Appendix F1
SCIG Noise Technical Study

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1 Introduction

This study evaluates existing and future noise levels associated with the proposed Southern California International Gateway (SCIG) Project. The proposed Project site is located west of the Terminal Island Freeway and east of the Dominguez Channel, and is primarily south of Sepulveda Blvd and north of Pacific Coast Highway. The Project site is located in the City of Los Angeles and portions of the project components are in proximity to noise sensitive land uses in the Cities of Long Beach, Los Angeles communities of San Pedro and Wilmington, and City of Carson. The SCIG Project description calls for the construction of an intermodal rail yard with tracks and staging areas within the facility, in addition to roads and rail lines to connect the facility to outside transport networks. The proposed Project elements would provide additional near-dock intermodal rail capacity for current and expected cargo volumes and maximize the efficiency of cargo transfer from port to rail. At full build–out in 2023, the facility would facilitate 5542 truck trips daily and would handle 4167 containers per day.

The following sections of this report provide an overview of the noise environment in the vicinity of the proposed Project and the federal, state and local regulations that are applicable to the project. Future noise and vibration associated with the construction and operation of the proposed Project are identified.

2 Environmental Setting

2.1 Noise Fundamentals

Noise is defined as unwanted sound. Sound is the result of vibration within a fluid medium. For humans, the fluid medium is air and the receptor is the human ear. Because all humans perceive and interpret sound differently, the types of sound which comprise noise are subjective. However, the consensus is that undesirable sound is noise. The science of noise and sound measurement and description is technically complex, having its own commonly used acoustical terminology (Table F1-1).

2.1.1 Decibels and Frequency

Environmental noise is measured on a logarithmic scale in decibels (dB). Decibels measure the relative magnitude of pressure fluctuations in a sound medium under the influence of a vibratory source. An increase of 10 decibels represents a 10-fold increase in acoustic energy, which is perceived by people as approximately a doubling of loudness over a wide range of amplitudes. Since decibels are logarithmic units, sound pressure levels are not added arithmetically. When two sounds of equal sound pressure level are added, the result is a sound pressure level that is 3 dB higher. For example, 60 dB plus

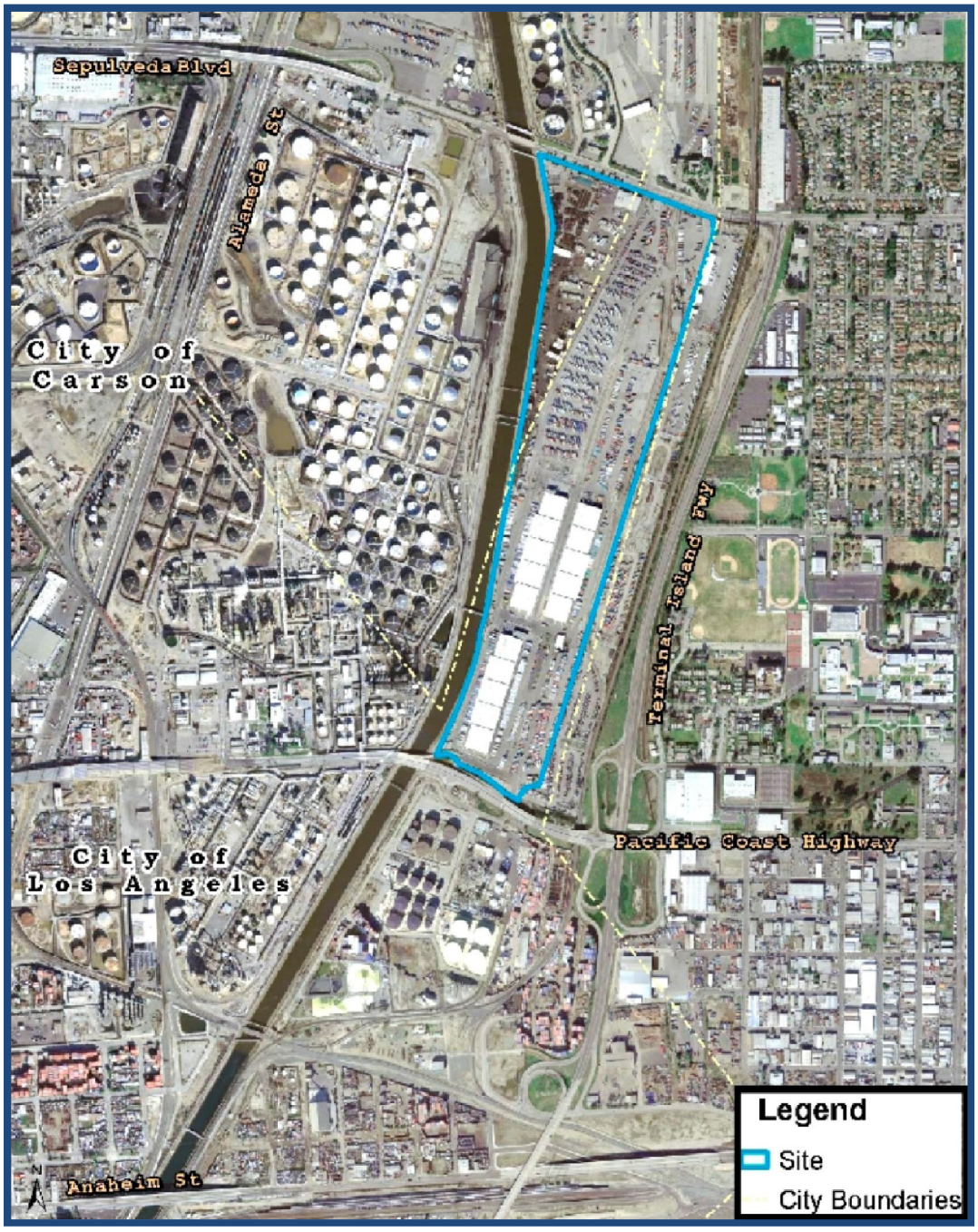


Figure F1-1. Location of the Proposed SCIG Project Site

Table F1-1. Common Acoustical Terminology

Term	*Definition*
Ambient Noise Level	The noise, resulting from the natural and mechanical sources and human activity, considered to be usually present in a particular area at any time.
A-Weighted Sound Level (dBA)	Weighted Sound Pressure Level which reflects the human ear's most noticed frequencies, defined in decibels. De-emphasizes sounds with frequencies lower that 1kHz and higher than 4 kHz, and emphasizes sounds in between. Most commonly used measure of environmental noise today.
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, adjusted to account for more noise sensitive time periods during the evening and nighttime. The noise level during the evening hours from 7:00 PM to 10:00 PM are increased by 5 dB and the nighttime hours from 10:00 PM to 7:00 AM are increased by 10 dB.
Day/Night Average Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day, adjusted to account for more noise sensitive time periods during the nighttime. The noise level during the nighttime hours from 10:00 PM TO 7:00 AM IS increased by 10 dB.
Decibel (dB)	Unit of sound pressure based on a logarithmic scale, computed by squaring a ratio between a given sound pressure and a reference sound pressure.
Frequency (Hz)	The number of times repeated in 1 second (i.e., cycles per second)
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location.
L_{eq}	The equivalent sound level or average A-weighted noise level during the measurement period.
L_{xx}	The statistical sound level that is exceeded xx % of the time during the measurement period.
L_{02}, L_{08}, L_{50}, L_{90}	The statistical A-weighted noise levels that are exceeded 2%, 8%, 50%, and 90% of the time during the measurement period.
L_{max} , L_{min}	The maximum and minimum noise levels during the measurement period.
Loudness	The amplitude of sound waves combined with the reception characteristics of the ear.
Pitch	The height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced.
SEL	Sound Exposure Level is a measure of cumulative noise exposure for a noise event. Mathematically, it is the sum of the sound energy over the duration of a noise event, normalized to a one-second duration.
Sound Pressure	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter.
Sound Pressure Level	Sound pressure level is the quantity that is directly measured by a sound level meter and is computed by squaring a ratio between a given sound pressure and a reference sound pressure: dB = (20 x log (measured sound pressure/ref. sound pressure) The reference pressure for air is 20 micro Pascals.

60 dB equals 63 dB, and 80 dB plus 80 dB equals 83 dB. However, where noise levels differ, there may be little change in comparison to the louder noise source; for example when 70 dB and 60 dB sources are added, the resulting noise level equals 70.4 dB.

The frequency of a sound wave is the number of times in one second that the sound wave is repeated (i.e., the number of cycles per second). Frequency is designated by a number, and is expressed by the unit *Hertz (Hz)*. The frequency range over which normal adults are capable of hearing is approximately 20 Hz at the low frequency end to 20,000 Hz at the high frequency end.

Because the human hearing system is not equally sensitive to sound at all frequencies, the A-weighted filter system is used to express measured sound levels, in units of dBA, based on the sensitivity of the human ear. The dBA scale emphasizes mid- to high-range frequencies and de-emphasizes the low frequencies to which human hearing is less sensitive. Table F1-2 shows typical A-weighted exterior and interior noise levels that occur in human environments.

Because A-weighted sound levels are adjusted to the sensitivity of the human ear, they are commonly used to quantify noise events and environmental noise. However, community response also depends on the existing ambient sound level, magnitude of sound with respect to the background noise level, duration of the sound, repetitiveness, number of events, and time of day.

Table F1-2. Typical A-weighted Exterior and Interior Noise Levels

COMMON OUTDOOR ACTIVITIES	NOISE LEVEL dBA	COMMON INDOOR ACTIVITIES
	---110---	Rock Band
Jet Fly-over at 300 m (1000 ft)		
	---100---	
Gas Lawn Mower at 1 m (3 ft)		
	---90---	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)		Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	---80---	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	---70---	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	---60---	
		Large Business Office
Quiet Urban Daytime	---50---	Dishwasher Next Room
Quiet Urban Nighttime	---40---	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	---30---	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (Background)
	---20---	
		Broadcast/Recording Studio
	---10---	
Lowest Threshold of Human Hearing	---0---	Lowest Threshold of Human Hearing

2.1.2 Noise Descriptors

Several noise metrics have been developed to evaluate noise. L_{eq} is the energy average noise level and corresponds to a steady-state sound level that has the same acoustical energy as the sum of all the time-varying noise events. L_{max} is the maximum noise level measured during a sampling period, and L_{xx} are the noise levels that are exceeded xx% of the time of the measurement.

Because environmental noise fluctuates over time, CNEL and L_{dn} were devised to relate noise exposure over time to human response. CNEL and L_{dn} are 24-hour averages of the hourly L_{eq}, but with penalties to account for the increased sensitivity to noise events that occur during the more sensitive evening and nighttime periods. Specifically, CNEL penalizes noise by 5 dB during the evening time period (7:00 PM to 10:00 PM) and 10 dB during the nighttime time period (10:00 PM to 7:00 AM), while L_{dn} only penalizes noise by 10 dB during the nighttime time period (10:00 PM to 7:00 AM).

2.1.3 Human Response to Noise

Research indicates that a healthy human ear is able to discern changes in sound levels of 1 dBA within a laboratory environment. It is widely accepted that changes of 3 dBA in a community noise environment are considered just noticeable to most people. A change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as being twice as loud.

A number of studies have linked increases in noise with health effects, including hearing impairment, sleep disturbance, cardiovascular effects (hypertension, heart disease, increased blood pressure), psychophysiological effects, and potential impacts to fetal development (Babisch, 2005). Potential health effects appear to be caused by both short- and long-term exposure to very loud noises and long-term exposure to lower levels of sound. Acute sounds of $L_{AF} > 120$ dB ("L_{AF}" is the A-weighted sound level measured at a "fast" response rate) can cause mechanical damage to hair cells of the cochlea (the auditory portion of the inner ear) and hearing impairment (Babisch, 2005). As shown in Table F1-2, $L_{AF} > 120$ dB is equivalent to a rock concert or a plane flying overhead at 300 meters. The World Health Organization and the USEPA consider $L_{Aeq} = 70$ dB (A) to be a safe daily average noise level for the ear. However, even this "ear-safe" level may cause disturbance to sleep and concentration and may be linked to chronic health impacts such as hypertension and heart disease (Babisch, 2006). A number of studies have looked at the potential health effects from the sound of chronic lower noise levels, such as traffic, especially as these noise levels affect children. In a study of school children in Germany, blood pressure was found to be 10 mmHg higher in a group of students exposed to road traffic noise from high traffic transit routes (Babisch, 2006). A study by Kwanda (2004) showed that in pregnant women, exposure to airplane noise was associated with decreased fetal body weight. Research into these potential effects is still in its early stages, and there is not yet enough information to permit an evaluation of an individual project's effects on public health. Accordingly, this summary is provided as an acknowledgement that such effects could occur, but that the possibility cannot be evaluated for the Proposed Project.

2.1.4 Sound Propagation

When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise is reduced with distance depends on a number of factors. These factors are geometric spreading, ground attenuation, shielding, and atmospheric effects.

Geometric spreading occurs when sound from a small localized source (i.e., a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates or drops-off at a rate of 6 dBA for each doubling of the distance.

Ground absorption adds to the attenuation due to geometric spreading, because the path of noise between the source and the receiver is relatively close to the ground. An excess ground attenuation value of 1.5 dBA for each doubling of distance is normally assumed.

Shielding takes place when a large object (building, barrier, soundwall, terrain feature, etc.) between a noise source and a receiver can significantly attenuate noise levels at that receiver. The amount of attenuation provided by this “shielding” depends on the size and mass of the object, source and receiver geometry, and frequencies of the noise levels. Finally, research by Caltrans and others has shown that atmospheric conditions can have a profound effect on noise levels. Wind, vertical air temperature gradients, humidity and turbulence all affect noise propagation.

2.2 Vibration Fundamentals

Vibration is an oscillatory motion in a solid medium that can be described in terms of displacement, velocity, and acceleration. With a vibrating floor, for example, the displacement is simply the vertical distance that a point on the floor moves away from its static position. The velocity represents the instantaneous speed of the floor movement, while acceleration is the rate of change of that speed. In an environmental setting, vibratory motion will most often propagate through the soil, and can potentially affect humans, structures, and equipment. The effects of ground vibration are dependent on the source and amplitude of vibration, source to receiver distance, soil conditions, and receiver characteristics.

2.2.1 Vibration Descriptors

Vibration amplitudes are usually expressed as either peak particle velocity (PPV), the maximum instantaneous peak of the vibration signal, or the root mean square (RMS) velocity, the average of the squared amplitude of the signal. For sources such as truck or motor vehicles, peak vibration levels are typically much higher than RMS levels -- typically a factor of 1.7 to 6 times greater, although the Federal Transit Administration (FTA) recommends a factor of 4. RMS velocity is more appropriate than PPV for evaluating human response to vibration, since it takes some time for the human body to respond to vibration signals. The RMS velocity is normally described in inches or millimeters per second.

Ground-borne vibration is quantified in terms of decibels, since that scale compresses the range of numbers required to describe the oscillations. The FTA uses vibration decibels (abbreviated as VdB) to measure and assess vibration amplitude. In the United States, vibration is referenced to 1 micro-inch/sec (25.4 micro-mm/sec) and presented in units of VdB.

Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration, and are therefore usually confined to short distances (i.e., 500 feet or less) from the source. These man-made activities include heavy rail operations (locomotives, heavily loaded freight cards, and coupling operations), highway traffic (heavy trucks on uneven pavement), and construction equipment (pile driving, pavement breaking, blasting, and demolition). Vibration-sensitive receptors include structures, people, and certain types of equipment.

2.2.2 Human and Structural Response to Vibration

In contrast to airborne noise, ground-borne vibration is not a phenomenon that most people perceive every day because background vibration levels in residential areas are generally below the threshold of perception for humans. The effects of ground vibration are dependent on the source and amplitude of vibration, source to receiver distance, soil conditions, and receiver characteristics. Common vibration sources and the human and structural responses to ground-borne vibration are shown in Figure F1-2.

Although the human threshold of perception for vibration is about 65 VdB (Table F1-3), humans do not usually respond significantly to vibration unless it exceeds 70 VdB. Heavy locomotives typically generate vibration levels of 75 to 80 VdB or more near their tracks. Trucks rarely create vibration that exceeds 70 VdB unless there are bumps in the road. Vibration levels from these sources can be 10 VdB higher than typical if there is unusually rough road or track, wheel flats, geologic conditions that promote propagation of vibration, or vehicles with very stiff suspension systems. Hence, at 50 feet, the upper range for freight rail vibration is around 90 VdB and the high range for heavy truck traffic vibration is 75 VdB. If the vibration level in a residence reaches 85 VdB, most people will be strongly annoyed (Table F1-3).

Construction activity can result in varying degrees of ground vibration, depending on the construction equipment and method of operation. Buildings near the construction site respond to these vibrations variously, ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels. Ground vibrations from construction activities generally do not reach the levels that can damage structures, but they can achieve the audible and perceivable ranges in buildings very close to the construction site.

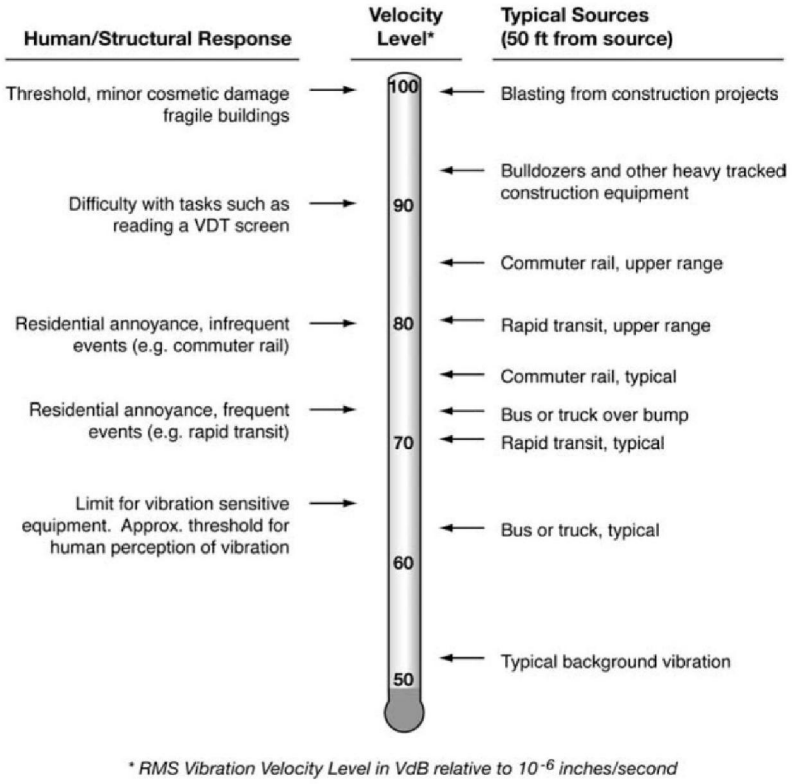


Figure F1-2. Typical Levels of Ground-Borne Vibration

Source: FTA Transit Noise and Vibration Impact Assessment, May 2006.

Table F1-3. Human Response to Different Levels of Ground-Borne Vibration

Vibration Velocity Level	*Human Response*
65 VdB	Approximate threshold of perception for many humans.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying.
85 VdB	Vibration acceptable only if there are infrequent events per day.

Source: FTA Transit Noise and Vibration Impact Assessment, May 2006

2.3 Existing Noise Environment

The existing noise environment at any particular location is a function of the types of nearby noise sources, the relative distance to the sources, and the intervening topography/structures. Baseline noise levels in the vicinity of the proposed Project site, as well as in the surrounding areas that border transportation corridors to and from the site, are attributed to:

- Vehicular traffic on the local arterials
- Vehicular traffic on the freeways (Terminal Island [SR 47], 110 Harbor, and 710 Long Beach,)
- Railroad activity
- Port activity
- Existing industrial operations
- Aircraft
- Community and wildlife activity

Noise-sensitive receivers are located near the proposed Project site and along the designated truck routes and rail segments that serve the proposed Project site. These receivers are located within the jurisdiction of the City of Long Beach and City of Los Angeles communities, and are comprised of single-and multi-family residences, marina live-aboards, a small wetland reserve next to downtown Long Beach, parks, and institutional uses such as fire stations, schools, religious establishments, child development facilities, and adult education centers. There may also be residences within industrial areas along some of the haul routes. Although a portion of the proposed Project is located within the City of Carson, there are limited noise sensitive receivers within the City of Carson that are directly exposed to the proposed Project.

A baseline noise survey was conducted between January and March 2008 to document existing noise levels at selected sensitive receivers and other points throughout the study area (Figure F1-3). These monitoring locations are representative of noise sensitive locations in the study area in the baseline year, since land uses and activity levels did not change substantially between 2005 and 2008.

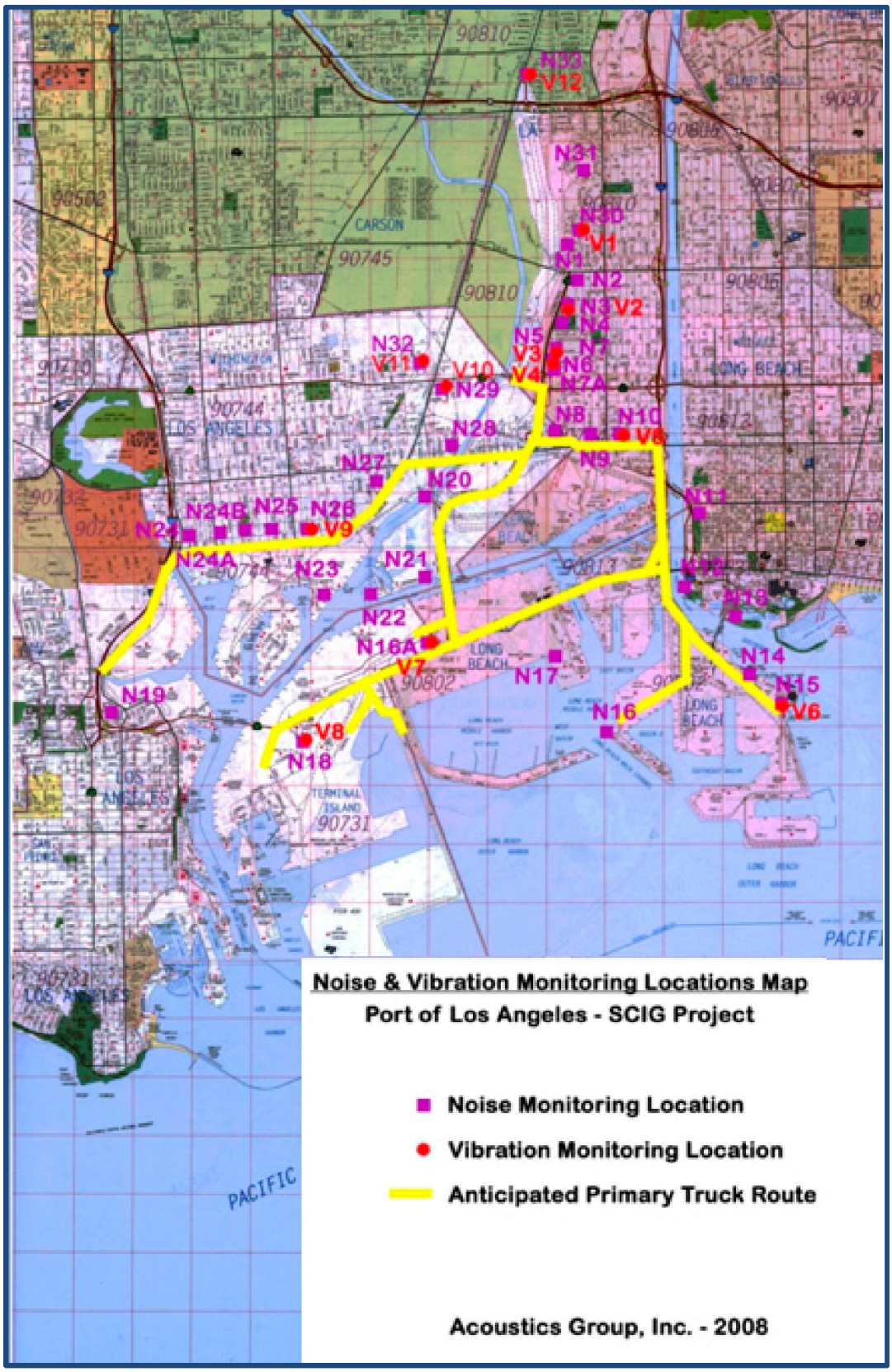


Figure F1-3. Location of the Noise and Vibration Measurements

2.3.1 Sensitive Receivers in Long Beach

Sensitive receivers in Long Beach include single-family residences (Location N1 in Table F1-4), educational and religious establishments (N2 through N7A, N30 and N31), industrial properties with potential residential uses (N8, N9, and N10), parks/open space (N11 through N14), and three fire stations (N15-N17). Details of the various monitoring stations are presented in Table F1-4. Plots of the long term hourly noise levels and statistical data are shown in Figures F.4A through F.4N and Figures F.5A through F.5N.

Measured short-term existing noise levels, L_{eq}, at the residential and educational receivers north of Sepulveda Blvd ranged from 56.0 to 65.1 dBA, and the measured CNEL from 58.0 to 61.7 dBA. Contributing noise sources included nearby industrial activity, trains, vehicular traffic, students, and children playing. Short-term noise levels, L_{eq}, at the educational and religious receivers between Pacific Coast Highway and Sepulveda Boulevard (where the North Lead Track would be located), ranged from 58.9 to 68.7 dBA, and the measured CNEL from 60.2 to 68.8 dBA. All of these receivers are located adjacent to the Terminal Island Freeway and are exposed to vehicular and truck traffic on the freeway, as well as train operations, local traffic, industrial activity, students playing, aircraft, and wildlife.

The measured existing short term noise levels, L_{eq}, within the West Long Beach Industrial Redevelopment Project Area ranged from 66.4 to 73.4 dBA. All of these potential receivers are located close to or along the container haul routes and are exposed to traffic noise. Because of the proximity to industrial land uses, truck traffic and industrial activity are the primary contributors to the existing noise environment. The parks/open space receivers (N11 – N14) and the fire stations (N15-N17) are located further away from the proposed Project site than the previous receivers, but they are near container haul routes. Short-term noise levels, L_{eq}, at those receivers ranged from 59.2 to 70.4. Typical contributing noise sources included vehicular and truck traffic, aircraft, children playing, people talking, ship generators, and wildlife.

2.3.2 Sensitive Receivers in San Pedro & Wilmington

Sensitive receivers in San Pedro and Wilmington include single-family residences (N19, N24, N24A, N26, N27, N29, and N32), Marinas with boat live-aboards (N20, N21, and N22), community centers (N25), industrial properties with potential residential uses (N28), parks (N24B), and two fire stations (N18 and N23). Details of the various monitoring stations are presented in Table F1-4. Plots of the long term hourly noise levels and statistical data are shown in Figures F.4A through F.4N and Figures F.5A through F.5N.

Fire station receivers (N16A and N18), which are considered sensitive receivers, are near shipping terminals and are adjacent to designated truck routes that would serve the proposed Project site. The measured short term existing noise levels, L_{eq}, at these receivers were 65.7 and 72.2 dBA, respectively. A CNEL of 69.5 dBA was measured at Receiver N16A. Noise sources that contributed to the ambient noise environment at Receiver N16A were trains, power plant operations and potential construction activity. The single family receiver (N19) overlooks the western edge of the Port of Los Angeles, specifically the China Shipping Terminal and Pacific Avenue. The

measured short term existing noise levels, L_{eq}, were 69.4 dBA, while the CNEL was 71.2 dBA. Typical noise sources experienced at this location include vehicular and truck traffic, trains, and port operations.

The short term noise levels, L_{eq}, measured at the Leeward Bay Marina, Island Yacht Marina, and Peninsula Road Marina Receivers (N20, N21, and N22) were 81.7, 75.6, and 58.7 dBA, respectively. The CNEL levels measured at Receivers N20 and N21 were 80.3 and 79.3 dBA, respectively. Ambient noise levels at Receivers N20 and N21 were dominated by train operations and vehicular traffic on the Terminal Island Freeway. Receiver N22 was located further away from these sources and was exposed to noise from Port operations, local traffic, live aboards, aircraft, and wildlife. A short term noise level of 58.7 dBA was measured at Fire Station #49 (N23). Noise sources experienced at this location included industrial activity, local traffic, horns, public address system, and wildlife. The Wilmington Community receivers (N24, N24A, N24B, and N25) border container haul routes and the ambient noise levels in these areas are dominated by truck traffic, and to a lesser extent port operations, local traffic, and industrial activity. The measured short term noise levels, L_{eq}, were 83.3, 64.0, 71.8, and 71.6 dBA, respectively.

Residential receivers (N26 and N27) in the Los Angeles Harbor Industrial Center Redevelopment Project Area, also known as the Wilmington Industrial Park, experience vehicular and truck traffic noise, industrial noise and dog barking. The short term noise measurements yielded L_{eq}s of 70.5 and 69.7 dBA, respectively. Potential residential uses (N28 and N29) within the industrial-zoned properties on East I Street and Mauretania Street are exposed to noise from local auto traffic, truck traffic, wrecking yard operations, trains, and refineries. Short term noise levels, L_{eq}, were 81.1 and 67.1 dBA at these receivers, respectively. The CNEL measured at N29 was 71.3 dBA. Residential Receptor N32 experiences noise from local auto and truck traffic, nearby industrial operations and operations from the Alameda Corridor. The L_{eq} was 67.2 dBA and the CNEL was 69.3 dBA at this location.

2.3.3 Sensitive Receivers in Carson

Sensitive receivers in Carson include single-family residences (Location N33 in Table F1-4) that are located near the Alameda Corridor. Details of the various monitoring stations are presented in Table F1-4. The measured short-term existing noise level, L_{eq}, at the residential receiver east of the Alameda Corridor was 64.1 dBA, and the measured CNEL was 65.7 dBA. Noise sources that contributed to the noise measurement included vehicular traffic on Alameda Blvd, Rail Operations on the Alameda Corridor, birds, lawn mowers and residential activity. Plots of the long term hourly noise levels and statistical data are shown in Figures F.4A through F.4N and Figures F.5A through F.5N.

Table F1-4. Summary of Existing Ambient Noise Measurement Data

Rec.	*Loc.*	*Description*	*Date*	*Start*	*A-WEIGHTED SOUND LEVEL, dBA*										*Predominant Noise Sources*
					L2	*L8*	*L25*	*L50*	*L90*	*L99*	L_{max}	L_{min}	L_{eq}	*CNEL*	
R1	N1	Residence at 2789 Webster	2-12-08	7:00 – 8:00 AM	60.8	57.0	55.8	55.3	54.1	53.1	67.4	52.9	56.0		Industrial Yard, Trains
			2-12-08	12:00 – 1:00 PM	57.6	53.6	50.6	49.4	47.1	46.0	68.9	44.7	50.9	58.0	Industrial Yard, Trains
			2-12-08	5:00 - 6:00 PM	58.2	56.0	54.7	53.7	52.3	51.3	66.7	51.2	54.3		Industrial Yard, Trains
R2	N2	Buddhist Temple at Willow and Webster	1-10-08	12:00 – 1:00 PM	66.9	64.3	62.2	60.3	56.8	54.3	75.6	53.2	61.5		Traffic, Trains, Temple, ICTF
			1-10-08	4:00 – 5:00 PM	66.4	64.4	64.4	59.9	57.2	55.2	71.3	53.3	61.2	63.6	Traffic, Trains, Temple, ICTF
			1-11-08	7:00 – 8:00 AM	72.7	72.7	65.8	60.1	57.4	55.6	78.1	54.9	63.2		Traffic, Trains, Temple, ICTF
R3	N3	Hudson Elementary School Playground	2-13-08	8:00 – 9:00 AM	64.5	62.5	60.2	57.8	51.8	47.7	68.9	43.2	58.9		Traffic, Children Playing, Trains
			2-13-08	12:00 – 1:00 PM	60.3	58.5	56.4	54.2	49.1	45.7	66.0	43.1	55.2	60.2	Traffic, Children Playing, Trains
			2-14-08	4:00 – 5:00 PM	63.3	61.7	59.5	57.6	53.8	50.7	69.4	48.6	58.5		Traffic, Children Playing, Trains
R4	N4	Hudson Park	1-22-08	9:20 – 9:35 AM	72.7	70.3	67.5	64.1	55.7	50.3	74.7	79.5	66.1		Traffic, Train
			1-22-08	12:05 – 12:20 PM	72.8	70.8	67.7	64.5	56.3	51.0	85.8	50.0	67.1	--	Traffic, Train
			1-22-08	4:00 – 4:15 PM	72.5	70.6	68.2	65.3	58.3	55.2	76.2	52.5	66.8		Traffic, Birds
R5	N5	Cabrillo High School	2-13-08	9:35 – 10:00 AM	71.4	59.2	54.1	52.0	49.6	48.2	87.2	47.5	63.6		Gardeners, Local Traffic
			2-13-08	10:00 – 11:00 AM	60.6	55.5	52.5	51.0	48.8	47.2	70.0	45.8	53.2	--	Birds, Local Traffic, TI Freeway, Train, Distant Construction, Airplane, Tractor, Train Horn
R6/ R7	N6/ N7	Cabrillo Child Dev Center/ Bethune School	2-12-08	8:00 – 9:00 AM	78.0	71.1	67.7	64.6	58.2	55.4	85.8	54.4	68.7		TI Freeway
			2-12-08	1:00 – 2:00 PM	71.8	68.9	66.2	63.3	55.4	50.4	93.6	47.5	67.2	68.8	TI Freeway
			2-12-08	4:00 – 5:00 PM	70.7	68.8	66.1	63.5	58.0	54.8	77.0	53.4	65.0		TI Freeway
R7A	N7A	Villages of Cabrillo	3-24-08	4:00 – 5:00 PM	72.4	68.2	64.8	62.5	58.9	56.0	89.9	54.5	66.5		TI Freeway, Local Traffic
			3-25-08	8:00 – 9:00 AM	71.3	67.9	63.7	61.2	57.3	54.4	77.7	53.1	63.9	65.6	TI Freeway, Local Traffic
			3-25-08	12:00 – 1:00 PM	71.5	66.5	63.2	61.0	57.8	56.1	81.9	54.6	63.7		TI Freeway, Local Traffic
R8	N8	Cervera Street	1-17-08	10:30 – 10:45 AM	70.8	68.8	67.3	65.2	62.2	60.3	79.9	59.7	66.4		Trucks, Industrial Activity
			1-17-08	1:05 – 1:20 PM	84.1	79.1	69.7	63.6	57.3	55.3	87.6	54.9	73.4	--	Trucks
			1-17-08	5:00 – 5:15 PM	70.4	68.1	64.8	61.4	57.2	56.5	72.5	55.9	63.8		Trucks, Train
R9	N9	1333 Seabright Avenue	1-17-08	10:00 – 10:15 AM	71.9	62.3	58.4	56.6	53.2	52.3	81.5	51.5	62.7		Traffic, Industrial Activity
			1-17-08	12:48 – 1:03 PM	68.1	63.3	60.6	58.8	56.6	54.1	93.3	53.0	66.4		Traffic, Industrial Activity, Birds, Plane
			1-17-08	4:42 – 4:57 PM	70.3	66.3	62.8	60.6	58.3	56.7	81.8	55.2	64.1	--	Industrial Activity, Traffic, Radio

Table F1-4. Summary of Ambient Noise Measurement Data, continued

Rec.	*Loc.*	*Description*	*Date*	*Start*	*A-WEIGHTED SOUND LEVEL, dBA* *L2*	*L8*	*L25*	*L50*	*L90*	*L99*	*L_{max}*	*L_{min}*	*L_{eq}*	*CNEL*	*Predominant Noise Sources*
R10	N10	1330 Canal Street	1-17-08	9:40 – 9:55 AM	71.7	68.2	65.6	63.2	59.2	55.4	89.2	54.5	66.5		Industrial Activity, Traffic
			1-17-08	12:27 – 12:42 PM	74.6	70.6	67.4	65.2	60.0	54.7	80.0	53.5	67.1	--	Industrial Activity, Traffic
			1-17-08	4:20 – 4:35 PM	76.6	73.2	69.9	67.3	61.6	56.3	80.2	54.2	69.4		Industrial Activity, Traffic
R11	N11	Cesar Chavez Park	1-15-08	10:00 – 10:15 AM	67.0	65.7	63.7	62.0	57.0	53.7	69.2	52.5	62.6	--	Traffic on 710, 6th Street, Aircraft
			1-15-08	1:25 – 1:40 PM	67.5	65.7	64.6	62.7	59.5	57.3	70.7	56.8	63.2		710 Traffic, Aircraft
			1-15-08	5:01 – 5:16 PM	69.3	67.5	66.3	65.3	63.0	60.0	78.8	58.9	65.7		710 Traffic, Children Playing
R12	N12	Pocket Wetland Reserve	1-15-08	9:37 – 9:52 AM	59.0	57.5	55.8	54.9	53.2	52.0	61.7	51.5	55.4		Trucks, Birds
			1-15-08	12:55 – 1:10 PM	59.5	58.7	57.4	56.2	54.3	53.4	61.3	52.4	56.6	--	Trucks
			1-15-08	4:37 – 4:52 PM	66.2	60.7	58.8	57.5	56.0	54.2	72.4	53.7	59.2		Trucks, RV Park, Helicopter
R13	N13	Pierpoint Landing/ Shoreline Park	1-10-08	10:25 – 10:40 AM	63.6	58.9	56.8	55.5	53.9	52.5	68.7	52.2	56.9	--	Aquarium P/A, Birds, Traffic, Helicopter, Plane
			1-10-08	1:30 – 1:45 PM	62.4	58.4	56.4	55.4	54.0	53.4	66.4	52.9	56.4		Birds, Parking Lot Vehicles, Traffic, G/A
			1-10-08	4:45 – 5:00 PM	72.1	71.3	70.6	54.9	53.3	52.5	72.5	51.7	66.3		Birds, Local Traffic, Parking Lot, Truck Idling
R14	N14	Queen Mary Park	1-15-08	9:10 – 9:25 AM	73.2	69.7	67.3	65.3	59.4	52.7	78.8	51.4	66.5	--	Trucks, Helicopter
			1-15-08	12:35 – 12:50 PM	71.4	67.7	65.2	62.4	57.7	55.2	76.1	54.2	64.3		Trucks, People Talking, Airplane
			1-15-08	4:13 – 4:28 PM	72.3	70.0	67.9	66.3	62.7	58.3	80.7	56.5	67.3		Trucks, Bus
R15	N15	Fire Station #6	1-10-08	9:30 – 9:45 AM	64.9	63.7	61.8	59.9	57.0	54.5	66.0	54.5	60.7	--	Heavy Trucks on Queens Way
			1-10-08	1:05 – 1:20 PM	73.3	65.0	62.9	61.5	58.8	54.1	77.4	53.8	63.9		Traffic, Distant Aircraft, Firetrucks
			1-10-08	4:20 – 4:35 PM	80.6	73.6	66.5	63.3	60.1	58.1	85.3	57.3	70.4		Traffic on Queens Way, Aircraft, Helicopter
R16	N16	Fire Station #15 @ Pier F Avenue	1-10-08	9:57 – 10:13 AM	64.6	62.1	59.6	57.8	55.3	54.0	70.0	53.6	59.1	--	Heavy Trucks
			1-10-08	12:38 – 12:53 PM	65.3	63.5	60.9	58.8	55.8	54.8	69.2	54.2	60.1		Heavy Trucks, Seagulls, People Talking, Boat
			1-10-08	3:55 – 4:10 PM	64.9	62.9	60.4	58.4	55.1	53.5	70.9	52.6	59.7		Heavy Trucks, Train Horn, A/C, Birds, Copter
R16A	N16A	New Fire Station #24 @ SR47	3-25-08	6:00 – 7:00 PM	68.4	66.8	65.3	63.9	62.0	60.4	77.6	59.5	64.6	69.5	Route 47, Pier Avenue
			3-26-08	8:00 – 9:00 AM	68.8	67.3	65.9	64.8	63.1	61.9	74.9	60.8	65.3		Route 47, Pier Avenue
			3-26-08	1:00 – 2:00 PM	69.7	67.9	66.4	65.1	63.1	61.5	74.4	60.6	65.7		Route 47, Pier Avenue

Table F1-4. Summary of Ambient Noise Measurement Data, continued

Rec.	Loc.	Description	Date	Start	A-WEIGHTED SOUND LEVEL, dBA L2	L8	L25	L50	L90	L99	L_{max}	L_{min}	L_{eq}	CNEL	Predominant Noise Sources
R17	N17	Fire Station #24	1-11-08	9:41 – 9:56 AM	66.4	62.1	59.5	58.5	57.0	56.4	76.1	55.7	60.2	--	Distant Traffic, Ship Generators, Firetruck
			1-11-08	1:05 – 1:20 PM	67.5	61.0	58.9	57.6	56.0	55.1	70.9	54.3	59.5		Ship Generators, Train, Back Up Beeper, Airplane, Traffic, Copter
			1-11-08	4:53 – 5:08 PM	64.1	61.5	60.0	58.6	56.9	56.0	66.1	55.6	59.3		Ship, Firestation, Train Horn, Distant Traffic
R18	N18	Fire Station #210 @ Ferry Street	1-11-08	9:15 – 9:30 AM	79.0	77.1	73.1	69.0	62.4	58.6	83.8	56.6	72.2	--	Traffic on Ferry, Train Locomotives and Rail/Wheel Squeak, P/A
			1-11-08	12:35 – 12:50 PM	78.4	73.7	69.9	66.0	57.7	54.1	85.4	52.8	69.0		Traffic, LAFD Siren
			1-11-08	4:28 – 4:43 PM	77.4	74.7	70.1	65.6	57.1	52.4	87.2	51.7	70.0		Traffic on Ferry
R19	N19	539 Shields Drive	1-14-08	1:00 – 2:00 PM	69.3	68.1	67.0	65.8	63.4	61.2	74.4	59.6	66.1	71.2	Traffic, Trains, Port Operations
			1-14-08	4:00 – 5:00 PM	73.0	73.0	67.6	66.4	64.2	62.2	81.0	60.9	67.3		Traffic, Trains, Port Operations
			1-15-08	7:00 – 8:00 AM	72.1	72.1	69.8	69.0	67.2	66.0	89.7	65.2	69.4		Traffic, Trains, Port Operations
R20	N20	Leeward Bay Marina	1-17-08	1:00 – 2:00 PM	68.8	63.8	58.8	56.4	53.2	51.0	84.7	49.6	62.2	80.3	Traffic, Trains, Marina, Industrial Operations
			1-17-08	6:00 – 7:00 PM	81.7	66.7	60.6	58.4	55.6	53.6	100.1	52.5	73.2		Traffic, Trains, Marina, Industrial Operations
			1-18-08	8:00 – 9:00 AM	82.2	66.0	61.2	58.8	56.3	55.2	109.3	54.9	81.7		Traffic, Trains, Marina, Industrial Operations
R21	N21	Island Yacht Marina	1-15-08	1:00 – 2:00 PM	80.0	77.4	72.4	68.0	58.0	56.1	87.2	54.9	72.5	79.3	Traffic, Trains, Marina, Industrial Operations
			1-15-08	5:00 – 6:00 PM	85.8	77.9	70.4	66.8	60.5	56.4	98.9	55.5	75.6		Traffic, Trains, Marina, Industrial Operations
			1-15-08	8:00 – 9:00 AM	83.6	75.6	71.2	66.0	58.0	54.7	94.1	53.8	73.3		Traffic, Trains, Marina, Industrial Operations
R22	N22	Peninsula Road Marina	1-11-08	10:14 – 10:29 AM	57.5	54.6	53.2	52.2	51.1	50.6	66.3	50.2	53.1	--	Port Ops, Birds, Local Traffic
			1-11-08	1:33 – 1:48 PM	64.4	60.1	58.2	57.4	56.2	55.5	72.5	55.1	58.7		Port Ops, Live Aboard Activities
			1-11-08	4:00 – 4:15 PM	64.0	59.9	55.6	54.4	52.5	51.7	72.2	51.4	56.7		Port Ops, Local Traffic, Live Aboard Activities, Train Horn, Airplane, Bird

Table F1-4. Summary of Ambient Noise Measurement Data, continued

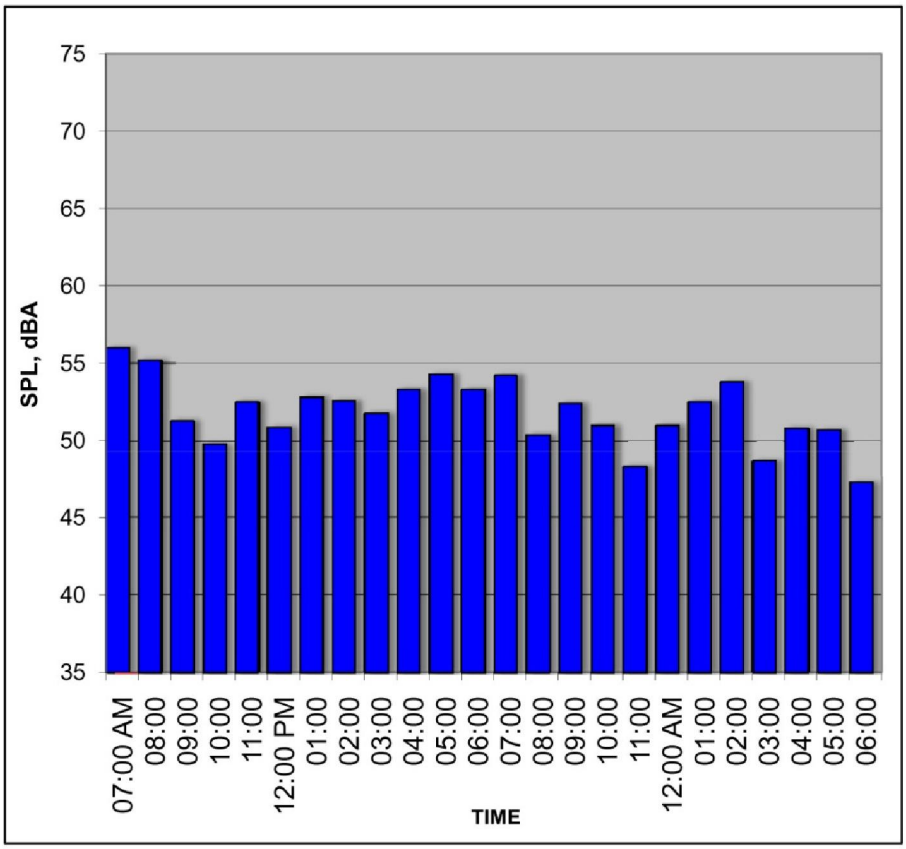
Rec.	*Loc.*	*Description*	*Date*	*Start*	*A-WEIGHTED SOUND LEVEL, dBA*										*Predominant Noise Sources*
					L2	*L8*	*L25*	*L50*	*L90*	*L99*	L_{max}	L_{min}	L_{eq}	*CNEL*	
R23	N23	Fire Station #49 – Yacht Street	1-16-08	9:19 – 9:34 AM	68.4	60.3	56.9	55.8	52.9	51.6	77.7	51.1	58.7	--	Industrial Activity, Local Traffic, Traffic Horn
			1-16-08	12:00 – 12:15 PM	62.6	55.6	51.3	50.3	48.6	46.9	72.5	46.0	54.0		Industrial Activity, Fire P/A, Traffic, Train Horn, Birds
			1-16-08	4:01 – 4:16 PM	57.1	55.0	53.9	53.4	52.5	52.1	59.7	51.7	53.7		Industrial Activity, Train Horn, Birds, Traffic
R24	N24	1231 C Street	1-8-08	9:39 – 9:54 AM	64.4	61.7	59.9	58.9	56.9	54.7	68.4	54.1	59.5	--	Trucks on Figueroa, Harry Bridges, 110 Freeway, Birds, Trapac
			1-8-08	12:00 – 12:15 PM	69.9	64.8	61.6	60.0	57.7	56.2	54.8	63.6	83.3		Trucks, Trapac, Light Aircraft
			1-8-08	4:10 – 4:25 PM	67.0	64.5	63.1	62.1	60.4	59.0	74.1	58.5	62.7		Trucks, Trapac, Local Traffic
R24A	N24A	925 West C Street	1-8-08	10:00 – 10:15 AM	72.5	65.9	60.6	57.6	54.2	52.0	81.7	50.7	63.3	--	Local Traffic, Heavy Trucks on H. Bridges, Light Aircraft, Garbage Collection
			1-8-08	12:25 – 12:40 PM	73.4	68.4	62.5	58.9	55.5	54.0	78.9	53.2	64.0		Local Traffic, Trapac, Heavy Trucks on H. Bridges
			1-8-08	4:30 – 4:45 PM	70.4	66.9	63.2	61.1	57.6	55.4	75.8	54.1	63.2		Local Traffic, Trapac, Train
R24B	N24B	Bayview Field	1-8-08	10:23 – 10:38 AM	79.1	76.2	72.4	67.7	59.4	54.0	82.5	53.1	71.4	--	Traffic on H. Bridges
			1-8-08	12:55 – 1:10 PM	78.5	76.7	73.2	68.5	59.2	55.6	84.5	54.6	71.8		Traffic on H. Bridges, Trapac
			1-8-08	4:50 – 5:05 PM	77.6	75.4	72.2	69.7	62.4	57.6	79.4	55.5	71.2		Traffic on H. Bridges, Trapac
R25	N25	Wilmington Skills Center 217 N. Island	1-14-08	9:35 – 9:50 AM	74.7	72.0	68.3	64.9	60.0	57.4	86.7	56.6	68.0	--	Trucks, Skills Center
			1-14-08	12:25 – 12:40 PM	76.2	72.7	68.9	65.2	59.7	57.0	96.9	56.4	71.6		Trucks
			1-14-08	4:05 – 4:20 PM	76.7	73.8	70.4	67.7	63.9	58.0	86.3	57.2	70.2		Trucks
R26	N26	200 Broad Street	1-16-08	9:40 – 9:55 AM	78.0	74.9	71.3	67.0	59.1	51.4	84.2	49.7	70.5	--	Traffic, Industrial Activity
			1-16-08	12:19 – 12:34 PM	75.6	73.1	69.1	65.4	56.4	51.9	80.7	51.0	68.4		Traffic
			1-16-08	4:25 – 4:40 PM	77.4	74.3	70.4	66.9	61.1	58.4	82.3	57.0	69.9		Traffic
R27	N27	1219 G Street	1-16-08	10:09 – 10:24 AM	73.8	66.8	59.8	57.3	52.9	50.9	83.9	50.1	63.9	--	Trucks, Train Horn
			1-16-08	12:43 – 12:58 PM	73.1	68.6	65.8	63.8	62.0	61.1	78.2	60.6	66.0		Trucks, Local Traffic
			1-16-08	4:50 – 5:05 PM	81.3	70.9	64.1	61.3	58.1	56.6	86.5	55.9	69.7		Local Traffic, Trucks, Aircraft, Dogs Barking

Table F1-4. Summary of Ambient Noise Measurement Data, continued

Rec.	*Loc.*	*Description*	*Date*	*Start*	*A-WEIGHTED SOUND LEVEL, dBA*										*Predominant Noise Sources*
					L2	*L8*	*L25*	*L50*	*L90*	*L99*	L_{max}	L_{min}	L_{eq}	*CNEL*	
R28	N28	1919 East I Street	1-14-08	10:10 – 10:25 AM	85.9		63.2	61.3	59.8	59.2	105.8	58.7	81.1	--	Local Traffic, Trains, Wrecking Yard
			1-14-08	12:50 – 1:05 PM	64.8		60.2	59.2	57.9	56.9	75.3	56.3	60.3		Local Traffic, Trains, Wrecking Yard
			1-14-08	4:32 – 4:47 PM	62.0		59.0	58.0	57.2	56.5	66.0	56.2	58.6		Refinery Truck Traffic, Train Horn
R29	N29	1710 Mauretania Street	1-14-08	10:25 – 10:40 AM	74.7	72.8	70.0	66.8	60.9	53.9	76.9	53.0	68.6	71.3	Trucks
			1-14-08	1:10 – 1:25 PM	75.3	72.3	68.2	64.7	57.3	54.2	81.0	52.6	67.6		Trucks
			1-14-08	5:01 – 5:16 PM	76.8	74.2	71.2	68.5	62.7	58.9	81.8	57.8	70.4		Trucks
			4-26-11	1:00 – 2:00 PM	72.2	68.1	66.7	64.7	60.7	58.0	85.5	55.4	66.2		Trucks, Trains, Site Activity
			4-26-11	4:00 – 5:00 PM	72.3	69.9	67.9	66.2	62.4	59.8	80.5	57.0	67.1		Trucks, Trains, Site Activity
			4-27-11	9:00 – 10:00 AM	72.2	68.6	66.2	63.8	58.8	55.1	94.8	53.0	67.0		Trucks, Trains, Site Activity
R30	N30	Stephens Middle School Classroom PC2	2-14-08	11:00 – 12:00 AM	59.6	54.9	50.3	47.2	44.4	43.1	72.8	42.4	51.4	61.5	Students, Traffic
			2-14-08	4:00 – 5:00 PM	62.1	59.6	56.9	54.5	52.2	50.9	77.9	49.5	56.5		Students, Traffic
			2-14-08	8:00 – 9:00 PM	69.6	65.9	64.7	64.0	56.5	54.5	89.3	54.1	65.1		Students, Traffic
R31	N31	Webster School Classroom B-1	2-14-08	12:00 – 1:00 PM	63.3	59.7	56.5	53.0	46.7	44.2	78.9	42.8	56.2	61.7	Children Playing
			2-14-08	5:00 – 6:00 PM	61.8	55.2	51.1	49.2	47.0	45.8	70.4	45.3	52.7		Traffic, Children Playing
			2-14-08	8:00 – 9:00 AM	63.3	60.4	57.8	55.7	53.9	53.0	69.5	50.8	57.5		Traffic, Children Playing
R32	N32	1619 Cruces St	4-28-11	6:00 – 7:00 PM	75.9	69.5	59.1	55.0	51.6	49.6	82.9	48.7	64.9	69.3	Traffic, Trains, Industrial Yard
			4-29-11	9:00 – 10:00 AM	77.2	72.2	62.6	56.8	52.9	51.3	89.3	50.6	67.2		Traffic, Trains, Industrial Yard
			4-29-11	2:00 – 3:00 PM	76.1	71.7	62.8	55.7	51.2	49.5	90.6	49.0	66.8		Traffic, Trains, Industrial Yard
R33	N33	21843 Salmon Ave	4-27-11	2:00 – 3:00 PM	68.6	66.2	63.3	60.3	55.7	53.4	77.1	51.2	62.4	65.7	Traffic, Trains, Birds, Gardener
			4-27-11	4:00 – 5:00 PM	68.2	66.0	63.5	61.1	56.4	53.2	77.4	50.8	64.1		Traffic, Trains, Birds
			4-28-11	8:00 – 9:00 AM	66.3	64.5	63.1	61.2	55.6	51.0	76.9	49.5	61.8		Traffic, Trains, Birds

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	SCIG		
Address:	RESIDENCE AT 2789 WEBSTER	Date:	2/12/08-2/13/08
Location:	REAR YARD		
Noise Sources:	INDUSTRIAL YARD, STEPHENS SCHOOL ACTIVITY, ICTF, TRAINS, LOCAL TRAFFIC	Position:	N-1



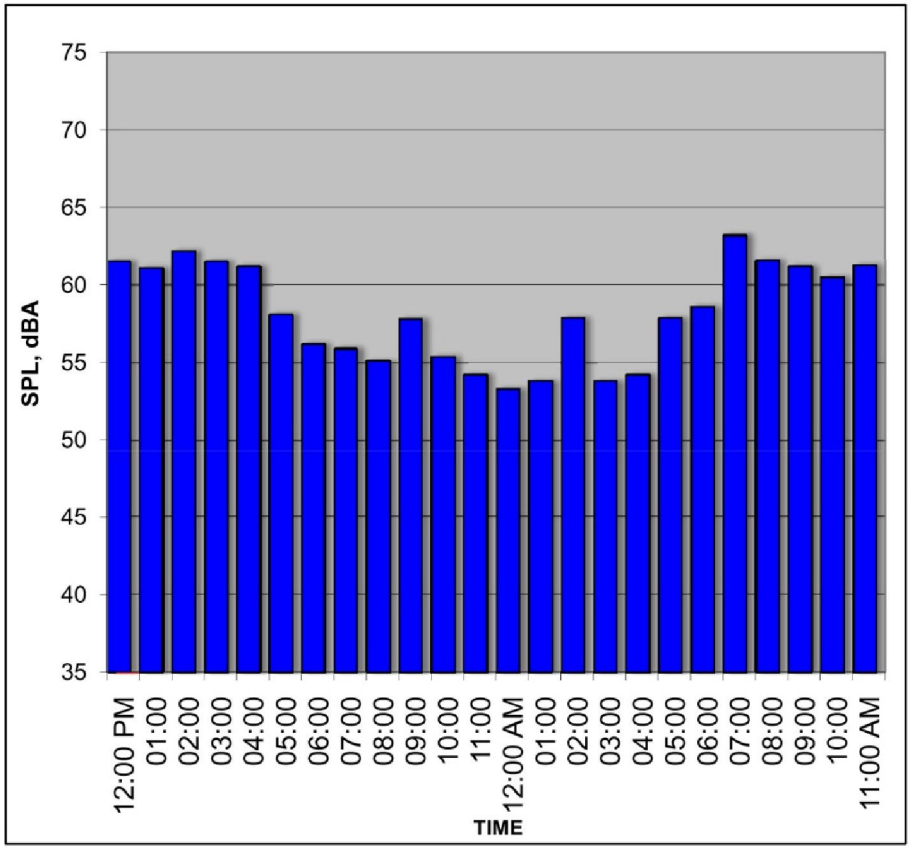
TIME	HNL, dB(A)
07:00 - 08:00 AM	56.0
08:00 - 09:00 AM	55.2
09:00 - 10:00 AM	51.3
10:00 - 11:00 AM	49.8
11:00 - 12:00 PM	52.5
12:00 - 01:00 PM	50.9
01:00 - 02:00 PM	52.8
02:00 - 03:00 PM	52.6
03:00 - 04:00 PM	51.8
04:00 - 05:00 PM	53.3
05:00 - 06:00 PM	54.3
06:00 - 07:00 PM	53.3
07:00 - 08:00 PM	54.2
08:00 - 09:00 PM	50.4
09:00 - 10:00 PM	52.4
10:00 - 11:00 PM	51.0
11:00 - 12:00 AM	48.3
12:00 - 01:00 AM	51.0
01:00 - 02:00 AM	52.5
02:00 - 03:00 AM	53.8
03:00 - 04:00 AM	48.7
04:00 - 05:00 AM	50.8
05:00 - 06:00 AM	50.7
06:00 - 07:00 AM	47.3
CNEL:	58.0

Notes:
Refer to field data sheet

Figure F1-4A Hourly Noise Level Measurement Data at Location N-1

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	**SCIG**		
Address:	**BUDDHIST TEMPLE**	**Date:**	**1/10/08-**
Location:	**OUTDOOR SPACE FACING TI FREEWAY**		**1/11/08**
Noise		**Position:**	**N-2**
Sources:	**TRAFFIC ON TI FREEWAY/WILLOW/WEBSTER, ICTF, TRAINS, TEMPLE ACTIVITIES**		



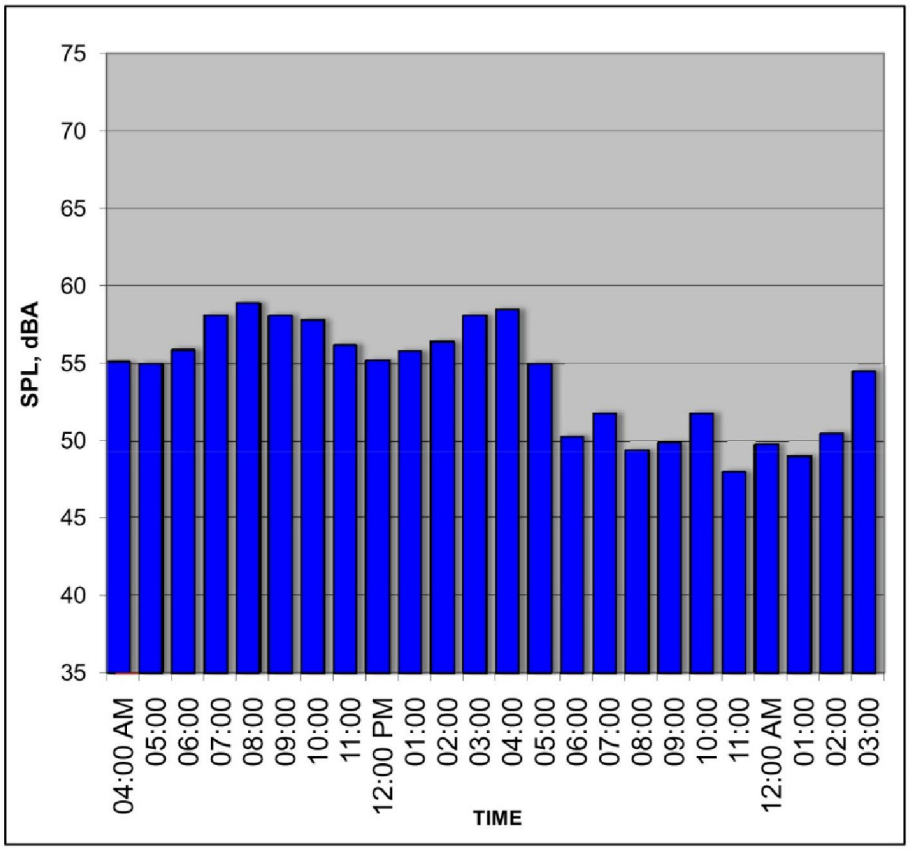
TIME	HNL, dB(A)
12:00 - 01:00 PM	61.5
01:00 - 02:00 PM	61.1
02:00 - 03:00 PM	62.2
03:00 - 04:00 PM	61.5
04:00 - 05:00 PM	61.2
05:00 - 06:00 PM	58.1
06:00 - 07:00 PM	56.2
07:00 - 08:00 PM	55.9
08:00 - 09:00 PM	55.1
09:00 - 10:00 PM	57.8
10:00 - 11:00 PM	55.4
11:00 - 12:00 AM	54.2
12:00 - 01:00 AM	53.3
01:00 - 02:00 AM	53.8
02:00 - 03:00 AM	57.9
03:00 - 04:00 AM	53.8
04:00 - 05:00 AM	54.2
05:00 - 06:00 AM	57.9
06:00 - 07:00 AM	58.6
07:00 - 08:00 AM	63.2
08:00 - 09:00 AM	61.6
09:00 - 10:00 AM	61.2
10:00 - 11:00 AM	60.5
11:00 - 12:00 PM	61.3
CNEL:	63.6

Notes:
Refer to field data sheet

Figure F1-4B Hourly Noise Level Measurement Data at Location N-2

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	SCIG		
Address:	HUDSON ELEMENTARY SCHOOL	Date:	2/13/08-2/14/08
Location:	PLAYGROUND		
Noise Sources:	TRAFFIC ON TERMINAL ISLAND FREEWAY, SCHOOL ACTIVITIES, INDUSTRIAL ACTIVITIES, LOCAL TRAFFIC, TRAINS	Position:	N-3



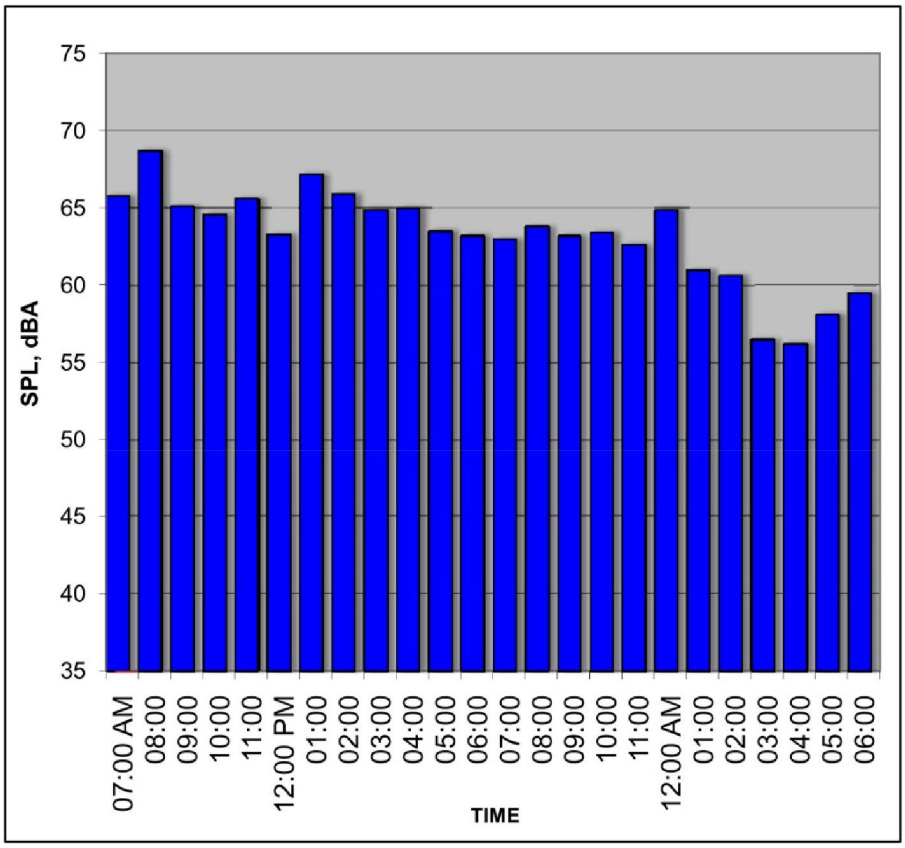
TIME	HNL, dB(A)
04:00 - 05:00 AM	55.1
05:00 - 06:00 AM	55.0
06:00 - 07:00 AM	55.9
07:00 - 08:00 AM	58.1
08:00 - 09:00 AM	58.9
09:00 - 10:00 AM	58.1
10:00 - 11:00 AM	57.8
11:00 - 12:00 PM	56.2
12:00 - 01:00 PM	55.2
01:00 - 02:00 PM	55.8
02:00 - 03:00 PM	56.4
03:00 - 04:00 PM	58.1
04:00 - 05:00 PM	58.5
05:00 - 06:00 PM	55.0
06:00 - 07:00 PM	50.3
07:00 - 08:00 PM	51.8
08:00 - 09:00 PM	49.4
09:00 - 10:00 PM	49.9
10:00 - 11:00 PM	51.8
11:00 - 12:00 AM	48.0
12:00 - 01:00 AM	49.8
01:00 - 02:00 AM	49.0
02:00 - 03:00 AM	50.5
03:00 - 04:00 AM	54.5
CNEL:	60.2

Notes:
Refer to field data sheet

Figure F1-4C Hourly Noise Level Measurement Data at Location N-3

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project: SCIG
Address: CABRILLO CHILD DEVELOPMENT CENTER
Location: WEST PROPERTY LINE AT PLAYGROUND
Noise Sources: TRAFFIC ON TERMINAL ISLAND FREEWAY, CHILDREN @ PLAYGROUND, INDUSTRIAL ACTIVITY, TRAINS
Date: 2/12/08-2/13/08
Position: N-6



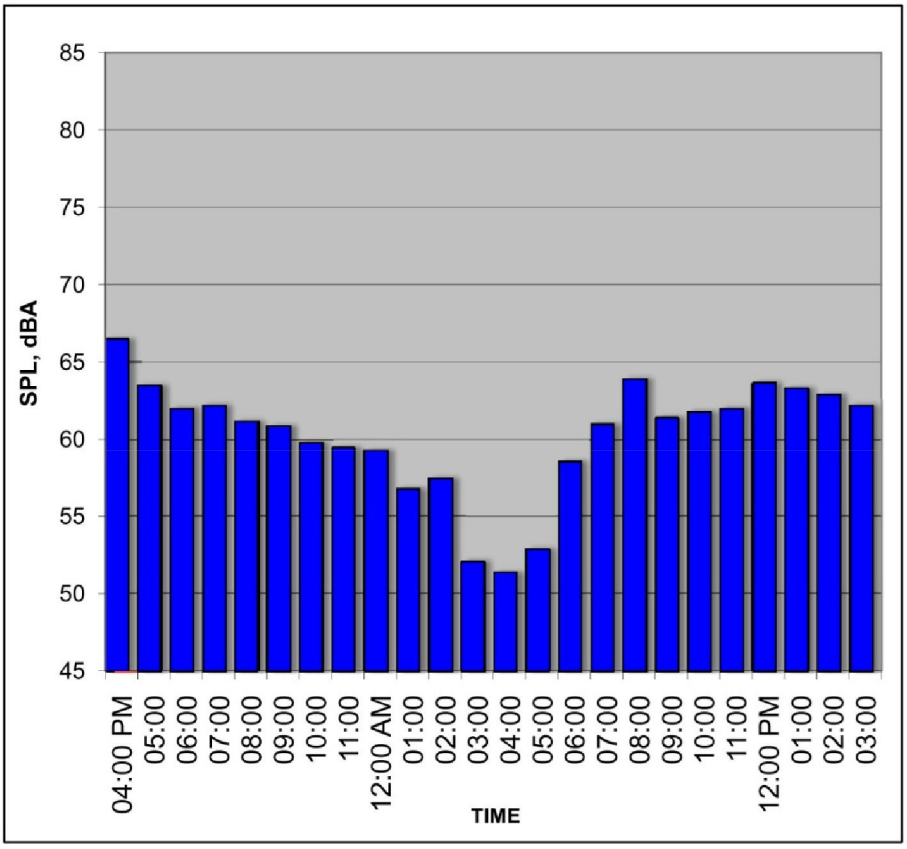
TIME	HNL, dB(A)
07:00 - 08:00 AM	65.8
08:00 - 09:00 AM	68.7
09:00 - 10:00 AM	65.1
10:00 - 11:00 AM	64.6
11:00 - 12:00 PM	65.6
12:00 - 01:00 PM	63.3
01:00 - 02:00 PM	67.2
02:00 - 03:00 PM	65.9
03:00 - 04:00 PM	64.9
04:00 - 05:00 PM	65.0
05:00 - 06:00 PM	63.5
06:00 - 07:00 PM	63.2
07:00 - 08:00 PM	63.0
08:00 - 09:00 PM	63.8
09:00 - 10:00 PM	63.2
10:00 - 11:00 PM	63.4
11:00 - 12:00 AM	62.6
12:00 - 01:00 AM	64.9
01:00 - 02:00 AM	61.0
02:00 - 03:00 AM	60.6
03:00 - 04:00 AM	56.5
04:00 - 05:00 AM	56.2
05:00 - 06:00 AM	58.1
06:00 - 07:00 AM	59.5
CNEL:	68.8

Notes:
Refer to field data sheet

Figure F1-4D Hourly Noise Level Measurement Data at Location N-6

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	**SCIG**		
Address:	**VILLAGES OF CABRILLO**	**Date:**	**3/24/08 - 3/25/08**
Location:	**OPEN SPACE ADJACENT TO GUARD GATE**		
Noise Sources:	**TRAFFIC, TRAINS, INDUSTRIAL NOISE**	**Position:**	**N-7A**



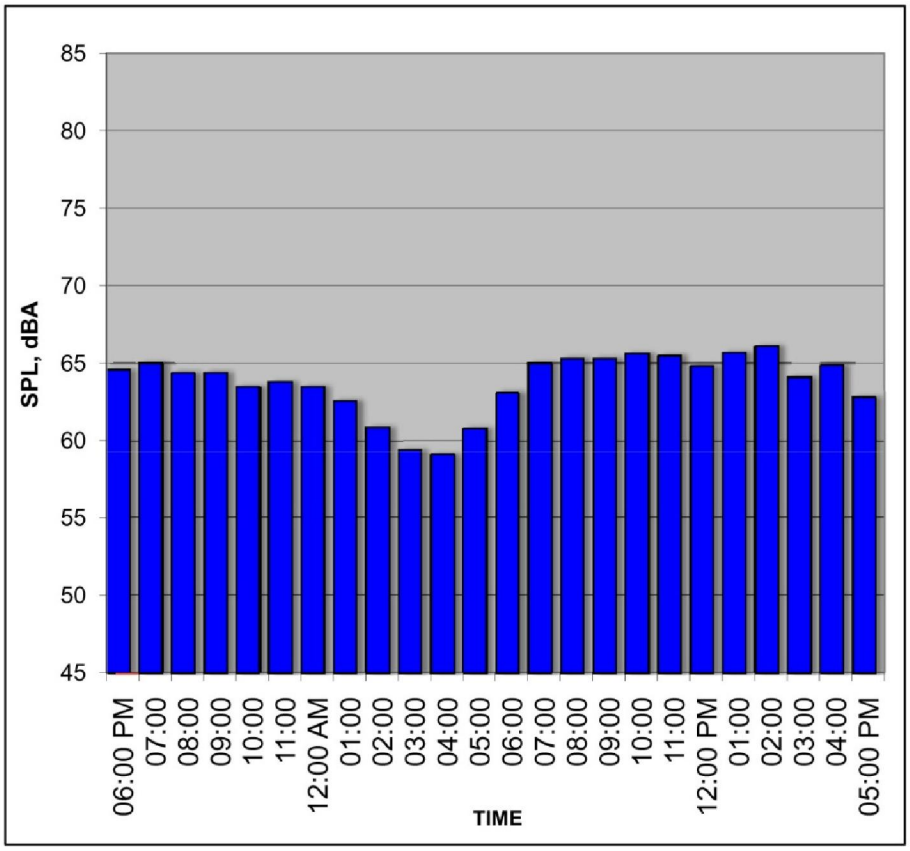
TIME	HNL, dB(A)
04:00 - 05:00 PM	66.5
05:00 - 06:00 PM	63.5
06:00 - 07:00 PM	62.0
07:00 - 08:00 PM	62.2
08:00 - 09:00 PM	61.2
09:00 - 10:00 PM	60.9
10:00 - 11:00 PM	59.8
11:00 - 12:00 AM	59.5
12:00 - 01:00 AM	59.3
01:00 - 02:00 AM	56.8
02:00 - 03:00 AM	57.5
03:00 - 04:00 AM	52.1
04:00 - 05:00 AM	51.4
05:00 - 06:00 AM	52.9
06:00 - 07:00 AM	58.6
07:00 - 08:00 AM	61.0
08:00 - 09:00 AM	63.9
09:00 - 10:00 AM	61.4
10:00 - 11:00 AM	61.8
11:00 - 12:00 PM	62.0
12:00 - 01:00 PM	63.7
01:00 - 02:00 PM	63.3
02:00 - 03:00 PM	62.9
03:00 - 04:00 PM	62.2
CNEL:	65.6

Notes:
Refer to field data sheet

Figure F1-4E Hourly Noise Level Measurement Data at Location N-7A

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	**SCIG**		
Address:	**NEW FIRESTATION 24**	**Date:**	**3/25/08 - 3/26/08**
Location:	**FRONT YARD FACING ROUTE 47**		
Noise Sources:	**TRAFFIC, TRAINS, INDUSTRIAL NOISE**	**Position:**	**N-16A**



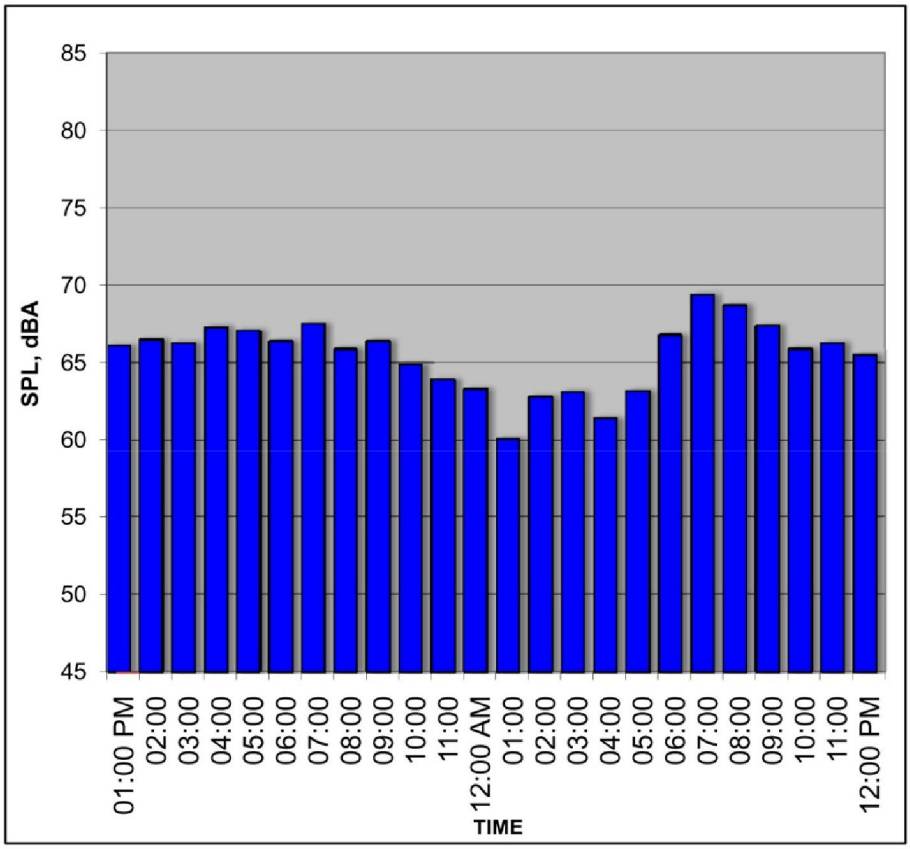
TIME	HNL, dB(A)
06:00 - 07:00 PM	64.6
07:00 - 08:00 PM	65.0
08:00 - 09:00 PM	64.4
09:00 - 10:00 PM	64.4
10:00 - 11:00 PM	63.5
11:00 - 12:00 AM	63.8
12:00 - 01:00 AM	63.5
01:00 - 02:00 AM	62.6
02:00 - 03:00 AM	60.9
03:00 - 04:00 AM	59.4
04:00 - 05:00 AM	59.1
05:00 - 06:00 AM	60.8
06:00 - 07:00 AM	63.1
07:00 - 08:00 AM	65.0
08:00 - 09:00 AM	65.3
09:00 - 10:00 AM	65.3
10:00 - 11:00 AM	65.6
11:00 - 12:00 PM	65.5
12:00 - 01:00 PM	64.8
01:00 - 02:00 PM	65.7
02:00 - 03:00 PM	66.1
03:00 - 04:00 PM	64.1
04:00 - 05:00 PM	64.9
05:00 - 06:00 PM	62.8
CNEL:	69.5

Notes:
Refer to field data sheet

Figure F1-4F Hourly Noise Level Measurement Data at Location N-16A

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	SCIG		
Address:	539 SHIELDS DRIVE	Date:	1/14/08-1/15/08
Location:	FRONT YARD FACING PACIFIC AND PORT OF LA		
Noise Sources:	TRAFFIC ON PACIFIC, TRAINS, PORT OF LA OPERATIONS	Position:	N-19



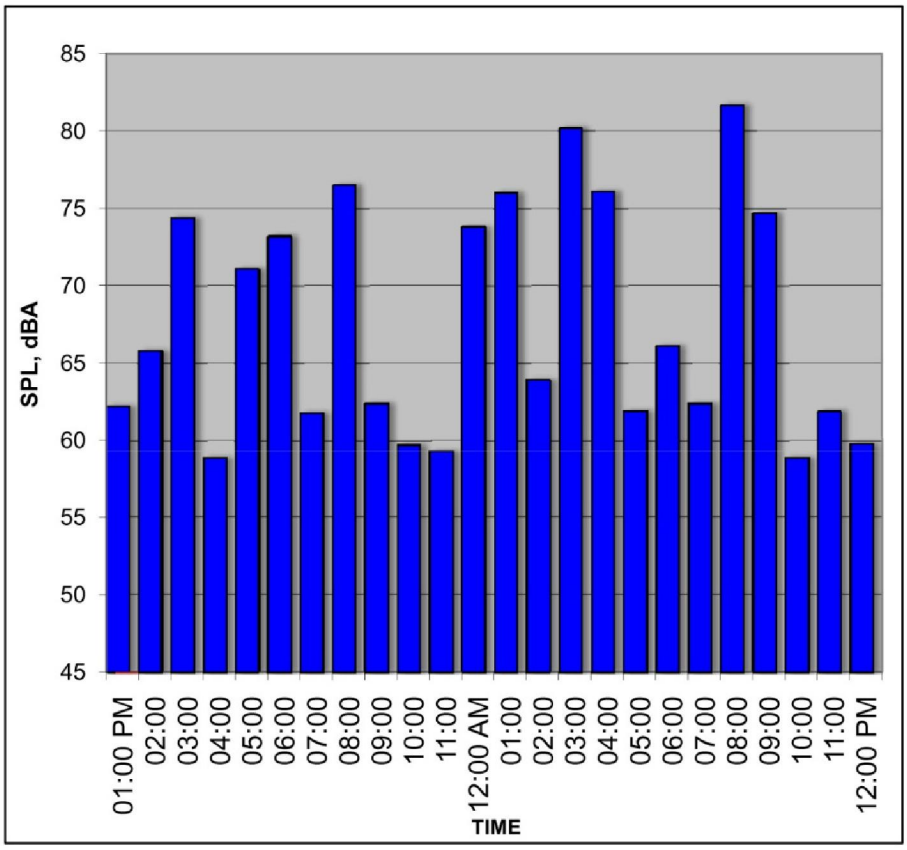
TIME	HNL, dB(A)
01:00 - 02:00 PM	66.1
02:00 - 03:00 PM	66.5
03:00 - 04:00 PM	66.3
04:00 - 05:00 PM	67.3
05:00 - 06:00 PM	67.1
06:00 - 07:00 PM	66.4
07:00 - 08:00 PM	67.5
08:00 - 09:00 PM	65.9
09:00 - 10:00 PM	66.4
10:00 - 11:00 PM	64.9
11:00 - 12:00 AM	63.9
12:00 - 01:00 AM	63.3
01:00 - 02:00 AM	60.1
02:00 - 03:00 AM	62.8
03:00 - 04:00 AM	63.1
04:00 - 05:00 AM	61.4
05:00 - 06:00 AM	63.2
06:00 - 07:00 AM	66.8
07:00 - 08:00 AM	69.4
08:00 - 09:00 AM	68.7
09:00 - 10:00 AM	67.4
10:00 - 11:00 AM	65.9
11:00 - 12:00 PM	66.3
12:00 - 01:00 PM	65.5
CNEL:	71.2

Notes:
Refer to field data sheet

Figure F1-4G Hourly Noise Level Measurement Data at Location N-19

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	**SCIG**		
Address:	**LEEWARD BAY MARINA**	**Date:**	**1/17/08-1/18/08**
Location:	**BOAT SLIP FACING RAILROAD**		
Noise Sources:	**TRAFFIC, TRAINS, MARINA NOISE, INDUSTRIAL NOISE**	**Position:**	**N-20**



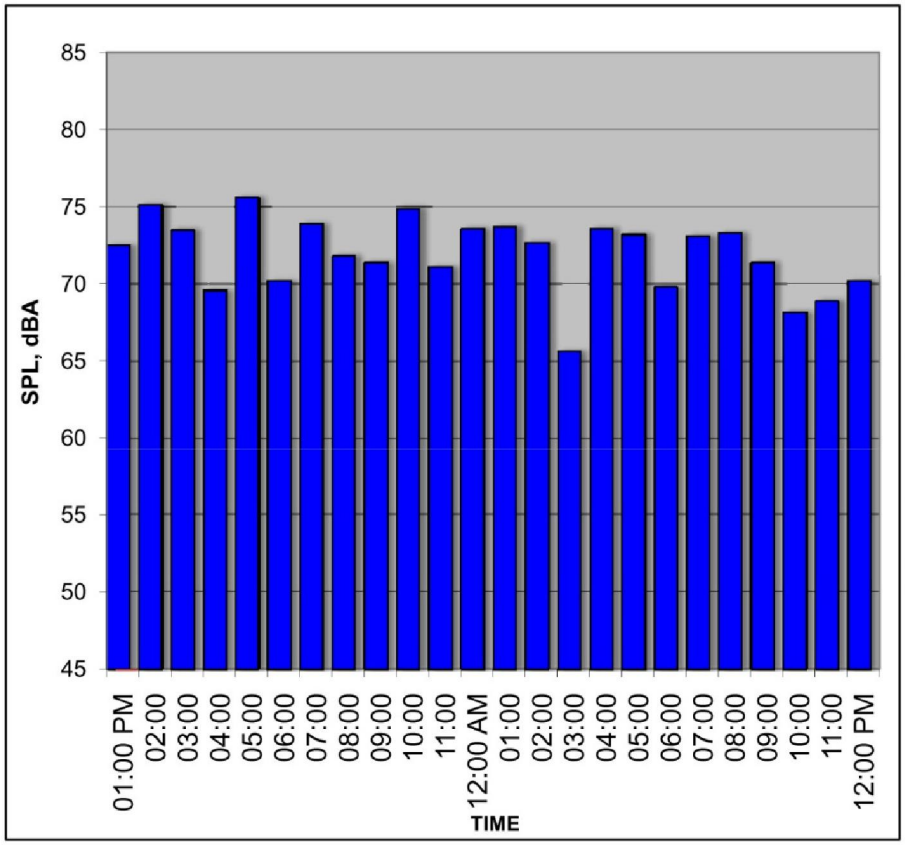
TIME	HNL, dB(A)
01:00 - 02:00 PM	62.2
02:00 - 03:00 PM	65.8
03:00 - 04:00 PM	74.4
04:00 - 05:00 PM	58.9
05:00 - 06:00 PM	71.1
06:00 - 07:00 PM	73.2
07:00 - 08:00 PM	61.8
08:00 - 09:00 PM	76.5
09:00 - 10:00 PM	62.4
10:00 - 11:00 PM	59.7
11:00 - 12:00 AM	59.3
12:00 - 01:00 AM	73.8
01:00 - 02:00 AM	76.0
02:00 - 03:00 AM	63.9
03:00 - 04:00 AM	80.2
04:00 - 05:00 AM	76.1
05:00 - 06:00 AM	61.9
06:00 - 07:00 AM	66.1
07:00 - 08:00 AM	62.4
08:00 - 09:00 AM	81.7
09:00 - 10:00 AM	74.7
10:00 - 11:00 AM	58.9
11:00 - 12:00 PM	61.9
12:00 - 01:00 PM	59.8
CNEL:	80.3

Notes:
Refer to field data sheet

Figure F1-4H Hourly Noise Level Measurement Data at Location N-20

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	SCIG		
Address:	ISLAND YACHT MARINA	Date:	1/15/08-
Location:	BOAT SLIP FACING TI FRWY BRIDGE & R/R BRIDGE AT CERRITOS CHANNEL		1/16/08
Noise		Position:	N-21
Sources:	TRAFFIC, TRAINS, MARINA NOISE, INDUSTRIAL NOISE		



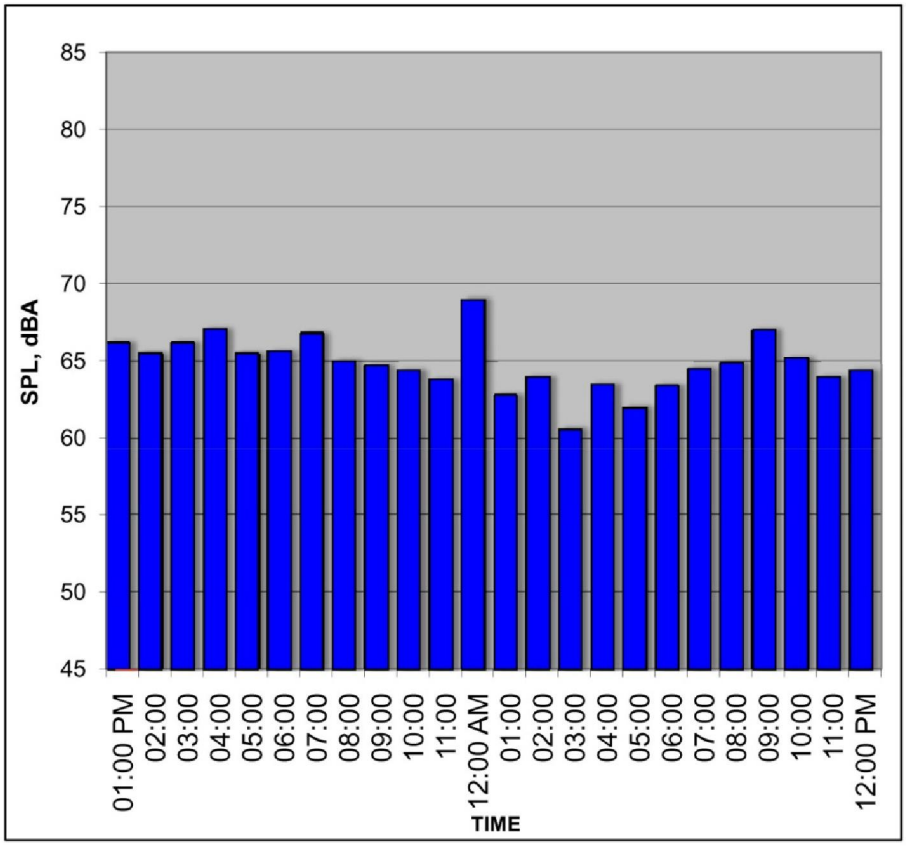
TIME	HNL, dB(A)
01:00 - 02:00 PM	72.5
02:00 - 03:00 PM	75.1
03:00 - 04:00 PM	73.5
04:00 - 05:00 PM	69.6
05:00 - 06:00 PM	75.6
06:00 - 07:00 PM	70.2
07:00 - 08:00 PM	73.9
08:00 - 09:00 PM	71.8
09:00 - 10:00 PM	71.4
10:00 - 11:00 PM	74.9
11:00 - 12:00 AM	71.1
12:00 - 01:00 AM	73.6
01:00 - 02:00 AM	73.7
02:00 - 03:00 AM	72.7
03:00 - 04:00 AM	65.6
04:00 - 05:00 AM	73.6
05:00 - 06:00 AM	73.2
06:00 - 07:00 AM	69.8
07:00 - 08:00 AM	73.1
08:00 - 09:00 AM	73.3
09:00 - 10:00 AM	71.4
10:00 - 11:00 AM	68.2
11:00 - 12:00 PM	68.9
12:00 - 01:00 PM	70.2
CNEL:	79.3

Notes:
Refer to field data sheet

Figure F1-4l Hourly Noise Level Measurement Data at Location N-21

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	**SCIG**		
Address:	**1710 MAURETANIA ST**	**Date:**	**4/26/11-**
Location:	**FRONT YARD OF PROPERTY FACING ALAMEDA ST AND CORRIDOR**		**4/27/11**
Noise Sources:	**TRAFFIC, TRAINS, INDUSTRIAL NOISE**	**Position:**	**N-29**



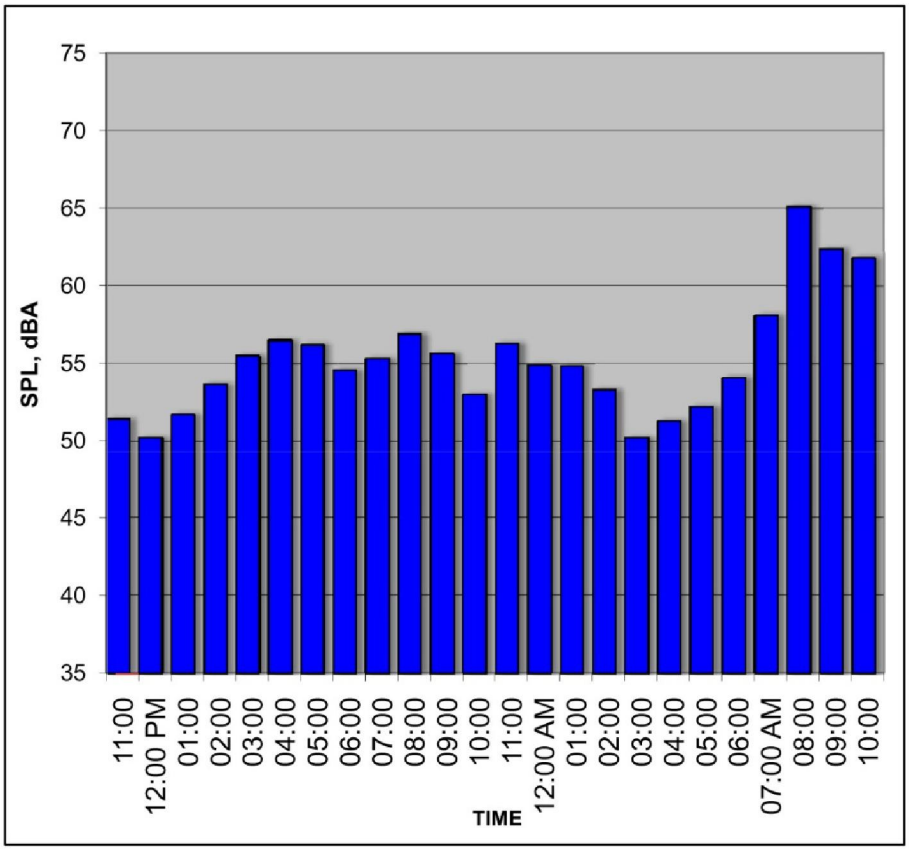
TIME	HNL, dB(A)
01:00 - 02:00 PM	66.2
02:00 - 03:00 PM	65.5
03:00 - 04:00 PM	66.2
04:00 - 05:00 PM	67.1
05:00 - 06:00 PM	65.5
06:00 - 07:00 PM	65.6
07:00 - 08:00 PM	66.8
08:00 - 09:00 PM	65.0
09:00 - 10:00 PM	64.7
10:00 - 11:00 PM	64.4
11:00 - 12:00 AM	63.8
12:00 - 01:00 AM	69.0
01:00 - 02:00 AM	62.8
02:00 - 03:00 AM	64.0
03:00 - 04:00 AM	60.6
04:00 - 05:00 AM	63.5
05:00 - 06:00 AM	62.0
06:00 - 07:00 AM	63.4
07:00 - 08:00 AM	64.5
08:00 - 09:00 AM	64.9
09:00 - 10:00 AM	67.0
10:00 - 11:00 AM	65.2
11:00 - 12:00 PM	64.0
12:00 - 01:00 PM	64.4
CNEL:	71.3

Notes:
Refer to field data sheet

Figure F1-4J Hourly Noise Level Measurement Data at Location N-29

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	SCIG		
Address:	STEPHENS MIDDLE SCHOOL	Date:	2/14/08-2/15/08
Location:	PLAYGROUND AT CLASSROOM PC2		
Noise Sources:	STUDENTS AT PLAYGROUND, LOCAL TRAFFIC TRAINS, ICTF	Position:	N-30



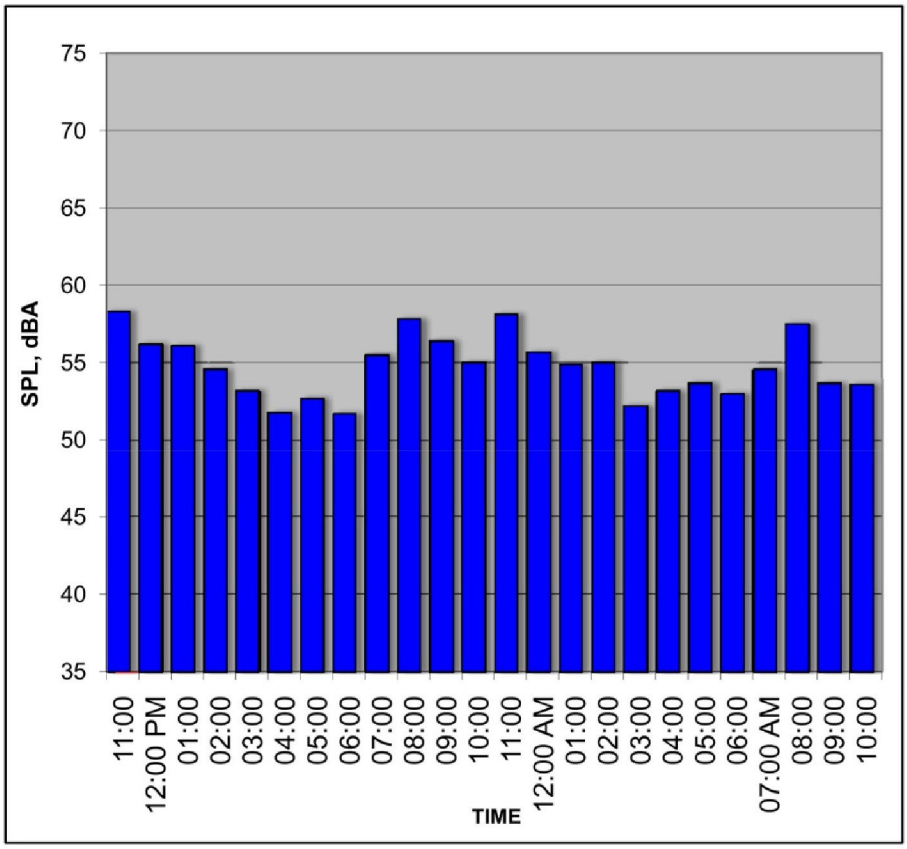
TIME	HNL, dB(A)
11:00 - 12:00 PM	51.4
12:00 - 01:00 PM	50.2
01:00 - 02:00 PM	51.7
02:00 - 03:00 PM	53.7
03:00 - 04:00 PM	55.5
04:00 - 05:00 PM	56.5
05:00 - 06:00 PM	56.2
06:00 - 07:00 PM	54.6
07:00 - 08:00 PM	55.3
08:00 - 09:00 PM	56.9
09:00 - 10:00 PM	55.6
10:00 - 11:00 PM	53.0
11:00 - 12:00 AM	56.3
12:00 - 01:00 AM	54.9
01:00 - 02:00 AM	54.8
02:00 - 03:00 AM	53.3
03:00 - 04:00 AM	50.2
04:00 - 05:00 AM	51.3
05:00 - 06:00 AM	52.2
06:00 - 07:00 AM	54.1
07:00 - 08:00 AM	58.1
08:00 - 09:00 AM	65.1
09:00 - 10:00 AM	62.4
10:00 - 11:00 AM	61.8
CNEL:	61.5

Notes:
Refer to field data sheet

Figure F1-4K Hourly Noise Level Measurement Data at Location N-30

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	SCIG		
Address:	WEBSTER SCHOOL	Date:	2/14/08-2/15/08
Location:	PLAYGROUND AT CLASSROOM B-1		
Noise Sources:	STUDENTS AT PLAYGROUND, LOCAL TRAFFIC, TRAINS	Position:	N-31



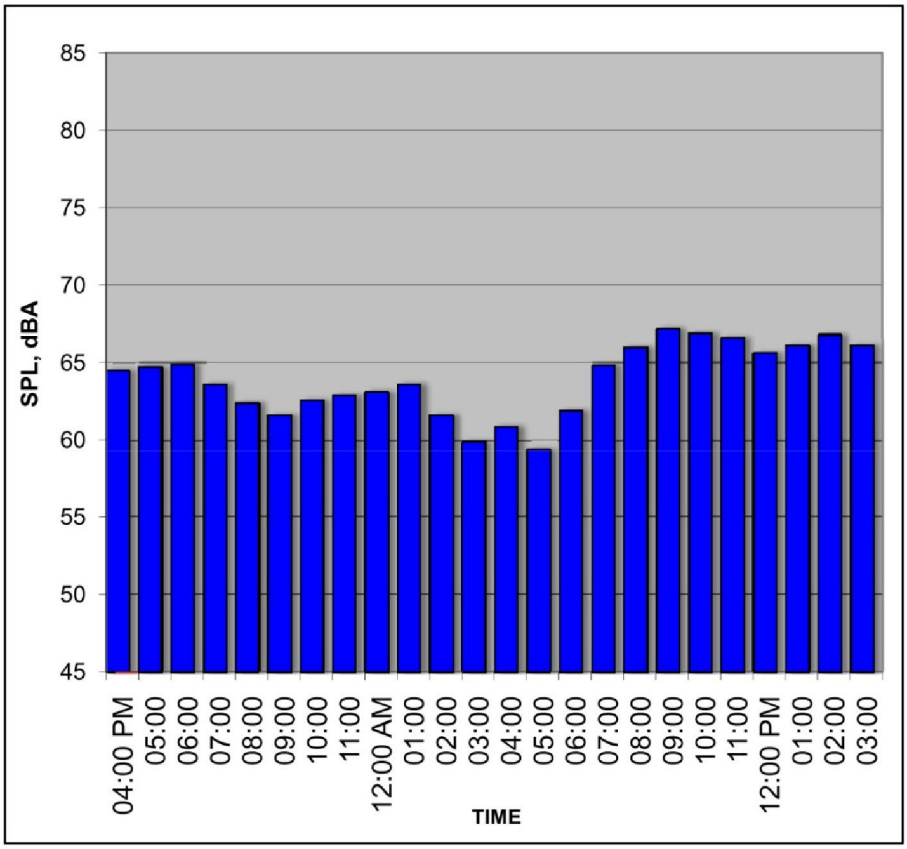
TIME	HNL, dB(A)
11:00 - 12:00 PM	58.3
12:00 - 01:00 PM	56.2
01:00 - 02:00 PM	56.1
02:00 - 03:00 PM	54.6
03:00 - 04:00 PM	53.2
04:00 - 05:00 PM	51.8
05:00 - 06:00 PM	52.7
06:00 - 07:00 PM	51.7
07:00 - 08:00 PM	55.5
08:00 - 09:00 PM	57.8
09:00 - 10:00 PM	56.4
10:00 - 11:00 PM	55.0
11:00 - 12:00 AM	58.1
12:00 - 01:00 AM	55.7
01:00 - 02:00 AM	54.9
02:00 - 03:00 AM	55.0
03:00 - 04:00 AM	52.2
04:00 - 05:00 AM	53.2
05:00 - 06:00 AM	53.7
06:00 - 07:00 AM	53.0
07:00 - 08:00 AM	54.6
08:00 - 09:00 AM	57.5
09:00 - 10:00 AM	53.7
10:00 - 11:00 AM	53.6
CNEL:	61.7

Notes:
Refer to field data sheet

Figure F1-4L Hourly Noise Level Measurement Data at Location N-31

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	**SCIG**		
Address:	**1619 CRUCES ST**	**Date:**	**4/28/11-4/29/11**
Location:	**FRONT YARD FACING INDUSTRIAL YARD**		
Noise Sources:	**TRAFFIC, TRAINS, INDUSTRIAL NOISE**	**Position:**	**N-32**



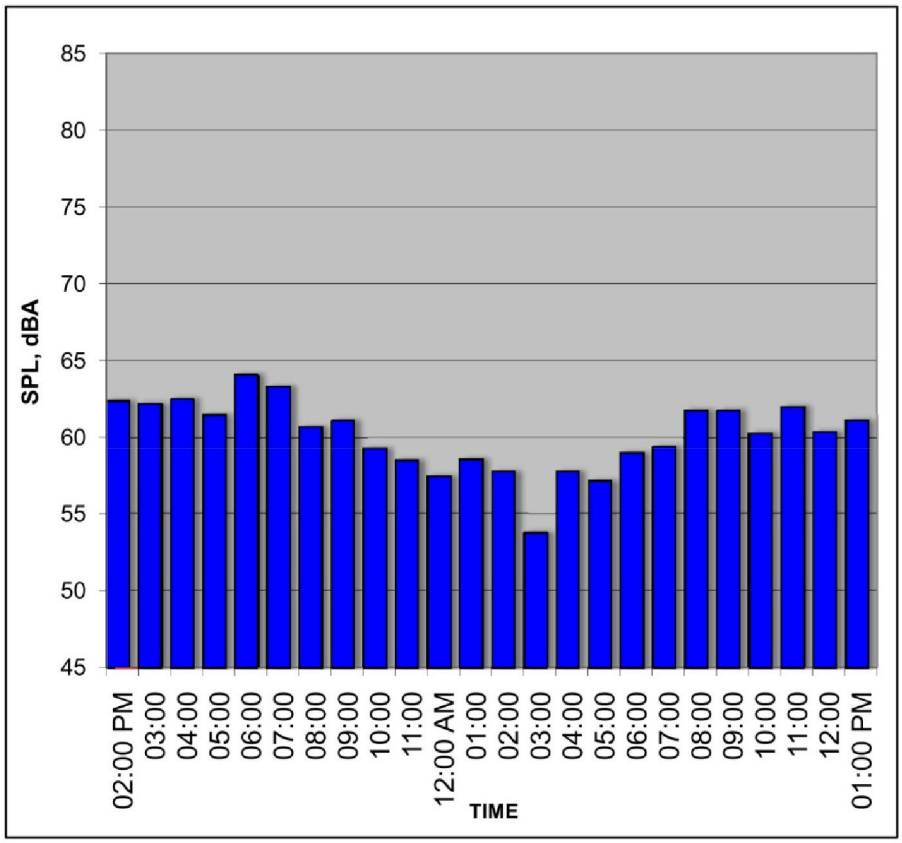
TIME	HNL, dB(A)
04:00 - 05:00 PM	64.5
05:00 - 06:00 PM	64.7
06:00 - 07:00 PM	64.9
07:00 - 08:00 PM	63.6
08:00 - 09:00 PM	62.4
09:00 - 10:00 PM	61.6
10:00 - 11:00 PM	62.6
11:00 - 12:00 AM	62.9
12:00 - 01:00 AM	63.1
01:00 - 02:00 AM	63.6
02:00 - 03:00 AM	61.6
03:00 - 04:00 AM	59.9
04:00 - 05:00 AM	60.9
05:00 - 06:00 AM	59.4
06:00 - 07:00 AM	61.9
07:00 - 08:00 AM	64.8
08:00 - 09:00 AM	66.0
09:00 - 10:00 AM	67.2
10:00 - 11:00 AM	66.9
11:00 - 12:00 PM	66.6
12:00 - 01:00 PM	65.6
01:00 - 02:00 PM	66.1
02:00 - 03:00 PM	66.8
03:00 - 04:00 PM	66.1
CNEL:	69.3

Notes:
Refer to field data sheet

Figure F1-4M Hourly Noise Level Measurement Data at Location N-32

MEASUREMENT DATA - HOURLY NOISE LEVELS

Project:	SCIG		
Address:	21843 SALMON AVE	Date:	4/27/11-4/28/11
Location:	REAR YARD OF PROPERTY FACING ALAMEDA ST AND CORRIDOR		
Noise Sources:	TRAFFIC, TRAINS, INDUSTRIAL NOISE	Position:	N-33



TIME	HNL, dB(A)
02:00 - 03:00 PM	62.4
03:00 - 04:00 PM	62.2
04:00 - 05:00 PM	62.5
05:00 - 06:00 PM	61.5
06:00 - 07:00 PM	64.1
07:00 - 08:00 PM	63.3
08:00 - 09:00 PM	60.7
09:00 - 10:00 PM	61.1
10:00 - 11:00 PM	59.3
11:00 - 12:00 AM	58.5
12:00 - 01:00 AM	57.5
01:00 - 02:00 AM	58.6
02:00 - 03:00 AM	57.8
03:00 - 04:00 AM	53.8
04:00 - 05:00 AM	57.8
05:00 - 06:00 AM	57.2
06:00 - 07:00 AM	59.0
07:00 - 08:00 AM	59.4
08:00 - 09:00 AM	61.8
09:00 - 10:00 AM	61.8
10:00 - 11:00 AM	60.3
11:00 - 12:00 PM	62.0
12:00 - 01:00 PM	60.4
01:00 - 02:00 PM	61.1
CNEL:	65.7

Notes:
Refer to field data sheet

Figure F1-4N Hourly Noise Level Measurement Data at Location N-33

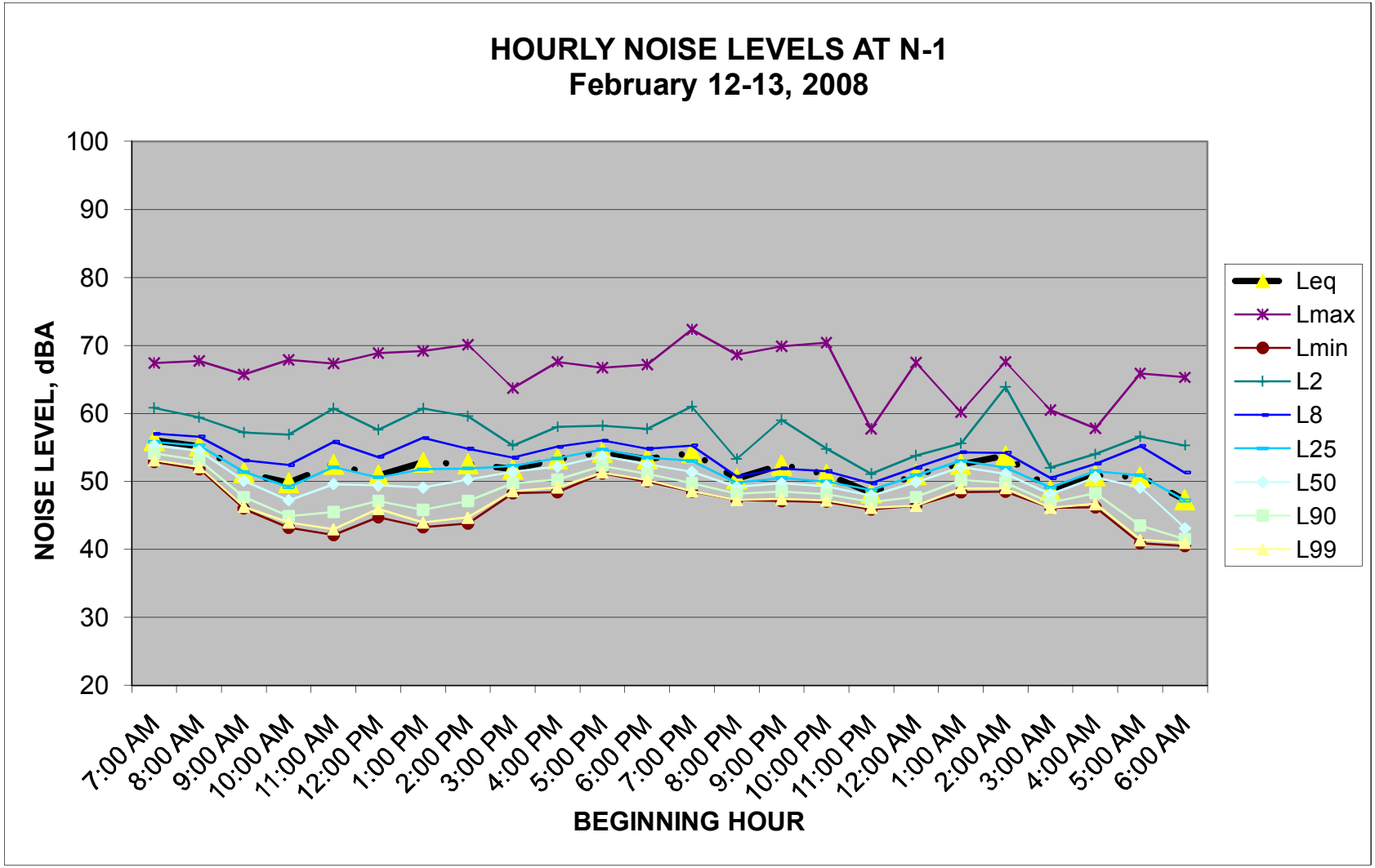


Figure F1-5A Hourly Noise Level and Statistical Data at Location N-1

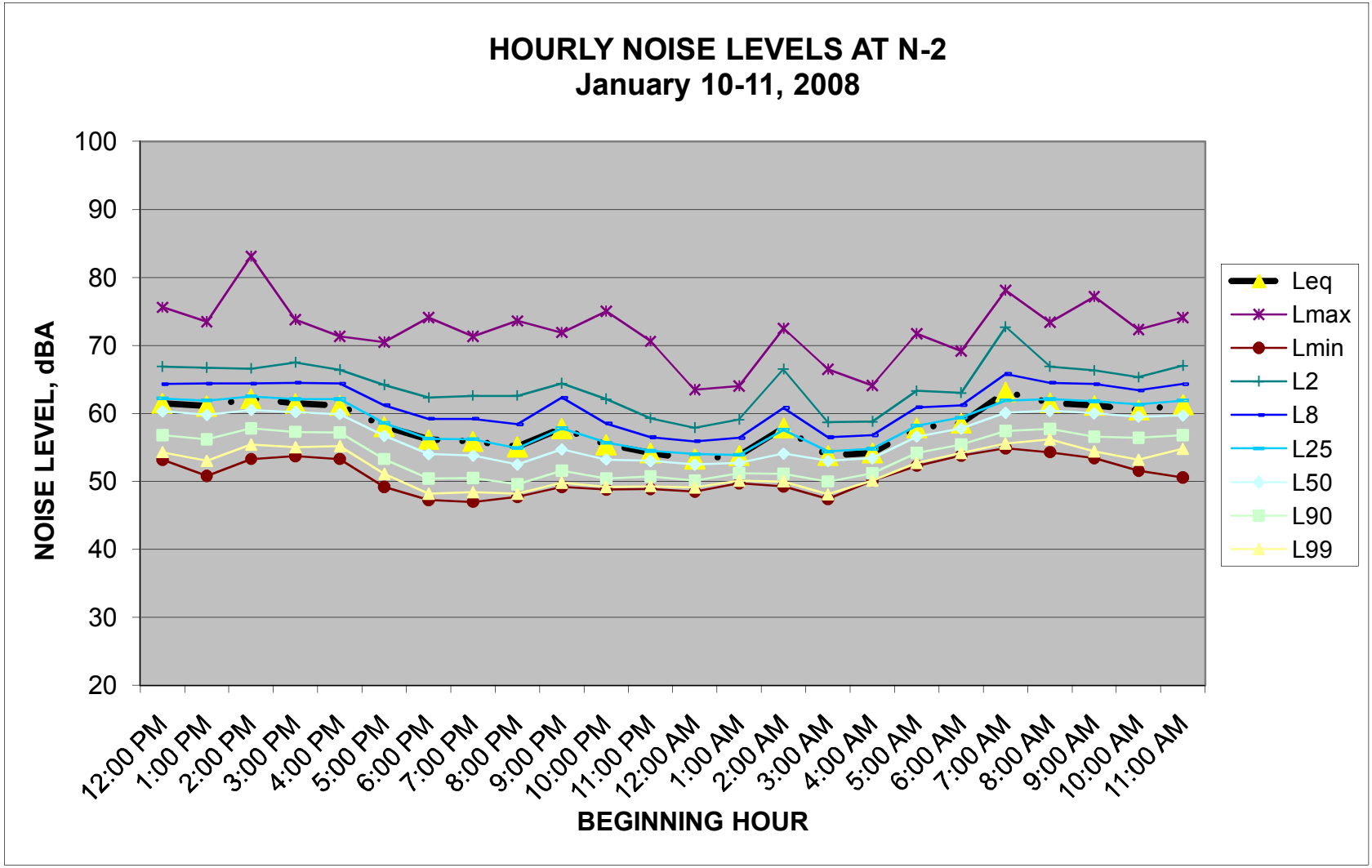


Figure F1-5B Hourly Noise Level and Statistical Data at Location N-2

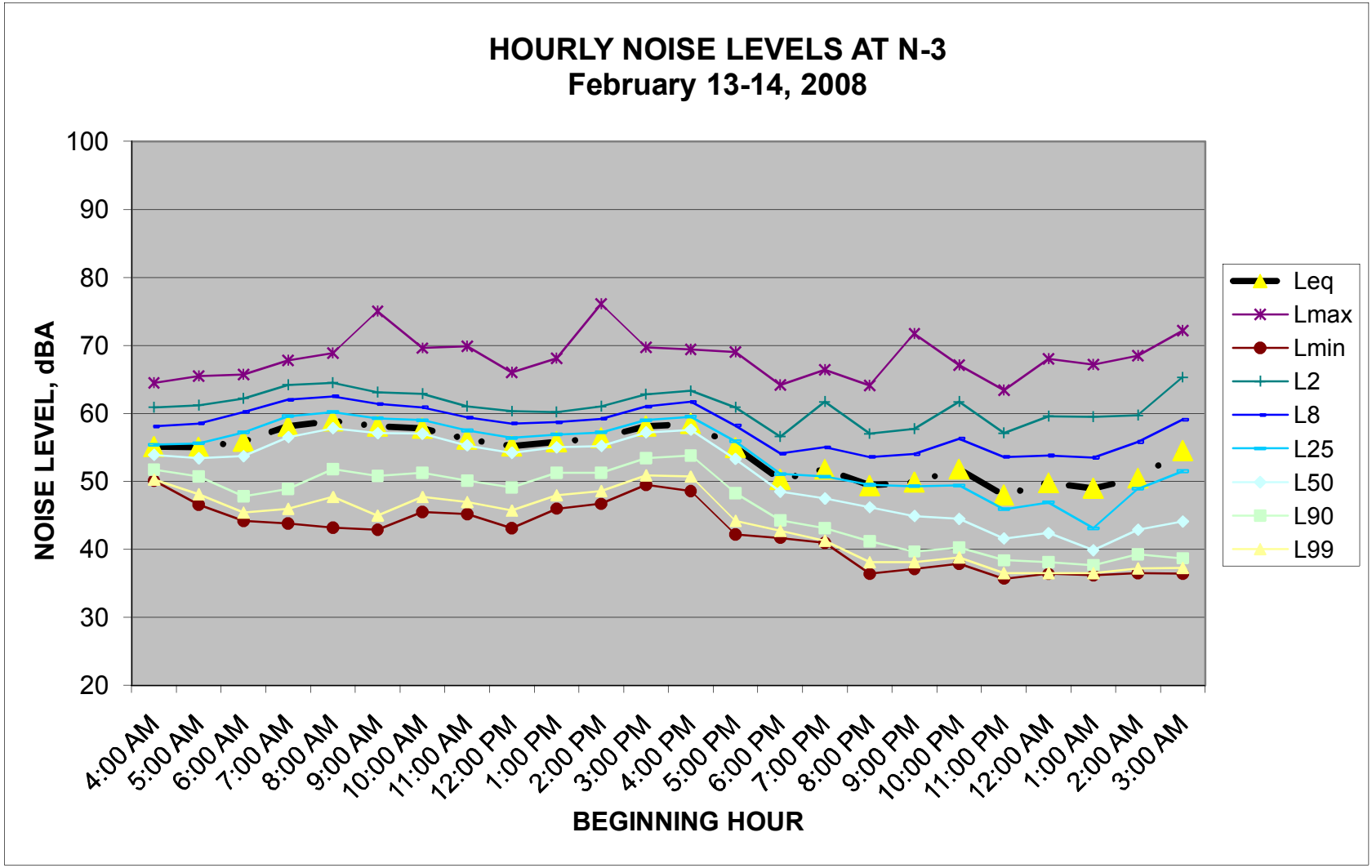


Figure F1-5C Hourly Noise Level and Statistical Data at Location N-3

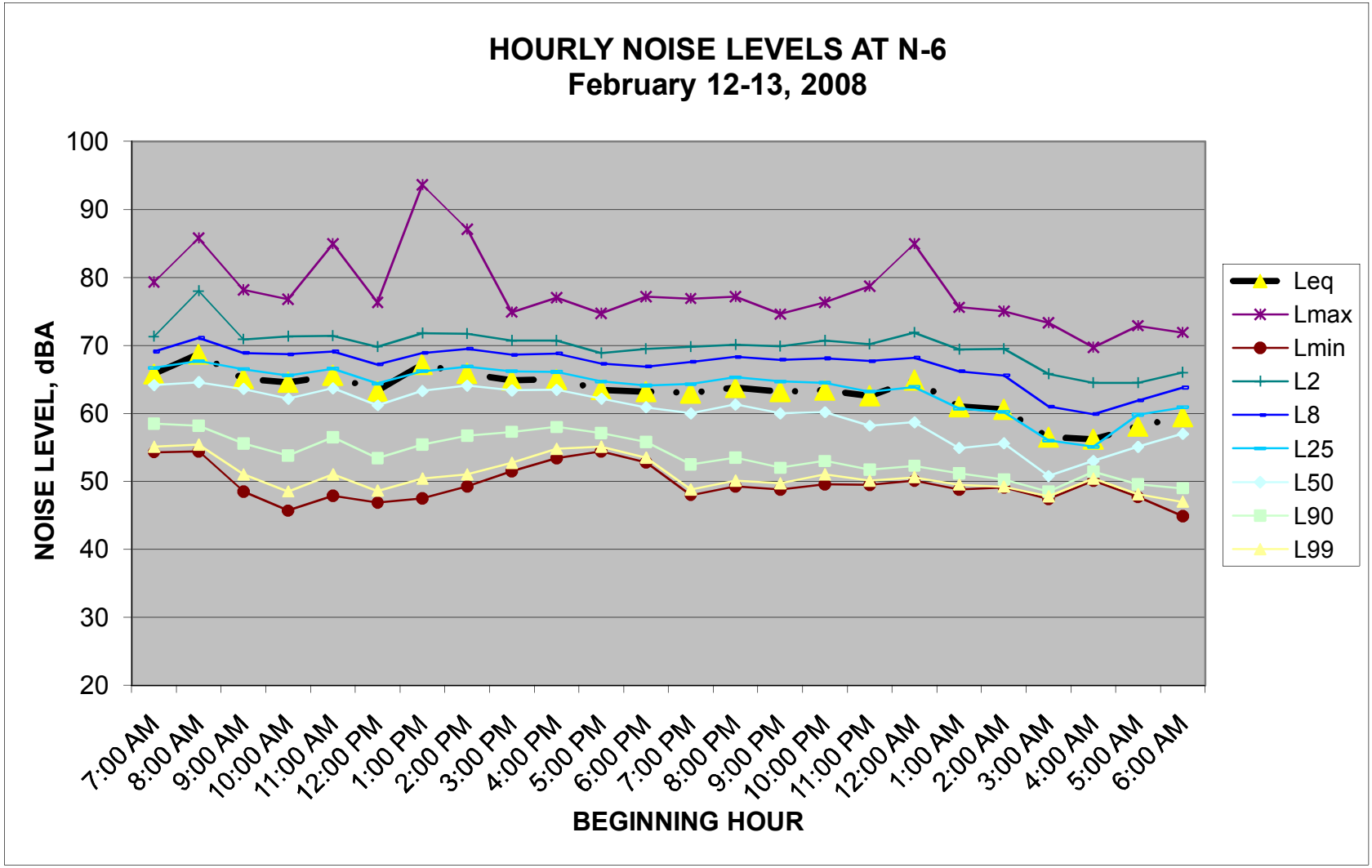


Figure F1-5D Hourly Noise Level and Statistical Data at Location N-6

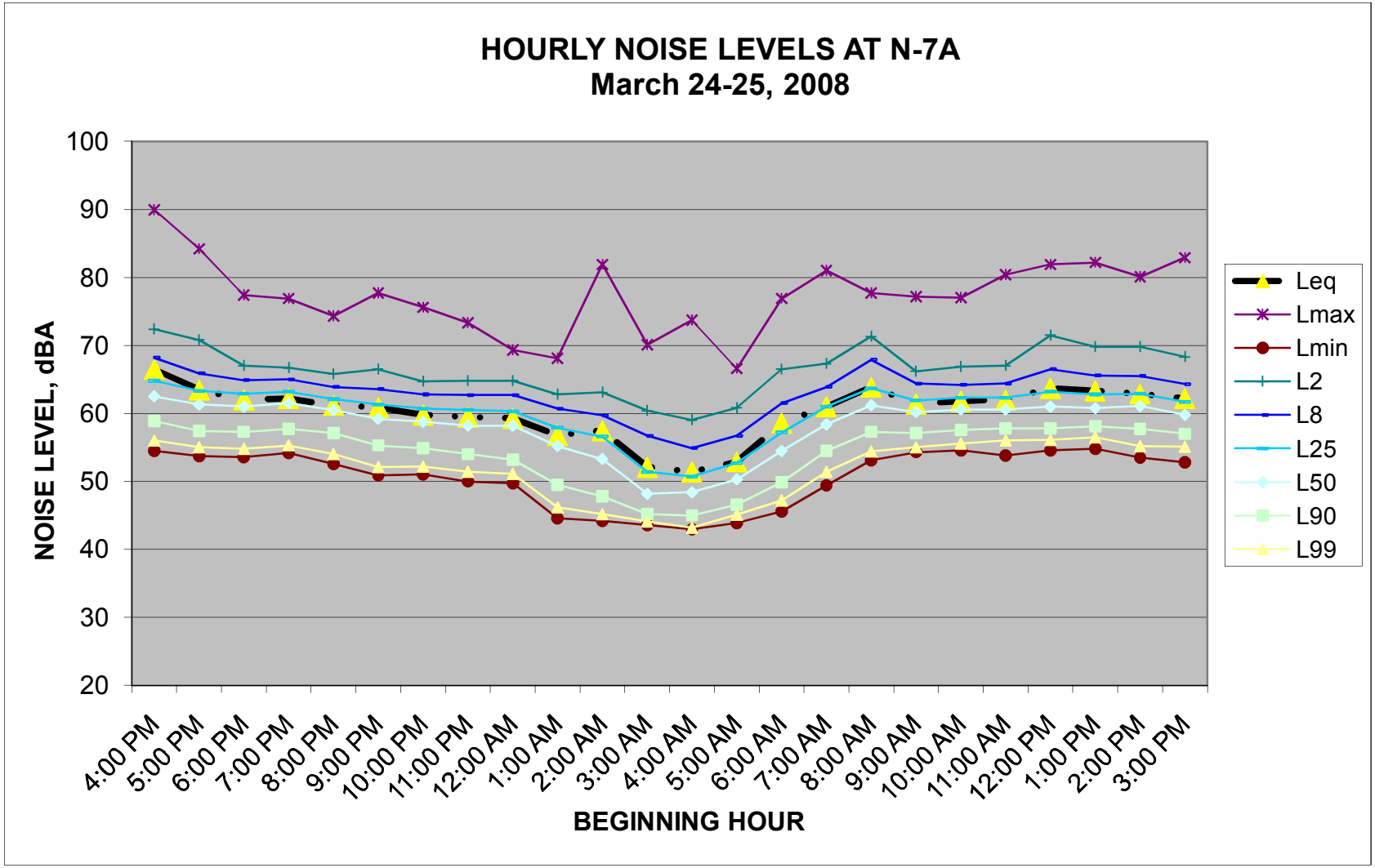


Figure F1-5E Hourly Noise Level and Statistical Data at Location N-7A

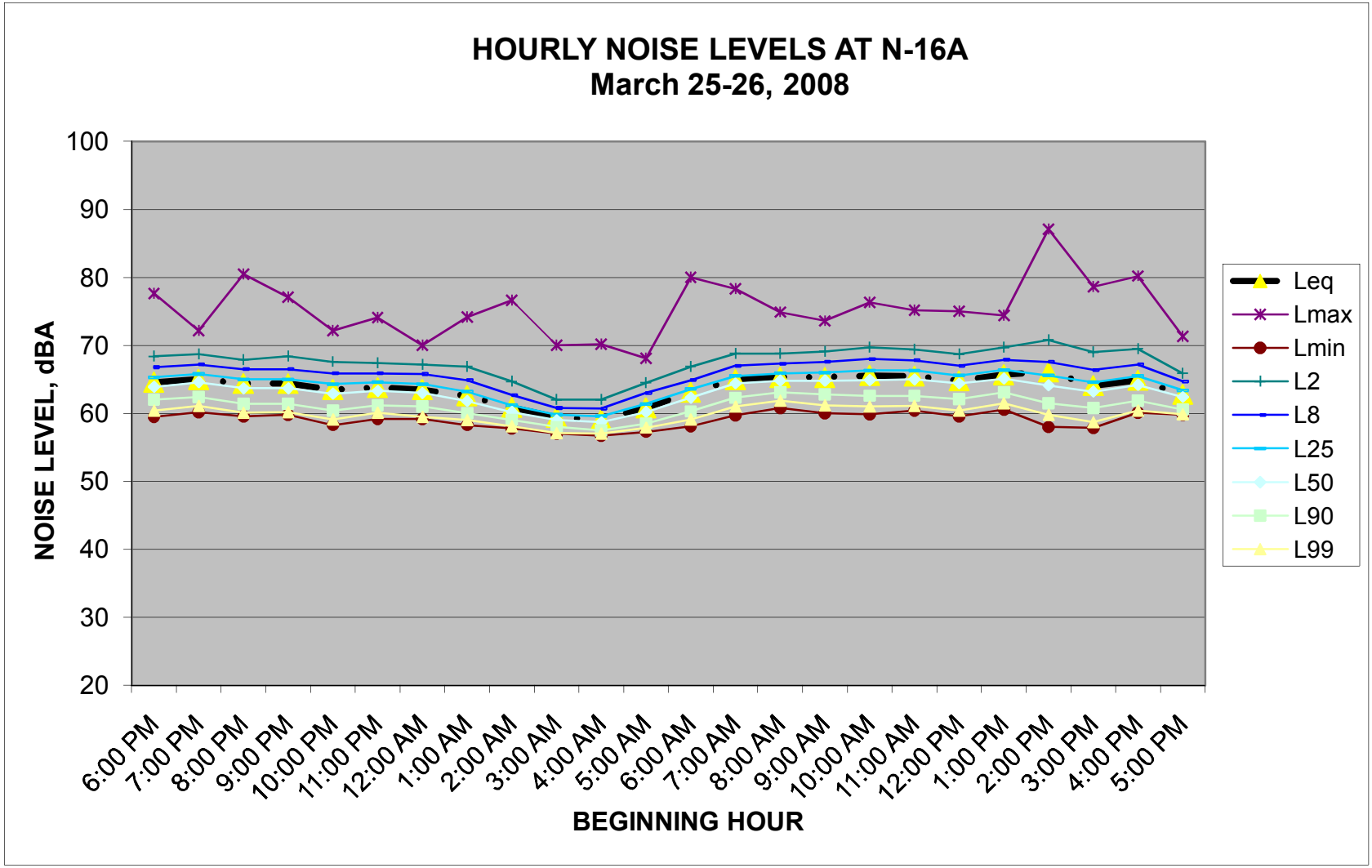


Figure F1-5F Hourly Noise Level and Statistical Data at Location N-16A

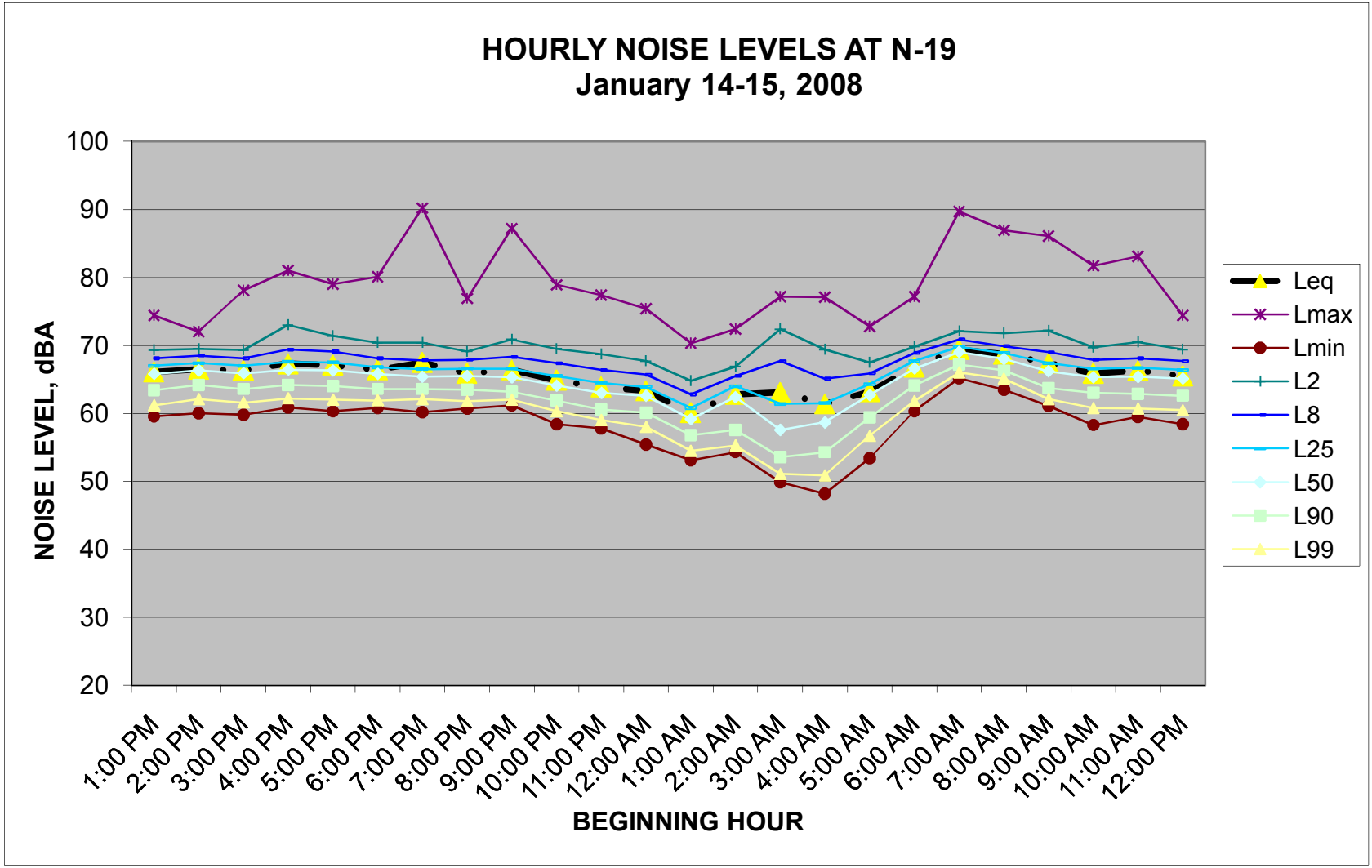


Figure F1-5G Hourly Noise Level and Statistical Data at Location N-19

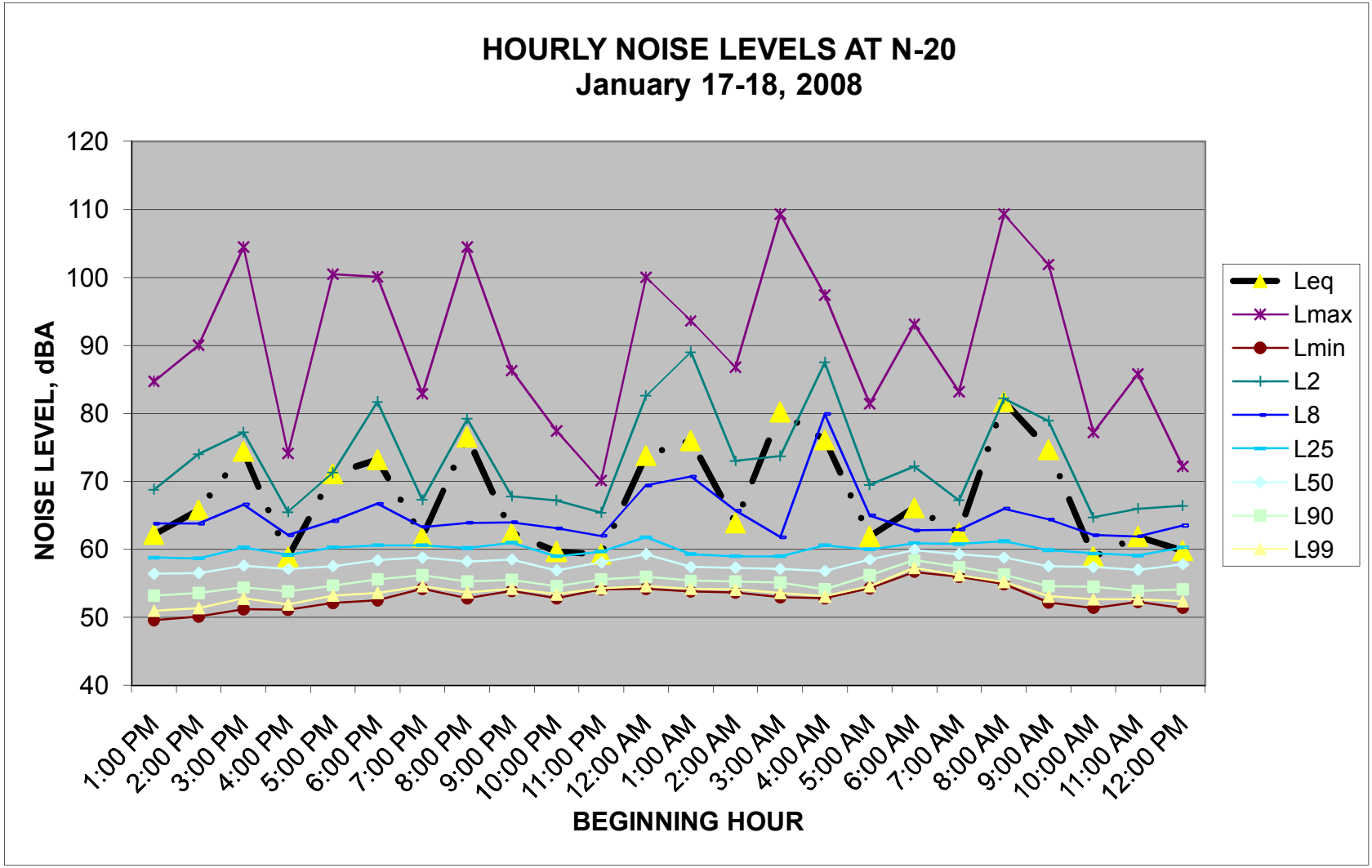


Figure F1-5H Hourly Noise Level and Statistical Data at Location N-20

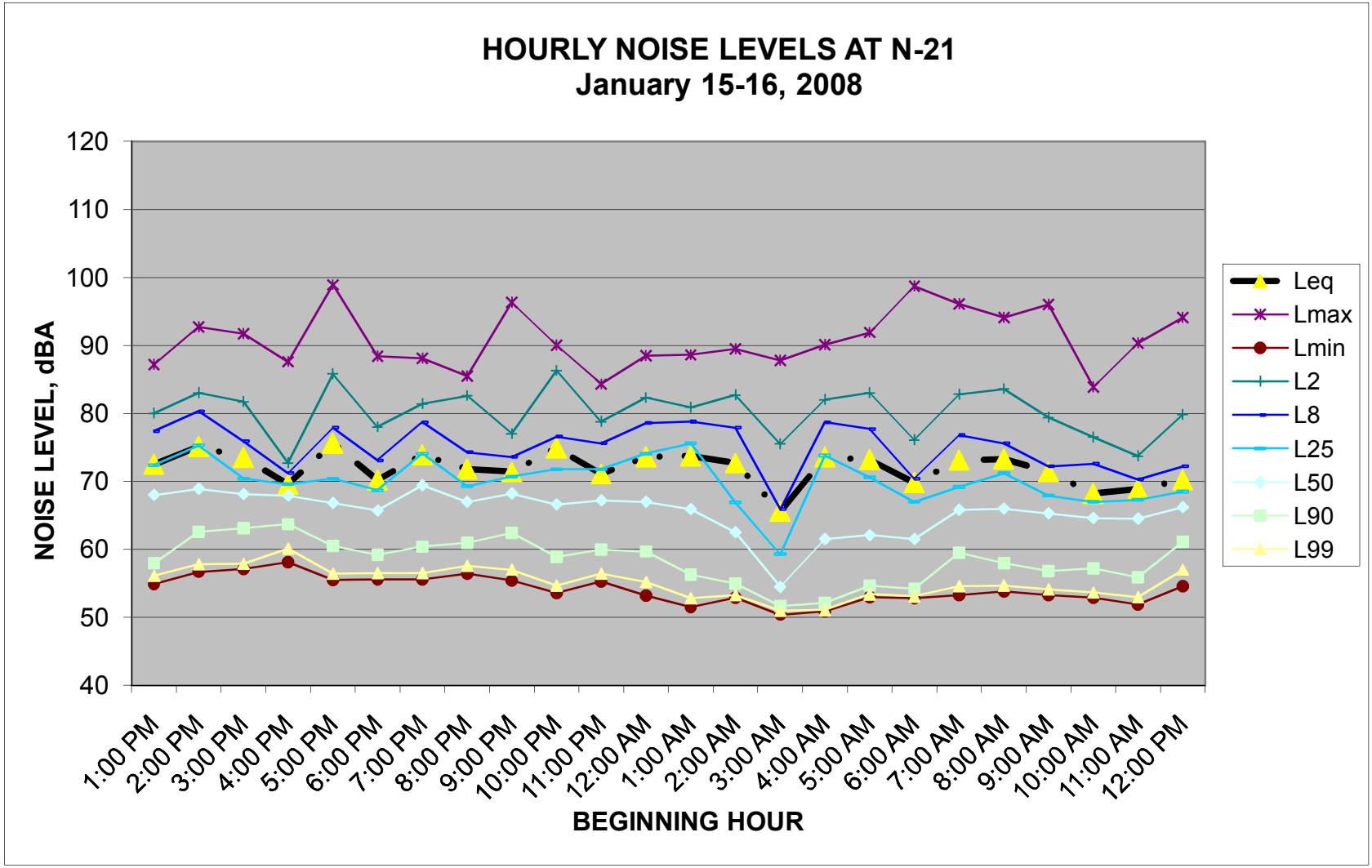


Figure F1-5l Hourly Noise Level and Statistical Data at Location N-21

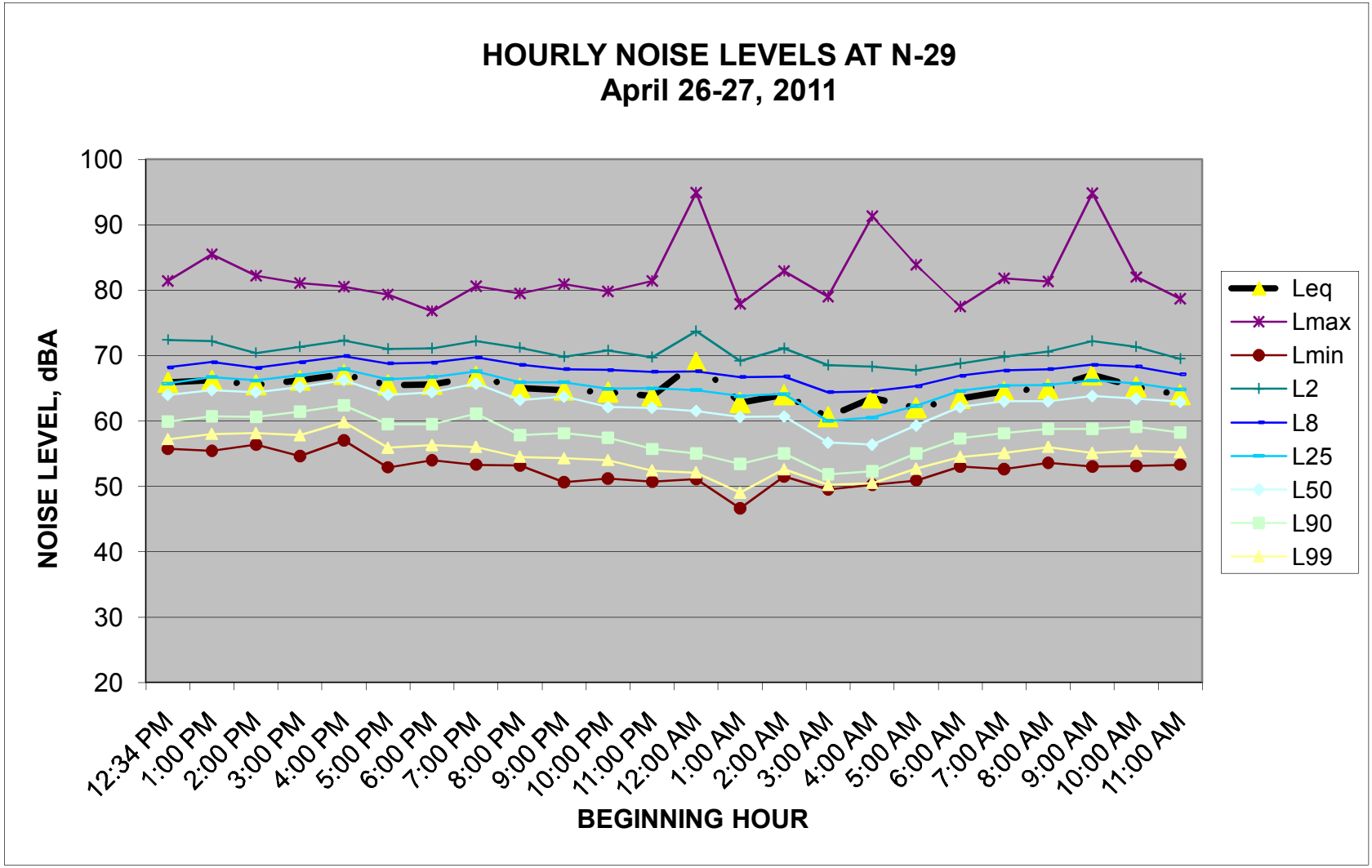


Figure F1-5J Hourly Noise Level and Statistical Data at Location N-29

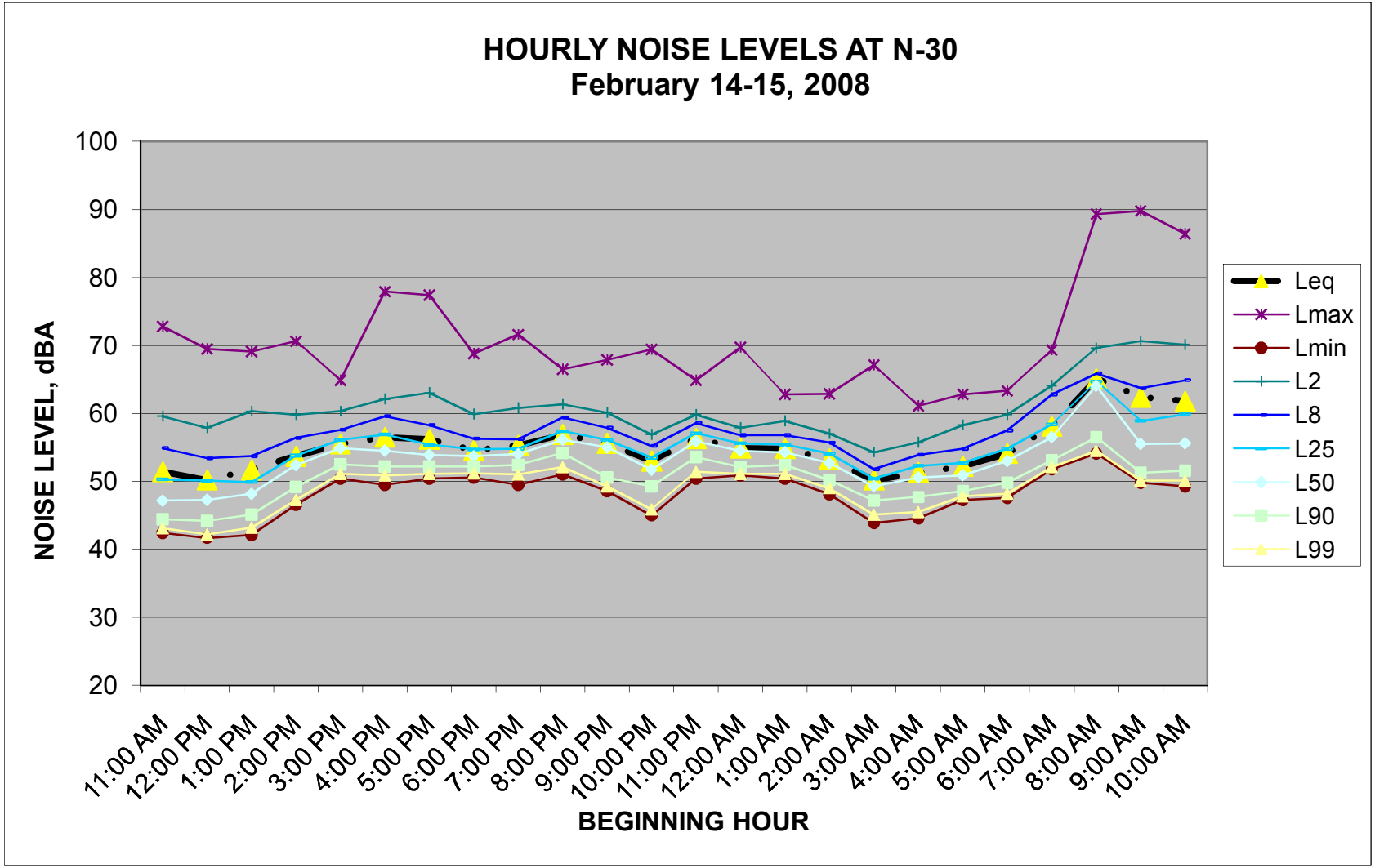


Figure F1-5K Hourly Noise Level and Statistical Data at Location N-30

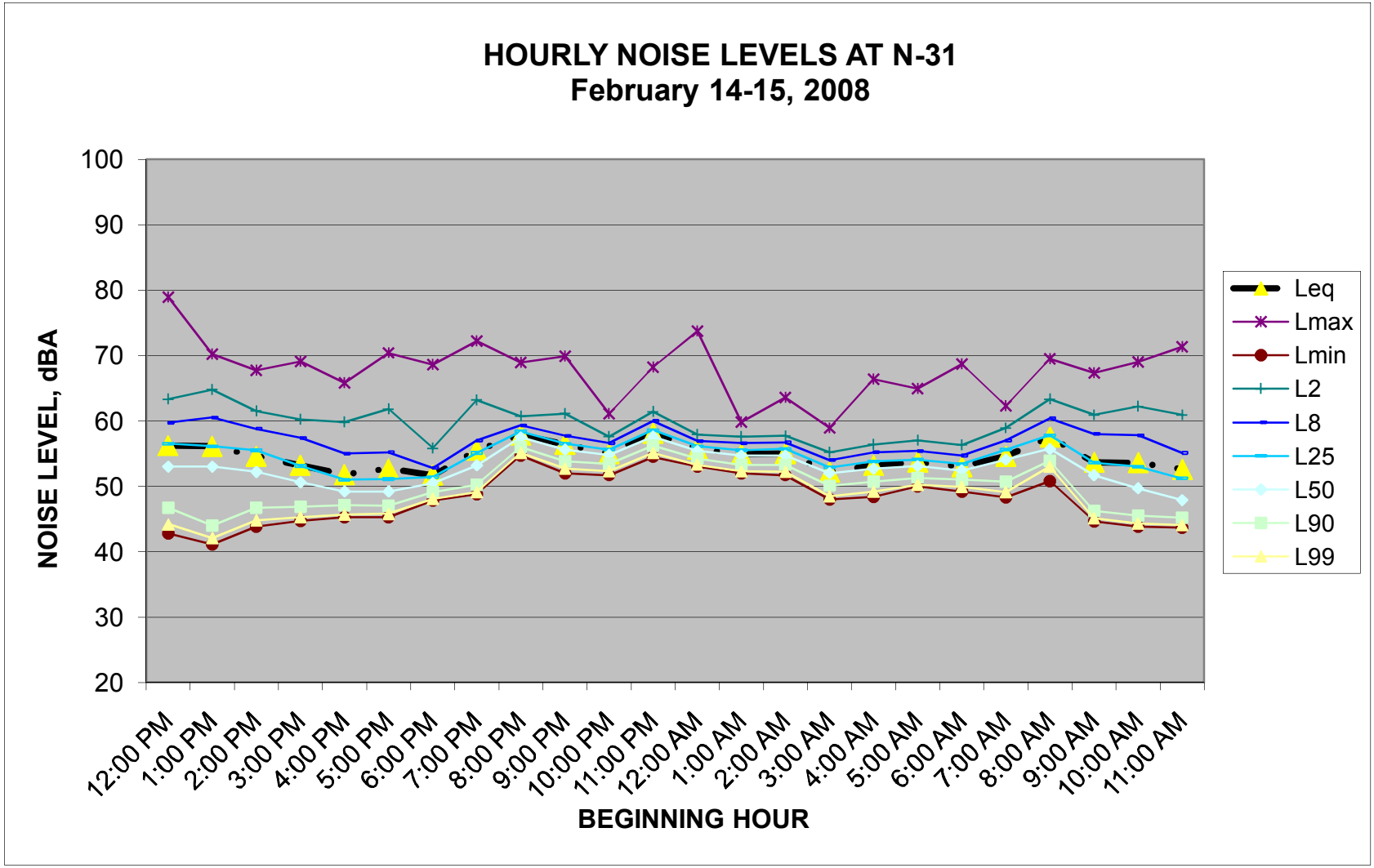


Figure F1-5L Hourly Noise Level and Statistical Data at Location N-31

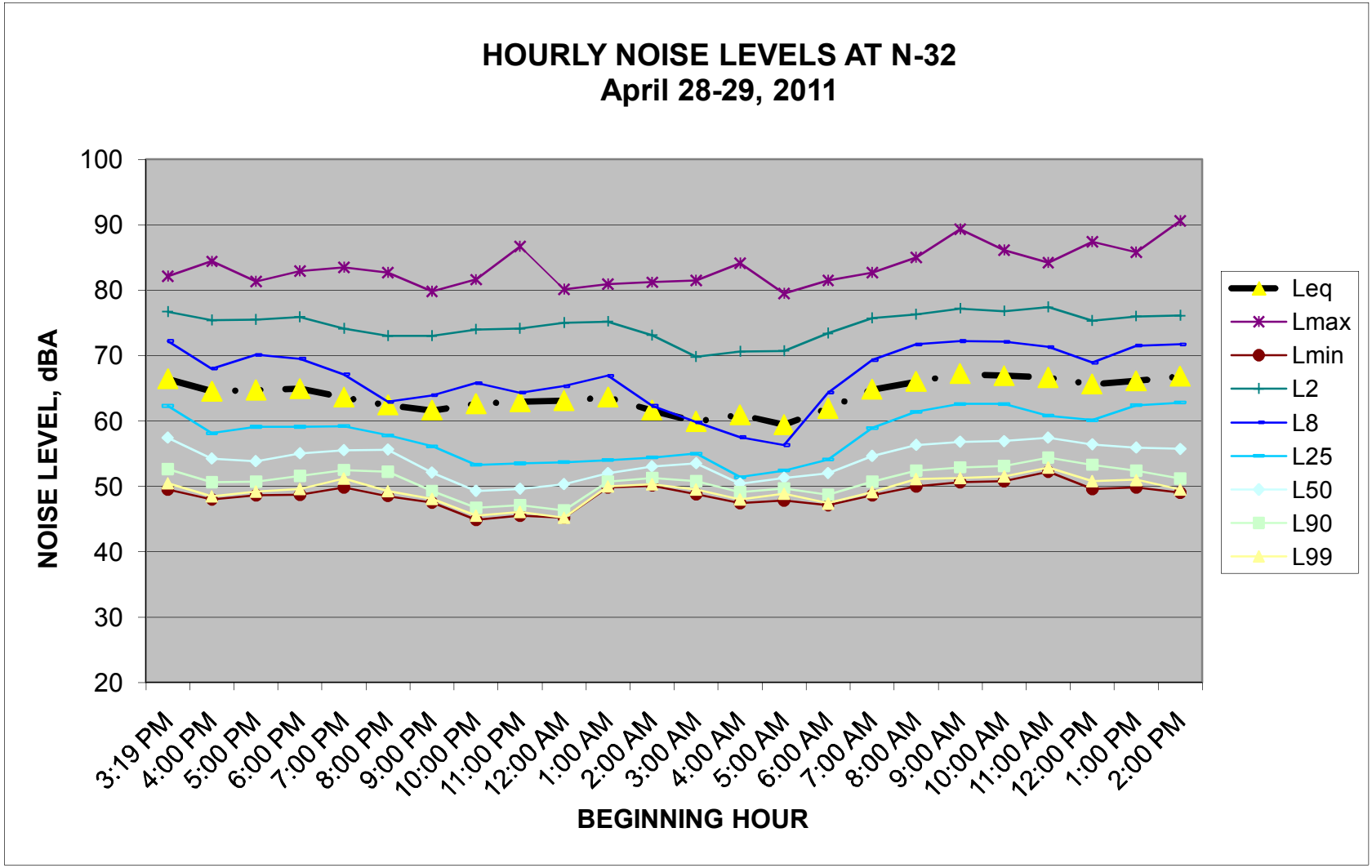


Figure F1-5M Hourly Noise Level and Statistical Data at Location N-32.

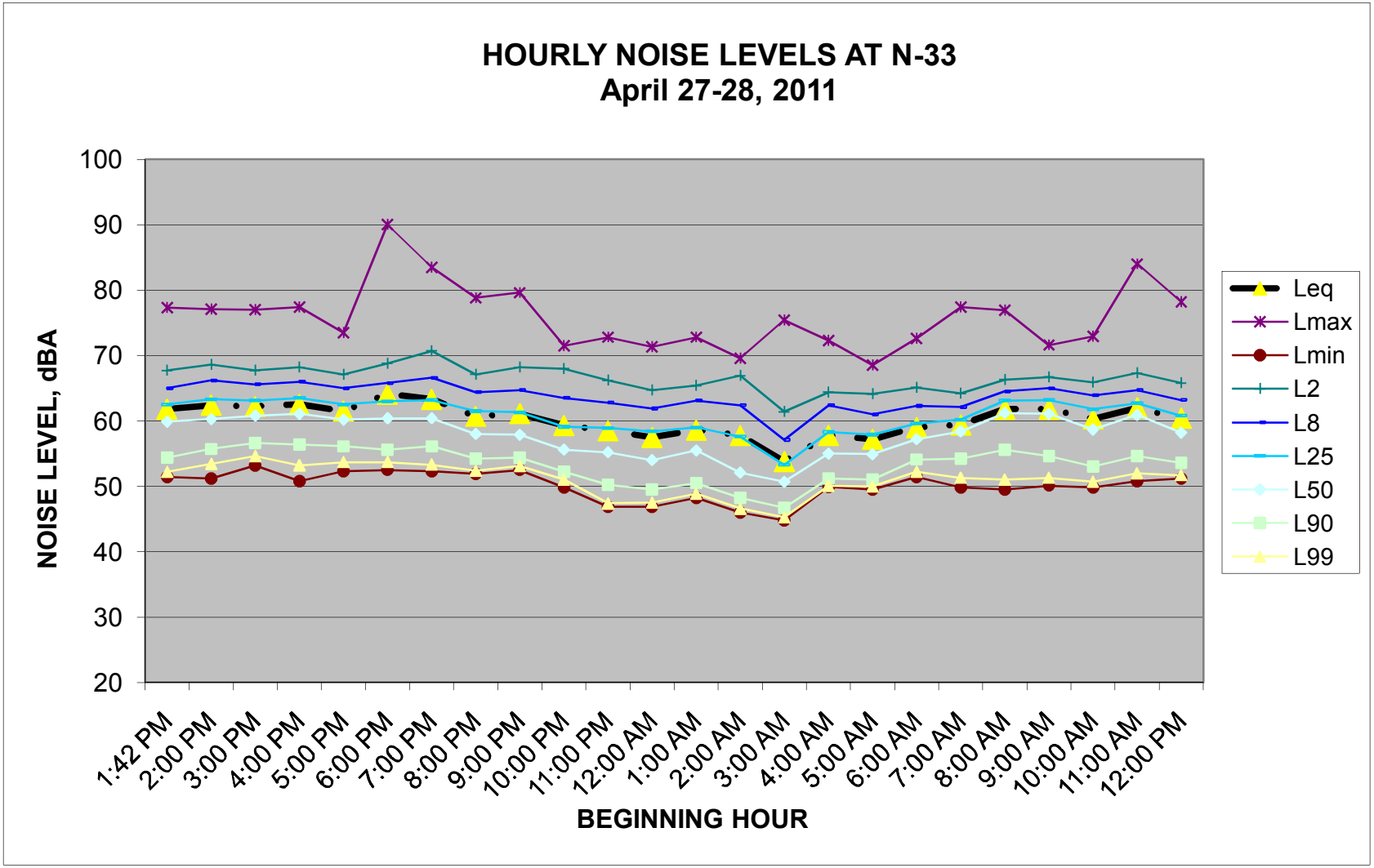


Figure F1-5N Hourly Noise Level and Statistical Data at Location N-33

2.3.4 Baseline Exterior Lmax and SEL Noise Levels at Long Term Receivers in Long Beach

SEL noise levels at long-term sensitive receivers were separated into daytime, evening, and nighttime time periods to further describe the existing noise environment. The ranges of the maximum noise levels (Lmax) and sound exposure levels (SEL) for each sensitive receiver in Long Beach are summarized in Table F1-5.

Residential and educational receivers in Long Beach included locations N1 through N3, N6, N7A, N30 and N31. The daytime Lmax at these locations had ranges of 59.9 to 78.4 dBA, 70.5 to 83.1 dBA, 64.2 to 80.7 dBA, 74.4 to 87.1 dBA, 73.6 to 89.9 dBA, 64.9 to 91.6 dBA, and 62.3 to 82.8 dBA, respectively. The evening Lmax ranged from 68.3 to 72.3 dBA, 71.3 to 73.6 dBA, 64.1 to 73.8 dBA, 74.6 to 78.1 dBA, 72.2 to 80.5 dBA, 66.5 to 71.6 dBA, and 68.9 to 72.2 dBA, at each respective location. The nighttime Lmax had ranges of 56.6 to 70.4 dBA, 63.5 to 75.0 dBA, 63.4 to 77.4 dBA, 69.7 to 78.7 dBA, 66.6 to 81.9 dBA, 61.1 to 69.7 dBA, and 58.9 to 73.7 dBA, respectively.

The ranges of daytime SELs at these same locations were 83.0 to 91.6 dBA, 91.7 to 98.8 dBA, 85.9 to 101.5 dBA, 97.8 to 104.3 dBA, 89.6 to 102.1 dBA, 85.7 to 100.7 dBA, and 87.3 to 93.1 dBA, respectively. The evening SELs ranged from 86.0 to 90.1 dBA, 90.7 to 93.3 dBA, 85.0 to 97.5 dBA, 98.6 to 102.0 dBA, 96.4 to 100.6 dBA, 90.8 to 92.5 dBA, and 91.1 to 93.4 dBA at each respective location. The nighttime SELs had ranges of 82.8 to 91.6 dBA, 88.9 to 94.2 dBA, 83.5 to 96.4 dBA, 91.8 to 101.5 dBA, 87.0 to 99.4 dBA, 85.8 to 91.9 dBA, and 87.8 to 93.7 dBA, respectively.

2.3.5 Baseline Exterior Lmax and SEL Noise Levels at Long Term Receivers in San Pedro & Wilmington

Residential receivers in San Pedro and Wilmington included locations N19, N29, and N32. The daytime Lmax at these locations had ranges of 71.1 to 89.7 dBA, 76.8 to 85.5 dBA, and 81.3 to 90.6 dBA, respectively. The evening Lmax ranged from 76.9 to 90.2 dBA, 79.5 to 80.9 dBA, and 79.8 to 83.5 dBA, at each respective location. The nighttime Lmax had ranges of 70.3 to 78.9 dBA, 77.5 to 94.9 dBA, and 79.5 to 86.7 dBA, respectively. The ranges of daytime SELs at these locations were 99.7 to 105.0 dBA, 99.6 to 102.7 dBA, and 100.1 to 102.8 dBA, respectively. The evening SELs ranged from 101.5 to 103.1 dBA, 100.3 to 102.4 dBA, and 97.2 to 99.2 dBA at each respective location. The nighttime SELs had ranges of 95.7 to 102.4 dBA, 96.2 to 104.6 dBA, and 95.0 to 99.2 dBA, respectively. The SELs at locations N29 and N32 were calculated using the Leq values plus 35.6 dBA.

The remaining long term sensitive receivers in San Pedro and Wilmington were located at the Leeward Bay Marina (N20) and the Island Yacht Marina (N21). The daytime Lmax at the marinas had ranges of 72.2 to 104.5 dBA, and 83.9 to 98.9 dBA, respectively. The evening Lmax ranged from 82.9 to 86.3 dBA, and 85.5 to 88.1 dBA, at the respective locations. The nighttime Lmax had ranges of 70.1 to 100.0 dBA, and 84.3 to 91.9 dBA, respectively. The ranges of daytime SELs at these locations were 92.5 to 110.2 dBA, and 103.8 to 111.2 dBA, respectively. The evening SELs ranged from 97.4 to 98.0 dBA, and 106.9 to 109.5 dBA at each respective location. The nighttime SELs had ranges of 94.9 to 111.7 dBA, and 101.2

to 110.5 dBA, respectively. A summary of the baseline Lmax and SEL at each long term receiver in San Pedro and Wilmington is presented in Table F1-5.

2.3.6 Baseline Exterior Lmax and SEL Noise Levels at Long Term Receivers in Carson

A long term noise measurement was conducted at a single family residence, 21843 Salmon Ave (N33) in Carson. The Lmax at this location ranged from 71.6 to 84.0 dBA, 78.8 to 83.5 dBA, and 68.5 to 75.4 dBA in the daytime, evening, and nighttime hours, respectively. The daytime, evening, and nighttime SELs had a range of 95.0 to 99.7 dBA, 96.3 to 98.9 dBA, and 89.4 to 94.9 dBA, respectively. The SELs at this location was calculated using the Leq average values plus 35.6 dBA. Measurement results for this receiver are presented in Table F1-5.

2.3.7 Estimated Baseline Interior Lmax and SEL Noise Levels at Long Term Receivers in Long Beach

Estimated interior noise levels were calculated based on exterior baseline noise data for two scenarios, with windows closed and with windows open. An exterior to interior noise reduction of 20 dB was applied in the case of windows closed and a conservative 12 dB reduction was utilized with windows open.

Residential and educational receivers in Long Beach included locations N1 through N3, N6, N7A, N30 and N31. The nighttime interior Lmax with windows closed had ranges of 36.6 to 50.4 dBA, 43.5 to 55.0 dBA, 43.4 to 57.4 dBA, 49.7 to 58.7 dBA, 46.6 to 61.9 dBA, 41.1 to 49.7 dBA, and 38.9 to 53.7 dBA, respectively. The nighttime interior SELs with windows closed had ranges of 62.8 to 71.6 dBA, 68.9 to 74.2 dBA, 63.5 to 76.4 dBA, 71.8 to 81.5 dBA, 67.0 to 79.4 dBA, 65.8 to 71.9 dBA, and 67.8 to 73.7 dBA, respectively. The nighttime interior Lmax with windows open had ranges of 44.6 to 58.4, 51.5 to 63.0 dBA, 51.4 to 65.4 dBA, 57.7 to 66.7 dBA, 54.6 to 69.9 dBA, 49.1 to 57.7 dBA, and 46.9 to 61.7 dBA, respectively. The nighttime interior SELs had ranges of 70.8 to 79.6 dBA, 76.9 to 82.2 dBA, 71.5 to 84.4 dBA, 79.8 to 89.5 dBA, 75.0 to 87.4 dBA, 73.8 to 79.9 dBA, and 75.8 to 81.7 dBA, respectively. Long term interior noise levels for receivers in Long Beach are summarized in Table F1-6.

2.3.8 Estimated Baseline Interior Lmax and SEL Noise Levels at Long Term Receivers in San Pedro & Wilmington

Residential receivers in San Pedro and Wilmington included locations N19, N29, and N32. The nighttime interior Lmax with windows closed had ranges of 50.3 to 58.9 dBA, 57.5 to 74.9 dBA, and 59.5 to 66.7 dBA, respectively. The nighttime interior SELs with windows closed had ranges of 75.7 to 82.4 dBA, 76.2 to 84.6 dBA, and 75.0 to 79.2 dBA, respectively. The nighttime interior Lmax with windows open had ranges of 58.3 to 66.9 dBA, 65.5 to 82.9 dBA, and 67.5 to 74.7 dBA, respectively. The nighttime interior SELs with windows open had ranges of 83.7 to 90.4 dBA, 84.2 to 92.6 dBA, and 83.0 to 87.2 dBA, respectively. The SELs at locations N29 and N32 were calculated using the Leq average values plus 35.6 dBA.

The remaining long term sensitive receivers in San Pedro and Wilmington were located at the Leeward Bay Marina (N20) and the Island Yacht Marina (N21). The nighttime interior Lmax with windows closed had ranges of 50.1 to 80.0 dBA, and 64.3 to 71.9 dBA, respectively. The nighttime interior SELs with windows closed

had ranges of 74.9 to 91.7 dBA, and 81.2 to 90.5 dBA, respectively. The nighttime interior Lmax with windows open had ranges of 58.1 to 88.0 dBA, and 72.3 to 79.9 dBA, respectively. The nighttime interior SELs with windows open had ranges of 82.9 to 99.7 dBA, and 89.2 to 98.5 dBA, respectively. A summary of the baseline interior Lmax and SEL at each long term receiver in San Pedro and Wilmington is presented in Table F1-6.

2.3.9 Baseline Interior Lmax and SEL Noise Levels at Long Term Receivers in Carson

A long term noise measurement was conducted at a single family residence, 21843 Salmon Ave (N33) in Carson. The interior Lmax at this location ranged from 48.5 to 55.4 dBA in the nighttime hours with windows closed. The nighttime interior SELs with windows closed had a range of 69.4 to 74.9 dBA. The nighttime interior Lmax at this location with windows open ranged from 56.5 to 63.4 dBA. The nighttime interior SELs with windows open had a range of 77.4 to 82.9 dBA. The SELs at this location were calculated using the Leq average values plus 35.6 dBA. Measurement results for this receiver are presented in Table F1-6.

2.3.10 Existing Classroom Noise Reduction Measurements

Sound insulation tests were conducted at selected classrooms to determine the noise reduction provided by the existing building shell of the classroom spaces exposed to vehicular and rail noise. The measurements were conducted for a field insertion loss (FIL) test in general accordance with ASTM E336-90, *Measurement of Airborne Sound Insulation in Buildings* (the field insertion loss is the difference between the average outside noise level and the average inside noise level). Simultaneous interior and exterior noise measurements were conducted using a pink noise generator as a sound source amplified through a single loudspeaker on the outside of the exterior building wall. The noise reduction data was used to predict future interior noise levels within the classrooms and assess the noise level within these spaces and is summarized in Table F1-7.

Exterior measurements were conducted at 3 meters (10 feet) from the building wall and interior measurements at the center of the room with the windows closed. Classrooms at Bethune School and Cabrillo Child Development Center are located directly adjacent to the Terminal Island Freeway and did not require a loudspeaker to conduct the noise reduction test. The noise reduction data for these two classrooms represent the ambient level without the random noise test signal used for the sound insulation test. These measurements were taken at the same interior and exterior locations as the sound insulation test, with the windows closed.

Table F1-5. Summary of Baseline Lmax and SEL at Long Term Noise Receptors.

Rec.	Loc.	Description	Date	Time[1]	A-WEIGHTED SOUND LEVEL, dBA	
					L_{max}	SEL
R1	N1	Residence at 2789 Webster	2-11-08 to 2-13-08	Day Evening Night	59.9 - 78.4 68.3 – 72.3 56.6 – 70.4	83.0 - 91.6 86.0 – 90.1 82.8 – 91.6
R2	N2	Buddhist Temple at Willow and Webster	1-10-08 to 1-11-08	Day Evening Night	70.5 - 83.1 71.3 – 73.6 63.5 – 75.0	91.7 - 98.8 90.7 – 93.3 88.9 – 94.2
R3	N3	Hudson Elementary School Playground	2-12-08 to 2-14-08	Day Evening Night	64.2 - 80.7 64.1 – 73.8 63.4 – 77.4	85.9 - 101.5 85.0 – 97.5 83.5 – 96.4
R6	N6	Cabrillo Child Development Center	2-11-08 to 2-13-08	Day Evening Night	74.4 - 87.1 74.6 – 78.1 69.7 – 78.7	97.8 - 104.3 98.6 – 102.0 91.8 – 101.5
R7A	N7A	Villages of Cabrillo	3-24-08 to 3-26-08	Day Evening Night	73.6 - 89.9 72.2 – 80.5 66.6 – 81.9	89.6 - 102.1 96.4 – 100.6 87.0 – 99.4
R19	N19	539 Shields Drive	1-14-08 to 1-15-08	Day Evening Night	71.1 - 89.7 76.9 – 90.2 70.3 – 78.9	99.7 - 105.0 101.5 – 103.1 95.7 – 102.4
R20	N20	Leeward Bay Marina	1-17-08 to 1-18-08	Day Evening Night	72.2 - 104.5 82.9 – 86.3 70.1 – 100.0	92.5 - 110.2 97.4 – 98.0 94.9 – 111.7
R21	N21	Island Yacht Marina	1-15-08 to 1-16-08	Day Evening Night	83.9 - 98.9 85.5 – 88.1 84.3 – 91.9	103.8 - 111.2 106.9 – 109.5 101.2 – 110.5
R29	N29	1710 Mauretania Street	4-26-11 to 4-27-11	Day Evening Night	76.8 - 85.5 79.5 – 80.9 77.5 – 94.9	**99.6 - 102.7**[2] **100.3 – 102.4**[2] **96.2 – 104.6**[2]
R30	N30	Stephens Middle School Classroom PC2	2-14-08 to 2-15-08	Day Evening Night	64.9 - 91.6 66.5 – 71.6 61.1 – 69.7	85.7 - 100.7 90.8 – 92.5 85.8 – 91.9
R31	N31	Webster School Classroom B-1	2-14-08 to 2-15-08	Day Evening Night	62.3 - 82.8 68.9 – 72.2 58.9 – 73.7	87.3 - 93.1 91.1 – 93.4 87.8 – 93.7
R32	N32	1619 Cruces St	4-28-11 to 4-29-11	Day Evening Night	81.3 - 90.6 79.8 – 83.5 79.5 – 86.7	**100.1 - 102.8**[2] **97.2 – 99.2**[2] **95.0 – 99.2**[2]
R33	N33	21843 Salmon Ave	4-27-11 to 4-28-11	Day Evening Night	71.6 - 84.0 78.8 – 83.5 68.5 – 75.4	**95.0 - 99.7**[2] **96.3 – 98.9**[2] **89.4 – 94.9**[2]

Notes:
1 Daytime hours are from 7:00 AM until 7:00 PM, Evening hours are from 7:00 PM until 10:00 PM, Nighttime hours are from 10:00 PM until 7:00 AM
2 SEL is calculated from Leq+35.6 dB

Table F1-6. Summary of Estimated Baseline Interior Lmax and SEL at Long Term Noise Receptors

Rec.	Loc.	Description	Date	Time[1]	Exterior Noise Levels, dBA		Interior Noise Levels With Windows Closed, dBA[3]		Interior Noise Levels With Windows Open, dBA[4]	
					L_{max}	SEL	L_{max}	SEL	L_{max}	SEL
R1	N1	Residence at 2789 Webster	2-11-08 to 2-13-08	Night	56.6 – 70.4	82.8 – 91.6	36.6 – 50.4	62.8 – 71.6	44.6 – 58.4	70.8 – 79.6
R2	N2	Buddhist Temple at Willow and Webster	1-10-08 to 1-11-08	Night	63.5 – 75.0	88.9 – 94.2	43.5 – 55.0	68.9 – 74.2	51.5 – 63.0	76.9 – 82.2
R3	N3	Hudson Elementary School Playground	2-12-08 to 2-14-08	Night	63.4 – 77.4	83.5 – 96.4	43.4 – 57.4	63.5 – 76.4	51.4 – 65.4	71.5 – 84.4
R6	N6	Cabrillo Child Development Center	2-11-08 to 2-13-08	Night	69.7 – 78.7	91.8 – 101.5	49.7 – 58.7	71.8 – 81.5	57.7 – 66.7	79.8 – 89.5
R7A	N7A	Villages of Cabrillo	3-24-08 to 3-26-08	Night	66.6 – 81.9	87.0 – 99.4	46.6 – 61.9	67.0 – 79.4	54.6 – 69.9	75.0 – 87.4
R19	N19	539 Shields Drive	1-14-08 to 1-15-08	Night	70.3 – 78.9	95.7 – 102.4	50.3 – 58.9	75.7 – 82.4	58.3 – 66.9	83.7 – 90.4
R20	N20	Leeward Bay Marina	1-17-08 to 1-18-08	Night	70.1 – 100.0	94.9 – 111.7	50.1 – 80.0	74.9 – 91.7	58.1 – 88.0	82.9 – 99.7
R21	N21	Island Yacht Marina	1-15-08 to 1-16-08	Night	84.3 – 91.9	101.2 – 110.5	64.3 – 71.9	81.2 – 90.5	72.3 – 79.9	89.2 – 98.5
R29	N29	1710 Mauretania Street	4-26-11 to 4-27-11	Night	77.5 – 94.9	**96.2 – 104.6[2]**	57.5 – 74.9	**76.2 – 84.6[2]**	65.5 – 82.9	**84.2 – 92.6[2]**
R30	N30	Stephens Middle School Classroom PC2	2-14-08 to 2-15-08	Night	61.1 – 69.7	85.8 – 91.9	41.1 – 49.7	65.8 – 71.9	49.1 – 57.7	73.8 – 79.9
R31	N31	Webster School Classroom B-1	2-14-08 to 2-15-08	Night	58.9 – 73.7	87.8 – 93.7	38.9 – 53.7	67.8 – 73.7	46.9 – 61.7	75.8 – 81.7
R32	N32	1619 Cruces St	4-28-11 to 4-29-11	Night	79.5 – 86.7	**95.0 – 99.2[2]**	59.5 – 66.7	**75.0 – 79.2[2]**	67.5 – 74.7	**83.0 – 87.2[2]**
R33	N33	21843 Salmon Ave	4-27-11 to 4-28-11	Night	68.5 – 75.4	**89.4 – 94.9[2]**	48.5 – 55.4	**69.4 – 74.9[2]**	56.5 – 63.4	**77.4 – 82.9[2]**

Notes:
1 Daytime hours are from 7:00 AM until 7:00 PM, Evening hours are from 7:00 PM until 10:00 PM, Nighttime hours are from 10:00 PM until 7:00 AM
2 SEL is calculated from Leq+35.6 dB
3 Exterior to interior noise reduction of 20 dB with windows closed
4 Exterior to interior noise reduction of 12 dB with windows open

Table F1-7. Summary of Classroom Noise Reduction Measurements

Location	*Description*	*Date*	*Leq, dBA*	*Noise Reduction, dB*	*Notes*
Bethune School	Classroom 102	2/12/2008	64.9 - Exterior 38.8 - Interior	26.1	Traffic Noise Source
Cabrillo Child Development Center	#2 Exterior, #4 Interior	2/11/2008	72.3 - Exterior 43.7 - Interior	28.6	Traffic Noise Source
Cabrillo High School	Classroom 1128	2/19/2008	105.5 - Exterior 61.1 - Interior 32.7 - Ambient	44.4	Loudspeaker Source
Hudson School	Classroom 52	2/19/2008	103.8 - Exterior 70.8 - Interior 36.9 - Ambient	33	Loudspeaker Source
Stephens Middle School	Classroom PC2	2/19/2008	98.1 – Exterior 59.8 - Interior 31.4 - Ambient	38.3	Loudspeaker Source
Webster School	Classroom B-48	2/19/2008	105.3 - Exterior 66.7 - Interior 31.9 - Ambient	38.6	Loudspeaker Source

2.4 Existing Vibration Environment

Vibration-sensitive receivers are comprised of single-family and multi-family residences, potential residences within industrial zoned properties, and institutional uses such as fire stations, schools, child development facilities, and adult education centers. Ground-borne vibration at the sensitive receivers in the study area is generated by heavy trucks, trains, automotive traffic, and nearby industrial activity. The amount of vibration experienced at each receiver is dependent on the source type, source to receiver distance, soil characteristics, vehicle type/weight, pavement type/condition, and rail type/condition.

Ground-borne vibration levels were monitored to document existing vibration levels at sensitive receivers nearest to the proposed Project site and designated truck routes (shown as V# in Figure F1-3). These monitoring locations are representative of vibration-sensitive receptors in the study area.

2.4.1 San Pedro & Wilmington

Short term ground-borne vibration measurements were conducted at five locations in San Pedro and Wilmington (V7 through V11 in Figure F1-3), representing two fire stations, a commercial/residential building and two residences (Table F1-8). The

measured maximum vibration velocities were 67.3, 81.5, 78.2, 56.8, and 79.7 VdB, respectively. The predominant source of vibration contributing to the baseline vibration environment at all three locations was truck traffic on nearby streets. At Receivers V10 and V11, Lmax ranged from 38.1 to 79.7 VdB. At each of these locations, truck traffic and rail movements on the Alameda Corridor contributed to the measurement data.

2.4.2 Long Beach

Short-term ground-borne vibration measurements were conducted at six receiver locations in Long Beach (V1 through V6 in Figure F1-3), representing four schools, a potential residential receiver, and a fire station. Measured maximum vibration velocities at the receivers V1–V6 were 64.3, 69.0, 75.5, 79.4, 80.2, and 69.2 VdB, respectively (Table F1-8). The predominant source of vibration was truck traffic, but site-specific sources such as trains on the San Pedro Branch, repair shop activity, worker activity, vehicles in a parking lot, fire trucks, and potentially helicopters contributed to the baseline vibration environment.

2.4.3 Carson

A long-term ground-borne vibration measurement was conducted at receiver location V12 in Carson (Figure F1-3), representing a residential receiver near the Alameda Corridor. Measured maximum vibration velocities at this location ranged from 53.0 to 68.8 VdB, (Table F1-8). The predominant source of vibration was truck traffic, but site-specific sources such as trains on the Alameda Corridor also contributed to the baseline vibration environment.

2.5 Predicted Existing Traffic Noise Levels

Existing traffic noise levels generated by vehicular traffic in the proposed Project vicinity were calculated using the FHWA traffic noise model and traffic data from the Traffic Study (refer to Chapter 3.10). Many roadway segments experience noise levels above 70 CNEL. However, as Table F1-9 shows, only some of those segments have sensitive land uses that currently experience noise levels above 70 CNEL at a distance of 100 feet. Traffic noise levels above 70 CNEL are normally considered incompatible with noise guidelines. Those segments occur on Alameda Street, E. Anaheim Street, E. Harry Bridges Boulevard, E. Sepulveda Boulevard, John S. Gibson Boulevard, Long Beach Freeway, Terminal Island Freeway, Pacific Coast Highway, W. Anaheim Street, W. Harry Bridges Boulevard, W. Pacific Coast Highway, and W. Willow Street.

Table F1-8. Summary of the Ambient Ground-Borne Vibration Measurement Data

Location	*Description*	*Date*	*Start*	*Stop*	*Lmax – Velocity Level, VdB*		*Predominant Sources of Vibration*
					Low	*High*	
V1	Stephens Middle School Classroom PC2	3-7-08	9:42 AM	4:17 PM	51.6	64.3	School Activities, Trains
V2	Hudson Elementary School Playground	3-6-08	10:06 AM	4:21 PM	55.9	69.0	Traffic on TI Freeway, Trains
V3	Cabrillo Child Development Center	3-4-08	10:02 AM	4:33 PM	58.9	75.5	Traffic on TI Freeway, Trains
V4	Bethune School	3-3-08	10:00 AM	3:43 PM	62.6	79.4	Traffic on TI Freeway, Trains
V5	Industrial Area with Potential Residential at 1332 Canal	3-24-08	3:40 PM	5:55 PM	63.7	80.2	Truck traffic, Repair Shop Activity, Worker Activity
V6	Fire Station #6 on Queensway	3-24-08	9:20 AM	10:20 AM	62.6	69.2	Traffic, Vehicles in Parking Lot, Fire Trucks, Helicopters
V7	New Fire Station #24 at Pier Avenue and Route 47	3-26-08	3:34 PM	4:53 PM	55.0	67.3	Trucks, Trains, and Power Plant
V8	Fire Station #210 on Ferry St	3-24-08	4:58 PM	5:58 PM	59.3	81.5	Trucks
V9	Commercial/ Residential Building at 200 Broad Street	3-24-08	11:30 AM	12:30 PM	55.6	78.2	Trucks on Harry Bridges and Broad St., Vehicular Traffic
V10	1710 Mauretania Street	4-26-11 to 4-27-11	2:00 PM	2:00 PM	38.1	56.8	Trucks and Trains
V11	1619 Cruces St	4-28-11 to 4-29-11	3:25 PM	3:00 PM	53.1	79.7	Trucks and Trains
V12	21843 Salmon Ave	4-27-11	4:00 PM	5:00 PM	53.0	68.8	Trucks and Trains

Table F1-9. Calculated Baseline Roadway Traffic Noise Levels

ROADWAY SEGMENT	Leq @ Rec.	CNEL @ Rec.	DISTANCE TO CNEL CONTOURS (FT) 70.0 dBA	65.0 dBA	60.0 dBA
1ST ST					
e/o East RD	77.1	78.1	317	1005	3178
ACCESS RD					
e/o Ferry St	77.5	78.5	347	1099	3477
ALAMEDA ST					
n/o Anaheim St	78.4	79.4	431	1365	4319
w/o Eubank Ave	80.5	81.5	694	2196	6945
s/o PCH	80.7	81.7	728	2304	7288
s/o Anaheim St	79.9	80.9	616	1950	6167
E 223RD ST					
w/o I-405 Off ramps	77.7	78.7	369	1167	3690
E ANAHEIM ST					
between Avalon Blvd and Broad Ave	69.3	70.3	53	169	536
between Eubank Ave and Sanford St	69.6	70.6	57	181	575
between Sanford Ave and Sanford St	69.6	70.6	57	180	572
between Anaheim and Henry Ford	75.7	76.7	229	725	2295
e/o Henry Ford Ave	75.6	76.6	228	723	2288
w/o E I St	75.2	76.2	208	658	2082
e/o Sanford Ave	69.3	70.3	53	16	533
w/o Anaheim Way	75.6	76.6	228	724	2289
between Henry Ford Ave and Terminal Isla	75.5	76.5	219	693	2193
E HARRY BRIDGES BLVD					
e/o Avalon Blvd	80.0	81.0	623	1969	6229
E I ST					
between Terminal Island Fwy and Anaheim	77.4	78.4	346	1095	3464
E OPP ST					
w/o Farragut Ave	52.6	53.6	1	3	11
E SEPULVEDA BLVD					
e/o Alameda St	74.9	75.9	194	616	1947
w/o Dolores St	71.6	72.6	90	286	904
w/o Wilmington Ave	72.4	73.4	109	346	1096
e/o Wilmington Ave	73.7	74.7	148	468	1480
e/o Dolores St	72.0	73.0	98	312	988
w/o Avalon Blvd	72.1	73.1	102	324	1024
EAST RD					
n/o 1st St	74.9	75.9	193	612	1937
s/o 1st St	72.9	73.9	121	383	1213
FARRAGUT AVE					
Between Terminal Island Fwy SB ramps	76.7	77.7	291	922	2916
FERRY ST					
between Seaside Ave and Access Rd	77.2	78.2	331	1046	3310
between Terminal Way and Pitchard St	80.3	81.3	669	2117	6696
FIGUEROA ST					
n/o Anaheim St	73.9	74.9	151	480	1518

Table F1-9. Calculated Baseline Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70.0 dBA	*65.0 dBA*	*60.0 dBA*
n/o PCH	72.3	73.3	105	332	1050
HARBOR FWY					
SB n/o PCH off Ramp	84.2	85.2	1651	5223	16516
NB s/o Sepulveda Blvd	84.7	85.7	1837	5809	18370
NB n/o Sepulveda Blvd	84.5	85.5	1777	5620	17774
SB n/o Sepulveda Blvd	84.2	85.2	1649	5216	16494
SB s/o 228th St	83.9	84.9	1548	4897	15487
SB n/o 220th St	82.5	83.5	1099	3475	10990
NB n/o 223rd St	84.4	85.4	1722	5445	17220
NB n/o Carson St	83.4	84.4	1361	4303	13609
SB s/o Torrance Blvd	82.7	83.7	1165	3685	11655
NB s/o Del Amo Blvd	83.6	84.6	1416	4480	14167
SB n/o Redondo Beach Blvd	81.7	82.7	930	2942	9303
SB between 135th St and Rosecrans Ave	81.2	82.2	815	2577	8150
NB n/o Redondo Beach Blvd	81.6	82.6	909	2877	9098
SB n/o 135th St	81.4	82.4	867	2744	8678
NB s/o 135th	81.5	82.5	877	2775	8776
NB s/o El Segundo Blvd	81.4	82.4	859	2716	8591
SB n/o Alondra	81.5	82.5	885	2800	8856
SB between Del Amo Blvd and Torrance Blv	82.9	83.9	1217	3849	12172
SB between 168th and Alondra	82.6	83.6	1139	3604	11398
NB between Redondo Beach Blvd and Alondra	81.2	82.2	819	2592	8197
SB n/o Del Amo Blvd	82.3	83.3	1066	3372	10665
SB n/o I-405	81.6	82.6	911	2882	9114
NB n/o Del Amo Blvd	82.3	83.3	1056	3341	10565
NB s/o I-405	81.6	82.6	907	2870	9076
NB n/o Victoria St	83.9	84.9	1541	4873	15410
SB s/o 182nd St	81.1	82.1	797	2522	7976
NB between Albertoni and Victoria	83.7	84.7	1451	4590	14514
SB s/o I-405	80.4	81.4	692	2188	6919
SB between Artesia Blvd and 168th	82.4	83.4	1076	3405	10767
NB n/o I-405	83.1	84.1	1275	4033	12754
NB s/o SR-91	83.1	84.1	1271	4019	12711
NB s/o Gardena Blvd	83.1	84.1	1286	4069	12867
SB s/o PCH off Ramp	84.5	85.5	1776	5616	17760
NB n/o PCH on Ramp	84.6	85.6	1805	5709	18054
NB n/o El Segundo Blvd	82.2	83.2	1035	3275	10358
SB s/o El Segundo Blvd	82.0	83.0	1000	3164	10007
SB n/o Anaheim St	84.9	85.9	1920	6072	19201
NB s/o PCH on ramp	84.9	85.9	1919	6071	19199
NB s/o L St	85.1	86.1	2029	6416	20290
SB s/o 120th St	81.2	82.2	832	2633	8328
NB s/o 120th St	81.6	82.6	897	2836	8969
SB s/o 120th St	81.5	82.5	892	2821	8922
SB n/o I-105	82.6	83.6	1125	3560	11259
NB n/o 120th St	82.1	83.1	1023	3237	10237

Table F1-9. Calculated Baseline Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70.0 dBA	*65.0 dBA*	*60.0 dBA*
SB n/o 108th St	81.7	82.7	921	2914	9216
NB s/o Torrance Blvd	83.4	84.4	1362	4309	13629
NB s/o 223rd St	84.3	85.3	1684	5326	16844
SB between 214th St and 220th St	82.6	83.6	1132	3581	11326
SB s/o 220th St	84.0	85.0	1558	4928	15585
NB s/o Rosecrans	81.3	82.3	847	2678	8471
NB between Gardena Blvd and Alondra Blvd	81.8	82.8	952	3010	9519
SB s/o 108th	82.5	83.5	1120	3542	11201
NB n/o 108th St	81.9	82.9	963	3045	9631
NB s/o 190th St	83.0	84.0	1241	3927	12418
NB n/o 220th ST	83.3	84.3	1345	4253	13450
SB s/o Sepulveda Blvd	84.2	85.2	1648	5213	16484
HARBOR PLZ					
between Pier F Ave and Pico Ave	78.4	79.4	431	1363	4310
HARBOR SCENIC DR					
NB w/o Goldenshore St	78.6	79.6	453	1434	4536
NB s/o Shoreline Dr	78.5	79.5	442	1398	4422
NB n/o Shoreline Dr	78.2	79.2	413	1308	4136
SB n/o Shoreline Dr	79.3	80.3	528	1670	5281
SB s/o Shoreline Dr	78.8	79.8	470	1486	4700
NB e/o Goldenshore St	78.7	79.7	459	1453	4596
HARBOR SCENIC WAY					
e/o Queens Hwy	77.6	78.6	358	1132	3580
e/o Port Access Rd	78.2	79.2	410	1299	4108
w/o Port Access Rd	78.2	79.2	409	1295	4096
JOHN S GIBSON BLVD					
n/o I-110 Ramps	77.5	78.5	355	1123	3552
LONG BEACH FWY					
SB n/o Imperial Hwy	84.7	85.7	1859	5881	18598
NB n/o Imperial Hwy	84.5	85.5	1756	5554	17564
NB s/o Imperial Hwy	84.7	85.7	1836	5806	18362
SB s/o Imperial Hwy	84.5	85.5	1741	5505	17411
SB s/o Imperial Hwy	84.7	85.7	1845	5834	18450
SB n/o I-105	84.4	85.4	1723	5448	17229
SB s/o I-105	84.7	85.7	1829	5786	18298
NB n/o I-105	84.3	85.3	1686	5331	16859
NB n/o Rosecrans Ave	84.5	85.5	1747	5527	17478
SB n/o Rosecrans Ave	84.4	85.4	1733	5483	17339
SB s/o Rosecrans Ave	85.8	86.8	2382	7534	23826
SB s/o Rosecrans Ave	85.9	86.9	2450	7749	24505
NB s/o Rosecrans	85.9	86.9	2410	7623	24107
SB n/o Alondra	85.9	86.9	2450	7749	24505
NB between Alondra and Rosecrans	86.0	87.0	2503	7915	25032
SB n/o Alondra	85.7	86.7	2326	7356	23261
NB n/o Alondra	86.0	87.0	2480	7843	24803
SB s/o Alondra	85.6	86.6	2252	7124	22528

Table F1-9. Calculated Baseline Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70.0 dBA	*65.0 dBA*	*60.0 dBA*
NB s/o Alondra	85.9	86.9	2457	7769	24569
SB n/o SR-91	86.1	87.1	2532	8008	25326
NB n/o SR-91	85.1	86.1	2007	6349	20078
SB n/o Artesia Blvd	84.8	85.8	1905	6025	19052
NB n/o Artesia Blvd	84.5	85.5	1773	5608	17736
NB s/o Artesia Blvd	84.7	85.7	1856	5871	18566
SB s/o Artesia Blvd	85.6	86.6	2252	7122	22522
NB s/o Artesia Blvd	84.6	85.6	1807	5714	18069
SB n/o Long Beach Blvd	86.0	87.0	2508	7931	25082
SB s/o Long Beach Blvd	85.9	86.9	2405	7606	24052
NB n/o Long Beach Blvd	86.5	87.5	2766	8748	27664
SB n/o Del Amo Blvd	85.6	86.6	2289	7238	22889
SB s/o Del Amo Blvd Off ramp	86.1	87.1	2531	8006	25318
NB s/o Long Beach Blvd	86.3	87.3	2645	8365	26453
NB n/o Del Amo Blvd	86.0	87.0	2461	7784	24617
SB s/o Del Amo Blvd	86.1	87.1	2531	8005	25314
NB n/o Wardlow Rd	86.3	87.3	2637	8340	26375
SB s/o Wardlow Rd	85.6	86.6	2267	7169	22673
SB n/o Willow St	84.9	85.9	1919	6071	19198
NB n/o Willow St	84.8	85.8	1878	5940	18785
NB s/o Willow St	85.2	86.2	2059	6511	20591
SB n/o Willow St	85.0	86.0	1971	6235	19717
SB s/o Willow St	84.9	85.9	1930	6104	19304
SB between off/of ramps at Willow St	85.0	86.0	1967	6222	19676
NB s/o Willow St	85.3	86.3	2113	6683	21134
NB s/o off ramp at PCH	85.2	86.2	2078	6574	20789
NB s/o Anaheim St	84.6	85.6	1806	5711	18060
NB s/o PCH	84.4	85.4	1710	5409	17106
SB n/o Anaheim St	84.7	85.7	1837	5811	18378
SB s/o Anaheim St	84.7	85.7	1836	5807	18363
NB s/o loop off ramp at PCH	85.4	86.4	2185	6910	21854
SB n/o Anaheim St	85.0	86.0	1991	6298	19916
SB s/o PCH	85.2	86.2	2090	6610	20904
NB n/o I-405 Interchange	85.8	86.8	2399	7589	23999
NB s/o I-405 Interchange Ramp	85.5	86.5	2240	7084	22403
SB n/o Wardlow Rd	86.4	87.4	2718	8596	27184
NB s/o Firestone Blvd	84.3	85.3	1678	5308	16787
SB s/o Firestone Blvd	84.8	85.8	1875	5929	18750
SB s/o 9th St	84.7	85.7	1823	5765	18232
SB n/o Long Beach Blvd	86.4	87.4	2706	8559	27065
NB n/o 9th St	85.3	86.3	2110	6672	21100
NB s/o 9th St	84.2	85.2	1640	5189	16409
SB n/o 9th St	85.5	86.5	2198	6951	21983
SB s/o Anaheim St	85.3	86.3	2128	6730	21284
NB n/o 10th St	84.9	85.9	1935	6119	19352
SB n/o I-405	85.7	86.7	2314	7318	23141

Table F1-9. Calculated Baseline Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70.0 dBA	*65.0 dBA*	*60.0 dBA*
SB s/o Alondra	85.7	86.7	2333	7380	23339
NB n/o Dell Amo Blvd Off Ramp	86.2	87.2	2618	8279	26183
SB s/o On ramp at Del Amo Blvd	86.1	87.1	2531	8005	25314
NB s/o Del Amo Blvd	86.1	87.1	2549	8061	25492
NB between s/o off ramp at Del Am o Blvd	85.8	86.8	2364	7476	23642
NB between off/on ramps at Willow St	85.2	86.2	2073	6555	20730
SB s/o Willow St	85.2	86.2	2079	6574	20791
NB n/o Willow St	85.6	86.6	2247	7106	22471
NB n/o PCH	85.1	86.1	2043	6460	20431
NB Between Ramps at Anaheim St	85.4	86.4	2160	6831	21603
SB s/o Anaheim St	84.9	85.9	1938	6130	19387
NB n/o Anaheim St	85.4	86.4	2166	6850	21661
N HENRY FORD AVE					
n/o Terminal Island Fwy	79.6	80.6	574	1815	5740
n/o Anaheim St	78.7	79.7	462	1462	4624
N SEASIDE AVE					
e/o Navy Way	82.9	83.9	1218	3852	12181
e/o Access Rd ramp	80.7	81.7	739	2337	7390
w/o Navy Way	82.4	83.4	1084	3430	10848
e/o Ferry St	77.3	78.3	338	1068	3380
e/o Navy Way ramp	83.7	84.7	1478	4673	14779
e/o Navy Way	83.0	84.0	1235	3905	12351
NAVY WAY					
s/o Reeves Ave	77.7	78.7	370	1172	3707
s/o Terminal Way	80.6	81.6	712	2253	7126
NEW DOCK ST					
w/o Henry Ford Ave	77.8	78.8	373	1182	3738
e/o Henry Ford Ave	79.8	80.8	603	1906	6030
w/o SB off ramp Terminal Island Fwy	79.9	80.9	604	1911	6045
w/o NB on ramp Terminal Island Fwy	77.0	78.0	310	981	3103
between Terminal Island Fwy SB and NB Ramp	77.0	78.0	314	995	3148
PACIFIC COAST HIGHWAY					
between Avalon Blvd and Eubank Ave	74.6	75.6	181	572	1810
between Watson Ave and Eubank Ave	75.2	76.2	206	651	2061
w/o Alameda St	73.7	74.7	147	467	1478
w/o East Rd	72.9	73.9	121	385	1217
w/o East Rd	71.4	72.4	86	274	868
between Watson Ave and Blinn Ave	75.1	76.1	201	636	2012
PICO AVE					
s/o Ocean Blvd	76.0	77.0	247	781	2472
n/o Ocean Blvd	76.0	77.0	247	781	2469
n/o Pier C St	80.1	81.1	643	2035	6437
s/o Pier C St	78.8	79.8	476	1506	4763
n/o Pier D St	78.8	79.8	474	1500	4746
PIER A WAY					
e/o Henry Ford Ave	74.3	75.3	167	530	1677

Table F1-9. Calculated Baseline Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70.0 dBA	*65.0 dBA*	*60.0 dBA*
e/o Henry Ford Ave	76.9	77.9	309	978	3094
e/o Henry Ford Ave	78.4	79.4	432	1367	4325
between Terminal Island Fwy and Henry Ford	64.2	65.2	16	52	164
n/o Terminal Island Fwy	73.6	74.6	142	450	1425
e/o Henry Ford Ave	73.1	74.1	127	403	1276
e/o Henry Ford Ave	74.4	75.4	170	538	1702
PIER B ST					
s/o 9th St	77.1	78.1	320	1013	3204
w/o Edison Ave	74.3	75.3	169	534	1691
n/o Pier A way	74.3	75.3	167	530	1677
PIER C ST					
w/o Pier B St	76.7	77.7	290	918	2903
w/o Pier B St	76.2	77.2	258	817	2584
PIER D AVE					
s/o Pier D St	70.8	71.8	75	237	750
PIER D ST					
w/o I-710	76.5	77.5	276	874	2764
PIER F AVE					
s/o Harbor Plaza	78.0	79.0	393	1242	3930
PIER G AV					
s/o Harbor Plaza	58.8	59.8	4	14	47
s/o Harbor Plaza	58.8	59.8	4	14	47
PIER J WAY					
e/o Panorama Dr	80.2	81.2	650	2058	6509
PORT ACCESS RD					
e/o Ocean Blvd Ramps	75.5	76.5	221	699	2213
n/o New Dock St	77.7	78.7	371	1175	3718
n/o New Dock St	77.4	78.4	344	1090	3449
s/o Pier J way	78.7	79.7	459	1454	4598
s/o Pier J way	80.3	81.3	664	2101	6644
n/o Pier J way	78.7	79.7	458	1450	4588
s/o Harbor Scenic way	78.2	79.2	408	1290	4081
QUEENSWAY DR					
s/o Harbor Scenic Dr	78.6	79.6	453	1434	4536
S ALAMEDA ST					
n/o Wardlow Rd	77.5	78.5	347	1099	3477
S FRIES AVE					
s/o Water St	78.6	79.6	448	1417	4482
between Harry Bridges Blvd and Water St	76.8	77.8	299	947	2996
S HARBOR SCENIC DR					
NB s/o Shoreline Dr	78.5	79.5	437	1384	4377
SB w/o Goldenshore St	79.4	80.4	539	1706	5397
NB n/o Goldenshore St	78.5	79.5	446	1412	4466
SB e/o Goldenshore St	79.0	80.0	496	1569	4964
NB s/o Shoreline Dr	78.2	79.2	412	1303	4121
SB w/o Panorama Dr	79.5	80.5	555	1756	5555

Table F1-9. Calculated Baseline Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70.0 dBA	*65.0 dBA*	*60.0 dBA*
SB w/o Panorama Dr	78.9	79.9	485	1536	4858
S PICO AVE					
s/o Embarcadero	77.1	78.1	322	1020	3227
n/o Harbor Scenic Dr ramp	80.0	81.0	619	1957	6191
s/o Harbor Scenic Dr ramp	79.3	80.3	533	1687	5335
SAN DIEGO FWY					
SB e/o I-110	81.8	82.8	940	2973	9403
SB e/o Wilmington Blvd	82.7	83.7	1167	3690	11669
SB s/o I-110 interchange	82.8	83.8	1197	3788	11979
NB s/o Wilmington Blvd	82.7	83.7	1153	3649	11539
NB w/o Santa Fe Ave	82.7	83.7	1161	3672	11611
SB e/o 218th St	80.6	81.6	715	2263	7159
NB w/o Alameda St	82.6	83.6	1148	3630	11479
SB w/o Alameda St	81.2	82.2	830	2626	8306
NB e/o Wilmington Ave	81.8	82.8	939	2970	9393
SB e/o Wilmington Ave	80.2	81.2	647	2047	6475
SB w/o Wilmington Ave	79.9	80.9	611	1933	6115
SB s/o Carson St	80.9	81.9	777	2457	7772
NB n/o Carson St	82.4	83.4	1080	3418	10808
NB n/o 213th St	81.9	82.9	977	3090	9772
NB e/o Avalon Blvd	82.5	83.5	1099	3477	10996
SB e/o Avalon Blvd	81.5	82.5	889	2812	8892
NB w/o Avalon Blvd	82.7	83.7	1163	3679	11634
SB e/o Avalon Blvd	81.9	82.9	965	3053	9655
NB w/o Wilmington Ave	81.7	82.7	926	2931	9268
NB e/o 218th St	82.3	83.3	1068	3378	10682
SB e/o Avalon Blvd	81.5	82.5	889	2812	8892
NB s/o Carson St	81.7	82.7	926	2931	9268
SB n/o Carson St	81.5	82.5	889	2812	8892
SAN GABRIEL AV					
n/o PCH	73.4	74.4	135	427	1352
TERMINAL ISLAND FWY					
s/o PCH	81.0	82.0	792	2506	7927
n/o PCH	80.0	81.0	627	1984	6274
n/o Ocean Blvd	81.8	82.8	937	2964	9373
NB s/o PCH	79.1	80.1	512	1621	5127
SB n/o PCH	78.0	79.0	391	1236	3910
NB between Off and loop On ramp at PCH	79.1	80.1	512	1621	5127
NB s/o PCH off ramp	82.1	83.1	1004	3175	10040
SB n/o Anaheim St	77.0	78.0	312	988	3125
NB between Henry Ford Ave and Anaheim St	80.6	81.6	722	2285	7228
NB n/o Ocean Blvd	79.4	80.4	540	1710	5408
SB n/o Ocean Blvd	77.7	78.7	365	1156	3656
s/o Henry Ford Ave	80.9	81.9	768	2430	7687
SB s/o Henry Ford Ave	79.9	80.9	606	1918	6067
e/o Seaside Ave	80.3	81.3	675	2135	6751

Table F1-9. Calculated Baseline Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70.0 dBA	*65.0 dBA*	*60.0 dBA*
SB s/o Anaheim Way	79.9	80.9	615	1946	6154
NB s/o Willow St	76.6	77.6	283	896	2835
SB s/o PCH on ramp	80.0	81.0	621	1965	6215
SB s/o PCH	78.8	79.8	473	1497	4735
NB n/o PCH	78.1	79.1	400	1266	4005
SB between loop Off and On ramp at PCH	78.8	79.8	471	1490	4714
SB s/o Henry Ford Ave	79.9	80.9	606	1918	6067
s/o Henry Ford Ave	81.0	82.0	787	2491	7877
TERMINAL WAY					
w/o Ferry St	80.0	81.0	620	1960	6200
w/o Eaire St	80.2	81.2	648	2050	6483
s/o Navy Way	80.5	81.5	698	2209	6988
s/o Navy Way	78.1	79.1	404	1277	4040
s/o Navy Way	80.5	81.5	698	2209	6988
s/o Navy Way	77.3	78.3	335	1059	3351
s/o Navy Way	77.4	78.4	340	1076	3403
s/o Navy Way	78.8	79.8	473	1495	4730
W 9TH ST					
e/o Caspian Ave	70.1	71.1	63	200	635
s/o Anaheim St	74.3	75.3	166	527	1666
e/o Santa Fe Ave	71.6	72.6	89	283	897
w/o Caspian Ave	70.1	71.1	64	204	646
n/o Pier B St	68.5	69.5	44	140	442
w/o Santa Fe Ave	74.2	75.2	162	514	1627
s/o Pier B St	78.4	79.4	434	1372	4340
n/o Pier B St	73.8	74.8	149	473	1496
W ANAHEIM ST					
e/o Harbor Ave	73.9	74.9	152	480	1520
e/o Santa Fe Ave	78.7	79.7	463	1466	4637
w/o Harbor Ave	76.7	77.7	293	929	2938
w/o Seabright Ave	77.8	78.8	380	1201	3800
w/o E I St	75.2	76.2	206	653	2067
w/o Figueroa PL	75.6	76.6	226	715	2262
between Wilmington and Neptune Ave	69.3	70.3	52	166	527
between Frigate Ave and Wilmington Blvd	69.4	70.4	53	170	539
e/o Neptune	68.9	69.9	48	154	487
between Neptune Ave and Fries Ave	69.0	70.0	49	157	498
w/o Frigate Ave	69.2	70.2	52	164	521
e/o Figueroa PL	75.3	76.3	213	675	2135
between Seabright Ave and Santa Fe Ave	77.7	78.7	367	1160	3670
between Fries Ave and Avalon Blvd	69.6	70.6	57	181	572
between I-710 SB and NB Ramps	73.6	74.6	142	449	1420
W HARRY BRIDGES BLVD					
between Wilmington Blvd and Neptune Ave	78.9	79.9	489	1548	4897
between Hawaiian Ave and Wilmington Blvd	78.8	79.8	473	1497	4736
between Neptune Ave and Fries Ave	78.0	79.0	398	1259	3983

Table F1-9. Calculated Baseline Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70.0 dBA	*65.0 dBA*	*60.0 dBA*
between Figueroa St and Mar Vista Ave	78.7	79.7	461	1459	4614
between Fries Ave and Avalon Blvd	79.5	80.5	561	1776	5617
between Mar Vista Ave and Hawaiian Ave	78.8	79.8	473	1497	4736
W I ST					
n/o Anaheim St	70.6	71.6	71	227	719
W PACIFIC COAST HIGHWAY					
between I-110 SB off ramp and Figueroa S	72.9	73.9	121	382	1210
w/o I-110 SB off ramp	73.2	74.2	130	411	1301
between I-710 NB and SB ramps	79.0	80.0	494	1562	4940
e/o San Gabriel Ave	79.4	80.4	548	1734	5483
between San Gabriel Ave and Santa Fe Ave	79.5	80.5	551	1743	5512
e/o Wilmington Blvd	74.2	75.2	163	515	1631
e/o Figueroa St	73.9	74.9	153	484	1532
between Neptune Ave and Avalon Blvd	74.7	75.7	182	576	1823
between Terminal Island Fwy SB and NB ramp	79.2	80.2	523	1654	5232
e/o Santa Fe Ave	78.6	79.6	448	1416	4480
e/o Harbor Ave	78.5	79.5	438	1385	4382
w/o Terminal Island Fwy	76.8	77.8	299	948	2998
W PANORAMA DR					
between Queens Hwy and Harbor Scenic Dr	78.8	79.8	473	1497	4735
between Harbor Scenic Dr and Pier J Way	78.9	79.9	486	1537	4860
W SEPULVEDA BLVD					
e/o SB I-110 off Ramp	73.9	74.9	155	490	1550
w/o NB I-110 off ramp	74.8	75.8	187	593	1878
w/o Figueroa St	74.1	75.1	161	512	1619
e/o Figueroa St	71.8	72.8	95	301	954
between SB and NB I-110 Ramps	74.0	75.0	158	501	1587
W WATER ST					
between Fries Ave and Avalon Blvd	72.7	73.7	116	367	1162
W WILLOW ST					
between NB and SB Terminal Island Fwy	76.5	77.5	276	875	2768
between Terminal Island Fwy and Santa Fe	70.8	71.8	74	236	746
between Santa Fe Ave and Easy Ave	72.1	73.1	100	319	1009
e/o Easy Ave	69.7	70.7	57	182	578
w/o SB I-710 ramps	70.1	71.1	64	204	646
w/o NB I-710 on ramp	70.0	71.0	62	198	626

3 Applicable Regulations

3.1 City of Los Angeles

Noise

Los Angeles General Plan Noise Element. The City of Los Angeles General Plan Noise Element establishes a set of community noise exposure/land use compatibility guidelines (summarized in Table F1-10) that characterizes the exterior noise level as "normally acceptable," "conditionally acceptable," "normally unacceptable," or "clearly unacceptable," depending on each particular land use's sensitivity to community noise.

Los Angeles Municipal Code. The City of Los Angeles Noise Ordinance is provided in Chapter 11 of the Los Angeles Municipal Code (LAMC). Section 111.02 of the LAMC provides procedures and criteria for the measurement of the sound level of "offending" noise sources. Specifically, the procedures provide for a penalty of 5 dBA for steady high-pitched noise or repeated impulsive noises. Conversely, the procedures provide a credit of 5 dBA for noise occurring less than 15 minutes in a period of 60 consecutive minutes during the day, as short-term noise events are typically less of a nuisance than sustained noise levels. A noise event duration of 15 minutes during a one-hour period would be equivalent to L_{25}, while a noise event duration of 5 minutes during a one-hour period would be equivalent to L_8.

Table F1-10. City of Los Angeles Noise Compatibility Guidelines

Land Use	*Community Noise Exposure CNEL, dBA*			
	Normally Acceptable	*Conditionally Acceptable*	*Normally UnaccepTable*	*Clearly UnaccepTable*
Single Family, Duplex, Mobile Homes	50 - 60	55 - 70	70 - 75	Above 70
Multi-Family Homes	50 - 65	60 - 70	70 - 75	Above 70
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	Above 80
Transient Lodging — Motels, Hotels	50 – 65	60 - 70	70 - 80	Above 80
Auditoriums, Concert Halls, Amphitheaters	-	50 - 70	-	Above 65
Sports Arena, Outdoor Spectator Sports	-	50 - 75	-	Above 70
Playgrounds, Neighborhood Parks	50 - 70	-	67 - 75	Above 72
Golf Courses, Riding Stables, Water, Recreation, Cemeteries	50 - 75	-	70 - 80	Above 80
Office Buildings, Business and Professional Commercial	50 - 70	67 - 77	Above 75	-
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	Above 75	-

Source: City of Los Angeles CEQA Thresholds Guide, 2006.

The LAMC indicates that in cases where the actual measured ambient conditions are not known or are less than 50 dBA, the presumed daytime (7:00 A.M. to 10:00 P.M.) and nighttime (10:00 P.M. to 7:00 A.M.) minimum ambient noise levels defined in Section 111.02 of the LAMC should be used. For residential-zoned areas, the presumed ambient noise level is 50 dBA during the daytime and 40 dBA during the nighttime.

Section 112.05 of the LAMC sets a maximum noise level for powered equipment of 75 dBA at a distance of 50 feet when operated within 500 feet of a residential zone. Compliance with this standard is only required where "technically feasible." In accordance with the City of Los Angeles Noise Ordinances, "technically feasible" means that the established noise limitations cannot be complied with at a project site, despite the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques employed during the operation of equipment. Section 41.40 of the LAMC prohibits construction between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, 6:00 P.M. and 8:00 A.M. on Saturday, and at any time on Sunday. In general, the City of Los Angeles Department of Building and Safety enforces noise ordinance provisions relative to equipment and the Los Angeles Police Department enforces provisions relative to noise generated by people.

Vibration

There are no adopted City of Los Angeles policies or standards for ground-borne vibration.

3.2 City of Long Beach

Noise

Long Beach Municipal Code. Chapter 8.80 of the Long Beach Municipal Code controls unnecessary and excessive noise and vibration in the City of Long Beach. Section 8.80.150 of the Long Beach Municipal Code outlines acceptable exterior noise levels by land use that applies to operations noise. As listed in Table F1-11, daytime noise levels at residential areas are not to exceed 50 dBA. In addition, it is unlawful for any person to create any noise which causes the noise level when measured on residential property to exceed:

- The noise standard for that land use district as shown in Table F1-9 for a cumulative period of more than thirty minutes in any hour;
- The noise standard plus five dBA for more than 15 minutes in any hour;
- The noise standard plus ten dBA for a cumulative period of more than five minutes in any hour;
- The noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; or
- The noise standard plus 20 dBA or the maximum measured ambient, for any period of time.

If the measured ambient level exceeds that permissible, the allowable noise exposure standard shall be increased in 5 dBA increments in each category as appropriate to

encompass or reflect the ambient noise level. In addition, Section 8.80.160 of the Long Beach Municipal Code states that, in the event an alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the standard limits should be reduced by 5 dBA.

Table F1-11. City of Long Beach Exterior Noise Limits by Receiving Land Use

Receiving Land Use District	*Time Period*	*Noise Level, dBA*	*Steady Audible Tone, dBA*
District One – Predominantly residential with other land use types also present	Night: 10 PM – 7 AM Day: 7 AM – 10 PM	45 50	40 45
District Two – Predominantly commercial with other land use types also present	Night: 10 PM – 7 AM Day: 7 AM – 10 PM	55 60	50 55
District Three – predominantly industrial with other land use types also present	Anytime	65	60
District Four – predominantly industrial with other land use types also present	Anytime	70	65
District Five – airports, freeways, and waterways regulated by other agencies	Regulated by other Agencies and laws	-	-

SOURCE: Long Beach Municipal Code, Section 8.80.160.

The Long Beach Municipal Code specifies interior noise standards for various land uses; as Table F1-12 shows, the interior daytime noise level for residences should not exceed 45 dBA for a cumulative period of more than five minutes in any hour. The interior noise standard is increased by 5 dBA for noise that occurs for a cumulative period of more than one minute in any hour and 10 dBA for the maximum measured ambient, for any period of time. If the measured ambient level exceeds that permissible for five and one minute durations, the allowable noise exposure standard shall be increased in 5 dBA increments in each category as appropriate to encompass or reflect the ambient noise level. If the ambient noise level exceeds the maximum standard, then the standard shall be increased to reflect the ambient noise level.

Table F1-12. City of Long Beach Interior Noise Limits

Receiving Land Use District	*Type of Land Use*	*Time Interval*	*Allowable Interior Noise Level, dBA*
All	Residential	10:00 PM – 7:00 AM 7:00 AM – 10:00 PM	35 45
All	School	7:00 AM – 10:00 PM While school is in session	45
Hospitals, designated quiet zones, and noise sensitive zones	-	Anytime	40

SOURCE: Long Beach Municipal Code, Section 8.80.170.

Further, the City of Long Beach Municipal Code Section 8.80.202 limits the use of construction tools and equipment on weekends and holidays.

Vibration

Section 8.80.200.G of the Long Beach Municipal Code limits operational ground-borne vibration:

> *Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty feet (forty-six meters) from the source if on a public space or public right-of-way. For the purposes of this subsection, "vibration perception threshold" means the minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such directed means as, but not limited to, sensation by touch or visual observation of moving objects. The perception threshold shall be presumed to be .001 g's in the frequency range 0-30 hertz and .003 g's in the frequency range between thirty and one hundred hertz.*

3.3 City of Carson

Noise

Carson General Plan. Chapter 3.2 of the General Plan Noise Element identifies land use compatible noise levels. In general, for residential land uses, an exterior CNEL between 50 to 60 dB is considered to be normally acceptable. Chapter 3.4 of the Noise Element further defines sensitive receptors and specifies a maximum exterior noise exposure of 65 dB CNEL for residences, public and private school/preschool classrooms, churches, hospitals, and elderly care facilities.

Vibration

The City of Carson does not specify vibration limits for transportation sources within the City boundaries.

3.4 State Policies

Noise

The California Department of Health Services establishes noise compatibility guidelines for various land uses. The guidelines indicate that an exterior noise level up to 65 dBA CNEL is "normally acceptable" for multi-family residential uses, without special noise insulation requirements. An exterior noise level up to 60 dBA CNEL is "normally acceptable" for low-density residential uses, without special noise insulation requirements. A noise level between 60 CNEL and 70 CNEL is considered "conditionally acceptable" for low-density residential uses, while a noise

level of 75 dBA CNEL or more is identified as "clearly unacceptable" for all residential uses.

In addition, the California Department of Transportation (Caltrans) adopts the Federal Highway Administrations Noise Abatement Criteria (NAC) for Type 1 projects. The NAC is discussed in the following section.

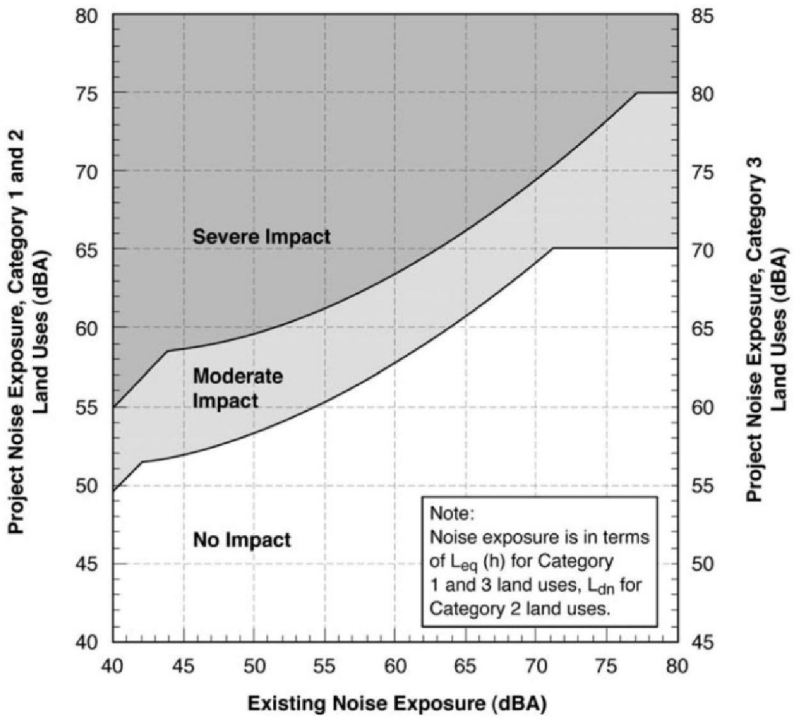
Vibration

There are no adopted state policies or standards for ground-borne vibration.

3.5 Federal Policies

Noise

Federal Rail Administration (FRA). The FRA relies upon the Federal Transit Administration (FTA) noise impact assessment procedures for assessing improvements to conventional passenger rail lines and stationary rail facilities and horn noise assessment. The FTA noise guidelines are illustrated in Figure F1-6. There are three designated land use categories under the FTA guidelines (Table F1-13).



Source: FTA Transit Noise and Vibration Impact Assessment, May 2006

Figure F1-6. FTA Noise Impact Criteria for Transit Projects

Table F1-13. Land Use Categories and Metrics for Transit Noise Impact Criteria

Land Use Category	*Noise Metric (dBA)*	*Description of Land Use Category*
1	Outdoor L_{eq} (h) *	Tracts of land where quiet are an essential element in their intended purpose. This category includes lands set aside for serenity and quiet, and such land uses as outdoor amphitheaters and concert pavilions, as well as National Historic Landmarks with significant outdoor use. Also included are recording studios and concert halls.
2	Outdoor Ldn	Residences and buildings where people normally sleep. This category includes homes, hospitals and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.
3	Outdoor L_{eq} (h) *	Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds and recreational facilities can also be considered to be in this category. Certain historical sites and parks are also included.
* L_{eq} (h) for the noisiest hour of transit-related activity during hours of noise sensitivity.		

Source: FTA Transit Noise and Vibration Impact Assessment, May 2006

FTA guidelines specify that noise impacts occur when predicted noise levels caused by the project increase the overall noise by a specific amount, which ranges between 1 and 10 dBA, depending on the land use and existing noise level. For example, for a project located in a residential area with an average L_{dn} of 50 dBA, the project can generate up to 54 dBA L_{dn} without causing any impact and up to 59 dBA L_{dn} without causing a severe impact. For daytime noise sensitive areas, impacts are determined by peak hour L_{eq}, so if the average L_{eq} is 50 dBA, the project can generate up to 59 dBA L_{eq} without causing any impact and up to 64 dBA L_{eq} without causing a severe impact. Daytime noise sensitive uses include parks, school, libraries and noise sensitive commercial uses.

FRA also adopts the FTA noise impact criteria for rail horn noise and has developed additional guidance on assessment of rail horn noise. The code of federal regulations mandates that audible warning devices shall be activated in accordance with railroad rules regarding the approach to both public and private roadway grade crossings. Standard practice is to begin sounding the horn 0.25 miles before the crossing in a long-long-short-long pattern and to continue sounding until the train reaches the crossing. The FRA has developed a horn-noise assessment model to determine the distance around each grade crossing where the noise exposure from train horns would exceed the guidelines.

Federal Highway Administration (FHWA). The FHWA's noise abatement criteria (NAC) define traffic noise impacts for Type 1 projects. Under the FHWA criteria, an impact occurs when predicted $L_{eq(h)}$ noise levels approach or exceed the NAC, or substantially exceed existing noise levels (23 CFR 772). These criteria are used to assess traffic noise on state and federal highways. The FHWA NAC specifies exterior $L_{eq(h)}$ noise levels for various land activity categories. For residences, parks, schools, churches, and similar areas, the noise criterion is 67 dBA. For other developed lands, the noise criterion is 72 dBA. For projects that add roadway capacity or substantially change the roadway alignment (FHWA Type 1 projects), the NAC defines levels that

if approached (within 1 dBA) or exceeded constitute a noise impact. Table F1-14 lists the FHWA Noise Abatement Criteria (NAC) for various land use categories.

Table F1-14. Noise Abatement Criteria (NAC)

Activity Category	*Noise Abatement Criteria Leq (dBA)*	*Description of Activity Category*
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 Exterior	Developed lands, properties, or activities not included in Categories A or B above.
D	--	Undeveloped lands.
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: 23 CFR 772, 1997

Vibration

Federal Rail Administration. The FRA relies upon the Federal Transit Administration (FTA) vibration impact assessment procedures for evaluating and assessing rail projects. The FTA criteria for environmental impact from ground-borne vibration are based on the maximum root-mean-square (rms) vibration levels for repeated events of the same source. The guidelines presented in Table F1-15 account for variation in project types as well as the frequency of events, which differ widely among transit projects. The limits are specified for the three land-use categories defined below:

- Vibration Category 1 - High Sensitivity: Included in Category 1 are buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance. Typical land uses covered by Category 1 are: vibration-sensitive research and manufacturing, hospitals with vibration-sensitive equipment, and university research operations. The degree of sensitivity to vibration will depend on the specific equipment that will be affected by the vibration. Equipment such as electron microscopes and high resolution lithographic equipment can be very sensitive to vibration, and even normal optical microscopes will sometimes be difficult to use when vibration is well below the human annoyance level. Manufacturing of computer chips is an example of a vibration-sensitive process. The vibration limits for Vibration Category 1 are based on acceptable vibration for moderately vibration-sensitive equipment such as optical microscopes and electron microscopes with vibration isolation systems.

- Vibration Category 2 - Residential: This category covers all residential land uses and any buildings where people sleep, such as hotels and hospitals. No differentiation is made between different types of residential areas. This is primarily because ground-borne vibration is experienced indoors and building

occupants have practically no means to reduce their exposure. Even in a noisy urban area, the bedrooms often will be quiet in buildings that have effective noise insulation and tightly closed windows. Moreover, street traffic often abates at night when rail operations continue. Hence, an occupant of a bedroom in a noisy urban area is likely to be just as exposed to ground-borne vibration as someone in a quiet suburban area.

- Vibration Category 3 - Institutional: Vibration Category 3 includes schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference. Although it is generally appropriate to include office buildings in this category, it is not appropriate to include all buildings that have any office space. For example, most industrial buildings have office space, but it is not intended that buildings primarily for industrial use be included in this category.

Table F1-15. FTA Ground-borne Vibration (GBV) Impact Criteria for General Assessment

	GBV Impact Levels (VdB re 1 micro-inch/sec)		
Land Use Category	*Frequent Events* [1]	*Occasional Events* [2]	*Infrequent Events* [3]
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB [4]	65 VdB [4]	65 VdB [4]
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

Notes:

1. "Frequency Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.
2. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter truck lines have this many operations.
3. "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.
4. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.

Source: FTA Transit Noise and Vibration Impact Assessment, May 2006

3.6 Sleep Disturbance and Speech Intelligibility

Increased community reaction to rail noise in the vicinity of the Port of Los Angeles has prompted the need for a discussion of the potential effects of sleep disturbance and speech intelligibility on the community from the SCIG Project.

Sleep Disturbance

The effect of noise on sleep is a recognized concern when addressing the impacts of noise on people. Historical studies of sleep disturbance were focused mainly in laboratories, using various indicators of response (electroencephalographic recordings, verbal response, button push, etc). Field studies also were conducted, in which subjects were exposed to noise in their own homes, using real or simulated transportation noise [Lukas, 1975; Griefahn and Muzet, 1978; and Pearsons et al., 1989].

Based on a 1989 literature review by Pearsons for the U.S. Air Force, no specific adverse health effects have been clearly associated with sleep disturbance, characterized either by awakening or by sleep-state changes [Pearsons, 1989]. Nevertheless, sleep disturbance is deemed undesirable, and may be considered an impact caused by noise exposure.

Three recent studies have added considerably to the stock of data on sleep disturbance caused by aviation noise. The first of these was conducted in the United Kingdom in 1992; the second in the U.S. near Castle Air Force Base and near Los Angeles International Airport in California in 1992; and the most recent study was conducted in communities near Stapleton International Airport (DEN) and near Denver International Airport (DIA) in Colorado, both before and after the opening of DIA in 1995. The Federal Interagency Committee on Aircraft Noise (FICAN) evaluated the data and conclusions of the three field studies and released the FICAN 1997 sleep disturbance curve. The FICAN 1997 curve shown in Figure F1-7 represents the upper limit of the observed field data, and should be interpreted as predicting the "maximum percent of the exposed population expected to be behaviorally awakened", or the "maximum % awakened" for a given residential population.

Speech Interference

One of the primary effects of continuous noise or sustained noise events are its tendency to drown out or "mask" speech, making it difficult or impossible to carry on a normal conversation without interruption. Figure F1-8 below presents typical distances between talker and listener for satisfactory conversations in the presence of different steady A-weighted background noise levels. As shown in the figure, satisfactory conversation does not always require hearing every word; 95% intelligibility is acceptable for many conversations. This is because a few unheard words can be inferred when they occur in a familiar context.

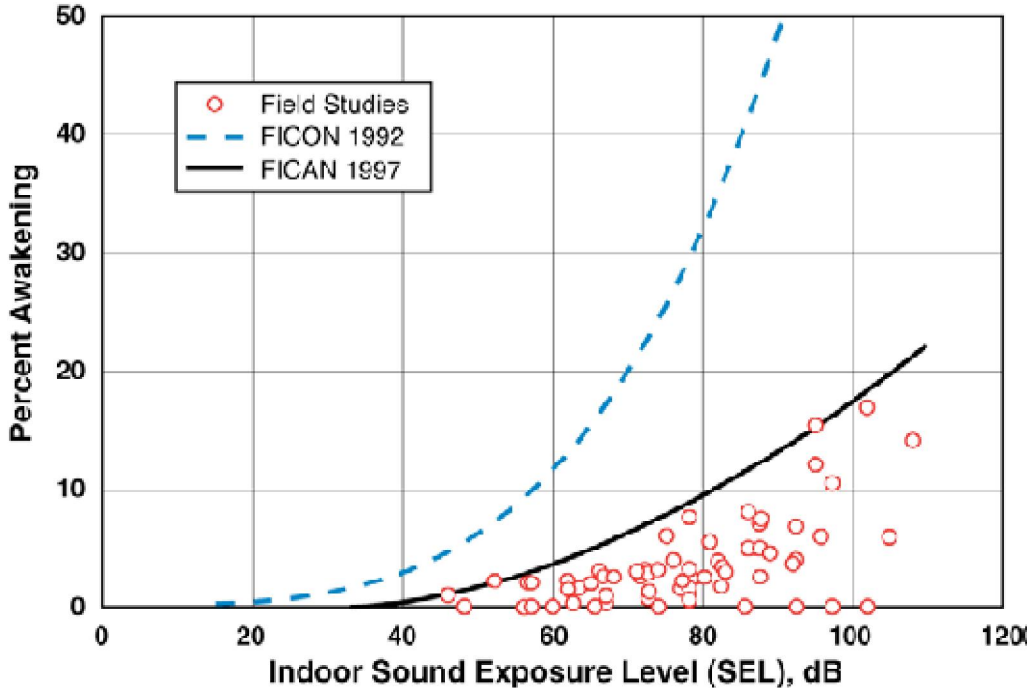
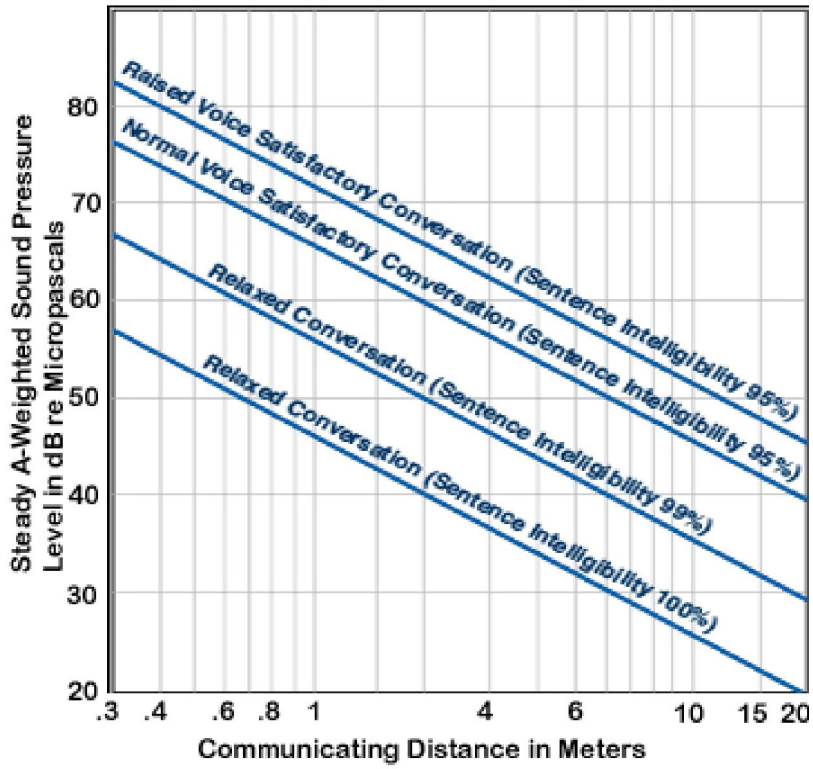


Figure F1-7. FICAN 1997 Recommended Sleep Disturbance Dose-Response Relationship



Source: US EPA, *Information on Levels of Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety*, March 1974.

Figure F1-8. USEPA Speech Intelligibility Curve

4 Predictive Noise Analysis

4.1 Methodology

Noise

To evaluate noise from construction activities, the methodology outlined by the Construction Engineering Research Laboratory (CERL) was used. The CERL methodology considers the type and number of construction equipment used, individual equipment noise emissions, and time-usage factors for each phase of construction.

The CNEL generated by existing and future traffic on the roadways that serve the proposed Project site has been estimated using the FHWA traffic noise prediction model and forecasted traffic data from the Transportation Chapter. Ambient noise levels (existing and future projected) associated with Project operations are expressed in CNEL.

The distances to noise contours presented in the tables are representative of "soft site" conditions without any barrier attenuation. Soft-site and hard-site conditions are parameters in the FHWA Highway Noise Model to account for how sound drops off as it radiates away from the roadway. For hard-site conditions, the reduction in sound over distance is solely due to the spreading of the sound energy over larger and larger area. As sound radiates from a source its energy is dispersed over a larger and larger area resulting in less energy at any one point the further it is from the source. This is the minimum rate that sound drops off over distance. Soft-site conditions include an additional effect, the fact that the sound typically travels along the ground and the ground absorbs some of the energy increasing the drop off rate from 3 dB per doubling of distance to 4.5 dB per doubling distance.

In addition to the CNEL noise analysis described above, the analysis of potential noise associated with the proposed Project's mechanical equipment, truck deliveries, cranes, yard tractors, and parking facility operations were analyzed using the Cadna noise model and equipment data from the proposed Project description. The CNEL generated by future rail operations was calculated by applying existing operational data to the FRA's computational procedures for railroad operations, DOT-T-95-16.

Sleep disturbance was evaluated for two cases, with windows closed and with windows open. With windows closed, a 20 dB noise reduction was applied to exterior single event noise to estimate interior noise levels. A conservative 12 dB exterior to interior noise reduction was applied to assess interior SELs with windows open. Interior SELs were then analyzed in conjunction with the FICAN Sleep Disturbance Curve (Fig. F.7) to predict the likelihood of single event awakenings.

4.2 Predicted Noise Levels – City of Los Angeles

Construction of the proposed Project would occur over approximately 24 months in the following areas:

1. The railyard area including the north lead tracks and railroad bridge over Sepulveda Blvd;

2. Pacific Coast Highway (PCH) grade separation and interchange;

3. The south lead tracks area along the Long Beach Lead and Alameda Corridor, including the Dominguez Channel Bridge.

4. Tenant relocation sites.

Construction would include demolition of existing structures; earthwork including excavating, repositioning, and compacting; drainage and utility construction/relocation; fine grading and sub-grade preparation; paving; construction of new buildings; track work and signal installation; assembly of the loading cranes; modifications to rail and road bridges; landscaping; and improvements to the Southern California Edison access road. Heavy construction equipment (e.g., excavators, graders, rollers, track-laying machines, cement mixers, cranes, and haul trucks) would be used in all parts of the proposed Project site, and some pile driving would likely occur, particularly for the new bridge abutments. Construction of all elements would occur essentially simultaneously. (See DEIR Section 2.4.3 for additional details on Construction Activities and Phasing).

Construction Noise Levels

Construction noise would be experienced by workers at industrial and commercial facilities near the proposed Project site in the City of Los Angeles. However, no noise-sensitive uses were identified within the portion of the City of Los Angeles near the proposed Project site; noise-sensitive uses within Los Angeles occur along the designated truck routes, which would be used during operations and not for construction trips. Nighttime construction would be very limited and would be confined to the PCH grade separation. Haul routes to and from the site would be limited to PCH to the west and east. Because the number of truck movements would be very limited, little to no increase would be expected with the overall CNEL from traffic on PCH.

No on-site construction activities would occur near noise-sensitive uses in the City of Los Angeles between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday. Nighttime construction noise from the PCH grade separation would be attenuated due to the distance to the receptors (4,000 ft), barrier effects of intervening topography and the high ambient background noise. Because the number of truck movements would be very limited, little to no increase would be expected with the overall CNEL from traffic on PCH. Further, single event noise levels would be expected to be similar to what is generated by existing heavy trucks on PCH. Therefore, nighttime construction noise would be considered less than significant.

On-Site Operations

Sources of on-site operational noise at the SCIG and relocation facilities would include truck activity, maintenance, train activity, and container loading and unloading operations. Operational noise levels for on-site activities are summarized in Table F1-16. Existing operations that would be relocated by the proposed Project would include less intensive trucking, warehousing, transloading and yard goats activities. Mechanical equipment associated with these operations includes heavy trucks, trailers, forklifts, yard goats, and maintenance equipment.

Trucks and hostlers would generate noise from their engines and horns. Truck activity would consist of truck traffic arriving and departing from the SCIG and relocation site facilities, and moving about within the facilities. An estimated 5,542 truck trips and 4,167 containers would be processed through the SCIG facility on a daily basis. Hostlers would transport containers between storage areas and the loading/unloading tracks. Crane operations would include the use of RMG cranes on the strip tracks for loading and unloading railcars and chassis, and managing container stacking. The cranes, being electrically powered, would generate little noise, but container stacking would generate noise from impacts with other containers, truck trailers, or the ground. The maintenance activities would consist of hostler and crane maintenance, which would be supported by an air compressor building in the northwest portion of the site.

Train operations would account for the majority of operational noise at the proposed Project site. Railroad noise would include locomotive diesel engines, horns, and air brake systems; wheel-on-rail clicking and squealing; and concussion from railcars banging together during switching operations. Eight inbound trains and eight outbound trains would be expected to pass through the facility each day. Each train would consist of three or four diesel-electric locomotives with attached railcars, with a total length of approximately 8,000 feet. Locomotives would operate from the junction with the Alameda Corridor through the railyard and northward up the north lead tracks.

Locomotive noise would be reduced by normal operating procedures, which call for shutting down all but one of the locomotives as the train arrives or until it is ready to depart and accomplishing all switching activities with a single locomotive. A non audible warning system would be used on site instead of train horns, eliminating the potential for on-site train horn affects.

Table F1-16. Summary of Predicted Noise Levels From On-Site Sources

On-Site Source	*Predicted Noise Level at 100 ft, dBA*
Train Horn (off site)	107
Trains	70 - 95
Air Compressor Building	68
RMG cranes	70
Maintenance Facilities	72
Parking Lots	67
Hostler w/ Trailer	69
Hostlers	59
Heavy Trucks	66
Container Impact	70

Rail Corridor Noise

The proposed eight roundtrip trains to and from the SCIG facility each day would result in increased train traffic on local corridors compared to baseline conditions. These corridors include the Alameda Corridor, South Lead Tracks and San Pedro Branch Line. Increased rail activity from the SCIG facility on the Alameda Corridor itself is already included in the Alameda Corridor project's EIR (ACEIR) as part of the overall projected increase in intermodal rail traffic. The ACEIR cites an existing train volume of 73 trains per day on the Alameda Corridor. Considering that the project would generate eight inbound and outbound trains per day, the increase in CNEL from the Project's trains on the Alameda Corridor would be less than 1 dB at the nearest residential receptors R28, R29 and R32.

Train horn sounding can produce maximum sound levels as high as 107 dBA at a distance of 100 ft and 90 dBA at a distance of 500 feet. The project would generate eight daily inbound and outbound trains with approximately 16 train horn soundings per day occurring near the intersection of the Alameda Corridor and Pacific Coast Highway. Train horn soundings from the project are not expected to occur more than once in any one hour period. When compared to the number of existing train operations, horn soundings and ambient background noise, future locomotive horn noise from SCIG train traffic, although still discernible, would not be expected to result in a CNEL increase greater than 3 dB at the nearest residential receptors R28, R29, and R32.

Future rail movements along the San Pedro Branch line would include diesel engine noise, train horns, and railcar noises, as described above. According to BNSF, train horn soundings are not expected to occur on the San Pedro Branch line due to the Project's design features. Future noise levels from the Project's rail movements on the San Pedro Branch line from all these sources are summarized in Table F1-17.

Table F1-17. Summary of SCIG Operational Train Noise Levels for San Pedro Branch Line

Receptor Number[1]	*Measured Ambient Noise Level, L50, dBA* [2]	*Measured Ambient CNEL, dBA*	*Predicted Future CNEL for San Pedro Branch Line, dBA*
R1	Day: 49.4 – 55.3 Night: 43.1	58.0	55.1
R2	Day: 59.9 – 60.3 Night: 52.5	63.6	48.3
R3	Day: 54.2 – 57.8	60.2	56.0
R4	Day: 64.1 – 65.3	--	57.3
R5	Day: 51.0 – 52.0	--	48.8
R6	Day: 63.3 – 64.6	68.8	57.1
R7	Day: 63.3 – 64.6	68.8	56.6
R8	Day: 61.0 – 62.5 Night: 48.0	--	53.9
R30	Day: 47.2 – 64.0	61.5	52.9
R31	Day: 49.2 – 55.7	61.7	50.3

Note: *1* For receptor locations refer to Figure F1-3 (where N is equivalent to R).
2 Refer to Table F1-4, Summary of Ambient Noise Measurement Data.

Existing Plus Project Traffic Noise Levels

Table F1-18 shows the roadway traffic noise levels once the proposed Project is in full operation. Portions of the following roadways in the City of Los Angeles include noise-sensitive land uses that would be expected to experience future traffic noise levels above 70 CNEL: Alameda Street, E. Anaheim St., E. Harry Bridges Boulevard, E. Sepulveda Boulevard, John S. Gibson Boulevard, Pacific Coast Highway, S Alameda St., W. Harry Bridges Boulevard, and W. Sepulveda Boulevard. Traffic noise levels above 70 CNEL are considered incompatible with noise guidelines.

Table F1-19 shows the predicted noise level increase over existing levels; the Project's traffic noise contribution. Roadways in Los Angeles would not experience a Project increase in traffic noise level exceeding 1 dB. The majority of roadways within the City would experience a traffic noise decrease as a result of the Project.

Table F1-20 shows the predicted future noise level increase over existing levels and the Project's contribution upon build out (i.e., in 2023). Portions of the following roadways in Los Angeles would experience a cumulative noise level increase over existing noise levels of 3 dBA or greater: Access Road, Alameda Street., E. Anaheim Street, E. Harry Bridges Boulevard, E. Sepulveda Boulevard, Ferry Street, Harbor Freeway, John S. Gibson Boulevard., N. Seaside Avenue, Navy Way, New Dock Street, Pacific Coast Highway, S. Fries Avenue, San Diego Freeway, San Gabriel Avenue, Terminal Island Freeway, Terminal Way, and W. Harry Bridges Boulevard.

Table F1-18. Calculated Existing Plus Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS(FT)*		
			70 dBA	*65 dBA*	*60 dBA*
1ST ST					
e/o East RD	77.8	78.8	377	1194	3777
ACCESS RD					
e/o Ferry St	77.2	78.2	326	1030	3259
ALAMEDA ST					
n/o Anaheim St	77.9	78.9	381	1206	3816
w/o Eubank Ave	80.5	81.5	707	2237	7075
s/o PCH	80.3	81.3	674	2131	6739
s/o Anaheim St	80.0	81.0	627	1982	6270
CARRACK AVE					
e/o Pier B St	65.1	66.1	20	63	200
E 223RD ST					
w/o I-405 Off ramps	77.1	78.1	320	1014	3207
E ANAHEIM ST					
between Avalon Blvd and Broad Ave	69.3	70.3	53	170	537
between Eubank Ave and Sanford St	69.6	70.6	57	182	576
between Sanford Ave and Sanford St	69.6	70.6	57	181	573
between Anaheim and Henry Ford	76.3	77.3	266	843	2666
e/o Henry Ford Ave	76.5	77.5	279	883	2792
w/o E I St	76.2	77.2	258	817	2583
e/o Sanford Ave	69.3	70.3	53	169	535
w/o Anaheim Way	76.5	77.5	279	883	2794
between Henry Ford Ave and Terminal Island	76.3	77.3	268	847	2680
E HARRY BRIDGES BLVD					
e/o Avalon Blvd	80.1	81.1	642	2031	6424
E I ST					
between Terminal Island Fwy and Anaheim	77.8	78.8	377	1193	3772
E OPP ST					
w/o Farragut Ave	64.5	65.5	17	55	176
E SEPULVEDA BLVD					
e/o Alameda St	74.9	75.9	194	613	1941
w/o Dolores St	71.6	72.6	89	283	897
w/o Wilmington Ave	72.4	73.4	109	345	1091
e/o Wilmington Ave	73.7	74.7	147	466	1474
e/o Dolores St	72.0	73.0	98	310	981
w/o Avalon Blvd	72.1	73.1	101	321	1016
EAST RD					
n/o 1st St	74.6	75.6	180	571	1808
s/o 1st St	74.6	75.6	178	563	1781
FARRAGUT AVE					
Between Terminal Island Fwy SB ramps	76.8	77.8	296	935	2959
s/o E OPP St	63.4	64.4	13	43	137
FERRY ST					
between Seaside Ave and Access Rd	76.8	77.8	297	940	2974
between Terminal Way and Pitchard St	79.9	80.9	613	1939	6132
FIGUEROA ST					

Table F1-18. Calculated Existing Plus Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS(FT)*		
			70 dBA	*65 dBA*	*60 dBA*
n/o Anaheim St	73.9	74.9	151	480	1518
n/o PCH	72.1	73.1	101	322	1018
HARBOR FWY					
SB n/o PCH off Ramp	84.2	85.2	1626	5144	16267
NB s/o Sepulveda Blvd	84.6	85.6	1802	5699	18024
NB n/o Sepulveda Blvd	84.5	85.5	1745	5518	17450
SB n/o Sepulveda Blvd	84.1	85.1	1624	5135	16239
SB s/o 228th St	83.9	84.9	1524	4820	15243
SB n/o 220th St	82.4	83.4	1079	3413	10795
NB n/o 223rd St	84.3	85.3	1690	5345	16905
NB n/o Carson St	83.3	84.3	1334	4221	13347
SB s/o Torrance Blvd	82.6	83.6	1145	3622	11455
NB s/o Del Amo Blvd	83.5	84.5	1389	439	13893
SB n/o Redondo Beach Blvd	81.7	82.7	924	2924	9246
SB between 135th St and Rosecrans Ave	81.1	82.1	809	2559	8092
NB n/o Redondo Beach Blvd	81.6	82.6	904	2860	9046
SB n/o 135th St	81.4	82.4	862	2726	8622
NB s/o 135th	81.4	82.4	871	2757	8719
NB s/o El Segundo Blvd	81.4	82.4	853	2699	8536
SB n/o Alondra	81.5	82.5	879	2782	8799
SB between Del Amo Blvd and Torrance Blvd	82.8	83.8	1196	3783	11963
SB between 168th and Alondra	82.6	83.6	1133	3585	11337
NB between Redondo Beach Blvd and Alondra	81.1	82.1	813	2573	8137
SB n/o Del Amo Blvd	82.2	83.2	1046	3308	10461
SB n/o I-405	81.5	82.5	892	2822	8926
NB n/o Del Amo Blvd	82.2	83.2	1032	3263	10319
NB s/o I-405	81.5	82.5	882	2790	8823
NB n/o Victoria St	83.8	84.8	1495	4729	14955
SB s/o 182nd St	81.0	82.0	794	2513	7947
NB between Albertoni and Victoria	83.5	84.5	14089	4455	14089
SB s/o I-405	80.3	81.3	673	2130	6738
SB between Artesia Blvd and 168th	82.3	83.3	1070	3384	10704
NB n/o I-405	83.0	84.0	1247	3945	12476
NB s/o SR-91	83.1	84.1	1264	3998	12643
NB s/o Gardena Blvd	83.1	84.1	1279	4047	12799
SB s/o PCH off Ramp	84.5	85.5	1747.0	5524	17469
NB n/o PCH on Ramp	84.5	85.5	1772.0	5603	17719
NB n/o El Segundo Blvd	82.2	83.2	1030	3257	10301
SB s/o El Segundo Blvd	82.0	83.0	995	3147	9952
SB n/o Anaheim St	84.8	85.8	1889	5975	18896
NB s/o PCH on ramp	84.8	85.8	1880	5945	18799
NB s/o L St	85.0	86.0	1988	6287	19883
SB s/o 120th St	81.2	82.2	827	2615	8271
NB s/o 120th St	81.5	82.5	891	2818	8914
SB s/o 120th St	81.5	82.5	886	2804	8868
SB n/o I-105	82.5	83.5	1119	3540	11197
NB n/o 120th St	82.1	83.1	1017	3217	10173

Table F1-18. Calculated Existing Plus Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS(FT)*		
			70 dBA	*65 dBA*	*60 dBA*
SB n/o 108th St	81.7	82.7	916	2896	9159
NB s/o Torrance Blvd	83.3	84.3	1336	4227	13367
NB s/o 223rd St	84.2	85.2	1653	5229	16537
SB between 214th St and 220th St	82.5	83.5	1112	3517	11124
SB s/o 220th St	83.9	84.9	1533	4850	15338
NB s/o Rosecrans	81.3	82.3	841	2659	8410
NB between Gardena Blvd and Alondra Blvd	81.8	82.8	946	2993	9466
SB s/o 108th	82.5	83.5	1114	3524	11145
NB n/o 108th St	81.9	82.9	957	3026	9571
NB s/o 190th St	82.8	83.8	1198	3788	11979
NB n/o 220th ST	83.2	84.2	1318	4167	13180
SB s/o Sepulveda Blvd	84.1	85.1	1623	5132	16230
HARBOR PLZ					
between Pier F Ave and Pico Ave	77.8	78.8	376	1190	3764
HARBOR SCENIC DR					
NB w/o Goldenshore St	78.2	79.2	410	1298	4104
NB s/o Shoreline Dr	78.2	79.2	414	1311	4147
NB n/o Shoreline Dr	77.9	78.9	387	1226	3879
SB n/o Shoreline Dr	78.6	79.6	453	1434	4537
SB s/o Shoreline Dr	77.9	78.9	387	1226	3877
NB e/o Goldenshore St	77.9	78.9	389	1231	3893
HARBOR SCENIC WAY					
e/o Queens Hwy	77.1	78.1	319	1010	3196
e/o Port Access Rd	77.8	78.8	372	1177	3723
Between Queens Hwy and Port Access Rd	47.4	48.4	0	1	3
w/o Port Access Rd	77.7	78.7	371	1173	3712
JOHN S GIBSON BLVD					
n/o I-110 Ramps	76.8	77.8	300	950	3004
LONG BEACH FWY					
SB n/o Imperial Hwy	83.4	84.4	1370	4332	13701
NB n/o Imperial Hwy	83.2	84.2	1314	4158	13148
NB s/o Imperial Hwy	83.5	84.5	1396	4415	13963
SB s/o Imperial Hwy	83.2	84.2	1320	4175	13202
SB s/o Imperial Hwy	83.5	84.5	1401	4430	14009
SB n/o I-105	83.1	84.1	1289	4077	12894
SB s/o I-105	83.4	84.4	1370	4334	13705
NB n/o I-105	83.1	84.1	1269	4014	12694
NB n/o Rosecrans Ave	83.2	84.2	1315	4159	13154
SB n/o Rosecrans Ave	83.2	84.2	1297	4102	12972
SB s/o Rosecrans Ave	84.9	85.9	1915	6057	19156
SB s/o Rosecrans Ave	85.0	86.0	1963	6207	19629
NB s/o Rosecrans	85.0	86.0	1971	6232	19709
SB n/o Alondra	85.0	86.0	1963	6207	19629
NB between Alondra and Rosecrans	85.1	86.1	2038	6444	20380
SB n/o Alondra	84.7	85.7	1841	5822	18411
NB n/o Alondra	85.1	86.1	2000	6325	20002

Table F1-18. Calculated Existing Plus Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	Leq @ Rec.	CNEL @ Rec.	DISTANCE TO CNEL CONTOURS(FT)		
			70 dBA	65 dBA	60 dBA
SB s/o Alondra	84.6	85.6	1819	5752	18190
NB s/o Alondra	85.1	86.1	2006	6344	20061
SB n/o SR-91	85.1	86.1	2019	6384	20190
NB n/o SR-91	84.1	85.1	1589	5027	15898
SB n/o Artesia Blvd	83.6	84.6	1444	4569	14448
NB n/o Artesia Blvd	83.5	84.5	1385	4379	13850
NB s/o Artesia Blvd	83.7	84.7	1481	4683	14810
SB s/o Artesia Blvd	84.7	85.7	1829	5783	18289
NB s/o Artesia Blvd	83.8	84.8	1488	4707	14885
SB n/o Long Beach Blvd	85.2	86.2	2061	6518	20614
SB s/o Long Beach Blvd	85.0	86.0	1967	6220	19669
NB n/o Long Beach Blvd	85.7	86.7	2344	7412	23441
SB n/o Del Amo Blvd	84.8	85.8	1873	5925	18738
SB s/o Del Amo Blvd Off ramp	85.2	86.2	2070	6547	20706
NB s/o Long Beach Blvd	85.5	86.5	2233	7061	22331
NB n/o Del Amo Blvd	85.2	86.2	2078	6572	20784
SB s/o Del Amo Blvd	85.2	86.2	2070	6547	20703
NB n/o Wardlow Rd	85.5	86.5	2240	7085	22404
SB s/o Wardlow Rd	84.9	85.9	1909	6037	19091
SB n/o Willow St	84.7	85.7	1853	5862	18538
NB n/o Willow St	84.7	85.7	1848	5846	18489
NB s/o Willow St	84.5	85.5	1742	5509	17421
SB n/o Willow St	84.2	85.2	1648	5211	16480
SB s/o Willow St	84.1	85.1	1611	5095	16114
SB between off/of ramps at Willow St	84.2	85.2	1645	5203	16453
NB s/o Willow St	84.6	85.6	1790	5661	17904
NB s/o off ramp at PCH	84.7	85.7	1848	5845	18484
NB s/o Anaheim St	84.2	85.2	1626	5144	16268
NB s/o PCH	83.8	84.8	1512	4781	15120
SB n/o Anaheim St	84.0	85.0	1582	5005	15828
SB s/o Anaheim St	84.0	85.0	1581	5001	15815
NB s/o loop off ramp at PCH	84.8	85.8	1874	5927	18743
SB n/o Anaheim St	84.3	85.3	1695	5361	16955
SB s/o PCH	84.5	85.5	1771	5602	17716
NB n/o I-405 Interchange	85.1	86.1	2023	6399	20237
NB s/o I-405 Interchange Ramp	84.9	85.9	1923	6083	19237
SB n/o Wardlow Rd	85.6	86.6	2268	7175	22689
NB s/o Firestone Blvd	83.1	84.1	1281	4050	12809
SB s/o Firestone Blvd	83.5	84.5	1411	4462	14111
SB s/o 9th St	83.5	84.5	1399	4425	13995
SB n/o Long Beach Blvd	85.5	86.5	2229	7049	22292
NB n/o 9th St	84.2	85.2	1636	5176	16368
NB s/o 9th St	83.2	84.2	1318	4167	13179
SB n/o 9th St	84.3	85.3	1680	5314	16807
SB s/o Anaheim St	83.8	84.8	1503	4752	15030
NB n/o 10th St	83.8	84.8	1499	4741	14993
SB n/o I-405	84.9	85.9	1933	6113	19333

Table F1-18. Calculated Existing Plus Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS(FT)*		
			70 dBA	*65 dBA*	*60 dBA*
SB s/o Alondra	84.7	85.7	1852	5856	18520
NB n/o Dell Amo Blvd Off Ramp	85.4	86.4	2180	6894	21803
SB s/o On ramp at Del Amo Blvd	85.2	86.2	2070	6547	20703
NB s/o Del Amo Blvd	85.3	86.3	2124	6719	21248
NB between s/o off ramp at Del Am o Blvd	85.0	86.0	1994	6307	19945
NB between off/on ramps at Willow St	84.5	85.5	1753	5545	17537
SB s/o Willow St	84.4	85.4	1736	5492	17369
NB n/o Willow St	84.8	85.8	1906	6028	19062
NB n/o PCH	84.4	85.4	1738	5497	17383
NB Between Ramps at Anaheim St	85.0	86.0	1966	6219	19667
SB s/o Anaheim St	84.3	85.3	1667	5272	16671
NB n/o Anaheim St	84.9	85.9	1929	6100	19291
N HENRY FORD AVE					
n/o Terminal Island Fwy	79.4	80.4	542	1713	5419
n/o Anaheim St	78.5	79.5	444	1404	4439
N SEASIDE AVE					
e/o Navy Way	82.8	83.8	1178	3725	11781
e/o Access Rd ramp	80.7	81.7	740	2341	7403
w/o Navy Way	82.4	83.4	1082	3424	10828
e/o Ferry St	76.9	77.9	304	964	3049
e/o Navy Way ramp	83.5	84.5	1410	4459	14100
e/o Navy Way	82.8	83.8	1194	3777	11945
NAVY WAY					
s/o Reeves Ave	77.2	78.2	331	1048	3315
s/o Terminal Way	79.7	80.7	589	1863	5892
NEW DOCK ST					
w/o Henry Ford Ave	77.2	78.2	330	1043	3300
e/o Henry Ford Ave	79.2	80.2	521	1650	5217
w/o SB off ramp Terminal Island Fwy	79.2	80.2	523	1654	5230
w/o NB on ramp Terminal Island Fwy	76.6	77.6	284	898	2841
between Terminal Island Fwy SB and NB Ramp	76.6	77.6	288	911	2883
e/o NB on ramp Terminal Island Fwy	66.4	67.4	27	86	274
PACIFIC COAST HIGHWAY					
between Avalon Blvd and Eubank Ave	74.5	75.5	176	557	1763
between Watson Ave and Eubank Ave	75.1	76.1	201	637	2016
w/o Alameda St	73.6	74.6	144	455	1441
w/o East Rd	72.5	73.5	110	349	1105
w/o East Rd	71.5	72.5	87	277	878
between Watson Ave and Blinn Ave	75.0	76.0	196	622	1967
PICO AVE					
s/o Ocean Blvd	75.6	76.6	224	711	2248
n/o Ocean Blvd	75.3	76.3	210	665	2103
n/o Pier C St	78.7	79.7	461	1457	4609
s/o Pier C St	77.2	78.2	330	1044	3302
n/o Pier D St	77.4	78.4	343	1084	3430
PIER A WAY					

Table F1-18. Calculated Existing Plus Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	Leq @ Rec.	CNEL @ Rec.	DISTANCE TO CNEL CONTOURS(FT) 70 dBA	65 dBA	60 dBA
e/o Henry Ford Ave	73.2	74.2	131	414	1310
e/o Henry Ford Ave	76.5	77.5	276	873	2762
e/o Henry Ford Ave	77.7	78.7	370	1170	3701
between Terminal Island Fwy and Henry Ford	64.2	65.2	16	52	164
n/o Terminal Island Fwy	73.1	74.1	127	404	1278
e/o Henry Ford Ave	72.6	73.6	112	356	1128
e/o Henry Ford Ave	73.8	74.8	151	478	1514
PIER B ST					
s/o 9th St	76.4	77.4	272	862	2727
w/o Edison Ave	74.2	75.2	163	518	1638
n/o Pier A way	73.8	74.8	150	474	1500
PIER C ST					
w/o Pier B St	76.1	77.1	252	798	2524
w/o Pier B St	75.5	76.5	220	696	2202
PIER D AVE					
s/o Pier D St	70.8	71.8	75	237	750
PIER D ST					
w/o I-710	75.0	76.0	197	625	1978
PIER F AVE					
s/o Harbor Plaza	77.4	78.4	34	1079	3412
PIER G AV					
s/o Harbor Plaza	69.3	70.3	52	167	528
s/o Harbor Plaza	69.3	70.3	52	167	528
PIER J WAY					
e/o Panorama Dr	79.5	80.5	553	1751	5539
PORT ACCESS RD					
e/o Ocean Blvd Ramps	74.1	75.1	160	505	1599
n/o New Dock St	77.0	78.0	312	989	3127
n/o New Dock St	76.6	77.6	285	902	2852
s/o Pier J way	78.2	79.2	416	1317	4164
s/o Pier J way	79.6	80.6	565	1788	5654
n/o Pier J way	78.2	79.2	415	1314	4155
s/o Harbor Scenic way	77.7	78.7	364	1151	3641
QUEENSWAY DR					
s/o Harbor Scenic Dr	78.2	79.2	410	1298	4104
S ALAMEDA ST					
n/o Wardlow Rd	77.0	78.0	311	985	3117
S FRIES AVE					
s/o Water St	78.2	79.2	415	1314	4157
between Harry Bridges Blvd and Water St	76.3	77.3	266	843	2668
S HARBOR SCENIC DR					
NB s/o Shoreline Dr	78.0	79.0	396	1252	3959
SB w/o Goldenshore St	78.7	79.7	462	1462	4625
NB n/o Goldenshore St	78.1	79.1	403	1276	4036
SB e/o Goldenshore St	78.3	79.3	424	1343	4249
NB s/o Shoreline Dr	77.9	78.9	386	1222	3866

Table F1-18. Calculated Existing Plus Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS(FT)*		
			70 dBA	*65 dBA*	*60 dBA*
SB w/o Panorama Dr	78.8	79.8	479	1514	4789
SB w/o Panorama Dr	78.2	79.2	416	1318	4169
S PICO AVE					
s/o Embarcadero	77.0	78.0	310	980	3099
n/o Harbor Scenic Dr ramp	79.9	80.9	612	1935	6120
s/o Harbor Scenic Dr ramp	79.3	80.3	526	1664	5263
SAN DIEGO FWY					
SB e/o I-110	81.7	82.7	932	2948	9325
SB e/o Wilmington Blvd	82.7	83.7	1158	3663	11584
SB s/o I-110 interchange	82.8	83.8	1188	3759	11888
NB s/o Wilmington Blvd	82.6	83.6	1149	3636	11498
NB w/o Santa Fe Ave	82.5	83.5	1100	3480	11005
SB e/o 218th St	80.4	81.4	689	2181	6897
NB w/o Alameda St	82.6	83.6	1143	3615	11432
SB w/o Alameda St	81.2	82.2	830	2625	8303
NB e/o Wilmington Ave	81.8	82.8	935	2956	9350
SB e/o Wilmington Ave	80.2	81.2	647	2046	6472
SB w/o Wilmington Ave	79.9	80.9	605	1916	6059
SB s/o Carson St	80.9	81.9	770	2435	7702
NB n/o Carson St	82.4	83.4	1076	3403	10761
NB n/o 213th St	81.9	82.9	972	3076	9729
NB e/o Avalon Blvd	82.4	83.4	1094	3462	10948
SB e/o Avalon Blvd	81.5	82.5	881	2788	8818
NB w/o Avalon Blvd	82.7	83.7	1159	3666	11593
SB e/o Avalon Blvd	81.9	82.9	957	3028	9575
NB w/o Wilmington Ave	81.7	82.7	922	2917	9227
NB e/o 218th St	82.1	83.1	1012	3200	10120
SB e/o Avalon Blvd	81.5	82.5	881	2788	8818
NB s/o Carson St	81.7	82.7	922	2918	9227
SB n/o Carson St	81.5	82.5	881	2788	8818
SAN GABRIEL AV					
n/o PCH	77.1	78.1	322	1018	3220
TERMINAL ISLAND FWY					
s/o PCH	80.2	81.2	654	2069	6543
n/o PCH	79.2	80.2	519	1643	5196
n/o Ocean Blvd	81.7	82.7	927	2932	9274
NB s/o PCH	78.4	79.4	431	1363	4312
SB n/o PCH	77.2	78.2	324	1026	3244
NB between Off and loop On ramp at PCH	79.7	80.7	588	1862	5889
NB s/o PCH off ramp	82.0	83.0	985	3116	9854
SB n/o Anaheim St	77.5	78.5	351	1111	3513
NB between Henry Ford Ave and Anaheim St	80.9	81.9	768	2429	7683
NB n/o Ocean Blvd	79.3	80.3	530	1678	5307
SB n/o Ocean Blvd	77.7	78.7	366	1158	3664
s/o Henry Ford Ave	80.8	81.8	744	2352	7440
SB s/o Henry Ford Ave	79.8	80.8	600	1897	6001

Table F1-18. Calculated Existing Plus Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS(FT)*		
			70 dBA	*65 dBA*	*60 dBA*
e/o Seaside Ave	80.2	81.2	656	2075	6563
SB s/o Anaheim Way	79.9	80.9	608	1924	6084
NB s/o Willow St	75.8	76.8	235	746	2359
SB s/o PCH on ramp	80.4	81.4	681	2154	6811
SB s/o PCH	78.0	79.0	394	1247	3943
NB n/o PCH	77.4	78.4	341	1080	3416
SB between loop Off and On ramp at PCH	78.0	79.0	392	1240	3922
SB s/o Henry Ford Ave	79.8	80.8	601	1900	6010
s/o Henry Ford Ave	80.8	81.8	742	2349	7428
TERMINAL WAY					
w/o Ferry St	79.5	80.5	555	1755	5552
w/o Eaire St	79.6	80.6	568	1799	5689
s/o Navy Way	79.5	80.5	554	1753	5543
s/o Navy Way	77.2	78.2	325	1029	3254
s/o Navy Way	79.5	80.5	554	1753	5543
s/o Navy Way	76.3	77.3	267	846	2676
s/o Navy Way	76.4	77.4	272	862	2728
s/o Navy Way	78.0	79.0	394	1246	3942
W 9TH ST					
e/o Caspian Ave	69.9	70.9	61	195	616
s/o Anaheim St	74.0	75.0	158	501	1586
e/o Santa Fe Ave	70.9	71.9	77	244	774
w/o Caspian Ave	70.0	71.0	62	198	627
n/o Pier B St	67.8	68.8	37	117	372
w/o Santa Fe Ave	73.9	74.9	153	486	1538
s/o Pier B St	77.2	78.2	331	1046	3309
n/o Pier B St	71.9	72.9	97	308	976
W ANAHEIM ST					
e/o Harbor Ave	74.4	75.4	173	546	1729
e/o Santa Fe Ave	78.8	79.8	475	1505	4759
w/o Harbor Ave	77.2	78.2	330	1045	3305
w/o Seabright Ave	78.0	79.0	396	1253	3964
w/o E I St	76.1	77.1	256	811	2565
w/o Figueroa PL	75.6	76.6	226	715	2262
between Wilmington and Neptune Ave	69.3	70.3	52	167	528
between Frigate Ave and Wilmington Blvd	69.4	70.4	53	170	539
e/o Neptune	68.9	69.9	48	154	487
between Neptune Ave and Fries Ave	69.0	70.0	49	157	498
w/o Frigate Ave	69.2	70.2	52	164	521
e/o Figueroa PL	75.3	76.3	213	675	2135
between Seabright Ave and Santa Fe Ave	78.0	79.0	391	1238	3916
between Fries Ave and Avalon Blvd	69.6	70.6	57	181	573
between I-710 SB and NB Ramps	74.1	75.1	160	508	1606
W HARRY BRIDGES BLVD					
between Wilmington Blvd and Neptune Ave	79.1	80.1	507	1604	5075
between Hawaiian Ave and Wilmington Blvd	79.0	80.0	491	1555	4917
between Neptune Ave and Fries Ave	78.2	79.2	417	1319	4172

Table F1-18. Calculated Existing Plus Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS(FT)*		
			70 dBA	*65 dBA*	*60 dBA*
between Figueroa St and Mar Vista Ave	78.8	79.8	479	1516	4794
between Fries Ave and Avalon Blvd	79.7	80.7	576	1824	5767
between Mar Vista Ave and Hawaiian Ave	79.0	80.0	491	1555	4917
W I ST					
n/o Anaheim St	70.6	71.6	71	227	719
W PACIFIC COAST HIGHWAY					
between I-110 SB off ramp and Figueroa S	72.8	73.8	119	378	1198
w/o I-110 SB off ramp	73.2	74.2	130	411	1299
between I-710 NB and SB ramps	78.5	79.5	445	1409	4456
e/o San Gabriel Ave	78.7	79.7	464	1467	4639
between San Gabriel Ave and Santa Fe Ave	78.7	79.7	466	1473	4659
e/o Wilmington Blvd	74.0	75.0	158	502	1587
e/o Figueroa St	73.8	74.8	149	471	1490
between Neptune Ave and Avalon Blvd	74.5	75.5	177	561	1776
between Terminal Island Fwy SB and NB ramps	79.7	80.7	576	1824	5768
e/o Santa Fe Ave	77.9	78.9	383	1213	3836
e/o Harbor Ave	78.0	79.0	393	1244	3934
w/o Terminal Island Fwy	78.6	79.6	453	1433	4531
W PANORAMA DR					
between Queens Hwy and Harbor Scenic Dr	78.1	79.1	399	1263	3996
between Harbor Scenic Dr and Pier J Way	78.1	79.1	400	1264	3999
W SEPULVEDA BLVD					
e/o SB I-110 off Ramp	73.9	74.9	154	489	1546
w/o NB I-110 off ramp	74.7	75.7	186	589	1865
w/o Figueroa St	74.1	75.1	160	507	1605
e/o Figueroa St	71.8	72.8	94	299	947
between SB and NB I-110 Ramps	74.0	75.0	158	500	1582
W WATER ST					
between Fries Ave and Avalon Blvd	72.6	73.6	114	361	1142
W WILLOW ST					
between NB and SB Terminal Island Fwy	76.0	77.0	251	795	2516
between Terminal Island Fwy and Santa Fe	70.8	71.8	74	236	746
between Santa Fe Ave and Easy Ave	72.1	73.1	100	318	1008
e/o Easy Ave	69.7	70.7	57	182	578
w/o SB I-710 ramps	70.1	71.1	64	204	646
w/o NB I-710 on ramp	70.0	71.0	62	198	626

Table F1-19. Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*Project CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
1ST ST			
e/o East RD	78.1	78.8	0.7
ACCESS RD			
e/o Ferry St	78.5	78.2	-0.3
ALAMEDA ST			
n/o Anaheim St	79.4	78.9	-0.5
w/o Eubank Ave	81.5	81.5	0.1
s/o PCH	81.7	81.3	-0.3
s/o Anaheim St	80.9	81.0	0.1
E 223RD ST			
w/o I-405 Off ramps	78.7	78.1	-0.6
E ANAHEIM ST			
between Avalon Blvd and Broad Ave	70.3	70.3	0.0
between Eubank Ave and Sanford St	70.6	70.6	0.0
between Sanford Ave and Sanford St	70.6	70.6	0.0
between Anaheim and Henry Ford	76.7	77.3	0.7
e/o Henry Ford Ave	76.6	77.5	0.9
w/o E I St	76.2	77.2	0.9
e/o Sanford Ave	70.3	70.3	0.0
w/o Anaheim Way	76.6	77.5	0.9
between Henry Ford Ave and Terminal Island	76.5	77.3	0.9
E HARRY BRIDGES BLVD			
e/o Avalon Blvd	81.0	81.1	0.1
E I ST			
between Terminal Island Fwy and Anaheim	78.4	78.8	0.4
E OPP ST			
w/o Farragut Ave	53.6	65.5	11.9
E SEPULVEDA BLVD			
e/o Alameda St	75.9	75.9	0.0
w/o Dolores St	72.6	72.6	0.0
w/o Wilmington Ave	73.4	73.4	0.0
e/o Wilmington Ave	74.7	74.7	0.0
e/o Dolores St	73.0	73.0	0.0
w/o Avalon Blvd	73.1	73.1	0.0
EAST RD			
n/o 1st St	75.9	75.6	-0.3
s/o 1st St	73.9	75.6	1.7
FARRAGUT AVE			

Table F1-19. Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*Project CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
Between Terminal Island Fwy SB ramps	77.7	77.8	0.1
FERRY ST			
between Seaside Ave and Access Rd	78.2	77.8	-0.5
between Terminal Way and Pitchard St	81.3	80.9	-0.4
FIGUEROA ST			
n/o Anaheim St	74.9	74.9	0.0
n/o PCH	73.3	73.1	-0.1
HARBOR FWY			
SB n/o PCH off Ramp	85.2	85.2	-0.1
NB s/o Sepulveda Blvd	85.7	85.6	-0.1
NB n/o Sepulveda Blvd	85.5	85.5	-0.1
SB n/o Sepulveda Blvd	85.2	85.1	-0.1
SB s/o 228th St	84.9	84.9	-0.1
SB n/o 220th St	83.5	83.4	-0.1
NB n/o 223rd St	85.4	85.3	-0.1
NB n/o Carson St	84.4	84.3	-0.1
SB s/o Torrance Blvd	83.7	83.6	-0.1
NB s/o Del Amo Blvd	84.6	84.5	-0.1
SB n/o Redondo Beach Blvd	82.7	82.7	0.0
SB between 135th St and Rosecrans Ave	82.2	82.1	0.0
NB n/o Redondo Beach Blvd	82.6	82.6	0.0
SB n/o 135th St	82.4	82.4	0.0
NB s/o 135th	82.5	82.4	0.0
NB s/o El Segundo Blvd	82.4	82.4	0.0
SB n/o Alondra	82.5	82.5	0.0
SB between Del Amo Blvd and Torrance Blvd	83.9	83.8	-0.1
SB between 168th and Alondra	83.6	83.6	0.0
NB between Redondo Beach Blvd and Alondra	82.2	82.1	0.0
SB n/o Del Amo Blvd	83.3	83.2	-0.1
SB n/o I-405	82.6	82.5	-0.1
NB n/o Del Amo Blvd	83.3	83.2	-0.1
NB s/o I-405	82.6	82.5	-0.1
NB n/o Victoria St	84.9	84.8	-0.1
SB s/o 182nd St	82.1	82.0	0.0
NB between Albertoni and Victoria	84.7	84.5	-0.1
SB s/o I-405	81.4	81.3	-0.1
SB between Artesia Blvd and 168th	83.4	83.3	0.0
NB n/o I-405	84.1	84.0	-0.1

Table F1-19. Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*Project CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
NB s/o SR-91	84.1	84.1	0.0
NB s/o Gardena Blvd	84.1	84.1	0.0
SB s/o PCH off Ramp	85.5	85.5	-0.1
NB n/o PCH on Ramp	85.6	85.5	-0.1
NB n/o El Segundo Blvd	83.2	83.2	0.0
SB s/o El Segundo Blvd	83.0	83.0	0.0
SB n/o Anaheim St	85.9	85.8	-0.1
NB s/o PCH on ramp	85.9	85.8	-0.1
NB s/o L St	86.1	86.0	-0.1
SB s/o 120th St	82.2	82.2	0.0
NB s/o 120th St	82.6	82.5	0.0
SB s/o 120th St	82.5	82.5	0.0
SB n/o I-105	83.6	83.5	0.0
NB n/o 120th St	83.1	83.1	0.0
SB n/o 108th St	82.7	82.7	0.0
NB s/o Torrance Blvd	84.4	84.3	-0.1
NB s/o 223rd St	85.3	85.2	-0.1
SB between 214th St and 220th St	83.6	83.5	-0.1
SB s/o 220th St	85.0	84.9	-0.1
NB s/o Rosecrans	82.3	82.3	0.0
NB between Gardena Blvd and Alondra Blvd	82.8	82.8	0.0
SB s/o 108th	83.5	83.5	0.0
NB n/o 108th St	82.9	82.9	0.0
NB s/o 190th St	84.0	83.8	-0.2
NB n/o 220th ST	84.3	84.2	-0.1
SB s/o Sepulveda Blvd	85.2	85.1	-0.1
HARBOR PLZ			
between Pier F Ave and Pico Ave	79.4	78.8	-0.6
HARBOR SCENIC DR			
NB w/o Goldenshore St	79.6	79.2	-0.4
NB s/o Shoreline Dr	79.5	79.2	-0.3
NB n/o Shoreline Dr	79.2	78.9	-0.3
SB n/o Shoreline Dr	80.3	79.6	-0.7
SB s/o Shoreline Dr	79.8	78.9	-0.8
NB e/o Goldenshore St	79.7	78.9	-0.7
HARBOR SCENIC WAY			
e/o Queens Hwy	78.6	78.1	-0.5
e/o Port Access Rd	79.2	78.8	-0.4

Table F1-19. Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*Project CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
w/o Port Access Rd	79.2	78.7	-0.4
JOHN S GIBSON BLVD			
n/o I-110 Ramps	78.5	77.8	-0.7
LONG BEACH FWY			
SB n/o Imperial Hwy	85.7	84.4	-1.3
NB n/o Imperial Hwy	85.5	84.2	-1.3
NB s/o Imperial Hwy	85.7	84.5	-1.2
SB s/o Imperial Hwy	85.5	84.2	-1.2
SB s/o Imperial Hwy	85.7	84.5	-1.2
SB n/o I-105	85.4	84.1	-1.3
SB s/o I-105	85.7	84.4	-1.3
NB n/o I-105	85.3	84.1	-1.2
NB n/o Rosecrans Ave	85.5	84.2	-1.2
SB n/o Rosecrans Ave	85.4	84.2	-1.3
SB s/o Rosecrans Ave	86.8	85.9	-0.9
SB s/o Rosecrans Ave	86.9	86.0	-1.0
NB s/o Rosecrans	86.9	86.0	-0.9
SB n/o Alondra	86.9	86.0	-1.0
NB between Alondra and Rosecrans	87.0	86.1	-0.9
SB n/o Alondra	86.7	85.7	-1.0
NB n/o Alondra	87.0	86.1	-0.9
SB s/o Alondra	86.6	85.6	-0.9
NB s/o Alondra	86.9	86.1	-0.9
SB n/o SR-91	87.1	86.1	-1.0
NB n/o SR-91	86.1	85.1	-1.0
SB n/o Artesia Blvd	85.8	84.6	-1.2
NB n/o Artesia Blvd	85.5	84.5	-1.1
NB s/o Artesia Blvd	85.7	84.7	-1.0
SB s/o Artesia Blvd	86.6	85.7	-0.9
NB s/o Artesia Blvd	85.6	84.8	-0.8
SB n/o Long Beach Blvd	87.0	86.2	-0.9
SB s/o Long Beach Blvd	86.9	86.0	-0.9
NB n/o Long Beach Blvd	87.5	86.7	-0.7
SB n/o Del Amo Blvd	86.6	85.8	-0.9
SB s/o Del Amo Blvd Off ramp	87.1	86.2	-0.9
NB s/o Long Beach Blvd	87.3	86.5	-0.7
NB n/o Del Amo Blvd	87.0	86.2	-0.7
SB s/o Del Amo Blvd	87.1	86.2	-0.9

Table F1-19. Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*Project CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
NB n/o Wardlow Rd	87.3	86.5	-0.7
SB s/o Wardlow Rd	86.6	85.9	-0.7
SB n/o Willow St	85.9	85.7	-0.2
NB n/o Willow St	85.8	85.7	-0.1
NB s/o Willow St	86.2	85.5	-0.7
SB n/o Willow St	86.0	85.2	-0.8
SB s/o Willow St	85.9	85.1	-0.8
SB between off/of ramps at Willow St	86.0	85.2	-0.8
NB s/o Willow St	86.3	85.6	-0.7
NB s/o off ramp at PCH	86.2	85.7	-0.5
NB s/o Anaheim St	85.6	85.2	-0.5
NB s/o PCH	85.4	84.8	-0.5
SB n/o Anaheim St	85.7	85.0	-0.6
SB s/o Anaheim St	85.7	85.0	-0.6
NB s/o loop off ramp at PCH	86.4	85.8	-0.7
SB n/o Anaheim St	86.0	85.3	-0.7
SB s/o PCH	86.2	85.5	-0.7
NB n/o I-405 Interchange	86.8	86.1	-0.7
NB s/o I-405 Interchange Ramp	86.5	85.9	-0.7
SB n/o Wardlow Rd	87.4	86.6	-0.8
NB s/o Firestone Blvd	85.3	84.1	-1.2
SB s/o Firestone Blvd	85.8	84.5	-1.2
SB s/o 9th St	85.7	84.5	-1.1
SB n/o Long Beach Blvd	87.4	86.5	-0.8
NB n/o 9th St	86.3	85.2	-1.1
NB s/o 9th St	85.2	84.2	-1.0
SB n/o 9th St	86.5	85.3	-1.2
SB s/o Anaheim St	86.3	84.8	-1.5
NB n/o 10th St	85.9	84.8	-1.1
SB n/o I-405	86.7	85.9	-0.8
SB s/o Alondra	86.7	85.7	-1.0
NB n/o Dell Amo Blvd Off Ramp	87.2	86.4	-0.8
SB s/o On ramp at Del Amo Blvd	87.1	86.2	-0.9
NB s/o Del Amo Blvd	87.1	86.3	-0.8
NB between s/o off ramp at Del Am o Blvd	86.8	86.0	-0.7
NB between off/on ramps at Willow St	86.2	85.5	-0.7
SB s/o Willow St	86.2	85.4	-0.8
NB n/o Willow St	86.6	85.8	-0.7

Table F1-19. Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*Project CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
NB n/o PCH	86.1	85.4	-0.7
NB Between Ramps at Anaheim St	86.4	86.0	-0.4
SB s/o Anaheim St	85.9	85.3	-0.7
NB n/o Anaheim St	86.4	85.9	-0.5
N HENRY FORD AVE			
n/o Terminal Island Fwy	80.6	80.4	-0.2
n/o Anaheim St	79.7	79.5	-0.2
N SEASIDE AVE			
e/o Navy Way	83.9	83.8	-0.1
e/o Access Rd ramp	81.7	81.7	0.0
w/o Navy Way	83.4	83.4	0.0
e/o Ferry St	78.3	77.9	-0.4
e/o Navy Way ramp	84.7	84.5	-0.2
e/o Navy Way	84.0	83.8	-0.1
NAVY WAY			
s/o Reeves Ave	78.7	78.2	-0.5
s/o Terminal Way	81.6	80.7	-0.8
NEW DOCK ST			
w/o Henry Ford Ave	78.8	78.2	-0.5
e/o Henry Ford Ave	80.8	80.2	-0.6
w/o SB off ramp Terminal Island Fwy	80.9	80.2	-0.6
w/o NB on ramp Terminal Island Fwy	78.0	77.6	-0.4
between Terminal Island Fwy SB and NB Ramp	78.0	77.6	-0.4
PACIFIC COAST HIGHWAY			
between Avalon Blvd and Eubank Ave	75.6	75.5	-0.1
between Watson Ave and Eubank Ave	76.2	76.1	-0.1
w/o Alameda St	74.7	74.6	-0.1
w/o East Rd	73.9	73.5	-0.4
w/o East Rd	72.4	72.5	0.1
between Watson Ave and Blinn Ave	76.1	76.0	-0.1
PICO AVE			
s/o Ocean Blvd	77.0	76.6	-0.4
n/o Ocean Blvd	77.0	76.3	-0.7
n/o Pier C St	81.1	79.7	-1.5
s/o Pier C St	79.8	78.2	-1.6
n/o Pier D St	79.8	78.4	-1.4
PIER A WAY			
e/o Henry Ford Ave	75.3	74.2	-1.1

Table F1-19. Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*Project CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
e/o Henry Ford Ave	77.9	77.5	-0.5
e/o Henry Ford Ave	79.4	78.7	-0.7
between Terminal Island Fwy and Henry Ford	65.2	65.2	0.0
n/o Terminal Island Fwy	74.6	74.1	-0.5
e/o Henry Ford Ave	74.1	73.6	-0.5
e/o Henry Ford Ave	75.4	74.8	-0.5
PIER B ST			
s/o 9th St	78.1	77.4	-0.7
w/o Edison Ave	75.3	75.2	-0.1
n/o Pier A way	75.3	74.8	-0.5
PIER C ST			
w/o Pier B St	77.7	77.1	-0.6
w/o Pier B St	77.2	76.5	-0.7
PIER D AVE			
s/o Pier D St	71.8	71.8	0.0
PIER D ST			
w/o I-710	77.5	76.0	-1.5
PIER F AVE			
s/o Harbor Plaza	79.0	78.4	-0.6
PIER G AV			
s/o Harbor Plaza	59.8	70.3	10.5
s/o Harbor Plaza	59.8	70.3	10.5
PIER J WAY			
e/o Panorama Dr	81.2	80.5	-0.7
PORT ACCESS RD			
e/o Ocean Blvd Ramps	76.5	75.1	-1.4
n/o New Dock St	78.7	78.0	-0.8
n/o New Dock St	78.4	77.6	-0.8
s/o Pier J way	79.7	79.2	-0.4
s/o Pier J way	81.3	80.6	-0.7
n/o Pier J way	79.7	79.2	-0.4
s/o Harbor Scenic way	79.2	78.7	-0.5
QUEENSWAY DR			
s/o Harbor Scenic Dr	79.6	79.2	-0.4
S ALAMEDA ST			
n/o Wardlow Rd	78.5	78.0	-0.5
S FRIES AVE			
s/o Water St	79.6	79.2	-0.3

Table F1-19. Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*Project CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
between Harry Bridges Blvd and Water St	77.8	77.3	-0.5
S HARBOR SCENIC DR			
NB s/o Shoreline Dr	79.5	79.0	-0.4
SB w/o Goldenshore St	80.4	79.7	-0.7
NB n/o Goldenshore St	79.5	79.1	-0.4
SB e/o Goldenshore St	80.0	79.3	-0.7
NB s/o Shoreline Dr	79.2	78.9	-0.3
SB w/o Panorama Dr	80.5	79.8	-0.6
SB w/o Panorama Dr	79.9	79.2	-0.7
S PICO AVE			
s/o Embarcadero	78.1	78.0	-0.2
n/o Harbor Scenic Dr ramp	81.0	80.9	0.0
s/o Harbor Scenic Dr ramp	80.3	80.3	-0.1
SAN DIEGO FWY			
SB e/o I-110	82.8	82.7	0.0
SB e/o Wilmington Blvd	83.7	83.7	0.0
SB s/o I-110 interchange	83.8	83.8	0.0
NB s/o Wilmington Blvd	83.7	83.6	0.0
NB w/o Santa Fe Ave	83.7	83.5	-0.2
SB e/o 218th St	81.6	81.4	-0.2
NB w/o Alameda St	83.6	83.6	0.0
SB w/o Alameda St	82.2	82.2	0.0
NB e/o Wilmington Ave	82.8	82.8	0.0
SB e/o Wilmington Ave	81.2	81.2	0.0
SB w/o Wilmington Ave	80.9	80.9	0.0
SB s/o Carson St	81.9	81.9	0.0
NB n/o Carson St	83.4	83.4	0.0
NB n/o 213th St	82.9	82.9	0.0
NB e/o Avalon Blvd	83.5	83.4	0.0
SB e/o Avalon Blvd	82.5	82.5	0.0
NB w/o Avalon Blvd	83.7	83.7	0.0
SB e/o Avalon Blvd	82.9	82.9	0.0
NB w/o Wilmington Ave	82.7	82.7	0.0
NB e/o 218th St	83.3	83.1	-0.2
SB e/o Avalon Blvd	82.5	82.5	0.0
NB s/o Carson St	82.7	82.7	0.0
SB n/o Carson St	82.5	82.5	0.0
SAN GABRIEL AV			

Table F1-19. Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*Project CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
n/o PCH	74.4	78.1	3.8
TERMINAL ISLAND FWY			
s/o PCH	82.0	81.2	-0.8
n/o PCH	81.0	80.2	-0.8
n/o Ocean Blvd	82.8	82.7	0.0
NB s/o PCH	80.1	79.4	-0.8
SB n/o PCH	79.0	78.2	-0.8
NB between Off and loop On ramp at PCH	80.1	80.7	0.6
NB s/o PCH off ramp	83.1	83.0	-0.1
SB n/o Anaheim St	78.0	78.5	0.5
NB between Henry Ford Ave and Anaheim St	81.6	81.9	0.3
NB n/o Ocean Blvd	80.4	80.3	-0.1
SB n/o Ocean Blvd	78.7	78.7	0.0
s/o Henry Ford Ave	81.9	81.8	-0.1
SB s/o Henry Ford Ave	80.9	80.8	0.0
e/o Seaside Ave	81.3	81.2	-0.1
SB s/o Anaheim Way	80.9	80.9	0.0
NB s/o Willow St	77.6	76.8	-0.8
SB s/o PCH on ramp	81.0	81.4	0.4
SB s/o PCH	79.8	79.0	-0.8
NB n/o PCH	79.1	78.4	-0.7
SB between loop Off and On ramp at PCH	79.8	79.0	-0.8
SB s/o Henry Ford Ave	80.9	80.8	0.0
s/o Henry Ford Ave	82.0	81.8	-0.3
TERMINAL WAY			
w/o Ferry St	81.0	80.5	-0.5
w/o Eaire St	81.2	80.6	-0.6
s/o Navy Way	81.5	80.5	-1.0
s/o Navy Way	79.1	78.2	-0.9
s/o Navy Way	81.5	80.5	-1.0
s/o Navy Way	78.3	77.3	-1.0
s/o Navy Way	78.4	77.4	-1.0
s/o Navy Way	79.8	79.0	-0.8
W 9TH ST			
e/o Caspian Ave	71.1	70.9	-0.1
s/o Anaheim St	75.3	75.0	-0.2
e/o Santa Fe Ave	72.6	71.9	-0.6
w/o Caspian Ave	71.1	71.0	-0.1

Table F1-19. Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*Project CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
n/o Pier B St	69.5	68.8	-0.7
w/o Santa Fe Ave	75.2	74.9	-0.2
s/o Pier B St	79.4	78.2	-1.2
n/o Pier B St	74.8	72.9	-1.9
W ANAHEIM ST			
e/o Harbor Ave	74.9	75.4	0.6
e/o Santa Fe Ave	79.7	79.8	0.1
w/o Harbor Ave	77.7	78.2	0.5
w/o Seabright Ave	78.8	79.0	0.2
w/o E I St	76.2	77.1	0.9
w/o Figueroa PL	76.6	76.6	0.0
between Wilmington and Neptune Ave	70.3	70.3	0.0
between Frigate Ave and Wilmington Blvd	70.4	70.4	0.0
e/o Neptune	69.9	69.9	0.0
between Neptune Ave and Fries Ave	70.0	70.0	0.0
w/o Frigate Ave	70.2	70.2	0.0
e/o Figueroa PL	76.3	76.3	0.0
between Seabright Ave and Santa Fe Ave	78.7	79.0	0.3
between Fries Ave and Avalon Blvd	70.6	70.6	0.0
between I-710 SB and NB Ramps	74.6	75.1	0.5
W HARRY BRIDGES BLVD			
between Wilmington Blvd and Neptune Ave	79.9	80.1	0.2
between Hawaiian Ave and Wilmington Blvd	79.8	80.0	0.2
between Neptune Ave and Fries Ave	79.0	79.2	0.2
between Figueroa St and Mar Vista Ave	79.7	79.8	0.2
between Fries Ave and Avalon Blvd	80.5	80.7	0.1
between Mar Vista Ave and Hawaiian Ave	79.8	80.0	0.2
W I ST			
n/o Anaheim St	71.6	71.6	0.0
W PACIFIC COAST HIGHWAY			
between I-110 SB off ramp and Figueroa S	73.9	73.8	0.0
w/o I-110 SB off ramp	74.2	74.2	0.0
between I-710 NB and SB ramps	80.0	79.5	-0.4
e/o San Gabriel Ave	80.4	79.7	-0.7
between San Gabriel Ave and Santa Fe Ave	80.5	79.7	-0.7
e/o Wilmington Blvd	75.2	75.0	-0.1
e/o Figueroa St	74.9	74.8	-0.1
between Neptune Ave and Avalon Blvd	75.7	75.5	-0.1

Table F1-19. Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*Project CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
between Terminal Island Fwy SB and NB ramp	80.2	80.7	0.4
e/o Santa Fe Ave	79.6	78.9	-0.7
e/o Harbor Ave	79.5	79.0	-0.5
w/o Terminal Island Fwy	77.8	79.6	1.8
W PANORAMA DR			
between Queens Hwy and Harbor Scenic Dr	79.8	79.1	-0.7
between Harbor Scenic Dr and Pier J Way	79.9	79.1	-0.8
W SEPULVEDA BLVD			
e/o SB I-110 off Ramp	74.9	74.9	0.0
w/o NB I-110 off ramp	75.8	75.7	0.0
w/o Figueroa St	75.1	75.1	0.0
e/o Figueroa St	72.8	72.8	0.0
between SB and NB I-110 Ramps	75.0	75.0	0.0
W WATER ST			
between Fries Ave and Avalon Blvd	73.7	73.6	-0.1
W WILLOW ST			
between NB and SB Terminal Island Fwy	77.5	77.0	-0.4
between Terminal Island Fwy and Santa Fe	71.8	71.8	0.0
between Santa Fe Ave and Easy Ave	73.1	73.1	0.0
e/o Easy Ave	70.7	70.7	0.0
w/o SB I-710 ramps	71.1	71.1	0.0
w/o NB I-710 on ramp	71.0	71.0	0.0

Table F1-20. Future Year 2023 Project Roadway Traffic Noise Level, CNEL, Increase

ROADWAY SEGMENT	*Existing Noise Level, CNEL, dBA*	*Future w/o Project Noise Level, CNEL, dBA*	*Future w/ Project Noise Level, CNEL, dBA*	*Future Increase Above Existing, dB*	*Project Incremental Contribution, dB*
ACCESS RD					
e/o Ferry St	69.5	72.5	72.9	3.4	0.4
ALAMEDA ST					
s/o Anaheim St	75.4	77.9	78.5	3.1	0.6
Off ramp from Wardlow Rd to Alameda St	67.7	71.2	71.3	3.5	0.1
E ANAHEIM ST					
between Anaheim and Henry Ford	74.1	76.1	77.2	3.1	1.2
e/o Henry Ford Ave	73.0	74.9	76.3	3.3	1.4
w/o Anaheim Way	73.0	74.9	76.3	3.3	1.4
between Henry Ford Ave and Terminal Island	73.0	74.9	76.3	3.3	1.4
E HARRY BRIDGES BLVD					
e/o Avalon Blvd	73.8	75.9	76.8	3.0	0.9
E SEPULVEDA BLVD					
e/o Alameda St	72.2	76.7	76.9	4.6	0.2
FERRY ST					
between Seaside Ave and Access Rd	69.4	72.9	73.3	3.9	0.4
between Terminal Way and Pilchard St	72.5	75.7	76.1	3.6	0.4
HARBOR FWY					
n/o 220th ST	83.8	85.0	87.1	3.4	2.1
SB I-110 on Ramp from PCH	62.6	67.8	67.8	5.2	0.0
On Ramp e/o Ferry St	68.4	71.8	72.4	4.1	0.6
JOHN S GIBSON BLVD					
n/o I-110 Ramps	71.0	74.7	75.5	4.5	0.8
N SEASIDE AVE					
w/o Navy Way	79.3	82.4	82.7	3.4	0.2
e/o Navy Way	79.9	82.6	82.9	3.0	0.3
e/o Ferry St	71.4	74.9	75.5	4.1	0.5
NAVY WAY					
s/o Reeves Ave	73.4	78.2	78.4	5.0	0.3
s/o Terminal Way	75.4	79.4	79.6	4.3	0.2
s/o Seaside Ave	71.7	80.0	80.2	8.5	0.2
NEW DOCK ST					
w/o Henry Ford Ave	71.6	75.0	75.1	3.5	0.1
e/o Henry Ford Ave	72.3	76.2	76.6	4.3	0.4
w/o SB off ramp Terminal Island Fwy	72.3	76.2	76.6	4.3	0.4

Table F1-20. Future Year 2023 Project Roadway Traffic Noise Level, CNEL, Increase

ROADWAY SEGMENT	*Existing Noise Level, CNEL, dBA*	*Future w/o Project Noise Level, CNEL, dBA*	*Future w/ Project Noise Level, CNEL, dBA*	*Future Increase Above Existing, dB*	*Project Incremental Contribution, dB*
w/o NB on ramp Terminal Island Fwy	69.5	75.6	76.0	6.4	0.4
between Terminal Island Fwy SB and NB Ramp	69.5	75.6	76.0	6.4	0.4
PACIFIC COAST HIGHWAY					
w/o East Rd	70.1	73.8	73.9	3.8	0.1
PCH on ramp to SB Terminal Island Fwy	64.5	70.4	70.5	6.0	0.1
S FRIES AVE					
s/o Water St	70.9	73.7	74.2	3.3	0.5
between Harry Bridges Blvd and Water St	68.6	71.1	71.9	3.3	0.8
SAN DIEGO FWY					
SB e/o Wilmington Blvd	81.6	83.8	85.5	4.0	1.7
NB s/o Wilmington Blvd	81.8	83.9	85.6	3.8	1.7
SB I-405 off Ramp e/o Alameda St	63.6	66.5	66.6	3.0	0.1
SAN GABRIEL AV					
n/o PCH	63.7	69.8	74.1	10.4	4.3
TERMINAL ISLAND FWY					
NB between Off and loop On ramp at PCH	71.5	62.4	74.5	3.0	12.1
SB between loop Off and On ramp at PCH	71.8	71.7	77.8	5.9	6.1
NB s/o PCH off ramp	62.9	75.2	74.5	11.6	-0.7
PCH on ramp SB Terminal Island Fwy	57.3	66.7	80.1	22.7	13.4
SB n/o Anaheim St	70.5	72.4	80.4	9.9	8.1
NB between Henry Ford Ave and Anaheim St	73.1	76.0	77.9	4.8	1.9
Terminal Island n/o Ocean Blvd	74.8	78.8	78.5	3.7	-0.3
NB on ramp n/o Anaheim St	68.9	69.3	74.0	5.1	4.7
NB Terminal Island Fwy off Ramp at PCH	62.9	47.6	71.4	8.5	23.8
E I St on ramp NB Terminal Island Fwy	64.8	55.6	73.2	8.4	17.6
SB Terminal Island Fwy on Ramp n/o Anaheim	67.9	68.0	78.5	10.6	10.5
Terminal Island n/o New Dock St	72.4	77.3	79.4	6.9	2.1
TERMINAL WAY					
w/o Ferry St	73.8	76.8	77.2	3.5	0.4
w/o Earle St	73.2	76.5	76.9	3.7	0.4
W HARRY BRIDGES BLVD					
between Wilmington Blvd and Neptune Ave	73.2	75.7	76.4	3.1	0.7
between Hawaiian Ave and Wilmington Blvd	73.3	75.8	76.4	3.0	0.6
between Neptune Ave and Fries Ave	71.9	74.3	75.1	3.2	0.9
between Figueroa St and Mar Vista Ave	73.3	75.7	76.3	3.1	0.6

Table F1-20. Future Year 2023 Project Roadway Traffic Noise Level, CNEL, Increase

ROADWAY SEGMENT	*Existing Noise Level, CNEL, dBA*	*Future w/o Project Noise Level, CNEL, dBA*	*Future w/ Project Noise Level, CNEL, dBA*	*Future Increase Above Existing, dB*	*Project Incremental Contribution, dB*
between Fries Ave and Avalon Blvd	73.6	75.9	76.8	3.2	0.9
between Mar Vista Ave and Hawaiian Ave	73.3	75.8	76.4	3.0	0.6

None of the noise-sensitive uses that would be affected by operation of the proposed Project are in the City of Los Angeles. Roadways in the City of Los Angeles would not experience project-related increases in noise exceeding 3 dBA. Future cumulative traffic noise levels would result in noise exceeding 3 dBA, however, none of the increases would occur within the City of Los Angeles.

Sleep Disturbance

Table F1-21 summarizes the operational Project train horn SEL at nearby residences and an assessment of sleep disturbance. Interior SELs with windows closed with the train horn would be as high as 64.0, 65.9, and 64.0 dB at the East I St, Mauretania St, and Cruces St residences, respectively. Based on the FICAN 1997 curve, approximately 5% of the exposed population at the residences at 1919 East I Street, 1710 Mauretania Street, and 1619 Cruces Street would be expected to be awakened by train horn soundings associated with the proposed Project. Interior SELs with windows open from train horn soundings would be as high as 72.0, 73.9 and 72.0 dB at the East I St, Mauretania St, and Cruces St residences, respectively. When compared with the FICAN curve, approximately 7%, 8%, and 7% of the exposed population at the residences at 1919 East I Street, 1710 Mauretania Street, and 1619 Cruces Street, respectively, would be expected to be awakened by train horn soundings associated with the proposed Project. Single event awakenings would occur at a frequency below 10%.

Table F1-21. Summary of the Predicted SCIG Train Horn SEL at Nearby Residences and Sleep Disturbance Assessment.

Receptor Number	Receptor Location	Measured Ambient Exterior Leq, dBA	Ambient Interior Leq, dBA[1]	Predicted SCIG Train Horn Exterior SEL, dBA	Predicted SCIG Train Horn Interior SEL w/ Windows Closed, dBA [1]	Approximate Percentage of Exposed Population Expected to be Awakened [2]	Predicted SCIG Train Horn Interior SEL w/ Windows Open, dBA[3]	Approximate Percentage of Exposed Population Expected to be Awakened [2]
R28	Residence at 1919 East I St	Day: 58.6 – 81.1	Day: 38.6 – 61.1	84.0	64.0	5%	72.0	7%
R29	Residence at 1710 Mauretania St	Day: 66.2 – 70.4 Lowest Night: 60.6	Day: 46.2 – 50.4 Lowest Night: 40.6	85.9	65.9	5%	73.9	8%
R32	Residence at 1619 Cruces St	Day: 64.9 – 67.2 Lowest Night: 59.4	Day: 44.9 – 47.2 Lowest Night: 39.4	84.0	64.0	5%	72.0	7%

1 Assumes a 20 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Closed.
2 Based on FICAN 1997 Sleep Disturbance Curve.
3 Assumes a 12 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Open.

School Classroom Speech Intelligibility

There are no schools located in the City of Los Angeles within the immediate vicinity of the Project Site. There would be no construction and operations related noise that could disrupt speech intelligibility in classrooms.

4.3 Predicted Noise Levels – City of Long Beach

Construction

The analysis of construction-related noise levels in the City of Long Beach included data from ten different receptor locations: the back yard of a residence at 2789 Webster Street, the Buddhist temple at Willow and Webster streets, the playground of the Hudson Elementary School, Hudson Park, the building setback of Cabrillo High School, the Cabrillo Child Development Center, Bethune School, the Villages of Cabrillo, the playground of Stephens Middle School, and Webster School. The predicted construction noise levels are presented in Table F1-22. This data represents the worst-case daytime construction noise levels expected, assuming all construction elements occur simultaneously.

Exterior daytime construction noise levels (L50) from the proposed Project would be expected to be as high as 63.5, 65.8, 70.2, 70.4, 57.8, 70.9, 68.8, 57.5, and 47.0 dBA at the Webster residence, Buddhist Temple, Hudson School, Hudson Park, Cabrillo High School, Cabrillo Child Development Center, Bethune School, Stephens Middle School and Webster School, respectively. The increase would exceed ambient noise levels by more than 5 dB at each of these receptor locations. The construction noise at the Villages of Cabrillo would be 64.4 dBA, a 2 dB increase above existing ambient noise levels.

Nighttime construction noise levels from the PCH grade separation would be expected to be as high as 33.3, 36.3 and 50.7 dBA at the Webster residence, Buddhist Temple, and Villages of Cabrillo. Table F1-23 summarizes the nighttime construction noise levels. The increase in noise would be expected to be more than 3 dB above ambient levels at the Villages of Cabrillo, because this is the nearest receptor to the PCH grade separation. At the Webster residence and Buddhist Temple, the increase would be less than 1. Nighttime construction noise was not evaluated for the nearby school and park uses because they are not expected to be operating during the nighttime hours.

Table F1-22. Summary of the Predicted Daytime Construction Noise Levels for SCIG Construction

Receptor Number	*Receptor Location*	*Measured Ambient Noise Level L50, dBA*	*Approximate Distance to Nearest Construction Area, feet*	*Predicted Daytime Construction Noise Level – Worst Case April 2013, dBA*	*Predicted Daytime Construction Noise Level – Worst Case Month 2013, dBA*	*City of Long Beach Daytime Noise Ordinance, Exterior Standard, L50, dBA*[1]
R1	Residence at 2789 Webster – rear yard	Day: 49.4 – 55.3 Night: 43.1	275	61.5	63.5	50
R2	Buddhist Temple at Willow and Webster	Day: 59.9 – 60.3 Night: 52.5	375	65.7	65.8	50
R3	Hudson Elementary School - playground	Day: 54.2 – 57.8	300	65.4 – 70.1	65.5 - 70.2	50
R4	Hudson Park	Day: 64.1 – 65.3	300	70.3	70.4	50
R5	Cabrillo High School – building setback	Day: 51.0 – 52.0	1,700	57.0	57.8	50
R6	Cabrillo Child Development Center	Day: 63.3 – 64.6	300	70.0	70.9	50
R7	Bethune School	Day: 63.3 – 64.6	300	68.8	68.8	50
R8	Villages of Cabrillo	Day: 61.0 – 62.5 Night: 48.0	500	64.4	64.4	50
R30	Stephens Middle School - playground	Day: 47.2 – 64.0	600	57.5	57.5	50
R31	Webster School	Day: 49.2 – 55.7	2,750	47.0	47.0	50

Notes:
[1] Noise standard for a cumulative period of 30 minutes in a 60 minute period. Higher noise levels are permitted for shorter time periods. If ambient noise level exceeds standard, standard shall be increased by 5 dB increments to encompass or reflect ambient level.

Table F1-23. Summary of the Predicted Nighttime Construction Noise Levels for SCIG Construction

Receptor Number	*Receptor Location*	*Predicted Nighttime Exterior Construction Noise Level – Worst Case 2013, dBA*	*Measured Nighttime Ambient Noise Level, dBA* [1]	*Predicted Increase in Ambient Noise Level with Nighttime Construction, dB*	*City of Long Beach Noise Ordinance, Nighttime Exterior Standard, L50, dBA* [2]
R1	Residence at 2789 Webster – rear yard	33.3	43.1	+0.4	45
R2	Buddhist Temple at Willow and Webster	36.3	52.5	0.0	45
R8	Villages of Cabrillo	50.7	48.0	+4.6	45

[1] – Lowest Nighttime Ambient Noise Level, L50.
[2] –Nighttime noise standard for a cumulative period of 30 minutes in a 60 minute period. Higher noise levels are permitted for shorter time periods.

Classroom Interior Construction Noise Levels

Future interior noise levels within classrooms were analyzed to evaluate Project construction on school facilities (impacts to students' ability to study). Future interior noise levels were calculated by subtracting the measured noise reduction from the predicted exterior construction noise levels from the Project. As summarized in Table F1-24, the future interior classroom construction noise would be 42.7 dBA at Bethune School, 42.3 dBA at Cabrillo Child Development Center, and 13.4 dBA at Cabrillo High School. At Hudson School, the future interior construction noise would be 32.5 dBA, while at Stephens Middle School; the interior construction noise level would be 19.2 dBA. Lastly, at Webster School, the interior construction noise level would be 8.4 dBA. Interior construction noise levels would be below the LBMC allowable interior noise standard of 45 dBA during the daytime. When compared to existing ambient noise levels, future interior construction noise levels would be below existing ambient noise levels within the classrooms with exception of Bethune School. At this location, a greater than 5 dB increase would be experienced during the heaviest periods of construction activity (although noise levels would not exceed the LBMC 45 dBA noise standard).

Table F1-24. Summary of the Project's Construction Noise Levels within Classrooms

Receiver Number	*Location*	*Description*	*Future Exterior Construction Noise Level,L50, dBA*	*Noise Reduction, dB*	*Future Interior Construction Noise Level, L50, dBA*	*Ambient Interior Noise Level, L50, dBA*	*Future Interior Construction Noise Level with Ambient, L50, dBA*	*Predicted Increase in Ambient Noise Level with Construction Noise, dB*
R3	Hudson School	Classroom 52	65.5	33	32.5	36.9	38.2	1.3
R5	Cabrillo High School	Classroom 1128	57.8	44.4	13.4	32.7	32.8	0.1
R6	Cabrillo Child Development Center	#2 Exterior, #4 Interior	70.9	28.6	42.3	43.7	46.1	2.4
R7	Bethune School	Classroom 102	68.8	26.1	42.7	38.8	44.2	5.4
R30	Stephens Middle School	Classroom PC2	57.5	38.3	19.2	31.4	31.7	0.3
R31	Webster School	Classroom B-48	47.0	38.6	8.4	31.9	31.9	0.0

On-Site and Rail Corridor Operations

As previously discussed in NOI-3 and summarized in Table F1-16, on-site operational noise at the SCIG and relocation facilities would consist of truck activity, maintenance, train activity, and container loading and unloading operations. On-site SCIG operations would generate noise levels ranging from 59 to 95 dBA at a distance of 100 feet from the source. Future rail movements along the San Pedro Branch line would include diesel engine noise, train horns, and railcar noises. According to BNSF, train horn soundings are not expected to occur on the San Pedro Branch line due to the Project's design features. As previously summarized in Table F1-17, the Predicted Future CNEL for San Pedro Branch Line operations would range from 48.3 to 57.3 dBA at the nearest sensitive receptor locations.

Predicted daytime Project on-site and rail corridor operational noise levels at sensitive receivers (Table F1-25) would exceed existing measured ambient noise levels by 3 dBA or greater at the residence at 2789 Webster (R1), Hudson Elementary School playground (R3), Cabrillo High School (R5) and at Stephens Middle School (R30). At the residence on Webster, the predicted noise level of 54.8 dBA would occasionally exceed the ambient noise levels that range from 49.4 to 55.3 dBA. SCIG operations noise would reach 54.3 dBA and exceed the ambient noise level at Hudson School during the quieter daytime periods when the background noise is 54.2 dBA. Similarly, operations noise would reach 52.6 dBA at Cabrillo High School and exceed ambient noise levels when the background noise is 51.0 dBA. At Stephens Middle School, future operational noise levels would reach 51.3 dBA and would occasionally exceed existing levels of 47.2 to 64.0 dBA. The remaining six receiver locations would experience predicted operational noise levels either lower than the existing ambient levels or within a 3 dBA increase.

Nighttime on-site and rail corridor operational noise levels would exceed existing measured ambient noise levels by 5 dB or greater at the residence at 2789 Webster (R1) and at the Villages of Cabrillo (R8). At the residence on Webster, the predicted noise level of 54.8 dBA would occasionally exceed the nighttime ambient noise level of 43.1 dBA. At the Villages of Cabrillo, future nighttime operational noise levels would reach 55.6 dBA and would occasionally exceed the nighttime ambient noise level of 48.0 dBA. The nighttime noise increases that would be experienced at the Webster residence and the Villages of Cabrillo would occur when normal "high level" operations coincide with the low background noise. This condition is not expected to occur on a daily basis and for more than one hour in any given 24-hour period. The remaining eight receiver locations would experience predicted operational noise levels either lower than the existing nighttime ambient levels or within a 3 dBA increase.

Table F1-25. Predicted Operational Noise Levels for the Proposed Project

Receptor Number	*Receptor Location*	*Predicted Operational Noise Level –Year 2023,L50, dBA**	*Measured Ambient Noise Level, L50, dBA[1]*	*Predicted Largest Increase in Ambient Noise Level with Operations Noise, dB*	*City of Long Beach Noise Ordinance, Exterior Standard, L50, Daytime/Nighttime dBA[2]*
R1	Residence at 2789 Webster – rear yard	54.8	Day: 49.4 – 55.3 Night: 43.1	Day +6.5 Night +12.0	Day 50 Night 45
R2	Buddhist Temple at Willow and Webster	49.5	Day: 59.9 – 60.3 Night: 52.5	Day +0.4 Night +1.8	Day 50 Night 45
R3	Hudson Elementary School - playground	54.3	Day: 54.2 – 57.8	Day +3.0	Day 50
R4	Hudson Park	55.4	Day: 64.1 – 65.3	Day +0.5	Day 50
R5	Cabrillo High School – building setback	52.6	Day: 51.0 – 52.0	Day +3.9	Day 50
R6	Cabrillo Child Development Center	55.7	Day: 63.3 – 64.6	Day +0.7	Day 50
R7	Bethune School	55.8	Day: 63.3 – 64.6	Day +0.7	Day 50
R8	Villages of Cabrillo	55.6	Day: 61.0 – 62.5 Night: 48.0	Day +1.1 Night +8.3	Day 50 Night 45
R30	Stephens Middle School - playground	51.3	Day: 47.2 – 64.0	Day +5.5	Day 50
R31	Webster School	46.4	Day: 49.2 – 55.7	Day +1.8	Day 50

Notes:
[1] Refer to Table F1-4, Summary of Ambient Noise Measurement Data
[2] Noise standard for a cumulative period of 30 minutes in a 60 minute period. Higher noise levels are permitted for shorter time periods. If ambient noise level exceeds standard, standard shall be increased by 5 dB increments to encompass or reflect ambient level.
[3] Noise standard for a cumulative period of 5 minutes in a 60 minute period. Higher noise levels are permitted for shorter time periods. If ambient noise level exceeds standard, standard shall be increased to reflect ambient level.
* Includes relocation of existing tenants

Existing Plus Project Traffic Noise Levels

Table F1-18 previously summarized the predicted roadway traffic noise levels once the proposed Project is in full operation. Portions of the following roadways in the City of Long Beach include noise-sensitive land uses that would be expected to experience future traffic noise levels above 70 CNEL: E. Anaheim St., E. Sepulveda Boulevard, Pacific Coast Highway, Long Beach Freeway and the Terminal Island Freeway. Traffic noise levels above 70 CNEL are considered incompatible with noise guidelines.

The Project's predicted noise level increase over existing levels is summarized in Table F1-19. Roadways in Long Beach would not experience a Project increase in traffic noise level exceeding 1 dB. The majority of roadways within the City would experience a traffic noise decrease as a result of the Project because the Project would reduce truck traffic on local roadways in lieu of rail movements.

Table F1-20 shows the predicted cumulative noise level increase over existing levels and the Project's contribution upon build out (i.e., in 2023). Portions of the following roadways in Long Beach would experience a cumulative noise level increase over existing noise levels of 3 dBA or greater: E. Anaheim Street, E. Sepulveda Boulevard, Pacific Coast Highway, and Terminal Island Freeway.

Classroom Interior Operational Noise Levels

Interior noise levels within classrooms were analyzed to evaluate the effect of the proposed Project's on-site and rail corridor operational noise on school facilities. Future interior noise levels were calculated by subtracting the measured noise reduction from the predicted exterior operations noise levels from the proposed Project. As summarized in Table F1-26, the interior classroom noise levels with proposed project operations would be 29.7 dBA at Bethune School, 27.1 dBA at Cabrillo Child Development Center, and 8.2 dBA at Cabrillo High School. At Hudson School, the future interior operational noise would be as high as 21.3 dBA, while at Stephens Middle School, the interior operational noise level would be 13.0 dBA. At Webster School, the interior operational noise level would be 7.8 dBA. Future operational noise levels would be below the LBMC allowable interior noise standard of 45 dBA. When compared to existing ambient noise levels, future interior operations noise levels would be below existing noise levels within the classrooms.

Table F1-26. Summary of the Proposed Project's Operational Noise Levels within Classrooms

Receiver Number	*Location*	*Description*	*Future Exterior Operations Noise Level, dBA*	*Noise Reduction, dB*	*Future Interior Operations Noise Level, dBA*	*Measured Ambient Interior Noise Level, dBA*	*Existing Ambient Plus Project Interior Noise Levels, dBA*	*Increase in Ambient Interior Noise Level with Project Contribution, dBA*	*City of Long Beach Noise Ordinance Interior Noise Level for Schools, L8, dBA[1]*
R3	Hudson School	Classroom 52	54.3	33	21.3	36.9	37.0	0	45
R5	Cabrillo High School	Classroom 1128	52.6	44.4	8.2	32.7	32.7	0	45
R6	Cabrillo Child Development Center	#2 Exterior, #4 Interior	55.7	28.6	27.1	43.7	43.8	0	45
R7	Bethune School	Classroom 102	55.8	26.1	29.7	38.8	39.3	0.5	45
R30	Stephens Middle School	Classroom PC2	51.3	38.3	13.0	31.4	31.5	0	45
R31	Webster School	Classroom B-48	46.4	38.6	7.8	31.9	31.9	0	45

Notes:
[1] Noise standard for a cumulative period of 5 minutes in a 60 minute period. Higher noise levels are permitted for shorter time periods. If ambient noise level exceeds standard, standard shall be increased to reflect ambient level.
* Includes relocation of existing tenants

Construction Vibration

Construction operations involving heavy equipment can generate high vibration levels that can affect sensitive receptors such as the nearby schools and residences. A site survey was conducted to determine if there were nonresidential vibration sensitive receptors (microelectronics firms, recording studios, research laboratories, etc. that employ vibration sensitive equipment) in the vicinity of the Project site and associated haul routes. It was determined that no such receptors were present. A technology park is located approximately 1,100 feet east of the Project site and is located well enough away so that on site generated vibration would not affect these office uses. In addition, the construction haul route would be expected to be primarily on Pacific Coast Highway to and from the Project site. Truck vibration would not be expected to exceed existing vibration generated by existing trucks on Pacific Coast Highway; thus, no increase in vibration would be expected. Table F1-27 summarizes typical construction vibration levels as reported by the FTA. Construction vibration can range between 58 to 112 VdB when measured at a distance of 25 feet from the source. Table F1-28 summarizes the future construction vibration. The future maximum vibration level at Stephens Middle School, designated location V1, would be as high as 63 VdB, while existing ambient levels are 51.6 to 64.3 VdB. The predicted vibration level at location V2, Hudson Elementary School, would be as high as 72 VdB and above the existing ambient levels of 55.9 to 69.0 VdB. Future vibration levels at the Cabrillo Child Development Center and Bethune School would be 72 VdB at both locations. Their respective existing ambient levels are 58.9 to 75.5 VdB and 62.6 to 79.4 VdB. Predicted vibration levels from Project construction would occasionally exceed existing ambient vibration measurements at Receivers V1 to V4 but would be clearly below the FTA vibration impact criteria of 75 VdB.

Locations V5 through V9 are situated away from the Project Site (4,200-17,500 feet); thus, future vibration levels from construction, ranging from 19 VdB to 37 VdB, would be significantly lower than the existing ambient vibration levels. The predominant source of existing vibration, as identified in the existing conditions sections, is heavy truck movement on existing roadways and haul routes. Although the number of vibration events would increase accordingly with Project truck movements, future vibration levels from Project construction operations would not be expected to exceed existing levels.

Table F1-27. Vibration Source Levels for Construction Equipment

Equipment	Approximate Velocity Level @ 25 ft, VdB Re: 1 micro inch/sec
Pile Driver Impact typical range	112
Pile Driver Sonic typical range	93
Clam Shovel Drop	94
Hydromill in Soil	66
Vibratory Roller	94
Hoe Ram	87
Large Bulldozer	87
Caisson Drilling	87
Loaded Trucks	86
Jackhammer	79
Small Bulldozer	58

Source: FTA, 2006

Table F1-28. Predicted Construction Vibration Levels

Location	*Description*	Distance to Nearest Construction Area, ft	Range of Predicted Construction Vibration Levels, VdB	*Existing Ambient Velocity Level, VdB Lmax, VdB*		*FTA Impact Criteria, VdB*
				Low	*High*	
V1	Stephens Middle School Classroom PC2	600	17 - 63	51.6	64.3	75
V2	Hudson Elementary School Playground	300	26 - 72	55.9	69.0	75
V3	Cabrillo Child Development Center	300	26 - 72	58.9	75.5	75
V4	Bethune School	300	26 - 72	62.6	79.4	75

Operational Vibration

Trains from the proposed Project would use a portion of the San Pedro Branch Line and future run-around track during daily operations. Future vibration levels from Project rail operations are summarized in Table F1-29.

Receiver locations V1 through V4 are in close proximity with the San Pedro Branch line (approximately 300 to 600 feet), and could be affected by ground-borne vibration from future train movements. The future maximum vibration level at Stephens Middle School, designated location V1, would be 54.8 VdB, while existing ambient levels are 51.6 to 64.3 VdB. The predicted vibration level at location V2, Hudson Elementary School, would be 55.4 VdB and below the existing ambient levels of 55.9 to 69.0 VdB. Future vibration levels at the Cabrillo Child Development Center and Bethune School would be 58.2 VdB and 59.2 VdB, respectively. Their respective existing ambient levels are 58.9 to 75.5 VdB and 62.6 to 79.4 VdB. Predicted vibration levels from Project train movements would not exceed existing ambient vibration measurements at Receivers V1 to V4 and would be clearly below the FTA vibration impact criteria of 75 VdB.

Locations V5 through V9 are situated away from the San Pedro Branch line (4,200-17,500 feet); thus, future vibration levels from Project train movements, ranging from 24 VdB to 36 VdB, would be significantly lower than the existing ambient vibration levels. The predominant source of existing vibration, as identified in the existing conditions sections, is heavy truck movement on existing roadways and haul routes. Although the number of vibration events would increase accordingly with Project truck movements, future vibration levels from Project operations would not be expected to exceed existing levels.

Table F1-29. Predicted Future Train Vibration on the San Pedro Branch Line

Receiver Location	*Description*	*Predicted Velocity Level from Project Train Movements, VdB*	*Existing Ambient Velocity Level, Lmax, VdB*		*FTA Impact Criteria, VdB*
			Low	*High*	
V1	Stephens Middle School Classroom	54.8	51.6	64.3	75
V2	Hudson Elementary School Playground	55.4	55.9	69.0	75
V3	Cabrillo Child Development Center	58.2	58.9	75.5	75
V4	Bethune School	59.2	62.6	79.4	75

Sleep Disturbance

Nighttime construction activity also has the potential to cause sleep disturbances at the nearest residential/sensitive receptors. Nighttime construction noise was analyzed by assuming the worst case hour during the nighttime. The potential for sleep disturbance was assessed by comparing the construction related nighttime interior noise levels with the FICAN 1997 sleep disturbance curves. Interior SELs with windows closed from nighttime construction activity would be as high as 48.9, 51.9 and 66.3 dBA at the Webster residence, Buddhist Temple and Villages of Cabrillo, respectively. When assessed with the FICAN curve, approximately 2%, 3% and 7% of exposed population at the Webster residence, Buddhist Temple and Villages of Cabrillo, respectively, would be expected to be awakened due to the highest levels of construction activity. Interior SELs with windows open during nighttime construction activity would be as high as 56.9, 59.9 and 74.3 dBA at the Webster residence, Buddhist Temple and Villages of Cabrillo, respectively. When assessed with the FICAN curve, approximately 3%, 4% and 8% of exposed population at each respective location would be expected to be awakened due to the highest levels of construction activity. For periods of less intensive construction activity, the percentage of awakenings would be lower. Table F1-30 summarizes the nighttime construction noise SEL and sleep disturbance for these receptors. Single event awakenings would occur at a frequency below 10%.

Table F1-31 summarizes the predicted Project train horn SEL at nearby residences and an assessment of sleep disturbance. Interior SELs with windows closed from the SCIG Train Horn would be as high as 25.1, 27.2 and 32.5 dBA at the Webster residence, Buddhist Temple and Villages of Cabrillo, respectively. When assessed with the FICAN curve, none of the exposed population at these residences would be expected to be awakened due to the highest levels of construction activity. Interior SELs with windows open from the SCIG Train Horn would be as high as 33.1, 35.2 and 40.5 dBA at the Webster residence, Buddhist Temple and Villages of Cabrillo, respectively. When assessed with the FICAN curve, none of the exposed population at the Webster residence and Buddhist Temple would be expected to be awakened due to the highest levels of construction activity, and only 1% of residents at the Villages of Cabrillo would experience awakenings. Single event awakenings would occur at a frequency below 10%.

Table F1-30. Summary of the Predicted Nighttime Construction Noise SEL for SCIG Construction and Sleep Disturbance Assessment.

Receptor Number	Receptor Location	Predicted Nighttime Exterior Construction Noise Level – Worst Case 2013, dBA	Predicted Nighttime Exterior SEL – Worst Case 2013, dBA [1]	Predicted Nighttime Interior SEL w/ Windows Closed – Worst Case 2013, dBA [2]	Approximate Percentage of Exposed Population Expected to be Awakened [3]	Predicted Nighttime Interior SEL w/ Windows Open – Worst Case 2013, dBA [4]	Approximate Percentage of Exposed Population Expected to be Awakened [3]
R1	Residence at 2789 Webster – rear yard	33.3	68.9	48.9	2%	56.9	3%
R2	Buddhist Temple at Willow and Webster	36.3	71.9	51.9	3%	59.9	4%
R8	Villages of Cabrillo	50.7	86.3	66.3	7%	74.3	8%

1 SEL is calculated from Leq+35.6, dB.
2 Assumes a 20 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Closed.
3 Based on FICAN 1997 Sleep Disturbance Curve.
4 Assumes a 12 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Open.

Table F1-31. Summary of the Predicted SCIG Train Horn SEL at Nearby Residences and Sleep Disturbance Assessment.

Receptor Number	Receptor Location	Predicted SCIG Train Horn Exterior SEL, dB	Predicted SCIG Train Horn Interior SEL w/ Windows Closed, dBA [1]	Approximate Percentage of Exposed Population Expected to be Awakened [2]	Predicted SCIG Train Horn Interior SEL w/ Windows Open, dBA [3]	Approximate Percentage of Exposed Population Expected to be Awakened [2]
R1	Residence at 2789 Webster – rear yard	45.1	25.1	0%	33.1	0%
R2	Buddhist Temple at Willow and Webster	47.2	27.2	0%	35.2	0%
R8	Villages of Cabrillo	52.5	32.5	0%	40.5	1%

1 Assumes a 20 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Closed.
2 Based on FICAN 1997 Sleep Disturbance Curve.
3 Assumes a 12 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Open.

School Classroom Speech Intelligibility

Construction noise experienced within the classrooms has the potential to interfere with speech intelligibility between the teacher and the student. Table F1-32 summarizes the interior construction noise within classrooms and the speech intelligibility between a teacher and student separated by 20 feet. The analysis and evaluation considers both a normal and raised voice speech level between a teacher and student. Future interior construction noise would be as high as 38.2, 32.8, 46.1, 44.2, 31.7 and 31.9 dBA at Hudson School, Cabrillo High School, Cabrillo Child Development Center, Bethune School, Stephens Middle School, and Webster School, respectively. When compared with the USEPA curve for speech intelligibility, there would be greater than 95% normal voice satisfactory conversation speech intelligibility at all locations. Similarly, there would be greater than 95% raised voice satisfactory conversation speech intelligibility at all locations. When the distance between the teacher and student is less than 20 feet, speech intelligibility would be expected to be even greater.

The Project's on-site and rail corridor operational noise experienced within the classrooms has the potential to interfere with speech intelligibility between the teacher and the student. Table F1-33 summarizes the interior operations noise levels within classrooms and the speech intelligibility between a teacher and student separated by 20 feet. The analysis and evaluation considers both a normal and raised voice speech level between a teacher and student. Future interior operations noise levels would be as high as 37.0, 32.7, 43.8, 39.3, 31.5 and 31.9 dBA at Hudson School, Cabrillo High School, Cabrillo Child Development Center, Bethune School, Stephens Middle School, and Webster School, respectively. When compared with the USEPA curve for speech intelligibility, there would be greater than 95% normal voice satisfactory conversation speech intelligibility at all locations. Likewise, there would be greater than 95% raised voice satisfactory conversation speech intelligibility at all locations. When the distance between the teacher and student is less than 20 feet, speech intelligibility would be expected to be even greater.

Project train horn soundings near the intersection of the Alameda Corridor and Pacific Coast Highway also have the potential to affect speech intelligibility within classrooms. Table F1-34 summarizes the interior train horn noise levels within classrooms and the speech intelligibility between a teacher and student separated by 20 feet. The analysis and assessment considers both a normal and raised voice speech level between a teacher and student. Future interior train horn noise levels would be as high as 17.1, 5.4, 23.9, 26.6, 7.3 and 1.5 dB at Hudson School, Cabrillo High School, Cabrillo Child Development Center, Bethune School, Stephens Middle School, and Webster School, respectively. When compared with the USEPA curve for speech intelligibility, there would be greater than 95% normal and raised voice satisfactory conversation speech intelligibility at all classroom locations.

Table F1-32. Summary of the Predicted Daytime Construction Noise within Classrooms and Speech Intelligibility Assessment.

Receiver Number	Location	Description	Ambient Interior Noise Level, L50, dBA	Predicted Future Interior Construction Noise Level with Ambient, L50, dBA[1]	Normal Voice Satisfactory Conversation Speech Intelligibility at 20 feet between Speaker and Listener [2]	Raised Voice Satisfactory Conversation Speech Intelligibility at 20 feet between Speaker and Listener [2]
R3	Hudson School	Classroom 52	36.9	38.2	Greater than 95%	Greater than 95%
R5	Cabrillo High School	Classroom 1128	32.7	32.8	Greater than 95%	Greater than 95%
R6	Cabrillo Child Development Center	#2 Exterior, #4 Interior	43.7	46.1	Greater than 95%	Greater than 95%
R7	Bethune School	Classroom 102	38.8	44.2	Greater than 95%	Greater than 95%
R30	Stephens Middle School	Classroom PC2	31.4	31.7	Greater than 95%	Greater than 95%
R31	Webster School	Classroom B-48	31.9	31.9	Greater than 95%	Greater than 95%

1 Data from Table F1-22.
2 Based on FICAN – USEPA Speech Intelligibility Curve, 1974.

Table F1-33. Summary of the Project's Operational Noise within Classrooms and Speech Intelligibility Assessment.

Receiver Number	Location	Description	Ambient Interior Noise Level, dBA	Existing Ambient Plus Project Interior Noise Levels, dBA[1]	Normal Voice Satisfactory Conversation Speech Intelligibility at 20 feet between Speaker and Listener [2]	Raised Voice Satisfactory Conversation Speech Intelligibility at 20 feet between Speaker and Listener [2]
R3	Hudson School	Classroom 52	36.9	37.0	Greater than 95%	Greater than 95%
R5	Cabrillo High School	Classroom 1128	32.7	32.7	Greater than 95%	Greater than 95%
R6	Cabrillo Child Development Center	#2 Exterior, #4 Interior	43.7	43.8	Greater than 95%	Greater than 95%
R7	Bethune School	Classroom 102	38.8	39.3	Greater than 95%	Greater than 95%
R30	Stephens Middle School	Classroom PC2	31.4	31.5	Greater than 95%	Greater than 95%
R31	Webster School	Classroom B-48	31.9	31.9	Greater than 95%	Greater than 95%

Notes:
1 Data from Table F1-25
2 Based on FICAN – USEPA Speech Intelligibility Curve, 1974.
Noise standard for a cumulative period of 5 minutes in a 60 minute period. Higher noise levels are permitted for shorter time periods. If ambient noise level exceeds standard, standard shall be increased to reflect ambient level.
* Includes relocation of existing tenants

Table F1-34. Predicted SCIG Train Horn SEL within Classrooms and Speech Intelligibility Assessment.

Receiver Number	Location	Description	Predicted SCIG Train Horn Exterior Noise Level, dBA	Measured Exterior to Interior Noise Reduction, dB	Predicted SCIG Train Horn Interior Noise Level, dBA [1]	Normal Voice Satisfactory Conversation Speech Intelligibility at 20 feet between Speaker and Listener [2]	Raised Voice Satisfactory Conversation Speech Intelligibility at 20 feet between Speaker and Listener [2]
R3	Hudson School	Classroom 52	50.1	33	17.1	Greater than 95%	Greater than 95%
R5	Cabrillo High School	Classroom 1128	49.8	44.4	5.4	Greater than 95%	Greater than 95%
R6	Cabrillo Child Development Center	#2 Exterior, #4 Interior	52.5	28.6	23.9	Greater than 95%	Greater than 95%
R7	Bethune School	Classroom 102	52.7	26.1	26.6	Greater than 95%	Greater than 95%
R30	Stephens Middle School	Classroom PC2	45.6	38.3	7.3	Greater than 95%	Greater than 95%
R31	Webster School	Classroom B-48	40.1	38.6	1.5	Greater than 95%	Greater than 95%

1 Assumes a 20 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors.
2 Based on FICAN – USEPA Speech Intelligibility Curve, 1974.

4.4 Predicted Noise Levels – City of Carson

Construction and Operations Noise

The nearest residential receptor in the City of Carson (R33) is located over 7,000 ft from the SCIG site. Because of the distance to the nearest construction areas, barrier effects of intervening topography, and the high ambient background noise, construction noise is expected to be attenuated to ambient levels.

Receptor R33 is located approximately 200 feet east of the Alameda Corridor and directly east of Alameda Street. This location is exposed to significant noise levels from train movements, automobile traffic and heavy truck operations. Considering that the project would generate eight inbound and outbound trains per day, the increase in CNEL from the Project's trains on the Alameda Corridor and at the Salmon Avenue residence (R33) would be less than 1 dB.

Train horn sounding can produce maximum sound levels as high as 107 dBA at a distance of 100 ft and 90 dBA at a distance of 500 feet. The project would generate eight daily inbound and outbound trains with approximately 16 train horn soundings per day occurring near the intersection of the Alameda Corridor and Pacific Coast Highway. This is approximately 11,000 ft south of the Salmon Avenue residence. Train horn soundings from the project are not expected to occur more than once in any one hour period. Train horn soundings are estimated to be approximately 63 dBA at this residence. When compared to the number of existing train operations, horn soundings and ambient background noise, future locomotive horn noise from SCIG train traffic, although still discernible, would not be expected to result in a CNEL increase greater than 3 dB.

Construction and Operations Vibration

Because the Project site is located over 7,000 ft south of the Salmon Avenue residence (R33), daytime and nighttime construction vibration would not be expected to approach ambient noise levels. A site survey was conducted to determine if there were nonresidential vibration sensitive receptors (microelectronics firms, recording studios, research laboratories, etc. that employ vibration sensitive equipment) in the vicinity of the Project site and rail line. It was determined that no such receptors were present. In addition, the construction haul route would be expected to be primarily on Pacific Coast Highway outside of the City of Carson. Truck vibration would not be expected to exceed existing vibration generated by existing trucks on Pacific Coast Highway; thus, no increase in vibration would be expected.

Project train movements on the Alameda Corridor would pass by the Salmon Residence, within approximately 200 feet of the property boundary. Existing vibration levels range from 53 to 68.8 VdB at this location. Future train vibration would not be expected to exceed existing vibration levels from the Alameda Corridor and Alameda St. Future Project train vibration at the Salmon Residence would be less than the FTA criteria of 75 VdB.

Sleep Disturbance

Table F1-35 summarizes the predicted Project train horn SEL at the nearby residence and an evaluation of sleep disturbance. Interior SELs with windows closed from the train horn noise experienced at 21843 Salmon Avenue would be as high as 43.0. When assessed with the FICAN curve, approximately 1% of exposed population at the residence would be expected to be awakened due to the highest levels of construction activity. Interior train horn SELs with windows open at 21843 Salmon Avenue would be as high as 51.0. When assessed with the FICAN curve, approximately 2% of exposed population at the residence would be expected to be awakened due to the highest levels of construction activity. Single event awakenings would occur at a frequency below 10%.

Table F1-35. Summary of the Predicted SCIG Train Horn SEL at Nearby Carson Residences and Sleep Disturbance Assessment.

Receptor Number	Receptor Location	Predicted SCIG Train Horn Exterior SEL, dBA	Predicted SCIG Train Horn Interior SEL w/ Windows Closed, dBA[1]	Approximate Percentage of Exposed Population Expected to be Awakened [2]	Predicted SCIG Train Horn Interior SEL w/ Windows Open, dBA[3]	Approximate Percentage of Exposed Population Expected to be Awakened [2]
R33	Residence at 21843 Salmon Avenue	63.0	43.0	1%	51.0	2%

1 Assumes a 20 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Closed.
2 Based on FICAN 1997 Sleep Disturbance Curve.
3 Assumes a 12 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Open.

School Classroom Speech Intelligibility

There are no schools located in the City of Carson within the immediate vicinity of the Project Site.There would be no construction and operations related noise that could affect speech intelligibility in classrooms.

5 Alternatives

5.1 Alternative 2: Reduced Project Alternative

The reduced project alternative would consist of the same on-site operations sources and railway sources but would decrease the daily volume of truck and rail activity. An estimated 4,035 truck trips would facilitate the transport of 3,034 containers each day in the proposed alternative. Additionally, only six inbound and six outbound trains would be processed daily.

5.1.1 Predicted Noise Levels – City of Los Angeles

Construction of the proposed Project would occur over approximately 24 months in the following areas:

1. The railyard area including the north lead tracks and railroad bridge over Sepulveda Blvd;

2. Pacific Coast Highway (PCH) grade separation and interchange;

3. The south lead tracks area along the Long Beach Lead and Alameda Corridor, including the Dominguez Channel Bridge.

4. Tenant relocation sites.

Construction would include demolition of existing structures; earthwork including excavating, repositioning, and compacting; drainage and utility construction/relocation; fine grading and sub-grade preparation; paving; construction of new buildings; track work and signal installation; assembly of the loading cranes; modifications to rail and road bridges; landscaping; and improvements to the Southern California Edison access road. Heavy construction equipment (e.g., excavators, graders, rollers, track-laying machines, cement mixers, cranes, and haul trucks) would be used in all parts of the proposed Project site, and some pile driving would likely occur, particularly for the new bridge abutments. Construction of all elements would occur essentially simultaneously. (See DEIR Section 2.4.3 for additional details on Construction Activities and Phasing).

Construction Noise Levels

Construction noise would be experienced by workers at industrial and commercial facilities near the proposed Reduced Project site in the City of Los Angeles. However, no noise-sensitive uses were identified within the portion of the City of Los Angeles near the proposed Reduced Project site; noise-sensitive uses within Los Angeles occur along the designated truck routes, which would be used during operations and not for construction trips. Nighttime construction would be very limited and would be confined to the PCH grade separation. Haul routes to and from the site would be limited to PCH to the west and east. Because the number of truck

movements would be very limited, little to no increase would be expected with the overall CNEL from traffic on PCH.

Because no noise-sensitive uses in the City of Los Angeles are near the proposed construction areas, daytime construction activities would have no noise-related affects. The distance from the nearest residential receptor southwest of the reduced project site to the proposed south lead track construction area is approximately 1,800 feet. The distance to the SCIG site is approximately 3,000 to 5,000 feet. Businesses in this area are primarily industrial automobile wrecking yards with a few sporadic residences. Because of the distance to the nearest construction areas, barrier effects of intervening topography, and the high ambient background noise, construction noise is expected to be attenuated to ambient levels.

No on-site construction activities would occur near noise-sensitive uses in the City of Los Angeles between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday. Nighttime construction noise from the PCH grade separation would be attenuated due to the distance to the receptors (4,000 ft), barrier effects of intervening topography and the high ambient background noise. Because the number of truck movements would be very limited, little to no increase would be expected with the overall CNEL from traffic on PCH. Further, single event noise levels would be expected to be similar to what is generated by existing heavy trucks on PCH.

On-Site Operations

Sources of on-site operational noise at the SCIG and relocation facilities would include truck activity, maintenance, train activity, and container loading and unloading operations. Predicted noise levels for on-site activities are summarized in Table F1-36. Existing operations that would be relocated by the proposed Reduced Project would include less intensive trucking in comparison to baseline conditions, warehousing, transloading and yard goats activities. Mechanical equipment associated with these operations includes heavy trucks, trailers, forklifts, yard goats, and maintenance equipment.

Trucks and hostlers would generate noise from their engines and horns. Truck activity would consist of truck traffic arriving and departing from the SCIG and relocation site facilities, and moving about within the facilities. An estimated 4,035 truck trips and 3,034 containers would be processed through the SCIG facility on a daily basis. Hostlers would transport containers between storage areas and the loading/unloading tracks. Crane operations would include the use of RMG cranes on the strip tracks for loading and unloading railcars and chassis, and managing container stacking. The cranes, being electrically powered, would generate little noise, but container stacking would generate noise from impacts with other containers, truck trailers, or the ground. The maintenance activities would consist of hostler and crane maintenance, which would be supported by an air compressor building in the northwest portion of the site.

Train operations would account for the majority of operational noise at the proposed Project site. Railroad noise would include locomotive diesel engines, horns, and air brake systems; wheel-on-rail clicking and squealing; and concussion from railcars banging together during switching operations. Six inbound trains and six outbound

trains would be expected to pass through the facility each day. Each train would consist of three or four diesel-electric locomotives with attached railcars, with a total length of approximately 8,000 feet. Locomotives would operate from the junction with the Alameda Corridor through the railyard and northward up the north lead tracks. Locomotive noise would be reduced by normal operating procedures, which call for shutting down all but one of the locomotives as the train arrives or until it is ready to depart and accomplishing all switching activities with a single locomotive. A non audible warning system would be used on site instead of train horns, eliminating the potential for on-site train horn affects.

Table F1-36. Summary of Predicted Noise Levels From On-Site Sources

On-Site Source	*Predicted Noise Level at 100 ft, dBA*
Train Horn (off site)	107
Trains	70 - 95
Air Compressor Building	68
RMG cranes	70
Maintenance Facilities	72
Parking Lot	67
Hostler w/ Trailer	69
Hostlers	59
Heavy Trucks	66
Container Impact	70

Rail Corridor Noise

The proposed six roundtrip trains to and from the SCIG facility each day would result in increased train traffic on local corridors compared to baseline conditions. These corridors include the Alameda Corridor, South Lead Tracks and San Pedro Branch Line. Increased rail activity from the SCIG facility on the Alameda Corridor itself is already included in the Alameda Corridor project's EIR (ACEIR) as part of the overall projected increase in intermodal rail traffic. The ACEIR cites an existing train volume of 73 trains per day on the Alameda Corridor. Considering that the project would generate six inbound and outbound trains per day, the increase in CNEL from the Project's trains on the Alameda Corridor would be less than 1 dB at the nearest residential receptors R28, R29 and R32.

Train horn sounding can produce maximum sound levels as high as 107 dBA at a distance of 100 ft and 90 dBA at a distance of 500 feet. The project would generate six daily inbound and outbound trains with approximately 12 train horn soundings per day occurring near the intersection of the Alameda Corridor and Pacific Coast Highway. Train horn soundings from the project are not expected to occur more than once in any one hour period. When compared to the number of existing train operations, horn soundings and ambient background noise, future locomotive horn noise from SCIG train traffic, although still discernible, would not be expected to result in a CNEL increase greater than 3 dB at the nearest residential receptors R28, R29, and R32.

Future rail movements along the San Pedro Branch line would include diesel engine noise, train horns, and railcar noises, as described above. According to BNSF, train horn soundings are not expected to occur on the San Pedro Branch line due to the Project's design features. Future noise levels from the Project's rail movements on the San Pedro Branch line from all these sources are summarized in Table F1-37.

Table F1-37. Summary of Reduced SCIG Operational Train Noise Levels for San Pedro Branch Line

Receptor Number[1]	*Measured Ambient Noise Level, L50, dBA* [2]	*Measured Ambient CNEL, dBA*	*Predicted Future CNEL for San Pedro Branch Line, dBA*
R1	Day: 49.4 – 55.3 Night: 43.1	58.0	53.9
R2	Day: 59.9 – 60.3 Night: 52.5	63.6	47.1
R3	Day: 54.2 – 57.8	60.2	54.8
R4	Day: 64.1 – 65.3	--	56.1
R5	Day: 51.0 – 52.0	--	47.6
R6	Day: 63.3 – 64.6	68.8	55.9
R7	Day: 63.3 – 64.6	68.8	55.4
R8	Day: 61.0 – 62.5 Night: 48.0	--	52.7
R30	Day: 47.2 – 64.0	61.5	51.7
R31	Day: 49.2 – 55.7	61.7	50.3

Note: [1] For receptor locations refer to Figure 3 (where N is equivalent to R).
[2] Refer to Table F1- 4, Summary of Ambient Noise Measurement Data.

Existing Plus Reduced Project Traffic Noise Levels

Table F1-38 shows the predicted roadway traffic noise levels once the proposed Reduced Project is in full operation. Portions of the following roadways in the City of Los Angeles include noise-sensitive land uses that would be expected to experience future traffic noise levels above 70 CNEL: Alameda Street, E. Anaheim St., E. Harry Bridges Boulevard, E. Sepulveda Boulevard, John S. Gibson Boulevard, Pacific Coast Highway, S Alameda St., W. Harry Bridges Boulevard, and W. Sepulveda Boulevard. Traffic noise levels above 70 CNEL are considered incompatible with noise guidelines.

Table F1-39 shows the predicted noise level increase over existing levels; the Reduced Project's traffic noise contribution. Roadways in Los Angeles would not experience a Reduced Project increase in traffic noise level exceeding 3 dB. The majority of roadways within the City would experience a traffic noise decrease as a result of the Reduced Project.

Table F1-38. Existing Plus Reduced Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	Leq @ Rec.	CNEL @ Rec.	DISTANCE TO CNEL CONTOURS (FT) 70 dBA	65 dBA	60 dBA
1ST ST					
e/o East RD	78.1	79.1	406	1284	4060
ACCESS RD					
e/o Ferry St	77.1	78.1	323	1022	3234
ALAMEDA ST					
n/o Anaheim St	78.0	79.0	394	1248	3948
w/o Eubank Ave	80.5	81.5	705	2231	7056
s/o PCH	80.4	81.4	687	2172	6871
s/o Anaheim St	80.1	81.1	632	1999	6322
CARRACK AVE					
e/o Pier B St	61.9	62.9	9	30	96
E 223RD ST					
w/o I-405 Off ramps	77.2	78.2	324	1027	3249
E ANAHEIM ST					
between Avalon Blvd and Broad Ave	69.4	70.4	53	170	538
between Eubank Ave and Sanford St	69.7	70.7	57	182	577
between Sanford Ave and Sanford St	69.6	70.6	57	181	574
between Anaheim and Henry Ford	76.3	77.3	264	835	2642
e/o Henry Ford Ave	76.5	77.5	280	887	2805
w/o E I St	76.2	77.2	260	823	2603
e/o Sanford Ave	69.3	70.3	53	169	536
w/o Anaheim Way	76.7	77.7	289	914	2893
between Henry Ford Ave and Terminal Island	76.4	77.4	272	861	2723
E HARRY BRIDGES BLVD					
e/o Avalon Blvd	80.1	81.1	637	2015	6374
E I ST					
between Terminal Island Fwy and Anaheim	77.9	78.9	381	1207	3818
E OPP ST					
w/o Farragut Ave	65.3	66.3	21	67	211
E SEPULVEDA BLVD					
e/o Alameda St	74.9	75.9	194	614	1943
w/o Dolores St	71.6	72.6	89	283	897
w/o Wilmington Ave	72.4	73.4	109	345	1092
e/o Wilmington Ave	73.7	74.7	147	466	1476
e/o Dolores St	72.0	73.0	98	310	981
w/o Avalon Blvd	72.1	73.1	101	321	1017
EAST RD					
n/o 1st St	74.2	75.2	163	516	1632
s/o 1st St	74.1	75.1	162	513	1622
FARRAGUT AVE					
Between Terminal Island Fwy SB ramps	77.1	78.1	322	1018	3221
s/o E OPP St	64.2	65.2	16	51	163
FERRY ST					
between Seaside Ave and Access Rd	76.9	77.9	307	972	3074
between Terminal Way and Pitchard St	79.9	80.9	612	1937	6127
FIGUEROA ST					
n/o Anaheim St	73.9	74.9	151	480	1518

Table F1-38. Existing Plus Reduced Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
n/o PCH	72.1	73.1	101	321	1017
HARBOR FWY					
SB n/o PCH off Ramp	84.2	85.2	1635	5172	16357
NB s/o Sepulveda Blvd	84.6	85.6	1816	5743	18162
NB n/o Sepulveda Blvd	84.5	85.5	1758	5559	17579
SB n/o Sepulveda Blvd	84.2	85.2	1633	5164	16330
SB s/o 228th St	83.9	84.9	1532	4847	15327
SB n/o 220th St	82.4	83.4	1086	3435	10862
NB n/o 223rd St	84.4	85.4	1702	5384	17028
NB n/o Carson St	83.3	84.3	1345	4253	13450
SB s/o Torrance Blvd	82.7	83.7	1152	3644	11523
NB s/o Del Amo Blvd	83.5	84.5	1400	4427	14000
SB n/o Redondo Beach Blvd	81.7	82.7	924	2923	9245
SB between 135th St and Rosecrans Ave	81.1	82.1	809	2558	8091
NB n/o Redondo Beach Blvd	81.6	82.6	904	2860	9046
SB n/o 135th St	81.4	82.4	862	2726	8621
NB s/o 135th	81.4	82.4	871	2757	8719
NB s/o El Segundo Blvd	81.4	82.4	853	2699	8536
SB n/o Alondra	81.5	82.5	879	2782	8798
SB between Del Amo Blvd and Torrance Blvd	82.8	83.8	1203	3805	12035
SB between 168th and Alondra	82.6	83.6	1133	3584	11336
NB between Redondo Beach Blvd and Alondra	81.1	82.1	813	2573	8137
SB n/o Del Amo Blvd	82.3	83.3	1053	3330	10531
SB n/o I-405	81.6	82.6	899	2844	8993
NB n/o Del Amo Blvd	82.2	83.2	1041	3293	10416
NB s/o I-405	81.5	82.5	892	2822	8926
NB n/o Victoria St	83.8	84.8	1504	4756	15040
SB s/o 182nd St	81.0	82.0	794	2512	7946
NB between Albertoni and Victoria	83.6	84.6	1416	4480	14168
SB s/o I-405	80.4	81.4	680	2151	6803
SB between Artesia Blvd and 168th	82.3	83.3	1070	3384	10702
NB n/o I-405	83.0	84.0	1259	3981	12590
NB s/o SR-91	83.1	84.1	1264	3998	12643
NB s/o Gardena Blvd	83.1	84.1	1279	4047	12798
SB s/o PCH off Ramp	84.5	85.5	1756	5555	17567
NB n/o PCH on Ramp	84.6	85.6	1785	5645	17852
NB n/o El Segundo Blvd	82.2	83.2	1030	3257	10301
SB s/o El Segundo Blvd	82.0	83.0	995	3146	9951
SB n/o Anaheim St	84.8	85.8	1899	6007	18998
NB s/o PCH on ramp	84.8	85.8	1895	5993	18952
NB s/o L St	85.1	86.1	2004	6337	20039
SB s/o 120th St	81.2	82.2	827	2615	8269
NB s/o 120th St	81.5	82.5	891	2818	8914
SB s/o 120th St	81.5	82.5	886	2804	8867
SB n/o I-105	82.5	83.5	1119	3540	11195
NB n/o 120th St	82.1	83.1	1017	3217	10173
SB n/o 108th St	81.7	82.7	915	2896	9158
NB s/o Torrance Blvd	83.3	84.3	1347	4259	13469
NB s/o 223rd St	84.3	85.3	1665	5267	16657

Table F1-38. Existing Plus Reduced Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
SB between 214th St and 220th St	82.5	83.5	1119	3539	11193
SB s/o 220th St	83.9	84.9	1542	4877	15423
NB s/o Rosecrans	81.3	82.3	841	2659	8411
NB between Gardena Blvd and Alondra Blvd	81.8	82.8	946	2993	9466
SB s/o 108th	82.5	83.5	1114	3524	11143
NB n/o 108th St	81.9	82.9	957	3026	9571
NB s/o 190th St	82.9	83.9	1212	3833	12123
NB n/o 220th ST	83.3	84.3	1326	4194	13264
SB s/o Sepulveda Blvd	84.3	85.3	1677	5305	16778
HARBOR PLZ					
between Pier F Ave and Pico Ave	78.1	79.1	405	1281	4051
HARBOR SCENIC DR					
NB w/o Goldenshore St	78.3	79.3	418	1322	4181
NB s/o Shoreline Dr	78.3	79.3	421	1333	4216
NB n/o Shoreline Dr	78.0	79.0	390	1233	3901
SB n/o Shoreline Dr	78.6	79.6	451	1427	4512
SB s/o Shoreline Dr	78.0	79.0	392	1242	3929
NB e/o Goldenshore St	78.0	79.0	392	1241	3926
HARBOR SCENIC WAY					
e/o Queens Hwy	77.1	78.1	317	1004	3175
e/o Port Access Rd	78.1	79.1	408	1290	4081
Between Queens Hwy and Port Access Rd	48.7	49.7	0	1	4
w/o Port Access Rd	78.1	79.1	406	1286	4069
JOHN S GIBSON BLVD					
n/o I-110 Ramps	77.1	78.1	317	1004	3175
LONG BEACH FWY					
SB n/o Imperial Hwy	83.6	84.6	1432	4529	14323
NB n/o Imperial Hwy	83.4	84.4	1367	4324	13674
NB s/o Imperial Hwy	83.7	84.7	1448	4581	14486
SB s/o Imperial Hwy	83.4	84.4	1373	4341	13729
SB s/o Imperial Hwy	83.7	84.7	1456	4606	14565
SB n/o I-105	83.3	84.3	1343	4249	13437
SB s/o I-105	83.6	84.6	1428	4515	14280
NB n/o I-105	83.2	84.2	1319	4171	13189
NB n/o Rosecrans Ave	83.4	84.4	1366	4322	13668
SB n/o Rosecrans Ave	83.4	84.4	1351	4275	13519
SB s/o Rosecrans Ave	85.0	86.0	1973	6241	19738
SB s/o Rosecrans Ave	85.1	86.1	2023	6399	20237
NB s/o Rosecrans	85.1	86.1	2023	6397	20231
SB n/o Alondra	85.1	86.1	2023	6399	20236
NB between Alondra and Rosecrans	85.2	86.2	2093	6619	20931
SB n/o Alondra	84.8	85.8	1901	6013	19015
NB n/o Alondra	85.2	86.2	2057	6505	20571
SB s/o Alondra	84.8	85.8	1873	5923	18730
NB s/o Alondra	85.2	86.2	2059	6513	20595
SB n/o SR-91	85.2	86.2	2082	6585	20825
NB n/o SR-91	84.2	85.2	1643	5195	16430
SB n/o Artesia Blvd	83.7	84.7	1452	4593	14524
NB n/o Artesia Blvd	83.6	84.6	1429	4520	14295

Table F1-38. Existing Plus Reduced Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
NB s/o Artesia Blvd	83.9	84.9	1529	4837	15298
SB s/o Artesia Blvd	84.8	85.8	1872	5922	18727
NB s/o Artesia Blvd	83.8	84.8	1494	4727	14948
SB n/o Long Beach Blvd	85.2	86.2	2068	6541	20686
SB s/o Long Beach Blvd	85.1	86.1	2012	6363	20122
NB n/o Long Beach Blvd	85.8	86.8	2398	7585	23987
SB n/o Del Amo Blvd	84.8	85.8	1880	5947	18806
SB s/o Del Amo Blvd Off ramp	85.3	86.3	2118	6699	21186
NB s/o Long Beach Blvd	85.5	86.5	2241	7087	22412
NB n/o Del Amo Blvd	85.2	86.2	2085	6593	20850
SB s/o Del Amo Blvd	85.2	86.2	2079	6574	20791
NB n/o Wardlow Rd	85.7	86.7	2297	7265	22975
SB s/o Wardlow Rd	85.0	86.0	1957	6190	19576
SB n/o Willow St	84.8	85.8	1898	6002	18981
NB n/o Willow St	84.8	85.8	1889	5973	18889
NB s/o Willow St	84.6	85.6	1789	5657	17891
SB n/o Willow St	84.3	85.3	1691	5350	16918
SB s/o Willow St	84.1	85.1	1612	5098	16121
SB between off/of ramps at Willow St	84.3	85.3	1689	5341	16890
NB s/o Willow St	84.7	85.7	1832	5793	18321
NB s/o off ramp at PCH	84.8	85.8	1880	5947	18806
NB s/o Anaheim St	84.2	85.2	1651	5221	16511
NB s/o PCH	83.9	84.9	1539	4869	15397
SB n/o Anaheim St	84.1	85.1	1619	5122	16197
SB s/o Anaheim St	84.1	85.1	1618	5118	16184
NB s/o loop off ramp at PCH	84.9	85.9	1914	6053	19143
SB n/o Anaheim St	84.4	85.4	1738	5497	17382
SB s/o PCH	84.6	85.6	1817	5746	18170
NB n/o I-405 Interchange	85.2	86.2	2066	6535	20667
NB s/o I-405 Interchange Ramp	85.0	86.0	1964	6212	19646
SB n/o Wardlow Rd	85.7	86.7	2327	7361	23278
NB s/o Firestone Blvd	83.3	84.3	1328	4200	13282
SB s/o Firestone Blvd	83.7	84.7	1470	4648	14701
SB s/o 9th St	83.5	84.5	1400	4428	14002
SB n/o Long Beach Blvd	85.6	86.6	2244	7097	22443
NB n/o 9th St	84.2	85.2	1646	5205	16461
NB s/o 9th St	83.3	84.3	1326	4195	13267
SB n/o 9th St	84.6	85.6	1793	5672	17936
SB s/o Anaheim St	84.2	85.2	1651	5222	16513
NB n/o 10th St	84.1	85.1	1602	5068	16028
SB n/o I-405	85.0	86.0	1984	6275	19846
SB s/o Alondra	84.8	85.8	1894	5991	18945
NB n/o Dell Amo Blvd Off Ramp	85.5	86.5	2222	7028	22227
SB s/o On ramp at Del Amo Blvd	85.2	86.2	208	6585	20824
NB s/o Del Amo Blvd	85.3	86.3	2130	6735	21300
NB between s/o off ramp at Del Am o Blvd	85.1	86.1	2020	6388	20202
NB between off/on ramps at Willow St	84.6	85.6	1788	5654	17879
SB s/o Willow St	84.5	85.5	1765	5581	17649
NB n/o Willow St	84.8	85.8	1908	6035	19086

Table F1-38. Existing Plus Reduced Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
NB n/o PCH	84.4	85.4	1738	5497	17385
NB Between Ramps at Anaheim St	85.0	86.0	1989	6290	19892
SB s/o Anaheim St	84.3	85.3	1670	5282	16705
NB n/o Anaheim St	84.9	85.9	1931	6106	19310
N HENRY FORD AVE					
n/o Terminal Island Fwy	79.4	80.4	544	1723	5448
n/o Anaheim St	78.9	79.9	482	1525	4824
N SEASIDE AVE					
e/o Navy Way	82.7	83.7	1170	3699	11700
e/o Access Rd ramp	80.7	81.7	738	2335	7385
w/o Navy Way	82.4	83.4	1087	3438	10872
e/o Ferry St	77.0	78.0	310	982	3105
e/o Navy Way ramp	83.5	84.5	1404	4440	14042
e/o Navy Way	82.8	83.8	1184	3744	11841
NAVY WAY					
s/o Reeves Ave	77.2	78.2	326	1033	3266
s/o Terminal Way	79.7	80.7	583	1845	5835
NEW DOCK ST					
w/o Henry Ford Ave	77.2	78.2	330	1044	3304
e/o Henry Ford Ave	79.4	80.4	543	1720	5439
w/o SB off ramp Terminal Island Fwy	79.4	80.4	545	1724	5452
w/o NB on ramp Terminal Island Fwy	76.6	77.6	285	901	2852
between Terminal Island Fwy SB and NB Ramp	76.7	77.7	289	915	2893
e/o NB on ramp Terminal Island Fwy	65.5	66.5	22	70	221
PACIFIC COAST HIGHWAY					
between Avalon Blvd and Eubank Ave	74.5	75.5	175	555	1757
between Watson Ave and Eubank Ave	75.1	76.1	200	635	2008
w/o Alameda St	73.6	74.6	143	454	1438
w/o East Rd	72.5	73.5	110	348	1100
w/o East Rd	71.5	72.5	87	277	876
between Watson Ave and Blinn Ave	75.0	76.0	195	619	1959
PICO AVE					
s/o Ocean Blvd	75.6	76.6	227	720	2277
n/o Ocean Blvd	75.5	76.5	222	703	2225
n/o Pier C St	78.7	79.7	468	1480	4681
s/o Pier C St	77.4	78.4	347	1098	3472
n/o Pier D St	77.6	78.6	356	1127	3566
PIER A WAY					
e/o Henry Ford Ave	73.5	74.5	138	438	1386
e/o Henry Ford Ave	76.5	77.5	279	883	2793
e/o Henry Ford Ave	77.8	78.8	372	1179	3729
between Terminal Island Fwy and Henry Ford	64.2	65.2	16	52	164
n/o Terminal Island Fwy	73.4	74.4	136	430	1361
e/o Henry Ford Ave	72.9	73.9	121	383	1212
e/o Henry Ford Ave	74.2	75.2	162	515	1629
PIER B ST					
s/o 9th St	76.3	77.3	266	843	2666
w/o Edison Ave	74.2	75.2	166	525	1662
n/o Pier A way	73.7	74.7	147	465	1473

Table F1-38. Existing Plus Reduced Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
PIER C ST					
w/o Pier B St	76.2	77.2	258	817	2585
w/o Pier B St	75.7	76.7	233	739	2336
PIER D AVE					
s/o Pier D St	70.8	71.8	75	237	750
PIER D ST					
w/o I-710	75.2	76.2	206	651	2060
PIER F AVE					
s/o Harbor Plaza	77.4	78.4	342	1082	3423
PIER G AV					
s/o Harbor Plaza	69.5	70.5	56	177	560
PIER J WAY					
e/o Panorama Dr	79.5	80.5	556	1760	5566
PORT ACCESS RD					
e/o Ocean Blvd Ramps	74.6	75.6	180	571	1806
n/o New Dock St	77.1	78.1	321	1015	3210
n/o New Dock St	76.7	77.7	295	933	2953
s/o Pier J way	78.2	79.2	415	1312	4151
s/o Pier J way	79.6	80.6	568	1797	5683
n/o Pier J way	78.1	79.1	407	1287	4071
s/o Harbor Scenic way	77.8	78.8	373	1181	3735
QUEENSWAY DR					
s/o Harbor Scenic Dr	78.2	79.2	412	1304	4124
S ALAMEDA ST					
n/o Wardlow Rd	77.3	78.3	338	1071	3386
S FRIES AVE					
s/o Water St	78.2	79.2	409	1295	4095
between Harry Bridges Blvd and Water St	76.3	77.3	267	845	2673
S HARBOR SCENIC DR					
NB s/o Shoreline Dr	78.3	79.3	423	1338	4233
SB w/o Goldenshore St	78.7	79.7	458	1450	4586
NB n/o Goldenshore St	78.1	79.1	400	1266	4005
SB e/o Goldenshore St	78.4	79.4	430	1360	4302
NB s/o Shoreline Dr	77.9	78.9	388	1229	3887
SB w/o Panorama Dr	78.9	79.9	487	1540	4872
SB w/o Panorama Dr	78.3	79.3	424	1342	4246
S PICO AVE					
s/o Embarcadero	77.0	78.0	311	984	3114
n/o Harbor Scenic Dr ramp	80.2	81.2	657	2080	6579
s/o Harbor Scenic Dr ramp	79.3	80.3	536	1694	5359
SAN DIEGO FWY					
SB e/o I-110	81.7	82.7	932	2948	9324
SB e/o Wilmington Blvd	82.7	83.7	1158	3663	11584
SB s/o I-110 interchange	82.8	83.8	1188	3759	11887
NB s/o Wilmington Blvd	82.6	83.6	1149	3636	11498
NB w/o Santa Fe Ave	82.5	83.5	1105	3495	11052
SB e/o 218th St	80.5	81.5	693	2192	6934
NB w/o Alameda St	82.6	83.6	1143	3615	11432
SB w/o Alameda St	81.2	82.2	830	2625	8302

Table F1-38. Existing Plus Reduced Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
NB e/o Wilmington Ave	81.8	82.8	935	2956	9350
SB e/o Wilmington Ave	80.2	81.2	647	2046	6472
SB w/o Wilmington Ave	79.9	80.9	605	1916	6058
SB s/o Carson St	80.9	81.9	770	2435	7702
NB n/o Carson St	82.4	83.4	1076	3403	10761
NB n/o 213th St	81.9	82.9	972	3076	9729
NB e/o Avalon Blvd	82.4	83.4	1094	3462	10948
SB e/o Avalon Blvd	81.5	82.5	881	2788	8818
NB w/o Avalon Blvd	82.7	83.7	1159	3666	11593
SB e/o Avalon Blvd	81.9	82.9	957	3028	9575
NB w/o Wilmington Ave	81.7	82.7	922	2917	9227
NB e/o 218th St	82.1	83.1	1023	3235	10231
SB e/o Avalon Blvd	81.5	82.5	881	2788	8818
NB s/o Carson St	81.7	82.7	922	2918	9227
SB n/o Carson St	81.5	82.5	881	2788	8818
SAN GABRIEL AV					
n/o PCH	76.8	77.8	301	953	3015
TERMINAL ISLAND FWY					
s/o PCH	78.5	79.5	446	1410	4459
n/o PCH	77.2	78.2	324	1027	3248
n/o Ocean Blvd	79.7	80.7	580	1836	5806
NB s/o PCH	82.0	83.0	981	3102	9811
SB n/o PCH	77.5	78.5	349	1104	3491
NB between Off and loop On ramp at PCH	80.8	81.8	758	2397	7580
NB s/o PCH off ramp	79.3	80.3	527	1668	5276
SB n/o Anaheim St	77.7	78.7	366	1158	3663
NB between Henry Ford Ave and Anaheim St	80.8	81.8	748	2368	7489
NB n/o Ocean Blvd	79.9	80.9	608	1923	6083
SB n/o Ocean Blvd	80.2	81.2	658	2081	6582
s/o Henry Ford Ave	80.0	81.0	618	1956	6187
SB s/o Henry Ford Ave	75.8	76.8	235	746	2359
e/o Seaside Ave	80.4	81.4	683	2159	6829
SB s/o Anaheim Way	78.1	79.1	399	1261	3990
NB s/o Willow St	77.4	78.4	342	1081	3419
SB s/o PCH on ramp	78.1	79.1	403	1277	4039
SB s/o PCH	79.9	80.9	613	1939	6132
NB n/o PCH	80.7	81.7	737	2330	7370
SB between loop Off and On ramp at PCH	79.5	80.5	559	1767	5590
SB s/o Henry Ford Ave	79.7	80.7	582	1841	5824
s/o Henry Ford Ave	79.5	80.5	556	1760	5568
TERMINAL WAY					
w/o Ferry St	77.2	78.2	328	1040	3289
w/o Eaire St	79.5	80.5	563	1781	5633
s/o Navy Way	76.4	77.4	272	862	2727
s/o Navy Way	76.6	77.6	283	896	2835
s/o Navy Way	78.1	79.1	406	12866	4068
s/o Navy Way	70.0	71.0	62	198	627
s/o Navy Way	74.1	75.1	161	511	1616
s/o Navy Way	71.0	72.0	78	248	786

Table F1-38. Existing Plus Reduced Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	Leq @ Rec.	CNEL @ Rec.	DISTANCE TO CNEL CONTOURS (FT) 70 dBA	65 dBA	60 dBA
W 9TH ST					
e/o Caspian Ave	70.1	71.1	63	201	6375
s/o Anaheim St	68.0	69.0	39	125	397
e/o Santa Fe Ave	74.0	75.0	158	500	1582
w/o Caspian Ave	77.4	78.4	342	1081	3420
n/o Pier B St	72.2	73.2	104	331	1048
w/o Santa Fe Ave	74.5	75.5	176	556	1759
s/o Pier B St	78.8	79.8	474	1500	4743
n/o Pier B St	77.6	78.6	361	1143	3614
W ANAHEIM ST					
e/o Harbor Ave	78.2	79.2	410	1296	4101
e/o Santa Fe Ave	76.3	77.3	266	843	2666
w/o Harbor Ave	75.6	76.6	226	715	2263
w/o Seabright Ave	69.3	70.3	52	167	529
w/o E I St	69.4	70.4	54	170	539
w/o Figueroa PL	68.9	69.9	48	154	488
between Wilmington and Neptune Ave	69.0	70.0	50	158	499
between Frigate Ave and Wilmington Blvd	69.2	70.2	52	164	521
e/o Neptune	75.3	76.3	213	675	2135
between Neptune Ave and Fries Ave	78.0	79.0	397	1256	3973
w/o Frigate Ave	69.6	70.6	57	181	573
e/o Figueroa PL	74.1	75.1	160	506	1600
between Seabright Ave and Santa Fe Ave	79.1	80.1	506	1603	5069
between Fries Ave and Avalon Blvd	79.0	80.0	498	1577	4987
between I-710 SB and NB Ramps	78.3	79.3	424	1341	4242
W HARRY BRIDGES BLVD					
between Wilmington Blvd and Neptune Ave	78.9	79.9	488	1546	4888
between Hawaiian Ave and Wilmington Blvd	79.6	80.6	576	1821	5760
between Neptune Ave and Fries Ave	79.0	80.0	496	1570	4965
between Figueroa St and Mar Vista Ave	70.6	71.6	71	227.4	719
between Fries Ave and Avalon Blvd	72.8	73.8	119	378	1195
between Mar Vista Ave and Hawaiian Ave	73.2	74.2	129	410	1298
W I ST					
n/o Anaheim St	78.5	79.5	447	1414	4472
W PACIFIC COAST HIGHWAY					
between I-110 SB off ramp and Figueroa S	78.7	79.7	465	1473	4659
w/o I-110 SB off ramp	78.9	79.9	480	1519	4803
between I-710 NB and SB ramps	74.0	75.0	158	500	1583
e/o San Gabriel Ave	73.8	74.8	148	470	1487
between San Gabriel Ave and Santa Fe Ave	74.5	75.5	177	560	1772
e/o Wilmington Blvd	79.6	80.6	576	1822	5763
e/o Figueroa St	77.9	78.9	387	1225	3875
between Neptune Ave and Avalon Blvd	78.0	79.0	398	12601	3984
between Terminal Island Fwy SB and NB ramp	78.4	79.4	431	1363	4311
e/o Santa Fe Ave	78.0	79.0	396	1252	3961
e/o Harbor Ave	78.2	79.2	410	1296	4099
w/o Terminal Island Fwy	73.9	74.9	154	488	1545
W PANORAMA DR					
between Queens Hwy and Harbor Scenic Dr	74.8	75.8	186	590	1865

Table F1-38. Existing Plus Reduced Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
between Harbor Scenic Dr and Pier J Way	74.1	75.1	160	507	1605
W SEPULVEDA BLVD					
e/o SB I-110 off Ramp	71.8	72.8	94	299	947
w/o NB I-110 off ramp	74.0	75.0	158	500	1582
w/o Figueroa St	72.6	73.6	114	361	1144
e/o Figueroa St	76.1	77.1	251	795	2516
between SB and NB I-110 Ramps	70.8	71.8	74	236	746
W WATER ST					
between Fries Ave and Avalon Blvd	72.1	73.1	100	318	1008
W WILLOW ST					
between NB and SB Terminal Island Fwy	69.7	70.7	57	182	578
between Terminal Island Fwy and Santa Fe	70.1	71.1	64	204	646
between Santa Fe Ave and Easy Ave	70.0	71.0	62	198	626
e/o Easy Ave	69.7	70.7	57	182	578
w/o SB I-710 ramps	70.1	71.1	64	204	646
w/o NB I-710 on ramp	70.0	71.0	62	198	626

Table F1-39. Reduced Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft.*	*Reduced Project Alternative CNEL @ 100 ft*	*Reduced Project Increment in Traffic Noise Level, dB*
1ST ST			
e/o East RD	78.1	79.1	1.1
ACCESS RD			
e/o Ferry St	78.5	78.1	-0.3
ALAMEDA ST			
n/o Anaheim St	79.4	79.0	-0.4
w/o Eubank Ave	81.5	81.5	0.1
s/o PCH	81.7	81.4	-0.3
s/o Anaheim St	80.9	81.1	0.1
E 223RD ST			
w/o I-405 Off ramps	78.7	78.2	-0.6
E ANAHEIM ST			
between Avalon Blvd and Broad Ave	70.3	70.4	0.0
between Eubank Ave and Sanford St	70.6	70.7	0.0
between Sanford Ave and Sanford St	70.6	70.6	0.0
between Anaheim and Henry Ford	76.7	77.3	0.6
e/o Henry Ford Ave	76.6	77.5	0.9
w/o E I St	76.2	77.2	1.0
e/o Sanford Ave	70.3	70.3	0.0
w/o Anaheim Way	76.6	77.7	1.0
between Henry Ford Ave and Terminal Island	76.5	77.4	0.9
E HARRY BRIDGES BLVD			
e/o Avalon Blvd	81.0	81.1	0.1
E I ST			
between Terminal Island Fwy and Anaheim	78.4	78.9	0.4
E OPP ST			
w/o Farragut Ave	53.6	66.3	12.7
E SEPULVEDA BLVD			
e/o Alameda St	75.9	75.9	0.0
w/o Dolores St	72.6	72.6	0.0
w/o Wilmington Ave	73.4	73.4	0.0
e/o Wilmington Ave	74.7	74.7	0.0
e/o Dolores St	73.0	73.0	0.0
w/o Avalon Blvd	73.1	73.1	0.0
EAST RD			
n/o 1st St	75.9	75.2	-0.7
s/o 1st St	73.9	75.1	1.3
FARRAGUT AVE			
Between Terminal Island Fwy SB ramps	77.7	78.1	0.4
FERRY ST			
between Seaside Ave and Access Rd	78.2	77.9	-0.3
between Terminal Way and Pitchard St	81.3	80.9	-0.4
FIGUEROA ST			
n/o Anaheim St	74.9	74.9	0.0
n/o PCH	73.3	73.1	-0.1
HARBOR FWY			

Table F1-39. Reduced Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft.*	*Reduced Project Alternative CNEL @ 100 ft*	*Reduced Project Increment in Traffic Noise Level, dB*
SB n/o PCH off Ramp	85.2	85.2	0.0
NB s/o Sepulveda Blvd	85.7	85.6	0.0
NB n/o Sepulveda Blvd	85.5	85.5	0.0
SB n/o Sepulveda Blvd	85.2	85.2	0.0
SB s/o 228th St	84.9	84.9	0.0
SB n/o 220th St	83.5	83.4	-0.1
NB n/o 223rd St	85.4	85.4	0.0
NB n/o Carson St	84.4	84.3	-0.1
SB s/o Torrance Blvd	83.7	83.7	0.0
NB s/o Del Amo Blvd	84.6	84.5	-0.1
SB n/o Redondo Beach Blvd	82.7	82.7	0.0
SB between 135th St and Rosecrans Ave	82.2	82.1	0.0
NB n/o Redondo Beach Blvd	82.6	82.6	0.0
SB n/o 135th St	82.4	82.4	0.0
NB s/o 135th	82.5	82.4	0.0
NB s/o El Segundo Blvd	82.4	82.4	0.0
SB n/o Alondra	82.5	82.5	0.0
SB between Del Amo Blvd and Torrance Blvd	83.9	83.8	0.0
SB between 168th and Alondra	83.6	83.6	0.0
NB between Redondo Beach Blvd and Alondra	82.2	82.1	0.0
SB n/o Del Amo Blvd	83.3	83.3	-0.1
SB n/o I-405	82.6	82.6	-0.1
NB n/o Del Amo Blvd	83.3	83.2	-0.1
NB s/o I-405	82.6	82.5	-0.1
NB n/o Victoria St	84.9	84.8	-0.1
SB s/o 182nd St	82.1	82.0	0.0
NB between Albertoni and Victoria	84.7	84.6	-0.1
SB s/o I-405	81.4	81.4	-0.1
SB between Artesia Blvd and 168th	83.4	83.3	0.0
NB n/o I-405	84.1	84.0	-0.1
NB s/o SR-91	84.1	84.1	0.0
NB s/o Gardena Blvd	84.1	84.1	0.0
SB s/o PCH off Ramp	85.5	85.5	0.0
NB n/o PCH on Ramp	85.6	85.6	0.0
NB n/o El Segundo Blvd	83.2	83.2	0.0
SB s/o El Segundo Blvd	83.0	83.0	0.0
SB n/o Anaheim St	85.9	85.8	0.0
NB s/o PCH on ramp	85.9	85.8	-0.1
NB s/o L St	86.1	86.1	-0.1
SB s/o 120th St	82.2	82.2	0.0
NB s/o 120th St	82.6	82.5	0.0
SB s/o 120th St	82.5	82.5	0.0
SB n/o I-105	83.6	83.5	0.0
NB n/o 120th St	83.1	83.1	0.0
SB n/o 108th St	82.7	82.7	0.0
NB s/o Torrance Blvd	84.4	84.3	-0.1

Table F1-39. Reduced Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft.*	*Reduced Project Alternative CNEL @ 100 ft*	*Reduced Project Increment in Traffic Noise Level, dB*
NB s/o 223rd St	85.3	85.3	0.0
SB between 214th St and 220th St	83.6	83.5	-0.1
SB s/o 220th St	85.0	84.9	0.0
NB s/o Rosecrans	82.3	82.3	0.0
NB between Gardena Blvd and Alondra Blvd	82.8	82.8	0.0
SB s/o 108th	83.5	83.5	0.0
NB n/o 108th St	82.9	82.9	0.0
NB s/o 190th St	84.0	83.9	-0.1
NB n/o 220th ST	84.3	84.3	-0.1
SB s/o Sepulveda Blvd	85.2	85.3	0.1
HARBOR PLZ			
between Pier F Ave and Pico Ave	79.4	79.1	-0.3
HARBOR SCENIC DR			
NB w/o Goldenshore St	79.6	79.3	-0.4
NB s/o Shoreline Dr	79.5	79.3	-0.2
NB n/o Shoreline Dr	79.2	79.0	-0.3
SB n/o Shoreline Dr	80.3	79.6	-0.7
SB s/o Shoreline Dr	79.8	79.0	-0.8
NB e/o Goldenshore St	79.7	79.0	-0.7
HARBOR SCENIC WAY			
e/o Queens Hwy	78.6	78.1	-0.5
e/o Port Access Rd	79.2	79.1	0.0
w/o Port Access Rd	79.2	79.1	0.0
JOHN S GIBSON BLVD			
n/o I-110 Ramps	78.5	78.1	-0.5
LONG BEACH FWY			
SB n/o Imperial Hwy	85.7	84.6	-1.1
NB n/o Imperial Hwy	85.5	84.4	-1.1
NB s/o Imperial Hwy	85.7	84.7	-1.0
SB s/o Imperial Hwy	85.5	84.4	-1.0
SB s/o Imperial Hwy	85.7	84.7	-1.0
SB n/o I-105	85.4	84.3	-1.1
SB s/o I-105	85.7	84.6	-1.1
NB n/o I-105	85.3	84.2	-1.1
NB n/o Rosecrans Ave	85.5	84.4	-1.1
SB n/o Rosecrans Ave	85.4	84.4	-1.1
SB s/o Rosecrans Ave	86.8	86.0	-0.8
SB s/o Rosecrans Ave	86.9	86.1	-0.8
NB s/o Rosecrans	86.9	86.1	-0.8
SB n/o Alondra	86.9	86.1	-0.8
NB between Alondra and Rosecrans	87.0	86.2	-0.8
SB n/o Alondra	86.7	85.8	-0.9
NB n/o Alondra	87.0	86.2	-0.8
SB s/o Alondra	86.6	85.8	-0.8
NB s/o Alondra	86.9	86.2	-0.8
SB n/o SR-91	87.1	86.2	-0.8

Table F1-39. Reduced Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft.*	*Reduced Project Alternative CNEL @ 100 ft*	*Reduced Project Increment in Traffic Noise Level, dB*
NB n/o SR-91	86.1	85.2	-0.9
SB n/o Artesia Blvd	85.8	84.7	-1.2
NB n/o Artesia Blvd	85.5	84.6	-0.9
NB s/o Artesia Blvd	85.7	84.9	-0.8
SB s/o Artesia Blvd	86.6	85.8	-0.8
NB s/o Artesia Blvd	85.6	84.8	-0.8
SB n/o Long Beach Blvd	87.0	86.2	-0.8
SB s/o Long Beach Blvd	86.9	86.1	-0.8
NB n/o Long Beach Blvd	87.5	86.8	-0.6
SB n/o Del Amo Blvd	86.6	85.8	-0.9
SB s/o Del Amo Blvd Off ramp	87.1	86.3	-0.8
NB s/o Long Beach Blvd	87.3	86.5	-0.7
NB n/o Del Amo Blvd	87.0	86.2	-0.7
SB s/o Del Amo Blvd	87.1	86.2	-0.9
NB n/o Wardlow Rd	87.3	86.7	-0.6
SB s/o Wardlow Rd	86.6	86.0	-0.6
SB n/o Willow St	85.9	85.8	0.0
NB n/o Willow St	85.8	85.8	0.0
NB s/o Willow St	86.2	85.6	-0.6
SB n/o Willow St	86.0	85.3	-0.7
SB s/o Willow St	85.9	85.1	-0.8
SB between off/of ramps at Willow St	86.0	85.3	-0.7
NB s/o Willow St	86.3	85.7	-0.6
NB s/o off ramp at PCH	86.2	85.8	-0.4
NB s/o Anaheim St	85.6	85.2	-0.4
NB s/o PCH	85.4	84.9	-0.5
SB n/o Anaheim St	85.7	85.1	-0.5
SB s/o Anaheim St	85.7	85.1	-0.5
NB s/o loop off ramp at PCH	86.4	85.9	-0.6
SB n/o Anaheim St	86.0	85.4	-0.6
SB s/o PCH	86.2	85.6	-0.6
NB n/o I-405 Interchange	86.8	86.2	-0.6
NB s/o I-405 Interchange Ramp	86.5	86.0	-0.6
SB n/o Wardlow Rd	87.4	86.7	-0.7
NB s/o Firestone Blvd	85.3	84.3	-1.0
SB s/o Firestone Blvd	85.8	84.7	-1.1
SB s/o 9th St	85.7	84.5	-1.1
SB n/o Long Beach Blvd	87.4	86.6	-0.8
NB n/o 9th St	86.3	85.2	-1.1
NB s/o 9th St	85.2	84.3	-0.9
SB n/o 9th St	86.5	85.6	-0.9
SB s/o Anaheim St	86.3	85.2	-1.1
NB n/o 10th St	85.9	85.1	-0.8
SB n/o I-405	86.7	86.0	-0.7
SB s/o Alondra	86.7	85.8	-0.9
NB n/o Dell Amo Blvd Off Ramp	87.2	86.5	-0.7

Table F1-39. Reduced Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft.*	*Reduced Project Alternative CNEL @ 100 ft*	*Reduced Project Increment in Traffic Noise Level, dB*
SB s/o On ramp at Del Amo Blvd	87.1	86.2	-0.8
NB s/o Del Amo Blvd	87.1	86.3	-0.8
NB between s/o off ramp at Del Amo Blvd	86.8	86.1	-0.7
NB between off/on ramps at Willow St	86.2	85.6	-0.6
SB s/o Willow St	86.2	85.5	-0.7
NB n/o Willow St	86.6	85.8	-0.7
NB n/o PCH	86.1	85.4	-0.7
NB Between Ramps at Anaheim St	86.4	86.0	-0.4
SB s/o Anaheim St	85.9	85.3	-0.6
NB n/o Anaheim St	86.4	85.9	-0.5
N HENRY FORD AVE			
n/o Terminal Island Fwy	80.6	80.4	-0.2
n/o Anaheim St	79.7	79.9	0.2
N SEASIDE AVE			
e/o Navy Way	83.9	83.7	-0.2
e/o Access Rd ramp	81.7	81.7	0.0
w/o Navy Way	83.4	83.4	0.0
e/o Ferry St	78.3	78.0	-0.4
e/o Navy Way ramp	84.7	84.5	-0.2
e/o Navy Way	84.0	83.8	-0.2
NAVY WAY			
s/o Reeves Ave	78.7	78.2	-0.5
s/o Terminal Way	81.6	80.7	-0.9
NEW DOCK ST			
w/o Henry Ford Ave	78.8	78.2	-0.5
e/o Henry Ford Ave	80.8	80.4	-0.4
w/o SB off ramp Terminal Island Fwy	80.9	80.4	-0.4
w/o NB on ramp Terminal Island Fwy	78.0	77.6	-0.4
between Terminal Island Fwy SB and NB Ramp	78.0	77.7	-0.4
PACIFIC COAST HIGHWAY			
between Avalon Blvd and Eubank Ave	75.6	75.5	-0.1
between Watson Ave and Eubank Ave	76.2	76.1	-0.1
w/o Alameda St	74.7	74.6	-0.1
w/o East Rd	73.9	73.5	-0.4
w/o East Rd	72.4	72.5	0.0
between Watson Ave and Blinn Ave	76.1	76.0	-0.1
PICO AVE			
s/o Ocean Blvd	77.0	76.6	-0.4
n/o Ocean Blvd	77.0	76.5	-0.5
n/o Pier C St	81.1	79.7	-1.4
s/o Pier C St	79.8	78.4	-1.4
n/o Pier D St	79.8	78.6	-1.2
PIER A WAY			
e/o Henry Ford Ave	75.3	74.5	-0.8
e/o Henry Ford Ave	77.9	77.5	-0.4
e/o Henry Ford Ave	79.4	78.8	-0.6

Table F1-39. Reduced Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft.*	*Reduced Project Alternative CNEL @ 100 ft*	*Reduced Project Increment in Traffic Noise Level, dB*
between Terminal Island Fwy and Henry Ford	65.2	65.2	0.0
n/o Terminal Island Fwy	74.6	74.4	-0.2
e/o Henry Ford Ave	74.1	73.9	-0.2
e/o Henry Ford Ave	75.4	75.2	-0.2
PIER B ST			
s/o 9th St	78.1	77.3	-0.8
w/o Edison Ave	75.3	75.2	-0.1
n/o Pier A way	75.3	74.7	-0.6
PIER C ST			
w/o Pier B St	77.7	77.2	-0.5
w/o Pier B St	77.2	76.7	-0.4
PIER D AVE			
s/o Pier D St	71.8	71.8	0.0
PIER D ST			
w/o I-710	77.5	76.2	-1.3
PIER F AVE			
s/o Harbor Plaza	79.0	78.4	-0.6
PIER G AV			
s/o Harbor Plaza	59.8	70.5	10.8
s/o Harbor Plaza	59.8	70.5	10.8
PIER J WAY			
e/o Panorama Dr	81.2	80.5	-0.7
PORT ACCESS RD			
e/o Ocean Blvd Ramps	76.5	75.6	-0.9
n/o New Dock St	78.7	78.1	-0.6
n/o New Dock St	78.4	77.7	-0.7
s/o Pier J way	79.7	79.2	-0.4
s/o Pier J way	81.3	80.6	-0.7
n/o Pier J way	79.7	79.1	-0.5
s/o Harbor Scenic way	79.2	78.8	-0.4
QUEENSWAY DR			
s/o Harbor Scenic Dr	79.6	79.2	-0.4
S ALAMEDA ST			
n/o Wardlow Rd	78.5	78.3	-0.1
S FRIES AVE			
s/o Water St	79.6	79.2	-0.4
between Harry Bridges Blvd and Water St	77.8	77.3	-0.5
S HARBOR SCENIC DR			
NB s/o Shoreline Dr	79.5	79.3	-0.1
SB w/o Goldenshore St	80.4	79.7	-0.7
NB n/o Goldenshore St	79.5	79.1	-0.5
SB e/o Goldenshore St	80.0	79.4	-0.6
NB s/o Shoreline Dr	79.2	78.9	-0.3
SB w/o Panorama Dr	80.5	79.9	-0.6
SB w/o Panorama Dr	79.9	79.3	-0.6
S PICO AVE			

Table F1-39. Reduced Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft.*	*Reduced Project Alternative CNEL @ 100 ft*	*Reduced Project Increment in Traffic Noise Level, dB*
s/o Embarcadero	78.1	78.0	-0.2
n/o Harbor Scenic Dr ramp	81.0	81.2	0.3
s/o Harbor Scenic Dr ramp	80.3	80.3	0.0
SAN DIEGO FWY			
SB e/o I-110	82.8	82.7	0.0
SB e/o Wilmington Blvd	83.7	83.7	0.0
SB s/o I-110 interchange	83.8	83.8	0.0
NB s/o Wilmington Blvd	83.7	83.6	0.0
NB w/o Santa Fe Ave	83.7	83.5	-0.2
SB e/o 218th St	81.6	81.5	-0.1
NB w/o Alameda St	83.6	83.6	0.0
SB w/o Alameda St	82.2	82.2	0.0
NB e/o Wilmington Ave	82.8	82.8	0.0
SB e/o Wilmington Ave	81.2	81.2	0.0
SB w/o Wilmington Ave	80.9	80.9	0.0
SB s/o Carson St	81.9	81.9	0.0
NB n/o Carson St	83.4	83.4	0.0
NB n/o 213th St	82.9	82.9	0.0
NB e/o Avalon Blvd	83.5	83.4	0.0
SB e/o Avalon Blvd	82.5	82.5	0.0
NB w/o Avalon Blvd	83.7	83.7	0.0
SB e/o Avalon Blvd	82.9	82.9	0.0
NB w/o Wilmington Ave	82.7	82.7	0.0
NB e/o 218th St	83.3	83.1	-0.2
SB e/o Avalon Blvd	82.5	82.5	0.0
NB s/o Carson St	82.7	82.7	0.0
SB n/o Carson St	82.5	82.5	0.0
SAN GABRIEL AV			
n/o PCH	74.4	77.8	3.5
TERMINAL ISLAND FWY			
s/o PCH	82.0	79.5	-2.5
n/o PCH	81.0	78.2	-2.9
n/o Ocean Blvd	82.8	80.7	-2.1
NB s/o PCH	80.1	83.0	2.8
SB n/o PCH	79.0	78.5	-0.5
NB between off and loop on ramp at PCH	80.1	81.8	1.7
NB s/o PCH off ramp	83.1	80.3	-2.8
SB n/o Anaheim St	78.0	78.7	0.7
NB between Henry Ford Ave and Anaheim St	81.6	81.8	0.2
NB n/o Ocean Blvd	80.4	80.9	0.5
SB n/o Ocean Blvd	78.7	81.2	2.6
s/o Henry Ford Ave	81.9	81.0	-0.9
SB s/o Henry Ford Ave	80.9	76.8	-4.1
e/o Seaside Ave	81.3	81.4	0.0
SB s/o Anaheim Way	80.9	79.1	-1.9
NB s/o Willow St	77.6	78.4	0.8

Table F1-39. Reduced Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft.*	*Reduced Project Alternative CNEL @ 100 ft*	*Reduced Project Increment in Traffic Noise Level, dB*
SB s/o PCH on ramp	81.0	79.1	-1.9
SB s/o PCH	79.8	80.9	1.1
NB n/o PCH	79.1	81.7	2.6
SB between loop off and on ramp at PCH	79.8	80.5	0.7
SB s/o Henry Ford Ave	80.9	80.7	-0.2
s/o Henry Ford Ave	82.0	80.5	-1.5
TERMINAL WAY			
w/o Ferry St	81.0	78.2	-2.8
w/o Eaire St	81.2	80.5	-0.6
s/o Navy Way	81.5	77.4	-4.1
s/o Navy Way	79.1	77.6	-1.5
s/o Navy Way	81.5	79.1	-2.3
s/o Navy Way	78.3	71.0	-7.3
s/o Navy Way	78.4	75.1	-3.2
s/o Navy Way	79.8	72.0	-7.8
W 9TH ST			
e/o Caspian Ave	71.1	71.1	0.0
s/o Anaheim St	75.3	69.0	-6.2
e/o Santa Fe Ave	72.6	75.0	2.5
w/o Caspian Ave	71.1	78.4	7.2
n/o Pier B St	69.5	73.2	3.7
w/o Santa Fe Ave	75.2	75.5	0.3
s/o Pier B St	79.4	79.8	0.4
n/o Pier B St	74.8	78.6	3.8
W ANAHEIM ST			
e/o Harbor Ave	74.9	79.2	4.3
e/o Santa Fe Ave	79.7	77.3	-2.4
w/o Harbor Ave	77.7	76.6	-1.1
w/o Seabright Ave	78.8	70.3	-8.6
w/o E I St	76.2	70.4	-5.8
w/o Figueroa PL	76.6	69.9	-6.7
between Wilmington and Neptune Ave	70.3	70.0	-0.2
between Frigate Ave and Wilmington Blvd	70.4	70.2	-0.1
e/o Neptune	69.9	76.3	6.4
between Neptune Ave and Fries Ave	70.0	79.0	9.0
w/o Frigate Ave	70.2	70.6	0.4
e/o Figueroa PL	76.3	75.1	-1.3
between Seabright Ave and Santa Fe Ave	78.7	80.1	1.4
between Fries Ave and Avalon Blvd	70.6	80.0	9.4
between I-710 SB and NB Ramps	74.6	79.3	4.8
W HARRY BRIDGES BLVD			
between Wilmington Blvd and Neptune Ave	79.9	79.9	0.0
between Hawaiian Ave and Wilmington Blvd	79.8	80.6	0.9
between Neptune Ave and Fries Ave	79.0	80.0	1.0
between Figueroa St and Mar Vista Ave	79.7	71.6	-8.1
between Fries Ave and Avalon Blvd	80.5	73.8	-6.7

Table F1-39. Reduced Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft.*	*Reduced Project Alternative CNEL @ 100 ft*	*Reduced Project Increment in Traffic Noise Level, dB*
between Mar Vista Ave and Hawaiian Ave	79.8	74.2	-5.6
W I ST			
n/o Anaheim St	71.6	79.5	7.9
W PACIFIC COAST HIGHWAY			
between I-110 SB off ramp and Figueroa S	73.9	79.7	5.9
w/o I-110 SB off ramp	74.2	79.9	5.7
between I-710 NB and SB ramps	80.0	75.0	-4.9
e/o San Gabriel Ave	80.4	74.8	-5.7
between San Gabriel Ave and Santa Fe Ave	80.5	75.5	-4.9
e/o Wilmington Blvd	75.2	80.6	5.5
e/o Figueroa St	74.9	78.9	4.0
between Neptune Ave and Avalon Blvd	75.7	79.0	3.4
between Terminal Island Fwy SB and NB ramp	80.2	79.4	-0.8
e/o Santa Fe Ave	79.6	79.0	-0.5
e/o Harbor Ave	79.5	79.2	-0.3
w/o Terminal Island Fwy	77.8	74.9	-2.9
W PANORAMA DR			
between Queens Hwy and Harbor Scenic Dr	79.8	75.8	-4.0
between Harbor Scenic Dr and Pier J Way	79.9	75.1	-4.8
W SEPULVEDA BLVD			
e/o SB I-110 off Ramp	74.9	72.8	-2.1
w/o NB I-110 off ramp	75.8	75.0	-0.7
w/o Figueroa St	75.1	73.6	-1.5
e/o Figueroa St	72.8	77.1	4.2
between SB and NB I-110 Ramps	75.0	71.8	-3.3
W WATER ST			
between Fries Ave and Avalon Blvd	73.7	73.1	-0.6
W WILLOW ST			
between NB and SB Terminal Island Fwy	77.5	70.7	-6.8
between Terminal Island Fwy and Santa Fe	71.8	71.1	-0.6
between Santa Fe Ave and Easy Ave	73.1	71.0	-2.1
e/o Easy Ave	70.7	70.7	0.0
w/o SB I-710 ramps	71.1	71.1	0.0
w/o NB I-710 on ramp	71.0	71.0	0.0

None of the noise-sensitive uses that would be affected by operation of the Reduced Project are in the City of Los Angeles. Roadways in the City of Los Angeles would experience project-related increases in noise exceeding 3 dBA. However, none of those roadways have sensitive uses nearby.

Sleep Disturbance

Table F1-40 summarizes the operational Reduced Project train horn SEL at nearby residences and an assessment of sleep disturbance. Interior SELs with windows closed with the train horn would be as high as 64.0, 65.9, and 64.0 dB at the East I St, Mauretania St, and Cruces St residences, respectively. Based on the FICAN 1997 curve, approximately 5% of the exposed population at each residence would be expected to be awakened by train horn soundings associated with the Reduced Project Alternative. Interior SELs with windows open from train horn soundings would be as high as 72.0, 73.9 and 72.0 dB at the respective residences. When compared with the FICAN curve, approximately 7%, 8%, and 7% of the exposed population at the residences at 1919 East I Street, 1710 Mauretania Street, and 1619 Cruces Street, respectively, would be expected to be awakened by train horn soundings associated with the Reduced Project Alternative. Single event awakenings would occur at a frequency below 10%.

Table F1-40. Summary of the Predicted SCIG Train Horn SEL at Nearby Residences and Sleep Disturbance Assessment.

Receptor Number	Receptor Location	Measured Ambient Exterior Leq, dBA	Ambient Interior Leq, dBA[1]	Predicted SCIG Train Horn Exterior SEL, dBA	Predicted SCIG Train Horn Interior SEL w/ Windows Closed, dBA [1]	Approximate Percentage of Exposed Population Expected to be Awakened [2]	Predicted SCIG Train Horn Interior SEL w/ Windows Open, dBA[3]	Approximate Percentage of Exposed Population Expected to be Awakened [2]
R28	Residence at 1919 East I St	Day: 58.6 – 81.1	Day: 38.6 – 61.1	84.0	64.0	5%	72.0	7%
R29	Residence at 1710 Mauretania St	Day: 66.2 – 70.4 Lowest Night: 60.6	Day: 46.2 – 50.4 Lowest Night: 40.6	85.9	65.9	5%	73.9	8%
R32	Residence at 1619 Cruces St	Day: 64.9 – 67.2 Lowest Night: 59.4	Day: 44.9 – 47.2 Lowest Night: 39.4	84.0	64.0	5%	72.0	7%

1 Assumes a 20 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Closed.
2 Based on FICAN 1997 Sleep Disturbance Curve.
3 Assumes a 12 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Open.

School Classroom Speech Intelligibility

There are no schools located in the City of Los Angeles within the immediate vicinity of the Project Site, thus construction and operations noise would be affect speech intelligibility in classrooms.

5.1.2. Predicted Noise Levels – City of Long Beach

Construction

The analysis of construction-related noise levels in the City of Long Beach included data from ten different receptor locations: the back yard of a residence at 2789 Webster Street, the Buddhist temple at Willow and Webster streets, the playground of the Hudson Elementary School, Hudson Park, the building setback of Cabrillo High School, the Cabrillo Child Development Center, Bethune School, the Villages of Cabrillo, the playground of Stephens Middle School, and Webster School. The predicted construction noise levels are presented in Table F1-41. This data represents the worst-case daytime construction noise levels expected, assuming all construction elements occur simultaneously.

Considering the distances between the construction noise sources and receivers, the standard controls and noise barriers may not be sufficient to reduce the projected increase in ambient noise levels to the point where they would no longer be substantial. Daytime construction noise levels (L50) from the proposed Reduced Project would be expected to be as high as 63.5, 65.8, 70.2, 70.4, 57.8, 70.9, 68.8, 57.5, and 47.0 dBA at the Webster residence, Buddhist Temple, Hudson School, Hudson Park, Cabrillo High School, Cabrillo Child Development Center, Bethune School, Stephens Middle School and Webster School, respectively. The increase would exceed ambient noise levels by more than 5 dB at each of these receptor locations. The construction noise at the Villages of Cabrillo would be 64.4 dBA, a 2 dB increase above existing ambient noise levels.

Nighttime construction noise levels from the PCH grade separation would be expected to be as high as 33.3, 36.3 and 50.7 dBA at the Webster residence, Buddhist Temple, and Villages of Cabrillo. Table F1-42 summarizes the nighttime construction noise levels. The increase in noise would be expected to be more than 3 dBA above ambient levels at the Villages of Cabrillo, because this is the nearest receptor to the PCH grade separation. At the Webster residence and Buddhist Temple, the increase would be less than 1 dB. Nighttime construction noise was not evaluated for the nearby school and park uses because they are not expected to be operating during the nighttime hours.

Table F1-41. Summary of the Predicted Daytime Construction Noise Levels for SCIG Construction

Receptor Number	*Receptor Location*	*Measured Ambient Noise Level L50, dBA*	*Approximate Distance to Nearest Construction Area, feet*	*Predicted Daytime Construction Noise Level – Worst Case April 2013, dBA*	*Predicted Daytime Construction Noise Level – Worst Case Month 2013, dBA*	*City of Long Beach Daytime Noise Ordinance, Exterior Standard, L50, dBA*[1]
R1	Residence at 2789 Webster – rear yard	Day: 49.4 – 55.3 Night: 43.1	275	61.5	63.5	50
R2	Buddhist Temple at Willow and Webster	Day: 59.9 – 60.3 Night: 52.5	375	65.7	65.8	50
R3	Hudson Elementary School - playground	Day: 54.2 – 57.8	300	65.4 – 70.1	65.5 - 70.2	50
R4	Hudson Park	Day: 64.1 – 65.3	300	70.3	70.4	50
R5	Cabrillo High School – building setback	Day: 51.0 – 52.0	1,700	57.0	57.8	50
R6	Cabrillo Child Development Center	Day: 63.3 – 64.6	300	70.0	70.9	50
R7	Bethune School	Day: 63.3 – 64.6	300	68.8	68.8	50
R8	Villages of Cabrillo	Day: 61.0 – 62.5 Night: 48.0	500	64.4	64.4	50
R30	Stephens Middle School - playground	Day: 47.2 – 64.0	600	57.5	57.5	50
R31	Webster School	Day: 49.2 – 55.7	2,750	47.0	47.0	50

Notes:
[1] Noise standard for a cumulative period of 30 minutes in a 60 minute period. Higher noise levels are permitted for shorter time periods. If ambient noise level exceeds standard, standard shall be increased by 5 dB increments to encompass or reflect ambient level.

Table F1-42. Summary of the Predicted Nighttime Construction Noise Levels for SCIG Construction

Receptor Number	*Receptor Location*	*Predicted Nighttime Exterior Construction Noise Level – Worst Case 2013, dBA*	*Measured Nighttime Ambient Noise Level, dBA* [1]	*Predicted Increase in Ambient Noise Level with Nighttime Construction, dB*	*City of Long Beach Noise Ordinance, Nighttime Exterior Standard, L50, dBA* [2]
R1	Residence at 2789 Webster – rear yard	33.3	43.1	+0.4	45
R2	Buddhist Temple at Willow and Webster	36.3	52.5	0.0	45
R8	Villages of Cabrillo	50.7	48.0	+4.6	45

[1] – Lowest Nighttime Ambient Noise Level, L50.
[2] –Nighttime noise standard for a cumulative period of 30 minutes in a 60 minute period. Higher noise levels are permitted for shorter time periods.

Classroom Interior Construction Noise Levels

Future interior noise levels within classrooms were analyzed to evaluate the Reduced Project construction on school facilities (impacts to students' ability to study). Future interior noise levels were calculated by subtracting the measured noise reduction from the predicted exterior construction noise levels from the Reduced Project. As summarized in Table F1-43, the future interior classroom construction noise would be 42.7 dBA at Bethune School, 42.3 dBA at Cabrillo Child Development Center, and 13.4 dBA at Cabrillo High School. At Hudson School, the future interior construction noise would be 37.2 dBA, while at Stephens Middle School; the interior construction noise level would be 19.2 dBA. At Webster School, the interior construction noise level would be 8.4 dBA. Interior construction noise levels would be below the LBMC allowable interior noise standard of 45 dBA during the daytime. When compared to existing ambient noise levels, future interior construction noise levels would be below existing ambient noise levels within the classrooms with exception of Bethune School. At this location, a greater than 5 dB increase would be experienced during the heaviest periods of construction activity (although noise levels would not exceed the LBMC 45 dBA noise standard).

Table F1-43. Summary of the Project's Construction Noise Levels within Classrooms

Receiver Number	*Location*	*Description*	*Future Exterior Construction Noise Level, L50, dBA*	*Noise Reduction, dB*	*Future Interior Construction Noise Level, L50, dBA*	*Ambient Interior Noise Level, L50, dBA*	*Future Interior Construction Noise Level with Ambient, L50, dBA*	*Predicted Increase in Ambient Noise Level with Construction Noise, dB*
R3	Hudson School	Classroom 52	65.5	33	32.5	36.9	38.2	1.3
R5	Cabrillo High School	Classroom 1128	57.8	44.4	13.4	32.7	32.8	0.1
R6	Cabrillo Child Development Center	#2 Exterior, #4 Interior	70.9	28.6	42.3	43.7	46.1	2.4
R7	Bethune School	Classroom 102	68.8	26.1	42.7	38.8	44.2	5.4
R30	Stephens Middle School	Classroom PC2	57.5	38.3	19.2	31.4	31.7	0.3
R31	Webster School	Classroom B-48	47.0	38.6	8.4	31.9	31.9	0.0

On-Site and Rail Corridor Operations

As summarized in Table F1-36, on-site operational noise at the Reduced SCIG Project and relocation facilities would consist of truck activity, maintenance, train activity, and container loading and unloading operations. On-site SCIG operations would generate noise levels ranging from 59 to 95 dBA at a distance of 100 feet from the source. Future rail movements along the San Pedro Branch line would include diesel engine noise, train horns, and railcar noises. According to BNSF, train horn soundings are not expected to occur on the San Pedro Branch line due to the Reduced Project's design features. As previously summarized in Table F1-37, the Predicted Future CNEL for San Pedro Branch Line operations would range from 47.1 to 56.1 dBA at the nearest sensitive receptor locations.

Predicted daytime Reduced Project on-site and rail corridor operational noise levels at sensitive receivers (Table F1-44) would exceed existing measured ambient noise levels by 3 dBA or greater at the residence at 2789 Webster (R1), Cabrillo High School (R5) and at Stephens Middle School (R30). At the residence on Webster, the predicted noise level of 54.3 dBA would occasionally exceed the ambient noise levels that range from 49.4 to 55.3 dBA. Similarly, operations noise would reach 51.1 dBA at Cabrillo High School and would slightly exceed ambient noise levels when the background noise is 51.0 dBA. At Stephens Middle School, future operational noise levels would reach 50.8 dBA and would occasionally exceed existing levels of 47.2 to 64.0 dBA. The remaining seven receiver locations would experience predicted operational noise levels either lower than the existing ambient levels or within 3 dBA..

Nighttime on-site and rail corridor operational noise levels would exceed existing measured ambient noise levels by 5 dB or greater at the residence at 2789 Webster (R1) and at the Villages of Cabrillo (R8). At the residence on Webster, the predicted noise level of 54.3 dBA would occasionally exceed the nighttime ambient noise level of 43.1 dBA. At the Villages of Cabrillo, future nighttime operational noise levels would reach 54.1 dBA and would occasionally exceed the nighttime ambient noise level of 48.0 dBA. The nighttime noise increases that would be experienced at the Webster residence and the Villages of Cabrillo would occur when normal "high activity" operations coincide with the low background noise. This condition is not expected to occur on a daily basis and for more than one hour in any given 24-hour period. The remaining eight receiver locations would experience predicted operational noise levels either lower than the existing nighttime ambient levels or within 3 dBA.

Table F1-44. Predicted Reduced Project Operational Noise Levels

Receptor Number	*Receptor Location*	*Predicted Reduced Project Operational Noise Level –Year 2023, L50, dBA**	*Measured Ambient Noise Level, L50, dBA[1]*	*Predicted Largest Increase in Ambient Noise Level with Operations Noise, dB*	*City of Long Beach Noise Ordinance, Exterior Standard, L50, Daytime/Nighttime dBA[2]*
R1	Residence at 2789 Webster – rear yard	54.3	Day: 49.4 – 55.3 Night: 43.1	Day +6.1 Night +11.5	Day 50 Night 45
R2	Buddhist Temple at Willow and Webster	48.8	Day: 59.9 – 60.3 Night: 52.5	Day +0.3 Night +1.5	Day 50 Night 45
R3	Hudson Elementary School - playground	53.5	Day: 54.2 – 57.8	Day +2.7	Day 50
R4	Hudson Park	54.5	Day: 64.1 – 65.3	Day +0.5	Day 50
R5	Cabrillo High School – building setback	51.1	Day: 51.0 – 52.0	Day +3.1	Day 50
R6	Cabrillo Child Development Center	54.6	Day: 63.3 – 64.6	Day +0.5	Day 50
R7	Bethune School	54.6	Day: 63.3 – 64.6	Day +0.5	Day 50
R8	Villages of Cabrillo	54.1	Day: 61.0 – 62.5 Night: 48.0	Day +0.8 Night +7.1	Day 50 Night 45
R30	Stephens Middle School - playground	50.8	Day: 47.2 – 64.0	Day +5.2	Day 50
R31	Webster School	45.4	Day: 49.2 – 55.7	Day +1.5	Day 50

Notes:
[1] Refer to Table F1-4, Summary of Ambient Noise Measurement Data
[2] Noise standard for a cumulative period of 30 minutes in a 60 minute period. Higher noise levels are permitted for shorter time periods. If ambient noise level exceeds standard, standard shall be increased by 5 dB increments to encompass or reflect ambient level.
[3] Noise standard for a cumulative period of 5 minutes in a 60 minute period. Higher noise levels are permitted for shorter time periods. If ambient noise level exceeds standard, standard shall be increased to reflect ambient level.
* Includes relocation of existing tenants

Existing Plus Project Traffic Noise Levels

Table F1-38 previously summarized the predicted roadway traffic noise levels once the Reduced Project is in full operation. Portions of the following roadways in the City of Long Beach include noise-sensitive land uses that would be expected to experience future traffic noise levels above 70 CNEL: E. Anaheim St., E. Sepulveda Boulevard, Pacific Coast Highway, Long Beach Freeway and the Terminal Island Freeway. Traffic noise levels above 70 CNEL are considered incompatible with noise guidelines.

The Reduced Project's predicted noise level increase over existing levels is summarized in Table F1-39. Roadways in Long Beach would not experience a Project increase in traffic noise level exceeding 2 dB. The majority of roadways within the City would experience a traffic noise decrease as a result of the Project because the Project would reduce truck traffic on local roadways in lieu of rail movements.

Traffic noise levels along portions of the Long Beach Freeway would range from 84.2 CNEL to 86.8 CNEL and would be above the compatibility threshold of 70 CNEL. However, traffic noise for all segments of the Long Beach Freeway would decrease from existing levels due to reduced truck traffic of the Reduced Project.

Classroom Interior Operational Noise Levels

Interior noise levels within classrooms were analyzed to assess the effect of the Reduced Project's on-site and rail corridor operational noise on school facilities. Future interior noise levels were calculated by subtracting the measured noise reduction from the predicted exterior operations noise levels from the Reduced Project. As summarized in Table F1-45, the interior classroom noise levels with proposed Reduced Project operations would be 28.5 dBA at Bethune School, 26.0 dBA at Cabrillo Child Development Center, and 6.7 dBA at Cabrillo High School. At Hudson School, the future interior operational noise would be as high as 20.5 dBA, while at Stephens Middle School, the interior operational noise level would be 12.5 dBA. At Webster School, the interior operations noise level would be 6.8 dBA. Future operations noise levels would be below the LBMC allowable interior noise standard of 45 dBA. When compared to existing ambient noise levels, future interior operations noise levels would be below existing noise levels within the classrooms.

Table F1-45. Summary of the Reduced Project's Operational Noise Levels within Classrooms

Receiver Number	*Location*	*Description*	*Future Exterior Operations Noise Level, dBA*	*Noise Reduction, dB*	*Future Interior Operations Noise Level, dBA*	*Measured Ambient Interior Noise Level, dBA*	*Existing Ambient Plus Project Interior Noise Levels, dBA*	*Increase in Ambient Interior Noise Level with Project Contribution, dBA*	*City of Long Beach Noise Ordinance Interior Noise Level for Schools, L8, dBA*[1]
R3	Hudson School	Classroom 52	53.5	33	20.5	36.9	37.0	0	45
R5	Cabrillo High School	Classroom 1128	51.1	44.4	6.7	32.7	32.7	0	45
R6	Cabrillo Child Development Center	#2 Exterior, #4 Interior	54.6	28.6	26.0	43.7	43.8	0	45
R7	Bethune School	Classroom 102	54.6	26.1	28.5	38.8	39.2	0.5	45
R30	Stephens Middle School	Classroom PC2	50.8	38.3	12.5	31.4	31.5	0	45
R31	Webster School	Classroom B-48	45.4	38.6	6.8	31.9	31.9	0	45

Notes:
[1] Noise standard for a cumulative period of 5 minutes in a 60 minute period. Higher noise levels are permitted for shorter time periods. If ambient noise level exceeds standard, standard shall be increased to reflect ambient level.
* Includes relocation of existing tenants

Construction Vibration

Construction operations involving heavy equipment can generate high vibration levels that can affect sensitive receptors such as the nearby schools and residences. A site survey was conducted to determine if there were nonresidential vibration sensitive receptors (microelectronics firms, recording studios, research laboratories, etc. that employ vibration sensitive equipment) in the vicinity of the Project site and associated haul routes. It was determined that no such receptors were present. A technology park is located approximately 1,100 feet east of the Project site and is located well enough away so that on site generated vibration would not affect these office uses. In addition, the construction haul route would be expected to be primarily on Pacific Coast Highway to and from the Project site. Truck vibration would not be expected to exceed existing vibration generated by existing trucks on Pacific Coast Highway; thus, no increase in vibration would be expected. Table F1-46 summarizes typical construction vibration levels as reported by the FTA. Construction vibration can range between 58 to 112 VdB when measured at a distance of 25 feet from the source. Table F1-47 summarizes the future construction vibration. The future maximum vibration level at Stephens Middle School, designated location V1, would be as high as 63 VdB, while existing ambient levels are 51.6 to 64.3 VdB. The predicted vibration level at location V2, Hudson Elementary School, would be as high as 72 VdB and above the existing ambient levels of 55.9 to 69.0 VdB. Future vibration levels at the Cabrillo Child Development Center and Bethune School would be 72 VdB at each location, and their respective existing ambient levels are 58.9 to 75.5 VdB and 62.6 to 79.4 VdB, respectively. Predicted vibration levels from Project construction would occasionally exceed existing ambient vibration measurements at Receivers V1 to V4 but would be clearly below the FTA vibration impact criteria of 75 VdB.

Locations V5 through V9 are situated away from the Project Site (4,200-17,500 feet); thus, future vibration levels from construction, ranging from 19 VdB to 37 VdB, would be significantly lower than the existing ambient vibration levels. The predominant source of existing vibration, as identified in the existing conditions sections, is heavy truck movement on existing roadways and haul routes. Although the number of vibration events would increase accordingly with Project truck movements, future vibration levels from Project construction operations would not be expected to exceed existing levels.

Table F1-46. Vibration Source Levels for Construction Equipment

Equipment	*Approximate Velocity Level @ 25 ft, VdB Re: 1 micro inch/sec*
Pile Driver Impact typical range	112
Pile Driver Sonic typical range	93
Clam Shovel Drop	94
Hydromill in Soil	66
Vibratory Roller	94
Hoe Ram	87
Large Bulldozer	87
Caisson Drilling	87
Loaded Trucks	86
Jackhammer	79
Small Bulldozer	58

Source: FTA, 2006

Table F1-47. Predicted Construction Vibration Levels

Location	*Description*	*Distance to Nearest Construction Area, ft*	*Range of Predicted Construction Vibration Levels, VdB*	*Existing Ambient Velocity Level, VdB Lmax, VdB*		*FTA Impact Criteria, VdB*
				Low	*High*	
V1	Stephens Middle School Classroom PC2	600	17 - 63	51.6	64.3	75
V2	Hudson Elementary School Playground	300	26 - 72	55.9	69.0	75
V3	Cabrillo Child Development Center	300	26 - 72	58.9	75.5	75
V4	Bethune School	300	26 - 72	62.6	79.4	75

Operational Vibration

Trains from the proposed Project would use a portion of the San Pedro Branch Line and future run-around track during daily operations. Future vibration levels from Reduced Project rail operations are summarized in Table F1-48.

Receiver locations V1 through V4 are in close proximity with the San Pedro Branch line (approximately 300 to 600 feet), and could be affected by ground-borne vibration from future train movements. The future maximum vibration level at Stephens Middle School, designated location V1, would be 54.8 VdB, while existing ambient levels are 51.6 to 64.3 VdB. The predicted vibration level at location V2, Hudson Elementary School, would be 55.4 VdB and below the existing ambient levels of 55.9 to 69.0 VdB. Future vibration levels at the Cabrillo Child Development Center and Bethune School would be 58.2 VdB and 59.2 VdB, respectively, and their respective existing ambient levels are 58.9 to 75.5 VdB and 62.6 to 79.4 VdB, respectively. Predicted vibration levels from Reduced Project train movements would

not exceed existing ambient vibration measurements at Receivers V1 to V4 and would be clearly below the FTA vibration impact criteria of 75 VdB.

Locations V5 through V9 are situated away from the San Pedro Branch line (4,200-17,500 feet); thus, future vibration levels from Project train movements, ranging from 24 VdB to 36 VdB, would be significantly lower than the existing ambient vibration levels. The predominant source of existing vibration, as identified in the existing conditions sections, is heavy truck movement on existing roadways and haul routes. Although the number of vibration events would increase accordingly with Reduced Project truck movements, future vibration levels from operations would not be expected to exceed existing levels.

Table F1-48. Predicted Future Train Vibration on the San Pedro Branch Line

Receiver Location	*Description*	*Predicted Velocity Level from Project Train Movements, VdB*	*Existing Ambient Velocity Level, Lmax, VdB*		*FTA Impact Criteria, VdB*
			Low	*High*	
V1	Stephens Middle School Classroom	54.8	51.6	64.3	75
V2	Hudson Elementary School Playground	55.4	55.9	69	75
V3	Cabrillo Child Development Center	58.2	58.9	75.5	75
V4	Bethune School	59.2	62.6	79.4	75

Predicted vibration levels from the Reduced Project train movements within Long Beach would not exceed existing ambient vibration measurements. Likewise, predicted vibration levels would not exceed the FTA Impact Criteria for ground-borne vibration of 75 VdB for occasional events.

Sleep Disturbance

Nighttime construction activity also has the potential to cause sleep disturbances at the nearest residential/sensitive receptors. Nighttime construction noise was analyzed by assuming the worst case hour during the nighttime. The potential for sleep disturbance was assessed by comparing the construction related nighttime interior noise levels with the FICAN 1997 sleep disturbance curves. Interior SELs with windows closed from nighttime construction activity would be as high as 48.9, 51.9 and 66.3 dBA at the Webster residence, Buddhist Temple and Villages of Cabrillo, respectively. When assessed with the FICAN curve, approximately 2%, 3% and 7% of exposed population at the Webster residence, Buddhist Temple and Villages of

Cabrillo, respectively, would be expected to be awakened due to the highest levels of construction activity. Interior SELs with windows open from nighttime construction activity would be as high as 56.9, 59.9 and 74.3 dBA at the Webster residence, Buddhist Temple and Villages of Cabrillo, respectively. When assessed with the FICAN curve, approximately 3%, 4% and 8% of exposed population at each respective location would be expected to be awakened due to the highest levels of construction activity. For periods of less intensive construction activity, the percentage of awakenings would be lower. Table F1-53 summarizes the nighttime construction noise SEL and sleep disturbance for these receptors. Single event awakenings would occur at a frequency below 10%.Table F1-54 summarizes the predicted Reduced Project train horn SEL at nearby residences and an assessment of sleep disturbance. Interior SELs with windows closed from the SCIG Train Horn would be as high as 25.1, 27.2 and 32.5 dBA at the Webster residence, Buddhist Temple and Villages of Cabrillo, respectively. When assessed with the FICAN curve, none of the exposed population at these residences would be expected to be awakened due to the highest levels of construction activity. Interior SELs with windows open from the SCIG Train Horn would be as high as 33.1, 35.2 and 40.5 dBA at the Webster residence, Buddhist Temple and Villages of Cabrillo, respectively. When assessed with the FICAN curve, approximately 0%, 0% and 1% of exposed population at the Webster residence, Buddhist Temple and Villages of Cabrillo, respectively, would be expected to be awakened due to the highest levels of construction activity. Single event awakenings would occur at a frequency below 10%.

Table F1-49. Summary of the Predicted Nighttime Construction Noise SEL for SCIG Construction and Sleep Disturbance Assessment.

Receptor Number	Receptor Location	Predicted Nighttime Exterior Construction Noise Level – Worst Case 2013, dBA	Predicted Nighttime Exterior SEL – Worst Case 2013, dBA [1]	Predicted Nighttime Interior SEL w/ Windows Closed – Worst Case 2013, dBA [2]	Approximate Percentage of Exposed Population Expected to be Awakened [3]	Predicted Nighttime Interior SEL w/ Windows Open – Worst Case 2013, dBA [4]	Approximate Percentage of Exposed Population Expected to be Awakened [3]
R1	Residence at 2789 Webster – rear yard	33.3	68.9	48.9	2%	56.9	3%
R2	Buddhist Temple at Willow and Webster	36.3	71.9	51.9	3%	59.9	4%
R8	Villages of Cabrillo	50.7	86.3	66.3	7%	74.3	8%

1 SEL is calculated from Leq+35.6, dB.
2 Assumes a 20 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Closed.
3 Based on FICAN 1997 Sleep Disturbance Curve.
4 Assumes a 12 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Open.

Table F1-50. Summary of the Predicted SCIG Train Horn SEL at Nearby Residences and Sleep Disturbance Assessment.

Receptor Number	Receptor Location	Predicted SCIG Train Horn Exterior SEL, dBA	Predicted SCIG Train Horn Interior SEL w/ Windows Closed, dBA[1]	Approximate Percentage of Exposed Population Expected to be Awakened [2]	Predicted SCIG Train Horn Interior SEL w/ Windows Open, dBA [3]	Approximate Percentage of Exposed Population Expected to be Awakened [2]
R1	Residence at 2789 Webster – rear yard	45.1	25.1	0%	33.1	0%
R2	Buddhist Temple at Willow and Webster	47.2	27.2	0%	35.2	0%
R8	Villages of Cabrillo	52.5	32.5	0%	40.5	1%

1 Assumes a 20 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Closed.
2 Based on FICAN 1997 Sleep Disturbance Curve.
3 Assumes a 12 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Open.

School Classroom Speech Intelligibility

Construction noise experienced within the classrooms has the potential to interfere with speech intelligibility between the teacher and the student. Table F1-51 summarizes the interior construction noise within classrooms and the speech intelligibility between a teacher and student separated by 20 feet. The analysis and assessment considers both a normal and raised voice speech level between a teacher and student. Future interior construction noise would be as high as 38.2, 32.8, 46.1, 44.2, 31.7 and 31.9 dBA at Hudson School, Cabrillo High School, Cabrillo Child Development Center, Bethune School, Stephens Middle School, and Webster School, respectively. When compared with the USEPA curve for speech intelligibility, there would be greater than 95% normal voice satisfactory conversation speech intelligibility at all locations. Similarly, there would be greater than 95% raised voice satisfactory conversation speech intelligibility at all locations. When the distance between the teacher and student is less than 20 feet, speech intelligibility would be expected to be greater.

The Reduced Project's on-site and rail corridor operational noise experienced within the classrooms also has the potential to interfere with speech intelligibility. Table F1-52 summarizes the interior operations noise levels within classrooms and the speech intelligibility between a teacher and student separated by 20 feet. The analysis and assessment considers both a normal and raised voice speech level between a teacher and student. Future interior operations noise levels would be as high as 37.0, 32.7, 43.8, 39.2, 31.5 and 31.9 dBA at Hudson School, Cabrillo High School, Cabrillo Child Development Center, Bethune School, Stephens Middle School, and Webster School, respectively. When compared with the USEPA curve for speech intelligibility, there would be greater than 95% normal voice satisfactory conversation speech intelligibility and greater than 95% raised voice satisfactory conversation speech intelligibility at all locations. When the distance between the teacher and student is less than 20 feet, speech intelligibility would be expected to be even greater.

Reduced Project train horn soundings near the intersection of the Alameda Corridor and Pacific Coast Highway also have the potential to affect speech intelligibility within classrooms. Table F1-53 summarizes the interior train horn noise levels within classrooms and the speech intelligibility between a teacher and student separated by 20 feet. The analysis and assessment considers both a normal and raised voice speech level between a teacher and student. Future interior train horn noise levels would be as high as 17.1, 5.4, 23.9, 26.6, 7.3 and 1.5 dBA at Hudson School, Cabrillo High School, Cabrillo Child Development Center, Bethune School, Stephens Middle School, and Webster School, respectively. When compared with the USEPA curve for speech intelligibility, there would be greater than 95% normal and raised voice satisfactory conversation speech intelligibility at all locations.

Table F1-51. Summary of the Predicted Daytime Construction Noise within Classrooms and Speech Intelligibility Assessment.

Receiver Number	Location	Description	Ambient Interior Noise Level, L50, dBA	Predicted Future Interior Construction Noise Level with Ambient, L50, dBA[1]	Normal Voice Satisfactory Conversation Speech Intelligibility at 20 feet between Speaker and Listener [2]	Raised Voice Satisfactory Conversation Speech Intelligibility at 20 feet between Speaker and Listener [2]
R3	Hudson School	Classroom 52	36.9	38.2	Greater than 95%	Greater than 95%
R5	Cabrillo High School	Classroom 1128	32.7	32.8	Greater than 95%	Greater than 95%
R6	Cabrillo Child Development Center	#2 Exterior, #4 Interior	43.7	46.1	Greater than 95%	Greater than 95%
R7	Bethune School	Classroom 102	38.8	44.2	Greater than 95%	Greater than 95%
R30	Stephens Middle School	Classroom PC2	31.4	31.7	Greater than 95%	Greater than 95%
R31	Webster School	Classroom B-48	31.9	31.9	Greater than 95%	Greater than 95%

1 Data from Table F1-41.
2 Based on FICAN – USEPA Speech Intelligibility Curve, 1974.

Table F1-52. Summary of the Reduced Project's Operational Noise within Classrooms and Speech Intelligibility Assessment.

Receiver Number	Location	Description	Ambient Interior Noise Level, dBA	Existing Ambient Plus Project Interior Noise Levels, dBA[1]	Normal Voice Satisfactory Conversation Speech Intelligibility at 20 feet between Speaker and Listener [2]	Raised Voice Satisfactory Conversation Speech Intelligibility at 20 feet between Speaker and Listener [2]
R3	Hudson School	Classroom 52	36.9	37.0	Greater than 95%	Greater than 95%
R5	Cabrillo High School	Classroom 1128	32.7	32.7	Greater than 95%	Greater than 95%
R6	Cabrillo Child Development Center	#2 Exterior, #4 Interior	43.7	43.8	Greater than 95%	Greater than 95%
R7	Bethune School	Classroom 102	38.8	39.2	Greater than 95%	Greater than 95%
R30	Stephens Middle School	Classroom PC2	31.4	31.5	Greater than 95%	Greater than 95%
R31	Webster School	Classroom B-48	31.9	31.9	Greater than 95%	Greater than 95%

Notes:
1 Data from Table F1-44
2 Based on FICAN – USEPA Speech Intelligibility Curve, 1974.
Noise standard for a cumulative period of 5 minutes in a 60 minute period. Higher noise levels are permitted for shorter time periods. If ambient noise level exceeds standard, standard shall be increased to reflect ambient level.
* Includes relocation of existing tenants

Table F1-53. Predicted SCIG Train Horn SEL within Classrooms and Speech Intelligibility Assessment.

Receiver Number	Location	Description	Predicted SCIG Train Horn Exterior Noise Level, dBA	Measured Exterior to Interior Noise Reduction, dB	Predicted SCIG Train Horn Interior Noise Level, dBA[1]	Normal Voice Satisfactory Conversation Speech Intelligibility at 20 feet between Speaker and Listener [2]	Raised Voice Satisfactory Conversation Speech Intelligibility at 20 feet between Speaker and Listener [2]
R3	Hudson School	Classroom 52	50.1	33	17.1	Greater than 95%	Greater than 95%
R5	Cabrillo High School	Classroom 1128	49.8	44.4	5.4	Greater than 95%	Greater than 95%
R6	Cabrillo Child Development Center	#2 Exterior, #4 Interior	52.5	28.6	23.9	Greater than 95%	Greater than 95%
R7	Bethune School	Classroom 102	52.7	26.1	26.6	Greater than 95%	Greater than 95%
R30	Stephens Middle School	Classroom PC2	45.6	38.3	7.3	Greater than 95%	Greater than 95%
R31	Webster School	Classroom B-48	40.1	38.6	1.5	Greater than 95%	Greater than 95%

1 Assumes a 20 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors.
2 Based on FICAN – USEPA Speech Intelligibility Curve, 1974.

5.1.3 Predicted Noise Levels – City of Carson

The nearest residential receptor in the City of Carson (R33) is located over 7,000 ft from the SCIG site. Because of the distance to the nearest construction areas, barrier effects of intervening topography, and the high ambient background noise, construction noise is expected to be attenuated to ambient levels.

Receptor R33 is located approximately 200 feet east of the Alameda Corridor and directly east of Alameda Street. This location is exposed to significant noise levels from train movements, automobile traffic and heavy truck operations. Considering that the Reduced Project would generate six inbound and outbound trains per day, the increase in CNEL from the Project's trains on the Alameda Corridor and at the Salmon Avenue residence (R33) would be less than 1 dB.

Train horn sounding can produce maximum sound levels as high as 107 dBA at a distance of 100 ft and 90 dBA at a distance of 500 feet. The reduced project would generate six daily inbound and outbound trains with approximately 12 train horn soundings per day occurring near the intersection of the Alameda Corridor and Pacific Coast Highway. This is approximately 11,000 ft south of the Salmon Avenue residence. Train horn soundings from the Reduced Project are not expected to occur

more than once in any one hour period. Train horn soundings are estimated to be approximately 63 dBA at this residence. When compared to the number of existing train operations, horn soundings and ambient background noise, future locomotive horn noise from SCIG train traffic, although still discernible, would not be expected to result in a CNEL increase greater than 3 dB at the Salmon Avenue residence.

Reduced Project Construction and Operations Vibration

Because the Project site is located over 7,000 ft south of the Salmon Avenue residence (R33), daytime and nighttime construction vibration would not be expected to approach ambient noise levels. A site survey was conducted to determine if there were nonresidential vibration sensitive receptors (microelectronics firms, recording studios, research laboratories, etc. that employ vibration sensitive equipment) in the vicinity of the Project site and rail line. It was determined that no such receptors were present. In addition, the construction haul route would be expected to be primarily on Pacific Coast Highway outside of the City of Carson. Truck vibration would not be expected to exceed existing vibration generated by existing trucks on Pacific Coast Highway; thus, no increase in vibration would be expected.

Reduced Project train movements on the Alameda Corridor would pass by the Salmon Residence, within approximately 200 feet of the property boundary. Existing vibration levels range from 53 to 68.8 VdB at this location. Future train vibration would not be expected to exceed existing vibration levels from the Alameda Corridor and Alameda St. Future Project train vibration at the Salmon Residence would be less than the FTA criteria of 75 VdB.

Sleep Disturbance

Table F1-54 summarizes the predicted Reduced Project train horn SEL at the nearby residence and an assessment of sleep disturbance. Interior SELs with windows closed from the train horn noise experienced at 21843 Salmon Avenue would be as high as 43.0. When assessed with the FICAN curve, approximately 1% of exposed population at the residence would be expected to be awakened due to the highest levels of construction activity. Interior SELs with windows open at 21843 Salmon Avenue would be as high as 51.0. When assessed with the FICAN curve, approximately 2% of exposed population at the residence would be expected to be awakened due to the highest levels of construction activity. Single event awakenings would occur at a frequency below 10%.

Table F1-54. Summary of the Predicted SCIG Train Horn SEL at Nearby Carson Residences and Sleep Disturbance Assessment.

Receptor Number	Receptor Location	Predicted SCIG Train Horn Exterior SEL, dBA	Predicted SCIG Train Horn Interior SEL w/ Windows Closed, dBA[1]	Approximate Percentage of Exposed Population Expected to be Awakened [2]	Predicted SCIG Train Horn Interior SEL w/ Windows Open, dBA[3]	Approximate Percentage of Exposed Population Expected to be Awakened [2]
R33	Residence at 21843 Salmon Avenue	63.0	43.0	1%	51.0	2%

1 Assumes a 20 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Closed.
2 Based on FICAN 1997 Sleep Disturbance Curve.
3 Assumes a 12 dB Exterior to Interior Noise Reduction for Residential and Institutional Receptors with Windows Open.

School Classroom Speech Intelligibility

There are no schools located in the City of Carson within the immediate vicinity of the Project Site, thus SCIG train horns would not have any effect on speech intelligibility in classrooms.

There would be no construction and operations related noise affects on speech intelligibility in classrooms.

5.2 Alternative 1: No Project Alternative

The No Project Alternative considers what would reasonably be anticipated to occur if the proposed Project is not built and operated.

5.2.1 Predicted Noise Levels – City of Los Angeles

This alternative would not include any construction activities that could potentially cause an increase in noise levels at nearby sensitive receiver locations.

No construction activities would occur under the No Project Alternative. Accordingly, there would be no construction noise between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

On-Site Operations

Operations at the existing site would continue from the current tenants. The existing noise environment, which is primarily from vehicular traffic on the roadway network, would be expected to change when compared to the existing noise levels previously presented in Table F1-18. Table F1-55 shows the predicted roadway traffic noise levels for the No Project Alternative. Portions of the following roadways in the City of Los Angeles include noise-sensitive land uses that would be expected to experience traffic noise levels above 70 CNEL: Alameda Street, E. Anaheim St., E. Harry Bridges Boulevard, E. Sepulveda Boulevard, John S. Gibson Boulevard, Pacific Coast Highway, S Alameda St., W. Harry Bridges Boulevard, and W. Sepulveda Boulevard. Traffic noise levels above 70 CNEL would continue to be considered incompatible with noise guidelines.

Table F1.56 shows the predicted noise level increase over existing levels; the No Project Alternative's traffic noise contribution. Roadways in Los Angeles would not experience a Project increase in traffic noise level exceeding 1 dB.

Table F1-55. Calculated Existing Plus No Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	Leq @ Rec.	CNEL @ Rec.	DISTANCE TO CNEL CONTOURS (FT)		
			70 dBA	65 dBA	60 dBA
1ST ST					
e/o East RD	78.2	79.2	417	1319	4171
ACCESS RD					
e/o Ferry St	77.5	78.5	352	1113	3522
ALAMEDA ST					
n/o Anaheim St	78.4	79.4	437	1382	4373
w/o Eubank Ave	80.5	81.5	700	2215	7006
s/o PCH	80.7	81.7	735	2324	7350
s/o Anaheim St	80.0	81.0	621	1966	6219
E 223RD ST					
w/o I-405 Off ramps	77.8	78.8	374	1183	3742
E ANAHEIM ST					
between Avalon Blvd and Broad Ave	69.3	70.3	53	169	536
between Eubank Ave and Sanford St	69.6	70.6	57	182	575
between Sanford Ave and Sanford St	69.6	70.6	57	181	572
between Anaheim and Henry Ford	75.7	76.7	230	727	2301
e/o Henry Ford Ave	75.7	76.7	230	727	2300
w/o E I St	75.3	76.3	209	662	209
e/o Sanford Ave	69.3	70.3	53	168	533
w/o Anaheim Way	75.7	76.7	230	727	2301
between Henry Ford Ave and Terminal Island	75.5	76.5	220	697	2204
E HARRY BRIDGES BLVD					
e/o Avalon Blvd	80.0	81.0	628	1988	6287
E I ST					
between Terminal Island Fwy and Anaheim	77.6	78.6	357	1131	3576
E OPP ST					
w/o Farragut Ave	52.8	53.8	1	3	11
E SEPULVEDA BLVD					
e/o Alameda St	74.9	75.9	195	616	1949
w/o Dolores St	71.6	72.6	90	286	905
w/o Wilmington Ave	72.4	73.4	109	347	1097
e/o Wilmington Ave	73.8	74.8	148	468	1482
e/o Dolores St	72.0	73.0	99	313	989
w/o Avalon Blvd	72.2	73.2	102	324	1025
EAST RD					
n/o 1st St	75.3	76.3	213	673	2131
s/o 1st St	73.3	74.3	133	422	1334
FARRAGUT AVE					
Between Terminal Island Fwy SB ramps	76.8	77.8	299	947	2995
s/o E OPP St	47.9	48.9	0	0	0
FERRY ST					
between Seaside Ave and Access Rd	77.3	78.3	336	1064	3365
between Terminal Way and Pitchard St	80.4	81.4	679	2149	6796
FIGUEROA ST					
n/o Anaheim St	73.9	74.9	151	480	1518
n/o PCH	72.3	73.3	105	333	1054

Table F1-55. Calculated Existing Plus No Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
HARBOR FWY					
SB n/o PCH off Ramp	84.2	85.2	1654	5231	16542
NB s/o Sepulveda Blvd	84.7	85.7	1840	5820	18405
NB n/o Sepulveda Blvd	84.5	85.5	1780	5630	17806
SB n/o Sepulveda Blvd	84.2	85.2	1652	5224	16520
SB s/o 228th St	83.9	84.9	1551	4905	15512
SB n/o 220th St	82.5	83.5	1101	3481	11010
NB n/o 223rd St	84.4	85.4	1725	5455	17252
NB n/o Carson St	83.4	84.4	1363	4312	13635.
SB s/o Torrance Blvd	82.7	83.7	1167	3692	11675
NB s/o Del Amo Blvd	83.6	84.6	1419	4489	14195
SB n/o Redondo Beach Blvd	81.7	82.7	931	2944	9310
SB between 135th St and Rosecrans Ave	81.2	82.2	815	2579	8157
NB n/o Redondo Beach Blvd	81.6	82.6	910	2879	9104
SB n/o 135th St	81.4	82.4	868	2746	8684
NB s/o 135th	81.5	82.5	878	2777	8783
NB s/o El Segundo Blvd	81.4	82.4	859	2718	8597
SB n/o Alondra	81.5	82.5	886	2802	8862
SB between Del Amo Blvd and Torrance Blvd	82.9	83.9	1219	3855	12193
SB between 168th and Alondra	82.6	83.6	1140	3606	11405
NB between Redondo Beach Blvd and Alondra	81.2	82.2	820	2594	8204
SB n/o Del Amo Blvd	82.3	83.3	1068	3379	10685
SB n/o I-405	81.6	82.6	913	2888.	9133
NB n/o Del Amo Blvd	82.3	83.3	1059	3348	10590
NB s/o I-405	81.6	82.6	910	2878	9101
NB n/o Victoria St	83.9	84.9	1545	4887	15456
SB s/o 182nd St	81.1	82.1	797	2523	7979
NB between Albertoni and Victoria	83.7	84.7	1455	4603	14558
SB s/o I-405	80.5	81.5	693	2194	6938
SB between Artesia Blvd and 168th	82.4	83.4	1077	3407	10774
NB n/o I-405	83.1	84.1	1278	4042	12782
NB s/o SR-91	83.1	84.1	1271	4021	12718
NB s/o Gardena Blvd	83.1	84.1	1287	4071	12875
SB s/o PCH off Ramp	84.5	85.5	1779	5625	17789
NB n/o PCH on Ramp	84.6	85.6	1808	5720	18088
NB n/o El Segundo Blvd	82.2	83.2	1036	3277	10365
SB s/o El Segundo Blvd	82.0	83.0	1001	3166	10013
SB n/o Anaheim St	84.9	85.9	1923	6081	19231
NB s/o PCH on ramp	84.9	85.9	1923	6084	19239
NB s/o L St	85.1	86.1	2033	6429	20331
SB s/o 120th St	81.3	82.3	833	2635	8334
NB s/o 120th St	81.6	82.6	897	2838	8975
SB s/o 120th St	81.5	82.5	892	2823	8928
SB n/o I-105	82.6	83.6	1126	3562	11266
NB n/o 120th St	82.1	83.1	1024	3239	10243

Table F1-55. Calculated Existing Plus No Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
SB n/o 108th St	81.7	82.7	922	2916	9222
NB s/o Torrance Blvd	83.4	84.4	1365	4318	13655
NB s/o 223rd St	84.3	85.3	1687	5336	16875
SB between 214th St and 220th St	82.6	83.6	1134	3588	11346
SB s/o 220th St	84.0	85.0	1561	4936	15609
NB s/o Rosecrans	81.3	82.3	847	2680	8477
NB between Gardena Blvd and Alondra Blvd	81.8	82.8	952	3012	9525
SB s/o 108th	82.5	83.5	1120	3544	11207
NB n/o 108th St	81.9	82.9	963	3047	9637
NB s/o 190th St	83.0	84.0	1246	3941	12462
NB n/o 220th ST	83.3	84.3	1347	4262	13477
SB s/o Sepulveda Blvd	84.2	85.2	1651	5221	16510
HARBOR PLZ					
between Pier F Ave and Pico Ave	78.4	79.4	437	1382	4372
HARBOR SCENIC DR					
NB w/o Goldenshore St	78.7	79.7	459	1453	4594
NB s/o Shoreline Dr	78.5	79.5	447	1414	4472
NB n/o Shoreline Dr	78.3	79.3	418	1322	4183
SB n/o Shoreline Dr	79.4	80.4	539	1706	5395
SB s/o Shoreline Dr	78.9	79.9	480	1519	4806
NB e/o Goldenshore St	78.8	79.8	469	1483	4692
HARBOR SCENIC WAY					
e/o Queens Hwy	77.6	78.6	363	1150	3637
e/o Port Access Rd	78.2	79.2	416	1317	4165
w/o Port Access Rd	78.2	79.2	415	1313	4153
JOHN S GIBSON BLVD					
n/o I-110 Ramps	77.7	78.7	367	1162	3675
LONG BEACH FWY					
SB n/o Imperial Hwy	84.9	85.9	1909	6039	19099
NB n/o Imperial Hwy	84.6	85.6	1801	5695	18010
NB s/o Imperial Hwy	84.8	85.8	1880	5947	18806
SB s/o Imperial Hwy	84.6	85.6	1784	5642	17842
SB s/o Imperial Hwy	84.8	85.8	1890	5978	18905
SB n/o I-105	84.5	85.5	1767	5588	17673
SB s/o I-105	84.8	85.8	1876	5935	18768
NB n/o I-105	84.4	85.4	1728	5464	17280
NB n/o Rosecrans Ave	84.6	85.6	1791	5665	17915
SB n/o Rosecrans Ave	84.5	85.5	1778	5624	17786
SB s/o Rosecrans Ave	85.9	86.9	2430	7685	24304
SB s/o Rosecrans Ave	86.0	87.0	2500	7907	25004
NB s/o Rosecrans	85.9	86.9	2455	7763	24551
SB n/o Alondra	86.0	87.0	2500	7907	25004
NB between Alondra and Rosecrans	86.1	87.1	2550	8064	25502
SB n/o Alondra	85.8	86.8	2375	7513	23758
NB n/o Alondra	86.1	87.1	2528	7996	25288
SB s/o Alondra	85.7	86.7	2297	7264	22972

Table F1-55. Calculated Existing Plus No Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
NB s/o Alondra	86.0	87.0	2502	7913	25025
SB n/o SR-91	86.2	87.2	2585	8175	25852
NB n/o SR-91	85.2	86.2	2050	6483	20501
SB n/o Artesia Blvd	84.9	85.9	1952	6174	19524
NB n/o Artesia Blvd	84.6	85.6	1813	5733	18129
NB s/o Artesia Blvd	84.8	85.8	1894	5991	18946
SB s/o Artesia Blvd	85.7	86.7	2295	7259	22957
NB s/o Artesia Blvd	84.7	85.7	1839	5816	18392
SB n/o Long Beach Blvd	86.1	87.1	2554	8076	25540
SB s/o Long Beach Blvd	85.9	86.9	2450	7748	24502
NB n/o Long Beach Blvd	86.5	87.5	2809	8883	28091
SB n/o Del Amo Blvd	85.7	86.7	2331	7373	23315
SB s/o Del Amo Blvd Off ramp	86.2	87.2	2579	8155	25790
NB s/o Long Beach Blvd	86.3	87.3	2687	8497	26871
NB n/o Del Amo Blvd	86.0	87.0	2500	7907	25006
SB s/o Del Amo Blvd	86.2	87.2	2578	8154	25786
NB n/o Wardlow Rd	86.3	87.3	2677	8467	26775
SB s/o Wardlow Rd	85.7	86.7	2303	7285	23038
SB n/o Willow St	84.9	85.9	1927	6094	19272
NB n/o Willow St	84.8	85.8	1881	5950.	18817
NB s/o Willow St	85.2	86.2	2090	6612	20909
SB n/o Willow St	85.1	86.1	2004	6339	20047
SB s/o Willow St	85.0	86.0	1963.	6207	19629
SB between off/of ramps at Willow St	85.1	86.1	2000	6326	20005
NB s/o Willow St	85.4	86.4	2145	6786	21459
NB s/o off ramp at PCH	85.3	86.3	2102	6647	21021
NB s/o Anaheim St	84.7	85.7	1826	5777	18269
NB s/o PCH	84.4	85.4	1730	5472	17306
SB n/o Anaheim St	84.7	85.7	1863	5892	18633
SB s/o Anaheim St	84.7	85.7	1861	5887	18618
NB s/o loop off ramp at PCH	85.5	86.5	2216	7009	22166
SB n/o Anaheim St	85.1	86.1	2022	6394	20219
SB s/o PCH	85.3	86.3	2123	6713	21230
NB n/o I-405 Interchange	85.9	86.9	2438	7709	24380
NB s/o I-405 Interchange Ramp	85.6	86.6	2272	7185	22722
SB n/o Wardlow Rd	86.5	87.5	2764	8741	27644
NB s/o Firestone Blvd	84.4	85.4	1719	5435	17189
SB s/o Firestone Blvd	84.9	85.9	1922	6079	19224
SB s/o 9th St	84.8	85.8	1873	5923	18730
SB n/o Long Beach Blvd	86.4	87.4	2755	8713	27555
NB n/o 9th St	85.4	86.4	2164	6846	21649
NB s/o 9th St	84.3	85.3	1680	5314	16805
SB n/o 9th St	85.6	86.6	2257	7137	22571
SB s/o Anaheim St	85.4	86.4	2191	6928	21910
NB n/o 10th St	85.0	86.0	1985	6279	19857
SB n/o I-405	85.8	86.8	2352	7440	23529

Table F1-55. Calculated Existing Plus No Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	Leq @ Rec.	CNEL @ Rec.	DISTANCE TO CNEL CONTOURS (FT)		
			70 dBA	65 dBA	60 dBA
SB s/o Alondra	85.8	86.8	2383	7536	23832
NB n/o Dell Amo Blvd Off Ramp	86.3	87.3	2662	8420	26626
SB s/o On ramp at Del Amo Blvd	86.2	87.2	2578	8154	25786
NB s/o Del Amo Blvd	86.2	87.2	2592	8197	25922
NB between s/o off ramp at Del Am o Blvd	85.8	86.8	2401	7594	24016.
NB between off/on ramps at Willow St	85.3	86.3	2105	6656	21051
SB s/o Willow St	85.3	86.3	2114	6685	21140
NB n/o Willow St	85.6	86.6	2281	7214	22813
NB n/o PCH	85.2	86.2	2073	6557	20737
NB Between Ramps at Anaheim St	85.4	86.4	2183	6903	21831
SB s/o Anaheim St	85.0	86.0	1965	6216	19659
NB n/o Anaheim St	85.4	86.4	2190	6925	21900
N HENRY FORD AVE					
n/o Terminal Island Fwy	79.7	80.7	577	1826	5775
n/o Anaheim St	78.7	79.7	464	1470	4649
N SEASIDE AVE					
e/o Navy Way	82.9	83.9	1226	3878	12265
e/o Access Rd ramp	80.7	81.7	740	2342	7406
w/o Navy Way	82.4	83.4	1088	3440	10880
e/o Ferry St	77.4	78.4	343	1085	3434
e/o Navy Way ramp	83.8	84.8	1489	4708	14890
e/o Navy Way	83.0	84.0	1243	3932	12435
NAVY WAY					
s/o Reeves Ave	77.8	78.8	377	1193	3773
s/o Terminal Way	80.7	81.7	728	2302	7281
NEW DOCK ST					
w/o Henry Ford Ave	77.8	78.8	379	1199	3791
e/o Henry Ford Ave	79.9	80.9	615	1945	6152
w/o SB off ramp Terminal Island Fwy	79.9	80.9	616	1950	6168
w/o NB on ramp Terminal Island Fwy	77.0	78.0	316	1000	3163
between Terminal Island Fwy SB and NB Ramp	77.1	78.1	321	1015	3209
PACIFIC COAST HIGHWAY					
between Avalon Blvd and Eubank Ave	74.6	75.6	181	574	1815
between Watson Ave and Eubank Ave	75.2	76.2	206	653	2067
w/o Alameda St	73.8	74.8	148	468	1482
w/o East Rd	72.9	73.9	123	389	1230.
w/o East Rd	71.4	72.4	86	274	868
between Watson Ave and Blinn Ave	75.1	76.1	201	638	2018
PICO AVE					
s/o Ocean Blvd	76.0	77.0	250	790	2499
n/o Ocean Blvd	76.0	77.0	251	794	2511
n/o Pier C St	80.3	81.3	664	2101	6645
s/o Pier C St	79.0	80.0	492	1555	4920
n/o Pier D St	78.9	79.9	490	1550	4902
PIER A WAY					

Table F1-55. Calculated Existing Plus No Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
e/o Henry Ford Ave	74.4	75.4	171	542	1714
e/o Henry Ford Ave	77.0	78.0	313	990	3131
e/o Henry Ford Ave	78.5	79.5	439	1388	4391
between Terminal Island Fwy and Henry Ford	64.2	65.2	16	52	164
n/o Terminal Island Fwy	73.6	74.6	144	455	1440
e/o Henry Ford Ave	73.2	74.2	129	408	1291
e/o Henry Ford Ave	74.4	75.4	172	545	1724
PIER B ST					
s/o 9th St	77.2	78.2	328.	1038	3285
w/o Edison Ave	74.4	75.4	170	540	1709
n/o Pier A way	74.4	75.4	171	542	1714
PIER C ST					
w/o Pier B St	76.8	77.8	295	935	2959
w/o Pier B St	76.3	77.3	264	835	2641
PIER D AVE					
s/o Pier D St	70.8	71.8	75	237	750
PIER D ST					
w/o I-710	76.6	77.6	284	900	2846
PIER F AVE					
s/o Harbor Plaza	78.1	79.1	398	1261	3988
PIER G AV					
s/o Harbor Plaza	58.8	59.8	4	14	47
PIER J WAY					
e/o Panorama Dr	80.3	81.3	662	2096	6628
PORT ACCESS RD					
e/o Ocean Blvd Ramps	75.7	76.7	233	739	2338
n/o New Dock St	77.8	78.8	380	1204	3807
n/o New Dock St	77.5	78.5	354	1119	3539
s/o Pier J way	78.7	79.7	466	1474	4662
s/o Pier J way	80.3	81.3	676	2139	6766
n/o Pier J way	78.7	79.7	465	1471	4652
s/o Harbor Scenic way	78.2	79.2	414	1311	4146
QUEENSWAY DR					
s/o Harbor Scenic Dr	78.7	79.7	459	1453	4594
S ALAMEDA ST					
n/o Wardlow Rd	77.5	78.5	351	1112	3519
S FRIES AVE					
s/o Water St	78.6	79.6	454	1437	4546
between Harry Bridges Blvd and Water St	76.9	77.9	306	968	3062
S HARBOR SCENIC DR					
NB s/o Shoreline Dr	78.5	79.5	443	1402	4433
SB w/o Goldenshore St	79.4	80.4	549	1738	5496
NB n/o Goldenshore St	78.6	79.6	452	1430	4524
SB e/o Goldenshore St	79.1	80.1	505	1598	5055
NB s/o Shoreline Dr	78.2	79.2	416	1318	4168
SB w/o Panorama Dr	79.6	80.6	565	1787	5653

Table F1-55. Calculated Existing Plus No Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
SB w/o Panorama Dr	79.0	80.0	494	1564	4946
S PICO AVE					
s/o Embarcadero	77.2	78.2	324	1026	3245
n/o Harbor Scenic Dr ramp	80.0	81.0	624	1976	6249
s/o Harbor Scenic Dr ramp	79.4	80.4	539	1706	5395
SAN DIEGO FWY					
SB e/o I-110	81.8	82.8	941	2976	9412
SB e/o Wilmington Blvd	82.7	83.7	1167	3693	11678
SB s/o I-110 interchange	82.8	83.8	1198	3791	11988
NB s/o Wilmington Blvd	82.7	83.7	1154	3650	11543
NB w/o Santa Fe Ave	82.7	83.7	1167	3692	11676
SB e/o 218th St	80.6	81.6	718	2272	7186
NB w/o Alameda St	82.6	83.6	1148	3631	11484
SB w/o Alameda St	81.2	82.2	830	2626	8306
NB e/o Wilmington Ave	81.8	82.8	939	2971	9397
SB e/o Wilmington Ave	80.2	81.2	647	2047	6475
SB w/o Wilmington Ave	79.9	80.9	612.	1935	6120
SB s/o Carson St	81.0	82.0	777	2460	7779
NB n/o Carson St	82.4	83.4	1081	3419	10813
NB n/o 213th St	81.9	82.9	977	3091	9776
NB e/o Avalon Blvd	82.5	83.5	1100	3478	11000
SB e/o Avalon Blvd	81.5	82.5	890	2814	8900
NB w/o Avalon Blvd	82.7	83.7	1163	3680	11639
SB e/o Avalon Blvd	81.9	82.9	966	3055	9663
NB w/o Wilmington Ave	81.7	82.7	927	2932	9272
NB e/o 218th St	82.4	83.4	1074	3397	10742
SB e/o Avalon Blvd	81.5	82.5	890	2814	8900
NB s/o Carson St	81.7	82.7	927	2932	9272
SB n/o Carson St	81.5	82.5	890	2814	8900
SAN GABRIEL AV					
n/o PCH	73.5	74.5	138	438	1386
TERMINAL ISLAND FWY					
s/o PCH	78.3	79.3	418	1324	4187
n/o PCH	77.1	78.1	317	1004	3174
n/o Ocean Blvd	78.3	79.3	418	1324	4187
NB s/o PCH	82.2	83.2	1040	3290	10404
SB n/o PCH	77.0	78.0	314	995	3148
NB between Off and loop On ramp at PCH	80.7	81.7	726	2296	7261
NB s/o PCH off ramp	80.4	81.4	689	2178	6889
SB n/o Anaheim St	78.9	79.9	482	1524	4821
NB between Henry Ford Ave and Anaheim St	82.0	83.0	997	3155	9977
NB n/o Ocean Blvd	79.9	80.9	614	1941	6140
SB n/o Ocean Blvd	80.9	81.9	771	2441	7719
s/o Henry Ford Ave	78.8	79.8	476	1505	4760
SB s/o Henry Ford Ave	77.4	78.4	340	1078	3409
e/o Seaside Ave	78.6	79.6	454	1437	4545

Table F1-55. Calculated Existing Plus No Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
SB s/o Anaheim Way	78.9	79.9	482	1525	4822
NB s/o Willow St	76.2	77.2	261	826	2612
SB s/o PCH on ramp	78.8	79.8	473	1498	4737
SB s/o PCH	81.0	82.0	794	2512	7943
NB n/o PCH	82.2	83.2	1027	3250	10279
SB between loop Off and On ramp at PCH	82.0	83.0	986	3118	9860
SB s/o Henry Ford Ave	80.1	81.1	642	2032	6428
s/o Henry Ford Ave	80.5	81.5	707	2237	7074
TERMINAL WAY					
w/o Ferry St	77.3	78.3	332	1052	3327
w/o Eaire St	80.7	81.7	738	2333	7379
s/o Navy Way	77.1	78.1	318	1007	3186
s/o Navy Way	77.3	78.3	337	1067	3375
s/o Navy Way	78.8	79.8	468	1482	4689
s/o Navy Way	71.4	72.4	85.	271	857
s/o Navy Way	75.0	76.0	196	621	1964
s/o Navy Way	73.1	74.1	127	403	1274
W 9TH ST					
e/o Caspian Ave	70.1	71.1	64	203	643
s/o Anaheim St	68.5	69.5	44	139	440
e/o Santa Fe Ave	74.6	75.6	178	564	1785
w/o Caspian Ave	78.4	79.4	428	1354	4283
n/o Pier B St	74.2	75.2	165	522	1653
w/o Santa Fe Ave	72.7	73.7	117	371	1173
s/o Pier B St	79.5	80.5	562	1777	5622
n/o Pier B St	77.5	78.5	353	1118	3537
W ANAHEIM ST					
e/o Harbor Ave	77.9	78.9	381	1205	3812.4
e/o Santa Fe Ave	75.1	76.1	201	637	2017.0
w/o Harbor Ave	75.8	76.8	235	744	2354.9
w/o Seabright Ave	69.4	70.4	54	171	540.7
w/o E I St	69.1	70.1	51	162	513.5
w/o Figueroa PL	68.6	69.6	44	141	448.6
between Wilmington and Neptune Ave	68.8	69.8	47	150	474.9
between Frigate Ave and Wilmington Blvd	69.4	70.4	54	172	545.5
e/o Neptune	75.9	76.9	244	773	2444.5
between Neptune Ave and Fries Ave	77.8	78.8	373	1181	3735.5
w/o Frigate Ave	69.4	70.4	54	171	542.7
e/o Figueroa PL	73.6	74.6	143	453	1433.3
between Seabright Ave and Santa Fe Ave	78.6	79.6	450	1425	4507.8
between Fries Ave and Avalon Blvd	78.1	79.1	402	1273	4026.7
between I-710 SB and NB Ramps	76.8	77.8	299	945	2990.3
W HARRY BRIDGES BLVD					
between Wilmington Blvd and Neptune Ave	78.6	79.6	453	1434	4536
between Hawaiian Ave and Wilmington Blvd	79.6	80.6	569	1800	5695
between Neptune Ave and Fries Ave	79.0	80.0	492	1558	4927

Table F1-55. Calculated Existing Plus No Project Roadway Traffic Noise Levels

ROADWAY SEGMENT	*Leq @ Rec.*	*CNEL @ Rec.*	*DISTANCE TO CNEL CONTOURS (FT)*		
			70 dBA	*65 dBA*	*60 dBA*
between Figueroa St and Mar Vista Ave	71.1	72.1	81	257	813
between Fries Ave and Avalon Blvd	74.3	75.3	167	528	1670
between Mar Vista Ave and Hawaiian Ave	74.7	75.7	182	577	1827
W I ST					
n/o Anaheim St	79.6	80.6	570	1805	5709
W PACIFIC COAST HIGHWAY					
between I-110 SB off ramp and Figueroa S	80.7	81.7	739	2338	7394
w/o I-110 SB off ramp	80.6	81.6	716	2265	7163
between I-710 NB and SB ramps	73.0	74.0	124	394	1248
e/o San Gabriel Ave	71.7	72.7	91	289	915
between San Gabriel Ave and Santa Fe Ave	71.9	72.9	96	304	962
e/o Wilmington Blvd	79.2	80.2	522	1651	5223
e/o Figueroa St	80.8	81.8	754	2384	7539
between Neptune Ave and Avalon Blvd	80.0	81.0	626	1980	6262
between Terminal Island Fwy SB and NB ramp	78.3	79.3	427	1351	4272
e/o Santa Fe Ave	76.2	77.2	263	831	2630
e/o Harbor Ave	78.5	79.5	444	1403	4439
w/o Terminal Island Fwy	73.2	74.2	131	414	1312
W PANORAMA DR					
between Queens Hwy and Harbor Scenic Dr	75.7	76.7	231	731	2311
between Harbor Scenic Dr and Pier J Way	72.7	73.7	116	366	1159
W SEPULVEDA BLVD					
e/o SB I-110 off Ramp	70.3	71.3	66	210	665
w/o NB I-110 off ramp	74.9	75.9	191	606	1918
w/o Figueroa St	72.5	73.5	111	352	1115
e/o Figueroa St	78.2	79.2	408	1292	4085
between SB and NB I-110 Ramps	73.2	74.2	131	416	1316
W WATER ST					
between Fries Ave and Avalon Blvd	75.2	76.2	206	654	2069
W WILLOW ST					
between NB and SB Terminal Island Fwy	73.4	74.4	137	434	1374
between Terminal Island Fwy and Santa Fe	70.0	71.0	62	195	619
between Santa Fe Ave and Easy Ave	71.6	72.6	89	283	895
e/o Easy Ave	69.7	70.7	57	182	578
w/o SB I-710 ramps	70.1	71.1	64	204	646
w/o NB I-710 on ramp	70.0	71.0	62	198	626

Table F1-56. No Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*No Project Alternative CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
1ST ST			
e/o East RD	78.1	79.2	1.2
ACCESS RD			
e/o Ferry St	78.5	78.5	0.1
ALAMEDA ST			
n/o Anaheim St	79.4	79.4	0.1
w/o Eubank Ave	81.5	81.5	0.0
s/o PCH	81.7	81.7	0.0
s/o Anaheim St	80.9	81.0	0.0
E 223RD ST			
w/o I-405 Off ramps	78.7	78.8	0.1
E ANAHEIM ST			
between Avalon Blvd and Broad Ave	70.3	70.3	0.0
between Eubank Ave and Sanford St	70.6	70.6	0.0
between Sanford Ave and Sanford St	70.6	70.6	0.0
between Anaheim and Henry Ford	76.7	76.7	0.0
e/o Henry Ford Ave	76.6	76.7	0.0
w/o E I St	76.2	76.3	0.0
e/o Sanford Ave	70.3	70.3	0.0
w/o Anaheim Way	76.6	76.7	0.0
between Henry Ford Ave and Terminal Island	76.5	76.5	0.0
E HARRY BRIDGES BLVD			
e/o Avalon Blvd	81.0	81.0	0.0
E I ST			
between Terminal Island Fwy and Anaheim	78.4	78.6	0.1
E OPP ST			
w/o Farragut Ave	53.6	53.8	0.1
E SEPULVEDA BLVD			
e/o Alameda St	75.9	75.9	0.0
w/o Dolores St	72.6	72.6	0.0
w/o Wilmington Ave	73.4	73.4	0.0
e/o Wilmington Ave	74.7	74.8	0.0
e/o Dolores St	73.0	73.0	0.0
w/o Avalon Blvd	73.1	73.2	0.0
EAST RD			
n/o 1st St	75.9	76.3	0.4
s/o 1st St	73.9	74.3	0.4
FARRAGUT AVE			
Between Terminal Island Fwy SB ramps	77.7	77.8	0.1
FERRY ST			
between Seaside Ave and Access Rd	78.2	78.3	0.1
between Terminal Way and Pitchard St	81.3	81.4	0.1
FIGUEROA ST			
n/o Anaheim St	74.9	74.9	0.0
n/o PCH	73.3	73.3	0.0
HARBOR FWY			

Table F1-56. No Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*No Project Alternative CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
SB n/o PCH off Ramp	85.2	85.2	0.0
NB s/o Sepulveda Blvd	85.7	85.7	0.0
NB n/o Sepulveda Blvd	85.5	85.5	0.0
SB n/o Sepulveda Blvd	85.2	85.2	0.0
SB s/o 228th St	84.9	84.9	0.0
SB n/o 220th St	83.5	83.5	0.0
NB n/o 223rd St	85.4	85.4	0.0
NB n/o Carson St	84.4	84.4	0.0
SB s/o Torrance Blvd	83.7	83.7	0.0
NB s/o Del Amo Blvd	84.6	84.6	0.0
SB n/o Redondo Beach Blvd	82.7	82.7	0.0
SB between 135th St and Rosecrans Ave	82.2	82.2	0.0
NB n/o Redondo Beach Blvd	82.6	82.6	0.0
SB n/o 135th St	82.4	82.4	0.0
NB s/o 135th	82.5	82.5	0.0
NB s/o El Segundo Blvd	82.4	82.4	0.0
SB n/o Alondra	82.5	82.5	0.0
SB between Del Amo Blvd and Torrance Blvd	83.9	83.9	0.0
SB between 168th and Alondra	83.6	83.6	0.0
NB between Redondo Beach Blvd and Alondra	82.2	82.2	0.0
SB n/o Del Amo Blvd	83.3	83.3	0.0
SB n/o I-405	82.6	82.6	0.0
NB n/o Del Amo Blvd	83.3	83.3	0.0
NB s/o I-405	82.6	82.6	0.0
NB n/o Victoria St	84.9	84.9	0.0
SB s/o 182nd St	82.1	82.1	0.0
NB between Albertoni and Victoria	84.7	84.7	0.0
SB s/o I-405	81.4	81.5	0.0
SB between Artesia Blvd and 168th	83.4	83.4	0.0
NB n/o I-405	84.1	84.1	0.0
NB s/o SR-91	84.1	84.1	0.0
NB s/o Gardena Blvd	84.1	84.1	0.0
SB s/o PCH off Ramp	85.5	85.5	0.0
NB n/o PCH on Ramp	85.6	85.6	0.0
NB n/o El Segundo Blvd	83.2	83.2	0.0
SB s/o El Segundo Blvd	83.0	83.0	0.0
SB n/o Anaheim St	85.9	85.9	0.0
NB s/o PCH on ramp	85.9	85.9	0.0
NB s/o L St	86.1	86.1	0.0
SB s/o 120th St	82.2	82.3	0.0
NB s/o 120th St	82.6	82.6	0.0
SB s/o 120th St	82.5	82.5	0.0
SB n/o I-105	83.6	83.6	0.0
NB n/o 120th St	83.1	83.1	0.0
SB n/o 108th St	82.7	82.7	0.0
NB s/o Torrance Blvd	84.4	84.4	0.0
NB s/o 223rd St	85.3	85.3	0.0

Table F1-56. No Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*No Project Alternative CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
SB between 214th St and 220th St	83.6	83.6	0.0
SB s/o 220th St	85.0	85.0	0.0
NB s/o Rosecrans	82.3	82.3	0.0
NB between Gardena Blvd and Alondra Blvd	82.8	82.8	0.0
SB s/o 108th	83.5	83.5	0.0
NB n/o 108th St	82.9	82.9	0.0
NB s/o 190th St	84.0	84.0	0.0
NB n/o 220th ST	84.3	84.3	0.0
SB s/o Sepulveda Blvd	85.2	85.2	0.0
HARBOR PLZ			
between Pier F Ave and Pico Ave	79.4	79.4	0.1
HARBOR SCENIC DR			
NB w/o Goldenshore St	79.6	79.7	0.1
NB s/o Shoreline Dr	79.5	79.5	0.0
NB n/o Shoreline Dr	79.2	79.3	0.0
SB n/o Shoreline Dr	80.3	80.4	0.1
SB s/o Shoreline Dr	79.8	79.9	0.1
NB e/o Goldenshore St	79.7	79.8	0.1
HARBOR SCENIC WAY			
e/o Queens Hwy	78.6	78.6	0.1
e/o Port Access Rd	79.2	79.2	0.1
w/o Port Access Rd	79.2	79.2	0.1
JOHN S GIBSON BLVD			
n/o I-110 Ramps	78.5	78.7	0.1
LONG BEACH FWY			
SB n/o Imperial Hwy	85.7	85.9	0.1
NB n/o Imperial Hwy	85.5	85.6	0.1
NB s/o Imperial Hwy	85.7	85.8	0.1
SB s/o Imperial Hwy	85.5	85.6	0.1
SB s/o Imperial Hwy	85.7	85.8	0.1
SB n/o I-105	85.4	85.5	0.1
SB s/o I-105	85.7	85.8	0.1
NB n/o I-105	85.3	85.4	0.1
NB n/o Rosecrans Ave	85.5	85.6	0.1
SB n/o Rosecrans Ave	85.4	85.5	0.1
SB s/o Rosecrans Ave	86.8	86.9	0.1
SB s/o Rosecrans Ave	86.9	87.0	0.1
NB s/o Rosecrans	86.9	86.9	0.1
SB n/o Alondra	86.9	87.0	0.1
NB between Alondra and Rosecrans	87.0	87.1	0.1
SB n/o Alondra	86.7	86.8	0.1
NB n/o Alondra	87.0	87.1	0.1
SB s/o Alondra	86.6	86.7	0.1
NB s/o Alondra	86.9	87.0	0.1
SB n/o SR-91	87.1	87.2	0.1
NB n/o SR-91	86.1	86.2	0.1
SB n/o Artesia Blvd	85.8	85.9	0.1

Table F1-56. No Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*No Project Alternative CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
NB n/o Artesia Blvd	85.5	85.6	0.1
NB s/o Artesia Blvd	85.7	85.8	0.1
SB s/o Artesia Blvd	86.6	86.7	0.1
NB s/o Artesia Blvd	85.6	85.7	0.1
SB n/o Long Beach Blvd	87.0	87.1	0.1
SB s/o Long Beach Blvd	86.9	86.9	0.1
NB n/o Long Beach Blvd	87.5	87.5	0.1
SB n/o Del Amo Blvd	86.6	86.7	0.1
SB s/o Del Amo Blvd Off ramp	87.1	87.2	0.1
NB s/o Long Beach Blvd	87.3	87.3	0.1
NB n/o Del Amo Blvd	87.0	87.0	0.1
SB s/o Del Amo Blvd	87.1	87.2	0.1
NB n/o Wardlow Rd	87.3	87.3	0.1
SB s/o Wardlow Rd	86.6	86.7	0.1
SB n/o Willow St	85.9	85.9	0.0
NB n/o Willow St	85.8	85.8	0.0
NB s/o Willow St	86.2	86.2	0.1
SB n/o Willow St	86.0	86.1	0.1
SB s/o Willow St	85.9	86.0	0.1
SB between off/of ramps at Willow St	86.0	86.1	0.1
NB s/o Willow St	86.3	86.4	0.1
NB s/o off ramp at PCH	86.2	86.3	0.0
NB s/o Anaheim St	85.6	85.7	0.1
NB s/o PCH	85.4	85.4	0.1
SB n/o Anaheim St	85.7	85.7	0.1
SB s/o Anaheim St	85.7	85.7	0.1
NB s/o loop off ramp at PCH	86.4	86.5	0.1
SB n/o Anaheim St	86.0	86.1	0.1
SB s/o PCH	86.2	86.3	0.1
NB n/o I-405 Interchange	86.8	86.9	0.1
NB s/o I-405 Interchange Ramp	86.5	86.6	0.1
SB n/o Wardlow Rd	87.4	87.5	0.1
NB s/o Firestone Blvd	85.3	85.4	0.1
SB s/o Firestone Blvd	85.8	85.9	0.1
SB s/o 9th St	85.7	85.8	0.1
SB n/o Long Beach Blvd	87.4	87.4	0.1
NB n/o 9th St	86.3	86.4	0.1
NB s/o 9th St	85.2	85.3	0.1
SB n/o 9th St	86.5	86.6	0.1
SB s/o Anaheim St	86.3	86.4	0.1
NB n/o 10th St	85.9	86.0	0.1
SB n/o I-405	86.7	86.8	0.1
SB s/o Alondra	86.7	86.8	0.1
NB n/o Dell Amo Blvd Off Ramp	87.2	87.3	0.1
SB s/o On ramp at Del Amo Blvd	87.1	87.2	0.1
NB s/o Del Amo Blvd	87.1	87.2	0.1
NB between s/o off ramp at Del Am o Blvd	86.8	86.8	0.1

Table F1-56. No Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*No Project Alternative CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
NB between off/on ramps at Willow St	86.2	86.3	0.1
SB s/o Willow St	86.2	86.3	0.1
NB n/o Willow St	86.6	86.6	0.1
NB n/o PCH	86.1	86.2	0.1
NB Between Ramps at Anaheim St	86.4	86.4	0.0
SB s/o Anaheim St	85.9	86.0	0.1
NB n/o Anaheim St	86.4	86.4	0.0
N HENRY FORD AVE			
n/o Terminal Island Fwy	80.6	80.7	0.0
n/o Anaheim St	79.7	79.7	0.0
N SEASIDE AVE			
e/o Navy Way	83.9	83.9	0.0
e/o Access Rd ramp	81.7	81.7	0.0
w/o Navy Way	83.4	83.4	0.0
e/o Ferry St	78.3	78.4	0.1
e/o Navy Way ramp	84.7	84.8	0.0
e/o Navy Way	84.0	84.0	0.0
NAVY WAY			
s/o Reeves Ave	78.7	78.8	0.1
s/o Terminal Way	81.6	81.7	0.1
NEW DOCK ST			
w/o Henry Ford Ave	78.8	78.8	0.1
e/o Henry Ford Ave	80.8	80.9	0.1
w/o SB off ramp Terminal Island Fwy	80.9	80.9	0.1
w/o NB on ramp Terminal Island Fwy	78.0	78.0	0.1
between Terminal Island Fwy SB and NB Ramp	78.0	78.1	0.1
PACIFIC COAST HIGHWAY			
between Avalon Blvd and Eubank Ave	75.6	75.6	0.0
between Watson Ave and Eubank Ave	76.2	76.2	0.0
w/o Alameda St	74.7	74.8	0.0
w/o East Rd	73.9	73.9	0.0
w/o East Rd	72.4	72.4	0.0
between Watson Ave and Blinn Ave	76.1	76.1	0.0
PICO AVE			
s/o Ocean Blvd	77.0	77.0	0.0
n/o Ocean Blvd	77.0	77.0	0.1
n/o Pier C St	81.1	81.3	0.1
s/o Pier C St	79.8	80.0	0.1
PIER A WAY			
e/o Henry Ford Ave	75.3	75.4	0.1
e/o Henry Ford Ave	77.9	78.0	0.1
e/o Henry Ford Ave	79.4	79.5	0.1
between Terminal Island Fwy and Henry Ford	65.2	65.2	0.0
n/o Terminal Island Fwy	74.6	74.6	0.0
e/o Henry Ford Ave	74.1	74.2	0.1
e/o Henry Ford Ave	75.4	75.4	0.1
PIER B ST			

Table F1-56. No Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*No Project Alternative CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
s/o 9th St	78.1	78.2	0.1
w/o Edison Ave	75.3	75.4	0.0
n/o Pier A way	75.3	75.4	0.1
PIER C ST			
w/o Pier B St	77.7	77.8	0.1
w/o Pier B St	77.2	77.3	0.1
PIER D AVE			
s/o Pier D St	71.8	71.8	0.0
PIER D ST			
w/o I-710	77.5	77.6	0.1
PIER F AVE			
s/o Harbor Plaza	79.0	79.1	0.1
PIER G AVE			
s/o Harbor Plaza	59.8	59.8	0.0
s/o Harbor Plaza	59.8	59.8	0.0
PIER J WAY			
e/o Panorama Dr	81.2	81.3	0.1
PORT ACCESS RD			
e/o Ocean Blvd Ramps	76.5	76.7	0.2
n/o New Dock St	78.7	78.8	0.1
n/o New Dock St	78.4	78.5	0.1
s/o Pier J way	79.7	79.7	0.1
s/o Pier J way	81.3	81.3	0.1
n/o Pier J way	79.7	79.7	0.1
s/o Harbor Scenic way	79.2	79.2	0.1
QUEENSWAY DR			
s/o Harbor Scenic Dr	79.6	79.7	0.1
S ALAMEDA ST			
n/o Wardlow Rd	78.5	78.5	0.1
S FRIES AVE			
s/o Water St	79.6	79.6	0.1
between Harry Bridges Blvd and Water St	77.8	77.9	0.1
S HARBOR SCENIC DR			
NB s/o Shoreline Dr	79.5	79.5	0.1
SB w/o Goldenshore St	80.4	80.4	0.1
NB n/o Goldenshore St	79.5	79.6	0.1
SB e/o Goldenshore St	80.0	80.1	0.1
NB s/o Shoreline Dr	79.2	79.2	0.0
SB w/o Panorama Dr	80.5	80.6	0.1
SB w/o Panorama Dr	79.9	80.0	0.1
S PICO AVE			
s/o Embarcadero	78.1	78.2	0.0
n/o Harbor Scenic Dr ramp	81.0	81.0	0.0
s/o Harbor Scenic Dr ramp	80.3	80.4	0.0
SAN DIEGO FWY			
SB e/o I-110	82.8	82.8	0.0
SB e/o Wilmington Blvd	83.7	83.7	0.0

Table F1-56. No Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*No Project Alternative CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
SB s/o I-110 interchange	83.8	83.8	0.0
NB s/o Wilmington Blvd	83.7	83.7	0.0
NB w/o Santa Fe Ave	83.7	83.7	0.0
SB e/o 218th St	81.6	81.6	0.0
NB w/o Alameda St	83.6	83.6	0.0
SB w/o Alameda St	82.2	82.2	0.0
NB e/o Wilmington Ave	82.8	82.8	0.0
SB e/o Wilmington Ave	81.2	81.2	0.0
SB w/o Wilmington Ave	80.9	80.9	0.0
SB s/o Carson St	81.9	82.0	0.0
NB n/o Carson St	83.4	83.4	0.0
NB n/o 213th St	82.9	82.9	0.0
NB e/o Avalon Blvd	83.5	83.5	0.0
SB e/o Avalon Blvd	82.5	82.5	0.0
NB w/o Avalon Blvd	83.7	83.7	0.0
SB e/o Avalon Blvd	82.9	82.9	0.0
NB w/o Wilmington Ave	82.7	82.7	0.0
NB e/o 218th St	83.3	83.4	0.0
SB e/o Avalon Blvd	82.5	82.5	0.0
NB s/o Carson St	82.7	82.7	0.0
SB n/o Carson St	82.5	82.5	0.0
SAN GABRIEL AV			
n/o PCH	74.4	74.5	0.1
TERMINAL ISLAND FWY			
s/o PCH	82.0	79.3	-2.8
n/o PCH	81.0	78.1	-3.0
n/o Ocean Blvd	82.8	79.3	-3.5
NB s/o PCH	80.1	83.2	3.1
SB n/o PCH	79.0	78.0	-0.9
NB between Off and loop On ramp at PCH	80.1	81.7	1.5
NB s/o PCH off ramp	83.1	81.4	-1.6
SB n/o Anaheim St	78.0	79.9	1.9
NB between Henry Ford Ave and Anaheim St	81.6	83.0	1.4
NB n/o Ocean Blvd	80.4	80.9	0.6
SB n/o Ocean Blvd	78.7	81.9	3.2
s/o Henry Ford Ave	81.9	79.8	-2.1
SB s/o Henry Ford Ave	80.9	78.4	-2.5
e/o Seaside Ave	81.3	79.6	-1.7
SB s/o Anaheim Way	80.9	79.9	-1.1
NB s/o Willow St	77.6	77.2	-0.4
SB s/o PCH on ramp	81.0	79.8	-1.2
SB s/o PCH	79.8	82.0	2.2
NB n/o PCH	79.1	83.2	4.1
SB between loop Off and On ramp at PCH	79.8	83.0	3.2
SB s/o Henry Ford Ave	80.9	81.1	0.3
s/o Henry Ford Ave	82.0	81.5	-0.5
TERMINAL WAY			

Table F1-56. No Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*No Project Alternative CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
w/o Ferry St	81.0	78.3	-2.7
w/o Eaire St	81.2	81.7	0.6
s/o Navy Way	81.5	78.1	-3.4
s/o Navy Way	79.1	78.3	-0.8
s/o Navy Way	81.5	79.8	-1.7
s/o Navy Way	78.3	72.4	-5.9
s/o Navy Way	78.4	76.0	-2.4
s/o Navy Way	79.8	74.1	-5.7
W 9TH ST			
e/o Caspian Ave	71.1	71.1	0.1
s/o Anaheim St	75.3	69.5	-5.8
e/o Santa Fe Ave	72.6	75.6	3.0
w/o Caspian Ave	71.1	79.4	8.2
n/o Pier B St	69.5	75.2	5.7
w/o Santa Fe Ave	75.2	73.7	-1.4
s/o Pier B St	79.4	80.5	1.1
n/o Pier B St	74.8	78.5	3.7
W ANAHEIM ST			
e/o Harbor Ave	74.9	78.9	4.0
e/o Santa Fe Ave	79.7	76.1	-3.6
w/o Harbor Ave	77.7	76.8	-1.0
w/o Seabright Ave	78.8	70.4	-8.5
w/o E I St	76.2	70.1	-6.0
w/o Figueroa PL	76.6	69.6	-7.0
between Wilmington and Neptune Ave	70.3	69.8	-0.5
between Frigate Ave and Wilmington Blvd	70.4	70.4	0.0
e/o Neptune	69.9	76.9	7.0
between Neptune Ave and Fries Ave	70.0	78.8	8.8
w/o Frigate Ave	70.2	70.4	0.2
e/o Figueroa PL	76.3	74.6	-1.7
between Seabright Ave and Santa Fe Ave	78.7	79.6	0.9
between Fries Ave and Avalon Blvd	70.6	79.1	8.5
between I-710 SB and NB Ramps	74.6	77.8	3.2
W HARRY BRIDGES BLVD			
between Wilmington Blvd and Neptune Ave	79.9	79.6	-0.3
between Hawaiian Ave and Wilmington Blvd	79.8	80.6	0.8
between Neptune Ave and Fries Ave	79.0	80.0	0.9
between Figueroa St and Mar Vista Ave	79.7	72.1	-7.5
between Fries Ave and Avalon Blvd	80.5	75.3	-5.3
between Mar Vista Ave and Hawaiian Ave	79.8	75.7	-4.1
W I ST			
n/o Anaheim St	71.6	80.6	9.0
W PACIFIC COAST HIGHWAY			
between I-110 SB off ramp and Figueroa S	73.9	81.7	7.9
w/o I-110 SB off ramp	74.2	81.6	7.4
between I-710 NB and SB ramps	80.0	74.0	-6.0
e/o San Gabriel Ave	80.4	72.7	-7.8

Table F1-56. No Project Roadway Traffic Noise Level Increase

ROADWAY SEGMENT	*Existing CNEL @ 100 ft*	*No Project Alternative CNEL @ 100 ft*	*Project Increment in Traffic Noise Level, dB*
between San Gabriel Ave and Santa Fe Ave	80.5	72.9	-7.6
e/o Wilmington Blvd	75.2	80.2	5.1
e/o Figueroa St	74.9	81.8	6.9
between Neptune Ave and Avalon Blvd	75.7	81.0	5.4
between Terminal Island Fwy SB and NB ramp	80.2	79.3	-0.9
e/o Santa Fe Ave	79.6	77.2	-2.3
e/o Harbor Ave	79.5	79.5	0.1
w/o Terminal Island Fwy	77.8	74.2	-3.6
W PANORAMA DR			
between Queens Hwy and Harbor Scenic Dr	79.8	76.7	-3.1
between Harbor Scenic Dr and Pier J Way	79.9	73.7	-6.2
W SEPULVEDA BLVD			
e/o SB I-110 off Ramp	74.9	71.3	-3.7
w/o NB I-110 off ramp	75.8	75.9	0.1
w/o Figueroa St	75.1	73.5	-1.6
e/o Figueroa St	72.8	79.2	6.3
between SB and NB I-110 Ramps	75.0	74.2	-0.8
W WATER ST			
between Fries Ave and Avalon Blvd	73.7	76.2	2.5
W WILLOW ST			
between NB and SB Terminal Island Fwy	77.5	74.4	-3.0
between Terminal Island Fwy and Santa Fe	71.8	71.0	-0.8
between Santa Fe Ave and Easy Ave	73.1	72.6	-0.5
e/o Easy Ave	70.7	70.7	0.0
w/o SB I-710 ramps	71.1	71.1	0.0
w/o NB I-710 on ramp	71.0	71.0	0.0

Rail Corridor Noise

There would be no increase in train movements on the Alameda Corridor under the No Project Alternative because the Project would not be constructed. Therefore, noise from rail activity on the Alameda Corridor under the No Project Alternative would be unchanged from baseline conditions.

No Project operational noise levels would not result in the CNEL being increased by 3 dBA CNEL or more above baseline nor increase to within the "normally unacceptable" or "clearly unacceptable" category, nor exceed 5 dBA over the current CNEL at sensitive locations.

Sleep Disturbance

There would be no construction and operations related noise that could cause sleep disturbance in residences. Operations related noise due to the 10% increase in activity on the site would increase by 0.4 dB.

School Classroom Speech Intelligibility

There would be no construction and operations related noise that could cause speech intelligibility in classrooms. Operations related noise due to the 10% increase in activity on the site would increase by 0.4 dB.

5.2.2 Predicted Noise Levels – City of Long Beach

On-Site Operations

Operations at the existing site would continue from the current tenants. The existing noise environment, which is primarily from vehicular traffic on the roadway network, would be expected to change when compared to the existing noise levels previously presented in Table F1-17. Table F1-55 previously summarized the predicted roadway traffic noise levels with the No Project Alternative. Portions of the following roadways in the City of Long Beach include noise-sensitive land uses that would be expected to experience future traffic noise levels above 70 CNEL: E. Anaheim St., E. Sepulveda Boulevard, Pacific Coast Highway, Long Beach Freeway and the Terminal Island Freeway. Traffic noise levels above 70 CNEL are considered incompatible with noise guidelines.

The No Project's predicted noise level increase over existing levels is summarized in Table F1-56. Roadways in Long Beach would not experience a No Project increase in traffic noise level exceeding 2 dB. The majority of roadways within the City would not experience any traffic noise increase or decrease as a result of the No Project alternative.

Traffic noise levels along portions of the Long Beach Freeway would range from 85.3 CNEL to 87.5 CNEL and would be above the compatibility threshold of 70 CNEL. However, the traffic noise increase as a result of the No Project alternative would not exceed 0.1 dB at any segments.

Rail Corridor Noise

There would be no increase in train movements under the No Project Alternative because the Project would not be constructed. Therefore, noise from rail activity under the No Project Alternative would be unchanged from baseline conditions.

No Project operational noise levels would result in the CNEL being increased by 3 dBA CNEL or more or exceed municipal code standards.

On-Site Operations

The No Project Alternative would not include any construction that could potentially cause an increase in vibration levels at nearby sensitive receiver locations.

Operations at the existing site would continue from the current tenants. The existing groundborne vibration, which is primarily from vehicular traffic on the roadway network, would be unchanged.

Rail Corridor Vibration

There would be no increase in train movements under the No Project Alternative because the Project would not be constructed. Therefore, vibration from rail activity under the No Project Alternative would be unchanged from baseline conditions.

Because the No Project Alternative does not include any construction nor operations activities, there would be no vibration increases attributed to the No Project Alternative and no vibration impacts from construction or operations.

Sleep Disturbance

There would be no construction and operations related noise that could cause sleep disturbance in residences.

School Classroom Speech Intelligibility

There would be no construction and operations related noise that could disrupt speech intelligibility in classrooms.

5.2.3 Predicted Noise Levels – City of Carson

On-Site Operations

Operations at the existing site would continue from the current tenants. The existing noise, which is primarily from vehicular traffic on the roadway network, would be unchanged.

Rail Corridor Noise

There would be no increase in train movements under the No Project Alternative because the Project would not be constructed. Therefore, noise from rail activity under the No Project Alternative would be unchanged from baseline conditions.

No Project operational noise levels would result in the CNEL being increased by 3 dBA CNEL or more or exceed municipal code standards.

On-Site Operations

Operations at the existing site would continue from the current tenants. The existing groundborne vibration, which is primarily from vehicular traffic on the roadway network, would be unchanged.

Rail Corridor Vibration

There would be no increase in train movements under the No Project Alternative because the Project would not be constructed. Therefore, groundborne vibration from rail activity under the No Project Alternative would be unchanged from baseline conditions.

Sleep Disturbance

There would be no construction and operations related impacts for sleep disturbance in residences.

School Classroom Speech Intelligibility

There would be no construction and operations related noise that could disrupt speech intelligibility in classrooms.

6 References

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6. City of Los Angeles Municipal Code Chapter XI Noise Regulation, City of Los Angeles, 2011.
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8. FHWA Roadway Construction Noise Model, U.S. Department of Transportation, 2006.
9. FHWA Traffic Noise Model TNM 2.5, U.S. Department of Transportation, 2004.
10. FHWA Traffic Noise Model, FHWA RD-77-108, U.S. Department of Transportation.
11. FTA Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.
12. Handbook of Acoustical Measurements and Noise Control, Cyril M. Harris, 1998.
13. Information on Levels of Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety, U.S. Environmental Protection Agency, March 1974.
14. Long Beach Municipal Code Chapter 8.80 Noise, City of Long Beach, 2010.
15. Noise Element of the City of Carson General Plan, City of Carson, 2004.
16. Noise Element of the Los Angeles City General Plan, Los Angeles Department of City Planning, 1999.
17. Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, U.S. Environmental Protection Agency, Dec 1971.
18. Port of Los Angeles China Shipping EIR Noise Section.
19. Port of Los Angeles Trapac EIR Noise Section.
20. Port of Long Beach Environmental Protocol, Port of Long Beach, 2006.
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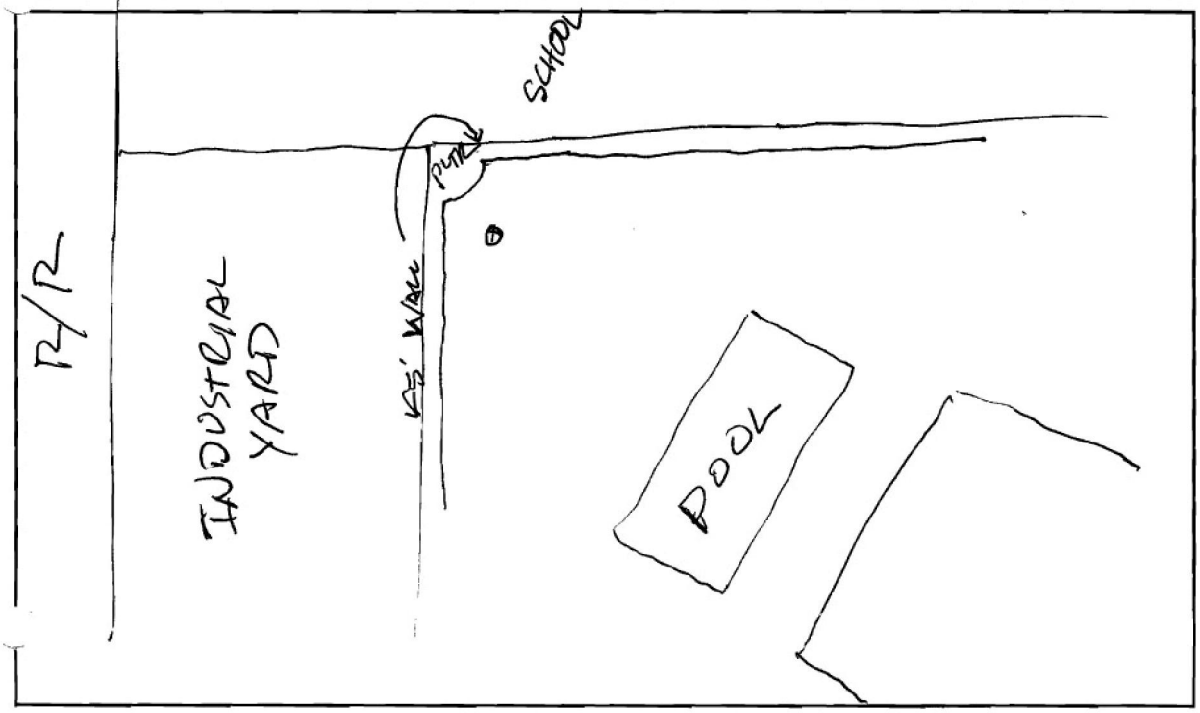
7 Noise Monitoring Field Data Sheets

NOISE MONITORING FIELD DATA SHEET

Project:	SCIG	Date:	2/11/08
oc:	2789 Webster N/		
	Maria 562 477-5856		
	Jesus		
SLM:	LD 870 System 3	SN:	870A0340
Mic:		SN:	
P/A:		SN:	

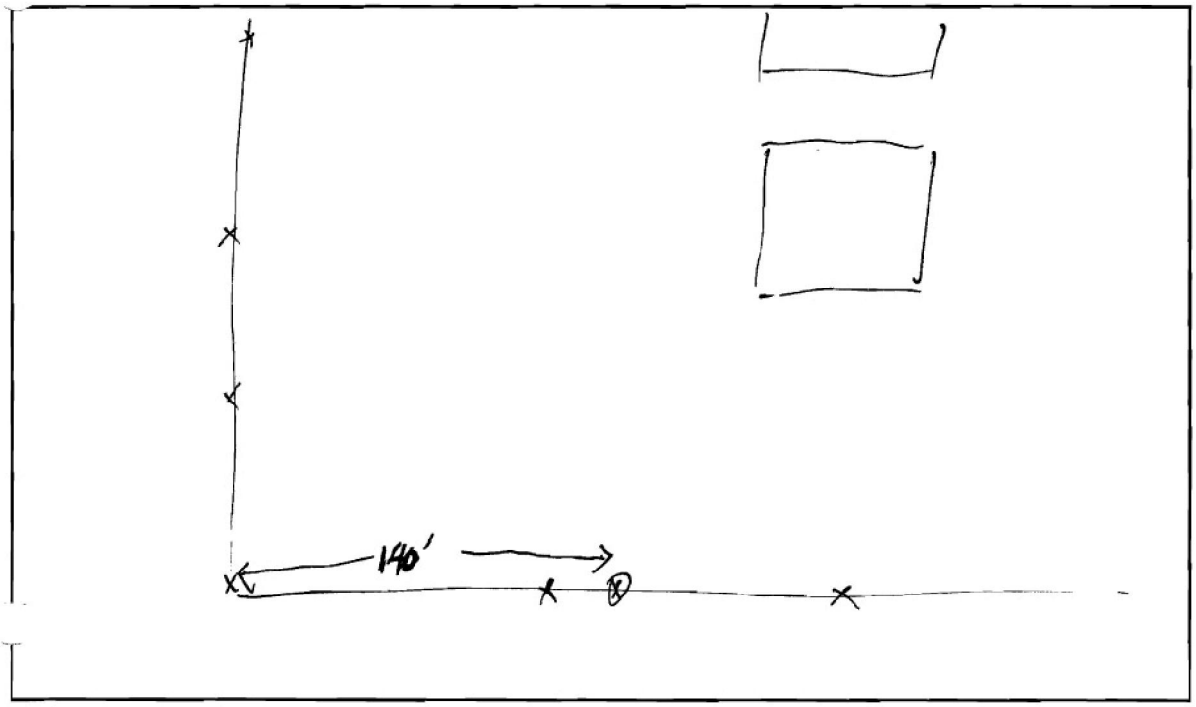
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
2:15pm											INDUSTRIAL YARD TRAINS
~~7:00pm~~	~~8:00pm~~	~~60.8~~	~~57.0~~	~~55.8~~	~~55.3~~			~~67.4~~	~~52.9~~	~~56.0~~	
7:00	8:00pm	60.8	57.0	55.8	55.3	54.1	53.1	67.4	52.9	56.0	2/12/08
12:00	1:00pm	57.6	53.6	50.6	49.4	47.1	46.0	68.9	44.7	50.9	2/12/08
5:00	6:00pm	58.2	56.0	54.7	53.7	52.3	51.3	66.7	51.2	54.3	2/12/08



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	2/12/08
Loc:	HUDSON Elementary School N3		
SLM:	**LD 870 System**	**SN:**	870A0338
Mic:		**SN:**	
P/A:		**SN:**	

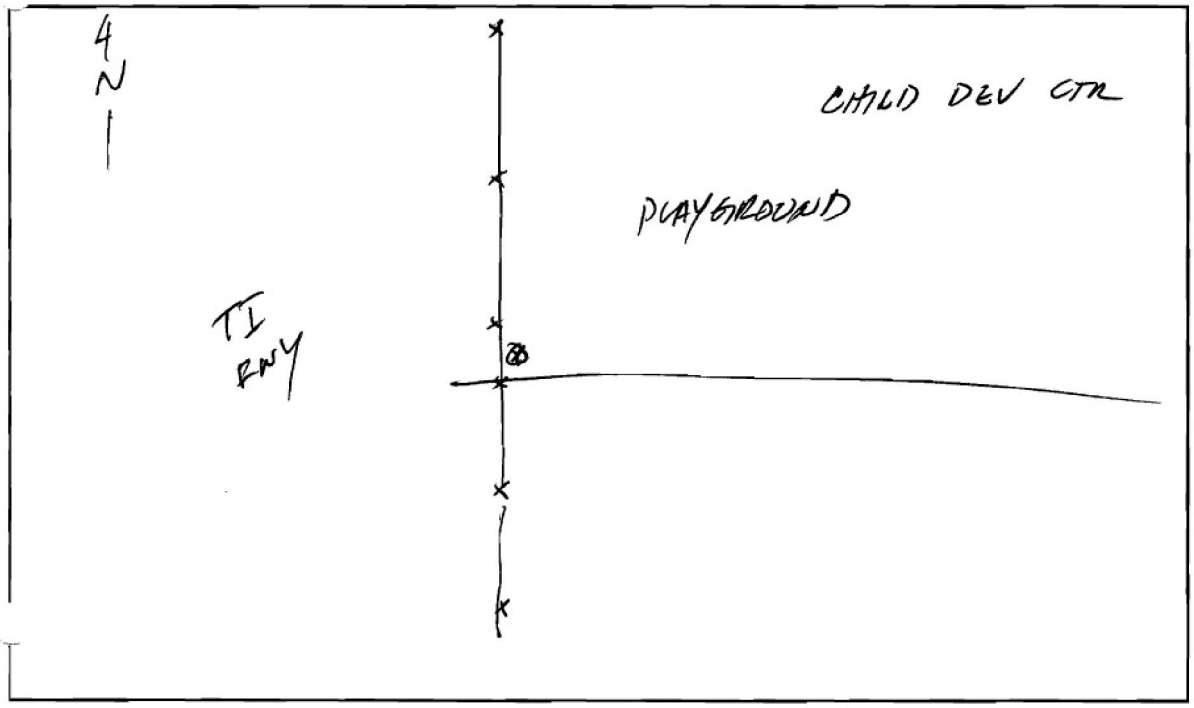
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
2:40 pm											Traffic noise playing, TRAINS
8:00	9:00 pm	64.5	62.5	60.2	57.8	51.8	47.7	68.9	43.2	58.9	2/13/08
12:00	1:00 pm	60.3	58.5	56.4	54.2	49.1	45.7	66.0	43.1	55.2	2/13/08
4:00	5:00 pm	~~59.5~~ 63.3	61.7	59.5	57.6	53.8	50.7	69.4	48.6	58.5	2/13/08
											3:30 pm 2/14 TRAIN



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	2/11/08
Loc:	CHILD DEV CTR N6		
	N6 INT. TOT		
SLM:	**LD 870 System #4**	**SN:**	870A0338
Mic:		**SN:**	
P/A:		**SN:**	

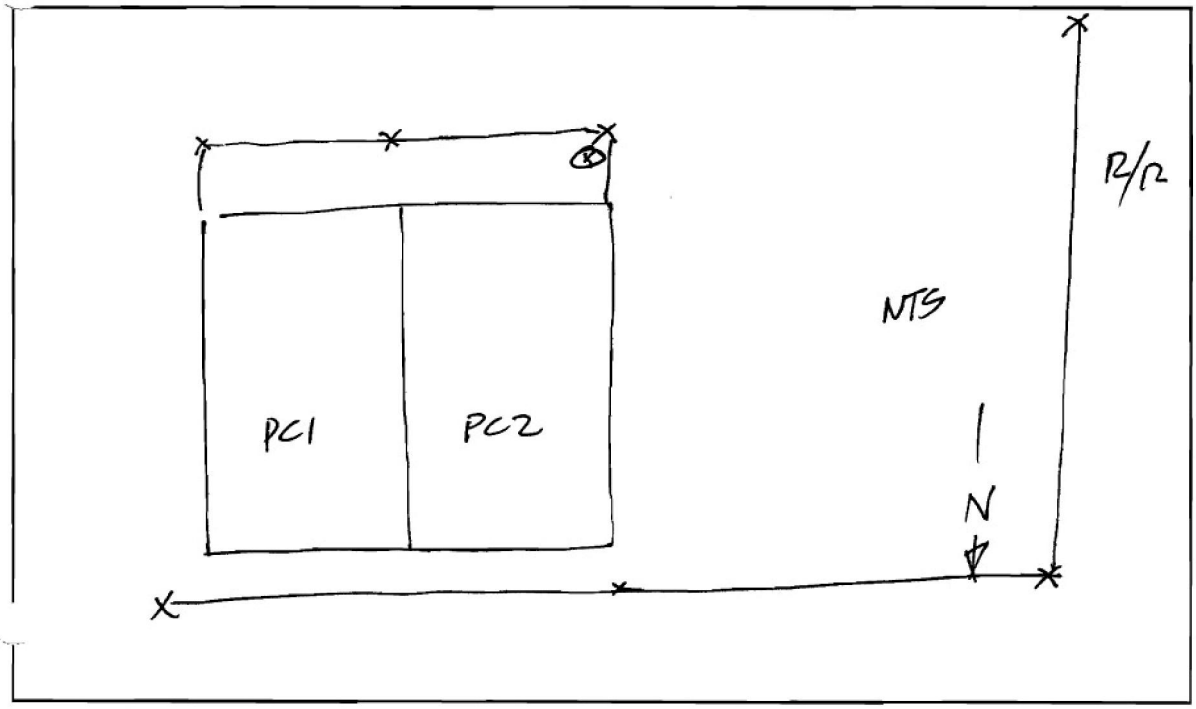
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
12:01pm											
10:04am											TI FWY TRFC
8:00	9:00 AM	78.0	71.1	67.7	64.6	58.2	55.4	85.8	54.4	68.7	TI FWY } 2/12/08
1:00	2:00pm	71.8	68.9	66.2	63.3	55.4	50.4	93.6	47.5	67.2	" "
4:00	5:00pm	70.7	68.8	66.1	63.5	58.0	54.8	77.0	53.4	65.0	



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	2/14/08
Loc:	STEPHENS MIDDLE SCHOOL		
	CLASSROOM PC2		
SLM:	**LD 870 System** #4	**SN:**	870B1195
Mic:		**SN:**	
P/A:		**SN:**	

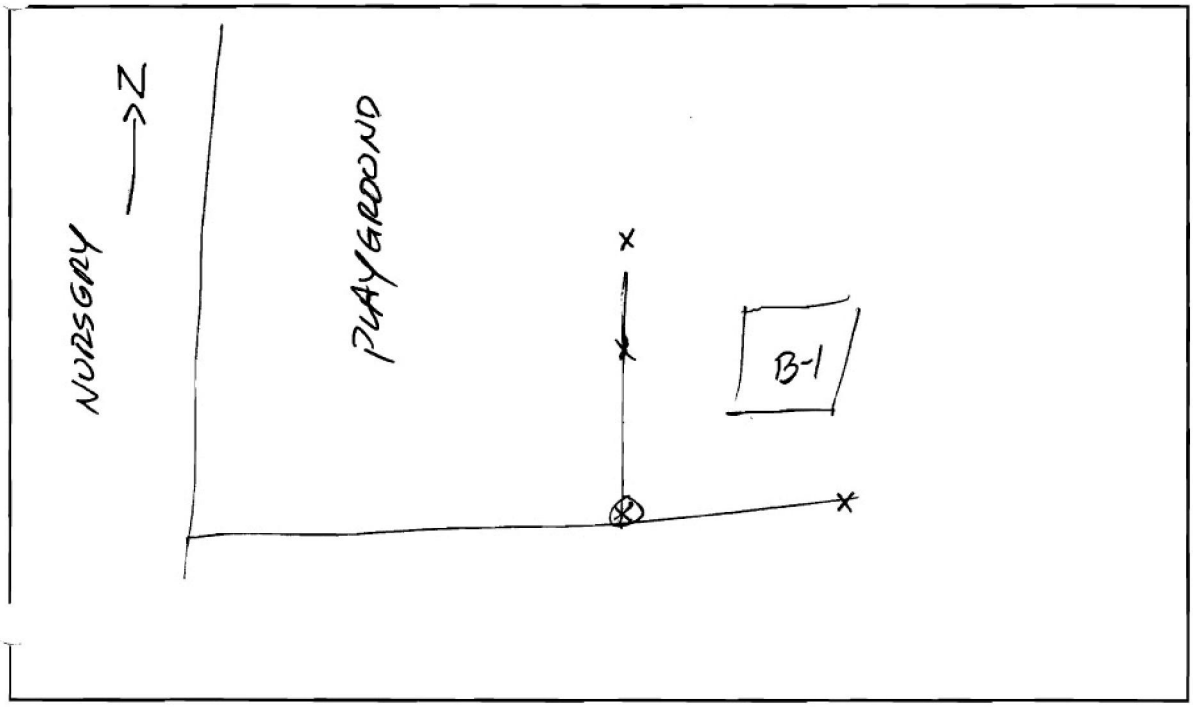
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
10:30 AM											START
11:00	12:00 PM	59.6	54.9	50.3	47.2	44.4	43.1	72.8	42.4	51.4	STUDENTS, TRAFFIC,
4:00	5:00 PM	62.1	59.6	56.9	54.5	52.2	50.9	77.9	49.5	56.5	FAR "
8:00	9:00 PM	69.6	65.9	64.7	64.0	56.5	54.5	89.3	54.1	65.1	"



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	2/14/08
Loc:	Webster School CLASSROOM B-1		
SLM:	**LD 870 System 3**	**SN:**	870A0340
Mic:		**SN:**	
P/A:		**SN:**	

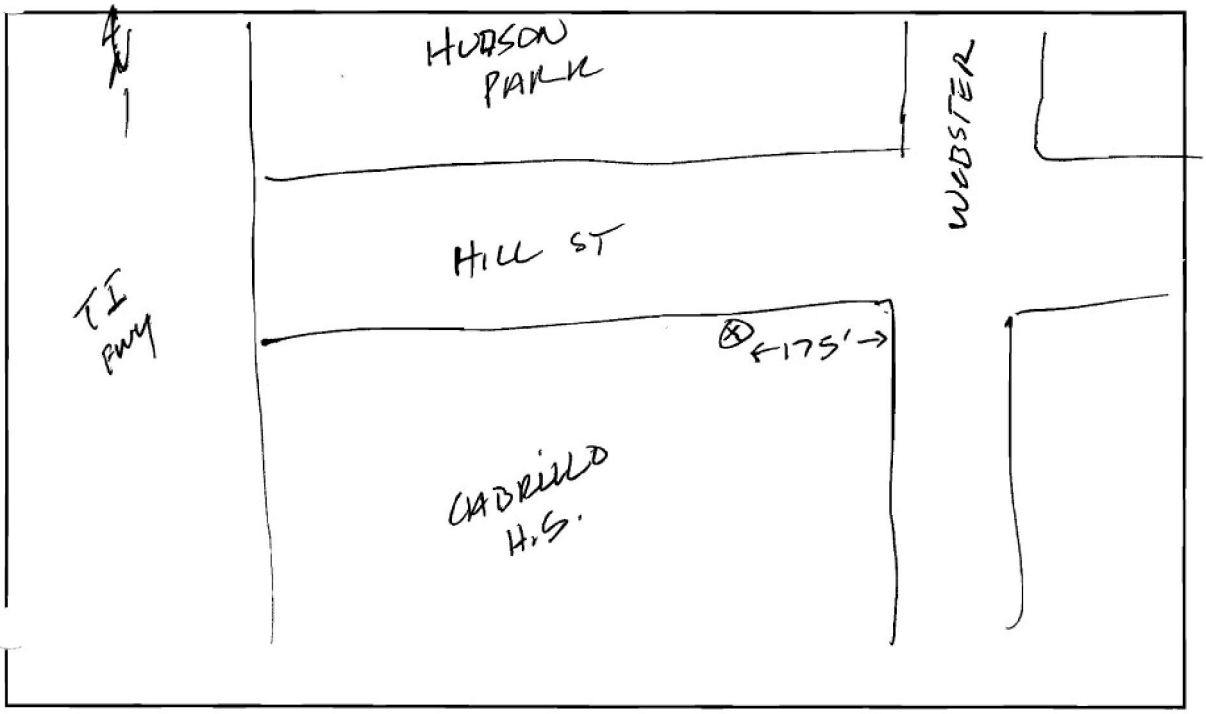
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
12:00 pm	1:00 pm	63.3	59.7	56.5	53.0	46.7	44.2	78.9	42.8	56.2	Children playing
5:06	6:00 pm	61.8	55.2	51.1	49.2	47.0	45.8	70.4	45.3	52.7	Traffic "
8:00	9:00 PM	63.3	60.4	57.8	55.7	53.9	53.0	69.5	50.0	57.5	"



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	2/13/08
Loc:	CABRILLO H.S.		
SLM:	**LD 870 System**	**SN:**	870B1195
Mic:		**SN:**	
P/A:		**SN:**	

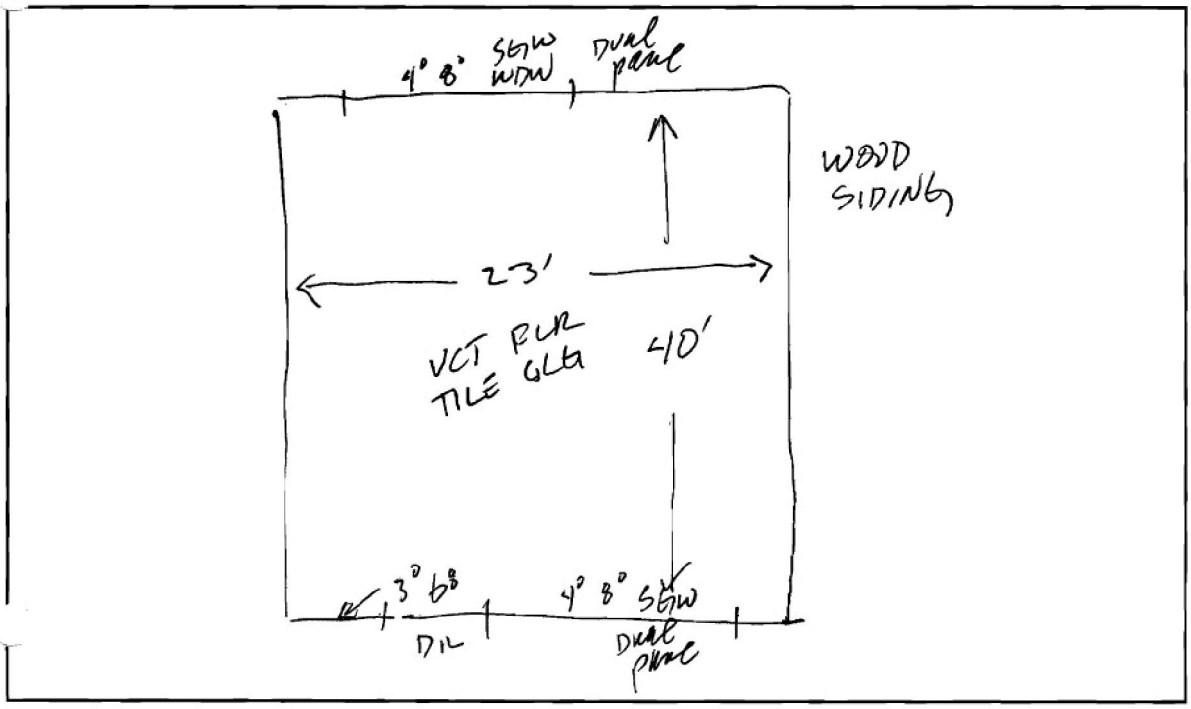
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:35 AM	10:00 AM	71.4	59.2	54.1	52.0	49.6	48.2	87.2	47.5	63.6	GARDENERS, local traffic
10:00 AM	11:00	60.6	55.5	52.5	51.0	48.8	47.2	70.0	45.9	53.2	Birds, local traffic,
											TI FWY, TRAIN,
											DISTANT CONSTRUCTION,
											Airplane, TRACTOR,
											Train horn



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	2/12/08
oc:	Bethune School Classroom 102 NR		
SLM:	**LD 870 System**	**SN:**	870B1195
Mic:		**SN:**	
P/A:		**SN:**	

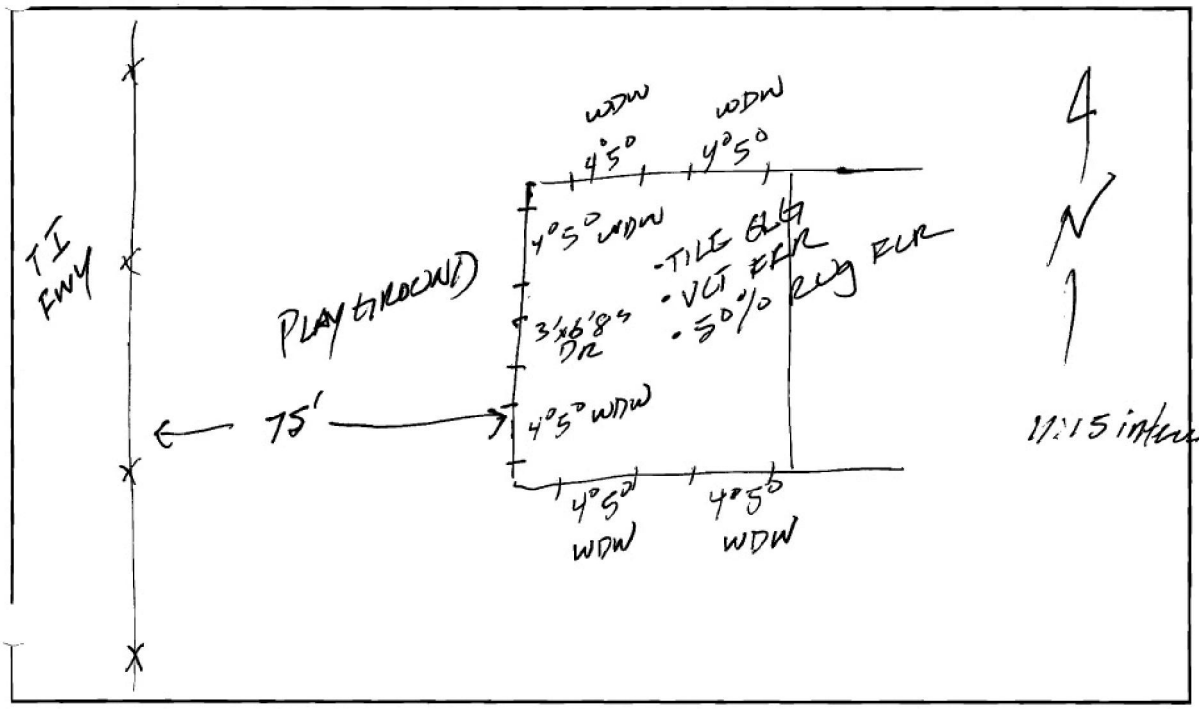
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
3:00 pm	4:00 pm	44.6	42.2	39.8	37.4	33.1	31.6	50.2	30.5	38.8	Traffic, kids playing INTERM
3:00 pm	4:00 pm	70.7	68.6	66.2	63.4	57.3	52.7	~~100.5~~ 74.9	24.9 51.5	64.9	EXTERIOR
											NR = 64.9 − 38.8 = 26.1 dB



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	2/11/08
Loc:	CABRILLO CHILD DEVELOPMENT Center 2205		
SLM:	**LD 870 System** #2 EXT, #4 INT	**SN:**	870A0342
Mic:		**SN:**	
P/A:		**SN:**	

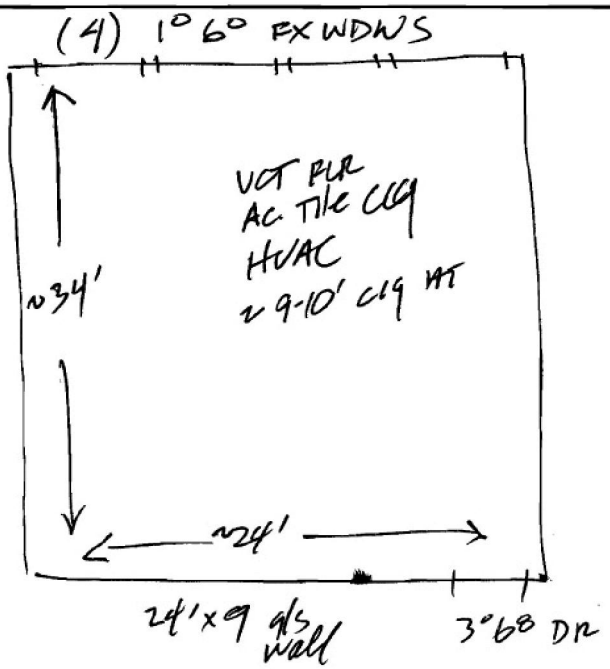
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
11:05	11:15	80.2	76.2	74.3	69.5	63.5	60.5	87.7	55.7	72.6	Traffic on TI Fwy
11:15	11:25	78.0	74.4	71.3	68.6	64.2	60.6	85.4	55.7	71.0	CHILDREN PLAYING
11:25	11:35	76.4	73.6	70.5	68.3	63.9	59.5	80.1	57.4	69.8	JET
11:35	11:45	80.3	76.4	72.3	69.6	65.4	63.1	84.0	60.9	72.3	
11:05	11:15	52.2	46.0	43.0	41.1	36.9	35.1	63.6	33.7	44.5	
11:15	11:25	60.6	53.7	43.4	40.1	35.2	32.4	66.9	31.7	49.5	
11:25	11:35	44.9	43.3	41.5	39.2	35.4	33.4	48.5	32.7	40.2	
11:35	11:45	50.1	45.2	42.0	40.0	36.4	34.2	61.2	33.6	43.7	



NOISE MONITORING FIELD DATA SHEET

Project:	SCIG	**Date:**	2/19/08
Loc:	CABRILLO H.S CLASSROOM 1128 4:30 pm		
SLM:		**SN:**	870A0340
Mic:		**SN:**	
P/A:		**SN:**	

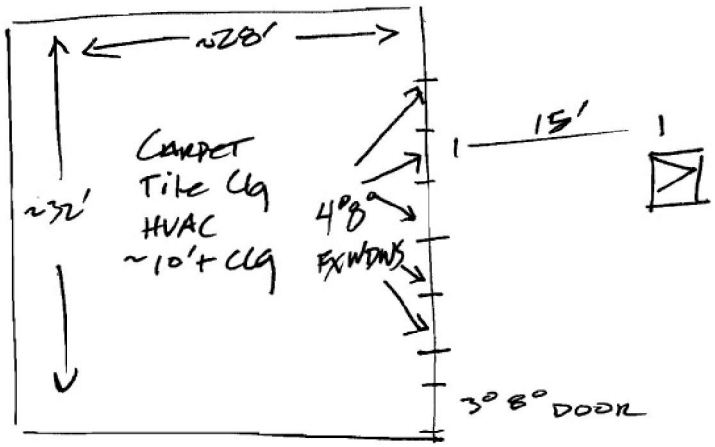
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
4:30pm		109.1	108.5	107.3	104.8	100.5	99.3	109.2	99.3	105.5	EXTERIOR
		62.0	61.9	61.6	61.2	60.3	60.3	62.0	60.3	61.1	INTERIOR
		39.8	34.9	32.7	31.0	29.3	28.6	43.0	28.6	32.7	AMBIENT



NOISE MONITORING FIELD DATA SHEET

Project:	SCIG	**Date:**	2/19/08
Loc:	HUDSON SCHOOL		
	CLASSROOM 52		
	NR TEST 4:00pm		
SLM:		**SN:**	870A0340
Mic:		**SN:**	
P/A:		**SN:**	

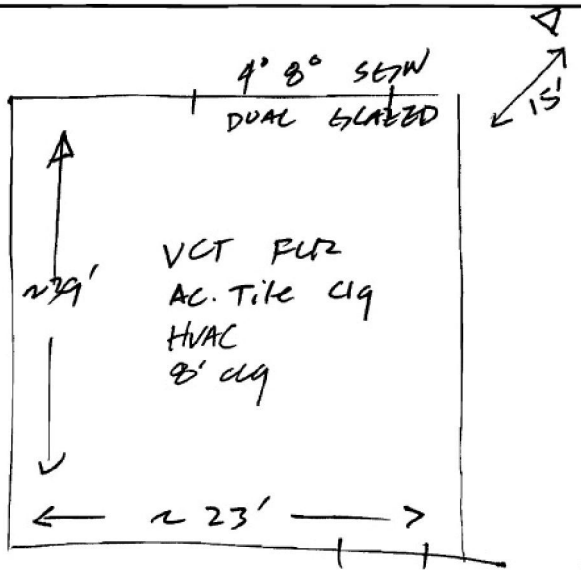
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
4:00pm		106.7	105.8	104.9	103.7	100.7	99.4	107.3	99.4	103.8	EXTERIOR
		73.9	73.5	72.4	69.9	67.5	66.3	73.9	66.3	70.8	INTERIOR
		40.8	39.0	37.6	~~38.4~~	~~37.2~~ 33.2	~~45.0~~	45.8	33.2	36.9	AMBIENT



NOISE MONITORING FIELD DATA SHEET

Project:	SCIG	**Date:**	2/19/08
Loc:	STEPHENS MIDDLE SCHOOL		
	CLASSROOM PC2		
	NR TEST		
SLM:		**SN:**	870A0340
Mic:		**SN:**	
P/A:		**SN:**	

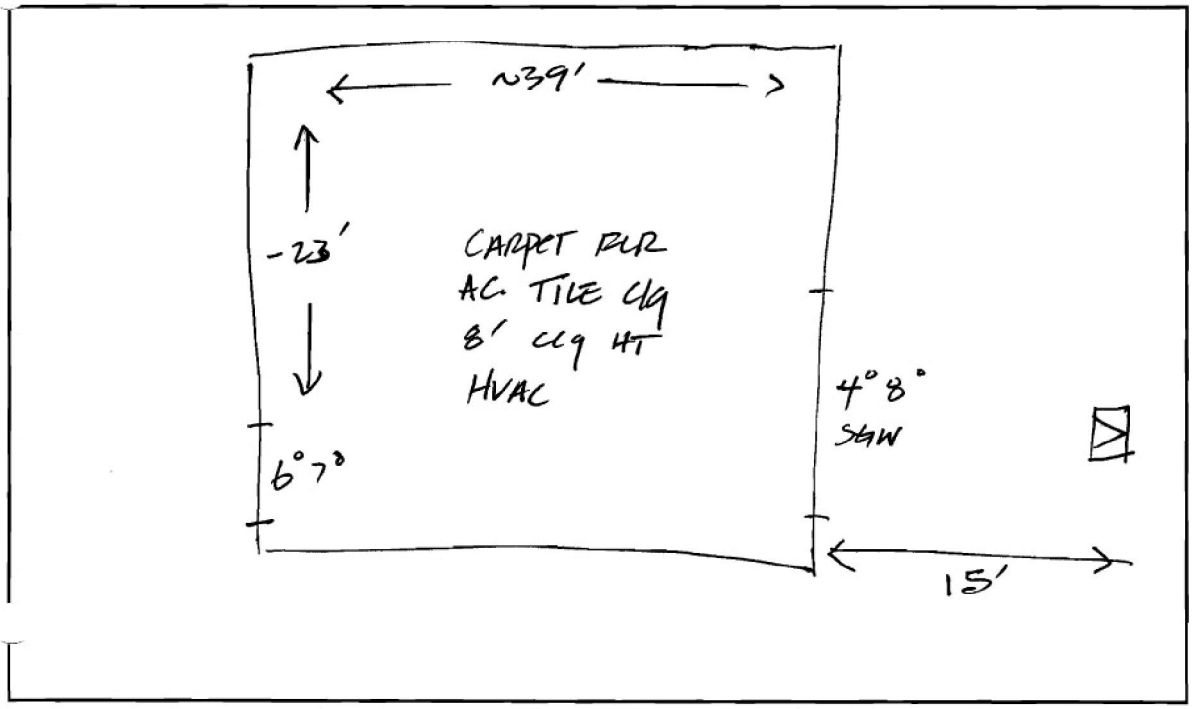
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
1:30pm		62.3	61.1	60.6	60.1	56.8	56.0	62.7	55.9	59.8	INTERIOR
		101.7	100.1	99.4	97.7	94.7	89.7	102.6	89.2	98.1	EXTERIOR
		37.9	34.5	32.0	29.6	27.5	27.2	41.2	22.2	31.4	AMBIENT



NOISE MONITORING FIELD DATA SHEET

Project:	SCIG	**Date:**	2/19/08
Loc:	WEBSTER SCHOOL		
	CLASSROOM B-48		
	NR TEST 3:15pm START		
SLM:		**SN:**	870A0340
Mic:		**SN:**	
P/A:		**SN:**	

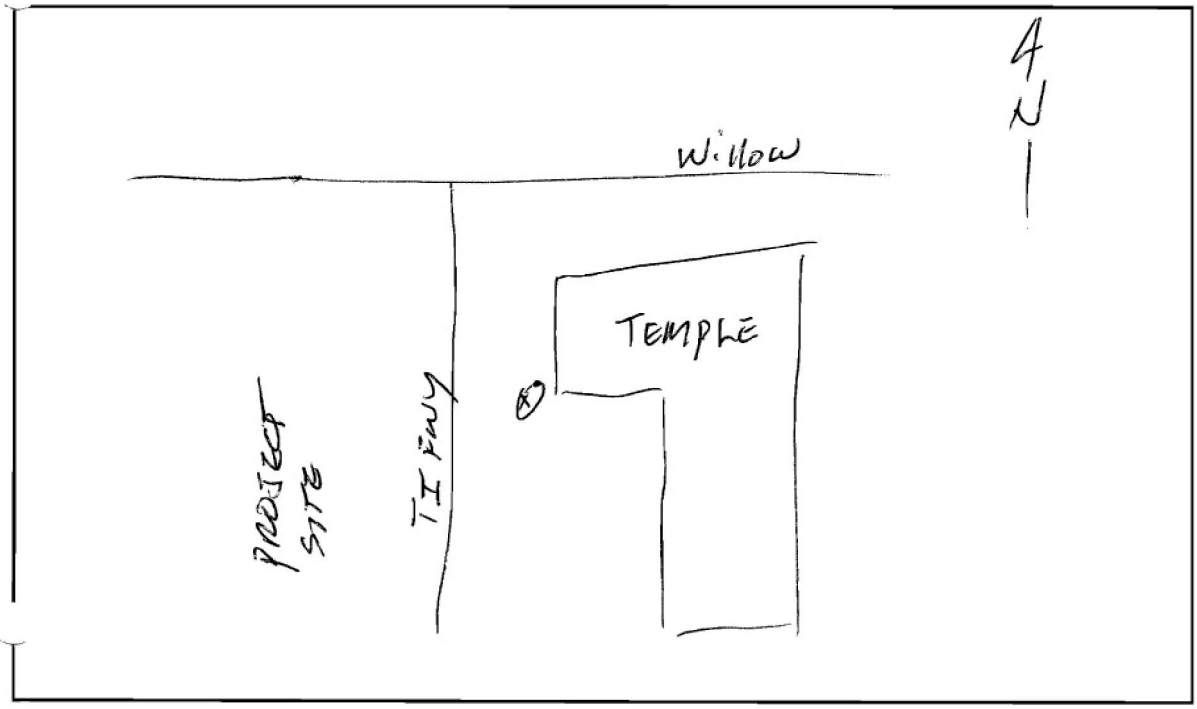
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
3:15pm		107.9	107.5	106.5	105.9	100.8	99.1	108.4	98.9	105.3	EXTERIOR
		68.4	67.9	67.2	66.6	65.5	65.2	68.4	65.2	66.7	INTERIOR
		39.9	35.9	30.8	29.6	27.8	27.2	43.0	27.2	31.9	AMBIENT



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/10/08
oc:	BUDDHIST TEMPLE		
	N2		
	24-HR		
SLM:	**LD 870 System** /	**SN:**	870A0340
Mic:		**SN:**	
P/A:		**SN:**	

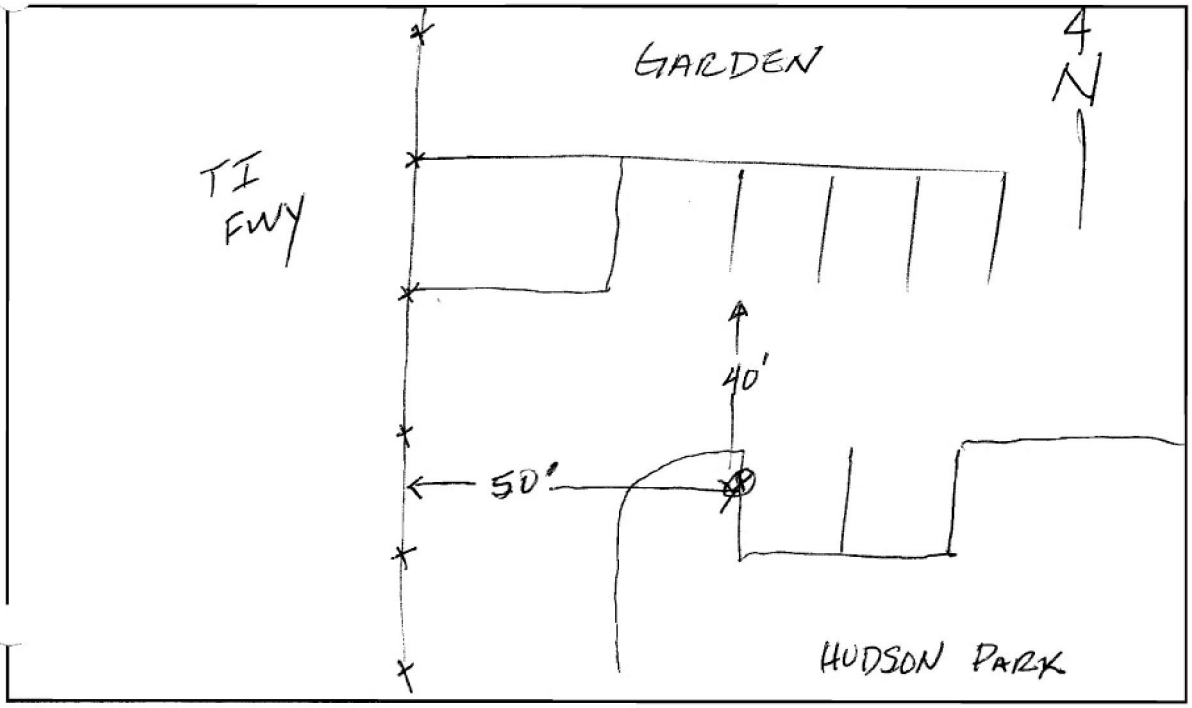
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
12:26											FWY TRFC TRUCKS



NOISE MONITORING FIELD DATA SHEET

Project:	SCIG	**Date:**	1/22/08
Loc:	HUDSON PARK N4		
SLM:	LD 870 System 4	**SN:**	870B1195
Mic:		**SN:**	
P/A:		**SN:**	

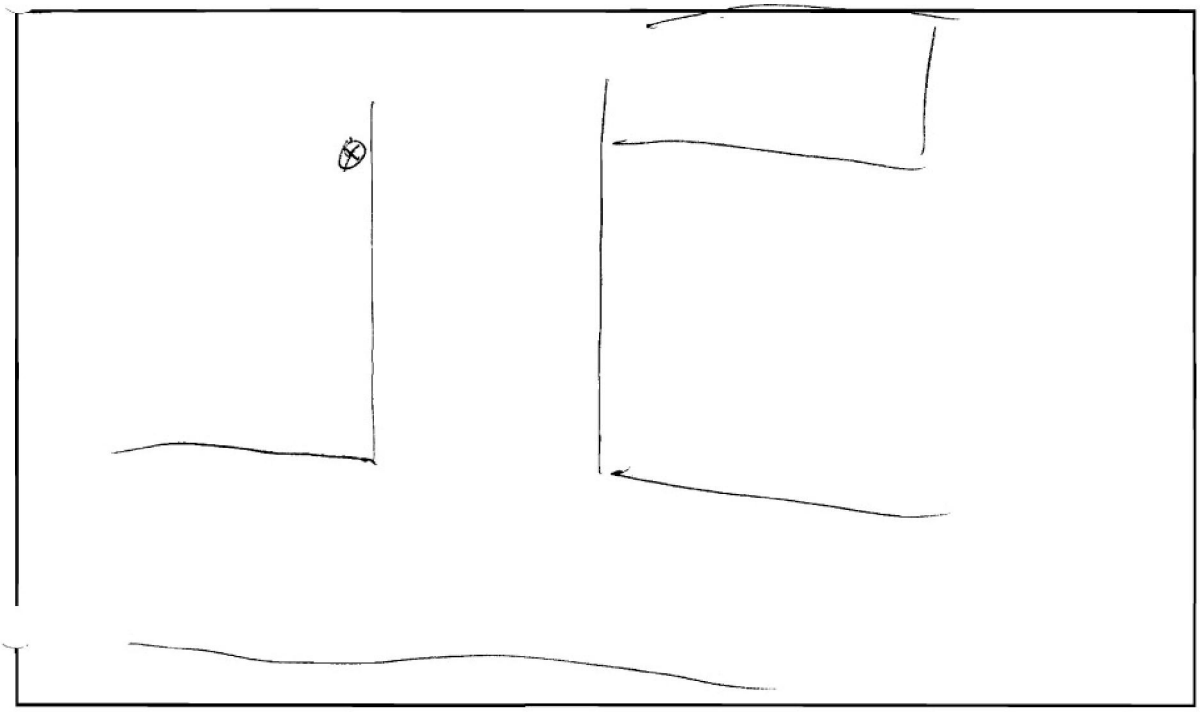
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:10AM		72.7	70.3	67.5	64.1	55.7	50.3	74.7	49.5	66.1	Traffic, Train
12:05pm		72.8	70.8	67.7	64.5	56.3	51.0	85.8	50.0	67.1	Traffic, Train
4:00pm		72.5	70.6	68.2	65.3	58.3	55.2	76.2	52.5	66.8	Traffic, Birds



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/17/08
oc:			
	CERVERA ST		
	NB		
SLM:	**LD 870 System**	**SN:**	870A0338
Mic:		**SN:**	
P/A:		**SN:**	

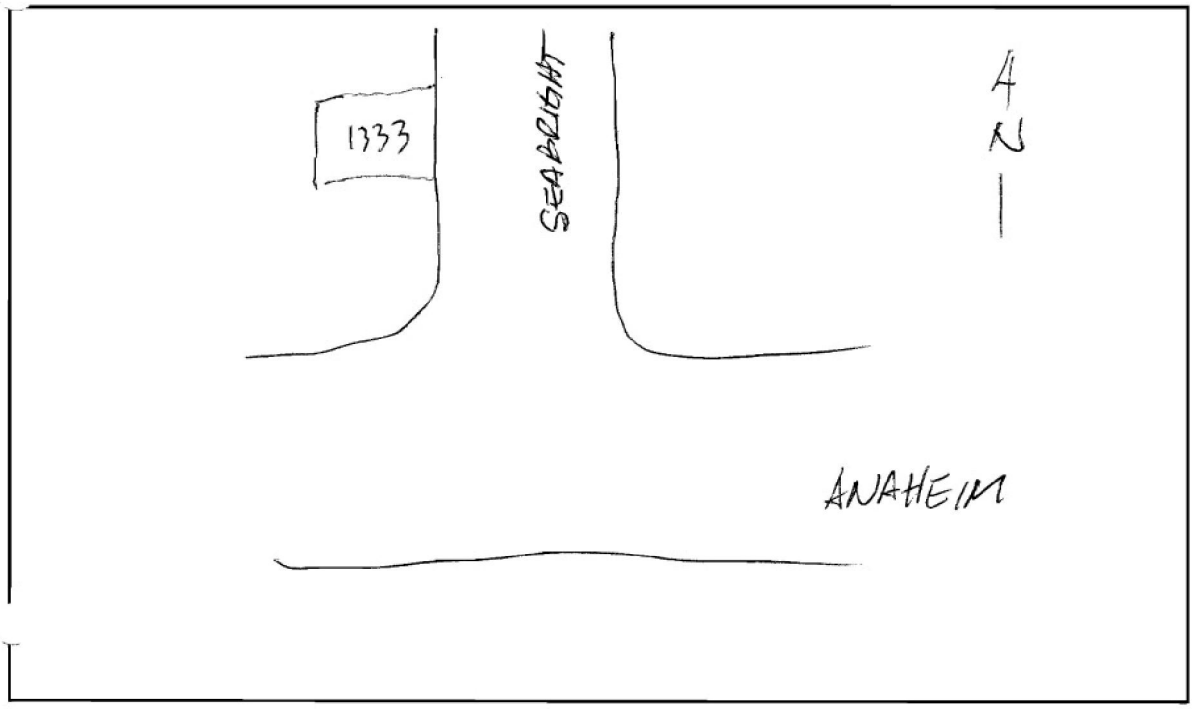
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
10:30	AM	70.8	68.8	67.3	65.2	62.2	60.3	79.9	59.7	66.4	TRUCK Traffic, INDUSTRIAL ACTIVITY
1:05	pm	84.1	79.1	69.7	63.6	57.3	55.3	87.6	54.9	73.4	Truck Traffic,
5:00	pm	70.4	68.1	64.8	61.4	57.2	56.5	72.5	55.9	63.8	Truck Traffic, Train



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/17/08
Loc:	1333 SEABRIGHT AVE		
	N9		
SLM:	LD 870 System 4	**SN:**	870B1195
Mic:		**SN:**	
P/A:		**SN:**	

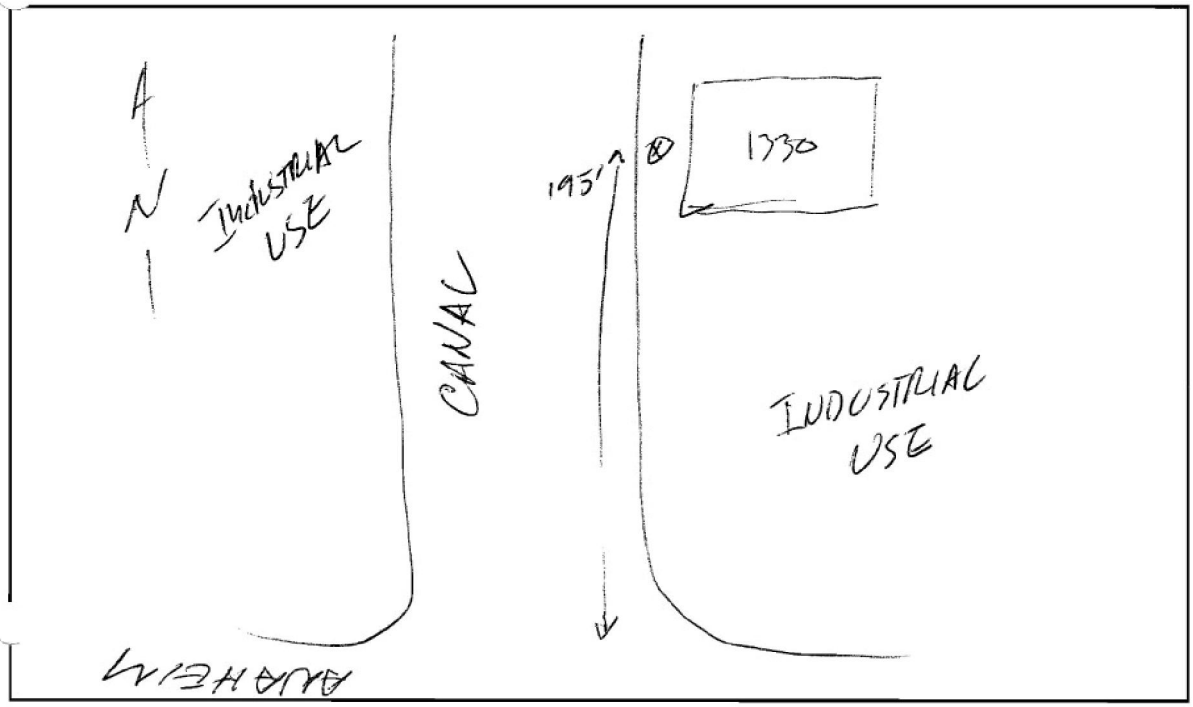
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
10:10 pm		71.9	62.3	58.4	56.6	53.2	52.3	81.5	51.5	62.7	Traffic Noise, industrial activity
12:48 pm		68.1	63.3	60.6	58.8	56.6	54.1	93.3	53.0	66.4	Traffic noise, industrial activity, birds airplane, train
4:42 pm		70.3	66.3	62.8	60.6	58.3	56.7	81.8	55.2	64.1	Industrial noise, traffic noise, radio,



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/17/08
Loc:	1330 CANAL ST N90		
SLM:	**LD 870 System** 4	**SN:**	870A0338
Mic:		**SN:**	
P/A:		**SN:**	

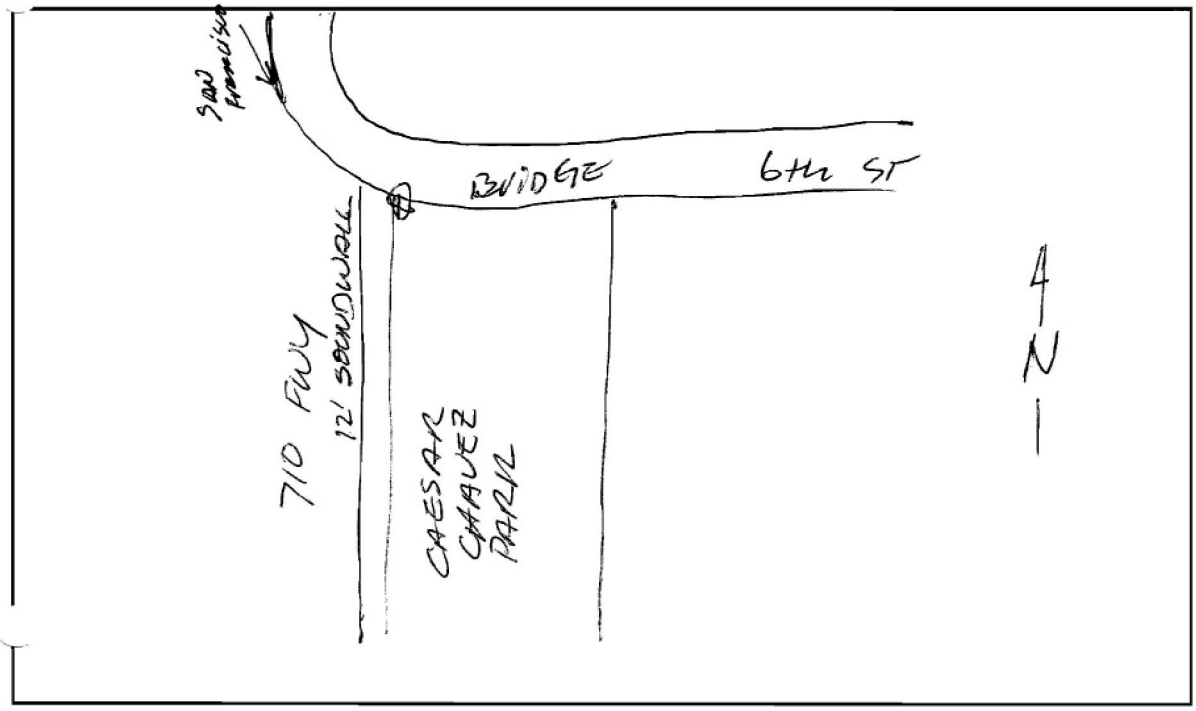
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:40am		71.7	68.2	65.6	63.2	59.2	55.4	89.2	54.5	66.5	Industrial noise, Traffic
12:27pm		74.6	70.6	67.4	65.2	60.0	54.7	80.0	53.5	67.1	Industrial noise, Traffic,
4:20pm		76.6	73.2	69.9	67.3	61.6	56.3	80.2	54.2	69.4	Industrial noise, Traffic,



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/15/08
Loc:	CAESAR CHAVEZ PARK		
	N11		
SLM:	**LD 870 System** 4	**SN:**	870A0338
Mic:		**SN:**	
P/A:		**SN:**	

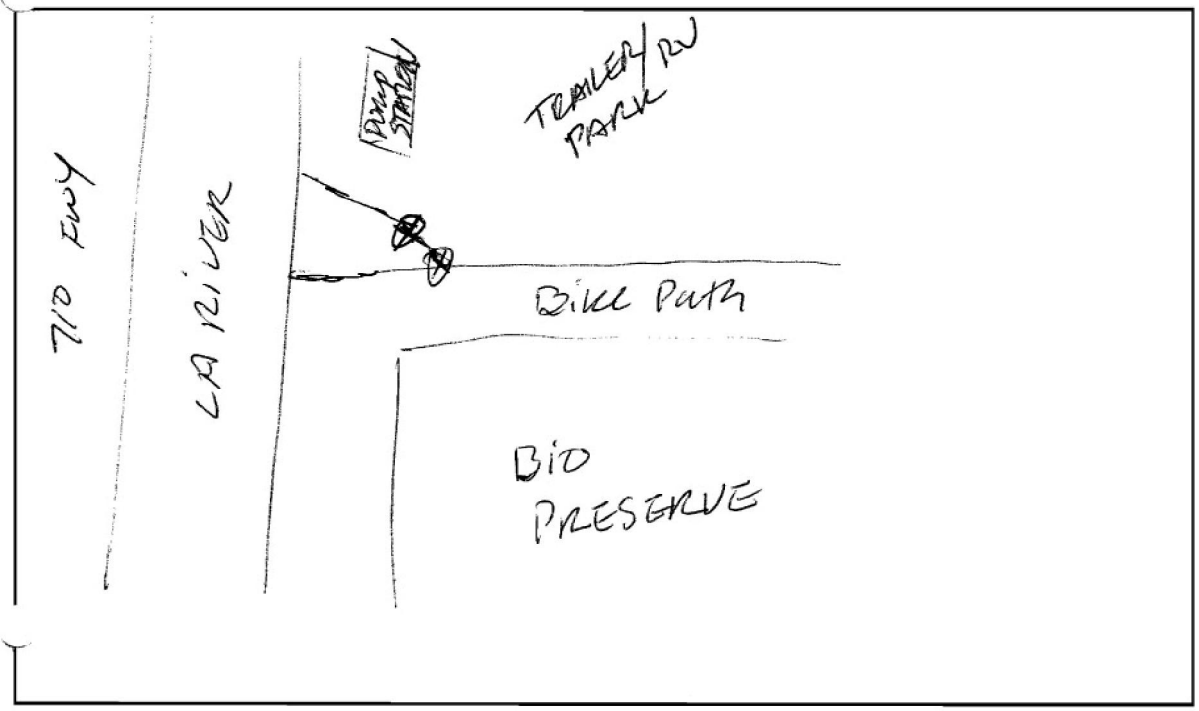
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
10:00pm		67.0	65.7	63.7	62.0	57.0	53.7	69.2	52.5	62.6	Traffic on 710, 6th Street, Aircraft
1:25pm		67.5	65.7	64.6	62.7	59.5	57.3	70.7	56.8	63.2	710 Traffic, Aircraft
5:01pm		69.3	67.5	66.3	65.3	63.0	60.0	78.8	58.9	65.7	710 Traffic, children playing



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/15/08
Loc:	BIO PRESERVE		
	N/2		
SLM:	**LD 870 System** 4	**SN:**	870A0338
Mic:		**SN:**	
P/A:		**SN:**	

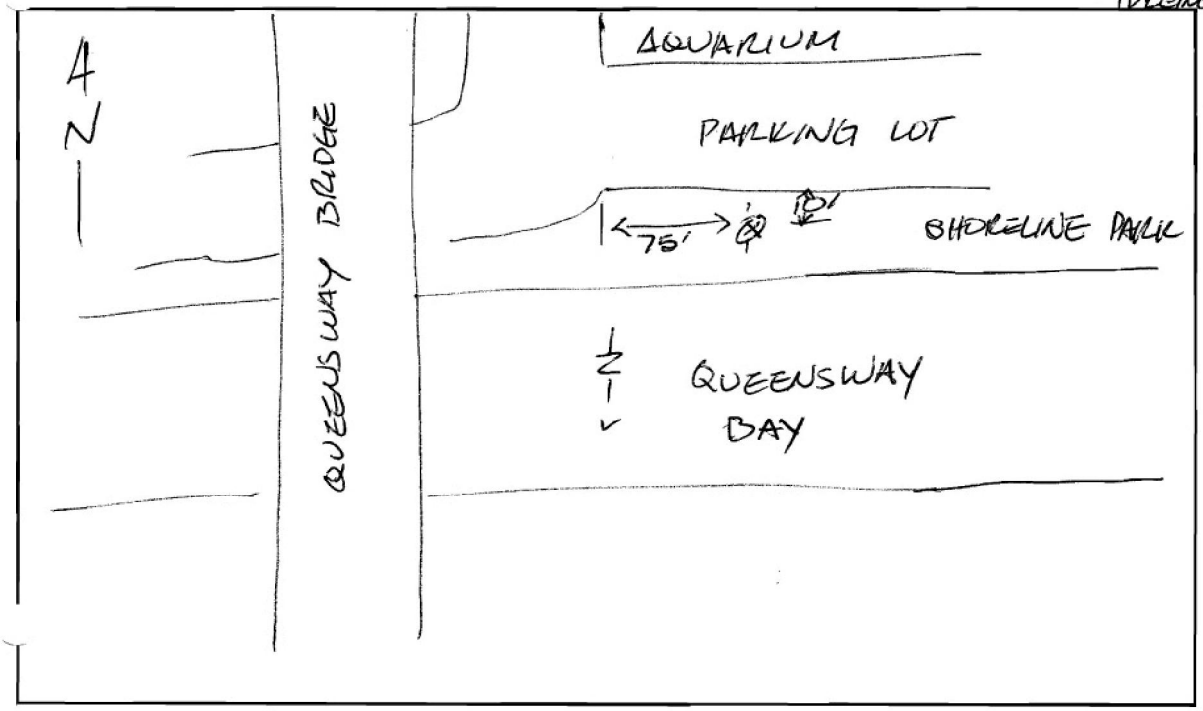
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:37 am		59.0	57.5	55.8	54.9	53.2	52.0	61.7	51.5	55.4	Truck Traffic, Birds
12:55 pm		59.5	58.7	57.4	56.2	54.3	53.4	61.3	52.4	56.6	Truck traffic,
4:37 pm		66.2	60.7	58.8	57.5	56.0	54.2	72.4	53.7	59.2	Truck Traffic, RV Park, Helicopter



NOISE MONITORING FIELD DATA SHEET

Project:	SCIG	**Date:**	1/10/08
oc:	PIER POINT LANDING/PARK		
	SHORELINE PARK		
	N13		
SLM:	LD 870 System 4	**SN:**	870A0342
Mic:		**SN:**	
P/A:		**SN:**	

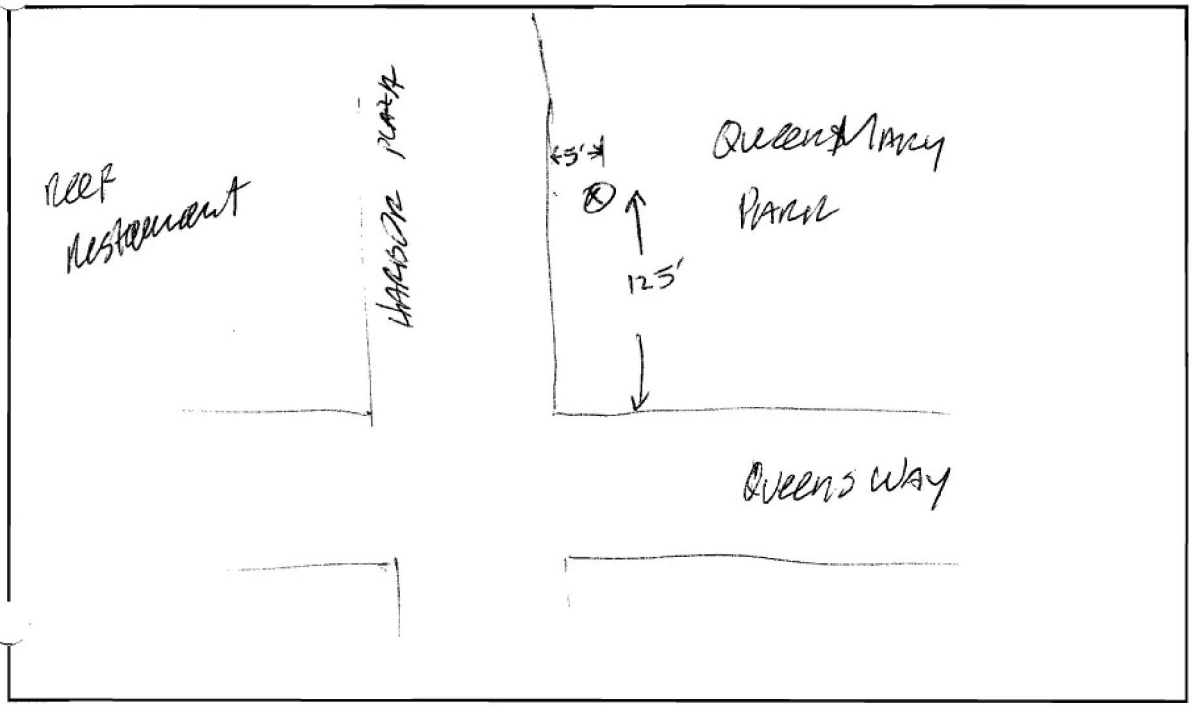
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
10:25 AM		63.6	58.9	56.8	55.5	53.9	52.5	68.7	52.2	56.9	AQUARIUM P/A, BIRDS, DISTANT TRAFFIC, Helicopter, AIRCRAFT
1:30 pm		62.4	58.4	56.4	55.4	54.0	53.4	66.4	52.9	56.4	BIRDS, PARKING LOT VEHICLES, DISTAN TRAFFIC, G/A FLYOVER
4:45 pm	5:0	72.1	72.3	70.6	54.9	53.3	52.5	72.5	51.7	66.3	BIRDS, LOCAL TRFC, PARKING LOT, TRUCK IDLEING



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1-15-08
Loc:	Queen Mary Park N 14		
SLM:	**LD 870 System** 4	**SN:**	870A0338
Mic:		**SN:**	
P/A:		**SN:**	

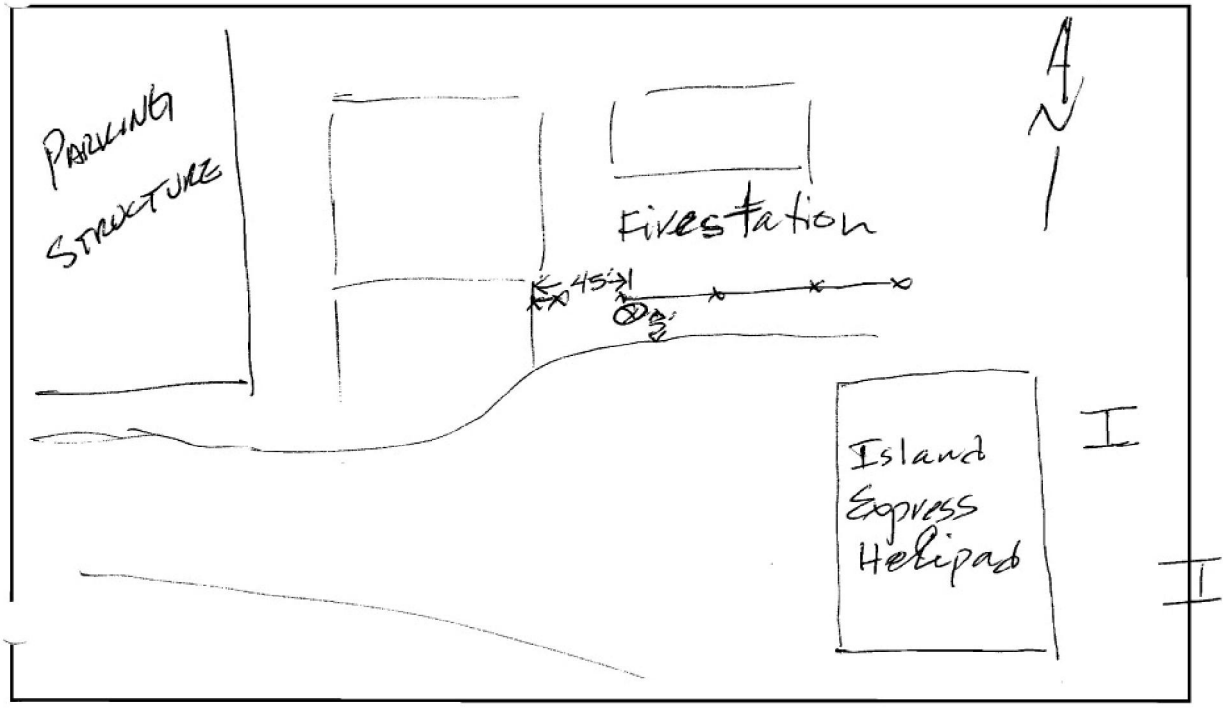
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:10pm		73.2	69.7	67.3	65.3	59.4	52.7	78.8	51.4	66.5	Truck Traffic, Helicopter
12:35pm		71.4	67.7	65.2	62.4	57.7	55.2	76.1	54.2	64.3	Truck Traffic, People Talking, Airplane
4:13pm		72.3	70.0	67.9	66.3	62.7	58.8	80.7	56.5	67.3	Truck Traffic, Bus



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/10/08
Loc:	Firestation 6		
	NLS		
SLM:	**LD 870 System** 4	**SN:**	870A0338
Mic:		**SN:**	
P/A:		**SN:**	

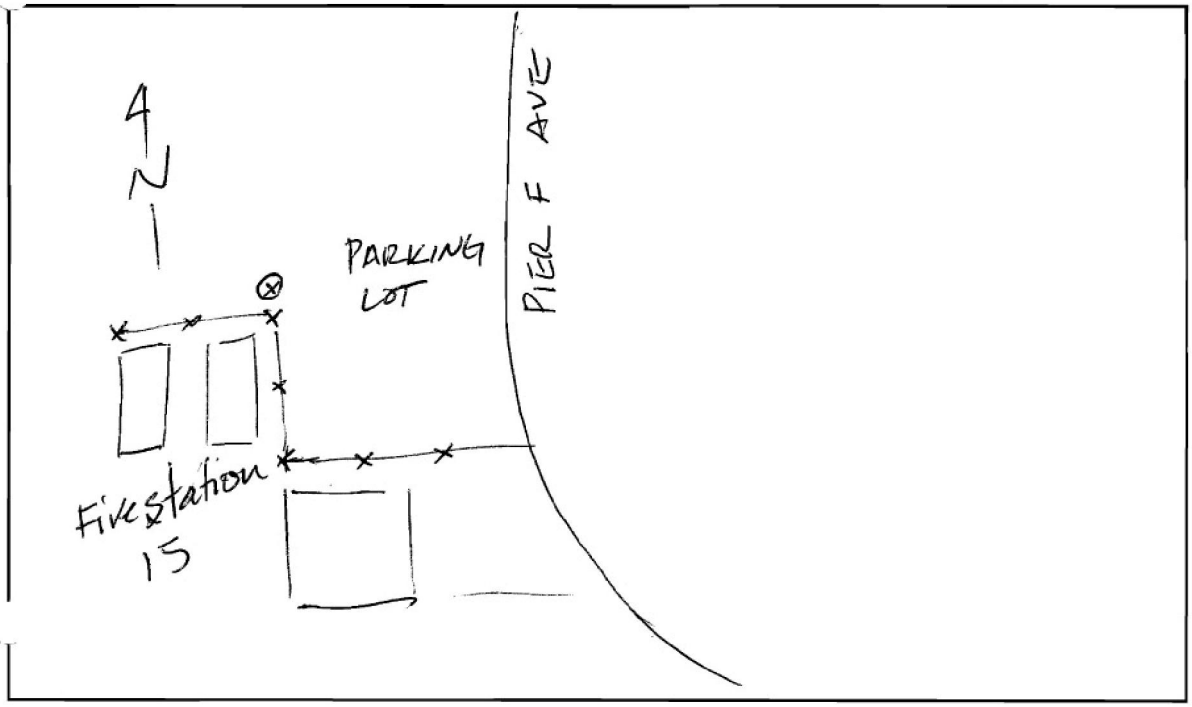
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:30am	9:37am							85.8		75.4	Helicopter SEL 101.7
9:37		64.9	63.7	61.8	59.9	57.0	54.5	66.0	54.5	60.7	Hwy TVLs on Queens Way
1:05pm											
1:05pm		73.3	65.0	62.9	61.5	58.8	54.1	77.4	53.8	63.9	Traffic on Queens Way
											Distant Aircraft,
											Fire TVLs
4:20pm		80.6	73.6	66.5	63.3	60.1	58.1	85.3	57.3	70.4	TVaffic on Queens Way,
											Aircraft, Helicopter



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG** **Date:**	1/10/08
Loc:	Firestation 15 @ PIER F AVE N16	
SLM:	**LD 870 System** 4 **SN:**	870B1195
Mic:	**SN:**	
P/A:	**SN:**	

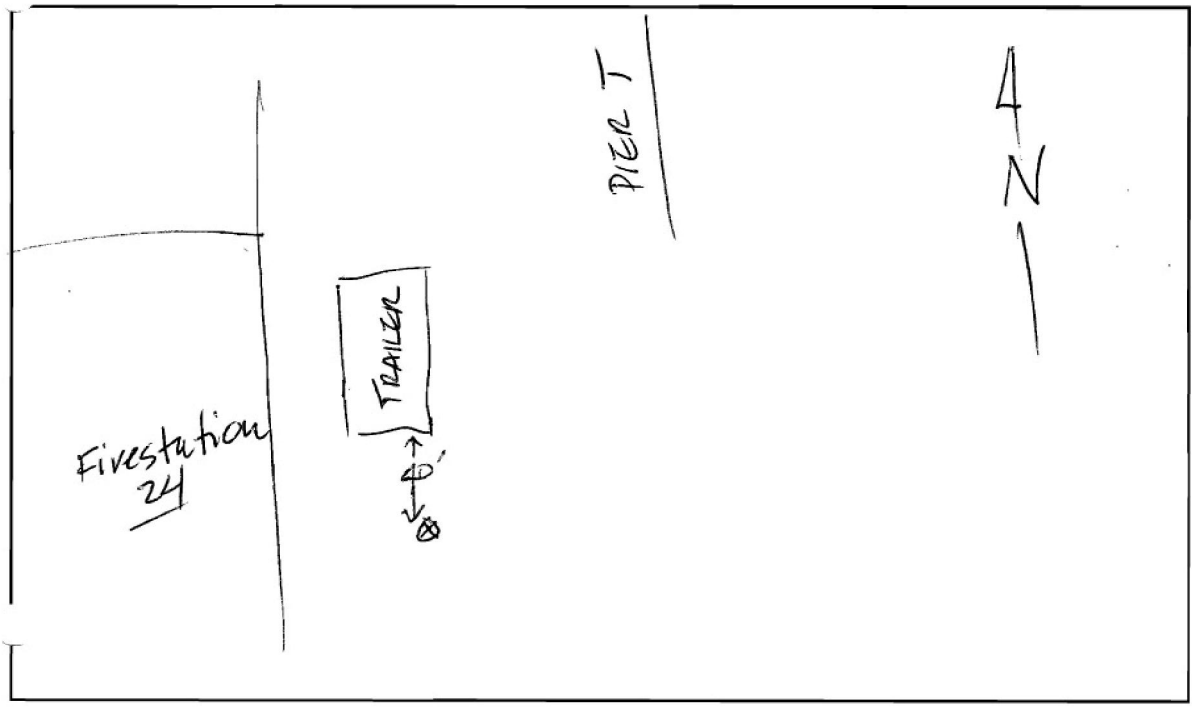
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:57am		64.6	62.1	59.6	57.8	55.3	54.0	70.0	53.6	59.1	Hvy Truck Trfc
12:38pm		65.3	63.5	60.9	58.8	55.8	54.8	69.2	54.2	60.1	Hvy Truck Trfc,
											SEAGULLS, PEOPLE
											TALKING, BOAT
3:55pm		64.9	62.9	60.4	58.4	55.1	53.5	70.9	52.6	59.7	Hvy Truck Trfc,
											DISTANT TRAIN HORN
											Aircraft, Birds
											Helicopter



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1-11-08
Loc:	Firestation 24 N17		
SLM:	**LD 870 System** 4	**SN:**	870A0342
Mic:		**SN:**	
P/A:		**SN:**	

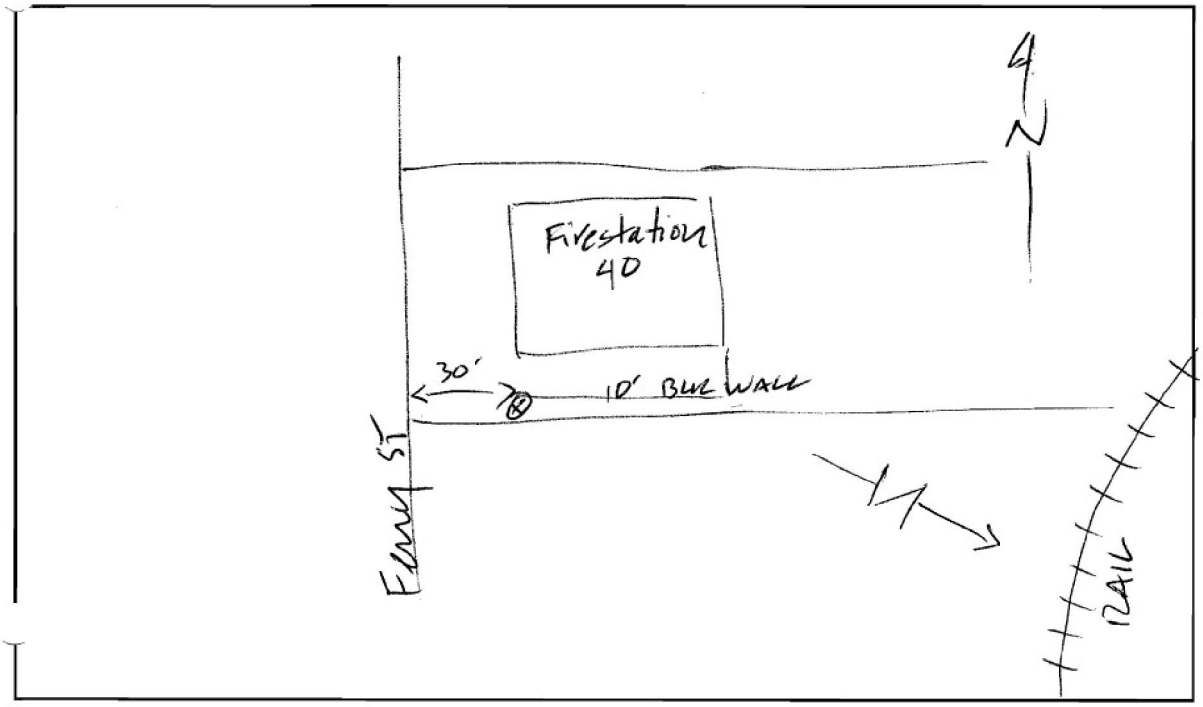
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:41 AM		66.4	62.1	59.5	58.5	57.0	56.4	76.1	55.7	60.2	Distant Traffic,
											Ship generators
											Fire Truck
1:05 PM		67.5	61.0	58.9	57.6	56.0	55.1	70.9	54.3	59.5	Ship Generators, Train H
											BACK UP BEEPER, Airp
											Distant Traffic, Helicopter
4:53		64.1	61.5	60.0	58.6	56.9	56.0	66.1	55.6	59.3	Ship Generators/HORN
											Fire Station, Trains Horn,
											Distant Traffic



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1-11-08
Loc:	Firestation 210 @ Ferry St. N/B		
SLM:	**LD 870 System** 4	**SN:**	870A0342
Mic:		**SN:**	
P/A:		**SN:**	

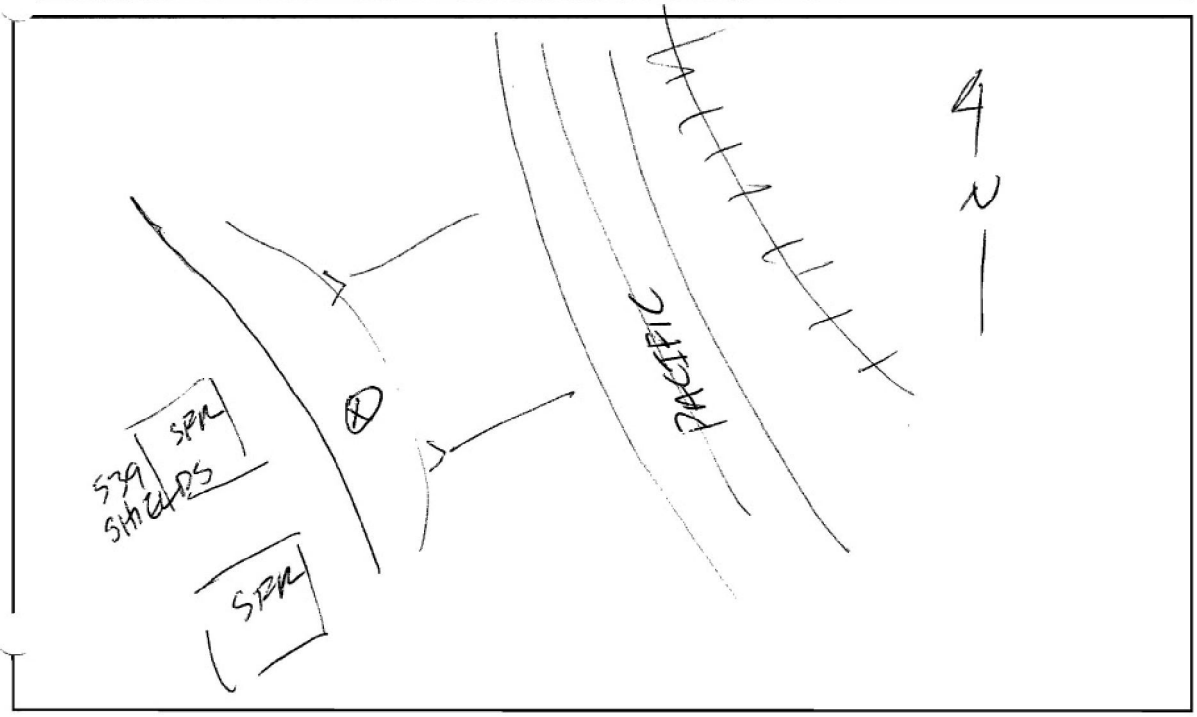
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:15 am		79.0	72.1	73.1	69.0	62.4	58.6	83.8	56.6	72.2	Traffic on Ferry Train Locomotive + RAIL/WHEEL SOURCE P/A
12:35 pm		78.4	73.7	69.9	66.0	57.7	54.1	85.4	52.8	69.0	Traffic, LAFD SIREN
4:29 pm		77.4	74.7	70.1	65.6	57.1	52.4	87.2	51.7	70.0	Traffic on Ferry



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/14/08
Loc:	539 SHIELDS DRIVE N/O		
SLM:	**LD 870 System** 3	**SN:**	870A0340
Mic:		**SN:**	
P/A:		**SN:**	

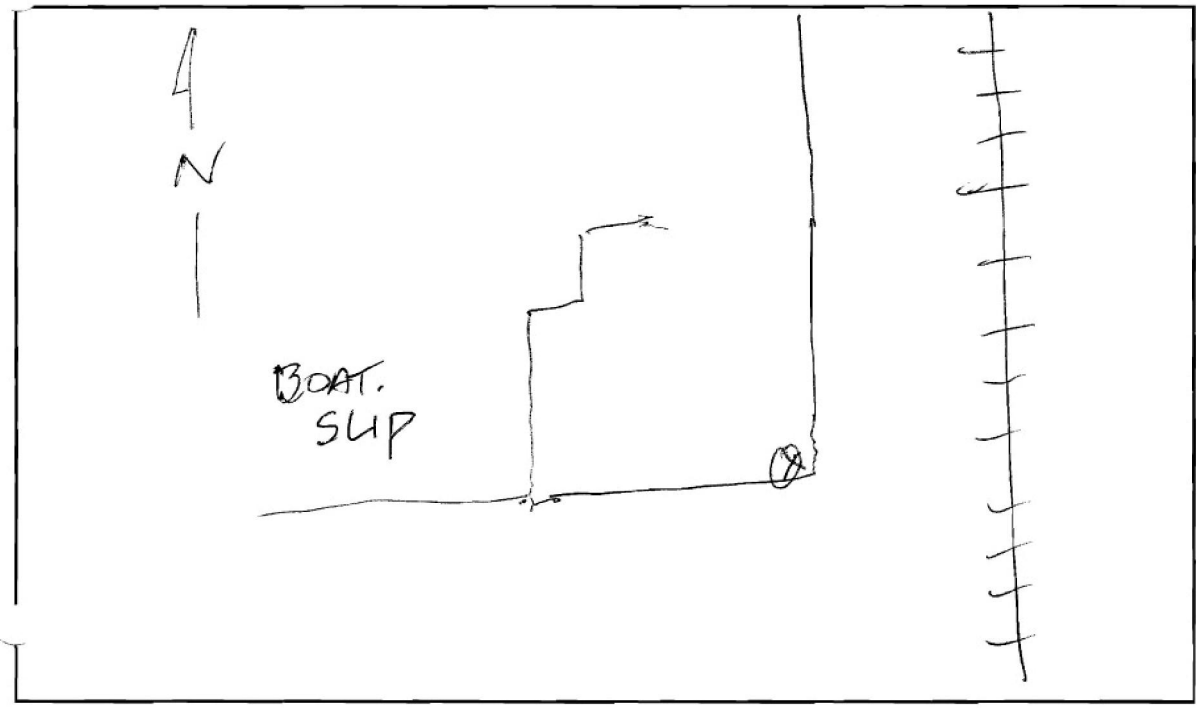
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
12:00pm											



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	11/18/08
Loc:	LEEWARD BAY MARINA N 20		
SLM:	**LD 870 System 4**	**SN:**	870A0342
Mic:		**SN:**	
P/A:		**SN:**	

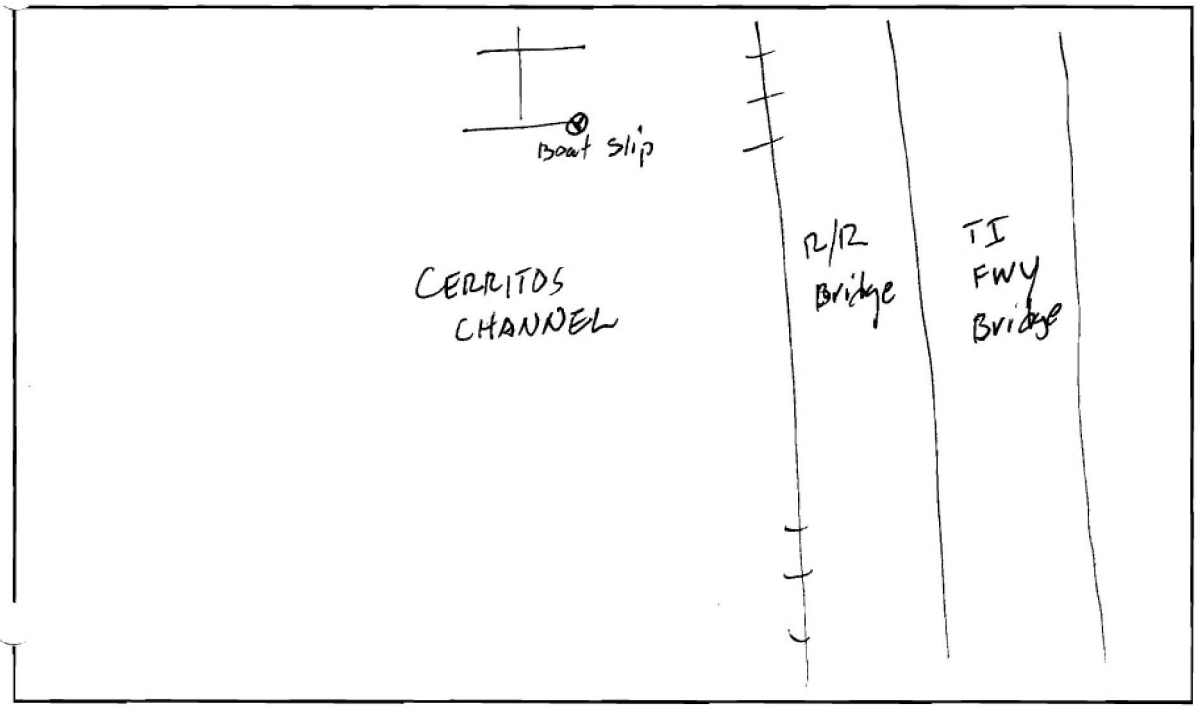
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
12:00pm											



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/15/08
Loc:	ISLAND YACHT MARINA		
	N21		
	24-HR		
SLM:	**LD 870 System** 4	**SN:**	870A0342
Mic:		**SN:**	
P/A:		**SN:**	

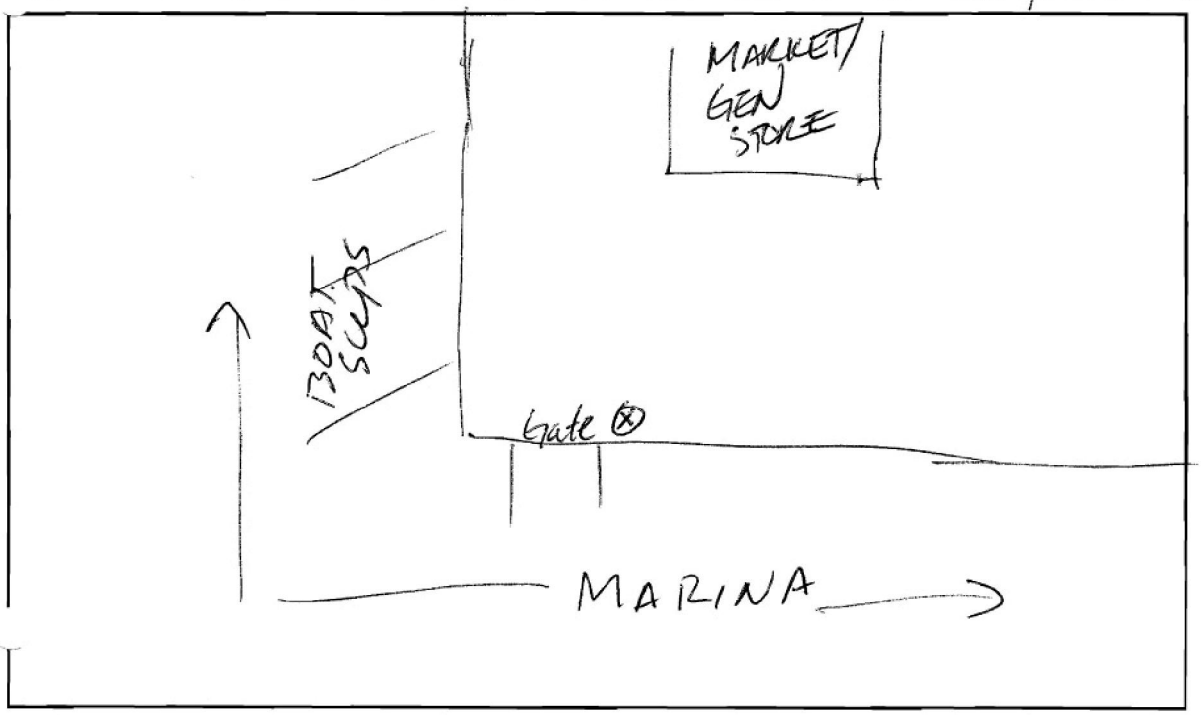
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
12:00pm											



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1-11-08
Loc:	PENINSULA Rd MARINA N22		
SLM:	**LD 870 System**	**SN:**	870A0342
Mic:		**SN:**	
P/A:		**SN:**	

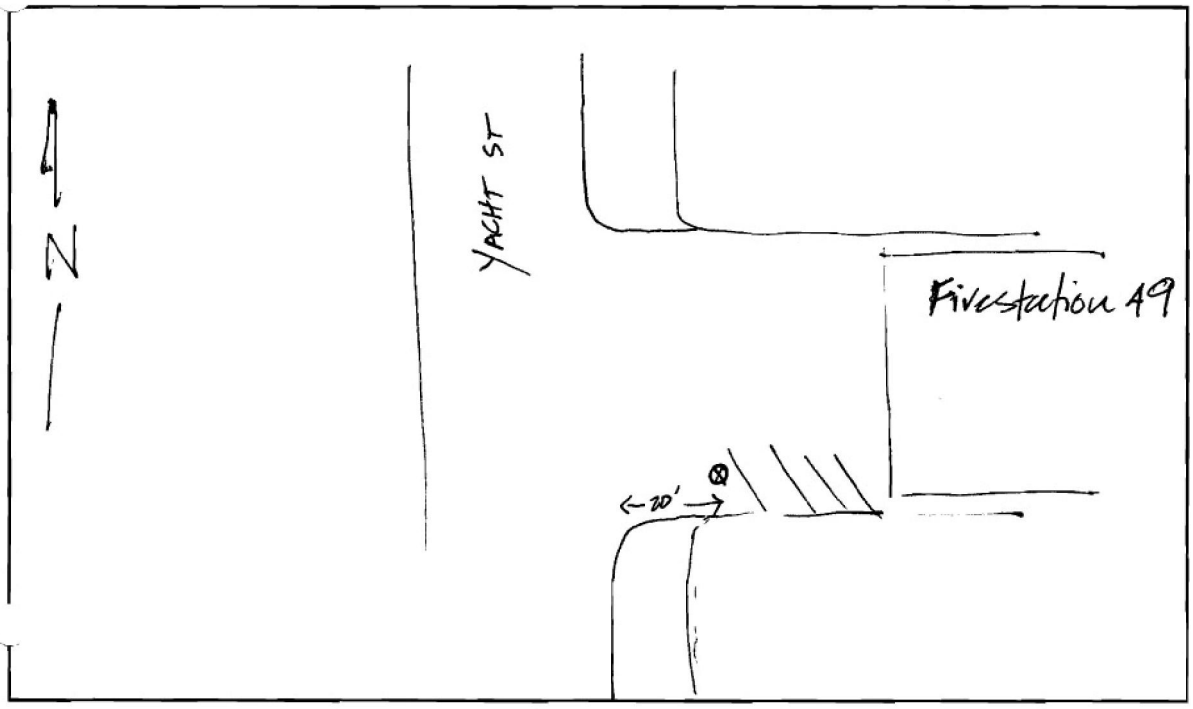
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
10:14 pm		57.5	54.6	53.2	52.2	51.1	50.6	66.3	50.2	53.1	Port Ops, Birds Local Traffic
1:33 pm		64.4	60.1	58.2	57.4	56.2	55.5	72.5	55.1	58.7 ~~58.7~~	Port Ops, Live Aboard Activities,
4:00 pm		64.0	59.9	55.6	54.4	52.5	51.7	72.2	51.4	56.7	Port Ops, Local traffic, Live Aboard Activities, Train Horn, Airplane, birds



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1-16-08
Loc:	Fivestation 49 - YACHT ST N23		
SLM:	**LD 870 System** 4	**SN:**	870A0340
Mic:		**SN:**	
P/A:		**SN:**	

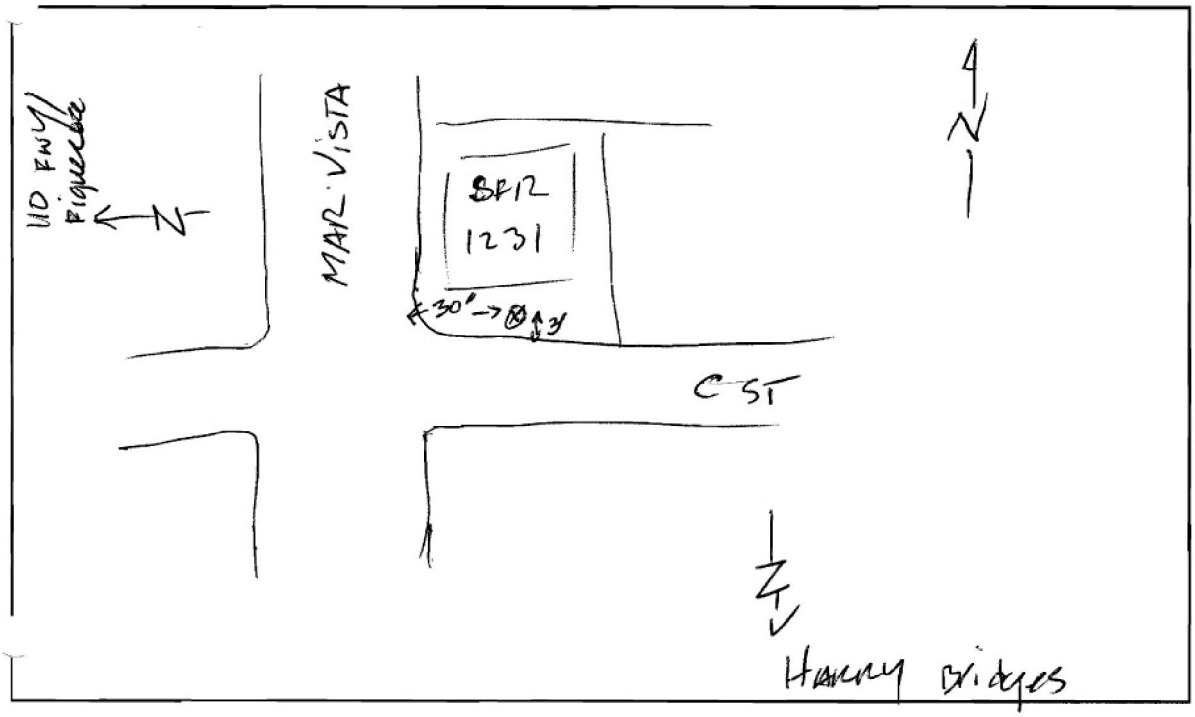
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:19 am		68.4	60.3	56.9	55.8	52.9	51.6	77.7	51.1	58.7	INDUSTRIAL Noise, Local traffic, Train Horn
12:00 pm		62.6	55.6	51.3	50.3	48.6	46.9	72.5	46.0	54.0	INDUSTRIAL Noise, Fire P/A Local traffic, Train Horn Birds
4:01 pm		57.1	55.0	53.9	53.4	52.5	52.1	59.7	51.7	53.7	INDUSTRIAL NOISE, TRAIN HORN, Birds, Traffic



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1-8-08
Loc:			
	1231 C STREET		
	N24		
SLM:	**LD 870 System** 4	**SN:**	870B1195
Mic:		**SN:**	
P/A:		**SN:**	

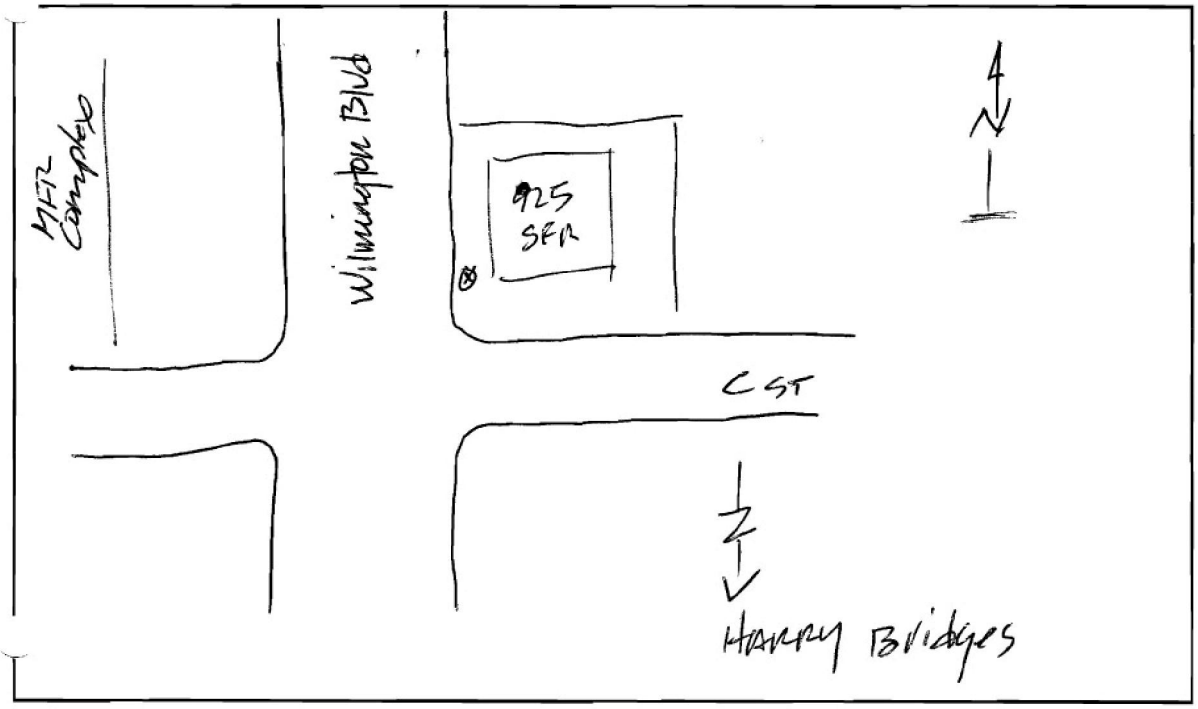
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:39 AM		64.4	61.7	59.9	58.9	56.9	54.7	68.4	54.1	59.5	TRUCK Traffic on Figueroa, Harbor Bridges, 110 Fwy, Birds, TRAPAC
12:00 PM		69.9	64.8	61.6	60.0	57.7	56.2	74.8	83.3	63.6	Truck Traffic, TRAPAC, LT Aircraft
4:10 PM		67.0	64.5	63.1	62.1	60.4	59.0	74.1	58.5	62.7	Truck Traffic, TRAPAC, Local traffic



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1-8-08
Loc:			
	925 West C ST		
	N24A		
SLM:	**LD 870 System**	**SN:**	870B1195
Mic:		**SN:**	
P/A:		**SN:**	

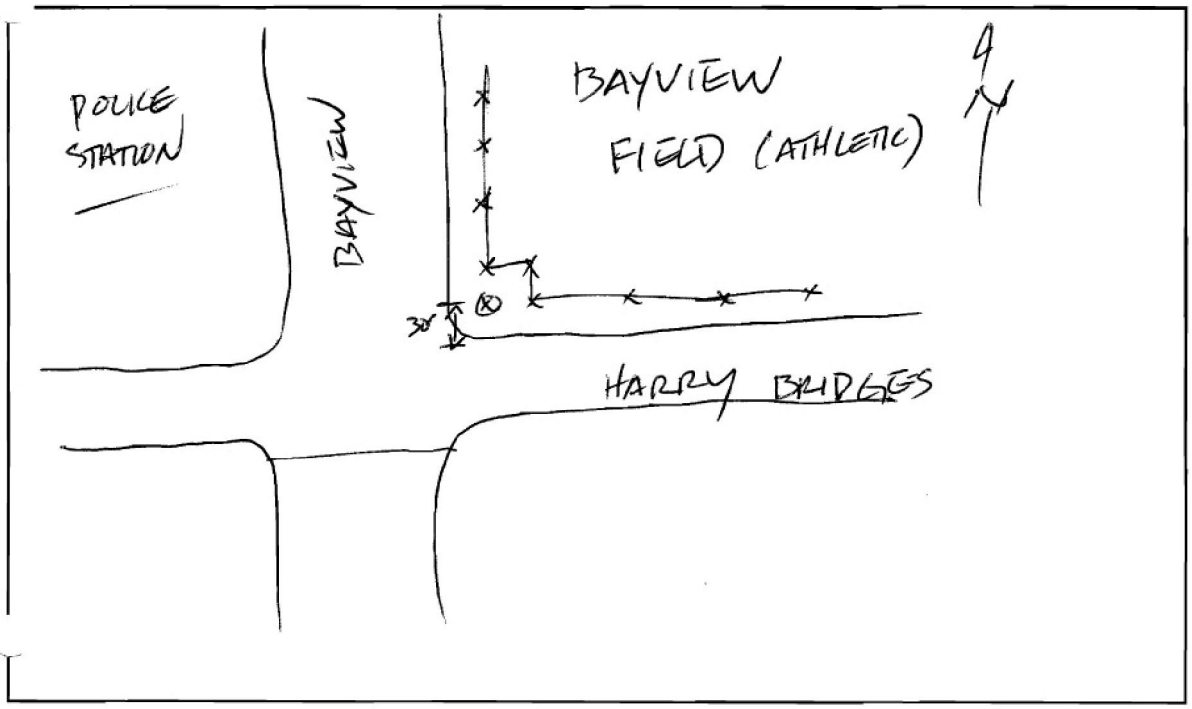
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
10:00am		72.5	65.9	60.6	57.6	54.2	52.0	81.7	50.7	63.3	Local Traffic, Hvy Trucks on Ft. Bridge Lt Aircraft, Garbage Collection
12:25pm		73.4	68.4	62.5	58.9	55.5	54.0	78.9	53.2	64.0	Local Traffic, TRAPAC Hvy Trks @ Ft. Bridges
4:30pm		70.4	66.9	63.2	61.1	57.6	55.4	75.8	54.1	63.2	Local Traffic, TRAPAC, Train



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1-8-08
Loc:			
	BAYVIEW FIELD N24B		
SLM:	**LD 870 System**	**SN:**	870B1195
Mic:		**SN:**	
P/A:		**SN:**	

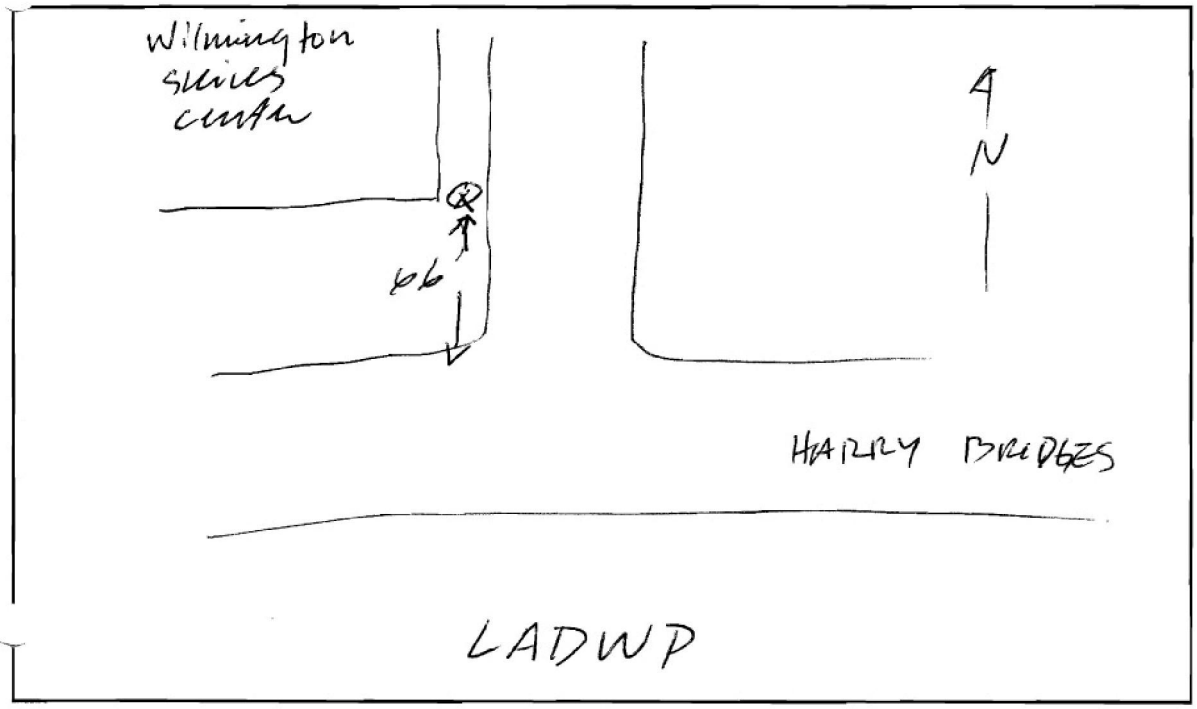
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
10:23am		79.1	76.2	72.4	67.7	59.4	54.0	82.5	53.1	71.4	Traffic on Hi Bridges
12:55pm		78.5	76.7	73.2	68.5	59.2	55.6	84.5	54.6	71.8	Traffic on Hi Bridges TRAPAC
4:50pm		77.6	75.4	72.2	69.7	62.4	57.6	79.4	55.5	71.2	Traffic on Hi Bridges, TRAPAC



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/14/08
Loc:	WILMINGTON SKILLS CENTER N25 217 N. ISLAND		
SLM:	**LD 870 System** 4	**SN:**	870A0338
Mic:		**SN:**	
P/A:		**SN:**	

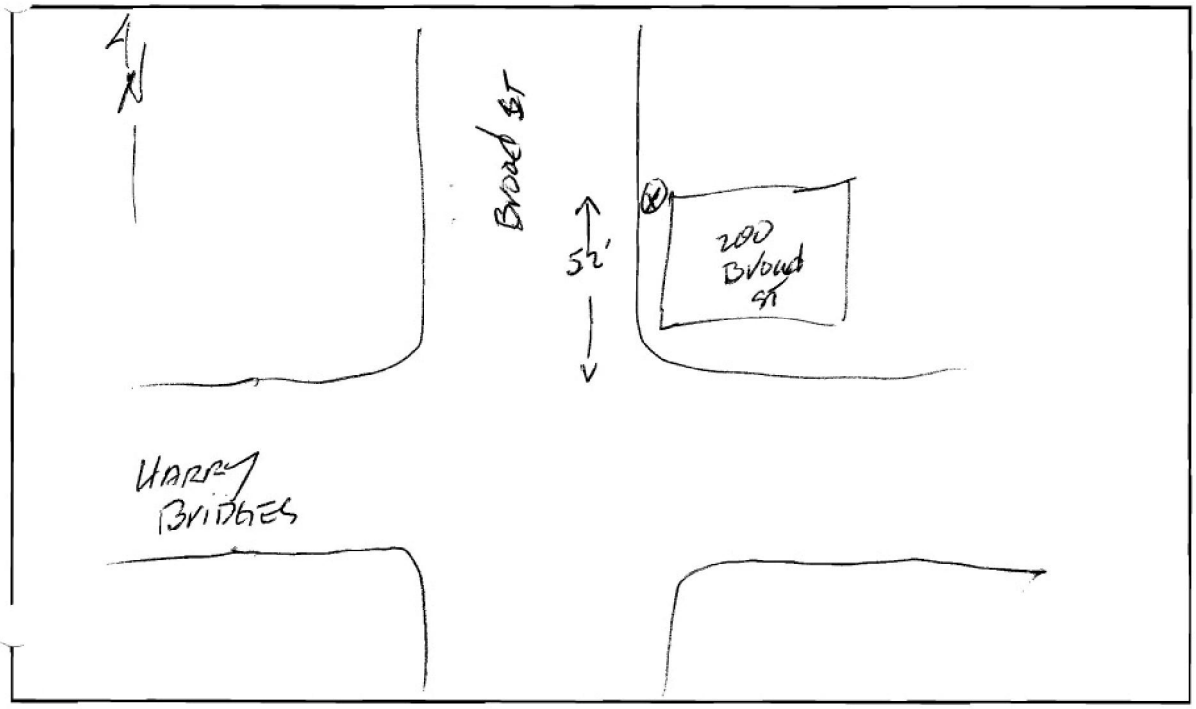
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:35am		74.7	72.2	68.3	64.9	60.0	57.4	86.7	56.6	68.0	TRUCK TRAFFIC, SKILLS CENTER
11:35AM		76.2	72.7	68.9	65.2	59.7	57.0	91.9	56.4	71.6	TRUCK TRAFFIC
4:05PM		76.7	73.8	70.4	67.7	63.9	58.0	86.3	57.2	70.2	TRUCK TRAFFIC



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/16/08
Loc:	200 Broad St		
	N26		
SLM:	**LD 870 System** 4	**SN:**	870A0340
Mic:		**SN:**	
P/A:		**SN:**	

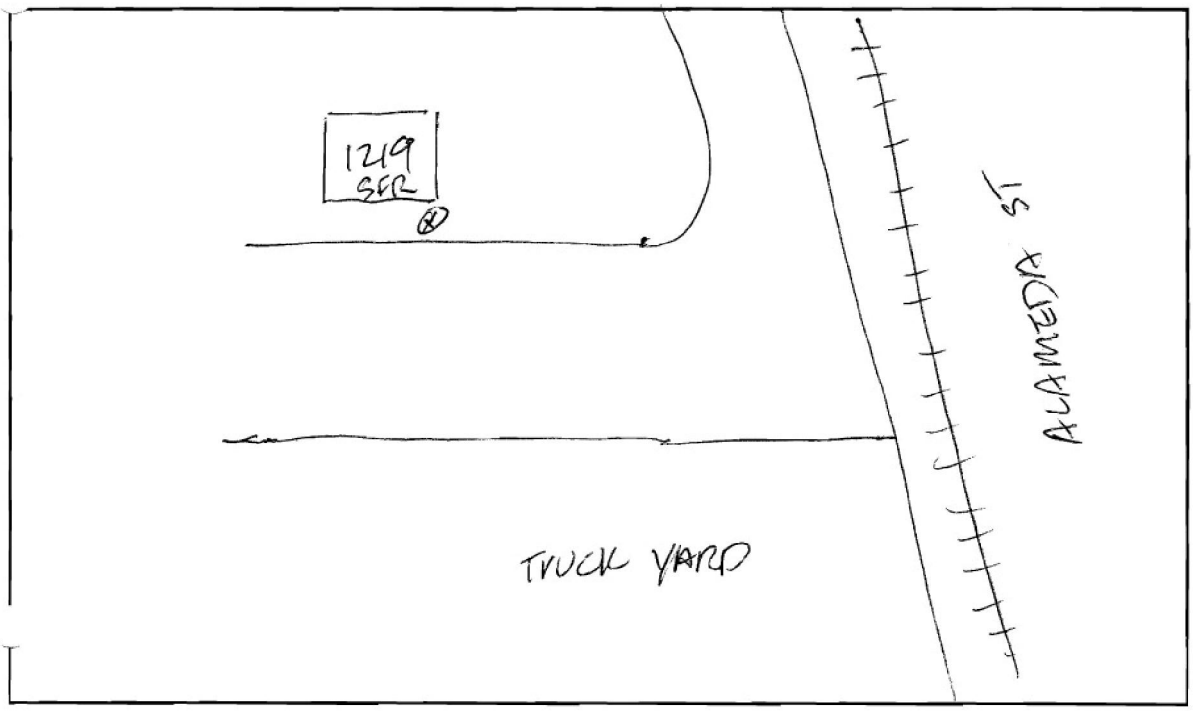
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
9:40 pm		78.0	74.9	71.3	67.0	59.1	51.4	84.2	49.7	70.5	Traffic, Industrial noise,
12:19 pm		75.6	73.1	69.1	63.4	56.4	51.9	80.7	51.0	68.4	Traffic,
4:25 pm		77.4	74.3	70.4	66.9	61.1	58.4	82.3	57.0	69.9	Traffic



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/16/08
Loc:	1249 G STREET N27		
SLM:	**LD 870 System** 4	**SN:**	870A0340
Mic:		**SN:**	
P/A:		**SN:**	

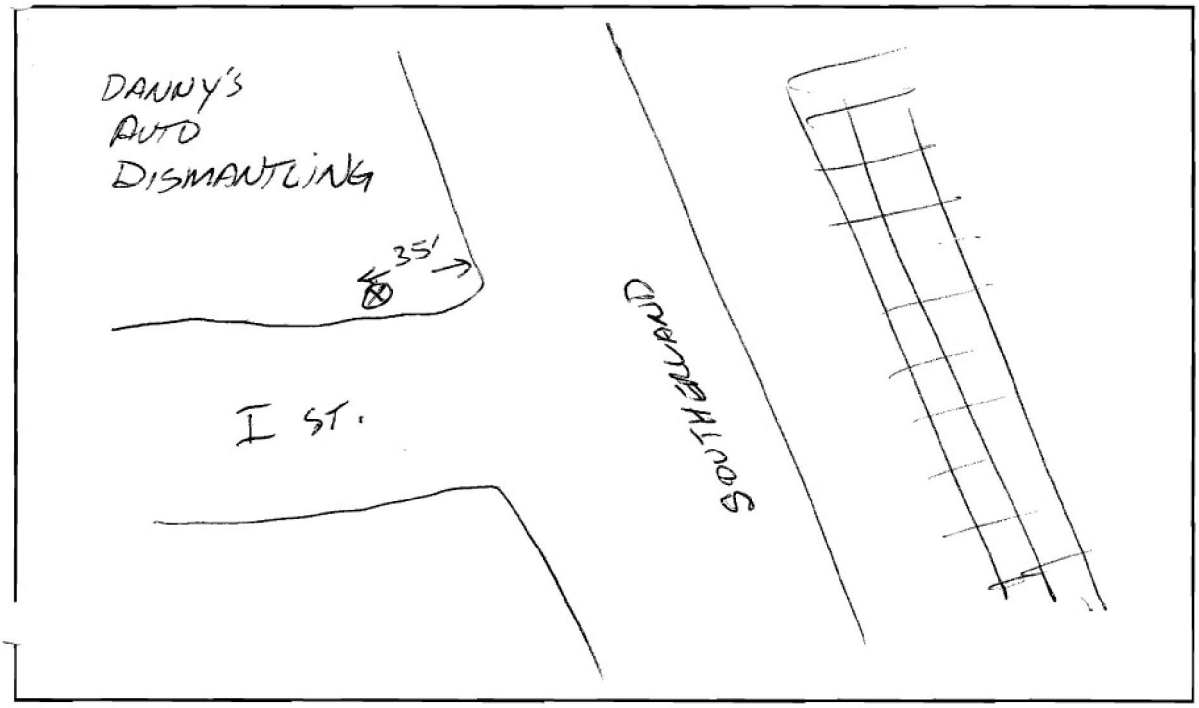
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
10:09 am		73.8	66.4	59.8	57.3	52.9	50.9	83.9	50.1	63.9	TRUCKS, TRAIN HORN
12:43 pm		73.1	68.6	65.8	63.8	62.0	61.1	78.2	60.6	66.0	Trucks, Local Traffic,
4:50 pm		81.3	70.9	64.1	61.3	58.1	56.6	86.5	55.9	69.7	Local Traffic, Trucks, Aircraft, dogs barking



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1/19/08
Loc:	1919 East I Street N28		
SLM:	**LD 870 System** 4	**SN:**	870A0338
Mic:		**SN:**	
P/A:		**SN:**	

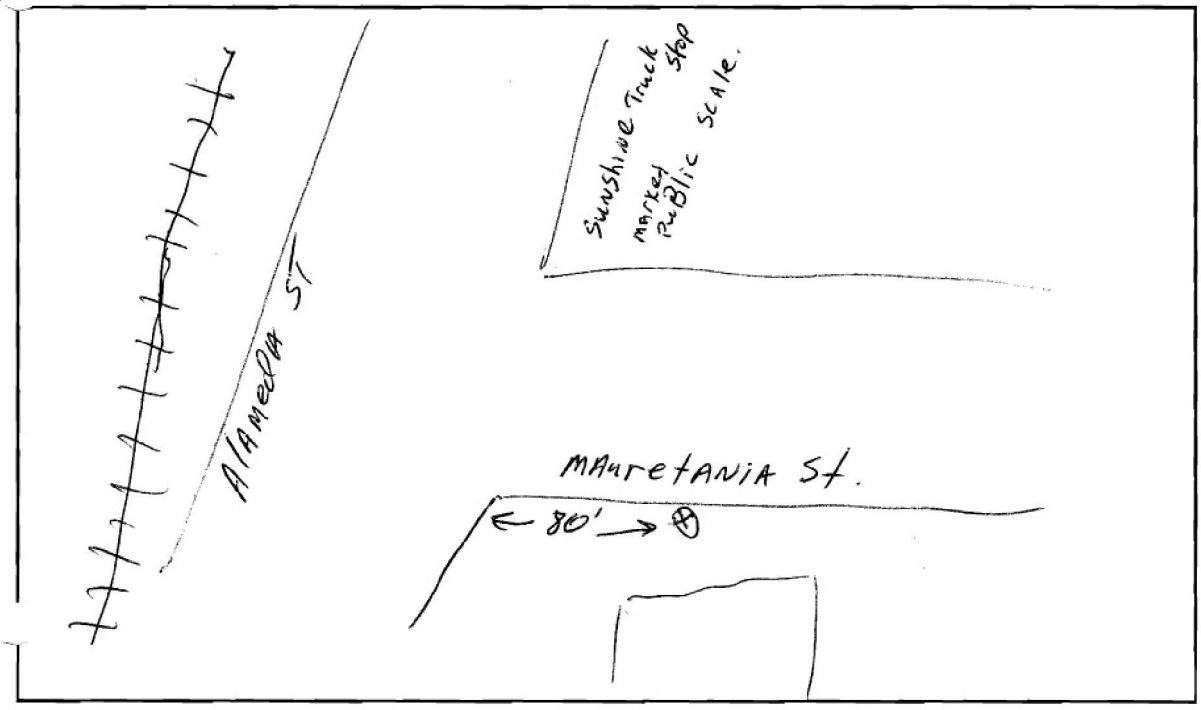
Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
10:01pm		85.9	71.4	63.2	61.3	59.8	59.2	105.3	58.7	81.1	LOCAL TRAFFIC, TRAINS, WRECKING
12:50pm		64.8	61.8	60.2	59.2	57.9	56.9	75.3	56.3	60.3	YARD
4:32pm		62.0	60.0	59.0	58.0	57.2	56.5	66.0	56.2	58.6	Refinery-Truck Traffic, Train Horn-
[illegible]											



NOISE MONITORING FIELD DATA SHEET

Project:	**SCIG**	**Date:**	1-14-08
Loc:	1710 Mauretania St. N/O		
SLM:	**LD 870 System**	**SN:**	870A0342
Mic:		**SN:**	
P/A:		**SN:**	

Start	Stop	L2	L8	L25	L50	L90	L99	Lmax	Lmin	Leq	Notes
10:25AM		74.7	72.8	70.0	66.8	60.9	53.9	76.9	53.0	68.6	Truck Traffic
1:10PM		75.3	72.3	68.2	64.7	57.3	54.2	81.0	52.6	67.6	Truck Traffic
5:01PM		76.8	74.2	71.2	68.5	62.7	58.9	81.8	57.8	70.4	Truck Traffic



8 Meteorological Data

Long Beach Weather History

Date	1/8/2008	1/10/2008	1/11/2008	1/14/2008	1/15/2008	1/16/2008	1/17/2008
Mean Temperature	52 °F	53 °F	55 °F	59 °F	55 °F	58 °F	55 °F
Max Temperature	59 °F	62 °F	66 °F	75 °F	67 °F	70 °F	66 °F
Min Temperature	45 °F	44 °F	44 °F	43 °F	42 °F	45 °F	44 °F
Dew Point	44 °F	45 °F	45 °F	30 °F	40 °F	38 °F	17 °F
Average Humidity	72	74	71	39	57	53	40
Maximum Humidity	86	93	90	66	90	93	71
Minimum Humidity	57	55	52	12	24	12	9
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in	0.00 in	0.00 in	0.00 in
Sea Level Pressure	30.18 in	30.12 in	30.05 in	30.20 in	30.06 in	29.97 in	30.08 in
Wind Speed	2 mph (WSW)	2 mph (West)	2 mph (South)	4 mph (NW)	2 mph (SE)	4 mph (East)	6 mph (North)
Max Wind Speed	8 mph	8 mph	9 mph	14 mph	9 mph	20 mph	16 mph
Max Gust Speed	10 mph	12 mph	12 mph	15 mph	13 mph	79 mph	22 mph
Events						Fog	

Date	1/18/2008	1/22/2008	2/11/2008	2/12/2008	2/13/2008	2/14/2008	2/15/2008
Mean Temperature	52 °F	54 °F	58 °F	63 °F	52 °F	53 °F	52 °F
Max Temperature	62 °F	59 °F	70 °F	80 °F	55 °F	60 °F	63 °F
Min Temperature	42 °F	48 °F	45 °F	46 °F	48 °F	46 °F	41 °F
Dew Point	34 °F	44 °F	44 °F	46 °F	47 °F	40 °F	31 °F
Average Humidity	50	72	62	58	83	55	46
Maximum Humidity	71	86	83	93	93	83	71
Minimum Humidity	28	57	40	22	72	26	21
Precipitation	0.00 in	0.09 in	0.00 in	0.00 in	0.00 in	0.11 in	0.00 in
Sea Level Pressure	30.15 in	30.12 in	30.04 in	30.03 in	29.88 in	29.83 in	30.09 in
Wind Speed	2 mph (SW)	3 mph (ESE)	2 mph (SSE)	2 mph (NW)	4 mph (SSE)	4 mph (East)	4 mph (SW)
Max Wind Speed	9 mph	9 mph	8 mph	15 mph	12 mph	14 mph	14 mph
Max Gust Speed	13 mph	13 mph	10 mph	17 mph	15 mph	18 mph	17 mph
Events		Rain		Fog	Fog	Rain	

Date	2/19/2008	3/24/2008	3/25/2008	3/26/2008	4/27/2011	4/28/2011
Mean Temperature	56 °F	67 °F	61 °F	64 °F	70 °F	68 °F
Max Temperature	59 °F	82 °F	67 °F	73 °F	85 °F	80 °F
Min Temperature	52 °F	52 °F	54 °F	54 °F	54 °F	56 °F
Dew Point	46 °F	38 °F	51 °F	50 °F	44 °F	49 °F
Average Humidity	70	44	69	64	50	55
Maximum Humidity	77	72	93	86	83	80
Minimum Humidity	62	16	45	41	16	30
Precipitation	Trace in	0.00 in	0.00 in	0.00 in	0.00 in	0.00 in
Sea Level Pressure	30.12 in	29.99 in	30.03 in	30.10 in	29.96 in	29.98 in
Wind Speed	3 mph (WSW)	4 mph (WNW)	4 mph (South)	5 mph (SSE)	5 mph (NW)	5 mph (WSW)
Max Wind Speed	9 mph	16 mph	12 mph	17 mph	21 mph	18 mph
Max Gust Speed	12 mph	18 mph	14 mph	21 mph	26 mph	25 mph
Events	Rain	Rain				

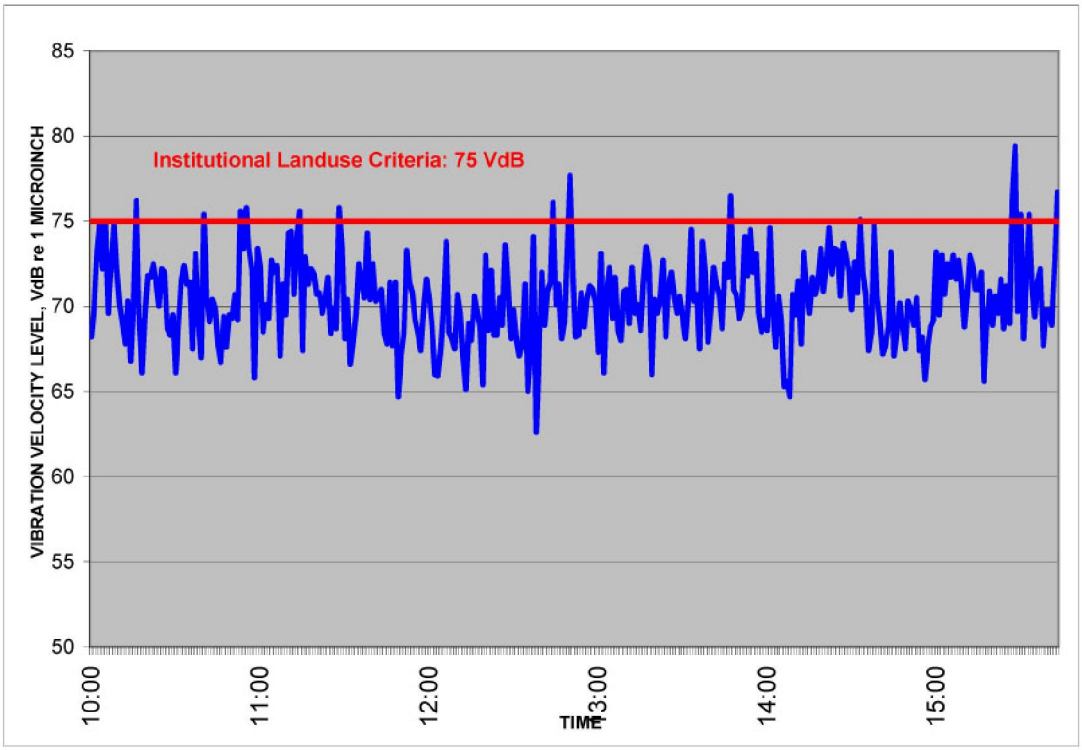
Los Angeles-San Pedro Weather History

Date	4/26/2011	4/27/2011	4/28/2011	4/29/2011
Mean Temperature	66 °F	66 °F	68 °F	65 °F
Max Temperature	73 °F	78 °F	80 °F	71 °F
Min Temperature	59 °F	55 °F	57 °F	59 °F
Dew Point	44 °F	45 °F	51 °F	48 °F
Average Humidity	43	42	51	52
Maximum Humidity	67	67	72	77
Minimum Humidity	29	27	30	35
Precipitation	0.00 in	0.00 in	0.00 in	0.00 in
Sea Level Pressure	29.95 in	29.99 in	30.00 in	29.97 in
Wind Speed	13 mph (West)	4 mph (WNW)	7 mph (West)	7 mph (West)
Max Wind Speed	17 mph	17 mph	21 mph	17 mph
Max Gust Speed	23 mph	22 mph	-	17 mph
Visibility	18 miles	12 miles	12 miles	10 miles

9 Vibration Velocity Level Plots

MEASUREMENT DATA - VIBRATION VELOCITY LEVELS

Project:	**SCIG**		
Address:	**BETHUNE ELEMENTARY SCHOOL**	**Date:**	**3/3/2008**
Location:	**CLASSROOM 101**		
Vibration Sources:	**TRAFFIC ON TERMINAL ISLAND FREEWAY, TRAINS**	**Position:**	**EAST FAÇADE SETBACK**



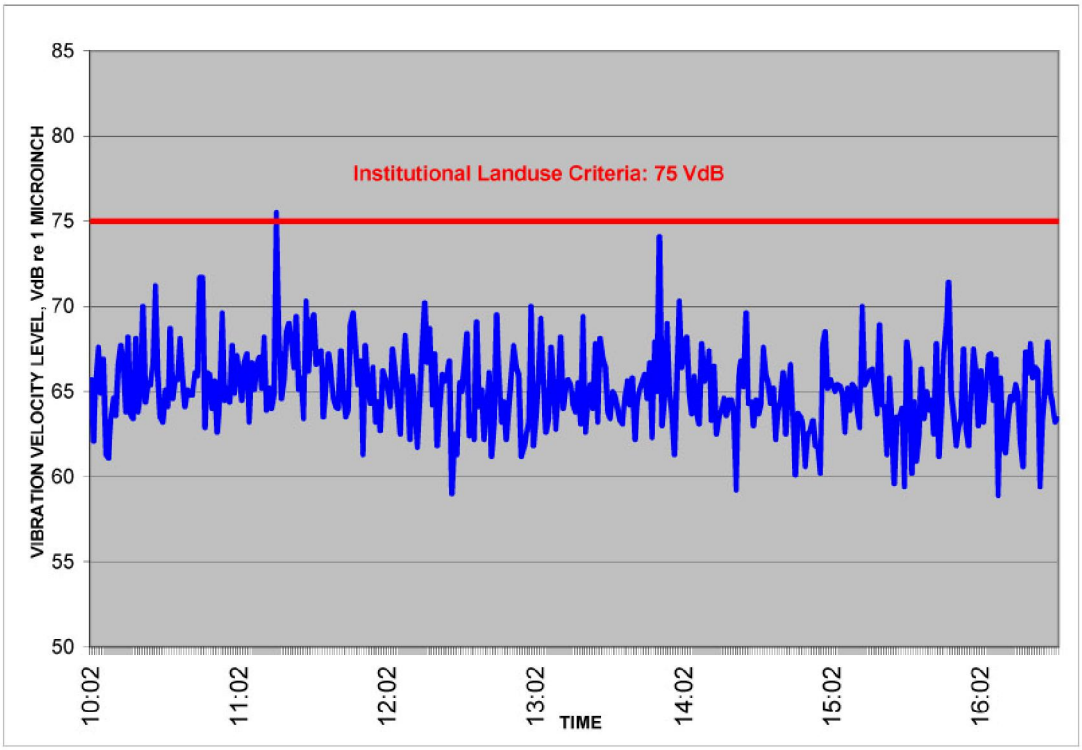
Notes:
Refer to field data sheet

DRAFT - PRELIMINARY WORK IN PROGRESS - SUBJECT TO CHANGE

Source: Acoustics Group, Inc. 2008

MEASUREMENT DATA - VIBRATION VELOCITY LEVELS

Project:	**SCIG**		
Address:	**CABRILLO CHILD DEVELOPMENT CENTER**	**Date:**	**3/4/2008**
Location:	**CLASSROOM 2205**		
Vibration Sources:	**TRAFFIC ON TERMINAL ISLAND FREEWAY, TRAINS**	**Position:**	**EAST FAÇADE SETBACK**



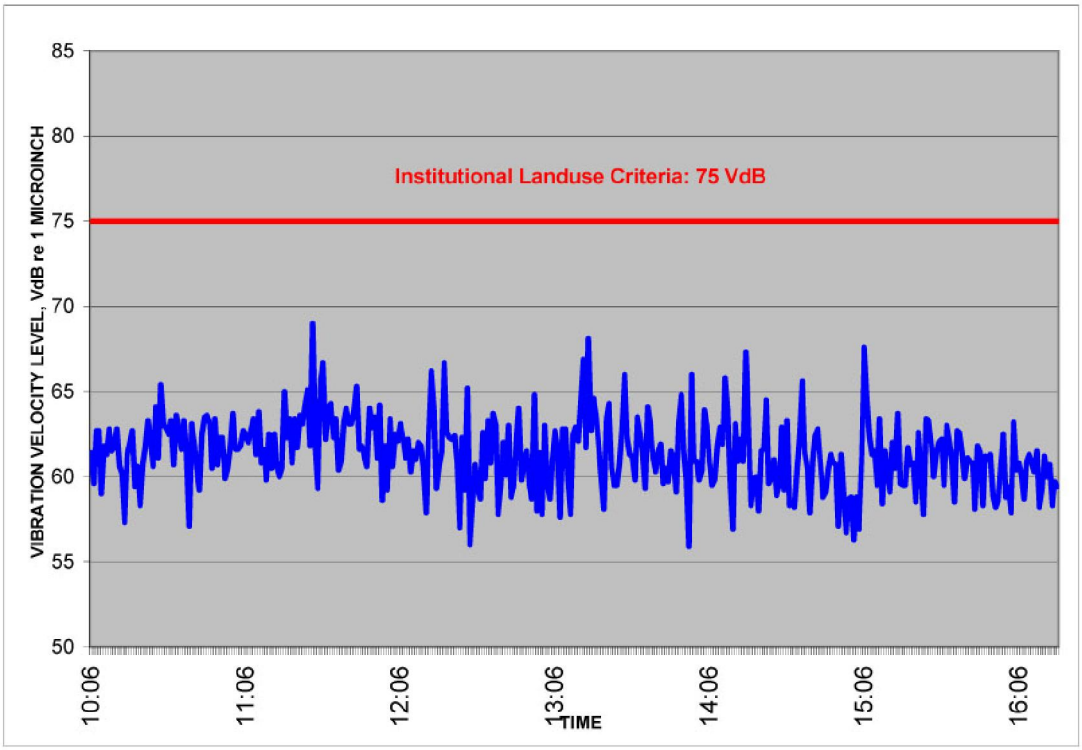
Notes:
Refer to field data sheet

DRAFT - PRELIMINARY WORK IN PROGRESS - SUBJECT TO CHANGE

Source: Acoustics Group, Inc. 2008

MEASUREMENT DATA - VIBRATION VELOCITY LEVELS

Project:	**SCIG**		
Address:	**HUDSON SCHOOL**	**Date:**	**3/6/2008**
Location:	**ADJACENT TO CLASSROOM 52**		
Vibration		**Position:**	**EAST FAÇADE SETBACK**
Sources:	**TRAFFIC ON TERMINAL ISLAND FREEWAY, TRAINS**		



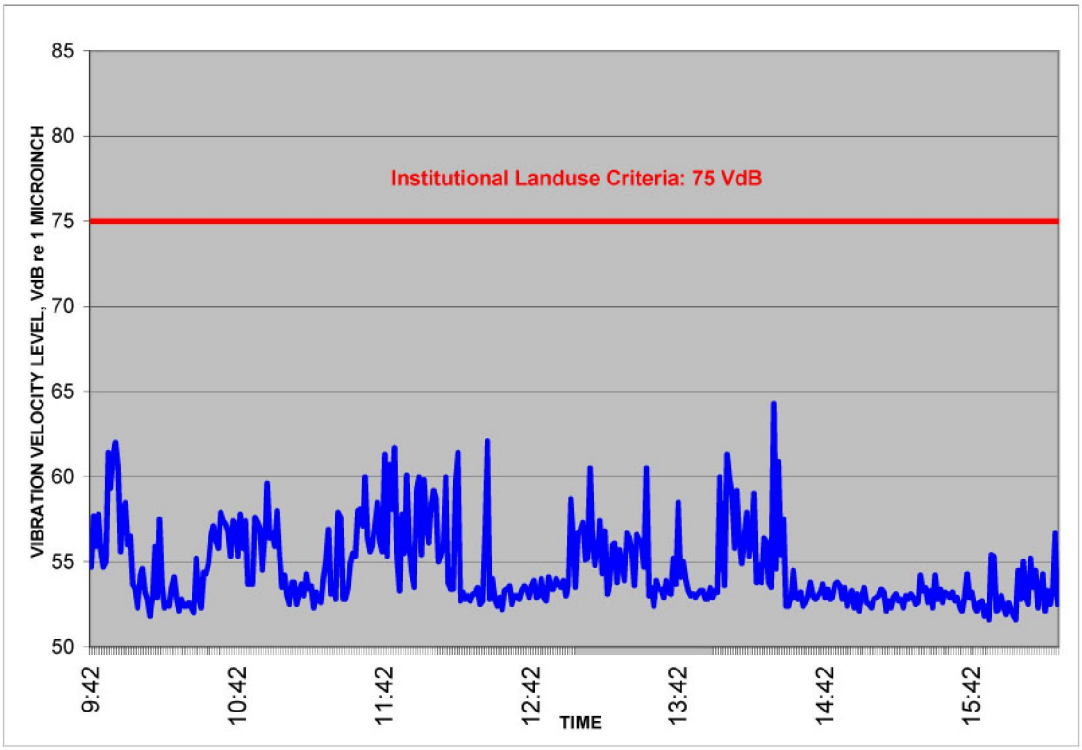
Notes:
Refer to field data sheet

DRAFT - PRELIMINARY WORK IN PROGRESS - SUBJECT TO CHANGE

Source: Acoustics Group, Inc. 2008

MEASUREMENT DATA - VIBRATION VELOCITY LEVELS

Project:	**SCIG**		
Address:	**STEPHENS MIDDLE SCHOOL**	**Date:**	**3/7/2008**
Location:	**ADJACENT TO CLASSROOM PC2**		
Vibration		**Position:**	**EAST FAÇADE SETBACK**
Sources:	**LOCAL ACTIVITIES, TRAINS ON THE SAN PEDRO BRANCH**		



Notes:
Refer to field data sheet

DRAFT - PRELIMINARY WORK IN PROGRESS - SUBJECT TO CHANGE

Source: Acoustics Group, Inc. 2008

10 Traffic Calculator Input and Output Data

FHWA RD-77-108 TRAFFIC NOISE CALCULATOR

SCIG EXISTING CONDITIONS TRAFFIC

ROADWAY	Segment	Peak Hour Volume	Vehicle Distribution %Auto	%MT	%HT	Vehicle Speed mph	Receiver Distance NL, ft	FL, ft	Grade % NL	FL	Alpha H=0, S=0.5 NL	FL	CNEL Correction	PREDICTED TRAFFIC NOISE LEVEL, dBA Leq @ Rec.	CNEL @ Rec.	DISTANCE TO CNEL CONTOURS 80	75	70	65	60
ALAMEDA ST	n/o Anaheim St	2834	80	1	19	33	44	56	0	0	0.5	0.5	1	78.4	79.4	43	137	432	1366	4319
ALAMEDA ST	w/o Eubank Ave	3298	71	1	28	34	44	56	0	0	0.5	0.5	1	80.5	81.5	69	220	695	2196	6946
ALAMEDA ST	s/o PCH	3090	68	1	31	33	44	56	0	0	0.5	0.5	1	80.7	81.7	73	230	729	2305	7288
ALAMEDA ST	s/o Anaheim St	5331	81	1	19	24	44	56	0	0	0.5	0.5	1	79.9	80.9	62	195	617	1950	6167
E ANAHEIM ST	between Anaheim and Henry Ford	5975	91	1	8	17	44	56	0	0	0.5	0.5	1	75.7	76.7	23	73	230	726	2296
E ANAHEIM ST	e/o Henry Ford Ave	5156	92	1	7	23	44	56	0	0	0.5	0.5	1	75.6	76.6	23	72	229	724	2288
E ANAHEIM ST	w/o E I St	4550	92	1	7	24	44	56	0	0	0.5	0.5	1	75.2	76.2	21	66	208	659	2083
E ANAHEIM ST	w/o Anaheim Way	5156	92	1	7	23	44	56	0	0	0.5	0.5	1	75.6	76.6	23	72	229	724	2289
E HARRY BRIDGES BLVD	e/o Avalon Blvd	3029	73	1	26	31	44	56	0	0	0.5	0.5	1	80.0	81.0	62	197	623	1970	6230
E SEPULVEDA BLVD	e/o Alameda St	5044	95	2	4	30	44	56	0	0	0.5	0.5	1	74.9	75.9	19	62	195	616	1948
JOHN S GIBSON BLVD	n/o I-110 Ramps	1778	75	0	25	31	44	56	0	0	0.5	0.5	1	77.5	78.5	36	112	355	1123	3553
LONG BEACH FWY	NB n/o Wardlow Rd	9815	73	1	27	49	44	56	0	0	0.5	0.5	1	86.3	87.3	264	834	2638	8341	26376
LONG BEACH FWY	SB s/o Wardlow Rd	12640	77	1	22	40	44	56	0	0	0.5	0.5	1	85.6	86.6	227	717	2267	7170	22673
LONG BEACH FWY	SB n/o Willow St	12228	80	1	19	32	44	56	0	0	0.5	0.5	1	84.9	85.9	192	607	1920	6071	19199
LONG BEACH FWY	SB between off/of namps at Willow St	11720	76	1	24	36	44	56	0	0	0.5	0.5	1	85.0	86.0	197	622	1968	6222	19676
LONG BEACH FWY	NB s/o Willow St	11756	76	1	23	34	44	56	0	0	0.5	0.5	1	85.3	86.3	211	668	2113	6683	21135
LONG BEACH FWY	NB s/o off ramp at PCH	10905	79	1	21	44	44	56	0	0	0.5	0.5	1	85.2	86.2	208	657	2079	6574	20789
LONG BEACH FWY	NB s/o Anaheim St	10427	78	1	21	40	44	56	0	0	0.5	0.5	1	84.6	85.6	181	571	1806	5711	18060
LONG BEACH FWY	NB s/o PCH	10863	79	1	20	38	44	56	0	0	0.5	0.5	1	84.4	85.4	171	541	1711	5409	17106
LONG BEACH FWY	NB s/o loop off ramp at PCH	11719	75	1	24	34	44	56	0	0	0.5	0.5	1	85.4	86.4	219	691	2185	6911	21854
LONG BEACH FWY	SB n/o Anaheim St	10913	76	1	23	39	44	56	0	0	0.5	0.5	1	85.0	86.0	199	630	1992	6298	19917
LONG BEACH FWY	SB s/o PCH	10265	75	1	24	42	44	56	0	0	0.5	0.5	1	85.2	86.2	209	661	2090	6611	20904
LONG BEACH FWY	NB n/o I-405 Interchange	17332	80	1	19	36	44	56	0	0	0.5	0.5	1	85.8	86.8	240	759	2400	7589	23999
LONG BEACH FWY	NB s/o I-405 Interchange Ramp	14420	80	1	19	39	44	56	0	0	0.5	0.5	1	85.5	86.5	224	708	2240	7085	22404
LONG BEACH FWY	SB n/o Wardlow Rd	9800	72	1	27	50	44	56	0	0	0.5	0.5	1	86.4	87.4	272	860	2718	8597	27185
LONG BEACH FWY	NB s/o Firestone Blvd	18674	87	1	12	35	44	56	0	0	0.5	0.5	1	84.3	85.3	168	531	1679	5309	16788
LONG BEACH FWY	SB s/o Anaheim St	2616	29	0	71	62	44	56	0	0	0.5	0.5	1	85.3	86.3	213	673	2128	6731	21285
LONG BEACH FWY	SB n/o I-405	14329	79	1	20	31	44	56	0	0	0.5	0.5	1	85.7	86.7	231	732	2314	7318	23141
LONG BEACH FWY	NB between off/on ramps at Willow St	12840	77	1	22	29	44	56	0	0	0.5	0.5	1	85.2	86.2	207	656	2073	6556	20730
LONG BEACH FWY	SB s/o Willow St	11179	75	1	25	38	44	56	0	0	0.5	0.5	1	85.2	86.2	208	657	2079	6575	20791
LONG BEACH FWY	NB n/o Willow St	12434	76	1	23	31	44	56	0	0	0.5	0.5	1	85.6	86.6	225	711	2247	7106	22471
LONG BEACH FWY	NB n/o PCH	10855	74	1	25	38	44	56	0	0	0.5	0.5	1	85.1	86.1	204	646	2043	6461	20431
LONG BEACH FWY	NB Between Ramps at Anaheim St	10806	78	1	22	44	44	56	0	0	0.5	0.5	1	85.4	86.4	216	683	2160	6832	21604
LONG BEACH FWY	NB n/o Anaheim St	10463	77	1	22	45	44	56	0	0	0.5	0.5	1	85.4	86.4	217	685	2166	6850	21661
TERMINAL ISLAND FWY	s/o PCH	2810	63	0	37	30	44	56	0	0	0.5	0.5	1	81.0	82.0	79	251	793	2507	7927
TERMINAL ISLAND FWY	n/o PCH	2465	67	0	33	30	44	56	0	0	0.5	0.5	1	80.0	81.0	63	198	627	1984	6274
TERMINAL ISLAND FWY	n/o Ocean Blvd	3502	65	0	35	30	44	56	0	0	0.5	0.5	1	81.8	82.8	94	296	937	2964	9374
TERMINAL ISLAND FWY	NB between Off and loop On ramp at PCH	1526	65	0	35	49	44	56	0	0	0.5	0.5	1	79.1	80.1	51	162	513	1621	5127
TERMINAL ISLAND FWY	NB s/o PCH off ramp	2176	49	0	51	48	44	56	0	0	0.5	0.5	1	82.1	83.1	100	318	1004	3175	10040
TERMINAL ISLAND FWY	SB n/o Anaheim St	1120	72	0	28	49	44	56	0	0	0.5	0.5	1	77.0	78.0	31	99	313	988	3126
TERMINAL ISLAND FWY	NB between Henry Ford Ave and Anaheim St	1726	55	0	45	49	44	56	0	0	0.5	0.5	1	80.6	81.6	72	229	723	2286	7228
TERMINAL ISLAND FWY	SB s/o Henry Ford Ave	2150	61	0	38	39	44	56	0	0	0.5	0.5	1	79.9	80.9	61	192	607	1919	6067
TERMINAL ISLAND FWY	e/o Seaside Ave	4985	80	1	19	27	44	56	0	0	0.5	0.5	1	80.3	81.3	68	214	675	2135	6752
TERMINAL ISLAND FWY	SB s/o Anaheim Way	1814	65	0	35	49	44	56	0	0	0.5	0.5	1	79.9	80.9	62	195	615	1946	6154
TERMINAL ISLAND FWY	NB s/o Willow St	1353	66	0	33	25	44	56	0	0	0.5	0.5	1	76.6	77.6	28	90	284	897	2835
TERMINAL ISLAND FWY	SB s/o PCH on ramp	1891	65	0	34	48	44	56	0	0	0.5	0.5	1	80.0	81.0	62	197	622	1965	6215
TERMINAL ISLAND FWY	SB between loop Off and On ramp at PCH	1284	61	0	38	49	44	56	0	0	0.5	0.5	1	78.8	79.8	47	149	471	1491	4715
TERMINAL ISLAND FWY	s/o Henry Ford Ave	2310	53	0	47	39	44	56	0	0	0.5	0.5	1	81.0	82.0	79	249	788	2491	7878
W ANAHEIM ST	e/o Santa Fe Ave	4489	82	1	17	24	44	56	0	0	0.5	0.5	1	78.7	79.7	46	147	464	1467	4638
W ANAHEIM ST	w/o Harbor Ave	3937	88	1	11	25	44	56	0	0	0.5	0.5	1	76.7	77.7	29	93	294	929	2939
W ANAHEIM ST	w/o Seabright Ave	3538	83	1	16	26	44	56	0	0	0.5	0.5	1	77.8	78.8	38	120	380	1202	3800
W ANAHEIM ST	w/o E I St	4550	92	1	7	24	44	56	0	0	0.5	0.5	1	75.2	76.2	21	65	207	654	2068
W ANAHEIM ST	between Seabright Ave and Santa Fe Ave	3407	83	1	16	26	44	56	0	0	0.5	0.5	1	77.7	78.7	37	116	367	1161	3670
W HARRY BRIDGES BLVD	between Wilmington Blvd and Neptune Ave	2947	77	1	23	28	44	56	0	0	0.5	0.5	1	78.9	79.9	49	155	490	1549	4897
W HARRY BRIDGES BLVD	between Hawaiian Ave and Wilmington Blvd	2916	78	1	21	29	44	56	0	0	0.5	0.5	1	78.8	79.8	47	150	474	1498	4736
W HARRY BRIDGES BLVD	between Neptune Ave and Fries Ave	2409	78	1	21	30	44	56	0	0	0.5	0.5	1	78.0	79.0	40	126	398	1260	3983
W HARRY BRIDGES BLVD	between Figueroa St and Mar Vista Ave	2917	78	1	21	29	44	56	0	0	0.5	0.5	1	78.7	79.7	46	146	461	1459	4615
W HARRY BRIDGES BLVD	between Fries Ave and Avalon Blvd	2714	72	1	28	29	44	56	0	0	0.5	0.5	1	79.5	80.5	56	178	562	1776	5618
W HARRY BRIDGES BLVD	between Mar Vista Ave and Hawaiian Ave	2916	78	1	21	29	44	56	0	0	0.5	0.5	1	78.8	79.8	47	150	474	1498	4736
W PACIFIC COAST HIGHWAY	between I-710 NB and SB ramps	5894	85	1	14	23	44	56	0	0	0.5	0.5	1	79.0	80.0	49	156	494	1562	4941
W PACIFIC COAST HIGHWAY	e/o San Gabriel Ave	5846	80	1	20	19	44	56	0	0	0.5	0.5	1	79.4	80.4	55	173	548	1734	5483
W PACIFIC COAST HIGHWAY	between San Gabriel Ave and Santa Fe Ave	5737	80	1	19	19	44	56	0	0	0.5	0.5	1	79.5	80.5	55	174	551	1743	5512
W PACIFIC COAST HIGHWAY	between Terminal Island Fwy SB and NB ra	5399	86	1	13	28	44	56	0	0	0.5	0.5	1	79.2	80.2	52	165	523	1655	5233
W PACIFIC COAST HIGHWAY	e/o Santa Fe Ave	6025	81	1	18	16	44	56	0	0	0.5	0.5	1	78.6	79.6	45	142	448	1417	4480
W PACIFIC COAST HIGHWAY	e/o Harbor Ave	5307	84	1	15	21	44	56	0	0	0.5	0.5	1	78.5	79.5	44	139	438	1386	4382
W WILLOW ST	between NB and SB Terminal Island Fwy	5909	91	1	8	21	44	56	0	0	0.5	0.5	1	76.5	77.5	28	88	277	875	2768
W WILLOW ST	between Terminal Island Fwy and Santa Fe	6681	96	1	2	16	44	56	0	0	0.5	0.5	1	70.8	71.8	7	24	75	236	747
W WILLOW ST	between Santa Fe Ave and Easy Ave	6247	96	1	3	19	44	56	0	0	0.5	0.5	1	72.1	73.1	10	32	101	319	1009
W WILLOW ST	e/o Easy Ave	8543	97	1	2	11	44	56	0	0	0.5	0.5	1	69.7	71	6	18	58	183	578
W WILLOW ST	w/o NB I-710 on ramp	7244	97	1	2	14	44	56	0	0	0.5	0.5	1	70.0	71	6	20	63	198	627

FHWA RD-77-108 TRAFFIC NOISE CALCULATOR

SCIG PROJECT CONDITIONS TRAFFIC

ROADWAY	Segment	Peak Hour Volume	Vehicle Distribution %Auto	%MT	%HT	Vehicle Speed mph	Receiver Distance NL, ft	FL, ft	Grade % NL	FL	Alpha H=0, S=0.5 NL	FL	CNEL Correction	PREDICTED TRAFFIC NOISE LEVEL, dBA Leq @ Rec.	CNEL @ Rec.	DISTANCE TO CNEL CONTOURS 80	75	70	65	60
ALAMEDA ST	n/o Anaheim St	2715	81	1	18	33	44	56	0	0	0.5	0.5	1	77.9	78.9	38	121	382	1207	3816
ALAMEDA ST	w/o Eubank Ave	3336	71	1	28	34	44	56	0	0	0.5	0.5	1	80.5	81.5	71	224	708	2238	7076
ALAMEDA ST	s/o PCH	2964	69	1	30	33	44	56	0	0	0.5	0.5	1	80.3	81.3	67	213	674	2131	6740
ALAMEDA ST	s/o Anaheim St	5324	80	1	19	24	44	56	0	0	0.5	0.5	1	80.0	81.0	63	198	627	1983	6270
E ANAHEIM ST	between Anaheim and Henry Ford	6101	90	1	10	17	44	56	0	0	0.5	0.5	1	76.3	77.3	27	84	267	843	2667
E ANAHEIM ST	e/o Henry Ford Ave	5285	91	1	8	23	44	56	0	0	0.5	0.5	1	76.5	77.5	28	88	279	883	2793
E ANAHEIM ST	w/o E I St	4674	91	1	8	24	44	56	0	0	0.5	0.5	1	76.2	77.2	26	82	258	817	2584
E ANAHEIM ST	w/o Anaheim Way	5285	91	1	8	23	44	56	0	0	0.5	0.5	1	76.5	77.5	28	88	279	884	2794
E HARRY BRIDGES BLVD	e/o Avalon Blvd	3075	73	1	26	31	44	56	0	0	0.5	0.5	1	80.1	81.1	64	203	642	2032	6424
E SEPULVEDA BLVD	e/o Alameda St	5034	95	2	4	30	44	56	0	0	0.5	0.5	1	74.9	75.9	19	61	194	614	1941
JOHN S GIBSON BLVD	n/o I-110 Ramps	1705	78	0	22	31	44	56	0	0	0.5	0.5	1	76.8	77.8	30	95	300	950	3004
LONG BEACH FWY	NB n/o Wardlow Rd	9363	76	1	23	49	44	56	0	0	0.5	0.5	1	85.5	86.5	224	709	2240	7085	22405
LONG BEACH FWY	SB s/o Wardlow Rd	12152	80	1	19	40	44	56	0	0	0.5	0.5	1	84.9	85.9	191	604	1909	6037	19092
LONG BEACH FWY	SB n/o Willow St	12152	80	1	19	32	44	56	0	0	0.5	0.5	1	84.7	85.7	185	586	1854	5862	18538
LONG BEACH FWY	SB between off/of namps at Willow St	11244	79	1	20	36	44	56	0	0	0.5	0.5	1	84.2	85.2	165	520	1645	5203	16454
LONG BEACH FWY	NB s/o Willow St	11319	79	1	20	34	44	56	0	0	0.5	0.5	1	84.6	85.6	179	566	1790	5662	17904
LONG BEACH FWY	NB s/o off ramp at PCH	10617	81	1	18	44	44	56	0	0	0.5	0.5	1	84.7	85.7	185	585	1848	5845	18485
LONG BEACH FWY	NB s/o Anaheim St	10174	80	1	19	40	44	56	0	0	0.5	0.5	1	84.2	85.2	163	514	1627	5144	16268
LONG BEACH FWY	NB s/o PCH	10576	81	1	18	38	44	56	0	0	0.5	0.5	1	83.8	84.8	151	478	1512	4781	15120
LONG BEACH FWY	NB s/o loop off ramp at PCH	11297	78	1	21	34	44	56	0	0	0.5	0.5	1	84.8	85.8	187	593	1874	5927	18743
LONG BEACH FWY	SB n/o Anaheim St	10515	79	1	20	39	44	56	0	0	0.5	0.5	1	84.3	85.3	170	536	1696	5362	16956
LONG BEACH FWY	SB s/o PCH	9861	79	1	21	42	44	56	0	0	0.5	0.5	1	84.5	85.5	177	560	1772	5602	17716
LONG BEACH FWY	NB n/o I-405 Interchange	16753	83	1	16	36	44	56	0	0	0.5	0.5	1	85.1	86.1	202	640	2024	6400	20238
LONG BEACH FWY	NB s/o I-405 Interchange Ramp	13968	82	1	17	39	44	56	0	0	0.5	0.5	1	84.9	85.9	192	608	1924	6083	19237
LONG BEACH FWY	SB n/o Wardlow Rd	9309	76	1	23	50	44	56	0	0	0.5	0.5	1	85.6	86.6	227	717	2269	7175	22689
LONG BEACH FWY	SB n/o I-405	13831	82	1	17	31	44	56	0	0	0.5	0.5	1	84.9	85.9	193	611	1933	6114	19334
LONG BEACH FWY	NB between off/on ramps at Willow St	12392	80	1	19	29	44	56	0	0	0.5	0.5	1	84.5	85.5	175	555	1754	5546	17537
LONG BEACH FWY	SB s/o Willow St	10703	78	1	21	38	44	56	0	0	0.5	0.5	1	84.4	85.4	174	549	1737	5493	17369
LONG BEACH FWY	NB n/o Willow St	11988	79	1	20	31	44	56	0	0	0.5	0.5	1	84.8	85.8	191	603	1906	6028	19062
LONG BEACH FWY	NB n/o PCH	10418	77	1	22	38	44	56	0	0	0.5	0.5	1	84.4	85.4	174	550	1738	5497	17383
LONG BEACH FWY	NB Between Ramps at Anaheim St	10565	79	1	20	44	44	56	0	0	0.5	0.5	1	85.0	86.0	197	622	1967	6220	19668
LONG BEACH FWY	SB s/o Anahiem St	9009	81	1	19	46	44	56	0	0	0.5	0.5	1	84.3	85.3	167	527	1667	5272	16672
LONG BEACH FWY	NB n/o Anaheim St	10175	80	1	20	45	44	56	0	0	0.5	0.5	1	84.9	85.9	193	610	1929	6101	19292
TERMINAL ISLAND FWY	s/o PCH	2662	68	0	32	30	44	56	0	0	0.5	0.5	1	80.2	81.2	65	207	654	2069	6543
TERMINAL ISLAND FWY	n/o PCH	2348	71	0	28	30	44	56	0	0	0.5	0.5	1	79.2	80.2	52	164	520	1643	5197
TERMINAL ISLAND FWY	n/o Ocean Blvd	3488	65	0	34	30	44	56	0	0	0.5	0.5	1	81.7	82.7	93	293	927	2933	9274
TERMINAL ISLAND FWY	NB between Off and loop On ramp at PCH	1638	62	0	38	49	44	56	0	0	0.5	0.5	1	79.7	80.7	59	186	589	1862	5889
TERMINAL ISLAND FWY	NB s/o PCH off ramp	2179	50	0	50	48	44	56	0	0	0.5	0.5	1	82.0	83.0	99	312	985	3116	9855
TERMINAL ISLAND FWY	SB n/o Anaheim St	1163	69	0	31	49	44	56	0	0	0.5	0.5	1	77.5	78.5	35	111	351	1111	3514
TERMINAL ISLAND FWY	NB between Henry Ford Ave and Anaheim St	1777	53	0	47	49	44	56	0	0	0.5	0.5	1	80.9	81.9	77	243	768	2430	7683
TERMINAL ISLAND FWY	s/o Henry Ford Ave	2246	54	0	46	39	44	56	0	0	0.5	0.5	1	80.8	81.8	74	235	744	2353	7440
TERMINAL ISLAND FWY	e/o Seaside Ave	4956	81	1	19	27	44	56	0	0	0.5	0.5	1	80.2	81.2	66	208	656	2075	6563
TERMINAL ISLAND FWY	SB s/o Anaheim Way	1805	65	0	35	49	44	56	0	0	0.5	0.5	1	79.9	80.9	61	192	608	1924	6084
TERMINAL ISLAND FWY	NB s/o Willow St	1293	71	0	29	25	44	56	0	0	0.5	0.5	1	75.8	76.8	24	75	236	746	2359
TERMINAL ISLAND FWY	SB s/o PCH on ramp	1994	64	0	36	48	44	56	0	0	0.5	0.5	1	80.4	81.4	68	215	681	2154	6812
TERMINAL ISLAND FWY	SB between loop Off and On ramp at PCH	1204	66	0	33	49	44	56	0	0	0.5	0.5	1	78.0	79.0	39	124	392	1240	3923
TERMINAL ISLAND FWY	s/o Henry Ford Ave	2244	54	0	46	39	44	56	0	0	0.5	0.5	1	80.8	81.8	74	235	743	2349	7429
W ANAHEIM ST	e/o Santa Fe Ave	4537	82	1	17	24	44	56	0	0	0.5	0.5	1	78.8	79.8	48	151	476	1505	4759
W ANAHEIM ST	w/o Harbor Ave	4014	87	1	12	25	44	56	0	0	0.5	0.5	1	77.2	78.2	33	105	331	1045	3306
W ANAHEIM ST	w/o Seabright Ave	3592	83	1	16	26	44	56	0	0	0.5	0.5	1	78.0	79.0	40	125	396	1254	3964
W ANAHEIM ST	w/o E I St	4674	91	1	8	24	44	56	0	0	0.5	0.5	1	76.1	77.1	26	81	257	811	2566
W ANAHEIM ST	between Seabright Ave and Santa Fe Ave	3473	83	1	16	26	44	56	0	0	0.5	0.5	1	78.0	79.0	39	124	392	1239	3917
W HARRY BRIDGES BLVD	between Wilmington Blvd and Neptune Ave	2992	76	1	23	28	44	56	0	0	0.5	0.5	1	79.1	80.1	51	160	508	1605	5075
W HARRY BRIDGES BLVD	between Hawaiian Ave and Wilmington Blvd	2941	77	1	22	29	44	56	0	0	0.5	0.5	1	79.0	80.0	49	155	492	1555	4917
W HARRY BRIDGES BLVD	between Neptune Ave and Fries Ave	2455	78	1	22	30	44	56	0	0	0.5	0.5	1	78.2	79.2	42	132	417	1319	4172
W HARRY BRIDGES BLVD	between Figueroa St and Mar Vista Ave	2942	78	1	22	29	44	56	0	0	0.5	0.5	1	78.8	79.8	48	152	479	1516	4794
W HARRY BRIDGES BLVD	between Fries Ave and Avalon Blvd	2755	71	1	28	29	44	56	0	0	0.5	0.5	1	79.7	80.7	58	182	577	1824	5768
W HARRY BRIDGES BLVD	between Mar Vista Ave and Hawaiian Ave	2941	77	1	22	29	44	56	0	0	0.5	0.5	1	79.0	80.0	49	155	492	1555	4917
W PACIFIC COAST HIGHWAY	between I-710 NB and SB ramps	5811	87	1	12	23	44	56	0	0	0.5	0.5	1	78.5	79.5	45	141	446	1409	4456
W PACIFIC COAST HIGHWAY	e/o San Gabriel Ave	5664	82	1	17	19	44	56	0	0	0.5	0.5	1	78.7	79.7	46	147	464	1467	4640
W PACIFIC COAST HIGHWAY	between San Gabriel Ave and Santa Fe Ave	5557	82	1	17	19	44	56	0	0	0.5	0.5	1	78.7	79.7	47	147	466	1473	4660
W PACIFIC COAST HIGHWAY	between Terminal Island Fwy SB and NB ra	5480	85	1	14	28	44	56	0	0	0.5	0.5	1	79.7	80.7	58	182	577	1824	5769
W PACIFIC COAST HIGHWAY	e/o Santa Fe Ave	5868	83	1	16	16	44	56	0	0	0.5	0.5	1	77.9	78.9	38	121	384	1213	3837
W PACIFIC COAST HIGHWAY	e/o Harbor Ave	5224	86	1	13	21	44	56	0	0	0.5	0.5	1	78.0	79.0	39	124	393	1244	3935
W WILLOW ST	between NB and SB Terminal Island Fwy	5832	91	1	7	21	44	56	0	0	0.5	0.5	1	76.0	77.0	25	80	252	796	2516
W WILLOW ST	between Terminal Island Fwy and Santa Fe	6651	96	1	2	16	44	56	0	0	0.5	0.5	1	70.8	71.8	7	24	75	236	746
W WILLOW ST	between Santa Fe Ave and Easy Ave	6215	96	1	3	19	44	56	0	0	0.5	0.5	1	72.1	73.1	10	32	101	319	1008
W WILLOW ST	e/o Easy Ave	8511	97	1	2	11	44	56	0	0	0.5	0.5	1	69.7	70.7	6	18	58	183	578
W WILLOW ST	w/o NB I-710 on ramp	7220	97	1	2	14	44	56	0	0	0.5	0.5	1	70.0	71.0	6	20	63	198	627

FHWA RD-77-108 TRAFFIC NOISE CALCULATOR

SCIG REDUCED PROJECT CONDITIONS TRAFFIC

ROADWAY	Segment	Peak Hour Volume	Vehicle Distribution %Auto	%MT	%HT	Vehicle Speed mph	Receiver Distance NL, ft	FL, ft	Grade % NL	FL	Alpha H=0, S=0.5 NL	FL	CNEL Correction	PREDICTED TRAFFIC NOISE LEVEL, dBA Leq @ Rec.	CNEL @ Rec.	DISTANCE TO CNEL CONTOURS 80	75	70	65	60
ALAMEDA ST	n/o Anaheim St	2720	81	1	18	33	44	56	0	0	0.5	0.5	1	78.0	79.0	39	125	395	1249	3949
ALAMEDA ST	w/o Eubank Ave	3323	71	1	28	34	44	56	0	0	0.5	0.5	1	80.5	81.5	71	223	706	2232	7057
ALAMEDA ST	s/o PCH	2966	68	1	31	33	44	56	0	0	0.5	0.5	1	80.4	81.4	69	217	687	2173	6871
ALAMEDA ST	s/o Anaheim St	5317	80	1	19	24	44	56	0	0	0.5	0.5	1	80.1	81.1	63	200	632	1999	6323
CARRACK AVE	e/o Pier B St	13	0	0	100	31	44	56	0	0	0.5	0.5	1	61.9	62.9	1	3	10	30	96
E ANAHEIM ST	between Anaheim and Henry Ford	6110	90	1	10	17	44	56	0	0	0.5	0.5	1	76.3	77.3	26	84	264	836	2643
E ANAHEIM ST	e/o Henry Ford Ave	5304	91	1	8	23	44	56	0	0	0.5	0.5	1	76.5	77.5	28	89	281	887	2806
E ANAHEIM ST	w/o E I St	4693	91	1	8	24	44	56	0	0	0.5	0.5	1	76.2	77.2	26	82	260	823	2603
E ANAHEIM ST	w/o Anaheim Way	5319	91	1	9	23	44	56	0	0	0.5	0.5	1	76.7	77.7	29	91	289	915	2893
E HARRY BRIDGES BLVD	e/o Avalon Blvd	3057	73	1	26	31	44	56	0	0	0.5	0.5	1	80.1	81.1	64	202	637	2016	6375
E SEPULVEDA BLVD	e/o Alameda St	5043	95	2	4	30	44	56	0	0	0.5	0.5	1	74.9	75.9	19	61	194	615	1943
JOHN S GIBSON BLVD	n/o I-110 Ramps	1728	77	0	23	31	44	56	0	0	0.5	0.5	1	77.1	78.1	32	100	318	1004	3175
LONG BEACH FWY	NB n/o Wardlow Rd	9421	76	1	24	49	44	56	0	0	0.5	0.5	1	85.7	86.7	230	727	2298	7266	22976
LONG BEACH FWY	SB s/o Wardlow Rd	12207	80	1	19	40	44	56	0	0	0.5	0.5	1	85.0	86.0	196	619	1958	6191	19577
LONG BEACH FWY	SB n/o Willow St	12199	80	1	19	32	44	56	0	0	0.5	0.5	1	84.8	85.8	190	600	1898	6002	18981
LONG BEACH FWY	SB between off/of namps at Willow St	11296	78	1	21	36	44	56	0	0	0.5	0.5	1	84.3	85.3	169	534	1689	5341	16890
LONG BEACH FWY	NB s/o Willow St	11363	78	1	21	34	44	56	0	0	0.5	0.5	1	84.7	85.7	183	579	1832	5794	18321
LONG BEACH FWY	NB s/o off ramp at PCH	10660	81	1	19	44	44	56	0	0	0.5	0.5	1	84.8	85.8	188	595	1881	5947	18806
LONG BEACH FWY	NB s/o Anaheim St	10207	80	1	20	40	44	56	0	0	0.5	0.5	1	84.2	85.2	165	522	1651	5221	16512
LONG BEACH FWY	NB s/o PCH	10618	81	1	19	38	44	56	0	0	0.5	0.5	1	83.9	84.9	154	487	1540	4869	15398
LONG BEACH FWY	NB s/o loop off ramp at PCH	11337	77	1	22	34	44	56	0	0	0.5	0.5	1	84.9	85.9	191	605	1914	6054	19144
LONG BEACH FWY	SB n/o Anaheim St	10577	79	1	20	39	44	56	0	0	0.5	0.5	1	84.4	85.4	174	550	1738	5497	17383
LONG BEACH FWY	SB s/o PCH	9923	78	1	21	42	44	56	0	0	0.5	0.5	1	84.6	85.6	182	575	1817	5746	18171
LONG BEACH FWY	NB n/o I-405 Interchange	16812	83	1	16	36	44	56	0	0	0.5	0.5	1	85.2	86.2	207	654	2067	6536	20668
LONG BEACH FWY	NB s/o I-405 Interchange Ramp	14020	82	1	17	39	44	56	0	0	0.5	0.5	1	85.0	86.0	196	621	1965	6213	19647
LONG BEACH FWY	SB n/o Wardlow Rd	9362	76	1	23	50	44	56	0	0	0.5	0.5	1	85.7	86.7	233	736	2328	7361	23278
LONG BEACH FWY	SB s/o Anaheim St	2188	35	0	65	62	44	56	0	0	0.5	0.5	1	84.2	85.2	165	522	1651	5222	16514
LONG BEACH FWY	SB n/o I-405	13889	82	1	17	31	44	56	0	0	0.5	0.5	1	85.0	86.0	198	628	1985	6276	19846
LONG BEACH FWY	NB between off/on ramps at Willow St	12427	80	1	19	29	44	56	0	0	0.5	0.5	1	84.6	85.6	179	565	1788	5654	17880
LONG BEACH FWY	SB s/o Willow St	10728	78	1	21	38	44	56	0	0	0.5	0.5	1	84.5	85.5	176	558	1765	5581	17650
LONG BEACH FWY	NB n/o Willow St	11978	79	1	20	31	44	56	0	0	0.5	0.5	1	84.8	85.8	191	604	1909	6036	19086
LONG BEACH FWY	NB n/o PCH	10404	77	1	22	38	44	56	0	0	0.5	0.5	1	84.4	85.4	174	550	1739	5498	17385
LONG BEACH FWY	NB Between Ramps at Anaheim St	10596	79	1	20	44	44	56	0	0	0.5	0.5	1	85.0	86.0	199	629	1989	6291	19893
LONG BEACH FWY	NB n/o Anaheim St	10179	80	1	20	45	44	56	0	0	0.5	0.5	1	84.9	85.9	193	611	1931	6107	19311
TERMINAL ISLAND FWY	s/o PCH	1485	69	0	31	49	44	56	0	0	0.5	0.5	1	78.5	79.5	45	141	446	1410	4460
TERMINAL ISLAND FWY	n/o PCH	1067	69	0	31	49	44	56	0	0	0.5	0.5	1	77.2	78.2	32	103	325	1027	3248
TERMINAL ISLAND FWY	n/o Ocean Blvd	1639	63	0	37	49	44	56	0	0	0.5	0.5	1	79.7	80.7	58	184	581	1836	5807
TERMINAL ISLAND FWY	NB between Off and loop On ramp at PCH	1766	53	0	46	49	44	56	0	0	0.5	0.5	1	80.8	81.8	76	240	758	2397	7581
TERMINAL ISLAND FWY	NB s/o PCH off ramp	1889	62	0	38	39	44	56	0	0	0.5	0.5	1	79.3	80.3	53	167	528	1669	5277
TERMINAL ISLAND FWY	SB n/o Anaheim St	1595	69	0	30	39	44	56	0	0	0.5	0.5	1	77.7	78.7	37	116	366	1158	3663
TERMINAL ISLAND FWY	NB between Henry Ford Ave and Anaheim St	2253	54	0	46	39	44	56	0	0	0.5	0.5	1	80.8	81.8	75	237	749	2368	7489
TERMINAL ISLAND FWY	SB s/o Henry Ford Ave	1300	71	0	29	25	44	56	0	0	0.5	0.5	1	75.8	76.8	24	75	236	746	2359
TERMINAL ISLAND FWY	e/o Seaside Ave	2007	64	0	36	48	44	56	0	0	0.5	0.5	1	80.4	81.4	68	216	683	2160	6830
TERMINAL ISLAND FWY	SB s/o Anaheim Way	1216	66	0	34	49	44	56	0	0	0.5	0.5	1	78.1	79.1	40	126	399	1262	3990
TERMINAL ISLAND FWY	NB s/o Willow St	1296	74	0	26	49	44	56	0	0	0.5	0.5	1	77.4	78.4	34	108	342	1081	3420
TERMINAL ISLAND FWY	SB s/o PCH on ramp	1224	66	0	34	49	44	56	0	0	0.5	0.5	1	78.1	79.1	40	128	404	1277	4039
TERMINAL ISLAND FWY	SB between loop Off and On ramp at PCH	2331	60	0	40	24	44	56	0	0	0.5	0.5	1	79.5	80.5	56	177	559	1768	5590
TERMINAL ISLAND FWY	s/o Henry Ford Ave	1083	27	0	73	29	44	56	0	0	0.5	0.5	1	79.5	80.5	56	176	557	1761	5568
W ANAHEIM ST	e/o Santa Fe Ave	4707	91	1	8	24	44	56	0	0	0.5	0.5	1	76.3	77.3	27	84	267	843	2667
W ANAHEIM ST	w/o Harbor Ave	3974	91	1	8	24	44	56	0	0	0.5	0.5	1	75.6	76.6	23	72	226	716	2263
W ANAHEIM ST	w/o Seabright Ave	3203	98	1	1	26	44	56	0	0	0.5	0.5	1	69.3	70.3	5	17	53	167	529
W ANAHEIM ST	w/o E I St	3604	98	1	1	25	44	56	0	0	0.5	0.5	1	69.4	70.4	5	17	54	171	540
W ANAHEIM ST	between Seabright Ave and Santa Fe Ave	2981	76	1	23	28	44	56	0	0	0.5	0.5	1	79.1	80.1	51	160	507	1603	5069
W HARRY BRIDGES BLVD	between Wilmington Blvd and Neptune Ave	2955	77	1	22	29	44	56	0	0	0.5	0.5	1	78.9	79.9	49	155	489	1546	4889
W HARRY BRIDGES BLVD	between Hawaiian Ave and Wilmington Blvd	2743	71	1	28	29	44	56	0	0	0.5	0.5	1	79.6	80.6	58	182	576	1821	5760
W HARRY BRIDGES BLVD	between Neptune Ave and Fries Ave	2948	77	1	22	29	44	56	0	0	0.5	0.5	1	79.0	80.0	50	157	497	1570	4965
W HARRY BRIDGES BLVD	between Figueroa St and Mar Vista Ave	875	87	1	12	26	44	56	0	0	0.5	0.5	1	70.6	71.6	7	23	72	227	719
W HARRY BRIDGES BLVD	between Fries Ave and Avalon Blvd	7991	98	1	1	25	44	56	0	0	0.5	0.5	1	72.8	73.8	12	38	120	378	1196
W HARRY BRIDGES BLVD	between Mar Vista Ave and Hawaiian Ave	8545	98	1	1	24	44	56	0	0	0.5	0.5	1	73.2	74.2	13	41	130	411	1299
W PACIFIC COAST HIGHWAY	between I-710 NB and SB ramps	6494	97	1	2	27	44	56	0	0	0.5	0.5	1	74.0	75.0	16	50	158	501	1584
W PACIFIC COAST HIGHWAY	e/o San Gabriel Ave	6841	97	1	2	26	44	56	0	0	0.5	0.5	1	73.8	74.8	15	47	149	470	1487
W PACIFIC COAST HIGHWAY	between San Gabriel Ave and Santa Fe Ave	6405	97	1	2	29	44	56	0	0	0.5	0.5	1	74.5	75.5	18	56	177	560	1772
W PACIFIC COAST HIGHWAY	between Terminal Island Fwy SB and NB ra	5957	86	1	13	21	44	56	0	0	0.5	0.5	1	78.4	79.4	43	136	431	1364	4312
W PACIFIC COAST HIGHWAY	e/o Santa Fe Ave	681	22	0	78	30	44	56	0	0	0.5	0.5	1	78.0	79.0	40	125	396	1253	3961
W PACIFIC COAST HIGHWAY	e/o Harbor Ave	835	17	0	83	24	44	56	0	0	0.5	0.5	1	78.2	79.2	41	130	410	1296	4100
W WILLOW ST	between NB and SB Terminal Island Fwy	8515	97	1	2	11	44	56	0	0	0.5	0.5	1	69.7	70.7	6	18	58	183	578
W WILLOW ST	between Terminal Island Fwy and Santa Fe	6834	97	1	2	16	44	56	0	0	0.5	0.5	1	70.1	71.1	6	20	65	204	646
W WILLOW ST	between Santa Fe Ave and Easy Ave	7223	97	1	2	14	44	56	0	0	0.5	0.5	1	70.0	71.0	6	20	63	198	627
W WILLOW ST	e/o Easy Ave	8511	97	1	2	11	44	56	0	0	0.5	0.5	1	69.7	70.7	6	18	58	183	578
W WILLOW ST	w/o NB I-710 on ramp	7220	97	1	2	14	44	56	0	0	0.5	0.5	1	70.0	71.0	6	20	63	198	627

FHWA RD-77-108 TRAFFIC NOISE CALCULATOR

SCIG NO PROJECT CONDITIONS TRAFFIC

ROADWAY	Segment	Peak Hour Volume	Vehicle Distribution %Auto	%MT	%HT	Vehicle Speed mph	Receiver Distance NL, ft	FL, ft	Grade % NL	FL	Alpha H=0, S=0.5 NL	FL	CNEL Correction	PREDICTED TRAFFIC NOISE LEVEL, dBA Leq @ Rec.	CNEL @ Rec.	DISTANCE TO CNEL CONTOURS 80	75	70	65	60
ALAMEDA ST	n/o Anaheim St	2852	79	1	19	33	44	56	0	0	0.5	0.5	1	78.4	79.4	44	138	437	1383	4373
ALAMEDA ST	w/o Eubank Ave	3307	71	1	28	34	44	56	0	0	0.5	0.5	1	80.5	81.5	70	222	701	2216	7007
ALAMEDA ST	s/o PCH	3109	68	1	31	33	44	56	0	0	0.5	0.5	1	80.7	81.7	74	232	735	2324	7351
ALAMEDA ST	s/o Anaheim St	5348	80	1	19	24	44	56	0	0	0.5	0.5	1	80.0	81.0	62	197	622	1967	6219
E ANAHEIM ST	between Anaheim and Henry Ford	5976	91	1	8	17	44	56	0	0	0.5	0.5	1	75.7	76.7	23	73	230	728	2301
E ANAHEIM ST	e/o Henry Ford Ave	5159	92	1	7	23	44	56	0	0	0.5	0.5	1	75.7	76.7	23	73	230	727	2300
E ANAHEIM ST	w/o E I St	4552	92	1	7	24	44	56	0	0	0.5	0.5	1	75.3	76.3	21	66	210	663	2096
E ANAHEIM ST	w/o Anaheim Way	5159	92	1	7	23	44	56	0	0	0.5	0.5	1	75.7	76.7	23	73	230	728	2302
E HARRY BRIDGES BLVD	e/o Avalon Blvd	3037	73	1	26	31	44	56	0	0	0.5	0.5	1	80.0	81.0	63	199	629	1988	6288
E SEPULVEDA BLVD	e/o Alameda St	5047	95	2	4	30	44	56	0	0	0.5	0.5	1	74.9	75.9	19	62	195	616	1950
JOHN S GIBSON BLVD	n/o I-110 Ramps	1794	74	0	26	31	44	56	0	0	0.5	0.5	1	77.7	78.7	37	116	368	1162	3676
LONG BEACH FWY	NB n/o Wardlow Rd	9864	72	1	27	49	44	56	0	0	0.5	0.5	1	86.3	87.3	268	847	2678	8467	26775
LONG BEACH FWY	SB s/o Wardlow Rd	12694	77	1	22	40	44	56	0	0	0.5	0.5	1	85.7	86.7	230	729	2304	7285	23039
LONG BEACH FWY	SB n/o Willow St	12241	80	1	20	32	44	56	0	0	0.5	0.5	1	84.9	85.9	193	609	1927	6094	19272
LONG BEACH FWY	SB between off/of namps at Willow St	11772	75	1	24	36	44	56	0	0	0.5	0.5	1	85.1	86.1	200	633	2001	6326	20005
LONG BEACH FWY	NB s/o Willow St	11802	76	1	24	34	44	56	0	0	0.5	0.5	1	85.4	86.4	215	679	2146	6786	21459
LONG BEACH FWY	NB s/o off ramp at PCH	10935	78	1	21	44	44	56	0	0	0.5	0.5	1	85.3	86.3	210	665	2102	6648	21021
LONG BEACH FWY	NB s/o Anaheim St	10457	78	1	21	40	44	56	0	0	0.5	0.5	1	84.7	85.7	183	578	1827	5777	18269
LONG BEACH FWY	NB s/o PCH	10893	79	1	21	38	44	56	0	0	0.5	0.5	1	84.4	85.4	173	547	1731	5473	17306
LONG BEACH FWY	NB s/o loop off ramp at PCH	11764	75	1	25	34	44	56	0	0	0.5	0.5	1	85.5	86.5	222	701	2217	7010	22167
LONG BEACH FWY	SB n/o Anaheim St	10957	76	1	23	39	44	56	0	0	0.5	0.5	1	85.1	86.1	202	639	2022	6394	20220
LONG BEACH FWY	SB s/o PCH	10309	75	1	24	42	44	56	0	0	0.5	0.5	1	85.3	86.3	212	671	2123	6714	21231
LONG BEACH FWY	NB n/o I-405 Interchange	17394	80	1	19	36	44	56	0	0	0.5	0.5	1	85.9	86.9	244	771	2438	7710	24380
LONG BEACH FWY	NB s/o I-405 Interchange Ramp	14468	79	1	19	39	44	56	0	0	0.5	0.5	1	85.6	86.6	227	719	2272	7185	22722
LONG BEACH FWY	SB n/o Wardlow Rd	9855	72	1	27	50	44	56	0	0	0.5	0.5	1	86.5	87.5	276	874	2764	8742	27644
LONG BEACH FWY	NB s/o Firestone Blvd	18738	87	1	12	35	44	56	0	0	0.5	0.5	1	84.4	85.4	172	544	1719	5436	17190
LONG BEACH FWY	SB s/o Anaheim St	2672	29	0	71	62	44	56	0	0	0.5	0.5	1	85.4	86.4	219	693	2191	6929	21911
LONG BEACH FWY	SB n/o I-405	14384	79	1	20	31	44	56	0	0	0.5	0.5	1	85.8	86.8	235	744	2353	7441	23529
LONG BEACH FWY	NB between off/on ramps at Willow St	12889	77	1	22	29	44	56	0	0	0.5	0.5	1	85.3	86.3	211	666	2105	6657	21051
LONG BEACH FWY	SB s/o Willow St	11231	74	1	25	38	44	56	0	0	0.5	0.5	1	85.3	86.3	211	669	2114	6685	21140
LONG BEACH FWY	NB n/o Willow St	12483	76	1	23	31	44	56	0	0	0.5	0.5	1	85.6	86.6	228	721	2281	7214	22813
LONG BEACH FWY	NB n/o PCH	10901	74	1	26	38	44	56	0	0	0.5	0.5	1	85.2	86.2	207	656	2074	6558	20738
LONG BEACH FWY	NB Between Ramps at Anaheim St	10835	77	1	22	44	44	56	0	0	0.5	0.5	1	85.4	86.4	218	690	2183	6904	21832
LONG BEACH FWY	NB n/o Anaheim St	10492	77	1	22	45	44	56	0	0	0.5	0.5	1	85.4	86.4	219	693	2190	6925	21900
TERMINAL ISLAND FWY	s/o PCH	1536	64	0	35	30	44	56	0	0	0.5	0.5	1	78.3	79.3	42	132	419	1324	4187
TERMINAL ISLAND FWY	n/o PCH	1133	63	0	36	30	44	56	0	0	0.5	0.5	1	77.1	78.1	32	100	317	1004	3175
TERMINAL ISLAND FWY	n/o Ocean Blvd	1536	64	0	35	30	44	56	0	0	0.5	0.5	1	78.3	79.3	42	132	419	1324	4187
TERMINAL ISLAND FWY	NB between Off and loop On ramp at PCH	1730	55	0	45	49	44	56	0	0	0.5	0.5	1	80.7	81.7	73	230	726	2296	7262
TERMINAL ISLAND FWY	NB s/o PCH off ramp	1916	61	0	39	48	44	56	0	0	0.5	0.5	1	80.4	81.4	69	218	689	2179	6890
TERMINAL ISLAND FWY	SB n/o Anaheim St	1599	69	0	30	49	44	56	0	0	0.5	0.5	1	78.9	79.9	48	152	482	1525	4822
TERMINAL ISLAND FWY	NB between Henry Ford Ave and Anaheim St	2296	53	0	47	49	44	56	0	0	0.5	0.5	1	82.0	83.0	100	316	998	3155	9978
TERMINAL ISLAND FWY	SB s/o Henry Ford Ave	1362	66	0	34	39	44	56	0	0	0.5	0.5	1	77.4	78.4	34	108	341	1078	3409
TERMINAL ISLAND FWY	e/o Seaside Ave	1903	65	0	35	27	44	56	0	0	0.5	0.5	1	78.6	79.6	45	144	455	1437	4546
TERMINAL ISLAND FWY	SB s/o Anaheim Way	1293	61	0	39	49	44	56	0	0	0.5	0.5	1	78.9	79.9	48	153	482	1525	4823
TERMINAL ISLAND FWY	NB s/o Willow St	1348	69	0	31	25	44	56	0	0	0.5	0.5	1	76.2	77.2	26	83	261	826	2612
TERMINAL ISLAND FWY	SB s/o PCH on ramp	1293	61	0	39	48	44	56	0	0	0.5	0.5	1	78.8	79.8	47	150	474	1498	4737
TERMINAL ISLAND FWY	SB between loop Off and On ramp at PCH	2451	57	0	43	49	44	56	0	0	0.5	0.5	1	82.0	83.0	99	312	986	3118	9860
TERMINAL ISLAND FWY	s/o Henry Ford Ave	1306	23	0	77	39	44	56	0	0	0.5	0.5	1	80.5	81.5	71	224	707	2237	7074
W ANAHEIM ST	e/o Santa Fe Ave	4552	92	1	7	24	44	56	0	0	0.5	0.5	1	75.1	76.1	20	64	202	638	2017
W ANAHEIM ST	w/o Harbor Ave	3974	91	1	8	25	44	56	0	0	0.5	0.5	1	75.8	76.8	24	74	235	745	2355
W ANAHEIM ST	w/o Seabright Ave	3183	98	1	1	26	44	56	0	0	0.5	0.5	1	69.4	70.4	5	17	54	171	541
W ANAHEIM ST	w/o E I St	3604	98	1	1	24	44	56	0	0	0.5	0.5	1	69.1	70.1	5	16	51	162	514
W ANAHEIM ST	between Seabright Ave and Santa Fe Ave	2952	77	1	23	26	44	56	0	0	0.5	0.5	1	78.6	79.6	45	143	451	1425	4508
W HARRY BRIDGES BLVD	between Wilmington Blvd and Neptune Ave	2921	78	1	21	28	44	56	0	0	0.5	0.5	1	78.6	79.6	45	143	454	1434	4536
W HARRY BRIDGES BLVD	between Hawaiian Ave and Wilmington Blvd	2723	71	1	28	29	44	56	0	0	0.5	0.5	1	79.6	80.6	57	180	569	1801	5695
W HARRY BRIDGES BLVD	between Neptune Ave and Fries Ave	2920	78	1	21	30	44	56	0	0	0.5	0.5	1	79.0	80.0	49	156	493	1558	4928
W HARRY BRIDGES BLVD	between Figueroa St and Mar Vista Ave	875	87	1	12	29	44	56	0	0	0.5	0.5	1	71.1	72.1	8	26	81	257	814
W HARRY BRIDGES BLVD	between Fries Ave and Avalon Blvd	8005	98	1	1	29	44	56	0	0	0.5	0.5	1	74.3	75.3	17	53	167	528	1670
W HARRY BRIDGES BLVD	between Mar Vista Ave and Hawaiian Ave	8555	98	1	1	29	44	56	0	0	0.5	0.5	1	74.7	75.7	18	58	183	578	1827
W PACIFIC COAST HIGHWAY	between I-710 NB and SB ramps	6519	97	1	2	23	44	56	0	0	0.5	0.5	1	73.0	74.0	12	39	125	395	1248
W PACIFIC COAST HIGHWAY	e/o San Gabriel Ave	6860	97	1	2	19	44	56	0	0	0.5	0.5	1	71.7	72.7	9	29	92	290	915
W PACIFIC COAST HIGHWAY	between San Gabriel Ave and Santa Fe Ave	6430	97	1	2	19	44	56	0	0	0.5	0.5	1	71.9	72.9	10	30	96	304	962
W PACIFIC COAST HIGHWAY	between Terminal Island Fwy SB and NB ra	5737	90	1	10	28	44	56	0	0	0.5	0.5	1	78.3	79.3	43	135	427	1351	4273
W PACIFIC COAST HIGHWAY	e/o Santa Fe Ave	798	19	0	81	16	44	56	0	0	0.5	0.5	1	76.2	77.2	26	83	263	832	2631
W PACIFIC COAST HIGHWAY	e/o Harbor Ave	981	15	0	85	21	44	56	0	0	0.5	0.5	1	78.5	79.5	44	140	444	1404	4440
W WILLOW ST	between NB and SB Terminal Island Fwy	8550	97	1	2	21	44	56	0	0	0.5	0.5	1	73.4	74.4	14	43	137	435	1375
W WILLOW ST	between Terminal Island Fwy and Santa Fe	6861	97	1	2	16	44	56	0	0	0.5	0.5	1	70.0	71.0	6	20	62	196	620
W WILLOW ST	between Santa Fe Ave and Easy Ave	7249	97	1	2	19	44	56	0	0	0.5	0.5	1	71.6	72.6	9	28	90	283	896
W WILLOW ST	e/o Easy Ave	8511	97	1	2	11	44	56	0	0	0.5	0.5	1	69.7	70.7	6	18	58	183	578
W WILLOW ST	w/o NB I-710 on ramp	7220	97	1	2	14	44	56	0	0	0.5	0.5	1	70.0	71.0	6	20	63	198	627

11 Noise Model Input and Output Data

Operational and rail noise modeling input and output files are maintained at AGI offices.