

2.0 SUMMARY

2.1 INTRODUCTION

This Environmental Impact Report (EIR) evaluates the environmental effects that may result from the Canoga Transportation Corridor project, also known as the extension of the Metro Orange Line (MOL).

This EIR has been prepared in compliance with the California Environmental Quality Act of 1970 (CEQA) (Public Resources Code §21000, et seq.) and the State CEQA Guidelines (California Code of Regulations §15000, et seq.), as amended. An EIR is a full disclosure, public information document in which the potential significant environmental impacts of a proposed project are evaluated; measures to mitigate significant impacts are identified, and alternatives to the project that can reduce or avoid significant environmental effects are discussed.

An EIR is used in the planning and decision-making process by the lead agency and all responsible agencies. CEQA Guidelines define the “Lead Agency” as the public agency with principal responsibility for carrying out or approving a project. For this project, the Los Angeles County Metropolitan Transportation Authority (Metro) is the lead agency. The term “Responsible Agency” includes all public agencies, other than the lead agency, that have discretionary approval of the project or a component thereof. The purpose of an EIR is not to recommend either approval or denial of a project; its purpose is to disclose objective information so that informed decisions can be made. CEQA requires the decision makers to balance the benefits of a proposed project against its unavoidable environmental effects in deciding whether to carry out a project.

2.2 PROJECT BACKGROUND/HISTORY AND ALTERNATIVES SCREENING

The San Fernando Valley North-South Transit Corridor Regionally Significant Transportation Investment Study (RSTIS), completed in April, 2003 evaluated transit enhancements on five major corridors extending from Vineland Avenue in the East Valley to Topanga Canyon Boulevard in the West Valley. The RSTIS, which was approved by the Metro Board in May, 2003, recommended transit improvements on five north-south corridors; (1) Reseda Boulevard, (2) Van Nuys Boulevard, (3) Sepulveda Boulevard, (4) Lankershim Boulevard-San Fernando Road, and (5) Canoga Avenue. Metro Rapid Bus service has been implemented on the first three corridors and Metro is currently working with the City of Los Angeles Department of Transportation (LADOT) to identify additional bus speed enhancements on those four corridors, such as peak period bus lanes, queue jumps at signals and other physical and operational improvements to enhance transit service. Subsequently, Metro completed the Canoga Transportation Corridor Alternatives Screening Report (Screening Report), focusing only on alternatives in the Canoga Corridor which could serve to implement the remaining RSTIS recommendations for improved north-south transit improvements in the western San Fernando Valley. The Screening Report, which was the first step in this environmental clearance process, was submitted to the Metro Board as an information item in September 2007. Four alternatives were screened and are now being considered for the Canoga Corridor. They include a No Project Alternative, a Transportation Systems Management (TSM) Alternative, Canoga On-Street Dedicated Bus Lanes Alternative and a Canoga Busway Alternative.

Optional SR-118 Connection

For each of the build alternatives, the alternatives screening analysis included the assessment of a potential connection to a park-and-ride lot at SR-118. This connection would allow automobile commuters coming from both directions on SR-118 to park close to the freeway off-ramp and connect via transit with destinations in the entire San Fernando Valley and beyond. Three options for extensions of bus service north from the Chatsworth Metrolink Station were examined: (1) via Topanga Canyon Boulevard to a potential park-and-ride lot in the vicinity of the SR-118 Topanga Canyon Boulevard ramps; (2) via De Soto Avenue to a potential park-and-ride lot in the vicinity of the SR-118 De Soto Avenue ramps; or (3) via De Soto Avenue, Rinaldi Street and Porter Ranch Road to an existing park-and-ride lot south of SR-118 along Porter Ranch Road. The feasibility of this extension was limited primarily by the availability of suitable sites for a park-and-ride lot in the vicinity of the freeway ramps (Topanga Canyon Boulevard or De Soto Avenue) and/or the feasibility of having buses access the existing park-and-ride lot at Porter Ranch Road. In the case of Topanga Canyon Boulevard, no suitable sites were available for the development of a park-and-ride lot. As for the existing Porter Ranch Road park-and-ride lot, even though the lot has capacity to accommodate new riders, it would take buses up to 8-10 minutes to travel the 3.2-mile stretch from the Chatsworth Metrolink Station, given the levels of congestion on De Soto Avenue, and this would have negative cost and operational implications that would make the extension infeasible. Finally, one potentially suitable site was identified at the northern terminus of De Soto Avenue near SR-118. However, this option was not carried forward as part of the project description for two reasons: 1) during the two public scoping sessions held for the project, general public opposition to running buses on De Soto Avenue was expressed and; 2) the travel demand at the potential SR-118 station was forecasted to be only approximately 30 peak-period trips. The cost of extending MOL service north to SR-118 with three minute headways would not be justified to capture 30 additional peak-period riders. If the level of service was less than the three minute headways proposed for the rest of the MOL, the level of ridership would likely decrease, making this extension of service not cost-effective.

2.3 AREAS OF CONTROVERSY

Areas of concern identified in public comments are as follows:

- Loss or relocation of businesses located within the Right-of-Way (ROW).
- Extension of the Metro Orange Line beyond Chatsworth to SR 118:
 - potential impacts to open space, including aesthetic impacts and diminished access to biking and hiking trails and/or loss of, open space;
 - incompatibility with current zoning or land use regulations;
 - potential damage to petroglyphs in the vicinity of SR 118.
- Possible increased noise levels at mobile home parks with predominantly senior residents that are located adjacent to the Right of Way
- Possible loss of safety and security due to potential increased trespassing.

2.4 SUMMARY OF PROJECT ALTERNATIVES

Alternative 1 -- No Project

The No Project Alternative reflects the condition anticipated for the year 2030, based on SCAG's growth forecast, if no major transit improvement investments are made in the western SFV. This scenario would mean that the Metro-owned ROW or Canoga Avenue would not be used for a transit project. This alternative is used as a baseline for comparison to the TSM, On-Street Dedicated Bus Lanes, and Busway Alternatives.

Alternative 2 -- Transportation Systems Management (TSM)

A Transportation Systems Management (TSM) Alternative is designed to identify low-cost, easily implementable improvements as an alternative to the construction of more-expensive alternatives. The TSM Alternative entails frequency improvements on existing Metro transit routes as well as providing a new local transit line for Canoga Avenue, though not including any transit priority measures (signal priority or dedicated lanes) for this corridor.

The implementation of the TSM Alternative would allow for a reduction in headways in comparison to the No Project Alternative. The TSM Alternative improvements would be applied for the full length of each route. If all suggested improvements were made, estimated increased fleet requirements would be up to 23 vehicles (excluding spares). These improvements would need to be prioritized and could be included with any selected alternative.

The TSM Alternative also includes the addition of a new Metro Local route along Canoga Avenue. The new local route (246) would extend from the Warner Center Transit Hub to the Chatsworth Metrolink Station, utilizing Owensmouth Street, Oxnard Street, Erwin Street, Canoga Avenue, Marilla Street, Owensmouth Street, and Lassen Street. The TSM Alternative's new local service on Canoga Avenue would include a terminal at Warner Center, a stop at the existing Canoga MOL station and stops on Canoga Avenue at Sherman Way, Saticoy, Roscoe Boulevard, Parthenia (Optional), Nordhoff, Plummer, and Lassen Streets in line with closer stop spacing provided by local service.

Alternative 3 – Canoga On-Street Dedicated Bus Lanes

This alternative would operate similar to a Metro Rapid service, but with dedicated lanes. A southbound Bus-Only Lane along Canoga Avenue provided by prohibiting on-street parking; a northbound Bus-Only Lane would be provided by widening the street into the Metro-owned ROW that parallels Canoga Avenue. At intersections with east-west cross streets, Canoga Avenue will be further widened into the Metro ROW to provide right-turn-only lanes on Canoga Avenue, which would allow right-turning vehicles to merge across the bus-only lanes so that through buses are not blocked by right-turning vehicles at the intersections. The dedicated lanes would be paved in concrete at the stations and extend approximately 150 ft. north and south of the stations in each direction. On Canoga Avenue, north of the Canoga MOL Station, a landscaped median island would be provided as part of this alternative. This landscape median would not extend north of Plummer Street, where the roadway narrows to one lane in each direction.

The Canoga On-Street Dedicated Bus Lane Alternative would be a “modified” version of the MOL concept of a “multi-modal transportation facility within a greenway.” Canoga Avenue would be widened between Vanowen and Nordhoff Streets to create dedicated lanes for the BRT adjacent to the curbs. Along Canoga Avenue, the Metro ROW varies from 40 ft to 275 ft with a typical width of 100 ft. The 100 ft ROW and larger ROW sections provide opportunities for landscaping, a bikeway/pedestrian path and the dedicated lanes. The 40-foot portion is at the north end of the corridor along the railroad tracks. The Canoga On-Street Dedicated Bus Lanes Alternative will utilize City of Los Angeles ROW in addition to the Metro ROW in this area. The 65-foot portion, a short segment directly north of Sherman Way, is directly behind a recently built strip shopping center with parking facing Canoga Avenue. The Canoga On-Street Dedicated Bus Lanes Alternative would displace this shopping center to accommodate the median, dedicated bus lanes, station platforms, and the bikeway/pedestrian path. The property would have to be purchased and the building torn down. This alternative also requires the termination of the Canoga Self-Storage lease between Saticoy Avenue and Roscoe Boulevard. Other Metro leases adjacent to Canoga Avenue would not be renewed. The 275 ft portion of the Metro ROW, located south of Sherman Way and north of Vanowen Street provides the opportunity for the typical sections of the Canoga On-street Dedicated Bus Lanes Alternative. The additional ROW width also provides opportunities for landscaping, the potential preservation of existing Metro leases, and the integration of the project with the Los Angeles River. At the northern end of the route, between Marilla Street and Lassen Avenue, this alternative may include dedicated bus lanes in an exclusive ROW. The ROW north of Marilla Street is only partially owned by Metro; therefore, some private property would have to be purchased.

Where feasible, a Class I bikeway and parallel pedestrian path would run from the Canoga MOL Station to the Chatsworth Metrolink Station and would occupy 10-17 ft of the ROW. Where ROW allows, the facility would include a 10-foot bikeway and adjacent 7-foot pedestrian pathway. In narrower areas, a 10-foot multi-use path is provided and will be shared by bicycles and pedestrians. Buses would be the only vehicles allowed within the dedicated lanes, except at intersections and driveways, where vehicles would be able to cross the dedicated lanes in order to turn right. Left turn pockets into driveways are not anticipated. Furthermore, a right-turn pocket would be provided at the approaches to all intersections along Canoga Avenue where the dedicated lanes are implemented, allowing buses to cross the intersections unimpeded by right-turning vehicles. Signage would be posted listing restrictions on autos, trucks, motorcycles, bicycles and pedestrians within the dedicated lanes.

North of Plummer Street, the Canoga Avenue ROW is limited and the Amtrak/Metrolink/UP tracks are still in operation. Canoga Avenue narrows from two lanes in each direction to one lane in each direction. Several sub-options are under consideration for this area and will be described below. Three options are considered for the final northern segment to connect to the Chatsworth Metrolink Station:

Option 1 Dedicated Bus Lanes end at Marilla Street - The dedicated lanes would end at Marilla Street and buses would use Marilla Street, Owensmouth Avenue, Lassen Street and Old Depot Plaza Road. With this option, the intersection of Lassen Street and Old Depot Plaza Road would be signalized. The multi-use path for this option would either terminate at Plummer Street or continue up the railroad ROW to Lassen Street.

Option 2 At-Grade “T” Intersection on Lassen Street Approx. 200 ft. West of Tracks - The dedicated lanes would continue north of Marilla Street through two parcels (one is Metro-owned and the other

one is privately-owned) to connect to Lassen Street at a new signalized intersection approximately 200 ft west of the tracks; the buses would then turn right onto Lassen Street, cross the tracks, and left onto Old Depot Plaza Road (Lassen Street at Old Depot Plaza Road will be signalized). The multi-use path for this option would terminate at Lassen Street.

Option 3 At-Grade Parallel Crossing of Lassen West of Tracks - The dedicated lanes would continue north of Marilla Street through two parcels (one is Metro-owned and the other one is privately-owned) and then cross Lassen Street at a new signalized intersection to access a new terminus bus station located on the west side of the train tracks, on a property that is currently privately-owned. A grade-separated pedestrian access to the new bus station from the parking lot would be provided. The multi-use path for this option would terminate at Lassen Street.

Landscaping would be provided along each side of the busway and the multi-use path for all the options discussed above.

Alternative 4 -- Canoga Busway

The Canoga Busway Alternative consists of a fixed busway extending BRT service north from the existing MOL Canoga Station along the Metro-owned railroad ROW paralleling Canoga Avenue, to the Chatsworth Metrolink Station. Some of the options for the northern portion of the alignment could potentially require some ROW purchases.

Along most of the alignment, the ROW would provide adequate room for landscaping and space for a bikeway/pedestrian path adjacent to the busway. Along Canoga Avenue, the Metro ROW varies from 40 ft to 275 ft with a typical width of 100 ft. The 100 ft ROW and larger ROW sections provide opportunities for landscaping, bikeway/pedestrian paths and the busway. The 40-ft portion is adjacent to the railroad tracks at the north end of the corridor. In this segment, the busway and multi-use path will be between the tracks and a narrowed Canoga Avenue, with room for only minimal landscaping. The 65-ft portion, a short segment directly north of Sherman Way, is directly behind a recently built strip shopping center with parking facing Canoga Avenue. The busway and a multi-use path would be located behind the shopping center, but the narrow 65 ft ROW in this segment reduces the potential for landscaping and a bio-swale (swaled drainage course with gently sloped sides and filled with vegetation and compost). The 275-ft portion of the Metro ROW, located south of Sherman Way and north of Vanowen Street provides the opportunity for the typical sections for the Canoga Busway Alternative. The additional ROW width (approximately 175 ft) also provides the opportunity for additional landscaping, the potential preservation of existing long-term leases, and the integration of the project with the Los Angeles River Revitalization Master Plan. The ROW narrows significantly north of Plummer Street, adjacent to the Metrolink tracks. At this point, Canoga Avenue would be 32 ft wide. Due to the curving nature of the railroad tracks and Canoga Avenue (moving away from each other), the narrow segment is limited in length and the roadway (Canoga Avenue) will widen back to 62 ft as quickly as possible. Several options are considered for the northern segment to connect to the Chatsworth Metrolink Station and they are discussed in detail below.

Where feasible, a Class I bikeway and pedestrian path would run from the Canoga MOL Station to the Chatsworth Metrolink Station and would occupy 10-17 ft of the ROW. Buses and Metro-authorized vehicles would be the only vehicles allowed within the busway. Signage would be posted listing restrictions on autos, trucks, motorcycles, bicycles and pedestrian within the busway lanes.

Metro-authorized emergency vehicles would only use the busway when responding to emergencies within or immediately adjacent to the ROW.

Several options are considered for the northern segment to connect to the Chatsworth Metrolink Station:

Option 1 Busway Ends At Plummer – Buses would exit the Busway at Plummer Street and travel on Plummer Street, Owensmouth Avenue, Lassen Street and Old Depot Plaza Road. With this option, the intersection of Canoga Avenue and Plummer Street and the intersection of Lassen Street and Old Depot Plaza Road will be signalized. The multi-use path for this option would terminate at Plummer Street.

Option 2 At-Grade "T" Intersection on Lassen Approx. 200 Ft West of Tracks – The busway and possibly the multi-use path would extend north to Lassen Street on the west side of the railroad tracks, intersecting Lassen Street at a new signalized intersection approximately 200 ft west of the tracks. Buses would travel in mixed flow on Lassen Street and cross the tracks to reach the Chatsworth Metrolink Station. This alternative requires property acquisition south of Lassen Street; it also requires converting the southbound approach of a private roadway intersecting Lassen Street west of the tracks into a right-turn only. An optional plan could be required where only northbound buses and the multi-use path would travel on the busway all the way north to Lassen Street. This would occur if the two-way busway and multi-use path could not be accommodated in the narrow ROW area adjacent to the Metrolink tracks. Southbound buses would return via Lassen Street, Owensmouth Avenue, and Plummer Street, re-entering the busway at a new signalized intersection at the intersection of Canoga Avenue and Plummer Street.

Option 3 At-Grade Parallel Crossing of Lassen West of Tracks - The busway and the multi-use path would extend north to Lassen Street directly to the west of the railroad tracks and cross Lassen Street at a signalized intersection to access the Busway terminus station on the west side of the tracks. A pedestrian grade-separation to cross the tracks would be provided. Sidewalks along the north side of Lassen Street would be widened between the railroad tracks and Old Depot Plaza Road to provide a connection of the multi-use path to the station. This option requires property acquisition or reconfiguration of one property south of Lassen Street, directly west of the railroad tracks, as well as several lots north of Lassen Street for the terminus station. An optional plan could be required where only northbound buses and the multi-use path would travel on the busway all the way north to Lassen Street. This would occur if the two-way busway could not be provided in the narrow ROW area adjacent to the Metrolink tracks. Southbound buses would return via Lassen Street, Owensmouth Avenue, and Plummer Street, re-entering the busway at a new signalized intersection at the intersection of Canoga Avenue and Plummer Street.

Option 4 Underpass of Tracks with Crossing of Lassen East of Tracks - The busway would pass under the railroad tracks in a grade separation and cross Lassen Street at-grade. Two potential intersections of the busway on Lassen Street are being considered in this EIR. One would be located at the existing Old Depot Plaza Road intersection on Lassen Street. This would require purchase of part of the mobile home park's property, south of Lassen Street, and reconfiguration of the parking and access road to the mobile home park. The mobile home park egress would likely be right-turn only. The second option would include an intersection adjacent to the east side of the railroad tracks, with buses crossing Lassen Street parallel to the tracks at a signalized intersection into a redesigned

Chatsworth Metrolink Station. The multi-use path would remain at-grade adjacent to the west side of the tracks and end at Lassen Street.

Option 5 Elevated/Underground Grade Separation of Railroad Tracks and Lassen Street - The busway extends along the west side of the railroad tracks and is either elevated over or depressed under the railroad tracks and Lassen Street on a grade separation, then descending or ascending into the parking lot of the Chatsworth Metrolink Station. The multi-use path would remain at-grade adjacent to the west side of the grade-separated busway and end at Lassen Street.

Bus Rapid Transit (BRT) signals and vehicle signals will be placed at each crossing to control the bus, vehicle, pedestrian, and bicycle traffic at the crossing, the same way they are currently being operated along the MOL. Typically, the BRT crossings will be multi-phased (BRT phase and multiple vehicle phases to control turns across the busway).

Landscaping would be provided along each side of the busway and the multi-use path for all the options discussed above.

Bus Maintenance Facility

The Division 8 facility currently operates at almost full capacity. The Division's capacity is 229 buses and it is currently assigned 223 buses. The existing facility will need to be modified to accommodate the 7 to 23 buses, plus spares, required by the different project alternatives. In order to accommodate the added buses, Metro would have to provide an off-site overnight bus parking facility, and do the maintenance work at Division 8. The Metro-owned vacant lot at the northwest corner of Owensmouth Avenue and Marilla Street would be paved for bus parking.

2.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

This EIR analyzes four alternatives at equal level detail, including the No Project Alternative. An environmentally superior alternative other than the No Project must be identified in an EIR. The TSM Alternative would not have the construction impacts (noise and localized PM10 and PM2.5) of the Dedicated Bus Lanes and Busway Alternatives and is thus determined to have the least environmental impact. Since the TSM Alternative involves only changing bus routes it would be categorically exempt and could be implemented at any time without environmental review. However, the TSM alternative would not realize mobility improvements in the area to the same extent as the Dedicated Lanes and Busway Alternatives.

2.6 SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS

CEQA identifies various types of EIRs. The most common type is the project EIR. A project EIR examines the environmental impacts of a specific development project. This type of EIR focuses primarily on the changes in the environment that would result from the development of a project's and examines all phases of the project, including planning, construction, and operation. This EIR is a project EIR.

To assist in the understanding of this report, the following descriptions, as found in Article 20 of the

State *CEQA Guidelines*, are provided:

“Project” means the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment directly or ultimately.

“Significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

“Environment” means the physical conditions that exist within the area which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The “environment” includes both natural and man-made conditions.

“Effects” and “impacts” as used in these Guidelines are synonymous. Effects include direct or primary effects that are caused by the project and occur at the same time and place, and indirect or secondary effects that are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems. Effects analyzed under CEQA must be related to a physical change.

“Mitigation” includes: 1) avoiding the impact altogether by not taking a certain action or parts of an action; 2) minimizing impacts by limiting the degree or magnitude of the action and its implementation; 3) rectifying the impact by repairing, rehabilitating, or restoring the impacted environment; 4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and 5) compensating for the impact by replacing or providing substitute resources or environments.

“Cumulative impacts” refers to two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts.

A “less-than-significant impact” is an impact that is adverse but that does not exceed the defined standards of significance. Less-than-significant impacts do not require mitigation.

A “potentially significant impact” is an impact for which there is not enough information to make a finding of less-than-significant impact; however, for the purpose of this Draft EIR, the impact is considered significant. A potentially significant impact is equivalent to a significant impact and requires the identification of feasible mitigation measures or alternatives.

A “significant impact” is an impact that exceeds the defined standards of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less-than-significant level.

A “significant and unavoidable impact” is an impact that exceeds the defined standards of significance and that cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures.

Table 2-1 following summarizes the impacts of the project and presents the identified mitigation measures; the level of significance after mitigation is identified.

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
<i>Land Use and Development</i>		
<p>Impact 4.1.1: For Alternative 3, the Canoga On-Street Dedicated Bus Lanes and Alternative 4, the Canoga Busway adjacent sensitive land uses would be buffered with walls, fences, and landscaping as described in the Project Description. The Canoga On-Street Dedicated Bus Lanes and the Canoga Busway Alternatives would not renew business leases, including, Metro tenants along the ROW, and depending on the option selected for the northern portion of the alignment, the project could result in the acquisition and displacement of commercial/industrial property. The character of the surrounding area would not be substantially altered. Therefore, land use compatibility impacts for all alternatives would be less than significant. Depending on the Northern Segment Options, impacts would be less than significant with mitigation.</p>	<p>Alternatives 3 and 4: MM 4.1-1: Walls and/or fences, and landscaping shall be included in the Metro ROW buffering mobile homes and other residential units from the project along the Metro ROW.</p> <p>Alternatives 3 and 4 Option 2, 2a, 3, and 3a: MM 4.1-2: Metro will work with property owners of industrial buildings to determine if full acquisition of the industrial buildings would be required or if a partial acquisition could be accomplished by reconfiguring the site and parking.</p> <p>Alternative 4 Option 4: MM 4.1-3: Metro to work with mobile home park property owners to coordinate the design of the Busway with the reconfiguration of the access and parking to the club house and the mobile home park.</p>	<p>Less than significant.</p>
<p>Impact 4.1.2: The alternatives generally would be consistent with planned land uses and policies contained in most of the relevant plans. Alternative 2, TSM would be inconsistent with the Canoga - Park - Winnetka Hills - West Hills Community Plan and the Chatsworth - Porter - Ranch Community Plan as policies in these plans include development of the ROW for public transportation improvements and recreational uses. For the other Canoga Alternatives, the General Plan Transportation Element Secondary Highway standard would require an exception to address unique conditions along Canoga Avenue. Impacts would be less than significant with mitigation.</p>	<p>Alternative 2: MM 4.1-4: For the TSM Alternative, the Canoga Park- Winnetka Hills - West Hill Community Plan and the Chatsworth Porter - Rancho Community Plan policies would need to be amended to remove goals, objectives, and/or policies that call for transportation improvements in the ROW, when the City updates this plan.</p> <p>Alternatives 3 and 4: MM 4.1-5: Due to unique conditions along Canoga Avenue, a request from the City for relief from the Secondary Highway Standards shown in the cross-sections in the City of Los Angeles Transportation Element needs to be secured. The modification would include dedicated bus lanes, the elimination of parking on the street, and a substitution for a standard City sidewalk for a multi-purpose bikeway/pedestrian path to be developed to Metro standards</p>	<p>Less than significant.</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>and landscaping adjacent to Canoga Avenue.</p> <p>MM 4.1-6: A modification of the Chatsworth - Porter Ranch Community Plan shall be made to change the text to read a high capacity urban rail or “premium bus” system when the City updates this Plan</p>	
<p>Impact 4.1.3: The project build alternatives would increase the likelihood of redevelopment on adjacent land at higher intensities. Further study and approval from the City of Los Angeles would be required before specific development changes could be identified and analyzed. Mitigation measures would ensure that impacts remain below a level of significance.</p>	<p>Alternatives 3 and 4:</p> <p>MM 4.1-7: Metro and the City of Los Angeles shall coordinate on any proposed transit-oriented projects or any change in land use designation or zoning change that are within ¼ mile of a station by reviewing projects and environmental assessments for potential transit linkages to the stations, the mix of uses, and other conditions that would increase transit usage and reduce potential land use impacts.</p> <p>MM 4.1-8: Any future joint use proposal made on the Metro ROW shall provide measures to protect adjacent sensitive uses including such measures as landscaped setbacks, walls, fences, lighting that does not spill over into neighborhoods, parking management to avoid spill over parking in the neighborhoods, clearly defined pathways to the stations, varied building massing and height transition for compatibility with adjacent development, and special attention to enhance pedestrian environment.</p>	<p>Less than significant.</p>
<p>Impact 4.1.4: Construction of the build alternatives would result in temporary disruptions to the existing land use in the area, however the land use impacts of construction would not be significant and no additional mitigation measures are required other than traffic congestion, access, parking and air quality listed in Sections 4.7 through 4.9..</p>	<p>None required.</p>	<p>Less than significant.</p>
<p>Impact 4.1.5: The proposed project would not result in a potentially significant cumulatively considerable impact to land uses within the project area and no mitigation is required.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p><i>Land Acquisition, Relocation and Displacement</i></p>		
<p>Impact 4.2.1: The proposed project could impact property owners and occupants of private property through land acquisition resulting in the</p>	<p>Alternatives 3 and 4, Northern Segment Options 2, 3, and 4:</p> <p>MM 4.2-1: For those properties that would be acquired as a result of the</p>	<p>Less than significant.</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
displacement of businesses along the corridor. The proposed project could have a significant land acquisition impact prior to mitigation.	Canoga Transportation Corridor Project, Metro shall provide relocation assistance and compensation per the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Act. Purchases would be made at fair market value.	
Impact 4.2.2: The proposed project could impact businesses on property that is leased. Business displacements would also occur where the leased property is used for ancillary or support operations such as access, parking and/or storage. The proposed project could have a significant impact on business lease agreements along the Canoga Corridor prior to mitigation.	Alternatives 3 and 4: MM 4.2-2: For leases without an acquisition waiver, Metro shall provide relocation assistance and compensation per the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Act to those who are displaced as a result of the Canoga Transportation Corridor Project.	Less than significant.
Impact 4.2.3: The proposed project does not have the potential to significantly impact licenses and easements along the Metro ROW.	None required.	Less than significant.
Impact 4.2.4: The proposed project would not have any land acquisition, displacement or relocation impacts as a result of construction activities.	None required.	Less than significant.
Impact 4.2.5: The proposed project would not result in a significant cumulatively considerable impact.	None required.	Less than significant.
<i>Population, Housing & Environmental Justice</i>		
Impact 4.3.1: The proposed project would not have the potential to cause the redistribution of population, or an influx or loss of population. The proposed project would not have any significant impact to population and housing without mitigation.	None required.	No impact.
Impact 4.3.2: The proposed project could have the potential to create inconsistencies with the growth management policies mentioned in the various applicable plans that govern the project area. The proposed project would have a less-than-significant impact on population and housing without mitigation.	None required.	Less than significant.
Impact 4.3.3: The proposed project would not have the potential to displace substantial numbers of	None required.	Less than significant.

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure(s)	Significance After Mitigation
existing housing and/or people, necessitating the construction of replacement housing elsewhere. The proposed project would have a less-than-significant impact on population and housing without mitigation.		
Impact 4.3.4: The proposed project could have the potential to displace employment opportunities. The proposed project would have a significant impact on employment without mitigation.	Alternatives 3 and 4: Mitigation Measure MM 4.2-1 and MM 4.2-2 included in Section 4.2 Land Acquisition, Relocation and Displacement would also be applicable to the Canoga On-Street Dedicated Lanes and the Canoga Busway Alternatives.	Less than significant.
Impact 4.3.5: The proposed project would disproportionately affect minority and/or low-income populations through the displacement of employment. The proposed project would have less than significant impact on minority and/or low-income population with mitigation.	Alternatives 3 and 4: Mitigation Measure MM 4.2-1 and MM 4.2-2 included in Section 4.2 Land Acquisition, Relocation and Displacement would also be applicable to the Canoga On-Street Dedicated Lanes and the Canoga Busway Alternatives.	Less than significant.
Impact 4.3.6: The proposed project would not have potential to have significant construction impacts with mitigation.	Mitigation Measures MM 4.7-15 through MM 4.7-27 for Traffic, Mitigation Measures MM 4.8-1 through MM 4.8-11 for Air Quality, and Mitigation Measures MM 4.9-1 through MM 4.9-7 for Noise would mitigate construction impacts.	Significant unavoidable impact due to residual impacts for construction air quality and noise.
Impact 4.3.7: The proposed project would not result in a potentially significant cumulatively considerable impact to population, housing employment or environmental justice without mitigation.	None required.	Less than significant.
<i>Parklands & Other Community Facilities</i>		
Impact 4.4.1: The proposed project would not displace any parks or park facilities and would not require the expansion or construction of a new park or park facilities. The project could facilitate the movement of people to local parks. The proposed project would have a less-than-significant impact on park displacement without mitigation.	None required.	Less than significant.
Impact 4.4.2: The proposed project would not acquire, displace or disrupt a community facility and/or create barriers and/or cause substantial	None required.	Less than significant.

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
<p>disruption to pedestrian and vehicular access to a facility. The project would have a less-than-significant impact on community facilities without mitigation.</p>		
<p>Impact 4.4.3: The proposed project would not substantially affect emergency response times or substantially increase demand for fire and police services. The project would have a less-than-significant impact on police and fire protection services without mitigation.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p>Impact 4.4.4: The proposed project would temporarily disrupt parks and community facilities during construction and could adversely affect emergency response times for police and fire protection services. The temporary and short-term disruption on parks during construction is a less-than-significant impact. The proposed project would not have potential significant construction impacts on emergency response times for police and fire protection services, as well as the Canoga Park Elementary School, Old Canoga Park Elementary School, Columbus Middle School, and Hart Elementary School with mitigation.</p>	<p>Alternatives 3 and 4: Parklands and Recreational Facilities Mitigation Measures MM 4.8-1 through MM 4.8-11 for Air Quality and Mitigation Measures MM 4.9-1 through MM 4.9-7 for Noise would mitigate construction impacts on parklands and recreation facilities. Police and Fire Protection MM 4.4-1: Coordination with City of Los Angeles Fire and Police Department personnel shall be conducted to provide adequate advance notice of construction activities and identify, as necessary, any special arrangements that may be needed to provide emergency services. MM 4.4-2: To minimize the effect of street and lane closures, the construction contractor shall develop a staging/detour plan prior to construction activities. The construction contractor shall provide the staging/detour plans to the City of Los Angeles Fire and Police Department personnel for review. The plans shall be developed to the satisfaction of the City of Los Angeles Fire and Police Department personnel. MM 4.4-3: Emergency vehicle access on Canoga Avenue shall be included in construction specifications. MM 4.4-4: On Canoga Avenue, the construction contractor shall make one lane in each direction available at all times for emergency vehicle use.</p>	<p>Less than Significant</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>Mitigation Measures included in Section 4.7 Traffic, Circulation and Parking would also be applicable to the Canoga On-Street Dedicated Bus Lanes Alternative and the Canoga Busway Alternative.</p> <p>Schools and Libraries</p> <p>Mitigation Measures MM 4.8-1 through MM 4.8-11 for Air Quality and Mitigation Measures MM 4.9-1 through MM 4.9-7 for Noise would mitigate construction impacts on schools and libraries.</p> <p>MM 4.4-5: School officials for the New Academy Canoga Park Elementary School and LAUSD shall be consulted regarding the construction process in order to develop the least intrusive construction process feasible.</p> <p>MM 4.4-6: School officials for the New Academy Canoga Park Elementary School and the LAUSD schools with pedestrian routes on Canoga Avenue shall be consulted in order to ensure maintenance of safe student walk routes and access for passenger vehicles and school buses.</p> <p>MM 4.4-7: Crossing guards or flag men shall be provided at active construction sites in proximity to schools and where school pedestrian routes cross construction areas. The construction contractor shall coordinate with the New Academy Canoga Park Elementary School and LAUSD to determine the location of crossing guards or flag men.</p> <p>MM 4.4-8: The construction contractor shall coordinate with the New Academy Canoga Park Elementary School and LAUSD to determine haul routes and when haul truck travel shall be avoided. In coordination with the New Academy Canoga Park Elementary School and LAUSD, construction scheduling and haul routes shall be sequenced, to the extent practicable, to minimize conflicts with pedestrians, school buses and vehicular traffic during arrivals and dismissals of the school day.</p> <p>MM 4.4-9: The construction contractor shall install fences and signage around the construction sites to prohibit unauthorized entry to the construction sites.</p>	

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure(s)	Significance After Mitigation
<p>Impact 4.4.5: The proposed project does not have the potential to result in a significant cumulatively considerable impact on parklands and other community facilities without mitigation.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p><i>Historic, Archeological & Paleontological Resources</i></p>		
<p>Impact 4.5.1: Construction activities have a low potential to damage or destroy significant or unique paleontological resources or sites. Impacts would be less than significant after mitigation.</p>	<p>MM 4.5-1; A qualified paleontologic monitor shall monitor excavation in areas identified as likely to contain paleontologic resources. These areas are defined as all areas within the proposed project area where current design plans require excavation to exceed depths of 5 ft.. The qualified paleontologic monitor shall retain the option to reduce monitoring if, in his or her professional opinion, sediments being monitored are previously disturbed. Monitoring may also be reduced if the potentially fossiliferous units, previously described, are not found to be present or, if present, are determined by qualified paleontologic personnel to have low potential to contain fossil resources.</p> <p>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. Because the older Quaternary deposits yield small fossils specimens likely to go unnoticed during typical large scale paleontological monitoring, matrix samples shall be collected and processed to determine the potential for small fossils to be recovered prior to substantial excavations in those sediments. If this sampling indicates these units do possess small fossils, a matrix sample of up to 6,000 pounds shall be collected at various locations, to be specified by the paleontologist, within the construction area. These matrix samples shall also be processed for small fossils. This is standard mitigation practice that will meet the requirements of Public Resources Code Section 5097.5 which prohibits excavation or removal of any vertebrate paleontological site or any other archaeological, paleontological, or historical feature situated on public lands, except with the express permission of the public agency having jurisdiction over such lands, and Section 30244 which requires reasonable mitigation of adverse impacts on paleontological resources from development on public land.</p>	<p>Less than significant.</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>MM 4.5-2: Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments, to recover small invertebrates and vertebrates. Unidentifiable specimens shall be discarded.</p> <p>MM 4.5-3: Identified specimens shall be curated into a professional, accredited museum repository with permanent retrievable storage.</p> <p>MM 4.5-4: A report of findings, with an appended itemized inventory of specimens, shall be prepared. The report and inventory, when submitted to the Lead Agency, will signify completion of the program to mitigate impacts to paleontologic resources.</p>	
<p>Impact 4.5.2: Construction activities have a low potential to damage or destroy significant archaeological resources. Impacts would be less than significant after mitigation.</p>	<p>MM 4.5-5: If buried cultural resources are uncovered during construction, all work shall be halted in the immediate vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource. All unanticipated finds shall be documented, and a report of findings prepared, and discoveries further evaluated. 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 7050.5, State CEQA Guidelines 15064.5(e), and Public Resources Code 5097.98 shall be implemented.</p>	<p>Less than significant.</p>
<p>Impact 4.5.3: The proposed project would result in the demolition of two buildings and a railroad bridge along the ROW that are 50 years of age or older. However, none of these structures are historic resources; therefore, any impacts would be less than significant, and no mitigation is required.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p>Impact 4.5.4: The proposed project could contribute to cumulative impacts to paleontological resources. However, with implementation of mitigation, the proposed project's incremental effects would not be cumulatively considerable.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p>Impact 4.5.5: The proposed project could contribute to cumulative impacts to archaeological resources. However, with implementation of mitigation, the proposed project's incremental effects would not be cumulatively considerable.</p>	<p>None required.</p>	<p>Less than significant.</p>

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure(s)	Significance After Mitigation
<p>Impact 4.5.6: The proposed project would not result in impacts to historical resources; therefore, it would not contribute to any cumulative impacts to historical resources.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p><i>Visual & Aesthetic Impacts</i></p>		
<p>Impact 4.6.1: For Alternative 3, Canoga On-Street Dedicated Bus Lanes and Alternative 4, Canoga Busway most elements would be at-grade and would not adversely affect a scenic vista or degrade the existing visual quality of the area. Vertical elements such as trees, stations, artwork, walls, and signage, would not adversely affect views of the mountains or the visual quality of the area. In most cases, stations would be located in areas adjoining multi-family residential, commercial or industrial development, would be in scale with existing surrounding land uses and massing and would not obstruct the character of key views. With the conceptual design, no significant visual impacts are anticipated with mitigation Alternative 4, Option 5 in an elevated profile could result in a potentially significant impact without mitigation.</p>	<p>Alternatives 3 and 4:</p> <p>MM 4.6-1: To reduce visual impacts, provide trees and landscaping as described in the Project Description and similar to the MOL. Relocation of overhead utility lines on the east side of Canoga Avenue shall be coordinated with Los Angeles Department of Water and Power’s program for underground utilities. If utility poles and wires must be relocated above ground, these should be placed to not obstruct or prohibit new tree plantings.</p> <p>MM 4.6-2: Soundwalls, walls/fences, and landscape screening shall be designed taking into consideration community input. Landscaping, where technically feasible, shall shield adjacent residencies to maintain privacy</p> <p>MM 4.6-3: The following Metro Art policies will be applied to both build alternatives:</p> <ul style="list-style-type: none"> • Public Art and the Design Process: As part of the <u>Design/Build</u> process, artists will be hired to participate in the project. Metro Art staff will invite interested members of the communities (residential, business, and institutional) along the alignment to form a Metro Art Advisory Group. This process of community participation follows FTA policy (Circular 9400.1A), which states: “To create facilities that are integral components of communities, information about the character, makeup, and history of the neighborhood should be developed and local residents and businesses could be involved in generating ideas for the project.” 	<p>Less than significant.</p>

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure(s)	Significance After Mitigation
	<ul style="list-style-type: none"> • A budget will be established for public art that will be based on a percentage of the hard costs (construction costs) for the project and will cover design fees and fabrication and installation of art elements. Again, as directed by the FTA (Circular 9400.1A), “Funds spent on the art component of the project should be appropriate to the overall costs of the transit project and adequate to have an impact.” • Design Excellence: Following policy established by the FTA for design and art in transit projects (Circular 9400.1A), MTA commits to the idea that: “Good design and art can improve the appearance and safety of a facility, give vibrancy to its public spaces, and make patrons feel welcome. Good design and art will also contribute to the goal that transit facilities help to create livable communities.” To continue its commitment to these ideals, design excellence will be an important criterion for selection of design team members and for evaluation of design proposals. • To ensure design excellence, the MTA will follow the award-winning model for “Excellence in Public Architecture” established by the General Services Administration of the U.S. Government. That process attracts large numbers of qualified design firms through a streamlined process and utilizes the insight of outside peer advisors. • Graphics and Wayfinding: The quality of graphic signage and wayfinding within the system and within the adjacent neighborhoods greatly affects the ease and comfort with which patrons will use the system. Station names, station identification, directional signage, logos, maps, and informational signage shall adhere to the MTA Graphics Standards. The guiding principles for the standards are to simplify Metro signage systems in a way that makes sense for patrons, using uniformity in text styles, a rational hierarchy of sign sizes, clear directional arrows, etc. 	

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>Alternative 4, Option 5:</p> <p>MM 4.6-4: To reduce visual impacts for the Canoga Busway Alternative Option 5, provide landscaping adjacent to the mobile homes, and also visual barriers on the elevated viaduct or other measures that would reduce direct views from the elevated Busway onto adjacent mobile homes.</p> <p>MM 4.6-5: Design guidelines for the elevated bridge structure for the Canoga Busway Alternative - Option 5 shall consider community input before the construction phase of the project. Design guidelines shall include techniques to reduce the massing and profile of the elevated structure, and to maintain views, where possible of the Santa Susana Mountains.</p>	
<p>Impact 4.6.2: Portions of Canoga Avenue and the Metro ROW contain trees that would be affected by the construction of the project. However, the conceptual plan includes considerably more trees to be planted than removed for Alternative 3, Canoga On-Street Dedicated Bus Lanes and Alternative 4, Canoga Busway. Therefore, impacts would not be significant with mitigation.</p>	<p>Alternatives 3 and 4:</p> <p>MM 4.6-6: A landscape plan and guidelines shall be prepared during Preliminary Engineering stage establishing the number and pattern of tree species. Approximately, 1,200 to 1,350 new and relocated trees would be provided for Alternative 3 and 1,400 to 1,700 new and relocated trees for Alternative 4. Wherever feasible, specimen trees within the existing ROW or sidewalk shall be preserved or relocated and incorporated into the landscape plan where space permits. Specimen trees removed shall be replaced at a minimum of 1:1 ratio. During the Design/Build phase, the alignment of the dedicated lanes and Busway and placement of elements such as privacy walls, soundwalls for Options 4 and 4a, natural drainage, and fences as well as landscape guidelines developed during the Preliminary Engineering will be followed and the project will continue to take into account existing mature trees in the Metro ROW and avoid their removal where possible.</p>	<p>Less than significant.</p>
<p>Impact 4.6.3: The construction of the project would result in the installation of additional lighting at station areas and along the bikeway for Alternative 3, Canoga On-Street Dedicated Bus Lanes and Alternative, 4 Canoga Busway. For Alternative 3 street lighting and utility poles on the east side would be relocated closer to residents than the existing</p>	<p>Alternatives 3 and 4</p> <p>MM 4.6-7: To reduce impacts from glare from bus headlights, stations, and park-and-ride lots, landscaping, fences, or walls or other measures shall be provided, designed and placed in such a way as to minimize glare and nighttime light intrusion on residences. A landscape plan, lighting plan and the design of screening features shall consider community input during final</p>	<p>Less than significant.</p>

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure(s)	Significance After Mitigation
<p>condition. For Alternative 4, additional lighting would be limited to 12 ft to 20 ft high lighting poles along the bikeway and lighting of stations similar to the MOL. The impacts of bus headlights on residents along the corridor would be minimal due to planned landscape improvements, fences, walls and other measures. For Alternative 4, Options 4 and 4a, soundwalls located close to existing mobile homes and their outdoor spaces would reduce access to sunlight and air and impacts would be significant without mitigation. No other significant impacts are anticipated except the elevated component of Alternative 4, Option 5 has the potential to add significantly to ambient lighting adjacent to mobile homes if lighting is provided on the overpass.</p>	<p>design. Alternative 4, Option 4 and 4a MM 4.6-8: If a wall taller than six ft or a soundwall for Options 4 and 4a is adjacent to existing mobile homes or their usable open spaces which are located 10 ft or less from the wall or soundwall, architectural treatment, screening with vines and landscaping for visual relief, a variation in the wall plane, setbacks or other similar solutions shall be provided to provide access to sunlight and air for windows and usable space. Alternative 4: MM 4.6-9: In Northern Segment Option 5, the elevated viaduct shall be designed to minimize glare and night-time light intrusion on the mobile homes.</p>	
<p>Impact 4.6.4: Construction of the build alternatives would result in temporary disruptions to the visual character of the study area. Such disruptions would not include blockage of key views, but could result in visual intrusions, shade and shadow, increase in ambient light levels, and glare during the short period of construction. However, mitigation would reduce the impacts to less than significant.</p>	<p>Alternative 3 and Alternative 4: MM 4.6-10: All construction lighting shall be hooded and shielded to minimize spillover effects and glare. Alternatively, screening and construction fences can be used to shield construction lighting. Lighting shall be directed towards the interior of the construction staging area and shielded so as to avoid or minimize spillover into adjacent residential areas. Construction activities directly adjacent to residential uses shall be limited to day time hours unless required by the City of Los Angeles.</p>	Less than significant.
<p>Impact 4.6.5: The proposed project would not result in a potentially significant cumulatively considerable visual impact. No significant impacts are anticipated and no mitigation is required.</p>	None necessary.	Less than significant.
<p><i>Traffic, Circulation & Parking</i></p>		
<p>Impact 4.7.1: The proposed project would have a beneficial impact on Valley-wide mobility indicators. Bus boardings, daily transit trips and boardings, and the overall transit mode share would increase; vehicle miles traveled and daily vehicle trips would be</p>	None required.	Beneficial.

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
reduced.		
<p>Impact 4.7.2: The proposed project would have a beneficial impact on study area mobility indicators. Both vehicle miles traveled (VMT) and vehicle hours in travel (VHT) would decrease.</p>	None required.	Beneficial.
<p>Impact 4.7.3: Development of the proposed project would result in increased delays on local intersections. Some of the study intersections in the vicinity of the project site would experience a potentially significant increase in delay without mitigation. For Alternative 2, TSM one of the 41 study intersections would be significantly impacted before mitigation; five of the 41 study intersections would be significantly impacted before mitigations for Alternative 3 Canoga On-Street Dedicated Lanes; and nine intersections would be significantly impacted before mitigations for Alternative 4, Canoga Busway. All of these impacts would be considered less than significant after mitigation for all alternatives.</p>	<p>Alternative 2:</p> <p>MM 4.7-1: Lassen Street & Owensmouth Avenue. Re-time the existing signal from a 50-second cycle during the peak periods to provide a 90-second cycle length during peak periods. In addition, change the existing permissive phasing on Lassen Street to provide protective phasing for left turns onto Owensmouth Avenue.</p> <p>MM 4.7-2: Lassen Street & Old Depot Plaza Road. Install a three-phase traffic signal that would provide protective left-turn phasing for buses turning left into the Chatsworth Metrolink Station.</p> <p>Alternative 3:</p> <p>Northern Option 1</p> <p>All the options include all the Alternative 2 mitigations plus the following:</p> <p>MM 4.7-3: Devonshire Street & Old Depot Plaza Road. Install a two-phase traffic signal.</p> <p>MM 4.7-4: Canoga Avenue & Vanowen Street. Widen the Canoga Avenue northbound approach to provide an additional through lane, from one left-turn lane, two through lanes and one right-turn lane to consist of one left-turn lane, three through lanes and one right-turn lane. Re-stripe the Vanowen Street eastbound approach from one left-turn lane, one through lane and one shared through-right-turn lane to consist of one left-turn lane, two through lanes and one right-turn lane. Re-striping the eastbound approach to accommodate this number of lanes would reduce the width of the Vanowen Street westbound curb-lane. Since Metro Bus 165 stops on the northwest corner of the intersection, this reduction in curb-lane width would produce a traffic blockage every time a bus arrives at the stop (buses arrive every 6-10</p>	Less than significant.

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>minutes during the peak period and every 20 minutes during the off-peak period), but this is not considered a significant impact.</p> <p>MM 4.7-5: Canoga Avenue & Erwin Street. Change the existing permissive phasing to provide protective phasing for the northbound left turns and the eastbound left turns.</p> <p>MM 4.7-6: Canoga Avenue & Oxnard Street. Re-stripe the Canoga Avenue southbound approach from one left-turn lane, two through lanes and one shared through-right-turn lane to consist of one left-turn lane, two through lanes and one right-turn lane.</p> <p>Alternative 4:</p> <p>All Options have all of the Alternative 3 mitigations plus the following:</p> <p>MM 4.7-7: Canoga Avenue & Nordhoff Street. Widen the Canoga Avenue southbound approach from one left-turn lane, one through lane and one shared through-right-turn lane to consist of one left-turn lane, two through lanes and a right-turn lane.</p> <p>MM 4.7-8: Canoga Avenue & Roscoe Boulevard. Widen the Canoga Avenue southbound approach from one left-turn lane, one through lane and one shared through-right-turn lane to consist of one left-turn lane, two through lanes and a right-turn lane. Additionally, widen Roscoe Boulevard westbound approach from one left-turn lane, two through lanes and one shared through-right-turn lane to consist of one left-turn lane, three through lanes and one right-turn lane.</p> <p>MM 4.7-9: Canoga Avenue & Saticoy Street. Widen the Canoga Avenue southbound approach from one left-turn lane, one through lane and one shared through-right-turn lane to consist of one left-turn lane, two through lanes and one through/right-turn lane.</p> <p>MM 4.7-10: Canoga Avenue & Sherman Way. Widen the Canoga Avenue southbound approach from one left-turn lane, one through lane and one shared through-right-turn lane to consist of one left-turn lane, two through</p>	

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	lanes and a right-turn lane. Widen the Sherman Way westbound approach to provide an additional through lane, from one left-turn lane, two through lanes and one right-turn lane to consist of one left-turn lane, three through lanes and one right-turn lane. To accomplish this, the bus stop for westbound Metro Route 163, located on the northwest corner of the intersection, must be moved further west to allow the third westbound departure lane to be dropped and traffic to merge into two lanes.	
<p>Impact 4.7-4: Alternative 3, Canoga On-Street Dedicated Lanes and Alternative 4, Canoga Busway would have a significant impact on existing Park-and-Ride Lots. This impact would be considered less than significant after mitigation.</p>	<p>Alternatives 3 and 4:</p> <p>MM 4.7-11: Off-street parking adjacent to the Sherman Way station shall be provided to accommodate future park-and-ride demand, including extra demand due to the loss of any existing spaces at the re-configured MOL Canoga Station.</p> <p>Chatsworth Metrolink Station Turn-Around Options B and D:</p> <p>MM 4.7-12: The northern parking lot at the Chatsworth Metrolink Station shall be expanded either vertically or horizontally to replace, at a minimum on a one-for-one basis, the spaces displaced by the bus turn-around on the south parking lot.</p>	<p>Less than significant.</p>
<p>Impact 4.7-5: Alternative 3, Canoga On-Street Dedicated Lanes and Alternative 4, Canoga Busway could have a significant impact before mitigation on the supply of on-street parking along Canoga Avenue.</p>	<p>Alternative 3:</p> <p>MM 4.7-13a: At the Sherman Way station, a parking lot (2) shall be provided on the Metro right-of-way that contains at least 50 parking spaces beyond the anticipated park-and-ride demand for the station that shall be designated as public parking. At the Roscoe Boulevard station, a parking lot (s) shall be provided on the Metro right-of-way that contains at least 75 parking spaces beyond the anticipated park-and-ride demand for the station that shall be designated as public parking. Or,</p> <p>MM 4.7-13b: Modify the design of the On-Street Dedicated Bus Lanes Alternative to leave the on-street parking along the western curb of Canoga Avenue in those blocks where on-street parking is heavily utilized. This would have a detrimental but less than significant impact on bus operations.</p>	<p>Less than significant.</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
<p>Impact 4.7.6: Alternative 3, Canoga On-Street Dedicated Lanes and Alternative 4, Canoga Busway have the potential to result in significant construction impacts on traffic circulation.</p>	<p>Alternatives 3 and 4:</p> <p>MM 4.7- 14: Before the start of construction, Worksite Traffic Control Plans (WTCP) and Traffic Circulation Plans, including identification of detour requirements, will be formulated in cooperation with the City of Los Angeles and other affected jurisdictions (County, State). The WTCPs will be based on lane requirements and other special requirements defined by the Los Angeles City Department of Transportation (LADOT) for construction within the city and from other appropriate agencies for construction in those jurisdictions. LADOT will provide the contractor with the latest copy of the Requirements of the Contractor and Signs and Legends, to be incorporated into the WTCPs.</p> <p>MM 4.7-15: No designated major or secondary highway will be closed to vehicular or pedestrian traffic except at night or on weekends, unless approval is granted by LADOT. No collector or local street or alley will be completely closed, allowing continued local vehicular or pedestrian access to residences, businesses and other establishments. Comprehensive bus rerouting and detour plans will be adopted, if necessary.</p> <p>MM 4.7-16: Metro and the design/build contractor will develop preferred haul route plans for the removal of excavated material. The haul route plans shall prohibit the use of local residential streets, and avoid utilizing streets on which schools are located. If it is necessary for a potential haul route to pass a school, trucks shall be prohibited from hauling past the school during normal school hours. The truck haul route plan will distribute the trucks over more than one arterial street route to/from the freeways, but avoid the use of any local residential streets. Hauling operations may occur over more than one shift (not concentrated in an 8-hour period). Haul routes, which must be approved by the City of Los Angeles, will be developed in consultation with and must be approved by the LADOT and the Bureaus of Engineering and Street Services.</p> <p>Example haul routes for carrying out excavated material are summarized below.</p>	<p>Less than significant.</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	<ul style="list-style-type: none"> • Canoga Avenue south to 101 Freeway • Canoga Avenue north and east to De Soto Avenue and north to SR-118 <p>MM 4.7-17: Metro will coordinate with other major construction projects within a 1-mile radius of the construction site to avoid, to the maximum extent practicable, overlapping haul routes with other public or private construction projects.</p> <p>MM 4.7-18: Prior to initiating construction, Metro will develop and adopt a site-specific parking plan that identifies construction worker parking restrictions and replacement parking for any substantial quantity of on-street parking lost during construction, subject to consultation with LADOT.</p> <p>MM 4.7-19: The City of Los Angeles will provide to the contractor the latest versions of Requirements of the Contractor and Signs and Legends, which will be incorporated into the construction contract and used in developing all WSTCPs.</p> <p>MM 4.7-20: Contractors shall notify property owners, residences, and businesses of major construction activities (e.g., utility relocation/disruption and re-routing of delivery trucks).</p> <p>MM 4.7-21: Contractors shall coordinate with local businesses and residents to provide advanced notification of traffic detours and delays, and potential utility disruptions associated with construction.</p> <p>MM 4.7-22: Contractors shall use temporary special signage to inform customers that merchants and other businesses directly affected by construction are open. The signage shall include closure information in advance of any future temporary closure. Signage shall also provide special access directions, if warranted.</p> <p>MM 4.7-23: Contractors shall be required to have all employees park off-street or on-street at Metro-approved locations to minimize the loss of commercial parking.</p>	

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>MM 4.7-24: Unless required by WSTCPs, construction activities shall be sequenced to minimize the temporary removal of multiple blocks of on-street parking at one time, which would make various on-street parking spaces available in an area under construction for a period of time.</p> <p>MM 4.7-25: Prior to initiating construction, staging/detour plans will be reviewed by emergency response personnel (i.e. Fire Department).</p>	
<p>Impact 4.7.7: Cumulative development in the region would significantly impact traffic in the region, including the study area. The proposed project does not have a cumulatively considerable contribution to a significant cumulative impact.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p><i>Air Quality</i></p>		
<p>Impact 4.8.1: Based on the construction emission estimates, the No Project Alternative would have no regional construction air quality impact. The TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives would result in less-than-significant regional construction air quality impacts without mitigation.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p>Impact 4.8.2: Based on localized emission calculations, the No Project Alternative would have no localized construction air quality impact. The TSM Alternative would result in a less-than-significant localized construction impact. The Canoga On-Street Dedicated Bus Lanes and the Canoga Busway Alternatives would result in significant and unavoidable localized air quality construction impacts even with mitigation.</p>	<p>Mitigation Measures MM 4.8-1 through MM 4.8-8 would reduce localized PM_{2.5} and PM₁₀ fugitive dust emissions for the Canoga On-Street Dedicated Bus Lanes and the Canoga Busway Alternatives.</p> <p>MM 4.8-1: Water or a stabilizing agent shall be applied to exposed surfaces in sufficient quantity to prevent generation of dust plumes.</p> <p>MM 4.8-2: A wheel washing system shall be installed and used to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site.</p> <p>MM 4.8-3: All haul trucks hauling soil, sand, and other loose materials shall maintain at least six inches of freeboard in accordance with California Vehicle Code Section 23114.</p> <p>MM 4.8-4: 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</p>	<p>No impact for the No Project Alternative.</p> <p>Less than significant for the TSM Alternative.</p> <p>Significant unavoidable impacts for the Canoga On-Street Dedicated Bus Lanes and Canoga Busway Alternatives.</p>

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>emissions).</p> <p>MM 4.8-5: Traffic speeds on unpaved roads shall be limited to 15 miles per hour.</p> <p>MM 4.8-6: Operations on unpaved surfaces shall be suspended when winds exceed 25 miles per hour.</p> <p>MM 4.8-7: Heavy equipment operations shall be suspended during first and second stage smog alerts.</p> <p>MM 4.8-8: On-site stock piles of debris, dirt, or rusty materials shall be covered or watered at least twice per day.</p>	
<p>Impact 4.8.3: Based on the operational emission estimates, the No Project Alternative would have no regional operational impact. The TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives would result in less-than-significant regional operational air quality impacts without mitigation.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p>Impact 4.8.4: Based on the CO hotspot analysis, the No Project, TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives would result in less-than-significant localized CO hotspot impacts without mitigation.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p>Impact 4.8.5: The proposed project would not emit a substantial amount of toxic air contaminants (TACs). The No Project Alternative would have no TAC impact. The TSM Alternative would result in a less than significant TAC impact without mitigation. The Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives would result in less-than-significant TAC impacts with mitigation.</p>	<p>MM 4.8-9: Construction contractors shall comply with SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities). The requirements for demolition activities include asbestos surveying, notification, asbestos-containing material (ACM) removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials.</p> <p>MM 4.8-10: Construction contractors shall prepare a project-specific Lead Compliance Plan to prevent or minimize worker exposure to lead while handling material containing aeri ally deposited lead. The Lead Compliance</p>	<p>Less than significant.</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	Plan shall contain the elements listed in Title 8, California Code of Regulations, Section 1532.1(e)(2)(B). Before submission to the Engineer, the Lead Compliance Plan shall be approved by an Industrial Hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene. The plan shall be submitted to the Engineer for review and acceptance at least 15 days prior to beginning work in areas containing aeri ally deposited lead.	
Impact 4.8.6: The No Project Alternative would have no odor impact. The TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives would result in less-than-significant odor impacts without mitigation.	None required.	Less than significant.
Impact 4.8.7: The No Project, TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives would be consistent with the 2007 AQMP without mitigation.	None required.	Less than significant.
Impact 4.8.8: The No Project Alternative would have no global warming impact. The TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives would result in a beneficial global warming impact without mitigation.	None required.	Less than significant.
Impact 4.8.9: The No Project Alternative would have no cumulative air quality impact. The TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives would result in less-than-significant cumulative air quality impacts without mitigation.	None required.	Less than significant.
Noise		
Impact 4.9.1: Construction activity has the potential to significantly increase ambient noise levels through the use of heavy-duty construction equipment. The No Project Alternative would not result in any construction noise impact. The TSM Alternative would result in less-than-significant construction noise impacts without mitigation. However, the Canoga On-Street Dedicated Bus Lanes and the Canoga Busway Alternatives would result in significant and unavoidable construction noise	Alternatives 3 and 4: MM 4.9-1: Metro will require construction contractors to equip construction equipment with the most effective locally available mufflers, along with any other suitable noise attenuation devices. MM 4.9-2: In noise sensitive areas, the construction contractor shall work with Metro to select construction processes and techniques that create the lowest noise levels. These techniques include, but are not limited to, the mixing of concrete off-site instead of on-site, using hydraulic tools instead of	Significant and unavoidable impact for the Canoga On-Street Dedicated Bus Lanes and the Canoga Busway Alternatives.

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
impacts.	<p>pneumatic tools, and using quieter equipment as opposed to noisier equipment (such as rubber-tired equipment rather than track equipment).</p> <p>MM 4.9-3: Metro will ensure that equipment staging areas and rock crushing operations for recycling concrete and asphalt rubble are located as far as possible from sensitive receptors along the project corridor.</p> <p>MM 4.9-4: Metro will require that construction contractors limit construction activities that generate loud noise levels to daytime hours, including construction activities that generate loud noise levels for short periods of time. Example restrictions include limiting the use of jackhammers and other pneumatic impact devices and restricting construction in residential areas to daytime hours. Metro shall have the ability to require the construction contractor to enforce additional noise reduction measures to minimize construction noise levels during the evening and nighttime hours. Metro shall also have the ability to limit certain types of construction activities to the daytime hours.</p> <p>MM 4.9-5: Metro will coordinate with the City of Los Angeles Department of Transportation to conduct sandblasting during the daytime hours rather than during the evening and nighttime hours.</p> <p>MM 4.9-6: Metro shall develop specific noise limits at noise sensitive areas to be included in the construction specifications and require that construction contractors perform noise monitoring during construction to verify compliance with the limits. Metro shall have the ability to require construction contractors to enforce noise reduction measures to ensure that noise levels at noise sensitive areas are minimized.</p> <p>MM 4.9-7: Metro will require that construction contractors minimize the use of backup alarms. Potential techniques that Metro can require construction contractors to enforce include designing construction sites to minimize the need for backup alarms (subject to approval by safety regulatory agencies); use strobe lights in place of backup alarms at night (subject to approval by safety regulatory agencies); use of flagmen to keep the area behind maneuvering vehicles clear; and use self-adjusting, ambient-controlled backup alarms to adjust the alarm loudness up and down depending on</p>	

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>ambient noise levels.</p> <p>MM 4.9-8: Metro will require the construction contractor to establish a “noise disturbance coordinator.” The disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would be required to implement reasonable measures such that the complaint is resolved. All signs posted at the construction site shall list the telephone number for the disturbance coordinator. Metro shall have the ability to require the construction contractor to enforce additional noise reduction measures to minimize construction noise levels.</p> <p>MM 4.9-9: Metro will require the construction contractor to install temporary sound barriers (e.g., soundwall or sound blankets) between the construction site and sensitive receptors. Metro will determine the type, length, and height of the sound barriers that would be used. Metro will also require the construction contractor to place portable sound blankets around sandblasting and jackhammering operations, as well as construction activities that involve vibratory rollers. The sound barriers shall break the line-of-sight between the construction equipment on the construction site and the sensitive receptors.</p>	
<p>Impact 4.9.2: Construction of the proposed project has the potential to increase vibration levels through the use of heavy-duty construction equipment. The No Project Alternative would have no vibration impact. The TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives would result in less-than-significant construction vibration impacts without mitigation.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p>Impact 4.9.3: Operation of the proposed project would not significantly increase ambient noise levels with mitigation. The No Project Alternative would have no impact on operational noise. The TSM Alternative would have a less-than-significant impact. The Canoga On-Street Dedicated Bus Lanes and</p>	<p>Alternatives 3 and 4:</p> <p>MM 4.9-10: New buses intended for use in the corridor under the Canoga On-Street Dedicated Bus Lanes and the Canoga Busway Alternatives shall be equipped with the most effective commercially available mufflers.</p>	<p>No impact for the No Project Alternative.</p> <p>Less-than-significant impact for the TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives.</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
<p>Canoga Busway Alternatives require mitigation.</p>	<p>MM 4.9-11: The sound path of the speakers for the passenger information systems shall be directed downward and away from sensitive receptors.</p> <p>MM 4.9-12: Sound emitted from the speakers shall not exceed the ambient sound level at the proposed stations by more than ten dBA.</p> <p>Option 2 under Alternative 3 and Options 2 through 3a under Alternative 4:</p> <p>MM 4.9-13: For the multi-family residences north of Lassen Street, one of the following measures shall be implemented:</p> <ol style="list-style-type: none"> 1) Metro shall reimburse property owners who retrofit the existing residential uses, or 2) Metro shall purchase noise easements from the affected property owners. <p>Options 4 and 4a under Alternative 4:</p> <p>MM4.9-14: A soundwall with a minimum height of eight ft. shall be constructed along the western property line of the Sunburst Mobile Home Park. The soundwall shall be installed along the western perimeter of the property. The soundwall shall be tall and long enough to break the line-of-sight between the buses at the proposed bus lanes and the mobile homes at the Sunburst Mobile Home Park. To break the line-of-sight between the bus lanes on Canoga Avenue and the mobile homes at the Sunburst Mobile Home Park, the soundwall shall be extended by 260 ft to the north of the northernmost mobile home and up to the Browns Canyon Wash to the south. The installation of the soundwall shall be coordinated with the applicable public agencies.</p>	
<p>Impact 4.9.4: Operation of the proposed project has the potential to increase vibration levels. The No Project Alternative would have no vibration impact. The TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives would result in less-than-significant operational vibration impacts without mitigation.</p>	<p>None required.</p>	<p>Less than significant</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
<p>Impact 4.9.5: The proposed project has the potential to result in a significant cumulative noise impact. The No Project Alternative would have no cumulative impact. The TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives would result in significant impact on ambient noise levels without mitigation.</p>	<p>See mitigation measures above.</p>	<p>No impact for the No Project Alternative. Less-than-significant impact for the TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives.</p>
<i>Geology, Soils and Seismicity</i>		
<p>Impact 4.10.1: The project could expose people or structures to less than significant to potentially significant adverse effects from surface rupture of an earthquake fault prior to mitigation.</p>	<p>No mitigation required for Alternatives 1, 2, and 3. Alternative 4: MM 4.10-1: A geological study shall be performed during the final design of any proposed grade separation structures located within the fault study area. The results of the geotechnical studies shall be incorporated in the final design of the structure.</p>	<p>Less than significant.</p>
<p>Impact 4.10.2: The project could expose people or structures to significant adverse effects from strong seismic ground shaking.</p>	<p>No mitigation is required for Alternative 1. Mitigation measures MM 4.10-2 and MM 4.10-3 identified below are required for Alternatives 2, 3, and 4. MM 4.10-2: A geotechnical investigation shall be performed during final design. The investigation shall include collection of site specific soil samples, laboratory testing, engineering analyses, and recommendations for final design. MM4.10-3: During the investigation noted in MM 4.10-2, the magnitude of the strong ground shaking shall be confirmed and acceleration response spectra recommended for design seismic events in accordance with the latest editions of Metro, American Railway Engineering and Maintenance-of-Way Association (AREMA), Caltrans code, and California Building codes. The structural design shall then incorporate these findings in accordance with the applicable codes to maintain structural integrity during seismic events.</p>	<p>Less than significant.</p>
<p>Impact 4.10.3: The project could expose people or structures to potentially significant adverse effects from liquefaction-induced ground failures prior to</p>	<p>No mitigation is required for Alternative 1. Alternative 2 would require MM 4.10-2, MM 4.10-4, and if needed MM 4.10-5. Alternatives 3 and 4 would require MM 4.10-2, MM 4.10-4, and if needed MM 4.10-5 and MM 4.10-6.</p>	<p>Less than significant.</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
mitigation.	<p>MM 4.10-4: The geotechnical investigation noted in MM 4.10-2 shall include evaluation of site specific liquefaction potential in accordance with California Geological Survey’s (CGS) Special Publication 117 for all planned structures that lie within the liquefaction zone.</p> <p>MM 4.10-5: For lightly loaded structures such as bus stops, canopies, and walls if MM 4.10-4 indicates that the likely effect of liquefaction is increased settlement and not collapse then incorporate geotechnical and/or structural methods to mitigate the effects of liquefaction on the foundations during final design. The geotechnical mitigation methods may range from recompaction of the upper material to provision of a mechanically stabilized earth (MSE) foundation system. The structural mitigation methods may range from planning for repairs/ maintenance after a seismic event to supporting the improvements on mat foundation or interconnected beam foundations to tolerate the anticipated seismic settlement without collapse.</p> <p>MM 4.10-6: For grade separation structures, if MM 4.10-4 indicates liquefaction potential, then incorporate structural design to mitigate effects of liquefaction or perform geotechnical ground improvement to mitigate liquefaction potential. The structural design will likely include pile foundations that extend below the potentially liquefiable layers. The foundation design should incorporate the effects of liquefaction induced down drag on axial pile capacity and reduced lateral resistance from liquefied soils. The ground improvement methods may range from stone columns in non-contaminated areas to compaction grouting in contaminated areas.</p>	
<p>Impact 4.10.4: The project would expose people or structures to less than significant adverse effects from landslides; no mitigation is required, although mitigation is recommended.</p>	<p>No mitigation is required for Alternatives 1 and 2. For Alternatives 3 and 4, mitigation measures MM 4.10-2 and MM 4.10-7 are recommended to reduce instability of new slopes during seismic conditions.</p> <p>MM 4.10-7: Perform slope stability analyses for the planned abutment slopes at the grade separation structures at Los Angeles River and Lassen Street considering seismic shaking and liquefaction potential. If analyses indicate a factor-of-safety (FS) less than 1.1 for pseudo-static conditions or FS less than 1.3 for post-earthquake conditions, deformation analyses should be performed and its effects on the foundations should be evaluated. If the</p>	Less than significant.

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	foundations cannot tolerate the estimated deformations, the slope inclinations will have to be revised (to be shallower) such that the minimum FS values noted above are met.	
Impact 4.10.5: The proposed project is not expected to result in significant erosion or loss of top soil; no mitigation is required.	None required.	Less than significant.
Impact 4.10.6: The proposed project would have less than significant potential to result in on- or off-site landslide, lateral spreading, and collapse, no mitigation is required.	None required.	Less than significant.
Impact 4.10.7: The proposed project would have less than significant potential for adverse effects from expansive soils; no mitigation is required.	None required.	Less than significant.
Impact 4.10.8: The soils at the proposed project site can adequately support septic tanks and alternative waste water system, if needed; no mitigation is required.	None required.	Less than significant.
Impact 4.10.9: The proposed project would have less than significant impact from other subsurface conditions such as shallow subsurface gas; no mitigation is required	None required.	Less than significant.
Impact 4.10.10: The project would have less than significant impacts on geologic resources during construction; no mitigation is required, although measures are recommended.	<p>No mitigation measures are required for Alternative 1. Mitigation measures, in accordance with general construction procedures, are recommended for Alternatives 2, 3, and 4. Mitigation measures MM4.10-8 and MM 4.10-9 are applicable for Alternative 2. For Alternatives 3 and 4 MM 4.10-8 through MM 4.10-10 are applicable. See Hazardous Materials below for mitigation measures if hazardous or contaminated materials are encountered during construction.</p> <p>MM 4.10-8: Implementing industry standard storm water pollution control Best Management Practices would reduce soil erosion to a less than significant or adverse level. Erosion control measures that shall be implemented as part of Best Management Practices would include the placement of sandbags, use of proper grading techniques, appropriate sloping, and covering or stabilizing topsoil stockpiles. Construction industry standard storm water Best Management Practices are provided in the State of California Storm Water Best Management Practice Handbook, Construction</p>	Less than significant.

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>Activity.</p> <p>MM 4.10-9: Discoveries of undocumented wells or dry holes during construction activities must be reported to the City of Los Angeles and the California Division of Oil, Gas and Geothermal Resources (DOGGR). Any wells or dry holes uncovered must be plugged and abandoned in accordance with current DOGGR regulations.</p> <p>MM 4.10-10: Any groundwater that is encountered during foundation installation (or during excavations for the underpass option near Lassen Street) should be contained and disposed of off-site appropriately.</p>	
<p>Impact 4.10.11: There is no potential for substantial cumulative geologic resource impacts because potential geologic impacts are mostly localized; no mitigation is required.</p>	<p>None required.</p>	<p>No impact.</p>
<p><i>Hazardous Materials</i></p>		
<p>Impact 4.11.1: The proposed project is located on land that is known to contain hazardous materials and as a result could create a hazard to the public or environment if mitigation measures were not implemented.</p>	<p>Alternative 1 would not need any mitigation measures. For Alternative 2 mitigation measures MM 4.11-1 through MM 4.11-7 are recommended. Mitigation measures MM 4.11-2 through MM 4.11-13 shall be implemented for Alternatives 3 and 4.</p> <p>MM 4.11-1: A Phase II investigation shall be performed at proposed bus stops along Canoga Avenue at Sherman Way, Nordoff, Roscoe, Parthenia (optional stop), and at the Chatsworth Metrolink station. Soil borings shall be performed at locations where earthwork is planned for construction of bus stops. Soil sampling shall include environmental screening for contamination by visual observations and field screening for volatile organic compounds with a photoionization detector (PID). The soils shall be tested for arsenic and lead. Based on field screening, soil samples shall be analyzed for the suspected chemicals by a laboratory certified by the State of California Department of Health Services.</p> <p>MM 4.11-2: Railroad ties stored for reuse or removed during construction excavation are presumed treated with preservatives and thereby subject to Title 22 Alternative Management Standards for Treated Wood Waste (TWW).</p>	<p>Less than significant.</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>MM 4.11-3: On the previous Metro Orange Line project from the North Hollywood Station to the Canoga Park and Ride Station, Metro and the California Department of Toxic Substance Control (DTSC) agreed on a plan for handling soils with elevated levels of arsenic. The DTSC calculated an action level for arsenic to be 50 ppm. Soils with arsenic levels above 50 ppm were removed and disposed of off-site according to State disposal guidelines. Soils with arsenic between 11 and 50 ppm were considered as having elevated levels of arsenic and were required to be managed to prevent migration of arsenic to water supplies as well as exposure to humans. A similar agreement between Metro and DTSC establishing thresholds for removal and management of soils with elevated levels of arsenic is anticipated for this project based on the soil condition in the Project area. To evaluate the presence and extent of arsenic in the near surface soils, a Phase II investigation shall be performed where earthwork is planned.</p> <p>MM 4.11-4: Yellow thermoplastic paint markings on the pavement should be evaluated for lead and other heavy metals such as chromium before disposal.</p> <p>MM 4.11-5: Excavated soils with lead above a total threshold limit concentration (TTL) above 1,000 ppm and/or soluble threshold limit concentration (STLC) above 5 mg/l are considered hazardous. Metro plans to coordinate with DTSC to have a site specific background level for the project and a plan for handling soils with elevated levels of lead. To evaluate the presence and extent of lead in the near surface soils, a Phase II investigation shall be performed where earthwork is planned.</p> <p>MM 4.11-6: Soils with petroleum hydrocarbons or hazardous constituents exceeding cleanup levels provided by California Regional Water Quality Control Board (RWQCB) and/or Department of Toxic Substances Control (DTSC) shall be remediated or disposed of offsite according to State guidelines.</p> <p>MM 4.11-7: Metro must make allowances for future groundwater monitoring wells to be installed by Pratt & Whitney at the Canoga Park-and-Ride Station if required.</p>	

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>MM 4.11-8: To evaluate evidence of hazardous substances, unlabeled drums, and petroleum hydrocarbons observed during the Phase I investigation, a Phase II investigation shall be performed where earthwork is planned between 7000 and 7900 Canoga Avenue. Sufficient borings shall be performed to estimate the lateral extent and levels of contamination. Soil sampling shall include environmental screening for contamination by visual observations and field screening for volatile organic compounds with a photo ionization detector (PID). Based on field screening, soil samples shall be analyzed for the suspected chemicals by a laboratory certified by the State of California Department of Health Services.</p> <p>MM 4.11-9: To evaluate for the presence of deeper soil contamination and volatile organic compounds (VOC) in groundwater at grade separation excavations, soils borings and groundwater monitoring wells shall be installed. Soil sampling shall include environmental screening for contamination by visual observations and field screening for volatile organic compounds with a PID. Based on field screening, soil samples shall be analyzed for the suspected chemicals by a certified laboratory. Groundwater samples should be analyzed for VOC.</p> <p>MM 4.11-10: Groundwater removed for construction purposes with VOC above State and Federal Maximum Contaminant Levels for drinking water shall be treated or disposed according to applicable state guidelines.</p> <p>MM 4.11-11: Buildings that will be demolished shall have a comprehensive asbestos containing materials (ACM) inspection prior to demolition. ACM that may be identified as present in any building to be demolished, including the building material debris observed at the waste transfer facility between Vanowen Street and Sherman Way shall be tested and properly disposed.</p> <p>MM 4.11-12: At 6969 Deering Avenue, 7001 Deering Avenue, and 7101/7119 Deering Avenue, a Phase II investigation shall be performed consisting of surveying the lots to assess for potentially unknown remaining underground storage tanks.</p> <p>MM 4.11-13: At 21350 Sherman Way groundwater monitoring shall continue until the case is closed by RWQCB.</p>	

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
Impact 4.11.2: There are no potential cumulative hazardous materials impacts.	None required.	Less than significant.
Water Resources		
Impact 4.12.1: With mitigation neither project construction nor operation would result in violations of any water quality standards or waste discharge requirements.	<p>MM 4.12-1: Runoff from parking lots (MOL Canoga Station, Sherman Way Station, and Chatsworth Metrolink Station) shall be treated, as required by Standard Urban Storm Water Mitigation Plan (SUSMP), prior to discharging into existing storm drain systems. Stormceptor® units have been installed as post-construction treatment control Best Management Practices (BMPs) at the existing MOL Canoga Station. These units shall continue to be used for the modified parking area and additional units added at the new Sherman Way Station and existing Chatsworth Metrolink Station. At the Canoga Station, the design must make accommodations for installation of groundwater monitoring wells, if wells are required to address contamination from the Pratt & Whitney site. See Section 4.11 Hazardous Material for additional Mitigation Measures.</p> <p>MM 4.12-2: Where sufficient area is available, runoff shall be collected in roadside vegetated swales and directed to existing curb and gutter or storm drains in Canoga Avenue. In other areas, runoff shall be collected in gutters and directed to the storm drain systems in Canoga Avenue. Swale design shall be coordinated with mitigations for potential arsenic and lead in soils described in Section 4.11 Hazardous Materials.</p> <p>.</p> <p>MM 4.12-3: Prepare SUSMP in accordance with the Los Angeles Municipal Storm Water permit to address construction and operational impacts. The SUSMP shall identify post-development peak runoff, conserve natural areas, minimize storm water pollutants, protect slopes and channels, and post-construction BMPs and other items as required by the permit. Air Quality mitigations may also provide mitigation to water resources impacts and are addressed in Section 4.8 by measures 1 through 7 and 9.</p> <p>MM 4.12-4: Develop Storm Water Pollution Prevention Plan (SWPPP) that complies with National Pollutant Discharge Elimination System (NPDES) requirements from California State Water Resources Control Board (SWQCB). Construction shall be in compliance with this permit.</p>	None or beneficial.

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure(s)	Significance After Mitigation
Impact 4.12.2: The project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge; no mitigation is required.	None required.	None or less than significant.
Impact 4.12.3: With mitigation the project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site or result in flooding on- or off-site.	MM 4.12-5: Small detention/infiltration basins shall be provided as-needed within the ROW, including in park-and-ride lots at Canoga, Sherman Way, Roscoe, (Alternative 3 only) and Chatsworth Metrolink Stations, to reduce peak flow and runoff volumes to pre-project conditions.	None or less than significant.
Impact 4.12.4: With mitigation the project would not create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.	MM 4.12-1 through MM 4.12-4 would address this impact.	None or less than significant.
Impact 4.12.5: With mitigation the project would not substantially degrade water quality.	MM 4.12-1 through MM 4.12-4 would address this impact.	None or Beneficial.
Impact 4.12.6: The project would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map; no mitigation is required.	None required.	No impact.
Impact 4.12.7: The project would not place structures that would impede or redirect flood flows, nor expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation from seiche, tsunami or mudflow; no mitigation is required.	None required.	No impact.
<i>Biological Resources & Ecosystems</i>		
Impact 4.13.1: Construction activities would not result in temporary harassment or mortality to special-status species and/or temporary loss of occupied habitat for those species. Since special-status species and their occupied habitat are not expected to	None required.	Less than significant.

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure(s)	Significance After Mitigation
<p>be present in the immediate project area, no significant impacts would occur; no mitigation is required.</p>		
<p>Impact 4.13.2: Permanent or ongoing project operations would not result in harassment or mortality to special-status species and/or loss of occupied habitat for those species, should such species or habitats be present. Since special-status species (as defined) and their occupied habitat do not have reasonable potential to be present in the immediate project area, there is no potential for significant impacts to these species. No mitigation is required. See Impact 4.13.5 regarding the Migratory Bird Treaty Act.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p>Impact 4.13.3: Project changes to existing conditions, either temporarily or permanently, would not interrupt or remove functional wildlife corridors or habitat linkages, and would not adversely affect large-scale, landscape level functioning of the project area for this purpose. The project would not affect common native species nor special-status species or populations. Because such corridors or linkages are not present in the immediate project area, no significant impacts to these resources are anticipated, and no mitigation measures are necessary.</p>	<p>None required.</p>	<p>Less than significant.</p>
<p>Impact 4.13.4: The project would not have a substantial adverse effect on protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Although there are stormwater channels present, including the Los Angeles River, on and adjacent to the project site, they lack a prevalence of wetland vegetation and are not wetlands under current regulations. Because no wetlands exist on or adjacent to the project site, and because the project would not result in fill or</p>	<p>None required.</p>	<p>Less than significant.</p>

**TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact	Mitigation Measure(s)	Significance After Mitigation
substantial alteration of flow elsewhere, no impacts to wetlands would occur, and no mitigation is required.		
<p>Impact 4.13.5: The project would require the removal of a small number of planted trees, a less than significant impact because these trees do not have special regulatory status as rare or sensitive. Removal of trees or other construction activities, however, could affect native birds and their nests and conflict with the Migratory Bird Treaty Act and similar laws in the California Fish and Game Code protecting native bird species, a potentially significant impact that would less than significant with mitigation.</p>	<p>MM 4.13-1: Any removal of native or nonnative vegetation for the project shall be conducted outside the core nesting season for native birds in the project area, which is 01 March through 31 August. If such activities cannot be so restricted, a qualified biologist shall conduct a pre-construction survey for nesting birds in relevant areas on and adjacent to the project within 7 days prior to any relevant project activities. Any active (or potentially active) nests shall be identified with information relevant to the statutes at hand, which proscribe the mortality, injury, or causing nest failure of protected bird species, including location (accurately mapped or recorded using GPS) and this information relayed within 72 hours to relevant project personnel and resource agency personnel. No project activities that may result in mortality or failure of an active nest of native birds shall be conducted within 100 ft. of an active (or potentially active) nest of a native bird. The distance of 100 ft. is based on anticipated tolerance for project activities for native birds in an existing, urban setting, but may be modified (up to 300 feet or down to 50 ft.) on a case-by-case basis, based on professional judgment and written recommendations of the qualified biologist.</p> <p>MM 4.13-2: All trees removed must be replaced in accordance with applicable guidelines.</p>	Less than significant.
<p>Impact 4.13.6: Impact 4.13.6. The project would not have a cumulatively considerable effect on wetlands, special-status species, or disrupt functional wildlife corridors in the project area. However, the removal of trees and other construction activities as a result of the proposed project and other cumulative projects in the project area could result in cumulatively considerable impacts to native birds and their nests and conflict with the Migratory Bird Treaty Act and similar laws in the California Fish and Game Code protecting native bird species. Impacts would be less than significant after mitigation.</p>	None required.	Less than significant

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measure(s)	Significance After Mitigation
Energy		
Impact 4.14.1: The No Project Alternative would have no energy impact. The TSM, Canoga On-Street Dedicated Bus Lanes, and Canoga Busway Alternatives would result in beneficial energy impacts without mitigation.	None required.	Less than significant.
Safety & Security		
Impact 4.15.2: The proposed project would not result in a significant impact on crime prevention.	None required.	Less than significant.
Impact 4.15.3: The proposed project would not result in a significant impact on emergency response.	None required.	Less than significant.
Impact 4.15.4: The proposed project has the potential to have significant construction impacts on safety and security.	<p>Alternatives 3 and 4:</p> <p>MM 4.15-1: To further minimize impacts to schools, students, and active pedestrian communities, the following will be implemented:</p> <ul style="list-style-type: none"> • Emergency services providers and school officials will be consulted regarding the construction process to reduce intrusiveness of the construction process and provide for continuing two-way communication throughout the construction period. • School officials will be consulted in order to ensure maintenance of safe student walk routes and access for passenger vehicles and school buses. • Flag men will be provided during intersection modifications in active pedestrian communities. Crossing guards or flag men will also be provided at construction sites in proximity to schools and where school pedestrian routes cross construction areas. • Construction scheduling and haul routes will be sequenced to minimize conflicts with pedestrians, school buses and vehicular traffic during arrivals and dismissals on school days. 	Less than significant.
Impact 4.15.5: The proposed project does not have the potential to result in a significant cumulatively considerable impact on safety and security.	None required.	Less than significant.

