

5200 Lone Tree Way United Pacific Gas Station Project

Mitigation Monitoring and Reporting Program

March 22, 2022

#### Lead Agency:

City of Antioch Planning Division 200 H Street Antioch, CA 94509

#### Technical Assistance:

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# **ACRONYMS AND ABBREVIATIONS**

applicant	United Pacific
BAAQMD	Bay Area Air Quality Management District
BMPs	Best Management Practices
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
City	City of Antioch
CRHR	California Register of Historical Resources
DPM	Diesel particulate matter
DPR	Department of Parks and Recreation
HMBP	Hazardous Materials Business Plan
ISMND	Initial Study Mitigated Negative Declaration
MLD	Most Likely Descendant
MMRP	Mitigation, Monitoring, and Reporting Program
NAHC	Native American Heritage Commission
PM <sub>2.5</sub>	particulate matter less than 2.5 micrometers in aerodynamic diameter
PRC	Public Resources Code
proposed project	5200 Lone Tree Way United Pacific Gas Station Project
SWPPP	Stormwater Pollution Prevention Program
US EPA	United States Environmental Protection Agency

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# **1.0 MITIGATION MONITORING AND REPORTING PROGRAM**

The purpose of the Mitigation, Monitoring, and Reporting Program (MMRP) is to provide the City of Antioch (City) Community Development Department and United Pacific (applicant) with a comprehensive list of the mitigation measures identified in the Initial Study Mitigated Negative Declaration (ISMND) for the 5200 Lone Tree Way United Pacific Gas Station Project (proposed project).

## 1.1 INTRODUCTION

The City is acting as the Lead Agency, as defined by the California Environmental Quality Act (CEQA). In accordance with Public Resources Code (PRC) section 21081.6, a Lead Agency that approves or carries out a project with potentially significant environmental effects shall adopt a "reporting or monitoring program for the changes to the project which it has adopted or made a condition of a project approval to mitigate or avoid significant effects on the environment."

The CEQA Guidelines provide direction for clarifying and managing the complex relationships between a Lead Agency and other agencies with respect to implementing and monitoring mitigation measures. In accordance with CEQA Guidelines section 15097(d), "each agency has the discretion to choose its own approach to monitoring or reporting; and each agency has its own special expertise." This discretion will be exercised by implementing agencies at the time they consider any of the activities identified in the environmental document.

This MMRP is a working guide to facilitate both the implementation of the mitigation measures and the monitoring, compliance, and reporting activities by the City and any monitors it may designate. If the City adopts the ISMND for the proposed project, it will adopt the MMRP.

## 1.2 OVERVIEW OF THE MITIGATION MONITORING AND REPORTING PROGRAM

The MMRP is presented in the following table and includes the following components:

- The list of mitigation measures contained in the ISMND, as adopted by the City;
- The party responsible for implementing the mitigation measure;
- The timing for implementation of the mitigation measure;
- The agency responsible for monitoring implementation of the mitigation measure; and
- The monitoring action and frequency.

The City and its contractors will be required to comply with this MMRP in all respects. In any instance where non-compliance occurs, the City-designated environmental monitors will issue a warning to the construction supervisor and the City's Project

Manager. Any decisions to halt work due to non-compliance will be made by the City. The City's designated environmental monitors will keep records of any incidents on noncompliance with mitigation measures. Copies of these documents will be supplied to the City.

Once construction has begun and is underway, the City will carry out monitoring of the mitigation measures associated with construction. The MMRP will be maintained in the City's files for use in construction and operation of the proposed project.

						Verification o	f Implementation
	Mitigation Measures	Implementation Party	Timing of Implementation	Monitoring Party and Monitoring Action	Monitoring Frequency	Action	Date completed with Signature
Se	ection 3.3: Air Quality						
Ma co co Ba rec me	M AIR-1: Implement Construction Best anagement Practices. The applicant shall require all nstruction contractors to implement the basic nstruction mitigation measures recommended by the by Area Air Quality Management District (BAAQMD) to duce fugitive dust emissions. Emission reduction easures will include, at a minimum, the following easures. Additional measures may be identified by the AQMD or contractor as appropriate:	<ul> <li>Applicant</li> <li>Construction Contractor</li> </ul>	Prior to issuance of grading permit and during construction.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> <li>Confirm best management practices (BMPs) are included in project specifications and grading plan.</li> </ul>	Prior to issuance of grading permit and throughout the construction phase as needed.		
•	All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day			Confirm BMPs are implemented throughout the construction phase.			
•	All haul trucks transporting soil, sand, or other loose material off-site will be covered						
•	All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited						
•	All vehicle speeds on unpaved roads shall be limited to 15 miles per hour						
•	All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used						
•	Idling times shall be minimized either by shutting equipment off when not in use or by reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California Code of Regulations [CCR]); clear signage shall be provided for construction workers at all access points						
•	All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications						
•	All equipment shall be checked by a certified visible emissions evaluator or checked by a certified mechanic and determined to be running in proper condition prior to operation						

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Post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person will respond and take corrective action within 48 hours. The Bay Area Air Quality Management District's phone number will also be visible to ensure compliance with applicable regulations.							
<b>MM AIR-2: Implement Cleaner Construction</b> <b>Equipment.</b> The following mitigation measure shall be implemented during all phases of construction to reduce potential exposure of diesel particulate matter (DPM) and particulate matter less than 2.5 micrometers in aerodynamic diameter (PM <sub>2.5</sub> ) emissions to sensitive receptors located near the Project site. Prior to the issuance of any demolition, grading and/or building permits (whichever occurs earliest), the project applicant shall prepare and submit a construction - operations plan that includes specifications of the equipment to be used during construction to the Community Development Director or the Director's designee. The plan shall be accompanied by a letter signed by an air quality specialist, verifying that the equipment included in the plan meets the standards set forth below:	<ul> <li>Applicant</li> <li>Construction Contractor</li> <li>Air Quality Specialist</li> </ul>	Prior to issuance of demolition, grading and/or building permit (whichever occurs earliest) and during construction.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> <li>Confirm construction – operations plan that includes specifications of construction equipment and accompanying letter signed by an air quality specialist is submitted to the City</li> <li>Confirm construction – operations plan is implemented throughout the construction phase.</li> </ul>	Prior to issuance of demolition, grading, and/or building permit (whichever occurs earliest) and throughout the construction phase as needed.			
• For all construction equipment larger than 25 horsepower used at the site, equipment shall at a minimum, meet United States Environmental Protection Agency (US EPA) or California Air Resources Board (CARB) particulate matter emissions standards for Tier 4 Final engines.							
<ul> <li>The construction contractor shall maintain records documenting its efforts to comply with this requirement, including equipment lists. Off-road equipment descriptions and information shall include, but are not limited to, equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, and engine serial number. The plan shall be submitted to the Community Development Director or the Director's designee for review and approval prior to the issuance of any demolition, grading and/or building permits (whichever occurs earliest).</li> </ul>							



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Section 3.4: Biological Resources			- -			
MM BIO-1: Avoid Disturbance of Nesting Birds and Pre-Construction Nesting Bird Surveys. If project activities occur during the nesting season for native birds (February 15 to August 31), the following measures shall be implemented to avoid or minimize the potential for adverse impacts on nesting migratory birds and raptors:	<ul> <li>Applicant</li> <li>Construction Contractor</li> <li>Qualified Biologist</li> </ul>	No more than 14 days prior to the start of project construction activities.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> <li>Confirm nesting bird surveys are conducted within 14 days of starting construction work.</li> </ul>	Prior to issuance of grading permit and throughout the construction phase as needed.		
• Pre-construction nesting bird survey for species protected by the Migratory Bird Treaty Act and California Fish and Game Code shall be conducted by a qualified biologist within a 100-foot radius of proposed construction activities for passerines and a 300-foot radius for raptors no more than 14 days prior to the start of construction activities.			<ul> <li>Confirm pre-construction clearance by qualified biologist.</li> <li>If active nests of protected species are found, confirm buffer zone has been established.</li> </ul>			
• If active nests are found, a qualified biologist shall determine the size of the buffers based on the nesting species and its sensitivity to disturbance. The size of the buffers may be reduced at the discretion of a qualified biologist, but no construction activities shall be permitted within the buffer if they are demonstrated to be likely to disturb nesting birds. Active nest sites shall be monitored periodically to determine time of fledging.						
MM BIO-2: Pre-Construction Swainson's Hawk Surveys. If project construction-related activities would take place during the nesting season (February through August), pre-construction surveys for nesting Swainson's hawks within 0.5-mile radius of the project shall be conducted within 14 days prior to construction activity. Surveys shall be conducted in a manner that maximizes the potential to observe the adult Swainson's hawks, as well as the nest/chicks second. To meet the California Department of Fish and Game's recommendations for mitigation and protection of Swainson's hawks, surveys shall be conducted for a 0.5-mile radius around all project activities, and if active nesting is identified within the 0.5-mile radius, consultation is required. Methodology for surveys can be found in the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley – Swainson's Hawk Technical Advisory Committee (2000).	<ul> <li>Applicant</li> <li>Construction Contractor</li> <li>Qualified Biologist</li> </ul>	No more than 14 days prior to the start of project construction activities.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> <li>Confirm surveys are conducted within 14 days of starting construction work.</li> <li>Confirm pre-construction clearance by qualified biologist.</li> <li>If active nests are found, confirm consultation has been conducted.</li> </ul>	Prior to issuance of grading permit and throughout the construction phase as needed.		

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MM BIO-3: Pre-Construction Burrowing Owl Surveys. A burrowing owl pre-construction survey shall take place before any construction activities commence. They shall be conducted whenever burrowing owl habitat or sign is encountered on or adjacent to (within 150 meters) of a project site. If a burrowing owl or sign is present on the Property, three additional protocol level surveys shall be initiated. Once these surveys have been completed to identify the owl's location, disturbance buffers shall be placed around each active burrow. No disturbance shall occur within 200 meters (approximately 655 feet) of occupied burrows during the breeding season (February 1 through August 31) and/or within 50 meters (approximately 165 feet) of occupied burrows during non-breeding season (September 1 through January 31). Preconstruction surveys shall be completed no more than 14 days prior to initiating ground disturbing activities. Surveys and mitigation shall be conducted and implemented in accordance with protocols established in the California Department of Fish and Wildlife's (CDFW) Staff Report on Burrowing Owl Mitigation (2012).	<ul> <li>Applicant</li> <li>Construction Contractor</li> <li>Qualified Biologist</li> </ul>	No more than 14 days prior to the start of project construction activities.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> <li>Confirm pre-construction survey has been conducted no more than 14 days prior to start of construction activities.</li> <li>If active burrows are found, confirm buffer zone has been established.</li> </ul>	Prior to issuance of grading permit and throughout the construction phase as needed.		
Section 3.5: Cultural Resources						
MM CUL-1: Cultural Materials Discovered During Construction. If any cultural resource is encountered during ground disturbance or subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified potential resource shall cease until a qualified archaeologist who meets the Secretary of the Interior's Standards and Guidelines for Professional Qualifications in archaeology and/or history evaluates the resource for its potential significance and determines whether the resource requires further study. If the qualified archaeologist determines that the cultural resource does not appear to be eligible for inclusion on the California Register of Historical Resources (CRHR), it will be appropriately documented on Department of Parks and Recreation (DPR) 523 series forms and project activity may resume. If the qualified archaeologist determines that the cultural resource appears eligible for inclusion on the CRHR, the archaeologist shall make recommendations to the City of Antioch on the measures to be implemented to	<ul> <li>Construction Contractor</li> <li>Qualified Archaeologist</li> </ul>	During the construction phase.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> <li>Confirm a qualified archaeologist is under contract prior to the start of any ground disturbing activities.</li> <li>If cultural resources are discovered during construction, confirm activities are halted until appropriate treatment measures are implemented.</li> </ul>	Prior to issuance of grading permit and throughout the construction phase as needed.		



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<ul> <li>protect the discovered resources. The measures may include avoidance, preservation in place, data recovery excavation, or other appropriate measures outlined in PRC Section 21083.2. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate DPR forms and evaluated for significance in terms of CEQA criteria. The applicant shall be responsible for the costs of retaining a qualified archaeologist and the recording of resources on DPR forms.</li> <li>No further grading shall occur within a 50-foot radius of the discovery until the City of Antioch approves the measures to protect these resources. Any archaeological artifacts recovered because of mitigation shall be donated to a qualified scientific institution approved by the City where they would be afforded long-term preservation to allow future scientific study.</li> </ul>							
MM CUL-2: Human Burials Encountered During Construction. If ground-disturbing activities uncover previously unknown human remains, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed: There shall be no further excavation or disturbance of the area where the human remains were found or within 50 feet of the find until the Contra Costa County Coroner and the appropriate City representative are contacted. Duly authorized representatives of the Coroner and the City shall be permitted onto the project area and shall take all actions consistent with Health and Safety Code Section 7050.5 and Government Code Sections 5097.98, et seq. Excavation or disturbance of the area where the human remains were found or within 50 feet of the find shall not be permitted to re- commence until the Coroner determines that the remains are not subject to the provisions of law concerning investigation of the circumstances, manner, and cause of any death. If the Coroner determines that the remains are Native American, the Coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with	<ul> <li>Construction Contractor</li> <li>Qualified Archaeologist</li> </ul>	During the construction phase.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> <li>Confirm a qualified archaeologist is under contract prior to the start of any ground disturbing activities.</li> <li>Confirm a qualified archaeologist is onsite monitoring during ground disturbing activities.</li> <li>If human remains are discovered during construction, confirm activities are halted until appropriate treatment measures are implemented.</li> </ul>	Prior to issuance of grading permit and throughout the construction phase as needed.			

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appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from further disturbance. If the landowner does not accept the MLD's recommendations, the owner or the MLD may request mediation by NAHC.						
Section 3.7: Geology and Soils						
MM GEO-1: Implement Geotechnical Design Recommendations. Prior to issuance of grading permits, the applicant shall incorporate all design specifications and recommendations contained within the site specific geotechnical analysis report into relevant project plans and specifications. These specifications pertain to but are not limited to expansive soils, building foundations, foundation drainage, and backfill of excavations. The project site plans shall be submitted to the City and reviewed as part of the building permit review process.	Applicant	Prior to issuance of grading permit.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> <li>Confirm all design specifications and recommendations contained in the geotechnical investigation report has been incorporated into project plans and submitted to the City.</li> </ul>	Once during building permit review process.		
MM GEO-2: Implement Potential Liquefaction	<ul> <li>Applicant</li> </ul>	Prior to issuance of	Monitoring Party:	Once during building		
Hazard Recommendations. Prior to the issue of building permits, the project applicant shall submit to the City of Antioch Building Division, for review and approval, a design-level geotechnical engineering report produced by a California Registered Civil Engineer or Geotechnical Engineer. The design-level report shall include measures to address construction requirements to mitigate, at a minimum, slope stability, liquefiable soils, and ground shaking. Recommendations of adequate and appropriate measures will be implemented, including, but not limited to designing foundations in a manner that limits the effects of liquefaction; the placement of an engineered fill with low liquefaction potential; and the alternative siting of structures in areas with a lower liquefaction risk.		grading permit.	<ul> <li>City of Antioch Community Development Department</li> <li>City of Antioch Building Department</li> <li>Monitoring Action:         <ul> <li>Confirm design-level engineering report produced by a California Registered Civil Engineer or Geotechnical Engineer nas been submitted to the City of Antioch Building Department.</li> <li>Confirm design-level report recommendations have been incorporated into project plans.</li> </ul> </li> </ul>	permit review process.		
MM GEO-3: Procedures for Paleontological Resources Discovered During Construction. If any paleontological resources are encountered during ground-disturbing or subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified resource shall cease and the City shall immediately be notified. The applicant shall retain a qualified paleontologist (as	<ul> <li>Construction Contractor</li> <li>Qualified Paleontologist</li> </ul>	During the construction phase.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> <li>Confirm selection of qualified paleontologist.</li> </ul>	Prior to issuance of grading permit and throughout the construction phase as needed.		



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approved by the City) to evaluate the find and recommend appropriate treatment of the inadvertently discovered paleontological resource. The appropriate treatment of an inadvertently discovered paleontological resource shall be implemented to ensure that impacts to the resource are avoided.			If paleontological resources are encountered during construction, confirm construction activities are halted until appropriate treatment measures are implemented.			
Refer to Mitigation Measure HYD-1: Prepare and Implem	ent a SWPPP in Sectior	a 3.10, Hydrology and Wa	ater Quality.			
Section 3.9: Hazards and Hazardous Materials						
<b>MM HAZ-1: Prepare and Implement a Hazardous</b> <b>Materials Business Plan.</b> The applicant shall prepare a Hazardous Materials Business Plan (HMBP) in accordance with CFR Title 40. The HMBP shall include inventory of any individual hazardous material or mixture in excess of any of the following quantities: 55 gallons (liquid); 500 pounds (solid); or 200 cubic feet (gases). The HMBP would include measures for safe storage, transportation, use, and handling of hazardous materials. The HMBP shall also include a contingency plan that described the facility's response procedures in the event of a hazardous materials release. The HMBP shall be submitted to Contra Costa Health Services prior to start of operation.	• Applicant	Prior to start of operation.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Contra Costa Health Services</li> <li>Monitoring Action:</li> <li>Confirm HMBP has been submitted to Contra Costa Health Services prior to start of operation.</li> <li>Confirm HMBP is implemented during operation of the proposed project.</li> </ul>	Prior to the start of operation and throughout operation phase as needed.		
<b>MM HAZ-2: Removal of Asbestos and Lead-Based</b> <b>Paint.</b> Prior to demolition of any onsite structures, the applicant shall retain a certified hazardous waste contractor to identify the presence of asbestos containing building materials and lead-based paint in existing structures. If such substances are found to be present, the contractor shall properly remove and dispose of them in accordance with federal and State law. All removal activities shall be completed prior to commencement of demolition activities. Following completion of removal activities, the applicant shall submit documentation to the City of Antioch verifying that all hazardous materials have been properly removed and disposed.	<ul> <li>Applicant</li> <li>Construction Contractor</li> <li>Certified Hazardous Waste Contractor</li> </ul>	Prior to start of demolition activities.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> <li>Confirm asbestos and lead based paint surveys have been conducted prior to demolition activities.</li> <li>If asbestos and lead based paint are determined to be present, ensure documentation verifying proper removal and disposal has been submitted to the City.</li> </ul>	Prior to the start of demolition activities.		
Refer to Mitigation Measures HYD-1: Prepare and Impler	ment a SWPPP in Section	on 3.10, Hydrology and V	Vater Quality.			
Section 3.10: Hydrology and Water Quality						
<b>MM HYD-1: Prepare and Implement a SWPPP.</b> Prior to the issuance of any construction-related permits, the applicant shall prepare and submit a Notice of Intent to the State Water Resources Control Board and prepare a Stormwater Pollution Prevention Plan (SWPPP) in	<ul><li> Applicant</li><li> Construction Contractor</li></ul>	Prior to issuance of grading permits and during construction.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> </ul>	Once at the time of contractor specifications review and throughout the construction phase as needed.		

	<b>_</b>	Monitoring Party and Monitoring Action	Monitoring Frequency	Verification of Implementation		
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compliance with the National Pollutant Discharge Elimination System General Construction Permit. The SWPPP shall include a detailed, site-specific listing of the potential sources of stormwater pollution; pollution prevention measures (erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills); description of the type and location of erosion and sediment control BMPs to be implemented at the project site; and a BMP monitoring and maintenance schedule to determine the amount of pollutants leaving the project site. A copy of the SWPPP must be current and remain onsite. Water quality BMPs identified in the SWPPP could include but are not limited to the following:		Confirm requirements of the approved SWPPP are included in project specifications and implemented throughout the construction phase.				
• Surface water runoff shall be controlled by directing flowing water away from critical areas and by reducing runoff velocity. Diversion structures, such as terraces, dikes, and ditches, shall collect and direct runoff water around vulnerable areas to prepared drainage outlets.						
• Surface roughening, berms, check dams, hay bales, or similar devices shall be used to reduce runoff velocity and erosion.						
<ul> <li>Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out. Construction materials, including topsoil and chemicals, shall be stored, covered, and isolated to prevent runoff losses and contamination of groundwater.</li> </ul>						
<ul> <li>Topsoil removed during construction shall be carefully stored and treated as an important resource. Berms shall be placed around topsoil stockpiles to prevent runoff during storm events.</li> </ul>						
• Fuel and vehicle maintenance areas shall be established away from all drainage courses, and these areas shall be designed to control runoff.						
• Temporary erosion control measures, such as silt fences, staked straw bales, and temporary revegetation, shall be employed for disturbed areas.						



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No disturbed surfaces will be left without erosion control measures in place during the winter and spring months.						
• A spill prevention and countermeasure plan shall be developed to identify proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used onsite. The plan will also require the proper storage, handling, use, and disposal of petroleum products.						
• Construction activities shall be scheduled to reduce land disturbance during peak runoff periods and to the immediate area required for construction. Soil conservation practices shall be completed during the fall or late winter to reduce erosion during spring runoff. Existing vegetation will be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction.						
Section 3.13: Noise						
<ul> <li>MM NOI-1: Project Fixed-Source Noise. The noise from all mechanical equipment associated with the project, including the car wash blowers, shall comply with the requirements in Policy 11.6.2.e in the City of Antioch General Plan and the maximum noise level limits listed in Section 9-5.1901, Paragraph A in the City of Antioch Code of Ordinances. Policy 11.6.2.e in the City of Antioch General Plan states the following: "When new development incorporating a potentially significant noise generator is proposed, require noise analyses to be prepared by a qualified acoustical engineer. Require the implementation of appropriate noise mitigation when the proposed project will cause new exceedances of General Plan noise objectives, or an audible (3.0 dB(A)) increase in noise in areas where General Plan noise objectives are already exceeded as the result of existing development."</li> <li>Section 9-5.1901, Paragraph A in the City of Antioch Code of Ordinances states "Uses adjacent to outdoor living areas (e.g., backyards for single-family homes and patios for multifamily units) and parks shall not cause an increase in background ambient noise which will exceed 60 CNEL."</li> </ul>	<ul> <li>Applicant</li> <li>Qualified Acoustical Engineer</li> </ul>	Prior to issuance of grading permit.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> <li>Confirm noise analysis has been conducted by a qualified acoustical engineer.</li> <li>Confirm equipment has been designed to incorporate mitigation measures as needed.</li> </ul>	Once during design review phase.		

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<ul> <li>MM NOI-2: Construction Activity. All construction activity shall follow the time and noise reduction measure requirements listed in Policies 11.6.2.i, j, k, m, and n in the City of Antioch General Plan and Sections 5-17.04 and 5-17.05 in the City of Antioch Code of Ordinances as follows:</li> <li>i. Ensure that construction activities are regulated as to hours of operation in order to avoid or mitigate</li> </ul>	<ul> <li>Applicant</li> <li>Construction Contractor</li> </ul>	Prior to issuance of grading permit and during construction.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> <li>Monitoring Action:</li> <li>Confirm requirements are implemented prior to and during construction.</li> </ul>	Once at the time of contractor specifications review and throughout the construction phase as needed.			
noise impacts on adjacent noise-sensitive land uses.							
j. Require proposed development adjacent to occupied noise sensitive land uses to implement a construction-related noise mitigation plan. This plan would depict the location of construction equipment storage and maintenance area, and document methods to be employed to minimize noise impacts on adjacent noise sensitive land uses.							
<ul> <li>Require that all construction equipment utilize noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.</li> </ul>							
<ul> <li>m. Prior to the issuance of any grading plans, the City shall condition approval of subdivisions and non-residential development adjacent to any developed/occupied noise-sensitive land uses by requiring applicants to submit a construction-related noise mitigation plan to the City for review and approval. The plan should depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of the project through the use of such methods as:</li> </ul>							
<ul> <li>The construction contractor shall use temporary noise-attenuation fences, where feasible, to reduce construction noise impacts on adjacent noise sensitive land uses.</li> </ul>							
<ul> <li>During all project site excavation and grading on-site, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is</li> </ul>							

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directed away from sensitive receptors nearest the project site.							
• The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.							
<ul> <li>The construction contractor shall limit all construction-related activities that would result in high noise levels to between the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday. No construction shall be allowed on Sundays and public holidays.</li> </ul>							
n. The construction-related noise mitigation plan required shall also specify that haul truck deliveries be subject to the same hours specified for construction equipment. Additionally, the plan shall denote any construction traffic haul routes where heavy trucks would exceed 100 daily trips (counting those both to and from the construction site). To the extent feasible, the plan shall denote haul routes that do not pass sensitive land uses or residential dwellings. Lastly, the construction-related noise mitigation plan shall incorporate any other restrictions imposed by the City.							
Section 5-17.04 "Heavy Construction Equipment Noise" and Section 5-17.05 "Construction Activity Noise" states it shall be unlawful for any person to operate heavy construction equipment or be involved in construction activity during the hours specified below:							
<ol> <li>On weekdays prior to 7:00 a.m. and after 6:00 p.m.</li> </ol>							
<ol> <li>On weekdays within 300 feet of occupied dwelling space, prior to 8:00 a.m. and after 5:00 p.m.</li> </ol>							
<ol> <li>On weekends and holidays, prior to 9:00 a.m. and after 5:00 p.m., irrespective of the distance from the occupied dwelling.</li> </ol>							
<b>MM NOI-3: Construction Vibration.</b> Follow the FTA construction mitigation measures listed in Section 7.2, Construction Vibration Assessment, in the Transit Noise	<ul><li> Applicant</li><li> Construction Contractor</li></ul>	Prior to issuance of grading permit and during construction.	<ul> <li>Monitoring Party:</li> <li>City of Antioch Community Development Department</li> </ul>	Once at the time of contractor specifications review and throughout			

Mitigation Measures	Implementation Party	Timing of Implementation	Monitoring Party and Monitoring Action	Monitoring Frequency	Verification of Implementation	
					Action	Date completed with Signature
and Vibration Impact Assessment Manual document (FTA Report No. 0123 September 2018).			<ul> <li>Monitoring Action:</li> <li>Confirm requirements are implemented prior to and during construction.</li> </ul>	the construction phase as needed.		
Design Considerations and Project Layout						
Route heavily loaded trucks away from residential streets. Select streets with the fewest homes if no alternatives are available.						
<ul> <li>Operate earth-moving equipment on the construction lot as far away from vibration- sensitive sites as possible.</li> </ul>						
Sequence of Operations						
• Phase demolition, earth-moving, and ground- impacting operations so as not to occur in the same time period. Unlike noise, the total vibration level produced could be substantially less when each vibration source operates separately.						
<ul> <li>Avoid nighttime activities. Sensitivity to vibration increases during the nighttime hours in residential neighborhoods.</li> </ul>						
Alternate Construction Methods						
<ul> <li>Avoid vibratory rollers and packers near sensitive areas.</li> </ul>						
Vibration Mitigation Plan						
Describe and commit to a mitigation plan that will be developed and implemented during the engineering and construction phase when the information available during the project development phase will not be sufficient to define specific construction vibration mitigation measures. The objective of the plan should be to minimize construction vibration damage using all reasonable and feasible means available. The plan should include the following components:						
<ul> <li>A procedure for establishing threshold and limiting vibration values for potentially affected structures, based on an assessment of each structure's ability to withstand the loads and displacements due to construction vibrations.</li> </ul>						
<ul> <li>A commitment to develop a vibration monitoring plan during the engineering phase and to implement a compliance monitoring program during construction.</li> </ul>						

Mitigation Measures	Implementation Party	Timing of Implementation	Monitoring Party and Monitoring Action	Monitoring Frequency	Verification of Implementation				
					Action	Date completed with Signature			
Section 3.18: Tribal Cultural Resources									
Refer to Mitigation Measures CUL-1: Cultural Materials Discovered During Construction and CUL-2: Human Burials Encountered During Construction in Section 3.5, Cultural Resources.									