



Memorandum

Date: May 16, 2025

To: Scott Connelly, Seven77 Housing Partners, LLC

From: Philip Ault, Director of Noise and Air Quality, FirstCarbon Solutions
Tsui Li, Senior Air Quality Scientist

Subject: Supplemental Air Quality and Noise Analysis for the Proposed Seven77 Sunnyvale Saratoga Road Project, City of Sunnyvale, Santa Clara County, California

The 5.32-acre project site is located in the City of Sunnyvale and is bounded by commercial developments and Sunnyvale Saratoga Road to the east, residential development and South Mathilda Avenue to the south and west, open land and Sunnyvale Municipal Tennis Center to the west, and commercial and residential development to the north. The proposed project would involve demolishing existing improvements at the project site to construct an apartment and townhome development. The western portion of the site would be developed with 160 apartment units and the eastern portion of the site would be developed with 80 townhomes.

FirstCarbon Solutions (FCS) prepared this memorandum to qualitatively evaluate the potential air quality and noise impacts from a two-phase construction schedule. According to applicant-provided information, the townhomes to the east would be constructed first. During that time, the entire site would be demolished and rough graded. Off-site improvements on Sunnyvale Saratoga and the southern access road on Matilda would also occur at that time. The construction of the apartments would occur at a later date. Therefore, it is possible that the residents at the townhomes would have moved in during the construction of the apartments.

The analysis below discusses the potential air quality and noise impacts resulting from the two-phase construction and demonstrates that the two-phase construction schedule would not alter the findings in the FCS Air Quality and Greenhouse Gas Emissions Technical Analysis dated November 14, 2024, and the Noise Impact Analysis Report dated November 12, 2024.

Air Quality

As it relates to regional emissions, the schedule as considered in the original Air Quality analysis represents a more conservative evaluation compared to the two-phase construction schedule. Emission factors for construction equipment decrease as the analysis year increases due to improvements in technology and compliance with more stringent regulatory requirements. Therefore, construction emissions would decrease if part of the construction is moved to later years.

In addition, the Bay Area Air Quality Management District (BAAQMD)'s construction regional emission thresholds are based on average daily emissions.¹ Therefore, if the construction schedule is constructed in two phases (i.e., lengthened), the proposed project's construction average daily emissions would decrease.

With regard to regional emissions from the standpoint of construction (of the apartments) and operation (of the townhomes) overlapping, the proposed project would not result in greater impacts than what was analyzed in the Air Quality analysis. The grading phase is the most intensive construction phase and generally results in the highest level of emissions compared to other phases. In other words, subsequent construction phases of the apartments (i.e., building construction, architectural coating, and paving) generate significantly lower emissions after grading is complete. Therefore, even if construction of the apartments and operation of the townhomes would overlap, the overlapping emissions would not be materially different from the level of emissions analyzed. Furthermore, given that the proposed project's construction and operation criteria emission pollutants (shown in Tables 5 and 6 of the November 14, 2024, Air Quality Analysis) are substantially below BAAQMD's thresholds, the proposed project would not exceed BAAQMD construction or operation thresholds even if building construction would occur in phases.

For the construction Health Risk Assessment (HRA), the off-site Maximally Exposed Individual Receptor (MEIR) would be exposed to potential TACs for the entirety of project construction, which serves as a conservative indicator of the level of health risks that could be experienced by new receptors moving into the site while building construction is ongoing. The MEIR of the overall construction impacts was determined to be the multi-family residence immediately to the south of the project site located at Fall River Terrace (585596 UTM E 4135817 UTM North).

The grading phase is the most intensive construction phase and grading would be completed prior to completion of the townhome construction and the subsequent introduction of new receptors. Given the proposed project's cancer risk and chronic non-cancer hazard index (HI) at the MEIR during the entire construction is below the BAAQMD thresholds (Table 10 of the November 14, 2024, Air Quality Analysis), the entirety of the proposed project would not exceed the acceptable cancer risk or chronic non-cancer HI. The townhome receptors would only be subject to a fraction of the risks during the building construction of the apartments.

Furthermore, the prevailing wind is from the northwest, meaning that the TACs would be blown southeast from the apartment construction site and would not concentrate near the townhomes. Therefore, the townhome residents would not be exposed to TACs and associated health risks at levels beyond BAAQMD thresholds.

As it relates to consistency with applicable air quality plans, odors, and greenhouse emissions, the proposed project's operation would be the same and therefore would not alter the relevant analyses as found in the November 14, 2024, Air Quality Analysis.

¹ Bay Area Air Quality Management District (BAAQMD). CEQA Thresholds and Guidelines Section 5 Project Level Air Quality Impacts. 2022. https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-5-project-air-quality-impacts_final-pdf.pdf?rev=de582fe349e545989239cbbc0d62c37a&sc_lang=en. Accessed May 14, 2025.

Given the above reasons, the phased construction schedule would not alter the findings in the November 14, 2024, Air Quality and Greenhouse Gas Emissions Technical Analysis.

Noise

As it relates to potential noise impacts, the schedule as analyzed in the original Noise Impact Analysis dated November 12, 2024, represents a more conservative construction noise impact analysis compared to the two-phase construction schedule. The report analyzed reasonable worst-case construction noise impacts as measured at off-site receptors, including worst-case construction traffic noise impacts. For example, the report identified that the building construction phase would generate the highest average daily trips. However, with implementation of a phased development, these highest average daily trips would be reduced since only a portion of the site would be undergoing vertical building construction at a time. Similarly, the grading phase is the most intensive construction phase and results in the highest noise levels compared to other phases. Since the entire site would be graded at one time, the subsequent phases of construction would have lower construction noise levels than the reasonable worst-case analyzed in the noise report.

Similarly, the schedule as analyzed in the original Noise Impact Analysis Report represents an equivalent operational noise impact analysis compared to the two-phase development schedule because the analysis identified the reasonable worst-case operational noise impacts for both mobile and stationary noise sources with implementation of the fully built-out project. For example, the Average Daily Traffic (ADTs) with the buildout of the entire site would be greater than the ADTs that would be associated with temporary operation of only a portion of the proposed project. Also, the original analysis identified the reasonable worst-case stationary source operational noise impacts to off-site receptors, which would not change even with the temporary operation of only a portion of the proposed project.

The proposed two-phase construction phasing would also not change any of the reasonable worst-case construction and operational vibration impacts already analyzed and identified as being less than significant. Furthermore, since the development would still take place on the same project site, potential airport noise would still result in no impact to any phase of the proposed development.

Given the above reasons, a two-phase construction schedule would not alter the findings in the Noise Impact Analysis Report dated November 12, 2024.

Conclusion

As demonstrated above, implementation of a two-phase construction schedule would not result in any new or more severe impacts than what were already identified in the Air Quality and Greenhouse Gas Emissions Technical Analysis and Noise Impact Analysis Report prepared for the proposed project.