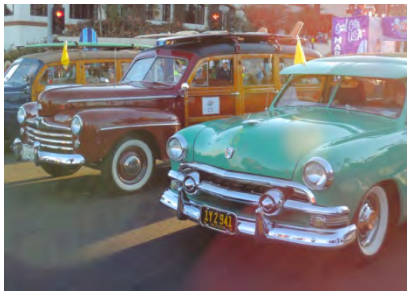
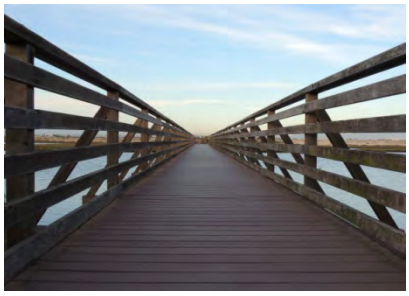
APPENDIX K

Noise Technical Report

Noise Technical Report

Draft





City of Huntington Beach

General Plan Update

July 30, 2014

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LIST OF ABBREVIATIONS

ADT	average daily traffic
ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CNEL	Community Noise Equivalent Level
dB	decibel
dBA	A-weighted decibel scale
EPA	US Environmental Protection Agency
FHWA	Federal Highway Administration
HUD	US Department of Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
L_{dn}	Day-Night Average Level
USGS	US Geological Survey

INTRODUCTION

This report describes existing environmental noise conditions within the Huntington Beach General Plan Update planning area shown in **Figure 1**. The planning area includes the City of Huntington Beach, the Bolsa Chica Wetlands, and the Goodell property located northeast of the wetlands.

Information contained in this report will be used to inform the Huntington Beach General Plan Update and Environmental Impact Report. Information was compiled from various state and federal sources, field measurements within the city, and modeling of local traffic data.

FUNDAMENTALS OF SOUND AND ENVIRONMENTAL NOISE

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise, on the other hand, is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from traffic on a major highway. **Table 1** illustrates representative noise levels for the urban environment. Criteria have been established to help protect the public health and safety and prevent disruption of certain activities. The criteria are based on known impacts of noise as described below:

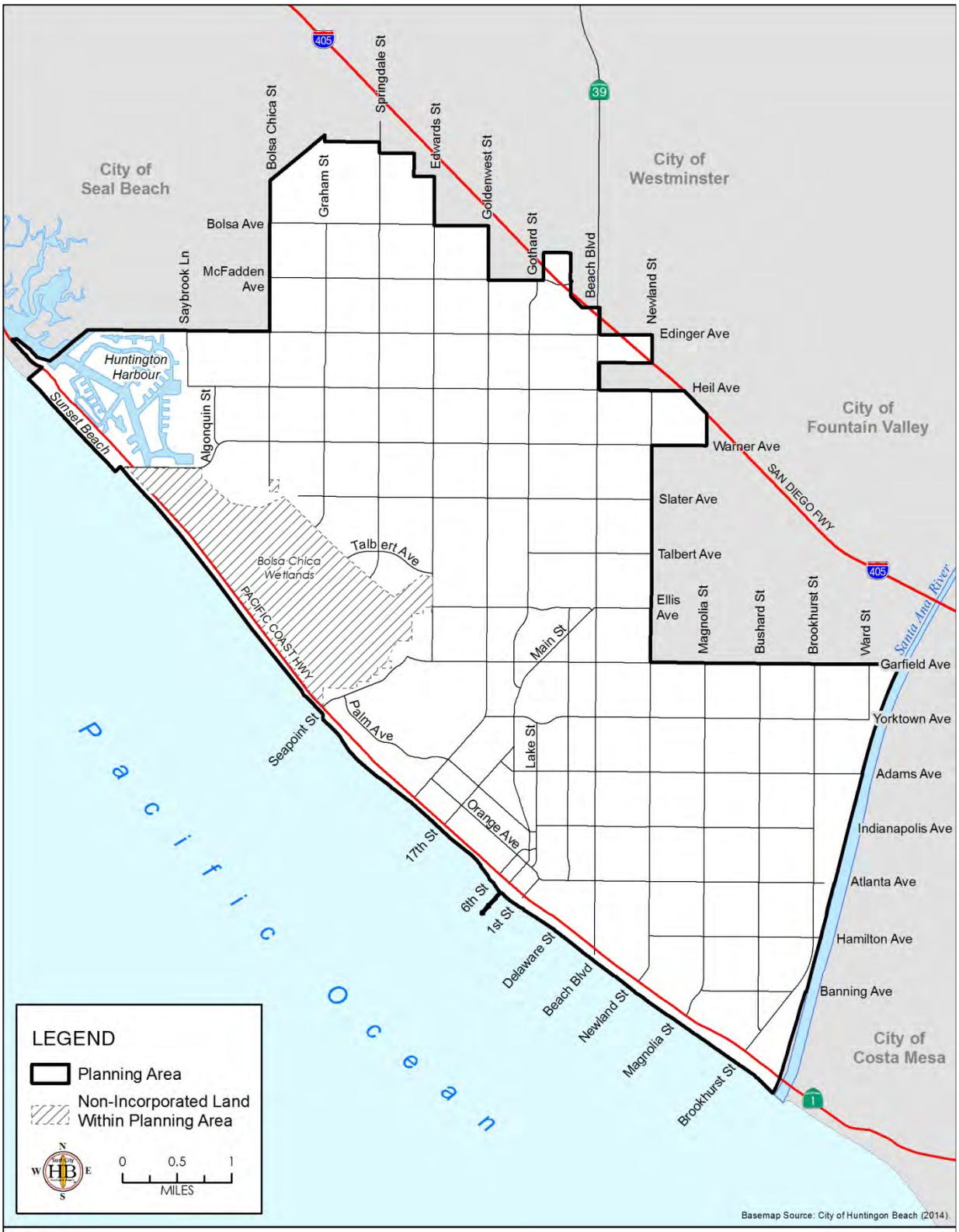
- Hearing loss is not a concern in community noise. The potential for noise-induced hearing loss is more commonly associated with occupational noise exposure in heavy industry to noisy work environments. Noise levels in neighborhoods, even in noisy airport environs, are not sufficiently loud to cause hearing loss.

- Speech interference is one of the primary concerns in environmental noise analysis. Normal conversational speech is in the range of 60 to 65 dBA, and any noise in this range or louder may interfere with speech.

- Sleep interference is a major noise concern related to community noise. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

- Physiological responses are those measurable effects of noise on people that are realized as physiological changes (e.g., pulse rate, blood pressure). While such effects can be induced and observed, the extent to which these physiological responses cause harm or are signs of harm is not known.

- Annoyance is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.



HUNTINGTON BEACH PLANNING AREA **FIGURE 1**

City of Huntington Beach General Plan

TABLE 1
REPRESENTATIVE NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock concert
Jet fly-over at 100 feet	—105—	
	—100—	
Gas lawnmower at 3 feet	—95—	
	—90—	
	—85—	Food blender at 3 feet
Diesel truck going 50 mph at 50 feet	—80—	Garbage disposal at 3 feet
Noisy urban area at daytime	—75—	
Gas lawnmower at 100 feet	—70—	Vacuum cleaner at 10 feet
Commercial area	—65—	Normal speech at 3 feet
Heavy traffic at 300 feet	—60—	
	—55—	Large business office
Quiet urban area during daytime	—50—	Dishwasher in next room
	—45—	
Quiet urban area during nighttime	—40—	Theater, large conference room (background)
	—35—	
	—30—	Library
Quiet rural area during nighttime	—25—	Bedroom at night, concert hall (background)
	—20—	
	—15—	Broadcast/recording studio
	—10—	
	—5—	
Lowest threshold of human hearing	—0—	Lowest threshold of human hearing

Source: Caltrans 2009

NOISE DESCRIPTORS

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise as well as the time of day when the noise occurs. Those scales that are applicable to this analysis are as follows:

- L_{eq}, the equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time; thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

- L_{dn}, the Day-Night Average Level, is a 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24 hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.

- CNEL, the Community Noise Equivalent Level, is a 24-hour average L_{eq} with a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. and an additional 5 dBA weighting during the hours of 7:00 p.m. to 10:00 p.m. to account for noise sensitivity in the evening and nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.

- L_{min}, the minimum instantaneous noise level experienced during a given period of time.

- L_{max}, the maximum instantaneous noise level experienced during a given period of time.

- L_n, the A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% (L_{01}, L_{10}, L_{50}, L_{90}, respectively) of the time during the measurement period.

HUMAN REACTION TO NOISE

People react to sound in a variety of ways. For example, rock music may be pleasant to some people, while for others it may be annoying, constitute a health hazard, or disrupt activities. Human tolerance to noise depends on a variety of acoustical characteristics of the source and environmental characteristics. Noise environments and consequences of human activities are usually well represented by median noise levels during the day, night, or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 55 dBA, moderate in the 55 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated natural settings that can provide noise levels as low as 20 dBA and quiet suburban residential streets that can provide noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). Some people may consider louder environments adverse, but most individuals will tolerate higher levels associated with more noisy urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Human perception is complicated by the fact that it has no simple correlation with acoustical energy. Two noise sources do not sound twice as loud as one noise source. When evaluating changes in 24-hour community noise levels, a 3 dBA increase is barely perceptible to most people. While a 5 dBA increase is readily noticeable, a 10 dBA increase would be perceived as a doubling of loudness.

Noise levels from a particular source decline as distance to the receptor increases. Other factors such as the weather and reflecting or shielding also help intensify or reduce the noise level at any given location. Sound from a small localized source (approximating 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. However, highway traffic noise is not a single, stationary point source. The movement of the vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over a time interval. This results in cylindrical spreading rather than spherical spreading. Because the change in surface area of a cylinder only increases by two times for each doubling of the radius instead of the four times associated with spheres, the change in sound level is 3 dBA for each doubling of distance. Noise levels may also be reduced by intervening structures—generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. As noted by the California Department of Transportation (Caltrans), the manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 dBA with closed windows, while the exterior-to-interior reduction of newer homes is generally 30 dBA or more due to the use of double-pane windows.

EXISTING NOISE CONDITIONS

Land uses in the Huntington Beach planning area include a range of residential, commercial, institutional, industrial, recreational, and open space areas. In general, the greatest source of noise throughout Huntington Beach is vehicle roadway noise generated along arterial roadways such as Beach Boulevard, Bolsa Chica Street, Goldenwest Street, Adams Avenue, Brookhurst Street, and Pacific Coast Highway, as well as minor arterial roads along residential areas, and various stationary sources such as commercial heating, ventilation, and air conditioning (HVAC) units and petroleum extraction activities. Additionally, the city experiences occasional aircraft overflight from commercial airlines from both Long Beach and John Wayne airports.

TRANSPORTATION NOISE SOURCES

On-Road Vehicle Noise

Noise levels along roadways are affected by several traffic characteristics, including average daily traffic (ADT) volumes. Other factors that affect roadway noise levels include the vehicle mix of trucks versus automobiles, road conditions, vehicle speed, and the gradient of the roadway. The major east–west roadways in Huntington Beach are Bolsa Avenue, Edinger Avenue, Warner Avenue, Adams Avenue, and Pacific Coast Highway. The major north–south roadways are Beach Boulevard, Goldenwest Street, Bolsa Chica Street, and Brookhurst Street. In general, these roadways abut commercial or residential land uses with some sound-reducing measures (e.g., sound walls, setbacks from roadways) incorporated into site design.

Rail Service Noise

The Union Pacific Railroad right-of-way runs east of Gothard Street, extending from the northern city limits to a terminus just north of Garfield Avenue. It provides freight service for the industrial corridor located along Gothard Street and is generally not located adjacent to noise-sensitive land uses. Rail service is extremely limited, with approximately one to two trains per day traveling through the planning area (Stantec 2014).

Aircraft Noise

No airport is located in the planning area, and no major flight corridors overlie Huntington Beach. Long Beach Airport is located approximately 12.5 miles to the northwest of the planning area, and John Wayne Airport is located approximately 3.5 miles to the southeast. These represent the closest commercial airports to the planning area (LACALUC 2003; OCALUC 2008). The planning area is not located within the noise contours for either airport. While there are parts of the city that experience direct flyover by aircraft landing at Long Beach Airport, generally, these aircraft are at sufficient altitude that noise impacts typically would not occur.

STATIONARY NOISE SOURCES

Construction Noise

Construction activities are a regular and ongoing source of noise throughout the planning area. The noise levels generated by construction activities are generally isolated to the immediate vicinity of a construction site and occur during daytime hours in accordance with City regulations. Construction activities also occur for relatively short-term periods of a few weeks to a few months, after which the noise sources are removed from the construction area. According to the US Environmental Protection Agency (EPA), construction noise levels can reach as high as 107 dBA for pile driving activities. **Table 2** illustrates noise levels for common construction equipment and activities at a distance of 50 feet.

TABLE 2
NOISE RANGES OF TYPICAL CONSTRUCTION EQUIPMENT

Construction Equipment	Noise Levels in dBA L_{eq} at 50 feet[1]
Front Loader	73–86
Truck	82–95
Crane (movable)	75–88
Crane (derrick)	86–89
Vibrator	68–82
Saw	72–82
Pneumatic Impact Equipment	83–88
Pile Driving (peaks)	95–107
Jackhammer	81–98
Pump	68–72
Generator	71–83
Compressor	75–87
Concrete Mixer	75–88
Concrete Pump	81–85
Backhoe	73–95
Tractor	77–98
Scraper/Grader	80–93
Paver	85–88

Source: EPA 1971

Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of noise emissions as that shown in this table

Commercial and Industrial Noise

Commercial uses in the planning area consist of regional retail centers, general commercial uses, neighborhood commercial uses, and offices. Existing commercial uses are predominantly located in regional shopping centers such as Bella Terra, in Downtown Huntington Beach, and along the blocks adjacent to both sides of Beach Boulevard, Gothard Street, Edinger Avenue, and Warner Avenue. The primary noise sources associated with commercial uses are commercial HVAC systems. Large HVAC systems associated with commercial buildings typically result in noise levels that average between 50 and 65 dBA L_{eq} at 50 feet from the equipment (AHRI 1997). Other noise sources include medium-duty truck noise associated with the delivery of goods, as well as human activity.

Industrial uses are located primarily in the northwestern portion of the planning area (including and adjacent to the Boeing campus), along the Gothard Street corridor, in the Holly-Seacliff area surrounding the intersection of Stewart Lane and Garfield Avenue, and along Pacific Coast Highway (near and including oil production facilities and the AES power plant). Aside from oil extraction uses, most of the industrial uses in the planning area consist of warehousing, including vehicle and equipment storage along the Gothard Street corridor. The other predominant concentration of industrial use is located in northwestern Huntington Beach, generally north of Edinger Avenue and west of Springdale Street. Industries in this area consist primarily of manufacturing and research and development related to the aerospace industry. Similar to commercial uses, the primary exterior noise sources associated with these uses are related to HVAC systems and medium-duty commercial trucks.

Oil Extraction Noise

Huntington Beach has been an active site for oil extraction since the 1920s, and large-scale oil and gas production continues today. Oil wells in Huntington Beach are scattered throughout much of the planning area. Most are concentrated along the coastal areas and mesas. The US Geological Survey (USGS) (2013) estimates that approximately 117 million barrels of oil could potentially be recovered out of the Huntington Beach oil field. Noise sources associated with oil extraction activities are related to heavy-duty vehicle use, including noise associated with site preparation, and would be similar to those identified in **Table 2**.

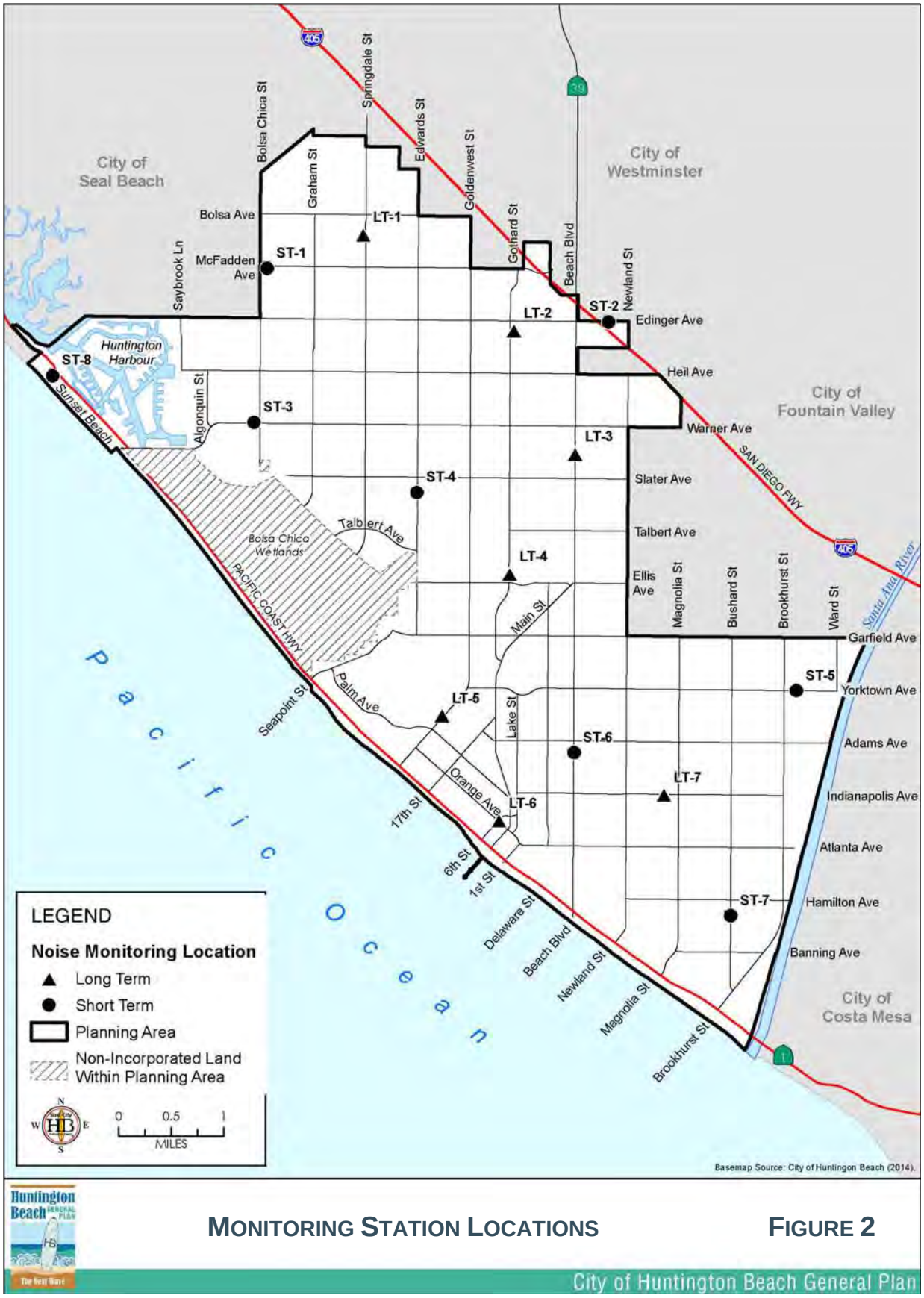
Special Event Noise

Many of the parks within the planning area have facilities for organized sports including baseball, soccer, and basketball. Noise from these activities can have a negative impact on neighboring residential land uses, particularly at parks where lighted fields allow evening activities. Additionally, the City regularly hosts special events on a local, regional, and international level. Local events include farmers markets and Surf City Nights and evening music events in public parks, drawing crowds from a few dozen people to up to 2,800 for a summer evening Surf City Night event (City of Huntington Beach 2013). Regional and international events include sporting events such as the Huntington Beach Association of Volleyball Professionals Finals, the BB Jazz Festival at Central Park, and the Association of Surfing Professionals US Open of Surfing.

These events often use amplification devices, such as public address systems, and include amplified music. According to the City's (2013) Draft Focused Environmental Impact Report for the Surf City Nights Project, average noise levels for the Surf City Nights events range between 56.5 dBA and 64.5 dBA due to the use of amplified music and crowd noise. For larger professional events, such as the US Open of Surfing, crowd noise could exceed 93 dBA at 50 feet.

Noise Study

In order to accurately determine the existing noise environment within the planning area, PMC staff performed a series of long- and short-term noise measurements over the course of a three-week period in June and July 2014. The measurements were taken with a Larson-Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute (ANSI) standards for general environmental noise measurement instrumentation. Prior to each measurement period, the SoundExpert LxT sound level meter was calibrated according to manufacturer's specifications with a Larson Davis CAL200 Class I Calibrator. The locations of long- and short-term measurements are shown in **Figure 2**. The data sheets associated with the noise measurements are provided as **Appendix A** to this report.



MONITORING STATION LOCATIONS **FIGURE 2**

City of Huntington Beach General Plan

AMBIENT NOISE MEASUREMENTS

Long-Term Measurement Results

Long-term 24-hour ambient noise measurements were taken at seven different locations throughout the planning area. The locations were chosen in consultation with City staff. They were identified as unique noise generators within the planning area, due to a high volume of traffic, large number of truck trips, or commercial activities occurring in the vicinity. The measurements were taken Tuesday through Friday in order to accurately record peak traffic noise throughout the planning area. To obtain the measurements, the microphone was positioned at a height of approximately 6 feet above the ground on available street signs and utility poles, approximately 3 to 6 feet from the curb line of the roadway and approximately 3 to 5 feet from the adjacent property line of the nearest residential or commercial use. Due to the location of these street signs and utility poles, it was not possible to have a uniform distance from the roadway for all locations.

As shown in **Figure 2**, monitoring was conducted in residential, commercial, and industrial areas of the planning area. **Table 3** summarizes the L_{eq} measurements by location for each 24-hour period of the survey and the 24-hour $_{Ldn,}$ and the L_{max} and L_{min} for each hour of the 24-hour recording. Because the noise measurements were taken over a 24-hour period, it is not possible to determine the source of noise that generated the L_{max} for each location; however, when spikes in noise were captured by the monitoring equipment, it can be assumed that typical urban noise generators were the cause. Examples of typical urban noise generators capable of producing the L_{max} values include standard gardening and landscaping equipment such as lawnmowers and leaf-blowers; police, ambulance, and fire sirens; motorcycles; heavy trucks; and typical home maintenance equipment such as handsaws.

TABLE 3
LONG-TERM NOISE SURVEY RESULTS

Measurement Location	Date	Measured Ambient Noise Levels, dBA (L_{eq})					
		24-Hour L_{eq}	L_{min}	L_{max}	Daytime (7:00 a.m. to 10:00 p.m.) L_{eq}	Nighttime (10:00 p.m. to 7:00 a.m.) L_{eq}	L_{dn}
LT-1 (Springdale Street/Thor Drive)	June 10, 2014	68.5	34.0	93.4	69.6	63.8	71.5
LT-2 (Gothard Street/Murdy Avenue)	June 11, 2014	70.3	96.6	31.2	71.6	63.9	72.5
LT-3 (Beach Boulevard, north of Slater Avenue)	June 12, 2014	74.1	101.5	35.9	75.2	69.9	77.4
LT-4 (Goldenwest Street, north of Ellis Avenue)	June 17, 2014	74.6	100.5	30.7	73.6	76.0	81.7
LT-5 (Deep Harbor Lane/Quiet Bay Lane)	June 18, 2014	58.2	87.0	27.5	57.6	59.4	65.1
LT-6 (6th Street/Orange Avenue)	June 19, 2014	61.4	94.0	34.0	60.1	63.0	68.6
LT-7 (Indianapolis Street/Ives Lane)	June 25, 2014	69.6	100.3	34.5	70.8	63.6	72.0

As shown in **Table 3**, the average 24-hour noise levels ranged between 58.2 dBA L_{eq} and 74.6 dBA L_{eq}, with L_{dn} noise levels ranging between 65.1 dBA and 81.7 dBA. Typical of urban areas, noise levels in the residential areas, such as locations LT-5 and LT-6, were substantially lower than those measured in the commercial areas. Commercial and industrial areas in the planning area regularly exceed 68 dBA, particularly along major arterials such as Beach Boulevard, Goldenwest Street, and Gothard Street.

Short-Term Measurement Results

The short-term measurements were taken at eight different locations on July 8, 2014, throughout the planning area for a duration of 20 minutes each. The locations were chosen in consultation with City staff. They generally represent residential areas within the planning area where ambient noise levels are anticipated to be lower than those along the major transportation corridors and commercial areas. The microphone was positioned at a height of 5 feet, 6 inches from local grade elevation during the short-term measurements. **Table 4** shows the average noise levels recorded during the measurements, as well as the primary source of the noise. The measured noise levels ranged from 52.4 dBA L_{eq} to 68.6 dBA $L_{eq.}$ As with the long-term measurements, noise levels were lower in residential areas and higher along busier arterials and in commercial areas.

TABLE 4
SHORT-TERM NOISE SURVEY RESULTS

	Location	Run Time	Primary Noise Sources	Noise Level Statistics		
				L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)
ST-1	15432 Andaman Way	July 8, 2014 9:28 a.m.	Traffic on McFadden Street, lawnmower	52.4	41.7	67.0
ST-2	8400 Edinger Avenue	July 8, 2014 10:06 a.m.	Traffic on Edinger Avenue	68.2	50.3	80.4
ST-3	17021 Sims Lane	July 8, 2014 10:55 a.m.	Traffic on Warner Avenue, garbage truck activity	64.8	43.3	90.4
ST-4	17701 Edwards Street	July 8, 2014 11:36 a.m.	Traffic on Edwards Street, skateboard	59.1	44.1	71.6
ST-5	Yorktown Avenue/Mauna Lane	July 8, 2014 12.19 p.m.	Traffic on Yorktown Avenue	68.6	47.5	94.4
ST-6	Memphis Avenue, east of Lakeside Lane	July 8, 2014 1:34 p.m.	Traffic on Beach Boulevard	65.1	43.4	90.2
ST-7	9521 Landfall Drive	July 8, 2014 2:14 p.m.	Traffic on Bushard, dog barking	57.7	41.3	82.0
ST-8	20th Street/N. Pacific Avenue	July 8, 2014 3:08 p.m.	Traffic on PCH, parking lot, and HVAC from adjacent restaurant	60.0	50.7	78.3

Noise-Sensitive Receptors

Sensitive land uses have associated human activities that may be subject to stress or significant interference from noise and include residences, schools, childcare facilities, religious institutions, hospitals, libraries, parks and recreational facilities, healthcare facilities, convalescent centers, and retirement homes. Various federal, state, and local standards address the compatibility of land uses with noise levels. Applicable standards are presented in the following discussion. The standards place special emphasis on land uses considered to be sensitive to high noise levels.

The planning area contains many of these different land uses, including residences, healthcare facilities, retirement homes, convalescent centers, parks and recreational facilities, public and private schools, religious institutions, and childcare facilities. As illustrated in **Figure 2** and shown in **Tables 3** and **4**, sensitive uses located adjacent to Beach Boulevard, Goldenwest Street, Warner Avenue, Edinger Avenue, and Pacific Coast Highway regularly experience noise levels of up to 70 dBA L_{dn}. Sensitive uses located along arterials such as Brookhurst Street, Bushard Street, Springdale Street, Yorktown Avenue, and Heil Avenue experience noise levels up to 65 dBA L_{dn}.

ROADWAY NOISE LEVELS

Existing 24-hour noise levels have been calculated for various highways and roadways throughout the planning area using the Federal Highway Administration Highway Noise Prediction Model (FHWA-RD-77-108). The model calculates the average noise level at specific locations based on traffic volumes, average speeds represented by the posted speed limit, roadway geometry, and site environmental conditions. Average vehicle noise rates (energy rates) utilized in the FHWA Model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels.

Noise levels were modeled for roadways with the highest traffic volumes in the planning area, using data from the traffic study prepared by Stantec. Resulting noise contours are illustrated on **Figure 3**. Calculated noise levels are presented in **Table 5**, along with distances to various noise level contours. Calculation data and results are provided in **Appendix B** of this report.

NOISE CONTOURS

FIGURE 3

City of Huntington Beach General Plan

TABLE 5
EXISTING ROADWAY NOISE LEVELS

Location	Reference L_{dn} at 100 Feet	Distance to Noise Contour		
		70 L_{dn}	65 L_{dn}	60 L_{dn}
Bolsa Avenue				
Bolsa Chica Street to Springdale Street	61.9	—	133	287
Springdale Street to Edwards Street	63.4	—	78	168
Edwards Street to Goldenwest Street	61.3	—	75	161
McFadden Avenue				
Bolsa Chica Street to Springdale Street	58.6	—	—	81
Springdale Street to Edwards Street	59.6	—	—	95
Edwards Street to Goldenwest Street	62.2	—	65	139
Goldenwest Street to Gothard Street	63.7	—	82	177
Edinger Avenue				
Saybrook Lane to Bolsa Chica Street	61.5	—	58	126
Bolsa Chica Street to Springdale Street	65.3	—	104	225
Springdale Street to Edwards Street	65.6	—	109	235
Edwards Street to Goldenwest Street	64.4	—	91	196
Goldenwest Street to Gothard Street	64.7	—	95	204
Gothard Street to Beach Boulevard	64.7	—	95	204
Beach Boulevard to Newland Street	64.8	—	97	209
Heil Avenue				
Algonquin Street to Bolsa Chica Street	58.6	—	—	81
Bolsa Chica Street to Springdale Street	60.6	—	51	110
Springdale Street to Edwards Street	60.6	—	51	110
Edwards Street to Goldenwest Street	61.0	—	54	116
Goldenwest Street to Gothard Street	62.5	—	68	146
Gothard Street to Beach Boulevard	62.2	—	65	139
Beach Boulevard to Newland Street	58.9	—	39	85
Warner Avenue				
PCH to Algonquin Street	66.2	—	120	258
Algonquin Street to Bolsa Chica Street	65.4	—	106	229
Bolsa Chica Street to Springdale Street	65.9	—	114	246
Springdale Street to Edwards Street	66.4	—	124	267
Edwards Street to Goldenwest Street	66.6	—	129	277
Goldenwest Street to Gothard Street	66.6	—	129	277
Gothard Street to Beach Boulevard	67.1	64	138	297

Location	Reference L_{dn} at 100 Feet	Distance to Noise Contour		
		70 L_{dn}	65 L_{dn}	60 L_{dn}
Beach Boulevard to Newland Street	66.5	—	126	272
Newland Street to Brookhurst Street	66.8	—	131	282
Slater Avenue				
Graham Street to Springdale Street	59.2	—	—	89
Springdale Street to Edwards Street	61.2	—	56	120
Edwards Street to Goldenwest Street	62.2	—	65	141
Goldenwest Street to Gothard Street	63.1	—	74	160
Gothard Street to Beach Boulevard	63.3	—	77	166
Beach Boulevard to Newland Street	63.1	—	74	160
Talbert Avenue				
Goldenwest Street to Gothard Street	54.1	—	—	41
Gothard Street to Beach Boulevard	61.9	—	62	134
Beach Boulevard to Newland Street	63.3	—	77	166
Ellis Avenue				
Edwards Street to Goldenwest Street	58.5	—	—	79
Goldenwest Street to Gothard Street	60.2	—	48	104
Gothard Street to Beach Boulevard	58.4	—	36	79
Beach Boulevard to Newland Street	61.5	—	59	127
Garfield Avenue				
PCH to Edwards Street	57.4	—	—	67
Edwards Street to Goldenwest Street	62.3	—	66	142
Goldenwest Street to Gothard Street	62.3	—	66	142
Gothard Street to Main Street	61.9	—	63	135
Main Street to Beach Boulevard	62.8	—	72	155
Beach Boulevard to Newland Street	63.1	—	75	161
Newland Street to Brookhurst Street	62.3	—	66	142
Yorktown Avenue				
Goldenwest Street to Main Street	60.5	—	50	108
Main Street to Beach Boulevard	60.2	—	48	104
Beach Boulevard to Newland Street	60.3	—	49	105
Newland Street to Brookhurst Street	60.6	—	51	110
Adams Avenue				
Lake Street to Beach Boulevard	62.4	—	67	144
Beach Boulevard to Newland Street	65.1	—	101	217
Newland Street to Magnolia Street	65.4	—	106	229

Location	Reference L_{dn} at 100 Feet	Distance to Noise Contour		
		70 L_{dn}	65 L_{dn}	60 L_{dn}
Magnolia Street to Bushard Street	66.3	—	121	262
Bushard Street to Brookhurst Street	66.3	—	121	262
Brookhurst Street to city limits	66.6	—	129	277
Indianapolis Avenue				
Lake Street to Beach Boulevard	54.1	—	—	40
Beach Boulevard to Newland Street	57.9	—	—	73
Newland Street to Magnolia Street	57.9	—	—	73
Magnolia Street to Bushard Street	58.5	—	—	80
Bushard Street to Brookhurst Street	57.3	—	—	66
Atlanta Avenue				
Beach Boulevard to Newland Street	61.6	—	60	129
Newland Street to Magnolia Street	62.6	—	69	148
Magnolia Street to Bushard Street	61.2	—	56	121
Bushard Street to Brookhurst Street	61.2	—	56	121
Hamilton Avenue				
Newland Street to Magnolia Street	60.8	—	52	112
Magnolia Street to Bushard Street	62.5	—	68	147
Bushard Street to Brookhurst Street	63.6	—	80	172
Banning Avenue				
Magnolia Street to Bushard Street	52.9	—	—	33
Bushard Street to Brookhurst Street	52.9	—	—	33
Orange Avenue				
Goldenwest Street to 17th Street	54.1	—	—	40
17th Street to 14th Street	54.1	—	—	40
14th Street to 6th Street	54.1	—	—	40
6th Street to Main Street	54.1	—	—	40
Main Street to 3rd Street	54.1	—	—	40
3rd Street to 1st Street	55.6	—	—	51
Pacific Coast Highway				
Anderson Drive to Warner Avenue	67.1	64	138	297
Warner Avenue to Seapoint Street	69.7	95	205	442
Seapoint Street to Goldenwest Street	68.1	75	161	347
Goldenwest Street to 17th Street	66.2	56	121	261
17th Street to 14th Street	66.0	54	116	251
14th Street to 6th Street	66.2	56	121	261

Location	Reference L_{dn} at 100 Feet	Distance to Noise Contour		
		70 L_{dn}	65 L_{dn}	60 L_{dn}
6th Street to Main Street	66.2	56	121	261
Main Street to 2nd Street	66.2	56	121	261
2nd Street to 1st Street	66.1	55	119	256
1st Street to Huntington Street	66.1	55	119	256
Huntington Street to Beach Boulevard	66.1	55	119	256
Beach Boulevard to Newland Street	66.5	58	126	271
Newland Street to Magnolia Street	66.0	54	116	251
Magnolia Street to Brookhurst Street	65.9	53	114	246
Brookhurst Street to city limits	66.5	58	126	271
Bolsa Chica Street				
Skylab Road to Bolsa Avenue	68.4	78	169	364
Bolsa Avenue to McFadden Avenue	68.0	73	158	340
McFadden Avenue to Edinger Avenue	67.5	68	147	316
Edinger Avenue to Heil Avenue	65.7	—	111	240
Heil Avenue to Warner Avenue	64.5	—	93	200
Graham Street				
Bolsa Avenue to McFadden Avenue	58.6	—	—	81
McFadden Avenue to Edinger Avenue	59.8	—	—	97
Edinger Avenue to Heil Avenue	58.5	—	—	79
Heil Avenue to Warner Avenue	56.6	—	—	59
Warner Avenue to Slater Avenue	57.9	—	—	72
Springdale Street				
Skylab Road to Bolsa Avenue	64.8	—	97	208
Bolsa Avenue to McFadden Avenue	64.4	—	92	197
McFadden Avenue to Edinger Avenue	63.8	—	83	180
Edinger Avenue to Heil Avenue	63.6	—	81	174
Heil Avenue to Warner Avenue	63.1	—	75	161
Warner Avenue to Slater Avenue	62.3	—	66	142
Slater Avenue to Talbert Avenue	59.6	—	—	94
Edwards Street				
Industry Way to Bolsa Avenue	61.5	—	59	127
Bolsa Avenue to McFadden Avenue	61.5	—	59	127
McFadden Avenue to Edinger Avenue	61.5	—	59	127
Edinger Avenue to Heil Avenue	61.3	—	56	121
Heil Avenue to Warner Avenue	61.0	—	54	116

Location	Reference L_{dn} at 100 Feet	Distance to Noise Contour		
		70 L_{dn}	65 L_{dn}	60 L_{dn}
Warner Avenue to Slater Avenue	61.0	—	54	116
Slater Avenue to Talbert Avenue	59.5	—	—	93
Talbert Avenue to Ellis Avenue	59.9	—	46	99
Ellis Avenue to Garfield Avenue	58.9	—	39	84
Goldenwest Street				
Bolsa Avenue to McFadden Avenue	66.6	59	128	276
McFadden Avenue to Edinger Avenue	66.2	56	121	261
Edinger Avenue to Heil Avenue	66.2	56	121	261
Heil Avenue to Warner Avenue	65.9	53	114	246
Warner Avenue to Slater Avenue	65.6	—	109	235
Slater Avenue to Talbert Avenue	65.0	—	99	214
Talbert Avenue to Ellis Avenue	65.1	—	102	219
Ellis Avenue to Garfield Avenue	64.8	—	97	208
Garfield Avenue to Yorktown Avenue	65.6	—	109	234
Yorktown Avenue to Palm Avenue	64.9	—	98	212
Palm Avenue to PCH	63.9	—	84	181
Gothard Street				
McFadden Avenue to Edinger Avenue	61.6	—	59	128
Edinger Avenue to Heil Avenue	62.1	—	64	138
Heil Avenue to Warner Avenue	62.4	—	67	144
Warner Avenue to Slater Avenue	62.8	—	71	153
Slater Avenue to Talbert Avenue	62.4	—	67	144
Talbert Avenue to Ellis Avenue	61.6	—	59	128
Ellis Avenue to Garfield Avenue	60.0	—	—	100
Garfield Avenue to Main Street	60.0	—	—	100
Beach Boulevard				
Center Avenue to Edinger Avenue	69.9	98	212	456
Edinger Avenue to Heil Avenue	69.4	91	197	424
Heil Avenue to Warner Avenue	69.1	88	189	407
Warner Avenue to Slater Avenue	68.9	84	181	390
Slater Avenue to Talbert Avenue	67.7	70	152	326
Talbert Avenue to Ellis Avenue	68.2	75	162	350
Ellis Avenue to Garfield Avenue	68.0	73	158	341
Garfield Avenue to Yorktown Avenue	67.7	70	152	326
Yorktown Avenue to Adams Avenue	67.1	64	138	297

Location	Reference L_{dn} at 100 Feet	Distance to Noise Contour		
		70 L_{dn}	65 L_{dn}	60 L_{dn}
Adams Avenue to Indianapolis Avenue	65.7	—	111	240
Indianapolis Avenue to Atlanta Avenue	64.9	—	98	212
Atlanta Avenue to PCH	63.6	—	81	175
Newland Street				
Edinger Avenue to Heil Avenue	64.7	—	96	207
Heil Avenue to Warner Avenue	64.4	—	91	196
Warner Avenue to Slater Avenue	63.3	—	77	166
Slater Avenue to Talbert Avenue	63.3	—	77	166
Talbert Avenue to Ellis Avenue	63.1	—	74	160
Ellis Avenue to Garfield Avenue	62.8	—	71	154
Garfield Avenue to Yorktown Avenue	62.8	—	71	154
Yorktown Avenue to Adams Avenue	62.5	—	68	147
Adams Avenue to Indianapolis Avenue	62.2	—	65	141
Indianapolis Avenue to Atlanta Avenue	61.9	—	62	134
Atlanta Avenue to Hamilton Avenue	61.9	—	62	134
Hamilton Avenue to PCH	58.0	—	—	74
Magnolia Street				
Garfield Avenue to Yorktown Avenue	64.4	—	91	196
Yorktown Avenue to Adams Avenue	64.4	—	91	196
Adams Avenue to Indianapolis Avenue	63.6	—	80	172
Indianapolis Avenue to Atlanta Avenue	63.3	—	77	166
Atlanta Avenue to Hamilton Avenue	62.5	—	68	147
Hamilton Avenue to Banning Avenue	59.8	—	—	97
Banning Avenue to PCH	60.3	—	—	105
Bushard Street				
Garfield Avenue to Yorktown Avenue	62.2	—	65	141
Yorktown Avenue to Adams Avenue	63.1	—	74	160
Adams Avenue to Indianapolis Avenue	63.1	—	74	160
Indianapolis Avenue to Atlanta Avenue	62.8	—	71	154
Atlanta Avenue to Hamilton Avenue	62.5	—	68	147
Hamilton Avenue to Banning Avenue	60.8	—	52	112
Banning Avenue to PCH	55.6	—	—	51
Brookhurst Street				
Garfield Avenue to Yorktown Avenue	66.3	—	123	264
Yorktown Avenue to Adams Avenue	66.2	—	120	259

Location	Reference L_{dn} at 100 Feet	Distance to Noise Contour		
		70 L_{dn}	65 L_{dn}	60 L_{dn}
Adams Avenue to Indianapolis Avenue	65.3	—	105	227
Indianapolis Avenue to Atlanta Avenue	65.2	—	103	221
Atlanta Avenue to Hamilton Avenue	65.2	—	103	221
Hamilton Avenue to Banning Avenue	62.2	—	65	139
Banning Avenue to PCH	61.0	—	—	116
Main Street				
Ellis Avenue to Garfield Avenue	59.9	—	46	99
Garfield Avenue to Yorktown Avenue	59.3	—	—	90
Yorktown Avenue to Palm Avenue	60.9	—	53	114
Palm Avenue to PCH	55.1	—	—	47

REGULATORY FRAMEWORK

FEDERAL

No federal noise requirements or regulations apply directly to local actions of Orange County or the City of Huntington Beach; however, several federal regulations influence the audible landscape, especially for projects where federal funding is involved. The Federal Highway Administration (FHWA) requires abatement of highway traffic noise for highway projects through rules in the Code of Federal Regulations (23 CFR Part 772), the Federal Transit Administration, and the Federal Railroad Administration. Each recommends thorough noise and vibration assessments through comprehensive guidelines for any mass transit or high-speed railroad projects that would pass by residential areas. For housing constructed with assistance from the US Department of Housing and Urban Development (HUD), minimum noise insulation standards must be achieved (24 CFR Part 51, Subpart B).

STATE

Department of Health Services

The Office of Noise Control in the California Department of Health Care Services has established guidelines to provide a community with a noise environment that it deems to be generally acceptable. Specifically, ranges of noise exposure levels have been developed for different land uses to serve as the primary tool a city uses to assess the compatibility between land uses and outdoor noise. These noise standards are shown in **Table 6**. A noise level standard of 60 dBA L_{dn} is used for the exterior living areas of new single-family, duplex, and mobile home residential land uses, with a noise level standard of 45 to 65 dBA L_{dn} for the exterior of all new multi-family residential uses. Where a land use is denoted as "normally acceptable" for the given L_{dn} noise environment, the highest noise level in that range should be considered the maximum desirable for conventional construction which does not incorporate any special acoustic treatment. The acceptability of noise environments classified as "conditionally acceptable" or "normally unacceptable" will depend on the anticipated amount of time that will normally be spent outside the structure and the acoustic treatment to be incorporated in the structure's design.

TABLE 6
LAND USE COMPATIBILITY WITH COMMUNITY NOISE ENVIRONMENTS

Land Use Category	Community Noise Exposure (CNEL)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low Density, Single-Family, Duplex, Mobile Homes	50–60	55–70	70–75	75–85
Residential – Multiple-Family	50–65	60–70	70–75	75–85
Transient Lodging – Motels, Hotels	50–65	60–70	70–80	80–85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	80–85
Auditoriums, Concert Halls, Amphitheaters	NA	50–70	NA	65–85
Sports Arenas, Outdoor Spectator Sports	NA	50–75	NA	70–85
Playgrounds, Neighborhood Parks	50–70	NA	67.5–77.5	72.5–85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–70	60–70	NA	80–85
Office Buildings, Business Commercial and Professional	50–70	67.5–77.5	75–85	NA
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	75–85	NA

CNEL = community noise equivalent level; NA = not applicable

NORMALLY ACCEPTABLE: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features have been included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

NORMALLY UNACCEPTABLE: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise-insulation features must be included in the design.

CLEARLY UNACCEPTABLE: New construction or development should generally not be undertaken.

Source: Office of Planning and Research 2003

LOCAL

City of Huntington Beach General Plan

The California Government Code requires that a noise element be included in the general plan of each county and city in the state. Each local government's goals, objectives, and policies for noise control are established by the noise element of the general plan and the passage of specific noise ordinances. The Noise Element of the City of Huntington Beach General Plan addresses the issue of noise by identifying sources of noise in the city and providing objectives and policies, which ensure that noise from various sources would not create an unacceptable noise environment. Noise Element goals, objectives, and policies ensure new development is compatible with existing land uses, and alternately, ensure new developments are sited, designed, and constructed in such a manner that ambient noise levels would not create an unacceptable noise environment for occupants and patrons.

Current Noise Element goals, objectives, and policies will be updated as a part of this project. However, the following Noise Element policies establish standards for external and internal ambient noise:

Policy N 1.2.1 Require, in areas where noise levels exceed an exterior L_{dn} of 60 dB(A) and an interior L_{dn} of 45 dB(A), that all new development of "noise sensitive" land uses, such as housing, health care facilities, schools, libraries, and religious facilities, include appropriate buffering and/or construction mitigation measures that will reduce noise exposure to levels within acceptable limits.

Policy N 1.2.3 Require development, in all areas where the ambient noise level exceeds an L_{dn} of 60 dB(A), to conduct an acoustical analysis and incorporate special design measures in their construction, thereby, reducing interior noise levels to the 45 dB(A) L_{dn} level.

City of Huntington Beach Municipal Code

The City has also adopted a Noise Ordinance (Chapter 8.40 of the Huntington Beach Municipal Code), which identifies exterior and interior noise standards, specific noise restrictions, exemptions, and variances for sources of noise in the city. The noise level standards in the City Noise Ordinance are more stringent than state Office of Noise Control guidelines for residential and commercial noise levels. The Noise Ordinance applies to all noise sources, with the exception of any vehicle that is operated on any public highway, street, or right-of-way, or to the operation of any off-highway vehicle, to the extent that it is regulated in the California Vehicle Code, and all other sources of noise that are specifically exempted. As such, the Municipal Code provides standards against intrusive noises such as loud gatherings, unauthorized construction-generated noise, and other intrusive noises.

Exterior noise standards established in the City's Noise Ordinance, Section 8.40.050, are identified in **Table 7**, along with the exterior noise levels that are prohibited as established by Section 8.40.060. Section 8.40.070 establishes the City's interior noise standards, and Section 8.40.080 establishes the prohibited interior noise limits as identified in **Table 8**. For both exterior and interior noise levels, if the ambient noise level is greater than the identified noise standards, the noise standard becomes the ambient noise level without the offending noise.

In accordance with Section 8.40.090(d), construction noise activities are exempt from the Noise Ordinance, provided that the applicant has been granted a permit from the City and that the construction activities do not occur between the hours of 8:00 p.m. and 7:00 a.m. on weekdays and Saturdays, or at any time on Sundays or federal holidays. Additionally, Section 8.40.100 prohibits noise levels at the exterior of schools, hospitals, and churches from exceeding the standards set forth in Section 8.40.50 or from interfering with the activities at these institutions.

TABLE 7
CITY OF HUNTINGTON BEACH NOISE ORDINANCE EXTERIOR NOISE STANDARDS

Noise Zone	Noise Zone Land Uses	Noise Level	Time Period
1	All Residential Properties	55 dBA 50 dBA	7:00 a.m. to 10:00 p.m. 10:00 p.m. to 7:00 a.m.
2	All Professional Office and Public Institutional Properties	55 dBA	Anytime
3	All Commercial Properties Except Professional Office	60 dBA	Anytime
4	All Industrial Properties	70 dBA	Anytime

Source: City of Huntington Beach Noise Ordinance

Exterior Noise Levels Prohibited:

It shall be unlawful for any person at any location within the incorporated area of the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on any residential, public institutional, professional, commercial or industrial property, either within or without the city, to exceed the applicable noise standards:

(a) For a cumulative period or more than 30 minutes in any hour;
(b) Plus 5 dBA for a cumulative period of more than 15 minutes in any hour;
(c) Plus 10 dBA for a cumulative period of more than 5 minutes in any hour;
(d) Plus 15 dBA for a cumulative period of more than 1 minute in any hour; or
(e) Plus 20 dBA for any period of time.

In the event the ambient noise level exceeds any of the first four noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

TABLE 8
CITY OF HUNTINGTON BEACH NOISE ORDINANCE INTERIOR NOISE STANDARDS

Noise Zone	Noise Zone Land Uses	Noise Level	Time Period
1	All Residential Properties	55 dBA 45 dBA	7:00 a.m. to 10:00 p.m. 10:00 p.m. to 7:00 a.m.
2, 3, 4	All Professional Office, Public Institutional, Commercial, and Industrial Properties	55 dBA	Anytime

Source: City of Huntington Beach Noise Ordinance

Interior Noise Levels Prohibited:

It shall be unlawful for any person at any location within the incorporated area of the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured within any other structure on any residential, public institutional, professional, commercial or industrial property to exceed:

(a) The noise standard for a cumulative period or more than 5 minutes in any hour;
(b) The noise standard plus 5 dBA for a cumulative period of more than 1 minute in any hour; or
(c) The noise standard plus 10 dBA for any period of time.

In the event the ambient noise level exceeds any of the first two noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the third noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

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PREPARERS

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APPENDIX A -
NOISE MONITORING DATA SHEETS

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_24-01.001
User	PMC
Job Description	HB Long-Term
Location	HB_24-01 (Springdale/Thor)
Measurement Description	
Start Time	Tuesday, 2014 June 10 12:22:12
Stop Time	Wednesday, 2014 June 11 13:22:12
Duration	1 Day 01:00:00.0
Run Time	1 Day 01:00:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 2014 June 10 11:53:17
Post Calibration	None
Calibration Deviation	---

Note

Meter on Springdale adjacent residential and flood channel

Overall Data

LASeq		68.5	dB
LASmax	2014 Jun 10 18:29:44	93.4	dB
LZpeak (max)	2014 Jun 11 09:25:20	117.6	dB
LASmin	2014 Jun 11 02:14:44	34.0	dB
LCSeq		74.8	dB
LASeq		68.5	dB
LCSeq - LASeq		6.3	dB
LAIeq		70.4	dB
LAeq		68.5	dB
LAIeq - LAeq		1.9	dB
Ldn		71.5	dB
LDay 07:00-23:00		69.6	dB
LNight 23:00-07:00		63.8	dB
Lden		72.0	dB
LDay 07:00-19:00		70.2	dB
LEvening 19:00-23:00		66.9	dB
LNight 23:00-07:00		63.8	dB
LASE		118.0	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	74.4	dBA
LAS10.00	72.8	dBA
LAS33.30	67.7	dBA
LAS50.00	63.4	dBA
LAS66.60	57.5	dBA
LAS90.00	40.4	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	22 / 49.9	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Under Range Limit	25.9	dB
Under Range Peak	79.8	dB
Noise Floor	16.2	dB
Overload	121.6	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	68.8	65.2	66.2	69.8	69.2	65.8	65.0	65.6	59.2	49.7	43.2	38.5
LZSmax	94.4	91.0	93.1	96.0	94.5	97.1	93.7	90.5	84.3	87.4	80.5	76.5
LZSmin	40.2	48.3	48.1	48.4	43.0	36.0	29.3	25.9	20.9	18.3	19.0	21.5

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	65.5	63.8	62.3	61.1	60.6	59.7	59.7	61.4	62.7	64.1	65.4	65.5
LZSmax	92.2	90.5	88.9	88.0	86.3	85.8	85.0	89.4	93.0	95.8	93.8	93.3
LZSmin	28.9	33.6	32.1	40.6	44.3	40.3	41.0	42.7	41.5	43.4	42.7	40.7

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	65.3	65.0	62.8	62.1	61.0	59.9	59.2	60.1	61.3	61.8	60.9	59.6
LZSmax	91.9	91.5	92.0	97.2	88.1	91.1	87.0	92.7	86.6	84.6	86.7	86.2
LZSmin	38.7	37.5	33.2	32.0	30.9	28.1	25.6	23.9	21.9	22.1	21.5	19.0

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	57.0	53.5	49.7	46.6	45.1	42.0	40.4	38.0	35.5	35.6	32.7	31.7
LZSmax	80.3	78.9	79.8	80.6	87.3	78.2	79.6	75.3	72.0	76.4	69.2	72.9
LZSmin	17.1	15.5	13.8	13.1	12.8	13.7	13.9	13.6	14.5	15.4	16.3	18.0

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6
PRMLxT1L	29 Apr 2014 13:43:49	-28.2
PRMLxT1L	29 Apr 2014 12:41:12	-26.4

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_24-02.001
User	PMC
Job Description	HB Long-Term
Location	HB_24-02 (Gothard/Murdy)
Measurement Description	
Start Time	Wednesday, 2014 June 11 14:44:34
Stop Time	Thursday, 2014 June 12 15:44:34
Duration	1 Day 01:00:00.0
Run Time	1 Day 01:00:00.0
Pause	00:00:00.0
Pre Calibration	Wednesday, 2014 June 11 14:34:53
Post Calibration	None
Calibration Deviation	---

Note

Meter on Gothard. Fire station approximately 500 feet to the south

Overall Data

LASeq		70.3	dB
LASmax	2014 Jun 11 16:57:25	96.6	dB
LZpeak (max)	2014 Jun 11 16:57:25	122.1	dB
LASmin	2014 Jun 12 03:24:32	31.2	dB
LCSeq		76.0	dB
LASeq		70.3	dB
LCSeq - LASeq		5.7	dB
LAIeq		72.8	dB
LAeq		70.3	dB
LAIeq - LAeq		2.5	dB
Ldn		72.5	dB
LDay 07:00-23:00		71.6	dB
LNight 23:00-07:00		63.9	dB
Lden		73.2	dB
LDay 07:00-19:00		72.1	dB
LEvening 19:00-23:00		69.4	dB
LNight 23:00-07:00		63.9	dB
LASE		119.8	dB
SEA		132.1	dBZ
# Overloads		1	
Overload Duration		2.2	s
# OBA Overloads		1	
OBA Overload Duration		2.2	s

Statistics

LAS5.00	76.4	dBA
LAS10.00	74.8	dBA
LAS33.30	69.0	dBA
LAS50.00	64.3	dBA
LAS66.60	57.4	dBA
LAS90.00	40.6	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	46 / 98.1	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Under Range Limit	25.9	dB
Under Range Peak	79.8	dB
Noise Floor	16.2	dB
Overload	121.6	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	71.0	66.9	66.7	70.8	70.6	66.9	64.8	67.4	62.6	53.6	45.9	41.2
LZSmax	97.3	93.8	95.1	101.9	101.2	101.6	94.1	93.5	85.1	84.2	75.6	78.5
LZSmin	35.9	41.6	40.6	41.0	36.3	31.2	28.7	22.9	20.0	17.2	18.9	21.5

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	67.8	66.0	64.3	62.9	62.0	61.4	60.3	61.7	63.3	65.1	66.1	66.8
LZSmax	90.2	95.7	91.1	91.0	92.5	88.5	86.0	90.9	95.4	96.5	98.2	102.1
LZSmin	25.9	27.6	27.5	30.8	34.3	37.0	34.2	34.4	35.5	35.1	35.0	33.0

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	66.9	66.1	64.2	63.2	62.2	60.6	58.2	59.3	61.8	63.3	62.7	62.0
LZSmax	98.6	98.6	98.3	96.5	96.6	97.1	90.9	88.2	86.7	93.2	89.1	86.3
LZSmin	30.8	32.1	27.6	25.6	26.6	21.5	21.3	23.5	20.6	18.3	16.6	18.1

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	60.1	57.3	54.2	51.1	48.0	45.5	43.1	40.6	38.5	38.4	37.0	31.2
LZSmax	81.6	79.6	80.7	84.2	77.0	75.6	72.7	71.1	70.1	78.4	73.6	68.6
LZSmin	16.1	14.7	12.9	12.4	11.6	12.4	13.4	13.8	14.6	15.4	16.4	18.0

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6
PRMLxT1L	29 Apr 2014 13:43:49	-28.2
PRMLxT1L	29 Apr 2014 12:41:12	-26.4

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_24-03.001
User	PMC
Job Description	HB Long-Term
Location	HB_24-03 (17251 Beach Blvd)
Measurement Description	
Start Time	Thursday, 2014 June 12 16:08:42
Stop Time	Friday, 2014 June 13 17:08:42
Duration	1 Day 01:00:00.0
Run Time	1 Day 01:00:00.0
Pause	00:00:00.0
Pre Calibration	Thursday, 2014 June 12 15:55:40
Post Calibration	None
Calibration Deviation	---

Note

Traffic on Beach. Commercial area

Overall Data

LASeq		74.1	dB
LASmax	2014 Jun 13 14:45:18	101.5	dB
LZpeak (max)	2014 Jun 12 21:11:29	122.2	dB
LASmin	2014 Jun 13 03:41:36	35.9	dB
LCSeq		80.3	dB
LASeq		74.1	dB
LCSeq - LASeq		6.2	dB
LAIeq		76.6	dB
LAeq		74.1	dB
LAIeq - LAeq		2.5	dB
Ldn		77.4	dB
LDay 07:00-23:00		75.2	dB
LNight 23:00-07:00		69.9	dB
Lden		78.0	dB
LDay 07:00-19:00		75.5	dB
LEvening 19:00-23:00		73.9	dB
LNight 23:00-07:00		69.9	dB
LASE		123.6	dB
SEA		140.5	dBZ
# Overloads		3	
Overload Duration		6.3	s
# OBA Overloads		3	
OBA Overload Duration		6.3	s

Statistics

LAS5.00	79.3	dBA
LAS10.00	78.0	dBA
LAS33.30	73.8	dBA
LAS50.00	70.2	dBA
LAS66.60	66.4	dBA
LAS90.00	54.9	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	157 / 341.9	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Under Range Limit	26.0	dB
Under Range Peak	79.9	dB
Noise Floor	16.2	dB
Overload	121.7	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	72.5	68.5	70.1	75.3	75.4	71.3	68.6	71.1	66.2	57.8	51.7	45.3
LZSmax	103.5	97.5	101.9	104.1	106.5	102.7	98.4	99.6	99.3	91.3	88.5	84.8
LZSmin	39.2	46.0	49.4	45.5	43.1	38.2	32.1	28.9	24.7	19.3	18.7	21.6

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	70.0	66.8	64.7	64.1	63.6	63.4	63.4	64.9	66.9	68.9	71.0	71.5
LZSmax	103.0	95.9	95.7	92.7	94.3	93.6	92.1	92.2	102.1	98.8	104.0	101.1
LZSmin	30.0	30.0	33.9	34.0	37.4	42.8	44.7	41.9	39.9	39.1	41.3	36.9

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	71.5	71.2	68.7	67.6	66.9	64.8	62.4	63.0	65.6	67.1	66.4	65.6
LZSmax	100.7	105.1	102.4	101.0	98.5	99.0	98.0	89.0	97.5	91.7	96.0	97.2
LZSmin	37.8	38.4	34.3	32.1	35.5	29.5	28.1	26.9	26.2	25.6	23.2	22.5

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	63.7	60.8	57.5	54.9	52.5	50.7	48.3	47.5	44.0	42.2	41.1	36.3
LZSmax	98.3	93.2	85.4	85.9	86.2	87.0	84.9	88.4	81.6	81.9	80.7	76.7
LZSmin	20.8	20.0	18.1	15.5	13.9	13.0	13.3	13.8	14.6	15.5	16.5	18.1

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6
PRMLxT1L	29 Apr 2014 13:43:49	-28.2
PRMLxT1L	29 Apr 2014 12:41:12	-26.4

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_24-04.001
User	PMC
Job Description	HB Long-Term
Location	HB_24-04 (Goldenwest n. of Ellis)
Measurement Description	
Start Time	Saturday, 2014 June 14 19:48:35
Stop Time	Sunday, 2014 June 15 20:52:10
Duration	1 Day 01:00:05.1
Run Time	1 Day 01:00:05.1
Pause	00:00:00.0
Pre Calibration	Saturday, 2014 June 14 19:34:23
Post Calibration	None
Calibration Deviation	---

Note

Mobile home to east. Equestrian across Goldenwest

Overall Data

LASeq		74.6	dB
LASmax	2014 Jun 15 01:13:50	100.5	dB
LZpeak (max)	2014 Jun 15 02:53:23	120.4	dB
LASmin	2014 Jun 15 10:41:44	30.7	dB
LCSeq		78.5	dB
LASeq		74.6	dB
LCSeq - LASeq		3.9	dB
LAIeq		76.4	dB
LAeq		74.6	dB
LAIeq - LAeq		1.8	dB
Ldn		81.7	dB
LDay 07:00-23:00		73.6	dB
LNight 23:00-07:00		76.0	dB
Lden		82.1	dB
LDay 07:00-19:00		72.3	dB
LEvening 19:00-23:00		75.8	dB
LNight 23:00-07:00		76.0	dB
LASE		124.1	dB
SEA		133.4	dBZ
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	81.1	dBA
LAS10.00	79.6	dBA
LAS33.30	72.4	dBA
LAS50.00	66.7	dBA
LAS66.60	61.1	dBA
LAS90.00	48.1	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	219 / 577.1	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Under Range Limit	25.9	dB
Under Range Peak	79.7	dB
Noise Floor	16.2	dB
Overload	121.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	73.8	69.0	67.0	69.9	72.6	70.6	69.0	71.8	67.3	56.9	50.3	44.4
LZSmax	97.7	96.2	93.7	95.8	103.6	99.8	98.2	94.7	95.6	91.9	89.5	83.1
LZSmin	43.3	49.6	51.0	46.4	42.8	30.5	22.3	19.1	16.6	16.0	18.4	21.4

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	70.7	68.8	66.9	65.2	64.2	63.1	62.0	61.9	62.9	63.8	64.5	66.5
LZSmax	95.3	94.2	93.1	91.8	93.4	94.1	89.0	88.0	93.6	96.2	91.8	95.4
LZSmin	31.1	34.5	38.0	38.9	43.4	43.5	44.1	45.2	44.8	43.1	40.1	38.9

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	68.5	68.3	66.6	66.7	66.6	63.8	62.5	64.2	65.4	67.0	67.8	66.3
LZSmax	98.8	100.1	100.7	100.5	96.2	95.4	91.9	95.8	93.0	91.7	89.6	91.8
LZSmin	39.0	36.6	30.8	27.6	24.9	19.6	17.5	15.7	14.7	14.8	14.1	13.3

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	64.9	62.1	58.0	54.4	51.4	49.0	47.1	45.5	42.9	41.0	39.9	37.3
LZSmax	91.4	92.4	89.0	87.2	88.2	85.8	86.6	84.4	81.4	78.6	78.2	79.0
LZSmin	12.7	11.5	10.9	10.6	11.0	11.7	12.5	13.4	14.4	15.3	16.2	17.9

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jun 2014 19:34:17	-27.8
PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6
PRMLxT1L	29 Apr 2014 13:43:49	-28.2
PRMLxT1L	29 Apr 2014 12:41:12	-26.4

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_24-05.001
User	PMC
Job Description	HB Long-Term
Location	HB_24-05 (Deep Harbor/Quiet Bay)
Measurement Description	
Start Time	Sunday, 2014 June 15 21:49:23
Stop Time	Monday, 2014 June 16 22:49:23
Duration	1 Day 01:00:00.0
Run Time	1 Day 01:00:00.0
Pause	00:00:00.0
Pre Calibration	Sunday, 2014 June 15 21:44:00
Post Calibration	None
Calibration Deviation	---

Note

Residential cul-de-sac west of Goldenwest

Overall Data

LASeq		58.2	dB
LASmax	2014 Jun 16 22:11:10	87.0	dB
LZpeak (max)	2014 Jun 16 22:11:10	108.0	dB
LASmin	2014 Jun 16 12:10:58	27.5	dB
LCSeq		67.1	dB
LASeq		58.2	dB
LCSeq - LASeq		8.8	dB
LAIeq		61.4	dB
LAeq		58.2	dB
LAIeq - LAeq		3.2	dB
Ldn		65.1	dB
LDay 07:00-23:00		57.6	dB
LNight 23:00-07:00		59.4	dB
Lden		65.6	dB
LDay 07:00-19:00		56.2	dB
LEvening 19:00-23:00		59.8	dB
LNight 23:00-07:00		59.4	dB
LASE		107.8	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	63.4	dBA
LAS10.00	61.6	dBA
LAS33.30	56.6	dBA
LAS50.00	53.2	dBA
LAS66.60	48.3	dBA
LAS90.00	34.8	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	3 / 4.7	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Under Range Limit	25.9	dB
Under Range Peak	79.8	dB
Noise Floor	16.2	dB
Overload	121.6	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	66.4	61.2	60.5	62.7	61.8	57.5	55.0	54.2	49.3	43.3	39.0	42.0
LZSmax	88.4	82.3	87.6	89.2	88.7	87.7	85.8	82.2	82.0	81.5	78.2	83.6
LZSmin	39.4	43.8	44.3	42.5	35.6	23.3	21.4	17.3	16.4	17.1	18.8	21.5

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	63.3	61.4	59.5	57.7	56.3	55.0	54.3	55.4	57.1	57.3	58.1	58.3
LZSmax	85.4	84.0	82.7	79.5	78.4	76.7	77.5	81.6	87.5	86.1	86.5	87.9
LZSmin	28.7	30.7	34.8	36.1	36.9	37.5	37.6	38.0	37.8	36.5	37.3	34.0

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	58.2	57.5	54.9	54.0	52.6	51.2	50.4	49.8	50.5	50.5	49.3	48.3
LZSmax	86.8	85.9	86.5	87.0	84.0	81.8	84.2	81.8	80.6	78.4	79.6	76.4
LZSmin	32.1	29.8	23.9	19.8	17.6	14.8	16.2	16.2	15.2	12.5	12.1	11.7

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	46.3	44.4	42.1	39.3	36.9	38.8	36.3	33.1	31.4	38.0	39.7	25.3
LZSmax	73.4	79.0	78.0	75.0	72.7	79.9	75.7	71.8	70.5	83.6	79.9	65.4
LZSmin	11.9	11.4	11.0	11.1	11.7	12.9	13.3	13.6	14.5	15.4	16.4	18.0

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	15 Jun 2014 21:43:57	-27.9
PRMLxT1L	14 Jun 2014 19:34:17	-27.8
PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6
PRMLxT1L	29 Apr 2014 13:43:49	-28.2
PRMLxT1L	29 Apr 2014 12:41:12	-26.4

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_24-06.001
User	PMC
Job Description	HB Long-Term
Location	HB_24-06 (Orange/6th)
Measurement Description	
Start Time	Monday, 2014 June 16 23:21:48
Stop Time	Wednesday, 2014 June 18 00:21:48
Duration	1 Day 01:00:00.0
Run Time	1 Day 01:00:00.0
Pause	00:00:00.0
Pre Calibration	Monday, 2014 June 16 23:15:06
Post Calibration	None
Calibration Deviation	---

Note

Multi-family residential near Downtown area

Overall Data

LASeq		61.4	dB
LASmax	2014 Jun 17 00:10:00	94.0	dB
LZpeak (max)	2014 Jun 17 19:03:31	115.2	dB
LASmin	2014 Jun 17 12:05:32	34.0	dB
LCSeq		72.0	dB
LASeq		61.4	dB
LCSeq - LASeq		10.6	dB
LAIeq		65.4	dB
LAeq		61.4	dB
LAIeq - LAeq		4.0	dB
Ldn		68.6	dB
LDay 07:00-23:00		60.1	dB
LNight 23:00-07:00		63.0	dB
Lden		69.0	dB
LDay 07:00-19:00		58.6	dB
LEvening 19:00-23:00		62.8	dB
LNight 23:00-07:00		63.0	dB
LASE		110.9	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	66.1	dBA
LAS10.00	63.9	dBA
LAS33.30	58.5	dBA
LAS50.00	55.2	dBA
LAS66.60	51.2	dBA
LAS90.00	38.1	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	9 / 23.8	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Under Range Limit	25.9	dB
Under Range Peak	79.8	dB
Noise Floor	16.2	dB
Overload	121.6	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	67.7	63.6	66.6	68.6	66.7	59.8	57.7	56.9	52.8	47.4	43.9	45.8
LZSmax	92.5	92.4	95.3	98.3	94.5	89.1	93.0	91.0	88.4	79.3	80.7	83.7
LZSmin	40.1	47.1	50.3	49.4	43.0	33.5	29.1	25.5	23.0	18.3	19.4	21.6

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	64.7	62.7	60.8	59.0	58.3	59.1	60.7	61.2	63.3	63.6	63.4	64.4
LZSmax	89.4	88.7	84.9	88.3	87.8	89.1	88.6	85.5	95.3	95.1	96.1	98.2
LZSmin	29.3	32.1	34.1	35.2	40.3	42.2	41.5	42.7	45.8	45.3	44.1	41.2

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	63.4	62.5	59.1	56.3	55.2	52.8	52.2	52.8	53.7	52.9	52.3	50.9
LZSmax	92.0	93.3	90.9	86.7	85.9	83.7	88.2	81.6	93.0	91.6	83.8	83.3
LZSmin	39.2	37.8	33.9	30.1	28.1	24.8	24.6	23.6	23.0	20.4	21.2	20.0

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	50.2	47.5	45.4	44.1	42.6	40.6	39.7	39.9	37.3	38.7	42.9	40.8
LZSmax	88.7	79.8	77.8	77.6	79.3	77.6	75.9	80.7	75.2	75.0	83.6	78.9
LZSmin	20.2	17.0	14.7	13.8	13.1	13.5	14.4	14.2	14.8	15.5	16.4	18.0

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	16 Jun 2014 23:15:06	-27.9
PRMLxT1L	15 Jun 2014 21:43:57	-27.9
PRMLxT1L	14 Jun 2014 19:34:17	-27.8
PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6
PRMLxT1L	29 Apr 2014 13:43:49	-28.2
PRMLxT1L	29 Apr 2014 12:41:12	-26.4

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_24-07.001
User	PMC
Job Description	HB Long-Term
Location	HB_24_07 (Indianapolis/Ives)
Measurement Description	
Start Time	Wednesday, 2014 June 25 11:51:04
Stop Time	Thursday, 2014 June 26 12:51:04
Duration	1 Day 01:00:00.0
Run Time	1 Day 01:00:00.0
Pause	00:00:00.0
Pre Calibration	Wednesday, 2014 June 25 11:41:45
Post Calibration	None
Calibration Deviation	---

Note

Residential area across from senior living community.

Overall Data

LASeq		69.6	dB
LASmax	2014 Jun 25 15:30:05	100.3	dB
LZpeak (max)	2014 Jun 25 22:12:17	114.7	dB
LASmin	2014 Jun 26 02:30:14	34.5	dB
LCSeq		74.0	dB
LASeq		69.6	dB
LCSeq - LASeq		4.5	dB
LAIeq		72.0	dB
LAeq		69.6	dB
LAIeq - LAeq		2.5	dB
Ldn		72.0	dB
LDay 07:00-23:00		70.8	dB
LNight 23:00-07:00		63.6	dB
Lden		72.6	dB
LDay 07:00-19:00		71.4	dB
LEvening 19:00-23:00		68.7	dB
LNight 23:00-07:00		63.6	dB
LASE		119.1	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	76.7	dBA
LAS10.00	72.6	dBA
LAS33.30	64.0	dBA
LAS50.00	58.7	dBA
LAS66.60	52.1	dBA
LAS90.00	38.5	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	65 / 124.8	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	Bin Max	
Under Range Limit	25.9	dB
Under Range Peak	79.7	dB
Noise Floor	16.2	dB
Overload	121.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	64.8	61.0	63.4	65.0	68.5	66.1	66.4	67.2	58.6	49.9	41.9	37.0
LZSmax	86.7	83.5	89.4	95.5	101.7	91.4	87.8	98.9	94.5	85.0	80.6	75.6
LZSmin	38.8	40.7	44.8	41.6	43.9	33.2	27.9	19.0	14.6	15.8	18.5	21.5

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	61.8	59.7	57.8	56.5	56.1	55.9	57.4	59.0	59.4	58.4	59.6	62.0
LZSmax	85.3	82.5	82.7	82.8	81.3	82.5	83.0	83.5	88.8	86.5	93.2	95.5
LZSmin	29.1	30.3	33.6	33.7	34.5	35.9	37.2	38.8	39.0	36.7	34.4	32.8

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	64.7	64.2	61.7	62.0	61.8	60.2	59.7	61.6	63.1	64.0	62.8	59.3
LZSmax	101.3	97.2	95.0	89.9	87.4	88.9	84.1	81.5	86.8	85.5	95.9	96.2
LZSmin	32.7	38.7	27.2	27.7	26.8	26.2	23.9	22.9	18.4	16.1	14.1	11.0

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	56.4	52.8	50.1	47.6	44.2	41.3	39.4	36.4	33.9	33.3	33.6	26.3
LZSmax	94.5	76.7	77.0	84.1	80.4	75.6	78.9	74.1	72.2	69.3	74.3	67.2
LZSmin	9.5	9.3	9.8	10.2	10.8	11.7	12.7	13.5	14.4	15.4	16.3	18.0

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	25 Jun 2014 11:41:42	-27.8
PRMLxT1L	16 Jun 2014 23:15:06	-27.9
PRMLxT1L	15 Jun 2014 21:43:57	-27.9
PRMLxT1L	14 Jun 2014 19:34:17	-27.8
PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6
PRMLxT1L	29 Apr 2014 13:43:49	-28.2
PRMLxT1L	29 Apr 2014 12:41:12	-26.4

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_Short.001
User	PMC
Job Description	HB Short-Term
Location	HB_ST-01 (15432 Andaman)
Measurement Description	
Start Time	Tuesday, 2014 July 08 09:28:46
Stop Time	Tuesday, 2014 July 08 09:48:46
Duration	00:20:00.0
Run Time	00:20:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 2014 July 08 09:22:54
Post Calibration	None
Calibration Deviation	---

Note

Residential north of McFadden. Lawnmower on McFadden.

Overall Data

LASeq		52.4	dB
LASmax	2014 Jul 08 09:47:08	67.0	dB
LZpeak (max)	2014 Jul 08 09:45:16	92.0	dB
LASmin	2014 Jul 08 09:43:50	41.7	dB
LCSeq		62.9	dB
LASeq		52.4	dB
LCSeq - LASeq		10.5	dB
LAIeq		54.1	dB
LAeq		52.4	dB
LAIeq - LAeq		1.7	dB
Ldn		52.4	dB
LDay 07:00-23:00		52.4	dB
LNight 23:00-07:00		---	dB
Lden		52.4	dB
LDay 07:00-19:00		52.4	dB
LEvening 19:00-23:00		---	dB
LNight 23:00-07:00		---	dB
LASE		83.2	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	58.2	dBA
LAS10.00	55.7	dBA
LAS33.30	50.6	dBA
LAS50.00	48.3	dBA
LAS66.60	46.6	dBA
LAS90.00	44.4	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.9	dB
Under Range Peak	79.7	dB
Noise Floor	16.2	dB
Overload	121.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	61.3	58.1	57.3	58.8	58.0	52.5	49.4	47.4	43.9	38.0	33.3	27.4
LZSmax	58.7	60.1	62.9	65.8	69.7	66.3	62.8	63.9	57.9	53.4	48.8	42.6
LZSmin	48.1	53.2	52.6	52.7	47.9	39.9	36.2	34.6	30.8	25.7	20.2	22.0

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	58.5	55.8	54.2	54.0	53.2	53.0	52.4	51.9	53.1	51.9	53.6	55.7
LZSmax	54.8	52.9	54.7	57.3	55.9	54.9	57.7	58.4	59.3	58.2	59.1	64.1
LZSmin	38.0	41.9	44.2	46.7	46.3	46.5	46.6	44.8	47.6	46.0	46.9	46.1

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	55.9	52.4	48.8	48.6	47.7	46.8	44.9	44.7	44.2	44.2	42.3	40.9
LZSmax	68.6	61.5	59.3	63.3	60.9	59.1	57.2	58.0	58.9	61.1	58.5	56.0
LZSmin	44.7	40.1	36.6	35.3	34.9	33.6	31.5	30.6	30.4	29.9	30.0	29.0

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	40.6	39.5	36.2	34.8	33.1	31.4	30.2	28.4	26.1	23.7	22.2	21.8
LZSmax	54.7	52.6	51.1	49.8	48.9	47.0	45.2	44.4	42.1	39.4	37.6	36.0
LZSmin	27.6	25.4	23.6	22.5	20.6	17.9	15.7	15.0	15.3	15.8	16.5	18.9

Calibration History

Preamp	Date	dB re. 1V/Pa
Direct	01 Jul 2014 09:45:44	-27.0
PRMLxT1L	08 Jul 2014 09:22:52	-27.7
PRMLxT1L	25 Jun 2014 11:41:42	-27.8
PRMLxT1L	16 Jun 2014 23:15:06	-27.9
PRMLxT1L	15 Jun 2014 21:43:57	-27.9
PRMLxT1L	14 Jun 2014 19:34:17	-27.8
PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6
PRMLxT1L	29 Apr 2014 13:43:49	-28.2

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_Short.002
User	PMC
Job Description	HB Short-Term
Location	HB_ST-02 (8400 Edinger)

Measurement Description	
Start Time	Tuesday, 2014 July 08 10:06:33
Stop Time	Tuesday, 2014 July 08 10:26:33
Duration	00:20:00.0
Run Time	00:20:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 2014 July 08 09:22:52
Post Calibration	None
Calibration Deviation	---

Note

Traffic on Edinger, adjacent mulit-family uses.

Overall Data

LASeq		68.2	dB
LASmax	2014 Jul 08 10:18:42	80.4	dB
LZpeak (max)	2014 Jul 08 10:18:41	102.3	dB
LASmin	2014 Jul 08 10:24:08	50.3	dB
LCSeq		75.2	dB
LASeq		68.2	dB
LCSeq - LASeq		7.0	dB
LAIeq		70.1	dB
LAeq		68.2	dB
LAIeq - LAeq		1.9	dB
Ldn		68.2	dB
LDay 07:00-23:00		68.2	dB
LNight 23:00-07:00		---	dB
Lden		68.2	dB
LDay 07:00-19:00		68.2	dB
LEvening 19:00-23:00		---	dB
LNight 23:00-07:00		---	dB
LASE		99.0	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	73.5	dBA
LAS10.00	71.9	dBA
LAS33.30	68.4	dBA
LAS50.00	65.7	dBA
LAS66.60	62.3	dBA
LAS90.00	55.1	dBA

LAS > 85.0 dB (Exceedence Counts / Duration)	0 /	0.0	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 /	0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0 /	0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0 /	0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0 /	0.0	s

Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamp	PRMLxT1L		
Microphone Correction	Off		
Integration Method	Exponential		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Freq. Weighting	Z Weighting		
OBA Max Spectrum	At Lmax		
Under Range Limit		25.9	dB
Under Range Peak		79.7	dB
Noise Floor		16.2	dB
Overload		121.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	61.6	63.7	68.1	70.9	70.0	64.3	63.1	65.6	59.6	51.5	46.3	45.2
LZSmax	76.0	79.1	77.1	83.5	74.4	80.4	76.7	76.6	70.6	62.4	57.5	48.5
LZSmin	51.0	56.0	59.5	58.3	56.4	47.2	44.8	46.2	41.3	32.2	21.4	22.1

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	57.4	57.1	56.2	57.4	59.8	59.4	61.9	63.2	64.6	64.6	67.5	65.8
LZSmax	58.3	57.2	74.8	73.6	75.6	73.9	74.8	67.8	69.4	72.1	73.8	83.2
LZSmin	39.2	44.1	45.3	43.8	50.6	49.7	52.6	53.4	48.7	51.9	56.6	54.1

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	66.8	65.4	62.2	61.0	58.9	58.1	57.2	58.1	59.6	61.2	61.6	59.4
LZSmax	67.5	68.4	69.0	68.3	72.6	79.5	69.8	69.0	75.2	72.9	72.2	70.1
LZSmin	52.1	49.5	47.3	41.2	42.7	41.5	36.8	39.3	40.1	41.2	40.5	37.9

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	56.9	54.3	51.4	48.8	46.4	43.7	43.0	40.8	40.3	39.4	42.5	38.4
LZSmax	68.2	65.6	62.2	59.1	57.6	55.6	52.8	51.7	53.5	45.3	41.8	39.6
LZSmin	38.3	36.0	33.3	30.0	26.4	21.6	17.9	15.7	15.6	15.9	16.6	18.9

Calibration History

Preamp	Date	dB re. 1V/Pa
Direct	01 Jul 2014 09:45:44	-27.0
PRMLxT1L	08 Jul 2014 09:22:52	-27.7
PRMLxT1L	25 Jun 2014 11:41:42	-27.8
PRMLxT1L	16 Jun 2014 23:15:06	-27.9
PRMLxT1L	15 Jun 2014 21:43:57	-27.9
PRMLxT1L	14 Jun 2014 19:34:17	-27.8
PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6
PRMLxT1L	29 Apr 2014 13:43:49	-28.2

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_Short.003
User	PMC
Job Description	HB_ST-03
Location	HB_ST-03 (17021 Sims)
Measurement Description	
Start Time	Tuesday, 2014 July 08 10:55:13
Stop Time	Tuesday, 2014 July 08 11:15:13
Duration	00:20:00.0
Run Time	00:20:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 2014 July 08 09:22:52
Post Calibration	None
Calibration Deviation	---

Note

Residential east of Warner. Waste disposal activities at approximately 11:03.

Overall Data

LASeq		64.8	dB
LASmax	2014 Jul 08 11:02:24	90.4	dB
LZpeak (max)	2014 Jul 08 11:02:24	110.1	dB
LASmin	2014 Jul 08 10:56:37	43.3	dB
LCSeq		70.6	dB
LASeq		64.8	dB
LCSeq - LASeq		5.8	dB
LAIeq		70.6	dB
LAeq		64.8	dB
LAIeq - LAeq		5.8	dB
Ldn		64.8	dB
LDay 07:00-23:00		64.8	dB
LNight 23:00-07:00		---	dB
Lden		64.8	dB
LDay 07:00-19:00		64.8	dB
LEvening 19:00-23:00		---	dB
LNight 23:00-07:00		---	dB
LASE		95.6	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00		68.7	dBA
LAS10.00		64.6	dBA
LAS33.30		58.8	dBA
LAS50.00		56.7	dBA
LAS66.60		54.3	dBA
LAS90.00		48.2	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)		1 / 2.4	s
LAS > 115.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)		0 / 0.0	s

Settings

RMS Weight		A Weighting	
Peak Weight		Z Weighting	
Detector		Slow	
Preamp		PRMLxT1L	
Microphone Correction		Off	
Integration Method		Exponential	
OBA Range		Normal	
OBA Bandwidth		1/1 and 1/3	
OBA Freq. Weighting		Z Weighting	
OBA Max Spectrum		At Lmax	
Under Range Limit		25.9	dB
Under Range Peak		79.7	dB
Noise Floor		16.2	dB
Overload		121.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	61.5	59.4	65.5	66.3	64.3	59.5	57.4	58.2	55.7	56.8	59.0	58.9
LZSmax	68.4	63.6	77.7	68.4	63.0	62.9	67.7	76.9	80.7	84.5	87.2	87.6
LZSmin	45.7	49.0	54.1	53.9	49.8	41.5	38.0	38.2	33.6	27.9	23.2	22.5

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	58.5	56.3	55.0	54.6	54.6	54.7	58.8	62.2	60.8	60.2	59.7	63.6
LZSmax	65.9	63.8	59.7	58.5	56.6	61.1	68.0	75.0	74.9	60.4	57.6	66.8
LZSmin	38.4	38.5	37.5	41.6	38.1	43.2	47.4	41.4	47.1	48.8	48.2	42.5

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	61.4	58.3	58.1	54.9	55.5	53.8	52.0	53.4	52.3	52.5	53.8	54.1
LZSmax	56.3	60.1	58.1	54.8	58.2	60.0	61.9	63.9	63.2	69.6	72.5	74.9
LZSmin	45.7	43.0	39.8	35.3	34.7	33.2	33.6	31.9	32.2	32.9	33.3	32.7

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	51.0	50.6	50.8	51.6	51.9	53.0	53.2	54.3	55.1	55.1	54.5	52.3
LZSmax	75.0	75.5	76.7	79.1	79.5	81.1	81.1	82.5	83.6	83.7	83.4	81.3
LZSmin	30.7	27.7	26.7	24.7	22.7	20.9	20.1	17.8	16.5	16.4	16.8	19.2

Calibration History

Preamp	Date	dB re. 1V/Pa
Direct	01 Jul 2014 09:45:44	-27.0
PRMLxT1L	08 Jul 2014 09:22:52	-27.7
PRMLxT1L	25 Jun 2014 11:41:42	-27.8
PRMLxT1L	16 Jun 2014 23:15:06	-27.9
PRMLxT1L	15 Jun 2014 21:43:57	-27.9
PRMLxT1L	14 Jun 2014 19:34:17	-27.8
PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6
PRMLxT1L	29 Apr 2014 13:43:49	-28.2

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_Short.004
User	PMC
Job Description	HB Short-Term
Location	HB_ST-04(17701 Edwards)
Measurement Description	
Start Time	Tuesday, 2014 July 08 11:36:31
Stop Time	Tuesday, 2014 July 08 11:56:31
Duration	00:20:00.0
Run Time	00:20:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 2014 July 08 09:22:52
Post Calibration	None
Calibration Deviation	---

Note

Residential on Edwards. Skateboard, helicopter fly-over.

Overall Data

LASeq		59.1	dB
LASmax	2014 Jul 08 11:46:15	71.6	dB
LZpeak (max)	2014 Jul 08 11:51:56	96.2	dB
LASmin	2014 Jul 08 11:38:54	44.1	dB
LCSeq		68.5	dB
LASeq		59.1	dB
LCSeq - LASeq		9.4	dB
LAIeq		60.5	dB
LAeq		59.1	dB
LAIeq - LAeq		1.4	dB
Ldn		59.1	dB
LDay 07:00-23:00		59.1	dB
LNight 23:00-07:00		---	dB
Lden		59.1	dB
LDay 07:00-19:00		59.1	dB
LEvening 19:00-23:00		---	dB
LNight 23:00-07:00		---	dB
LASE		89.9	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	64.9	dBA
LAS10.00	63.2	dBA
LAS33.30	58.0	dBA
LAS50.00	55.4	dBA
LAS66.60	52.8	dBA
LAS90.00	47.7	dBA

LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamp	PRMLxT1L		
Microphone Correction	Off		
Integration Method	Exponential		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Freq. Weighting	Z Weighting		
OBA Max Spectrum	At Lmax		
Under Range Limit		25.9	dB
Under Range Peak		79.7	dB
Noise Floor		16.2	dB
Overload		121.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	66.0	60.9	60.8	65.2	63.2	58.1	56.4	55.2	48.9	43.1	37.4	32.6
LZSmax	59.8	60.0	62.5	66.8	65.8	75.1	72.0	61.9	58.0	56.0	49.2	43.7
LZSmin	46.9	51.4	52.7	57.1	54.8	42.3	35.5	33.7	30.3	33.0	31.2	27.2

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	63.1	61.2	58.2	57.5	55.8	54.4	55.8	56.4	56.1	58.2	58.9	62.9
LZSmax	54.5	55.7	52.5	54.1	53.5	53.7	57.0	57.3	58.6	64.9	58.6	60.1
LZSmin	39.0	38.9	42.8	41.1	45.8	45.7	47.3	49.1	48.8	50.5	51.4	51.3

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	60.3	57.6	55.4	53.9	53.2	52.8	51.0	51.9	51.9	51.5	50.8	48.8
LZSmax	62.8	61.0	62.4	62.4	65.6	74.3	69.9	70.0	62.5	58.5	56.4	56.2
LZSmin	49.8	49.3	44.0	42.3	38.0	34.8	32.0	29.6	29.7	29.8	29.0	27.5

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	46.3	43.4	41.2	39.8	38.5	36.1	34.4	32.3	30.4	28.3	26.0	28.7
LZSmax	55.0	52.5	52.2	52.5	51.5	49.4	46.6	41.9	43.8	40.8	39.3	34.2
LZSmin	25.7	24.5	25.6	27.5	28.5	28.6	27.4	26.4	24.7	23.9	21.9	20.9

Calibration History

Preamp	Date	dB re. 1V/Pa
Direct	01 Jul 2014 09:45:44	-27.0
PRMLxT1L	08 Jul 2014 09:22:52	-27.7
PRMLxT1L	25 Jun 2014 11:41:42	-27.8
PRMLxT1L	16 Jun 2014 23:15:06	-27.9
PRMLxT1L	15 Jun 2014 21:43:57	-27.9
PRMLxT1L	14 Jun 2014 19:34:17	-27.8
PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6
PRMLxT1L	29 Apr 2014 13:43:49	-28.2

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_Short.005
User	PMC
Job Description	HB Short-Term
Location	HB_ST-04 (Yorktown/Mauna LN)
Measurement Description	
Start Time	Tuesday, 2014 July 08 12:19:02
Stop Time	Tuesday, 2014 July 08 12:39:02
Duration	00:20:00.0
Run Time	00:20:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 2014 July 08 09:22:52
Post Calibration	None
Calibration Deviation	---

Note

Residential set back from Yorktown

Overall Data

LASeq		68.6	dB
LASmax	2014 Jul 08 12:34:28	94.4	dB
LZpeak (max)	2014 Jul 08 12:34:28	115.9	dB
LASmin	2014 Jul 08 12:27:03	47.5	dB
LCSeq		75.2	dB
LASeq		68.6	dB
LCSeq - LASeq		6.6	dB
LAIeq		71.2	dB
LAeq		68.6	dB
LAIeq - LAeq		2.7	dB
Ldn		68.6	dB
LDay 07:00-23:00		68.6	dB
LNight 23:00-07:00		---	dB
Lden		68.6	dB
LDay 07:00-19:00		68.6	dB
LEvening 19:00-23:00		---	dB
LNight 23:00-07:00		---	dB
LASE		99.4	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00		65.9	dBA
LAS10.00		64.4	dBA
LAS33.30		60.8	dBA
LAS50.00		58.7	dBA
LAS66.60		56.2	dBA
LAS90.00		51.8	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)		1 / 5.7	s
LAS > 115.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)		0 / 0.0	s

Settings

RMS Weight		A Weighting	
Peak Weight		Z Weighting	
Detector		Slow	
Preamp		PRMLxT1L	
Microphone Correction		Off	
Integration Method		Exponential	
OBA Range		Normal	
OBA Bandwidth		1/1 and 1/3	
OBA Freq. Weighting		Z Weighting	
OBA Max Spectrum		At Lmax	
Under Range Limit		25.9	dB
Under Range Peak		79.7	dB
Noise Floor		16.2	dB
Overload		121.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	66.3	62.1	63.4	69.3	68.6	68.9	68.4	62.0	58.6	52.0	45.7	37.5
LZSmax	79.6	68.1	73.9	91.8	92.2	94.4	94.8	87.1	84.7	78.2	71.6	61.1
LZSmin	48.5	48.1	56.0	58.5	54.3	46.0	40.6	41.5	36.8	27.7	20.7	22.4

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	63.4	61.3	59.1	57.9	57.1	57.1	57.8	58.8	59.4	61.4	65.7	65.2
LZSmax	69.0	70.7	69.4	65.4	61.7	60.1	62.7	73.2	67.8	70.3	90.9	88.7
LZSmin	40.0	43.1	43.6	45.0	47.4	48.0	48.3	50.2	51.4	51.5	53.3	52.5

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	63.0	62.9	65.3	64.2	64.3	64.0	65.5	63.9	60.5	57.4	57.5	56.4
LZSmax	85.2	85.5	90.5	89.8	90.6	90.2	92.3	90.3	86.3	81.4	83.1	82.2
LZSmin	51.0	48.2	45.3	42.1	41.7	37.7	36.4	35.7	34.6	36.5	37.2	36.3

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	55.3	53.9	51.4	48.9	47.0	44.6	42.9	40.6	38.1	35.0	32.1	28.8
LZSmax	81.3	80.3	77.6	74.9	73.5	70.9	69.0	66.1	63.4	59.4	55.1	48.2
LZSmin	34.3	31.0	28.1	25.1	22.1	19.0	16.7	15.5	15.4	16.2	16.7	19.0

Calibration History

Preamp	Date	dB re. 1V/Pa
Direct	01 Jul 2014 09:45:44	-27.0
PRMLxT1L	08 Jul 2014 09:22:52	-27.7
PRMLxT1L	25 Jun 2014 11:41:42	-27.8
PRMLxT1L	16 Jun 2014 23:15:06	-27.9
PRMLxT1L	15 Jun 2014 21:43:57	-27.9
PRMLxT1L	14 Jun 2014 19:34:17	-27.8
PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6
PRMLxT1L	29 Apr 2014 13:43:49	-28.2

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_Short.006
User	PMC
Job Description	HB Short-Term
Location	HB_ST_05 (SW of Memphis/Lakeside)
Measurement Description	
Start Time	Tuesday, 2014 July 08 13:34:00
Stop Time	Tuesday, 2014 July 08 13:54:00
Duration	00:20:00.0
Run Time	00:20:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 2014 July 08 13:30:20
Post Calibration	None
Calibration Deviation	---

Note

Residential west of Beach

Overall Data

LASeq		65.1	dB
LASmax	2014 Jul 08 13:50:14	90.2	dB
LZpeak (max)	2014 Jul 08 13:50:14	117.9	dB
LASmin	2014 Jul 08 13:51:50	43.4	dB
LCSeq		73.2	dB
LASeq		65.1	dB
LCSeq - LASeq		8.1	dB
LAIeq		68.2	dB
LAeq		65.1	dB
LAIeq - LAeq		3.1	dB
Ldn		65.1	dB
LDay 07:00-23:00		65.1	dB
LNight 23:00-07:00		---	dB
Lden		65.1	dB
LDay 07:00-19:00		65.1	dB
LEvening 19:00-23:00		---	dB
LNight 23:00-07:00		---	dB
LASE		95.9	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00		64.7	dBA
LAS10.00		62.0	dBA
LAS33.30		56.8	dBA
LAS50.00		54.3	dBA
LAS66.60		52.0	dBA
LAS90.00		47.2	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)		1 / 4.4	s
LAS > 115.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)		0 / 0.0	s

Settings

RMS Weight		A Weighting	
Peak Weight		Z Weighting	
Detector		Slow	
Preamp		PRMLxT1L	
Microphone Correction		Off	
Integration Method		Exponential	
OBA Range		Normal	
OBA Bandwidth		1/1 and 1/3	
OBA Freq. Weighting		Z Weighting	
OBA Max Spectrum		At Lmax	
Under Range Limit		25.9	dB
Under Range Peak		79.7	dB
Noise Floor		16.2	dB
Overload		121.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	66.0	60.8	62.5	68.8	68.4	65.6	61.7	60.3	56.7	52.3	46.2	38.9
LZSmax	72.2	65.3	77.5	89.4	89.2	89.2	86.4	85.7	83.4	78.9	73.1	65.2
LZSmin	46.5	52.2	53.5	55.7	51.9	43.8	37.1	34.6	33.6	30.0	22.6	24.0

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	63.1	61.2	58.1	56.6	55.7	55.8	56.3	57.2	59.2	60.8	63.2	66.3
LZSmax	59.9	58.0	62.6	60.0	61.4	57.5	63.7	74.9	77.0	81.5	87.1	84.2
LZSmin	39.0	39.0	40.6	44.7	45.7	46.2	49.0	49.3	47.9	49.4	50.7	50.2

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	62.0	64.9	63.5	62.0	59.5	60.0	58.3	55.9	56.0	56.5	55.3	54.4
LZSmax	80.0	83.0	87.3	86.3	83.3	84.1	83.3	80.7	80.9	81.8	80.9	80.3
LZSmin	47.9	46.7	42.9	40.7	37.7	35.6	33.5	32.1	31.1	30.3	29.6	28.9

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	52.5	51.4	50.9	49.1	47.3	45.6	43.4	41.3	38.2	35.1	33.6	33.7
LZSmax	78.8	77.6	78.3	76.1	73.6	71.6	70.2	68.5	64.9	61.6	61.2	58.0
LZSmin	29.3	28.4	27.9	26.7	24.8	22.0	19.5	16.9	16.2	16.2	16.7	22.1

Calibration History

Preamp	Date	dB re. 1V/Pa
Direct	01 Jul 2014 09:45:44	-27.0
PRMLxT1L	08 Jul 2014 13:30:19	-27.7
PRMLxT1L	08 Jul 2014 09:22:52	-27.7
PRMLxT1L	25 Jun 2014 11:41:42	-27.8
PRMLxT1L	16 Jun 2014 23:15:06	-27.9
PRMLxT1L	15 Jun 2014 21:43:57	-27.9
PRMLxT1L	14 Jun 2014 19:34:17	-27.8
PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_Short.007
User	PMC
Job Description	HB Short-term
Location	HB_ST-06 (9521 Landfall)
Measurement Description	
Start Time	Tuesday, 2014 July 08 14:14:55
Stop Time	Tuesday, 2014 July 08 14:34:55
Duration	00:20:00.0
Run Time	00:20:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 2014 July 08 13:30:19
Post Calibration	None
Calibration Deviation	---

Note

Residential east of Bushard. Dog bark

Overall Data

LASeq		57.7	dB
LASmax	2014 Jul 08 14:25:51	82.0	dB
LZpeak (max)	2014 Jul 08 14:25:51	103.2	dB
LASmin	2014 Jul 08 14:22:22	41.3	dB
LCSeq		69.7	dB
LASeq		57.7	dB
LCSeq - LASeq		12.0	dB
LAIeq		60.8	dB
LAeq		57.7	dB
LAIeq - LAeq		3.0	dB
Ldn		57.7	dB
LDay 07:00-23:00		57.7	dB
LNight 23:00-07:00		---	dB
Lden		57.7	dB
LDay 07:00-19:00		57.7	dB
LEvening 19:00-23:00		---	dB
LNight 23:00-07:00		---	dB
LASE		88.5	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	61.0	dBA
LAS10.00	58.2	dBA
LAS33.30	53.6	dBA
LAS50.00	50.4	dBA
LAS66.60	47.6	dBA
LAS90.00	44.4	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Normal	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.9	dB
Under Range Peak	79.7	dB
Noise Floor	16.2	dB
Overload	121.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	68.0	62.2	60.0	69.1	59.8	55.3	53.6	53.1	49.0	47.8	40.7	40.4
LZSmax	78.6	67.9	68.2	84.3	76.3	78.9	78.8	76.9	72.2	74.0	66.8	66.8
LZSmin	46.9	50.6	51.2	53.6	42.9	42.3	35.9	32.1	28.0	22.6	20.0	23.9

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	65.3	63.0	60.8	58.6	57.4	55.7	54.8	54.4	56.1	59.7	68.1	59.1
LZSmax	70.8	71.5	72.6	65.4	64.3	61.6	63.8	64.1	63.7	67.8	78.8	83.6
LZSmin	41.1	43.0	42.3	41.8	45.7	43.9	33.0	41.6	46.8	46.7	48.7	47.1

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	56.9	55.2	51.9	51.1	49.8	50.4	48.5	48.6	49.4	48.4	49.5	46.7
LZSmax	63.9	73.3	74.7	72.1	71.5	76.2	72.6	73.3	75.3	70.7	74.5	68.6
LZSmin	47.3	46.1	38.1	37.9	36.0	33.7	32.3	30.5	29.3	28.0	27.5	26.4

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	45.3	44.2	43.0	45.1	42.7	40.2	37.7	35.5	33.1	38.1	35.7	27.4
LZSmax	68.6	67.4	66.1	71.4	69.0	66.1	63.9	61.9	59.1	64.4	64.4	51.7
LZSmin	24.7	21.8	20.0	18.5	17.5	16.0	15.1	14.9	15.6	16.2	15.6	21.0

Calibration History

Preamp	Date	dB re. 1V/Pa
Direct	01 Jul 2014 09:45:44	-27.0
PRMLxT1L	08 Jul 2014 13:30:19	-27.7
PRMLxT1L	08 Jul 2014 09:22:52	-27.7
PRMLxT1L	25 Jun 2014 11:41:42	-27.8
PRMLxT1L	16 Jun 2014 23:15:06	-27.9
PRMLxT1L	15 Jun 2014 21:43:57	-27.9
PRMLxT1L	14 Jun 2014 19:34:17	-27.8
PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6

General Information

Serial Number	03788
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	HB_Short.008
User	PMC
Job Description	HB Short-term
Location	HB_ST-08 (20th/N. Pacific)
Measurement Description	
Start Time	Tuesday, 2014 July 08 15:08:51
Stop Time	Tuesday, 2014 July 08 15:28:51
Duration	00:20:00.0
Run Time	00:20:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 2014 July 08 13:30:19
Post Calibration	None
Calibration Deviation	---

Note

Sunset Beach residential area. HVAC from adjacent restaurant, parking area.

Overall Data

LASeq		60.0	dB
LASmax	2014 Jul 08 15:10:09	78.3	dB
LZpeak (max)	2014 Jul 08 15:10:08	106.2	dB
LASmin	2014 Jul 08 15:11:04	50.7	dB
LCSeq		73.3	dB
LASeq		60.0	dB
LCSeq - LASeq		13.3	dB
LAIeq		63.0	dB
LAeq		60.0	dB
LAIeq - LAeq		3.0	dB
Ldn		60.0	dB
LDay 07:00-23:00		60.0	dB
LNight 23:00-07:00		---	dB
Lden		60.0	dB
LDay 07:00-19:00		60.0	dB
LEvening 19:00-23:00		---	dB
LNight 23:00-07:00		---	dB
LASE		90.8	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	64.9	dBA
LAS10.00	62.2	dBA
LAS33.30	57.7	dBA
LAS50.00	56.2	dBA
LAS66.60	55.1	dBA
LAS90.00	53.2	dBA

LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamp	PRMLxT1L		
Microphone Correction	Off		
Integration Method	Exponential		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Freq. Weighting	Z Weighting		
OBA Max Spectrum	At Lmax		
Under Range Limit		25.9	dB
Under Range Peak		79.7	dB
Noise Floor		16.2	dB
Overload		121.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZSeq	70.3	66.3	65.5	70.4	69.1	60.1	56.1	54.0	49.9	46.8	44.4	34.6
LZSmax	66.3	72.6	78.1	91.8	91.1	82.2	74.8	67.3	59.9	56.7	49.1	40.0
LZSmin	52.6	56.2	57.6	57.7	54.6	48.2	47.9	45.5	41.6	38.4	32.7	27.3

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LZSeq	67.4	65.5	62.7	61.3	61.4	61.8	60.7	60.3	61.2	62.4	66.0	67.3
LZSmax	56.9	56.8	58.8	62.0	63.5	72.4	70.8	72.7	73.3	79.2	88.1	90.4
LZSmin	47.2	44.8	45.7	47.3	49.5	50.7	50.6	53.3	51.6	48.3	52.4	51.1

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LZSeq	64.4	66.4	60.4	56.1	55.8	53.2	52.3	50.8	50.6	50.2	49.7	47.6
LZSmax	86.5	88.7	81.9	77.6	79.0	73.5	72.8	67.2	68.1	65.5	61.8	56.6
LZSmin	50.8	50.2	46.1	43.6	42.7	42.0	44.0	40.5	40.7	38.6	41.3	38.9

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LZSeq	46.4	44.9	43.7	42.3	42.2	41.7	42.8	38.1	34.2	32.3	28.6	26.5
LZSmax	54.3	51.2	57.6	52.6	52.4	50.4	46.6	42.8	41.4	35.9	36.7	30.6
LZSmin	37.1	36.7	35.9	34.7	34.0	31.4	29.2	26.9	26.5	23.5	21.0	22.2

Calibration History

Preamp	Date	dB re. 1V/Pa
Direct	01 Jul 2014 09:45:44	-27.0
PRMLxT1L	08 Jul 2014 13:30:19	-27.7
PRMLxT1L	08 Jul 2014 09:22:52	-27.7
PRMLxT1L	25 Jun 2014 11:41:42	-27.8
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PRMLxT1L	12 Jun 2014 15:55:40	-27.9
PRMLxT1L	11 Jun 2014 14:34:51	-27.9
PRMLxT1L	10 Jun 2014 11:53:17	-27.8
PRMLxT1L	04 Jun 2014 13:36:28	-27.8
PRMLxT1L	30 Apr 2014 10:12:18	-27.6

APPENDIX B -
TRAFFIC NOISE LEVELS AND NOISE CONTOURS

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 13-021
Project Name: Huntington Beach Noise Technical Background Report

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Stantec 2014
Community Noise Descriptor: L_{dn}: x CNEL: ____

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Distance from Centerline of Roadway						Traffic Volumes								Ref. Energy Leve Dist				Ld				Le				Ln				DISTANCE TO CONTOUR (2)			
Existing Conditions		Median	ADT	Design Speed	Alpha	Vehicle Mix Medium	Heavy	Ldn at	Distance to Contour				Calc	Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn																			
Roadway, Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 Ldn	65 Ldn	60 Ldn	55 Ldn	Dist										A	MT	HT	Adj	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total	70 Ldn	65 Ldn	60 Ldn	55 Ldn
Bolsa Chica Street to Springdale Street	6	15	12,000	45	0.5	1.8%	0.7%	61.9	-	-	133	287	100	9,324	1,524	1,152	189	75	11	2	16	7	69.3	77.6	82.1	-4.1	62.2	53.6	54.1	63.3	59.2	46.0	44.0	59.5	46.0	44.2	44.9	49.8	29	62	133	287
Springdale Street to Edwards Street	6	15	17,000	45	0.5	1.8%	0.7%	63.4	-	78	168	362	100	13,209	2,159	1,632	268	106	15	3	23	10	69.3	77.6	82.1	-4.1	63.7	55.1	55.6	64.8	60.7	47.6	45.5	61.0	47.5	45.7	46.4	51.4	36	78	168	362
Edwards Street to Goldenwest Street	6	15	21,000	45	0.5	1.8%	0.7%	64.3	-	90	194	417	100	16,317	2,667	2,016	330	131	19	4	28	12	69.3	77.6	82.1	-4.1	64.6	56.1	56.6	65.7	61.6	48.5	46.4	61.9	48.4	46.6	47.3	52.3	42	90	194	417
McFadden Avenue																																										
Bolsa Chica Street to Springdale Street	4	0	11,000	35	0.5	1.8%	0.7%	58.6	-	-	81	174	100	8,547	1,397	1,056	173	69	10	2	15	6	65.1	74.8	80.0	-4.5	58.2	51.2	52.4	59.9	55.3	43.6	42.2	55.7	42.1	41.7	43.1	47.1	17	37	81	174
Springdale Street to Edwards Street	4	0	14,000	35	0.5	1.8%	0.7%	59.6	-	-	95	204	100	10,878	1,778	1,344	220	87	13	3	19	8	65.1	74.8	80.0	-4.5	59.3	52.2	53.4	60.9	56.3	44.6	43.2	56.8	43.1	42.7	44.2	48.2	20	44	95	204
Edwards Street to Goldenwest Street	4	0	14,000	35	0.5	1.8%	0.7%	59.6	-	-	95	204	100	10,878	1,778	1,344	220	87	13	3	19	8	65.1	74.8	80.0	-4.5	59.3	52.2	53.4	60.9	56.3	44.6	43.2	56.8	43.1	42.7	44.2	48.2	20	44	95	204
Goldenwest Street to Gothard Street	4	0	20,000	35	0.5	1.8%	0.7%	61.2	-	56	120	259	100	15,540	2,540	1,920	315	125	18	4	27	11	65.1	74.8	80.0	-4.5	60.8	53.8	54.9	62.5	57.9	46.2	44.8	58.3	44.7	44.3	45.7	49.7	26	56	120	259
Edinger Avenue																																										
Saybrook Lane to Bolsa Chica Street	4	0	12,000	45	0.5	1.8%	0.7%	61.5	-	58	126	271	100	9,324	1,524	1,152	189	75	11	2	16	7	69.3	77.6	82.1	-4.5	61.8	53.2	53.7	62.9	58.8	45.7	43.6	59.1	45.6	43.8	44.5	49.5	27	58	126	271
Bolsa Chica Street to Springdale Street	4	15	28,000	45	0.5	1.8%	0.7%	65.3	-	104	225	484	100	21,756	3,556	2,688	441	175	25	6	38	16	69.3	77.6	82.1	-4.4	65.6	57.0	57.5	66.7	62.6	49.4	47.4	62.9	49.4	47.6	48.3	53.3	48	104	225	484
Springdale Street to Edwards Street	4	15	30,000	45	0.5	1.8%	0.7%	65.6	-	109	235	507	100	23,310	3,810	2,880	472	187	27	6	41	17	69.3	77.6	82.1	-4.4	65.9	57.3	57.8	67.0	62.9	49.7	47.7	63.2	49.7	47.9	48.6	53.6	51	109	235	507
Edwards Street to Goldenwest Street	4	15	30,000	45	0.5	1.8%	0.7%	65.6	-	109	235	507	100	23,310	3,810	2,880	472	187	27	6	41	17	69.3	77.6	82.1	-4.4	65.9	57.3	57.8	67.0	62.9	49.7	47.7	63.2	49.7	47.9	48.6	53.6	51	109	235	507
Goldenwest Street to Gothard Street	4	15	32,000	45	0.5	1.8%	0.7%	65.9	53	114	246	529	100	24,864	4,064	3,072	504	200	29	6	43	18	69.3	77.6	82.1	-4.4	66.1	57.6	58.1	67.3	63.2	50.0	47.9	63.5	50.0	48.2	48.9	53.8	53	114	246	529
Gothard Street to Beach Boulevard	4	15	32,000	45	0.5	1.8%	0.7%	65.9	53	114	246	529	100	24,864	4,064	3,072	504	200	29	6	43	18	69.3	77.6	82.1	-4.4	66.1	57.6	58.1	67.3	63.2	50.0	47.9	63.5	50.0	48.2	48.9	53.8	53	114	246	529
Beach Boulevard to Newland Street	4	15	33,000	45	0.5	1.8%	0.7%	66.0	54	116	251	540	100	25,641	4,191	3,168	519	206	30	7	45	19	69.3	77.6	82.1	-4.4	66.3	57.7	58.2	67.4	63.3	50.2	48.1	63.6	50.1	48.3	49.0	54.0	54	116	251	540
Heil Avenue																																										
Algonquin Street to Bolsa Chica Street	4	0	11,000	40	0.5	1.8%	0.7%	59.9	-	46	99	213	100	8,547	1,397	1,056	173	69	10	2	15	6	67.4	76.3	81.2	-4.5	59.9	52.1	52.9	61.3	56.9	44.5	42.7	57.3	43.7	42.6	43.7	48.1	21	46	99	213
Bolsa Chica Street to Springdale Street	4	0	13,000	40	0.5	1.8%	0.7%	60.6	-	51	110	238	100	10,101	1,651	1,248	205	81	12	3	18	7	67.4	76.3	81.2	-4.5	60.6	52.8	53.6	62.0	57.7	45.2	43.4	58.1	44.5	43.3	44.4	48.9	24	51	110	238
Springdale Street to Edwards Street	4	0	13,000	40	0.5	1.8%	0.7%	60.6	-	51	110	238	100	10,101	1,651	1,248	205	81	12	3	18	7	67.4	76.3	81.2	-4.5	60.6	52.8	53.6	62.0	57.7	45.2	43.4	58.1	44.5	43.3	44.4	48.9	24	51	110	238
Edwards Street to Goldenwest Street	4	0	14,000	40	0.5	1.8%	0.7%	61.0	-	54	116	250	100	10,878	1,778	1,344	220	87	13	3	19	8	67.4	76.3	81.2	-4.5	61.0	53.1	53.9	62.3	58.0	45.5	43.8	58.4	44.8	43.7	44.7	49.2	25	54	116	250
Goldenwest Street to Gothard Street	4	0	15,000	40	0.5	1.8%	0.7%	61.3	-	56	121	261	100	11,655	1,905	1,440	236	94	14	3	20	8	67.4	76.3	81.2	-4.5	61.3	53.4	54.2	62.6	58.3	45.8	44.1	58.7	45.1	44.0	45.0	49.5	26	56	121	261
Gothard Street to Beach Boulevard	4	0	14,000	40	0.5	1.8%	0.7%	59.0	-	54	116	250	100	10,878	1,778	1,344	220	87	13	3	19	8	67.4	76.3	81.2	-4.5	61.0	53.1	53.9	62.3	58.0	45.5	43.8	58.4	44.8	43.7	44.7	49.2	25	54	116	250
Beach Boulevard to Newland Street	4	0	9,000	40	0.5	1.8%	0.7%	59.0	-	-	86	186	100	6,993	1,143	864	142	56	8	2	12	5	67.4	76.3	81.2	-4.5	59.0	51.2	52.0	60.4	56.1	43.6	41.8	56.5	42.9	41.7	42.8	47.3	19	40	86	186
Warner Avenue																																										
PCH to Algonquin Street	6	15	25,000	45	0.5	1.8%	0.7%	65.1	-	101	217	468	100	19,425	3,175	2,400	393	156	23	5	34	14	69.3	77.6	82.1	-4.1	65.3	56.8	57.3	66.5	62.4	49.2	47.1	62.7	49.2	47.4	48.1	53.0	47	101	217	468
Algonquin Street to Bolsa Chica Street	6	15	27,000	45	0.5	1.8%	0.7%	65.4	-	106	229	493	100	20,979	3,429	2,592	425	168	25	5	37	15	69.3	77.6	82.1	-4.1	65.7	57.1	57.6	66.8	62.7	49.6	47.5	63.0	49.5	47.7	48.4	53.4	49	106	229	493
Bolsa Chica Street to Springdale Street	6	15	30,000	45	0.5	1.8%	0.7%	65.9	-	114	246	529	100	23,310	3,810	2,880	472	187	27	6	41	17	69.3	77.6	82.1	-4.1	66.1	57.6	58.1	67.3	63.2	50.0	47.9	63.5	50.0	48.1	48.9	53.8	53	114	246	529
Springdale Street to Edwards Street	6	15	34,000	45	0.5	1.8%	0.7%	66.4	-	124	267	575	100	26,418	4,318	3,264	535	212	31	7	46	19	69.3	77.6	82.1	-4.1	66.7	58.1	58.6	67.8	63.7	50.6	48.5	64.0	50.5	48.7	49.4	54.4	58	124	267	575
Edwards Street to Goldenwest Street	6	15	36,000	45	0.5	1.8%	0.7%	66.6	-	129	277	597	100	27,972	4,572	3,456	567	225	33	7	49	20	69.3	77.6	82.1	-4.1	66.9	58.4	58.9	68.1	63.9	50.8	48.7	64.3	50.8	48.9	49.7	54.6	60	129	277	597
Goldenwest Street to Gothard Street	6	15	36,000	45	0.5	1.8%	0.7%	66.6	-	129	277	597	100	27,972	4,572	3,456	567	225	33	7	49	20	69.3	77.6	82.1	-4.1	66.9	58.4	58.9	68.1	63.9	50.8	48.7	64.3	50.8	48.9	49.7	54.6	60	129	277	597
Gothard Street to Beach Boulevard	6	15	40,000	45	0.5	1.8%	0.7%	67.1	64	138	297	641	100	31,080	5,080	3,840	629	249	36	8	54	23	69.3	77.6	82.1	-4.1	67.4	58.9	59.4	68.5	64.4	51.3	49.2	64.7	51.2	49.4	50.1	55.1	64	138	297	641
Beach Boulevard to Newland Street	6	15	35,000	45	0.5	1.8%	0.7%	66.5	-	126	272	586	100	27,195	4,445	3,360	551	218	32	7	47	20	69.3	77.6	82.1	-4.1	66.8	58.3	58.8	67.9	63.8	50.7	48.6	64.2	50.6	48.8	49.5	54.5	59	126	272	586
Newland Street to Brookhurst Street	6	15	37,000	45	0.5	1.8%	0.7%	66.8	-	131	282	608	100	28,749	4,699	3,552	582	231	34	7	50	21	69.3	77.6	82.1	-4.1	67.0	58.5	59.0	68.2	64.1	50.9	48.8	64.4	50.9	49.1	49.8	54.7	61	131	282	608
Slater Avenue																																										
Graham Street to Springdale Street	4	10	7,000	45	0.5	1.8%	0.7%	59.2	-	-	89	191	100	5,439	889	672	110	44	6	1	9	4	69.3	77.6	82.1	-4.4	59.5	51.0	51.5	60.6	56.5	43.4	41.3	56.8	43.3	41.5	42.2	47.2	19	41	89	191
Springdale Street to Edwards Street	4	10	11,000	45	0.5	1.8%	0.7%	61.2	-	56	120	258	100	8,547	1,397	1,056	173	69	10	2	15	6	69.3	77.6	82.1	-4.4	61.5	52.9	53.4	62.6	58.5	45.3	43.3	58.8	45.3	43.5	44.2	49.2	26	56	120	258
Edwards Street to Goldenwest Street	4	10	14,000	45	0.5	1.8%	0.7%	62.2	-	65	141	303	100	10,878	1,778	1,344	220	87	13	3	19	8	69.3	77.6	82.1	-4.4	62.5	54.0	54.5	63.6	59.5	46.4	44.3	59.9	46.3	44.5	45.2	50.2	30	65	141	303
Goldenwest Street to Gothard Street	4	10	17,000	45	0.5	1.8%	0.7%	63.1	-	74	160	345	100	13,209	2,159	1,632	268	106	15	3	23	10	69.3	77.6	82.1	-4.4	63.4	54.8	55.3	64.5	60.4	47.2	45.2	60.7	47.2	45.4	46.1	51.0	35	74	160	345
Gothard Street to Beach Boulevard	4	10	18,000	45	0.5	1.8%	0.7%	63.3	-	77	166	358	100	13,986	2,286	1,728	283	112	16	4	24	10	69.3	77.6	82.1	-4.4	63.6	55.1	55.6	64.7	60.6	47.5	45.4	60.9	47.4	45.6	46.3	51.3	36	77	166	358
Beach Boulevard to Newland Street	4	10	17,000	45	0.5	1.8%	0.7%	63.1	-	74	160	345	100	13,209	2,159	1,632	268	106	15	3	23	10	69.3	77.6	82.1	-4.4	63.4	54.8	55.3	64.5	60.4	47.2	45.2	60.7	47.2	45.4	46.1	51.0	35	74	160	345
Talbert Avenue																																										
Goldenwest Street to Gothard Street	4	10	4,000	45	0.5	1.8%	0.7%	56.8	-	-	61	132	100	3,108	508	384	63	25	4	1	5	2	69.3	77.6	82.1	-4.4	57.1	48.5	49.0	58.2	54.1	41.0	38.9	54.4	40.9	39.1	39.8	44.8	13	28	61	132
Gothard Street to Beach Boulevard	4	10	13,000	45	0.5	1.8%	0.7%	61.9	-	62	134	289	100	10,101	1,651	1,248	205	81	12	3	18	7	69.3	77.6	82.1	-4.4	62.2	53.7	54.2	63.3	59.2	46.1	44.0	59.5	46.0	44.2	44.9	49.9	29	62	134	289
Beach Boulevard to Newland Street	4	10	18,000	45	0.5	1.8%	0.7%	63.3	-	77	166	358	100	13,986	2,286	1,728	283	112	16	4	24	10	69.3	77.6	82.1	-4.4	63.6	55.1	55.6	64.7	60.6	47.5	45.4	60.9	47.4	45.6	46.3	51.3	36	77	166	358
Ellis Avenue																																										
Edwards Street to Goldenwest Street	4	0	6,000	40	0.5	1.8%	0.7%	57.3	-	-	66	142	100	4,662	762	576	94	37	5	1	8	3	67.4	76.3	81.2	-4.5	57.3	49.4	50.3	58.6	54.3	41.8	40.1	54.7	41.1	40.0	41.0	45.5	14	31	66	142
Goldenwest Street to Gothard Street	2	0	9,000	40	0.5	1.8%	0.7%	58.9	-	39	85	183	100	6,993	1,143	864	142	56	8	2	12	5	67.4	76.3	81.2	-4.6	58.9	51.1	51.9	60.3	56.0	43.5	41.8	56.4	42.8	41.6	42.7	47.2	18	39	85	183
Gothard Street to Beach Boulevard	2	0	8,000	40	0.5	1.8%	0.7%	58.4	-	36	79	169	100	6,216	1,016	768	126	50	7	2	11	5	67.4	76.3	81.2	-4.6	58.4	50.6	51.4	59.8	55.5	43.0	41.2	55.9	42.3	41.1	42.2	46.7	17	36	79	169
Beach Boulevard to Newland Street	2	0	16,000	40	0.5	1.8%	0.7%	61.4	-	58	125	269	100	12,432	2,032	1,536	252	100	15	3	22	9	67.4	76.3	81.2	-4.6	61.4	53.6	54.4	62.8	58.5	46.0	44.3	58.9	45.3	44.1	45.2	49.7	27	58	125	269
Garfield Avenue																																										
PCH to Edwards Street	4	15	6,000	45	0.5	1.8%	0.7%	58.6	-	-	81	173	100	4,662	762	576	94	37	5	1	8	3	69.3	77.6	82.1	-4.4	58.9	50.3	50.8	60.0	55.9	42.8	40.7	56.2	42.7	40.9	41.6	46.6	17	37	81	173
Edwards Street to Goldenwest Street	4	15	14,000	45	0.5	1.8%	0.7%	62.3	-	66	142	305	100	10,878	1,778	1,344	220	87	13	3	19	8	69.3	77.6	82.1	-4.4	62.5	54.0	54.5	63.7	59.6	46.4	44.4	59.9	46.4	44.6	45.3	50.2	31	66	142	305
Goldenwest Street to Gothard Street	4	15	14,000	45	0.5	1.8%	0.7%	62.3	-	66	142	305	100	10,878	1,778	1,344	220	87	13	3	19	8	69.3	77.6	82.1	-4.4	62.5	54.0	54.5	63.7	59.6	46.4	44.4	59.9	46.4	44.6	45.3	50.2	31	66	142	305
Gothard Street to Main Street	4	15	13,000	45	0.5	1.8%	0.7%	61.9	-	63	135	290	100	10,101	1,651	1,248	205	81	12	3	18	7	69.3	77.6	82.1	-4.4	62.2	53.7	54.2	63.4	59.2	46.1	44.0	59.6	46.1	44.2	45.0	49.9	29	63	135	290
Main Street to Beach Boulevard	4	15	16,000	45	0.5	1.8%	0.7%	62.8	-	72	155	334	100	12,432	2,032	1,536	252	100	15	3	22	9	69.3	77.6	82.1	-4.4	63.1	54.6	55.1	64.3	60.1	47.0	44.9	60.5	47.0	45.1	45.9	50.8	33	72	155	334
Beach Boulevard to Newland Street	4	15	17,000	45	0.5	1.8%	0.7%	63.1	-	75	161	347	100	13,209	2,159	1,632	268	106	15	3	23	10	69.3	77.6	82.1	-4.4	63.4	54.9	55.4	64.5	60.4	47.3	45.2	60.7	47.2	45.4	46.1	51.1	35	75	161	347
Newland Street to Brookhurst Street	4	15	14,000	45	0.5	1.8%	0.7%	62.3	-	66	142	305	100	10,878	1,778	1,344	220	87	13	3	19	8	69.3	77.6	82.1	-4.4	62.5	54.0	54.5	63.7	59.6	46.4	44.4	59.9	46.4	44.6	45.3	50.2	31	66	142	305
Yorktown Avenue																																										
Gothard Street to Main Street	4	0	17,000	40	0.5	1.8%	0.7%	61.8	-	61	132	284	100	13,209	2,159	1,632	268	106	15	3	23	10	67.4	76.3	81.2	-4.5	61.8	53.9	54.8	63.1	58.8	46.4	44.6	59.2	45.6	44.5	45.5	50.0	28	61	132	284
Main Street to Beach Boulevard	4	0	16,000	40	0.5	1.8%	0.7%	61.5	-	59	127	273	100	12,432	2,032	1,536	252	100	15	3	22	9	67.4	76.3	81.2	-4.5	61.5	53.7	54.5	62.9	58.6	46.1	44.3	59.0	45.4	44.2	45.3	49.8	27	59	127	273
Beach Boulevard to Newland Street	4	0	12,000	40	0.5	1.8%	0.7%	60.3	-	49	105	225	100	9,324	1,524	1,152	189	75	11	2	16	7	67.4	76.3	81.2	-4.5	60.3	52.4	53.3	61.6	57.3	44.9	43.1	57.7	44.1	43.0	44.0	48.5	23	49	105	225
Newland Street to Brookhurst Street	4	0	13,000	40	0.5	1.8%	0.7%	60.6	-	51	110	238	100	10,101	1,651	1,248	205	81	12	3	18	7	67.4	76.3	81.2	-4.5	60.6	52.8	53.6	62.0	57.7	45.2	43.4	58.1	44.5	43.3	44.4	48.9	24	51	110	238
Adams Avenue																																										
Lake Street to Beach Boulevard	4	10	19,000	45	0.5	1.8%	0.7%	63.6	-	80	172	372	100	14,763	2,413	1,824	299	119	17	4	26	11	69.3	77.6	82.1	-4.4	63.8	55.3	55.8	65.0	60.9	47.7	45.6	61.2	47.7	45.8	46.6	51.5	37	80	172	372

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Stantec 2014
Community Noise Descriptor: L_{dn}: x CNEL:

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

									Traffic Volumes										Ref. Energy Leve Dist				Ld				Le				Ln				DISTANCE TO CONTOUR (2)			
Existing Conditions		Median	ADT	Design Speed	Alpha	Vehicle Mix Medium	Heavy	Ldn at	Distance from Centerline of Roadway Distance to Contour				Calc	Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn																			
Roadway, Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 Ldn	65 Ldn	60 Ldn	55 Ldn	Dist										A	MT	HT	Adj	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total	70 Ldn	65 Ldn	60 Ldn	55 Ldn
Beach Boulevard to Newland Street	6	15	25,000	45	0.5	1.8%	0.7%	65.1	-	101	217	468	100	19,425	3,175	2,400	393	156	23	5	34	14	69.3	77.6	82.1	-4.1	65.3	56.8	57.3	66.5	62.4	49.2	47.1	62.7	49.2	47.4	48.1	53.0	47	101	217	468
Newland Street to Magnolia Avenue	6	15	27,000	45	0.5	1.8%	0.7%	65.4	-	106	229	493	100	20,979	3,429	2,592	425	168	25	5	37	15	69.3	77.6	82.1	-4.1	65.7	57.1	57.6	66.8	62.7	49.6	47.5	63.0	49.5	47.7	48.4	53.4	49	106	229	493
Magnolia Avenue to Bushard Street	6	15	33,000	45	0.5	1.8%	0.7%	66.3	-	121	262	564	100	25,641	4,191	3,168	519	206	30	7	45	19	69.3	77.6	82.1	-4.1	66.5	58.0	58.5	67.7	63.6	50.4	48.3	63.9	50.4	48.6	49.3	54.2	56	121	262	564
Bushard Street to Brookhurst Street	6	15	33,000	45	0.5	1.8%	0.7%	66.3	-	121	262	564	100	25,641	4,191	3,168	519	206	30	7	45	19	69.3	77.6	82.1	-4.1	66.5	58.0	58.5	67.7	63.6	50.4	48.3	63.9	50.4	48.6	49.3	54.2	56	121	262	564
Brookhurst Street to city limits	6	15	36,000	45	0.5	1.8%	0.7%	66.6	-	129	277	597	100	27,972	4,572	3,456	567	225	33	7	49	20	69.3	77.6	82.1	-4.1	66.9	58.4	58.9	68.1	63.9	50.8	48.7	64.3	50.8	48.9	49.7	54.6	60	129	277	597
Indianapolis Avenue																																									
Lake Street to Beach Boulevard	4	0	5,000	40	0.5	1.8%	0.7%	56.5	-	-	58	126	100	3,885	635	480	79	31	5	1	7	3	67.4	76.3	81.2	-4.5	56.5	48.6	49.5	57.8	53.5	41.1	39.3	53.9	40.3	39.2	40.2	44.7	13	27	58	126
Beach Boulevard to Newland Street	4	0	7,000	40	0.5	1.8%	0.7%	57.9	-	-	73	157	100	5,439	889	672	110	44	6	1	9	4	67.4	76.3	81.2	-4.5	58.0	50.1	50.9	59.3	55.0	42.5	40.8	55.4	41.8	40.6	41.7	46.2	16	34	73	157
Newland Street to Magnolia Avenue	4	0	7,000	40	0.5	1.8%	0.7%	57.9	-	-	73	157	100	5,439	889	672	110	44	6	1	9	4	67.4	76.3	81.2	-4.5	58.0	50.1	50.9	59.3	55.0	42.5	40.8	55.4	41.8	40.6	41.7	46.2	16	34	73	157
Magnolia Avenue to Bushard Street	4	0	8,000	40	0.5	1.8%	0.7%	58.5	-	-	80	172	100	6,216	1,016	768	126	50	7	2	11	5	67.4	76.3	81.2	-4.5	58.5	50.7	51.5	59.9	55.6	43.1	41.3	55.9	42.4	41.2	42.3	46.8	17	37	80	172
Bushard Street to Brookhurst Street	4	0	6,000	40	0.5	1.8%	0.7%	57.3	-	-	66	142	100	4,662	762	576	94	37	5	1	8	3	67.4	76.3	81.2	-4.5	57.3	49.4	50.3	58.6	54.3	41.8	40.1	54.7	41.1	40.0	41.0	45.5	14	31	66	142
Atlanta Avenue																																									
Beach Boulevard to Newland Street	6	15	17,000	45	0.5	1.8%	0.7%	63.1	-	75	161	348	100	12,432	2,032	1,536	252	100	15	3	22	9	69.3	77.6	82.1	-4.1	63.4	54.9	55.4	64.5	60.4	47.3	45.2	60.8	47.2	45.4	46.1	51.1	35	75	161	348
Newland Street to Magnolia Avenue	6	15	16,000	45	0.5	1.8%	0.7%	62.8	-	72	155	333	100	11,655	1,905	1,440	236	94	14	3	20	8	69.3	77.6	82.1	-4.1	63.1	54.6	55.1	64.3	60.1	47.0	44.9	60.5	46.9	45.1	45.9	50.8	33	72	155	333
Magnolia Avenue to Bushard Street	6	15	15,000	45	0.5	1.8%	0.7%	61.5	-	-	126	271	100	8,547	1,397	1,056	173	69	10	2	15	6	69.3	77.6	82.1	-4.1	61.8	53.2	53.7	62.9	58.8	45.7	43.6	59.1	45.6	43.8	44.5	49.5	27	58	126	271
Bushard Street to Brookhurst Street	6	15	11,000	45	0.5	1.8%	0.7%	61.5	-	-	126	271	100	8,547	1,397	1,056	173	69	10	2	15	6	69.3	77.6	82.1	-4.1	61.8	53.2	53.7	62.9	58.8	45.7	43.6	59.1	45.6	43.8	44.5	49.5	27	58	126	271
Hamilton Avenue																																									
Newland Street to Magnolia Avenue	4	10	10,000	45	0.5	1.8%	0.7%	60.8	-	52	112	242	100	7,770	1,270	960	157	62	9	2	14	6	69.3	77.6	82.1	-4.4	61.0	52.5	53.0	62.2	58.1	44.9	42.8	58.4	44.9	43.1	43.8	48.7	24	52	112	242
Magnolia Avenue to Bushard Street	4	10	15,000	45	0.5	1.8%	0.7%	62.5	-	68	147	317	100	11,655	1,905	1,440	236	94	14	3	20	8	69.3	77.6	82.1	-4.4	62.8	54.3	54.8	63.9	59.8	46.7	44.6	60.2	46.6	44.8	45.5	50.5	32	68	147	317
Bushard Street to Brookhurst Street	4	10	19,000	45	0.5	1.8%	0.7%	63.6	-	80	172	372	100	14,763	2,413	1,824	299	119	17	4	26	11	69.3	77.6	82.1	-4.4	63.8	55.3	55.8	65.0	60.9	47.7	45.6	61.2	47.7	45.8	46.6	51.5	37	80	172	372
Banning Avenue																																									
Magnolia Avenue to Bushard Street	2	0	3,000	35	0.5	1.8%	0.7%	52.9	-	-	33	72	100	2,331	381	288	47	19	3	1	4	2	65.1	74.8	80.0	-4.6	52.5	45.4	46.6	54.1	49.5	37.8	36.4	50.0	36.3	36.0	37.4	41.4	7	16	33	72
Bushard Street to Brookhurst Street	2	0	3,000	35	0.5	1.8%	0.7%	52.9	-	-	33	72	100	2,331	381	288	47	19	3	1	4	2	65.1	74.8	80.0	-4.6	52.5	45.4	46.6	54.1	49.5	37.8	36.4	50.0	36.3	36.0	37.4	41.4	7	16	33	72
Orange Avenue																																									
Goldenwest Street to 17th Street	2	0	5,000	30	0.5	1.8%	0.7%	54.1	-	-	40	87	100	3,885	635	480	79	31	5	1	7	3	62.5	73.1	80.3	-4.6	52.8	46.6	49.7	55.2	49.8	39.0	39.6	50.5	36.6	37.1	40.5	43.2	9	19	40	87
17th Street to 14th Street	2	0	5,000	30	0.5	1.8%	0.7%	54.1	-	-	40	87	100	3,885	635	480	79	31	5	1	7	3	62.5	73.1	80.3	-4.6	52.8	46.6	49.7	55.2	49.8	39.0	39.6	50.5	36.6	37.1	40.5	43.2	9	19	40	87
14th Street to 6th Street	2	0	5,000	30	0.5	1.8%	0.7%	54.1	-	-	40	87	100	3,885	635	480	79	31	5	1	7	3	62.5	73.1	80.3	-4.6	52.8	46.6	49.7	55.2	49.8	39.0	39.6	50.5	36.6	37.1	40.5	43.2	9	19	40	87
6th Street to Main Street	2	0	5,000	30	0.5	1.8%	0.7%	54.1	-	-	40	87	100	3,885	635	480	79	31	5	1	7	3	62.5	73.1	80.3	-4.6	52.8	46.6	49.7	55.2	49.8	39.0	39.6	50.5	36.6	37.1	40.5	43.2	9	19	40	87
Main Street to 3rd Street	2	0	5,000	30	0.5	1.8%	0.7%	54.1	-	-	40	87	100	3,885	635	480	79	31	5	1	7	3	62.5	73.1	80.3	-4.6	52.8	46.6	49.7	55.2	49.8	39.0	39.6	50.5	36.6	37.1	40.5	43.2	9	19	40	87
3rd Street to 1st Street	2	0	7,000	30	0.5	1.8%	0.7%	55.6	-	-	51	109	100	5,439	889	672	110	44	6	1	9	4	62.5	73.1	80.3	-4.6	54.3	48.1	51.2	56.6	51.3	40.5	41.0	52.0	38.1	38.6	41.9	44.7	11	24	51	109
Pacific Coast Highway																																									
Anderson Drive to Warner Avenue	4	10	43,000	45	0.5	1.8%	0.7%	67.1	64	138	297	641	100	33,411	5,461	4,128	677	268	39	9	58	24	69.3	77.6	82.1	-4.4	67.4	58.8	59.3	68.5	64.4	51.3	49.2	64.7	51.2	49.4	50.1	55.1	64	138	297	641
Warner Avenue to Seapoint Street	4	15	38,000	55	0.5	1.8%	0.7%	68.7	82	177	382	822	100	29,526	4,826	3,648	598	237	35	8	51	21	72.7	79.9	83.8	-4.4	69.4	59.7	59.7	70.2	66.4	52.1	49.5	66.7	53.2	50.3	50.4	56.3	82	177	382	822
Seapoint Street to Goldenwest Street	4	15	33,000	45	0.5	1.8%	0.7%	66.0	54	116	251	540	100	25,641	4,191	3,168	519	206	30	7	45	19	69.3	77.6	82.1	-4.4	66.3	57.7	58.2	67.4	63.3	50.2	48.1	63.6	50.1	48.3	49.0	54.0	54	116	251	540
Goldenwest Street to 17th Street	4	15	35,000	45	0.5	1.8%	0.7%	66.2	56	121	261	562	100	27,195	4,445	3,360	551	218	32	7	47	20	69.3	77.6	82.1	-4.4	66.5	58.0	58.5	67.7	63.5	50.4	48.3	63.9	50.4	48.5	49.3	54.2	56	121	261	562
17th Street to 14th Street	4	15	33,000	45	0.5	1.8%	0.7%	66.0	54	116	251	540	100	25,641	4,191	3,168	519	206	30	7	45	19	69.3	77.6	82.1	-4.4	66.3	57.7	58.2	67.4	63.3	50.2	48.1	63.6	50.1	48.3	49.0	54.0	54	116	251	540
14th Street to 6th Street	4	15	35,000	45	0.5	1.8%	0.7%	66.2	56	121	261	562	100	27,195	4,445	3,360	551	218	32	7	47	20	69.3	77.6	82.1	-4.4	66.5	58.0	58.5	67.7	63.5	50.4	48.3	63.9	50.4	48.5	49.3	54.2	56	121	261	562
6th Street to Main Street	4	15	35,000	45	0.5	1.8%	0.7%	66.2	56	121	261	562	100	27,195	4,445	3,360	551	218	32	7	47	20	69.3	77.6	82.1	-4.4	66.5	58.0	58.5	67.7	63.5	50.4	48.3	63.9	50.4	48.5	49.3	54.2	56	121	261	562
Main Street to 2nd Street	4	15	35,000	45	0.5	1.8%	0.7%	66.2	56	121	261	562	100	27,195	4,445	3,360	551	218	32	7	47	20	69.3	77.6	82.1	-4.4	66.5	58.0	58.5	67.7	63.5	50.4	48.3	63.9	50.4	48.5	49.3	54.2	56	121	261	562
2nd Street to 1st Street	4	15	34,000	45	0.5	1.8%	0.7%	66.1	55	119	256	551	100	26,418	4,318	3,264	535	212	31	7	46	19	69.3	77.6	82.1	-4.4	66.4	57.9	58.4	67.5	63.4	50.3	48.2	63.8	50.2	48.4	49.1	54.1	55	119	256	551
1st Street to Huntington Street	4	15	34,000	45	0.5	1.8%	0.7%	66.1	55	119	256	551	100	26,418	4,318	3,264	535	212	31	7	46	19	69.3	77.6	82.1	-4.4	66.4	57.9	58.4	67.5	63.4	50.3	48.2	63.8	50.2	48.4	49.1	54.1	55	119	256	551
Huntington Street to Beach Boulevard	4	15	34,000	45	0.5	1.8%	0.7%	66.1	55	119	256	551	100	26,418	4,318	3,264	535	212	31	7	46	19	69.3	77.6	82.1	-4.4	66.4	57.9	58.4	67.5	63.4	50.3	48.2	63.8	50.2	48.4	49.1	54.1	55	119	256	551
Beach Boulevard to Newland Street	4	15	37,000	45	0.5	1.8%	0.7%	66.5	58	126	271	583	100	28,749	4,699	3,552	582	231	34	7	50	21	69.3	77.6	82.1	-4.4	66.8	58.2	58.7	67.9	63.8	50.7	48.6	64.1	50.6	48.8	49.5	54.5	58	126	271	583
Newland Street to Magnolia Avenue	4	15	33,000	45	0.5	1.8%	0.7%	66.0	54	116	251	540	100	25,641	4,191	3,168	519	206	30	7	45	19	69.3	77.6	82.1	-4.4	66.3	57.7	58.2	67.4	63.3	50.2	48.1	63.6	50.1	48.3	49.0	54.0	54	116	251	540
Magnolia Avenue to Brookhurst Street	4	15	32,000	45	0.5	1.8%	0.7%	65.9	53	114	246	529	100	24,864	4,064	3,072	504	200	29	6	43	18	69.3	77.6	82.1	-4.4	66.1	57.6	58.1	67.3	63.2	50.0	47.9	63.5	50.0	48.2	48.9	53.8	53	114	246	529
Brookhurst Street to city limits	4	15	37,000	45	0.5	1.8%	0.7%	66.5	58	126	271	583	100	28,749	4,699	3,552	582	231	34	7	50	21	69.3	77.6	82.1	-4.4	66.8	58.2	58.7	67.9	63.8	50.7	48.6	64.1	50.6	48.8	49.5	54.5	58	126	271	583
NORTH - SOUTH																																									
Bolsa Chica Street																																									
Skylab Road to Bolsa Avenue	6	15	42,000	45	0.5	1.8%	0.7%	67.3	66	143	307	662	100	32,634	5,334	4,032	661	262	38	8	57	24	69.3	77.6	82.1	-4.1	67.6	59.1	59.6	68.7	64.6	51.5	49.4	64.9	51.4	49.6	50.3	55.3	66	143	307	662
Bolsa Avenue to McFadden Avenue	6	15	38,000	45	0.5	1.8%	0.7%	66.9	-	133	287	619	100	29,526	4,826	3,648	598	237	35	8	51	21	69.3	77.6	82.1	-4.1	67.2	58.6	59.1	68.3	64.2	51.0	49.0	64.5	51.0	49.2	49.9	54.9	62	133	287	619
McFadden Avenue to Edinger Avenue	6	15	34,000	45	0.5	1.8%	0.7%	66.4	-	124	267	575	100	26,418	4,318	3,264	535	212	31	7	46	19	69.3	77.6	82.1	-4.1	66.7	58.1	58.6	67.8	63.7	50.6	48.5	64.0	50.5	48.7	49.4	54.4	58	124	267	575
Edinger Avenue to Heil Avenue	6	15	29,000	45	0.5	1.8%	0.7%	65.7	-	111	240	517	100	22,533	3,683	2,784	456	181	26	6	39	16	69.3	77.6	82.1	-4.1	66.0	57.5	58.0	67.1	63.0	49.9	47.8	63.3	49.8	48.0	48.7	53.7	52	111	240	517
Heil Avenue to Warner Avenue	6	15	22,000	45	0.5	1.8%	0.7%	64.5	-	93	200	430	100	17,094	2,794	2,112	346	137	20	4	30	12	69.3	77.6	82.1	-4.1	64.8	56.3	56.8	65.9	61.8	48.7	46.6	62.1	48.6	46.8	47.5	52.5	43	93	200	430
Graham Street																																									
Bolsa Avenue to McFadden Avenue	4	10	8,000	40	0.5	1.8%	0.7%	58.6	-	-	81	174	100	6,216	1,016	768	126	50	7	2	11	5	67.4	76.3	81.2	-4.4	58.6	50.7	51.6	59.9	55.6	43.2	41.4	56.0	42.4	41.3	42.3	46.8	17	37	81	174
McFadden Avenue to Edinger Avenue	4	10	8,000	40	0.5	1.8%	0.7%	58.6	-	-	81	174	100	6,216	1,016	768	126	50	7	2	11	5	67.4	76.3	81.2	-4.4	58.6	50.7	51.6	59.9	55.6	43.2	41.4	56.0	42.4	41.3	42.3	46.8	17	37	81	174
Edinger Avenue to Heil Avenue	4	10	8,000	40	0.5	1.8%	0.7%	58.6	-	-	81	174	100	6,216	1,016	768	126	50	7	2	11	5	67.4	76.3	81.2	-4.4	58.6	50.7	51.6	59.9	55.6	43.2	41.4	56.0	42.4	41.3	42.3	46.8	17	37	81	174
Heil Avenue to Warner Avenue	4	10	7,000	40	0.5	1.8%	0.7%	58.0	-	-	74	159	100	5,439	889	672	110	44	6	1	9	4	67.4	76.3	81.2	-4.4	58.0	50.2	51.0	59.4	55.0	42.6	40.8	55.4	41.8	40.7	41.8	46.2	16	34	74	159
Warner Avenue to Slater Avenue	4	10	7,000	40	0.5	1.8%	0.7%	58.0	-	-	74	159	100	5,439	889	672	110	44	6	1	9	4	67.4	76.3	81.2	-4.4	58.0	50.2	51.0	59.4	55.0	42.6	40.8	55.4	41.8	40.7	41.8	46.2	16	34	74	159
Sprindale Street																																									
Skylab Road to Bolsa Avenue	4	15	25,000	45	0.5	1.8%	0.7%	64.8	-	97	208	449	100	19,425	3,175	2,400	393	156	23	5	34	14	69.3	77.6	82.1	-4.4	65.1	56.5	57.0	66.2	62.1	49.0	46.9	62.4	48.9	47.1	47.8	52.8	45	97	208	449
Bolsa Avenue to McFadden Avenue	4	15	23,000	45	0.5	1.8%	0.7%	64.4	-	92	197	425	100	17,871	2,921	2,208	362	143	21	5	31	13	69.3	77.6	82.1	-4.4	64.7	56.2	56.7	65.8	61.7	48.6	46.5	62.1	48.5	46.7	47.4	52.4	42	92	197	425
McFadden Avenue to Edinger Avenue	4	15	20,000	45	0.5	1.8%	0.7%	63.8	-	83	180	387	100	15,540	2,540	1,920	315	125	18	4	27	11	69.3	77.6	82.1	-4.4	64.1	55.6	56.1	65.2	61.1	48.0	45.9	61.4	47.9	46.1	46.8	51.8	39	83	180	387
Edinger Avenue to Heil Avenue	4	15	19,000	45	0.5	1.8%	0.7%	63.6	-	81	174	374	100	14,763	2,413	1,824	299	119	17	4	26	11	69.3	77.6	82.1	-4.4	63.9	55.3	55.8	65.0	60.9	47.8	45.7	61.2	47.7	45.9	46.6	51.6	37	81	174	374
Heil Avenue to Warner Avenue	4	15	17,000	45	0.5	1.8%	0.7%	63.1	-	75	161	347	100	13,209	2,159	1,632	268	106	15	3	23	10	69.3	77.6	82.1	-4.4	63.4	54.9	55.4	64.5	60.4	47.3	45.2	60.7	47.2	45.4	46.1	51.1	35	75	161	347
Warner Avenue to Slater Avenue	4	15	14,000	45	0.5	1.8%	0.7%	62.3	-	66	142	305	100	10,878	1,778	1,344	220	87	13	3	19	8	69.3	77.6	82.1	-4.4	62.5	54.0	54.5	63.7	59.6	46.4	44.4	59.9	46.4	44.6	45.3	50.2	31	66	142	305
Slater Avenue to Albert Avenue	4	15	10,000	45	0.5	1.8%	0.7%	60.8	-	53	113	244	100	7,770	1,270	960	157	62	9	2	14	6	69.3	77.6	82.1	-4.4	61.1	52.6	53.1	62.2	58.1	45.0	42.9	58.4	44.9	43.1	43.8	48.8	24	53	113	244
Edwards Street																																									
Industry Way to Bolsa Avenue	4	0	16,000	40	0.5	1.8%	0.7%	61.5	-	59	127	273	100	12,432	2,032	1,536	252	100	15	3	22	9	67.4	76.3	81.2	-4.5	61.5	53.7	54.5	62.9	58.6	46.1	44.3	59.0	45.4	44.2	45.3	49.8	27	59	127	273
Bolsa Avenue to McFadden Avenue	4	0	16,000	40	0.5	1.8%	0.7%	61.5	-	59	127	273	100	12,432	2,032	1,536	252	100	15	3	22	9	67.4	76.3	81.2	-4.5	61.5	53.7	54.5	62.9	58.6	46.1	44.3	59.0	45.4	44.2	45.3	49.8	27	59	127	273
McFadden Avenue to Edinger Avenue	4	0	16,000	40	0.5	1.8%	0.7%	61.5	-	59	127	273	100	12,432	2,032	1,536	252	100	15	3	22	9	67.4	76.3	81.2	-4.5	61.5	53.7	54.5	62.9	58.6	46.1	44.3	59.0	45.4	44.2	45.3	49.8	27	59	127	273
Edinger Avenue to Heil Avenue	4	0	15,000	40	0.5	1.8%	0.7%	61.3	-	56	121	261	100	11,655	1,905	1,440	236	94	14	3	20	8	67.4	76.3	81.2	-4.5	61.3	53.4	54.2	62.6	58.3	45.8	44.1	58.7	45.1	44.0	45.0	49.5	26	56	121	261

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Stantec 2014
Community Noise Descriptor: L_{dn}: x CNEL: ____

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Existing Conditions Roadway, Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	Ldn at 100 Feet	Distance from Centerline of Roadway 70 Ldn	Distance to Contour 65 Ldn	Distance to Contour 60 Ldn	Distance to Contour 55 Ldn	Calc Dist	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Leve A	MT	HT	Dist Adj	Ld A	MT	HT	Total	Le A	MT	HT	Total	Ln A	MT	HT	Total	DISTANCE TO CONTOUR (2) 70 Ldn	65 Ldn	60 Ldn	55 Ldn
Heil Avenue to Warner Avenue	4	0	14,000	40	0.5	1.8%	0.7%	61.0	-	54	116	250	100	10,878	1,778	1,344	220	87	13	3	19	8	67.4	76.3	81.2	-4.5	61.0	53.1	53.9	62.3	58.0	45.5	43.8	58.4	44.8	43.7	44.7	49.2	25	54	116	250
Warner Avenue to Slater Avenue	4	0	14,000	40	0.5	1.8%	0.7%	61.0	-	54	116	250	100	10,878	1,778	1,344	220	87	13	3	19	8	67.4	76.3	81.2	-4.5	61.0	53.1	53.9	62.3	58.0	45.5	43.8	58.4	44.8	43.7	44.7	49.2	25	54	116	250
Slater Avenue to Albert Avenue	4	0	10,000	40	0.5	1.8%	0.7%	59.5	-	-	93	199	100	7,770	1,270	960	157	62	9	2	14	6	67.4	76.3	81.2	-4.5	59.5	51.6	52.5	60.8	56.5	44.1	42.3	56.9	43.3	42.2	43.2	47.7	20	43	93	199
Albert Avenue to Ellis Avenue	4	0	11,000	40	0.5	1.8%	0.7%	59.9	-	46	99	213	100	8,547	1,397	1,056	173	69	10	2	15	6	67.4	76.3	81.2	-4.5	59.9	52.1	52.9	61.3	56.9	44.5	42.7	57.3	43.7	42.6	43.7	48.1	21	46	99	213
Ellis Avenue to Garfield Avenue	4	0	12,000	40	0.5	1.8%	0.7%	60.3	-	49	105	225	100	9,324	1,524	1,152	189	75	11	2	16	7	67.4	76.3	81.2	-4.5	60.3	52.4	53.3	61.6	57.3	44.9	43.1	57.7	44.1	43.0	44.0	48.5	23	49	105	225
Goldenwest Street																																										
Bolsa Avenue to McFadden Avenue	4	15	38,000	45	0.5	1.8%	0.7%	66.6	59	128	276	594	100	29,526	4,826	3,648	598	237	35	8	51	21	69.3	77.6	82.1	-4.4	66.9	58.4	58.9	68.0	63.9	50.8	48.7	64.2	50.7	48.9	49.6	54.6	59	128	276	594
McFadden Avenue to Edinger Avenue	4	15	35,000	45	0.5	1.8%	0.7%	66.2	56	121	261	562	100	27,195	4,445	3,360	551	218	32	7	47	20	69.3	77.6	82.1	-4.4	66.5	58.0	58.5	67.7	63.5	50.4	48.3	63.9	50.4	48.5	49.3	54.2	56	121	261	562
Edinger Avenue to Heil Avenue	4	15	35,000	45	0.5	1.8%	0.7%	66.2	56	121	261	562	100	27,195	4,445	3,360	551	218	32	7	47	20	69.3	77.6	82.1	-4.4	66.5	58.0	58.5	67.7	63.5	50.4	48.3	63.9	50.4	48.5	49.3	54.2	56	121	261	562
Heil Avenue to Warner Avenue	4	15	32,000	45	0.5	1.8%	0.7%	65.9	53	114	246	529	100	24,864	4,064	3,072	504	200	29	6	43	18	69.3	77.6	82.1	-4.4	66.1	57.6	58.1	67.3	63.2	50.0	47.9	63.5	50.0	48.2	48.9	53.8	53	114	246	529
Warner Avenue to Slater Avenue	4	15	30,000	45	0.5	1.8%	0.7%	65.6	-	109	235	507	100	23,310	3,810	2,880	472	187	27	6	41	17	69.3	77.6	82.1	-4.4	65.9	57.3	57.8	67.0	62.9	49.7	47.7	63.2	49.7	47.9	48.6	53.6	51	109	235	507
Slater Avenue to Talbert Avenue	4	15	26,000	45	0.5	1.8%	0.7%	65.0	-	99	214	461	100	20,202	3,302	2,496	409	162	24	5	35	15	69.3	77.6	82.1	-4.4	65.2	56.7	57.2	66.4	62.3	49.1	47.0	62.6	49.1	47.3	48.0	52.9	46	99	214	461
Talbert Avenue to Ellis Avenue	4	15	27,000	45	0.5	1.8%	0.7%	65.1	-	102	219	473	100	20,979	3,429	2,592	425	168	25	5	37	15	69.3	77.6	82.1	-4.4	65.4	56.9	57.4	66.5	62.4	49.3	47.2	62.8	49.2	47.4	48.1	53.1	47	102	219	473
Ellis Avenue to Garfield Avenue	4	15	25,000	45	0.5	1.8%	0.7%	64.8	-	97	208	449	100	19,425	3,175	2,400	393	156	23	5	34	14	69.3	77.6	82.1	-4.4	65.1	56.5	57.0	66.2	62.1	49.0	46.9	62.4	48.9	47.1	47.8	52.8	45	97	208	449
Garfield Avenue to Yorktown Avenue	6	15	28,000	45	0.5	1.8%	0.7%	65.6	-	109	234	505	100	21,756	3,556	2,688	441	175	25	6	38	16	69.3	77.6	82.1	-4.1	65.8	57.3	57.8	67.0	62.9	49.7	47.6	63.2	49.7	47.8	48.6	53.5	51	109	234	505
Yorktown Avenue to Palms Avenue	6	15	24,000	45	0.5	1.8%	0.7%	64.9	-	98	212	456	100	18,648	3,048	2,304	378	150	22	5	32	14	69.3	77.6	82.1	-4.1	65.2	56.6	57.1	66.3	62.2	49.0	47.0	62.5	49.0	47.2	47.9	52.9	46	98	212	456
Palms Avenue to PCH	6	15	19,000	45	0.5	1.8%	0.7%	63.9	-	84	181	390	100	14,763	2,413	1,824	299	119	17	4	26	11	69.3	77.6	82.1	-4.1	64.2	55.6	56.1	65.3	61.2	48.0	46.0	61.5	48.0	46.2	46.9	51.8	39	84	181	390
Gothard Street																																										
McFadden Avenue to Edinger Avenue	4	10	16,000	40	0.5	1.8%	0.7%	61.6	-	59	128	276	100	12,432	2,032	1,536	252	100	15	3	22	9	67.4	76.3	81.2	-4.4	61.6	53.8	54.6	63.0	58.6	46.2	44.4	59.0	45.4	44.3	45.3	49.8	28	59	128	276
Edinger Avenue to Heil Avenue	4	10	18,000	40	0.5	1.8%	0.7%	62.1	-	64	138	298	100	13,986	2,286	1,728	283	112	16	4	24	10	67.4	76.3	81.2	-4.4	62.1	54.3	55.1	63.5	59.1	46.7	44.9	59.5	46.0	44.8	45.9	50.3	30	64	138	298
Heil Avenue to Warner Avenue	4	10	19,000	40	0.5	1.8%	0.7%	62.4	-	67	144	309	100	14,763	2,413	1,824	299	119	17	4	26	11	67.4	76.3	81.2	-4.4	62.4	54.5	55.3	63.7	59.4	46.9	45.2	59.8	46.2	45.0	46.1	50.6	31	67	144	309
Warner Avenue to Slater Avenue	4	10	21,000	40	0.5	1.8%	0.7%	62.8	-	71	153	331	100	16,317	2,667	2,016	330	131	19	4	28	12	67.4	76.3	81.2	-4.4	62.8	54.9	55.8	64.1	59.8	47.4	45.6	60.2	46.6	45.5	46.5	51.0	33	71	153	331
Slater Avenue to Talbert Avenue	4	10	19,000	40	0.5	1.8%	0.7%	62.4	-	67	144	309	100	14,763	2,413	1,824	299	119	17	4	26	11	67.4	76.3	81.2	-4.4	62.4	54.5	55.3	63.7	59.4	46.9	45.2	59.8	46.2	45.0	46.1	50.6	31	67	144	309
Talbert Avenue to Ellis Avenue	4	10	16,000	40	0.5	1.8%	0.7%	61.6	-	59	128	276	100	12,432	2,032	1,536	252	100	15	3	22	9	67.4	76.3	81.2	-4.4	61.6	53.8	54.6	63.0	58.6	46.2	44.4	59.0	45.4	44.3	45.3	49.8	28	59	128	276
Ellis Avenue to Garfield Avenue	4	10	11,000	40	0.5	1.8%	0.7%	60.0	-	-	100	215	100	8,547	1,397	1,056	173	69	10	2	15	6	67.4	76.3	81.2	-4.4	60.0	52.1	53.0	61.3	57.0	44.5	42.8	57.4	43.8	42.7	43.7	48.2	21	46	100	215
Garfield Avenue to Main Street	4	10	15,000	35	0.5	1.8%	0.7%	60.0	-	-	100	216	100	11,655	1,905	1,440	236	94	14	3	20	8	65.1	74.8	80.0	-4.4	59.7	52.6	53.8	61.3	56.7	45.0	43.6	57.2	43.5	43.1	44.5	48.5	22	47	100	216
Beach Boulevard																																										
Center Avenue to Edinger Avenue	6	15	76,000	45	0.5	1.8%	0.7%	69.9	98	212	456	983	100	59,052	9,652	7,296	1,196	474	69	15	103	43	69.3	77.6	82.1	-4.1	70.2	61.6	62.1	71.3	67.2	54.1	52.0	67.5	54.0	52.2	52.9	57.9	98	212	456	983
Edinger Avenue to Heil Avenue	6	15	68,000	45	0.5	1.8%	0.7%	69.4	91	197	424	913	100	52,836	8,636	6,528	1,070	424	62	14	92	38	69.3	77.6	82.1	-4.1	69.7	61.2	61.7	70.8	66.7	53.6	51.5	67.0	53.5	51.7	52.4	57.4	91	197	424	913
Heil Avenue to Warner Avenue	6	15	64,000	45	0.5	1.8%	0.7%	69.1	88	189	407	877	100	49,728	8,128	6,144	1,007	399	58	13	87	36	69.3	77.6	82.1	-4.1	69.4	60.9	61.4	70.6	66.4	53.3	51.2	66.8	53.2	51.4	52.2	57.1	88	189	407	877
Warner Avenue to Slater Avenue	6	15	60,000	45	0.5	1.8%	0.7%	68.9	84	181	390	840	100	46,620	7,620	5,760	944	374	55	12	81	34	69.3	77.6	82.1	-4.1	69.1	60.6	61.1	70.3	66.2	53.0	50.9	66.5	53.0	51.2	51.9	56.8	84	181	390	840
Slater Avenue to Talbert Avenue	6	15	46,000	45	0.5	1.8%	0.7%	67.7	70	152	326	703	100	35,742	5,842	4,416	724	287	42	9	62	26	69.3	77.6	82.1	-4.1	68.0	59.5	60.0	69.1	65.0	51.9	49.8	65.3	51.8	50.0	50.7	55.7	70	152	326	703
Talbert Avenue to Ellis Avenue	6	15	51,000	45	0.5	1.8%	0.7%	68.2	75	162	350	754	100	39,627	6,477	4,896	803	318	46	10	69	29	69.3	77.6	82.1	-4.1	68.4	59.9	60.4	69.6	65.5	52.3	50.2	65.8	52.3	50.5	51.2	56.1	75	162	350	754
Ellis Avenue to Garfield Avenue	6	15	49,000	45	0.5	1.8%	0.7%	68.0	73	158	341	734	100	38,073	6,223	4,704	771	306	45	10	66	28	69.3	77.6	82.1	-4.1	68.3	59.7	60.2	69.4	65.3	52.1	50.1	65.6	52.1	50.3	51.0	56.0	73	158	341	734
Garfield Avenue to Yorktown Avenue	6	15	46,000	45	0.5	1.8%	0.7%	67.7	70	152	326	703	100	35,742	5,842	4,416	724	287	42	9	62	26	69.3	77.6	82.1	-4.1	68.0	59.5	60.0	69.1	65.0	51.9	49.8	65.3	51.8	50.0	50.7	55.7	70	152	326	703
Yorktown Avenue to Adams Avenue	6	15	40,000	45	0.5	1.8%	0.7%	67.1	64	138	297	641	100	31,080	5,080	3,840	629	249	36	8	54	23	69.3	77.6	82.1	-4.1	67.4	58.9	59.4	68.5	64.4	51.3	49.2	64.7	51.2	49.4	50.1	55.1	64	138	297	641
Adams Avenue to Indianapolis Avenue	6	15	29,000	45	0.5	1.8%	0.7%	65.7	-	111	240	517	100	22,533	3,683	2,784	456	181	26	6	39	16	69.3	77.6	82.1	-4.1	66.0	57.5	58.0	67.1	63.0	49.9	47.8	63.3	49.8	48.0	48.7	53.7	52	111	240	517
Indianapolis Avenue to Atlanta Avenue	6	15	24,000	45	0.5	1.8%	0.7%	64.9	-	98	212	456	100	18,648	3,048	2,304	378	150	22	5	32	14	69.3	77.6	82.1	-4.1	65.2	56.6	57.1	66.3	62.2	49.0	47.0	62.5	49.0	47.2	47.9	52.9	46	98	212	456
Atlanta Avenue to PCH	6	15	18,000	45	0.5	1.8%	0.7%	63.6	-	81	175	376	100	13,986	2,286	1,728	283	112	16	4	24	10	69.3	77.6	82.1	-4.1	63.9	55.4	55.9	65.0	60.9	47.8	45.7	61.3	47.7	45.9	46.6	51.6	38	81	175	376
Newland Street																																										
Edinger Avenue to Heil Avenue	4	10	25,000	45	0.5	1.8%	0.7%	64.7	-	96	207	446	100	19,425	3,175	2,400	393	156	23	5	34	14	69.3	77.6	82.1	-4.4	65.0	56.5	57.0	66.2	62.0	48.9	46.8	62.4	48.9	47.0	47.8	52.7	45	96	207	446
Heil Avenue to Warner Avenue	4	10	23,000	45	0.5	1.8%	0.7%	64.4	-	91	196	422	100	17,871	2,921	2,208	362	143	21	5	31	13	69.3	77.6	82.1	-4.4	64.7	56.1	56.6	65.8	61.7	48.5	46.5	62.0	48.5	46.7	47.4	52.4	42	91	196	422
Warner Avenue to Slater Avenue	4	10	18,000	45	0.5	1.8%	0.7%	63.3	-	77	166	358	100	13,986	2,286	1,728	283	112	16	4	24	10	69.3	77.6	82.1	-4.4	63.6	55.1	55.6	64.7	60.6	47.5	45.4	60.9	47.4	45.6	46.3	51.3	36	77	166	358
Slater Avenue to Talbert Avenue	4	10	18,000	45	0.5	1.8%	0.7%	63.3	-	77	166	358	100	13,986	2,286	1,728	283	112	16	4	24	10	69.3	77.6	82.1	-4.4	63.6	55.1	55.6	64.7	60.6	47.5	45.4	60.9	47.4	45.6	46.3	51.3	36	77	166	358
Talbert Avenue to Ellis Avenue	4	10	17,000	45	0.5	1.8%	0.7%	63.1	-	74	160	345	100	13,209	2,159	1,632	268	106	15	3	23	10	69.3	77.6	82.1	-4.4	63.4	54.8	55.3	64.5	60.4	47.2	45.2	60.7	47.2	45.4	46.1	51.0	35	74	160	345
Ellis Avenue to Garfield Avenue	4	10	16,000	45	0.5	1.8%	0.7%	62.8	-	71	154	331	100	12,432	2,032	1,536	252	100	15	3	22	9	69.3	77.6	82.1	-4.4	63.1	54.6	55.1	64.2	60.1	47.0	44.9	60.4	46.9	45.1	45.8	50.8	33	71	154	331
Garfield Avenue to Yorktown Avenue	4	10	16,000	45	0.5	1.8%	0.7%	62.8	-	71	154	331	100	12,432	2,032	1,536	252	100	15	3	22	9	69.3	77.6	82.1	-4.4	63.1	54.6	55.1	64.2	60.1	47.0	44.9	60.4	46.9	45.1	45.8	50.8	33	71	154	331
Yorktown Avenue to Adams Avenue	4	10	15,000	45	0.5	1.8%	0.7%	62.5	-	68	147	317	100	11,655	1,905	1,440	236	94	14	3	20	8	69.3	77.6	82.1	-4.4	62.8	54.3	54.8	63.9	59.8	46.7	44.6	60.2	46.6	44.8	45.5	50.5	32	68	147	317
Adams Avenue to Indianapolis Avenue	4	10	14,000	45	0.5	1.8%	0.7%	62.2	-	65	141	303	100	10,878	1,778	1,344	220	87	13	3	19	8	69.3	77.6	82.1	-4.4	62.5	54.0	54.5	63.6	59.5	46.4	44.3	59.9	46.3	44.5	45.2	50.2	30	65	141	303
Indianapolis Avenue to Atlanta Avenue	4	10	13,000	45	0.5	1.8%	0.7%	61.9	-	62	134	289	100	10,101	1,651	1,248	205	81	12	3	18	7	69.3	77.6	82.1	-4.4	62.2	53.7	54.2	63.3	59.2	46.1	44.0	59.5	46.0	44.2	44.9	49.9	29	62	134	289
Atlanta Avenue to Hamilton Avenue	4	10	13,000	45	0.5	1.8%	0.7%	61.9	-	62	134	289	100	10,101	1,651	1,248	205	81	12	3	18	7	69.3	77.6	82.1	-4.4	62.2	53.7	54.2	63.3	59.2	46.1	44.0	59.5	46.0	44.2	44.9	49.9	29	62	134	289
Hamilton Avenue to PCH	4	10	7,000	40	0.5	1.8%	0.7%	58.0	-	-	74	159	100	5,439	889	672	110	44	6	1	9	4	67.4	76.3	81.2	-4.4	58.0	50.2	51.0	59.4	55.0	42.6	40.8	55.4	41.8	40.7	41.8	46.2	16	34	74	159
Magnolia Avenue																																										
Garfield Avenue to Yorktown Avenue	4	10	23,000	45	0.5	1.8%	0.7%	64.4	-	91	196	422	100	17,871	2,921	2,208	362	143	21	5	31	13	69.3	77.6	82.1	-4.4	64.7	56.1	56.6	65.8	61.7	48.5	46.5	62.0	48.5	46.7	47.4	52.4	42	91	196	422
Yorktown Avenue to Adams Avenue	4	10	23,000	45	0.5	1.8%	0.7%	64.4	-	91	196	422	100	17,871	2,921	2,208	362	143	21	5	31	13	69.3	77.6	82.1	-4.4	64.7	56.1	56.6	65.8	61.7	48.5	46.5	62.0	48.5	46.7	47.4	52.4	42	91	196	422
Adams Avenue to Indianapolis Avenue	4	10	19,000	45	0.5	1.8%	0.7%	63.6	-	80	172	372	100	14,763	2,413	1,824	299	119	17	4	26	11	69.3	77.6	82.1	-4.4	63.8	55.3	55.8	65.0	60.9	47.7	45.6	61.2	47.7	45.8	46.6	51.5	37	80	172	372
Indianapolis Avenue to Atlanta Avenue	4	10	18,000	45	0.5	1.8%	0.7%	63.3	-	77	166	358	100	13,986	2,286	1,728	283	112	16	4	24	10	69.3	77.6	82.1	-4.4	63.6	55.1	55.6	64.7	60.6	47.5	45.4	60.9	47.4	45.6	46.3	51.3	36	77	166	358
Atlanta Avenue to Hamilton Avenue	4	10	15,000	45	0.5	1.8%	0.7%	62.5	-	68	147	317	100	11,655	1,905	1,440	236	94	14	3	20	8	69.3	77.6	82.1	-4.4	62.8	54.3	54.8	63.9	59.8	46.7	44.6	60.2	46.6	44.8	45.5	50.5	32	68	147	317
Hamilton Avenue to Banning Avenue	4	10	8,000	45	0.5	1.8%	0.7%	59.8	-	-	97	209	100	6,216	1,016	768	126	50	7	2	11	5	69.3	77.6	82.1	-4.4	60.1	51.5	52.0	61.2	57.1	44.0	41.9	57.4	43.9	42.1	42.8	47.8	21	45	97	209
Banning Avenue to PCH	4	10	9,000	45	0.5	1.8%	0.7%	60.3	-	-	105	226	100	6,993	1,143	864	142	56	8	2	12	5	69.3	77.6	82.1	-4.4	60.6	52.1	52.6	61.7	57.6	44.5	42.4	57.9	44.4	42.6	43.3	48.3	23	49	105	226
Bushard Street																																										
Garfield Avenue to Yorktown Avenue	4	10	14,000	45	0.5	1.8%	0.7%	62.2	-	65	141	303	100	10,878	1,778	1,344	220	87	13	3	19	8	69.3	77.6	82.1	-4.4	62.5	54.0	54.5	63.6	59.5	46.4	44.3	59.9	46.3	44.5	45.2	50.2	30	65	141	303
Yorktown Avenue to Adams Avenue	4	10	17,000	45	0.5	1.8%	0.7%	63.1	-	74	160	345	100	13,209	2,159	1,632	268	106	15	3	23	10	69.3	77.6	82.1	-4.4	63.4	54.8	55.3	64.5	60.4	47.2	45.2	60.7	47.2	45.4	46.1	51.0	35	74	160	345
Adams Avenue to Indianapolis Avenue	4	10	17,000	45	0.5	1.8%	0.7%	63.1	-	74	160	345	100	13,209	2,159	1,632	268	106	15	3	23	10	69.3	77.6	82.1	-4.4	63.4	54.8	55.3	64.5	60.4	47.2	45.2	60.7	47.2	45.4	46.1	51.0	35	74	160	345
Indianapolis Avenue to Atlanta Avenue	4	10	16,000	45	0.5	1.8%	0.7%	62.8	-	71	154	331	100	12,432	2,032	1,536	252	100	15	3	22	9	69.3	77.6	82.1	-4.4	63.1	54.6	55.1	64.2	60.1	47.0	44.9	60.4	46.9	45.1	45.8	50.8	33	71	154	331
Atlanta Avenue to Hamilton Avenue	4	10	15,000	45	0.5	1.8%	0.7%	62.5	-	68	147	317	100	11,655	1,905	1,440	236	94	14	3	20	8	69.3	77.6	82.1	-4.4	62.8	54.3	54.8	63.9	59.8	46.7	44.6	60.2	46.6	44.8	45.5	50.5	32	68	147	317
Hamilton Avenue to Banning Avenue	4	10	10,000	45	0.5	1.8%	0.7%	60.8	-	52	112	242	100	7,770	1,270	960	157	62	9	2	14	6	69.3	77.6	82.1	-4.4	61.0	52.5	53.0	62.2	58.1	44.9	42.8	58.4	44.9	43.1	43.8	48.7	24	52	112	242
Banning Avenue to PCH	4	10	4,000	40	0.5	1.8%	0.7%	55.6	-	-	51	109	100	3,108	508	384	63	25	4	1	5	2	67.4	76.3	81.2	-4.4	55.6	47.7	48.6	56.9	52.6	40.2	38.4	53.0	39.4	38.3	39.3	43.8	11	24	51	109
Brookhurst Street																																										
Garfield Avenue to Yorktown Avenue	6	10	34,000	45	0.5	1.8%	0.7%	66.3	-	123	264	569	100	26,418	4,318	3,264	535	212	31	7	46	19	69.3	77.6	82.1	-4.2	66.6	58.1	58.6	67.7	63.6	50.5	48.4	64.0	50.4	48.6	49.3	54.3	57	123	264	569
Yorktown Avenue to Adams Avenue	6	10	33,000	45	0.5	1.8%	0.7%	66.2	-	120	259	558	100	25,641	4,191	3,168	519	206	30	7	45	19	69.3	77.6	82.1	-4.2	66.5	57.9	58.4	67.6	63.5	50.4	48.3	63.8	50.3	48.5	49.2	54.2	56	120	259	558
Adams Avenue to Indianapolis Avenue	6	10	27,000	45	0.5	1.8%	0.7%	65.3	-	105	227	488	100	20,979	3,429	2,592	425	168	25	5	37	15	69.3	77.6	82.1	-4.2	65.6	57.1	57.6	66.7	62.6	49.5	47.4	63.0	49.4	47.6	48.3	53.3	49	105	227	488

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Stantec 2014
Community Noise Descriptor: L_{dn}: x CNEL:

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

													Traffic Volumes								Ref. Energy Leve Dist				Ld				Le				Ln				DISTANCE TO CONTOUR (2)			
Existing Conditions		Median	ADT	Design Speed	Alpha	Vehicle Mix Medium	Heavy	Distance from Centerline of Roadway Ldn at	Distance to Contour				Calc																												
Roadway, Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 Ldn	65 Ldn	60 Ldn	55 Ldn	Dist	Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total	70 Ldn	65 Ldn	60 Ldn	55 Ldn
Indianapolis Avenue to Atlanta Avenue	6	10	26,000	45	0.5	1.8%	0.7%	65.2	-	103	221	476	100	20,202	3,302	2,496	409	162	24	5	35	15	69.3	77.6	82.1	-4.2	65.4	56.9	57.4	66.6	62.5	49.3	47.2	62.8	49.3	47.5	48.2	53.1	48	103	221	476
Atlanta Avenue to Hamilton Avenue	6	10	26,000	45	0.5	1.8%	0.7%	65.2	-	103	221	476	100	20,202	3,302	2,496	409	162	24	5	35	15	69.3	77.6	82.1	-4.2	65.4	56.9	57.4	66.6	62.5	49.3	47.2	62.8	49.3	47.5	48.2	53.1	48	103	221	476
Hamilton Avenue to Banning Avenue	6	10	13,000	45	0.5	1.8%	0.7%	62.2	-	65	139	300	100	10,101	1,651	1,248	205	81	12	3	18	7	69.3	77.6	82.1	-4.2	62.4	53.9	54.4	63.6	59.5	46.3	44.2	59.8	46.3	44.4	45.2	50.1	30	65	139	300
Banning Avenue to PCH	6	10	13,000	40	0.5	1.8%	0.7%	61.0	-	-	116	249	100	10,101	1,651	1,248	205	81	12	3	18	7	67.4	76.3	81.2	-4.2	61.0	53.1	53.9	62.3	58.0	45.5	43.8	58.4	44.8	43.6	44.7	49.2	25	54	116	249
Main Street																																										
Ellis Avenue to Garfield Avenue	4	0	15,000	35	0.5	1.8%	0.7%	59.9	-	46	99	214	100	11,655	1,905	1,440	236	94	14	3	20	8	65.1	74.8	80.0	-4.5	59.6	52.5	53.7	61.2	56.6	44.9	43.5	57.1	43.4	43.0	44.5	48.5	21	46	99	214
Garfield Avenue to Yorktown Avenue	4	0	13,000	35	0.5	1.8%	0.7%	59.3	-	-	90	194	100	10,101	1,651	1,248	205	81	12	3	18	7	65.1	74.8	80.0	-4.5	59.0	51.9	53.1	60.6	56.0	44.3	42.9	56.5	42.8	42.4	43.8	47.8	19	42	90	194
Yorktown Avenue to Palms Avenue	2	0	19,000	35	0.5	1.8%	0.7%	60.9	-	53	114	247	100	14,763	2,413	1,824	299	119	17	4	26	11	65.1	74.8	80.0	-4.6	60.5	53.4	54.6	62.1	57.5	45.8	44.5	58.0	44.3	44.0	45.4	49.4	25	53	114	247
Palm Avenue to PCH	2	0	5,000	35	0.5	1.8%	0.7%	55.1	-	-	47	101	100	3,885	635	480	79	31	5	1	7	3	65.1	74.8	80.0	-4.6	54.7	47.6	48.8	56.3	51.7	40.1	38.7	52.2	38.6	38.2	39.6	43.6	10	22	47	101