Appendix B

Noise

Los Angeles Harbor Department -
Berths 121-131 Container Terminal Redevelopment Project
Draft EIR/EIS

Appendix D
Noise Analysis Methodology

April 2022

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1.0 NOISE ANALYSIS METHODOLOGY

The noise analysis for the Berths 121-131 Container Terminal Redevelopment Project EIS/EIR characterized the existing noise environment and evaluated potential noise impacts from on-site construction, on-site operations, and off-site traffic. Details regarding the methodology used for the analysis follow.

1.1 Existing Noise Environment

A noise monitoring survey was conducted in December 2021 to quantify existing ambient noise levels in the Project vicinity. The measurements were taken using Class 1 sound level meters (LxT) that had been factory certified within the previous 12 months and were field calibrated immediately prior to the measurements. The microphones were fitted with acoustically neutral windscreens and set at approximately 5 feet above the ground (at a typical listening height). This survey was supplemented with a long-term sound level measurement taken in 2017 at one location (Acoustics Group Inc., 2017).

Five long-term (LT; 24-48 hours) and four short-term (ST; approximately 30 minutes) noise measurements were taken at locations representing sensitive receptors nearest to the Project site. **Appendix D1** includes a figure showing the measurement locations. Details regarding the five long-term noise measurements, including graphs of hourly noise levels, are presented in **Appendix D1**. Details of the four short-term measurements are presented in **Appendix D2**.

1.2 Noise Model – On-site Sources

Noise from on-site construction and operations at the Terminal were estimated using the CadnaA noise model (Datakustik, 2022). CadnaA is a software program that enables noise modeling of complex industrial sources using sound propagation factors as adopted by International Organization for Standardization (ISO) 9613. The modeling process included the following steps: (1) characterizing the noise sources, (2) creating 3-dimensional maps of the site, proposed structures, and vicinity to enable the model to evaluate effects of distance, structural interference, and topography on noise attenuation, and (3) assigning the equipment sound levels to appropriate locations on the site. CadnaA then constructs topographic cross sections to calculate sound levels in the vicinity of the project site. On-site traffic sound levels were modeled using CadnaA's US Federal Highway Administration (FHWA) Traffic Noise Model (TNM) road noise module. Rail noise was evaluated using CadnaA's Federal Railroad Administration (FRA) module available in CadnaA for modeling noise due to moving freight trains.

1.3 Construction Sources

Construction of the proposed Project would take place over approximately 2 years and, depending on the alternative, would involve the elements shown in the construction schedule in **Appendix D3, Construction Schedule**. Construction is assumed to take place 6 days per week (Monday through Saturday) except national holidays. In general, construction would occur during daytime hours, but

dredging is assumed to occur 24 hours per day, 7 days per week for approximately 120 days of the total 600-day construction period.

A list of expected construction equipment types and numbers per each construction phase of the Project is provided in **Appendix D3: Modeled Construction Equipment**. The Project construction schedule (**Appendix D3, Construction Schedule**) indicates that the maximum level of construction activities would occur in the third quarter of the first year of construction (approximately October and November, 2025) due to the combination of dredging, disposal, rock dike construction, pile driving, wharf deck construction, and construction of the first half of the WBICTF expansion. The resulting construction equipment included in the noise modeling for this worst-case daytime construction would include the construction equipment found in **Appendix D3, Modeled Construction Equipment** for construction Phases I-2a, I-2b, I-3a, I-3b, I-3c, and I-5a (Stage I). Only dredging would occur at night, represented by equipment identified in **Appendix D3, Modeled Construction Equipment** for phase I-2a and I-2b. The No Federal Action (NFA) Alternative would not include dredging or in-water work and would only entail construction activity and equipment identified in Phase I-5a, Stages I, II, and III in **Appendix D3, Modeled Construction Equipment.**

In general, most construction equipment associated with dredging and wharf improvements (phases I-1a through I-4b) is assumed to be operating near the wharf, approximately 2,300 feet from the nearest residences in the Wilmington area north of the terminal and 4,000 feet or further from the nearest receivers west or south of the terminal. Construction equipment associated with installation of additional rail lines in the intermodal yard (IY) (phase I-5a) is assumed to be operating in the vicinity of the IY, approximately 2,200 feet or more from the Wilmington community to the north, 1,800 feet from the Field of Dreams soccer field to the west, 2,600 feet from the nearest residences west of the terminal, and 3,300 feet or more from the nearest residences south of the terminal.

The number of truck trips estimated for peak construction activities is 330 per day. The modeling of construction activities assumed the maximum number of truck trips would be spread out evenly over the 8-hours of daytime construction, resulting in an estimated 41 truck trips per hour when construction is limited to daytime hours. During dredging, when the 330 peak construction truck trips would be spread over 24-hours, the estimated number of hourly truck trips is 14 per hour. In the model, these trucks were assumed to enter the terminal, travel to either the wharf area and the IY, and exit the terminal.

Noise levels for typical construction equipment were characterized using sound level data available from the FHWA's Roadway Construction Noise Model (RCNM). For those sources for which RCNM does not identify a sound level, sound levels were identified in the Port of Long Beach Beach, Pier S Marine Terminal and Back Channel Improvements DEIR, Appendix E (Port of Long Beach, 2011). The general RCNM sound levels at a distance of 50 feet are provided in **Appendix D3: Construction Equipment Noise Emission Levels.** Sound level details used in the noise model, including the sound

power level by octave band, are provided in **Appendix D3: Construction Equipment Sound Power Levels by Octave Band.**

1.4 Operations Sources

Activities and equipment currently in operation at the Terminal include ship-to-shore (STS) cranes; other cargo-handling equipment (CHE) such as top-picks, rubber-tired gantry (RTG) cranes, and yard tractors; refrigerated containers (reefers); haul trucks; and trains/rail activity. Activities and equipment with the Project in the future would generally entail the same types of equipment but in greater numbers. Some additional equipment associated with the Project, such as the rail-mounted gantry (RMG) cranes, are electrically powered, produce minimal noise compared to the other sources, and were not included in the analysis.

The numbers and types of equipment expected to operate on the site in 2045 are summarized in **Appendix D4: 2045 Onsite Equipment Counts - All Alternatives**. The sound power levels and octave band information are provided in **Appendix D4: 2045 Onsite Operations Equipment Sound Power Levels by Octave Band.**

1.5 Off-site Traffic

Traffic volumes and truck percentages related to the Project and alternatives in 2045 and for the 2019 background volumes were provided for all roadways by Cambridge Systematics Inc. (Cambridge Systematics, Inc., 2019). Traffic volumes were provided as average daily traffic volumes. Because the thresholds of significance are based on increases in the CNEL levels, a 24-hour sound level metric, the daily traffic volumes needed to be converted to a 24-hour distribution for daytime hours (7 AM to 7 PM), evening hours (7 PM to 10 PM), and nighttime hours (10 PM to 7 AM). Using the temporal distribution identified in **Appendix D5: Weeday Traffic Distribution Profile,** average day, evening, and nighttime traffic volumes were computed for each roadway segment (Texas A&M Transportation Institute, 2021).

Ramboll used FHWA's Traffic Noise Model (TNM) v2.5 to predict hourly L_{eq}s 50 feet from a long-straight road for 100 passenger vehicles and 100 heavy-duty trucks traveling at varying speeds. These modeled sound levels were adjusted to account for the average predicted number of passenger vehicles and trucks traveling on each roadway segment during daytime hours (7 AM to 7 PM), evening hours (7 PM to 10 PM) and nighttime hours (10 PM to 7 AM). The CNEL level was calculated from the resulting daytime, evening, and nighttime hourly Leqs. The roadway segments considered in this analysis included those within 500 feet of a sensitive receiver. In a busy urban area with multiple major transportation corridors, receivers farther than 500 feet from a single road segment would be more affected by nearer, more local traffic sources. Detailed traffic data including speeds and passenger vehicle and truck percentages for each roadway segment considered are provided in **Appendix D5: Traffic Noise Summary.**

2.0 REFERENCES

Acoustics Group, Inc., 2017. Yang Ming Noise Measurement Data – Hourly Noise Levels. November.

Caltrans. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September 2013.

Cambridge Systems, Inc., 2019. 2019 Traffic Calculations.

Datakustik, 2022. CadnaA version 2021 (MR2) Noise Prediction Software.

Federal Highway Administration

2004. Traffic Noise Model TNM 2.5, U.S. Department of Transportation.

2006. FHWA Roadway Construction Noise Model (RCNM), U.S. Department of Transportation.

Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment, Federal Transit Administration, September 2018.

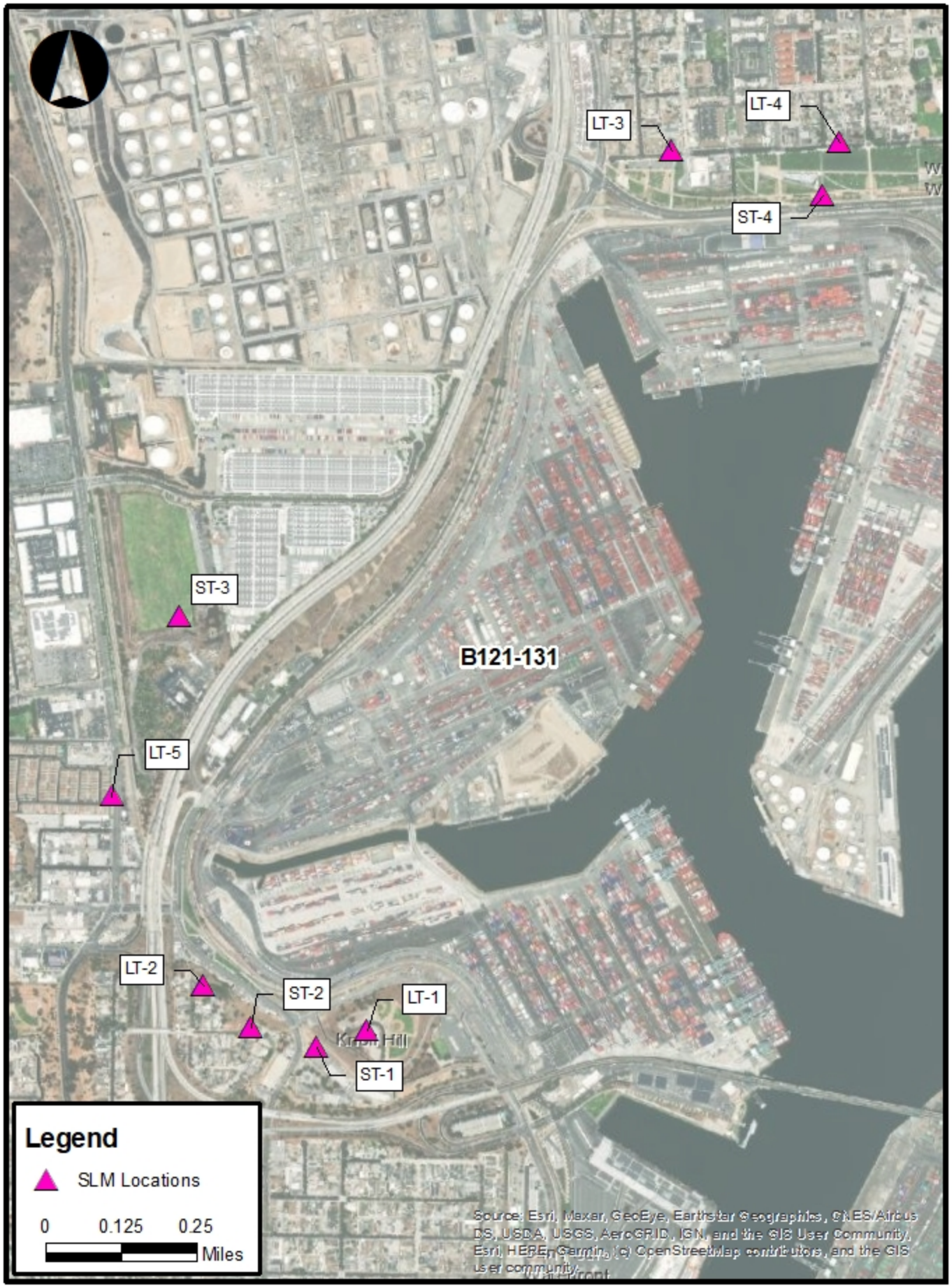
Port of Long Beach, 2011. Pier S Marine Terminal and Back Channel Improvements DEIR, Appendix E Noise, September 2011.

Port of Seattle, 2016. Terminal 5 Cargo Wharf Rehabilitation, Berth Deepening, and Improvements FEIS, Appendix B, October 2016.

Texas A&M Transportation Institute, 2021. 2021 Urban Mobility Report Appendix A: Methodology, June 2021.

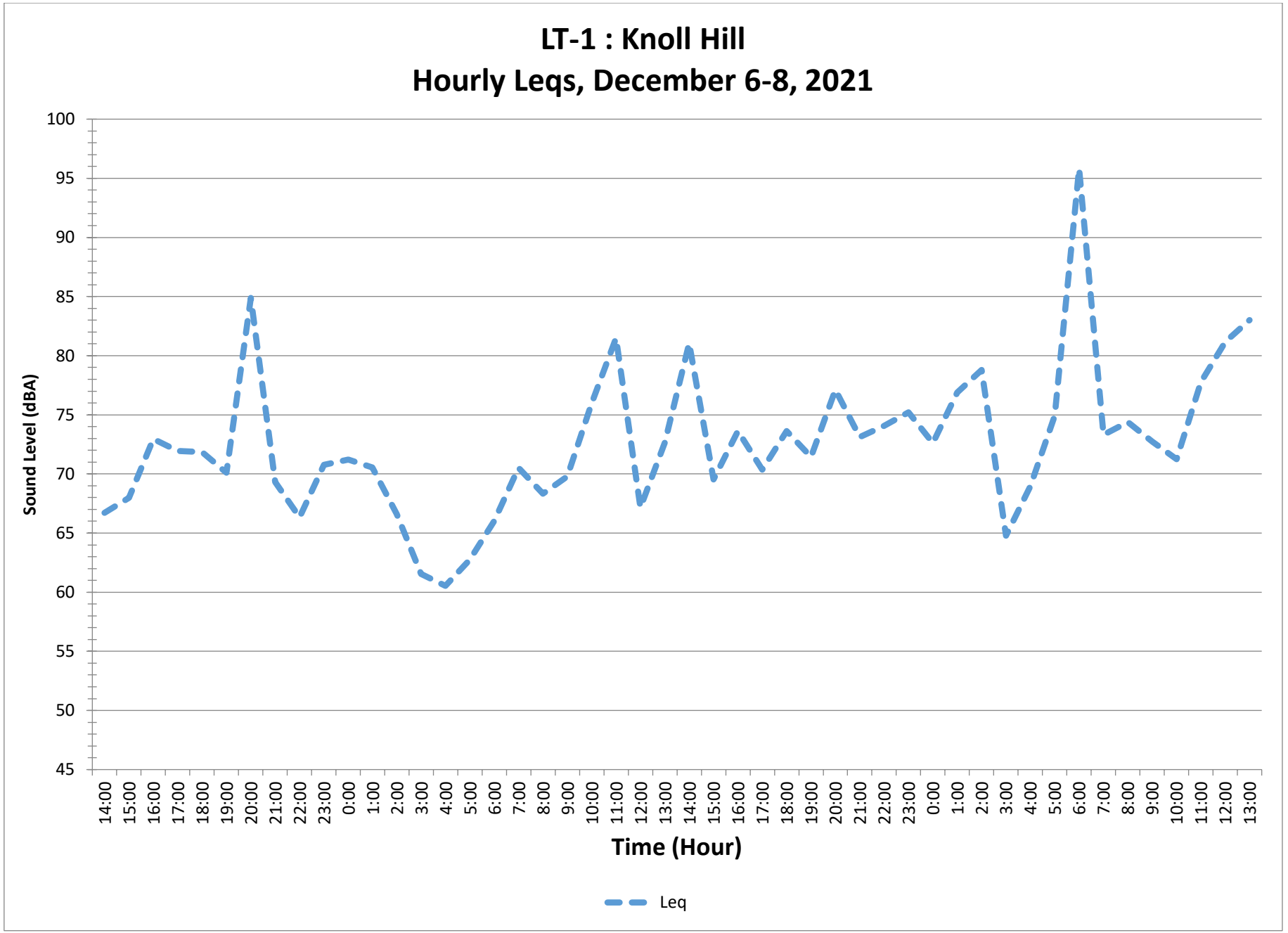
Appendix D-1:

Long-term Noise Monitoring Data


LT-3
LT-4
ST-4
ST-3
B121-131
LT-5
LT-2
ST-2
LT-1
ST-1
Legend
SLM Locations
0
0.125
0.25
Miles
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Appendix D-1: Long-Term Noise Monitoring

LT-1										
Record #	Date	Time	Leq	Lmax	L2.5	L8.33	L10	L25	L50	L90
4	12/6/2021	14:00:00	57.5	66.7	60.6	59.0	58.8	57.9	57.1	55.8
5	12/6/2021	15:00:00	57.9	68.0	60.3	59.3	59.1	58.4	57.6	56.3
6	12/6/2021	16:00:00	57.6	73.0	60.4	59.1	59.0	58.0	57.2	55.5
7	12/6/2021	17:00:00	56.8	71.9	59.6	58.3	58.1	57.2	56.3	54.6
8	12/6/2021	18:00:00	56.8	71.9	59.5	58.4	58.2	57.3	56.4	54.8
9	12/6/2021	19:00:00	55.6	70.1	58.7	57.1	56.9	56.0	55.3	53.9
10	12/6/2021	20:00:00	58.2	84.9	60.8	59.1	58.9	57.7	56.6	54.7
11	12/6/2021	21:00:00	56.8	69.3	60.0	58.7	58.5	57.5	56.3	54.4
12	12/6/2021	22:00:00	54.8	66.3	58.0	56.6	56.4	55.4	54.4	52.5
13	12/6/2021	23:00:00	56.7	70.8	59.6	58.6	58.4	57.4	56.3	54.3
1	12/7/2021	0:00:00	58.2	71.2	61.3	60.1	59.9	58.8	57.6	55.7
2	12/7/2021	1:00:00	55.6	70.6	59.3	57.8	57.6	56.2	54.9	53.0
3	12/7/2021	2:00:00	53.7	66.6	56.6	55.4	55.2	54.2	53.3	51.6
4	12/7/2021	3:00:00	49.7	61.5	53.5	52.0	51.8	50.3	49.0	47.0
5	12/7/2021	4:00:00	50.4	60.5	54.1	52.5	52.3	51.0	49.8	47.9
6	12/7/2021	5:00:00	53.3	62.7	56.0	55.1	54.9	54.1	53.1	51.0
7	12/7/2021	6:00:00	55.7	66.0	58.1	57.2	57.0	56.4	55.5	53.7
8	12/7/2021	7:00:00	58.4	70.5	61.2	59.8	59.6	58.7	58.0	56.8
9	12/7/2021	8:00:00	58.3	68.3	60.4	59.6	59.4	58.8	58.1	57.1
10	12/7/2021	9:00:00	58.7	69.8	61.7	60.2	60.0	59.0	58.1	56.9
11	12/7/2021	10:00:00	58.5	76.0	61.2	59.6	59.4	58.4	57.6	56.2
12	12/7/2021	11:00:00	57.1	81.5	59.6	58.5	58.3	57.5	56.7	55.4
1	12/7/2021	12:00:00	56.8	67.2	59.7	58.4	58.2	57.3	56.5	55.0
2	12/7/2021	13:00:00	58.9	72.6	64.1	61.2	60.8	59.1	57.9	56.1
3	12/7/2021	14:00:00	58.7	81.0	63.4	59.4	59.1	58.0	57.0	55.6
4	12/7/2021	15:00:00	57.3	69.5	59.8	58.7	58.5	57.7	57.0	55.6
5	12/7/2021	16:00:00	57.1	73.6	59.7	58.5	58.4	57.4	56.6	55.2
6	12/7/2021	17:00:00	57.4	70.4	59.6	58.6	58.5	57.7	57.1	56.0
7	12/7/2021	18:00:00	58.0	73.6	60.2	59.1	59.0	58.3	57.6	56.4
8	12/7/2021	19:00:00	58.5	71.4	61.3	60.0	59.8	58.9	58.1	56.8
9	12/7/2021	20:00:00	59.4	77.1	61.9	60.4	60.2	59.3	58.5	57.2
10	12/7/2021	21:00:00	59.8	73.1	62.6	61.2	61.1	60.2	59.4	57.9
11	12/7/2021	22:00:00	59.1	74.1	62.5	60.9	60.7	59.5	58.5	57.0
12	12/7/2021	23:00:00	59.7	75.2	62.8	61.4	61.2	60.2	59.3	57.7
1	12/8/2021	0:00:00	59.9	72.6	62.7	61.5	61.3	60.4	59.4	58.1
2	12/8/2021	1:00:00	59.8	76.9	62.8	61.6	61.4	60.4	59.4	57.8
3	12/8/2021	2:00:00	58.6	78.8	62.0	60.5	60.3	58.9	57.7	55.3
4	12/8/2021	3:00:00	54.4	64.8	58.4	56.7	56.4	55.1	53.7	51.3
5	12/8/2021	4:00:00	56.3	69.0	60.2	58.7	58.5	57.1	55.6	53.2
6	12/8/2021	5:00:00	58.4	74.9	61.7	60.5	60.2	59.1	57.8	55.1
7	12/8/2021	6:00:00	63.6	95.8	64.9	64.5	64.4	63.9	61.7	57.2
8	12/8/2021	7:00:00	62.0	73.3	63.9	63.4	63.3	62.8	62.1	59.9
9	12/8/2021	8:00:00	59.7	74.4	62.0	61.3	61.2	60.7	59.4	57.6
10	12/8/2021	9:00:00	57.1	72.7	59.2	58.2	58.0	57.4	56.9	55.6
11	12/8/2021	10:00:00	57.0	71.3	60.2	58.4	58.1	57.1	56.5	55.5
12	12/8/2021	11:00:00	56.9	77.8	60.2	58.3	58.1	57.2	56.4	55.2
1	12/8/2021	12:00:00	58.3	81.2	62.2	59.7	59.4	58.4	57.4	55.9
2	12/8/2021	13:00:00	58.8	83.0	62.2	59.6	59.3	58.0	57.0	55.2


LT-1 : Knoll Hill
Hourly Leqs, December 6-8, 2021
Sound Level (dBA)
100
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Time (Hour)
Leq

Appendix D-1: Long-Term Noise Monitoring

LT-2										
Record #	Date	Time	Leq	Lmax	L2.5	L8.33	L10	L25	L50	L90
5	12/6/2021	14:00:00	67.0	78.6	70.1	68.7	68.5	67.6	66.7	64.9
6	12/6/2021	15:00:00	67.0	79.7	69.7	68.7	68.5	67.6	66.6	64.7
7	12/6/2021	16:00:00	66.8	79.9	69.8	68.6	68.4	67.4	66.4	64.4
8	12/6/2021	17:00:00	65.6	78.1	68.3	67.3	67.2	66.3	65.3	63.6
9	12/6/2021	18:00:00	65.4	78.7	69.1	67.4	67.2	66.0	64.8	62.9
10	12/6/2021	19:00:00	65.1	81.5	68.5	67.0	66.8	65.8	64.6	62.3
11	12/6/2021	20:00:00	65.2	80.5	68.3	66.9	66.7	65.7	64.7	62.7
12	12/6/2021	21:00:00	65.2	81.7	68.3	67.0	66.8	65.9	65.0	62.4
13	12/6/2021	22:00:00	62.3	80.2	65.5	64.1	63.8	62.8	61.7	59.8
14	12/6/2021	23:00:00	62.8	78.5	66.2	64.8	64.6	63.4	62.2	60.1
1	12/7/2021	0:00:00	65.5	87.5	69.7	66.7	66.4	64.7	63.3	61.1
2	12/7/2021	1:00:00	63.2	88.6	66.7	65.1	64.8	63.5	62.0	59.7
3	12/7/2021	2:00:00	61.2	76.4	64.6	63.0	62.8	61.6	60.5	58.6
4	12/7/2021	3:00:00	58.9	70.3	63.0	61.5	61.3	59.8	58.2	54.9
5	12/7/2021	4:00:00	60.3	73.3	65.0	63.6	63.3	61.3	59.0	54.9
6	12/7/2021	5:00:00	63.9	76.5	67.0	66.2	66.1	65.0	63.6	60.1
7	12/7/2021	6:00:00	67.7	75.5	70.1	69.6	69.5	68.9	67.9	64.2
8	12/7/2021	7:00:00	69.0	81.1	71.1	70.2	70.1	69.4	68.7	67.5
9	12/7/2021	8:00:00	68.6	81.6	71.2	70.0	69.8	69.1	68.3	66.8
10	12/7/2021	9:00:00	68.3	78.7	71.6	70.1	69.8	68.7	67.8	66.2
11	12/7/2021	10:00:00	68.4	89.5	71.8	69.8	69.6	68.5	67.5	66.0
12	12/7/2021	11:00:00	69.4	95.9	72.0	69.5	69.2	67.9	66.8	65.1
1	12/7/2021	12:00:00	66.6	81.4	70.0	68.4	68.2	67.1	66.0	64.2
2	12/7/2021	13:00:00	68.7	87.5	73.3	71.2	70.8	68.9	67.5	65.5
3	12/7/2021	14:00:00	67.7	81.8	71.5	69.6	69.4	68.1	67.1	65.2
4	12/7/2021	15:00:00	67.4	90.2	71.1	69.1	68.8	67.6	66.6	64.8
5	12/7/2021	16:00:00	66.7	77.7	69.3	68.2	68.1	67.2	66.4	64.7
6	12/7/2021	17:00:00	66.3	79.1	69.0	67.9	67.7	66.9	65.9	64.2
7	12/7/2021	18:00:00	66.5	81.1	69.0	68.1	68.0	67.1	66.2	64.7
8	12/7/2021	19:00:00	67.5	80.0	70.4	69.2	69.0	68.1	67.2	65.6
9	12/7/2021	20:00:00	67.2	80.3	71.3	69.4	69.1	67.7	66.5	64.5
10	12/7/2021	21:00:00	66.8	85.9	70.5	68.4	68.2	67.1	66.0	63.9
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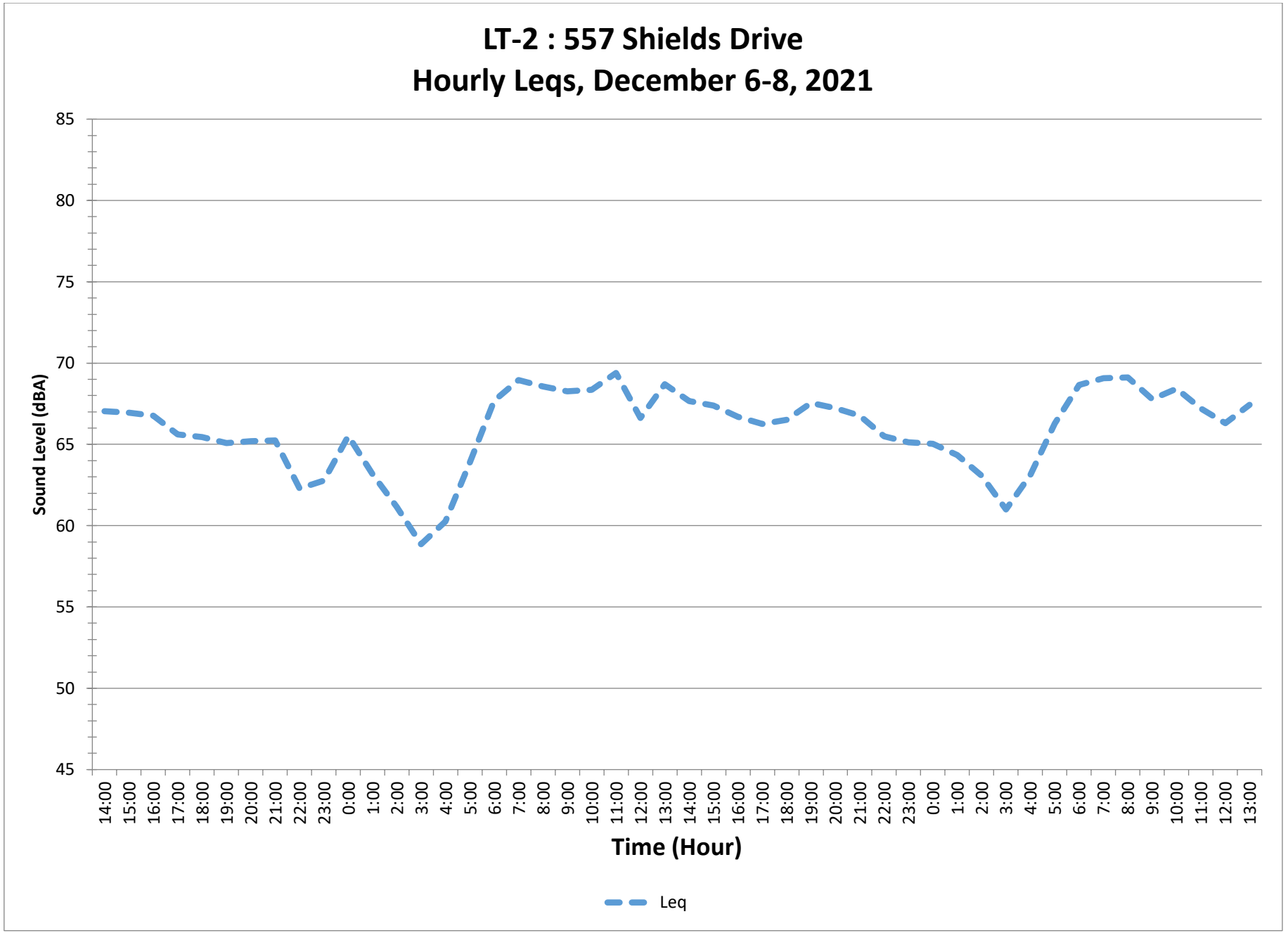
12	12/7/2021	23:00:00	65.1	82.0	68.4	67.2	66.9	65.7	64.6	62.6
1	12/8/2021	0:00:00	65.0	78.5	68.2	67.0	66.8	65.7	64.6	62.5
2	12/8/2021	1:00:00	64.3	77.5	67.7	66.2	66.0	64.9	63.8	61.9
3	12/8/2021	2:00:00	63.1	81.1	67.1	65.3	65.0	63.7	62.1	58.7
4	12/8/2021	3:00:00	61.0	75.5	65.6	64.0	63.7	61.9	60.0	56.8
5	12/8/2021	4:00:00	63.1	85.5	67.5	65.4	65.1	63.5	61.7	58.0
6	12/8/2021	5:00:00	66.3	75.3	69.8	68.9	68.7	67.5	65.9	61.7
7	12/8/2021	6:00:00	68.6	79.0	71.3	70.4	70.3	69.5	68.5	66.1
8	12/8/2021	7:00:00	69.1	79.0	71.3	70.5	70.4	69.7	68.9	67.4
9	12/8/2021	8:00:00	69.1	84.8	71.7	70.7	70.5	69.7	68.7	66.9
10	12/8/2021	9:00:00	67.8	90.8	70.9	69.3	69.1	68.1	67.1	65.3
11	12/8/2021	10:00:00	68.4	82.2	72.0	70.4	70.2	69.0	67.9	65.9
12	12/8/2021	11:00:00	67.2	84.2	71.0	69.3	69.1	67.8	66.5	64.2
1	12/8/2021	12:00:00	66.3	90.3	69.2	67.6	67.4	66.2	65.1	63.0
2	12/8/2021	13:00:00	67.4	79.2	70.8	69.6	69.4	68.3	67.0	64.1


LT-2 : 557 Shields Drive
Hourly Leqs, December 6-8, 2021
Sound Level (dBA)
85
80
75
70
65
60
55
50
45
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
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4:00
5:00
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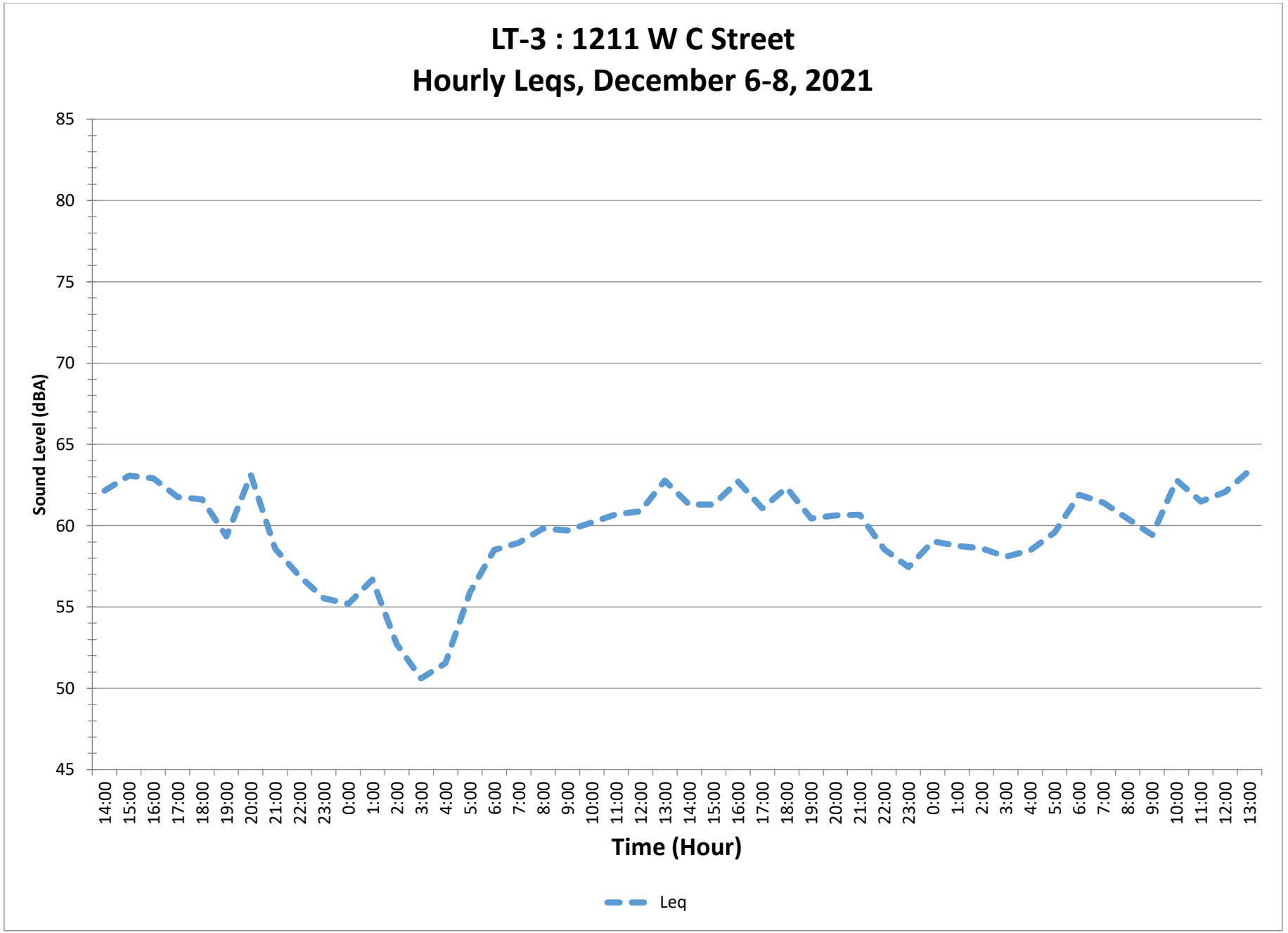
Time (Hour)
Leq

Appendix D-1: Long-Term Noise Monitoring

LT-3										
Record #	Date	Time	Leq	Lmax	L2.5	L8.33	L10	L25	L50	L90
3	12/6/2021	14:00:00	62.2	74.6	66.6	64.5	64.1	62.6	61.2	59.1
4	12/6/2021	15:00:00	63.1	77.4	67.6	65.1	64.8	63.4	62.2	60.1
5	12/6/2021	16:00:00	62.9	83.1	67.1	64.7	64.4	63.2	62.1	59.6
6	12/6/2021	17:00:00	61.8	82.8	66.2	63.8	63.5	61.9	60.5	58.0
7	12/6/2021	18:00:00	61.6	78.2	65.5	63.8	63.6	62.1	60.7	58.7
8	12/6/2021	19:00:00	59.3	78.5	64.4	61.8	61.4	59.6	57.8	55.2
9	12/6/2021	20:00:00	63.1	98.2	64.7	61.6	61.2	59.3	57.4	54.8
10	12/6/2021	21:00:00	58.6	79.7	63.1	60.9	60.6	58.9	57.3	54.6
11	12/6/2021	22:00:00	56.9	74.5	62.2	59.6	59.2	57.4	55.3	52.3
12	12/6/2021	23:00:00	55.5	75.5	61.0	58.4	58.0	55.8	53.6	50.6
1	12/7/2021	0:00:00	55.2	75.9	60.8	57.9	57.5	55.2	52.7	49.3
2	12/7/2021	1:00:00	56.7	84.3	60.9	58.2	57.7	55.3	52.9	49.4
3	12/7/2021	2:00:00	52.7	72.3	58.3	55.9	55.5	53.3	51.1	48.3
4	12/7/2021	3:00:00	50.6	65.3	56.3	54.0	53.5	51.1	48.9	46.3
5	12/7/2021	4:00:00	51.6	69.7	56.9	54.4	54.0	52.0	50.2	47.2
6	12/7/2021	5:00:00	55.9	71.2	60.3	58.6	58.3	56.8	54.9	51.8
7	12/7/2021	6:00:00	58.5	73.5	62.5	60.8	60.6	59.2	57.7	55.3
8	12/7/2021	7:00:00	58.9	77.3	62.7	61.0	60.8	59.5	58.2	56.1
9	12/7/2021	8:00:00	59.8	81.6	64.4	62.0	61.7	60.0	58.5	56.4
10	12/7/2021	9:00:00	59.7	78.9	64.1	62.1	61.8	60.3	58.8	56.2
11	12/7/2021	10:00:00	60.2	76.9	64.6	62.5	62.2	60.7	59.3	56.8
12	12/7/2021	11:00:00	60.7	77.5	65.3	63.1	62.8	61.1	59.7	57.3
1	12/7/2021	12:00:00	60.9	74.3	66.5	63.3	63.0	61.2	59.6	57.0
2	12/7/2021	13:00:00	62.8	87.5	67.0	64.2	63.8	62.1	60.6	58.3
3	12/7/2021	14:00:00	61.3	80.6	65.4	63.4	63.1	61.5	60.1	57.9
4	12/7/2021	15:00:00	61.3	81.2	65.4	63.6	63.3	61.6	60.1	57.9
5	12/7/2021	16:00:00	62.7	81.3	66.8	64.8	64.5	63.0	61.6	59.4
6	12/7/2021	17:00:00	61.1	78.6	65.0	62.7	62.4	61.1	59.8	57.7
7	12/7/2021	18:00:00	62.3	84.7	67.0	63.9	63.5	61.5	60.0	58.0
8	12/7/2021	19:00:00	60.4	76.0	64.5	62.9	62.6	61.0	59.6	57.2
9	12/7/2021	20:00:00	60.6	77.8	65.1	62.1	61.8	60.5	59.4	57.4
10	12/7/2021	21:00:00	60.7	77.3	64.2	62.5	62.3	61.1	59.9	58.1
11	12/7/2021	22:00:00	58.6	74.5	62.8	60.5	60.3	59.0	57.8	55.6
12	12/7/2021	23:00:00	57.4	68.4	61.3	59.6	59.3	58.0	56.8	54.9
1	12/8/2021	0:00:00	59.0	71.7	64.8	61.4	61.0	59.2	57.7	55.6
2	12/8/2021	1:00:00	58.8	78.3	63.3	60.8	60.5	59.0	57.6	55.3
3	12/8/2021	2:00:00	58.6	76.4	63.1	61.2	60.8	59.3	57.8	54.9
4	12/8/2021	3:00:00	58.1	73.5	63.1	60.7	60.4	58.8	57.1	54.2
5	12/8/2021	4:00:00	58.5	69.7	62.2	61.0	60.7	59.4	57.9	54.9
6	12/8/2021	5:00:00	59.6	72.4	62.4	61.3	61.1	60.2	59.2	57.5
7	12/8/2021	6:00:00	61.9	80.2	64.9	63.6	63.4	62.4	61.4	59.4
8	12/8/2021	7:00:00	61.4	77.0	65.1	63.1	62.9	61.8	60.8	59.2
9	12/8/2021	8:00:00	60.4	75.4	64.6	62.6	62.4	60.9	59.6	57.4
10	12/8/2021	9:00:00	59.4	73.6	64.1	62.0	61.6	60.0	58.5	55.9
11	12/8/2021	10:00:00	62.8	94.2	67.5	63.0	62.5	60.2	58.3	55.9
12	12/8/2021	11:00:00	61.5	79.4	66.5	63.6	63.2	61.5	59.8	57.2
1	12/8/2021	12:00:00	62.1	77.9	66.2	64.3	64.0	62.5	61.2	59.0
2	12/8/2021	13:00:00	63.4	82.6	67.0	65.2	64.9	63.7	62.5	60.4


LT-3 : 1211 W C Street
Hourly Leqs, December 6-8, 2021
Sound Level (dBA)
85
80
75
70
65
60
55
50
45
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
0:00
1:00
2:00
3:00
4:00
5:00
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11:00
12:00
13:00
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16:00
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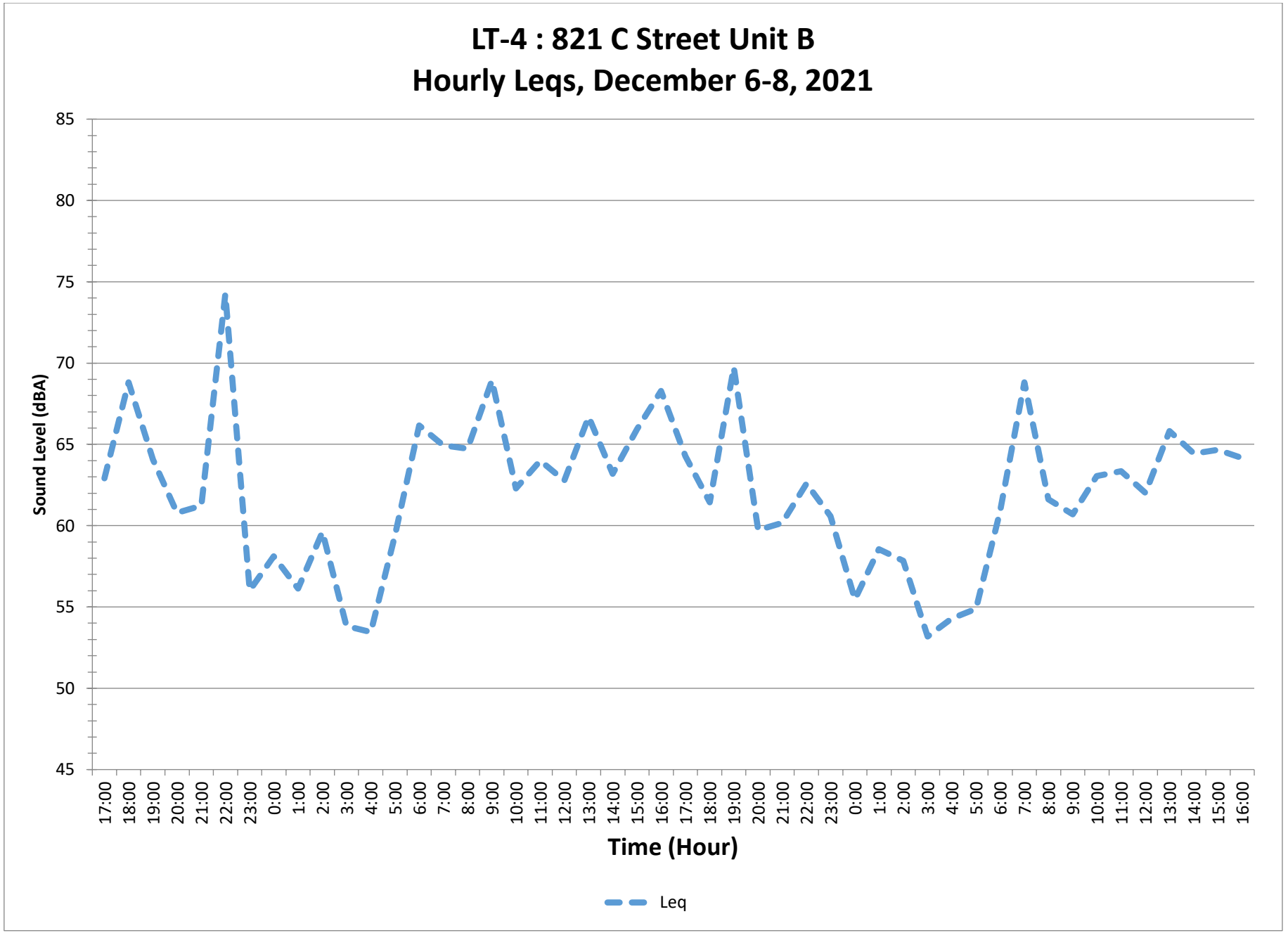
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
Time (Hour)
Leq

Appendix D-1: Long-Term Noise Monitoring

LT-4										
Record #	Date	Time	Leq	Lmax	L2.5	L8.33	L10	L25	L50	L90
3	12/8/2021	17:00:00	62.9	89.8	69.9	64.4	63.6	60.3	58.2	56.0
4	12/8/2021	18:00:00	68.8	103.4	69.8	64.5	63.7	60.4	58.3	55.6
5	12/8/2021	19:00:00	64.1	94.3	67.1	61.6	60.9	57.6	55.6	53.3
6	12/8/2021	20:00:00	60.8	88.5	66.6	61.6	61.0	58.2	56.8	55.3
7	12/8/2021	21:00:00	61.2	88.1	68.4	62.7	61.9	58.4	56.0	53.0
8	12/8/2021	22:00:00	74.2	112.1	63.5	58.6	57.8	55.1	53.1	48.6
9	12/8/2021	23:00:00	56.0	76.2	60.0	57.2	56.9	55.7	54.9	53.6
1	12/9/2021	0:00:00	58.1	88.0	60.5	57.8	57.5	56.2	55.4	54.0
2	12/9/2021	1:00:00	56.1	79.3	59.0	57.0	56.7	55.6	54.6	53.2
3	12/9/2021	2:00:00	59.6	94.2	59.6	58.1	57.9	56.7	55.4	52.7
4	12/9/2021	3:00:00	53.8	85.7	56.1	53.7	53.4	52.2	51.3	49.9
5	12/9/2021	4:00:00	53.5	76.0	58.0	54.4	54.1	53.0	51.8	49.7
6	12/9/2021	5:00:00	59.4	90.4	63.4	58.3	57.6	55.5	54.0	52.3
7	12/9/2021	6:00:00	66.2	96.8	68.6	63.0	62.4	59.4	57.5	55.5
8	12/9/2021	7:00:00	64.9	95.8	70.6	65.1	64.5	61.4	59.4	57.2
9	12/9/2021	8:00:00	64.7	94.5	69.9	65.5	65.1	62.9	60.6	56.8
10	12/9/2021	9:00:00	68.9	98.2	69.1	65.1	64.7	61.7	60.0	58.2
11	12/9/2021	10:00:00	62.3	84.9	68.6	63.3	62.8	60.7	59.5	57.7
12	12/9/2021	11:00:00	64.0	95.8	69.3	63.8	63.0	60.1	58.4	56.4
1	12/9/2021	12:00:00	62.8	86.0	70.0	65.1	64.4	60.9	58.4	56.2
2	12/9/2021	13:00:00	66.7	95.3	72.4	66.0	65.0	61.1	59.1	57.1
3	12/9/2021	14:00:00	63.2	89.4	69.5	65.0	64.3	61.7	60.0	58.3
4	12/9/2021	15:00:00	65.9	94.0	71.4	66.1	65.2	62.2	60.5	58.6
5	12/9/2021	16:00:00	68.3	102.9	70.5	65.6	65.0	62.0	60.5	58.5
6	12/9/2021	17:00:00	64.3	94.7	69.6	64.7	64.0	61.5	59.7	57.8
7	12/9/2021	18:00:00	61.4	87.6	66.2	61.7	61.1	58.6	57.3	55.9
8	12/9/2021	19:00:00	69.7	107.5	65.2	60.7	60.3	58.5	57.5	56.1
9	12/9/2021	20:00:00	59.7	84.6	65.6	60.5	59.8	57.5	56.5	55.1
10	12/9/2021	21:00:00	60.2	91.3	64.6	60.6	60.0	57.8	56.5	54.6
11	12/9/2021	22:00:00	62.6	92.7	61.8	58.6	58.2	56.7	55.6	53.4
12	12/9/2021	23:00:00	60.6	93.3	63.2	58.0	57.4	55.5	54.4	52.8
1	12/10/2021	0:00:00	55.5	77.9	59.5	56.8	56.4	55.0	54.1	52.7
2	12/10/2021	1:00:00	58.6	92.8	57.8	55.4	55.2	54.2	53.4	52.0
3	12/10/2021	2:00:00	57.8	89.3	59.8	57.6	57.3	55.9	54.7	51.0
4	12/10/2021	3:00:00	53.2	72.8	56.7	54.9	54.5	53.2	52.2	50.1
5	12/10/2021	4:00:00	54.3	73.7	57.9	56.1	55.9	54.6	53.3	51.1
6	12/10/2021	5:00:00	54.9	81.7	61.2	56.1	55.3	52.7	51.3	49.6
7	12/10/2021	6:00:00	60.9	86.7	66.8	61.8	61.2	59.0	57.6	55.3
8	12/10/2021	7:00:00	68.8	106.2	68.8	63.9	63.2	59.1	56.5	53.7
9	12/10/2021	8:00:00	61.6	89.4	68.5	62.6	61.7	58.0	55.9	53.6
10	12/10/2021	9:00:00	60.7	87.6	66.6	61.6	60.8	56.7	54.4	52.0
11	12/10/2021	10:00:00	63.1	93.4	67.5	62.2	61.5	58.4	56.1	53.1
12	12/10/2021	11:00:00	63.4	87.8	69.1	64.5	63.8	59.7	56.7	54.2
1	12/10/2021	12:00:00	62.0	89.1	69.2	64.6	64.0	60.3	56.8	53.7
2	12/10/2021	13:00:00	65.8	102.2	68.1	63.0	62.2	58.6	55.8	52.8
3	12/10/2021	14:00:00	64.4	94.4	71.0	65.2	64.2	60.3	57.2	53.7
4	12/10/2021	15:00:00	64.7	90.1	71.2	65.5	64.6	60.9	57.5	54.5
5	12/10/2021	16:00:00	64.1	94.2	69.2	64.4	63.8	60.6	58.3	55.5


LT-4 : 821 C Street Unit B
Hourly Leqs, December 6-8, 2021
Sound Level (dBA)
85
80
75
70
65
60
55
50
45
17:00
18:00
19:00
20:00
21:00
22:00
23:00
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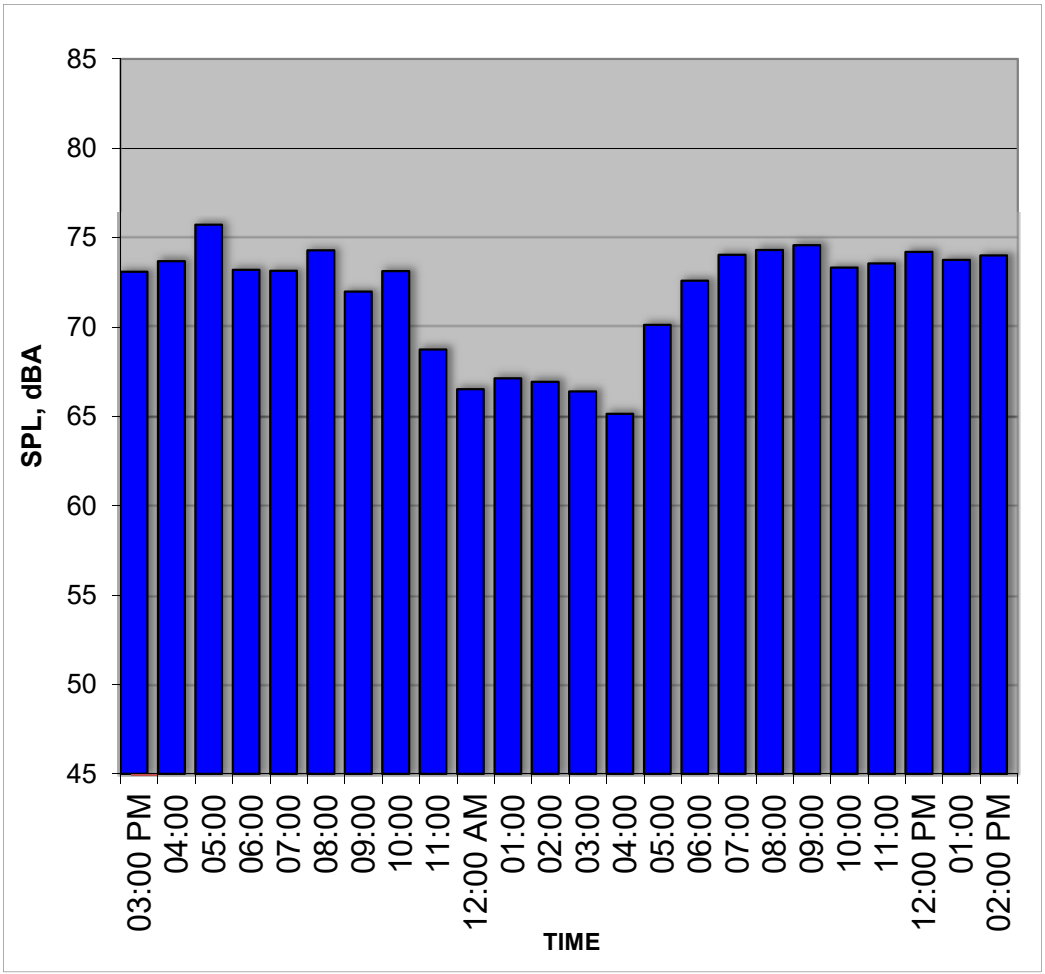
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
Time (Hour)
Leq

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project: **Yang Ming**
Address: **LT-8** **Date:** **July 13 - 14, 2017**
Location: **783 Gatun St Residential Community**
Noise Sources: (behind Unit 618 at 10' High) **Position:**

Constant traffic on Gaffey St, Train, Community Noise, Wildlife



TIME	HNL, dB(A)
03:00 - 04:00 PM	73.1
04:00 - 05:00 PM	73.7
05:00 - 06:00 PM	75.7
06:00 - 07:00 PM	73.2
07:00 - 08:00 PM	73.2
08:00 - 09:00 PM	74.3
09:00 - 10:00 PM	72.0
10:00 - 11:00 PM	73.1
11:00 - 12:00 AM	68.7
12:00 - 01:00 AM	66.5
01:00 - 02:00 AM	67.1
02:00 - 03:00 AM	66.9
03:00 - 04:00 AM	66.4
04:00 - 05:00 AM	65.1
05:00 - 06:00 AM	70.1
06:00 - 07:00 AM	72.6
07:00 - 08:00 AM	74.0
08:00 - 09:00 AM	74.3
09:00 - 10:00 AM	74.6
10:00 - 11:00 AM	73.3
11:00 - 12:00 PM	73.5
12:00 - 01:00 PM	74.2
01:00 - 02:00 PM	73.8
02:00 - 03:00 PM	74.0
CNEL:	77.3

Notes:

Source: Acoustics Group, Inc.

Appendix D-2:

Short-term Noise Monitoring Data

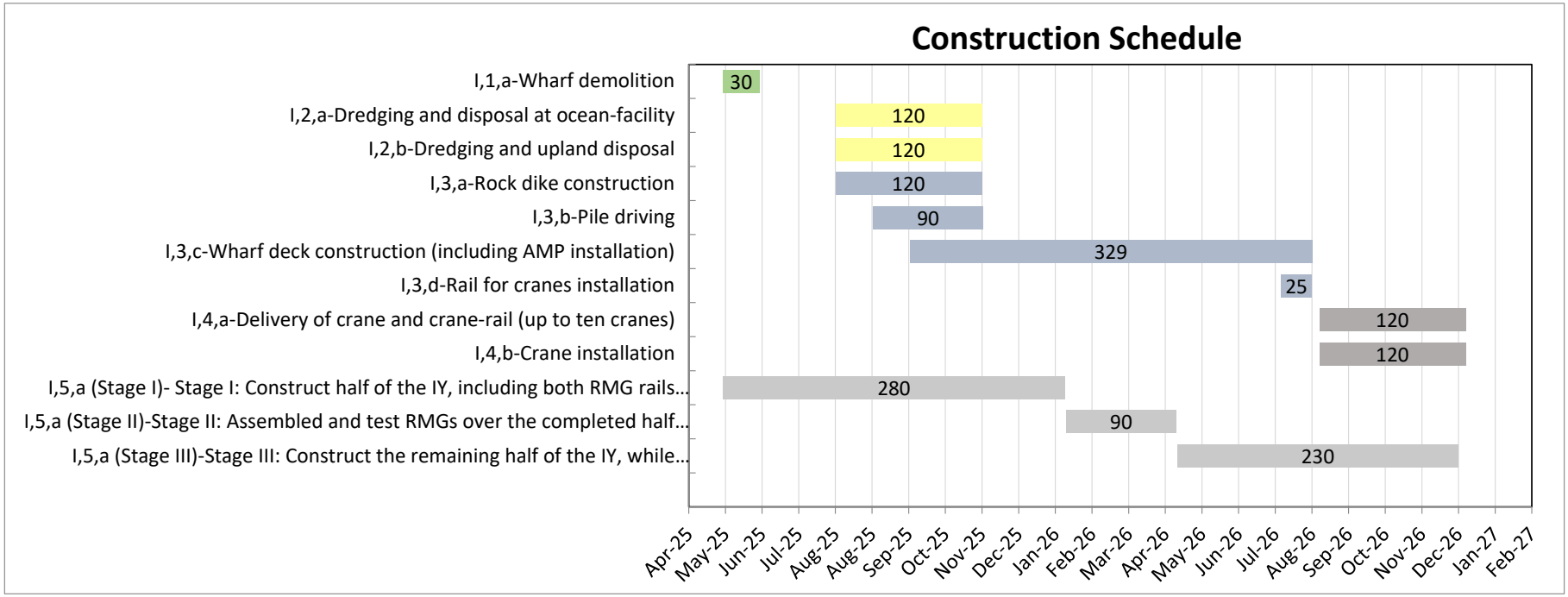
Appendix D-2: Short-Term Noise Monitoring

Location	Date	Time	Run Duration	Leq	Lmin	Lmax	L2.5	L8.3	L10	L25	L50	L90
ST-3	2020-12-07	11:31:29	00:28:30.5	62.0	51.6	80.3	66.7	64.7	64.4	62.5	60.6	56.1
ST-4	2020-12-07	12:18:52	00:30:20.7	59.3	51.2	97.3	62.3	58.1	57.6	56.1	55.0	53.5
ST-5	2020-12-07	13:23:03	00:31:05.6	57.3	50.7	70.9	62.9	60.3	59.8	57.6	55.9	53.7
ST-6	2020-12-07	14:46:37	00:30:31.1	69.4	56.8	86.5	74.5	72.5	72.2	70.4	68.3	62.7

Appendix D-3:

Construction Phasing and Equipment

Appendix D3: Construction Schedule



Appendix 3: Modeled Construction Equipment

Construction Phase	Equipment Type	Day Time	Night Time
I,1,a	air compressor	1	0
	crane	1	0
	derrick barge	1	0
	excavator	1	0
	generator	1	0
	tugboat	1	0
	vibratory hammer	1	0
	forklift	1	0
	loader	1	0
	Heavy Trucks	41 per hour	0
I,2,a	tugboat	1	1
I,2,b	derrick barge	1	1
	excavator	1	1
	tugboat	2	2
	Heavy Duty Truck	14 per hour	14 per hour
	Sweeping Truck	14 per hour	14 per hour
I,3,a	derrick barge	1	0
	excavator	1	0
	loader	1	0
I,3,b	derrick barge	1	0
	tugboat	1	0
	vibratory hammer	1	0
	Pile Delivery Truck	41 per hour	0
I,3,c	crane	1	0
	excavator	1	0
	pile hammer	1	0
	roller	1	0
	scraper	1	0
	skip loader	2	0
	forklift	1	0
	loader	1	0
	paving machine	2	0
	Asphalt Delivery Truck	41 per hour	0
	Concrete Delivery Truck		
	Debris Haul Delivery Truck		
	Haul Delivery Truck		
	Haul Trucks		
	Pile Delivery Truck		
	Rail Delivery Trucks		
	Scraped material hauling trucks		

Appendix 3: Modeled Construction Equipment

Construction Phase	Equipment Type	Day Time	Night Time
I,3,d	crane	1	0
	forklift	1	0
	loader	1	0
	Rail Delivery Truck	41 per hour	0
I,4,a	crane	1	0
	tractor	1	0
	tugboat	2	0
	welder	1	0
I,4,b	crane	1	0
I,5,a Stage I,II & III	backhoe	1	0
	Concrete truck	1	0
	excavator	1	0
	tamper	1	0
	forklift	1	0
	grader	1	0
	loader	1	0
	paving machines	1	0
	smooth drum rollers	1	0
	Dump Truck	41 per hour	0
	Heavy Duty Trucks	41 per hour	0

Appendix D3: Construction Equipment Sound Power Levels by Octave Band (Hz, dB)

Equipment	Octave Band (Hz) Sound Levels (dB)											Data Source
	31.5	63	125	250	500	1000	2000	4000	8000	A-weighted (dBA)	Linear (dB)	
Backhoe	0.0	116.6	108.6	106.6	106.6	105.6	102.6	101.6	92.6	110.5	118.4	RCNM, 2006
Compressor	0.0	110.6	106.6	100.6	105.6	106.6	104.6	97.6	92.6	110.5	114.6	RCNM, 2006
Concrete Pump Truck	98.3	107.0	105.7	110.1	104.2	104.0	103.1	98.2	93.3	109.5	114.4	RCNM, 2006
Derrick Barge	114.7	117.2	119.6	111.4	111.6	110.2	109.3	103.2	96.5	115.5	123.5	POLB, 2011
Excavator	106.9	116.7	119.8	111.9	112.5	111.0	107.5	102.6	96.5	115.5	123.0	RCNM, 2006
Forklift	121.0	121.0	121.0	117.0	112.0	108.0	108.0	103.0	98.0	115.5	126.6	POLB, 2011
Generator	0.0	118.5	120.5	117.5	110.5	106.5	100.5	95.5	93.5	113.5	124.1	RCNM, 2006
Grader	106.9	116.7	119.8	111.9	112.5	111.0	107.5	102.6	96.4	115.5	123.0	RCNM, 2006
Hoeram	98.2	104.8	114.5	111.5	110.4	112.0	111.5	109.5	106.0	117.5	120.0	RCNM, 2006
Impact Pile Driver	123.3	126.0	122.6	115.7	114.3	117.7	114.3	114.0	115.9	122.5	130.0	RCNM, 2006
Loader	101.9	111.7	114.8	106.9	107.5	106.0	102.5	97.6	91.4	110.5	118.0	RCNM, 2006
Mobile Crane	110.7	113.2	115.6	107.4	107.6	106.2	105.3	99.2	92.5	111.5	119.5	RCNM, 2006
Tugboat	114.7	117.2	119.6	111.4	111.6	110.2	109.3	103.2	96.5	115.5	123.5	POLB, 2011
Vactor Truck	93.3	102.0	100.7	105.1	99.2	99.0	98.1	93.2	88.3	104.5	109.4	RCNM, 2006
Vibratory Pile Driver	118.0	122.3	120.8	115.0	117.5	118.8	115.8	111.7	103.5	122.6	127.6	RCNM, 2006
Welder	112.5	115.8	111.4	101.1	102.0	99.0	95.4	91.6	85.1	104.5	118.7	RCNM, 2006

Sources:
FHWA Roadway Construction Noise Model (RCNM), 2006.
Port of Long Beach, Pier S Marine Terminal and Back Channel Improvements DEIR, Appendix E Noise, 2011

Appendix D3: Construction Equipment Noise Emission Levels

Equipment Type	Lmax @ 50 feet from Source, dBA	Acoustical Usage Factor, %	Hourly Leq @ 50 feet from Source, dBA
Air Compressor	80	40	76
Backhoe	80	40	76
Clam Shovel	93	20	86
Concrete Mixer Truck	85	40	81
Concrete Pump Truck	82	20	75
Crane	85	16	77
Derrick Barge[1]	85	40	81
Dump Truck	80	50	77
Excavator	85	40	81
Flat Bed Truck	84	40	80
Forklift[1]	85	40	81
Front End Loader	80	40	76
Generator	82	50	79
Grader	85	40	81
Hoe Ram	90	20	83
Impact Pile Driver	95	20	88
Paver	85	50	82
Pickup Truck	75	40	71
Pump	81	50	78
Roller	85	20	78
Scraper	85	40	81
Tamper	85	40	81
Tractor	84	40	80
Tugboat[1]	85	40	81
Vacuum Street Sweeper	80	10	70
Vibratory Pile Driver	95	20	88
Water Truck	84	40	80
Welder/Torch	74	40	70

Source: FHWA Roadway Construction Noise Model (RCNM), 2006.
For unavailable noise levels, RCNM levels for similar equipment were assumed.
[1]Port of Long Beach, Pier S Marine Terminal and Back Channel Improvements DEIR, Appendix E Noise, 2011.

Appendix D-4:

Operations Equipment

Appendix D4: 2045 Onsite Operations Equipment - All Alternatives

Equipment Type	2045 - No Project Number of Equipment			2045 - No Federal Action (NFA) Number of Equipment			2045 - Project Number of Equipment		
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Cargo ship	1	1	1	1	1	1	3	3	3
Forklift	8	8	8	8	8	8	9	9	9
Rail - Locomotives	5	1	3	5	1	3	6	2	5
Rail - Freight	2	1	1	2	1	1	2	1	2
Reefers	327	327	327	327	327	327	327	327	327
Rubber Tired Gantry (RTG)	9	9	9	9	9	9	11	11	11
Onsite Heavy Duty Trucks	44	21	21	40	20	19	57	28	27
Switcher	2	2	2	2	2	2	2	2	2
Ship to Shore Crane	5	5	5	5	5	5	15	15	15
Top Pick	17	17	17	17	17	17	20	20	20
Hostler	83	83	83	83	83	83	99	99	99

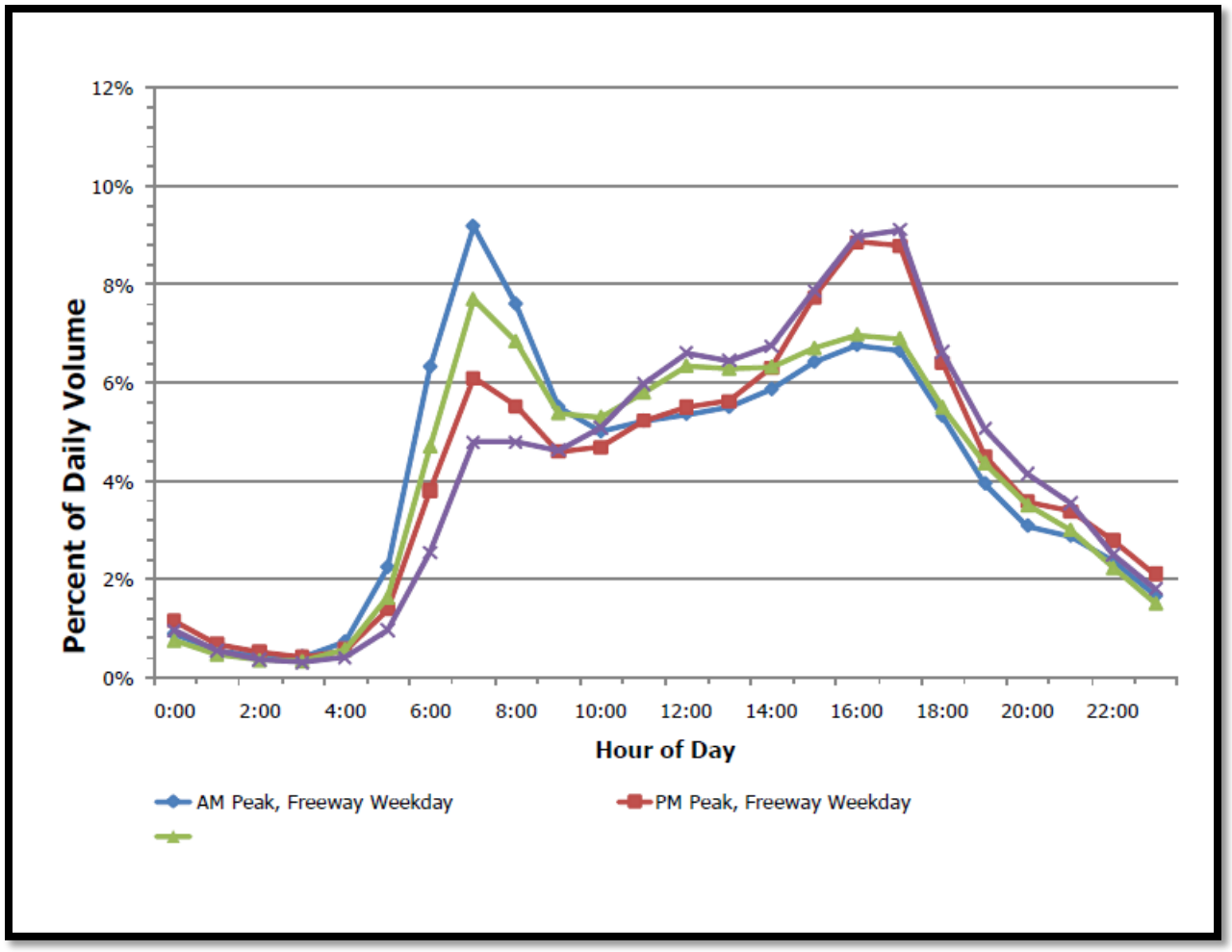
Appendix D4: Operations Equipment Sound Power Levels by Octave Band (Hz, dB)

Source	Sound Power Levels by Octave Band (Hz, dB)									A-weighted level (dBA)	Linear	Data Source
	31.5	63	125	250	500	1000	2000	4000	8000			
Cargo Ship	105.7	108.2	111.6	102.4	102.6	101.2	100.3	94.2	87.5	106.6	114.9	POLB, 2011
Forklift	121.0	121.0	121.0	117.0	112.0	108.0	108.0	103.0	98.0	115.5	126.6	POLB, 2011
Refrigerated Container [1]	98.7	101.7	101.6	101.8	102.7	98.7	95.3	89.1	81.5	103.9	109.1	Ramboll
Rubber Tired Gantry (RTG)	113.1	111.4	108.8	106.6	115.2	109	104.6	96.6	85.9	114.6	119.6	Ramboll
Switch Engine	122.2	123.9	119.6	106	107.8	105.1	102.7	97.6	93.4	111.1	127.1	Ramboll
Ship-to-Shore Cranes	117.4	118	119.1	111.7	107.5	105.1	106.2	106	84.1	113.1	123.6	Ramboll
TopPick	114.9	114.2	114.1	116.7	113.4	108.2	104.4	96.8	88	114.6	122.1	Ramboll
Hostler	109.2	107.8	105.5	105.9	109.1	104	98.8	92.4	82.6	109.2	115.2	Ramboll
[1] Sound power level represents 5 refrigerated containers (reefers)												

Appendix D-5:

Off-site Traffic Data and Calculations

Appendix D5: Weekday Traffic Distribution Profile



Appendix D5 : Traffic Noise Summary

2019 Baseline

Road Name	Segment Name	Daily Traffic Volumes	Hourly Average Traffic - Day	%PC Day	%HDT Day	Hourly Average Traffic - Evening	%PC Evening	%HDT Evening	Hourly Average Traffic - Night	%PC Night	%HDT Night	Speed (mph)	Receiver Distance (ft)	CNEL (dBA)
Alameda St	w/o Eubank Ave	27,502	1,869.7	76.3%	23.7%	976.5	74.6%	25.4%	432.4	78.1%	21.9%	35	50	82
	e/o Eubank Ave	27,502	1,869.7	76.3%	23.7%	976.5	74.6%	25.4%	432.4	78.1%	21.9%	35	50	82
	n/o Anaheim St	24,921	1,601.0	74.8%	25.2%	890.1	74.7%	25.3%	342.2	74.8%	25.2%	40	50	81
	s/o Anaheim St	28,256	1,855.5	75.4%	24.6%	1,007.1	74.6%	25.4%	409.5	76.1%	23.9%	40	50	82
	n/o Henry Ford Ave	41,222	2,647.0	74.9%	25.1%	1,471.6	74.8%	25.2%	565.0	74.9%	25.1%	40	50	84
	s/o Henry Ford Ave	24,921	1,601.0	74.8%	25.2%	890.1	74.7%	25.3%	342.2	74.8%	25.2%	40	50	81
Harry Bridges Blvd	between Mar Vista Ave and Hawaiian Ave	39,537	2,642.0	86.1%	13.9%	1,405.7	85.3%	14.7%	596.9	86.8%	13.2%	45	50	82
	between Hawaiian Ave and Wilmington Blvd	66,104	4,451.7	86.1%	13.9%	2,348.9	85.2%	14.8%	1,016.5	87.0%	13.0%	45	50	84
	between Wilmington Blvd and Neptune Ave	26,567	1,809.7	85.5%	14.5%	943.2	84.3%	15.7%	419.6	86.6%	13.4%	45	50	80
	between Neptune Ave and Fries Ave	25,123	1,717.0	77.3%	22.7%	891.6	75.4%	24.6%	399.9	79.1%	20.9%	45	50	81
	between Fries Ave and Avalon Blvd	25,194	1,721.6	76.3%	23.7%	894.2	74.4%	25.6%	400.9	78.1%	21.9%	45	50	82
	e/o Avalon Blvd	23,990	1,644.3	71.2%	28.8%	851.2	68.8%	31.2%	384.4	73.6%	26.4%	45	50	82
	e/o Broad Ave	27,495	1,869.3	69.1%	30.9%	976.3	66.9%	33.1%	432.3	71.5%	28.5%	45	50	83
	e/o Quay Ave	27,502	1,869.7	69.1%	30.9%	976.5	66.9%	33.1%	432.4	71.5%	28.5%	45	50	83
John Gibson Blvd	n/o I-110 Ramps	23,211	1,634.6	89.0%	11.0%	825.7	86.9%	13.1%	397.3	89.9%	10.1%	35	50	78
Front St	e/o John S. Gibson	1,894	122.4	78.2%	21.8%	67.5	78.0%	22.0%	26.4	78.4%	21.6%	35	50	70
	n/o I-110 NB on-ramps	4,742	305.2	78.1%	21.9%	169.1	78.0%	22.0%	65.3	78.2%	21.8%	35	50	74
Harbor Bld	n/o I-110 Harbor/Swinford Ramps	20,889	1,340.4	89.6%	10.4%	745.0	89.6%	10.4%	285.5	89.6%	10.4%	35	50	77
	s/o I-110 Harbor/Swinford Ramps	35,359	2,268.9	99.8%	0.2%	1,261.2	99.8%	0.2%	483.2	99.8%	0.2%	35	50	72
Henry Ford Ave	s/o Denni St.	16,314	1,046.8	56.6%	43.4%	581.9	56.6%	43.4%	223.0	56.6%	43.4%	40	50	82
	n/o Anaheim St	16,314	1,046.8	57.0%	43.0%	581.9	57.0%	43.0%	223.0	57.0%	43.0%	40	50	82
	s/o Alameda St	27,034	1,734.7	54.0%	46.0%	964.2	54.0%	46.0%	369.5	54.0%	46.0%	40	50	84
Pacific Ave	s/o Channel Street	23,603	1,515.5	98.8%	1.2%	841.8	98.8%	1.2%	323.1	98.8%	1.2%	35	50	72
	n/o 1st Street	14,890	956.1	98.8%	1.2%	531.1	98.8%	1.2%	203.9	98.8%	1.2%	35	50	70
	s/o Front Street	22,065	1,416.9	98.8%	1.2%	787.0	98.8%	1.2%	302.1	98.8%	1.2%	35	50	71
Gaffey St	n/o Channel St	26,813	1,723.0	97.0%	3.0%	956.3	97.0%	3.0%	367.8	97.0%	3.0%	45	50	75
Harbor Fwy (I-110)	between John S. Gibson Blvd Ramps	105,407	6,535.3	93.7%	6.3%	3,443.3	93.7%	6.3%	1,850.5	93.7%	6.3%	55	100	84
	n/o C Street	129,333	8,018.6	93.7%	6.3%	4,224.9	93.7%	6.3%	2,270.5	93.7%	6.3%	55	100	85
	s/o C Street	138,071	8,560.4	93.7%	6.3%	4,510.3	93.7%	6.3%	2,423.9	93.7%	6.3%	55	100	86
	s/o Channel Street	54,653	3,388.5	93.7%	6.3%	1,785.3	93.7%	6.3%	959.5	93.7%	6.3%	55	100	81
	I-110 SB Ramp to Gaffey St	11,278	699.2	93.7%	6.3%	368.4	93.7%	6.3%	198.0	93.7%	6.3%	55	50	73
	I-110 SB ramp to SR-47 EB	24,013	1,488.8	93.7%	6.3%	784.4	93.7%	6.3%	421.6	93.7%	6.3%	55	50	77
	I-110 SB Ramp to SR-47 EB Ramp	29,509	1,829.5	93.7%	6.3%	964.0	93.7%	6.3%	518.0	93.7%	6.3%	55	50	77
Terminal Island Fwy (SR-47)	between N Pacific Ave and N Habor Blvd	44,776	2,776.1	91.2%	8.8%	1,462.7	91.2%	8.8%	786.1	91.2%	8.8%	45	100	80
	Vincent Thomas Bridge	59,844	3,710.3	91.2%	8.8%	1,954.9	91.2%	8.8%	1,050.6	91.2%	8.8%	45	100	82
	SR-47 WB Off Ramp to Gaffey St	8,400	520.8	91.2%	8.8%	274.4	91.2%	8.8%	147.5	91.2%	8.8%	30	50	73
	SR-47 EB On Ramp from Gaffey St	10,155	629.6	91.2%	8.8%	331.7	91.2%	8.8%	178.3	91.2%	8.8%	30	50	73
	SR-47 WB Ramp to I-110 NB	26,774	1,660.0	91.2%	8.8%	874.6	91.2%	8.8%	470.0	91.2%	8.8%	30	50	78
	SR-47 WB On Ramp from Front St	16,173	1,002.8	97.7%	2.3%	528.3	97.7%	2.3%	283.9	97.7%	2.3%	30	50	71
	SR-47 WB Off Ramp to Front St/Harbor Blvd	4,691	290.8	91.2%	8.8%	153.2	91.2%	8.8%	82.3	91.2%	8.8%	30	50	70
	SR-47 EB Off Ramp to Front St/Harbor Blvd	13,888	861.0	91.2%	8.8%	453.7	91.2%	8.8%	243.8	91.2%	8.8%	30	50	75
	SR-47 EB On Ramp from Front St/Harbor Blvd	10,377	643.4	91.2%	8.8%	339.0	91.2%	8.8%	182.2	91.2%	8.8%	30	50	73

Note: Calculated CNEL are based on TNM2.5 model results

2019 Baseline and 2045-No Project

Road Name	Segment Name	Daily Traffic Volumes	Hourly Average Traffic - Day	%PC Day	%HDT Day	Hourly Average Traffic - Evening	%PC Evening	%HDT Evening	Hourly Average Traffic - Night	%PC Night	%HDT Night	Speed (mph)	Receiver Distance (ft)	CNEL (dBA)
Alameda St	w/o Eubank Ave	29,808	2,780.5	82.0%	18.0%	1,004.0	72.5%	27.5%	887.2	86.1%	13.9%	35	50	82
	e/o Eubank Ave	29,808	2,780.5	82.0%	18.0%	1,004.0	72.5%	27.5%	887.2	86.1%	13.9%	35	50	82
	n/o Anaheim St	26,026	1,875.2	76.3%	23.7%	910.4	73.0%	27.0%	478.9	77.7%	22.3%	40	50	81
	s/o Anaheim St	29,758	2,230.6	77.0%	23.0%	1,034.6	72.6%	27.4%	596.5	78.9%	21.1%	40	50	82
	n/o Henry Ford Ave	42,022	2,718.6	74.0%	26.0%	1,491.8	73.8%	26.2%	600.4	72.9%	27.1%	40	50	84
	s/o Henry Ford Ave	25,723	1,673.2	73.4%	26.6%	910.4	73.0%	27.0%	377.9	71.7%	28.3%	40	50	81
Harry Bridges Blvd	between Mar Vista Ave and Hawaiian Ave	41,911	3,570.4	88.0%	12.0%	1,434.4	83.6%	16.4%	1,060.5	89.8%	10.2%	45	50	82
	between Hawaiian Ave and Wilmington Blvd	68,478	5,380.1	87.4%	12.6%	2,377.6	84.2%	15.8%	1,480.1	89.1%	10.9%	45	50	84
	between Wilmington Blvd and Neptune Ave	28,923	2,725.7	88.2%	11.8%	971.9	81.8%	18.2%	877.0	90.2%	9.8%	45	50	80
	between Neptune Ave and Fries Ave	27,437	2,630.7	83.0%	17.0%	919.2	73.2%	26.8%	856.1	86.9%	13.1%	45	50	82
	between Fries Ave and Avalon Blvd	27,505	2,633.1	82.3%	17.7%	921.8	72.1%	27.9%	856.0	86.5%	13.5%	45	50	82
	e/o Avalon Blvd	26,301	2,555.4	79.2%	20.8%	878.8	66.6%	33.4%	839.3	84.5%	15.5%	45	50	82
	e/o Broad Ave	29,802	2,780.1	77.2%	22.8%	1,003.7	65.1%	34.9%	887.1	82.9%	17.1%	45	50	83
	e/o Quay Ave	29,808	2,780.5	77.2%	22.8%	1,004.0	65.1%	34.9%	887.2	82.9%	17.1%	45	50	83
John Gibson Blvd	n/o I-110 Ramps	26,542	2,585.8	88.6%	11.4%	881.4	81.5%	18.5%	871.6	88.8%	11.2%	35	50	79
Front St	e/o John S. Gibson	1,894	122.4	78.2%	21.8%	67.5	78.0%	22.0%	26.4	78.4%	21.6%	35	50	70
	n/o I-110 NB on-ramps	4,782	330.9	79.7%	20.3%	169.1	78.0%	22.0%	78.1	81.7%	18.3%	35	50	74
Harbor Bld	n/o I-110 Harbor/Swinford Ramps	20,929	1,366.1	89.8%	10.2%	745.1	89.6%	10.4%	298.3	90.0%	10.0%	35	50	77
	s/o I-110 Harbor/Swinford Ramps	35,398	2,294.5	99.8%	0.2%	1,261.2	99.8%	0.2%	496.0	99.8%	0.2%	35	50	72
Henry Ford Ave	s/o Denni St.	16,316	1,047.5	56.6%	43.4%	581.9	56.6%	43.4%	223.3	56.6%	43.4%	40	50	82
	n/o Anaheim St	16,316	1,047.5	57.0%	43.0%	581.9	57.0%	43.0%	223.3	57.0%	43.0%	40	50	82
	s/o Alameda St	27,297	1,753.5	53.7%	46.3%	971.1	53.6%	46.4%	378.7	53.3%	46.7%	40	50	84
Pacific Ave	s/o Channel Street	23,792	1,629.1	98.8%	1.2%	842.4	98.7%	1.3%	379.9	98.8%	1.2%	35	50	72
	n/o 1st Street	15,030	1,037.7	98.8%	1.2%	531.6	98.7%	1.3%	244.6	98.8%	1.2%	35	50	70
	s/o Front Street	22,255	1,530.5	98.8%	1.2%	787.5	98.7%	1.3%	358.9	98.8%	1.2%	35	50	71
Gaffey St	n/o Channel St	27,040	1,854.7	97.1%	2.9%	957.1	96.9%	3.1%	433.6	97.2%	2.8%	45	50	75
Harbor Fwy (I-110)	between John S. Gibson Blvd Ramps	105,413	6,535.7	93.7%	6.3%	3,443.4	93.7%	6.3%	1,850.7	93.7%	6.3%	55	100	84
	n/o C Street	131,728	8,464.7	92.8%	7.2%	4,275.3	92.6%	7.4%	2,492.4	92.2%	7.8%	55	100	85
	s/o C Street	140,809	9,144.1	92.9%	7.1%	4,564.7	92.6%	7.4%	2,714.5	92.3%	7.7%	55	100	86
	s/o Channel Street	54,660	3,389.9	93.7%	6.3%	1,785.5	93.7%	6.3%	960.2	93.7%	6.3%	55	100	81
	I-110 SB Ramp to Gaffey St	11,516	719.9	92.1%	7.9%	374.4	92.2%	7.8%	208.2	91.0%	9.0%	55	50	73
	I-110 SB ramp to SR-47 EB	24,013	1,488.8	93.7%	6.3%	784.4	93.7%	6.3%	421.6	93.7%	6.3%	55	50	77
	I-110 SB Ramp to SR-47 EB Ramp	29,820	1,888.8	93.2%	6.8%	970.4	93.1%	6.9%	547.5	92.8%	7.2%	55	50	78
Terminal Island Fwy (SR-47)	between N Pacific Ave and N Habor Blvd	45,413	2,892.0	90.6%	9.4%	1,476.2	90.4%	9.6%	843.7	90.2%	9.8%	45	100	80
	Vincent Thomas Bridge	60,480	3,826.2	90.7%	9.3%	1,968.4	90.6%	9.4%	1,108.2	90.4%	9.6%	45	100	82
	SR-47 WB Off Ramp to Gaffey St	8,400	520.8	91.2%	8.8%	274.4	91.2%	8.8%	147.5	91.2%	8.8%	30	50	73
	SR-47 EB On Ramp from Gaffey St	10,156	629.7	91.2%	8.8%	331.8	91.2%	8.8%	178.3	91.2%	8.8%	30	50	73
	SR-47 WB Ramp to I-110 NB	27,097	1,716.8	90.6%	9.4%	881.6	90.5%	9.5%	498.3	90.3%	9.7%	30	50	78
	SR-47 WB On Ramp from Front St	16,174	1,003.1	97.7%	2.3%	528.3	97.7%	2.3%	284.1	97.7%	2.3%	30	50	71
	SR-47 WB Off Ramp to Front St/Harbor Blvd	4,691	290.8	91.2%	8.8%	153.2	91.2%	8.8%	82.3	91.2%	8.8%	30	50	70
	SR-47 EB Off Ramp to Front St/Harbor Blvd	13,888	861.0	91.2%	8.8%	453.7	91.2%	8.8%	243.8	91.2%	8.8%	30	50	75
	SR-47 EB On Ramp from Front St/Harbor Blvd	10,378	643.4	91.2%	8.8%	339.0	91.2%	8.8%	182.2	91.2%	8.8%	30	50	73

Note: Calculated CNEL are based on TNM2.5 model results

2019 Baseline and 2045-No Federal Action (NFA)

Road Name	Segment Name	Daily Traffic Volumes	Hourly Average Traffic - Day	%PC Day	%HDT Day	Hourly Average Traffic - Evening	%PC Evening	%HDT Evening	Hourly Average Traffic - Night	%PC Night	%HDT Night	Speed (mph)	Receiver Distance (ft)	CNEL (dBA)
Alameda St	w/o Eubank Ave	29,105	2,440.3	80.0%	20.0%	998.3	73.0%	27.0%	717.2	83.7%	16.3%	35	50	82
	e/o Eubank Ave	29,105	2,440.3	80.0%	20.0%	998.3	73.0%	27.0%	717.2	83.7%	16.3%	35	50	82
	n/o Anaheim St	25,679	1,775.1	75.6%	24.4%	904.7	73.5%	26.5%	429.0	76.4%	23.6%	40	50	81
	s/o Anaheim St	29,365	2,096.7	76.1%	23.9%	1,028.9	73.0%	27.0%	529.6	77.3%	22.7%	40	50	82
	n/o Henry Ford Ave	41,792	2,695.8	74.2%	25.8%	1,486.1	74.1%	25.9%	589.1	73.4%	26.6%	40	50	84
	s/o Henry Ford Ave	25,491	1,650.2	73.8%	26.2%	904.7	73.5%	26.5%	366.5	72.4%	27.6%	40	50	81
Harry Bridges Blvd	between Mar Vista Ave and Hawaiian Ave	41,197	3,224.3	87.1%	12.9%	1,428.7	83.9%	16.1%	887.6	88.4%	11.6%	45	50	82
	between Hawaiian Ave and Wilmington Blvd	67,764	5,034.0	86.8%	13.2%	2,371.9	84.4%	15.6%	1,307.2	88.1%	11.9%	45	50	84
	between Wilmington Blvd and Neptune Ave	28,216	2,384.4	87.0%	13.0%	966.2	82.3%	17.7%	706.5	88.7%	11.3%	45	50	80
	between Neptune Ave and Fries Ave	26,733	2,289.5	81.0%	19.0%	913.6	73.6%	26.4%	685.7	84.5%	15.5%	45	50	82
	between Fries Ave and Avalon Blvd	26,802	2,292.7	80.2%	19.8%	916.1	72.6%	27.4%	685.9	83.9%	16.1%	45	50	82
	e/o Avalon Blvd	25,598	2,215.2	76.5%	23.5%	873.2	67.1%	32.9%	669.3	81.5%	18.5%	45	50	82
	e/o Broad Ave	29,099	2,439.9	74.5%	25.5%	998.1	65.5%	34.5%	717.1	79.7%	20.3%	45	50	83
	e/o Quay Ave	29,105	2,440.3	74.5%	25.5%	998.3	65.5%	34.5%	717.2	79.7%	20.3%	45	50	83
John Gibson Blvd	n/o I-110 Ramps	25,859	2,234.1	87.2%	12.8%	876.8	81.9%	18.1%	695.9	86.7%	13.3%	35	50	79
Front St	e/o John S. Gibson	1,894	122.4	78.2%	21.8%	67.5	78.0%	22.0%	26.4	78.4%	21.6%	35	50	70
	n/o I-110 NB on-ramps	4,770	321.8	79.2%	20.8%	169.2	78.0%	22.0%	73.6	80.5%	19.5%	35	50	74
Harbor Bld	n/o I-110 Harbor/Swinford Ramps	20,917	1,357.0	89.7%	10.3%	745.1	89.6%	10.4%	293.8	89.9%	10.1%	35	50	77
	s/o I-110 Harbor/Swinford Ramps	35,385	2,285.4	99.8%	0.2%	1,261.2	99.8%	0.2%	491.5	99.8%	0.2%	35	50	72
Henry Ford Ave	s/o Denni St.	16,315	1,047.2	56.6%	43.4%	581.9	56.6%	43.4%	223.1	56.6%	43.4%	40	50	82
	n/o Anaheim St	16,315	1,047.2	57.0%	43.0%	581.9	57.0%	43.0%	223.1	57.0%	43.0%	40	50	82
	s/o Alameda St	27,188	1,746.3	53.8%	46.2%	968.2	53.8%	46.2%	375.2	53.6%	46.4%	40	50	84
Pacific Ave	s/o Channel Street	23,724	1,583.9	98.8%	1.2%	842.4	98.7%	1.3%	357.3	98.7%	1.3%	35	50	72
	n/o 1st Street	14,982	1,005.5	98.7%	1.3%	531.6	98.7%	1.3%	228.6	98.7%	1.3%	35	50	70
	s/o Front Street	22,187	1,485.2	98.8%	1.2%	787.5	98.7%	1.3%	336.3	98.7%	1.3%	35	50	71
Gaffey St	n/o Channel St	26,966	1,804.9	97.0%	3.0%	957.1	96.9%	3.1%	408.7	97.1%	2.9%	45	50	76
Harbor Fwy (I-110)	between John S. Gibson Blvd Ramps	105,415	6,535.8	93.7%	6.3%	3,443.5	93.7%	6.3%	1,850.8	93.7%	6.3%	55	100	84
	n/o C Street	131,315	8,320.7	92.8%	7.2%	4,269.6	92.7%	7.3%	2,420.6	92.2%	7.8%	55	100	85
	s/o C Street	140,336	8,974.2	92.9%	7.1%	4,558.4	92.7%	7.3%	2,629.7	92.3%	7.7%	55	100	86
	s/o Channel Street	54,663	3,390.0	93.7%	6.3%	1,785.6	93.7%	6.3%	960.2	93.7%	6.3%	55	100	81
	I-110 SB Ramp to Gaffey St	11,398	708.8	92.9%	7.1%	371.5	92.9%	7.1%	202.7	92.3%	7.7%	55	50	74
	I-110 SB ramp to SR-47 EB	24,013	1,488.8	93.7%	6.3%	784.4	93.7%	6.3%	421.6	93.7%	6.3%	55	50	77
	I-110 SB Ramp to SR-47 EB Ramp	29,781	1,871.1	93.2%	6.8%	970.1	93.1%	6.9%	538.7	92.8%	7.2%	55	50	78
Terminal Island Fwy (SR-47)	between N Pacific Ave and N Habor Blvd	45,346	2,859.0	90.5%	9.5%	1,475.7	90.4%	9.6%	827.2	90.0%	10.0%	45	100	80
	Vincent Thomas Bridge	60,414	3,793.2	90.7%	9.3%	1,967.9	90.6%	9.4%	1,091.8	90.3%	9.7%	45	100	82
	SR-47 WB Off Ramp to Gaffey St	8,400	520.8	91.2%	8.8%	274.4	91.2%	8.8%	147.5	91.2%	8.8%	30	50	73
	SR-47 EB On Ramp from Gaffey St	10,156	629.7	91.2%	8.8%	331.8	91.2%	8.8%	178.3	91.2%	8.8%	30	50	73
	SR-47 WB Ramp to I-110 NB	27,068	1,701.5	90.6%	9.4%	881.4	90.5%	9.5%	490.6	90.2%	9.8%	30	50	78
	SR-47 WB On Ramp from Front St	16,174	1,003.1	97.7%	2.3%	528.3	97.7%	2.3%	284.1	97.7%	2.3%	30	50	71
	SR-47 WB Off Ramp to Front St/Harbor Blvd	4,691	290.8	91.2%	8.8%	153.2	91.2%	8.8%	82.3	91.2%	8.8%	30	50	70
	SR-47 EB Off Ramp to Front St/Harbor Blvd	13,888	861.0	91.2%	8.8%	453.7	91.2%	8.8%	243.8	91.2%	8.8%	30	50	75
	SR-47 EB On Ramp from Front St/Harbor Blvd	10,379	643.5	91.2%	8.8%	339.0	91.2%	8.8%	182.2	91.2%	8.8%	30	50	73

Note: Calculated CNEL are based on TNM2.5 model results

2019 Baseline and 2045-Project

Road Name	Segment Name	Daily Traffic Volumes	Hourly Average Traffic - Day	%PC Day	%HDT Day	Hourly Average Traffic - Evening	%PC Evening	%HDT Evening	Hourly Average Traffic - Night	%PC Night	%HDT Night	Speed (mph)	Receiver Distance (ft)	CNEL (dBA)
Alameda St	w/o Eubank Ave	29,911	2,785.2	81.8%	18.2%	1,006.8	72.3%	27.7%	889.5	85.9%	14.1%	35	50	83
	e/o Eubank Ave	29,912	2,786.4	81.9%	18.1%	1,006.8	72.3%	27.7%	890.1	85.9%	14.1%	35	50	83
	n/o Anaheim St	25,957	1,849.0	76.0%	24.0%	909.5	73.1%	26.9%	465.8	77.2%	22.8%	40	50	82
	s/o Anaheim St	29,824	2,211.1	76.5%	23.5%	1,037.3	72.4%	27.6%	586.6	78.1%	21.9%	40	50	82
	n/o Henry Ford Ave	41,992	2,717.3	74.1%	25.9%	1,491.0	73.8%	26.2%	599.7	73.0%	27.0%	40	50	84
	s/o Henry Ford Ave	25,691	1,671.3	73.5%	26.5%	909.5	73.1%	26.9%	377.0	71.8%	28.2%	40	50	82
Harry Bridges Blvd	between Mar Vista Ave and Hawaiian Ave	42,033	3,578.3	87.8%	12.2%	1,437.6	83.4%	16.6%	1,064.4	89.5%	10.5%	45	50	82
	between Hawaiian Ave and Wilmington Blvd	68,600	5,388.0	87.3%	12.7%	2,380.8	84.1%	15.9%	1,484.0	88.9%	11.1%	45	50	84
	between Wilmington Blvd and Neptune Ave	29,042	2,731.5	88.0%	12.0%	975.1	81.6%	18.4%	879.8	89.9%	10.1%	45	50	81
	between Neptune Ave and Fries Ave	27,542	2,635.7	82.8%	17.2%	922.1	73.0%	27.0%	858.6	86.6%	13.4%	45	50	82
	between Fries Ave and Avalon Blvd	27,610	2,638.1	82.1%	17.9%	924.6	71.9%	28.1%	858.4	86.2%	13.8%	45	50	82
	e/o Avalon Blvd	26,405	2,560.2	79.0%	21.0%	881.7	66.4%	33.6%	841.7	84.2%	15.8%	45	50	83
	e/o Broad Ave	29,904	2,784.8	77.0%	23.0%	1,006.5	64.9%	35.1%	889.4	82.6%	17.4%	45	50	84
	e/o Quay Ave	29,911	2,785.2	77.0%	23.0%	1,006.8	64.9%	35.1%	889.5	82.6%	17.4%	45	50	84
John Gibson Blvd	n/o I-110 Ramps	27,090	2,610.9	87.5%	12.5%	896.3	80.1%	19.9%	883.8	87.3%	12.7%	35	50	81
Front St	e/o John S. Gibson	1,894	122.4	78.2%	21.8%	67.5	78.0%	22.0%	26.4	78.4%	21.6%	35	50	70
	n/o I-110 NB on-ramps	4,784	331.9	79.8%	20.2%	169.1	78.0%	22.0%	78.7	81.8%	18.2%	35	50	74
Harbor Bld	n/o I-110 Harbor/Swinford Ramps	20,931	1,367.1	89.8%	10.2%	745.1	89.6%	10.4%	298.8	90.0%	10.0%	35	50	77
	s/o I-110 Harbor/Swinford Ramps	35,400	2,295.5	99.8%	0.2%	1,261.2	99.8%	0.2%	496.6	99.8%	0.2%	35	50	72
Henry Ford Ave	s/o Denni St.	16,314	1,046.9	56.6%	43.4%	581.9	56.6%	43.4%	223.0	56.6%	43.4%	40	50	82
	n/o Anaheim St	16,315	1,047.1	57.0%	43.0%	581.9	57.0%	43.0%	223.1	57.0%	43.0%	40	50	82
	s/o Alameda St	27,250	1,750.9	53.8%	46.2%	969.8	53.7%	46.3%	377.5	53.5%	46.5%	40	50	84
Pacific Ave	s/o Channel Street	23,794	1,624.7	98.8%	1.2%	842.6	98.7%	1.3%	377.7	98.7%	1.3%	35	50	72
	n/o 1st Street	15,037	1,036.5	98.7%	1.3%	531.8	98.6%	1.4%	244.1	98.7%	1.3%	35	50	70
	s/o Front Street	22,257	1,526.1	98.8%	1.2%	787.8	98.7%	1.3%	356.7	98.7%	1.3%	35	50	72
Gaffey St	n/o Channel St	27,055	1,855.6	97.1%	2.9%	957.5	96.8%	3.2%	434.1	97.2%	2.8%	45	50	76
Harbor Fwy (I-110)	between John S. Gibson Blvd Ramps	105,414	6,535.7	93.7%	6.3%	3,443.5	93.7%	6.3%	1,850.7	93.7%	6.3%	55	100	84
	n/o C Street	132,295	8,494.8	92.4%	7.6%	4,290.6	92.3%	7.7%	2,507.1	91.6%	8.4%	55	100	86
	s/o C Street	141,397	9,182.2	92.5%	7.5%	4,580.3	92.3%	7.7%	2,733.2	91.8%	8.2%	55	100	86
	s/o Channel Street	54,662	3,390.0	93.7%	6.3%	1,785.5	93.7%	6.3%	960.2	93.7%	6.3%	55	100	81
	I-110 SB Ramp to Gaffey St	11,546	720.5	91.9%	8.1%	375.3	92.0%	8.0%	208.5	90.6%	9.4%	55	50	74
	I-110 SB ramp to SR-47 EB	24,013	1,488.8	93.7%	6.3%	784.4	93.7%	6.3%	421.6	93.7%	6.3%	55	50	77
	I-110 SB Ramp to SR-47 EB Ramp	29,902	1,894.0	93.0%	7.0%	972.6	92.9%	7.1%	550.1	92.5%	7.5%	55	50	78
Terminal Island Fwy (SR-47)	between N Pacific Ave and N Habor Blvd	45,570	2,901.1	90.3%	9.7%	1,480.4	90.1%	9.9%	848.2	89.7%	10.3%	45	100	81
	Vincent Thomas Bridge	60,637	3,835.3	90.5%	9.5%	1,972.6	90.4%	9.6%	1,112.7	90.1%	9.9%	45	100	82
	SR-47 WB Off Ramp to Gaffey St	8,400	520.8	91.2%	8.8%	274.4	91.2%	8.8%	147.5	91.2%	8.8%	30	50	73
	SR-47 EB On Ramp from Gaffey St	10,156	629.7	91.2%	8.8%	331.8	91.2%	8.8%	178.3	91.2%	8.8%	30	50	73
	SR-47 WB Ramp to I-110 NB	27,172	1,720.5	90.4%	9.6%	883.6	90.3%	9.7%	500.1	89.9%	10.1%	30	50	78
	SR-47 WB On Ramp from Front St	16,174	1,002.9	97.7%	2.3%	528.3	97.7%	2.3%	284.0	97.7%	2.3%	30	50	71
	SR-47 WB Off Ramp to Front St/Harbor Blvd	4,691	290.8	91.2%	8.8%	153.2	91.2%	8.8%	82.3	91.2%	8.8%	30	50	70
	SR-47 EB Off Ramp to Front St/Harbor Blvd	13,888	861.0	91.2%	8.8%	453.7	91.2%	8.8%	243.8	91.2%	8.8%	30	50	75
	SR-47 EB On Ramp from Front St/Harbor Blvd	10,378	643.4	91.2%	8.8%	339.0	91.2%	8.8%	182.2	91.2%	8.8%	30	50	73

Note: Calculated CNEL are based on TNM2.5 model results