NOISE STUDY

Otay Mesa Central Village Specific Plan
City of San Diego California

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GLOSSARY OF TERMS

Sound Pressure Level (SPL): a ratio of one sound pressure to a reference pressure (L_{ref}) of 20 µPa. Because of the dynamic range of the human ear, the ratio is calculated logarithmically by 20 log (L/L_{ref}).

A-weighted Sound Pressure Level (dBA): Some frequencies of noise are more noticeable than others. To compensate for this fact, different sound frequencies are weighted more.

Minimum Sound Level (L_{min}): Minimum SPL or the lowest SPL measured over the time interval using the A-weighted network and slow time weighting.

Maximum Sound Level (L_{max}): Maximum SPL or the highest SPL measured over the time interval the A-weighted network and slow time weighting.

Equivalent sound level (L_{eq}): the true equivalent sound level measured over the run time. Leq is the A-weighted steady sound level that contains the same total acoustical energy as the actual fluctuating sound level.

Day Night Sound Level (LDN): Representing the Day/Night sound level, this measurement is a 24 –hour average sound level where 10 dB is added to all the readings that occur between 10 pm and 7 am. This is primarily used in community noise regulations where there is a 10 dB "Penalty" for night time noise. Typically LDN's are measured using A weighting.

Community Noise Exposure Level (CNEL): The accumulated exposure to sound measured in a 24-hour sampling interval and artificially boosted during certain hours. For CNEL, samples taken between 7 pm and 10 pm are boosted by 5 dB; samples taken between 10 pm and 7 am are boosted by 10 dB.

Octave Band: An octave band is defined as a frequency band whose upper band-edge frequency is twice the lower band frequency.

Third-Octave Band: A third-octave band is defined as a frequency band whose upper band-edge frequency is 1.26 times the lower band frequency.

Response Time (F,S,I): The response time is a standardized exponential time weighting of the input signal according to fast (F), slow (S) or impulse (I) time response relationships. Time response can be described with a time constant. The time constants for fast, slow and impulse responses are 1.0 seconds, 0.125 seconds and 0.35 milliseconds, respectively.

1.0 PROJECT INTRODUCTION

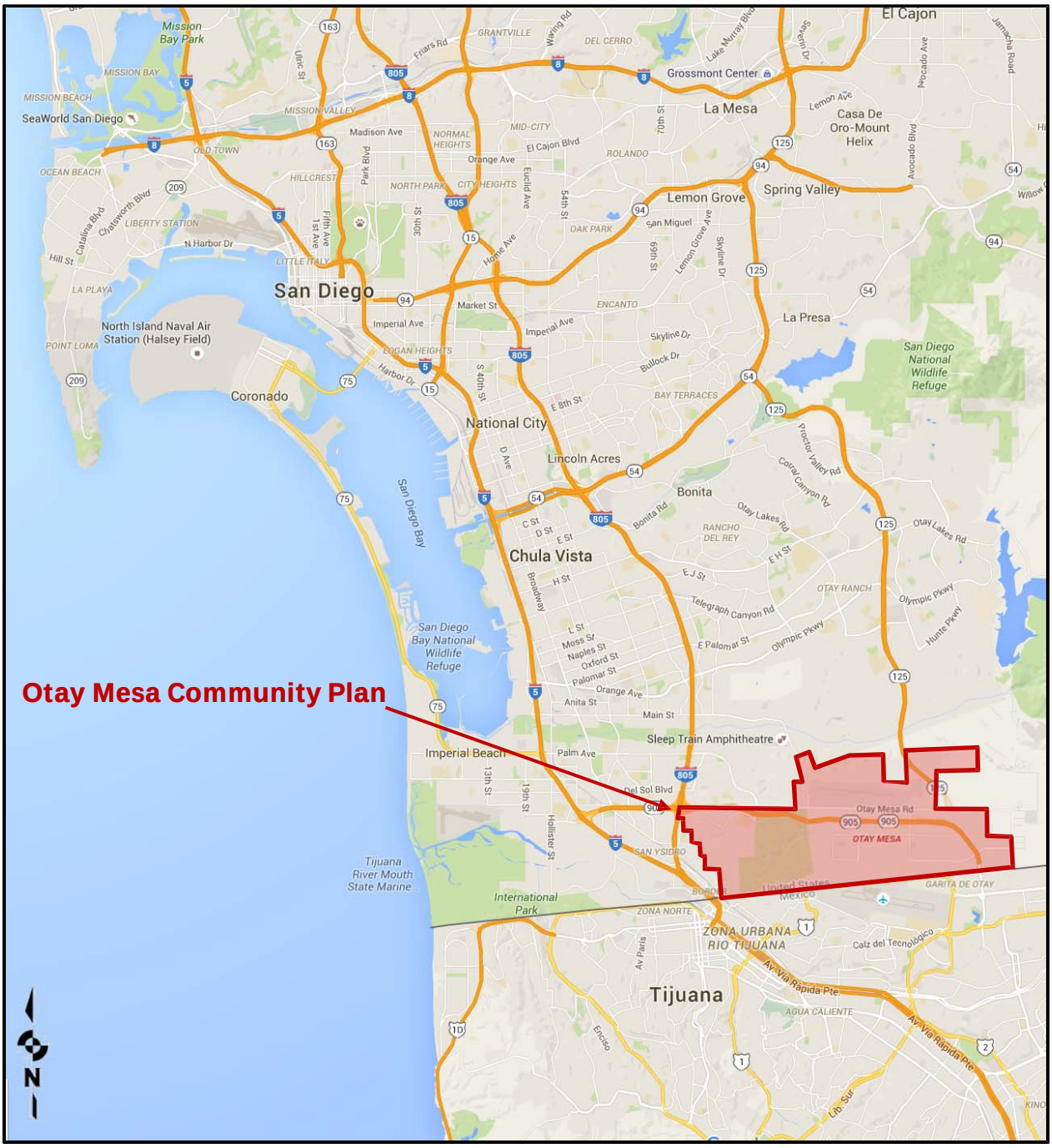
1.1 Purpose of this Study

The City of San Diego certified a Final Environmental Impact Report for the Otay Mesa Community Plan Update in 2014 (EIR). The EIR disclosed potential noise impacts that would result from implementing the Otay Mesa Community Plan Update (March 2014, "OMCPU") and presented mitigation measures to address the impacts. After the application of mitigation measures, the OMCPU concluded that noise impacts would be significant and unavoidable. The OMCPU requires the City of San Diego to adopt a Specific Plan for the Central Village portion of the community. The purpose of this Noise study is to evaluate the currently proposed Central Village Specific Plan (CVSP) and determine if expected noise impacts fall within the scope of impacts disclosed in the EIR, and whether any additional mitigation measures beyond those presented in the EIR are warranted. Because the proposed CVSP implements and is fully consistent with the OMCPU, the comparative portion of the analysis focuses on differences in noise levels disclosed by the OMCPU EIR in comparison to noise levels calculated by Ldn Consulting for the proposed CVSP project.

1.2 Project Location

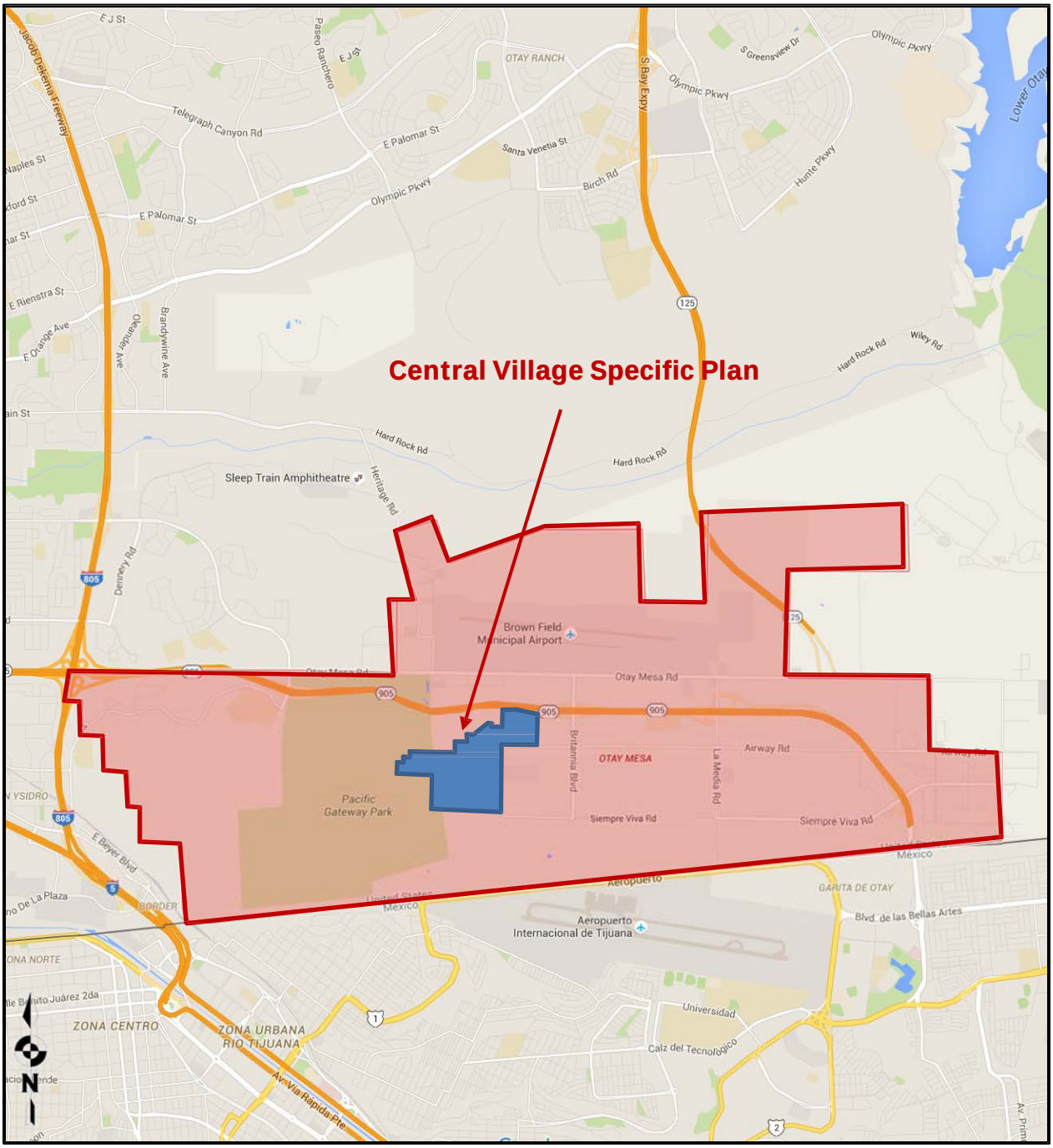
The Central Village Specific Plan (CVSP) area is located in the southern portion of the City of San Diego, within the Otay Mesa Community. The CVSP is situated immediately south of California State Route 905 (SR-905), approximately 2.4 miles east of Interstate 805 (I-805) and Interstate 5 (I-5), and 0.5 mile north of the United States and Mexico International Border. Specifically, the CVSP is bordered by SR-905 and Airway Road to the north, Cactus Road and Continental Road to the east, and Siempre Viva Road to the south, which terminates at its western extent at Cactus Road at the southwest corner of the CVSP boundary. A general vicinity map showing the Otay Mesa Community Plan boundaries is shown in Figure 1 on the following page and a map showing the CVSP within the Otay Mesa Community Plan is shown in Figure 2.

Figure 1: Otay Mesa Community Plan Location



Source: (Google 2016)

Figure 2: Central Village Specific Plan Location



Source: (Google 2016)

1.3 Project Description

The OMCPU and associated EIR assumed the following land uses within the Central Village portion of the OMCPU area:

- 5,246 multi-family dwelling units
- 32.7 ksf of community commercial
- 32.3 acres of active park space
- 1 elementary school

The CVSP is proposing to change the land uses within the Central Village area to the following:

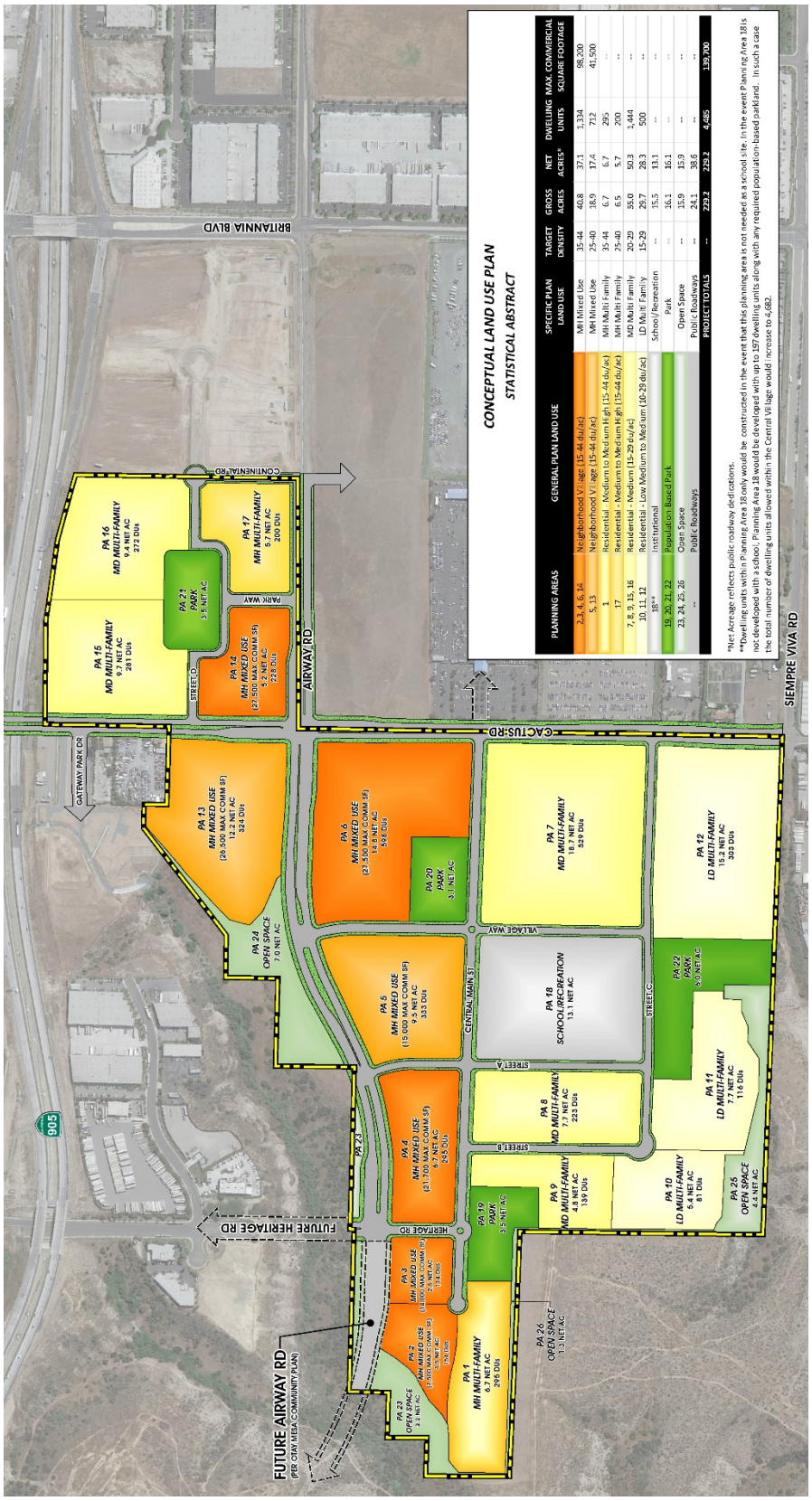
- 425 multi-family dwelling units (<20 du/ac)
- 4,060 multi-family dwelling units (>20 du/ac)
- 139.7 ksf of community commercial
- 16.1 acres of active park space
- 1 elementary school

Because the mix of land uses assumed by the OMCPU EIR and the land uses proposed by the CVSP are substantially similar, it is assumed that construction activities associated with buildout of the Central Village would largely remain the same as assumed by the OMCPU EIR in the Central Village area. Consistent with the assumptions used by the EIR for construction activity, CVSP Section 3.3 "Phasing Plan" indicates that the Central Village is likely to develop in multiple phases over time. The EIR assumed that construction activities would involve demolition, earthwork, construction, and surface preparation for implementing projects, and that typical construction equipment to be used would include scrapers, dump trucks, backhoes, front-end loaders, jackhammers, concrete mixers and others (see Table 8 of the Noise report appended to the OMCPU EIR). Based on industry-standard construction practices, these are reasonable assumptions for construction activities in the Central Village.

The land use modifications proposed by the CVSP in comparison to the mix of land uses assumed for the Central Village by the OMCPU EIR are summarized below. The proposed CVSP land use plan is shown in Figure 3.

- A reduction of 761 Multi-family dwelling units
- An increase of 107 ksf of community commercial floor space
- A reduction of 16.2 acres of active park space

Figure 3: Central Village Specific Plan Land Use Plan



CONCEPTUAL LAND USE PLAN
STATISTICAL ABSTRACT

PLANNING AREAS	GENERAL PLAN LAND USE	SPECIFIC PLAN LAND USE	TARGET DENSITY	GROSS ACRES	NET ACRES*	DWELLING UNITS	MAX. COMMERCIAL SQUARE FOOTAGE
2,3, 4, 6, 14	Neighborhood Village (15-44 du/ac)	MH Mixed Use	35-44	40.8	37.1	1,334	98,200
5, 13	Neighborhood Village (15-44 du/ac)	MH Mixed Use	25-40	18.9	17.4	712	41,500
17	Residential - Medium to Medium High (15-44 du/ac)	MH Multi Family	35-44	6.7	6.7	295	--
7, 8, 9, 15, 16	Residential - Medium to Medium High (15-44 du/ac)	MH Multi Family	25-40	6.5	5.7	200	--
1	Residential - Medium (15-29 du/ac)	MD Multi Family	20-30	58.0	50.3	1,441	--
10, 11, 12	Residential - Low Medium to Medium (10-29 du/ac)	LD Multi Family	15-29	28.7	28.3	500	--
18, 26**	Institutional	School/Recreation	--	15.5	13.1	--	--
19, 20, 21, 22	Public/Semi-Public	Park	--	16.1	16.1	--	--
23, 24, 25, 26	Open Space	Open Space	--	15.9	15.3	--	--
---	---	Public Roadways	--	24.1	25.5	--	--
		PROJECT TOTALS	--	229.2	229.2	4,485	139,700

*Net Acreage reflects public roadway dedications.
**Dwelling units within Planning Area 18 only would be constructed in the event that this planning area is not needed as a school site. In the event Planning Area 18 is not developed with a school, Planning Area 18 would be developed with up to 157 dwelling units along with any required population based parkland. In such a case the total number of dwelling units allowed within the Central Village would increase to 4,642.

2.0 PROJECT DESCRIPTION

2.1 Plan Location

The Central Village is located in the Otay Mesa Community Plan area in the southern portion of the City of San Diego, approximately 0.5-mile north of the United States-Mexico Border, approximately 2.7 miles east of the community of San Ysidro, and 1.6 miles south of the City of Chula Vista (See Figure 1, Vicinity Map). State Route 905 (SR-905) abuts the northern boundary of the CVSP, and Interstate 805 (I-805) is located approximately 2.9 miles west of the site. Specifically, the CVSP is bordered by SR-905 and Airway Road to the north, Cactus Road and Continental Road to the east, and Siempre Viva Road to the south, which terminates at Cactus Road.

2.2 Plan Description

The City of San Diego certified a Final Environmental Impact Report for the Otay Mesa Community Plan Update (OMCPU) in 2014 (FEIR; City of San Diego [City] 2014). The OMCPU requires the City to adopt a Specific Plan for the Central Village portion of the community. The purpose of this report is to evaluate the currently proposed Central Village Specific Plan (CVSP). Adoption of the proposed CVSP would develop up to 4,485 multi-family homes, 139,700 square feet (sf) of commercial space, a 13.1-acre combined school/recreation site, 16.1 acres of population-based park land uses, 15.9 acres of open space, and approximately 24.1 acres of major roadways within the 229.2-acre CVSP Area (SPA) (T&B Planning, Inc. 2017). The Project includes the adoption of the CVSP as an amendment to the Otay Mesa Community Plan and a rezoning program to implement the designated land uses. The land uses proposed by the CVSP are generally in conformance with the land uses analyzed in the FEIR for the SPA, which assumed up to 5,246 multi-family homes and up to 32,700 sf of commercial uses arranged as a predominately residential community with core areas of mixed uses and public spaces sited along Airway Road.

Land Use Element

Land uses that would occur as a result of the Specific Plan's buildout are summarized below:

The 229.2-acre Specific Plan area is divided for planning purposes into 26 planning areas, containing the following land uses:

Moderate to High Density (MH) Mixed Use: Allows for up to 139,700 square feet of commercial land uses and 2,046 homes on 54.5 acres, within an allowable density range of 15 to 44 dwelling units per acre (du/ac);

Moderate to High Density (MH) Multi-Family: Allows for up to 495 homes on 12.4 acres, within an allowable density range of 15 to 44 du/ac

Medium Density (MD) Multi-Family: Allows for up to 1,444 homes on 50.3 acres, within an allowable density range of 15 to 29 du/ac

Low Density (LD) Multi-Family: Allows for up to 500 homes on 28.3 acres, within an allowable density range of 10 to 29 du/ac

Parks: Provides for passive and active recreation on 16.1 acres.

Open Space: Provides for the preservation of 15.9 acres of open space to remain undeveloped

School/Recreation: Designates a public school site with public recreation areas on 13.1 acres. It is noted that recreation areas on this site may or may not be available for public use, as public use of this facility is subject to approval by the San Ysidro School District.

Mobility Element

Primary perimeter roadways would occur in the same locations and general alignments as assumed by the OMCPU EIR, including Airway Road, Cactus Road, and Heritage Road. The CVSP provides more detail on internal circulation roadways than was available in the OMCPU. The CVSP's proposed circulation system includes a hierarchy of roads throughout Central Village. The design and orientation of the internal roadway network provides the structure for grid pattern street systems within the individual planning areas. Main roads intersect one another at right angles. This forms the master grid, within which the secondary grids will occur. The Mobility Element also addresses alternative transportation facilities including public transit, bicycle facilities, and pedestrian facilities.

According to the CVSP's *Transportation Facilities Trigger Analysis* (Chen Ryan & Associates, 2017), the CVSP is calculated to generate 36,345 average daily vehicular trips (ADT), which is less traffic than was assumed for the Central Village by the OMCPU EIR, at 45,429 ADT.

Parks and Open Space Element

The CVSP provides more specificity about the location, size, and programming of park facilities in the CVSP area than was available in the OMCPU. Two parks are proposed interior to the CVSP (Planning Areas 20 and 21) and two parks are proposed that abut off-site open space (Planning Areas 19 and 22). All parks facilities in the CVSP would be deeded to the City for long-term ownership and maintenance. Within each park, conceptual amenities are identified by the CVSP, including passive and active recreational uses.

The location and configuration of open space areas within Central Village are consistent with the open space designations applied to the area by the OMCPU. These areas, generally located in the western (Planning Area 23), southwestern (Planning Area 25), and northern (Planning Area 24)

portions of the CVSP area, are designed to preserve existing open space and preclude development in these areas.

Urban Design Element

This section of the CVSP provides development standards and design guidelines for urban design elements including design principles, architectural design, and landscape design. The Urban Design Element contains several policies that specifically address noise, including but not limited to the following:

"Policy 2.5-43 Address the challenges presented by the collocation of industrial and residential uses with any combination of the following design strategies:

- Provide landscape screening and/or patio walls to reduce noise impacts and protect the privacy of residential units along high traffic streets and intense uses.
- Address noise through the use of berms, planting, setbacks, and architectural design rather than with conventional wall barriers for generating uses.
- Minimize the number of residential units that have window and door openings that afford views into adjacent industrial uses located east of the Central Village. Whenever possible, orient the short end of buildings towards industrial uses."

"Policy 2.5-47: Use of landscaping and insulating materials is encouraged to attenuate noise generated within and outside the community."

"Policy 2.5-48 Use site planning to minimize noise in shared residential outdoor activity areas by locating the areas behind the buildings or in courtyards, or orienting the terraces to alleyways rather than streets, whenever possible."

"Policy 2.5-56 Provide mechanical ventilation in all residential units proposed along roadways carrying high traffic volumes and in the areas where noise levels could exceed interior noise standards such that windows can remain closed at the choice of the occupants."

"Policy 2.5-57 In commercial buildings, place loading and unloading areas so that commercial buildings shield nearby residential land uses from noise generated by located dock and delivery activities. If necessary, additional sound barriers should be constructed on the commercial sites to reduce noise levels at nearby noise-sensitive uses."

"Policy 2.5-58 Place commercial heating, ventilation, and air conditioning (HVAC) machinery within mechanical equipment rooms, wherever possible."

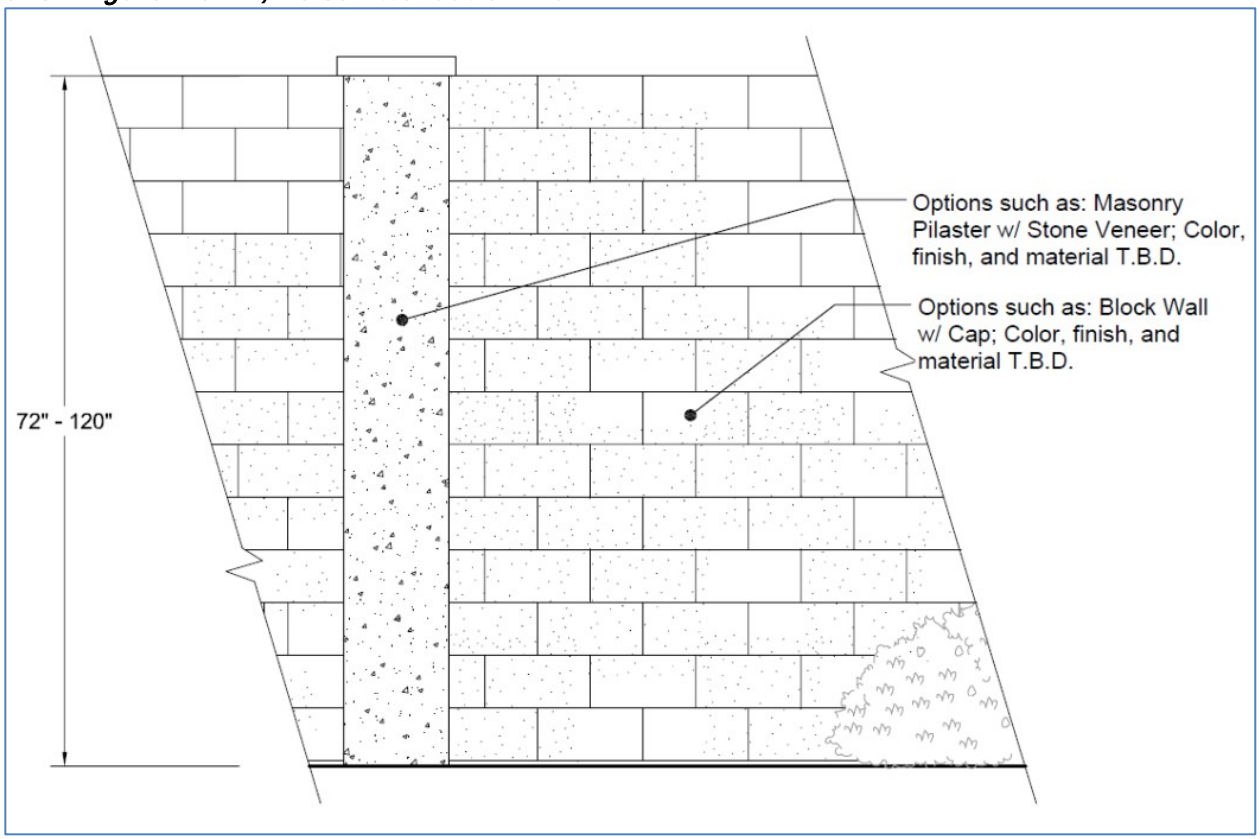
"Policy 2.5-59 Provide localized noise barriers or rooftop parapets around HVAC, cooling towers, and mechanical equipment so that line-of-sight to the noise source from the property line of the noise-sensitive receptors is blocked."

"Policy 2.5-142: Where berms, setbacks, and architectural design are inadequate to achieve required interior or exterior noise levels, physical noise walls may be provided at a maximum height of 120 inches."

"Policy 2.5-143: Where noise attenuation walls are required, materials may consist of concrete block, with stone veneer masonry pilaster treatments and a color finish. Materials for the block wall and pilasters will be determined during the tentative map stage."

"Policy 2.5-145: Noise attenuation walls, where required, should be designed to substantially conform to [CVSP] Figure 2.5-42, *Noise Attenuation Wall*." [Figure 2.5-24 from the CVSP is shown below.]

CVSP Figure 2.5-42, Noise Attenuation Wall



Infrastructure Element

Infrastructure improvements necessary within the CVSP include water, sewer, and storm water drainage systems. The installation and operation of utility infrastructure is not expected to generate measurable noise.

3.0 METHODOLOGY

3.1 Noise Terminology and Concepts

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired, and may, therefore, be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2009).

Decibels and Frequency

In its most basic form, a continuous sound can be described by its frequency or wavelength (pitch) and its amplitude (loudness). Frequency is expressed in cycles per second, or hertz. Frequencies are heard as the pitch or tone of sound. High-pitched sounds produce high frequencies; low-pitched sounds produce low frequencies. Sound-pressure amplitude is measured in micro-Pascals (mPa). Sound-pressure amplitudes for different kinds of noise environments can range from 20 to 100,000,000 mPa. Because this huge range of values is cumbersome and difficult to use, a logarithmic scale is used to describe sound-pressure level in terms of decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 mPa (Caltrans 2009).

As dB are measured on a logarithmic scale that quantifies sound intensity, similar to the Richter scale used for earthquake magnitudes, dB cannot be added or subtracted through ordinary arithmetic. 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. In way of example, if an air conditioner produces a sound pressure level of 65 dB at 50 feet, two air conditioners at the same distance would produce 68 dB—not 130 dB.

Perception of Noise at the Receiver and A-Weighting

The human ear is not equally sensitive to all frequencies within the sound spectrum. To accommodate this phenomenon, the A-scale, which approximates the frequency response of the average young ear when listening to most everyday sounds, was devised. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the A-scale for sound levels. Therefore, the “A-weighted” noise scale is used for measurements and standards involving the human perception of noise. Noise levels using A weighted measurements are written dB(A) or dBA. Table 1 shows the relationship of various noise levels to commonly experienced noise events.

Table 1: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 meters (1,000 feet)	--100--	
Gas Lawn Mower at 1 meter (3 feet)	--90--	
Diesel Truck at 15 meters (50 feet), at 80 kilometers per hour (50 miles per hour)	--80--	Food Blender at 1 meter (3 feet); Garbage Disposal at 1 meter (3 feet)
Noisy Urban Area, Daytime Gas Lawn Mower at 30 meters (100 feet)	--70--	Vacuum Cleaner at 3 meters (10 feet)
Commercial Area Heavy Traffic at 90 meters (300 feet)	--60--	Normal Speech at 1 meter (3 feet)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in 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 2009

Human perception of noise has no simple correlation with acoustical energy. The perception of noise is not linear in terms of dBA or in terms of acoustical energy. Two noise sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease; that a change of 5 dBA is readily perceptible; and that an increase (decrease) of 10 dBA sounds twice (half) as loud (Caltrans 2009).

Noise Propagation

From the source to the receiver, noise changes both in level and frequency. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on the important factors described in the following discussion.

Geometric spreading from point and line sources: Sound from a small localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates, or drops off, at a rate of 6 dBA for each doubling of

the distance. Movement makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. The sound level attenuates at a rate of 3 dBA per doubling of distance for line sources (Crocker 2007).

Ground absorption: Hard sites (i.e., sites with a reflective surface between the source and the receiver, 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. Soft sites are sites that 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 dBA per doubling of distance (Crocker 2007).

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, 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, temperature may increase with altitude, focusing sound on the ground surface (Caltrans 2009).

Shielding by natural and human-made features, noise barriers, diffraction, and reflection: A large object in the path between a noise source and a receiver can significantly attenuate noise levels at that receiver location. The amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, as well as fabricated features such as buildings and walls, can significantly alter noise levels.

Noise Descriptors

The intensity of environmental noise fluctuates over time, and several different descriptors of time-averaged noise levels are used. The selection of a proper noise descriptor for a specific source depends on the spatial and temporal distribution, duration, and fluctuation of both the noise source and the environment. The noise descriptors used in this report to describe environmental noise are defined below:

- Lmax (Maximum Noise Level): The highest A-weighted integrated noise level occurring during a specific period of time.
- Lmin (Minimum Noise Level): The lowest A-weighted integrated noise level during a specific period of time.
- Peak: The highest weighted or unweighted instantaneous peak-to-peak value occurring during a measurement period.

- Ln (Statistical Descriptor): The noise level exceeded “n%” of a specific period of time, generally accepted as an hourly statistic. An L10 would be the noise level exceeded 10% of the measurement period.
- Leq (Equivalent Noise Level): The energy mean (average) noise level. The steady-state sound level that, in a specified period of time, contains the same acoustical energy as a varying sound level over the same time period.
- CNEL (Day-Night Noise Level): The 24-hour Leq with a 10-dBA “penalty” applied during nighttime noise-sensitive hours, 10:00 p.m. through 7:00 a.m. The CNEL attempts to account for the fact that noise during this specific period of time is a potential source of disturbance with respect to normal sleeping hours.

4.0 EXISTING CONDITIONS

4.1 Plan Area

Existing land uses within the Central Village area consist of undeveloped lands, agricultural operations, a few single-family residential homes, and open space. Consistent with the existing conditions reported in the OMCPU EIR and as indicated below in Section 4.3, noise generated by these existing uses is nominal.

4.2 Sensitive Noise Receptors

Noise-sensitive receptors are generally considered humans engaged in activities or utilizing land uses that may be subject to the stress of significant interference from noise. Activities usually associated with sensitive receptors include, but are not limited to, talking, reading, and sleeping. Land uses often associated with noise-sensitive receptors include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, education facilities, and libraries. The only noise-sensitive receptors located in the CVSP area under existing conditions are a few residential structures. The majority of the subject property, particularly in the northern portions of the site (west of Cactus Road), is used for crop production (oats). Along Cactus Road in the southern portions of the CVSP area are greenhouses and goat husbandry operations. Agricultural activity is not a noise-sensitive use. Along the southern, western, and northwestern boundaries of the site and extending off-site are open space areas. Open space is not a noise-sensitive use, although wildlife species that have the potential to use these open spaces can be affected by noise. Other land uses surrounding the Central Village area include a mixture of open space, undeveloped lands, agricultural uses, and light and heavy industrial uses. None of these uses are noise-sensitive.

4.3 Existing Noise Levels

Noise measurements were taken on Monday, March 21, 2016 by Ldn Consulting to determine existing noise conditions in the CVSP area. Noise measurements were taken with a Larson-Davis Model LxT Type 1 Integrating Sound Level Meter, serial number 2412. The noise meter was programmed, in "slow" mode, to record noise levels in "A" weighted form. The sound level meter and microphone were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 200.

The ambient measurements were taken at four locations, which were selected for their ability to provide a representative range of noise levels throughout the CVSP area. The noise measurement locations are shown in Figure 4. During the collection of these noise measurements, the weather was mostly cloudy to clear and dry with moderate breezes from the northwest averaging 6 miles per hour (mph) with occasional gusts of up to 15 mph. The results of the noise

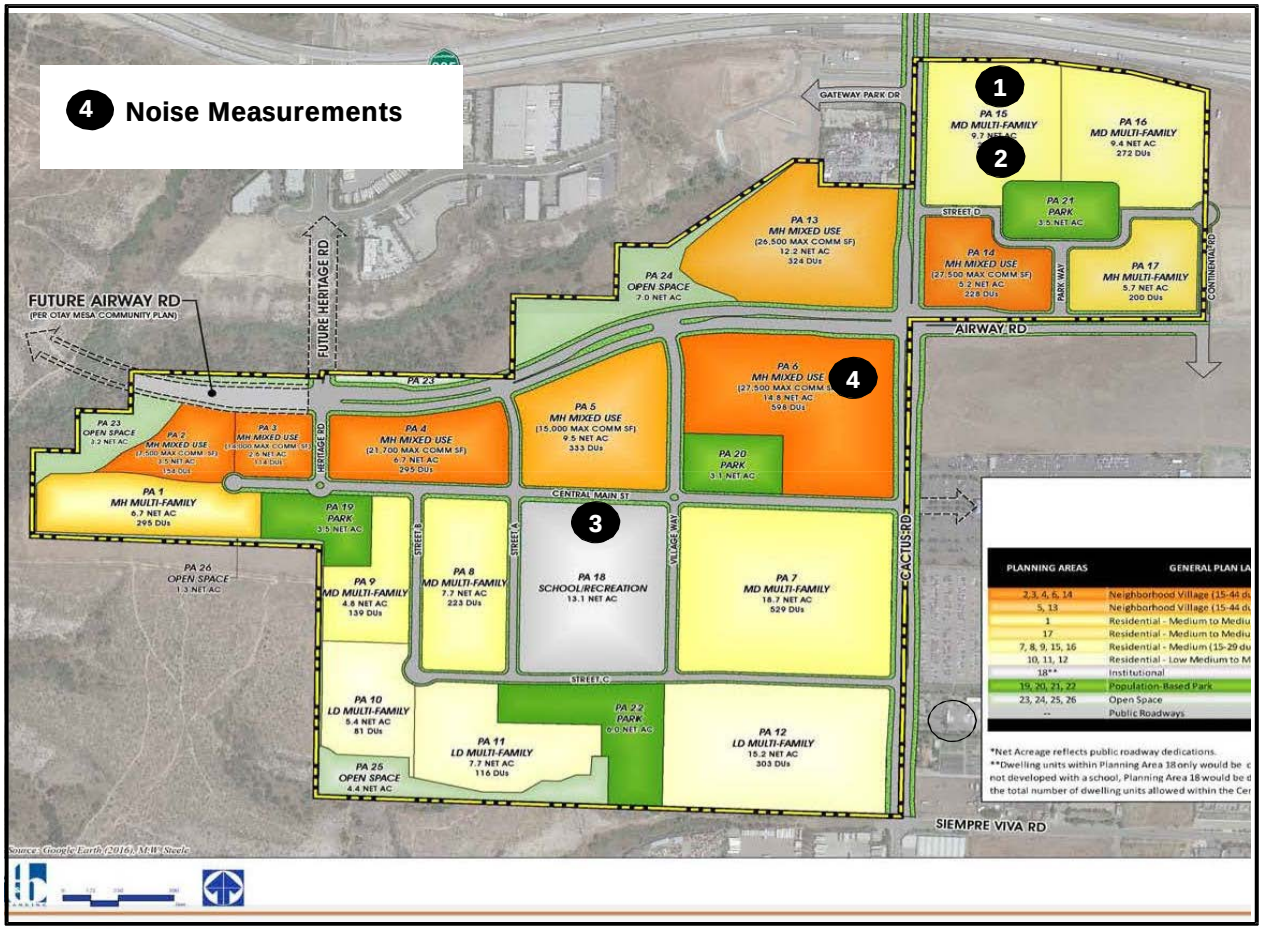
measurements are summarized in Table 2 and ranged from 53.8 dB(A) to 68.1 dB(A). No existing noise measurements were collected within the CVSP area as part of the OMCPU EIR, although noise measurements taken in other parts of the OMCPU area in 2011 and 2012 were reported in the EIR as ranging from 55.2 dB(A) (near State Route 125 at Lonestar Road) to 77.3 dB(A) (near State Route 905 at Otay Mesa Road) (RECON, 2013).

Table 2: Short-term Noise Measurement Summary

Location*	Description	Date	Start Time of Measurement	L_{eq} dBA
1	PA 25 – 400 Feet from SR-905	3/21/2016	8:50 AM	68.1
2	PA 25 – 800 Feet from SR-905	3/21/2016	9:05 AM	60.7
3	PA 13 – 1,400 Feet from Cactus Road	3/21/2016	9:30 AM	51.4
4	PA 16 – 200 Feet from Cactus Road	3/21/2016	9:45 AM	53.8

*The Location or Site ID number corresponds to locations shown in Figure 4.

Figure 4: Noise Measurement Locations



Source: Ldn Consulting, 2016

4.4 Airport Noise

Otay Mesa Central Village is located within the Airport Influence Area (AIA) for the Brown Field Municipal Airport. The AIA serves as the boundary for the Airport Land Use Compatibility Plan (ALUCP). The ALUCP contains policies and criteria that address land use compatibilities concerning noise and safety aspects of airport operations and requirements for land uses, heights of buildings, and residential densities/intensities within the AIA. Noise is one of the compatibility factors affecting the Otay Mesa Central Village area.

Serving as the Airport Land Use Commission (ALUC), the San Diego County Regional Airport Authority establishes the policies and criteria that affect properties in the AIA. Current policies addressing airport land use compatibility are contained in the ALUCP as amended in 2010 and are implemented by the Airport Approach and Airport Environs overlay zones of the San Diego Municipal Code. As depicted on ALUCP Exhibit III-1, *Compatibility Policy Map: Noise*, the CVSP area is located outside of the 60-65 dB CNEL contour, indicating that the subject property is not exposed to airport-related noise levels exceeding 60 dB CNEL.

5.0 SIGNIFICANCE THRESHOLDS AND STANDARDS

The City developed and published Significance Determination Thresholds for use in California Environmental Quality Act (CEQA) determinations; these thresholds were used by the OMCPU EIR to determine the significance of noise impacts associated with implementation of the OMCPU. Those same thresholds are used herein to evaluate potential noise impacts associated with approval of the CVSP. Impacts would be significant if the CVSP would:

1. Result in the exposure of people to current or future transportation noise levels that would exceed standards established in the Transportation Element of the General Plan [see Table 3 below, which represents Table NE-3 of the General Plan] and land use compatibility guidelines in the Brown Field Comprehensive Land Use Plan [see Table 4 below];

2. Result in exposure of future residents to excessive noise levels from airport and aircraft operations;

3. Allow collocation of residential and commercial or industrial uses where exposure of people to noise levels would exceed the City's Noise Abatement and Control Ordinance [see Table 5 below];

4. Adversely impact sensitive species within the MHPA due to construction noise.

Table 3: Land Use - Noise Compatibility Guidelines

Land Use Category	Exterior Noise Exposure (dBA CNEL) 60	65	70	75
Parks and Recreational				
Parks, Active and Passive Recreation				
Outdoor Spectator Sports, Golf Courses; Water Recreational Facilities; Indoor Recreational Facilities				
Agricultural				
Crop Raising & Farming; Community Gardens, Aquaculture, Dairies; Horticulture Nurseries & Greenhouses; Animal Raising, Maintain & Keeping; Commercial Stables				
Residential				
Single Dwelling Units; Mobile Homes		45		
Multiple Units; **For uses affected by aircraft noise, refer to Policies NE-D.2. & NE-D.3.*		45	45*	
Institutional				
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through Grade 12 Educational Facilities; Libraries; Museums; Child Care Facilities		45		
Other Educational Facilities including Vocational/Trade Schools and Colleges, and Universities		45	45	
Cemeteries				
Retail Sales				
Building Supplies/Equipment; Food, Beverages & Groceries; Pets & Pet Supplies; Sundries, Pharmaceutical, & Convenience Sales; Wearing Apparel & Accessories			50	50
Commercial Services				
Building Services; Business Support; Eating & Drinking; Financial Institutions; Maintenance & Repair; Personal Services; Assembly & Entertainment (includes public and religious assembly); Radio & Television Studios; Golf Course Support			50	50
Visitor Accommodations		45	45	45
Offices				
Business & Professional; Government; Medical, Dental & Health Practitioner; Regional & Corporate Headquarters			50	50
Vehicle and Vehicular Equipment Sales and Services Use				
Commercial or Personal Vehicle Repair & Maintenance; Commercial or Personal Vehicle Sales & Rentals; Vehicle Equipment & Supplies Sales & Rentals; Vehicle Parking				
Wholesale, Distribution, Storage Use Category				
Equipment & Materials Storage Yards; Moving & Storage Facilities; Warehouse; Wholesale Distribution				
Industrial				
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking & Transportation Terminals; Mining & Extractive Industries				
Research & Development				50

	Compatible	Indoor Uses	Standard construction methods should attenuate exterior noise to an acceptable indoor noise level. Refer to Section I.
		Outdoor Uses	Activities associated with the land use may be carried out.
45, 50	Conditionally Compatible	Indoor Uses	Building structure must attenuate exterior noise to the indoor noise level indicated by the number (45 or 50) for occupied areas. Refer to Section I.
		Outdoor Uses	Feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable. Refer to Section I.
	Incompatible	Indoor Uses	New construction should not be undertaken.
		Outdoor Uses	Severe noise interference makes outdoor activities unacceptable.

Source: City of San Diego Noise Element (2015)

Table 4: Brown Field 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	

Land Use Acceptability		Interpretation/Comments
	Compatible	Indoor Uses: Standard construction methods will sufficiently attenuate exterior noise to an acceptable indoor community noise equivalent level (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.

Table 5: Sound Abatement and Control Noise Ordinance Noise Limits

Land Use	Time of Day	One-Hour Average Sound Level (decibels)
1. Single Family Residential	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	50 45 40
2. Multi-Family Residential (Up to a maximum density of 1/2000)	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	55 50 45
3. All other Residential	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55 50
4. Commercial	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	65 60 60
5. Industrial or Agricultural	any time	75

Source: City of San Diego Noise Ordinance Section 59.5.0401

6.0 IMPACT ANALYSIS

6.1 Traffic Noise

Traffic-generated noise impacts reported in the OMCPU EIR were calculated based on future traffic volumes for buildout of the OMCPU published in the OMCPU's traffic study (Appendix J of the OMCPU EIR), in addition to posted speed limits, proposed truck routes, and estimated vehicle mix on various roads.

According to the CVSP's *Transportation Facilities Trigger Analysis* (Chen Ryan & Associates, 2017), the CVSP would generate up to 36,345 average daily vehicular trips (ADT), which is less traffic than was assumed for the Central Village by the OMCPU EIR, at 45,429 daily trips (Urban Systems Associates, Inc. 2012).

Even though traffic volumes would be less with approval of the CVSP, an analysis was conducted to determine if approval of the CVSP would result in the exposure of noise-sensitive receptors to transportation noise levels that would exceed City standards. The City uses the Land Use - Noise Compatibility Guidelines as shown on Table NE-3 in the Noise Element of the General Plan (provided as Table 3 above) for evaluating land use noise compatibility when reviewing proposed land use development projects. A "compatible" land use indicates that standard construction methods will attenuate exterior noise to an acceptable indoor noise level and people can carry out outdoor activities with minimal noise interference. Land uses that fall into the "conditionally compatible" noise environment should be subject to acoustical study. The acoustical study should consider the type of noise source, the sensitivity of the noise receptor, and the degree to which the noise source may interfere with speech, sleep, or other activities characteristic of the land use. For land uses indicated as "incompatible" with certain noise levels, new construction of those land uses should generally not be undertaken.

In addition, and in accordance with the CEQA Guidelines, a project should not result in a substantial permanent increase in ambient noise levels. The definition of a substantial increase is not defined by CEQA and is left to each lead agency to determine an appropriate threshold. Noise level changes greater than 3 dBA, or a doubling of the acoustic energy, are often identified as an audible change in the ambient noise levels and an increase of this magnitude may be considered potentially significant in locations with existing high ambient noise levels. Therefore, for the purposes of this analysis, a direct and cumulatively considerable roadway noise impact would be considered significant if the CVSP would increase noise levels at a noise sensitive land use by +3 dBA CNEL or more, and the future noise level at the same noise sensitive land use is in excess of the "compatible" noise level per the City's General Plan (Table 3, above).

Noise levels projected for various roadway segments in this report were calculated using the methods in the *Highway Noise Prediction Model* published by the Federal Highway Administration

(FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108, December, 1978). The FHWA Model uses the traffic volume, vehicle mix, speed, and roadway geometry to compute the equivalent noise level. The noise contours are then established by iterating the equivalent noise level over many distances until the distance to the desired noise contour(s) are found.

CVSP traffic volumes were taken from the *Otay Mesa Central Village Specific Plan Transportation Facilities Trigger Analysis* (Chen Ryan & Associates, 2017). OMCPU traffic volumes were taken from the traffic report prepared to support the OMCPU EIR (Urban Systems Associates, Inc. 2012). The traffic classification mix used in the acoustical modeling conducted for this report was developed from traffic counts taken during the noise measurements (refer to Table 2 above), reflecting an atypically large percentage of truck traffic given the high volume of industrial activity in the surrounding area. This vehicle mix is consistent with the 15-minute traffic count mix data reported in the OMCPU EIR (refer to EIR Table 5.10-5, "15-Minute Traffic Counts"), which indicates that the existing condition is similar to the condition that existed at the time the OMCPU EIR analysis was conducted. Existing truck volumes along SR-905 used in this acoustical analysis were obtained from the California Department of Transportation (Caltrans) truck counts (Caltrans 2014). A traffic mix of 91.9 percent cars, 5.5 percent medium trucks, and 2.6 heavy trucks was observed along SR-905.

Truck routes were modeled using an assumed traffic mix of 65 percent cars, 10 percent medium trucks, 20 percent heavy trucks, 2 percent buses, and 3 percent motorcycles, consistent with the OMCPU EIR. The remaining circulation roadways were modeled using an industry standard mix of 90 percent cars, 3 percent medium trucks, 20 percent heavy trucks, 2 percent buses, and 3 percent motorcycles and which is reflective of the vehicle mix reported in the OMCPU EIR (refer to EIR Table 5.10-5, "15-Minute Traffic Counts").

Traffic speeds were obtained from the San Diego Association of Governments (SANDAG; 2016) and observed posted speed limits. All roadways were modeled on acoustically hard ground type. The model outputs are noise levels at 100 feet from the centerline of affected streets with distances to various noise level contours (see Table 6). These noise contours do not account for intervening structures, differences in ground absorption or other shielding objects that could absorb or deflect sound and lower noise levels. The noise contours that would occur from implementation of the adopted OMCPU EIR are provided in Figure 5.

Adoption of the CVSP would alter the land use mix and lower the traffic volumes that were assumed for the Central Village by the OMCPU. Also, due to the land use changes and knowledge of the CVSP's proposed street pattern inside the Central Village (which was not known at the time of OMCPU approval), the directional distribution of traffic generated by development in the Central Village would slightly change from that reported in the OMCPU FEIR. To quantify future noise levels with adoption of the CVSP compared to future noise levels that were reported in the OMCUP EIR, Ldn Consulting calculated the comparative noise levels. Future noise levels along study area roadways assuming approval of the CVSP are shown in Table 7. The future (OMCPU as amended by

the CVSP) anticipated noise contours in the CVSP area are provided graphically in Figure 6. The changes in traffic noise levels between adopted (OMCPU) and proposed (OMCPU as amended to account for the CVSP) traffic volumes are shown in Table 8.

Table 6: Adopted (OMCPU) Modeled Noise Levels

Roadway	Segment	CNEL @ 100 Feet	Distance in feet to Noise Level Contour (CNEL)		
			75 dB	70 dB	65 dB
Airway Road	Old Otay Mesa Rd to Caliente Ave	68	37	79	170
	Caliente Ave to Heritage Rd	73	74	159	343
	Heritage Rd to Cactus Rd	71	57	122	263
	Cactus Rd to Britannia Blvd	72	63	136	293
	Britannia Blvd to La Media Rd	71	56	121	261
	La Media Rd to Harvest Rd	73	70	151	326
	Harvest Rd to Sanyo Ave	72	66	142	305
Beyer Boulevard	Alaquinas Dr to Old Otay Mesa Rd	68	34	74	159
	Old Otay Mesa Rd to East End	61	12	26	56
Britannia Boulevard	Otay Mesa Rd to SR-905	68	35	76	164
	SR-905 to Airway Rd	78	167	359	774
	Siempre Viva Rd to South End	76	122	263	566
	Airway Rd to Siempre Viva Rd	76	123	265	571
Cactus Road	Otay Mesa Rd to Airway Rd	72	62	133	287
	Airway Rd to Siempre Viva Rd	70	47	101	217
Caliente Avenue	Otay Mesa Rd to SR-905	69	42	91	197
	SR-905 to Airway Rd	71	55	119	256
	Airway Rd to Siempre Viva Rd	72	64	139	299
Camino Maquiladora	Pacific Rim Ct. to Cactus Rd	61	12	26	57
	Cactus Rd to Continental St	61	11	25	53
Heritage Road	Avenida De Las Vistas to Datsun St	75	105	226	488
	Datsun St to Otay Mesa Rd	73	76	163	352
	Otay Mesa Rd to SR-905	69	39	84	181
	SR-905 to Airway Rd	74	81	174	374
La Media Road	Aviator Rd to Otay Mesa Rd	80	212	457	984
	Otay Mesa Rd to SR-905	79	174	375	808
	SR-905 to Airway Rd	80	214	461	992
	Airway Rd to Siempre Viva Rd	76	121	260	560
Ocean View Hills Pkwy	Dennery Rd to Del Sol Blvd	71	52	112	242
	Del Sol Blvd to Street A	72	62	133	287
	Street A to Otay Mesa Rd	69	40	86	186
Otay Mesa Road	Caliente Ave to Corporate Center Dr	75	106	227	490
	Corporate Center Dr to Innovative Dr	72	63	136	293
	Innovative Dr to Heritage Rd	73	70	151	324
	Heritage Rd to Cactus Rd	76	119	257	554
	Cactus Rd to Britannia Blvd	74	89	191	412
	Britannia Blvd to Ailsa Ct	75	102	220	473
	Ailsa Ct to La Media Rd	74	91	197	423
	La Media Rd to Piper Ranch Rd	73	78	169	364
Siempre Viva Rd	Cactus Rd to Britannia Blvd	72	61	132	285
	Britannia Blvd to La Media Rd	73	68	147	318
	La Media Rd to Harvest Rd	71	52	111	240
	Harvest Rd to Otay Center Dr	71	52	113	242
	Otay Center Dr to SR-905	73	79	169	364
St Andrews Avenue	Otay Mesa Center Rd To La Media Rd	82	309	665	1,433
Street A	Ocean View Hills Pkwy to Otay Mesa Rd	85	449	968	2,085

Figure 5: Adopted (OMCPU) Modeled Transportation Noise Contours

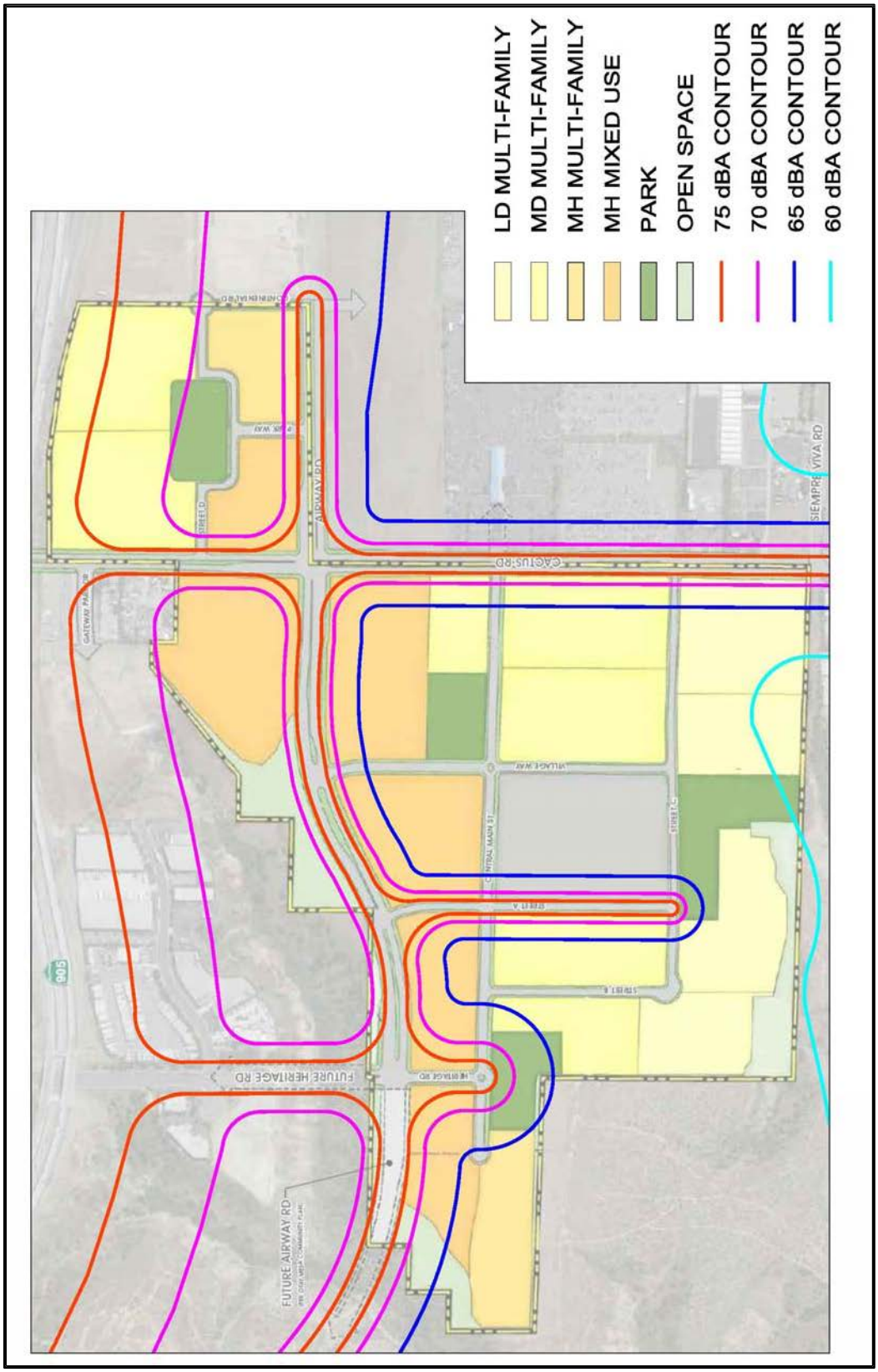


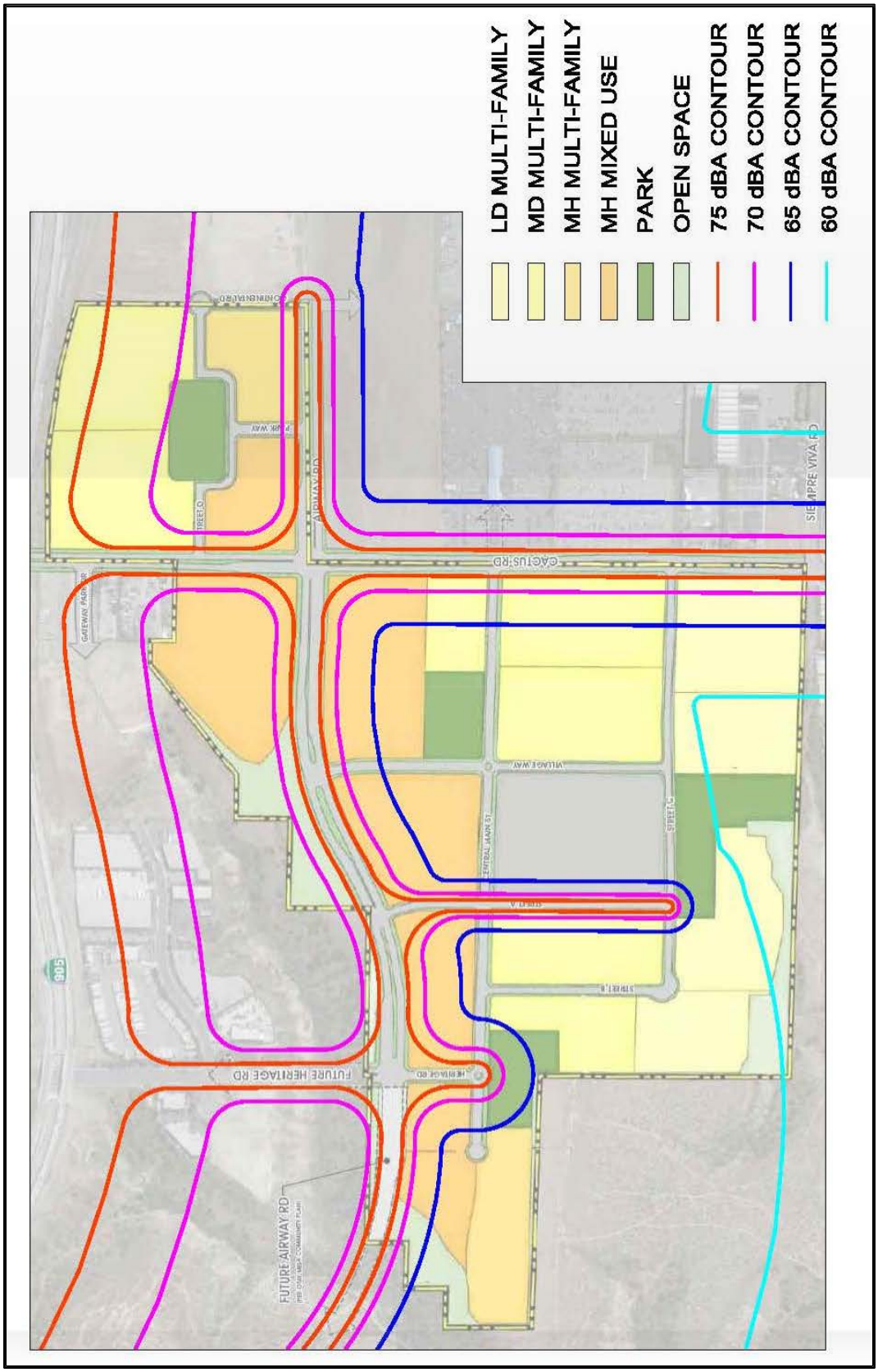
Table 7: Future (OMCPU as amended by the CVSP) Modeled Noise Levels

Roadway	Segment	CNEL @ 100 Feet	Distance in feet to Noise Level Contour (CNEL)		
			75 dB	70 dB	65 dB
Airway Road	Old Otay Mesa Rd to Caliente Ave	66	23	50	109
	Caliente Ave to Heritage Rd	71	55	119	256
	Heritage Rd to Cactus Rd	73	75	162	349
	Cactus Rd to Britannia Blvd	72	61	132	285
	Britannia Blvd to La Media Rd	71	52	113	242
	La Media Rd to Harvest Rd	71	51	110	238
	Harvest Rd to Sanyo Ave	70	43	93	201
Beyer Boulevard	Alaquinas Dr to Old Otay Mesa Rd	69	41	89	192
	Old Otay Mesa Rd to Caliente Ave	71	57	123	265
Britannia Boulevard	Otay Mesa Rd to SR-905	68	33	71	153
	SR-905 to Airway Rd	79	189	408	879
	Airway Rd to Siempre Viva Rd	78	150	324	697
	Siempre Viva Rd to South End	75	94	202	436
Cactus Road	Otay Mesa Rd to Airway Rd	73	68	147	317
	Airway Rd to Siempre Viva Rd	73	68	147	317
Caliente Avenue	Otay Mesa Rd to SR-905	69	42	90	194
	SR-905 to Airway Rd	70	49	106	228
	Airway Rd to Beyer Blvd	72	63	135	291
	Beyer Blvd to Siempre Viva Rd	71	58	125	269
Camino Maquiladora	Pacific Rim Ct to Cactus Rd	62	14	30	66
	Cactus Rd to Continental St	61	12	26	57
Heritage Road	Avenida De Las Vistas to Datsun St.	75	103	223	479
	Datsun St to Otay Mesa Rd	73	76	165	354
	Otay Mesa Rd to SR-905	70	47	102	220
	SR-905 to Airway Rd	72	62	133	287
La Media Road	Aviator Rd to Otay Mesa Rd	75	105	226	488
	Otay Mesa Rd to SR-905	78	148	318	685
	SR-905 to Airway Rd	79	191	412	889
	Airway Rd to Siempre Viva Rd	76	123	265	571
Ocean View Hills Pkwy	Dennery Rd to Del Sol Blvd	70	45	98	211
	Del Sol Blvd to Street “A”	71	52	113	242
	Street “A” to Otay Mesa Rd	69	40	86	186
Otay Mesa Road	Caliente Ave to Corporate Center Dr	75	101	217	467
	Corporate Center Dr to Innovative Dr	74	80	172	372
	Innovative Dr to Heritage Rd	73	75	161	347
	Heritage Rd to Cactus Rd	76	122	263	566
	Cactus Rd to Britannia Blvd	74	84	182	391
	Britannia Blvd to Ailsa Ct	74	92	199	429
	Ailsa Ct to La Media Rd	74	82	178	383
	La Media Rd to Piper Ranch Rd	74	83	178	383
Siempre Viva Rd	Cactus Rd to Britannia Blvd	71	54	117	252
	Britannia Blvd to La Media Rd	72	59	128	276
	La Media Rd to Harvest Rd	71	58	124	267
	Harvest Rd to Otay Center Dr	71	51	110	238
	Otay Center Dr to SR-905	73	75	161	347
St Andrews Avenue	Otay Mesa Center Rd to La Media Rd	82	286	615	1,325
Street A	Ocean View Hills Pkwy to Otay Mesa Rd	84	410	883	1,903

Table 8: Change in Adopted (OMCPU) and Future (OMCPU as amended by the CVSP) Modeled Noise Levels (dBA at 100 feet)

Roadway	Segment	Existing CNEL	Future CNEL	Change
Airway Road	Old Otay Mesa Rd to Caliente Ave	68	66	-2
	Caliente Ave to Heritage Rd	73	71	-2
	Heritage Rd to Cactus Rd	71	73	+2
	Cactus Rd to Britannia Blvd	72	72	0
	Britannia Blvd to La Media Rd	71	71	0
	La Media Rd to Harvest Rd	73	71	-2
	Harvest Rd to Sanyo Ave	72	70	-2
Beyer Boulevard	Alaquinas Dr to Old Otay Mesa Rd	68	69	+1
	Old Otay Mesa Rd to Caliente Ave	61	71	**+10**
Britannia Boulevard	Otay Mesa Rd to SR-905	68	68	0
	SR-905 to Airway Rd	78	79	+1
	Airway Rd to Siempre Viva Rd	76	78	+2
	Siempre Viva Rd to South End	76	75	-1
Cactus Road	Otay Mesa Rd to Airway Rd	72	73	+1
	Airway Rd to Siempre Viva Rd	70	73	**+3**
Caliente Avenue	Otay Mesa Rd to SR-905	69	69	0
	SR-905 to Airway Rd	71	70	-1
	Airway Rd to Beyer Blvd	72	72	0
	Beyer Blvd to Siempre Viva Rd	72	71	-1
Camino Maquiladora	Pacific Rim Ct to Cactus Rd	61	62	+1
	Cactus Rd to Continental St	61	61	0
Heritage Road	Avenida De Las Vistas to Datsun St.	75	75	0
	Datsun St to Otay Mesa Rd	73	73	0
	Otay Mesa Rd to SR-905	69	70	+1
	SR-905 to Airway Rd	74	72	-2
La Media Road	Aviator Rd to Otay Mesa Rd	80	75	-5
	Otay Mesa Rd to SR-905	79	78	-1
	SR-905 to Airway Rd	80	79	-1
	Airway Rd to Siempre Viva Rd	76	76	0
Ocean View Hills Pkwy	Dennery Rd to Del Sol Blvd	71	70	-1
	Del Sol Blvd to Street “A”	72	71	-1
	Street “A” to Otay Mesa Rd	69	69	0
Otay Mesa Road	Caliente Ave to Corporate Center Dr	75	75	0
	Corporate Center Dr to Innovative Dr	72	74	+2
	Innovative Dr to Heritage Rd	73	73	0
	Heritage Rd to Cactus Rd	76	76	0
	Cactus Rd to Britannia Blvd	74	74	0
	Britannia Blvd to Ailsa Ct	75	74	-1
	Ailsa Ct to La Media Rd	74	74	0
	La Media Rd to Piper Ranch Rd	73	74	+1
Siempre Viva Rd	Cactus Rd to Britannia Blvd	72	71	-1
	Britannia Blvd to La Media Rd	73	72	-1
	La Media Rd to Harvest Rd	71	71	0
	Harvest Rd to Otay Center Dr	71	71	0
	Otay Center Dr to SR-905	73	73	0
St Andrews Avenue	Otay Mesa Center Rd to La Media Rd	82	82	0
Street A	Ocean View Hills Pkwy to Otay Mesa Rd	85	84	-1

Figure 6: Future (OMCPU as Amended by the CVSP) Transportation Noise Contours



As shown in Table 8, changes in future noise levels along studied roadways would range between -2 dB(A) and +10 dB(A). Based on the results shown in Table 8, the CVSP would cause traffic noise levels to decrease along 17 road segments, stay the same along 19 road segments, and increase by +1 dB(A)or +2 dB(A) along nine roadway segments compared to the noise levels reported by the OMCPU EIR. Decreases in noise levels, no changes in noise levels, and increases in noise levels of less than +3 dB(A) are considered to be less than significant differences. Along the segment of Beyer Boulevard between Old Otay Mesa Road and Caliente Avenue, the CVSP would cause future projected noise levels to increase by +10dB(A) and along Cactus north of Siempre Viva Road, the CVSP would cause future projected noise levels to increase by + 3 dB(A), which are potentially significant noise level increases if these increases affect sensitive noise receivers. The increases are discussed in more detail below.

For the segment of Beyer Boulevard between Old Otay Mesa Road and Caliente Avenue, the noise impact analysis prepared for the OMCPU EIR (RECON, 2013) determined that with buildout of the OMCPU (including the Central Village as originally envisioned by the OMCPU), planned residential uses along this portion of Beyer Boulevard would be exposed to noise levels exceeding 60 dBA. Similarly, for the segment of Cactus Road north of Siempre Viva Road, the noise impact analysis prepared for the OMCPU EIR (RECON, 2013) determined that with buildout of the OMCPU (including the Central Village as originally envisioned by the OMCPU), planned residential and park uses along this portion of Cactus Road would be exposed to noise levels exceeding 60 dBA. Consistent with the conclusion drawn by the OMCPU EIR, implementation of the proposed CVSP project would contribute to *significant impacts* to the above-referenced segments of Beyer Avenue and Cactus Avenue. The OMCPU EIR concluded that noise impacts to residential and/or park uses along these and other road segments would be significant and potentially unavoidable. Thus, this is not a new impact as the result of the CVSP.

In regards to on-site land uses, the proposed CVSP designates development areas for residential uses where traffic-related noise levels would exceed the City's noise level compatibility standards (i.e., proposed residential uses adjacent to Airway Road, Cactus Road, and SR-905, as reported in the OMCPU EIR and substantiated in this report). Typical residential construction in California, conducted in compliance with the California Building Standards Code, provides approximately 10 to 15 dBA of noise reduction from exterior noise sources with windows partially open, and approximately 20 to 25 dBA of noise reduction with windows closed. Thus, as a rule of thumb, where exterior noise levels are below 65-dBA CNEL, interior noise levels for new construction would typically meet the interior 45-dBA CNEL standard for residential uses established in the California Code of Regulations, Title 24.

Additionally, where exterior noise levels are 65 to 70 dBA CNEL, interior noise can be reduced with standard wall and window construction, and the inclusion of mechanical forced-air ventilation to allow occupants the option of maintaining windows closed to control noise. As stated in the OMCPU EIR, where exterior noise levels exceed 70 dBA CNEL, residential units would not normally

be able to meet the 45-dBA CNEL interior standard through typical construction methods. Thus, the OMCPU EIR stated that noise-sensitive uses located within the 70 dBA CNEL will require acoustical study at the project-level, and may require enhanced design features, such as windows and doors with higher Sound Transition Class (STC) ratings to meet the 45-dBA CNEL criteria. All development projects that would implement the CVSP (including those with uses that would occur within the 65-dBA CNEL contour (refer to Figure 6)) would be subject to a discretionary review process and evaluated under CEQA, including a requirement for additional site-specific acoustical analysis. Applicable provisions of OMCPU EIR Mitigation Measures NOI-1 and NOI-2, which require acoustical study at the implementing project level, are listed in Section 7.0 of this report.

Commercial uses developed under the CVSP in mixed-use planning areas would be a compatible use for the future noise levels calculated for these areas. The interior noise level criterion for commercial sales and offices is 50 dBA CNEL. The majority of planned commercial land uses in the CVSP area are located along Airway Road. As shown in Table 7, noise levels along this roadway would be above 70 dBA CNEL at 100 feet. As noted in the OMCPU EIR, interior noise can be reduced with standard wall and window construction, and the inclusion of mechanical forced-air ventilation to allow occupants the option of maintaining windows closed to control noise. Thus, no additional noise reduction measures are needed for the proposed commercial areas on-site beyond those presented in the OMCPU EIR. The OMCPU EIR's noise mitigation measures are listed in Section 7.0 of this report.

6.2 Cumulative Traffic Noise

The cumulative study area for traffic-related noise was determined to include those roadway segments throughout the CVSP area and the immediate community that would have an increase in traffic as a result of the CVSP and, thus, a potential increase in noise. However, the proposed CVSP project would result in fewer daily trips than assumed for the Central Village by the OMCPU EIR; thus, implementation of the CVSP as proposed would have overall reduced cumulatively considerable impacts associated with transportation-related noise as compared to what was disclosed by the OMCPU EIR. Nonetheless, and consistent with the findings of the OMCPU EIR, implementation of the proposed CVSP project, in conjunction with other cumulative traffic expected upon buildout of the OMCPU and ambient growth, would expose sensitive receptors to significant noise impacts particularly where residential and/or park uses exist or are planned to be located along roadways impacted by noise levels above 65 dB(A). Although mitigation measures, consistent with OMCPU Mitigation Measures NOI-1 and NOI-2, are presented in Section 7.0 of this report, transportation-related noise impacts would nonetheless remain cumulatively considerable and unavoidable. This conclusion is consistent with the conclusion reached by the OMCPU EIR.

Cumulative traffic noise levels (i.e., existing plus future with Proposed Project), were calculated using future traffic volumes from the CVSP/s *Transportation Facilities Trigger Analysis* (Chen Ryan

Associates, 2017) and were presented in Tables 7 and 8 above. As shown in Table 8, the CVSP would cause traffic noise to increase by 3 dBA or more along two study area road segments: Beyer Boulevard between Old Otay Mesa Road and Caliente Avenue; and Cactus Road north of Siempre Viva Road. Cumulative traffic-related noise levels along Beyer Boulevard would expose future residential uses in the Southwest Village portion of the OMCPU to noise levels exceeding City thresholds of significance. Cumulative traffic-related noise levels along Cactus Road north of Siempre Viva Road would expose off- site recreational uses (i.e., Grand Park) to unacceptable noise levels, and also would expose proposed on-site residential uses abutting Cactus Road to noise levels exceeding the City's land use compatibility guidelines as presented in Table 3. Thus, and consistent with the conclusions of the OMCPU EIR, even with the incorporation of mitigation measures, impacts to sensitive receptors abutting the Beyer Boulevard or Cactus Avenue roadway segments would be cumulatively considerable and unavoidable.

6.3 Airport Noise

The CVSP is located outside of the 60-65 dB CNEL contour for the Brown Field Municipal Airport. Thus, the CVSP has no potential to conflict with the land use compatibility guidelines of the Brown Field Comprehensive Land Use Plan (see Table 4 above). A *less-than-significant* impact would occur.

6.4 Operational Noise and Collocation of Land Uses

The generation of noise from certain types of land uses in the CVSP area could cause potential land use incompatibility. A project which would generate noise levels at the property line which exceed Section 59.5.0401 of the City's Municipal Code is considered potentially significant, as identified in Table 5 above.

Section 59.5.0401 of the City's Noise Ordinance sets the operational exterior noise limit for commercial uses at 65 dBA Leq for daytime hours of 7 a.m. to 7 p.m. and 60 dBA Leq during the noise sensitive nighttime hours of 7 p.m. to 7 a.m. Although commercial uses permitted in the CVSP's mixed-use planning areas are expected to only operate during the daytime hours, there is still a potential that businesses may operate during nighttime or early morning hours and therefore the most restrictive and conservative approach is to apply the 60 dBA Leq nighttime standard at the property lines.

Development projects that would be implemented pursuant to the CVSP would result in the collocation of residential and recreational land uses with commercial uses (i.e., within and adjacent to the mixed-use portions of the CVSP area). Additionally, the Project also would introduce residential and recreational land uses in the northern and southern portions of the site in close proximity to existing or planned off-site light and/or heavy industrial land uses.

Noise sources associated with commercial land uses include mechanical equipment operations, public address systems, parking lot noise (e.g., opening and closing of vehicle doors, people talking, car alarms), delivery activities (e.g., use of forklifts, hydraulic lifts), trash compactors, and air compressors. Noise from such equipment can reach intermittent levels of approximately 90 dBA, 50 feet from the source (EPA 1974). The noise levels that have the potential to be generated by commercial uses within mixed-use land use designations could expose nearby noise-sensitive land uses (e.g., residential units and parks) to noise levels that may exceed the noise level limits specified in the City's Noise Ordinance.

Additionally, the CVSP area abuts off-site light industrial land uses north of Planning Area 13 and east of Planning Areas 6, 7, and 12, and occurs in close proximity to heavy industrial uses located south of Planning Area 12. Noise sources associated with light and heavy industrial sources include mechanical equipment, public address systems, parking lot noise (e.g., opening and closing of vehicle doors, trucks idling, car alarms), delivery activities (e.g., use of forklifts, hydraulic lifts, truck movements), trash compactors, and air compressors. Noise from such equipment can reach intermittent levels of approximately 90 dBA, 50 feet from the source (EPA 1974). These noise levels that have the potential to be generated by off-site industrial uses could expose noise-sensitive land uses within the CVSP (e.g., residential units) to noise levels that may exceed noise level limits specified in the City's Noise Ordinance.

The juxtaposition of future land uses within the CVSP could result in significant noise impacts to sensitive receptors on-site. This potential was acknowledged by the OMCPU EIR. While the City's applicable regulations and policies would reduce direct and indirect impacts associated with the generation of noise levels in excess of standards established in the General Plan or Noise Ordinance, no project level site plans are proposed as part of the CVSP. Without detailed operational data and site plans for the land uses within each CVSP planning area, it cannot be verified if future projects would be capable of reducing noise levels to comply with City standards. As the degree of success cannot be adequately known for specific projects at a program level of analysis, consistent with the conclusion drawn by the OMCPU EIR, mitigation would be required to provide verification that City standards have been met for operational noise. As a result, and consistent with the findings of the OMCPU EIR, this impact is *potentially significant*. Noise attenuation measures, consistent with OMCPU EIR Mitigation Measure NOI-3, are identified in Section 7.0 of this report to reduce this impact; however, and consistent with the conclusions reached by the OMCPU EIR, even with strict adherence to the required mitigation (see Section 7.0 of this report), impacts associated with collocation of residential, commercial, and light/heavy industrial land uses has the potential to remain significant and unavoidable. There is no aspect of the CVSP that would worsen the level of impact compared to the potential impacts disclosed in the OMCPU EIR. The impact would be the same.

6.5 Cumulative Operational Noise

Operational noise sources, such as noise from mechanical equipment, are temporary and more localized and controlled at the source such that they do not typically combine with other sources to create cumulative noise impacts. Nonetheless, and consistent with the conclusions drawn by the OMCPU EIR, operational-related noise from on-site commercial areas and off-site light/heavy industrial areas could combine to expose on-site residents and/or recreational uses to cumulatively considerable noise impacts. Although mitigation consistent with OMCPU EIR Mitigation Measure NOI-3 is presented in Section 7.0 of this report, the required mitigation would not reduce stationary noise impacts to below a level of significant. Therefore, and consistent with the conclusion reached in the OMCPU EIR, impacts due to noise from commercial and/or industrial land uses affecting on-site residential and/or recreational uses is a cumulatively-considerable and unavoidable impact for which additional feasible mitigation is not available.

6.6 Construction Noise

Division 4 of Article 9.5 of the City of San Diego Municipal Code addresses the limits of disturbing or offensive construction noise. The Municipal Code states that with the exception of an emergency, it should be unlawful 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.

Noise impacts from construction are dependent on the noise generated by the construction equipment, the location and sensitivity of affected land uses, as well as the timing and duration of the activities. Noise levels adjacent to active construction sites would increase during construction. Construction would not result in long-term impacts, since it would be temporary and daily construction activities would be limited by the City's Noise Ordinance (Section 59.5.0404) to hours of less noise sensitivity.

In general, construction activities are carried out in stages, and each stage has its own noise characteristics based on the construction equipment in use. Typical maximum noise levels at a distance of 50 feet from various pieces of construction equipment are shown in Table 9.

Typical construction projects, with equipment moving from one point to another, work breaks, and idle time, have hourly noise level that are lower than loud short-term, or instantaneous, peak noise events. For purposes of analysis of this project, a maximum 1-hour average noise level of 80 dBA L_{eq} at a distance of 50 feet from the center of the construction area is assumed to occur. Noise levels of other activities, such as framing or paving, would be less. Maximum noise levels of 90 dBA L_{max} may occur during grading and excavation, when there may be a combination of noise from several pieces of equipment in close proximity, including the noise of

backup alarms, and these activities are near the construction site periphery.

Noise levels from construction activities are considered as point sources and would drop off at a rate of 6 dBA per doubling of distance over hard sites, such as streets and parking lots; the drop-off rate would increase slightly to 7.5 dBA over soft sites such as grass fields and open terrain with vegetation (FTA 2006). For purposes of this analysis the project area is considered acoustically hard, and all potential exterior receptors were assumed to be 5 feet above grade. All construction equipment is assumed to have an exhaust outlet height (source height) of 10 to 14 feet.

The majority of the CVSP area is proposed for multiple-family residential and mixed use development. A proposed school and recreation area is planned near the center of the CVSP area with four parks and open space areas designated throughout the CVSP.

Table 9: Typical Maximum Construction Equipment Noise Levels

Equipment	Noise Level at 50 feet (dBA L_{max})	Typical Duty Cycle
Auger Drill Rig	85	20%
Backhoe	80	40%
Blasting	94	1%
Chain Saw	85	20%
Clam Shovel	93	20%
Compactor (ground)	80	20%
Compressor (air)	80	40%
Concrete Mixer Truck	85	40%
Concrete Pump	82	20%
Concrete Saw	90	20%
Crane (mobile or stationary)	85	20%
Dozer	85	40%
Dump Truck	84	40%
Excavator	85	40%
Front End Loader	80	40%
Generator (25 KVA or less)	70	50%
Generator (more than 25 KVA)	82	50%
Grader	85	40%
Hydra Break Ram	90	10%
Impact Pile Driver (diesel or drop)	95	20%
Insitu Soil Sampling Rig	84	20%
Jackhammer	85	20%
Mounted Impact Hammer (hoe ram)	90	20%
Paver	85	50%
Pneumatic Tools	85	50%
Pumps	77	50%
Rock Drill	85	20%
Roller	74	40%
Scraper	85	40%
Tractor	84	40%
Vacuum Excavator (vac-truck)	85	40%
Vibratory Concrete Mixer	80	20%
Vibratory Pile Driver	95	20%

Source: FTA 2006; Thalheimer 2000
KVA = kilovolt amps

Construction noise impacts to humans primarily result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction durations last over extended periods of time. The highest construction noise levels during typical construction activities would be generated during grading, excavation, road base construction, and foundation work, with lower noise levels occurring during building construction and paving. As shown in Table 9, large pieces of earth-moving equipment, such as graders, scrapers, and bulldozers, generate maximum noise levels of 85 to 90 dBA L_{max} at a distance of 50 feet. However, typical construction-generated hourly noise levels are about 75 to 80 dBA L_{eq} measured at a distance of 50 feet from the site during busy construction periods.

Noise levels drop off at a rate of about 6 dBA per doubling of distance between the noise source and receptor. However, intervening structures would result in lower noise levels at greater distances. Sound levels may be attenuated 3.0 to 5.0 dBA by a first row of houses/buildings and 1.5 dBA for each additional row of houses in built-up environments (FHWA 1978). These factors generally limit the distance construction noise travels and ensure noise impacts from construction are localized.

Although construction noise would be localized to discrete locations during construction, businesses, residences, recreational facilities, and noise-sensitive wildlife species using open space areas in and around the CVSP area could be intermittently exposed to temporary elevated levels of noise throughout the construction period. Specifically, the OMCPU EIR indicated that coastal California gnatcatcher (CAGN) occupying habitat in the Multiple Species Habitat Area (MHPA) could be adversely impacted by temporary construction noise if construction occurs during the breeding season. Therefore, adoption of the proposed CVSP with its potential to directly and indirectly affect the CAGN by construction noise does not represent a new impact.

Consistent with the findings of the OMCPU EIR, this is a *potentially significant impact* to humans and potentially to wildlife (CAGN in particular) due to the potential for high short-term and instantaneous noise levels during peak construction activity; mitigation consistent with OMCPU EIR Mitigation Measure NOI-4 and Mitigation Measure LU-2 is identified in Section 7.0 of this report. Consistent with the findings of the OMCPU EIR, even with the application of mitigation measures, construction noise impacts cannot be reduced to below a level of significance; therefore, construction-related noise impact would remain significant and unavoidable.

7.0 NOISE ABATEMENT AND MITIGATION MEASURES

Compliance with City regulatory standards addressing noise abatement is required of all projects and is not considered to be mitigation. However, and consistent with the conclusions of the OMCPU EIR, it is possible that for certain projects that implement the CVSP, adherence to the regulations may not adequately reduce noise levels to below City standards. As such, implementing projects may require noise attenuation mitigation. To reduce potential noise-related impacts, the City will verify that the following mitigation measures required by the OMCPU EIR are incorporated into each project that implements the CVSP, as applicable. As required by the CVSP, every development project that implements the CVSP will be subject to a discretionary review and approval process, including CEQA compliance. Even with the incorporation of mitigation, however, traffic-related, operational-related, and construction-related noise impacts have the potential to be *significant and unavoidable* as disclosed in the OMCPU EIR.

NOI-1: Prior to the issuance of building permits, site-specific exterior noise analyses that demonstrate that the project would not place residential receptors in locations where the exterior existing or future noise levels would exceed the noise compatibility standards of the City's General Plan shall be required as part of the review of future residential development proposals. Noise reduction measures, including but not limited to building noise barriers, increased building setbacks, speed reductions on surrounding roadways, alternative pavement surfaces, or other relevant noise attenuation measures, may be used to achieve the noise compatibility standards. Exact noise mitigation measures and their effectiveness shall be determined by the site-specific exterior noise analyses.

NOI-2: When building plans are available and prior to the issuance of building permits, site specific interior noise analyses demonstrating compliance with the interior noise compatibility standards of the City's General Plan and other applicable regulations shall be prepared for noise sensitive land uses located in areas where the exterior noise levels exceed the noise compatibility standards of the City's General Plan. Noise control measures, including but not limited to increasing roof, wall, window, and door sound attenuation ratings, placing HVAC in noise reducing enclosures, or designing buildings so that no windows face freeways or major roadways may be used to achieve the noise compatibility standards. Exact noise mitigation measures and their effectiveness shall be

NOI-3: Prior to the issuance of a building permit, a site-specific acoustical/noise analysis of any on-site generated noise sources, including generators, mechanical equipment, and trucks, shall be prepared which identifies all noise generating equipment, predicts noise levels at property lines from all identified equipment, and recommends mitigation to be implemented (e.g., enclosures, barriers, site orientation), to ensure compliance with the City's Noise Abatement and Control Ordinance. Noise reduction measures shall include building noise-attenuating walls, reducing noise

at the source by requiring quieter machinery or limiting the hours of operation, or other attenuation measures. Additionally, future projects shall be required to buffer sensitive receptors from noise sources through the use of open space and other separation techniques as recommended after thorough analysis by a qualified acoustical engineer. Exact noise mitigation measures and their effectiveness shall be determined by the site-specific noise analyses.

NOI-4: For projects that exceed daily construction noise thresholds established by the City of San Diego, best construction management practices shall be used to reduce construction noise levels to comply with standards established by the Municipal Code in Chapter 5, Article 9.5, Noise Abatement and Control. Project applicant shall prepare and implement a Construction Noise Management Plan. Appropriate management practices shall be determined on a project-by-project basis, and are specific to the location. Control measures shall include:

a. Minimizing simultaneous operation of multiple construction equipment units;

b. Locating stationary equipment as far as reasonable from sensitive receptors;

c. Requiring all internal combustion-engine-driven equipment to be equipped with mufflers that are in good operating condition and appropriate for the equipment; and

d. Construction of temporary noise barriers around construction sites that block the line-of-sight to surrounding receptors.

A tailored version of NOI-4 to more specifically address the impacts of the CVSP project is as follows. N-4 is recommended to replace NOI-4:

N-4: Prior to approval of implementing Development Permits within the Central Village, and consistent with OMCPU EIR Mitigation Measure NOI-4, the City of San Diego Development Services Department (DSD) shall ensure that all future Development Permits are appropriately conditioned to prepare a Construction Noise Management Plan (CNMP) that shall establish appropriate management practices that are specific to the property proposed for development. The CNMP shall incorporate best construction management practices, to the extent feasible, to ensure compliance with the standards established by the Municipal Code in Chapter 5, Article 9.5, *Noise Abatement and Control*. The CNMP shall require, at a minimum, the following measures to reduce noise associated with construction:

- Simultaneous operation of multiple construction equipment units shall be minimized.
- Stationary construction equipment shall be located as far as reasonable from sensitive receptors.
- All internal combustion-engine-driven equipment will be equipped with mufflers that are in good operating condition and appropriate for the equipment.
- Where physically feasible, temporary noise barriers shall be erected around construction sites adjacent to, or within 150 feet of, operational business, residences, or other noise-sensitive land uses. Temporary noise barriers must be constructed of material with a minimum weight of 3 pounds per square foot with no gaps or

perforations. Noise barriers may be constructed of, but are not limited to, 5/8 inch plywood, 5/8 inch oriented strand board, or hay bales.

- For construction projects within 150 feet of residential uses, a temporary sound-control blanket barrier shall be erected, if necessary, along building façades facing construction sites. This requirement shall only be imposed if conflicts occur that are irresolvable by proper scheduling, compliance with the CNMP, or other means of noise control. The sound blankets shall have a minimum breaking and tear strength of 120 pounds and 30 pounds, respectively. The sound blankets shall have a minimum sound transmission classification of 27 and noise-reduction coefficient of 0.70. The sound blankets shall be of sufficient length to extend from the top of the building and drape onto the ground or be sealed at the ground. The sound blankets also shall have a minimum overlap of 2 inches.
- "Quiet" models of air compressors and other stationary construction equipment shall be employed where such technology exists.
- Stationary noise-generating equipment shall be located as far as reasonable from sensitive receptors when sensitive receptors adjoin or are within 150 feet of a construction site.
- Unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes) shall be prohibited.
- Foundation pile holes shall be predrilled, as feasible based on geologic conditions, to minimize the number of impacts required to seat the pile.
- Construction-related traffic shall be routed along major roadways and away from noise-sensitive receptors.
- Construction activities, including the loading and unloading of materials and truck movements, shall be limited to the hours specified in the City Noise Ordinance (Section 8.80.202).
- Businesses, residences, and noise-sensitive land uses within 150 feet of construction sites shall be notified of the construction in writing. The notification shall describe the activities anticipated, provide dates and hours, and provide contact information with a description of the complaint and response procedure.
- Each project implemented within the CVSP shall designate a "construction liaison" that will be responsible for responding to any local complaints about construction noise. The liaison shall determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures to correct the problem. A telephone number for the liaison shall be conspicuously posted at the construction site.

LU-2: All subsequent development projects that are implemented in accordance with the CPU which is adjacent to designated MHPA areas shall comply with the Land Use Adjacency Guidelines of the MSCP in terms of noise. The project biologist for each proposed project would identify specific mitigation measures needed to reduce impacts to below a level of significance.

Subsequent environmental review would be required to determine the significance of impacts from land use adjacency and compliance with the Land Use Adjacency Guidelines of the MSCP. Prior to approval of any subsequent development project in an area adjacent to a designated MHPA, the City shall identify specific conditions of approval in order to avoid or to reduce potential impacts to adjacent the MHPA.

As recommended supplements to the applicable mitigation measures presented in the OMCPU EIR, the following additional mitigation measures are recommended.

N-1 In areas where new residential development would be exposed to a CNEL of greater than 60 dBA associated with stationary noise sources, site-specific noise studies shall be prepared which identifies all noise-generating equipment, predicts noise levels at property lines from all identified equipment, and recommends noise attenuating features to be implemented (e.g., enclosures, barriers, site orientation), to ensure compliance with the City's Noise Abatement and Control Ordinance. Noise reduction measures may include one or more of the following measures, and/or other measures as determined necessary by the site-specific noise analyses:

- Use site planning to minimize noise in shared residential outdoor activity areas by locating the areas behind the buildings or in courtyards, or orienting the terraces to alleyways rather than streets whenever possible. [CVSP Policy 2.5-48]
- Provide mechanical ventilation in all residential units proposed along roadways carrying high traffic volumes and in areas where noise levels could exceed interior noise standards such that windows can remain closed at the choice of the occupants. [CVSP Policy 2.5-56]
- Provide landscape screening and/or patio walls to reduce noise impacts and protect the privacy of residential units along high traffic streets and intense uses. [CVSP Policy 2.5-43].
- Minimize the number of residential units that have window and door openings that afford views into adjacent industrial uses located east of the Central Village. Whenever possible, orient the short end of buildings towards industrial uses. [CVSP Policy 2.5-43].
- Where berms, setbacks, and architectural design are inadequate to achieve required interior or exterior noise levels, provide physical noise walls. [CVSP Policy 2.5-142].
- Install sound-rated windows and construction methods to provide the requisite noise control for residential units proposed in areas where noise levels could exceed 70 dBA CNEL.
- Where necessary to achieve the City's nighttime noise standards, limit the hours of operation of on-site commercial uses.

N-2: Prior to Development Plan approval for any commercial structure, a site-specific noise study should be conducted to determine the area of noise impact on noise-sensitive uses and to identify noise attenuation features to reduce impacts to the extent feasible or below a level of significance

(whichever is applicable), which could include, but are not limited to the following:

- In commercial buildings, place loading and unloading areas so that commercial buildings shield nearby residential land uses from noise generated by loading dock and delivery activities. If necessary, additional sound barriers should be constructed on the commercial sites to reduce noise levels at nearby noise-sensitive uses. [CVSP Policy 2.5-57]
- Place commercial heating, ventilation, and air conditioning (HVAC) machinery within mechanical equipment rooms wherever possible. [CVSP Policy 2.5-58]
- Provide localized noise barriers or rooftop parapets around HVAC, cooling towers, and mechanical equipment so that line-of-sight to the noise source from the property line of the noise-sensitive receptors is blocked. [CVSP Policy 2.5-59]

8.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the projected noise from the proposed CVSP development. This report was prepared utilizing the latest emission rates and reduction methodologies.

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Date January 19, 2017

ATTACHMENT A

FHWA RD-77-108 Traffic Noise Prediction Model

FHWA RD-77-108

Traffic Noise Prediction Model

Data Input Sheet

Project Name : OMCPU
Project Number : 3957.1
Modeled Condition : Adopted

Surface Refelction: CNEL
Assessment Metric: Soft
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 %	K-Factor
1	Airway Road	Old Otay Mesa Rd. to Caliente Ave.		20,500	40	100	90	3	2	78.00	8.00	14.00	
2	Airway Road	Caliente Ave. to Heritage Rd.		59,000	40	100	90	3	2	78.00	8.00	14.00	
3	Airway Road	Heritage Rd. to Cactus Rd.		39,500	40	100	90	3	2	78.00	8.00	14.00	
4	Airway Road	Cactus Rd. to Britannia Blvd.		46,500	40	100	90	3	2	78.00	8.00	14.00	
5	Airway Road	Britannia Blvd. to La Media Rd.		39,000	40	100	90	3	2	78.00	8.00	14.00	
6	Airway Road	La Media Rd. to Harves t Rd.		54,500	40	100	90	3	2	78.00	8.00	14.00	
7	Airway Road	Harvest Rd. to Sanyo Ave.		49,500	40	100	90	3	2	78.00	8.00	14.00	
8	Beyer Boulevard	Alaquinas Dr. to Old Otay Mesa Rd.		24,500	35	100	90	3	2	78.00	8.00	14.00	
9	Beyer Boulevard	Old Otay Mesa Rd. to East End		3,000	45	100	90	3	2	78.00	8.00	14.00	
10	Britannia Boulevard	Otay Mesa Rd. to SR-905		19,500	40	100	90	3	2	78.00	8.00	14.00	
11	Britannia Boulevard	SR-905 to Airway Rd.		52,000	40	100	65	10	20	78.00	8.00	14.00	
12	Britannia Boulevard	Siempre Viva Rd. to South End		32,500	40	100	65	10	20	78.00	8.00	14.00	
13	Britannia Boulevard	Airway Rd. to Siempre Viva Rd.		33,000	40	100	65	10	20	78.00	8.00	14.00	
14	Cactus Road	Otay Mesa Rd. to Airway Rd.		35,000	45	100	90	3	2	78.00	8.00	14.00	
15	Cactus Road	Airway Rd. to Siempre Viva Rd.		23,000	45	100	90	3	2	78.00	8.00	14.00	
16	Caliente Avenue	Otay Mesa Rd. to SR-905		39,000	30	100	90	3	2	78.00	8.00	14.00	
17	Caliente Avenue	SR-905 to Airway Rd.		38,000	40	100	90	3	2	78.00	8.00	14.00	
18	Caliente Avenue	Airway Rd. to Siempre Viva Rd.		48,000	40	100	90	3	2	78.00	8.00	14.00	
19	Camino Maquiladora	Pacific Rim Ct . to Cactus Rd.		6,000	30	100	90	3	2	78.00	8.00	14.00	
20	Camino Maquiladora	Cactus Rd. to Continental St.		5,500	30	100	90	3	2	78.00	8.00	14.00	
21	Heritage Road	Avenida De Las Vistas to Datsun St.		77,500	45	100	90	3	2	78.00	8.00	14.00	
22	Heritage Road	Datsun St. to Otay Mesa Rd.		47,500	45	100	90	3	2	78.00	8.00	14.00	
23	Heritage Road	Otay Mesa Rd. to SR-905		17,500	45	100	90	3	2	78.00	8.00	14.00	
24	Heritage Road	SR-905 to Airway Rd.		52,000	45	100	90	3	2	78.00	8.00	14.00	
25	La Media Road	Aviator Rd. to Otay Mesa Rd.		64,500	45	100	65	10	20	78.00	8.00	14.00	
26	La Media Road	Otay Mesa Rd. to SR-905		48,000	45	100	65	10	20	78.00	8.00	14.00	
27	La Media Road	SR-905 to Airway Rd.		75,500	40	100	65	10	20	78.00	8.00	14.00	
28	La Media Road	Airway Rd. to Siempre Viva Rd.		32,000	40	100	65	10	20	78.00	8.00	14.00	
29	Ocean View Hills Pkwy	Dennery Rd. to Del Sol Blvd.		27,000	45	100	90	3	2	78.00	8.00	14.00	
30	Ocean View Hills Pkwy	Del Sol Blvd. to Street A		45,000	40	100	90	3	2	78.00	8.00	14.00	
31	Ocean View Hills Pkwy	Street A to Otay Mesa Rd.		23,500	40	100	90	3	2	78.00	8.00	14.00	
32	Otay Mesa Road	Caliente Ave. to Corporate Center Dr.		78,000	45	100	90	3	2	78.00	8.00	14.00	
33	Otay Mesa Road	Corporate Center Dr. to Innovative Dr.		36,000	45	100	90	3	2	78.00	8.00	14.00	
34	Otay Mesa Road	Innovative Dr. to Heritage Rd.		42,000	45	100	90	3	2	78.00	8.00	14.00	
35	Otay Mesa Road	Heritage Rd. to Cactus Rd.		74,000	50	100	90	3	2	78.00	8.00	14.00	
36	Otay Mesa Road	Cactus Rd. to Britannia Blvd.		47,500	50	100	90	3	2	78.00	8.00	14.00	
37	Otay Mesa Road	Britannia Blvd. to Ailsa Ct.		58,500	50	100	90	3	2	78.00	8.00	14.00	
38	Otay Mesa Road	Ailsa Ct. to La Media Rd.		49,500	50	100	90	3	2	78.00	8.00	14.00	
39	Otay Mesa Road	La Media Rd. to Piper Ranch Rd.		50,000	45	100	90	3	2	78.00	8.00	14.00	
40	Siempre Viva Rd.	Cactus Rd. to Britannia Blvd.		44,500	40	100	90	3	2	78.00	8.00	14.00	
41	Siempre Viva Rd.	Britannia Blvd. to La Media Rd.		52,500	40	100	90	3	2	78.00	8.00	14.00	
42	Siempre Viva Rd.	La Media Rd. to Harvest Rd.		34,500	40	100	90	3	2	78.00	8.00	14.00	
43	Siempre Viva Rd.	Harvest Rd. to Otay Center Dr.		35,000	40	100	90	3	2	78.00	8.00	14.00	
44	Siempre Viva Rd.	Otay Center Dr. to SR-905		64,500	40	100	90	3	2	78.00	8.00	14.00	
45	SR-905	Picador Blvd. to I-805		144,500	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
46	SR-905	I-805 to Caliente Ave.		253,500	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
47	SR-905	Caliente Ave. to Heritage Rd.		224,000	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
48	SR-905	Heritage Rd. to Britannia Blvd.		193,000	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
49	SR-905	Britannia Blvd. to La Media Rd.		167,000	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
50	SR-905	La Media Rd. to SR-125		121,000	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
51	SR-905	SR-125 to Siempre Viva Rd.		103,000	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
52	SR-905	Siempre Viva Rd. to Border		64,500	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
53	St. Andrews Avenue	Otay Mesa Center Rd. To La Media Rd.		20,500	30	100	90	3	2	78.00	8.00	14.00	
54	Street A	Ocean View Hills Pkwy. to Otay Mesa Rd.		19,500	40	100	90	3	2	78.00	8.00	14.00	

FHWA RD-77-108

Traffic Noise Prediction Model

Predicted Noise Levels

Project Name : OMCPU
Project Number : 3957.1
Modeled Condition : Adopted
Assessment Metric: Soft

Segment	Roadway	Segment From	To	Noise Levels, dBA Soft Auto	MT	HT	Total	Distance to Traffic Noise Level Contours, Feet 75 dB	70 dB	65 dB	60 dB	55 dB
1	Airway Road	Old Otay Mesa Rd. to Caliente Ave.		65.9	60.1	63.1	68	37	79	170	366	788
2	Airway Road	Caliente Ave. to Heritage Rd.		70.5	64.7	67.7	73	74	159	343	740	1,594
3	Airway Road	Heritage Rd. to Cactus Rd.		68.8	62.9	66.0	71	57	122	263	566	1,220
4	Airway Road	Cactus Rd. to Britannia Blvd.		69.5	63.6	66.7	72	63	136	293	631	1,360
5	Airway Road	Britannia Blvd. to La Media Rd.		68.7	62.9	65.9	71	56	121	261	561	1,210
6	Airway Road	La Media Rd. to Harves t Rd.		70.2	64.3	67.4	73	70	151	326	702	1,512
7	Airway Road	Harvest Rd. to Sanyo Ave.		69.8	63.9	67.0	72	66	142	305	658	1,418
8	Beyer Boulevard	Alaquinas Dr. to Old Otay Mesa Rd.		65.0	59.9	63.4	68	34	74	159	343	739
9	Beyer Boulevard	Old Otay Mesa Rd. to East End		59.1	52.5	55.3	61	12	26	56	120	259
10	Britannia Boulevard	Otay Mesa Rd. to SR-905		65.7	59.9	62.9	68	35	76	164	354	762
11	Britannia Boulevard	SR-905 to Airway Rd.		68.6	69.3	77.2	78	167	359	774	1,667	3,592
12	Britannia Boulevard	Siempre Viva Rd. to South End		66.5	67.3	75.1	76	122	263	566	1,219	2,626
13	Britannia Boulevard	Airway Rd. to Siempre Viva Rd.		66.6	67.4	75.2	76	123	265	571	1,231	2,652
14	Cactus Road	Otay Mesa Rd. to Airway Rd.		69.7	63.2	65.9	72	62	133	287	619	1,333
15	Cactus Road	Airway Rd. to Siempre Viva Rd.		67.9	61.4	64.1	70	47	101	217	468	1,007
16	Caliente Avenue	Otay Mesa Rd. to SR-905		65.1	60.9	66.3	69	42	91	197	424	914
17	Caliente Avenue	SR-905 to Airway Rd.		68.6	62.8	65.8	71	55	119	256	552	1,189
18	Caliente Avenue	Airway Rd. to Siempre Viva Rd.		69.6	63.8	66.8	72	64	139	299	645	1,389
19	Camino Maquiladora	Pacific Rim Ct . to Cactus Rd.		57.0	52.8	58.2	61	12	26	57	122	262
20	Camino Maquiladora	Cactus Rd. to Continental St.		56.6	52.4	57.8	61	11	25	53	115	248
21	Heritage Road	Avenida De Las Vistas to Datsun St.		73.2	66.7	69.4	75	105	226	488	1,051	2,264
22	Heritage Road	Datsun St. to Otay Mesa Rd.		71.0	64.5	67.3	73	76	163	352	758	1,634
23	Heritage Road	Otay Mesa Rd. to SR-905		66.7	60.2	62.9	69	39	84	181	390	840
24	Heritage Road	SR-905 to Airway Rd.		71.4	64.9	67.7	74	81	174	374	806	1,735
25	La Media Road	Aviator Rd. to Otay Mesa Rd.		71.0	71.1	78.6	80	212	457	984	2,120	4,567
26	La Media Road	Otay Mesa Rd. to SR-905		69.7	69.8	77.3	79	174	375	808	1,741	3,750
27	La Media Road	SR-905 to Airway Rd.		70.2	71.0	78.8	80	214	461	992	2,138	4,605
28	La Media Road	Airway Rd. to Siempre Viva Rd.		66.4	67.2	75.1	76	121	260	560	1,206	2,599
29	Ocean View Hills Pkwy	Dennery Rd. to Del Sol Blvd.		68.6	62.1	64.8	71	52	112	242	520	1,121
30	Ocean View Hills Pkwy	Del Sol Blvd. to Street A		69.3	63.5	66.6	72	62	133	287	618	1,331
31	Ocean View Hills Pkwy	Street A to Otay Mesa Rd.		66.5	60.7	63.7	69	40	86	186	401	863
32	Otay Mesa Road	Caliente Ave. to Corporate Center Dr.		73.2	66.7	69.4	75	106	227	490	1,056	2,274
33	Otay Mesa Road	Corporate Center Dr. to Innovative Dr.		69.8	63.3	66.1	72	63	136	293	630	1,358
34	Otay Mesa Road	Innovative Dr. to Heritage Rd.		70.5	64.0	66.7	73	70	151	324	699	1,505
35	Otay Mesa Road	Heritage Rd. to Cactus Rd.		74.3	67.2	69.6	76	119	257	554	1,193	2,570
36	Otay Mesa Road	Cactus Rd. to Britannia Blvd.		72.4	65.2	67.7	74	89	191	412	888	1,912
37	Otay Mesa Road	Britannia Blvd. to Ailsa Ct.		73.3	66.1	68.6	75	102	220	473	1,020	2,197
38	Otay Mesa Road	Ailsa Ct. to La Media Rd.		72.5	65.4	67.9	74	91	197	423	912	1,966
39	Otay Mesa Road	La Media Rd. to Piper Ranch Rd.		71.3	64.7	67.5	73	78	169	364	785	1,691
40	Siempre Viva Rd.	Cactus Rd. to Britannia Blvd.		69.3	63.4	66.5	72	61	132	285	613	1,321
41	Siempre Viva Rd.	Britannia Blvd. to La Media Rd.		70.0	64.2	67.2	73	68	147	318	684	1,475
42	Siempre Viva Rd.	La Media Rd. to Harvest Rd.		68.2	62.3	65.4	71	52	111	240	517	1,115
43	Siempre Viva Rd.	Harvest Rd. to Otay Center Dr.		68.2	62.4	65.5	71	52	113	242	522	1,125
44	Siempre Viva Rd.	Otay Center Dr. to SR-905		70.9	65.1	68.1	73	79	169	364	785	1,692
45	SR-905	Picador Blvd. to I-805		80.6	74.5	74.7	82	309	665	1,433	3,088	6,652
46	SR-905	I-805 to Caliente Ave.		83.0	76.9	77.1	85	449	968	2,085	4,491	9,677
47	SR-905	Caliente Ave. to Heritage Rd.		82.5	76.4	76.6	84	414	891	1,920	4,136	8,911
48	SR-905	Heritage Rd. to Britannia Blvd.		81.8	75.7	76.0	84	374	807	1,738	3,745	8,068
49	SR-905	Britannia Blvd. to La Media Rd.		81.2	75.1	75.3	83	340	733	1,578	3,401	7,326
50	SR-905	La Media Rd. to SR-125		79.8	73.7	73.9	82	274	591	1,273	2,743	5,910
51	SR-905	SR-125 to Siempre Viva Rd.		79.1	73.0	73.2	81	246	531	1,144	2,464	5,308
52	SR-905	Siempre Viva Rd. to Border		77.1	71.0	71.2	79	180	389	837	1,803	3,885
53	St. Andrews Avenue	Otay Mesa Center Rd. To La Media Rd.		62.3	58.1	63.5	67	28	60	128	276	595
54	Street A	Ocean View Hills Pkwy. to Otay Mesa Rd.		65.7	59.9	62.9	68	35	76	164	354	762
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FHWA RD-77-108

Traffic Noise Prediction Model

Data Input Sheet

Project Name : OMCPU
Project Number : 3957.1
Modeled Condition : Proposed

Surface Refelction: CNEL
Assessment Metric: Soft
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 %	K-Factor
1	Airway Road	Old Otay Mesa Rd. to Caliente Ave.		10,500	40	100	90	3	2	78.00	8.00	14.00	
2	Airway Road	Caliente Ave. to Heritage Rd.		38,000	40	100	90	3	2	78.00	8.00	14.00	
3	Airway Road	Heritage Rd. to Cactus Rd.		60,500	40	100	90	3	2	78.00	8.00	14.00	
4	Airway Road	Cactus Rd. to Britannia Blvd.		44,500	40	100	90	3	2	78.00	8.00	14.00	
5	Airway Road	Britannia Blvd. to La Media Rd.		35,000	40	100	90	3	2	78.00	8.00	14.00	
6	Airway Road	La Media Rd. to Harvest Rd.		34,000	40	100	90	3	2	78.00	8.00	14.00	
7	Airway Road	Harvest Rd. to Sanyo Ave.		26,500	40	100	90	3	2	78.00	8.00	14.00	
8	Beyer Boulevard	Alaquinas Dr. to Old Otay Mesa Rd.		32,500	35	100	90	3	2	78.00	8.00	14.00	
9	Beyer Boulevard	Old Otay Mesa Rd. to Caliente Ave.		31,000	45	100	90	3	2	78.00	8.00	14.00	
10	Britannia Boulevard	Otay Mesa Rd. to SR-905		17,500	40	100	90	3	2	78.00	8.00	14.00	
11	Britannia Boulevard	SR-905 to Airway Rd.		63,000	40	100	65	10	20	78.00	8.00	14.00	
12	Britannia Boulevard	Airway Rd. to Siempre Viva Rd.		44,500	40	100	65	10	20	78.00	8.00	14.00	
13	Britannia Boulevard	Siempre Viva Rd. to South End		22,000	40	100	65	10	20	78.00	8.00	14.00	
14	Cactus Road	Otay Mesa Rd. to Airway Rd.		40,500	45	100	90	3	2	78.00	8.00	14.00	
15	Cactus Road	Airway Rd. to Siempre Viva Rd.		40,500	45	100	90	3	2	78.00	8.00	14.00	
16	Caliente Avenue	Otay Mesa Rd. to SR-905		38,000	30	100	90	3	2	78.00	8.00	14.00	
17	Caliente Avenue	SR-905 to Airway Rd.		32,000	40	100	90	3	2	78.00	8.00	14.00	
18	Caliente Avenue	Airway Rd. to Beyer Blvd.		46,000	40	100	90	3	2	78.00	8.00	14.00	
19	Caliente Avenue	Beyer Blvd. to Siempre Viva Rd.		41,000	40	100	90	3	2	78.00	8.00	14.00	
20	Camino Maquiladora	Pacific Rim Ct. to Cactus Rd.		7,500	30	100	90	3	2	78.00	8.00	14.00	
21	Camino Maquiladora	Cactus Rd. to Continental St.		6,000	30	100	90	3	2	78.00	8.00	14.00	
22	Heritage Road	Avenida De Las Vis tas to Datsun St .		75,500	45	100	90	3	2	78.00	8.00	14.00	
23	Heritage Road	Datsun St. to Otay Mesa Rd.		48,000	45	100	90	3	2	78.00	8.00	14.00	
24	Heritage Road	Otay Mesa Rd. to SR-905		23,500	45	100	90	3	2	78.00	8.00	14.00	
25	Heritage Road	SR-905 to Airway Rd.		35,000	45	100	90	3	2	78.00	8.00	14.00	
26	La Media Road	Aviator Rd. to Otay Mesa Rd.		22,500	45	100	65	10	20	78.00	8.00	14.00	
27	La Media Road	Otay Mesa Rd. to SR-905		37,500	45	100	65	10	20	78.00	8.00	14.00	
28	La Media Road	SR-905 to Airway Rd.		64,000	40	100	65	10	20	78.00	8.00	14.00	
29	La Media Road	Airway Rd. to Siempre Viva Rd.		33,000	40	100	65	10	20	78.00	8.00	14.00	
30	Ocean View Hills Pkwy	Dennery Rd. to Del Sol Blvd.		22,000	45	100	90	3	2	78.00	8.00	14.00	
31	Ocean View Hills Pkwy	Del Sol Blvd. to Street “A”		35,000	40	100	90	3	2	78.00	8.00	14.00	
32	Ocean View Hills Pkwy	Street “A” to Otay Mesa Rd.		23,500	40	100	90	3	2	78.00	8.00	14.00	
33	Otay Mesa Road	Caliente Ave. to Corporate Center Dr.		72,500	45	100	90	3	2	78.00	8.00	14.00	
34	Otay Mesa Road	Corporate Center Dr. to Innovative Dr.		51,500	45	100	90	3	2	78.00	8.00	14.00	
35	Otay Mesa Road	Innovative Dr. to Heritage Rd.		46,500	45	100	90	3	2	78.00	8.00	14.00	
36	Otay Mesa Road	Heritage Rd. to Cactus Rd.		76,500	50	100	90	3	2	78.00	8.00	14.00	
37	Otay Mesa Road	Cactus Rd. to Britannia Blvd.		44,000	50	100	90	3	2	78.00	8.00	14.00	
38	Otay Mesa Road	Britannia Blvd. to Ailsa Ct.		50,500	50	100	90	3	2	78.00	8.00	14.00	
39	Otay Mesa Road	Ailsa Ct. to La Media Rd.		42,500	50	100	90	3	2	78.00	8.00	14.00	
40	Otay Mesa Road	La Media Rd. to Piper Ranch Rd.		54,000	45	100	90	3	2	78.00	8.00	14.00	
41	Siempre Viva Rd.	Cactus Rd. to Britannia Blvd.		37,000	40	100	90	3	2	78.00	8.00	14.00	
42	Siempre Viva Rd.	Britannia Blvd. to La Media Rd.		42,500	40	100	90	3	2	78.00	8.00	14.00	
43	Siempre Viva Rd.	La Media Rd. to Harves t Rd.		40,500	40	100	90	3	2	78.00	8.00	14.00	
44	Siempre Viva Rd.	Harves t Rd. to Otay Center Dr.		34,000	40	100	90	3	2	78.00	8.00	14.00	
45	Siempre Viva Rd.	Otay Center Dr. to SR-905		60,000	40	100	90	3	2	78.00	8.00	14.00	
46	SR-905	Picador Blvd. to I-805		128,500	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
47	SR-905	I-805 to Caliente Ave.		221,000	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
48	SR-905	Caliente Ave. to Heritage Rd.		196,000	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
49	SR-905	Heritage Rd. to Britannia Blvd.		173,000	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
50	SR-905	Britannia Blvd. to La Media Rd.		154,000	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
51	SR-905	La Media Rd. to SR-125		103,500	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
52	SR-905	SR-125 to Siempre Viva Rd.		99,000	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
53	SR-905	Siempre Viva Rd. to Border		64,500	65	100	91.9	5.5	2.6	78.00	8.00	14.00	
54	St. Andrews Avenue	Otay Mesa Center Rd. to La Media Rd.		13,500	30	100	90	3	2	78.00	8.00	14.00	
55	Street A	Ocean View Hills Pkwy. to Otay Mesa Rd.		13,500	40	100	90	3	2	78.00	8.00	14.00	

FHWA RD-77-108

Traffic Noise Prediction Model

Predicted Noise Levels

Project Name : OMCPU
Project Number : 3957.1
Modeled Condition : Proposed
Assessment Metric: Soft

Segment	Roadway	Segment From	To	Noise Levels, dBA Soft Auto	MT	HT	Total	Distance to Traffic Noise Level Contours, Feet 75 dB	70 dB	65 dB	60 dB	55 dB
1	Airway Road	Old Otay Mesa Rd. to Caliente		63.0	57.2	60.2	66	23	50	109	234	504
2	Airway Road	Caliente Ave. to Heritage Rd.		68.6	62.8	65.8	71	55	119	256	552	1,189
3	Airway Road	Heritage Rd. to Cactus Rd.		70.6	64.8	67.8	73	75	162	349	752	1,621
4	Airway Road	Cactus Rd. to Britannia Blvd.		69.3	63.4	66.5	72	61	132	285	613	1,321
5	Airway Road	Britannia Blvd. to La Media Rd.		68.2	62.4	65.5	71	52	113	242	522	1,125
6	Airway Road	La Media Rd. to Harvest Rd.		68.1	62.3	65.3	71	51	110	238	512	1,104
7	Airway Road	Harvest Rd. to Sanyo Ave.		67.0	61.2	64.3	70	43	93	201	434	935
8	Beyer Boulevard	Alaquinas Dr. to Old Otay Mes		66.3	61.2	64.6	69	41	89	192	414	892
9	Beyer Boulevard	Old Otay Mesa Rd. to Caliente		69.2	62.7	65.4	71	57	123	265	571	1,229
10	Britannia Boulevard	Otay Mesa Rd. to SR-905		65.2	59.4	62.5	68	33	71	153	329	709
11	Britannia Boulevard	SR-905 to Airway Rd.		69.4	70.2	78.0	79	189	408	879	1,895	4,082
12	Britannia Boulevard	Airway Rd. to Siempre Viva Rd		67.9	68.7	76.5	78	150	324	697	1,503	3,237
13	Britannia Boulevard	Siempre Viva Rd. to South End		64.8	65.6	73.4	75	94	202	436	940	2,024
14	Cactus Road	Otay Mesa Rd. to Airway Rd.		70.4	63.8	66.6	73	68	147	317	682	1,469
15	Cactus Road	Airway Rd. to Siempre Viva Rd		70.4	63.8	66.6	73	68	147	317	682	1,469
16	Caliente Avenue	Otay Mesa Rd. to SR-905		65.0	60.8	66.2	69	42	90	194	417	898
17	Caliente Avenue	SR-905 to Airway Rd.		67.9	62.0	65.1	70	49	106	228	492	1,060
18	Caliente Avenue	Airway Rd. to Beyer Blvd.		69.4	63.6	66.7	72	63	135	291	627	1,350
19	Caliente Avenue	Beyer Blvd. to Siempre Viva Rd		68.9	63.1	66.2	71	58	125	269	580	1,251
20	Camino Maquiladora	Pacific Rim Ct. to Cactus Rd.		58.0	53.8	59.1	62	14	30	66	141	305
21	Camino Maquiladora	Cactus Rd. to Continental St.		57.0	52.8	58.2	61	12	26	57	122	262
22	Heritage Road	Avenida De Las Vis tas to Dat		73.1	66.5	69.3	75	103	223	479	1,033	2,225
23	Heritage Road	Datsun St. to Otay Mesa Rd.		71.1	64.6	67.3	73	76	165	354	764	1,645
24	Heritage Road	Otay Mesa Rd. to SR-905		68.0	61.5	64.2	70	47	102	220	474	1,022
25	Heritage Road	SR-905 to Airway Rd.		69.7	63.2	65.9	72	62	133	287	619	1,333
26	La Media Road	Aviator Rd. to Otay Mesa Rd.		66.4	66.5	74.0	75	105	226	488	1,050	2,263
27	La Media Road	Otay Mesa Rd. to SR-905		68.6	68.7	76.2	78	148	318	685	1,477	3,181
28	La Media Road	SR-905 to Airway Rd.		69.5	70.3	78.1	79	191	412	889	1,915	4,125
29	La Media Road	Airway Rd. to Siempre Viva Rd		66.6	67.4	75.2	76	123	265	571	1,231	2,652
30	Ocean View Hills Pkwy	Dennery Rd. to Del Sol Blvd.		67.7	61.2	63.9	70	45	98	211	454	978
31	Ocean View Hills Pkwy	Del Sol Blvd. to Street “A”		68.2	62.4	65.5	71	52	113	242	522	1,125
32	Ocean View Hills Pkwy	Street “A” to Otay Mesa Rd.		66.5	60.7	63.7	69	40	86	186	401	863
33	Otay Mesa Road	Caliente Ave. to Corporate Cen		72.9	66.4	69.1	75	101	217	467	1,005	2,166
34	Otay Mesa Road	Corporate Center Dr. to Innovat		71.4	64.9	67.6	74	80	172	372	800	1,724
35	Otay Mesa Road	Innovative Dr. to Heritage Rd.		71.0	64.4	67.2	73	75	161	347	748	1,611
36	Otay Mesa Road	Heritage Rd. to Cactus Rd.		74.4	67.3	69.8	76	122	263	566	1,220	2,627
37	Otay Mesa Road	Cactus Rd. to Britannia Blvd.		72.0	64.9	67.4	74	84	182	391	843	1,817
38	Otay Mesa Road	Britannia Blvd. to Ailsa Ct.		72.6	65.5	67.9	74	92	199	429	925	1,992
39	Otay Mesa Road	Ailsa Ct. to La Media Rd.		71.9	64.8	67.2	74	82	178	383	824	1,776
40	Otay Mesa Road	La Media Rd. to Piper Ranch R		71.6	65.1	67.8	74	83	178	383	826	1,780
41	Siempre Viva Rd.	Cactus Rd. to Britannia Blvd.		68.5	62.6	65.7	71	54	117	252	542	1,168
42	Siempre Viva Rd.	Britannia Blvd. to La Media Rd.		69.1	63.2	66.3	72	59	128	276	595	1,281
43	Siempre Viva Rd.	La Media Rd. to Harves t Rd.		68.9	63.0	66.1	71	58	124	267	576	1,240
44	Siempre Viva Rd.	Harves t Rd. to Otay Center Dr.		68.1	62.3	65.3	71	51	110	238	512	1,104
45	Siempre Viva Rd.	Otay Center Dr. to SR-905		70.6	64.7	67.8	73	75	161	347	748	1,612
46	SR-905	Picador Blvd. to I-805		80.1	74.0	74.2	82	286	615	1,325	2,855	6,152
47	SR-905	I-805 to Caliente Ave.		82.4	76.3	76.5	84	410	883	1,903	4,099	8,831
48	SR-905	Caliente Ave. to Heritage Rd.		81.9	75.8	76.0	84	378	815	1,756	3,784	8,152
49	SR-905	Heritage Rd. to Britannia Blvd.		81.4	75.3	75.5	83	348	750	1,616	3,482	7,501
50	SR-905	Britannia Blvd. to La Media Rd.		80.8	74.8	75.0	83	322	694	1,495	3,222	6,941
51	SR-905	La Media Rd. to SR-125		79.1	73.0	73.3	81	247	533	1,147	2,472	5,326
52	SR-905	SR-125 to Siempre Viva Rd.		78.9	72.8	73.1	81	240	517	1,114	2,400	5,170
53	SR-905	Siempre Viva Rd. to Border		77.1	71.0	71.2	79	180	389	837	1,803	3,885
54	St. Andrews Avenue	Otay Mesa Center Rd. to La Me		60.5	56.3	61.7	65	21	45	97	209	451
55	Street A	Ocean View Hills Pkwy. to Ota		64.1	58.3	61.3	67	28	60	128	277	596
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