

NOISE IMPACT ANALYSIS

**TENTATIVE TRACT MAP NO. 38236 VALLEY &
WHITNEY RESIDENTIAL PROJECT**

CITY OF MORENO VALLEY

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ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Moreno Valley
cmu	concrete masonry unit
CNEL	Community Noise Equivalent Level
dB	Decibel
dBA	A-weighted decibels
DOT	Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
EPA	Environmental Protection Agency
Hz	Hertz
Ldn	Day-night average noise level
Leq	Equivalent sound level
Lmax	Maximum noise level
OSHA	Occupational Safety and Health Administration
PPV	Peak particle velocity
RMS	Root mean square
SEL	Single Event Level or Sound Exposure Level
STC	Sound Transmission Class
TTM	Tentative Tract Map
VdB	Vibration velocity level in decibels

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Noise Impact Analysis has been prepared to determine the noise impacts associated with the proposed Tentative Tract Map (TTM) No. 38236 Valley & Whitney Residential project (proposed project). The following is provided in this report:

- A description of the study area and the proposed project;
- Information regarding the fundamentals of noise;
- Information regarding the fundamentals of vibration;
- A description of the local noise guidelines and standards;
- An evaluation of the current noise environment;
- An analysis of the potential short-term construction-related noise impacts from the proposed project; and
- An analysis of long-term operations-related noise impacts from the proposed project.

1.2 Site Location and Study Area

The project site is located in the City of Moreno Valley (City), on the southwest corner of the intersection of Alessandro Boulevard and Oliver Street. The 26.7 gross acre project site is currently vacant and is bounded by Alessandro Boulevard, rural residential and vacant land to the north, Oliver Street, Discovery Christian Church and vacant land to the east, Brodiaea Avenue (currently dirt road) and rural residential to the south, and vacant land to the west. The project study area is shown in Figure 1.

Sensitive Receptors in Project Vicinity

The nearest sensitive receptor to the project site is a single-family home that is located as near 80 feet south of the project site. There is also a single-family home located as near as 170 feet north of the project site and a church located as near as 100 feet east of the project site. The nearest K-12 school is La Jolla Elementary School, which is located as near as 0.4 mile south of the project site.

1.3 Proposed Project Description

The proposed project would consist of a residential development that would include 204 detached single-family homes with a 1.87-acre open space park near the center of the project site and four detention basins on the south portion of the project site as well as an onsite roadway system. The proposed project would also include road improvements to the portions of Alessandro Boulevard, Oliver Street and Brodiaea Avenue that are adjacent to the project site. The proposed site plan is shown in Figure 2.

1.4 Executive Summary

Standard Noise Regulatory Conditions

The proposed project will be required to comply with the following regulatory conditions from the City and State of California (State).

City of Moreno Valley Noise Regulations

The following lists the noise and vibration regulations from the Municipal Code that are applicable, but not limited to the proposed project.

- Section 9.10.030 Temporary Construction Exemptions;
- Section 9.10.170 Vibration;
- Section 11.80.030(B)(2) Sound Level Limits.

State of California Noise Regulations

The following lists the State of California noise regulations that are applicable, but not limited to the proposed project.

- California Vehicle Code Section 27200-27207 – On Road Vehicle Noise Limits
- California Vehicle Code Section 38365-38350 – Off-Road Vehicle Noise Limits

Summary of Analysis Results

The following is a summary of the proposed project's impacts with regard to the State CEQA Guidelines noise checklist questions.

Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially significant impact. Implementation of Mitigation Measure 1 would reduce the impact to less than significant levels.

Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact.

For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

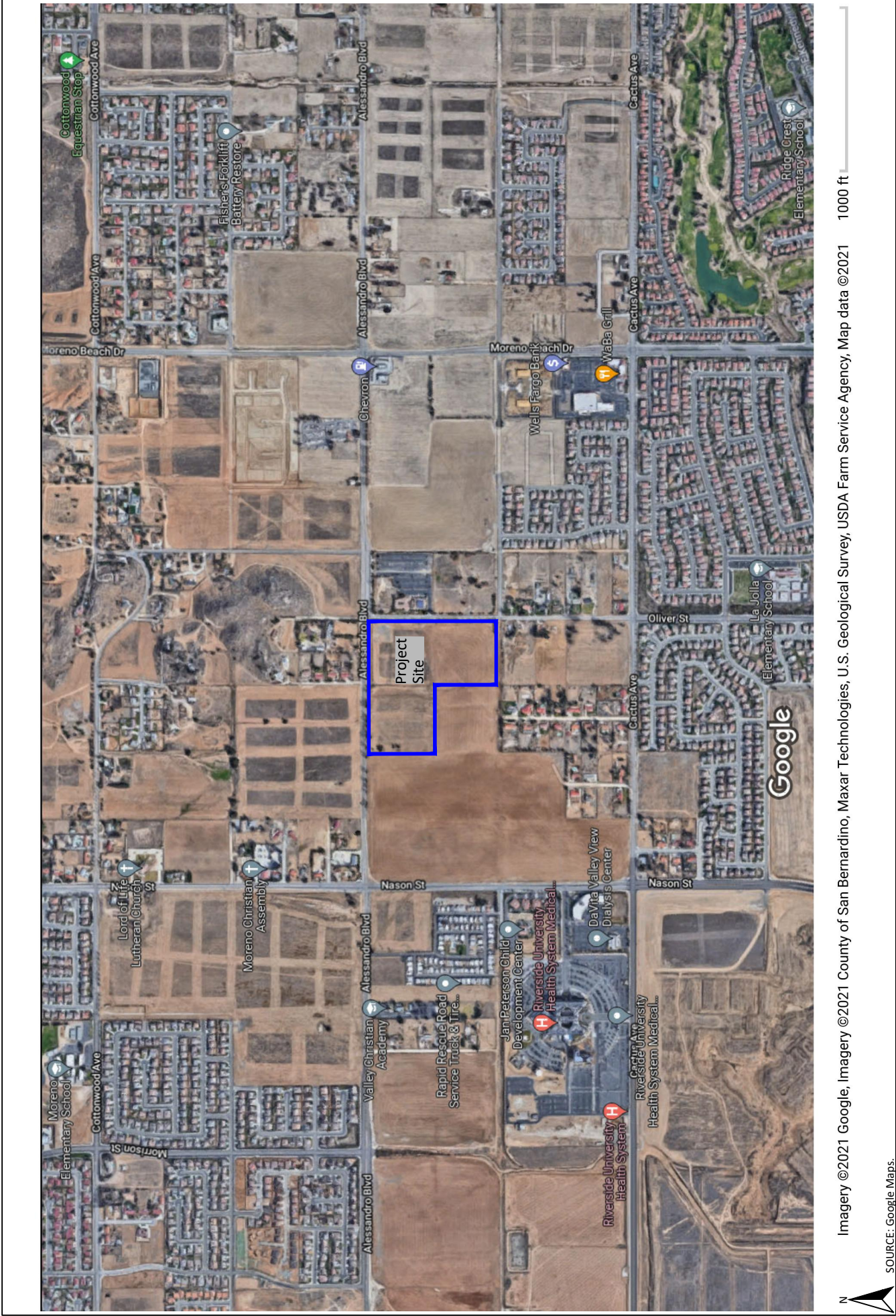
No impact.

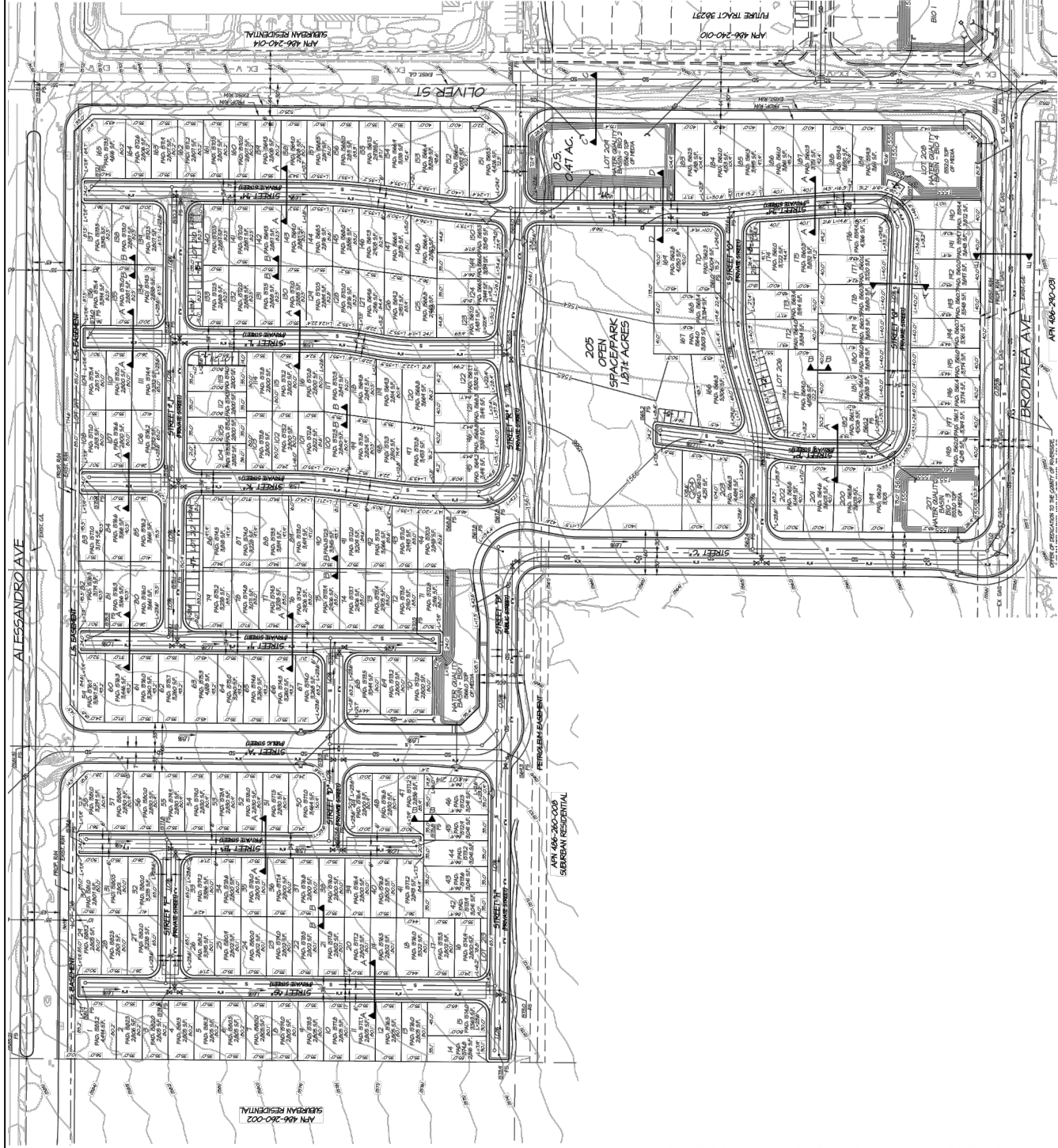
1.5 Mitigation Measures for the Proposed Project

This analysis found that through adherence to the noise and vibration regulations detailed in Section 1.4 above, and through implementation of the following mitigation all noise and vibration impacts would be reduced to less than significant levels

Mitigation Measure 1:

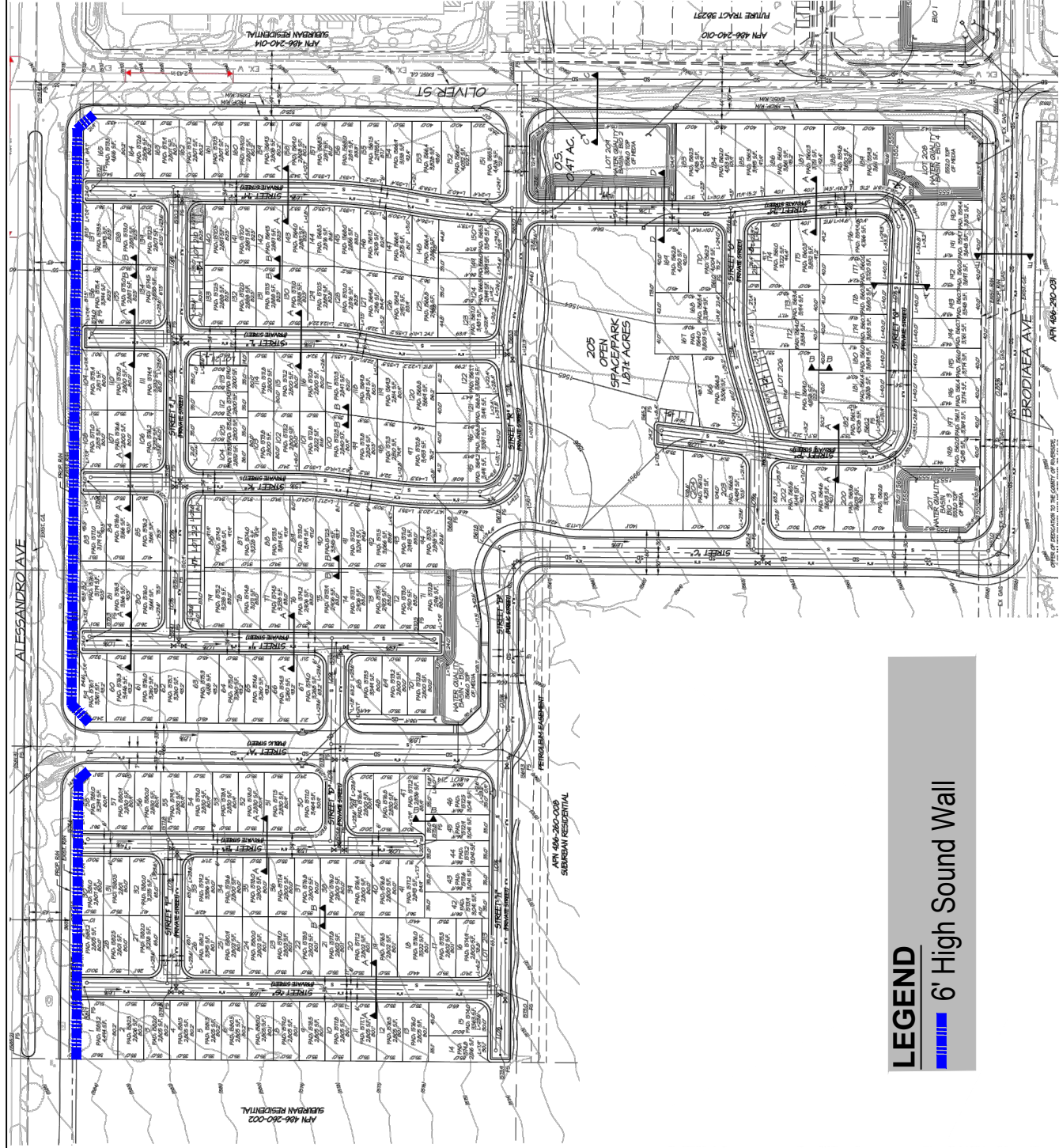
The project applicant shall construct a minimum 6.0-foot high solid wall on the shared property lines of the proposed homes that are adjacent to Alessandro Boulevard. The solid walls shall be constructed of concrete masonry units (CMUs) and shall be free of any decorative cutouts or openings. Figure 3 depicts the locations of the required sound walls.





SOURCE: Adkan Engineers.

Figure 2
Proposed Site Plan



SOURCE: Adkan Engineers.

Figure 3
Locations of Required Sound Walls

2.0 NOISE FUNDAMENTALS

Noise is defined as unwanted sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit which expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear.

2.1 Noise Descriptors

Noise Equivalent sound levels are not measured directly, but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The worst-hour traffic Leq is the noise metric used by California Department of Transportation (Caltrans) for all traffic noise impact analyses.

The Day-Night Average Level (Ldn) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of ten decibels to sound levels at night between 10 p.m. and 7 a.m. While the Community Noise Equivalent Level (CNEL) is similar to the Ldn, except that it has another addition of 4.77 decibels to sound levels during the evening hours between 7 p.m. and 10 p.m. These additions are made to the sound levels at these time periods because during the evening and nighttime hours, when compared to daytime hours, there is a decrease in the ambient noise levels, which creates an increased sensitivity to sounds. For this reason the sound appears louder in the evening and nighttime hours and is weighted accordingly. The City of Moreno Valley relies on the CNEL noise standard to assess transportation-related impacts on noise sensitive land uses.

2.2 Tone Noise

A pure tone noise is a noise produced at a single frequency and laboratory tests have shown that humans are more perceptible to changes in noise levels of a pure tone. For a noise source to contain a “pure tone,” there must be a significantly higher A-weighted sound energy in a given frequency band than in the neighboring bands, thereby causing the noise source to “stand out” against other noise sources. A pure tone occurs if the sound pressure level in the one-third octave band with the tone exceeds the average of the sound pressure levels of the two contiguous one-third octave bands by:

- 5 dB for center frequencies of 500 hertz (Hz) and above
- 8 dB for center frequencies between 160 and 400 Hz
- 15 dB for center frequencies of 125 Hz or less

2.3 Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in level of noise as the distance from the source increases. The manner in which the noise level reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features.

Sound from point sources, such as air conditioning condensers, radiate uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD) between source and receiver. Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

2.4 Ground Absorption

The sound drop-off rate is highly dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA/DD is typically observed over soft ground with landscaping, as compared with a 6.0 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. For line sources a 4.5 dBA/DD is typically observed for soft-site conditions compared to the 3.0 dBA/DD drop-off rate for hard-site conditions. Caltrans research has shown that the use of soft-site conditions is more appropriate for the application of the Federal Highway Administration (FHWA) traffic noise prediction model used in this analysis.

3.0 GROUND-BORNE VIBRATION FUNDAMENTALS

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

3.1 *Vibration Descriptors*

There are several different methods that are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Due to the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels and is denoted as (L_v) and is based on the rms velocity amplitude. A commonly used abbreviation is “VdB”, which in this text, is when L_v is based on the reference quantity of 1 micro inch per second.

3.2 *Vibration Perception*

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration.

3.3 *Vibration Propagation*

The propagation of ground-borne vibration is not as simple to model as airborne noise. This is due to the fact that noise in the air travels through a relatively uniform medium, while ground-borne vibrations travel through the earth which may contain significant geological differences. There are three main types of vibration propagation; surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground’s surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a “push-pull” fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or “side-to-side and perpendicular to the direction of propagation.”

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 REGULATORY SETTING

The project site is located in the City of Moreno Valley. Noise regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA), which regulates transit noise, while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being sited adjacent to a highway or, alternately that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation sources, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

4.2 State Regulations

Noise Standards

California Department of Health Services Office of Noise Control

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regulatory tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix,” which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise. The Community Noise Compatibility Matrix that was adopted by the City is shown in Figure 4.

California Noise Insulation Standards

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required

Table N-1: Community Noise Compatibility Matrix

Land Use Category	Community Noise Exposure (CNEL)					
	55	60	65	70	75	80
Residential – Low Density Single Family, Duplex, Mobile Homes	A			B	C	D
Residential – Multiple Family	A			B	C	D
Transient Lodging: Hotels and Motels	A			B	C	D
Schools, Libraries, Churches, Hospitals, Nursing Homes	A				C	D
Auditoriums, Concert Halls, Amphitheaters	B				C	
Sports Arena, Outdoor Spectator Sports	B				C	
Playground, Neighborhood Parks	A			B	C	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	A				C	D
Office Buildings, Businesses, Commercial and Professional	A			B	C	
Industrial, Manufacturing, Utilities, Agricultural	A				B	C

A	Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
B	Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
	Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Governor's Office of Planning and Research 2017.

SOURCE: City of Moreno Valley, 2021.

to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

California Vehicle Code Section 27200-27207 – On-Road Vehicle Noise

California Vehicle Code Section 27200-27207 provides noise limits for vehicles operated in California. For vehicles over 10,000 pounds noise is limited to 88 dB for vehicles manufactured before 1973, 86 dB for vehicles manufactured before 1975, 83 dB for vehicles manufactured before 1988, and 80 dB for vehicles manufactured after 1987. All measurements are based at 50 feet from the vehicle.

California Vehicle Section 38365-38380 – Off-Road Vehicle Noise

California Vehicle Code Section 38365-38380 provides noise limits for off-highway motor vehicles operated in California. 92 dBA for vehicles manufactured before 1973, 88 dBA for vehicles manufactured before 1975, 86 dBA for vehicles manufactured before 1986, and 82 dBA for vehicles manufactured after December 31, 1985. All measurements are based at 50 feet from the vehicle.

Vibration Standards

Title 14 of the California Administrative Code Section 15000 requires that all state and local agencies implement the California Environmental Quality Act (CEQA) Guidelines, which requires the analysis of exposure of persons to excessive groundborne vibration. However, no statute has been adopted by the state that quantifies the level at which excessive groundborne vibration occurs.

The *Transportation- and Construction Vibration Guidance Manual*, prepared by Caltrans, April 2020, provides practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. However, this manual is also used as a reference point by many lead agencies and CEQA practitioners throughout California, as it provides numeric thresholds for vibration impacts. Thresholds are established for continuous (construction-related) and transient (transportation-related) sources of vibration, which found that the human response becomes distinctly perceptible at 0.25 inch per second PPV for transient sources and 0.04 inch per second PPV for continuous sources.

4.3 Local Regulations

The *City of Moreno Valley General Plan 2040* (General Plan 2040), adopted June 15, 2021 and Municipal Code establishes the following applicable policies related to noise and vibration.

City of Moreno Valley General Plan

The following applicable goals and policies to the proposed residential project are from the Noise Element of the General Plan 2040.

Goal N-1: Design for a pleasant, healthy sound environment conducive to living and working.

Policies

- N.1-1** Protect occupants of existing and new buildings from exposure to excessive noise, particularly adjacent to freeways, major roadways, the railroad, and within areas of aircraft overflight.
- N.1-3** Apply the community noise compatibility standards (Table N-1[see Figure 4 above]) to all new development and major redevelopment projects outside the noise and safety compatibility zones established in the March Air Reserve Base/Inland Port Airport Land Use Compatibility (ALUC) Plan in order to protect against the adverse effects of noise exposure. Projects within the noise and safety compatibility zones are subject to the standards contained in the ALUC Plan.
- N.1-4** Require a noise study and/or mitigation measures if applicable for all projects that would expose people to noise levels greater than the “normally acceptable” standard and for any other projects that are likely to generate noise in excess of these standards.
- N.1-7** Developers shall reduce the noise impacts on new development through appropriate means (e.g. double-paned or soundproof windows, setbacks, berming, and screening). Noise attenuation methods should avoid the use of visible sound walls where possible.

Goal N-2: Ensure that noise does not have a substantial, adverse effect on the quality of life in the community.

Policies

- N.2-1** Use the development review process to proactively identify and address potential noise compatibility issues.
- N.2-3** Limit the potential noise impacts of construction activities on surrounding land uses through noise regulations in the Municipal Code that address allowed days and hours of construction, types of work, construction equipment, and sound attenuation devices.

City of Moreno Valley Municipal Code

The City of Moreno Valley Municipal Code establishes the following applicable standards related to noise.

Section 9.10.010 Performance Standards - Purpose and Intent

The purpose and intent of this chapter is to explicitly describe the location, configuration, design, amenities, operation and other standards for proposed development projects that may impact the surrounding neighborhood. The performance standards set maximum tolerance limits on certain adverse effects created by any use or development of land.

Section 9.10.030 Performance Standards - Exemptions

The following uses or activities are exempt from the provisions of this chapter:

- A. Emergency equipment, vehicles, devices and activities.
- B. Temporary construction, maintenance, or demolition activities between the hours of seven a.m. and seven p.m.

Section 9.10.170 Performance Standards - Vibration

No vibration shall be permitted which can be felt at or beyond the property line.

Section 11.80.030 Prohibited Acts

A. General Prohibition. It is unlawful and a violation of this chapter to maintain, make, cause, or allow the making of any sound that causes a noise disturbance, as defined in Section 11.80.020.

B. Sound causing permanent hearing loss.

1. Sound level limits. Based on statistics from the Center for Disease Control and Prevention and the National Institute for Occupational Safety and Health, Table 1 and Table 1-A specify sound level limits which, if exceeded, will have a high probability of producing permanent hearing loss in anyone in the area where the sound levels are being exceeded. No sound shall be permitted within the city which exceeds the parameters set for in Tables 11.80.030-1 [see Table A] and 11.80.030-1-A [see Table B] of this chapter:

Table A – City of Moreno Valley Maximum Continuous Sound Levels

Duration per Day (Continuous Hours)	Sound Level [dB(A)]
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25	115

Source: City of Moreno Valley Municipal Code Section 11.80.030.

Table B – City of Moreno Valley Maximum Impulsive Sound Levels

Number of Repetitions per 24-Hour Period	Sound Level [dB(A)]
1	145
10	135
100	125

Source: City of Moreno Valley Municipal Code Section 11.80.030.

C. Nonimpulsive Sound Decibel Limits. No person shall maintain, create, operate or cause to be operated on private property any source of sound in such a manner as to create any nonimpulsive sound which exceeds the limits set forth for the source land use category (as defined in Section 11.80.020) in Table 11.80.030-2 [see Table C] when measured at a distance of two hundred (200) feet or more from the real

property line of the source of the sound, if the sound occurs on privately owned property, or from the source of the sound, if the sound occurs on public right-of-way, public space or other publicly owned property. Any source of sound in violation of this subsection shall be deemed prima facie to be a noise disturbance.

Table C – City of Moreno Valley Maximum Sound Levels for Source Land Uses

Residential		Commercial	
Daytime ¹	Nighttime ²	Daytime ¹	Nighttime ²
60	55	65	60

Notes:

¹ Daytime defined as 8:00 a.m. to 10:00 p.m.

² Nighttime define as 10:01 p.m. to 7:59 a.m. the following day.

Source: City of Moreno Valley Municipal Code Section 11.80.030.

D. Specific Prohibitions. In addition to the general prohibitions set out in subsection A of this section, and unless otherwise exempted by this chapter, the following specific acts, or the causing or permitting thereof, are regulated as follows:

7. Construction and Demolition. No person shall operate or cause the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the hours of 8 p.m. and 7 a.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee. This section shall not apply to the use of power tools as provided in subsection (D)(9) of this section.

5.0 EXISTING NOISE CONDITIONS

To determine the existing noise levels, noise measurements have been taken in the vicinity of the project site. The field survey noted that noise within the proposed project area is generally characterized by vehicle traffic on Alessandro Boulevard that is adjacent to the north side of the project site and Oliver Street that is adjacent to the east side of the project site. The following describes the measurement procedures, measurement locations, noise measurement results, and the modeling of the existing noise environment.

5.1 Noise Measurement Equipment

The noise measurements were taken using three Larson Davis Model LXT1 Class 1 sound level meters programmed in “slow” mode to record the sound pressure level at 1-second intervals for 24 hours in “A” weighted form. In addition, the L_{eq} averaged over the entire measuring time and L_{max} were recorded with the three sound level meters. The sound level meters and microphones were mounted on trees and posts, were placed between three and six feet above the ground and were equipped with windscreens during all measurements. The noise meters were calibrated before and after the monitoring using a Larson Davis Cal200 calibrator. All noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (ANSI S1.4-2014 standard).

Noise Measurement Locations

The noise monitoring locations were selected in order to obtain noise levels in the vicinity of the project site. Descriptions of the noise monitoring sites are provided below in Table D and are shown in Figure 5. Appendix A includes a photo index of the study area and noise level measurement locations.

Noise Measurement Timing and Climate

The noise measurements were recorded between 3:28 p.m. on Wednesday, September 22, 2021 and 3:40 p.m. on Thursday, September 23, 2021. At the start of the noise measurements, the sky was partly cloudy, the temperature was 101 degrees Fahrenheit, the humidity was 29 percent, barometric pressure was 28.32 inches of mercury, and the wind was blowing around eight miles per hour. Overnight, the temperature dropped to 68 degrees Fahrenheit and the humidity peaked at 56 percent. At the conclusion of the noise measurements, the sky was hazy, the temperature was 96 degrees Fahrenheit, the humidity was 31 percent, barometric pressure was 28.19 inches of mercury, and the wind was blowing around six miles per hour.

5.2 Noise Measurement Results

The results of the noise level measurements are presented in Table D. The measured sound pressure levels in dBA have been used to calculate the minimum and maximum L_{eq} averaged over 1-hour intervals. Table D also shows the L_{eq} , L_{max} , and CNEL, based on the entire measurement time. The CNEL was calculated through use of Equation 2-23 from *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (TeNS), prepared by Caltrans, September 2013. The noise monitoring data printouts are included in Appendix B. Figure 6 shows a graph of the 24-hour noise measurements.

Table D – Existing (Ambient) Noise Level Measurements

Site No.	Site Description	Average (dBA L _{eq})		1-hr Average (dBA L _{eq} /Time)		Weighted-Average ³ (dBA CNEL)
		Daytime ¹	Nighttime ²	Minimum	Maximum	
A	Located on a tree on the north side of the project site, approximately 70 feet south of Alessandro Boulevard centerline and 30 feet west of Marion Road centerline.	60.0	53.1	46.3 2:01 a.m.	62.1 7:39 a.m.	62.1
B	Located on a tree on the east side of the project site and directly across street from Discovery Church Preschool Playground, approximately 30 feet west of Oliver Street centerline.	64.6	55.4	49.7 2:26 a.m.	67.4 7:52 a.m.	65.4
C	Located on a post on the south side of the project site, within the Brodiaea Avenue right-of-way, approximately 350 feet west of Oliver Street centerline.	47.4	42.7	38.9 9:50 a.m.	52.0 4:39 p.m.	51.2

Notes:

¹ Daytime defined as 8:00 a.m. to 10:00 p.m. (Section 11.80.020 of the Municipal Code)

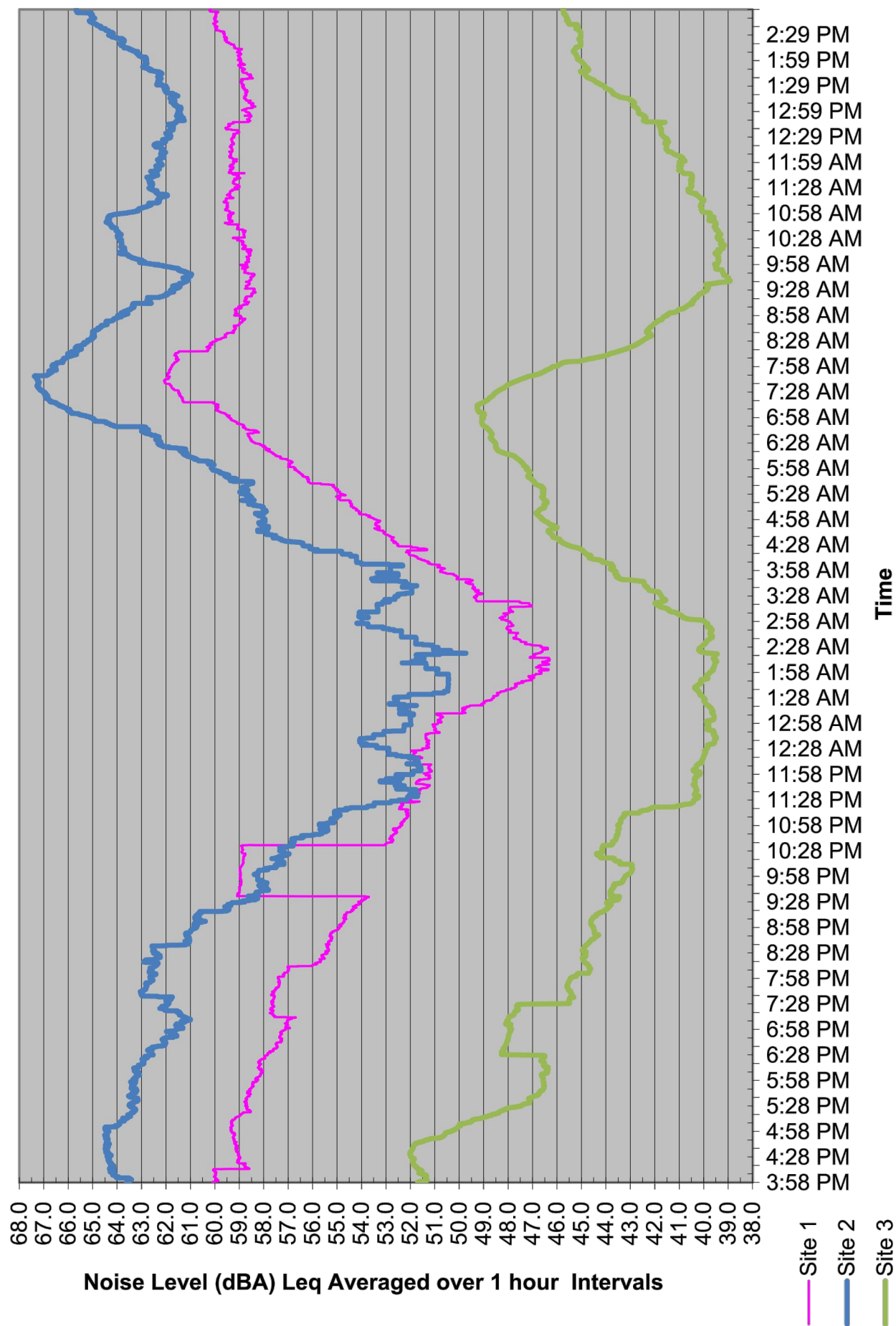
² Nighttime define as 10:01 p.m. to 7:59 a.m. (Section 11.80.020 of the Municipal Code)

³ The weighted-average noise level (dBA CNEL) includes an additional 4.77 dBA noise penalty to account for the evening noise sensitive hours of 7 p.m. to 10 p.m. and an additional 10 dBA penalty to account for the nighttime noise sensitive hours of 10 p.m. to 7 a.m..

Source: Noise measurements taken between Wednesday, September 22, 2021 and Thursday, September 23, 2021.



Figure 5
Field Noise Monitoring Locations



SOURCE: Three Larson Davis Model LXT1 Class 1 Sound Level Meters.

6.0 MODELING PARAMETERS AND ASSUMPTIONS

6.1 Construction Noise

The noise impacts from construction of the proposed project have been analyzed through use of the FHWA's Roadway Construction Noise Model (RCNM). The FHWA compiled noise measurement data regarding the noise generating characteristics of several different types of construction equipment used during the Central Artery/Tunnel project in Boston. Table E below provides a list of the construction equipment anticipated to be used for each phase of construction that was obtained from the *Air Quality, Energy, and Greenhouse Gas Impact Analysis Tentative Tract Map No. 38236 Valley & Whitney Residential Project* (Air Quality Analysis), prepared by Vista Environmental, October 27, 2021.

Table E – Construction Equipment Noise Emissions and Usage Factors

Equipment Description	Number of Equipment	Acoustical Use Factor ¹ (percent)	Spec 721.560 Lmax at 50 feet ² (dBA, slow ³)	Actual Measured Lmax at 50 feet ⁴ (dBA, slow ³)
Site Preparation				
Rubber Tired Dozers	3	40	85	82
Crawler Tractors	4	40	84	N/A
Grading				
Excavators	2	40	85	81
Grader	1	40	85	83
Rubber Tired Dozer	1	40	85	82
Scrapers	2	40	85	84
Crawler Tractors	2	40	85	82
Building Construction				
Crane	1	16	85	81
Forklift (Gradall)	3	40	85	83
Generator	1	50	82	81
Tractor, Loader or Backhoes	3	40	84	N/A
Welder	1	40	73	74
Paving				
Paver	2	50	85	77
Paving Equipment	2	50	85	77
Roller	2	20	85	80
Architectural Coating				
Air Compressor	1	40	80	78

Notes:

¹ Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.

² Spec 721.560 is the equipment noise level utilized by the RCNM program.

³ The "slow" response averages sound levels over 1-second increments. A "fast" response averages sound levels over 0.125-second increments.

⁴ Actual Measured is the average noise level measured of each piece of equipment during the Central Artery/Tunnel project in Boston, Massachusetts primarily during the 1990s.

Source: Federal Highway Administration, 2006.

Table E shows the associated measured noise emissions for each piece of equipment from the RCNM model and measured percentage of typical equipment use per day. Construction noise impacts to the nearby sensitive receptors have been calculated according to the equipment noise levels and usage factors listed Table E and through use of the RCNM.

For each phase of construction, the construction equipment was analyzed based on being placed in the middle of the project site, which is based on the analysis methodology detailed in FTA Manual for a General Assessment. However, in order to provide a conservative analysis, all equipment was analyzed, instead of just the two noisiest pieces of equipment as detailed in the FTA Manual. In order to account for Section 11.80.030(C) of the Municipal Code, each receiver was placed 200 feet back from the project site property lines. The RCNM model printouts are provided in Appendix C.

6.2 Operations-Related Noise

FHWA Model Methodology

The proposed project would result in increases in traffic noise to the nearby roadways as well as introduce new sensitive receptors to the project site. The project impacts to the offsite roadways were analyzed through use of the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108 (FHWA Model). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Adjustments are then made to the reference energy mean emission level to account for: the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT) and the percentage of ADT which flows during the day, evening and night, the travel speed, the vehicle mix on the roadway, which is a percentage of the volume of automobiles, medium trucks and heavy trucks, the roadway grade, the angle of view of the observer exposed to the roadway and site conditions ("hard" or "soft" relates to the absorption of the ground, pavement or landscaping). The following section provides a discussion of the software and modeling input parameters used in this analysis and a discussion of the resultant existing noise model.

FHWA Model Traffic Noise Prediction Model Inputs

The roadway parameters used for this study are presented in Table F. The roadway classifications are based on the City's General Plan Circulation Element. The roadway speeds are based on the posted speed limits. The distance to the nearest sensitive receptor was determined by measuring the distance from the roadway centerline to the nearest residence. Since the study area is located in a suburban environment and landscaping or natural vegetation exists along the sides of the analyzed roadways, soft site conditions were modeled. It should be noted that Brodiaea Avenue is classified as a local roadway that consists of low traffic volumes at slower speeds and the traffic noise from Brodiaea Avenue would not make a significant contribution to the noise environment, as such the noise level from Brodiaea Avenue was not analyzed.

Table F – FHWA Model Roadway Parameters

Roadway	Segment	General Plan Classification	Vehicle Speed (MPH)	Distance to Nearest Receptor¹ (feet)
Oliver Street	South of Alessandro Boulevard	Minor Arterial	40	60
Alessandro Boulevard	West of Oliver Street	Divided Arterial	50	70
Alessandro Boulevard	East of Oliver Street	Divided Arterial	40	110

Notes:

¹ Distance measured from nearest offsite residential structure to centerline of roadway.

Source: City of Moreno Valley, 2021.

The average daily traffic (ADT) volumes for the without project conditions were obtained from Appendix D: Noise Output of the *Draft Environmental Impact Report for the MoVal 2040: Moreno Valley Comprehensive Plan Update, Housing Element Update, and Climate Action Plan Public Review Draft* (MoVal 2040 DEIR), April 2, 2021. The ADT for the with project conditions were calculated by adding the project trip generation rate of 1,924 daily trips that was obtained from the *Project Scoping Form*, prepared by EPD Solutions, October 2021, to the without project ADT volumes. Since the Project Scoping Form did not include any project trip distribution, it was assumed that 50 percent of the project trips would travel west on Alessandro Boulevard, 25 percent would travel east on Alessandro Boulevard, and 25 percent would travel south on Oliver Street. The ADT volumes used in this analysis are shown in Table G.

Table G – Average Daily Traffic Volumes

Roadway	Segment	Average Daily Traffic Volumes			
		Existing	Existing + Project	Year 2040 No Project	Year 2040 + Project
Oliver Street	South of Alessandro Boulevard	3,957	4,438	4,409	4,890
Alessandro Boulevard	West of Oliver Street	6,942	7,904	10,694	11,656
Alessandro Boulevard	East of Oliver Street	6,942	7,423	10,694	11,175

Source: City of Moreno Valley, 2021; EPD Solutions, Inc., 2021.

The vehicle mixes used in the FHWA-RD-77-108 Model are shown in Table H and were obtained from Appendix D of the MoVal 2040 DEIR for Oliver Street and Alessandro Boulevard. The vehicle mix provides the hourly distribution percentages of automobiles, medium trucks, and heavy trucks for input into the FHWA model.

Table H – Roadway Vehicle Mixes

Vehicle Type	Traffic Flow Distributions			Overall
	Day (7 a.m. to 7 p.m.)	Evening (7 p.m. to 10 p.m.)	Night (10 p.m. to 7 a.m.)	
Oliver Street				
Automobiles	76.44%	3.92%	17.64%	98.00%
Medium Trucks	0.78%	0.04%	0.18%	1.00%
Heavy Trucks	0.78%	0.04%	0.18%	1.00%
Alessandro Boulevard				
Automobiles	76.78%	3.94%	17.72%	98.44%
Medium Trucks	0.88%	0.05%	0.20%	1.13%
Heavy Trucks	0.34%	0.02%	0.08%	0.43%

Source: City of Moreno Valley, 2021.

FHWA Model Source Assumptions

To assess the roadway noise generation in a uniform manner, all vehicles are analyzed at the single lane equivalent acoustic center of the roadway being analyzed. In order to determine the height above the

road grade where the noise is being emitted from, each type of vehicle has been analyzed independently with autos at road grade, medium trucks at 2.3 feet above road grade, and heavy trucks at 8 feet above road grade. These elevations were determined through a noise-weighted average of the elevation of the exhaust pipe, tires and mechanical parts in the engine, which are the primary noise emitters from a vehicle.

6.3 Vibration

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to damage at the highest levels. Table I gives approximate vibration levels for particular construction activities. The data in Table I provides a reasonable estimate for a wide range of soil conditions.

Table I – Vibration Source Levels for Construction Equipment

Equipment		Peak Particle Velocity (inches/second)	Approximate Vibration Level (L _v) at 25 feet
Pile driver (impact)	Upper range	1.518	112
	typical	0.644	104
Pile driver (sonic)	Upper range	0.734	105
	typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large bulldozer		0.089	87
Caisson drill		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: Federal Transit Administration, 2018.

The construction-related vibration impacts have been calculated through the vibration levels shown above in Table I and through typical vibration propagation rates. The equipment assumptions were based on the equipment lists provided above in Table E.

7.0 IMPACT ANALYSIS

7.1 CEQA Thresholds of Significance

Consistent with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a significant impact related to noise would occur if a proposed project is determined to result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generation of excessive groundborne vibration or groundborne noise levels; or
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

7.2 Generation of Noise Levels in Excess of Standards

The proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The following section calculates the potential noise emissions associated with the temporary construction activities and long-term operations of the proposed project and compares the noise levels to the City standards.

Construction-Related Noise

The construction activities for the proposed project are anticipated to include site preparation and grading of the 26.7 gross acre project site, building construction of the 204 single-family homes, paving of the onsite roads and road improvements to Alessandro Boulevard, Oliver Street and Brodiaea Avenue and application of architectural coatings. Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities. The nearest sensitive receptor to the project site is a single-family home that is located as near 80 feet south of the project site. There is also a single-family home located as near as 170 feet north of the project site and a church located as near as 100 feet east of the project site.

Section 11.80.030(C) of the City's Municipal Code limits all noise sources, including construction noise to 60 dBA at the nearby residential uses and 65 dBA at the nearby commercial uses, including church uses during the daytime. Section 11.80.030(D)(7) of the City's Municipal Code provides additional prohibitions on construction activities by restricting construction activities from occurring between the hours of 8:00 p.m. and 7:00 a.m..

Construction noise impacts to the nearby sensitive receptors have been calculated through use of the RCNM and the parameters and assumptions detailed in Section 6.1 of this report including Table E – Construction Equipment Noise Emissions and Usage Factors. The results are shown below in Table J and the RCNM printouts are provided in Appendix C.

Table J – Construction Noise Levels at the Nearby Sensitive Receptors

Construction Phase	Construction Noise Level ¹ (dBA Leq) at:		
	Home to South	Home to North	Church to North
Site Preparation	57	56	57
Grading	59	58	58
Building Construction	58	57	57
Paving	52	51	51
Painting	49	48	48
City's Noise Threshold²	60	60	65
Exceed Thresholds?	No	No	No

Notes:

¹ The distances were calculated from the center of the project site to the nearest sensitive receptor property line. Pursuant to Section 11.80.030(C) of the Municipal Code an additional 200 feet was added to the distance.

² City Noise Threshold obtained from Section 11.80.030(C) of the Municipal Code.

Source: RCNM, Federal Highway Administration, 2006

Table J shows that the greatest noise impacts would occur during the grading phase, with a noise level as high as 59 dBA Leq at 200 feet from the property line to the nearest homes to the south and 58 dBA Leq at 200 from the property line to the nearest homes to the north, which are both within the City's residential noise threshold of 60 dBA and as high as 58 dBA at 200 feet from the property line to the church to the east of the project site, which is within the City's commercial noise threshold of 65 dBA. Through adherence to the limitation of allowable construction times provided in Section 9.10.030(B) of the City's Municipal Code, the construction-related noise levels would not exceed any standards. Therefore, impacts would be less than significant.

Operational-Related Noise

The proposed project would consist of the development of a residential community with 204 detached single-family homes. Potential noise impacts associated with the operations of the proposed project would be from project-generated vehicular traffic on the nearby roadways. In addition, the proposed development would be adjacent to Alessandro Boulevard and Oliver Street, which may create exterior and interior noise levels in excess of City standards at the proposed homes. The noise impacts to the nearby existing homes and proposed homes have been analyzed separately below.

Roadway Vehicular Noise Impact to Nearby Homes

Vehicle noise is a combination of the noise produced by the engine, exhaust and tires. The level of traffic noise depends on three primary factors (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic. The proposed project does not propose any uses that would require a substantial number of truck trips and the proposed project would not alter the speed limit on any existing roadway so the proposed project's potential offsite noise impacts have been focused on the noise impacts associated with the change of volume of traffic that would occur with development of the proposed project.

General Plan Policy N.1-1, requires the protection of occupants of existing and new homes from excessive noise from roadways. Since the General Plan does not quantify what is a significant roadway noise increase, the roadway noise threshold utilized in the MoVal 2040 FEIR, has been utilized, which details that a significant noise increase would occur if the project would:

- Increase noise levels by 5 dB or more where the no project noise level is less than 60 CNEL;
- Increase noise levels by 3 dB or more where the no project noise level is 60 CNEL to 65 CNEL; or
- Increase noise levels by 1.5 dB or more where the no project noise level is greater than 65 CNEL.

The potential offsite traffic noise impacts created by the on-going operations of the proposed project have been analyzed through utilization of the FHWA model and parameters described above in Section 6.2 and the FHWA model traffic noise calculation spreadsheets are provided in Appendix D. The proposed project's potential offsite traffic noise impacts have been analyzed for the existing year and future year 2040 scenarios that are discussed separately below.

Existing Year Conditions

The proposed project's potential offsite traffic noise impacts have been calculated through a comparison of the Existing scenario to the Existing With Project scenario. The results of this comparison are shown in Table K.

Table K – Existing Year Project Traffic Noise Contributions

Roadway	Segment	dBA CNEL at Nearest Receptor ¹			Increase Threshold ²
		Existing	Existing Plus Project	Project Contribution	
Oliver Street	South of Alessandro Boulevard	60.2	60.7	+0.5	+3 dB
Alessandro Boulevard	West of Oliver Street	65.2	65.7	+0.5	+1.5 dB
Alessandro Boulevard	East of Oliver Street	58.8	59.1	+0.3	+5 dB

Notes:

¹ Distance to nearest sensitive receptors shown in Table F, does not take into account existing noise barriers.

² Increase Threshold obtained from MoVal 2040 DEIR, 2021.

Source: FHWA Traffic Noise Prediction Model FHWA-RD-77-108.

Table K shows that the proposed project's permanent noise increases to the nearby homes from the generation of additional vehicular traffic would not exceed the traffic noise increase thresholds detailed above. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels for the existing conditions. Impacts would be less than significant.

Future Year 2040 Conditions

The proposed project's potential offsite traffic noise impacts have been calculated through a comparison of the future year 2040 scenario to the future year 2040 with project scenario. The results of this comparison are shown in Table L.

Table L – Future Year 2040 Project Traffic Noise Contributions

Roadway	Segment	dBA CNEL at Nearest Receptor ¹			Increase Threshold ²
		Year 2040	Year 2040 Plus Project	Project Contribution	
Oliver Street	South of Alessandro Boulevard	60.7	61.1	0.4	+3 dB
Alessandro Boulevard	West of Oliver Street	67.0	67.4	0.4	+1.5 dB
Alessandro Boulevard	East of Oliver Street	60.7	60.8	0.1	+3 dB

Notes:

¹ Distance to nearest sensitive receptors shown in Table F, does not take into account existing noise barriers.

² Increase Threshold obtained from MoVal 2040 DEIR, 2021.

Source: FHWA Traffic Noise Prediction Model FHWA-RD-77-108.

Table L shows that the proposed project's permanent noise increases to the nearby homes from the generation of additional vehicular traffic would not exceed the traffic noise increase thresholds detailed above. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels for the future year 2040 conditions. Impacts would be less than significant.

Roadway Vehicular Noise Impacts to Proposed Homes

The proposed project would consist of the development of a residential community with 204 detached single-family homes. General Plan Policy N-1.4 requires that new developments within the City to meet the "normally acceptable" standard. As shown above in Figure 4, the "normally acceptable" noise standard for single-family homes is 65 dBA CNEL or less.

It is anticipated that the primary source of noise impacts to the project site will be traffic noise from Alessandro Boulevard that is adjacent to the north side of the project site and Oliver Street that is adjacent to the east side of the project site. It should be noted that Brodiaea Avenue is classified as a local roadway that consists of low traffic volumes at slower speeds and the traffic noise from Brodiaea Avenue would not make a significant contribution to the noise environment, as such the noise level from Brodiaea Avenue was not analyzed. The FHWA traffic noise prediction model parameters used in this analysis are discussed above in detail in Section 6.2 and the FHWA model printouts are provided in Appendix E. The anticipated noise levels have been calculated for backyards that are adjacent to Alessandro Boulevard and Oliver Street for representative lots and the results are shown below in Table M.

Table M – Proposed Homes Exterior Noise Levels from Alessandro Boulevard and Oliver Street

Building Number	Roadway	Exterior Noise Levels (dBA CNEL)		Wall Height Analyzed ¹ (feet)
		Without Sound Wall	With Sound Wall	
1	Alessandro Boulevard	67	60	6.0
30	Alessandro Boulevard	67	60	6.0
59	Alessandro Boulevard	67	61	6.0
83	Alessandro Boulevard	67	60	6.0
109	Alessandro Boulevard	67	60	6.0
137	Alessandro Boulevard	67	60	6.0
164	Oliver Street	62	--	--
160	Oliver Street	62	--	--
156	Oliver Street	61	--	--
152	Oliver Street	61	--	--
185	Oliver Street	61	--	--
189	Oliver Street	61	--	--

Notes:

Exceedance of City's 65 dBA CNEL residential exterior noise standard shown in **bold**.

Source: FHWA RD-77-108 Model.

Table M shows that the noise levels at all proposed homes backyards adjacent to Oliver Street would be within the City's 65 dBA CNEL residential exterior noise standard for the without sound wall condition and that all proposed homes backyards that are adjacent to Alessandro Boulevard would exceed the City's 65 dBA CNEL residential exterior noise standard for the without sound wall condition. This would be considered a significant impact.

Mitigation Measure 1 is provided that would require the applicant to construct minimum 6.0-foot high cmu walls on the shared property lines of the proposed homes with Alessandro Boulevard. The location of the proposed walls is shown above in Figure 3.

Table M shows that with application of the proposed 6.0-foot high sound wall specified in Mitigation Measure 1, the exterior noise level at the proposed homes would be within the City's exterior residential noise standard. Impacts would be less than significant with implementation of Mitigation Measure 1.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

Mitigation Measure 1:

The project applicant shall construct a minimum 6.0-foot high solid wall on the shared property lines of the proposed homes that are adjacent to Alessandro Boulevard. The solid walls shall be constructed of concrete masonry units (CMUs) and shall be free of any decorative cutouts or openings.

Level of Significance After Mitigation

Less than significant impact.

7.3 Generation of Excessive Groundborne Vibration

The proposed project would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. The following section analyzes the potential vibration impacts associated with the construction and operations of the proposed project.

Construction-Related Vibration Impacts

The construction activities for the proposed project are anticipated to include site preparation and grading of the 26.7 gross acre project site, building construction of the 204 single-family homes, paving of the onsite roads and road improvements to Alessandro Boulevard, Oliver Street and Brodiaea Avenue and application of architectural coatings. Vibration impacts from construction activities associated with the proposed project would typically be created from the operation of heavy off-road equipment. The nearest sensitive receptor to the project site is a single-family home that is located as near 80 feet south of the project site.

Chapter 9.10 of the Municipal Code includes performance standards for proposed development projects that may impact the surrounding neighborhood and Section 9.10.030(B), which is part of this Chapter, exempts temporary construction activities from Section 9.10.170 that restricts the creation of vibration that can be felt at the property line, provided that construction activities occur between the hours of 7 a.m. and 7 p.m.. Since the City's Municipal does not provide a quantifiable vibration level for construction activities, Caltrans guidance that is detailed above in Section 4.2 has been utilized, which defines the threshold of perception from transient sources at 0.25 inch per second PPV.

The primary source of vibration during construction would be from the operation of a bulldozer. From Table I above a large bulldozer would create a vibration level of 0.089 inch per second PPV at 25 feet. Based on typical propagation rates, the vibration level at the nearest home (80 feet to the south) would

be 0.025 inch per second PPV. The vibration level at the nearest offsite structure would be below the 0.25 inch per second PPV threshold detailed above. Impacts would be less than significant.

Operations-Related Vibration Impacts

The proposed project would consist of the development of a residential community with 204 single-family homes. The on-going operation of the proposed project would not include the operation of any known vibration sources other than typical onsite vehicle operations for a residential development. Therefore, a less than significant vibration impact is anticipated from operation of the proposed project.

Level of Significance

Less than significant impact.

7.4 Aircraft Noise

The proposed project may expose people residing in the project area to excessive noise levels from aircraft. The nearest airport is March Air Reserve Base that is located as near as 4.5 miles southwest of the project site. The project site is located outside of the 60 dBA CNEL noise contours of this airport. Therefore, the proposed homes would not be exposed to excessive aircraft noise. No impact would occur from aircraft noise.

Level of Significance

No impact.

8.0 REFERENCES

California Department of Transportation, *2016 Annual Average Daily Truck Traffic on the California State Highway System*, 2018.

California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analytics Protocol*, September 2013.

California Department of Transportation, *Transportation- and Construction Vibration Guidance Manual*, April 2020.

City of Moreno Valley, *City of Moreno Valley General Plan 2040*, adopted June 15, 2021.

City of Moreno Valley, *Final Environmental Impact Report for the MoVal 2040: Moreno Valley Comprehensive Plan Update, Housing Element Update, and Climate Action Plan*, May 20, 2021.

City of Moreno Valley, *City of Moreno Valley Municipal Code*, December 2018.

EPD Solutions, Inc., *City of Moreno Valley Traffic Impact Preparation Guide Project Scoping Form*, October, 2021.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

U.S. Department of Transportation, *FHWA Roadway Construction Noise Model User's Guide*, January, 2006.

U.S. Department of Transportation, *Highway Traffic Noise: Analysis and Abatement Guidance*, December, 2011.

Vista Environmental, *Air Quality, Energy, and Greenhouse Gas Emissions Impact Analysis Tentative Tract Map No. 38236 Valley & Whitney Residential Project*, October 27, 2021

APPENDIX A

Field Noise Measurements Photo Index



Noise Measurement Site A - looking north



Noise Measurement Site A - looking northeast



Noise Measurement Site A - looking east



Noise Measurement Site A - looking southeast



Noise Measurement Site A - looking south



Noise Measurement Site A - looking southwest



Noise Measurement Site A - looking west



Noise Measurement Site A - looking northwest



Noise Measurement Site B - looking north



Noise Measurement Site B - looking northeast



Noise Measurement Site B - looking east



Noise Measurement Site B - looking southeast



Noise Measurement Site B - looking south



Noise Measurement Site B - looking southwest



Noise Measurement Site B - looking west



Noise Measurement Site B - looking northwest



Noise Measurement Site C - looking north



Noise Measurement Site C - looking northeast



Noise Measurement Site C - looking east



Noise Measurement Site C - looking southeast



Noise Measurement Site C - looking south



Noise Measurement Site C - looking southwest



Noise Measurement Site C - looking west



Noise Measurement Site C - looking northwest

APPENDIX B

Field Noise Measurements Printouts

Site 1 - On North Side of Project Site
September 22, 2021 3:28:20 PM Leq Daytime = 60.0
Sampling Time = 1 sec Freq Weighting=A Leq Nighttime = 53.1
Record Num = 86402 CNEL(24hr)= 62.1
Leq = 57.7 Ldn(24hr)= 61.8
Min = 33.0 Min Leq hr at 2:01 AM 46.3
Max = 88.8 Max Leq hr at 7:39 AM 62.1

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
58.9	15:28:20	58.9	58.9
59.0	15:28:21	59.0	59.0
60.0	15:28:22	60.0	60.0
61.5	15:28:23	61.5	61.5
62.7	15:28:24	62.7	62.7
61.1	15:28:25	61.1	61.1
60.2	15:28:26	60.2	60.2
62.4	15:28:27	62.4	62.4
59.7	15:28:28	59.7	59.7
60.7	15:28:29	60.7	60.7
68.2	15:28:30	68.2	68.2
64.8	15:28:31	64.8	64.8
61.5	15:28:32	61.5	61.5
58.7	15:28:33	58.7	58.7
61.6	15:28:34	61.6	61.6
63.2	15:28:35	63.2	63.2
65.1	15:28:36	65.1	65.1
65.8	15:28:37	65.8	65.8
63.2	15:28:38	63.2	63.2
60.9	15:28:39	60.9	60.9
61.6	15:28:40	61.6	61.6
59.6	15:28:41	59.6	59.6
62.6	15:28:42	62.6	62.6
62.8	15:28:43	62.8	62.8
61.3	15:28:44	61.3	61.3
62.1	15:28:45	62.1	62.1
57.6	15:28:46	57.6	57.6
59.6	15:28:47	59.6	59.6
58.7	15:28:48	58.7	58.7
59.2	15:28:49	59.2	59.2
61.1	15:28:50	61.1	61.1
59.4	15:28:51	59.4	59.4
61.8	15:28:52	61.8	61.8
60.3	15:28:53	60.3	60.3
60.7	15:28:54	60.7	60.7
60.6	15:28:55	60.6	60.6
64.0	15:28:56	64.0	64.0
63.5	15:28:57	63.5	63.5
63.9	15:28:58	63.9	63.9
65.8	15:28:59	65.8	65.8
65.7	15:29:00	65.7	65.7
68.5	15:29:01	68.5	68.5
66.8	15:29:02	66.8	66.8
65.3	15:29:03	65.3	65.3
64.1	15:29:04	64.1	64.1
60.8	15:29:05	60.8	60.8
61.7	15:29:06	61.7	61.7
59.4	15:29:07	59.4	59.4
65.3	15:29:08	65.3	65.3
63.2	15:29:09	63.2	63.2
61.7	15:29:10	61.7	61.7
61.0	15:29:11	61.0	61.0
59.6	15:29:12	59.6	59.6
61.8	15:29:13	61.8	61.8
64.1	15:29:14	64.1	64.1
66.7	15:29:15	66.7	66.7
65.8	15:29:16	65.8	65.8
66.1	15:29:17	66.1	66.1
63.8	15:29:18	63.8	63.8
63.0	15:29:19	63.0	63.0
64.3	15:29:20	64.3	64.3
63.6	15:29:21	63.6	63.6
66.0	15:29:22	66.0	66.0
66.0	15:29:23	66.0	66.0
65.5	15:29:24	65.5	65.5
64.0	15:29:25	64.0	64.0
65.2	15:29:26	65.2	65.2
67.0	15:29:27	67.0	67.0
68.4	15:29:28	68.4	68.4
68.5	15:29:29	68.5	68.5
67.7	15:29:30	67.7	67.7
67.6	15:29:31	67.6	67.6
66.5	15:29:32	66.5	66.5
64.8	15:29:33	64.8	64.8
64.0	15:29:34	64.0	64.0
64.3	15:29:35	64.3	64.3
64.5	15:29:36	64.5	64.5
64.8	15:29:37	64.8	64.8
64.4	15:29:38	64.4	64.4
62.8	15:29:39	62.8	62.8
66.9	15:29:40	66.9	66.9
68.8	15:29:41	68.8	68.8
65.5	15:29:42	65.5	65.5
63.3	15:29:43	63.3	63.3
62.4	15:29:44	62.4	62.4
61.4	15:29:45	61.4	61.4
59.2	15:29:46	59.2	59.2
56.3	15:29:47	56.3	56.3
54.3	15:29:48	54.3	54.3
52.7	15:29:49	52.7	52.7
54.7	15:29:50	54.7	54.7
55.7	15:29:51	55.7	55.7
56.5	15:29:52	56.5	56.5
57.9	15:29:53	57.9	57.9
58.0	15:29:54	58.0	58.0
59.7	15:29:55	59.7	59.7
59.5	15:29:56	59.5	59.5
59.3	15:29:57	59.3	59.3
61.8	15:29:58	61.8	61.8
64.1	15:29:59	64.1	64.1
65.4	15:30:00	65.4	65.4
64.6	15:30:01	64.6	64.6
64.5	15:30:02	64.5	64.5
66.1	15:30:03	66.1	66.1
67.7	15:30:04	67.7	67.7
68.6	15:30:05	68.6	68.6
67.8	15:30:06	67.8	67.8
66.9	15:30:07	66.9	66.9
65.3	15:30:08	65.3	65.3
62.5	15:30:09	62.5	62.5
59.1	15:30:10	59.1	59.1
55.8	15:30:11	55.8	55.8
53.0	15:30:12	53.0	53.0
51.3	15:30:13	51.3	51.3
50.5	15:30:14	50.5	50.5
52.0	15:30:15	52.0	52.0
57.4	15:30:16	57.4	57.4
61.5	15:30:17	61.5	61.5
61.3	15:30:18	61.3	61.3
59.3	15:30:19	59.3	59.3
56.9	15:30:20	56.9	56.9
55.9	15:30:21	55.9	55.9
57.7	15:30:22	57.7	57.7
53.2	15:30:23	53.2	53.2
58.6	15:30:24	58.6	58.6
56.2	15:30:25	56.2	56.2
53.2	15:30:26	53.2	53.2
50.6	15:30:27	50.6	50.6
49.0	15:30:28	49.0	49.0
48.7	15:30:29	48.7	48.7
49.4	15:30:30	49.4	49.4
51.8	15:30:31	51.8	51.8
56.2	15:30:32	56.2	56.2
59.5	15:30:33	59.5	59.5
61.2	15:30:34	61.2	61.2
59.4	15:30:35	59.4	59.4
57.9	15:30:36	57.9	57.9
57.1	15:30:37	57.1	57.1
55.7	15:30:38	55.7	55.7
56.3	15:30:39	56.3	56.3
58.3	15:30:40	58.3	58.3
58.2	15:30:41	58.2	58.2
56.9	15:30:42	56.9	56.9
54.8	15:30:43	54.8	54.8
52.3	15:30:44	52.3	52.3
50.0	15:30:45	50.0	50.0
48.1	15:30:46	48.1	48.1
46.5	15:30:47	46.5	46.5
45.8	15:30:48	45.8	45.8
45.2	15:30:49	45.2	45.2
45.4	15:30:50	45.4	45.4
45.3	15:30:51	45.3	45.3
45.4	15:30:52	45.4	45.4
45.9	15:30:53	45.9	45.9
46.3	15:30:54	46.3	46.3
50.1	15:30:55	50.1	50.1
48.6	15:30:56	48.6	48.6
47.8	15:30:57	47.8	47.8
47.8	15:30:58	47.8	47.8
47.2	15:30:59	47.2	47.2
46.5	15:31:00	46.5	46.5
46.5	15:31:01	46.5	46.5
46.9	15:31:02	46.9	46.9
48.0	15:31:03	48.0	48.0
48.6	15:31:04	48.6	48.6
48.5	15:31:05	48.5	48.5
47.6	15:31:06	47.6	47.6
46.9	15:31:07	46.9	46.9
46.6	15:31:08	46.6	46.6
46.8	15:31:09	46.8	46.8

Site 2 - On East Side of Project Site
September 22, 2021 3:33:37 PM Leq Daytime = 64.6
Sampling Time = 1 sec Freq Weighting=A Leq Nighttime = 55.4
Record Num = 86402 CNEL(24hr)= 65.4
Leq = 62.0 Ldn(24hr)= 65.0
Min = 32.6 Min Leq hr at 2:26 AM 49.7
Max = 89.5 Max Leq hr at 7:52 AM 67.4

Site 2 - On East Side of Project Site			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
64.9	15:33:37	64.9	64.9
62.6	15:33:38	62.6	62.6
61.0	15:33:39	61.0	61.0
59.6	15:33:40	59.6	59.6
64.0	15:33:41	64.0	64.0
64.2	15:33:42	64.2	64.2
62.5	15:33:43	62.5	62.5
65.9	15:33:44	65.9	65.9
67.0	15:33:45	67.0	67.0
64.3	15:33:46	64.3	64.3
60.8	15:33:47	60.8	60.8
60.5	15:33:48	60.5	60.5
67.6	15:33:49	67.6	67.6
62.0	15:33:50	62.0	62.0
61.4	15:33:51	61.4	61.4
67.8	15:33:52	67.8	67.8
64.2	15:33:53	64.2	64.2
63.1	15:33:54	63.1	63.1
65.0	15:33:55	65.0	65.0
67.9	15:33:56	67.9	67.9
66.4	15:33:57	66.4	66.4
63.1	15:33:58	63.1	63.1
59.9	15:33:59	59.9	59.9
60.9	15:34:00	60.9	60.9
68.7	15:34:01	68.7	68.7
66.4	15:34:02	66.4	66.4
62.5	15:34:03	62.5	62.5
60.8	15:34:04	60.8	60.8
66.8	15:34:05	66.8	66.8
64.3	15:34:06	64.3	64.3
65.1	15:34:07	65.1	65.1
67.3	15:34:08	67.3	67.3
64.2	15:34:09	64.2	64.2
61.7	15:34:10	61.7	61.7
61.4	15:34:11	61.4	61.4
62.3	15:34:12	62.3	62.3
59.7	15:34:13	59.7	59.7
57.1	15:34:14	57.1	57.1
57.2	15:34:15	57.2	57.2
57.8	15:34:16	57.8	57.8
60.9	15:34:17	60.9	60.9
58.4	15:34:18	58.4	58.4
56.3	15:34:19	56.3	56.3
60.1	15:34:20	60.1	60.1
62.2	15:34:21	62.2	62.2
59.2	15:34:22	59.2	59.2
56.8	15:34:23	56.8	56.8
54.9	15:34:24	54.9	54.9
59.3	15:34:25	59.3	59.3
57.8	15:34:26	57.8	57.8
55.5	15:34:27	55.5	55.5
59.4	15:34:28	59.4	59.4
58.1	15:34:29	58.1	58.1
57.0	15:34:30	57.0	57.0
56.9	15:34:31	56.9	56.9
58.4	15:34:32	58.4	58.4
60.2	15:34:33	60.2	60.2
60.2	15:34:34	60.2	60.2
59.0	15:34:35	59.0	59.0
57.4	15:34:36	57.4	57.4
56.4	15:34:37	56.4	56.4
56.0	15:34:38	56.0	56.0
54.7	15:34:39	54.7	54.7
54.0	15:34:40	54.0	54.0
53.8	15:34:41	53.8	53.8
56.1	15:34:42	56.1	56.1
58.1	15:34:43	58.1	58.1
60.4	15:34:44	60.4	60.4
62.4	15:34:45	62.4	62.4
61.9	15:34:46	61.9	61.9
61.1	15:34:47	61.1	61.1
63.3	15:34:48	63.3	63.3
60.9	15:34:49	60.9	60.9
60.4	15:34:50	60.4	60.4
62.8	15:34:51	62.8	62.8
61.0	15:34:52	61.0	61.0
67.0	15:34:53	67.0	67.0
63.3	15:34:54	63.3	63.3
60.6	15:34:55	60.6	60.6
58.6	15:34:56	58.6	58.6
56.7	15:34:57	56.7	56.7
57.9	15:34:58	57.9	57.9
57.3	15:34:59	57.3	57.3
62.5	15:35:00	62.5	62.5
69.0	15:35:01	69.0	69.0
68.6	15:35:02	68.6	68.6
63.4	15:35:03	63.4	63.4
59.6	15:35:04	59.6	59.6
56.7	15:35:05	56.7	56.7
55.8	15:35:06	55.8	55.8
54.9	15:35:07	54.9	54.9
53.9	15:35:08	53.9	53.9
52.7	15:35:09	52.7	52.7
51.8	15:35:10	51.8	51.8
51.9	15:35:11	51.9	51.9
53.3	15:35:12	53.3	53.3
66.4	15:35:13	66.4	66.4
61.8	15:35:14	61.8	61.8
68.2	15:35:15	68.2	68.2
60.4	15:35:16	60.4	60.4
67.9	15:35:17	67.9	67.9
64.3	15:35:18	64.3	64.3
61.4	15:35:19	61.4	61.4
60.0	15:35:20	60.0	60.0
61.7	15:35:21	61.7	61.7
68.5	15:35:22	68.5	68.5
72.7	15:35:23	72.7	72.7
70.9	15:35:24	70.9	70.9
67.0	15:35:25	67.0	67.0
63.2	15:35:26	63.2	63.2
59.7	15:35:27	59.7	59.7
56.5	15:35:28	56.5	56.5
54.0	15:35:29	54.0	54.0
52.4	15:35:30	52.4	52.4
52.2	15:35:31	52.2	52.2
53.7	15:35:32	53.7	53.7
57.5	15:35:33	57.5	57.5
63.8	15:35:34	63.8	63.8
61.0	15:35:35	61.0	61.0
71.9	15:35:36	71.9	71.9
66.5	15:35:37	66.5	66.5
64.8	15:35:38	64.8	64.8
61.2	15:35:39	61.2	61.2
58.0	15:35:40	58.0	58.0
55.1	15:35:41	55.1	55.1
52.6	15:35:42	52.6	52.6
51.4	15:35:43	51.4	51.4
52.6	15:35:44	52.6	52.6
56.4	15:35:45	56.4	56.4
59.9	15:35:46	59.9	59.9
67.0	15:35:47	67.0	67.0
73.0	15:35:48	73.0	73.0
72.8	15:35:49	72.8	72.8
69.0	15:35:50	69.0	69.0
65.0	15:35:51	65.0	65.0
61.2	15:35:52	61.2	61.2
57.8	15:35:53	57.8	57.8
55.0	15:35:54	55.0	55.0
52.5	15:35:55	52.5	52.5
50.4	15:35:56	50.4	50.4
48.9	15:35:57	48.9	48.9
48.3	15:35:58	48.3	48.3
48.1	15:35:59	48.1	48.1
45.5	15:36:00	45.5	45.5
48.2	15:36:01	48.2	48.2
48.3	15:36:02	48.3	48.3
48.0	15:36:03	48.0	48.0
48.2	15:36:04	48.2	48.2
48.1	15:36:05	48.1	48.1
48.5	15:36:06	48.5	48.5
49.0	15:36:07	49.0	49.0
49.7	15:36:08	49.7	49.7
51.5	15:36:09	51.5	51.5
54.7	15:36:10	54.7	54.7
60.1	15:36:11	60.1	60.1
69.8	15:36:12	69.8	69.8
72.7	15:36:13	72.7	72.7
70.4	15:36:14	70.4	70.4
67.1	15:36:15	67.1	67.1
63.5	15:36:16	63.5	63.5
59.8	15:36:17	59.8	59.8
56.3	15:36:18	56.3	56.3
53.3	15:36:19	53.3	53.3
50.9	15:36:20	50.9	50.9
49.6	15:36:21	49.6	49.6
49.2	15:36:22	49.2	49.2
49.4	15:36:23	49.4	49.4
49.5	15:36:24	49.5	49.5
49.6	15:36:25	49.6	49.6
52.7	15:36:26	52.7	52.7

Site 1 - On North Side of Project Site				Site 2 - On East Side of Project Site				Site 3 - On South Side of Project Site			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
47.4	15:31:10		47.4	57.3	15:36:27		57.3	45.8	15:43:11		45.8
47.4	15:31:11		47.4	66.7	15:36:28		66.7	44.6	15:43:12		44.6
47.0	15:31:12		47.0	72.7	15:36:29		72.7	43.7	15:43:13		43.7
47.1	15:31:13		47.1	72.1	15:36:30		72.1	43.4	15:43:14		43.4
48.7	15:31:14		48.7	69.4	15:36:31		69.4	42.9	15:43:15		42.9
49.7	15:31:15		49.7	66.3	15:36:32		66.3	43.2	15:43:16		43.2
49.7	15:31:16		49.7	62.9	15:36:33		62.9	43.7	15:43:17		43.7
49.0	15:31:17		49.0	59.5	15:36:34		59.5	46.3	15:43:18		46.3
48.8	15:31:18		48.8	56.2	15:36:35		56.2	49.2	15:43:19		49.2
48.8	15:31:19		48.8	53.3	15:36:36		53.3	49.2	15:43:20		49.2
48.9	15:31:20		48.9	50.8	15:36:37		50.8	46.9	15:43:21		46.9
49.4	15:31:21		49.4	50.8	15:36:38		50.8	45.2	15:43:22		45.2
51.2	15:31:22		51.2	51.7	15:36:39		51.7	44.5	15:43:23		44.5
54.6	15:31:23		54.6	52.5	15:36:40		52.5	45.1	15:43:24		45.1
56.2	15:31:24		56.2	53.1	15:36:41		53.1	45.8	15:43:25		45.8
56.0	15:31:25		56.0	57.8	15:36:42		57.8	45.7	15:43:26		45.7
55.1	15:31:26		55.1	64.8	15:36:43		64.8	45.8	15:43:27		45.8
57.1	15:31:27		57.1	66.6	15:36:44		66.6	45.8	15:43:28		45.8
56.7	15:31:28		56.7	66.7	15:36:45		66.7	44.9	15:43:29		44.9
55.7	15:31:29		55.7	66.8	15:36:46		66.8	44.6	15:43:30		44.6
54.5	15:31:30		54.5	63.8	15:36:47		63.8	44.4	15:43:31		44.4
53.3	15:31:31		53.3	60.4	15:36:48		60.4	43.6	15:43:32		43.6
52.2	15:31:32		52.2	57.1	15:36:49		57.1	43.1	15:43:33		43.1
51.8	15:31:33		51.8	54.3	15:36:50		54.3	43.6	15:43:34		43.6
52.4	15:31:34		52.4	52.3	15:36:51		52.3	44.5	15:43:35		44.5
56.7	15:31:35		56.7	51.5	15:36:52		51.5	45.3	15:43:36		45.3
58.9	15:31:36		58.9	51.2	15:36:53		51.2	45.4	15:43:37		45.4
60.5	15:31:37		60.5	51.3	15:36:54		51.3	45.9	15:43:38		45.9
58.2	15:31:38		58.2	51.4	15:36:55		51.4	44.4	15:43:39		44.4
56.9	15:31:39		56.9	51.5	15:36:56		51.5	44.4	15:43:40		44.4
59.0	15:31:40		59.0	51.4	15:36:57		51.4	44.4	15:43:41		44.4
60.5	15:31:41		60.5	51.3	15:36:58		51.3	44.8	15:43:42		44.8
60.8	15:31:42		60.8	51.3	15:36:59		51.3	45.1	15:43:43		45.1
60.9	15:31:43		60.9	51.0	15:37:00		51.0	45.2	15:43:44		45.2
62.1	15:31:44		62.1	51.2	15:37:01		51.2	44.8	15:43:45		44.8
64.2	15:31:45		64.2	51.9	15:37:02		51.9	44.8	15:43:46		44.8
64.1	15:31:46		64.1	52.2	15:37:03		52.2	45.1	15:43:47		45.1
63.6	15:31:47		63.6	52.1	15:37:04		52.1	45.2	15:43:48		45.2
63.6	15:31:48		63.6	51.5	15:37:05		51.5	45.0	15:43:49		45.0
62.9	15:31:49		62.9	50.7	15:37:06		50.7	45.0	15:43:50		45.0
63.1	15:31:50		63.1	50.0	15:37:07		50.0	45.1	15:43:51		45.1
63.2	15:31:51		63.2	49.5	15:37:08		49.5	45.0	15:43:52		45.0
62.5	15:31:52		62.5	49.6	15:37:09		49.6	44.3	15:43:53		44.3
62.6	15:31:53		62.6	50.1	15:37:10		50.1	44.1	15:43:54		44.1
61.4	15:31:54		61.4	50.8	15:37:11		50.8	44.0	15:43:55		44.0
60.2	15:31:55		60.2	51.1	15:37:12		51.1	44.3	15:43:56		44.3
58.6	15:31:56		58.6	50.8	15:37:13		50.8	44.8	15:43:57		44.8
57.9	15:31:57		57.9	50.1	15:37:14		50.1	45.4	15:43:58		45.4
57.4	15:31:58		57.4	49.7	15:37:15		49.7	45.8	15:43:59		45.8
56.7	15:31:59		56.7	49.7	15:37:16		49.7	45.8	15:44:00		45.8
57.7	15:32:00		57.7	50.6	15:37:17		50.6	48.7	15:44:01		48.7
58.9	15:32:01		58.9	50.8	15:37:18		50.8	48.0	15:44:02		48.0
58.6	15:32:02		58.6	51.2	15:37:19		51.2	46.8	15:44:03		46.8
56.5	15:32:03		56.5	51.0	15:37:20		51.0	45.8	15:44:04		45.8
54.5	15:32:04		54.5	51.6	15:37:21		51.6	45.6	15:44:05		45.6
53.1	15:32:05		53.1	51.4	15:37:22		51.4	45.5	15:44:06		45.5
51.5	15:32:06		51.5	51.2	15:37:23		51.2	45.3	15:44:07		45.3
50.3	15:32:07		50.3	51.3	15:37:24		51.3	45.3	15:44:08		45.3
48.9	15:32:08		48.9	50.8	15:37:25		50.8	45.7	15:44:09		45.7
49.4	15:32:09		49.4	50.4	15:37:26		50.4	47.0	15:44:10		47.0
52.7	15:32:10		52.7	51.0	15:37:27		51.0	46.8	15:44:11		46.8
52.2	15:32:11		52.2	52.8	15:37:28		52.8	46.4	15:44:12		46.4
55.3	15:32:12		55.3	53.0	15:37:29		53.0	45.9	15:44:13		45.9
62.4	15:32:13		62.4	52.4	15:37:30		52.4	45.5	15:44:14		45.5
64.6	15:32:14		64.6	51.8	15:37:31		51.8	44.7	15:44:15		44.7
64.2	15:32:15		64.2	53.2	15:37:32		53.2	45.3	15:44:16		45.3
61.6	15:32:16		61.6	56.5	15:37:33		56.5	46.8	15:44:17		46.8
61.5	15:32:17		61.5	62.4	15:37:34		62.4	48.0	15:44:18		48.0
60.6	15:32:18		60.6	67.6	15:37:35		67.6	46.1	15:44:19		46.1
58.0	15:32:19		58.0	67.5	15:37:36		67.5	46.1	15:44:20		46.1
55.1	15:32:20		55.1	64.8	15:37:37		64.8	45.6	15:44:21		45.6
52.4	15:32:21		52.4	62.2	15:37:38		62.2	46.2	15:44:22		46.2
50.3	15:32:22		50.3	62.6	15:37:39		62.6	47.3	15:44:23		47.3
48.3	15:32:23		48.3	67.6	15:37:40		67.6	49.0	15:44:24		49.0
48.7	15:32:24		48.7	68.5	15:37:41		68.5	48.4	15:44:25		48.4
48.0	15:32:25		48.0	67.1	15:37:42		67.1	47.2	15:44:26		47.2
47.3	15:32:26		47.3	64.3	15:37:43		64.3	49.4	15:44:27		49.4
47.3	15:32:27		47.3	61.3	15:37:44		61.3	51.2	15:44:28		51.2
48.0	15:32:28		48.0	58.1	15:37:45		58.1	51.1	15:44:29		51.1
50.2	15:32:29		50.2	55.0	15:37:46		55.0	50.0	15:44:30		50.0
54.4	15:32:30		54.4	52.4	15:37:47		52.4	50.9	15:44:31		50.9
56.3	15:32:31		56.3	50.3	15:37:48		50.3	51.5	15:44:32		51.5
57.2	15:32:32		57.2	49.9	15:37:49		49.9	51.8	15:44:33		51.8
57.0	15:32:33		57.0	50.3	15:37:50		50.3	52.1	15:44:34		52.1
56.1	15:32:34		56.1	52.5	15:37:51		52.5	51.5	15:44:35		51.5
54.4	15:32:35		54.4	54.3	15:37:52		54.3	52.8	15:44:36		52.8
52.1	15:32:36		52.1	53.6	15:37:53		53.6	52.7	15:44:37		52.7
51.0	15:32:37		51.0	55.0	15:37:54		55.0	50.8	15:44:38		50.8
50.2	15:32:38		50.2	56.5	15:37:55		56.5	51.5	15:44:39		51.5
54.9	15:32:39		54.9	64.4	15:37:56		64.4	54.7	15:44:40		54.7
55.1	15:32:40		55.1	70.7	15:37:57		70.7	54.7	15:44:41		54.7
54.8	15:32:41		54.8	71.0	15:37:58		71.0	54.8	15:44:42		54.8
56.3	15:32:42		56.3	68.5	15:37:59		68.5	53.7	15:44:43		53.7
54.5	15:32:43		54.5	65.6	15:38:00		65.6	52.7	15:44:44		52.7
56.9	15:32:44		56.9	61.3	15:38:01		61.3	51.7	15:44:45		51.7
58.7	15:32:45		58.7	57.6	15:38:02		57.6	50.6	15:44:46		50.6
56.4	15:32:46		56.4	54.1	15:38:03		54.1	49.7	15:44:47		49.7
56.8	15:32:47		56.8	51.3	15:38:04		51.3	48.6	15:44:48		48.6
55.8	15:32:48		55.8	49.5	15:38:05		49.5	48.0	15:44:49		48.0
53.2	15:32:49		53.2	48.3	15:38:06		48.3	47.9	15:44:50		47.9
50.5	15:32:50		50.5	48.0	15:38:07		48.0	48.0	15:44:51		48.0
50.7	15:32:51		50.7	48.0	15:38:08		48.0	45.6	15:44:52		45.6
51.4	15:32:52		51.4	47.3	15:38:09		47.3	44.9	15:44:53		44.9
51.6	15:32:53		51.6	47.1	15:38:10		47.1	44.4	15:44:54		44.4
54.5	15:32:54		54.5	47.5	15:38:11		47.5	46.2	15:44:55		46.2
60.0	15:32:55		60.0	47.2	15:38:12		47.2	47.1	15:44:56		47.1
62.0	15:32:56		62.0	47.5	15:38:13		47.5	47.2	15:44:57		47.2
60.5	15:32:57		60.5	47.5	15:38:14		47.5	46.9	15:44:58		46.9
58.1	15:32:58		58.1	47.4	15:38:15		47.4	45.9	15:44:59		45.9
55.1	15:32:59		55.1	47.2	15:38:16		47.2	47.8	15:45:00		47.8
52.3	15:33:00		52.3	47.0	15:38:17		47.0	47.8	15:45:01		47.8
53.											

Site 1 - On North Side of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
47.1	15:34:11	47.1	47.1
47.5	15:34:12	47.5	47.5
47.9	15:34:13	47.9	47.9
48.5	15:34:14	48.5	48.5
51.7	15:34:15	51.7	51.7
55.5	15:34:16	55.5	55.5
56.3	15:34:17	56.3	56.3
55.1	15:34:18	55.1	55.1
53.8	15:34:19	53.8	53.8
52.2	15:34:20	52.2	52.2
50.7	15:34:21	50.7	50.7
49.8	15:34:22	49.8	49.8
49.4	15:34:23	49.4	49.4
49.1	15:34:24	49.1	49.1
49.3	15:34:25	49.3	49.3
49.7	15:34:26	49.7	49.7
51.0	15:34:27	51.0	51.0
54.5	15:34:28	54.5	54.5
55.2	15:34:29	55.2	55.2
53.9	15:34:30	53.9	53.9
52.1	15:34:31	52.1	52.1
50.4	15:34:32	50.4	50.4
49.6	15:34:33	49.6	49.6
49.1	15:34:34	49.1	49.1
49.0	15:34:35	49.0	49.0
49.6	15:34:36	49.6	49.6
49.0	15:34:37	49.0	49.0
49.6	15:34:38	49.6	49.6
49.4	15:34:39	49.4	49.4
47.7	15:34:40	47.7	47.7
46.2	15:34:41	46.2	46.2
45.9	15:34:42	45.9	45.9
45.9	15:34:43	45.9	45.9
45.7	15:34:44	45.7	45.7
45.8	15:34:45	45.8	45.8
45.7	15:34:46	45.7	45.7
45.5	15:34:47	45.5	45.5
47.5	15:34:48	47.5	47.5
48.5	15:34:49	48.5	48.5
48.0	15:34:50	48.0	48.0
47.4	15:34:51	47.4	47.4
47.9	15:34:52	47.9	47.9
49.0	15:34:53	49.0	49.0
49.5	15:34:54	49.5	49.5
50.4	15:34:55	50.4	50.4
52.2	15:34:56	52.2	52.2
56.2	15:34:57	56.2	56.2
59.6	15:34:58	59.6	59.6
62.5	15:34:59	62.5	62.5
66.1	15:35:00	66.1	66.1
69.9	15:35:01	69.9	69.9
69.8	15:35:02	69.8	69.8
67.9	15:35:03	67.9	67.9
65.8	15:35:04	65.8	65.8
63.8	15:35:05	63.8	63.8
61.7	15:35:06	61.7	61.7
59.5	15:35:07	59.5	59.5
58.0	15:35:08	58.0	58.0
56.6	15:35:09	56.6	56.6
55.1	15:35:10	55.1	55.1
55.7	15:35:11	55.7	55.7
57.5	15:35:12	57.5	57.5
59.3	15:35:13	59.3	59.3
60.2	15:35:14	60.2	60.2
60.4	15:35:15	60.4	60.4
59.5	15:35:16	59.5	59.5
57.8	15:35:17	57.8	57.8
55.9	15:35:18	55.9	55.9
54.3	15:35:19	54.3	54.3
54.4	15:35:20	54.4	54.4
57.1	15:35:21	57.1	57.1
57.1	15:35:22	57.1	57.1
55.7	15:35:23	55.7	55.7
54.9	15:35:24	54.9	54.9
59.0	15:35:25	59.0	59.0
63.2	15:35:26	63.2	63.2
62.8	15:35:27	62.8	62.8
60.2	15:35:28	60.2	60.2
57.1	15:35:29	57.1	57.1
55.9	15:35:30	55.9	55.9
59.0	15:35:31	59.0	59.0
58.4	15:35:32	58.4	58.4
58.4	15:35:33	58.4	58.4
59.8	15:35:34	59.8	59.8
60.6	15:35:35	60.6	60.6
59.7	15:35:36	59.7	59.7
58.9	15:35:37	58.9	58.9
60.7	15:35:38	60.7	60.7
62.0	15:35:39	62.0	62.0
62.8	15:35:40	62.8	62.8
64.7	15:35:41	64.7	64.7
64.2	15:35:42	64.2	64.2
61.4	15:35:43	61.4	61.4
59.4	15:35:44	59.4	59.4
59.5	15:35:45	59.5	59.5
61.1	15:35:46	61.1	61.1
61.5	15:35:47	61.5	61.5
60.6	15:35:48	60.6	60.6
59.2	15:35:49	59.2	59.2
56.5	15:35:50	56.5	56.5
54.2	15:35:51	54.2	54.2
54.3	15:35:52	54.3	54.3
58.5	15:35:53	58.5	58.5
58.8	15:35:54	58.8	58.8
59.9	15:35:55	59.9	59.9
59.9	15:35:56	59.9	59.9
60.1	15:35:57	60.1	60.1
60.3	15:35:58	60.3	60.3
61.3	15:35:59	61.3	61.3
59.9	15:36:00	59.9	59.9
57.2	15:36:01	57.2	57.2
55.9	15:36:02	55.9	55.9
58.0	15:36:03	58.0	58.0
59.4	15:36:04	59.4	59.4
58.3	15:36:05	58.3	58.3
55.3	15:36:06	55.3	55.3
52.6	15:36:07	52.6	52.6
52.2	15:36:08	52.2	52.2
55.4	15:36:09	55.4	55.4
58.5	15:36:10	58.5	58.5
61.8	15:36:11	61.8	61.8
64.0	15:36:12	64.0	64.0
63.4	15:36:13	63.4	63.4
61.3	15:36:14	61.3	61.3
59.9	15:36:15	59.9	59.9
59.0	15:36:16	59.0	59.0
57.4	15:36:17	57.4	57.4
58.3	15:36:18	58.3	58.3
60.2	15:36:19	60.2	60.2
61.0	15:36:20	61.0	61.0
61.3	15:36:21	61.3	61.3
60.5	15:36:22	60.5	60.5
58.3	15:36:23	58.3	58.3
59.7	15:36:24	59.7	59.7
59.8	15:36:25	59.8	59.8
57.4	15:36:26	57.4	57.4
56.7	15:36:27	56.7	56.7
56.7	15:36:28	56.7	56.7
56.4	15:36:29	56.4	56.4
56.8	15:36:30	56.8	56.8
48.2	15:36:31	48.2	48.2
47.6	15:36:32	47.6	47.6
47.2	15:36:33	47.2	47.2
47.4	15:36:34	47.4	47.4
47.9	15:36:35	47.9	47.9
48.9	15:36:36	48.9	48.9
48.1	15:36:37	48.1	48.1
48.4	15:36:38	48.4	48.4
47.9	15:36:39	47.9	47.9
48.1	15:36:40	48.1	48.1
47.9	15:36:41	47.9	47.9
47.2	15:36:42	47.2	47.2
48.4	15:36:43	48.4	48.4
50.0	15:36:44	50.0	50.0
52.1	15:36:45	52.1	52.1
50.5	15:36:46	50.5	50.5
50.5	15:36:47	50.5	50.5
50.5	15:36:48	50.5	50.5
50.5	15:36:49	50.5	50.5
50.5	15:36:50	50.5	50.5
50.5	15:36:51	50.5	50.5
50.5	15:36:52	50.5	50.5
50.5	15:36:53	50.5	50.5
50.5	15:36:54	50.5	50.5
50.5	15:36:55	50.5	50.5
50.5	15:36:56	50.5	50.5
50.5	15:36:57	50.5	50.5
50.5	15:36:58	50.5	50.5
50.5	15:36:59	50.5	50.5
50.5	15:37:00	50.5	50.5
50.5	15:37:01	50.5	50.5
50.5	15:37:02	50.5	50.5
50.5	15:37:03	50.5	50.5
50.5	15:37:04	50.5	50.5
50.5	15:37:05	50.5	50.5
50.5	15:37:06	50.5	50.5
50.5	15:37:07	50.5	50.5
50.5	15:37:08	50.5	50.5
50.5	15:37:09	50.5	50.5
50.5	15:37:10	50.5	50.5
50.5	15:37:11	50.5	50.5
50.5	15:37:12	50.5	50.5
50.5	15:37:13	50.5	50.5
50.5	15:37:14	50.5	50.5
50.5	15:37:15	50.5	50.5
50.5	15:37:16	50.5	50.5
50.5	15:37:17	50.5	50.5
50.5	15:37:18	50.5	50.5
50.5	15:37:19	50.5	50.5
50.5	15:37:20	50.5	50.5

Site 2 - On East Side of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
51.2	15:39:28	51.2	51.2
52.8	15:39:29	52.8	52.8
53.9	15:39:30	53.9	53.9
56.4	15:39:31	56.4	56.4
59.5	15:39:32	59.5	59.5
67.5	15:39:33	67.5	67.5
72.8	15:39:34	72.8	72.8
71.0	15:39:35	71.0	71.0
67.1	15:39:36	67.1	67.1
63.3	15:39:37	63.3	63.3
59.6	15:39:38	59.6	59.6
56.5	15:39:39	56.5	56.5
54.2	15:39:40	54.2	54.2
53.0	15:39:41	53.0	53.0
52.4	15:39:42	52.4	52.4
52.2	15:39:43	52.2	52.2
52.0	15:39:44	52.0	52.0
51.6	15:39:45	51.6	51.6
51.4	15:39:46	51.4	51.4
51.3	15:39:47	51.3	51.3
51.8	15:39:48	51.8	51.8
52.3	15:39:49	52.3	52.3
51.8	15:39:50	51.8	51.8
52.5	15:39:51	52.5	52.5
52.3	15:39:52	52.3	52.3
51.8	15:39:53	51.8	51.8
51.9	15:39:54	51.9	51.9
52.2	15:39:55	52.2	52.2
53.1	15:39:56	53.1	53.1
53.2	15:39:57	53.2	53.2
52.8	15:39:58	52.8	52.8
52.2	15:39:59	52.2	52.2
51.6	15:40:00	51.6	51.6
50.9	15:40:01	50.9	50.9
50.9	15:40:02	50.9	50.9
51.7	15:40:03	51.7	51.7
51.5	15:40:04	51.5	51.5
51.1	15:40:05	51.1	51.1
50.5	15:40:06	50.5	50.5
50.0	15:40:07	50.0	50.0
49.8	15:40:08	49.8	49.8
49.7	15:40:09	49.7	49.7
49.2	15:40:10	49.2	49.2
48.7	15:40:11	48.7	48.7
48.5	15:40:12	48.5	48.5
48.6	15:40:13	48.6	48.6
48.7	15:40:14	48.7	48.7
48.8	15:40:15	48.8	48.8
49.3	15:40:16	49.3	49.3
50.1	15:40:17	50.1	50.1
51.0	15:40:18	51.0	51.0
50.8	15:40:19	50.8	50.8
50.3	15:40:20	50.3	50.3
50.2	15:40:21	50.2	50.2
50.7	15:40:22	50.7	50.7
50.3	15:40:23	50.3	50.3
50.4	15:40:24	50.4	50.4
49.8	15:40:25	49.8	49.8
49.8	15:40:26	49.8	49.8
50.2	15:40:27	50.2	50.2
49.9	15:40:28	49.9	49.9
49.6	15:40:29	49.6	49.6
49.6	15:40:30	49.6	49.6
49.4	15:40:31	49.4	49.4
48.9	15:40:32	48.9	48.9
48.9	15:40:33	48.9	48.9
48.5	15:40:34	48.5	48.5
49.5	15:40:35	49.5	49.5
50.9	15:40:36	50.9	50.9
52.2	15:40:37	52.2	52.2
52.6	15:40:38	52.6	52.6
52.3	15:40:39	52.3	52.3
50.5	15:40:40	50.5	50.5
50.2	15:40:41	50.2	50.2
50.3	15:40:42	50.3	50.3
50.1	15:40:43	50.1	50.1
49.6	15:40:44	49.6	49.6
49.4	15:40:45	49.4	49.4
48.6	15:40:46	48.6	48.6
48.4	15:40:47	48.4	48.4

Site 1 - On North Side of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
60.0	15:37:21	59.0	60.0
60.0	15:37:22	59.0	60.0
60.0	15:37:23	59.0	60.0
61.2	15:37:24	60.2	61.2
62.2	15:37:25	62.2	62.2
62.2	15:37:26	62.2	62.2
61.0	15:37:27	60.0	61.0
59.0	15:37:28	58.0	59.0
58.1	15:37:29	57.1	58.1
58.3	15:37:30	57.3	58.3
57.0	15:37:31	56.0	57.0
57.0	15:37:32	56.0	57.0
56.4	15:37:33	55.4	56.4
57.4	15:37:34	56.4	57.4
56.0	15:37:35	55.0	56.0
60.2	15:37:36	60.2	60.2
60.0	15:37:37	60.0	60.0
61.0	15:37:38	61.0	61.0
59.0	15:37:39	58.0	59.0
59.1	15:37:40	58.1	59.1
57.0	15:37:41	56.0	57.0
56.0	15:37:42	55.0	56.0
60.3	15:37:43	60.3	60.3
61.0	15:37:44	61.0	61.0
59.0	15:37:45	58.0	59.0
58.0	15:37:46	57.0	58.0
56.0	15:37:47	55.0	56.0
51.3	15:37:48	51.3	51.3
49.2	15:37:49	48.2	49.2
48.5	15:37:50	47.5	48.5
48.1	15:37:51	47.1	48.1
48.0	15:37:52	47.0	48.0
52.1	15:37:53	52.1	52.1
57.3	15:37:54	57.3	57.3
61.0	15:37:55	61.0	61.0
64.0	15:37:56	64.0	64.0
64.0	15:37:57	64.0	64.0
63.3	15:37:58	63.3	63.3
61.3	15:37:59	61.3	61.3
62.0	15:38:00	62.0	62.0
60.1	15:38:01	60.1	60.1
61.0	15:38:02	61.0	61.0
60.0	15:38:03	60.0	60.0
60.3	15:38:04	60.3	60.3
62.0	15:38:05	62.0	62.0
59.0	15:38:06	58.0	59.0
56.5	15:38:07	55.5	56.5
53.0	15:38:08	53.0	53.0
50.0	15:38:09	50.0	50.0
49.0	15:38:10	48.0	49.0
48.0	15:38:11	47.0	48.0
47.0	15:38:12	46.0	47.0
46.2	15:38:13	45.2	46.2
46.1	15:38:14	45.1	46.1
45.0	15:38:15	44.0	45.0
44.0	15:38:16	43.0	44.0
43.0	15:38:17	42.0	43.0
42.0	15:38:18	41.0	42.0
41.0	15:38:19	40.0	41.0
40.0	15:38:20	39.0	40.0
39.0	15:38:21	38.0	39.0
38.0	15:38:22	37.0	38.0
37.0	15:38:23	36.0	37.0
36.0	15:38:24	35.0	36.0
35.0	15:38:25	34.0	35.0
34.0	15:38:26	33.0	34.0
33.0	15:38:27	32.0	33.0
32.0	15:38:28	31.0	32.0
31.0	15:38:29	30.0	31.0
30.0	15:38:30	29.0	30.0
29.0	15:38:31	28.0	29.0
28.0	15:38:32	27.0	28.0
27.0	15:38:33	26.0	27.0
26.0	15:38:34	25.0	26.0
25.0	15:38:35	24.0	25.0
24.0	15:38:36	23.0	24.0
23.0	15:38:37	22.0	23.0
22.0	15:38:38	21.0	22.0
21.0	15:38:39	20.0	21.0
20.0	15:38:40	19.0	20.0
19.0	15:38:41	18.0	19.0
18.0	15:38:42	17.0	18.0
17.0	15:38:43	16.0	17.0
16.0	15:38:44	15.0	16.0
15.0	15:38:45	14.0	15.0
14.0	15:38:46	13.0	14.0
13.0	15:38:47	12.0	13.0
12.0	15:38:48	11.0	12.0
11.0	15:38:49	10.0	11.0
10.0	15:38:50	9.0	10.0
9.0	15:38:51	8.0	9.0
8.0	15:38:52	7.0	8.0
7.0	15:38:53	6.0	7.0
6.0	15:38:54	5.0	6.0
5.0	15:38:55	4.0	5.0
4.0	15:38:56	3.0	4.0
3.0	15:38:57	2.0	3.0
2.0	15:38:58	1.0	2.0
1.0	15:38:59	0.0	1.0
0.0	15:39:00	0.0	0.0
0.0	15:39:01	0.0	0.0
0.0	15:39:02	0.0	0.0
0.0	15:39:03	0.0	0.0
0.0	15:39:04	0.0	0.0
0.0	15:39:05	0.0	0.0
0.0	15:39:06	0.0	0.0
0.0	15:39:07	0.0	0.0
0.0	15:39:08	0.0	0.0
0.0	15:39:09	0.0	0.0
0.0	15:39:10	0.0	0.0
0.0	15:39:11	0.0	0.0
0.0	15:39:12	0.0	0.0
0.0	15:39:13	0.0	0.0
0.0	15:39:14	0.0	0.0
0.0	15:39:15	0.0	0.0
0.0	15:39:16	0.0	0.0
0.0	15:39:17	0.0	0.0
0.0	15:39:18	0.0	0.0
0.0	15:39:19	0.0	0.0
0.0	15:39:20	0.0	0.0
0.0	15:39:21	0.0	0.0
0.0	15:39:22	0.0	0.0
0.0	15:39:23	0.0	0.0
0.0	15:39:24	0.0	0.0
0.0	15:39:25	0.0	0.0
0.0	15:39:26	0.0	0.0
0.0	15:39:27	0.0	0.0
0.0	15:39:28	0.0	0.0
0.0	15:39:29	0.0	0.0
0.0	15:39:30	0.0	0.0
0.0	15:39:31	0.0	0.0
0.0	15:39:32	0.0	0.0
0.0	15:39:33	0.0	0.0
0.0	15:39:34	0.0	0.0
0.0	15:39:35	0.0	0.0
0.0	15:39:36	0.0	0.0
0.0	15:39:37	0.0	0.0
0.0	15:39:38	0.0	0.0
0.0	15:39:39	0.0	0.0
0.0	15:39:40	0.0	0.0
0.0	15:39:41	0.0	0.0
0.0	15:39:42	0.0	0.0
0.0	15:39:43	0.0	0.0
0.0	15:39:44	0.0	0.0
0.0	15:39:45	0.0	0.0
0.0	15:39:46	0.0	0.0
0.0	15:39:47	0.0	0.0
0.0	15:39:48	0.0	0.0
0.0	15:39:49	0.0	0.0
0.0	15:39:50	0.0	0.0
0.0	15:39:51	0.0	0.0
0.0	15:39:52	0.0	0.0
0.0	15:39:53	0.0	0.0
0.0	15:39:54	0.0	0.0
0.0	15:39:55	0.0	0.0
0.0	15:39:56	0.0	0.0
0.0	15:39:57	0.0	0.0
0.0	15:39:58	0.0	0.0
0.0	15:39:59	0.0	0.0
0.0	15:40:00	0.0	0.0
0.0	15:40:01	0.0	0.0
0.0	15:40:02	0.0	0.0
0.0	15:40:03	0.0	0.0
0.0	15:40:04	0.0	0.0
0.0	15:40:05	0.0	0.0
0.0	15:40:06	0.0	0.0
0.0	15:40:07	0.0	0.0
0.0	15:40:08	0.0	0.0
0.0	15:40:09	0.0	0.0
0.0	15:40:10	0.0	0.0
0.0	15:40:11	0.0	0.0
0.0	15:40:12	0.0	0.0
0.0	15:40:13	0.0	0.0
0.0	15:40:14	0.0	0.0
0.0	15:40:15	0.0	0.0
0.0	15:40:16	0.0	0.0
0.0	15:40:17	0.0	0.0
0.0	15:40:18	0.0	0.0
0.0	15:40:19	0.0	0.0
0.0	15:40:20	0.0	0.0
0.0	15:40:21	0.0	0.0
0.0	15:40:22	0.0	0.0
0.0	15:40:23	0.0	0.0
0.0	15:40:24	0.0	0.0
0.0	15:40:25	0.0	0.0
0.0	15:40:26	0.0	0.0
0.0	15:40:27	0.0	0.0
0.0	15:40:28	0.0	0.0
0.0	15:40:29	0.0	0.0
0.0	15:40:30	0.0	0.0
0.0	15:40:31	0.0	0.0
0.0	15:40:32	0.0	0.0
0.0	15:40:33	0.0	0.0
0.0	15:40:34	0.0	0.0
0.0	15:40:35	0.0	0.0
0.0	15:40:36	0.0	0.0
0.0	15:40:37	0.0	0.0
0.0	15:40:38	0.0	0.0
0.0	15:40:39	0.0	0.0
0.0	15:40:40	0.0	0.0
0.0	15:40:41	0.0	0.0
0.0	15:40:42	0.0	0.0
0.0	15:40:43	0.0	0.0
0.0	15:40:44	0.0	0.0
0.0	15:40:45	0.0	0.0
0.0	15:40:46	0.0	0.0
0.0	15:40:47	0.0	0.0
0.0	15:40:48	0.0	0.0
0.0	15:40:49	0.0	0.0
0.0	15:40:50	0.0	0.0
0.0	15:40:51	0.0	0.0
0.0	15:40:52	0.0	0.0
0.0	15:40:53	0.0	0.0
0.0	15:40:54	0.0	0.0
0.0	15:40:55	0.0	0.0
0.0	15:40:56	0.0	0.0
0.0	15:40:57	0.0	0.0
0.0	15:40:58	0.0	0.0
0.0	15:40:59	0.0	0.0
0.0	15:41:00	0.0	0.0
0.0	15:41:01	0.0	0.0
0.0	15:41:02	0.0	0.0
0.0	15:41:03	0.0	0.0
0.0	15:41:04	0.0	0.0
0.0	15:41:05	0.0	0.0
0.0	15:41:06	0.0	0.0
0.0	15:41:07	0.0	0.0
0.0	15:41:08	0.0	0.0
0.0	15:41:09	0.0	0.0
0.0	15:41:10	0.0	0.0
0.0	15:41:11	0.0	0.0
0.0	15:41:12	0.0	0.0
0.0	15:41:13	0.0	0.0
0.0	15:41:14	0.0	0.0
0.0	15:41:15	0.0	0.0
0.0	15:41:16	0.0	0.0
0.0	15:41:17	0.0	0.0
0.0	15:41:18	0.0	0.0
0.0	15:41:19	0.0	0.0
0.0	15:41:20	0.0	0.0
0.0	15:41:21	0.0	0.0
0.0	15:41:22	0.0	0.0
0.0	15:41:23	0.0	0.0
0.0	15:41:24	0.0	0.0
0.0	15:41:25	0.0	0.0
0.0	15:41:26	0.0	0.0
0.0	15:41:27	0.0	0.0
0.0	15:41:28	0.0	0.0
0.0	15:41:29	0.0	0.0
0.0	15:41:30	0.0	0.0
0.0	15:41:31	0.0	0.0
0.0	15:41:32	0.0	0.0
0.0	15:41:33	0.0	0.0
0.0	15:41:34	0.0	0.0
0.0	15:41:35	0.0	0.0
0.0	15:41:36	0.0	0.0
0.0	15:41:37	0.0	0.0
0.0	15:41:38	0.0	0.0
0.0	15:41:39	0.0	0.0
0.0	15:41:40	0.0	0.0
0.0	15:41:41	0.0	0.0
0.0	15:41:42	0.0	0.0
0.0	15:41:43	0.0	0.0
0.0	15:41:44	0.0	0.0
0.0	15:41:45	0.0	0.0
0.0	15:41:46	0.0	0.0
0.0	15:41:47	0.0	0.0
0.0	15:41:48	0.0	0.0
0.0	15:41:49	0.0	0.0
0.0	15:41:50	0.0	0.0
0.0	15:41:51	0.0	0.0
0.0	15:41:52	0.0	0.0
0.0	15:41:53	0.0	0.0
0.0	15:41:54	0.0	0.0
0.0	15:41:55	0.0	0.0
0.0	15:41:56	0.0	0.0
0.0	15:41:57	0.0	0.0
0.0	15:41:58	0.0	0.0
0.0	15:41:59	0.0	0.0
0.0	15:42:00	0.0	0.0
0.0	15:42:01	0.0	0.0
0.0	15:42:02	0.0	0.0
0.0	15:42:03	0.0	0.0
0.0	15:42:04	0.0	0.0
0.0	15:42:05	0.0	0.0
0.0	15:42:06	0.0	0.0
0.0	15:42:07	0.0	0.0
0.0	15:42:08	0.0	0.0
0.0	15:42:09	0.0	0.0
0.0	15:42:10	0.0	0.0
0.0	15:42:11	0.0	0.0
0.0	15:42:12	0.0	0.0
0.0	15:42:13	0.0	0.0

Site 1 - On North Side of Project Site				Site 2 - On East Side of Project Site				Site 3 - On South Side of Project Site			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
36.2	15:40:34	36.2	36.2	36.2	15:40:11	36.2	36.2	36.2	15:36:30	36.2	36.2
36.3	15:40:35	36.3	36.3	36.8	15:40:12	36.8	36.8	36.3	15:36:30	36.3	36.3
36.7	15:40:36	36.7	36.7	36.9	15:40:13	36.9	36.9	36.9	15:36:31	36.9	36.9
36.3	15:40:37	36.3	36.3	36.9	15:40:14	36.9	36.9	36.4	15:36:32	36.4	36.4
36.5	15:40:38	36.5	36.5	36.2	15:40:15	36.2	36.2	36.7	15:36:33	36.7	36.7
36.5	15:40:39	36.5	36.5	36.5	15:40:16	36.5	36.5	36.5	15:36:34	36.5	36.5
36.3	15:40:40	36.3	36.3	36.3	15:40:17	36.3	36.3	36.3	15:36:35	36.3	36.3
60.0	15:41:01	60.0	60.0	36.3	15:40:18	36.3	36.3	36.3	15:36:36	36.3	36.3
60.7	15:41:02	60.7	60.7	36.0	15:40:19	36.0	36.0	36.2	15:36:37	36.2	36.2
60.2	15:41:03	60.2	60.2	36.1	15:40:20	36.1	36.1	36.9	15:36:38	36.9	36.9
39.8	15:41:04	39.8	39.8	36.4	15:40:21	36.4	36.4	36.0	15:36:39	36.0	36.0
36.9	15:41:05	36.9	36.9	36.7	15:40:22	36.7	36.7	36.1	15:36:40	36.1	36.1
39.2	15:41:06	39.2	39.2	36.1	15:40:23	36.1	36.1	36.9	15:36:41	36.9	36.9
36.1	15:41:07	36.1	36.1	36.1	15:40:24	36.1	36.1	36.5	15:36:42	36.5	36.5
37.0	15:41:08	37.0	37.0	39.4	15:40:25	39.4	39.4	36.7	15:36:43	36.7	36.7
36.9	15:41:09	36.9	36.9	37.7	15:40:26	37.7	37.7	36.4	15:36:44	36.4	36.4
36.8	15:41:10	36.8	36.8	37.8	15:40:27	37.8	37.8	36.9	15:36:45	36.9	36.9
37.0	15:41:11	37.0	37.0	71.0	15:40:28	71.0	71.0	36.8	15:36:46	36.8	36.8
36.9	15:41:12	36.9	36.9	73.3	15:40:29	73.3	73.3	36.7	15:36:47	36.7	36.7
36.2	15:41:13	36.2	36.2	70.4	15:40:30	70.4	70.4	36.8	15:36:48	36.8	36.8
37.8	15:41:14	37.8	37.8	66.4	15:40:31	66.4	66.4	36.8	15:36:49	36.8	36.8
36.5	15:41:15	36.5	36.5	66.0	15:40:32	66.0	66.0	36.8	15:36:50	36.8	36.8
36.7	15:41:16	36.7	36.7	39.1	15:40:33	39.1	39.1	36.9	15:36:51	36.9	36.9
37.0	15:41:17	37.0	37.0	36.8	15:40:34	36.8	36.8	36.5	15:36:52	36.5	36.5
37.0	15:41:18	37.0	37.0	36.4	15:40:35	36.4	36.4	36.0	15:36:53	36.0	36.0
60.1	15:41:19	60.1	60.1	37.9	15:40:36	37.9	37.9	36.7	15:36:54	36.7	36.7
62.9	15:41:20	62.9	62.9	37.1	15:40:37	37.1	37.1	36.7	15:36:55	36.7	36.7
63.9	15:41:21	63.9	63.9	36.8	15:40:38	36.8	36.8	36.5	15:36:56	36.5	36.5
61.7	15:41:22	61.7	61.7	36.9	15:40:39	36.9	36.9	36.4	15:36:57	36.4	36.4
36.8	15:41:23	36.8	36.8	37.2	15:40:40	37.2	37.2	36.9	15:36:58	36.9	36.9
36.8	15:41:24	36.8	36.8	37.3	15:40:41	37.3	37.3	36.9	15:36:59	36.9	36.9
36.2	15:41:25	36.2	36.2	36.8	15:40:42	36.8	36.8	36.8	15:37:00	36.8	36.8
49.9	15:41:26	49.9	49.9	37.2	15:40:43	37.2	37.2	49.4	15:37:01	49.4	49.4
47.8	15:41:27	47.8	47.8	36.2	15:40:44	36.2	36.2	37.1	15:37:02	37.1	37.1
46.5	15:41:28	46.5	46.5	36.5	15:40:45	36.5	36.5	49.7	15:37:03	49.7	49.7
45.5	15:41:29	45.5	45.5	37.0	15:40:46	37.0	37.0	49.2	15:37:04	49.2	49.2
44.9	15:41:30	44.9	44.9	70.1	15:40:47	70.1	70.1	49.4	15:37:05	49.4	49.4
44.9	15:41:31	44.9	44.9	66.1	15:40:48	66.1	66.1	49.1	15:37:06	49.1	49.1
43.4	15:41:32	43.4	43.4	66.4	15:40:49	66.4	66.4	49.5	15:37:07	49.5	49.5
47.1	15:41:33	47.1	47.1	63.9	15:40:50	63.9	63.9	36.8	15:37:08	36.8	36.8
46.3	15:41:34	46.3	46.3	60.3	15:40:51	60.3	60.3	36.1	15:37:09	36.1	36.1
36.8	15:41:35	36.8	36.8	37.3	15:40:52	37.3	37.3	36.3	15:37:10	36.3	36.3
36.3	15:41:36	36.3	36.3	36.3	15:40:53	36.3	36.3	36.7	15:37:11	36.7	36.7
61.0	15:41:37	61.0	61.0	61.7	15:40:54	61.7	61.7	36.4	15:37:12	36.4	36.4
62.4	15:41:38	62.4	62.4	70.3	15:40:55	70.3	70.3	49.3	15:37:13	49.3	49.3
61.2	15:41:39	61.2	61.2	70.1	15:40:56	70.1	70.1	47.9	15:37:14	47.9	47.9
36.9	15:41:40	36.9	36.9	73.1	15:40:57	73.1	73.1	47.6	15:37:15	47.6	47.6
36.2	15:41:41	36.2	36.2	69.3	15:40:58	69.3	69.3	47.4	15:37:16	47.4	47.4
36.2	15:41:42	36.2	36.2	69.3	15:40:59	69.3	69.3	47.0	15:37:17	47.0	47.0
54.2	15:41:43	54.2	54.2	54.3	15:41:00	54.3	54.3	47.4	15:37:18	47.4	47.4
56.2	15:41:44	56.2	56.2	57.8	15:41:01	57.8	57.8	48.6	15:37:19	48.6	48.6
56.8	15:41:45	56.8	56.8	54.6	15:41:02	54.6	54.6	48.6	15:37:20	48.6	48.6
55.1	15:41:46	55.1	55.1	52.1	15:41:03	52.1	52.1	48.7	15:37:21	48.7	48.7
52.9	15:41:47	52.9	52.9	50.3	15:41:04	50.3	50.3	48.2	15:37:22	48.2	48.2
51.4	15:41:48	51.4	51.4	49.6	15:41:05	49.6	49.6	48.5	15:37:23	48.5	48.5
50.7	15:41:49	50.7	50.7	49.0	15:41:06	49.0	49.0	47.5	15:37:24	47.5	47.5
50.2	15:41:50	50.2	50.2	48.9	15:41:07	48.9	48.9	47.4	15:37:25	47.4	47.4
50.5	15:41:51	50.5	50.5	49.2	15:41:08	49.2	49.2	48.2	15:37:26	48.2	48.2
55.3	15:41:52	55.3	55.3	49.5	15:41:09	49.5	49.5	50.2	15:37:27	50.2	50.2
60.7	15:41:53	60.7	60.7	49.6	15:41:10	49.6	49.6	51.1	15:37:28	51.1	51.1
62.9	15:41:54	62.9	62.9	49.9	15:41:11	49.9	49.9	51.1	15:37:29	51.1	51.1
63.1	15:41:55	63.1	63.1	50.0	15:41:12	50.0	50.0	50.1	15:37:30	50.1	50.1
62.8	15:41:56	62.8	62.8	50.0	15:41:13	50.0	50.0	48.5	15:37:31	48.5	48.5
62.4	15:41:57	62.4	62.4	50.7	15:41:14	50.7	50.7	48.9	15:37:32	48.9	48.9
61.4	15:41:58	61.4	61.4	51.4	15:41:15	51.4	51.4	49.3	15:37:33	49.3	49.3
60.2	15:41:59	60.2	60.2	51.9	15:41:16	51.9	51.9	50.2	15:37:34	50.2	50.2
57.9	15:42:00	57.9	57.9	53.2	15:41:17	53.2	53.2	49.8	15:37:35	49.8	49.8
55.4	15:42:01	55.4	55.4	54.4	15:41:18	54.4	54.4	49.9	15:37:36	49.9	49.9
53.1	15:42:02	53.1	53.1	54.2	15:41:19	54.2	54.2	50.4	15:37:37	50.4	50.4
51.3	15:42:03	51.3	51.3	54.2	15:41:20	54.2	54.2	50.4	15:37:38	50.4	50.4
50.4	15:42:04	50.4	50.4	55.0	15:41:21	55.0	55.0	50.9	15:37:39	50.9	50.9
52.5	15:42:05	52.5	52.5	55.6	15:41:22	55.6	55.6	52.7	15:37:40	52.7	52.7
56.6	15:42:06	56.6	56.6	55.7	15:41:23	55.7	55.7	53.1	15:37:41	53.1	53.1
58.4	15:42:07	58.4	58.4	55.1	15:41:24	55.1	55.1	51.7	15:37:42	51.7	51.7
55.1	15:42:08	55.1	55.1	54.1	15:41:25	54.1	54.1	50.3	15:37:43	50.3	50.3
55.1	15:42:09	55.1	55.1	53.9	15:41:26	53.9	53.9	49.8	15:37:44	49.8	49.8
52.6	15:42:10	52.6	52.6	53.5	15:41:27	53.5	53.5	49.7	15:37:45	49.7	49.7
50.8	15:42:11	50.8	50.8	52.9	15:41:28	52.9	52.9	49.3	15:37:46	49.3	49.3
49.4	15:42:12	49.4	49.4	52.4	15:41:29	52.4	52.4	48.8	15:37:47	48.8	48.8
49.6	15:42:13	49.6	49.6	52.7	15:41:30	52.7	52.7	48.5	15:37:48	48.5	48.5
50.1	15:42:14	50.1	50.1	53.2	15:41:31	53.2	53.2	50.8	15:37:49	50.8	50.8
53.7	15:42:15	53.7	53.7	53.9	15:41:32	53.9	53.9	51.0	15:37:50	51.0	51.0
57.7	15:42:16	57.7	57.7	53.3	15:41:33	53.3	53.3	51.4	15:37:51	51.4	51.4
61.1	15:42:17	61.1	61.1	53.0	15:41:34	53.0	53.0	51.9	15:37:52	51.9	51.9
61.8	15:42:18	61.8	61.8	53.1	15:41:35	53.1	53.1	49.8	15:37:53	49.8	49.8
59.4	15:42:19	59.4	59.4	52.8	15:41:36	52.8	52.8	49.1	15:37:54	49.1	49.1
59.1	15:42:20	59.1	59.1	52.7	15:41:37	52.7	52.7	48.7	15:37:55	48.7	48.7
60.1	15:42:21	60.1	60.1	52.7	15:41:38	52.7	52.7	47.2	15:37:56	47.2	47.2
59.8	15:42:22	59.8	59.8	52.6	15:41:39	52.6	52.6	46.0	15:37:57	46.0	46.0
58.1	15:42:23	58.1	58.1	52.5	15:41:40	52.5	52.5	46.2	15:37:58	46.2	46.2
56.0	15:42:24	56.0	56.0	52.3	15:41:41	52.3	52.3	46.1	15:37:59	46.1	46.1
53.6	15:42:25	53.6	53.6	53.1	15:41:42	53.1	53.1	46.7	15:38:00	46.7	46.7
51.7	15:42:26	51.7	51.7	54.9	15:41:43	54.9	54.9	46.4	15:38:01	46.4	46.4
50.6	15:42:27	50.6	50.6	55.5	15:41:44	55.5	55.5	47.5	15:38:02	47.5	47.5
50.3	15:42:28	50.3	50.3	55.4	15:41:45	55.4	55.4	50.0	15:38:03	50.0	50.0
50.2	15:42:29	50.2	50.2	54.8	15:41:46	54.8	54.8	50.9	15:38:04	50.9	50.9
50.1	15:42:30	50.1	50.1	54.1	15:41:47	54.1	54.1	48.3	15:38:05	48.3	48.3
49.7	15:42:31	49.7	49.7	53.7	15:41:48	53.7	53.				

Site 1 - On North Side of Project Site					Site 2 - On East Side of Project Site					Site 3 - On South Side of Project Site				
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL		SPL	Time	Leq (1 hour Avg.)	Ldn CNEL		SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	
66.7	15:43:48		66.7	66.7	52.3	15:49:05		52.3	52.3	51.1	15:55:49		51.1	51.1
66.6	15:43:49		66.6	66.6	51.9	15:49:06		51.9	51.9	49.6	15:55:50		49.6	49.6
64.0	15:43:50		64.0	64.0	51.2	15:49:07		51.2	51.2	48.6	15:55:51		48.6	48.6
69.1	15:43:51		69.1	69.1	50.7	15:49:08		50.7	50.7	52.4	15:55:52		52.4	52.4
75.5	15:43:52		75.5	75.5	50.8	15:49:09		50.8	50.8	54.8	15:55:53		54.8	54.8
82.8	15:43:53		82.8	82.8	51.7	15:49:10		51.7	51.7	55.0	15:55:54		55.0	55.0
80.5	15:43:54		80.5	80.5	52.0	15:49:11		52.0	52.0	54.7	15:55:55		54.7	54.7
86.2	15:43:55		86.2	86.2	52.9	15:49:12		52.9	52.9	54.7	15:55:56		54.7	54.7
82.0	15:43:56		82.0	82.0	54.5	15:49:12		54.5	54.5	53.4	15:55:57		53.4	53.4
77.8	15:43:57		77.8	77.8	55.3	15:49:14		55.3	55.3	52.1	15:55:58		52.1	52.1
73.5	15:43:58		73.5	73.5	55.4	15:49:15		55.4	55.4	51.6	15:55:59		51.6	51.6
69.4	15:43:59		69.4	69.4	54.9	15:49:16		54.9	54.9	53.2	15:56:00		53.2	53.2
65.4	15:44:00		65.4	65.4	54.7	15:49:17		54.7	54.7	52.9	15:56:01		52.9	52.9
61.8	15:44:01		61.8	61.8	54.5	15:49:18		54.5	54.5	51.4	15:56:02		51.4	51.4
58.6	15:44:02		58.6	58.6	55.3	15:49:19		55.3	55.3	51.6	15:56:03		51.6	51.6
56.5	15:44:03		56.5	56.5	57.5	15:49:20		57.5	57.5	51.2	15:56:04		51.2	51.2
54.2	15:44:04		54.2	54.2	60.9	15:49:21		60.9	60.9	50.9	15:56:05		50.9	50.9
52.1	15:44:05		52.1	52.1	61.4	15:49:22		61.4	61.4	50.5	15:56:06		50.5	50.5
51.2	15:44:06		51.2	51.2	60.8	15:49:23		60.8	60.8	50.0	15:56:07		50.0	50.0
50.2	15:44:07		50.2	50.2	58.3	15:49:24		58.3	58.3	49.8	15:56:08		49.8	49.8
50.2	15:44:08		50.2	50.2	57.8	15:49:25		57.8	57.8	48.9	15:56:09		48.9	48.9
50.9	15:44:09		50.9	50.9	57.3	15:49:26		57.3	57.3	48.8	15:56:10		48.8	48.8
51.3	15:44:10		51.3	51.3	55.3	15:49:27		55.3	55.3	48.5	15:56:11		48.5	48.5
52.2	15:44:11		52.2	52.2	53.9	15:49:28		53.9	53.9	47.4	15:56:12		47.4	47.4
57.6	15:44:12		57.6	57.6	53.4	15:49:29		53.4	53.4	46.8	15:56:13		46.8	46.8
61.6	15:44:13		61.6	61.6	53.4	15:49:30		53.4	53.4	47.4	15:56:14		47.4	47.4
61.3	15:44:14		61.3	61.3	52.6	15:49:31		52.6	52.6	48.4	15:56:15		48.4	48.4
59.7	15:44:15		59.7	59.7	51.8	15:49:32		51.8	51.8	49.5	15:56:16		49.5	49.5
57.8	15:44:16		57.8	57.8	51.2	15:49:33		51.2	51.2	49.3	15:56:17		49.3	49.3
55.6	15:44:17		55.6	55.6	50.6	15:49:34		50.6	50.6	47.6	15:56:18		47.6	47.6
55.3	15:44:18		55.3	55.3	51.3	15:49:35		51.3	51.3	46.9	15:56:19		46.9	46.9
55.8	15:44:19		55.8	55.8	52.2	15:49:36		52.2	52.2	46.8	15:56:20		46.8	46.8
55.2	15:44:20		55.2	55.2	52.9	15:49:37		52.9	52.9	46.5	15:56:21		46.5	46.5
54.8	15:44:21		54.8	54.8	53.7	15:49:38		53.7	53.7	47.0	15:56:22		47.0	47.0
54.3	15:44:22		54.3	54.3	54.6	15:49:39		54.6	54.6	46.3	15:56:23		46.3	46.3
56.4	15:44:23		56.4	56.4	55.1	15:49:40		55.1	55.1	46.0	15:56:24		46.0	46.0
61.3	15:44:24		61.3	61.3	55.2	15:49:41		55.2	55.2	45.7	15:56:25		45.7	45.7
66.0	15:44:25		66.0	66.0	57.1	15:49:42		57.1	57.1	45.0	15:56:26		45.0	45.0
66.9	15:44:26		66.9	66.9	59.0	15:49:43		59.0	59.0	45.9	15:56:27		45.9	45.9
64.9	15:44:27		64.9	64.9	62.3	15:49:44		62.3	62.3	45.9	15:56:28		45.9	45.9
62.5	15:44:28		62.5	62.5	68.1	15:49:45		68.1	68.1	45.1	15:56:29		45.1	45.1
59.7	15:44:29		59.7	59.7	71.6	15:49:46		71.6	71.6	45.1	15:56:30		45.1	45.1
56.5	15:44:30		56.5	56.5	70.7	15:49:47		70.7	70.7	45.1	15:56:31		45.1	45.1
53.8	15:44:31		53.8	53.8	72.6	15:49:48		72.6	72.6	44.8	15:56:32		44.8	44.8
52.2	15:44:32		52.2	52.2	73.7	15:49:49		73.7	73.7	45.0	15:56:33		45.0	45.0
50.8	15:44:33		50.8	50.8	72.9	15:49:50		72.9	72.9	44.9	15:56:34		44.9	44.9
50.4	15:44:34		50.4	50.4	72.9	15:49:51		72.9	72.9	44.8	15:56:35		44.8	44.8
50.8	15:44:35		50.8	50.8	70.4	15:49:52		70.4	70.4	45.4	15:56:36		45.4	45.4
53.5	15:44:36		53.5	53.5	66.8	15:49:53		66.8	66.8	46.2	15:56:37		46.2	46.2
56.3	15:44:37		56.3	56.3	63.4	15:49:54		63.4	63.4	47.7	15:56:38		47.7	47.7
57.6	15:44:38		57.6	57.6	60.8	15:49:55		60.8	60.8	51.4	15:56:39		51.4	51.4
57.1	15:44:39		57.1	57.1	59.8	15:49:56		59.8	59.8	53.4	15:56:40		53.4	53.4
55.3	15:44:40		55.3	55.3	62.0	15:49:57		62.0	62.0	52.3	15:56:41		52.3	52.3
53.6	15:44:41		53.6	53.6	69.2	15:49:58		69.2	69.2	53.4	15:56:42		53.4	53.4
52.3	15:44:42		52.3	52.3	77.9	15:49:59		77.9	77.9	51.1	15:56:43		51.1	51.1
51.1	15:44:43		51.1	51.1	78.3	15:50:00		78.3	78.3	52.9	15:56:44		52.9	52.9
50.0	15:44:44		50.0	50.0	74.6	15:50:01		74.6	74.6	52.9	15:56:45		52.9	52.9
49.5	15:44:45		49.5	49.5	70.7	15:50:02		70.7	70.7	52.7	15:56:46		52.7	52.7
49.8	15:44:46		49.8	49.8	66.9	15:50:03		66.9	66.9	53.3	15:56:47		53.3	53.3
49.6	15:44:47		49.6	49.6	63.2	15:50:04		63.2	63.2	52.9	15:56:48		52.9	52.9
49.7	15:44:48		49.7	49.7	60.0	15:50:05		60.0	60.0	54.0	15:56:49		54.0	54.0
49.6	15:44:49		49.6	49.6	58.2	15:50:06		58.2	58.2	52.7	15:56:50		52.7	52.7
49.7	15:44:50		49.7	49.7	55.9	15:50:07		55.9	55.9	52.1	15:56:51		52.1	52.1
50.0	15:44:51		50.0	50.0	54.7	15:50:08		54.7	54.7	53.6	15:56:52		53.6	53.6
52.0	15:44:52		52.0	52.0	53.9	15:50:09		53.9	53.9	53.8	15:56:53		53.8	53.8
53.9	15:44:53		53.9	53.9	54.9	15:50:10		54.9	54.9	54.5	15:56:54		54.5	54.5
56.0	15:44:54		56.0	56.0	55.5	15:50:11		55.5	55.5	54.3	15:56:55		54.3	54.3
59.0	15:44:55		59.0	59.0	55.8	15:50:12		55.8	55.8	54.0	15:56:56		54.0	54.0
60.1	15:44:56		60.1	60.1	55.3	15:50:13		55.3	55.3	56.1	15:56:57		56.1	56.1
58.7	15:44:57		58.7	58.7	54.4	15:50:14		54.4	54.4	54.9	15:56:58		54.9	54.9
56.8	15:44:58		56.8	56.8	55.3	15:50:15		55.3	55.3	52.9	15:56:59		52.9	52.9
57.1	15:44:59		57.1	57.1	56.5	15:50:16		56.5	56.5	52.1	15:57:00		52.1	52.1
59.0	15:45:00		59.0	59.0	57.1	15:50:17		57.1	57.1	51.3	15:57:01		51.3	51.3
60.5	15:45:01		60.5	60.5	58.9	15:50:18		58.9	58.9	51.8	15:57:02		51.8	51.8
60.1	15:45:02		60.1	60.1	62.9	15:50:19		62.9	62.9	52.1	15:57:03		52.1	52.1
60.0	15:45:03		60.0	60.0	70.2	15:50:20		70.2	70.2	51.9	15:57:04		51.9	51.9
60.5	15:45:04		60.5	60.5	72.0	15:50:21		72.0	72.0	49.9	15:57:05		49.9	49.9
60.5	15:45:05		60.5	60.5	71.4	15:50:22		71.4	71.4	48.1	15:57:06		48.1	48.1
60.5	15:45:06		60.5	60.5	72.8	15:50:23		72.8	72.8	46.8	15:57:07		46.8	46.8
60.6	15:45:07		60.6	60.6	70.7	15:50:24		70.7	70.7	45.3	15:57:08		45.3	45.3
61.1	15:45:08		61.1	61.1	66.9	15:50:25		66.9	66.9	46.3	15:57:09		46.3	46.3
61.1	15:45:09		61.1	61.1	63.1	15:50:26		63.1	63.1	48.5	15:57:10		48.5	48.5
61.2	15:45:10		61.2	61.2	59.8	15:50:27		59.8	59.8	47.6	15:57:11		47.6	47.6
61.3	15:45:11		61.3	61.3	57.2	15:50:28		57.2	57.2	47.1	15:57:12		47.1	47.1
61.8	15:45:12		61.8	61.8	55.2	15:50:29		55.2	55.2	47.2	15:57:13		47.2	47.2
62.2	15:45:13		62.2	62.2	53.8	15:50:30		53.8	53.8	46.6	15:57:14		46.6	46.6
61.3	15:45:14		61.3	61.3	53.2	15:50:31		53.2	53.2	46.5	15:57:15		46.5	46.5
59.6	15:45:15		59.6	59.6	53.3	15:50:32		53.3	53.3	46.8	15:57:16		46.8	46.8
58.5	15:45:16		58.5	58.5	52.5	15:50:33		52.5	52.5	45.8	1			

Site 1 - On North Side of Project Site				Site 2 - On East Side of Project Site				Site 3 - On South Side of Project Site			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
46.3	15:46:30	46.3	46.3	60.5	15:51:47	60.5	60.5	54.0	15:58:31	54.0	54.0
47.0	15:46:31	47.0	47.0	58.3	15:51:48	58.3	58.3	53.1	15:58:32	53.1	53.1
48.0	15:46:32	48.0	48.0	56.5	15:51:49	56.5	56.5	51.6	15:58:33	51.6	51.6
50.0	15:46:33	50.0	50.0	55.1	15:51:50	55.1	55.1	50.2	15:58:34	50.2	50.2
55.3	15:46:34	55.3	55.3	54.4	15:51:51	54.4	54.4	48.9	15:58:35	48.9	48.9
61.0	15:46:35	61.0	61.0	55.0	15:51:52	55.0	55.0	48.0	15:58:36	48.0	48.0
64.8	15:46:36	64.8	64.8	56.5	15:51:53	56.5	56.5	47.8	15:58:37	47.8	47.8
65.8	15:46:37	65.8	65.8	55.2	15:51:54	55.2	55.2	46.3	15:58:38	46.3	46.3
64.7	15:46:38	64.7	64.7	66.8	15:51:55	66.8	66.8	47.8	15:58:39	47.8	47.8
63.7	15:46:39	63.7	63.7	69.3	15:51:56	69.3	69.3	47.1	15:58:40	47.1	47.1
63.1	15:46:40	63.1	63.1	67.2	15:51:57	67.2	67.2	46.5	15:58:41	46.5	46.5
62.4	15:46:41	62.4	62.4	64.3	15:51:58	64.3	64.3	45.5	15:58:42	45.5	45.5
61.8	15:46:42	61.8	61.8	64.3	15:51:59	64.3	64.3	47.5	15:58:43	47.5	47.5
61.3	15:46:43	61.3	61.3	71.1	15:52:00	71.1	71.1	47.1	15:58:44	47.1	47.1
61.7	15:46:44	61.7	61.7	75.1	15:52:01	75.1	75.1	48.3	15:58:45	48.3	48.3
63.7	15:46:45	63.7	63.7	76.9	15:52:02	76.9	76.9	47.3	15:58:46	47.3	47.3
66.1	15:46:46	66.1	66.1	76.6	15:52:03	76.6	76.6	46.2	15:58:47	46.2	46.2
65.3	15:46:47	65.3	65.3	75.8	15:52:04	75.8	75.8	45.6	15:58:48	45.6	45.6
63.6	15:46:48	63.6	63.6	73.6	15:52:05	73.6	73.6	45.3	15:58:49	45.3	45.3
61.7	15:46:49	61.7	61.7	70.2	15:52:06	70.2	70.2	45.5	15:58:50	45.5	45.5
59.2	15:46:50	59.2	59.2	68.6	15:52:07	68.6	68.6	47.7	15:58:51	47.7	47.7
56.7	15:46:51	56.7	56.7	67.9	15:52:08	67.9	67.9	48.4	15:58:52	48.4	48.4
55.6	15:46:52	55.6	55.6	66.4	15:52:09	66.4	66.4	47.7	15:58:53	47.7	47.7
57.5	15:46:53	57.5	57.5	63.8	15:52:10	63.8	63.8	47.6	15:58:54	47.6	47.6
60.5	15:46:54	60.5	60.5	61.2	15:52:11	61.2	61.2	46.4	15:58:55	46.4	46.4
63.3	15:46:55	63.3	63.3	58.8	15:52:12	58.8	58.8	45.8	15:58:56	45.8	45.8
65.0	15:46:56	65.0	65.0	56.3	15:52:13	56.3	56.3	48.0	15:58:57	48.0	48.0
65.9	15:46:57	65.9	65.9	54.5	15:52:14	54.5	54.5	48.1	15:58:58	48.1	48.1
64.4	15:46:58	64.4	64.4	52.1	15:52:15	52.1	52.1	47.6	15:58:59	47.6	47.6
61.8	15:46:59	61.8	61.8	50.6	15:52:16	50.6	50.6	48.4	15:59:00	48.4	48.4
61.4	15:47:00	61.4	61.4	49.9	15:52:17	49.9	49.9	48.9	15:59:01	48.9	48.9
63.9	15:47:01	63.9	63.9	50.0	15:52:18	50.0	50.0	48.8	15:59:02	48.8	48.8
64.2	15:47:02	64.2	64.2	53.5	15:52:19	53.5	53.5	49.7	15:59:03	49.7	49.7
63.3	15:47:03	63.3	63.3	57.0	15:52:20	57.0	57.0	50.0	15:59:04	50.0	50.0
62.5	15:47:04	62.5	62.5	58.1	15:52:21	58.1	58.1	48.8	15:59:05	48.8	48.8
62.8	15:47:05	62.8	62.8	57.7	15:52:22	57.7	57.7	47.8	15:59:06	47.8	47.8
63.1	15:47:06	63.1	63.1	57.6	15:52:23	57.6	57.6	47.5	15:59:07	47.5	47.5
61.3	15:47:07	61.3	61.3	56.3	15:52:24	56.3	56.3	47.6	15:59:08	47.6	47.6
59.1	15:47:08	59.1	59.1	58.6	15:52:25	58.6	58.6	48.2	15:59:09	48.2	48.2
57.9	15:47:09	57.9	57.9	59.4	15:52:26	59.4	59.4	47.3	15:59:10	47.3	47.3
56.5	15:47:10	56.5	56.5	55.9	15:52:27	55.9	55.9	46.5	15:59:11	46.5	46.5
59.2	15:47:11	59.2	59.2	60.4	15:52:28	60.4	60.4	46.8	15:59:12	46.8	46.8
58.1	15:47:12	58.1	58.1	60.6	15:52:29	60.6	60.6	46.5	15:59:13	46.5	46.5
56.7	15:47:13	56.7	56.7	59.4	15:52:30	59.4	59.4	46.5	15:59:14	46.5	46.5
59.0	15:47:14	59.0	59.0	58.6	15:52:31	58.6	58.6	46.8	15:59:15	46.8	46.8
60.2	15:47:15	60.2	60.2	57.9	15:52:32	57.9	57.9	47.4	15:59:16	47.4	47.4
58.7	15:47:16	58.7	58.7	58.7	15:52:33	58.7	58.7	47.3	15:59:17	47.3	47.3
56.2	15:47:17	56.2	56.2	59.3	15:52:34	59.3	59.3	47.0	15:59:18	47.0	47.0
53.1	15:47:18	53.1	53.1	58.1	15:52:35	58.1	58.1	47.1	15:59:19	47.1	47.1
50.5	15:47:19	50.5	50.5	56.9	15:52:36	56.9	56.9	46.4	15:59:20	46.4	46.4
50.2	15:47:20	50.2	50.2	56.0	15:52:37	56.0	56.0	48.1	15:59:21	48.1	48.1
53.0	15:47:21	53.0	53.0	54.9	15:52:38	54.9	54.9	48.4	15:59:22	48.4	48.4
56.8	15:47:22	56.8	56.8	54.3	15:52:39	54.3	54.3	48.6	15:59:23	48.6	48.6
58.7	15:47:23	58.7	58.7	53.8	15:52:40	53.8	53.8	46.5	15:59:24	46.5	46.5
57.4	15:47:24	57.4	57.4	53.7	15:52:41	53.7	53.7	46.7	15:59:25	46.7	46.7
54.2	15:47:25	54.2	54.2	54.7	15:52:42	54.7	54.7	46.3	15:59:26	46.3	46.3
51.0	15:47:26	51.0	51.0	55.5	15:52:43	55.5	55.5	46.2	15:59:27	46.2	46.2
48.0	15:47:27	48.0	48.0	56.0	15:52:44	56.0	56.0	45.9	15:59:28	45.9	45.9
45.6	15:47:28	45.6	45.6	56.9	15:52:45	56.9	56.9	45.3	15:59:29	45.3	45.3
44.1	15:47:29	44.1	44.1	58.2	15:52:46	58.2	58.2	45.4	15:59:30	45.4	45.4
43.3	15:47:30	43.3	43.3	58.2	15:52:47	58.2	58.2	45.7	15:59:31	45.7	45.7
42.8	15:47:31	42.8	42.8	57.5	15:52:48	57.5	57.5	45.9	15:59:32	45.9	45.9
42.7	15:47:32	42.7	42.7	57.4	15:52:49	57.4	57.4	44.8	15:59:33	44.8	44.8
42.6	15:47:33	42.6	42.6	57.2	15:52:50	57.2	57.2	43.9	15:59:34	43.9	43.9
42.6	15:47:34	42.6	42.6	56.6	15:52:51	56.6	56.6	44.9	15:59:35	44.9	44.9
42.6	15:47:35	42.6	42.6	55.9	15:52:52	55.9	55.9	45.5	15:59:36	45.5	45.5
42.1	15:47:36	42.1	42.1	55.1	15:52:53	55.1	55.1	47.0	15:59:37	47.0	47.0
41.9	15:47:37	41.9	41.9	54.3	15:52:54	54.3	54.3	46.3	15:59:38	46.3	46.3
41.5	15:47:38	41.5	41.5	53.7	15:52:55	53.7	53.7	45.5	15:59:39	45.5	45.5
41.4	15:47:39	41.4	41.4	54.4	15:52:56	54.4	54.4	44.9	15:59:40	44.9	44.9
42.1	15:47:40	42.1	42.1	56.4	15:52:57	56.4	56.4	44.7	15:59:41	44.7	44.7
42.8	15:47:41	42.8	42.8	59.1	15:52:58	59.1	59.1	44.5	15:59:42	44.5	44.5
42.7	15:47:42	42.7	42.7	66.4	15:52:59	66.4	66.4	44.9	15:59:43	44.9	44.9
42.4	15:47:43	42.4	42.4	73.0	15:53:00	73.0	73.0	44.8	15:59:44	44.8	44.8
42.7	15:47:44	42.7	42.7	72.6	15:53:01	72.6	72.6	43.3	15:59:45	43.3	43.3
43.0	15:47:45	43.0	43.0	69.3	15:53:02	69.3	69.3	47.8	15:59:46	47.8	47.8
43.3	15:47:46	43.3	43.3	65.6	15:53:03	65.6	65.6	48.2	15:59:47	48.2	48.2
43.5	15:47:47	43.5	43.5	62.1	15:53:04	62.1	62.1	47.0	15:59:48	47.0	47.0
43.5	15:47:48	43.5	43.5	58.5	15:53:05	58.5	58.5	46.9	15:59:49	46.9	46.9
43.3	15:47:49	43.3	43.3	56.8	15:53:06	56.8	56.8	46.4	15:59:50	46.4	46.4
43.5	15:47:50	43.5	43.5	56.9	15:53:07	56.9	56.9	45.4	15:59:51	45.4	45.4
43.5	15:47:51	43.5	43.5	58.0	15:53:08	58.0	58.0	45.4	15:59:52	45.4	45.4
43.5	15:47:52	43.5	43.5	60.8	15:53:09	60.8	60.8	46.0	15:59:53	46.0	46.0
43.8	15:47:53	43.8	43.8	68.4	15:53:10	68.4	68.4	45.2	15:59:54	45.2	45.2
44.3	15:47:54	44.3	44.3	71.1	15:53:11	71.1	71.1	44.5	15:59:55	44.5	44.5
45.8	15:47:55	45.8	45.8	69.6	15:53:12	69.6	69.6	44.3	15:59:56	44.3	44.3
46.7	15:47:56	46.7	46.7	66.8	15:53:13	66.8	66.8	43.6	15:59:57	43.6	43.6
47.3	15:47:57	47.3	47.3	63.7	15:53:14	63.7	63.7	43.6	15:59:58	43.6	43.6
47.5	15:47:58	47.5	47.5	61.3	15:53:15	61.3	61.3	44.1	15:59:59	44.1	44.1
48.4	15:47:59	48.4	48.4	59.2	15:53:16	59.2	59.2	44.4	16:00:00	44.4	44.4
52.3	15:48:00	52.3	52.3	52.5	15:53:17	52.5	52.5	50.6	16:00:01	50.6	50.6
56.2	15:48:01	56.2	56.2	60.6	15:53:18	60.6	60.6	53.1	16:00:02	53.1	53.1
56.6	15:48:02	56.6	56.6	59.6	15:53:19	59.6	59.6	52.8	16:00:03	52.8	52.8
55.4	15:48:03	55.4	55.4	59.0	15:53:20	59.0	59.0	50.3	16:00:04	50.3	50.3
53.9	15:48:04	53.9	53.9	58.1	15:53:21	58.1	58.1	48.2	16:00:05	48.2	48.2
52.5	15:48:05	52.5	52.5	58.3	15:53:22	58.3	58.3	46.2	16:00:06	46.2	46.2
55.6	15:48:06	55.6	55.6	58.2	15:53:23	58.2	58.2	45.4	16:00:07	45.4	45.4
59.3	15:48:07	59.3	59.3	57.6	15:53:24	57.6	57.				

Site 1 - On North Side of Project Site				Site 2 - On East Side of Project Site				Site 3 - On South Side of Project Site			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
62.1	15:49:12		62.1	53.0	15:54:29		53.0	44.1	16:01:13		44.1
59.6	15:49:13		59.6	52.6	15:54:30		52.6	44.8	16:01:14		44.8
57.7	15:49:14		57.7	52.3	15:54:31		52.3	45.5	16:01:15		45.5
58.9	15:49:15		58.9	53.5	15:54:32		53.5	44.8	16:01:16		44.8
60.6	15:49:16		60.6	53.5	15:54:33		53.5	44.4	16:01:17		44.4
59.6	15:49:17		59.6	53.2	15:54:34		53.2	45.1	16:01:18		45.1
57.4	15:49:18		57.4	53.8	15:54:35		53.8	45.9	16:01:19		45.9
55.1	15:49:19		55.1	55.0	15:54:36		55.0	46.5	16:01:20		46.5
54.1	15:49:20		54.1	57.9	15:54:37		57.9	46.7	16:01:21		46.7
54.9	15:49:21		54.9	63.7	15:54:38		63.7	47.7	16:01:22		47.7
59.2	15:49:22		59.2	72.1	15:54:39		72.1	48.9	16:01:23		48.9
63.4	15:49:23		63.4	73.4	15:54:40		73.4	48.9	16:01:24		48.9
65.5	15:49:24		65.5	70.1	15:54:41		70.1	49.7	16:01:25		49.7
65.8	15:49:25		65.8	66.5	15:54:42		66.5	50.3	16:01:26		50.3
65.4	15:49:26		65.4	63.9	15:54:43		63.9	50.9	16:01:27		50.9
64.3	15:49:27		64.3	66.8	15:54:44		66.8	50.8	16:01:28		50.8
61.0	15:49:28		61.0	71.8	15:54:45		71.8	49.9	16:01:29		49.9
59.2	15:49:29		59.2	70.8	15:54:46		70.8	48.9	16:01:30		48.9
56.5	15:49:30		56.5	67.5	15:54:47		67.5	49.5	16:01:31		49.5
54.3	15:49:31		54.3	63.7	15:54:48		63.7	50.8	16:01:32		50.8
52.6	15:49:32		52.6	60.0	15:54:49		60.0	52.6	16:01:33		52.6
51.8	15:49:33		51.8	56.8	15:54:50		56.8	52.4	16:01:34		52.4
51.7	15:49:34		51.7	55.0	15:54:51		55.0	52.5	16:01:35		52.5
51.0	15:49:35		51.0	56.3	15:54:52		56.3	53.3	16:01:36		53.3
49.6	15:49:36		49.6	56.4	15:54:53		56.4	52.1	16:01:37		52.1
50.0	15:49:37		50.0	57.5	15:54:54		57.5	50.5	16:01:38		50.5
52.2	15:49:38		52.2	57.3	15:54:55		57.3	50.6	16:01:39		50.6
53.7	15:49:39		53.7	56.6	15:54:56		56.6	49.9	16:01:40		49.9
54.2	15:49:40		54.2	57.1	15:54:57		57.1	49.8	16:01:41		49.8
56.3	15:49:41		56.3	57.9	15:54:58		57.9	48.8	16:01:42		48.8
59.1	15:49:42		59.1	60.6	15:54:59		60.6	48.7	16:01:43		48.7
59.4	15:49:43		59.4	68.0	15:55:00		68.0	49.1	16:01:44		49.1
59.8	15:49:44		59.8	72.9	15:55:01		72.9	48.9	16:01:45		48.9
59.2	15:49:45		59.2	71.4	15:55:02		71.4	48.1	16:01:46		48.1
57.6	15:49:46		57.6	68.0	15:55:03		68.0	47.8	16:01:47		47.8
56.4	15:49:47		56.4	64.4	15:55:04		64.4	47.2	16:01:48		47.2
55.3	15:49:48		55.3	61.3	15:55:05		61.3	46.8	16:01:49		46.8
53.7	15:49:49		53.7	58.6	15:55:06		58.6	46.3	16:01:50		46.3
54.5	15:49:50		54.5	56.5	15:55:07		56.5	46.0	16:01:51		46.0
57.6	15:49:51		57.6	55.9	15:55:08		55.9	44.7	16:01:52		44.7
56.2	15:50:17		56.2	55.3	15:55:09		55.3	44.1	16:01:53		44.1
57.8	15:49:53		57.8	54.8	15:55:10		54.8	44.3	16:01:54		44.3
63.6	15:49:54		63.6	53.4	15:55:11		53.4	44.7	16:01:55		44.7
65.8	15:49:55		65.8	52.0	15:55:12		52.0	48.4	16:01:56		48.4
60.4	15:49:56		60.4	51.3	15:55:13		51.3	50.6	16:01:57		50.6
72.4	15:49:57		72.4	51.7	15:55:14		51.7	51.4	16:01:58		51.4
71.8	15:49:58		71.8	52.9	15:55:15		52.9	50.5	16:01:59		50.5
69.0	15:49:59		69.0	53.4	15:55:16		53.4	49.8	16:02:00		49.8
66.5	15:50:00		66.5	53.1	15:55:17		53.1	49.0	16:02:01		49.0
64.7	15:50:01		64.7	52.1	15:55:18		52.1	48.1	16:02:02		48.1
64.1	15:50:02		64.1	52.5	15:55:19		52.5	47.4	16:02:03		47.4
64.7	15:50:03		64.7	53.7	15:55:20		53.7	47.3	16:02:04		47.3
63.5	15:50:04		63.5	54.1	15:55:21		54.1	47.7	16:02:05		47.7
61.3	15:50:05		61.3	55.0	15:55:22		55.0	47.4	16:02:06		47.4
60.1	15:50:06		60.1	55.6	15:55:23		55.6	47.4	16:02:07		47.4
61.4	15:50:07		61.4	55.7	15:55:24		55.7	47.2	16:02:08		47.2
63.2	15:50:08		63.2	55.4	15:55:25		55.4	47.6	16:02:09		47.6
63.7	15:50:09		63.7	56.1	15:55:26		56.1	47.1	16:02:10		47.1
62.9	15:50:10		62.9	56.0	15:55:27		56.0	47.4	16:02:11		47.4
61.4	15:50:11		61.4	56.2	15:55:28		56.2	48.8	16:02:12		48.8
59.8	15:50:12		59.8	55.6	15:55:29		55.6	52.1	16:02:13		52.1
57.6	15:50:13		57.6	55.7	15:55:30		55.7	52.6	16:02:14		52.6
55.2	15:50:14		55.2	55.5	15:55:31		55.5	51.8	16:02:15		51.8
55.2	15:50:15		55.2	54.1	15:55:32		54.1	50.6	16:02:16		50.6
55.5	15:50:16		55.5	53.5	15:55:33		53.5	51.6	16:02:17		51.6
55.7	15:50:17		55.7	53.4	15:55:34		53.4	50.8	16:02:18		50.8
57.2	15:50:18		57.2	53.3	15:55:35		53.3	53.8	16:02:19		53.8
57.3	15:50:19		57.3	53.2	15:55:36		53.2	53.4	16:02:20		53.4
56.3	15:50:20		56.3	53.3	15:55:37		53.3	52.9	16:02:21		52.9
54.1	15:50:21		54.1	52.7	15:55:38		52.7	51.9	16:02:22		51.9
51.4	15:50:22		51.4	52.5	15:55:39		52.5	51.5	16:02:23		51.5
49.4	15:50:23		49.4	53.7	15:55:40		53.7	50.8	16:02:24		50.8
47.7	15:50:24		47.7	57.6	15:55:41		57.6	51.0	16:02:25		51.0
47.0	15:50:25		47.0	63.1	15:55:42		63.1	51.9	16:02:26		51.9
47.2	15:50:26		47.2	72.2	15:55:43		72.2	51.5	16:02:27		51.5
47.2	15:50:27		47.2	75.3	15:55:44		75.3	50.7	16:02:28		50.7
46.8	15:50:28		46.8	72.6	15:55:45		72.6	51.1	16:02:29		51.1
46.3	15:50:29		46.3	69.0	15:55:46		69.0	51.8	16:02:30		51.8
46.2	15:50:30		46.2	65.4	15:55:47		65.4	52.4	16:02:31		52.4
45.9	15:50:31		45.9	62.3	15:55:48		62.3	52.8	16:02:32		52.8
46.4	15:50:32		46.4	59.8	15:55:49		59.8	51.8	16:02:33		51.8
47.0	15:50:33		47.0	58.5	15:55:50		58.5	49.5	16:02:34		49.5
46.8	15:50:34		46.8	57.6	15:55:51		57.6	47.9	16:02:35		47.9
50.0	15:50:35		50.0	57.3	15:55:52		57.3	47.2	16:02:36		47.2
49.4	15:50:36		49.4	56.5	15:55:53		56.5	48.1	16:02:37		48.1
49.4	15:50:37		49.4	55.2	15:55:54		55.2	50.8	16:02:38		50.8
49.0	15:50:38		49.0	54.2	15:55:55		54.2	51.9	16:02:39		51.9
49.0	15:50:39		49.0	54.4	15:55:56		54.4	50.8	16:02:40		50.8
50.6	15:50:40		50.6	54.5	15:55:57		54.5	49.5	16:02:41		49.5
53.6	15:50:41		53.6	54.3	15:55:58		54.3	49.3	16:02:42		49.3
51.7	15:50:42		51.7	54.7	15:55:59		54.7	49.7	16:02:43		49.7
59.9	15:50:43		59.9	54.5	15:56:00		54.5	50.0	16:02:44		50.0
60.8	15:50:44		60.8	54.5	15:56:01		54.5	50.2	16:02:45		50.2
60.4	15:50:45		60.4	54.5	15:56:02		54.5	49.7	16:02:46		49.7
59.0	15:50:46		59.0	55.0	15:56:03		55.0	49.4	16:02:47		49.4
59.2	15:50:47		59.2	54.3	15:56:04		54.3	49.9	16:02:48		49.9
59.4	15:50:48		59.4	54.0	15:56:05		54.0	49.1	16:02:49		49.1
59.9	15:50:49		59.9	54.2	15:56:06		54.2	47.9	16:02:50		47.9
58.6	15:50:50		58.6	54.6	15:56:07		54.6	47.1	16:02:51		47.1
56.1	15:50:51		56.1	54.6	15:56:08		54.6	46.8	16:02:52		46.8
54.3	15:50:52		54.3	54.5	15:56:09		54.5	45.5	16:02:53		45.5
54.4	15:50:53		54.4	54.5	15:56:10		54.5	44.4	16:02:54		44.4
52.5	15:50:54		52.5	54.5	15:56:11		54.5	44.0	16:02:55		44.0
54.7	15:50:55		54.7	54.7	15:56:12		54.7	44.8	16:02:56		44.8
56.8	15:50:56		56.8	54.2	15:56:13		54.2	45.5	16:02:57		45.5
56.2	15:50:57		56.2	54.1	15:56:14		54.1	45.6	16:02:58		45.6
54.7	15:50:58		54.7	53.7	15:56:15		53.7	46.1	16:02:59		46.1
53.5	15:50:59		53.5	52.9	15:56:16		52.9	46.5	16:03:00		46.5
53.3	15:51:00		53.3	52.1	15:56:17		52.1	46.3	16:03:01		46.3
55.4	15:51:01		55.4	52.6	15:56:18		52.6	45.5	16:03:02		45.5
58.3	15:51:02		58.3	55.0	15:56:19		55.0	45.4	16:03:03		45.4
58.											

Site 1 - On North Side of Project Site				Site 2 - On East Side of Project Site				Site 3 - On South Side of Project Site			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
53.7	15:51:54		53.7	48.4	15:57:11		48.4	44.9	16:03:55		44.9
55.7	15:51:55		55.7	49.1	15:57:12		49.1	44.8	16:03:56		44.8
59.5	15:51:56		59.5	49.5	15:57:13		49.5	44.6	16:03:57		44.6
60.0	15:51:57		60.0	49.1	15:57:14		49.1	44.4	16:03:58		44.4
60.8	15:51:58		60.8	49.1	15:57:15		49.1	45.1	16:03:59		45.1
60.8	15:51:59		60.8	49.4	15:57:16		49.4	45.8	16:04:00		45.8
60.9	15:52:00		60.9	49.6	15:57:17		49.6	45.6	16:04:01		45.6
62.6	15:52:01		62.6	50.1	15:57:18		50.1	45.5	16:04:02		45.5
62.1	15:52:02		62.1	51.0	15:57:19		51.0	46.1	16:04:03		46.1
60.0	15:52:03		60.0	51.8	15:57:20		51.8	46.5	16:04:04		46.5
58.6	15:52:04		58.6	51.8	15:57:21		51.8	45.8	16:04:05		45.8
59.4	15:52:05		59.4	51.9	15:57:22		51.9	45.1	16:04:06		45.1
60.8	15:52:06		60.8	53.6	15:57:23		53.6	44.7	16:04:07		44.7
63.2	15:52:07		63.2	54.0	15:57:24		54.0	44.7	16:04:08		44.7
61.9	15:52:08		61.9	52.8	15:57:25		52.8	44.5	16:04:09		44.5
59.2	15:52:09		59.2	51.8	15:57:26		51.8	44.2	16:04:10		44.2
58.6	15:52:10		58.6	51.9	15:57:27		51.9	44.4	16:04:11		44.4
60.2	15:52:11		60.2	53.3	15:57:28		53.3	44.3	16:04:12		44.3
61.1	15:52:12		61.1	54.9	15:57:29		54.9	44.2	16:04:13		44.2
62.6	15:52:13		62.6	55.7	15:57:30		55.7	44.1	16:04:14		44.1
65.0	15:52:14		65.0	55.0	15:57:31		55.0	43.9	16:04:15		43.9
63.9	15:52:15		63.9	55.1	15:57:32		55.1	44.1	16:04:16		44.1
61.9	15:52:16		61.9	57.5	15:57:33		57.5	44.1	16:04:17		44.1
60.2	15:52:17		60.2	64.7	15:57:34		64.7	44.1	16:04:18		44.1
59.3	15:52:18		59.3	70.9	15:57:35		70.9	43.7	16:04:19		43.7
59.8	15:52:19		59.8	70.8	15:57:36		70.8	43.4	16:04:20		43.4
60.0	15:52:20		60.0	67.8	15:57:37		67.8	43.0	16:04:21		43.0
60.8	15:52:21		60.8	64.3	15:57:38		64.3	43.0	16:04:22		43.0
62.3	15:52:22		62.3	60.6	15:57:39		60.6	43.3	16:04:23		43.3
62.2	15:52:23		62.2	57.1	15:57:40		57.1	43.4	16:04:24		43.4
61.1	15:52:24		61.1	54.1	15:57:41		54.1	43.3	16:04:25		43.3
60.3	15:52:25		60.3	52.3	15:57:42		52.3	43.7	16:04:26		43.7
59.9	15:52:26		59.9	51.6	15:57:43		51.6	44.3	16:04:27		44.3
59.8	15:52:27		59.8	51.4	15:57:44		51.4	44.2	16:04:28		44.2
61.9	15:52:28		61.9	52.6	15:57:45		52.6	44.0	16:04:29		44.0
61.3	15:52:29		61.3	55.0	15:57:46		55.0	43.9	16:04:30		43.9
59.9	15:52:30		59.9	57.1	15:57:47		57.1	44.1	16:04:31		44.1
57.3	15:52:31		57.3	63.3	15:57:48		63.3	44.2	16:04:32		44.2
54.8	15:52:32		54.8	70.2	15:57:49		70.2	44.3	16:04:33		44.3
54.8	15:52:33		54.8	70.0	15:57:50		70.0	44.5	16:04:34		44.5
56.8	15:52:34		56.8	66.7	15:57:51		66.7	44.9	16:04:35		44.9
54.9	15:52:35		54.9	63.1	15:57:52		63.1	44.3	16:04:36		44.3
53.4	15:52:36		53.4	59.5	15:57:53		59.5	43.9	16:04:37		43.9
53.9	15:52:37		53.9	57.0	15:57:54		57.0	45.1	16:04:38		45.1
54.8	15:52:38		54.8	57.0	15:57:55		57.0	47.0	16:04:39		47.0
55.7	15:52:39		55.7	62.0	15:57:56		62.0	49.0	16:04:40		49.0
56.1	15:52:40		56.1	70.9	15:57:57		70.9	47.9	16:04:41		47.9
58.1	15:52:41		58.1	74.1	15:57:58		74.1	48.5	16:04:42		48.5
61.4	15:52:42		61.4	71.0	15:57:59		71.0	51.0	16:04:43		51.0
62.2	15:52:43		62.2	67.3	15:58:00		67.3	49.9	16:04:44		49.9
61.3	15:52:44		61.3	63.6	15:58:01		63.6	50.4	16:04:45		50.4
59.6	15:52:45		59.6	59.9	15:58:02		59.9	49.9	16:04:46		49.9
57.0	15:52:46		57.0	56.8	15:58:03		56.8	50.0	16:04:47		50.0
57.7	15:52:47		57.7	54.7	15:58:04		54.7	49.5	16:04:48		49.5
59.3	15:52:48		59.3	53.4	15:58:05		53.4	49.2	16:04:49		49.2
60.6	15:52:49		60.6	52.5	15:58:06		52.5	49.1	16:04:50		49.1
61.9	15:52:50		61.9	51.9	15:58:07		51.9	50.3	16:04:51		50.3
62.4	15:52:51		62.4	51.4	15:58:08		51.4	50.7	16:04:52		50.7
63.2	15:52:52		63.2	51.2	15:58:09		51.2	49.9	16:04:53		49.9
64.0	15:52:53		64.0	52.0	15:58:10		52.0	48.5	16:04:54		48.5
63.5	15:52:54		63.5	52.9	15:58:11		52.9	47.3	16:04:55		47.3
62.2	15:52:55		62.2	52.8	15:58:12		52.8	47.7	16:04:56		47.7
61.0	15:52:56		61.0	52.4	15:58:13		52.4	48.5	16:04:57		48.5
61.5	15:52:57		61.5	51.9	15:58:14		51.9	48.9	16:04:58		48.9
60.3	15:52:58		60.3	51.9	15:58:15		51.9	49.4	16:04:59		49.4
59.3	15:52:59		59.3	52.4	15:58:16		52.4	52.8	16:05:00		52.8
58.2	15:53:00		58.2	52.5	15:58:17		52.5	52.4	16:05:01		52.4
57.0	15:53:01		57.0	52.5	15:58:18		52.5	51.1	16:05:02		51.1
57.2	15:53:02		57.2	53.1	15:58:19		53.1	48.6	16:05:03		48.6
56.9	15:53:03		56.9	53.8	15:58:20		53.8	46.8	16:05:04		46.8
58.0	15:53:04		58.0	56.8	15:58:21		56.8	46.2	16:05:05		46.2
57.2	15:53:05		57.2	61.5	15:58:22		61.5	46.3	16:05:06		46.3
55.5	15:53:06		55.5	67.7	15:58:23		67.7	45.4	16:05:07		45.4
54.6	15:53:07		54.6	68.3	15:58:24		68.3	45.6	16:05:08		45.6
53.6	15:53:08		53.6	67.1	15:58:25		67.1	44.4	16:05:09		44.4
53.2	15:53:09		53.2	69.2	15:58:26		69.2	47.0	16:05:10		47.0
52.6	15:53:10		52.6	70.2	15:58:27		70.2	49.4	16:05:11		49.4
52.5	15:53:11		52.5	68.0	15:58:28		68.0	49.5	16:05:12		49.5
55.9	15:53:12		55.9	65.0	15:58:29		65.0	49.5	16:05:13		49.5
58.5	15:53:13		58.5	62.9	15:58:30		62.9	49.2	16:05:14		49.2
57.3	15:53:14		57.3	66.1	15:58:31		66.1	48.7	16:05:15		48.7
55.0	15:53:15		55.0	69.6	15:58:32		69.6	51.7	16:05:16		51.7
52.3	15:53:16		52.3	69.1	15:58:33		69.1	52.4	16:05:17		52.4
51.5	15:53:17		51.5	66.2	15:58:34		66.2	51.1	16:05:18		51.1
55.9	15:53:18		55.9	62.8	15:58:35		62.8	51.0	16:05:19		51.0
54.9	15:53:19		54.9	59.7	15:58:36		59.7	49.9	16:05:20		49.9
54.7	15:53:20		54.7	56.9	15:58:37		56.9	55.2	16:05:21		55.2
57.7	15:53:21		57.7	55.6	15:58:38		55.6	57.7	16:05:22		57.7
60.2	15:53:22		60.2	54.5	15:58:39		54.5	57.7	16:05:23		57.7
59.5	15:53:23		59.5	52.6	15:58:40		52.6	55.0	16:05:24		55.0
57.9	15:53:24		57.9	51.4	15:58:41		51.4	52.0	16:05:25		52.0
57.3	15:53:25		57.3	51.8	15:58:42		51.8	53.8	16:05:26		53.8
56.7	15:53:26		56.7	52.0	15:58:43		52.0	55.8	16:05:27		55.8
55.4	15:53:27		55.4	52.2	15:58:44		52.2	55.1	16:05:28		55.1
53.5	15:53:28		53.5	52.6	15:58:45		52.6	54.0	16:05:29		54.0
51.4	15:53:29		51.4	52.8	15:58:46		52.8	52.8	16:05:30		52.8
49.6	15:53:30		49.6	53.4	15:58:47		53.4	53.2	16:05:31		53.2
48.5	15:53:31		48.5	53.4	15:58:48		53.4	52.8	16:05:32		52.8
48.2	15:53:32		48.2	53.4	15:58:49		53.4	53.8	16:05:33		53.8
48.3	15:53:33		48.3	53.9	15:58:50		53.9	53.1	16:05:34		53.1
48.3	15:53:34		48.3	56.2	15:58:51		56.2	52.5	16:05:35		52.5
48.2	15:53:35		48.2	57.9	15:58:52		57.9	52.3	16:05:36		52.3
47.6	15:53:36		47.6	58.6	15:58:53		58.6	53.4	16:05:37		53.4
47.7	15:53:37		47.7	58.9	15:58:54		58.9	54.7	16:05:38		54.7
48.4	15:53:38		48.4	58.8	15:58:55		58.8	55.2	16:05:39		55.2
48.5	15:53:39		48.5	58.3	15:58:56		58.3	55.7	16:05:40		55.7
48.9	15:53:40		48.9	58.8	15:58:57		58.8	56.8	16:05:41		56.8
49.0	15:53:41		49.0	58.9	15:58:58		58.9	56.4	16:05:42		56.4
48.5	15:53:42		48.5	59.1	15:58:59		59.1	56.3	16:05:43		56.3
47.9	15:53:43		47.9	59.3	15:59:00		59.3	54.3	16:05:44		54.3
47.7	15:53:44		47.7	59.4	15:59:01		59.4	54.6	16:05:45		54.6
47.											

Site 1 - On North Side of Project Site				Site 2 - On East Side of Project Site				Site 3 - On South Side of Project Site			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
61.7	15:54:36		61.7 61.7	55.4	15:59:53		55.4 55.4	49.6	16:06:37		49.6 49.6
61.8	15:54:37		61.8 61.8	54.5	15:59:54		54.5 54.5	48.0	16:06:38		48.0 48.0
61.9	15:54:38		61.9 61.9	54.1	15:59:55		54.1 54.1	49.3	16:06:39		49.3 49.3
61.5	15:54:39		61.5 61.5	54.2	15:59:56		54.2 54.2	50.3	16:06:40		50.3 50.3
61.4	15:54:40		61.4 61.4	54.0	15:59:57		54.0 54.0	49.4	16:06:41		49.4 49.4
63.4	15:54:41		63.4 63.4	54.1	15:59:58		54.1 54.1	49.9	16:06:42		49.9 49.9
65.0	15:54:42		65.0 65.0	53.7	15:59:59		53.7 53.7	48.8	16:06:43		48.8 48.8
64.8	15:54:43		64.8 64.8	53.5	16:00:00		53.5 53.5	47.5	16:06:44		47.5 47.5
64.1	15:54:44		64.1 64.1	53.9	16:00:01		53.9 53.9	47.3	16:06:45		47.3 47.3
63.9	15:54:45		63.9 63.9	54.1	16:00:02		54.1 54.1	47.7	16:06:46		47.7 47.7
63.5	15:54:46		63.5 63.5	53.8	16:00:03		53.8 53.8	48.9	16:06:47		48.9 48.9
63.5	15:54:47		63.5 63.5	53.2	16:00:04		53.2 53.2	50.2	16:06:48		50.2 50.2
63.5	15:54:48		63.5 63.5	52.9	16:00:05		52.9 52.9	49.2	16:06:49		49.2 49.2
63.6	15:54:49		63.6 63.6	52.6	16:00:06		52.6 52.6	48.9	16:06:50		48.9 48.9
63.8	15:54:50		63.8 63.8	52.6	16:00:07		52.6 52.6	48.8	16:06:51		48.8 48.8
63.4	15:54:51		63.4 63.4	52.9	16:00:08		52.9 52.9	49.3	16:06:52		49.3 49.3
63.5	15:54:52		63.5 63.5	53.5	16:00:09		53.5 53.5	51.4	16:06:53		51.4 51.4
63.3	15:54:53		63.3 63.3	53.8	16:00:10		53.8 53.8	50.8	16:06:54		50.8 50.8
62.3	15:54:54		62.3 62.3	54.7	16:00:11		54.7 54.7	49.0	16:06:55		49.0 49.0
60.6	15:54:55		60.6 60.6	56.2	16:00:12		56.2 56.2	49.3	16:06:56		49.3 49.3
59.0	15:54:56		59.0 59.0	57.4	16:00:13		57.4 57.4	48.6	16:06:57		48.6 48.6
58.6	15:54:57		58.6 58.6	59.1	16:00:14		59.1 59.1	48.7	16:06:58		48.7 48.7
57.9	15:54:58		57.9 57.9	63.6	16:00:15		63.6 63.6	50.0	16:06:59		50.0 50.0
56.0	15:54:59		56.0 56.0	72.1	16:00:16		72.1 72.1	53.5	16:07:00		53.5 53.5
54.9	15:55:00		54.9 54.9	74.4	16:00:17		74.4 74.4	53.6	16:07:01		53.6 53.6
56.1	15:55:01		56.1 56.1	71.7	16:00:18		71.7 71.7	52.7	16:07:02		52.7 52.7
58.5	15:55:02		58.5 58.5	68.1	16:00:19		68.1 68.1	51.2	16:07:03		51.2 51.2
59.7	15:55:03		59.7 59.7	64.7	16:00:20		64.7 64.7	49.6	16:07:04		49.6 49.6
59.4	15:55:04		59.4 59.4	61.8	16:00:21		61.8 61.8	49.1	16:07:05		49.1 49.1
59.1	15:55:05		59.1 59.1	59.8	16:00:22		59.8 59.8	50.3	16:07:06		50.3 50.3
59.9	15:55:06		59.9 59.9	58.4	16:00:23		58.4 58.4	51.1	16:07:07		51.1 51.1
61.4	15:55:07		61.4 61.4	57.4	16:00:24		57.4 57.4	51.3	16:07:08		51.3 51.3
61.7	15:55:08		61.7 61.7	56.3	16:00:25		56.3 56.3	51.7	16:07:09		51.7 51.7
61.2	15:55:09		61.2 61.2	55.5	16:00:26		55.5 55.5	49.8	16:07:10		49.8 49.8
60.7	15:55:10		60.7 60.7	54.9	16:00:27		54.9 54.9	51.0	16:07:11		51.0 51.0
59.8	15:55:11		59.8 59.8	54.3	16:00:28		54.3 54.3	53.3	16:07:12		53.3 53.3
58.5	15:55:12		58.5 58.5	53.7	16:00:29		53.7 53.7	58.3	16:07:13		58.3 58.3
59.3	15:55:13		59.3 59.3	53.5	16:00:30		53.5 53.5	59.4	16:07:14		59.4 59.4
60.5	15:55:14		60.5 60.5	53.5	16:00:31		53.5 53.5	58.6	16:07:15		58.6 58.6
61.2	15:55:15		61.2 61.2	53.5	16:00:32		53.5 53.5	57.2	16:07:16		57.2 57.2
60.1	15:55:16		60.1 60.1	53.9	16:00:33		53.9 53.9	57.2	16:07:17		57.2 57.2
57.8	15:55:17		57.8 57.8	53.8	16:00:34		53.8 53.8	55.6	16:07:18		55.6 55.6
56.6	15:55:18		56.6 56.6	53.1	16:00:35		53.1 53.1	55.0	16:07:19		55.0 55.0
57.0	15:55:19		57.0 57.0	52.4	16:00:36		52.4 52.4	53.6	16:07:20		53.6 53.6
56.9	15:55:20		56.9 56.9	52.2	16:00:37		52.2 52.2	51.0	16:07:21		51.0 51.0
61.0	15:55:21		61.0 61.0	52.5	16:00:38		52.5 52.5	50.5	16:07:22		50.5 50.5
61.6	15:55:22		61.6 61.6	51.9	16:00:39		51.9 51.9	49.8	16:07:23		49.8 49.8
61.4	15:55:23		61.4 61.4	51.2	16:00:40		51.2 51.2	50.5	16:07:24		50.5 50.5
61.6	15:55:24		61.6 61.6	51.1	16:00:41		51.1 51.1	49.2	16:07:25		49.2 49.2
61.5	15:55:25		61.5 61.5	50.3	16:00:42		50.3 50.3	50.9	16:07:26		50.9 50.9
60.5	15:55:26		60.5 60.5	49.9	16:00:43		49.9 49.9	52.3	16:07:27		52.3 52.3
62.3	15:55:27		62.3 62.3	50.3	16:00:44		50.3 50.3	53.3	16:07:28		53.3 53.3
64.3	15:55:28		64.3 64.3	50.4	16:00:45		50.4 50.4	54.5	16:07:29		54.5 54.5
63.8	15:55:29		63.8 63.8	49.7	16:00:46		49.7 49.7	53.7	16:07:30		53.7 53.7
61.3	15:55:30		61.3 61.3	49.5	16:00:47		49.5 49.5	53.1	16:07:31		53.1 53.1
59.2	15:55:31		59.2 59.2	49.9	16:00:48		49.9 49.9	54.5	16:07:32		54.5 54.5
58.9	15:55:32		58.9 58.9	50.0	16:00:49		50.0 50.0	55.0	16:07:33		55.0 55.0
61.2	15:55:33		61.2 61.2	50.0	16:00:50		50.0 50.0	54.6	16:07:34		54.6 54.6
63.2	15:55:34		63.2 63.2	50.1	16:00:51		50.1 50.1	56.7	16:07:35		56.7 56.7
61.9	15:55:35		61.9 61.9	49.9	16:00:52		49.9 49.9	58.5	16:07:36		58.5 58.5
59.3	15:55:36		59.3 59.3	49.8	16:00:53		49.8 49.8	59.0	16:07:37		59.0 59.0
56.5	15:55:37		56.5 56.5	50.2	16:00:54		50.2 50.2	58.4	16:07:38		58.4 58.4
53.7	15:55:38		53.7 53.7	49.8	16:00:55		49.8 49.8	58.2	16:07:39		58.2 58.2
51.6	15:55:39		51.6 51.6	49.5	16:00:56		49.5 49.5	58.1	16:07:40		58.1 58.1
50.6	15:55:40		50.6 50.6	49.5	16:00:57		49.5 49.5	57.3	16:07:41		57.3 57.3
50.7	15:55:41		50.7 50.7	49.7	16:00:58		49.7 49.7	56.8	16:07:42		56.8 56.8
51.4	15:55:42		51.4 51.4	50.5	16:00:59		50.5 50.5	55.5	16:07:43		55.5 55.5
50.9	15:55:43		50.9 50.9	50.7	16:01:00		50.7 50.7	53.9	16:07:44		53.9 53.9
50.9	15:55:44		50.9 50.9	51.3	16:01:01		51.3 51.3	53.7	16:07:45		53.7 53.7
50.6	15:55:45		50.6 50.6	51.2	16:01:02		51.2 51.2	50.5	16:07:46		50.5 50.5
50.2	15:55:46		50.2 50.2	51.7	16:01:03		51.7 51.7	53.9	16:07:47		53.9 53.9
49.9	15:55:47		49.9 49.9	51.5	16:01:04		51.5 51.5	52.3	16:07:48		52.3 52.3
51.8	15:55:48		51.8 51.8	51.6	16:01:05		51.6 51.6	50.4	16:07:49		50.4 50.4
51.7	15:55:49		51.7 51.7	51.4	16:01:06		51.4 51.4	49.0	16:07:50		49.0 49.0
52.9	15:55:50		52.9 52.9	51.2	16:01:07		51.2 51.2	49.9	16:07:51		49.9 49.9
53.0	15:55:51		53.0 53.0	50.8	16:01:08		50.8 50.8	49.9	16:07:52		49.9 49.9
51.8	15:55:52		51.8 51.8	50.3	16:01:09		50.3 50.3	48.9	16:07:53		48.9 48.9
50.4	15:55:53		50.4 50.4	49.9	16:01:10		49.9 49.9	48.3	16:07:54		48.3 48.3
50.3	15:55:54		50.3 50.3	49.3	16:01:11		49.3 49.3	48.3	16:07:55		48.3 48.3
52.3	15:55:55		52.3 52.3	50.0	16:01:12		50.0 50.0	48.7	16:07:56		48.7 48.7
51.8	15:55:56		51.8 51.8	50.3	16:01:13		50.3 50.3	47.8	16:07:57		47.8 47.8
50.8	15:55:57		50.8 50.8	50.8	16:01:14		50.8 50.8	47.6	16:07:58		47.6 47.6
50.0	15:55:58		50.0 50.0	52.2	16:01:15		52.2 52.2	47.2	16:07:59		47.2 47.2
49.5	15:55:59		49.5 49.5	54.0	16:01:16		54.0 54.0	47.3	16:08:00		47.3 47.3
50.1	15:56:00		50.1 50.1	55.1	16:01:17		55.1 55.1	48.1	16:08:01		48.1 48.1
52.3	15:56:01		52.3 52.3	56.4	16:01:18		56.4 56.4	49.1	16:08:02		49.1 49.1
54.7	15:56:02		54.7 54.7	58.2	16:01:19		58.2 58.2	51.1	16:08:03		51.1 51.1
56.5	15:56:03		56.5 56.5	61.5	16:01:20		61.5 61.5	52.8	16:08:04		52.8 52.8
57.0	15:56:04		57.0 57.0	67.3	16:01:21		67.3 67.3	54.5	16:08:05		54.5 54.5
56.2	15:56:05		56.2 56.2	73.5	16:01:22		73.5 73.5	53.7	16:08:06		53.7 53.7
55.0	15:56:06		55.0 55.0	73.6	16:01:23		73.6 73.6	54.6	16:08:07		54.6 54.6
53.8	15:56:07		53.8 53.8	71.0	16:01:24		71.0 71.0	53.0	16:08:08		53.0 53.0
52.4	15:56:08		52.4 52.4	67.6	16:01:25		67.6 67.6	51.1	16:08:09		51.1 51.1
51.2	15:56:09		51.2 51.2	64.1	16:01:26		64.1 64.1	50.5	16:08:10		50.5 50.5
50.5	15:56:10		50.5 50.5	60.8	16:01:27		60.8 60.8	50.0	16:08:11		50.0 50.0
51.1	15:56:11		51.1 51.1	57.9	16:01:28		57.9 57.9	49.8	16:08:12		49.8 49.8
53.2	15:56:12		53.2 53.2	56.0	16:01:29		56.0 56.0	50.8	16:08:13		50.8 50.8
57.1	15:56:13		57.1 57.1	54.4	16:01:30		54.4 54.				

Site 1 - On North Side of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
47.5	15:57:18	47.5	47.5
47.1	15:57:19	47.1	47.1
46.6	15:57:20	46.6	46.6
46.7	15:57:21	46.7	46.7
47.1	15:57:22	47.1	47.1
47.5	15:57:23	47.5	47.5
48.0	15:57:24	48.0	48.0
49.2	15:57:25	49.2	49.2
48.2	15:57:26	48.2	48.2
47.3	15:57:27	47.3	47.3
47.0	15:57:28	47.0	47.0
46.2	15:57:29	46.2	46.2
49.3	15:57:30	49.3	49.3
49.1	15:57:31	49.1	49.1
47.7	15:57:32	47.7	47.7
46.7	15:57:33	46.7	46.7
46.2	15:57:34	46.2	46.2
45.8	15:57:35	45.8	45.8
45.5	15:57:36	45.5	45.5
45.3	15:57:37	45.3	45.3
45.0	15:57:38	45.0	45.0
45.2	15:57:39	45.2	45.2
45.6	15:57:40	45.6	45.6
46.8	15:57:41	46.8	46.8
47.4	15:57:42	47.4	47.4
47.3	15:57:43	47.3	47.3
48.2	15:57:44	48.2	48.2
49.9	15:57:45	49.9	49.9
49.1	15:57:46	49.1	49.1
48.0	15:57:47	48.0	48.0
47.6	15:57:48	47.6	47.6
47.3	15:57:49	47.3	47.3
47.0	15:57:50	47.0	47.0
46.8	15:57:51	46.8	46.8
47.3	15:57:52	47.3	47.3
49.8	15:57:53	49.8	49.8
54.1	15:57:54	54.1	54.1
57.1	15:57:55	57.1	57.1
58.0	15:57:56	58.0	58.0
57.8	15:57:57	57.8	57.8
55.4	15:57:58	55.4	55.4
52.7	15:57:59	52.7	52.7
50.9	15:58:00	50.9	50.9
52.0	15:58:01	52.0	52.0
55.2	15:58:02	55.2	55.2
58.7	15:58:03	58.7	58.7
59.7	15:58:04	59.7	59.7
59.4	15:58:05	59.4	59.4
59.8	15:58:06	59.8	59.8
59.2	15:58:07	59.2	59.2
58.7	15:58:08	58.7	58.7
57.6	15:58:09	57.6	57.6
55.1	15:58:10	55.1	55.1
53.6	15:58:11	53.6	53.6
53.7	15:58:12	53.7	53.7
54.5	15:58:13	54.5	54.5
55.1	15:58:14	55.1	55.1
53.3	15:58:15	53.3	53.3
51.7	15:58:16	51.7	51.7
51.7	15:58:17	51.7	51.7
54.3	15:58:18	54.3	54.3
56.8	15:58:19	56.8	56.8
59.8	15:58:20	59.8	59.8
61.0	15:58:21	61.0	61.0
60.2	15:58:22	60.2	60.2
59.6	15:58:23	59.6	59.6
55.7	15:58:24	55.7	55.7
53.0	15:58:25	53.0	53.0
50.8	15:58:26	50.8	50.8
49.4	15:58:27	49.4	49.4
49.8	15:58:28	49.8	49.8
50.5	15:58:29	50.5	50.5
54.2	15:58:30	54.2	54.2
57.7	15:58:31	57.7	57.7
58.6	15:58:32	58.6	58.6
55.9	15:58:33	55.9	55.9
52.9	15:58:34	52.9	52.9
50.4	15:58:35	50.4	50.4
48.7	15:58:36	48.7	48.7
47.7	15:58:37	47.7	47.7
47.6	15:58:38	47.6	47.6
49.0	15:58:39	49.0	49.0
50.4	15:58:40	50.4	50.4
50.8	15:58:41	50.8	50.8
50.5	15:58:42	50.5	50.5
50.3	15:58:43	50.3	50.3
51.5	15:58:44	51.5	51.5
54.1	15:58:45	54.1	54.1
59.3	15:58:46	59.3	59.3
62.8	15:58:47	62.8	62.8
62.8	15:58:48	62.8	62.8
62.0	15:58:49	62.0	62.0
61.4	15:58:50	61.4	61.4
60.8	15:58:51	60.8	60.8
59.9	15:58:52	59.9	59.9
56.4	15:58:53	56.4	56.4
54.1	15:58:54	54.1	54.1
52.4	15:58:55	52.4	52.4
51.5	15:58:56	51.5	51.5
53.1	15:58:57	53.1	53.1
56.4	15:58:58	56.4	56.4
57.0	15:58:59	57.0	57.0
55.4	15:59:00	55.4	55.4
53.2	15:59:01	53.2	53.2
50.9	15:59:02	50.9	50.9
49.6	15:59:03	49.6	49.6
50.9	15:59:04	50.9	50.9
55.3	15:59:05	55.3	55.3
60.3	15:59:06	60.3	60.3
63.6	15:59:07	63.6	63.6
63.0	15:59:08	63.0	63.0
60.8	15:59:09	60.8	60.8
58.5	15:59:10	58.5	58.5
55.7	15:59:11	55.7	55.7
53.1	15:59:12	53.1	53.1
51.1	15:59:13	51.1	51.1
49.6	15:59:14	49.6	49.6
48.7	15:59:15	48.7	48.7
48.8	15:59:16	48.8	48.8
51.4	15:59:17	51.4	51.4
54.8	15:59:18	54.8	54.8
57.4	15:59:19	57.4	57.4
57.8	15:59:20	57.8	57.8
55.9	15:59:21	55.9	55.9
53.0	15:59:22	53.0	53.0
50.3	15:59:23	50.3	50.3
48.7	15:59:24	48.7	48.7
48.0	15:59:25	48.0	48.0
49.5	15:59:26	49.5	49.5
54.3	15:59:27	54.3	54.3
58.6	15:59:28	58.6	58.6
59.9	15:59:29	59.9	59.9
59.8	15:59:30	59.8	59.8
59.4	15:59:31	59.4	59.4
59.0	15:59:32	59.0	59.0
56.7	15:59:33	56.7	56.7
53.9	15:59:34	53.9	53.9
51.5	15:59:35	51.5	51.5
49.9	15:59:36	49.9	49.9
49.6	15:59:37	49.6	49.6
49.5	15:59:38	49.5	49.5
49.1	15:59:39	49.1	49.1
49.7	15:59:40	49.7	49.7
51.3	15:59:41	51.3	51.3
52.0	15:59:42	52.0	52.0
51.7	15:59:43	51.7	51.7
51.6	15:59:44	51.6	51.6
52.0	15:59:45	52.0	52.0
53.1	15:59:46	53.1	53.1
55.7	15:59:47	55.7	55.7
57.1	15:59:48	57.1	57.1
56.2	15:59:49	56.2	56.2
54.1	15:59:50	54.1	54.1
52.9	15:59:51	52.9	52.9
52.2	15:59:52	52.2	52.2

Site 2 - On East Side of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
56.6	16:02:35	56.6	56.6
56.1	16:02:36	56.1	56.1
56.9	16:02:37	56.9	56.9
56.9	16:02:38	56.9	56.9
56.3	16:02:39	56.3	56.3
57.6	16:02:40	57.6	57.6
58.7	16:02:41	58.7	58.7
58.8	16:02:42	58.8	58.8
57.9	16:02:43	57.9	57.9
57.4	16:02:44	57.4	57.4
56.6	16:02:45	56.6	56.6
55.9	16:02:46	55.9	55.9
55.7	16:02:47	55.7	55.7
55.4	16:02:48	55.4	55.4
55.2	16:02:49	55.2	55.2
55.9	16:02:50	55.9	55.9
56.8	16:02:51	56.8	56.8
56.9	16:02:52	56.9	56.9
56.5	16:02:53	56.5	56.5
56.2	16:02:54	56.2	56.2
56.4	16:02:55	56.4	56.4
56.6	16:02:56	56.6	56.6
57.1	16:02:57	57.1	57.1
57.0	16:02:58	57.0	57.0
55.9	16:02:59	55.9	55.9
54.4	16:03:00	54.4	54.4
53.7	16:03:01	53.7	53.7
54.8	16:03:02	54.8	54.8
55.2	16:03:03	55.2	55.2
55.0	16:03:04	55.0	55.0
55.8	16:03:05	55.8	55.8
60.8	16:03:06	60.8	60.8
67.3	16:03:07	67.3	67.3
71.1	16:03:08	71.1	71.1
70.3	16:03:09	70.3	70.3
67.3	16:03:10	67.3	67.3
63.7	16:03:11	63.7	63.7
60.3	16:03:12	60.3	60.3
57.5	16:03:13	57.5	57.5
55.3	16:03:14	55.3	55.3
54.0	16:03:15	54.0	54.0
52.5	16:03:16	52.5	52.5
51.5	16:03:17	51.5	51.5
51.9	16:03:18	51.9	51.9
52.3	16:03:19	52.3	52.3
52.1	16:03:20	52.1	52.1
51.7	16:03:21	51.7	51.7
51.2	16:03:22	51.2	51.2
51.5	16:03:23	51.5	51.5
53.0	16:03:24	53.0	53.0
56.0	16:03:25	56.0	56.0
65.9	16:03:26	65.9	65.9
73.0	16:03:27	73.0	73.0
72.8	16:03:28	72.8	72.8
70.0	16:03:29	70.0	70.0
66.6	16:03:30	66.6	66.6
62.8	16:03:31	62.8	62.8
59.1	16:03:32	59.1	59.1
55.9	16:03:33	55.9	55.9
53.7	16:03:34	53.7	53.7
52.1	16:03:35	52.1	52.1
50.7	16:03:36	50.7	50.7
50.3	16:03:37	50.3	50.3
50.0	16:03:38	50.0	50.0
49.9	16:03:39	49.9	49.9
50.0	16:03:40	50.0	50.0
49.9	16:03:41	49.9	49.9
50.4	16:03:42	50.4	50.4
49.7	16:03:43	49.7	49.7
49.2	16:03:44	49.2	49.2
49.3	16:03:45	49.3	49.3
49.7	16:03:46	49.7	49.7
49.3	16:03:47	49.3	49.3
49.3	16:03:48	49.3	49.3
49.2	16:03:49	49.2	49.2
48.9	16:03:50	48.9	48.9
49.0	16:03:51	49.0	49.0
48.9	16:03:52	48.9	48.9
48.7	16:03:53	48.7	48.7
49.4	16:03:54	49.4	49.4
49.4	16:03:55	49.4	49.4
49.8	16:03:56	49.8	49.8
49.6	16:03:57	49.6	49.6
49.9	16:03:58	49.9	49.9
50.0	16:03:59	50.0	50.0
50.1	16:04:00	50.1	50.1
50.4	16:04:01	50.4	50.4
50.6	16:04:02	50.6	50.6
50.2	16:04:03	50.2	50.2
50.5	16:04:04	50.5	50.5
50.8	16:04:05	50.8	50.8
51.0	16:04:06	51.0	51.0
50.9	16:04:07	50.9	50.9
50.6	16:04:08	50.6	50.6
50.3	16:04:09	50.3	50.3
50.2	16:04:10	50.2	50.2
50.3	16:04:11	50.3	50.3
50.5	16:04:12	50.5	50.5
50.8	16:04:13	50.8	50.8
50.7	16:04:14	50.7	50.7
50.3	16:04:15	50.3	50.3
50.0	16:04:16	50.0	50.0
49.8	16:04:17	49.8	49.8
50.4	16:04:18	50.4	50.4
50.8	16:04:19	50.8	50.8
51.2	16:04:20	51.2	51.2
51.6	16:04:21	51.6	51.6
52.0	16:04:22	52.0	52.0
51.7	16:04:23	51.7	51.7
51.3	16:04:24	51.3	51.3
50.3	16:04:25	50.3	50.3
49.6	16:04:26	49.6	49.6
48.7	16:04:27	48.7	48.7
48.0	16:04:28	48.0	48.0
47.2	16:04:29	47.2	47.2

APPENDIX C

RCNM Model Construction Noise Calculation Printouts

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 10/30/2021

Case Description: Tentative Tract Map No. 38236 Valley & Whitney - Site Preparation

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Home to South	Residential	47.4	47.4	42.7

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	880	0
Tractor	No	40	84		880	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Dozer	56.8	52.8	N/A	N/A	N/A	N/A
Tractor	59.1	55.1	N/A	N/A	N/A	N/A
Total	59	57	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Home to North	Residential	60.0	60.0	53.1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	970	0
Tractor	No	40	84		970	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Dozer	55.9	51.9	N/A	N/A	N/A	N/A
Tractor	58.2	54.3	N/A	N/A	N/A	N/A
Total	58	56	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 10/30/2021

Case Description: Tentative Tract Map No. 38236 Valley & Whitney - Site Preparation

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Church to East	Commercial	64.6	64.6	55.4

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	930	0
Tractor	No	40	84		930	0

Equipment		Calculated (dBA)		Results			
		*Lmax	Leq	Day		Noise Limits (dBA) Evening	
				Lmax	Leq	Lmax	Leq
Dozer		56.3	52.3	N/A	N/A	N/A	N/A
Tractor		58.6	54.6	N/A	N/A	N/A	N/A
	Total	59	57	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 10/30/2021

Case Description: Tentative Tract Map No. 38236 Valley & Whitney - Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Home to South	Residential	47.4	47.4	42.7

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		880	0
Tractor	No	40	84		880	0

Equipment		Calculated (dBA)		Results Noise Limits (dBA)			
		*Lmax	Leq	Day		Evening	
				Lmax	Leq	Lmax	Leq
Grader		60.1	56.1	N/A	N/A	N/A	N/A
Tractor		59.1	55.1	N/A	N/A	N/A	N/A
Total		60	59	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Home to North	Residential	60.0	60.0	53.1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		970	0
Tractor	No	40	84		970	0

Equipment		Calculated (dBA)		Results Noise Limits (dBA)			
		*Lmax	Leq	Day		Evening	
				Lmax	Leq	Lmax	Leq
Grader		59.2	55.3	N/A	N/A	N/A	N/A
Tractor		58.2	54.3	N/A	N/A	N/A	N/A
Total		59	58	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 10/30/2021

Case Description: Tentative Tract Map No. 38236 Valley & Whitney - Grading

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Church to East	Commercial	64.6	64.6	55.4

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Grader	No		40	85	930	0
Tractor	No		40	84	930	0

Equipment		Calculated (dBA)		Results			
		*Lmax	Leq	Day		Evening	
				Lmax	Leq	Lmax	Leq
Grader		59.6	55.6	N/A	N/A	N/A	N/A
Tractor		58.6	54.6	N/A	N/A	N/A	N/A
	Total	60	58	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 10/30/2021

Case Description: Tentative Tract Map No. 38236 Valley & Whitney - Building Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		Night			
		Daytime	Evening				
Home to South	Residential	47.4	47.4	42.7			
Description		Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Gradall		No	40		83.4	880	0
Tractor		No	40	84		880	0
Results							
Calculated (dBA)				Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Gradall		58.5	54.5	N/A	N/A	N/A	N/A
Tractor		59.1	55.1	N/A	N/A	N/A	N/A
Total		59	58	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		Night			
		Daytime	Evening				
Home to North	Residential	60.0	60.0	53.1			
Description		Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Gradall		No	40		83.4	970	0
Tractor		No	40	84		970	0
Results							
Calculated (dBA)				Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Gradall		57.6	53.7	N/A	N/A	N/A	N/A
Tractor		58.2	54.3	N/A	N/A	N/A	N/A
Total		58	57	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 10/30/2021

Case Description: Tentative Tract Map No. 38236 Valley & Whitney - Building Construction

---- Receptor #3 ----

		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Church to East	Commercial	64.6	64.6	55.4			
				Equipment Spec	Actual	Receptor	Estimated
Description		Impact Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Gradall		No	40		83.4	930	0
Tractor		No	40	84		930	0
				Results			
		Calculated (dBA)		Noise Limits (dBA)			
				Day	Evening		
		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Equipment							
Gradall		58.0	54.0	N/A	N/A	N/A	N/A
Tractor		58.6	54.6	N/A	N/A	N/A	N/A
	Total	59	57	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 10/30/2021

Case Description: Tentative Tract Map No. 38236 Valley & Whitney - Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		Night	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
		Daytime	Evening					
Home to South	Residential	47.4	47.4	47.4				
Description		Impact Device	Usage(%)	Day Lmax (dBA)	Leq (dBA)	Evening Lmax (dBA)	Leq (dBA)	
Paver		No	50	N/A	N/A	N/A	N/A	0
Roller		No	20	N/A	N/A	N/A	N/A	0
Total				N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		Night	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
		Daytime	Evening					
Home to North	Residential	60.0	60.0	53.1				
Description		Impact Device	Usage(%)	Day Lmax (dBA)	Leq (dBA)	Evening Lmax (dBA)	Leq (dBA)	
Paver		No	50	N/A	N/A	N/A	N/A	0
Roller		No	20	N/A	N/A	N/A	N/A	0
Total				N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 10/30/2021

Case Description: Tentative Tract Map No. 38236 Valley & Whitney - Paving

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Church to East	Commercial	64.6	64.6	55.4

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Paver	No	50		77.2	930	0
Roller	No	20		80	930	0

Equipment	Calculated (dBA)	Leq	Results		Noise Limits (dBA)		
			Day	Lmax	Leq	Evening	Lmax
Paver	*Lmax	48.8		N/A	N/A		N/A
Roller	51.8	47.6		N/A	N/A		N/A
Total	54.6	51		N/A	N/A		N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 10/30/2021

Case Description: Tentative Tract Map No. 38236 Valley & Whitney - Painting

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Home to South	Residential	47.4	47.4	42.7			
Description		Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)		No	40		77.7	880	0
				Results			
				Calculated (dBA)		Noise Limits (dBA)	
				Day Lmax	Leq	Evening Lmax	Leq
Equipment Compressor (air)		*Lmax	Leq				
		52.8	48.8	N/A	N/A	N/A	N/A
Total		53	49	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Home to North	Residential	60.0	60.0	53.1			
Description		Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)		No	40		77.7	970	0
				Results			
				Calculated (dBA)		Noise Limits (dBA)	
				Day Lmax	Leq	Evening Lmax	Leq
Equipment Compressor (air)		*Lmax	Leq				
		51.9	47.9	N/A	N/A	N/A	N/A
Total		52	48	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 10/30/2021

Case Description: Tentative Tract Map No. 38236 Valley & Whitney - Painting

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Church to East	Commercial	64.6	64.6	55.4

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	930	0

	Calculated (dBA)	Results		Noise Limits (dBA)		
		Day	Evening	Leq	Lmax	Leq
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	52.3	48.3	N/A	N/A	N/A	N/A
Total	52	48	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

APPENDIX D

FHWA Model Offsite Traffic Noise Calculation Printouts

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: TTM No. 38236 Valley & Whitney
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Alessandro W of Oliver)			Vehicle Mix 2 (Alessandro E of Moreno Bct			Vehicle Mix 3 (Oliver Street)		
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Automobiles	76.78%	3.94%	17.72%	98.44%	76.71%	3.93%	17.70%	98.35%	76.44%
Medium Trucks	0.88%	0.05%	0.20%	1.13%	1.07%	0.05%	0.25%	1.37%	0.78%
Heavy Trucks	0.34%	0.02%	0.08%	0.43%	0.22%	0.01%	0.05%	0.28%	0.78%

Road Name: Oliver Street		Segment: South of Alessandro Boulevard		Vehicle Speed: 40 MPH		Vehicle Mix: 3		Roadway Classification: Minor Arterial	
Average Daily Traffic: 3957 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3		Roadway Classification: Minor Arterial			
Noise Adjustments		Noise Adjustments		Noise Adjustments		Noise Adjustments		Noise Adjustments	
Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline	
Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline	
Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline	
Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline	
Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline	
Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline	
Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline	
Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline	
Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline		Noise Parameters at 60 Feet from Centerline	
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Road Name: Alessandro Boulevard		Segment: West of Oliver Street				Roadway Classification: Divided Arterial							
Average Daily Traffic: 6942 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 1									
		NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 59.73 ft)											
		Noise Adjustments		Unmitigated Noise Levels				Centerline Distance to Noise Contour (in feet)					
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	71.12	-3.95	-1.26	-1.20	64.71	62.77	55.89	57.65	65.02	65.16	70 dBA:	33	33
Medium Trucks	78.79	-23.35	-1.26	-1.20	52.98	31.64	24.76	26.52	33.89	34.04	65 dBA:	70	72
Heavy Trucks	83.02	-27.55	-1.26	-1.20	53.01	27.48	20.60	22.36	29.73	29.87	60 dBA:	151	155
Total:				65.26	62.78	55.90	57.66	65.03	65.17	55 dBA:	326	333	

Road Name: Alessandro Boulevard		Segment: East of Oliver Street				Roadway Classification: Divided Arterial							
Average Daily Traffic: 6942 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE		(Equiv. Lane Dist: 103.77 ft)				Centerline Distance to							
Noise Adjustments		Unmitigated Noise Levels				Noise Contour (in feet)							
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	67.36	-2.98	-4.86	-1.20	58.32	56.38	49.50	51.26	58.63	58.77	70 dBA:	19	20
Medium Trucks	76.31	-22.38	-4.86	-1.20	47.87	26.53	19.65	21.41	28.78	28.93	65 dBA:	41	42
Heavy Trucks	81.16	-26.58	-4.86	-1.20	48.52	22.99	16.11	17.87	25.24	25.38	60 dBA:	89	91
Total:				59.09	56.39	49.51	51.27	58.64	58.78	55 dBA:	192	197	

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: TTM No. 38236 Valley & Whitney
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Alessandro W of Oliver)				Vehicle Mix 2 (Alessandro E of Moreno Bct				Vehicle Mix 3 (Oliver Street)			
	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evening	Night	Daily
Automobiles	76.78%	3.94%	17.72%	98.44%	76.71%	3.93%	17.70%	98.35%	76.44%	3.92%	17.64%	98.00%
Medium Trucks	0.88%	0.05%	0.20%	1.13%	1.07%	0.05%	0.25%	1.37%	0.78%	0.04%	0.18%	1.00%
Heavy Trucks	0.34%	0.02%	0.08%	0.43%	0.22%	0.01%	0.05%	0.28%	0.78%	0.04%	0.18%	1.00%

Road Name: Oliver Street		Segment: South of Alessandro Boulevard		Vehicle Speed: 40 MPH		Vehicle Mix: 3		Roadway Classification: Minor Arterial						
Average Daily Traffic: 4438 Vehicles		NOISE PARAMETERS AT 60 FEET FROM CENTERLINE				(Equiv. Lane Dist: 57.24 ft)								
		Noise Adjustments			Unmitigated Noise Levels									
		REME	Ldn	CNEL	Ldn	CNEL								
Vehicle Type		Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night						
Automobiles		67.36	-4.94	-0.98	-1.20	60.23	58.28	51.40	53.16	60.53	60.67	70 dBA:	14	14
Medium Trucks		76.31	-24.85	-0.98	-1.20	49.27	27.40	20.52	22.28	29.66	29.80	65 dBA:	30	31
Heavy Trucks		81.16	-24.85	-0.98	-1.20	54.12	32.25	25.37	27.13	34.50	34.64	60 dBA:	65	67
		Total:				61.46	58.29	51.41	53.17	60.54	60.68	55 dBA:	140	144

Road Name: Alessandro Boulevard		Segment: West of Oliver Street				Roadway Classification: Divided Arterial					
Average Daily Traffic: 7904 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 1							
		NOISE PARAMETERS AT 70 FEET FROM CENTERLINE				(Equiv. Lane Dist: 59.73 ft)					
		Noise Adjustments			Unmitigated Noise Levels						
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	
Automobiles	71.12	-3.38	-1.26	-1.20	65.27	63.33	56.45	58.22	65.59	65.73	70 dBA: 36
Medium Trucks	78.79	-22.79	-1.26	-1.20	53.55	32.21	25.33	27.09	34.46	34.60	65 dBA: 77
Heavy Trucks	83.02	-26.98	-1.26	-1.20	53.58	28.04	21.16	22.92	30.29	30.43	60 dBA: 165
		Total:			65.82	63.34	56.46	58.22	65.59	65.73	55 dBA: 356
											364

Road Name: Alessandro Boulevard		Segment: East of Oliver Street				Roadway Classification: Divided Arterial								
Average Daily Traffic: 7423 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1										
		NOISE PARAMETERS AT 110 FEET FROM CENTERLINE				(Equiv. Lane Dist: 103.77 ft)								
		Noise Adjustments		Unmitigated Noise Levels										
Vehicle Type		REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles		67.36	-2.69	-4.86	-1.20	58.61	56.67	49.79	51.55	58.92	59.07	70 dBA:	20	21
Medium Trucks		76.31	-22.09	-4.86	-1.20	48.16	26.82	19.94	21.70	29.08	29.22	65 dBA:	43	44
Heavy Trucks		81.16	-26.29	-4.86	-1.20	48.81	23.28	16.40	18.16	25.53	25.67	60 dBA:	93	95
		Total:				59.39	56.68	49.80	51.56	58.93	59.07	55 dBA:	201	206

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2040 WITHOUT PROJECT CONDITIONS

Project: TTM No. 38236 Valley & Whitney
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Alessandro W of Oliver)			Vehicle Mix 2 (Alessandro E of Moreno Bct			Vehicle Mix 3 (Oliver Street)		
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Automobiles	76.78%	3.94%	17.72%	98.44%	76.71%	3.93%	76.44%	3.92%	17.64%
Medium Trucks	0.88%	0.05%	0.20%	1.13%	1.07%	0.05%	0.78%	0.04%	0.18%
Heavy Trucks	0.34%	0.02%	0.08%	0.43%	0.22%	0.01%	0.78%	0.04%	0.18%

Road Name: Oliver Street		Segment: South of Alessandro Boulevard		Vehicle Speed: 40 MPH		Vehicle Mix: 3		Roadway Classification: Minor Arterial	
Average Daily Traffic: 4409 Vehicles		NOISE PARAMETERS AT 60 FEET FROM CENTERLINE		(Equiv. Lane Dist: 57.24 ft)		Centerline Distance to Noise Contour (in feet)			
		Noise Adjustments		Unmitigated Noise Levels					
Vehicle Type		RETEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn CNEL
Automobiles		67.36	-4.97	-1.20	60.21	58.25	51.37	53.13	60.50 60.64
Medium Trucks		76.31	-24.88	-1.20	49.25	27.38	20.50	22.26	29.63 29.77
Heavy Trucks		81.16	-24.88	-1.20	54.09	32.22	25.34	27.10	34.47 34.61
Total:						61.43	58.26	53.14	60.51 60.65

Road Name: Alessandro Boulevard		Segment: West of Oliver Street		Vehicle Speed: 50 MPH		Vehicle Mix: 1		Roadway Classification: Divided Arterial	
Average Daily Traffic: 10694 Vehicles		NOISE PARAMETERS AT 70 FEET FROM CENTERLINE		(Equiv. Lane Dist: 59.73 ft)		Centerline Distance to Noise Contour (in feet)			
		Noise Adjustments		Unmitigated Noise Levels					
Vehicle Type		RETEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn CNEL
Automobiles		71.12	-2.07	-1.26	66.59	64.65	57.77	59.53	66.90 67.04
Medium Trucks		78.79	-21.47	-1.26	54.86	33.52	26.64	28.40	35.77 35.91
Heavy Trucks		83.02	-25.67	-1.26	54.89	29.35	22.47	24.23	31.61 31.75
Total:						67.14	64.65	57.77	66.90 67.04

Road Name: Alessandro Boulevard		Segment: East of Oliver Street		Vehicle Speed: 40 MPH		Vehicle Mix: 1		Roadway Classification: Divided Arterial	
Average Daily Traffic: 10694 Vehicles		NOISE PARAMETERS AT 110 FEET FROM CENTERLINE		(Equiv. Lane Dist: 103.77 ft)		Centerline Distance to Noise Contour (in feet)			
		Noise Adjustments		Unmitigated Noise Levels					
Vehicle Type		RETEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn CNEL
Automobiles		67.36	-1.10	-4.86	60.20	58.26	51.38	53.14	60.51 60.65
Medium Trucks		76.31	-20.50	-4.86	49.75	28.41	21.53	23.29	30.66 30.80
Heavy Trucks		81.16	-24.70	-4.86	50.40	24.86	17.98	19.74	27.12 27.26
Total:						60.97	58.26	53.15	60.52 60.66

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: YEAR 2040 WITH PROJECT CONDITIONS

Project: TTM No. 38236 Valley & Whitney
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Alessandro W of Oliver)				Vehicle Mix 2 (Alessandro E of Moreno Bct				Vehicle Mix 3 (Oliver Street)			
	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evening	Night	Daily
Automobiles	76.78%	3.94%	17.72%	98.44%	76.71%	3.93%	17.70%	98.35%	76.44%	3.92%	17.64%	98.00%
Medium Trucks	0.88%	0.05%	0.20%	1.13%	1.07%	0.05%	0.25%	1.37%	0.78%	0.04%	0.18%	1.00%
Heavy Trucks	0.34%	0.02%	0.08%	0.43%	0.22%	0.01%	0.05%	0.28%	0.78%	0.04%	0.18%	1.00%

Road Name: Oliver Street

Segment: South of Alessandro Boulevard

Average Daily Traffic: 4890 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 3		Roadway Classification: Minor Arterial							
		NOISE PARAMETERS AT 60 FEET FROM CENTERLINE (Equiv. Lane Dist: 57.24 ft)											
		Noise Adjustments		Unmitigated Noise Levels				Centerline Distance to Noise Contour (in feet)					
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	67.36	-4.52	-0.98	-1.20	60.66	58.70	51.82	53.58	60.95	61.09	70 dBA:	15	15
Medium Trucks	76.31	-24.43	-0.98	-1.20	49.70	27.83	20.95	22.71	30.08	30.22	65 dBA:	32	33
Heavy Trucks	81.16	-24.43	-0.98	-1.20	54.54	32.67	25.79	27.55	34.92	35.06	60 dBA:	70	71
Total:				61.88	58.71	51.83	53.59	60.96	61.10	55 dBA:	150	153	

Road Name: Alessandro Boulevard

Segment: West of Oliver Street

Average Daily Traffic: 11656 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 1		Roadway Classification: Divided Arterial							
		NOISE PARAMETERS AT 70 FEET FROM CENTERLINE (Equiv. Lane Dist: 59.73 ft)				Centerline Distance to							
		Noise Adjustments		Unmitigated Noise Levels				Noise Contour (in feet)					
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	71.12	-1.70	-1.26	-1.20	66.96	65.02	58.14	59.90	67.27	67.41	70 dBA:	46	47
Medium Trucks	78.79	-21.10	-1.26	-1.20	55.23	33.89	27.01	28.77	36.14	36.29	65 dBA:	99	101
Heavy Trucks	83.02	-25.29	-1.26	-1.20	55.26	29.73	22.85	24.61	31.98	32.12	60 dBA:	214	219
Total:				67.51	65.03	58.15	59.91	67.28	67.42	55 dBA:	461	471	

Road Name: Alessandro Boulevard

Segment: East of Oliver Street

Average Daily Traffic: 11175 Vehicles			Vehicle Speed: 40 MPH			Vehicle Mix: 1			Roadway Classification: Divided Arterial		
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE (Equiv. Lane Dist: 103.77 ft)											
Noise Adjustments					Unmitigated Noise Levels						
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldh	CNEL	Centerline Distance to Noise Contour (in feet)	
Automobiles	67.36	-0.91	-4.86	-1.20	60.39	58.45	51.57	53.33	60.70	60.84	70 dBA: 26
Medium Trucks	76.31	-20.31	-4.86	-1.20	49.94	28.60	21.72	23.48	30.85	30.99	65 dBA: 57
Heavy Trucks	81.16	-24.51	-4.86	-1.20	50.59	25.05	18.18	19.94	27.31	27.45	60 dBA: 123
Total:				61.16	58.46	51.58	53.34	60.71	60.85	55 dBA: 264	270

APPENDIX E

FHWA Model Onsite Traffic Noise Calculation Printouts

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Alessandro Boulevard
Lot Number: 1

Project Name: TTM No. 38236
Job Number: 21135

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	11,656 vehicles		Day	Evening	Night	Daily
Peak Hour Volume:	1,166 vehicles	Autos:	76.8%	3.9%	17.7%	98.4%
Vehicle Speed:	50 mph	Medium Trucks:	0.9%	0.1%	0.2%	3.4%
Near/Far Lane Distance:	73 feet	Heavy Trucks:	0.3%	0.0%	0.1%	1.2%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,583.2 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,585.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	65 feet	Autos:		0 feet		
C.L. Dist. To Observer (Backyard):	75 feet	Med Trucks:		2.3 feet		
Barrier Dist. To Observer (Backyard):	10 feet	Hvy Trucks:		8 feet		
C.L. Dist. To Observer (Structure):	68 feet	Pad Elevation: 1,583.2 feet				
Barrier Dist. To Observer (Structure):	3 feet	Observer Heights Above Pad Elevation				
Road Grade:	0.80 %	Exterior:		5 feet		
Left View:	-90 degrees	First Floor:		5.5 feet		
Right View:	90 degrees	Second Floor:		14 feet		

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation		
						Exterior	1st Flr	2nd Flr
Autos:	71.12	-1.70	-1.87	-1.20	0.00	-6.94	-6.32	0
Med Trucks:	78.79	-16.35	-1.87	-1.20	0.00	-6.56	-6.24	0
Hvy Trucks:	83.02	-20.80	-1.87	-1.20	0.00	-5.1	-5.4	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.4	64.4	57.5	59.3	66.7	66.8
Med Trucks:	59.4	38.0	31.6	32.8	40.2	40.4
Hvy Trucks:	59.1	33.7	27.4	28.6	36.0	36.1
Traffic Noise:	67.8	64.4	57.5	59.3	66.7	66.8

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.4	57.5	50.6	52.4	59.7	59.9
Med Trucks:	52.8	31.5	25.0	26.3	33.7	33.8
Hvy Trucks:	54.0	28.6	22.3	23.5	30.9	31.0
Traffic Noise:	61.2	57.5	50.6	52.4	59.7	59.9

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.9	58.9	52.1	53.8	61.2	61.3
Med Trucks:	54.0	32.6	26.2	27.5	34.9	35.0
Hvy Trucks:	54.6	29.1	22.8	24.1	31.4	31.6
Traffic Noise:	62.5	59.0	52.1	53.8	61.2	61.4

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.1	65.1	58.3	60.0	67.4	67.5
Med Trucks:	60.1	38.7	32.3	33.6	41.0	41.1
Hvy Trucks:	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Traffic Noise:	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Alessandro Boulevard
Lot Number: 30

Project Name: TTM No. 38236
Job Number: 21135

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	11,656 vehicles		Day	Evening	Night	Daily
Peak Hour Volume:	1,166 vehicles	Autos:	76.8%	3.9%	17.7%	98.4%
Vehicle Speed:	50 mph	Medium Trucks:	0.9%	0.1%	0.2%	3.4%
Near/Far Lane Distance:	73 feet	Heavy Trucks:	0.3%	0.0%	0.1%	1.2%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,581.0 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,583.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	65 feet	Autos:		0 feet		
C.L. Dist. To Observer (Backyard):	75 feet	Med Trucks:		2.3 feet		
Barrier Dist. To Observer (Backyard):	10 feet	Hvy Trucks:		8 feet		
C.L. Dist. To Observer (Structure):	84 feet	Pad Elevation: 1,581.0 feet				
Barrier Dist. To Observer (Structure):	19 feet	Observer Heights Above Pad Elevation				
Road Grade:	0.80 %	Exterior:		5 feet		
Left View:	-90 degrees	First Floor:		5.5 feet		
Right View:	90 degrees	Second Floor:		14 feet		

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation		
						Exterior	1st Flr	2nd Flr
Autos:	71.12	-1.70	-1.87	-1.20	0.00	-6.94	-6.08	-0.101
Med Trucks:	78.79	-16.35	-1.87	-1.20	0.00	-6.56	-5.5	0
Hvy Trucks:	83.02	-20.80	-1.87	-1.20	0.00	-5.1	-4.6	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.4	64.4	57.5	59.3	66.7	66.8
Med Trucks:	59.4	38.0	31.6	32.8	40.2	40.4
Hvy Trucks:	59.1	33.7	27.4	28.6	36.0	36.1
Traffic Noise:	67.8	64.4	57.5	59.3	66.7	66.8

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.4	57.5	50.6	52.4	59.7	59.9
Med Trucks:	52.8	31.5	25.0	26.3	33.7	33.8
Hvy Trucks:	54.0	28.6	22.3	23.5	30.9	31.0
Traffic Noise:	61.2	57.5	50.6	52.4	59.7	59.9

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.3	57.4	50.5	52.3	59.6	59.8
Med Trucks:	52.9	31.6	25.2	26.4	33.8	34.0
Hvy Trucks:	53.6	28.1	21.8	23.1	30.5	30.6
Traffic Noise:	61.1	57.4	50.5	52.3	59.7	59.8

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.2	63.3	56.4	58.2	65.5	65.7
Med Trucks:	58.4	37.0	30.6	31.8	39.2	39.4
Hvy Trucks:	58.1	32.7	26.4	27.6	35.0	35.1
Traffic Noise:	66.7	63.3	56.4	58.2	65.6	65.7

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Alessandro Boulevard
Lot Number: 59

Project Name: TTM No. 38236
Job Number: 21135

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	11,656 vehicles		Day	Evening	Night	Daily
Peak Hour Volume:	1,166 vehicles	Autos:	76.8%	3.9%	17.7%	98.4%
Vehicle Speed:	50 mph	Medium Trucks:	0.9%	0.1%	0.2%	3.4%
Near/Far Lane Distance:	73 feet	Heavy Trucks:	0.3%	0.0%	0.1%	1.2%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,576.7 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,581.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	65 feet	Autos:		0 feet		
C.L. Dist. To Observer (Backyard):	75 feet	Med Trucks:		2.3 feet		
Barrier Dist. To Observer (Backyard):	10 feet	Hvy Trucks:		8 feet		
C.L. Dist. To Observer (Structure):	75 feet	Pad Elevation: 1,576.7 feet				
Barrier Dist. To Observer (Structure):	10 feet	Observer Heights Above Pad Elevation				
Road Grade:	0.80 %	Exterior:		5 feet		
Left View:	-90 degrees	First Floor:		5.5 feet		
Right View:	90 degrees	Second Floor:		14 feet		

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation	1st Flr	2nd Flr
Autos:	71.12	-1.70	-1.86	-1.20	0.00	-6.24	-5.4	0
Med Trucks:	78.79	-16.35	-1.86	-1.20	0.00	-5.8	-5.1	0
Hvy Trucks:	83.02	-20.80	-1.86	-1.20	0.00	-4.9	-4.6	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.4	64.4	57.5	59.3	66.7	66.8
Med Trucks:	59.4	38.0	31.6	32.8	40.2	40.4
Hvy Trucks:	59.2	33.7	27.4	28.6	36.0	36.2
Traffic Noise:	67.8	64.4	57.6	59.3	66.7	66.8

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.1	58.2	51.3	53.1	60.4	60.6
Med Trucks:	53.6	32.2	25.8	27.0	34.4	34.6
Hvy Trucks:	54.3	28.8	22.5	23.7	31.1	31.3
Traffic Noise:	61.8	58.2	51.3	53.1	60.4	60.6

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.0	59.0	52.1	53.9	61.3	61.4
Med Trucks:	54.3	32.9	26.5	27.7	35.1	35.3
Hvy Trucks:	54.6	29.1	22.8	24.0	31.4	31.6
Traffic Noise:	62.6	59.0	52.2	53.9	61.3	61.4

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.3	57.5	59.2	66.6	66.7
Med Trucks:	59.3	38.0	31.5	32.8	40.2	40.3
Hvy Trucks:	59.1	33.6	27.3	28.6	35.9	36.1
Traffic Noise:	67.7	64.4	57.5	59.2	66.6	66.7

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Alessandro Boulevard
Lot Number: 83

Project Name: TTM No. 38236
Job Number: 21135

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	11,656 vehicles		Day	Evening	Night	Daily
Peak Hour Volume:	1,166 vehicles	Autos:	76.8%	3.9%	17.7%	98.4%
Vehicle Speed:	50 mph	Medium Trucks:	0.9%	0.1%	0.2%	3.4%
Near/Far Lane Distance:	73 feet	Heavy Trucks:	0.3%	0.0%	0.1%	1.2%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,577.0 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,579.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	65 feet	Autos:		0 feet		
C.L. Dist. To Observer (Backyard):	75 feet	Med Trucks:		2.3 feet		
Barrier Dist. To Observer (Backyard):	10 feet	Hvy Trucks:		8 feet		
C.L. Dist. To Observer (Structure):	80 feet	Pad Elevation: 1,577.0 feet				
Barrier Dist. To Observer (Structure):	15 feet	Observer Heights Above Pad Elevation				
Road Grade:	0.80 %	Exterior:		5 feet		
Left View:	-90 degrees	First Floor:		5.5 feet		
Right View:	90 degrees	Second Floor:		14 feet		

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation	1st Flr	2nd Flr
Autos:	71.12	-1.70	-1.87	-1.20	0.00	-6.94	-6	0
Med Trucks:	78.79	-16.35	-1.87	-1.20	0.00	-6.56	-5.5	0
Hvy Trucks:	83.02	-20.80	-1.87	-1.20	0.00	-5.1	-4.8	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.4	64.4	57.5	59.3	66.7	66.8
Med Trucks:	59.4	38.0	31.6	32.8	40.2	40.4
Hvy Trucks:	59.1	33.7	27.4	28.6	36.0	36.1
Traffic Noise:	67.8	64.4	57.5	59.3	66.7	66.8

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.4	57.5	50.6	52.4	59.7	59.9
Med Trucks:	52.8	31.5	25.0	26.3	33.7	33.8
Hvy Trucks:	54.0	28.6	22.3	23.5	30.9	31.0
Traffic Noise:	61.2	57.5	50.6	52.4	59.7	59.9

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.8	57.9	51.0	52.8	60.1	60.3
Med Trucks:	53.3	32.0	25.5	26.8	34.2	34.4
Hvy Trucks:	53.8	28.3	22.0	23.3	30.6	30.8
Traffic Noise:	61.5	57.9	51.0	52.8	60.1	60.3

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	63.8	56.9	58.7	66.0	66.2
Med Trucks:	58.7	37.4	31.0	32.2	39.6	39.8
Hvy Trucks:	58.5	33.0	26.8	28.0	35.4	35.5
Traffic Noise:	67.2	63.8	56.9	58.7	66.0	66.2

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Alessandro Boulevard
Lot Number: 109

Project Name: TTM No. 38236
Job Number: 21135

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	11,656 vehicles		Day	Evening	Night	Daily
Peak Hour Volume:	1,166 vehicles	Autos:	76.8%	3.9%	17.7%	98.4%
Vehicle Speed:	50 mph	Medium Trucks:	0.9%	0.1%	0.2%	3.4%
Near/Far Lane Distance:	73 feet	Heavy Trucks:	0.3%	0.0%	0.1%	1.2%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,575.4 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,577.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	65 feet	Autos:		0 feet		
C.L. Dist. To Observer (Backyard):	75 feet	Med Trucks:		2.3 feet		
Barrier Dist. To Observer (Backyard):	10 feet	Hvy Trucks:		8 feet		
C.L. Dist. To Observer (Structure):	80 feet	Pad Elevation: 1,575.4 feet				
Barrier Dist. To Observer (Structure):	15 feet	Observer Heights Above Pad Elevation				
Road Grade:	0.80 %	Exterior:		5 feet		
Left View:	-90 degrees	First Floor:		5.5 feet		
Right View:	90 degrees	Second Floor:		14 feet		

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation	1st Flr	2nd Flr
Autos:	71.12	-1.70	-1.87	-1.20	0.00	-7.01	-6.16	0
Med Trucks:	78.79	-16.35	-1.87	-1.20	0.00	-6.64	-5.6	0
Hvy Trucks:	83.02	-20.80	-1.87	-1.20	0.00	-5.2	-4.9	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.4	57.5	59.3	66.7	66.8
Med Trucks:	59.4	38.0	31.6	32.8	40.2	40.4
Hvy Trucks:	59.1	33.7	27.4	28.6	36.0	36.1
Traffic Noise:	67.8	64.4	57.5	59.3	66.7	66.8

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.3	57.4	50.5	52.3	59.7	59.8
Med Trucks:	52.7	31.4	24.9	26.2	33.6	33.8
Hvy Trucks:	53.9	28.5	22.2	23.4	30.8	30.9
Traffic Noise:	61.1	57.4	50.5	52.3	59.7	59.8

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.6	57.7	50.8	52.6	60.0	60.1
Med Trucks:	53.2	31.9	25.4	26.7	34.1	34.2
Hvy Trucks:	53.7	28.2	21.9	23.2	30.5	30.7
Traffic Noise:	61.4	57.7	50.8	52.6	60.0	60.1

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	63.8	56.9	58.7	66.0	66.2
Med Trucks:	58.7	37.4	30.9	32.2	39.6	39.8
Hvy Trucks:	58.5	33.0	26.7	28.0	35.4	35.5
Traffic Noise:	67.1	63.8	56.9	58.7	66.0	66.2

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Alessandro Boulevard
Lot Number: 137

Project Name: TTM No. 38236
Job Number: 21135

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	11,656 vehicles		Day	Evening	Night	Daily
Peak Hour Volume:	1,166 vehicles	Autos:	76.8%	3.9%	17.7%	98.4%
Vehicle Speed:	50 mph	Medium Trucks:	0.9%	0.1%	0.2%	3.4%
Near/Far Lane Distance:	73 feet	Heavy Trucks:	0.3%	0.0%	0.1%	1.2%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,573.5 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,575.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	65 feet	Autos:		0 feet		
C.L. Dist. To Observer (Backyard):	75 feet	Med Trucks:		2.3 feet		
Barrier Dist. To Observer (Backyard):	10 feet	Hvy Trucks:		8 feet		
C.L. Dist. To Observer (Structure):	80 feet	Pad Elevation: 1,573.5 feet				
Barrier Dist. To Observer (Structure):	15 feet	Observer Heights Above Pad Elevation				
Road Grade:	0.80 %	Exterior:		5 feet		
Left View:	-90 degrees	First Floor:		5.5 feet		
Right View:	90 degrees	Second Floor:		14 feet		

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation	1st Flr	2nd Flr
Autos:	71.12	-1.70	-1.87	-1.20	0.00	-7.08	-6.16	0
Med Trucks:	78.79	-16.35	-1.87	-1.20	0.00	-6.72	-5.6	0
Hvy Trucks:	83.02	-20.80	-1.87	-1.20	0.00	-5.2	-4.9	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.4	57.5	59.3	66.7	66.8
Med Trucks:	59.4	38.0	31.6	32.8	40.2	40.4
Hvy Trucks:	59.1	33.7	27.4	28.6	36.0	36.1
Traffic Noise:	67.8	64.4	57.5	59.3	66.7	66.8

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.3	57.3	50.5	52.2	59.6	59.7
Med Trucks:	52.6	31.3	24.9	26.1	33.5	33.7
Hvy Trucks:	53.9	28.5	22.2	23.4	30.8	30.9
Traffic Noise:	61.1	57.3	50.5	52.2	59.6	59.7

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.6	57.7	50.8	52.6	60.0	60.1
Med Trucks:	53.2	31.9	25.4	26.7	34.1	34.2
Hvy Trucks:	53.7	28.2	21.9	23.2	30.5	30.7
Traffic Noise:	61.4	57.7	50.8	52.6	60.0	60.1

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	63.8	56.9	58.7	66.0	66.2
Med Trucks:	58.7	37.4	30.9	32.2	39.6	39.8
Hvy Trucks:	58.5	33.0	26.7	28.0	35.3	35.5
Traffic Noise:	67.1	63.8	56.9	58.7	66.0	66.2

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Oliver Street
Lot Number: 164

Project Name: TTM No. 38236
Job Number: 21135

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	5,041 vehicles		Day	Evening	Night	Daily
Peak Hour Volume:	504 vehicles	Autos:	76.4%	3.9%	17.6%	98.0%
Vehicle Speed:	40 mph	Medium Trucks:	0.8%	0.0%	0.2%	1.0%
Near/Far Lane Distance:	36 feet	Heavy Trucks:	0.8%	0.0%	0.2%	1.0%
Site Data		Elevations				
Barrier Height:	4 feet	Barrier Base Elevation: 1,572.6 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,569.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	50 feet	Autos:		0 feet		
C.L. Dist. To Observer (Backyard):	60 feet	Med Trucks:		2.3 feet		
Barrier Dist. To Observer (Backyard):	10 feet	Hvy Trucks:		8 feet		
C.L. Dist. To Observer (Structure):	61 feet	Pad Elevation: 1,572.6 feet				
Barrier Dist. To Observer (Structure):	11 feet	Observer Heights Above Pad Elevation				
Road Grade:	2.70 %	Exterior:		5 feet		
Left View:	-90 degrees	First Floor:		5.5 feet		
Right View:	90 degrees	Second Floor:		14 feet		

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation		
						Exterior	1st Flr	2nd Flr
Autos:	67.36	-4.39	-1.06	-1.20	1.00	-5.2	-4.9	0
Med Trucks:	76.31	-24.30	-1.06	-1.20	1.00	-4.9	-4.8	0
Hvy Trucks:	81.16	-24.30	-1.06	-1.20	1.00	-3.1	-1.22	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.6	59.6	52.7	54.5	61.8	62.0
Med Trucks:	50.8	28.9	22.0	23.8	31.1	31.3
Hvy Trucks:	55.6	33.7	26.9	28.6	36.0	36.1
Traffic Noise:	62.8	59.6	52.7	54.5	61.9	62.0

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.5	54.6	47.7	49.4	56.8	56.9
Med Trucks:	45.9	24.0	17.1	18.9	26.2	26.4
Hvy Trucks:	52.5	30.6	23.8	25.5	32.9	33.0
Traffic Noise:	58.2	54.6	47.7	49.5	56.8	57.0

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.7	54.7	47.9	49.6	57.0	57.1
Med Trucks:	45.8	24.0	17.1	18.8	26.2	26.4
Hvy Trucks:	54.3	32.4	25.5	27.3	34.6	34.8
Traffic Noise:	58.9	54.8	47.9	49.6	57.0	57.2

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.4	59.4	52.5	54.3	61.7	61.8
Med Trucks:	50.4	28.5	21.7	23.4	30.8	30.9
Hvy Trucks:	55.3	33.4	26.5	28.3	35.6	35.8
Traffic Noise:	62.6	59.4	52.5	54.3	61.7	61.8

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Oliver Street
Lot Number: 160

Project Name: TTM No. 38236
Job Number: 21135

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	5,041 vehicles		Day	Evening	Night	Daily
Peak Hour Volume:	504 vehicles	Autos:	76.4%	3.9%	17.6%	98.0%
Vehicle Speed:	40 mph	Medium Trucks:	0.8%	0.0%	0.2%	1.0%
Near/Far Lane Distance:	36 feet	Heavy Trucks:	0.8%	0.0%	0.2%	1.0%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,570.0 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,566.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	50 feet	Autos:		0 feet		
C.L. Dist. To Observer (Backyard):	60 feet	Med Trucks:		2.3 feet		
Barrier Dist. To Observer (Backyard):	10 feet	Hvy Trucks:		8 feet		
C.L. Dist. To Observer (Structure):	71 feet	Pad Elevation: 1,570.0 feet				
Barrier Dist. To Observer (Structure):	21 feet	Observer Heights Above Pad Elevation				
Road Grade:	2.70 %	Exterior:		5 feet		
Left View:	-90 degrees	First Floor:		5.5 feet		
Right View:	90 degrees	Second Floor:		14 feet		

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation	1st Flr	2nd Flr
Autos:	67.36	-4.39	-1.06	-1.20	1.00	-9.38	-9.34	-0.46
Med Trucks:	76.31	-24.30	-1.06	-1.20	1.00	-9.18	-8.85	-0.195
Hvy Trucks:	81.16	-24.30	-1.06	-1.20	1.00	-6.8	-5.7	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.5	59.6	52.7	54.5	61.8	62.0
Med Trucks:	50.7	28.9	22.0	23.8	31.1	31.3
Hvy Trucks:	55.6	33.7	26.8	28.6	36.0	36.1
Traffic Noise:	62.8	59.6	52.7	54.5	61.8	62.0

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	52.3	50.4	43.5	45.3	52.6	52.8
Med Trucks:	41.6	19.7	12.8	14.6	21.9	22.1
Hvy Trucks:	48.8	26.9	20.0	21.8	29.2	29.3
Traffic Noise:	54.2	50.4	43.5	45.3	52.6	52.8

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	51.2	49.2	42.4	44.1	51.5	51.6
Med Trucks:	40.7	18.9	12.0	13.7	21.1	21.3
Hvy Trucks:	48.7	26.9	20.0	21.7	29.1	29.2
Traffic Noise:	53.4	49.3	42.4	44.1	51.5	51.7

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.9	58.0	51.1	52.8	60.2	60.3
Med Trucks:	49.2	27.3	20.5	22.2	29.6	29.7
Hvy Trucks:	54.3	32.4	25.5	27.3	34.6	34.8
Traffic Noise:	61.2	58.0	51.1	52.9	60.2	60.4

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Oliver Street
Lot Number: 156

Project Name: TTM No. 38236
Job Number: 21135

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	5,041 vehicles		Day	Evening	Night	Daily
Peak Hour Volume:	504 vehicles	Autos:	76.4%	3.9%	17.6%	98.0%
Vehicle Speed:	40 mph	Medium Trucks:	0.8%	0.0%	0.2%	1.0%
Near/Far Lane Distance:	36 feet	Heavy Trucks:	0.8%	0.0%	0.2%	1.0%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,568.0 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,564.5 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	50 feet	Autos:		0 feet		
C.L. Dist. To Observer (Backyard):	60 feet	Med Trucks:		2.3 feet		
Barrier Dist. To Observer (Backyard):	10 feet	Hvy Trucks:		8 feet		
C.L. Dist. To Observer (Structure):	64 feet	Pad Elevation: 1,568.0 feet				
Barrier Dist. To Observer (Structure):	14 feet	Observer Heights Above Pad Elevation				
Road Grade:	2.00 %	Exterior:		5 feet		
Left View:	-90 degrees	First Floor:		5.5 feet		
Right View:	90 degrees	Second Floor:		14 feet		

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation	1st Flr	2nd Flr
Autos:	67.36	-4.39	-1.05	-1.20	0.00	-9.21	-8.65	-0.145
Med Trucks:	76.31	-24.30	-1.05	-1.20	0.00	-9.03	-8.15	0
Hvy Trucks:	81.16	-24.30	-1.05	-1.20	0.00	-6.56	-5.5	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.6	58.6	51.7	53.5	60.8	61.0
Med Trucks:	49.8	27.9	21.0	22.8	30.1	30.3
Hvy Trucks:	54.6	32.7	25.9	27.6	35.0	35.1
Traffic Noise:	61.8	58.6	51.7	53.5	60.9	61.0

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	51.5	49.5	42.7	44.4	51.8	51.9
Med Trucks:	40.7	18.9	12.0	13.7	21.1	21.2
Hvy Trucks:	48.0	26.2	19.3	21.1	28.4	28.6
Traffic Noise:	53.4	49.6	42.7	44.5	51.8	52.0

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	51.6	49.7	42.8	44.5	51.9	52.0
Med Trucks:	41.1	19.3	12.4	14.2	21.5	21.7
Hvy Trucks:	48.6	26.8	19.9	21.7	29.0	29.2
Traffic Noise:	53.6	49.7	42.8	44.6	51.9	52.1

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.9	58.0	51.1	52.8	60.2	60.3
Med Trucks:	49.1	27.2	20.3	22.1	29.5	29.6
Hvy Trucks:	53.9	32.1	25.2	27.0	34.3	34.5
Traffic Noise:	61.2	58.0	51.1	52.9	60.2	60.4

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Oliver Street
Lot Number: 152

Project Name: TTM No. 38236
Job Number: 21135

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	5,041 vehicles		Day	Evening	Night	Daily
Peak Hour Volume:	504 vehicles	Autos:	76.4%	3.9%	17.6%	98.0%
Vehicle Speed:	40 mph	Medium Trucks:	0.8%	0.0%	0.2%	1.0%
Near/Far Lane Distance:	36 feet	Heavy Trucks:	0.8%	0.0%	0.2%	1.0%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,566.0 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,562.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	50 feet	Autos:		0 feet		
C.L. Dist. To Observer (Backyard):	60 feet	Med Trucks:		2.3 feet		
Barrier Dist. To Observer (Backyard):	10 feet	Hvy Trucks:		8 feet		
C.L. Dist. To Observer (Structure):	70 feet	Pad Elevation: 1,566.0 feet				
Barrier Dist. To Observer (Structure):	20 feet	Observer Heights Above Pad Elevation				
Road Grade:	2.00 %	Exterior:		5 feet		
Left View:	-90 degrees	First Floor:		5.5 feet		
Right View:	90 degrees	Second Floor:		14 feet		

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation		
						Exterior	1st Flr	2nd Flr
Autos:	67.36	-4.39	-1.06	-1.20	0.00	-9.38	-9.27	-0.4
Med Trucks:	76.31	-24.30	-1.06	-1.20	0.00	-9.18	-8.8	-0.182
Hvy Trucks:	81.16	-24.30	-1.06	-1.20	0.00	-6.8	-5.7	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.5	58.6	51.7	53.5	60.8	61.0
Med Trucks:	49.7	27.9	21.0	22.8	30.1	30.3
Hvy Trucks:	54.6	32.7	25.8	27.6	35.0	35.1
Traffic Noise:	61.8	58.6	51.7	53.5	60.8	61.0

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	51.3	49.4	42.5	44.3	51.6	51.8
Med Trucks:	40.6	18.7	11.8	13.6	20.9	21.1
Hvy Trucks:	47.8	25.9	19.0	20.8	28.2	28.3
Traffic Noise:	53.2	49.4	42.5	44.3	51.6	51.8

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	50.4	48.4	41.5	43.3	50.7	50.8
Med Trucks:	39.9	18.0	11.1	12.9	20.3	20.4
Hvy Trucks:	47.8	26.0	19.1	20.8	28.2	28.3
Traffic Noise:	52.5	48.4	41.6	43.3	50.7	50.8

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.1	57.1	50.2	52.0	59.4	59.5
Med Trucks:	48.3	26.5	19.6	21.3	28.7	28.8
Hvy Trucks:	53.4	31.5	24.6	26.4	33.7	33.9
Traffic Noise:	60.4	57.1	50.2	52.0	59.4	59.5

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Oliver Street
Lot Number: 185

Project Name: TTM No. 38236
Job Number: 21135

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	5,041 vehicles		Day	Evening	Night	Daily
Peak Hour Volume:	504 vehicles	Autos:	76.4%	3.9%	17.6%	98.0%
Vehicle Speed:	40 mph	Medium Trucks:	0.8%	0.0%	0.2%	1.0%
Near/Far Lane Distance:	36 feet	Heavy Trucks:	0.8%	0.0%	0.2%	1.0%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,561.5 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,557.5 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	50 feet	Autos:		0 feet		
C.L. Dist. To Observer (Backyard):	60 feet	Med Trucks:		2.3 feet		
Barrier Dist. To Observer (Backyard):	10 feet	Hvy Trucks:		8 feet		
C.L. Dist. To Observer (Structure):	61 feet	Pad Elevation: 1,561.5 feet				
Barrier Dist. To Observer (Structure):	11 feet	Observer Heights Above Pad Elevation				
Road Grade:	1.80 %	Exterior:		5 feet		
Left View:	-90 degrees	First Floor:		5.5 feet		
Right View:	90 degrees	Second Floor:		14 feet		

FHWA NOISE MODEL CALCULATIONS

						Barrier Attenuation		
	REMEL	Traffic Flow	Distance	Finite Road	Grade	Exterior	1st Flr	2nd Flr
Autos:	67.36	-4.39	-1.06	-1.20	0.00	-9.38	-8.6	0
Med Trucks:	76.31	-24.30	-1.06	-1.20	0.00	-9.18	-8.2	0
Hvy Trucks:	81.16	-24.30	-1.06	-1.20	0.00	-6.8	-5.8	0
UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)								
	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	60.5	58.6	51.7	53.5	60.8	61.0		
Med Trucks:	49.7	27.9	21.0	22.8	30.1	30.3		
Hvy Trucks:	54.6	32.7	25.8	27.6	35.0	35.1		
Traffic Noise:	61.8	58.6	51.7	53.5	60.8	61.0		
MITIGATED NOISE LEVELS (Backyard with sound wall)								
	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	51.3	49.4	42.5	44.3	51.6	51.8		
Med Trucks:	40.6	18.7	11.8	13.6	20.9	21.1		
Hvy Trucks:	47.8	25.9	19.0	20.8	28.2	28.3		
Traffic Noise:	53.2	49.4	42.5	44.3	51.6	51.8		
MITIGATED NOISE LEVELS (First Floor)								
	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	52.0	50.0	43.1	44.9	52.3	52.4		
Med Trucks:	41.4	19.6	12.7	14.4	21.8	21.9		
Hvy Trucks:	48.7	26.8	19.9	21.7	29.1	29.2		
Traffic Noise:	53.9	50.0	43.2	44.9	52.3	52.4		
MITIGATED NOISE LEVELS (Second Floor)								
	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL		
Autos:	60.4	58.4	51.5	53.3	60.6	60.8		
Med Trucks:	49.4	27.5	20.6	22.4	29.8	29.9		
Hvy Trucks:	54.2	32.4	25.5	27.3	34.6	34.8		
Traffic Noise:	61.6	58.4	51.5	53.3	60.7	60.8		

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Road Name: Oliver Street
Lot Number: 189

Project Name: TTM No. 38236
Job Number: 21135

NOISE MODEL INPUTS

Highway Data		Vehicle Mix				
Average Daily Traffic:	5,041 vehicles		Day	Evening	Night	Daily
Peak Hour Volume:	504 vehicles	Autos:	76.4%	3.9%	17.6%	98.0%
Vehicle Speed:	40 mph	Medium Trucks:	0.8%	0.0%	0.2%	1.0%
Near/Far Lane Distance:	36 feet	Heavy Trucks:	0.8%	0.0%	0.2%	1.0%
Site Data		Elevations				
Barrier Height:	6 feet	Barrier Base Elevation: 1,559.3 feet				
Barrier Type(Wall/Berm):	Wall	Road Elevation: 1,555.0 feet				
Site Conditions(Hard/Soft):	Soft	Noise Source Elevation above Road				
Centerline (C.L.) Dist. to Barrier:	50 feet	Autos:		0 feet		
C.L. Dist. To Observer (Backyard):	60 feet	Med Trucks:		2.3 feet		
Barrier Dist. To Observer (Backyard):	10 feet	Hvy Trucks:		8 feet		
C.L. Dist. To Observer (Structure):	66 feet	Pad Elevation: 1,559.3 feet				
Barrier Dist. To Observer (Structure):	16 feet	Observer Heights Above Pad Elevation				
Road Grade:	1.80 %	Exterior:		5 feet		
Left View:	-90 degrees	First Floor:		5.5 feet		
Right View:	90 degrees	Second Floor:		14 feet		

FHWA NOISE MODEL CALCULATIONS

	REMEL	Traffic Flow	Distance	Finite Road	Grade	Barrier Attenuation		
						Exterior	1st Flr	2nd Flr
Autos:	67.36	-4.39	-1.07	-1.20	0.00	-9.46	-9.15	-0.193
Med Trucks:	76.31	-24.30	-1.07	-1.20	0.00	-9.27	-8.7	-0.12
Hvy Trucks:	81.16	-24.30	-1.07	-1.20	0.00	-6.94	-5.8	0

UNMITIGATED NOISE LEVELS (Backyard with topographical attenuation)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.5	58.6	51.7	53.5	60.8	61.0
Med Trucks:	49.7	27.9	21.0	22.8	30.1	30.3
Hvy Trucks:	54.6	32.7	25.8	27.6	35.0	35.1
Traffic Noise:	61.8	58.6	51.7	53.5	60.8	61.0

MITIGATED NOISE LEVELS (Backyard with sound wall)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	51.2	49.3	42.4	44.2	51.5	51.7
Med Trucks:	40.5	18.6	11.7	13.5	20.9	21.0
Hvy Trucks:	47.6	25.8	18.9	20.7	28.0	28.2
Traffic Noise:	53.1	49.3	42.4	44.2	51.6	51.7

MITIGATED NOISE LEVELS (First Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	50.9	48.9	42.0	43.8	51.2	51.3
Med Trucks:	40.4	18.5	11.6	13.4	20.8	20.9
Hvy Trucks:	48.1	26.3	19.4	21.1	28.5	28.6
Traffic Noise:	53.0	49.0	42.1	43.8	51.2	51.3

MITIGATED NOISE LEVELS (Second Floor)

	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.6	57.7	50.8	52.6	59.9	60.1
Med Trucks:	48.8	26.9	20.0	21.8	29.1	29.3
Hvy Trucks:	53.7	31.9	25.0	26.7	34.1	34.2
Traffic Noise:	60.9	57.7	50.8	52.6	60.0	60.1