Appendix L
Noise Modeling Data Sheets

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Definitions

Community Noise Equivalent Level (CNEL): The CNEL is an average of noise levels over a twenty-four (24) hour period. The measured energy equivalent level (Leq) is weighted for the hours when there is a greater sensitivity to noise. A weighting factor of 5 decibels is applied to the evening period (7 to 10 p.m.) and a weighting factor of 10 decibels is applied to the night time period (10 p.m. to 7 a.m.). The daytime Leqs between 7 a.m. and 7 p.m. are not weighted.

Decibel: dB, a numerical expression of the relative intensity of a sound as it is heard by the human ear.

dBA: The "A-weighted" scale for measuring sound in decibels, it weighs or reduces the effects of low and high frequencies in order to simulate human hearing. Every increase of 10 dBA doubles the perceived loudness although the noise is actually ten times more intense.

Leq: The energy equivalent level, defined as the average sound level on the basis of sound energy. The Leq is a "dosage" type measure and is the basis for the descriptors used in current standards, such as the 24- hour Community Noise Equivalent Level (CNEL) used by the State of California.

Standards

Interior and Exterior Noise Standards: Table F-1 identifies the maximum interior and exterior noise levels for each land uses category. The standards assume the incorporation of California State Law requirements into all projects.

Land Use Noise Compatibility Table F-2 identifies the compatibility of proposed projects and future noise levels. The diagram is used in evaluating new development projects, including General Plan amendments, zone changes, tentative maps, conditional use permits and master plans.

Single Event Noise Standard: The maximum interior noise levels of the loudest 10% of single noise events [Lmax(10)] for noise sensitive land uses within the 60 CNEL of aircraft and railroad noise sources shall not exceed 65 dBA between 7 a.m. and 7 p.m nor 55 dBA between 7 p.m. and 7 a.m. for typical occupancy. (Note: The samples for single event noise measurement must include representative aircraft operation.)

TABLE F-1

INTERIOR AND EXTERIOR NOISE STANDARDS ENERGY AVERAGE (CNEL)

LAND USE CATEGORIES		ENERGY AVERAGE (CNEL)	
CATEGORIES	**USES**	**INTERIOR[1]**	**EXTERIOR[2]**
RESIDENTIAL	Single-Family Multiple-Family	45[3] 55[4]	65[7]
	Mobile Home	____	65[5]
COMMERCIAL/ INDUSTRIAL	Hotel, motel, transient lodging	45	65[6]
	Commercial, retail, bank, restaurant	55	____
	Office building, professional office, research & development	50	____
	Amphitheater, concert hall, auditorium, meeting hall	45	____
	Gymnasium (Multipurpose)	50	____
	Health clubs	55	____
	Manufacturing, warehousing, wholesale, utilities	65	____
	Movie theater	45	____
INSTITUTIONAL	Hospital, school classroom	45	65
	Church, library	45	____
OPEN SPACE	Parks	____	65

Interpretation:

1. Interior environment excludes bathrooms, toilets, closets, and corridors.
2. Outdoor environment limited to private yard of single-family or multi-family residences private patio which is accessed by a means of exit from inside the unit; mobile home park; hospital patio; park picnic area; school playground; and hotel and motel recreation area.
3. Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided pursuant to Appendix Chapter 12, Section 1208 of UBC.
4. Noise level requirement with open windows, if they are used to meet natural ventilation requirement.
5. Exterior noise level shall be such that interior noise level will not exceed 45 CNEL.
6. Except those areas affected by aircraft noise.
7. Multi-family developments with balconies that do not meet the 65 CNEL are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.

TABLE F-2

LAND USE NOISE COMPATIBILITY

LAND USE CATEGORIES		ENERGY AVERAGE (CNEL)						
Categories	Uses	≤	55	60	65	70	75	80≥
RESIDENTIAL	Single-Family	A	A	B	B	C	D	D
RESIDENTIAL	Mobile Home	A	A	B	C	C	D	D
COMMERCIAL Regional	Hotel, Motel, Transient Lodging	A	A	B	B	C	C	D
COMMERCIAL Regional Community	Commercial retail, Bank, Restaurant, Movie theater	A	A	A	A	B	B	C
COMMERCIAL Community INDUSTRIAL & INSTITUTIONAL	Office building, Research & development Professional office, City office building	A	A	A	B	B	C	D
COMMERCIAL Recreation INSTITUTIONAL General	Amphitheater, Concert hall Auditorium, Meeting hall	B	B	C	C	D	D	D
COMMERCIAL Recreation	Children's amusement park, Miniature golf, Go-cart track, Health club, Equestrian center	A	A	A	B	B	D	D
COMMERCIAL Community INDUSTRIAL General	Automobile service station, Auto dealer, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B
INSTITUTIONAL General	Hospital, Church, Library, School classrooms	A	A	B	C	C	D	D
OPEN SPACE	Parks	A	A	A	B	C	D	D
OPEN SPACE	Golf courses, Nature centers, Cemeteries, Wildlife reserves, Wildlife habitat	A	A	A	A	B	C	C
AGRICULTURAL	Agriculture	A	A	A	A	A	A	A

Interpretation

Zone A Clearly Compatible	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
Zone B Normally Compatible	New construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.
Zone C Normally Incompatible	New construction or development should normally be discouraged. If new construction or development does proceed, a detailed analysis or noise reduction requirements must be made and needed noise insulation features must be included in the design
Zone D Clearly Incompatible	New construction or development should generally not be undertaken.

CHAPTER 2. NOISE*

***Editor's note:** Prior to amendment by Ord. No. 84-18, adopted Sept. 11, 1984, the provisions of this chapter derived from Ord. No. 136, §§ 2--13, adopted March 25, 1975.

Sec. 6-8-201. Declaration of policy.

The City Council has adopted the following regulations in order to control unnecessary, excessive and annoying noise in the City of Irvine. The provisions of this chapter are applicable to nontransportation-related stationary noise sources.

(Code 1976, § VI.K-301; Ord. No. 84-18, 9-11-84)

Sec. 6-8-202. Definitions.

The following definitions are provided to clarify words, phrases and terms used in this chapter.

Ambient noise level: The all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding the alleged offensive noise, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

Cumulative period: An additive period of time composed of individual time segments which may be continuous or interrupted.

Decibel (dB): A unit of noise measurement indicating the loudness of sound, based on logarithmic (base 10) scale.

Emergency work: Any mechanical device, apparatus or equipment which is used, employed or performed in an effort to protect, provide or restore safe conditions in the community or for the citizenry, or work by private or public utilities when restoring utility service.

Grading: Any excavating or filling of earth material or any combination thereof conducted to prepare a site for construction or the placement of the improvements thereon.

Impact noises: The noise produced by the collision of one mass in motion with a second mass which may be either in motion or at rest.

Noise level: The "A" weighted sound pressure level in decibels obtained by using a sound level meter. The "A" weighted discriminates against the lower and higher frequencies according to a relationship with the sensitivity of the human ear. The unit of measurement is designated as dB(A).

Predominant tone noise: A noise characterized by a predominant frequency or frequencies so that other frequencies cannot be readily distinguished.

Stationary noise source: The source which is often referred to as "fixed source" (non-transportation-related) including but not limited to mechanical electric equipment, various power tools construction, commercial, industrial and agricultural activity and animal noise.

(Code 1976, § VI.K-302; Ord. No. 84-18, 9-11-84)

Sec. 6-8-203. Noise level measurement criteria.

Any noise level measurements made pursuant to the provisions of this chapter shall be performed using a sound level meter. The location selected for measuring exterior noise levels shall be anywhere on the affected property. The interior noise measurement shall be made at a point in the affected unit at least four feet from the wall, ceiling or floor nearest the noise source.

(Code 1976, § VI.K-303; Ord. No. 84-18, 9-11-84)

Sec. 6-8-204. General provision.

A. *Designated noise zones.* The properties hereinafter described, whether within or without the City, are hereby assigned to the following noise zones:

1. *Noise zone 1:* All hospitals, libraries, churches, schools and residential properties.
2. *Noise zone 2:* All professional office and public institutional properties.
3. *Noise zone 3:* All commercial properties excluding professional office properties.
4. *Noise zone 4:* All industrial properties.

B. *Exterior and interior noise standards.*

1. The following noise standards, unless otherwise specifically indicated, shall apply to all property within a designated noise zone.

NOISE STANDARDS
dB(A)

Noise Levels for a Period Not Exceeding (minutes/hour)

TABLE INSET:

	Noise Zone	Time Period	30	15	5	1	0 (anytime)
1	Exterior	7:00 a.m.--10:00 p.m.	55	60	65 1	70	75
		10:00 p.m.--7:00 a.m.	50	55	60	65 1	70
	Interior	7:00 a.m.--10:00 p.m.	--	--	55	60	65
		10:00 p.m.--7:00 a.m.	--	--	45	50	55
2	Exterior	Any time	55	60	65	70	75
	Interior	Any time	--	--	55	60	65
3	Exterior	Any time	60	65	70	75	80
	Interior	Any time	--	--	55	60	65
4	Exterior	Any time	70	75	80	85	90
	Interior	Any time	--	--	55	60	65

1 This standard does not apply to multi-family residence private balconies. Multi-family developments with balconies that do not meet the 65 CNEL are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.

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2. It shall be unlawful for any person at any location within the City to create any noise or to

allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level when measured on any property within designated noise zones either within or without the City to exceed the applicable noise standard.

3. Each of the noise standards specified above shall be reduced by five dB(A) for impact, or predominant tone noise or for noises consisting of speech or music.

4. In the event that the noise source and the affected property are within different noise zones, the noise standards of the affected property shall apply.

(Code 1976, § VI.K-304; Ord. No. 84-18, 9-11-84; Ord. No. 05-06, § 2, 2-22-05)

Sec. 6-8-205. Special provisions.

A. Construction activities and agricultural operations may occur between 7:00 a.m. and 7:00 p.m. Mondays through Fridays, and 9:00 a.m. and 6:00 p.m. on Saturdays. No construction activities shall be permitted outside of these hours or on Sundays and federal holidays unless a temporary waiver is granted by the Chief Building Official or his or her authorized representative. Trucks, vehicles, and equipment that are making or are involved with material deliveries, loading, or transfer of materials, equipment service, maintenance of any devices or appurtenances for or within any construction project in the City shall not be operated or driven on City streets outside of these hours or on Sundays and federal holidays unless a temporary waiver is granted by the City. Any waiver granted shall take impact upon the community into consideration. No construction activity and agricultural will be permitted outside of these hours except in emergencies including maintenance work on the City rights-of-way that might be required.

Deliveries to or pickups from any commercial property sharing a property line with any residential property may occur between 7:00 a.m. and 10:00 p.m. daily. No deliveries to or pickups from any such properties shall occur outside of these hours.

B. Maintenance of real property operations may exceed the noise standards between 7:00 a.m. and 7:00 p.m. on any day except Sundays, or between 9:00 a.m. and 6:00 p.m. on Sundays or a federal holiday.

C. The use of leaf blowers shall be regulated as follows:

1. *Definition of leaf blower.* Leaf blowers are defined as portable power equipment that is powered by fuel or electricity and used in any landscape maintenance, construction, property repair, or property maintenance for the purpose of blowing, dispersing or redistributing dust, dirt, leaves, grass clippings, cuttings and trimmings from trees and shrubs or other debris.

2. *Limitations on use.*

a. All leaf blowers shall be equipped with a permanently installed limiter that restricts the individual equipment motor performance to half throttle speed or less, and will produce not more than 70 decibels db(A) measured at the midpoint of a wall area 20 feet long and ten feet high and at a horizontal distance 50 feet away from the midpoint of the wall, or not more than 76 db(A) at a horizontal distance of 25 feet using a sound level meter set at level A.

b. Each individual leaf blower shall be tested and certified for use by the City of Irvine or its designated representative. Each individual leaf blower shall bear the label of required approval in a visible location on the equipment prior to use and at all times during use. A fee for the City to recover all costs connected with equipment approvals shall be charged in an amount set by City resolution.

c. The use of leaf blowers is prohibited except between the hours of 8:00 a.m. and 5:00 p.m. Monday through Friday and between 9:00 a.m. and 5:00 p.m. on Saturday.

d. Leaf blower operations shall not cause dirt, dust, debris, leaves, grass clippings, cuttings or trimmings from trees or shrubs to be blown or deposited on any adjacent or other parcel of land, lot, or public right-of-way/property other than the parcel, land, or lot upon which the leaf blower is being operated. Deposits of dirt, dust, leaves, grass clippings, debris, cuttings or trimmings from trees or shrubs shall be removed and disposed of in a sanitary manner which will prevent dispersement by wind, vandalism or similar means within six hours of deposit by the user or property occupant.

e. Leaf blowers shall not be operated within a horizontal distance of ten feet of any operable window, door, or mechanical air intake opening or duct.

f. No person using leaf blowers shall exceed noise limitations set by section 6-8-204 of the City Code of Ordinances.

3. *Education.*

a. Each person operating an individual leaf blower is required to complete not less than one training session of content and time approved by the City of Irvine Administrative Authority prior to operation of leaf blower equipment. Training and qualification shall be required for certification at least every two years for each individual equipment user.

b. The equipment operator shall carry certification of the training and qualification at all times during equipment use and make it available upon demand. Failure to abide by the use requirements contained in this Code and/or the certification training provided will be cause for the City of Irvine to revoke such certification.

c. *Exception:* An individual residential property occupant operating a single leaf blower himself or herself in a manner confined to his or her own property shall be excepted from the education requirements set forth by this subsection.

4. *Fees.* A fee for the City to recover all costs connected with training, testing, certification and enforcement shall be charged in an amount set by City Council resolution.

D. The following activities shall be exempted from the provision of this chapter:

1. School bands, school athletic and school entertainment events, provided said events are conducted on school property or authorized by special permit from the City.

2. Activities otherwise lawfully conducted on public parks, public playgrounds and public or private school grounds.

3. Any mechanical device, apparatus or equipment which is utilized for emergency work, pest control, and protection or harvest of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions.

4. Any activity or equipment to the extent that design regulation thereby has been preempted by State or federal law.

The Chief Building Official or his or her duly authorized representative and City police shall enforce where necessary the provisions of this chapter. No person shall interfere with, oppose or resist any authorized person charged with the enforcement of this chapter which such person is engaged in the performance of his or her duty.

(Code 1976, § VI.K-305; Ord. No. 84-18, 9-11-84; Ord. No. 88-11, §§ 1, 2, 5-24-88; Ord. No. 90-2, § 1, 2-13-90; Ord. No. 90-7, § 1, 4-10-90; Ord. No. 05-16, § 2, 7-12-05)

Sec. 6-8-206. Reserved.

Sec. 6-8-207. Enforcement.

The Chief Building Official or his or her duly authorized representative shall enforce the provisions of this chapter. No person shall interfere with, oppose or resist any authorized person charged with the enforcement of this chapter while such person is engaged in the performance of his or her duty.

(Code 1976, § VI.K-306; Ord. No. 84-18, 9-11-84)

Sec. 6-8-208. Waiver procedure.

A. The owner or operator of a noise source which violates any of the provisions of this chapter may apply for temporary waiver with the Chief Building Official. Any waiver granted shall take impact upon the community into consideration and state why immediate compliance cannot be achieved, a proposed method of achieving compliance, and a proposed time schedule for its accomplishment. Said application shall be accompanied by a fee as listed in the City Council resolution for variances where deemed appropriate and necessary by the City administrative authority.

B. A separate application shall be flled for each noise source; provided, however, that several sources under common ownership or several sources on a single property may be combined into one application.

C. An applicant for a waiver shall remain subject to prosecution under the terms of this chapter until a waiver is granted.

D. Within 60 days of receipt of an appeal, the City Council shall either affirm, modify or reverse the decision of the Chief Building Official at a duly notified public hearing.

(Code 1976, § VI.K-307; Ord. No. 84-18, 9-11-84; Ord. No. 90-7, § 2, 4-10-90)

Sec. 6-8-209. Appeals.

A. The decision of the Chief Building Official on waiver applications may be appealed to the City Council. Appeals shall be filed with the City Clerk and shall be accompanied by a letter stating the reason for the appeal.

B. An appeal shall be accompanied by a deposit/fee of $150 to be updated on an annual basis by City Council resolution.

C. An appeal shall be filed within 15 days of the decision of the Chief Building Official.

D. Within 60 days of receipt of an appeal, the City Council shall either affirm, modify or reverse the decision of the Chief Building Official at a duly notified public hearing.

(Code 1976, § VI.K-308; Ord. No. 84-18, 9-11-84)

Construction Generated Noise - Non-Residential

Construction Noise at 50 Feet (dBA Leq)

Construction Phase	All Applicable Equipment in Use[1]	Minimum Required Equipment in Use[1]
Ground Clearing/Demolition	84	87
Excavation	89	74
Foundation Construction	78	78
Building Construction	85	74
Finishing and Site Cleanup	89	75

Source: Bolt, Beranek and Newman, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," prepared for the USEPA, December 31, 1971. Based on analysis for Industrial, Parking Garage, Religious, Amusement and Recreations, Store, Service Station

Construction Generated Noise - Residential

Construction Noise at 50 Feet (dBA Leq)

Construction Phase	All Applicable Equipment in Use[1]	Minimum Required Equipment in Use[1]
Ground Clearing/Demolition	83	83
Excavation	88	75
Foundation Construction	81	81
Building Construction	81	65
Finishing and Site Cleanup	88	72

Source: Bolt, Beranek and Newman, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," prepared for the USEPA, December 31, 1971. Based on analysis for Domestic Housing.

Construction Generated Noise - Residential

Construction Noise

Equipment	Noise Levels (dBA) at 50 Feet	Equipment	Noise Levels (dBA) at 50 Feet
Air Compressor	81	Pile-Driver (Impact)	101
Backhoe	80	Pile-Driver (Sonic)	96
Ballast Equilizer	82	Pneumatic Tool	85
Ballast Tamper	83	Pump	76
Compactor	82	Rail Saw	90
Concrete Mixer	85	Rock Drill	98
Concrete Pump	82	Roller	74
Concrete Vibrator	76	Saw	76
Crane, Derrick	88	Scarifier	83
Crane, Mobile	83	Scraper	89
Dozer	85	Shovel	82
Generator	81	Spike Driver	77
Grader	85	Tie Cutter	84
Impact Wrench	85	Tie Handler	80
Jack Hammer	88	Tie Inserter	85
Loader	85	Truck	88
Paver	89		

Source: Table 12-1, Construction Equipment Noise Emission Levels. Federal Transit Administration. 2006, May. Transit Noise and Vibration Impact Assessment. FTA-VA-90-1003-06.

Construction Vibration

	Range	PPV at 25 (inch/sec)	VdB
Pile Driver (Impact)	upper	1.518	112
Pile Driver (Impact)	typical	0.644	104
Pile Driver (Sonic)	upper	0.734	105
Pile Driver (Sonic)	typical	0.170	93
Clam Shovel Drop (slurry wall)		0.202	94
Hydomill (slurry wall)	in soil	0.008	66
Hydomill (slurry wall)	in rock	0.017	73
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caison Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Source: Table 12-2, Vibration Source Levels for Contruction Equipment (From measured data). Federal Transit Administration. 2006, May. Transit Noise and Vibration Impact Assessment. FTA-VA-90-1003-06.

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Anton Boulevard	Bristol Street to Sunflower Avenue	40	7,620	10,100	10,300	67.9	169	78	36	69.1	204	95	44	69.2	206	96	44	1.3	0.1
Baker Street	Bear Street to Bristol Street	45	23,497	29,600	30,200	73.9	422	196	91	74.9	492	229	106	75.0	499	232	108	1.1	0.1
Baker Street	Bristol Street to SR 55 SB Ramps	45	27,498	36,300	37,100	74.6	469	218	101	75.8	564	262	122	75.9	572	266	123	1.3	0.1
Baker Street	SR 55 SB to SR 55 NB	45	24,275	37,800	38,400	74.0	431	200	93	76.0	580	269	125	76.0	586	272	126	2.0	0.1
Baker Street	SR 55 NB to Red Hill Avenue	45	13,718	21,500	22,100	71.6	295	137	64	73.5	398	185	86	73.6	405	188	87	2.1	0.1
Baker Street	Red Hill Avenue to Airway Avenue	45	4,699	6,200	6,200	66.9	144	67	31	68.1	174	81	37	68.1	174	81	37	1.2	0.0
Bear Street	Paularino Avenue to Baker Street	45	17,577	19,900	20,000	72.6	348	161	75	73.2	378	175	81	73.2	379	176	82	0.6	0.0
Bristol Street	Segerstrom Avenue to West Alton Avenue	45	35,789	40,400	41,400	75.7	559	259	120	76.3	606	281	131	76.4	616	286	133	0.6	0.1
Bristol Street	West Alton Avenue to MacArthur Boulevard	45	38,850	44,200	45,400	76.1	590	274	127	76.6	643	299	139	76.8	655	304	141	0.7	0.1
Bristol Street	MacArthur Boulevard to Sunflower Avenue	45	22,305	25,300	25,800	73.7	408	189	88	74.2	443	206	96	74.3	449	209	97	0.6	0.1
Bristol Street	Sunflower Avenue to Anton Boulevard	45	42,108	44,400	45,400	76.4	623	289	134	76.7	645	299	139	76.8	655	304	141	0.3	0.1
Bristol Street	Anton Boulevard to I-405 NB Ramps	45	62,602	69,500	70,700	78.2	811	377	175	78.6	870	404	187	78.7	880	408	190	0.5	0.1
Bristol Street	I-405 NB Ramps to I-405 SB Ramps	45	63,048	69,900	71,000	78.2	815	378	176	78.6	873	405	188	78.7	882	410	190	0.5	0.1
Bristol Street	I-405 SB Ramp to Paularino Avenue	45	40,727	50,600	51,100	76.3	609	283	131	77.2	704	327	152	77.3	709	329	153	1.0	0.0
Bristol Street	Paularino Avenue to Baker Street	45	34,095	40,400	41,000	75.5	541	251	117	76.3	606	281	131	76.3	612	284	132	0.8	0.1
Bristol Street	Baker Street to SR 55	45	24,713	25,100	25,500	74.1	437	203	94	74.2	441	205	95	74.3	446	207	96	0.1	0.1
Bristol Street	SR-55 to Red Hill Avenue	45	20,914	23,000	23,500	73.4	391	181	84	73.8	416	193	90	73.9	422	196	91	0.5	0.1
Del Mar Avenue	Newport Boulevard SB to Newport Boulevard NB	45	12,232	18,300	18,700	71.1	273	127	59	72.8	357	166	77	72.9	363	168	78	1.8	0.1
Del Mar Avenue	Newport Boulevard to Santa Ana Avenue	45	7,069	12,900	13,200	68.7	190	88	41	71.3	283	131	61	71.4	287	133	62	2.7	0.1
Flower Street	Segerstrom Avenue to MacArthur Boulevard	45	9,756	11,500	11,900	70.1	235	109	51	70.8	262	122	56	70.9	268	124	58	0.9	0.1
Flower Street	MacArthur Boulevard to Sunflower Avenue	45	8,180	13,100	13,400	69.3	209	97	45	71.4	286	133	62	71.5	290	135	63	2.1	0.1
Flower Street	Sunflower Avenue to Anton Boulevard	45	6,193	9,300	9,400	68.1	174	81	37	69.9	228	106	49	69.9	229	106	49	1.8	0.0
Main Street	Sunflower Avenue to SR-55	45	20,195	24,400	26,900	73.2	382	177	82	74.1	433	201	93	74.5	462	214	100	1.2	0.4
Mesa Drive	Newport Boulevard SB to Newport Boulevard NB	45	5,469	4,900	5,500	67.6	160	74	34	67.1	148	69	32	67.6	160	74	35	0.0	0.5

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Mesa Drive	Newport Boulevard NB to Santa Ana Avenue	45	5,674	4,800	4,700	67.7	164	76	35	67.0	146	68	32	66.9	144	67	31	-0.8	-0.1
Mesa Drive	Irvine Avenue to Birch Street	45	8,487	13,400	13,800	69.5	214	99	46	71.5	290	135	63	71.6	296	137	64	2.1	0.1
Paularino Avenue	Bear Street to Bristol Street	35	7,632	8,400	8,600	66.8	141	66	30	67.2	151	70	32	67.3	153	71	33	0.5	0.1
Paularino Avenue	Bristol Street to SR-55 SB	35	16,284	21,600	21,700	70.1	234	109	50	71.3	283	131	61	71.3	283	132	61	1.2	0.0
Paularino Avenue	SR-55 SB to SR-55 NB	35	15,141	23,500	23,900	69.7	223	103	48	71.6	299	139	64	71.7	302	140	65	2.0	0.1
Paularino Avenue	SR-55 NB to Red Hill Avenue	35	3,967	7,400	7,600	63.9	91	42	20	66.6	138	64	30	66.7	141	65	30	2.8	0.1
Paularino Avenue	Red Hill Avenue to Airway Avenue	35	10,781	17,300	17,300	68.3	178	83	38	70.3	244	113	52	70.3	244	113	52	2.1	0.0
Red Hill Avenue	Main Street to Paularino Avenue	45	16,060	19,300	20,800	72.2	328	152	71	73.0	370	172	80	73.4	389	181	84	1.1	0.3
Red Hill Avenue	Paularino Avenue to Baker Street	45	15,961	21,000	21,900	72.2	326	151	70	73.4	392	182	84	73.6	403	187	87	1.4	0.2
Red Hill Avenue	Baker Street to Bristol Street	45	14,182	23,500	23,900	71.7	301	140	65	73.9	422	196	91	74.0	427	198	92	2.3	0.1
Santa Ana Avenue	Mesa Drive to Bristol Street	35	9,020	9,000	9,000	67.5	158	73	34	67.5	158	73	34	67.5	158	73	34	0.0	0.0
University Drive	Santa Ana Avenue to Irvine Avenue	50	5,684	10,300	10,900	68.7	191	89	41	71.3	284	132	61	71.6	295	137	64	2.8	0.2
Alton Parkway	Daimler Street to Red Hill Avenue	50	4,578	4,600	6,500	67.8	166	77	36	67.8	166	77	36	69.3	209	97	45	1.5	1.5
Alton Parkway	Red Hill Avenue to Von Karman Avenue	50	12,332	13,200	14,400	72.1	321	149	69	72.4	335	156	72	72.8	355	165	77	0.7	0.4
Alton Parkway	Von Karman Avenue to Jamboree Road	50	14,649	16,800	18,000	72.9	360	167	77	73.4	394	183	85	73.7	412	191	89	0.9	0.3
Alton Parkway	Jamboree Road to Murphy Avenue	50	15,133	17,600	18,800	73.0	367	171	79	73.6	406	189	88	73.9	425	197	91	0.9	0.3
Alton Parkway	Murphy Avenue to Harvard Avenue	50	15,645	18,100	19,500	73.1	376	174	81	73.8	414	192	89	74.1	435	202	94	1.0	0.3
Alton Parkway	Harvard Avenue to Paseo Westpark	50	15,465	17,300	18,500	73.1	373	173	80	73.6	402	186	87	73.9	420	195	91	0.8	0.3
Alton Parkway	Paseo Westpark to San Marino	50	12,620	14,400	15,300	72.2	326	151	70	72.8	355	165	77	73.0	370	172	80	0.8	0.3
Alton Parkway	San Marino to Culver Drive	50	21,617	24,000	25,200	74.5	466	216	100	75.0	500	232	108	75.2	516	240	111	0.7	0.2
Barranca Parkway (Dyer)	Pullman to Red Hill Avenue	50	24,454	28,000	30,300	75.1	506	235	109	75.7	554	257	119	76.0	584	271	126	0.9	0.3
Barranca Parkway	Red Hill Avenue to Armstrong	50	30,266	30,300	31,700	76.0	583	271	126	76.0	584	271	126	76.2	602	279	130	0.2	0.2
Barranca Parkway	Armstrong to Von Karman Avenue	50	29,815	29,800	30,800	75.9	577	268	124	75.9	577	268	124	76.1	590	274	127	0.1	0.1
Barranca Parkway	Von Karman Avenue to Jamboree Road	50	22,039	22,000	22,900	74.6	472	219	102	74.6	472	219	102	74.8	484	225	104	0.2	0.2

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Barranca Parkway	Jamboree Road to Construction Circle	50	24,517	28,500	29,500	75.1	507	235	109	75.7	560	260	121	75.9	573	266	124	0.8	0.1
Barranca Parkway	Construction Circle to Harvard Avenue	50	21,003	25,000	25,800	74.4	457	212	98	75.2	513	238	111	75.3	524	243	113	0.9	0.1
Barranca Parkway	Harvard Avenue to Paseo Westpark	50	19,905	23,900	24,500	74.2	441	205	95	75.0	498	231	107	75.1	507	235	109	0.9	0.1
Barranca Parkway	Paseo Westpark to Santa Rosa	50	21,004	26,400	27,100	74.4	457	212	98	75.4	532	247	115	75.5	542	251	117	1.1	0.1
Barranca Parkway	Santa Rosa to Culver Drive	50	21,643	26,000	26,700	74.5	466	216	100	75.3	527	245	114	75.5	536	249	116	0.9	0.1
Bryan Avenue	Jamboree Road to Marketplace	50	21,001	25,300	25,300	74.4	457	212	98	75.2	518	240	112	75.2	518	240	112	0.8	0.0
Bryan Avenue	Marketplace to El Camino Real	50	17,921	23,200	23,100	73.7	411	191	89	74.8	489	227	105	74.8	487	226	105	1.1	0.0
Bryan Avenue	El Camino Real to Rubicon	50	14,726	20,100	20,000	72.9	361	167	78	74.2	444	206	96	74.2	442	205	95	1.3	0.0
Bryan Avenue	Rubicon to Culver	50	18,343	26,300	26,400	73.8	418	194	90	75.4	531	247	114	75.4	532	247	115	1.6	0.0
Campus Drive	MacArthur Boulevard to Martin	40	16,279	18,900	21,300	71.2	280	130	60	71.9	309	144	67	72.4	335	155	72	1.2	0.5
Campus Drive	Martin to Von Karman Avenue	40	12,892	15,900	17,300	70.2	240	111	52	71.1	276	128	59	71.5	292	135	63	1.3	0.4
Campus Drive	Von Karman Avenue to Teller Avenue	40	11,823	15,000	16,000	69.8	226	105	49	70.9	265	123	57	71.1	277	128	60	1.3	0.3
Campus Drive	Teller Avenue to Jamboree Road	40	10,315	13,200	14,000	69.2	207	96	44	70.3	243	113	52	70.6	253	118	55	1.3	0.3
Campus Drive	Jamboree Road to Carlson Avenue	55	20,089	28,800	30,500	75.2	513	238	110	76.7	652	303	140	77.0	677	314	146	1.8	0.2
Campus Drive	Carlson Avenue to University	55	18,247	31,100	32,000	74.7	481	223	104	77.1	686	319	148	77.2	699	325	151	2.4	0.1
Carlson Avenue	Michelson Drive to Campus Drive	55	3,901	5,700	6,800	68.0	172	80	37	69.7	221	103	48	70.5	249	116	54	2.4	0.8
Culver Drive	I-5 NB Ramps to I-5 SB Ramps	50	36,738	45,200	45,400	76.8	664	308	143	77.7	762	354	164	77.8	764	355	165	0.9	0.0
Culver Drive	I-5 SB Off-Ramp to Scottsdale Drive	50	49,687	57,200	57,900	78.2	812	377	175	78.8	892	414	192	78.8	899	417	194	0.7	0.1
Culver Drive	Scottsdale Drive to Walnut Avenue	50	44,077	51,300	52,100	77.6	749	348	161	78.3	829	385	179	78.4	838	389	180	0.7	0.1
Culver Drive	Walnut Avenue to Deerfield Avenue	50	42,201	48,200	48,800	77.4	728	338	157	78.0	795	369	171	78.1	802	372	173	0.6	0.1
Culver Drive	Deerfield Avenue to Irvine Center Drive	50	38,904	42,600	43,500	77.1	690	320	149	77.5	733	340	158	77.6	743	345	160	0.5	0.1
Culver Drive	Irvine Center Drive to Warner Avenue	50	41,580	46,600	47,500	77.4	721	335	155	77.9	778	361	168	78.0	788	366	170	0.6	0.1
Culver Drive	Warner Avenue to Barranca Parkway	50	40,870	47,100	48,600	77.3	713	331	154	77.9	783	364	169	78.1	800	371	172	0.8	0.1
Culver Drive	Barranca Parkway to Alton Parkway	50	44,253	51,300	52,800	77.7	751	349	162	78.3	829	385	179	78.4	845	392	182	0.8	0.1

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Culver Drive	Alton Parkway to Main Street	50	45,204	51,700	53,500	77.7	762	354	164	78.3	833	387	180	78.5	853	396	184	0.7	0.1
Culver Drive	Main Street to San Leandro	50	49,711	52,700	54,100	78.2	812	377	175	78.4	844	392	182	78.5	859	399	185	0.4	0.1
Culver Drive	San Leandro to I-405 NB On-Ramp	50	54,428	58,800	60,300	78.6	863	400	186	78.9	908	422	196	79.0	923	429	199	0.4	0.1
Culver Drive	I-405 SB On-Ramp to Michelson Drive	50	53,319	59,400	61,800	78.5	851	395	183	78.9	914	424	197	79.1	939	436	202	0.6	0.2
Culver Drive	Michelson Drive to Sandburg Way	50	39,658	46,600	46,900	77.2	698	324	150	77.9	778	361	168	77.9	781	363	168	0.7	0.0
Culver Drive	Sandburg Way to University Drive	50	32,408	38,700	39,000	76.3	610	283	132	77.1	687	319	148	77.1	691	321	149	0.8	0.0
El Camino Real	Jamboree Road to Alliance	45	20,876	24,700	24,600	73.4	390	181	84	74.1	436	203	94	74.1	435	202	94	0.7	0.0
Fairchild Road	MacArthur Boulevard to Jamboree Road	50	4,393	5,500	6,100	67.6	161	75	35	68.6	187	87	40	69.0	200	93	43	1.4	0.4
Harvard Avenue	Walnut Avenue to Poplar Street	50	9,179	11,500	11,700	70.8	263	122	57	71.8	306	142	66	71.9	310	144	67	1.1	0.1
Harvard Avenue	Poplar Street to Deerfield Avenue	50	11,387	13,900	14,300	71.8	304	141	65	72.6	347	161	75	72.7	354	164	76	1.0	0.1
Harvard Avenue	Deerfield Avenue to Irvine Center Drive	50	10,273	12,900	13,200	71.3	284	132	61	72.3	330	153	71	72.4	335	156	72	1.1	0.1
Harvard Avenue	Irvine Center Drive to Paseo Westpark	50	12,508	14,800	15,900	72.2	324	150	70	72.9	362	168	78	73.2	380	176	82	1.0	0.3
Harvard Avenue	Paseo Westpark to Warner Avenue	50	11,065	15,400	16,400	71.6	298	138	64	73.1	372	173	80	73.3	388	180	84	1.7	0.3
Harvard Avenue	Warner to Barranca Parkway	50	12,686	17,100	17,900	72.2	327	152	70	73.5	399	185	86	73.7	411	191	89	1.5	0.2
Harvard Avenue	Barranca Parkway to San Juan	50	15,295	18,200	19,300	73.0	370	172	80	73.8	416	193	90	74.0	432	201	93	1.0	0.3
Harvard Avenue	San Juan to San Leon	50	14,888	17,000	18,400	72.9	363	169	78	73.5	397	184	86	73.8	419	194	90	0.9	0.3
Harvard Avenue	San Leon to Alton Parkway	50	16,362	18,700	20,300	73.3	387	180	83	73.9	423	196	91	74.3	447	207	96	0.9	0.4
Harvard Avenue	Alton Parkway to San Marino	50	18,655	21,700	23,100	73.9	422	196	91	74.6	467	217	101	74.8	487	226	105	0.9	0.3
Harvard Avenue	San Marino to Main Street	50	19,291	22,500	24,100	74.0	432	201	93	74.7	479	222	103	75.0	501	233	108	1.0	0.3
Harvard Avenue	Main Street to Coronado	50	13,552	15,300	16,600	72.5	341	158	74	73.0	370	172	80	73.4	391	181	84	0.9	0.4
Harvard Avenue	Coronado to Michelson Drive	50	20,167	22,900	24,900	74.2	445	207	96	74.8	484	225	104	75.2	512	238	110	0.9	0.4
Harvard Avenue	Michelson Drive to University Drive	50	8,672	10,800	11,500	70.6	253	118	55	71.5	293	136	63	71.8	306	142	66	1.2	0.3
Irvine Center Drive	Harvard Avenue to Hearthstone	50	17,848	26,900	26,900	73.7	410	190	88	75.5	539	250	116	75.5	539	250	116	1.8	0.0
Irvine Center Drive	Hearthstone to Culver Drive	50	15,815	25,500	25,600	73.2	378	176	82	75.3	520	241	112	75.3	522	242	112	2.1	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change From Existing	Change due to Project
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Jamboree Road	Bryan Avenue to El Camino	50	39,163	41,200	41,700	77.1	693	321	149	77.3	716	333	154	77.4	722	335	156	0.3	0.1
Jamboree Road	El Camino Real to I-5 NB On-Ramp	50	61,511	63,900	64,500	79.1	936	434	202	79.2	960	446	207	79.3	966	448	208	0.2	0.0
Jamboree Road	I-5 NB Ramps to I-5 SB Off-Ramp	50	65,707	70,200	70,000	79.4	978	454	211	79.7	1022	474	220	79.6	1020	473	220	0.3	0.0
Jamboree Road	I-5 SB Off-Ramp to Michelle Drive	50	57,976	64,300	63,600	78.8	900	418	194	79.3	964	447	208	79.2	957	444	206	0.4	0.0
Jamboree Road	Michelle Drive to Walnut Avenue	50	54,497	59,400	61,200	78.6	863	401	186	78.9	914	424	197	79.1	933	433	201	0.5	0.1
Jamboree Road	Walnut Ave to Edinger Ave (& Frontage Rds)*	50	71,936	95,600	100,600	79.8	1039	482	224	81.0	1256	583	271	81.2	1299	603	280	1.5	0.2
Jamboree Road	Edinger Avenue to Warner Avenue*	50	78,493	83,500	88,000	80.1	1101	511	237	80.4	1147	533	247	80.6	1188	551	256	0.5	0.2
Jamboree Road	Warner Avenue to Barranca Parkway	50	69,451	77,800	82,100	79.6	1015	471	219	80.1	1094	508	236	80.3	1134	527	244	0.7	0.2
Jamboree Road	Barranca Parkway to Beckman Avenue	50	50,727	56,700	61,300	78.2	823	382	177	78.7	886	411	191	79.1	934	433	201	0.8	0.3
Jamboree Road	Beckman Avenue to Alton Parkway	50	49,220	54,500	58,800	78.1	807	374	174	78.6	863	401	186	78.9	908	422	196	0.8	0.3
Jamboree Road	Alton Parkway to McGaw Avenue	50	46,536	50,900	55,900	77.9	777	361	167	78.3	825	383	178	78.7	878	408	189	0.8	0.4
Jamboree Road	McGaw Avenue to Kelvin Avenue	50	45,004	49,300	54,300	77.7	760	353	164	78.1	807	375	174	78.5	861	400	186	0.8	0.4
Jamboree Road	Kelvin Avenue to Main Street	50	53,259	57,900	65,300	78.5	850	395	183	78.8	899	417	194	79.3	974	452	210	0.9	0.5
Jamboree Road	Main Street to I-405 Off-Ramp	50	52,524	55,300	62,900	78.4	842	391	181	78.6	872	405	188	79.2	950	441	205	0.8	0.6
Jamboree Road	I-405 On-Ramp to Michelson Drive	50	69,470	74,800	90,100	79.6	1015	471	219	79.9	1066	495	230	80.7	1207	560	260	1.1	0.8
Jamboree Road	Michelson Drive to Dupont Drive	50	51,529	56,500	64,900	78.3	832	386	179	78.7	884	410	191	79.3	970	450	209	1.0	0.6
Jamboree Road	Dupont Drive to Campus Drive	50	45,645	51,800	54,500	77.8	767	356	165	78.3	835	387	180	78.6	863	401	186	0.8	0.2
Jamboree Road	Campus Drive to Birch Street	50	40,300	46,200	50,900	77.2	706	328	152	77.8	773	359	167	78.3	825	383	178	1.0	0.4
Jamboree Road	Birch Street to Fairchild Road	50	32,438	37,800	41,200	76.3	611	284	132	77.0	676	314	146	77.3	716	333	154	1.0	0.4
Jamboree Road	Fairchild Road to Koll Center	50	33,237	37,900	42,300	76.4	621	288	134	77.0	678	315	146	77.5	729	338	157	1.0	0.5
Jamboree Road	Koll Center to MacArthur Boulevard	50	26,722	29,600	33,000	75.5	537	249	116	75.9	575	267	124	76.4	618	287	133	0.9	0.5
MacArthur Boulevard	Fitch to Red Hill Avenue	50	35,926	38,200	43,100	76.7	654	303	141	77.0	681	316	147	77.5	738	343	159	0.8	0.5
MacArthur Boulevard	Red Hill Avenue to Skypark Boulevard	50	15,788	16,800	18,700	73.2	378	175	81	73.4	394	183	85	73.9	423	196	91	0.7	0.5
MacArthur Boulevard	Skypark Boulevard to Main Street	50	25,505	27,100	30,000	75.3	520	242	112	75.5	542	251	117	76.0	580	269	125	0.7	0.4

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

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						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
MacArthur Boulevard	Main Street to I-405 NB Off-Ramp	50	33,677	37,300	41,800	76.5	626	291	135	76.9	670	311	144	77.4	723	336	156	0.9	0.5
MacArthur Boulevard	I-405 SB On-Ramp to Michelson Drive	50	48,662	53,100	59,900	78.1	800	372	172	78.4	848	394	183	79.0	919	427	198	0.9	0.5
MacArthur Boulevard	Michelson Drive to Douglass	50	40,604	45,900	49,300	77.3	709	329	153	77.8	770	357	166	78.1	807	375	174	0.8	0.3
MacArthur Boulevard	Douglass to Campus Drive	50	33,358	38,500	38,700	76.4	622	289	134	77.0	685	318	148	77.1	687	319	148	0.6	0.0
MacArthur Boulevard	Jamboree Road to Fairchild Road	50	30,151	37,100	38,100	76.0	582	270	125	76.9	668	310	144	77.0	680	316	146	1.0	0.1
MacArthur Boulevard	Fairchild Road to University Drive	50	34,000	44,000	45,400	76.5	630	293	136	77.6	748	347	161	77.8	764	355	165	1.3	0.1
Main Street	McDurmott to Red Hill Avenue	50	18,121	21,600	23,900	73.8	414	192	89	74.5	466	216	100	75.0	498	231	107	1.2	0.4
Main Street	Red Hill Avenue to Executive Park	50	16,818	18,800	20,800	73.5	394	183	85	73.9	425	197	91	74.4	454	211	98	0.9	0.4
Main Street	Executive Park to MacArthur Boulevard	50	26,160	28,700	31,400	75.4	529	246	114	75.8	563	261	121	76.2	598	277	129	0.8	0.4
Main Street	MacArthur Boulevard to Mercantile	50	35,615	37,000	40,000	76.7	650	302	140	76.9	667	310	144	77.2	702	326	151	0.5	0.3
Main Street	Gillette Avenue to Von Karman Avenue	50	17,820	18,900	21,500	73.7	410	190	88	74.0	426	198	92	74.5	464	216	100	0.8	0.6
Main Street	Von Karman Avenue to Cartwright	50	16,082	17,300	19,500	73.3	383	178	82	73.6	402	186	87	74.1	435	202	94	0.8	0.5
Main Street	Siglo to Jamboree Road	50	22,024	22,900	27,100	74.6	472	219	102	74.8	484	225	104	75.5	542	251	117	0.9	0.7
Main Street	Jamboree Road to Union	50	19,037	19,200	21,000	74.0	428	199	92	74.0	431	200	93	74.4	457	212	98	0.4	0.4
Main Street	Veneto to Harvard Avenue	50	10,456	10,600	11,600	71.4	287	133	62	71.4	290	135	62	71.8	308	143	66	0.5	0.4
Main Street	Harvard Avenue to San Mateo	50	11,382	11,500	12,600	71.8	304	141	65	71.8	306	142	66	72.2	325	151	70	0.4	0.4
Main Street	Paseo Westpark to Culver Drive	50	8,757	9,000	9,600	70.6	255	118	55	70.7	260	121	56	71.0	271	126	58	0.4	0.3
McGaw Avenue	Daimler Street to Red Hill Avenue	50	3,630	3,700	5,600	66.8	142	66	31	66.9	144	67	31	68.7	189	88	41	1.9	1.8
McGaw Avenue	Red Hill Avenue to Von Karman Avenue	50	5,653	5,900	7,500	68.7	191	88	41	68.9	196	91	42	69.9	230	107	50	1.2	1.0
McGaw Avenue	Von Karman Avenue to Jamboree Road	50	6,451	6,900	8,600	69.3	208	97	45	69.6	218	101	47	70.5	252	117	54	1.2	1.0
McGaw Avenue	Jamboree Road to Murphy Avenue	50	2,462	2,600	4,400	65.1	109	51	24	65.3	114	53	24	67.6	161	75	35	2.5	2.3
Michelson Drive	MacArthur Boulevard to Dupont Drive	45	14,917	15,700	19,100	71.9	312	145	67	72.1	323	150	70	73.0	368	171	79	1.1	0.9
Michelson Drive	Bixby to Von Karman Avenue	45	10,836	11,900	14,200	70.5	252	117	54	70.9	268	124	58	71.7	302	140	65	1.2	0.8
Michelson Drive	Von Karman Avenue to Obsidian	45	10,559	11,500	14,600	70.4	248	115	53	70.8	262	122	56	71.8	307	143	66	1.4	1.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Michelson Drive	Teller Avenue to Jamboree Road	45	17,973	19,200	22,000	72.7	353	164	76	73.0	369	171	79	73.6	404	188	87	0.9	0.6
Michelson Drive	Jamboree Road to Carlson Avenue	45	14,864	17,000	23,300	71.9	311	144	67	72.5	340	158	73	73.9	420	195	90	2.0	1.4
Michelson Drive	Carlson Avenue to Prince	45	16,704	18,100	25,900	72.4	336	156	72	72.8	355	165	76	74.3	450	209	97	1.9	1.6
Michelson Drive	Riparian View to Harvard Avenue	45	16,553	17,300	22,500	72.4	334	155	72	72.6	344	160	74	73.7	410	190	88	1.3	1.1
Michelson Drive	Harvard Avenue to Parkside Drive	45	11,741	12,600	14,500	70.9	266	123	57	71.2	279	129	60	71.8	306	142	66	0.9	0.6
Michelson Drive	Parkside Drive to Culver Drive	45	16,629	17,900	20,600	72.4	335	156	72	72.7	352	163	76	73.3	387	179	83	0.9	0.6
Red Hill Avenue	Dyer/Barranca Parkway to Deere Avenue	50	26,611	30,700	34,300	75.4	535	248	115	76.1	589	273	127	76.5	634	294	137	1.1	0.5
Red Hill Avenue	Deere Avenue to Alton Parkway	50	26,630	30,900	34,700	75.4	536	249	115	76.1	591	274	127	76.6	639	297	138	1.1	0.5
Red Hill Avenue	Alton Parkway to McGaw Avenue	50	26,216	32,900	37,000	75.4	530	246	114	76.4	617	286	133	76.9	667	310	144	1.5	0.5
Red Hill Avenue	McGaw Avenue to MacArthur Boulevard	50	34,187	40,500	46,800	76.5	633	294	136	77.3	708	329	153	77.9	780	362	168	1.4	0.6
Red Hill Avenue	MacArthur Boulevard to Skypark	50	9,780	13,000	14,600	71.1	275	127	59	72.3	332	154	72	72.8	359	167	77	1.7	0.5
Red Hill Avenue	Skypark to Main Street	50	12,554	17,000	19,100	72.2	324	151	70	73.5	397	184	86	74.0	429	199	92	1.8	0.5
University Drive	MacArthur Boulevard to California Avenue	55	23,581	37,100	38,100	75.9	571	265	123	77.8	772	358	166	77.9	786	365	169	2.1	0.1
University Drive	California Avenue to Mesa Road	55	32,837	43,700	45,000	77.3	712	330	153	78.5	861	400	185	78.7	878	407	189	1.4	0.1
University Drive	Mesa Road to Campus Drive	45	33,673	43,700	44,600	75.5	537	249	116	76.6	638	296	138	76.7	647	300	139	1.2	0.1
University Drive	Campus Drive to Harvard Avenue	45	26,248	35,400	36,700	74.4	454	211	98	75.7	555	257	120	75.8	568	264	122	1.5	0.2
University Drive	Harvard Avenue to San Joaquin Hills Road	55	21,301	33,100	33,600	75.4	533	247	115	77.3	715	332	154	77.4	723	335	156	2.0	0.1
University Drive	San Joaquin Hills Road to Culver Drive	55	21,676	33,100	33,600	75.5	539	250	116	77.3	715	332	154	77.4	723	335	156	1.9	0.1
Von Karman Avenue	Barranca Parkway to Alton Parkway	45	16,770	28,300	31,400	72.4	337	156	73	74.7	478	222	103	75.2	512	238	110	2.7	0.5
Von Karman Avenue	Alton Parkway to McGaw Avenue	45	16,349	21,500	23,700	72.3	331	154	71	73.5	398	185	86	73.9	425	197	91	1.6	0.4
Von Karman Avenue	McGaw Avenue to Anchor	45	17,271	21,200	23,600	72.6	344	160	74	73.5	394	183	85	73.9	423	197	91	1.4	0.5
Von Karman Avenue	Anchor to Main Street	45	17,763	21,600	24,100	72.7	350	163	75	73.5	399	185	86	74.0	429	199	92	1.3	0.5
Von Karman Avenue	Main Street to Morse Avenue	45	18,765	21,500	25,200	72.9	363	169	78	73.5	398	185	86	74.2	442	205	95	1.3	0.7
Von Karman Avenue	Quartz to Michelson Drive	45	20,193	23,600	27,100	73.2	382	177	82	73.9	423	197	91	74.5	464	215	100	1.3	0.6

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change	Chang
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	From Existing	due to Projec
Von Karman Avenue	Michelson Drive to Dupont Drive	45	16,840	19,500	21,700	72.5	338	157	73	73.1	373	173	80	73.6	400	186	86	1.1	0.5
Von Karman Avenue	Dupont Drive to Martin	45	16,346	19,200	21,300	72.3	331	154	71	73.0	369	171	79	73.5	395	184	85	1.1	0.5
Von Karman Avenue	Martin to Campus Drive	45	14,234	17,300	18,100	71.7	302	140	65	72.6	344	160	74	72.8	355	165	76	1.0	0.2
Walnut Avenue	Myford to Jamboree SB Off-Ramp	45	21,169	22,000	22,100	73.4	394	183	85	73.6	404	188	87	73.6	405	188	87	0.2	0.0
Walnut Avenue	Jamboree Road to Peters Canyon	45	18,580	23,100	23,000	72.9	361	168	78	73.8	417	194	90	73.8	416	193	90	0.9	0.0
Walnut Avenue	Peters Canyon to Harvard Avenue	45	18,125	21,700	21,900	72.8	355	165	76	73.6	400	186	86	73.6	403	187	87	0.8	0.0
Walnut Avenue	Harvard Avenue to Mall Street	45	16,040	19,400	19,500	72.2	327	152	71	73.1	372	172	80	73.1	373	173	80	0.8	0.0
Walnut Avenue	Mall Street to Culver Drive	45	20,951	25,900	25,900	73.4	391	182	84	74.3	450	209	97	74.3	450	209	97	0.9	0.0
Warner Avenue	Construction North to Harvard Avenue	45	8,225	14,500	14,700	69.3	210	97	45	71.8	306	142	66	71.9	309	143	67	2.5	0.1
Warner Avenue	Harvard Avenue to Paseo Westpark	45	5,766	9,300	9,300	67.8	165	77	36	69.9	228	106	49	69.9	228	106	49	2.1	0.0
Warner Avenue	Santa Ynez to Culver Drive	45	6,493	10,300	10,300	68.3	179	83	39	70.3	244	113	52	70.3	244	113	52	2.0	0.0
Birch Street	Mesa Drive to Bristol Street SB	40	10,372	20,400	20,900	69.3	207	96	45	72.2	325	151	70	72.3	331	153	71	**3.0**	0.1
Birch Street	Bristol Street SB to Bristol Street NB	40	15,579	24,200	24,800	71.0	272	126	59	72.9	365	169	79	73.0	371	172	80	2.0	0.1
Birch Street	East of MacArthur Boulevard	40	20,327	25,800	26,600	72.2	325	151	70	73.2	381	177	82	73.4	388	180	84	1.2	0.1
Birch Street	West of MacArthur Boulevard	40	11,707	16,500	17,400	69.8	225	104	48	71.3	282	131	61	71.5	293	136	63	1.7	0.2
Birch Street	East of Von Karman Avenue	40	20,327	25,200	26,400	72.2	325	151	70	73.1	375	174	81	73.3	386	179	83	1.1	0.2
Bison Avenue	Jamboree Road to MacArthur Boulevard	45	9,087	9,900	10,200	69.8	224	104	48	70.1	237	110	51	70.3	242	112	52	0.5	0.1
Bison Avenue	MacArthur Boulevard to SR-73	45	13,411	16,600	16,600	71.5	290	135	63	72.4	335	155	72	72.4	335	155	72	0.9	0.0
Birstol Street	Red Hill Avenue to Campus Drive	45	20,119	24,300	25,400	73.2	381	177	82	74.0	432	200	93	74.2	445	206	96	1.0	0.2
Birstol Street	Campus Drive to Birch Street	45	33,382	39,600	40,800	75.4	533	248	115	76.2	598	277	129	76.3	610	283	131	0.9	0.1
Birstol Street	West of Jamboree Road	45	42,491	42,500	43,100	76.5	627	291	135	76.5	627	291	135	76.5	633	294	136	0.1	0.1
Campus Drive	Bristol Street NB to MacArthur Boulevard	50	27,671	31,200	33,700	75.6	549	255	118	76.1	595	276	128	76.5	627	291	135	0.9	0.3
Ford Road	Jamboree Road to MacArthur Boulevard	50	9,051	9,100	9,100	70.8	261	121	56	70.8	262	122	56	70.8	262	122	56	0.0	0.0
Irvine Avenue	Bristol Street NB to Bristol Street SB	45	22,879	22,900	23,900	73.8	415	192	89	73.8	415	193	89	74.0	427	198	92	0.2	0.2

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Irvine Avenue	Bristol Street SB to Mesa Drive	45	24,237	21,400	24,200	74.0	431	200	93	73.5	397	184	85	74.0	430	200	93	0.0	0.5
Irvine Avenue	South of University Drive	45	22,253	22,300	22,500	73.7	407	189	88	73.7	408	189	88	73.7	410	190	88	0.0	0.0
Jamboree Road	South of MacArthur Boulevard	50	28,826	28,800	31,000	75.8	565	262	122	75.8	564	262	122	76.1	593	275	128	0.3	0.3
Jamboree Road	Bristol Street SB to Bristol Street NB	50	46,597	40,300	46,600	77.9	778	361	168	77.2	706	328	152	77.9	778	361	168	0.0	0.6
Jamboree Road	South of Bristol Street	50	48,897	36,000	37,300	78.1	803	373	173	76.8	655	304	141	76.9	670	311	144	-1.2	0.2
Jamboree Road	University Drive to Bison Avenue	50	42,624	35,100	36,000	77.5	733	340	158	76.6	644	299	139	76.8	655	304	141	-0.7	0.1
Jamboree Road	Bison Avenue to Ford Road	50	33,614	28,500	29,400	76.5	626	290	135	75.7	560	260	121	75.9	572	266	123	-0.6	0.1
MacArthur Boulevard	Campus Drive to Birch Street	50	21,187	24,100	24,400	74.5	460	213	99	75.0	501	233	108	75.1	505	235	109	0.6	0.1
MacArthur Boulevard	South of Birch Street	50	23,445	25,500	26,300	74.9	492	228	106	75.3	520	241	112	75.4	531	247	114	0.5	0.1
MacArthur Boulevard	Von Karman Avenue to Jamboree Road	50	23,568	25,900	27,200	74.9	494	229	106	75.3	526	244	113	75.5	543	252	117	0.6	0.2
MacArthur Boulevard	University Drive to Bison Avenue	50	43,429	46,400	47,000	77.6	742	344	160	77.9	775	360	167	77.9	782	363	169	0.3	0.1
MacArthur Boulevard	Bison Avenue to Ford Road	50	75,856	78,100	79,000	80.0	1076	500	232	80.1	1097	509	236	80.2	1106	513	238	0.2	0.0
University Drive	East of Irvine Avenue	50	823	1,400	1,400	60.3	53	24	11	62.7	75	35	16	62.7	75	35	16	2.3	0.0
University Drive	Jamboree Road to MacArthur Boulevard	50	14,628	19,200	19,400	72.8	359	167	77	74.0	431	200	93	74.1	434	201	93	1.2	0.0
Von Karman Avenue	South of Campus Drive	50	10,305	11,900	12,500	71.3	284	132	61	71.9	313	145	67	72.2	323	150	70	0.8	0.2
Von Karman Avenue	South of Birch Street	50	11,237	12,800	13,500	71.7	301	140	65	72.3	329	153	71	72.5	340	158	73	0.8	0.2
Dyer Road	Main Street to Halladay Street	50	25,688	30,900	31,900	75.3	523	243	113	76.1	591	274	127	76.2	604	280	130	0.9	0.1
Dyer Road	Halladay Street to SR-55 SB	50	30,243	33,500	35,100	76.0	583	271	126	76.4	624	290	134	76.6	644	299	139	0.6	0.2
Dyer Road	SR-55 SB to SR-55 NB	50	43,265	46,000	48,700	77.6	740	344	159	77.8	771	358	166	78.1	801	372	173	0.5	0.2
Dyer Road	SR-55 NB to Pullman Street	50	29,458	32,100	34,300	75.9	573	266	123	76.3	607	282	131	76.5	634	294	137	0.7	0.3
Grand Avenue	Warner Avenue to Hotel Terrace Drive	50	22,946	23,000	24,000	74.8	485	225	104	74.8	486	225	105	75.0	500	232	108	0.2	0.2
Grand Avenue	Hotel Terrace Drive to SR-55 NB	50	21,501	21,500	22,100	74.5	464	216	100	74.5	464	216	100	74.6	473	220	102	0.1	0.1
Halladay Street	Dyer Road to Alton Avenue	35	4,687	4,900	5,400	64.6	102	47	22	64.8	105	49	23	65.3	112	52	24	0.6	0.4
Halladay Street	Alton Avenue to McGaw Avenue(Columbine)	35	1,748	1,600	1,700	60.4	53	25	11	60.0	50	23	11	60.2	52	24	11	-0.1	0.3

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

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						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
MacArthur Boulevard	Flower Street to Main Street	50	31,093	35,800	37,800	76.1	594	276	128	76.7	652	303	141	77.0	676	314	146	0.8	0.2
MacArthur Boulevard	Main Street to SR-55 SB	50	47,010	51,000	52,600	77.9	782	363	169	78.3	826	383	178	78.4	843	391	182	0.5	0.1
Main Street	Segerstrom Avenue to Alton Avenue	50	20,603	25,300	26,200	74.3	451	209	97	75.2	518	240	112	75.4	530	246	114	1.0	0.2
Main Street	Alton Avenue to McGaw Avenue(Columbine)	50	23,743	28,500	29,700	74.9	496	230	107	75.7	560	260	121	75.9	576	267	124	1.0	0.2
Main Street	McGaw(Columbine) to MacArthur Boulevard	50	28,675	29,800	30,900	75.8	563	261	121	75.9	577	268	124	76.1	591	274	127	0.3	0.2
Main Street	MacArthur Boulevard to Sunflower Avenue	50	30,103	31,700	33,100	76.0	581	270	125	76.2	602	279	130	76.4	619	287	133	0.4	0.2
McGaw Avenue (Alton)	Main Street to Halladay Street	50	3,092	3,900	3,900	66.1	127	59	27	67.1	149	69	32	67.1	149	69	32	1.0	0.0
Segerstrom Avenue	Bristol Street to Flower Street	45	11,560	15,600	16,100	70.8	263	122	57	72.1	321	149	69	72.3	328	152	71	1.4	0.1
Segerstrom Avenue	Flower Street to Main Street	45	18,676	23,600	24,200	72.9	362	168	78	73.9	423	197	91	74.0	430	200	93	1.1	0.1
Warner Avenue	Grand Avenue to SR-55	50	18,190	34,500	35,800	73.8	415	193	89	76.6	636	295	137	76.7	652	303	141	2.9	0.2
Sunflower Avenue	Bristol Street to Flower Street	45	40,204	42,000	43,500	76.2	604	280	130	76.4	622	289	134	76.6	636	295	137	0.3	0.2
Sunflower Avenue	Flower Street to Anton Boulevard	45	18,032	19,600	21,300	72.7	354	164	76	73.1	374	174	81	73.5	395	184	85	0.7	0.4
Sunflower Avenue	Anton Boulevard to Main Street	45	19,454	21,900	23,900	73.1	372	173	80	73.6	403	187	87	74.0	427	198	92	0.9	0.4
Browning Avenue	Walnut Avenue to I-5	40	4,501	6,200	6,400	65.6	119	55	26	67.0	147	68	32	67.2	150	70	32	1.5	0.1
Bryan Avenue	Newport Boulevard to Red Hill Avenue	50	15,300	18,800	19,000	73.0	370	172	80	73.9	425	197	91	74.0	428	198	92	0.9	0.0
Bryan Avenue	Red Hill Avenue to Browning	50	16,200	18,600	18,700	73.3	385	178	83	73.9	422	196	91	73.9	423	196	91	0.6	0.0
Bryan Avenue	Browning Avenue to Tustin Ranch Road	50	16,700	21,100	21,100	73.4	392	182	85	74.4	459	213	99	74.4	459	213	99	1.0	0.0
Bryan Avenue	Tustin Ranch Road to Jamboree Road	50	16,800	21,800	21,900	73.4	394	183	85	74.6	469	218	101	74.6	470	218	101	1.2	0.0
Edinger Avenue	West of Newport Avenue	55	34,312	52,300	52,900	77.5	733	340	158	79.3	970	450	209	79.4	978	454	211	1.9	0.0
Edinger Avenue	Newport Avenue to Red Hill Avenue	55	20,215	25,900	26,400	75.2	515	239	111	76.3	607	282	131	76.4	615	286	133	1.2	0.1
Edinger Avenue	Red Hill Avenue and Tustin Ranch Road	60	22,340	31,300	31,700	76.5	630	293	136	78.0	789	366	170	78.0	796	369	171	1.5	0.1
El Camino Real	Newport Avenue to Red Hill Avenue	45	13,735	14,400	14,700	71.6	295	137	64	71.8	305	141	66	71.9	309	143	67	0.3	0.1
El Camino Real	Red Hill Avenue to Browning Avenue	45	8,973	9,000	9,000	69.7	222	103	48	69.7	223	103	48	69.7	223	103	48	0.0	0.0
El Camino Real	Browning Avenue to Tustin Ranch Road	45	8,392	9,800	9,900	69.4	212	99	46	70.1	236	109	51	70.1	237	110	51	0.7	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

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						Existing				Future No Project				Future With Project				Change	Chang
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	From Existing	due to Projec
El Camino Real	Tustin Ranch Road to Jamboree Road	45	13,574	15,900	16,000	71.5	293	136	63	72.2	325	151	70	72.2	327	152	70	0.7	0.0
Irvine Center Drive (Edinge	Red Hill Avenue to Jamboree Road	55	22,340	27,600	28,100	75.6	550	255	119	76.5	634	294	137	76.6	641	298	138	1.0	0.1
Irvine Center Drive	Jamboree Road to Harvard Avenue	55	13,952	18,500	18,900	73.6	402	187	87	74.8	485	225	105	74.9	492	229	106	1.3	0.1
Mitchell Avenue	Newport Avenue to Red Hill Avenue	35	7,350	8,200	8,000	66.6	138	64	30	67.1	148	69	32	67.0	146	68	31	0.4	-0.1
Mitchell Avenue	Red Hill Avenue to Browning Avenue	35	4,417	5,800	5,700	64.4	98	46	21	65.6	118	55	25	65.5	116	54	25	1.1	-0.1
Newport Avenue	El Camino Real to I-5	35	28,516	37,000	37,900	72.5	340	158	73	73.6	404	188	87	73.7	411	191	89	1.2	0.1
Newport Avenue	I-5 to Mitchell Avenue	35	31,417	40,100	40,800	72.9	363	168	78	74.0	427	198	92	74.0	432	200	93	1.1	0.1
Newport Avenue	Mitchell Avenue to McFadden Avenue	35	29,223	39,100	40,100	72.6	346	160	74	73.9	420	195	90	74.0	427	198	92	1.4	0.1
Newport Avenue	North of Sycamore Avenue	35	9,604	22,800	23,700	67.8	165	76	35	71.5	293	136	63	71.7	301	140	65	**3.9**	0.2
Newport Avenue	Valencia Avenue to Edinger Avenue	35	18,205	34,600	35,700	70.5	252	117	54	73.3	387	180	83	73.5	395	183	85	2.9	0.1
Nisson Road	Newport Avenue to Red Hill Avenue	35	5,593	6,000	6,000	65.4	115	53	25	65.7	120	56	26	65.7	120	56	26	0.3	0.0
Nisson Road	Red Hill Avenue to Browning Avenue	35	3,915	5,200	5,200	63.9	90	42	19	65.1	109	51	24	65.1	109	51	24	1.2	0.0
Red Hill Avenue	I-5 NB Ramps to El Camino Real	35	43,222	43,200	43,200	74.3	449	208	97	74.3	449	208	97	74.3	449	208	97	0.0	0.0
Red Hill Avenue	I-5 SB Ramps to I-5 NB Ramps	35	38,996	39,000	39,000	73.8	419	194	90	73.8	419	194	90	73.8	419	194	90	0.0	0.0
Red Hill Avenue	Nisson Road to I-5 SB	35	38,235	38,200	38,200	73.8	413	192	89	73.8	413	192	89	73.8	413	192	89	0.0	0.0
Red Hill Avenue	Nisson Road to Mitchell Avenue	35	26,681	26,700	26,700	72.2	325	151	70	72.2	325	151	70	72.2	325	151	70	0.0	0.0
Red Hill Avenue	Mitchell Avenue to Walnut Avenue	35	25,830	26,000	26,800	72.1	318	148	69	72.1	320	148	69	72.2	326	151	70	0.2	0.1
Red Hill Avenue	Walnut Avenue to Sycamore Avenue	40	27,502	27,500	27,500	73.5	397	184	86	73.5	397	184	86	73.5	397	184	86	0.0	0.0
Red Hill Avenue	Sycamore Avenue to Edinger Avenue	40	29,957	30,000	30,000	73.9	420	195	91	73.9	421	195	91	73.9	421	195	91	0.0	0.0
Red Hill Avenue	Edinger Avenue to Valencia Avenue	40	25,507	28,300	29,600	73.2	378	175	81	73.6	405	188	87	73.8	417	194	90	0.6	0.2
Red Hill Avenue	Valencia Avenue to Warner Avenue	50	26,723	31,600	33,600	75.5	537	249	116	76.2	600	279	129	76.5	625	290	135	1.0	0.3
Red Hill Avenue	Warner Avenue to Barranca Parkway/Dyer	50	29,570	31,800	34,200	75.9	574	267	124	76.2	603	280	130	76.5	633	294	136	0.6	0.3
Sycamore Avenue	SR-55 NB to Newport Avenue	35	9,036	7,400	7,500	67.5	158	73	34	66.6	138	64	30	66.7	140	65	30	-0.8	0.1
Sycamore Avenue	Newport Avenue to Red Hill Avenue	35	7,758	8,400	8,600	66.8	143	66	31	67.2	151	70	32	67.3	153	71	33	0.4	0.1

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change	Chang
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	From Existing	due t Proje
Tustin Ranch Road	North of I-5	50	32,560	38,500	38,500	76.3	612	284	132	77.0	685	318	148	77.0	685	318	148	0.7	0.0
Tustin Ranch Road	I-5 to Walnut Avenue	50	21,087	36,600	37,400	74.4	458	213	99	76.8	662	307	143	76.9	672	312	145	2.5	0.1
Valencia Avenue	Newport Avenue to Red Hill Avenue	45	3,690	15,900	16,600	65.9	123	57	26	72.2	325	151	70	72.4	335	155	72	**6.5**	0.2
Walnut Avenue	East of Newport Avenue	45	15,375	20,800	21,000	72.1	318	148	69	73.4	389	181	84	73.4	392	182	84	1.4	0.0
Walnut Avenue	East of Red Hill Avenue	45	15,579	17,400	17,500	72.1	321	149	69	72.6	346	160	74	72.6	347	161	75	0.5	0.0
Walnut Avenue	West of Tustin Ranch Road	45	19,862	22,500	22,700	73.2	377	175	81	73.7	410	190	88	73.7	413	191	89	0.6	0.0
Walnut Avenue	Franklin Avenue to Myford Road	45	18,249	21,000	21,100	72.8	357	166	77	73.4	392	182	84	73.4	393	182	85	0.6	0.0
Warner Avenue	SR-55 to Red Hill Avenue	50	13,682	34,300	35,700	72.6	344	159	74	76.5	634	294	137	76.7	651	302	140	**4.2**	0.2
						4.8	0	0	0	4.8	0	0	0	4.8	0	0	0	0.0	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030 Existing GP

Roadway Segment	Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change	Chang
					Existing				Future No Project				Future With Project					
		Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	From Existing	due t Proje

Assumptions: Based on the Traffic Analysis for the Irvine Busines Center completed by Parsons Brinkerhoff, February 2009. Speed Limits obtained from the City of Irvine Municipal Code and Google Earth, S 2.3

Federal Highway Administration Highway Traffic Noise Prediction Model, December, 1978. Baseline California vehicle noise levels from Caltrans, TAN 95-03, 1995

Simplified to 2 lanes 6.1 meters= 20.0

future 6.1 meters= 20.0

Noise path decay parameter for hard site

24-hour distribution of traffic volumes based on: California Department of Transportation (Caltrans). 2008 September. 2007 Annual Average Daily Truck Traffic on the California State Highway System.

MacArthur to I-5 70% Day 94% LDA

15% Eve 4% MDT

Site parameter: 0.0 15% Night 2% HDT

HALFSEP 1/2 lane separation 6.1

HALFSEPFUT 1/2 lane separation (future) 6.1

Lane separation:

2 ___ ___

\+ +

4 ___ ___ ___ ___

\+ <--------> +

consider moving lanes only

6 ___ ___ ___ ___ ___ ___

\+ <----------> +

8 + ___ ___ ___ ___ ___ ___ ___ ___

\+ <----------> +

California base noise levels:

Autos 5.2+38.8 Log10 (speed, mi/hr) = -2.8 + 38.8 Log10 (speed, km/hr)

Light trucks: 35.3 + 25.6 Log10 (speed, mi/hr) = 30 + 25.6 Log10 (speed, km/hr)

Heavy trucks:

25-31 mi/hr: 51.9 + 19.2 Log10 (speed, mi/hr) = 47.9 + 19.2 Log10 (speed, km/hr)

35-65 mi/hr: 50.4 + 19.2 Log10 (speed, mi/hr) = 46.4 + 19.2 Log10 (speed, km/hr)

31-35 mi/hr: straight line interpolation between above two curves

Fleet Mix

Route 55 Caltrans AADT Fleet Mix - 2007

	AADT	Trucks	Med Truck	Heavy Truck	Car
SR-1 to I-405	150,000	5,250	3,665	1,586	144,750
	Percent		2.4%	1.1%	96.5%
I-405 to Mac Arthur	222,000	4,662	2,457	2,205	217,338
	Percent		1.1%	1.0%	97.9%
Mac Arthur to I-5	233,000	13,514	8,230	5,284	219,486
	Percent		3.5%	2.3%	94.2%

Source: California Department of Transportation (Caltrans). 2008 September. 2*007 Annual Average Daily Truck Traffic on the California State Highway System*.

RTE	DIST	CNTY	POST MILE	L E G	DESCRIPTION	VEHICLE AADT TOTAL	TRUCK AADT TOTAL	TRUCK % TOT VEH	TRUCK AADT TOTAL By Axle 2	3	4	5+	% TRUCK AADT By Axle 2	3	4	5+	EAL 2-WAY (1000)	YEAR VER/ EST
055	12	ORA	0	A	TUSTIN, FINLEY AVENUE	48000	768	1.6	606	108	22	33	78.9	14	2.8	4.3	46	81E
055	12	ORA	.267	A	JCT. RTE. 1	55000	1980	3.6	1402	305	55	218	70.8	15.4	2.8	11	160	81E
055	12	ORA	R5.99	B	JCT. RTE. 405, SAN DIEGO FREEWAY	150000	5250	3.5	3665	872	142	572	69.8	16.6	2.7	10.9	427	79E
055	12	ORA	R5.99	A	JCT. RTE. 405, SAN DIEGO FREEWAY	222000	4662	2.1	2457	625	326	1254	52.7	13.4	7	26.9	624	84V
055	12	ORA	R6.99	A	SANTA ANA, MAC ARTHUR BOULEVARD	233000	13514	5.8	8230	1946	770	2568	60.9	14.4	5.7	19	1466	84V
055	12	ORA	10.45	B	TUSTIN, JCT. RTE. 5, SANTA ANA FREEWAY	252000	16632	6.6	9780	1613	898	4341	58.8	9.7	5.4	26.1	2120	84V
055	12	ORA	10.45	A	TUSTIN, JCT. RTE. 5, SANTA ANA FREEWAY	232000	17864	7.7	9915	1965	1304	4680	55.5	11	7.3	26.2	2334	83E
055	12	ORA	12.967	B	JCT. RTE. 22 WEST, GARDEN GROVE FREEWAY	225000	16875	7.5	9332	1789	1266	4489	55.3	10.6	7.5	26.6	2226	83E
055	12	ORA	12.967	A	JCT. RTE. 22 WEST, GARDEN GROVE FREEWAY	243000	14337	5.9	8574	1491	631	3642	59.8	10.4	4.4	25.4	1787	84E
055	12	ORA	13.7	A	CHAPMAN AVENUE	233000	13747	5.9	8221	1430	605	3492	59.8	10.4	4.4	25.4	1713	84E
055	12	ORA	R17.876	B	JCT RTE 91	211000	12449	5.9	7445	1295	548	3162	59.8	10.4	4.4	25.4	1551	84E

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Anton Boulevard	Bristol Street to Sunflower Avenue	40	7,620	8,200	8,200	67.9	169	78	36	68.2	177	82	38	68.2	177	82	38	0.3	0.0
Baker Street	Bear Street to Bristol Street	45	23,497	25,400	25,900	73.9	422	196	91	74.2	445	206	96	74.3	450	209	97	0.4	0.1
Baker Street	Bristol Street to SR 55 SB Ramps	45	27,498	30,200	30,700	74.6	469	218	101	75.0	499	232	108	75.1	504	234	109	0.5	0.1
Baker Street	SR 55 SB to SR 55 NB	45	24,275	28,000	28,500	74.0	431	200	93	74.7	474	220	102	74.7	480	223	103	0.7	0.1
Baker Street	SR 55 NB to Red Hill Avenue	45	13,718	15,800	16,300	71.6	295	137	64	72.2	324	150	70	72.3	331	154	71	0.7	0.1
Baker Street	Red Hill Avenue to Airway Avenue	45	4,699	5,700	5,700	66.9	144	67	31	67.7	164	76	35	67.7	164	76	35	0.8	0.0
Bear Street	Paularino Avenue to Baker Street	45	17,577	18,300	18,400	72.6	348	161	75	72.8	357	166	77	72.8	359	166	77	0.2	0.0
Bristol Street	Segerstrom Avenue to West Alton Avenue	45	35,789	36,100	36,300	75.7	559	259	120	75.8	562	261	121	75.8	564	262	122	0.1	0.0
Bristol Street	West Alton Avenue to MacArthur Boulevard	45	38,850	40,400	40,600	76.1	590	274	127	76.3	606	281	131	76.3	608	282	131	0.2	0.0
Bristol Street	MacArthur Boulevard to Sunflower Avenue	45	22,305	23,100	23,100	73.7	408	189	88	73.8	417	194	90	73.8	417	194	90	0.2	0.0
Bristol Street	Sunflower Avenue to Anton Boulevard	45	42,108	43,200	43,200	76.4	623	289	134	76.5	634	294	136	76.5	634	294	136	0.1	0.0
Bristol Street	Anton Boulevard to I-405 NB Ramps	45	62,602	64,600	64,600	78.2	811	377	175	78.3	828	385	178	78.3	828	385	178	0.1	0.0
Bristol Street	I-405 NB Ramps to I-405 SB Ramps	45	63,048	64,500	64,700	78.2	815	378	176	78.3	828	384	178	78.3	829	385	179	0.1	0.0
Bristol Street	I-405 SB Ramp to Paularino Avenue	45	40,727	43,400	43,400	76.3	609	283	131	76.6	635	295	137	76.6	635	295	137	0.3	0.0
Bristol Street	Paularino Avenue to Baker Street	45	34,095	35,500	35,600	75.5	541	251	117	75.7	556	258	120	75.7	557	258	120	0.2	0.0
Bristol Street	Baker Street to SR 55	45	24,713	25,600	25,700	74.1	437	203	94	74.3	447	207	96	74.3	448	208	97	0.2	0.0
Bristol Street	SR-55 to Red Hill Avenue	45	20,914	22,000	22,400	73.4	391	181	84	73.6	404	188	87	73.7	409	190	88	0.3	0.1
Del Mar Avenue	Newport Boulevard SB to Newport Boulevard NB	45	12,232	13,300	13,400	71.1	273	127	59	71.4	289	134	62	71.5	290	135	63	0.4	0.0
Del Mar Avenue	Newport Boulevard to Santa Ana Avenue	45	7,069	7,300	7,300	68.7	190	88	41	68.8	194	90	42	68.8	194	90	42	0.1	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change From Existing	Change due to Project
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Flower Street	Segerstrom Avenue to MacArthur Boulevard	45	9,756	10,100	10,200	70.1	235	109	51	70.2	240	112	52	70.3	242	112	52	0.2	0.0
Flower Street	MacArthur Boulevard to Sunflower Avenue	45	8,180	8,500	8,500	69.3	209	97	45	69.5	214	99	46	69.5	214	99	46	0.2	0.0
Flower Street	Sunflower Avenue to Anton Boulevard	45	6,193	6,500	6,400	68.1	174	81	37	68.3	179	83	39	68.2	177	82	38	0.1	-0.1
Main Street	Sunflower Avenue to SR-55	45	20,195	21,400	22,100	73.2	382	177	82	73.5	397	184	85	73.6	405	188	87	0.4	0.1
Mesa Drive	Newport Boulevard SB to Newport Boulevard NB	45	5,469	5,800	5,800	67.6	160	74	34	67.8	166	77	36	67.8	166	77	36	0.3	0.0
Mesa Drive	Newport Boulevard NB to Santa Ana Avenue	45	5,674	6,000	6,100	67.7	164	76	35	68.0	170	79	37	68.0	172	80	37	0.3	0.1
Mesa Drive	Irvine Avenue to Birch Street	45	8,487	9,000	9,200	69.5	214	99	46	69.7	223	103	48	69.8	226	105	49	0.4	0.1
Paularino Avenue	Bear Street to Bristol Street	35	7,632	8,100	8,200	66.8	141	66	30	67.0	147	68	32	67.1	148	69	32	0.3	0.1
Paularino Avenue	Bristol Street to SR-55 SB	35	16,284	18,100	18,100	70.1	234	109	50	70.5	251	117	54	70.5	251	117	54	0.5	0.0
Paularino Avenue	SR-55 SB to SR-55 NB	35	15,141	18,200	18,400	69.7	223	103	48	70.5	252	117	54	70.6	254	118	55	0.8	0.0
Paularino Avenue	SR-55 NB to Red Hill Avenue	35	3,967	5,200	5,200	63.9	91	42	20	65.1	109	51	24	65.1	109	51	24	1.2	0.0
Paularino Avenue	Red Hill Avenue to Airway Avenue	35	10,781	13,300	13,300	68.3	178	83	38	69.2	204	95	44	69.2	204	95	44	0.9	0.0
Red Hill Avenue	Main Street to Paularino Avenue	45	16,060	18,600	19,200	72.2	328	152	71	72.9	361	168	78	73.0	369	171	79	0.8	0.1
Red Hill Avenue	Paularino Avenue to Baker Street	45	15,961	19,600	20,200	72.2	326	151	70	73.1	374	174	81	73.2	382	177	82	1.0	0.1
Red Hill Avenue	Baker Street to Bristol Street	45	14,182	16,700	16,700	71.7	301	140	65	72.4	336	156	72	72.4	336	156	72	0.7	0.0
Santa Ana Avenue	Mesa Drive to Bristol Street	35	9,020	9,400	9,300	67.5	158	73	34	67.7	162	75	35	67.6	161	75	35	0.1	0.0
University Drive	Santa Ana Avenue to Irvine Avenue	50	5,684	5,900	6,000	68.7	191	89	41	68.9	196	91	42	69.0	198	92	43	0.2	0.1

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change From Existing	Change due to Project
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Alton Parkway	Daimler Street to Red Hill Avenue	50	4,578	4,700	4,700	67.8	166	77	36	67.9	169	78	36	67.9	169	78	36	0.1	0.0
Alton Parkway	Red Hill Avenue to Von Karman Avenue	50	12,332	12,500	13,000	72.1	321	149	69	72.2	323	150	70	72.3	332	154	72	0.2	0.2
Alton Parkway	Von Karman Avenue to Jamboree Road	50	14,649	15,700	16,100	72.9	360	167	77	73.2	377	175	81	73.3	383	178	82	0.4	0.1
Alton Parkway	Jamboree Road to Murphy Avenue	50	15,133	16,500	16,900	73.0	367	171	79	73.4	389	181	84	73.5	395	184	85	0.5	0.1

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change From Existing	Change due to Project
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Alton Parkway	Murphy Avenue to Harvard Avenue	50	15,645	17,100	17,600	73.1	376	174	81	73.5	399	185	86	73.6	406	189	88	0.5	0.1
Alton Parkway	Harvard Avenue to Paseo Westpark	50	15,465	16,600	16,800	73.1	373	173	80	73.4	391	181	84	73.4	394	183	85	0.4	0.1
Alton Parkway	Paseo Westpark to San Marino	50	12,620	13,800	14,000	72.2	326	151	70	72.6	346	160	74	72.7	349	162	75	0.5	0.1
Alton Parkway	San Marino to Culver Drive	50	21,617	23,300	23,300	74.5	466	216	100	74.9	490	227	106	74.9	490	227	106	0.3	0.0
Barranca Parkway (Dyer)	Pullman to Red Hill Avenue	50	24,454	25,100	25,800	75.1	506	235	109	75.2	515	239	111	75.3	524	243	113	0.2	0.1
Barranca Parkway	Red Hill Avenue to Armstrong	50	30,266	27,100	30,300	76.0	583	271	126	75.5	542	251	117	76.0	584	271	126	0.0	0.5
Barranca Parkway	Armstrong to Von Karman Avenue	50	29,815	29,800	29,800	75.9	577	268	124	75.9	577	268	124	75.9	577	268	124	0.0	0.0
Barranca Parkway	Von Karman Avenue to Jamboree Road	50	22,039	22,000	22,300	74.6	472	219	102	74.6	472	219	102	74.7	476	221	103	0.1	0.1
Barranca Parkway	Jamboree Road to Construction Circle	50	24,517	27,500	27,600	75.1	507	235	109	75.6	547	254	118	75.6	548	255	118	0.5	0.0
Barranca Parkway	Construction Circle to Harvard Avenue	50	21,003	24,200	24,300	74.4	457	212	98	75.0	502	233	108	75.0	504	234	109	0.6	0.0
Barranca Parkway	Harvard Avenue to Paseo Westpark	50	19,905	22,800	22,800	74.2	441	205	95	74.8	483	224	104	74.8	483	224	104	0.6	0.0
Barranca Parkway	Paseo Westpark to Santa Rosa	50	21,004	24,200	24,300	74.4	457	212	98	75.0	502	233	108	75.0	504	234	109	0.6	0.0
Barranca Parkway	Santa Rosa to Culver Drive	50	21,643	24,600	24,700	74.5	466	216	100	75.1	508	236	109	75.1	509	236	110	0.6	0.0
Bryan Avenue	Jamboree Road to Marketplace	50	21,001	22,400	22,400	74.4	457	212	98	74.7	477	222	103	74.7	477	222	103	0.3	0.0
Bryan Avenue	Marketplace to El Camino Real	50	17,921	20,800	20,800	73.7	411	191	89	74.4	454	211	98	74.4	454	211	98	0.6	0.0
Bryan Avenue	El Camino Real to Rubicon	50	14,726	17,400	17,300	72.9	361	167	78	73.6	403	187	87	73.6	402	186	87	0.7	0.0
Bryan Avenue	Rubicon to Culver	50	18,343	23,100	23,000	73.8	418	194	90	74.8	487	226	105	74.8	486	225	105	1.0	0.0
Campus Drive	MacArthur Boulevard to Martin	40	16,279	17,400	19,100	71.2	280	130	60	71.5	293	136	63	71.9	311	145	67	0.7	0.4
Campus Drive	Martin to Von Karman Avenue	40	12,892	13,700	15,100	70.2	240	111	52	70.5	250	116	54	70.9	266	124	57	0.7	0.4
Campus Drive	Von Karman Avenue to Teller Avenue	40	11,823	12,600	14,000	69.8	226	105	49	70.1	236	110	51	70.6	253	118	55	0.7	0.5
Campus Drive	Teller Avenue to Jamboree Road	40	10,315	10,900	11,600	69.2	207	96	44	69.5	214	99	46	69.7	223	104	48	0.5	0.3

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Campus Drive	Jamboree Road to Carlson Avenue	55	20,089	21,400	22,300	75.2	513	238	110	75.4	535	248	115	75.6	550	255	118	0.5	0.2
Campus Drive	Carlson Avenue to University	55	18,247	18,900	19,300	74.7	481	223	104	74.9	492	229	106	75.0	499	232	108	0.2	0.1
Carlson Avenue	Michelson Drive to Campus Drive	55	3,901	5,300	5,700	68.0	172	80	37	69.4	211	98	45	69.7	221	103	48	1.6	0.3
Culver Drive	I-5 NB Ramps to I-5 SB Ramps	50	36,738	44,200	44,000	76.8	664	308	143	77.6	751	348	162	77.6	748	347	161	0.8	0.0
Culver Drive	I-5 SB Off-Ramp to Scottsdale Drive	50	49,687	54,800	54,800	78.2	812	377	175	78.6	866	402	187	78.6	866	402	187	0.4	0.0
Culver Drive	Scottsdale Drive to Walnut Avenue	50	44,077	48,500	48,600	77.6	749	348	161	78.1	799	371	172	78.1	800	371	172	0.4	0.0
Culver Drive	Walnut Avenue to Deerfield Avenue	50	42,201	44,300	44,500	77.4	728	338	157	77.7	752	349	162	77.7	754	350	162	0.2	0.0
Culver Drive	Deerfield Avenue to Irvine Center Drive	50	38,904	41,100	41,100	77.1	690	320	149	77.3	715	332	154	77.3	715	332	154	0.2	0.0
Culver Drive	Irvine Center Drive to Warner Avenue	50	41,580	43,100	43,100	77.4	721	335	155	77.5	738	343	159	77.5	738	343	159	0.2	0.0
Culver Drive	Warner Avenue to Barranca Parkway	50	40,870	43,300	43,600	77.3	713	331	154	77.6	741	344	160	77.6	744	345	160	0.3	0.0
Culver Drive	Barranca Parkway to Alton Parkway	50	44,253	47,000	47,500	77.7	751	349	162	77.9	782	363	169	78.0	788	366	170	0.3	0.0
Culver Drive	Alton Parkway to Main Street	50	45,204	48,000	48,600	77.7	762	354	164	78.0	793	368	171	78.1	800	371	172	0.3	0.1
Culver Drive	Main Street to San Leandro	50	49,711	51,500	52,000	78.2	812	377	175	78.3	831	386	179	78.4	837	388	180	0.2	0.0
Culver Drive	San Leandro to I-405 NB On-Ramp	50	54,428	56,100	56,600	78.6	863	400	186	78.7	880	409	190	78.7	885	411	191	0.2	0.0
Culver Drive	I-405 SB On-Ramp to Michelson Drive	50	53,319	57,100	57,900	78.5	851	395	183	78.8	891	413	192	78.8	899	417	194	0.4	0.1
Culver Drive	Michelson Drive to Sandburg Way	50	39,658	43,100	43,400	77.2	698	324	150	77.5	738	343	159	77.6	742	344	160	0.4	0.0
Culver Drive	Sandburg Way to University Drive	50	32,408	35,600	35,800	76.3	610	283	132	76.7	650	302	140	76.7	652	303	141	0.4	0.0
El Camino Real	Jamboree Road to Alliance	45	20,876	22,800	22,800	73.4	390	181	84	73.8	414	192	89	73.8	414	192	89	0.4	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Fairchild Road	MacArthur Boulevard to Jamboree Road	50	4,393	4,500	4,500	67.6	161	75	35	67.7	164	76	35	67.7	164	76	35	0.1	0.0
Harvard Avenue	Walnut Avenue to Poplar Street	50	9,179	9,600	9,700	70.8	263	122	57	71.0	271	126	58	71.1	273	127	59	0.2	0.0
Harvard Avenue	Poplar Street to Deerfield Avenue	50	11,387	11,700	11,700	71.8	304	141	65	71.9	310	144	67	71.9	310	144	67	0.1	0.0
Harvard Avenue	Deerfield Avenue to Irvine Center Drive	50	10,273	10,800	10,800	71.3	284	132	61	71.5	293	136	63	71.5	293	136	63	0.2	0.0
Harvard Avenue	Irvine Center Drive to Paseo Westpark	50	12,508	12,900	13,100	72.2	324	150	70	72.3	330	153	71	72.4	334	155	72	0.2	0.1
Harvard Avenue	Paseo Westpark to Warner Avenue	50	11,065	12,700	12,800	71.6	298	138	64	72.2	327	152	70	72.3	329	153	71	0.6	0.0
Harvard Avenue	Warner to Barranca Parkway	50	12,686	15,000	15,100	72.2	327	152	70	73.0	365	170	79	73.0	367	170	79	0.8	0.0
Harvard Avenue	Barranca Parkway to San Juan	50	15,295	17,100	17,300	73.0	370	172	80	73.5	399	185	86	73.6	402	186	87	0.5	0.1
Harvard Avenue	San Juan to San Leon	50	14,888	16,200	16,600	72.9	363	169	78	73.3	385	178	83	73.4	391	181	84	0.5	0.1
Harvard Avenue	San Leon to Alton Parkway	50	16,362	17,900	18,200	73.3	387	180	83	73.7	411	191	89	73.8	416	193	90	0.5	0.1
Harvard Avenue	Alton Parkway to San Marino	50	18,655	20,500	21,100	73.9	422	196	91	74.3	450	209	97	74.4	459	213	99	0.5	0.1
Harvard Avenue	San Marino to Main Street	50	19,291	21,100	21,800	74.0	432	201	93	74.4	459	213	99	74.6	469	218	101	0.5	0.1
Harvard Avenue	Main Street to Coronado	50	13,552	14,700	15,400	72.5	341	158	74	72.9	360	167	78	73.1	372	173	80	0.6	0.2
Harvard Avenue	Coronado to Michelson Drive	50	20,167	21,500	22,700	74.2	445	207	96	74.5	464	216	100	74.8	481	223	104	0.5	0.2
Harvard Avenue	Michelson Drive to University Drive	50	8,672	9,300	9,800	70.6	253	118	55	70.9	266	123	57	71.1	275	128	59	0.5	0.2
Irvine Center Drive	Harvard Avenue to Hearthstone	50	17,848	20,700	20,900	73.7	410	190	88	74.4	453	210	98	74.4	456	212	98	0.7	0.0
Irvine Center Drive	Hearthstone to Culver Drive	50	15,815	19,200	19,400	73.2	378	176	82	74.0	431	200	93	74.1	434	201	93	0.9	0.0
Jamboree Road	Bryan Avenue to El Camino	50	39,163	39,200	39,200	77.1	693	321	149	77.1	693	322	149	77.1	693	322	149	0.0	0.0
Jamboree Road	El Camino Real to I-5 NB On-Ramp	50	61,511	61,500	61,500	79.1	936	434	202	79.1	936	434	202	79.1	936	434	202	0.0	0.0
Jamboree Road	I-5 NB Ramps to I-5 SB Off-Ramp	50	65,707	66,700	66,500	79.4	978	454	211	79.4	988	458	213	79.4	986	458	212	0.1	0.0
Jamboree Road	I-5 SB Off-Ramp to Michelle Drive	50	57,976	61,300	61,100	78.8	900	418	194	79.1	934	433	201	79.1	932	432	201	0.2	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change	Change
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	From Existing	due to Project
Jamboree Road	Michelle Drive to Walnut Avenue	50	54,497	54,500	54,500	78.6	863	401	186	78.6	863	401	186	78.6	863	401	186	0.0	0.0
Jamboree Road	Walnut Ave to Edinger Ave (& Frontage Rds)*	50	71,936	71,900	71,900	79.8	1039	482	224	79.8	1038	482	224	79.8	1038	482	224	0.0	0.0
Jamboree Road	Edinger Avenue to Warner Avenue*	50	78,493	78,500	78,500	80.1	1101	511	237	80.1	1101	511	237	80.1	1101	511	237	0.0	0.0
Jamboree Road	Warner Avenue to Barranca Parkway	50	69,451	73,900	74,500	79.6	1015	471	219	79.9	1058	491	228	79.9	1063	494	229	0.3	0.0
Jamboree Road	Barranca Parkway to Beckman Avenue	50	50,727	54,300	55,200	78.2	823	382	177	78.5	861	400	186	78.6	871	404	188	0.4	0.1
Jamboree Road	Beckman Avenue to Alton Parkway	50	49,220	51,900	52,800	78.1	807	374	174	78.3	836	388	180	78.4	845	392	182	0.3	0.1
Jamboree Road	Alton Parkway to McGaw Avenue	50	46,536	49,400	51,600	77.9	777	361	167	78.1	809	375	174	78.3	832	386	179	0.4	0.2
Jamboree Road	McGaw Avenue to Kelvin Avenue	50	45,004	47,700	50,200	77.7	760	353	164	78.0	790	367	170	78.2	817	379	176	0.5	0.2
Jamboree Road	Kelvin Avenue to Main Street	50	53,259	56,100	59,900	78.5	850	395	183	78.7	880	409	190	79.0	919	427	198	0.5	0.3
Jamboree Road	Main Street to I-405 Off-Ramp	50	52,524	54,100	58,300	78.4	842	391	181	78.5	859	399	185	78.9	903	419	195	0.5	0.3
Jamboree Road	I-405 On-Ramp to Michelson Drive	50	69,470	72,300	79,900	79.6	1015	471	219	79.8	1042	484	225	80.2	1114	517	240	0.6	0.4
Jamboree Road	Michelson Drive to Dupont Drive	50	51,529	53,000	60,100	78.3	832	386	179	78.4	847	393	183	79.0	921	428	199	0.7	0.5
Jamboree Road	Dupont Drive to Campus Drive	50	45,645	46,900	49,800	77.8	767	356	165	77.9	781	363	168	78.2	813	377	175	0.4	0.3
Jamboree Road	Campus Drive to Birch Street	50	40,300	41,800	44,600	77.2	706	328	152	77.4	723	336	156	77.7	755	351	163	0.4	0.3
Jamboree Road	Birch Street to Fairchild Road	50	32,438	33,600	35,700	76.3	611	284	132	76.5	625	290	135	76.7	651	302	140	0.4	0.3
Jamboree Road	Fairchild Road to Koll Center	50	33,237	34,200	36,400	76.4	621	288	134	76.5	633	294	136	76.8	660	306	142	0.4	0.3
Jamboree Road	Koll Center to MacArthur Boulevard	50	26,722	27,500	29,200	75.5	537	249	116	75.6	547	254	118	75.8	569	264	123	0.4	0.3
MacArthur Boulevard	Fitch to Red Hill Avenue	50	35,926	37,500	39,100	76.7	654	303	141	76.9	673	312	145	77.1	692	321	149	0.4	0.2

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change From Existing	Change due to Project
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
MacArthur Boulevard	Red Hill Avenue to Skypark Boulevard	50	15,788	16,200	17,200	73.2	378	175	81	73.3	385	178	83	73.5	400	186	86	0.4	0.3
MacArthur Boulevard	Skypark Boulevard to Main Street	50	25,505	26,200	27,600	75.3	520	242	112	75.4	530	246	114	75.6	548	255	118	0.3	0.2
MacArthur Boulevard	Main Street to I-405 NB Off-Ramp	50	33,677	34,700	36,600	76.5	626	291	135	76.6	639	297	138	76.8	662	307	143	0.4	0.2
MacArthur Boulevard	I-405 SB On-Ramp to Michelson Drive	50	48,662	50,300	53,000	78.1	800	372	172	78.2	818	380	176	78.4	847	393	183	0.4	0.2
MacArthur Boulevard	Michelson Drive to Douglass	50	40,604	41,800	42,300	77.3	709	329	153	77.4	723	336	156	77.5	729	338	157	0.2	0.1
MacArthur Boulevard	Douglass to Campus Drive	50	33,358	34,600	34,800	76.4	622	289	134	76.6	638	296	137	76.6	640	297	138	0.2	0.0
MacArthur Boulevard	Jamboree Road to Fairchild Road	50	30,151	31,800	32,400	76.0	582	270	125	76.2	603	280	130	76.3	610	283	131	0.3	0.1
MacArthur Boulevard	Fairchild Road to University Drive	50	34,000	35,600	36,200	76.5	630	293	136	76.7	650	302	140	76.8	657	305	142	0.3	0.1
Main Street	McDurmott to Red Hill Avenue	50	18,121	18,900	19,500	73.8	414	192	89	74.0	426	198	92	74.1	435	202	94	0.3	0.1
Main Street	Red Hill Avenue to Executive Park	50	16,818	17,700	18,500	73.5	394	183	85	73.7	408	189	88	73.9	420	195	91	0.4	0.2
Main Street	Executive Park to MacArthur Boulevard	50	26,160	27,200	28,400	75.4	529	246	114	75.5	543	252	117	75.7	559	259	120	0.4	0.2
Main Street	MacArthur Boulevard to Mercantile	50	35,615	36,000	37,100	76.7	650	302	140	76.8	655	304	141	76.9	668	310	144	0.2	0.1
Main Street	Gillette Avenue to Von Karman Avenue	50	17,820	18,700	19,800	73.7	410	190	88	73.9	423	196	91	74.2	440	204	95	0.5	0.2
Main Street	Von Karman Avenue to Cartwright	50	16,082	16,900	17,900	73.3	383	178	82	73.5	395	184	85	73.7	411	191	89	0.5	0.2
Main Street	Siglo to Jamboree Road	50	22,024	22,700	24,700	74.6	472	219	102	74.8	481	223	104	75.1	509	236	110	0.5	0.4
Main Street	Jamboree Road to Union	50	19,037	19,600	20,200	74.0	428	199	92	74.1	437	203	94	74.2	445	207	96	0.3	0.1
Main Street	Veneto to Harvard Avenue	50	10,456	11,200	11,600	71.4	287	133	62	71.7	301	140	65	71.8	308	143	66	0.5	0.2
Main Street	Harvard Avenue to San Mateo	50	11,382	12,100	12,300	71.8	304	141	65	72.0	317	147	68	72.1	320	149	69	0.3	0.1
Main Street	Paseo Westpark to Culver Drive	50	8,757	9,600	9,600	70.6	255	118	55	71.0	271	126	58	71.0	271	126	58	0.4	0.0
McGaw Avenue	Daimler Street to Red Hill Avenue	50	3,630	3,600	3,600	66.8	142	66	31	66.8	141	65	30	66.8	141	65	30	0.0	0.0
McGaw Avenue	Red Hill Avenue to Von Karman Avenue	50	5,653	5,700	6,100	68.7	191	88	41	68.8	192	89	41	69.0	200	93	43	0.3	0.3
McGaw Avenue	Von Karman Avenue to Jamboree Road	50	6,451	6,600	7,000	69.3	208	97	45	69.4	211	98	46	69.6	220	102	47	0.4	0.3

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change From Existing	Change due to Project
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
McGaw Avenue	Jamboree Road to Murphy Avenue	50	2,462	2,600	3,500	65.1	109	51	24	65.3	114	53	24	66.6	138	64	30	1.5	1.3
Michelson Drive	MacArthur Boulevard to Dupont Drive	45	14,917	15,100	17,200	71.9	312	145	67	72.0	314	146	68	72.5	343	159	74	0.6	0.6
Michelson Drive	Bixby to Von Karman Avenue	45	10,836	11,400	13,000	70.5	252	117	54	70.8	261	121	56	71.3	284	132	61	0.8	0.6
Michelson Drive	Von Karman Avenue to Obsidian	45	10,559	11,100	12,800	70.4	248	115	53	70.6	256	119	55	71.3	282	131	61	0.8	0.6
Michelson Drive	Teller Avenue to Jamboree Road	45	17,973	18,400	20,400	72.7	353	164	76	72.8	359	166	77	73.3	384	178	83	0.6	0.4
Michelson Drive	Jamboree Road to Carlson Avenue	45	14,864	16,500	19,100	71.9	311	144	67	72.4	333	155	72	73.0	368	171	79	1.1	0.6
Michelson Drive	Carlson Avenue to Prince	45	16,704	17,200	20,200	72.4	336	156	72	72.5	343	159	74	73.2	382	177	82	0.8	0.7
Michelson Drive	Riparian View to Harvard Avenue	45	16,553	17,500	18,900	72.4	334	155	72	72.6	347	161	75	73.0	365	169	79	0.6	0.3
Michelson Drive	Harvard Avenue to Parkside Drive	45	11,741	12,500	13,100	70.9	266	123	57	71.2	277	129	60	71.4	286	133	62	0.5	0.2
Michelson Drive	Parkside Drive to Culver Drive	45	16,629	17,600	18,400	72.4	335	156	72	72.6	348	162	75	72.8	359	166	77	0.4	0.2

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

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						Existing				Future No Project				Future With Project				Change From Existing	Change due to Project
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Red Hill Avenue	Dyer/Barranca Parkway to Deere Avenue	50	26,611	26,700	27,300	75.4	535	248	115	75.5	536	249	116	75.6	544	253	117	0.1	0.1
Red Hill Avenue	Deere Avenue to Alton Parkway	50	26,630	27,200	27,800	75.4	536	249	115	75.5	543	252	117	75.6	551	256	119	0.2	0.1
Red Hill Avenue	Alton Parkway to McGaw Avenue	50	26,216	30,000	30,900	75.4	530	246	114	76.0	580	269	125	76.1	591	274	127	0.7	0.1
Red Hill Avenue	McGaw Avenue to MacArthur Boulevard	50	34,187	37,400	38,400	76.5	633	294	136	76.9	672	312	145	77.0	684	317	147	0.5	0.1
Red Hill Avenue	MacArthur Boulevard to Skypark	50	9,780	11,400	11,800	71.1	275	127	59	71.8	304	141	66	71.9	311	144	67	0.8	0.1
Red Hill Avenue	Skypark to Main Street	50	12,554	14,400	14,800	72.2	324	151	70	72.8	355	165	77	72.9	362	168	78	0.7	0.1
University Drive	MacArthur Boulevard to California Avenue	55	23,581	24,800	25,100	75.9	571	265	123	76.1	590	274	127	76.1	595	276	128	0.3	0.1
University Drive	California Avenue to Mesa Road	55	32,837	34,600	35,100	77.3	712	330	153	77.5	737	342	159	77.6	744	345	160	0.3	0.1
University Drive	Mesa Road to Campus Drive	45	33,673	35,900	36,300	75.5	537	249	116	75.7	560	260	121	75.8	564	262	122	0.3	0.0
University Drive	Campus Drive to Harvard Avenue	45	26,248	28,700	29,000	74.4	454	211	98	74.8	482	224	104	74.8	486	225	105	0.4	0.0
University Drive	Harvard Avenue to San Joaquin Hills Road	55	21,301	24,200	24,300	75.4	533	247	115	76.0	581	269	125	76.0	582	270	125	0.6	0.0
University Drive	San Joaquin Hills Road to Culver Drive	55	21,676	24,600	24,700	75.5	539	250	116	76.0	587	272	126	76.1	589	273	127	0.6	0.0
Von Karman Avenue	Barranca Parkway to Alton Parkway	45	16,770	24,200	25,100	72.4	337	156	73	74.0	430	200	93	74.2	441	205	95	1.8	0.2
Von Karman Avenue	Alton Parkway to McGaw Avenue	45	16,349	19,400	20,400	72.3	331	154	71	73.1	372	172	80	73.3	384	178	83	1.0	0.2
Von Karman Avenue	McGaw Avenue to Anchor	45	17,271	19,700	20,700	72.6	344	160	74	73.1	375	174	81	73.3	388	180	84	0.8	0.2
Von Karman Avenue	Anchor to Main Street	45	17,763	19,900	21,200	72.7	350	163	75	73.2	378	175	81	73.5	394	183	85	0.8	0.3
Von Karman Avenue	Main Street to Morse Avenue	45	18,765	20,500	22,000	72.9	363	169	78	73.3	385	179	83	73.6	404	188	87	0.7	0.3
Von Karman Avenue	Quartz to Michelson Drive	45	20,193	21,900	23,700	73.2	382	177	82	73.6	403	187	87	73.9	425	197	91	0.7	0.3
Von Karman Avenue	Michelson Drive to Dupont Drive	45	16,840	17,800	19,000	72.5	338	157	73	72.7	351	163	76	73.0	366	170	79	0.5	0.3
Von Karman Avenue	Dupont Drive to Martin	45	16,346	17,000	18,200	72.3	331	154	71	72.5	340	158	73	72.8	356	165	77	0.5	0.3
Von Karman Avenue	Martin to Campus Drive	45	14,234	14,800	15,800	71.7	302	140	65	71.9	310	144	67	72.2	324	150	70	0.5	0.3

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change From Existing	Change due to Project
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Walnut Avenue	Myford to Jamboree SB Off-Ramp	45	21,169	21,200	21,300	73.4	394	183	85	73.5	394	183	85	73.5	395	184	85	0.0	0.0
Walnut Avenue	Jamboree Road to Peters Canyon	45	18,580	21,900	21,900	72.9	361	168	78	73.6	403	187	87	73.6	403	187	87	0.7	0.0
Walnut Avenue	Peters Canyon to Harvard Avenue	45	18,125	20,600	20,700	72.8	355	165	76	73.3	387	179	83	73.3	388	180	84	0.6	0.0
Walnut Avenue	Harvard Avenue to Mall Street	45	16,040	18,500	18,500	72.2	327	152	71	72.9	360	167	78	72.9	360	167	78	0.6	0.0
Walnut Avenue	Mall Street to Culver Drive	45	20,951	24,200	24,400	73.4	391	182	84	74.0	430	200	93	74.1	433	201	93	0.7	0.0
Warner Avenue	Construction North to Harvard Avenue	45	8,225	11,800	11,900	69.3	210	97	45	70.9	267	124	57	70.9	268	124	58	1.6	0.0
Warner Avenue	Harvard Avenue to Paseo Westpark	45	5,766	8,100	8,000	67.8	165	77	36	69.3	208	96	45	69.2	206	96	44	1.4	-0.1
Warner Avenue	Santa Ynez to Culver Drive	45	6,493	8,700	8,600	68.3	179	83	39	69.6	218	101	47	69.5	216	100	47	1.2	-0.1
Birch Street	Mesa Drive to Bristol Street SB	40	10,372	11,200	11,400	69.3	207	96	45	69.6	218	101	47	69.7	221	102	48	0.4	0.1
Birch Street	Bristol Street SB to Bristol Street NB	40	15,579	16,000	16,200	71.0	272	126	59	71.1	277	128	60	71.2	279	130	60	0.2	0.1
Birch Street	East of MacArthur Boulevard	40	20,327	20,800	22,300	72.2	325	151	70	72.3	330	153	71	72.6	345	160	74	0.4	0.3
Birch Street	West of MacArthur Boulevard	40	11,707	12,000	12,900	69.8	225	104	48	69.9	228	106	49	70.2	240	111	52	0.4	0.3
Birch Street	East of Von Karman Avenue	40	20,327	20,800	22,400	72.2	325	151	70	72.3	330	153	71	72.6	346	161	75	0.4	0.3
Bison Avenue	Jamboree Road to MacArthur Boulevard	45	9,087	9,800	9,900	69.8	224	104	48	70.1	236	109	51	70.1	237	110	51	0.4	0.0
Bison Avenue	MacArthur Boulevard to SR-73	45	13,411	13,900	13,800	71.5	290	135	63	71.6	297	138	64	71.6	296	137	64	0.1	0.0
Bristol Street	Red Hill Avenue to Campus Drive	45	20,119	21,400	22,100	73.2	381	177	82	73.5	397	184	85	73.6	405	188	87	0.4	0.1
Bristol Street	Campus Drive to Birch Street	45	33,382	34,900	35,200	75.4	533	248	115	75.6	550	255	118	75.7	553	257	119	0.2	0.0
Bristol Street	West of Jamboree Road	45	42,491	44,200	44,500	76.5	627	291	135	76.6	643	299	139	76.7	646	300	139	0.2	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Campus Drive	Bristol Street NB to MacArthur Boulevard	50	27,671	28,800	30,300	75.6	549	255	118	75.8	564	262	122	76.0	584	271	126	0.4	0.2
Ford Road	Jamboree Road to MacArthur Boulevard	50	9,051	10,000	9,900	70.8	261	121	56	71.2	279	129	60	71.2	277	129	60	0.4	0.0
Irvine Avenue	Bristol Street NB to Bristol Street SB	45	22,879	23,700	24,600	73.8	415	192	89	73.9	425	197	91	74.1	435	202	94	0.3	0.2
Irvine Avenue	Bristol Street SB to Mesa Drive	45	24,237	25,200	25,500	74.0	431	200	93	74.2	442	205	95	74.3	446	207	96	0.2	0.1
Irvine Avenue	South of University Drive	45	22,253	23,200	23,500	73.7	407	189	88	73.8	419	194	90	73.9	422	196	91	0.2	0.1
Jamboree Road	South of MacArthur Boulevard	50	28,826	29,500	30,700	75.8	565	262	122	75.9	573	266	124	76.1	589	273	127	0.3	0.2
Jamboree Road	Bristol Street SB to Bristol Street NB	50	46,597	47,600	48,500	77.9	778	361	168	78.0	789	366	170	78.1	799	371	172	0.2	0.1
Jamboree Road	South of Bristol Street	50	48,897	50,500	51,200	78.1	803	373	173	78.2	821	381	177	78.3	828	384	178	0.2	0.1
Jamboree Road	University Drive to Bison Avenue	50	42,624	44,300	44,900	77.5	733	340	158	77.7	752	349	162	77.7	759	352	163	0.2	0.1
Jamboree Road	Bison Avenue to Ford Road	50	33,614	34,800	35,100	76.5	626	290	135	76.6	640	297	138	76.6	644	299	139	0.2	0.0
MacArthur Boulevard	Campus Drive to Birch Street	50	21,187	22,100	21,900	74.5	460	213	99	74.6	473	220	102	74.6	470	218	101	0.1	0.0
MacArthur Boulevard	South of Birch Street	50	23,445	24,700	24,600	74.9	492	228	106	75.1	509	236	110	75.1	508	236	109	0.2	0.0
MacArthur Boulevard	Von Karman Avenue to Jamboree Road	50	23,568	25,000	25,000	74.9	494	229	106	75.2	513	238	111	75.2	513	238	111	0.3	0.0
MacArthur Boulevard	University Drive to Bison Avenue	50	43,429	45,600	45,700	77.6	742	344	160	77.8	767	356	165	77.8	768	356	165	0.2	0.0
MacArthur Boulevard	Bison Avenue to Ford Road	50	75,856	78,700	78,700	80.0	1076	500	232	80.2	1103	512	238	80.2	1103	512	238	0.2	0.0
University Drive	East of Irvine Avenue	50	823	800	800	60.3	53	24	11	60.2	52	24	11	60.2	52	24	11	-0.1	0.0
University Drive	Jamboree Road to MacArthur Boulevard	50	14,628	15,400	15,600	72.8	359	167	77	73.1	372	173	80	73.1	375	174	81	0.3	0.1
Von Karman Avenue	South of Campus Drive	50	10,305	10,800	11,100	71.3	284	132	61	71.5	293	136	63	71.6	299	139	64	0.3	0.1

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change From Existing	Change due to Project
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Von Karman Avenue	South of Birch Street	50	11,237	11,700	12,100	71.7	301	140	65	71.9	310	144	67	72.0	317	147	68	0.3	0.1
Dyer Road	Main Street to Halladay Street	50	25,688	27,400	27,800	75.3	523	243	113	75.6	546	253	118	75.6	551	256	119	0.3	0.1
Dyer Road	Halladay Street to SR-55 SB	50	30,243	31,800	32,400	76.0	583	271	126	76.2	603	280	130	76.3	610	283	131	0.3	0.1
Dyer Road	SR-55 SB to SR-55 NB	50	43,265	43,600	44,400	77.6	740	344	159	77.6	744	345	160	77.7	753	350	162	0.1	0.1
Dyer Road	SR-55 NB to Pullman Street	50	29,458	30,000	30,600	75.9	573	266	123	76.0	580	269	125	76.1	588	273	127	0.2	0.1
Grand Avenue	Warner Avenue to Hotel Terrace Drive	50	22,946	22,900	22,900	74.8	485	225	104	74.8	484	225	104	74.8	484	225	104	0.0	0.0
Grand Avenue	Hotel Terrace Drive to SR-55 NB	50	21,501	21,500	21,500	74.5	464	216	100	74.5	464	216	100	74.5	464	216	100	0.0	0.0
Halladay Street	Dyer Road to Alton Avenue	35	4,687	5,500	5,600	64.6	102	47	22	65.3	114	53	24	65.4	115	53	25	0.8	0.1
Halladay Street	Alton Avenue to McGaw Avenue(Columbine)	35	1,748	2,100	2,100	60.4	53	25	11	61.2	60	28	13	61.2	60	28	13	0.8	0.0
MacArthur Boulevard	Flower Street to Main Street	50	31,093	32,100	32,400	76.1	594	276	128	76.3	607	282	131	76.3	610	283	131	0.2	0.0
MacArthur Boulevard	Main Street to SR-55 SB	50	47,010	49,900	50,800	77.9	782	363	169	78.2	814	378	175	78.3	824	382	177	0.3	0.1
Main Street	Segerstrom Avenue to Alton Avenue	50	20,603	21,600	21,900	74.3	451	209	97	74.5	466	216	100	74.6	470	218	101	0.3	0.1
Main Street	Alton Avenue to McGaw Avenue(Columbine)	50	23,743	24,600	24,900	74.9	496	230	107	75.1	508	236	109	75.2	512	238	110	0.2	0.1
Main Street	McGaw(Columbine) to MacArthur Boulevard	50	28,675	29,100	29,400	75.8	563	261	121	75.8	568	264	122	75.9	572	266	123	0.1	0.0
Main Street	MacArthur Boulevard to Sunflower Avenue	50	30,103	30,600	30,800	76.0	581	270	125	76.1	588	273	127	76.1	590	274	127	0.1	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change From Existing	Change due to Project
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
McGaw Avenue (Alton)	Main Street to Halladay Street	50	3,092	3,100	3,100	66.1	127	59	27	66.1	128	59	28	66.1	128	59	28	0.0	0.0
Segerstrom Avenue	Bristol Street to Flower Street	45	11,560	12,200	12,400	70.8	263	122	57	71.1	273	127	59	71.1	276	128	59	0.3	0.1
Segerstrom Avenue	Flower Street to Main Street	45	18,676	19,600	19,800	72.9	362	168	78	73.1	374	174	81	73.2	377	175	81	0.3	0.0
Warner Avenue	Grand Avenue to SR-55	50	18,190	28,900	29,200	73.8	415	193	89	75.8	566	263	122	75.8	569	264	123	2.1	0.0
Sunflower Avenue	Bristol Street to Flower Street	45	40,204	40,500	41,100	76.2	604	280	130	76.3	607	282	131	76.3	613	284	132	0.1	0.1
Sunflower Avenue	Flower Street to Anton Boulevard	45	18,032	18,300	18,900	72.7	354	164	76	72.8	357	166	77	73.0	365	169	79	0.2	0.1
Sunflower Avenue	Anton Boulevard to Main Street	45	19,454	20,600	21,400	73.1	372	173	80	73.3	387	179	83	73.5	397	184	85	0.4	0.2
Browning Avenue	Walnut Avenue to I-5	40	4,501	5,000	5,000	65.6	119	55	26	66.1	127	59	27	66.1	127	59	27	0.5	0.0
Bryan Avenue	Newport Boulevard to Red Hill Avenue	50	15,300	16,200	16,200	73.0	370	172	80	73.3	385	178	83	73.3	385	178	83	0.2	0.0
Bryan Avenue	Red Hill Avenue to Browning	50	16,200	17,400	17,400	73.3	385	178	83	73.6	403	187	87	73.6	403	187	87	0.3	0.0
Bryan Avenue	Browning Avenue to Tustin Ranch Road	50	16,700	18,400	18,500	73.4	392	182	85	73.8	419	194	90	73.9	420	195	91	0.4	0.0
Bryan Avenue	Tustin Ranch Road to Jamboree Road	50	16,800	18,400	18,400	73.4	394	183	85	73.8	419	194	90	73.8	419	194	90	0.4	0.0
Edinger Avenue	West of Newport Avenue	55	34,312	40,800	40,900	77.5	733	340	158	78.2	822	382	177	78.3	824	382	177	0.8	0.0
Edinger Avenue	Newport Avenue to Red Hill Avenue	55	20,215	22,200	22,300	75.2	515	239	111	75.6	548	254	118	75.6	550	255	118	0.4	0.0
Edinger Avenue	Red Hill Avenue and Tustin Ranch Road	60	22,340	25,800	26,000	76.5	630	293	136	77.1	694	322	149	77.2	697	324	150	0.7	0.0
El Camino Real	Newport Avenue to Red Hill Avenue	45	13,735	13,700	13,700	71.6	295	137	64	71.6	295	137	63	71.6	295	137	63	0.0	0.0
El Camino Real	Red Hill Avenue to Browning Avenue	45	8,973	10,800	10,800	69.7	222	103	48	70.5	251	117	54	70.5	251	117	54	0.8	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change From Existing	Change due to Project
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
El Camino Real	Browning Avenue to Tustin Ranch Road	45	8,392	9,500	9,500	69.4	212	99	46	70.0	231	107	50	70.0	231	107	50	0.5	0.0
El Camino Real	Tustin Ranch Road to Jamboree Road	45	13,574	15,000	15,100	71.5	293	136	63	71.9	313	145	67	72.0	314	146	68	0.5	0.0
Irvine Center Drive (Edinge	Red Hill Avenue to Jamboree Road	55	22,340	23,300	23,600	75.6	550	255	119	75.8	566	263	122	75.9	571	265	123	0.2	0.1
Irvine Center Drive	Jamboree Road to Harvard Avenue	55	13,952	15,400	15,700	73.6	402	187	87	74.0	430	199	93	74.1	435	202	94	0.5	0.1
Mitchell Avenue	Newport Avenue to Red Hill Avenue	35	7,350	7,400	7,400	66.6	138	64	30	66.6	138	64	30	66.6	138	64	30	0.0	0.0
Mitchell Avenue	Red Hill Avenue to Browning Avenue	35	4,417	4,400	4,400	64.4	98	46	21	64.4	98	45	21	64.4	98	45	21	0.0	0.0
Newport Avenue	El Camino Real to I-5	35	28,516	34,200	34,400	72.5	340	158	73	73.3	384	178	83	73.3	385	179	83	0.8	0.0
Newport Avenue	I-5 to Mitchell Avenue	35	31,417	37,200	37,300	72.9	363	168	78	73.6	406	188	87	73.7	407	189	88	0.7	0.0
Newport Avenue	Mitchell Avenue to McFadden Avenue	35	29,223	35,600	35,600	72.6	346	160	74	73.5	394	183	85	73.5	394	183	85	0.9	0.0
Newport Avenue	North of Sycamore Avenue	35	9,604	19,500	19,400	67.8	165	76	35	70.8	264	122	57	70.8	263	122	57	**3.1**	0.0
Newport Avenue	Valencia Avenue to Edinger Avenue	35	18,205	27,600	27,300	70.5	252	117	54	72.3	333	154	72	72.3	330	153	71	1.8	0.0
Nisson Road	Newport Avenue to Red Hill Avenue	35	5,593	5,600	5,600	65.4	115	53	25	65.4	115	53	25	65.4	115	53	25	0.0	0.0
Nisson Road	Red Hill Avenue to Browning Avenue	35	3,915	4,100	4,100	63.9	90	42	19	64.1	93	43	20	64.1	93	43	20	0.2	0.0
Red Hill Avenue	I-5 NB Ramps to El Camino Real	35	43,222	44,300	44,100	74.3	449	208	97	74.4	456	212	98	74.4	455	211	98	0.1	0.0
Red Hill Avenue	I-5 SB Ramps to I-5 NB Ramps	35	38,996	41,000	40,800	73.8	419	194	90	74.1	433	201	93	74.0	432	200	93	0.2	0.0
Red Hill Avenue	Nisson Road to I-5 SB	35	38,235	38,200	38,200	73.8	413	192	89	73.8	413	192	89	73.8	413	192	89	0.0	0.0
Red Hill Avenue	Nisson Road to Mitchell Avenue	35	26,681	26,700	26,700	72.2	325	151	70	72.2	325	151	70	72.2	325	151	70	0.0	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Red Hill Avenue	Mitchell Avenue to Walnut Avenue	35	25,830	25,800	25,800	72.1	318	148	69	72.1	318	148	69	72.1	318	148	69	0.0	0.0
Red Hill Avenue	Walnut Avenue to Sycamore Avenue	40	27,502	23,900	23,900	73.5	397	184	86	72.9	362	168	78	72.9	362	168	78	-0.6	0.0
Red Hill Avenue	Sycamore Avenue to Edinger Avenue	40	29,957	24,600	24,600	73.9	420	195	91	73.0	369	171	79	73.0	369	171	79	-0.9	0.0
Red Hill Avenue	Edinger Avenue to Valencia Avenue	40	25,507	25,500	25,500	73.2	378	175	81	73.2	378	175	81	73.2	378	175	81	0.0	0.0
Red Hill Avenue	Valencia Avenue to Warner Avenue	50	26,723	26,700	26,900	75.5	537	249	116	75.5	536	249	116	75.5	539	250	116	0.0	0.0
Red Hill Avenue	Warner Avenue to Barranca Parkway/Dyer	50	29,570	24,900	25,300	75.9	574	267	124	75.2	512	238	110	75.2	518	240	112	-0.7	0.1
Sycamore Avenue	SR-55 NB to Newport Avenue	35	9,036	9,100	9,400	67.5	158	73	34	67.5	159	74	34	67.7	162	75	35	0.2	0.1
Sycamore Avenue	Newport Avenue to Red Hill Avenue	35	7,758	8,800	8,900	66.8	143	66	31	67.4	155	72	33	67.4	156	73	34	0.6	0.0
Tustin Ranch Road	North of I-5	50	32,560	42,600	42,500	76.3	612	284	132	77.5	733	340	158	77.5	731	339	158	1.2	0.0
Tustin Ranch Road	I-5 to Walnut Avenue	50	21,087	36,000	35,800	74.4	458	213	99	76.8	655	304	141	76.7	652	303	141	2.3	0.0
Valencia Avenue	Newport Avenue to Red Hill Avenue	45	3,690	10,100	10,300	65.9	123	57	26	70.2	240	112	52	70.3	244	113	52	**4.5**	0.1
Walnut Avenue	East of Newport Avenue	45	15,375	16,700	16,800	72.1	318	148	69	72.4	336	156	72	72.4	338	157	73	0.4	0.0
Walnut Avenue	East of Red Hill Avenue	45	15,579	16,100	16,100	72.1	321	149	69	72.3	328	152	71	72.3	328	152	71	0.1	0.0
Walnut Avenue	West of Tustin Ranch Road	45	19,862	21,900	21,900	73.2	377	175	81	73.6	403	187	87	73.6	403	187	87	0.4	0.0
Walnut Avenue	Franklin Avenue to Myford Road	45	18,249	18,500	18,600	72.8	357	166	77	72.9	360	167	78	72.9	361	168	78	0.1	0.0
Warner Avenue	SR-55 to Red Hill Avenue	50	13,682	27,600	28,100	72.6	344	159	74	75.6	548	255	118	75.7	555	258	120	**3.1**	0.1
						4.8	0	0	0	4.8	0	0	0	4.8	0	0	0	0.0	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2015

Roadway Segment	Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
					Existing				Future No Project				Future With Project					
		Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		

Assumptions: Based on the Traffic Analysis for the Irvine Busines Center completed by Parsons Brinkerhoff, February 2009. Speed Limits obtained from the City of Irvine Municipal Code and Google Earth, 1.3

Federal Highway Administration Highway Traffic Noise Prediction Model, December, 1978. Baseline California vehicle noise levels from Caltrans, TAN 95-03, 1995

Simplified to 2 lanes 6.1 meters= 20.0

future 6.1 meters= 20.0

Noise path decay parameter for hard site

24-hour distribution of traffic volumes based on: California Department of Transportation (Caltrans). 2008 September. 2007 Annual Average Daily Truck Traffic on the California State Highway System.

MacArthur to I-5 70% Day 94% LDA

15% Eve 4% MDT

Site parameter: 0.0 15% Night 2% HDT

HALFSEP 1/2 lane separation 6.1

HALFSEPFUT 1/2 lane separation (future) 6.1

Lane separation: 2 ___ ___ 4 ___ ___ ___ ___

consider + + + <--------> +

moving lanes

only 6 ___ ___ ___ ___ ___ ___

+ <----------> +

8 + ___ ___ ___ ___ ___ ___ ___ ___

+ <----------> +

California base noise levels:

Autos 5.2+38.8 Log10 (speed, mi/hr) = -2.8 + 38.8 Log10 (speed, km/hr)

Light trucks: 35.3 + 25.6 Log10 (speed, mi/hr) = 30 + 25.6 Log10 (speed, km/hr)

Heavy trucks: 25-31 mi/hr: 51.9 + 19.2 Log10 (speed, mi/hr) = 47.9 + 19.2 Log10 (speed, km/hr)

35-65 mi/hr: 50.4 + 19.2 Log10 (speed, mi/hr) = 46.4 + 19.2 Log10 (speed, km/hr)

31-35 mi/hr: straight line interpolation between above two curves

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Projec
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Anton Boulevard	Bristol Street to Sunflower Avenue	40	7,620	10,100	10,200	67.9	169	78	36	69.1	204	95	44	69.2	205	95	44	1.3	0.0
Baker Street	Bear Street to Bristol Street	45	23,497	29,600	30,100	73.9	422	196	91	74.9	492	229	106	75.0	498	231	107	1.1	0.1
Baker Street	Bristol Street to SR 55 SB Ramps	45	27,498	36,300	37,000	74.6	469	218	101	75.8	564	262	122	75.9	571	265	123	1.3	0.1
Baker Street	SR 55 SB to SR 55 NB	45	24,275	37,800	38,200	74.0	431	200	93	76.0	580	269	125	76.0	584	271	126	2.0	0.0
Baker Street	SR 55 NB to Red Hill Avenue	45	13,718	21,500	22,000	71.6	295	137	64	73.5	398	185	86	73.6	404	188	87	2.1	0.1
Baker Street	Red Hill Avenue to Airway Avenue	45	4,699	6,200	6,200	66.9	144	67	31	68.1	174	81	37	68.1	174	81	37	1.2	0.0
Bear Street	Paularino Avenue to Baker Street	45	17,577	19,900	20,100	72.6	348	161	75	73.2	378	175	81	73.2	380	177	82	0.6	0.0
Bristol Street	Segerstrom Avenue to West Alton Avenue	45	35,789	40,400	41,200	75.7	559	259	120	76.3	606	281	131	76.3	614	285	132	0.6	0.1
Bristol Street	West Alton Avenue to MacArthur Boulevard	45	38,850	44,200	45,000	76.1	590	274	127	76.6	643	299	139	76.7	651	302	140	0.6	0.1
Bristol Street	MacArthur Boulevard to Sunflower Avenue	45	22,305	25,300	25,600	73.7	408	189	88	74.2	443	206	96	74.3	447	207	96	0.6	0.1
Bristol Street	Sunflower Avenue to Anton Boulevard	45	42,108	44,400	45,300	76.4	623	289	134	76.7	645	299	139	76.7	654	303	141	0.3	0.1
Bristol Street	Anton Boulevard to I-405 NB Ramps	45	62,602	69,500	70,500	78.2	811	377	175	78.6	870	404	187	78.7	878	408	189	0.5	0.1
Bristol Street	I-405 NB Ramps to I-405 SB Ramps	45	63,048	69,900	71,000	78.2	815	378	176	78.6	873	405	188	78.7	882	410	190	0.5	0.1
Bristol Street	I-405 SB Ramp to Paularino Avenue	45	40,727	50,600	51,100	76.3	609	283	131	77.2	704	327	152	77.3	709	329	153	1.0	0.0
Bristol Street	Paularino Avenue to Baker Street	45	34,095	40,400	41,000	75.5	541	251	117	76.3	606	281	131	76.3	612	284	132	0.8	0.1
Bristol Street	Baker Street to SR 55	45	24,713	25,100	25,600	74.1	437	203	94	74.2	441	205	95	74.3	447	207	96	0.2	0.1
Bristol Street	SR-55 to Red Hill Avenue	45	20,914	23,000	23,700	73.4	391	181	84	73.8	416	193	90	73.9	425	197	91	0.5	0.1
Del Mar Avenue	Newport Boulevard SB to Newport Boulevard NB	45	12,232	18,300	18,800	71.1	273	127	59	72.8	357	166	77	72.9	364	169	78	1.9	0.1
Del Mar Avenue	Newport Boulevard to Santa Ana Avenue	45	7,069	12,900	13,200	68.7	190	88	41	71.3	283	131	61	71.4	287	133	62	2.7	0.1

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Projec
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Flower Street	Segerstrom Avenue to MacArthur Boulevard	45	9,756	11,500	11,800	70.1	235	109	51	70.8	262	122	56	70.9	267	124	57	0.8	0.1
Flower Street	MacArthur Boulevard to Sunflower Avenue	45	8,180	13,100	13,300	69.3	209	97	45	71.4	286	133	62	71.4	289	134	62	2.1	0.1
Flower Street	Sunflower Avenue to Anton Boulevard	45	6,193	9,300	9,300	68.1	174	81	37	69.9	228	106	49	69.9	228	106	49	1.8	0.0
Main Street	Sunflower Avenue to SR-55	45	20,195	24,400	27,200	73.2	382	177	82	74.1	433	201	93	74.5	465	216	100	1.3	0.5
Mesa Drive	Newport Boulevard SB to Newport Boulevard NB	45	5,469	4,900	4,900	67.6	160	74	34	67.1	148	69	32	67.1	148	69	32	-0.5	0.0
Mesa Drive	Newport Boulevard NB to Santa Ana Avenue	45	5,674	4,800	4,700	67.7	164	76	35	67.0	146	68	32	66.9	144	67	31	-0.8	-0.1
Mesa Drive	Irvine Avenue to Birch Street	45	8,487	13,400	13,900	69.5	214	99	46	71.5	290	135	63	71.6	297	138	64	2.1	0.2
Paularino Avenue	Bear Street to Bristol Street	35	7,632	8,400	8,500	66.8	141	66	30	67.2	151	70	32	67.2	152	70	33	0.5	0.1
Paularino Avenue	Bristol Street to SR-55 SB	35	16,284	21,600	21,600	70.1	234	109	50	71.3	283	131	61	71.3	283	131	61	1.2	0.0
Paularino Avenue	SR-55 SB to SR-55 NB	35	15,141	23,500	23,800	69.7	223	103	48	71.6	299	139	64	71.7	301	140	65	2.0	0.1
Paularino Avenue	SR-55 NB to Red Hill Avenue	35	3,967	7,400	7,500	63.9	91	42	20	66.6	138	64	30	66.7	140	65	30	2.8	0.1
Paularino Avenue	Red Hill Avenue to Airway Avenue	35	10,781	17,300	17,300	68.3	178	83	38	70.3	244	113	52	70.3	244	113	52	2.1	0.0
Red Hill Avenue	Main Street to Paularino Avenue	45	16,060	19,300	20,800	72.2	328	152	71	73.0	370	172	80	73.4	389	181	84	1.1	0.3
Red Hill Avenue	Paularino Avenue to Baker Street	45	15,961	21,000	21,900	72.2	326	151	70	73.4	392	182	84	73.6	403	187	87	1.4	0.2
Red Hill Avenue	Baker Street to Bristol Street	45	14,182	23,500	23,900	71.7	301	140	65	73.9	422	196	91	74.0	427	198	92	2.3	0.1
Santa Ana Avenue	Mesa Drive to Bristol Street	35	9,020	9,000	9,000	67.5	158	73	34	67.5	158	73	34	67.5	158	73	34	0.0	0.0
University Drive	Santa Ana Avenue to Irvine Avenue	50	5,684	10,300	11,000	68.7	191	89	41	71.3	284	132	61	71.6	297	138	64	2.9	0.3

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change	Change
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	From Existing	due to Projec
Alton Parkway	Daimler Street to Red Hill Avenue	50	4,578	4,600	6,500	67.8	166	77	36	67.8	166	77	36	69.3	209	97	45	1.5	1.5
Alton Parkway	Red Hill Avenue to Von Karman Avenue	50	12,332	13,200	14,700	72.1	321	149	69	72.4	335	156	72	72.9	360	167	78	0.8	0.5
Alton Parkway	Von Karman Avenue to Jamboree Road	50	14,649	16,800	18,100	72.9	360	167	77	73.4	394	183	85	73.8	414	192	89	0.9	0.3
Alton Parkway	Jamboree Road to Murphy Avenue	50	15,133	17,600	19,100	73.0	367	171	79	73.6	406	189	88	74.0	429	199	92	1.0	0.4
Alton Parkway	Murphy Avenue to Harvard Avenue	50	15,645	18,100	19,800	73.1	376	174	81	73.8	414	192	89	74.2	440	204	95	1.0	0.4
Alton Parkway	Harvard Avenue to Paseo Westpark	50	15,465	17,300	18,600	73.1	373	173	80	73.6	402	186	87	73.9	422	196	91	0.8	0.3
Alton Parkway	Paseo Westpark to San Marino	50	12,620	14,400	15,400	72.2	326	151	70	72.8	355	165	77	73.1	372	173	80	0.9	0.3
Alton Parkway	San Marino to Culver Drive	50	21,617	24,000	25,100	74.5	466	216	100	75.0	500	232	108	75.2	515	239	111	0.6	0.2
Barranca Parkway (Dyer)	Pullman to Red Hill Avenue	50	24,454	28,000	30,500	75.1	506	235	109	75.7	554	257	119	76.0	586	272	126	1.0	0.4
Barranca Parkway	Red Hill Avenue to Armstrong	50	30,266	30,300	32,000	76.0	583	271	126	76.0	584	271	126	76.2	605	281	130	0.2	0.2
Barranca Parkway	Armstrong to Von Karman Avenue	50	29,815	29,800	31,300	75.9	577	268	124	75.9	577	268	124	76.1	596	277	129	0.2	0.2
Barranca Parkway	Von Karman Avenue to Jamboree Road	50	22,039	22,000	23,300	74.6	472	219	102	74.6	472	219	102	74.9	490	227	106	0.2	0.2
Barranca Parkway	Jamboree Road to Construction Circle	50	24,517	28,500	30,200	75.1	507	235	109	75.7	560	260	121	76.0	582	270	125	0.9	0.3
Barranca Parkway	Construction Circle to Harvard Avenue	50	21,003	25,000	26,300	74.4	457	212	98	75.2	513	238	111	75.4	531	247	114	1.0	0.2
Barranca Parkway	Harvard Avenue to Paseo Westpark	50	19,905	23,900	24,800	74.2	441	205	95	75.0	498	231	107	75.1	511	237	110	1.0	0.2
Barranca Parkway	Paseo Westpark to Santa Rosa	50	21,004	26,400	27,400	74.4	457	212	98	75.4	532	247	115	75.6	546	253	118	1.2	0.2
Barranca Parkway	Santa Rosa to Culver Drive	50	21,643	26,000	26,900	74.5	466	216	100	75.3	527	245	114	75.5	539	250	116	0.9	0.1
Bryan Avenue	Jamboree Road to Marketplace	50	21,001	25,300	25,400	74.4	457	212	98	75.2	518	240	112	75.2	519	241	112	0.8	0.0
Bryan Avenue	Marketplace to El Camino Real	50	17,921	23,200	23,100	73.7	411	191	89	74.8	489	227	105	74.8	487	226	105	1.1	0.0
Bryan Avenue	El Camino Real to Rubicon	50	14,726	20,100	20,000	72.9	361	167	78	74.2	444	206	96	74.2	442	205	95	1.3	0.0
Bryan Avenue	Rubicon to Culver	50	18,343	26,300	26,400	73.8	418	194	90	75.4	531	247	114	75.4	532	247	115	1.6	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
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			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	From Existing	due to Projec
Campus Drive	MacArthur Boulevard to Martin	40	16,279	18,900	22,500	71.2	280	130	60	71.9	309	144	67	72.6	347	161	75	1.4	0.8
Campus Drive	Martin to Von Karman Avenue	40	12,892	15,900	18,000	70.2	240	111	52	71.1	276	128	59	71.7	299	139	64	1.4	0.5
Campus Drive	Von Karman Avenue to Teller Avenue	40	11,823	15,000	16,600	69.8	226	105	49	70.9	265	123	57	71.3	284	132	61	1.5	0.4
Campus Drive	Teller Avenue to Jamboree Road	40	10,315	13,200	14,100	69.2	207	96	44	70.3	243	113	52	70.6	254	118	55	1.4	0.3
Campus Drive	Jamboree Road to Carlson Avenue	55	20,089	28,800	30,300	75.2	513	238	110	76.7	652	303	140	76.9	674	313	145	1.8	0.2
Campus Drive	Carlson Avenue to University	55	18,247	31,100	32,100	74.7	481	223	104	77.1	686	319	148	77.2	701	325	151	2.5	0.1
Carlson Avenue	Michelson Drive to Campus Drive	55	3,901	5,700	6,800	68.0	172	80	37	69.7	221	103	48	70.5	249	116	54	2.4	0.8
Culver Drive	I-5 NB Ramps to I-5 SB Ramps	50	36,738	45,200	45,300	76.8	664	308	143	77.7	762	354	164	77.8	763	354	164	0.9	0.0
Culver Drive	I-5 SB Off-Ramp to Scottsdale Drive	50	49,687	57,200	57,600	78.2	812	377	175	78.8	892	414	192	78.8	896	416	193	0.6	0.0
Culver Drive	Scottsdale Drive to Walnut Avenue	50	44,077	51,300	51,900	77.6	749	348	161	78.3	829	385	179	78.3	836	388	180	0.7	0.1
Culver Drive	Walnut Avenue to Deerfield Avenue	50	42,201	48,200	48,500	77.4	728	338	157	78.0	795	369	171	78.1	799	371	172	0.6	0.0
Culver Drive	Deerfield Avenue to Irvine Center Drive	50	38,904	42,600	43,100	77.1	690	320	149	77.5	733	340	158	77.5	738	343	159	0.4	0.1
Culver Drive	Irvine Center Drive to Warner Avenue	50	41,580	46,600	47,400	77.4	721	335	155	77.9	778	361	168	78.0	787	365	169	0.6	0.1
Culver Drive	Warner Avenue to Barranca Parkway	50	40,870	47,100	48,300	77.3	713	331	154	77.9	783	364	169	78.0	796	370	172	0.7	0.1
Culver Drive	Barranca Parkway to Alton Parkway	50	44,253	51,300	52,900	77.7	751	349	162	78.3	829	385	179	78.4	846	393	182	0.8	0.1
Culver Drive	Alton Parkway to Main Street	50	45,204	51,700	53,600	77.7	762	354	164	78.3	833	387	180	78.5	854	396	184	0.7	0.2
Culver Drive	Main Street to San Leandro	50	49,711	52,700	54,300	78.2	812	377	175	78.4	844	392	182	78.5	861	400	186	0.4	0.1
Culver Drive	San Leandro to I-405 NB On-Ramp	50	54,428	58,800	60,500	78.6	863	400	186	78.9	908	422	196	79.0	926	430	199	0.5	0.1
Culver Drive	I-405 SB On-Ramp to Michelson Drive	50	53,319	59,400	61,700	78.5	851	395	183	78.9	914	424	197	79.1	938	435	202	0.6	0.2
Culver Drive	Michelson Drive to Sandburg Way	50	39,658	46,600	46,800	77.2	698	324	150	77.9	778	361	168	77.9	780	362	168	0.7	0.0
Culver Drive	Sandburg Way to University Drive	50	32,408	38,700	39,000	76.3	610	283	132	77.1	687	319	148	77.1	691	321	149	0.8	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

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						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
El Camino Real	Jamboree Road to Alliance	45	20,876	24,700	24,600	73.4	390	181	84	74.1	436	203	94	74.1	435	202	94	0.7	0.0
Fairchild Road	MacArthur Boulevard to Jamboree Road	50	4,393	5,500	5,800	67.6	161	75	35	68.6	187	87	40	68.8	194	90	42	1.2	0.2
Harvard Avenue	Walnut Avenue to Poplar Street	50	9,179	11,500	11,800	70.8	263	122	57	71.8	306	142	66	71.9	311	144	67	1.1	0.1
Harvard Avenue	Poplar Street to Deerfield Avenue	50	11,387	13,900	14,300	71.8	304	141	65	72.6	347	161	75	72.7	354	164	76	1.0	0.1
Harvard Avenue	Deerfield Avenue to Irvine Center Drive	50	10,273	12,900	13,200	71.3	284	132	61	72.3	330	153	71	72.4	335	156	72	1.1	0.1
Harvard Avenue	Irvine Center Drive to Paseo Westpark	50	12,508	14,800	15,700	72.2	324	150	70	72.9	362	168	78	73.2	377	175	81	1.0	0.3
Harvard Avenue	Paseo Westpark to Warner Avenue	50	11,065	15,400	16,100	71.6	298	138	64	73.1	372	173	80	73.3	383	178	82	1.6	0.2
Harvard Avenue	Warner to Barranca Parkway	50	12,686	17,100	17,700	72.2	327	152	70	73.5	399	185	86	73.7	408	189	88	1.4	0.1
Harvard Avenue	Barranca Parkway to San Juan	50	15,295	18,200	19,200	73.0	370	172	80	73.8	416	193	90	74.0	431	200	93	1.0	0.2
Harvard Avenue	San Juan to San Leon	50	14,888	17,000	18,300	72.9	363	169	78	73.5	397	184	86	73.8	417	194	90	0.9	0.3
Harvard Avenue	San Leon to Alton Parkway	50	16,362	18,700	20,100	73.3	387	180	83	73.9	423	196	91	74.2	444	206	96	0.9	0.3
Harvard Avenue	Alton Parkway to San Marino	50	18,655	21,700	23,300	73.9	422	196	91	74.6	467	217	101	74.9	490	227	106	1.0	0.3
Harvard Avenue	San Marino to Main Street	50	19,291	22,500	24,300	74.0	432	201	93	74.7	479	222	103	75.0	504	234	109	1.0	0.3
Harvard Avenue	Main Street to Coronado	50	13,552	15,300	16,800	72.5	341	158	74	73.0	370	172	80	73.4	394	183	85	0.9	0.4
Harvard Avenue	Coronado to Michelson Drive	50	20,167	22,900	25,100	74.2	445	207	96	74.8	484	225	104	75.2	515	239	111	1.0	0.4
Harvard Avenue	Michelson Drive to University Drive	50	8,672	10,800	11,700	70.6	253	118	55	71.5	293	136	63	71.9	310	144	67	1.3	0.3
Irvine Center Drive	Harvard Avenue to Hearthstone	50	17,848	26,900	27,000	73.7	410	190	88	75.5	539	250	116	75.5	541	251	116	1.8	0.0
Irvine Center Drive	Hearthstone to Culver Drive	50	15,815	25,500	25,700	73.2	378	176	82	75.3	520	241	112	75.3	523	243	113	2.1	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

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			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	From Existing	due to Projec
Jamboree Road	Bryan Avenue to El Camino	50	39,163	41,200	41,300	77.1	693	321	149	77.3	716	333	154	77.4	718	333	155	0.2	0.0
Jamboree Road	El Camino Real to I-5 NB On-Ramp	50	61,511	63,900	64,200	79.1	936	434	202	79.2	960	446	207	79.3	963	447	207	0.2	0.0
Jamboree Road	I-5 NB Ramps to I-5 SB Off-Ramp	50	65,707	70,200	69,700	79.4	978	454	211	79.7	1022	474	220	79.6	1017	472	219	0.3	0.0
Jamboree Road	I-5 SB Off-Ramp to Michelle Drive	50	57,976	64,300	63,300	78.8	900	418	194	79.3	964	447	208	79.2	954	443	206	0.4	-0.1
Jamboree Road	Michelle Drive to Walnut Avenue	50	54,497	59,400	61,000	78.6	863	401	186	78.9	914	424	197	79.0	931	432	200	0.5	0.1
Jamboree Road	Walnut Ave to Edinger Ave (& Frontage Rds)*	50	71,936	95,600	99,300	79.8	1039	482	224	81.0	1256	583	271	81.2	1288	598	277	1.4	0.2
Jamboree Road	Edinger Avenue to Warner Avenue*	50	78,493	83,500	87,300	80.1	1101	511	237	80.4	1147	533	247	80.6	1182	549	255	0.5	0.2
Jamboree Road	Warner Avenue to Barranca Parkway	50	69,451	77,800	81,500	79.6	1015	471	219	80.1	1094	508	236	80.3	1129	524	243	0.7	0.2
Jamboree Road	Barranca Parkway to Beckman Avenue	50	50,727	56,700	61,400	78.2	823	382	177	78.7	886	411	191	79.1	935	434	201	0.8	0.3
Jamboree Road	Beckman Avenue to Alton Parkway	50	49,220	54,500	59,700	78.1	807	374	174	78.6	863	401	186	79.0	917	426	198	0.8	0.4
Jamboree Road	Alton Parkway to McGaw Avenue	50	46,536	50,900	56,500	77.9	777	361	167	78.3	825	383	178	78.7	884	410	191	0.8	0.5
Jamboree Road	McGaw Avenue to Kelvin Avenue	50	45,004	49,300	55,500	77.7	760	353	164	78.1	807	375	174	78.6	874	406	188	0.9	0.5
Jamboree Road	Kelvin Avenue to Main Street	50	53,259	57,900	67,300	78.5	850	395	183	78.8	899	417	194	79.5	994	461	214	1.0	0.7
Jamboree Road	Main Street to I-405 Off-Ramp	50	52,524	55,300	63,900	78.4	842	391	181	78.6	872	405	188	79.2	960	446	207	0.9	0.6
Jamboree Road	I-405 On-Ramp to Michelson Drive	50	69,470	74,800	90,600	79.6	1015	471	219	79.9	1066	495	230	80.8	1211	562	261	1.2	0.8
Jamboree Road	Michelson Drive to Dupont Drive	50	51,529	56,500	65,400	78.3	832	386	179	78.7	884	410	191	79.3	975	452	210	1.0	0.6
Jamboree Road	Dupont Drive to Campus Drive	50	45,645	51,800	55,700	77.8	767	356	165	78.3	835	387	180	78.7	876	407	189	0.9	0.3
Jamboree Road	Campus Drive to Birch Street	50	40,300	46,200	51,500	77.2	706	328	152	77.8	773	359	167	78.3	831	386	179	1.1	0.5
Jamboree Road	Birch Street to Fairchild Road	50	32,438	37,800	41,700	76.3	611	284	132	77.0	676	314	146	77.4	722	335	156	1.1	0.4
Jamboree Road	Fairchild Road to Koll Center	50	33,237	37,900	42,700	76.4	621	288	134	77.0	678	315	146	77.5	734	341	158	1.1	0.5
Jamboree Road	Koll Center to MacArthur Boulevard	50	26,722	29,600	33,200	75.5	537	249	116	75.9	575	267	124	76.4	620	288	134	0.9	0.5

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Projec
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
MacArthur Boulevard	Fitch to Red Hill Avenue	50	35,926	38,200	43,300	76.7	654	303	141	77.0	681	316	147	77.6	741	344	160	0.8	0.5
MacArthur Boulevard	Red Hill Avenue to Skypark Boulevard	50	15,788	16,800	18,800	73.2	378	175	81	73.4	394	183	85	73.9	425	197	91	0.8	0.5
MacArthur Boulevard	Skypark Boulevard to Main Street	50	25,505	27,100	30,200	75.3	520	242	112	75.5	542	251	117	76.0	582	270	125	0.7	0.5
MacArthur Boulevard	Main Street to I-405 NB Off-Ramp	50	33,677	37,300	42,000	76.5	626	291	135	76.9	670	311	144	77.4	726	337	156	1.0	0.5
MacArthur Boulevard	I-405 SB On-Ramp to Michelson Drive	50	48,662	53,100	60,800	78.1	800	372	172	78.4	848	394	183	79.0	929	431	200	1.0	0.6
MacArthur Boulevard	Michelson Drive to Douglass	50	40,604	45,900	50,200	77.3	709	329	153	77.8	770	357	166	78.2	817	379	176	0.9	0.4
MacArthur Boulevard	Douglass to Campus Drive	50	33,358	38,500	39,300	76.4	622	289	134	77.0	685	318	148	77.1	694	322	150	0.7	0.1
MacArthur Boulevard	Jamboree Road to Fairchild Road	50	30,151	37,100	38,300	76.0	582	270	125	76.9	668	310	144	77.0	682	317	147	1.0	0.1
MacArthur Boulevard	Fairchild Road to University Drive	50	34,000	44,000	45,400	76.5	630	293	136	77.6	748	347	161	77.8	764	355	165	1.3	0.1
Main Street	McDurmott to Red Hill Avenue	50	18,121	21,600	24,200	73.8	414	192	89	74.5	466	216	100	75.0	502	233	108	1.3	0.5
Main Street	Red Hill Avenue to Executive Park	50	16,818	18,800	20,900	73.5	394	183	85	73.9	425	197	91	74.4	456	212	98	0.9	0.5
Main Street	Executive Park to MacArthur Boulevard	50	26,160	28,700	31,700	75.4	529	246	114	75.8	563	261	121	76.2	602	279	130	0.8	0.4
Main Street	MacArthur Boulevard to Mercantile	50	35,615	37,000	40,100	76.7	650	302	140	76.9	667	310	144	77.2	704	327	152	0.5	0.3
Main Street	Gillette Avenue to Von Karman Avenue	50	17,820	18,900	21,900	73.7	410	190	88	74.0	426	198	92	74.6	470	218	101	0.9	0.6
Main Street	Von Karman Avenue to Cartwright	50	16,082	17,300	19,900	73.3	383	178	82	73.6	402	186	87	74.2	441	205	95	0.9	0.6
Main Street	Siglo to Jamboree Road	50	22,024	22,900	27,200	74.6	472	219	102	74.8	484	225	104	75.5	543	252	117	0.9	0.7
Main Street	Jamboree Road to Union	50	19,037	19,200	21,100	74.0	428	199	92	74.0	431	200	93	74.4	459	213	99	0.4	0.4
Main Street	Veneto to Harvard Avenue	50	10,456	10,600	11,600	71.4	287	133	62	71.4	290	135	62	71.8	308	143	66	0.5	0.4
Main Street	Harvard Avenue to San Mateo	50	11,382	11,500	12,500	71.8	304	141	65	71.8	306	142	66	72.2	323	150	70	0.4	0.4
Main Street	Paseo Westpark to Culver Drive	50	8,757	9,000	9,600	70.6	255	118	55	70.7	260	121	56	71.0	271	126	58	0.4	0.3

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
McGaw Avenue	Daimler Street to Red Hill Avenue	50	3,630	3,700	5,600	66.8	142	66	31	66.9	144	67	31	68.7	189	88	41	1.9	1.8
McGaw Avenue	Red Hill Avenue to Von Karman Avenue	50	5,653	5,900	7,900	68.7	191	88	41	68.9	196	91	42	70.2	238	111	51	1.5	1.3
McGaw Avenue	Von Karman Avenue to Jamboree Road	50	6,451	6,900	9,000	69.3	208	97	45	69.6	218	101	47	70.7	260	121	56	1.4	1.2
McGaw Avenue	Jamboree Road to Murphy Avenue	50	2,462	2,600	5,500	65.1	109	51	24	65.3	114	53	24	68.6	187	87	40	**3.5**	**3.3**
Michelson Drive	MacArthur Boulevard to Dupont Drive	45	14,917	15,700	19,200	71.9	312	145	67	72.1	323	150	70	73.0	369	171	79	1.1	0.9
Michelson Drive	Bixby to Von Karman Avenue	45	10,836	11,900	14,500	70.5	252	117	54	70.9	268	124	58	71.8	306	142	66	1.3	0.9
Michelson Drive	Von Karman Avenue to Obsidian	45	10,559	11,500	14,600	70.4	248	115	53	70.8	262	122	56	71.8	307	143	66	1.4	1.0
Michelson Drive	Teller Avenue to Jamboree Road	45	17,973	19,200	22,300	72.7	353	164	76	73.0	369	171	79	73.7	408	189	88	0.9	0.7
Michelson Drive	Jamboree Road to Carlson Avenue	45	14,864	17,000	23,400	71.9	311	144	67	72.5	340	158	73	73.9	421	195	91	2.0	1.4
Michelson Drive	Carlson Avenue to Prince	45	16,704	18,100	25,900	72.4	336	156	72	72.8	355	165	76	74.3	450	209	97	1.9	1.6
Michelson Drive	Riparian View to Harvard Avenue	45	16,553	17,300	22,400	72.4	334	155	72	72.6	344	160	74	73.7	409	190	88	1.3	1.1
Michelson Drive	Harvard Avenue to Parkside Drive	45	11,741	12,600	14,400	70.9	266	123	57	71.2	279	129	60	71.8	305	141	66	0.9	0.6
Michelson Drive	Parkside Drive to Culver Drive	45	16,629	17,900	20,400	72.4	335	156	72	72.7	352	163	76	73.3	384	178	83	0.9	0.6
Red Hill Avenue	Dyer/Barranca Parkway to Deere Avenue	50	26,611	30,700	34,600	75.4	535	248	115	76.1	589	273	127	76.6	638	296	137	1.1	0.5
Red Hill Avenue	Deere Avenue to Alton Parkway	50	26,630	30,900	35,000	75.4	536	249	115	76.1	591	274	127	76.6	643	298	138	1.2	0.5
Red Hill Avenue	Alton Parkway to McGaw Avenue	50	26,216	32,900	37,800	75.4	530	246	114	76.4	617	286	133	77.0	676	314	146	1.6	0.6
Red Hill Avenue	McGaw Avenue to MacArthur Boulevard	50	34,187	40,500	47,100	76.5	633	294	136	77.3	708	329	153	77.9	783	364	169	1.4	0.7
Red Hill Avenue	MacArthur Boulevard to Skypark	50	9,780	13,000	14,900	71.1	275	127	59	72.3	332	154	72	72.9	364	169	78	1.8	0.6
Red Hill Avenue	Skypark to Main Street	50	12,554	17,000	19,500	72.2	324	151	70	73.5	397	184	86	74.1	435	202	94	1.9	0.6

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change	Change
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	From Existing	due to Projec
University Drive	MacArthur Boulevard to California Avenue	55	23,581	37,100	38,000	75.9	571	265	123	77.8	772	358	166	77.9	784	364	169	2.1	0.1
University Drive	California Avenue to Mesa Road	55	32,837	43,700	45,000	77.3	712	330	153	78.5	861	400	185	78.7	878	407	189	1.4	0.1
University Drive	Mesa Road to Campus Drive	45	33,673	43,700	44,700	75.5	537	249	116	76.6	638	296	138	76.7	648	301	140	1.2	0.1
University Drive	Campus Drive to Harvard Avenue	45	26,248	35,400	36,700	74.4	454	211	98	75.7	555	257	120	75.8	568	264	122	1.5	0.2
University Drive	Harvard Avenue to San Joaquin Hills Road	55	21,301	33,100	33,400	75.4	533	247	115	77.3	715	332	154	77.4	720	334	155	2.0	0.0
University Drive	San Joaquin Hills Road to Culver Drive	55	21,676	33,100	33,400	75.5	539	250	116	77.3	715	332	154	77.4	720	334	155	1.9	0.0
Von Karman Avenue	Barranca Parkway to Alton Parkway	45	16,770	28,300	31,400	72.4	337	156	73	74.7	478	222	103	75.2	512	238	110	2.7	0.5
Von Karman Avenue	Alton Parkway to McGaw Avenue	45	16,349	21,500	24,400	72.3	331	154	71	73.5	398	185	86	74.1	433	201	93	1.7	0.5
Von Karman Avenue	McGaw Avenue to Anchor	45	17,271	21,200	24,100	72.6	344	160	74	73.5	394	183	85	74.0	429	199	92	1.4	0.6
Von Karman Avenue	Anchor to Main Street	45	17,763	21,600	24,600	72.7	350	163	75	73.5	399	185	86	74.1	435	202	94	1.4	0.6
Von Karman Avenue	Main Street to Morse Avenue	45	18,765	21,500	25,600	72.9	363	169	78	73.5	398	185	86	74.3	447	207	96	1.3	0.8
Von Karman Avenue	Quartz to Michelson Drive	45	20,193	23,600	27,900	73.2	382	177	82	73.9	423	197	91	74.6	473	220	102	1.4	0.7
Von Karman Avenue	Michelson Drive to Dupont Drive	45	16,840	19,500	22,600	72.5	338	157	73	73.1	373	173	80	73.7	411	191	89	1.3	0.6
Von Karman Avenue	Dupont Drive to Martin	45	16,346	19,200	22,400	72.3	331	154	71	73.0	369	171	79	73.7	409	190	88	1.4	0.7
Von Karman Avenue	Martin to Campus Drive	45	14,234	17,300	19,400	71.7	302	140	65	72.6	344	160	74	73.1	372	172	80	1.3	0.5
Walnut Avenue	Myford to Jamboree SB Off-Ramp	45	21,169	22,000	22,200	73.4	394	183	85	73.6	404	188	87	73.7	406	189	88	0.2	0.0
Walnut Avenue	Jamboree Road to Peters Canyon	45	18,580	23,100	23,000	72.9	361	168	78	73.8	417	194	90	73.8	416	193	90	0.9	0.0
Walnut Avenue	Peters Canyon to Harvard Avenue	45	18,125	21,700	21,900	72.8	355	165	76	73.6	400	186	86	73.6	403	187	87	0.8	0.0
Walnut Avenue	Harvard Avenue to Mall Street	45	16,040	19,400	19,500	72.2	327	152	71	73.1	372	172	80	73.1	373	173	80	0.8	0.0
Walnut Avenue	Mall Street to Culver Drive	45	20,951	25,900	25,900	73.4	391	182	84	74.3	450	209	97	74.3	450	209	97	0.9	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change	Change
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	From Existing	due to Projec
Warner Avenue	Construction North to Harvard Avenue	45	8,225	14,500	14,700	69.3	210	97	45	71.8	306	142	66	71.9	309	143	67	2.5	0.1
Warner Avenue	Harvard Avenue to Paseo Westpark	45	5,766	9,300	9,300	67.8	165	77	36	69.9	228	106	49	69.9	228	106	49	2.1	0.0
Warner Avenue	Santa Ynez to Culver Drive	45	6,493	10,300	10,300	68.3	179	83	39	70.3	244	113	52	70.3	244	113	52	2.0	0.0
Birch Street	Mesa Drive to Bristol Street SB	40	10,372	20,400	21,000	69.3	207	96	45	72.2	325	151	70	72.3	332	154	71	**3.1**	0.1
Birch Street	Bristol Street SB to Bristol Street NB	40	15,579	24,200	24,800	71.0	272	126	59	72.9	365	169	79	73.0	371	172	80	2.0	0.1
Birch Street	East of MacArthur Boulevard	40	20,327	25,800	27,000	72.2	325	151	70	73.2	381	177	82	73.4	392	182	85	1.2	0.2
Birch Street	West of MacArthur Boulevard	40	11,707	16,500	17,400	69.8	225	104	48	71.3	282	131	61	71.5	293	136	63	1.7	0.2
Birch Street	East of Von Karman Avenue	40	20,327	25,200	26,800	72.2	325	151	70	73.1	375	174	81	73.4	390	181	84	1.2	0.3
Bison Avenue	Jamboree Road to MacArthur Boulevard	45	9,087	9,900	10,100	69.8	224	104	48	70.1	237	110	51	70.2	240	112	52	0.5	0.1
Bison Avenue	MacArthur Boulevard to SR-73	45	13,411	16,600	16,700	71.5	290	135	63	72.4	335	155	72	72.4	336	156	72	1.0	0.0
Bristol Street	Red Hill Avenue to Campus Drive	45	20,119	24,300	25,600	73.2	381	177	82	74.0	432	200	93	74.3	447	207	96	1.0	0.2
Bristol Street	Campus Drive to Birch Street	45	33,382	39,600	40,600	75.4	533	248	115	76.2	598	277	129	76.3	608	282	131	0.9	0.1
Bristol Street	West of Jamboree Road	45	42,491	42,500	43,200	76.5	627	291	135	76.5	627	291	135	76.5	634	294	136	0.1	0.1
Campus Drive	Bristol Street NB to MacArthur Boulevard	50	27,671	31,200	34,400	75.6	549	255	118	76.1	595	276	128	76.6	635	295	137	0.9	0.4
Ford Road	Jamboree Road to MacArthur Boulevard	50	9,051	9,100	9,100	70.8	261	121	56	70.8	262	122	56	70.8	262	122	56	0.0	0.0
Irvine Avenue	Bristol Street NB to Bristol Street SB	45	22,879	22,900	24,400	73.8	415	192	89	73.8	415	193	89	74.1	433	201	93	0.3	0.3
Irvine Avenue	Bristol Street SB to Mesa Drive	45	24,237	21,400	24,200	74.0	431	200	93	73.5	397	184	85	74.0	430	200	93	0.0	0.5
Irvine Avenue	South of University Drive	45	22,253	22,300	22,500	73.7	407	189	88	73.7	408	189	88	73.7	410	190	88	0.0	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change	Change
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	From Existing	due to Projec
Jamboree Road	South of MacArthur Boulevard	50	28,826	28,800	31,000	75.8	565	262	122	75.8	564	262	122	76.1	593	275	128	0.3	0.3
Jamboree Road	Bristol Street SB to Bristol Street NB	50	46,597	40,300	46,600	77.9	778	361	168	77.2	706	328	152	77.9	778	361	168	0.0	0.6
Jamboree Road	South of Bristol Street	50	48,897	36,000	37,400	78.1	803	373	173	76.8	655	304	141	76.9	672	312	145	-1.2	0.2
Jamboree Road	University Drive to Bison Avenue	50	42,624	35,100	36,000	77.5	733	340	158	76.6	644	299	139	76.8	655	304	141	-0.7	0.1
Jamboree Road	Bison Avenue to Ford Road	50	33,614	28,500	29,400	76.5	626	290	135	75.7	560	260	121	75.9	572	266	123	-0.6	0.1
MacArthur Boulevard	Campus Drive to Birch Street	50	21,187	24,100	24,500	74.5	460	213	99	75.0	501	233	108	75.1	507	235	109	0.6	0.1
MacArthur Boulevard	South of Birch Street	50	23,445	25,500	26,400	74.9	492	228	106	75.3	520	241	112	75.4	532	247	115	0.5	0.2
MacArthur Boulevard	Von Karman Avenue to Jamboree Road	50	23,568	25,900	27,500	74.9	494	229	106	75.3	526	244	113	75.6	547	254	118	0.7	0.3
MacArthur Boulevard	University Drive to Bison Avenue	50	43,429	46,400	47,100	77.6	742	344	160	77.9	775	360	167	77.9	783	364	169	0.4	0.1
MacArthur Boulevard	Bison Avenue to Ford Road	50	75,856	78,100	78,900	80.0	1076	500	232	80.1	1097	509	236	80.2	1105	513	238	0.2	0.0
University Drive	East of Irvine Avenue	50	823	1,400	1,400	60.3	53	24	11	62.7	75	35	16	62.7	75	35	16	2.3	0.0
University Drive	Jamboree Road to MacArthur Boulevard	50	14,628	19,200	19,300	72.8	359	167	77	74.0	431	200	93	74.0	432	201	93	1.2	0.0
Von Karman Avenue	South of Campus Drive	50	10,305	11,900	13,000	71.3	284	132	61	71.9	313	145	67	72.3	332	154	72	1.0	0.4
Von Karman Avenue	South of Birch Street	50	11,237	12,800	14,000	71.7	301	140	65	72.3	329	153	71	72.7	349	162	75	1.0	0.4
Dyer Road	Main Street to Halladay Street	50	25,688	30,900	32,000	75.3	523	243	113	76.1	591	274	127	76.2	605	281	130	1.0	0.2
Dyer Road	Halladay Street to SR-55 SB	50	30,243	33,500	35,300	76.0	583	271	126	76.4	624	290	134	76.7	646	300	139	0.7	0.2
Dyer Road	SR-55 SB to SR-55 NB	50	43,265	46,000	49,100	77.6	740	344	159	77.8	771	358	166	78.1	805	374	173	0.5	0.3
Dyer Road	SR-55 NB to Pullman Street	50	29,458	32,100	34,500	75.9	573	266	123	76.3	607	282	131	76.6	636	295	137	0.7	0.3

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline													
						Existing				Future No Project				Future With Project				Change	Change
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	From Existing	due to Projec
Grand Avenue	Warner Avenue to Hotel Terrace Drive	50	22,946	23,000	24,200	74.8	485	225	104	74.8	486	225	105	75.0	502	233	108	0.2	0.2
Grand Avenue	Hotel Terrace Drive to SR-55 NB	50	21,501	21,500	22,500	74.5	464	216	100	74.5	464	216	100	74.7	479	222	103	0.2	0.2
Halladay Street	Dyer Road to Alton Avenue	35	4,687	4,900	5,400	64.6	102	47	22	64.8	105	49	23	65.3	112	52	24	0.6	0.4
Halladay Street	Alton Avenue to McGaw Avenue(Columbine)	35	1,748	1,600	1,700	60.4	53	25	11	60.0	50	23	11	60.2	52	24	11	-0.1	0.3
MacArthur Boulevard	Flower Street to Main Street	50	31,093	35,800	37,700	76.1	594	276	128	76.7	652	303	141	77.0	675	313	145	0.8	0.2
MacArthur Boulevard	Main Street to SR-55 SB	50	47,010	51,000	52,800	77.9	782	363	169	78.3	826	383	178	78.4	845	392	182	0.5	0.2
Main Street	Segerstrom Avenue to Alton Avenue	50	20,603	25,300	26,000	74.3	451	209	97	75.2	518	240	112	75.3	527	245	114	1.0	0.1
Main Street	Alton Avenue to McGaw Avenue(Columbine)	50	23,743	28,500	29,500	74.9	496	230	107	75.7	560	260	121	75.9	573	266	124	0.9	0.1
Main Street	McGaw(Columbine) to MacArthur Boulevard	50	28,675	29,800	30,900	75.8	563	261	121	75.9	577	268	124	76.1	591	274	127	0.3	0.2
Main Street	MacArthur Boulevard to Sunflower Avenue	50	30,103	31,700	32,900	76.0	581	270	125	76.2	602	279	130	76.4	617	286	133	0.4	0.2
McGaw Avenue (Alton)	Main Street to Halladay Street	50	3,092	3,900	3,900	66.1	127	59	27	67.1	149	69	32	67.1	149	69	32	1.0	0.0
Segerstrom Avenue	Bristol Street to Flower Street	45	11,560	15,600	16,100	70.8	263	122	57	72.1	321	149	69	72.3	328	152	71	1.4	0.1
Segerstrom Avenue	Flower Street to Main Street	45	18,676	23,600	24,300	72.9	362	168	78	73.9	423	197	91	74.0	432	200	93	1.1	0.1
Warner Avenue	Grand Avenue to SR-55	50	18,190	34,500	35,600	73.8	415	193	89	76.6	636	295	137	76.7	650	302	140	2.9	0.1
Sunflower Avenue	Bristol Street to Flower Street	45	40,204	42,000	43,700	76.2	604	280	130	76.4	622	289	134	76.6	638	296	138	0.4	0.2
Sunflower Avenue	Flower Street to Anton Boulevard	45	18,032	19,600	21,400	72.7	354	164	76	73.1	374	174	81	73.5	397	184	85	0.7	0.4
Sunflower Avenue	Anton Boulevard to Main Street	45	19,454	21,900	24,400	73.1	372	173	80	73.6	403	187	87	74.1	433	201	93	1.0	0.5

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Projec
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Browning Avenue	Walnut Avenue to I-5	40	4,501	6,200	6,400	65.6	119	55	26	67.0	147	68	32	67.2	150	70	32	1.5	0.1
Bryan Avenue	Newport Boulevard to Red Hill Avenue	50	15,300	18,800	19,000	73.0	370	172	80	73.9	425	197	91	74.0	428	198	92	0.9	0.0
Bryan Avenue	Red Hill Avenue to Browning	50	16,200	18,600	18,700	73.3	385	178	83	73.9	422	196	91	73.9	423	196	91	0.6	0.0
Bryan Avenue	Browning Avenue to Tustin Ranch Road	50	16,700	21,100	21,200	73.4	392	182	85	74.4	459	213	99	74.5	460	214	99	1.0	0.0
Bryan Avenue	Tustin Ranch Road to Jamboree Road	50	16,800	21,800	21,900	73.4	394	183	85	74.6	469	218	101	74.6	470	218	101	1.2	0.0
Edinger Avenue	West of Newport Avenue	55	34,312	52,300	52,800	77.5	733	340	158	79.3	970	450	209	79.4	977	453	210	1.9	0.0
Edinger Avenue	Newport Avenue to Red Hill Avenue	55	20,215	25,900	26,300	75.2	515	239	111	76.3	607	282	131	76.3	614	285	132	1.1	0.1
Edinger Avenue	Red Hill Avenue and Tustin Ranch Road	60	22,340	31,300	31,900	76.5	630	293	136	78.0	789	366	170	78.1	799	371	172	1.5	0.1
El Camino Real	Newport Avenue to Red Hill Avenue	45	13,735	14,400	14,700	71.6	295	137	64	71.8	305	141	66	71.9	309	143	67	0.3	0.1
El Camino Real	Red Hill Avenue to Browning Avenue	45	8,973	9,000	9,000	69.7	222	103	48	69.7	223	103	48	69.7	223	103	48	0.0	0.0
El Camino Real	Browning Avenue to Tustin Ranch Road	45	8,392	9,800	9,900	69.4	212	99	46	70.1	236	109	51	70.1	237	110	51	0.7	0.0
El Camino Real	Tustin Ranch Road to Jamboree Road	45	13,574	15,900	16,000	71.5	293	136	63	72.2	325	151	70	72.2	327	152	70	0.7	0.0
Irvine Center Drive (Edinge	Red Hill Avenue to Jamboree Road	55	22,340	27,600	28,200	75.6	550	255	119	76.5	634	294	137	76.6	643	298	139	1.0	0.1
Irvine Center Drive	Jamboree Road to Harvard Avenue	55	13,952	18,500	18,800	73.6	402	187	87	74.8	485	225	105	74.9	491	228	106	1.3	0.1
Mitchell Avenue	Newport Avenue to Red Hill Avenue	35	7,350	8,200	8,000	66.6	138	64	30	67.1	148	69	32	67.0	146	68	31	0.4	-0.1
Mitchell Avenue	Red Hill Avenue to Browning Avenue	35	4,417	5,800	5,700	64.4	98	46	21	65.6	118	55	25	65.5	116	54	25	1.1	-0.1

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Projec
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Newport Avenue	El Camino Real to I-5	35	28,516	37,000	37,500	72.5	340	158	73	73.6	404	188	87	73.7	408	189	88	1.2	0.1
Newport Avenue	I-5 to Mitchell Avenue	35	31,417	40,100	40,600	72.9	363	168	78	74.0	427	198	92	74.0	430	200	93	1.1	0.1
Newport Avenue	Mitchell Avenue to McFadden Avenue	35	29,223	39,100	39,900	72.6	346	160	74	73.9	420	195	90	73.9	425	197	92	1.4	0.1
Newport Avenue	North of Sycamore Avenue	35	9,604	22,800	23,400	67.8	165	76	35	71.5	293	136	63	71.6	298	138	64	**3.9**	0.1
Newport Avenue	Valencia Avenue to Edinger Avenue	35	18,205	34,600	35,300	70.5	252	117	54	73.3	387	180	83	73.4	392	182	84	2.9	0.1
Nisson Road	Newport Avenue to Red Hill Avenue	35	5,593	6,000	6,000	65.4	115	53	25	65.7	120	56	26	65.7	120	56	26	0.3	0.0
Nisson Road	Red Hill Avenue to Browning Avenue	35	3,915	5,200	5,200	63.9	90	42	19	65.1	109	51	24	65.1	109	51	24	1.2	0.0
Red Hill Avenue	I-5 NB Ramps to El Camino Real	35	43,222	43,200	43,200	74.3	449	208	97	74.3	449	208	97	74.3	449	208	97	0.0	0.0
Red Hill Avenue	I-5 SB Ramps to I-5 NB Ramps	35	38,996	39,000	39,000	73.8	419	194	90	73.8	419	194	90	73.8	419	194	90	0.0	0.0
Red Hill Avenue	Nisson Road to I-5 SB	35	38,235	38,200	38,200	73.8	413	192	89	73.8	413	192	89	73.8	413	192	89	0.0	0.0
Red Hill Avenue	Nisson Road to Mitchell Avenue	35	26,681	26,700	26,700	72.2	325	151	70	72.2	325	151	70	72.2	325	151	70	0.0	0.0
Red Hill Avenue	Mitchell Avenue to Walnut Avenue	35	25,830	26,000	26,500	72.1	318	148	69	72.1	320	148	69	72.2	324	150	70	0.1	0.1
Red Hill Avenue	Walnut Avenue to Sycamore Avenue	40	27,502	27,500	27,500	73.5	397	184	86	73.5	397	184	86	73.5	397	184	86	0.0	0.0
Red Hill Avenue	Sycamore Avenue to Edinger Avenue	40	29,957	30,000	30,000	73.9	420	195	91	73.9	421	195	91	73.9	421	195	91	0.0	0.0
Red Hill Avenue	Edinger Avenue to Valencia Avenue	40	25,507	28,300	29,000	73.2	378	175	81	73.6	405	188	87	73.7	411	191	89	0.6	0.1
Red Hill Avenue	Valencia Avenue to Warner Avenue	50	26,723	31,600	33,400	75.5	537	249	116	76.2	600	279	129	76.4	623	289	134	1.0	0.2
Red Hill Avenue	Warner Avenue to Barranca Parkway/Dyer	50	29,570	31,800	34,400	75.9	574	267	124	76.2	603	280	130	76.6	635	295	137	0.7	0.3
Sycamore Avenue	SR-55 NB to Newport Avenue	35	9,036	7,400	7,500	67.5	158	73	34	66.6	138	64	30	66.7	140	65	30	-0.8	0.1
Sycamore Avenue	Newport Avenue to Red Hill Avenue	35	7,758	8,400	8,500	66.8	143	66	31	67.2	151	70	32	67.2	152	70	33	0.4	0.1

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment		Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Project
						Existing				Future No Project				Future With Project					
			Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		
Tustin Ranch Road	North of I-5	50	32,560	38,500	38,300	76.3	612	284	132	77.0	685	318	148	77.0	682	317	147	0.7	0.0
Tustin Ranch Road	I-5 to Walnut Avenue	50	21,087	36,600	36,900	74.4	458	213	99	76.8	662	307	143	76.9	666	309	143	2.4	0.0
Valencia Avenue	Newport Avenue to Red Hill Avenue	45	3,690	15,900	16,500	65.9	123	57	26	72.2	325	151	70	72.4	333	155	72	**6.5**	0.2
Walnut Avenue	East of Newport Avenue	45	15,375	20,800	21,000	72.1	318	148	69	73.4	389	181	84	73.4	392	182	84	1.4	0.0
Walnut Avenue	East of Red Hill Avenue	45	15,579	17,400	17,500	72.1	321	149	69	72.6	346	160	74	72.6	347	161	75	0.5	0.0
Walnut Avenue	West of Tustin Ranch Road	45	19,862	22,500	22,700	73.2	377	175	81	73.7	410	190	88	73.7	413	191	89	0.6	0.0
Walnut Avenue	Franklin Avenue to Myford Road	45	18,249	21,000	21,200	72.8	357	166	77	73.4	392	182	84	73.5	394	183	85	0.7	0.0
Warner Avenue	SR-55 to Red Hill Avenue	50	13,682	34,300	35,900	72.6	344	159	74	76.5	634	294	137	76.7	654	303	141	**4.2**	0.2
						4.8	0	0	0	4.8	0	0	0	4.8	0	0	0	0.0	0.0

Federal Highway Administration (FHWA) Traffic Noise Prediction Model
Irvine Business Center - Year 2030

Roadway Segment	Speed	24-hour Traffic Volume			Distance to CNEL from Roadway Centerline												Change From Existing	Change due to Projec
					Existing				Future No Project				Future With Project					
		Existing	Future Without Project	Future With Project	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL	50.0 Feet	60 CNEL	65 CNEL	70 CNEL		

Assumptions: Based on the Traffic Analysis for the Irvine Busines Center completed by Parsons Brinkerhoff, February 2009. Speed Limits obtained from the City of Irvine Municipal Code and Google Earth, 3.3

Federal Highway Administration Highway Traffic Noise Prediction Model, December, 1978. Baseline California vehicle noise levels from Caltrans, TAN 95-03, 1995

Simplified to 2 lanes 6.1 meters= 20.0

future 6.1 meters= 20.0

Noise path decay parameter for hard site

24-hour distribution of traffic volumes based on: California Department of Transportation (Caltrans). 2008 September. 2007 Annual Average Daily Truck Traffic on the California State Highway System.

MacArthur to I-5 70% Day 94% LDA

15% Eve 4% MDT

Site parameter: 0.0 15% Night 2% HDT

HALFSEP 1/2 lane separation 6.1

HALFSEPFUT 1/2 lane separation (future) 6.1

Lane separation:

2 ___ ___

consider + +

moving lanes

only

4 ___ ___ ___ ___

+ <--------> +

6 ___ ___ ___ ___ ___ ___

+ <----------> +

8 + ___ ___ ___ ___ ___ ___ ___ ___

+ <----------> +

California base noise levels:

Autos 5.2+38.8 Log10 (speed, mi/hr) = -2.8 + 38.8 Log10 (speed, km/hr)

Light trucks: 35.3 + 25.6 Log10 (speed, mi/hr) = 30 + 25.6 Log10 (speed, km/hr)

Heavy trucks:

25-31 mi/hr: 51.9 + 19.2 Log10 (speed, mi/hr) = 47.9 + 19.2 Log10 (speed, km/hr)

35-65 mi/hr: 50.4 + 19.2 Log10 (speed, mi/hr) = 46.4 + 19.2 Log10 (speed, km/hr)

31-35 mi/hr: straight line interpolation between above two curves