



South Coast Air Quality Management District

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SENT VIA E-MAIL:

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Draft Environmental Impact Report (Draft EIR) for the Proposed Arlington High School Modernization and New Construction Measure O Project (SCH No.: 2020029047)

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments include recommended revisions to the health risk assessment and health risk reduction strategies that the Lead Agency should include in the Final EIR.

South Coast AQMD Staff's Summary of Project Description

The Lead Agency is proposing to modernize the existing Arlington High School, which will include the demolition of 6,720 square feet of portable buildings, construction of 21,017 square feet of school facilities, expansion of a sports field from 1,250 seats to 2,250 seats, and interior and exterior building modernizations on 45 acres (Proposed Project). The Proposed Project is located at 2951 Jackson Street on the northwest corner of Jackson Street and Lincoln Avenue within the City of Riverside. Construction of the Proposed Project is anticipated to occur over one year from 2021 through 2022¹. Upon review of Figure 4-1: *Aerial Photograph* in the Draft EIR, South Coast AQMD staff found that the Proposed Project will be located within 1,100 feet of State Route (SR-91) and adjacent to existing railroad tracks².

South Coast AQMD Staff's Summary of the Air Quality Analysis and Health Risk Assessment

In the Air Quality Analysis Section, the Lead Agency quantified the Proposed Project's construction emissions and compared those emissions to South Coast AQMD's recommended regional and localized air quality CEQA significance thresholds. Based on the analysis, the Lead Agency found that air quality impacts from the Proposed Project's construction would be less than significant³. The Lead Agency also quantified the Proposed Project's operational emissions and found that operational emissions would also be less than significant⁴. As such, no air quality mitigation measures were included in the Draft EIR⁵.

Due to the Proposed Project's proximity to SR-91 and existing railroad tracks, the Lead Agency prepared a Health Risk Assessment (HRA) in the Draft EIR to disclose potential health risks to sensitive receptors (e.g., school students and staff) at the Proposed Project. The Lead Agency found that cancer risk from the surrounding high-volume freeway and existing railroad tracks would be 1.7 in one million for students⁶.

¹ Draft EIR. Section 3 Project Description. Page 3-4.

² *Ibid.* Section 4 Environmental Setting. Figure 4-1-*Aerial Photograph*. Page 4-7.

³ *Ibid.* Section 8.2 Impacts Found Not to Be Significant: Air Quality. Pages 8-4 through 8-9.

⁴ *Ibid.*

⁵ *Ibid.*

⁶ Draft EIR. Appendix I: Health Risk Assessment. Page 19.

and 6 in one million for staff⁷, both of which would not exceed South Coast AQMD's CEQA significance threshold of 10 in one million for cancer risk⁸.

South Coast AQMD Staff's Comments

Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptors include schools, daycare centers, nursing homes, elderly care facilities, hospitals, and residential dwelling units. As stated above, the Proposed Project will include, among others, modernization of an existing high school which is within 1,100 feet of SR-91 and adjacent to existing railroad tracks.

In 2018, SR-91 had 212,000 annual average daily trips, 25% of which was comprised of 4- and 5-axle trucks at Van Buren Street (Post Mile 14.079)⁹. The Lead Agency also found that 18 freight trains and 27 passenger trains pass by the school per day¹⁰. Sensitive receptors attending or working at the Proposed Project could be exposed to diesel particulate matter (DPM) emissions from diesel fueled, heavy-duty trucks passing by on SR-91 or from locomotives traveling on the adjacent railroad tracks. The California Air Resources Board (CARB) has identified DPM as a toxic air contaminant based on its carcinogenic effects¹¹.

Notwithstanding the court rulings, South Coast AQMD staff recognizes that Lead Agencies that approve CEQA documents retain the authority to include any additional information they deem relevant to assessing and mitigating the environmental impacts of a project. Because of South Coast AQMD's concern about the potential public health impacts of siting sensitive populations in proximity to sources of air pollution, such as high-volume freeways and railroad tracks, South Coast AQMD staff recommends that the Lead Agency review and consider the following comments when making local planning and land use decisions.

HRA for Sensitive Receptors Sited Near a Freeway and Other Sources of Air Pollution

In the Draft EIR, the Lead Agency prepared a mobile source HRA to disclose potential health risks to students attending and staff working at the Proposed Project. Upon review of the HRA analysis, South Coast AQMD staff found that the Proposed Project's cancer risk was likely under-estimated in the Draft EIR. Detailed comments are as follows:

- a) In Appendix I *Health Risk Assessment* the Lead Agency explains that approximately 27 passenger trains and 18 freight trains pass by the Proposed Project daily¹². However, upon review of the technical appendices, South Coast AQMD staff found that the Lead Agency is assuming only six passenger trains will pass by the Proposed Project per day¹³. South Coast AQMD staff recommends the Lead Agency revise the HRA based on 27 daily passenger train trips in the Final EIR. Alternatively, Lead Agency should provide reasons why it is more appropriate to analyze

⁷ *Ibid.*

⁸ South Coast AQMD has developed the CEQA significance threshold of 10 in one million for cancer risk. When South Coast AQMD acts as the Lead Agency, South Coast AQMD staff conducts a HRA, compares the maximum cancer risk to the threshold of 10 in one million to determine the level of significance for health risk impacts, and identifies mitigation measures if the risk is found to be significant.

⁹ California Department of Transportation. 2018. *Truck Traffic: Average Daily Truck Traffic*. Accessed at: <https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/f0017681-2016-aadt-truck-a11y.pdf>

¹⁰ Draft EIR. Appendix I: *Health Risk Assessment*. Section 4.12 Locomotive Emissions. Page 12.

¹¹ California Air Resources Board. August 27, 1998. Resolution 98-35. Accessed at: <http://www.arb.ca.gov/regact/diesltac/diesltac.htm>.

¹² Draft EIR. Appendix I: *Health Risk Assessment*. Section 4.12 Locomotive Emissions. Page 12.

¹³ *Ibid.* Appendix A: Emission Rate Calculations. "Source 2 Locomotives – BNSF and Metrolink". PDF Page 37.

the Proposed Project's health risks based on six passenger trips per day supported by substantial evidence in the record.

- b) The Lead Agency modeled SR-91's operational emissions during the hours of school operation (Mondays through Fridays 7:00AM-3:00PM, or eight hours of operation per day) using the hour-of-day variable emission factors option in AERMOD¹⁴. However, in doing so, the Lead Agency did not properly account for the continuous 24-hour operations of vehicles and trucks on SR-91. The U.S. EPA AERMOD User Guide indicates that when using hour-of-day emission scalars, the scalars must add up to total 24 hours¹⁵. Here, the Lead Agency used hour-of-day variable emission scalars that add up to a total of 8.5 hours and six hours for passenger vehicles and trucks, respectively¹⁶. South Coast AQMD staff recommends emission sources from SR-91 be modeled as continuous operations (24 hours/day, seven days/week, and 52 weeks/year) by using the default emission rate of 1g/s, 24 hours a day, for 365 days a year in AERMOD to estimate the cancer risk. Alternatively, if the Lead Agency has substantial evidence to support the restriction of operating hours on SR-91, the Lead Agency should revise the hour-of-day variable emission scalar in AERMOD and use 3 for each hour of operation and 0 for each hour of non-operation to account for 24 hours over a day (24 hours/day divided 8 hours of operation/day).
- c) The Lead Agency used an exposure duration of four years to calculate cancer risk to students at the Proposed Project.¹⁷ The 2015 revised Office of Environmental Health Hazard Assessment (OEHHA) guidelines acknowledge that children are more susceptible to exposures to air toxics and have revised the way cancer risks are estimated to take this into account. When calculating cancer risk to students, South Coast AQMD staff recommends that the Lead Agency start from the third trimester, calculate cancer risk for each individual age group (i.e., the third trimester to 0 year age bin, the 0 to 2 years age bin, the 2 to 9 years age bin, and the 9 to 16 years age bin), assign proper exposure parameters for each individual age group, sum cancer risks for individual age groups to estimate cancer risk for a 30-year exposure duration, and compare the summed cancer risk to South Coast AQMD CEQA significance threshold of 10 in a million for cancer risk to determine the level of significance in the Final EIR.

Health Risk Reduction Strategies

As discussed above, sensitive receptors attending school and working at the Proposed Project could be exposed to DPM emissions from mobile sources traveling on SR-91 (e.g., diesel fueled, heavy-duty trucks) or from locomotives traveling on the adjacent railroad tracks. Many strategies are available to reduce exposure, including, but not limited to, building filtration systems with MERV 13 or better, or in some cases, MERV 15 or better is recommended; building design, orientation, location; vegetation barriers or landscaping screening, etc. Enhanced filtration units are capable of reducing exposures. Installation of enhanced filtration units can be achieved during interior modernization activities and can be verified during occupancy inspection prior to the issuance of an occupancy permit.

¹⁴ *Ibid.* Appendix A: Emission Rate Calculations. "Variable Emissions Worksheet Caltrans PeMS Data". PDF page 32.

¹⁵ U.S. EPA. "User's Guide for AMS/EPA Regulatory Model (AERMOD). Section 3.3.11 *Specifying variable emission factors (EMISFACT)*". Page 3-128. Accessed at: https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf. Accessed on June 9th, 2020.

¹⁶ *Ibid.* Appendix A: Emission Rate Calculations. "Variable Emissions Worksheet Caltrans PeMS Data". PDF page 32.

¹⁷ Draft EIR. Appendix I *Health Risk Assessment*. Page 2.

Enhanced filtration systems have limitations. In a study that South Coast AQMD conducted to investigate filters¹⁸, a cost burden is expected to be within the range of \$120 to \$240 per year to replace each filter. The initial start-up cost could substantially increase if an HVAC system needs to be installed. In addition, because the filters would not have any effectiveness unless the HVAC system is running, there may be increased energy costs to the building tenants. It is typically assumed that the filters operate 100 percent of the time while sensitive receptors are indoors, and the environmental analysis does not generally account for the times when sensitive receptors have windows or doors open or are in common space areas of a project. Moreover, these filters have no ability to filter out any toxic gases from vehicle exhaust. Therefore, the presumed effectiveness and feasibility of any filtration units should be carefully evaluated in more detail and disclosed to prospective residences prior to assuming that they will sufficiently alleviate exposures to DPM emissions.

Because of limitations, to ensure that enhanced filters are enforceable throughout the lifetime of the Proposed Project and effective in reducing exposures to DPM emissions, South Coast AQMD staff recommends that the Lead Agency provide additional details regarding the ongoing, regular inspection, maintenance, and monitoring of filters in the Final EIR. To facilitate a good-faith effort at full disclosure and provide useful information to students, parents, and staff who will attend school and work at the Proposed Project, which is adjacent to SR-91 and existing railroad tracks, at a minimum, the Final EIR should include the following information:

- a) Disclose the potential health risks to prospective students, parents, and staff from attending school and working in proximity to sources of air pollution (e.g., high-volume freeways, railroad tracks, etc.) and the reduced effectiveness of the air filtration system when windows are open and/or when students and staff are outdoors (e.g., in the common usable open space areas);
- b) Identify the responsible implementing and enforcement agency such as the Lead Agency, to ensure that enhanced filtration units are installed on-site at the Proposed Project before a permit of occupancy is issued;
- c) Identify the responsible implementing and enforcement agency, such as the Lead Agency to ensure that enhanced filtration units are inspected, maintained, and replaced regularly;
- d) Disclose the potential increase in energy costs for running the HVAC system to school facility operator(s);
- e) Provide information to school facility operator(s) on where the MERV filters can be purchased;
- f) Provide recommended schedules (e.g., every year or every six months) for replacing the enhanced filtration units and disclose that information to school facility operator(s);
- g) Identify the responsible entity, such as the Lead Agency or school facility operator(s), for ensuring enhanced filtration units are replaced on time, if appropriate and feasible (if the building operators should be responsible for the periodic and regular purchase and replacement of the enhanced filtration units, the Lead Agency should include this information in the disclosure form);
- h) Identify, provide, and disclose ongoing cost sharing strategies, if any, for replacing the enhanced filtration units;

¹⁸ This study evaluated filters rated MERV 13 or better. Accessed at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/aqmdpilotstudyfinalreport.pdf>. Also see 2012 Peer Review Journal article by South Coast AQMD: <http://d7.iqair.com/sites/default/files/pdf/Polidori-et-al-2012.pdf>.

- i) Set School District-wide or Proposed Project-specific criteria for assessing progress in installing and replacing the enhanced filtration units; and
- j) Develop a School District-wide or Proposed Project-specific process for evaluating the effectiveness of the enhanced filtration units and maintain records to demonstrate results of the evaluation.

Conclusion

Pursuant to California Public Resources Code Section 21092.5(a) and CEQA Guidelines Section 15088(b), South Coast AQMD staff requests that the Lead Agency provide South Coast AQMD staff with written responses to all comments contained herein prior to the certification of the Final EIR. In addition, issues raised in the comments should be addressed in detail giving reasons why specific comments and suggestions are not accepted. There should be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice (CEQA Guidelines Section 15088(c)). Conclusory statements do not facilitate the purpose and goal of CEQA on public disclosure and are not meaningful, informative, or useful to decision makers and to the public who are interested in the Proposed Project.

South Coast AQMD staff is available to work with the Lead Agency to address any air quality questions that may arise from this comment letter. Please contact Alina Mullins, Assistant Air Quality Specialist, at amullins@aqmd.gov if you have questions or wish to discuss the comments.

Sincerely,

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Planning, Rule Development & Area Sources

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