

5. Mitigation Monitoring and Reporting Program

5.1 INTRODUCTION

Section 21081.6 of the PRC requires a lead agency to adopt a “reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment” (Section 15097 of the CEQA Guidelines provides additional direction on mitigation monitoring or reporting). As lead agency for the Proposed Project, Metro is responsible for administering and implementing the Mitigation Monitoring and Reporting Program (MMRP). The decisionmakers must define specific monitoring requirements to be enforced during project implementation prior to final approval of the Proposed Project. The primary purpose of the MMRP is to ensure that the mitigation measures identified in the Draft and Final EIR are implemented, effectively minimizing the identified environmental effects.

5.2. PURPOSE

Table 5-1 has been prepared to ensure compliance with all mitigation measures identified in the Draft EIR and this Final EIR which would lessen or avoid potentially significant adverse environmental impacts resulting from implementation of the Proposed Project. Each mitigation measure is identified in **Table 5-1** and is categorized by environmental topic and corresponding number, with identification of:

- **Monitoring Action:** The criteria that would determine when the measure has been accomplished and/or the monitoring actions to be undertaken to ensure the measure is implemented.
- **Responsible Party for Implementing Mitigation:** The entity accountable for the action.
- **Enforcement Agency and Monitoring Phase:** The agencies responsible for overseeing the implementation of mitigation and when the implementation is verified.

Table 5-1 – Mitigation Monitoring and Reporting Program

Mitigation Measures	Monitoring Action	Responsible Party	1. Enforcement Agency 2. Monitoring Phase
AESTHETICS			
<p>CUL-1: Project design related to potentially historic streetlights and station platforms located immediately adjacent (i.e., on or directly in front of) known or potential historical resources identified in the Historical Resources Project Area shall be reviewed by a qualified architectural historian (individual who meets the Secretary of the Interior’s Professional Qualification Standards in Appendix A of 36 Code of Federal Regulations Part 61) to determine consistency with the rehabilitation treatment under the Secretary of the Interior’s Standards for the Treatment of Historic Properties and confirm the Proposed Project will not cause a substantial adverse change in the significance of a historical resource. The results of this review shall be provided to Metro in a memorandum prepared by the qualified architectural historian conducting the review. This review shall be completed prior to the preparation of final construction documents.</p>	<p>Conduct review of historic resources identified in the Historical Resources Project Area to determine Project’s consistency with the Secretary of the Interior’s Standards for the Treatment of Historic Properties.</p>	<p>Lead Engineer and Architectural Historian</p>	<p>1. Metro 2. Final Design</p>
<p>VIS-1: Plant material removed from center medians and sidewalks shall be replaced within the existing street/curb right-of-way based on the following requirements:</p> <ul style="list-style-type: none"> • Street trees shall be replaced in accordance with the regulations established by each affected jurisdiction’s Bureau of Street Services and located within the street right-of-way along station approaches or within the sidewalk. • Plant groundcover using similar replacement species or to the satisfaction of the affected jurisdiction’s Bureau of Street Services. • A Landscape Replacement Study shall be prepared by a licensed landscape architect during final design. The study shall identify the location, species, and landscape design elements for all replacement landscaping associated with the Proposed Project and subject to local jurisdiction review. 	<p>Prepare a Landscape Replacement Study; Replace plant material from center medians and sidewalks according to jurisdictional requirements.</p>	<p>Lead Engineer/Landscape Architect</p>	<p>1. Metro 2. Final Design through Construction</p>

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<p>VIS-2: Replacement median, barriers, or other divider shall be enhanced with patterns or decorative features in accordance with the local jurisdiction's streetscape design guidelines and approved by local jurisdiction Street Services bureau or similar entity.</p>	<p>After conducting a Landscape Replacement Study, design median, barriers, or other dividers with patterns or decorative features in accordance with local streetscape design guidelines.</p>	<p>Lead Engineer/ Landscape Architect</p>	<p>1. Metro 2. Final Design through Construction</p>
<p>BIOLOGICAL RESOURCES</p>			
<p>BIO-1: To mitigate for construction impacts on special-status bird species, the construction contractor shall implement the following measures:</p> <ul style="list-style-type: none"> • Construction during bird nesting season (typically February 1 to September 1) would be avoided to the extent feasible. Feasible means capable of being accomplished in a successful manner taking into consideration costs and schedule. • If construction is required during the nesting season, vegetation removal would be conducted outside of the nesting season (typically February 1 to September 1), wherever feasible. Feasible means capable of being accomplished in a successful manner taking into consideration costs and schedule. • If construction, trimming, or removal of vegetation and trees are scheduled to begin during nesting bird season, nesting bird surveys would be completed by a qualified biologist no more than 72 hours prior to construction, or as determined by the qualified biologist, to determine if nesting birds or active nests are present within the construction area. Surveys would be conducted within 150 feet for songbirds and 500 feet for raptors, or as otherwise determined by the qualified biologist. Surveys would be repeated if construction, trimming, or removal of vegetation and trees are suspended for five days or more. • If nesting birds/raptors are found within 500 feet of the construction area, appropriate buffers consisting of orange flagging/fencing or similar (typically 150 feet for songbirds, and 500 feet for raptors, or as directed by a 	<p>Limit construction to outside the bird nesting season and outside the maternal and non-active bat season. Should vegetation be removed during these times, proper mitigation for habitat loss, vegetation replacement, and species protection shall be conducted.</p>	<p>Construction Contractor</p>	<p>1. Metro 2. Pre-Construction/ Construction</p>

Mitigation Measures	Monitoring Action	Responsible Party	1. Enforcement Agency 2. Monitoring Phase
<p>qualified biologist) would be installed and maintained until nesting activity has ended, as determined in coordination with the qualified biologist and regulatory agencies, as appropriate.</p> <p>To mitigate construction impacts on special-status bat species, the construction contractor shall implement the following measures:</p> <ul style="list-style-type: none"> • Where feasible, tree removal would be conducted in October, which is outside of the maternal and non-active seasons for bats. • During the summer months (June to August) in the year prior to construction, a thorough bat roosting habitat assessment would be conducted of all trees and structures within 100 feet of the construction area. Visual and acoustic surveys would be conducted for at least two nights during appropriate weather conditions to assess the presence of roosting bats. If presence is detected, a count and species analysis would be completed to help assess the type of colony and usage. • No fewer than 30 days prior to construction, and during the non-breeding and active season (typically October), bats would be safely evicted from any roosts to be directly impacted by the Project under the direction of a qualified biologist. Once bats have been safely evicted, exclusionary devices designed by the qualified biologist would be installed to prevent bats from returning and roosting in these areas prior to removal. Roosts not directly impacted by the Project would be left undisturbed. • No fewer than two weeks prior to construction, all excluded areas would be surveyed to determine whether exclusion measures were successful and to identify any outstanding concerns. Exclusionary measures would be monitored throughout construction to ensure they are functioning correctly and would be removed following construction. 			

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<ul style="list-style-type: none"> If the presence or absence of bats cannot be confirmed in potential roosting habitat, a qualified biologist would be onsite during removal or disturbance of this area. If the biologist determines that bats are being disturbed during this work, work would be suspended until bats have left the vicinity on their own or can be safely excluded under direction of the biologist. Work would resume only once all bats have left the site and/or approval is given by a qualified biologist. In the event that a maternal colony of bats is found, no work would be conducted within 100 feet of the maternal roosting site until the maternal season is finished or the bats have left the site, or as otherwise directed by a qualified biologist. The site would be designated as a sensitive area and protected as such until the bats have left the site. No activities would be authorized adjacent to the roosting site. Combustion equipment, such as generators, pumps, and vehicles, would not to be parked nor operated under or adjacent to the roosting site. Construction personnel would not be authorized to enter areas beneath the colony, especially during the evening exodus (typically between 15 minutes prior to sunset and one hour following sunset). 			
CULTURAL RESOURCES			
Refer to CUL-1	Refer to CUL-1	Refer to CUL-1	Refer to CUL-1
<p>CUL-2: A Qualified Archaeologist, meeting the Secretary of the Interior’s Standards for professional archaeology, shall be retained for the Project and will remain on call during all ground-disturbing activities. The Qualified Archaeologist shall ensure that Worker Environmental Awareness Protection (WEAP) training, presented by a Qualified Archaeologist and Native American representative, is provided to all construction and managerial personnel involved with the Proposed Project. The WEAP training shall provide an overview of cultural (prehistoric and historic) and tribal cultural resources and outline regulatory requirements for the</p>	<p>A qualified archaeologist shall remain on call for all ground-disturbing activities to ensure Contractor is properly trained in WEAP. Unanticipated archaeological resources discovered shall be handled, removed, and preserved according to the applicable requirements of PRC Section 21083.2.</p>	<p>Construction Contractor/Archaeological Monitor</p>	<p>1. Metro 2. Construction</p>

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<p>protection of cultural resources. The WEAP shall also cover the proper procedures in the event of an unanticipated cultural resource. The WEAP training can be in the form of a video or PowerPoint presentation. Printed literature (handouts) can accompany the training and can also be given to new workers and contractors to avoid the necessity of continuous training over the course of the Proposed Project.</p> <p>If an inadvertent discovery of archaeological materials is made during construction activities, ground disturbances in the area of the find shall be halted and the Qualified Archaeologist shall be notified regarding the discovery. If prehistoric or potential tribal cultural resources are identified, the interested Native American participant(s) shall be notified.</p> <p>The archaeologist, in consultation with Native American participant(s) and the lead agency, shall determine whether the resource is potentially significant as per CEQA (i.e., whether it is an historical resource, a unique archaeological resource, a unique paleontological resource, or tribal cultural resources). If avoidance is not feasible, a Qualified Archaeologist, in consultation with the lead agency, shall prepare and implement a detailed treatment plan. Treatment of unique archaeological resources shall follow the applicable requirements of PRC Section 21083.2. Treatment for most resources would consist of, but would not be limited to, in-field documentation, archival research, subsurface testing, and excavation. The treatment plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories, libraries, and interested professionals.</p>			

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GEOLOGY AND SOILS			
<p>GEO-1: The Proposed Project shall be designed based on the latest versions of local and State building codes and regulations in order to construct seismically-resistant structures that help counteract the adverse effects of ground shaking. During final design, site-specific geotechnical investigations shall be performed at the sites where structures are proposed within liquefaction-prone designated areas. The investigations shall include exploratory soil borings with groundwater measurements. The exploratory soil borings shall be advanced, as a minimum, to the depths required by local and State jurisdictions to conduct liquefaction analyses. Similarly, the investigations shall include earthquake-induced settlement analyses of the dry substrata (i.e., above the groundwater table). The investigations shall also include seismic risk solutions to be incorporated into final design (e.g., deep foundations, ground improvement, remove and replace, among others) for those areas where liquefaction potential may be experienced. The investigation shall include stability analyses of slopes located within earthquake-induced landslides areas and provide appropriate slope stabilization measures (e.g., retaining walls, slopes with shotcrete faces, slopes re-grading, among others). The geotechnical investigations and design solutions shall follow the "Guidelines for Evaluating and Mitigating Seismic Hazards in California" Special Publication 117A of the California Geologic Service, as well as Metro's Design Criteria and the latest federal and State seismic and environmental requirements.</p>	<p>Design Proposed Project according to applicable regulations; conduct geotechnical investigations prior to construction to determine risks associated with liquefaction.</p>	<p>Lead Engineer/ Geotechnical Consultant</p>	<p>1. Metro 2. Final Design</p>
NOISE			
<p>NOI-1: Where construction cannot be performed in accordance with the FTA 1-hour L_{eq} construction noise standards, elevates existing ambient noise levels by 5 dBA L_{eq} or more at a noise sensitive use, or exceeds other applicable noise thresholds of significance, the construction contractor shall develop a Noise Control Plan demonstrating how noise criteria would be achieved during</p>	<p>Prepare Noise Control and Monitoring Plan and Submit to Metro</p>	<p>Construction Contractor</p>	<p>1. Metro 2. During Construction</p>

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<p>construction. The Noise Control Plan shall be designed to follow Metro requirements, include construction noise control measures, measurements of existing noise, a list of the major pieces of construction equipment that would be used, and predictions of the noise levels at the closest noise-sensitive receivers (residences, hotels, schools, churches, temples, and similar facilities). The Noise Control Plan shall be approved by Metro prior to initiating localized construction activities.</p> <p>The Noise Control Plan shall require weekly noise monitoring at land used adjacent to construction activities. Noise reducing measures shall be required should the following performance standards be exceeded within the following jurisdictions:</p> <ul style="list-style-type: none"> • City of Los Angeles: Construction noise levels that exceed the existing ambient exterior noise level at a noise sensitive use by 10 dBA L_{eq} within one hour for construction lasting more than one day, 5 dBA L_{eq} for construction lasting more than 10 days in a three-month period, and any exceedance of 5 dBA during the hours of 9:00 p.m. to 7:00 a.m. Monday through Friday and between 6:00 p.m. to 8:00 a.m. on Saturday or any time Sunday. • City of Burbank: Construction noise levels that exceed the existing ambient exterior noise level between 7:00 a.m. and 7:00 p.m. at a noise sensitive use by 5 dBA L_{eq} for construction lasting more than 10 days in a three-month period. Construction noise levels of any duration that exceed existing ambient exterior noise levels by 5 dBA L_{eq} at a noise sensitive use between the hours of 7:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 5:00 p.m. on Saturday, or at any time on Sunday. • City of Glendale: Construction noise levels that exceed the existing ambient exterior noise level between 7:00 a.m. and 7:00 p.m. at a noise sensitive use by 5 dBA L_{eq} for construction lasting more than 10 days in a three-month period. Construction noise levels of any duration that exceed existing ambient exterior noise levels by 			

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<p>5 dBA L_{eq} at a noise sensitive use between 7:00 p.m. and 7:00 a.m. Monday through Saturday or at any time on Sunday.</p> <ul style="list-style-type: none"> City of Pasadena: Construction noise levels that exceed 85 dBA L_{eq} at 100 feet of distance or any duration of noise levels that exceeds existing ambient exterior noise levels by 5 dBA L_{eq} at a noise sensitive use between 7:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 5:00 p.m. on Saturday, or at any time on Sunday. <p>Noise-reducing methods that may be implemented include:</p> <ul style="list-style-type: none"> Where construction occurs near noise sensitive land uses, specialty equipment with enclosed engines, acoustically attenuating shields, and/or high-performance mufflers shall be used. Limit unnecessary idling of equipment. Install temporary noise barriers or noise-control curtains, where feasible and desirable. Reroute construction-related truck traffic away from local residential streets and/or sensitive receivers. Use electric instead of diesel-powered equipment and hydraulic instead of pneumatic tools where feasible. 			
<p>NOI-2: Where equipment such as a vibratory roller, that produces high levels of vibration is used within 25 feet of buildings or typical equipment such as large bulldozer is used within 15 feet of buildings, or where the 0.2 PPV inches per second vibration damage risk threshold would be exceeded, the construction contractor shall develop and implement a Vibration Control Plan to avoid exceeding FTA thresholds for significant vibration impacts at land uses. The Construction Vibration Control Plan shall include mitigation measures to minimize vibration impacts during construction. Recommended construction vibration mitigation measures shall, at a minimum, include:</p> <ul style="list-style-type: none"> The contractor shall minimize the use of tracked vehicles. 	<p>Prepare Vibration Control Plan</p>	<p>Construction Contractor</p>	<p>1. Metro 2. Construction</p>

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<ul style="list-style-type: none"> The contractor shall avoid vibratory compaction within 25 feet of buildings. The contractor shall monitor vibration levels near sensitive receivers during activities that generate high vibration levels to ensure thresholds are not exceeded. 			
<p>NOI-3: Where equipment such as a vibratory roller that produces high levels of vibration is used within 105 feet of residences or institutional daytime land uses or equipment such as large bulldozers are used within 65 feet of such uses, the 75 VdB vibration threshold for human annoyance could be exceeded at residences or the 75 VdB threshold at institutional uses. The Construction Vibration Control Plan shall include mitigation measures to minimize vibration impacts during construction. Recommended construction vibration mitigation measures that shall be considered and implemented where feasible include:</p> <ul style="list-style-type: none"> The contractor shall minimize the use of tracked vehicles and vibratory equipment. The contractor shall avoid vibratory compaction. The contractor shall monitor vibration levels near sensitive receivers during activities that generate high vibration levels to ensure thresholds are not exceeded. 	Prepare Vibration Control Plan	Construction Contractor	<ol style="list-style-type: none"> Metro Construction
TRANSPORTATION			
<p>TRA-1: Prior to the initiation of localized construction activities, a Traffic Management Plan compliant with the provisions of the current California Manual on Uniform Traffic Control Devices, the California Traffic Control Handbook and local ordinances, as applicable, shall be developed by Metro and the construction contractor in coordination with the City of Los Angeles, City of Burbank, City of Glendale, and City of Pasadena. Metro shall develop detours as appropriate and communicate any changes to bus service to local transit agencies in advance. Stops shall be relocated in a manner which is least disruptive to transit. If</p>	Prepare a Traffic Management Plan	Construction Contractor/Metro/ City of Los Angeles, City of Burbank, City of Glendale, City of Pasadena	<ol style="list-style-type: none"> Metro Pre-Construction

Mitigation Measures	Monitoring Action	Responsible Party	1. Enforcement Agency 2. Monitoring Phase
<p>bus stops need to be relocated, warning signs shall be posted in advance of closure along with alternative stop notifications and information regarding the duration of the closure.</p>			
<p>TRA-2: Prior to the initiation of localized construction activities, a Traffic Management Plan and/or Construction Management Plan compliant with the provisions of the current California Manual on Uniform Traffic Control Devices, the California Traffic Control Handbook and local ordinances, as applicable, shall be developed by Metro and the construction contractor in coordination with the City of Los Angeles, City of Burbank, City of Glendale, and City of Pasadena. The Traffic and/or Construction Management Plan shall include provisions such as: approval of work hours and lane closures, designation of construction lay-down zones, provisions to maintain roadway access to adjoining land uses, use of warning signs, temporary traffic control devices and/or flagging to manage traffic conflicts, and designation of detour routes where appropriate.</p>	<p>Prepare a Traffic Management Plan and submit to Metro</p>	<p>Construction Contractor/Metro/ City of Los Angeles, City of Burbank, City of Glendale, City of Pasadena</p>	<p>1. Metro 2. Pre-Construction</p>
<p>TRA-3: Prior to the initiation of localized construction activities, a Traffic Management Plan and/or Construction Management Plan compliant with the provisions of the current California Manual on Uniform Traffic Control Devices, the California Traffic Control Handbook and local ordinances, as applicable, shall be developed by Metro and the construction contractor, in coordination with affected jurisdictions. The plan shall include provisions for wayfinding signage, lighting, and access to pedestrian safety amenities (such as handrails, fences and alternative walkways). Metro shall also work with local municipalities and public works departments to confirm that only one side of the street would be closed at a time. If crosswalks are temporarily closed, pedestrians shall be directed to use nearby pedestrian facilities. Where construction encroaches on sidewalks, walkways and crosswalks, special pedestrian safety measures shall be used such as</p>	<p>Prepare a Traffic Management Plan and submit to Metro</p>	<p>Construction Contractor/Metro/ City of Los Angeles, City of Burbank, City of Glendale, City of Pasadena</p>	<p>1. Metro 2. Pre-Construction</p>

Mitigation Measures	Monitoring Action	Responsible Party	1. Enforcement Agency 2. Monitoring Phase
<p>detour routes and temporary pedestrian shelters. Access to businesses and residences shall be maintained throughout the construction period. These mitigation measures shall be documented in a Traffic Management Plan and/or Construction Management Plan.</p>			
<p>TRA-4: Prior to the initiation of localized construction activities, a Traffic Management Plan and/or Construction Management Plan compliant with the provisions of the current California Manual on Uniform Traffic Control Devices, the California Traffic Control Handbook and local ordinances, as applicable, shall be developed by Metro and the construction contractor, in coordination with the affected jurisdictions. The plan shall identify on-street bicycle detour routes and signage. Metro shall also work with local municipalities and public works departments to accommodate bicycle circulation during construction. Bicycle access to businesses and residences shall be maintained throughout the construction period. These mitigation measures shall be documented in a Traffic Management Plan and/or Construction Management Plan.</p>	<p>Prepare a Traffic Management Plan and submit to Metro</p>	<p>Construction Contractor/Metro/ City of Los Angeles, City of Burbank, City of Glendale, City of Pasadena</p>	<p>1. Metro 2. Pre-Construction</p>
<p>TRA-5: Prior to completion of Final Design, Metro shall convene a design working group with LADOT to resolve potential bicycle conflicts and identify network enhancements that integrate bicycle and BRT facilities, consistent with Policy 2.6 and Policy 2.9 of the Mobility Plan 2035. The design working group shall include representatives from the LADOT Active Transportation Division, the Los Angeles Bureau of Engineering, and a representative of the Los Angeles County Bicycle Coalition. Coordination shall be provided with LADOT and the Active Transportation Division during the preliminary engineering design development phase.</p> <p>In addition, Metro shall coordinate with the Cities of Burbank, Glendale, and Pasadena to resolve potential bicycle conflicts and identify network enhancements that integrate bicycle and BRT facilities.</p>	<p>Design Proposed Project to safely integrate bicycle and automobile lanes</p>	<p>Lead Engineer/ City of Los Angeles, City of Burbank, City of Glendale, City of Pasadena</p>	<p>1. Metro 2. Final Design</p>

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<p>TRA-6: The construction contractor shall provide early notification of traffic disruption to emergency service providers. Work plans and traffic control measures shall be coordinated with emergency responders to prevent impacts to emergency response times. A Traffic Management Plan compliant with the provisions of the current California Manual on Uniform Traffic Control Devices, the California Traffic Control Handbook and local ordinances, as applicable, shall be developed and implemented to minimize impacts on emergency access.</p>	<p>Prepare a Traffic Management Plan and submit to Metro</p>	<p>Construction Contractor/Metro/City of Los Angeles, City of Burbank, City of Glendale, City of Pasadena</p>	<p>1. Metro 2. Pre-Construction</p>
TRIBAL CULTURAL RESOURCES			
Refer to CUL-2	Refer to CUL-2	Refer to CUL-2	Refer to CUL-2

SOURCE: Terry A. Hayes Associates Inc., 2022.