Los Angeles County
Metropolitan Transportation Authority

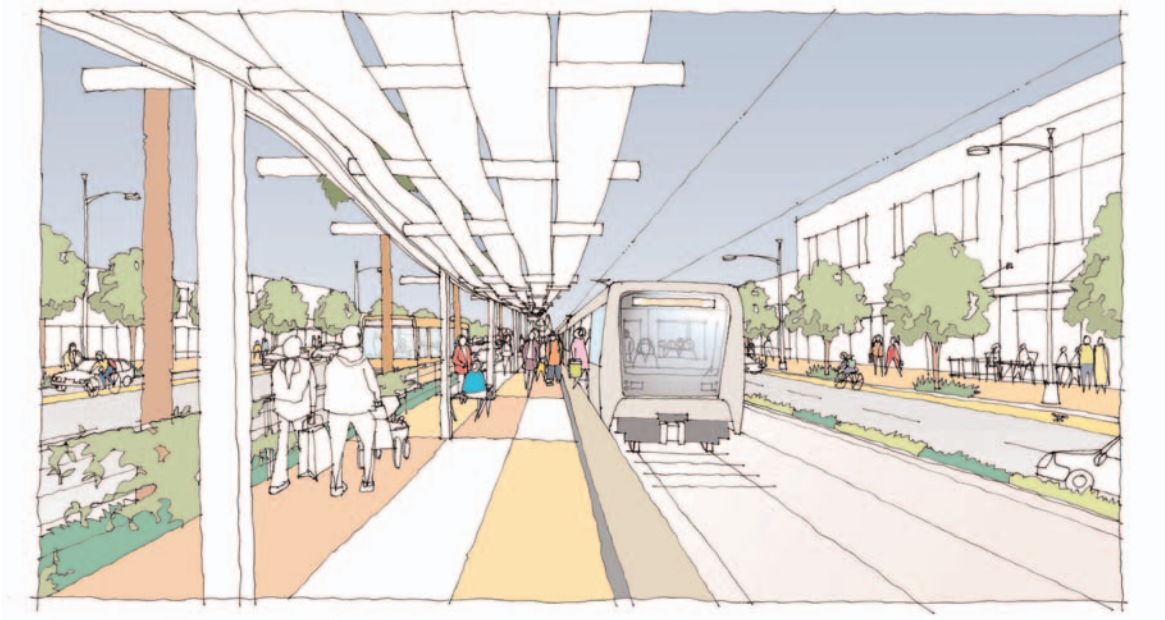
LOS ANGELES MID-CITY/WESTSIDE TRANSIT CORRIDOR

> Mid-City/Exposition Light Rail Transit Project
> Final Environmental Impact Statement/ Environmental Impact Report
> **Executive Summary**

S-1 Final EIS/EIR Purpose & Intended Uses

This Final Environmental Impact Statement/ Environmental Impact Report (FEIS/EIR or Final EIS/EIR) has been prepared to meet the requirements of the National Environmental Quality Act (NEPA) and the California Environmental Quality Act (CEQA). The document describes the environmental setting and consequences of the construction and operation of the Mid-City/Exposition Light Rail Transit Project to the public and involved local, State, and Federal agencies. The report also identifies and evaluates alternatives, and proposes mitigation measures to reduce potentially significant environmental impacts. The environmental review process also provides an opportunity for public participation to further inform the environmental analysis. The Los Angeles County Metropolitan Transportation Authority (LACMTA or Metro) and the U.S. Department of Transportation, Federal Transit Administration (FTA) are the lead agencies for compliance with CEQA and NEPA, respectively, and will take separate actions on this Final EIS/EIR and the Mid-City/Exposition Light Rail Transit (LRT) Project. This FEIS/EIR does not make recommendations regarding the approval or denial of the Project.

An EIS/EIR is an informational document, which informs public agency decision makers, and the public of the significant environmental effect of a project, identifies possible ways to minimize the significant effects, and describes reasonable alternatives. The many agencies that evaluated the Draft EIS/EIR continue to be involved in the review process of the Final EIS/EIR. Metro and the FTA shall consider the information in the EIS/EIR along with other information, which may be presented to the agency, prior to the adoption of the Project. Other agencies, such as the California Department of Transportation (Caltrans) and the cities of Los Angeles and Culver City will also be involved in reviewing and approving the Project. On the Federal level, agencies with potential reviewing/permitting authorities include the Advisory Council on Historic Preservation, the Occupational Safety and Health Administration, and the Environmental Protection Agency.



Metro

U.S. Department of Transportation
Federal Transit Administration

S-2 Environmental Review Process

Compliance with the requirements of NEPA and CEQA must be achieved before the proposed project can be approved. The goal of both legislative acts is to ensure that local and federal decision-makers are aware of the environmental consequences of a decision before it is made.

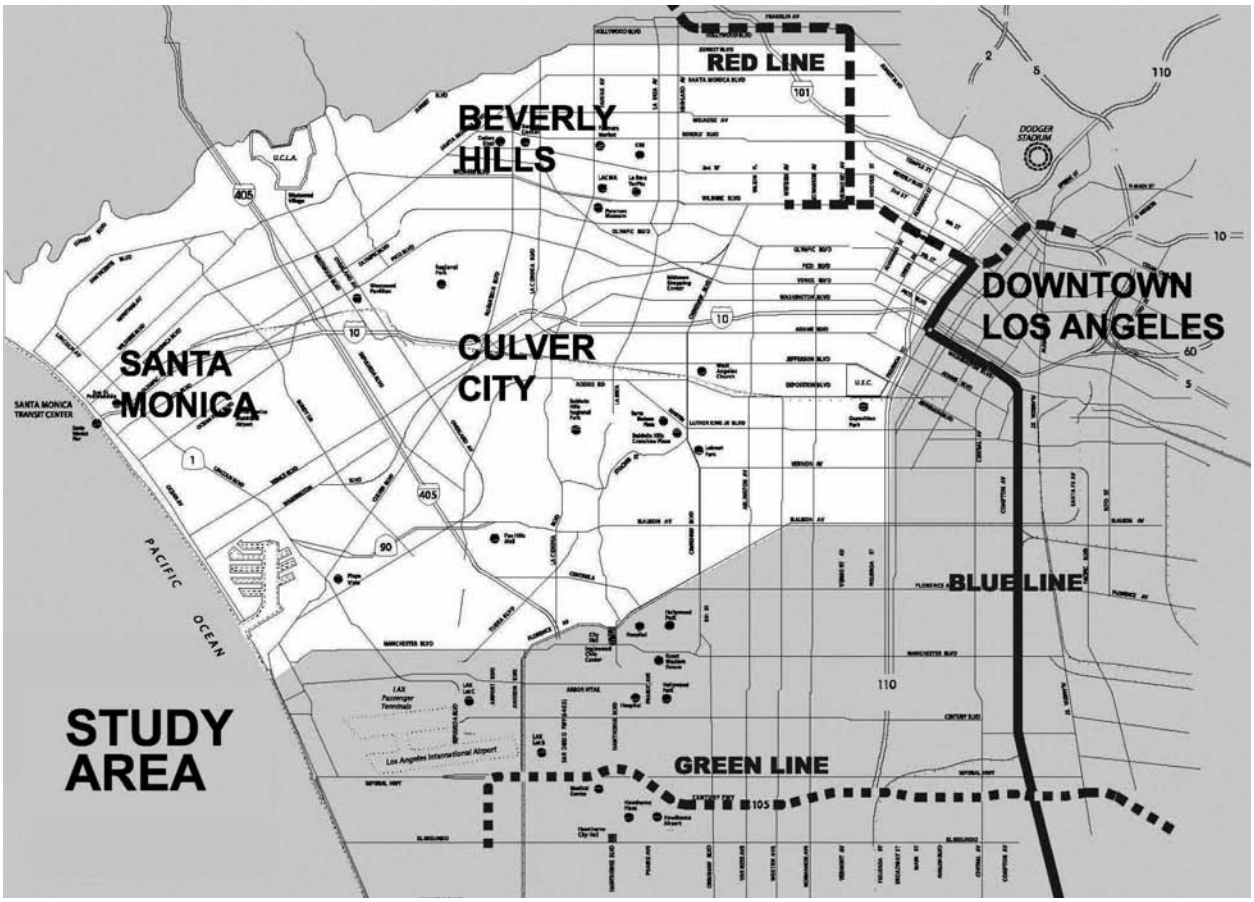
In February 2000, the Metro Board of Directors considered recommendations contained in the Mid-City/Westside Transit Corridor Study; Re-Evaluation/Major Investment Study (MIS) and selected alternatives for the Wilshire Corridor and the Exposition Corridor for further analysis and environmental review. The MIS Study considered a wide range of alternatives for the Mid-City/Westside Study Area including heavy rail, light rail and bus rapid transit.

One of the first steps in the environmental review process is to publish a Notice of Intent (NOI) to prepare an EIS in the Federal Register. The notice was published on May 19, 2000 (Vol 65, No 98) and provided a brief description of the proposed project and invited comment on issues that would be addressed in the environmental document. A Notice of Preparation (NOP) of an EIR, the CEQA equivalent of the NOI, was also prepared and circulated by the State of California on May 8, 2000.

In addition, various means were used to invite public comment about the Project. Six public scoping workshops were held between May 23rd and June 8th, 2000 that were attended by more than 380 persons. Letters of invitation were mailed to over 12,000 addresses along the Wilshire and Exposition Corridors. In addition, articles and advertisements were run in a number of Westside newspapers including the Los Angeles Times, Jewish Journal, Korea Times, The Sentinel, La Opinion as well as numerous community publications. The 30-day public scoping comment period extended through June 23, 2000, and all comments received about the Project were documented and reviewed as a part of the preparation of the DEIS/EIR. Additionally, Metro staff attended more that 42 community meetings with business, civic and homeowners associations during the scoping period and subsequent preparation of the Draft EIS/EIR.

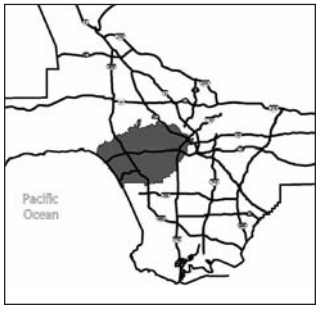
At the end of the public scoping period, all comments were reviewed and work commenced on preparation of the Draft EIS/EIR in compliance with NEPA and CEQA. The public review period of the Draft EIS/EIR commenced on April 6, 2001 and ended on June 15, 2001. During the public review period, the Draft EIS/EIR was placed in public libraries and other repository sites as an effective way of providing ongoing information about the project. The document was made available on the Metro website (www.metro.net) and information about public hearings and other ongoing project activities was available via the project telephone line (310-366-6443). Public hearings are held to receive oral and written testimony on the Draft EIS/EIR from the general public. Metro provides notice of these public involvement meetings in compliance with CEQA and NEPA. For a detailed description of the environmental review process, and project-related public involvement opportunities, please refer to Section 6.0 Coordination and Community Participation of this Final EIS/EIR.

Responses and letters on the DEIS/EIR were compiled during the public review period and incorporated into the Final EIS/EIR. In June 2001, the Metro Board adopted a Locally Preferred Alternative (LPA) consisting of Bus Rapid Transit (BRT) for the Wilshire Corridor and Light Rail Transit (LRT) for the Exposition Corridor. The Board also approved the Draft EIS/EIR. At the same time, the Metro Board separated the Wilshire BRT and Exposition LRT Projects in separate environmental documents. The analysis found in the Mid-City/Exposition LRT Project Final EIS/EIR evaluates solely LRT for the Exposition Corridor and contains refinements prepared by Preliminary Engineering Design to the Metro Board-approved LPA. Metro and the FTA cannot construct the Project until the Final EIS/EIR is certified with all necessary mitigation measures and an adopted Mitigation Monitoring Program. Following certification of the Final EIS/EIR by the Metro Board, the FTA will consider the Final EIS/EIR and issue a public "Record of Decision" (ROD) for the project.



The Mid-City/Westside Corridor Study Area encompasses 112 square miles. It includes the City of Los Angeles, Beverly Hills, Santa Monica, Culver City and unincorporated portions of Los Angeles County (Veteran's Administration, West Los Angeles and Baldwin Hills). Approximately 16 percent of the population and 24 percent of the jobs in Los Angeles County are concentrated in the area.The area encompasses the most well known employment, entertainment, educational/cultural activity centers in the region, including USC, UCLA, Santa Monica College, Los Angeles Trade Technical College, Rodeo Drive (Beverly Hills), Westwood Village, Hollywood Boulevard, Sunset Strip, Century City, Westside Pavilion, Paramount and Sony Studios, Third Street Promenade in Santa Monica, Wilshire Boulevard Miracle Mile, Los Angeles County Museum of Art, Page Museum, Petersen Automotive Museum, California African-American Museum, California Science Center, Los Angeles County Museum of Natural History, Los Angeles Memorial Coliseum and Sports Arena, Los Angeles Convention Center and Staples Center.

In 2004, the California Legislature adopted Public Utilities Code (Sections 132600–132650, et.seq.) to create the Exposition Metro Line Construction Authority (Authority). The Authority was created for the purpose of awarding and overseeing final design and construction contracts for completion of the Los Angeles Exposition Line Transit Project. The LACMTA remains the lead agency for the purpose of planning and preparing this FEIS/FEIR. Responsibility for designing the project as well as incorporation and implementation of most mitigation measures identified in this FEIS/FEIR, will lie with the Authority, which will be identified and assigned as a responsible agency or entity in a Record of Decision issued by the Federal Transit Administration, following a 45-day Public Review Period and certification of this FEIS/FEIR by the Los Angeles County Metropolitan Transportation Authority Board of Directors.



Key Plan of Study Area

S-3 History, Purpose & Need for the Project

The need for high-capacity transit service improvements has been long recognized in the Mid-City/Westside area of Los Angeles. The Mid-City/Westside Study Area is located in western Los Angeles County and encompasses approximately 112 square miles. It is roughly bounded by the Pacific Ocean on the west; Sunset Boulevard and the Hollywood Freeway (US 101) on the north; Hope Street and Figueroa Street on the east; and Slauson and Manchester Boulevards on the south. Portions of the City of Los Angeles, unincorporated areas of Los Angeles County (e.g., Baldwin Hills), and the Cities of West Hollywood, Beverly Hills, Santa Monica, and Culver City are within the Study Area. Since the 1970's, the Metro and its predecessors the Southern California Rapid Transit District (SCRTD) and the Los Angeles County Transportation Commission (LACTC) have conducted numerous transportation planning and environmental impact studies that have established the need for, and environmental impacts resulting from, improved east-west oriented transit service in various parts of the Study Area. Several planning and environmental studies prepared in the late 1980's and early 1990's identified the potential for the westward extension of the Metro Red Line system, which currently terminates at Wilshire Boulevard and Western Avenue.

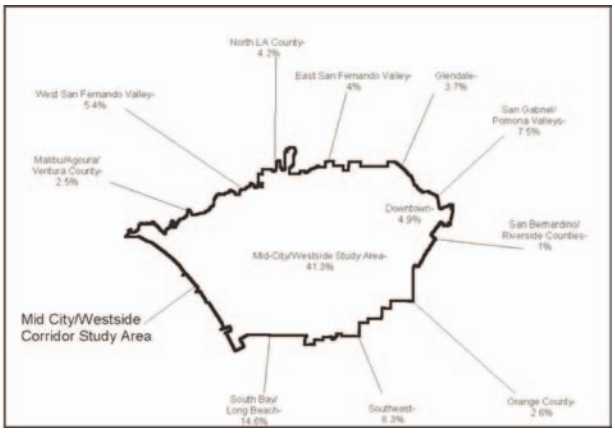
These efforts led to the adoption of a Locally Preferred Alternative (LPA) for the Metro Red Line Segment 3 (Mid-City Area) in 1994. A Full Funding Grant Agreement was executed with the Federal Government and the project was carried into the construction phase. However, in January 1998, the Metro suspended work on extensions of the Metro Red Line heavy rail subway extension to the Mid-City area due to funding shortfalls. The Federal Government had committed to fund $245 million, or approximately 50% of the cost of the project. However, state and local funds that were needed to match this grant were not available. The project would have provided two stations further west along the Metro Red Line from its current terminus at Wilshire/Western to the Mid-City Shopping Center near the intersection of Pico & San Vicente boulevards. The Metro Red Line Subway was envisioned to ultimately extend as far west as Century City, Westwood and the I-405 Freeway.

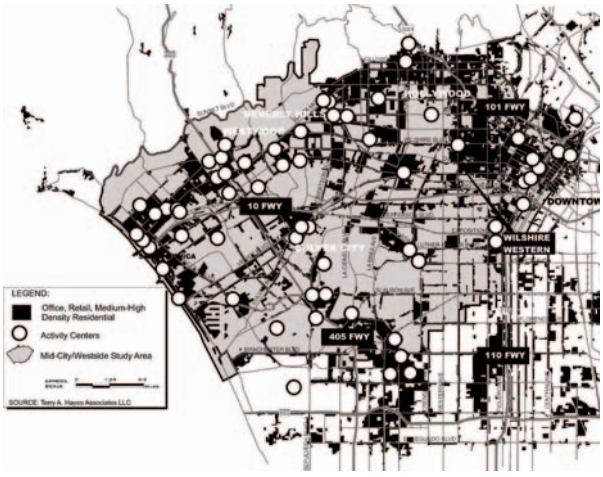
Metro Fixed Guideway/Metro Rapid Map. Further work on Metro Red Line extensions was suspended in 1998. Subsequently, Metro studied alternatives to subway extensions in the Mid City/Westside Corridor Study Area in 2000 and 2001.

The Mid City/Westside Corridor Study Area map shown at top right indicates that the many trips entering the Study Area are coming from south, while incoming surface trips are also occurring from almost all directions. A large number of daily trips occurring within the Study Area remain in the Study Area.

The "Centers Concept" of Los Angeles shown at middle right indicates that land use planning in the Los Angeles area, and particularly in the Mid City/Westside Corridor Study Area is viewed as an urban area consisting of urban centers rather than a central downtown served by adjacent areas.

The Mid City/Westside Corridor Study Area shown at lower right has an existing concentration of transit-supporting land uses. There is a dense concentration of office, retail and residential uses along existing transit corridors shown in black, along with many activity centers shown in white circles.





Subsequently, in November 1998, Los Angeles County voters passed an initiative prohibiting further use of local sales tax dollars to build subways, although these funds can be used for above ground or surface bus and rail transit improvements.

Since it was decided that the subway would not be extended, Metro has been looking at alternatives to the previously approved subway extension to provide above ground or surface transit mobility for this area in a more cost-effective manner. The need for these improvements is most critical. The Westside of Los Angeles has some of the highest population and employment density in the Southern California region, as well as the highest proportion of transit ridership. The Los Angeles Westside has a current population of 1.5 million persons, expected to grow by 300,000 over 20 years. The number of jobs is also projected to increase by over 200,000. No significant expansion of existing freeway and street networks is planned to accommodate this growth. The enhancement of public transit provides an opportunity to move more people in a way that is more energy-efficient, and does not require the building of more freeways or widening of streets.

Why Transit Improvements?

Study Area Contains a Major Concentration of Activity Centers and Destinations. The area contains the largest concentration of major activity centers and destinations within the Los Angeles metropolitan region. Many of these centers are located within the most congested portion of the Study Area.

The "Centers Concept" Land Use Policy is Transit Based. Land use policies in the Los Angeles metropolitan region have traditionally been founded upon the framework that access to major activity centers would be facilitated through a network of transit connections.

There is an Existing Concentration of Transit Supporting Land Uses. The existing activity centers in the Study Area are central part of a large concentration of land uses that are considered to be transit supporting (high density housing, commercial and retail). Roughly 30 percent of the land area within the Study Area falls into this category.

High Study Area Population and Employment Densities Support Transit. Population and employment densities in the Study Area are the highest within the metropolitan region, averaging approximately 13,883 persons per square mile and 9,167 employees per square mile.

There is a History of Transit Usage in the Study Area. Existing transit usage within the Study Area is proportionally higher than any other area in Los Angeles County (13.64 % for the Study Area versus 6.8 % for the County).

There is a Significant Transit Dependent Population in the Study Area. Part of the underlying reason for high transit usage in the Study Area is that a significant number of households are autoless and have low incomes. According to the 1990 Census there are approximately 18.3% of households did not have a vehicle compared to 10.9% for the County.

The Study Area Is Expected to Continue to Capture a Large Share of Regional Population and Employment Growth. Population and employment forecasts to the year 2020 adopted by the Southern California Association of Governments clearly suggest that the Study Area will capture a high level of growth over the next 20 years, growth that will place further demands on transit service and is expected to result in increasing congestion on local roadways and regional highways serving the Study Area.

Continued Growth in the Business Services Sector (Entertainment and Media Related) Underlies the Future Development Potential in the Study Area. Growth in the Study Area will continue to be fueled by entertainment and media related businesses concentrating in the western part of the corridor. Currently, the Study Area is the center of approximately 1/3 of all new office construction underway in LA County, which makes it the largest office market in Los Angeles.

There are Substantial East-West Travel Patterns that are Not Currently Served by a High Capacity Transit System. Travel patterns currently indicate that the Study Area is a primary attraction for work trips with origins in the San Gabriel Valley, San Fernando Valley and South Bay areas. These trips are represented by very high traffic volumes on the I-10 and I-405 Freeways.

Peak Hour Congestion on Study Area Roadways Underlies Need for Transit Improvements. There is substantial peak hour congestion in the northern portion of the Study Area. Vehicular travel to the East and West San Fernando Valleys must ultimately by-pass through the Sepulveda or Cahuenga passes. Access patterns into these routes are congested during the peak travel hours as motorists attempt to pass northward at either the western or eastern ends of the Study Area.

Local Policies are Oriented Toward Demand Management and Transit Solutions rather than on Physical Roadway Improvements. Because of the level of build-out and density within the Study Area, local jurisdictions have generally determined through their local policies that congestion relief improvements should focus on travel demand management rather than on physical improvements such as widening and new roadways. In a number of cases, local communities which desire to eliminate short cuts through neighborhoods and support more livable communities, are supporting initiatives to limit roadway widening and traffic calming. Thus, transit improvements are the only viable alternative to mitigate increasing traffic volumes and congestion-related delays.

The Growth of the Metro Rapid Program. Metro Rapid buses were introduced along Wilshire/Whittier Boulevard and Ventura Boulevard in June 2000. These buses run on compressed natural gas and are low-floor design, meaning that no steps are required to enter and exit these buses. The implementation of Metro Rapid buses in 2000 began a demonstration program of "Rapid Bus" services as an initial phase of Bus Rapid Transit (BRT) service in Los Angeles. Metro's brand name for the initial phase "Rapid Bus" and

BRT is Metro Rapid. Based on the success of this program, the Metro Board approved in 2002, an accelerated Metro Rapid Expansion Program with over 24 new corridor services to be implemented within the schedule of the Metro Short Range Transportation Plan.

Alternatives Considered in the Draft EIR/EIS

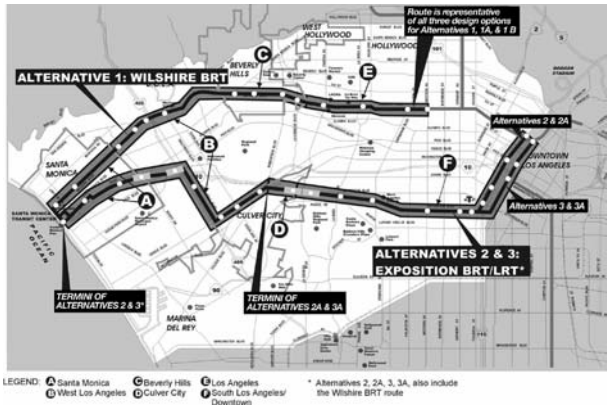
In February and March 2000, following their review of the findings of the Major Investment Study, the Metro Board of Directors considered and provided specific direction on alternatives to be evaluated in the Draft EIS/EIR. This process was derived from previous studies of the selected LPA associated with the Exposition Right of Way (ROW), currently owned by Metro, as a viable future transit improvement opportunity.

Based on previous analysis conducted for the Study Area, a set of alternatives was selected for screening in the MIS phase prior to the preparation of the Draft EIS/EIR. The alternatives evaluated in the MIS pertaining to the Exposition corridor only are described below:

- **Exposition Bus Rapid Transit (BRT).** This is referred to as Alternative 2 and 2a in the 2001 DEIS/EIR. This alternative offers significant, long-term transportation benefits through the use of an exclusive busway. Articulated buses operating either in a dedicated curb-lane or the Exposition ROW would provide connection to Downtown Los Angeles, USC, Exposition Park and Harbor Freeway Transitway from key centers in Santa Monica, West Los Angeles, and Culver City.

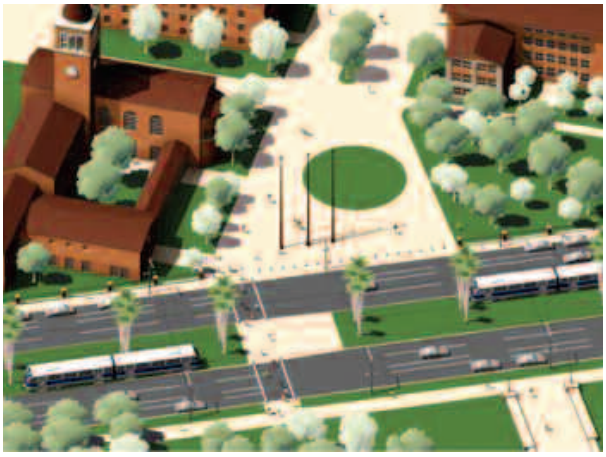
- **Exposition Light Rail Transit (LRT).** This is referred to as Alternative 3 and 3a in the 2001 DEIS/EIR. This alternative offers significant, long-term transportation benefits through the implementation of a light rail transit system. Light rail vehicles operating on existing tracks or in the Exposition ROW would connect Downtown Los Angeles, USC, Exposition Park, and Harbor Freeway Transitway from key centers in Santa Monica, West Los Angeles, and Culver City. This alternative has less frequent disruption of intersections and adjacent properties when compared with the BRT and has the capacity to serve post-2020 demand. Alternative 3 is identified as a full alignment LRT along the Exposition Corridor from Downtown Los Angeles to Santa Monica. Alternative 3a is identified as a Minimal Operating Segment (MOS) from Downtown Los Angeles to Culver City along the Exposition Corridor.

Metro Rapid buses were introduced along the Wilshire/Whittier route in 2000. This represents the first step to implementing a Bus Rapid Transit program in Los Angeles.



In 2000, the Metro Board provided specific direction to study Alternatives 2 and 2a (Exposition BRT), along with Alternatives 3 and 3a (Exposition LRT) and Alternative 1 (Wilshire BRT) in the Draft EIS/EIR.

Exposition BRT Alternative 2 and 2a in the Draft EIS/EIR shown at USC/Exposition Park



Exposition LRT Alternatives 3 and 3a in the Draft EIS/EIR shown at USC/Exposition Park

The Exposition LRT alternative would operate in a semi-exclusive and exclusive guideway similar to Metro Blue Line.

Light Rail Transit Systems have been operating worldwide for over a Century.

In June 2001, the Metro Board adopted Alternative 3a, a Downtown Los Angeles to Culver City LRT alignment as the Locally Preferred Alternative. The Wilshire Boulevard Bus Rapid Transit Alternatives were separated from the Exposition alternatives for purposes of final environmental clearance. The Final EIR for the Wilshire BRT Project was certified by the Metro Board of Directors in August 2002. Alternative 3a in the DEIS/EIR thus became the LPA for the Mid City/Exposition LRT Project.

For the purposes of this FEIS/EIR, no other alternatives are being considered west of the LPA's western terminus at Culver City. The Metro Board, however, adopted a "vision and intent to complete the LRT line to Santa Monica" as a future project, at the same time the LPA to Culver City was adopted. Therefore, for the purposes of this document, the Project and its LPA are also known as the Mid City/Exposition LRT Project. The Exposition Corridor refers to the entire right-of-way, from Downtown Los Angeles to Santa Monica. Mid City/Exposition LRT Project refers to the LPA from Downtown Los Angeles to Culver City. This Project is part of the Mid City/Westside Transit Corridor Study Area.

The public circulation of the Draft EIS/EIS generated over 3,000 comments regarding the Project. Many of the comments expressed inquiries and concerns about similar topics: the length and location of the bikeway, grade separations, grade crossings, landscaping, and art features. In an effort to address these comments, the updated project description in Section 2.0, Alternatives Considered, includes a greater amount of detail than the Draft EIS/EIR had related to each of the Project's components listed in S-5 The Locally Preferred Alternative.

Please join us for Community Open Houses
regarding
The Mid-City/Westside Transit Corridor Study

The Los Angeles County Metropolitan Transportation Authority (MTA) is evaluating several new transit alternatives along Wilshire and Exposition Boulevards that can provide improved transit mobility for this area. Learn about the proposed ***Wilshire Boulevard Bus Rapid Transit***, the ***Exposition Right-of-Way Bus Rapid Transit*** and ***Exposition Right-of-Way Light Rail Transit*** possibilities.

Interested individuals, organizations and public agencies are invited to attend to hear and comment on the alternatives at any of the community open houses listed below, between 5:00 and 8:00 pm.

- **Tues, May 23, 2000, 5:00–8:00 pm**
  Peterson Automotive Museum
  6060 Wilshire Boulevard, Los Angeles
- **Wed, May 31, 2000, 5:00–8:00 pm**
  Veteran's Administration Hospital of Los Angeles
  11301 Wilshire Boulevard, Los Angeles
- **Tues, June 6, 2000, 5:00–8:00 pm**
  Ken Edwards Center
  1527 Fourth Street, Santa Monica
- **Wed, June 7, 2000, 5:00–8:00 pm**
  California African-American Museum
  600 State Street—Exposition Park, Los Angeles
- **Thurs, June 8, 2000, 5:00–8:00 pm**
  Veteran's Memorial Complex
  4117 Overland Avenue, Culver City

For further information, to be placed on the project mailing list, or to leave verbal comments, please call:

- **Project Hotline: 310.366.6443**

Please send written comments to:
(Due by June 23, 2000)

- **David Mieger, Project Manager**
  Los Angeles County MTA
  One Gateway Plaza
  Mail Stop 99-22-5
  Los Angeles, CA 90012
  Fax: 213.922.3060
  E-mail: miegerd@mta.net

Pedestrians at a "T" tram station at Boston University

S-4 What is Light Rail Transit?

Light Rail Transit (LRT) is defined as a metropolitan electric railway system characterized by its ability to operate single cars or short trains along exclusive rights-of-way at ground level, on aerial structures, in subways or occasionally, in streets, and to board and discharge passengers at track or car-floor level. Light rail vehicles are driven electrically with power drawn from an overhead electric line.[1] Light rail transit provides a cleaner, more energy-efficient form of transportation than automobiles and is quieter than conventional rail systems. By operating in protected trackways that often have signal priority over intersecting cross-streets, light rail not only offers an alternative to driving on congested roadways but can shorten the time spent commuting from one point to the next. According to the American Public Transportation Association, 27 urban areas across the country are served by light rail systems.

The entry doors to the Eurotram in Strasbourg

A GVB train at Churchillsplein, Amsterdam

1. Transportation Research Board and Light Rail.com

Electric rail systems have a lengthy history in Los Angeles beginning at the turn of the 20th century. During the years of 1914 to 1953, Pacific Electric's Santa Monica Air Line provided passenger service between Santa Monica and downtown Los Angeles. After a period of time when rail service was nonexistent in Los Angeles, a modern light rail transit system under the auspices of Metro has emerged linking the outer reaches of the City and County of Los Angeles together. The Blue Line runs north-south from 7th Street/Metro Center in downtown to Long Beach. The Green Line is an east-west running line in south-central Los Angeles connecting Norwalk to Redondo Beach and the South Bay. Completed in 2003, the Gold Line connects Pasadena to downtown. Ideally, as the light rail transit continues to expand, and bus rapid transit provides a link to areas outside of the light rail's coverage, a comprehensive regional transportation network will develop.

Light Rail Transit systems in the U.S. West Coast and Europe:
MAX & Downtown Streetcar in Portland,
Homme de Fer Station, Strasbourg

Photo Credit: Elson Trinidad

LOS ANGELES (Air Line) CULVER JCT.
LOCAL SERVICE

Lv. Los Angeles (Main St. Sta.)	Ar. Culver Jct.	Lv. Culver Jct.	Ar. Los Angeles (Main St. Sta.)
6.00 A.M.	6.41 A.M.	†6.13 A.M.	6.52 A.M.
7.00 "	7.41 "	6.43 "	7.22 "
a7.30 "	.....	7.13 "	7.52 "
8.15 "	8.56 "	7.43 "	8.22 "
9.45 "	10.26 "	a.....	8.53 "
11.15 "	11.56 "	9.00 "	9.39 "
12.45 P.M.	1.26 P.M.	10.30 "	11.09 "
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3.45 "	4.26 "	1.30 "	2.09 "
a4.30 "	.....	3.00 "	3.39 "
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6.45 "	7.26 "	7.30 "	8.09 "
8.15 "	8.56 "	9.00 "	9.39 "
9.45 "	10.26 "	10.30 '	11.09 "
11.15 "	11.56 "		

†Daily except Sunday.
a Operates to and from 11th Avenue.

LOS ANGELES (Air Line)—SANTA MONICA

Through train daily leaving Utah Ave., Santa Monica at 6.45 A.M. for Los Angeles (Main St. Station).

Through train daily leaving Main St. Station at 5.30 P.M. for Santa Monica.

INGLEWOOD LINE

Car will be operated daily except Sunday on this line, leaving Ocean Park for Inglewood at 10.15 A.M. and Inglewood for Ocean Park at 10.55 A.M.

The Los Angeles (Air Line) Culver Junction was operating on the Exposition Right of Way as shown in this 1922 timetable, similar to the Mid City/Exposition LRT 's route alignment.

Pacific Electric Railway Red Car interurban system. At left is a Red Car leaving the Ivy Station in Culver City.

Pacific Electric System Map showing the Santa Monica Air Line operating on the Exposition Right of Way (then owned by Southern Pacific Railroad). The Exposition Right of Way was then purchased by the Los Angeles County Transportation Commission in 1990, a predecessor agency to Metro.

Copyright 1933 by D.W. Pontius for Pacific Electric Railway

S-5 The Locally Preferred Alternative

The Mid-City/Exposition LRT Project's Locally Preferred Alternative (LPA) is an LRT alignment, running from Downtown Los Angeles to Culver City. In addition to the LPA, the Final EIS/EIR also evaluates several design options for the Downtown Los Angeles alignment and for the Jefferson Boulevard crossing. These are discussed in Section S-6.

The Mid-City/Exposition LRT Project system would use light rail vehicles with standard dimensions measuring 90 feet in length, 8.6 feet in width, and 15 feet in height. The system would use a catenary system (overhead wires) as a source of power. The LRT maximum speed would be 55 miles per hour, with lower speeds in certain segments of the alignment. It would take just under 30 minutes with the stops to run the length of the line. Initially, a fleet of 16 light rail vehicles would be required to operate the line in one to two car trains. Ultimately, a fleet of 31 vehicles would provide three-car trains to operate during peak periods. All LRT Stations would be designed to accommodate three-car trains. Selected bus routes would be modified to connect at LRT stations.

Ultimately, During peak periods, trains would eventually reach headways (time between train arrivals) as close as five minutes. During off-peak hours, trains would run approximately every 10 minutes. During peak periods, to further reduce travel times, Metro may also introduce express service where there would not be a stop at every station.

Ridership forecasts indicate there would be approximately 43,000 daily riders by 2020.

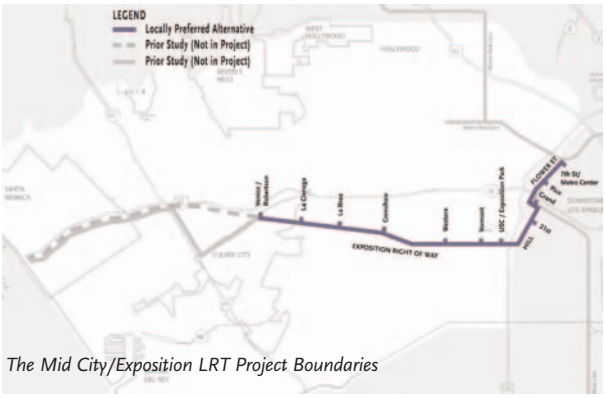
The LPA consists of two main components, the Exposition Transit Parkway and an Operations and Maintenance Facility. The significant elements of the Exposition Transit Parkway include the route alignment and guideway, the stations, parking facilities, the bikeway and bicycle facilities, landscaping and art. The Operations and Maintenance Facility component of the proposed project would require a new facility for the short- and long-term maintenance of the light rail vehicles. The planned location for this facility is adjacent to the existing Division 11 Yard in Carson, California.

The route of the Locally Preferred Alternative runs from 7th Street Metro Center in Downtown Los Angeles to Venice/Robertson Station in Culver City. The route is approximately 10 miles in a dual track alignment. The LPA will have up to eleven stations, The alignment and stations from 7th St. Metro Center to Pico Station would be shared with Metro Blue Line.

The Downtown Los Angeles portion of the line will be street running from 7th Street Metro Center to the Exposition Right of Way (ROW). The line will run in an exclusive ROW along Exposition to Venice/Robertson Station. More than 7 miles of the route is in the Exposition Right of Way.

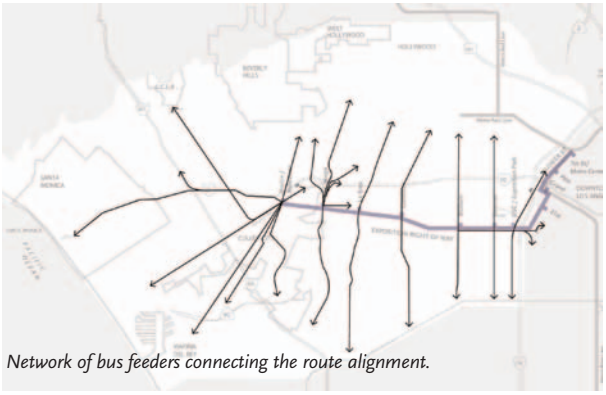
The Project's boundaries are the following: the alignment between and including 7th Street/Metro Center and Venice/Robertson Station, all stations within the alignment, and all Right of Way components described as part of the Locally Preferred Alternative. All Operations and Maintenance Facilities described in this document are also part of the Project.

All prior studies west of Venice/Robertson Station in Culver City and east of Hill St. and 7th Street/Metro Center in Downtown Los Angeles are not part of this Project.

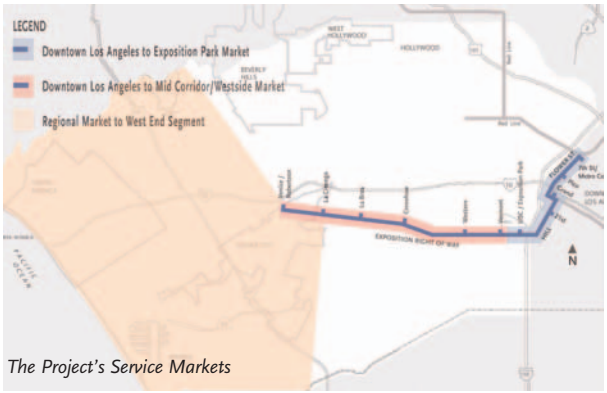


The Mid City/Exposition LRT Project Boundaries

Many trips transferring onto the Mid City/Exposition LRT will be coming from bus transit transfers. Many bus transfers will be coming from Metro's expanded Metro Rapid program providing non-fixed guideway BRT service at all Mid City/Exposition LRT stations on the Exposition Right of Way, as well as feeder bus lines provided by municipal operators and local shuttle service from adjacent neighborhoods. 2 Transit Centers are integrated with LRT stations.

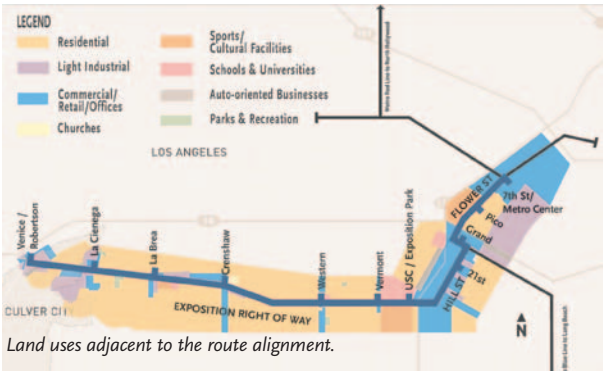

Network of bus feeders connecting the route alignment.

The Mid City/Exposition LRT Project serves multiple service markets including: the Downtown Los Angeles to USC/Exposition Park service market, a Mid-Corridor service market serving both Downtown Los Angeles and the Westside and, a Westside service market. The Downtown Los Angeles to USC/Exposition Park service market is localized, with potential ridership captured for entertainment, cultural and educational purposes. The Westside market captures commute trips to and from a wide westside area to the Project, connecting major activity centers to Downtown Los Angeles. The Project also serves trips beyond the corridor through connecting transit lines.



The Project's Service Markets

The land uses adjacent to the LPA indicate developed commercial/retail, school, open space and cultural uses located in the Downtown Los Angeles - USC/Exposition Park area, while residential uses occur along the Right of Way in the Mid Corridor and West End segments. Service Markets described above, will compliment these land uses with more localized trips made to to open space, school and cultural uses in the Downtown Los Angeles to USC/Exposition Park. Longer commute type trips would be made from residential uses in the Mid Corridor and Westside to other activity centers within and outside the alignment.



Land uses adjacent to the route alignment.

Planning Principles

The Exposition Transit Parkway follows these planning principals:

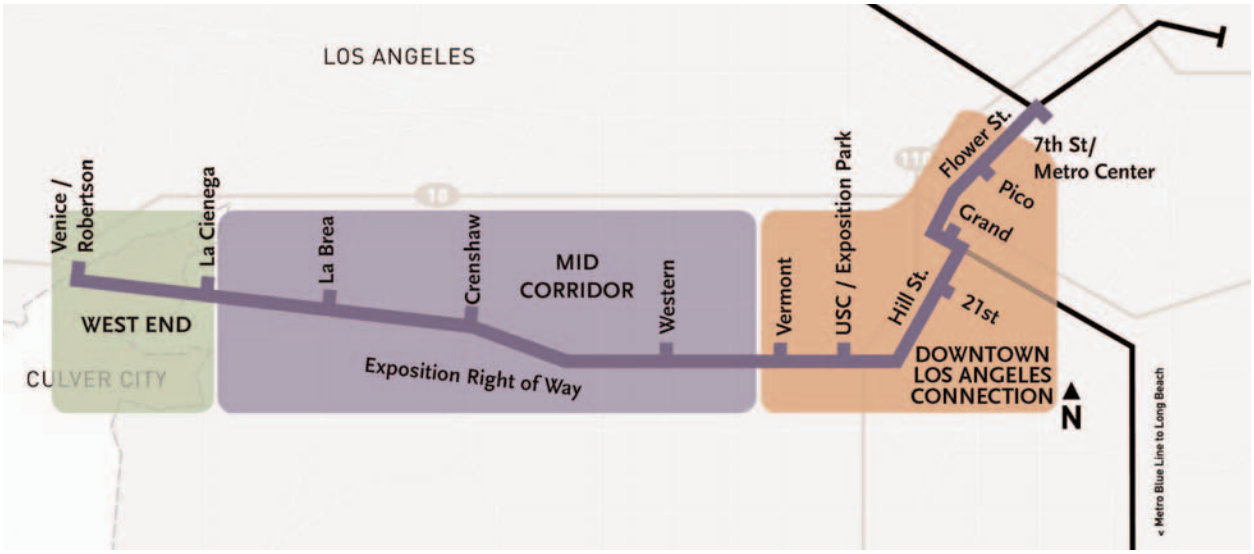
- *To establish a multi-modal transit corridor combining a light rail transit alignment, a bikeway, streets and pedestrian linkages in a safe, balanced and cohesive parkway setting*
- *To develop a transit parkway that encourages links, buffers, borders, paths and edges from the parkway into diverse communities along the alignment*
- *To weave the transit parkway into the existing urban fabric of the city by combining public art, architecture and landscape design with public transportation that integrates neighborhoods and is legible across the entire alignment*
- *Provide design continuity across the alignment through art and landscaping while allowing for variation to distinguish individual neighborhoods*
- *Provide architectural and landscape designs to express movement and place along the alignment*
- *Develop designs that promote sustainability of natural resources; and*
- *Integrate regional planning goals of the Project with local communities along the alignment*

Exposition Transit Parkway

Route Alignment and Guideway. The route of the LPA runs from 7th Street/Metro Center in Downtown Los Angeles to Venice/Robertson Station in Culver City, covering a distance of approximately 10 miles. The entire alignment of this Project is on a dual track configuration. The Project shares the eastern terminal station and an existing track alignment with Metro Blue Line from 7th Street/Metro Center to Washington Boulevard. The length of the LPA route not shared with the Metro Blue Line is 7.7 miles. In the new construction segment, the Exposition LRT will operate either in the center or curb lane of selected streets (as described below) or within the Metro-owned Exposition ROW. Specifically, the LPA would use the existing Metro Blue Line track facilities extending from the 7th Street/Metro Center along the at-grade portions of Flower Street and along the at-grade portion of Washington Boulevard until the intersection of Washington Boulevard and Hill Street. At Hill Street, the line would turn southward in the middle of Hill Street until it reaches the Exposition ROW. The line would then proceed westward using this ROW until the terminal station at Venice and Washington Boulevards. Section S-6 also describes several design options being evaluated along specific segments of the route.

Stations. Eleven stations are included in the Project. Three stations will be shared with the Metro Blue Line and eight new stations will be constructed exclusively for Project trains. Two of the new stations will be constructed as part of an elevated bridge structure spanning a major thoroughfare. Station locations include the following:

- 7th Street/Metro Center (existing)
- Pico (existing)
- Grand (existing)
- Hill/21st Street
- USC/Exposition Park
- Vermont
- Western
- Crenshaw (park and ride)
- La Brea
- La Cienega (park and ride with transit center)
- Venice/Robertson (park and ride with transit center)



Stakeholders along the alignment have provided input to the corridor study during the 2001 Draft EIS/EIR comment period to which this Final EIS/EIR responds. Beyond this comment period, many stakeholders have participated in the Project's Working Groups from 2002 and beyond to advise on the development of the Project. Project issues and characteristics along the alignment unique to a particular area can be best described in grouped segments of the alignment, or, LPA segments. Each segment shares common characteristics and local conditions occurring adjacent to the alignment. The Project's Working Groups form the framework of the LPA segments shown above, which are: Downtown Los Angeles Connection, Mid Corridor and

The concept for the Exposition Transit Parkway has historical roots in Olmsted and Bartholemew's 1930 plan for "Parks Playgrounds and Beaches of Los Angeles." This comprehensive master plan proposed a parkway system to link open recreational spaces around the Los Angeles region. Translating this plan into a 21st century model of a transit parkway is the basis for a new set of guiding principles for the Mid City/Exposition LRT Project.

Stations for up to three-car train capacity (300-foot platforms) will be provided along the LRT route. Stations will feature contemporary designs. The layout and materials used will be designed to be consistent with the overall Exposition Transit Parkway planning principles. A typical station is shown on the next page.

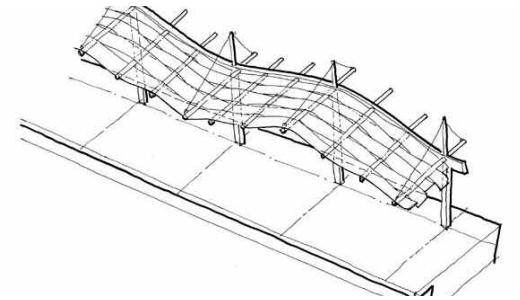
Standardized Station Design

Station design goals and objectives include:

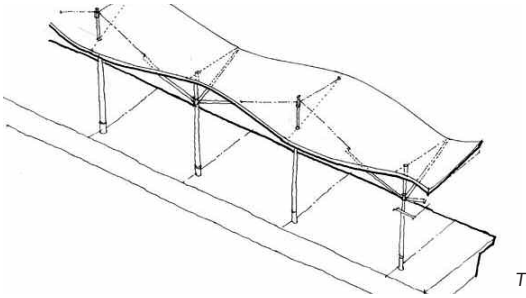
- An architecture based on a singular design language to provide continuity to the overall alignment while allowing for variation at each station
- Developing a kit-of-parts for the station architecture that can be combined in different ways to address a variety of needs along the station platform (full rain protection or shade, partial shade, and openness)
- Applying the kit-of-parts to create a variety that can be used at both Neighborhood and Gateway stations
- Developing an architecture expressive of movement and place
- Integrating sustainability into the design of the station architecture
- Providing architectural continuity while allowing for the unique character of neighborhoods along the Exposition Transit Parkway to be expressed

The stations represent special places along the alignment and signal a point of entry into the light rail system. The approach to station design emerges from the larger concept for the Exposition Transit Parkway.

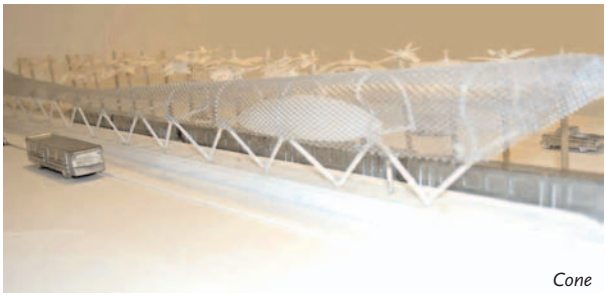
These canopy concepts illustrate how a station architecture kit-of-parts can be applied in a variety of ways:



River

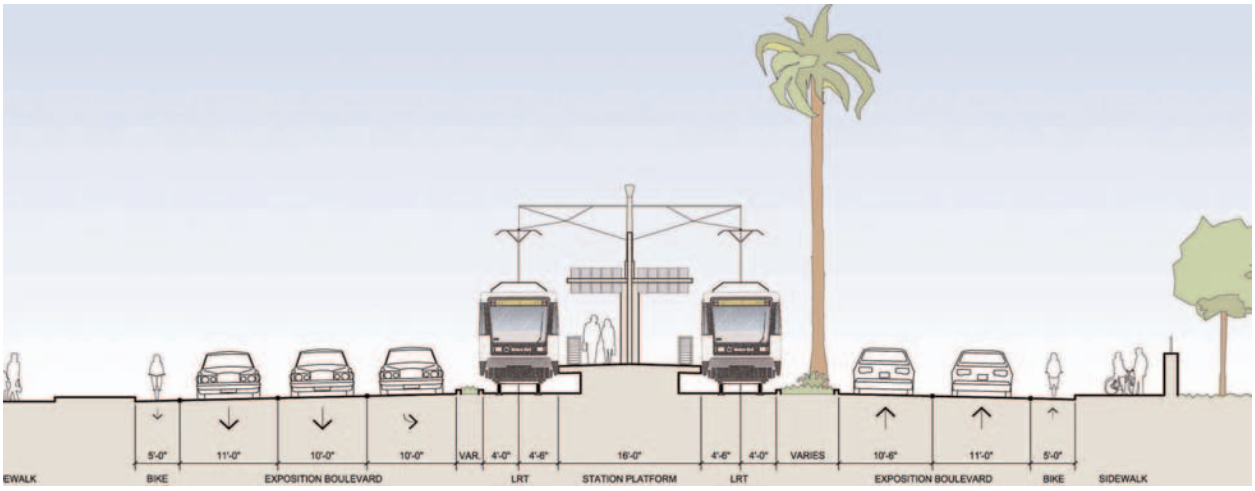


Tree

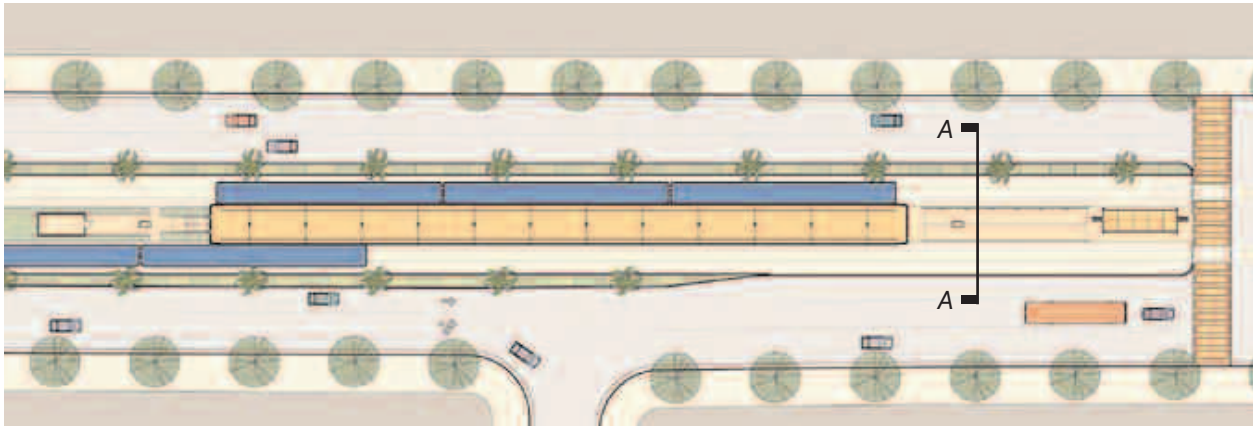


Cone

These canopy designs are concept only and do not represent Final Design requirements for station architecture.



Typical Site Section A

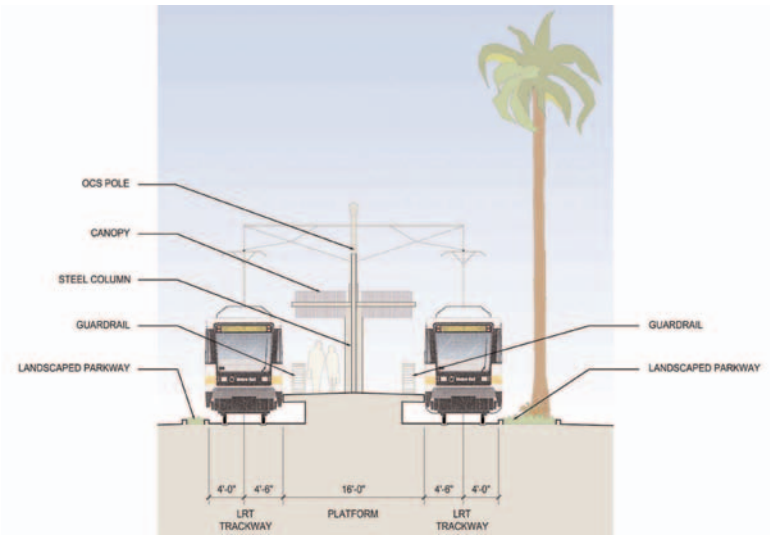


Typical Site Plan

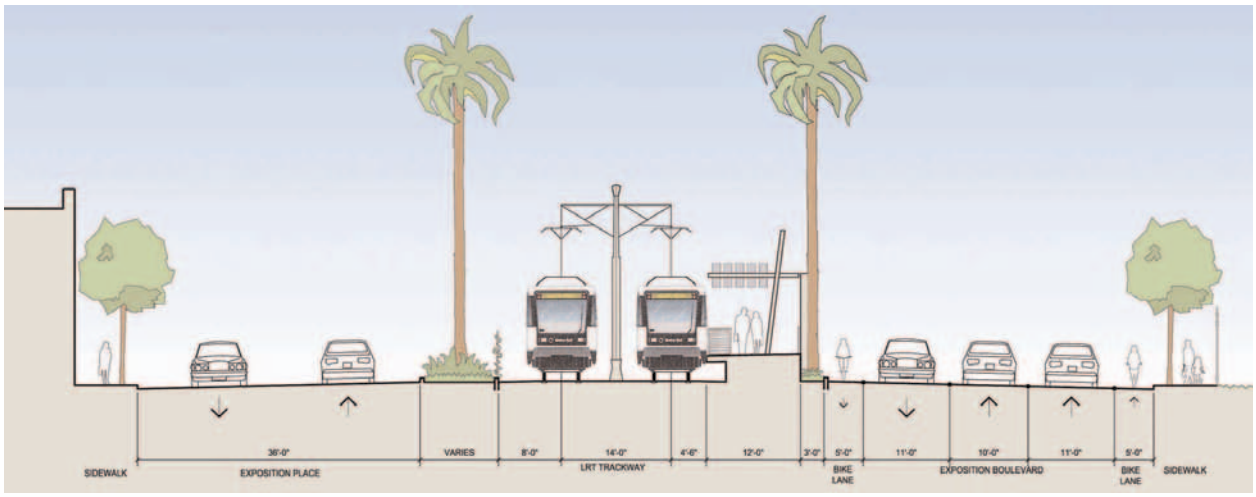
Typical LRT Station

Center Platform Configuration

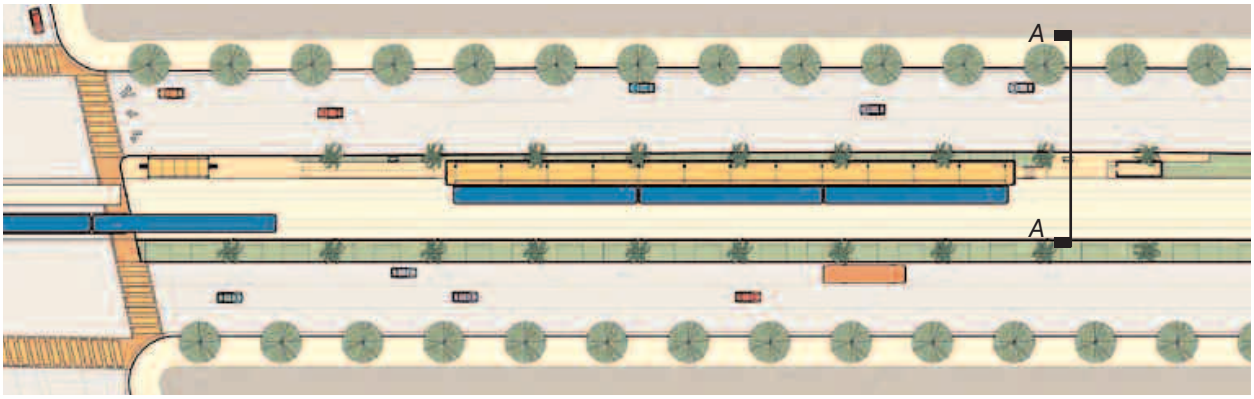
A typical LRT station for the Mid City/Exposition LRT Project would be 300 feet long and would include include amenities such as a canopy, lighting, paving, map and information cases, variable message signs, ticket vending machines, landscaping and public art.



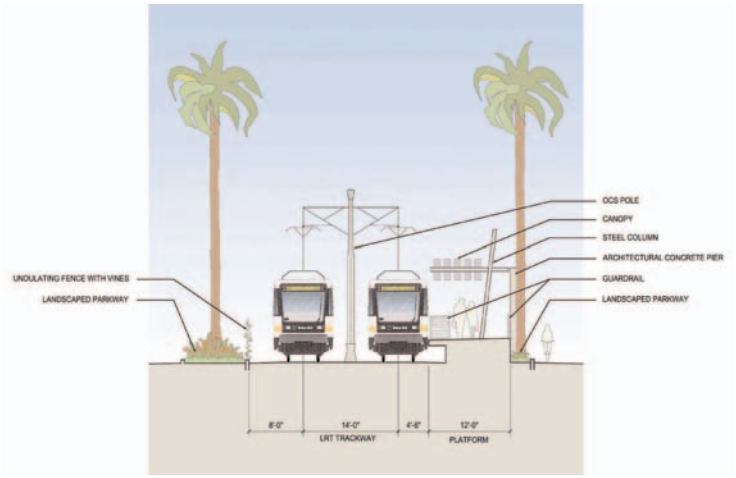
Station Section



Typical Site Section A



Typical Site Plan

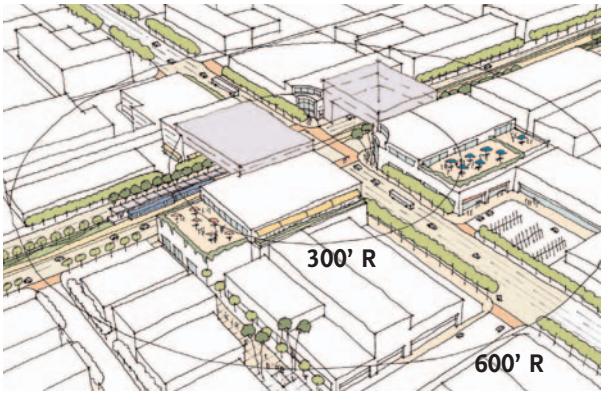


Station Section

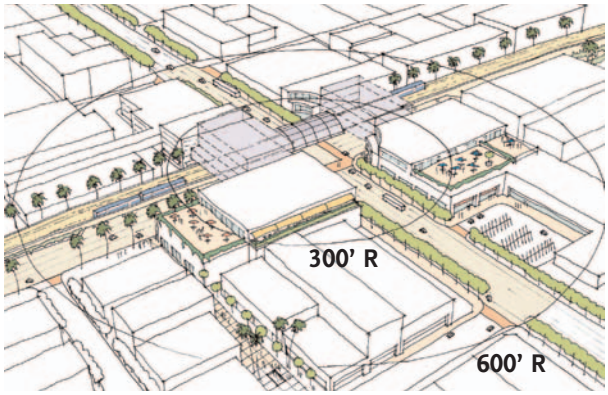
Typical LRT Station

Side Platform Configuration

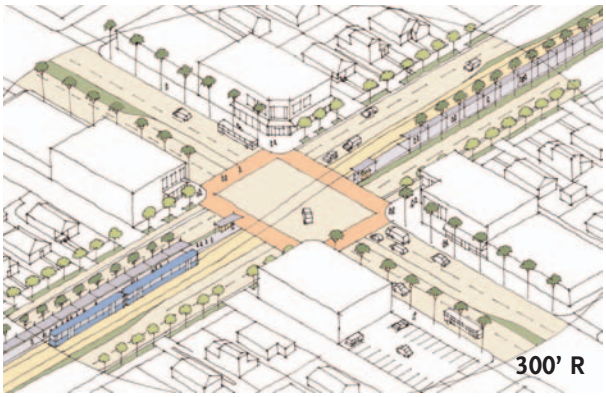
A typical LRT station for the Mid City/Exposition LRT Project would be 300 feet long and would include include amenities such as a canopy, lighting, paving, map and information cases, variable message signs, ticket vending machines, landscaping and public art.



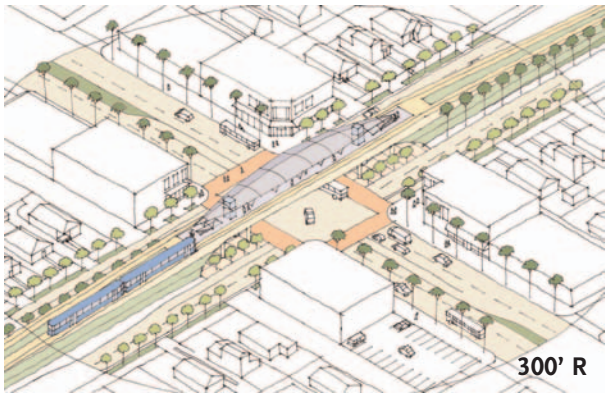
Typical Gateway Station at-grade



Typical Gateway Station on bridge



Typical Neighborhood Station at-grade



Typical Neighborhood Station on bridge

Station Program Guidelines:

The following concepts and definitions are used to express station program guidelines for the proposed project.

Gateway Stations Gateway Stations are stations located near major destinations along the alignment. These stations anticipate high boardings and may include extensive pedestrian linkages within the station vicinity to major destinations nearby. Gateway Stations would be visible to and from a major destination. These stations may present opportunities for air rights development over the station.

Neighborhood Stations Neighborhood Stations are smaller scaled stations located in smaller neighborhoods along the alignment. Typically, air rights development over Neighborhood Stations and Guideway is generally not anticipated. This will preserve existing views and open space around the station. Pedestrian linkages would typically include enhancements to a station site area.

Existing Downtown Los Angeles Station These existing LRT stations are located in Downtown Los Angeles. These stations may include improvements to the stations themselves and/or station site areas.

Pedestrian Linkages Pedestrian Linkages integrate the landscaping, public art and other transit parkway improvements together with station program guidelines to develop linkages from the station to the surrounding area within two station area zones: the station site area and station vicinity. Pedestrian linkages may include streetscape improvements such as trees, lighting, signage and benches in station site areas across from the station platforms.

Station Area Definitions These station area definitions are used to define pedestrian linkages, ROW landscaping near stations, public art and other transit parkway improvements, station entrance features and station program guidelines. The following zones are included:

Station Site: zone extending approximately 200 to 300 feet from the center of the platform of the station.

Station Vicinity: zone extending approximately 300 to 600 feet beyond the Station Site.

Station Influence: zone extending approximately 1/4 mile from the center of the station site area.

At-Grade Crossings. The LPA includes predominantly at-grade crossings along existing streets. The exceptions are at the following portions of the LPA alignment; the existing Metro Blue Line subway tunnel in Downtown Los Angeles and new grade separations at La Brea Avenue and La Cienega Boulevard. In both the at-grade and grade separated conditions, the design of the crossings is governed by the requirements of the California Public Utilities Commission (CPUC).

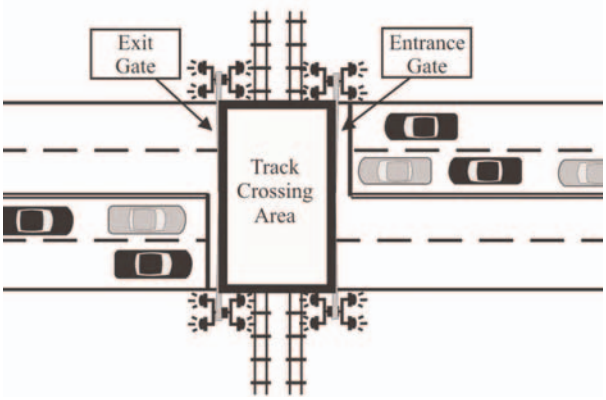
At-grade and grade separated crossings have been determined using the adopted Metro Grade Crossing Policy for LRT. This policy provides a uniform approach to analyze crossings for feasibility of LRT operations at-grade. The City of Los Angeles, Culver City, Caltrans and the California Public Utilities Commission (CPUC) made input regarding crossing evaluation using this Policy. The La Cienega segment of the alignment is shown grade separated in the Draft EIS/EIR and is also part of all Jefferson Boulevard Design Options described under S-6 Design Options to the LPA in this Executive Summary. Design options for other grade separations are also described in the same section.

Pedestrian and Motorist Safety. A variety of techniques are available for enhancing pedestrian safety at light rail at-grade crossings. Warning signals range in height, placement, and mode in an effort to capture the pedestrian's attention. The Project incorporates passive signing, pavement marking, and barrier channelization which includes active warning devices, swing gates, and pedestrian gates into its pedestrian safety approach.

Safety features will also be incorporated into the Project to provide an increased level of safety for motorists at LRT crossings. One of the leading causes of collisions between trains and cars at grade crossings controlled by gate arms is cars driving around lowered gate arms. The classic, "drive-around" gate violation is an "S" turn maneuver made along the cross street. In addition, inattentive drivers may make left turns from unsignalized frontage roads or driveways around the tips of lowered gate arms. Various measures can be taken to deter or prevent motorists from intentionally driving around the lowered automatic gates arms. Those safety measures include installing a raised median, installing large pavement buttons or flexible bollards, and installing four-quadrant gates

Pedestrian passive signing and pavement marking

Pedestrian automatic gates and swing gates



Example of four-quadrant gates at an LRT crossing

Initial year Parking facilities will be provided at the Crenshaw Station with capacity for approximately 400 vehicles, at the La Cienega Station with capacity for approximately 500 vehicles, and at the Venice/Robertson Station with capacity for approximately 600 vehicles. The Crenshaw and Venice/Robertson Stations will use surface parking lots, and a multi-level parking structure and surface lot will be used at the La Cienega Station. Year 2020 parking demand could be reduced for this Project if the light rail line is extended further west to Santa Monica in the future.

Parking Facilities. Planning studies indicate that approximately 27 percent of patrons would arrive at the various stations in private automobiles. The projected ridership demand calls for approximately 1500 parking spaces for initial operations and up to 2,243 parking spaces in the year 2020, concentrated in the Mid Corridor and West End segments of the route. Transit Centers are also located within or adjacent to Parking Facilities at La Cienega and Venice Robertson Stations.

A vision concept at La Cienega Station for a six-level parking structure with a ground floor transit center is shown. The view shown below is a vision for the parking facility and transit center looking south towards Baldwin Hills.

Bikeway and Bicycle Facilities. The Project would also incorporate a bikeway that will parallel the length of the LRT alignment from Vermont Station near the University of Southern California campus to the Venice/Robertson Station in Culver City. Class II (on-street) bike lanes will run from Vermont Station to Ballona Creek for a distance of almost five miles. The bike lanes will transition into a Class I (off-street) bike path from Ballona Creek to Washington Boulevard for a distance of 0.6 miles. The bike path will transition towards the Venice/Robertson Station via a Class III bike route at Washington Boulevard. In total, the bike path included in the Project would be just over five and a half miles. These bike facilities would provide connections to the existing Ballona Creek Bike Path and Venice Boulevard Bike Path, as well as to the future Exposition West Bike Path that will be on the Exposition ROW northwest of Venice Boulevard to Sepulveda Boulevard.

Bicycle racks and lockers will be provided at every station along the alignment with the exception of the 7th Street/Metro Center Station. At least 10 racks will be located within easy access to each station entrance and 4 secure bicycle lockers will be provided at stations without Parking Facilities.

Examples of bikeway facilities: Bikepath (off-street) shown at top; Bike lane (on-street) shown above

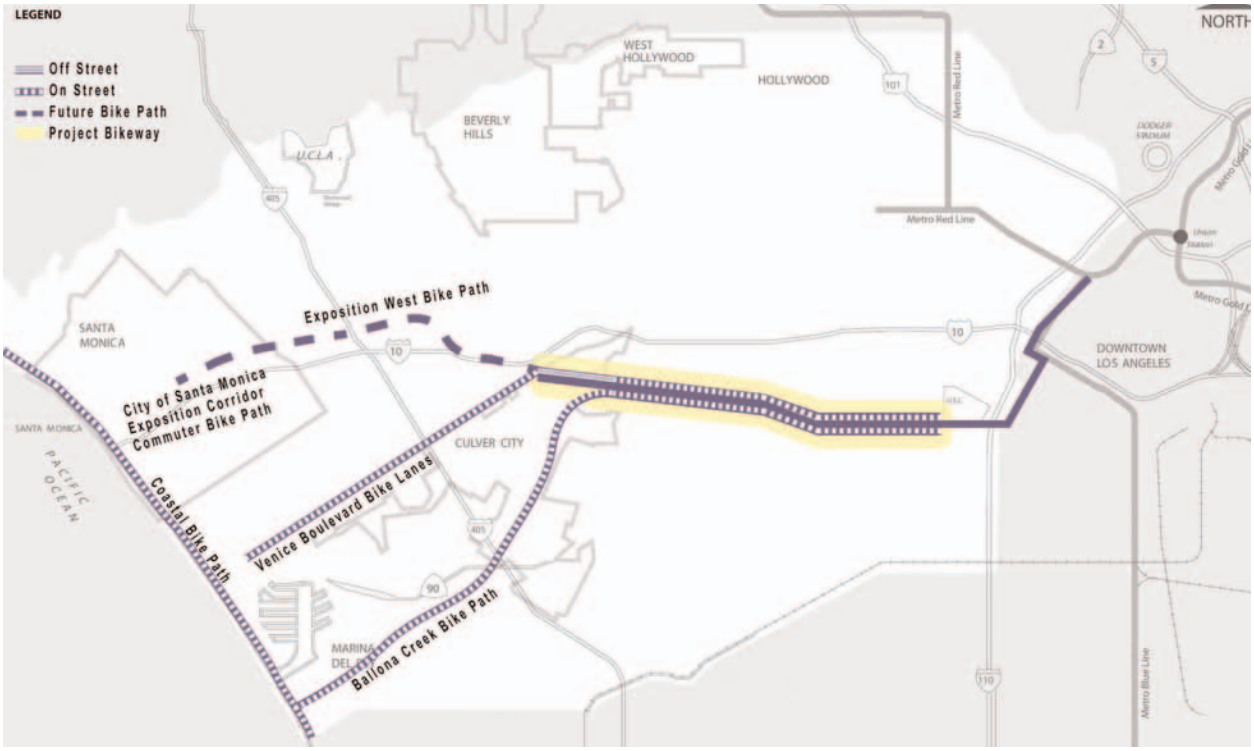
Examples of bicycle facilities used worldwide:

Transit station bicycle locker facility shown above

Bike racks at LRT station in Paris

Bikestation in Long Beach

The LPA with Bicycle Facilities. The Project's bikeway runs from Vermont Station to Venice/Robertson Station.



Connections to the Metro Bikeway system in the Mid City/Westside Study Area

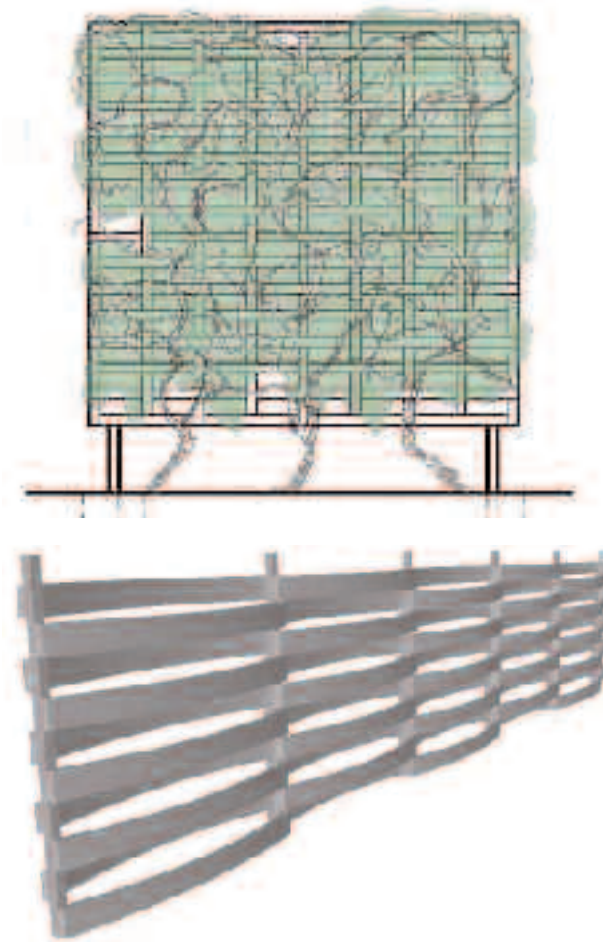
Landscaping Plan The Exposition Transit Parkway focuses on improved landscape design throughout the corridor. The goal of this landscaping plan is to implement the Exposition Transit Parkway using landscape concepts, which would:

- Create a distinct and positive image to the neighborhoods along the alignment.
- Provide a sustainable alignment;
- Be reasonable to maintain; and
- Be economical to build;

The landscape installations for the Exposition Transit Parkway are designed to enhance and invite customers onto the system. Improvements may include extensive plantings, earthen berms, enhanced fencing, landscaped-veiled structural walls, sound walls and fencing, an other features. These installations will mitigate the visual impacts of the alignment. Wherever possible, all of the landscape elements will be designed with input from the Lead Artist so that landscape and structure appear thematically woven together. Woven decorative patterns conceptualized by the Lead Artist may also be incorporated into the design of structural walls, sound walls and fencing. While also creating a sculptural interest, the elements may also help deter graffiti.

Stations and bridges will be landscaped efficiently wherever possible, including in restricted, elevated spaces such as hills and walls. This will further reduce visual impact and will reinforce the image of a cohesive green corridor. The color, texture and massing of trees and plantings will create visual interest to passengers and will screen undesirable views from residential areas. The trees, shrubs and ground covers suggested in the landscaping plan have been recommended for their longevity, low maintenance requirements and drought tolerance.

Local needs of residential and other property owners will be taken into consideration in providing adequate screening and buffering adjacent to the Project. Where feasible, planting and woven patterns conceptualized by the Lead Artist may cover large unadorned walls, and would be used to screen light rail equipment such as valves, transformers, electrical substations and other mechanical devices that may visually impact residents. These measures will further help deter graffiti, especially in difficult to supervise areas. Walkways and linkages from adjacent neighborhoods will be enhanced to reinforce neighborhood places and signal the act of arrival at stations. Levels of landscaping provided by the Project would be consistent with the landscape levels provided for Metro Orange Line and Metro Gold line (Pasadena).

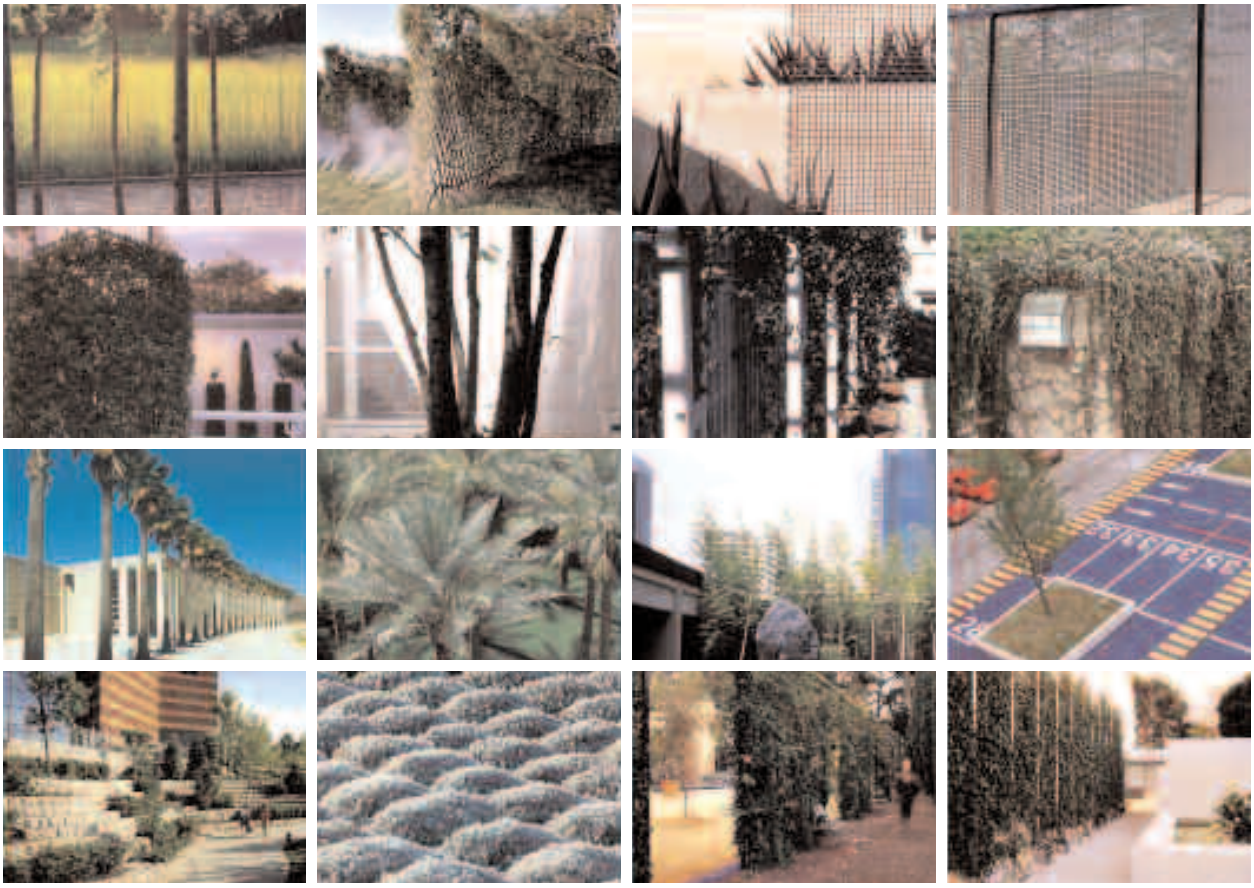


Landscape, Public Art and Other Transit Parkway Improvements: Planting Armature and Modular Fencing System

Planting Armature

Espalier, Row of Trees

Earthen berms for sound attenuation



The above imagery was used as a reference to develop preliminary landscape strategies for the Exposition Transit Parkway

Public Art In support of the EIR effort, Metro has commissioned a Lead Artist to work with the Project's Design Team to develop relevant, integrated public art opportunities with a cohesive aesthetic. With the Lead Artist's input, the concept of "weaving" the structural and landscaped elements of the Parkway has been developed during PE and will require further refinement during Design/Build. Due to the unique nature of art and the significance of operational impacts, and in order to ensure curatorial appropriateness, the public art program must be implemented and managed during the Design/Build phase of this project by experts in both the public art field and public transportation (see Visual Quality Section of this document).

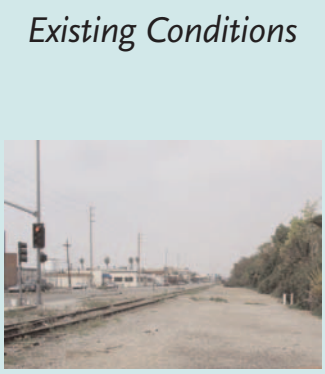
System Wide Elements to be designed with Lead Artist input include: Canopies, Entry Sculptures, Bridges, Sound Walls, Structural Walls and Fences, and Bikeway: (see Bikeway and Bicycle Facilities section)

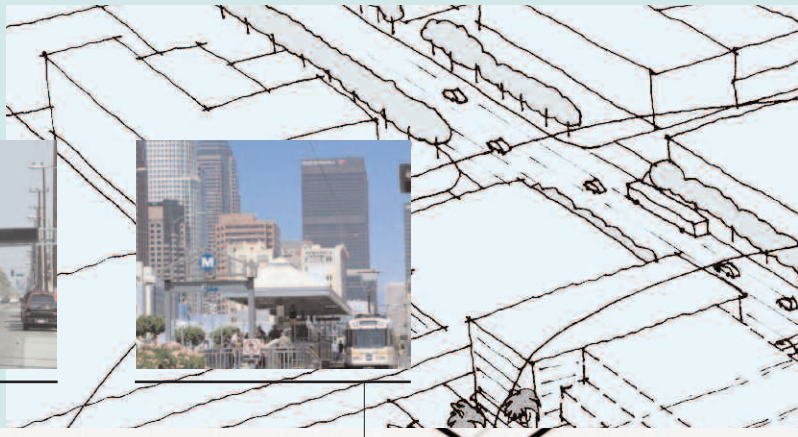
In addition to the Lead Artist who will work on the system wide elements, individual Station Artists will be contracted at a later date to design, fabricate and install feature artworks for each individual station. Station Artist projects will address the environmental and cultural contexts of their appointed station.

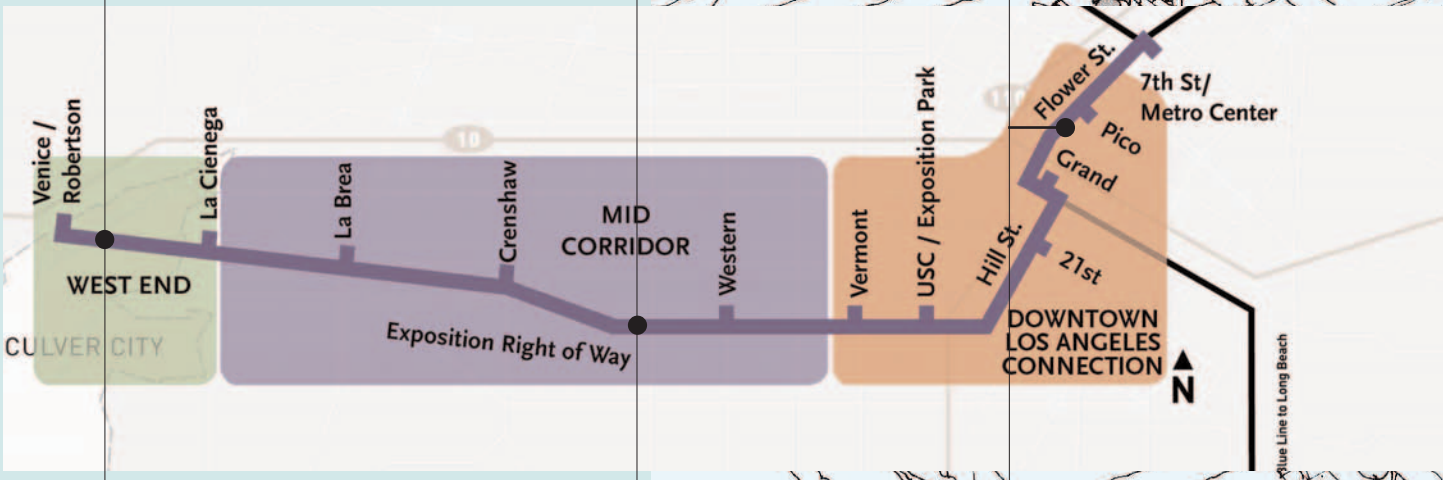
Station Artist Opportunities at a minimum will include: Paving, and Sculptural Elements.

The Project's Lead Artist would coordinate the numerous opportunities afforded by the scope of the Project to create public works of art. A creative approach would be applied to the functional features of the light rail so that conventional items such as sidewalk paving, station entries and exits, canopies, and lighting systems can take on interesting and attractive aesthetic qualities. Such an approach would establish a thematic context from station to station, yet allow enough room for the creation of visual diversity throughout the parkway.

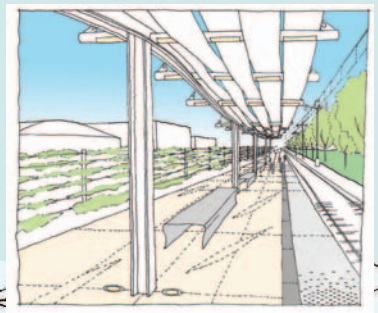
Existing Conditions



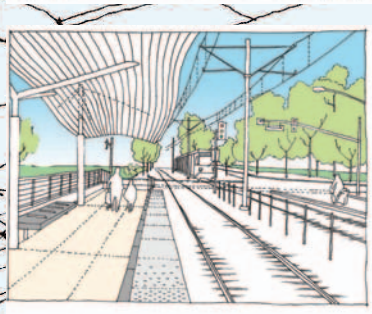




Route Alignment and Guideway



Stations



Exposition Transit Parkway

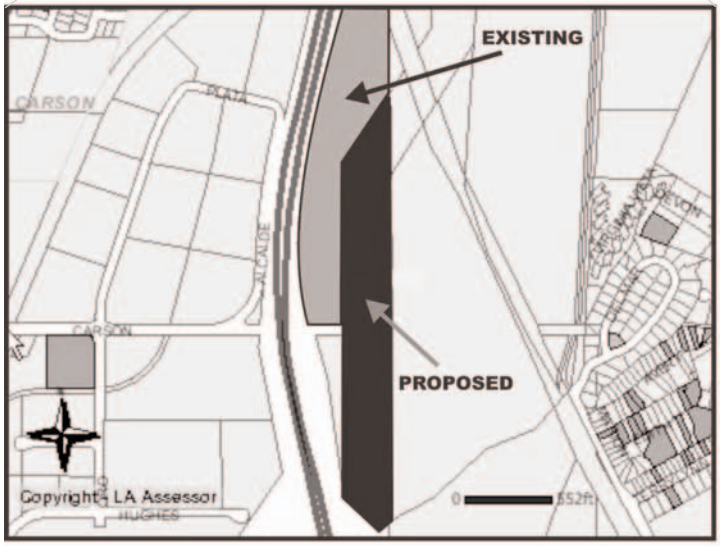
Operations and Maintenance Facility

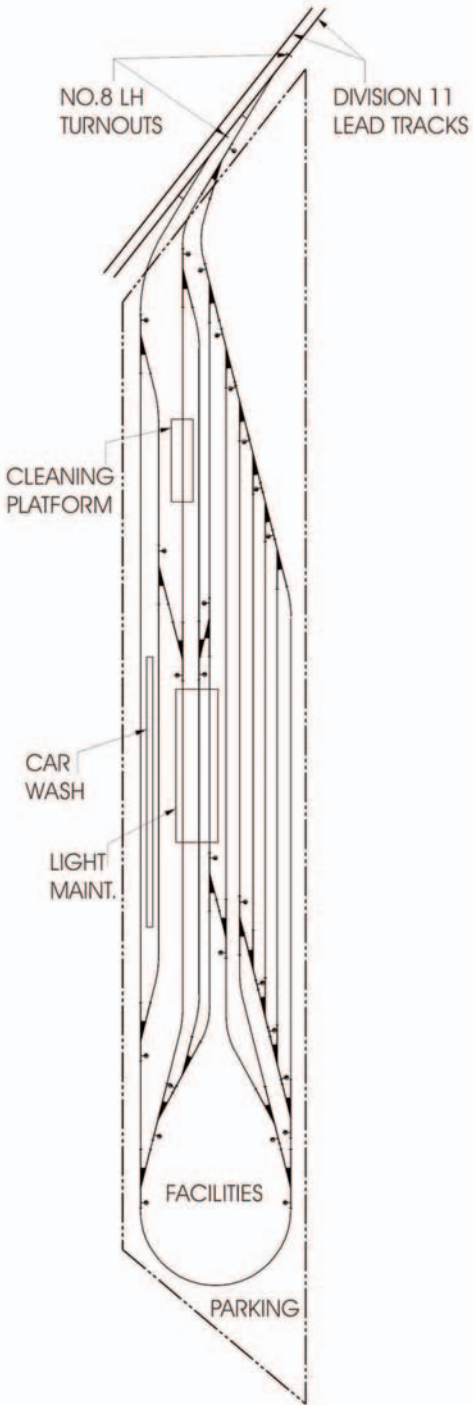
Division 11 Expansion. Short-term and long-term maintenance, including major repairs and more complicated minor repairs and routine maintenance, will take place at the existing Division 11 facility in Carson, California. The facility is located approximately 16.5 miles from the project route. The Division 11 facility will be expanded by approximately 8.5 acres to accommodate facilities for an eventual fleet of at least 31 Exposition LRT vehicles. The additional space is needed not only for vehicle storage and repair, but also for administrative and functional uses including offices, materials, tools, parts storage, and communications equipment rooms. The size and configuration of this site is conducive to the efficient operation of all maintenance activities.

Mid-day Layover Facility For the temporary storage of LRT vehicles, a mid-day layover site would be established in an industrial area south of Downtown Los Angeles. A short section of abandoned rail ROW from Union Pacific Railroad would be provided for midday storage. The proposed track purchase is approximately 10 miles closer to the Mid-City/Exposition LRT alignment than Division 11 in Carson.

Mid-day Layover Facility adjacent to Metro Blue Line tracks at Long Beach Blvd. and Washington Blvd.

Vicinity Map of Division 11





Site Location Plan
Existing Division 11 & Proposed Expansion
This is a representative illustration subject to revision during Final Design.

S-6 Design Options to the LPA

During the Draft EIS/EIR circulation period, a number of comments were received regarding the route alignment in Downtown Los Angeles. Particularly, the City of Los Angeles Department of Transportation (LADOT) commented that adding a second LRT line on top of the existing Washington Boulevard segment of the existing Metro Blue Line would significantly impact north-south traffic on Grand Avenue and Hope Street by overtaxing the traffic signal timing progressions. Additional comments expressed concern regarding the proposed at-grade crossing of Jefferson Boulevard near Culver City. In response to these comments, three route alignment design options were developed in Downtown Los Angeles and two Jefferson Boulevard grade separation design options were developed for evaluation in the Final EIS/EIR.

Downtown Los Angeles Design Options - The Locally Preferred Alternative alignment that was approved by the MTA Board in 2001 follows the existing Metro Blue Line tracks from 7th/MetroCenter Station to Washington/Grand Station. The alignment diverges from the existing Metro Blue Line at Washington/Hill and proceeds south on Hill Street to the

Segment of Design Options on pages 31-33

Exposition right-of-way near 37th Street. Three design options were developed that would avoid the segment of Washington Boulevard. These include:

1. Hill Street Couplet Design Option - This alternative would carry the LRT east-west from Flower Street in a corridor between 17th and 18th Streets and provide a connection to Hill Street north of Washington Boulevard, thus eliminating additional LRT operations at this intersection.

2. Flower Street Design Option - This option would continue the LRT alignment along the east side of Flower Street until just south of Jefferson Boulevard where it would enter a 2,800-foot long undercrossing (of which 1,250 is fully depressed) passing under Figueroa Street and emerges about 400 feet west of the Exposition Boulevard/Figueroa Street intersection.

Table 2-3: Station Options – Downtown Los Angeles Connection Design Options, Station Locations and Types

Locally Preferred Alternative	Hill Street Couplet Design Option	Flower Street Design Option
Uses existing Pico Station	Uses existing Pico Station	Uses existing Pico Station
Uses existing Grand Station	N/A	N/A
New Hill Street and 21th Street Station center platform	New Hill Street and 21th Street Station split platform	New Flower Street and 23rd Street center platform stations
Designed not to preclude a future station at Hill Street and Jefferson Boulevard	Designed not to preclude a future station at Hill Street and Jefferson Boulevard or at 17th Street/18th Street/Grand Avenue	New Flower Street and Jefferson Boulevard split/side platform station
New USC/Exposition Park Station at Kinsey Drive	New USC/Exposition Park Station at Kinsey Drive	Optional New USC/Exposition Park Station at Kinsey Drive

Note: for station plans see Appendix A, bound separately.
SOURCE: Los Angeles Metropolitan Transit Authority, 2004

The LPA calls for track sharing with the existing Metro Blue Line on Flower St. from 7th St./Metro Center to Grand Station. The LPA's alignment would branch off of Metro Blue Line at Washington Blvd. and Hill St. and proceed south on Hill St. to the Exposition Right of Way.

These options were evaluated in coordination with LADOT during the preparation of the Metro Grade Crossing Policy for Light Rail Transit and during the preparation of preliminary engineering for the Mid-City Exposition LRT Project. In general, these studies concluded that the Flower Street Westside Design Option would most likely create unacceptable impacts on traffic unless the LRT operations were to accept significant delay. LADOT does not find this alternative acceptable.

The Locally Preferred Alternative at Downtown Los Angeles Connection segment

The Hill Street Couplet Design Option

The Hill Street Couplet Design Option and the Flower Street Design Option were generally preferred to the previously adopted LPA that follows Hill Street via Washington Boulevard. Should one of these design options to the LPA become part of the Project, new station locations would be added, or substituted for some of those in the LPA. Table S-1 summarizes the number and type of stations anticipated for each of the design options.

The Hill St. Couplet Design Option calls for track sharing with the existing Metro Blue Line on Flower St. from 7th St./Metro Center to the I-10 Santa Monica Freeway. The southbound portion of the alignment would then branch off just south of the freeway and run east on 18th St. The southbound portion would then join the double-track alignment on Hill St. and proceed south to the Exposition Right of Way. Northbound trains would branch off of Hill St. at 17th St. and proceed west to join the existing Metro Blue Line tracks at Flower St. The alignment would then follow the existing tracks to 7th St. Metro Center.

Flower Street Design Option: the LRT alignment would run along the east side of Flower Street until just south of Jefferson Boulevard where it would enter a 2,290 foot long undercrossing, of which 1,250 feet will be fully depressed. The undercrossing would contain the LRT trackway in an open trench configuration, approximately 20 feet below grade and portals at either end of the undercrossing. Existing street intersections will bridge over the undercrossing at Flower Street, Figueroa Street and Pardee Way.

In response to urban design concerns at USC and Exposition Park, several undercrossing options have been included as part of the Flower Street Design Option. Each undercrossing option considers the length of the undercrossing, the LRT portal location between these institutions, the height and extent of safety walls and screens used to line the LRT portal and open undercrossing and the option to include the USC/Exposition Park Station, to address pedestrian access, circulation and view corridor issues across USC and Exposition Park. Pedestrian and vehicular access and views are maintained at Kinsey Drive. Full pedestrian access and views are maintained at a proposed Trousdale Circle, connecting Trousdale Way to the Rose Garden. These undercrossing options are:

USC/Exposition Park Undercrossing Option: The USC/Exposition Park Station is included in this option between Kinsey Drive and Trousdale Circle. The safety wall and screen will surround the open undercrossing from Flower Street to east of Pardee Way. The LRT portal with safety walls is located west of Pardee Way. The safety wall transitions to a lower height from LRT portal to the USC/Exposition Park station platform. The total length of safety wall from LRT portal to the USC/Exposition Park Station is 800 feet.

USC/Exposition Park Modified Undercrossing - The USC/Exposition Park Station is not included in this option. This design option would follow the same alignment as the USC/Exposition Park Undercrossing described above. The open undercrossing will be covered. Safety walls and screens would line the LRT portal west of Pardee Way to a point immediately west of Kinsey Drive. The length of the safety wall would be approximately 500 feet in length.

USC/Exposition Park Extended Undercrossing - The USC/Exposition Park Station is not included in this option. This design option would also follow the same alignment as the two previous options except for an extended undercrossing of an additional 1,070 feet to the west as compared to the above options. The undercrossing would also be covered. The LRT portal and safety wall are located west of the proposed Trousdale Circle. The safety wall would continue from LRT portal to grade alignment at Watt Way. The length of the safety wall would span 580 feet from LRT portal west of Trousdale Circle to Watt Way. At-grade pedestrian and vehicular access would be maintained at Watt Way.

Full description of the undercrossing options is located in Chapter 2.4 Description of LRT Build Alternative Considered in this Final EIS/EIR.

The Flower Street Design Option

Jefferson Boulevard Design Options – The currently proposed grade separation for La Cienega Boulevard, referred to as Option B, is an aerial bridge structure with aerial station that would extend over La Cienega Boulevard and return to grade just east of Jefferson Boulevard. The light rail line would cross Jefferson Boulevard at-grade and cross over the Ballona Creek on a new bridge that would be constructed to replace an existing historic railroad bridge.

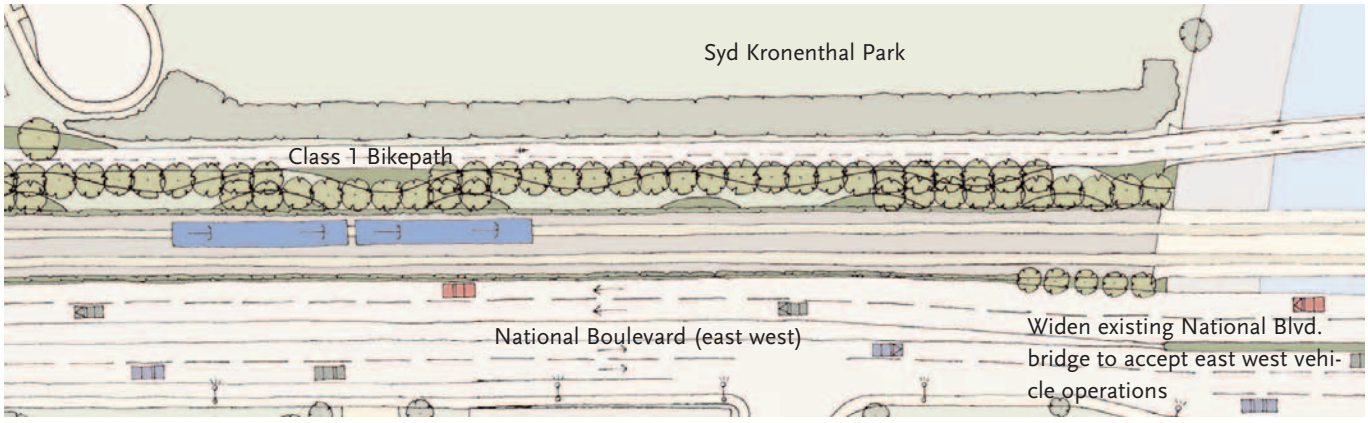
Also for consideration in this document is the Medium Bridge Design Option. This section also includes a North Widening option and a South Widening option at Jefferson and La Cienega Boulevards. See pages 34-37.

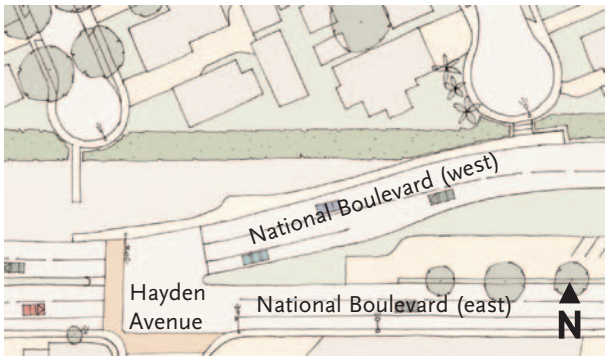
The environmental effects of the design option of the proposed options are evaluated in Chapter 4.0 Affected Environment and Environmental Consequences of the Final EIS/EIR.

Segment of Design Options on pages 34-37

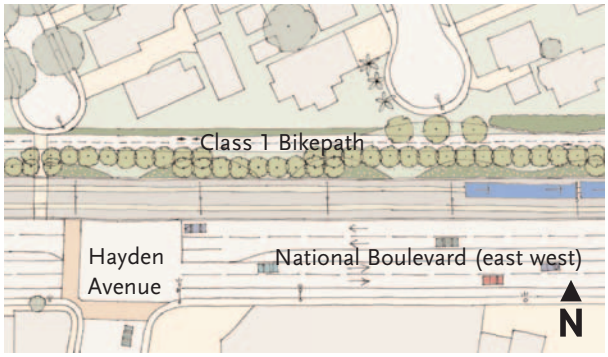
Vicinity Plan of Jefferson Boulevard Design Options

Site Plan Option B - Preliminary Engineering Short Bridge





Existing Conditions at Hayden Avenue

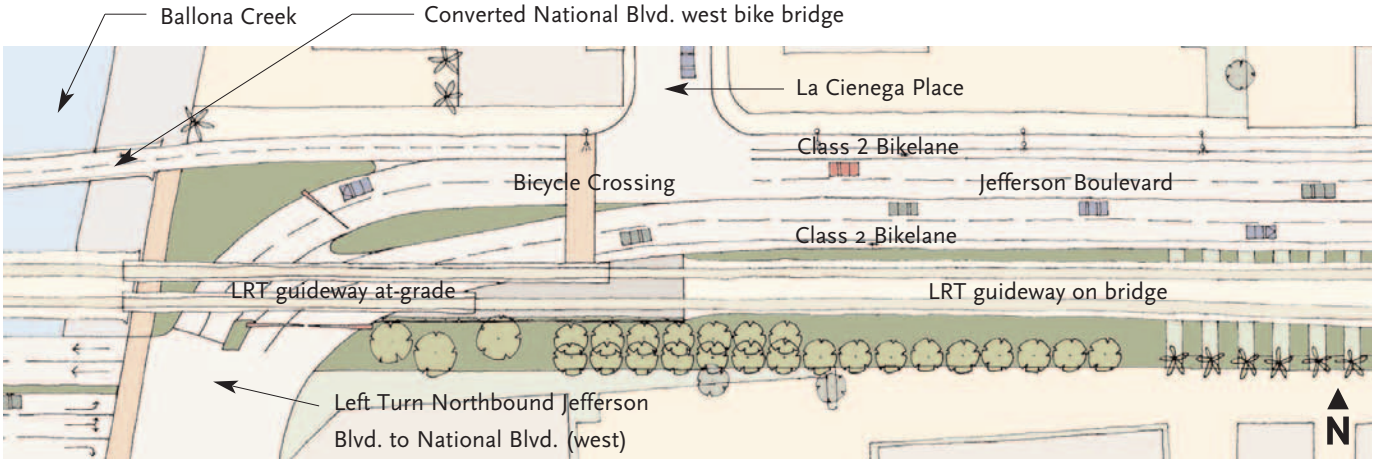


LPA and all Jefferson Boulevard Design Options

Elimination of Hayden Crossing

The LPA and all Jefferson Boulevard Design Options call for the removal of the Hayden Avenue crossing in Culver City. The removal of this crossing will be done as part of combining both National Boulevard east and National Boulevard west in Culver City into one National Boulevard serving both directions. To achieve this objective, the following design strategies are used:

- *Combine National Boulevard east and west east of Ballona Creek at Jefferson Boulevard or further east (see LPA and Options C and D site plans)*
- *Convert the current National Boulevard west bridge over Ballona Creek as a bicycle bridge*
- *Convert the current National Boulevard west into a Class 1 bikepath as part of the Exposition Transit Parkway*
- *Create a new left turn lane northbound from Jefferson Boulevard north south to newly combined National Boulevard east west.*

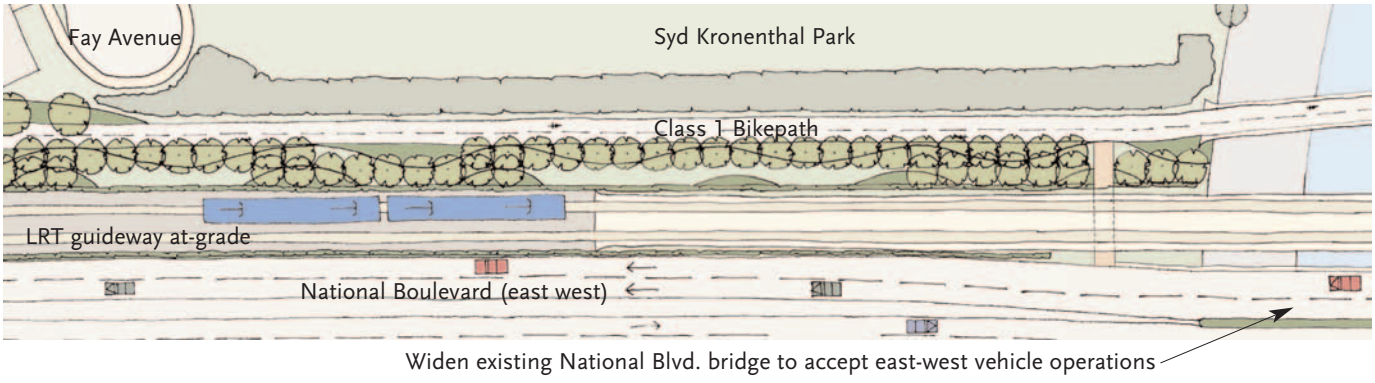


Medium Bridge Design Option – This option would extend the existing La Cienega aerial structure to allow a grade separation over Jefferson Boulevard. The bridge would be approximately 2,970 feet long. The aerial structure would run adjacent to Syd Kronenthal Park then return to grade on the west side of Ballona Creek just east of Fay Avenue, thereby keeping the aerial structure away from the McManus neighborhood homes. Under this design option, the existing historic railroad bridge is maintained.

North Widening – Jefferson Boulevard to the north at La Cienega and Jefferson Boulevards would be widened to accommodate additional turning and through traffic lanes on Jefferson Boulevard. Land acquisition would occur at this corner. The aerial structure of the Medium Bridge Design Option would run directly over Jefferson Boulevard at certain segments.

South Widening – Jefferson Boulevard would be widened to accommodate additional traffic movements. No land acquisition would occur to the south of Jefferson Boulevard and La Cienega. The Medium Bridge Design Option would extend 300 feet to the west. An eastbound right-turn lane on Jefferson Boulevard would be constructed under the bridge.

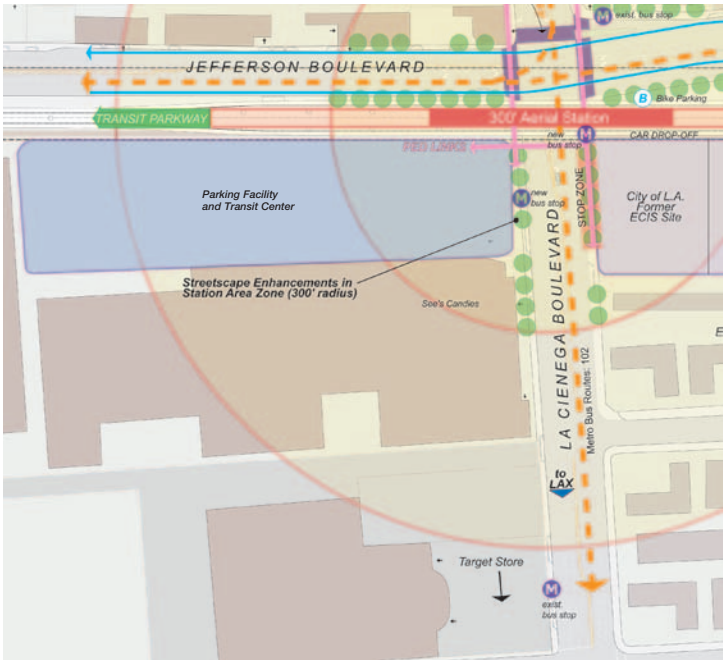
Site Plan Medium Bridge Design Option



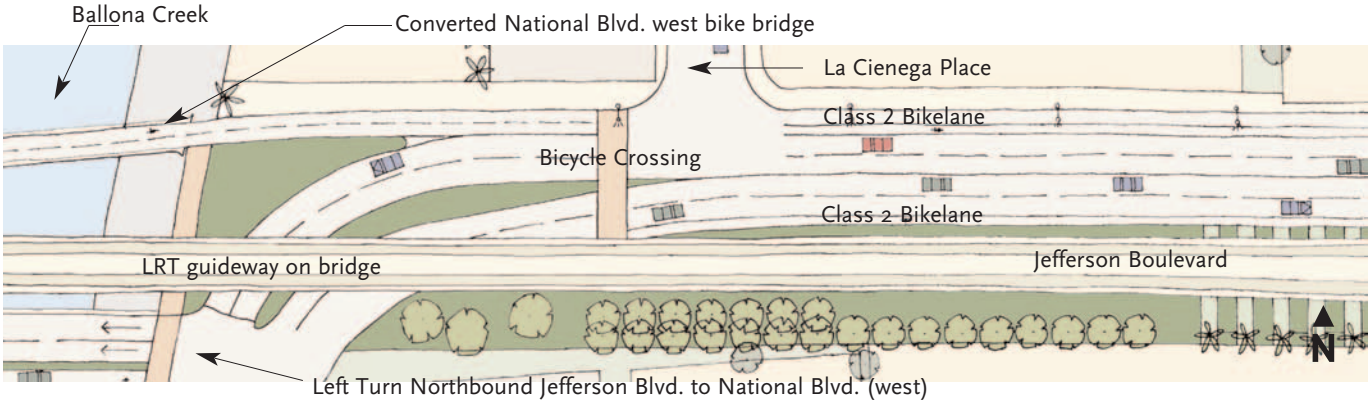
La Cienega Station Parking Options – The current Parking Facility proposed for the La Cienega Station under the LPA is on a City of Los Angeles owned site. Also for consideration in this document are the following options:

Southwest Corner Option – The Southwest Corner option would construct a 530-space parking facility with transit center. The parking facility would provide parking in a structure to meet expected initial and year 2020 parking demand at the La Cienega station. The transit center will include both off-street and on-street transit centers as part of this design option.

No Parking Option – The No Parking option would shift the La Cienega Station parking demand to other station locations where parking maybe provided. For example, the demand could be shifted to the Venice/Robertson Station, La Brea Station or Crenshaw station. At Crenshaw station, a new parking structure could be provided within the station vicinity, to meet this demand.



Site Plan Southwest Corner Option



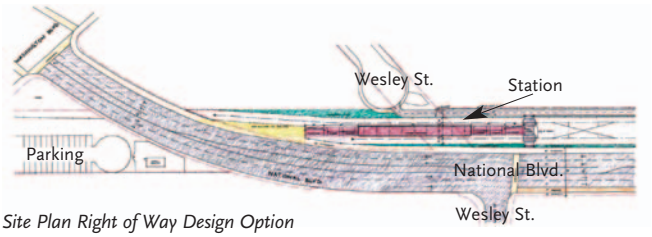
Venice/Robertson Station Design Options – The City of Culver City has expressed concern that at-grade LRT operations west of Washington and National Boulevards to the Venice/Robertson station listed in the LPA would adversely impact traffic operations at these intersections. To address these issues, the following design options are considered:

Right of Way Design Option – These options have been developed for an interim at-grade station located north of the Exposition ROW, east of National Boulevard in the vicinity of Wesley Street.

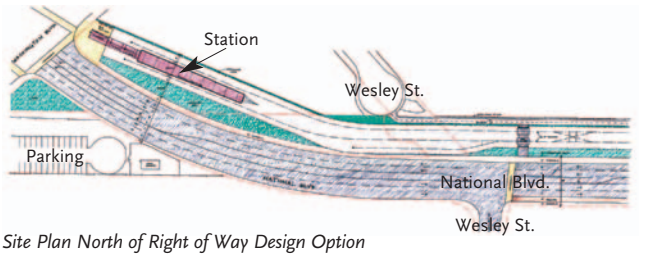
North of Right of Way Design Options – An interim at-grade station located north of the Exposition ROW, east of National Boulevard and west of Wesley Street.

Aerial Station Design Option – This is a grade separated aerial station on a bridge located within the same station site area as the LPA.

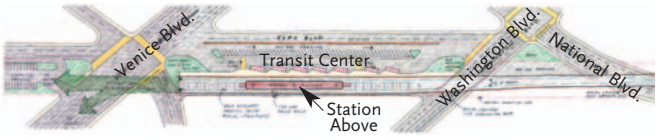
Full description of the Venice/Robertson Station Design Options is located in Chapter 2.4 Description of LRT Build Alternative Considered in this Final EIS/EIR.



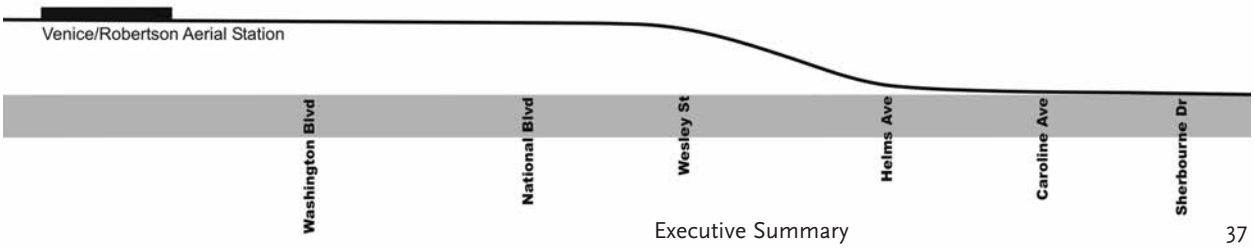
Site Plan Right of Way Design Option



Site Plan North of Right of Way Design Option



Site Plan Aerial Station Design Option



S-7 Ridership Forecast

For all project alternatives, ridership is a function of travel time and cost. All else being equal, the faster technologies attract more riders. Longer segments have higher ridership because they serve a larger area, incorporate more stations, and potentially reduce transfers. Alignment choice also affects ridership, as does the amount of delay at intersections, which is affected by the amount of signal priority that can be assumed for an alternative.

Ridership has been estimated for each alternative through the Metro's travel simulation model, based on the forecast year 2020. Individual model runs were performed for the following scenarios:

- No Action
- Transportation Systems Management (TSM)
- Mid City/Exposition Light Rail Transit

The projected ridership for the project is shown on Table S-1 below. The "boardings" column represents the number of passengers expected to use the system within the study area, that is, board and disembark at stations constructed as part of the Mid City/Exposition LRT project. While boardings give an indication of transit activity, these numbers should not be used in trying to assess how many new riders are attracted to transit since a single rider may need to transfer one or more times, accounting for more than one boarding to complete a single trip. Boardings also include current bus riders switching to rail as well as new transit users. The incremental linked trips column is the appropriate measure for determining the number of additional riders, since this measure deals with "linked" (end-to-end) trips not previously on the transit system. Incremental linked trips are reported for each alternative as increments over the No Action and TSM alternatives. The TSM alternative would make minor improvements to transit services and develop rapid bus service in the Exposition corridor, but would not construct a fixed guideway. It provides a baseline for comparative analysis of the proposed project.

Table S-1: Ridership in Year 2020

Alternative	Daily Fixed Guideway Boardings	Incremental Linked Trips (Daily)	
		To No Action	To TSM
TSM	N/A	2000	N/A
Mid-City/Exposition LRT	43,600	22,200	20,200
SOURCE: Metro Transportation Demand Model 2003			

The TSM alternative (which makes minor improvements to transit services and provides rapid bus service in the Exposition corridor) leads to a very modest increase in new ridership, with about 2,000 additional daily transit riders. The Mid City/Exposition LRT alternative has far greater potential to attract new ridership, adding over 22,000 new daily transit trips compared to No Action.

Staples Center

Los Angeles Coliseum

S-8 Financial Analysis

The cost of a transportation investment falls into two categories: capital costs, and operating and maintenance (O&M) costs. Capital costs are the start-up costs for the proposed project, including the costs of guideway construction, vehicles, and any system facilities necessary before the project can begin operation. Operating and maintenance costs are the costs associated with the regular running of a new transportation facility. Costs such as labor, vehicle maintenance, and overall facility maintenance fall into this category.

Capital Costs

Capital costs are the expenses associated with design and construction and include acquisition of right-of-way, guideway and station construction, environmental mitigation and urban design, parking facilities, vehicles, and system equipment and maintenance facilities. Capital costs will be refined as more detailed design and engineering is completed.

Table S-2 provides the capital cost estimate for the Locally Preferred Alternative (LPA) that was adopted by the Metro Board of Directors in June 2001, as well as the Flower Street Design Option as recommended by Metro staff.

Table S-2: Capital Cost Estimate for Mid-City/Exposition LRT (in year of expenditure millions of dollars)

Mid-City/Exposition LRT	Original LPA[a]	Revised LPA (Metro Staff Recommendation)[b]
Construction Elements (Guideway, Track, Stations, Systems,Yards/Shops, Special Conditions, Sitework, Art Program)	$283.8	$313.3
Right-of-Way, Land	$32.3	$33.3
Vehicles (16 Light Rail Vehicles)	$40.4	$40.4
Indirect Costs	$79.9	$79.9
Contingency	$65.3	$71.7
Escalation	$88.0	$96.2
Subtotal Year of Expenditure Dollars (millions)	**$589.9**	**$635.0**
Bikeway	$5.0	$5.0
Total Year of Expenditure Dollars (millions)	**$594.9**	**$640.0**

[a] Original LPA was adopted by the Metro Board of Directors in June 2001. It follows Hill Street in Downtown Los Angeles and includes grade separations at La Brea Avenue and La Cienega Boulevard.

[b] The Revised LPA (Metro Staff Recommendation) follows Flower Street in Downtown Los Angeles and includes grade separations at Figueroa Street, La Brea Avenue, La Cienega Boulevard, and Jefferson Boulevard. The Venice/Robertson station design option is located east of National Boulevard on the existing ROW.

The destinations shown below are representative of development activities occurring in the last 4 years within walking distance to each Mid City/Exposition LRT Station.

The California Science Center at Exposition Park

Foshay Middle School

Operating and Maintenance Costs

Operating and Maintenance (O&M) costs were determined using the Metro's O&M cost model. This cost model was developed to estimate O&M costs for Metro's bus, Metro Blue, Green, Gold and Red Line operating modes, as well as support department costs related to operations. The model takes numerous variables into consideration including annual boardings, total route miles, total stations, and annual revenue per train hour of operation. Even though Metro operating costs have been used for purposes of analysis in this section, no determination has been made about who would operate any such new service. Either Metro or other municipal operators could provide all or parts of this new service.

O&M costs were estimated for the Mid-City/Exposition LRT Project are estimated at $24.8 million per year. Metro O&M bus costs could increase from $4 to 8.8 million to modify Metro bus service to support the LRT service

Funding Sources

Table S-3 lists the anticipated source of capital funds and the expected amount (in future years of expenditure dollars) for the Mid-City/Exposition LRT project. Under this plan, $243.6 million (38%) come from Federal sources, $385.4 million (60%) are expected from Local sources and about 2 percent provided by State of California sources.

Table S-3: Proposed Funding Plan for Mid-City/Exposition LRT Project (Millions, in Year of Expenditure Dollars 2004-2014)

Funding Source	Year of Expenditure Dollars 2003-2012 (Millions)	
	Amount	Total
Transportation Enhancement Act Funds (TEA) Section 5309 Bus Facilities/Other Discretionary Allocations Congestion Mitigation & Air Quality Funds (CMAQ) **Subtotal Federal Sources**	$13.6 $15.0 $215.0	**$243.6 (38%)**
Traffic Congestion Relief Program (TCRP) **Subtotal State Sources**	**$11.0**	**$11.0 (2%)**
Proposition C 10% Proposition C 25% Local Contribution from Others Subtotal Local Sources	$4.2 $331.2 $50.0	$385.4 (60%)
TOTAL (ALL FUNDING SOURCES)	**$640.0**	**$640.0 (100%)**
SOURCE: Metro Full Funding Plan, April 2005.		

The cash flow results indicate that Metro has the financial capacity to build and operate the Mid City/Exposition LRT project.

West Angeles Cathedral

Culver Hotel

S-9 Resolution of Project Issues

The California Environmental Quality Act requires that areas of controversy or issues to be resolved be identified as part of the public environmental record. The Draft EIS/EIR identified eleven such issues that were affecting the various communities, civic organizations and agencies with jurisdiction within the project corridor. Six of these issues affected the Wilshire Bus Rapid Transit Project and were addressed separately in the Final EIR, which was certified for that project in August 2002. Of the remaining five issues, one of them addressed the alignment of the Exposition Transit Corridor in the western segment between Culver City and Santa Monica and is therefore no longer a part of the adopted Locally Preferred Alternative. The resolutions of the remaining four issues are addressed below, in addition to two additional issues (Noise & Vibration and Loss of Landscaping) that were more fully identified during the Public Hearings on the Draft EIS/EIR document.

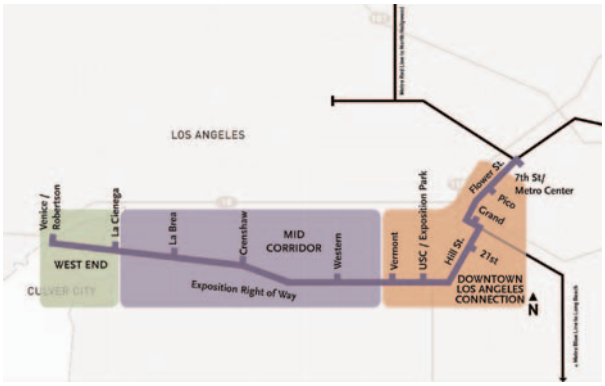
Issue #1 At-Grade Alignment
Issue #2 USC/Exposition Park Subway

The Exposition LRT Alternative 3A in the Draft EIS/EIR, which became the Locally Preferred Alternative (LPA), included one aerial grade separation at La Cienega Boulevard. The remainder of the alignment was designed to operate in an at-grade configuration.

As part of the Board consideration of the Draft EIS/EIR and adoption of the LPA, several communities asked that subway configurations be considered in residential areas and that additional grade separations be considered to reduce impacts. There was concern that decisions regarding where to provide grade separations should be made on an equitable basis.

In order to address the equity of grade separations and below-ground segments, the Metro Board of Directors directed that a "LRT Grade Crossing Policy" be developed so that a systematic evaluation could be performed for the Exposition LRT and future light rail projects throughout Los Angeles County.

The "Metro Grade Crossing Policy for Light Rail Transit" was subsequently developed and adopted by the Board in December 2003. Through application of the adopted policy, the Board approved selected additional grade separations and some conditions under which additional grade-separations could be provided. These additional crossings include the following:



The map shown at top indicates that crossings at all segments of the alignment have been studied using the adopted Grade Crossing Policy for Light Rail Transit.

The map above indicates that out of the fifty intersections studied using the Grade Crossing Policy for LRT, fourteen intersections would have impacts requiring a higher level of study using the Policy. Out of the higher level study, two intersections have grade separations. Additional analysis using the Policy would recommend the possibility of additional grade separations as discussed in this section.

1. La Brea Avenue – The Metro Board determined that La Brea Avenue should be grade-separated, in addition to the previously approved grade-separation at La Cienega Boulevard.

2. Venice/Washington/National Boulevard Segment – Although the LPA's terminus station at Venice/Robertson does not cross Venice Boulevard, the Grade Crossing Policy recommendations determined that, in the future, if the

Exposition LRT were extended to the west, Venice Boulevard would require grade-separation. In order for a grade separation to be constructed at Venice Boulevard, nearby at-grade crossings at Washington and National Boulevards, which are currently within the LPA alignment, would also require grade-separation in the future. The current LPA design therefore, includes an interim at-grade station at Venice/Robertson with at-grade crossings at Washington and National Boulevards, with the understanding that if the line is extended to the west in the future, that an aerial station and aerial grade-separations would need to be provided at Venice, Washington and National Boulevards.

3. Figueroa/Flower/Vermont - The Grade Crossing Policy evaluated the planned light rail crossing at Figueroa Street, Flower Street and Vermont Avenue and determined that at-grade crossings would be possible, primarily because trains in the Downtown area would run at street running speeds and will not operate with gated-crossings or other equipment required for higher speed operation. As a result, no tunnel option has been recommended in the vicinity of USC/Exposition Park as a part of the adopted LPA (Hill Street Downtown alignment).

A grade-separation is recommended however with the Flower Street Eastside Design Option (see Section S-6). If the Flower Street alignment is adopted, as recommended by the City of Los Angeles Department of Transportation, a grade-separated undercrossing is recommended from Jefferson Boulevard to Trousdale Circle over a distance of approximately 2,800 feet (with 1,250 feet fully depressed). No subway is recommended adjacent to USC/Exposition Park under any of the design options or LPA alignment configurations.

4. Jefferson Boulevard - The Grade Crossing Policy evaluated the planned at-grade crossing at Jefferson Boulevard and determined that such a crossing could be possible, however, because of its close proximity to the approved grade-separation at La Cienega, should be considered for grade-separation. As a result, two alternatives have been developed as a part of this Final EIS/EIR to extend the La Cienega bridge structure to include a LRT crossing over Jefferson Boulevard. As described in Section S-6, a grade-separation at the location could be provided at much lower cost than at other locations because it could be constructed by simply extending the La Cienega Bridge and therefore may be a cost-effective option to increase safety and reduce running times of the LRT.

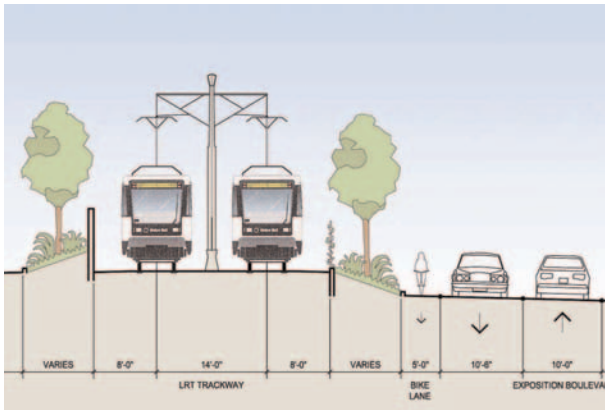
5. Other Crossings and Alignments in Mid-Corridor and West End Segments - In addition to grade-separations, alignment designs for the West End Segment in Culver City call for a graded parkway and berms to provide greater separation between the light rail tracks and adjacent residential neighborhoods. A similar alignment design using berms and sound walls is proposed for the Mid-Corridor segment in the Crenshaw Station. The light rail alignment is also proposed to operate at Crenshaw station at-grade.

Location of Issue #2 Equity of At-Grade Alignment

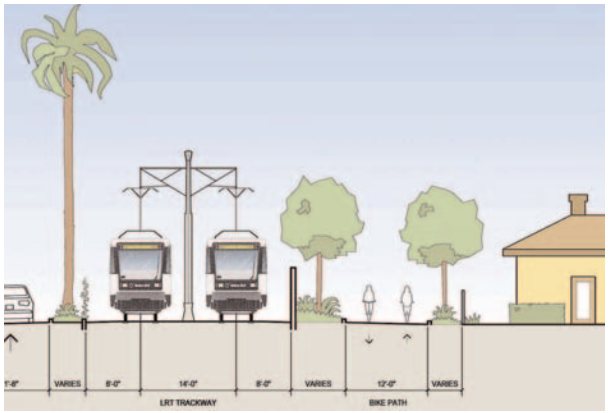
Resolution of Issue #1

A concept for a grade separation at La Brea is shown at the Exposition Right of Way looking east towards La Brea Avenue. This version of an Exposition Transit Parkway concept would include an aerial station over La Brea Avenue and would also replace nearby landscaping.

The Crenshaw Station shown above is a split-platform station on the Exposition Right of Way on both sides of Crenshaw Boulevard. Trains will cross Crenshaw Boulevard using city signal traffic controls.

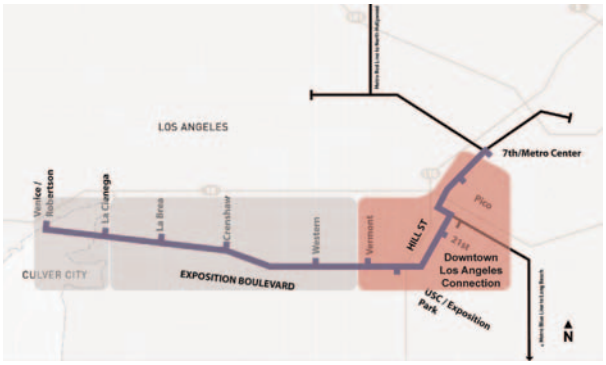


Partial Site Section west of Crenshaw Boulevard near Hillcrest in Mid Corridor Segment



Partial Site Section west of Fay Avenue near Wesley Street in the West End-Culver City Segment

Shown below is a concept for the Jefferson Boulevard bridge (Option C Medium Bridge) crossing Ballona Creek to Culver City. The bridge will land just east of Fay Avenue and would be screened from view of the first single family house in Culver City



Location of Issue #2 USC/Exposition Park Subway

Existing view of Exposition Boulevard and Right of Way at Pardee Way, looking east to Figueroa St., Flower St. and the 110 Freeway

Resolution of Issue #2

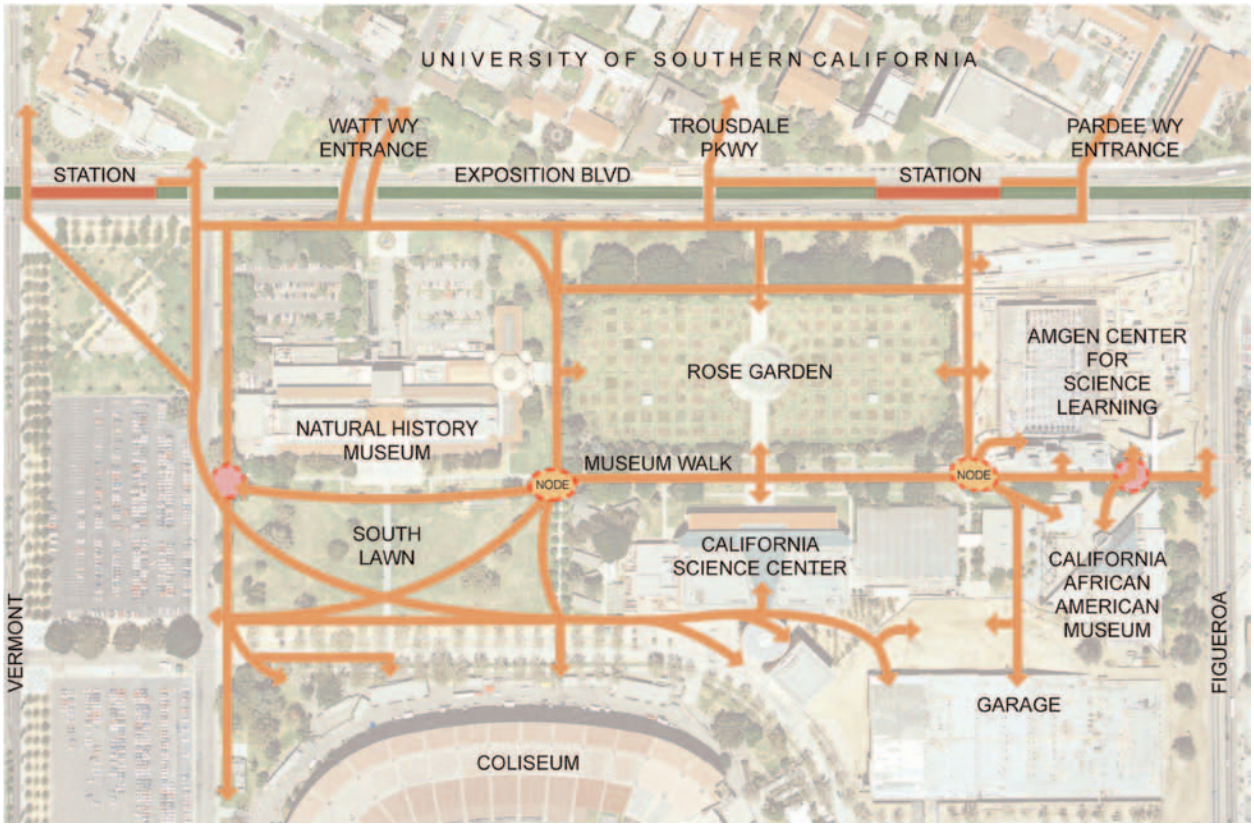
If the Flower Street alignment is adopted, a grade-separated undercrossing is recommended from Jefferson Boulevard to Trousdale Circle over a distance of approximately 2,290 feet. Beyond this undercrossing, no subway is recommended adjacent to USC/Exposition Park under any of the design options or LPA alignment configurations.

At-grade crossings would be possible at Figueroa Street, Flower Street and Vermont Avenue for the LPA primarily because trains in the Downtown area would be operating at street running speeds without gated-crossings or other equipment required for higher speed operation.

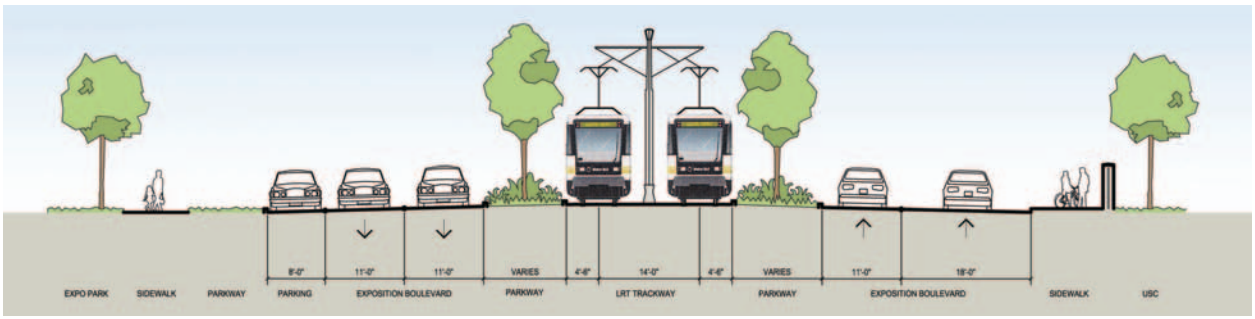
Right page, above: Site Plan of pedestrian linkages from the LPA on the Exposition Right of Way to the USC Campus and Exposition Park. Described as part of the Project is a plan for modified or interrupted train service on Exposition Boulevard during special events when there are street closures.

Right page, across: Section of the Exposition Transit Parkway illustrating a landscaped Boulevard as an extension of Exposition Park. All train operations from Figueroa St. to Vermont Ave. are at-grade for the LPA.

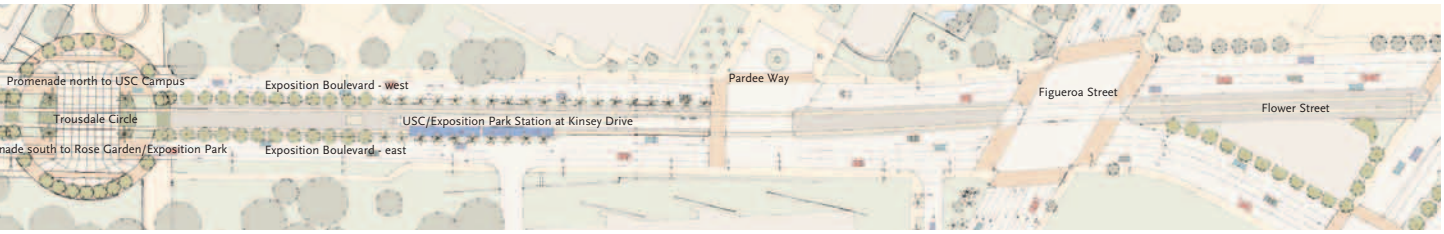
Site Plan - Exposition Transit Parkway between Flower/Figueroa Street to Vermont Avenue for the LPA (at-grade alignment)



Site Plan - Pedestrian Linkages from Exposition Boulevard and Right of Way to Exposition Park and USC



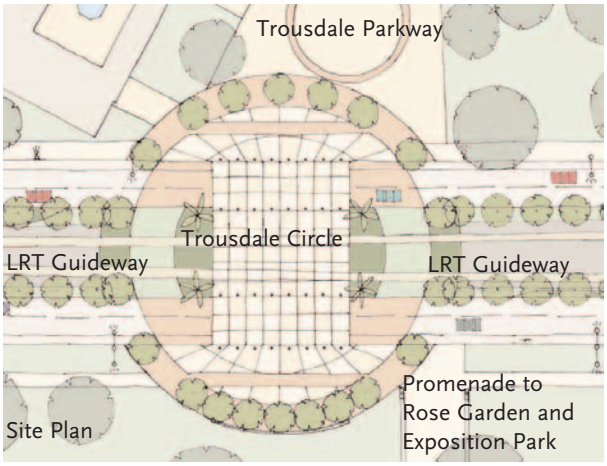
Section looking West at Exposition Transit Parkway



A vision for the Exposition Transit Parkway near Trousdale Circle looking west.

Skidmore Fountain and Ancheny Square, Portland

Park Blocks with Downtown Streetcar, Portland

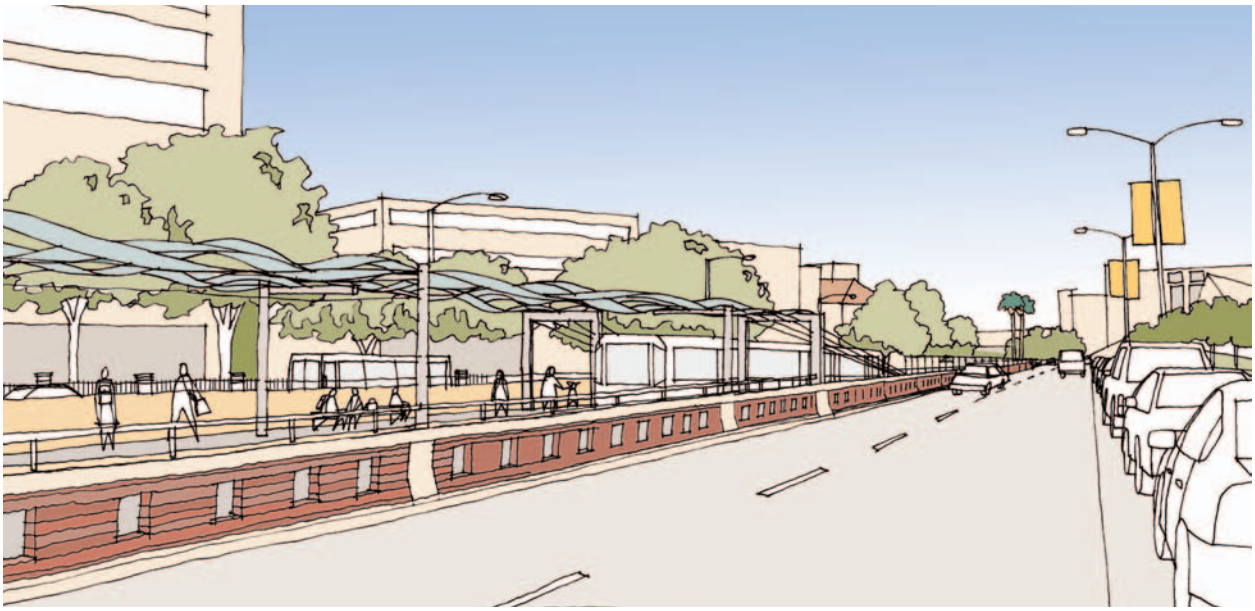


Images shown in the middle and above describe at-grade LRT service where pedestrians freely cross. To the left is a concept for Trousdale Circle, crossing the alignment.

Site Plan – Exposition Transit Parkway between Flower/Figueroa Street to Vermont Avenue for the Flower Street Design Option (with USC/Exposition Park Undercrossing Option)

Site Plan describes existing views, pedestrian access and entrances to major features from the alignment to USC and Exposition Park if the Flower Street Design Option is used with any of the USC/Exposition Park undercrossing options.

To the far left is a transit parkway in San Jose. To the near left is Trousdale Way at USC. The concept for the Exposition Transit Parkway is to merge the transit parkway concept as shown in San Jose with open spaces such as Trousdale Way so that the transit parkway is an extension of the Boulevard and Exposition Park. LRT operations would run safely at speeds no higher than existing automobile traffic.



Shown above is a vision concept for the Exposition Transit Parkway looking east toward Pardee Way. Using the Flower Street Design Option, a train portal would be located west of Pardee Way, so that the USC/Exposition Park Station would be at-grade prior to reaching Trousdale Parkway. The station entrance will be from Trousdale Circle with the possibility of another station entrance off of Kinsey Drive.

Issue #3 Pedestrian and Vehicular Safety

The conversion of the former Exposition railroad right-of-way for an exclusive light rail facility has raised concerns regarding both cross street vehicular safety and pedestrian crossing safety. Accident statistics along other rail lines were cited as cause for concern about the safety of light rail operations along the Mid-City/Exposition route particularly in areas where the line passes in close proximity to schools, parks and other community facilities.

In response to these concerns, the Metro Board directed that special studies be conducted as a part of preliminary engineering to identify best practices for light rail safety and incorporate those practices in the Mid-City/Exposition project. These are described in Chapter 4.12 of The Final EIS/EIR and include the following provisions;

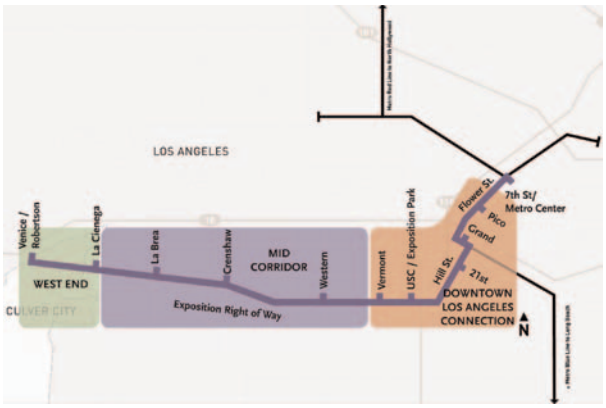
1. School Crossings- A total of thirteen (13) schools exist with 1/2 mile of the proposed project alignment. In addition to upgrading the safety at all existing crossings, four new traffic signals will be installed near these schools. All of the traffic signals will be equipped with pedestrian signals. Supplemental crossing guards will be provided, as needed.

2. Park Crossings- A total of eight (8) parks exist with 1/2 mile of the proposed project alignment. In addition to upgrading the safety of all existing crossings, three new traffic signals will be installed near these parks. All of the traffic signals will be equipped with pedestrian signals.

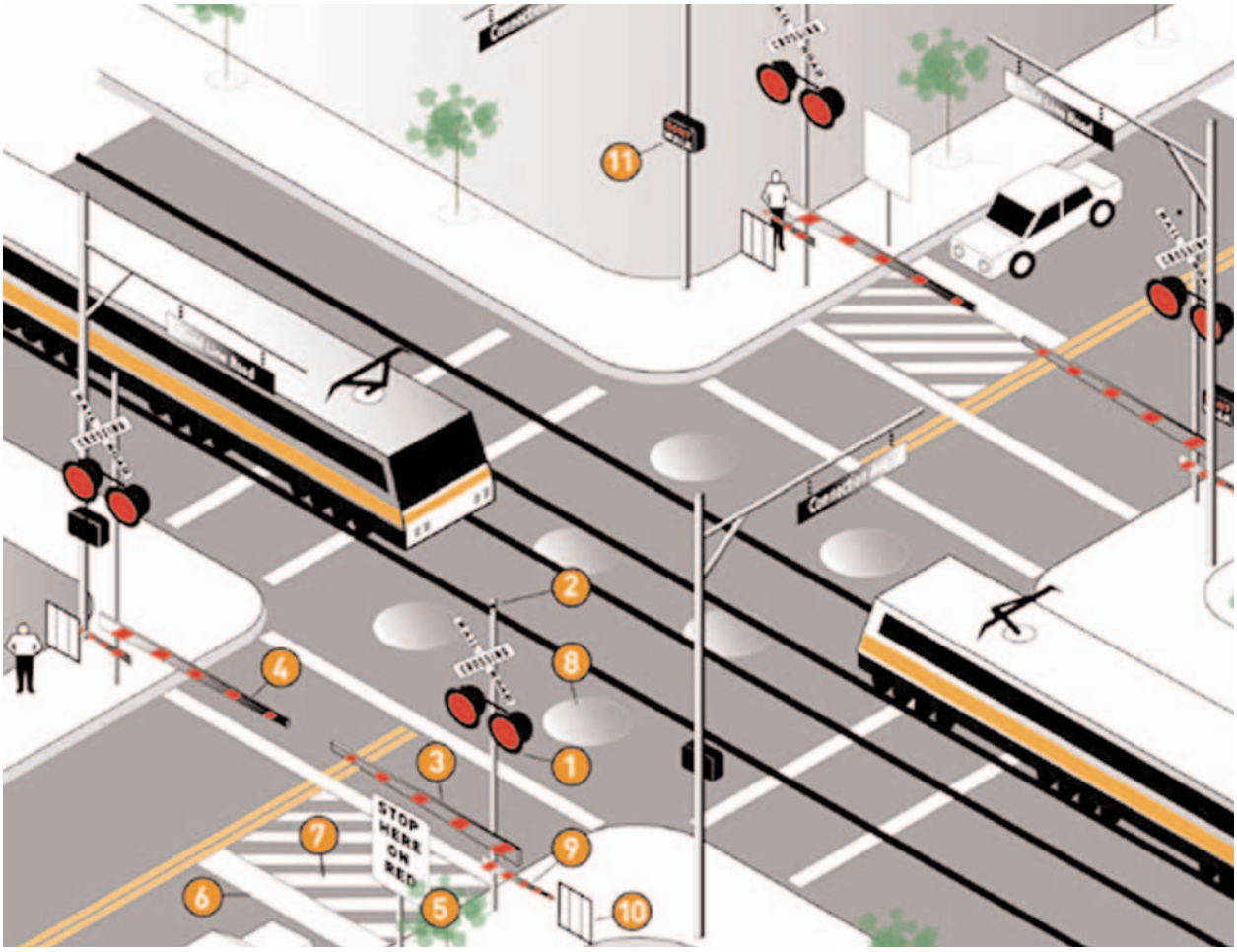
3. Bikeway/Right of Way Safety- The project will include a new bikeway that will run parallel to the light rail line. Fencing will be provided along the right of way in all areas where the speed of the light rail vehicles will exceed 35 mph (Other areas are generally located in the middle of existing streets and are separate from pedestrians by traffic lanes). All crossings of the right of way will employ state of the art pedestrian and bicycle crossing safety devices and fencing.

The proposed LRT project would include fencing along certain segments of the route, and special designs would be implemented to designate pedestrian crossings along the alignment. A parallel bikeway would be designed in such a way to provide continuous separation between the bikeway and the LRT guideway. Near areas of pedestrian activity, signalized pedestrian crossings would be employed to protect pedestrians from both cars and transit vehicles.

Enhanced crosswalks and pedestrian safety gates are part of a larger list of safety features utilized in the Project



Location of Issue #3 Pedestrian and Vehicular Safety

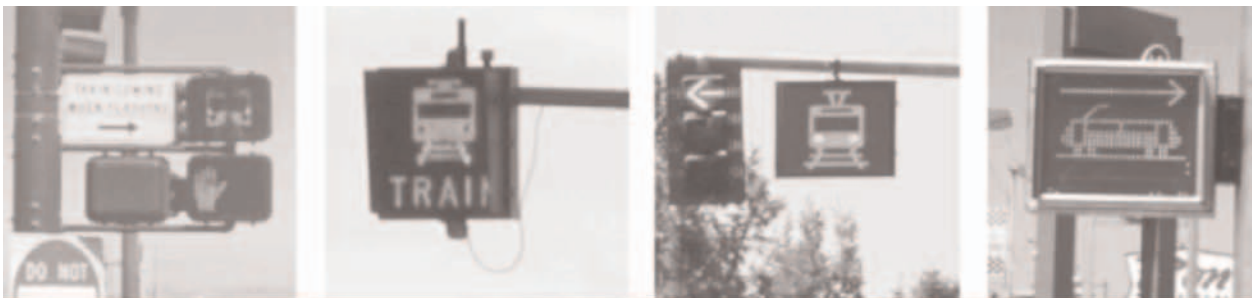


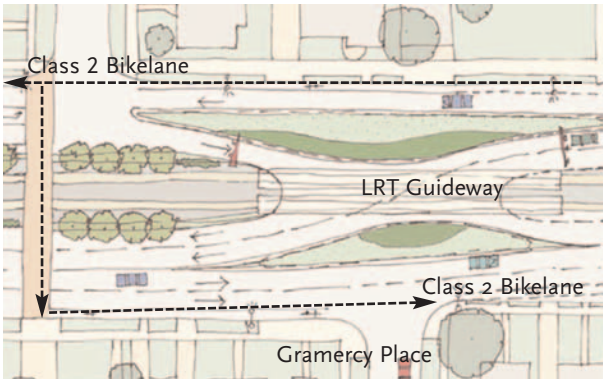
1. Flashers,
2. Bell,
3 Entrance Gates,
4. Exit Gates,
5. Stop Here Sign,
6. Vehicle Limit Line,
7 Keep Clear Zone,
8. Vehicle Detection Loops,
9. Pedestrian Gates,
10. Swing Gates,
11. Walk/Don't Walk Signals

The Mid City/Exposition LRT Project will use safety crossing features similar to these as illustrated, where gated at-grade crossings occur.

Resolution of Issue #3

Several types of optical warning signals are used to warn pedestrians and motorists of a train approaching





In the Mid Corridor segment at Gramercy Place, eastbound or westbound cyclists on Class 2 bikelanes will have a choice to cross or turn at the signalized intersections, at the pedestrian crosswalks, or ride on the street as a vehicle.

Issue #4 Non-Revenue Connector

The Draft EIS/EIR proposed a non-revenue connector track to connect the Expo line to the Long Beach Blue Line. This connector would have allowed light rail vehicles to access storage and maintenance facilities that are located along the Long Beach Blue Line route. Residents and community organizations in the areas along the Non-Revenue Connector south of Downtown Los Angeles had expressed opposition to the use of the Exposition right-of-way that is east of the Harbor Freeway for such a connector. They had asked that the Metro evaluate alternative routes.

In response to these requests, the Metro has discontinued consideration of the use of the Non-Revenue Connector as a part of the Locally Preferred Alternative and has developed an alternative routing that will allow Expo Line trains to access existing Metro Blue Line Maintenance & Storage Facilities via the existing Metro Blue Line tracks on Washington Boulevard and Long Beach Boulevard.

The deletion of non-revenue train operations on this segment of the Exposition Right of Way has in effect, rendered no access to the Hooper and Central maintenance yard proposed in the DEIS/EIR. Therefore, Metro is no longer considering the Hooper and Central site as a viable maintenance yard for the Project. The non-revenue connector line, between Main Street and Long Beach Boulevard, that was contemplated in the Draft EIS/EIR, has been eliminated from the Project.

An expanded operations and maintenance facility (detailed in Chapter 2.4 Description of Locally Preferred Alternative and analyzed in Chapter 4.16 Operations and Maintenance Facility Expansion of the Final EIS/EIR) is proposed at the Division 11 site in Carson. LRT vehicles in need of heavy maintenance will travel from downtown Los Angeles to the Division 11 site via existing Blue Line tracks.

Resolution of Issue # 4: Non-Revenue Connector

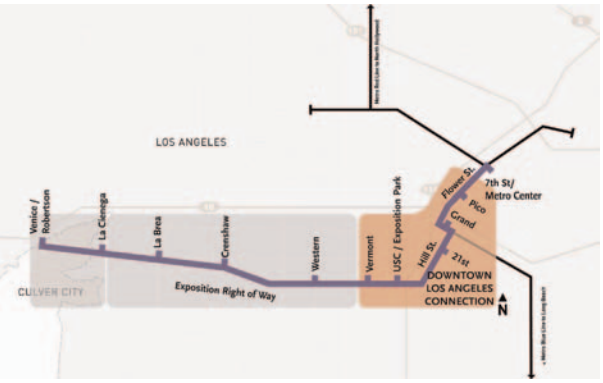
The dashed line within and outside the Downtown Los Angeles Connection segment shown above indicates the Non-Revenue Connector no longer considered for use as part of the LPA.

Issue #5 Downtown Connector/Hill Street Alignment

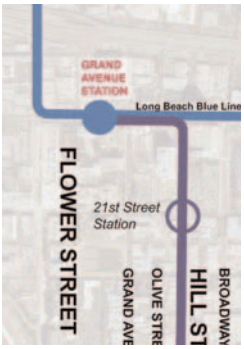
In their comments on the Draft EIS/EIR, the City of Los Angeles Department of Transportation (LADOT) questioned the viability of the Hill Street Alignment. In particular, they asserted that the joint operation of the Metro Blue Line and the Expo Line along Washington Boulevard between Flower and Hill Streets would result in adverse impacts on both traffic and train operations. They pointed out that with both LRT lines running at 5-minute "peak-hour" headways, trains would be operating at a combined frequency of every 2 1/2 minutes in each direction. When both directions are included, there would be a train passing through each intersection on Washington Boulevard every 1 1/4 minutes; a frequency that LADOT feels would severely impact traffic flows in both the north-south and east-west directions.

LADOT requested that further consideration be given to alignments that avoid this segment of Washington Boulevard. They particularly recommended that a previously considered alignment along Flower Street be reconsidered. The Flower Street route had been environmentally cleared for a light rail line in 1992 under State environmental law (CEQA). It was also located along a more developed corridor than Hill Street, would be shorter than the Hill Street alignment and would require fewer turns on city streets.

In response to LADOT's request, two design options were developed as a part of preliminary engineering and reviewed in the Final EIS/EIR. A description of these alignments is included in Section S-6 and in Section 2.4.2 of the Final EIS/EIR. Metro has conducted supplemental outreach to affected stakeholders and incorporated their comments in this supplemental review.



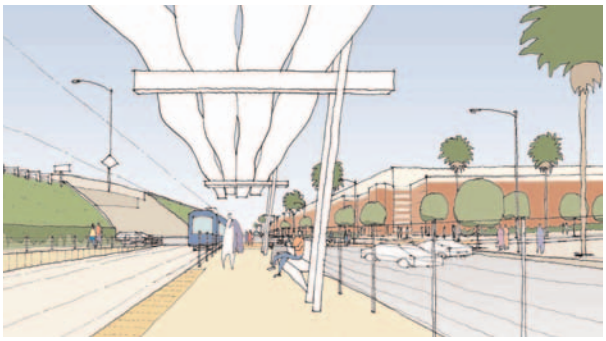
Location of Resolution of Issue # 5: Downtown Connector/Hill Street Alignment



LPA at Washington Blvd. and Hill St.

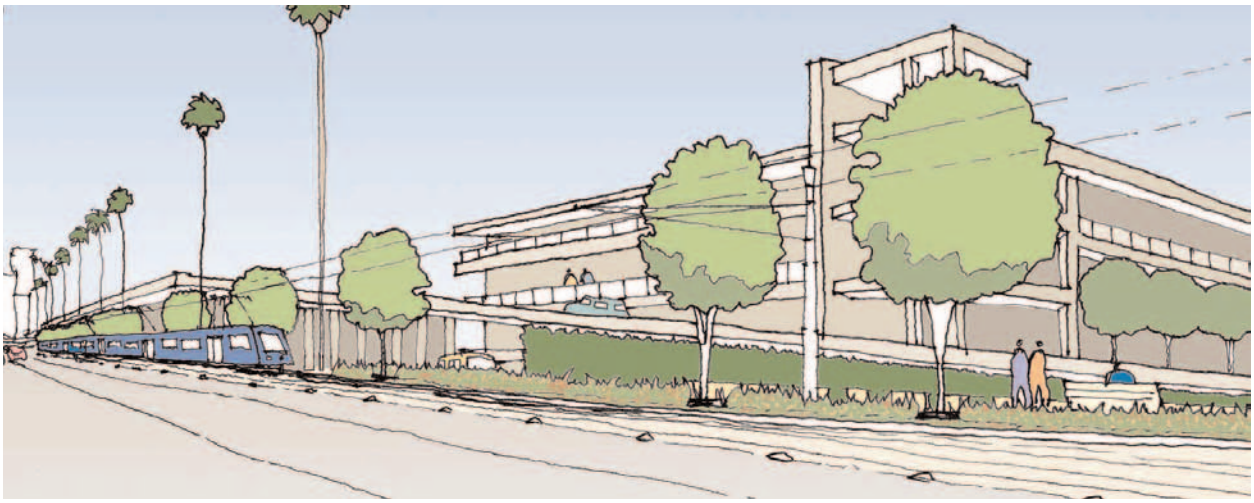
Flower St. Design Alterative. This alignment was environmentally cleared in a prior study.

Resolution of Issue #5

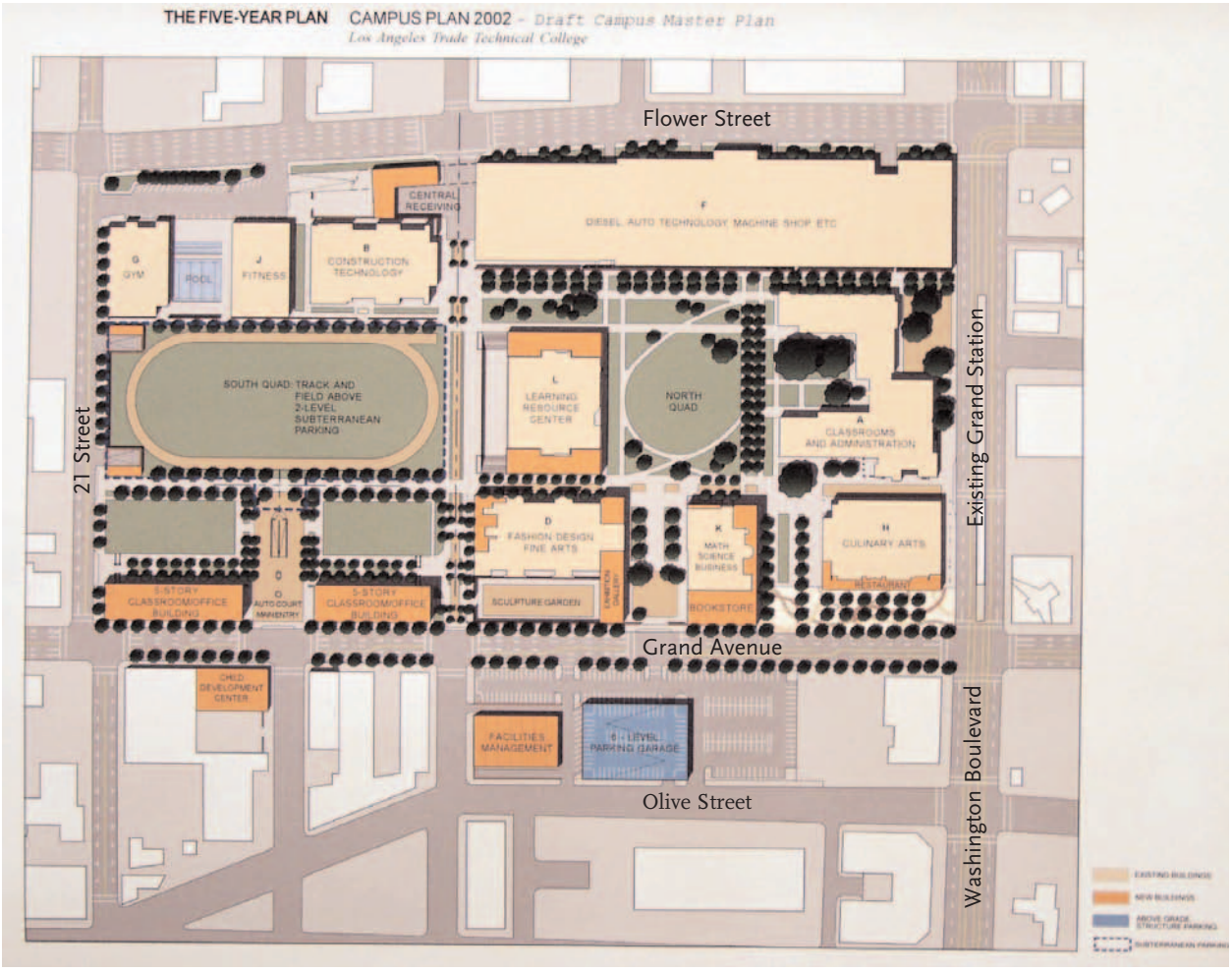


View looking south from Jefferson Station as proposed with the Flower Street Design Option. To the left is a new USC sports activity center.

Vision concept for the existing shared dual track alignment with Metro Blue Line after Exposition Transit Parkway improvements



Vision concepts shown above and to the right at Los Angeles Trade Technical College for the Flower Street Design Option with Exposition Transit Parkway improvements. Shown below is the Five Year Plan for Los Angeles Trade Technical College.



Issue #6 Noise and Vibration Impacts

The Draft EIS/EIR identified mitigation measures including soundwalls and other measures to mitigate the impacts from wayside noise and vibration impacts. These are described in Chapter 4.6 of the Final EIS/EIR, as updated based on the development of preliminary engineering designs for the project. In general, 6-8 foot noise barriers will be provided in areas of the route where homes and schools are located immediately adjacent to the right of way. In some areas, noise barriers no higher than 6 feet high would be located next to the LRT trackway, combined with landscaped berms to reduce noise from train wheels.

With the opening of the Metro Gold Line between Downtown Los Angeles and Pasadena in August 2003, a number of questions have also arisen about the noise generated by audible warning devices. These include bells attached to light rail crossing gates and horns or quackers that are used by operators to alert motorists and pedestrians of oncoming trains. Such devices increase safety of the light rail operations, but often provide an annoyance to others not using the system, particularly people living in homes adjacent to the alignment.

The Mid-City/Exposition LRT Project will have audible warning devices located in portions of the Mid-Corridor and West End segments of the alignment. The alignment within the Downtown Los Angeles Connection segment will not require crossing bells at any crossings. Furthermore, crossing bells are not required at grade separations.

In locations where audible warning devices are located near homes or other sensitive receptors, additional mitigation measures have been identified to reduce impact. The audible warning devices that will be located next to sensitive receptors are: Arlington Avenue, 7th Avenue, Buckingham Road and Farmdale Avenue. In Culver City, crossings are eliminated from Ballona Creek to Wesley Street and there will be no audible warning devices located in front of residential areas between these points. Special studies will be conducted as part of Final Design to direct warning device noise away from sensitive receptors and focus towards automobile and pedestrian crossings. Such measures can greatly reduce the intrusion from such devices.

Location of Issue #7 Noise and Vibration Impacts

Soundwall (Noise Barrier) locations along the alignment

An example of a soundwall designed by Artist Martha Schwartz

Public Artist's concept for a sound wall.

Issue #7 Loss of Landscaping

Several segments of the Exposition railroad right-of-way have been informally planted with trees, shrubs and other groundcover which have served as a visual buffer to the community. This landscaping has become quite dense in some areas, particularly between Vermont and Western and in the Crenshaw Community. Comments were heard from the community that the loss of mature landscaping would be an adverse impact that must be mitigated.

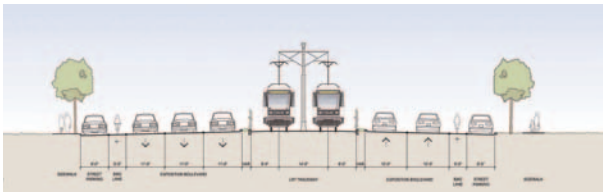
As a part of the preliminary engineering design, the project team researched the history of the Exposition Corridor and identified plans developed in the 1920's for a linear greenbelt along the Exposition right-of-way that would include transportation and landscape elements. These plans were developed by the world famous Landscape Architecture firm of Olmstead & Bartholomew (whose predecessor firm of Frederick Law Olmsted, planners of San Francisco's Golden Gate Park and New York's Central Park, among others. The Exposition Parkway was planned at that time to be part of a citywide greenway plan for Los Angeles. The light rail project team reviewed the historical plan, which described a "pleasure parkway" that was to connect Baldwin Hills to Downtown Los Angeles, and to the extent possible, incorporated such concepts into the planning for the Exposition Light Rail Transit Project. The overall project plan was thus named "Exposition Transit Parkway" in homage to this historical plan.

The Exposition Transit Parkway is described more fully in Chapter 2.4 of the Final EIS/EIR. In addition to two light rail transit tracks, the right-of-way will be developed with a combination of bikeway and landscaping. Because of the narrowness of the right-of-way in certain segments of the corridor, design for the trackway, bikeway and landscaping must all share the available land. Therefore, most of the existing plant materials will need to be removed or relocated. In these areas, inventories of existing plant materials will be conducted so that mature trees and plant materials can be replaced with similar varieties, in accordance with the project landscape plans.

Wherever possible, the density of existing landscaping will be maintained. In areas of the corridor which are not presently landscaped, new plant materials will be introduced.

Location of Issue #7 Loss of Landscaping

Two views of the Exposition Transit Parkway in the Mid Corridor Segment: looking west near Western Avenue at upper image and looking west near Buckingham Road at above image



Site section of the Exposition Transit Parkway east of Gramercy Place shown above

Issue #8 La Cienega Station Parking Facility

The La Cienega Station has been designed as an aerial structure spanning over La Cienega Boulevard with a contiguous parking structure for approximately 500 spaces located on the southeast corner of Jefferson and La Cienega Boulevards. The parking structure was to be located on a site owned by the City of Los Angeles, which was used as a construction-staging site for the East Central Interceptor Sewer Project (ECIS Project). See LPA to the right.

On December 10, 2004, the Los Angeles City Council approved Item #(11)–04-2344 which requires further consideration by the City Council before it can be determined if any of the ECIS property will be made available for use as part of the Metro station. Reasons cited by the city for further consideration include new requirements by the U.S. Environmental Protection Agency for construction of an ECIS Project Air Treatment Facility and the need to consider other potential uses.

Metro has reviewed options for this parking facility with the City of Los Angeles Bureau of Sanitation and Bureau of Engineering to determine if a shared use of this land would be possible. Metro has developed concepts that would allow the ECIS Air Treatment Facility to occupy the eastern portion of the property and allow the Metro Parking Structure to occupy the western portion of the property. To date, resolution of this issue has been inconclusive.

In the event that the City of Los Angeles ECIS site should be become unavailable for use as a station parking facility, an alternative site has been identified on the southwest corner of Jefferson and La Cienega Boulevards. This site is privately owned and is currently operated as a Public Storage warehouse. The use of this site for station-related parking would require the relocation of this business and the acquisition of the property. This option would only be pursued if use of the City of Los Angeles property cannot be made available for station parking.

Issue #9 Venice/Robertson Interim Station Design Options

The Locally Preferred Alternative adopted by the Metro Board of Directors in June 2001 called for an at-grade station at Venice/Robertson, with at-grade crossings of Washington and National Boulevards. The City of Culver City requested that this decision be reconsidered in favor of a grade-separated crossing of Washington and National Boulevards. The city cited severe traffic congestion and maintained that only an aerial station could successfully mitigate such impacts.

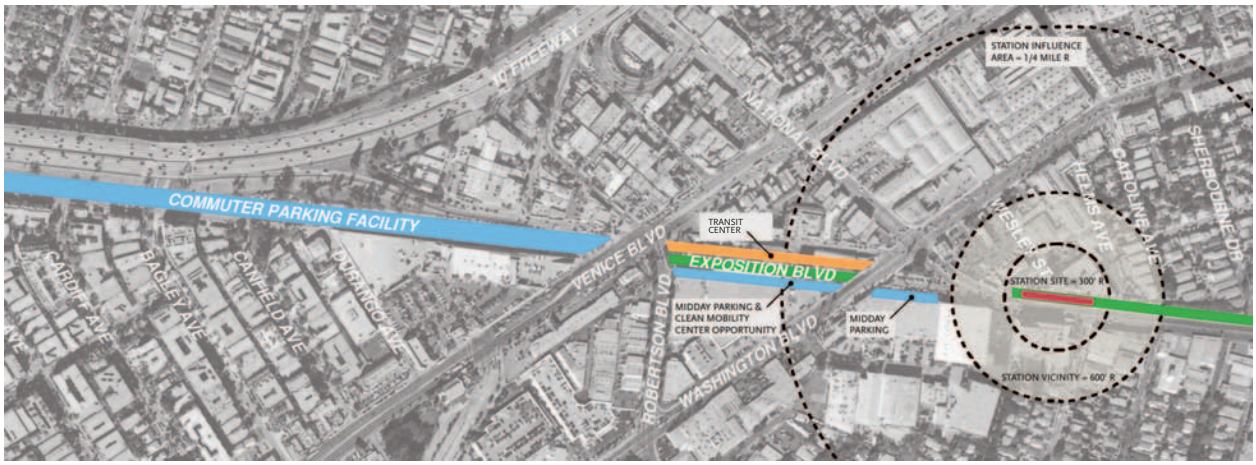
The Southwest Corner Option shown above to the left includes a parking facility with 530 spaces and a transit center. The LPA shown above to the right includes a parking facility with the same number of parking spaces and a transit center on the City of Los Angeles Former ECIS site. The No Parking Option (not shown) shifts the parking demand to stations other than La Cienega Station.

Following preparation of the Grade Crossing Policy for Light Rail Transit, the Metro Board agreed that an aerial station would be needed at some point in the future when the Expo Line is extended across Venice Boulevard. In the meantime, however, interim station designs have been developed in preliminary engineering that do not preclude future conversion to an aerial station. Funding has not been available to consider full grade-separation at this time, and furthermore, a decision has not been made about the future extension of the Expo Line, and no alignment has been approved for such an extension. A major benefit of the interim station is that it will allow for the design of the aerial station to be developed in the future, when the routing of the future extension will be known and the aerial station can be designed in the optimum location.

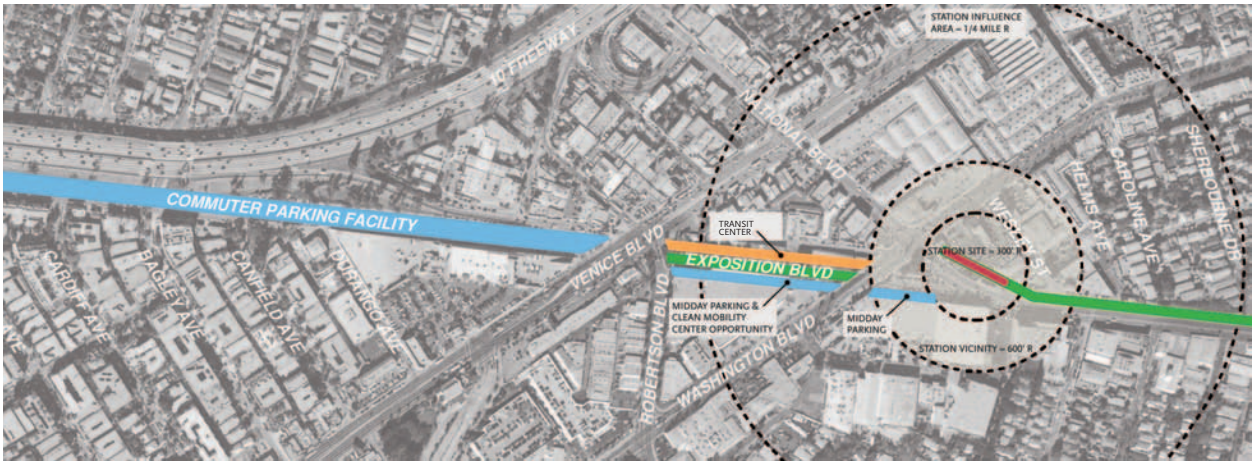
In order to respond to the City of Culver City's concerns about the at-grade crossings of Washington and National Boulevards, four additional interim station design options have been developed that do not require at-grade LRT crossings of these streets. These "North of ROW" Design Options would locate an interim stations on the parcels of land presently occupied by industrial and commercial uses along Wesley Street. These parcels are bounded by National, Washington and the Expo right-of-way. The "On ROW" Design Option is located on the Metro owned, National Boulevard right-of-way in the vicinity of Wesley Street. This design option would not require any private property takings.

Metro staff is continuing to work with Culver City on these station design options to determine if consensus can be reached on a preferred station design for the Venice/Robertson Station. Comments received from the circulation of the FEIS/FEIR will be considered prior to the adoption of a preferred station design.

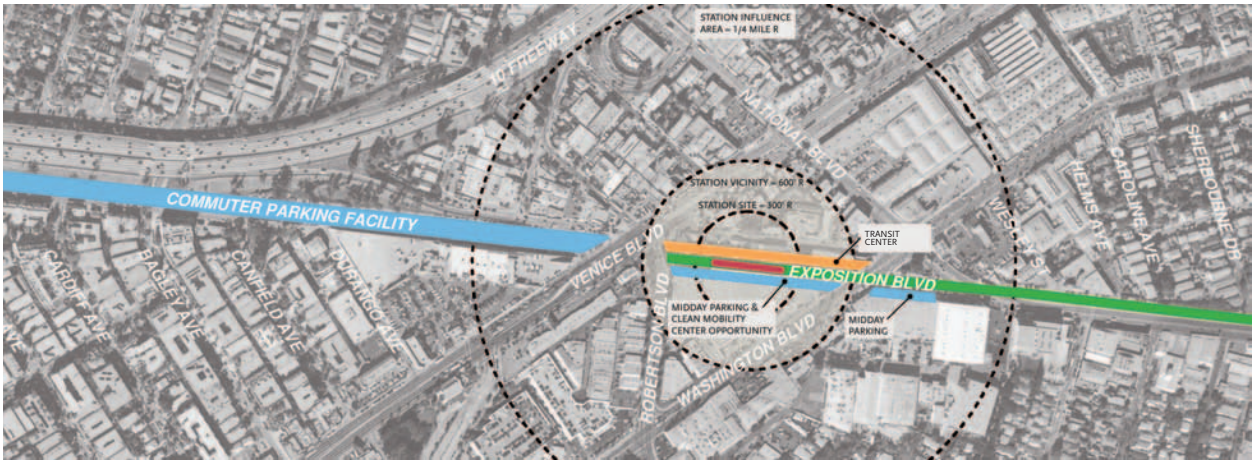
Venice/Robertson Station Design Options



Vicinity Plan Right of Way Option

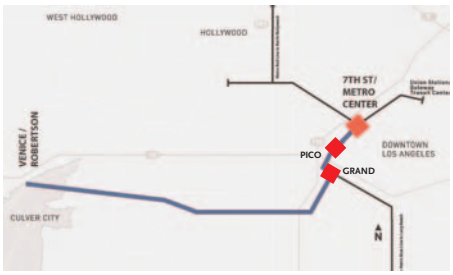


Vicinity Plan North of Right of Way Option

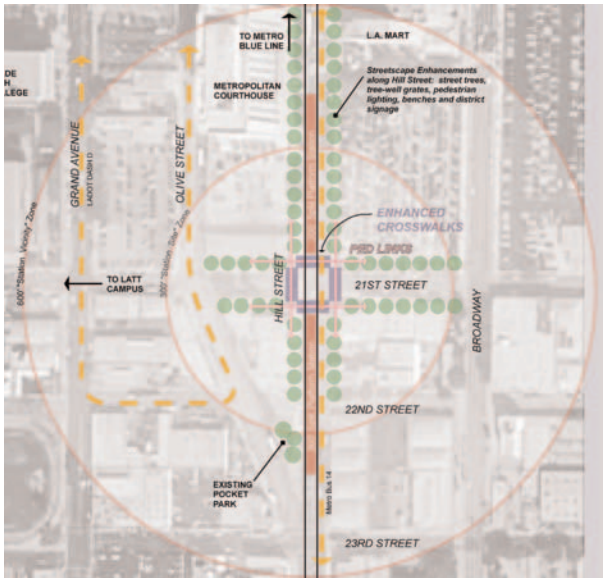


Vicinity Plan Aerial Station Option

7th Street/ Metro Center



Key Plan



Hill/21st Street Station Station Area Plan

Pico Station

7th Street/Metro Center
Pico Station/Grand Station

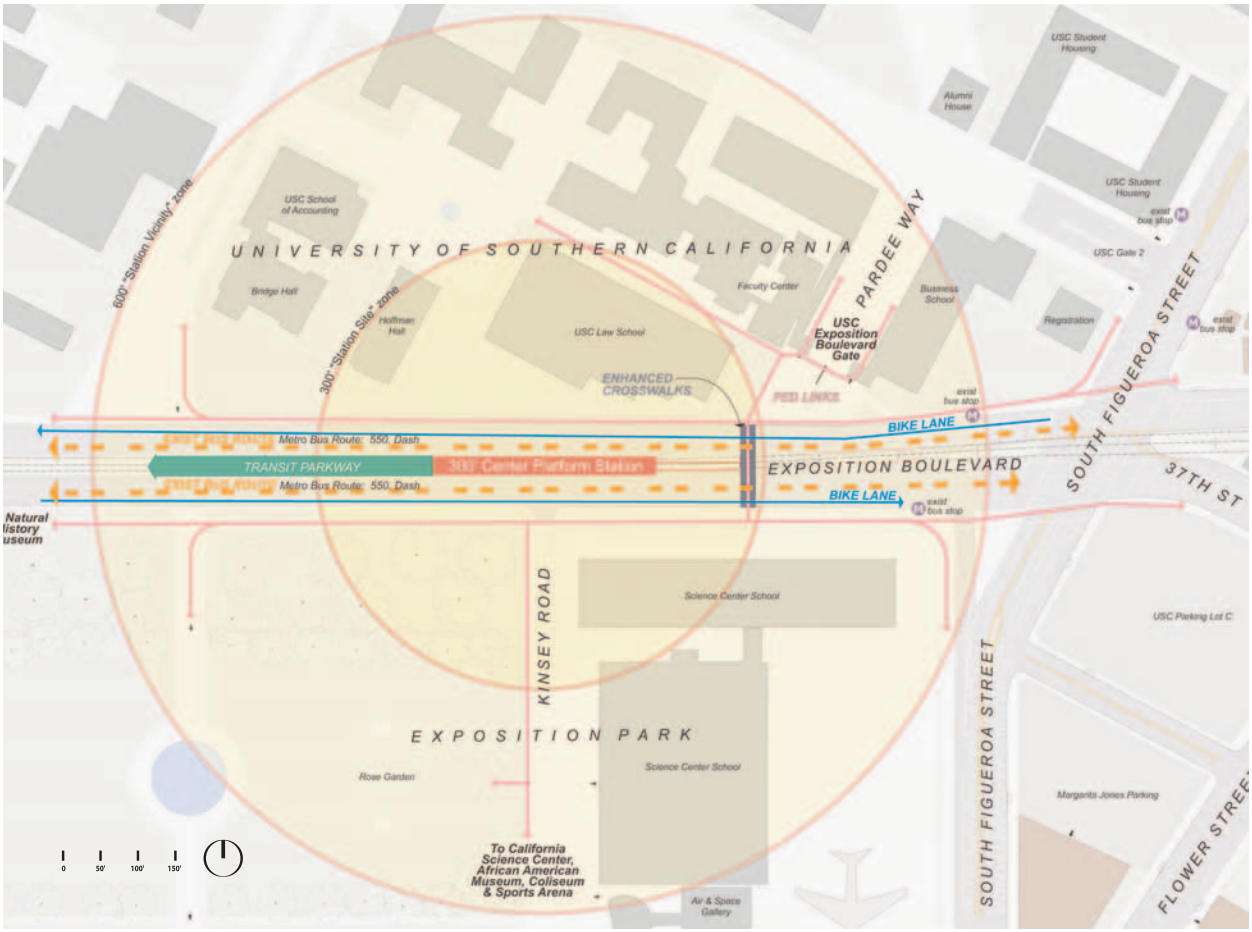
7th Street/Metro Center is the eastern terminal in Downtown Los Angeles for the Mid City/Exposition LRT Project. This is an existing underground station with two levels. The LRT line will share the same platforms as Metro Blue Line at this station. Metro Red Line also serves this station one level below Metro Blue Line. This station is close to the Central Business District of Downtown Los Angeles.

The LRT line will share Pico Station with Metro Blue Line. The existing at-grade station is within walking distance to Staples Center, the Los Angeles Convention Center and new housing developing in South Park.

Hill/21st Street

The Hill/21st Street Station is situated in close proximity to a major employment center in the Los Angeles garment district. The station will provide an alternative transit option for employees working in this area. The station will also provide access to the Los Angeles Trade Technical College new campus entrance two blocks west on Grand Avenue at 21st Street as well as to the Orthopedic hospital and a proposed LAUSD magnet school.

Key Plan



Station Area Plan

Vicinity Plan

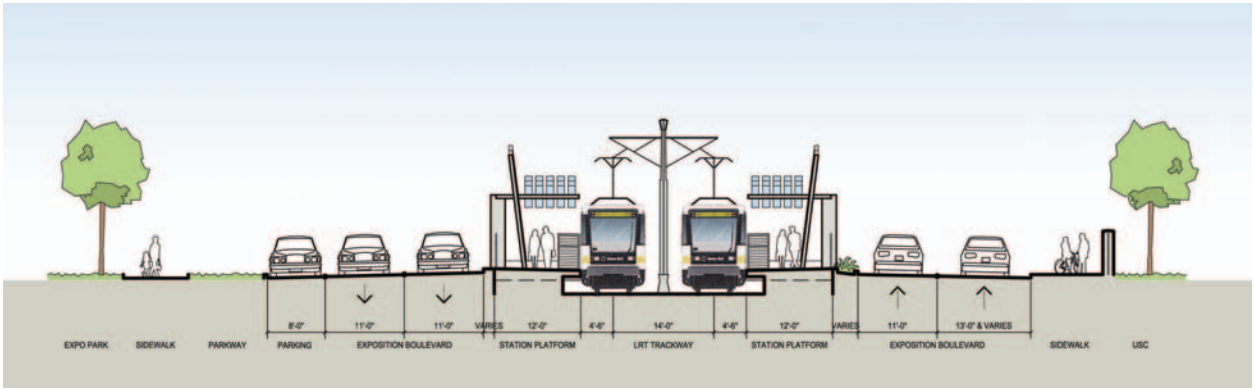
Key Plan

Exposition Boulevard looking West

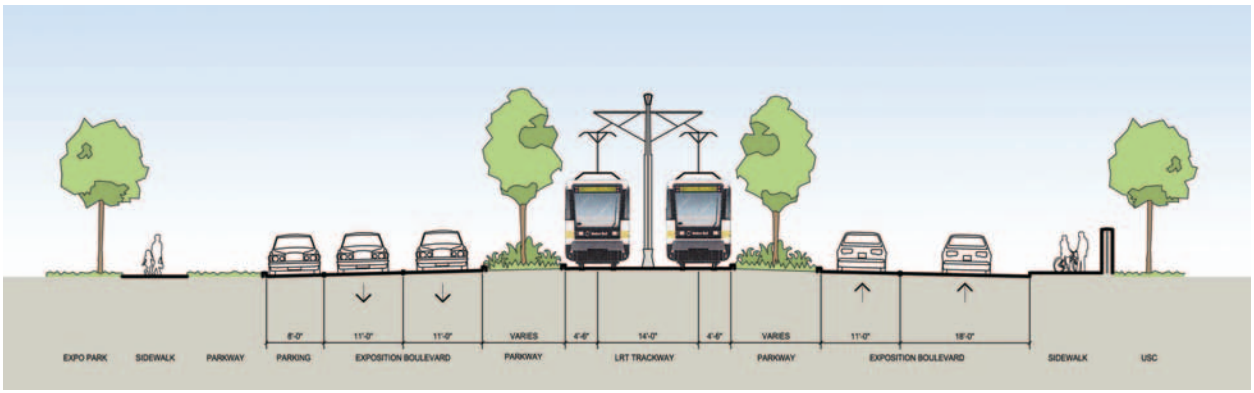
USC/Exposition Park

The USC/Exposition Station serves the USC campus as well as numerous nearby cultural institutions, including the Natural History Museum of Los Angeles County, the California Science Center, the California African-American Museum, Exposition Park, the Rose Garden, and the Coliseum. The station will also be in close proximity to USC's new Galen Center sports arena, the Exposition Park Intergenerational Community Complex which includes a swimming stadium, and the new Amgen Center for Science Learning.

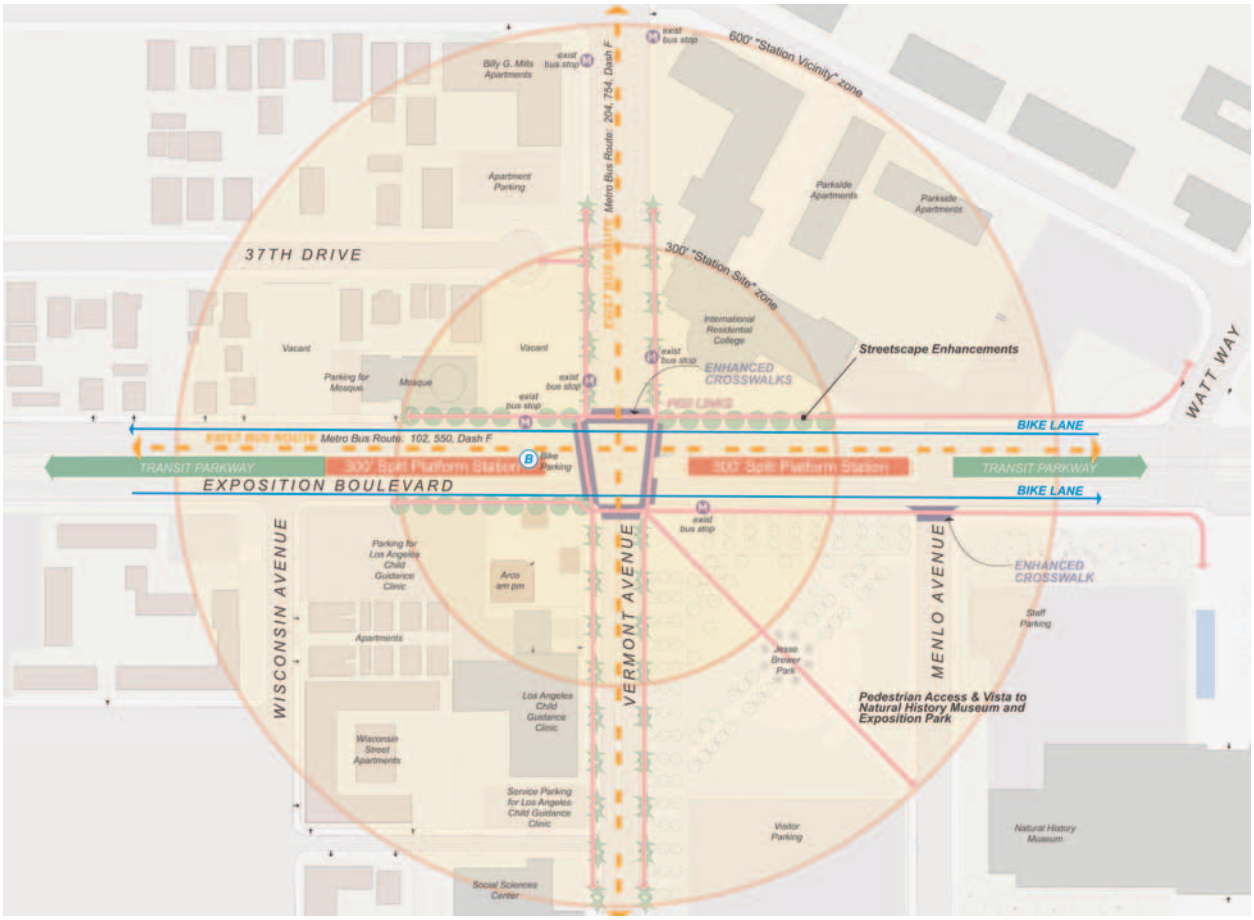
Looking West along Exposition Transit Parkway from Pardee Way



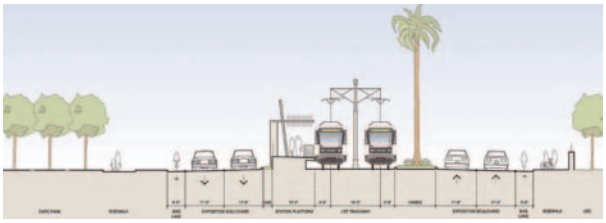
Side opposing platform for USC/Exposition Park Undercrossing



Section looking West at Exposition Transit Parkway



Station Area Plan



Section looking West

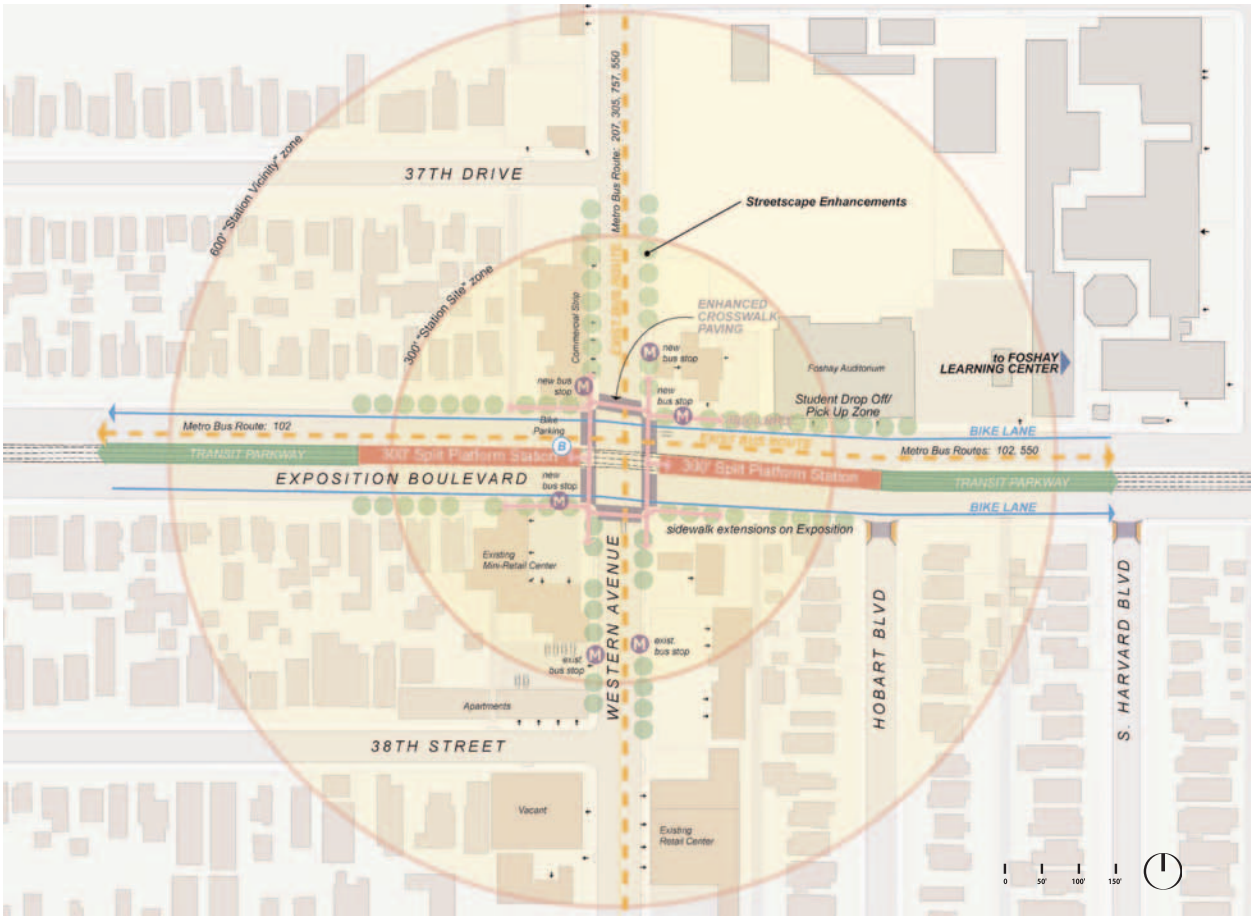
Key Plan

Vicinity Plan

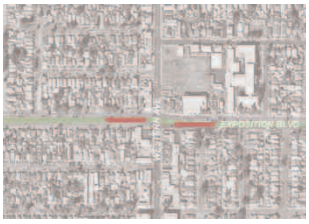
Vermont

The Vermont Station provides access to Vermont Avenue, which is a major north-south gateway leading to destinations such as Hollywood to the north and cities like Hawthorne to the south. As such, Vermont Avenue is well served by transit, including the most heavily traveled Metro Rapid bus line, as well as local buses. The station will serve the USC campus, the Hasjid Omar Ibn Al-Khatdab Mosque among area destinations, as well as the Exposition Park Cultural institutions.

Exposition Boulevard looking West from Menlo Ave.



Station Area Plan



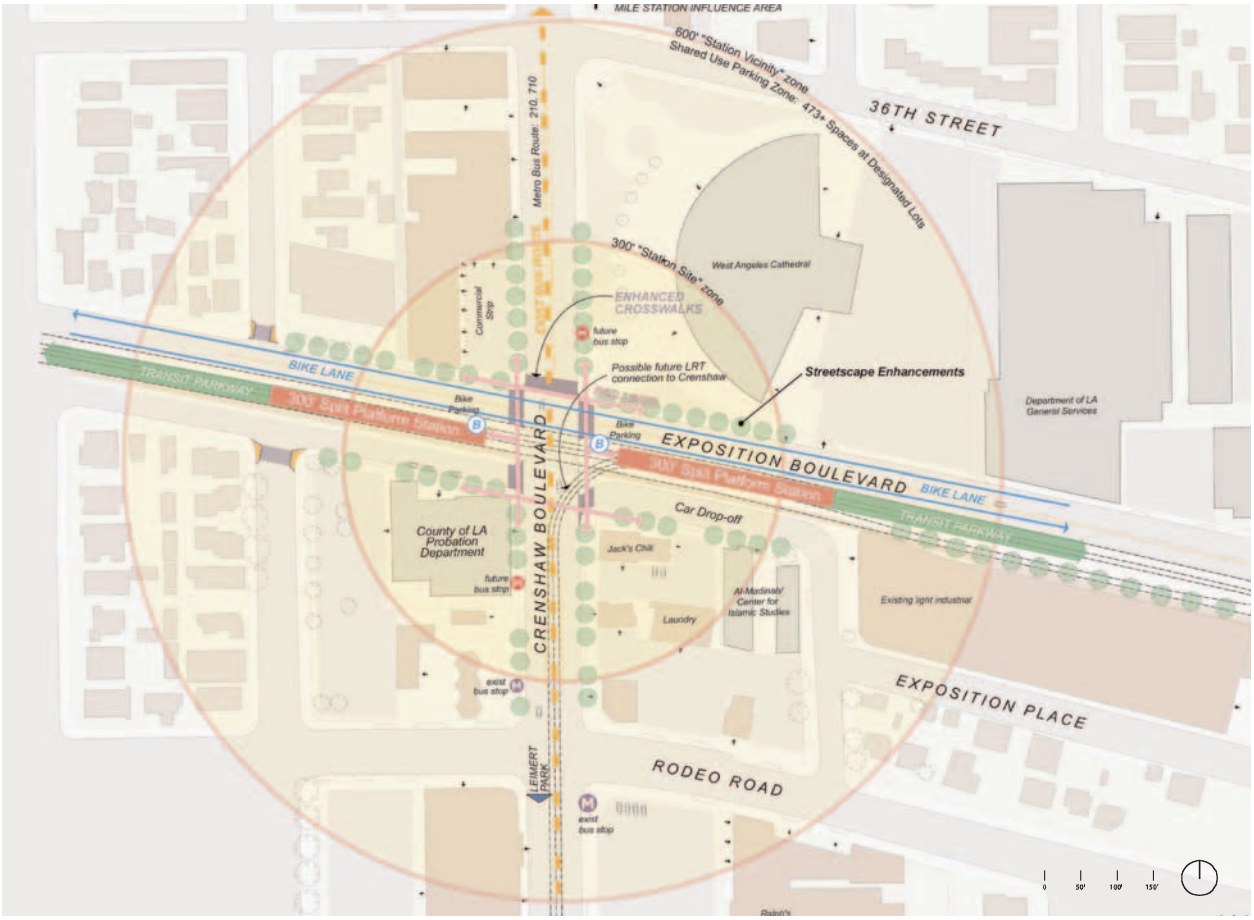
Vicinity Plan

Key Plan

Western Avenue & Exposition Boulevard

Western

The Western Station serves Western Avenue, which is a major gateway street providing access to the Mid-City area to the north or South Los Angeles in the opposite direction. This station is walking distance to LAUSD's Foshay Learning Center, 38th and Normandie Park, neighborhood commercial uses, and surrounding neighborhoods. This station will provide an alternative transit option for a heavily transit-dependent population living north of Exposition Boulevard near this station area.



Station Area Plan

Crenshaw

The Crenshaw Station provides access to the West Angeles Cathedral which hosts social services in addition to religious services. The station is in close proximity to neighborhood shopping areas as well as a potential housing development on nearby West Angeles Cathedral-owned land. As a major north-south artery, Crenshaw Boulevard is well-served from Metro Rapid buses and other local buses.

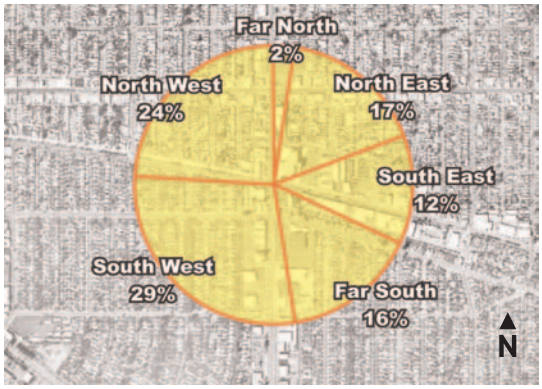
Key Plan

Vicinity Plan

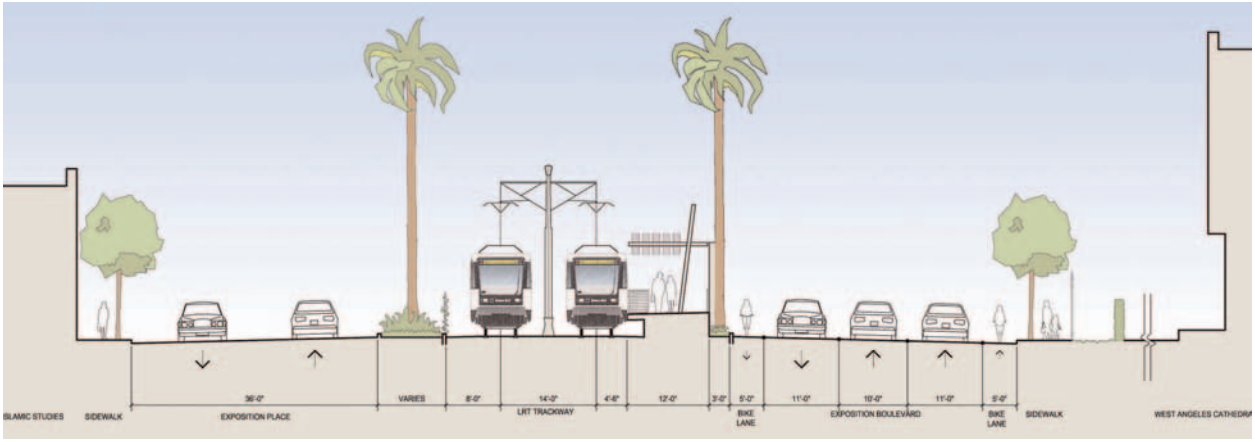
Exposition Boulevard looking east from Crenshaw Boulevard

View of Crenshaw Station looking East towards West Angeles Cathedral

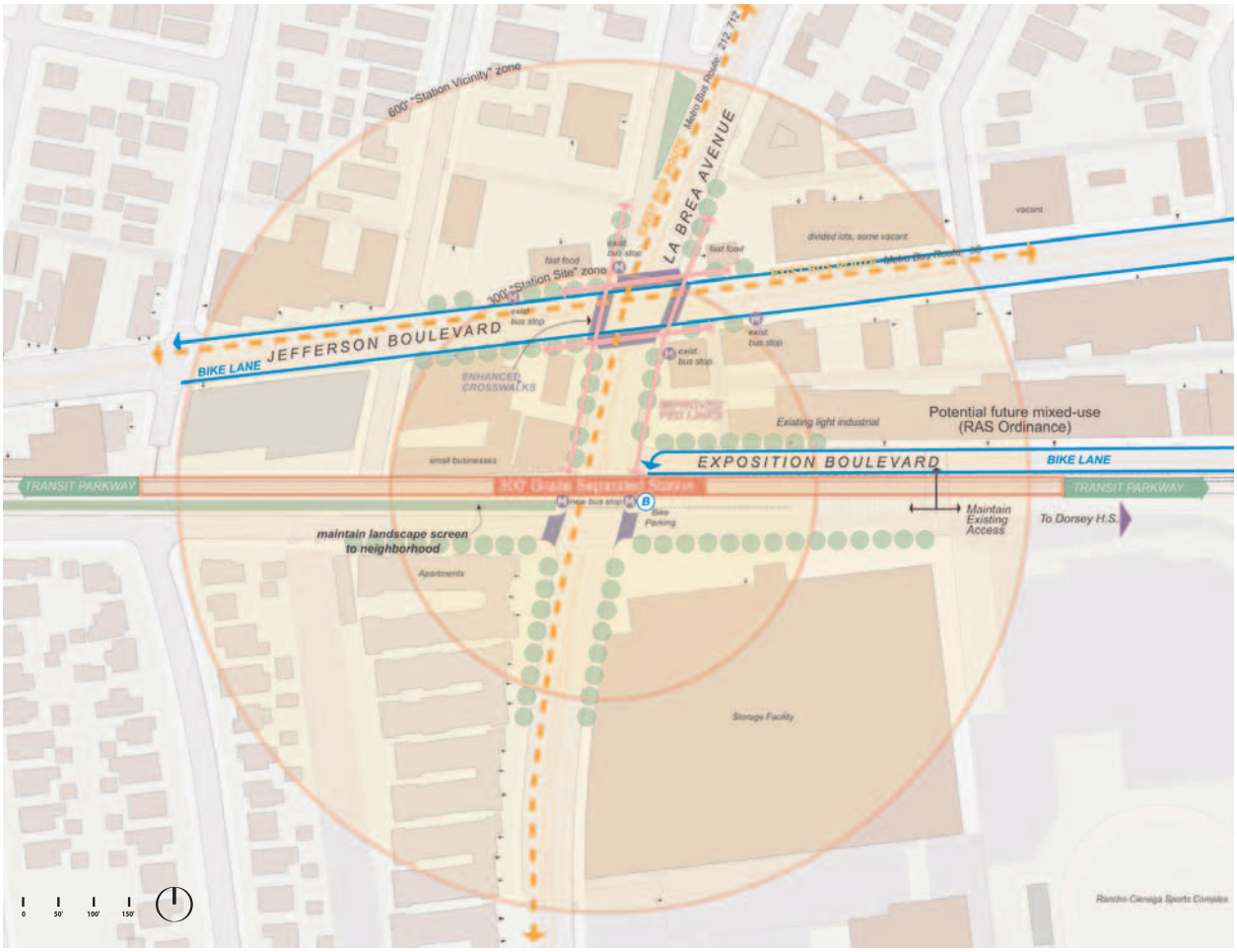
Circulation Plan



Trip Arrivals to Station



Section looking West



Station Area Plan

Vicinity Plan

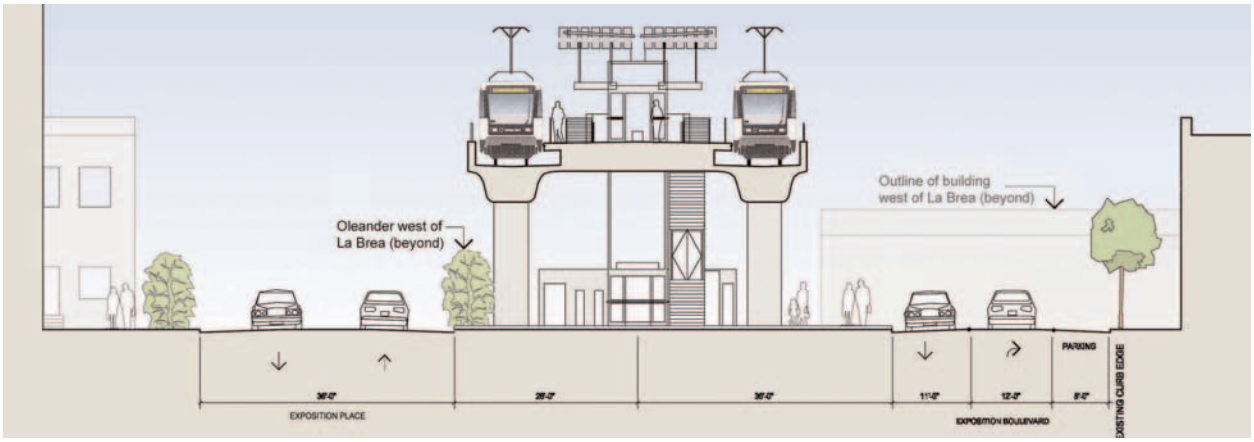
Key Plan

Looking West at Exposition on Right of Way

La Brea

The La Brea Station will serve Dorsey High School, Rancho La Cienega Park and Westside Park, in addition to the Village Green and Baldwin Hills communities. The LRT at this location would provide an alternative transit option for a heavily transit-dependent population living north of Exposition Boulevard near this station area. As a major north-south artery, La Brea Avenue is well-served from Metro Rapid buses and other local buses. This station is also walking distance to local commercial uses.

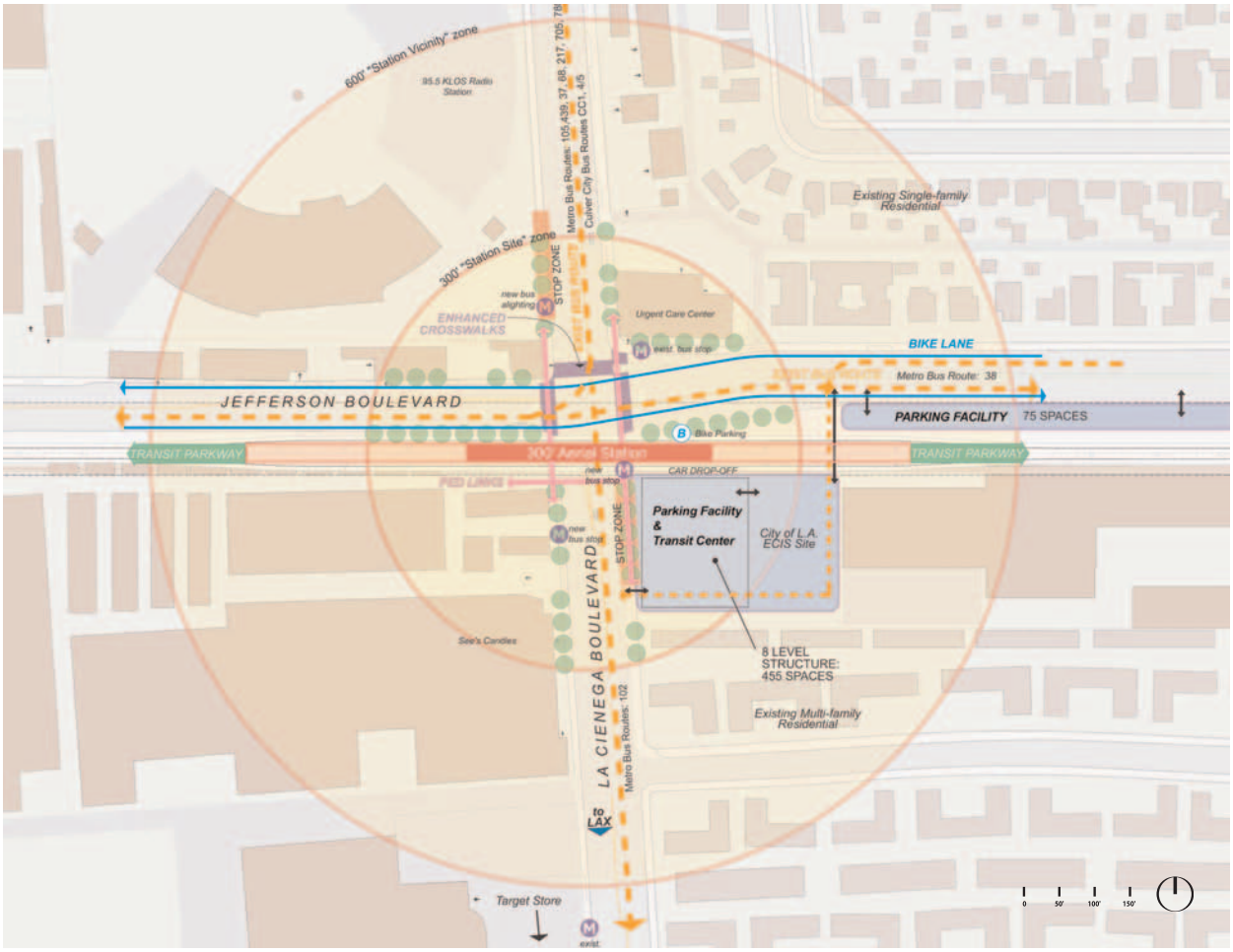
Vicinity Plan with Bikeway Transition



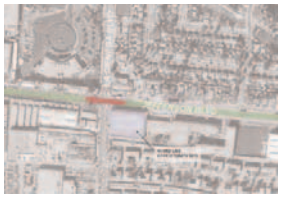
Section looking West

View of Bridge looking East

Station Circulation Plan



Station Area Plan



Vicinity Plan

Key Plan

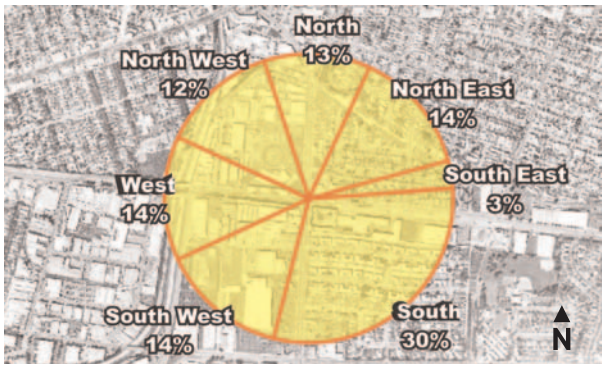
La Cienega

The La Cienega Station serves La Cienega Boulevard, which is a major gateway street leading to destinations such as Hollywood to the north and LAX and the South Bay in the opposite direction. As a major north-south artery, La Cienega Boulevard is well-served from Metro Rapid buses and other local buses. This station is also walking distance to shopping areas.

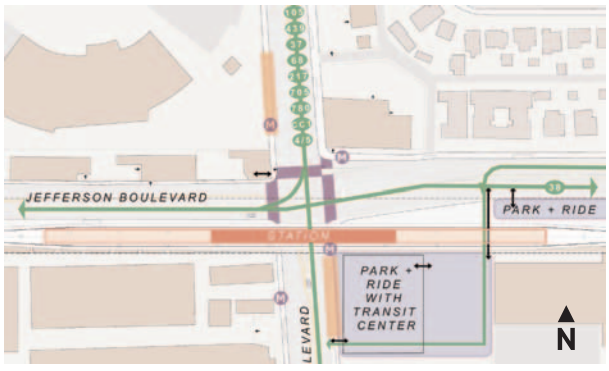
View at La Cienega at Jefferson Boulevards

View looking North towards Hollywood Hills

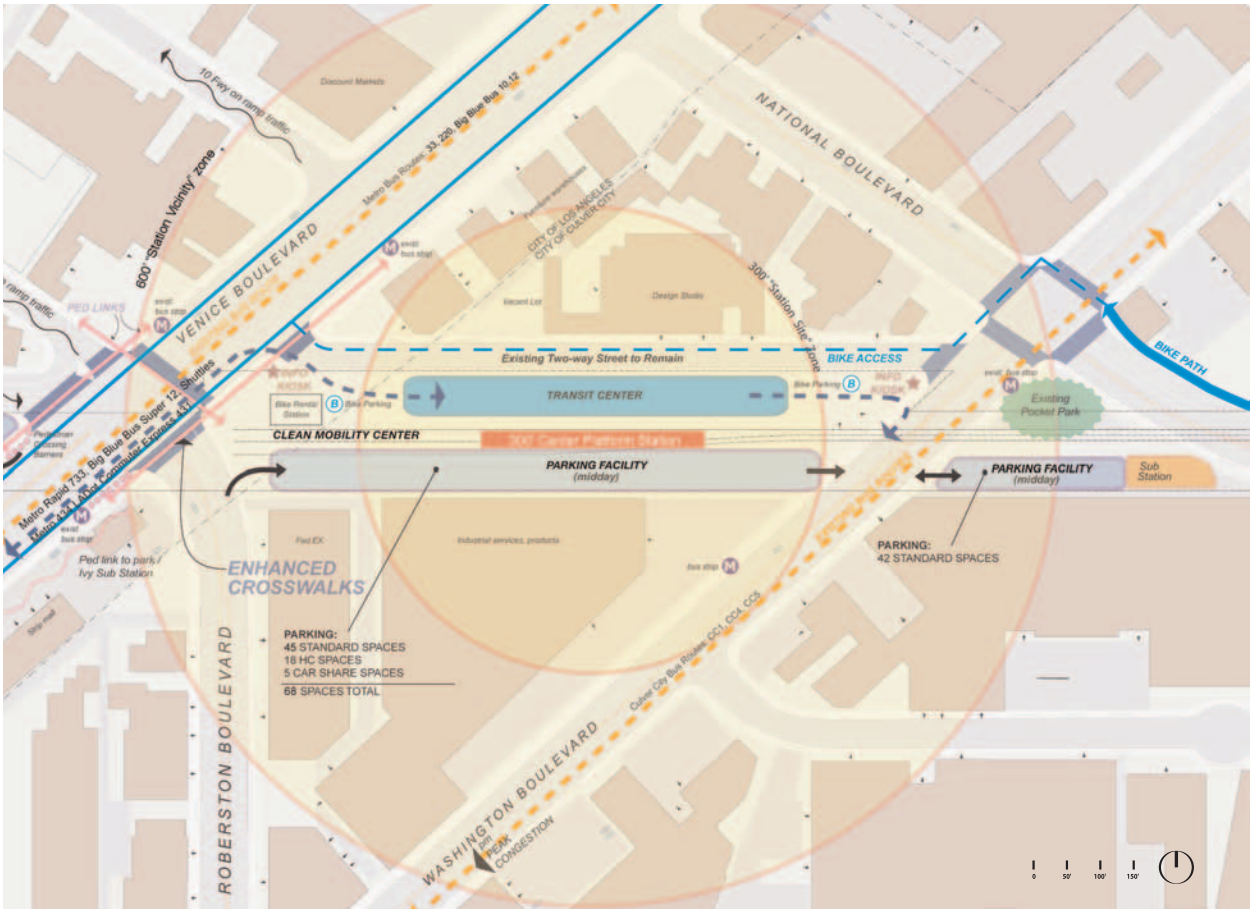
Section looking West



Trip Arrivals to station



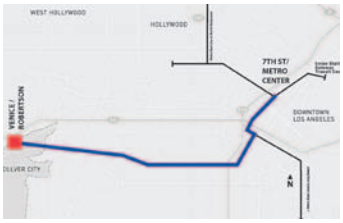
Station Circulation Plan



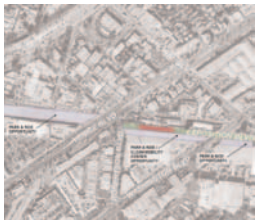
Station Area Plan

Venice/Robertson

The Venice Robertson Station would serve as a transit center, allowing riders to connect to Metro and Culver City buses for travel beyond this terminus station to Westside destinations such as Venice, Marina del Rey, and Santa Monica. Riders can also transition to a connecting bike path on Venice Boulevard leading to the beach, or may elect to walk to Culver City destinations. The Venice/Robertson Station is close to various Culver City movie studios which are employment centers and tourism venues. Cultural attractions such as movie theaters and playhouses are also nearby. The Station is adjacent to the site of a potential mixed-use, transit-oriented development at Venice Boulevard, National, and Exposition Boulevard, proposed by the Culver City Redevelopment Agency.



Key Plan



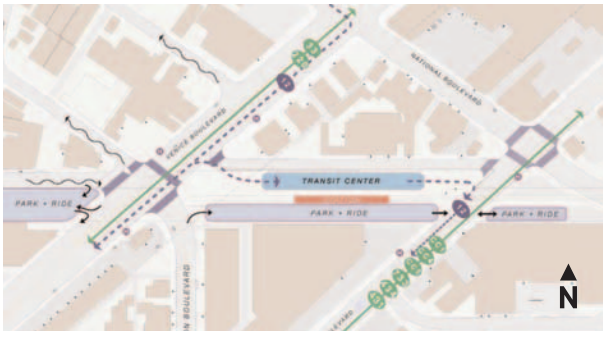
Vicinity Plan

View looking West from Venice & Exposition Boulevards

Bird's-eye View of Station Area

Parking Facility Plan

Trip Arrivals to Station



Station Circulation Plan

To meet the requirements of Federal and State law, the environmental evaluation of the Mid-City/Westside Transit Corridor Alternatives addresses a variety of impact topics. The two tables presented in this section provide a synopsis of the key findings within each topic area. The first table is an overview showing what type of impact occurred for each environmental topic area, while the second table provides specific information on the environmental analysis and associated mitigation measures. Impacts related to the LPA components (Exposition LRT and Operations and Maintenance Facility), both of the proposed Minimum Operable Segments (MOS), and design options to the LPA are discussed. This section should be viewed as a guide to more detailed information in the attached topics or in the body of the environmental document as a whole.

The table at the end of this summary presents a summary of the impacts associated with the components of the Mid-City/Exposition LRT Project and the proposed MOS options. The legend at the bottom of the table explains the meaning of the letters used to describe impacts. Key impact attributes of the alternatives are shown. Attributes designated as "S" (remains significant after mitigation measures) and "LSM" (less-than-significant after mitigation) should be noted. Temporary, but significant traffic and air quality impacts would occur during construction of the proposed project, and unavoidable noise and vibration impacts would occur at certain locations along the route during project operation. The proposed Project would also have beneficial effects related to traffic, energy consumption, and long-term air quality.

Example of one of the community workshops held to discuss issues and ideas for the Exposition Transit Parkway

To meet the requirements of Federal and State law, the environmental evaluation of the Mid-City/Exposition LRT Project addresses a wide range of topics. The following table summarizes impacts that would occur under each topic and lists the mitigation associated with each impact. Impacts and mitigation measures are shown for the LPA, all design options, and for the Phased Implementation segments. The parties responsible for implementing the mitigation measures will be assigned in the Mitigation Monitoring Reporting Program.

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
3.1 TRANSIT				
No Action	No impact anticipated.	N/A	N/A	N/A
LPA	Expand public transportation system to serve more residents and increase daily boardings.	Beneficial	None Required	Beneficial
Downtown Los Angeles Connection Options	Same as the LPA.	Beneficial	None Required	Beneficial
La Cienega Parking Options	Same as the LPA.	Beneficial	None Required	Beneficial
Jefferson Boulevard Design Options	Same as the LPA.	Beneficial	None Required	Beneficial
Venice/Robertson Design Options	Same as the LPA.	Beneficial	None Required	Beneficial
Phased Implementation	Beneficial impacts compared to the No Action Alternative, but not as great as the LPA.	Beneficial	None Required	Beneficial

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
3.2 TRAFFIC				
No Action	Increased congestion and delays.	N/A	N/A	N/A
LPA	LRT would cross potential queue area for the I-110/Hope St. on-ramp.	Significant	**T1** Exposition Boulevard/South Hope Street/I-110 On-Ramp • Metro shall provide a coordinated timing plan between the ramp meter, the intersection, and use either a queue cutter or the existing signalized pedestrian crossing between the Department of Motor Vehicles building and its parking lot east of South Hope Street to manage queuing across the trackway.	Less than Significant
LPA	Traffic to and from parking facility at Venice/Robertson station could worsen congestion for already overburdened I-10 on- and off-ramps	Significant	**T2** I-10 Robertson Boulevard Ramps • Metro shall contribute $100,000 toward the preparation of a study identifying possible improvements and reconfiguration of freeway ramps and connecting arterial streets. The study shall include review and coordination by the City of Los Angeles, Culver City, and Caltrans.	Less than Significant
LPA	With implementation of certain design features, no adverse impacts to intersection operation would result in the Downtown Los Angeles Connection. The following intersection-specific mitigation measures would ensure that these design features are implemented as part of the Project.	Significant	**T4** Hill Street/Washington Boulevard (LPA and Hill Couplet only) • Metro shall ensure that the northbound left-turn is prohibited. Metro shall ensure that northbound lane is configured to accommodate one shared through/right-turn lane and one through lane; and • Metro shall ensure that signal timing and phasing is modified to accommodate the LRT phase.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			T5 Hill Street/Adams Boulevard (LPA and Hill Couplet only) • Metro shall ensure that the northbound lane is configured to accommodate one shared through/right-turn lane and one exclusive left-turn lane; • Metro shall ensure that the southbound lane is configured to accommodate one shared through/right-turn lane and one exclusive left-turn lane; and • Metro shall ensure that signal timing and phasing is modified to accommodate protected left-turn phases for the northbound and southbound approaches. **T6** Hill Street/30th Street (LPA and Hill Couplet only) • Metro shall ensure that the northbound left-turn is prohibited and that northbound lane is configured to accommodate one through lane and one shared through/right-turn lane; • Metro shall ensure that the southbound left-turn is prohibited and that southbound lane is configured to accommodate one through lane and one shared through/right-turn lane; and • Metro shall ensure that signal timing and phasing is modified to accommodate the LRT phase. **T7** Hill Street/Jefferson Boulevard (LPA and Hill Couplet only) • Metro shall ensure that the northbound lane is configured to accommodate one shared through/right-turn lane and one exclusive left-turn lane; • Metro shall ensure that the southbound lane is configured to accommodate one shared through/right-turn lane and one exclusive left-turn lane; and • Metro shall ensure that signal timing and phasing shall be modified to accommodate protected left-turn phases for the northbound and southbound approaches.	

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			T10 Figueroa Street/Exposition Boulevard • Metro shall ensure that the eastbound lane is configured to accommodate two exclusive left-turn lanes and two through lanes; • Metro shall ensure that the westbound lane is configured to accommodate one exclusive right-turn lane and two through lanes; and • Metro shall ensure that signal phasing and timing is modified to accommodate the LRT phase.	
LPA	With implementation of certain design features, no adverse impacts to intersection operation would result in the Mid-Corridor. The following intersection-specific mitigation measures would ensure that these design features are implemented as part of the Project.	Significant	**T11** Vermont Avenue/Exposition Boulevard • Metro shall ensure that the eastbound shared through/left-turn lane is converted to an exclusive left-turn lane. • Metro shall ensure that the westbound shared through/left-turn lane is converted to an exclusive left-turn lane; and • Metro shall ensure that signal timing and phasing is modified to accommodate protected left-turn phases for all the approaches. **T12** Normandie Avenue/Exposition Boulevard • Metro shall ensure that the westbound lane is configured to accommodate one exclusive left-turn lane, one through lane and one shared through/right-turn lane; • Metro shall ensure that the southbound lane is configured to accommodate one exclusive left-turn lane, two through lanes and one exclusive right-turn lane; and • Metro shall ensure that signal timing and phasing is modified to accommodate protected left-turn phases for all the approaches.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			T13 Western Avenue/Exposition Boulevard • Metro shall ensure that an exclusive left-turn lane is added to both northbound and southbound to accommodate one exclusive left-turn lane, one through lane and one shared through/right-turn lane; and • Metro shall ensure that signal timing and phasing is modified to accommodate protected left-turn phases for all the approaches. **T14** Arlington Avenue/Exposition Boulevard • Metro shall ensure that the an exclusive left-turn lane is added to northbound to accommodate one left-turn lane, one through lane and one shared through/right-turn lane; • Metro shall ensure that the both eastbound and westbound lanes are configured to accommodate one exclusive left-turn lane and one shared through/right-turn lane; • Metro shall ensure that a southbound left-turn is prohibited; and • Metro shall ensure that signal timing and phasing is modified to accommodate protected left-turn phases for the northbound and eastbound approaches. **T15** Crenshaw Boulevard/Exposition Boulevard • Metro shall ensure that both eastbound and westbound lanes are configured to accommodate one exclusive left-turn lane and one shared through/right-turn lane; • Metro shall ensure that signal timing and phasing to accommodate protected left-turn phases for the eastbound and westbound approaches; and • Metro shall ensure that a new traffic signal is installed at the intersection of Crenshaw Boulevard and 36th St.	

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
LPA	With the implementation of certain design features, no adverse impacts to intersection operation would result in the West End. The following intersection-specific mitigation measures would ensure that these design features are implemented as part of the Project.	Significant	**T16** La Cienega Boulevard/Jefferson Boulevard (LPA, Jefferson Boulevard Design Option, Venice/Robertson Station Option, Phased Implementation Option: Southeast Corner Parking) C Metro shall modify signal phasing to "permissive" for the eastbound and westbound approaches on Jefferson Boulevard. C Metro shall ensure that the eastbound approach and departures are converted to accommodate a left-turn lane, two through lanes and a through/right-turn lane. The eastbound departure would require the removal of parking to accommodate the approach reconfiguration. C Metro shall ensure that the southbound approach and departures are converted to accommodate two left-turn lanes, three through lanes and a right-turn lane. Additional right of way would be required to accommodate the southbound right turn lane between Venice Boulevard and Washington Boulevard. The southbound departure on National Boulevard would also require additional right of way (on the southeast corner of Washington & National) to accommodate realignment and three departure lanes. **T17** La Cienega Boulevard/Rodeo Road (LPA, Jefferson Boulevard Design Option, Venice/Robertson Station Options, Phased Implementation Option: Southeast Corner Parking) C Metro shall ensure that the westbound approach configuration on Rodeo Road are converted to accommodate two left-turn lanes, two through lanes and a right-turn lane. **T18** Jefferson Boulevard/National Boulevard (LPA, La Cienega Station Option, Jefferson Boulevard Design Option, Venice/Robertson Station Options, Phased Implementation	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			Options) C Metro shall ensure that the southbound approach configuration on Jefferson Boulevard are converted to accommodate a right-turn lane, a through/right-turn lane and one through lane. **T19** Washington Boulevard/National Boulevard (LPA, La Cienega Station Option, Jefferson Boulevard Design Option) C Metro shall ensure that the westbound approach and departures are converted to accommodate a left-turn lane, two through lanes and a through/right-turn lane. The westbound departure would require additional Metro right of way and the removal of parking to accommodate the new approach configuration. **T21** Venice Boulevard/National Boulevard (LPA, La Cienega Station Option, Jefferson Boulevard Design Option, Venice/Robertson Station Options) C Metro shall ensure that the eastbound and westbound approaches on Venice Boulevard are converted to accommodate two left-turn lanes, three through lanes and a right-turn lane. This could be achieved through a widening of the existing pavement utilizing some of the central median and sidewalks on Venice Boulevard.	
LPA	Street closures would be required in certain residential areas.	Significant	**T22** Neighborhood Traffic Control C Although no adverse neighborhood traffic effects have been identified, Metro shall monitor traffic conditions on residential streets adjacent to the Exposition Corridor to determine the need for traffic calming measures on residential streets. Metro shall prepare traffic calming programs for each identified	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
			neighborhood location in coordination with the affected residents. C Neighborhood traffic control may be typically achieved by three means: a) General devices for neighborhood traffic control and protection that convey specific controls to drivers and pedestrians alike, including stop signs, speed limit signs and speed zones, turn prohibition signs, one-way street designation, and other regulatory devices such as flashing signals, yield signs, access regulation signs, truck restrictions, and parking controls; b) Geometric features of the road that physically restrict and prevent vehicle movement including chokers, traffic circles, median barriers, semi-diverters, forced-turn channelization, and cul-de-sacs at intersections or mid block. Other measures shall be considered to reduce vehicle speed such as pavement undulations and dips or raised intersections; c) Complete street closures to divert traffic to alternate routes and accomplish a desired goal.	
LPA	Special events at USC or Exposition Park would require special, temporary operating procedures for the Mid-City/Exposition LRT	Significant	**T23** Special Event Strategies C Metro shall develop "Bus Bridge" plan (with non-continuous LRT operations). C Metro shall develop "Traffic Control" plan (with LRT operation) with the City of Los Angeles.	Less than Significant
Downtown Los Angeles Connection Options	LRT travel on 17th and 18th Streets could block access to I-10 Freeway on- and off-ramps.	Significant	**T3** I-10 Off-Ramp/Grand Avenue/17th street/18th Street (Hill Street Couplet Design Option only) C Metro shall modify signal timing plan to allow outbound trains to cross traffic from the eastound I-10 off-ramp approaching Grand Avenue. C Modify signal timing and phasing to accommodate protected left-turn phases for the northbound and	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
			southbound approaches; exclusive left-turn lanes and two through lanes; C Convert westbound lane configuration to accommodate one exclusive right-turn lane and two through lanes; and C Modify signal phasing and timing to accommodate the LRT phase.	
Downtown Los Angeles Connection Options	With implementation of design features, no adverse impacts to intersection operation would result from the Downtown Los Angeles Connection Options. The following intersection-specific mitigation measures would ensure that these design features are implemented as part of the Project.	Significant	*Hill Street Couplet Design Option*: Mitigation measures **T4** through **T7** apply. See LPA above. For the *Flower Street Design Option*, the following measures apply: **T8** Flower Street/Adams Boulevard (Flower Street Options) C Metro shall ensure that the southbound lane is configured to accommodate one shared through/right-turn lane, one through lane and one shared through/left-turn lane; and C Metro shall ensure that signal timing and phasing is modified to accommodate the new additional LRT phase. **T9** Flower Street/Jefferson Boulevard (Flower Street Options) C Metro shall ensure that the southbound lane is configured to accommodate one shared through/right-turn lane, one through lane and one shared through/left-turn lane; and C Metro shall ensure that signal timing and phasing is modified to accommodate the new additional LRT phase.	Less than Signifcant
La Cienega Parking Options	Same as LPA.	Significant	Same as LPA.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
Jefferson Boulevard Design Options	Same as LPA.	Significant	Same as LPA.	Less than Significant
Venice/Robertson Design Options	Traffic to and from Venice/Robertson station would affect Washington/National Boulevard intersection operation.	Significant	Same as LPA. Mitigation measure **T20** would also apply. **T20** Washington Boulevard/National Boulevard (Venice/Robertson Station Options) C Metro shall ensure that the westbound approach and departures are converted to accommodate a left-turn lane, two through lanes and a through/right-turn lane. The westbound departure would require additional Metro right of way and the removal of parking to accommodate the new approach configuration.	Less than Significant
Phased Implementation	Same as LPA.	Potentially Significant	*Vermont Segment* - the following mitigation measures apply: **T3** through **T7** and **T10**, **T11**. See LPA above. *Crenshaw Segment* - the following mitigation measures would apply: **TC3** through **T7** and **T10** through **T15**. See LPA above.	Less than Significant
3.3 PARKING				
No Action	No impact is anticipated.	N/A	None Required.	N/A
LPA	A total of 278 off-street parking spaces currently leased from MTA and used by nearby schools and businesses would be removed.	Less than Significant	None Required.	Less than Significant
LPA	Of 328 on-street spaces along the proposed alignment, the Project would remove 242 spaces in the Downtown Los Angeles Connection. On Hill Street, all	Significant	**P6** Metro shall coordinate with the City of Los Angeles and local business owners to identify available off-street replacement parking locations for employees displaced by the loss of on-street public parking along Hill Street. For businesses that rely on on-	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
	on-street parking would be removed between Washington Bl. and Exposition Bl.		street customer parking and loading, side street locations shall be identified for conversion to metered, short-term parking and to designated loading zones.	
LPA	At stations without parking facilities spillover parking on neighboring residential streets could occur.	Potentially Significant	**P1** The following mitigation measures shall be implemented in the areas adjacent to the LRT station where no station parking facility is provided, and local jurisdictions determine that spillover parking is causing a significant impact. Some combination of the following four basic control approaches shall be implemented to reduce impacts of Metro patron parking in neighborhoods: C Prohibit on-street parking C Time-limited parking C Resident permit parking C Non-resident permits for registered car-poolers who work in the zone *See also **P5**.*	Less than Significant
	Of the 1,010 on-street parking spaces along the alignment in the Mid-Corridor, 512 spaces would be removed. The availability of street parking on surrounding streets would help to partially off-set the loss.	Significant	**P3** To absorb the parking loss associated with the removal of on-street parking along north side of Jefferson Boulevard between Carmona Avenue and La Cienega Boulevard, approximately 75 spaces in the proposed La Cienega Station parking facility shall be dedicated to local residents' use. **P4** The street configuration on Exposition Blvd between Carmona Avenue and La Brea Avenue shall be redesigned to accommodate an additional 50 on-street parking spaces. **P5** Year 2020 parking demand at the Venice/Robertson Station, La Cienega Station, and Crenshaw Station parking facilities shall be reevaluated after opening day of the Project based on the status and operation characteristics of the Mid-City/Exposition LRT taking into account bus feeder service and the for potential extension of the line to Santa Monica.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
Downtown Los Angeles Connection Options	No impacts related to spillover parking in residential areas.	No Impact	None Required.	No Impact
	On Hill Street, all on-street parking would be removed between Washington Bl. and Exposition Bl. Hill Street Couplet Design Option would remove 48 more on-street spaces than the LPA due to removal on 17th and 18th Streets.	Significant	Mitigation measure **P6**. See LPA above.	Less than Significant
	The Flower Street Design Option would remove or place restrictions upon 181 of the 269 on-street parking spaces along the alignment in the Downtown Los Angeles Connection. This option would remove 61 fewer spaces than the LPA.	Significant	**P2** In the event that either Flower Street Design Option is selected as part of the Mid-City/Exposition LRT Project, parking restrictions shall be implemented on the west side of Flower Street between 17th Street and Exposition Boulevard. The restrictions shall prohibit parking during PM peak traffic hours.	Less than Significant
	Flower Street Design Options would avoid loss of off-street parking being leased from MTA.	No Impact	None Required.	No Impact
La Cienega Parking Options	Potential spillover parking in residential areas	Potentially Significant	Mitigation measure **P5**. See LPA above.	Less than Significant
Jefferson Boulevard Design Options	No impacts related to spillover parking in residential areas.	No Impact	None Required	No Impact
	Loss of off-street parking within MTA ROW same as LPA.	Less than Significant	None Required	Less than Significant
	On-street parking impacts same as the LPA.	Less than Significant	None Required.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
Venice/Robertson Design Options	Removal of off-street parking in ROW.	No Impact	None Required.	No Impact
	Potential spillover parking in residential areas	Potentially Significant	Mitigation measure **P5**. See LPA above.	Less than Significant
Phased Implementation	No impacts related to spillover parking in residential areas.	No Impact	None Required.	No Impact
	Loss of off-street for both segments.	Less than Significant	None Required.	Less than Significant
	Loss of on-street parking in the Vermont segment on Hill Street and Exposition Boulevard.	Significant	None feasible.	Significant
	Loss of on-street parking in Mid-Corridor along Exposition Boulevard and Jefferson Boulevard.	Significant	Mitigation measures **P1**, **P3** through **P5** would apply.	Less than Significant
4.1 LAND USE/NEIGHBORHOODS				
No Action	The No Action Alternative would be inconsistent with four SCAG policies.	N/A	None Required.	N/A
	The No Action Alternative would not support the goals and objectives of the City of Los Angeles General Plan Framework.	N/A	None Required.	
LPA	Regional Land Use C The proposed Project would be consistent with all applicable regional plans of agencies with jurisdiction over the Project.	No Impact	None Required.	No Impact
LPA	Local Land Use C The proposed Project would be	Less than Significant	None Required.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
	consistent all applicable land use plans, policies, regulations, and general plans of agencies having jurisdiction over the Project.			
	C The proposed parking structure and transit center located next to the La Cienega Station at Jefferson and La Cienega Boulevards would be located on the same site as a proposed city air treatment facility, resulting in a land use incompatibility.	Significant	**LU1** Station area design guidelines shall be prepared prior to construction phase of the Project to accommodate the air treatment facility within or adjacent to the La Cienega Station parking facility and transit center. **LU2** Architectural feasibility studies and programming shall be conducted prior to construction phase of the Project to accommodate the parking facility, transit center and other transit oriented uses with existing plans for the air treatment facility at the same site location. Architectural programming and feasibility studies should provide screening and/or use separation between the air treatment facility and transit oriented uses, so that these measures are implemented during Final Design.	Less than Significant
Downtown Los Angeles Connection Options	There would be no conflicts with local land use policies or surrounding land uses for any of the design options.	No Impact	None Required.	No Impact

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
La Cienega Parking Options	Regional Land Use C The La Cienega Station Parking Options would be compatible with all SCAG policies.	No Impact	None Required.	No Impact.
	Local Land Use C With implementation of the Southwest Corner option, the predominant land use in the immediate area would be transit-related and may create conflicts with the continued redevelopment of the area to office type uses.	Potentially Significant	**LU3** If the parking option for the southwest corner of La Cienega and Jefferson Boulevards is selected, station area design guidelines shall be prepared prior to construction phase of the Project to integrate the Parking Facility and Transit Center with city plans for future development. Metro and the City of Los Angeles will coordinate these guidelines for land use compatibility.	
	C The No Parking option would increase the number of vehicles parking at Crenshaw Station, but would not introduce any new land use conflicts.	No Impact	None Required.	No Impact
Jefferson Boulevard Design Options	The widening option to the north or south of Jefferson Boulevard would not conflict with local land use policies.	No Impact	None Required.	No Impact

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
Venice/Robertson Design Options	There would be no conflicts with local land use plans or surrounding land uses.	No Impact	None Required. However, mitigation **LU4** and **LU5** would apply: **LU4** If the North of ROW Station option is selected for the interim western terminus, station area design guidelines shall be prepared prior to construction phase of the project. Metro and Culver City will coordinate guidelines to integrate the station as an interim station within Culver City's transit oriented development process. These guidelines would be compatible to city land use plans. **LU5** If the Aerial Station Option is selected for the interim western terminus, Metro will coordinate with Culver City regarding station area planning to ensure land use compatibility prior to construction of the Project.	No Impact
Phased Implementation	There would be no conflicts with local land use policies or surrounding land uses in any segment.	No Impact	None Required.	No Impact.
4.2 LAND ACQUISITION, DISPLACEMENT AND RELOCATION				
No Action	No impact is anticipated.	N/A	None Required.	N/A
LPA	Termination of 89 MTA leases and all beautification licences (within the MTA ROW)	Potentially Significant	**LADR1** The potential effects of property acquisition and the displacement of persons and business will be substantially alleviated through compliance with applicable federal and state laws governing relocation assistance and property acquisition procedures.	Less than Significant
	Acquisition of property, in full or part, along the Exposition ROW and outside the alignment would be required. Four of the parcels may not be required if the City of Los Angeles determines that 3rd Avenue may be closed without constructing a cul-de-sac.	Significant	**LADR1** would apply **LADR2** Metro shall coordinate with the City of Los Angeles during final design of the Mid-City/Exposition LRT Project to assess the feasibility of closing 3rd Avenue without creating a cul-de-sac, thereby eliminating the need to acquire portions of private property.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
Downtown Los Angeles Connection Options	Flower Street Design Options • No leases would be terminated. No ROW licenses exist.	No Impact	None Required.	No Impact
	• Requires much of the same as acquisition required for LPA.	Significant	**LADR1.** See Above.	Less than Significant
	Hill Street Couplet Design Option • Termination of 11 MTA leases. No ROW licenses exist.	Less than Significant	None Required.	Less than Significant
	• Requires same acquisition as LPA along Hill Street plus additional parcel (APN 5134-008-006).	Significant	**LADR1.** See Above.	Less than Significant
La Cienega Parking Options	The parking options would not affect any ROW leases. No ROW licenses exist.	No Impact	None required.	No Impact
	The Southwest Parking Option would require the acquisition of one parcel (APN 4205-032-001).	Significant	**LADR1.** See LPA Above.	Less than Significant
Jefferson Boulevard Design Options	Medium Bridge Option • Termination of all MTA leases. No ROW licenses exist.	Less than Significant	None Required.	Less than Significant
	• The South Widening option would not require any acquisition. The North Widening option, however, would require the acquisition of one parcel (APN 4205-033-006) and result in the displacement of three businesses.	Significant	North Widening Option - **LADR1**. See LPA Above.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
Venice/Robertson Design Options	All of the design options would require the termination of ROW leases.	Significant	Same as LPA.	Less than Significant
	No ROW licences would be affected.	No Impact	None Required.	No Impact
	The ROW and Aerial Station options would not require the acquisition of property. The North of ROW station option A, would require partial takes of six parcels. North of ROW station options B and C would require three parcels	Significant	**LADR1**. See LPA Above.	Less than Significant
Phased Implementation	Requires acquisition of same parcels as LPA (except those in the West End, but over a longer time period.	Significant	Same as LPA.	Less than Significant
	Any licenses granted within the Exposition ROW would terminated under the terms of the license upon construction and operation of the Mid-Corridor portion.	Less than Significant	None Required.	Less than Significant
4.3 EQUITY AND ENVIRONMENTAL JUSTICES CONSIDERATIONS				
No Action	The No Action Alternative would not provide increased access to public transit to lower income, minority populations	N/A	None Required	N/A
LPA	• Populations sensitive to environmental justice concerns will have greater access to regional activity centers and employment opportunities.	Beneficial	None Required.	Beneficial
	• Businesses would be affected by acquisition.	Significant	(See Land Acquisition, Displacement and Relocation Mitigation Measures)	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
	• Loss of on-street parking adjacent to businesses on Hill St.	Significant	See **P6** in Parking above.	Significant
	• Loss of on-street parking in Mid-Corridor and West End segments.	Significant	(See Parking Mitigation Measures)	Less than Significant
Downtown Los Angeles Connection Options	Same beneficial effect from improved transit access as LPA.	Beneficial	None Required.	La Cienega Parking Options
	Flower Street Design Options • No displacement of businesses or adverse loss of parking.	Less than Significant	None Required.	Less than Significant
	Hill Street Couplet Design Option • One business displacement.	Significant	(See Land Acquisition, Displacement and Relocation Mitigation Measures)	Less than Significant
	• Same parking effects as LPA	Significant	(See Parking Mitigation Measures)	Less than Significant
La Cienega Parking Options	The Southwest Corner option would displace one local business.	Significant	(See Land Acquisition, Displacement, and Relocation Mitigation Measures)	Less than Significant
	Neither parking options would affect parking for local businesses.	No Impact	None Required.	No Impact
Jefferson Boulevard Design Options	Same beneficial effect from improved transit access as LPA.	Beneficial	None Required.	Beneficial
	Widening Jefferson Boulevard to the north would displace three businesses.	Significant	(See Land Acquisition, Displacement, and Relocation Mitigation Measures)	Less than Significant
	No parking for local businesses would be affected.	No Impact	None Required.	No Impact

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
Venice/Robertson Design Options	Beneficial effect from improved transit access.	Beneficial	None Required.	Beneficial
	Acquisition for the Aerial Station option and the North of ROW station options would affect local businesses.	Significant	(See Land Acquisition, Displacement, and Relocation Mitigation Measures)	Less than Significant
	Parking in the ROW would be removed as allowed in Metro leases with local businesses.	Less than Significant	None Required.	Less than Significant
Phased Implementation	Beneficial effect from improved transit access would be limited to the Vermont, Crenshaw, or La Cienega segments.	Beneficial	None Required	Beneficial
	Acquisition impacts would result in loss of parking impacts.	Significant	(See 4.2 Land Acquisition, Relocation, and Displacement Mitigation Measures and 3.3 Parking Mitigation Measures)	Less than Significant
	Parking loss west of La Cienega Boulevard would be avoided.	No Impact	None Required	No Impact
4.4 VISUAL QUALITY				
No Action	No impacts are anticipated.	N/A	None required.	N/A
LPA			*Note: Mitigation measures listed below may mitigate more than one of the impacts described in "Environmental Impacts" column.*	
	• No impact to a designated Scenic Highway would occur.	No Impact	None Required	No Impact
	• Landscaping in existing Exposition Boulevard median would be removed.	Significant	**V1** Wherever feasible (as determined by a qualified arborist), specimen trees within the existing median shall be relocated to be incorporated into the landscape plan or along adjacent sidewalks where space permits as part of the implementation of guidelines	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
		Significant	for the Landscape Element of the Exposition Transit Parkway. Landscape guidelines shall be prepared before the construction phase of the Project. **V2** An embedded trackway enhanced with decorative surfaces shall be included as part of the ROW landscaping of the LRT alignment adjacent to Exposition Park.	Less than Significant
	• New sources of light and glare would be introduced adjacent to station areas and parking areas, and glare from embedded track surfaces in the ROW would occur.	Significant	**V3** All lighting at the park-and-ride lots and station locations shall utilize Best Available Technology to reduce spillover to adjacent land uses. In addition, all lighting at park-and-ride lots and station locations shall be directed away from adjacent residences and landscaping, fences, or other measures to shield adjacent residences from light and glare produced by light standards and vehicle headlights as part of the design development and implementation of the integrated corridor feature sub-element.	Less than Significant
	• Shade and shadow impacts may result from the proposed parking structure in Baldwin Hills.	Significant	**V4** All walls, structures and fences shall be properly screened or incorporate design features to improve appearance and reduce visual intrusion. Feature improvements, at minimum, would include choice of materials, Lead Artist design input and placement as part of the implementation of all sub-elements of landscaping, art, and other Transit Parkway improvements.	Less than Significant
	• Privacy impacts to residences may occur along selected portions of the alignment.	Significant		Less than Significant
	• Scenic vistas at various points along the Exposition Corridor would be altered.	Significant	**V5** Per Metro Art policy and in accordance with FTA Circular 9400.1A, a public art budget will be established for the incorporation of public art within the Project. The budget will include design, fabrication and installation of Station Artist elements and Lead Artist design fees. Implementation of the Lead Artists designs will be included in the Project's construction's base budget.	Less than Significant
	• New visual elements would be added to the project area, including the overhead wire system, transit vehicles, bridge and parking structures, and sound and retaining walls.	Significant	**V6** To reduce visual impacts in the segment between Figueroa Avenue and Vermont Avenue, median landscaping shall be	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			replaced and LRT Project elements shall be designed as part of the Exposition Transit Parkway with Lead Artist and community input. Project elements shall be defined to include lighting, public art, pedestrian access, etc.. Visual barriers in this segment such as fencing and walkways shall be discouraged. **V7** To reduce impact in the Mid-Corridor segment, landscaping, trees and public art and other elements of the Exposition Transit Parkway included in the median ROW shall be designed with Lead Artist and community input. Landscaping would be provided where feasible, to shield the LRT alignment against privacy impacts in residential areas. **V8** To reduce impact, noise walls and landscape screening shall be designed with community and Lead Artist input. Landscaping, where feasible, shall shield the LRT alignment against privacy impacts in residential areas. **V9** Crenshaw station area design guidelines shall be prepared before the construction phase of the Project to maintain views and the visual importance of the West Angeles Cathedral. **V10** La Brea station area design guidelines shall be prepared before the construction phase of the Project to reduce the massing and profile of the elevated structure, and to maintain existing views, where possible, to Baldwin Hills. **V11** La Cienega station area and parking structure design guidelines shall be prepared before the construction phase of the Project with community input. These guidelines shall include consideration of north-south vistas to Baldwin Hills as part of the station and parking structure design. **V12** Design guidelines for the Jefferson Boulevard Bridge shall be prepared before the construction phase of the Project with community input. These guidelines shall include consideration	

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			of north-south vistas to Baldwin Hills as part of the bridge design. **V13** The Option C Bridge design for the Jefferson Boulevard Bridge shall be integrated into the Exposition Transit Parkway concept to maintain views, where possible to Syd Kronenthal Park. **V14** An opaque wall shall be provided in back of the landscaping facing the Baldwin Vista Neighborhood and south of the alignment. **V15** The LRT alignment, bike path and landscaping shall be designed as an integral part of the Exposition Transit Parkway. Landscape features and the grading of the existing ROW shall provide screening of the LRT alignment from residential areas. A double row of trees shall be placed along the bike path in Culver City between Ballona Creek and National Boulevard to provide an additional buffer between the LRT alignment on the ROW and residential areas. A landscape plan, lighting plan and the design of screening features shall be coordinated with the community and Lead Artist input during Final Design. **V16** A graded parkway shall be constructed to buffer the LRT trackway between Faye Avenue and Wesley Street. **V17** To reduce impact from reflected glare from embedded track surfaces, landscaping shall be provided, where feasible, along the sides of the ROW median, outside of the LRT dynamic envelope. **V21** A Mid-City/Exposition LRT Customer Environment and Design Committee shall be established by Metro and shall contain representatives from the following Metro departments: • Construction • Operations • Planning	

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			• Communications The Committee shall serve as a review board to ensure that the final designs adhere to the Metro Design Criteria and are consistent with overall agency goals and the guiding criteria for the Exposition LRT Gateway and Neighborhood Station design. **V22** Where feasible, openings shall be provided along the safety wall of the USC/Exposition Park Station's platforms to allow for views through the station. **V23** TPSS sites shall be screened with landscaping (to cover necessary fencing) in retail and residential areas.	

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
Downtown Los Angeles Connection Options	Same as LPA	Significant	Mitigation measures **V1** through **V7**, and **V15** would apply.	Less than Significant
	• No new or different impacts to designated scenic highways, scenic vistas, or from light and glare would occur.	No Impact	None Required.	No Impact
	• The design options, whether on 17th and 18th Streets and Hill St or on Flower St, would fit into the urban character of the area	Less than Significant	None Required	Less than Significant
	• During construction, tall palm trees currently lining Flower Street, between Washington Boulevard and the I-110 freeway, would have to be removed.	Significant	**V24** Metro shall conduct an urban design study with the City of Los Angeles before Final Design to develop design guidelines for tree location and replacement. Community input shall be included as part of the study.	Less than Significant
	• The Flower Street Design Option would involve an undercrossing with approximately five-foot high safety walls adjacent to Exposition Park and USC where the LRT alignment would come back to grade. While the wall would introduce a new visual element, views and the visual character would not be significantly altered.	Less than Significant	None Required.	Less than Significant
La Cienega Parking Options	The proposed site for the parking structure is in a semi-industrial area and would be visually consistent with the surrounding area.	Significant	**V3.** See LPA Above.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
Jefferson Boulevard Design Options	Same as LPA • No new or different impacts to designated scenic highways, scenic vistas, or from light and glare would occur.	Significant	**V1, V4, V8, V13, V15, V16.** See LPA Above. **V18** If Jefferson Boulevard is widened to the north at the La Cienega grade separation, Metro shall landscape, as needed, any portion of the land acquired to accommodate the grade separation, necessary street widening and parking that would be left vacant.	Less than Significant
	• For either type of bridge structure (retained fill or columns as determined by the widening option), a pedestrian or cyclist's view of the Baldwin Hills ridge line would be obstructed by the profile of the bridge. This existing view is limited and the impact from the structure would not be adverse.	Less than Significant	None Required.	Less than Significant
Venice/Robertson Design Options	The close proximity of the station options residences has the potential to create light and glare and reduce privacy.	Significant	**V1, V4.** See LPA Above. **V19** Metro shall develop design guidelines in coordination with Culver City's station area planning process to ensure that visual impacts due to location of the North of ROW station are minimized. **V20** If the Aerial Station option is selected for the interim western terminus station, Metro shall develop design guidelines in coordination with Culver City's station area planning process to ensure that visual impacts are minimized. These guidelines shall also consider the incorporation of vistas or view corridors for the station to Downtown Culver City.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
Phased Implementation	Vermont segment • No impacts to designated scenic highways, scenic vistas, or from light and glare would occur in the Vermont Segment.	No Impact	None Required	No Impact
	• Visual character would be altered in the western portion of the segment near Exposition Park.	Significant	**V1** through **V6**, **V16**, **V17**. See LPA Above.	Less than Significant
	Crenshaw segment • Same as LPA with regard to landscaping removal, the introduction of new visual elements, spillover light and glare, and privacy impacts on nearby residences.	Significant	**V1** through **V8**, **V16**, **V17**. See LPA Above.	Less than Significant
	• Crenshaw Station platforms would be a new visual element neat West Angeles Cathedral.	Significant	**V9**. See LPA Above.	Less than Significant
	La Cienega • Same as LPA with regard to landscaping removal, the introduction of new visual elements, spillover light and glare, and privacy impacts on nearby residences.	Significant	**V1** through **V10**. See LPA Above.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
4.5 AIR QUALITY				
No Action	Would result in higher vehicle miles traveled (VMT) and would likely contribute to the degradation of regional air quality.	N/A	N/A	N/A
LPA	Regional Emissions • Mobile emissions would not exceed State or Federal thresholds. CO Hotspots / Ambient Air Quality • No CO hotspots, including at roadway intersections, park-and-ride facilities, the Venice/Robertson transit center. Conformity Determination • Compliance with the USEPA transportation conformity criteria (40 CFR Part 93).	No Impact Less than Significant No Impact	None Required. None Required. None Required.	No Impact Less than Significant No Impact
Downtown Los Angeles Connection Options	Similar to the LPA.	Less than Significant	None Required.	Less than Significant
La Cienega Parking Options	Similar to the LPA.	Less than Significant	None Required.	Less than Significant
Jefferson Boulevard Design Option	Similar to the LPA.	Less than Significant	None Required.	Less than Significant
Venice/Robertson Design Options	Similar to the LPA.	Less than Significant	None Required.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
Phased Implementation	Implementation of the LRT segments would result in slight decreases in regional pollutant emissions. Crenshaw and La Cienega Segments would have slightly more beneficial effects than the Vermont Segment.	Beneficial	None Required.	Beneficial
	Pollutant concentrations for either segment would not exceed State ambient air quality standards.	Less than Significant	None Required.	Less than Significant
	Compliance with the USEPA transportation conformity criteria (40 CFR Part 93).	No Impact	None Required.	No Impact

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
4.6 NOISE AND VIBRATION				
No Action	No impact anticipated.	N/A	N/A	N/A
LPA	Before mitigation, the proposed Project would result in moderate noise impacts at 66 residences and severe noise impacts at 49 residences. Sound walls would eliminate all severe impacts, but 10 residences would remain moderately affected. No impacts to non-residential noise-sensitive uses. The residual impacts would be fully eliminated with mitigation for audible warning device noise.	Significant	**NV1** To achieve Federal Transit Administration noise standards for residential uses adjacent to the Exposition ROW, sound walls shall be constructed approximately eight feet from the near track centerline. They shall be constructed at the following locations and according to the specified height: • Between Van Ness Avenue to Arlington Avenue, on the south side of the ROW, at a height of eight feet; • Between 2nd Avenue and 7th Avenue, on the south side of the ROW, at a height of eight feet; • Between 7th Avenue and 9th Avenue, on the south side of the ROW, at a height of eight feet; • Between Somerset Drive to Buckingham Road, on the south side of the ROW, at a height of six feet; • Between Buckingham Road and Farmdale Avenue, on the south side of the ROW, at a height of six feet; • Between La Brea Avenue to 600 feet east of Hauser Boulevard, on the south side of the ROW, at a height of six feet for at-grade sound wall and four feet for the wall along the elevated structure; and • Between Fay Avenue to Wesley Street, on the north side of the ROW, at a height of six feet. All of the sound walls shall incorporate landscape screening or public art features to enhance their appearance and reduce visual intrusion. Specific heights and lengths may be modified slightly as the design process progresses, but shall comply with all federal and state noise regulations. **NV2** In addition to the sound walls required by mitigation measure **NV1**, a combination of the following source, path and receiver options shall be employed to augment reduction of noise from Mid-City/Exposition LRT operations where necessary to	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
			comply with federal and state noise regulations. These methods shall be employed where sound walls alone would not fully attenuate LRT noise levels to federal and state noise regulations. The following methods shall be employed: • Sound Absorption Treatment; • Sound Insulation; • Relocation of turnouts (switches) to minimize proximately to residence or other sensitive receptors; • Spring-Rail Frogs shall be used where turnouts cannot be relocated to avoid residences or sensitive receptors; and • Increased wheel and rail maintenance only when all other methods all fail as it is a reoccurring operational expense.	
LPA	Audible warning signal noise (bells) are projected to generate five new impacts and increase the severity of light rail vehicle noise impacts, from moderate to severe, at 15 sensitive receptors.	Significant	**NV3** In addition to the sound walls required by mitigation measure **NV1**, the following options to control noise from audible warnings at grade crossings shall be employed at the following locations along the ROW: • Arlington Avenue: Crossing bell noise shall be reduced to 64 dBA at 50 feet and the same sound barrier prescribed in **NV1** shall be constructed; • 7th Avenue: Crossing bell noise shall be reduced to 64 dBA at 50 feet, the sound barrier prescribed in **NV1** shall be constructed, the noise walls shall extend south for approximately 50 to 100 feet on both the east and the west side of 7th Avenue at a height of eight feet; or if extending the noise wall is infeasible, then sound insulation at affected residences shall be put in place; • 9th Avenue: Crossing bell noise shall be reduced to 64 dBA at 50 feet and the same sound barrier prescribed in **NV1** shall be constructed; • Buckingham Road: Crossing bell noise shall be reduced to 64 dBA at 50 feet and the sound barrier prescribed in **NV1** shall	Less than Signficant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			be constructed, and sound insulation at affected residences near Buckingham Road shall be put in place. • Farmdale Avenue: Crossing bell noise shall be reduced to 64 dBA at 50 feet, the sound barrier prescribed in **NV1** shall be constructed, and sound insulation at affected residences near Farmdale Avenue shall be put in place.	
LPA	Crossover noise would result in three new impacts and increase the severity of previously identified noise impacts at Stations 213, 311, 413 and 486.	Significant	**NV4** The crossover at Station 311 shall be relocated to a location between Stations 319 and 337. The crossover at Station 413 shall be relocated to a location between Stations 425 and 450 or between Stations 383 and 385. **NV5** A spring-rail or moveable frog shall be used at the Station 213 crossover. **NV6** A spring rail frog shall be used at one of the following locations depending on the Venice/Robertson Design Option selected: • Station 489 for the LPA or the Aerial Station Option; • Station 486 for the ROW Option or the North of ROW Option A; • Station 482 for North of ROW Option B; and • Station 484 for North of ROW Option C.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
LPA	Without mitigation, ground-borne vibration impacts are projected at 150 single-family residences and 23 multi-family buildings.	Significant	**NV7** The vibration mitigation locations are shown in Section 4.6, Noise and Vibration of the Final EIS/EIR. Because detailed engineering drawings and information are not available during the EIS phase of a project, specific recommendations are not finalized until the engineering and design phase of the project. All vibration mitigation shall be designed to a performance specification that will reduce vibration levels at all impacted residential locations to below the FTA vibration criterion. The types of mitigation measures listed above provide examples of potential mitigation measures that might be used to meet the performance specification. As shown above in **Table 4.6-14**, vibration mitigation shall be recommended at vibration-sensitive receptors along 7,300 feet of the corridor. Methods to mitigate vibration impacts may include the following: • Ballast Mats • Resilient Fasteners • Resiliently Supported Ties • Tire Shred or Recycled Rubber Chip Underlay • Floating Slabs • Relocation of Crossovers or Special Trackwork **NV8** A detailed, site-specific noise impact assessment for the sound studio at Wesley Street shall be performed. The assessment shall be performed in accordance with FTA ground-borne noise and vibration impact criteria to measure site-specific impacts from LRT vehicles. Any necessary actions recommended by the assessment to attenuate vibration impacts to the studio shall be undertaken by Metro.	Less than Significant
Downtown Los Angeles Connection Options	No air-borne noise or vibration impacts.	No Impact	None Required.	No Impact

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
La Cienega Parking Options	No air-borne noise or vibration impacts.	No Impact	None Required.	No Impact
Jefferson Boulevard Design Options	Choice of bridge design option would not noticeably affect noise or vibration conditions.	Less than Significant	N/A	Less than Significant
Venice/Robertson Design Options	Ambient station noise from the North of ROW station options and the ROW station option as well as a crossover at Station 486 would result in noise and vibration impacts at the nearby residences on Helms Avenue.	Significant	Same as LPA. See above. In addition: **NV7** Any of the North of ROW terminus stations shall incorporate a sufficiently high peripheral sound wall to attain compliance with all applicable Federal and State noise regulation standards.	Less than Significant
Phased Implementation	In the Vermont Segment, there would be no noise or vibration impacts. In the Crenshaw Segment, there would be 28 moderate and 42 severe noise impacts. Audible warning noise impacts would be the same as the LPA within this segment. Ground-borne vibration impacts would be the same as the LPA. No ancillary noise impacts. In the La Cienega Segment, there would be 58 moderate impacts and 45 severe impacts. There would be no additional air-borne noise from LRT vehicles impacts.	No Impact Significant Significant	None Required. **NV1** through **NV4**. See LPA Above. **NV1** through **NV4**. See LPA Above.	No Impact Less than Significant Less than Significant
4.7 GEOLOGY, SOILS, AND SEISMICITY				
No Action	No impact would result.	N/A	None Required.	N/A

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
LPA	The grade separations at La Brea and La Cienega would be built on or adjacent to potentially active faults, in a potential liquefaction area, and on moderately expansive soils.	Significant	**GS1** Because the Exposition LRT proposes structures at La Brea Avenue and La Cienega Boulevard, which traverse or are adjacent to active or active faults and are located in potential liquefaction areas, a geotechnical study for each affected transit structure shall be required. This technical study shall identify design requirements for structures and foundations, which will maintain structural integrity under design earthquake conditions.	Less than Significant
Downtown Los Angeles Connection Options	The undercrossing in the Flower Street Design Option would be constructed in a potential liquefaction zone.	Significant	**GS2** A geotechnical study for each affected transit structure along the proposed Flower Street Eastside design option shall be required. This technical study shall identify design requirements for structures and foundations which will maintain structural integrity of the undercrossing's design in earthquake conditions. The study shall be performed before the commencement of Final Design.	Less than Significant
La Cienega Parking Options	Same as the LPA.	Significant	Same as LPA.	Less than Significant
Jefferson Boulevard Design Options	Same as the LPA. Either bridge design would be built in a potentially active fault zone, in a potential liquefaction area, and on moderately expansive soil.	Significant	Same as LPA.	Less than Significant
Venice/Robertson Design Options	Same as the LPA. In the case of an earthquake, the aerial station would be more vulnerable to damage.	Significant	Same as LPA.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
Phased Implementation	The Vermont and Crenshaw segments do not propose any aerial structures or undercrossings that require extra seismic consideration.	Less than Significant	None required.	Less than Significant
	In the La Cienega Segment, mitigation measures would be required to address the structural sufficiency of the proposed grade separation at La Brea Avenue, the parking option, and the aerial structure.	Significant	Same as LPA.	Less than Significant
4.8 EXPOSURE TO HAZARDOUS SUBSTANCES				
No Action	No impact anticipated.	N/A	N/A	N/A
LPA	Potential to encounter hazardous material during grading or excavation.	Significant	**H1** Government agency records for database sites, such as adjacent leaking USTs that appear to have the potential to impact the project shall be reviewed for site-specific information. Within areas experiencing ground disturbances during construction, any site containing contaminated soil from a previously or currently leaking UST that could affect or be effected by the proposed project shall be remediated according to State law. Contaminated soil shall be transported to an approved disposal site. **H2** The future geotechnical investigation scope of work shall be expanded to include walking observation of the surface soil within areas of the project ROW where there is the appearance of illegal dumping. Borings will be taken at locations that are determined by close-up observations or as a result of the database search to be an environmental concerns. Geotechnical soil sampling should include environmental screening for contamination by visual observations and field screening for volatile organic compounds with a photo ionization detector (PID). Soil samples that are suspected of contamination based on field	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			observations and PID readings shall be analyzed for suspected chemicals by a certified laboratory. If a site is found to contain contaminated soil it shall be removed, transported to an approved disposal location, and remediated according to State law. **H3** The patch of oil-stained soil with chemical odor observed on the southwest corner of the intersection of Exposition Boulevard and 11th Avenue shall be sampled and analyzed for petroleum hydrocarbons with carbon chain definition, PCBs, metals, and volatile organic compounds. If contaminated soil is found, the soil shall be removed, transported to an approved disposal location, and the site remediated according to State law. **H4** The appropriate jurisdictional agency shall be notified of soil stockpiles observed adjacent to the ROW in the vicinity of 9th Avenue to 11th Avenue intersections. The owner of this property shall be notified to remove this material to an approved disposal location. These stockpiles appear to be associated with an adjacent construction-contractor yard. **H5** Additional soil sampling and testing shall be conducted in the area of the La Cienega and La Brea Boulevards grade separations to confirm the lack of contaminated materials. In the event that the Eastside Flower Street Design Option is adopted, soil sampling and testing shall be conducted in the area of the proposed undercrossing to confirm the lack of contaminated materials. If contaminated soil is discovered, it shall be removed, transported to an approved disposal location, and remediated according to State law. **HS6** If the Southwest Corner Option is selected, and the La Cienega station parking facility is constructed on the southwest corner of La Cienega and Jefferson Boulevards, a Phase II Hazardous Waste Assessment shall be prepared for the site. As part of the Phase II assessment, a soil testing program to identify	

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
			any contaminated soil shall be conducted, and protocol for contaminated soil removal shall be established. **HS7** A Phase II assessment shall be conducted for the Exposition ROW to determine the extent, if any, of soil contamination by lead arsenate. Metro shall implement recommendations of the Phase II based on the study's results and remove contaminated soil where ever necessary. This testing shall include the site selected for the Venice/Robertson Station.	
Downtown Los Angeles Connection Options	Hill Street Couplet Design effects would be the same as the LPA. For the Flower Street Design Options, an increased potential to encounter contaminated materials would occur due to deeper excavation to construct the undercrossing.	Significant	Same as the LPA	Less than Significant
La Cienega Parking Options	Operation impacts would be the same as the LPA. For the Southwest Corner Option, digging would occur at depths significantly deeper than five feet to construct the lower two levels of parking. This greater depth increases the possibility of encountering contaminated soils.	Significant	**H6** If the Southwest Corner Option is selected, and the La Cienega station parking facility is constructed on the southwest corner of La Cienega and Jefferson Boulevards, a Phase II Hazardous Waste Assessment shall be prepared for the site. As part of the Phase II assessment, a soil testing program to identify any contaminated soil shall be conducted, and protocol for contaminated soil removal shall be established.	Less than Significant
Jefferson Boulevard Design Options	Same as the LPA.	Significant	Same as the LPA	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
Venice/Robertson Design Options	For the ROW and North of ROW station options, impacts would be the same as LPA. The Aerial Station Option, however, would require more significant excavation to construct the support columns. Digging at a greater depth increases the possibility of encountering contaminated soils.	Significant	Same as the LPA	Less than Significant
Phased Implementation	Same as the LPA.	Significant	Same as the LPA	Less than Significant
4.9 WATER RESOURCES				
No Action	No impacts would result.	N/A	N/A	N/A
	The Project would be subject to NPDES permit to control effects to water quality.	Less than Significant	None Required	Less than Significant
	No elements of the project would overload existing sewer systems.	Less than Significant	None Required	Less than Significant
	Project would result in limited grading and slight increase in the amount of impermeable surface.	Potentially Significant	**WR1** A drainage plan shall be developed and implemented to ensure that the Mid-City/Exposition LRT is engineered so that no new source of direct water resulting from flooding is created that would affect nearby properties. Metro shall secure all necessary Federal and local permits prior to bridge construction over Ballona Creek.	Less than significant.

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
LPA	Ballona Creek subject flooding during a 100-year storm events. Project would be built in accordance with all state and local flood plain standards.	Less than Significant	**WR2** To reduce surface runoff, all new surface parking facilities within the Exposition ROW shall include permeable surfaces.	Less than Significant
	Project would result in a slight increase in amount of impermeable surface which would slightly affect groundwater recharge. The inclusion of landscaping along the alignment would help off-set this increased impermeable surface.	Less than Significant	None Required	Less than Significant
Downtown Los Angeles Connection Options	Same as the LPA. Project would result in limited grading and slight increase in the amount of impermeable surface.	Potentially Significant	**WR1** and **WR2**. See LPA Above..	Less than Significant
	Ballona Creek not part of this segment of the route.	No Impact	None Required.	No Impact
La Cienega Parking Options	Potential impacts for the Southwest Corner Option related to flooding would be the same as the LPA. A new structure would not notably change the amount of impervious surface on-site and would be designed to direct surface runoff to existing drainage systems.	Less than Significant	**WR1** and **WR2**. See LPA Above..	Less than Significant
Jefferson Boulevard Design Options	Ballona Creek subject flooding during a 100-year storm events. Selected design option would be built in accordance with all state and local flood plain standards.	Less than Significant	None Required	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
Venice/Robertson Design Options	This station area would not be adjacent to any body of water or a 100-year flood plain.	No Impact	None Required	No Impact
	The station would be designed to direct surface runoff to existing drainage systems.	Less than Significant	**WR2**. See LPA Above.	Less than Significant
Phased Implementation	No waterways are adjacent to any portion of this route.	No Impact	None Required	No Impact
	All other analysis are similar to the LPA. Project would result in limited grading and slight increase in the amount of impermeable surface.	Potentially Significant	**WR1**. See LPA Above.	Less than Significant
4.10 BIOLOGICAL RESOURCES				
No Action	No impact anticipated.	N/A	N/A	N/A
LPA	Potential to affect nesting raptors in the breeding season due to removal of palm trees near Exposition Park	Significant	**BR1** Prior to construction a biological survey will be conducted to look for raptor species. If raptor species are found on Metro property, the construction schedule will be modified so as not to disturb birds during breeding season. Such disturbances could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment.	Less than Significant
	Possible adverse impacts to biota in the concrete-lined portion of Ballona Creek	Significant	**BR2** The MTA must give official notification of the project to the California Department of Fish and Game so that they may determine whether the portion of the LRT crossing Ballona Creek requires further mitigation.	Less than Significant
Downtown Los Angeles Connection Options	Potential impact to resting raptors in the breeding season due to removal of palm trees along Flower Street from Washington Boulevard to Exposition Boulevard.	Significant	Mitigation measure **BR1** would apply.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
La Cienega Parking Options	No biological resources would be affected.	No Impact	None Required.	No Impact
Jefferson Boulevard Design Options	The Medium Bridge Design Option has the potential to affect biota in the concrete-lined portion of Ballona Creek.	Significant	Mitigation measure **BR2** would apply.	Less-than-Significant
Venice/Robertson Design Options	No biological resources would be affected.	No Impact	None Required.	No Impact
Phased Implementation	The Vermont, Crenshaw , and La Cienega segments all have the potential to affect nesting raptors in the breeding season due to removal of palm trees.	Significant	Mitigation measure **BR1** would apply.	Less than Significant
4.12 ENERGY RESOURCES				
No Action	Higher VMT and correspondingly higher energy consumption compared to existing and Project conditions.	N/A	N/A	N/A
LPA	Projected fuel consumption is approximately 0.002 percent less than the No Action alternative.	Beneficial	None Required.	Beneficial
Downtown Los Angeles Connection Options	Same as the LPA.	Beneficial	None Required.	Beneficial
La Cienega Parking Options	Same as the LPA	Beneficial	Non Required.	Beneficial
Jefferson Boulevard Design Options	Same as the LPA.	Beneficial	None Required.	Beneficial

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
Venice/Robertson Design Options	Same as the LPA	Beneficial	None Required.	Beneficial
Phased Implementation	Projected fuel consumption for the Vermont, Crenshaw, and La Cienega segments are approximately 0.003 percent, 0.01 percent, and 0.02 percent respectively, less than the No Action alternative.	Beneficial	None Required	Beneficial
4.12 SAFETY AND SECURITY				
No Action	No impact anticipated.	N/A	N/A	N/A
LPA	Elimination of pedestrian crosswalks at Raymond Avenue due to the closure of the street to accommodate the ROW.	Significant	**SS1** Metro shall provide an at-grade pedestrian and vehicular crossing at Denker Avenue to allow pedestrians to cross Exposition Boulevard.	Less-than-Significant
	Elimination of the pedestrian crosswalk at Denker Avenue due to the closure of the street to accommodate the ROW.	Significant	**SS2** All stations shall be equipped with monitoring equipment and/or be monitored by Metro security personnel on a regular basis.	Less-than-Significant
	Security concerns at station platforms and park- and-ride lots.	Significant	**SS3** Metro shall implement a security plan for LRT operations. The plan shall include both in-car and station surveillance by Metro security or other local jurisdiction security personnel.	Less-than-Significant
			SS4 All stations shall be lit to standards that avoid shadows and all pedestrian pathways leading to/from sidewalks and parking areas shall be well illuminated.	
			SS5 Metro shall coordinate and consult with the LAPD, the LA County Sheriff Department, and the Culver City Police Department to develop safety and security plans for the alignment and station areas.	
			SS6 The station design shall not include design elements that obstruct visibility or observation nor provide discrete locations	

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
			favorable to crime; pedestrian access at stations shall be ground-level with clear sight lines. **SS7** Metro shall monitor pedestrian crossing activity at all locations with adjacent schools and implement appropriate measures to ensure pedestrian crossing safety. **SS8** Metro shall conduct a Hazard Analysis before the start of Final Design, using current safety analysis as a reference. The Hazard Analysis shall determine a design basis for warning devices as required by the California Public Utilities Commission. **SS9** Pavement markings will be provided on Exposition Boulevard along the length of the platforms of the USC/Exposition Park Station. These markings will be provided for motorist safety.	
Downtown Los Angeles Connection Options	As LRT trains would not exceed 35 mph, additional safety features would not be warranted. Security considerations would be similar to the LPA.	Less than Significant Significant	None Required Mitigation measures **SS2** through **SS7** would apply	Less than Significant Less than Significant
La Cienega Parking Options	The structure's design would facilitate safe ingress and egress from the structure and onto the street, for both vehicles and pedestrians. Security considerations for parking facilities would be the same as the LPA.	 Significant	 **SS2**, **SS4**, and **SS6**. See LPA Above.	Less than Significant Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
Jefferson Boulevard Design Options	Because the LRT crossing would be grade separated at Jefferson Blvd., additional safety features would not be warranted.	Less than Significant	None Required	Less than Significant
	Security considerations would be same as the LPA.	Significant	Mitigation measures **SS2** through **SS7** would apply	Less than Significant
Venice/Robertson Design Options	Safety and security conditions for stations would be the same as the LPA.	Significant	**SS1** through **SS9**. See LPA Above.	Less than Significant
Phased Implementation	As LRT trains would not exceed 35 mph, additional safety features would not be warranted for the Vermont segment. Security considerations would be similar to the LPA, but would not affect Turning Point School or Dorsey High School.	Significant	**SS3** through **SS7**. See LPA Above.	Less than Significant
	The Crenshaw and La Cienega segments would have similar safety and security considerations as the LPA.	Significant	**SS2** through **SS7**. See LPA Above.	Less than Significant
4.13 HISTORIC, ARCHAEOLOGICAL, AND PALEONTOLOGICAL RESOURCES				
No Action	No impact anticipated.	N/A	N/A	N/A
LPA	Discovery and disruption of paleontological remains for construction of caissons for aerial structure supports at the La Brea Avenue and La Cienega Boulevard grade separations.	Significant	**HAP1 Monitoring of Paleontological Resources.** Prior to any earth moving at the Project site, a qualified vertebrate paleontologist approved by the Los Angeles County Museum of Natural History – Vertebrate Paleontology Section (LACMVP) will be retained by the MTA or its designated contractor to advise the MTA about mitigation alternatives and planning. The paleontologist will assist the MTA to develop a mitigation plan and a discovery clause/treatment plan to be implemented during earth-moving activities along the corridor. The clause/plan will allow for the management, monitoring, recovery and subsequent treatment of any fossil remains uncovered by these activities, and for the archiving and documentation of associated specimen and	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
			site data. The mitigation plan shall include procedures and lines of communication to be implemented if fossil remains are uncovered by earth-moving activities. **HAP2 Scientific Recovery of Paleontological Resources**. If fossil remains are found, any earth-moving activity will be diverted temporarily around the fossil site until the remains have been. The mitigation plan will address the treatment of recovered fossil remains including identifying, curating, and catalogued, and reporting of speciments.	
	Discovery and disruption of archeological remains for construction of caissons for aerial structure supports at the La Brea Avenue and La Cienega Boulevard grade separations.	Significant	**HAP3 Jefferson Boulevard Design Option.** Prior to the start of the Project earth disturbing activities, the MTA shall prepare a Memorandum of Agreement (MOA) with the State Historic Preservation Officer (SHPO) per 36 CFR 800.6 (c), if necessary. The MOA shall be prepared in consultation with SHPO, and it shall include stipulations for the preparation of a Cultural Resource Monitoring and Mitigation Plan (CRMMP) to be reviewed and approved by SHPO. The CRMMP shall establish protocol for data recovery, site monitoring and identifying, curating, and cataloging of discovered archaeologic or historic resources. A draft Memorandum of Agreement was submitted to SHPO in a meeting on October 14, 2004. Mitigation measure **HAP3** would also apply	Less than Significant
	Although the State Historic Preservation Officer (SHPO) determined that removal of historic railroad tracks and associated ROW elements was not a significant impact, mitigation measures to document to historic operations on the Exposition LRT alignment would still be implemented.	Less than Significant	**HAP4 Historic American Engineering Record Documentation**. Historic American Engineering Record (HAER) documentation shall be prepared for the SP/PE Santa Monica Air Line that historically occupied the Exposition Corridor. This report shall document the significance of the resource and its physical conditions, both historic and current, through site plans, historic maps, photographs, written data, text, and video. This material will be published and made available to the public. A report documenting the contextual history of Pacific Electric and its	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
			significant role in American history, as well as its history in southern California, shall be prepared as part of the HAER documentation required above.	
	Although discovery of human remains is unlikely, mitigation for accidental discovery would be implemented.	Less than Significant	**HAP5 Historic Reference.** Historic reference and/or context of the ROW shall be included in the Project. The work shall convey information to the public regarding the historic context of the ROW and may also reference specific physical components of the SP/PE Santa Monica Airline. The development and oversight of the Project's historical reference shall be done by Metro Art who shall use the Metro Dorothy Peyton Gray Library as a reference. **HAP6 Discovery of Human Remains**. If any human remains are encountered during construction, work in the immediate area of the find shall be halted and the Los Angeles County Coroner shall be contacted. This mitigation measure will ensure proper legal identification and/or documentation, if necessary.	Less than Significant
	Alteration of historical setting and visual context of historic properties.	Significant	**HAP7 Alternative Design of Catenary System**. The catenary system along Exposition Boulevard in the vicinity of Exposition Park and USC shall be designed to conform with historic surroundings. All catenary pole alternative designs shall be consistent with basic standardized guideway components and shall not radically alter the proposed basic design.	Less than Significant
Downtown Los Angeles Connection Options	Flower Street Design Option only would have potential to disturb paleonotological and archaeological resources.	Significant	**HAP1**, **HAP2**, and **HAP6**. See LPA Above.	Less than Significant
	Same impacts to visual context of historic properties near USC as LPA.	Significant	**HAP4, HAP5,** and **HAP7**. See LPA Above.	Less than Significant
	No additional impact on historic properties that would be passed by either of these design options.	No Impact	None Required	No Impact

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
La Cienega Parking Options	Excavation for the Southwest Corner Option may result in alteration, removal, and destruction of paleontological resources. Impacts to archeological resources would be the same as the LPA.	Significant	**HAP1**, **HAP2, HAP3, and HAP6**. See LPA Above.	Less than Significant
	There are no historical resources where the La Cienega Station Parking Option is proposed.	No Impact	None Required	No Impact
Jefferson Boulevard Design Options	Paleontological and archaeological impacts same as LPA.	Significant	Mitigation measures **HAP1**, **HAP2**, **HAP3**, and **HAP6** would apply **HAP3**. See LPA Above.	Less than Significant
	The Median Bridge Design Option would cross over the NRHP-eligible to Ballona Creek Bridge.	Potentially Significant		Less than Significant
Venice/Robertson Design Options	Excavation for construction of caissons for the Aerial Station Option may result in alteration, removal, and destruction of paleontological resources. No known archaeological sites exist within the vicinity of the Venice/Robertson design options. However, previously unknown and unrecorded prehistoric or historical archaeological resources may be discovered during construction.	Significant	**HAP1, HAP2,** and **HAP6.** See LPA Above..	Less than Significant
	There are no historical resources in the location of the proposed Venice/Robertson Design Options.	No Impact	None Required	No Impact
Phased Implementation	Paleontological and archaeological impacts same as the LPA in the three segments. Potential impacts related to	Significant	**HAP1** and **HAP2**. See LPA Above.	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
	excavation at La Cienega Blvd would be avoided. The potential for accidental discovery at La Brea Avenue grade separation exists only for the La Cienega Segment. Historical impacts would be same as the LPA for the Vermont, Crenshaw, and La Cienega Segments.	Significant	**HAP4, HAP5,** and **HAP7**. See LPA Above.	Less than Significant
4.14 COMMUNITY FACILITIES AND PARKLANDS				
No Action	No impact anticipated.	N/A	N/A	N/A
LPA	No impact to parklands would result.	No Impact	None Required	No Impact
	Twenty-five community facilities are within 1/4 mile of the LPA alignment, providing increased accessibility to the facilities.	Beneficial	None Required	Beneficial
	On-street parking adjacent to two community facilities in the Downtown Los Angeles Connection would be removed.	Significant	No feasible replacement parking	Significant
	Parking at some community facilities would be removed, however, available street parking on surrounding streets or off-street exists.	Less than Significant	None required	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
LPA	The elimination of pedestrian access at Hayden Avenue would result in an adverse effect on pedestrian access to Syd Kronenthal Park.	Significant	**CF1** To fully mitigate the loss of the pedestrian access at Hayden Avenue, the MTA shall be required to provide a second pedestrian access point that crosses the Exposition ROW at Wesley Street.	Less than Significant
	Vehicle access to the Rancho Cienega Sports Park will be relocated.	Significant	**CF2** A vehicle access road shall be relocated and maintained from Exposition Boulevard north of the right-of-way crossing to connect to the existing entrance at Rancho Cienega Sports Park at Exposition Place. The relocated access road shall provide two-way access close to the existing Exposition Boulevard park entrance and shall be compatible with the station site, bridge structure, and guideway as part of the Project.	Less than Significant
Downtown Los Angeles Connection Options	No impact to parklands would result.	No Impact	None Required	No Impact
	Community facilities would benefit from improved transit access under any design option.	Beneficial	None Required	Beneficial
	Hill Street Couplet • On-street parking adjacent to two community facilities in the Downtown Los Angeles Connection would be removed.	Significant	See parking mitigation measure **P6.**	Significant

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
Downtown Los Angeles Connection Options	Flower Street Options • Would not utilize Hill Street, thus, all of the on-street parking on Hill Street would remain. LA Trade Tech College students, faculty, visitors would be affected by the partial loss of parking on Flower Street. However, off-street parking exists at the college.	Significant	See parking mitigation measure **P2.**	Less than Significant
	• Street widening may affect pedestrian access to community facilities.	Significant	**CF3** Prior to Final Design, Metro shall conduct an urban design study with the City of Los Angeles and affected stakeholders to provide design guidelines for improvement of pedestrian station access at the 23rd Street Station and Jefferson Station.	Less than Significant
La Cienega Parking Options	The parking options would not affect parkland, access to community facilities, or parking for community facilities.	No Impact	None Required	No Impact
Jefferson Boulevard Design Options	The Jefferson Boulevard Design Options would not result in any impacts on community facility accessibility.	No Impact	None Required.	No Impact
Venice/Robertson Design Options	The design options would not affect parkland, access to community facilities, or parking for community facilities.	No Impact	None Required	No Impact

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
Phased Implementation	Increased access to community facilities would correspond to the length of segment implemented.	Beneficial	None Required.	Beneficial
	Some parking loss adjacent to community facilities.	Significant	(See Parking Mitigation Measures)	Less than Significant
	La Cienega Segment would affect accessibility at Hayden Avenue and Rancho Cienega Sports Park.	Significant	**CF1** and **CF2.** See LPA Above.	Less than Significant
4.15 CONSTRUCTION IMPACTS				
No Action	No impact anticipated.	N/A	N/A	N/A
LPA	• Traffic - Interfere with normal flow of traffic, causing some lanes to be closed to vehicles for various durations.	Significant	**C1** MTA shall coordinate with the Los Angeles Department of Transportation (LADOT) and Culver City Public Works Department to designate and identify haul routes for trucks and establish hours of operation during final design. These routes shall be situated to minimize noise, vibration, and other possible impacts.	Significant
			C2 MTA shall prepare a traffic management plan to facilitate the flow of traffic during construction. The plan shall include the following: • Implement diversions/detours to facilitate traffic flow throughout the construction zone; • Temporarily restripe traffic lanes at significantly impacted locations, to the extent that this can increase the number of travel lanes provided during construction activities; • Temporarily eliminate on-street parking in the vicinity of significantly impacted locations, to the extent that this can increase the number of travel lanes provided during construction activities; • Implement a public outreach/education program to inform the public about the planned construction process and encourage motorists to consider alternate travel routes.	

TABLE S-4: SUMMARY OF IMPACTS

Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
			C3 MTA shall develop Worksite Traffic Control plans in cooperation with the Los Angeles Department of Transportation (LADOT) and the Culver City Public Works department to accommodate required pedestrian and traffic movements. LAUSD shall be invited to participate as part of MTA's Third Party Coordination Group to develop the plans prior to approval by LADOT and the Culver City Public Works department, as required by City regulations. **C4** MTA shall notify LAUSD of impending impacts on existing school bus routes. **C5** Contractors shall be required to have all employees park off-street or on-street at MTA approved locations to minimize the loss of commercial parking.	
			C6 Prior to construction, MTA public affairs and construction staff shall contact and interview individual businesses, allowing for knowledge and understanding of how these businesses carry out their work. MTA shall use this information to develop worksite traffic control plans, identify alternative access routes, and make efforts during construction to maintain business activities.	
LPA	• Parking - Loss of parking could affect business accessibility.	Significant	**C7** Unless required by worksite traffic control plans, construction activities shall be sequenced to minimize the temporary removal of multiple blocks of on-street parking at one time, which would make various on-street parking spaces available in an area under construction for a period of time. Mitigation measures **C5** through **C7** would also apply.	Less-than-Significant
LPA	• Equity and Environmental Justice Considerations - Access to local facilities, services, and residences could be obstructed; loss of parking could decrease patronage to affected	Significant	**C8** MTA shall provide affected communities and businesses with the telephone number of the Public Affairs Officers, who will be responsible for responding to questions about construction activities.	Less-than-Significant

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Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
	businesses.		**C9** MTA shall notify property owners, residences, and businesses of major construction activities (e.g., utility relocation/disruption and re-routing of delivery trucks). **C10** MTA shall coordinate with local businesses and residents to provide advanced notification of traffic detours and delays, and potential utility disruptions associated with construction. **C11** Temporary special signage shall be used to inform customers that merchants and other businesses directly affected by construction are open. The signage shall include special and closure information in advance of any future temporary closure. Signage shall also provide special access directions, if warranted.	
LPA	• Land Use/Neighborhoods - Construction activities would not physically divide existing communities or require a change in land use designation.	Less than Significant	None Required. With the exception of traffic congestion and air pollution, construction of the proposed Project would not result in impacts to land use or neighborhoods. Mitigation measures for traffic and air pollution are listed elsewhere in this section.	Less than Significant
LPA	• Land Acquisition, Displacement and Relocation - Construction could disrupt businesses due to loss of parking or business access. These impacts are discussed above under "Parking" and "Equity and Environmental Justice Considerations.	Significant	Mitigation measures **C5** through **C11**, above, also apply to land acquisition, displacement and relocation.	Less than Significant
LPA	• Visual Quality - Construction would be visible at nearby residential neighborhoods; construction lighting could alter lighting and create glare at nearby residential neighborhoods.	Significant	**C12** Construction staging areas outside of the MTA ROW shall be located adjacent to non-residential land uses wherever possible. If complete avoidance of adjacent residential properties is not possible, then construction staging shall be screened with materials and techniques approved by MTA. If located adjacent to single-story residential land uses, views from adjacent residences shall be screened with black-out fencing, temporary	Less than Significant

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Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			landscaping, or other means. **C13** All construction lighting shall be hooded and shielded to minimize spillover and glare. Alternately, screening can be used to shield construction lighting. **C14** Lighting shall be directed toward the interior of the construction staging area and shielded so as to avoid or minimize spill over into adjacent residential areas. Lighting techniques are to be approved by MTA.	
	• Air Quality -Daily construction emissions are anticipated to exceed the SCAQMD construction threshold for PM_{10}.	Significant	**C15** The following is a list of feasible control measures that SCAQMD recommends to reduce PM_{10} emissions during construction. These mitigation measures shall be implemented for all areas where construction for the proposed Project would occur. • **Diesel Equipment Usage**. The LACMTA will require contractors as part of their contract to minimize use of on-site diesel construction equipment, particularly unnecessary idling. • **Electric Powered Equipment**. The LACMTA will require contractors to replace diesel-powered machinery with electrically powered machinery, where feasible. • **Equipment Emissions**. Construction equipment will be shut off to reduce idling when not in direct use. Diesel engines, motors, or equipment will be located as far away as possible from existing residential areas. Low sulfur fuel will be used for construction equipment.	Less than Significant
			• **Location of Staging Areas**. If required, haul truck staging areas will be approved by the Los Angeles Department of Transportation. When feasible, haul trucks will be staged in non-residential areas away from school buildings and playgrounds. • **Fugitive Dust Control**. Maintain fugitive dust control program consistent with the provisions of SCAQMD Rules	

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Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			403 and 1186 for any grading or earthwork activity that may be required. • **Site Watering**. Site wetting shall occur often enough to maintain a twelve percent (12 percent) surface soil moisture content throughout any site grading or excavation activity. All unpaved parking or staging areas shall be watered at least two times daily, and all on-site stockpiles of debris, dirt, or dusty material shall be covered or watered in accordance with SCAQMD Rule 403. • **Truck Covering**. Require all trucks hauling dirt, sand, soil or other loose substances and building materials to be covered. • **Street Sweeping**. Utilize efficient street sweeping equipment at site access points and all adjacent streets used by haul trucks or vehicles that have been on-site in compliance with SCAQMD Rule 403. • **Phasing**. To the extent feasible, phase construction activities to minimize concurrent dust generating activities within 2,500-square-foot radius of shaft site locations. • **Wheel Washing Equipment**. MTA will require the contractor to install wheel/undercarriage-washing equipment or a functional equivalent at tunnel excavations as the first method by which to ensure that haul trucks have clean	
			wheels and undercarriages before entering public roadways. The installation of wheel washers alone will not relieve the contractor of their responsibility to eliminate (remove) all track-out from public roadways. Should use of the wheel/undercarriage washing equipment not be effective, the contractor will be responsible for providing alternative solutions in addition to, or instead of, the use of the equipment to ensure elimination (removal) of all track-out from public roadways. This could require the contractor to have a street-sweeper in use any time muck is being removed from the construction site and as often as is required throughout each workday to ensure that public roadways are kept clear of all track-out.	

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Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			• **Suspend Operations**. Suspend grading operations during second stage smog alerts, and during high winds, i.e., greater than 35 miles per hour. • **Sidewalk and Window Cleaning**. MTA will implement a sidewalk and window cleaning program, if needed, to reduce construction-related dust impacts to local businesses and residences. • **MTA Section 01566 Pollution Control Mandates**. All contractors as part of their contract must meet MTA Section 01566 pollution control mandates, which requires that all equipment engines be properly tuned at all times. • **Coordinate Construction Activities**. MTA will coordinate construction activities with school, daycare, and convalescent centers within the area that may be affected by the proposed Project to minimize air quality impacts to these sensitive receptor locations. In addition, the MTA's Public Affairs Officers will be administering a construction impact program for the benefit of the community. • **Signage Requirement**. Signs will be posted throughout the proposed alignment area that will include anticipated dates of construction activity, and the telephone number of the construction information desk that can log complaints, or offer additional information regarding the construction process. • **VMT Reduction Strategy**. With regard to project construction, MTA will require (through the construction contract administration process) that all contractors implement car/van pool programs throughout the construction process to minimize worker travel related VTM. • **Dust Suppression**. Dust suppression shall be applied in sufficient quantity and frequency to maintain a stabilized surface at all disturbed surface areas. • **Vehicular Speed**. Vehicle speed shall be limited to 15 miles per hour on unpaved roads.	
LPA	• Noise and Vibration - Construction	Significant	**C16** The construction management firm shall monitor noise	Less than

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Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
	noise would likely occur within 300 feet of residences, schools, or places of worship; ground-borne vibrations would cause intermittent localized intrusion along the alignment.		during construction activities. Regular noise monitoring shall be performed in areas where it is expected that the contractor would have difficulty meeting the property line noise limits. The monitoring includes weekly spot checks supplemented by monitoring in response to complaints. **C17** Noise control will be a construction contract requirement to ensure that contractors consider community noise when designing construction sites, selecting construction procedures and equipment, and determining work schedules. The noise control requirements may include the following: • Limit noisy construction activities, particularly during nighttime hours. Sample restrictions include: requiring pre-drilled piles and restricting the use of jackhammers and other pneumatic and impact devices. **C18** In noise sensitive areas, the MTA may require contractors to select construction processes and techniques that create the lowest noise levels. Examples are the mixing of concrete off-site instead of on-site and using hydraulic tools instead of pneumatic tools. **C19** All equipment shall be required to have effective commercially available mufflers installed, consist with best urban construction practice. **C20** The use of backup alarms shall be minimized. Approaches to be considered for reducing noise intrusion caused by backup alarms include the following: lay out construction sites to minimize the need for backup alarms; use strobe lights in place of backup alarms at night; use flagmen to keep the area behind maneuvering vehicles clear; and use self-adjusting backup alarms that adjust the alarm loudness up and down depending on ambient noise. The safety implications of any procedures for reducing backup alarm noise shall be carefully reviewed before the	Significant

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Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
			procedure is implemented. **C21** Construction sites shall be laid out in a manner that the noisiest activities are as far as possible from noise sensitive receptors. Pile installation shall be by drilling not driving per existing MTA guidelines. **C23** Vibration monitoring shall be required for any construction process that could cause intrusive or damaging vibration. **C24** During final design, a detailed analysis of construction noise impacts shall be carried out and pre-construction surveys shall be conducted at properties where the potential for significant vibration impact has been identified. In addition, measures to mitigate significant vibration impacts shall be developed for inclusion in construction contracts. **C25** If temporary sound barriers are required to meet City noise regulations, MTA shall review sound barrier designs prior to implementation. **C26** The Public Affairs Officer shall be responsible for responding to any local complaints about construction noise. The Officer would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would be required to implement reasonable measures to address the issue. All signs posted at the construction site shall list the telephone number for the Officer.	
LPA	• Geology, Soils, and Seismicity - As construction is at street level, it would not expose workers to hazards from geologic and seismic hazards.	Less than Significant	No significant impacts are anticipated. Thus, no mitigation measures are required.	Less than Significant

C22

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Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
LPA	• Exposure to Hazardous Substances - Impacts associated with encounter with hazardous materials would be mitigated prior to construction.	Significant	None Required. Mitigation measures listed in Section 4.8 Exposure to Hazardous Substances shall be implemented prior to construction activities to reduce effects to acceptable levels.	Less than Significant
LPA	• Water Resources - Construction activities could result in increased erosion and sediments to surface waters; construction activities may violate water quality standards, provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality.	Significant	**C27** A program of best management practices (BMPs) and "Best available technologies" shall be implemented to reduce potential impacts to water quality that may result form construction activities. To reduce and/or eliminate construction-related water quality impacts, before the onset of construction activities, MTA or its contractors shall obtain coverage under the NPDES General Construction Permit. Construction activities shall comply with the conditions in the permit, which include preparation of a stormwater pollution prevention plan, implementation of BMPs, and monitoring to ensure impacts to water quality are minimized. As part of this process, multiple BMPs shall be implemented to provide effective erosion and sediment control. These BMPs shall be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMPs to be implemented as part of this mitigation measure may include the following: • Employ temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) for disturbed areas; • Use BMPs that are acceptable to MTA, local jurisdictions, and the Regional Water Quality Control Board to protect storm drain inlets in the construction area and in downstream off-site areas; • Sweep dirt and debris from paved streets in the construction zone on a regular basis, particularly before predicted rainfall events; and • Provide grass or other vegetative cover on the construction site as soon as possible after disturbance.	Less than Significant

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Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			C28 Water quality control measures shall be implemented to prevent release of sediment to Ballona Creek. MTA shall ensure that water quality control measures, such as silt barriers/curtains, are in place before construction activities begin along Ballona Creek.	
LPA	• Biological Resources - Construction activities would not affect would not affect ecological resources	Less than Significant	None Required. Mitigation measures listed in Section 4.10 Biological Resources shall be implemented prior to construction activities to reduce impacts to acceptable levels.	Less than Significant
LPA	• Energy Resources - The highest indirect energy consumption would occur during demolition and then construction of on-site facilities.	Significant	**C29** MTA shall implement a construction energy conservation plan. MTA shall encourage contractors to adopt construction energy conservation measures that including, but not limited to, the following: • Use energy-efficient equipment; • Incorporate energy-saving techniques during construction; • Avoid unnecessary idling of construction equipment; • Consolidate material delivery as much as possible to ensure efficient vehicle utilization; • Schedule delivery of materials during non-rush hours to maximize vehicle fuel efficiency; • Encourage construction workers to carpool; and • Maintain equipment and machinery, especially those using gasoline and diesel, in good working condition.	Less than Significant
LPA	• Safety and Security - Construction activities would affect pedestrian and motorist's safety	Significant	**C30** MTA shall coordinate with and notify LAUSD when vehicular and pedestrian routes to school are affected. **C31** LAUSD, as well as LADOT and the Culver City Public Works department, shall be invited to participate as part of MTA's Third Party Coordination Group to ensure safe and convenient pedestrian routes to schools are maintained, and to publish and distribute school pedestrian route maps. **C32** MTA shall provide sufficient notices to forewarn children and	Less than Significant

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			parents when school pedestrian routes are affected. **C33** MTA or their designated contractor shall coordinate with and notify LAUSD the schedule for LRT construction. LAUSD shall be notified when construction would occur within a half-mile of a LAUSD school. **C34** MTA shall install appropriate traffic controls (signs and signals) as needed in conformance with LADOT and Culver City Public Works department's standards to ensure pedestrian and vehicular safety during construction. **C35** MTA shall provide, at no charge to LAUSD, an instructional safety program that will cover safety issues relative to construction of the LRT Project. **C36** Construction shall be scheduled and haul routes shall be planned to minimize conflicts during school arrival and dismissal times. **C37** MTA shall provide the funding for crossing guards in the vicinity of all construction sites and haul routes as warranted in accordance with criterion contained in the *California DOT Traffic Manual*, Chapter 10-07.3, Warrants for Adult Crossing Guards. Where the manual criterion does not warrant placement of crossing guards, MTA may provide crossing guards during school hours on a site-specific basis considering the conditions and criterion stated in the manual. MTA shall provide crossing guards during school arrival and departure hours during construction, where related lane closures will divert traffic to residential streets utilized by elementary and middle school students. **C38** The construction contractor shall be responsible for providing flag persons at construction sites and construction staging areas, as needed, where construction activities	

TABLE S-4: SUMMARY OF IMPACTS				
Alternative	**Environmental Impacts**	**CEQA Determination of Significance**	**Mitigation Measures**	**CEQA Significance After Mitigation**
			compromise the safety of pedestrians and/or motorists while traveling to and from school. **C39** The contractors shall be required, in conformance with provisions in the California Vehicle Code, to inform their drivers that they must drive cautiously in areas with concentrations of school children and must stop when they encounter school buses using red flashing lights. **C40** As part of the stipulations of the construction contract, the contractor shall not allow construction vehicles to stage or park along streets bordering school sites. Vehicles used to transport construction workers shall be required to park elsewhere. The adequacy of these provisions shall be reviewed with the LAUSD School Traffic and Safety Department. **C41** The contractor shall be responsible for providing security at construction sites at a level that MTA determines to be appropriate in accordance with *MTA Rail Transit Design Criteria and Standards, Fire/Life Safety Criteria*, Volume IX. The MTA shall provide security patrols at construction staging and construction sites by Los Angeles law enforcement agencies under contract to the MTA; install temporary fencing around major construction sites and construction staging areas; install screening to block views of the major construction sites from motorists to avoid distraction; and install appropriate signage and lighting as required by LADOT and Culver City Public Works department. **C42** Citations with fines shall be issued for trespassing on construction sites, by LA Law Enforcement Agencies under contract to MTA. **C43** Newsletters shall be prepared and distributed to keep the public informed about safety issues during construction. In addition, information booths shall be provided at local	

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Alternative	Environmental Impacts	CEQA Determination of Significance	Mitigation Measures	CEQA Significance After Mitigation
			community events. **C44** Standard lighting levels, as required by the City of Los Angeles and Culver City, for detours and existing roadways through and around construction zones shall be implemented.	
LPA	• Historic, Archaeological, and Paleontological Resources - Excavation for construction of caissons for aerial structure supports may result in alteration, removal, and destruction of archaeological sites or of paleontological resources that could be present in the soils that underlie the Exposition ROW.	Potentially Significant	Mitigation measures listed in Section 4.13 Historic, Archaeological and Paleontological Resources shall be implemented to reduce impacts on historic, archaeological and paleontological resources.	Less than Significant
LPA	• Community Facilities - Vehicular access may be limited during construction due to temporary street or lane closure; loss of on-street parking could potentially reduce access to nearby community facilities.	Potentially Significant	Mitigation measures **C2**, **C3**, **C5**, and **C7** also applies to community facilities and parklands.	Less than Significant
Downtown Los Angeles Connection Options	Construction of the Flower Street Option undercrossing would result in traffic detours for a longer period and the most severe air quality impacts. Construction impacts of other options would be same as the LPA.	Same as LPA	Same as LPA	Same as LPA
La Cienega Parking Options	The Southwest Corner Option would have localized construction impacts adjacent to the intersection of La Cienega and Jefferson Boulevards.	Significant	Mitigation measures **C1** through **C4** would apply.	Less than Significant

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Jefferson Boulevard Design Options	The Medium Bridge Option with street widening either to the north or to the south would preserve the Ballona Creek Bridge and would not be considered by SHPO as an adverse visual effect since the existing setting of the bridge has already lost integrity because of the proximity of adjacent roadways.	Same as LPA	Same as LPA	Same as LPA
Venice/ Robertson Design Options	Construction impacts would be similar to the LPA.	Same as LPA	Same as LPA	Same as LPA
Phased Implementation	Construction impacts would be the same as the LPA for the Vermont and Crenshaw segments.	Same as LPA	Same as LPA	Same as LPA

SOURCE: Terry A. Hayes Associates LLC, 2005.