

APPENDIX E

NOISE MODELING DATA

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Bristol Project
Project Number: 094698010
Scenario: Existing
Ldn/CNEL: CNEL

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%

#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway				
								Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Irvine Avenue	S/O Mesa Dr.	6	10	30,600	45	0.5	2.0%	1.0%	66.8	62	133	286	616
2	Irvine Avenue	S/O Bristol St. South	4	14	25,600	50	0.5	2.0%	1.0%	66.9	62	135	290	624
3	Campus Drive	N/O Bristol St. North	6	16	28,800	45	0.5	2.0%	1.0%	66.7	-	129	278	599
4	Campus Drive	E/O Von Karmen Ave.	4	4	10,600	45	0.5	2.0%	1.0%	61.9	-	63	135	290
5	MacArthur Boulevard	S/O Birch St.	6	4	18,200	55	0.5	2.0%	1.0%	66.6	59	128	275	593
6	Jamboree Road	N/O Eastbluff/University Dr.	6	14	50,200	55	0.5	2.0%	1.0%	71.1	119	256	552	1,190
7	Jamboree Road	N/O Bison Ave.	6	20	43,000	55	0.5	2.0%	1.0%	70.5	109	234	505	1,088
8	University Drive	E/O Jamboree Rd.	4	16	13,700	50	0.5	2.0%	1.0%	64.2	-	89	192	413
9	Birch Street	S/O Orchard	4	12	8,400	45	0.5	2.0%	1.0%	61.0	-	54	116	251
10	Bristol Street	E/O Birch St.	3	0	13,180	45	0.5	2.0%	1.0%	62.8	-	71	154	331

¹ Distance is from the centerline of the roadway segment to the receptor location.
 "-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Bristol Project
Project Number: 094698010
Scenario: Existing Plus Project
Ldn/CNEL: CNEL

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%

#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway				
								Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Irvine Avenue	S/O Mesa Dr.	6	10	30,600	45	0.5	2.0%	1.0%	66.8	62	133	286	616
2	Irvine Avenue	S/O Bristol St. South	4	14	25,600	50	0.5	2.0%	1.0%	66.9	62	135	290	624
3	Campus Drive	N/O Bristol St. North	6	16	28,800	45	0.5	2.0%	1.0%	66.7	-	129	278	599
4	Campus Drive	E/O Von Karmen Ave.	4	4	10,600	45	0.5	2.0%	1.0%	61.9	-	63	135	290
5	MacArthur Boulevard	S/O Birch St.	6	4	18,300	55	0.5	2.0%	1.0%	66.6	60	128	276	595
6	Jamboree Road	N/O Eastbluff/University Dr.	6	14	50,300	55	0.5	2.0%	1.0%	71.1	119	257	553	1,191
7	Jamboree Road	N/O Bison Ave.	6	20	43,100	55	0.5	2.0%	1.0%	70.6	109	235	506	1,090
8	University Drive	E/O Jamboree Rd.	4	16	13,700	50	0.5	2.0%	1.0%	64.2	-	89	192	413
9	Birch Street	S/O Orchard	4	12	8,400	45	0.5	2.0%	1.0%	61.0	-	54	116	251
10	Bristol Street	E/O Birch St.	3	0	13,400	45	0.5	2.0%	1.0%	62.9	-	72	155	335

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FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Bristol Project
Project Number: 094698010
Scenario: Opening Year
Ldn/CNEL: CNEL

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%

#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway				
								Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Irvine Avenue	S/O Mesa Dr.	6	10	32,500	45	0.5	2.0%	1.0%	67.1	64	138	297	641
2	Irvine Avenue	S/O Bristol St. South	4	14	27,200	50	0.5	2.0%	1.0%	67.2	65	140	302	650
3	Campus Drive	N/O Bristol St. North	6	16	29,000	45	0.5	2.0%	1.0%	66.7	-	130	279	601
4	Campus Drive	E/O Von Karmen Ave.	4	4	10,700	45	0.5	2.0%	1.0%	62.0	-	63	136	292
5	MacArthur Boulevard	S/O Birch St.	6	4	19,800	55	0.5	2.0%	1.0%	67.0	63	135	291	628
6	Jamboree Road	N/O Eastbluff/University Dr.	6	14	54,600	55	0.5	2.0%	1.0%	71.5	126	271	584	1,258
7	Jamboree Road	N/O Bison Ave.	6	20	47,100	55	0.5	2.0%	1.0%	70.9	116	249	537	1,156
8	University Drive	E/O Jamboree Rd.	4	16	13,800	50	0.5	2.0%	1.0%	64.3	-	89	193	415
9	Birch Street	S/O Orchard	4	12	8,900	45	0.5	2.0%	1.0%	61.2	-	56	121	261
10	Bristol Street	E/O Birch St.	3	0	14,102	45	0.5	2.0%	1.0%	63.1	-	75	161	347

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FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Bristol Project
Project Number: 094698010
Scenario: Opening Year Plus Project
Ldn/CNEL: CNEL

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%

#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway				
								Medium Trucks	Heavy Trucks	CNEL at 100 Feet	Distance to Contour			
										70 CNEL	65 CNEL	60 CNEL	55 CNEL	
1	Irvine Avenue	S/O Mesa Dr.	6	10	32,500	45	0.5	2.0%	1.0%	67.1	64	138	297	641
2	Irvine Avenue	S/O Bristol St. South	4	14	27,200	50	0.5	2.0%	1.0%	67.2	65	140	302	650
3	Campus Drive	N/O Bristol St. North	6	16	29,000	45	0.5	2.0%	1.0%	66.7	-	130	279	601
4	Campus Drive	E/O Von Karmen Ave.	4	4	10,700	45	0.5	2.0%	1.0%	62.0	-	63	136	292
5	MacArthur Boulevard	S/O Birch St.	6	4	19,900	55	0.5	2.0%	1.0%	67.0	63	136	292	630
6	Jamboree Road	N/O Eastbluff/University Dr.	6	14	54,700	55	0.5	2.0%	1.0%	71.5	126	271	585	1,260
7	Jamboree Road	N/O Bison Ave.	6	20	47,200	55	0.5	2.0%	1.0%	71.0	116	249	537	1,158
8	University Drive	E/O Jamboree Rd.	4	16	13,800	50	0.5	2.0%	1.0%	64.3	-	89	193	415
9	Birch Street	S/O Orchard	4	12	8,900	45	0.5	2.0%	1.0%	61.2	-	56	121	261
10	Bristol Street	E/O Birch St.	3	0	14,258	45	0.5	2.0%	1.0%	63.1	-	75	162	349

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FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Bristol Project
Project Number: 094698010
Scenario: Horizon Year
Ldn/CNEL: CNEL

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%
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#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway				
								Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Irvine Avenue	S/O Mesa Dr.	6	10	48,700	45	0.5	2.0%	1.0%	68.9	84	181	389	839
2	Irvine Avenue	S/O Bristol St. South	4	14	48,700	50	0.5	2.0%	1.0%	69.7	96	207	445	959
3	Campus Drive	N/O Bristol St. North	6	16	49,600	45	0.5	2.0%	1.0%	69.0	86	185	399	860
4	Campus Drive	E/O Von Karmen Ave.	4	4	25,600	45	0.5	2.0%	1.0%	65.8	52	113	243	523
5	MacArthur Boulevard	S/O Birch St.	6	4	27,700	55	0.5	2.0%	1.0%	68.4	78	169	364	785
6	Jamboree Road	N/O Eastbluff/University Dr.	6	14	46,400	55	0.5	2.0%	1.0%	70.8	113	243	524	1,129
7	Jamboree Road	N/O Bison Ave.	6	20	11,100	55	0.5	2.0%	1.0%	64.7	-	95	205	441
8	University Drive	E/O Jamboree Rd.	4	16	16,800	50	0.5	2.0%	1.0%	65.1	-	102	219	473
9	Birch Street	S/O Orchard	4	12	46,200	45	0.5	2.0%	1.0%	68.4	78	168	363	782
10	Bristol Street	E/O Birch St.	3	0	18,540	45	0.5	2.0%	1.0%	64.3	42	90	193	416

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FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

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Scenario: Horizon Year Plus Project
Ldn/CNEL: CNEL

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1	Irvine Avenue	S/O Mesa Dr.	6	10	48,700	45	0.5	2.0%	1.0%	68.9	84	181	389	839
2	Irvine Avenue	S/O Bristol St. South	4	14	48,700	50	0.5	2.0%	1.0%	69.7	96	207	445	959
3	Campus Drive	N/O Bristol St. North	6	16	49,600	45	0.5	2.0%	1.0%	69.0	86	185	399	860
4	Campus Drive	E/O Von Karmen Ave.	4	4	25,600	45	0.5	2.0%	1.0%	65.8	52	113	243	523
5	MacArthur Boulevard	S/O Birch St.	6	4	27,700	55	0.5	2.0%	1.0%	68.4	78	169	364	785
6	Jamboree Road	N/O Eastbluff/University Dr.	6	14	46,400	55	0.5	2.0%	1.0%	70.8	113	243	524	1,129
7	Jamboree Road	N/O Bison Ave.	6	20	11,100	55	0.5	2.0%	1.0%	64.7	-	95	205	441
8	University Drive	E/O Jamboree Rd.	4	16	16,800	50	0.5	2.0%	1.0%	65.1	-	102	219	473
9	Birch Street	S/O Orchard	4	12	46,200	45	0.5	2.0%	1.0%	68.4	78	168	363	782
10	Bristol Street	E/O Birch St.	3	0	18,636	45	0.5	2.0%	1.0%	64.3	42	90	194	417

¹ Distance is from the centerline of the roadway segment to the receptor location.
 "-" = contour is located within the roadway right-of-way.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 11/19/2021
Case Description: 00 Demolition

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Southwest	Residential	55	50	45

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Concrete Saw	No	20		89.6	800	0
Dozer	No	40		81.7	800	0
Tractor	No	40	84		800	0
Tractor	No	40	84		800	0
Tractor	No	40	84		800	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)							
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	65.5	58.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	57.6	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	59.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	59.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	59.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	65.5	63.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
	Residential	55	50	45

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Concrete Saw	No	20		89.6	490	0
Dozer	No	40		81.7	490	0
Tractor	No	40	84		490	0
Tractor	No	40	84		490	0
Tractor	No	40	84		490	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)							
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	61.8	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.2	67.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
	Residential	55	50	45

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Concrete Saw	No	20		89.6	470	0
Dozer	No	40		81.7	470	0
Tractor	No	40	84		470	0
Tractor	No	40	84		470	0
Tractor	No	40	84		470	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)							
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	64.5	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	64.5	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	64.5	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	64.5	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	62.2	58.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.5	68.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 11/19/2021
 Case Description: 01 Site Prep

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Southwest	Residential	55	50	45

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		800	0
Dozer	No	40		81.7	800	0
Tractor	No	40	84		800	0

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	60.9	56.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	57.6	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	59.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	60.9	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
	Residential	55	50	45

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		490	0
Dozer	No	40		81.7	490	0
Tractor	No	40	84		490	0

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.2	67.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
	Residential	55	50	45

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		470	0
Dozer	No	40		81.7	470	0
Tractor	No	40	84		470	0

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	64.5	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	64.5	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	64.5	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.5	68.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/19/2021
Case Description: 02 Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Southwest	Residential	55	50	45

Description	Impact Device	Usage(%)	Equipment Spec		Receptor Distance (feet)	Estimated Shielding (dBA)
			Lmax (dBA)	Actual Lmax (dBA)		
Dozer	No	40		81.7	800	0
Tractor	No	40	84		800	0
Grader	No	40	85		800	0
Tractor	No	40	84		800	0

Results

Equipment	Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
	Day		Evening		Night		Day		Evening		Night			
	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	57.6	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	59.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	60.9	56.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	59.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	60.9	61.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residential	Residential	55	50	45

Description	Impact Device	Usage(%)	Equipment Spec		Receptor Distance (feet)	Estimated Shielding (dBA)
			Lmax (dBA)	Actual Lmax (dBA)		
Dozer	No	40		81.7	490	0
Tractor	No	40	84		490	0
Grader	No	40	85		490	0
Tractor	No	40	84		490	0

Results

Equipment	Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
	Day		Evening		Night		Day		Evening		Night			
	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	60.9	56.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	60.9	56.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	65.2	61.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	63.8	59.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	65.2	68.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residential	Residential	55	50	45

Description	Impact Device	Usage(%)	Equipment Spec		Receptor Distance (feet)	Estimated Shielding (dBA)
			Lmax (dBA)	Actual Lmax (dBA)		
Dozer	No	40		81.7	470	0
Tractor	No	40	84		470	0
Grader	No	40	85		470	0
Tractor	No	40	84		470	0

Results

Equipment	Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
	Day		Evening		Night		Day		Evening		Night			
	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	61.2	57.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	61.2	57.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	65.5	61.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	64.1	60.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	65.5	68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/19/2021
Case Description: 03 Building Construction

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Southwest	Residential	55	50	45

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Crane	No	16		80.6	800	0
All Other Equipment > 5 HP	No	50	85		800	0
Generator	No	50		80.6	800	0
Tractor	No	40	84		800	0
Welder / Torch	No	40		74	800	0
Welder / Torch	No	40		74	800	0
Welder / Torch	No	40		74	800	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	56.5	48.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	60.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	56.5	53.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	59.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	49.9	45.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	49.9	45.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	49.9	45.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	60.9	61.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
	Residential	55	50	45

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Crane	No	16		80.6	490	0
All Other Equipment > 5 HP	No	50	85		490	0
Generator	No	50		80.6	490	0
Tractor	No	40	84		490	0
Welder / Torch	No	40		74	490	0
Welder / Torch	No	40		74	490	0
Welder / Torch	No	40		74	490	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	60.7	52.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	65.2	62.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	65.2	62.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.2	62.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	60.8	57.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	64.2	60.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	65.2	69.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
	Residential	55	50	45

		Equipment				
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Crane	No	16		80.6	470	0
All Other Equipment > 5 HP	No	50	85		470	0
Generator	No	50		80.6	470	0
Tractor	No	40	84		470	0
Welder / Torch	No	40		74	470	0
Welder / Torch	No	40		74	470	0

Welder / Torch No 40 74 470 0

Equipment	Results													
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
Lmax			Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	
Crane	61.1	53.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	65.5	62.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	65.5	62.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.5	62.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	61.2	58.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	64.5	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	64.5	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	65.5	69.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roller		70	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		60.5	53.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	70	67.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 11/19/2021
Case Description: 05 AC

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Southwest	Residential	55	50	45

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	800	0

Equipment	Calculated (dBA)	Noise Limits (dBA)						Noise Limit Exceedance (dBA)						
		Day		Evening		Night		Day		Evening		Night		
		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	
Compressor (air)		53.6	49.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total		53.6	49.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
	Residential	55	50	45

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	490	0

Equipment	Calculated (dBA)	Noise Limits (dBA)						Noise Limit Exceedance (dBA)						
		Day		Evening		Night		Day		Evening		Night		
		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	
Compressor (air)		57.8	53.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total		57.8	53.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
	Residential	55	50	45

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	470	0

Equipment	Calculated (dBA)	Noise Limits (dBA)						Noise Limit Exceedance (dBA)						
		Day		Evening		Night		Day		Evening		Night		
		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	
Compressor (air)		58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total		58.2	54.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.