City of Costa Mesa General Plan Update

Noise Study

February 2016 (13141)

Prepared for:

City of Costa Mesa
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Costa Mesa, California 92626

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City of Costa Mesa General Plan Update

Noise Study

February 2016

City of Costa Mesa, California

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1 PROJECT DESCRIPTION

1.1 Project Location

The City of Costa Mesa is located in the extensively developed west-central portion of Orange County. It is surrounded by the cities of Newport Beach, Huntington Beach, Santa Ana, Fountain Valley, and Irvine (Exhibit 3.0-1 Regional Map). Major transportation facilities include Interstate 405 (I-405), State Route 55 (SR-555), State Route 73 (SR-73), and John Wayne-Orange County (SNA) Airport.

The 15.7 square mile area covered by the General Plan Update consists of the corporate limits of the City as well as lands within the City's unincorporated "sphere of influence" (see Exhibit 1 (Regional and Vicinity Map). The term "sphere of influence" (SOI) applies to the area designated by the Orange County Local Agency Formation Commission (LAFCO) as the probable, future physical boundary or service area of the City. Land use regulatory authority in the SOI area is held by Orange County. However, certain portions of the SOI receive one or more services administered by the City. Overall, planning decisions made by the City are assumed to have a bearing on growth and development in these unincorporated adjacent areas; hence the term "sphere of influence".

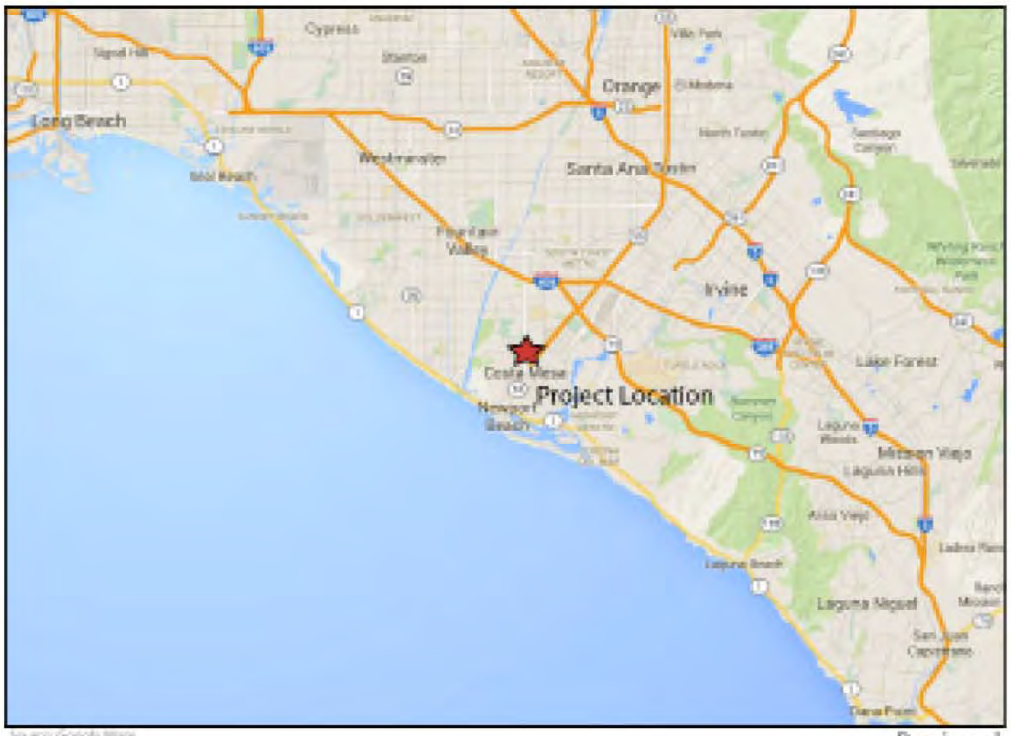
1.2 Project Description

California state law requires each city and county to adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning" (California Government Code, §65300). A general plan expresses the community's development goals and embodies public policies relative to the distribution of future land uses, both public and private. The Costa Mesa General Plan Update proposes to establish the overall development capacity for the City and will serve as a long-range policy document for determining the appropriate look, feel, and experience of the City.

The proposed General Plan Update will address six of the seven State-mandated General Plan elements and other issues that are important to the community. The Housing Element has been previously adopted in 2014 and is not included in this update. The proposed General Plan Update contains the following elements:

- Land Use Element
- Circulation Element
- Growth Management Element
- Conservation Element
- Open Space and Recreation Element
- Historic and Cultural Resources Element
- Safety Element
- Noise Element
- Community Design

The proposed Land Use Element establishes an overall development capacity for the City and serves as a policy guide for determining the appropriate physical development and character of the approximately 15.7 square miles that make up the City's jurisdiction proper and the additional area located in the City's SOI. The development capacity of the proposed Land Use Plan is estimated at 51,894 dwelling units to house about 134,984 residents, 11.0 million square feet of office space, 13.2 million square feet of commercial space, and 13.0 million square feet of industrial. The General Plan applies to all properties within the City of Costa Mesa and recommends policy for the City's SOI.



Regional

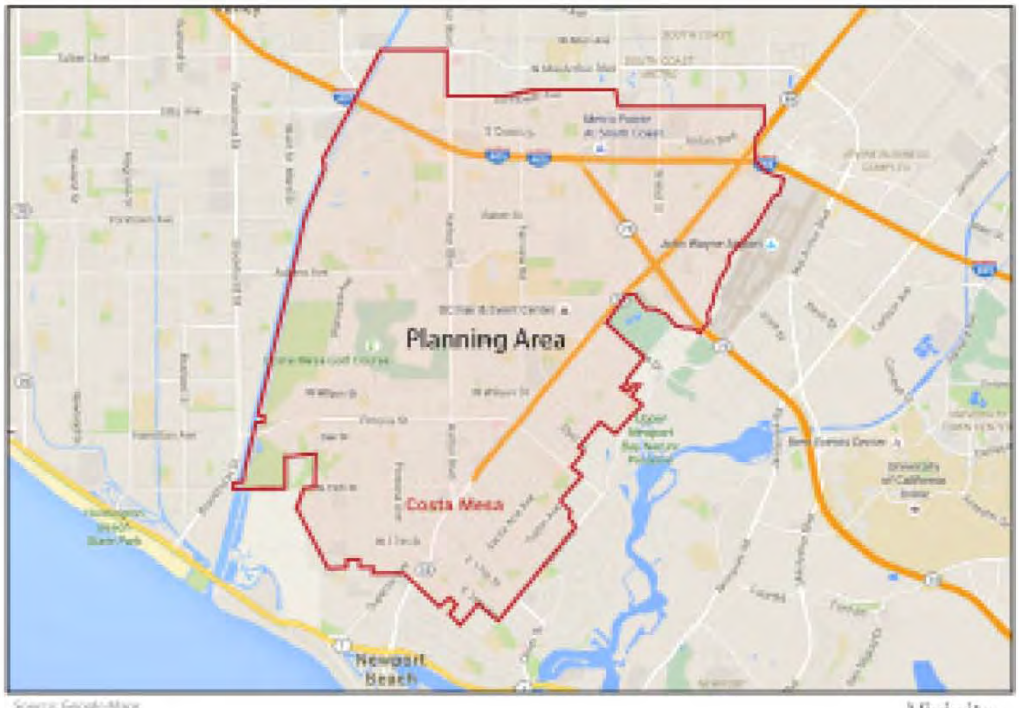


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Exhibit 1 Regional and Vicinity Map

Costa Mesa General Plan Update
Costa Mesa, California

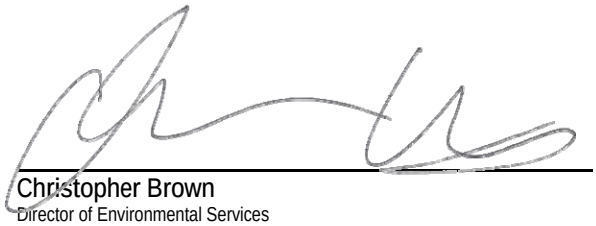
2 INTRODUCTION

This report includes program-level analysis of construction- and operation-related noise generated from implementation of the proposed General Plan Update. Vibration effects and airport noise are also discussed herein.

This report has been prepared utilizing traffic volumes provided by the project traffic study and represents a "worst-case" analysis to ensure a conservative estimate of noise impacts.

This report has been prepared for use by the Lead Agency to assess potential project-related noise impacts to the environment in compliance with federal, State, or local guidelines, particularly with respect to the noise issues identified in Appendix G of the State CEQA Guidelines. This report does not make determinations of significance pursuant to CEQA because such determinations are required to be made solely in the purview of the Lead Agency.

This report has been prepared by Christopher Brown (Director of Environmental Services) and Olivia Chan (Associate Analyst) of MIG, Inc. under contract to the City of Costa Mesa.



Christopher Brown
Director of Environmental Services

Olivia Chan
Associate Analyst

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3.1 Defining Noise

"Sound" is a vibratory disturbance created by a moving or vibrating source and is capable of being detected. "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.

THE PRODUCTION OF SOUND

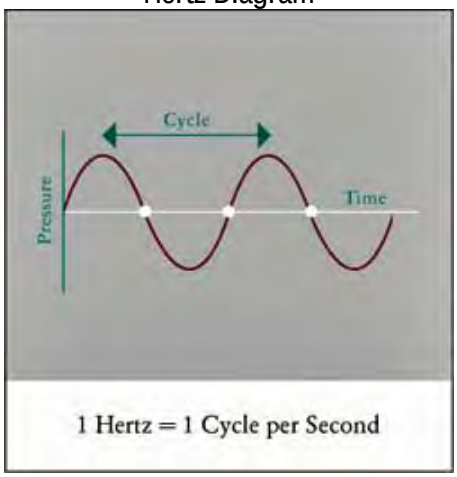
Sound has three properties: amplitude and amplitude variation of the acoustical wave (loudness), frequency (pitch), and duration of the noise. Despite the ability to measure sound, human perceptibility is subjective, and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness."

MEASURING SOUND

Sound pressure levels are described in logarithmic units of ratios of sound pressures to a reference pressure, squared. These units are called bels. To provide a finer description of sound, a bel is subdivided into 10 decibels, abbreviated dB. Since decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces a sound pressure level of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB. In fact, they would combine to produce 73 dB. This same principle can be applied to other traffic quantities as well. In other words, doubling the traffic volume on a street or the speed of the traffic will increase the traffic noise level by three dB. Conversely, halving the traffic volume or speed will reduce the traffic noise level by three dB. A three dB change in sound is the beginning at which humans generally notice a *barely perceptible* change in sound and a five dB change is generally *readily perceptible.*[1]

Sound pressure level alone is not a reliable indicator of loudness. The frequency or pitch of a sound also has a substantial effect on how humans will respond. While the intensity of the sound is a purely physical quantity, the loudness or human response depends on the characteristics of the human ear. Human hearing is limited not only to the range of audible frequencies but also in the way it perceives the sound pressure level in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 Hertz (Hz) and 5,000 Hz, and perceives both higher and lower frequency sounds of the same magnitude with less intensity. Hertz is a unit of frequency that defines any periodic event. In the case of sound pressure, a Hertz defines one cycle of a sound wave per second (see Figure 1, Hertz Diagram). To approximate the frequency response of the human ear, a series of sound pressure level adjustments is usually applied to the sound measured by a sound level meter.

Figure 1
Hertz Diagram



STANDARDS FOR NOISE EQUIVALENT

Noise consists of pitch, loudness, and duration; therefore, a variety of methods for measuring noise have been developed. According to the California General Plan Guidelines for Noise Elements, the following are common metrics for measuring noise:[2]

L_{eq} (Equivalent Energy Noise Level): The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over given sample periods. L_{eq} is typically computed over 1-, 8-, and 24-hour sample periods.

CNEL (Community Noise Equivalent Level): The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 PM to 10:00 PM and after addition of ten decibels to sound levels in the night from 10:00 PM to 7:00 AM.

L_{dn} (Day-Night Average Level): The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of ten decibels to sound levels in the night after 10:00 PM and before 7:00 AM.

CNEL and L_{dn} are utilized for describing ambient noise levels because they account for all noise sources over an extended period of time and account for the heightened sensitivity of people to noise during the night. L_{eq} is better utilized for describing specific and consistent sources because of the shorter reference period.

Federal and State agencies have established noise and land use compatibility guidelines that use averaging approaches to noise measurement. The State Department of Aeronautics and the California Commission on Housing and Community Development have adopted the community noise equivalent level (CNEL).

3.2 Vibration and Groundborne Noise

Vibration is the movement of mass over time. It is described in terms of frequency and amplitude and unlike sound; there is no standard way of measuring and reporting amplitude. Vibration can be described in units of velocity (inches per second) or discussed in decibel (dB) units in order to compress the range of numbers required to describe vibration. Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) that describes particle movement over time (in terms of physical displacement of mass). For purposes of this analysis, PPV will be used to describe all vibration for ease of reading and comparison. Vibration can impact people, structures, and sensitive equipment.[3] The primary concern related to vibration and people is the potential to annoy those working and residing in the area. Vibration with high enough amplitudes can damage structures (such as crack plaster or destroy windows). Groundborne vibration can also disrupt the use of sensitive medical and scientific instruments such as electron microscopes. Common sources of vibration within communities include construction activities and railroads.

Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used.

4.1 Sensitive Receptors

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, and residential uses make up the majority of these areas. Sensitive receptors are located throughout the city.

4.2 Existing Noise Measurements

Short-term noise measurements were conducted to identify the ambient noise within the city. An American National Standards Institute (ANSI Section SI4 1979, Type 1) Larson Davis model LxT sound level meter was used to monitor existing ambient noise levels in the city. The noise meter was programmed in "slow" mode to record noise levels in A-weighted form. The microphone height was set at five feet. Fifteen 15-minute daytime noise measurements were taken on Tuesday August 4, 2015 through Thursday August 6, 2015.

Ambient noise levels are a composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location. Measurement locations are shown in Exhibit 2 (Noise Measurement Locations). Ambient noise levels are presented in Table 1 (Ambient Noise Levels) and measurement output data is included as Appendix A.

Table 1
Ambient Noise Levels

Site	Date	Time	Leq	Lmax	Lmin	Location
1	8/4/15	7:12 AM	67.8	84.5	57.8	Northeast corner of Anton & Avenue of the Arts
2	8/4/15	7:45 AM	77.6	102.1	55.3	Southeast corner of Bear & Paularino
3	8/4/15	8:12 AM	71.5	88.5	57.6	Northeast corner of Harbor & Adams
4	8/4/15	8:37 AM	70.2	84.3	56.2	Northwest corner of Fairview & Fair
5	8/4/15	9:12 AM	66.2	82.3	55.1	Southwest corner of South Coast & Susan
6	8/5/15	11:07 PM	68.4	80.7	45.5	Northwest corner of Mesa Verde & Adams
7	8/5/15	11:35 PM	52.5	65.2	39.1	East corner of Santa Ana & 22nd
8	8/6/15	7:02 AM	67.8	84.9	46.4	North corner of Del Mar & Orange
9	8/6/15	7:33 AM	61.5	75.1	45.5	East corner of Santa Ana & Cabrillo
10	8/6/15	7:55 AM	73.1	86.9	57.1	Northeast corner of Harbor & 19th
11	8/6/15	8:21 AM	73.8	89.4	60.5	Northeast corner of Harbor & Victoria
12	8/6/15	8:47 AM	69.4	82.5	54.3	Northeast corner of 17th & Pomona
13	8/6/15	9:11 AM	63.1	82.0	42.3	Northeast corner of 17th & Whittier
14	8/6/15	9:43 AM	74.1	93.9	53.9	Northeast corner of Placentia & 20th
15	8/6/15	10:24 AM	69.3	85.5	56.2	South corner of Red Hill & Paularino

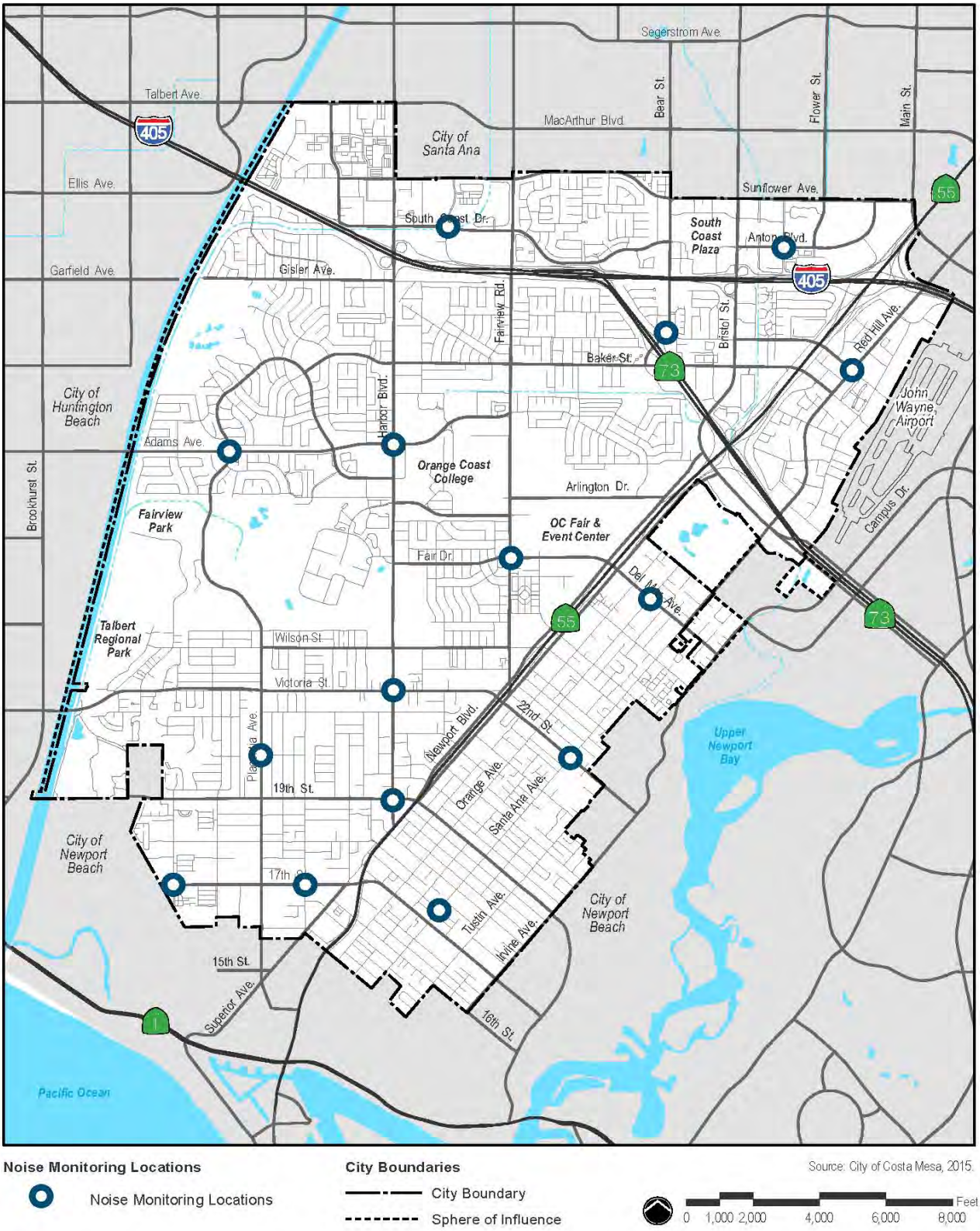


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Exhibit 2 Noise Measurement Locations

Costa Mesa General Plan Update
Costa Mesa, California

4.3 Existing Traffic Noise Levels

Existing traffic noise levels projected in this report were computed using Version 2.5 of the Traffic Noise Model (TNM) published by the Federal Highway Administration (FHWA). The model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute equivalent noise levels for each of the time periods used in the calculation of CNEL. Weighting these noise levels and summing them results in the CNEL for the traffic projections used. CNEL contours are found by calculating distances to the 55, 60, 65, and 70 CNEL contours assuming a reduction of 6 dB with every doubling of distance. For roadway analysis, worst-case assumptions about future motor vehicle traffic and noise levels have been made and were incorporated in the modeling effort. Specifically, calculations do not assume natural or artificial shielding nor do they assume reflection from existing or proposed structures or topography.

Traffic volumes and estimated speeds were used with TNM to estimate the noise levels in terms of CNEL. Existing traffic volumes were obtained from the traffic study prepared by Stantec Consulting Services, Inc. The distances to the CNEL contours for the roadway are shown in Table 2 (Existing Traffic Noise Levels). Existing traffic noise contours are shown in Exhibit 3 (Existing Traffic Noise Contours).

Table 2
Existing Traffic Noise Levels

Roadway	Segment	Distance to CNEL Contour from Centerline of Roadway (feet)			
		55 dBA	60 dBA	65 dBA	70 dBA
Adams	w/o Placentia	1349	759	427	240
	e/o Placentia	1334	750	422	237
	btwn Mesa Verde E. & Harbor	1841	1035	582	327
	btwn Harbor & Fairview	1603	902	507	285
Anaheim	btwn 19th & Superior	490	275	155	115
Anton	btwn Bristol & Sunflower	1148	646	363	204
Arlington	e/o Fairview	385	216	122	146
Ave of the Arts	n/o Anton	447	251	141	126
Baker	btwn Mesa Verde & Harbor	822	462	260	146
	btwn Harbor & Fairview	1122	631	355	200
	e/o Fairview	1035	582	327	184
	btwn Coolidge & Bear	1349	759	427	240
	w/o Randolph	832	468	263	148
	w/o SR-55	891	501	282	158
	w/o Pullman	708	398	224	126
	e/o Pullman	661	372	209	117
Bay	e/o Harbor	295	166	107	191
	e/o Newport	355	200	112	158
Bear	btwn Sunflower & South Coast	1585	891	501	282
	n/o Paularino	1000	562	316	178
Bristol	btwn Sunflower & Anton	1995	1122	631	355
	btwn Anton & Paularino	2163	1216	684	385
	n/o Baker	1135	638	359	202
	n/o Bear	1000	562	316	178
	s/o Bear	1059	596	335	188

Roadway	Segment	Distance to CNEL Contour from Centerline of Roadway (feet)			
		55 dBA	60 dBA	65 dBA	70 dBA
	btwn Newport & Redhill	1531	861	484	272
Canyon	n/o Victoria	257	145	123	219
Country Club	n/o Mesa Verde	295	166	107	191
Del Mar	w/o Orange	589	331	186	105
	w/o Santa Ana	412	232	130	136
	w/o Irvine	412	232	130	136
El Camino	btwn Fairview & Mendoza	513	288	162	110
Elden	n/o 22nd	211	119	150	266
Fair	e/o Harbor	676	380	214	120
	btwn Fairview & Newport	1288	724	407	229
Fairview	n/o South Coast	1380	776	437	245
	s/o South Coast	1641	923	519	292
	s/o I-405	1429	804	452	254
	s/o Baker	1462	822	462	260
	btwn Adams & Fair	1622	912	513	288
	n/o Wilson	776	437	245	138
	s/o Wilson	716	403	226	127
Gisler	w/o Harbor	575	324	182	102
Hamilton	btwn Placentia & Harbor	495	279	157	114
Harbor	n/o Sunflower	1429	804	452	254
	n/o South Coast	1496	841	473	266
	n/o Baker	1660	933	525	295
	n/o Village	1622	912	513	288
	n/o Adams	1567	881	495	279
	btwn Adams & Fair	2042	1148	646	363
	n/o Wilson	1365	767	432	243
	n/o Victoria	1318	741	417	234
	n/o Bay	1096	617	347	195
	n/o 19th	1109	624	351	197
	s/o 19th	871	490	275	155
Hyland	s/o MacArthur	582	327	184	104
	s/o Scenic	495	279	157	114
	s/o Sunflower	495	279	157	114
Industrial	w/o Newport	316	178	100	178
Irvine	btwn Bristol & Mesa	1318	741	417	234
	n/o University	955	537	302	170
	n/o 22nd	1023	575	324	182
	btwn 22nd & 19th	1429	804	452	254
	n/o 17th	861	484	272	153

Roadway	Segment	Distance to CNEL Contour from Centerline of Roadway (feet)			
		55 dBA	60 dBA	65 dBA	70 dBA
	n/o 16th	631	355	200	112
MacArthur	w/o Harbor	1035	582	327	184
Merrimac	btwn Harbor & Fairview	861	484	272	153
Mesa	w/o Orange	447	251	141	126
	e/o Santa Ana	442	248	140	127
Mesa Verde W.	btwn Adams & Country Club	724	407	229	129
Mesa Verde E.	n/o Baker	372	209	117	151
	n/o Adams	468	263	148	120
	btwn Adams & Harbor	881	495	279	157
Monrovia	btwn 19th & 17th	513	288	162	110
Newport SB	n/o Mesa	1096	617	347	195
	n/o Fair/Del Mar	1035	582	327	184
	n/o Santa Isabel	684	385	216	122
	n/o Victoria	1175	661	372	209
	s/o Victoria	716	403	226	127
	s/o Ford	589	331	186	105
Newport NB	n/o Mesa	562	316	178	100
	n/o Fair/Del Mar	1035	582	327	184
	n/o Santa Isabel	776	437	245	138
	n/o 22nd	1135	638	359	202
	s/o 22nd	776	437	245	138
	s/o 20th	631	355	200	112
Newport	btwn 19th & 17th	2600	1462	822	462
	n/o Industrial	1531	861	484	272
Ogle	e/o Orange	204	115	155	275
Orange	n/o Del Mar	204	115	155	275
	n/o Santa Isabel	251	141	126	224
	n/o 22nd	288	162	110	195
	n/o 21st	355	200	112	158
	n/o 19th	385	216	122	146
	n/o 17th	501	282	158	112
	n/o 16th	412	232	130	136
	n/o 15th	324	182	102	174
Park	s/o 19th	324	182	102	174
Paularino	e/o Fairview	363	204	115	155
	e/o Bear	417	234	132	135
	e/o Bristol	767	432	243	136
	w/o Redhill	646	363	204	115
Placentia	btwn Adams & Wilson	923	519	292	164

Roadway	Segment	Distance to CNEL Contour from Centerline of Roadway (feet)			
		55 dBA	60 dBA	65 dBA	70 dBA
	n/o Victoria	750	422	237	133
	n/o Hamilton	923	519	292	164
	s/o Hamilton	944	531	299	168
	s/o 19th	923	519	292	164
	n/o 17th	776	437	245	138
	n/o 16th	724	407	229	129
Pomona	n/o Victoria	376	211	119	150
	n/o Hamilton	389	219	123	145
	n/o 19th	394	221	124	143
	n/o 18th	385	216	122	146
	btwn 18th & 17th	562	316	178	100
Red Hill	n/o Airport Loop	785	442	248	140
	n/o Paularino	832	468	263	148
	n/o Baker	776	437	245	138
	n/o Kalmus	741	417	234	132
	n/o Bristol	832	468	263	148
Sakioka	n/o Anton	462	260	146	122
Santa Ana	s/o Bristol	468	263	148	120
	n/o Del Mar/University	385	216	122	146
	n/o Santa Isabel	355	200	112	158
	n/o 22nd	355	200	112	158
	n/o 21st	324	182	102	174
	n/o 19th	355	200	112	158
	n/o 17th	412	232	130	136
	n/o 16th	355	200	112	158
	n/o 15th	324	182	102	174
Santa Isabel	e/o Newport	335	188	106	168
	e/o Orange	292	164	108	193
South Coast	w/o Harbor	624	351	197	111
	e/o Harbor	653	367	207	116
	w/o Fairview	684	385	216	122
	btwn Wimbledon & Bear	1096	617	347	195
Sunflower	btwn Hyland & Harbor	653	367	207	116
	btwn Harbor & Susan	966	543	305	172
	w/o Fairview	785	442	248	140
	w/o Fuschia/Raitt	813	457	257	145
	w/o Bristol	1189	668	376	211
	e/o Bristol	1072	603	339	191
	w/o Anton	923	519	292	164

Roadway	Segment	Distance to CNEL Contour from Centerline of Roadway (feet)			
		55 dBA	60 dBA	65 dBA	70 dBA
	w/o Main	977	550	309	174
Superior	btwn Anaheim & 16th/Industrial	1072	603	339	191
Tustin	n/o 21st	251	141	126	224
	n/o 20th	204	115	155	275
	n/o 19th	288	162	110	195
	n/o 17th	324	182	102	174
	n/o 16th	385	216	122	146
Victoria	w/o Pacific	1023	575	324	182
	w/o National	1012	569	320	180
	w/o Placentia	1035	582	327	184
	e/o Placentia	977	550	309	174
	e/o Harbor	989	556	313	176
	w/o Harbor	1072	603	339	191
	e/o College	1012	569	320	180
Wilson	w/o Placentia	457	257	145	123
	e/o Placentia	582	327	184	104
	btwn Pomona & Harbor	966	543	305	172
	e/o Harbor	708	398	224	126
	e/o Fairview	575	324	182	102
	e/o Newport	412	232	130	136
15th	e/o Newport	202	114	157	279
W. 16th	e/o Monrovia	288	162	110	195
	e/o Placentia	324	182	102	174
16th	w/o Newport	197	111	160	285
	e/o Newport	260	146	122	216
	e/o Orange	251	141	126	224
16th Pl	e/o Santa Ana	251	141	126	224
	e/o Tustin	251	141	126	224
W. 17th	e/o Monrovia	309	174	102	182
	w/o Placentia	363	204	115	155
	btwn Placentia & Pomona	631	355	200	112
17th	w/o Orange	1230	692	389	219
	w/o Westminster	933	525	295	166
	w/o Santa Ana	912	513	288	162
	e/o Santa Ana	977	550	309	174
	w/o Irvine	923	519	292	164
W. 18th	e/o Monrovia	324	182	102	174
	e/o Placentia	385	216	122	146
	w/o Anaheim	457	257	145	123

Roadway	Segment	Distance to CNEL Contour from Centerline of Roadway (feet)			
		55 dBA	60 dBA	65 dBA	70 dBA
	w/o Park	457	257	145	123
W. 19th	e/o Monrovia	603	339	191	107
	e/o Placentia	804	452	254	143
	w/o Park	1135	638	359	202
	e/o Harbor	1135	638	359	202
19th	e/o Newport	550	309	174	102
	w/o Orange	457	257	145	123
	e/o Orange	412	232	130	136
	e/o Santa Ana	355	200	112	158
	w/o Irvine	355	200	112	158
20th	e/o Newport	299	168	106	188
	e/o Tustin	251	141	126	224
21st	e/o Newport	257	145	123	219
	w/o Irvine	204	115	155	275
22nd	e/o Newport	457	257	145	123
	e/o Orange	385	216	122	146
	e/o Santa Ana	355	200	112	158
	w/o Irvine	324	182	102	174

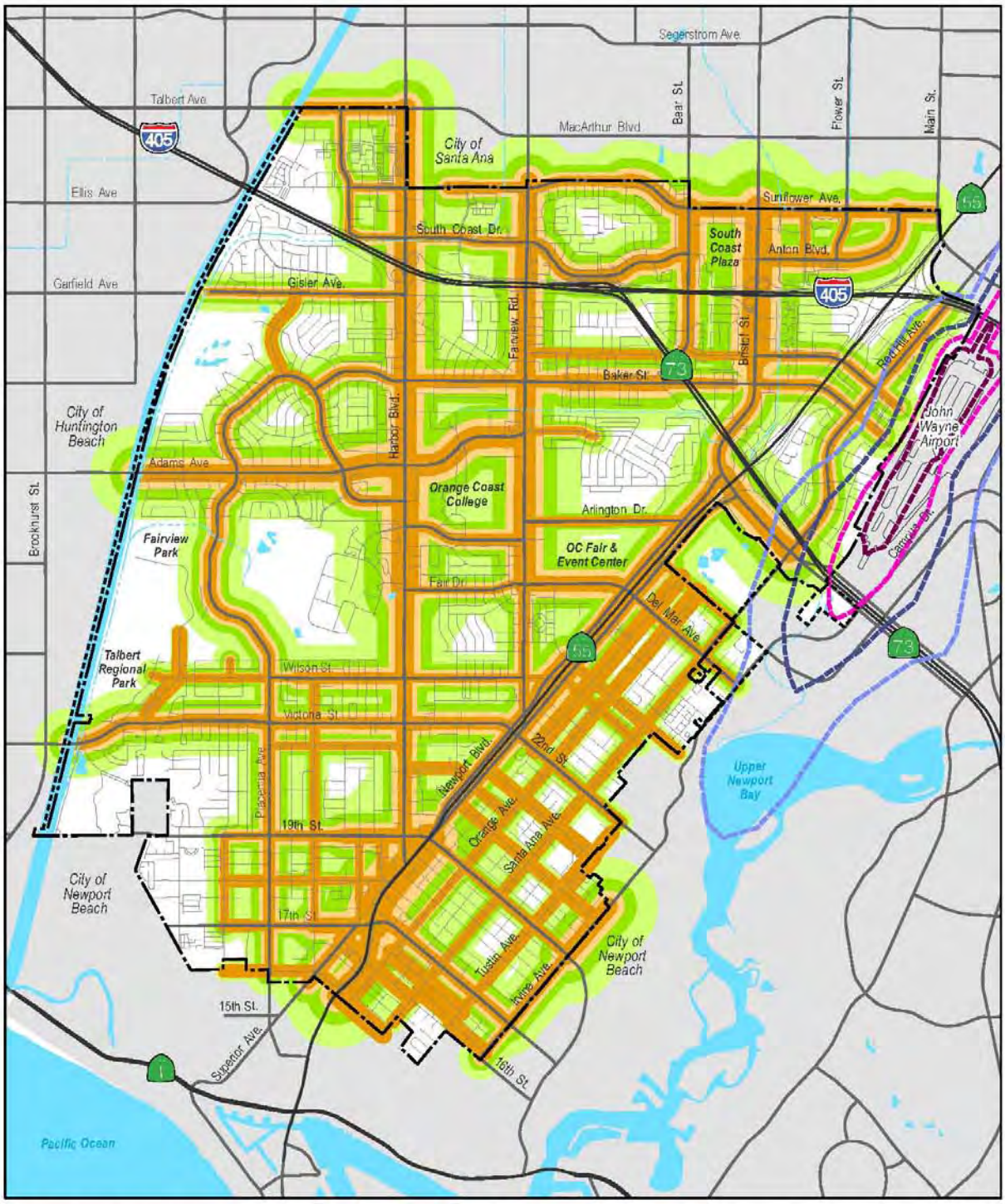

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Exhibit 3 Existing Traffic Noise Contours

Costa Mesa General Plan Update
Costa Mesa, California

4.4 Aircraft Noise

John Wayne Airport, operated by the County of Orange, abuts industrial and commercial properties at the northeast corner of Costa Mesa. A portion of Costa Mesa lies within the 65 dBA CNEL contour of John Wayne Airport. Development in the northeastern portion of the city is exposed to noise levels up to 65 dBA according to the Airport Environs Land Use Plan (AELUP) for John Wayne Airport. Uses in this area include industrial operations located between State Route 73 (SR-73) and Interstate 405 (I-405) with general commercial and outdoor recreation uses located immediately south of SR-73.

4.5 OC Fair and Event Center

The OC Fair and Event Center (OCFEC), located on Fairview Road between Arlington Drive and Fair Drive. serves as a year-round exhibition, conference, and event center. The primary function of the OCFEC is to host the annual "OC Fair" that includes rides, exhibits, theater performances, a farm area, an equestrian center, and an amphitheater typically used for concerts. Typical noise associated with the OC Fair include public address systems, screams and the sound of rides moving along their tracks, animal noises, human activity throughout the fairgrounds, and setup and breakdown of booths and rides. Approximately 1.3 million people attend the Fair annually. The Orange County Fair operates for four weeks annually during the summer months. Noise sources during the fair events include a public address system, carnival rides, and several sound reinforcement systems used for concerts and carnival rides.

Several other periodic and temporary noise sources exist within the Orange County Fairgrounds property. The majority of on-site stationary noise is due to activity during the weekly Orange County Market Place, Farmers Market, Centennial Farm, and Food Truck Fare Wednesday, as well as annual events such as the OC Home and Garden Show. Typical sources of noise during these events include public address systems, human activity, truck activity, loading and unloading, and setup and breakdown of booths. Vehicles and human activity within the parking lot during various fairground events also generates noise.

The 8,200-seat Pacific Amphitheater is owned and managed by the OC Fair and Event Center and provides year-round events such as concerts. Typical noise associated with concerts and events sat the Pacific Amphitheater includes crowd cheering, whistling, clapping, public address systems, sound amplifiers, instrument noise, singing, and setup and breakdown of equipment.

5.1 Federal Regulations

FEDERAL NOISE CONTROL ACT OF 1972

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, EPA's Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In response, the EPA published information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Levels of Environmental Noise). The Levels of Environmental Noise recommended that the L_{dn} should not exceed 55 dBA outdoors or 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas.

In addition, the Levels of Environmental Noise identified five dBA as an "adequate margin of safety" for a noise level increase relative to a baseline noise exposure level of 55 dBA L_{dn} (i.e., there would not be a noticeable increase in adverse community reaction with an increase of five dBA or less from this baseline level). The EPA did not promote these findings as universal standards or regulatory goals with mandatory applicability to all communities, but rather as advisory exposure levels below which there would be no risk to a community from any health or welfare effect of noise.

In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at more localized levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated federal agencies, allowing more individualized control for specific issues by designated federal, State, and local government agencies.

FEDERAL TRANSIT ADMINISTRATION

The Federal Transit Administration (FTA) has developed methodology and significance criteria to evaluate incremental noise impacts from surface transportation modes (i.e., on road motor vehicles and trains) as presented in Transit Noise Impact and Vibration Assessment (FTA Guidelines). These incremental noise impact criteria are based on EPA findings and subsequent studies of annoyance in communities affected by transportation noise. The FTA extended the EPA's five dBA incremental impact criterion to higher ambient levels. As baseline ambient levels increase, smaller and smaller increments are allowed to limit expected increases in community annoyance. For example, in residential areas with a baseline ambient noise level of 50 dBA CNEL, a less-than-five dBA increase in noise levels would produce a minimal increase in community annoyance levels, while at 70 dBA CNEL, only one dBA increase could be accommodated before a significant annoyance increase would occur.

VIBRATION STANDARDS

The FTA provides guidelines for maximum-acceptable vibration criteria for different types of land uses. Groundborne vibration and noise levels associated with various types of construction equipment and activities are summarized in Table 3 (Reference Vibration Source Amplitudes for Construction Equipment). Table 4 (Groundborne Vibration and Noise Impact Criteria) shows the Federal Transit Administration's maximum acceptable vibration standard for human annoyance in residences where people normally sleep is 80 VdB (less than 70 vibration events per day).

Table 3
Reference Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV at 25 ft (in/sec) at 25 Feet	Approximate Vibration Level (VL) at 25 Feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 (upper range)	105
	0.170 (typical)	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
Slurry wall	0.017 in rock	75
Vibratory roller	0.210	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Notes: PPV is the peak particle velocity. Pile driver amplitude varies greatly based on equipment type and size.
Source: Federal Transit Administration. Transit Noise and Vibration Impact Assessment. 2006.

Table 4
Groundborne Vibration and Noise Impact Criteria

Land Use Category	Groundborne Vibration Impact Levels (VdB)		Groundborne Noise Impact Levels (dBA)	
	Frequent Events[1]	Infrequent Events[2]	Frequent Events[1]	Infrequent Events[2]
Category 1: Buildings where low ambient vibration is essential for interior vibrations	65 VdB[3]	65 VdB[3]	N/A	N/A
Category 2: Residences and buildings where people normally sleep	72 VdB	80 VdB	35 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use	75 VdB	83 VdB	40 dBA	48 dBA

[1] *Frequent Events – more than 70 vibration events per day*
[2] *Infrequent Events – fewer than 70 vibration events per day*
[3] *This criterion limit is based on levels that are acceptable for more moderately sensitive equipment such as optical microscopes.*
Source: United States Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Assessment, 1995

The FTA and Caltrans have compiled the data from numerous studies related to vibration and have developed standards for human perception and building damage. The FTA's maximum acceptable vibration standard for human annoyance is 78 VdB at nearby vibration-sensitive land uses.[4] The Caltrans maximum vibration level standard is 0.2 in/sec PPV for the prevention of structural damage to typical residential buildings.[5]

5.2 State Regulations

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

CEQA requires lead agencies to consider noise impacts. Under CEQA, lead agencies are directed to assess conformance to locally established noise standards or other agencies' noise standards; measure and identify the potentially significant exposure of people to or generation of excessive noise levels; measure and identify potentially significant permanent or temporary increase in ambient noise levels; and measure and identify potentially significant impacts associated with air traffic.

CALIFORNIA NOISE CONTROL ACT OF 1973

Sections 46000-46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, find that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

CALIFORNIA NOISE INSULATION STANDARDS (CCR TITLE 24)

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for multi-family residential buildings (Title 24, Part 2, California Code of Regulations). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a residential building or structure is proposed to be located near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, and where such noise source or sources create an exterior CNEL (or L_{dn}) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of 45 dBA or below [California's Title 24 Noise Standards, Chap. 2-35].

STATE OF CALIFORNIA GENERAL PLAN GUIDELINES 2003

Though not adopted by law, the State of California General Plan Guidelines 2003, published by the California Governor's Office of Planning and Research (OPR) (OPR Guidelines), provides guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify the suitability of various types of development relative to a range of outdoor noise levels and provide each local community some flexibility in setting local noise standards that allow for the variability in community preferences. Findings presented in the Levels of Environmental Noise Document (EPA 1974) influenced the recommendations of the OPR Guidelines, most importantly in the choice of noise exposure metrics (i.e., L_{dn} or CNEL) and in the upper limits for the normally acceptable outdoor exposure of noise-sensitive uses.

The OPR Guidelines include a Noise and Land Use Compatibility Matrix that identifies acceptable and unacceptable community noise exposure limits for various land use categories. Where the "normally acceptable" range is used, it is defined as the highest noise level that should be considered for the construction of the buildings that do not incorporate any special acoustical treatment or noise mitigation. The "conditionally acceptable" or "normally acceptable" ranges include conditions calling for detailed acoustical study or construction mitigation to reduce interior exposure levels prior to the construction or operation of the building under the listed exposure levels.

CALIFORNIA DEPARTMENT OF TRANSPORTATION

According to the Caltrans vibration manual, large bulldozers, vibratory rollers (used to compact earth), and loaded trucks utilized during grading activities can produce vibration, and depending on the level of vibration, could cause annoyance at uses within the project vicinity or damage structures. Caltrans has developed a screening tool to determine of vibration from construction equipment is substantial enough to impact surrounding uses.

The Caltrans vibration manual establishes thresholds for vibration impacts on buildings and humans. These thresholds are summarized in Tables 5 (Vibration Damage Potential Threshold Criteria) and 6 (Vibration Annoyance Potential Threshold Criteria).

Table 5
Vibration Damage Potential Threshold Criteria

Structural Integrity	Maximum PPV (in/sec)	
	Transient	Continuous
Historic and some older buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial and commercial structures	2.00	0.50
Source: Caltrans 2013		

Table 6
Vibration Annoyance Potential Threshold Criteria

Human Response	PPV Threshold (in/sec)	
	Transient	Continuous
Barely perceptible	0.035	0.012
Distinctly perceptible	0.24	0.035
Strongly perceptible	0.90	0.10
Severely perceptible	2.00	0.40
Source: Caltrans 2013		

5.3 Local Regulations

CITY OF COSTA MESA MUNICIPAL CODE

The City of Costa Mesa Municipal Code, under Chapter XIII (Noise Control), sets standards for noise levels citywide and provides the means to enforce the reduction of offensive noises. Pursuant to the Costa Mesa Municipal Code, the noise standards set for in Table 7 (Residential Exterior and Interior Standards) apply to both indoor and outdoor residential areas.

Table 7
Residential Exterior and Interior Standards

Time	Exterior Noise Standards	Interior Noise Standards
7:00 AM – 11:00 PM	55 dBA	55 dBA
11:00 PM – 7:00 AM	50 dBA	45 dBA
Source: Costa Mesa Municipal Code, Chapter XIII		

Construction Noise Standards

Pursuant to Section 13-279 of the Costa Mesa Municipal Code, the provisions of the Noise Control chapter (Chapter XIII) shall not apply to construction equipment, vehicles, or work between the following approved hours, provided that all required permits for such construction, repair, or remodeling have been obtained from the appropriate City departments.

- 7:00 AM – 7:00 PM – Mondays through Fridays
- 9:00 AM – 6:00 PM – Saturdays

CITY OF COSTA MESA GENERAL PLAN

The City of Costa Mesa General Plan Noise Element includes the following noise and land use compatibility matrix.

Table 8
Noise and Land Use Compatibility Matrix

Land Use Category	Community Noise Exposure Ldn or CNEL, dBA			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential: Low-Density	50-60	60-70	70-75	≥75
Residential: Multiple Family	50-65	65-70	70-75	≥75
Mixed use	50-65	65-70	70-75	≥75
Transient Lodging-Motel, Hotels	50-65	65-70	70-80	≥80
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-60	60-65	65-80	≥80
Auditoriums, Concert Halls, Amphitheaters	NA	50-70	NA	≥80
Sports Arenas, Outdoor Spectator Sports	NA	50-75	NA	≥80
Playgrounds, Neighborhood Parks	50-67.5	NA	67.5-75	≥75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-70	NA	70-80	≥80
Office Buildings, Business Commercial and Professional	50-67.5	67.5-77.5	77.5-85	≥85 unless appropriately insulated
Industrial, Manufacturing, Utilities, Agriculture	50-70	70-80	80-85	NA

Notes:

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

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

Normally Unacceptable. *New Construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.*

Clearly Unacceptable. *New construction or development should generally not be undertaken.*

NA: Not Applicable

Source: Modified from U.S. Department of Housing and Urban Development Guidelines and State of California Standards.

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The thresholds identified in Appendix G of the State CEQA Guidelines, as implemented by the City of Costa Mesa, have been utilized to assess the significance of the potential environmental effects of the project.

6.1 Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the proposed project could result in potentially significant impacts related to noise if it results in:

A. Exposure of persons or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
B. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
C. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
D. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
E. For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels.
F. For a project within a vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

6.2 Consistency with Applicable Standards

DEMOLITION AND CONSTRUCTION NOISE

Over the long term, the General Plan Update will facilitate the completion of various construction projects at numerous places throughout the City. These projects can occur in any zoned area, including residential, commercial/office, industrial, and mixed-use area. It is unknown when and where specific construction may occur, and therefore, potential impacts for the proposed General Plan Update can only be addressed in a qualitative manner.

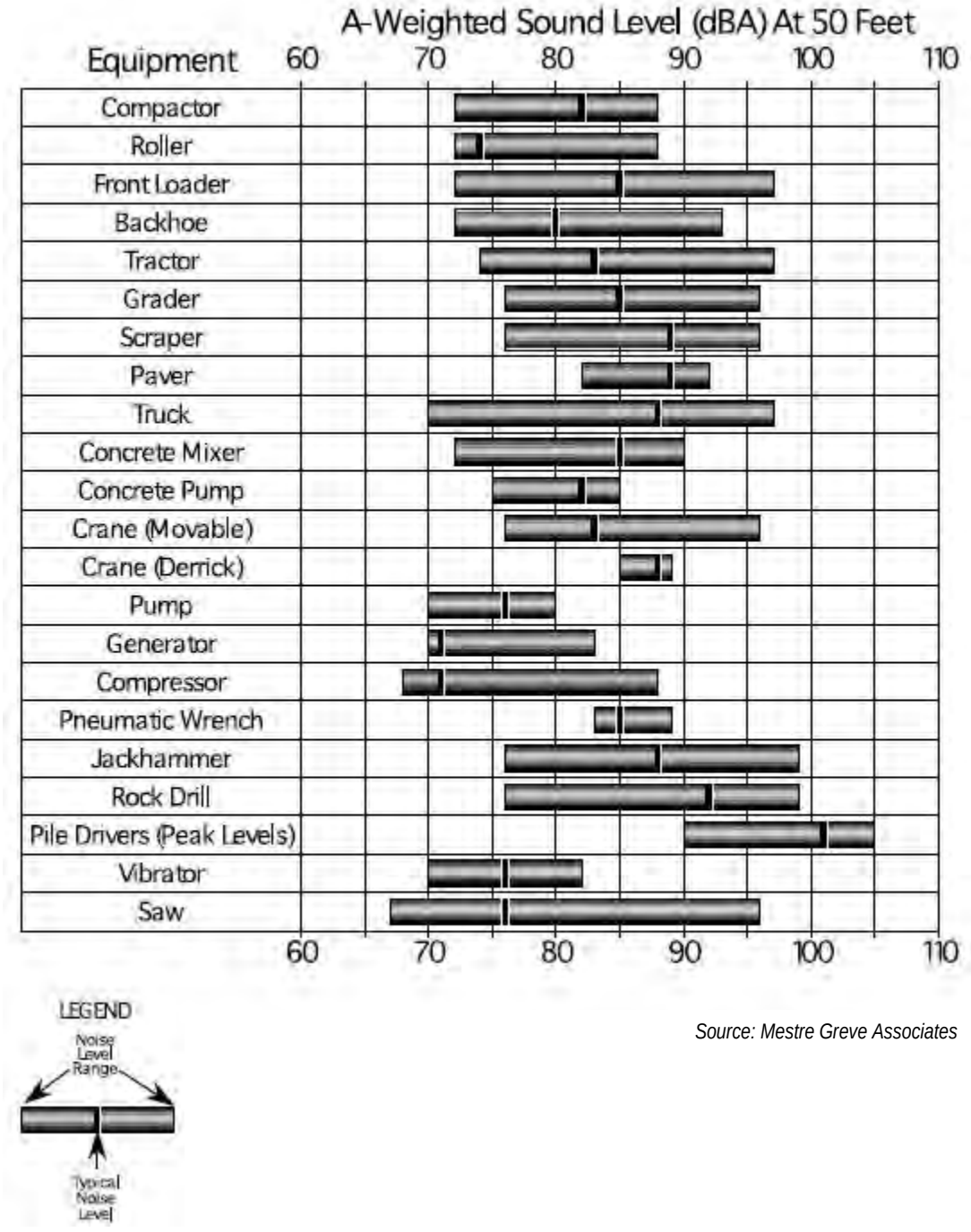
Construction activities would generate a variety of noise levels associated with different kinds of construction equipment and the location of staging, construction, storage and access routes. Grading, paving, landscaping and building construction processes involve equipment and vehicles that are known to produce intrusive levels of noise. This will result in temporary increase in local noise levels near the active construction sites that could adversely affect neighboring land uses, particularly those where sensitive receptors are located. Construction activity generates noise that potentially has a short-term impact on ambient noise levels and can reach high levels that have the potential to impact nearby sensitive land uses.

Future construction projects within the city will be subject to rules of the noise ordinance. The construction noise impacts to a particular neighborhood are dependent upon a number of factors specific to the project. Some of the factors include proximity to sensitive land uses, time of day, intervening barriers, level of construction (e.g., number and type of construction equipment that is operating simultaneously), and the duration of the project's construction phase. Worst-case examples of construction noise at 50 feet are presented in Figure 2 (Typical Construction Equipment Noise Levels). The peak noise level for most of the equipment that would be used during construction is in the range of 70 to 95 dBA at a distance of 50 feet. Noise levels for each doubling of distance will be 6 dBA less. For example, at 200 feet, the peak construction noise levels range from 58 to 83 dBA.

According to Section 13-279 (Exceptions for Construction) of the City of Costa Mesa Municipal Code, operation of construction equipment, vehicles, or construction work is exempt between the hours of 7:00 AM and 7:00 PM on Mondays through Fridays and between 9:00 AM and 6:00 PM on Saturdays provided that all required permits have been obtained from the appropriate City departments. The proposed General Plan Update would not authorize any specific construction. Potential construction noise will be assessed in conjunction with the City's review of site-specific noise

impact analyses. Although construction activity is exempt according to Section 13-279 of the Costa Mesa Municipal Code, noise levels at sensitive receptors should be analyzed on a case-by-case basis and appropriate mitigation should be applied to bring noise levels down to acceptable levels. Compliance with Chapter XIII (Noise Control) will ensure that construction noise impacts will be less than significant.

Figure 2
Typical Construction Equipment Noise Levels



Source: Mestre Greve Associates

FUTURE NOISE LEVELS ALONG EXISTING ROADWAY SEGMENTS

Future population and employment growth within the planning area would result in increased traffic and the need for roadway and intersection improvements necessary to maintain desired levels of service. Increases in traffic could result in permanent increases in ambient noise levels, e.g., where a roadway segment is proposed to be expanded with additional travel lanes over the long-term to achieve level of service standards. Roadway noise could also increase on an existing roadway that will carry increasing traffic volumes. In either set of circumstances, roadway noise levels could increase to beyond the levels considered acceptable for the adjacent land uses as defined by the City of Costa Mesa Noise Ordinance or General Plan Noise Element.

As part of the Costa Mesa General Plan Update process, an inventory of the existing land uses in the city was compiled and future land uses associated with future development under existing land use conditions and proposed land use conditions was determined. Traffic noise levels at 100 feet from roadway segment centerlines were modeled utilizing the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) Version 2.5 (see Appendix B for TNM Output Data). Distances to the 55, 60, 65, and 70 BA CNEL noise contours under 2035 proposed General Plan Buildout conditions were calculated and shown in Table 9 (Future 2035 CNEL Proposed General Plan Buildout) and Exhibit 4 (2035 Proposed General Plan Buildout Traffic Noise Contours). Traffic noise levels identified represent conservative potential noise exposure. In reality, noise levels may vary from those represented as the calculations do not assume natural or artificial shielding nor do they assume reflection from existing or proposed structures or topography. Intervening structures or other noise-attenuating obstacles between a roadway and a receptor may reduce roadway noise levels at the receptor.

Table 10 (Future 2035 CNEL Noise Level Increase) shows the noise increases due to future development facilitated by build out of the proposed General Plan Update compared to existing conditions. Noise levels at 100 feet from the centerline of roadway segments were calculated based on average daily traffic volumes provided by the project traffic study prepared by Stantec Consulting Services, Inc. A 3.0 dBA change in sound is the beginning at which humans generally notice a *barely perceptible* change in sound, a 5.0 dBA change is generally *readily perceptible*, and a 10.0 dBA increase is perceived by most people as a doubling of the existing noise level.[6]

Based on the results of the model, implementation of the proposed General Plan Update will result in noise increases of 3.0 dB CNEL along Del Mar west of Santa Ana, where residential uses are located, and 3.1 dB CNEL along 16th west of Newport, where industrial uses are located. Therefore, residents along Del Mar west of Santa Ana and the industrial uses along 16th west of Newport and could be exposed to barely perceptible increases in noise.

The proposed General Plan Update would not authorize any specific construction. Potential increases in noise levels along existing and proposed roadways will be assessed in conjunction with the City's review of site-specific noise impact analyses. Implementation of the following General Plan Objectives and Policies will ensure that impacts related to increases in traffic noise due to future development will be reduced to acceptable levels.

Objective N-1: Control noise levels within the City for the protection of residential areas and other sensitive land uses from excessive and unhealthful noise.

Policy N-1.A: Enforce the maximum acceptable exterior noise levels for residential areas at 65 CNEL.

Policy N-1.D: Ensure that appropriate site design measures are incorporated into residential developments, when required by an acoustical study, to obtain appropriate exterior and interior noise levels.

Policy N-1.E: Apply the standards contained in Title 24 of the California Code of Regulations as applicable to the construction of all new dwelling units.

Objective N-2: Plan for the reduction in noise impacts on sensitive receptors and land uses.

Policy N-2.A: Require the use of walls, berms, interior noise insulation, double-paned windows, and other noise mitigation measures, as appropriate, in the design of new residential or other new noise sensitive land uses that are adjacent to arterials, freeways, or adjacent to industrial or commercial uses.

Policy N-2.B: Require, as a part of the environmental review process, that full consideration be given to the existing and projected noise environment.

Policy N-2.D: Require that all proposed projects are compatible with adopted noise/land use compatibility criteria.

Policy N-2.E: Enforce applicable interior and exterior noise standards.

Policy N-2.F: Allow a higher exterior noise level standard for infill projects in existing residential areas adjacent to major arterials if it can be shown that there are no feasible mechanisms to meet the exterior noise levels. The interior standard of 45 dBA CNEL shall be enforced for any new residential project.

Table 9
Future 2035 CNEL Proposed General Plan Buildout

Roadway	Segment	Distance to CNEL Contour from Centerline of Roadway (feet)			
		55 dBA	60 dBA	65 dBA	70 dBA
Adams	w/o Placentia	1462	822	462	260
	e/o Placentia	1413	794	447	251
	btwn Mesa Verde E. & Harbor	1950	1096	617	347
	btwn Harbor & Fairview	1718	966	543	305
Anaheim	btwn 19th & Superior	537	302	170	105
Anton	btwn Bristol & Sunflower	1413	794	447	251
Arlington	e/o Fairview	457	257	145	123
Ave of the Arts	n/o Anton	507	285	160	111
Baker	btwn Mesa Verde & Harbor	881	495	279	157
	btwn Harbor & Fairview	1230	692	389	219
	e/o Fairview	1035	582	327	184
	btwn Coolidge & Bear	1514	851	479	269
	w/o Randolph	1023	575	324	182
	w/o SR-55	1072	603	339	191
	w/o Pullman	804	452	254	143
	e/o Pullman	759	427	240	135
Bay	e/o Harbor	331	186	105	170
	e/o Newport	355	200	112	158
Bear	btwn Sunflower & South Coast	1718	966	543	305
	n/o Paularino	1084	610	343	193
Bristol	btwn Sunflower & Anton	2138	1202	676	380
	btwn Anton & Paularino	2427	1365	767	432
	n/o Baker	1288	724	407	229
	n/o Bear	1175	661	372	209
	s/o Bear	1230	692	389	219
	btwn Newport & Redhill	1698	955	537	302
Canyon	n/o Victoria	299	168	106	188
Country Club	n/o Mesa Verde	295	166	107	191
Del Mar	w/o Orange	716	403	226	127
	w/o Santa Ana	582	327	184	104
	w/o Irvine	531	299	168	106
El Camino	btwn Fairview & Mendoza	569	320	180	101
Elden	n/o 22nd	211	119	150	266
Fair	e/o Harbor	700	394	221	124
	btwn Fairview & Newport	1380	776	437	245
Fairview	n/o South Coast	1462	822	462	260
	s/o South Coast	1738	977	550	309
	s/o I-405	1567	881	495	279

Roadway	Segment	Distance to CNEL Contour from Centerline of Roadway (feet)			
		55 dBA	60 dBA	65 dBA	70 dBA
	s/o Baker	1641	923	519	292
	btwn Adams & Fair	1884	1059	596	335
	n/o Wilson	944	531	299	168
	s/o Wilson	881	495	279	157
Gisler	w/o Harbor	603	339	191	107
Hamilton	btwn Placentia & Harbor	519	292	164	108
Harbor	n/o Sunflower	1531	861	484	272
	n/o South Coast	1603	902	507	285
	n/o Baker	1799	1012	569	320
	n/o Village	1758	989	556	313
	n/o Adams	1718	966	543	305
	btwn Adams & Fair	2239	1259	708	398
	n/o Wilson	1496	841	473	266
	n/o Victoria	1396	785	442	248
	n/o Bay	1189	668	376	211
	n/o 19th	1245	700	394	221
	s/o 19th	933	525	295	166
Hyland	s/o MacArthur	610	343	193	108
	s/o Scenic	531	299	168	106
	s/o Sunflower	562	316	178	100
Industrial	w/o Newport	347	195	110	162
Irvine	btwn Bristol & Mesa	1380	776	437	245
	n/o University	1023	575	324	182
	n/o 22nd	1035	582	327	184
	btwn 22nd & 19th	1413	794	447	251
	n/o 17th	813	457	257	145
	n/o 16th	653	367	207	116
MacArthur	w/o Harbor	1084	610	343	193
Merrimac	btwn Harbor & Fairview	923	519	292	164
Mesa	w/o Orange	447	251	141	126
	e/o Santa Ana	473	266	150	119
Mesa Verde W.	btwn Adams & Country Club	767	432	243	136
Mesa Verde E.	n/o Baker	417	234	132	135
	n/o Adams	507	285	160	111
	btwn Adams & Harbor	933	525	295	166
Monrovia	btwn 19th & 17th	513	288	162	110
Newport SB	n/o Mesa	1202	676	380	214
	n/o Fair/Del Mar	1109	624	351	197
	n/o Santa Isabel	804	452	254	143

Roadway	Segment	Distance to CNEL Contour from Centerline of Roadway (feet)			
		55 dBA	60 dBA	65 dBA	70 dBA
	n/o Victoria	1303	733	412	232
	s/o Victoria	912	513	288	162
	s/o Ford	716	403	226	127
Newport NB	n/o Mesa	676	380	214	120
	n/o Fair/Del Mar	1096	617	347	195
	n/o Santa Isabel	861	484	272	153
	n/o 22nd	1175	661	372	209
	s/o 22nd	832	468	263	148
	s/o 20th	668	376	211	119
Newport	btwn 19th & 17th	1862	1047	589	331
	n/o Industrial	861	484	272	153
Ogle	e/o Orange	204	115	155	275
Orange	n/o Del Mar	204	115	155	275
	n/o Santa Isabel	288	162	110	195
	n/o 22nd	324	182	102	174
	n/o 21st	355	200	112	158
	n/o 19th	355	200	112	158
	n/o 17th	501	282	158	112
	n/o 16th	355	200	112	158
	n/o 15th	324	182	102	174
Park	s/o 19th	355	200	112	158
Paularino	e/o Fairview	394	221	124	143
	e/o Bear	442	248	140	127
	e/o Bristol	741	417	234	132
	w/o Redhill	668	376	211	119
Placentia	btwn Adams & Wilson	1000	562	316	178
	n/o Victoria	881	495	279	157
	n/o Hamilton	977	550	309	174
	s/o Hamilton	977	550	309	174
	s/o 19th	933	525	295	166
	n/o 17th	794	447	251	141
	n/o 16th	724	407	229	129
Pomona	n/o Victoria	422	237	133	133
	n/o Hamilton	412	232	130	136
	n/o 19th	447	251	141	126
	n/o 18th	412	232	130	136
	btwn 18th & 17th	582	327	184	104
Red Hill	n/o Airport Loop	871	490	275	155
	n/o Paularino	912	513	288	162

Roadway	Segment	Distance to CNEL Contour from Centerline of Roadway (feet)			
		55 dBA	60 dBA	65 dBA	70 dBA
	n/o Baker	881	495	279	157
	n/o Kalmus	785	442	248	140
	n/o Bristol	881	495	279	157
Sakioka	n/o Anton	531	299	168	106
Santa Ana	s/o Bristol	513	288	162	110
	n/o Del Mar/University	437	245	138	129
	n/o Santa Isabel	385	216	122	146
	n/o 22nd	355	200	112	158
	n/o 21st	324	182	102	174
	n/o 19th	355	200	112	158
	n/o 17th	385	216	122	146
	n/o 16th	324	182	102	174
	n/o 15th	288	162	110	195
Santa Isabel	e/o Newport	335	188	106	168
	e/o Orange	292	164	108	193
South Coast	w/o Harbor	733	412	232	130
	e/o Harbor	841	473	266	150
	w/o Fairview	871	490	275	155
	btwn Wimbledon & Bear	1175	661	372	209
Sunflower	btwn Hyland & Harbor	776	437	245	138
	btwn Harbor & Susan	1109	624	351	197
	w/o Fairview	871	490	275	155
	w/o Fuschia/Raitt	923	519	292	164
	w/o Bristol	1334	750	422	237
	e/o Bristol	1230	692	389	219
	w/o Anton	1059	596	335	188
	w/o Main	1161	653	367	207
Superior	btwn Anaheim & 16th/Industrial	1109	624	351	197
Tustin	n/o 21st	251	141	126	224
	n/o 20th	204	115	155	275
	n/o 19th	288	162	110	195
	n/o 17th	288	162	110	195
	n/o 16th	385	216	122	146
Victoria	w/o Pacific	1096	617	347	195
	w/o National	1072	603	339	191
	w/o Placentia	1084	610	343	193
	e/o Placentia	977	550	309	174
	e/o Harbor	1035	582	327	184
	w/o Harbor	1096	617	347	195

Roadway	Segment	Distance to CNEL Contour from Centerline of Roadway (feet)			
		55 dBA	60 dBA	65 dBA	70 dBA
	e/o College	1084	610	343	193
Wilson	w/o Placentia	490	275	155	115
	e/o Placentia	767	432	243	136
	btwn Pomona & Harbor	1274	716	403	226
	e/o Harbor	841	473	266	150
	e/o Fairview	716	403	226	127
	e/o Newport	412	232	130	136
15th	e/o Newport	248	140	127	226
W. 16th	e/o Monrovia	324	182	102	174
	e/o Placentia	355	200	112	158
16th	w/o Newport	282	158	112	200
	e/o Newport	292	164	108	193
	e/o Orange	251	141	126	224
16th Pl	e/o Santa Ana	251	141	126	224
	e/o Tustin	251	141	126	224
W. 17th	e/o Monrovia	417	234	132	135
	w/o Placentia	452	254	143	124
	btwn Placentia & Pomona	785	442	248	140
17th	w/o Orange	1514	851	479	269
	w/o Westminster	1096	617	347	195
	w/o Santa Ana	1072	603	339	191
	e/o Santa Ana	1135	638	359	202
	w/o Irvine	1047	589	331	186
W. 18th	e/o Monrovia	355	200	112	158
	e/o Placentia	385	216	122	146
	w/o Anaheim	501	282	158	112
	w/o Park	495	279	157	114
W. 19th	e/o Monrovia	603	339	191	107
	e/o Placentia	871	490	275	155
	w/o Park	1245	700	394	221
	e/o Harbor	1189	668	376	211
19th	e/o Newport	479	269	151	117
	w/o Orange	389	219	123	145
	e/o Orange	385	216	122	146
	e/o Santa Ana	355	200	112	158
	w/o Irvine	355	200	112	158
20th	e/o Newport	257	145	123	219
	e/o Tustin	251	141	126	224
21st	e/o Newport	257	145	123	219

Roadway	Segment	Distance to CNEL Contour from Centerline of Roadway (feet)			
		55 dBA	60 dBA	65 dBA	70 dBA
	w/o Irvine	204	115	155	275
22nd	e/o Newport	457	257	145	123
	e/o Orange	355	200	112	158
	e/o Santa Ana	324	182	102	174
	w/o Irvine	288	162	110	195

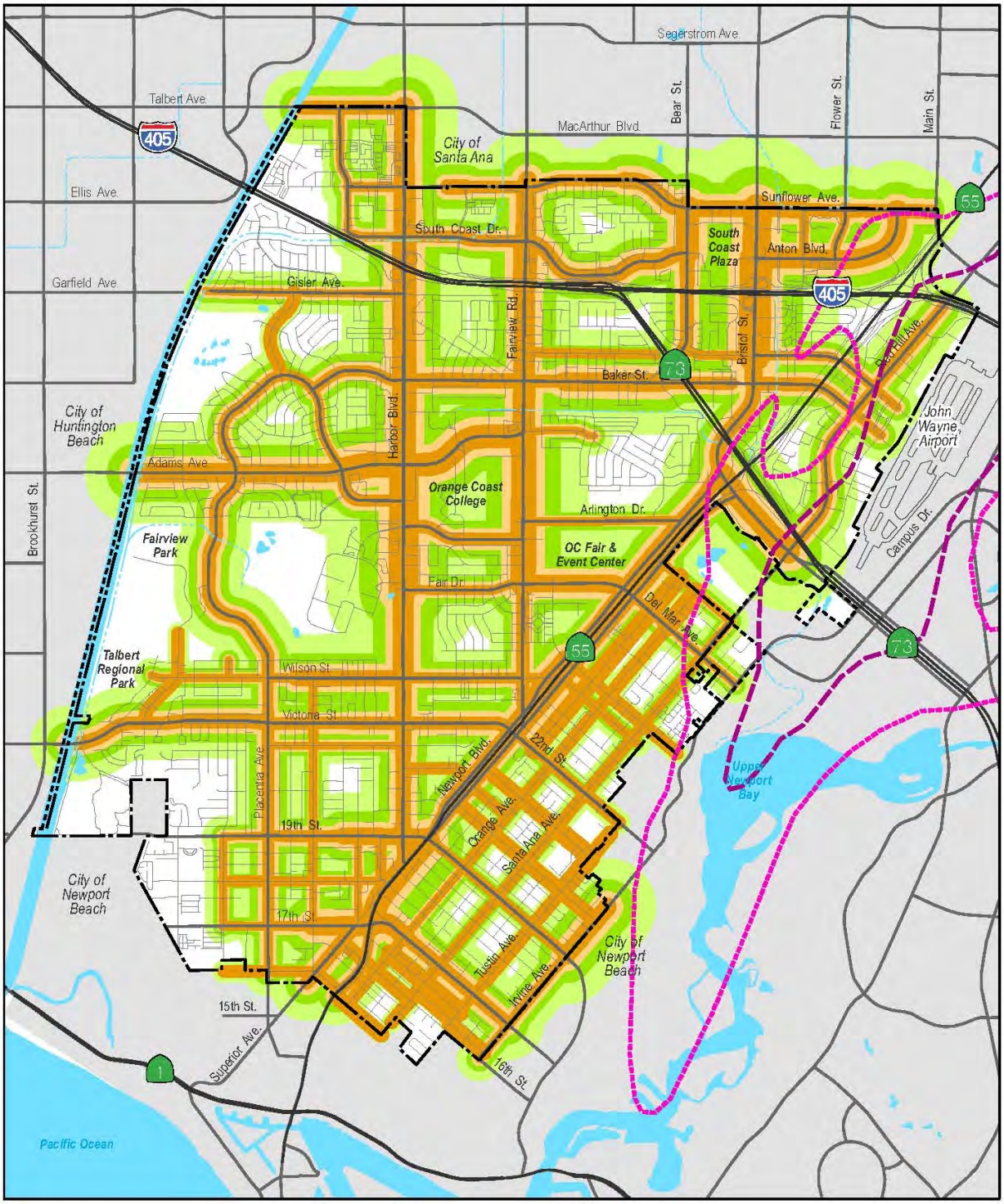


Exhibit 4 2035 Proposed General Plan Buildout Traffic Noise Contours

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Costa Mesa, California

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Table 10
Future 2035 CNEL Noise Level Increase

Roadway	Segment	Noise Level at 100 Feet from Roadway Centerline (dBA)		Difference
		Existing	2035 Proposed GP Buildout	
Adams	w/o Placentia	77.6	78.3	0.7
	e/o Placentia	77.5	78.0	0.5
	btwn Mesa Verde E. & Harbor	80.3	80.8	0.5
	btwn Harbor & Fairview	79.1	79.7	0.6
Anaheim	btwn 19th & Superior	68.8	69.6	0.8
Anton	btwn Bristol & Sunflower	76.2	78.0	1.8
Arlington	e/o Fairview	66.7	68.2	1.5
Ave of the Arts	n/o Anton	68.0	69.1	1.1
Baker	btwn Mesa Verde & Harbor	73.3	73.9	0.6
	btwn Harbor & Fairview	76.0	76.8	0.8
	e/o Fairview	75.3	75.3	0.0
	btwn Coolidge & Bear	77.6	78.6	1.0
	w/o Randolph	73.4	75.2	1.8
	w/o SR-55	74.0	75.6	1.6
	w/o Pullman	72.0	73.1	1.1
	e/o Pullman	71.4	72.6	1.2
Bay	e/o Harbor	64.4	65.4	1.0
	e/o Newport	66.0	66.0	0.0
Bear	btwn Sunflower & South Coast	79.0	79.7	0.7
	n/o Paularino	75.0	75.7	0.7
Bristol	btwn Sunflower & Anton	81.0	81.6	0.6
	btwn Anton & Paularino	81.7	82.7	1.0
	n/o Baker	76.1	77.2	1.1
	n/o Bear	75.0	76.4	1.4
	s/o Bear	75.5	76.8	1.3
	btwn Newport & Redhill	78.7	79.6	0.9
Canyon	n/o Victoria	63.2	64.5	1.3
Country Club	n/o Mesa Verde	64.4	64.4	0.0
Del Mar	w/o Orange	70.4	72.1	1.7
	w/o Santa Ana	67.3	70.3	3.0
	w/o Irvine	67.3	69.5	2.2
El Camino	btwn Fairview & Mendoza	69.2	70.1	0.9
Elden	n/o 22nd	61.5	61.5	0.0
Fair	e/o Harbor	71.6	71.9	0.3
	btwn Fairview & Newport	77.2	77.8	0.6
Fairview	n/o South Coast	77.8	78.3	0.5
	s/o South Coast	79.3	79.8	0.5

Roadway	Segment	Noise Level at 100 Feet from Roadway Centerline (dBA)		Difference
		Existing	2035 Proposed GP Buildout	
	s/o I-405	78.1	78.9	0.8
	s/o Baker	78.3	79.3	1.0
	btwn Adams & Fair	79.2	80.5	1.3
	n/o Wilson	72.8	74.5	1.7
	s/o Wilson	72.1	73.9	1.8
Gisler	w/o Harbor	70.2	70.6	0.4
Hamilton	btwn Placentia & Harbor	68.9	69.3	0.4
Harbor	n/o Sunflower	78.1	78.7	0.6
	n/o South Coast	78.5	79.1	0.6
	n/o Baker	79.4	80.1	0.7
	n/o Village	79.2	79.9	0.7
	n/o Adams	78.9	79.7	0.8
	btwn Adams & Fair	81.2	82.0	0.8
	n/o Wilson	77.7	78.5	0.8
	n/o Victoria	77.4	77.9	0.5
	n/o Bay	75.8	76.5	0.7
	n/o 19th	75.9	76.9	1.0
	s/o 19th	73.8	74.4	0.6
Hyland	s/o MacArthur	70.3	70.7	0.4
	s/o Scenic	68.9	69.5	0.6
	s/o Sunflower	68.9	70.0	1.1
Industrial	w/o Newport	65.0	65.8	0.8
Irvine	btwn Bristol & Mesa	77.4	77.8	0.4
	n/o University	74.6	75.2	0.6
	n/o 22nd	75.2	75.3	0.1
	btwn 22nd & 19th	78.1	78.0	-0.1
	n/o 17th	73.7	73.2	-0.5
	n/o 16th	71.0	71.3	0.3
MacArthur	w/o Harbor	75.3	75.7	0.4
Merrimac	btwn Harbor & Fairview	73.7	74.3	0.6
Mesa	w/o Orange	68.0	68.0	0.0
	e/o Santa Ana	67.9	68.5	0.6
Mesa Verde W.	btwn Adams & Country Club	72.2	72.7	0.5
Mesa Verde E.	n/o Baker	66.4	67.4	1.0
	n/o Adams	68.4	69.1	0.7
	btwn Adams & Harbor	73.9	74.4	0.5
Monrovia	btwn 19th & 17th	69.2	69.2	0.0
Newport SB	n/o Mesa	75.8	76.6	0.8
	n/o Fair/Del Mar	75.3	75.9	0.6

Roadway	Segment	Noise Level at 100 Feet from Roadway Centerline (dBA)		Difference
		Existing	2035 Proposed GP Buildout	
	n/o Santa Isabel	71.7	73.1	1.4
	n/o Victoria	76.4	77.3	0.9
	s/o Victoria	72.1	74.2	2.1
	s/o Ford	70.4	72.1	1.7
Newport NB	n/o Mesa	70.0	71.6	1.6
	n/o Fair/Del Mar	75.3	75.8	0.5
	n/o Santa Isabel	72.8	73.7	0.9
	n/o 22nd	76.1	76.4	0.3
	s/o 22nd	72.8	73.4	0.6
	s/o 20th	71.0	71.5	0.5
Newport	btwn 19th & 17th	83.3	80.4	-2.9
	n/o Industrial	78.7	73.7	-5.0
Ogle	e/o Orange	61.2	61.2	0.0
Orange	n/o Del Mar	61.2	61.2	0.0
	n/o Santa Isabel	63.0	64.2	1.2
	n/o 22nd	64.2	65.2	1.0
	n/o 21st	66.0	66.0	0.0
	n/o 19th	66.7	66.0	-0.7
	n/o 17th	69.0	69.0	0.0
	n/o 16th	67.3	66.0	-1.3
	n/o 15th	65.2	65.2	0.0
Park	s/o 19th	65.2	66.0	0.8
Paularino	e/o Fairview	66.2	66.9	0.7
	e/o Bear	67.4	67.9	0.5
	e/o Bristol	72.7	72.4	-0.3
	w/o Redhill	71.2	71.5	0.3
Placentia	btwn Adams & Wilson	74.3	75.0	0.7
	n/o Victoria	72.5	73.9	1.4
	n/o Hamilton	74.3	74.8	0.5
	s/o Hamilton	74.5	74.8	0.3
	s/o 19th	74.3	74.4	0.1
	n/o 17th	72.8	73.0	0.2
	n/o 16th	72.2	72.2	0.0
Pomona	n/o Victoria	66.5	67.5	1.0
	n/o Hamilton	66.8	67.3	0.5
	n/o 19th	66.9	68.0	1.1
	n/o 18th	66.7	67.3	0.6
	btwn 18th & 17th	70.0	70.3	0.3
Red Hill	n/o Airport Loop	72.9	73.8	0.9

Roadway	Segment	Noise Level at 100 Feet from Roadway Centerline (dBA)		
		Existing	2035 Proposed GP Buildout	Difference
	n/o Paularino	73.4	74.2	0.8
	n/o Baker	72.8	73.9	1.1
	n/o Kalmus	72.4	72.9	0.5
	n/o Bristol	73.4	73.9	0.5
Sakioka	n/o Anton	68.3	69.5	1.2
Santa Ana	s/o Bristol	68.4	69.2	0.8
	n/o Del Mar/University	66.7	67.8	1.1
	n/o Santa Isabel	66.0	66.7	0.7
	n/o 22nd	66.0	66.0	0.0
	n/o 21st	65.2	65.2	0.0
	n/o 19th	66.0	66.0	0.0
	n/o 17th	67.3	66.7	-0.6
	n/o 16th	66.0	65.2	-0.8
	n/o 15th	65.2	64.2	-1.0
Santa Isabel	e/o Newport	65.5	65.5	0.0
	e/o Orange	64.3	64.3	0.0
South Coast	w/o Harbor	70.9	72.3	1.4
	e/o Harbor	71.3	73.5	2.2
	w/o Fairview	71.7	73.8	2.1
	btwn Wimbledon & Bear	75.8	76.4	0.6
Sunflower	btwn Hyland & Harbor	71.3	72.8	1.5
	btwn Harbor & Susan	74.7	75.9	1.2
	w/o Fairview	72.9	73.8	0.9
	w/o Fuschia/Raitt	73.2	74.3	1.1
	w/o Bristol	76.5	77.5	1.0
	e/o Bristol	75.6	76.8	1.2
	w/o Anton	74.3	75.5	1.2
	w/o Main	74.8	76.3	1.5
Superior	btwn Anaheim & 16th/Industrial	75.6	75.9	0.3
Tustin	n/o 21st	63.0	63.0	0.0
	n/o 20th	61.2	61.2	0.0
	n/o 19th	64.2	64.2	0.0
	n/o 17th	65.2	64.2	-1.0
	n/o 16th	66.7	66.7	0.0
Victoria	w/o Pacific	75.2	75.8	0.6
	w/o National	75.1	75.6	0.5
	w/o Placentia	75.3	75.7	0.4
	e/o Placentia	74.8	74.8	0.0
	e/o Harbor	74.9	75.3	0.4

Roadway	Segment	Noise Level at 100 Feet from Roadway Centerline (dBA)		Difference
		Existing	2035 Proposed GP Buildout	
	w/o Harbor	75.6	75.8	0.2
	e/o College	75.1	75.7	0.6
Wilson	w/o Placentia	68.2	68.8	0.6
	e/o Placentia	70.3	72.7	2.4
	btwn Pomona & Harbor	74.7	77.1	2.4
	e/o Harbor	72.0	73.5	1.5
	e/o Fairview	70.2	72.1	1.9
	e/o Newport	67.3	67.3	0.0
15th	e/o Newport	61.1	62.9	1.8
W. 16th	e/o Monrovia	64.2	65.2	1.0
	e/o Placentia	65.2	66.0	0.8
16th	w/o Newport	60.9	64.0	3.1
	e/o Newport	63.3	64.3	1.0
	e/o Orange	63.0	63.0	0.0
16th Pl	e/o Santa Ana	63.0	63.0	0.0
	e/o Tustin	63.0	63.0	0.0
W. 17th	e/o Monrovia	64.8	67.4	2.6
	w/o Placentia	66.2	68.1	1.9
	btwn Placentia & Pomona	71.0	72.9	1.9
17th	w/o Orange	76.8	78.6	1.8
	w/o Westminster	74.4	75.8	1.4
	w/o Santa Ana	74.2	75.6	1.4
	e/o Santa Ana	74.8	76.1	1.3
	w/o Irvine	74.3	75.4	1.1
W. 18th	e/o Monrovia	65.2	66.0	0.8
	e/o Placentia	66.7	66.7	0.0
	w/o Anaheim	68.2	69.0	0.8
	w/o Park	68.2	68.9	0.7
W. 19th	e/o Monrovia	70.6	70.6	0.0
	e/o Placentia	73.1	73.8	0.7
	w/o Park	76.1	76.9	0.8
	e/o Harbor	76.1	76.5	0.4
19th	e/o Newport	69.8	68.6	-1.2
	w/o Orange	68.2	66.8	-1.4
	e/o Orange	67.3	66.7	-0.6
	e/o Santa Ana	66.0	66.0	0.0
	w/o Irvine	66.0	66.0	0.0
20th	e/o Newport	64.5	63.2	-1.3
	e/o Tustin	63.0	63.0	0.0

Roadway	Segment	Noise Level at 100 Feet from Roadway Centerline (dBA)		
		Existing	2035 Proposed GP Buildout	Difference
21st	e/o Newport	63.2	63.2	0.0
	w/o Irvine	61.2	61.2	0.0
22nd	e/o Newport	68.2	68.2	0.0
	e/o Orange	66.7	66.0	-0.7
	e/o Santa Ana	66.0	65.2	-0.8
	w/o Irvine	65.2	64.2	-1.0

6.3 Vibration Impacts

Pile drivers and rock blasting are generally the primary cause of construction related vibration impacts. Such construction methods are employed on a limited basis, on sites where there are extensive layers of very hard materials that must be loosened and/or penetrated to achieve the grading plan and place foundation supports. Additional noise impacts could occur where heavy machinery is required to break up large, hard rocks into smaller fragments. The need for such methods is determined through site-specific geotechnical investigations that identify the subsurface materials within the grading envelope, along with the construction methods recommended to handle the types of materials that are found.

Occasionally, large bulldozers and loaded trucks can create perceptible vibration at close proximity; however, they generally do not cause vibration that could cause structural or cosmetic damage. Construction equipment and activities are categorized by the nature of the vibration it produces. Equipment or activities typical of continuous vibration include excavation equipment, static compaction equipment, vibratory pile drivers, and pile-extraction equipment. Equipment or activities typical of transient (single-impact) or low-rate repeated impact vibration include impact pile drivers, blasting, and crack-and-seat equipment. High-rate repeated impact vibrations are common of jackhammers and pavement breakers. Table 11 (Common Construction Vibration) summarizes the peak particle velocity (PPV) at 25 feet for common construction equipment.

Table 11
Common Construction Vibration

Equipment	PPV (in/sec at 25ft)
Crack-and-Seat Operators	2.400
Vibratory Roller	0.210
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003
Source: California Department of Transportation. Transportation- and Construction-Induced Vibration Guidance Manual, June 2004	

Vibration varies widely with distance and intensity. Vibration from earthmovers and haulers have no potential to damage buildings after ten feet, while vibration from blasting activities can damage structures up to 115 feet away. Common mitigation for impact pile drivers include jetting, pre-drilling, use of cast-in-place or auger cast piles, use of non-displacement piles, and use of pile cushioning. Vibration can be reduced from breaking of concrete and other materials through use of hydraulic crushers, saws or rotary rock-cutting heads, hydraulic splitters, and chemicals instead of using hydraulic breakers.

Building and roadway construction has the potential to generate perceptible vibration levels to sensitive receptors within 20 feet from the operation of heavy equipment. Given that vibration levels dissipate rapidly with distance, and that homes along streets and intersections are typically more than 20 feet away from the street edge, residential land uses adjoining

roadway and intersection improvement projects would not likely be subject to distinctly perceptible vibration levels over extended periods of time.

The proposed General Plan Update does not authorize any construction or other land altering activity that could result in construction-related vibration. Potential vibration due to future construction activities would be assessed in conjunction with the City's routine review of site-specific geotechnical studies and the recommended grading and foundation design measures. This will occur in the project planning process, prior to project approval, for projects subject to review under CEQA, and this will provide an adequate mechanism to require special measures to mitigate potentially significant vibration impacts of the updated General Plan. Impacts resulting from construction–generated groundborne vibration and noise would be less than significant.

6.4 Airport Noise

JOHN WAYNE AIRPORT

The City of Costa Mesa does not contain any airports. However, the City is located immediately adjacent to John Wayne-Orange County (SNA) Airport to the southeast. According to the Airport Environs Land Use Plan (AELUP) for John Wayne Airport, uses within the northeastern portion of the city are exposed to noise levels up to 65 dBA. Exposed uses include industrial uses between State Route 73 (SR-73) and Interstate 405 (I-405) and general commercial and outdoor recreation uses immediately south of SR-73.

According to the AELUP, the Orange County Airport Land Use Commission (ALUC) does not support residential development within the 65 dB CNEL noise contour. Approximately 107 dwelling units within the City's sphere of influence lie within the 65 dBA CNEL noise impact area south of the runway. Noise contours resulting from operations at John Wayne Airport, indicated on Exhibit 3, are those on file with the County of Orange Office of Noise Abatement and the Orange County Airport Land Use Commission (ALUC). The 2008 Airport AELUP, Figure N-2, represents the latest (1990/2005) measurement data, and shows a broader ALUC land use jurisdiction that encompasses the majority of the city of Costa Mesa.

The 2008 AELUP adopted by the Airport Land Use Commission specifies acceptable uses proximate to the airport. These are defined as uses that will not subject people to adverse noise impacts. John Wayne Airport, primarily through the General Aviation Noise Ordinance (GANO), has on-going programs of noise reduction that include limits on the number of commercial airline flights, noise abatement arrival and departure procedures, admonishment of noisy operators (including private aircraft), curfew, and take-off weight limitations.

The Orange County Board of Supervisors approved a Master Plan for the airport in February 1985. Settlement of lawsuits concerning airport expansion was reached in December 1985 between the County, City of Newport Beach, and two community organizations. In 2003, the Settlement Agreement was amended which extended the agreement until 2015, allowed an increase in passengers served from 8.4 million annual passengers to 10.8 million annual passengers, allowed an increase in regular Class A flights to 85 average daily departures, and allowed facility improvements.

In 2014, the Board of Supervisors authorized an increase in operational capacity and extended the terms of the Settlement Agreement through December 31, 2030, with no change to curfew until December 31, 2035. Additionally, beginning January 1, 2021, the approval allows a gradual increase in passenger count from 8.4 million average passengers to 11.8 million average passengers and 95 average daily departures. Further, on January 1, 2026, the number passengers would again be able to increase, up to 12.5 million average passengers, depending upon the actual service levels in the preceding five years. Despite the increase in air traffic from John Wayne Airport, the ultimate CNEL noise contours are less than the noise contour contained in the 2008 ALUC, due to updated technology creating quieter fleets of commercial aircrafts (see Exhibit 4).

HELICOPTER SERVICES

The City of Costa Mesa contracts with Huntington Beach for police helicopter services on a case-by-case basis. Depending on altitude and speed, noise levels generated by the craft under normal conditions range from 61 to 65 dBA. As of 2015, four heliports were located in Costa Mesa at the following locations:

- Costa Mesa Police Department, 99 Fair Drive
- Former Los AngelesA Times building, 1375 West Sunflower Avenue
- South Coast Metro Center, 555 Anton Boulevard
- Tridair Helicopter, 3000 Airway Avenue

The AELUP for Heliports establishes regulations and restrictions for the siting of heliports/helipads. The purpose of the AELUP for Heliports is to protect the public from the adverse effects of aircraft noise by ensuring that heliports/helipads are sited in areas of compatible land use. The City regulates the siting of helipads through a Conditional Use Permit. The City requires an analysis to identify potential noise impacts and the City may regulate the hours of operation and arrival, departure/arrival routes, and type of helicopters that may use the heliport in order to minimize impacts to sensitive land uses. Heliports and helistops must comply with the all conditions of approval imposed or recommended by the FAA, ALUC, and by Caltrans/Division of Aeronautics.

6.5 OC Fair and Event Center

The OC Fair and Event Center hosts the annual summer fair and the weekly Orange County Market Place, Farmers Market, Centennial Farm, and Food Truck Fare Wednesday, as well as annual events such as OC Home and Garden Show, Orange County Fair, and concerts at the Pacific Amphitheater.

In 1980, a modified stricter Noise Ordinance for fairground operations was established in an agreement between the 32nd District Agricultural Association and the City of Costa Mesa ("1980 Settlement Agreement"). Table 12 (Orange County Fairgrounds Modified Noise Ordinance) applies to the activities within the Orange County Fairgrounds, with the exception of the events at the Pacific Amphitheater. Ongoing compliance with the Orange County Fairground Modified Noise Ordinance will ensure that noise levels generated by activities at the OC Fairgrounds will remain within acceptable levels.

Table 12
Orange County Fairgrounds Modified Noise Ordinance

Land Use	Noise Level Not to Be Exceeded	Maximum Allowable Duration of Exceedance
Residential	50 dBA 55 dBA 60 dBA 65 dBA 70 dBA	30 min/hour 15 min/hour 5 min/hour 1 min/hour Not for any period of time
Noise Zone	**Noise Level (CNEL)**	**Time Period**
1 and 2 Family Residential	60 dBA 50 dBA	7:00 a.m. to 11:00 p.m. 11:00 p.m. to 7:00 a.m.
Multiple Dwelling Residential, Public Space, Commercial	60 dBA 55 dBA	7:00 a.m. to 11:00 p.m. 11:00 p.m. to 7:00 a.m.
Source: City of Costa Mesa Inter Office Memorandum, August 24, 2010		

Prior to 1990, noise levels generated by concert events at Pacific Amphitheater exceeded the Costa Mesa Noise Ordinance, impacting surrounding residential neighborhoods. In 1990, a permanent injunction ("1990 Order") was entered against the former operators of the Amphitheater and the order set the current noise level established in Table

13 (Pacific Amphitheater Court Order Current Noise Restriction). The order specifically stated that the City's Noise Ordinance does not apply to the Pacific Amphitheatre. The amphitheater closed in 1997, but reopened in 2003 and remains subject to the noise restrictions of the 1990 Order outlined in Table 13. Ongoing compliance with the 1990 Order will ensure that noise levels generated by the events held at the Pacific Amphitheater will remain within acceptable levels.

Table 13
Pacific Amphitheater Court Order Current Noise Restriction

Maximum Noise Level	Time Period	Days of the Week
55 dBA	7:00 AM – 10:30 PM	Sunday-Thursday
50 dBA	10:30 PM – 7:00 AM	Sunday-Thursday
55 dBA	7:00 AM – 11:00 PM	Friday-Saturday
50 dBA	11:00 PM – 7:00 AM.	Friday-Saturday

No mitigation measures are required.

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1 California Department of Transportation. Basics of Highway Noise: Technical Noise Supplement. November 2009.
2 California Governor's Office of Planning and Research. General Plan Guidelines. 2003
3 California Department of Transportation. Transportation- and Construction-Induced Vibration Guidance Manual. June 2004
4 Federal Transit Administration. *Transit Noise and Vibration Impact Assessment.* 2006
5 California Department of Transportation. *Transportation and Construction Vibration Guidance Manual. Division of Environmental Analysis. September 2013*
6 California Department of Transportation. Basics of Highway Noise: Technical Noise Supplement. November 2009.

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General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.001
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Tuesday, 04 August 2015 07:12:05
Stop Time	Tuesday, 04 August 2015 07:27:05
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		67.8	dB
LASmax	04 Aug 2015 07:23:16	84.5	dB
LApeak (max)	04 Aug 2015 07:24:55	101.5	dB
LASmin	04 Aug 2015 07:16:45	57.8	dB
LCSeq		76.6	dB
LASeq		67.8	dB
LCSeq - LASeq		8.8	dB
LAIeq		70.7	dB
LAeq		67.8	dB
LAIeq - LAeq		2.8	dB
LASE		97.4	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		18	
OBA Overload Duration		73.6	s

Statistics

LAS5.00	72.4	dBA
LAS10.00	70.3	dBA
LAS33.30	66.2	dBA
LAS50.00	64.9	dBA
LAS66.60	63.6	dBA
LAS90.00	61.3	dBA

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

Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At Lmax

Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.0	11.8	31.3	47.0	53.9	56.1	60.6	63.0	59.1	53.6	48.9	41.6
LASmax	7.0	12.7	30.3	50.6	71.2	67.8	69.2	69.6	66.2	58.3	50.6	40.2
LASmin	7.0	5.0	24.9	37.0	43.6	45.3	48.0	53.2	49.3	38.5	25.8	8.7

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.3	1.5	1.2	3.7	10.9	18.3	23.8	30.2	34.7	41.0	45.5
LASmax	2.8	2.3	1.5	1.0	6.1	12.2	16.3	22.8	28.6	44.3	48.3	46.8
LASmin	2.8	2.3	1.5	1.0	0.1	3.0	9.5	17.0	23.2	27.4	30.4	33.3

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	46.0	49.2	50.9	49.7	52.2	51.6	53.5	56.3	56.9	57.2	58.9	58.3
LASmax	54.3	68.0	70.9	59.6	65.0	64.3	64.6	64.6	64.6	64.4	65.0	65.1
LASmin	36.0	38.5	37.4	40.4	39.4	40.7	40.8	42.3	44.5	47.7	48.3	48.3

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	56.2	53.8	51.7	50.4	48.6	46.6	45.6	44.2	41.7	39.0	37.3	29.4
LASmax	63.7	60.9	58.1	55.7	52.9	50.7	48.2	45.2	42.0	38.6	33.7	27.7
LASmin	45.7	43.5	39.7	36.3	33.3	27.6	23.6	20.9	13.6	6.6	1.6	0.2

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.002
User	
Job Description	
Location	
Measurement Description	Costa Mesa Ambient Noise
Start Time	Tuesday, 04 August 2015 07:45:50
Stop Time	Tuesday, 04 August 2015 08:00:50
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		77.6	dB
LASmax	04 Aug 2015 07:55:19	102.1	dB
LApeak (max)	04 Aug 2015 07:55:18	112.0	dB
LASmin	04 Aug 2015 07:54:36	55.3	dB
LCSeq		81.2	dB
LASeq		77.6	dB
LCSeq - LASeq		3.7	dB
LAIeq		81.0	dB
LAeq		77.6	dB
LAIeq - LAeq		3.5	dB
LASE		107.1	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		31	
OBA Overload Duration		162.6	s

Statistics

LAS5.00	76.6	dBA
LAS10.00	73.0	dBA
LAS33.30	69.3	dBA
LAS50.00	66.6	dBA
LAS66.60	64.5	dBA
LAS90.00	60.9	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	2 / 11.9	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	9.2	12.4	33.9	49.4	58.1	58.3	61.3	69.7	66.5	57.8	51.1	41.1
LASmax	29.7	32.2	42.1	54.5	53.0	63.6	76.5	89.9	90.0	77.8	72.4	63.6
LASmin	7.0	5.0	23.5	36.0	42.3	42.2	45.6	52.3	48.3	38.2	27.1	13.1

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	4.4	4.6	4.3	3.7	5.5	10.9	20.0	26.5	32.8	38.0	44.8	47.1
LASmax	16.5	21.5	27.0	25.5	28.5	28.6	27.8	36.0	40.9	36.9	41.5	54.8
LASmin	2.8	2.3	1.5	1.0	0.1	1.6	8.3	15.8	20.9	24.3	28.9	32.9

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	49.7	54.8	54.0	52.4	53.5	54.4	55.3	56.1	57.7	64.2	65.5	65.2
LASmax	49.4	46.9	50.1	50.1	54.1	63.2	60.5	62.8	75.6	85.4	87.6	88.0
LASmin	35.5	36.9	37.3	37.6	37.1	37.1	38.8	40.7	42.2	46.2	48.1	47.5

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	65.5	57.1	56.3	54.9	52.3	50.8	48.1	46.5	42.9	38.8	35.4	31.5
LASmax	90.0	74.0	75.0	74.2	73.7	74.1	68.8	68.3	64.9	61.2	58.1	54.3
LASmin	45.6	42.7	39.5	36.1	32.2	28.0	24.6	21.8	17.5	11.5	5.6	1.3

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.003
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Tuesday, 04 August 2015 08:12:21
Stop Time	Tuesday, 04 August 2015 08:27:21
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		71.5	dB
LASmax	04 Aug 2015 08:20:46	88.5	dB
LApeak (max)	04 Aug 2015 08:20:45	110.4	dB
LASmin	04 Aug 2015 08:18:06	57.6	dB
LCSeq		82.8	dB
LASeq		71.5	dB
LCSeq - LASeq		11.3	dB
LAIeq		73.7	dB
LAeq		71.5	dB
LAIeq - LAeq		2.2	dB
LASE		101.0	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		70	
OBA Overload Duration		468.6	s

Statistics

LAS5.00	76.0	dBA
LAS10.00	73.5	dBA
LAS33.30	69.9	dBA
LAS50.00	68.4	dBA
LAS66.60	67.0	dBA
LAS90.00	64.2	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	1 / 3.7	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.0	16.7	38.0	53.0	60.9	61.7	62.2	65.4	62.2	57.4	51.8	42.0
LASmax	7.0	16.3	42.1	58.5	73.1	72.0	70.6	71.3	72.3	68.9	63.9	55.0
LASmin	7.0	6.4	25.6	40.0	46.0	48.5	49.5	53.2	49.5	41.1	31.6	15.3

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.3	1.5	1.2	4.6	16.5	26.2	28.7	37.1	41.9	47.7	51.1
LASmax	2.8	2.3	1.5	5.1	12.6	13.3	20.8	33.0	42.3	42.6	48.8	58.2
LASmin	2.8	2.3	1.5	1.0	0.1	5.5	12.6	17.1	22.8	28.3	33.1	35.4

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	53.7	57.6	56.3	56.4	57.2	57.0	56.6	57.0	58.5	61.1	61.0	59.8
LASmax	65.6	69.8	69.7	68.4	66.9	67.4	65.5	67.0	64.8	66.5	67.0	66.8
LASmin	40.3	40.4	40.3	42.2	43.7	43.2	43.7	43.8	45.2	48.1	49.1	47.2

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	59.0	56.7	56.3	54.4	52.1	50.3	48.1	47.4	44.9	40.9	33.7	28.3
LASmax	67.8	67.4	67.2	65.6	64.2	62.9	61.3	59.1	55.5	53.2	48.4	43.8
LASmin	47.2	43.0	41.0	38.7	35.6	32.8	29.4	26.0	20.4	14.0	7.0	2.2

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.004
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Tuesday, 04 August 2015 08:37:36
Stop Time	Tuesday, 04 August 2015 08:52:36
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		70.2	dB
LASmax	04 Aug 2015 08:44:45	84.3	dB
LApeak (max)	04 Aug 2015 08:44:43	95.9	dB
LASmin	04 Aug 2015 08:38:49	56.2	dB
LCSeq		81.8	dB
LASeq		70.2	dB
LCSeq - LASeq		11.5	dB
LAIeq		71.3	dB
LAeq		70.2	dB
LAIeq - LAeq		1.1	dB
LASE		99.8	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		30	
OBA Overload Duration		179.7	s

Statistics

LAS5.00	75.5	dBA
LAS10.00	73.4	dBA
LAS33.30	69.0	dBA
LAS50.00	66.6	dBA
LAS66.60	64.8	dBA
LAS90.00	61.4	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.0	12.7	35.3	51.7	59.4	59.7	61.3	65.4	61.9	55.0	48.8	37.4
LASmax	7.0	16.9	42.5	59.0	72.4	76.9	73.9	69.1	63.0	56.1	49.4	37.8
LASmin	7.0	5.0	24.5	37.2	43.2	45.3	47.2	52.4	49.5	40.1	30.5	15.9

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.3	1.5	1.5	3.4	12.1	21.5	30.3	33.4	38.4	45.6	50.2
LASmax	2.8	2.3	1.5	8.1	9.4	15.8	26.5	32.4	41.7	45.2	45.7	58.8
LASmin	2.8	2.3	1.5	1.0	0.1	-0.2	10.7	15.5	22.5	24.9	29.1	35.1

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	55.1	54.8	53.8	53.3	55.5	55.6	55.0	56.2	58.0	60.0	61.1	60.7
LASmax	69.5	70.1	69.1	71.9	74.5	72.9	70.1	68.3	68.7	65.8	64.2	62.5
LASmin	37.5	37.7	37.5	38.3	39.2	40.5	39.7	42.3	44.0	46.1	48.2	48.2

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	59.2	56.6	54.2	52.1	49.8	47.6	46.2	44.0	39.5	34.8	30.7	30.8
LASmax	60.3	57.7	55.6	53.6	50.8	48.6	46.3	45.0	41.5	36.1	31.5	26.3
LASmin	46.7	43.9	40.7	37.9	34.2	31.6	28.2	25.5	19.5	14.8	7.7	0.1

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.005
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Tuesday, 04 August 2015 09:12:23
Stop Time	Tuesday, 04 August 2015 09:27:23
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		66.2	dB
LASmax	04 Aug 2015 09:23:48	82.3	dB
LApeak (max)	04 Aug 2015 09:23:48	98.5	dB
LASmin	04 Aug 2015 09:26:04	55.1	dB
LCSeq		75.9	dB
LASeq		66.2	dB
LCSeq - LASeq		9.7	dB
LAIeq		69.1	dB
LAeq		66.2	dB
LAIeq - LAeq		2.9	dB
LASE		95.7	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		22	
OBA Overload Duration		81.8	s

Statistics

LAS5.00	71.5	dBA
LAS10.00	69.5	dBA
LAS33.30	64.4	dBA
LAS50.00	62.2	dBA
LAS66.60	60.6	dBA
LAS90.00	58.2	dBA

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

Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At Lmax

Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.0	12.3	30.0	48.3	54.3	55.8	59.5	61.7	58.4	52.8	46.3	35.2
LASmax	14.3	17.0	28.8	41.1	49.2	56.4	65.5	80.9	71.3	70.3	61.8	46.2
LASmin	7.0	5.4	24.3	36.8	41.9	42.4	47.8	51.5	46.4	36.5	23.3	8.6

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.3	1.5	1.1	5.6	11.1	17.5	23.2	28.6	37.3	41.7	46.9
LASmax	2.8	2.3	10.1	11.8	12.3	12.1	18.4	22.7	27.3	31.4	35.0	38.4
LASmin	2.8	2.3	1.5	1.0	0.1	3.5	10.6	16.4	22.2	26.8	30.3	33.8

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	49.0	50.0	49.5	49.3	49.2	53.3	56.5	53.2	53.9	56.8	57.7	56.4
LASmax	42.7	44.3	47.4	44.8	45.5	55.9	61.5	58.7	62.3	76.7	78.5	70.6
LASmin	35.3	36.0	37.4	36.9	37.6	37.3	39.5	42.3	43.6	46.8	47.5	45.6

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	54.9	53.7	51.8	49.7	47.9	45.9	43.8	40.9	38.1	33.7	28.4	22.4
LASmax	64.1	66.7	68.6	67.4	66.4	63.3	59.0	57.7	50.9	45.1	38.0	31.3
LASmin	44.0	40.9	37.4	34.3	30.0	26.1	21.5	16.1	12.9	6.1	2.4	0.3

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.006
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Wednesday, 05 August 2015 23:07:19
Stop Time	Wednesday, 05 August 2015 23:22:19
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		68.4	dB
LASmax	05 Aug 2015 23:08:01	80.7	dB
LApeak (max)	05 Aug 2015 23:08:01	95.3	dB
LASmin	05 Aug 2015 23:14:35	45.5	dB
LCSeq		74.2	dB
LASeq		68.4	dB
LCSeq - LASeq		5.8	dB
LAIeq		70.0	dB
LAeq		68.4	dB
LAIeq - LAeq		1.6	dB
LASE		98.0	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		26	
OBA Overload Duration		76.9	s

Statistics

LAS5.00	74.5	dBA
LAS10.00	72.8	dBA
LAS33.30	67.2	dBA
LAS50.00	63.9	dBA
LAS66.60	60.6	dBA
LAS90.00	55.4	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.1	8.8	27.0	44.4	51.4	53.8	59.3	65.4	61.9	53.3	45.4	34.5
LASmax	7.0	14.1	31.1	63.5	65.4	64.7	67.2	71.5	72.4	66.0	59.8	52.1
LASmin	7.0	5.0	17.5	29.3	35.4	35.9	36.8	41.5	36.1	28.5	22.4	13.5

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.3	1.8	1.5	1.8	7.6	18.1	20.1	25.2	33.3	35.9	43.3
LASmax	2.8	2.3	1.5	1.0	5.1	13.7	19.5	24.2	30.5	32.6	40.3	63.5
LASmin	2.8	2.3	1.5	1.0	0.1	-0.6	1.3	8.3	15.3	18.6	23.3	26.8

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	45.8	46.8	47.3	47.7	49.5	49.8	51.4	54.1	56.6	59.7	61.3	60.9
LASmax	65.7	50.9	62.7	59.7	61.5	58.9	60.2	61.9	64.9	65.7	65.9	68.6
LASmin	28.2	28.8	29.6	31.3	30.4	30.8	31.0	31.4	32.6	36.0	34.5	36.7

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	59.4	56.5	53.6	50.7	47.8	45.1	43.0	40.1	36.5	32.3	27.5	26.7
LASmax	68.9	67.9	65.4	62.8	60.6	59.0	56.7	54.5	52.5	50.3	46.1	39.5
LASmin	32.8	30.9	27.6	25.9	23.0	20.8	19.9	16.8	13.6	10.1	8.2	0.3

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.007
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Wednesday, 05 August 2015 23:35:10
Stop Time	Wednesday, 05 August 2015 23:50:10
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		52.5	dB
LASmax	05 Aug 2015 23:13:26	65.2	dB
LApeak (max)	05 Aug 2015 23:27:43	93.1	dB
LASmin	05 Aug 2015 23:16:46	39.1	dB
LCSeq		63.5	dB
LASeq		52.5	dB
LCSeq - LASeq		11.0	dB
LAIeq		54.4	dB
LAeq		52.5	dB
LAIeq - LAeq		1.9	dB
LASE		82.0	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		1	
OBA Overload Duration		2.2	s

Statistics

LAS5.00		59.5	dBA
LAS10.00		56.5	dBA
LAS33.30		48.9	dBA
LAS50.00		45.1	dBA
LAS66.60		42.2	dBA
LAS90.00		40.4	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LAS > 115.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)		0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)		0 / 0.0	s

Settings

RMS Weight		A Weighting	
Peak Weight		A Weighting	
Detector		Slow	
Preamp		PRMLxT1L	
Microphone Correction		Off	
Integration Method		Exponential	
OBA Range		Low	
OBA Bandwidth		1/1 and 1/3	
OBA Freq. Weighting		A Weighting	
OBA Max Spectrum		At Lmax	
Under Range Limit		25.4	dB
Under Range Peak		78.7	dB
Noise Floor		15.1	dB
Overload		122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.0	5.3	19.4	32.0	40.8	43.3	45.5	48.0	44.9	39.7	37.0	22.1
LASmax	7.0	6.4	23.9	38.9	53.4	51.9	60.8	59.6	57.2	53.8	46.7	35.2
LASmin	7.0	5.0	2.1	23.9	32.3	30.4	28.2	27.9	21.6	16.6	32.3	7.5

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.3	1.5	1.1	0.5	1.0	6.3	12.4	18.2	27.3	26.6	27.8
LASmax	2.8	2.3	1.5	1.0	0.1	5.8	12.0	19.1	22.6	31.9	37.0	34.1
LASmin	2.8	2.3	1.5	1.0	0.1	-0.6	-1.9	3.6	9.9	-4.7	-5.1	21.1

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	33.9	37.6	36.0	37.2	38.6	39.5	40.5	40.2	41.0	42.9	43.7	43.6
LASmax	39.2	53.0	46.1	43.7	45.9	49.4	59.3	53.2	54.3	54.6	54.9	55.4
LASmin	24.8	28.2	26.4	26.1	25.4	24.3	23.6	22.9	22.5	23.7	23.3	21.8

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	41.6	39.9	37.9	36.6	34.5	32.6	35.8	29.4	25.8	20.6	15.1	8.2
LASmax	52.8	52.8	51.9	51.0	49.1	46.9	44.3	41.0	38.7	33.8	28.0	20.2
LASmin	19.3	16.0	13.0	9.4	8.0	12.0	32.0	18.1	6.3	5.0	2.1	-2.0

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.008
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Thursday, 06 August 2015 07:02:21
Stop Time	Thursday, 06 August 2015 07:17:21
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		67.8	dB
LASmax	06 Aug 2015 07:12:18	84.9	dB
LApeak (max)	06 Aug 2015 07:12:17	98.8	dB
LASmin	06 Aug 2015 07:05:30	46.4	dB
LCSeq		78.3	dB
LASeq		67.8	dB
LCSeq - LASeq		10.5	dB
LAIeq		69.2	dB
LAeq		67.8	dB
LAIeq - LAeq		1.3	dB
LASE		97.4	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		23	
OBA Overload Duration		126.6	s

Statistics

LAS5.00	72.5	dBA
LAS10.00	70.3	dBA
LAS33.30	65.2	dBA
LAS50.00	62.7	dBA
LAS66.60	60.0	dBA
LAS90.00	54.2	dBA

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

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.0	10.3	32.6	47.6	57.3	59.0	61.5	61.2	58.9	53.6	48.7	40.7
LASmax	7.0	14.6	49.5	61.7	64.4	74.6	78.1	78.1	75.3	70.9	64.2	53.2
LASmin	7.0	5.0	18.7	32.1	36.8	36.5	37.2	37.7	30.9	23.0	15.2	6.6

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.3	1.5	1.0	2.2	9.5	19.3	24.9	31.5	37.7	41.8	45.7
LASmax	2.8	2.3	1.5	1.0	4.8	14.0	34.0	37.8	49.7	59.8	60.2	60.9
LASmin	2.8	2.3	1.5	1.0	0.1	-0.6	5.3	11.7	17.1	20.9	25.8	28.4

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	51.3	53.2	52.9	52.2	53.6	56.0	57.5	56.7	56.0	56.6	56.6	56.1
LASmax	57.3	59.2	62.1	66.8	69.4	72.7	75.0	71.8	72.5	74.2	73.6	72.4
LASmin	31.4	32.3	32.2	31.2	31.8	30.9	29.9	32.2	33.7	33.0	33.6	30.1

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	55.1	54.1	52.9	50.6	48.3	46.7	45.9	43.6	40.9	36.9	38.0	26.3
LASmax	70.8	70.8	69.7	67.9	65.8	63.9	61.5	59.3	55.7	51.7	46.6	39.5
LASmin	29.2	24.3	20.0	18.0	17.3	16.7	11.9	9.0	6.0	3.5	1.8	-1.8

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.009
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Thursday, 06 August 2015 07:33:39
Stop Time	Thursday, 06 August 2015 07:48:39
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		61.5	dB
LASmax	06 Aug 2015 07:35:49	75.1	dB
LApeak (max)	06 Aug 2015 07:46:34	92.2	dB
LASmin	06 Aug 2015 07:42:13	45.5	dB
LCSeq		72.5	dB
LASeq		61.5	dB
LCSeq - LASeq		11.0	dB
LAIeq		63.5	dB
LAeq		61.5	dB
LAIeq - LAeq		2.0	dB
LASE		91.1	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		14	
OBA Overload Duration		36.5	s

Statistics

LAS5.00	67.9	dBA
LAS10.00	65.9	dBA
LAS33.30	60.8	dBA
LAS50.00	56.4	dBA
LAS66.60	52.7	dBA
LAS90.00	49.0	dBA

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

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.0	6.8	31.2	44.5	48.4	50.7	53.8	57.9	54.4	47.0	39.7	32.4
LASmax	7.0	18.1	36.2	51.4	57.1	60.3	65.9	71.7	68.8	58.9	52.8	40.6
LASmin	7.0	5.0	16.4	30.4	35.4	37.7	38.0	37.7	34.3	30.0	20.1	7.9

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.3	1.5	1.0	0.3	5.2	12.0	26.8	29.1	36.7	41.3	40.2
LASmax	2.8	2.3	1.5	1.0	7.3	18.0	22.6	24.4	35.8	35.0	43.4	50.5
LASmin	2.8	2.3	1.5	1.0	0.1	-0.6	1.8	8.0	14.1	18.9	23.0	27.1

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	39.7	44.8	44.9	44.3	46.6	46.6	47.9	48.7	50.2	52.7	53.6	53.3
LASmax	49.0	55.4	49.9	50.6	55.3	58.1	56.4	60.9	63.0	66.4	67.7	67.0
LASmin	28.1	30.1	30.3	31.0	30.6	34.4	31.7	32.3	31.9	32.3	32.7	32.9

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	51.5	49.3	46.6	44.4	41.6	39.2	37.1	34.7	31.0	25.9	31.1	16.2
LASmax	66.4	64.0	59.4	56.1	53.8	51.4	50.2	48.1	43.4	38.8	34.7	27.5
LASmin	30.1	29.3	28.8	26.2	24.6	22.3	18.3	13.5	9.6	5.5	2.5	-1.5

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.010
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Thursday, 06 August 2015 07:55:40
Stop Time	Thursday, 06 August 2015 08:10:40
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		73.1	dB
LASmax	06 Aug 2015 08:07:35	86.9	dB
LApeak (max)	06 Aug 2015 08:07:35	102.2	dB
LASmin	06 Aug 2015 08:04:40	57.1	dB
LCSeq		83.3	dB
LASeq		73.1	dB
LCSeq - LASeq		10.2	dB
LAIeq		74.8	dB
LAeq		73.1	dB
LAIeq - LAeq		1.7	dB
LASE		102.6	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		52	
OBA Overload Duration		502.7	s

Statistics

LAS5.00	78.2	dBA
LAS10.00	76.7	dBA
LAS33.30	72.8	dBA
LAS50.00	70.3	dBA
LAS66.60	68.6	dBA
LAS90.00	63.5	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	1 / 1.9	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.0	18.8	40.8	54.0	61.3	63.1	65.4	68.6	64.1	57.7	50.1	45.7
LASmax	7.0	14.5	36.9	57.2	67.7	77.9	73.9	75.0	68.2	60.7	54.4	40.3
LASmin	7.0	7.9	29.9	40.0	46.1	48.3	48.5	51.4	48.2	42.7	33.5	20.2

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.3	1.5	2.1	7.8	18.6	24.5	30.8	40.3	42.0	47.7	52.4
LASmax	2.8	2.3	1.5	1.0	4.1	14.0	18.1	31.0	35.3	41.9	41.5	56.6
LASmin	2.8	2.3	1.5	1.0	0.1	5.8	12.7	20.8	26.7	29.4	32.2	36.6

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	53.8	57.5	57.5	58.7	58.1	58.1	61.0	60.2	60.9	63.7	64.4	63.4
LASmax	65.6	57.4	67.0	76.9	67.5	69.4	69.2	67.9	69.9	72.2	70.2	68.5
LASmin	40.0	41.3	40.3	42.2	42.5	43.7	42.0	43.5	44.4	46.7	46.4	46.3

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	61.0	58.9	56.9	55.0	52.5	50.0	47.5	45.0	41.1	38.3	44.6	26.1
LASmax	65.6	62.7	60.0	57.2	55.9	54.3	52.4	48.8	43.9	38.5	33.7	29.8
LASmin	44.5	43.0	42.1	39.9	36.8	34.3	30.7	28.4	23.4	18.7	11.8	3.4

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.011
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Thursday, 06 August 2015 08:21:27
Stop Time	Thursday, 06 August 2015 08:36:27
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		73.8	dB
LASmax	06 Aug 2015 08:32:41	89.4	dB
LApeak (max)	06 Aug 2015 08:32:40	104.8	dB
LASmin	06 Aug 2015 08:34:42	60.5	dB
LCSeq		82.5	dB
LASeq		73.8	dB
LCSeq - LASeq		8.7	dB
LAIeq		75.6	dB
LAeq		73.8	dB
LAIeq - LAeq		1.8	dB
LASE		103.4	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		64	
OBA Overload Duration		473.0	s

Statistics

LAS5.00	78.4	dBA
LAS10.00	75.9	dBA
LAS33.30	72.8	dBA
LAS50.00	71.3	dBA
LAS66.60	70.1	dBA
LAS90.00	67.0	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	4 / 8.6	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.0	16.3	37.5	52.8	61.2	63.0	65.2	68.6	65.5	59.6	62.2	48.3
LASmax	7.0	17.6	35.8	58.2	74.8	75.2	77.4	74.3	69.1	63.3	56.6	49.1
LASmin	7.0	5.9	28.7	18.3	36.3	-4.0	-4.7	-4.1	-2.6	-0.9	0.4	1.9

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.3	1.5	2.0	6.6	15.8	22.7	30.1	36.5	40.2	47.9	50.7
LASmax	2.8	2.3	1.5	1.0	1.7	17.4	24.5	32.2	32.1	41.8	55.6	56.7
LASmin	2.8	2.3	1.5	1.0	0.1	5.2	12.0	17.7	27.5	29.6	35.3	30.8

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	54.1	56.8	57.7	57.2	57.9	59.4	59.3	60.2	61.5	63.4	64.5	63.7
LASmax	60.6	67.3	74.7	72.4	69.0	71.2	73.1	72.9	72.9	70.8	69.1	67.9
LASmin	28.5	41.5	30.5	10.6	18.6	2.1	-9.4	-9.5	-9.5	-9.2	-9.0	-8.5

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	62.2	60.7	58.4	56.6	54.3	52.5	61.5	53.5	47.0	45.1	44.1	39.5
LASmax	66.2	64.1	62.1	60.4	58.5	55.5	53.6	51.8	49.3	47.5	43.1	35.9
LASmin	-8.0	-7.4	-6.9	-6.2	-5.7	-5.2	-4.8	-4.4	-4.0	-3.2	-2.8	-2.5

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.012
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Thursday, 06 August 2015 08:47:46
Stop Time	Thursday, 06 August 2015 09:02:46
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		69.4	dB
LASmax	06 Aug 2015 09:01:45	82.5	dB
LApeak (max)	06 Aug 2015 09:02:07	103.2	dB
LASmin	06 Aug 2015 08:52:07	54.3	dB
LCSeq		81.3	dB
LASeq		69.4	dB
LCSeq - LASeq		12.0	dB
LAIeq		71.6	dB
LAeq		69.4	dB
LAIeq - LAeq		2.2	dB
LASE		98.9	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		24	
OBA Overload Duration		182.9	s

Statistics

LAS5.00	75.2	dBA
LAS10.00	72.2	dBA
LAS33.30	66.9	dBA
LAS50.00	65.5	dBA
LAS66.60	64.2	dBA
LAS90.00	61.7	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.0	10.4	34.3	51.1	60.7	60.4	61.4	62.5	60.6	56.9	52.7	46.6
LASmax	7.0	10.9	33.3	65.5	72.6	68.9	68.6	70.4	68.5	64.8	58.3	49.3
LASmin	7.0	5.0	20.5	34.2	41.6	44.0	44.8	50.3	48.2	39.1	36.0	29.4

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.3	1.5	1.1	1.9	9.6	20.3	28.9	32.6	37.9	45.0	49.6
LASmax	2.8	2.3	1.5	1.0	5.1	9.2	19.7	30.7	31.0	39.4	45.4	65.2
LASmin	2.8	2.3	1.5	1.0	0.1	-0.6	8.1	12.3	18.6	24.9	26.4	31.6

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	55.4	56.0	56.5	55.4	55.4	56.1	56.5	56.1	57.3	57.7	57.9	57.7
LASmax	72.5	57.2	56.9	59.3	60.1	67.7	62.4	64.5	64.6	64.8	65.6	66.6
LASmin	35.6	37.1	35.6	37.2	38.8	39.4	39.0	39.9	40.1	43.2	46.4	46.3

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	56.0	54.7	56.5	53.4	51.6	50.4	49.4	48.3	45.0	45.2	40.0	37.3
LASmax	64.0	64.0	63.3	61.8	60.1	57.5	55.5	53.4	50.2	48.6	40.9	35.6
LASmin	45.8	42.6	39.1	35.6	33.7	33.1	32.3	31.5	29.6	27.4	23.7	17.0

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.013
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Thursday, 06 August 2015 09:11:37
Stop Time	Thursday, 06 August 2015 09:26:37
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		63.1	dB
LASmax	06 Aug 2015 09:21:00	82.0	dB
LApeak (max)	06 Aug 2015 09:19:55	99.7	dB
LASmin	06 Aug 2015 09:15:01	42.3	dB
LCSeq		80.3	dB
LASeq		63.1	dB
LCSeq - LASeq		17.2	dB
LAIeq		66.4	dB
LAeq		63.1	dB
LAIeq - LAeq		3.3	dB
LASE		92.7	dB
# Overloads		1	
Overload Duration		3.1	s
# OBA Overloads		23	
OBA Overload Duration		97.6	s

Statistics

LAS5.00	68.9	dBA
LAS10.00	66.4	dBA
LAS33.30	59.7	dBA
LAS50.00	56.3	dBA
LAS66.60	52.3	dBA
LAS90.00	44.5	dBA

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

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.2	12.1	31.4	45.0	50.1	51.9	53.5	57.0	56.5	52.1	55.0	42.4
LASmax	7.0	25.9	41.4	52.6	59.4	62.2	62.1	66.5	63.9	66.1	81.3	62.0
LASmin	7.0	5.0	16.4	29.3	34.3	34.4	-4.7	27.2	32.6	27.4	0.4	1.9

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.4	2.3	2.5	5.0	10.9	23.5	24.1	29.5	34.7	40.9	42.2
LASmax	2.8	2.3	1.5	1.0	11.0	24.2	36.3	35.4	38.5	45.6	47.4	50.8
LASmin	2.8	2.3	1.5	1.0	0.1	-0.6	3.9	9.9	13.2	19.2	24.5	25.6

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	46.8	44.3	44.7	47.0	46.8	47.5	48.1	48.4	49.5	50.6	52.0	53.7
LASmax	56.6	55.5	53.8	56.8	57.4	58.0	58.1	55.8	58.5	60.4	62.1	62.9
LASmin	27.5	29.4	29.6	29.6	29.0	27.4	27.6	28.7	18.6	-9.2	-9.0	-8.5

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	52.7	51.1	51.0	49.6	46.0	45.2	44.9	54.4	41.7	39.6	37.9	32.4
LASmax	57.7	60.5	58.6	59.1	61.6	62.3	66.3	81.2	61.7	55.7	60.2	52.4
LASmin	-3.5	19.0	24.7	24.0	20.9	20.8	20.6	18.8	-4.0	-3.2	-2.8	-2.5

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.014
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Thursday, 06 August 2015 09:43:30
Stop Time	Thursday, 06 August 2015 09:58:30
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		74.1	dB
LASmax	06 Aug 2015 09:52:59	93.9	dB
LApeak (max)	06 Aug 2015 09:52:59	118.0	dB
LASmin	06 Aug 2015 09:44:19	53.9	dB
LCSeq		80.4	dB
LASeq		74.1	dB
LCSeq - LASeq		6.3	dB
LAIeq		78.9	dB
LAeq		74.1	dB
LAIeq - LAeq		4.8	dB
LASE		103.6	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		38	
OBA Overload Duration		172.5	s

Statistics

LAS5.00	76.8	dBA
LAS10.00	75.5	dBA
LAS33.30	72.2	dBA
LAS50.00	70.5	dBA
LAS66.60	68.7	dBA
LAS90.00	61.8	dBA

LAS > 85.0 dB (Exceedence Counts / Duration)	2 / 9.1	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.1	10.1	32.7	48.0	55.8	60.7	64.3	69.1	65.5	58.2	53.8	48.0
LASmax	13.6	19.5	40.8	66.0	71.5	72.3	73.6	74.4	72.7	75.6	77.0	72.6
LASmin	7.0	5.0	20.9	33.7	42.3	45.5	47.8	48.4	45.0	38.0	31.6	15.5

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.9	2.5	1.6	1.2	3.1	9.0	18.8	29.9	29.0	39.0	42.2	45.8
LASmax	2.8	2.3	8.1	11.1	14.9	16.3	25.3	36.6	39.5	50.5	62.2	65.6
LASmin	2.8	2.3	1.5	1.0	0.1	-0.6	7.0	14.2	18.1	21.7	27.9	30.9

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	50.6	49.6	52.6	55.1	56.4	56.0	57.2	58.6	61.6	63.6	64.9	64.3
LASmax	66.3	60.6	70.9	66.5	67.2	66.7	68.3	69.5	69.2	69.1	70.5	69.4
LASmin	33.2	36.3	37.8	37.8	39.2	43.0	42.9	42.8	42.4	44.0	42.9	43.4

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	62.8	60.4	57.5	55.1	52.9	51.4	50.2	49.0	47.5	46.2	41.6	37.8
LASmax	67.7	67.6	68.9	70.5	70.6	71.7	72.1	72.6	72.2	70.0	67.6	63.6
LASmin	42.1	38.8	37.3	35.2	32.5	30.8	29.3	26.4	21.2	14.2	6.5	0.7

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

General Information

Serial Number	03790
Model	SoundExpert™ LxT
Firmware Version	2.206
Filename	CM_Data.015
User	Olivia Chan
Job Description	Costa Mesa GP Update
Location	Costa Mesa
Measurement Description	Costa Mesa Ambient Noise
Start Time	Thursday, 06 August 2015 10:24:59
Stop Time	Thursday, 06 August 2015 10:39:59
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre Calibration	Tuesday, 14 July 2015 08:29:53
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LASeq		69.3	dB
LASmax	06 Aug 2015 10:39:56	85.5	dB
LApeak (max)	06 Aug 2015 10:31:54	105.4	dB
LASmin	06 Aug 2015 10:30:39	56.2	dB
LCSeq		80.1	dB
LASeq		69.3	dB
LCSeq - LASeq		10.7	dB
LAIeq		71.8	dB
LAeq		69.4	dB
LAIeq - LAeq		2.5	dB
LASE		98.9	dB
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		35	
OBA Overload Duration		180.6	s

Statistics

LAS5.00	74.5	dBA
LAS10.00	72.6	dBA
LAS33.30	67.9	dBA
LAS50.00	65.6	dBA
LAS66.60	63.1	dBA
LAS90.00	59.5	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	1 / 1.7	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0	s

Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
OBA Range	Low	
OBA Bandwidth	1/1 and 1/3	
OBA Freq. Weighting	A Weighting	
OBA Max Spectrum	At Lmax	
Under Range Limit	25.4	dB
Under Range Peak	78.7	dB
Noise Floor	15.1	dB
Overload	122.5	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LASeq	7.0	14.4	33.7	51.1	58.7	59.4	60.9	63.8	60.7	55.7	50.8	42.2
LASmax	7.0	21.0	40.6	65.6	69.9	73.8	71.3	69.3	65.8	65.9	59.9	49.7
LASmin	7.0	5.2	23.7	37.6	44.8	47.2	48.2	51.3	46.0	39.0	28.2	10.0

1/3 Spectra

Freq. (Hz):	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0
LASeq	2.8	2.3	1.5	1.6	7.5	13.4	19.7	25.9	32.8	37.3	45.1	49.6
LASmax	2.8	2.3	1.5	1.0	13.0	21.9	24.4	30.5	40.1	45.8	58.3	65.1
LASmin	2.8	2.3	1.5	1.0	0.1	2.6	9.3	17.0	21.0	26.5	30.5	33.9

Freq. (Hz):	100	125	160	200	250	315	400	500	630	800	1k	1.25k
LASeq	52.6	55.5	53.5	53.6	55.5	54.8	55.5	56.0	56.9	58.5	59.6	59.0
LASmax	65.5	66.1	66.0	69.8	70.2	66.1	66.7	67.3	66.4	64.6	65.2	64.1
LASmin	37.4	39.1	40.4	41.1	41.8	41.9	42.5	43.2	43.8	45.6	47.1	45.5

Freq. (Hz):	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
LASeq	57.2	56.0	54.2	52.7	50.7	48.2	47.4	46.7	43.0	41.4	34.1	24.4
LASmax	61.6	60.1	61.8	63.6	60.2	58.0	57.4	55.0	51.8	47.9	43.1	38.6
LASmin	43.1	40.3	37.8	35.7	34.0	31.3	26.8	21.1	15.3	8.3	2.7	-1.6

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT1L	14 Jul 2015 08:29:53	-28.8
PRMLxT1L	30 Jan 2014 00:00:58	-28.0
PRMLxT1L	13 Sep 2014 10:03:02	-27.2
PRMLxT1L	13 Aug 2014 07:59:24	-28.6
PRMLxT1L	21 Jul 2014 14:19:41	-28.1
PRMLxT1L	08 May 2014 10:49:07	-28.1
PRMLxT1L	07 Oct 2013 00:47:30	-28.3
PRMLxT1L	07 Oct 2013 00:06:24	-26.4

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MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Adams w/o Placentia
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.6	0	77.6	0	Snd Lvl	77.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Adams e/o Placentia
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.5	0	77.5	0	Snd Lvl	77.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Adams btwn Mesa Verde E & Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	80.3	0	80.3	0	Snd Lvl	80.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Adams btwn Harbor & Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.1	0	79.1	0	Snd Lvl	79.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Anaheim btwn 19th & Superior
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.8	0	68.8	0	Snd Lvl	68.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Anton btwn Bristol & Sunflower
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.2	0	76.2	0	Snd Lvl	76.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Arlington e/o Fairview
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.7	0	66.7	0	Snd Lvl	66.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Ave of the Arts n/o Anton
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.0	0	68.0	0	Snd Lvl	68.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Baker btwn Mesa Verde & Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.3	0	73.3	0	Snd Lvl	73.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Baker btwn Harbor & Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.0	0	76.0	0	Snd Lvl	76.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Baker e/o Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.4	0	77.4	0	Snd Lvl	77.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Baker btwn Coolidge & Bear
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.6	0	77.6	0	Snd Lvl	77.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Baker w/o Randolph
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.4	0	73.4	0	Snd Lvl	73.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Baker w/o SR-55
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.0	0	74.0	0	Snd Lvl	74.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Baker w/o Pullman
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.0	0	72.0	0	Snd Lvl	72.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Baker e/o Pullman
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.4	0	71.4	0	Snd Lvl	71.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bay e/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.4	0	64.4	0	Snd Lvl	64.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bay e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Bear s/o Sunflower
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.0	0	79.0	0	Snd Lvl	79.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Bear n/o Paularino
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.0	0	75.0	0	Snd Lvl	75.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS

16 February 2016
TNM 2.5
Calculated with TNM 2.5

PROJECT/CONTRACT:	Costa Mesa
RUN:	Bristol btwn Sunflower & Anton
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	81.0	0	81.0	0	Snd Lvl	81.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS

16 February 2016
TNM 2.5
Calculated with TNM 2.5

PROJECT/CONTRACT:	Costa Mesa
RUN:	Bristol btwn Anton & Paularino
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	81.7	0	81.7	0	Snd Lvl	81.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bristol n/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.1	0	76.1	0	Snd Lvl	76.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bristol n/o Bear
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.0	0	75.0	0	Snd Lvl	75.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bristol s/o Bear
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.5	0	75.5	0	Snd Lvl	75.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bristol btwn Newport & Redhill
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.7	0	78.7	0	Snd Lvl	78.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Canyon n/o Victoria
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.2	0	63.2	0	Snd Lvl	63.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Country Club n/o Mesa Verde
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.4	0	64.4	0	Snd Lvl	64.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Del Mar w/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.4	0	70.4	0	Snd Lvl	70.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Del Mar w/o Santa Ana
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.3	0	67.3	0	Snd Lvl	67.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Del Mar/University w/o Irvine
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.3	0	67.3	0	Snd Lvl	67.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: El Camino btwn Fairview & Mendoza
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.2	0	69.2	0	Snd Lvl	69.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Elden n/o 22nd
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	61.5	0	61.5	0	Snd Lvl	61.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG'

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Fair e/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.6	0	71.6	0	Snd Lvl	71.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Fair btwn Fairview & Newport
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.2	0	77.2	0	Snd Lvl	77.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Fairview n/o South Coast
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.8	0	77.8	0	Snd Lvl	77.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Fairview s/o South Coast
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.3	0	79.3	0	Snd Lvl	79.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Fairview s/o I-405
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.1	0	78.1	0	Snd Lvl	78.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Fairview s/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.3	0	78.3	0	Snd Lvl	78.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Fairview btwn Adams & Fair
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.2	0	79.2	0	Snd Lvl	79.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Fairview n/o Wilson
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.8	0	72.8	0	Snd Lvl	72.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Fairview s/o Wilson
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.1	0	72.1	0	Snd Lvl	72.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Gisler w/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.2	0	70.2	0	Snd Lvl	70.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Hamilton btwn Placentia & Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.9	0	68.9	0	Snd Lvl	68.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS

16 February 2016
TNM 2.5
Calculated with TNM 2.5

PROJECT/CONTRACT:	Costa Mesa
RUN:	Harbor n/o Sunflower
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.1	0	78.1	0	Snd Lvl	78.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS

16 February 2016
TNM 2.5
Calculated with TNM 2.5

PROJECT/CONTRACT:	Costa Mesa
RUN:	Harbor n/o South Coast
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.5	0	78.5	0	Snd Lvl	78.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 Feet	11	1	0.0	79.4	0	79.4	0	Snd Lvl	79.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.2	0	79.2	0	Snd Lvl	79.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.9	0	78.9	0	Snd Lvl	78.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor btwn Adams & Fair
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	81.2	0	81.2	0	Snd Lvl	81.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Wilson
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.7	0	77.7	0	Snd Lvl	77.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Victoria
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.4	0	77.4	0	Snd Lvl	77.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Bay
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.8	0	75.8	0	Snd Lvl	75.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.9	0	75.9	0	Snd Lvl	75.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor s/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.8	0	73.8	0	Snd Lvl	73.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Hyland s/o MacArthur
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.3	0	70.3	0	Snd Lvl	70.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Hyland s/o Scenic
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.9	0	68.9	0	Snd Lvl	68.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Hyland s/o Sunflower
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.9	0	68.9	0	Snd Lvl	68.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Industrial w/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.0	0	65.0	0	Snd Lvl	65.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Irvine btwn Bristol & Mesa
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.4	0	77.4	0	Snd Lvl	77.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Irvine n/o University
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.6	0	74.6	0	Snd Lvl	74.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Irvine n/o 22nd
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.2	0	75.2	0	Snd Lvl	75.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Irvine n/o 22nd
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.1	0	78.1	0	Snd Lvl	78.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Irvine n/o 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.7	0	73.7	0	Snd Lvl	73.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Irvine n/o 16th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.0	0	71.0	0	Snd Lvl	71.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: MacArthur w/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.3	0	75.3	0	Snd Lvl	75.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Merrimac btwn Harbor & Fairview
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.7	0	73.7	0	Snd Lvl	73.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Mesa w/o Orange
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.0	0	68.0	0	Snd Lvl	68.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Mesa e/o Santa Ana
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.9	0	67.9	0	Snd Lvl	67.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	MesaVerdeW btwnAdams&CountryClub
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.2	0	72.2	0	Snd Lvl	72.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG'

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Mesa Verde E n/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.4	0	66.4	0	Snd Lvl	66.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Mesa Verde E n/o Adams
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.4	0	68.4	0	Snd Lvl	68.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Mesa Verde E btwn Adams & Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.9	0	73.9	0	Snd Lvl	73.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Monrovia btwn 19th & 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.2	0	69.2	0	Snd Lvl	69.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport SB n/o Mesa
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.8	0	75.8	0	Snd Lvl	75.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport SB n/o Fair/Del Mar
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.3	0	75.3	0	Snd Lvl	75.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport SB n/o Santa Isabel
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.7	0	71.7	0	Snd Lvl	71.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport SB n/o Victoria
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.4	0	76.4	0	Snd Lvl	76.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport SB s/o Victoria
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.1	0	72.1	0	Snd Lvl	72.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport SB s/o Ford
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.4	0	70.4	0	Snd Lvl	70.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Newport NB n/o Mesa
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.0	0	70.0	0	Snd Lvl	70.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Newport NB n/o Fair/Del Mar
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.3	0	75.3	0	Snd Lvl	75.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport NB n/o Santa Isabel
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.8	0	72.8	0	Snd Lvl	72.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport NB n/o 22nd
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.1	0	76.1	0	Snd Lvl	76.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport NB s/o 22nd
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.8	0	72.8	0	Snd Lvl	72.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport NB s/o 20th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.0	0	71.0	0	Snd Lvl	71.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport btwn 19th & 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	83.3	0	83.3	0	Snd Lvl	83.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport n/o Industrial
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.7	0	78.7	0	Snd Lvl	78.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Ogle e/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	61.2	0	61.2	0	Snd Lvl	61.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o Del Mar
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	61.2	0	61.2	0	Snd Lvl	61.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o Santa Isabel
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.0	0	63.0	0	Snd Lvl	63.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o 22nd
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.2	0	64.2	0	Snd Lvl	64.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o 21st
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.7	0	66.7	0	Snd Lvl	66.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.0	0	69.0	0	Snd Lvl	69.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o 16th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.3	0	67.3	0	Snd Lvl	67.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o 15th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Park s/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Paularino e/o Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.2	0	66.2	0	Snd Lvl	66.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Paularino e/o Bear
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.4	0	67.4	0	Snd Lvl	67.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Paularino e/o Bristol
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.7	0	72.7	0	Snd Lvl	72.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Paularino w/o Redhill
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.2	0	71.2	0	Snd Lvl	71.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Placentia btwn Adams & Wilson
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.3	0	74.3	0	Snd Lvl	74.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o Victoria
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.5	0	72.5	0	Snd Lvl	72.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o Hamilton
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.3	0	74.3	0	Snd Lvl	74.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Placentia s/o Hamilton
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.5	0	74.5	0	Snd Lvl	74.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Placentia s/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.3	0	74.3	0	Snd Lvl	74.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.8	0	72.8	0	Snd Lvl	72.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o 16th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.2	0	72.2	0	Snd Lvl	72.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o Victoria
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.5	0	66.5	0	Snd Lvl	66.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o Hamilton
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.8	0	66.8	0	Snd Lvl	66.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.9	0	66.9	0	Snd Lvl	66.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Pomona n/o 18th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.7	0	66.7	0	Snd Lvl	66.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Pomona btwn 18th & 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.0	0	70.0	0	Snd Lvl	70.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Red Hill n/o Airport Loop
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.9	0	72.9	0	Snd Lvl	72.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Red Hill n/o Paularino
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.4	0	73.4	0	Snd Lvl	73.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Red Hill n/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.8	0	72.8	0	Snd Lvl	72.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Red Hill n/o Kalmus
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.4	0	72.4	0	Snd Lvl	72.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Red Hill n/o Bristol
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.4	0	73.4	0	Snd Lvl	73.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sakioka n/o Anton
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.3	0	68.3	0	Snd Lvl	68.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana s/o Bristol
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.4	0	68.4	0	Snd Lvl	68.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o Del Mar/University
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.7	0	66.7	0	Snd Lvl	66.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o Santa Isabel
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o 22nd
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

17 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS

16 February 2016
TNM 2.5
Calculated with TNM 2.5

PROJECT/CONTRACT:	Costa Mesa
RUN:	Santa Ana n/o 21st
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS

16 February 2016
TNM 2.5
Calculated with TNM 2.5

PROJECT/CONTRACT:	Costa Mesa
RUN:	Santa Ana n/o 19th
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.3	0	67.3	0	Snd Lvl	67.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o 16th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o 15th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Isabel e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.5	0	65.5	0	Snd Lvl	65.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Isabel e/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.3	0	64.3	0	Snd Lvl	64.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: South Coast w/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.9	0	70.9	0	Snd Lvl	70.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: South Coast e/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.3	0	71.3	0	Snd Lvl	71.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: South Coast w/o Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.7	0	71.7	0	Snd Lvl	71.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: South Coast btwn Wimbledon & Bear
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.8	0	75.8	0	Snd Lvl	75.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower btwn Hyland & Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.3	0	71.3	0	Snd Lvl	71.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower btwn Harbor & Susan
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.7	0	74.7	0	Snd Lvl	74.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower w/o Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

17 February 2016
TNM 2.5
Calculated with TNM 2.5
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver

Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.9	0	72.9	0	Snd Lvl	72.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower w/o Fuschia/Raitt
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.2	0	73.2	0	Snd Lvl	73.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower w/o Bristol
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.5	0	76.5	0	Snd Lvl	76.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower e/o Bristol
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.6	0	75.6	0	Snd Lvl	75.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower w/o Anton
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.3	0	74.3	0	Snd Lvl	74.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower w/o Main
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.8	0	74.8	0	Snd Lvl	74.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Superior bwtn Anaheim & 16th/Industrial
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.6	0	75.6	0	Snd Lvl	75.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Tustin n/o 21st
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.0	0	63.0	0	Snd Lvl	63.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Tustin n/o 20th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	61.2	0	61.2	0	Snd Lvl	61.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Tustin n/o 19th
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.2	0	64.2	0	Snd Lvl	64.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Tustin n/o 17th
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Tustin n/o 16th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.7	0	66.7	0	Snd Lvl	66.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Victoria w/o Pacific
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.2	0	75.2	0	Snd Lvl	75.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Victoria w/o National
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated		Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.1	0	75.1	0	Snd Lvl	75.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Victoria w/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc		Calculated		Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.3	0	75.3	0	Snd Lvl	75.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Victoria e/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.8	0	74.8	0	Snd Lvl	74.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Victoria e/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.9	0	74.9	0	Snd Lvl	74.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Victoria w/o Harbor
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.6	0	75.6	0	Snd Lvl	75.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Victoria e/o College
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.1	0	75.1	0	Snd Lvl	75.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Wilson w/o Placentia
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.2	0	68.2	0	Snd Lvl	68.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Wilson e/o Placentia
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.3	0	70.3	0	Snd Lvl	70.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Wilson btwn Pomona & Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.7	0	74.7	0	Snd Lvl	74.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Wilson e/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.0	0	72.0	0	Snd Lvl	72.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS

16 February 2016
TNM 2.5
Calculated with TNM 2.5

PROJECT/CONTRACT:	Costa Mesa
RUN:	Wilson e/o Fairview
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.2	0	70.2	0	Snd Lvl	70.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS

16 February 2016
TNM 2.5
Calculated with TNM 2.5

PROJECT/CONTRACT:	Costa Mesa
RUN:	Wilson e/o Newport
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.3	0	67.3	0	Snd Lvl	67.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 15th e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	61.1	0	61.1	0	Snd Lvl	61.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 16th e/o Monrovia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.2	0	64.2	0	Snd Lvl	64.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W. 16th e/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 16th w/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	60.9	0	60.9	0	Snd Lvl	60.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 16th e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.3	0	63.3	0	Snd Lvl	63.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 16th e/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.0	0	63.0	0	Snd Lvl	63.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	16th Pl e/o Santa Ana
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.0	0	63.0	0	Snd Lvl	63.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	16th Pl e/o Tustin
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.0	0	63.0	0	Snd Lvl	63.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS

16 February 2016
TNM 2.5
Calculated with TNM 2.5

PROJECT/CONTRACT: Costa Mesa
RUN: W 17th e/o Monrovia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.8	0	64.8	0	Snd Lvl	64.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS

16 February 2016
TNM 2.5
Calculated with TNM 2.5

PROJECT/CONTRACT: Costa Mesa
RUN: W 17th w/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.2	0	66.2	0	Snd Lvl	66.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	W 17th btwn Placentia & Pomona
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.0	0	71.0	0	Snd Lvl	71.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	17th w/o Orange
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.8	0	76.8	0	Snd Lvl	76.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: 17th w/o Westminster
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.4	0	74.4	0	Snd Lvl	74.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: 17th w/o Santa Ana
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.2	0	74.2	0	Snd Lvl	74.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 17th e/o Santa Ana
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.8	0	74.8	0	Snd Lvl	74.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 17th w/o Irvine
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.3	0	74.3	0	Snd Lvl	74.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: W 18th e/o Monrovia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: W 18th e/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.7	0	66.7	0	Snd Lvl	66.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 18th w/o Anaheim
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.2	0	68.2	0	Snd Lvl	68.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 18th w/o Park
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.2	0	68.2	0	Snd Lvl	68.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 19th e/o Monrovia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.6	0	70.6	0	Snd Lvl	70.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 19th e/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.1	0	73.1	0	Snd Lvl	73.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 19th w/o Park
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.1	0	76.1	0	Snd Lvl	76.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 19th e/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.1	0	76.1	0	Snd Lvl	76.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	19th e/o Newport
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.8	0	69.8	0	Snd Lvl	69.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	19th w/o Orange
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.2	0	68.2	0	Snd Lvl	68.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: 19th e/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.3	0	67.3	0	Snd Lvl	67.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: 19th e/o Santa Ana
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 19th w/o Irvine
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 20th e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

16 February 2016
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.5	0	64.5	0	Snd Lvl	64.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 20th e/o Tustin
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.0	0	63.0	0	Snd Lvl	63.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 21st e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.2	0	63.2	0	Snd Lvl	63.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 21st w/o Irvine
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	61.2	0	61.2	0	Snd Lvl	61.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 22nd e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.2	0	68.2	0	Snd Lvl	68.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 22nd e/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.7	0	66.7	0	Snd Lvl	66.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 22nd e/o Santa Ana
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 22nd/Santiago w/o Irvine
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

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MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Adams w/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.3	0	78.3	0	Snd Lvl	78.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Adams e/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.0	0	78.0	0	Snd Lvl	78.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Adams btwn Mesa Verde E & Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	80.8	0	80.8	0	Snd Lvl	80.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Adams btwn Harbor & Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.7	0	79.7	0	Snd Lvl	79.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Anaheim btwn 19th & Superior
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.6	0	69.6	0	Snd Lvl	69.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Anton btwn Bristol & Sunflower
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.0	0	78.0	0	Snd Lvl	78.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Arlington e/o Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.2	0	68.2	0	Snd Lvl	68.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Ave of the Arts n/o Anton
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.1	0	69.1	0	Snd Lvl	69.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Baker btwn Mesa Verde & Harbor
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.9	0	73.9	0	Snd Lvl	73.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 16 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Baker btwn Harbor & Fairview
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.8	0	76.8	0	Snd Lvl	76.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Baker e/o Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.3	0	75.3	0	Snd Lvl	75.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
16 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Baker btwn Coolidge & Bear
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.6	0	78.6	0	Snd Lvl	78.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Baker w/o Randolph
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.2	0	75.2	0	Snd Lvl	75.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Baker w/o SR-55
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.6	0	75.6	0	Snd Lvl	75.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Baker w/o Pullman
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.1	0	73.1	0	Snd Lvl	73.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Baker e/o Pullman
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.6	0	72.6	0	Snd Lvl	72.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bay e/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.4	0	65.4	0	Snd Lvl	65.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bay e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Bear s/o Sunflower
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.7	0	79.7	0	Snd Lvl	79.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Bear n/o Paularino
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.7	0	75.7	0	Snd Lvl	75.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bristol btwn Sunflower & Anton
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	81.6	0	81.6	0	Snd Lvl	81.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bristol btwn Anton & Paularino
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	82.7	0	82.7	0	Snd Lvl	82.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bristol n/o Baker
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.2	0	77.2	0	Snd Lvl	77.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bristol n/o Bear
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.4	0	76.4	0	Snd Lvl	76.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bristol s/o Bear
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.8	0	76.8	0	Snd Lvl	76.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Bristol btwn Newport & Redhill
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.6	0	79.6	0	Snd Lvl	79.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Canyon n/o Victoria
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.5	0	64.5	0	Snd Lvl	64.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Country Club n/o Mesa Verde
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.4	0	64.4	0	Snd Lvl	64.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

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17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Del Mar w/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.1	0	72.1	0	Snd Lvl	72.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
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17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Del Mar w/o Santa Ana
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.3	0	70.3	0	Snd Lvl	70.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
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17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Del Mar/University w/o Irvine
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.5	0	69.5	0	Snd Lvl	69.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

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17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: El Camino btwn Fairview & Mendoza
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.1	0	70.1	0	Snd Lvl	70.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Elden n/o 22nd
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	61.5	0	61.5	0	Snd Lvl	61.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG' TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Fair e/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.9	0	71.9	0	Snd Lvl	71.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

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17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Fair btwn Fairview & Newport
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.8	0	77.8	0	Snd Lvl	77.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

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17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Fairview n/o South Coast
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.3	0	78.3	0	Snd Lvl	78.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Fairview s/o South Coast
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.8	0	79.8	0	Snd Lvl	79.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Fairview s/o I-405
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.9	0	78.9	0	Snd Lvl	78.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Fairview s/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.3	0	79.3	0	Snd Lvl	79.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Fairview btwn Adams & Fair
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	80.5	0	80.5	0	Snd Lvl	80.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Fairview n/o Wilson
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.5	0	74.5	0	Snd Lvl	74.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Fairview s/o Wilson
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.9	0	73.9	0	Snd Lvl	73.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Gisler w/o Harbor
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.6	0	70.6	0	Snd Lvl	70.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Hamilton btwn Placentia & Harbor
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.3	0	69.3	0	Snd Lvl	69.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Sunflower
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.7	0	78.7	0	Snd Lvl	78.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o South Coast
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.1	0	79.1	0	Snd Lvl	79.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 Feet	11	1	0.0	80.1	0	80.1	0	Snd Lvl	80.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.9	0	79.9	0	Snd Lvl	79.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	79.7	0	79.7	0	Snd Lvl	79.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor btwn Adams & Fair
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	82.0	0	82.0	0	Snd Lvl	82.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Wilson
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.5	0	78.5	0	Snd Lvl	78.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Victoria
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.9	0	77.9	0	Snd Lvl	77.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o Bay
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.5	0	76.5	0	Snd Lvl	76.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor n/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.9	0	76.9	0	Snd Lvl	76.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Harbor s/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.4	0	74.4	0	Snd Lvl	74.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Hyland s/o MacArthur
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.7	0	70.7	0	Snd Lvl	70.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Hyland s/o Scenic
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.5	0	69.5	0	Snd Lvl	69.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Hyland s/o Sunflower
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.0	0	70.0	0	Snd Lvl	70.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Industrial w/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.8	0	65.8	0	Snd Lvl	65.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Irvine btwn Bristol & Mesa
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.8	0	77.8	0	Snd Lvl	77.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Irvine n/o University
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.2	0	75.2	0	Snd Lvl	75.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Irvine n/o 22nd
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.3	0	75.3	0	Snd Lvl	75.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Irvine n/o 22nd
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.0	0	78.0	0	Snd Lvl	78.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Irvine n/o 17th
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.2	0	73.2	0	Snd Lvl	73.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Irvine n/o 16th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.3	0	71.3	0	Snd Lvl	71.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: MacArthur w/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.7	0	75.7	0	Snd Lvl	75.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Merrimac btwn Harbor & Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.3	0	74.3	0	Snd Lvl	74.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Mesa w/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.0	0	68.0	0	Snd Lvl	68.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Mesa e/o Santa Ana
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.5	0	68.5	0	Snd Lvl	68.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: MesaVerdeW btwnAdams&CountryClub
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.7	0	72.7	0	Snd Lvl	72.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG'
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Mesa Verde E n/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.4	0	67.4	0	Snd Lvl	67.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
22 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Mesa Verde E n/o Adams
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.1	0	69.1	0	Snd Lvl	69.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Mesa Verde E btwn Adams & Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.4	0	74.4	0	Snd Lvl	74.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Monrovia btwn 19th & 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.2	0	69.2	0	Snd Lvl	69.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Newport SB n/o Mesa
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.6	0	76.6	0	Snd Lvl	76.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Newport SB n/o Fair/Del Mar
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.9	0	75.9	0	Snd Lvl	75.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport SB n/o Santa Isabel
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.1	0	73.1	0	Snd Lvl	73.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport SB n/o Victoria
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.3	0	77.3	0	Snd Lvl	77.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport SB s/o Victoria
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.2	0	74.2	0	Snd Lvl	74.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport SB s/o Ford
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.1	0	72.1	0	Snd Lvl	72.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Newport NB n/o Mesa
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.6	0	71.6	0	Snd Lvl	71.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Newport NB n/o Fair/Del Mar
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.8	0	75.8	0	Snd Lvl	75.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Newport NB n/o Santa Isabel
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.7	0	73.7	0	Snd Lvl	73.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Newport NB n/o 22nd
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.4	0	76.4	0	Snd Lvl	76.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport NB s/o 22nd
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.4	0	73.4	0	Snd Lvl	73.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport NB s/o 20th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.5	0	71.5	0	Snd Lvl	71.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport btwn 19th & 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	80.4	0	80.4	0	Snd Lvl	80.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Newport n/o Industrial
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.7	0	73.7	0	Snd Lvl	73.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Ogle e/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		Calculated minus Goal
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	61.2	0	61.2	0	Snd Lvl	61.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o Del Mar
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		Calculated minus Goal
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	61.2	0	61.2	0	Snd Lvl	61.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o Santa Isabel
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.2	0	64.2	0	Snd Lvl	64.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o 22nd
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o 21st
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.0	0	69.0	0	Snd Lvl	69.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o 16th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Orange n/o 15th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Park s/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Paularino e/o Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.9	0	66.9	0	Snd Lvl	66.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Paularino e/o Bear
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.9	0	67.9	0	Snd Lvl	67.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Paularino e/o Bristol
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.4	0	72.4	0	Snd Lvl	72.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Paularino w/o Redhill
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	71.5	0	71.5	0	Snd Lvl	71.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Placentia btwn Adams & Wilson
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.0	0	75.0	0	Snd Lvl	75.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o Victoria
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.9	0	73.9	0	Snd Lvl	73.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o Hamilton
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.8	0	74.8	0	Snd Lvl	74.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Placentia s/o Hamilton
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.8	0	74.8	0	Snd Lvl	74.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Placentia s/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.4	0	74.4	0	Snd Lvl	74.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.0	0	73.0	0	Snd Lvl	73.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o 16th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.2	0	72.2	0	Snd Lvl	72.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o Victoria
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.5	0	67.5	0	Snd Lvl	67.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o Hamilton
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.3	0	67.3	0	Snd Lvl	67.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Placentia n/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.0	0	68.0	0	Snd Lvl	68.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Pomona n/o 18th
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.3	0	67.3	0	Snd Lvl	67.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Pomona btwn 18th & 17th
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.3	0	70.3	0	Snd Lvl	70.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Red Hill n/o Airport Loop
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.8	0	73.8	0	Snd Lvl	73.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Red Hill n/o Paularino
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.2	0	74.2	0	Snd Lvl	74.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Red Hill n/o Baker
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.9	0	73.9	0	Snd Lvl	73.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Red Hill n/o Kalmus
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.9	0	72.9	0	Snd Lvl	72.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Red Hill n/o Bristol
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.9	0	73.9	0	Snd Lvl	73.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sakioka n/o Anton
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.5	0	69.5	0	Snd Lvl	69.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana s/o Bristol
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.2	0	69.2	0	Snd Lvl	69.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o Del Mar/University
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.8	0	67.8	0	Snd Lvl	67.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o Santa Isabel
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.7	0	66.7	0	Snd Lvl	66.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o 22nd
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o 21st
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.7	0	66.7	0	Snd Lvl	66.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o 16th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Ana n/o 15th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.2	0	64.2	0	Snd Lvl	64.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Isabel e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.5	0	65.5	0	Snd Lvl	65.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Santa Isabel e/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.3	0	64.3	0	Snd Lvl	64.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: South Coast w/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.3	0	72.3	0	Snd Lvl	72.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: South Coast e/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.5	0	73.5	0	Snd Lvl	73.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: South Coast w/o Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.8	0	73.8	0	Snd Lvl	73.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: South Coast btwn Wimbledon & Bear
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.4	0	76.4	0	Snd Lvl	76.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower btwn Hyland & Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.8	0	72.8	0	Snd Lvl	72.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower btwn Harbor & Susan
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.9	0	75.9	0	Snd Lvl	75.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower w/o Fairview
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.8	0	73.8	0	Snd Lvl	73.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower w/o Fuschia/Raitt
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.3	0	74.3	0	Snd Lvl	74.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower w/o Bristol
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.5	0	77.5	0	Snd Lvl	77.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower e/o Bristol
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.8	0	76.8	0	Snd Lvl	76.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower w/o Anton
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.5	0	75.5	0	Snd Lvl	75.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Sunflower w/o Main
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.3	0	76.3	0	Snd Lvl	76.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Superior bwtn Anaheim & 16th/Industrial
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.9	0	75.9	0	Snd Lvl	75.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Tustin n/o 21st
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.0	0	63.0	0	Snd Lvl	63.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Tustin n/o 20th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	61.2	0	61.2	0	Snd Lvl	61.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Tustin n/o 19th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.2	0	64.2	0	Snd Lvl	64.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Tustin n/o 17th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.2	0	64.2	0	Snd Lvl	64.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Tustin n/o 16th
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.7	0	66.7	0	Snd Lvl	66.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Victoria w/o Pacific
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.8	0	75.8	0	Snd Lvl	75.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Victoria w/o National
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.6	0	75.6	0	Snd Lvl	75.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Victoria w/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.7	0	75.7	0	Snd Lvl	75.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Victoria e/o Placentia
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	74.8	0	74.8	0	Snd Lvl	74.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:	Costa Mesa
RUN:	Victoria e/o Harbor
BARRIER DESIGN:	INPUT HEIGHTS
ATMOSPHERICS:	68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.3	0	75.3	0	Snd Lvl	75.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Victoria w/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.8	0	75.8	0	Snd Lvl	75.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Victoria e/o College
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.7	0	75.7	0	Snd Lvl	75.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Wilson w/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.8	0	68.8	0	Snd Lvl	68.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Wilson e/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.7	0	72.7	0	Snd Lvl	72.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Wilson btwn Pomona & Harbor
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	77.1	0	77.1	0	Snd Lvl	77.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Wilson e/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.5	0	73.5	0	Snd Lvl	73.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Wilson e/o Fairview
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.1	0	72.1	0	Snd Lvl	72.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: Wilson e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.3	0	67.3	0	Snd Lvl	67.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 15th e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	62.9	0	62.9	0	Snd Lvl	62.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 16th e/o Monrovia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W. 16th e/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 16th w/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.0	0	64.0	0	Snd Lvl	64.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 16th e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.3	0	64.3	0	Snd Lvl	64.3	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 16th e/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.0	0	63.0	0	Snd Lvl	63.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 16th Pl e/o Santa Ana
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.0	0	63.0	0	Snd Lvl	63.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 16th Pl e/o Tustin
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.0	0	63.0	0	Snd Lvl	63.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: W 17th e/o Monrovia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	67.4	0	67.4	0	Snd Lvl	67.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: W 17th w/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.1	0	68.1	0	Snd Lvl	68.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 17th btwn Placentia & Pomona
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	72.9	0	72.9	0	Snd Lvl	72.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG 17 February 2016
MIG TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 17th w/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	78.6	0	78.6	0	Snd Lvl	78.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 17th w/o Westminster
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.8	0	75.8	0	Snd Lvl	75.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 17th w/o Santa Ana
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.6	0	75.6	0	Snd Lvl	75.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 17th e/o Santa Ana
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.1	0	76.1	0	Snd Lvl	76.1	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 17th w/o Irvine
BARRIER DESIGN: INPUT HEIGHTS
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.
ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	75.4	0	75.4	0	Snd Lvl	75.4	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 18th e/o Monrovia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 18th e/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.7	0	66.7	0	Snd Lvl	66.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 18th w/o Anaheim
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	69.0	0	69.0	0	Snd Lvl	69.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 18th w/o Park
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.9	0	68.9	0	Snd Lvl	68.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 19th e/o Monrovia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	70.6	0	70.6	0	Snd Lvl	70.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 19th e/o Placentia
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	73.8	0	73.8	0	Snd Lvl	73.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 19th w/o Park
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.9	0	76.9	0	Snd Lvl	76.9	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: W 19th e/o Harbor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	76.5	0	76.5	0	Snd Lvl	76.5	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 19th e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.6	0	68.6	0	Snd Lvl	68.6	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 19th w/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.8	0	66.8	0	Snd Lvl	66.8	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 19th e/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.7	0	66.7	0	Snd Lvl	66.7	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 19th e/o Santa Ana
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH
Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 19th w/o Irvine
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 20th e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.2	0	63.2	0	Snd Lvl	63.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: 20th e/o Tustin
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.0	0	63.0	0	Snd Lvl	63.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

22 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Costa Mesa
RUN: 21st e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	63.2	0	63.2	0	Snd Lvl	63.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 21st w/o Irvine
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	61.2	0	61.2	0	Snd Lvl	61.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 22nd e/o Newport
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	68.2	0	68.2	0	Snd Lvl	68.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 22nd e/o Orange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	66.0	0	66.0	0	Snd Lvl	66.0	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG
17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 22nd e/o Santa Ana
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	65.2	0	65.2	0	Snd Lvl	65.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

MIG
MIG

17 February 2016
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Costa Mesa
RUN: 22nd/Santiago w/o Irvine
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden		Increase over existing		Type Impact	With Barrier Calculated Lden	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
100 feet	2	1	0.0	64.2	0	64.2	0	Snd Lvl	64.2	0.0	0	0.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0