

Appendix F: Noise

Noise

1. Traffic Noise Modeling Worksheets
 - Existing Traffic Noise
 - Future Traffic Noise (2040)



TRAFFIC NOISE ANALYSIS TOOL

Project Name: Diamond Bar GPU
 Project Number:
 Analysis Scenario: Existing
 Source of Traffic Volumes: Fehr & Peers, 2019

Roadway Segment	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Distance to 60 CNEL (ft)	Distance to 65 CNEL (ft)	Distance to 70 CNEL (ft)
			Auto	MT	HT	Auto	MT	HT				
1 Brea Canyon Cutoff between SR-57 SB Ramps and SR-57 NB Ramps	Hard	50	45	40	35	1,758	36	18	67.7	481	118	<50
2 Brea Canyon Cutoff Rd between Oak Crest Dr and SR-57 SB Ramps	Hard	50	45	40	35	1,177	24	12	68.5	306	63	<50
3 Brea Canyon Rd between Diamond Bar Blvd and Silver Bullet Dr	Hard	50	45	40	35	1,633	34	17	69.9	443	106	<50
4 Brea Canyon Rd between Golden Springs Dr and Pathfinder Rd	Hard	50	45	40	35	2,021	42	21	70.9	561	143	<50
5 Brea Canyon Rd between Lycoming St and SR-60 SB Ramps	Hard	50	45	40	35	2,888	60	30	72.4	823	226	<50
6 Brea Canyon Rd between SR-60 SB Ramps and Golden Springs Dr	Hard	50	45	40	35	2,530	52	26	71.8	715	192	<50
7 Brea Canyon Rd between Washington Ave and Lycoming St	Hard	50	45	40	35	2,379	49	25	71.6	669	177	<50
8 Chino Hills Parkway between Diamond Ranch Rd and Chino Ave	Hard	50	45	40	35	1,390	29	14	69.2	370	83	<50
9 Chino Hills Parkway s/o Chino Ave	Hard	50	45	40	35	1,382	29	14	69.2	368	82	<50
10 Diamond Bar Blvd between Cold Spring Ln and Diamond Bar Blvd	Hard	50	45	40	35	1,397	29	14	69.3	372	84	<50
11 Diamond Bar Blvd between Golden Springs Dr and Goldrush Dr	Hard	50	45	40	35	1,895	39	20	70.6	523	131	<50
12 Diamond Bar Blvd between Goldrush Dr and Grand Ave	Hard	50	45	40	35	1,930	40	20	70.7	533	135	<50
13 Diamond Bar Blvd between Grand Ave and Quail Summit Dr	Hard	50	45	40	35	2,878	59	30	72.4	820	225	<50
14 Diamond Bar Blvd between Kiowa Crest Dr and Pathfinder Rd	Hard	50	45	40	35	3,125	64	32	72.8	895	249	<50
15 Diamond Bar Blvd between Pathfinder Rd and Cold Spring Ln	Hard	50	45	40	35	2,077	43	21	71.0	578	149	<50
16 Diamond Bar Blvd between Quail Summit Dr and Mountain Laurel Way	Hard	50	45	40	35	3,003	62	31	72.6	858	237	<50
17 Diamond Bar Blvd between SR-60 EB Ramps and Golden Springs Dr	Hard	50	45	40	35	2,352	49	24	71.5	661	175	<50
18 Diamond Bar Blvd between Sunset Crossing Rd and SR-60 WB Ramps	Hard	50	45	40	35	2,625	54	27	72.0	743	201	<50
19 Diamond Bar Blvd/Mission Blvd between Temple Ave/Ave Rancheros and SR-	Hard	50	45	40	35	1,306	27	13	69.0	345	75	<50
20 Fern Hollow Dr/Brea Canyon Rd between Pathfinder Rd and Diamond Bar Blvd	Hard	50	45	40	35	977	20	10	67.7	245	<50	<50
21 Golden Springs Dr between Brea Canyon Rd and Copley Dr	Hard	50	45	40	35	2,327	48	24	71.5	653	172	<50
22 Golden Springs Dr between Copley Dr and Grand Avenue	Hard	50	45	40	35	2,754	57	28	72.2	782	213	<50
23 Golden Springs Dr w/o Lemon Ave	Hard	50	45	40	35	2,288	47	24	71.4	642	169	<50
24 Golden Springs Dr between Lemon Ave and SR-60 EB Ramps	Hard	50	45	40	35	2,068	43	21	71.0	575	148	<50
25 Golden Springs Dr between Racquet Club Dr and Diamond Bar Blvd	Hard	50	45	40	35	1,676	35	17	70.1	457	110	<50
26 Golden Springs Dr between SR-60 EB Ramps and Brea Canyon Rd	Hard	50	45	40	35	2,408	50	25	71.6	678	180	<50
27 Golden Springs Drive between Grand Avenue and Racquet Club Dr	Hard	50	45	40	35	1,791	37	18	70.3	491	121	<50
28 Grand Ave between SR-57 NB Ramps and Golden Springs Drive	Hard	50	45	40	35	2,791	58	29	72.3	793	217	<50
29 Grand Ave between SR-57 SB Ramps and SR-57 NB Ramps	Hard	50	45	40	35	2,962	61	31	72.5	845	233	<50
30 Grand Ave between Diamond Bar Blvd and Summitridge Dr	Hard	50	45	40	35	2,643	55	27	72.0	749	203	<50
31 Grand Ave between Lavender Dr and Diamond Bar Blvd	Hard	50	45	40	35	2,435	50	25	71.7	686	183	<50
32 Grand Ave between Summitridge Dr and Longview Dr	Hard	50	45	40	35	2,130	44	22	71.1	594	154	<50
33 Grand Avenue between Golden Springs Drive and Lavender Dr	Hard	50	45	40	35	2,393	49	25	71.6	673	179	<50
34 N Diamond Bar Blvd between SR-60 WB Ramps and SR-60 EB Ramps	Hard	50	45	40	35	2,486	51	26	71.8	701	188	<50
35 N Diamond Bar Blvd between SR-57 NB Ramps and Sunset Crossing Rd	Hard	50	45	40	35	1,840	38	19	70.5	506	126	<50
36 Pathfinder Rd between Brea Canyon Rd and SR-57 SB Ramps	Hard	50	45	40	35	2,275	47	23	71.4	638	167	<50
37 Pathfinder Rd between Fern Hollow Dr/Brea Canyon Rd and Diamond Bar Blvd	Hard	50	45	40	35	1,831	38	19	70.4	504	125	<50
38 Pathfinder Rd between SR-57 NB Ramps and Fern Hollow Dr/Brea Canyon Rd	Hard	50	45	40	35	2,668	55	28	72.1	757	205	<50
39 Pathfinder Rd between SR-57 SB Ramps and SR-57 NB Ramps	Hard	50	45	40	35	2,402	50	25	71.6	676	180	<50
40 Pathfinder Rd w/o Pathfinder Rd	Hard	50	45	40	35	1,306	27	13	69.0	345	75	<50
41 S Diamond Bar Blvd between Mountain Laurel Way and Kiowa Crest Dr	Hard	50	45	40	35	2,870	59	30	72.4	818	224	<50
42 S Diamond Bar Blvd between SR-57 NB Ramps and Brea Canyon Rd	Hard	50	45	40	35	1,728	36	18	70.2	472	115	<50
43 Sunset Crossing Rd between SR-57 SB Ramps and Diamond Bar Blvd	Hard	50	45	40	35	178	4	2	60.3	<50	<50	<50

Model Notes:

The calculation is based on the methodology described in FHWA Traffic Noise Model Technical Manual (1998).
 The peak hour noise level at 50 feet was validated with the results from FHWA Traffic Noise Model Version 2.5.
 Accuracy of the calculation is within ±0.1 dB when comparing to TNM results.
 Noise propagation greater than 50 feet is based on the following assumptions:
 For hard ground, the propagation rate is 3 dB per doubling the distance.
 For soft ground, the propagation rate is 4.5 dB per doubling the distance.
 Vehicles are assumed to be on a long straight roadway with cruise speed.
 Roadway grade is less than 1.5%.



TRAFFIC NOISE ANALYSIS TOOL

Project Name: Diamond Bar GPU
 Project Number:
 Analysis Scenario: 2040
 Source of Traffic Volumes: Fehr & Peers, 2019

Roadway Segment	Ground Type	Distance from Roadway to Receiver (feet)	Speed (mph)			Peak Hour Volume			Peak Hour Noise Level (Leq(h) dBA)	Distance to 60 CNEL (ft)	Distance to 65 CNEL (ft)	Distance to 70 CNEL (ft)
			Auto	MT	HT	Auto	MT	HT				
1 Brea Canyon Cutoff between SR-57 SB Ramps and SR-57 NB Ramps	Hard	45	45	40	35	2,066	43	21	71.4	579	153	<50
2 Brea Canyon Cutoff Rd between Oak Crest Dr and SR-57 SB Ramps	Hard	45	45	40	35	1,261	26	13	69.3	336	76	<50
3 Brea Canyon Rd between Diamond Bar Blvd and Silver Bullet Dr	Hard	45	45	40	35	1,872	39	19	71.0	521	134	<50
4 Brea Canyon Rd between Golden Springs Dr and Pathfinder Rd	Hard	45	45	40	35	2,374	49	24	72.0	672	182	<50
5 Brea Canyon Rd between Lycoming St and SR-60 SB Ramps	Hard	45	45	40	35	3,036	63	31	73.1	873	245	<50
6 Brea Canyon Rd between SR-60 SB Ramps and Golden Springs Dr	Hard	45	45	40	35	2,774	57	29	72.7	793	220	<50
7 Brea Canyon Rd between Washington Ave and Lycoming St	Hard	45	45	40	35	2,410	50	25	72.1	684	185	<50
8 Chino Hills Parkway between Diamond Ranch Rd and Chino Ave	Hard	45	45	40	35	1,562	32	16	70.2	427	104	<50
9 Chino Hills Parkway s/o Chino Ave	Hard	45	45	40	35	1,504	31	16	70.0	409	99	<50
10 Diamond Bar Blvd between Cold Spring Ln and Diamond Bar Blvd	Hard	45	45	40	35	1,531	32	16	70.1	418	101	<50
11 Diamond Bar Blvd between Golden Springs Dr and Goldrush Dr	Hard	45	45	40	35	2,095	43	22	71.5	588	155	<50
12 Diamond Bar Blvd between Goldrush Dr and Grand Ave	Hard	45	45	40	35	2,018	42	21	71.3	565	148	<50
13 Diamond Bar Blvd between Grand Ave and Quail Summit Dr	Hard	45	45	40	35	3,068	63	32	73.1	882	248	<50
14 Diamond Bar Blvd between Kiowa Crest Dr and Pathfinder Rd	Hard	45	45	40	35	3,508	72	36	73.7	1015	290	61
15 Diamond Bar Blvd between Pathfinder Rd and Cold Spring Ln	Hard	45	45	40	35	2,358	49	24	72.0	668	180	<50
16 Diamond Bar Blvd between Quail Summit Dr and Mountain Laurel Way	Hard	45	45	40	35	3,244	67	33	73.4	935	265	53
17 Diamond Bar Blvd between SR-60 EB Ramps and Golden Springs Dr	Hard	45	45	40	35	2,551	53	26	72.3	726	199	<50
18 Diamond Bar Blvd between Sunset Crossing Rd and SR-60 WB Ramps	Hard	45	45	40	35	2,813	58	29	72.8	805	224	<50
19 Diamond Bar Blvd/Mission Blvd between Temple Ave/Ave Rancheros and SR-	Hard	45	45	40	35	1,649	34	17	70.4	453	113	<50
20 Fern Hollow Dr/Brea Canyon Rd between Pathfinder Rd and Diamond Bar Blv	Hard	45	45	40	35	1,038	21	11	68.4	269	54	<50
21 Golden Springs Dr between Brea Canyon Rd and Copley Dr	Hard	45	45	40	35	2,489	51	26	72.2	707	193	<50
22 Golden Springs Dr between Copley Dr and Grand Avenue	Hard	45	45	40	35	2,959	61	31	73.0	849	238	<50
23 Golden Springs Dr w/o Lemon Ave	Hard	45	45	40	35	2,730	56	28	72.6	780	216	<50
24 Golden Springs Dr between Lemon Ave and SR-60 EB Ramps	Hard	45	45	40	35	3,154	65	33	73.3	908	257	50
25 Golden Springs Dr between Racquet Club Dr and Diamond Bar Blvd	Hard	45	45	40	35	1,921	40	20	71.1	536	139	<50
26 Golden Springs Dr between SR-60 EB Ramps and Brea Canyon Rd	Hard	45	45	40	35	2,790	58	29	72.7	798	222	<50
27 Golden Springs Drive between Grand Avenue and Racquet Club Dr	Hard	45	45	40	35	1,959	40	20	71.2	547	142	<50
28 Grand Ave between SR-57 NB Ramps and Golden Springs Drive	Hard	45	45	40	35	4,026	83	42	74.3	1172	340	77
29 Grand Ave between SR-57 SB Ramps and SR-57 NB Ramps	Hard	45	45	40	35	4,879	101	50	75.2	1430	421	103
30 Grand Ave between Diamond Bar Blvd and Summitridge Dr	Hard	45	45	40	35	3,094	64	32	73.2	890	251	<50
31 Grand Ave between Lavender Dr and Diamond Bar Blvd	Hard	45	45	40	35	2,648	55	27	72.5	755	208	<50
32 Grand Ave between Summitridge Dr and Longview Dr	Hard	45	45	40	35	2,474	51	26	72.2	703	191	<50
33 Grand Avenue between Golden Springs Drive and Lavender Dr	Hard	45	45	40	35	2,658	55	27	72.5	758	209	<50
34 N Diamond Bar Blvd between SR-60 WB Ramps and SR-60 EB Ramps	Hard	45	45	40	35	2,774	57	29	72.7	793	220	<50
35 N Diamond Bar Blvd between SR-57 NB Ramps and Sunset Crossing Rd	Hard	45	45	40	35	2,037	42	21	71.4	571	150	<50
36 Pathfinder Rd between Brea Canyon Rd and SR-57 SB Ramps	Hard	45	45	40	35	2,532	52	26	72.3	720	197	<50
37 Pathfinder Rd between Fern Hollow Dr/Brea Canyon Rd and Diamond Bar Blv	Hard	45	45	40	35	2,018	42	21	71.3	565	148	<50
38 Pathfinder Rd between SR-57 NB Ramps and Fern Hollow Dr/Brea Canyon Rd	Hard	45	45	40	35	2,813	58	29	72.8	805	224	<50
39 Pathfinder Rd between SR-57 SB Ramps and SR-57 NB Ramps	Hard	45	45	40	35	2,444	50	25	72.2	694	189	<50
40 Pathfinder Rd w/o Pathfinder Rd	Hard	45	45	40	35	1,601	33	17	70.3	439	108	<50
41 S Diamond Bar Blvd between Mountain Laurel Way and Kiowa Crest Dr	Hard	45	45	40	35	3,079	63	32	73.2	886	249	<50
42 S Diamond Bar Blvd between SR-57 NB Ramps and Brea Canyon Rd	Hard	45	45	40	35	2,212	46	23	71.7	623	166	<50
43 Sunset Crossing Rd between SR-57 SB Ramps and Diamond Bar Blvd	Hard	45	45	40	35	1,397	29	14	69.7	377	89	<50

Model Notes:

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