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Existing Air Quality, Greenhouse Gas Emissions, and Noise Conditions Report for the Southeast San Diego Community Plan Update, City of San Diego

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TABLE OF CONTENTS

TABLE OF CONTENTS (cont.)

TABLE OF CONTENTS (cont.)

FIGURES

TABLES

ATTACHMENTS

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1.0 Introduction and Background

1.1 Purpose

This study has been prepared as part of the proposed Community Plan Update (CPU) for the southeastern San Diego and Encanto communities to provide an understanding of the existing environment relative to air quality, greenhouse gas (GHG) emissions, and noise within the project area. The purpose of this existing conditions analysis is to provide an understanding of the key issues in the planning areas and to serve as setting information for subsequent environment review. Its purpose is also to identify opportunities and constraints with respect to planning for adaptation to air quality, climate change/GHG emissions, and noise issues.

1.2 Project Location

The proposed CPUs include two existing community plan areas: the Southeastern San Diego Community Plan (SESD CP) area and the Encanto Community Plan (Encanto CP) area. Both communities are located within the city of San Diego, California (City). The SESD CP area encompasses approximately 5.6 square miles located west of Interstate 805 (I-805), south of State Route 94 (SR-94), east of I-5, and north of Division Street. The Encanto CP area encompasses approximately 6 square miles, located east of I-805, south of SR-94, generally west of 69th Street and Woodman Street, and generally north of Plaza Boulevard. Figure 1 shows the regional location of the proposed CPUs. Figure 2 shows a map of the two communities that make up the study area.

The CPU areas have been identified as San Diego Association of Governments (SANDAG) planned Smart Growth area, and also fall within the Dells Imperial Redevelopment Study Area and the San Diego Regional Enterprise Zone.

1.3 Project Description

The Southeastern San Diego and Encanto CPUs would be developed through a collaborative effort between City staff, community stakeholders, and a multi-disciplinary consulting team. This planning effort will result in two community plan updates; one for southeastern San Diego (west of I-805) and one for Encanto (east of I-805). These updates will implement the 2008 City of San Diego General Plan and establish specific goals and policies related to the communities of southeastern San Diego and Encanto. The community plan elements to be included in the update are: Land Use (Housing); Mobility; Urban

Design; Economic Prosperity; Public Facilities, Services and Safety; Recreation; Conservation; Noise; Historic Preservation; and Arts and Culture.

The updates will build upon the two SANDAG Smart Growth Incentive Program (SGIP) master planning efforts that are currently underway. These two SGIP master planning efforts include the Commercial and Imperial Corridor Master Plan areas along Commercial Street and Imperial Avenue from I-5 to I-805 in the southeastern San Diego community as well as the Euclid and Market Land Use and Mobility Plan area located along Euclid Avenue and Market Street and Imperial Avenue south of SR-94 in the Encanto community. These areas are highlighted in Figures 3 and 4, respectively.

The City is the Lead Agency for the environmental processing of the proposed CPUs. Discretionary actions by the City required to implement the proposed CPU include approval and certification of the program environmental impact report (PEIR) and adoption of the proposed community plan updates.

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FIGURE 1

Regional Location

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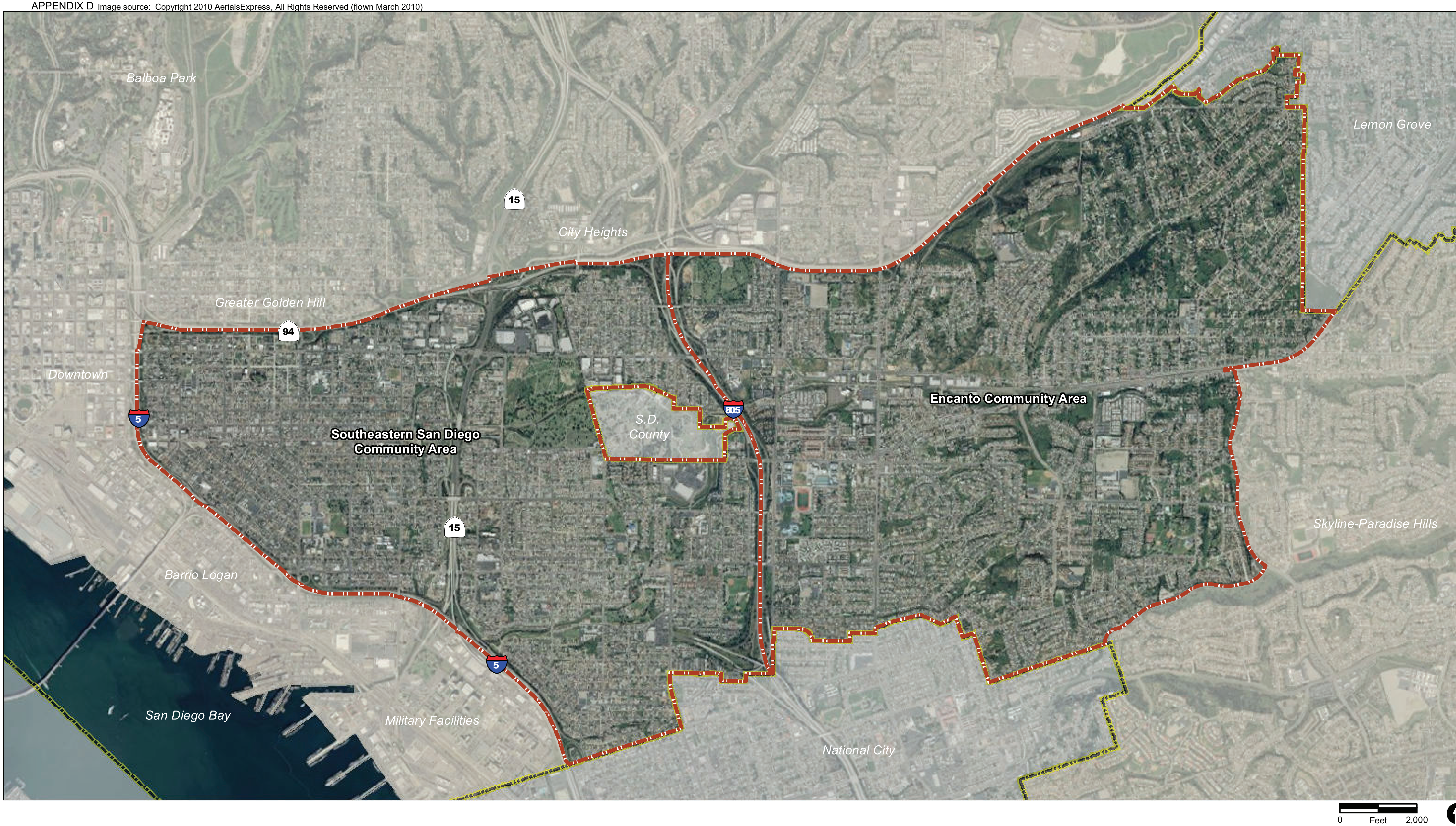

FIGURE 2

Southeastern San Diego and Encanto Community Areas

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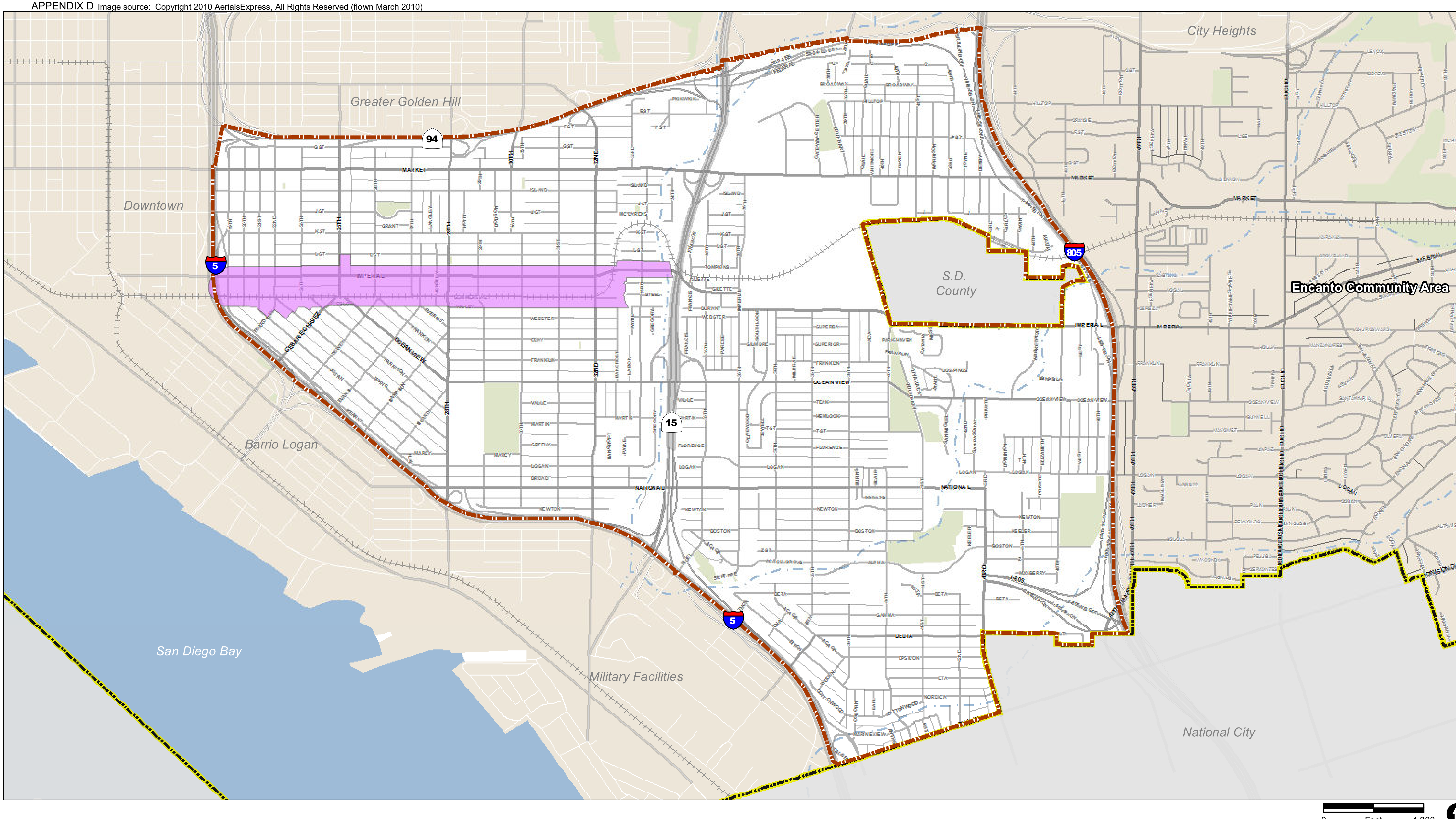

FIGURE 3

Southeastern San Diego Community Plan Area

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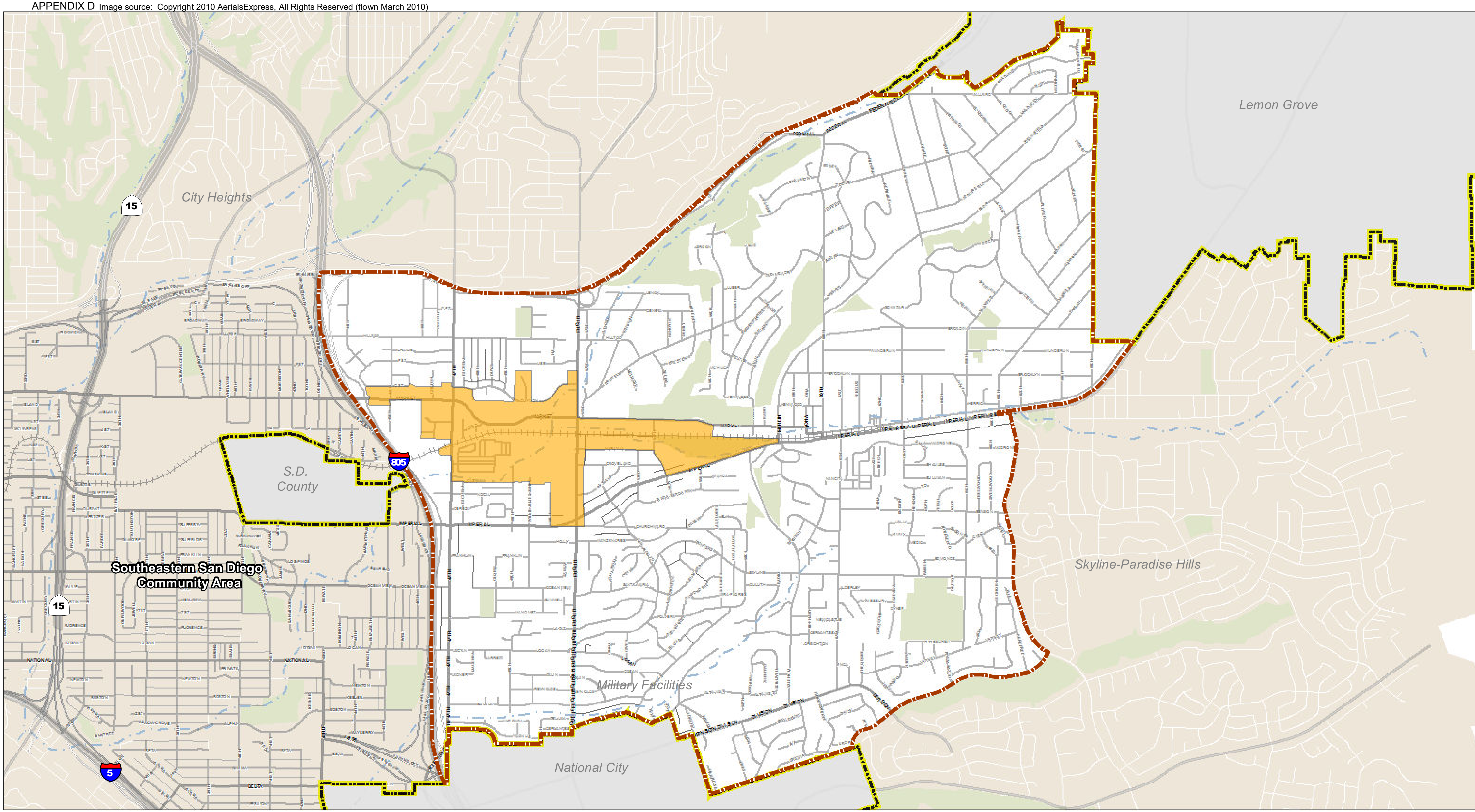

Project Boundary
Euclid and Market Land Use and Mobility Plan
Areas Outside City of San Diego
Light Rail
Rivers/Streams
Bodies of Water
Open Space

0 Feet 1,800

FIGURE 4

Encanto Community Plan Area

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2.0 Fundamentals of Air Quality, Greenhouse Gases, and Environmental Noise

This section provides a discussion of basic concepts, definitions, and terminology used in the evaluation and determination of air quality, GHG emissions, and noise policy planning and environmental impact analysis.

2.1 Air Quality

"Air pollution" is a general term that refers to one or more chemical substances that degrade the quality of the atmosphere. Individual air pollutants may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation.

Air quality at a particular location is a function of the kinds, amounts, and dispersal rates of pollutants being emitted into the air locally and throughout an air basin. The major factors affecting air pollutant dispersion are wind speed and direction, the vertical dispersion of pollutants, and the local topography.

Air quality issues arise when the rate of pollutant emissions exceeds the rate of dispersion. Air quality in California is commonly expressed as the number of days in which air pollution levels exceed standards set by the California Air Resources Board (CARB) and the US Environmental Protection Agency (U.S. EPA).

The Clean Air Act (CAA) requires the U.S. EPA to set ambient air quality standards (AAQS) for six common pollutants, known as criteria pollutants. The pollutants regulated as criteria pollutants are: ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), lead (Pb), and particulate matter (PM).

2.1.1 Ozone (O_3)

O_3 is the principal component of smog and is formed in the atmosphere through a series of reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_X) in the presence of sunlight. ROG and NO_X are called precursors of O_3. NO_X includes various combinations of nitrogen and oxygen, including nitrogen oxide (NO), NO_2, and nitrite (NO_3). O_3 is a principal cause of lung and eye irritation in the urban environment. Significant O_3 concentrations are normally produced only in the summer, when atmospheric inversions are greatest and temperatures are high. ROG and NO_X emissions are both considered critical in

O_3 formation. Control strategies for O_3 have focused on reducing emissions from vehicles, industrial processes using solvents and coatings, and consumer products.

2.1.2 Particulate Matter (PM)

Particulate matter is a complex mixture of extremely small particles and liquid droplets. PM is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. Natural sources of particulates include windblown dust and ocean spray.

The size of PM is directly linked to the potential for causing health problems. The U.S. EPA is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Health studies have shown a significant association between exposure to PM and premature death. Other important effects include aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and irregular heartbeat (U.S. EPA 2012a). Individuals particularly sensitive to fine particle exposure include older adults, people with heart and lung disease, and children. The U.S. EPA groups PM into two categories as described below.

2.1.2.1 Fine Particulate Matter ($PM_{2.5}$)

Fine particles, such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller ($PM_{2.5}$). Sources of fine particles include all types of combustion activities (motor vehicles, power plants, wood burning, etc.) and certain industrial processes. $PM_{2.5}$ is the major cause of reduced visibility (haze) in California. Control of $PM_{2.5}$ is primarily achieved through the regulation of emission sources, such as the U.S. EPA's Clean Air Interstate Rule and Clean Air Visibility Rule for stationary sources; the 2004 Clean Air Nonroad Diesel Rule; the Tier 2 Vehicle Emission Standard and Gasoline Sulfur Program; and the CARB Goods Movement Reduction Plan.

2.1.2.2 Inhalable Particulate Matter (PM_{10})

Inhalable particles (PM_{10}) include both fine and coarse dust particles; the fine particles are $PM_{2.5}$. Coarse particles, such as those found near roadways and dusty industries, are larger than 2.5 micrometers and smaller than 10 micrometers in diameter. Sources of coarse particles include crushing or grinding operations, and dust from paved or unpaved roads. The health effects of PM_{10} are similar to $PM_{2.5}$. Control of PM_{10} is primarily achieved through the control of dust at construction and industrial sites, the cleaning of paved roads, and the wetting or paving of frequently used unpaved roads.

2.1.3 Sulfur Dioxide (SO_2)

SO_2 is a combustion product, with the primary source being power plants and heavy industries that use coal or oil as fuel. SO_2 is also a product of diesel engine combustion. The health effects of SO_2 include lung disease and breathing problems for asthmatics. SO_2 in the atmosphere contributes to the formation of acid rain. In the San Diego Air Basin, there is relatively little use of coal and oil; therefore, SO_2 is of lesser concern than in many other parts of the country.

2.1.4 Nitrogen Dioxide (NO_2)

NO_2 is a product of combustion and is generated in vehicles and in stationary sources such as power plants and boilers. NO_2 can cause lung damage. As noted above, NO_2 is part of the NO_X family and is a principal contributor to O_3 and smog.

2.1.5 Lead (Pb)

Pb is a stable compound that persists and accumulates both in the environment and in animals. Previously, the Pb used in gasoline anti-knock additives represented a major source of Pb emissions to the atmosphere. The U.S. EPA began working to reduce Pb emissions soon after its inception, issuing the first reduction standards in 1973, which called for a gradual phase down of Pb to one-tenth of a gram per gallon by 1986. The average Pb content in gasoline in 1973 was 2 to 3 grams per gallon or about 200,000 tons of Pb a year. In 1975, passenger cars and light trucks were manufactured with a more elaborate emission control system, which included a catalytic converter that required lead-free fuel. In 1995 leaded fuel accounted for only 0.6 percent of total gasoline sales and less than 2,000 tons of Pb per year. Effective January 1, 1996, the CAA banned the sale of the small amount of leaded fuel that was still available in some parts of the country for use in on-road vehicles (U.S. EPA 1996). Pb emissions have significantly decreased due to the near elimination of the use of leaded gasoline.

2.1.6 Carbon Monoxide (CO)

CO is a colorless and odorless gas which, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. Relatively high concentrations are typically found near crowded intersections and along heavily used roadways carrying slow-moving traffic. Even under the severest meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300 to 600 feet) of heavily traveled roadways. Overall, CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO concentrations are typically higher in winter. As a result, California has required the use of oxygenated gasoline in the winter months to reduce CO emissions.

2.1.7 Toxic Air Contaminants

In addition to the criteria air pollutants, the U.S. EPA also regulates Toxic Air Contaminants (TACs), also known as hazardous air pollutants. Concentrations of TACs are also used as indicators of ambient air quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no threshold level below which adverse health impacts may not be expected to occur. This contrasts with the criteria air pollutants for which acceptable levels of exposure can be determined and for which the ambient standards have been established. Most TACs originate from human-made sources, including on-road mobile sources, nonroad mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries).

2.1.7.1 Mobile Source Air Toxics

The CAA identified 188 TACs. The U.S. EPA has evaluated this list of toxics and identified a group of 21 as Mobile Source Air Toxics (MSATs). The MSATs are compounds emitted from highway vehicles and off-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline. The U.S. EPA extracted a subset of this list of 21 compounds that it now labels as the six priority MSATs. These are benzene, formaldehyde, acetaldehyde, diesel particulate matter/diesel exhaust organic gases, acrolein, and 1,3-butadiene. While these MSATs are considered the priority transportation toxics, the U.S. EPA stresses that the lists are subject to change and may be adjusted in future rules (Federal Highways Administration [FHWA] 2006).

The U.S. EPA has issued a number of regulations that will dramatically decrease MSATs through cleaner fuels and cleaner engines. According to an FHWA analysis, even if the number of vehicle miles traveled increases by 64 percent, reductions of 57 percent to 87 percent in MSATs are projected from 2000 to 2020 (FHWA 2006).

2.2 Greenhouse Gases

2.2.1 Understanding Climate Change

Global climate change is a change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. The earth's climate is in a state of constant flux with periodic warming and cooling cycles. Extreme periods of cooling are termed “ice ages,” which may then be followed by extended periods of warmth. For most of the earth’s geologic history, these periods of warming and cooling have been the result of many complicated, interacting natural factors that include volcanic eruptions which spew gases and particles into the atmosphere, the amount of water, vegetation, and ice covering the earth’s surface, subtle changes in the earth’s orbit, and the amount of energy released by the sun (sun cycles). However, since the beginning of the Industrial Revolution around 1750, the average temperature of the earth has been increasing at a rate that is faster than can be explained by natural climate cycles alone.

GHGs influence the amount of heat that is trapped in the earth’s atmosphere and thus play a critical role in determining the earth’s surface temperature. Outgoing infrared radiation is absorbed by GHGs, resulting in a warming of the atmosphere. This phenomenon, known as the “greenhouse effect,” is responsible for maintaining a habitable climate on Earth. With the Industrial Revolution came an increase in the combustion of carbon-based fuels such as wood, coal, oil, and biofuels, as well as the creation of GHG-emitting substances not found in nature. Such human activities have increased atmospheric GHG levels in excess of natural ambient concentrations. This has led to a trend of unnatural warming of the earth’s atmosphere and oceans, with corresponding effects on global circulation patterns and climate.

2.2.2 Greenhouse Gases of Primary Concern

There are numerous GHGs, both naturally occurring (i.e., biogenic) and manmade (i.e., anthropogenic). Table 1 summarizes some of the most common. Each GHG has variable atmospheric lifetime and global warming potential.

TABLE 1
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES OF COMMON GHGS

Gas	Atmospheric Lifetime (Years)	100-year GWP	20-year GWP	500-year GWP
Carbon dioxide (CO_2)	50–200	1	1	1
Methane (CH_4)*	12 ± 3	21	56	6.5
Nitrous oxide (N_2O)	120	310	280	170
HFC-23	264	11,700	9,100	9,800
HFC-32	5.6	650	2,100	200
HFC-125	32.6	2,800	4,600	920
HFC-134a	14.6	1,300	3,400	420
HFC-143a	48.3	3,800	5,000	1,400
HFC-152a	1.5	140	460	42
HFC-227ea	36.5	2,900	4,300	950
HFC-236fa	209	6,300	5,100	4,700
HFC-43-10mee	17.1	1,300	3,000	400
CF_4	50,000	6,500	4,400	10,000
C_2F_6	10,000	9,200	6,200	14,000
C_3F_8	2,600	7,000	4,800	10,100
C_4F_{10}	2,600	7,000	4,800	10,100
c-C_4F_8	3,200	8,700	6,000	12,700
C_5F_{12}	4,100	7,500	5,100	11,000
C_6F_{14}	3,200	7,400	5,000	10,700
SF_6	3,200	23,900	16,300	34,900

SOURCE: U.S. Environmental Protection Agency 2010, Annex 6.
GWP = global warming potential.
*The methane GWP includes the direct effects and those indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.

The atmospheric lifetime of a GHG is the average time the gas molecule stays stable in the atmosphere. Most GHGs have long atmospheric lifetimes, staying in the atmosphere hundreds or thousands of years. The potential of a GHG to trap heat and warm the atmosphere is measured by its global warming potential (GWP). The reference gas for establishing GWP is carbon dioxide which consequently has a GWP of 1, as shown in Table 1. As an example, methane, while having a shorter atmospheric lifetime than carbon dioxide, has a 100-year GWP of 21, which means that it has a greater global warming effect than carbon dioxide on a molecule-by-molecule basis.

Although there are dozens of GHGs, state law defines GHGs as the following seven compounds: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs or CFs), sulfur hexafluoride (SF_6), and nitrogen triflouride (NF_3). Of these gases, CO_2, CH_4, and N_2O are produced by both biogenic and anthropogenic sources, and are the GHGs of primary concern. The remaining gases occur solely as the result of anthropogenic processes such as refrigeration, aluminum production, semiconductor manufacture, and insulation in electric power transmission and distribution equipment.

2.3 Noise and Vibration Fundamentals

2.3.1 Sound, Noise, and Acoustics

Sound is a vibratory disturbance created by a moving or vibrating source in a gaseous or liquid medium or the elastic stage of a solid, and is capable of being detected by the hearing organs. Sound may be thought of as the mechanical energy of a vibrating object transmitted by pressure waves through a medium to a hearing organ, such as a human ear. For traffic sound, the medium is air.

Sound is actually a process that consists of three components: the sound source, the sound path, and the sound receiver. All three components must be present for sound to exist. Without a source to produce sound, there is no sound. Likewise, without a medium to transmit sound pressure waves, there is no sound. Finally, sound must be received; a hearing organ, sensor, or object must be present to perceive, register, or be affected by, sound or noise. In most situations, there are many different sound sources, paths, and receptors rather than just one of each. Acoustics is the field of science that deals with the production, propagation, reception, effects, and control of sound. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired.

2.3.1.1 Frequency and Hertz

A continuous sound can be described by its frequency (pitch) and its amplitude (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch, like the low notes on a piano, whereas high-frequency sounds are high in pitch, like the high notes on a piano. Frequency is expressed in terms of oscillations, or cycles, per second. Cycles per second are commonly referred to as Hertz (Hz). High frequencies are sometimes more conveniently expressed in units of kilo-Hertz (kHz), or thousands of Hertz. The extreme range of frequencies that can be heard by the healthiest human ear spans from 16–20 Hz on the low end to about 20,000 Hz (or 20 kHz) on the high end.

2.3.1.2 Sound Pressure Levels and Decibels

The amplitude of a sound determines its loudness. Loudness of sound increases and decreases with its amplitude. Sound pressure levels are described in units called the decibel (dB). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the energy would result in a 3 dB decrease.

2.3.1.3 A-Weighted Decibels

Sound pressure level alone is not a reliable indicator of loudness. The frequency, or pitch, of a sound also has a substantial effect on how humans will respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

The human ear is not equally sensitive to all frequencies within the sound spectrum. Human hearing is limited not only in the range of audible frequencies but also in the way it perceives the sound in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, and it perceives a sound within that range as more intense than a sound of higher or lower frequency with the same magnitude. To approximate the frequency response of the human ear, a series of sound level adjustments is usually applied to the sound measured by a sound level meter. The adjustments (referred to as a weighting network) are frequency-dependent.

The A-scale weighting network approximates the frequency response of the average healthy ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special situations (e.g., B-scale, C-scale, D-scale), but these scales are rarely, if ever, used in conjunction with highway traffic noise. Noise levels for traffic noise reports are typically reported in terms of A-weighted decibels [dB(A)]. All sound levels discussed in this report are A-weighted. Examples of typical noise levels for common indoor and outdoor activities are depicted in Table 2. The basic terminology and concepts of noise are described below.

Additionally, human perception of noise has no simple correlation with acoustical energy. The perception of noise is not linear in terms of dB(A) or in terms of acoustical energy. Two noise sources do not “sound twice as loud” as one source. Under controlled conditions in an acoustics laboratory, the trained, healthy human ear is able to discern changes in sound levels of 1.5 dB(A) under certain conditions. Outside such controlled conditions, the average healthy ear can barely perceive changes of 3 dB(A), a change of 5 dB(A) is readily perceptible; and an increase (decrease) of 10 dB(A) sounds twice (half) as loud (California Department of Transportation [Caltrans] 2011).

TABLE 2
TYPICAL SOUND LEVELES IN THE ENVIRONMENT AND INDUSTRY

Common Outdoor Activities	Noise Level (dB[A])	Common Indoor Activities
—	110	Rock band
Jet fly over at 300 m (1000 feet)	100	—
Gas lawn mower at 1 m (3 feet)	90	—
Diesel truck at 15 m (50 feet), at 80 km/hr (50 mph)	80	Food blender at 1 m (3 feet) Garbage disposal at 1 m (3 feet)
Noisy urban area, daytime Gas lawn mower at 30 m (100 feet)	70	Vacuum cleaner at 3 m (10 feet)
Commercial area Heavy traffic at 90 m (300 feet)	60	Normal speech at 1 m (3 feet)
Quiet urban daytime	50	Large business office Dishwasher next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural nighttime	20	Bedroom at night, concert hall (background)
—	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

SOURCE: Caltrans 2009a.

2.3.1.4. Noise Descriptors

Several rating scales (or noise “metrics”) exist to analyze adverse effects of noise on a community. The two scales used in this analysis are the equivalent noise level (L_{eq}) and the community noise equivalent level (CNEL).

L_{eq}: The equivalent sound level (L_{eq}) is also referred to as the time-average sound level. It is the equivalent steady state sound level which in a stated period of time would contain the same acoustical energy as the time-varying sound level during the same time period. The period of time averaging may be specified; $L_{eq(3)}$ would be a three-hour average. When no period of time is specified, a one-hour average is assumed. The one-hour A-weighted equivalent sound level is the energy average of the A-weighted sound levels occurring during a one-hour period. It is important to understand that noise of short duration, that is, times substantially less than the averaging period, is averaged into ambient noise during the period of interest. Thus, a loud noise lasting many seconds or a few minutes may have minimal effect on the measured sound level averaged over a one-hour period.

CNEL: People are generally more sensitive and annoyed by noise occurring during the evening and nighttime hours. Thus, another noise descriptor used in community noise assessments termed the CNEL was introduced. The CNEL scale represents a time-weighted 24-hour average noise level based on the A-weighted sound level. CNEL accounts for the increased noise sensitivity during the evening (7:00 p.m.–10:00 p.m.) and nighttime hours (10:00 p.m.–7:00 a.m.) by adding five and ten decibels, respectively, to the average sound levels occurring during these hours.

2.3.1.5 Sound Propagation

Sound propagation (i.e., the passage of sound from a noise source to a receiver) is influenced by several factors. The most obvious is the decrease in noise as the distance from the source increases. Other factors include geometric spreading, ground absorption and atmospheric effects, as well as shielding by natural and/or manmade features, as described below.

***Geometric spreading**:* Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dB(A) for each doubling of distance. Highway noise is not a single, stationary point source of sound. The movement of the vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a line source) rather than a point. This line source results in cylindrical spreading rather than the spherical spreading that occurs from a point source. The change in sound level from a line source is 3 dB(A) per doubling of distance.

Ground absorption: Most often the noise path between the highway and the observer is very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as parking lots or smooth bodies of water) receive no excess ground attenuation, and the changes in noise levels with distance (drop-off rate) are simply the geometric spreading of the source. Acoustically soft sites have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees, and receive an excess ground attenuation value of 1.5 dB(A) per doubling of distance.

Atmospheric effects: Wind speed will bend the path of sound to “focus” it on the downwind side and make a “shadow” on the upwind side of the source. At short distances of up to 164 feet, the wind has minor influence on the measured sound level. For longer distances, the wind effect becomes appreciably greater. Temperature gradients create effects similar to those of wind gradients, except that they are uniform in all directions from the source. On a sunny day with no wind, temperature decreases with altitude, giving a shadow effect for sound. On a clear night, temperatures may increase with altitude, focusing sound on the ground surface.

Shielding by natural or human-made features: A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by this shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB(A) of noise reduction. A taller barrier may provide as much as 20 dB(A) of noise reduction.

2.3.2 Vibration

Groundborne vibration consists of oscillatory waves that propagate from the source through the ground to adjacent structures. The frequency of a vibrating object describes how rapidly it is oscillating. The number of cycles per second of oscillation is the vibration frequency, which is described in terms of hertz, or abbreviated as Hz. The normal frequency range of most groundborne vibration that can be felt generally ranges from a low frequency of less than 1 Hz to a high of about 200 Hz.

2.3.2.1 Perception of Vibration at the Receptor

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings caused by construction activities may be perceived as motion of building surfaces or rattling of windows, items on shelves, and pictures hanging on walls. Vibration of building components can also take the form of an audible low-frequency rumbling noise, which is referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when the structure and the construction activity are connected by foundations or utilities, such as sewer and water pipes.

Although groundborne vibration is sometimes noticeable in outdoor environments, groundborne vibration is almost never annoying to people who are outdoors (Federal Transit Administration [FTA] 2006). The primary concern from vibration is the ability to be intrusive and annoying to local residents and other vibration-sensitive land uses.

2.3.2.2 Vibration Propagation

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations reduce much more rapidly than low frequencies, so that low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances. When vibration encounters a building, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under certain circumstances, the ground-to-foundation coupling may also amplify the vibration level due to structural resonances of the floors and walls.

2.3.2.3 Vibration Descriptors

Vibration levels are usually expressed as single-number measure of vibration magnitude, in terms of velocity or acceleration, which describes the severity of the vibration without the frequency variable. The peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak of the vibration signal, usually measured in inches per second. Since it is related to the stresses that are experienced by buildings, PPV is often used in monitoring of blasting vibration. Although PPV is appropriate for evaluating the potential of building damage, it is not suitable for evaluating human response. It takes some time for the human body to respond to vibrations. In a sense, the human body responds to an average vibration amplitude (FTA 2006). Because vibration waves are oscillatory, the net average of a vibration signal is zero. Thus, the root mean square (rms) amplitude is used to describe the "smoothed" vibration amplitude (FTA 2006). The rms of a signal is the square root of the average of the squared amplitude of the signal, usually measured in inches per second. The average is typically calculated over a 1-second period. The rms amplitude is always less than the PPV and is always positive. Decibel notation is used to compress the range of numbers required to describe vibration. For purposes of this report, the rms vibration velocity level in decibels is defined as:

$$L_v = 20\times\log_{10}(v/v_{ref})$$

Where: L_v is the velocity level in decibels, v is the rms velocity amplitude, and v_{ref} is the reference velocity amplitude.

A reference must always be specified whenever a quantity is expressed in terms of decibels. The accepted reference quantity for vibration velocity is microinches per second ($1x10^{-6}$). The abbreviation VdB is used in this report for vibration decibels to reduce the potential for confusion with sound decibels.

2.3.2.4 Vibration-Sensitive Receptors

Vibration-sensitive receptors are generally considered humans engaged in activities, or involved with land uses, that may be subject to significant interference from vibration. Activities and land uses often associated with vibration-sensitive receptors are similar to those associated with noise-sensitive receptors. The primary vibration source within the CPU areas would be construction equipment used for development of future projects. Thus, vibration-sensitive receptors are generally limited to sensitive uses located adjacent to construction sites.

3.0 Regulations and Standards

3.1 Air Quality

Motor vehicles are San Diego County's leading source of air pollution and the largest contributor to greenhouse gases (County of San Diego 2008). Emission standards for mobile sources are established by state and federal agencies, such as CARB and U.S. EPA. The State of California has developed statewide programs to encourage cleaner cars and cleaner fuels. Since 1996, smog-forming emissions from motor vehicles have been reduced by 15 percent, and the cancer risk from exposure to motor vehicle air toxics has been reduced by 40 percent (County of San Diego 2008). The regulatory framework described below details the federal and State agencies that are in charge of monitoring and controlling mobile source air pollutants and the measures currently being taken to achieve and maintain healthful air quality in the San Diego Air Basin (SDAB).

In addition to mobile sources, stationary sources also contribute to air pollution in the SDAB. Stationary sources include gasoline stations, power plants, dry cleaners, and other commercial and industrial uses. Stationary sources of air pollution are regulated by the local air pollution control or management district, in this case the San Diego County Air Pollution Control District (SDAPCD).

The state of California is divided geographically into 15 air basins for managing the air resources of the state on a regional basis. Areas within each air basin are considered to share the same air masses and, therefore, are expected to have similar ambient air quality.

If an air basin is not in either federal or state attainment for a particular pollutant, the basin is classified as a moderate, serious, severe, or extreme non-attainment area for that pollutant (there is also a marginal classification for federal non-attainment areas). Once a non-attainment area has achieved the air quality standards for a particular pollutant, it may be redesignated to an attainment area for that pollutant. To be redesignated, the area must meet air quality standards and have a 10-year plan for continuing to meet and maintain air quality standards, as well as satisfy other requirements of the CAA. Areas that are redesignated to attainment are called maintenance areas.

3.1.1 Federal Regulations

AAQS represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The federal CAA enabled the U.S. EPA to develop primary and secondary national ambient air quality standards (NAAQS) and are shown in Table 3.

TABLE 3
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone	1 Hour	0.09 ppm (180 μg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 μg/m³)		0.075 ppm (147 μg/m³)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 μg/m³	Gravimetric or Beta Attenuation	150 μg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 μg/m³		–		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		35 μg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 μg/m³	Gravimetric or Beta Attenuation	15 μg/m³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-dispersive Infrared Photometry	35 ppm (40 mg/m³)	–	Non-dispersive Infrared Photometry
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO_2)[8]	1 Hour	0.18 ppm (339 μg/m³)	Gas Phase Chemi-luminescence	100 ppb (188 μg/m³)	–	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)		53 ppb (100 μg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[9]	1 Hour	0.25 ppm (655 μg/m³)	Ultraviolet Fluorescence	75 ppb (196 μg/m³)	–	Ultraviolet Fluorescence; Spectro photometry (Pararosaniline Method)
	3 Hour	–		–	0.5 ppm (1300 μg/m³)	
	24 Hour	0.04 ppm (105 μg/m³)		0.14 ppm (for certain areas)[9]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[9]	–	
Lead[10,11]	30 Day Average	1.5 μg/m³	Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 μg/m³ (for certain areas)[11]	Same as Primary Standard	
	Rolling 3-Month Average	–		0.15 μg/m³		
Visibility Reducing Particles[12]	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24 Hour	25 μg/m³	Ion Chroma-tography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 μg/m³)	Gas Chroma-tography			

See footnotes on next page.

SOURCE: State of California 2012.

TABLE 3
AMBIENT AIR QUALITY STANDARDS
(continued)

ppm = parts per million; ppb = parts per billion; μg/m^3 = micrograms per cubic meter; – = not applicable.

[1]California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2]National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

[3]Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4]Any equivalent measurement method which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

[5]National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6]National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7]Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.

[8]To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.

[9]On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[10]The ARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[11]The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 μg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[12]In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

3.1.2 State Regulations

The state of California has developed the California Ambient Air Quality Standards (CAAQS) and generally has set more stringent limits on the six criteria pollutants (see Table 3). In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride (see Table 3). The California CAA requires that districts implement regulations to reduce emissions from mobile sources through the adoption and enforcement of transportation control measures. The SDAB is a non-attainment area for the state ozone standards, the state PM_{10} standard, and the state $PM_{2.5}$ standard.

3.1.2.1 Toxic Air Contaminants

Following the identification of diesel particulate matter (DPM) as a TAC, CARB has worked on developing strategies and regulations aimed at reducing the risk from diesel particulate matter. The overall strategy for achieving these reductions is found in the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (State of California 2000). A stated goal of the plan is to reduce the cancer risk statewide arising from exposure to diesel particulate matter 85 percent by 2020. There are a number of programs and strategies to reduce diesel particulate matter that have been implemented or are in the process of being developed (State of California 2010a).

a. Diesel Exhaust Particulate

In 1999, the CARB identified particulate emissions from diesel-fueled engines as a TAC. Once a substance is identified as a TAC, the CARB is required by law to determine if there is a need for further control. This is referred to as risk management (State of California 2000). The process of further studies is ongoing at the CARB, with committees meeting to analyze both stationary and mobile diesel engine sources, as well as many other aspects of the problem. On September 28, 2000, the CARB approved the *Proposed Diesel Risk Reduction Plan and the Proposed Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines*. CARB programs in progress relating to truck emissions are included in the following paragraphs. There are other programs for risk reduction for off-road diesel engines.

In February 2001, the U.S. EPA issued new rules requiring cleaner diesel fuels in 2006 and beyond. However, since 1993 California's regulations have required cleaner diesel fuel than the federal requirements. The 1993 federal regulations reduced particulate emissions by 5 percent, while the California regulations reduced particulate emissions by 25 percent.

The control of emissions from mobile sources is a statewide responsibility of the CARB that has not been delegated to the local air districts. However, the SDAPCD is participating in the administration programs to reduce diesel emissions, principally by procurement and use of replacement vehicles powered by natural gas.

Some air districts have issued preliminary project guidance for projects with large or concentrated numbers of trucks, such as warehouses and distribution facilities. No standards exist for quantitative impact analysis for diesel particulates.

3.1.2.2 Children's Environmental Health Protection Act

The Children's Environmental Health Protection Act (SB 25, Escutia 1999) established specific requirements to determine if children are adequately protected from the harmful effects of air pollution. The act requires the CARB and the Office of Environmental Health Hazard Assessment to review all health-based California AAQS to determine if public health, particularly the health of infants and children, is adequately protected. It also requires a review of the air monitoring network to determine if it accurately measures the amount of pollutants in the air. Furthermore, the state's list of TACs must be reviewed, and Air Toxic Control Measures must be implemented, in order to reduce exposure to TACs that cause children to be especially susceptible to illness.

3.1.2.3 State Implementation Plan

The SIP is a collection of documents that set forth the state's strategies for achieving the NAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. The CARB is the Lead Agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. The CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. All of the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

The SDAPCD is responsible for preparing and implementing the portion of the SIP applicable to the SDAB. The SDAPCD adopts rules, regulations, and programs to attain State and federal air quality standards, and appropriates money (including permit fees) to achieve these objectives.

3.1.2.4 The California Environmental Quality Act

Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines requires discussion of any inconsistencies between the proposed project and applicable general plans and regional plans, including the applicable air quality attainment or maintenance plan (or SIP).

3.1.3 Local Regulations

The proposed CPUs are located within the SDAB, which is currently classified as a federal non-attainment area for ozone and a state non-attainment area for PM_{10}, $PM_{2.5}$, and ozone.

The SDAPCD currently maintains 11 air quality monitoring stations that continuously record air pollutant concentrations and meteorological information. These measurements are then used by scientists to help forecast daily air pollution levels.

3.1.3.1 City of San Diego CEQA Thresholds

The City of San Diego has the following air quality thresholds (City of San Diego 2011):

A project may have a significant air quality environmental impact if it could:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Result in cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including release emissions which exceed quantitative thresholds for ozone precursors).
4. Expose sensitive receptors to substantial pollutant concentrations including air toxics such as diesel particulates. As adopted by the South Coast Air Quality Management District (SCAQMD) in their CEQA Air Quality Handbook (Chapter 4), a sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant than is the population at large. Sensitive receptors (and the facilities that house them) in proximity to localized CO sources, toxic air contaminants or odors are of particular concern (See threshold for examples).
5. Create objectionable odors affecting a substantial number of people.
6. Release substantial quantities of air contaminants beyond the boundaries of the premises upon which the stationary source emitting the contaminants is located

The City of San Diego uses the SDAPCD thresholds as one component of substantial evidence under CEQA. They are considered on a case-by-case basis with other substantial evidence in light of the whole record to determine if the project may have a significant air quality impact.

3.1.3.2 City of San Diego General Plan

The City of San Diego's Conservation Element of the General Plan contains air quality goals. These are to meet the state and federal standards and to reduce greenhouse gas emissions affecting climate change, which is a topic addressed in the greenhouse gas section.

The Conservation Element states that locally the SDAPCD is the agency responsible for enforcing the federal and state air pollution regulations, and for developing local rules for the county. The attainment planning process is embodied in a regional air quality management plan developed jointly by the SDAPCD and SANDAG.

a. Air Quality Strategy

The San Diego Regional Air Quality Strategy (RAQS) was developed to identify feasible emission control measures and provide expeditious progress toward attaining the state ozone standards. The two pollutants addressed in the RAQS are volatile organic compounds (VOC) and oxides of nitrogen (NOx), which are precursors to the formation of ozone (State of California 2009b).

State law requires the RAQS, when implemented, to achieve a 5 percent average annual reduction in countywide emissions of ozone precursors or, if that is not achievable, it must include an expeditious schedule for adopting every feasible emission control measure under air district purview (H&SC §40914). This RAQS Revision reflects expeditious adoption of feasible control measures, since neither San Diego County nor any nonattainment air district in the state has demonstrated a sustained 5 percent average annual reduction in ozone precursor emissions. State law also requires annual and triennial progress reports regarding implementation of control measures, and triennial plan revisions, as necessary, to reflect and respond to changing circumstances (H&SC §40924 and §40925). A district may revise an emission reduction strategy if the district demonstrates to CARB, and the CARB finds, that the modified strategy is at least as effective in improving air quality as the strategy being replaced (H&SC §40925(b)) (State of California 2009b).

Additional information is available in the 2009 Regional Air Quality Strategy Revision produced by the SDAPCD.

3.2 Climate Change/Greenhouse Gas Emissions

The following provides a brief summary of the most relevant national, state, and local governmental efforts to address GHG emissions reductions and climate change adaptation. This existing regulatory framework provides an important backdrop to the City's CPU planning efforts to adequately address effects from GHG emissions and climate change and identify appropriate actions and policies. Because climate change is a global phenomenon, there are also numerous international efforts and treaties to which the United States is a signatory; however, these treaties do not play a significant practical role in the reduction of GHG emissions or climate change response at the CPU level. They are thus omitted from the following discussion.

3.2.1 Federal Regulations

There are no federal laws or regulations governing the emission of GHGs. The following discussion describes current federal activities and related legislation.

U.S. EPA Authority to Regulate GHGs: In April 2007, the U.S Supreme Court ruled that CO_2 is an air pollutant as defined under the CAA, and that the U.S. EPA has the authority to regulate GHG emissions.

National GHG Emissions Intensity Reduction Programs: Towards a national effort to reduce GHG emissions, the U.S. set a goal to reduce its 2002 GHG emissions intensity (which is the ratio of GHG emissions to economic output) by 18 percent by 2012 through various GHG reduction programs. Two important programs relevant to land use development include the Energy Star program and the Corporate Average Fuel Economy Standards (CAFE). Energy Star is a program that labels energy-efficient products with the Energy Star label. This enables consumers to choose appliances such as refrigerators, dishwashers, clothes washers, and fans that are up to 30 percent more energy-efficient than conventional, non-labeled products. The CAFE standards determine the fuel efficiency of certain vehicle classes in the U.S. By improving vehicle gas mileage, less transportation fuel is combusted to travel the same distance, thereby reducing GHG emissions associated with vehicle travel. As part of the Energy and Security Act of 2007, the CAFE standards for new light-duty vehicles were increased to 35 miles per gallon (mpg) by 2020. In 2009, these standards were increased to 35.5 mpg by 2016.

3.2.2 State Regulations

Executive Order S-3-05 - Statewide GHG Emission Targets: This executive order (EO) proclaimed that California is vulnerable to the impacts of climate change, including increased temperatures, reduced snowpack, exacerbated air quality problems, and potentially sea level rise. To combat those concerns, it established targets for reducing GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

Assembly Bill 32 - California Global Warming Solutions Act of 2006: In response to executive order S-3-05, the California Global Warming Solutions Act of 2006 (Assembly Bill 32 [AB 32]) was passed, enacting Sections 38500–38599 of the California Health and Safety Code. AB 32 required CARB to establish an emissions cap and to adopt a Climate

Change Scoping Plan indicating how emission reductions to 1990 levels by 2020 would be achieved via regulations, market mechanisms, and other actions.

Climate Change Scoping Plan: A Climate Change Scoping Plan (Scoping Plan) was adopted in 2008 that identified the GHG reductions necessary to reduce forecasted business-as-usual (BAU) emissions to 1990 levels by 2020. CARB identified a need for a 28.3 percent reduction in BAU emissions by 2020 to comply with AB 32. To achieve these reductions, regulations were proposed for the major sources of statewide GHG emissions: transportation and electricity production.

In 2010, CARB revised its 2020 BAU projections to account for the economic downturn (CARB 2010a). This projection assumed the absence of Scoping Plan reduction measures; thus CARB also estimated a 2020 baseline emissions accounting for two key reduction measures that were already being enforced. This revised estimate projected that a 16 percent reduction was to be needed by 2020 in order to reach the 1990 emission levels (CARB 2010a). These updates have been incorporated into a revised Scoping Plan that was approved in 2011 (CARB 2011).

The two Scoping Plan measures incorporated into the revised BAU forecast that have already begun to be enforced include the Pavley I Light-duty Vehicle GHG Emissions Standards and the initial Renewable Portfolios Strategy. These and other key Scoping Plan reduction measures are discussed, beginning with transportation sector reduction strategies, followed by electricity-production reduction strategies.

- ***Pavley I - Light-duty Vehicle GHG Emissions Standards (AB 1493):*** AB 1493 directed CARB to adopt vehicle standards that lowered GHG emissions from passenger vehicles and light-duty trucks to the maximum extent technologically feasible, beginning with the 2009 model year. CARB adopted regulations in 2004 but was not granted the authority to enforce them until mid-2009 due to a lawsuit by an alliance of automobile manufacturers (Marten Law Group 2008).

  These regulations (termed “Pavley I”) were adopted as a discrete early action measure pursuant to AB 32 and are included in the Scoping Plan. CARB estimates that full implementation of Pavley I will reduce GHG emissions from California passenger vehicles by about 37 percent of the total reduction target for 2020 (CARB 2010a and 2011). CARB has also recently adopted a second phase of the Pavley regulations, termed “Pavley II” or the Low Emission Vehicle III” (LEV III) Standards, that covers model years 2017 to 2025. CARB estimates that Pavley II will reduce vehicle GHGs by an additional 5 percent of the total reduction target (CARB 2010a). These reductions are to come from improved vehicle technologies such as small engines with superchargers, continuously variable transmissions, and hybrid electric drives. As such, they are reductions to be achieved by automobile manufacturers and are not influenced by local government or land use development actions. Nonetheless, the vehicle GHG emissions associated with land use patterns would benefit (i.e., be reduced) from these regulations.

- ***Low Carbon Fuel Standard:*** The Low Carbon Fuel Standard (LCFS) was established by EO S-01-07. It directed that the carbon intensity of state transportation fuels be reduced by at least 10 percent by 2020. It aims to achieve this by incentivizing the development of clean low-carbon transportation fuels, and accelerating their availability and diversity. Similar to Pavley I, CARB adopted the LCFS as a discrete early action measure pursuant to AB 32 in April 2009 and includes it as a reduction measure in its Scoping Plan. Its implementation is estimated to account for approximately 10 percent of the total statewide GHG reductions, and while not affected by local government actions, the LCFS would reduce GHG emissions attributed to vehicle use associated with existing and planned land uses.

- ***Regional Emissions Targets:*** The Scoping Plan includes a "Regional Transportation-related GHG Targets" measure that identifies policies to reduce transportation emissions through changes in future land use patterns and community design, as well as through improvements in public transportation. Specific regional reduction targets were to be established through SB 375.

  SB 375 required CARB to consult with Metropolitan Planning Organizations (MPOs) to set regional targets for reducing passenger vehicle GHG emissions and to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS) in each MPOs Regional Transportation Plan (RTP) (CARB 2010b).

  SANDAG is the San Diego region's MPO. SANDAG completed and adopted its 2050 RTP in October 2011, the first such plan in the state that included a SCS. The San Diego regional GHG reduction targets call for a 7 percent reduction in GHG emissions per capita from automobiles and light-duty trucks compared to 2005 levels by 2020, and a 13 percent reduction by 2035 (SANDAG 2010). SANDAG's 2050 RTP and SCS aim to achieve these per capita vehicle GHG emissions reduction by promoting high-density, mixed-use developments around mass transit hubs. Such land use patterns serve to reduce the vehicle miles travelled (VMT) by automobiles, and are directly related to existing and planned land use patterns.

- ***Renewables Portfolio Standard:*** The Renewables Portfolio Standard (RPS) was adopted in 2002 as an early action measure pursuant to AB 32 and is included as an energy-sector reduction measure in the Scoping Plan. The initial RPS established a goal to achieve a 20 percent renewable energy mix by 2020. This goal was increased in 2009 to a goal of 33 percent by 2020. The RPS is designed to accelerate the transformation of the electricity sector from fossil-fuel sources to renewable energy sources through investments in energy transmission infrastructure and systems to allow integration of large quantities of intermittent wind and solar generation. Increased use of renewables would decrease California's reliance on fossil fuels, thus reducing GHGs emitted during electricity production from fossil fuels. In 2008, CARB estimated that full achievement of the RPS would decrease statewide GHG emissions by 21.3 million metric tons of CO_2 equivalent ($MMTCO_2E$; CARB 2008). In 2010, CARB revised this number upwards to 24.0 $MMTCO_2E$ (CARB 2010a).

These RPS reductions are to be achieved by energy utility providers and are not subject to local government or land use development actions. Nonetheless, the GHG emissions associated with various land uses' energy consumption would benefit (i.e., be reduced) from these regulations.

- ***Million Solar Roofs Program***: The Million Solar Roofs Program is another key Scoping Plan measure to reduce energy sector emissions. It encompasses the California Public Utilities Commission's California Solar Initiative and California Energy Commission's (CEC's) New Solar Homes Partnership programs. In brief, it requires publicly owned utilities to adopt, implement, and finance solar-incentive programs to lower the cost of solar systems and help achieve the goal of installing 3,000 megawatts (MW) of new solar capacity by 2020.

Title 24 - California Building Code: The California Code of Regulations (CCR), Title 24 consists of a compilation of several distinct standards and codes related to building construction including but not limited to, plumbing, electrical, interior acoustics, energy efficiency, and handicap accessibility. Of particular relevance to GHG reductions are the energy efficiency and green building standards.

Part 6 of Title 24 includes the energy efficiency standards for all new and majorly renovated structures in the state. These current standards (2008) require energy savings of a minimum of 15 percent above the former standards, and affect energy consumption associated with the major building envelope systems such as space heating, space cooling, water heating, some aspects of the fixed lighting system, and ventilation. Prior to issuance of building permits, applicants for new construction and major renovations must demonstrate compliance with the current standards through submission and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC.

Part 11 of Title 24 is the California Green Building Standards code, referred to as CalGreen. In addition to instituting mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals, CalGreen also includes voluntary standards with stricter environmental performance standards for these same building categories. Local jurisdictions must enforce the minimum mandatory requirements and may adopt the standards with amendments for the stricter requirements.

CalGreen mandatory standards require a 20 percent reduction in indoor water use relative to specified baseline levels (in exceedance of the 2008 plumbing code); 50 percent construction/demolition waste diverted from landfills (in conformance with state law);

mandatory inspections of energy systems to ensure optimal working efficiency; and application of low-pollutant emitting exterior and interior finish materials.

Compliance with the CalGreen water reduction requirements must be demonstrated by project applicants through completion of water use reporting forms that demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CalGreen or a reduced per-plumbing-fixture water use rate.

CEQA GHG Amendments. Chapter 185, Statutes of 2007; Public Resources Code, Sections 21083.05 and 21097 acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. The California Natural Resources Agency adopted amendments to the CEQA Guidelines (CCRs, Title 14, Sections 15000-15387) to address GHG emissions, consistent with the Legislature's directive in Public Resources Code section 21083.05 (enacted as part of SB 97 [Chapter 185, Statutes 2007]).

3.2.3 Local Regulations

3.2.3.1 City of San Diego

Sustainable Building Policies: In several of its policies, the City aims to reduce GHG emissions by requiring sustainable development practices in City operations and incentivizing sustainable development practices in private development. In Council Policy 900-14 Sustainable Building Policy, Council Policy 900-16 Community Energy Partnership, and Council Policy 600-27 Sustainable Buildings Expedite Program, the City establishes a mandate for all City projects to achieve the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver standard for all new buildings and major renovations over 5,000 square feet. Incentives are also provided to private developers through the Expedite Program, which expedites project review of green building projects, including those that install solar energy systems, and discounts project review fees.

The City has also enacted codes and policies aimed to reduce water and solid waste. These include Policy 400-15 Sustainable Water Supply, and the Refuse and Recyclable Materials Storage Regulations (Municipal Code Chapter 14, Article 2, Division 8), Recycling Ordinance (O-19678 Municipal Code Chapter 6, Article 6, Division 7), and the Construction and Demolition (C & D) Debris Deposit Ordinance (0-19420 & 0-19694 Municipal Code Chapter 6, Article 6, Division 6).

General Plan: The City of San Diego 2008 General Plan includes several climate change-related policies aimed at reducing GHG emissions from future development and City operations. For example, Conservation Element policy CE-A.2 aims to "reduce the City's carbon footprint" and to "develop and adopt new or amended regulations, programs, and incentives as appropriate to implement the goals and policies set forth" related to climate change. The Land Use and Community Planning Element, the Mobility Element, the Urban Design Element, and the Public Facilities, Services and Safety Element also identify GHG reduction and climate change adaptation goals. These elements contain policy language related to sustainable land use patterns, alternative modes of transportation, energy efficiency, water conservation, waste reduction, and greater landfill efficiency. The overall intent of these policies is to support climate protection actions, while retaining flexibility in the design of implementation measures, which could be influenced by new scientific research, technological advances, environmental conditions, or state and federal legislation.

Cumulative impacts of GHG emissions were qualitatively analyzed and determined to be significant and unavoidable in the 2008 PEIR for the General Plan. The PEIR included a Mitigation Framework that indicated "for each future project requiring mitigation (measures that go beyond what is required by existing programs, plans and regulations), project-specific measures will [need to] be identified with the goal of reducing incremental project-level impacts to less than significant; or the incremental contributions of a project may remain significant and unavoidable where no feasible mitigation exists."

Climate Mitigation and Adaption Plan: The City's first Climate Protection Action Plan was approved in 2005 and included measures focused on City operations. While many of its reduction goals were achieved, community-wide GHG emissions continued to increase. A Draft Climate Mitigation and Adaptation Plan (CMAP) has been developed to address issues of growth and climate change and was circulated for public review in late August 2012. The CMAP was designed to mitigate the impacts of climate change by achieving meaningful GHG reductions within the entire City (i.e., including community-wide emissions), consistent with AB 32, EO S-3-05, and SB 97. It is intended that future project-specific environmental documents may rely on the CMAP for cumulative impacts analysis (City of San Diego 2012:2-2).

The Draft CMAP provides a baseline GHG inventory and BAU projections, leading to GHG emissions reduction targets for 2020, 2035 and 2050; and GHG reduction measures and actions for both the community and local government. For community-wide GHG reductions, measures are included in the Draft CMAP pertaining to water use, buildings and energy, increasing renewable energy generation, integrating land use and transportation, agricultural practices, and landscaping and open space. Such GHG reduction measures are provided for both 2020 and 2035. The Draft CMAP also identifies the co-benefits of such GHG reduction measures (such as improved public health and reduced energy costs over the long term) and includes strategies to adapt to climate change. Specific recommendations of the Draft CMAP are described in greater detail in Section 2.5.2 of this report.

3.3 Noise and Vibration

Federal noise standards include transportation-related noise sources related to interstate commerce (i.e., aircraft, trains, and trucks) for which there are not more stringent state standards. State noise standards are set for automobiles, light trucks, and motorcycles. Local noise standards are set for industrial, commercial, and construction activities subject to local noise ordinances and general plan policies.

3.3.1 Federal Regulations

The U.S. Department of Transportation (USDOT) is comprised of several agencies and has the primary responsibility to keep the traveling public safe and secure, increase their mobility, and have our transportation system contribute to the nation's economic growth. The USDOT agencies with regulations associated with the RTP include the FHWA, the Federal Transit Administration (FTA), the Federal Aviation Administration (FAA), and the Federal Rail Administration (FRA).

3.3.1.1 FHWA

Title 23 Part 772 of the Code of Federal Regulations (23 CFR 772) is the federal regulation governing traffic noise. According to Part 772, a federal, or federally funded, project would result in an adverse impact when the construction of a new highway or significant modification of an existing highway would result in predicted operational noise levels approaching or exceeding the FHWA Noise Abatement Criteria (NAC). A "substantial increase” is not defined by the FHWA but rather by state agencies. FHWA has developed the NAC for Categories A–G at various noise sensitive land uses. For example, the FHWA NAC for Category B land uses, which are exterior locations of residences, and Category C land uses, which include active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings, is 67 dB(A) L_{eq}. According to 23 CFR 772, noise levels that approach the NAC are defined as 1 dB(A) less than the criterion level, or 66 dB(A) for Category B and C land uses.

There are no FHWA standards for vibration.

3.3.1.2 FAA

Aircraft operated in the U.S. are subject to federal requirements for noise emissions levels. The requirements are set forth in Title 14 CFR, Part 36, which establishes maximum acceptable noise levels for specific aircraft types, taking into account the model year, aircraft weight, and number of engines. Pursuant to the federal Airport Noise and Capacity Act of

1990, the FAA established a schedule for complete transition to Part 36 "Stage 3" standards by year 2000. This transition schedule applies to jet aircraft with a maximum takeoff weight in excess of 75,000 pounds, and thus applies to passenger and cargo airlines, but not to operators of business jets or other general aviation aircraft.

The FAA Part 150 program encourages airports to prepare noise exposure maps that show land uses that are incompatible with high noise levels (FICAN 1992). The program proposes measures to reduce the incompatibility. With an FAA Part 150 program approved, airport projects such as land acquisition, acoustic treatment of residences, etc., become eligible for federal airport improvement program funds.

There are no FAA standards for vibration.

a. FRA and FTA

The Federal Railroad Noise Emission Compliance Regulation (49 CFR Part 210) prescribes minimum compliance regulations for enforcement of the railroad noise emission standards adopted by the U.S. EPA (40 CFR Part 201). The FTA has also established criteria for assessment of noise and vibration impacts for high-speed ground transportation projects (FTA 2006). The FRA has adopted the FTA methodologies and significance criteria for the evaluation of noise impacts from surface transportation modes. These have applicability to noise from motor vehicle traffic, such as buses, on local roadway that the proposed project would generate, as well as train noise, and as to how the noise might be judged in relation to the existing and future background noise. The FTA and FRA incremental noise impact criteria are summarized in Table 4.

TABLE 4
NOISE IMPACT CRITERIA FOR NOISE-SENSITIVE USES
(dB[A])

Existing Noise Level	For Land Use Categories 1 & 2			For Land Use Category 3		
	Project Impact Threshold	Combined Noise Level	Allowable Noise Increment	Project Impact Threshold	Combined Noise Level	Allowable Noise Increment
55	55	58	3	60	61	6
60	58	62	2	63	65	5
65	61	66	1	66	68	3
70	64	71	1	69	73	3
75	65	75	0	70	76	1

Notes:
Land Use Category 1: Tracts of land where quiet is an essential element in their intended purposes. This category includes lands set aside for serenity and quiet, and such land uses as outdoor amphitheaters and concert pavilions, as well as National Historic Landmarks with significant outdoor uses. Also included are recording studios and concert halls. The noise metric for Category 1 is the outdoor 1-hour L_{eq} during the noisiest hour of activity.
Land Use Category 2: Residences and buildings where people normally sleep. This category includes homes, hospitals and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance. The noise metric for Category 2 is the outdoor L_{eq} or CNEL.
Land Use Category 3: Institutional land uses with primarily daytime and evening uses. This category includes schools, libraries, theaters, churches where it is important to avoid interference with such activities as speech, meditation and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds and recreational facilities can also be considered in this category. Certain historical sites and parks are also included. The noise metric for Category 3 is the outdoor 1-hour Leq during the noisiest hour of activity.
SOURCE: FTA 2006.

Hourly L_{eq} is used as the measure of total noise impact for non-residential land uses (those not involving sleep) because: (1) L_{eq}s correlate well with speech interference in conversation and on the telephone – as well as interruption of TV, radio, and music enjoyment, (2) L_{eq}s increase with the duration of noise events, which is important to people's reaction, (3) L_{eq}s take into account the number of events over the hour, which is also important to people's reaction, and (4) L_{eq}s are used by the FHWA in assessing highway-traffic noise impact. Thus, this noise descriptor can be used for comparing and contrasting various noise sources, such as automobile and trains. L_{eq} is computed for the loudest hour during noise-sensitive activity at each particular non-residential land use.

CNEL is used as the measure of total noise impact for residential land uses (those involving sleep), because: (1) CNEL correlates well with the results of attitudinal surveys of residential noise impact; (2) CNELs increase with the duration of events, which is important to people's reaction; (3) CNELs take into account the number of events over a 24-hour period, which is also important to people's reaction; (4) CNELs take into account the increased sensitivity to noise during the evening and night, when most people are relaxing or sleeping; (5) CNELs allow composite measurements to capture all sources of community noise combined; (6) CNELs allow quantitative comparison of specific noise sources with other community noises; and (7) CNEL is the designated metric of choice for airport planning and community planning, and also has wide acceptance internationally.

Neither L_{eq} nor CNEL is an "average" in the normal sense of the word, where introduction of a quiet event would pull down the average. Furthermore, similar to the effect of rainfall in watering a field or garden, scientific evidence strongly indicates that total noise exposure is the truest measure of noise impact. Neither the moment-to-moment rain rate nor the moment-to-moment A-weighted noise level is a good measure of long-term effects.

The FRA and FTA have published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to groundborne vibration levels of 0.5 PPV without experiencing structural damage (FTA 2006). The FTA and FRA has identified the human annoyance response to vibration levels from train operations as 80 VdB.

3.3.2 State Regulations

3.3.2.1 Noise Insulation Standard

Title 24 of the California Code of Regulations further specifies that for any residence, other than single-family residences, an acoustical analysis shall be prepared where the exterior noise level exceeds 60 CNEL. The acoustical analysis shall demonstrate that interior noise levels in any inhabitable would not exceed 45 CNEL.

3.3.2.2 California Department of Transportation

Caltrans manages California's highways and freeways, provides inter-city rail services, and permits public-use airports and special-use hospital heliports. Caltrans has programs and divisions with policies or regulations associated with the RTP including Aeronautics, Highway Transportation, Rail, and Mass Transportation.

Sections 27201-27206 of the California Vehicle Code sets noise limits for vehicles licensed to operate on public roads. For heavy trucks, the state standard is consistent with the federal limit of 80 dB(A). The state passby standard for motorcycles, passenger cars, and light trucks is also maximum of 80 dB(A) at 50 feet from the centerline. For roadway projects, Caltrans uses the FHWA NAC and sets the substantial increase criterion at 12 dB(A) L_{eq} (Caltrans 2006; 2009a). Additionally, construction noise from a contractor’s operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 dB(A) at a distance of 50 feet.

The California Airport Noise Standards (CCR, Title 21, Section 5000 et seq.) apply to any airport that is determined to have a noise problem by the local County Board of Supervisors. At this time, San Diego International Airport is the only airport within the jurisdiction of SANDAG that has been determined to have a noise problem. Title 21 CCR Section 5006, states “[t]he level of noise acceptable to a reasonable person residing in the vicinity of an airport is established as a community noise equivalent level (CNEL) value of 65 dB for purposes of these regulations.” Section 5012 sets 65 CNEL as the acceptable level standard. The Caltrans Division of Aeronautics is responsible for licensing and permitting programs for airports and heliports. Assistance for the development and maintenance of aviation facilities through engineering and aviation experience is also provided, as well as systems planning and environmental and community service programs.

Caltrans Division of Rail uses FRA and FTA noise criteria and methodologies for assessing rail related noise or vibration impacts.

3.3.3 Local Regulations

3.3.3.1 City of San Diego CEQA Thresholds

The City of San Diego has the following noise significance thresholds, with additional tables for traffic noise significance thresholds and impacts from airport noise available in the City's Determination Threshold document (City of San Diego 2011):

1. Interior and exterior noise impacts from traffic generated noise.

2. HUD-funded projects and noise. If a project is receiving U.S. Department of Housing and Urban Development (HUD) funding, noise analysis and mitigation must be in accordance with the HUD Noise Guidebook. Minimum attenuation requirements are prescribed in 24 CFR 51.104(a)), which are the HUD Environmental Criteria Standards.

3. Airport noise impacts. If the project is proposed within the Airport Environs Overlay Zone (AEOZ) as defined in Chapter 13, Article 2, Division 3 of the San Diego Municipal Code, the potential exterior noise impacts from aircraft noise would not constitute a significant environmental impact.

   However, interior noise impacts will be regulated by the requirement for residential development within the AEOZ to reduce interior noise levels attributable to airport noise to 45 dB Community Noise Equivalent Level (CNEL). Interior noise levels for new construction of multi-family units are addressed by the Building Development Review Division (BDR) of the City's Development Services Department (DSD) and do not need to be mitigated through conditions in the environment report, but the BDR requirements should be noted. BDR requires additional insulation and upgraded building materials so that interior noise levels do not exceed 45 dB(A) CNEL. The requirements for an acoustical testing are defined in the City of San Diego Municipal Code, Chapter 13, Article 2, Division 3, §132.0308, Acoustical Testing of Interior Noise Levels.

   Requirements for noise studies are found in the Municipal Code at Chapter 13, Article 2, Division 3, §132.0308. This section of the Municipal Code applies to developmentǁ as defined at §113.0103 to include constructing, reconstructing, converting, establishing, altering, maintaining, relocating, demolishing, using, or enlarging any building, structure, improvement, lot, or premises.

Remodels and additions to single-family and multi-family residences subject to airport noise levels above 65 dB(A) CNEL ordinarily would not be considered a significant issue and a noise study would not be required for the purposes of CEQA analysis. However, new construction of hospitals, schools, daycare centers, or other sensitive uses subject to airport noise levels in excess of 65 dB(A) CNEL would be considered a significant issue and a noise study would be required that could recommend measures to mitigate potential noise impacts to a level below significance.

4. Noise from adjacent stationary uses (noise generators). A project which would generate noise levels at the property line which exceed the City's Noise Ordinance Standards is considered potentially significant (such as potentially a carwash or projects operating generators or noisy equipment).

   If a non-residential use, such as a commercial, industrial, or school use, is proposed to abut an existing residential use, the decibel level at the property line should be the arithmetic mean of the decibel levels allowed for each use as set forth in Section 59.5.0401 of the Municipal Code. Although the noise level above could be consistent with the City's Noise Ordinance Standards, a noise level above 65 dB(A) CNEL at the residential property line could be considered a significant environmental impact.

5. Impacts to sensitive wildlife. Noise mitigation may be required for significant noise impacts to certain avian species during their breeding season, depending upon the location of the project such as in or adjacent to an multi-habitat planning area (MHPA), whether or not the project is occupied by the coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), least tern (*Sternula antillarum browni*), cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), tricolored blackbird (*Agelaius tricolor*), or western snowy plover (*Charadrius alexandrinus nivosus*), and whether or not noise levels from the project, including construction during the breeding season of these species, would exceed 60 dB(A) or existing ambient noise level if above 60 dB(A). In addition, please note that significant noise impacts to the coastal California gnatcatcher are only analyzed if the project is within an MHPA; there are no restrictions for the coastal California gnatcatcher outside the MHPA any time of year.

6. Temporary construction noise. Temporary construction noise which exceeds 75 dB(A) L_{eq} at a sensitive receptor would be considered significant. Construction noise levels measured at or beyond the property lines of any property zoned residential shall not exceed an average sound level greater than 75 decibels (dB)

during the 12-hour period from 7:00 a.m. to 7:00 p.m. In addition, construction activity is prohibited between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays, as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, that would create disturbing, excessive, or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator, in conformance with San Diego Municipal Code Section 59.5.0404.

Additionally, where temporary construction noise would substantially interfere with normal business communication, or affect sensitive receptors, such as daycare facilities, a significant noise impact may be identified.

7. Noise/land use compatibility. Noise is one factor to be considered in determining whether a land use is compatible. Land use compatibility noise factors are presented in Table 5. The transition zone between compatible and incompatible should be evaluated by the environmental planner to determine whether the use would be acceptable based on all available information and the extent to which the noise from the proposed project would affect the surrounding uses.

3.3.3.2 City of San Diego General Plan

Future residents and visitors to the CPU areas would be exposed to noise from vehicle traffic on area roadways, from aircraft operations at the San Diego International Airport, and from other local noise sources. As discussed in Section 1.4.3, in the city of San Diego, noise standards are expressed in terms of the L_{eq} and the CNEL.

The City's Noise Element of the General Plan specifies compatibility standards for different categories of land use. The land use compatibility standards are summarized in Table 5.

The City also specifies that residential structures shall be designed to prevent the intrusion of exterior noises such that interior noise levels attributable to exterior sources do not exceed 45 CNEL in noise-sensitive interior rooms. This conforms to Title 24 of the California Code of Regulations, which requires that multi-family residences' interior noise levels, due to exterior sources, not exceed 45 dB CNEL.

The City also specifies that the interior noise level due to exterior sources is not to exceed 45 CNEL for institutional uses and is not to exceed 50 CNEL for office buildings and commercial uses.

TABLE 5
CITY OF SAN DIEGO NOISE AND LAND USE COMPATIBILITY GUIDELINES

Land Use Category	Exterior Noise Exposure [CNEL]				
	60	65	70	75	
Open Space, Parks, and Recreational					
Community and Neighborhood Parks; Passive Recreation	Compatible	Conditionally Compatible	Incompatible	Incompatible	Incompatible
Regional Parks; Outdoor Spectator Sports, Golf Courses; Athletic Fields; Water Recreational Facilities; Horse Stables; Park Maintenance Facilities	Compatible	Compatible	Conditionally Compatible	Incompatible	Incompatible
Agricultural					
Crop Raising and Farming; Aquaculture, Dairies; Horticulture Nurseries and Greenhouses; Animal Raising, Maintaining and Keeping; Commercial Stables	Compatible	Compatible	Compatible	Conditionally Compatible	Incompatible
Residential					
Single Units; Mobile Homes; Senior Housing	Compatible	Conditionally Compatible 45	Incompatible	Incompatible	Incompatible
Multiple Units; Mixed-Use Commercial/Residential; Live Work; Group Living Accommodations	Compatible	Conditionally Compatible 45	Conditionally Compatible 45	Incompatible	Incompatible
Institutional					
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through Grade 12 Educational Facilities; Libraries; Museums; Places of Worship; Child Care Facilities	Compatible	Conditionally Compatible 45	Incompatible	Incompatible	Incompatible
Vocational or Professional Educational Facilities; Higher Education Institution Facilities (Community or Junior Colleges, Colleges, or Universities)	Compatible	Compatible 45	Compatible 45	Incompatible	Incompatible
Cemeteries	Compatible	Compatible	Compatible	Conditionally Compatible	Incompatible
Sales					
Building Supplies/Equipment; Food, Beverage, and Groceries; Pets and Pet Supplies; Sundries, Pharmaceutical, and Convenience Sales; Wearing Apparel and Accessories	Compatible	Compatible	Conditionally Compatible 50	Conditionally Compatible 50	Incompatible
Commercial Services					
Building Services; Business Support; Eating and Drinking; Financial Institutions; Assembly and Entertainment; Radio and Television Studios; Golf Course Support	Compatible	Compatible	Conditionally Compatible 50	Conditionally Compatible 50	Incompatible
Visitor Accommodations	Compatible	Conditionally Compatible 45	Conditionally Compatible 45	Conditionally Compatible 45	Incompatible
Offices					
Business and Professional; Government; Medical, Dental, and Health Practitioner; Regional and Corporate Headquarters	Compatible	Compatible	Conditionally Compatible 50	Conditionally Compatible 50	Incompatible
Vehicle and Vehicular Equipment Sales and Services Use					
Commercial or Personal Vehicle Repair and Maintenance; Commercial or Personal Vehicle Sales and Rentals; Vehicle Equipment and Supplies Sales and Rentals; Vehicle Parking	Compatible	Compatible	Conditionally Compatible	Conditionally Compatible	Incompatible
Wholesale, Distribution, Storage Use Category					
Equipment and Materials Storage Yards; Moving and Storage Facilities; Warehouse; Wholesale Distribution	Compatible	Compatible	Conditionally Compatible	Conditionally Compatible	Incompatible
Industrial					
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking and Transportation Terminals; Mining and Extractive Industries	Compatible	Compatible	Conditionally Compatible	Conditionally Compatible	Incompatible
Research and Development	Compatible	Compatible	Conditionally Compatible	Conditionally Compatible 50	Incompatible

(light shading)	Compatible	Indoor Uses	Standard construction methods should attenuate exterior noise to an acceptable indoor noise level.
		Outdoor Uses	Activities associated with the land use may be carried out.
(medium shading)	Conditionally Compatible	Indoor Uses	Building structure must attenuate exterior noise to the indoor noise level indicated by the number for occupied areas.
		Outdoor Uses	Feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable.
(dark shading)	Incompatible	Indoor Uses	New construction should not be undertaken.
		Outdoor Uses	Severe noise interference makes outdoor activities unacceptable.

SOURCE: City of San Diego 2008.

3.3.3.2 City of San Diego Municipal Code

a. Stationary Noise

Impacts to sensitive receptors generated by activities at a given location are regulated by the City's Municipal Code. The Noise Ordinance specifies maximum one-hour average sound level limits at the boundary of a property. These maximum one-hour sound level limits are the maximum noise levels allowed at any point on or beyond the property boundaries due to activities occurring on the property. Where two or more zones adjoin, the sound level limit is the arithmetic mean of the respective limits for the two zones. Table 6 shows the exterior noise limits specified in the City's Noise Control Ordinance.

TABLE 6
SAN DIEGO PROPERTY LINE NOISE LEVEL LIMITS

	Noise Level [dB(A)]		
Receiving Land Use Category	7:00 A.M. to 7:00 P.M.	7:00 P.M. to 10:00 P.M.	10:00 P.M. to 7:00 A.M.
Single-family Residential	50	45	40
Multi-family Residential (up to a maximum density of 1 dwelling unit/2,000 square feet)	55	50	45
All Other Residential	60	55	50
Commercial	65	60	60
Industrial or Agricultural	75	75	75

SOURCE: City of San Diego, Municipal Code Section 59.5.0401

b. Construction Noise

Construction noise is regulated by the City's Municipal Code. Section 59.5.0404 of the Municipal Code, the Noise Abatement and Control Ordinance, states that:

> A. It shall be unlawful for any person, between the hours of 7:00 P.M. of any day and 7:00 A.M. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise.
>
> B. . . . it shall be unlawful for any person, including the City of San Diego, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 A.M. to 7:00 P.M.

3.3.3.3 San Diego County Regional Airport Authority

The San Diego Regional Airport Authority (SDRAA) is responsible for the management and development of the Airport Land Use Compatibility Plan (ALUCP) for each public airport in San Diego County. Each ALUCP identifies land use and noise level compatibility due to operations at airports as well as noise level contours based on annual operations at each airport. These noise level contours and land use compatibility noise levels are used in determining whether a proposed land use is consistent with existing as well as future noise levels. Table 7 presents the land uses and the compatible noise levels. Figure 5 depicts the future operations contours from the San Diego International Airport.

3.3.3.4 Vibration

As noted, numerous public and private organizations and governing bodies have provided guidelines to assist in the analysis of groundborne noise and vibration. However, the City has not established specific groundborne noise and vibration standards. Therefore, there are no federal, state, or local vibration regulations or guidelines directly applicable to the proposed CPUs.

The publications of the FTA and Caltrans are two of the most significant works for the analysis of environmental impacts due to groundborne noise and vibration relating to transportation and construction project. Thus, these guidelines serve as a useful tool to evaluate vibration impacts.

Caltrans guidelines recommend that a standard of 0.2 inch per second (inch/sec) PPV not be exceeded for the protection of normal residential buildings, and that 0.08 inch/sec PPV not be exceeded for the protection of old or historically significant structures (Caltrans 2004). With respect to human response within residential uses (i.e., annoyance, sleep disruption), FTA recommends a maximum acceptable vibration standard of 80 VdB (FTA 2006).

TABLE 7
AIRPORT NOISE COMPATIBILITY CRITERIA

Land Use Category[1] *Note: Multiple categories may apply to a project*	Exterior Noise Exposure (CNEL)			
	60-65	65-70	70-75	75-80
Agricultural and Animal-Related				
Horse stables; livestock breeding or farming	**A**	**A**	**A**	
Nature preserves; wildlife preserves				
Interactive nature exhibits	**A**			
Zoos	**A**	**A**		
Agriculture (except residences and livestock); greenhouses; fishing				**A**
Recreational				
Children-oriented neighborhood parks; playgrounds	**A**			
Campgrounds; recreational vehicle/motor home parks				
Community parks; regional parks; golf courses; tennis courts; athletic fields; outdoor spectator sports; fairgrounds; water recreation facilities		**A**		
Recreation buildings; gymnasiums; club houses; athletic clubs; dance studios		**50**	**50**	
Public				
Outdoor amphitheaters	**A**			
Children's schools (K-12); day care centers (>14 children)	**45**			
Libraries	**45**			
Auditoriums; concert halls; indoor arenas; places of worship	**45**	**45**		
Adult schools; colleges; universities[2]	**45**	**45**		
Prisons; reformatories		**50**		
Public safety facilities (e.g., police, fire stations)		**50**	**50**	
Cemeteries; cemetery chapels; mortuaries		**45** **A**	**45** **A**	
Residential, Lodging, and Care				
Residential (including single-family, multi-family, and mobile homes); family day care homes (≤14 children)	**45**			
Extended-stay hotels; retirement homes; assisted living; hospitals; nursing homes; intermediate care facilities	**45**			
Hotels; motels; other transient lodging[3]	**45**	**45**	**45**	
Commercial and Industrial				
Office buildings; office areas of industrial facilities; medical clinics; clinical laboratories; radio, television, recording studios		**50**	**50**	
Retail sales; eating/drinking establishments; movie theaters; personal services		**50**	**50** **B**	
Wholesale sales; warehouses; mini/other indoor storage			**50** **C**	
Industrial manufacturing; research & development; auto, marine, other sales & repair services; car washes; gas stations; trucking, transportation terminals			**50** **C**	
Extractive industry; utilities; road, rail right-of-ways; outdoor storage; public works yards; automobile parking; automobile dismantling; solid waste facilities				**50** **C**
Animal shelters/kennels	**50**	**50**	**50**	

TABLE 7
AIRPORT NOISE COMPATIBILITY CRITERIA
(continued)

Land Use Acceptability		Interpretation/Comments
	Compatible	Indoor Uses: Standard construction methods will sufficiently attenuate exterior noise to an acceptable indoor CNEL. Outdoor Uses: Activities associated with the land use may be carried out with essentially no interference from aircraft noise.
45 **50**	Conditional[4]	Indoor Uses: Building structure must be capable of attenuating exterior noise to the indoor CNEL indicated by the number, standard construction methods will normally suffice. Outdoor Uses: CNEL is acceptable for outdoor activities, although some noise interference may occur.
A **B** **C**	Conditional[4]	Indoor and Outdoor Uses: A Caution should be exercised with regard to noise-sensitive outdoor uses; these uses are likely to be disrupted by aircraft noise events; acceptability is dependent upon characteristics of the specific use.[5] B Outdoor dining or gathering places incompatible above 70 CNEL. C Sound attenuation must be provided for associated office, retail, and other noise-sensitive indoor spaces sufficient to reduce exterior noise to an interior maximum of 50 CNEL.
	Incompatible	Use is not compatible under any circumstances.

SOURCE: San Diego County Regional Airport Authority 2010.
[1]Land uses not specifically listed shall be evaluated, as determined by the ALUC, using the criteria for similar uses.
[2]Applies only to classrooms, offices, and related indoor uses. Laboratory facilities, gymnasiums, outdoor athletic facilities, and other uses to be evaluated as indicated for those land use categories.
[3]Lodging intended for stays by an individual person of no more than 25 days consecutively and no more than 90 days total per year; facilities for longer stays are in the extended-stay hotel category.
[4]An *aviation easement* is required for any project situated on a property lying within the projected 65 CNEL noise contour. See Policy 2.11.5 and Policy 3.3.3(d).
[5]Noise-sensitive land uses are ones for which the associated primary activities, whether indoor or outdoor, are susceptible to disruption by loud noise events. The most common types of noise-sensitive land uses include, but are not limited to, the following: residential, hospitals, nursing facilities, intermediate care facilities, educational facilities, libraries, museums, places of worship, child-care facilities, and certain types of passive recreational parks and open space.

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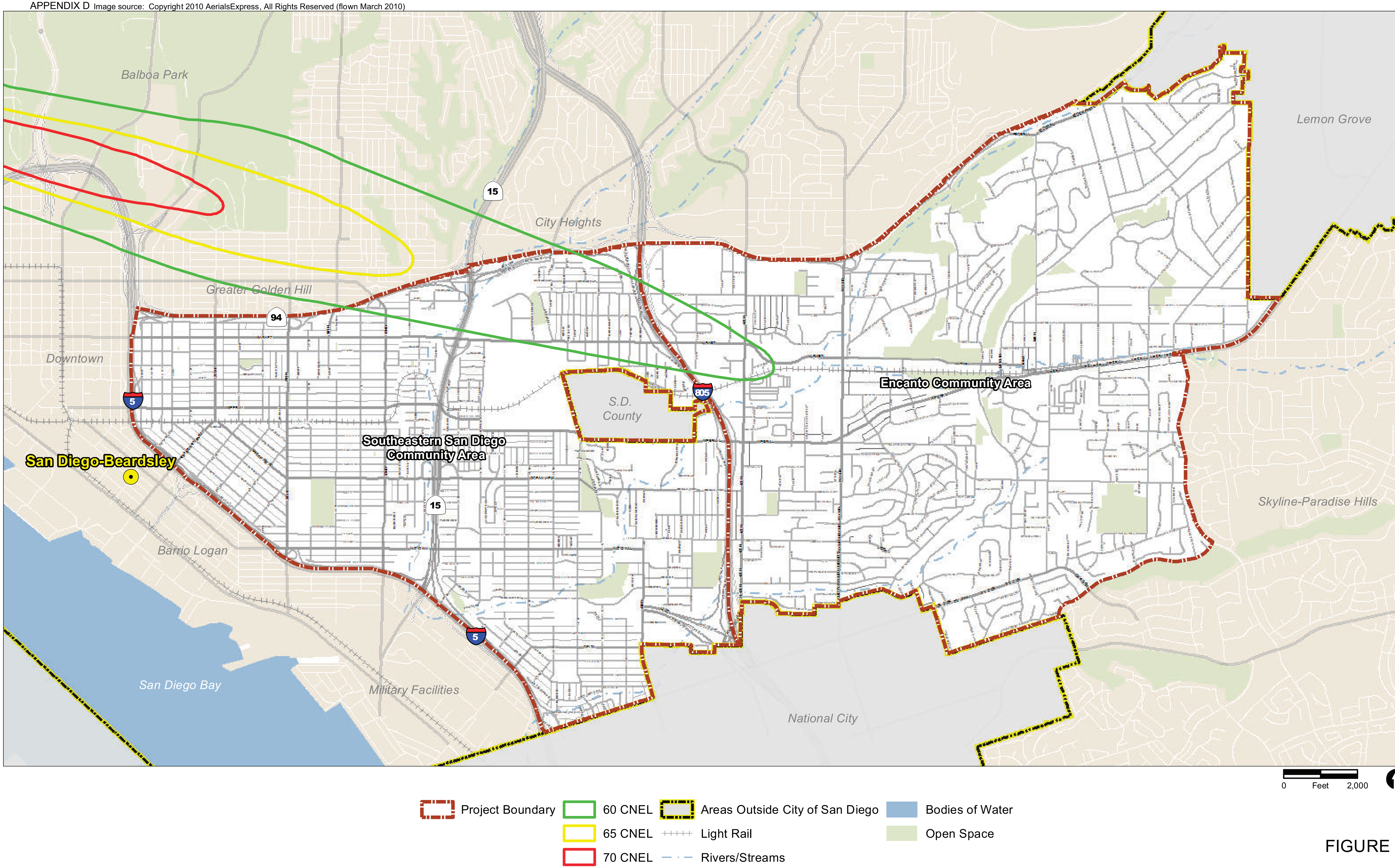

FIGURE 5

San Diego International Airport Noise Contours

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4.0 Methodology

4.1 Air Quality

Existing air quality for this report is characterized by review of published meteorological and air quality data recorded in the SDAB at the air quality monitoring stations for the years 2007 to 2011. Potential constraints and opportunities were taken from the *Air Quality and Land Use Handbook* (handbook) as part of their Community Health Program and the SDAPCD RAQS (CARB 2005; SDAPCD 2011). The handbook was developed to encourage local land use agencies to consider the risks from air pollution prior to making decisions that approve the siting of new sensitive receptors (e.g., homes or daycare centers) near sources of air pollution. Unlike industrial or stationary sources of air pollution, the siting of new sensitive receptors does not require air quality permits or other approvals, which may result in adverse air quality effects. The primary purpose of this assessment is to identify and highlight potential health impacts associated with proximity to air pollution sources, as these issues can affect the planning process and plan development. The handbook provides recommendations, shown in Table 8, regarding the siting of new sensitive land uses near freeways, truck distribution centers, dry cleaners, gasoline dispensing stations, and other air pollution sources.

These recommendations are based primarily on dispersion and health risk assessments and focused monitoring studies near these types sources. Accordingly, they may not entirely reflect conditions in either community. Siting of new sensitive land uses within these recommended distances may be possible, but site-specific studies should be conducted to identify any potential health risks.

TABLE 8
CARB LAND USE SITING RECOMMENDATIONS

Source Type	Advisory Recommendations
Freeways and High-Traffic Roads	• Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	• Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or CARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	• Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	• Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

SOURCE: CARB 2005.

4.2 Greenhouse Gas Emissions

Existing statewide GHG emissions are based on emission inventories prepared by CARB and regional GHG emissions are based on the University of San Diego, School of Law, Energy Policy Initiative Center (EPIC) emissions inventories. These inventories are fully described in Section 5.2. As pattern and intensity of land and vehicle use are directly correlated with emissions of GHGs, the potential sources of GHG emissions were identified based on a review of existing land use information. This methodology provides a useful characterization of the nature of existing GHG emission conditions in the CPU areas.

4.3 Noise

Existing noise level contours were developed with the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) algorithms. The model was used to calculate distances to noise contours for each roadway. The development of the traffic noise contours take into account traffic mix, speed, and volume. The model did not include existing shielding provided by intervening terrain or structures or take into account any acoustically soft ground. As no obstructions were included in the model, predicted noise levels are likely higher than would actually occur. Buildings and other obstructions along the roadways would shield distant receivers from the traffic noise.

The CREATE model was used to model rail noise. The CREATE model is a spreadsheet model provided by the FTA and FRA for evaluating potential noise impacts from surface transportation sources such as various trains, buses, and parking lots.

Airport/aircraft noise is evaluated based on the noise contours developed by the San Diego Regional Airport Authority and provided in the 2004 SDIA Airport Land Use Compatibility Plan (San Diego Regional Airport Authority 2004).

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5.0 Existing Conditions

5.1 Air Quality

5.1.1 Geography

The topography of the proposed CPU areas is predominantly flat in the southeastern San Diego community and gently slopes westerly toward the Pacific Ocean. The San Diego Bay portion of the ocean lies approximately one-half mile east of the westernmost CPU boundary. The Encanto community has more topographic diversity, with rolling hills surrounding lower, flatter valley areas.

5.1.2 Climate

The CPU area project is located in the SDAB, which is coincident with San Diego County. The CPU area experiences a Mediterranean climate characterized by warm, dry summers and mild, wet winters. The mean annual temperature in the proposed CPU area is 63 degrees Fahrenheit (°F). The average annual precipitation is approximately 10 inches, falling primarily from November to April. Winter low temperatures in the CPU area average about 57°F, and summer high temperatures average about 69°F (Western Regional Climate Center 2012).

The dominant meteorological feature affecting the region and CPU area is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. Fluctuations in the strength and pattern of winds from the Pacific High Pressure Zone interacting with the daily local cycle produce periodic temperature inversions. A temperature inversion is a thin layer of the atmosphere where the decrease in temperature with elevation is less than normal. Beneath the inversion layer, pollutants become “trapped” as their ability to disperse diminishes. The mixing depth is the area under the inversion layer. Throughout the year, the height of the temperature inversion in the afternoon varies between approximately 1,500 and 2,500 feet above mean sea level (AMSL). Generally, the morning inversion layer is lower than the afternoon inversion layer. The greater the change between the morning and afternoon mixing depths, the greater the ability of the atmosphere to disperse pollutants. Air quality tends to be better in winter than in summer because there is a greater change in the morning and afternoon mixing depths, allowing the dispersal of pollutants. In winter, the morning inversion layer is about 800 feet AMSL. In summer, the morning inversion layer is about 1,100 feet AMSL.

The prevailing westerly wind pattern is sometimes interrupted by regional “Santa Ana” conditions. A Santa Ana occurs when a strong high pressure develops over the Nevada-

Utah area and overcomes the prevailing westerly coastal winds, sending strong, steady, hot, dry northeasterly winds from the east over the mountains and out to sea. During Santa Ana conditions, strong Santa Ana winds tend to blow pollutants out over the ocean, producing clear days. However, at the onset or during breakdown of these conditions, or if the Santa Ana is weak, local air quality may be adversely affected. In these cases, emissions from the South Coast Air Basin to the north are blown out over the ocean, and low pressure over Baja California draws this pollutant-laden air mass southward. As the high pressure weakens, prevailing northwesterly winds reassert themselves and send this cloud of contamination ashore in the SDAB. When this event does occur, the combination of transported and locally produced contaminants produce the worst air quality measurements recorded in the SDAB.

5.1.3 Criteria Pollutants

The air quality monitoring station nearest the CPU area is the San Diego-Beardsley Street monitoring station that is located at 1110 Beardsley Street, just outside the westernmost CPU boundary (Figure 6). The San Diego–Beardsley Street monitoring station started taking measurements on July 14, 2005 and monitors the following criteria pollutants: O_3, CO, PM_{10}, $PM_{2.5,}$ and NO_2. The SO_2 monitor was decommissioned on June 30, 2011, as SO_2 is not a pollutant of concern in the SDAB. Table 9 provides a summary of measurements of O_3, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ collected at the Beardsley Street monitoring station for the years 2007 through 2011.

5.1.3.1 Ozone

Neither the former national one-hour ozone standard of 0.12 ppm, nor the state one-hour ozone standard were exceeded at the Beardsley Street monitoring station during the five-year period of 2007 to 2011 (see Table 9).

In order to address adverse health effects due to prolonged exposure, the U.S. EPA phased out the national one-hour ozone standard and replaced it with the more protective eight-hour ozone standard. The SDAB is currently a non-attainment area for the previous (1997) national eight-hour standard and is recommended as a non-attainment area for the revised (2008) national eight-hour standard of 0.075 ppm.

In the SDAB overall, during the five-year period of 2007 to 2011 the former national eight-hour ozone standard of 0.08 ppm was exceeded 7 days in 2007, 11 days in 2008, 4 days in 2009, 1 day in 2010, and 3 days in 2011. The revised national eight-hour standard of 0.075 ppm was exceeded 27 days in 2007, 35 days in 2008, 24 days in 2009, 14 days in 2010, and 10 days in 2011. The stricter state eight-hour ozone standard of 0.07 ppm was exceeded 50 days in 2007, 69 days in 2008, 47 days in 2009, 21 days in 2010, and 33 days in 2011.

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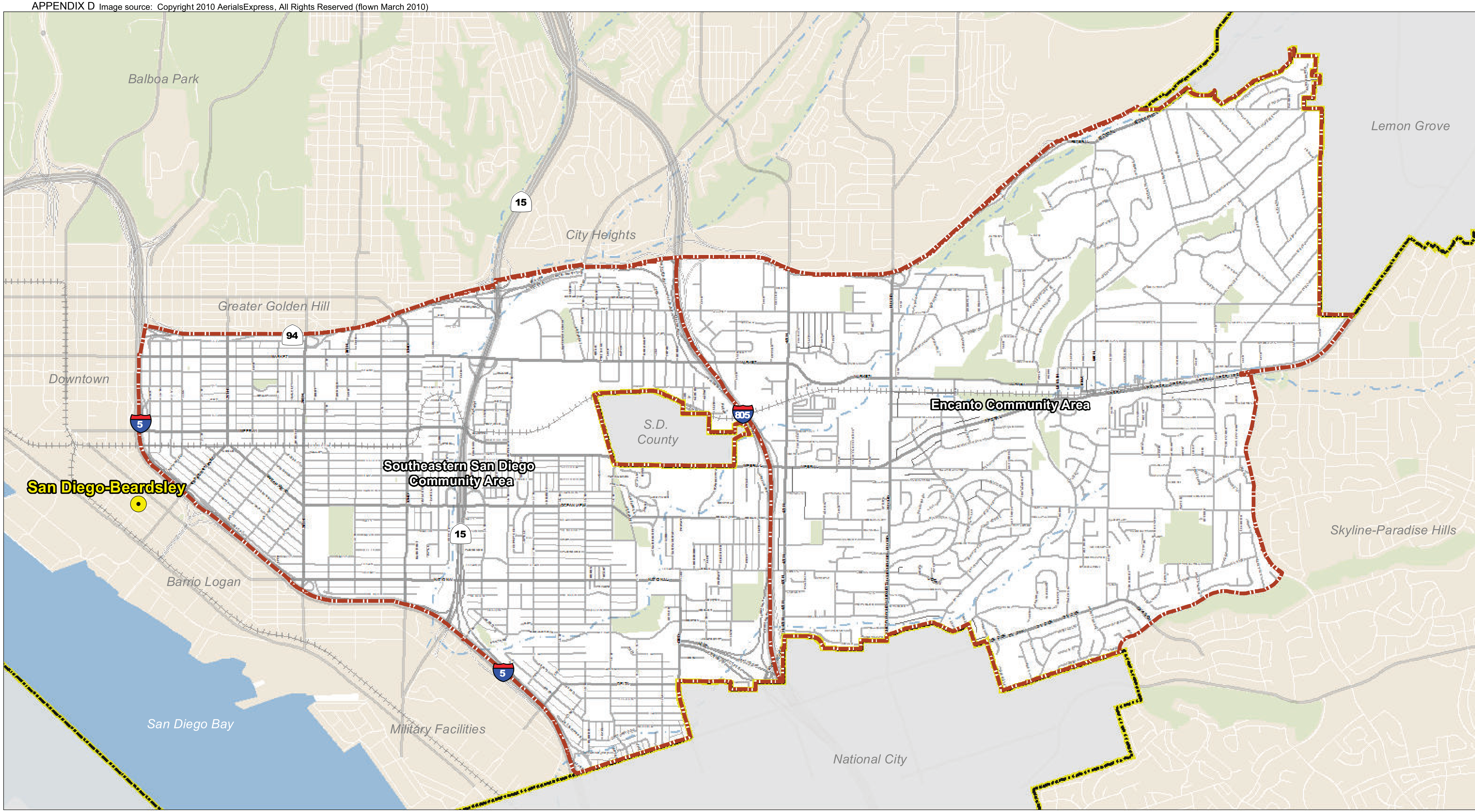

Project Boundary
Areas Outside City of San Diego
Light Rail
Rivers/Streams
Bodies of Water
Open Space

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FIGURE 6

Beardsley Street Air Quality Monitoring Station

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Neither the 1997 national eight-hour standard of 0.08 ppm nor the revised 2008 national eight-hour standard of 0.075 ppm were exceeded at the Beardsley Street monitoring station. However, the state standard of 0.07 ppm was exceeded 1 day in 2007 and 1 day in 2008.

TABLE 9
SUMMARY OF AIR QUALITY MEASUREMENTS
RECORDED AT THE SAN DIEGO–1110 BEARDSLEY STREET MONITORING STATION

Pollutant/Standard	2007	2008	2009	2010	2011
Ozone					
Days State 1-hour Standard Exceeded (0.09 ppm)	0	0	0	0	0
Days Federal 1-hour Standard Exceeded (0.12 ppm)[a]	0	0	0	0	0
Days Federal 8-hour Standard Exceeded (0.075 ppm)	0	0	0	0	0
Days State 8-hour Standard Exceeded (0.07 ppm)	1	1	0	0	0
Max. 1-hr (ppm)	0.087	0.087	0.085	0.078	0.082
Max. 8-hr (ppm)	0.073	0.073	0.063	0.066	0.061
Carbon Monoxide					
Days State 8-hour Standard Exceeded (20 ppm)	0	0	0	0	0
Days Federal 8-hour Standard Exceeded (35 ppm)	0	0	0	0	0
Max. 1-hr (ppm)	4.4	3.1	NA	NA	NA
Max. 8-hr (ppm)	3.01	2.60	2.77	2.17	2.44
Nitrogen Dioxide					
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0	0	0
Max 1-hr (ppm)	0.098	0.091	0.078	0.077	0.067
Annual Average (ppm)	0.018	0.019	0.017	0.015	0.014
Sulfur Dioxide					
Days State 24-hour Standard Exceeded (0.04 ppm)	0	0	0	0	0
Max 24-hr (ppm)	0.006	0.007	0.006	0.002	0.003
Annual Average (ppm)	0.002	0.003	0.001	0.000	NA[b]
PM_{10}					
Days State 24-hour Standard Exceeded (50 $\mu g/m^3$)*	24.4	23.6	18.2	0	0
Days Federal 24-hour Standard Exceeded (150 $\mu g/m^3$)	0	0	0	0	0
Max. Daily—Federal ($\mu g/m^3$)	110.0	58.0	59.0	40.0	48.0
Max. Daily—State ($\mu g/m^3$)	111.0	59.0	60.0	40.0	49.0
State Annual Average ($\mu g/m^3$)	31.2	29.3	29.4	23.4	24.0
Federal Annual Average ($\mu g/m^3$)	30.5	28.6	28.8	22.8	23.3
$PM_{2.5}$					
Days Federal 24-hour Standard Exceeded (35 $\mu g/m^3$)*	8.9	3.5	3.4	0	0
Max. Daily—Federal ($\mu g/m^3$)	69.6	42.0	52.1	29.7	34.7
Max. Daily—State ($\mu g/m^3$)	71.4	42.0	52.1	31.0	35.5
State Annual Average ($\mu g/m^3$)	11.7	10.7	11.8	NA	10.9
Federal Annual Average ($\mu g/m^3$)	12.7	13.7	11.7	10.4	10.8

SOURCE: State of California 2011
NA = Not available.
[a]The federal 1-hour standard for ozone (0.12 ppm) has been revoked.
[b]The SO_2 monitor was decommissioned on June 30, 2011.
*Calculated days. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. Particulate measurements are collected every six days. The number of days above the standard is not necessarily the number of violations of the standard for the year.

5.1.3.2 Carbon Monoxide

The SDAB is classified as a state attainment area and as a federal maintenance area for CO (County of San Diego 1998). Until 2003, no violations of the state standard for CO had been recorded in the SDAB since 1991, and no violations of the national standard had been recorded in the SDAB since 1989. The violations that took place in 2003 were likely the result of massive wildfires that occurred throughout San Diego County. No violations of the state or federal CO standards have occurred since 2003.

5.1.3.3 PM_{10}

The SDAB is designated as federal unclassified and state non-attainment for PM_{10}. The measured federal PM_{10} standard was exceeded once in 2007 and once in 2008 in the SDAB. The 2007 exceedance occurred on October 21, 2007, at a time when major wildfires occurred throughout San Diego County. Consequently, this exceedance was likely caused by the wildfires (State of California 2010b). The stricter state standard was exceeded a calculated number of days of 158.6 days in 2007, 163.4 days in 2008, 146.4 days in 2009, 136 days in 2010, and 138.5 days in 2011.

At the Beardsley Street monitoring station, the national 24-hour PM_{10} standard was not exceeded from 2007 through 2011. The stricter state 24-hour PM_{10} standard was exceeded 4 times in 2007, 4 times in 2008, and 3 times in 2009, 0 times in 2010, and 0 times in 2011 (State of California 2011). These exceedances result in a calculated number of days that the state standard was exceeded of approximately 24.4 days, 23.6, 18.2, 0, and 0 days for 2007, 2008, 2009, 2010, and 2011, respectively.

5.1.3.4 $PM_{2.5}$

The SDAB was classified as an attainment area for the previous federal 24-hour $PM_{2.5}$ standard of 65 $\mu g/m^3$ and has been classified as an attainment area for the revised federal 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$ (U.S. EPA 2012a). The SDAB is a non-attainment area for the State $PM_{2.5}$ standard (State of California 2009).

In the SDAB overall the national standard of 35 $\mu g/m^3$ was exceeded a calculated number of days of 11.4 days in 2007, 3.5 days in 2008, 3.4 days in 2009, 2 days in 2010, and 3 days in 2011. Additionally, although the federal annual standard was not exceeded during the period from 2007 through 2011, the state annual standard was routinely exceeded during this period in the SDAB overall.

The prior 24-hour $PM_{2.5}$ standard of 65 $\mu g/m^3$ was not exceeded and the new standard of 35 $\mu g/m^3$ was exceeded a calculated 8.9 days in 2007, 3.5 days in 2008, 3.4 days in 2009, 0 days in 2010, and 0 days in 2011 at the San Diego–1110 Beardsley Street monitoring station. As with the SDAB overall, the federal annual standard was not exceeded during the period from 2007 through 2011, whereas the state annual standard was routinely exceeded during this period at the Beardsley Street monitoring station.

5.1.3.5 Nitrogen Dioxide, Sulfur Dioxide, Lead, and Other Criteria Pollutants

The national and state standards for NO_2, SO_2, and previous standard for lead are being met in the SDAB, and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future. As discussed above, new standards for these pollutants have been adopted and new designations for the SDAB will be determined in the future. The SDAB is also in attainment of the state standards for hydrogen sulfides, sulfates, and visibility-reducing particles.

5.1.4 Toxic Air Contaminants

The SDAPCD samples for toxic air contaminants at the El Cajon and Chula Vista monitoring stations. Excluding diesel particulate emissions, data from these stations indicate that the background cancer risk in 2008 due to air toxics was 135 in one million in Chula Vista and 150 in one million in El Cajon. Based on CARB estimates, diesel particulate emissions could add an additional 420 in one million to the ambient cancer risk levels in San Diego County (County of San Diego 2010). Thus, the combined background ambient cancer risk due to air toxics in the urbanized areas of San Diego County potentially range from 555 to 570 in one million.

5.1.5 Nuisance

The SDAPCD receives and documents nuisance complaints, including complaints for dust, odors, and other nuisances. Odors and dust are air pollutants that can have negative health impacts, and while almost any source may emit objectionable odors, some land uses are more likely to produce odors due to operations characteristics. Assessing potential effects of these nuisances depends on wind speed and direction, design features of the facility such as stack height and odor controls, and the physical distance from the source and the sensitive receptors. Ideally, potential odors, dust emissions, and other nuisances should be identified and evaluated while a project is still in its initial design phase.

5.2 Greenhouse Gases

5.2.1 Inventories

CARB performs statewide GHG inventories. The inventory is divided into nine broad sectors of economic activity: agriculture, commercial, electricity generation, forestry, high GWP emitters, industrial, recycling and waste, residential, and transportation. Emissions are quantified in MMTCO_2E. Table 10 shows the estimated statewide GHG emissions for the years 1990, 2000, 2004, and 2008.

TABLE 10
CALIFORNIA GHG EMISSIONS BY SECTOR IN 1990, 2000, 2004, AND 2008

Sector	1990 Emissions in MMTCO_2E (% total)[1]	2000 Emissions in MMTCO_2E (% total)[1]	2004 Emissions in MMTCO_2E (% total)[1]	2008 Emissions in MMTCO_2E (% total)[1]
Sources				
Agriculture	23.4 (5%)	25.44 (6%)	28.82 (6%)	28.06 (6%)
Commercial	14.4 (3%)	12.80 (3%)	13.20 (3%)	14.68 (3%)
Electricity Generation	110.6 (26%)	103.92 (23%)	119.96 (25%)	116.35 (24%)
Forestry (excluding sinks)	0.2 (<1%)	0.19 (<1%)	0.19 (<1%)	0.19 (<1%)
High GWP	--	10.95 (2%)	13.57 (3%)	15.65 (3%)
Industrial	103.0 (24%)	97.27 (21%)	90.87 (19%)	92.66 (19%)
Recycling and Waste	--	6.20 (1%)	6.23 (1%)	6.71 (1%)
Residential	29.7 (7%)	30.13 (7%)	29.34 (6%)	28.45 (6%)
Transportation	150.7 (35%)	171.13 (37%)	181.71 (38%)	174.99 (37%)
Unspecified Remaining[2]	1.3 (<1%)	--	--	--
Subtotal	*433.3*	*458.03*	*483.89*	*477.74*
Sinks				
Forestry Sinks	-6.7 (--)	-4.72 (--)	-4.32 (--)	-3.98 (--)
TOTAL	**426.6**	**453.31**	**479.57**	**473.76**

SOURCE: CARB 2010c.
[1] Percentages may not total 100 due to rounding.
[2] Unspecified fuel combustion and ozone depleting substance (ODS) substitute use, which could not be attributed to an individual sector.

As shown in Table 10, without inclusion of the forestry sector, statewide GHG emissions totaled 433 MMTCO_2E in 1990, 458 MMTCO_2E in 2000, 484 MMTCO_2E in 2004, and 478 MMTCO_2E in 2008. According to data from the CARB, it appears that statewide GHG emissions peaked in 2004 and are now beginning to decrease (CARB 2010c). Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions.

The forestry sector is unique because it not only includes emissions associated with harvest, fire, and land use conversion (sources), but also includes removals of atmospheric CO_2 (sinks) by photosynthesis, which is then bound (sequestered) in plant tissues. As seen in Table 10, the forestry sector consistently removes more CO_2 from the atmosphere statewide than it emits. As a result, although decreasing over time, this sector represents a net sink, removing a net 6.5 MMTCO_2E from the atmosphere in 1990, a net 4.5 MMTCO_2E in 2000, a net 4.1 MMTCO_2E in 2004, and a net 3.8 MMTCO_2E in 2008.

A San Diego regional emissions inventory was prepared by EPIC that took into account the unique characteristics of the region. Their 2006 emissions inventory for San Diego is shown in Table 11. The sectors included in this inventory are somewhat different from those in the statewide inventory.

TABLE 11
SAN DIEGO COUNTY GHG EMISSIONS BY SECTOR IN 2006

Sector	2006 Emissions in $MMTCO_2E$ (% total)[1]	
Agriculture/Forestry/Land Use	0.7	(2%)
Waste	0.7	(2%)
Electricity	9.0	(25%)
Natural Gas Consumption	3.0	(8%)
Industrial Processes & Products	1.6	(5%)
On-Road Transportation	16.0	(45%)
Off-Road Equipment & Vehicles	1.3	(4%)
Civil Aviation	1.7	(5%)
Rail	0.3	(<1%)
Water-Borne Navigation	0.127	(<0.5%)
Other Fuels/Other	1.1	(3%)
Total	**35.5**	

SOURCE: University of San Diego 2008.
[1]Percentages may not total 100 due to rounding.

Similar to the statewide emissions, transportation-related GHG emissions contributed the most countywide, followed by emissions associated with energy use.

Within the southeastern San Diego and Encanto communities, GHGs are being emitted by demolition and construction activity, as well as by ongoing operational-related sources such as vehicle use; on-site fuel combustion for space and water heating of buildings; landscape maintenance equipment; fireplaces; off-site emissions at utility providers associated with electricity demands; and solid waste generation and disposal.

CARB identifies transportation, electric power generation, commercial and residential operations, industrial, recycling and waste, high GWPs, and agriculture as the main sources of GHG emissions in the state. The first two of these—transportation and electricity generation—account for the majority of GHG emissions generated within the state. As shown in Tables 10 and 11, transportation accounts for 37 percent of statewide GHG emissions and 45 percent of San Diego countywide emissions; and electricity generation accounts for 24 percent of statewide GHG emissions and 25 percent of countywide emissions.

The transportation sector represents the GHG emissions associated with motor vehicles, recreational vehicles, aviation, ships, and rail. All but ships are represented in the CPU area. GHG emissions from on-road and off-road vehicles are generated from the engines' combustion of fossil fuels and thus are typically estimated based on fuel type, fuel quantity consumed and vehicle miles traveled (VMT). CO_2 emissions account for the majority of GHG emissions from mobile sources and are directly related to the quantity of fuel combusted, while CH_4 and N_2O emissions depend more on the emissions-control technologies employed in the vehicle and distance traveled.

Emissions from the electric power sector, as measured statewide, represent the GHG emissions associated with use and production of electrical energy, including electricity generated out of state. Electricity use is associated with fulfilling commercial, residential and industrial energy needs, as well as with collecting, treating, storing, and distributing water, wastewater, and solid waste.

5.2.2 Consequences and Climate Changes

Based on the 2009 *California Climate Adaptation Strategy*, California can expect the following climate change effects on water supply, wildfires, food production, sea level, and ecosystems health.

Water Supply: California can expect a 12 to 35 percent decrease in precipitation levels by mid-century, along with increased evaporation from higher temperatures. San Diego's climate will be hotter and drier. Snowpack serves a critical role in California's water supply. With increased temperatures, decreases in winter snow, and increases in winter rain, storage, and conveyance of water supply will become more of a challenge. The *Focus 2050 Study for the San Diego Region* reports that the San Diego region could face severe (18 percent) water shortages by 2050.

The average early spring snowpack runoff has decreased by about 10 percent over the last century. The Sierra Nevada snowpack is projected to decrease by 25 to 40 percent by 2050 compared to its mid-twentieth century average. The loss of snowpack would also hamper hydropower generation.

Wildfires: Climate change is predicted to increase the number of wildfires and the acreage affected. Wildfire occurrence statewide could increase from 57 percent to 169 percent by 2085, depending on the emissions scenario, and events are predicted be more severe. The wildfire season is already increasing in intensity, starting sooner, and lasting longer. The *Focus 2050 Study for the San Diego Region* reports that San Diego wildfires will be more frequent and intense by 2050, and heat waves will begin earlier in the year, last longer into the fall, and continue for more days in succession. Santa Ana winds are also projected to occur for a longer period of time during the San Diego fire season, prolonging extreme fire conditions. By 2050, the number of days each year with ideal conditions for large-scale fires will increase by as much as 20 percent (San Diego Foundation 2012:10).

Agriculture/Food Production: Increased GHG emissions are expected to cause widespread changes to agriculture, reducing the quantity and quality of agricultural products statewide. Reductions in available water supply to support agriculture will impact production. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, farmers will face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development will change, as will the intensity and frequency of pest and disease outbreaks.

Rising temperatures promote ozone formation, which will, in turn, make plants more susceptible to disease and pests and interfere with plant growth. Plant growth tends to be slow at low temperatures and increase up to a certain point with rising temperatures. Faster growth, however, can result in less-than-optimal development for many crops, thus decreasing the quantity and quality of yield for a number of agricultural products.

Sea Level Rise: Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the state's coastal regions. Recent estimates suggest sea level rise of up to 55 inches by the end of this century. The *Focus 2050 Study for the San Diego Region* reports that sea level will be 12–18 inches higher by 2050 along the San Diego coast. Sea level rise of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten levees and inland water systems, and disrupt natural habitats. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers.

The *Study* reports that coastal properties will experience regular flooding, more frequent high waves and rough surf damage, and collapsing fragile sea cliffs. Saltwater intrusion caused by rising sea levels is a major threat to water quality within the southern edge of the Sacramento/San Joaquin River Delta. The Delta accounts for a portion of San Diego County's water supply and is important to the state as a whole. The *Study* additionally reports that San Diego coastal wetlands will lose their capacity to filter polluted runoff and keep local beaches clean.

Ecosystems and Habitats: Climate change is anticipated to adversely affect biological resources in a number of ways. Various temperature-sensitive plant and animal species would have to adapt to warmer temperatures or shift their geographic range, which may not be feasible in certain instances. Species migration and invasions will alter species interactions. Longer fire seasons will affect vegetation and help to spread invasive species. Sea level rise may wipe out critical habitat for coastal species. Several potential hydrological changes associated with global climate change could influence the ecology of aquatic life and have negative effects on native and cold-water fish. The *Focus 2050 Study for the San Diego Region* reports that many San Diego area native plants and animal species will be lost forever.

5.3 Noise

As part of this assessment, ambient noise levels were measured in the CPU areas to provide a characterization of the variability of noise throughout the study area and to assist in determining constraints and opportunities for future development to avoid noise conflicts with existing land uses. Ten 15-minute, daytime noise level measurements were conducted throughout the study area. Noise measurements were taken with a Larson Davis Model 820 sound level meter (SLM). The measurements were taken with the SLM placed 5 feet above the grade of each measurement location. Each measurement location is shown in Figure 7. A summary of the measurements is provided in Table 12.

TABLE 12
NOISE MEASUREMENTS

ID[1]	Location	Date	Time	L_{eq}	L_{max}
Southeastern San Diego					
SE-1	Market Street	11/16/2012	9:15 AM	62.8	76.2
SE-2	25th Street	11/15/2012	5:28 PM	63.0	79.6
SE-3	28th Street	11/15/2012	5:05 PM	63.6	63.6
SE-4	Market Street	11/15/2012	4:23 PM	63.5	73.4
SE-5	Alpha Street	11/15/2012	3:46 PM	56.8	68.1
Encanto Community					
En-1	Division Street	11/15/2012	2:00 PM	61.0	76.0
En-2	Euclid Avenue	11/15/2012	12:30 PM	65.2	80.2
En-3	Euclid Avenue	11/15/2012	2:37 PM	62.7	75.2
En-4	Imperial Avenue	11/15/2012	1:31 PM	62.6	75.5
En-5	Market Street	11/15/2012	1:03 PM	66.3	85.9

[1]Measurement locations are shown in Figure 7 and are represented by the ID provided in the table above.

Based on the measurement data shown in Table 12, daytime noise levels in the project area are typical of an urban environment. Each measurement location and noise source observed during the measurements are discussed under separate headings for each community plan area.

5.3.1 Southeastern San Diego

Measurement SE-1 was taken on November 16, 2012 and measurements SE-2-5 on November 15, 2012.

Measurement SE-1 was taken adjacent to Market Street between 26th Street and 27th Street. The main source of noise at the measurement location was traffic on Market Street. The measured speed on this portion of Market was between 30 and 50 miles per hour (mph). The average measured noise level at 50 feet from the edge of the roadway of Market Street was 62.8 dB(A) L_{eq}.

Measurement SE-2 was taken adjacent to 25th Street north of the intersection of Imperial Avenue and 25th Street. The main source of noise at the measurement location was traffic on 25th Street. The measured speed on this portion of 25th Street was between 15 and 30 mph. The average measured noise level at 50 feet from the edge of the roadway of 25th Street was 63.0 dB(A) L_{eq}.

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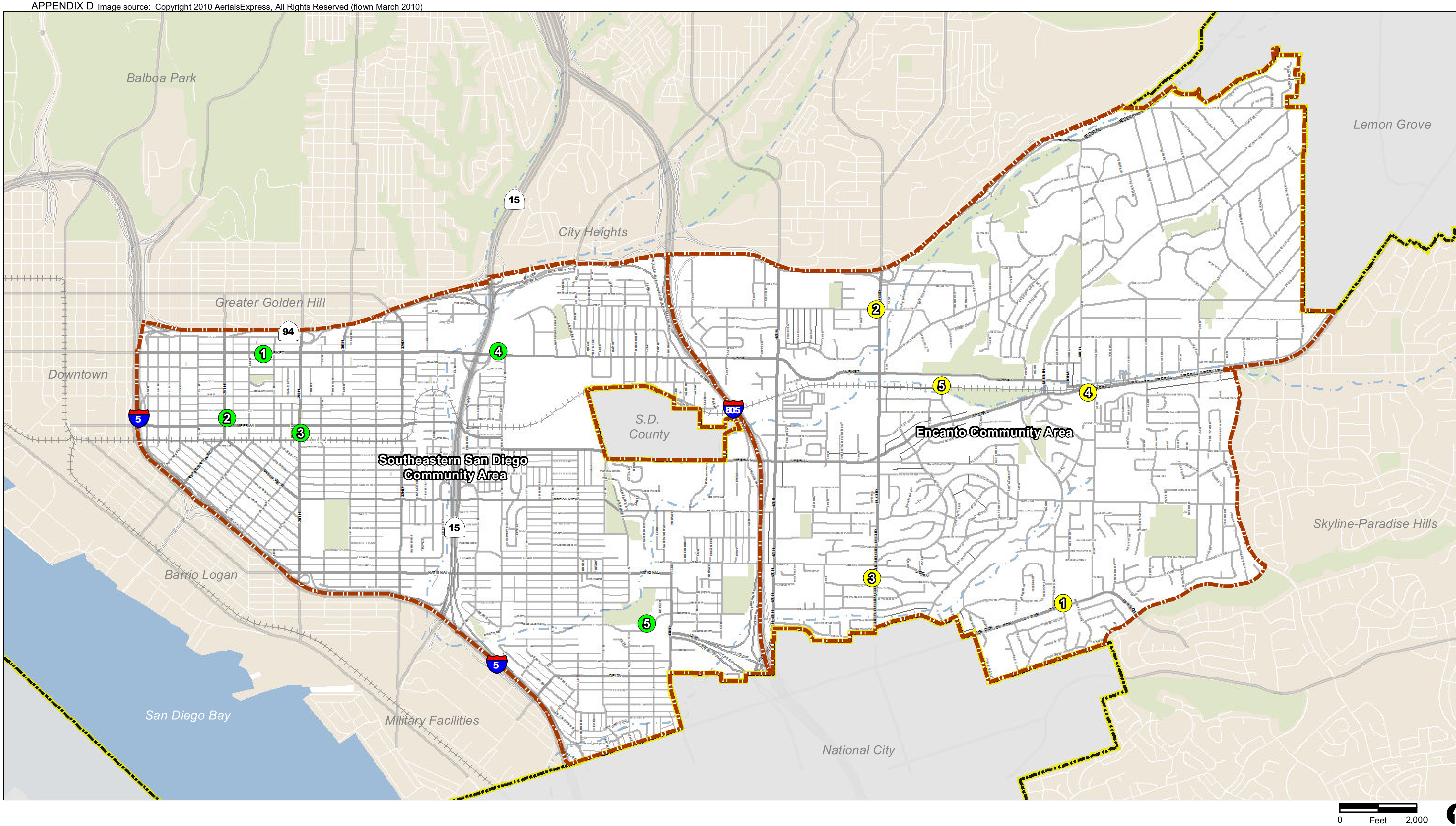

Project Boundary
Encanto Noise Measurement Locations
Southeastern San Diego Noise Measurement Locations
Areas Outside City of San Diego
Light Rail
Rivers/Streams
Bodies of Water
Open Space

FIGURE 7

Noise Measurement Locations

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Measurement SE-3 was taken adjacent to 28th Street between Imperial Avenue and Commercial Street. The main source of noise at the measurement location was traffic on 28th Street and operation activities from Riley Recycling. The measured speed on this portion of 28th Street was between 15 and 25 mph. The average measured noise level at 18 feet from the edge of the roadway of 28th Street was 63.6 dB(A) L_{eq}.

Measurement SE-4 was taken adjacent Market Street between 36th Street and I-15. The main source of noise at the measurement location was traffic on Market Street and I-15. The measured speed on this portion of Market Street was between 0 and 40 mph. The average measured noise level at 50 feet from the edge of the roadway of Market Street was 63.5 dB(A) L_{eq}.

Measurement SE-5 was taken adjacent to Alpha Street between S. 41st Street and S 43rd Street. The main source of noise at the measurement location was traffic on Alpha Street. The measured speed on this portion of Alpha Street was between 29 and 33 mph. The average measured noise level at 62 feet from the edge of the roadway of Alpha Street was 56.8 dB(A) L_{eq}.

5.3.2 Encanto

Measurements EN1–EN5 were taken on November 15, 2012.

Measurement EN-1 was taken adjacent to Division Street east of Ava Street. The main source of noise at the measurement location was traffic on Division Street. The measured speed on this portion of Division Street was between 30 and 40 mph. The average measured noise level at 50 feet from the edge of the roadway of Division Street was 61.0 dB(A) L_{eq}.

Measurement EN-2 was taken adjacent to Euclid Avenue at the Hilltop Drive and Euclid Avenue intersection. The main source of noise at the measurement location was traffic on Euclid Avenue. The measured speed on this portion of Euclid Avenue was between 25 and 45 mph. The average measured noise level at 50 feet from the edge of the roadway of Euclid Avenue was 65.2 dB(A) L_{eq}.

Measurement EN-3 was taken adjacent to Euclid Avenue south of the intersection of Logan Avenue and Euclid Avenue intersection. The main source of noise at the measurement location was traffic on Euclid Avenue. The measured speed on this portion of Euclid Avenue was between 30 and 40 mph. The average measured noise level at 50 feet from the edge of the roadway of Euclid Avenue was 62.7 dB(A) L_{eq}.

Measurement EN-4 was taken adjacent to Imperial Avenue between 60th Street and 61st Street. The main source of noise at the measurement location was traffic on Imperial Avenue. The measured speed on this portion of Imperial Avenue was between 25 and 55 mph. The average measured noise level at 50 feet from the edge of the roadway of Imperial Avenue was 62.6 dB(A) L_{eq}.

Measurement EN-5 was taken on 54th Street adjacent to Market Street. 54th Street is a cul-de-sac off Market Street and is adjacent to the trolley tracks. The main source of noise at the measurement location was traffic on Market Street and noise from the trolley and the trolley bells. The measured speed on this portion of Market Street was between 35 and 45 mph. The average measured noise level at 50 feet from the edge of the roadway of Market Street was 66.3 dB(A) L_{eq}.

6.0 Existing Land Uses

A map of the existing land uses in the proposed CPU areas is shown in Figures 8 and 9. The existing land uses within the southeastern San Diego and Encanto communities include industrial lands, residential, commercial office and retail, educational, and other public/institutional uses. As shown in Figures 8 and 9, both communities are well developed urbanized areas. The proposed CPUs have few undeveloped parcels or open space.

6.1.1 Southeastern San Diego Community

The southeastern San Diego community includes the Commercial and Imperial Master Plan and the National Avenue Master Plan areas, which are shown in Figure 8.

As shown in Figure 8, residential uses account for the majority of land uses within the southeastern San Diego community. Residential uses in the southeastern San Diego CPU area are predominantly multiple-family interspersed with lower density single-family residential uses located. Single-family residential land uses in the southeastern San Diego community total approximately 982 acres and multiple-family residential land uses total approximately 129 acres.

Commercial uses within the southeastern San Diego community are primarily located along Imperial Avenue, 28th Street, and Market Street. Small pockets of commercial uses are also located throughout the CPU area. Commercial areas represent approximately 124 acres of the community. Industrial uses are primarily located along Commercial Street and between 32nd Street and Boundary Street south of SR-94 and north of Market Street. Smaller areas of industrial land uses are located east of the cemetery. Industrial land uses represent approximately 105 acres of the community.

There are approximately 12 school sites within the southeastern San Diego CPU area. The southeastern San Diego community includes approximately 115 acres of passive parks, open space, and recreational land uses. Active parks account for approximately 75 acres of the total roadways and transportation-related land uses occupy approximately 1,054 acres.

A separate assessment of existing mobility conditions was/is being prepared that will evaluate pedestrian, bicycle and transit facilities, traffic circulation, intersection movements, goods movement, and transportation infrastructure.

6.1.2 The Encanto Community

The Encanto community includes the Euclid Street and Master Plan and the National Avenue Master Plan areas, which are shown in Figure 9.

As with the southeast San Diego community and shown in Figure 8, residential uses account for the majority of land uses within the Encanto community. Residential uses in the Encanto community are predominantly single-family with small pockets of higher density multiple-family residential uses, particularly near the I-805 and SR-94 interchange. Single-family residential land uses in the Encanto community total approximately 1,934 acres, multiple-family residential accounts for approximately 106 acres, and mobile home parks account for approximately 51 acres.

Commercial uses within the Encanto community are primarily located along Imperial Avenue and Euclid Street. Small pockets of commercial uses are also located throughout the CPU area along major roadways. Commercial areas represent approximately 45 acres of the community. Industrial uses are primarily located along Market Street, east and west of Euclid Street. Industrial land uses represent approximately 32 acres of the community.

There are approximately nine schools sites within the Encanto community. The Encanto community includes approximately 265 acres of parks, open space, and recreational land uses, with approximately 61 acres used for active park space. Roadways and transportation-related land uses occupy approximately 792 acres. Currently there is approximately 201 acres of vacant/undeveloped land within the Encanto community.

A separate assessment of existing mobility conditions was/is being prepared that will evaluate pedestrian, bicycle and transit facilities, traffic circulation, intersection movements, goods movement, and transportation infrastructure.

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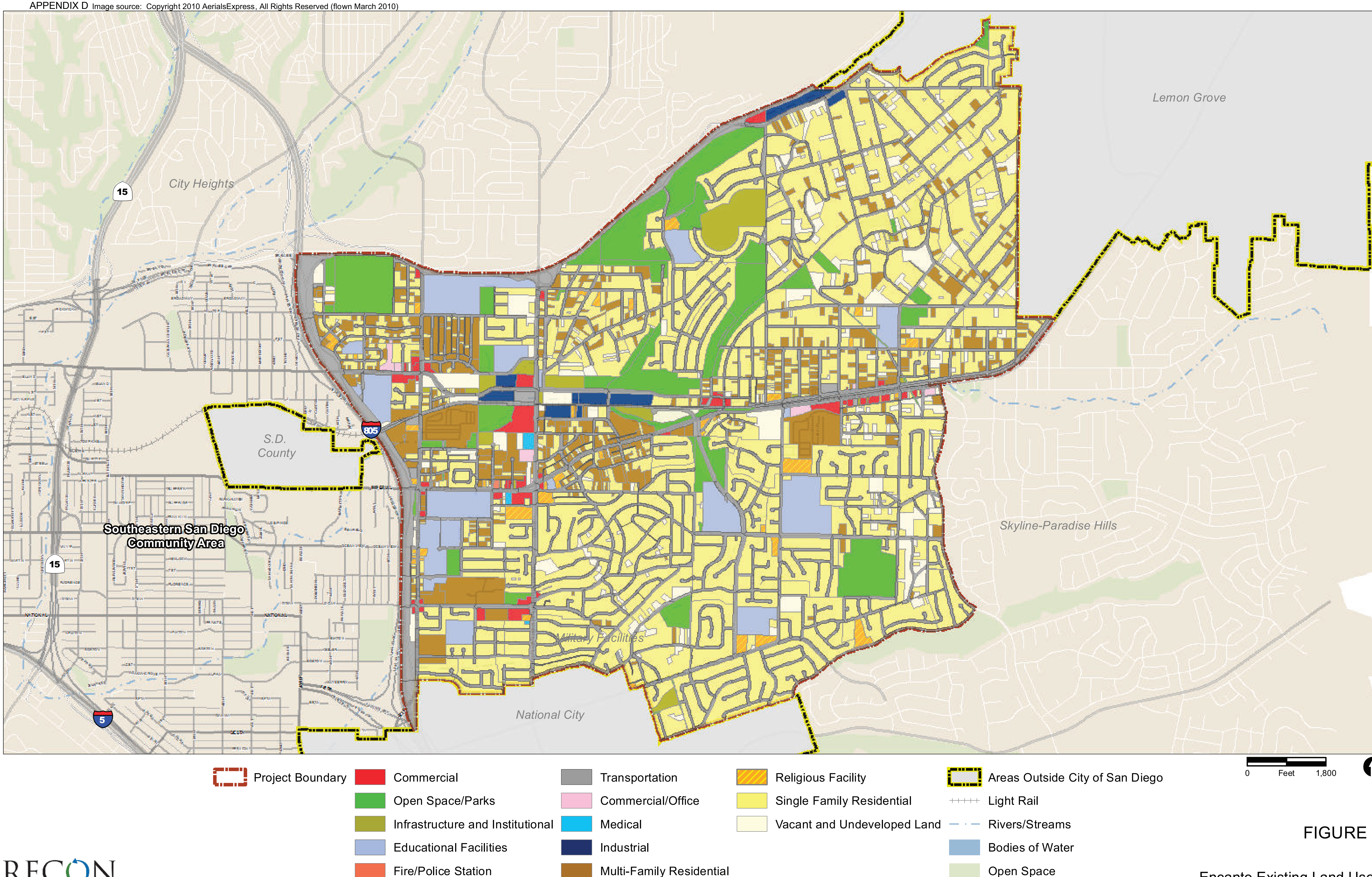

FIGURE 9

Encanto Existing Land Uses

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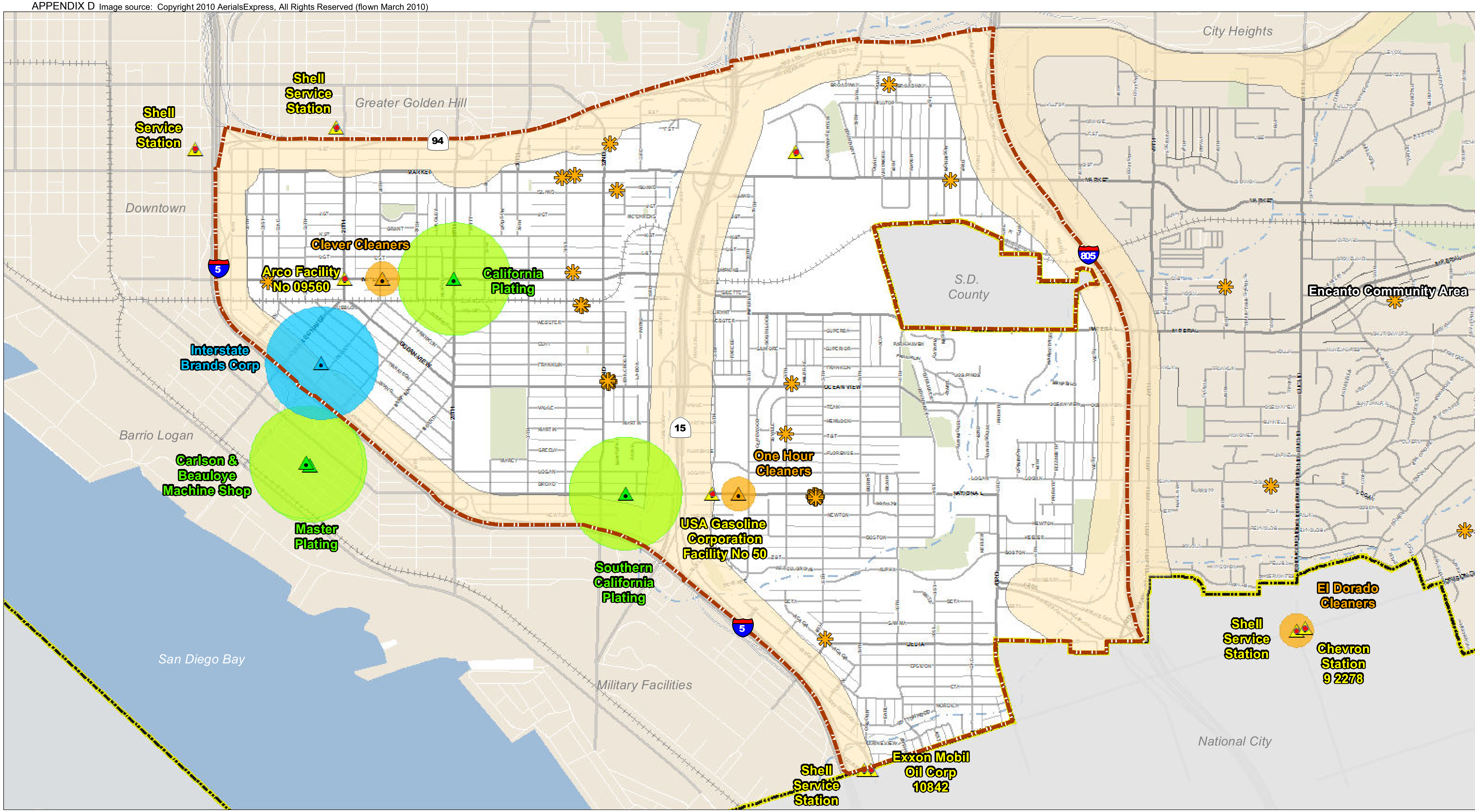

Project Boundary
SDAPCD Nuisance Locations
Gasoline Dispensing Facilities
Dry Cleaners
Distirbution Centers
Chrome Platers
Gasoline Dispensing Facilities (50 feet)
Dry Cleaners Buffer (300 feet)
Distribution Facilities Buffer (1,000 feet)
Chrome Platers Buffer (1,000 feet)
Freeway Buffer (500 feet)
Areas Outside City of San Diego
Light Rail
Rivers/Streams
Bodies of Water
Open Space

0 Feet 1,800

FIGURE 10

CARB Land Use Siting Constraints – Southeastern San Diego

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7.0 Planning Constraints and Opportunities

7.1 Air Quality

With respect to planning in response to potential air quality concerns, a variety of planning tools can be relied upon. First and foremost are the existing regulations that establish standards, compliance procedures, and monitoring protocols to avoid or reduce to below significance the potential human and environmental effects associated with emissions of criteria pollutants and TACs. These regulations are described in Section 3.1.2 and provide an established framework for planning and for subsequent project-level review. In addition to the various adopted regulations, policies, and programs to address air quality and protect public health, the CARB and SDAPCD provide guidance on siting land uses to avoid health risks and avoid nuisances. A common component of such guidance is the recommendation to site sensitive land uses outside specified buffers adjacent to or surrounding major emitters or facilities of concern.

7.1.1 Regional Emissions

Regional air quality affects more than any single project or community and can result in reduced visibility, eye irritation, and adverse health impacts upon those persons termed sensitive receptors. Due to the scope of regional air emissions, the discussion of regional pollutants is a combined assessment of both CPUs. Localized air quality issues include CO emissions from vehicles on local roadways, PM generation predominantly from construction, nuisance odors, and TACs. Localized emissions are discussed under the heading for each CPU as they offer potential constraints on siting of land uses and opportunities for improving the health of the communities.

The proposed CPU areas consist of various air quality sensitive land uses (i.e., residences, schools, hospitals, etc.,) located in close proximity with commercial and industrial land uses. There are numerous instances where potentially sensitive receptors may be located adjacent to commercial and industrial land uses (collocation). The existing mix of land uses and small amount of undeveloped land, limit opportunities for reducing impacts due to collocation. Therefore, the proposed CPUs should include policies to reduce the potential for collocating future air quality sensitive land uses adjacent to existing or future industrial and commercial land uses.

Of the identified criteria pollutants, the SDAB is a non-attainment area for the state ozone standards, the state PM_{10} standard, and the state $PM_{2.5}$ standard. Thus, these are the pollutants of primary concern, as there is a greater opportunity for an exceedance of the NAAQS or CAAQS.

Ozone is a secondary pollutant formed by complex interactions of NO_X and ROG emitted into the atmosphere. Meteorology and terrain play major roles in ozone formation and ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term exposures (lasting for a few hours) to ozone at levels typically observed in southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

$PM_{2.5}$ and PM_{10} represent fractions of total PM. $PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. These tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract when inhaled. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections.

CO is a non-reactive air pollutant that dissipates relatively quickly, thus ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. However, CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February.

7.1.2 Southeastern San Diego

7.1.2.1 Carbon Monoxide

Exhaust emissions of CO can potentially cause a localized impact. These high concentrations of CO are typically found near congested roadways and failing intersections and are a result of the incomplete combustion of fossil fuels in motor vehicles. The highest concentrations are normally between 300 and 600 feet from these sources. The most probable sources of high CO within the southeastern San Diego CPU are the I-5, SR-94, I-15, and I-805. However, as this requires very specific detail of traffic patterns and roadway configurations the determination of potential siting constraints is done on a project-by-project basis.

7.1.2.2 Toxic Air Contaminants

Based on a review of existing land uses, several of the emission source types indicated in Table 7 were identified within the southeastern San Diego community.

Toxic air contaminants are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. These sources are shown in Figure 10 with appropriate setback buffers for known stationary sources, as well as the I-5, I-805, SR-94, and I-15. The stationary sources identified in Figure 10 are based on the U.S. EPA's EnviroMapper, which includes facilities of concern as potential air emission emitters (U.S. EPA 2012b). See Section 2.1.7 for further information on the potential effects of TACS. CARB recommends that these buffers be considered when evaluating land use and collocation decisions.

7.1.2.3 Nuisance Sources

In addition to the sources listed, various sources within the southeastern San Diego community could create a nuisance to sensitive receptors in the project area. Imperial Avenue is largely dominated by land uses associated with automotive repair and maintenance, with residential lots often located directly adjacent to these uses. Similarly, Commercial Street consists of junk yards, storage yards, recycling centers, and automotive repair shops close to residential land uses and other sensitive receptors.

Table 13 indicates several sources located within the southeastern San Diego CPU associated with nuisance compliance, based on data obtained from the SDAPCD from 2010 through 2012. The proximity of these facilities should be considered when making future land use decisions to avoid the potential for future nuisances. The southeastern San Diego CPU primarily consisted of smoke- and odor-based nuisance complaints. There was also one documented asbestos complaint. As previously referenced, these complaints originated mostly from busier streets such as Market Street, Commercial Street, Imperial Avenue, and National Avenue (see Figure 10).

TABLE 13
SOUTHEASTERN SAN DIEGO NUISANCE SOURCES

Facility	Facility Address	Nature of Complaint	Date of Complaint
Former San Diego Farmers Market	2121 Imperial Ave., San Diego, CA	Asbestos	4/24/2012
La Nueva Michoacana Meat Market	2793 National Ave., San Diego, CA	Smoke	3/9/2011
Joe's Stereo & Alarm	3091 Market Street, San Diego, CA	Unpermitted operations	8/12/2011
Cabinet painting business	3116 Imperial Ave. #4, San Diego, CA	Odor	7/5/2012
Residence	3119 Market St., San Diego, CA	Dust	7/17/2012
RW Little Co.	3135 Commercial St., San Diego, CA	Other	3/8/2012
RW Little Co.	3135 Commercial St., San Diego, CA	Other	9/19/2012
Belagio Pre-Cast	3216 Island Ave., San Diego, CA	Unpermitted operations	8/2/2012
Lupita's Market	3227 Ocean View Blvd., San Diego, CA	Smoke	3/23/2011
Lupita Meat Market	3227 Ocean View Blvd., San Diego, CA	Smoke	4/26/2011
Lupita's Market	3227 Ocean View Blvd., San Diego, CA	Smoke	7/18/2011
Lupita’s Market/Jose Pollos	32nd Street and Ocean View Blvd., San Diego, CA	Smoke	8/15/2011
Lupita’s Market	32nd Street and Ocean View Blvd., San Diego, CA	Smoke	8/19/2011
Paint shop	3708 Oceanview Blvd. San Diego, CA	Odor	2/28/2011
La Nueva Michoacana Meat Market	3793 National Ave San Diego, CA	Smoke	10/18/2010
La Nueva Michoacana Meat Market	3793 National Ave San Diego, CA	Smoke	12/9/2010
La Nueva Michoacana Meat Market	3793 National Ave San Diego, CA	Smoke	2/11/2011
Sawaya Brothers Jr. Market	3793 National Ave San Diego, CA	Smoke	1/5/2012
Saway Brothers Markets	3793 National Avenue San Diego, CA	Smoke	1/17/2012
La Nueva Michoacana (Sawaya Bros. Jr. Market)	3793 National Avenue San Diego, CA	Smoke	3/2/2012
Sawaya Brothers Tortilleria	3793 National Avenue San Diego, CA	Smoke	3/12/2012
Sawaya Brothers	3793 National Avenue San Diego, CA	Smoke	5/16/2012
Sawaya Brothers Jr. Market	3793 National Avenue San Diego, CA	Smoke	6/21/2012
Sawaya Brothers Market	3793 National Avenue San Diego, CA	Smoke	8/6/2012
Sawaya Brothers Market	3793 National Avenue San Diego, CA	Smoke	9/18/2012
El Camino Body Shop	3814 Acacia Street, San Diego,, CA	Odor	10/22/2012
Sawaya Brothers Jr. Market	3896 or 3897 National Ave., San Diego, CA	Smoke	7/26/2011
Unpermitted painting	3982 Broadway, San Diego, CA	Unpermitted operations	5/16/2012
CET Employment Center	4153 Market Street, San Diego, CA	Odor	5/26/2011
Cintas	675 32nd St., San Diego, CA	Other	11/26/2012
Unknown	Area of T St. and 37th St., San Diego, CA	Other	4/20/2012

7.1.2.4 Opportunities and Constraints

In order to provide a basis for planning decisions, a variety of specific land uses were identified and included on Figure 10. Buffers based on the CARB’s land use siting recommendations are also shown in Figure 10. This visual representation shows constraints, where air quality sensitive development should be limited, and an opportunity to reduce potential health impacts.

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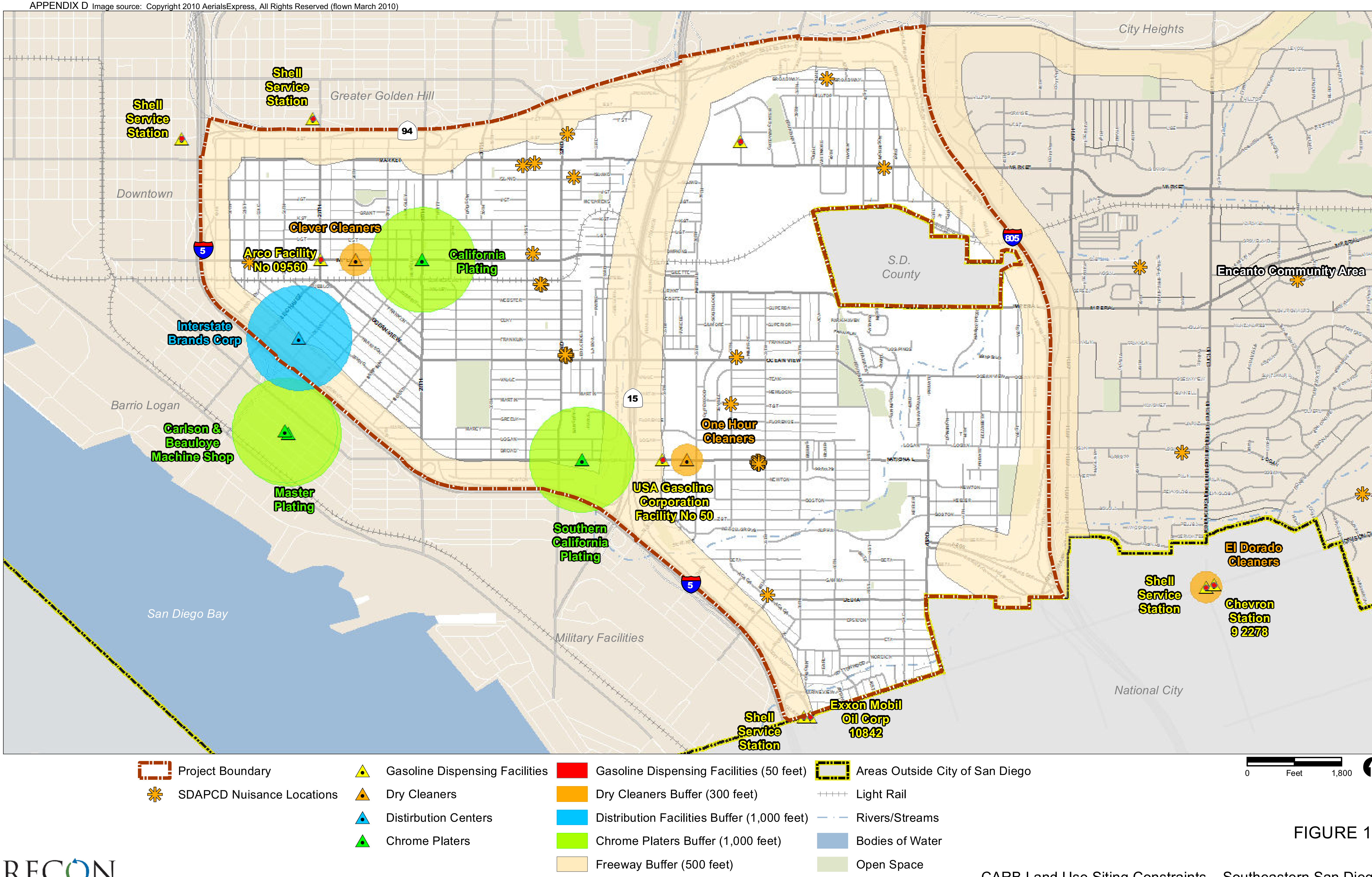

FIGURE 10

CARB Land Use Siting Constraints – Southeastern San Diego

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The U.S. EPA provides information about environmental activities that may affect air, water, and land within the United States. Based on this database, there are two chromium plating facilities bordering the SESD CPU area to the southwest in Barrio Logan. There are two facilities within the CPU area, which are the California Plating and Southern California Plating facilities. New sensitive land uses should not be placed within 1,000 feet of these facilities and new facilities should maintain the same distance when proposed. There is also a freeway network surrounding and crossing the CPU area (I-5, SR-94, I-15, and I-805) represents additional sources of air pollutants and potential air toxics. Therefore, new sensitive land uses should not be placed within 500 feet of these roadways (CARB 2005). Additionally, future development guidelines should include a 1,000-foot setback from existing and proposed distribution centers, a 300-foot setback for dry cleaners, and a 50-foot setback for fuel dispensing facilities (CARB 2005).

Existing local stationary sources in the CPU area include gas stations and dry cleaning facilities. Sensitive land uses should not be placed within 300 feet of the dry cleaners or 50 feet of typical gas dispensing facilities and the siting of new facilities of these types should conform to these distances. The freeway network of SR-94 and the I-805 represents additional sources of air pollutants and potential air toxics. Therefore, new sensitive land uses should not be placed within 500 feet of these freeways.

7.1.3 Encanto

7.1.3.1 Carbon Monoxide

Exhaust emissions can potentially cause a localized impact. These high concentrations of CO are typically found near congested roadways and failing intersections and are a result of the incomplete combustion of fossil fuels in motor vehicles. The highest concentrations are normally between 300 and 600 feet from these sources. The most probable sources of high CO within the Encanto CPU are the SR-94 and the I-805. However, as this requires very specific detail of traffic patterns and roadway configurations the determination of potential siting constraints is done on a project-by-project basis.

7.1.3.2 Toxic Air Contaminants

Toxic air contaminants are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfill sources within the Encanto community are shown in Figure 11 with appropriate setback buffers for I-805 and SR-94. The stationary sources identified in Figure 11 are based on the U.S. EPA's EnviroMapper, which includes facilities of concern as potential air emission emitters (U.S. EPA 2012b). See Section 2.1.7 for further information on the potential effects of TACS. CARB recommends that these buffers be considered when evaluating land use and co-location decisions.

7.1.3.3 Nuisance Sources

In addition to the sources listed, various sources within the Encanto community could create a nuisance to sensitive receptors in the CPU area. Market Street and Euclid Avenue have the highest average daily trips (ADTs) within the Encanto CPU and contain a mix of land uses including residences, schools, commercial and industrial land uses.

Table 14 indicates several sources located within the Encanto CPU area associated with nuisance compliance, based on data obtained from the SDAPCD from 2010 through 2012. The proximity of these facilities should be considered when making future land use decisions to avoid the potential for future nuisances. The Encanto CPU primarily consisted of dust and odor based nuisance complaints. There was also one documented asbestos complaint as well as one unpermitted operations complaint. These complaints originated from multiple different areas throughout the Encanto CPU (see Figure 11).

TABLE 14
ENCANTO NUISANCE SOURCES

Facility	Facility Address	Nature of Complaint	Date of Complaint
Painting operation	315 49th Street, San Diego, CA	Odor	6/20/2012
Mercado International	5065 Logan Ave., San Diego, CA	Asbestos	8/23/2012
Construction site	5411-5417 Santa Margarita Street, San Diego, CA	Dust	12/8/2010
Unknown	5708 Alta Vista Ave., San Diego, CA	Odor	9/12/2011
Unknown	5830 Market Street, San Diego, CA	Unpermitted operations	8/17/2010
O'Farrell Community School	6130 Skyline Dr., corner of Benson and 61st Street, San Diego, CA	Dust	7/24/2012
Federal Recycling	6144 Federal Blvd., San Diego, CA	Odor	5/2/2011
Painting operation	315 49th Street, San Diego, CA	Odor	6/20/2012

7.1.3.4 Opportunities and Constraints

A variety of specific land uses where potential air quality impacts would be greatest were identified and included on Figure 11 for the Encanto planning area. Buffers based on the CARB's land use siting requirements are shown in Figure 11. This visual representation shows constraints where air quality sensitive development should be limited and an opportunity to reduce potential health impacts.

Existing local stationary sources in the CPU area include gas stations and dry cleaning facilities. Sensitive land uses should not be placed within 300 feet of the dry cleaners or 50 feet of typical gas dispensing facilities and the siting of new facilities of these types should be located conform to these distances (CARB 2005) . There is a freeway network surrounding the CPU area including the SR-94 and the I-805, which would represent additional existing sources of air pollutants and potential air toxics. Therefore, new sensitive land uses should not be placed within 500 feet of these freeways (CARB 2005). Additionally, future development guidelines for the Encanto CPU should include a 1,000-foot

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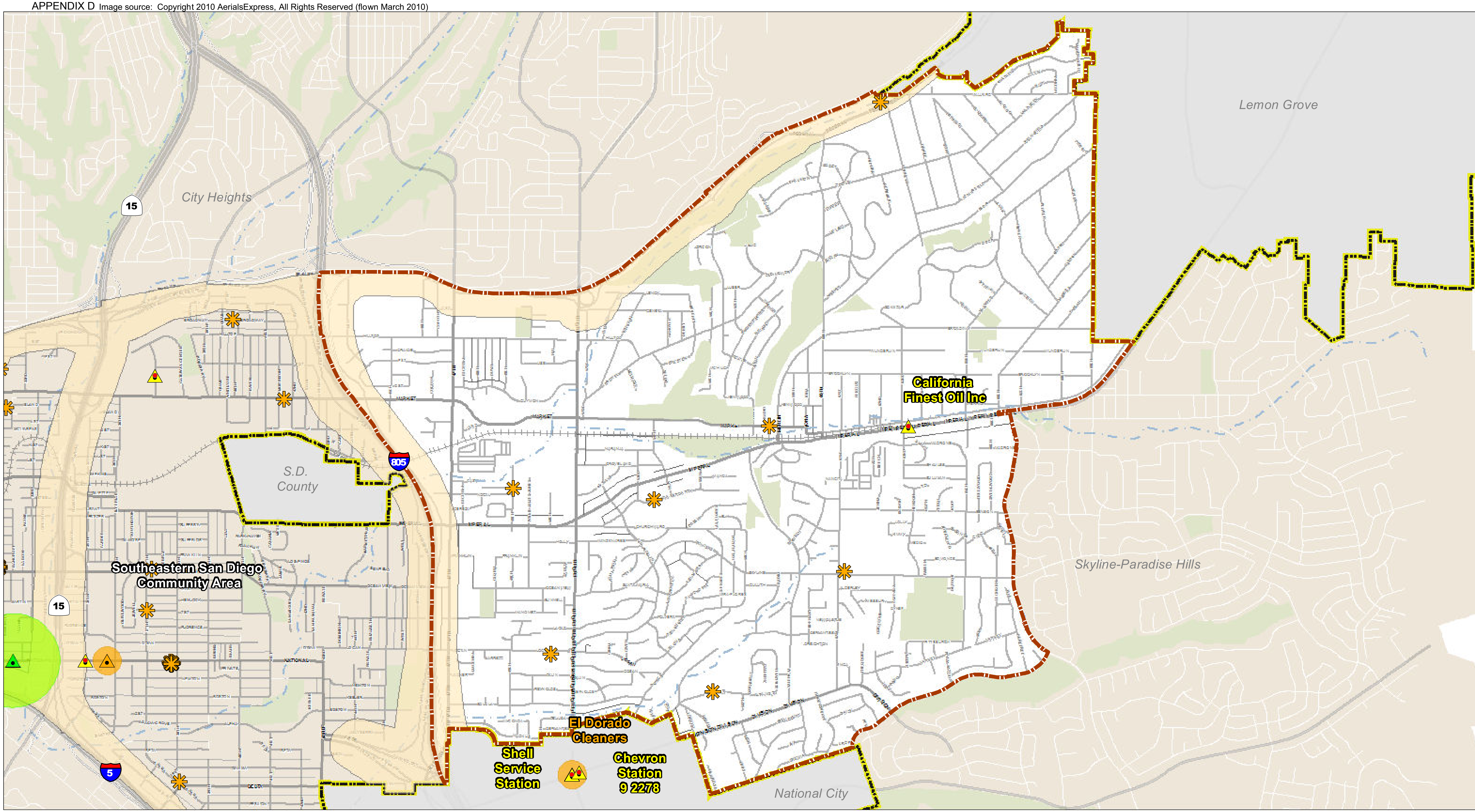

Project Boundary
SDAPCD Nuisance Locations
Dry Cleaners
Gasoline Dispensing Facilities
Distirbution Centers
Chrome Platers
Dry Cleaners Buffer (300 feet)
Gasoline Dispensing Facilities (50 feet)
Distribution Facilities Buffer (1,000 feet)
Chrome Platers Buffer (1,000 feet)
Freeway Buffer (500 feet)
Areas Outside City of San Diego
Light Rail
Rivers/Streams
Bodies of Water
Open Space

0 Feet 1,800

FIGURE 11

CARB Land Use Siting Constraints – Encanto

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setback from existing and proposed distribution centers, a 300-foot setback for dry cleaners, and a 50-foot setback for fuel dispensing facilities (CARB 2005).

7.2 Greenhouse Gases

Similar to regional air quality emissions, the effects of GHG emissions are cumulative in nature and the choices made affect more than a single project or community. According to the California Natural Resources Agency's 2009 *California Climate Adaptation Strategy*, California should anticipate hotter and drier conditions, reduced winter snow, increased winter rain, and accelerating sea level rise. Extreme weather events, such as heat waves, wildfires, droughts, and floods are expected to become more common. By 2050, annual average temperatures are projected to increase by 1.8 to 5.4°F statewide. These climate changes will affect public health, water supply, food production, and ecosystems health. The *Focus 2050* Study for the San Diego Region (Focus 2050) completed in 2012 and commissioned by the San Diego Foundation echoes these predictions. Focus 2050 reports that average annual San Diego temperatures will increase between 1.5 and 4.5 °F by 2050, and increases in peak summer temperatures will be even more dramatic, with August in San Diego being an average of 8°F hotter (San Diego Foundation 2012).

As described, the CPU areas contain commercial and residential land uses. Direct GHG emissions from the commercial and residential sector include area sources such as landscape maintenance equipment, fireplaces, and natural gas consumption for space and water heating. Indirect GHG emissions are also generated off-site at electricity-generating plants to meet commercial and residential electricity demand for heating, cooling, ventilating, lighting and appliance needs. At the state level, these indirect electricity emissions are accounted for in the electric power sector.

The CPU area contains industrial land uses, primarily light to medium industrial uses located along the western boundary and along the major Imperial and National Avenues in the Southeastern San Diego community. GHG emissions associated with industrial land uses, such as manufacturing plants and refineries, are predominantly comprised of stationary sources (e.g., boilers and engines) associated with industrial processes.

Examples of high global warming potential GHG sources include refrigerants (e.g., HFCs), industrial gases (i.e., PFCs and NF_3), and electrical insulation (e.g., SF_6). Although these GHGs are typically generated in much smaller quantities than CO_2, their high GWP results in considerable CO_2 statewide.

GHG emissions associated with agricultural processes are generated through the use of off-road farm equipment, irrigation pumps, residue burning, livestock, and fertilizer volatilization. GHG emissions associated with the forestry sector include emissions from forest and rangeland fires and other disturbances such as pest damage, timber harvesting, wood waste decomposition, and other sources. There are presently no agricultural or forestry operations within either of the CPU areas.

Changes in the Earth's climate can trigger a range of public health effects. Extreme heat waves, increases in pollen, more frequent wildfires, and changes in the spread of vector-borne diseases represent threats to the public health. Climate change can also impact public health through changes to food supply, water systems, and shelter. Climate change can also promote the formation of ground-level pollutants, such as ozone and particulate matter, which have been shown to have adverse health effects, particularly among sensitive populations. The *Focus 2050 Study for the San Diego Region* reports that we will use at least 60 percent more electricity in the San Diego region by 2050; and peak electricity demand will grow by over 70 percent, with warmer weather causing about 7 percent of the increase (San Diego Foundation 2012:16). Higher demand will come from hotter inland areas driven mostly by people using air condition.

7.2.1 Opportunities and Constraints

The City has developed a variety of tools to address GHG emissions, including enforcement of the state regulations and standards and local policies. These regulations provide an established framework for minimizing GHG emissions in land use planning and for subsequent project-level review of GHG emissions impacts. In addition to providing a broad range of strategies to address the different sources of GHG emissions, the existing regulatory framework establishes a hierarchy of tools to deal with state, regional, and local issues. For example, the City's General Plan and Draft CMAP were developed to iteratively implement AB 32 and the Scoping Plan.

The General Plan provides the overall framework for the City's commitment to long-term conservation, sustainable growth and resource management. It addresses GHG reductions through its City of Villages growth strategy and a wide range of inter-disciplinary policies consistent with AB 32 and the state Scoping Plan.

By increasing density, especially within proximity of transit, as under the City of Villages concept, travel distances are reduced and greater options for the mode of travel are provided. This can result in a substantial reduction in VMT depending on the change in density compared to a typical suburban residential density (California Air Pollution Control Officers Association [CAPCOA] 2010). By increasing the diversity of land use (i.e., through mixed-use developments), a similar reduction in VMT can occur because trips between land use types would be shorter and may be accommodated by non-auto modes of transport. By increasing transit accessibility (e.g., by locating a high-density project near transit), a shift in travel mode is facilitated along with reduced VMT. The effectiveness of these land use strategies ranges from less than one percent up to a maximum 30 percent reduction in community wide VMT (CAPCOA 2010). For example, where high-density mixed-use development is located within a five- to ten-minute walk from a transit station with high-frequency transit or bus service and is combined with walkable community design, a total VMT reduction up to 24 percent can be achieved (CAPCOA 2010).

The Draft CMAP includes four categories of GHG sources and associated reduction strategies (Table 15). These citywide strategies and targets are consistent with reduction measures contained in the Scoping Plan and other comprehensive state and regional documents, and would be in addition to continued implementation of federal and state mandates.

TABLE 15
DRAFT CMAP GHG REDUCTION STRATEGIES

Energy: The energy strategy aims to reduce GHG emissions by improving the energy efficiency of both new and existing residential and commercial buildings, increasing the use of renewable and efficient energy production, improving communitywide understanding of energy management, and highlighting the water energy nexus.	
Specific targets to improve new and existing building energy efficiency include:	• Retrofit existing single-family homes for 30 percent energy savings per unit (for 10 percent of existing single-family homes by 2020, and 25 percent by 2035). • Retrofit existing multi-family homes for 20 percent energy savings per unit (15 percent of homes by 2020, and 30 percent of multi-family homes by 2035). • Retrofit existing commercial square footage to achieve 15 percent energy savings per unit (for 10 percent of units by 2020, and 25 percent by 2035). • Retrofit existing City facilities and infrastructure to achieve energy savings of 20 percent by 2020 and 30 percent by 2035). • Improve energy efficiency of new residential and commercial buildings by 15 percent by 2020. (Note that this is consistent with the current CalGreen Tier I standard; and is also the mandatory standard being considered by adoption in the next – 2015 – CBC cycle.)
Specific targets to increase renewable energy use include:	• Install solar water heaters on 5% of existing homes by 2020 and 15% by 2035. • Replace 5% of commercial natural gas used to heat water by 2020 and 15% by 2035. • Achieve 350 megawatts (200 MW photovoltaic, 150 MW cogeneration) of clean and efficient distributed energy generation by 2020 and 800 megawatts (550 MW photovoltaic, 250 MW cogeneration) by 2035.
Specific targets to address the water energy nexus by increasing water conservation include:	• Improve water use efficiency by reducing daily per capita water consumption to achieve a goal of 142 daily gallons per capita by 2020 and 116 daily gallons per capita by 2035

TABLE 15
DRAFT CMAP GHG REDUCTION STRATEGIES
(continued)

Transportation: The transportation strategy focuses on reducing emissions by reducing vehicle miles traveled (VMT) through multimodal transportation options, by decreasing the energy intensity per mile traveled by reducing idling, and increasing electric vehicle use by improving the electric vehicle infrastructure.	
Specific targets to improve multimodal transportation options citywide include:	• Increase mode share by 8% by 2020 and 10% by 2035. • Increase bike lane miles per square mile to 4 by 2020 and 8 by 2035. • Decrease parking spaces in the San Diego Metro area 10% by 2020 and 20% by 2035. • Increase downtown parking prices per day to $24 by 2020 and $30 by 2035.
The target to reduce vehicle idling and conserve fuel citywide includes:	• Re-time traffic signals on 15 intersections and install roundabouts on 15 intersections by2020 and 20 intersections by 2035.
Specific targets to increase electric and other alternative fueled vehicle use include.	• Reserve 10% of parking spaces for electric vehicles by 2020 and 20% by 2035. • Increase the number of miles driven by electric vehicles to 4% by 2020 and 11% by 2035. • Increase zero emissions passenger and light duty trucks to 50% of the City's municipal fleet by 2020 and 100% by 2035.
Land Use and Local Food System: The land use and local food system strategy reduces emissions by supporting the City's General Plan that will result in more compact, walkable, transit-accessible Communities and by strengthening the regional food system, including expanding urban agriculture activities.	
Citywide targets aimed at increasing effective land use patterns and expanding development of local food systems include.	• Achieve better walkability and transit-supportive densities in targeted locations identified in community plans by increasing population density 12% by 2020 and 27% by 2035. • Increase availability of local food options 50% by 2020.
Waste: The waste strategy reduces emissions by diverting waste from landfills, and supports continual improvement in equipment and operations for wastewater treatment and landfill management.	
The Draft CMAP includes the following targets to improve waste management efficiency:	• Divert 75% of trash from landfill disposal • Capture 80% of methane from landfills by 2020. • Capture 98% of wastewater treatment gas by 2020.

The General Plan lays out the policy framework for addressing climate change and the Community Plans make site-specific land use and design recommendations. These recommendations, along with implementing ordinances, can influence the level of consequence from climate change impacts. Examples of planning-related adaptation strategies include:

- Designating land for a full range of uses, including open spaces and high density areas where appropriate.
- Designing a multi-modal mobility system with multiple routes in and out of communities.
- Fostering urban agriculture to increase food system security.
- Implementing tree planting incentives, ordinances and programs to save energy, sequester carbon, and reduce the urban heat island effect.
- Requiring development to incorporate natural drainage basins and water features to capture storm water in areas vulnerable to increased flood risk.
- Increasing conservation and efficiency in water use to reduce reliance on imported water.

7.3 Noise

Noise sources are typically categorized as mobile or stationary. The majority of mobile sources are transportation related from vehicles operating on roadways, aircraft and airport operations, and railroad activities. Stationary noise sources typically include machinery; fabrication; construction; heating, ventilation, and air conditioning systems; compressors and generators; and landscape maintenance equipment. Another category of stationary sources include various activities such as concerts, outdoor dining, amplified music, public address systems. The dominant noise sources in both CPU areas are traffic on roadways. Secondary noise sources include light rail transit vehicles, stationary noise sources, and aircraft overflights.

The primary issue with stationary noise sources from light industrial and commercial activities is when these land uses and operations are adjacent to residential land uses (collocation). The collocation of these land uses is a long-standing concern of communities.

Noise impacts generated by construction activities, as well as commercial businesses can periodically generate high levels of noise in the community.

7.3.1 Southeastern San Diego

7.3.1.1 Stationary Noise

The southeastern San Diego community is an urbanized area and is subject to numerous noise sources, primarily vehicular traffic on major roadways and rail traffic. The community is also subject to typical urban noise sources such as construction, police and fire department sirens, landscaping equipment, barking dogs, high altitude jet aircraft, and car alarms.

7.3.1.2 Transportation Noise

a. Traffic

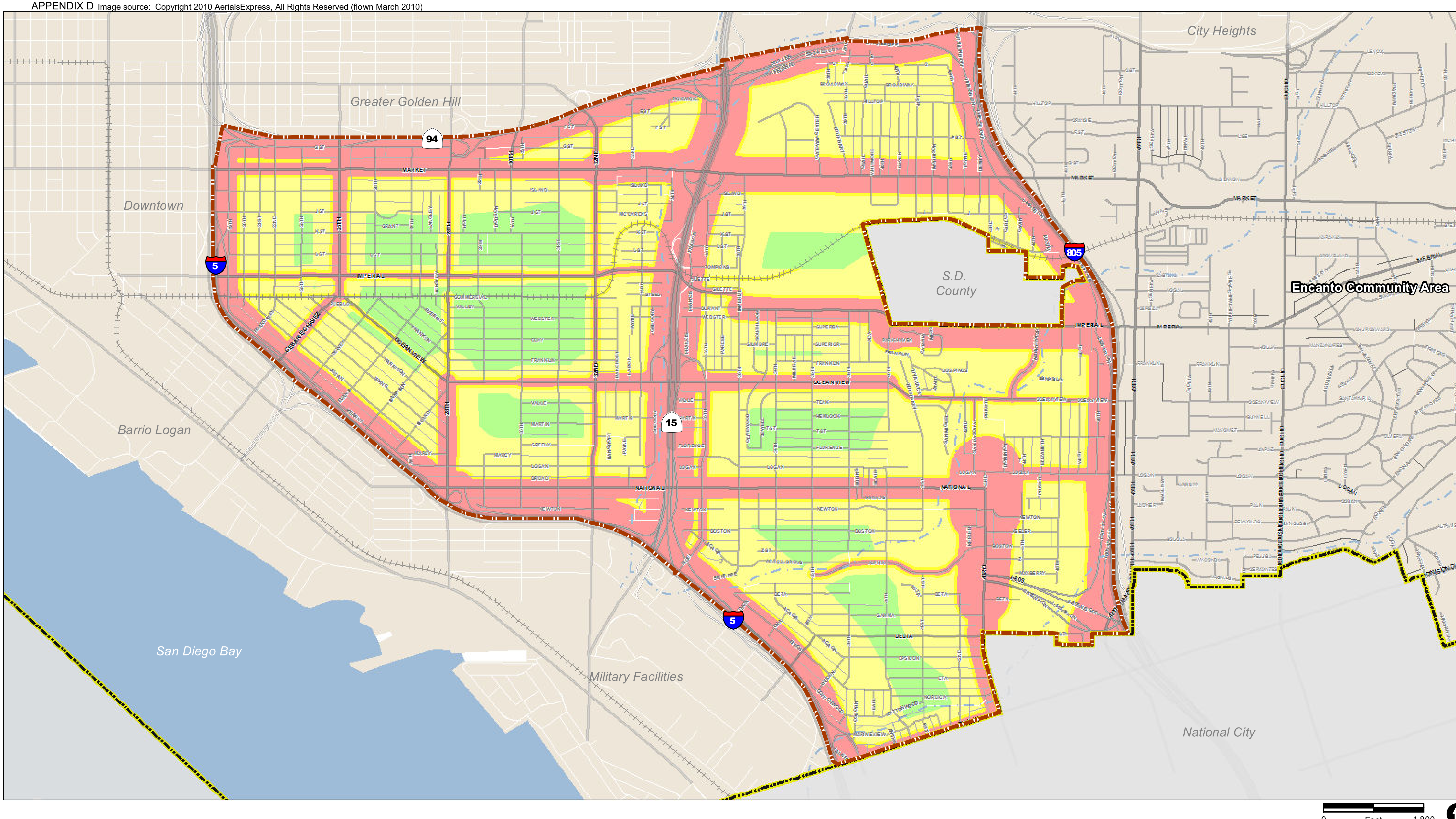
The roads generating the greatest noise level in the area are I-5, I-805, SR-15, SR-94, Market Street, National Avenue, Ocean View Avenue, and 43rd Street. The noise contour distances represent the predicted noise level and do not reflect the attenuating effects of noise barriers, structures, topography, or dense vegetation. As intervening structures, topography, and dense vegetation would affect noise exposure at a particular location, the noise contours should not be considered site-specific, but rather are guides to determine when detailed acoustic analysis should be undertaken. As shown in Figure 12, existing noise levels in the community exceed 60 CNEL. The local freeways are the dominant noise sources in the CPU and due to the pervasiveness encompass the contours from local roadways. The distances to various traffic CNEL noise contours for these major roads are provided in Attachment 1.

b. Rail

Within the CPU area, the SDMTS provides trolley service along a railway alignment designated the “Orange Line”. The Orange Line trolley generally parallels Commercial Street. At the at-grade crossings there are trolley warning signals operating while the trolley is in the vicinity of the crossing.

Railway noise consists of noise from the trolleys and emergency signaling devices. Trolley vehicles are equipped with horns for use in emergency situations and as a general audible warning to track workers and trespassers within the right-of-way as well as to pedestrians and motor vehicles at road grade crossings. Horns on the moving trolley vehicle, combined with stationary bells at grade crossings can generate excessive noise levels that can affect noise sensitive land uses.

APPENDIX D Image source: Copyright 2010 AerialsExpress, All Rights Reserved (flown March 2010)



Project Boundary
CNEL 60
CNEL 65
CNEL 70
Areas Outside City of San Diego
Light Rail
Rivers/Streams
Bodies of Water

FIGURE 12

Existing Traffic Noise Level Contours – Southeastern San Diego

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The majority of the trolley trains run between the hours of 5:00 a.m. and 10:00 p.m. The Orange Line trolley operations consist of 146 scheduled trains each weekday with fewer trolleys on weekends (SDMTS 2010). Of this total, 96 trains occur during the daytime hours (i.e., 7 a.m.–7 p.m.) 17 occurring during the evening hours (i.e., 7 p.m.–10 p.m.) and 33 occur during the nighttime hours (i.e., 10 p.m.–7 a.m.).

The modeled trolley noise levels indicate that existing noise levels range up to approximately 61 CNEL at 50 feet associated with the trolley (without the use of a trolley horn and 63 CNEL at 50 feet with the use of trolley horns). Thus, the 60 CNEL contour from trolley operations would fall approximately 56 feet from the centerline of the trolley tracks and the 65 CNEL would fall approximately 32 feet from the centerline. At intersections, where the trolley horn is used, the 60 CNEL contour would fall approximately 71 feet from the centerline of the trolley tracks and the 65 CNEL contour would fall approximately 40 feet from the centerline. The distances to the 75 CNEL under either scenario would fall within the trolley track right-of-way. The distances to various CNEL noise contours for the trolley are provided in Attachment 2.

c. Airport

The southeastern San Diego community is located entirely outside of the present and future 65 CNEL noise contour for San Diego International Airport, and therefore, airport operations would not significantly affect the ambient noise environment of the southeastern San Diego community.

7.3.1.3 Opportunities and Constraints

Future developments would include on-site noise generators, such as heating, venting, and air conditioning units, pool pumps, parking lots, punches and presses, as well as a host of other potential sources. Stationary noise sources are of particular concern when locating residential and industrial land uses adjacent to each other and when collocating different land uses in mixed developments. Noise compatibility conflicts can often be avoided or reduced through compliance with existing regulations (described in Section 3). Measures can also be developed and included in the CPU that require noise controls for stationary noise sources, which may include requirements for equipment selection including noise ratings, noise control features (e.g., mufflers, barriers, vibration isolation systems, enclosures) or structural design requirements for new facilities (e.g., isolating noise sources and walls with a high transmission loss).

While stationary sources require careful consideration when siting them, transportation noise offers the greatest challenge to built-out communities such as southern San Diego. However, through planning documents, such as the CPU, measures can be developed for the community that require site design considerations that locate non-noise sensitive land along roadways and shield land uses located further away. The CPU could include limits on the siting of land uses to appropriate noise environments, especially locating noise-sensitive land uses to appropriate locations, or at specified distances from major sources of noise, such as freeways and major roadways. Additional measures that may be employed when setbacks are not sufficient include site design such that noise sensitive, exterior use area, such as backyards, are shielded from adjacent roadways and interior noise levels comply with the City standards through the use of acoustically rated wall and window components.

7.3.2 Encanto

7.3.2.1 Stationary Noise

The southeastern San Diego community is an urbanized area and is subject to numerous noise sources, primarily vehicular traffic on major roadways and rail traffic. The community is also subject to typical urban noise sources such as construction, police and fire department sirens, landscaping equipment, barking dogs, high altitude jet aircraft, and car alarms.

7.3.2.2 Transportation Noise

a. Traffic

The roads generating the greatest noise level in the Encanto community are I-805, SR-94, Imperial Avenue, Market Avenue, 47th Street, and Euclid Avenue. The noise contour distances represent the predicted noise level and do not reflect the attenuating effects of noise barriers, structures, topography, or dense vegetation. Because intervening structures, topography, and dense vegetation may significantly affect noise exposure at a particular location, the noise contours should not be considered site-specific, but rather are guides to determine when detailed acoustic analysis should be undertaken. As shown in Figure 13 existing, noise levels exceed 60 CNEL in the CPU area. The local freeways are the dominant noise sources in the CPU area and due to the pervasiveness encompass the contours from local roadways. The distances to various traffic CNEL noise contours for these major roads are provided in Attachment 1.

b. Rail

Within the CPU area, community the SDMTS provides trolley service along a railway alignment designated the “Orange Line.” The Orange Line trolley generally parallels Commercial Street. At the at-grade crossings there are trolley warning signals operating while the trolley is in the vicinity of the crossing.

APPENDIX D Image source: Copyright 2010 AerialsExpress, All Rights Reserved (flown March 2010)

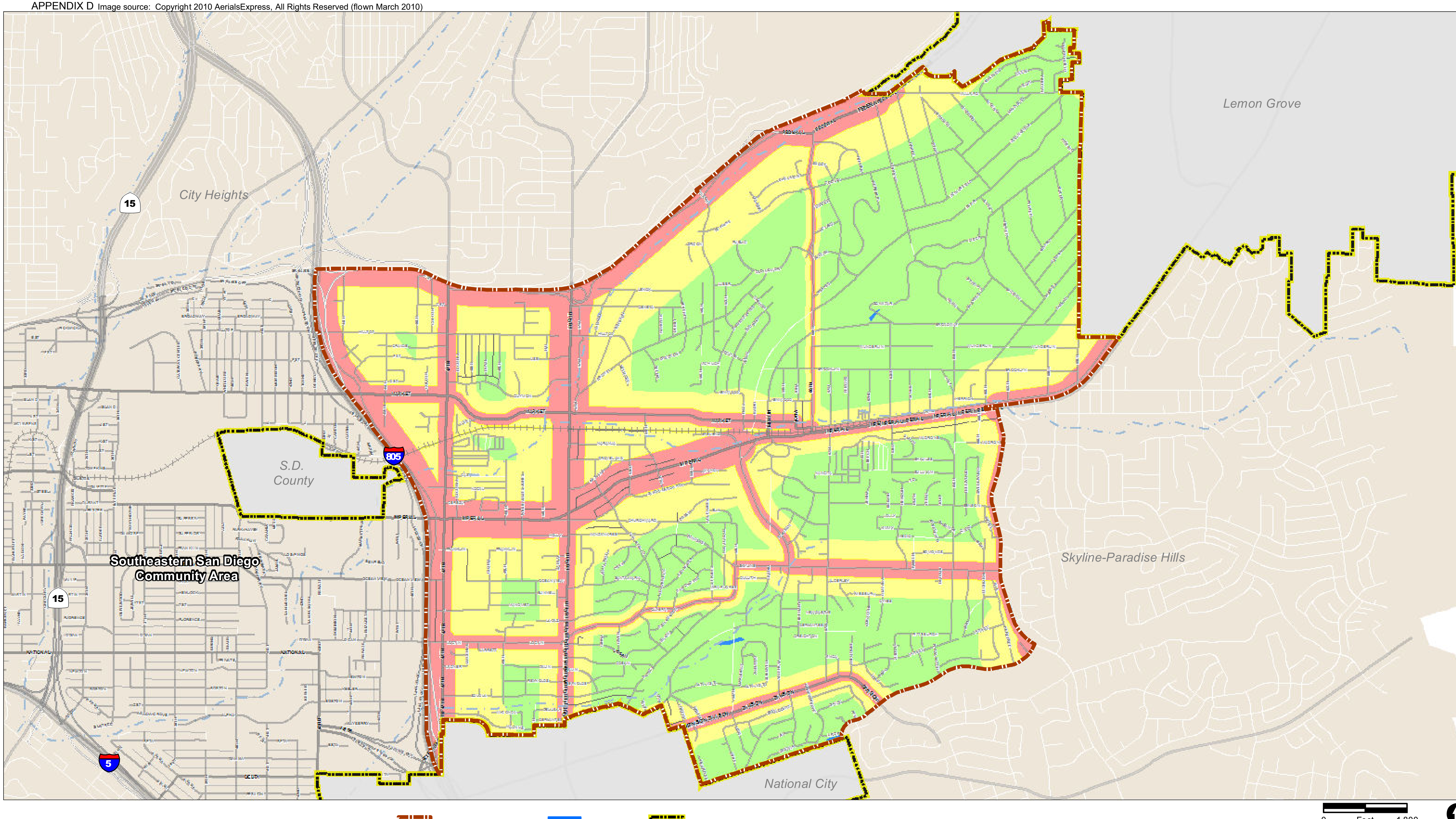

FIGURE 13

Existing Traffic Noise Level Contours – Encanto

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Railway noise consists of noise from the trolleys and emergency signaling devices. Trolley vehicles are equipped with horns for use in emergency situations and as a general audible warning to track workers and trespassers within the right-of-way as well as to pedestrians and motor vehicles at road grade crossings. Horns on the moving trolley vehicle, combined with stationary bells at grade crossings can generate excessive noise levels that can affect noise sensitive land uses.

The train schedule and noise levels described previously for the southeastern San Diego community is the same for the Encanto community.

c. Airport

The Encanto community is located entirely outside of the present and future 65 CNEL noise contour for San Diego International Airport, and therefore, airport operations would not significantly affect the ambient noise environment of the Encanto community.

7.3.2.3 Opportunities and Constraints

Future development would include on-site noise generators, such as heating, venting, and air conditioning units, pool pumps, parking lots, punches and presses, as well as a host of other potential sources. Stationary noise sources are of particular concern when locating residential and industrial land uses adjacent to each other and when collocating different land uses in mixed developments. Noise compatibility conflicts can often be avoided or reduced through compliance with existing regulations (described in Section 3). As discussed for the Southeastern San Diego plan area, measures can be developed and included in the CPU that require noise controls for stationary noise sources to control noise sources at the source.

While stationary sources require careful consideration when siting them, transportation noise offers the greatest challenge to built-out communities such as Encanto. However, planning documents, such as the CPU, can include measures that require site design considerations, which locate non-noise sensitive land uses along roadways to shield existing or future noise sensitive land uses located further away. The CPU can also require the siting of land uses appropriate to noise environments, especially locating noise-sensitive land uses at specified distances from major sources of noise. Additional measures that may be employed when setbacks are not sufficient include site design such that noise sensitive, exterior use area, such as backyards, are shielded from adjacent roadways and interior noise levels comply with the City standards through the use of acoustically rated wall and window components.

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8.0 References

California Air Pollution Control Officers Association (CAPCOA)

2010 Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures. August.

California Air Resources Board (CARB)

2008 Climate Change Scoping Plan: A Framework for Change. Accessed from the CARB website April 15, 2010 at http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. December.

2010a Greenhouse Gas Emission Forecast for 2020: Data Sources, Methods, and Assumptions, and Status of Scoping Plan Recommended Measures. October 28. Accessed from the CARB website at http://www.arb.ca.gov/cc/inventory/data/forecast.htm and http://www.arb.ca.gov/cc/scopingplan/status_of_scoping plan measures.pdf on May 4, 2012.

2010b Greenhouse Gas Inventory Data – 2000 to 2008. Obtained from the CARB website at http://www.arb.ca.gov/cc/inventory/data/data.htm (last updated May 12, 2010) on December 28.

2010c Senate Bill 375 – Regional Targets. Obtained from the CARB website at http://www.arb.ca.gov/cc/sb375/sb375.htm on October 29.

2011a Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document. August 19. Accessed from the CARB website at http://www.arb.ca.gov/cc/scopingplan/document/final_supplement_to_sp_fed.pdf on May 9, 2012.

California Department of Transportation (Caltrans)

2004 Transportation- and Construction-Induced Vibration Guidance Manual. June. Available at: http://www.dot.ca.gov/hq/env/noise/pub/vibrationmanFINAL.pdf.

2006 Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects. August 14.

2009a Technical Noise Supplement. November. Available at: http://www.dot.ca.gov/hq/env/noise/pub/tens_complete.pdf.

2009b 2008 California Motor Vehicle Stock, Travel and Fuel Forecast. Division of Transportation System Information Program. June.

2011 2010 Traffic on the California State Highways.

California, State of

2000 Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles. California Air Resources Board. Stationary Source Division, Mobile Source Control Division. October.

2005 *Air Quality and Land Use Handbook: A Community Health Perspective*. California Air Resources Board.

2009 The California Almanac of Emissions and Air Quality—2009 Edition. Planning and Technical Support Division. California Air Resources Board.

2010a ARB Programs. Pages obtained from the CARB website at http://www.arb.ca.gov/html/programs.htm.

2010b $PM_{2.5}$ and PM_{10} Natural Event Document – Southern California High Winds and Wildfires October/November 2007. Obtained from the CARB website at http://www.arb.ca.gov/desig/excevents/2007wildfires.htm on January 3, 2011. (indicated to be a draft document on the website).

2011 iADAM Air Quality Data Statistics. Obtained from the CARB website at http://www.arb.ca.gov/adam/welcome.html.

2012 Ambient Air Quality Standards. California Air Resources Board.

Chen Ryan

2012 Traffic Impact Analysis for the Southeastern San Diego and Encanto Community Plan Updates.

Federal Interagency Committee on Aviation Noise (FICAN)

1992 Federal Agency Review of Selected Airport Noise Analysis Issues. Available at http://www.fican.org/pdf/nai-8-92.pdf.

Federal Transit Administration (FTA)

2006 Transit Noise and Vibration Impact Assessment. July 1.

Marten Law Group

2008 California Sues EPA over Vehicle Emissions Standards. Accessed May 19, 2008 at: http://www.martenlaw.com/news/?20080109-calif-sues-epa.

San Diego Air Pollution Control District (SDAPCD)

2011 Regional Air Quality Strategies. Air Pollution Control District. June.

San Diego Association of Governments (SANDAG)

2010 Greenhouse Gas Reduction Targets Set. News story accessed from the SANDAG website at http://www.sandag.org/index.asp?newsid= 666&fuseaction=news.detail on October 29.

San Diego, City of

2008 General Plan, Noise Element, March 10.

2011 California Environmental Quality Act. Significance Determination Thresholds. Development Services Department. January 2011.

2012 City of San Diego Climate Mitigation and Adaptation Plan. Draft. August 28.

San Diego, County of

1998 Air Quality in San Diego County. 1997 Annual Report. San Diego Air Pollution Control District.

2008 Air Quality in San Diego County. 2007 Annual Report. San Diego Air Pollution Control District.

2010 2009 Air Toxics “Hot Spots” Program Report for San Diego, County. California Air Toxics “Hot Spots” Information and Assessment Act (AB 2588). San Diego Air Pollution Control District. December 8.

San Diego County Regional Airport Authority

2004 Airport Land Use Compatibility Plan, San Diego International Airport, San Diego, California. Amended October 4.

San Diego Foundation

2012 San Diego’s Changing Climate: A Regional Wake-up Call. A Summary of the Focus 2050 Study Presented by the San Diego Foundation. Accessed from the San Diego Foundation website at sdfoundation.org on November 16.

San Diego Metropolitan Transit System (SDMTS)

2012 Trolley Information. Available at: http://www.sdmts.com/trolley/trolley.asp

U.S. Department of Transportation, Federal Highway Administration (FHWA)

2006 Memorandum: Interim Guidance on Air Toxic Analysis in NEPA documents. February 3. Available at http://www.fhwa.dot.gov.

U.S. Environmental Protection Agency (U.S. EPA)

1996 EPA Takes Final Step in Phaseout of Leaded Gasoline. January 29.

2009b Air Quality Designations for the 2006 24-Hour Fine Particle ($PM_{2.5}$) National Ambient Air Quality Standards: Final Rule. Federal Register 74(218): 58717. November 13.

2010 Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2008. U.S. Greenhouse Gas Inventory Program, Office of Atmospheric Programs. 430-R-10-006. April 15.

2012a The Six Common Air Pollutants. Available at: http://www.epa.gov/air/urbanair/

2012b Enviromapper for Envirofacts. http://www.epa.gov/emefdata/em4ef.home

University of San Diego

2008 Greenhouse Gas Inventory: An Analysis of Regional Emissions and Strategies to Achieve AB 32 Targets. Prepared by the University of San Diego School of Law, Energy Policy Initiative Center (EPIC), and available online at http://www.sandiego.edu/epic/ghginventory/. September.

Western Regional Climate Center (WRCC)

2012 Western U.S. Climate Historical Summaries. Accessed May 18.

ATTACHMENTS

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ATTACHMENT 1

Existing Noise Measurements

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Measured Noise Levels - Southeastern San Diego

Meter	
Model	820
SN	1824

Calibrator	
Model	200
SN	8324

Measurement SE-1
62.8 dB(A)

Day-Month	Year	Time	Level	Lmax	SEL	
16-Nov	12	9:15:00	65	66.9	71.9	3162278
16-Nov	12	9:15:05	66.7	68.3	73.7	4677351
16-Nov	12	9:15:10	65.8	67.5	72.8	3801894
16-Nov	12	9:15:15	68.5	70	75.4	7079458
16-Nov	12	9:15:20	63.5	66.6	70.5	2238721
16-Nov	12	9:15:25	61.4	62	68.3	1380384
16-Nov	12	9:15:30	60.4	62.2	67.4	1096478
16-Nov	12	9:15:35	62.6	63.2	69.6	1819701
16-Nov	12	9:15:40	59.9	62	66.9	977237.2
16-Nov	12	9:15:45	58.4	59.5	65.4	691831
16-Nov	12	9:15:50	62.6	64	69.6	1819701
16-Nov	12	9:15:55	64.5	65.1	71.5	2818383
16-Nov	12	9:16:00	65.2	65.6	72.2	3311311
16-Nov	12	9:16:05	63.9	64.7	70.9	2454709
16-Nov	12	9:16:10	62.3	63.7	69.3	1698244
16-Nov	12	9:16:15	63	65.1	70	1995262
16-Nov	12	9:16:20	60	63.5	67	1000000
16-Nov	12	9:16:25	60.3	63.5	67.3	1071519
16-Nov	12	9:16:30	58.9	62.1	65.9	776247.1
16-Nov	12	9:16:35	57.6	58.1	64.6	575439.9
16-Nov	12	9:16:40	63.1	68.3	70.1	2041738
16-Nov	12	9:16:45	60	62.8	67	1000000
16-Nov	12	9:16:50	61.1	61.7	68.1	1288250
16-Nov	12	9:16:55	62.6	63.7	69.6	1819701
16-Nov	12	9:17:00	63.9	64.3	70.9	2454709
16-Nov	12	9:17:05	63.2	64.2	70.2	2089296
16-Nov	12	9:17:10	61.7	62	68.7	1479108
16-Nov	12	9:17:15	60.8	61.6	67.8	1202264
16-Nov	12	9:17:20	63.1	64.3	70.1	2041738
16-Nov	12	9:17:25	60.8	63.8	67.8	1202264
16-Nov	12	9:17:30	57.8	59	64.8	602559.6
16-Nov	12	9:17:35	62.2	66.1	69.2	1659587
16-Nov	12	9:17:40	60.3	64	67.3	1071519
16-Nov	12	9:17:45	60.8	62.3	67.8	1202264
16-Nov	12	9:17:50	65.8	67	72.8	3801894
16-Nov	12	9:17:55	61	64.1	68	1258925
16-Nov	12	9:18:00	64.7	66.8	71.7	2951209
16-Nov	12	9:18:05	66	66.8	73	3981072
16-Nov	12	9:18:10	63.7	64.6	70.7	2344229
16-Nov	12	9:18:15	63.6	64.5	70.6	2290868
16-Nov	12	9:18:20	63.3	63.8	70.3	2137962
16-Nov	12	9:18:25	62.6	63.3	69.6	1819701
16-Nov	12	9:18:30	61.1	63.7	68.1	1288250
16-Nov	12	9:18:35	56.4	57.8	63.3	436515.8
16-Nov	12	9:18:40	59.8	62.8	66.8	954992.6
16-Nov	12	9:18:45	66.6	69.6	73.6	4570882
16-Nov	12	9:18:50	64.3	68.1	71.3	2691535
16-Nov	12	9:18:55	61.3	62.1	68.3	1348963
16-Nov	12	9:19:00	59.7	60.6	66.7	933254.3
16-Nov	12	9:19:05	61.1	63.5	68.1	1288250
16-Nov	12	9:19:10	62.8	63.8	69.8	1905461
16-Nov	12	9:19:15	63.6	64.7	70.6	2290868
16-Nov	12	9:19:20	60	62	67	1000000
16-Nov	12	9:19:25	56.4	57.5	63.4	436515.8
16-Nov	12	9:19:30	62.5	67.8	69.5	1778279
16-Nov	12	9:19:35	68.8	70.3	75.8	7585776
16-Nov	12	9:19:40	62.7	66.6	69.7	1862087
16-Nov	12	9:19:45	63.2	64.1	70.2	2089296
16-Nov	12	9:19:50	66.1	69.8	73.1	4073803
16-Nov	12	9:19:55	69.2	71.6	76.2	8317638
16-Nov	12	9:20:00	63.5	65.5	70.4	2238721
16-Nov	12	9:20:05	64.4	65.5	71.4	2754229
16-Nov	12	9:20:10	60.7	62.8	67.7	1174898
16-Nov	12	9:20:15	59	62	66	794328.2
16-Nov	12	9:20:20	57.9	60.8	64.9	616595
16-Nov	12	9:20:25	60	61.8	67	1000000
16-Nov	12	9:20:30	62.4	65.1	69.4	1737801
16-Nov	12	9:20:35	68.2	72.5	75.2	6606934
16-Nov	12	9:20:40	71.6	74.1	78.6	14454398
16-Nov	12	9:20:45	65	66.5	72	3162278
16-Nov	12	9:20:50	66.4	69.8	73.4	4365158
16-Nov	12	9:20:55	66.7	69.2	73.7	4677351
16-Nov	12	9:21:00	62.3	64	69.3	1698244
16-Nov	12	9:21:05	62.6	65.6	69.6	1819701
16-Nov	12	9:21:10	60.4	61.5	67.4	1096478
16-Nov	12	9:21:15	60.3	62.1	67.3	1071519
16-Nov	12	9:21:20	61.5	62.5	68.5	1412538
16-Nov	12	9:21:25	62.2	63.2	69.2	1659587
16-Nov	12	9:21:30	59.6	61.6	66.6	912010.8
16-Nov	12	9:21:35	60.2	62.2	67.2	1047129
16-Nov	12	9:21:40	58.2	58.8	65.2	660693.4
16-Nov	12	9:21:45	63.2	66.1	70.2	2089296
16-Nov	12	9:21:50	64.4	66.1	71.4	2754229
16-Nov	12	9:21:55	62.9	64.5	69.9	1949845
16-Nov	12	9:22:00	61	62	68	1258925
16-Nov	12	9:22:05	61.3	63.6	68.3	1348963
16-Nov	12	9:22:10	55.4	57.5	62.4	346736.9
16-Nov	12	9:22:15	55.1	55.5	62.1	323593.7
16-Nov	12	9:22:20	58.8	62.8	65.8	758577.6
16-Nov	12	9:22:25	60.3	63	67.3	1071519
16-Nov	12	9:22:30	59.6	61.8	66.6	912010.8
16-Nov	12	9:22:35	60	61.7	66.9	1000000
16-Nov	12	9:22:40	61.2	62.1	68.2	1318257
16-Nov	12	9:22:45	61.5	63.3	68.5	1412538
16-Nov	12	9:22:50	62.9	64.5	69.9	1949845
16-Nov	12	9:22:55	62.5	64.6	69.5	1778279
16-Nov	12	9:23:00	59.4	60	66.4	870963.6
16-Nov	12	9:23:05	58	59.5	65	630957.3
16-Nov	12	9:23:10	57.3	61	64.3	537031.8
16-Nov	12	9:23:15	58.4	61	65.4	691831
16-Nov	12	9:23:20	56.4	56.9	63.3	436515.8
16-Nov	12	9:23:25	57.9	60.1	64.9	616595
16-Nov	12	9:23:30	57	60	64	501187.2
16-Nov	12	9:23:35	54	55.6	61	251188.6
16-Nov	12	9:23:40	58.5	61.3	65.5	707945.8
16-Nov	12	9:23:45	63.1	63.9	70.1	2041738
16-Nov	12	9:23:50	64.9	65.8	71.9	3090295
16-Nov	12	9:23:55	65.2	70.1	72.2	3311311
16-Nov	12	9:24:00	65.7	68.8	72.7	3715352
16-Nov	12	9:24:05	61.9	64.7	68.9	1548817
16-Nov	12	9:24:10	59.9	65.6	66.9	977237.2
16-Nov	12	9:24:15	68.4	69.5	75.4	6918310
16-Nov	12	9:24:20	70.5	72.2	77.4	11220185
16-Nov	12	9:24:25	63.5	67.6	70.5	2238721
16-Nov	12	9:24:30	55.2	57.3	62.2	331131.1
16-Nov	12	9:24:35	60.6	63.3	67.6	1148154
16-Nov	12	9:24:40	63.6	64.3	70.6	2290868
16-Nov	12	9:24:45	62.3	63.2	69.3	1698244
16-Nov	12	9:24:50	60.5	63	67.5	1122018
16-Nov	12	9:24:55	61.4	63.2	68.4	1380384
16-Nov	12	9:25:00	61.3	63.2	68.3	1348963
16-Nov	12	9:25:05	60.3	61.6	67.3	1071519
16-Nov	12	9:25:10	62.2	63.5	69.2	1659587
16-Nov	12	9:25:15	61.2	62.7	68.2	1318257
16-Nov	12	9:25:20	62.1	62.7	69.1	1621810
16-Nov	12	9:25:25	63.3	64.8	70.3	2137962
16-Nov	12	9:25:30	63.8	65.2	70.8	2398833
16-Nov	12	9:25:35	63	64.3	70	1995262
16-Nov	12	9:25:40	60.5	62.1	67.4	1122018
16-Nov	12	9:25:45	58.4	59	65.4	691831
16-Nov	12	9:25:50	58.4	60.8	65.4	691831
16-Nov	12	9:25:55	61.8	63.3	68.8	1513561
16-Nov	12	9:26:00	56.9	60.7	63.9	489778.8
16-Nov	12	9:26:05	53	53.3	59.9	199526.2
16-Nov	12	9:26:10	52.5	53.3	59.5	177827.9
16-Nov	12	9:26:15	54.8	56	61.8	301995.2
16-Nov	12	9:26:20	57.6	61.6	64.6	575439.9
16-Nov	12	9:26:25	73.4	76.2	80.3	21877616
16-Nov	12	9:26:30	68.8	75.3	75.8	7585776
16-Nov	12	9:26:35	58.5	59	65.5	707945.8
16-Nov	12	9:26:40	59.1	60.5	66.1	812830.5
16-Nov	12	9:26:45	61.3	63	68.3	1348963
16-Nov	12	9:26:50	62.6	63.3	69.6	1819701
16-Nov	12	9:26:55	60	61.1	67	1000000
16-Nov	12	9:27:00	61.6	62.3	68.6	1445440
16-Nov	12	9:27:05	58.6	60.7	65.6	724436
16-Nov	12	9:27:10	60	62.2	67	1000000
16-Nov	12	9:27:15	61.1	61.8	68.1	1288250
16-Nov	12	9:27:20	56	59.1	63	398107.2
16-Nov	12	9:27:25	55.1	56.6	62.1	323593.7
16-Nov	12	9:27:30	60	64	67	1000000
16-Nov	12	9:27:35	59.1	60.3	66.1	812830.5
16-Nov	12	9:27:40	60.9	63.5	67.9	1230269
16-Nov	12	9:27:45	62	64.2	69	1584893
16-Nov	12	9:27:50	55.5	56.7	62.5	354813.4
16-Nov	12	9:27:55	52.6	53.3	59.6	181970.1
16-Nov	12	9:28:00	52.4	53	59.4	173780.1
16-Nov	12	9:28:05	52.3	53.1	59.3	169824.4
16-Nov	12	9:28:10	54.6	55.6	61.6	288403.2
16-Nov	12	9:28:15	58.5	60.7	65.5	707945.8
16-Nov	12	9:28:20	53.9	56.3	60.9	245470.9
16-Nov	12	9:28:25	52.3	52.8	59.3	169824.4
16-Nov	12	9:28:30	53.5	55.1	60.5	223872.1
16-Nov	12	9:28:35	58.1	60.5	65.1	645654.2
16-Nov	12	9:28:40	61.9	64	68.9	1548817
16-Nov	12	9:28:45	63	64.1	69.9	1995262
16-Nov	12	9:28:50	61.7	63.3	68.7	1479108
16-Nov	12	9:28:55	58.9	61	65.9	776247.1
16-Nov	12	9:29:00	52	54	59	158489.3
16-Nov	12	9:29:05	56.5	60.6	63.5	446683.6
16-Nov	12	9:29:10	56.7	59.8	63.7	467735.1
16-Nov	12	9:29:15	61.8	64.1	68.8	1513561
16-Nov	12	9:29:20	61.9	64.5	68.9	1548817
16-Nov	12	9:29:25	55	56.1	62	316227.8
16-Nov	12	9:29:30	57.9	60.2	64.9	616595
16-Nov	12	9:29:35	61.6	62.8	68.6	1445440
16-Nov	12	9:29:40	61.3	62.7	68.3	1348963
16-Nov	12	9:29:45	62.6	63.1	69.6	1819701
16-Nov	12	9:29:50	60.4	62	67.3	1096478
16-Nov	12	9:29:55	65.6	67	72.6	3630781
16-Nov	12	9:30:00	63.3	65.8	70.3	2137962

Measurement SE-2
63.0 dB(A)

Day-Month	Year	Time	Level	Lmax	SEL	
15-Nov	12	17:28:00	66.4	70.1	73.3	4365158
15-Nov	12	17:28:05	62.6	66.3	69.6	1819701
15-Nov	12	17:28:10	58.5	60.1	65.5	707945.8
15-Nov	12	17:28:15	57.6	58.8	64.6	575439.9
15-Nov	12	17:28:20	58.5	59.8	65.4	707945.8
15-Nov	12	17:28:25	57.4	58.1	64.4	549540.9
15-Nov	12	17:28:30	57.1	58.4	64.1	512861.4
15-Nov	12	17:28:35	61	64.4	68	1258925
15-Nov	12	17:28:40	63.6	65.6	70.6	2290868
15-Nov	12	17:28:45	62.8	65	69.8	1905461
15-Nov	12	17:28:50	57.2	58.9	64.2	524807.5
15-Nov	12	17:28:55	58.5	61.8	65.5	707945.8
15-Nov	12	17:29:00	63.5	64.5	70.5	2238721
15-Nov	12	17:29:05	58.9	61.2	65.9	776247.1
15-Nov	12	17:29:10	59.5	60	66.5	891250.9
15-Nov	12	17:29:15	61.5	63.9	68.5	1412538
15-Nov	12	17:29:20	63.1	64.3	70.1	2041738
15-Nov	12	17:29:25	59.2	60.9	66.2	831763.8
15-Nov	12	17:29:30	61.5	63.4	68.4	1412538
15-Nov	12	17:29:35	61.3	62.9	68.3	1348963
15-Nov	12	17:29:40	60	60.8	67	1000000
15-Nov	12	17:29:45	62.7	63.8	69.7	1862087
15-Nov	12	17:29:50	64.4	64.9	71.4	2754229
15-Nov	12	17:29:55	65.2	65.8	72.2	3311311
15-Nov	12	17:30:00	61.2	64.8	68.2	1318257
15-Nov	12	17:30:05	55.5	56.6	62.5	354813.4
15-Nov	12	17:30:10	57.3	58.1	64.3	537031.8
15-Nov	12	17:30:15	60.7	62.9	67.7	1174898
15-Nov	12	17:30:20	56.7	58.9	63.7	467735.1
15-Nov	12	17:30:25	55.7	57.3	62.7	371535.2
15-Nov	12	17:30:30	60.4	62.3	67.4	1096478
15-Nov	12	17:30:35	60	61	67	1000000
15-Nov	12	17:30:40	59.2	61	66.2	831763.8
15-Nov	12	17:30:45	55.7	56.8	62.7	371535.2
15-Nov	12	17:30:50	59.8	62	66.8	954992.6
15-Nov	12	17:30:55	64.5	68.3	71.4	2818383
15-Nov	12	17:31:00	71.2	74.5	78.2	13182567
15-Nov	12	17:31:05	73.5	75	80.5	22387211
15-Nov	12	17:31:10	66.5	70.6	73.4	4466836
15-Nov	12	17:31:15	64.5	66.1	71.5	2818383
15-Nov	12	17:31:20	62.2	64.3	69.2	1659587
15-Nov	12	17:31:25	62.5	64.4	69.5	1778279
15-Nov	12	17:31:30	59.8	61	66.8	954992.6
15-Nov	12	17:31:35	61.3	62.3	68.3	1348963
15-Nov	12	17:31:40	60.3	61.1	67.3	1071519
15-Nov	12	17:31:45	59.5	60.4	66.5	891250.9
15-Nov	12	17:31:50	58.5	60	65.4	707945.8
15-Nov	12	17:31:55	59.8	62.9	66.8	954992.6
15-Nov	12	17:32:00	64	65.8	71	2511886
15-Nov	12	17:32:05	63.9	64.6	70.9	2454709
15-Nov	12	17:32:10	63.2	65	70.2	2089296
15-Nov	12	17:32:15	61.4	64.8	68.4	1380384
15-Nov	12	17:32:20	59.1	60.1	66.1	812830.5
15-Nov	12	17:32:25	60.7	62.5	67.7	1174898
15-Nov	12	17:32:30	62	62.6	69	1584893
15-Nov	12	17:32:35	56.9	60.9	63.9	489778.8
15-Nov	12	17:32:40	53.4	53.8	60.4	218776.2
15-Nov	12	17:32:45	54.3	55.3	61.3	269153.5
15-Nov	12	17:32:50	55.4	57.8	62.4	346736.9
15-Nov	12	17:32:55	55.9	57.4	62.8	389045.1
15-Nov	12	17:33:00	54.9	57.1	61.8	309029.5
15-Nov	12	17:33:05	59.8	62.5	66.8	954992.6
15-Nov	12	17:33:10	63.4	64.7	70.4	2187762
15-Nov	12	17:33:15	59.4	61.5	66.3	870963.6
15-Nov	12	17:33:20	58.4	60.9	65.4	691831
15-Nov	12	17:33:25	62.4	64.7	69.4	1737801
15-Nov	12	17:33:30	65.6	68	72.6	3630781
15-Nov	12	17:33:35	63.4	67.4	70.3	2187762
15-Nov	12	17:33:40	57.3	58	64.3	537031.8
15-Nov	12	17:33:45	57.5	58.9	64.5	562341.3
15-Nov	12	17:33:50	62.7	64.9	69.7	1862087
15-Nov	12	17:33:55	64.8	66.4	71.8	3019952
15-Nov	12	17:34:00	61	64.5	67.9	1258925
15-Nov	12	17:34:05	66.9	74	73.9	4897788
15-Nov	12	17:34:10	74.1	75.9	81.1	25703958
15-Nov	12	17:34:15	67.6	69.5	74.6	5754399
15-Nov	12	17:34:20	61.6	64.4	68.6	1445440
15-Nov	12	17:34:25	60.2	61	67.2	1047129
15-Nov	12	17:34:30	59.9	62.5	66.9	977237.2
15-Nov	12	17:34:35	62.3	63.2	69.3	1698244
15-Nov	12	17:34:40	64	66.4	71	2511886
15-Nov	12	17:34:45	65.7	66.2	72.7	3715352
15-Nov	12	17:34:50	62.4	64.6	69.4	1737801
15-Nov	12	17:34:55	58.8	60.6	65.8	758577.6
15-Nov	12	17:35:00	57.3	63	64.3	537031.8
15-Nov	12	17:35:05	63.9	68	70.9	2454709
15-Nov	12	17:35:10	58.2	59.1	65.2	660693.4
15-Nov	12	17:35:15	59.9	62	66.9	977237.2
15-Nov	12	17:35:20	59.7	61	66.7	933254.3
15-Nov	12	17:35:25	62.7	64.6	69.7	1862087
15-Nov	12	17:35:30	62.9	63.9	69.9	1949845
15-Nov	12	17:35:35	59	61.1	66	794328.2
15-Nov	12	17:35:40	56.5	57	63.5	446683.6
15-Nov	12	17:35:45	59.9	60.7	66.9	977237.2
15-Nov	12	17:35:50	59.9	60.7	66.9	977237.2
15-Nov	12	17:35:55	59.2	59.9	66.2	831763.8
15-Nov	12	17:36:00	57.7	59.2	64.7	588843.7
15-Nov	12	17:36:05	60.2	61.4	67.2	1047129
15-Nov	12	17:36:10	60	61.6	67	1000000
15-Nov	12	17:36:15	59.3	61	66.3	851138
15-Nov	12	17:36:20	62.1	64.7	69.1	1621810
15-Nov	12	17:36:25	62.7	62.9	69.7	1862087
15-Nov	12	17:36:30	63	64.6	70	1995262
15-Nov	12	17:36:35	65.3	66.6	72.3	3388442
15-Nov	12	17:36:40	63.1	64	70.1	2041738
15-Nov	12	17:36:45	62.6	65.4	69.6	1819701
15-Nov	12	17:36:50	61.5	62	68.4	1412538
15-Nov	12	17:36:55	61.9	62.9	68.9	1548817
15-Nov	12	17:37:00	61.7	62.5	68.7	1479108
15-Nov	12	17:37:05	62	63.2	69	1584893
15-Nov	12	17:37:10	62.9	64.7	69.9	1949845
15-Nov	12	17:37:15	59.1	61.7	66.1	812830.5
15-Nov	12	17:37:20	55.8	56.4	62.8	380189.4
15-Nov	12	17:37:25	58.7	61	65.6	741310.2
15-Nov	12	17:37:30	62.6	63.5	69.6	1819701
15-Nov	12	17:37:35	59.1	62.7	66.1	812830.5
15-Nov	12	17:37:40	56.6	58.6	63.6	457088.2
15-Nov	12	17:37:45	59.3	61.1	66.3	851138
15-Nov	12	17:37:50	58.1	60	65.1	645654.2
15-Nov	12	17:37:55	58.7	60	65.7	741310.2
15-Nov	12	17:38:00	57.7	59.6	64.7	588843.7
15-Nov	12	17:38:05	61.1	62	68.1	1288250
15-Nov	12	17:38:10	63	63.7	70	1995262
15-Nov	12	17:38:15	61.2	63.6	68.1	1318257
15-Nov	12	17:38:20	58.6	60	65.6	724436
15-Nov	12	17:38:25	59.3	60.7	66.3	851138
15-Nov	12	17:38:30	61	62.7	67.9	1258925
15-Nov	12	17:38:35	65.1	66.6	72.1	3235937
15-Nov	12	17:38:40	73.2	75.4	80.2	20892961
15-Nov	12	17:38:45	65.3	71.1	72.3	3388442
15-Nov	12	17:38:50	64	64.6	71	2511886
15-Nov	12	17:38:55	61.5	63.2	68.5	1412538
15-Nov	12	17:39:00	59.8	61.7	66.8	954992.6
15-Nov	12	17:39:05	60.1	61.7	67.1	1023293
15-Nov	12	17:39:10	58.7	59.7	65.7	741310.2
15-Nov	12	17:39:15	58.7	59.2	65.7	741310.2
15-Nov	12	17:39:20	58.6	60.1	65.6	724436
15-Nov	12	17:39:25	60.3	61.5	67.3	1071519
15-Nov	12	17:39:30	62.5	63.4	69.5	1778279
15-Nov	12	17:39:35	66.8	69.2	73.8	4786301
15-Nov	12	17:39:40	73.5	79.6	80.5	22387211
15-Nov	12	17:39:45	64	69.7	71	2511886
15-Nov	12	17:39:50	57.9	60.2	64.9	616595
15-Nov	12	17:39:55	61	63.6	68	1258925
15-Nov	12	17:40:00	61.2	63.6	68.1	1318257
15-Nov	12	17:40:05	58.9	59.7	65.9	776247.1
15-Nov	12	17:40:10	62	63.1	69	1584893
15-Nov	12	17:40:15	61.3	62.6	68.3	1348963
15-Nov	12	17:40:20	59.7	60.7	66.6	933254.3
15-Nov	12	17:40:25	62.3	63.7	69.3	1698244
15-Nov	12	17:40:30	61.6	62.4	68.6	1445440
15-Nov	12	17:40:35	61.2	62.4	68.2	1318257
15-Nov	12	17:40:40	62.7	64.4	69.7	1862087
15-Nov	12	17:40:45	60.9	61.7	67.9	1230269
15-Nov	12	17:40:50	60.2	60.6	67.2	1047129
15-Nov	12	17:40:55	57.4	59.4	64.4	549540.9
15-Nov	12	17:41:00	60.9	63.2	67.9	1230269
15-Nov	12	17:41:05	62.4	63.6	69.4	1737801
15-Nov	12	17:41:10	60	60.9	67	1000000
15-Nov	12	17:41:15	58.6	59.6	65.6	724436
15-Nov	12	17:41:20	57.4	58.7	64.4	549540.9
15-Nov	12	17:41:25	62.5	64.7	69.5	1778279
15-Nov	12	17:41:30	60.1	63	67.1	1023293
15-Nov	12	17:41:35	63.4	64.5	70.4	2187762
15-Nov	12	17:41:40	62.1	62.9	69.1	1621810
15-Nov	12	17:41:45	62.6	63.6	69.6	1819701
15-Nov	12	17:41:50	60.7	62.2	67.7	1174898
15-Nov	12	17:41:55	63.7	64.7	70.7	2344229
15-Nov	12	17:42:00	63.5	64.4	70.5	2238721
15-Nov	12	17:42:05	63.1	64.7	70.1	2041738
15-Nov	12	17:42:10	58.9	61	65.9	776247.1
15-Nov	12	17:42:15	57.5	60	64.5	562341.3
15-Nov	12	17:42:20	61.6	62.4	68.6	1445440
15-Nov	12	17:42:25	59.7	61.2	66.7	933254.3
15-Nov	12	17:42:30	59.7	61.2	66.7	933254.3
15-Nov	12	17:42:35	61.5	62	68.5	1412538
15-Nov	12	17:42:40	60.5	61.1	67.5	1122018
15-Nov	12	17:42:45	61.5	62	68.5	1412538
15-Nov	12	17:42:50	62.9	64.4	69.9	1949845
15-Nov	12	17:42:55	64	65.2	71	2511886
15-Nov	12	17:43:00	63.2	63.2	70.2	2089296

Measurement SE-3
63.6 dB(A)

Day-Month	Year	Time	Level	Lmax	SEL	
15-Nov	12	17:05:00	60.3	62.6	67.3	1071519
15-Nov	12	17:05:05	59.1	60.9	66.1	812830.5
15-Nov	12	17:05:10	57	59.5	64	501187.2
15-Nov	12	17:05:15	76.2	81.1	83.1	41686938
15-Nov	12	17:05:20	68.3	74.3	75.3	6760830
15-Nov	12	17:05:25	57.2	60.7	64.2	524807.5
15-Nov	12	17:05:30	56.2	59.3	63.2	416869.4
15-Nov	12	17:05:35	55.8	58.8	62.8	380189.4
15-Nov	12	17:05:40	57.1	62.7	64.1	512861.4
15-Nov	12	17:05:45	60.5	62.6	67.5	1122018
15-Nov	12	17:05:50	57.8	60.5	64.8	602559.6
15-Nov	12	17:05:55	56.5	58.3	63.5	446683.6
15-Nov	12	17:06:00	59.3	60.7	66.3	851138
15-Nov	12	17:06:05	63.8	66.2	70.8	2398833
15-Nov	12	17:06:10	63	64.7	70	1995262
15-Nov	12	17:06:15	61.6	63.4	68.6	1445440
15-Nov	12	17:06:20	60	63.3	67	1000000
15-Nov	12	17:06:25	62.4	64.7	69.4	1737801
15-Nov	12	17:06:30	61.8	64.8	68.8	1513561
15-Nov	12	17:06:35	61.3	63.2	68.3	1348963
15-Nov	12	17:06:40	61.5	62.7	68.5	1412538
15-Nov	12	17:06:45	60.6	62.1	67.6	1148154
15-Nov	12	17:06:50	61.2	63.1	68.2	1318257
15-Nov	12	17:06:55	59.9	62.9	66.9	977237.2
15-Nov	12	17:07:00	57.8	59.2	64.8	602559.6
15-Nov	12	17:07:05	59	61.1	66	794328.2
15-Nov	12	17:07:10	62.4	64.5	69.4	1737801
15-Nov	12	17:07:15	61.1	62.2	68.1	1288250
15-Nov	12	17:07:20	62.8	65.5	69.8	1905461
15-Nov	12	17:07:25	68.6	71.8	75.6	7244360
15-Nov	12	17:07:30	65	69.2	72	3162278
15-Nov	12	17:07:35	63.8	67.2	70.8	2398833
15-Nov	12	17:07:40	63.8	68.1	70.8	2398833
15-Nov	12	17:07:45	64.5	68	71.5	2818383
15-Nov	12	17:07:50	64.7	67.3	71.7	2951209
15-Nov	12	17:07:55	58.7	60.3	65.7	741310.2
15-Nov	12	17:08:00	59.2	60.6	66.2	831763.8
15-Nov	12	17:08:05	59.5	62.3	66.5	891250.9
15-Nov	12	17:08:10	57.2	59.3	64.2	524807.5
15-Nov	12	17:08:15	58.5	60.5	65.5	707945.8
15-Nov	12	17:08:20	59.2	60.6	66.1	831763.8
15-Nov	12	17:08:25	62.6	66	69.6	1819701
15-Nov	12	17:08:30	63.1	66.1	70.1	2041738
15-Nov	12	17:08:35	63.6	66.1	70.6	2290868
15-Nov	12	17:08:40	63.2	64.6	70.2	2089296
15-Nov	12	17:08:45	60.8	62.8	67.8	1202264
15-Nov	12	17:08:50	57.7	61.2	64.7	588843.7
15-Nov	12	17:08:55	61.5	64.7	68.5	1412538
15-Nov	12	17:09:00	61.5	64.3	68.5	1412538
15-Nov	12	17:09:05	61.3	63.6	68.3	1348963
15-Nov	12	17:09:10	63.5	65.1	70.4	2238721
15-Nov	12	17:09:15	62.3	64.6	69.3	1698244
15-Nov	12	17:09:20	61.2	63.7	68.2	1318257
15-Nov	12	17:09:25	58.3	59.6	65.3	676083
15-Nov	12	17:09:30	60.4	63.1	67.4	1096478
15-Nov	12	17:09:35	61.3	63.2	68.3	1348963
15-Nov	12	17:09:40	58.3	59.7	65.3	676083
15-Nov	12	17:09:45	57.2	58.8	64.2	524807.5
15-Nov	12	17:09:50	60.3	65.7	67.3	1071519
15-Nov	12	17:09:55	71.7	74.4	78.7	14791084
15-Nov	12	17:10:00	65	70.4	72	3162278
15-Nov	12	17:10:05	59.7	61.6	66.7	933254.3
15-Nov	12	17:10:10	57.9	59.8	64.9	616595
15-Nov	12	17:10:15	58.2	60.4	65.2	660693.4
15-Nov	12	17:10:20	59.5	61.6	66.4	891250.9
15-Nov	12	17:10:25	58.2	61.2	65.2	660693.4
15-Nov	12	17:10:30	61.6	64.2	68.6	1445440
15-Nov	12	17:10:35	67.5	69.2	74.5	5623413
15-Nov	12	17:10:40	62.2	65.1	69.2	1659587
15-Nov	12	17:10:45	58.7	60.7	65.7	741310.2
15-Nov	12	17:10:50	61.3	64.1	68.3	1348963
15-Nov	12	17:10:55	61.8	63.8	68.8	1513561
15-Nov	12	17:11:00	62.4	64.4	69.4	1737801
15-Nov	12	17:11:05	67.4	69.3	74.3	5495409
15-Nov	12	17:11:10	60.7	64.1	67.7	1174898
15-Nov	12	17:11:15	57.1	59.6	64.1	512861.4
15-Nov	12	17:11:20	58.9	59.8	65.9	776247.1
15-Nov	12	17:11:25	59.6	61.6	66.6	912010.8
15-Nov	12	17:11:30	61.8	64.4	68.8	1513561
15-Nov	12	17:11:35	63.1	66.6	70.1	2041738
15-Nov	12	17:11:40	64.2	66.2	71.2	2630268
15-Nov	12	17:11:45	64.6	67.3	71.6	2884032
15-Nov	12	17:11:50	64.4	67.4	71.3	2754229
15-Nov	12	17:11:55	61	63.3	68	1258925
15-Nov	12	17:12:00	61	63.3	68	1258925
15-Nov	12	17:12:05	63.4	67.7	70.3	2187762
15-Nov	12	17:12:10	67.8	69.2	74.8	6025596
15-Nov	12	17:12:15	62.1	65.3	69.1	1621810
15-Nov	12	17:12:20	62.1	64.9	69.1	1621810
15-Nov	12	17:12:25	59.2	62.1	66.2	831763.8
15-Nov	12	17:12:30	59.5	61.7	66.5	891250.9
15-Nov	12	17:12:35	59.1	61.9	66.1	812830.5
15-Nov	12	17:12:40	62.1	64.1	69.1	1621810
15-Nov	12	17:12:45	62.5	66.8	69.4	1778279
15-Nov	12	17:12:50	64.1	67.4	71.1	2570396
15-Nov	12	17:12:55	69.2	72.2	76.2	8317638
15-Nov	12	17:13:00	65.3	68.9	72.3	3388442
15-Nov	12	17:13:05	63.1	65.3	70.1	2041738
15-Nov	12	17:13:10	63.5	65.4	70.5	2238721
15-Nov	12	17:13:15	62.5	64.1	69.4	1778279
15-Nov	12	17:13:20	67.6	71.4	74.6	5754399
15-Nov	12	17:13:25	61	64.6	67.9	1258925
15-Nov	12	17:13:30	56.8	59.1	63.8	478630.1
15-Nov	12	17:13:35	60.5	61.6	67.5	1122018
15-Nov	12	17:13:40	60.7	61.9	67.7	1174898
15-Nov	12	17:13:45	58	59.9	65	630957.3
15-Nov	12	17:13:50	63.5	65.1	70.5	2238721
15-Nov	12	17:13:55	64.2	65.3	71.2	2630268
15-Nov	12	17:14:00	62.1	63.3	69.1	1621810
15-Nov	12	17:14:05	60.5	64.4	67.5	1122018
15-Nov	12	17:14:10	63.5	66.7	70.5	2238721
15-Nov	12	17:14:15	63.4	67.2	70.4	2187762
15-Nov	12	17:14:20	68.7	71.9	75.7	7413102
15-Nov	12	17:14:25	70.2	73	77.2	10471285
15-Nov	12	17:14:30	76.5	79.1	83.5	44668359
15-Nov	12	17:14:35	67.4	72.1	74.4	5495409
15-Nov	12	17:14:40	55.2	58.6	62.2	331131.1
15-Nov	12	17:14:45	56.8	60.4	63.8	478630.1
15-Nov	12	17:14:50	57	59.8	64	501187.2
15-Nov	12	17:14:55	56.1	56.9	63.1	407380.3
15-Nov	12	17:15:00	64.4	68.1	71.4	2754229
15-Nov	12	17:15:05	65.6	67.4	72.6	3630781
15-Nov	12	17:15:10	64.9	65.7	71.8	3090295
15-Nov	12	17:15:15	61.3	63.9	68.3	1348963
15-Nov	12	17:15:20	61.5	64.8	68.5	1412538
15-Nov	12	17:15:25	55.9	57.4	62.9	389045.1
15-Nov	12	17:15:30	56	58.1	63	398107.2
15-Nov	12	17:15:35	54.8	56.8	61.8	301995.2
15-Nov	12	17:15:40	53.7	55.9	60.7	234422.9
15-Nov	12	17:15:45	59.2	63.8	66.2	831763.8
15-Nov	12	17:15:50	57.2	63.6	64.2	524807.5
15-Nov	12	17:15:55	52.6	55.6	59.6	181970.1
15-Nov	12	17:16:00	57.4	59.2	64.4	549540.9
15-Nov	12	17:16:05	57.2	62.9	64.2	524807.5
15-Nov	12	17:16:10	66.1	68.4	73.1	4073803
15-Nov	12	17:16:15	64.6	67.3	71.6	2884032
15-Nov	12	17:16:20	64.8	65.9	71.8	3019952
15-Nov	12	17:16:25	61.1	65.7	68.1	1288250
15-Nov	12	17:16:30	65.4	67.2	72.4	3467369
15-Nov	12	17:16:35	61.4	62.8	68.4	1380384
15-Nov	12	17:16:40	61.1	62.8	68.1	1288250
15-Nov	12	17:16:45	62.8	64.7	69.8	1905461
15-Nov	12	17:16:50	66	67.4	73	3981072
15-Nov	12	17:16:55	64	66	71	2511886
15-Nov	12	17:17:00	59.1	60.5	66.1	812830.5
15-Nov	12	17:17:05	58.9	62.8	65.9	776247.1
15-Nov	12	17:17:10	60.3	62.4	67.3	1071519
15-Nov	12	17:17:15	60.5	62	67.5	1122018
15-Nov	12	17:17:20	62.3	63.9	69.3	1698244
15-Nov	12	17:17:25	63.2	65.7	70.2	2089296
15-Nov	12	17:17:30	62.5	65.5	69.5	1778279
15-Nov	12	17:17:35	63.4	65.3	70.4	2187762
15-Nov	12	17:17:40	60.7	64.9	67.7	1174898
15-Nov	12	17:17:45	57.5	59.9	64.5	562341.3
15-Nov	12	17:17:50	62	64.7	69	1584893
15-Nov	12	17:17:55	60.7	62.3	67.6	1174898
15-Nov	12	17:18:00	59.3	61.3	66.3	851138
15-Nov	12	17:18:05	59.7	64	66.7	933254.3
15-Nov	12	17:18:10	62.6	66.8	69.6	1819701
15-Nov	12	17:18:15	59.1	64.4	66.1	812830.5
15-Nov	12	17:18:20	67.1	71.8	74.1	5128614
15-Nov	12	17:18:25	62.3	67.5	69.3	1698244
15-Nov	12	17:18:30	60.4	63.4	67.4	1096478
15-Nov	12	17:18:35	59.2	62.7	66.2	831763.8
15-Nov	12	17:18:40	57.6	63.5	64.6	575439.9
15-Nov	12	17:18:45	60.7	62.5	67.7	1174898
15-Nov	12	17:18:50	61.2	63.8	68.2	1318257
15-Nov	12	17:18:55	60.8	62.9	67.8	1202264
15-Nov	12	17:19:00	59.4	60.8	66.4	870963.6
15-Nov	12	17:19:05	57.9	59	64.8	616595
15-Nov	12	17:19:10	55.9	57	62.9	389045.1
15-Nov	12	17:19:15	60.8	66.4	67.8	1202264
15-Nov	12	17:19:20	61.2	63.4	68.2	1318257
15-Nov	12	17:19:25	66.1	68.9	73.1	4073803
15-Nov	12	17:19:30	65	68.3	72	3162278
15-Nov	12	17:19:35	59.1	62.5	66.1	812830.5
15-Nov	12	17:19:40	55	57.8	62	316227.8
15-Nov	12	17:19:45	64.5	68.2	71.5	2818383
15-Nov	12	17:19:50	58.6	62.7	65.6	724436
15-Nov	12	17:19:55	60.7	64.5	67.7	1174898
15-Nov	12	17:20:00	61.6	62	68.6	1445440

Measurement SE-4
63.5 dB(A)

Day-Month	Year	Time	Level	Lmax	SEL	
15-Nov	12	16:23:00	61.6	62.4	68.6	1445440
15-Nov	12	16:23:05	59.5	60.3	66.5	891250.9
15-Nov	12	16:23:10	60.6	61	67.6	1148154
15-Nov	12	16:23:15	60.1	60.8	67.1	1023293
15-Nov	12	16:23:20	61.4	63.6	68.4	1380384
15-Nov	12	16:23:25	67.8	68.8	74.8	6025596
15-Nov	12	16:23:30	63.4	67.5	70.3	2187762
15-Nov	12	16:23:35	59	59.5	66	794328.2
15-Nov	12	16:23:40	61	63.6	68	1258925
15-Nov	12	16:23:45	62.9	63.8	69.9	1949845
15-Nov	12	16:23:50	64.1	65.1	71.1	2570396
15-Nov	12	16:23:55	62.6	64.1	69.6	1819701
15-Nov	12	16:24:00	63.6	65.4	70.6	2290868
15-Nov	12	16:24:05	62.7	63.5	69.7	1862087
15-Nov	12	16:24:10	64.9	66.1	71.8	3090295
15-Nov	12	16:24:15	64.5	67.3	71.5	2818383
15-Nov	12	16:24:20	66.5	67.5	73.5	4466836
15-Nov	12	16:24:25	65.4	66.3	72.4	3467369
15-Nov	12	16:24:30	62.8	64.5	69.8	1905461
15-Nov	12	16:24:35	60.8	62	67.8	1202264
15-Nov	12	16:24:40	59.9	60.3	66.9	977237.2
15-Nov	12	16:24:45	59.4	60.3	66.4	870963.6
15-Nov	12	16:24:50	58.9	60.3	65.9	776247.1
15-Nov	12	16:24:55	61	64.4	68	1258925
15-Nov	12	16:25:00	64.6	65.8	71.6	2884032
15-Nov	12	16:25:05	62.2	63.1	69.2	1659587
15-Nov	12	16:25:10	64.5	65.4	71.5	2818383
15-Nov	12	16:25:15	63.4	64	70.4	2187762
15-Nov	12	16:25:20	61.3	61.8	68.3	1348963
15-Nov	12	16:25:25	61.5	62	68.5	1412538
15-Nov	12	16:25:30	61.1	62.1	68.1	1288250
15-Nov	12	16:25:35	59.8	60.1	66.8	954992.6
15-Nov	12	16:25:40	59.6	61.6	66.6	912010.8
15-Nov	12	16:25:45	60.8	61.6	67.8	1202264
15-Nov	12	16:25:50	57.6	58.9	64.6	575439.9
15-Nov	12	16:25:55	59.3	60.4	66.3	851138
15-Nov	12	16:26:00	60.5	62.6	67.5	1122018
15-Nov	12	16:26:05	65	66.5	72	3162278
15-Nov	12	16:26:10	69.3	72	76.3	8511380
15-Nov	12	16:26:15	71.8	72.5	78.8	15135612
15-Nov	12	16:26:20	68.3	70.8	75.3	6760830
15-Nov	12	16:26:25	62.3	63.8	69.3	1698244
15-Nov	12	16:26:30	60.2	61.3	67.2	1047129
15-Nov	12	16:26:35	61.2	61.5	68.2	1318257
15-Nov	12	16:26:40	59.5	60.6	66.4	891250.9
15-Nov	12	16:26:45	58.6	59.8	65.6	724436
15-Nov	12	16:26:50	62.2	63.6	69.2	1659587
15-Nov	12	16:26:55	60	62.3	67	1000000
15-Nov	12	16:27:00	56.1	57.3	63.1	407380.3
15-Nov	12	16:27:05	60.5	62.5	67.5	1122018
15-Nov	12	16:27:10	62.1	62.6	69.1	1621810
15-Nov	12	16:27:15	61.1	62.6	68.1	1288250
15-Nov	12	16:27:20	58.7	59.6	65.7	741310.2
15-Nov	12	16:27:25	59	60.3	66	794328.2
15-Nov	12	16:27:30	61.6	62.8	68.6	1445440
15-Nov	12	16:27:35	59.3	60.4	66.3	851138
15-Nov	12	16:27:40	58.4	59.4	65.4	691831
15-Nov	12	16:27:45	58.8	59.6	65.8	758577.6
15-Nov	12	16:27:50	59	60	66	794328.2
15-Nov	12	16:27:55	56.8	58.8	63.8	478630.1
15-Nov	12	16:28:00	59.5	60.5	66.5	891250.9
15-Nov	12	16:28:05	58.7	60.1	65.7	741310.2
15-Nov	12	16:28:10	61.2	62	68.2	1318257
15-Nov	12	16:28:15	64.5	66	71.5	2818383
15-Nov	12	16:28:20	67.1	67.9	74.1	5128614
15-Nov	12	16:28:25	67.4	68	74.4	5495409
15-Nov	12	16:28:30	64.1	66.5	71.1	2570396
15-Nov	12	16:28:35	61.5	62.1	68.4	1412538
15-Nov	12	16:28:40	62	62.9	69	1584893
15-Nov	12	16:28:45	61.7	62.1	68.7	1479108
15-Nov	12	16:28:50	62.7	64.3	69.7	1862087
15-Nov	12	16:28:55	64.3	64.9	71.3	2691535
15-Nov	12	16:29:00	62.4	63.4	69.4	1737801
15-Nov	12	16:29:05	59.9	61.6	66.9	977237.2
15-Nov	12	16:29:10	60.9	63.1	67.8	1230269
15-Nov	12	16:29:15	63.9	65.3	70.9	2454709
15-Nov	12	16:29:20	64.2	65.9	71.2	2630268
15-Nov	12	16:29:25	58.2	60.8	65.2	660693.4
15-Nov	12	16:29:30	57	57.6	64	501187.2
15-Nov	12	16:29:35	59	60	66	794328.2
15-Nov	12	16:29:40	57.8	60	64.8	602559.6
15-Nov	12	16:29:45	56.5	58.3	63.5	446683.6
15-Nov	12	16:29:50	59.9	61.1	66.9	977237.2
15-Nov	12	16:29:55	62.9	65.1	69.9	1949845
15-Nov	12	16:30:00	65.5	66.6	72.5	3548134
15-Nov	12	16:30:05	65.4	66.6	72.3	3467369
15-Nov	12	16:30:10	60.5	63.1	67.4	1122018
15-Nov	12	16:30:15	59	59.9	66	794328.2
15-Nov	12	16:30:20	60.3	61	67.3	1071519
15-Nov	12	16:30:25	60.7	61.5	67.7	1174898
15-Nov	12	16:30:30	60.8	61.6	67.8	1202264
15-Nov	12	16:30:35	62.2	63.6	69.2	1659587
15-Nov	12	16:30:40	65.4	66.4	72.4	3467369
15-Nov	12	16:30:45	67.1	67.8	74.1	5128614
15-Nov	12	16:30:50	70.1	71.6	77.1	10232930
15-Nov	12	16:30:55	69.7	71.5	76.7	9332543
15-Nov	12	16:31:00	67.1	67.8	74.1	5128614
15-Nov	12	16:31:05	66.2	66.9	73.2	4168694
15-Nov	12	16:31:10	65.4	65.8	72.4	3467369
15-Nov	12	16:31:15	65.5	66.8	72.5	3548134
15-Nov	12	16:31:20	61.9	63.1	68.9	1548817
15-Nov	12	16:31:25	62.3	63.1	69.3	1698244
15-Nov	12	16:31:30	61.1	61.6	68.1	1288250
15-Nov	12	16:31:35	64.2	65.4	71.2	2630268
15-Nov	12	16:31:40	60.6	63.1	67.6	1148154
15-Nov	12	16:31:45	60.3	62.1	67.3	1071519
15-Nov	12	16:31:50	61.1	63.3	68.1	1288250
15-Nov	12	16:31:55	55.5	57.1	62.5	354813.4
15-Nov	12	16:32:00	55	55.8	62	316227.8
15-Nov	12	16:32:05	55.3	55.8	62.3	338844.2
15-Nov	12	16:32:10	56.1	59.1	63.1	407380.3
15-Nov	12	16:32:15	60.7	61.8	67.7	1174898
15-Nov	12	16:32:20	60.9	63.3	67.9	1230269
15-Nov	12	16:32:25	62.9	63.9	69.9	1949845
15-Nov	12	16:32:30	59.7	60.5	66.7	933254.3
15-Nov	12	16:32:35	61.1	62.9	68.1	1288250
15-Nov	12	16:32:40	66.8	69.3	73.8	4786301
15-Nov	12	16:32:45	66.4	67.5	73.4	4365158
15-Nov	12	16:32:50	66.1	67.1	73.1	4073803
15-Nov	12	16:32:55	66.5	67	73.5	4466836
15-Nov	12	16:33:00	66.3	67.4	73.3	4265795
15-Nov	12	16:33:05	64	66.4	71	2511886
15-Nov	12	16:33:10	59.7	61.8	66.6	933254.3
15-Nov	12	16:33:15	57.4	57.9	64.4	549540.9
15-Nov	12	16:33:20	58.9	60.4	65.9	776247.1
15-Nov	12	16:33:25	56.9	57.8	63.9	489778.8
15-Nov	12	16:33:30	60.2	61.6	67.2	1047129
15-Nov	12	16:33:35	60.5	61.1	67.5	1122018
15-Nov	12	16:33:40	58.5	60.1	65.5	707945.8
15-Nov	12	16:33:45	58.2	60.5	65.2	660693.4
15-Nov	12	16:33:50	61	61.8	68	1258925
15-Nov	12	16:33:55	61.8	63.8	68.8	1513561
15-Nov	12	16:34:00	62.3	63.5	69.3	1698244
15-Nov	12	16:34:05	60.7	61.1	67.7	1174898
15-Nov	12	16:34:10	58.5	59.3	65.5	707945.8
15-Nov	12	16:34:15	62.3	64.3	69.3	1698244
15-Nov	12	16:34:20	61.5	64.1	68.5	1412538
15-Nov	12	16:34:25	58.1	59.6	65.1	645654.2
15-Nov	12	16:34:30	60.1	60.6	67.1	1023293
15-Nov	12	16:34:35	60.7	61.9	67.7	1174898
15-Nov	12	16:34:40	61.7	63.4	68.7	1479108
15-Nov	12	16:34:45	63.2	63.9	70.2	2089296
15-Nov	12	16:34:50	63.3	63.9	70.3	2137962
15-Nov	12	16:34:55	62.7	63.6	69.7	1862087
15-Nov	12	16:35:00	63.5	64.3	70.5	2238721
15-Nov	12	16:35:05	61.9	63.4	68.9	1548817
15-Nov	12	16:35:10	61.2	62	68.2	1318257
15-Nov	12	16:35:15	62.7	63.3	69.7	1862087
15-Nov	12	16:35:20	60.8	62.4	67.8	1202264
15-Nov	12	16:35:25	59	59.6	66	794328.2
15-Nov	12	16:35:30	58.9	60.4	65.9	776247.1
15-Nov	12	16:35:35	58.5	59.3	65.5	707945.8
15-Nov	12	16:35:40	62.9	64	69.8	1949845
15-Nov	12	16:35:45	61.7	64	68.7	1479108
15-Nov	12	16:35:50	60.8	63.9	67.8	1202264
15-Nov	12	16:35:55	71.4	73.4	78.4	13803843
15-Nov	12	16:36:00	65.9	68.4	72.9	3890451
15-Nov	12	16:36:05	64.7	65.5	71.7	2951209
15-Nov	12	16:36:10	61.9	63.4	68.9	1548817
15-Nov	12	16:36:15	62	63.1	69	1584893
15-Nov	12	16:36:20	66	67.8	73	3981072
15-Nov	12	16:36:25	66.1	67	73.1	4073803
15-Nov	12	16:36:30	67.6	70.5	74.6	5754399
15-Nov	12	16:36:35	71.3	72.5	78.3	13489629
15-Nov	12	16:36:40	70.3	71.4	77.3	10715193
15-Nov	12	16:36:45	65.8	69.3	72.8	3801894
15-Nov	12	16:36:50	63.3	64.1	70.3	2137962
15-Nov	12	16:36:55	61.9	62.8	68.9	1548817
15-Nov	12	16:37:00	60.4	61.3	67.4	1096478
15-Nov	12	16:37:05	62.6	64.6	69.6	1819701
15-Nov	12	16:37:10	65	65.3	72	3162278
15-Nov	12	16:37:15	65.2	67.4	72.2	3311311
15-Nov	12	16:37:20	65.8	67.8	72.8	3801894
15-Nov	12	16:37:25	61.8	62.6	68.8	1513561
15-Nov	12	16:37:30	62.7	63.8	69.7	1862087
15-Nov	12	16:37:35	61.2	62.4	68.2	1318257
15-Nov	12	16:37:40	62.2	62.9	69.2	1659587
15-Nov	12	16:37:45	63.9	64.5	70.8	2454709
15-Nov	12	16:37:50	65.9	66.9	72.9	3890451
15-Nov	12	16:37:55	64.8	66.1	71.8	3019952
15-Nov	12	16:38:00	62.9	63.8	69.9	1949845

Measurement SE-5
56.8 dB(A)

Day-Month	Year	Time	Level	Lmax	SEL	
15-Nov	12	15:46:00	55.7	58.3	62.7	371535.2
15-Nov	12	15:46:05	56.2	58.8	63.2	416869.4
15-Nov	12	15:46:10	52	52.5	59	158489.3
15-Nov	12	15:46:15	55.3	59.5	62.3	338844.2
15-Nov	12	15:46:20	58.5	60.2	65.5	707945.8
15-Nov	12	15:46:25	57.2	60.5	64.2	524807.5
15-Nov	12	15:46:30	57	59.9	64	501187.2
15-Nov	12	15:46:35	54.6	55.3	61.6	288403.2
15-Nov	12	15:46:40	56.1	57.7	63.1	407380.3
15-Nov	12	15:46:45	58	59.9	65	630957.3
15-Nov	12	15:46:50	57.2	60.4	64.2	524807.5
15-Nov	12	15:46:55	58.2	61.2	65.2	660693.4
15-Nov	12	15:47:00	53.7	54.5	60.7	234422.9
15-Nov	12	15:47:05	53.4	53.7	60.3	218776.2
15-Nov	12	15:47:10	53.6	54	60.6	229086.8
15-Nov	12	15:47:15	55.2	56.3	62.2	331131.1
15-Nov	12	15:47:20	52.6	54.8	59.6	181970.1
15-Nov	12	15:47:25	52.7	53.2	59.7	186208.7
15-Nov	12	15:47:30	53.3	53.5	60.3	213796.2
15-Nov	12	15:47:35	53.4	53.9	60.4	218776.2
15-Nov	12	15:47:40	58.1	61.2	65.1	645654.2
15-Nov	12	15:47:45	60.5	61.3	67.5	1122018
15-Nov	12	15:47:50	59.4	60.9	66.4	870963.6
15-Nov	12	15:47:55	59.5	60.7	66.5	891250.9
15-Nov	12	15:48:00	60	60.8	67	1000000
15-Nov	12	15:48:05	62.1	62.9	69.1	1621810
15-Nov	12	15:48:10	57	60.5	64	501187.2
15-Nov	12	15:48:15	54.9	55.8	61.9	309029.5
15-Nov	12	15:48:20	54.4	55.5	61.3	275422.9
15-Nov	12	15:48:25	53.8	54.7	60.8	239883.3
15-Nov	12	15:48:30	55.1	57.8	62.1	323593.7
15-Nov	12	15:48:35	60.8	64	67.8	1202264
15-Nov	12	15:48:40	58.6	61.4	65.6	724436
15-Nov	12	15:48:45	59.8	61.2	66.8	954992.6
15-Nov	12	15:48:50	54.7	56.2	61.7	295120.9
15-Nov	12	15:48:55	57	61.3	64	501187.2
15-Nov	12	15:49:00	59.7	61.3	66.7	933254.3
15-Nov	12	15:49:05	58.8	61.3	65.8	758577.6
15-Nov	12	15:49:10	56	58.4	63	398107.2
15-Nov	12	15:49:15	56.7	58	63.7	467735.1
15-Nov	12	15:49:20	63.6	67.3	70.6	2290868
15-Nov	12	15:49:25	58	62.8	65	630957.3
15-Nov	12	15:49:30	53.2	54	60.2	208929.6
15-Nov	12	15:49:35	54.2	55.4	61.2	263026.8
15-Nov	12	15:49:40	54.8	56	61.8	301995.2
15-Nov	12	15:49:45	58.4	59.9	65.4	691831
15-Nov	12	15:49:50	56.5	58.3	63.5	446683.6
15-Nov	12	15:49:55	57.7	59.4	64.7	588843.7
15-Nov	12	15:50:00	56.2	59.4	63.2	416869.4
15-Nov	12	15:50:05	53.9	54	60.9	245470.9
15-Nov	12	15:50:10	56.4	60.5	63.4	436515.8
15-Nov	12	15:50:15	57.7	60.5	64.7	588843.7
15-Nov	12	15:50:20	57.8	59.9	64.8	602559.6
15-Nov	12	15:50:25	53.8	55.6	60.8	239883.3
15-Nov	12	15:50:30	52.3	52.6	59.3	169824.4
15-Nov	12	15:50:35	52.7	53.1	59.7	186208.7
15-Nov	12	15:50:40	52.4	52.8	59.4	173780.1
15-Nov	12	15:50:45	52.9	53.5	59.8	194984.5
15-Nov	12	15:50:50	53.7	54	60.7	234422.9
15-Nov	12	15:50:55	56.2	57.8	63.2	416869.4
15-Nov	12	15:51:00	58.1	59.1	65.1	645654.2
15-Nov	12	15:51:05	55.2	56.4	62.1	331131.1
15-Nov	12	15:51:10	54.9	56	61.9	309029.5
15-Nov	12	15:51:15	57	60.4	64	501187.2
15-Nov	12	15:51:20	60	61	67	1000000
15-Nov	12	15:51:25	57.9	60.3	64.9	616595
15-Nov	12	15:51:30	55.4	56.5	62.4	346736.9
15-Nov	12	15:51:35	55.8	56.9	62.8	380189.4
15-Nov	12	15:51:40	58.5	60.4	65.5	707945.8
15-Nov	12	15:51:45	57.8	59.3	64.8	602559.6
15-Nov	12	15:51:50	58.8	59.8	65.8	758577.6
15-Nov	12	15:51:55	60.7	62.9	67.6	1174898
15-Nov	12	15:52:00	58.4	59.6	65.4	691831
15-Nov	12	15:52:05	58.7	60	65.7	741310.2
15-Nov	12	15:52:10	59	62	66	794328.2
15-Nov	12	15:52:15	59.3	61.4	66.3	851138
15-Nov	12	15:52:20	59.7	62.6	66.7	933254.3
15-Nov	12	15:52:25	54.9	55.9	61.8	309029.5
15-Nov	12	15:52:30	56.1	58	63.1	407380.3
15-Nov	12	15:52:35	58.1	61	65.1	645654.2
15-Nov	12	15:52:40	61.9	64.1	68.8	1548817
15-Nov	12	15:52:45	55.7	57.7	62.7	371535.2
15-Nov	12	15:52:50	55	56.1	62	316227.8
15-Nov	12	15:52:55	59.4	61.4	66.3	870963.6
15-Nov	12	15:53:00	59.6	62.1	66.6	912010.8
15-Nov	12	15:53:05	54.3	55.1	61.3	269153.5
15-Nov	12	15:53:10	55.1	57.4	62.1	323593.7
15-Nov	12	15:53:15	57.8	59.5	64.8	602559.6
15-Nov	12	15:53:20	56.5	58.1	63.5	446683.6
15-Nov	12	15:53:25	55	56.1	62	316227.8
15-Nov	12	15:53:30	57.3	58.9	64.3	537031.8
15-Nov	12	15:53:35	55.7	56.6	62.6	371535.2
15-Nov	12	15:53:40	56.6	57.8	63.6	457088.2
15-Nov	12	15:53:45	54.7	56	61.7	295120.9
15-Nov	12	15:53:50	55.5	56.6	62.5	354813.4
15-Nov	12	15:53:55	55.2	57.9	62.2	331131.1
15-Nov	12	15:54:00	55.1	57.4	62.1	323593.7
15-Nov	12	15:54:05	57.2	59.4	64.1	524807.5
15-Nov	12	15:54:10	54	54.8	61	251188.6
15-Nov	12	15:54:15	53.5	54.4	60.4	223872.1
15-Nov	12	15:54:20	57.5	59.8	64.5	562341.3
15-Nov	12	15:54:25	56.9	59.8	63.9	489778.8
15-Nov	12	15:54:30	58.9	62.4	65.8	776247.1
15-Nov	12	15:54:35	59.2	62.5	66.2	831763.8
15-Nov	12	15:54:40	53.2	53.9	60.2	208929.6
15-Nov	12	15:54:45	52.8	53.1	59.8	190546.1
15-Nov	12	15:54:50	52.7	53	59.7	186208.7
15-Nov	12	15:54:55	52.9	53.3	59.9	194984.5
15-Nov	12	15:55:00	52.3	52.5	59.3	169824.4
15-Nov	12	15:55:05	53	54.9	60	199526.2
15-Nov	12	15:55:10	60.6	64.8	67.6	1148154
15-Nov	12	15:55:15	61.1	63.8	68.1	1288250
15-Nov	12	15:55:20	54.5	56.3	61.5	281838.3
15-Nov	12	15:55:25	52.2	53	59.2	165958.7
15-Nov	12	15:55:30	55.4	59.1	62.3	346736.9
15-Nov	12	15:55:35	65.3	68.1	72.3	3388442
15-Nov	12	15:55:40	61	62.4	68	1258925
15-Nov	12	15:55:45	59.2	60.3	66.2	831763.8
15-Nov	12	15:55:50	59.9	61.9	66.9	977237.2
15-Nov	12	15:55:55	55	56.9	62	316227.8
15-Nov	12	15:56:00	55.6	56.4	62.6	363078.1
15-Nov	12	15:56:05	52.9	54	59.9	194984.5
15-Nov	12	15:56:10	52.5	53.1	59.4	177827.9
15-Nov	12	15:56:15	54.5	56.6	61.4	281838.3
15-Nov	12	15:56:20	55.9	58.5	62.9	389045.1
15-Nov	12	15:56:25	50.8	51.3	57.8	120226.4
15-Nov	12	15:56:30	51.5	54.3	58.5	141253.8
15-Nov	12	15:56:35	51.4	52.5	58.3	138038.4
15-Nov	12	15:56:40	52.4	54.1	59.4	173780.1
15-Nov	12	15:56:45	58.1	60.6	65.1	645654.2
15-Nov	12	15:56:50	59	60.3	66	794328.2
15-Nov	12	15:56:55	54.9	56.7	61.9	309029.5
15-Nov	12	15:57:00	56.1	57.5	63.1	407380.3
15-Nov	12	15:57:05	57	57.9	64	501187.2
15-Nov	12	15:57:10	57.2	58.4	64.2	524807.5
15-Nov	12	15:57:15	55.1	55.9	62.1	323593.7
15-Nov	12	15:57:20	55.7	56.4	62.7	371535.2
15-Nov	12	15:57:25	54	56.4	61	251188.6
15-Nov	12	15:57:30	50.9	51.3	57.9	123026.9
15-Nov	12	15:57:35	50.9	51.5	57.9	123026.9
15-Nov	12	15:57:40	51.2	51.8	58.2	131825.7
15-Nov	12	15:57:45	51.9	52.1	58.9	154881.7
15-Nov	12	15:57:50	52.1	52.6	59.1	162181
15-Nov	12	15:57:55	54.2	56.4	61.2	263026.8
15-Nov	12	15:58:00	56.1	57.6	63.1	407380.3
15-Nov	12	15:58:05	51.7	52.5	58.6	147910.8
15-Nov	12	15:58:10	53	53.6	59.9	199526.2
15-Nov	12	15:58:15	57.1	59.3	64.1	512861.4
15-Nov	12	15:58:20	55.3	58.9	62.3	338844.2
15-Nov	12	15:58:25	56.2	59.6	63.2	416869.4
15-Nov	12	15:58:30	55.7	58.1	62.7	371535.2
15-Nov	12	15:58:35	59.4	61	66.4	870963.6
15-Nov	12	15:58:40	54.7	57.3	61.7	295120.9
15-Nov	12	15:58:45	52.4	53.3	59.4	173780.1
15-Nov	12	15:58:50	51.7	52.6	58.7	147910.8
15-Nov	12	15:58:55	51.9	52.8	58.9	154881.7
15-Nov	12	15:59:00	51.7	52.3	58.7	147910.8
15-Nov	12	15:59:05	52.2	52.9	59.2	165958.7
15-Nov	12	15:59:10	53.5	55	60.5	223872.1
15-Nov	12	15:59:15	58.2	60.9	65.2	660693.4
15-Nov	12	15:59:20	58.4	61	65.3	691831
15-Nov	12	15:59:25	57.5	58.7	64.5	562341.3
15-Nov	12	15:59:30	54.2	56.8	61.2	263026.8
15-Nov	12	15:59:35	52.8	53.1	59.8	190546.1
15-Nov	12	15:59:40	52.4	52.8	59.4	173780.1
15-Nov	12	15:59:45	52.7	53.5	59.7	186208.7
15-Nov	12	15:59:50	53.3	53.9	60.3	213796.2
15-Nov	12	15:59:55	54.7	56.4	61.7	295120.9
15-Nov	12	16:00:00	55.3	57.1	62.3	338844.2
15-Nov	12	16:00:05	52.1	52.7	59.1	162181
15-Nov	12	16:00:10	52.1	52.5	59.1	162181
15-Nov	12	16:00:15	53.4	54	60.3	218776.2
15-Nov	12	16:00:20	56.7	58.9	63.7	467735.1
15-Nov	12	16:00:25	53.7	57	60.7	234422.9
15-Nov	12	16:00:30	53.1	54.6	60.1	204173.8
15-Nov	12	16:00:35	57.9	60.1	64.9	616595
15-Nov	12	16:00:40	60.4	61.4	67.3	1096478
15-Nov	12	16:00:45	58.6	60	65.6	724436
15-Nov	12	16:00:50	59	60.9	66	794328.2
15-Nov	12	16:00:55	53.7	55.1	60.7	234422.9
15-Nov	12	16:01:00	53	53.5	59.9	199526.2

Measured Noise Levels - Encanto

Meter	
Model	820
SN	1824

Calibrator	
Model	200
SN	8324

Measurement EN-1
61.0 d(B)A)

Day-Month	Year	Time	Level	Lmax	SEL	
15-Nov	12	14:00:00	55.7	57	62.7	371535.2
15-Nov	12	14:00:05	59.7	61	66.7	933254.3
15-Nov	12	14:00:10	53.6	58.6	60.6	229086.8
15-Nov	12	14:00:15	48.1	49.1	55.1	64565.42
15-Nov	12	14:00:20	56.3	61	63.3	426579.5
15-Nov	12	14:00:25	60.3	62.9	67.3	1071519
15-Nov	12	14:00:30	48.3	52.8	55.3	67608.3
15-Nov	12	14:00:35	43.9	46.1	50.9	24547.09
15-Nov	12	14:00:40	47.1	47.9	54.1	51286.14
15-Nov	12	14:00:45	47.6	48.6	54.6	57543.99
15-Nov	12	14:00:50	48.7	50.3	55.7	74131.02
15-Nov	12	14:00:55	48.7	50.3	55.7	74131.02
15-Nov	12	14:01:00	53	55.6	60	199526.2
15-Nov	12	14:01:05	62.2	64.5	69.2	1659587
15-Nov	12	14:01:10	58.7	63.3	65.7	741310.2
15-Nov	12	14:01:15	61	65.1	68	1258925
15-Nov	12	14:01:20	64.6	65.9	71.6	2884032
15-Nov	12	14:01:25	63.5	64.6	70.5	2238721
15-Nov	12	14:01:30	72.4	76	79.3	17378008
15-Nov	12	14:01:35	69.5	75.4	76.5	8912509
15-Nov	12	14:01:40	61.7	63.4	68.7	1479108
15-Nov	12	14:01:45	62.4	64.4	69.4	1737801
15-Nov	12	14:01:50	57.5	59.8	64.5	562341.3
15-Nov	12	14:01:55	61.4	62.3	68.4	1380384
15-Nov	12	14:02:00	65.4	68.4	72.4	3467369
15-Nov	12	14:02:05	65.3	67.4	72.3	3388442
15-Nov	12	14:02:10	61	63.4	68	1258925
15-Nov	12	14:02:15	60.6	61.8	67.6	1148154
15-Nov	12	14:02:20	63	64.5	70	1995262
15-Nov	12	14:02:25	57.4	61	64.4	549540.9
15-Nov	12	14:02:30	63.3	65.8	70.3	2137962
15-Nov	12	14:02:35	56.7	61.4	63.7	467735.1
15-Nov	12	14:02:40	64.6	70	71.6	2884032
15-Nov	12	14:02:45	66.3	69.9	73.3	4265795
15-Nov	12	14:02:50	56.8	58.5	63.8	478630.1
15-Nov	12	14:02:55	56.5	57.6	63.4	446683.6
15-Nov	12	14:03:00	59.6	63.5	66.6	912010.8
15-Nov	12	14:03:05	56.9	62	63.8	489778.8
15-Nov	12	14:03:10	48.5	49.4	55.4	70794.58
15-Nov	12	14:03:15	50.3	53.8	57.3	107151.9
15-Nov	12	14:03:20	52.9	55.6	59.8	194984.5
15-Nov	12	14:03:25	57.8	61.3	64.8	602559.6
15-Nov	12	14:03:30	55.5	59.9	62.4	354813.4
15-Nov	12	14:03:35	54.2	60	61.2	263026.8
15-Nov	12	14:03:40	58.8	61	65.8	758577.6
15-Nov	12	14:03:45	49.1	52.9	56.1	81283.05
15-Nov	12	14:03:50	54.3	60.2	61.3	269153.5
15-Nov	12	14:03:55	61.5	63.6	68.5	1412538
15-Nov	12	14:04:00	58.5	60.5	65.5	707945.8
15-Nov	12	14:04:05	52.5	56.1	59.5	177827.9
15-Nov	12	14:04:10	51	52.4	58	125892.5
15-Nov	12	14:04:15	59	63.4	66	794328.2
15-Nov	12	14:04:20	58.3	62.5	65.3	676083
15-Nov	12	14:04:25	58.3	65.4	65.3	676083
15-Nov	12	14:04:30	68	70.1	75	6309573
15-Nov	12	14:04:35	61.5	65.2	68.5	1412538
15-Nov	12	14:04:40	60.2	62	67.2	1047129
15-Nov	12	14:04:45	60.2	62	67.2	1047129
15-Nov	12	14:04:50	58.1	61.7	65.1	645654.2
15-Nov	12	14:04:55	70.1	73.2	77.1	10232930
15-Nov	12	14:05:00	65.7	70.2	72.7	3715352
15-Nov	12	14:05:05	63.5	63.9	70.5	2238721
15-Nov	12	14:05:10	60.8	62.6	67.8	1202264
15-Nov	12	14:05:15	54	56.9	61	251188.6
15-Nov	12	14:05:20	51.1	51.7	58.1	128825
15-Nov	12	14:05:25	50.9	51.6	57.9	123026.9
15-Nov	12	14:05:30	49.4	51.5	56.3	87096.36
15-Nov	12	14:05:35	47.1	48.9	54.1	51286.14
15-Nov	12	14:05:40	47.9	48.6	54.9	61659.5
15-Nov	12	14:05:45	54.3	61.2	61.3	269153.5
15-Nov	12	14:05:50	61.5	64.7	68.5	1412538
15-Nov	12	14:05:55	51.7	54.2	58.7	147910.8
15-Nov	12	14:06:00	61.2	63.7	68.2	1318257
15-Nov	12	14:06:05	59.5	62.6	66.4	891250.9
15-Nov	12	14:06:10	58.7	61.4	65.7	741310.2
15-Nov	12	14:06:15	63.5	64.6	70.5	2238721
15-Nov	12	14:06:20	63.7	64.6	70.7	2344229
15-Nov	12	14:06:25	58.9	63.6	65.9	776247.1
15-Nov	12	14:06:30	59.9	62.4	66.9	977237.2
15-Nov	12	14:06:35	61.1	62.2	68.1	1288250
15-Nov	12	14:06:40	61.6	63.7	68.6	1445440
15-Nov	12	14:06:45	61.3	63.7	68.3	1348963
15-Nov	12	14:06:50	57.8	58.3	64.8	602559.6
15-Nov	12	14:06:55	61.1	63.4	68.1	1288250
15-Nov	12	14:07:00	59.4	61.9	66.3	870963.6
15-Nov	12	14:07:05	55.7	59	62.7	371535.2
15-Nov	12	14:07:10	58	60.4	65	630957.3
15-Nov	12	14:07:15	51.3	54.4	58.3	134896.3
15-Nov	12	14:07:20	48.2	51.2	55.2	66069.34
15-Nov	12	14:07:25	51.6	53.6	58.6	144544
15-Nov	12	14:07:30	53.4	55.4	60.3	218776.2
15-Nov	12	14:07:35	50.5	52.8	57.5	112201.8
15-Nov	12	14:07:40	52.1	59	59.1	162181
15-Nov	12	14:07:45	61.6	63.6	68.6	1445440
15-Nov	12	14:07:50	57.2	59.2	64.2	524807.5
15-Nov	12	14:07:55	63	64.9	70	1995262
15-Nov	12	14:08:00	57.4	61.2	64.4	549540.9
15-Nov	12	14:08:05	53	54.5	60	199526.2
15-Nov	12	14:08:10	52.2	56	59.2	165958.7
15-Nov	12	14:08:15	54.7	59.4	61.7	295120.9
15-Nov	12	14:08:20	48.3	52.7	55.3	67608.3
15-Nov	12	14:08:25	49.9	54.1	56.9	97723.72
15-Nov	12	14:08:30	59.9	62.2	66.9	977237.2
15-Nov	12	14:08:35	55.2	59.6	62.2	331131.1
15-Nov	12	14:08:40	58.3	60.4	65.3	676083
15-Nov	12	14:08:45	55.3	59.1	62.3	338844.2
15-Nov	12	14:08:50	56	60.6	63	398107.2
15-Nov	12	14:08:55	61.8	64.1	68.8	1513561
15-Nov	12	14:09:00	66.9	69	73.8	4897788
15-Nov	12	14:09:05	62.1	64.7	69.1	1621810
15-Nov	12	14:09:10	62.2	65.2	69.2	1659587
15-Nov	12	14:09:15	51.9	54.5	58.9	154881.7
15-Nov	12	14:09:20	50.6	54.1	57.6	114815.4
15-Nov	12	14:09:25	47.5	49.2	54.5	56234.13
15-Nov	12	14:09:30	52.3	55.9	59.3	169824.4
15-Nov	12	14:09:35	59.9	61.1	66.9	977237.2
15-Nov	12	14:09:40	59.7	60.5	66.7	933254.3
15-Nov	12	14:09:45	56.1	59.1	63.1	407380.3
15-Nov	12	14:09:50	54.8	59.1	61.8	301995.2
15-Nov	12	14:09:55	59.7	61.4	66.7	933254.3
15-Nov	12	14:10:00	62.9	64.5	69.9	1949845
15-Nov	12	14:10:05	62.9	64.2	69.9	1949845
15-Nov	12	14:10:10	61.1	63.1	68.1	1288250
15-Nov	12	14:10:15	62.3	63.9	69.3	1698244
15-Nov	12	14:10:20	66.2	67.4	73.2	4168694
15-Nov	12	14:10:25	60.2	64.2	67.2	1047129
15-Nov	12	14:10:30	58.5	60.1	65.4	707945.8
15-Nov	12	14:10:35	55	55.2	62	316227.8
15-Nov	12	14:10:40	56.6	57.7	63.6	457088.2
15-Nov	12	14:10:45	52.2	54	59.2	165958.7
15-Nov	12	14:10:50	57.4	61.4	64.4	549540.9
15-Nov	12	14:10:55	62.7	64.1	69.7	1862087
15-Nov	12	14:11:00	69.1	73.3	76.1	8128305
15-Nov	12	14:11:05	68.8	72.3	75.8	7585776
15-Nov	12	14:11:10	62	63.8	69	1584893
15-Nov	12	14:11:15	63	64	70	1995262
15-Nov	12	14:11:20	60.2	63	67.2	1047129
15-Nov	12	14:11:25	55.8	57.3	62.8	380189.4
15-Nov	12	14:11:30	61.3	64.2	68.3	1348963
15-Nov	12	14:11:35	63.7	66.8	70.7	2344229
15-Nov	12	14:11:40	67.4	69.8	74.4	5495409
15-Nov	12	14:11:45	59	62.2	66	794328.2
15-Nov	12	14:11:50	50.5	55.1	57.4	112201.8
15-Nov	12	14:11:55	47.3	49.6	54.3	53703.18
15-Nov	12	14:12:00	49.2	49.8	56.2	83176.38
15-Nov	12	14:12:05	47.7	48.6	54.7	58884.37
15-Nov	12	14:12:10	46.6	47	53.6	45708.82
15-Nov	12	14:12:15	46.8	50.2	53.8	47863.01
15-Nov	12	14:12:20	59.3	65.2	66.3	851138
15-Nov	12	14:12:25	63	65.6	70	1995262
15-Nov	12	14:12:30	62.1	64.5	69.1	1621810
15-Nov	12	14:12:35	62.4	64.6	69.4	1737801
15-Nov	12	14:12:40	60.2	62.1	67.2	1047129
15-Nov	12	14:12:45	58.4	60	65.4	691831
15-Nov	12	14:12:50	53.5	56.7	60.5	223872.1
15-Nov	12	14:12:55	55.1	59.5	62.1	323593.7
15-Nov	12	14:13:00	59.8	61	66.8	954992.6
15-Nov	12	14:13:05	56.5	57.7	63.4	446683.6
15-Nov	12	14:13:10	60.2	61.2	67.2	1047129
15-Nov	12	14:13:15	60.1	61.2	67.1	1023293
15-Nov	12	14:13:20	60.1	61.3	67.1	1023293
15-Nov	12	14:13:25	63.4	64.7	70.4	2187762
15-Nov	12	14:13:30	63.6	66.1	70.6	2290868
15-Nov	12	14:13:35	51.8	56.7	58.8	151356.1
15-Nov	12	14:13:40	47.2	47.5	54.2	52480.75
15-Nov	12	14:13:45	48.9	51.3	55.9	77624.71
15-Nov	12	14:13:50	54	55.5	61	251188.6
15-Nov	12	14:13:55	58.5	60.8	65.5	707945.8
15-Nov	12	14:14:00	57.9	59.5	64.9	616595
15-Nov	12	14:14:05	60.3	61.6	67.3	1071519
15-Nov	12	14:14:10	57.9	63	64.8	616595
15-Nov	12	14:14:15	65.4	68.1	72.4	3467369
15-Nov	12	14:14:20	65.5	68.2	72.5	3548134
15-Nov	12	14:14:25	58.6	62.8	65.6	724436
15-Nov	12	14:14:30	54	55.1	61	251188.6
15-Nov	12	14:14:35	53.9	55.7	60.9	245470.9
15-Nov	12	14:14:40	53.8	55	60.8	239883.3
15-Nov	12	14:14:45	61.1	63.1	68.1	1288250
15-Nov	12	14:14:50	59.7	62	66.7	933254.3
15-Nov	12	14:14:55	58.3	60	65.3	676083
15-Nov	12	14:15:00	59	60.3	66	794328.2

Measurement EN-2
65.2 dB(A)

Day-Month	Year	Time	Level	Lmax	SEL	
15-Nov	12	12:30:00	55.3	56.4	62.3	338844.2
15-Nov	12	12:30:05	56.2	57.3	63.2	416869.4
15-Nov	12	12:30:10	62.6	65.8	69.6	1819701
15-Nov	12	12:30:15	65.3	66.7	72.3	3388442
15-Nov	12	12:30:20	64.3	66.3	71.3	2691535
15-Nov	12	12:30:25	63	65.4	70	1995262
15-Nov	12	12:30:30	66.2	67.4	73.2	4168694
15-Nov	12	12:30:35	63.5	67.3	70.5	2238721
15-Nov	12	12:30:40	64	67.4	71	2511886
15-Nov	12	12:30:45	63.1	65.9	70.1	2041738
15-Nov	12	12:30:50	57.5	63.3	64.4	562341.3
15-Nov	12	12:30:55	51.7	52.7	58.7	147910.8
15-Nov	12	12:31:00	55.5	59.2	62.5	354813.4
15-Nov	12	12:31:05	56.4	57.4	63.4	436515.8
15-Nov	12	12:31:10	56.1	56.8	63.1	407380.3
15-Nov	12	12:31:15	57.1	57.7	64.1	512861.4
15-Nov	12	12:31:20	64.8	68.8	71.8	3019952
15-Nov	12	12:31:25	68	68.5	75	6309573
15-Nov	12	12:31:30	69.2	70.4	76.2	8317638
15-Nov	12	12:31:35	68.7	69.4	75.7	7413102
15-Nov	12	12:31:40	69	70.2	76	7943282
15-Nov	12	12:31:45	68.4	69.7	75.3	6918310
15-Nov	12	12:31:50	65.8	67.2	72.8	3801894
15-Nov	12	12:31:55	61.4	64.2	68.3	1380384
15-Nov	12	12:32:00	66.5	68	73.5	4466836
15-Nov	12	12:32:05	62.3	65.9	69.3	1698244
15-Nov	12	12:32:10	57.8	60.2	64.8	602559.6
15-Nov	12	12:32:15	58.5	60.2	65.5	707945.8
15-Nov	12	12:32:20	60.3	65	67.3	1071519
15-Nov	12	12:32:25	77	80.2	84	50118723
15-Nov	12	12:32:30	75.4	79.2	82.4	34673685
15-Nov	12	12:32:35	66.2	67.2	73.1	4168694
15-Nov	12	12:32:40	64.5	67.3	71.5	2818383
15-Nov	12	12:32:45	57.4	62.8	64.4	549540.9
15-Nov	12	12:32:50	62.9	67.3	69.9	1949845
15-Nov	12	12:32:55	62.8	66.8	69.8	1905461
15-Nov	12	12:33:00	65.7	69.5	72.7	3715352
15-Nov	12	12:33:05	67.2	69.8	74.1	5248075
15-Nov	12	12:33:10	64.2	65.2	71.2	2630268
15-Nov	12	12:33:15	67.7	69.3	74.7	5888437
15-Nov	12	12:33:20	64.3	68.4	71.3	2691535
15-Nov	12	12:33:25	65.6	69.3	72.6	3630781
15-Nov	12	12:33:30	65.4	69.3	72.4	3467369
15-Nov	12	12:33:35	63.5	65.5	70.5	2238721
15-Nov	12	12:33:40	67.7	70.1	74.7	5888437
15-Nov	12	12:33:45	65.7	67.9	72.7	3715352
15-Nov	12	12:33:50	58.2	61.4	65.2	660693.4
15-Nov	12	12:33:55	63.9	65.6	70.9	2454709
15-Nov	12	12:34:00	65	68.8	72	3162278
15-Nov	12	12:34:05	67.7	70.5	74.7	5888437
15-Nov	12	12:34:10	59.8	64.5	66.8	954992.6
15-Nov	12	12:34:15	57.6	59.6	64.6	575439.9
15-Nov	12	12:34:20	63.1	67.5	70.1	2041738
15-Nov	12	12:34:25	67.6	68.8	74.6	5754399
15-Nov	12	12:34:30	68.2	69.6	75.1	6606934
15-Nov	12	12:34:35	67	68	74	5011872
15-Nov	12	12:34:40	66.4	68.3	73.4	4365158
15-Nov	12	12:34:45	62.4	66.6	69.3	1737801
15-Nov	12	12:34:50	57.8	62.9	64.8	602559.6
15-Nov	12	12:34:55	67.1	69.6	74.1	5128614
15-Nov	12	12:35:00	62.7	66.5	69.7	1862087
15-Nov	12	12:35:05	66.7	70.1	73.7	4677351
15-Nov	12	12:35:10	68	70	75	6309573
15-Nov	12	12:35:15	61.6	64	68.6	1445440
15-Nov	12	12:35:20	56.2	58.5	63.2	416869.4
15-Nov	12	12:35:25	59.5	65.3	66.5	891250.9
15-Nov	12	12:35:30	68.5	73.3	75.5	7079458
15-Nov	12	12:35:35	57.9	59.6	64.9	616595
15-Nov	12	12:35:40	61.9	62.6	68.9	1548817
15-Nov	12	12:35:45	65.6	67.6	72.6	3630781
15-Nov	12	12:35:50	60.3	65.1	67.3	1071519
15-Nov	12	12:35:55	54.8	55.3	61.8	301995.2
15-Nov	12	12:36:00	53.5	55.3	60.4	223872.1
15-Nov	12	12:36:05	56.3	59.5	63.3	426579.5
15-Nov	12	12:36:10	60.1	63.8	67.1	1023293
15-Nov	12	12:36:15	64.8	65.3	71.8	3019952
15-Nov	12	12:36:20	65.6	67.6	72.6	3630781
15-Nov	12	12:36:25	63.8	66.9	70.8	2398833
15-Nov	12	12:36:30	61.8	67	68.8	1513561
15-Nov	12	12:36:35	57.1	59	64.1	512861.4
15-Nov	12	12:36:40	55.5	57.1	62.5	354813.4
15-Nov	12	12:36:45	61.1	63.6	68.1	1288250
15-Nov	12	12:36:50	66.2	67.5	73.2	4168694
15-Nov	12	12:36:55	65.4	67.1	72.4	3467369
15-Nov	12	12:37:00	65.9	67.8	72.9	3890451
15-Nov	12	12:37:05	61	65.8	67.9	1258925
15-Nov	12	12:37:10	59	63.1	66	794328.2
15-Nov	12	12:37:15	64.6	65.8	71.6	2884032
15-Nov	12	12:37:20	58.1	61.5	65.1	645654.2
15-Nov	12	12:37:25	65.5	69.2	72.5	3548134
15-Nov	12	12:37:30	60.3	66.3	67.3	1071519
15-Nov	12	12:37:35	51.2	52.3	58.2	131825.7
15-Nov	12	12:37:40	58.7	63.3	65.7	741310.2
15-Nov	12	12:37:45	66.6	68.3	73.6	4570882
15-Nov	12	12:37:50	67.3	68.9	74.3	5370318
15-Nov	12	12:37:55	69.3	70.1	76.3	8511380
15-Nov	12	12:38:00	67	69	74	5011872
15-Nov	12	12:38:05	65.2	67.6	72.2	3311311
15-Nov	12	12:38:10	66.9	68	73.9	4897788
15-Nov	12	12:38:15	64.1	65.1	71.1	2570396
15-Nov	12	12:38:20	60.7	62.5	67.7	1174898
15-Nov	12	12:38:25	63.6	66.5	70.6	2290868
15-Nov	12	12:38:30	65.6	67.4	72.6	3630781
15-Nov	12	12:38:35	64.2	66.9	71.2	2630268
15-Nov	12	12:38:40	67.3	69.1	74.3	5370318
15-Nov	12	12:38:45	68	68.8	75	6309573
15-Nov	12	12:38:50	66.5	68.1	73.5	4466836
15-Nov	12	12:38:55	68.9	70.1	75.9	7762471
15-Nov	12	12:39:00	64	68.6	71	2511886
15-Nov	12	12:39:05	65.4	68.8	72.4	3467369
15-Nov	12	12:39:10	65.2	66.4	72.1	3311311
15-Nov	12	12:39:15	59.5	63.9	66.4	891250.9
15-Nov	12	12:39:20	64.7	66.1	71.7	2951209
15-Nov	12	12:39:25	66.9	68	73.9	4897788
15-Nov	12	12:39:30	66.3	68.4	73.3	4265795
15-Nov	12	12:39:35	65.1	66.9	72.1	3235937
15-Nov	12	12:39:40	61.5	63.5	68.5	1412538
15-Nov	12	12:39:45	60.2	63	67.2	1047129
15-Nov	12	12:39:50	64.8	67.1	71.8	3019952
15-Nov	12	12:39:55	69	70.9	75.9	7943282
15-Nov	12	12:40:00	66.4	68	73.4	4365158
15-Nov	12	12:40:05	65.1	67.1	72.1	3235937
15-Nov	12	12:40:10	66.4	67.5	73.4	4365158
15-Nov	12	12:40:15	66.1	67.5	73.1	4073803
15-Nov	12	12:40:20	64.1	67.6	71.1	2570396
15-Nov	12	12:40:25	58.6	59.5	65.6	724436
15-Nov	12	12:40:30	61.2	63.1	68.2	1318257
15-Nov	12	12:40:35	63.6	65.3	70.6	2290868
15-Nov	12	12:40:40	63.5	65	70.5	2238721
15-Nov	12	12:40:45	61.5	63.1	68.5	1412538
15-Nov	12	12:40:50	61.8	64.6	68.8	1513561
15-Nov	12	12:40:55	64.8	66	71.8	3019952
15-Nov	12	12:41:00	62	63.5	69	1584893
15-Nov	12	12:41:05	66.8	68.3	73.8	4786301
15-Nov	12	12:41:10	67.9	70	74.9	6165950
15-Nov	12	12:41:15	68.4	69.6	75.4	6918310
15-Nov	12	12:41:20	66.4	67.9	73.3	4365158
15-Nov	12	12:41:25	65.7	68.9	72.6	3715352
15-Nov	12	12:41:30	65.3	68.8	72.3	3388442
15-Nov	12	12:41:35	61.9	65.1	68.9	1548817
15-Nov	12	12:41:40	66.4	69	73.3	4365158
15-Nov	12	12:41:45	62.6	66.6	69.6	1819701
15-Nov	12	12:41:50	62.9	64.8	69.9	1949845
15-Nov	12	12:41:55	64.6	67.3	71.6	2884032
15-Nov	12	12:42:00	62.1	65.3	69.1	1621810
15-Nov	12	12:42:05	60	66.6	67	1000000
15-Nov	12	12:42:10	65.4	68	72.4	3467369
15-Nov	12	12:42:15	64.3	66.3	71.3	2691535
15-Nov	12	12:42:20	64.9	68.8	71.9	3090295
15-Nov	12	12:42:25	67.7	70.9	74.7	5888437
15-Nov	12	12:42:30	61.2	66.6	68.2	1318257
15-Nov	12	12:42:35	60	64.3	67	1000000
15-Nov	12	12:42:40	62.9	64.6	69.9	1949845
15-Nov	12	12:42:45	58	61	65	630957.3
15-Nov	12	12:42:50	60.2	62.1	67.2	1047129
15-Nov	12	12:42:55	66.6	68.8	73.6	4570882
15-Nov	12	12:43:00	68.6	70.3	75.6	7244360
15-Nov	12	12:43:05	65.4	66.4	72.4	3467369
15-Nov	12	12:43:10	64.3	65.8	71.3	2691535
15-Nov	12	12:43:15	59.5	61.5	66.5	891250.9
15-Nov	12	12:43:20	60.8	64.1	67.8	1202264
15-Nov	12	12:43:25	61.3	64.5	68.3	1348963
15-Nov	12	12:43:30	55.6	56	62.6	363078.1
15-Nov	12	12:43:35	56.3	59.8	63.3	426579.5
15-Nov	12	12:43:40	56.6	59.4	63.6	457088.2
15-Nov	12	12:43:45	64.8	67.3	71.8	3019952
15-Nov	12	12:43:50	68.2	69.5	75.2	6606934
15-Nov	12	12:43:55	65.9	66.9	72.9	3890451
15-Nov	12	12:44:00	64.4	65.9	71.3	2754229
15-Nov	12	12:44:05	63.2	63.9	70.2	2089296
15-Nov	12	12:44:10	62.6	64	69.6	1819701
15-Nov	12	12:44:15	59.6	61.9	66.6	912010.8
15-Nov	12	12:44:20	63.3	64.1	70.3	2137962
15-Nov	12	12:44:25	63.7	65.9	70.7	2344229
15-Nov	12	12:44:30	66.9	67.9	73.9	4897788
15-Nov	12	12:44:35	62.3	64.8	69.3	1698244
15-Nov	12	12:44:40	59.6	62.1	66.6	912010.8
15-Nov	12	12:44:45	57	61	64	501187.2
15-Nov	12	12:44:50	61.3	64.5	68.3	1348963
15-Nov	12	12:44:55	64.5	67.9	71.5	2818383
15-Nov	12	12:45:00	68.5	69.4	75.5	7079458

Measurement EN-3
62.7 dB(A)

Day-Month	Year	Time	Level	Lmax	SEL
15-Nov	12	14:37:00	60	66.1	1000000
15-Nov	12	14:37:05	61.1	66.1	1288250
15-Nov	12	14:37:10	53.6	54.6	229086.8
15-Nov	12	14:37:15	53	54.2	199526.2
15-Nov	12	14:37:20	50.7	53.2	117489.8
15-Nov	12	14:37:25	48.9	49.6	77624.71
15-Nov	12	14:37:30	55.3	63	338844.2
15-Nov	12	14:37:35	68	69.9	6309573
15-Nov	12	14:37:40	69.1	70.2	8128305
15-Nov	12	14:37:45	66.7	70.2	4677351
15-Nov	12	14:37:50	53.9	57.9	245470.9
15-Nov	12	14:37:55	60	66	1000000
15-Nov	12	14:38:00	60.7	65.7	1174898
15-Nov	12	14:38:05	54.8	55.6	301995.2
15-Nov	12	14:38:10	59.8	62.6	954992.6
15-Nov	12	14:38:15	60.5	62.5	1122018
15-Nov	12	14:38:20	57.4	58.2	549540.9
15-Nov	12	14:38:25	52	55	158489.3
15-Nov	12	14:38:30	49.6	51.1	91201.08
15-Nov	12	14:38:35	48	49	63095.73
15-Nov	12	14:38:40	48.6	49.6	72443.6
15-Nov	12	14:38:45	63.2	69.2	2089296
15-Nov	12	14:38:50	62.7	68.7	1862087
15-Nov	12	14:38:55	64	67.9	2511886
15-Nov	12	14:39:00	72.1	74.5	16218101
15-Nov	12	14:39:05	66.2	68.2	4168694
15-Nov	12	14:39:10	69.6	72.2	9120108
15-Nov	12	14:39:15	68.4	71.6	6918310
15-Nov	12	14:39:20	63.8	66.2	2398833
15-Nov	12	14:39:25	61	64.9	1258925
15-Nov	12	14:39:30	60.3	63.2	1071519
15-Nov	12	14:39:35	59	65.6	794328.2
15-Nov	12	14:39:40	60.2	65.5	1047129
15-Nov	12	14:39:45	57.5	60.1	562341.3
15-Nov	12	14:39:50	58.7	60.1	741310.2
15-Nov	12	14:39:55	60.2	62.2	1047129
15-Nov	12	14:40:00	66.1	69.9	4073803
15-Nov	12	14:40:05	55	57.8	316227.8
15-Nov	12	14:40:10	51.9	53	154881.7
15-Nov	12	14:40:15	52.1	54.6	162181
15-Nov	12	14:40:20	52.2	53	165958.7
15-Nov	12	14:40:25	52.5	55	177827.9
15-Nov	12	14:40:30	59	61.9	794328.2
15-Nov	12	14:40:35	61.2	62.1	1318257
15-Nov	12	14:40:40	59.6	61.1	912010.8
15-Nov	12	14:40:45	50.7	54.4	117489.8
15-Nov	12	14:40:50	50.8	53.1	120226.4
15-Nov	12	14:40:55	62.8	69.7	1905461
15-Nov	12	14:41:00	64.5	69.5	2818383
15-Nov	12	14:41:05	63.6	66.6	2290868
15-Nov	12	14:41:10	65.9	69.5	3890451
15-Nov	12	14:41:15	67.4	71.4	5495409
15-Nov	12	14:41:20	57.7	62.2	588843.7
15-Nov	12	14:41:25	61	65	1258925
15-Nov	12	14:41:30	60.3	63.6	1071519
15-Nov	12	14:41:35	52.5	54.9	177827.9
15-Nov	12	14:41:40	52.5	55.9	177827.9
15-Nov	12	14:41:45	61.3	63.7	1348963
15-Nov	12	14:41:50	60.9	62	1230269
15-Nov	12	14:41:55	56.6	59.5	457088.2
15-Nov	12	14:42:00	57.6	58.7	575439.9
15-Nov	12	14:42:05	52.2	54.7	165958.7
15-Nov	12	14:42:10	59.6	63.5	912010.8
15-Nov	12	14:42:15	57.3	61.9	537031.8
15-Nov	12	14:42:20	52.5	53.6	177827.9
15-Nov	12	14:42:25	51.7	52.5	147910.8
15-Nov	12	14:42:30	51.6	52.7	144544
15-Nov	12	14:42:35	55.2	59.5	331131.1
15-Nov	12	14:42:40	58.3	60.9	676083
15-Nov	12	14:42:45	54.9	59	309029.5
15-Nov	12	14:42:50	67.9	69.5	6165950
15-Nov	12	14:42:55	68.6	73.2	7244360
15-Nov	12	14:43:00	72.3	75.2	16982437
15-Nov	12	14:43:05	62.3	65.7	1698244
15-Nov	12	14:43:10	64	68.5	2511886
15-Nov	12	14:43:15	66.2	68.2	4168694
15-Nov	12	14:43:20	61.9	66.4	1548817
15-Nov	12	14:43:25	54.2	56.6	263026.8
15-Nov	12	14:43:30	58.6	60.1	724436
15-Nov	12	14:43:35	56.5	59.4	446683.6
15-Nov	12	14:43:40	58	62	630957.3
15-Nov	12	14:43:45	61.2	63.4	1318257
15-Nov	12	14:43:50	54.1	56.2	257039.6
15-Nov	12	14:43:55	56.2	62.9	416869.4
15-Nov	12	14:44:00	65	68.5	3162278
15-Nov	12	14:44:05	59.5	62.9	891250.9
15-Nov	12	14:44:10	63.1	64.2	2041738
15-Nov	12	14:44:15	60.5	65.6	1122018
15-Nov	12	14:44:20	66.4	68.6	4365158
15-Nov	12	14:44:25	67	68.6	5011872
15-Nov	12	14:44:30	57.1	61.6	512861.4
15-Nov	12	14:44:35	53.7	54.1	234422.9
15-Nov	12	14:44:40	56.4	59.7	436515.8
15-Nov	12	14:44:45	63.3	65.7	2137962
15-Nov	12	14:44:50	55.6	58.9	363078.1
15-Nov	12	14:44:55	54	54.9	251188.6
15-Nov	12	14:45:00	59	62.9	794328.2
15-Nov	12	14:45:05	65.4	69.5	3467369
15-Nov	12	14:45:10	65.7	69.5	3715352
15-Nov	12	14:45:15	57.6	60.1	575439.9
15-Nov	12	14:45:20	55.7	58.6	371535.2
15-Nov	12	14:45:25	54.3	55.5	269153.5
15-Nov	12	14:45:30	59.9	67.6	977237.2
15-Nov	12	14:45:35	68.2	69.7	6606934
15-Nov	12	14:45:40	65.4	68.2	3467369
15-Nov	12	14:45:45	63.9	66.4	2454709
15-Nov	12	14:45:50	63.5	66	2238721
15-Nov	12	14:45:55	61.2	62.6	1318257
15-Nov	12	14:46:00	70.9	74.9	12302688
15-Nov	12	14:46:05	69.4	73.9	8709636
15-Nov	12	14:46:10	62.6	66.2	1819701
15-Nov	12	14:46:15	56.5	57.6	446683.6
15-Nov	12	14:46:20	56.6	57.7	457088.2
15-Nov	12	14:46:25	56	56.9	398107.2
15-Nov	12	14:46:30	64.4	68.1	2754229
15-Nov	12	14:46:35	58.9	64	776247.1
15-Nov	12	14:46:40	54.5	55	281838.3
15-Nov	12	14:46:45	58.2	60.2	660693.4
15-Nov	12	14:46:50	59.2	61	831763.8
15-Nov	12	14:46:55	55.4	56.5	346736.9
15-Nov	12	14:47:00	53.4	54.1	218776.2
15-Nov	12	14:47:05	57.6	62.5	575439.9
15-Nov	12	14:47:10	62.5	64.4	1778279
15-Nov	12	14:47:15	56	57.9	398107.2
15-Nov	12	14:47:20	55	55.5	316227.8
15-Nov	12	14:47:25	66.1	71.1	4073803
15-Nov	12	14:47:30	69	70.7	7943282
15-Nov	12	14:47:35	61.2	65.7	1318257
15-Nov	12	14:47:40	57.2	59.5	524807.5
15-Nov	12	14:47:45	58	59.2	630957.3
15-Nov	12	14:47:50	61.3	63.6	1348963
15-Nov	12	14:47:55	65.7	67.9	3715352
15-Nov	12	14:48:00	65.7	68.6	3715352
15-Nov	12	14:48:05	66.3	69.5	4265795
15-Nov	12	14:48:10	59.2	60.5	831763.8
15-Nov	12	14:48:15	52.1	54.4	162181
15-Nov	12	14:48:20	54.9	60.5	309029.5
15-Nov	12	14:48:25	63.4	67.2	2187762
15-Nov	12	14:48:30	56.5	59.5	446683.6
15-Nov	12	14:48:35	56.9	59.7	489778.8
15-Nov	12	14:48:40	61.5	63.4	1412538
15-Nov	12	14:48:45	59.3	61.1	851138
15-Nov	12	14:48:50	54.2	62.1	263026.8
15-Nov	12	14:48:55	57.4	60.5	549540.9
15-Nov	12	14:49:00	56.7	59.1	467735.1
15-Nov	12	14:49:05	67.8	73.9	6025596
15-Nov	12	14:49:10	70.8	75.1	12022644
15-Nov	12	14:49:15	57.6	60.1	575439.9
15-Nov	12	14:49:20	56.2	57.2	416869.4
15-Nov	12	14:49:25	52.2	55.2	165958.7
15-Nov	12	14:49:30	49.9	50.5	97723.72
15-Nov	12	14:49:35	51.7	54.5	147910.8
15-Nov	12	14:49:40	57.7	59.2	588843.7
15-Nov	12	14:49:45	54.5	55.4	281838.3
15-Nov	12	14:49:50	53.1	55.4	204173.8
15-Nov	12	14:49:55	50.4	51.4	109647.8
15-Nov	12	14:50:00	53.9	55.1	245470.9
15-Nov	12	14:50:05	54.7	55.4	295120.9
15-Nov	12	14:50:10	51.7	53.5	147910.8
15-Nov	12	14:50:15	51.7	53.4	147910.8
15-Nov	12	14:50:20	59.8	63.4	954992.6
15-Nov	12	14:50:25	58.9	62.4	776247.1
15-Nov	12	14:50:30	63.8	65.2	2398833
15-Nov	12	14:50:35	65.4	67.4	3467369
15-Nov	12	14:50:40	65.6	68.5	3630781
15-Nov	12	14:50:45	59.5	61.7	891250.9
15-Nov	12	14:50:50	52.3	54.9	169824.4
15-Nov	12	14:50:55	50.4	51.9	109647.8
15-Nov	12	14:51:00	54.2	58.2	263026.8
15-Nov	12	14:51:05	61.7	63.6	1479108
15-Nov	12	14:51:10	58.3	61.1	676083
15-Nov	12	14:51:15	68.3	71.2	6760830
15-Nov	12	14:51:20	68.4	70.9	6918310
15-Nov	12	14:51:25	65.8	67	3801894
15-Nov	12	14:51:30	61.5	65.1	1412538
15-Nov	12	14:51:35	62.4	63	1737801
15-Nov	12	14:51:40	59.3	63.4	851138
15-Nov	12	14:51:45	63.9	67.4	2454709
15-Nov	12	14:51:50	54.8	56.9	301995.2
15-Nov	12	14:51:55	54.7	57.2	295120.9
15-Nov	12	14:52:00	51.2	51.2	131825.7

Measurement EN-4
62.6 dB(A)

Day-Month	Year	Time	Level	Lmax	SEL
15-Nov	12	13:31:00	68.2	71.9	6606934
15-Nov	12	13:31:05	62.2	64.1	1659587
15-Nov	12	13:31:10	61.2	63.9	1318257
15-Nov	12	13:31:15	60.6	62.4	1148154
15-Nov	12	13:31:20	54.9	57.1	309029.5
15-Nov	12	13:31:25	64	67.1	2511886
15-Nov	12	13:31:30	67	68.2	5011872
15-Nov	12	13:31:35	67.9	69.4	6165950
15-Nov	12	13:31:40	60.6	64.7	1148154
15-Nov	12	13:31:45	51.9	54.4	154881.7
15-Nov	12	13:31:50	53.3	57.1	213796.2
15-Nov	12	13:31:55	57.1	59.1	512861.4
15-Nov	12	13:32:00	60.4	64.1	1096478
15-Nov	12	13:32:05	63.3	64.7	2137962
15-Nov	12	13:32:10	58.4	60.5	691831
15-Nov	12	13:32:15	63.8	65	2398833
15-Nov	12	13:32:20	63.6	65.1	2290868
15-Nov	12	13:32:25	68.2	69.5	6606934
15-Nov	12	13:32:30	67.2	69.6	5248075
15-Nov	12	13:32:35	57.4	61.4	549540.9
15-Nov	12	13:32:40	54	55.4	251188.6
15-Nov	12	13:32:45	58.7	60.4	741310.2
15-Nov	12	13:32:50	61	62	1258925
15-Nov	12	13:32:55	57.5	60	562341.3
15-Nov	12	13:33:00	64.3	66.2	2691535
15-Nov	12	13:33:05	66.7	68.1	4677351
15-Nov	12	13:33:10	59.6	63.4	912010.8
15-Nov	12	13:33:15	57.3	58.6	537031.8
15-Nov	12	13:33:20	63.9	66.4	2454709
15-Nov	12	13:33:25	62.5	64.4	1778279
15-Nov	12	13:33:30	58.8	60.7	758577.6
15-Nov	12	13:33:35	62.7	63.5	1862087
15-Nov	12	13:33:40	66	67.6	3981072
15-Nov	12	13:33:45	65	66.6	3162278
15-Nov	12	13:33:50	61	63.2	1258925
15-Nov	12	13:33:55	60.8	61.7	1202264
15-Nov	12	13:34:00	57.3	59.4	537031.8
15-Nov	12	13:34:05	60.3	61.5	1071519
15-Nov	12	13:34:10	61.8	64.9	1513561
15-Nov	12	13:34:15	67	69	5011872
15-Nov	12	13:34:20	67.3	69.2	5370318
15-Nov	12	13:34:25	60	62.6	1000000
15-Nov	12	13:34:30	59.2	60.1	831763.8
15-Nov	12	13:34:35	56.1	58.1	407380.3
15-Nov	12	13:34:40	50.8	51.9	120226.4
15-Nov	12	13:34:45	51.1	51.7	128825
15-Nov	12	13:34:50	58.3	61.6	676083
15-Nov	12	13:34:55	60.4	62.1	1096478
15-Nov	12	13:35:00	59.6	61.4	912010.8
15-Nov	12	13:35:05	60.2	61.4	1047129
15-Nov	12	13:35:10	63	64.9	1995262
15-Nov	12	13:35:15	62.7	64	1862087
15-Nov	12	13:35:20	56.8	60.1	478630.1
15-Nov	12	13:35:25	50.5	52.7	112201.8
15-Nov	12	13:35:30	53.9	59	245470.9
15-Nov	12	13:35:35	61.9	63.4	1548817
15-Nov	12	13:35:40	60.6	62.5	1148154
15-Nov	12	13:35:45	62.1	64.5	1621810
15-Nov	12	13:35:50	65.1	66	3235937
15-Nov	12	13:35:55	65.1	66.1	3235937
15-Nov	12	13:36:00	66.4	67	4365158
15-Nov	12	13:36:05	64.2	65.7	2630268
15-Nov	12	13:36:10	56.4	61.5	436515.8
15-Nov	12	13:36:15	52	58	158489.3
15-Nov	12	13:36:20	60.6	61.4	1148154
15-Nov	12	13:36:25	59.3	62	851138
15-Nov	12	13:36:30	54.3	56.7	269153.5
15-Nov	12	13:36:35	50.7	52	117489.8
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15-Nov	12	13:36:45	54.7	57.2	295120.9
15-Nov	12	13:36:50	60.6	62.5	1148154
15-Nov	12	13:36:55	57.8	59.9	602559.6
15-Nov	12	13:37:00	55.2	56.1	331131.1
15-Nov	12	13:37:05	52.1	53.6	162181
15-Nov	12	13:37:10	52.7	54.4	186208.7
15-Nov	12	13:37:15	53.1	54.7	204173.8
15-Nov	12	13:37:20	56.9	58.7	489778.8
15-Nov	12	13:37:25	57.5	60	562341.3
15-Nov	12	13:37:30	55.7	57.6	371535.2
15-Nov	12	13:37:35	70.1	73.9	10232930
15-Nov	12	13:37:40	74.1	75.5	25703958
15-Nov	12	13:37:45	68.7	71.9	7413102
15-Nov	12	13:37:50	62	63.2	1584893
15-Nov	12	13:37:55	63.5	64.4	2238721
15-Nov	12	13:38:00	60	62.5	1000000
15-Nov	12	13:38:05	53.6	56.7	229086.8
15-Nov	12	13:38:10	53.4	55.7	218776.2
15-Nov	12	13:38:15	61	63.2	1258925
15-Nov	12	13:38:20	62.8	63.1	1905461
15-Nov	12	13:38:25	60.9	62.4	1230269
15-Nov	12	13:38:30	59.8	60.5	954992.6
15-Nov	12	13:38:35	59.3	59.6	851138
15-Nov	12	13:38:40	61	62.6	1258925
15-Nov	12	13:38:45	66.5	68.5	4466836
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15-Nov	12	13:39:25	65.9	66.4	3890451
15-Nov	12	13:39:30	61.3	65.1	1348963
15-Nov	12	13:39:35	59	61.5	794328.2
15-Nov	12	13:39:40	61.8	62.7	1513561
15-Nov	12	13:39:45	64.5	66.9	2818383
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15-Nov	12	13:39:55	55.6	58.7	363078.1
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15-Nov	12	13:40:10	61.5	63.9	1412538
15-Nov	12	13:40:15	65.1	66.4	3235937
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15-Nov	12	13:41:20	49.6	51.4	91201.08
15-Nov	12	13:41:25	51.3	52.7	134896.3
15-Nov	12	13:41:30	53.9	56.2	245470.9
15-Nov	12	13:41:35	57.6	61.6	575439.9
15-Nov	12	13:41:40	65.3	67.2	3388442
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15-Nov	12	13:42:05	63.8	65.6	2398833
15-Nov	12	13:42:10	59.2	60.6	831763.8
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15-Nov	12	13:42:30	53.4	55.2	218776.2
15-Nov	12	13:42:35	53	53.5	199526.2
15-Nov	12	13:42:40	53.7	55	234422.9
15-Nov	12	13:42:45	57.1	61.2	512861.4
15-Nov	12	13:42:50	63.9	64.7	2454709
15-Nov	12	13:42:55	62.1	63	1621810
15-Nov	12	13:43:00	61.6	66.2	1445440
15-Nov	12	13:43:05	66	67.5	3981072
15-Nov	12	13:43:10	67.4	68.4	5495409
15-Nov	12	13:43:15	63.5	64.9	2238721
15-Nov	12	13:43:20	63.7	65	2344229
15-Nov	12	13:43:25	66.3	66.7	4265795
15-Nov	12	13:43:30	68.5	70.1	7079458
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15-Nov	12	13:43:45	54	55.4	251188.6
15-Nov	12	13:43:50	53.1	55.2	204173.8
15-Nov	12	13:43:55	55.1	55.5	323593.7
15-Nov	12	13:44:00	64.3	69	2691535
15-Nov	12	13:44:05	66	69	3981072
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15-Nov	12	13:45:10	63.8	66.3	2398833
15-Nov	12	13:45:15	65.4	66.4	3467369
15-Nov	12	13:45:20	63.5	65.6	2238721
15-Nov	12	13:45:25	63.2	66.1	2089296
15-Nov	12	13:45:30	52.3	55.8	169824.4
15-Nov	12	13:45:35	50.2	51.1	104712.9
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15-Nov	12	13:45:55	55.1	57.3	323593.7
15-Nov	12	13:46:00	54.9	59	309029.5

Measurement EN-5
66.3 dB(A)

Day-Month	Year	Time	Level	Lmax	SEL
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15-Nov	12	13:03:05	70.6	71.5	11481536
15-Nov	12	13:03:10	70.5	71	11220185
15-Nov	12	13:03:15	70.7	71.1	11748976
15-Nov	12	13:03:20	70.6	70.9	11481536
15-Nov	12	13:03:25	70.6	71	11481536
15-Nov	12	13:03:30	71.1	71.4	12882496
15-Nov	12	13:03:35	71.5	72.8	14125375
15-Nov	12	13:03:40	76.8	77.8	47863009
15-Nov	12	13:03:45	74	77.4	25118864
15-Nov	12	13:03:50	61.2	66.7	1318257
15-Nov	12	13:03:55	54.8	58	301995.2
15-Nov	12	13:04:00	51.8	52.9	151356.1
15-Nov	12	13:04:05	50.5	53.3	112201.8
15-Nov	12	13:04:10	50.9	53.3	123026.9
15-Nov	12	13:04:15	46.8	48.1	47863.01
15-Nov	12	13:04:20	47.6	49	57543.99
15-Nov	12	13:04:25	49.7	52	93325.43
15-Nov	12	13:04:30	47.8	48.9	60255.96
15-Nov	12	13:04:35	50.1	52.1	102329.3
15-Nov	12	13:04:40	44.6	46.8	28840.32
15-Nov	12	13:04:45	42.6	44.6	18197.01
15-Nov	12	13:04:50	44.6	47.6	28840.32
15-Nov	12	13:04:55	44.6	46.3	28840.32
15-Nov	12	13:05:00	49.5	53.5	89125.09
15-Nov	12	13:05:05	51	53.1	125892.5
15-Nov	12	13:05:10	46.5	48.3	44668.36
15-Nov	12	13:05:15	47.6	51.4	57543.99
15-Nov	12	13:05:20	50.3	52.3	107151.9
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15-Nov	12	13:05:30	50.7	54.6	117489.8
15-Nov	12	13:05:35	54.9	55.8	309029.5
15-Nov	12	13:05:40	56	57.8	398107.2
15-Nov	12	13:05:45	51.5	54.1	141253.8
15-Nov	12	13:05:50	53.6	56.4	229086.8
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15-Nov	12	13:07:00	46.5	48	44668.36
15-Nov	12	13:07:05	51.2	53.9	131825.7
15-Nov	12	13:07:10	46.9	48.6	48977.88
15-Nov	12	13:07:15	46.8	49	47863.01
15-Nov	12	13:07:20	44.7	45.9	29512.09
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15-Nov	12	13:08:40	53.1	54	204173.8
15-Nov	12	13:08:45	52	53.3	158489.3
15-Nov	12	13:08:50	52.1	53.3	162181
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15-Nov	12	13:09:40	46.5	48	44668.36
15-Nov	12	13:09:45	50.7	52.8	117489.8
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15-Nov	12	13:09:55	48.5	51.8	70794.58
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15-Nov	12	13:10:50	51.2	53.5	131825.7
15-Nov	12	13:10:55	52.1	53.5	162181
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15-Nov	12	13:11:05	46.7	48.3	46773.51
15-Nov	12	13:11:10	49.9	52.6	97723.72
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15-Nov	12	13:11:20	48.2	51.2	66069.34
15-Nov	12	13:11:25	51.3	53	134896.3
15-Nov	12	13:11:30	49.1	51.4	81283.05
15-Nov	12	13:11:35	45.1	46	32359.37
15-Nov	12	13:11:40	48.6	52.3	72443.6
15-Nov	12	13:11:45	53.3	55.9	213796.2
15-Nov	12	13:11:50	52.3	54.4	169824.4
15-Nov	12	13:11:55	49.1	50.4	81283.05
15-Nov	12	13:12:00	51.6	53.9	144544
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15-Nov	12	13:12:30	46.3	48.1	42657.95
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15-Nov	12	13:12:45	62.4	68.1	1737801
15-Nov	12	13:12:50	56.7	59.9	467735.1
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15-Nov	12	13:15:20	70.9	76.8	12302688
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15-Nov	12	13:15:35	50.9	53.3	123026.9
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15-Nov	12	13:15:45	55.8	57.4	380189.4
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15-Nov	12	13:15:55	62.4	67.9	1737801
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15-Nov	12	13:16:05	49.6	51.5	91201.08
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15-Nov	12	13:16:15	48.9	51.5	77624.71
15-Nov	12	13:16:20	53.7	54.6	234422.9
15-Nov	12	13:16:25	51	54.3	125892.5
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15-Nov	12	13:16:40	46.2	48.1	41686.94
15-Nov	12	13:16:45	51.5	53.5	141253.8
15-Nov	12	13:16:50	52.2	53.1	165958.7
15-Nov	12	13:16:55	57.7	67.4	588843.7
15-Nov	12	13:17:00	69.6	70.1	9120108
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15-Nov	12	13:17:45	71.5	71.8	14125375
15-Nov	12	13:17:50	70.9	71.4	12302688
15-Nov	12	13:17:55	71.4	71.9	13803843
15-Nov	12	13:18:00	72.2	73.1	16595869
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		13:18:15	76.6	77.8	45708819
		13:18:20	69.3	73.6	8511380
		13:18:25	56.7	59	467735.1
		13:18:30	55.4	56.1	346736.9
		13:18:35	53.3	55.2	213796.2
		13:18:40	50.8	51.6	120226.4
		13:18:45	51.5	55.6	141253.8
		13:18:50	53.3	55.7	213796.2
		13:18:55	48.6	50.7	72443.6
		13:19:00	50	51.2	100000
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		13:19:10	50	52.5	100000
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		13:19:20	46.9	48.7	48977.88
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		13:19:40	50.7	53.4	117489.8
		13:19:45	50.4	51.6	109647.8
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		13:19:55	51.3	53.7	134896.3
		13:20:00	53.7	54.4	234422.9

ATTACHMENT 2

Noise Modeling Data Sheets

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Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

RECON

Project Name : SESD
Project Number : 6514
Modeling Condition : Existing
Ground Type : Hard
Metric (L_{eq}, L_{dn}, CNEL) : CNEL

Peak ratio to ADT: 10.00
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment From	To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Peak % to ADT
1	Mallard Street	Federal Boulevard	69th Street	7,510	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
2	Federal Boulevard	60th Street	Mallard Street	17,190	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
3	Federal Boulevard	Mallard Street	MacArthur Drive	10,880	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
4	Federal Boulevard/Home Avenue	SR-94 EB Off-Ramp/I-15 NB Off-Ramp	SR-94 WB On-Ramp	11,670	37.5	100	96.60	2.60	0.80	80.00	10.00	10.00	10
5	Tooley Street	60th Street	Paradise Street	463	28.333	100	96.60	2.60	0.80	80.00	10.00	10.00	10
6	Hilltop Drive	Boundary Street	I-805	2,885	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
7	Hilltop Drive	I-805	47th Street	4,435	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
8	Roswell Street	51st Street	Old Memory Lane	1,015	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
9	Old Memory Lane	Roswell Street	60th Street	1,303	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
10	Radio Drive	60th Street	Mallard Street	460	26.667	100	96.60	2.60	0.80	80.00	10.00	10.00	10
11	Klauber Avenue	Broadway	69th Street	919	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
12	Broadway	60th Street	Madera Street	2,600	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
13	Market Street	17th Street	19th Street	7,895	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
14	Market Street	19th Street	25th Street	7,835	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
15	Market Street	25th Street	28th Street	9,604	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
16	Market Street	28th Street	32nd Street	10,745	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
17	Market Street	32nd Street	1-15 SB Ramps	17,180	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
18	Market Street	I-15 SB Ramps	1-15 NB Ramps	22,320	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
19	Market Street	I-15 NB Ramps	1-805 SB Ramps	22,310	32.5	100	96.60	2.60	0.80	80.00	10.00	10.00	10
20	Market Street	I-805 SB Ramps	1-805 NB Ramps	17,543	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
21	Market Street	I-805 NB Ramps	47th Street	14,860	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
22	Market Street	47th Street	Euclid Avenue	10,022	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
23	Market Street/Akins Avenue	Euclid Avenue	60th Street	11,136	32	100	96.60	2.60	0.80	80.00	10.00	10.00	10
24	Imperial Avenue	17th Street	19th Street	6,582	40	100	96.60	2.60	0.80	80.00	10.00	10.00	10
25	Imperial Avenue	19th Street	25th Street	5,196	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
26	Imperial Avenue	25th Street	28th Street	5,257	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
27	Imperial Avenue	28th Street	30th Street	5,027	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
28	Imperial Avenue	30th Street	32nd Street	4,152	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10

29	Imperial Avenue	32nd Street	36th Street	6,555	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
30	Imperial Avenue	36th Street	40th Street	7,909	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
31	Imperial Avenue	40th Street	I-805 SB Ramps	10,301	40	100	96.60	2.60	0.80	80.00	10.00	10.00	10
32	Imperial Avenue	I-805 SB Ramps	1-805 NB Ramps	25,741	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
33	Imperial Avenue	I-805 NB Ramps	47th Street	33,370	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
34	Imperial Avenue	47th Street	Euclid Avenue	30,600	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
35	Imperial Avenue	Euclid Avenue	Valencia Parkway	23,685	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
36	Imperial Avenue	Valencia Parkway	Woodman Street	17,745	39.167	100	96.60	2.60	0.80	80.00	10.00	10.00	10
37	Imperial Avenue	Woodman Street	69th Street	16,738	40	100	96.60	2.60	0.80	80.00	10.00	10.00	10
38	Imperial Avenue	69th Street	Viewcrest	8,205	50	100	96.60	2.60	0.80	80.00	10.00	10.00	10
39	Lisbon Street	Imperial Avenue	71st Street	8,522	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
40	Commercial Street	17th Street	19th Street	1,192	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
41	Commercial Street	19th Street	25th Street	1,208	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
42	Commercial Street	25th Street	28th Street	1,065	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
43	Commercial Street	28th Street	30th Street	929	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
44	Commercial Street	30th Street	32nd Street	567	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
45	Churchward Street/58th Street	Euclid Avenue	Skyline Drive	2,007	26.667	100	96.60	2.60	0.80	80.00	10.00	10.00	10
46	Ocean View Boulevard	25th Street	28th Street	2,207	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
47	Ocean View Boulevard	28th Street	30th Street	5,524	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
48	Ocean View Boulevard	30th Street	32nd Street	7,985	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
49	Ocean View Boulevard	32nd Street	I-15 SB Ramps	13,905	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
50	Ocean View Boulevard	I-15 SB Ramps	I-15 NB Ramps	17,094	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
51	Ocean View Boulevard	I-15 NB Ramps	36th Street	13,730	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
52	Ocean View Boulevard	36th Street	40th Street	12,009	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
53	Ocean View Boulevard	40th Street	47th Street	4,965	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
54	Skyline Drive	58th Street	Valencia Parkway	6,760	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
55	Skyline Drive	Valencia Parkway	61st Street	10,910	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
56	Skyline Drive	61st Street	Omeara Street	11,474	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
57	Skyline Drive	Omeara Street	Woodman Street	11,700	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
58	Skyline Drive	Woodman Street	69th Street	11,665	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Predicted Noise Levels

RECON

Project Name : SESD
Project Number : 6514
Modeling Condition : Existing
Metric (Leq, Ldn, CNEL) : CNEL

		Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
1	Mallard Street	Federal Boulevard	69th Street	67.4	62.3	64.3	69.9	98	310	981	3,103	9,813
2	Federal Boulevard	60th Street	Mallard Street	72.9	66.9	67.0	74.7	294	929	2,938	9,290	29,379
3	Federal Boulevard	Mallard Street	MacArthur Drive	70.9	64.9	65.0	72.7	186	588	1,859	5,880	18,595
4	Federal Boulevard/Home Avenue	SR-94 EB Off-Ramp/I-15 NB Off-Ramp	SR-94 WB On-Ramp	72.1	65.7	65.6	73.7	235	742	2,345	7,417	23,455
5	Tooley Street	60th Street	Paradise Street	54.6	49.8	51.9	57.3	5	17	54	170	537
6	Hilltop Drive	Boundary Street	I-805	60.9	56.9	59.4	64.1	26	82	259	820	2,594
7	Hilltop Drive	I-805	47th Street	62.8	58.7	61.2	66.0	40	126	399	1,261	3,988
8	Roswell Street	51st Street	Old Memory Lane	56.4	52.3	54.8	59.6	9	29	91	289	913
9	Old Memory Lane	Roswell Street	60th Street	59.8	54.6	56.7	62.3	17	54	170	538	1,703
10	Radio Drive	60th Street	Mallard Street	53.8	49.3	51.7	56.7	5	15	47	149	471
11	Klauber Avenue	Broadway	69th Street	56.0	51.9	54.4	59.2	8	26	83	261	826
12	Broadway	60th Street	Madera Street	62.8	57.6	59.7	65.3	34	107	340	1,074	3,397
13	Market Street	17th Street	19th Street	69.5	63.5	63.6	71.3	135	427	1,349	4,267	13,493
14	Market Street	19th Street	25th Street	69.5	63.5	63.6	71.3	134	423	1,339	4,234	13,390
15	Market Street	25th Street	28th Street	70.4	64.4	64.4	72.2	164	519	1,641	5,190	16,413
16	Market Street	28th Street	32nd Street	70.9	64.9	64.9	72.6	184	581	1,836	5,807	18,364
17	Market Street	32nd Street	1-15 SB Ramps	72.9	66.9	67.0	74.7	294	928	2,936	9,285	29,362
18	Market Street	I-15 SB Ramps	1-15 NB Ramps	74.0	68.0	68.1	75.8	381	1,206	3,815	12,063	38,146
19	Market Street	I-15 NB Ramps	1-805 SB Ramps	73.1	67.5	68.8	75.3	336	1,063	3,363	10,635	33,629
20	Market Street	I-805 SB Ramps	1-805 NB Ramps	71.1	65.9	67.9	73.6	229	725	2,292	7,249	22,924
21	Market Street	I-805 NB Ramps	47th Street	70.3	65.2	67.2	72.9	194	614	1,942	6,140	19,418
22	Market Street	47th Street	Euclid Avenue	68.6	63.5	65.5	71.2	131	414	1,310	4,141	13,096
23	Market Street/Akins Avenue	Euclid Avenue	60th Street	69.9	64.4	65.9	72.1	164	518	1,639	5,181	16,385
24	Imperial Avenue	17th Street	19th Street	70.4	63.6	63.3	71.9	154	488	1,544	4,881	15,435
25	Imperial Avenue	19th Street	25th Street	65.8	60.7	62.7	68.3	68	215	679	2,147	6,790
26	Imperial Avenue	25th Street	28th Street	65.8	60.7	62.7	68.4	69	217	687	2,172	6,869
27	Imperial Avenue	28th Street	30th Street	65.6	60.5	62.5	68.2	66	208	657	2,077	6,569
28	Imperial Avenue	30th Street	32nd Street	64.8	59.7	61.7	67.3	54	172	543	1,716	5,425

29	Imperial Avenue	32nd Street	36th Street	66.8	61.7	63.7	69.3	86	271	857	2,709	8,566
30	Imperial Avenue	36th Street	40th Street	69.5	63.5	63.6	71.3	135	427	1,352	4,274	13,516
31	Imperial Avenue	40th Street	I-805 SB Ramps	72.3	65.6	65.3	73.8	242	764	2,416	7,639	24,157
32	Imperial Avenue	I-805 SB Ramps	1-805 NB Ramps	74.7	68.6	68.7	76.4	440	1,391	4,399	13,911	43,992
33	Imperial Avenue	I-805 NB Ramps	47th Street	75.8	69.8	69.9	77.6	570	1,803	5,703	18,035	57,031
34	Imperial Avenue	47th Street	Euclid Avenue	75.4	69.4	69.5	77.2	523	1,654	5,230	16,538	52,297
35	Imperial Avenue	Euclid Avenue	Valencia Parkway	74.3	68.3	68.4	76.1	405	1,280	4,048	12,801	40,479
36	Imperial Avenue	Valencia Parkway	Woodman Street	74.4	67.8	67.6	76.0	396	1,251	3,956	12,510	39,561
37	Imperial Avenue	Woodman Street	69th Street	74.5	67.7	67.4	75.9	393	1,241	3,925	12,413	39,252
38	Imperial Avenue	69th Street	Viewcrest	74.2	66.1	65.2	75.2	334	1,056	3,338	10,557	33,384
39	Lisbon Street	Imperial Avenue	71st Street	69.9	63.8	63.9	71.6	146	461	1,456	4,605	14,564
40	Commercial Street	17th Street	19th Street	57.1	53.0	55.5	60.3	11	34	107	339	1,072
41	Commercial Street	19th Street	25th Street	59.4	54.3	56.3	62.0	16	50	158	499	1,579
42	Commercial Street	25th Street	28th Street	58.9	53.8	55.8	61.4	14	44	139	440	1,392
43	Commercial Street	28th Street	30th Street	58.3	53.2	55.2	60.8	12	38	121	384	1,214
44	Commercial Street	30th Street	32nd Street	56.2	51.0	53.0	58.7	7	23	74	234	741
45	Churchward Street/58th Street	Euclid Avenue	Skyline Drive	60.2	55.7	58.1	63.1	21	65	205	649	2,053
46	Ocean View Boulevard	25th Street	28th Street	62.1	56.9	58.9	64.6	29	91	288	912	2,883
47	Ocean View Boulevard	28th Street	30th Street	66.0	60.9	62.9	68.6	72	228	722	2,282	7,218
48	Ocean View Boulevard	30th Street	32nd Street	67.6	62.5	64.5	70.2	104	330	1,043	3,300	10,434
49	Ocean View Boulevard	32nd Street	I-15 SB Ramps	70.1	64.9	66.9	72.6	182	575	1,817	5,746	18,170
50	Ocean View Boulevard	I-15 SB Ramps	I-15 NB Ramps	71.0	65.8	67.8	73.5	223	706	2,234	7,064	22,337
51	Ocean View Boulevard	I-15 NB Ramps	36th Street	70.0	64.9	66.9	72.5	179	567	1,794	5,674	17,941
52	Ocean View Boulevard	36th Street	40th Street	69.4	64.3	66.3	72.0	157	496	1,569	4,962	15,692
53	Ocean View Boulevard	40th Street	47th Street	65.6	60.5	62.5	68.1	65	205	649	2,052	6,488
54	Skyline Drive	58th Street	Valencia Parkway	68.8	62.8	62.9	70.6	116	365	1,155	3,653	11,552
55	Skyline Drive	Valencia Parkway	61st Street	70.9	64.9	65.0	72.7	186	590	1,864	5,896	18,645
56	Skyline Drive	61st Street	Omeara Street	71.1	65.1	65.2	72.9	196	620	1,961	6,201	19,609
57	Skyline Drive	Omeara Street	Woodman Street	71.2	65.2	65.3	73.0	200	632	2,000	6,323	19,996
58	Skyline Drive	Woodman Street	69th Street	71.2	65.2	65.3	73.0	199	630	1,994	6,304	19,935

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)

Model Input Sheet

Project Name : SESD
Project Number : 6514
Modeling Condition : Existing
Ground Type : Hard
Metric (L_{eq}, L_{dn}, CNEL) : CNEL

Peak ratio to ADT: 10.00
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Peak % to ADT
59	National Avenue	Commercial Street	Beardsley Street	2,561	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
60	National Avenue	Beardsley Street	SR-75 Off-Ramp	3,725	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
61	National Avenue	SR-75 Off-Ramp	26th Street	3,395	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
62	National Avenue	26th Street	27th Street/I-5 SB Off-Ramp	11,450	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
63	National Avenue	27th Street/I-5 SB Off-Ramp	28th Street	15,927	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
64	National Avenue	28th Street	I-5 NB Ramps	18,431	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
65	National Avenue	I-5 NB Ramps	32nd Street	10,020	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
66	National Avenue	32nd Street	43rd Street	10,572	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
67	Logan Avenue	43rd Street	45th Street	7,691	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
68	Logan Avenue	45th Street	47th Street	8,190	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
69	Logan Avenue	47th Street	Euclid Avenue	8,785	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
70	Olvera Avenue/58th Street	Euclid Avenue	Skyline Drive	5,190	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
71	Acacia Street	36th Street	38th Street	1,451	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
72	Alpha Street	38th Street	43rd Street	5,554	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
73	Division Street	Main Street	Osborn Street	15,920	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
74	Division Street	Osborn Street	Highland Avenue	10,265	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
75	Division Street	Highland Avenue	Palm Avenue	10,500	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
76	Division Street	Palm Avenue	Euclid Avenue	17,400	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
77	Division Street	Euclid Avenue	Harbison Avenue	12,800	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
78	Division Street	Harbison Avenue	58th Street	11,225	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
79	Division Street	58th Street	Valencia Parkway	10,678	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
80	Division Street	Valencia Parkway	61st Street	9,115	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
81	Division Street	61st Street	Plaza Boulevard	6,555	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
82	Plaza Boulevard	Paradise Valley Road	Division Street	4,700	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
83	Plaza Boulevard	Division Street	Woodman Street	6,190	40	100	96.60	2.60	0.80	80.00	10.00	10.00	10
84	Cesar Chavez Parkway	Commercial Street	I-5 NB Ramps	5,692	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10

85	Cesar Chavez Parkway	I-5 NB Ramps	SR-75 On-Ramp/Logan Avenue	13,771	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
86	25th Street	SR-94 WB Off-Ramp	SR-94 EB On-Ramp	12,970	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
87	25th Street	SR-94 EB On-Ramp	Market Street	10,914	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
88	25th Street	Market Street	Imperial Avenue	9,150	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
89	25th Street	Imperial Avenue	Commercial Street	5,703	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
90	28th Street	SR-94 WB Ramps	SR-94 EB On-Ramp	10,183	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
91	28th Street	SR-94 EB Ramps	Market Street	10,041	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
92	28th Street	Market Street	Imperial Avenue	7,494	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
93	28th Street	Imperial Avenue	Commercial Street	317	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
94	28th Street	Commercial Street	Ocean View Boulevard	4,965	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
95	28th Street	Ocean View Boulevard	National Avenue	8,195	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
96	28th Street	National Avenue	Boston Avenue	14,165	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
97	30th Street	E Street	Imperial Avenue	4,945	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
98	30th Street	Imperial Avenue	Commercial Street	2,993	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
99	30th Street	Commercial Street	National Avenue	4,826	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
100	Broadway/32nd Street	SR-94 WB Ramps	SR-94 EB On-Ramp/F Street	11,468	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
101	32nd Street	SR-94 EB On-Ramp/F Street	Market Street	6,076	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
102	32nd Street	Market Street	Imperial Avenue	5,116	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
103	32nd Street	Imperial Avenue	Commercial Street	3,134	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
104	32nd Street	Commercial Street	Ocean View Boulevard	3,975	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
105	32nd Street	Ocean View Boulevard	National Avenue	4,442	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
106	32nd Street	National Avenue	Boston Avenue	5,420	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
107	35th Street/Rigel Street	Ocean View Boulevard	Main Street	7,520	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
108	36th Street	Imperial Avenue	Ocean View Boulevard	3,447	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
109	36th Street	Ocean View Boulevard	Acacia Street	3,410	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Predicted Noise Levels

Project Name : SESD
Project Number : 6514
Modeling Condition : Existing
Metric (Leq, Ldn, CNEL) : CNEL

	Segment			Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
59	National Avenue	Commercial Street	Beardsley Street	62.7	57.6	59.6	65.2	33	106	335	1,058	3,346
60	National Avenue	Beardsley Street	SR-75 Off-Ramp	64.3	59.2	61.2	66.9	49	154	487	1,539	4,868
61	National Avenue	SR-75 Off-Ramp	26th Street	63.9	58.8	60.8	66.5	44	140	444	1,403	4,436
62	National Avenue	26th Street	27th Street/I-5 SB Off-Ramp	69.2	64.1	66.1	71.7	150	473	1,496	4,731	14,962
63	National Avenue	27th Street/I-5 SB Off-Ramp	28th Street	70.6	65.5	67.5	73.2	208	658	2,081	6,581	20,812
64	National Avenue	28th Street	I-5 NB Ramps	73.2	67.2	67.3	75.0	315	996	3,150	9,961	31,500
65	National Avenue	I-5 NB Ramps	32nd Street	70.6	64.5	64.6	72.3	171	542	1,712	5,415	17,125
66	Division Street	Euclid Avenue	43rd Street	71.6	65.6	65.7	73.4	219	692	2,188	6,918	21,876
67	Division Street	Harbison Avenue	45th Street	69.1	64.0	66.0	71.7	147	464	1,467	4,638	14,668
68	Logan Avenue	45th Street	47th Street	69.7	63.7	63.8	71.5	140	443	1,400	4,426	13,997
69	Logan Avenue	47th Street	Euclid Avenue	70.0	64.0	64.1	71.8	150	475	1,501	4,748	15,014
70	Olvera Avenue/58th Street	Euclid Avenue	Skyline Drive	65.8	60.6	62.7	68.3	68	214	678	2,145	6,782
71	Acacia Street	36th Street	38th Street	60.2	55.1	57.1	62.8	19	60	190	600	1,896
72	Alpha Street	38th Street	43rd Street	66.1	60.9	62.9	68.6	73	230	726	2,295	7,257
73	Division Street	Main Street	Osborn Street	72.6	66.6	66.6	74.3	272	860	2,721	8,604	27,208
74	Division Street	Osborn Street	Highland Avenue	68.7	63.6	65.6	71.3	134	424	1,341	4,242	13,413
75	Division Street	Highland Avenue	Palm Avenue	70.8	64.8	64.8	72.5	179	567	1,795	5,675	17,945
76	Division Street	Palm Avenue	Euclid Avenue	73.0	66.9	67.0	74.7	297	940	2,974	9,404	29,738
77	Division Street	Euclid Avenue	Harbison Avenue	71.6	65.6	65.7	73.4	219	692	2,188	6,918	21,876
78	Division Street	Harbison Avenue	58th Street	69.1	64.0	66.0	71.7	147	464	1,467	4,638	14,668
79	Division Street	58th Street	Valencia Parkway	68.9	63.8	65.8	71.4	140	441	1,395	4,412	13,953
80	Division Street	Valencia Parkway	61st Street	68.2	63.1	65.1	70.8	119	377	1,191	3,766	11,911
81	Division Street	61st Street	Plaza Boulevard	68.7	62.7	62.8	70.5	112	354	1,120	3,543	11,203
82	Plaza Boulevard	Paradise Valley Road	Division Street	63.1	59.0	61.5	66.3	42	134	423	1,336	4,226
83	Plaza Boulevard	Division Street	Woodman Street	70.1	63.4	63.1	71.6	145	459	1,452	4,590	14,516
84	Cesar Chavez Parkway	Commercial Street	I-5 NB Ramps	63.9	59.8	62.3	67.1	51	162	512	1,618	5,117

85	Cesar Chavez Parkway	I-5 NB Ramps	SR-75 On-Ramp/Logan Avenue	67.7	63.7	66.2	70.9	124	392	1,238	3,915	12,381
86	25th Street	SR-94 WB Off-Ramp	SR-94 EB On-Ramp	67.5	63.4	65.9	70.7	117	369	1,166	3,688	11,661
87	25th Street	SR-94 EB On-Ramp	Market Street	70.9	64.9	65.0	72.7	187	590	1,865	5,898	18,652
88	25th Street	Market Street	Imperial Avenue	70.2	64.2	64.2	71.9	156	495	1,564	4,945	15,638
89	25th Street	Imperial Avenue	Commercial Street	68.1	62.1	62.2	69.9	97	308	975	3,082	9,747
90	28th Street	SR-94 WB Ramps	SR-94 EB On-Ramp	66.4	62.3	64.9	69.6	92	290	916	2,895	9,156
91	28th Street	SR-94 EB Ramps	Market Street	66.4	62.3	64.8	69.6	90	285	903	2,855	9,027
92	28th Street	Market Street	Imperial Avenue	65.1	61.0	63.5	68.3	67	213	674	2,131	6,738
93	28th Street	Imperial Avenue	Commercial Street	51.4	47.3	49.8	54.5	3	9	29	90	285
94	28th Street	Commercial Street	Ocean View Boulevard	63.3	59.2	61.7	66.5	45	141	446	1,412	4,464
95	28th Street	Ocean View Boulevard	National Avenue	65.5	61.4	63.9	68.7	74	233	737	2,330	7,368
96	28th Street	National Avenue	Boston Avenue	70.1	65.0	67.0	72.7	185	585	1,851	5,853	18,510
97	30th Street	E Street	Imperial Avenue	63.3	59.2	61.7	66.5	44	141	445	1,406	4,446
98	30th Street	Imperial Avenue	Commercial Street	61.1	57.0	59.5	64.3	27	85	269	851	2,691
99	30th Street	Commercial Street	National Avenue	63.2	59.1	61.6	66.4	43	137	434	1,372	4,339
100	Broadway/32nd Street	SR-94 WB Ramps	SR-94 EB On-Ramp/F Street	69.2	64.1	66.1	71.8	150	474	1,499	4,739	14,985
101	32nd Street	SR-94 EB On-Ramp/F Street	Market Street	66.5	61.3	63.3	69.0	79	251	794	2,511	7,940
102	32nd Street	Market Street	Imperial Avenue	65.7	60.6	62.6	68.3	67	211	668	2,114	6,684
103	32nd Street	Imperial Avenue	Commercial Street	65.5	59.5	59.6	67.3	54	169	536	1,694	5,356
104	32nd Street	Commercial Street	Ocean View Boulevard	66.5	60.5	60.6	68.3	68	215	679	2,148	6,794
105	32nd Street	Ocean View Boulevard	National Avenue	67.0	61.0	61.1	68.8	76	240	759	2,401	7,592
106	32nd Street	National Avenue	Boston Avenue	66.0	60.8	62.8	68.5	71	224	708	2,240	7,082
107	35th Street/Rigel Street	Ocean View Boulevard	Main Street	67.4	62.3	64.3	69.9	98	311	983	3,107	9,826
108	36th Street	Imperial Avenue	Ocean View Boulevard	64.0	58.9	60.9	66.5	45	142	450	1,424	4,504
109	36th Street	Ocean View Boulevard	Acacia Street	61.7	57.6	60.1	64.9	31	97	307	970	3,066

Appendix

Traffic Noise Prediction Model, (FHWA RD-77-108)
Model Input Sheet

Project Name : SESD
Project Number : 6514
Modeling Condition : Existing
Ground Type : Hard
Metric (L_{eq}, L_{dn}, CNEL) : CNEL

Peak ratio to ADT: 10.00
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	Segment From	Segment To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	Peak % to ADT
110	38th Street	Ocean View Boulevard	Acacia Street	3,585	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
111	Vesta Street	Acacia Street	Main Street	3,970	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
112	40th Street	Imperial Avenue	Ocean View Boulevard	4,425	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
113	40th Street	National Avenue	Division Street	1,966	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
114	Boundary Street	Hilltop Drive	Market Street	2,060	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
115	San Pasqual Drive	Imperial Avenue	Ocean View Boulevard	5,479	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
116	San Pasqual Drive	Ocean View Boulevard	Logan Avenue	5,535	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
117	43rd Street	Logan Avenue	Newton Avenue	13,301	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
118	43rd Street	Newton Avenue	Beta Street	12,835	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
119	43rd Street	Beta Street	Delta Street	17,249	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
120	43rd Street/Highland Avenue	Delta Street	Division Street	15,360	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
121	Highland Avenue	Division Street	4th Street	13,000	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
122	45th Street	Imperial Avenue	Logan Avenue	1,955	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
123	47th Street	SR-94 EB On-Ramp	Market Street	12,263	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
124	47th Street	Market Street	Imperial Avenue	10,145	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
125	47th Street	Imperial Avenue	Logan Avenue	10,870	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
126	47th Street	Logan Avenue	I-805 NB Ramps	9,465	45	100	96.60	2.60	0.80	80.00	10.00	10.00	10
127	47th Street	I-805 NB Ramps	I-805 SB Ramps	15,469	45	100	96.60	2.60	0.80	80.00	10.00	10.00	10
128	47th Street/Palm Avenue	I-805 SB Ramps	Division Street	21,748	45	100	96.60	2.60	0.80	80.00	10.00	10.00	10
129	Euclid Avenue	SR-94 WB Ramps	SR-94 EB Ramps	28,950	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
130	Euclid Avenue	SR-94 EB Ramps	Market Street	25,364	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
131	Euclid Avenue	Market Street	Imperial Avenue	20,933	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
132	Euclid Avenue	Imperial Avenue	Logan Avenue	11,000	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
133	Euclid Avenue	Logan Avenue	Division Street	10,700	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
134	51st Street	Market Street	Roswell Street	2,252	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
135	San Jacinto Drive	Imperial Avenue	Olvera Avenue	1,848	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
136	Bayview Heights Way	SR-94 WB Ramps	SR-94 EB Ramps	11,160	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
137	Kelton Road	SR-94 EB Ramps	Alvin Street	3,840	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10

138	Alvin Street	Kelton Road	Pitta Street	1,164	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
139	Pitta Street	Alvin Street	Market Street	3,013	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
140	Merlin Drive	Broadway	Imperial Avenue	4,455	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
141	Valencia Parkway	Imperial Avenue	Skyline Drive	7,059	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
142	Valencia Parkway	Skyline Drive	Cervantes Avenue	3,645	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
143	Valencia Parkway	Cervantes Avenue	Wesmead Street	4,443	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
144	Valencia Parkway	Wesmead Street	Division Street	4,399	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
145	60th Street	Federal Boulevard	Imperial Avenue	5,050	27.5	100	96.60	2.60	0.80	80.00	10.00	10.00	10
146	61st Street	Imperial Avenue	Division Street	4,915	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
147	Winnett Street	Federal Boulevard	Radio Drive	2,649	27.5	100	96.60	2.60	0.80	80.00	10.00	10.00	10
148	Paradise Street	Mallard Street	Radio Drive	715	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
149	Madera Street	Massachusetts Avenue	69th Street	3,469	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
150	Madera Street/66th Street	69th Street	Akins Avenue	3,150	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
151	Woodman Street	Imperial Avenue	Skyline Drive	6,951	35	100	96.60	2.60	0.80	80.00	10.00	10.00	10
152	Woodman Street	Skyline Drive	Plaza Boulevard	9,290	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
153	Woodman Street	Plaza Boulevard	Paradise Valley Road	16,730	40	100	96.60	2.60	0.80	80.00	10.00	10.00	10
154	69th Street	San Miguel Avenue	Mallard Street	5,389	25	100	96.60	2.60	0.80	80.00	10.00	10.00	10
155	69th Street	Mallard Street	Imperial Avenue	4,000	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10
156	69th Street	Imperial Avenue	Skyline Drive	3,363	30	100	96.60	2.60	0.80	80.00	10.00	10.00	10

Appendix
Traffic Noise Prediction Model, (FHWA RD-77-108)
Predicted Noise Levels

RECON

Project Name : SESD
Project Number : 6514
Modeling Condition : Existing
Metric (Leq, Ldn, CNEL) : CNEL

		Segment		Noise Levels, dB CNEL				Distance to Traffic Noise Contours, Feet				
Segment	Roadway	From	To	Auto	MT	HT	Total	70 dB	65 dB	60 dB	55 dB	50 dB
110	38th Street	Ocean View Boulevard	Acacia Street	61.9	57.8	60.3	65.1	32	102	322	1,019	3,223
111	Vesta Street	Acacia Street	Main Street	62.3	58.2	60.8	65.5	36	113	357	1,129	3,569
112	40th Street	Imperial Avenue	Ocean View Boulevard	62.8	58.7	61.2	66.0	40	126	398	1,258	3,979
113	40th Street	National Avenue	Division Street	59.3	55.2	57.7	62.5	18	56	177	559	1,768
114	Boundary Street	Hilltop Drive	Market Street	63.7	57.7	57.8	65.5	35	111	352	1,113	3,521
115	San Pasqual Drive	Imperial Avenue	Ocean View Boulevard	67.9	61.9	62.0	69.7	94	296	936	2,961	9,363
116	San Pasqual Drive	Ocean View Boulevard	Logan Avenue	63.8	59.7	62.2	67.0	50	157	498	1,574	4,977
117	47th Street/Palm Avenue	I-805 SB Ramps	Newton Avenue	77.1	69.6	69.0	78.3	680	2,150	6,800	21,502	67,995
118	Euclid Avenue	SR-94 WB Ramps	Beta Street	75.2	69.2	69.2	76.9	495	1,565	4,948	15,646	49,477
119	43rd Street	Beta Street	Delta Street	72.9	66.9	67.0	74.7	295	932	2,948	9,322	29,479
120	43rd Street/Highland Avenue	Delta Street	Division Street	72.4	66.4	66.5	74.2	263	830	2,625	8,301	26,251
121	Highland Avenue	Division Street	4th Street	71.7	65.7	65.8	73.5	222	703	2,222	7,026	22,218
122	45th Street	Imperial Avenue	Logan Avenue	59.3	55.2	57.7	62.4	18	56	176	556	1,758
123	47th Street	SR-94 EB On-Ramp	Market Street	71.4	65.4	65.5	73.2	210	663	2,096	6,628	20,958
124	47th Street	Market Street	Imperial Avenue	70.6	64.6	64.7	72.4	173	548	1,734	5,483	17,338
125	47th Street	Imperial Avenue	Logan Avenue	70.9	64.9	65.0	72.7	186	587	1,858	5,875	18,577
126	47th Street	Logan Avenue	I-805 NB Ramps	73.5	66.0	65.4	74.7	296	936	2,959	9,358	29,593
127	47th Street	I-805 NB Ramps	I-805 SB Ramps	75.6	68.1	67.5	76.8	484	1,529	4,836	15,294	48,365
128	47th Street/Palm Avenue	I-805 SB Ramps	Division Street	77.1	69.6	69.0	78.3	680	2,150	6,800	21,502	67,995
129	Euclid Avenue	SR-94 WB Ramps	SR-94 EB Ramps	75.2	69.2	69.2	76.9	495	1,565	4,948	15,646	49,477
130	Euclid Avenue	SR-94 EB Ramps	Market Street	74.6	68.6	68.7	76.4	433	1,371	4,335	13,708	43,349
131	Euclid Avenue	Market Street	Imperial Avenue	73.8	67.7	67.8	75.5	358	1,131	3,578	11,313	35,776
132	Euclid Avenue	Imperial Avenue	Logan Avenue	71.0	65.0	65.0	72.7	188	594	1,880	5,945	18,800
133	Euclid Avenue	Logan Avenue	Division Street	70.8	64.8	64.9	72.6	183	578	1,829	5,783	18,287
134	51st Street	Market Street	Roswell Street	59.9	55.8	58.3	63.1	20	64	202	640	2,024
135	San Jacinto Drive	Imperial Avenue	Olvera Avenue	61.3	56.2	58.2	63.8	24	76	241	763	2,414
136	Bayview Heights Way	SR-94 WB Ramps	SR-94 EB Ramps	69.1	64.0	66.0	71.6	146	461	1,458	4,612	14,583
137	Kelton Road	SR-94 EB Ramps	Alvin Street	64.5	59.3	61.3	67.0	50	159	502	1,587	5,018

138	Alvin Street	Kelton Road	Pitta Street	59.3	54.2	56.2	61.8	15	48	152	481	1,521
139	Pitta Street	Alvin Street	Market Street	63.4	58.3	60.3	66.0	39	124	394	1,245	3,936
140	Merlin Drive	Broadway	Imperial Avenue	62.8	58.7	61.3	66.0	40	127	401	1,267	4,006
141	Valencia Parkway	Imperial Avenue	Skyline Drive	69.0	63.0	63.1	70.8	121	381	1,206	3,815	12,063
142	Valencia Parkway	Skyline Drive	Cervantes Avenue	66.2	60.2	60.2	67.9	62	197	623	1,970	6,230
143	Valencia Parkway	Cervantes Avenue	Wesmead Street	67.0	61.0	61.1	68.8	76	240	759	2,401	7,592
144	Valencia Parkway	Wesmead Street	Division Street	67.0	61.0	61.1	68.8	75	238	752	2,377	7,517
145	60th Street	Federal Boulevard	Imperial Avenue	64.6	59.9	62.2	67.4	55	174	550	1,740	5,503
146	61st Street	Imperial Avenue	Division Street	65.5	60.4	62.4	68.1	64	203	642	2,031	6,423
147	Winnett Street	Federal Boulevard	Radio Drive	61.8	57.1	59.4	64.6	29	91	289	913	2,886
148	Paradise Street	Mallard Street	Radio Drive	57.2	52.0	54.0	59.7	9	30	93	295	934
149	Madera Street	Massachusetts Avenue	69th Street	66.0	59.9	60.0	67.7	59	187	593	1,875	5,929
150	Madera Street/66th Street	69th Street	Akins Avenue	65.5	59.5	59.6	67.3	54	170	538	1,702	5,384
151	Woodman Street	Imperial Avenue	Skyline Drive	69.0	63.0	63.0	70.7	119	376	1,188	3,756	11,879
152	Woodman Street	Skyline Drive	Plaza Boulevard	68.3	63.2	65.2	70.8	121	384	1,214	3,839	12,139
153	Woodman Street	Plaza Boulevard	Paradise Valley Road	74.5	67.7	67.4	75.9	392	1,241	3,923	12,407	39,233
154	69th Street	San Miguel Avenue	Mallard Street	63.7	59.6	62.1	66.9	48	153	484	1,532	4,845
155	69th Street	Mallard Street	Imperial Avenue	64.6	59.5	61.5	67.2	52	165	523	1,653	5,227
156	69th Street	Imperial Avenue	Skyline Drive	63.9	58.8	60.8	66.4	44	139	439	1,389	4,394