APPENDIX H

Noise Output

APPENDIX H.1

Ambient Noise Data

Monitoring Location: Site 1a
Monitoring Date: 6/6/2017

Monitoring Period

Time	LAeq	LASmax	LASmin
10:11:04	60.0	65.2	55.4
10:12:04	62.1	66.9	56.9
10:13:04	59.8	67.4	51.9
10:14:04	60.6	67.1	52.6
10:15:04	62.1	69.9	54.3
10:16:04	62.1	66.0	56.0
10:17:04	61.4	66.2	54.4
10:18:04	61.3	64.3	54.8
10:19:04	60.8	63.6	57.1
10:20:04	61.8	68.8	53.2
10:21:04	65.0	70.7	59.9
10:22:04	62.9	67.5	55.7
10:23:04	59.4	61.6	56.4
10:24:04	60.4	64.1	55.5
10:25:04	64.0	67.2	55.6
10:26:04	63.4	66.9	62.5

15-minute LAeq **62.0**

Monitoring Location: Site 1b
Monitoring Date: 6/6/2017

Monitoring Period

Time	LAeq	LASmax	LASmin
10:06:05	56.3	65.5	30.9
10:07:00	53.7	61.2	50.1
10:08:00	52.2	56.7	46.3
10:09:00	49.3	60.1	46.1
10:10:00	50.8	58.8	45.3
10:11:00	49.6	53.8	47.8
10:12:00	46.6	51.3	44.7
10:13:00	48.5	51.9	44.7
10:14:00	47.7	51.7	45.1
10:15:00	48.7	50.9	46.7
10:16:00	48.4	51.7	45.7
10:17:00	48.6	51.2	46.6
10:18:00	48.1	52.1	45.4
10:19:00	48.1	52.8	44.3
10:20:00	51.3	54.7	48.6
10:21:00	52.5	55.4	50.4

15-minute LAeq **50.9**

Monitoring Location: Site 2a
Monitoring Date: 6/6/2017

Monitoring Period

Time	LAeq	LASmax	LASmin
10:38:02	63.3	72.0	52.3
10:39:02	58.8	65.9	52.7
10:40:02	62.2	65.7	57.5
10:41:02	60.5	64.6	54.6
10:42:02	62.6	66.4	58.9
10:43:02	60.0	64.7	54.5
10:44:02	63.5	67.9	56.8
10:45:02	59.7	65.5	52.9
10:46:02	61.8	65.8	55.6
10:47:02	59.6	63.5	55.5
10:48:02	61.9	65.3	56.7
10:49:02	60.0	63.5	56.1
10:50:02	61.8	64.7	56.8
10:51:02	60.4	65.6	52.8
10:52:02	62.6	66.9	55.3
10:53:02	60.4	62.0	58.9

15-minute LAeq **61.4**

Monitoring Location: Site 2b
Monitoring Date: 6/6/2017

Monitoring Period

Time	LAeq	LASmax	LASmin
10:40:06	60.0	64.3	55.6
10:41:00	58.3	63.3	55.0
10:42:00	56.6	60.1	53.3
10:43:00	59.3	62.3	55.4
10:44:00	55.9	58.2	50.8
10:45:00	57.7	61.1	54.3
10:46:00	55.2	58.0	52.8
10:47:00	58.8	61.9	56.0
10:48:00	56.3	62.2	52.5
10:49:00	58.2	61.1	55.0
10:50:00	55.8	60.3	49.0
10:51:00	58.8	61.6	54.6
10:52:00	54.6	58.8	47.1
10:53:00	56.4	61.0	52.7
10:54:00	53.2	57.5	49.9
10:55:00	59.1	61.1	57.4

15-minute LAeq **57.5**

Monitoring Location: Site 3
Monitoring Date: 6/6/2017

Monitoring Period

Time	LAeq	LASmax	LASmin
11:37:36	69.8	78.9	55.8
11:38:36	67.1	75.8	54.8
11:39:36	72.1	77.6	54.9
11:40:36	69.6	79.4	53.1
11:41:36	72.6	81.7	55.3
11:42:36	70.9	81.3	58.3
11:43:36	63.5	73.9	52.4
11:44:36	72.3	79.1	62.2
11:45:36	68.5	77.7	53.5
11:46:36	68.6	77.2	56.6
11:47:36	72.5	78.3	55.7
11:48:36	65.0	72.8	56.9
11:49:36	71.2	79.4	56.2
11:50:36	71.4	77.6	63.9
11:51:36	64.9	73.8	50.8
11:52:36	68.1	69.7	67.2

15-minute LAeq **70.0**

Monitoring Location: Site 4
Monitoring Date: 6/6/2017

Monitoring Period

Time	LAeq	LASmax	LASmin
11:38:44	56.8	62.1	54.1
11:39:00	63.9	76.6	48.9
11:40:00	62.3	68.4	50.1
11:41:00	61.3	68.8	55.1
11:42:00	59.0	64.0	50.7
11:43:00	58.7	64.1	52.5
11:44:00	63.3	69.7	52.4
11:45:00	60.1	67.3	52.8
11:46:00	62.4	67.2	52.6
11:47:00	61.9	65.6	52.7
11:48:00	64.8	72.1	56.5

15-minute LAeq **61.9**

Monitoring Location: Site 5
Monitoring Date: 6/6/2017

Monitoring Period

Time	LAeq	LASmax	LASmin
11:06:43	45.3	53.2	42.0
11:07:43	46.2	49.0	43.2
11:08:43	45.8	48.7	43.1
11:09:43	44.7	46.5	43.4
11:10:43	43.7	48.3	41.0
11:11:43	43.1	46.8	41.1
11:12:43	46.1	51.9	41.7
11:13:43	48.6	56.7	42.7
11:14:43	44.0	50.8	40.9
11:15:43	48.3	56.2	42.7
11:16:43	43.7	49.4	41.5
11:17:43	48.6	58.3	40.7
11:18:43	44.7	52.5	41.2
11:19:43	45.0	48.9	41.4
11:20:43	49.0	63.5	41.4
11:21:43	43.7	44.5	42.7

15-minute LAeq **46.1**

Monitoring Location: Site 6
Monitoring Date: 6/6/2017

Monitoring Period

Time	LAeq	LASmax	LASmin
11:03:16	47.8	52.8	44.9
11:04:00	48.8	52.6	44.5
11:05:00	54.5	66.6	43.7
11:06:00	57.6	68.7	42.4
11:07:00	58.1	69.1	44.1
11:08:00	46.6	56.2	44.1
11:09:00	47.3	55.5	44.0
11:10:00	53.0	64.3	44.1
11:11:00	45.9	49.5	43.0
11:12:00	45.9	55.5	42.9
11:13:00	44.6	46.5	43.6
11:14:00	52.4	67.1	41.8
11:15:00	52.3	67.8	42.9
11:16:00	57.2	63.7	42.8
11:17:00	55.2	66.0	42.8
11:18:00	45.8	51.8	42.7
11:19:00	45.2	49.9	42.3
11:20:00	46.3	52.6	42.9

15-minute LAeq **53.1**

APPENDIX H.2

Roadway Noise Calculations

Lancaster Health District
Roadway Noise Contours
Existing

Rev: 11/12/2012

ROADWAY NAME / Segment	Number of Lanes in Each Direction	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor (1)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	Distance from Center of Roadway: CNEL at 75 Feet	DISTANCE TO CONTOUR: 75 CNEL	70 CNEL	65 CNEL	60 CNEL
20th Street West												
Between Lancaster Blvd and Avenue J	2	10	8,400	45	0	1.8%	0.7%	65.0	-	-	-	231
Between Avenue J and Avenue J-8	3	10	20,400	45	0	1.8%	0.7%	68.8	-	-	178	554
15th Street West												
Between Lancaster Blvd and Avenue J	1	10	8,600	45	0	1.8%	0.7%	65.1	-	-	76	237
Between Avenue J and Avenue J-8	3	10	16,600	45	0	1.8%	0.7%	67.9	-	-	146	452
Between Avenue J-8 and Avenue K	2	10	13,100	40	0	1.8%	0.7%	65.6	-	-	86	267
Avenue J												
Between 20th Street West and 15th Street West	3	10	25,700	45	0	1.8%	0.7%	69.8	-	-	224	696
Between 15th Street West and 10th Street West	2	10	25,500	45	0	1.8%	0.7%	69.8	-	-	222	690
Avenue J-8												
Between 20th Street West and 15th Street West	2	10	12,800	45	0	1.8%	0.7%	66.8	-	-	113	350
Between 15th Street West and 10th Street West	1	10	8,200	35	0	1.8%	0.7%	62.1	-	-	-	121
SR-14												
Between Avenue J and Avenue J-8	3	10	45,000	65	0	1.8%	0.7%	76.5	105	326	1,013	3,148
Between Avenue J-8 and Avenue K	3	10	62,000	65	0	1.8%	0.7%	77.9	144	447	1,389	4,316

Notes:
(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 aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such, as heavily vegetated ground cover.

"-" = contour is located within the roadway lanes or within 75 feet of the roadway centerline.

Noise levels and distances to contours do not assume any natural or constructed barriers that may attenuate noise.

24-Hour Traffic Distribution for Roadways Designated as "Major," "Arterial" Highways or "Expressways"

	Weighted Traffic Distribution (%)			
	Day	Evening	Night	Totals
Auto	77.70%	12.70%	9.60%	100.00%
Medium-Duty Trucks	87.43%	5.05%	7.52%	100.00%
Heavy-Duty Trucks	89.10%	2.84%	8.06%	100.00%

Notes to Modeler: This model is for roadways designated as "major," "arterial" highways or "expressways by Riverside County." For roadways designated as "secondary," "collectors," or smaller, use the traffic distribution shown below. Vehicle mix for medium- and heavy-duty trucks was provided by Riverside County. Obtain traffic volumes from the traffic engineer. For state and federal highways, obtain percentages and traffic distribution data from the Caltrans website. Column H under Notes: should total 100%.

ROADWAY NAME / Segment	Traffic Volumes: Day	Eve	Night	Ref. Energy Levels: MTd	HTd	MTe	HTe	MTn	HTn	Dist: A	MT	HT	Adj	Ld: A	MT	HT	Total	Le: A	MT	HT	Total	Ln: A	MT	HT	Total	DISTANCE TO CONTOUR (2): 75 CNEL	70 CNEL	65 CNEL	60 CNEL
20th Street West																													
Between Lancaster Blvd and Avenue J	6,527	1,067	806	132	52	8	2	11	5	69.3	77.6	82.1	-1.8	62.9	54.4	54.9	64.0	59.9	46.8	44.7	60.2	55.1	44.9	45.6	55.9	8	24	74	231
Between Avenue J and Avenue J-8	15,851	2,591	1,958	321	127	19	4	28	12	69.3	77.6	82.1	-1.8	66.8	58.2	58.7	67.9	63.8	50.6	48.6	64.1	58.9	48.8	49.5	59.7	18	57	178	554
15th Street West																													
Between Lancaster Blvd and Avenue J	6,682	1,092	826	135	54	8	2	12	5	69.3	77.6	82.1	-1.8	63.0	54.5	55.0	64.1	60.0	46.9	44.8	60.4	55.2	45.0	45.7	56.0	8	25	76	237
Between Avenue J and Avenue J-8	12,898	2,108	1,594	261	104	15	3	22	9	69.3	77.6	82.1	-1.8	65.9	57.3	57.8	67.0	62.9	49.7	47.7	63.2	58.0	47.9	48.6	58.8	15	47	146	452
Between Avenue J-8 and Avenue K	10,179	1,664	1,258	206	82	12	3	18	7	67.4	76.3	81.2	-1.8	63.4	55.5	56.3	64.7	60.4	47.9	46.2	60.8	55.5	46.0	47.1	56.5	9	28	86	267
Avenue J																													
Between 20th Street West and 15th Street West	19,969	3,264	2,467	404	160	23	5	35	14	69.3	77.6	82.1	-1.8	67.8	59.2	59.7	68.9	64.8	51.6	49.6	65.1	59.9	49.8	50.5	60.7	23	72	224	696
Between 15th Street West and 10th Street West	19,814	3,239	2,448	401	159	23	5	35	14	69.3	77.6	82.1	-1.8	67.7	59.2	59.7	68.9	64.7	51.6	49.5	65.1	59.9	49.7	50.5	60.7	23	72	222	690
Avenue J-8																													
Between 20th Street West and 15th Street West	9,946	1,626	1,229	201	80	12	3	17	7	69.3	77.6	82.1	-1.8	64.7	56.2	56.7	65.9	61.8	48.6	46.5	62.1	56.9	46.7	47.5	57.7	12	36	113	350
Between 15th Street West and 10th Street West	6,371	1,041	787	129	51	7	2	11	5	65.1	74.8	80.0	-1.8	59.7	52.6	53.8	61.3	56.7	45.0	43.6	57.2	51.8	43.1	44.5	53.0	4	13	39	121
SR-14																													
Between Avenue J and Avenue J-8	34,965	5,715	4,320	708	281	41	9	61	25	75.5	81.7	85.2	-1.8	74.8	64.1	63.6	75.4	71.8	56.6	53.5	72.0	66.9	54.7	54.4	67.4	105	326	1013	3148
Between Avenue J-8 and Avenue K	48,174	7,874	5,952	976	387	56	12	84	35	75.5	81.7	85.2	-1.8	76.2	65.5	65.0	76.8	73.2	58.0	54.9	73.4	68.3	56.1	55.8	68.8	144	447	1389	4316

Lancaster Health District
Roadway Noise Contours
Buildout

Rev: 11/12/2012

ROADWAY NAME / Segment	Number of Lanes in Each Direction	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor (1)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	Distance from Center of Roadway: CNEL at 75 Feet	DISTANCE TO CONTOUR: 75 CNEL	70 CNEL	65 CNEL	60 CNEL
20th Street West												
Between Lancaster Blvd and Avenue J	2	10	11,500	45	0	1.8%	0.7%	66.3	-	-	101	315
Between Avenue J and Avenue J-8	3	10	13,800	45	0	1.8%	0.7%	67.1	-	-	121	377
15th Street West												
Between Lancaster Blvd and Avenue J	1	10	11,100	45	0	1.8%	0.7%	66.2	-	-	98	304
Between Avenue J and Avenue J-8	3	10	15,100	45	0	1.8%	0.7%	67.5	-	-	133	412
Between Avenue J-8 and Avenue K	2	10	10,800	40	0	1.8%	0.7%	64.8	-	-	-	220
Avenue J												
Between 20th Street West and 15th Street West	3	10	21,400	45	0	1.8%	0.7%	69.0	-	-	187	581
Between 15th Street West and 10th Street West	2	10	25,200	45	0	1.8%	0.7%	69.7	-	-	220	682
Avenue J-8												
Between 20th Street West and 15th Street West	2	10	19,800	45	0	1.8%	0.7%	68.7	-	-	173	538
Between 15th Street West and 10th Street West	1	10	13,300	35	0	1.8%	0.7%	64.2	-	-	-	195
SR-14												
Between Avenue J and Avenue J-8	3	10	55,800	65	0	1.8%	0.7%	77.4	130	403	1,252	3,890
Between Avenue J-8 and Avenue K	3	10	76,000	65	0	1.8%	0.7%	78.8	176	546	1,697	5,274

Notes:
(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 aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such, as heavily vegetated ground cover.

"-" = contour is located within the roadway lanes or within 75 feet of the roadway centerline.
Noise levels and distances to contours do not assume any natural or constructed barriers that may attenuate noise.

24-Hour Traffic Distribution for Roadways Designated as "Major," "Arterial" Highways or "Expressways"

	Weighted Traffic Distribution (%)			
	Day	Evening	Night	Totals
Auto	77.70%	12.70%	9.60%	100.00%
Medium-Duty Trucks	87.43%	5.05%	7.52%	100.00%
Heavy-Duty Trucks	89.10%	2.84%	8.06%	100.00%

Notes to Modeler: This model is for roadways designated as "major," "arterial" highways or "expressways by Riverside County." For roadways designated as "secondary," "collectors," or smaller, use the traffic distribution shown below. Vehicle mix for medium- and heavy-duty trucks was provided by Riverside County. Obtain traffic volumes from the traffic engineer. For state and federal highways, obtain percentages and traffic distribution data from the Caltrans website. Column H under Notes: should total 100%.

ROADWAY NAME / Segment	Traffic Volumes: Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	Ref. Energy Levels: A	MT	HT	Dist Adj	Ld: A	MT	HT	Total	Le: A	MT	HT	Total	Ln: A	MT	HT	Total	DISTANCE TO CONTOUR (2): 75 CNEL	70 CNEL	65 CNEL	60 CNEL
20th Street West																													
Between Lancaster Blvd and Avenue J	8,936	1,461	1,104	181	72	10	2	16	6	69.3	77.6	82.1	-1.8	64.3	55.7	56.2	65.4	61.3	48.1	46.1	61.6	56.4	46.3	47.0	57.3	11	33	101	315
Between Avenue J and Avenue J-8	10,723	1,753	1,325	217	86	13	3	19	8	69.3	77.6	82.1	-1.8	65.1	56.5	57.0	66.2	62.1	48.9	46.9	62.4	57.2	47.1	47.8	58.0	13	39	121	377
15th Street West																													
Between Lancaster Blvd and Avenue J	8,625	1,410	1,066	175	69	10	2	15	6	69.3	77.6	82.1	-1.8	64.1	55.6	56.1	65.2	61.1	48.0	45.9	61.5	56.3	46.1	46.8	57.1	10	32	98	304
Between Avenue J and Avenue J-8	11,733	1,918	1,450	238	94	14	3	20	9	69.3	77.6	82.1	-1.8	65.4	56.9	57.4	66.6	62.5	49.3	47.2	62.8	57.6	47.5	48.2	58.4	14	43	133	412
Between Avenue J-8 and Avenue K	8,392	1,372	1,037	170	67	10	2	15	6	67.4	76.3	81.2	-1.8	62.5	54.7	55.5	63.9	59.5	47.1	45.3	59.9	54.7	45.2	46.3	55.7	7	23	71	220
Avenue J																													
Between 20th Street West and 15th Street West	16,628	2,718	2,054	337	133	19	4	29	12	69.3	77.6	82.1	-1.8	67.0	58.4	58.9	68.1	64.0	50.8	48.8	64.3	59.1	49.0	49.7	59.9	19	60	187	581
Between 15th Street West and 10th Street West	19,580	3,200	2,419	397	157	23	5	34	14	69.3	77.6	82.1	-1.8	67.7	59.1	59.6	68.8	64.7	51.6	49.5	65.0	59.8	49.7	50.4	60.7	23	71	220	682
Avenue J-8																													
Between 20th Street West and 15th Street West	15,385	2,515	1,901	312	123	18	4	27	11	69.3	77.6	82.1	-1.8	66.6	58.1	58.6	67.8	63.6	50.5	48.4	64.0	58.8	48.6	49.4	59.6	18	56	173	538
Between 15th Street West and 10th Street West	10,334	1,689	1,277	209	83	12	3	18	8	65.1	74.8	80.0	-1.8	61.8	54.7	55.9	63.4	58.8	47.1	45.7	59.3	53.9	45.2	46.6	55.1	7	20	63	195
SR-14																													
Between Avenue J and Avenue J-8	43,357	7,087	5,357	878	348	51	11	76	31	75.5	81.7	85.2	-1.8	75.7	65.1	64.6	76.4	72.7	57.5	54.4	72.9	67.9	55.6	55.3	68.4	130	403	1252	3890
Between Avenue J-8 and Avenue K	59,052	9,652	7,296	####	474	69	15	103	43	75.5	81.7	85.2	-1.8	77.1	66.4	65.9	77.7	74.1	58.8	55.7	74.3	69.2	57.0	56.7	69.7	176	546	1697	5274

Lancaster Health District
Roadway Noise Contours
Building plus Project

Rev: 11/12/2012

ROADWAY NAME / Segment	Number of Lanes in Each Direction	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor (1)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	Distance from Center of Roadway: CNEL at 75 Feet	DISTANCE TO CONTOUR: 75 CNEL	70 CNEL	65 CNEL	60 CNEL
20th Street West												
Between Lancaster Blvd and Avenue J	2	10	12,215	45	0	1.8%	0.7%	66.6	-	-	108	334
Between Avenue J and Avenue J-8	3	10	19,216	45	0	1.8%	0.7%	68.6	-	-	168	523
15th Street West												
Between Lancaster Blvd and Avenue J	1	10	13,245	45	0	1.8%	0.7%	66.9	-	-	117	362
Between Avenue J and Avenue J-3	3	10	20,105	45	0	1.8%	0.7%	68.8	-	-	176	546
Between Avenue J-3 and Avenue J-8	3	10	17,847	45	0	1.8%	0.7%	68.2	-	-	156	486
Between Avenue J-8 and Avenue K	2	10	13,924	40	0	1.8%	0.7%	65.9	-	-	91	283
Avenue J												
Between 20th Street West and 15th Street West	3	10	24,878	45	0	1.8%	0.7%	69.7	-	-	217	674
Between 15th Street West and 10th Street West	2	10	28,298	45	0	1.8%	0.7%	70.2	-	79	246	765
Avenue J-8												
Between 20th Street West and 15th Street West	2	10	21,666	45	0	1.8%	0.7%	69.1	-	-	189	588
Between 15th Street West and 10th Street West	1	10	14,020	35	0	1.8%	0.7%	64.4	-	-	-	205
SR-14												
Between Avenue J and Avenue J-8	3	10	57,240	65	0	1.8%	0.7%	77.5	133	413	1,284	3,989
Between Avenue J-8 and Avenue K	3	10	78,069	65	0	1.8%	0.7%	78.9	181	561	1,743	5,415

Notes:

(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 aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such, as heavily vegetated ground cover.

"-" = contour is located within the roadway lanes or within 75 feet of the roadway centerline.

Noise levels and distances to contours do not assume any natural or constructed barriers that may attenuate noise.

24-Hour Traffic Distribution for Roadways Designated as "Major," "Arterial" Highways or "Expressways"

	Weighted Traffic Distribution (%)			
	Day	Evening	Night	Totals
Auto	77.70%	12.70%	9.60%	100.00%
Medium-Duty Trucks	87.43%	5.05%	7.52%	100.00%
Heavy-Duty Trucks	89.10%	2.84%	8.06%	100.00%

Notes to Modeler: This model is for roadways designated as "major," "arterial" highways or "expressways by Riverside County." For roadways designated as "secondary," "collectors," or smaller, use the traffic distribution shown below. Vehicle mix for medium- and heavy-duty trucks was provided by Riverside County. Obtain traffic volumes from the traffic engineer. For state and federal highways, obtain percentages and traffic distribution data from the Caltrans website. Column H under Notes: should total 100%.

ROADWAY NAME / Segment	Traffic Volumes: Day	Eve	Night	Ref. Energy Levels: MTd	HTd	MTe	HTe	MTn	HTn	Le: A	MT	HT	Dist Adj	Ld	Le: A	MT	HT	Total	Ln: A	MT	HT	Total	DISTANCE TO CONTOUR (2): 75 CNEL	70 CNEL	65 CNEL	60 CNEL
20th Street West																										
Between Lancaster Blvd and Avenue J	9,491	1,551	1,173	192	76	11	2	17	7	69.3	77.6	82.1	-1.8	64.5	56.0	56.5	65.7	61.5	48.4	46.3	61.9	56.7	46.5	47.3	57.5	11	35	108	334
Between Avenue J and Avenue J-8	14,931	2,440	1,845	302	120	17	4	26	11	69.3	77.6	82.1	-1.8	66.5	58.0	58.5	67.6	63.5	50.4	48.3	63.8	58.6	48.5	49.2	59.5	17	54	168	523
15th Street West																										
Between Lancaster Blvd and Avenue J	10,291	1,682	1,272	208	83	12	3	18	7	69.3	77.6	82.1	-1.8	64.9	56.3	56.8	66.0	61.9	48.8	46.7	62.2	57.0	46.9	47.6	57.9	12	38	117	362
Between Avenue J and Avenue J-3	15,622	2,553	1,930	316	125	18	4	27	11	69.3	77.6	82.1	-1.8	66.7	58.2	58.7	67.8	63.7	50.6	48.5	64.0	58.8	48.7	49.4	59.7	18	57	176	546
Between Avenue J-3 and Avenue J-8	13,867	2,267	1,713	281	111	16	4	24	10	69.3	77.6	82.1	-1.8	66.2	57.6	58.1	67.3	63.2	50.1	48.0	63.5	58.3	48.2	48.9	59.2	16	50	156	486
Between Avenue J-8 and Avenue K	10,819	1,768	1,337	219	87	13	3	19	8	67.4	76.3	81.2	-1.8	63.6	55.8	56.6	65.0	60.6	48.2	46.4	61.0	55.8	46.3	47.4	56.8	9	29	91	283
Avenue J																										
Between 20th Street West and 15th Street West	19,330	3,160	2,388	392	155	23	5	34	14	69.3	77.6	82.1	-1.8	67.6	59.1	59.6	68.7	64.6	51.5	49.4	65.0	59.8	49.6	50.3	60.6	22	70	217	674
Between 15th Street West and 10th Street West	21,988	3,594	2,717	445	176	26	6	38	16	69.3	77.6	82.1	-1.8	68.2	59.6	60.1	69.3	65.2	52.1	50.0	65.5	60.3	50.2	50.9	61.2	25	79	246	765
Avenue J-8																										
Between 20th Street West and 15th Street West	16,834	2,752	2,080	341	135	20	4	29	12	69.3	77.6	82.1	-1.8	67.0	58.5	59.0	68.1	64.0	50.9	48.8	64.4	59.2	49.0	49.7	60.0	20	61	189	588
Between 15th Street West and 10th Street West	10,894	1,781	1,346	221	87	13	3	19	8	65.1	74.8	80.0	-1.8	62.0	54.9	56.1	63.6	59.0	47.3	45.9	59.5	54.1	45.4	46.9	55.3	7	21	66	205
SR-14																										
Between Avenue J and Avenue J-8	44,475	7,269	5,495	901	357	52	11	77	32	75.5	81.7	85.2	-1.8	75.8	65.2	64.7	76.5	72.9	57.6	54.5	73.0	68.0	55.7	55.4	68.5	133	413	1284	3989
Between Avenue J-8 and Avenue K	60,660	9,915	7,495	####	487	71	16	106	44	75.5	81.7	85.2	-1.8	77.2	66.5	66.0	77.8	74.2	59.0	55.9	74.4	69.3	57.1	56.8	69.8	181	561	1743	5415

APPENDIX H.3

Construction Equipment Noise Output Sheets

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/17/20
Case Descr Demolition

---- Receptor #1 ----

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

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	50	0
Excavator	No	40		80.7	50	0
Excavator	No	40		80.7	50	0
Excavator	No	40		80.7	50	0
Dozer	No	40		81.7	50	0
Dozer	No	40		81.7	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	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	81.7	77.7	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	81.7	77.7	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	89.6	86.4	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.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/17/20
Case Descr SitePreparation

---- Receptor #1 ----

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

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Tractor	No	40	84		50	0
Tractor	No	40	84		50	0
Tractor	No	40	84		50	0
Tractor	No	40	84		50	0
Dozer	No	40		81.7	50	0
Dozer	No	40		81.7	50	0
Dozer	No	40		81.7	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor	84	80	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	84	80	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	84	80	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	84	80	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	81.7	77.7	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	81.7	77.7	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	81.7	77.7	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	84	87.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/17/20
Case Descr SitePreparation

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
50 feet	Residential	50	50	50

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	50	0
Excavator	No	40		80.7	50	0
Grader	No	40	85		50	0
Dozer	No	40		81.7	50	0
Scraper	No	40		83.6	50	0
Scraper	No	40		83.6	50	0
Tractor	No	40	84		50	0
Tractor	No	40	84		50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	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	85	81	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	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	83.6	79.6	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	84	80	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	84	80	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	85	88.2	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 6/17/20
Case Descr Grading

---- Receptor #1 ----

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

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	50	0
Forklift	No	40	85		50	0
Forklift	No	40	85		50	0
Forklift	No	40	85		50	0
Generator	No	50	82		50	0
Tractor	No	40	84		50	0
Tractor	No	40	84		50	0
Tractor	No	40	84		50	0
Welder / Torch	No	40		74	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift	85	81	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	82	79	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	84	80	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	84	80	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	84	80	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	74	70	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	85	89	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 6/17/29
Case Descr Paving

				---- Receptor #1 ----
		Baselines (dBA)		
Descriptior	Land Use	Daytime	Evening	Night
50 feet	Residential	50	50	50

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Paver	No	50		77.2	50	0
Paver	No	50		77.2	50	0
Paver	No	50		77.2	50	0
Paver	No	50		77.2	50	0
Roller	No	20		80	50	0
Roller	No	20		80	50	0

			Results											
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	80	73	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	80	73	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	80	81.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 6/17/20
Case Descr ArchitecturalCoating

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
50 feet	Residential	50	50	50

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40		77.7	50	0

			Results											
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	77.7	73.7	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	77.7	73.7	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.

APPENDIX H.4

Construction Vibration Output Sheets

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	50	0.031	0.008	78
Jackhammer		1	0.035	50	0.012	0.003	70
Large bulldozer		1	0.089	50	0.031	0.008	78
Loaded trucks		1	0.076	50	0.027	0.007	77
Pile Drive (impact)		1	0.644	50	0.228	0.057	95
Vibratory Roller		1	0.210	50	0.074	0.019	85
Small bulldozer		1	0.003	50	0.001	0.000	48

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06), May 2006, pg. 12-12.**

-Fragile Buildings- 0.20 in/sec

Lancaster Health District Master Plan
Construction Vibration Model
(75 feet)

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	75	0.017	0.004	73
Jackhammer		1	0.035	75	0.007	0.002	65
Large bulldozer		1	0.089	75	0.017	0.004	73
Loaded trucks		1	0.076	75	0.015	0.004	71
Pile Drive (impact)		1	0.644	75	0.124	0.031	90
Vibratory Roller		1	0.210	75	0.040	0.010	80
Small bulldozer		1	0.003	75	0.001	0.000	43

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06), May 2006, pg. 12-12.**

-Fragile Buildings- 0.20 in/sec

Lancaster Health District Master Plan
Construction Vibration Model
(100 feet)

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance[a]	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	100	0.011	0.003	69
Jackhammer		1	0.035	100	0.004	0.001	61
Large bulldozer		1	0.089	100	0.011	0.003	69
Loaded trucks		1	0.076	100	0.010	0.002	68
Pile Drive (impact)		1	0.644	100	0.081	0.020	86
Vibratory Roller		1	0.210	100	0.026	0.007	76
Small bulldozer		1	0.003	100	0.000	0.000	39

*** Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06), May 2006, pg. 12-12.**

-Fragile Buildings- 0.20 in/sec