

APPENDIX G

Noise Modeling Worksheets

APPENDIX G.1

Noise Monitoring Worksheets

Monitoring Location: Site 1
Monitoring Date: 12/10/2018

Monitoring Period

Time	LAeq	LASmax	LASmin
10:29:03	75.2	81.9	61.9
10:30:03	77.8	85.0	67.1
10:31:03	73.6	84.1	66.8
10:32:03	76.3	80.0	70.5
10:33:03	70.1	78.0	63.7
10:34:03	79.0	85.4	64.8
10:35:03	75.1	77.9	67.0
10:36:03	79.4	85.9	68.0
10:37:03	76.0	84.1	65.1
10:38:03	80.6	87.7	70.7
10:39:03	76.3	83.3	69.4
10:40:03	72.9	79.6	61.9
10:41:03	74.6	82.4	62.1
10:42:03	76.3	82.4	64.4
10:43:03	74.4	80.2	64.4
10:44:03	72.5	77.2	74.8



15-minute LAeq

76.4

Monitoring Location: Site 2
Monitoring Date: 12/10/2018

Monitoring Period

Time	LAeq	LASmax	LASmin
11:05:14	69.7	79.8	59.6
11:06:14	67.2	74.7	52.7
11:07:14	70.1	76.1	57.6
11:08:14	69.1	75.8	55.9
11:09:14	68.6	74.9	55.4
11:10:14	70.4	76.7	56.3
11:11:14	66.5	74.8	51.6
11:12:14	67.1	75.6	53.4
11:13:14	67.9	72.6	55.9
11:14:14	67.7	73.8	59.5
11:15:14	67.0	72.6	60.6
11:16:14	66.1	72.0	55.9
11:17:14	65.3	70.8	54.9
11:18:14	66.6	74.2	52.0
11:19:14	67.7	74.3	59.1
11:20:14	61.3	65.7	62.4

15-minute LAeq

67.8

Monitoring Location: Site 3
Monitoring Date: 12/10/2018

Monitoring Period

Time	LAeq	LASmax	LASmin
11:40:33	65.8	76.0	47.5
11:41:33	64.4	69.9	55.9
11:42:33	59.2	66.0	53.6
11:43:33	66.2	76.6	56.3
11:44:33	64.0	74.3	50.1
11:45:33	65.0	73.4	50.6
11:46:33	63.9	69.7	53.6
11:47:33	64.3	70.8	56.6
11:48:33	68.9	78.9	56.3
11:49:33	64.5	71.6	58.2
11:50:33	60.3	66.9	49.5
11:51:33	70.1	75.9	58.6
11:52:33	69.0	76.5	62.4
11:53:33	63.2	72.9	52.7
11:54:33	61.1	67.8	46.6
11:55:33	64.2	66.7	64.8



15-minute LAeq

65.6

Monitoring Location: Site 4
Monitoring Date: 12/10/2018

Monitoring Period

Time	LAeq	LASmax	LASmin
12:02:35	66.6	76.2	56.8
12:03:35	80.9	92.1	60.2
12:04:35	69.5	77.1	59.9
12:05:35	72.6	82.0	58.0
12:06:35	65.7	74.1	56.5
12:07:35	68.0	75.7	58.0
12:08:35	63.7	68.0	57.5
12:09:35	68.8	75.4	56.2
12:10:35	70.3	78.6	58.1
12:11:35	69.4	80.3	56.1
12:12:35	70.3	74.9	61.3
12:13:35	75.9	85.3	59.5
12:14:35	79.0	93.6	60.5
12:15:35	69.1	79.0	60.4
12:16:35	67.5	76.3	57.5
12:17:35	57.8	62.3	59.4

15-minute LAeq

73.2

APPENDIX G.2

Construction Noise Worksheet

Project Title: Single Family Residential

Parameters

Construction Hours: 11 Daytime hours (7:00 AM to 7:00 PM)
 0 Evening hours (7:00 PM to 10:00 PM)
 0 Nighttime hours (10:00 PM to 7:00 AM)

Calculation

Construction Phase	Number of	Acoustical	Actual Noise Level	Distance	Leq	Estimate Noise Shielding
Equipment Type	Units	Usage Factor (%)	At 50 feet, Lmax	Feet		dBA
Demolition					78.5	
Excavators	2	40	80.7	75	73.2	0
Loaders	2	40	79.1	75	71.6	0
Grading					85.0	
Scrapers	4	40	83.6	75	76.1	0
Blade	1	50	85	75	78.5	0
Loaders	1	40	79.1	75	71.6	0
Water Truck	1	50	85	75	78.5	0
Building Construction					86.4	
Generators	6	50	80.6	75	74.1	0
Loaders	2	40	79.1	75	71.6	0
Water Truck	1	50	85	75	78.5	0
Excavators	4	40	80.7	75	73.2	0
Crane	1	16	80.6	75	69.1	0
Laser Screed	1	50	85	75	78.5	0
Concrete Pump	1	20	81.4	75	70.9	0
Asphalt Tanker	1	50	85	75	78.5	0
Paving					84.9	
Scrapers	2	40	83.6	75	76.1	0
Loader	1	40	79.1	75	71.6	0
Bobcats	2	50	85	75	78.5	0
Laser Screed	1	50	85	75	78.5	0
Architectural Coating					74.2	
Compressor	2	40	77.7	75	70.2	0
Man Lift	2	20	74.7	75	64.2	0

APPENDIX G.3

Roadway Noise Worksheets

rev. (Date)

Weekday AM Peak Hour Volumes

Intersection: 10
Azusa Canyon Road (NS)/Arrow Hwy (EW)

Azusa Canyon Road

Southbound

	right	through	left
Existing	8	4	10
Existing plus Pro	8	4	10
Future Baseline	8	4	10
Future Baseline	8	4	10
Future Baseline	8	4	10
Future Baseline	8	4	10

Eastbound

	left	through	right
Existing	5	806	97
Existing plus Pro	5	806	198
Future Baseline	5	822	99
Future Baseline	5	822	200
Future Baseline	5	1,097	119
Future Baseline	5	1,099	222

W N E
S

Westbound

	right	through	left
Existing	9	1,810	91
Existing plus Pro	9	1,810	135
Future Baseline	9	1,846	93
Future Baseline	9	1,846	137
Future Baseline	9	1,955	99
Future Baseline	9	1,960	143

Northbound

	left	through	right
Existing	708	4	125
Existing plus Pro	708	4	125
Future Baseline	722	4	128
Future Baseline	722	4	128
Future Baseline	743	4	150
Future Baseline	748	4	150

ADT

Road	Azusa Canyon Road		Arrow Highway	
	North of	South of	East of	West of
Leg	Arrow Highway		Azusa Canyon Road	
Existing	320.0	8,232.0	22,808.0	27,472.0
Existing plus Pro	320.0	9,392.0	23,160.0	28,280.0
Future Baseline	320.0	8,400.0	23,264.0	28,016.0
Future Baseline	320.0	9,560.0	23,616.0	28,824.0
Future Baseline	320.0	8,952.0	26,560.0	31,416.0
Future Baseline	320.0	10,168.0	26,968.0	32,336.0

Arrow Highway

Weekday PM Peak Hour Volumes										rev. (Date)							
Intersection: 10																	
Azusa Canyon Road (NS)/Arrow Hwy (EW)																	
										ADT							
Azusa Canyon Road																	
Southbound																	
										Road							
										Azusa Canyon Road							
										Arrow Highway							
										Leg							
										North of							
										South of							
										East of							
										West of							
										Cross Street							
										Arrow Highway							
										Azusa Canyon Road							
Existing										22	20	26	Existing	784.0	6,736.0	27,384.0	27,624.0
Existing plus Pro										22	20	26	Existing plus Pro	784.0	7,688.0	27,672.0	28,288.0
Future Baseline										22	20	27	Future Baseline	792.0	6,872.0	27,936.0	28,176.0
Future Baseline										22	20	27	Future Baseline v	792.0	7,824.0	28,224.0	28,840.0
Future Baseline										22	20	27	Future Baseline p	792.0	7,560.0	31,392.0	31,872.0
Future Baseline										22	20	27	Future Baseline p	792.0	8,512.0	31,680.0	32,536.0
Eastbound												Westbound					
										left		right					
Existing										9	2,000	299	Existing	14	995	141	
Existing plus Pro										9	2,000	301	Existing plus Pro	14	995	142	
Future Baseline										9	2,040	305	Future Baseline	14	1,015	144	
Future Baseline										9	2,040	307	Future Baseline	14	1,015	145	
Future Baseline										9	2,168	335	Future Baseline	14	1,291	165	
Future Baseline										9	2,168	337	Future Baseline	14	1,291	166	
Northbound																	
										left		through		right			
Existing										128	7	247					
Existing plus Pro										209	7	282					
Future Baseline										131	7	252					
Future Baseline										212	7	287					
Future Baseline										159	7	259					
Future Baseline										240	7	294					

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Median Lanes	ADT Volume	Design Dist. from		Barrier Attn. dB(A)	Vehicle Mix		dB(A) CNEL	Traffic Volumes								Ref. Energy Level & Dist				Le				Ln										
				Speed (mph)	Center to Receptor		Alpha Factor (1)	Medium Trucks		Heavy Trucks	Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total	
Azusa Canyon n/o Arrow																																				
Existing		2	0	784	40	75	0	0	1.8%	0.7%	51.7	609	100	75	12	5	1	0	1	0	67.4	76.3	81.2	-1.8	51.1	43.3	44.1	52.5	48.2	35.7	33.9	48.6	35.0	33.8	34.9	39.4
Existing plus Project		2	0	784	40	75	0	0	1.8%	0.7%	51.7	609	100	75	12	5	1	0	1	0	67.4	76.3	81.2	-1.8	51.1	43.3	44.1	52.5	48.2	35.7	33.9	48.6	35.0	33.8	34.9	39.4
Future Baseline		2	0	792	40	75	0	0	1.8%	0.7%	51.8	615	101	76	12	5	1	0	1	0	67.4	76.3	81.2	-1.8	51.2	43.3	44.2	52.5	48.2	35.7	34.0	48.6	35.0	33.9	34.9	39.4
Future Baseline with Project		2	0	792	40	75	0	0	1.8%	0.7%	51.8	615	101	76	12	5	1	0	1	0	67.4	76.3	81.2	-1.8	51.2	43.3	44.2	52.5	48.2	35.7	34.0	48.6	35.0	33.9	34.9	39.4
Future Baseline plus Cumulative		2	0	792	40	75	0	0	1.8%	0.7%	51.8	615	101	76	12	5	1	0	1	0	67.4	76.3	81.2	-1.8	51.2	43.3	44.2	52.5	48.2	35.7	34.0	48.6	35.0	33.9	34.9	39.4
Future Baseline plus Cumulative with Project		2	0	792	40	75	0	0	1.8%	0.7%	51.8	615	101	76	12	5	1	0	1	0	67.4	76.3	81.2	-1.8	51.2	43.3	44.2	52.5	48.2	35.7	34.0	48.6	35.0	33.9	34.9	39.4
Azusa Canyon s/o Arrow																																				
Existing		4	15	6,736	30	75	0	0	1.8%	0.7%	58.9	#####	855	647	106	42	6	1	9	4	62.5	73.1	80.3	-1.6	57.1	50.9	54.1	59.5	54.2	43.3	43.9	54.9	41.0	41.5	44.8	47.5
Existing plus Project		4	15	7,688	30	75	0	0	1.8%	0.7%	59.5	#####	976	738	121	48	7	2	10	4	62.5	73.1	80.3	-1.6	57.7	51.5	54.6	60.1	54.7	43.9	44.5	55.4	41.5	42.0	45.4	48.1
Future Baseline		4	15	6,872	30	75	0	0	1.8%	0.7%	59.0	#####	873	660	108	43	6	1	9	4	62.5	73.1	80.3	-1.6	57.2	51.0	54.1	59.6	54.2	43.4	44.0	55.0	41.0	41.6	44.9	47.6
Future Baseline with Project		4	15	7,824	30	75	0	0	1.8%	0.7%	59.6	#####	994	751	123	49	7	2	11	4	62.5	73.1	80.3	-1.6	57.8	51.6	54.7	60.2	54.8	44.0	44.5	55.5	41.6	42.1	45.5	48.2
Future Baseline plus Cumulative		4	15	7,560	30	75	0	0	1.8%	0.7%	59.4	#####	960	726	119	47	7	2	10	4	62.5	73.1	80.3	-1.6	57.6	51.4	54.6	60.0	54.7	43.8	44.4	55.4	41.5	42.0	45.3	48.0
Future Baseline plus Cumulative with Project		4	15	8,512	30	75	0	0	1.8%	0.7%	59.9	#####	#####	817	134	53	8	2	12	5	62.5	73.1	80.3	-1.6	58.2	51.9	55.1	60.5	55.2	44.4	44.9	55.9	42.0	42.5	45.8	48.6
Arrow Hwy e/o Azusa																																				
Existing		4	5	27,384	45	75	0	0	1.8%	0.7%	68.6	#####	#####	#####	431	171	25	5	37	15	69.3	77.6	82.1	-1.7	68.2	59.7	60.2	69.3	65.2	52.1	50.0	65.6	52.0	50.2	50.9	55.9
Existing plus Project		4	5	27,672	45	75	0	0	1.8%	0.7%	68.6	#####	#####	#####	435	173	25	6	37	16	69.3	77.6	82.1	-1.7	68.2	59.7	60.2	69.4	65.3	52.1	50.0	65.6	52.1	50.3	51.0	55.9
Future Baseline		4	5	27,936	45	75	0	0	1.8%	0.7%	68.6	#####	#####	#####	440	174	25	6	38	16	69.3	77.6	82.1	-1.7	68.3	59.8	60.3	69.4	65.3	52.2	50.1	65.6	52.1	50.3	51.0	56.0
Future Baseline with Project		4	5	28,224	45	75	0	0	1.8%	0.7%	68.7	#####	#####	#####	444	176	26	6	38	16	69.3	77.6	82.1	-1.7	68.3	59.8	60.3	69.5	65.4	52.2	50.1	65.7	52.2	50.3	51.1	56.0
Future Baseline plus Cumulative		4	5	31,392	45	75	0	0	1.8%	0.7%	69.1	#####	#####	#####	494	196	29	6	42	18	69.3	77.6	82.1	-1.7	68.8	60.3	60.8	69.9	65.8	52.7	50.6	66.1	52.6	50.8	51.5	56.5
Future Baseline plus Cumulative with Project		4	5	31,680	45	75	0	0	1.8%	0.7%	69.2	#####	#####	#####	499	198	29	6	43	18	69.3	77.6	82.1	-1.7	68.8	60.3	60.8	70.0	65.9	52.7	50.6	66.2	52.7	50.8	51.6	56.5
Arrow Hwy w/o Azusa																																				
Existing		4	5	27,624	45	75	0	0	1.8%	0.7%	68.6	#####	#####	#####	435	172	25	5	37	16	69.3	77.6	82.1	-1.7	68.2	59.7	60.2	69.4	65.3	52.1	50.0	65.6	52.1	50.3	51.0	55.9
Existing plus Project		4	5	28,288	45	75	0	0	1.8%	0.7%	68.7	#####	#####	#####	445	176	26	6	38	16	69.3	77.6	82.1	-1.7	68.3	59.8	60.3	69.5	65.4	52.2	50.1	65.7	52.2	50.4	51.1	56.0
Future Baseline		4	5	28,176	45	75	0	0	1.8%	0.7%	68.7	#####	#####	#####	443	176	26	6	38	16	69.3	77.6	82.1	-1.7	68.3	59.8	60.3	69.5	65.3	52.2	50.1	65.7	52.2	50.3	51.1	56.0
Future Baseline with Project		4	5	28,840	45	75	0	0	1.8%	0.7%	68.8	#####	#####	#####	454	180	26	6	39	16	69.3	77.6	82.1	-1.7	68.4	59.9	60.4	69.6	65.4	52.3	50.2	65.8	52.3	50.4	51.2	56.1
Future Baseline plus Cumulative		4	5	31,872	45	75	0	0	1.8%	0.7%	69.2	#####	#####	#####	502	199	29	6	43	18	69.3	77.6	82.1	-1.7	68.9	60.3	60.8	70.0	65.9	52.7	50.7	66.2	52.7	50.9	51.6	56.6
Future Baseline plus Cumulative with Project		4	5	32,536	45	75	0	0	1.8%	0.7%	69.3	#####	#####	#####	512	203	30	6	44	18	69.3	77.6	82.1	-1.7	69.0	60.4	60.9	70.1	66.0	52.8	50.8	66.3	52.8	51.0	51.7	56.6

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

rev. (Date)

Weekday AM Peak Hour Volumes

Intersection: 11
Azusa Canyon Road (NS)/Sandstone St (EW)

Azusa Canyon Road

Southbound

	<u>right</u>	<u>through</u>	<u>left</u>
Existing	5	171	0
Existing plus Pro	5	229	106
Future Baseline	5	174	0
Future Baseline	5	232	106
Future Baseline	5	200	0
Future Baseline	5	260	106

Westbound

	<u>right</u>	<u>through</u>	<u>left</u>
Existing	0	0	0
Existing plus Pro	15	0	1
Future Baseline	0	0	0
Future Baseline	15	0	1
Future Baseline	0	0	0
Future Baseline	15	0	1

Northbound

	<u>left</u>	<u>through</u>	<u>right</u>
Existing	3	830	0
Existing plus Pro	3	838	8
Future Baseline	3	847	0
Future Baseline	3	855	8
Future Baseline	3	890	0
Future Baseline	3	903	8

Eastbound

	<u>left</u>	<u>through</u>	<u>right</u>
Existing	14	0	7
Existing plus Pro	14	0	7
Future Baseline	14	0	7
Future Baseline	14	0	7
Future Baseline	14	0	7
Future Baseline	14	0	7

W N E
S

Sandstone St

ADT

Road	Azusa Canyon Road		Sandstone St	
Leg	North of	South of	East of	West of
Cross Street	Sandstone St		Azusa Canyon Road	
Existing	8,160.0	8,088.0	0.0	232.0
Existing plus Pro	9,656.0	8,688.0	1,040.0	232.0
Future Baseline	8,320.0	8,248.0	0.0	232.0
Future Baseline v	9,816.0	8,848.0	1,040.0	232.0
Future Baseline p	8,872.0	8,800.0	0.0	232.0
Future Baseline p	10,424.0	9,456.0	1,040.0	232.0

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes								Ref. Energy Levels Dist Ld												Le			Ln				
ROADWAY NAME	Land Use	Median Lanes	Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor (ft)	Alpha	Barrier Attn. (dB(A))	Vehicle Mix		dB(A) CNEL	Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total A	MT	HT	Total A	MT	HT	Total A	MT	HT	Total	
Azusa Canyon n/o Sandstone																																						
Existing		4	15	8,160	30	75	0	0	1.8%	0.7%	59.8	6,340	1,036	783	128	51	7	2	11	5	62.5	73.1	80.3	-1.6	58.0	51.8	54.9	60.4	55.0	44.2	44.7	55.7	41.8	42.3	45.7	48.4		
Existing plus Project		4	15	9,656	30	75	0	0	1.8%	0.7%	60.5	7,503	1,226	927	152	60	9	2	13	5	62.5	73.1	80.3	-1.6	58.7	52.5	55.6	61.1	55.7	44.9	45.5	56.4	42.5	43.0	46.4	49.1		
Future Baseline		4	15	8,320	30	75	0	0	1.8%	0.7%	59.9	6,465	1,057	799	131	52	8	2	11	5	62.5	73.1	80.3	-1.6	58.1	51.8	55.0	60.4	55.1	44.3	44.8	55.8	41.9	42.4	45.7	48.5		
Future Baseline with Project		4	15	9,816	30	75	0	0	1.8%	0.7%	60.6	7,627	1,247	942	154	61	9	2	13	6	62.5	73.1	80.3	-1.6	58.8	52.6	55.7	61.2	55.8	45.0	45.5	56.5	42.6	43.1	46.5	49.2		
Future Baseline plus Cumulative		4	15	8,872	30	75	0	0	1.8%	0.7%	60.1	6,894	1,127	852	140	55	8	2	12	5	62.5	73.1	80.3	-1.6	58.3	52.1	55.3	60.7	55.4	44.5	45.1	56.1	42.2	42.7	46.0	48.7		
Future Baseline plus Cumulative with Project		4	15	10,424	30	75	0	0	1.8%	0.7%	60.8	8,099	1,324	1,001	164	65	9	2	14	6	62.5	73.1	80.3	-1.6	59.0	52.8	56.0	61.4	56.1	45.2	45.8	56.8	42.9	43.4	46.7	49.4		
Azusa Canyon s/o Sandstone																																						
Existing		4	15	8,088	30	75	0	0	1.8%	0.7%	59.7	6,284	1,027	776	127	50	7	2	11	5	62.5	73.1	80.3	-1.6	57.9	51.7	54.9	60.3	55.0	44.1	44.7	55.7	41.8	42.3	45.6	48.3		
Existing plus Project		4	15	8,688	30	75	0	0	1.8%	0.7%	60.0	6,751	1,103	834	137	54	8	2	12	5	62.5	73.1	80.3	-1.6	58.2	52.0	55.2	60.6	55.3	44.5	45.0	56.0	42.1	42.6	45.9	48.7		
Future Baseline		4	15	8,248	30	75	0	0	1.8%	0.7%	59.8	6,409	1,047	792	130	51	7	2	11	5	62.5	73.1	80.3	-1.6	58.0	51.8	54.9	60.4	55.0	44.2	44.8	55.7	41.8	42.4	45.7	48.4		
Future Baseline with Project		4	15	8,848	30	75	0	0	1.8%	0.7%	60.1	6,875	1,124	849	139	55	8	2	12	5	62.5	73.1	80.3	-1.6	58.3	52.1	55.2	60.7	55.3	44.5	45.1	56.0	42.1	42.7	46.0	48.7		
Future Baseline plus Cumulative		4	15	8,800	30	75	0	0	1.8%	0.7%	60.1	6,838	1,118	845	138	55	8	2	12	5	62.5	73.1	80.3	-1.6	58.3	52.1	55.2	60.7	55.3	44.5	45.1	56.0	42.1	42.6	46.0	48.7		
Future Baseline plus Cumulative with Project		4	15	9,456	30	75	0	0	1.8%	0.7%	60.4	7,347	1,201	908	149	59	9	2	13	5	62.5	73.1	80.3	-1.6	58.6	52.4	55.5	61.0	55.6	44.8	45.4	56.3	42.4	42.9	46.3	49.0		
Sandstone St e/o Azusa																																						
Existing		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####	####	
Existing plus Project		2	0	1,040	15	75	0	0	1.8%	0.7%	45.2	808	132	100	16	6	1	0	1	1	50.8	65.4	74.5	-1.8	40.1	37.9	42.9	45.6	37.1	30.3	32.8	39.1	23.9	28.4	33.7	35.2		
Future Baseline		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####	####	
Future Baseline with Project		2	0	1,040	15	75	0	0	1.8%	0.7%	45.2	808	132	100	16	6	1	0	1	1	50.8	65.4	74.5	-1.8	40.1	37.9	42.9	45.6	37.1	30.3	32.8	39.1	23.9	28.4	33.7	35.2		
Future Baseline plus Cumulative		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	####	####	####	####	####	####	####	####	####	####	####	####	####	
Future Baseline plus Cumulative with Project		2	0	1,040	15	75	0	0	1.8%	0.7%	45.2	808	132	100	16	6	1	0	1	1	50.8	65.4	74.5	-1.8	40.1	37.9	42.9	45.6	37.1	30.3	32.8	39.1	23.9	28.4	33.7	35.2		
Sandstone St w/o Azusa																																						
Existing		1	0	232	25	75	0	0	1.8%	0.7%	42.5	180	29	22	4	1	0	0	0	0	59.4	71.1	78.7	-1.8	40.0	34.8	38.4	43.0	37.0	27.2	28.3	37.9	23.8	25.3	29.2	31.5		
Existing plus Project		1	0	232	25	75	0	0	1.8%	0.7%	42.5	180	29	22	4	1	0	0	0	0	59.4	71.1	78.7	-1.8	40.0	34.8	38.4	43.0	37.0	27.2	28.3	37.9	23.8	25.3	29.2	31.5		
Future Baseline		1	0	232	25	75	0	0	1.8%	0.7%	42.5	180	29	22	4	1	0	0	0	0	59.4	71.1	78.7	-1.8	40.0	34.8	38.4	43.0	37.0	27.2	28.3	37.9	23.8	25.3	29.2	31.5		
Future Baseline with Project		1	0	232	25	75	0	0	1.8%	0.7%	42.5	180	29	22	4	1	0	0	0	0	59.4	71.1	78.7	-1.8	40.0	34.8	38.4	43.0	37.0	27.2	28.3	37.9	23.8	25.3	29.2	31.5		
Future Baseline plus Cumulative		1	0	232	25	75	0	0	1.8%	0.7%	42.5	180	29	22	4	1	0	0	0	0	59.4	71.1	78.7	-1.8	40.0	34.8	38.4	43.0	37.0	27.2	28.3	37.9	23.8	25.3	29.2	31.5		
Future Baseline plus Cumulative with Project		1	0	232	25	75	0	0	1.8%	0.7%	42.5	180	29	22	4	1	0	0	0	0	59.4	71.1	78.7	-1.8	40.0	34.8	38.4	43.0	37.0	27.2	28.3	37.9	23.8	25.3	29.2	31.5		

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

rev. (Date)

Weekday PM Peak Hour Volumes

Intersection: 11
Azusa Canyon Road (NS)/Sandstone St (EW)

Azusa Canyon Road

Southbound

	right	through	left
Existing	12	459	0
Existing plus Pro	12	467	15
Future Baseline	12	468	0
Future Baseline	12	476	15
Future Baseline	12	519	0
Future Baseline	12	527	15

Westbound

	right	through	left
Existing	0	0	0
Existing plus Pro	92	0	7
Future Baseline	0	0	0
Future Baseline	92	0	7
Future Baseline	0	0	0
Future Baseline	92	0	7

Northbound

	left	through	right
Existing	9	371	0
Existing plus Pro	9	422	1
Future Baseline	9	378	0
Future Baseline	9	429	1
Future Baseline	9	413	0
Future Baseline	9	464	1

Eastbound

	left	through	right
Existing	10	0	5
Existing plus Pro	10	0	5
Future Baseline	10	0	5
Future Baseline	10	0	5
Future Baseline	10	0	5
Future Baseline	10	0	5

Sandstone St

N
W E
S

ADT

Road	Azusa Canyon Road		Sandstone St	
	North of	South of	East of	West of
Leg	Sandstone St		Azusa Canyon Road	
Cross Street	Sandstone St		Azusa Canyon Road	
Existing	6,816.0	6,752.0	0.0	288.0
Existing plus Pro	8,144.0	7,288.0	920.0	288.0
Future Baseline	6,944.0	6,880.0	0.0	288.0
Future Baseline v	8,272.0	7,416.0	920.0	288.0
Future Baseline p	7,632.0	7,568.0	0.0	288.0
Future Baseline p	8,960.0	8,104.0	920.0	288.0

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor ft	Alpha Factor (1)	Barrier Attn. dB(A)	Vehicle Mix		dB(A) CNEL	Traffic Volumes								Ref. Energy Levels				Dist			Ld			Le			Ln					
									Medium Trucks	Heavy Trucks		Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total A	MT	HT	Total A	MT	HT	Total A	MT	HT	Total A	
Azusa Canyon n/o Sandstone																																						
Existing		4	15	6,816	30	75	0	0	1.8%	0.7%	59.0	5,296	866	654	107	43	6	1	9	4	62.5	73.1	80.3	-1.6	57.2	51.0	54.1	59.6	54.2	43.4	43.9	54.9	41.0	41.5	44.9	47.6		
Existing plus Project		4	15	8,144	30	75	0	0	1.8%	0.7%	59.8	6,328	1,034	782	128	51	7	2	11	5	62.5	73.1	80.3	-1.6	58.0	51.8	54.9	60.3	55.0	44.2	44.7	55.7	41.8	42.3	45.6	48.4		
Future Baseline		4	15	6,944	30	75	0	0	1.8%	0.7%	59.1	5,395	882	667	109	43	6	1	9	4	62.5	73.1	80.3	-1.6	57.3	51.1	54.2	59.7	54.3	43.5	44.0	55.0	41.1	41.6	45.0	47.7		
Future Baseline with Project		4	15	8,272	30	75	0	0	1.8%	0.7%	59.8	6,427	1,051	794	130	52	8	2	11	5	62.5	73.1	80.3	-1.6	58.0	51.8	54.9	60.4	55.0	44.2	44.8	55.8	41.9	42.4	45.7	48.4		
Future Baseline plus Cumulative		4	15	7,632	30	75	0	0	1.8%	0.7%	59.5	5,930	969	733	120	48	7	2	10	4	62.5	73.1	80.3	-1.6	57.7	51.5	54.6	60.1	54.7	43.9	44.4	55.4	41.5	42.0	45.4	48.1		
Future Baseline plus Cumulative with Project		4	15	8,960	30	75	0	0	1.8%	0.7%	60.2	6,962	1,138	860	141	56	8	2	12	5	62.5	73.1	80.3	-1.6	58.4	52.2	55.3	60.8	55.4	44.6	45.1	56.1	42.2	42.7	46.1	48.8		
Azusa Canyon s/o Sandstone																																						
Existing		4	15	6,752	30	75	0	0	1.8%	0.7%	58.9	5,246	858	648	106	42	6	1	9	4	62.5	73.1	80.3	-1.6	57.1	50.9	54.1	59.5	54.2	43.4	43.9	54.9	41.0	41.5	44.8	47.6		
Existing plus Project		4	15	7,288	30	75	0	0	1.8%	0.7%	59.3	5,663	926	700	115	45	7	1	10	4	62.5	73.1	80.3	-1.6	57.5	51.3	54.4	59.9	54.5	43.7	44.2	55.2	41.3	41.8	45.2	47.9		
Future Baseline		4	15	6,880	30	75	0	0	1.8%	0.7%	59.0	5,346	874	660	108	43	6	1	9	4	62.5	73.1	80.3	-1.6	57.2	51.0	54.1	59.6	54.2	43.4	44.0	55.0	41.1	41.6	44.9	47.6		
Future Baseline with Project		4	15	7,416	30	75	0	0	1.8%	0.7%	59.4	5,762	942	712	117	46	7	1	10	4	62.5	73.1	80.3	-1.6	57.6	51.3	54.5	59.9	54.6	43.8	44.3	55.3	41.4	41.9	45.2	48.0		
Future Baseline plus Cumulative		4	15	7,568	30	75	0	0	1.8%	0.7%	59.4	5,880	961	727	119	47	7	2	10	4	62.5	73.1	80.3	-1.6	57.6	51.4	54.6	60.0	54.7	43.9	44.4	55.4	41.5	42.0	45.3	48.1		
Future Baseline plus Cumulative with Project		4	15	8,104	30	75	0	0	1.8%	0.7%	59.7	6,297	1,029	778	128	51	7	2	11	5	62.5	73.1	80.3	-1.6	57.9	51.7	54.9	60.3	55.0	44.1	44.7	55.7	41.8	42.3	45.6	48.4		
Sandstone St e/o Azusa																																						
Existing		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	
Existing plus Project		2	0	920	15	75	0	0	1.8%	0.7%	44.7	715	117	88	14	6	1	0	1	1	50.8	65.4	74.5	-1.8	39.6	37.3	42.4	45.0	36.6	29.8	32.2	38.6	23.4	27.9	33.2	34.6		
Future Baseline		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####
Future Baseline with Project		2	0	920	15	75	0	0	1.8%	0.7%	44.7	715	117	88	14	6	1	0	1	1	50.8	65.4	74.5	-1.8	39.6	37.3	42.4	45.0	36.6	29.8	32.2	38.6	23.4	27.9	33.2	34.6		
Future Baseline plus Cumulative		2	0	0	15	75	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	50.8	65.4	74.5	-1.8	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	
Future Baseline plus Cumulative with Project		2	0	920	15	75	0	0	1.8%	0.7%	44.7	715	117	88	14	6	1	0	1	1	50.8	65.4	74.5	-1.8	39.6	37.3	42.4	45.0	36.6	29.8	32.2	38.6	23.4	27.9	33.2	34.6		
Sandstone St w/o Azusa																																						
Existing		1	0	288	25	75	0	0	1.8%	0.7%	43.4	224	37	28	5	2	0	0	0	0	59.4	71.1	78.7	-1.8	40.9	35.7	39.4	43.9	37.9	28.2	29.2	38.9	24.7	26.3	30.1	32.4		
Existing plus Project		1	0	288	25	75	0	0	1.8%	0.7%	43.4	224	37	28	5	2	0	0	0	0	59.4	71.1	78.7	-1.8	40.9	35.7	39.4	43.9	37.9	28.2	29.2	38.9	24.7	26.3	30.1	32.4		
Future Baseline		1	0	288	25	75	0	0	1.8%	0.7%	43.4	224	37	28	5	2	0	0	0	0	59.4	71.1	78.7	-1.8	40.9	35.7	39.4	43.9	37.9	28.2	29.2	38.9	24.7	26.3	30.1	32.4		
Future Baseline with Project		1	0	288	25	75	0	0	1.8%	0.7%	43.4	224	37	28	5	2	0	0	0	0	59.4	71.1	78.7	-1.8	40.9	35.7	39.4	43.9	37.9	28.2	29.2	38.9	24.7	26.3	30.1	32.4		
Future Baseline plus Cumulative		1	0	288	25	75	0	0	1.8%	0.7%	43.4	224	37	28	5	2	0	0	0	0	59.4	71.1	78.7	-1.8	40.9	35.7	39.4	43.9	37.9	28.2	29.2	38.9	24.7	26.3	30.1	32.4		
Future Baseline plus Cumulative with Project		1	0	288	25	75	0	0	1.8%	0.7%	43.4	224	37	28	5	2	0	0	0	0	59.4	71.1	78.7	-1.8	40.9	35.7	39.4	43.9	37.9	28.2	29.2	38.9	24.7	26.3	30.1	32.4		

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

rev. (Date)

Weekday AM Peak Hour Volumes

Intersection: 12
Azusa Canyon Road (NS)/Nubia St (EW)

Azusa Canyon Road

Southbound

	right	through	left
Existing	17	149	5
Existing plus Pro	17	150	58
Future Baseline	17	152	5
Future Baseline	17	153	58
Future Baseline	17	178	5
Future Baseline	17	181	58

Eastbound

	left	through	right
Existing	21	0	54
Existing plus Pro	21	0	54
Future Baseline	21	0	55
Future Baseline	21	0	55
Future Baseline	21	0	55
Future Baseline	21	0	55

Westbound

	right	through	left
Existing	2	0	2
Existing plus Pro	8	0	2
Future Baseline	2	0	2
Future Baseline	8	0	2
Future Baseline	2	0	2
Future Baseline	80	0	2

Northbound

	left	through	right
Existing	62	808	23
Existing plus Pro	62	816	13
Future Baseline	63	824	23
Future Baseline	63	832	13
Future Baseline	63	867	23
Future Baseline	63	881	13

W N E
S

ADT

Road	Azusa Canyon Road		Nubia St	
	North of	South of	East of	West of
Leg	Nubia St		Azusa Canyon Road	
Cross Street	Nubia St		Azusa Canyon Road	
Existing	8,016.0	8,784.0	256.0	1,232.0
Existing plus Pro	8,560.0	8,776.0	648.0	1,232.0
Future Baseline	8,168.0	8,952.0	256.0	1,248.0
Future Baseline v	8,712.0	8,944.0	648.0	1,248.0
Future Baseline p	8,720.0	9,504.0	256.0	1,248.0
Future Baseline p	9,904.0	9,560.0	1,224.0	1,248.0

Nubia St

rev. (Date)

Weekday PM Peak Hour Volumes

Intersection: 12
Azusa Canyon Road (NS)/Nubia St (EW)

Azusa Canyon Road

Southbound

	right	through	left
Existing	26	462	0
Existing plus Pro	26	467	0
Future Baseline	27	471	0
Future Baseline	27	476	0
Future Baseline	27	522	0
Future Baseline	27	527	0

Eastbound

	left	through	right
Existing	51	0	99
Existing plus Pro	51	0	99
Future Baseline	52	0	101
Future Baseline	52	0	101
Future Baseline	52	0	101
Future Baseline	52	0	101

Westbound

	right	through	left
Existing	0	0	0
Existing plus Pro	37	0	8
Future Baseline	0	0	0
Future Baseline	37	0	8
Future Baseline	0	0	0
Future Baseline	37	0	8

Northbound

	left	through	right
Existing	42	323	0
Existing plus Pro	42	323	0
Future Baseline	43	329	0
Future Baseline	43	329	0
Future Baseline	43	364	0
Future Baseline	43	364	0

W N E
 S

ADT

Road	Azusa Canyon Road		Nubia St	
	North of	South of	East of	West of
Leg	Nubia St		Azusa Canyon Road	
Cross Street	Nubia St		Azusa Canyon Road	
Existing	6,896.0	7,408.0	0.0	1,744.0
Existing plus Pro	7,232.0	7,512.0	360.0	1,744.0
Future Baseline	7,032.0	7,552.0	0.0	1,784.0
Future Baseline	7,368.0	7,656.0	360.0	1,784.0
Future Baseline	7,720.0	8,240.0	0.0	1,784.0
Future Baseline	8,056.0	8,344.0	360.0	1,784.0

Nubia St

