

## **FRAQMD Construction Phase Mitigation Measures**

1. The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained prior to and for the duration of onsite operation.
2. Utilize existing power sources (e.g., line power) or clean fuel generators rather than temporary power generators.
3. Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.
4. All grading operations on a project should be suspended when winds exceed 20 miles per hour or when winds carry dust beyond the property line despite implementation of all feasible dust control measures.
5. Work areas shall be watered or treated with Dust Suppressants as necessary to prevent fugitive dust violations.
6. An operational water truck should be available at all times. Apply water to control dust as needed to prevent visible emissions violations and offsite dust impacts. Travel time to water sources should be considered and additional trucks used if needed.
7. Onsite dirt piles or other stockpiled material should be covered, wind breaks installed, and water and/or soil stabilizers employed to reduce wind-blown dust emissions. Incorporate the use of approved non-toxic soil stabilizers according to manufacturer's specifications to all inactive construction areas.
8. All transfer processes involving a free fall of soil or other particulate matter shall be operated in such a manner as to minimize the free fall distance and fugitive dust emissions.
9. Apply approved chemical soil stabilizers according to the manufacturers' specifications, to all inactive construction areas (previously graded areas that remain inactive for 96 hours) including unpaved roads and employee/equipment parking areas.
10. To prevent track-out, wheel washers should be installed where project vehicles and/or equipment exit onto paved streets from unpaved roads. Vehicles and/or equipment shall be washed prior to each trip. Alternatively, a gravel bed may be installed as appropriate at vehicle/equipment site exit points to effectively remove soil buildup on tires and tracks to prevent/diminish track-out.
11. Paved streets shall be swept frequently (water sweeper with reclaimed water recommended; wet broom) if soil material has been carried onto adjacent paved, public thoroughfares from the project site.
12. Provide temporary traffic control as needed during all phases of construction to improve traffic flow, as deemed appropriate by the Department of Public Works and/or Caltrans and to reduce vehicle dust emissions.
13. Reduce traffic speeds on all unpaved surfaces to 15 miles per hour or less and reduce unnecessary vehicle traffic by restricting access. Provide appropriate training, onsite enforcement, and signage.
14. Reestablish ground cover on the construction site as soon as possible and prior to final occupancy, through seeding and watering.

15. The proponent shall assemble a comprehensive inventory list (i.e. make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that will be used an aggregate of 40 or more hours for the construction project and apply the following mitigation measure:

The project shall provide a plan for approval by FRAQMD demonstrating that the heavy-duty (equal to or greater than 50 horsepower) off-road equipment to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 5 percent ROG reduction, 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at time of construction. A Construction Mitigation Calculator (MS Excel) may be downloaded from the SMAQMD web site to perform the fleet average evaluation <http://www.airquality.org/ceqa/index.shtml> . Acceptable options for reducing emissions may include use of late model engines (Tier 4), CARB Approved low-emission diesel products, alternative fuels, engine retrofit technology (Carl Moyer Guidelines), after-treatment products, voluntary offsite mitigation projects, provide funds for air district offsite mitigation projects, and/or other options as they become available. The District should be contacted to discuss alternative measures.

The results of the Construction Mitigation Calculator shall be submitted and approved by the District PRIOR TO BEGINNING WORK. The project shall provide a monthly summary of heavy-duty off-road equipment usage to the District throughout the construction of the project.

16. The Lead Agency may also contribute to the FRAQMD's Off-Site Mitigation Program to reduce project emissions to less than significant. The lead agency should include contribution to the off-site mitigation program as a mitigation measure in its environmental analysis. The lead agency will need to compile a list of all emission sources and consult with the FRAQMD staff to implement this mitigation measure. The project will need to track emissions generated from equipment and vehicles throughout the project phase that is estimated to exceed the threshold (for example, if construction phase exceed the threshold, then track emissions from off-road, portable, and on-road equipment and vehicles). Please consult with the FRAQMD for more information on contributing to an Off-Site Mitigation Program.