

# APPENDIX C

## **Supplemental Modified Alternative 2 Environmental Analyses**



C-1 Supplemental Air Quality,  
Greenhouse Gas, Energy,  
and Noise and Vibration  
Assessment, 6220 West  
Yucca Project, Los  
Angeles, California

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# memorandum

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to Riley Realty, LP

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from Alan Sako, LEED AP BD+C, Principal Air Quality and Noise Analyst, ESA

subject Supplemental Air Quality, Greenhouse Gas, Energy, and Noise and Vibration Assessment, 6220 West Yucca Project, Los Angeles, California

This Memorandum provides a supplemental analysis to the previous Air Quality, Greenhouse Gas Emissions, Energy, and Noise and Vibration impacts analyses prepared by ESA, as documented in Sections IV.B, IV.D, IV.F, and IV.I and in Appendices C, E, G, and I of the Draft EIR for the 6220 W. Yucca Project (ENV-2014-4706-EIR, State Clearinghouse No.: 2015111073). The purpose of this Memorandum is to analyze the potential impacts of the Modified Alternative 2 to air quality, greenhouse gas (GHG) emissions, energy, and noise and vibration for compliance with the California Environmental Quality Act (CEQA).

## 1. Modified Alternative 2 Description

The Modified Alternative 2 would be located on the same approximately 1.16-acre (net area) property as the Project on the south side of West Yucca Street between Argyle Avenue and Vista Del Mar Avenue, with addresses of 6216 Yucca Street, 1777-1779 N. Vista Del Mar Avenue, 1771 N. Vista Del Mar Avenue, and 1765-1767 N. Vista Del Mar Avenue. The Modified Alternative 2 proposes to eliminate the Project's hotel uses (136 rooms) and to build residential uses and ground level/retail restaurant space only. The Modified Alternative 2 would be similar in use to Alternative 2, the "Primarily Residential-Mixed Use Alternative," evaluated in the Draft EIR.

The Modified Alternative 2, as with Alternative 2, would include a total of 271 residential units, as compared to the Project's total of 210 residential units. The residential units under the Modified Alternative 2 would include two single-family residences on N. Vista Del Mar in addition to the 269 multi-family units in the new building, for a total of 271 units. The Project's 3-story, 13-unit Building 2 proposed along N. Vista Del Mar Avenue (within the East Parcels) would not be constructed under the Modified Alternative 2. Under the Modified Alternative 2, the residence at 1771 N. Vista Del Mar Avenue would not be demolished as under the Project, but would remain as a single-family use, and, similarly, the residence at 1765-1767 N. Vista Del Mar Avenue would also be retained. Furthermore, the residence at 1765-1767 Vista Del Mar Avenue, which had previously been converted from a single-family residence to a duplex with an additional unit over the garage, will be returned to a single-family home under the Modified Alternative 2.

The Modified Alternative 2 would increase the Project's open space from 24,350 square feet to 30,400 square feet. The open space would include a 2,820-square-foot publicly-accessible park at the corner of Vista Del Mar Avenue and Yucca Street. The park would replace the existing fenced and paved parking lot currently occupying that location and would be available for use by the surrounding neighborhood. The proposed park would include passive park facilities (i.e., common open space and landscaped areas with sitting areas shaded by trees) serving the local neighborhood. Parking facilities under the Modified Alternative 2 would be accessed via a single driveway on Argyle Avenue, thus, eliminating the driveway along on Yucca Street proposed by the Project.

The Modified Alternative 2's single building, Building 1, would provide 312,246 square feet of new floor area. Because the existing on-site residences along Vista Del Mar contain 4,702 square feet of existing floor area, the total Modified Alternative 2 floor area would 316,948 square feet, which is the same as the Project. As with the Project, the Modified Alternative 2's anticipated Floor Area Ratio (FAR) would be 6.6:1. The Modified Alternative 2's new Building 1 would provide a total of 269 residential units. That building would be developed with a narrower east/west profile than the Project's Building 1, and as compared to the Project's building height of 20 stories (255 feet), the Modified Alternative 2's building height would be 30 stories (348 feet to the top of the parapet). Building heights are measured from the low point of the property to the top of the parapet. Under the Modified Alternative 2, the building dimensions would be reduced to approximately 80 feet x 180 feet as compared to the Project's high-rise component's dimension of 80 feet x by approximately 257 feet. The reduction would occur along the east/west axis, thus reducing the Modified Alternative 2's high-rise profile as viewed from the north from Yucca Street and from the south. This reduction would also allow for a greater setback of the high-rise component from Vista Del Mar Avenue. The Modified Alternative 2's high-rise component would rise above the five-story parking podium, which would be faced by ground-level retail/restaurant uses. The Modified Alternative 2 would have an east/west dimension of approximately 180 feet. By comparison, the east/west dimension of the Project's 20-story tower would be approximately 257 feet. The north/south dimension of the high-rise component would be 80 feet, similar to the Project.

Similar to the Project, the Modified Alternative 2 would have a 16-foot side yard setback along its southern edge. The Modified Alternative 2's high-rise component would be set back from the Vista Del Mar residential property (East Parcels) by approximately 77 feet and from Vista Del Mar Avenue by approximately 162 feet. It would be set back from the Argyle Avenue sidewalk by 17 feet (similar to the Project) and from Yucca Street by approximately 52 feet (similar to the Project).

Retail/restaurant uses (7,780 square feet) would be located along the Modified Alternative 2's Yucca Street frontage at Level 1 and at the corner of Yucca Street and Argyle Avenue in the P-1 Level, and would be accessible from the street level at that point. Residential uses would occupy Levels 6 through Level 29 of Building 1. Approximately 14,720-square-feet of open space, including a swimming pool, seating and landscaping would be provided at the top of the 5-level podium at Level 6. Loading, recycling, trash removal, and collection for the residential and commercial/restaurant uses would occur in designated areas within the interior areas of Level 1 such that noise, odor, or other impacts to nearby residents would be minimized. The Modified Alternative 2's features with respect to lighting and signage, site security and sustainability would be similar to the Project's features.

The Modified Alternative 2 would have one subterranean parking level and one partially subterranean parking level under the new building. Also, with the elimination of Project's Building 2, the excavation of the subterranean parking structure for Building 2 would not be required. Demolition debris under the Modified Alternative 2 would be reduced compared to the Project since the existing residences in the East Parcels would remain in place and

would not be demolished. Overall, the amount of soil export required for the Modified Alternative 2 is estimated to be approximately 24,000 cubic yards (cy) of soil, which is substantially less than conservative analysis of export of 120,000 CY of soils analyzed for the Project in the Draft EIR. Excavation depths for the Modified Alternative 2 would be a maximum of approximately 20 feet and approximately 40 feet for footings, slightly less than under the Project.

Attachment **Figure 3-1**, *Conceptual Site Plan – Modified Alternative 2*, shows the relative dimensions and setbacks of Building 1. It also shows the location of the two residential properties on the East Parcels that would be single-family dwellings. **Figure 3-2**, *Level 6 Plan – Modified Alternative 2*, illustrates the first residential floor and the standard layout of residential units, as well as the podium open space. The top level of Building 1, Level 30, would provide a 6,260-square-foot roof garden and swimming pool. This level is illustrated in **Figure 3-3**, *Level 30 Plan – Modified Alternative 2*. The profile of the high-rise component is illustrated in **Figure 3-4**, *East/West Building Section – Modified Alternative 2*, and in **Figure 3-5**, *North Elevation – Modified Alternative 2*. The full plan set for the Modified Alternative 2, including renderings, elevations, floor plans, and landscape plans are contained in the Final EIR as Appendix B.

## **2. Modified Alternative 2 Environmental Impacts**

### **a. Air Quality**

#### ***Consistency with Air Quality Management Plan***

As previously determined, the Project would be consistent with the AQMP through its incorporation of appropriate control strategies for emissions reduction during construction, including compliance with SCAQMD Rule 403, CARB off-road diesel standards, L.A. Green Building Code, Air Pollutions Control Officers Association (CAPCOA) recommendations, and Green Building Measures under PDF-AQ-1. The Modified Alternative 2 would similarly incorporate the same control strategies in the same manner as the Project. The Modified Alternative 2 would also like the Project be consistent with the applicable growth projections and control strategies used in the development of the AQMP, and would not jeopardize attainment of the air quality levels identified in the Plan, for the same reasons as the Project. During operation, the Modified Alternative 2 would incorporate control strategies set forth in the AQMP such as location efficiency, increased density, transit accessibility, improved development design, and other measures in the same manner as the Project. Like the Project, and for the same reasons, the Modified Alternative 2 would be consistent with the City's growth projections and policies of the General Plan Air Quality Element for achieving emission reduction goals. As such, impacts with respect to consistency with AQMP and General Plan air quality policies would be less than significant for the Modified Alternative 2 in the same manner and for the same reasons the Project was previously determined to be consistent with the AQMP and applicable General Plan policies.

#### ***Violation of Air Quality Standards, Substantial Pollutant Concentrations, and Other Emissions***

##### **Construction**

Like the Project, the Modified Alternative 2's construction phases have the potential to generate emissions, including TACs, through the use of heavy-duty construction equipment, generation of construction traffic, fugitive dust emissions, paving operations, and the application of architectural coatings and other building materials. The Modified Alternative 2 would utilize similar construction equipment with a similar daily intensity of proposed usage over the proposed construction phases, operated in accordance with the same applicable identified laws,

regulations and mitigation as the Project. During construction, the Modified Alternative 2 would, like the Project, implement Mitigation Measure MM-AQ-1, requiring off-road diesel-powered equipment that meets the CARB and USEPA Tier 4 Final standards and to use pole power to the extent feasible. As with the Project and for the same reasons, the implementation MM-AQ-1 would reduce the Modified Alternative 2's potentially significant regional construction impacts to a less than significant level. As with the Project, the Modified Alternative 2's maximum daily localized construction emissions would not exceed the localized thresholds for CO, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Therefore, similar to the Project, localized construction emission impacts under the Modified Alternative 2 on sensitive receptors would be less than significant. Also, the qualitative assessment as well as the health risk modeling for the Project concluded that TAC emissions from construction activities would not expose sensitive receptors to substantial TAC concentrations. Although the health risk modeling analysis is provided for informational purposes only, it demonstrates that construction activities under the Project with incorporation of MM-AQ-1 would not expose sensitive receptors to substantial TAC concentrations. Similar to the Project, the Modified Alternative 2 would not expose sensitive receptors to substantial TAC concentrations. However, both the Modified Alternative 2 would incrementally reduce the Project's total parking spaces and, in the process, reduce the extent of excavation required for the Project's parking levels. In addition, the Modified Alternative 2 would eliminate excavation activities otherwise associated with the Project's Building 2. Therefore, the Modified Alternative 2 would result in incrementally less excavation and impacts related to dust, haul truck trips, and equipment emissions, resulting in further reductions to the Project's already less than significant impacts. With respect to other emissions including odors, since construction of the Modified Alternative 2 would generate less emissions than the Project, which was determined to have less than significant impacts, impacts related to other emissions including odors would be less than significant under the Modified Alternative 2, and less than those of the Project.

## Operation

The Modified Alternative 2 and the Project would generate stationary and mobile emissions during operation, and would both implement PDF-AQ-1. PDF-AQ-1 includes the incorporation of energy efficiency features, such as reductions in building energy and resource consumption with energy efficient appliances and reduced building energy usage sufficient to meet the applicable Title 24 standard. Reductions for the Modified Alternative 2, like the Project, also include compliance with SCAQMD Rule 1113 (Architectural Coatings), which limits the VOC content.

The use of consumer products generates emissions of VOCs. As documented in the California Emissions Estimator Model (CalEEMod) User's Guide, Appendix A – Calculation Details for CalEEMod, VOC emissions from consumer product use is based on an emission factor for the SCAQMD region multiplied by the total square footage of all building floor area, including residential square footage.<sup>1</sup> Since the Modified Alternative 2 would have the same total square footage of building floor area as the Project, the Modified Alternative 2 would result in the same VOC emissions from consumer product usage as the Project. As such emissions are less than significant for the Project, they are similarly less than significant for the Modified Alternative 2 for the same reasons.

Building energy demand results in emissions of criteria pollutants (i.e., VOC, NO<sub>x</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>) and greenhouse gases (i.e., CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O) from natural gas combustion and the portion of utility supplied electricity generated by fossil fuel combustion. The Modified Alternative 2 would have 269 residential units and 7,760 square feet of commercial/restaurant space compared to the Project's 210 residential units, 136 hotel rooms,

<sup>1</sup> CAPCOA, CalEEMod User's Guide, Appendix A – Calculation Details for CalEEMod, pages 33-34, 2016.



and 12,570 square feet of commercial/restaurant space. As shown in Section B-3 (Project Operational Emissions – CalEEMod Output Files) of Appendix G-1 of the Draft EIR, the Project’s 210 residential units would have a natural gas and electricity demand of approximately 1,923,600 kilo-British thermal units per year (kBtu/yr) and 805,868 kilo-Watt-hours per year (kWh/yr), respectively. The Project’s hotel use would have a natural gas and electricity demand of approximately 1,777,730 kBtu/yr and 594,680 kWh/yr, respectively. The Modified Alternative 2’s 269 residential units would have an estimated energy demand of approximately 2,464,040 kBtu/yr and 1,032,279 kWh/yr, which is an increase of approximately 540,440 kBtu/yr and 226,411 kWh/yr for the residential uses as compared to the Project. However, the Modified Alternative 2’s increase in residential energy demand would, in comparison with the Project, be more than offset by its proposed removal of the hotel uses and its reduced commercial floor area. This is an expected outcome given that residential uses are generally less energy intensive than hotel uses. In summary the Modified Alternative 2 would have reduced building energy demand compared to the Project and, therefore, would generate less emissions from building energy demand as compared to the Project. Thus, with implementation of PDF-AQ-1, maximum daily net operational emissions, under the Modified Alternative 2 like the Project would not exceed the SCAQMD numeric thresholds for air pollutants to a greater extent than the Project. Also like the Project, the Modified Alternative 2 would not exceed SCAQMD numeric thresholds for air pollutants with regard to regional, localized or TAC emissions, as well as CO Hotspots, and therefore, like the Project and in a similar manner, its operational air quality impacts would be less than significant. With respect to other emissions including odors, since operation of the Modified Alternative 2 would generate less on-site emissions than the Project<sup>2</sup>, and because the Project, as previously analyzed causes less than significant impacts, impacts of the Modified Alternative 2 related to other emissions including odors would also be less than significant, with Modified Alternative 2 impacts being incrementally less than the Project.

Because of the elimination of the hotel use, the Modified Alternative 2 would result in an overall lower daily VMT than the Project. In addition, the Modified Alternative 2 would have incrementally lower daily VMT than the Project. Impacts related to air quality standards/emissions would be less than significant under the Modified Alternative 2, as they were under the Project. The Modified Alternative 2 would have less of an impact than the Project, with Alternative 2 resulting in a lesser impact due to having lower VMT.

## **b. Greenhouse Gas Emissions**

The construction and occupation of the Project Site under the Modified Alternative 2 and the Project would increase GHG emissions over existing conditions. The Project’s net operational emissions of 3,063 MTCO<sub>2e</sub> would be approximately 22 percent below the Project’s net operational emissions that would be generated by the Project under the NAT scenario. The Modified Alternative 2 and the Project would implement PDF-AQ-1 and PDF-GHG-1 to further reduce GHG emissions, and, like the Project, the Modified Alternative 2 would be consistent with applicable strategies outlined in CARB’s Climate Change Scoping Plan, SCAG’s RTP/SCS, L.A.’s Green New Deal (Sustainable City pLAn 2019), and the City’s Green Building Ordinance for the same reasons as the Project related to the construction of a new, efficient, high density new infill mixed-use development within a Transit Priority Area/ High Quality Transit Corridor, which analysis is further supported by the reduced overall GHG emissions that would be produced by the Modified Alternative 2 as compared to the Project. As with GHG impacts under the Project, the Modified Alternative 2’s GHG impacts would be less than significant. However, given that demolition debris under the Modified Alternative 2 would be reduced compared to the Project since the existing residences in the East Parcels would remain in place and would not be demolished and that the Modified Alternative 2 would require approximately 24,000 cubic yards (cy) of soil excavation compared to the 120,000 cy of soils analyzed for the Project, total construction GHG emissions for the Modified Alternative 2 would be less than the

Project since fewer total haul truck trips would be required. Furthermore, as discussed in Air Quality, the Modified Alternative 2 would have reduced building energy demand compared to the Project and, therefore, would generate less emissions from building energy demand as compared to the Project. Also, the Modified Alternative 2 would result in reduced annual VMT and mobile source emissions as compared to the Project. Thus, impacts with respect to GHG emissions would be less under the Modified Alternative 2 as compared to the Project.

### **c. Energy**

The Modified Alternative 2 and the Project would increase demand for electricity, natural gas, and transportation energy, during construction and operation over existing conditions. The Project would increase annual electricity consumption by 3,417,600 kWh per year (representing approximately 0.013 percent of LADWP's projected sales in 2021) and would account for approximately 0.0006 percent of the 2022 forecasted consumption in SoCalGas's planning area. Acknowledging that the Modified Alternative 2 and the Project would have a similar floor area, but with varied uses, as discussed in Air Quality, the Modified Alternative 2's energy demand would be less than the Project primarily as a result of removal of the hotel use in the Modified Alternative 2. Nonetheless, the Modified Alternative 2 would implement that same energy conservation features, which would not be materially different from the Project, such that the Modified Alternative 2 would not cause wasteful, inefficient, or unnecessary consumption of energy during construction or operation. Impacts related to efficient energy consumption under the Modified Alternative 2, like the Project and for the same reasons, would be less than significant and less than those of the Project.

The location of the Modified Alternative 2 and the Project on an infill site in a Transit Priority Area and a High Quality Transit Area and in proximity to existing high-quality transit stops, entertainment, and commercial uses, would achieve a reduction in VMT greater than the Hollywood Community Plan, City, and statewide averages. In addition, the Modified Alternative 2 would require less fuel consumption because the Modified Alternative 2 would generate 7,476 total daily VMT versus the Project, which would generate 11,929 total daily VMT.

Also, because the Modified Alternative 2 like the Project would incorporate a variety of energy conservation measures and features to reduce energy and water usage and minimize energy demand, it would not conflict with applicable state and local conservation plans in a similar manner and for the same reasons as the Project. Thus, similar to the Project and for the same reasons, the Modified Alternative 2 would have a less than significant impact regarding the provisions of plans for renewable energy and energy efficiency. As the Modified Alternative 2 would be in compliance with plans for renewable energy and energy efficiency, impacts under the Modified Alternative 2 would be similar to the Project.

### **d. Noise and Groundborne Vibration**

#### ***Construction***

Under the Modified Alternative 2, like the Project, construction activities would require the use of heavy-duty machinery, which would increase noise levels at several sensitive receptor locations in the area. The Modified Alternative 2, like the Project, would implement MM NOISE-1, which would provide for sound barriers that would achieve a noise reduction of 15 dBA, MM-NOI-2, which would require equipment noise control, and MM-NOI-3, which would maintain a 15-foot setback between large equipment and adjacent, off-site residences, as well as provide for an on-site construction liaison. Although these mitigation measures would result in a substantial reduction in noise and vibration, construction noise levels would still increase the daytime ambient noise level

above the 5-dBA significance threshold at adjacent residential uses along Vista Del Mar Avenue (Location R3), the residential uses to the west across Argyle Avenue (Location R1), the upper floors of the five-story mixed-use residential uses south of Carlos Avenue (Location R4), and those on the north side of Yucca Street (Location R2) even after implementation.

With respect to potential vibration impacts on the adjacent residential structures on Vista del Mar Avenue including historic district contributors, as addressed on page IV.I-61 in Section IV.I, *Noise*, of the Draft EIR, the implementation of Mitigation Measure MM-NOI-3 would ensure that construction groundborne vibration levels for the Project would be below the significance threshold of 0.2 inches per second (PPV) for potential structural damage impacts at the nearest single-family residential building adjacent to the Site along Vista Del Mar Avenue, which was determined based on prior visual observation to be appropriately protective of the neighboring residential structures to the Project Site along Vista del Mar Avenue. This mitigation measure requires a 15-foot buffer between the nearest off-site building and heavy construction equipment operations. This mitigation measure would reduce groundborne vibration levels to 0.191 inches per second (PPV), which is below the applicable significance threshold of 0.2 inches per second (PPV).

Even though substantial evidence supported the conclusion that MM-NOI-3 would reduce impacts to a less than significant level, the level at which groundborne vibration impacts would be reduced (0.191 inches per second (PPV)) was still close to the threshold (0.2 inches per second (PPV)), and therefore the Draft EIR conservatively concluded impacts could nonetheless potentially be significant.

Mitigation Measure MM-NOI-4 provides for a groundborne vibration monitoring program, which for the Project and Modified Alternative 2 has been revised to no longer require the consent of neighboring property owners to be implemented, as it could now be implemented on the Project Site or otherwise on the public right of way with City permission. MM-NOI-4: (1) requires the implementation of an expert created, City-approved vibration monitoring program at the neighboring properties along Vista del Mar Avenue, including 1761-1763 Vista del Mar Avenue; (2) includes a provision that if monitored vibration levels ever exceed a minimum warning level (0.15 inches per second (PPV) at the structure), feasible steps would be taken to ensure vibration levels are kept below the threshold; and (3) states that if monitored vibration levels exceed the threshold level of 0.2 inches per second (PPV) at the structure, construction near the neighboring structures would halt, neighboring structures would be examined for damage, and any such damage would be fully repaired. MM-NOI-4, as applicable to both the Project and Modified Alternative 2, was also clarified to add that any such repair of damage to identified contributors to the Vista del Mar/Carlos Historic District would be conducted in accordance with the Secretary of Interior Standards for Rehabilitation under CEQA Guidelines Section 15064.5(b)(3). With the implementation of MM-NOI-3 and MM-NOI-4, as revised and clarified, the Project's structural vibration impacts on nearby buildings, including those within the Vista del Mar/Carlos Historic District identified as contributors to the district, would be less than significant.

The Modified Alternative 2 would, as a function of the elimination of the construction of Building 2 and maintenance of the buildings at 1795 and 1771 Vista del Mar Avenue, not include the use of heavy construction equipment that would cause vibration impacts within at least 20 feet of the nearest adjacent contributor to the Vista del Mar/Carlos Historic District located at 1761-63 Vista del Mar Avenue. So with the Modified Alternative 2, neither MM-NOI-3 or MM-NOI-4 as originally proposed in the Draft EIR or revised and clarified are required to ensure a less than significant structural vibration impact on any adjacent or nearby buildings to the Project Site, as maintaining a distance of at least 15 feet for the operation of such equipment was determined based on substantial

evidence to reduce impacts to a less than significant level in the Draft EIR. At 20 feet, the maximum vibration level would be 0.124 PPV, which is well below the significance threshold of 0.2 PPV. Vibration calculations are provided in Attachment A of this memorandum. The Modified Alternative 2 would nonetheless continue to incorporate MM-NOI-3 and MM-NOI-4 as revised and clarified to further reduce the Modified Alternative 2's already less than significant impacts.

Although temporary, construction-related groundborne vibration and groundborne noise impacts on human annoyance would also be reduced in the Modified Alternative 2, given that the groundborne vibration level would be under the structural damage threshold, it would still exceed the human perceptibility threshold within groundborne vibration-sensitive uses, which include residential uses. Therefore, like the Project and for the same reasons, human annoyance impacts on the residential buildings along Vista Del Mar Avenue would be significant and unavoidable after implementation of mitigation measures under the Modified Alternative 2. Because maximum construction noise levels would be similar as between the Modified Alternative 2 and the Project, the Modified Alternative 2 would result in significant and unavoidable construction noise and vibration impacts with respect to human annoyance. However, the Modified Alternative 2 would reduce the Project's automobile parking space and, as such, reduce the extent of excavation required for the Project's parking levels. The Modified Alternative 2 would provide more above-grade parking than the Project and would substantially reduce excavation volumes. Moreover, with the elimination of Building 2 under the Modified Alternative 2, excavation in the East Parcels would not be required and the scope of excavation would be less than under the Project. Therefore, the duration of impacts related to high noise and vibration levels during the excavation phase for the Modified Alternative 2 would be less than the Project.

### **Operation**

Operation under the Modified Alternative 2 and the Project would increase mobile source noise (traffic) and onsite stationary and composite noise levels compared to existing conditions. The Modified Alternative 2, like the Project, would implement MM-NOI-5, which would require a sound enclosure or equivalent noise-attenuating features at the emergency generator. Composite noise from on-site activities under the Modified Alternative 2, like the Project and for the same reasons, would not exceed the City's threshold standards. Therefore, with the implementation of MM-NOI-5, stationary-source noise levels under either the Modified Alternative 2 or the Project would be less than significant. Regarding mobile-source noise, like the Project and for the same reasons, Modified Alternative 2-related off-site traffic noise increases would not exceed the City's noise threshold standard. However, because daily VMT would be less under the Modified Alternative 2 (the Modified Alternative 2 would generate 8,460 total daily VMT versus the Project, which would generate 11,929 total daily VMT), mobile noise impacts would be reduced as between the Project and the Modified Alternative 2. As such, although both the Project and the Modified Alternative 2 would generate less than significant operation noise impacts, impacts would be reduced under the Modified Alternative 2 as compared to the Project.

The Modified Alternative 2 would result changes to the locations and sizes of outdoor/open space activity areas, parking structures, and loading dock and refuse collection areas as compared to the Project. The Modified Alternative 2's operational noise impacts from these uses are analyzed below. Nonetheless, as demonstrated in the analysis below, the Modified Alternative 2's overall operational noise impacts would be mitigated to less than significant, similar to the Project.

## Outdoor/Open Space Activity

The Modified Alternative 2 would provide outdoor/open space on the ground level (Level 2), Level 6 and Level 30. Open space would include 2,820 square feet of park space on the ground level, 14,720 square feet of a podium courtyard on Level 6 (including a swimming pool, and a 6,260 square foot roof garden on the Level 30).

The Project would incorporate outdoor space, including a recreational courtyard on Level 4. The courtyard would be equipped with lounge seats, an active lounge, gas fire pit and lounge, BBQ, and dining tables and chairs. Building 1 under both the Project would also include a pool/roof garden space and small bar on Level 20. Building 2 in the Project would include a roof garden on Level 4.

The Modified Alternative 2's park space would be a potential noise source for the nearest residential uses at sensitive receptor locations R2 (residential and hotel uses on north side of Yucca Street) and R3 (residential uses along Vista Del Mar), which are located approximately 65 and 45 feet away from the Project Site boundary. Under a highly conservative scenario, the park space could generate approximately 94 visitors on the open space at one time.<sup>2</sup> The noise level from human conversation would be approximately 55 dBA per person (speaking) at a distance of 3 feet.<sup>3</sup> Conservatively assuming half of the visitors would be talking simultaneously (i.e., 47 people), the continuous noise level could be up to approximately 72 dBA at 3 feet. Based on a noise level of 72 dBA at a reference distance of 3 feet, and accounting for distance attenuation (27 dBA at R2 and 24 dBA at R3), the park noise level would be 45 dBA at the R2 noise sensitive receptors along Yucca Street, which would not exceed the significance threshold of 66 dBA, and 48 dBA at the R3 noise sensitive receptors along Vista Del Mar, which would not exceed the significance threshold of 63 dBA.<sup>4</sup>

It should be noted the analysis of open space noise is extremely conservative as it assumes all persons speaking would be located at the closest edge of the open space area to the noise sensitive receptor locations. In reality, people would be located throughout the open space area and not concentrated in any one particular area. Thus, open space noise levels at the noise sensitive receptor locations would be substantially lower than disclosed herein.

The Modified Alternative 2 would include a podium courtyard on Level 6, located approximately 59 feet above ground measured from Level 1 to the podium courtyard, and would be a potential noise source for the closest sensitive receptor locations R1 (residential uses to the east across Argyle Avenue – Argyle House), R2, R3 and R4 (residential uses south of Carlos Avenue), which are located approximately 80, 65, 160 and 50 feet away from the Project Site boundary. Under a conservative scenario, there could be up to approximately 491 visitors on the podium courtyard at one time on a peak weekend day.<sup>5</sup> Conservatively assuming half of the visitors would

<sup>2</sup> The park space is approximately 2,820 sf. The assembly area allowance in the Building Code is 15 sf/person. Thus, this courtyard area could accommodate approximately 188 people. However, with tables, chairs and benches provided during a social event with that number of people, an estimate of approximately 94 people is provided, which assumes half of the space would be filled with tables, chairs and/or other non-occupied space.

<sup>3</sup> American Journal of Audiology Vol.7 21-25 October 1998. doi:10.1044/1059-0889(1998/012). <https://aja.pubs.asha.org/article.aspx?articleid=1773811>, accessed July 2019.

<sup>4</sup> The open space noise levels of 45 dBA at R2 and 48 dBA at R3 would be less than the existing ambient noise levels by 10 or more dBA at both locations; therefore, it would not contribute an audible increase in the existing ambient noise levels at R2 or R3.

<sup>5</sup> The podium courtyard area is approximately 14,720 sf. The assembly area allowance in the Building Code is 15 sf/person. Thus, this courtyard area could accommodate approximately 981 people. However, with tables, chairs and benches provided during an event with that number of people, an estimate of approximately 491 people is provided, which assumes half of the space would be filled with furniture and/or other non-occupied space.

be talking simultaneously (i.e., 246 people), the continuous noise level could be up to approximately 79 dBA at 3 feet. Based on a noise level of 79 dBA at a reference distance of 3 feet, and accounting for distance attenuation (29 dBA at R1, 27 dBA at R2, 35 dBA at R3 and 24 dBA at R4), the podium courtyard noise level would be 50 dBA at the R1 noise sensitive receptors along Argyle Avenue, which would not exceed the significance threshold of 70 dBA, 52 dBA at the R2 noise sensitive receptors along Yucca Street, which would not exceed the significance threshold of 66 dBA, 44 dBA at the R3 noise sensitive receptors along Vista Del Mar Avenue, which would not exceed the significance threshold of 63 dBA, and 54 dBA at the R4 noise sensitive receptors along Carlos Avenue, which would not exceed the significance threshold of 61 dBA.<sup>6</sup>

The Modified Alternative 2's roof garden would be located on Level 30, approximately 312 feet above ground measured from Level 1 to the roof garden, and would be a potential noise source for the closest residential uses at sensitive receptor locations R1 and R4, and would be located approximately 80 and 90 lateral feet from the roof garden on Level 30. Therefore, the pool/roof garden would be located approximately 322 feet and 325 feet closest residential uses at sensitive receptor locations R1 and R4 along Argyle Avenue and Carlos Avenue. Under a conservative scenario, there could be up to approximately 209 visitors on the roof garden area at one time on a peak weekend day.<sup>7</sup> The noise levels generated by rooftop-related activities of approximately 209 people could be as high as 75 dBA at 3 feet from the boundary of the rooftop garden, assuming that 105 visitors would be talking simultaneously. Accounting for distance attenuation (minimum 41 dBA loss at R3 and 41 dBA loss at R4), the roof garden noise level would be 35 dBA at the R1 noise sensitive receptors along Argyle Avenue, which would not exceed the significance threshold of 70 dBA, and 35 dBA at the R4 noise sensitive receptors along Carlos Avenue, which would not exceed the significance threshold of 61 dBA.<sup>8</sup> Therefore, the podium courtyard operations would not result in a substantial increase in ambient noise levels, and impacts would be less than significant.

Section IV.1, *Noise*, of the Draft EIR concluded that the Level 4 pool deck, and other outdoor uses, including the rooftop spaces at Buildings 1 and 2 under the Project, would also not generate noise levels that would exceed the significance thresholds at these sensitive receptors. As such, the Modified Alternative 2, like the Project, would result in noise levels that do not create a substantial permanent increase in ambient noise levels in the vicinity of the Project Site. Thus, noise impacts associated with outdoor space under the Modified Alternative 2, like the Project, would be less than significant and similar.

## Parking Structure

Like the Project, the Modified Alternative 2 would provide in-building structure parking. Noise levels can be increased at entrances due to entering and existing vehicles. Regarding vehicle parking, the Modified Alternative 2 proposes to provide a total of 414 spaces within a five-level Parking Podium and one below grade parking level at Building 1. Parking facilities would be accessed via a single driveway on Argyle Avenue. The Project would

<sup>6</sup> The open space noise levels of 50 dBA at R1, 52 dBA at R2, 44 dBA at R3 would be less than the existing ambient noise levels by more 9 or more dBA at these locations; therefore, it would not contribute an audible increase in the existing ambient noise levels at R1, R2, and R3. But open space levels of 54 at R4 would increase the noise level at sensitive receptor location R4 by 2.1 dBA. The noise level increase of 2.1 dBA at R4 would not exceed the significance threshold.

<sup>7</sup> The roof garden area is approximately 6,260 sf. The assembly area allowance in the Building Code is 15 sf/person. Thus, approximately 417 people could potentially occupy this space. However, with tables, chairs and benches provided during an event with that number of people, an estimate of approximately 209 people is provided, which assumes half of the space would be filled with furniture and/or other non-occupied space.

<sup>8</sup> The open space noise levels of 35 dBA at R1 and 35 dBA at R4 would be less than the existing ambient noise levels by more than 10 dBA at R1 and R4; therefore, it would not contribute an audible increase in the existing ambient noise level at R1 and R4.

provide a three-level parking podium with two entrances, one on Argyle Avenue and one on Yucca Street, as well as a parking structure below Building 2 on Vista Del Mar Avenue. The Yucca Street and Vista Del Mar structure entrances are nearer to sensitive receptors than the structure entrance on Argyle Avenue.

The Modified Alternative 2 is forecasted to conservatively generate an anticipated 168 trips and 188 trips during the A.M. and P.M. peak hours, respectively, conservatively not accounting for TDM reductions. The peak hour trips would be almost all at the west entrance driveway on Argyle Avenue to access the parking structure, with the exception of several trips allocated to the existing residences along Vista Del Mar. Using the FTA's reference noise level of 92 dBA SEL<sup>9</sup> at 50 feet from the noise source for a parking lot, assuming the trip volumes mentioned previously, the noise levels would be approximately 49 dBA L<sub>eq</sub> at 50 feet for the west entrance driveway on Argyle Avenue to access the parking structure. The west entrance driveway on Argyle Avenue to access parking is approximately 80 feet from noise-sensitive uses at sensitive receptor location R1, 140 feet from noise-sensitive uses at sensitive receptor location R2, and 230 feet from noise-sensitive uses at sensitive receptor location R4. Therefore, adjusting for these distances, the parking structure vehicle-related noise levels would be approximately 45 dBA L<sub>eq</sub> at sensitive receptor location R1, 40 dBA L<sub>eq</sub> at sensitive receptor location R2, and 36 dBA L<sub>eq</sub> at sensitive receptor location R4. These noise levels are well below the existing noise levels of 65 dBA L<sub>eq</sub>, 61 dBA L<sub>eq</sub>, and 56 dBA L<sub>eq</sub>, respectively and which would not audibly increase the ambient noise level sensitive receptor locations at R1 and R2, or R4.<sup>10</sup> The Project is forecasted to generate an anticipated 218 trips and 238 trips during the A.M. and P.M. peak hours, with its trips dispersed among three driveways. As discussed in Draft EIR, Section IV.I, *Noise*, the Project's daily and peak hour vehicle trips would not increase ambient noise levels at the noise sensitive receptor locations R1, R2, R3, or R4 by the applicable 3 dBA or 5 dBA threshold, respectively, impacts would be less than significant. Noise impacts would be less under the Modified Alternative 2 because of fewer daily and peak hour vehicle trips. Moreover, because the Modified Alternative 2 would not locate parking structure entrances on Yucca Street or Vista Del Mar Avenue (R2 and R3), as under the Project, impacts with respect to parking structure noise are concluded to be less than either of these.

### Loading Dock and Refuse Collection Areas

Loading, recycling, trash removal, and collection associated with the Modified Alternative 2, like the Project, would occur in designated areas within the interior areas of the P1 Level near the parking entrance off Argyle Avenue. This location would minimize impacts to nearby residents.

Loading dock and refuse collection areas activities such as truck movements/idling and loading/unloading operations generate noise levels that have a potential to adversely impact adjacent land uses during long-term operations. Based on a noise survey that was conducted at a loading dock facility by ESA, loading dock activity (namely idling semi-trucks and backup alarm beeps) would generate noise levels of approximately 70 dBA L<sub>eq</sub> at a reference distance of 50 feet from the noisiest portion of the truck (i.e., to the side behind the cab and in line with the engine and exhaust stacks).<sup>11</sup>

<sup>9</sup> Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, Table 4-13 and Table 4-14, pages 45 and 47, 2018.

<sup>10</sup> The noise levels of 45 dBA at R1 and 40 dBA at R2 would be less than the existing ambient noise levels by more than 10 dBA at these locations; therefore, it would not contribute an audible increase in the existing ambient noise level at R1, R2 or R4.

<sup>11</sup> The loading dock facility noise measurements were conducted at a loading dock facility at a Wal-Mart store using the Larson-Davis 820 Precision Integrated Sound Level Meter (SLM) in June 15, 2016. The Larson-Davis 820 SLM is a Type 1 standard instrument as defined in the American National Standard Institute S1.4. All instruments were calibrated and operated according to the applicable

As with the Project, the Modified Alternative 2's loading dock and refuse service areas would be located within the P1 level. The east side of the parking structure from Level P1 up to the Level 3 for the new building would have no openings. In addition, the south side of the exterior building wall from at least 50 feet as measured from the southeastern corner of the parking structure (towards the center of the Project Site) from the P1 Level up to Level 3 would also have no openings, in order to block the line of sight to the residential uses along the west side of Vista Del Mar Avenue. Based on a noise source level of 66 dBA at a reference distance of 80 feet for noise sensitive receptor R1, and a noise level of 60 dBA at a reference distance of 160 feet for noise sensitive receptor R4, accounting for barrier-insertion loss by the Project building (minimum 40 dBA insertion loss), the loading dock and refuse service noise levels would be approximately 26 dBA  $L_{eq}$  at the noise-sensitive uses represented by R1 and 20 dBA  $L_{eq}$  at noise-sensitive uses represented by R4, of which such levels would be inaudible because they would be at least 10 dBA below the existing ambient noise levels at R1 and R4, and therefore would not exceed the significance thresholds of 70 dBA at R1 and 61 dBA at R4, respectively. The Project loading dock noise levels would not exceed established thresholds, and the Modified Alternative 2's noise impacts related to loading docks would be similar and also less than significant.

### Composite Noise Level Impacts from Proposed Modified Alternative 2 Operations

Composite noise levels represent potential maximum Project-related noise level. An evaluation of the combined noise from the Modified Alternative 2's various noise sources (i.e., composite noise level) was conducted to conservatively ascertain the potential maximum Modified Alternative 2-related noise level increase that may occur at the noise-sensitive receptor locations included in this analysis. As with the noise sources associated with the Project, the noise sources associated with Modified Alternative 2 would include traffic on nearby roadways, automobile movement noise in the parking structures, outdoor/open space noise, loading dock and refuse service areas, emergency generator, and on-site mechanical equipment. However, the Modified Alternative 2 is forecasted to generate 168 trips and 188 trips during the A.M. and P.M. peak hours, which is lower than the Project that is forecasted to generate 2 218 trips and 238 trips during the A.M. and P.M. peak hours, respectively. Thus, noise from traffic on nearby roadways would be lower for the Modified Alternative 2 as compared to the Project.

The maximum composite noise impacts would generally be expected near the Project Site boundary. As shown in **Table 1, Unmitigated Composite Noise Levels at Sensitive Receptor Locations R1, R2, R3, and R4 from Modified Alternative 2 Operation**, the composite noise levels are dominated by the emergency generator, which would be located on the P1 level, approximately 75 feet from Argyle Avenue and along the southern perimeter of the Project building. The maximum composite noise impacts are expected to occur at noise-sensitive receptors at measurement locations R1 and R4. Location R1 represents uses located across Argyle Avenue that could experience composite noise from the Project's emergency generator, Podium Courtyard (6<sup>th</sup> level), roof garden (30<sup>th</sup> level), and parking access as well as from traffic on Argyle Avenue. Location R4 represents uses located adjacent to the south of the Project Site that could experience composite noise from the Project's emergency generator, Podium Courtyard (6<sup>th</sup> level), roof garden (30<sup>th</sup> level), and parking access as well as from traffic on Vista Del Mar and Carlos Avenue. Locations R2 and R3 to the north and east of the Project Site would be less affected by composite noise, even though they experience open space noise from the park space (2<sup>nd</sup> level), because the Project building would provide a buffer from composite noise from the emergency generator and also would be situated further away from the podium courtyard (for R3) and the parking access (for R2).

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manufacturer specification. The microphone was placed at a height of approximately 5 feet above the local grade. See Appendix I for the supporting documents.



As shown in Table 1, the composite noise levels from the operation of the Modified Alternative 2 would be up to 80.2 dBA at sensitive receptor location R1, up to 63.5 dBA at sensitive receptor location R2, up to 61.5 dBA at sensitive receptor location R3, and up to 78.1 dBA at the sensitive receptor location R4, largely based on conservative noise levels from the emergency generator and conservatively using the Project-related peak hour traffic noise levels, even though peak hour traffic noise levels for the Modified Alternative 2 would be lower. The noise levels of mechanical equipment and loading dock and refuse collection areas was assumed to be the same between the Project and the Modified Alternative 2 as the size and location of these noise sources are assumed to be similar between the Project and the Modified Alternative 2.

**TABLE 1**  
**UNMITIGATED COMPOSITE NOISE LEVELS AT SENSITIVE RECEPTOR LOCATIONS R1, R2, R3, AND R4 FROM MODIFIED ALTERNATIVE 2 OPERATION**

| Operational Noise Sources   | Noise Levels, dBA |                  |                  |                 |
|---|-------------------|------------------|------------------|-----------------|
|   | Location R1       | Location R2      | Location R3      | Location R4     |
| <b>(A) Existing (Ambient) Noise Level</b>   | <b>65</b>         | <b>61</b>        | <b>58</b>        | <b>56</b>       |
| <b>Modified Alternative 2 Composite Noise Sources</b>                                   |                   |                  |                  |                 |
| (1) Mechanical Equipment  | 55                | 51               | 48               | 46              |
| (2) Outdoor/Open Space Activity   | 51 <sup>c</sup>   | 53 <sup>d</sup>  | 50 <sup>e</sup>  | 55 <sup>f</sup> |
| (3) Loading Dock and Refuse Collection Areas  | 26                | N/A <sup>g</sup> | N/A <sup>g</sup> | 20              |
| (4) Parking Structures  | 45                | 40               | N/A <sup>h</sup> | 36              |
| (5) Emergency Generator   | 80                | 46               | 40               | 78              |
| (6) Off-site traffic <sup>a</sup>   |                   |                  |                  |                 |
| Estimated Project-only traffic noise level (peak Leq)                                   | 53.6              | 57.9             | 57.9             | 53.6            |
| <b>(B) Modified Alternative 2 Composite Noise Level (1+2+3+4+5+6)<sup>b</sup></b>       | <b>80.0</b>       | <b>60.0</b>      | <b>58.9</b>      | <b>78.0</b>     |
| <b>(C) Existing Plus Modified Alternative 2 Composite Noise Level (A+B)<sup>b</sup></b> | <b>80.2</b>       | <b>63.5</b>      | <b>61.5</b>      | <b>78.1</b>     |
| Project Increment (C-A)   | 15.2              | 2.5              | 3.5              | 22.1            |
| Exceeds Threshold?  | Yes               | No               | No               | Yes             |

<sup>a</sup> Traffic volumes and associated noise levels conservatively assumed to be the same for R4 as R1. The Modified Alternative 2 would result in lower traffic noise levels than the Project. However, for the purposes of this analysis, the Project traffic noise levels are used, which provides for a conservative analysis.

<sup>b</sup> Noise levels are added logarithmically.

<sup>c</sup> Noise levels are added logarithmically for the Level 6 podium courtyard (50 dBA) and the Level 30 roof garden (35 dBA).

<sup>d</sup> Noise levels are added logarithmically for the Level 2 park space (45 dBA) and the Level 6 podium courtyard (52 dBA).

<sup>e</sup> Noise levels are added logarithmically for the Level 2 park space (48 dBA) and the Level 6 podium courtyard (44 dBA).

<sup>f</sup> Noise levels are added logarithmically for the Level 6 podium courtyard (54 dBA) and the Level 30 roof garden (35 dBA).

<sup>g</sup> The Project would not have loading docks near location R2 and R3 and as such would not contribute to noise increases from loading docks at location R2 and R3.

<sup>h</sup> The Modified Alternative 2 would not have parking structure entrances near location R3 and as such would not contribute to noise increases from parking structure activities at location R3.

SOURCE: ESA, 2020.

Overall, relative to the existing noise environment, the Modified Alternative 2 would be estimated to increase the ambient noise level by approximately 15.2 dBA at the residences to the west (R1) along Argyle Avenue,

approximately 2.5 dBA to the hotel and residential uses to the north (R2) along Yucca Street, approximately 3.6 dBA to the residential uses to the east (R4) along Vista Del Mar, and by approximately 22.1 dBA at the residences to the south along Carlos Avenue (R4). The increase in unmitigated noise level at R2 and R3 would not exceed the significance threshold of an increase of 5 dBA but would be above the applicable increase of 5 dBA at R1 and R4. This analysis conservatively assumes that the Modified Alternative 2's operational noise sources would generate maximum noise levels simultaneously. Therefore, as with the Project, the unmitigated composite noise level impact on sensitive receptors due to the Modified Alternative 2's future operations would be potentially significant and mitigation measures would be required.

**Table 2, Mitigated Composite Noise Levels at Sensitive Receptor Location R1 and R4 from Modified Alternative 2 Operation with Mitigation**, shows composite noise levels at the R1 and R4 locations after implementation of Mitigation Measure NOISE-5, which would reduce emergency generator-related noise levels to 55 dBA at the noise sensitive receptors (measurement location/sensitive receptor location R1) along Argyle Avenue and 53 dBA at the noise sensitive receptors (measurement location/sensitive receptor location R4) south of the Project Site, which are below the significance thresholds of 70 dBA for noise-sensitive receptors R1 and 61 dBA for noise-sensitive receptor R4.

**TABLE 2**  
**COMPOSITE NOISE LEVELS AT SENSITIVE RECEPTOR LOCATION R1 AND R4**  
**FROM MODIFIED ALTERNATIVE 2 OPERATION WITH MITIGATION**

| Operational Noise Sources  | Noise Levels, dBA | Noise Levels, dBA |
|--|-------------------|-------------------|
|  | Location R1       | Location R4       |
| <b>(A) Existing (Ambient) Noise Level</b>  | <b>65</b>         | <b>56</b>         |
| <b>Modified Alternative 2 Composite Noise Sources</b>                              |                   |                   |
| (1) Mechanical Equipment   | 55                | 46                |
| (2) Outdoor/Open Space Activity  | 51                | 55                |
| (3) Loading Dock and Refuse Collection Areas                                       | 26                | 20                |
| (4) Parking Structures   | 45                | 36                |
| (5) Emergency Generator  | 55                | 53                |
| (6) Off-site traffic <sup>a</sup>  |                   |                   |
| Estimated Project-only traffic noise level   | 53.6              | 53.6              |
| <b>(B) Modified Alternative 2 Composite Noise Level (1+2+3+4+5+6) <sup>a</sup></b> | <b>60.0</b>       | <b>58.8</b>       |
| <b>(C) Existing Plus Modified Alternative 2 Composite Noise Level (A+B)</b>        | <b>66.2</b>       | <b>60.6</b>       |
| Project Increment (C-A)  | 1.2               | 4.6               |
| Exceeds Threshold?   | No                | No                |

<sup>a</sup> Traffic volumes and associated noise levels conservatively assumed to be the same for R4 as R1. The Modified Alternative 2 would result in lower traffic noise levels than the Project. However, for the purposes of this analysis, the Project traffic noise levels are used, which provides for a conservative analysis.

<sup>b</sup> Noise levels are added logarithmically.

<sup>c</sup> With the implementation of MM-NOISE-4, emergency generator noise levels of up to 80 dBA at R1 and 78 dBA at R4 would be reduced to 55 dBA and 53 dBA, respectively.

SOURCE: ESA, 2020.

The mitigated composite noise levels from Modified Alternative 2 operation with the mitigated emergency generator noise levels would be up to 66.2 dBA for R1 and 60.6 dBA for R4. Overall, relative to the existing noise environment, the Modified Alternative 2 would be estimated to increase the ambient noise level by approximately 1.2 dBA at the residences to the west (represented by measurement location/sensitive receptor location R1) along Argyle Avenue and by 4.6 dBA at the residences to the south (represented by measurement location/sensitive receptor location R4). This increase in noise would be below the applicable thresholds involving increases of 5 dBA. These increases would be comparable to the Project's 1.1 dBA and 3.7 dBA at these same receptor locations. This analysis conservatively assumes that the Modified Alternative 2's operational noise sources would generate maximum noise levels simultaneously. The roughly 1 decibel difference at R4 would not be a perceptible difference. Therefore, as with the Project, the composite noise level impacts on sensitive receptors due to the Modified Alternative 2's future operations would be less than significant with mitigation, with impacts being similar.

It should be noted the analysis of open space noise is extremely conservative as it assumes all persons speaking would be located at the closest edge of the open space area to the noise sensitive receptor locations. In reality, people would be located throughout the open space area and not concentrated in any one particular area. Thus, open space noise levels and the resulting composite noise levels at the noise sensitive receptor locations would be substantially lower than disclosed herein.

#### Attachments

- Attachment A, Construction Vibration – Modified Alternative 2
- Figure 3-1, Conceptual Site Plan – Modified Alternative 2
- Figure 3-2, Level 6 Plan – Modified Alternative 2
- Figure 3-3, Level 30 Plan – Modified Alternative 2
- Figure 3-4, East/West Building Section – Modified Alternative 2
- Figure 3-5, North Elevation – Modified Alternative 2

**Attachment A, Construction Vibration - Modified Alternative 2**  
**Project: 6220 West Yucca Street Mixed Use Project - Modified Alternative 2**

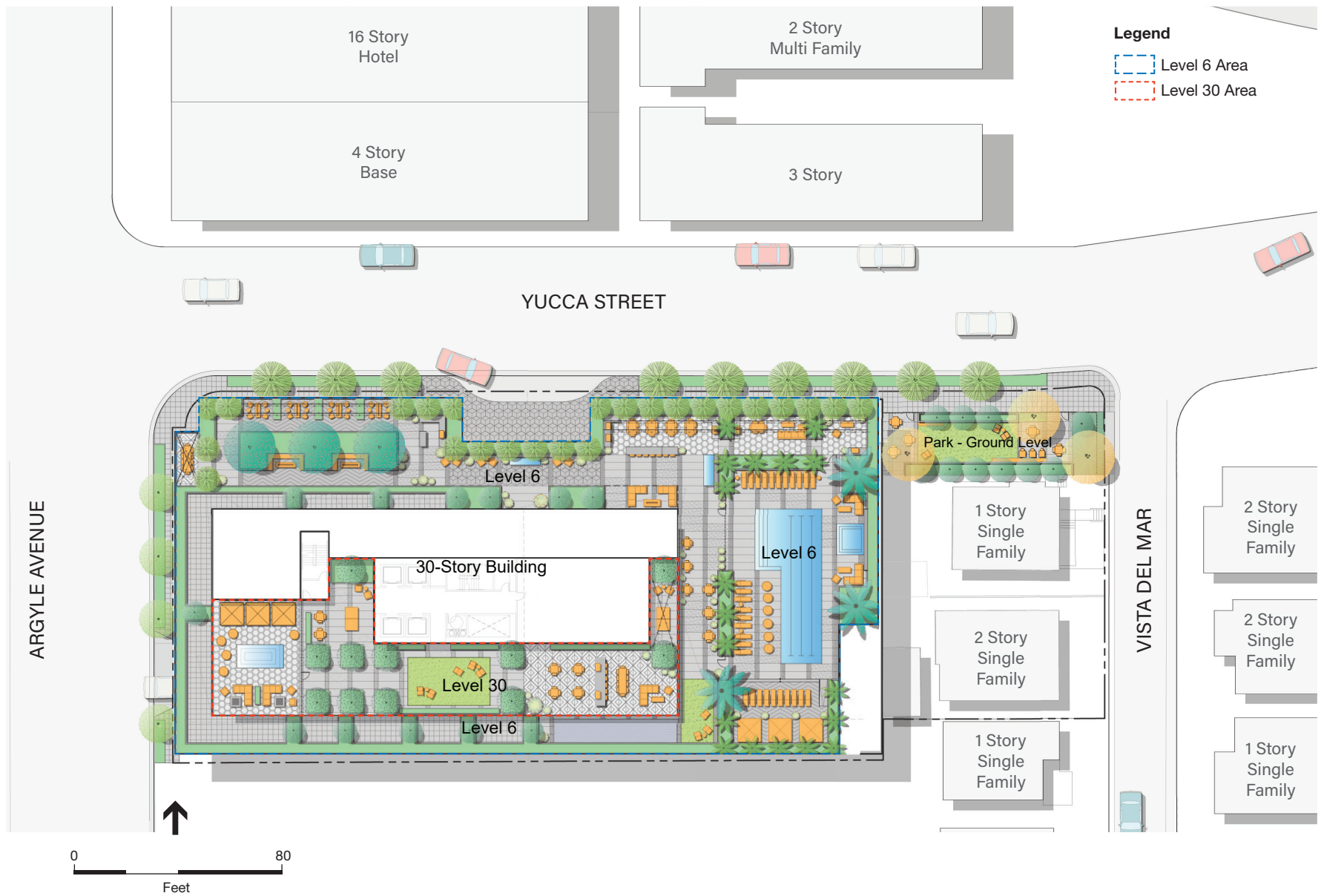
**Vibration Levels at 20 feet**

|                                      |          |                         |                        |
|--------------------------------------|----------|-------------------------|------------------------|
| <b>Small Bulldozer (V1)</b>          | 0.003    | in/sec PPV              |                        |
| Reference Distance (D1)              | 25       | ft                      |                        |
| Distance (D2)                        | 20       | ft                      |                        |
|                                      | 1.25     | $D1/D2$                 |                        |
|                                      | 1.398    | $V1(R1/R2)^r$           | r=1.5                  |
| <b>Small Bulldozer at 20 ft (V2)</b> | 0.0042   | in/sec PPV              |                        |
| RMS                                  | 0.0010   | in/sec                  |                        |
|                                      | 1.00E-06 | $20 \cdot \log(V/Vref)$ | Vref = 0.000001 in/sec |
| <b>RMS</b>                           | 60.4     | VdB                     |                        |

## Project: 6220 West Yucca Street Mixed Use Project - Modified Alternative 2

### Vibration Levels at 20 feet

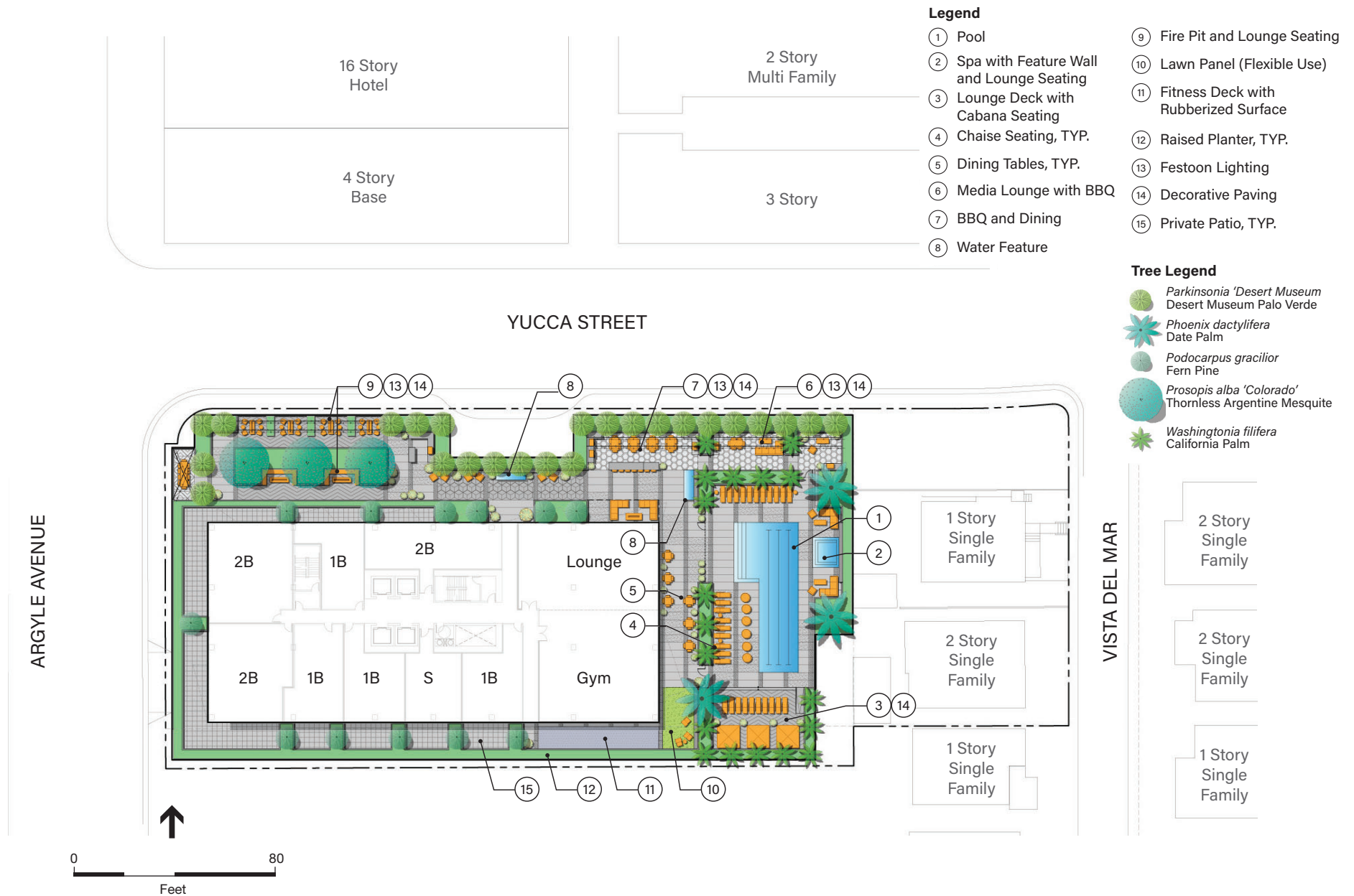
|                                      |                                     |                   |                        |
|--------------------------------------|-------------------------------------|-------------------|------------------------|
| <b>Large Bulldozer (V1)</b>          | <b>0.089</b>                        | <b>in/sec PPV</b> |                        |
| Reference Distance (D1)              | 25 ft                               |                   |                        |
| Distance (D2)                        | 20 ft                               |                   |                        |
|                                      | 1.25 <b>D1/D2</b>                   |                   |                        |
|                                      | 1.398 $V1(R1/R2)^r$                 |                   | r=1.5                  |
| <b>Large Bulldozer at 20 ft (V2)</b> | <b>0.124</b>                        | <b>in/sec PPV</b> |                        |
| RMS                                  | 0.0311 in/sec                       |                   |                        |
|                                      | 1.00E-06 $20 \cdot \log(V/V_{ref})$ |                   | Vref = 0.000001 in/sec |
| <b>RMS</b>                           | <b>89.9</b>                         | <b>VdB</b>        |                        |



SOURCE: Togawa Smith Martin, Inc. 2020

6220 West Yucca Project

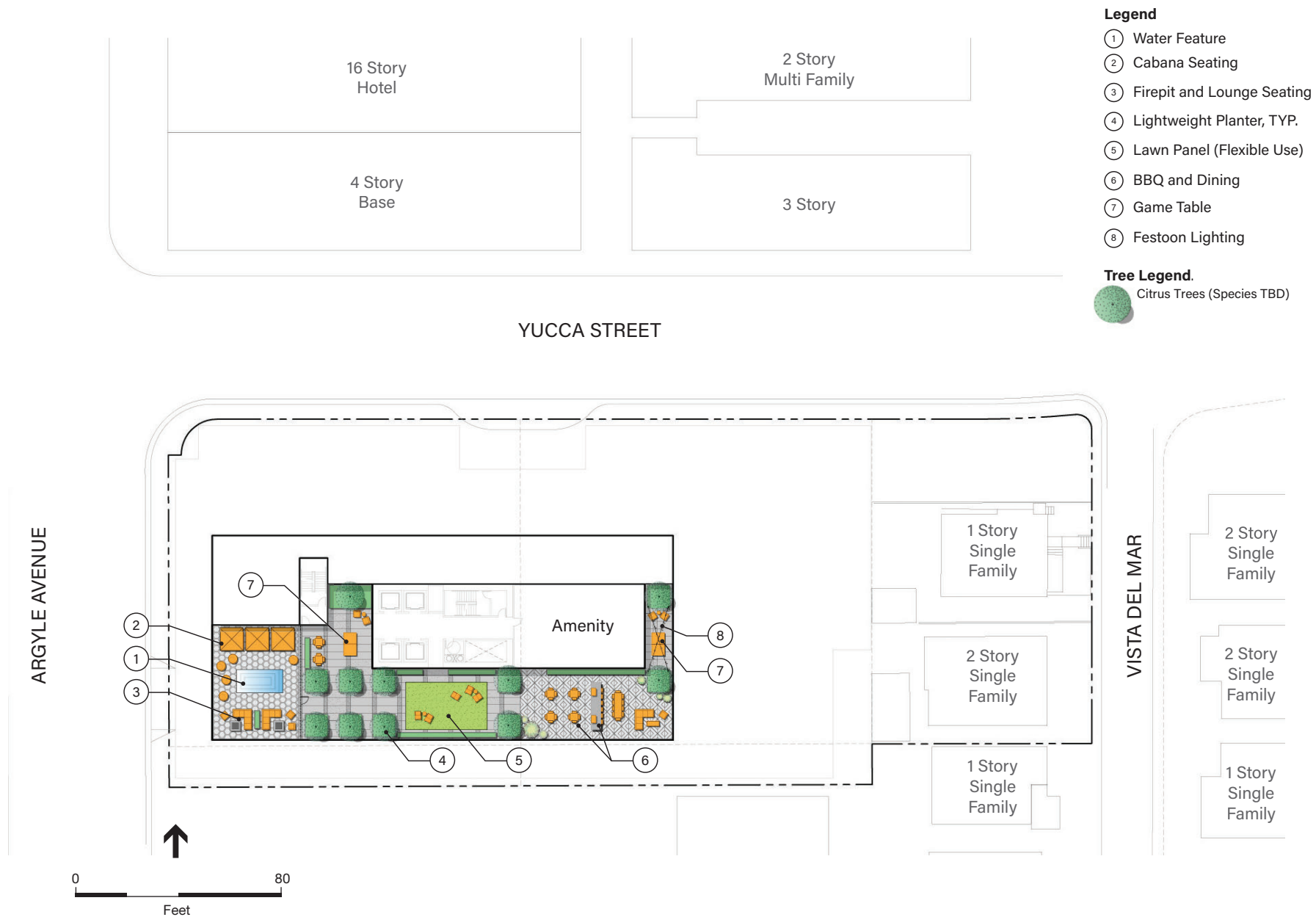
**Figure 3-1**  
Conceptual Site Plan – Modified Alternative 2



SOURCE: Togawa Smith Martin, Inc. 2020

6220 West Yucca Project

**Figure 3-2**  
Level 6 Plan – Modified Alternative 2

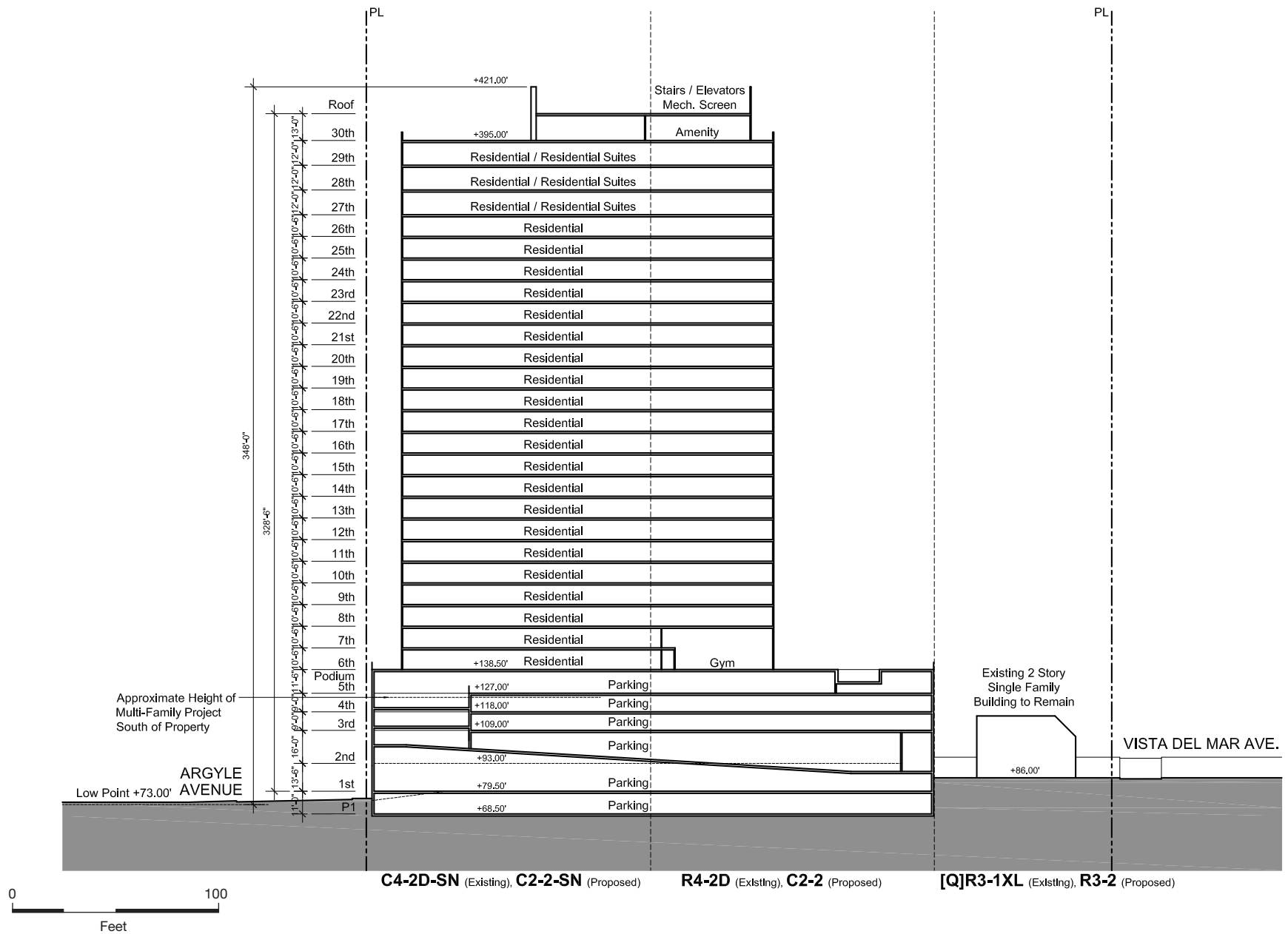


SOURCE: Togawa Smith Martin, Inc. 2020

6220 West Yucca Project

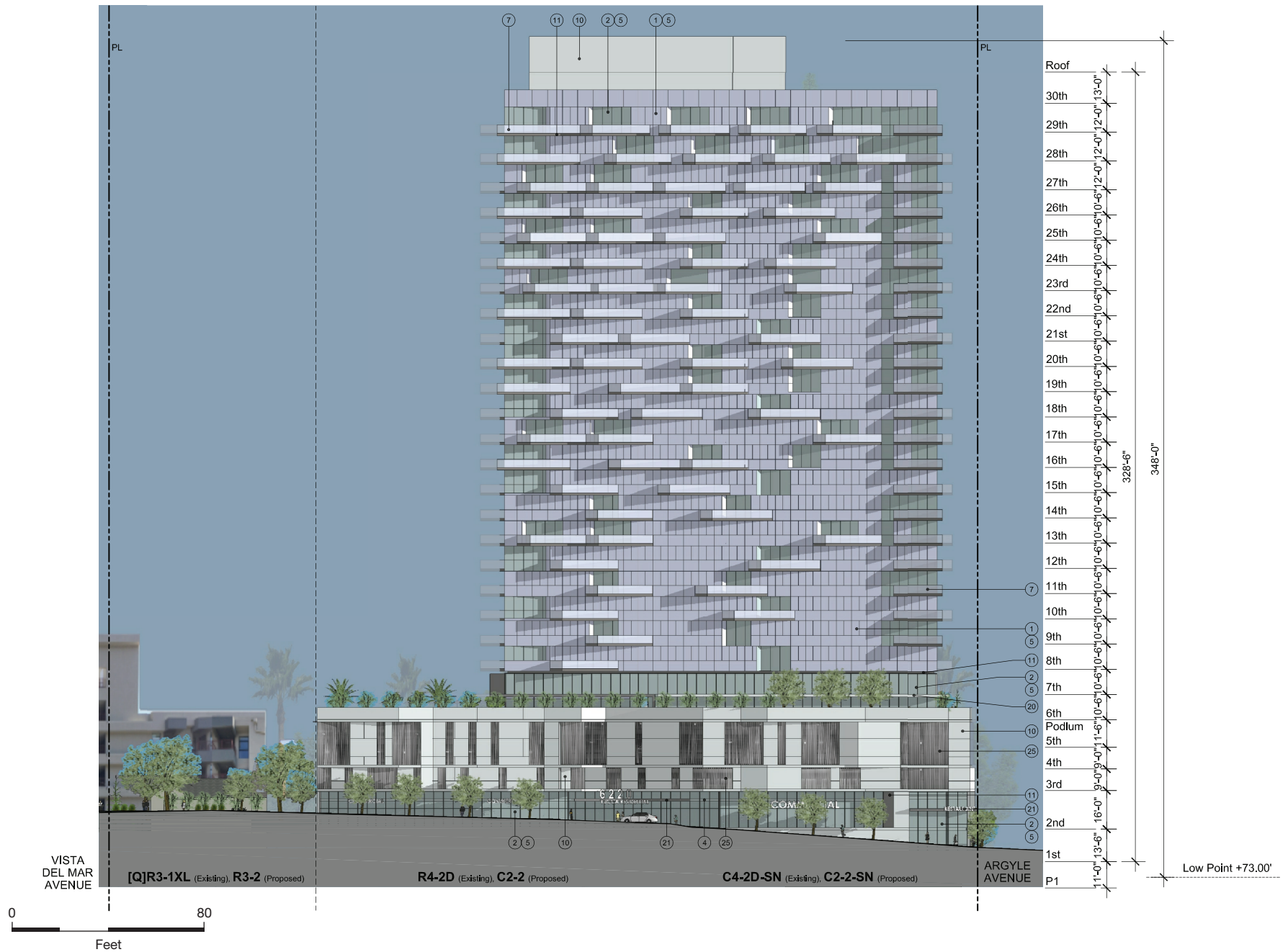
**Figure 3-3**  
Level 30 Plan – Modified Alternative 2





SOURCE: Togawa Smith Martin, Inc. 2020

6220 West Yucca Project  
**Figure 3-4**  
 East/West Building Section – Modified Alternative 2



6220 West Yucca Project

SOURCE: Togawa Smith Martin, Inc. 2020

**Figure 3-5**  
North Elevation – Modified Alternative 2