April 15, 2021

Ms. Tina Andersen
T&B Planning, Inc.
3200 El Camino Real, Suite 100
Irvine, CA 92602

SUBJECT: BRIDGE POINT RANCHO CUCAMONGA HIGH-CUBE SORT FULFILLMENT CENTER SUPPLEMENTAL OFF-SITE TRAFFIC NOISE ASSESSMENT

Dear Ms. Tina Andersen:

Urban Crossroads, Inc. is pleased to provide the following Supplemental Off-Site Traffic Noise Assessment (Supplemental Noise Assessment) for the Bridge Point Rancho Cucamonga Project. On January 22, 2021, Urban Crossroads prepared a comprehensive Noise Impact Analysis for the Bridge Point Rancho Cucamonga Project. In addition to an analysis of off-site traffic noise levels, the Noise Impact Analysis evaluated the potential Project-related long-term stationary-source operational noise and short-term construction noise and vibration impacts. The Project proposed and analyzed in the January 22, 2021 report is 90% occupancy by High-Cube Fulfillment Center (Non-Sort) Warehouse uses, and 10% occupancy by a High-Cube Cold Storage Warehouse uses.

A High-Cube Fulfillment Center (Sort) Warehouse is not proposed as part of the project, and the site plan as currently proposed does not support this on-site use. Nevertheless, for the purpose of providing a conservative analysis, this supplemental memorandum analyzes the potential off-site traffic noise level impacts associated with an increase in net trip generation that could occur if the proposed buildings operated as 90% High-Cube Fulfillment Center (Sort) Warehouse and 10% High-Cube Cold Storage Warehouse uses (together referred to in this memorandum as the "Sort Use").

The Sort Use is only expected to affect the vehicle trip rate (primarily automobile), which is analyzed in this memorandum, and the indoor operation of the buildings (i.e., sortation from manual methods or automation) which would not have outdoor noise impacts. Since there would be a minimal change in the number of truck trips with the Sort Use (an increase of 6 truck trip ends per day), the Sort Use is not expected to alter the potential long-term outdoor stationary-source operational noise source activities that will include outdoor loading dock activity, truck movements, roof-top air conditioning units, and trash enclosure activity. In addition, the Sort Use will not alter the short-term construction noise and vibration impacts, since the same two buildings would be constructed in both scenarios. Therefore, this supplemental memorandum is focused on analyzing the off-site traffic noise impacts from a Sort Use. The following off-site traffic noise levels are based on an estimate of trips that could occur if the proposed buildings operated as the Sort Use consistent with the *Bridge Point Rancho Cucamonga High-Cube Fulfillment Center Traffic Memo* prepared by Urban Crossroads, Inc..

PROJECT DESCRIPTION

The Project site is located north of 4th Street and west of Etiwanda Avenue at 12322 and 12434 4th Street in the City of Rancho Cucamonga as shown on Exhibit A. The Project site is located approximately 3 miles northeast of the Ontario International Airport (ONT) and roughly 0.5 miles east of Interstate 15. The preliminary site plan for the proposed Project is shown on Exhibit B. For purposes of analysis in this Supplemental Noise Assessment, it is anticipated the proposed building would consist of the following uses:

EXHIBIT A: LOCATION MAP

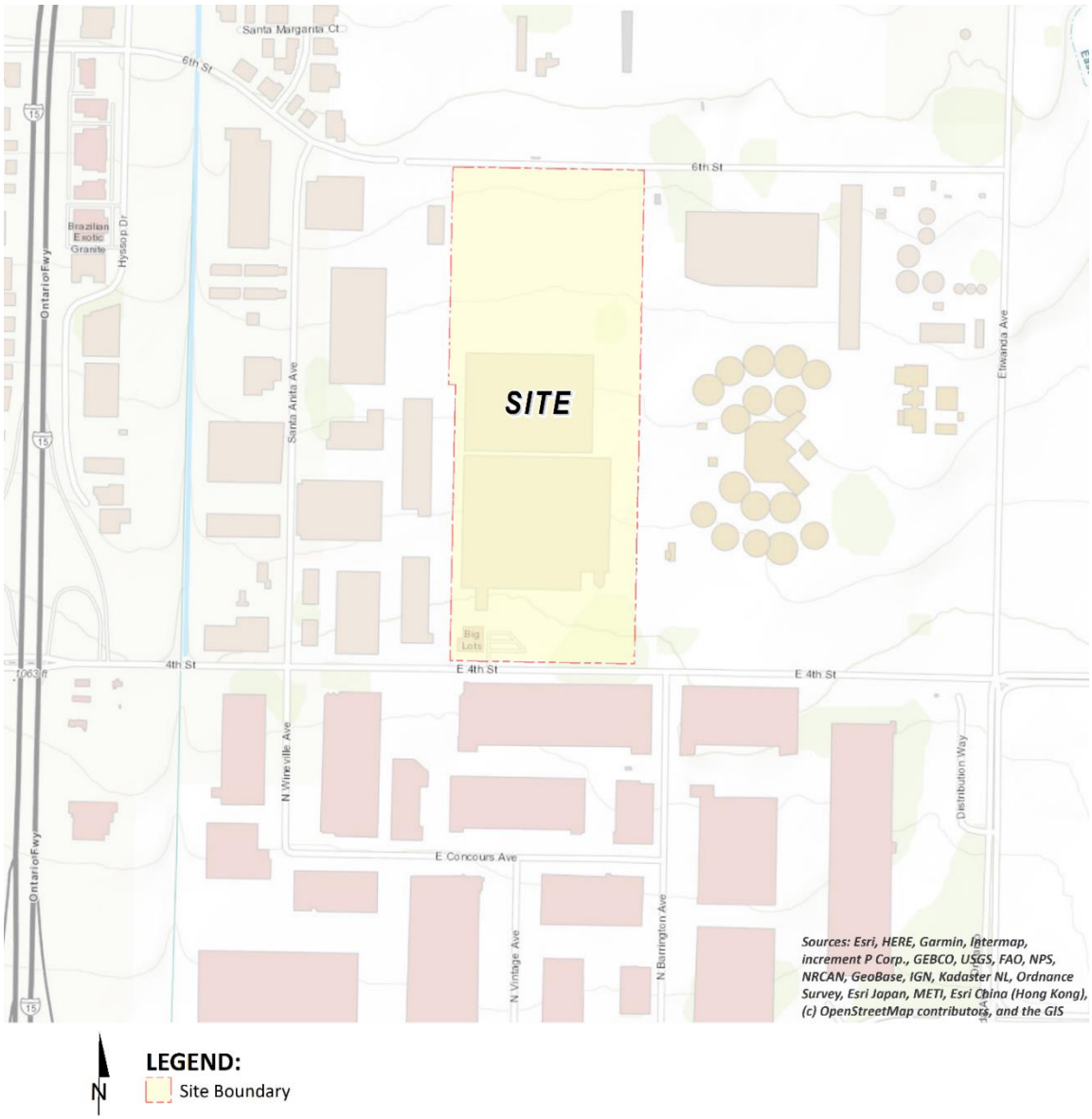
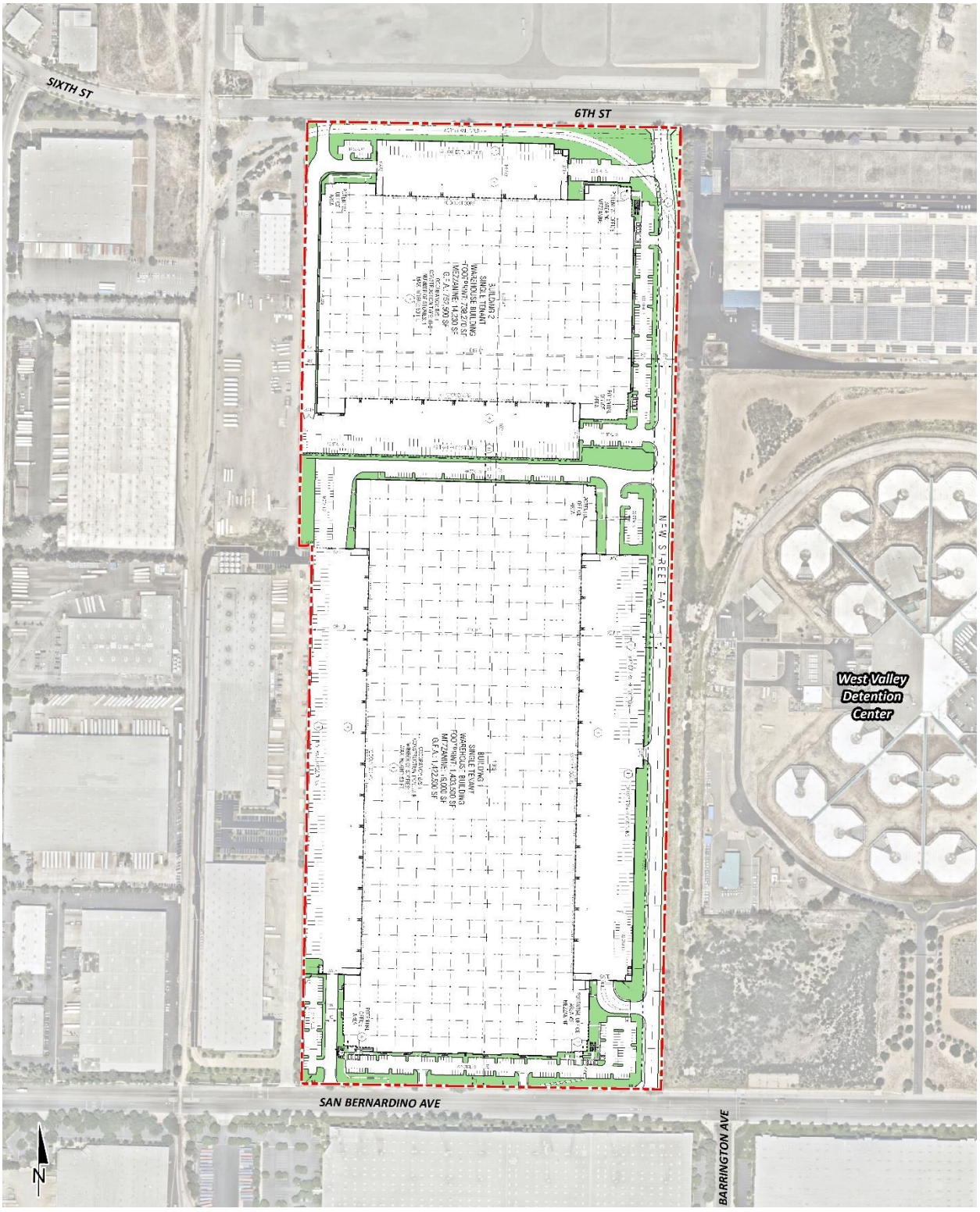


EXHIBIT B: SITE PLAN



- 1,957,500 square feet of High-Cube Fulfillment Center (Sort) Warehouse (90% of the total square footage of Building 1 and Building 2)
- 217,500 square feet of High-Cube Cold Storage Warehouse (10% of the total square footage of Building 1 and Building 2)

The proposed buildings would replace existing uses on-site, which consist of 1,431,000 square feet of High-Cube Transload Short-Term Storage Warehouse (Without Cold Storage) use and 23,240 square feet of Free-Standing Discount Store use.

OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 1 presents the roadway parameters used to assess the off-site dBA CNEL transportation noise impacts if the buildings are used as a High-Cube Fulfillment Center (Sort) Warehouse instead of a High-Cube Fulfillment Center (Non-Sort) Warehouse. Table 1 identifies the 8-study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Rancho Cucamonga General Plan, and the posted vehicle speeds. Since the off-site traffic noise levels are significantly influenced by the number of heavy trucks in the vehicle mix, and the Sort Use would have a minimal change in the number of heavy trucks and no change in the distribution of heavy trucks, it is expected that no additional roadways segments would be impacted if the building were used as a Sort Use facility. In addition, these inputs are consistent with the off-site traffic noise prediction model inputs outlined in the *Bridge Point Rancho Cucamonga Noise Impact Analysis* prepared by Urban Crossroads, Inc. for the Project on January 22, 2021.

The ADT volumes used in this study area presented on Table 2 are based on an estimate of trips that could occur if the proposed buildings operated as the Sort Use consistent with the *Bridge Point Rancho Cucamonga High-Cube Fulfillment Center Traffic Memo* prepared by Urban Crossroads, Inc. for the following traffic scenarios under both Without Sort Use and With Sort Use: Existing (2020), Opening Year Cumulative (OYC) (2022) including with and without the potential 6th Street extension, and Horizon Year (2040). Since the proposed buildings would replace existing uses, the net change in trips between the existing uses and the proposed use has been used to assess the off-site traffic noise levels. The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of Sort Use traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts, without and with ADT (actual vehicles) traffic volumes from an estimate of trips that could occur if the proposed buildings operated as the Sort Use consistent with the *Bridge Point Rancho Cucamonga High-Cube Fulfillment Center Traffic Memo* prepared by Urban Crossroads, Inc..

TABLE 1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Receiving Land Use[1]	Distance from Centerline to Receiving Land Use (Feet)[2]	Vehicle Speed (mph)[3]
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	50'	50
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	50'	50
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	60'	50
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	60'	50
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	44'	40
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	60'	55
7	4th St.	w/o Etiwanda Av.	Sensitive	60'	55
8	Street A	s/o Dwy. 8	Sensitive	30'	40

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] Distance to receiving land use is based upon the right-of-way distances.
[3] Bridge Point Rancho Cucamonga Noise Impact Analysis, Urban Crossroads, Inc.

TABLE 2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes[1]							
			Existing 2020		Opening Year Cumulative (OYC) 2022 Without 6th Street Connection		Opening Year Cumulative (OYC) 2022 with 6th Street Connection		Horizon Year (HY) 2040	
			Without Sort Use	With Sort Use	Without Sort Use	With Sort Use	Without Sort Use	With Sort Use	Without Sort Use	With Sort Use
1	Etiwanda Av.	s/o Foothill Bl.	13,077	15,062	16,469	18,455	16,469	18,455	27,232	29,218
2	Etiwanda Av.	s/o Whittram Av.	17,260	19,245	21,789	23,775	21,789	23,775	37,211	39,197
3	Etiwanda Av.	s/o San Bernardino Av.	19,731	22,230	24,076	26,574	30,447	32,945	25,271	27,770
4	Foothill Bl.	w/o Etiwanda Av.	27,934	29,429	32,898	34,393	32,898	33,902	51,539	52,543
5	6th St.	w/o Etiwanda Av.	337	2,366	350	2,380	350	2,380	5,543	7,573
6	4th St.	e/o I-15 NB Ramps	17,250	22,302	19,899	24,951	19,899	23,478	22,189	25,768
7	4th St.	w/o Etiwanda Av.	17,800	20,756	20,471	23,428	26,219	29,175	22,831	25,787
8	Street A	s/o Dwy. 8	n/a	4,485	n/a	4,485	n/a	3,012	n/a	3,012

[1] Based on an estimate of trips that could occur if the proposed buildings operated as the Sort Use.

To quantify the off-site noise levels, the truck trips from the Sort Use were added to the heavy truck category in the FHWA noise prediction model. The addition of the Sort Use related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix. Table 3 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Sort Use truck trip-ends were assigned to the individual off-site study area roadway segments based on an estimate of trips that could occur if the proposed buildings operated as the Sort Use consistent with the *Bridge Point Rancho Cucamonga High-Cube Fulfillment Center Traffic Memo* prepared by Urban Crossroads, Inc. Using the truck trips in combination with the trip distribution, Urban Crossroads, Inc. calculated the number of additional truck trips and vehicle mix percentages for each of the study area roadway segments for the Sort Use. Table 4 shows the traffic flow by vehicle type (vehicle mix) used for all without Sort Use traffic scenarios, and Tables 5 to 7 show the vehicle mixes used for the with Sort Use traffic scenarios.

TABLE 3: TIME OF DAY VEHICLE SPLITS

Vehicle Type	Time of Day Splits[1]			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Autos	77.50%	12.90%	9.60%	100.00%
Medium Trucks	84.80%	4.90%	10.30%	100.00%
Heavy Trucks	86.50%	2.70%	10.80%	100.00%

[1] Typical Southern California vehicle mix.
"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 4: WITHOUT SORT USE VEHICLE MIX

Classification	Total % Traffic Flow			Total
	Autos	Medium Trucks	Heavy Trucks	
All Segments	85.80%	3.57%	10.63%	100.00%

Based on an existing 24-hour count taken at Etiwanda Avenue and San Bernardino Avenue. (Bridge Point Rancho Cucamonga Traffic Analysis, Urban Crossroads, Inc.). Values rounded to the nearest one-hundredth.

Due to the added truck trips, the increase in traffic volumes and the distributions of trucks on the study area road segments, the percentage of autos, medium trucks and heavy trucks will vary for each of the traffic scenarios. This explains why the existing and future traffic volumes and vehicle mixes vary between seemingly identical study area roadway segments.

TABLE 5: EXISTING (2020) WITH SORT USE VEHICLE MIX

ID	Roadway	Segment	With Sort Use[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Etiwanda Av.	s/o Foothill Bl.	87.53%	3.15%	9.33%	100.00%
2	Etiwanda Av.	s/o Whittram Av.	87.15%	3.24%	9.61%	100.00%
3	Etiwanda Av.	s/o San Bernardino Av.	87.20%	3.23%	9.58%	100.00%
4	Foothill Bl.	w/o Etiwanda Av.	86.45%	3.41%	10.14%	100.00%
5	6th St.	w/o Etiwanda Av.	95.19%	1.35%	3.46%	100.00%
6	4th St.	e/o I-15 NB Ramps	88.38%	2.95%	8.67%	100.00%
7	4th St.	w/o Etiwanda Av.	87.77%	3.08%	9.15%	100.00%
8	Street A	s/o Dwy. 8	98.53%	0.45%	1.03%	100.00%

[1] Based on an estimate of trips that could occur if the proposed buildings operated as the Sort Use.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6: OYC (2022) WITH SORT USE VEHICLE MIX

ID	Roadway	Segment	With Sort Use[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Etiwanda Av.	s/o Foothill Bl.	87.21%	3.22%	9.57%	100.00%
2	Etiwanda Av.	s/o Whittram Av.	86.89%	3.30%	9.81%	100.00%
3	Etiwanda Av.	s/o San Bernardino Av.	86.97%	3.28%	9.75%	100.00%
4	Foothill Bl.	w/o Etiwanda Av.	86.35%	3.43%	10.21%	100.00%
5	6th St.	w/o Etiwanda Av.	95.14%	1.37%	3.50%	100.00%
6	4th St.	e/o I-15 NB Ramps	88.10%	3.02%	8.88%	100.00%
7	4th St.	w/o Etiwanda Av.	87.55%	3.13%	9.32%	100.00%
8	Street A	s/o Dwy. 8	98.53%	0.45%	1.03%	100.00%

[1] Based on an estimate of trips that could occur if the proposed buildings operated as the Sort Use.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 7: OYC (2022) WITH SORT USE WITH 6TH STREET VEHICLE MIX

ID	Roadway	Segment	With Sort Use[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Etiwanda Av.	s/o Foothill Bl.	87.21%	3.22%	9.57%	100.00%
2	Etiwanda Av.	s/o Whittram Av.	86.89%	3.30%	9.81%	100.00%
3	Etiwanda Av.	s/o San Bernardino Av.	86.74%	3.34%	9.92%	100.00%
4	Foothill Bl.	w/o Etiwanda Av.	86.16%	3.48%	10.36%	100.00%
5	6th St.	w/o Etiwanda Av.	95.14%	1.37%	3.50%	100.00%
6	4th St.	e/o I-15 NB Ramps	87.36%	3.21%	9.44%	100.00%
7	4th St.	w/o Etiwanda Av.	87.20%	3.22%	9.58%	100.00%
8	Street A	s/o Dwy. 8	97.80%	0.67%	1.53%	100.00%

[1] Based on an estimate of trips that could occur if the proposed buildings operated as the Sort Use.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 8: HORIZON YEAR (2040) WITH SORT USE VEHICLE MIX

ID	Roadway	Segment	With Sort Use[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Etiwanda Av.	s/o Foothill Bl.	86.69%	3.35%	9.96%	100.00%
2	Etiwanda Av.	s/o Whittram Av.	86.46%	3.41%	10.13%	100.00%
3	Etiwanda Av.	s/o San Bernardino Av.	86.92%	3.30%	9.79%	100.00%
4	Foothill Bl.	w/o Etiwanda Av.	86.03%	3.51%	10.46%	100.00%
5	6th St.	w/o Etiwanda Av.	88.73%	2.88%	8.39%	100.00%
6	4th St.	e/o I-15 NB Ramps	87.22%	3.24%	9.54%	100.00%
7	4th St.	w/o Etiwanda Av.	87.39%	3.17%	9.44%	100.00%
8	Street A	s/o Dwy. 8	97.80%	0.67%	1.53%	100.00%

[1] Based on an estimate of trips that could occur if the proposed buildings operated as the Sort Use.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

OFF-SITE TRAFFIC NOISE IMPACTS

To assess the off-site traffic CNEL noise level impacts associated with the proposed buildings operating with High-Cube Fulfillment Center (Sort) Warehouse and High-Cube Cold Storage Warehouse uses, noise contours were developed based on an estimate of trips that could occur if the proposed buildings operated as the Sort Use consistent with the *Bridge Point Rancho Cucamonga High-Cube Fulfillment Center Traffic Memo* prepared by Urban Crossroads, Inc.. Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Sort Use's incremental 24-hour dBA CNEL traffic-related noise impacts at land uses adjacent to roadways conveying Sort Use traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA CNEL noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area.

Tables 9 through 16 present a summary of the exterior dBA CNEL traffic noise level without barrier attenuation. Roadway segments are analyzed without and with Sort Use conditions in each of the following timeframes: Existing (2020), Opening Year Cumulative (2022), Opening Year Cumulative (2022) with the 6th Street Connection, and Horizon Year (2040). Appendix A includes a summary of the dBA CNEL traffic noise level contours for each of the traffic scenarios.

TABLE 9: EXISTING WITHOUT SORT USE NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	74.8	105	225	485
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	76.0	126	271	584
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	76.0	150	323	697
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	77.5	189	408	879
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	58.4	RW	RW	RW
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	76.1	154	332	715
7	4th St.	w/o Etiwanda Av.	Sensitive	76.3	157	339	730
8	Street A	s/o Dwy. 8	Sensitive	n/a	n/a	n/a	n/a

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"n/a"= Street A does not exist for the without project conditions.

TABLE 10: EXISTING WITH SORT USE NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	75.0	107	231	499
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	76.1	128	277	596
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	76.1	154	332	715
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	77.6	191	412	888
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	63.3	RW	RW	73
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	76.6	165	356	768
7	4th St.	w/o Etiwanda Av.	Sensitive	76.5	162	348	751
8	Street A	s/o Dwy. 8	Sensitive	65.0	RW	30	64

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 11: OYC (2022) WITHOUT SORT USE AND WITHOUT 6TH ST. CONNECTION NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	75.8	122	263	566
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	77.0	147	317	682
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	76.8	171	369	796
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	78.2	211	455	980
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	58.5	RW	RW	RW
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	76.8	169	365	786
7	4th St.	w/o Etiwanda Av.	Sensitive	76.9	173	372	801
8	Street A	s/o Dwy. 8	Sensitive	n/a	n/a	n/a	n/a

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"n/a"= Street A does not exist for the without project conditions.

TABLE 12: OYC (2022) WITH SORT USE AND WITHOUT 6TH ST. CONNECTION NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	75.9	125	268	578
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	77.1	149	322	693
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	77.0	175	377	813
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	78.3	213	459	989
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	63.4	RW	RW	74
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	77.2	180	388	837
7	4th St.	w/o Etiwanda Av.	Sensitive	77.0	177	381	821
8	Street A	s/o Dwy. 8	Sensitive	65.0	RW	30	64

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 13: OYC (2022) WITHOUT SORT USE WITH 6TH ST. CONNECTION NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	75.8	122	263	566
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	77.0	147	317	682
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	77.9	200	432	930
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	78.2	211	455	980
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	58.5	RW	RW	RW
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	76.8	169	365	786
7	4th St.	w/o Etiwanda Av.	Sensitive	78.0	204	439	945
8	Street A	s/o Dwy. 8	Sensitive	n/a	n/a	n/a	n/a

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"n/a"= Street A does not exist for the without project conditions.

TABLE 14: OYC (2022) WITH SORT USE WITH 6TH ST. CONNECTION NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	75.9	125	268	578
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	77.1	149	322	693
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	78.0	204	439	946
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	78.2	213	458	986
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	63.4	RW	RW	74
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	77.1	178	384	828
7	4th St.	w/o Etiwanda Av.	Sensitive	78.1	207	447	963
8	Street A	s/o Dwy. 8	Sensitive	63.9	RW	RW	54

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 15: HORIZON YEAR (2040) WITHOUT SORT USE NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	78.0	170	367	791
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	79.4	210	452	974
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	77.1	177	381	822
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	80.1	285	613	1322
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	70.5	48	103	221
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	77.2	182	392	845
7	4th St.	w/o Etiwanda Av.	Sensitive	77.4	186	400	862
8	Street A	s/o Dwy. 8	Sensitive	n/a	n/a	n/a	n/a

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.
"n/a"= Street A does not exist for the without project conditions.

TABLE 16: HORIZON YEAR (2040) WITH SORT USE NOISE CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	78.1	173	372	802
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	79.4	212	457	984
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	77.2	181	389	839
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	80.2	286	616	1327
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	71.1	52	111	240
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	77.5	191	411	885
7	4th St.	w/o Etiwanda Av.	Sensitive	77.5	190	409	881
8	Street A	s/o Dwy. 8	Sensitive	63.9	RW	RW	54

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

EXISTING TRAFFIC NOISE LEVEL INCREASES

An analysis of existing traffic noise levels plus traffic noise generated if the buildings are used as a High-Cube Fulfillment Center (Sort) Warehouse has been included in this report to fully analyze all the existing traffic scenarios identified based on an estimate of trips that could occur if the proposed buildings operated as the Sort Use consistent with the *Bridge Point Rancho Cucamonga High-Cube Fulfillment Center Traffic Memo* prepared by Urban Crossroads, Inc.. This condition is provided solely for informational purposes and will not occur, since the Sort Use would not be fully developed and occupied under Existing conditions.

Table 9 shows the Existing (2020) without Project conditions CNEL noise levels. The Existing (2020) without Project exterior noise levels are expected to range from 58.4 to 77.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 10 shows the Existing (2020) with Sort Use conditions will range from 63.3 to 77.6 dBA CNEL. Table 17 shows that the Sort Use off-site traffic noise level impacts will range from 0.1 to 4.9 dBA CNEL. Based on the significance criteria for off-site traffic noise, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Sort Use -related traffic noise levels.

OYC (2022) WITHOUT 6TH ST. CONNECTION SORT USE TRAFFIC NOISE LEVEL INCREASES

Table 11 presents the Opening Year Cumulative (2022) without Project and without the 6th Street connection conditions CNEL noise levels. The Opening Year (2022) without Project and without the 6th Street connection exterior noise levels are expected to range from 58.5 to 78.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 12 shows that the Opening Year Cumulative (2022) with Sort Use but without the 6th Street connection conditions will range from 63.4 to 78.3 dBA CNEL. Table 18 shows that the Sort Use off-site traffic noise level increases will range from 0.1 to 4.9 dBA CNEL. Based on the significance criteria for off-site traffic noise, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Sort Use related traffic noise levels.

OYC (2022) WITH 6TH ST. CONNECTION SORT USE TRAFFIC NOISE LEVEL INCREASES

Table 13 presents the Opening Year Cumulative (2022) without Project with 6th Street connection conditions CNEL noise levels. The Opening Year (2022) without Project with 6th Street connection exterior noise levels is expected to range from 58.5 to 78.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 14 shows that the Opening Year Cumulative (2022) with Sort Use with 6th Street connection conditions will range from 63.4 to 78.2 dBA CNEL. Table 19 shows that the Sort Use off-site traffic noise level increases will range from 0.0 to 4.9 dBA CNEL. Based on the significance criteria for off-site traffic noise, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Sort Use related traffic noise levels.

HORIZON YEAR (2040) SORT USE TRAFFIC NOISE LEVEL INCREASES

Table 15 presents the Horizon Year (2040) without Project conditions CNEL noise levels. The Horizon Year (2040) without Project exterior noise levels are expected to range from 70.5 to 80.1 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 16 shows that the Horizon Year (2040) with Sort Use conditions will range from 71.1 to 80.2 dBA CNEL. Table 20 shows that the Sort Use off-site traffic noise level increases will range from 0.0 to 0.6 dBA CNEL. Based on the significance criteria for off-site traffic noise, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Sort Use related traffic noise levels.

TABLE 17: EXISTING WITH SORT USE TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				Without Sort Use	With Sort Use	Project Addition	Limit	Exceeded?
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	74.8	75.0	0.2	1.5	No
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	76.0	76.1	0.1	3.0	No
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	76.0	76.1	0.1	3.0	No
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	77.5	77.6	0.1	3.0	No
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	58.4	63.3	4.9	5.0	No
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	76.1	76.6	0.5	3.0	No
7	4th St.	w/o Etiwanda Av.	Sensitive	76.3	76.5	0.2	1.5	No

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the with Sort Use create an incremental noise level increase exceeding the significance criteria?

TABLE 18: OYC (2022) WITH SORT USE WITHOUT 6TH ST. CONNECTION TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				Without Sort Use	With Sort Use	Project Addition	Limit	Exceeded?
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	75.8	75.9	0.1	1.5	No
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	77.0	77.1	0.1	3.0	No
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	76.8	77.0	0.2	3.0	No
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	78.2	78.3	0.1	3.0	No
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	58.5	63.4	4.9	5.0	No
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	76.8	77.2	0.4	3.0	No
7	4th St.	w/o Etiwanda Av.	Sensitive	76.9	77.0	0.1	1.5	No

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the with Sort Use create an incremental noise level increase exceeding the significance criteria?

TABLE 19: OYC (2022) WITH SORT USE WITH 6TH ST. CONNECTION TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				Without Sort Use	With Sort Use	Project Addition	Limit	Exceeded?
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	75.8	75.9	0.1	1.5	No
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	77.0	77.1	0.1	3.0	No
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	77.9	78.0	0.1	3.0	No
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	78.2	78.2	0.0	3.0	No
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	58.5	63.4	4.9	5.0	No
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	76.8	77.1	0.3	3.0	No
7	4th St.	w/o Etiwanda Av.	Sensitive	78.0	78.1	0.1	1.5	No

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the with Sort Use create an incremental noise level increase exceeding the significance criteria?

TABLE 20: HORIZON YEAR (2040) WITH SORT USE TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				Without Sort Use	With Sort Use	Project Addition	Limit	Exceeded?
1	Etiwanda Av.	s/o Foothill Bl.	Sensitive	78.0	78.1	0.1	1.5	No
2	Etiwanda Av.	s/o Whittram Av.	Non-Sensitive	79.4	79.4	0.0	3.0	No
3	Etiwanda Av.	s/o San Bernardino Av.	Non-Sensitive	77.1	77.2	0.1	3.0	No
4	Foothill Bl.	w/o Etiwanda Av.	Non-Sensitive	80.1	80.2	0.1	3.0	No
5	6th St.	w/o Etiwanda Av.	Non-Sensitive	70.5	71.1	0.6	3.0	No
6	4th St.	e/o I-15 NB Ramps	Non-Sensitive	77.2	77.5	0.3	3.0	No
7	4th St.	w/o Etiwanda Av.	Sensitive	77.4	77.5	0.1	1.5	No

[1] Noise sensitive uses limited to noise sensitive residential land uses and the West Valley Detention Center.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the with Sort Use create an incremental noise level increase exceeding the significance criteria?

CONCLUSIONS

Traffic generated by the operation of the buildings with High-Cube Fulfillment Center (Sort) Warehouse and High-Cube Cold Storage Warehouse uses will influence the traffic noise levels in surrounding off-site areas. To quantify the off-site traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 8 study-area roadway segments were calculated using the transportation related twenty-four-hour community noise equivalent levels (CNEL) based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on an estimate of trips that could occur if the proposed buildings operated as the Sort Use consistent with the *Bridge Point Rancho Cucamonga High-Cube Fulfillment Center Traffic Memo* prepared by Urban Crossroads, Inc.. To assess the off-site noise level impacts associated with operation of the buildings with High-Cube Fulfillment Center (Sort) Warehouse and High-Cube Cold Storage Warehouse uses, noise contour boundaries were developed for Existing (2020), Opening Year Cumulative (2022), Opening Year Cumulative (2022) with the 6th Street Connection, and Horizon Year (2040). The analysis shows that the Sort Use-related traffic noise level increases under all traffic scenarios are considered to have *less than significant* impacts at receiving land uses adjacent to the study area roadway segments. If you have any questions, please contact me directly at (949) 584-3148.

Respectfully submitted,

URBAN CROSSROADS, INC.

Bill Lawson, P.E., INCE
Principal

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APPENDIX A

OFF-SITE TRAFFIC NOISE CONTOURS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2020)
Road Name: Etiwanda Av.
Road Segment: s/o Foothill Bl.

Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,077 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	1,326 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-1.73	0.79	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-15.54	0.82	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-10.80	0.82	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.1	66.1	64.3	58.3	66.9	67.5
Medium Trucks:	65.1	63.5	57.1	55.6	64.1	64.3
Heavy Trucks:	74.2	72.7	63.7	64.9	73.3	73.4
Vehicle Noise:	75.5	74.0	67.5	66.2	74.6	74.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	101	218	469	1,010
CNEL:	105	225	485	1,045

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2020)
Road Name: Etiwanda Av.
Road Segment: s/o San Bernardino Av.

Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,731 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,001 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	0.05	0.18	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-13.76	0.20	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-9.02	0.20	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.2	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	66.2	64.7	58.3	56.8	65.2	65.5
Heavy Trucks:	75.4	73.9	64.8	66.1	74.4	74.6
Vehicle Noise:	76.7	75.1	68.6	67.3	75.8	76.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	145	313	674	1,451
CNEL:	150	323	697	1,501

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2020)
Road Name: Etiwanda Av.
Road Segment: s/o Whittram Av.

Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,260 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	1,750 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-0.53	0.79	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-14.34	0.82	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-9.60	0.82	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.3	67.3	65.5	59.5	68.1	68.7
Medium Trucks:	66.3	64.7	58.4	56.8	65.3	65.5
Heavy Trucks:	75.4	73.9	64.9	66.1	74.5	74.6
Vehicle Noise:	76.8	75.2	68.7	67.4	75.8	76.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	122	262	564	1,216
CNEL:	126	271	584	1,258

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2020)
Road Name: Foothill Bl.
Road Segment: w/o Etiwanda Av.

Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,934 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,833 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	1.56	0.18	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	81.00	-12.25	0.20	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-7.51	0.20	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.7	68.8	67.0	61.0	69.6	70.2
Medium Trucks:	67.8	66.2	59.8	58.3	66.7	67.0
Heavy Trucks:	76.9	75.4	66.4	67.6	76.0	76.1
Vehicle Noise:	78.2	76.7	70.1	68.9	77.3	77.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	183	394	849	1,830
CNEL:	189	408	879	1,893

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2020)
Road Name: 6th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	337 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	34 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-16.66	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-30.47	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-25.73	1.98	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	50.6	48.6	46.9	40.8	49.4	50.0
Medium Trucks:	48.0	46.5	40.1	38.6	47.0	47.2
Heavy Trucks:	58.0	56.6	47.5	48.8	57.1	57.3
Vehicle Noise:	59.1	57.6	50.6	49.8	58.2	58.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	7	15	33	71
CNEL:	7	16	34	74

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2020)
Road Name: 4th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,800 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	1,805 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.81	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-14.62	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-9.88	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.0	68.0	66.2	60.2	68.8	69.4
Medium Trucks:	66.8	65.2	58.9	57.3	65.8	66.0
Heavy Trucks:	75.5	74.0	65.0	66.3	74.6	74.7
Vehicle Noise:	77.0	75.4	69.1	67.6	76.0	76.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	152	327	704	1,518
CNEL:	157	339	730	1,572

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2020)
Road Name: 4th St.
Road Segment: e/o I-15 NB Ramps
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,250 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	1,749 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.95	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-14.75	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-10.02	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	67.9	66.1	60.0	68.7	69.3
Medium Trucks:	66.7	65.1	58.7	57.2	65.6	65.9
Heavy Trucks:	75.4	73.9	64.9	66.1	74.5	74.6
Vehicle Noise:	76.9	75.3	69.0	67.5	75.9	76.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	149	320	690	1,486
CNEL:	154	332	715	1,540

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing (2020)
Road Name: Street A
Road Segment: s/o Dwy. 8
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	11 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	29.912
Medium Trucks:	29.615
Heavy Trucks:	29.644

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-41.93	3.24	-1.20	-4.49	0.000	0.000
Medium Trucks:	77.72	-55.74	3.31	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-51.00	3.30	-1.20	-5.77	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	26.6	24.7	22.9	16.8	25.5	26.1
Medium Trucks:	24.1	22.5	16.2	14.6	23.1	23.3
Heavy Trucks:	34.1	32.6	23.6	24.8	33.2	33.3
Vehicle Noise:	35.2	33.6	26.7	25.8	34.2	34.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	0	0	1	1
CNEL:	0	0	1	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Etiwanda Av.
Road Segment: s/o Foothill Bl.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,062 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	1,527 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	87.53%
Medium Trucks:	84.8%	4.9%	10.3%	3.15%
Heavy Trucks:	86.5%	2.7%	10.8%	9.33%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.03	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-15.48	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-10.76	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	66.8	65.0	59.0	67.6	68.2
Medium Trucks:	65.1	63.6	57.2	55.7	64.1	64.4
Heavy Trucks:	74.2	72.8	63.7	65.0	73.3	73.5
Vehicle Noise:	75.7	74.1	67.8	66.3	74.7	75.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	104	223	481	1,037
CNEL:	107	231	499	1,074

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Etiwanda Av.
Road Segment: s/o San Bernardino Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,230 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,254 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	87.20%
Medium Trucks:	84.8%	4.9%	10.3%	3.23%
Heavy Trucks:	86.5%	2.7%	10.8%	9.58%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.64	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-13.68	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-8.95	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	67.9	66.1	60.0	68.7	69.3
Medium Trucks:	66.3	64.8	58.4	56.9	65.3	65.5
Heavy Trucks:	75.4	73.9	64.9	66.2	74.5	74.6
Vehicle Noise:	76.9	75.3	69.0	67.5	75.9	76.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	149	320	690	1,487
CNEL:	154	332	715	1,540

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Etiwanda Av.
Road Segment: s/o Whittram Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,245 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	1,951 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	87.15%
Medium Trucks:	84.8%	4.9%	10.3%	3.24%
Heavy Trucks:	86.5%	2.7%	10.8%	9.61%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.01	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-14.29	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-9.56	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.8	67.8	66.1	60.0	68.6	69.3
Medium Trucks:	66.3	64.8	58.4	56.9	65.3	65.6
Heavy Trucks:	75.4	74.0	64.9	66.2	74.5	74.6
Vehicle Noise:	76.9	75.3	68.9	67.5	75.9	76.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	124	267	575	1,240
CNEL:	128	277	596	1,284

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Foothill Bl.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,429 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,984 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	86.45%
Medium Trucks:	84.8%	4.9%	10.3%	3.41%
Heavy Trucks:	86.5%	2.7%	10.8%	10.14%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.82	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-12.22	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-7.49	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.0	69.0	67.3	61.2	69.8	70.5
Medium Trucks:	67.8	66.2	59.9	58.3	66.8	67.0
Heavy Trucks:	76.9	75.4	66.4	67.6	76.0	76.1
Vehicle Noise:	78.3	76.7	70.3	68.9	77.3	77.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	185	398	858	1,848
CNEL:	191	412	888	1,913

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: 6th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,366 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	240 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.19%
Medium Trucks:	84.8%	4.9%	10.3%	1.35%
Heavy Trucks:	86.5%	2.7%	10.8%	3.46%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-7.74	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-26.21	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-22.14	1.98	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.5	57.6	55.8	49.7	58.4	59.0
Medium Trucks:	52.3	50.7	44.4	42.8	51.3	51.5
Heavy Trucks:	61.6	60.1	51.1	52.4	60.7	60.8
Vehicle Noise:	64.0	62.4	57.3	54.6	63.0	63.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	32	70	150
CNEL:	16	34	73	158

Friday, March 19, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: 4th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,756 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,105 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	87.77%
Medium Trucks:	84.8%	4.9%	10.3%	3.08%
Heavy Trucks:	86.5%	2.7%	10.8%	9.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.04	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-14.60	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-9.86	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.8	67.0	60.9	69.6	70.2
Medium Trucks:	66.8	65.2	58.9	57.3	65.8	66.0
Heavy Trucks:	75.5	74.1	65.0	66.3	74.6	74.8
Vehicle Noise:	77.2	75.6	69.5	67.8	76.2	76.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	156	336	723	1,558
CNEL:	162	348	751	1,617

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: 4th St.
Road Segment: e/o I-15 NB Ramps
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,302 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,261 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	88.38%
Medium Trucks:	84.8%	4.9%	10.3%	2.95%
Heavy Trucks:	86.5%	2.7%	10.8%	8.67%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.30	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-14.46	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-9.78	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.1	69.1	67.3	61.3	69.9	70.5
Medium Trucks:	66.9	65.4	59.0	57.5	65.9	66.2
Heavy Trucks:	75.6	74.1	65.1	66.3	74.7	74.8
Vehicle Noise:	77.3	75.7	69.7	67.9	76.4	76.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	159	343	739	1,592
CNEL:	165	356	768	1,654

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Street A
Road Segment: s/o Dwy. 8
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,485 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	455 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	11 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	98.53%
Medium Trucks:	84.8%	4.9%	10.3%	0.45%
Heavy Trucks:	86.5%	2.7%	10.8%	1.03%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	29.912
Medium Trucks:	29.615
Heavy Trucks:	29.644

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-4.81	3.24	-1.20	-4.49	0.000	0.000
Medium Trucks:	77.72	-28.25	3.31	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-24.63	3.30	-1.20	-5.77	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.7	61.8	60.0	54.0	62.6	63.2
Medium Trucks:	51.6	50.0	43.6	42.1	50.6	50.8
Heavy Trucks:	60.5	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	65.6	63.8	60.5	56.0	64.5	65.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	13	28	60	129
CNEL:	14	30	64	138

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022
Road Name: Etiwanda Av.
Road Segment: s/o Foothill Bl.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,469 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	1,670 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.73	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-14.54	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-9.80	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.1	65.3	59.3	67.9	68.5
Medium Trucks:	66.1	64.5	58.1	56.6	65.1	65.3
Heavy Trucks:	75.2	73.7	64.7	65.9	74.3	74.4
Vehicle Noise:	76.5	75.0	68.5	67.2	75.6	75.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	118	254	547	1,178
CNEL:	122	263	566	1,219

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022
Road Name: Etiwanda Av.
Road Segment: s/o San Bernardino Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,076 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,441 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.92	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-12.89	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-8.15	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.1	68.1	66.4	60.3	68.9	69.5
Medium Trucks:	67.1	65.5	59.2	57.6	66.1	66.3
Heavy Trucks:	76.2	74.7	65.7	67.0	75.3	75.4
Vehicle Noise:	77.6	76.0	69.5	68.2	76.6	76.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	166	357	769	1,657
CNEL:	171	369	796	1,714

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022
Road Name: Etiwanda Av.
Road Segment: s/o Whittram Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,789 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,209 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.48	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-13.33	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-8.59	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.3	68.3	66.6	60.5	69.1	69.7
Medium Trucks:	67.3	65.7	59.4	57.8	66.3	66.5
Heavy Trucks:	76.4	74.9	65.9	67.1	75.5	75.6
Vehicle Noise:	77.8	76.2	69.7	68.4	76.8	77.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	142	306	659	1,420
CNEL:	147	317	682	1,469

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022
Road Name: Foothill Bl.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,898 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	3,336 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.27	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-11.54	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-6.80	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.5	69.5	67.7	61.7	70.3	70.9
Medium Trucks:	68.5	66.9	60.5	59.0	67.5	67.7
Heavy Trucks:	77.6	76.1	67.1	68.3	76.7	76.8
Vehicle Noise:	78.9	77.4	70.8	69.6	78.0	78.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	204	440	947	2,040
CNEL:	211	455	980	2,111

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022
Road Name: 6th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	350 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	35 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-16.49	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	77.72	-30.30	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-25.56	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	50.8	48.8	47.0	41.0	49.6	50.2
Medium Trucks:	48.2	46.6	40.3	38.7	47.2	47.4
Heavy Trucks:	58.2	56.7	47.7	48.9	57.3	57.4
Vehicle Noise:	59.3	57.7	50.8	49.9	58.3	58.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	7	16	34	73
CNEL:	8	16	35	76

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022
Road Name: 4th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,471 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,076 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.20	0.18	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-14.01	0.20	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-9.27	0.20	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.6	68.6	66.8	60.8	69.4	70.0
Medium Trucks:	67.4	65.8	59.5	57.9	66.4	66.6
Heavy Trucks:	76.1	74.6	65.6	66.9	75.2	75.3
Vehicle Noise:	77.6	76.0	69.7	68.2	76.7	76.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	167	359	773	1,666
CNEL:	173	372	801	1,726

Friday, March 19, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022
Road Name: 4th St.
Road Segment: e/o I-15 NB Ramps
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,899 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,018 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.33	0.18	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-14.13	0.20	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-9.39	0.20	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.4	68.5	66.7	60.7	69.3	69.9
Medium Trucks:	67.3	65.7	59.3	57.8	66.3	66.5
Heavy Trucks:	76.0	74.5	65.5	66.7	75.1	75.2
Vehicle Noise:	77.5	75.9	69.6	68.1	76.5	76.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	163	352	759	1,635
CNEL:	169	365	786	1,694

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022
Road Name: Street A
Road Segment: s/o Dwy. 8
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	11 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	29.912
Medium Trucks:	29.615
Heavy Trucks:	29.644

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-41.93	3.24	-1.20	*-4.49*	0.000	0.000
Medium Trucks:	77.72	-55.74	3.31	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	82.99	-51.00	3.30	-1.20	*-5.77*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	26.6	24.7	22.9	16.8	25.5	26.1
Medium Trucks:	24.1	22.5	16.2	14.6	23.1	23.3
Heavy Trucks:	34.1	32.6	23.6	24.8	33.2	33.3
Vehicle Noise:	35.2	33.6	26.7	25.8	34.2	34.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	0	0	1	1
CNEL:	0	0	1	1

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022 | Project Name: BridgePoint
Road Name: Etiwanda Av. | Job Number: 13349
Road Segment: s/o Foothill Bl.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,455 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	1,871 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	87.21%
Medium Trucks:	84.8%	4.9%	10.3%	3.22%
Heavy Trucks:	86.5%	2.7%	10.8%	9.57%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.17	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-14.49	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-9.77	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.6	67.7	65.9	59.8	68.5	69.1
Medium Trucks:	66.1	64.6	58.2	56.7	65.1	65.3
Heavy Trucks:	75.2	73.7	64.7	66.0	74.3	74.4
Vehicle Noise:	76.7	75.1	68.8	67.3	75.7	75.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	120	259	558	1,203
CNEL:	125	268	578	1,246

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022 | Project Name: BridgePoint
Road Name: Etiwanda Av. | Job Number: 13349
Road Segment: s/o San Bernardino Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,574 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,695 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	86.97%
Medium Trucks:	84.8%	4.9%	10.3%	3.28%
Heavy Trucks:	86.5%	2.7%	10.8%	9.75%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.40	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-12.83	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-8.10	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.6	68.6	66.9	60.8	69.4	70.0
Medium Trucks:	67.2	65.6	59.2	57.7	66.2	66.4
Heavy Trucks:	76.3	74.8	65.8	67.0	75.4	75.5
Vehicle Noise:	77.7	76.1	69.8	68.3	76.7	77.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	169	364	785	1,691
CNEL:	175	377	813	1,751

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022 | Project Name: BridgePoint
Road Name: Etiwanda Av. | Job Number: 13349
Road Segment: s/o Whittram Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,775 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,411 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	86.89%
Medium Trucks:	84.8%	4.9%	10.3%	3.30%
Heavy Trucks:	86.5%	2.7%	10.8%	9.81%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.92	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-13.29	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-8.56	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.8	67.0	60.9	69.6	70.2
Medium Trucks:	67.3	65.8	59.4	57.9	66.3	66.6
Heavy Trucks:	76.4	75.0	65.9	67.2	75.5	75.7
Vehicle Noise:	77.9	76.3	69.9	68.5	76.9	77.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	144	311	669	1,442
CNEL:	149	322	693	1,494

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022 | Project Name: BridgePoint
Road Name: Foothill Bl. | Job Number: 13349
Road Segment: w/o Etiwanda Av.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,393 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	3,487 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	86.35%
Medium Trucks:	84.8%	4.9%	10.3%	3.43%
Heavy Trucks:	86.5%	2.7%	10.8%	10.21%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.49	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-11.51	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-6.78	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.7	69.7	67.9	61.9	70.5	71.1
Medium Trucks:	68.5	66.9	60.6	59.0	67.5	67.7
Heavy Trucks:	77.6	76.1	67.1	68.3	76.7	76.8
Vehicle Noise:	79.0	77.4	71.0	69.6	78.0	78.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	206	443	955	2,057
CNEL:	213	459	989	2,130

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022
Road Name: 6th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,380 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	241 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	95.14%
Medium Trucks:	84.8%	4.9%	10.3%	1.37%
Heavy Trucks:	86.5%	2.7%	10.8%	3.50%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-7.72	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-26.15	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-22.06	1.98	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.5	57.6	55.8	49.8	58.4	59.0
Medium Trucks:	52.3	50.8	44.4	42.9	51.3	51.6
Heavy Trucks:	61.7	60.2	51.2	52.4	60.8	60.9
Vehicle Noise:	64.1	62.4	57.3	54.6	63.1	63.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	33	70	152
CNEL:	16	34	74	159

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022
Road Name: 4th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,428 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,376 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	87.55%
Medium Trucks:	84.8%	4.9%	10.3%	3.13%
Heavy Trucks:	86.5%	2.7%	10.8%	9.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.47	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-13.99	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-9.26	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.2	69.3	67.5	61.5	70.1	70.7
Medium Trucks:	67.4	65.8	59.5	57.9	66.4	66.6
Heavy Trucks:	76.1	74.7	65.6	66.9	75.2	75.4
Vehicle Noise:	77.8	76.2	70.1	68.4	76.8	77.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	170	367	791	1,704
CNEL:	177	381	821	1,769

Friday, March 19, 2021

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022
Road Name: 4th St.
Road Segment: e/o I-15 NB Ramps
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,951 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,530 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	88.10%
Medium Trucks:	84.8%	4.9%	10.3%	3.02%
Heavy Trucks:	86.5%	2.7%	10.8%	8.88%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.77	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-13.88	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-9.19	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.5	69.6	67.8	61.8	70.4	71.0
Medium Trucks:	67.5	66.0	59.6	58.1	66.5	66.7
Heavy Trucks:	76.2	74.7	65.7	66.9	75.3	75.4
Vehicle Noise:	77.9	76.3	70.3	68.5	76.9	77.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	174	374	805	1,735
CNEL:	180	388	837	1,802

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022
Road Name: Street A
Road Segment: s/o Dwy. 8
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,485 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	455 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	11 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	98.53%
Medium Trucks:	84.8%	4.9%	10.3%	0.45%
Heavy Trucks:	86.5%	2.7%	10.8%	1.03%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	29.912
Medium Trucks:	29.615
Heavy Trucks:	29.644

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-4.81	3.24	-1.20	-4.49	0.000	0.000
Medium Trucks:	77.72	-28.25	3.31	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-24.63	3.30	-1.20	-5.77	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.7	61.8	60.0	54.0	62.6	63.2
Medium Trucks:	51.6	50.0	43.6	42.1	50.6	50.8
Heavy Trucks:	60.5	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	65.6	63.8	60.5	56.0	64.5	65.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	13	28	60	129
CNEL:	14	30	64	138

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022 w/ ext.
Road Name: Etiwanda Av.
Road Segment: s/o Foothill Bl.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,469 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	1,670 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.73	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-14.54	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-9.80	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.1	67.1	65.3	59.3	67.9	68.5
Medium Trucks:	66.1	64.5	58.1	56.6	65.1	65.3
Heavy Trucks:	75.2	73.7	64.7	65.9	74.3	74.4
Vehicle Noise:	76.5	75.0	68.5	67.2	75.6	75.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	118	254	547	1,178
CNEL:	122	263	566	1,219

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022 w/ ext.
Road Name: Etiwanda Av.
Road Segment: s/o San Bernardino Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,447 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	3,087 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.94	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-11.87	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-7.13	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.1	69.2	67.4	61.3	70.0	70.6
Medium Trucks:	68.1	66.6	60.2	58.7	67.1	67.3
Heavy Trucks:	77.2	75.8	66.7	68.0	76.3	76.5
Vehicle Noise:	78.6	77.0	70.5	69.2	77.6	77.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	194	417	899	1,938
CNEL:	200	432	930	2,005

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022 w/ ext.
Road Name: Etiwanda Av.
Road Segment: s/o Whittram Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,789 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,209 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.48	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-13.33	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-8.59	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.3	68.3	66.6	60.5	69.1	69.7
Medium Trucks:	67.3	65.7	59.4	57.8	66.3	66.5
Heavy Trucks:	76.4	74.9	65.9	67.1	75.5	75.6
Vehicle Noise:	77.8	76.2	69.7	68.4	76.8	77.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	142	306	659	1,420
CNEL:	147	317	682	1,469

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022 w/ ext.
Road Name: Foothill Bl.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,898 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	3,336 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.27	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-11.54	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-6.80	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.5	69.5	67.7	61.7	70.3	70.9
Medium Trucks:	68.5	66.9	60.5	59.0	67.5	67.7
Heavy Trucks:	77.6	76.1	67.1	68.3	76.7	76.8
Vehicle Noise:	78.9	77.4	70.8	69.6	78.0	78.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	204	440	947	2,040
CNEL:	211	455	980	2,111

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022 w/ ext.
Road Name: 6th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	350 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	35 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-16.49	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-30.30	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-25.56	1.98	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	50.8	48.8	47.0	41.0	49.6	50.2
Medium Trucks:	48.2	46.6	40.3	38.7	47.2	47.4
Heavy Trucks:	58.2	56.7	47.7	48.9	57.3	57.4
Vehicle Noise:	59.3	57.7	50.8	49.9	58.3	58.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	7	16	34	73
CNEL:	8	16	35	76

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022 w/ ext.
Road Name: 4th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,219 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,659 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.87	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-12.94	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-8.20	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.6	69.7	67.9	61.9	70.5	71.1
Medium Trucks:	68.5	66.9	60.5	59.0	67.5	67.7
Heavy Trucks:	77.2	75.7	66.7	67.9	76.3	76.4
Vehicle Noise:	78.7	77.1	70.8	69.3	77.7	78.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	196	423	912	1,965
CNEL:	204	439	945	2,036

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022 w/ ext.
Road Name: 4th St.
Road Segment: e/o I-15 NB Ramps
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	19,899 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,018 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-0.33	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-14.13	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-9.39	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.4	68.5	66.7	60.7	69.3	69.9
Medium Trucks:	67.3	65.7	59.3	57.8	66.3	66.5
Heavy Trucks:	76.0	74.5	65.5	66.7	75.1	75.2
Vehicle Noise:	77.5	75.9	69.6	68.1	76.5	76.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	163	352	759	1,635
CNEL:	169	365	786	1,694

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2022 w/ ext.
Road Name: Street A
Road Segment: s/o Dwy. 8
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	11 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	29.912
Medium Trucks:	29.615
Heavy Trucks:	29.644

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-41.93	3.24	-1.20	-4.49	0.000	0.000
Medium Trucks:	77.72	-55.74	3.31	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-51.00	3.30	-1.20	-5.77	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	26.6	24.7	22.9	16.8	25.5	26.1
Medium Trucks:	24.1	22.5	16.2	14.6	23.1	23.3
Heavy Trucks:	34.1	32.6	23.6	24.8	33.2	33.3
Vehicle Noise:	35.2	33.6	26.7	25.8	34.2	34.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	0	0	1	1
CNEL:	0	0	1	1

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022 w/ ext.
Road Name: Etiwanda Av.
Road Segment: s/o Foothill Bl.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,455 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	1,871 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	87.21%
Medium Trucks:	84.8%	4.9%	10.3%	3.22%
Heavy Trucks:	86.5%	2.7%	10.8%	9.57%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.17	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-14.49	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-9.77	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.6	67.7	65.9	59.8	68.5	69.1
Medium Trucks:	66.1	64.6	58.2	56.7	65.1	65.3
Heavy Trucks:	75.2	73.7	64.7	66.0	74.3	74.4
Vehicle Noise:	76.7	75.1	68.8	67.3	75.7	75.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	120	259	558	1,203
CNEL:	125	268	578	1,246

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022 w/ ext.
Road Name: Etiwanda Av.
Road Segment: s/o San Bernardino Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,945 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	3,341 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	86.74%
Medium Trucks:	84.8%	4.9%	10.3%	3.34%
Heavy Trucks:	86.5%	2.7%	10.8%	9.92%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.33	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-11.82	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-7.09	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.5	69.5	67.8	61.7	70.4	71.0
Medium Trucks:	68.2	66.6	60.3	58.7	67.2	67.4
Heavy Trucks:	77.3	75.8	66.8	68.0	76.4	76.5
Vehicle Noise:	78.7	77.1	70.7	69.3	77.7	78.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	197	424	914	1,969
CNEL:	204	439	946	2,039

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022 w/ ext.
Road Name: Etiwanda Av.
Road Segment: s/o Whittram Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,775 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,411 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	86.89%
Medium Trucks:	84.8%	4.9%	10.3%	3.30%
Heavy Trucks:	86.5%	2.7%	10.8%	9.81%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.92	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-13.29	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-8.56	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.7	68.8	67.0	60.9	69.6	70.2
Medium Trucks:	67.3	65.8	59.4	57.9	66.3	66.6
Heavy Trucks:	76.4	75.0	65.9	67.2	75.5	75.7
Vehicle Noise:	77.9	76.3	69.9	68.5	76.9	77.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	144	311	669	1,442
CNEL:	149	322	693	1,494

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022 w/ ext.
Road Name: Foothill Bl.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,902 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	3,438 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	86.16%
Medium Trucks:	84.8%	4.9%	10.3%	3.48%
Heavy Trucks:	86.5%	2.7%	10.8%	10.36%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.42	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-11.51	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-6.78	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.6	69.6	67.9	61.8	70.4	71.1
Medium Trucks:	68.5	66.9	60.6	59.0	67.5	67.7
Heavy Trucks:	77.6	76.1	67.1	68.3	76.7	76.8
Vehicle Noise:	79.0	77.4	70.9	69.6	78.0	78.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	205	442	953	2,053
CNEL:	213	458	986	2,125

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022 w/ ext.
Road Name: 6th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,380 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	241 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	95.14%
Medium Trucks:	84.8%	4.9%	10.3%	1.37%
Heavy Trucks:	86.5%	2.7%	10.8%	3.50%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-7.72	1.94	-1.20	*-4.61*	0.000	0.000
Medium Trucks:	77.72	-26.15	1.98	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-22.06	1.98	-1.20	*-5.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	59.5	57.6	55.8	49.8	58.4	59.0
Medium Trucks:	52.3	50.8	44.4	42.9	51.3	51.6
Heavy Trucks:	61.7	60.2	51.2	52.4	60.8	60.9
Vehicle Noise:	64.1	62.4	57.3	54.6	63.1	63.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	15	33	70	152
CNEL:	16	34	74	159

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022 w/ ext.
Road Name: 4th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,175 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,958 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	87.20%
Medium Trucks:	84.8%	4.9%	10.3%	3.22%
Heavy Trucks:	86.5%	2.7%	10.8%	9.58%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.41	0.18	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-12.92	0.20	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-8.18	0.20	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.2	70.2	68.4	62.4	71.0	71.6
Medium Trucks:	68.5	66.9	60.6	59.0	67.5	67.7
Heavy Trucks:	77.2	75.7	66.7	67.9	76.3	76.4
Vehicle Noise:	78.8	77.2	71.1	69.4	77.8	78.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	200	431	928	2,000
CNEL:	207	447	963	2,075

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022 w/ ext.
Road Name: 4th St.
Road Segment: e/o I-15 NB Ramps
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,478 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,381 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	87.36%
Medium Trucks:	84.8%	4.9%	10.3%	3.21%
Heavy Trucks:	86.5%	2.7%	10.8%	9.44%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.47	0.18	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-13.88	0.20	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-9.19	0.20	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.2	69.3	67.5	61.5	70.1	70.7
Medium Trucks:	67.5	66.0	59.6	58.1	66.5	66.7
Heavy Trucks:	76.2	74.7	65.7	66.9	75.3	75.4
Vehicle Noise:	77.8	76.2	70.1	68.4	76.9	77.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	172	370	797	1,718
CNEL:	178	384	828	1,783

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYCP 2022 w/ ext.
Road Name: Street A
Road Segment: s/o Dwy. 8
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,012 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	305 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	11 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.80%
Medium Trucks:	84.8%	4.9%	10.3%	0.67%
Heavy Trucks:	86.5%	2.7%	10.8%	1.53%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	29.912
Medium Trucks:	29.615
Heavy Trucks:	29.644

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-6.57	3.24	-1.20	*-4.49*	0.000	0.000
Medium Trucks:	77.72	-28.25	3.31	-1.20	*-4.86*	0.000	0.000
Heavy Trucks:	82.99	-24.63	3.30	-1.20	*-5.77*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.0	60.0	58.3	52.2	60.8	61.4
Medium Trucks:	51.6	50.0	43.6	42.1	50.6	50.8
Heavy Trucks:	60.5	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	64.5	62.8	59.0	55.0	63.5	63.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	11	24	51	110
CNEL:	12	25	54	117

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2040
Road Name: Etiwanda Av.
Road Segment: s/o Foothill Bl.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,232 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,761 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.45	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-12.36	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-7.62	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.2	69.3	67.5	61.5	70.1	70.7
Medium Trucks:	68.3	66.7	60.3	58.8	67.2	67.5
Heavy Trucks:	77.4	75.9	66.9	68.1	76.5	76.6
Vehicle Noise:	78.7	77.2	70.6	69.4	77.8	78.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	165	355	765	1,648
CNEL:	170	367	791	1,705

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2040
Road Name: Etiwanda Av.
Road Segment: s/o San Bernardino Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,271 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,562 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.13	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-12.68	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-7.94	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.3	68.3	66.6	60.5	69.2	69.8
Medium Trucks:	67.3	65.8	59.4	57.8	66.3	66.5
Heavy Trucks:	76.4	75.0	65.9	67.2	75.5	75.6
Vehicle Noise:	77.8	76.2	69.7	68.4	76.8	77.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	171	369	794	1,711
CNEL:	177	381	822	1,771

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2040
Road Name: Etiwanda Av.
Road Segment: s/o Whittram Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,211 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	3,773 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.81	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-11.00	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-6.26	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.6	70.6	68.9	62.8	71.4	72.0
Medium Trucks:	69.6	68.1	61.7	60.1	68.6	68.8
Heavy Trucks:	78.7	77.3	68.2	69.5	77.8	77.9
Vehicle Noise:	80.1	78.5	72.0	70.7	79.1	79.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	203	437	942	2,029
CNEL:	210	452	974	2,099

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2040
Road Name: Foothill Bl.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	51,539 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	5,226 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.22	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-9.59	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-4.85	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.4	71.4	69.7	63.6	72.2	72.9
Medium Trucks:	70.4	68.8	62.5	60.9	69.4	69.6
Heavy Trucks:	79.5	78.0	69.0	70.3	78.6	78.7
Vehicle Noise:	80.9	79.3	72.8	71.5	79.9	80.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	275	593	1,277	2,752
CNEL:	285	613	1,322	2,847

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2040
Road Name: 6th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,543 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	562 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-4.49	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-18.30	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-13.56	1.98	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.8	60.8	59.0	53.0	61.6	62.2
Medium Trucks:	60.2	58.6	52.3	50.7	59.2	59.4
Heavy Trucks:	70.2	68.7	59.7	60.9	69.3	69.4
Vehicle Noise:	71.3	69.7	62.8	61.9	70.3	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	100	215	462
CNEL:	48	103	221	477

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2040
Road Name: 4th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,831 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,315 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.27	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-13.54	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-8.80	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.0	69.1	67.3	61.3	69.9	70.5
Medium Trucks:	67.9	66.3	59.9	58.4	66.9	67.1
Heavy Trucks:	76.6	75.1	66.1	67.3	75.7	75.8
Vehicle Noise:	78.1	76.5	70.2	68.7	77.1	77.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	179	386	832	1,792
CNEL:	186	400	862	1,856

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2040
Road Name: 4th St.
Road Segment: e/o I-15 NB Ramps
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,189 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,250 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.15	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-13.66	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-8.92	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.9	68.9	67.2	61.1	69.7	70.4
Medium Trucks:	67.7	66.2	59.8	58.3	66.7	67.0
Heavy Trucks:	76.5	75.0	66.0	67.2	75.6	75.7
Vehicle Noise:	78.0	76.4	70.1	68.6	77.0	77.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	176	379	816	1,758
CNEL:	182	392	845	1,821

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2040
Road Name: Street A
Road Segment: s/o Dwy. 8
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	11 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	85.80%
Medium Trucks:	84.8%	4.9%	10.3%	3.57%
Heavy Trucks:	86.5%	2.7%	10.8%	10.63%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	29.912
Medium Trucks:	29.615
Heavy Trucks:	29.644

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-41.93	3.24	-1.20	-4.49	0.000	0.000
Medium Trucks:	77.72	-55.74	3.31	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-51.00	3.30	-1.20	-5.77	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	26.6	24.7	22.9	16.8	25.5	26.1
Medium Trucks:	24.1	22.5	16.2	14.6	23.1	23.3
Heavy Trucks:	34.1	32.6	23.6	24.8	33.2	33.3
Vehicle Noise:	35.2	33.6	26.7	25.8	34.2	34.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	0	0	1	1
CNEL:	0	0	1	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP 2040
Road Name: Etiwanda Av.
Road Segment: s/o Foothill Bl.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,218 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,963 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	86.69%
Medium Trucks:	84.8%	4.9%	10.3%	3.35%
Heavy Trucks:	86.5%	2.7%	10.8%	9.96%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.80	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-12.33	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-7.60	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.6	69.6	67.9	61.8	70.4	71.0
Medium Trucks:	68.3	66.7	60.4	58.8	67.3	67.5
Heavy Trucks:	77.4	75.9	66.9	68.1	76.5	76.6
Vehicle Noise:	78.8	77.2	70.8	69.4	77.8	78.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	167	359	774	1,668
CNEL:	173	372	802	1,727

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP 2040
Road Name: Etiwanda Av.
Road Segment: s/o San Bernardino Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,770 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,816 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	86.92%
Medium Trucks:	84.8%	4.9%	10.3%	3.30%
Heavy Trucks:	86.5%	2.7%	10.8%	9.79%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.59	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-12.62	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-7.89	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.8	68.8	67.0	61.0	69.6	70.2
Medium Trucks:	67.4	65.8	59.5	57.9	66.4	66.6
Heavy Trucks:	76.5	75.0	66.0	67.2	75.6	75.7
Vehicle Noise:	77.9	76.3	70.0	68.5	77.0	77.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	174	376	810	1,744
CNEL:	181	389	839	1,807

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP 2040
Road Name: Etiwanda Av.
Road Segment: s/o Whittram Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,197 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	3,975 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	86.46%
Medium Trucks:	84.8%	4.9%	10.3%	3.41%
Heavy Trucks:	86.5%	2.7%	10.8%	10.13%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.07	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-10.98	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-6.25	0.82	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.9	70.9	69.1	63.1	71.7	72.3
Medium Trucks:	69.6	68.1	61.7	60.2	68.6	68.9
Heavy Trucks:	78.8	77.3	68.2	69.5	77.8	78.0
Vehicle Noise:	80.2	78.6	72.1	70.8	79.2	79.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	205	441	950	2,047
CNEL:	212	457	984	2,119

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP 2040
Road Name: Foothill Bl.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	52,543 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	5,328 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	86.03%
Medium Trucks:	84.8%	4.9%	10.3%	3.51%
Heavy Trucks:	86.5%	2.7%	10.8%	10.46%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.32	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-9.57	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-4.84	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	73.5	71.5	69.8	63.7	72.3	72.9
Medium Trucks:	70.4	68.9	62.5	61.0	69.4	69.7
Heavy Trucks:	79.5	78.1	69.0	70.3	78.6	78.8
Vehicle Noise:	80.9	79.3	72.8	71.5	79.9	80.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	276	595	1,283	2,763
CNEL:	286	616	1,327	2,860

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP 2040
Road Name: 6th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,573 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	768 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	50 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	88.73%
Medium Trucks:	84.8%	4.9%	10.3%	2.88%
Heavy Trucks:	86.5%	2.7%	10.8%	8.39%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-2.99	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-17.88	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-13.24	1.98	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.3	62.3	60.5	54.5	63.1	63.7
Medium Trucks:	60.6	59.0	52.7	51.1	59.6	59.8
Heavy Trucks:	70.5	69.1	60.0	61.3	69.6	69.7
Vehicle Noise:	71.8	70.2	63.7	62.4	70.8	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	108	232	500
CNEL:	52	111	240	517

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP 2040
Road Name: 4th St.
Road Segment: w/o Etiwanda Av.
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,787 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,615 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	87.39%
Medium Trucks:	84.8%	4.9%	10.3%	3.17%
Heavy Trucks:	86.5%	2.7%	10.8%	9.44%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.88	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-13.52	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-8.78	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.6	69.7	67.9	61.9	70.5	71.1
Medium Trucks:	67.9	66.3	60.0	58.4	66.9	67.1
Heavy Trucks:	76.6	75.1	66.1	67.3	75.7	75.8
Vehicle Noise:	78.2	76.6	70.5	68.8	77.3	77.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	183	394	849	1,828
CNEL:	190	409	881	1,897

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP 2040
Road Name: 4th St.
Road Segment: e/o I-15 NB Ramps
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,768 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	2,613 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	73 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	87.22%
Medium Trucks:	84.8%	4.9%	10.3%	3.24%
Heavy Trucks:	86.5%	2.7%	10.8%	9.54%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	47.883
Medium Trucks:	47.698
Heavy Trucks:	47.716

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.87	0.18	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-13.43	0.20	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-8.74	0.20	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.6	69.7	67.9	61.8	70.5	71.1
Medium Trucks:	68.0	66.4	60.0	58.5	67.0	67.2
Heavy Trucks:	76.7	75.2	66.1	67.4	75.7	75.9
Vehicle Noise:	78.3	76.7	70.5	68.9	77.3	77.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	184	396	853	1,838
CNEL:	191	411	885	1,907

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HYP 2040
Road Name: Street A
Road Segment: s/o Dwy. 8
Project Name: BridgePoint
Job Number: 13349

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,012 vehicles
Peak Hour Percentage:	10.14%
Peak Hour Volume:	305 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	11 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	30.0 feet
Centerline Dist. to Observer:	30.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.80%
Medium Trucks:	84.8%	4.9%	10.3%	0.67%
Heavy Trucks:	86.5%	2.7%	10.8%	1.53%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	29.912
Medium Trucks:	29.615
Heavy Trucks:	29.644

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.57	3.24	-1.20	-4.49	0.000	0.000
Medium Trucks:	77.72	-28.25	3.31	-1.20	-4.86	0.000	0.000
Heavy Trucks:	82.99	-24.63	3.30	-1.20	-5.77	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.0	60.0	58.3	52.2	60.8	61.4
Medium Trucks:	51.6	50.0	43.6	42.1	50.6	50.8
Heavy Trucks:	60.5	59.0	50.0	51.2	59.6	59.7
Vehicle Noise:	64.5	62.8	59.0	55.0	63.5	63.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	11	24	51	110
CNEL:	12	25	54	117