Garvey Avenue Grade Separation Drainage Improvement Project
Mitigation Monitoring and Reporting

	Mitigation Measure	Implementation Party	Implementation Phase	Monitored By	Outside Agency Coordination
AIR-1	1. City of El Monte and its designees shall comply with all applicable SCAQMD Rules and Regulations, including Rule 403 ensuring the cleanup of construction-related dirt on approach routes to the site. Rule 403 prohibits the release of fugitive dust emissions from any active operation, open storage pile or disturbed surface area visible beyond the property line of the emission source. 2. City of El Monte and its designees shall comply with all SCAQMD established minimum requirements for construction activities to reduce fugitive dust and PM_{10} emissions. 3. Adequate water techniques shall be employed to mitigate the impact of construction-related dust particulates. Portions of the site that are undergoing surface earth moving operations shall be dewatered such that a crust will be formed on the ground surface, and then watered again at the end of each day. Site watering shall be performed as necessary to mitigate blowing dust. 4. Grading operations shall be suspended during first stage ozone episodes or when winds exceed 25 mph. A high wind response plan shall be formulated	City of El Monte	Construction	City of El Monte	N/A

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	for enhanced dust control if winds are forecast to exceed 25 mph in any upcoming 24-hour period. 5. Any construction equipment using direct internal combustion engines shall use a diesel fuel with a maximum of 0.05 percent sulfur and four-degree retard. 6. Construction operations affecting roadways within the project area including detour routes, shall be scheduled by implementing traffic hours and shall minimize obstruction of through traffic lanes. 7. The engines of idling trucks or heavy equipment shall be turned off if the expected duration of idling exceeds five minutes. 8. On-site heavy equipment used during grading and construction shall be equipped with diesel particulate filters unless it is demonstrated that such equipment is not available, or its use is not cost-competitive. 9. All haul trucks leaving or entering the site shall be covered or have at least two feet of freeboard.				

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	10. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily. 11. Any site access points within 30 minutes of any visible dirt deposition on any public right-of-way shall be mechanically or manually swept.				
CUL-1	If previously unidentified cultural resources and/or tribal cultural resources are unearthed during ground activity, all work shall immediately be suspended within 100 feet of the discovery and the City shall be immediately notified. A qualified archaeologist and a Native American monitor shall assess the significance of the find and determine if it is a California Register of Historic Resource (CRHR)-eligible archaeological resource and/or tribal cultural resource. If the qualified archaeologist determines that adverse impacts to tribal cultural resources or significant archaeological resources could occur during the Project, then the resources shall be avoided from direct Project impacts by Project redesign, if feasible. If the resource cannot be avoided, then an archaeological treatment plan shall be developed and implemented.	City of El Monte	Construction	City of El Monte	Native American Heritage Commission

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CUL-2	➢ In compliance with Section 5097.98 of the Public Resources Code and Section 7050.5 of the California Health and Safety Code, if human remains are encountered, all ground disturbing activities shall be immediately suspended within 100 feet of the discovery, and the Los Angeles County Coroner should be notified immediately. If the Coroner determines the remains are Native American in origin, they must notify the Native American Heritage Commission within 24 hours of such identification so that the Native American Heritage Commission can contact the Most Likely Descendant (MLD). The MLD shall be provided access to the discovery and will provide recommendations for treatment of the remains within 48 hours of accessing the discovery site. Disposition of human remains and any associated grave goods, if encountered, shall be treated in accordance with procedures and requirements set forth in Sections 5097.94 and 5097.98 of the Public Resources Code; Section 7050.5 of the California Health and Safety Code and CEQA Guidelines Section 15064.5.	City of El Monte	Construction	City of El Monte	Native American Heritage Commission Los Angeles County Coroner

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GEO-1	The following mitigation measures should be implemented during the construction phase of the Project: ➢ Materials and construction of pavements for the project should be in accordance with the requirements and specifications of the State of California Department of Transportation, or other approved local governing specifications. ➢ Base course or pavement materials should not be placed when the surface is wet. Surface drainage should be provided away from the edge of paved areas to minimize lateral moisture transmission into the subgrade. ➢ Preventative maintenance should be planned and provided for through an on-going pavement management program in order to enhance future pavement performance. This consists of both localized maintenance (e.g. crack sealing and patching) and global maintenance (e.g. surface sealing). Preventative maintenance is usually the first priority when implementing a planned pavement maintenance program and provides the	City of El Monte	Construction	City of El Monte	N/A

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	highest return on investment for pavements. ➢ Earthwork portion of this project be completed during extended periods of dry weather, when possible.				
GEO-2	The following mitigation measures should be implemented during the earthwork/excavation phase of the Project: ➢ It is anticipated that excavations for the proposed construction can be accomplished with conventional earthmoving equipment. On-site silt soils may slump and unstable subgrade conditions could develop during general construction operations, particularly if the soils are wetted and/or subjected to repetitive construction traffic. The use of light construction equipment would aid in reducing subgrade disturbance. The use of remotely operated equipment, such as a backhoe, would be beneficial to perform cuts and reduce subgrade disturbance. Should unstable subgrade conditions develop stabilization measures will need to be employed.	City of El Monte	Construction	City of El Monte	N/A

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	➢ If the subgrade slumps or becomes unworkable, the subgrade material may be improved by scarifying and drying or may be removed and replaced if necessary. Suitable methods of stabilization will be dependent upon factors such as schedule, weather, size of area to be stabilized, and the nature of the instability. If the construction schedule does not allow for drying by aeration, silt soils may be stabilized using geo-synthetic or geogrid materials and coarse aggregate materials. ➢ Upon completion of filling and grading, care should be taken to maintain the subgrade moisture content prior to construction of pavements. Construction traffic over the completed subgrade should be avoided to the extent practical. If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and recompacted prior to pavement construction. The earthwork portion of this project be completed during extended periods of dry weather if possible. If earthwork is completed				

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	during the wet season (typically November through March) it may be necessary to take extra precautionary measures to protect subgrade soils. Wet season earthwork may require additional mitigation measures beyond that which would be expected during the drier summer and fall months. This could include diversion of surface runoff around exposed soils and draining of ponded water on the site. Once subgrades are established, it may be necessary to protect the exposed subgrade soils from construction traffic.				
HZ-1	The construction contractor shall provide reasonable, advance notification to service providers such as fire, police, and emergency medical services regarding lane closures or traffic control plans.	City of El Monte	Pre-Construction	City of El Monte	Fire, Policy, and Emergency Medical Services
NOISE-1	The City of El Monte and their designees shall implement the following measures during construction as needed: ➢ Include design measures necessary to reduce the construction noise levels where feasible. These measures may include noise barriers, curtains, or shields. ➢ Place noise-generating construction activities (e.g., operation of compressors	City of El Monte	Construction	City of El Monte	N/A

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	and generators, cement mixing, general truck idling) as far as possible from the nearest noise-sensitive land uses. ➢ Locate stationary construction noise sources as far from adjacent noise-sensitive receptors as possible. ➢ Identify a liaison for off-site sensitive receptors, such as residents and property owners, to contact with concerns regarding construction noise and vibration. The liaison's telephone number(s) shall be prominently displayed at construction locations. ➢ Notify, in writing, all landowners, occupants of properties adjacent to the construction area, and nearby sensitive receptors of the anticipated construction schedule at least 2 weeks prior to groundbreaking. ➢ Prepare visible signs indicating "Noise Control Zone." ➢ Use noise-control devices that meet original specifications and performance. ➢ To the extent practical, use electrically-powered equipment.				

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	➢ Implement temporary noise barriers and sound-control curtains where project activity is unavoidably close to noise-sensitive receivers. In particular, noise barriers of 8 feet and 12 feet tall should be established around work sites to remove noise impacts from the different construction operation areas. The construction contractor should regularly evaluate the noise level at nearby sensitive receptors to ensure noise levels are not in exceedance. If so, the following noise barrier measures should also be incorporated: ▪ Break line of sight from noise source to receiver ▪ Use a frame to secure an appropriate acoustic blanket or paneling ▪ Use a solid material with a minimum surface density of 3 lb/ft^2 or mass-loaded acoustic blankets with at least STC 25 ▪ Overlap or seal any gaps in the barriers ➢ Designate haul routes to be used based on the least overall noise impact route, with heavily-loaded trucks away from				

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	residential streets, if possible. Identify haul routes streets with the fewest noise sensitive receivers if no alternatives are available. ➢ Place earth-moving equipment, fixed noise-generating equipment, stockpiles, staging areas, and other noise-producing operations as far as practicable from noise-sensitive receivers. ➢ Eliminate the use of horns, whistles, alarms, and bells. ➢ Phase demolition, earth moving, and ground impacting operations so they do not occur in the same time period. ➢ In the case of nighttime construction, the contractor shall comply with the provisions of the nighttime noise variance issued by the City. ➢ Conduct periodic noise measurements in accordance with an approved noise monitoring plan, specifying monitoring locations, equipment, procedures, and schedule of measurements and reporting methods to be used.				

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NOISE-2	To prevent impacts from vibrations, the City of El Monte and their designees should implement the following measures as needed: ➢ Pre-construction Survey - A before and after survey should include inspecting building foundations and taking photographs (or installing crack monitors) of pre-existing conditions, cracks, or other flaws. The survey can be limited to buildings closest to the pile driving activities, except for the case of unusually fragile or historic structures that are located within approximately 200 feet of construction.	City of El Monte	Construction	City of El Monte	N/A
NOISE-3	To prevent impacts from vibrations, large vibration producing equipment should be placed as far as is feasible from sensitive receptors. Furthermore, the City of El Monte and their designees should implement the following measures as needed: ➢ Pre-construction Survey - A before and after survey should include inspecting building foundations and taking photographs (or installing crack monitors) of pre-existing conditions,	City of El Monte	Construction	City of El Monte	N/A

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	cracks, or other flaws. The survey can be limited to buildings closest to the pile driving activities, except for the case of unusually fragile or historic structures that are located within approximately 200 feet of construction. ➢ Sonic Pile Driving - At the upper range reference vibration for the sonic/vibratory pile driver, the risk for damage to nearby buildings begins when the equipment is 32 feet or closer to the structure. The nearest piling is expected to be 20 feet from the closest structure, so vibration limit exceedances would remain with use of a vibratory pile driver. ➢ Drilled Piles - Noise emission levels from bored/drilled pilling methods are approximately 15 dB lower and PPV levels may be more than 15 times lower than those due to traditional impact piling. The use of these methods will eliminate the vibration impacts of all receivers. These methods will also substantially reduce the noise impacts and in most cases they will also be				

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	eliminated, with the use of a suitable noise barrier. ➢ Hammer Energy - A recommended way to reduce PPV is to lower the hammer energy since there is a direct relationship between hammer energy and the resultant ground vibration. Ground PPV generally follows a square root relationship with hammer energy (i.e. PPV ~ √Hammer Energy). The degree of hammer energy reduction must be balanced against the likelihood/severity of expected exceedances, increase in total driving time, and ability to drive to required friction tolerances. Vibration Monitoring - It is recommended that vibration monitoring be conducted at any building where equipment is operating closer than the limits noted in Error! Reference source not found. of the IS/MND.				
PS-1	The City shall provide reasonable advance notification to service providers such as fire, police, and emergency medical services as well as to local businesses, homeowners, and other residents adjacent to and within areas potentially affected by the proposed Project about the nature, extent, and duration of construction activities. Interim updates should be provided to	City of El Monte	Pre-Construction	City of El Monte	Fire, Police, and Emergency Medical Services

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	inform the public of the status of the construction activities.				
PS-2	The City will prepare a detour plan to route traffic around the construction site if there are any road closures proposed on Garvey Avenue. Advance signage shall be provided to motorists to notify the proposed closures and with associated dates and detour routes shall be marked.	City of El Monte	Pre-Construction	City of El Monte	N/A
PS-3	Local access shall be provided to all business and residences during construction.	City of El Monte	Construction	City of El Monte	N/A
TRAF-1	Because the project will affect a major arterial road, the Project shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following: ➢ Develop circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible. ➢ To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.	City of El Monte	Construction	City of El Monte	N/A

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	➢ Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones. ➢ Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.				
TRAF-2	The Contractor will notify local Police and Fire Departments in its intent to close Garvey Avenue or lane closure at least ten (10) days before Work is to begin. The Contractor shall cooperate with local authorities relative to handling traffic through the area. The Contractor shall also coordinate with City Bus to ensure the safe operation of buses and access to bus stops in the construction area.	City of El Monte	Construction	City of El Monte	N/A
TRAF-3	Transportation of heavy construction equipment and/or materials which requires use of oversized-transport vehicles on State highways will need a Caltrans transportation permit. The project	City of El Monte	Construction	City of El Monte	California Department of Transportation

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	specifications will limit construction traffic to off-peak periods to minimize the potential impact on State facilities. If construction traffic is expected to cause delays on any State facilities, a construction traffic control plan detailing these delays shall be submitted for Caltrans' review.				
TRIB-1	At least 30 days prior to start of any ground disturbing activity, The Gabrieleño Band of Mission Indians – Kizh Nation should be contacted by the contractor to have a Cultural Monitor present during excavation activities of the Project. The Cultural Monitor will have the authority to stop and redirect grading in the immediate area of a find in order to evaluate the find and determine the appropriate next steps, in consultation with the qualified archaeologist. Such evaluation can include culturally appropriate temporary and permanent treatment as determined by the Cultural Monitor which may include avoidance of cultural resources, in-place preservation and/or re-burial on the project property in an area that will not be subject to future disturbances for preservation in perpetuity. All cultural resources, including all archaeological artifacts that are found on the project area, shall be relinquished to the appropriate agency for proper treatment and disposition.	City of El Monte	Pre-Construction	City of El Monte	Gabrieleño Band of Mission Indians – Kizh Nation