QUARTERLY MITIGATION MEASURES STATUS REPORT

LOS ANGELES METRO GOLDLINE EASTSIDE EXTENSION LRT PROJECT

14th EDITION

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U.S. Department of Transportation

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1. MITIGATION MEASURE PROGRAM

1.1 TERMINOLOGY

On April 1, 1993, by mandate of State legislation (AB152), the Los Angeles County Transportation Commission (LACTC) and the Southern California Rapid Transit District (SCRTD) were merged into one agency, the Los Angeles County Metropolitan Transportation Authority (Metro). This new agency combines all the duties and obligations of the LACTC and the SCRTD under one governing board made up of 13 voting members. The Rail Construction Corporation (RCC), now the Construction Division of Metro was formerly the construction subsidiary of the former LACTC.

For the purposes of this report, all references to SCRTD, the District, or Operations have been changed to Metro Operations. All references to LACTC and the Commission have been changed to Metro and the Authority.

1.2 INTRODUCTION

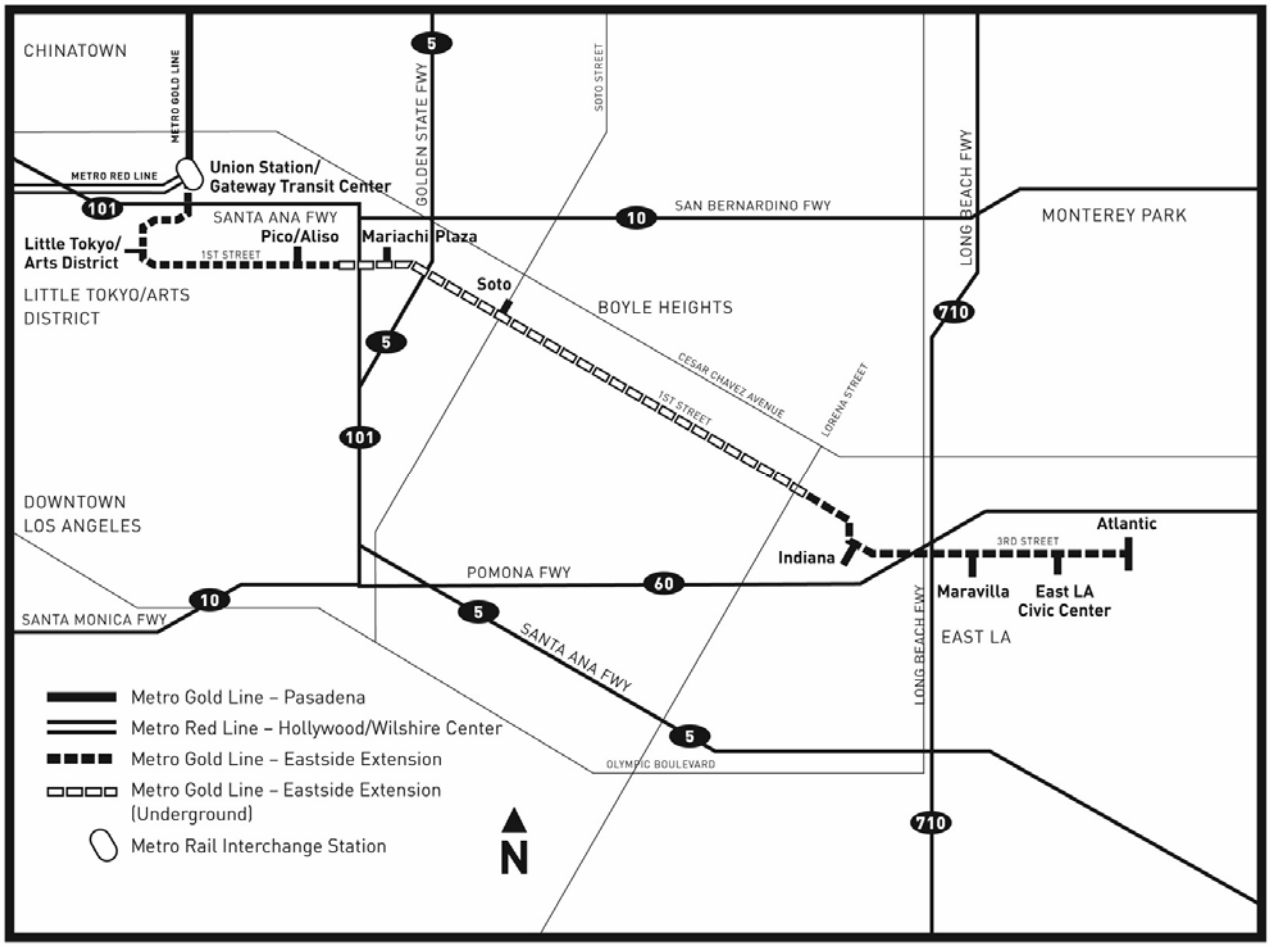
The Los Angeles Metro Eastside Light Rail Transit (LRT) project, a 6-mile, dual track light rail extension of the Metro Gold Line through East Los Angeles (See map), will form part of a larger, regional rail network that consists of heavy rail, light rail, and commuter rail components throughout Los Angeles County. In 2003, the 13.8-mile Metro Gold Line to Pasadena opened for service connecting Downtown Los Angeles with East Pasadena. The Eastside LRT is a continuation of the Gold line, which will include eight new stations from Union Station to Beverly and Atlantic Blvds. via Alameda St., 1st St., Indiana St., 3rd St., and Beverly Blvd. The system will bridge State Route 101 Freeway and traverse the existing 1st Street Bridge over the Los Angeles River. The system will travel south on Alameda Street and then east on 1st Street with two stations at Alameda and Utah Streets. East of the Los Angeles River and 1st and Utah Streets, the alignment transitions to tunnel for approximately 1.8 miles, and continues beneath 1st Street to underground stations at 1st Street and Boyle Avenue and 1st Street and Soto Street. The alignment returns to the surface near the intersection of 1st Street and Lorena Streets, then jogs to the south, transitioning to follow 3rd Street with stations at Indiana Street, Ford Boulevard, Mednik Avenue and Pomona and Atlantic Boulevards. Construction of the 1.8-mile tunnel portion and at-grade portion are underway, with operations expected to commence in mid-2008.

This report contains Mitigation Measures pertaining to the Eastside LRT. Metro is in compliance with the terms of the Full Funding Grant Agreement (FFGA) for federal financing of the Eastside LRT regarding the preparation of a Mitigation Measures Status Report (MMSR).

1.3 BACKGROUND

The LACMTA Board of Directors voted to certify the Final Supplemental Environmental Impact Statement/Final Subsequent Environmental Impact Report (FSEIS/FSEIR) of the Eastside LRT in February 2002. The FSEIS/FSEIR identifies both beneficial and adverse environmental impacts associated with the Project. The Metro adopted the environmental mitigations associated with this project in 2002. Metro expects that the

FFGA require that these mitigation measures be implemented as part of the Metro Eastside LRT project, and that where options exist, FTA will be consulted to reach agreement on specific measures to be implemented. The FFGA or FTA is likely to require that the quarterly review meetings be the forum to report on the progress of implementation of mitigation measures and to reach decisions on mitigation options still under consideration, and that no mitigation measure be withdrawn or substantially changed without its express written approval.



A Mitigation Measure Monitoring Program was initiated to ensure implementation of the respective mitigation measures. A summary of the latest monitoring activities is provided in this report.

1.4 MITIGATION MEASURES STATUS REPORT REFERENCES

The Mitigation Measures Status Report provides a comprehensive listing of all the mitigation measures reported in the following documents:

METRO, February 2002. *Mitigation Monitoring Plan, Final Supplemental Environmental Impact Statement/Final Subsequent Environmental Impact Report.*

January 4, 2002. *Final Supplemental Environmental Impact Statement/Final Subsequent Environmental Impact Report.* 7

1.5 ORGANIZATION AND FORMAT OF THE REPORT

- **Summary Status of Mitigation Measures**. This section (Section 2) provides the status for each Mitigation Measure including Mitigation Measures **completed (C)**, Mitigation Measures **in progress (P)** and Mitigation Measures to be addressed and implemented during the **next** quarterly report **(N**). If there has been no work completed for a particular mitigation measure this quarter it will be indicated with an "**NC"** indicating there is "**no change**" in the status of that measure.

- **Mitigation Measures Compliance**. This section (Section 3) provides a narrative discussion of those mitigation measures in progress or those that have been completed and are ready to be closed. Completed measures will be dropped from subsequent reports. Previous MMSR editions can be consulted for review of these measures.

- **Status of Mitigation Measures**. This section (Section 4) provides a detailed description of each Mitigation Measure and the current status. The measures are grouped into the following major categories (abbreviations also shown):

Category	**Abbreviation**
Transit	T
Traffic	Tr
Parking	P
Pedestrians/Bicyclists	P/B
Land Use & Development	LU&D
Economic	Ec
Land Acquisition and Displacement	LA&D
Visual & Aesthetics	V&A
Noise & Vibration	N&V
Geologic/Seismic	G/S
Hazardous Materials	HM
Water Resources	WR
Energy	E
Safety & Security	S&S
Historic/Archaeological	H/A
Paleontological	P
Community/Parklands	C/P
Construction Air Quality	CAQ
Neighborhoods & Business Disruption	N&BD
Natural Resources & Ecosystems	NR&E
Utilities	U

Each adopted mitigation measure is assigned a number within the major categories and contains a:

- Reference Section, indicating in which of the above environmental documents the mitigation measure is found, including sections and pages;
- Implementation Section, indicating what contract, permit, correspondence, procedure manual, or agreement will implement the mitigation measure;
- Responsible Party Section, indicating the individual(s) responsible for providing the status of compliance with the measure's provisions;
- Status Section, providing the current status of the mitigation measure; and
- Future Action Section, indicating what action is pending, if any, or what action must be accomplished before the mitigation measure can be completed, and the expected time of completion

- **Acronyms**. This section (Appendix A) provides a list of acronyms used throughout the document.
- **Acknowledgments**. This section (Appendix B) provides a list of Metro staff that participated in the compilation and completion of this document.

2. SUMMARY STATUS OF MITIGATION MEASURES

2.1 MONITORING COMPLETED

Monitoring is completed on a quarter-by-quarter basis, pending closure of measures. This quarter five mitigation monitoring measures were completed **(C).** Agreement has been reached regarding the reconstruction of Ramona Highs School, therefore measures **LU&D2**, and **LA&D2** have been completed. The tunneling work for the 1.7 mile underground portion of the Eastside Goldline Extension has been completed. Mitigation measures **G/S1** and **G/S2** related to geologic safety and water quality monitoring in the tunneling effort was completed. The project has been designed to be ADA compliant; therefore measure **S&S2** has been completed. The City of Los Angeles Bureau of Engineering (BOE) has commenced construction work on the 1st St. Bridge project. Three Mitigation Measures **WR3, H/A2, NR&E** are associated with the bridgework. All of these measures will be handled by the City of Los Angeles. These measures are currently considered in progress **(P**). Metro has revised the original MOA with FTA and SHPO to address the transfer of the bridgework mitigation measures and submitted the documents to the FTA. Once Metro has executed a revised MOA these Mitigation Measures will be dropped from the report. All other Mitigation Measures are considered active at this time and will be reported on quarterly as the project progresses.

2.2 MEASURES IN PROGRESS

The Mitigation Measures in progress **(P)** are indicated in the Mitigation Measures Table in included in this Section 2 of report. Most Mitigation Measures are in progress at this time and will continue to be monitored throughout construction. They include:

Transit (T)
Traffic (Tr)
Parking (P)
Pedestrian/Bicyclists (P/B)
Land Use and Development (LU&D)
Economic Development (EC)
Land Acquisition and Displacement (LA & D)
Visual and Aesthetics, (V&A)
Noise and Vibration (N&V)
Geologic/Seismic (G/S)
Hazardous Materials (HM)
Water Resources (WR)
Energy (E)
Safety and Security (S&S)
Historic/ Archeological (H/A)
Community Parklands (C/P)
Construction Air Quality (CAQ)
Neighborhood and Business Disruption (N&BD).
Natural Resources and Ecosystems (NR&E)
Utility (U)

2.3 MITIGATION MEASURES SUMMARY TABLE

The following table exhibits the current status of all Eastside LRT mitigation measures and activities. Mitigation Measures monitored in the current report quarter are shown in bold, and are discussed in Section 4. Those not in bold are not addressed in this edition report at this time. These are indicated with an "**NC**" (No Change) in the status column. Measure P/B2, Pedestrian/Bicyclists will be addressed later in the project before operations commence. Measure N&V1 will be addressed in the operational phase of the project.

Measures in progress are indicated by a "**P**" and are discussed in Section 4. The vast majority of measures are currently classified as "**P**".

Measures that will be implemented and addressed in the next report quarter are denoted with an "**N**".

A "**C**" indicates measures that have been completed. Three mitigation measures have been completed at this time.

Mitigation Measure	Page	Status	Mitigation Measure Completion Date	Monitoring Completion Date
T	13	P		6/30/07
Tr 1	14	P		6/30/07
Tr 2	17	P		6/30/07
Tr 3	20	P		6/30/07
P1	22	P		6/30/07
P2	24	P		6/30/07
P/B1	26	P		6/30/07
P/B2	27	NC		
LU & D1	28	P		6/30/07
LU &D2	29	C	6/30/07	6/30/07
EC	30	P		6/30/07
LA&D1	32	C	3/31/07	6/30/07
LA&D2	33	C	6/30/07	6/30/07
LA&D3	34	P		6/30/07
V&A1	35	P		6/30/07
V&A2	38	P		6/30/07
V&A3	39	P		6/30/07
N&V1	41	NC		6/30/07
N&V2	43	P		6/30/07
N&V3	44	P		6/30/07

Mitigation Measure	Page	Status	Mitigation Measure Completion Date	Monitoring Completion Date
G/S1	46	C	06/30/07	6/30/07
G/S2	48	C	6/30/07	6/30/07
G/S3	50	P		6/30/07
HM1	51	P		6/30/07
HM2	53	C	3/31/07	6/30/07
HM3	54	P		6/30/07
WR1	58	P		6/30/07
WR2	59	P		6/30/07
WR3	60	P		6/30/07
WR4	61	C	3/31/07	6/30/07
E1	62	P		6/30/07
E2	63	P		6/30/07
S&S1	64	P		6/30/07
S&S2	66	C	06/30/07	6/30/07
S&S3	67	P		6/30/07
S&S4	68	P		6/30/07
S&S5	69	P		6/30/07
S&S6	70	P		6/30/07
S&S7	71	P		6/30/07
S&S8	76	P		6/30/07
H/A1	78	P		6/30/07
H/A2	80	P		6/30/07
P	81	P		6/30/07
C/P1	84	P		6/30/07
C/P2	85	P		6/30/07
C/P3	86	P		6/30/07
C/P4	87	P		6/30/07
CAQ	88	P		6/30/07
N&BD	90	P		6/30/07
NR&E	91	P		6/30/07
U	92	P		6/30/07

3. MITIGATION MEASURES COMPLIANCE

This Section includes a narrative discussion of the project and the Mitigation Measures in progress or completed during the current quarter.

During this period, the Approved for Construction (AFC) civil design package for Segment 5 and Communications was reviewed and approved. Also, the AFC design package for Train Control was submitted for review. AFC civil designs are underway for Civil Segments 3A and 3B. The 100% design packages for Civil Segments 4B and Segment 3C Electrical are underway. All design packages are planning to be approved for construction by mid-July 2007.

Phase III design of the City of Los Angeles 1st Street Bridge Widening Project has been completed and the constructability review is nearing completion. Procurement of the City of Los Angeles 1st Street Bridge Phase III Widening Project has been delayed two months. The bid documents will become available to bidders by the end of August 2007, after the Right-of-Way Certification and Construction Authorization are completed. Phase III completion will not impact the construction of the project guideway/track work on the bridge.

The Los Angeles Unified School District (LAUSD) and Metro executed the Land Exchange Agreement at the Ramona Opportunity High School site on April 6, 2007. At the Ramona Opportunity High School site, the Los Angeles Unified School District (LAUSD) contractor completed demolishing existing facilities, which allowed construction of a concrete masonry unit (CMU) block wall and a shared driveway to begin. The shared driveway will give LAUSD staff access to temporary parking during construction. The C0803 Design-Build contractor this period completed installing a sound wall along Indiana Street and the CMU wall along the shared driveway. Also, the demolition of a warehouse building north of the ROHS in the Metro right-of-way was completed, thereby clearing the path for the start of the Indiana Station construction.

Underground construction is proceeding per plan. The concrete structures for Cross-passage (CP) Nos.4, 5 and 6 were completed this period. Tunnel civil work on cross-passages and sump structures has been completed. The tunneling contractor completed the concrete placement of invert slab between the Soto Station and the East Portal on both tunnels with the exception of a short section in the eastbound tunnel that will be rebuilt. The concrete placement of walkway in both tunnels between the two underground stations was also completed this period. Also, the placement of concrete for the walkway in the westbound tunnel was completed this period. In the eastbound tunnel, 1,200 feet of walkway remains to be poured. All tunneling activities are scheduled to be completed in July 2007.

At the Boyle Heights/Mariachi Plaza Station, construction crews this period completed installation of the HDPE water protection for exterior walls at track level and poured completed installation for the HDPE water protection for exterior walls at track level and poured concrete at exterior walls by the station hammerhead. The construction crews continued installing the remaining exterior walls and columns at the track level adjacent to the West Portal. At the opposite end, construction of interior walls and columns at the track level started this period. Also, remaining invert slab section adjacent to the West Portal was completed and rebar installation for the exterior wall by the bulkhead began. The first mezzanine slab section was poured and shoring for other mezzanine

sections was completed. Also in this period, station entrance excavation resumed and field crews excavated down to the first level where installation of walers and struts began.

At the Soto Station, the tunneling subcontractor completed station clean up this period and turned over the station to ELRTC to begin installation of exterior walls at the track level. The first exterior wall section between grid-lines 6 and 8 on the north side was poured. Also, field crews started installation of exterior walls at track level this period. The staging operation to support tunnel invert and walkway, and cross-passage construction east of the Soto Station was moved to the east portal. The invert slab section by the west hammerhead was poured and installation of the invert slab rebar and embeds on the east hammerhead began. The installation of the last two sections of invert slab on both ends of the station began. Also, installation of HDPE water protection for exterior walls at track level started this period. At the station entrance, construction of mezzanine walls is continuing per plan.

At the West Portal, construction of remaining exterior walls adjacent to the Mariachi Plaza Station continues per schedule. Construction crews completed placement of HDPE water protection and started installation of wall rebar and embeds. Construction crews poured concrete on remaining exterior walls and started installing rebar and forms for extensions to the top of exterior walls.

At the East Portal, the installation of the roof slab was completed except for the section between grid-lines 1 and 2, which is being utilized to support tunnel and cross-passage concrete operations. This support continued through May as per schedule. Also, construction crews started the removal of roof shoring. Support of concrete operations for tunnel and cross-passage construction between the Soto Station and the East Portal continues per schedule.

At-grade construction is proceeding according to plan. Along Alameda Street (Segment 1), fabrication of concrete panels for the Mechanically Stabilized Earth (MSE) wall continues per schedule. Wall panels began arriving in April, and Cast-In-Place (CIP) construction began this period. The first row of pre-cast panels was erected and the first lift of dirt compacted.

Along 1st Street between Alameda and Vignes Streets (Segment 2A), the installation on the north side of the street of a sewer line has resumed after relocation of a DWP power line completed this in April. The street widening on the north side of 1st street has been completed. The curb and gutter between Vignes and Hewitt Streets was completed. The curb and gutter outside the Buddhist Temple was completed. Also, the approved Traffic Control Plan for the start of guideway construction was implemented this period. Construction crews began preparations for the start of guideway construction, which is scheduled for next period. In a separate segment along 1st Street east of the Los Angeles River (Segment 2B), construction crews installed new curb and gutter between Clarence and Gless streets and started forming and placing rebar for new curb and gutter between Mission Road and Clarence Street.

At the east end of the alignment along 3rd Street between Atlantic Boulevard and Mednik Street (Segment 7), guideway construction began, and continues this period, per schedule. Field crews demolished existing pavement and excavated to sub-base. The rebar cages for the OCS pole foundations were completed. Field crews installed

embedded rail and poured concrete plinth east of Civic Center Drive and also west of Civic Center drive, and at the intersection of 3rd Street and La Verne Streets. Also, west of Mednik Avenue (Segment 6), widening of the south side of 3rd Street completed this period. Between Mednik and McDonnel avenues (Segment 6), guideway construction began, and continues per plan. Demolition in this area has been completed. The fiber optics duct bank was begun and completed. Installation of OCS pole foundations began and were completed.

Construction along 3rd Street, west of Eastern Avenue in Segment 5, continued according to plan. Construction crews completed installation of the retaining and transition walls in the u-channel. The invert slab was poured this period and embedded rail was installed in the u-channel as well. Also, along Segment 5 between Rowan and Hebert streets the widening of the north side of 3rd Street began. The rail barrier construction under the route 60 Freeway began, and continues. Street widening on the north side of 3rd Street between Rowan and Hebert Avenues completed this period. Street widening on the south side of 3rd Street between Rowan and Hebert Avenues is continuing per plan. Guideway construction began between Eastern and Marianna Avenues this period.

The 3rd Street overcrossing retrofit at the I-710 Freeway continues per schedule. This period, the bridge pier and abutment caps, and the pier walls were completed in anticipation of the erection of pre-cast box girders. The fabrication of pre-cast box girders was completed and delivery was made in June 2007. They were erected and the bridge diaphragms were formed and poured. Also, fabrication of steel casings for the existing bridge piers began.

In other areas of the alignment, at-grade station construction continues according to plan. At the Atlantic Station, construction crews completed the TC&C room, and the installation of platform walls and the deck this period. They also completed the installation of retaining barriers this period. They continue the rail barrier construction under the Route 60 Freeway and street widening on the south side of 3rd Street between Rowan and Hebert Avenues. At the East Los Angeles Civic Center Station the invert slab for the TC&C room and roof slab construction was began and completed. Site clearing and installation of the TC&C room foundation began at the Maravilla Station site. Guideway construction began between Eastern and Marianna Avenues this period.

The Caltrans contractor for the US-101 Freeway LRT Bridge Overcrossing Project (Contract C0802) completed work on punch list items.

The City of Los Angeles contractor for the 1st Street Viaduct Bridge Widening Project, Phase II Girder Strengthening, is progressing according to plan. The “Right of Entry” agreements with the railroad companies were obtained this period. Construction crews started the placement of the false work on the west end of the bridge and the abandoned utilities were removed. At the west end of the bridge, construction crews completed demolition, continued placing girder slab supports and began installation of girder and rebar forms in anticipation of the first concrete pour next period. At the east end of the bridge, demolition of walkway and removal of abandoned utilities continue were completed and installation of girder slab supports began at the east end.

Metro Operations continued installation of the new fiber optics cable from the Rail

Operations Control Center to the 7th/Metro Station. Completion and testing of this activity is scheduled for the end of July 2007. The fiber optics cable will provide the necessary links required by the project. The C0803 contractor continues to coordinate with Metro staff for the testing of existing fiber optic connections.

The fabrication and delivery of 50 light rail vehicles (LRV's), Contract No. P2550, continues per the revised plan. Fabrication of car assemblies is done at the vendor's plat in Italy and final assembly and testing is done at the vendor's facility in California. To date, five completed LRV's have been delivered to Metro. Ten vehicles are required for the Metro Gold Line Eastside Extension Project. These vehicles are going through the final acceptance process. Three completed vehicles are scheduled for delivery next period. The current delivery schedule supports the project systems integration testing and pre-revenue phases.

The Universal Fare System (UFS) equipment fabrication will start in July 2007. Equipment fabrication is expected to take up to six months. The finished equipment will be stored at the vendor's facility until the equipment is required for installation.

The Metro Art Department completed the process of selecting the artists that will be providing the art pieces for the eight stations. Presently the artists are finalizing the art design and developing shop drawings with multiple fabricators. Also, they continue providing technical support and coordination between the C0803 contractor and the artists. Metro and ELRTC staff this period reviewed engineering specifications, and foundation and support calculations for art pieces planned in the Maravilla Station. Metro and ELRTC staff is developing a schedule, which will provide the artists with project "need dates" for shop drawing completion, and delivery and installation of art pieces. Also, an evaluation process began for the base connections of the "Lucha Reyes" statues that will be installed at the Boyle Heights/Mariachi Plaza Station.

4. STATUS OF MITIGATION MEASURES

4.1 TRANSIT (T)

Mitigation Measure T.

Relocate selected bus stops to provide better interface with LRT stations.

Replacement bus stops will be designed and constructed with shelters, within 1/8 mile of original stop. Bus stops will be relocated to the adjacent corner of the same intersection, if possible, to maintain service access for passengers.

Reference:	FSEIS/FSEIR, Pages 3-1 through 3-13; 4.19-16 through 4.19-17
Implementation:	Selected bus lines interfacing with the LRT route.
Responsible Party:	Jon Hillmer
Status:	Affected bus lines (Montebello Bus Lines, El Sol, and METRO Stops and Zones) and appropriate traffic and lighting jurisdictional agencies have approved bus stop locations to best serve the passengers without having an impact on traffic flow. **Additionally, affected bus stops have been temporarily relocated to support construction activities. The majority of the new bus stops have been constructed; however, the shelters have not yet been installed. The only area yet to be finalized with respect to permanent bust stops is 1st/Boyle, 1st/Lorena, and Indiana from 1st to 3rd.**
Future Action:	**Install bus shelters, and finalize the new locations of the following bus stops: 1st/Boyle, 1st/Lorena, and Indiana from 1st to 3rd .**

4.2 TRAFFIC (Tr)

Traffic Mitigation Measures include the following:

Mitigation Measure Tr 1.

Traffic mitigation measures will be needed in the vicinity of LRT Stations, during both construction and for revenue operations.

Measures referenced in the FSEIS/FSEIR include:

(a) At Chavez/Mednik, restripe WB and EB Chavez approaches to provide 1 LT lane, 1 through lane, and 1 shared through/RT lane.

(b) At Chavez/Atlantic, restripe WB & EB Chavez approaches to provide 1 LT lane, 2 through lanes, & 1 exclusive RT lane.

(c) At Commercial/Vignes, 1st/101 SB Ramps, 1st/Alma, and 4th/I-5 SB Ramps, signalize the intersection.

(d) At Commercial/Alameda, 1st/Vignes, 1st/Mission, augment existing ATSAC with additional software for efficient handling of both car and train traffic.

(e) At 1st/Lorena, prohibit EB and WB left turns to allow permissive E/W signal phasing and accommodate LRT during permissive phase. At 1st/Indiana, prohibit EB left turns. Signal phasing in WB direction will accommodate a protected only left-turn phase. Permit N/S phasing, and accommodate LRT during a separate signal phase.

(f) At 1st/Atlantic, restripe WB approach from SR 60 WB Ramp to provide 1 LT lane, 1 through lane, and an exclusive RT lane. Restripe EB approach on 1st St. to provide 1 LT lane and 2 exclusive RT lanes.

(g) At 3rd/Indiana, prohibit WB left turn. EB phase will accommodate a protected only left turn. WB to have permissive phasing. NB and SB directions will be permitted phase. LRT will operate during N/S signal phase.

(h) At 3rd/Rowan, 3rd Eastern, and 3rd Mednik, impose peak hour parking restrictions in WB direction. WB approach on 3rd will accommodate 1 shared LT/through lane and 1 shared through/RT lane.

(i) At 3rd/Ford, impose peak hour parking restrictions in WB direction. WB approach on 3rd will accommodate 1 LT, 1 through lane, and 1 shared through/RT lane.

(j) At 3rd and Pomona/Beverly/Woods, prohibit WB LT from Beverly to Woods.

(k) At Pomona/Atlantic, EB phase will accommodate a protected only LT, and provide 1 LT lane, 1 through lane, and 1 RT lane. WB direction will have permitted phasing.

(l) Access to businesses will be maintained. Delivery trucks will be able to access businesses via right-hand turns. If there is not sufficient room to accommodate a right-hand turn, Metro will provide an alternative access point. Traffic and pedestrian movements that cross the tracks will be accommodated at signaled crossings. Check roadway design plans; check for compliance with required mitigation measures.

(m) The Housing Authority of the City of L.A. (HACLA) will widen 1st St. if they redevelop the north side of 1st St. in the vicinity. Check for compliance with required mitigation measures.

References:	FSEIS/FSEIR Pages 3-38 through 3-42, pages 4.19-16 through 4.19-18.
Implementation:	To be addressed by D/B contractor during construction. Monitoring by Metro.
Responsible Parties:	John Higgins, Design/Build Contractor, Fred Smith
Status:	a),b),g) These intersections are subject to future coordination and design between Metro and the local agencies. This will occur when construction has been completed, and before operation has commenced. d) i) j)h)k)l**)** Grade crossing applications for these intersections have been approved by the California Public Utilities Commission and incorporated into the final design. c) Traffic signals and lane striping on Commercial St. between Alameda and Vignes St. have been modified to facilitate the street widening. The signal for Commercial St. at Vignes has been designed and is part of the recently awarded Caltrans contract that includes the City of Los Angeles widening of Commercial St., the realignment of the 101 southbound freeway lanes and the Metro Gold Line Eastside Extension Bridge. Caltrans Contractor will implement final design. The falsework for the Eastside Goldline Extension 101 Freeway Bridge crossing has been removed and the large truck access restrictions on Commercial Street have been removed. A signal at 1st. St. and the 101 SB ramps was removed after further engineering and coordination between Caltrans, City of L.A. Dept. of Transportation and the local elected office revealed safety concerns related to the line of sight, conflicts with the West Portal of the tunnel and lack of demand for movement eastbound from the off-ramp. Lane stripping modifications were made on 1st Street between State and St. Louis Streets to facilitate the Cross Passage #2 **and #5** concrete drop hole and future sump pump pipe installations. The signal at 1st St. /Alma is being considered under the EIR for the new Ramona Opportunity High School that results in a cul de sac on Alma St. LAUSD, the school district, will coordinate with the County on the need for a signal based on the new demand created by the reconfigured school. LAUSD contractor will

	implement final design. d) A grade crossing application has been approved and incorporated into the final design. e) Traffic signal and lane stripping modifications were made at 1st/Lorena and to facilitate the planned street widening on the 1st Street. The CCTV camera at 1st/Lorena will not be installed as originally planned. Rather, LADOT plans to direct ELRTC to install the camera at the intersection of 1st/Indiana. Further engineering and coordination between Metro, LADOT and the California Public Utilities Commission has resulted in an approved grade crossing application at 1st/Lorena that allows for EB/WB left turns. Temporary traffic signal modifications were completed at the East Portal to accommodate the traffic lane modifications for the excavation and construction phases of the East Portal. Lane stripping modification were made on 1st St. between Savannah and evergreen Streets to facilitate the Cross Passage #5 concrete drop hole and future sump pump pipe installations. f) This intersection has been modified based on further detail engineering, coordination between the County of Los Angeles Dept. of Public Works, the City of Los Angeles, Department of Transportation, County and City Fire Depts. Metro and the California Public Utilities Commission (CPUC) staff. i) j) k) l) Grade crossing applications for these intersections have been approved and incorporated into the final design. m) During all construction activities access to all businesses has been maintained. **Street widening construction is underway on the north side of 1st Street as called for by this mitigation.** n) LADOT and LAUSD are coordinating the acquisition of the properties on the north side of 1st St. to widen project or as part of the new planned high school at 1st/Mission. Metro meets monthly with both agencies to insure schedule coordination.
Future Action:	Implementation by the contractor. Ongoing monitoring by Metro.

Mitigation Measure Tr 2.

During construction, temporary traffic lane closures during the day may affect normal traffic flow and bus travel times. Night closures of entire street blocks may require some buses to be temporarily re-routed. Some bus stops may also be temporarily relocated. General construction traffic may affect traffic patterns.

Metro will implement the following measures to alleviate these impacts:

(a) Metro will work with the City, County, and affected transit operators to develop a plan to minimize impacts on transit service.

(b) Metro will work with LADOT, County DPW, City of Monterey Park, and Caltrans (in the event that freeway access ramps are affected) to develop Worksite Traffic Control Plans that will meet their requirements. LAUSD will be invited to participate as part of Metro's Third Party Coordination Group to develop the plans prior to approval by the other agencies.

(c) Access to homes and businesses will be maintained throughout construction.

(d) A traffic control management plan for construction of the LRT on 3rd St. will require Caltrans approval prior to awarding a construction contract because the SR 60 Freeway on- and off-ramps connect directly with 3rd St.

(e) Construction techniques, such as segmental construction, will be used to the extent possible to minimize the construction envelopes to minimize the need for extensive falsework on the ground.

(f) A quick response tow truck service, funded by Metro, will target Indiana St., 1st St. Bridge, and where warranted, to minimize traffic impacts in these narrow areas.

(g) Designated haul routes will be established by LADOT, County DPW, and Caltrans and identified during final design. The routes will be situated to minimize traffic, transit, noise, vibration, air quality, and other possible impacts.

(h) Oversize and overweight vehicles will obtain Transportation Permits from Caltrans if their routes require use of any State highways.

(i) If physical damage to the haul routes, due to project trucks, is found following construction, the road will be treated as necessary.

References:	FSEIS/FSEIR, Construction Impacts, pages 4.19-16 through 4.19-18.
Implementation:	To be completed by the D/B contractor during construction.
Responsible Parties:	John Higgins, Design/Build Contractor, Fred Smith
Status:	a) Contractor notifies transit operators on a regular basis of scheduled construction activities and their impact on transit service. Plans are developed to mitigate impacts. No complaints from the community regarding changes in transit operations have been received this quarter. The bus stops

		on westbound 1st Street between Vignes and Alameda were abandoned to support the utility installation and street widening work on the north side of 1st Street. ELRTC investigated relocating at least one of the stops, but were unable to provide ADA access on the 1st Street Bridge. All these bus stops will be restored as soon as it is safe to do so or at completion of construction. Traffic signal and lane stripping modifications were made at 1st/Gless, 1st /Soto and 1st/Lorena to facilitate the widening on 1st Street at these locations. ELRTC and Metro Community Relations continue to publish postcards to identify all operational bus stops.
	b)	Continual coordination with LADOT, LADPW, and Caltrans is ongoing. Weekly meetings are held to discuss construction activities and their possible impact to the public. Worksite Traffic Control Plans implement negotiated solutions regarding freeway ramps. Metro Community Relations team is issuing construction notifications and conducting community briefings and presentations to representative committee as necessary. Plans are reviewed and approved by all affected agencies. Pedestrian re-routes have been approved as part of the Worksite Traffic Control Plans (TCPs). TCPs have been issued for the construction activities at the tunnel portals and at the sites of the two underground stations. The jogging path around Evergreen Cemetery has been detoured around the construction work area to allow the removal of the Tunnel Boring Machines and other tunnel related activities. The TBMs are now removed, but tunnel work in that area continues in support of the construction of the cross passages, tunnel invert & walkway. The area is maintained for safe passage of pedestrians through the area. The falsework for the Eastside Goldline Extension 101 Freeway Bridge crossing has been removed and the large truck access restrictions on Commercial Street have been removed.
	c)	A concrete bus pad was installed at the northeast corner of Soto and 1st Streets due to excessive deterioration of the asphalt street due to the relocation of the local and Rapid bus stops to avoid construction activities from the eastside Gold Line Extension Project. Access from 1st Street to the Los Angeles County Crematory was restored. Contractor implemented street closures and lane closures to facilitate the installation of the storm drain system and catch basins associated with the construction of the East Portal. Tunnel excavation is now complete. Construction of the walkway and invert continues in the tunnel and this requires maintaining the crane yard at the East Portal with its related lane closures on 1st Street between Fresno and Lorena Streets. ESLRT Contractor has implemented full street closures at the East Portal on 1st Street between Fresno and Lorena Streets to accommodate the installation of

	reinforcing steel deliveries and concrete pours for the East Portal structure. d) Haul routes are reviewed and approved by all affected agencies. Caltrans is reviewing the Traffic Management Plan for the SR 60 Freeway. The Traffic Management Plan for 3rd Street Over crossing at I-710 was approved by Caltrans as part of the Encroachment Permit that was issued on Sept. 25, 2006. ELRTC is incorporating Caltrans comments on the Traffic Management Plan for 3rd Street Undercrossing at SR 60. e) Not applicable at this time. f) Haul routes are reviewed and approved by all affected agencies. The Contractor has implemented full weekend closures to enhance the station decking operation through LADOT approved traffic circulation plans and approved hall and over load routes. g) No changes at this time. h) Contractor's trucking companies are obtaining oversize and overweight permits as required. i) This measure is not applicable at this time.
Future Action:	**Implementation by the Contractor. Metro will continue to monitor traffic issues throughout construction activities.**

Mitigation Measure Tr3.

Portions of sidewalks near subway station locations may be closed temporarily for decking construction. Temporary night sidewalk closures may be necessary at some locations. Some existing crosswalks may be temporarily closed. Lane and street closures may inhibit bicycle traffic flow.

Metro will provide the following:

(a) Provide special facilities, such as handrails, fences, and walkways where construction activities impact sidewalk areas.

(b) If crosswalks are temporarily closed, pedestrians will be directed to use one that is in close proximity. Several adjacent crosswalks will not be closed at the same time to allow for pedestrian movement across streets.

(c) All underground stations will have covered wood sidewalks or Metro-approved equal on both sides of the street throughout construction. Covered sidewalks are to be of new material and meet appropriate strength requirement.

(d) Signage will be provided instructing bicyclists to ride with caution or select other routes during construction activities.

(e) To the extent practical, pedestrian access will remain along affected streets and at least one traffic lane will be maintained in each direction, together with pedestrian access, particularly during peak traffic hours. Signage and flaggers will be incorporated where needed to assure access.

(f) See additional mitigation measures presented in "Construction-Safety and Security" section.

References:	FSEIS/FSEIR, pages 4.19-18 through 4.19-19.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Parties:	Design/Build Contractor, Yvette Robles, Fred Smith.
Status:	a) Pedestrian access is maintained during all construction activities and is shown on the approved Traffic Handling Plans (for both City and County) dedicated pedestrian walkways are maintained through the East and West Portals and underground station areas during all construction activities (even the decking). b) Pedestrian access is shown on LADOT approved Traffic Circulation Plans. Dedicated pedestrian walkways are maintained throughout all construction activities. c) **Sidewalk safety has been maintained at all times by**

	the construction of barrier walls and the implementation of safe operating procedures for cranes and heavy equipment working behind the walls. d) The jogging path around the Evergreen Cemetery has been detoured around the construction work area during TBM removal **and construction of the underground structure, which requires shaft access and lay down areas close to the path**. Proper signage was installed to ensure maximum pedestrian safety. e) TBM removal is complete. **Proper signage has been installed to ensure maximum pedestrian safety.** f) Pedestrian access is shown on LADOT approved Traffic Circulation Plans. Dedicated pedestrian walkways are maintained throughout all construction activities.
Future Action:	Will monitor and report quarterly.

4.3 PARKING (P)

Mitigation Measure P1.

On-street parking will be permanently removed at some locations. A total of 49 spaces removed in AM peak, 111 spaces removed off-peak, and 62 spaces removed in PM peak on 1st St.

Metro will provide replacement parking where utilization is high:

(a) Replacement parking will be provided at the following locations:

- Metro will contribute a parking replacement fee to the City of Los Angeles Housing Authority to develop parking at the Pico Aliso redevelopment project for 24 spaces lost along 1st St. between Anderson and Utah.
- 9 spaces at Metro-owned property at 1st/Lorena.
- Purchase property at northwest corner, and possibly at the northeast corner, of Ducommun/Garey and install metered parking at one or both locations.

(b) Utilize remaining land to be purchased at northeast corner of Garey/Ducommun or Alameda/Commercial for parking losses on Ducommun, if needed.

(c) To monitor, check parking facility design plans for 1st/Lorena.

Reference:	FSEIS/FSEIR, Page 3-44 through 3-53, pages 4.19-18.
Implementation:	To be addressed by the D/ B contractor during construction. Monitoring by Metro.
Responsible Party:	John Higgins, Velma Marshall
Status:	a) The City of Los Angeles 1st St. Bridge Project will widen the street from Clarence to Mission St. including the area between Anderson and Utah. The 1st St. Bridge Project is removing the street parking to accommodate for left turn lanes in each direction. This includes in the City of Los Angeles, 1st St. Viaduct and Street Widening Project Draft EIS/EIR released on January 2005. The Contractor with the assistance of LADOT has established additional resident parking at the 1st/Boyle Station site by converting parallel parking to diagonal parking on Pennsylvania Avenue. More than the originally planned 9 parking spaces at the Metro-owned property at 1st/Lorena will need to be designed and implemented by the Design Build Contractor. **Temporary no parking areas are necessary, but kept to a minimum. Diagonal parking on Pennsylvania**

	(one block from 1st and Boyle subway site) during construction is highly used. b) The property of Ducommun and Garey is no longer required due to the change in maintenance yards from Division 20 to Division 21. This measure is closed. c) Metro will monitor contract for implementation of the parking at 1st/ Lorena and continue to coordinate with the Neighborhood Development Cabinet**.**
Future Action:	Metro will continue to monitor and report on parking issues throughout construction.

Mitigation Measure P2.

Curb parking may be prohibited at times when traffic lanes are closed. Sidewalk construction on 1st St. would also necessitate prohibition of parking. Indiana St. would have temporary parking prohibitions.

Metro will implement the following measures to relieve construction impacts:

(a) A parking mitigation plan will be developed to the standards of, and reviewed by, LADOT and DPW prior to initiation of construction activities.

(b) Develop the Metro-owned parcel near 1st/Lorena for 9 spaces of permanent replacement parking early for construction replacement parking.

(c) Develop the park-and-ride facility at Pomona/Atlantic early for replacement parking during construction.

(d) Lease parking lots for construction employee parking, if necessary.

Reference:	FSEIS/FSEIR, Page 3-44 through 3-53.and pages 4.19-18 through 4.19-19.
Implementation:	To be addressed by D/B contractor during construction. Monitoring by Metro.
Responsible Party:	Design/Build Contractor, Velma Marshall
Status:	a) Metro Community Relations is addressing mitigation of parking impacts on a case-by-case basis. Additional construction activities created by adjacent developments such as the expansion of White Memorial has created scarcity of available property to assist in mitigating parking impacts. Metro is working with property owners on a case-by-case basis to address construction impacts. Metro Planning is working with the Neighborhood Development Cabinet on longer term parking mitigations as new project unrelated to the Metro Goldline Eastside Extension come on line. The Contractor in coordination with Metro and LADOT, provided angled parking on Pennsylvania from west of Bailey to the dead end east of State St. to mitigate parking impacts due to concurrent construction activities. b) There have been nine parking stalls provided in the construction staging area at 1st/Lorena. More will be required. c) Construction activity is not planned at this location for over one year. Park & ride facility will be implemented closer to construction activity at this location. d) Construction employees park in the lot between Fickett

	and Mathews on Cesar E Chavez. The Contractor provides a vanpool to get personnel form the Field Office to the construction area. ESLRT leased a portion of the El Mercado parking lot for 40 weekday daytime only parking spaces for construction.
Future Action:	**Metro will continue to monitor parking issues and mitigate as necessary throughout construction.**

4.4 PEDESTRIANS/BICYCLISTS (P/B)

Mitigation Measure P/B1.

LRT station designs need to consider pedestrians/bicyclists to ensure their needs are met.

(a) Metro will develop and fund a Community Linkage Study/Program to provide pedestrian and bicyclist's linkages from neighborhoods to LRT stations. Metro will work with the community to identify access improvements to the LRT project that may include additional pedestrian linkages, urban design enhancements, way-finding methods, bicycle enhancements, traffic management tools, park-and-ride, and other facilities that will enhance access and interface of the LRT project beyond the immediate station areas and beyond levels required by ADA and requirements of the State of California and local jurisdictions. The recommendations of the study will be eligible for funding through various transportation-related funding sources. The study will also include identification of preferred connections to bus services in the immediate vicinity of the rail station.

(b) Direct outlying bicycle routes to stations where possible.

(c) Bicycle racks and lockers will be provided at all stations.

Reference:	FSEIS/FSEIR, pages 3-54 through 3-65.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Parties:	Design/Build Contractor
Status:	a) Community Linkage Study completed. **Community linkage plans for each station area were completed and will help guide long range station area planning for pedestrian and bicycle access.** b) Caltrans grant was received and a study is being performed by Metro through the County Bicycle Coalition (CBC) with community input. CBC has presented to the Eastside Review Advisory Committee and established a task force to identify potential new routes to the stations. c) Bicycle racks and lockers have been incorporated into the Station design. Metro will purchase and install bicycle racks and lockers per Contractor's design**.**
Future Action:	To be implemented by the D/B contractor during construction.

Mitigation Measure P/B2.

Because of increased curb lane traffic volumes on 1st St., the proposed Commuter Bikeway on 1st may not be classified as such.

(a)_Remove designation of 1st St. as a bikeway between Alameda and Indiana. Designate a parallel street as a bikeway facility. To be investigated as part of Community Linkage Study/Program.

Reference:	FSEIS/FSEIR, pages 3-54 through 3-63.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Parties:	Metro Planning
Status:	Community Linkage Study completed. Bikeways identified. **The bikeway will be placed off 1st Street at the end of construction. There is no activity this quarter.**
Future Action:	Redesignate bikeways as identified in the Community Linkage Study. To be implemented by the D/B contractor during construction.

4.5 LAND USE AND DEVELOPMENT (LU&D)

Mitigation Measure LU&D1.

Displacements of homes near 1st/Boyle, 1st/Soto, and along Indiana St. challenges the Boyle Heights Community Plan policy requiring conservation and improvement to existing sound housing especially for low- and moderate-income families.

(a) Reconfigure remaining space on acquired parcels and make available for neighborhood commercial and medium-density residential uses similar to designations in the Boyle Heights Community Plan.

(b) Follow the Metro Joint Development Policy.

Reference:	FSEIS/FSEIR pages 4.1.1 through 4.1-10.
Implementation:	To be addressed by Metro during construction.
Responsible Party:	Metro Planning
Status:	Metro has released an RFP for the Soto and Boyle sites for housing and commercial development consistent with the community linkages studies. **Metro issued RFP for Joint Development and selected developer. Metro Board reviewed and approved staff recommendation. The joint development contractor for 1st and Boyle Street secured soils and geology data for the site to help guide project design.**
Future Action:	Development proposals will be reviewed and, if feasible, submitted to the Board for approval to enter into exclusive negotiations. **Submit Final Joint Development Agreement to Metro Board. Initiate project development.**

Mitigation Measure LU&D2 – Completed June 30, 2007.

Displacement or reconstruction of Ramona HS and all of the land uses on the east side of Indiana Street would challenge the East Los Angeles Community Plan and Policy because it would disrupt a community.

(a) The remaining parcels will be reconfigured and available for rezoning and reuse in conformity with LA County Regional Planning Dept. requirements. If the school is reconstructed, Metro will design the LRT alignment and station to allow access and safety for students and staff.

Reference:	FSEIS/FSEIR, pages 4.1-4 through 4.1-14.
Implementation:	To be addressed by Metro following construction.
Responsible Party:	John Higgins, Velma Marshall
Status:	a) LAUSD has completed the EIR for reconfiguring Ramona Opportunity High School at this location. Offers have been made to acquire the required parcels on Alma Street. Real Estate is in negotiations with property owners. LAUSD and Metro are negotiating the Conveyance Agreement, which will govern the future schedule and transfer issues. Metro negotiations with LAUSD over cost issues related to the acquisition of portions of the Ramona High School Site are complete. Metro Real Estate has completed the acquisition of all parcels on Alma St. All residents on Alma St. have been relocated. Environmental clean up of the parcels on Alma St. has been completed. A DTSC closure letter has been issued. **Agreement has been reached for the reconstruction of the school and construction work is underway on the east side of Alma Street. Please see mitigation measure LA&D2 for additional information regarding Ramona High School.**
Future Action:	Complete

4.6 ECONOMIC (EC)

Mitigation Measure EC.

The Project generates 1,078 direct and indirect jobs over the first 14 years, which is a beneficial effect.

(a) No mitigation measure is required. Metro will develop, fund, and implement a local employment policy, subject to current employment law, for both construction-related and long-term job opportunities that will include resources for job development, hiring, and training.

Reference:	FSEIS/FSEIR, pages 4.2-1 through 4.2-6.
Implementation:	To be addressed by Metro.
Responsible Parties:	Joe Hernandez
Status:	a) There is no mitigation required for this effort, however, Metro has committed to an economic development program, which includes a local hire component, to direct Eastside Project Community residents to job opportunities. Metro has required the Project Contractor to implement a local hire and training program that aims to provide access to project related jobs and training, known as the Metro Jobs Program. Metro incorporated contractual language requiring Contractor to meet a 30% local hire goal for trade workers for the Contract 801 portion of the project. Contract 801-construction work is about 30% complete. Contractor has teamed with 15 community-based organizations (CBOs) specializing in career development in order to refer interested individuals to job and like skill-training programs. Some of the CBOs include Homeboy Industries, La Puente Learning Center, East Los Angeles Community Corporation. Etc. Metro Jobs does not apply to the CO800 portion of the work. **b) To date, 18 non-trade workers from the local community have been hired to work in the project office and approximately 30% of all trades worker hours on the C801 portion of the e project have been performed by Eastside Community Workers. Over 2153 individuals have contacted the Contractor with interest in the program. Of those, 901 have opted to use the services of Metro Jobs Program, 427 have been placed in jobs not related to the project and 503 have been referred to training to prepare them for future employment opportunities. Some of the individuals referred to training are receiving tuition assistance to cover additional training fees.**
Future Action:	Metro will monitor and report quarterly.

4.7 LAND ACQUISITION AND DISPLACEMENT (LA&D)

Mitigation Measure LA&D1 – Completed, March 31, 2007.

Land acquisition for the Project and displacement mitigation will be in accordance with the Surface Transportation and Relocation Act of 1987 and the California Relocation Act. The Act provides for uniform and equitable treatment of persons displaced from their properties by federal and federally assisted programs, and establishes uniform and equitable land acquisition policies.

(a) Acquisition of 10 multi-family and 8 single-family units, displacing approximately 72 persons, with relocation assistance under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, and the California Relocation Act. Replacement housing locations and relocation costs will be identified.

(b) Acquisition of 20 business displacing about 124 employees, with relocation assistance under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, and the California Relocation Act. Replacement housing locations and relocation costs will be identified.

(c) Acquisition of 1 former medical clinic displacing no employees; 1 vacant building; DWP frontage; 7 vacant lots; part-take 1 vacant lot; portions of an impound lot and 6 parking lots. Payments for properties will be made under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, and the California Relocation Act.

(d) Metro will purchase subsurface easements between 1st/Gless and 1st/Lorena.

Reference:	FSEIS/FSEIR pages 4.3-1 through 4.3-13.
Implementation:	To be addressed by Metro prior to construction.
Responsible Parties:	Velma Marshall
Status:	(a) (b) (C) A total of 69 parcels has been acquired. Relocation of all residences has been completed. (d) Required subsurface easements between 1st St./Gless and 1st St/Lorena have been acquired.
Future Action:	**This measure is complete.**

Mitigation Measure LA&D2 – Completed, June 30, 2007.

Relocation/Reconstruction of Ramona High School.

(a) Ramona High School will be relocated or reconstructed at the present site. Metro will provide funding to LAUSD to either purchase a new school site acceptable to LAUSD, or to reconstruct the school at its present location. Metro staff has conferred with LAUSD staff, and LAUSD has agreed that, upon its completion of programmatic planning and identification of potential new sites, LAUSD will conduct all environmental studies as a condition to its determination of whether to relocate or reconstruct the school. However, Metro will monitor LAUSD progress with regard to Ramona High School decision-making and will work with LAUSD to address any conflicts, which may arise between LAUSD's Ramona High School and Metro's Eastside Corridor project.

Reference:	FSEIS/FSEIR, pages 4.3-1 through 4.3.13.
Implementation:	To be addressed by Metro prior to construction.
Responsible Parties:	John Higgins, Velma Marshall,
Status:	LAUSD has determined that reconstruction of the school on the current site with expansion to the east across Alma St. is the preferred alternative. Metro has provided LAUSD with $2 million in funding to conduct a feasibility analysis and complete environmental clearance of such a project. LAUSD is currently studying new design for high school. LAUSD has completed environmental clearance of reconfiguring Ramona Opportunity High School. Conveyance agreement in negotiation. Real Estate has completed the acquisition of nine parcels on Alma Street required for the reconfiguration of Ramona High School. All residents have been relocated. **Please see mitigation measure LU&D2 for additional information regarding Ramona High School.**
Future Action:	Acquisition of all parcels on Alma St. is complete. MTA will continue to work with LAUSD to address any issues regarding the reconstruction of LAUSD's Ramona High School and Metro's Eastside Corridor Project. **This mitigation measure is complete.**

Mitigation Measure LA&D3.

Corridor's high housing demand and low vacancy rate may limit availability of comparable replacement homes and businesses resulting in the need to relocate outside the study area.

(a) Establish Metro's Housing Replenishment Program targeted to assist with affordable housing development and rehabilitation in the community through establishment of a revolving loan fund that sets aside $26,000 per acquired residential unit. Program to be implemented through a MOU with City of LA Housing Dept (LAHD), which will administer the program. Those residential tenants displaced, as a result of the LRT project, will be afforded first right of refusal of the units created by the Housing Replenishment Program.

Reference:	Responsible Parties:
Implementation:	To be addressed by Metro prior to construction.
Responsible Parties:	Dolores Royal
Status:	Metro is in negotiation with developer on future development of Cesar Chavez/Soto. Proposal includes affordable housing. Metro to pursue a credit to developer if affordable housing is included. The credit will be estimated at $26,000 per unit. **The program and funding is in place, however the new location will not be at Cesar Chavez and Soto as previously thought. Metro is working with LAHD to find another suitable location.**
Future Action:	Metro will monitor and report quarterly.

4.8 VISUAL AND AESTHETICS (V&A)

Mitigation Measure V&A1.

METRO will undertake mitigation measures to improve lighting, reduce visual clutter and develop landscaping.

(a) Ornamental streetlights will be removed in the Mariachi Plaza area; electroliers will be re-used or replaced with similar fixtures. If not reused, they will be returned to the City of L.A. Bureau of Street Lighting.

(b) New lighting will be added in the vicinity of the stations. Lighting system designs will comply with City and County of LA standards and the *Land Use/Transportation Policy* (City/Metro). Lighting systems for the project itself will be funded by Metro. Lighting that may be proposed under the Community Linkages Study/Program will require City of LA review for eligibility for assessment per the Proposition 218 process.

(c) In order to reduce visual clutter of overhead catenary wires, Metro will work with utility providers to consolidate wiring or to install underground wiring where possible, with all feeder wire installed underground. Station design and other design elements will comply with FTA Circular 9400.1A (to create facilities that are integral components of communities), the Metro Art Program, and Metro's design guidelines for transit stations.

(d) Landscaping or other screening material will be placed in the path of LRT vehicle headlamps to prevent light from shining into residential areas on the west side of Indiana St.

(e) Removal of buildings for 1st/Soto Station and substation will change the dense, urban environment to an open plaza set well back from the street. Metro will recreate the linear sidewalk element along 1st St.

(f) Because the existing landscape will be removed at some locations, Metro will replace streetscape features in the same or similar locations, and work with City and County so as not to preclude streetscape features except for median treatments and to incorporate streetscape features into project plans, as applicable.

(g) The first row of structures along the east side of Indiana St. would be removed partially exposing yards from the remaining residences to view from passing motorists, transit riders, and properties on the east side of Indiana St. Impacts on Indiana St. will be mitigated by landscaping the excess property to provide a linear plaza/park-like setting. Use of walls, trees, vines, or other landscaping will screen backyards and rear facades of adjacent residences from view from Indiana St. Striped crosswalks between the residential area west of Indiana St. and the landscaped corridor will be provided.

(h) Ramona HS will be reconfigured at the present location if it is not relocated. If requested by LAUSD, Metro will coordinate the reconstructed school's design with the 3rd/Indiana Station and landscaping providing a transition between the high school and the mostly single-story surrounding development.

Reference:	FSEIS/FSEIR, pages 4.6-1 through 4.6-17.
Implementation:	To be addressed by the D/B contractor at all station areas along the LRT route during construction. Monitoring by Metro.
Responsible Parties:	John Higgins, Jorge Pardo, Design/Build Contractor.
Status:	a) Metro Art is continuing to meet with all eight-station artists to advance Schematic Designs. **The artist selection process has been completed. The artists are finalizing the art design and developing shop drawings with multiple fabricators. Metro and ELRTC staff are developing a schedule, which will provide the artists with project "need dates" for shop drawing completion, and delivery and installation of art pieces. Also, an evaluation process began for the base connections of the "Lucha Reyes" statues that will be installed at the Boyle Heights/Mariachi Plaza Station.** All artwork elements to be fabricated and installed by 2009. Ornamental streetlights at Mariachi Plaza have been removed and stored for future use upon final Street Restoration. b) Street light foundations have been installed on the north side of 3rd Street for Maravilla, East LA Civic Center, and Atlantic Stations and on the south side of 3rd Street at Atlantic station and the south side of 1st Street for Pico Aliso Station. One County Street light has been installed on the south side of 3rd Street in the bus pull out area between Civic Center Way and LaVerne. **13 new ornamental streetlights with sidewalk lights were installed in the vicinity of the stations in the County area. The remaining lights have been ordered and once received will be installed. Ornamental streetlights with sidewalk lights for the vicinity of the stations in the City of Los Angeles are on order.** c) LADW Power is currently installing an underground power distribution system on the north side of 1st Street between Alameda and Vignes. This will eliminate the majority of power poles in this four-block stretch. **LADWP has completed the underground installation. This effort has eliminated the power poles on both sides of 1st Street in this location.** (d), (e), (g) Urban landscape design has commenced throughout the project limits. A linear sidewalk along 1st St. has been incorporated into the Soto Station Plaza design. (f) The Contractor has removed all conflicting trees along the 1st Street and 3rd Street alignments. (g)The 1st St./ Soto Construction Fence mural is 100% complete. **Metro Arts continues to monitor the**

	completed murals at the storage yards along the alignment. (h) Negotiations over cost issues for Ramona HS are complete. LAUSD has issued a Notice to Proceed to their contractor Pinner Construction for the modifications at Ramona Opportunity High School. Construction has started. ELRTC is coordinating the construction of the noise wall on the east side of Indiana Station with this contract. **ELRTC has completed the wall at the shared driveway and the wall east of the proposed Indiana Station; the only remaining item is paving the shared driveway which will be completed next quarter.**
Future Action:	Artwork elements will be fabricated and installed at the stations by 2009. **Paving of the shared driveway between Ramona Opportunity High School and the Indiana Station will be completed in the 3rd quarter of 2007.**

Mitigation Measure V&A2.

Surfaces that are introduced as part of the LRT Project could potentially be subjected to graffiti.

(a) Design plans will consider reduction as much as possible of large, flat surfaces that are accessible and viewable to the public; where not possible, special graffiti-resistant surfaces will be used.

(b) New murals and other art will be used in areas where there is high graffiti potential, and murals will be coated with a sealer to allow easier clean-up of graffiti should it occur.

(c) Security systems will be used where there is a high potential for graffiti.

(d) If graffiti occurs, Metro maintenance staff will clean up the vandalism as quickly as possible. All project segment contracts shall require the contractor to maintain a 24-hour anti-graffiti hotline, subject to Metro audit, and to remove all graffiti reported within 48 hours on weekdays and 72 hours if reported on a weekend.

Reference:	FSEIS/FSEIR, page 4.6-9.
Implementation:	To be addressed by the D/B contractor at all station areas along the LRT route. Monitoring by Metro.
Responsible Parties:	Jorge Pardo, Design/Build Contractor, Metro Operations
Status:	a) The construction of the decorative keystone block wall on the northwest corner of 1st/Lorena at the Los Angeles County Crematorium is complete. b) **Mural painting has been completed at 1st/Lorena, 1st/Boyle and 1st/Soto construction fences. Metro continues to monitor mural condition.** c) ELRTC has increased the effort to perform graffiti removal to keep up with the increased occurrence. d) Contractor has been removing graffiti as quickly as possible.
Future Action:	**This measure is complete with the exception of the on-going monitoring and removal of graffiti. Metro will continue to monitor mural conditions throughout the construction process.**

Mitigation Measure V&A3.

The following mitigation measures will be implemented for construction impacts:

(a) Mariachi Plaza may become temporarily unusable for musical performances. Nearby demolition and construction staging area will be screened and construction accelerated as much as possible. Contractors will make every effort to maintain functionality of Mariachi Plaza during construction. However, if necessary, a suitable and nearby temporary alternative site for mariachi performances will be provided at LANI Park at 1st/Chicago.

(b) 1st/Gless portal excavation site could affect use of adjacent Pecan Park. Solid, tamper-proof and attractive screening materials will be installed around the park perimeter.

(c) Chavez/Soto construction staging area may be visible to nearby sensitive uses.

- Views into the construction site will be screened from view as much as possible. However, it may not be possible to screen all of the views from nearby multiple-story buildings if the screen cannot be placed high enough.
- Construction entrances will be regularly cleaned.
- Hooded lamps will be used to direct lighting for construction activities downward to prevent "spillover" into adjacent sensitive areas.

(d) The scale of activities involved in removing buildings on the east side of Indiana Street would create visual impacts during demolition. Demolition will be screened from view from adjacent areas; site will be kept clean as possible; and peripheral landscape as well as temporary grass and temporary art will be provided as soon as possible after demolition if construction is delayed. A public education program will be conducted showing how site will look after construction.

Reference:	FSEIS/FSEIR, pages 4.6-14 through 4.6-16.
Implementation:	To be addressed by the D/B contractor at all station areas along the LRT route. Monitoring by Metro.
Responsible Parties:	Yvette Robles, Design/Build Contractor
Status:	a) Construction staging areas have been screened by use of noise barrier walls. The remaining portion of Mariachi Plaza was turned back over to the community in April 2005. b) Pecan St. is now being used as a construction staging area. The area has been fenced off from the public and good housekeeping is in progress. The wrought iron fence construction around the park is complete. c) The Chavez/Soto construction staging area is being used as offices for the Contractor and Metro. The site is being maintained in an good condition d) The demolition is complete on the east side of Indiana

	with the exception of the Plumbing building that is being used by ELRTC for storage. The bracing is complete on the furniture store that shared a common wall with the medical building. The property has been fenced off to the public to maintain a clean site. No complaints were received regarding this demolition work. **All building demolition activities have been completed. The property is being used to store construction materials and is kept clean.**
Future Action:	This work will be monitored and reported by Metro quarterly.

4.9 NOISE AND VIBRATION (N&V)

Mitigation Measure N&V1.

Metro will implement mitigation measures to reduce impacts associated with airborne noise emanating from LRT operations, including trains and ancillary facilities. Severe noise impacts are anticipated on 11 single-family units and 1 multi-family residence unit due to special track work. Moderate noise impacts are anticipated on 35 single-family, 3 multi-family, and 2 other buildings, totaling 40 receptors.

(a) Buildings that are severely impacted by noise of special track work will be sound insulated to reduce the interior noise levels and will use the Housing and Urban Development interior Ldn=45 dBA as the reference value for noise reduction. Sound insulation will consist of air-conditioning, double-paned windows, and adding insulation to the walls and ceiling.

(b) During final design, consideration will be given to replace the two single crossovers on each side of the tunnel with a double crossover. This will reduce the length of special track work and the number of buildings that will be noise impacted.

(c) No feasible or reasonable mitigation is available for wayside moderate noise impacts. FTA requires reasonable mitigation, and moderate noise impacts are not significant per CEQA.

(d) Worn rail will be ground down or replaced as needed.

(e) Wheels will undergo periodic wheel turning and will be replaced as needed to minimize noise impacts due to wheel flats.

(f) Light rail vehicles will undergo periodic maintenance to ensure that the mechanical system is kept in top condition.

(g) LRT operators will be trained to maintain travel speeds at those speeds given in the operating plan and to avoid “hard-braking” whenever possible.

(h) If wheel squeal occurs, one of the following measures will be taken prior to start of revenue service: 1) Apply dry-stick friction modifiers on the wheel tread or directly on the running surface of the rail; or 2) Lubricate the rail gauge face and wheel flange. If wheel squeal remains after these measures are taken, then provide sound insulation consisting of air-conditioning, double-paned windows, and adding insulation to the walls and ceiling. An interior noise level of Ldn=45 dBA or lower will be achieved. Sound insulation, if needed, will be installed within 1 year of start of revenue service. For those planned buildings that may not be completed by the startup date, METRO will coordinate with the developer to provide sound insulation measures, where required, when buildings are completed.

Reference:	FSEIS/FSEIR, pages 4.8-1 through 4.8-22.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Parties:	Velma Marshall, Yvette Robles, Carl Peter Ripaldi, Metro Operations
Status:	**a. This will be addressed during the operational phase of operation.** **b. This will be addressed after the track work is laid.** **c. N/A** **d. This will be addressed during the operational phase.** **e. This will be addressed during the operational phase.** **f. This will be addressed during the operational phase.** **g. This will be addressed during the operational phase.** **h. This will be addressed during the operational phase.**
Future Action:	Metro will monitor and report quarterly.

Mitigation Measure N&V2.

Metro will implement mitigation measures to reduce impacts associated with ground borne noise and vibration emanating from LRT operations. Ground-borne noise impacts anticipated on 6 single- and two-family residences. (See Table 4.8-7 of the Final SEIS/SEIR for locations. Vibration impacts anticipated on 24 single- and two-family residences, 1 multi-family, and 2 other units totaling 27 receptors. (See Tables 4.8-6 and 4.8-7 of the Final SEIS/SEIR for locations).

(a) Vibration impacts will be mitigated to FTA criteria by: 1) At-grade sections-an elastomeric track work isolation mat will be installed under the concrete supporting the embedded track work; and 2) Tunnel sections- High resilience (soft) direct fixation fasteners will be used.

(b) The new Kaiser Medical Center may have vibration sensitive equipment or activities that will be affected by ground vibration. During preliminary and final engineering Metro will coordinate with Kaiser to further study this issue and to ensure that potential ground vibration impacts will not interfere with any sensitive medical equipment or surgical activities. The ground-borne vibrations at this location will be mitigated to a level that is below the FTA vibration criteria of 72 VdB for occupied spaces and for vibration sensitive equipment and medical instrumentation to a level that is below the manufacturer's recommended sensitivity threshold.

(c) Heet Sound Products, located near the yard lead on Ducommun St., contains a recording studio, which may be subject to vibration impacts from the LRT. A study will be undertaken to determine potential impacts on the recording studio. If impacts are likely, then measures will be taken to mitigate vibration to a level where it will meet the Metro Systemwide Criteria for maximum ground-borne vibration in studios of 65 VdB.

Reference:	FSEIS/FSEIR, pages 4.8-1 through 4.8-22.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Party:	Yvette Robles, Carl Ripaldi, Design/Build Contractor.
Status:	a), b), c) These measures have been incorporated into the design and specifications.
Future Action:	Contractor and Metro will continue to monitor noise and vibration impacts throughout construction activities. **Once the project is operational, Metro will verify that the noise and vibration levels comply with FTA guidelines.**

Mitigation Measure N&V3.

Construction noise impacts likely at some locations along the at-grade segments, and construction vibration impacts possible at both the at-grade and subway segments. Construction activity will need to meet the Los Angeles CEQA Noise Thresholds and Metro Baseline Specifications Section 01565.

(a) When possible, use noise control devices, such as equipment mufflers, enclosures, and barriers and stage construction operations away from noise-sensitive uses; and change the timing and/or sequence of the noisiest construction operations, where feasible, to avoid sensitive times of the day.
(b) Hire or retain an acoustical engineer to prepare and oversee implementation of the noise control and monitoring plan. The noise control plan will include an inventory of construction equipment used during daytime and nighttime, estimate projected construction noise levels, and include locations and types of measures that may be needed to meet specified noise limits. Conduct periodic noise monitoring at strategic locations during the construction.
(c) Comply with provisions of the LAPD nighttime noise variance if nighttime construction is required.
(d) During nighttime hours, use equipment at the surface of the construction site that, operating under full load, is certified to meet the specified lower noise level limits than standard equipment.
(e) Erect Metro designed noise barrier walls at each subway station, portal, or dirt processing construction site prior to the start of any construction activities.
(f) For those portions of the alignment where the tunnel is built under residences and businesses, the contractor will install an elastomeric isolator between the floor of the tunnel and the rails and ties on which the train carrying excavated materials operates. The isolation system must ensure that ground-borne noise and vibration from trains carrying excavated material does not exceed project criteria.
(g) If noise from construction activities creates disruption at nearby schools (Utah Street, First Street, Ramona High (if school is reconstructed), Our Lady of Lourdes Elementary, and Griffith Middle Schools), Metro will take action to resolve the issue through reducing or blocking noise from reaching the school or shift construction activity to less sensitive time periods. Measures to be taken will be based on maintaining acceptable interior noise levels within the school classrooms and occupied spaces. Criteria to be developed by Metro in coordination with LAUSD and the individual school administrators.
(h) The contractor will be responsible for protection of vibration-sensitive historic buildings or cultural resource structures within 200 feet of construction activity. A pre-construction survey will be undertaken to determine which properties may be fragile. Periodic vibration monitoring will be conducted at the closest structure using approved seismographs to determine vibration levels from the excavated-materials train, as it passes under historic properties. If the levels exceed 0.1 inches/second maximum PPV velocity level, the contractor will take action to reduce the levels to 0.1 inches/second PPV or less as soon as possible. If levels exceed 0.12 inches/second PPV, contractor will cease excavation operations

until action is taken to reduce levels below 0.1 inches/second. Such action could include reducing the speed of trains carrying excavated material, additional rail and tie isolation, or more frequent rail and wheel maintenance.

Reference:	FSEIS/FSEIR, pages 4.8-1 through 4.8-22.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Party:	Yvette Robles, Carl Ripaldi, Design/Build Contractor
Status:	a. Contractor is in compliance with this measure at this time. Contractor has incorporated this into it's construction practices. b. **Periodic noise monitoring is an ongoing effort by the Contractor. Results are complied for Metro review.** c. Contractor has complied with this nighttime variance (for nighttime and Sunday work). d. Contractor is in compliance with this measure. e. Noise barrier wall construction is complete at all construction staging areas. f. Vibration monitoring results have been compiled for Metro review. g. No noise complaints have been received from the schools in the vicinity to date. h. A pre-construction survey of historic buildings was completed. Seismographs are being used to monitor structures during tunneling operations.
Future Action:	Monitoring of noise and mitigation of any noise issues is ongoing. .

4.10 Geologic/Seismic (G/S)

Mitigation Measure G/S1 – Completed, June 30, 2007.

Taking into account the geologic and seismic conditions, measures to address corrosivity and presence of groundwater will include:

(a) Use concrete resistant to moderate sulfate exposure and corrosion protection for metals for underground structures in areas where corrosive groundwater or soil could potentially cause deterioration of tunnel liners and station walls.

(b) Tunnel liners and station walls and floors below groundwater will be designed for hydrostatic pressure and to minimize water leakage according to Metro Design Criteria and Standards.

(c)

The project would be subject to significant ground motions during an earthquake. However, the alignment is not exposed to a greater seismic risk than other sites in Southern California. Structural elements will be designed to resist or accommodate appropriate site-specific ground motions and to conform to Metro Design Standards. Bridge structures under the jurisdiction of Caltrans will be designed to conform to Caltrans Design Standards. If sensors detect ground motions over specified amounts, train operators will be instructed to reduce speed and bring trains to the nearest station if possible. Emergency systems (such as ventilating and lighting) will be automatically activated for passenger safety until the system is checked for damage.

d)

The Coyote Pass Escarpment is immediately adjacent to and parallels the alignment in the area of 1st/Soto. The 1st/Soto Station design will comply with Metro Design Criteria and Standards and accommodate the estimated ground displacement due to the MDE design event.

Reference:	FSEIS/FSEIR, pages 4.9-1 through 4.9-10.
Implementation:	The contractor has implemented these requirements at this time.
Responsible Party:	Design/Build Contractor, Eastside Partners, Metro Operations
Status:	a) Groundwater at Soto St. station has not been found to be corrosive. This measure was completed in the design phase, and implemented during construction. b) This has been considered in the design of the tunnel, and implemented during construction. c) This has been considered in the design of the project and implemented during construction. This has been considered in the design of the project and implemented during construction.
Future Action:	**This measure is complete**.

Mitigation Measure G/S2 – Completed, June 30, 2007.

Tunnel stability is of concern due to running sand and potential for ground surface settlement. In order to ensure tunnel stability, the following mitigation measures will be implemented:

(a) Use a pressure-face tunnel boring machine (TBM), where needed, and install grouting immediately behind the TBM to fill the annular space between the tunnel liners and the ground.

(b) Use additional methods to reduce settlement, as needed, in such areas as shallow tunnels directly below sensitive structures or utilities. The additional methods could include: 1) permeation grouting; 2) compaction grouting; 3) compensation grouting; or 4) underpinning the structure's foundation. The additional methods will be used when a differential settlement criteria limiting angular distortion to 1/600 (vertical deflection over horizontal distance) is reached.

(c) Detailed geotechnical investigations, settlement analyses, and evaluation of structures with respect to their condition and position relative to the LRT project will be required during final design before the TBM type is determined and additional protection measures, if needed, are designed and specified. For the suspended Red Line project, the action (warning) level for settlement five feet above the tunnel crown was 1.5 inches and 2 inches was the maximum allowable ground surface settlement. Settlement limits are anticipated to be similar for the Eastside LRT project.

(d) Perform pre-construction surveys to document existing conditions of buildings before the tunneling begins. Measure movements to document that the settlement specifications are being met and to inform the contractor regarding the tunneling performance. If measurements indicate settlement limits will be exceeded, the contractor will be required to change or add methods and/or procedures to comply with those limits.

(e) Stabilize excavation walls, if needed, with specialized shoring and/or chemical grouting and dewatering.

Reference:	FSEIS/FSEIR, pages 4.9-1 through 4.9-10.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Party:	Fred Smith, Design/Build Contractor, and Eastside Partners.
Status:	a. The two Herrenknecht Earth Pressure Balance Tunnel Boring Machines manufactured in Germany have completed both the Eastbound and the Westbound tunnels. b. Permeation grouting is complete. Compensation grouting is complete. To date there has been no significant settlement measured. c. The results of the geotechnical investigation have been incorporated into the design. d. Contractor has performed extensive preconstruction surveys at existing buildings to remain during construction. Settlement monitoring points and crack monitoring gauges have been installed and are being monitored routinely. e. Excavation at Mariachi Plaza Station, Soto Station, West Portal, and East Portal has been completed. Lagging and struts have been installed in accordance with the shoring design.
Future Action:	**This measure is complete.**

Mitigation Measure G/S3.

In the event that shallow and perched ground water is encountered above design tunnel and station elevations, the following measures will be taken:

(a) Use dewatering systems for station construction extending below ground water. Methods will be developed in accordance with accepted engineering practice and developed under the direction and signature of a licensed engineer specializing in dewatering systems.
(b) During construction, Metro will monitor adjacent streets, sidewalks, and buildings for settlement and other movement. Action levels to trigger additional measures to control settlement near station excavations are typically on the order of ½ inch to 1 inch, depending on the construction methods used and structures to be protected. Actual action levels will be determined during final design and development of specifications.
(c) Irrigation programs will be designed, if necessary, to minimize damage to mature vegetation in the immediate vicinity of the construction in the event that dewatering has an effect on the vegetation.

Reference:	FSEIS/FSEIR, pages 4.9-1 through 4.9-10.
Implementation:	To be addresses during construction.
Responsible Party:	Fred Smith, Design/Build Contractor, and Eastside Partners.
Status:	a) Dewatering is complete at Mariachi Plaza Station and Soto Station. b) Settlement monitoring is in progress. No significant movement has been detected to date. c) No effect on mature vegetation due to the dewatering was detected at this time.
Future Action	Landscaping will continue to be monitored by Metro through construction.

4.11 HAZARDOUS MATERIALS (HM)

Mitigation Measure HM1.

The operation of the tunneled elements will require addressing infiltration of hazardous gases and providing adequate ventilation procedures to maintain a safe environment. These issues are discussed below:

(a) To detect and identify hazardous gases within the underground stations, the following measures will be implemented:

- Install automatic gas detection systems, including discrete sensors throughout the system to allow early detection of infiltrating hazardous gases. Alert levels will be set well below dangerous concentrations.
- Install emergency ventilation systems that automatically activate upon gas detection at alert levels.
- Install audible and visible alarm systems to alert employees when gases are detected.

(b)To ensure adequate ventilation, the following measures will be taken:

- Provide an adequately sized ventilation system to prevent accumulation of hazardous gases.
- Provide an auxiliary ventilation system to rapidly evacuate hazardous gases.
- Prepare and implement a ventilation plan to provide adequate fresh airflow into the tunnels.

(c) To reduce gas inflows into the tunnel, the following measure will be implemented:

- Install gas barrier membranes in the tunnel section using precast concrete, bolted, gasketed systems. For stations and cross passages (where cast in place concrete is used for the final structure), High Density Polyethylene (HDPE) will be sandwiched between the initial support and final concrete lining.

(d) To ensure safety in the event of inflow of hazardous gases, the following will be developed and implemented:

- An emergency response plan will be developed to meet City and County of Los Angeles standards and will be coordinated with the City and County fire departments. The design will be reviewed and approved by the Metro Fire Life Safety Committee, composed of members from the Los Angeles City and County Fire Departments as well as Metro safety specialists and will address air monitoring, health risk assessment, refuge centers or tunnel cross passages, escape routes, and communication. The fire departments that will respond to an alarm will participate in emergency response training and drills during start up and throughout operations and coordinate with Metro operations.

Reference:	FSEIS/FSEIR, pages 4.0-1 through 4.10-6.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring and oversight by Metro.
Responsible Party:	Thomas Eng, John Quintanar, Design/Build Contractor.
Status:	a) Chemicals have been identified as well as the safe limits. These measures have been addressed and will be implemented once operations commence. b) These measures have been considered during design. c) These measures have been considered during design. d) The emergency response plan was implemented between the tunneling contractor, Traylor Brothers, and the LAFD.
Future Action	Monitoring by Metro will continue through to operation phase.

Mitigation Measure HM2 -- Completed March 31, 2007.

In the event that minor quantities of subsurface gases such as methane and hydrogen sulfide are encountered during the construction of tunnel and station excavations, the following measure will be implemented:

(a) Where needed, use a pressure-face tunnel boring machine (TBM) that provides a contained excavation system to reduce or eliminate worker exposure to excavated face and spoil. Use in combination with a gasketed, pre-cast or pre-fabricated lining system to minimize gas intrusion.

Reference:	FSEIS/FSEIR, pages 4.10-1 through 4.10-6.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring and oversight by Metro.
Responsible Party:	Fred Smith, Design/Build Contractor.
Status:	(a) Metro Environmental Services and Construction Safety continued to monitor for gases during the progress of the Earth Pressure Balance Tunnel Boring Machines. Unusual odors at CP5, suspected to be hydrogen sulfide were eliminated as groundwater seep was closed. Tunnel excavation activities are now complete. Metro Environmental Services and Construction Safety continued to monitor for gases during the progress of the Earth Balance Tunnel Boring Machines. Unusual odors were no longer found in the tunnel.
Future Action:	This measure is complete.

Mitigation Measure HM3.

The alignment traverses 2 known oil fields and numerous properties with known or potential contamination. Ground water or soil could be contaminated.

(a) Develop and implement, if necessary, emergency response procedures in conformance with federal, state, and local regulations in the unlikely event of a major hazardous materials release close to or within the vicinity of the proposed improvements.

(b) Coordinate as appropriate with the CA Dept. of Toxic Substance Control (DTSC), State Water Resources Board (WRB), South Coast Air Quality Management District (SCAQMD), and other agencies as needed to keep abreast of current RCRA notifications, hazardous materials spill reports, LUST reports, and results of any sampling conducted within the project vicinity.

(c) Treat contaminated ground water on-site to local and state criteria and discharge into the sanitary sewer or storm water system. If on-site remediation is not feasible, contaminated ground water will be disposed by recycling in a permitted facility. Contract specifications will define the role and responsibilities of Metro and contractor(s) relative to water pollution controls and solid residues from the contractor's water treatment operations. Metro will be responsible for any additional water treatment required to meet NPDES standards and will provide, operate, and maintain a water treatment system(s) for this purpose.

(d) For contaminated soil that may be encountered, remove and dispose, treat and recycle at a permitted facility, or remediate contaminated soil offsite for disposal as clean fill in a landfill. Mitigation will conform to applicable local, state, and federal requirements. Issues regarding encountering contaminated soil as well as information regarding RCRA compliance and other State hazardous waste disposal requirements that apply to the project will be addressed in the contract specifications.

(e) Metro, or its designated representative, will sample and analyze excavated soil, including tunnel muck, for the purpose of classifying material and determining disposal requirements. If soil is suspected or known to be contaminated, Metro will direct contractor to: 1) Segregate and stockpile material to facilitate measurement of the stockpile volume; and 2) Spray the stockpile with water or an SCAQMD-approved vapor suppressant and cover the stockpile with a heavy-duty plastic to prevent exposure.

(f) Contractor will provide qualified and trained personnel and personal protective equipment to perform operations that require disturbance of hazardous substances including, but not limited to, excavation, slurry/muck processing, segregation, stockpiling, loading, and hauling.

(g) No on-site treatment of hazardous soils will be conducted during the project. All contaminated soils and hazardous soils will be transported off-site to the Metro's temporary storage facility regulated by DTSC. Metro will follow the provisions of CCR Title 22, Division 4 and CCR Title 23 Chapter 15 as it relates to the classification and disposal of hazardous wastes. All soil believed

to be contaminated will be sampled in accordance with SW-846 sampling protocols and profiled into a legally acceptable and properly permitted disposal facility.

(h) All manifesting of potentially hazardous materials will be conducted with Metro as sole generator under Metro's EPA Generator Number.

(i) Haul routes and waste disposal facilities will be included in the final contract documents.

(j) Provisions are included in the contract specifications to instruct the contractor on procedures to follow if an oil or gas well is encountered. Plugged and abandoned oil wells (e.g., ARCO Evergreen and Taylor Royalties) located within proximity of the project limits will be shown on the contract drawings. The final geotechnical report for the underground segment includes a discussion of the oil field and any known oil wells.

(k) In locations where buildings will be demolished, asbestos and/or lead may be present and will be handled by specialty contractors licensed in asbestos and lead abatement.

Reference:	FSEIS/FSEIR, pages 4.10-1 through 4.10-6.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Party:	Thomas Eng, John Quintanar, John Higgins, Kathleen Sweet, Design/Build Contractor.
Status:	a) Contractor has developed and implemented a Chemical Hazards Health and Safety Plan that identifies hazardous substances at the site and procedures for handling emergency response to incidents. Metro and ELRTC have completed the response procedures with Fire Departments. ELRTC has updated Plan. b) Contractor has been in contact with DTSC, SCAQMD and the SWRCB regarding sources of hazardous material releases outside project boundaries that could impact construction. Contractor has reviewed regulatory agency records to obtain detailed information about past releases. The January 2007 Discharge Monitoring report under NPDES Permit made to Regional Water Quality Control Board stated no water discharge has been made to the storm drain and no contaminated water has been discharged. **The April 2007 Discharge Monitoring report under NPDES Permit made to Regional Water Quality Control Board stated no water discharge has been made to the storm drain and no contaminated water has been discharged.** c) Contractor continues to manage groundwater in

	accordance with Metro provided Industrial Waste Discharge permits for sanitary sewer discharge. Sampling and analysis is being conducted by Contractor to demonstrate compliance to permit limitations. **Two new permit applications for operations discharge to tunnel sumps were made.** d) Contractor has developed a Contaminated Soil Management Plan that defines soil segregation and disposal requirements. All contaminated soils classified as "Non-Hazardous" and handled at Metro Temporary Storage Facility (TSA) or is sent directly to a permitted landfill. Laboratory tests confirm "Non-Hazardous" classification prior to disposal of recycling. e) Contractor implements contaminated soil screening procedures by segregating suspected contaminated soils, sampling, classifying waste in accordance to state and federal regulations, and designating proper disposal or treatment. All Volatile Organic Compound (VOC) affected soil classified as "Non Hazardous" and stockpiled at the TSA for reduction of VOCs prior to landfill recycling. Three small underground storage tanks were discovered under the sidewalk on 1st St. near Clarence St. Metro Waste Management Contractor removed them and no soil contamination was found. LA City Fire Dept. assisted Metro in this effort. **Contractor has developed and implemented a Chemical Hazards Health and Safety Plan that identifies training requirements to enable work with hazardous substances. All staff working with any possible exposure has been trained.** f) Contractor has developed and implemented a Chemical Hazards Health and Safety Plan that identifies training requirements to enable work with hazardous substances. All staff working with any possible exposure has been trained. g) Contractor has identified and implemented off-site disposal facilities for disposal of contaminated and hazardous substances. h) Waste manifests are prepared by the contractor for review and signed by Metro under generator ID number issued by DTSC. No oil field contamination or oil wells have been encountered. i) Waste transport follows approved haul routes. j) Contractor has developed and implemented a Chemical Hazards Health and Safety Plan that contain procedures for oil well encounter.

	k) **Licensed contractors conducted final lead and asbestos abatement work. Bio-hazards were removed from the I-710 Freeway Bridge and a 26" steel pipe with elevated levels of pressurized gas was abandoned and removed.**
Future Action	Continue to follow approved plans and successful work practices, and report quarterly.

4.12 WATER RESOURCES (WR)

Mitigation Measure WR1.

Water may enter tunnel structures or there may be surface runoff from impervious areas during operations.

(a) Water will be treated before being discharged into the drainage system using oil/water separators with siltation basins or similar equipment.
(b) Comply with storm water regulations of the State Water Resources Control Board (SWRCB), LA Regional Water Quality Control Board (LARWQCB) including their Standard Urban Storm Water Mitigation Plan, and the General NPDES Storm Water Permit Program.
(c) Construction, drainage, and landscaping techniques consistent with minimizing storm water runoff will be employed during construction and operation of the project.

Reference:	FSEIS/FSEIR, pages 4.11-1 through 4.11-8.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Party:	Kathleen Sweet, Design/Build Contractor
Status:	**a) No contaminated water encountered.** **b) Best Management Practices under the Storm Water Pollution plans continue to be maintained even though rain has been minimal.** c) Contractor stopped groundwater seepage into Cross Passage 5.
Future Action:	Contractor to manage during construction. Continual monitoring by Metro through to operation phase.

Mitigation Measure WR2.

Surface water-runoff and sedimentation possible from excavation activities and installation of impervious surfaces (paving) at some facilities. Also, dewatering activities for the tunneling and cut-and-cover station construction would be limited to the immediate excavation area, thus avoiding potential adverse impacts of a lowered water table.

(a) A Notice of Intent (NOI) will be prepared and a NPDES permit will be obtained prior to construction, which requires completion of a Storm Water Sewer Pollution Prevention Plan (SWPPP), and a monitoring program for the SWPPP. New standards, including the standard stormwater mitigation plan, will be incorporated into the project. A copy of the NPDES permit will be submitted to the City of Los Angeles.
(b) If discharges to surface or ground water are expected, a Report of Waste Discharge (ROWD) will be prepared and submitted to SWRCB.
(c) Contaminated runoff from large paved areas will be minimized through the installation of oil/water separators or siltation basins and trash filters.
(d) Spoil from tunneling activities will be stored in the tunnel staging area and trucked to appropriate sites to minimize sedimentation. Spoil material will not be stored near water drainage facilities to prevent increased sedimentation in the drainage system. Spoil piles will be kept low and/or graded to minimize erosion. Spoil piles height restrictions will be added to the tunnel contract specifications.

Reference:	FSEIS/FSEIR, pages 4.11-1 through 4.11-8.
Implementation:	
Responsible Party:	Kathleen Sweet, Design/Build Contractor, and Eastside Partners.
Status:	a) The **April 2007** Discharge Monitoring Report submitted to Los Angeles Regional Water Quality Control Board in electronic format. b) No discharges made. c) No discharges made. No run-off. d) Trucking of tunneling spoils is complete.
Future Action:	Activities to be addressed during construction. Monitoring by Metro and status to be reported quarterly.

Mitigation Measure WR3.

The seismic retrofit work for the 1st St. Bridge will require equipment and vehicles to work directly in the Los Angeles River bed, which consists of a concrete-lined channel.

(a) For the 1st St. Bridge structural retrofitting, the Corps of Engineers (COE), CA Dept. of Fish and Game (CDFG), LA Flood Control District, LA County, and RWQCB will be coordinated with to determine requirements for compliance with Sections 401 and 404 of the Clean Water Act and Section 1600 of the CA Fish and Game Code, and also permission to cross the Los Angeles River on the existing bridge.

Reference:	FSEIS/FSEIR, pages 4.11-1 through 4.11-8.
Implementation:	Agency coordination by Metro during construction.
Responsible Party:	City of Los Angeles Bureau of Engineering
Status:	a) Contract work on the Bridge has begun. Coordination with Metro, Metro Contractor and the City of Los Angeles and the City Contractor has taken place for areas of interface at the ends of the bridge concerning traffic control, equipment movement, safety etc. A weekly coordination meeting is being held between Metro and the City with contractors. **MOA amongst FTA, Metro and SHPO is undergoing the revision process.**
Future Action:	The City of Los Angeles Bureau of Engineering will complete the widening and seismic retrofit of the 1st St. Bridge as a separate project. Continue coordination between agencies and contractors.

Mitigation Measure WR4 – March 31,2007.

Shallow and perched ground water may be present in the tunnels or underground station construction requiring dewatering activities. Contaminated ground water may be encountered.

(a) Prior to tunnel excavation and construction, negotiations with the CA Dept. of Water Resources (CDWR) will be initiated regarding water rights and pumping assessment to ensure avoidance of potential impacts due to over-withdrawing ground water.
(b) See "Construction-Geologic and Seismic" and "Construction-Hazardous Materials" for additional mitigation measures.

Reference:	FSEIS/FSEIR, pages 4.11.1 through 4.11-8.
Implementation:	To be addressed by the D/B contractor during construction Monitoring by Metro.
Responsible Party:	Kathleen Sweet.
Status:	a) Dewatering of tunnel and station areas is complete. b) Metro Environmental Services and Construction Safety are working with the contractor to monitor activities at all locations under other Mitigation Measures.
Future Action:	This measure is complete.

4.13 ENERGY (E)

Mitigation Measure E1.

To further reduce already less than significant impacts, the following measures will be taken:

(a) Schedule coordination and modal interface between LRT, commuter rail, and local buses will be optimized to conserve energy.
(b) Station designs will be reviewed to minimize lighting, heating, ventilating, and air conditioning loads.
(c) Use cold water to wash light rail vehicles.
(d) Use high-energy efficient fixtures for project lighting improvements as specified by City of Los Angeles Bureau of Street Lighting (LABSL). Their standards require use of high-pressure sodium, metal alloy, and fluorescent lamps. Mercury vapor, low-pressure sodium, and incandescent lamps are not permitted.

Reference:	FSEIS/FSEIR, pages 4.13-1 through 4.13-5.
Implementation:	To be addressed by Metro during planning and design.
Responsible Party:	Design/Build Contractor, Eastside Partners, Metro MOW and Operations
Status:	a) No change in status at this time. b) Station design minimizes lighting, heating, ventilation, and air conditioning. c) Not applicable at this time. d) These measures have been addressed in design.
Future Action:	Metro will monitor and report quarterly

Mitigation Measure E2.

During the construction stage, no mitigation is required. However, standard construction practices and techniques will ensure that energy sources are not used in a wasteful manner.

Metro will work with solid waste vendors to investigate methods of minimizing construction and demolition waste, including recycling options. Metro will comply with all federal, state, and local requirements for separation of differing standards of waste materials. Metro will comply with RCRA Section 6002 (EPA's Buy-Recycled Program) where technically feasible and appropriate.

Reference:	FSEIS/FSEIR, pages 4.13-1 through 4.13-5.
Implementation:	To be addressed by the D/B contractor and monitored by Metro.
Responsible Party:	Fred Smith
Status:	All spoil from site demolition is separated by material: scrap steel, concrete, asphalt, dirt, etc. and handled as appropriate. Materials are recycled as appropriate.
Future Action:	Metro will monitor and report quarterly

4.14 SAFETY & SECURITY (S&S)

Mitigation Measure S&S1.

To minimize potential accident and safety issues during operations, comply with applicable provisions of Metro Rail Transit Design Criteria and Standards, Fire/Life Safety Criteria, Volume IX, Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD), Public Utility Commission (PUC) safety standards for pedestrian crossings, and State of California Highway Design Manual (HDM).

The following measures have been specified to conform to these standards and criteria:

(a) Allow automobile movements across the tracks, including left turns, only at major thoroughfares and install traffic controls for turning movements.
(b) Design dedicated left turn lanes with adequate storage pocket length for cars waiting to make a left turn.
(c) Install active train coming automatic signs and intersection surveillance cameras similar to that presently existing on the Blue Line along Washington Blvd. Enforce ticketing of violators.
(d) Concentrate pedestrian crossings at major intersections and install physical barriers (fences, railings, etc) to discourage crossings at mid-block. Design crosswalks and active warning devices for pedestrians and install rumble strip/cobblestone distinctive design and contrasting stamped colored concrete for pedestrian crossings.
(e) Complete the rail safety and pedestrian safety analysis/study that began during PE that includes development of crossing control devices for autos and pedestrians at certain locations along the Eastside LRT corridor.
(f) Design station platforms to reduce risk of injury to persons waiting for trains. Metro will consider installing flush, platform mounted "train coming" illuminated markers, similar to those installed on the WMATA system. Also platforms will be designed to optimize visibility of the platform for approaching train operators by minimizing equipment cabinets on the platform.
(g) Crossing guards will be provided to Ramona High, Utah Elementary, Our Lady of Lourdes Elementary, and Griffith Middle Schools during arrival and dismissal times if requested by the school administrators for as long as their presence is required. The crossing guard plan will be reviewed and approved by the Metro Fire Life Safety Committee and will adhere to LADOT and County DPW standards.
(h) Provide funds to develop and implement an instructional rail safety program to affected schools, as well as neighborhood senior centers, upon request.
(i) Consult with LAPD, LA County Sheriff, and California Highway Patrol (CHP) during development and operation to seek input from these agencies regarding safety concerns.
(j) Provide appropriate lighting at strategic project locations such as stations and crossings to minimize accident and crime potential. Replace any street lights that may need to be removed during construction with lighting that reproduces existing conditions.

Reference:	FSEIS/FSEIR, pages 4.14-1 through 4.14-8.

Implementation:	To be addressed by the D/B contractor during construction with Metro monitoring.
Responsible Party:	John Higgins, Yvette Robles, Design/Build Contractor, Eastside Partners, Metro Operations
Status:	a) Incorporated into the design. b) Incorporated into the design. c) Incorporated into the design d) Pedestrian crossings are concentrated at the major intersections; however, physical barriers mid-block will not be used per direction from Fire Life Safety Committee. A rolled curb will be used in lieu of the rumble strip. e) Completed in design. Contractor has implemented. f) Incorporated into the design. g) To be completed closer to revenue operations date. h) Metro is no longer in partnership with the Los Angeles Times in Education effort. Metro Safety has begun doing Safety Outreach Presentations to the schools on the Eastside. i) Metro meets monthly with all third parties including LAPD, LA County Sheriff, CHP and LAFD. Third parties have been part of the review process of all contract drawings and specifications. Meetings will continue throughout construction. j) Included in design. Contractor has implemented.
Future Action:	Metro will continue to work with contractor to insure appropriate measures are maintained as required by the mitigation plan throughout construction of the project.

Mitigation Measure S&S2 – Completed, June 30, 2007.

In areas adjacent to rail stations implement the following:

(a) Design sidewalk widths to be widest feasible in conformance with LA City/Metro's adopted "Land Use/Transportation Policy".
(b) Minimum sidewalk widths will not be less than those allowed by California Title 24 access requirements or Americans with Disability Act (ADA) design recommendations where existing building lines or landscape areas preclude the other preferred widths.
(c) Accommodating pedestrian movements and flow will take priority over other transportation improvements where physical conditions present potential restrictions in pedestrian access, compliance with ADA, or Title 24 minimum requirements.
(d) All stations will be fully accessible as defined by ADA.

Reference:	FSEIS/FSEIR, pages 4.14.1 through 4.14.8
Implementation:	To be addressed by the D/B contractor during construction with Metro monitoring.
Responsible Party:	Eastside Partners
Status:	a), b),All pedestrian areas within the project limits are ADA compliant c), d) These measures have been addressed in the design effort.
Future Action:	**This measure is complete.**

Mitigation Measure S&S3.

To ensure safety near the U-sections at each end of the subway segment, the following will be done:

(a) Install a fence at the U-section trenched location near Utah Elementary School.
(b) Evaluate during final design what additional measures will be taken at both portals such as 1) an automatically closing gate; 2) an alarm; or 3) other advanced security measures against trespassing. Result to be reviewed by the Metro Fire Life Safety Committee.

Reference:	FSEIS/FSEIR, pages 4.14-1 through 4.14-8.
Implementation:	To be addressed by the D/B contractor during design and construction. Monitoring by Metro.
Responsible Party:	Eastside Partners, Design/Build Contractors, Metro Operations
Status:	a) Contractor installed a fence at the West Portal U-channel (near Utah Elementary School). b) Final design details that ensure safety at the U-channels are in progress.
Future Action:	To be addressed during final design and completed during construction.

Mitigation Measure S&S4.

Other measures to minimize potential operations safety and accident impacts include:

(a) Design programmed visibility train signals that are only visible to train operators so auto drivers are not distracted.
(b) Install photo enforcement camera equipment where needed.
(c) Design and install a train priority signal system.
(d) Design alignment, grade, horizontal, and vertical curves to minimize or eliminate any visibility and/or operational problems.
(e) Provide the light rail vehicles with front and rear fenders to minimize potential for pedestrian contact with the vehicle coupler and/or the potential to fall under the vehicle.

Reference:	FSEIS/FSEIR, pages 4.14-1 through 4.14-8.
Implementation:	To be addressed during design and construction by the D/B contractor. Monitoring by Metro.
Responsible Party:	Dave Kubicek, Design/Build Contractor, Eastside Partners, Metro Operations
Status:	a) Incorporated into the design. c) Incorporated into the design. d) Incorporated into the design. (b), (e) no change at this time.
Future Action:	On-going monitoring through the construction phase.

Mitigation Measure S&S5.

To ensure safety in the subway stations, the following measures will be implemented:

(a) Fire alarm protection within the station area.
(b) Minimum of 2 fire emergency routes from each station.
(c) Emergency station ventilation and lighting.
(d) Communication systems between adjoining fire agencies. Emergency telephones and radio communication with the fire departments will be part of the Rail Operations Center configuration.
(e) Methane detection system for each subway station in areas determined to be gaseous (see also Hazardous Materials measures).
(f) Building construction shall not be less than Type I Construction as defined in the Uniform Building Code (UBC). Stations having more than 2 levels below grade or more than 80 feet to the lowest occupied level will require protected level separation or other protection features to provide safe egress to the exits.
(g) Fire separations will be provided and maintained in public occupancy areas. Public occupancy areas will be separated from station ancillary occupancy by a minimum 2-hour fire rated wall. The only exception is that a maximum of 2 station agents, supervisors, or information booths may be located within public occupancy areas when constructed of approved noncombustible materials and limited in floor area to 100 square feet.

Reference:	FSEIS/FSEIR, pages 4.14-1 through 4.14-8.
Implementation:	To be addressed during design and construction by the D/B contractor. Monitoring by Metro.
Responsible Party:	Thomas Eng, John Quintanar, Design/Build Contractor, and Eastside Partners
Status:	a) b) c) e) f) g) During design review meetings, plans are being reviewed for compliance with fire safety considerations such as fire alarm protection detection, emergency exits, separations, ventilation, lighting and communications in the UBC, Fire Code and NFPA 130. Design is in compliance with recommendations and requirements from the Fire Life Safety Committee. d) Both City and County Fire Departments are continuing to meet with the project managers and contractors regarding fire emergencies.
Future Action:	To be addressed in future reports.

Mitigation Measure S&S6.

To minimize potential impacts on fire services and emergency response, the following measures will be implemented:

(a) Involve all public safety agencies on street modifications or access limitations for emergency vehicles. All limited access devices (gates, etc.) will conform to LA County and LA City Fire Dept. standards.
(b) Metro personnel will train with firefighters in preparing for project-related emergencies at Metro expense prior to project opening.
(c) Review all project drawings to ensure the design meets Metro Fire Life Safety Criteria and applicable City and County codes.
(d) Metro, in concert with LAPD and LA Co. Sheriff, will provide increased security in vicinity of Ramona HS to minimize potential crime activity in the vicinity of the 3rd/Indiana Station if Ramona HS is reconstructed at the existing location.

Reference:	FSEIS/SEIR, pages 4.14-1 through 4.14-8.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Party:	Thomas Eng, John Quintanar, John Higgins, and Eastside Partners
Status:	a) Street closures within the construction area continue as required during construction. Meetings with Metro, contractors, DOT and Fire Department are scheduled prior to a street closure. Local Fire Stations are advised to drive the area of the closure before and during the closure. b) Metro Construction Safety has held tunnel awareness training for fire department management teams. Traylor Bros. has conducted tunnel walk thru training. Traylor Bros has also agreed to conduct re-breather training for the fire department. c) Contractor is in compliance with this requirement. d) Not applicable at this time. This will be addressed once the project is operational.
Future Action:	To be addressed in future reports.

Mitigation Measure S&S7.

Construction activity at several locations including the following could affect public safety: in the streets and stations for the at-grade segments; staging and storage areas for construction equipment and materials; locations where construction equipment is moving; excavation sites at the portals and other areas where some of the underground construction is being conducted at street level; and locations where haul trucks are transporting debris from tunnel excavations.

The project will be required to meet Metro Rail Transit Design Criteria and Standards, Fire/Life Safety Criteria, Volume IX. The following measures will be taken:

(a) LAUSD, as well as LADOT and the County DPW, will be invited to participate as part of Metro's Third Party Coordination Group to ensure safe and convenient pedestrian routes to schools are maintained, including the publication and distribution of school pedestrian route maps.

(b) Metro or their designated contractor will coordinate with and notify the LAUSD, to the fullest extent possible, the scheduling planned for LRT construction. With regard to hauling scheduling, LADOT and DPW are responsible for determining haul routes and times. However, most of the excavated rock and soil materials from the tunneling operation will be removed at the construction staging area near the intersection of 1st Street/Boyle Avenue. The haul trucks will be routed along the on- and off-ramps of the nearby US 101 freeway, and impacts on sensitive uses in the project area will, therefore, be minimized. Metro will inform, through the public affairs department, the community of the construction schedule well in advance of the action.

(c) As part of the stipulations of the construction contract, the contractor will not allow construction vehicles to stage or park along streets bordering school sites unless they contain vehicle-mounted machinery actively in use as part of construction while the vehicle is parked. Vehicles used to transport construction workers will be required to park elsewhere. The adequacy of these provisions will be reviewed with the LAUSD School Traffic and Safety Department.

(d) The construction contractor will be required to maintain access to community facilities affected by construction activities.

(e) Metro will install appropriate traffic controls (signs and signals), as needed in conformance with LADOT, County DPW, HDM, MUTCD, and PUC standards to ensure pedestrian and vehicular safety during construction.

(f) Metro will notify the LAUSD of impending impacts on existing school bus routes.

(g) Metro will inform the public, including LAUSD, of bus stops that are to be abandoned or changed during or after construction of the LRT line.

(h) Construction will generally occur between the hours of 7:00 AM and 10:00 PM. Construction will be avoided during school arrival and departure times whenever possible. The contractor will inform adjacent schools of construction activities prior to their occurrence. The contractor will be required to inform their workers of the need to be especially cognizant of school children and others in the vicinity of

the schools while they are performing their work.

(i) Metro will 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, Metro will provide funding for crossing guards during school hours on a site-specific basis considering the conditions and criterion stated in the manual. Metro will provide funding for crossing guards during school hours during construction, where related lane closures will divert traffic to residential streets utilized by elementary and middle school students.

(j) The construction contractor will be responsible for providing flag persons at construction sites, as needed, where construction activities compromise the safety of pedestrians and/or motorists while traveling to and from school.

(k) The contractor will be responsible for providing security at construction sites at a level that Metro determines to be appropriate in accordance with Metro Rail Transit Design Criteria and Standards, Fire/Life Safety Criteria, Volume IX. In addition to the strategies previously discussed, other measures could include: use of security patrols; installation of temporary fencing around material laydown, subway excavation, and station sites; installation of screening to block construction site views from motorists' to avoid distraction; and installation of appropriate signing and lighting as required by LADOT and CoDPW. The contractor's security plan will be subject to Metro review.

(l) Where fencing is used, it will be of good quality, capable of supporting accidental application of the weight of an adult without collapse or major deformation. All at-grade construction sites will be enclosed by new chain link fence. Fence will have horizontal top pipe above, below, and in the middle of the chain link mesh. For all off-street construction sites, chain link fence will be wrapped in new green plastic glare reduction plastic commonly used on tennis courts or Metro-approved equal. For on-street at-grade construction sites, fencing will not be so wrapped, and visibility must be maintained. Metro must approve methods to be used for on-street construction sites.

(m) Where major streets must be fenced, business owners will be offered the opportunity to request covered walkways in lieu of chain link type fencing. Where covered walkways or other solid surface is installed, a program will be implemented to allow for artwork (e.g., by local students) on the surfaces. Chain link fences will be planted with vines, where feasible, and approved by local neighbors and businesses.

(n) All underground station perimeter fence designs will include Metro-approved gates with locks.

(o) Flag persons will be provided at construction site access driveways, as required by LADOT, Metro, and CoDPW.

(p) A construction methods manual will be developed and implemented that provides specific information regarding use of flaggers, cones, flashing lights, etc.

(q) Contractors shall secure and neatly stack tools and small parts during non-work hours; cover small, but deep excavations with heavy metal plates during non-work hours; and maintain tidy work sites.

(r) Contractors will use equipment and facilities that are vandal- and graffiti-resistant to the extent possible. Graffiti will be removed within 24 hours at construction sites, facilities under construction, and from equipment.

(s) Visibility of surrounding areas will be maintained to the extent possible to minimize crime potential.

(t) Citations with fines will be issued for trespassing on construction sites.

(u) See additional safety and security mitigation measures under "Construction-Community Facilities/Parklands".

Reference:	FSEIS/FSEIR, pages 4.14-1 through 4.14-8
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Party:	John Higgins, Yvette Robles, Fred Smith, and Design/Build Contractor
Status:	(a) No change in status at this time. b) Metro is in ongoing communications regarding the project with the LAUSD and LADOT. Over ten haul routes have been approved. To date, construction involving significant excavation and hauling has been limited to Mariachi Plaza Station and Soto Station, West Portal and East Portal. These sites are now fully excavated. Excavation haul trucks have been routed to the nearby freeways with minimal impact on the community. Construction notices are being provided for all construction activities that impact public space and coordination with 3rd parties that may be impacted due to construction is also handled ahead of time. c) The Contractor is using staging areas for vehicle parking where possible. No staging of trucks has occurred in streets bordering school sites. d) The contractor has maintained access to all businesses, residences, and community facilities impacted by construction. Construction notices are provided for all construction activities that impact public space.

	e) In conjunction with work at the West Portal and East Portal, the Contractor has implemented traffic control measures strictly in accordance with traffic control plans approved and monitored by LADOT. These have included the installation of signage, barriers and cones appropriate. The Contractor has also installed traffic signals at 1st and Bailey, facilitating the safe movement of vehicular traffic to Bailey Yard and pedestrian traffic across the intersection. Signage and lane stripping for ramp closures have also been installed on the 101 Freeway ramps and the closures initiated in conjunction with Caltrans and the Caltrans Encroachment Permit. Construction notices have been provided for all construction activities that impact public space and coordination with 3rd parties that may be impacted due to construction is also handled ahead of time. f) **This is ongoing while construction in progress.** g) Metro continues to meet with the LAUSD on a regular basis to discuss the status of the project and its effects on school bus routes. When appropriate, sidewalk closures have been implemented in accordance with LA BSS to keep pedestrians at a safe distance from the utility and station construction activities in 1st St. at Mariachi Plaza and Soto, 1st Street widening for the West Portal and at the East Portal. The Contractor is in compliance with the LAUSD notification requirements regarding bus stop changes. h), Contractor is in compliance with this measure at this time. Schools have been notified of construction activities. **i**) At each of the construction staging areas, secure fencing is in place. Security guards and patrols monitor access. Temporary removable fencing around construction being carried out at grade in the street at West Portal, and East Portal has also been provided. j) The Contractor has provided flaggers as necessary to ensure the safe transit of pedestrians around the construction sites at these locations. **k)** Sound wall barrier fences have been completed at 1st and Boyle, 1st and Soto and 1st and Lorena. These barriers provide site and sound mitigation as well as security. **l)** New chain link security fencing has been installed around the staging areas at 1st and Boyle, 1st and Soto and 1st and Lorena. m), n), Contractor is in compliance with these measures. o), p), q), r), s) Contractor is in compliance with these construction related safety measures.

	t), u) No change in status at this time.
Future Action:	Continued implementation of mitigation measures and outreach to the community regarding construction issues as they arise.

Mitigation Measure S&S8.

Detours, street closures, traffic congestion, and staging activities could affect emergency response.

(a) Construction staging/detour plans will be reviewed by, and developed to the standards of, the appropriate emergency service providers and medical facilities prior to construction.
(b) Advance notice will be given to emergency service providers of road and lane closures.
(c) Requirements to maintain uninterrupted emergency vehicle access will be included in the construction contract specifications.
(d) To satisfy LAFD criteria, a minimum residual water pressure of 20 lbs/sq in is to remain in the water system with the required gallons per minute flowing. Fire-flow for this project is set at 4,000 GPM from 4 fire hydrants flowing simultaneously.
(e) Contractor will notify LAFD Operations Control Dispatch Section regarding changes in access to streets, fire hydrants, or structures.
(f) Project will comply with applicable State and local codes and ordinances, and the guidelines found in the Fire Protection and Fire Prevention Plan, as well as the Safety Plan, both of which are elements of the General Plan of the City of LA CPC 19708.
(g) Adequate public and private fire hydrants will be required in accordance with City and County standards.
(h) When subway tunnel is under construction or major repair, all portions of the CA Administration Code Industrial Relations Title 8, Sub 20, Tunnel Safety Orders will be adhered to.
(i) A fire chief from City of LA and County of LA will be on-hand, as needed, to ensure the project meets all City and County codes.

Reference:	FSEIS/FSEIR, pages 4.14-1 through 4.14-8.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Party:	John Quintanar, John Higgins, Fred Smith, and Eastside Partners
Status:	a. Construction staging/detour plans have been reviewed and approved by LADOT, LAPD and LAFD. In the case of a full street closure on 1st Street, the emergency services have been kept fully informed and where possible temporary access roads for emergency vehicles have been provided. There has also been ongoing liaison with nearby White Memorial Hospital regarding access around and through the construction work area at Boyle for medical vehicles. The majority of all traffic handling set ups allow for emergency vehicle through access. b. The LAPD and LAFD continue to participate in the review process for emergency vehicle access

	impacting traffic flow. Meetings with street closure and construction individuals are on a regular basis and mutual concerns are shared. Fire Dept. personnel are given ample time to drive their district when a street closure is pending to locate alternate travel responses. c. The LAFD participates in all critical project meetings and readiness reviews to assure compliance with requirements. d. Incorporated into the design e. This is an ongoing effort of coordination with the LAFD by the contractor. **f.** Incorporated into the design**.** g. Fire hydrants are present in the construction area. h. Not applicable at this time. i Fire department personnel attend the majority of meetings regarding the construction, design, and plan reviews. Fire Department personnel frequently visit the site to familiarize themselves with the surroundings.
Future Action:	Will address other aspects of mitigation in future reports when they occur in construction.

4.15 HISTORIC/ARCHAEOLOGICAL (H/A)

Mitigation Measure H/A1.

Because ground disturbance during construction will have an unknown effect on 4 known archaeological sites and 10 areas of high archaeological sensitivity, the following mitigation measures will be implemented:

(a) Prior to earth-disturbing activities, Metro will retain the services of a qualified archaeologist to manage the impact mitigation program.
(b) The construction contracts will specify that when any potentially significant archaeological evidence is observed, work will be halted in the immediate vicinity, and the procedures set forth in the Memorandum of Agreement (MOA) with the State Historic Preservation Office (SHPO) will be followed. If archaeological sites are encountered, the site will be evaluated to determine if potentially eligible for National Register listing. If project plans cannot be altered to avoid site, the MOA will be implemented to resolve the adverse effect.
(c) If archaeological or buried historical sites are encountered, evaluation will be carried out, if deemed appropriate, by qualified archaeologist(s), through test level excavation designed to determine the horizontal and vertical extent of the site and to characterize the site's contents.

Reference:	FSEIS/FSEIR, pages 4.14-1 through 4.15-24.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Party:	Carl Peter Ripaldi, Jones and Stokes
Status:	a) An Archeo Paleo Monitor is present on site during all excavation activity. They continuously travel the alignment monitoring excavation activities. b) Following the discovery of human remains at the L.A. Crematorium Site work was temporarily halted. A Treatment Plan was prepared and reviewed by Metro, the County Supervisor's Office and the Community Review Action Committee (RAC). Ground Penetrating Radar and a Metals Survey were completed at the site to determine the extent of anomalies present and the likelihood of finding additional human remains. These surveys indicated a high likelihood of encountering additional burials. The Treatment Plan has been implemented in accordance with the Cultural Resource Monitoring and Mitigation Plan submitted to SHPO. Three cistern structures were discovered at Alma St. Following the demolition of residences there for the new Ramona High School. These structures were investigated and photographed by Archeo Paleo monitors. They are thought to be part of an old storm water drainage system for the houses at these sites. **Some materials such as glass shards, ceramic fragments, and brick were discovered, but determined not to be significant enough to be designated a "site". Three separate, small trash**

	deposits were discovered. In them, a small ink bottle, tin can lid, 'Woodbury' milk glass colored jar, and assorted glass and ceramics artifacts and fragments from household uses were collected. A few glass bottles and what looks like a child's bat from a small trash lens was collected. Analysis will identify how the object was actually used. **c)** Cogstone has completed laboratory analyses of the human remains in accordance with standard archeological practices. A special Ad Hoc subcommittee has been formed to address the re-interment of the remains. Participants include representatives of the Chinese Historical Society of Southern California. Presentations of the results have been made to the RAC and Ad Hoc subcommittee. The draft report on the Crematorium discoveries was issued on August 23rd and distributed to members of the Ad Hoc subcommittee, RAC Committee and County and elected officials. Monthly meetings of the Ad Hoc subcommittee have been held in Boyle Heights and China town. At the monthly meetings the Ad Hoc subcommittee has voted to re-inter all artifacts with the remains. The Ad Hoc subcommittee has also voted that the re-interments be done at Evergreen Cemetery. Metro has met with Evergreen Cemetery and continues negotiations for the re-interment. Metro is also in negotiations with a mortuary for their services related to the reinterment process. Authorization to proceed with the negotiations for the re-interment at Evergreen will be requested from the Metro Board of Directors. **The Ad Hoc subcommittee voted to recommend the burial of the human remains discovered at the Los Angeles Crematorium site at Area C in Evergreen Cemetery. This area is located at the front entrance of the cemetery. When this recommendation was presented to the RAC in May, there was significant protest from the Chinese Historical Society. As a result, the RAC directed the Ad Hoc subcommittee to re-examine the decision through further discussions. Two special meetings were held during the month of June to address this issue, however a quorum was not present to vote on the measure or any alternatives. The recommendation was again presented to the RAC. At that meeting a motion was raised to rebury the remains at Area A at Evergreen Cemetery that is adjacent to the Chinese Memorial shrine. That motion carried and the Ad Hoc subcommittee is currently working on the design of a memorial at area A in Evergreen.**
Future Action:	Ongoing archeological and paleontological monitoring during construction.

Mitigation Measure H/A2.

Supplemental seismic retrofit work on the 1st St. Bridge will require reinforced concrete infill of some of the openings of some of the bents. Additional concrete cast-in-drilled-hole piles will be constructed behind the original concrete abutments. The work will adversely affect the viaduct's design integrity; hence, the following mitigation measures will be implemented:

(a) Alteration of the 1st St. Bridge will require implementation of a MOA since it is eligible for the National Register. Recordation of the site will be undertaken, and concrete will be tinted to match the color of the existing infill walls. Interpretive opportunities for the bridge will be provided as stipulated in the MOA.

Reference:	FSEIS/FSEIR, pages 4.15-1 through 4.15-24.
Implementation:	To be addressed by the D/B contractor during construction. Monitoring by Metro.
Responsible Party:	Carl Ripaldi
Status:	The City of Los Angeles BOE has completed the Environmental Review process for this project. The City of Los Angeles has changed the design for the 1st St. Bridge so that it does not require infill work. Accordingly there will not be the need to deal with the Mitigation Measures as originally stated. Construction of the 1st St. Viaduct modifications by the City of Los Angeles has commenced. Construction coordination meetings are attended by Metro. The MOA between the FTA and SHPO needs to be revised. **Draft documents to amend the existing MOA have been drafted and sent to FTA for their review. Once finalized, they will be sent by the FTA to SHPO for consideration. Following SHPO concurrence an amendment to the MOA would be signed by all parties that will remove the mitigation measures from Metro's Mitigation Monitoring Plan and relieve Metro of any monitoring responsibilities.**
Future Action:	The City of Los Angeles Bureau of Engineering will complete the project.

4.16 PALEONTOLOGICAL (P)

Mitigation Measure P.

The following measures will ensure compliance with Metro specifications Section 01170 and with Society of Vertebrate Paleontology standard measures for mitigating construction-related impacts on paleontologic resources and for the museum repository acceptance of a mitigation program fossil collection:

(a) Prior to any earth-moving activity in the study area, Metro will retain the services of a vertebrate paleontologist approved by the Natural History Museum of Los Angeles County Vertebrate Paleontology Section (LACMVP) to manage a paleontologic resource impact mitigation program in support of earth-moving activities associated with construction of the Eastside Corridor.

(b) The paleontologist will develop a storage agreement with the LACMVP regarding permanent storage and maintenance of any vertebrate fossil remains recovered as a result of the mitigation program.

(c) The paleontologist or his/her designated representative will present an environmental awareness training session to construction workers regarding the appropriate procedures to be implemented if fossil remains are uncovered by earth-moving activities, particularly tunneling and/or when mitigation program personnel are not on site.

(d) A paleontologic construction monitor will monitor earth-moving activities in areas underlain by older alluvium and those extending beyond five feet in younger alluvium. Monitoring will include the inspection of strata freshly exposed by these activities and will allow for the recovery of larger fossil remains uncovered by the activities. Although tunneling will not be monitored because of the confined working space and safety concerns, tunneling debris will be inspected for larger fossil remains if an earth pressure balance TBM is used. In areas underlain by younger alluvium, monitoring will not begin until earth-moving activities have reached a depth five feet below grade.

(e) The monitor will recover fossil remains uncovered by earth-moving activities.

(f) The monitor or a paleontologic technician will recover and process rock samples to allow for the recovery of smaller fossil remains. The total weight of all samples recovered from each rock unit and subsequently processed will not exceed 6,000 pounds (12,000 pounds combined total for older and younger alluvium).

(g) The monitor will have the authority to temporarily divert any earth-moving activity around a newly discovered fossil site or a sampling site until the fossil remains or a rock sample have been recovered and the earth-moving activity has been allowed to proceed through the site by the monitor.

(h) The monitor will record associated specimen/sample data (taxon, element) and corresponding geologic (stratigraphic rock unit, stratigraphic level, lithology) and geographic site data (location, depth), and will plot site locations on maps of the study area.

(i) All identifiable fossil remains will be fully treated. Treatment will include

preparation of the remains by a paleontologic technician to the point of identification; identification to the lowest taxonomic level possible by knowledgeable paleontologists; curating and cataloguing the remains, plotting fossil site locations on maps of the study area, and entry of associated specimen data and corresponding geologic and geographic site data into appropriate computerized data bases by the technician; and placement of the remains in the appropriate museum repository fossil collection for permanent storage and maintenance. Any vertebrate and invertebrate fossil remains will be placed in the LACMVP and LACM Invertebrate Paleontology Section (IP), respectively. Fossil plant remains will be placed in the University of California Museum of Paleontology (UCMP). Associated data will be archived at the appropriate museum repository, where the data, along with the fossil remains, will be made available for future study by qualified scientific investigators.

(j) The paleontologist will prepare a comprehensive final report of results and findings that describes study area geology/stratigraphy, summarizes field and laboratory methods used, includes a faunal list and an inventory of curated/catalogued fossil remains, evaluates the scientific importance of the remains, and discusses the relationship of any newly recorded fossil site in the study area to relevant fossil sites previously recorded from other areas.

Reference:	FSEIS/FSEIR, page 4.15-12
Implementation:	To be addressed by Metro.
Responsible Party:	Carl Peter Ripaldi, Jones and Stokes
Status:	a. A Vertebrate Paleontologist is part of the Archeo Paleo team under the Jones and Stokes contract. Monitoring of the tunneling activities under 1st St. for fossils is completed. b. The one possible fossil that was found is undergoing study at this time. When the study is complete, then any necessary agreements with a museum repository will be negotiated. c. A paleontological monitor completed monitoring of the tunneling activities under 1st Street. **A femur fragment of a possibly ungulate (mid-sized hoofed herbivore) was found nearby. This potential fossil will be identified and dated at a later date.** **d. An Archeo Paleo Monitor has been retained, and is performing this work.** e. **An Archeo Paleo Monitor has been retained, and is performing this work. See discussion under c for details regarding potential fossil finds.** f. **An Archeo Paleo Monitor has been retained, and is performing this work. Nothing has been found to date.**

	g. **An Archeo Paleo Monitor has been retained, and is performing this work. This has been incorporated into construction activities.** h. Paleo monitors have complied with this requirement. i. Included in the Archeo Paleo scope of work. **This will be completed once the construction phase is complete.**
Future Action:	Implementation of approved CRMMP. Training sessions for all Construction Managers, Field Supervisors and Field Construction Workers has been completed.

4.17 COMMUNITY/PARKLANDS (C/P)

Mitigation Measure C/P1.

To alleviate impacts on schools, the following measures will be implemented:

(a) Inform the Los Angeles Unified School District (LAUSD) and private institutions along the LRT route of changes to Metro bus routes, school bus routes, and pedestrian crossings prior to construction and during operations, if applicable.
(b) Provide funds for City LADOT/LAUSD review of the "Safest Routes to School" (STEPS) maps for necessary revisions and development of mitigation at crossings.
(c) See "Safety and Security" section for additional mitigation measures to be taken near the schools.
(d) Ramona HS will either be relocated or reconstructed at the present site. See "Land Acquisition and Displacement" mitigation measures for relocation or reconstruction issues and "Safety and Security" measures to address safety impacts at the school.

Reference:	FSEIS/FSEIR, page 4.16-1 through 4.16-12.
Implementation:	To be addressed by Metro.
Responsible Party:	John Higgins, Yvette Robles
Status:	a) Metro Community Relations provide construction notices and meet sensitive uses to discuss construction activities and provide adequate mitigation if necessary. **No activities in this subject area occurred during the 2nd quarter of 2007.** b) To be addressed when construction is complete. c) Contractor is in compliance with this measure at this time. d) Negotiations with Ramona High School are complete. Portions of Ramona High School will be reconstructed on land provided by Metro.
Future Action:	Metro will continue to monitor and report on these issues throughout construction.

Mitigation Measure C/P2.

Construction-related impacts (such as traffic, parking, pedestrians/bicyclists, safety and security, air quality, noise and vibration, visual, and geologic/seismic) on some of the schools, parks, and other community facilities nearest the alignment are possible. The following mitigation measures will be implemented to resolve these impacts:

(a) Coordinate project construction activities as necessary with City of LA to avoid delays to either the LRT project and City of LA planned construction at Pecan Park.
(b) Construction contractors will be required, in conformance with 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.
(c) Maintain ongoing communication with administrators at impacted school sites providing sufficient notices to forewarn children and parents when currently existing school pedestrian routes will be impacted and furnish school pedestrian route maps to those requesting them.
(d) Provide funds to develop and implement an instructional construction safety program to affected schools, as well as neighborhood senior centers upon request.

Reference:	FSEIS/FSIER, pages 4.16-1 through 4.16-12.
Implementation:	To be addressed by Metro.
Responsible Party:	John Higgins, Yvette Robles, and Fred Smith
Status:	**a)** The Contractor coordinated work activities with representatives from Pecan Park. This work is now complete. Contractor continues to coordinate construction activities with sensitive receptors such as the Buddhist Temple. b), c) These measures have been incorporated into safety practices. d) Provided community with construction updates and continuous distribution of construction notices and coordinated access as needed. Extensometers and Settlement Markers at pertinent locations along the tunnel alignment have been installed and are being monitored. This effort will continue and be expanded as construction activities proceed and continue for a period of time after completion of the tunnel.
Future Action:	This effort will continue and be expanded as construction activities proceed.

Mitigation Measure C/P3.

If Ramona HS is reconstructed at the present site, there could be added safety and security issues that should be addressed, including:

(a) Construction contractor will either provide 1) fencing or other suitable barriers around the LRT off-street construction site between 1st and 3rd Sts.; or 2) a security patrol in the area that will provide security services during normal school hours.

(b) A Metro staff person or contractor representative will be available to keep the school administrator informed about ongoing and planned construction activities in the vicinity and will act as a liaison between the high school and the construction contractor regarding safety issues, as well as other issues, that may arise.

Reference:	FSEIS/FSEIR, page 4.16-10 through 4.16-12.
Implementation:	To be addressed by D/B Contractor. Monitoring by Metro.
Responsible Party:	Yvette Robles, Fred Smith
Status:	a) Sound Wall Barriers and Fencing have been erected around the staging areas at 1st and Boyle, Pennsylvania/ Bailey, and Chavez/Soto. b) This is an ongoing effort between Metro and the LAUSD.
Future Action:	Metro to monitor during construction and report status quarterly.

Mitigation Measure C/P4.

Construction activities may disrupt the Hompa Hongwanji Buddhist Temple's planned 2005 Centennial Activities.

(a) Work with the temple to schedule construction activities at times that do not conflict with the temple's planned events. Contractor will submit written plan to Metro to review and share with Temple/elected officials a minimum of 30 days prior to start of construction work.

Reference:	FSEIS/FSEIR, page 4.16-1 through 4.16-12.
Implementation:	To be addressed by the D/B contractor. Monitoring by Metro.
Responsible Party:	John Higgins, Yvette Robles, and Fred Smith.
Status:	a) Metro continues to coordinate all construction activities with the various planned Temple events such as Nisei Week and other special events such as weddings, funerals, etc. **During the 2nd quarter of 2007, Metro coordinated work activities to accommodate this year's Obon Festival.**
Future Action:	Metro will continue to coordinate construction activities with the Temple.

4.18 CONSTRUCTION AIR QUALITY (CAQ)

Mitigation Measure CAQ.

Nitrogen Oxides, NO_x, and Particulate Matter, PM_{10} emissions are anticipated to exceed SCAQMD significance thresholds during most of the construction period. However, impacts will still be localized and short-term because the construction equipment will move throughout the six-mile project area and not stay in one place for the entire construction period. As part of the stipulations of the construction contract, Metro will require contractors to:

(a) Minimize use of on-site diesel equipment, particularly unnecessary idling.
(b) Replace diesel-powered machinery with electrically powered machinery, where feasible.
(c) Shut off equipment to reduce idling when not in direct use.
(d) Locate diesel engines, motors, or equipment as far away as possible from existing residential and school areas.
(e) Use low sulfur fuel for construction equipment
(f) Install wheel/undercarriage-washing equipment or functional equivalent (such as automatic washing equipment, mechanized street cleaners/sweepers, or spraying wheels manually with HP water) at tunnel excavation site exits.
(g) Meet Metro Section 01566 Pollution Controls Mandates requiring that all equipment engines be properly tuned at all times.
(h) Implement car/van pool programs to minimize worker travel related VMT.
(i) Require all construction workers to park off-street
(j) Maintain a fugitive dust control program consistent with SCAQMD Rules 403 and 1166 for grading and earthwork activity.
(k) Ensure site wetting occurs frequently enough to maintain a 12% surface soil moisture content; water unpaved parking or staging areas at least 4 times per day; cover or water all on-site stockpiles of debris, dirt, or dusty material in accordance with SCAQMD Rule 403.
(l) Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface at all disturbed surface areas.
(m) Apply non-toxic chemical stabilizers to all unpaved areas during the last day of active operations prior to a weekend, holiday, or other period when active operations will not occur for more than 4 consecutive days. Water with a mixture of chemical stabilizer diluted to no less than 1/20 of the concentration shall be applied to unpaved surface areas such that a stabilized surface can be maintained for a period of 6 months.
(n) Limit vehicle speeds to 15 mph on unpaved roads.
(o) Require all trucks hauling dirt, sand, soil, or other loose substances and building materials to be covered.
(p) Use street sweeping equipment at site access points and all adjacent streets used by construction equipment in compliance with SCAQMD Rule 403.
(q) Phase construction activities, to the extent possible, to minimize concurrent dust generating activities within a 2,500-foot radius of shaft site locations.
(r) Suspend grading operations during 1st and 2nd stage smog alerts and during winds greater than 25 mph.
(s) Implement a sidewalk and window-cleaning program, if needed, to reduce dust impacts on businesses and residences.
(t) Provide a liaison to discuss construction activities with school, daycare, and

convalescent centers that may be affected by construction.

(u) Provide a liaison to Utah Street, Our Lady of Lourdes Elementary, Griffith Middle, and Ramona High (if reconstructed) Schools to discuss specific air quality issues if they arise.

(v) Post signs throughout the project area that include anticipated dates of construction activity and the phone number of a construction information desk that can log complaints or offer additional information regarding the construction process.

Reference:	FSIS/FSEIR, page 4.7-1 through 4.7-13.
Implementation:	To be addressed by the D/B contractor. Monitoring by Metro.
Responsible Party:	Fred Smith, Carl Ripaldi, Design/Build Contractor
Status:	a.), b.), c.) d.), e.), f.), i.), k.), l.), o.), p.), q.), r.), **These measures have been incorporated into the contractors construction practices.** g.) Contractor is implementing procedures identified in the approved Fugitive Dust Control Plan that incorporates requirements of Specification 01566. h.) A small school bus had been purchased by the tunneling contractor and is being used to transport crews to and from the project sites. j.) In accordance with SCAQMD Rule 403, unpaved areas and stockpiles at staging areas 1st/ Boyle, 1st/Bailey, 1st/ Soto, 1st/ Lorena are wetted to maintain dust suppression and rumble plates have been installed at entrances to remove debris form truck tires. A dust palliative and tarps are in use to control dust at the Commercial St. Ducommon Yard. Similarly, streets adjacent to these areas and construction areas in 1st St. are swept to remove all dirt and construction debris, which might otherwise cause air pollution. m), n), s), u), v) **These measures have been incorporated into the contractors construction practices.** **t)** Metro Community Affairs is in ongoing communications with sensitive receptors along the alignment. v) **These measures have been incorporated into the contractors construction practices.**

4.19 NEIGHBORHOODS AND BUSINESS DISRUPTION (N&BD)

Mitigation Measure N&BD.

Temporary traffic, access, circulation, parking, visual, noise and vibration, and air quality impacts are possible; hence, the following mitigation measures will be implemented:

(a) Metro Public Affairs staff and construction personnel will contact and interview individual businesses to identify business usage, delivery, and shipping patterns, as well as critical times of the day or year for business activities to aid in developing Worksite Traffic Control Plans (discussed in "Construction-Transportation" section) and to ensure that critical business activities are not disrupted.
(b) Develop, fund, and maintain during construction a telephone hotline and 1 or more Metro Field Offices with staff to address community issues and concerns as they arise. Office to be open from 9am-5pm weekdays and any weekends when work occurs. Schedule to be developed prior to construction. The office will provide a physical location where information pertaining to construction can be exchanged. Ensure that all potentially affected persons know the name and telephone number(s) of public affairs staff that they can contact if they so desire. The contractor staffing plan is subject to Metro review.
(c) Participate in local events to promote awareness of the LRT project.
(d) Notify property owners, businesses, and residences of major construction activities (e.g., utility relocation/disruption and milestones; re-routing of delivery trucks).
(e) Provide literature to public and news media, schedule promotional displays, participate in community committees, and make presentations, as needed, about the project.
(f) Coordinate business outreach programs, and implement promotions for businesses most affected by the construction.

Reference:	FSEIS/FSEIR, page 4.19-1 through 4.19-58.
Implementation:	To be addressed by Metro.
Responsible Party:	Yvette Robles
Status:	a), b), c), d), e), f), A Field Office has been opened and a project hotline established. Business profiles are completed for C) 803. Community-briefing sessions are held beginning each major construction activity, office hours are held at the field office weekly. Business impacts in active construction zones are continuously mitigated. Monthly presentations on construction activities are provided to the community. Supported several community events at which Community Relations promoted and informed the community of the Metro Gold Line Eastside Extension. **These activities are on-going.**
Future Action:	These activities will be monitored quarterly.

4.20 NATURAL RESOURCES & ECOSYSTEMS (NR&E)

Mitigation Measure NR&E.

Seismic retrofit of 1st St. Bridge may result in temporary impacts on biological resources downriver due to effects on surface water quality. There are no sensitive plant or animal species in the Eastside Corridor.

(a) Retrofit work will be limited to the dry season in accordance with COE and CDFG permitting procedures.
(b) See "Construction-Water Resources" for additional mitigation measures to comply with Sections 401 and 404 of the Clean Water Act and Section 1600 of the CA Fish and Game Code.

Reference:	FSEIS/FSEIR, pages 4.12.-6 through 4.12-7.
Implementation:	To be addressed by the D/B contractor with Metro oversight.
Responsible Party:	City of Los Angeles Bureau of Engineering. Metro effort complete.
Status:	a), b) The City of Los Angeles Bureau of Engineering is completing the widening and retrofit of the 1st St. Bridge as a separate project. The City will be responsible for compliance with this Mitigation Measure.
Future Action:	Measures to be completed by the City of Los Angeles Bureau of Engineering.

4.21 UTILITIES (U)

Mitigation Measure U.

Some utilities may need to be relocated or abandoned, and there could be temporary disruptions of service or loss of access. All mitigation measures will follow Metro Design Criteria and Standards (Volumes I through IV) and applicable utility standards and criteria or best industry practices. One or more of the following mitigation measures will be used to minimize potential impacts:

(a) Maintain and protect existing utilities in place during construction;
(b) Provide temporary connection for services that must be disconnected for extended periods of time;
(c) Maintain existing service as long as reasonably possible;
(d) Notify users well in advance of any anticipated service disruption and coordinate with the utility owner's convenient times for necessary service outages;
(e) Monitor the project's contractors as part of construction management/oversight and include terms in construction contracts that encourage contractors to actively seek to avoid accidental disruption of service;
(f) Coordinate the schedules of multiple utility rearrangements in order to minimize negative impacts on users;
(g) Develop a contingency plan in cooperation with the utility providers for emergency repairs of any utilities unexpectedly found or that disintegrated because of age during excavations;
(h) Adjust portions of the alignment of station locations, where feasible, to prevent a major utility relocation;
(i) Comply with the City of Los Angeles and the County of Los Angeles on procedures for utility construction, inspection, and operation;
(j) Use pipe and conduit support systems, trench sheeting and shoring, and other precautionary measures during construction to minimize the potential for damage to exposed utilities.

Reference:	FSEIS/FSEIR, pages 4.18-1 through 4.18-3.
Implementation:	To be addressed by the D/B contractor. Monitoring by Metro.
Responsible Party:	John Higgins, Yvette Robles, Fred Smith, Construction Contractor, and Eastside Partners
Status:	a) **These measures have been incorporated into the contractor's construction practices.** b) Contractor is in compliance with this measure. c) These measures have been incorporated into the contractor's construction practice All contractor's work related to the relocation of utilities for the construction of

	these stations at Mariachi Plaza and Soto and at the tunnel portals has been carefully monitored and has been completed with minimal disruption to service consumers. d) Community relations supports 3rd party activities and the contractor by providing community notification of all construction related activities. e) The utility construction subcontractor is on emergency call-out to repair all existing services encountered. In addition the utility providers have been called upon to provide standby crews during critical construction activities at Boyle and Soto stations as well as the West Portal and East Portal excavation. f) These measures have been incorporated into the contractor's construction practices. g) The utility construction subcontractor is on emergency call-out to repair all existing services encountered. In addition the utility providers have been called upon to provide standby crews during critical construction activities. h) To date, it has not been feasible to consider realignment of station excavations to avoid major utility relocation. At West & East Portal relocation of utilities and SBC's manholes and conduits to facilitate the pile and decking installation is completed. i) Relocation of applicable utilities has been carried out in accordance with the City of Los Angeles standards and procedures. CBS Billboard Company has finished the relocation of their three billboards on 1st St. Between Lorena and Indiana Streets to clear the encroachment into the City of Los Angeles street right-of-way for the DWP-Power 34.5 kv installation of the south side of 1st St. For the Eastside Gold Line Extension TPSS site at 1st/ Lorena. Segment 1: ITA completed installation and splicing of their fiber cable in previously installed conduit across Alameda and easterly in Temple St. Segment 2A: DWP Power has completed installing conduit and manhole structures on the north side of 1st St. Between Alameda and Vignes to relocate existing underground facilities and is presently installing underground power cables. ITS completed crossing the intersection of 1st St. And Vignes. DWP Water main construction began on the north side of 1st St. Between Hewitt and Vignes. **DWP water main construction on the north side of 1st Street between Hewitt and Vignes is now complete**. **Storm drain construction was completed between Alameda and**

	Vignes. Sewer installation completed between Hewitt and Vignes. Temporary traffic signals and street lighting was installed along Segment 2A. Segment 2B: DWP Water completed installation and encasement work on north side of 1st St. between Mission and Clarence. ITA, ATSAC conduit and cabling installed and spliced on south side of 1st St. Between Mission and Gless. Street Lighting and Traffic Signal conduit has been installed. DWP Power poles and overhead facility relocations on 1st street between Mission and Gless have been completed. **Installed new water main on the north side of 1st Street. Installed new catch basins and connected to existing storm drain system. Completed street civil work including curbs, gutters, sidewalks and paving.** Segment 4A & B: Relocation of sewer mainline and lateral encasements on the south side of 1st St. between Lorena and Indiana Streets. is complete. Calif. Water Service relocation work on the south side of 3rd St. From Indiana to Townsend and in Alma between 1st and 3rd Sts. is started. **Relocation of DWP water main, laterals and services completed on the north side of 1st between Lorena and Indiana. Construction continues on Indiana. Overhead cabling for Verizon, Adelphia, Time Warner et al is in progress**. Segment 5: The Gas Co. Completed all main abandonment work in 3rd St. Between Indiana and Sunol. LA County storm drain replacement, CMP lining and protection work at various crossing locations is complete. Segment 6: Replacement of damaged So. Cal. Edison vault at 3rd and McDonnell completed and the transferring of equipment from old to new vault has begun. **Southern California Edison vault transferring work at 3rd and McDonnell is nearly completed.** Calif. Water Service completed the relocation of two hydrants and water meter boxes. **California Water Service, Southern California Edison and AT&T completed repairs and/or relocations of facilities that were in conflict and/or damaged by construction activity.** **j) A close liaison has been maintained with the City and utility inspection agencies and their requirements have been conformed to in terms of pipe support and trench shoring.**
Future Action:	This activity will continue with construction and the status will be reported quarterly.

5. APPENDIX A - ACRONYMS

ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
AFR	Audit Finding Report
AQMD	South Coast Air Quality Management District
ATSAC	Automated Traffic Signal and Control
BRS	Blast Relief Shaft
CAdC	California Administrative Code
CAC	Citizens Advisory Committee
CAD	Computer Aided Design
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CBD	Central Business District
CCF	Central Control Facility
CCMC	Citizens Committee on METRO Construction
CCR	California Code of Regulations
CCTV	Closed Circuit Television
CD	Council District
CDC	Los Angeles County Community Development Commission
CDD	City of Los Angeles Community Development Department
CEDO	City of Los Angeles Economic Development Office
CELP	Construction Enhancement Loan Program
CEQA	California Environmental Quality Act
CESMMP	Consolidated Excavation Site Mitigation Monitoring Program
CFR	Code of Federal Regulations
CM	Construction Manager
CMP	Congestion Management Program
COF	Clarifications of Findings
CRA	City of Los Angeles Community Redevelopment Agency
CRWQCB	California Regional Water Quality Control Board
CTS	Commuter Transportation Services
dBA	A-weighted Sound Level
DND	Draft Negative Declaration
DP	Development Plan
DRSA	Developer Request for Proposal, Selection and Agreement
DWP	Department of Water and Power
EA	Environmental Assessment
EA/IS/ND	Environmental Assessment/Initial Study/Negative Declaration
E&H	Elderly & Handicapped
EB6S	Emergency Backup Power System
EMC	Engineering Management Consultant
EMFA	Economic/Market Feasibility Analysis
EMM	Edgemont Mini Mall
EMP	Environmental Management Panel
ETSDF	Egg-Type Soft Resilient Direct Fixation Rail Fasteners
FAR	Floor Area Ratio
Fed/EPA	Federal Environmental Protection Agency
FEIR	Final Environmental Impact Report
FEIS	Final Environmental Impact Statement

FEMA	Federal Emergency Management Agency
FFC	Full Funding Contract
FFGA	Full Funding Grant Agreement
FONSI	Finding of No Significant Impact
FST	Floating Slab Trackbed
FTA	Federal Transit Administration
G&A	Greenwood and Associates
GDSR	Geotechnical Design Summary Report
GEC	General Environmental Consultant
GPF	General Plan Framework
HDPE	High-Density Polyethylene
JDAg	Joint Development Agreement
JDA	Joint Development Assessment
LABOE	Los Angeles Bureau of Engineering
LACDRP	Los Angeles County Department of Regional Planning
LACM	Natural History Museum of Los Angeles County
LACTC	Los Angeles County Transportation Commission
LADOP	City of Los Angeles Department of Planning
LADOT	City of Los Angeles Department of Transportation
LADRP	Los Angeles Department of Recreation and Parks
LAFD	Los Angeles Fire Department
LAHD	Los Angeles Housing Department
LAPD	Los Angeles Police Department
LAUPT	Los Angeles Union Passenger Terminal
LAUSD	Los Angeles Unified School District
LPA	Locally Preferred Alternative
LUTC	Land Use/Transit Compatibility
LUTP	Land Use/Transportation Policy
MGD	Million Gallons per Day
MIS	Modified Initial Study
MMSR	Mitigation Measures Status Report
MOA	Memorandum of Agreement
MOS	Minimum Operable Segment
MOU	Memorandum of Understanding
MPA	Master Plan Assessment
MSDS	Material Safety Data Sheet
Metro	Los Angeles County Metropolitan Transportation Authority
NICU	Neonatal Intensive Care Unit
NPDES	National Pollutant Discharge Elimination System
NTP	Notice To Proceed
OSHA	Occupational Safety and Health Administration
PM_{10}	Particulate Matter with an Aerodynamic Diameter of 10 Microns or Less
PSR	Project Study Report
RFC	Request for Change
RFP	Request for Proposal
RFIQ	Request for Information and Qualifications
RFQ	Request for Qualifications
ROD	Revenue Operations Date
RRTP	Rail Rapid Transit Project
RWQCB	Regional Water Quality Control Board
SAA	Station Area Assessment

SCADA	Supervisory Control and Data Acquisition
SCAQMD	South Coast Air Quality Management District
SCRTD	Southern California Rapid Transit District
SEIS/SEIR	Supplemental Environmental Impact Statement and Subsequent Environmental Impact Report
SHPO	State Historic Preservation Officer
SP	Special Provision
SRDF	Soft Resilient Direct Rail Fasteners
SSPWC	Standard Specifications for Public Works Construction
SVP	Society of Vertebrate Paleontology
TBM	Tunnel Boring Machine
TCO	Traffic Control Officer
TDS	Total Dissolved Solids
TOD	Transit Oriented Districts
TRB	Transportation Research Board
TSM	Traffic Systems Management
UCMP	University of California Museum of Paleontology
USA	Underground Service Alert
VdB	Velocity Vibration Level
WTCP	Worksite Traffic Control Plan
WTF	Water Treatment Facility

6. APPENDIX B - ACKNOWLEDGMENTS

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