APPENDIX P

Noise Assessment Update of

Proposed Tree Removal Activities

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Memo

Date: **May 19, 2023**

To: **Craig Stevens, Stevens Consulting**

From: **Michael Thill, Illingworth & Rodkin, Inc.**

SUBJECT: **Cypress Point Affordable Housing Project, San Mateo County, California (17-158)**
Noise Assessment Update of Proposed Tree Removal Activities

This memo summarizes Illingworth & Rodkin, Inc.'s (I&R) evaluation of the noise levels that would be produced by tree removal activities currently proposed as part of the Cypress Point Affordable Housing Project in San Mateo, California. Tree removal activities were not proposed at the time of our prior analysis.[1] Other changes made to the project and supporting technical studies, such as minor modifications to the traffic study, were not considered to be substantial enough to warrant additional analysis.

Tree Removal Activities and Anticipated Noise Levels

Dense development is planned in the center of the project area, and demolition, grading, construction and landscaping will likely require the removal of all trees within the limits of grading. Tree removals will also include healthy trees that are too close to grading to survive the root loss and trees that are relatively far from grading but are in poor condition. In total, approximately 295 trees will be removed. Removal activities would utilize a tub grinder with a 12-foot excavator arm on top to process the trees. Approximately 50 trees per day can be processed, so tree removal activities would last approximately 6 days. The tub grinder will be located towards the center of the parcel, where the majority of trees will be removed.

Noise produced by the tree removal activities proposed by the project would be credibly represented by data collected by I&R at a similar tree removal/wood chipping operation in 2021.[2] Short-term noise measurements were made by I&R to quantify the average noise level produced by the overall operation at various distances from the source. Noise measurements were made using a Larson-Davis Laboratories (LDL) precision Type 1 sound level meter fitted with a ½-inch pre-polarized condenser microphone and windscreen. The sound level meter was calibrated before and after the measurements with an LDL acoustical calibrator. Weather conditions were generally good for the purposes of noise monitoring.

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[1] Cypress Point Affordable Housing Project, Noise and Vibration Assessment, Illingworth & Rodkin, Inc., June 12, 2018.
[2] Atlas Tree Yard at Pruitt Industrial Park, Windsor, California, Illingworth & Rodkin, Inc., April 9, 2021.

During the noise measurements, a Vermeer HG6800TX Horizontal Grinder, a CAT 966 Wheel Loader, a CAT 323 Excavator, and transport trucks contributed to the measured noise levels. The excavator was used to load stumps, logs, and large branches into the horizontal grinder. The wheel loader moved materials on the site and loaded wood chips onto the transport trucks. The predominant noise source was the horizontal grinder, which remained in operation throughout the entirety of the noise measurements.

Given the size and number of equipment operating, the measured noise data from 2021 would credibly represent a worst-case scenario for the proposed tree removal activities. Measured noise levels were 80 dBA L_{eq} at 75 feet from the center of the operation, 72 dBA L_{eq} at 300 feet from the center of the operation, and 70 dBA L_{eq} at 350 feet from the center of the operation. Noise levels produced by tree processing activities at the Cypress Point project site, measured at 300 feet from the center of the operation (representative of the nearest off-site receptors), would reach 72 dBA L_{eq}.

As noted previously, tree removal activities would last approximately 6 days during the proposed 14 month construction period. Tree removal activities would produce noise levels of approximately 84 dBA L_{eq} at 50 feet from the center of the operation, which is within the range of the noise levels disclosed in our prior analysis (74 to 88 dBA L_{eq} at a distance of 50 feet). Therefore, tree removal activities would not produce higher noise levels than previously disclosed. Since these activities would be limited to a relatively short period of time (6 days), additional mitigation measures are not recommended.