
Summary

S.1 THE PROJECT

The Metro Gold Line light rail transit (LRT) system currently extends from Los Angeles to Pasadena serving cities and communities along the alignment corridor. The Metro Gold Line Foothill Extension is a phased project that extends the existing Metro Gold Line by 24 miles to the east, from the City of Pasadena to the City of Montclair. The extension is proceeding in two phases. Construction of the first phase from the Pasadena Sierra Madre Villa Station to the Azusa-Citrus Station began in late 2011, and construction is anticipated to be completed in late 2015.

The proposed project, known as the Metro Gold Line Foothill Extension from Azusa to Montclair (illustrated in Figure S-1), is the next phase of this planned extension. It would extend the Metro Gold Line alignment 12.3 miles to the east and include six new stations in the cities of Glendora, San Dimas, La Verne, Pomona, Claremont, and Montclair. The project would provide LRT service from the Azusa-Citrus Station in the City of Azusa in Los Angeles County to the City of Montclair Transcenter, located just east of Monte Vista Avenue in Montclair in San Bernardino County.

The project would share right-of-way with Metrolink, but the LRT trains would operate on separate tracks and use different platforms than Metrolink commuter trains. The travel time is anticipated to be approximately 18 minutes between the Azusa-Citrus station and the Montclair station. Trains are anticipated to operate with 10-minute headways during peak periods and 20-minute headways during off-peak periods.

The Foothill Construction Authority is responsible for managing the design and construction of the project. The Los Angeles County Metropolitan Transportation Authority (Metro) will fund, oversee design and construction in coordination with the Authority, and operate the Gold Line from Azusa to Montclair service.

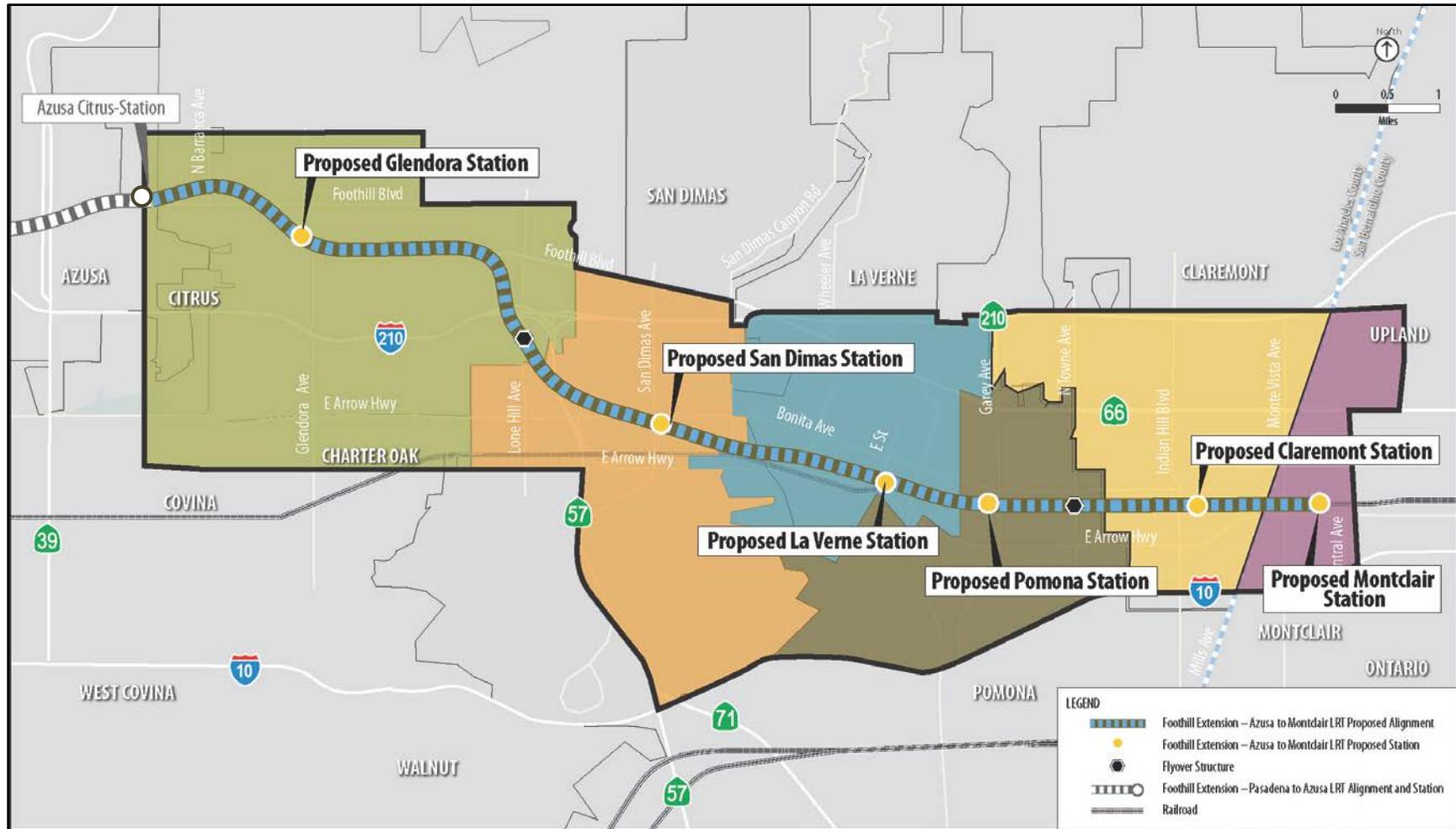


Figure S-1. Metro Gold Line Foothill Extension—Azusa to Montclair

S.2 PROJECT OBJECTIVES

The existing transportation infrastructure in the Azusa to Montclair corridor area primarily connects commuters to regional destinations, but does not provide functional or practical inter-city service for trips made within the corridor. The area is underserved by existing transit options, which are generally oriented toward short trips made within cities or long trips with destinations far outside the area. This transportation infrastructure will be strained by forecasted future regional and local growth, and the project objectives address these conditions. The project objectives are those that would most effectively serve the cities and communities within the Azusa to Montclair corridor area and meet the travel demand of the area's residents and employees, and include the following:

Enhance City-to-City Mobility by Providing High Frequency, Reliable, and Direct Transit Connections to Downtown Areas

Currently, the travel market between the corridor cities is underserved while the congested traffic conditions are worsening and are projected to continue to worsen. The provision of fast, convenient, and reliable transit service whose operation is not constrained by prevailing traffic conditions would provide a new option to enhance mobility between the cities along the corridor. The provision of high-frequency, direct transit connections to the downtowns of Glendora, San Dimas, La Verne, Pomona, Claremont, and Montclair would improve the area's circulation.

Improve the Area's Transportation Capacity

As the existing right-of-way for the proposed alignment is mostly owned by Metro, it provides a unique opportunity to provide a new high-frequency LRT service to this heavily populated corridor area, thereby expanding the area's transportation capacity.

Provide Transportation Improvements that Connect the Area to the Regional Transit System

The LRT option would provide a robust connection to the regional transit system for all of the cities along the corridor, in an area with an auto-dependent transportation system and limited potential for major roadway improvements.

Encourage Auto Trip Diversions and New Transit Trip Activity in the Area

Presently, substantial east-west auto travel occurs within the corridor; many trips of one to two miles are taken from one City in the corridor to another by auto. Providing an attractive alternative to driving would divert vehicle trips from local freeways and arterial streets, and reduce vehicle miles traveled (VMT). Also, new transit service would better accommodate the region's growth and economic development plans by increasing overall productivity of the local and regional transportation system.

S.3 ALTERNATIVES IN FINAL EIR

The following alternatives are considered in this Final EIR:

- **No Build Alternative:** The No Build Alternative includes all existing highways and bus and rail transit networks within the corridor area. This alternative considers existing conditions and forecasted future growth, but does not include major transportation infrastructure improvements since no such improvements within the corridor area (other than the proposed Metro Gold Line Extension Azusa to Montclair project) are considered in the Southern California Association of Governments (SCAG) *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*. The No Build Alternative is used as a baseline for comparing the transportation and environmental impacts that might result from the project and the transportation systems management alternative.
- **Transportation Systems Management (TSM) Alternative:** The TSM Alternative is a rapid bus system that would serve all the cities served by the project. The route for the TSM Alternative generally follows the Metro right-of-way that would be used for the Build Alternative project as closely as the arterial network allows.
- **Build Alternative Project:** The Build Alternative project is a 12.3-mile extension of the Metro Gold Line LRT alignment to the east, from just east of the Azusa-Citrus Station to the Montclair Transcenter (Table S-1). The project includes stations in Glendora, San Dimas, La Verne, Pomona, Claremont, and Montclair. The estimated travel time would be approximately 18 minutes between the Azusa-Citrus station and the Montclair station. Trains would operate with 10-minute headways during peak periods and 20-minute headways during off-peak periods.

Table S-1 outlines and illustrates the elements of the project, including stations, crossings, flyovers, parking facilities, and traction power supply substations (TPSS). The project will be built to comply with Metro design standards and criteria.

Table S-1. Project Elements

Project Element	Description																												
<p>Track Alignment</p> 	<p>12.3 miles of LRT at-grade track generally within existing Metro right of way, in a corridor which is shared, in part, with BNSF and Metrolink trains</p>																												
<p>Stations</p> 	<p>6 Stations</p> <ol style="list-style-type: none"> 1. Glendora Station 2. San Dimas Station 3. La Verne Station 4. Pomona Station 5. Claremont Station 6. Montclair Station <p><u>Bicycle parking will be provided at each of the new stations.</u></p>																												
<p>At-Grade Crossings</p> 	<p>26 Existing At-Grade Crossings</p> <table border="0"> <tr> <td>1. Barranca Avenue</td> <td>13. San Dimas Avenue</td> </tr> <tr> <td>2. Grand Avenue/Foothill Boulevard</td> <td>14. Walnut Avenue</td> </tr> <tr> <td>3. Vermont Avenue</td> <td>15. San Dimas Canyon Road</td> </tr> <tr> <td>4. Glendora Avenue</td> <td>16. Wheeler Avenue</td> </tr> <tr> <td>5. Pasadena Avenue</td> <td>17. A Street</td> </tr> <tr> <td>6. Glenwood Avenue</td> <td>18. D Street</td> </tr> <tr> <td>7. Elwood Avenue</td> <td>19. E Street</td> </tr> <tr> <td>8. Loraine Avenue</td> <td>20. White Avenue</td> </tr> <tr> <td>9. Gladstone Street</td> <td>21. Fulton Road</td> </tr> <tr> <td>10. Eucla Avenue</td> <td>22. Garey Avenue</td> </tr> <tr> <td>11. Bonita Avenue/ Cataract Avenue</td> <td>23. Cambridge Avenue</td> </tr> <tr> <td>12. Monte Vista Avenue</td> <td>24. Indian Hill Boulevard</td> </tr> <tr> <td></td> <td>25. College Avenue</td> </tr> <tr> <td></td> <td>26. Claremont Boulevard</td> </tr> </table>	1. Barranca Avenue	13. San Dimas Avenue	2. Grand Avenue/Foothill Boulevard	14. Walnut Avenue	3. Vermont Avenue	15. San Dimas Canyon Road	4. Glendora Avenue	16. Wheeler Avenue	5. Pasadena Avenue	17. A Street	6. Glenwood Avenue	18. D Street	7. Elwood Avenue	19. E Street	8. Loraine Avenue	20. White Avenue	9. Gladstone Street	21. Fulton Road	10. Eucla Avenue	22. Garey Avenue	11. Bonita Avenue/ Cataract Avenue	23. Cambridge Avenue	12. Monte Vista Avenue	24. Indian Hill Boulevard		25. College Avenue		26. Claremont Boulevard
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<p>Grade-Separated Crossings</p> 	<p>2 New Flyover Structures and New Bridges at 2 Existing Grade-Separated Crossings</p> <ol style="list-style-type: none"> 1. Lone Hill Avenue in Glendora (new flyover structure) 2. Towne Avenue in Pomona (new flyover structure) 3. Monte Vista Avenue in Montclair (new LRT bridge at an existing grade-separated crossing) 4. Route 66 in Glendora (new LRT bridge and BNSF freight replacement bridge) 																												
<p>Station Parking</p> 	<p>6 Station Parking Facilities (5 New Parking Structures)</p> <ol style="list-style-type: none"> 1. Glendora Station—new parking structure: 400-420 spaces 2. San Dimas Station—new parking structure: 450 spaces 3. La Verne Station—new parking structure: 600 spaces 4. Pomona Station—new parking structure: 750 new spaces in addition to 250 existing spaces 5. Claremont Station—new parking structure: 700 new spaces in addition to 400 existing spaces 6. Montclair Station—existing surface lot: 1,600 spaces 																												
<p>Traction Power Supply Substations (TPSS)</p> 	<p>11 TPSS facilities within or adjacent to the right of way, located every 1.0 to 1.5 miles</p>																												

Source: Parsons Brinckerhoff, 2013

S.4 LONG-TERM IMPACTS AND BENEFITS

S.4.1 Project Impacts

Table S-2 provides a summary of the project long-term environmental impacts. The No Build and TSM Alternatives would not result in significant long-term impacts. The project would result in potentially significant unavoidable long-term traffic, visual, and vibration impacts even with implementation of the identified mitigation measures. As shown in Table S-2, other potentially significant impacts would be mitigated to less than significant levels with implementation of the identified mitigation measures.

S.4.1.1 Traffic Impacts

Operation of the project would result in significant traffic impacts at ~~13~~ 12 intersections within the corridor area. Of the ~~13~~ 12 affected intersections, impacts on ~~10~~ 9 intersections would be mitigated to less than significant levels. There is no feasible mitigation that could be implemented within the existing right-of-way of the three remaining intersections (San Dimas Canyon Road/Arrow Highway in San Dimas, and Wheeler Avenue/Arrow Highway and D Street/Arrow Highway in La Verne). However, even without mitigation these three intersections would continue to operate at acceptable levels of service (LOS) C and D.

S.4.1.2 Property Impact

The project has been designed to minimize impacts on structures and the off-street parking located adjacent to the right-of way. To construct the project, either 12 or 13 parcels would be partially acquired and either eight (8) or nine (9) parcels would be fully acquired. One permanent easement and two temporary construction easements would also be required. For all property acquisitions, relocation assistance and compensation would be provided by ~~Metro~~ the Construction Authority as required by the California Relocation Assistance Act.

**Refer to Appendix C
for the location of
affected properties.**

Several businesses have lease agreements with Metro that allow them to encroach into Metro-owned right-of-way. The project would result in modifications to or termination of leases where the existing right-of-way is constrained. In addition, some temporary structures that encroach into existing rights-of-way in Pomona and Montclair would be removed.

S.4.1.3 Vibration Impact

The implementation of the identified mitigation measures would reduce the long-term vibration impacts to a less than significant level at the identified impacted locations, except for two locations: one cluster of single family residences in the City of Glendora, and the Red Roof Inn in the City of San Dimas. At these locations the vibration impact could exceed the 72 VdB threshold even with the mitigation measures of floating slabs and reduced train speeds. Therefore, the vibration impact at these two locations is considered significant and unavoidable.

S.4.1.4 Visual Impacts

Although most visual impacts would be less than significant, significant and unavoidable visual impacts would result from the new flyover at Towne Avenue in the City of Pomona and from removing some of the deodar cedar trees adjacent to the right-of-way in the City of La Verne.

S.4.2 Project Benefits

The corridor area is an established urban area with a population of 384,800 residents that is forecasted to grow by 20 percent to 460,900 residents by 2035. With housing and employment growth reaching 132,100 units and 156,200 jobs by 2035¹, these projections reflect the corridor area's existing and forecasted importance as a regional axis of population, housing, and employment. With no major transportation infrastructure improvements planned in the future to support this growth, the mobility and access for the residents and employees within the corridor area would continue to worsen. The project would improve mobility and access within the corridor area by providing fast, convenient, and reliable transit service whose operation is not constrained by prevailing traffic conditions. With the projected ridership of approximately 17,800 passengers per day by the year 2035, the project would also divert vehicle trips from local freeways and arterial streets, reduce VMTs, and reduce vehicular air pollutant emissions.

¹ 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), Southern California Association of Governments, 2012.

Table S-2. Summary of Long-Term Environmental Impacts

Environmental Element	No Build	TSM	Project Build
Transportation			
Public Transit	—	—	—
Streets and Highways	—	◐	●
Parking	—	—	○
Pedestrian and Bicycle Facilities	—	—	—
At-Grade Railroad Crossings	—	—	○
Air Quality	—	—	—
Biological Resources/Ecosystems	—	—	○
Climate Change	—	—	○
Communities, Population, and Housing	—	—	—
Acquisitions and Displacements	—	—	○
Community Facilities and Parklands	—	—	○
Cultural Resources	—	—	○
Energy	—	—	—
Geological Hazards	—	—	○
Hazardous Waste and Materials	—	—	○
Land Use and Planning	—	—	○
Noise	—	—	◐
Vibration			●
Safety and Security	—	—	◐
Visual Quality	—	—	●
Water Resources	—	—	○
Growth Inducing Effects	—	—	○
Irreversible and Irretrievable Commitments of Resources	—	—	○
Source: Parsons Brinckerhoff, ICF, ATS, BonTerra, 2012			
Key:			
— No impact			
○ Less than significant impact			
◐ Less than significant impact with mitigation			
● Potentially significant impact			

S.5 SHORT-TERM CONSTRUCTION IMPACTS

Table S-3 provides a summary of the anticipated short-term construction impacts. The No Build and TSM Alternatives do not involve construction and would not result in significant impacts. The construction of the project would result in potentially significant unavoidable air quality and noise impacts even with implementation of the identified mitigation measures. As shown in Table S-3, other potentially significant impacts would be mitigated to less than significant levels with implementation of the identified mitigation measures.

Table S-3. Summary of Short-Term Construction Impacts

Environmental Element	No Build	TSM	Project Build
Transportation			
Public Transit	—	○	◐
Streets and Highways	—	○	◐
Parking	—	○	◐
Pedestrian and Bicycle Facilities	—	○	◐
At-Grade Railroad Crossings	—	○	◐
Air Quality	—	—	●
Biological Resources/Ecosystems	—	—	◐
Climate Change	—	—	◐
Communities, Population, and Housing	—	—	◐
Acquisitions and Displacements	—	—	○
Community Facilities and Parklands	—	○	◐
Cultural Resources	—	—	◐
Energy	—	—	◐
Geological Hazards	—	—	○
Hazardous Waste and Materials	—	○	◐
Land Use and Planning	—	—	◐
Noise	—	—	●
Vibration	—	—	◐
Safety and Security	—	○	○
Visual Quality	—	—	◐
Water Resources	—	○	○

Source: Parsons Brinckerhoff, ICF, ATS, BonTerra, 2012

Key:

- No impact
- Less than significant impact
- ◐ Less than significant impact with mitigation
- Potentially significant impact

S.6 MITIGATION

S.6.1 Long-term Mitigation Measures

S.6.1.1 Transportation

- ~~LTR-1~~—In Glendora, the Construction Authority shall cooperatively work with the City, and contribute funding as necessary, to ensure the signalization at the intersection of Glenwood Avenue and US Route 66.
- ~~LTR-12~~—In San Dimas, the Construction Authority shall cooperatively work with the City, and contribute funding as necessary, to ensure the signalization at the intersection of San Dimas Avenue and Second Street when warranted.
- ~~LTR-23~~—In La Verne, the Construction Authority shall cooperatively work with the City, and contribute funding as necessary, to ensure the signalization of the intersections of White Avenue and First Street, White Avenue and Second Street, Arrow Highway at the Metrolink crossing, Arrow Highway and E Street, and La Verne Avenue and Arrow Highway when warranted.
- ~~LTR-34~~—In Pomona, the Construction Authority shall cooperatively work with the City, and contribute funding as necessary, to ensure the signalization of the intersection of Fulton Road and Bonita Avenue when warranted.
- ~~LTR-46~~—In Pomona, the Construction Authority shall cooperatively work with the City, and contribute funding as necessary, to modify the Garey Avenue and Bonita Avenue intersection within existing right-of-way. The proposed modification is a restriping of the northbound approach to provide two exclusive left-turn lanes, one through lane, and one shared right-turn/through lane. The “receiving leg” would also be restriped to provide two through lanes.
- ~~LTR-57~~—In Claremont, the Construction Authority shall cooperatively work with the City, and contribute funding as necessary to ensure the signalization of the intersection of College Avenue and First Street when warranted.
- ~~LTR-6~~—At the Garey Avenue crossing, the existing Metrolink track circuitry shall be recalibrated to eliminate false gate closures.
- ~~LTR-7~~—The signal at the intersection of Garey Avenue and Bonita Avenue shall be interconnected with the railroad signaling and allow for preemption when trains are present.
- ~~LTR-8~~—Bonita Avenue shall be protected/permitted in the east/west direction.

S.6.1.2 Noise and Vibration

- ~~N-3~~—The Construction Authority shall employ noise reduction strategies to reduce noise, including erecting noise barriers, employing building sound insulation, and modifying at-grade audible warning devices and operations (subject to California Public Utilities Commission approval). Final design, locations, and extent of implementation of each of these noise-reducing strategies shall be determined during final design of the project such that the Federal Transit Administration (FTA) noise abatement criteria are most effectively achieved.

The noise reduction measures include:

- **Noise Barriers**—This is a common approach to reduce noise impacts from surface transportation sources. The primary requirements for an effective noise barrier are (1) the barrier must be high

enough and long enough to break the line of sight between the sound source and the receiver; (2) the barrier must be of an impervious material with a minimum surface density of 4 lb/sq ft; and (3) the barrier must not have any gaps or holes between the panels or at the bottom. Because numerous materials meet these requirements, the selection of materials for noise barriers is usually dictated by aesthetics, durability, cost, and maintenance considerations.

- **Building Sound Insulation**—Sound insulation in residences and institutional buildings improves the outdoor-to-indoor noise reduction. Although this approach has no effect on noise in exterior areas, it may be the best choice for sites where noise barriers are not feasible or desirable, for buildings where indoor sensitivity is of most concern, or where train horn noise dominates the noise environment. Substantial improvements in building sound insulation (approximately five (5) to 10 dBA) can often be achieved by adding an extra layer of glazing to the windows, by sealing any holes in exterior surfaces that act as sound leaks, and by providing forced ventilation and air-conditioning so windows do not need to be opened.
- **Train Horns**—The Federal Railroad Administration (FRA) regulations require all trains operating on the national rail system to sound horns as they approach at-grade rail/roadway crossings. In 2005, the FRA finalized a horn rule that provides the opportunity to mitigate the effects of train horn noise by establishing “quiet zones.” The FRA may permit a quiet zone if the affected jurisdiction agrees to implement supplemental safety measures such as four-quadrant gates. If the application is approved, freight and Metrolink trains would not be required to sound their horns as they approach these crossings. In some areas, the elimination of existing horn noise would result in a significant reduction in noise that may be sufficient to decrease the noise level to below the Moderate Impact threshold. The proposed project would use four-quadrant gates and would be “quiet zone” eligible.
- **N-4**—The Construction Authority shall employ vibration reductions strategies such as ballast mats, shredded tire or recycled rubber chip underlay, relocation of crossovers, and special trackwork. Final design, location, and extent of implementation of each of these vibration-reducing strategies shall be determined during Final Design of the project such that FTA criteria are most effectively achieved.

The vibration reduction measures include the following:

- **Ballast Mats**—A ballast mat consists of a pad made of rubber or rubber-like material placed on the sub-ballast with normal ballast, ties, and rail on top. The reduction in groundborne vibration provided by a ballast mat is strongly dependent on the frequency content of the vibration and the design and support of the mat. Depending on the soil properties, an asphalt or concrete layer under the ballast may be required.
- **Tire Derived Aggregate (TDA)**—TDA consists of a resilient layer of shredded tires or recycled rubber chips placed beneath the sub-ballast layer of standard open ballast and tie track. This mitigation method provides results similar to ballast mats and would be strongly dependent on the frequency content of the vibration. This is a relatively new vibration mitigation approach that has been successfully implemented by Denver’s Regional Transportation District and the Santa Clara Valley Transportation Authority. In both Santa Clara Valley and Denver, 12-inch layers of TDA were installed.
- **Relocation of Crossovers or Special Trackwork**—The special trackwork at crossover locations increases vibration by about 10 dB. Crossovers are relocated away from residential areas wherever possible to eliminate impacts. If crossovers cannot be relocated away from residential areas, specially designed “low-impact” frogs could be used in place of standard rigid frogs. Examples of low-impact frogs include flange-bearing, spring-rail, and moveable point frogs.

- **N-5**—Prior to construction, the Construction Authority shall contact property owners of residences identified as having noise and vibration impacts listed as significant and unavoidable.

S.6.1.3 Safety and Security

- **SS-1**—All stations and parking facilities shall be equipped with monitoring equipment and/or be monitored by Metro Rail Operations Center staff/LASD TSB Desk Operations ~~Gold Line security~~ personnel on a regular basis.
- **SS-2**—A security plan for LRT operations shall be implemented. The plan shall include both in-car and station surveillance by Metro Rail Operations Center staff/LASD TSB Desk Operations ~~Gold Line security~~ ~~Gold Line security~~ personnel security or other local jurisdiction security personnel.
- **SS-3**—Lighting at all stations shall be to standards that minimize shadows, and all pedestrian pathways leading to/from sidewalks and parking facilities shall be well-illuminated in accordance with Metro Design Criteria.
- **SS-4**—Metro Rail Operations Center staff/LASD TSB Desk Operations ~~Gold Line security~~ personnel shall coordinate and consult with the Los Angeles and San Bernardino Counties sheriff's department and police departments of the cities adjacent to the alignment to develop and implement safety and security plans for the alignment, parking facilities, and station areas.
- **SS-5**—The station design shall not include design elements that obstruct visibility or observation or provide discrete locations favorable to crime, and pedestrian access to at-grade, below-grade, and above-grade station entrances/exits shall be accessible at ground level, with clear sight lines.
- **SS-6**—Metro Rail Operations Center staff/LASD TSB Desk Operations ~~Gold Line security~~ personnel shall monitor pedestrian crossing activity at all locations with adjacent schools and shall implement appropriate measures to ensure pedestrian crossing safety, as determined by the California Public Utilities Commission (CPUC).
- **SS-7**—The Construction Authority shall conduct a hazard analysis before the start of final design, using current safety analysis as a reference. The hazard analysis shall determine a design basis for warning devices, as required by the CPUC.
- **SS-8**—Traffic warning measures, such as signage, shall be provided at locations adjacent to stations to alert motorists to significant pedestrian activity in the area. Traffic warning measures will be per the California Manual of Uniform Traffic Control Devices (MUTCD) specifically Part 10 "Traffic Controls for Highway-Light Rail Transit Grade Crossing.

S.6.1.4 Visual Quality

- **VIS-4**—All lighting at the parking facilities and station locations shall utilize best available technology to reduce spillover to adjacent land uses and shall be directed away from adjacent residences. In addition, landscaping, fences, or other measures to shield adjacent residences from light and glare shall be provided where applicable. All lighting will conform to ANSI-IESNA standards.
- **VIS-5**—All walls, structures and fences shall be properly screened or incorporate design features to improve appearance and reduce visual intrusion pursuant to the standards established in the Metro Rail Design Criteria. The goal of the Criteria is to create site-adapted designs that reflect the specific urban context of each station and that enhance the neighborhood context in which the project is proposed. The Criteria include artwork, signage, advertising, landscaping, and guidelines for the selection of materials and finishes. Station design shall feature materials, landscaping, art, and other

~~Metro Gold Line Foothill Extension~~ elements consistent with Metro Rail Design Criteria, and developed by the station design team that includes architects, landscape architects, and lighting experts. Surface treatments shall be provided at the face of safety walls and at roadway/pedestrian portals, and landscaping along safety walls outside of the LRT portal shall be provided where feasible to provide wall screening. Per Metro Rail Design Criteria, artwork will be provided at each station and will be designed by professional artists. According to the Criteria, careful consideration must be given to station compatibility with proposed future development in the neighborhood of each station, and where applicable, future extensions and/or connecting line transfers. Neighborhood culture and character shall be emphasized through artwork. The Designer should become familiar with the general aspects of the entire system in order to determine how his individual project relates to the whole. The Landscape Architect shall coordinate design and production of construction drawings with Designers and Metro Art to ensure that landscaping, facilities architecture, site engineering and station art are visually and functionally compatible. Coordination is particularly important with regard to the design of lighting, paved surfaces, walls and site furnishings. The Authority shall coordinate with Metro Facilities Maintenance group in the review and comment stage of landscape design review submittals.

- **VIS-6**—The final design of the Towne Avenue flyover structure shall include considerations of materials and design refinements to reduce the height of the flyover structure above the surrounding grade to the lowest height feasible.

S.6.2 Short-term Construction Mitigation Measures to be Applied in All Cities

S.6.2.1 Transportation

- **CTR-1**—During final design, site- and street-specific Worksite Traffic Control Plans shall be developed in cooperation with the appropriate departments of transportation in each Azusa-Montclair corridor city and with Los Angeles and San Bernardino Counties, and implemented to accommodate required pedestrian and traffic movements. To the extent practical, traffic lanes will be maintained in both directions, particularly during periods of peak traffic operations. Access to homes and businesses shall be maintained throughout the construction period. To the extent feasible, lane closures shall occur during off-peak, weekend, or nighttime hours.
- **CTR-2**—Designated haul routes for trucks shall be identified during final design in cooperation with the corridor Cities and implemented throughout the construction process. These routes shall be situated to minimize noise, vibration, and other possible impacts. Following completion of the project, if slight physical damage to surface of the haul route roads is found, the road shall be treated as necessary.
- **CTR-3**— A Traffic Management Control Plan shall be developed and implemented. The Plan shall be developed in close coordination with local jurisdictions, the local emergency response agencies (including fire departments, police departments, and ambulance services), school districts, and other agencies as appropriate. The Plan shall include, but not be limited to:
 - Providing public information through media alerts, flyers, and the Construction Authority’s website to alert and inform the community about construction activities and schedules, including planned street and access closures.

- Providing traveler information through traffic advisor radio, changeable message signs (CMS) that includes detour routes.
- Creating a hotline for the community with a direct connection to personnel who can answer questions, provide information, and resolve issues. In addition, field offices shall be opened at specific locations identified as best serving the community and neighborhoods.
- Developing specific street closures and phasing plans, and other measures.
- Posting advance notices indicating when access would be closed or limited on City streets.
- Posting signs indicating access routes and alternate access points, as well as announcing that affected businesses are open.
- Placing newspaper notices to indicate street and access closures.
- Before any significant bus rerouting changes are made, fliers shall be provided on buses at least two weeks in advance notifying riders of route modifications. In addition, hoods shall be placed over bus-stop signs notifying riders of what modifications have been made to the bus route.
- Posting signage indicating detours for bicycles and pedestrians where roadways and/or sidewalks are closed during construction.
- Posting temporary signage warning motorists of pedestrians and bicycles where roadway and/or sidewalk closures create “pinch points” on travel lanes.

S.6.2.2 Air Quality, Climate Change, and Energy

- **AQCON-1**—Water or a stabilizing agent shall be applied to exposed surfaces in sufficient quantity to prevent generation of dust plumes.
- **CONAQ-2**—Track-out shall not extend 25 feet or more from an active operation and track-out shall be removed at the conclusion of each workday.
- **CONAQ-3**—Contractors shall be required to utilize at least one of the measures set forth in South Coast Air Quality Management District Rule 403 section (d)(5) to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site.
- **CONAQ-4**—All haul trucks hauling soil, sand, and other loose materials shall maintain at least six (6) inches of freeboard in accordance with California Vehicle Code Section 23114.
- **CONAQ-5**—All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).
- **CONAQ-6**—Traffic speeds on unpaved roads shall be limited to 15 mph. Operations on unpaved surfaces shall be suspended when winds exceed 25 mph.
- **CONAQ-7**—Heavy equipment operations shall be suspended during first and second stage smog alerts.
- **CONAQ-8**—On-site stockpiles of debris or rusty materials shall be covered at all times when not being used. On-site stockpiles of dirt shall be watered at least two times per day or covered at all times when not being used.
- **CONAQ-9**—Contractors shall maintain equipment and vehicle engines in good condition and in proper tune per manufacturers’ specifications.
- **CONAQ-10**—Heavy-duty trucks shall be prohibited from idling in excess of five minutes, both on- and off-site.

- **CONAQ-11**—Construction parking shall be configured to minimize traffic interference.
- **CONAQ-12**—Construction activity that affects traffic flow on the arterial system shall be limited to off-peak hours.
- **CONAQ-13**—Construction staging and vehicle parking, including workers' vehicles, shall be prohibited on streets adjacent to sensitive receptors such as schools, daycare centers, senior facilities, and hospitals.
- **CONAQ-14**—Portable generators shall be low-emitting and use ultra low sulfur diesel (<15 parts per million) or gasoline.
- **CONAQ-15**—Construction equipment shall use a combination of low sulfur diesel (<15 parts per million) and exhaust emission controls.
- **CONAQ-16**—The construction process shall use equipment having the minimum practical engine size (i.e., lowest appropriate horsepower rating for the intended job).
- **CONAQ-17**—Contractors shall be prohibited from tampering with construction equipment to increase horsepower or defeat emission control devices.
- **CONAQ-18**—The Construction Authority shall designate a person to ensure the implementation of air quality mitigation measures through direct inspections, records reviews, and complaint investigations.
- **CON-19**—LED lighting shall be used for construction activities taking place at night, to the extent feasible.

S.6.2.3 Biological Resources/Ecosystems

- **B-1**—During final plan review for each segment of the project, the Construction Authority shall review project plans to confirm that none of the drainages would be impacted by the final design. If changes in the design have occurred requiring impacts to drainage(s), the Construction Authority shall retain a qualified biologist/jurisdictional specialist to delineate the jurisdiction of the US Army Corps of Engineers, California Department of Fish and ~~Wildlife Game~~ (CDFGW), and the Regional Water Quality Control Board (RWQCB). If impacts on jurisdictional resources cannot be avoided, the Construction Authority shall obtain the necessary permits/agreements pursuant to the Clean Water Act and California Fish and ~~Wildlife Game~~-Code prior to impacting the drainage(s).
- **B-2**—Prior to the construction of each segment of the project, the Construction Authority (or its contractor) shall review project plans to determine whether any trees within the impact area require removal or trimming. If trees requiring removal or trimming are present and fit the requirements for protection by the corresponding city's ordinance, the Construction Authority shall retain a qualified biologist/arborist to determine whether any of the trees meet the requirements of the city's ordinance. Should any trees within the impact area meet the criteria specified in the city ordinance, the trees shall be trimmed (or removed and replaced) according to the specifications of the applicable city ordinance.
- **B-3**—The Construction Authority shall direct the contractor to avoid or minimize removal of vegetation (including ornamental tree and shrub removal) during the breeding season (February 1 to June 30 for nesting raptors and ~~February~~^{March} 15 to September 15 for all other birds). To the extent practicable, the contractor shall conduct vegetation and tree removal activities during the non-breeding season (September ~~16-2~~ through January 31) to limit impacts to nesting birds/raptors.

- **B-4**—In the event that removal of vegetation (including ornamental tree and shrub removal) must occur between February 1 and September 15, the Construction Authority (or contractor) shall retain a qualified biologist to conduct a nesting bird/raptor survey of the project impact area prior to the initiation of construction. The survey shall be conducted no more than three days prior to the initiation of construction to minimize the potential for nesting following the survey and prior to construction. If the biologist detects any active nests within or adjacent to the project impact area (within 25–150 feet for nesting birds, within 500 feet for raptors), the area(s) supporting bird nests shall be flagged for protection with a buffer determined at the biologist’s discretion based on the sensitivity of the species (minimum buffer of 3500 feet for raptors). The Construction Authority shall direct the contractor to avoid any activities within the buffer zone until the nests are no longer occupied as determined by the biologist.
- **B-5**—The Construction Authority shall direct the contractor to check and maintain daily any equipment operated within or adjacent to a drainage (including storm drains and concrete channels) to prevent leaks of materials that, if introduced to water, could be detrimental to water quality and, as a result, to biological resources that occur downstream of the project site. Cement/concrete, asphalt, paint, petroleum products, or other substances that could be hazardous, shall be prevented from entering the soil or waters. Any of these materials placed in an area that may result in the material entering the drainage shall be removed and disposed of at an appropriate site.
- **B-6**—The Construction Authority shall direct the contractor to remove all trash and debris related to the project prior to completion of project activities each day to avoid attracting wildlife to the work site.

S.6.2.4 Communities, Population, and Housing and Land Use and Planning

To address concerns related to access to properties during construction, the following preventive measures would be implemented as part of the Traffic Management Plan:

- **S-1**—Schedules for street closures shall be developed in consultation with each corridor city.
- **S-2**—Advance notice indicating when access will be closed or limited shall be posted on city streets.
- **S-3**—Signs indicating access routes and alternate access points, as well as announcing that affected businesses are open, shall be posted.
- **S-4**—Newspaper notices shall be placed to indicate street and access closures.
- **S-5**—The Construction Authority website shall include information regarding planned street and access closures.

S.6.2.5 Cultural Resources

- **CR-1**—If buried cultural resources are uncovered during construction, all work shall be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource. In the event that any artifact or an unusual amount of bone, shell, or non-native stone is encountered during construction, work will be immediately stopped and relocated to another area. The Construction Authority will stop construction within 100 feet of the exposed resource until a qualified archaeologist can evaluate the find (see 36 CFR 800.11.1 and CCR, Title 14, Section 15064.5[f]). Examples of such cultural materials might include: ground stone tools such as mortars, bowls, pestles, and manos; chipped stone tools such as projectile points or choppers; flakes of stone not consistent with the immediate geology such as obsidian or fused shale; historic trash pits containing bottles and/or ceramics; or structural remains. If

the resources are found to be significant, they will be avoided or will be mitigated consistent with State Historic Preservation Office (SHPO) Guidelines. All construction equipment operators will attend a preconstruction meeting presented by a professional archaeologist retained by the Construction Authority that will review types of cultural resources and artifacts that would be considered potentially significant, to ensure operator recognition of these materials during construction.

In the event of an accidental discovery of any human remains in a location other than a dedicated cemetery, the steps and procedures specified in Health and Safety Code Section 7050.5, California Environmental Quality Act (CEQA) Section 15064.5(e), and Public Resources Code Section 5097.98 shall be implemented. No further excavation or disturbance of the area or any nearby area reasonably suspected to overlie adjacent remains until the coroner is contacted and the appropriate steps taken pursuant to Health and Safety Code §7050.5 and Public Resource Code §5097.98. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours. If Native American human remains are discovered during project construction, it shall be necessary to comply with state laws relating to the disposition of Native American burials that are under the jurisdiction of the NAHC (Pub. Res. Code Section 5097). For remains of Native American origin, no further excavation or disturbance shall take place until the most likely descendant of the deceased Native American(s) has made a recommendation to the landowner or the person responsible for the excavation work regarding means of treating or disposing of the human remains and any associated grave goods, with appropriate dignity, as provided in the Pub. Res. Code Section 5097.98; or the NAHC is unable to identify a most likely descendant or the descendant fails to make a recommendation within 48 hours after being notified. In consultation with the most likely descendant, the project archaeologist and the Construction Authority shall determine a course of action regarding preservation or excavation of Native American human remains, and this recommendation shall be implemented expeditiously. If a most likely descendent cannot be located or does not make a recommendation, the project archaeologist and the Construction Authority shall determine a course of action regarding preservation or excavation of Native American human remains, which shall be submitted to the NAHC for review prior to implementation.

- **CR-2**—Project plans shall specify that a qualified paleontologist shall be contacted in the event that potential paleontological resources are discovered. Treatment measures may include monitoring by a qualified paleontologist during construction-related ground disturbing activities if paleontological resources are discovered. The qualified paleontologic monitor shall retain the option to reduce monitoring if, in his or her professional opinion, the sediments being monitored were previously disturbed. Monitoring may also be reduced if the previously described potentially fossiliferous units are not present or, if present, are determined by qualified paleontologic personnel to have a low potential to contain fossil resources. The monitor shall be equipped to salvage fossils and samples of sediments as they are unearthed to avoid construction delays and shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Specimens shall be curated into a professional, accredited museum repository with permanent retrievable storage. A report of findings, with an appended itemized inventory of specimens, shall be prepared and shall signify completion of the program to mitigate impacts on paleontological resources.

S.6.2.6 Hazardous Waste and Materials

- **HW-1**—A Soil Mitigation Plan shall be prepared once final construction plans are in place, showing the lateral and vertical extent of soil disturbance. The plan shall establish soil reuse criteria, establish a sampling plan for stockpiled materials, describe the disposition of materials that do not satisfy the reuse criteria, and specify criteria for imported materials.
- **HW-2**—During project final design, specific soil testing shall be conducted and necessary and appropriate specific means for remediation shall be selected and incorporated into construction or contract documents, such as excavation with offsite disposal or onsite reuse in low risk areas, vapor extraction, or in-situ remediation.
- **HW-3**—Risk-based cleanup levels shall be established in the Soil Mitigation Plan, which will be reviewed and approved by the oversight agency. Soil that contains soluble concentrations of metals in excess of the Soluble Threshold Limit Concentration (STLC) is considered a California hazardous waste and shall be removed from the site and disposed of in accordance with federal and state regulations.
- **HW-4**—Groundwater is not anticipated to be encountered, however, if ongoing engineering indicates groundwater may be encountered, testing shall be designed and performed to characterize groundwater where dewatering is required.
- **HW-5**—Hazardous materials, drums, trash, and debris shall be removed and disposed of in accordance with regulatory guidelines.
- **HW-6**—A health and safety plan shall be developed and implemented for construction personnel. When ground-disturbing activities begin, the Construction Authority shall identify potential contamination, such as, but not limited to, the presence of underground facilities, buried debris, waste drums, tanks, and stained or odorous soils. Should such materials be encountered, further investigation and analysis shall be conducted and may include the following actions:
 - Removal and disposal—Identify, remove, transport, and dispose of materials in a licensed Class I, II, or III disposal facility as established by waste profiling procedures.
 - Recycling—Treat and/or recycle materials at regulated recycling facilities.
 - Reuse uncontaminated or treated materials on project lands.
 - Segregate and stockpile the material on plastic sheeting.
 - Spray the stockpile with water or a South Coast Air Quality Management District-approved dust or vapor suppressant, and cover the stockpile with plastic sheeting to prevent exposure to soil.
 - Provide qualified and trained personnel with personal protective equipment for activities that include, but are not limited to, excavation, segregation, stockpiling, loading, and transporting hazardous substances.

S.6.2.7 Noise and Vibration

In compliance with the Construction Authority's policy, construction of the project would conform to the noise requirements of each city. These requirements generally limit construction activities to daytime hours (typically from 7 a.m. to 6 p.m.) and certain days of the week (e.g., construction is often precluded on Sundays and national holidays without a variance from the local jurisdiction). Some local noise requirements may also include equipment or property line limits.

In addition to the noise reduction that would result from voluntary compliance with these requirements, the following measures will be implemented:

- **N-1**—Construction shall proceed in accordance with the construction specifications for this project, including, but not limited to, the following:
 - **Noise and Vibration Control Plan**—A Noise and Vibration Control Plan shall be developed that demonstrates how the appropriate noise limits will be achieved. The plan shall include measurements of existing noise, a list of the major pieces of construction equipment that will be used, and predictions of the noise levels at the closest sensitive receptors (including residences, hotels, schools, churches, temples, and similar facilities). The noise and vibration control plan shall include measures to minimize vibration impacts during construction. Appropriate vibration mitigation measures include minimizing the use of tracked vehicles, avoiding vibratory compaction; and monitoring vibration near residences to ensure thresholds are not exceeded. The noise and vibration control plan shall be approved by the Construction Authority prior to initiating construction, and implemented during construction.
 - **Alternative Construction Procedures**—Where construction cannot be performed in accordance with the requirement of the noise limits, the Construction Authority shall investigate and implement alternative construction measures that would result in lower sound levels.
 - **Noise Monitoring**—The Construction Authority shall conduct noise monitoring to demonstrate compliance.
 - **Best Management Practices**—The Construction Authority shall use the following best management practices for noise abatement wherever practical:
 - Use specialty equipment with enclosed engines and/or high performance mufflers when feasible.
 - Locate equipment and staging areas as far as possible from noise-sensitive receptors.
 - Limit unnecessary idling of equipment.
 - Install temporary noise barriers as needed and where feasible.
 - Reroute construction-related truck traffic away from residential streets to the extent permitted by the relevant municipality.
 - Avoid impact pile driving where possible. Where geological conditions permit, use quieter alternatives, such as drilled piles or a vibratory pile driver.
- **N-2**—The Construction Authority shall implement complaint resolution procedures, including a contact person and telephone number, to rapidly resolve any construction noise problems.

S.6.2.8 Visual Quality

- **VIS-1**—As determined by a qualified arborist, specimen trees within the existing right-of-way shall be relocated. The relocated trees shall be incorporated into the landscape plan or along adjacent public right-of-way where space permits wherever feasible. In cooperation with the Cities, LLandscape guidelines and design strategies shall be prepared prior to the start of construction or any action to trim or remove heritage trees and implemented during the construction phase to minimize the loss of deodar cedars and incorporate new landscaping of commensurate quality when called for, consistent with the Metro Rail Design Criteria and in compliance with local jurisdictions' tree preservation ordinances. The Criteria state that landscaping for new facilities shall be designed in conformance with local landscape ordinances and existing plant material shall be preserved, as appropriate.

- **VIS-2**—Temporary construction area screening shall be considered in areas adjacent to roadways residences and businesses.
- **VIS-3**—If lighting is required during construction, lighting shall be shielded and directed downward and away from adjacent residential and commercial uses.

S.7 MITIGATION MONITORING PROGRAM

In accordance with Section 21081.6 of CEQA, a mitigation monitoring program would be adopted by the Construction Authority. The mitigation monitoring program has been prepared as a separate document and is designed to ensure compliance with adopted mitigation measures as outlined in the Final EIR. The program would be available for public review prior to any Construction Authority action on the project.

S.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Alternatives were evaluated based on the effectiveness with which they met the project objectives and their environmental impacts. Although the No Build and TSM Alternatives would result in fewer local impacts, those alternatives would either not contribute or contribute to a lesser degree to regional air quality conformity, and would not provide the desired levels of mobility, accessibility and reliability for the corridor communities. While the TSM Alternative does not involve construction and thus would have fewer impacts and could be considered environmentally superior, the Build Alternative project provides the greatest benefits to mobility for the residents and businesses in the corridor area and most effectively achieves the project objectives. The project would provide improved service reliability as well as reduced travel times for transit riders traveling between the corridor cities and between the corridor and adjacent areas west of the corridor. These benefits would result in 17,800 transit trips per day compared to the No Build Alternative.

S.9 PUBLIC INVOLVEMENT

Throughout the environmental review process, the Construction Authority actively engaged communities located along the rail corridor by hosting a series of community meetings and frequently disseminating updates about the project to interested community members and stakeholders via direct mail, online updates, telephone calls, and mass media.

In January 2011, public scoping meetings were held in Pomona, Glendora, Claremont, and San Dimas. The purpose of these meetings was to provide the public with an opportunity to provide comments on the proposed project. These comments informed the project definition to be included in the Draft EIR. Comments included general support for the project, concern about potential noise and vibration impacts, questions concerning the grade-crossing locations and design, the design and aesthetics of the stations, and a desire for integration of high-quality bike and pedestrian amenities into the project design.

Refer to Chapter 4 for more information on public involvement process and community feedback.

In April and May 2011, the Construction Authority engaged stakeholders in a supplemental round of six station planning workshops. At these workshops, stakeholders and members of the public reviewed

station designs and provided the Construction Authority with additional feedback on the designs that had evolved since the scoping period. The Construction Authority team first met with city staff in each proposed station city and then co-facilitated public workshops with each city where designs were presented to community members. Attendees of the workshops expressed interest in multi-modal access, especially good bike and pedestrian access to the stations, enthusiasm about transit-oriented development opportunities near the stations, concern about impacts to local businesses and traffic, and inquiries about proposed parking structures.

S.10 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Although the majority of comments expressed during the scoping process in January 2011 were generally supportive of the project, many comments addressed areas of concern about potential impacts associated with the project. The main areas of concern were:

- **Noise and vibration**—Comments typically concerned requests for noise walls, the height and appearance of noise walls, vibration, and the sound of train horns.
- **Grade crossings and grade crossing safety**—Comments typically concerned traffic impacts and car and pedestrian safety at major intersections and grade crossings (especially at Foothill Boulevard/Grand Avenue in Glendora and Garey Avenue in Pomona).
- **Bicycle and pedestrian facilities and access**—Comments typically concerned requests for bicycle storage and bikeway facilities, and pedestrian paths at and to stations.
- **Visual, aesthetics, and historic preservation**—Comments typically concerned visual impacts caused by the project's overhead catenary system (wires and poles necessary to provide electrical power to the trains). Many comments were received concerning the importance of preserving the historic character of the historic Atchison, Topeka and Santa Fe Depot in Claremont.

Other comments concerned the coordination of Metro Gold Line service with Metrolink and municipal bus service; station siting and design; station safety; operational issues (hours of service, fares, ridership, etc.); extending service to Ontario International Airport; the design of the alignment; property acquisitions; funding and cost; traffic and circulation impacts, emergency access; parking; and air quality. Some comments expressed general opposition to the project.

During the public review for the Draft EIR that extended from August 21, 2012 to October 5, 2012, the comments received mainly concerned information about existing and planned future uses in the corridor, visual effects, traffic, configurations of stations and parking, grade crossings, noise, and construction effects (refer to Chapter 7 for comments and responses to comments), which are addressed throughout the Final EIR.

