

APPENDIX I

NOISE MODELING DATA

Noise Measurement Field Data

Project:	Locust Gateway	Job Number:	195504002
Site No.:	ST-1	Date:	7/25/2024
Analyst:	Eric Wang, Dharma Truong	Time:	9:51-10:51

Location: 2279 W Fairview Dr

Noise Sources: nature, gardening, truck passing, dogs barking, mini airplane passing by

Comments:

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
49.9	34.3	68.0	87.7

Equipment

Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather

Temp. (degrees F):	88
Wind (mph):	4
Sky:	Clear
Bar. Pressure:	30
Humidity:	42%

Photo:



Summary

File Name on Meter	ST-1.076.s
File Name on PC	LxTse_0007061-20240725 095022-ST-1.076.ldbin
Serial Number	0007061
Model	SoundExpert® LxT
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2024-07-25 09:50:22
Stop	2024-07-25 10:01:17
Duration	00:10:02.4
Run Time	00:10:00.8
Pause	00:00:01.6
Pre-Calibration	2024-07-11 10:35:45
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamplifier	PRMLxT1L		
Microphone Correction	FF:90 2116		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Frequency Weighting	A Weighting		
OBA Max Spectrum	At LMax		
Overload	122.5 dB		
	A	C	Z
Under Range Peak	79.0	76.0	81.0 dB
Under Range Limit	24.2	25.3	31.4 dB
Noise Floor	15.1	16.1	22.2 dB
	First	Second	Third
Instrument Identification	1100 W. Town&Country Rd, #700	Orange, CA 92868	

Results

L _{Aeq}		49.9	dB	
L _{AE}		77.7	dB	
E _A		6.524	μPa ² h	
L _{Apeak} (max)	2024-07-25 09:55:56			87.7
L _{ASmax}	2024-07-25 09:58:53			68.0
L _{ASmin}	2024-07-25 09:53:46			34.3
SEA		-99.9	dB	

	Exceedance Counts	Duration
LAS > 85.0 dB	0	0.0 s
LAS > 115.0 dB	0	0.0 s
LApeak > 135.0 dB	0	0.0 s
LApeak > 137.0 dB	0	0.0 s
LApeak > 140.0 dB	0	0.0 s

Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00
	49.9	49.9	-99.9	49.9	49.9	-99.9

LCeq	66.1 dB
LAeq	49.9 dB
LCeq - LAeq	16.2 dB
LAleq	51.9 dB
LAeq	49.9 dB
LAleq - LAeq	2.0 dB

A		C		Z	
dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
49.9		66.1			
68.0	2024/07/25 9:58:53				
34.3	2024/07/25 9:53:46				
87.7	2024/07/25 9:55:56				

Overload Count	0
Overload Duration	0.0 s
OBA Overload Count	0
OBA Overload Duration	0.0 s

Statistics

LA 5.00	56.1 dB
LA 10.00	51.7 dB
LA 33.30	42.0 dB
LA 50.00	38.9 dB
LA 66.60	37.4 dB
LA 90.00	35.6 dB

Calibration History						
Preamp	Date	dB re. 1V/Pa	6.3	8.0	10.0	
PRMLxT1L	2024-07-11 10:35:45	-28.41	68.32	69.44	70.89	
Direct	2023-11-08 12:10:28	-28.52	45.48	45.42	43.49	
Direct	2023-11-08 12:09:58	-28.53	158.35	159.86	152.29	
Direct	2023-11-08 11:37:00	-132.33	110.44	108.06	107.44	
Direct	2023-11-08 11:36:39	-132.53	5.25	4.22	6.48	
Direct	2023-11-07 15:35:32	-28.69	70.57	67.61	48.98	
Direct	2023-11-01 08:51:15	-28.59	48.93	58.04	58.33	
Direct	2023-10-11 12:43:45	-28.61	79.30	66.89	69.64	
Direct	2023-10-04 09:46:14	-28.55	54.78	60.05	65.72	
Direct	2023-09-28 08:21:35	-28.98	55.11	60.64	64.35	
Direct	2023-09-18 22:55:29	-28.60	75.26	86.35	76.50	
PRMLxT1L	2024-07-25 09:27:37	-28.72	60.94	60.04	65.50	
PRMLxT1L	2024-07-16 10:35:11	-28.12	62.44	55.12	57.58	
PRMLxT1L	2024-07-15 15:41:53	-28.42	88.15	68.31	64.28	
PRMLxT1L	2024-07-10 15:35:13	-28.41	65.78	65.40	58.55	
PRMLxT1L	2024-06-26 14:34:57	-28.81	72.38	65.78	74.40	
PRMLxT1L	2024-06-15 14:05:02	-28.31	46.11	58.88	63.93	
PRMLxT1L	2024-06-14 11:10:45	-28.37	59.28	73.00	56.58	
PRMLxT1L	2024-06-12 10:11:04	-28.47	64.28	49.56	53.93	
PRMLxT1L	2024-06-04 13:42:31	-28.27	51.92	50.17	49.24	
PRMLxT1L	2024-06-04 10:51:57	-28.08	82.94	79.20	78.43	
PRMLxT1L	2024-05-31 09:29:43	-28.08	64.99	62.94	66.45	

Noise Measurement Field Data

Project:	Locust Gateway	Job Number:	195504002
Site No.:	ST-2	Date:	7/25/2024
Analyst:	Eric Wang, Dharma Truong	Time:	10:10-10:20

Location: 1767 W Carpenter St

Noise Sources: water fountain, car beeping, concrete and construction machinery, dog barking

Comments:

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
50.2	40.5	62.4	81.5

Equipment

Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather

Temp. (degrees F):	88
Wind (mph):	4
Sky:	Clear
Bar. Pressure:	30
Humidity:	42%

Photo:



Summary	
File Name on Meter	ST-1.077.s
File Name on PC	LxTse_0007061-20240725 100936-ST-1.077.ldbin
Serial Number	0007061
Model	SoundExpert® LxT
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement	
Description	
Start	2024-07-25 10:09:36
Stop	2024-07-25 10:19:36
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre-Calibration	2024-07-11 10:35:45
Post-Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correction	FF:90 2116
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	A Weighting
OBA Max Spectrum	At LMax
Overload	122.5 dB
	A C Z
Under Range Peak	79.0 76.0 81.0 dB
Under Range Limit	24.2 25.3 31.4 dB
Noise Floor	15.1 16.1 22.2 dB
	First Second Third
Instrument Identification	1100 W. Town&Country Rd, #700 Orange, CA 92868

Results	
LAeq	50.2 dB
LAE	78.0 dB
EA	6.981 µPa²h
LAp _{peak} (max)	2024-07-25 10:19:06 81.5 dB
LAS _{max}	2024-07-25 10:18:48 62.4 dB
LAS _{min}	2024-07-25 10:12:01 40.5 dB
SEA	-99.9 dB

	Exceedance Counts	Duration
LAS > 85.0 dB	0	0.0 s
LAS > 115.0 dB	0	0.0 s
LAp _{peak} > 135.0 dB	0	0.0 s
LAp _{peak} > 137.0 dB	0	0.0 s
LAp _{peak} > 140.0 dB	0	0.0 s

Community Noise	L _{dn}	LDay 07:00-22:00	LNight 22:00-07:00	L _{den}	LDay 07:00-19:00	LEvening 19:00-22:00
	50.2	50.2	-99.9	50.2	50.2	-99.9

LCeq	62.6 dB
LAeq	50.2 dB
LCeq - LAeq	12.4 dB
LAIeq	57.7 dB
LAeq	50.2 dB
LAIeq - LAeq	7.5 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	50.2		62.6			
LS(max)	62.4	2024/07/25 10:18:48				
LS(min)	40.5	2024/07/25 10:12:01				
LPeak(max)	81.5	2024/07/25 10:19:06				

Overload Count	0
Overload Duration	0.0 s
OBA Overload Count	0
OBA Overload Duration	0.0 s

Statistics	
LA 5.00	56.3 dB
LA 10.00	53.9 dB
LA 33.30	48.0 dB
LA 50.00	46.2 dB
LA 66.60	44.7 dB
LA 90.00	42.3 dB

Calibration History						
Preamp	Date	dB re. 1V/Pa	6.3	8.0	10.0	
PRMLxT1L	2024-07-11 10:35:45	-28.41	68.32	69.44	70.89	
Direct	2023-11-08 12:10:28	-28.52	45.48	45.42	43.49	
Direct	2023-11-08 12:09:58	-28.53	158.35	159.86	152.29	
Direct	2023-11-08 11:37:00	-132.33	110.44	108.06	107.44	
Direct	2023-11-08 11:36:39	-132.53	5.25	4.22	6.48	
Direct	2023-11-07 15:35:32	-28.69	70.57	67.61	48.98	
Direct	2023-11-01 08:51:15	-28.59	48.93	58.04	58.33	
Direct	2023-10-11 12:43:45	-28.61	79.30	66.89	69.64	
Direct	2023-10-04 09:46:14	-28.55	54.78	60.05	65.72	
Direct	2023-09-28 08:21:35	-28.98	55.11	60.64	64.35	
Direct	2023-09-18 22:55:29	-28.60	75.26	86.35	76.50	
PRMLxT1L	2024-07-25 09:27:37	-28.72	60.94	60.04	65.50	
PRMLxT1L	2024-07-16 10:35:11	-28.12	62.44	55.12	57.58	
PRMLxT1L	2024-07-15 15:41:53	-28.42	88.15	68.31	64.28	
PRMLxT1L	2024-07-10 15:35:13	-28.41	65.78	65.40	58.55	
PRMLxT1L	2024-06-26 14:34:57	-28.81	72.38	65.78	74.40	
PRMLxT1L	2024-06-15 14:05:02	-28.31	46.11	58.88	63.93	
PRMLxT1L	2024-06-14 11:10:45	-28.37	59.28	73.00	56.58	
PRMLxT1L	2024-06-12 10:11:04	-28.47	64.28	49.56	53.93	
PRMLxT1L	2024-06-04 13:42:31	-28.27	51.92	50.17	49.24	
PRMLxT1L	2024-06-04 10:51:57	-28.08	82.94	79.20	78.43	
PRMLxT1L	2024-05-31 09:29:43	-28.08	64.99	62.94	66.45	

Noise Measurement Field Data

Project:	Locust Gateway	Job Number:	195504002
Site No.:	ST-3	Date:	7/25/2024
Analyst:	Eric Wang, Dharma Truong	Time:	10:25-11:25

Location: corner of buxton st and n maple ave

Noise Sources: dogs barking, car passing, truck loading

Comments:

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
56.2	37.2	73.1	91.2

Equipment

Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather

Temp. (degrees F):	88
Wind (mph):	5
Sky:	Clear
Bar. Pressure:	30
Humidity:	41%

Photo:



Summary

File Name on Meter	ST-1.078.s
File Name on PC	LxTse_0007061-20240725 102523-ST-1.078.ldbin
Serial Number	0007061
Model	SoundExpert® LxT
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description		
Start	2024-07-25	10:25:23
Stop	2024-07-25	10:35:31
Duration		00:10:02.7
Run Time		00:10:02.7
Pause		00:00:00.0
Pre-Calibration	2024-07-11	10:35:45
Post-Calibration		None
Calibration Deviation		---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamplifier	PRMLxT1L		
Microphone Correction	FF:90 2116		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Frequency Weighting	A Weighting		
OBA Max Spectrum	At LMax		
Overload	122.5 dB		
	A	C	Z
Under Range Peak	79.0	76.0	81.0 dB
Under Range Limit	24.2	25.3	31.4 dB
Noise Floor	15.1	16.1	22.2 dB
	First	Second	Third
Instrument Identification	1100 W. Town&Country Rd, #700	Orange, CA 92868	

Results

LAeq			56.2 dB	
LAE			84.0 dB	
EA			27.916	μPa²h
LApeak (max)	2024-07-25	10:29:27		91.2 dB
LASmax	2024-07-25	10:29:27		73.1 dB
LASmin	2024-07-25	10:28:19		37.2 dB
SEA			-99.9	dB

	Exceedance Counts	Duration
LAS > 85.0 dB	0	0.0 s
LAS > 115.0 dB	0	0.0 s
LApeak > 135.0 dB	0	0.0 s
LApeak > 137.0 dB	0	0.0 s
LApeak > 140.0 dB	0	0.0 s

Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00
	56.2	56.2	-99.9	56.2	56.2	-99.9

LCeq	62.3 dB
LAeq	56.2 dB
LCeq - LAeq	6.1 dB
LAlaq	58.8 dB
LAeq	56.2 dB
LAlaq - LAeq	2.6 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	56.2		62.3			
LS(max)	73.1	2024/07/25 10:29:27				
LS(min)	37.2	2024/07/25 10:28:19				
LPeak(max)	91.2	2024/07/25 10:29:27				

Overload Count	0
Overload Duration	0.0 s
OBA Overload Count	0
OBA Overload Duration	0.0 s

Statistics

LA 5.00	63.0 dB
LA 10.00	56.1 dB
LA 33.30	44.2 dB
LA 50.00	41.1 dB
LA 66.60	39.2 dB
LA 90.00	38.0 dB

Calibration History						
Preamp	Date	dB re. 1V/Pa	6.3	8.0	10.0	
PRMLxT1L	2024-07-11 10:35:45	-28.41	68.32	69.44	70.89	
Direct	2023-11-08 12:10:28	-28.52	45.48	45.42	43.49	
Direct	2023-11-08 12:09:58	-28.53	158.35	159.86	152.29	
Direct	2023-11-08 11:37:00	-132.33	110.44	108.06	107.44	
Direct	2023-11-08 11:36:39	-132.53	5.25	4.22	6.48	
Direct	2023-11-07 15:35:32	-28.69	70.57	67.61	48.98	
Direct	2023-11-01 08:51:15	-28.59	48.93	58.04	58.33	
Direct	2023-10-11 12:43:45	-28.61	79.30	66.89	69.64	
Direct	2023-10-04 09:46:14	-28.55	54.78	60.05	65.72	
Direct	2023-09-28 08:21:35	-28.98	55.11	60.64	64.35	
Direct	2023-09-18 22:55:29	-28.60	75.26	86.35	76.50	
PRMLxT1L	2024-07-25 09:27:37	-28.72	60.94	60.04	65.50	
PRMLxT1L	2024-07-16 10:35:11	-28.12	62.44	55.12	57.58	
PRMLxT1L	2024-07-15 15:41:53	-28.42	88.15	68.31	64.28	
PRMLxT1L	2024-07-10 15:35:13	-28.41	65.78	65.40	58.55	
PRMLxT1L	2024-06-26 14:34:57	-28.81	72.38	65.78	74.40	
PRMLxT1L	2024-06-15 14:05:02	-28.31	46.11	58.88	63.93	
PRMLxT1L	2024-06-14 11:10:45	-28.37	59.28	73.00	56.58	
PRMLxT1L	2024-06-12 10:11:04	-28.47	64.28	49.56	53.93	
PRMLxT1L	2024-06-04 13:42:31	-28.27	51.92	50.17	49.24	
PRMLxT1L	2024-06-04 10:51:57	-28.08	82.94	79.20	78.43	
PRMLxT1L	2024-05-31 09:29:43	-28.08	64.99	62.94	66.45	

Noise Measurement Field Data

Project:	Locust Gateway	Job Number:	195504002
Site No.:	ST-4	Date:	7/25/2024
Analyst:	Eric Wang, Dharma Truong	Time:	10:59-11:59
Location:	w stonehurst drive (south of the project site)		
Noise Sources:	concrete and construction machinery, truck loading, truck and cars passing		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
64.5	45.8	85.4	99.4

Equipment

Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather

Temp. (degrees F):	91
Wind (mph):	5
Sky:	Clear
Bar. Pressure:	29.99
Humidity:	38%

Photo:



Summary

File Name on Meter	ST-1.079.s
File Name on PC	LxTse_0007061-20240725 105832-ST-1.079.ldbin
Serial Number	0007061
Model	SoundExpert® LxT
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement

Description		
Start	2024-07-25	10:58:32
Stop	2024-07-25	11:08:32
Duration		00:10:00.0
Run Time		00:10:00.0
Pause		00:00:00.0
Pre-Calibration	2024-07-11	10:35:45
Post-Calibration		None
Calibration Deviation		---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamplifier	PRMLxT1L		
Microphone Correction	FF:90 2116		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Frequency Weighting	A Weighting		
OBA Max Spectrum	At LMax		
Overload	122.5 dB		
	A	C	Z
Under Range Peak	79.0	76.0	81.0 dB
Under Range Limit	24.2	25.3	31.4 dB
Noise Floor	15.1	16.1	22.2 dB
	First	Second	Third
Instrument Identification		1100 W. Town&Country Rd, #700	Orange, CA 92868

Results

L _{Aeq}			64.5 dB	
L _{AE}			92.3 dB	
E _A			187.892 μPa²h	
L _{Apeak (max)}	2024-07-25	11:00:08		99.4 dB
L _{ASmax}	2024-07-25	11:00:09		85.4 dB
L _{ASmin}	2024-07-25	10:59:23		45.8 dB
SEA			-99.9 dB	

	Exceedance Counts	Duration
LAS > 85.0 dB	1	1.1 s
LAS > 115.0 dB	0	0.0 s
LApeak > 135.0 dB	0	0.0 s
LApeak > 137.0 dB	0	0.0 s
LApeak > 140.0 dB	0	0.0 s

Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00
	64.5	64.5	-99.9	64.5	64.5	-99.9

L_{Ceq}	72.7 dB
L_{Aeq}	64.5 dB
L_{Ceq} - L_{Aeq}	8.2 dB
L_{Aleq}	67.9 dB
L_{Aeq}	64.5 dB
L_{Aleq} - L_{Aeq}	3.4 dB

A		C		Z	
dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
64.5		72.7			
85.4	2024/07/25 11:00:09				
45.8	2024/07/25 10:59:23				
99.4	2024/07/25 11:00:08				

Overload Count	0
Overload Duration	0.0 s
OBA Overload Count	0
OBA Overload Duration	0.0 s

Statistics

LA 5.00	70.6 dB
LA 10.00	63.1 dB
LA 33.30	50.9 dB
LA 50.00	49.2 dB
LA 66.60	48.5 dB
LA 90.00	47.4 dB

Calibration History						
Preamp	Date	dB re. 1V/Pa	6.3	8.0	10.0	
PRMLxT1L	2024-07-11 10:35:45	-28.41	68.32	69.44	70.89	
Direct	2023-11-08 12:10:28	-28.52	45.48	45.42	43.49	
Direct	2023-11-08 12:09:58	-28.53	158.35	159.86	152.29	
Direct	2023-11-08 11:37:00	-132.33	110.44	108.06	107.44	
Direct	2023-11-08 11:36:39	-132.53	5.25	4.22	6.48	
Direct	2023-11-07 15:35:32	-28.69	70.57	67.61	48.98	
Direct	2023-11-01 08:51:15	-28.59	48.93	58.04	58.33	
Direct	2023-10-11 12:43:45	-28.61	79.30	66.89	69.64	
Direct	2023-10-04 09:46:14	-28.55	54.78	60.05	65.72	
Direct	2023-09-28 08:21:35	-28.98	55.11	60.64	64.35	
Direct	2023-09-18 22:55:29	-28.60	75.26	86.35	76.50	
PRMLxT1L	2024-07-25 09:27:37	-28.72	60.94	60.04	65.50	
PRMLxT1L	2024-07-16 10:35:11	-28.12	62.44	55.12	57.58	
PRMLxT1L	2024-07-15 15:41:53	-28.42	88.15	68.31	64.28	
PRMLxT1L	2024-07-10 15:35:13	-28.41	65.78	65.40	58.55	
PRMLxT1L	2024-06-26 14:34:57	-28.81	72.38	65.78	74.40	
PRMLxT1L	2024-06-15 14:05:02	-28.31	46.11	58.88	63.93	
PRMLxT1L	2024-06-14 11:10:45	-28.37	59.28	73.00	56.58	
PRMLxT1L	2024-06-12 10:11:04	-28.47	64.28	49.56	53.93	
PRMLxT1L	2024-06-04 13:42:31	-28.27	51.92	50.17	49.24	
PRMLxT1L	2024-06-04 10:51:57	-28.08	82.94	79.20	78.43	
PRMLxT1L	2024-05-31 09:29:43	-28.08	64.99	62.94	66.45	

Noise Measurement Field Data

Project:	Locust Gateway	Job Number:	195504002
Site No.:	ST-5	Date:	7/25/2024
Analyst:	Eric Wang, Dharma Truong	Time:	9:32-9:42

Location: northwest corner of summit ave and alder

Noise Sources: truck idling, truck passing, concrete and construction machinery

Comments:

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
65.6	63.7	76.1	89.6

Equipment

Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather

Temp. (degrees F):	86
Wind (mph):	3
Sky:	Clear
Bar. Pressure:	30.01
Humidity:	45%

Photo:



Summary	
File Name on Meter	ST-1.075.s
File Name on PC	LxTse_0007061-20240725 093150-ST-1.075.ldbin
Serial Number	0007061
Model	SoundExpert® LxT
Firmware Version	2.404
User	
Location	
Job Description	
Note	

Measurement	
Description	
Start	2024-07-25 09:31:50
Stop	2024-07-25 09:41:50
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre-Calibration	2024-07-25 09:27:39
Post-Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correction	FF:90 2116
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	A Weighting
OBA Max Spectrum	At LMax
Overload	122.5 dB
	A C Z
Under Range Peak	79.0 76.0 81.0 dB
Under Range Limit	24.2 25.3 31.4 dB
Noise Floor	15.1 16.1 22.2 dB
	First Second Third
Instrument Identification	1100 W. Town&Country Rd, #700 Orange, CA 92868

Results	
LAeq	65.6 dB
LAE	93.4 dB
EA	242.052 µPa²h
LAp _{peak} (max)	2024-07-25 09:41:35 89.6 dB
LAS _{max}	2024-07-25 09:41:26 76.1 dB
LAS _{min}	2024-07-25 09:34:30 63.7 dB
SEA	-99.9 dB

	Exceedance Counts	Duration			
LAS > 85.0 dB	0	0.0 s			
LAS > 115.0 dB	0	0.0 s			
LAp _{peak} > 135.0 dB	0	0.0 s			
LAp _{peak} > 137.0 dB	0	0.0 s			
LAp _{peak} > 140.0 dB	0	0.0 s			
Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00
	65.6	65.6	-99.9	65.6	65.6

LCeq	71.9 dB				
LAeq	65.6 dB				
LCeq - LAeq	6.3 dB				
LAIeq	66.5 dB				
LAeq	65.6 dB				
LAIeq - LAeq	0.9 dB				
	A		C		
	dB	Time Stamp	dB	Time Stamp	dB
Leq	65.6		71.9		
LS(max)	76.1	2024/07/25 9:41:26			
LS(min)	63.7	2024/07/25 9:34:30			
LPeak(max)	89.6	2024/07/25 9:41:35			
Overload Count	0				
Overload Duration	0.0 s				
OBA Overload Count	0				
OBA Overload Duration	0.0 s				

Statistics	
LA 5.00	69.2 dB
LA 10.00	67.0 dB
LA 33.30	64.7 dB
LA 50.00	64.4 dB
LA 66.60	64.3 dB
LA 90.00	64.1 dB

Calibration History					
Preamp	Date	dB re. 1V/Pa	6.3	8.0	
PRMLxT1L	2024-07-11 10:35:45	-28.41	68.32	69.44	
Direct	2023-11-08 12:10:28	-28.52	45.48	45.42	
Direct	2023-11-08 12:09:58	-28.53	158.35	159.86	
Direct	2023-11-08 11:37:00	-132.33	110.44	108.06	
Direct	2023-11-08 11:36:39	-132.53	5.25	4.22	
Direct	2023-11-07 15:35:32	-28.69	70.57	67.61	
Direct	2023-11-01 08:51:15	-28.59	48.93	58.04	
Direct	2023-10-11 12:43:45	-28.61	79.30	66.89	
Direct	2023-10-04 09:46:14	-28.55	54.78	60.05	
Direct	2023-09-28 08:21:35	-28.98	55.11	60.64	
Direct	2023-09-18 22:55:29	-28.60	75.26	86.35	
PRMLxT1L	2024-07-25 09:27:37	-28.72	60.94	60.04	
PRMLxT1L	2024-07-16 10:35:11	-28.12	62.44	55.12	
PRMLxT1L	2024-07-15 15:41:53	-28.42	88.15	68.31	
PRMLxT1L	2024-07-10 15:35:13	-28.41	65.78	65.40	
PRMLxT1L	2024-06-26 14:34:57	-28.81	72.38	65.78	
PRMLxT1L	2024-06-15 14:05:02	-28.31	46.11	58.88	
PRMLxT1L	2024-06-14 11:10:45	-28.37	59.28	73.00	
PRMLxT1L	2024-06-12 10:11:04	-28.47	64.28	49.56	
PRMLxT1L	2024-06-04 13:42:31	-28.27	51.92	50.17	
PRMLxT1L	2024-06-04 10:51:57	-28.08	82.94	79.20	
PRMLxT1L	2024-05-31 09:29:43	-28.08	64.99	62.94	

Project: Locust Gateway Development Project
Construction Noise Impact on Sensitive Receptors

Parameters		
Construction Hours:	Daytime hours (7 am to 7 pm)	8
	Evening hours (7 pm to 10 pm)	0
	Nighttime hours (10 pm to 7 am)	0
Leq to L10 factor		3

	Receptor (Land Use)	Average Distance (feet)	Distance to Property Line (feet)	Shielding	Direction
1	Residential	2,315	700		0 E
2	Residential	2,170	700		0 SE
3	Wilmer Amina Carter High School	3,205	1,745		0 SE
4	Industrial	350	15		0 SE

Construction Noise Levels by Phase (Leq)								
Demolition	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Infrastructure Improvements	Maximum Construction	
60.6	59.7	64.4	62.6	60.5	50.8	56.1	64.4	
60.7	59.9	64.6	62.8	60.6	50.8	56.2	64.6	
55.5	56.9	57.5	56.3	53.7	42.9	49.3	57.5	
71.2	84.6	87.5	87.4	86.7	78.2	82.4	87.5	

Construction Phase	Equipment Type	No. of Equip.	Acoustical Usage Factor	Reference Noise Level at 50ft per Unit, Lmax
Demolition	Concrete Saw	1	20%	90
	Excavator	3	40%	81
	Dozer	2	40%	82
	Combined LEQ			
Site Preparation	Tractor	1	40%	84
	Tractor	3	40%	84
	Dozer	3	40%	82
	Combined LEQ			
Grading	Grader	1	40%	85
	Excavator	2	40%	81
	Tractor	3	40%	84
	Scraper	3	40%	84
	Dozer	1	40%	82
	Combined LEQ			
Building Construction	forklift All Other Equipment > 5 HP	1	50%	85
	All Other Equipment > 5 HP	2	50%	85
	Generator	1	50%	81
	Crane	1	16%	81
	Welder/Torch	1	40%	74
	Tractor	3	40%	84
	Combined LEQ			
Paving	paving equipment All Other Equipment > 5 HP	1	50%	85
	All Other Equipment > 5 HP	1	50%	85
	Paver	2	50%	77
	Roller	2	20%	80
	Combined LEQ			
Architectural Coating				
Combined LEQ		1	40%	78
Infrastructure Improvements				
		1	40%	82
		1	40%	81
		1	50%	77
		1	20%	80
		Combined LEQ		
Overlapping Phases				
Architectural Coating + Infrastructure Improvements				
Paving + Architectural Coating				
Source for Ref. Noise Levels: RCNM, 2005				

RECEPTOR 1			RECEPTOR 2			RECEPTOR 3			RECEPTOR 4		
Distance (feet)	Noise Level at Receptor 1, Lmax	Noise Level at Receptor 1, Leq	Distance (feet)	Noise Level at Receptor 2, Lmax	Noise Level at Receptor 2, Leq	Distance (feet)	Noise Level at Receptor 3, Lmax	Noise Level at Receptor 3, Leq	Distance (feet)	Noise Level at Receptor 4, Lmax	Noise Level at Receptor 4, Leq
700	66.7	59.7	700.0	66.7	59.7	1745.0	58.7	51.8	30.0	94.0	87.0
1,510	55.9	51.9	1435.0	56.3	52.3	1430.0	56.3	52.4	180.0	74.3	70.4
2,315	51.4	47.4	2170.0	52.0	48.0	3205.0	48.6	44.6	350.0	67.8	63.8
		60.6			60.7			55.5			71.2
700	61.1	57.1	700.0	61.1	57.1	1745.0	53.1	49.2	30.0	88.4	84.5
1,510	59.2	55.2	1435.0	59.6	55.6	1430.0	59.6	55.7	350.0	71.9	67.9
2,315	53.2	49.2	2170.0	53.7	49.7	3205.0	50.3	46.4	350.0	69.6	65.6
		59.7			59.9			56.9			84.6
700	62.1	58.1	700.0	62.1	58.1	1745.0	54.1	50.2	30.0	89.4	85.5
800	59.6	55.6	790.0	59.7	55.8	1845.0	52.4	48.4	60.0	82.1	78.1
900	63.7	59.7	880.0	63.9	59.9	1945.0	57.0	53.0	90.0	83.7	79.7
1,000	62.4	58.4	970.0	62.6	58.6	2045.0	56.1	52.2	120.0	80.8	76.8
1,100	54.9	50.9	1060.0	55.2	51.2	2145.0	49.1	45.1	150.0	72.2	68.2
		64.4			64.6			57.5			87.5
700	62.1	59.1	700.0	62.1	59.1	1745.0	54.1	51.1	30.0	89.4	86.4
1,020	61.8	58.8	990.0	62.1	59.1	2035.0	55.8	52.8	90.0	82.9	79.9
1,340	52.0	49.0	1280.0	52.4	49.4	2325.0	47.3	44.2	150.0	71.1	68.0
1,660	50.2	42.2	1570.0	50.7	42.7	2615.0	46.2	38.3	210.0	68.1	60.2
1,980	42.0	38.1	1860.0	42.6	38.6	2905.0	38.7	34.7	270.0	59.4	55.4
2,315	55.5	51.5	2170.0	56.0	52.0	3205.0	52.6	48.7	350.0	71.9	67.9
		62.6			62.8			56.3			87.4
700	62.1	59.1	700.0	62.1	59.1	1745.0	54.1	51.1	30.0	89.4	86.4
1,230	57.2	54.2	1190.0	57.5	54.5	2230.0	52.0	49.0	135.0	76.4	73.4
1,760	49.3	46.3	1680.0	49.7	46.7	2715.0	45.5	42.5	240.0	66.6	63.6
2,315	49.7	42.7	2170.0	50.3	43.3	3205.0	46.9	39.9	350.0	66.1	59.1
		60.5			60.6			53.7			86.7
700	54.8	50.8	700.0	54.8	50.8	1745.0	46.8	42.9	30.0	82.1	78.2
		50.8			50.8			42.9			78.2
700	58.8	54.8	700.0	58.8	54.8	1745.0	50.8	46.9	30.0	86.1	82.2
1,230	52.9	48.9	1190.0	53.2	49.2	2230.0	47.7	43.7	135.0	72.1	68.1
1,760	46.3	43.3	1680.0	46.7	43.7	2715.0	42.5	39.5	240.0	63.6	60.6
2,315	46.7	39.7	2170.0	47.3	40.3	3205.0	43.9	36.9	350.0	63.1	56.1
		56.1			56.2			49.3			82.4
	57.2			57.3			50.2			83.8	
	61.0			61.1			54.1			87.2	

Receptor	Phase	Direction	Distance to Center of Site	Ambient (dBA Leq)	UNMITIGATED							MITIGATED ¹			
					Project Construction Noise Level dBA Leq	Ambient Threshold	Exceeds Ambient Threshold?	over threshold	FTA Threshold	Exceeds FTA Threshold?	over threshold	Project Construction Noise Level dBA Leq	Ambient Threshold	Exceeds Ambient Threshold?	over threshold
1 Residential	Demolition	E	2315	50.2	60.6	55.2	Yes	5.4	80.0	No	--	50.6	55.2	No	--
	Site Preparation			ST-2	59.7		Yes	4.5		No	--	49.7		No	--
	Grading				64.4		Yes	9.2		No	--	54.4		No	--
	Building Construction				62.6		Yes	7.4		No	--	52.6		No	--
	Paving				60.5		Yes	5.3		No	--	50.5		No	--
	Architectural Coating				50.8		No	--		No	--	40.8		No	--
	Infrastructure Improvements				56.1		Yes	0.9		No	--	46.1		No	--
	Paving + Architectural Coating				61.0		Yes	5.8		No	--	51.0		No	--
	Architectural Coating + Infrastructure Improvements				57.2		Yes	2.0		No	--	47.2		No	--
2 Residential	Demolition	SE	2170	56.2	60.7	61.2	No	--	80.0	No	--	50.7	61.2	No	--
	Site Preparation			ST-3	59.9		No	--		No	--	49.9		No	--
	Grading				64.6		Yes	3.4		No	--	54.6		No	--
	Building Construction				62.8		Yes	1.6		No	--	52.8		No	--
	Paving				60.6		No	--		No	--	50.6		No	--
	Architectural Coating				50.8		No	--		No	--	40.8		No	--
	Infrastructure Improvements				56.2		No	--		No	--	46.2		No	--
	Paving + Architectural Coating				61.1		No	--		No	--	51.1		No	--
	Architectural Coating + Infrastructure Improvements				57.3		No	--		No	--	47.3		No	--
3 Wilmer Amina Carter High School	Demolition	SE	3205	56.2	55.5	61.2	No	--	80.0	No	--	45.5	61.2	No	--
	Site Preparation			ST-3	56.9		No	--		No	--	46.9		No	--
	Grading				57.5		No	--		No	--	47.5		No	--
	Building Construction				56.3		No	--		No	--	46.3		No	--
	Paving				53.7		No	--		No	--	43.7		No	--
	Architectural Coating				42.9		No	--		No	--	32.9		No	--
	Infrastructure Improvements				49.3		No	--		No	--	39.3		No	--
	Paving + Architectural Coating				54.1		No	--		No	--	44.1		No	--
	Architectural Coating + Infrastructure Improvements				50.2		No	--		No	--	40.2		No	--
4 Industrial	Demolition	SE	350	64.5	71.2	NA	NA	NA	90.0	No	--	61.2	NA	NA	NA
	Site Preparation			ST-4	84.6		NA	NA		No	--	74.6		NA	NA
	Grading				87.5		NA	NA		No	--	77.5		NA	NA
	Building Construction				87.4		NA	NA		No	--	77.4		NA	NA
	Paving				86.7		NA	NA		No	--	76.7		NA	NA
	Architectural Coating				78.2		NA	NA		No	--	68.2		NA	NA
	Infrastructure Improvements				82.4		NA	NA		No	--	72.4		NA	NA
	Paving + Architectural Coating				87.2		NA	NA		No	--	77.2		NA	NA
	Architectural Coating + Infrastructure Improvements				83.8		NA	NA		No	--	73.8		NA	NA

Notes:

1. Includes implementation of muffler/shielding mitigation. The FHWA states that muffler systems can reduce noise levels by 10 dBA or more. (Source: Federal Highway Administration, *Special Report - Measurement, Prediction, and Mitigation, Chapter 4 Mitigation*, 2017.)

Project: Locust Gateway Development Project
Mechanical Equipment Noise Calculations

Receptor	Reference Level (dBA)	Reference Distance (feet) ¹	Distance to Receptor (feet) ²	Level at Receptor (dBA) ³	Noise Threshold (dBA)	Significant?	Daytime Ambient			Nighttime Ambient (Calculated) ⁴		
							Site	dBA Leq	Increase Above Ambient	Site	dBA Leq ⁴	Increase Above Ambient
Residential (East)	52	50	2125	19.4	60.0	No	2	50.2	-30.8	2	43.2	-23.8
Residential (Southeast)	52	50	3750	14.5	60.0	No	3	56.2	-41.7	3	49.2	-34.7
Industrial (Southeast)	52	50	115	44.8	75.0	No	4	64.5	-19.7	4	57.5	-12.7

1. Source for reference level: Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, Noise Navigator Sound Level Database with Over 1700 Measurement Values, June 26, 2015.

2. Distance estimated using location of rooftop equipment as indicated on Roof Plan

3. Calculated using the inverse square law formula for sound attenuation: $dBA_2 = dBA_1 + 20\log(d_1/d_2)$, where dBA_2 = estimated noise level at receptor; dBA_1 = reference noise level; d_1 = reference distance; d_2 = receptor location distance.

4. Based on Kimley-Horn noise measurement data, nighttime noise levels typically reduce by approximately 1 to 7 dBA when compared to daytime noise levels. Therefore, the maximum nighttime reduction of 7 dBA was applied to provide a conservative analysis.

Project: Locust Gateway Development Project
Truck and Loading Dock Noise Calculations

Receptor	Reference Level (dBA)	Reference Distance (feet) ¹	Distance to Receptor (feet) ²	Level at Receptor (dBA) ³	Noise Threshold (dBA)	Significant?	Daytime Ambient			Nighttime Ambient (Calculated) ⁴		
							Site	dBA Leq	Increase Above Ambient	Site	dBA Leq ⁴	Increase Above Ambient
Residential (East)	70	50	2190	37.2	60.0	No	2	50.2	-13.0	2	43.2	-6.0
Residential (Southeast)	70	50	1880	38.5	60.0	No	3	56.2	-17.7	3	49.2	-10.7
Industrial (Southeast)	70	50	200	58.0	75.0	No	4	64.5	-6.5	4	57.5	0.5

1. Source for reference level: Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, Noise Navigator Sound Level Database with Over 1700 Measurement Values, June 26, 2015.

2. Distance estimated using location of loading doc as indicated in the conceptual site plan.

3. Calculated using the inverse square law formula for sound attenuation: $dBA_2 = dBA_1 + 20\log(d_1/d_2)$, where dBA_2 = estimated noise level at receptor; dBA_1 = reference noise level; d_1 = reference distance; d_2 = receptor location distance.

4. Based on Kimley-Horn noise measurement data, nighttime noise levels typically reduce by approximately 1 to 7 dBA when compared to daytime noise levels. Therefore, the maximum nighttime reduction of 7 dBA was applied to provide a conservative analysis.

Project: Locust Gateway Development Project
Backup Alarm Noise Calculations

							Daytime Ambient			Nighttime Ambient (Calculated) ⁴		
Receptor	Reference Level (dBA)	Reference Distance (feet) ¹	Distance to Receptor (feet) ²	Level at Receptor (dBA) ³	Noise Threshold (dBA)	Significant?	Site	dBA Leq	Increase Above Ambient	Site	dBA Leq ⁴	Increase Above Ambient
Residential (East)	97	3.28	2190	40.5	60.0	No	2	50.2	-9.7	2	43.2	-2.7
Residential (Southeast)	97	3.28	1880	41.8	60.0	No	3	56.2	-14.4	3	49.2	-7.4
Industrial (Southeast)	97	3.28	200	61.3	75.0	No	4	64.5	-3.2	4	57.5	3.8

1. Source for reference level: Environmental Health Perspectives, Vehicle Motion Alarms: Necessity, Noise Pollution, or Both? <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3018517/>, accessed May, 2024.

2. Distance estimated using location of loading doc as indicated in the conceptual site plan.

3. Calculated using the inverse square law formula for sound attenuation: $dBA_2 = dBA_1 + 20\log(d_1/d_2)$, where dBA_2 = estimated noise level at receptor; dBA_1 = reference noise level; d_1 = reference distance; d_2 = receptor location distance.

4. Based on Kimley-Horn noise measurement data, nighttime noise levels typically reduce by approximately 1 to 7 dBA when compared to daytime noise levels. Therefore, the maximum nighttime reduction of 7 dBA was applied to provide a conservative analysis.

Project: Locust Gateway Development Project
Parking Noise Calculations

Receptor	Reference Level (dBA)	Reference Distance (feet) ¹	Distance to Receptor (feet) ²	Level at Receptor (dBA) ³	Noise Threshold (dBA)	Significant?	Daytime Ambient			Nighttime Ambient (Calculated) ⁴		
							Site	dBA Leq	Increase Above Ambient	Site	dBA Leq ⁴	Increase Above Ambient
Residential (East)	49.4	50	710	26.4	60.0	No	2	50.2	-23.8	2	43.2	-16.8
Residential (Southeast)	49.4	50	800	25.3	60.0	No	3	56.2	-30.9	3	49.2	-23.9
Industrial (Southeast)	49.4	50	30	53.8	75.0	No	4	64.5	-10.7	4	57.5	-3.7

1. Source for reference level: Using the Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018 reference noise level of 92 dBA SEL and the Project's highest peak hour vehicle trips would generate noise levels of approximately 49.4 dBA

2. Distance estimated using location of parking areas as indicated in the conceptual site plan.

3. Calculated using the inverse square law formula for sound attenuation: $dBA_2 = dBA_1 + 20\log(d_1/d_2)$, where dBA_2 = estimated noise level at receptor; dBA_1 = reference noise level; d_1 = reference distance; d_2 = receptor location distance.

4. Based on Kimley-Horn noise measurement data, nighttime noise levels typically reduce by approximately 1 to 7 dBA when compared to daytime noise levels. Therefore, the maximum nighttime reduction of 7 dBA was applied to provide a conservative analysis.

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

Project Name:
Project Number:
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	Distance to Contour			
											70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Locust Avenue	Lowell Street to Persimmon Avenue	2	0	10,200	45	0	16.1%	8.7%	69.1	81	255	806	2,548
2	Casmalia Street	Locust Avenue to Lauren Avenue	4	10	10,800	50	0	20.8%	8.3%	70.7	117	370	1,170	3,699
3	Riverside Avenue	Alder Avenue to Locust Avenue	4	10	15,400	50	1	15.3%	7.7%	68.5	84	149	265	472

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:

Project Number:

Scenario: Horizon 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	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Locust Avenue	Lowell Street to Persimmon Avenue	2	0	12,732	45	0	15.3%	12.7%	70.7	117	370	1,169	3,695
2	Casmalia Street	Locust Avenue to Lauren Avenue	4	10	13,442	50	0	18.1%	12.8%	72.0	160	507	1,602	5,066
3	Riverside Avenue	Alder Avenue to Locust Avenue	4	10	15,727	50	1	14.7%	11.1%	69.1	91	161	286	509

¹ Distance is from the centerline of the roadway segment to the receptor location.

"-" = contour is located within the roadway right-of-way.