



APPENDIX IV.K

Noise

Monitoring Location: Site 1
Monitoring Date: 2/3/2021

Monitoring Period

Time	LAeq	LASmax	LASmin
12:08:08	58.4	66.0	55.0
12:09:08	55.3	59.3	53.5
12:10:08	55.9	58.5	54.1
12:11:08	55.2	56.7	53.7
12:12:08	55.3	57.7	53.7
12:13:08	55.9	58.6	54.4
12:14:08	59.2	63.6	56.2
12:15:08	55.2	57.9	53.7
12:16:08	54.3	55.9	53.4
12:17:08	53.8	55.8	52.6
12:18:08	54.0	55.8	52.3
12:19:08	53.9	55.4	52.3
12:20:08	55.7	59.5	53.6
12:21:08	56.6	62.7	53.7
12:22:08	55.7	57.9	53.4
12:23:08	55.7	55.7	55.7

15-minute LAeq 55.9

Monitoring Location: Site 2
Monitoring Date: 2/3/2021

Monitoring Period

Time	LAeq	LASmax	LASmin
12:47:12	62.3	68.8	58.8
12:48:12	60.2	63.7	59.0
12:49:12	60.1	60.9	59.4
12:50:12	63.5	69.8	58.8
12:51:12	59.3	60.8	58.0
12:52:12	59.2	60.5	58.0
12:53:12	60.2	61.9	58.5
12:54:12	59.0	60.4	58.2
12:55:12	59.4	61.4	58.2
12:56:12	60.2	62.9	58.5
12:57:12	59.2	60.7	57.8
12:58:12	59.6	63.4	58.0
12:59:12	59.3	61.0	58.1
13:00:12	60.1	61.7	59.3
13:01:12	58.7	60.9	57.0
13:02:12	58.1	57.8	57.7



15-minute LAeq

60.1

Monitoring Location: Site 3
Monitoring Date: 2/3/2021

Monitoring Period

Time	LAeq	LASmax	LASmin
13:16:51	60.6	70.5	50.6
13:17:51	58.3	63.1	56.0
13:18:51	58.6	65.1	55.3
13:19:51	57.5	61.7	55.3
13:20:51	58.9	65.9	56.0
13:21:51	68.4	81.2	51.8
13:22:51	51.7	53.4	49.4
13:23:51	51.8	55.1	49.4
13:24:51	50.5	52.9	48.8
13:25:51	55.4	62.6	49.4
13:26:51	53.2	59.1	47.0
13:27:51	53.5	57.6	49.2
13:28:51	53.5	56.8	51.1
13:29:51	50.8	54.4	47.7
13:30:51	53.8	57.9	46.9
13:31:51	47.8	47.8	47.6



15-minute LAeq

59.0

Monitoring Location: Site 4
Monitoring Date: 2/3/2021

Monitoring Period

Time	LAeq	LASmax	LASmin
14:09:01	51.1	53.8	49.3
14:10:01	51.3	55.3	48.9
14:11:01	57.6	64.1	50.0
14:12:01	53.3	63.6	49.2
14:13:01	52.8	61.6	48.2
14:14:01	50.2	57.6	48.2
14:15:01	52.6	59.2	49.0
14:16:01	51.4	57.6	49.3
14:17:01	50.6	54.8	49.1
14:18:01	50.1	55.8	48.4
14:19:01	51.2	53.2	50.0
14:20:01	51.1	53.3	49.2
14:21:01	51.1	56.7	49.4
14:22:01	50.8	53.0	49.4
14:23:01	52.2	56.7	50.8
14:24:01	52.9	55.3	50.6



15-minute LAeq

52.4

Monitoring Location: Site 5
Monitoring Date: 2/3/2021

Monitoring Period

Time	LAeq	LASmax	LASmin
13:40:03	71.9	79.4	52.4
13:41:03	69.5	74.5	57.3
13:42:03	72.8	79.5	56.9
13:43:03	70.6	77.3	50.9
13:44:03	70.1	76.7	62.1
13:45:03	73.2	78.5	66.0
13:46:03	72.4	78.0	55.3
13:47:03	71.6	78.9	56.5
13:48:03	74.3	80.4	57.8
13:49:03	71.9	78.7	57.4
13:50:03	71.7	77.6	55.6
13:51:03	70.9	77.5	54.4
13:52:03	70.7	75.7	61.0
13:53:03	73.2	80.1	53.5
13:54:03	71.3	79.9	52.0
13:55:03	61.6	64.4	63.4



15-minute LAeq

71.7

Monitoring Location: Site 6
Monitoring Date: 2/3/2021

Monitoring Period

Time	LAeq	LASmax	LASmin
14:38:12	57.8	62.7	55.3
14:39:12	60.0	72.2	56.6
14:40:12	68.1	76.9	58.4
14:41:12	60.9	63.6	57.7
14:42:12	60.1	65.3	58.0
14:43:12	60.9	63.7	58.7
14:44:12	61.0	63.2	59.3
14:45:12	61.7	64.5	59.5
14:46:12	59.4	63.2	57.1
14:47:12	60.1	62.4	56.4
14:48:12	61.1	62.3	59.2
14:49:12	61.8	66.2	59.7
14:50:12	63.1	68.1	59.8
14:51:12	63.2	68.3	58.8
14:52:12	60.1	61.9	58.5
14:53:12	59.8	60.0	59.4



15-minute LAeq

61.9

Monitoring Location: Site 7
Monitoring Date: 2/3/2021

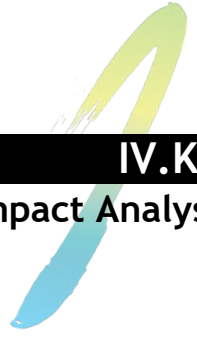
Monitoring Period

Time	LAeq	LASmax	LASmin
14:58:28	62.4	67.3	60.1
14:59:28	61.1	63.4	59.9
15:00:28	62.5	67.1	59.6
15:01:28	64.1	71.8	60.7
15:02:28	61.9	64.7	60.4
15:03:28	60.9	62.2	59.7
15:04:28	63.8	70.6	59.9
15:05:28	61.9	65.5	59.7
15:06:28	62.9	66.3	61.1
15:07:28	61.7	63.4	60.3
15:08:28	62.2	65.9	60.0
15:09:28	62.7	65.0	61.5
15:10:28	62.2	64.7	60.2
15:11:28	61.8	64.9	59.8
15:12:28	62.5	66.9	60.1
15:13:28	59.8	60.8	60.5



15-minute LAeq

62.3



IV.K.1

Traffic Impact Analysis



IV.K.2

Construction Noise Worksheets

Roadway Construction Noise Model (RCNM),Version 1.1

Report date #####

Case Description Site Clearing

---- Receptor #1 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Site 2	Residential	60.1	60.1	60.1

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	160	0
Dozer	No	40		81.7	160	0
Dozer	No	40		81.7	160	0
Backhoe	No	40		77.6	160	0
Backhoe	No	40		77.6	160	0
Front End Loader	No	40		79.1	160	0
Tractor	No	40	84		160	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
Dozer	71.6	67.6	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	71.6	67.6	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	71.6	67.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	67.5	63.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	67.5	63.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	69	65	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	73.9	69.9	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	73.9	75.4	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 #2 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Site 3	Residential	59	59	59

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	60	0
Dozer	No	40		81.7	60	0
Dozer	No	40		81.7	60	0
Backhoe	No	40		77.6	60	0
Backhoe	No	40		77.6	60	0
Front End Loader	No	40		79.1	60	0
Tractor	No	40	84		60	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
Dozer	80.1	76.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	80.1	76.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	80.1	76.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	76	72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	76	72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	77.5	73.5	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	82.4	78.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	82.4	83.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Site 4	Residential	52.4	52.4	52.4

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	460	0
Dozer	No	40		81.7	460	0
Dozer	No	40		81.7	460	0
Backhoe	No	40		77.6	460	0
Backhoe	No	40		77.6	460	0
Front End Loader	No	40		79.1	460	0
Tractor	No	40	84		460	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
Dozer	62.4	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	62.4	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	62.4	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.3	54.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.3	54.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	59.8	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	64.7	60.7	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	64.7	66.2	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.

---- Receptor #4 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 5	Residentia	71.7	71.7	71.7

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	430	0
Dozer	No	40		81.7	430	0
Dozer	No	40		81.7	430	0
Backhoe	No	40		77.6	430	0
Backhoe	No	40		77.6	430	0
Front End Loader	No	40		79.1	430	0
Tractor	No	40	84		430	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
Dozer	63	59	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	63	59	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	63	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.9	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.9	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	60.4	56.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.3	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	65.3	66.8	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 #5 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 6	Residentia	61.9	61.9	61.9

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	1000	0
Dozer	No	40		81.7	1000	0
Dozer	No	40		81.7	1000	0
Backhoe	No	40		77.6	1000	0
Backhoe	No	40		77.6	1000	0
Front End Loader	No	40		79.1	1000	0
Tractor	No	40	84		1000	0

Equipment	Results													
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
	*Lmax	Leq	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Dozer	55.6	51.7	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	55.6	51.7	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	55.6	51.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	51.5	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	51.5	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	53.1	49.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58	54	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	58	59.5	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 #6 ----

Baselines (dBA)		Daytime	Evening	Night
Descriptio Land Use	Site 7 Residential	62.3	62.3	62.3

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
			Dozer	No	40	81.7
Dozer	No	40	81.7	1000	0	
Dozer	No	40	81.7	1000	0	
Backhoe	No	40	77.6	1000	0	
Backhoe	No	40	77.6	1000	0	
Front End Loader	No	40	79.1	1000	0	
Tractor	No	40	84	1000	0	

Equipment	Results													
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
	*Lmax	Leq	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Dozer	55.6	51.7	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	55.6	51.7	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	55.6	51.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	51.5	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	51.5	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	53.1	49.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58	54	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	58	59.5	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.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date #####

Case Description Bioremediation

---- Receptor #1 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Site 2	Residential	60.1	60.1	60.1

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	160	0
Dozer	No	40		81.7	160	0
Backhoe	No	40		77.6	160	0
Backhoe	No	40		77.6	160	0
Front End Loader	No	40		79.1	160	0
Tractor	No	40	84		160	0
Dozer	No	40		81.7	160	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
Dozer	71.6	67.6	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	71.6	67.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	67.5	63.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	67.5	63.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	69	65	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	73.9	69.9	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	71.6	67.6	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	73.9	75.4	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 #2 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Site 3	Residential	59	59	59

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	60	0
Dozer	No	40		81.7	60	0
Backhoe	No	40		77.6	60	0
Backhoe	No	40		77.6	60	0
Front End Loader	No	40		79.1	60	0
Tractor	No	40	84		60	0
Dozer	No	40		81.7	60	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
Dozer	80.1	76.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	80.1	76.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	76	72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	76	72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	77.5	73.5	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	82.4	78.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	80.1	76.1	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	82.4	83.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Site 4	Residential	52.4	52.4	52.4

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	460	0
Dozer	No	40		81.7	460	0
Backhoe	No	40		77.6	460	0
Backhoe	No	40		77.6	460	0
Front End Loader	No	40		79.1	460	0
Tractor	No	40	84		460	0
Dozer	No	40		81.7	460	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
Dozer	62.4	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	62.4	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.3	54.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.3	54.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	59.8	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	64.7	60.7	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	62.4	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.7	66.2	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.

---- Receptor #4 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 5	Residentia	71.7	71.7	71.7

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	430	0
Dozer	No	40		81.7	430	0
Backhoe	No	40		77.6	430	0
Backhoe	No	40		77.6	430	0
Front End Loader	No	40		79.1	430	0
Tractor	No	40	84		430	0
Dozer	No	40		81.7	430	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
Dozer	63	59	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	63	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.9	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.9	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	60.4	56.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.3	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	63	59	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	65.3	66.8	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 #5 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 6	Residentia	61.9	61.9	61.9

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	1000	0
Dozer	No	40		81.7	1000	0
Backhoe	No	40		77.6	1000	0
Backhoe	No	40		77.6	1000	0
Front End Loader	No	40		79.1	1000	0
Tractor	No	40	84		1000	0
Dozer	No	40		81.7	1000	0

Equipment	Results													
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
	*Lmax	Leq	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Dozer	55.6	51.7	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	55.6	51.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	51.5	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	51.5	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	53.1	49.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58	54	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	55.6	51.7	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	58	59.5	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 #6 ----

Baselines (dBA)		Daytime	Evening	Night
Descriptio Land Use	Site 7 Residential	62.3	62.3	62.3

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
			Dozer	No	40	81.7
Dozer	No	40	81.7	1000	0	
Backhoe	No	40	77.6	1000	0	
Backhoe	No	40	77.6	1000	0	
Front End Loader	No	40	79.1	1000	0	
Tractor	No	40	84	1000	0	
Dozer	No	40	81.7	1000	0	

Equipment	Results													
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
	*Lmax	Leq	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Dozer	55.6	51.7	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	55.6	51.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	51.5	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	51.5	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	53.1	49.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58	54	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	55.6	51.7	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	58	59.5	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.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date #####
Case Desc: Grading

---- Receptor #1 ----

		Baselines (dBA)		
Descriptio	Land Use	Daytime	Evening	Night
Site 2	Residentia	60.1	60.1	60.1

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	160	0
Excavator	No	40		80.7	160	0
Grader	No	40	85		160	0
Dozer	No	40		81.7	160	0
Scraper	No	40		83.6	160	0
Scraper	No	40		83.6	160	0
Backhoe	No	40		77.6	160	0
Tractor	No	40	84		160	0

Equipment	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)							
	*Lmax	Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Excavator	70.6	66.6	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	70.6	66.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	74.9	70.9	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	71.6	67.6	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	73.5	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
Scraper	73.5	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
Backhoe	67.5	63.5	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	73.9	69.9	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	74.9	77.6	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.

---- Receptor #2 ----

		Baselines (dBA)		
Descriptio	Land Use	Daytime	Evening	Night
Site 3	Residentia	59	59	59

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	85	0
Excavator	No	40		80.7	85	0
Grader	No	40	85		60	0
Dozer	No	40		81.7	60	0
Scraper	No	40		83.6	60	0
Scraper	No	40		83.6	60	0
Backhoe	No	40		77.6	60	0
Tractor	No	40	84		60	0

Equipment	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)							
	*Lmax	Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Excavator	76.1	72.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	76.1	72.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	83.4	79.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	80.1	76.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	82	78	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	82	78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	76	72	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	82.4	78.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	83.4	85.7	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.

---- Receptor #3 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 4	Residentia	52.4	52.4	52.4

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	460	0
Excavator	No	40		80.7	460	0
Grader	No	40	85		460	0
Dozer	No	40		81.7	460	0
Scraper	No	40		83.6	460	0
Scraper	No	40		83.6	460	0
Backhoe	No	40		77.6	460	0
Tractor	No	40	84		460	0

Equipment	Results													
	Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Excavator	61.4	57.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	61.4	57.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	65.7	61.7	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	62.4	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	64.3	60.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	64.3	60.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.3	54.3	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	64.7	60.7	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	65.7	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 #4 ----

Baselines (dBA)				
Descriptio	Land Use	Daytime	Evening	Night
Site 5	Residentia	71.7	71.7	71.7

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	430	0
Excavator	No	40		80.7	430	0
Grader	No	40	85		430	0
Dozer	No	40		81.7	430	0
Scraper	No	40		83.6	430	0
Scraper	No	40		83.6	430	0
Backhoe	No	40		77.6	430	0
Tractor	No	40	84		430	0

Equipment	Results													
	Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Excavator	62	58	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	62	58	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	66.3	62.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	63	59	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	64.9	60.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper	64.9	60.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.9	54.9	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	65.3	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66.3	69	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 #5 ----

Baselines (dBA)				
Descriptio	Land Use	Daytime	Evening	Night
Site 6	Residentia	61.9	61.9	61.9

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)

Excavator	No	40		80.7	1000	0
Excavator	No	40		80.7	1000	0
Grader	No	40	85		1000	0
Dozer	No	40		81.7	1000	0
Scraper	No	40		83.6	1000	0
Scraper	No	40		83.6	1000	0
Backhoe	No	40		77.6	1000	0
Tractor	No	40	84		1000	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
Excavator	54.7	50.7	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	54.7	50.7	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	59	55	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	55.6	51.7	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	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
Scraper	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
Backhoe	51.5	47.6	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	58	54	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	59	61.7	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.

---- Receptor #6 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 7	Residentia	62.3	62.3	62.3

Equipment

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Excavator	No	40		80.7	1000	0
Excavator	No	40		80.7	1000	0
Grader	No	40	85		1000	0
Dozer	No	40		81.7	1000	0
Scraper	No	40		83.6	1000	0
Scraper	No	40		83.6	1000	0
Backhoe	No	40		77.6	1000	0
Tractor	No	40	84		1000	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
Excavator	54.7	50.7	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	54.7	50.7	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	59	55	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	55.6	51.7	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	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
Scraper	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
Backhoe	51.5	47.6	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	58	54	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	59	61.7	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.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date #####

Case Description Utility Installation/Streets

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site 2	Residential	60.1	60.1	60.1

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	160	0
Paver	No	50		77.2	160	0
Paver	No	50		77.2	160	0
Paver	No	50		77.2	160	0
Roller	No	20		80	160	0
Roller	No	20		80	160	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)							
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Paver	67.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	67.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	67.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	67.1	64.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	69.9	62.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	69.9	62.9	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	69.9	71.5	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
Site 3	Residential	59	59	59

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	60	0
Paver	No	50		77.2	60	0
Paver	No	50		77.2	60	0
Paver	No	50		77.2	60	0
Roller	No	20		80	60	0
Roller	No	20		80	60	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)							
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Paver	75.6	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
Paver	75.6	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
Paver	75.6	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
Paver	75.6	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
Roller	78.4	71.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	78.4	71.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	78.4	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

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site 4	Residential	52.4	52.4	52.4

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	460	0

Roller		54	47	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		54	55.6	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.

---- Receptor #6 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 7	Residentia	62.3	62.3	62.3

Equipment

Description	Impact Device	Usage(%)	Equipment	Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)		
Paver	No	50	77.2	1000	0
Paver	No	50	77.2	1000	0
Paver	No	50	77.2	1000	0
Paver	No	50	77.2	1000	0
Roller	No	20	80	1000	0
Roller	No	20	80	1000	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
Paver	51.2	48.2	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	51.2	48.2	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	51.2	48.2	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	51.2	48.2	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	54	47	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	54	47	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	54	55.6	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.

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 4	Residentia	52.4	52.4	52.4

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Crane	No	16		80.6	460	0
Forklift	No	40		85	460	0
Forklift	No	40		85	460	0
Forklift	No	40		85	460	0
Generator	No	50		80.6	460	0
Backhoe	No	40		77.6	460	0
Front End Loader	No	40		79.1	460	0
Tractor	No	40	84		460	0
Welder / Torch	No	40		74	460	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	61.3	53.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift	65.7	61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift	65.7	61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift	65.7	61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	61.4	58.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.3	54.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	59.8	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	64.7	60.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	54.7	50.7	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	65.7	68.7	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.

---- Receptor #4 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 5	Residentia	71.7	71.7	71.7

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Crane	No	16		80.6	430	0
Forklift	No	40		85	430	0
Forklift	No	40		85	430	0
Forklift	No	40		85	430	0
Generator	No	50		80.6	430	0
Backhoe	No	40		77.6	430	0
Front End Loader	No	40		79.1	430	0
Tractor	No	40	84		430	0
Welder / Torch	No	40		74	430	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	61.9	53.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift	66.3	62.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift	66.3	62.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift	66.3	62.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	61.9	58.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.9	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	60.4	56.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.3	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	55.3	51.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66.3	69.2	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.

---- Receptor #5 ----

		Baselines (dBA)		
Descriptio	Land Use	Daytime	Evening	Night
Site 6	Residentia	61.9	61.9	61.9

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	1000	0
Forklift	No	40		85	1000	0
Forklift	No	40		85	1000	0
Forklift	No	40		85	1000	0
Generator	No	50		80.6	1000	0
Backhoe	No	40		77.6	1000	0
Front End Loader	No	40		79.1	1000	0
Tractor	No	40	84		1000	0
Welder / Torch	No	40		74	1000	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
Crane	54.5	46.6	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	59	55	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	59	55	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	59	55	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	54.6	51.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	51.5	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	53.1	49.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58	54	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	48	44	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	59	61.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

		Baselines (dBA)		
Descriptio	Land Use	Daytime	Evening	Night
Site 7	Residentia	62.3	62.3	62.3

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	1000	0
Forklift	No	40		85	1000	0
Forklift	No	40		85	1000	0
Forklift	No	40		85	1000	0
Generator	No	50		80.6	1000	0
Backhoe	No	40		77.6	1000	0
Front End Loader	No	40		79.1	1000	0
Tractor	No	40	84		1000	0
Welder / Torch	No	40		74	1000	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
Crane	54.5	46.6	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	59	55	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	59	55	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	59	55	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	54.6	51.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	51.5	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	53.1	49.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58	54	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	48	44	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	59	61.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date #####

Case Description Architectural Coating

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site 2	Residential	60.1	60.1	60.1

		Equipment				
		Spec	Actual	Receptor	Estimated	
Description	Impact	Lmax	Lmax	Distance	Shielding	
	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40	77.7	160	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)	67.6	63.6	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	67.6	63.6	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.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site 3	Residential	59	59	59

		Equipment				
		Spec	Actual	Receptor	Estimated	
Description	Impact	Lmax	Lmax	Distance	Shielding	
	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40	77.7	60	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)	76.1	72.1	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	76.1	72.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site 4	Residential	52.4	52.4	52.4

		Equipment				
		Spec	Actual	Receptor	Estimated	
Description	Impact	Lmax	Lmax	Distance	Shielding	
	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40	77.7	460	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)	58.4	54.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	58.4	54.4	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 #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site 5	Residential	71.7	71.7	71.7

		Equipment				
		Spec	Actual	Receptor	Estimated	
Description	Impact	Lmax	Lmax	Distance	Shielding	
	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40	77.7	430	0	

Equipment	Results															
	Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)							
	*Lmax		Leq		Day		Evening		Night		Day		Evening		Night	
Compressor (air)	59		55	N/A	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	59		55	N/A	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 #5 ----

Baselines (dBA)				
Descriptio	Land Use	Daytime	Evening	Night
Site 6	Residentia	61.9	61.9	61.9

Description	Impact Device	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	1000	0

Equipment	Results															
	Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)							
	*Lmax		Leq		Day		Evening		Night		Day		Evening		Night	
Compressor (air)	51.6		47.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	51.6		47.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

Baselines (dBA)				
Descriptio	Land Use	Daytime	Evening	Night
Site 7	Residentia	62.3	62.3	62.3

Description	Impact Device	Usage(%)	Equipment			
			Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	1000	0

Equipment	Results															
	Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)							
	*Lmax		Leq		Day		Evening		Night		Day		Evening		Night	
Compressor (air)	51.6		47.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	51.6		47.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.



IV.K.3

Construction Vibration Worksheets

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	160	0.005	0.001	63
Jackhammer		1	0.035	160	0.002	0.001	55
Large bulldozer		1	0.089	160	0.005	0.001	63
Loaded trucks		1	0.076	160	0.005	0.001	61
Pile Drive (impact)		1	0.644	160	0.040	0.010	80
Vibratory Roller		1	0.210	160	0.013	0.003	70
Small bulldozer		1	0.003	160	0.000	0.000	33

* 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

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	60	0.024	0.006	76
Jackhammer		1	0.035	60	0.009	0.002	67
Large bulldozer		1	0.089	60	0.024	0.006	76
Loaded trucks		1	0.076	60	0.020	0.005	74
Pile Drive (impact)		1	0.644	60	0.173	0.043	93
Vibratory Roller		1	0.210	80	0.037	0.009	79
Small bulldozer		1	0.003	60	0.001	0.000	46

* 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

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	450	0.001	0.000	49
Jackhammer		1	0.035	450	0.000	0.000	41
Large bulldozer		1	0.089	450	0.001	0.000	49
Loaded trucks		1	0.076	450	0.001	0.000	48
Pile Drive (impact)		1	0.644	450	0.008	0.002	66
Vibratory Roller		1	0.210	450	0.003	0.001	57
Small bulldozer		1	0.003	450	0.000	0.000	20

* 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

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	430	0.001	0.000	50
Jackhammer		1	0.035	430	0.000	0.000	42
Large bulldozer		1	0.089	430	0.001	0.000	50
Loaded trucks		1	0.076	430	0.001	0.000	49
Pile Drive (impact)		1	0.644	430	0.009	0.002	67
Vibratory Roller		1	0.210	430	0.003	0.001	57
Small bulldozer		1	0.003	430	0.000	0.000	20

* 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

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	1000	0.000	0.000	39
Jackhammer		1	0.035	1000	0.000	0.000	31
Large bulldozer		1	0.089	1000	0.000	0.000	39
Loaded trucks		1	0.076	1000	0.000	0.000	38
Pile Drive (impact)		1	0.644	1000	0.003	0.001	56
Vibratory Roller		1	0.210	1000	0.001	0.000	46
Small bulldozer		1	0.003	1000	0.000	0.000	9

* 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

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	1000	0.000	0.000	39
Jackhammer		1	0.035	1000	0.000	0.000	31
Large bulldozer		1	0.089	1000	0.000	0.000	39
Loaded trucks		1	0.076	1000	0.000	0.000	38
Pile Drive (impact)		1	0.644	1000	0.003	0.001	56
Vibratory Roller		1	0.210	1000	0.001	0.000	46
Small bulldozer		1	0.003	1000	0.000	0.000	9

* 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



IV.K.4

Roadway Noise Worksheets



Project Name: Long Beach Riverpark AM Peak Hour and PM Peak Hour		rev. (Date)				If Peak Hour = 6% of ADT, Scaling Factor = 16.667				If Peak Hour = 7% of ADT, Scaling Factor = 14.286				If Peak Hour = 8% of ADT, Scaling Factor = 12.5				If Peak Hour = 9% of ADT, Scaling Factor = 11.111				If Peak Hour = 10% of ADT, Scaling Factor = 10			
Intersection: Magnolia Avenue & Wardlow Road		2																							
Magnolia Avenue																ADT									
Southbound												Road				Magnolia Avenue				Wardlow Road					
												Leg				North of				South of					
												Cross Street				Wardlow Road				Magnolia Avenue					
												right				through				left					
Existing Baseline (2020) No Project AM												38				14				38					
Existing Baseline (2020) No Project PM												19				13				50					
Existing Baseline (2020) Plus Project AM												38				24				93					
Existing Baseline (2020) Plus Project PM												19				19				84					
Opening Year (2026) No Project AM												39				15				39					
Opening Year (2026) No Project PM												20				14				52					
Opening Year (2026) Plus Project AM												39				25				94					
Opening Year (2026) Plus Project PM												20				20				86					
Eastbound												left				through				right					
Existing Baseline (2020) No Project AM												49				491				76					
Existing Baseline (2020) No Project PM												39				993				163					
Existing Baseline (2020) Plus Project AM												49				505				76					
Existing Baseline (2020) Plus Project PM												39				996				163					
Opening Year (2026) No Project AM												51				477				78					
Opening Year (2026) No Project PM												40				1,200				167					
Opening Year (2026) Plus Project AM												51				491				78					
Opening Year (2026) Plus Project PM												40				1,203				167					
Northbound												left				through				right					
Existing Baseline (2020) No Project AM												127				11				79					
Existing Baseline (2020) No Project PM												115				32				234					
Existing Baseline (2020) Plus Project AM												129				13				65					
Existing Baseline (2020) Plus Project PM												121				37				234					
Opening Year (2026) No Project AM												131				12				105					
Opening Year (2026) No Project PM												118				33				148					
Opening Year (2026) Plus Project AM												133				14				91					
Opening Year (2026) Plus Project PM												124				38				148					
Westbound												right				through				left					
Existing Baseline (2020) No Project AM												19				432				72					
Existing Baseline (2020) No Project PM												46				463				120					
Existing Baseline (2020) Plus Project AM												52				361				72					
Existing Baseline (2020) Plus Project PM												74				492				120					
Opening Year (2026) No Project AM												20				471				74					
Opening Year (2026) No Project PM												48				474				123					
Opening Year (2026) Plus Project AM												53				400				74					
Opening Year (2026) Plus Project PM												76				503				123					
Wardlow Road	Existing Baseline (2020) No Project AM												19				432				72				
	Existing Baseline (2020) No Project PM												46				463				120				
	Existing Baseline (2020) Plus Project AM												52				361				72				
	Existing Baseline (2020) Plus Project PM												74				492				120				
	Opening Year (2026) No Project AM												20				471				74				
	Opening Year (2026) No Project PM												48				474				123				
	Opening Year (2026) Plus Project AM												53				400				74				
	Opening Year (2026) Plus Project PM												76				503				123				
	Existing Baseline (2020) No Project AM												19				432				72				
	Existing Baseline (2020) No Project PM												46				463				120				
	Existing Baseline (2020) Plus Project AM												52				361				72				
	Existing Baseline (2020) Plus Project PM												74				492				120				

Project Name: Long Beach Riverpark AM Peak Hour and PM Peak Hour		rev. (Date)			If Peak Hour = 6% of ADT, Scaling Factor = 16.667				If Peak Hour = 7% of ADT, Scaling Factor = 14.286				If Peak Hour = 8% of ADT, Scaling Factor = 12.5				If Peak Hour = 9% of ADT, Scaling Factor = 11.111				If Peak Hour = 10% of ADT, Scaling Factor = 10				
Intersection: 4														ADT											
Long Beach Boulevard & Wardlow Road																									
		Long Beach Boulevard												Road				Long Beach Boulevard				Wardlow Road			
		Southbound												Leg				North of				South of			
					right	through	left					Cross Street				Wardlow Road				Long Beach Boulevard					
					Existing Baseline (2020) No Project AM	387	736	54					Existing Baseline (2020) No Project AM				18,040.0	16,264.0	11,552.0	16,704.0					
					Existing Baseline (2020) No Project PM	140	4	34					Existing Baseline (2020) No Project PM				4,016.0	648.0	17,392.0	20,056.0					
					Existing Baseline (2020) Plus Project AM	389	736	54					Existing Baseline (2020) Plus Project AM				18,112.0	16,320.0	11,736.0	17,016.0					
					Existing Baseline (2020) Plus Project PM	147	4	34					Existing Baseline (2020) Plus Project PM				4,104.0	720.0	17,624.0	20,448.0					
					Opening Year (2026) No Project AM	397	754	56					Opening Year (2026) No Project AM				18,784.0	16,704.0	11,864.0	17,368.0					
					Opening Year (2026) No Project PM	144	5	35					Opening Year (2026) No Project PM				4,432.0	728.0	17,856.0	20,808.0					
					Opening Year (2026) Plus Project AM	399	754	56					Opening Year (2026) Plus Project AM				18,856.0	16,760.0	12,048.0	17,680.0					
					Opening Year (2026) Plus Project PM	151	5	35					Opening Year (2026) Plus Project PM				4,520.0	800.0	18,088.0	21,200.0					
		Eastbound												Westbound											
		left	through	right				right	through	left															
Wardlow Road	Existing Baseline (2020) No Project AM		244	495	33				Existing Baseline (2020) No Project AM	33	664	79													
	Existing Baseline (2020) No Project PM		270	1,422	21				Existing Baseline (2020) No Project PM	44	641	16													
	Existing Baseline (2020) Plus Project AM		251	512	38				Existing Baseline (2020) Plus Project AM	33	670	79													
	Existing Baseline (2020) Plus Project PM		274	1,433	24				Existing Baseline (2020) Plus Project PM	44	659	16													
	Opening Year (2026) No Project AM		280	507	34				Opening Year (2026) No Project AM	36	681	81													
	Opening Year (2026) No Project PM		307	1,457	22				Opening Year (2026) No Project PM	48	657	17													
	Opening Year (2026) Plus Project AM		287	524	39				Opening Year (2026) Plus Project AM	36	687	81													
	Opening Year (2026) Plus Project PM		311	1,468	25				Opening Year (2026) Plus Project PM	48	675	17													
		Northbound																							
					left	through	right																		
					Existing Baseline (2020) No Project AM	265	801	119																	
					Existing Baseline (2020) No Project PM	13	10	17																	
					Existing Baseline (2020) Plus Project AM	267	801	119																	
					Existing Baseline (2020) Plus Project PM	19	10	17																	
					Opening Year (2026) No Project AM	272	825	122																	
					Opening Year (2026) No Project PM	14	15	18																	
					Opening Year (2026) Plus Project AM	274	825	122																	
					Opening Year (2026) Plus Project PM	20	15	18																	

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

ROADWAY NAME Segment	Land Use	Median Lanes	Width	ADT Volume	Design Speed (mph)	Dist. from Center (ft)	Alpha	Barrier	Vehicle Mix		dB(A) CNEL	Traffic Volumes											Ref. Energy Level: Dist					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	
Atlantic Avenue n/o Wardlow Road																																			
Existing Baseline (2020) No Project AM		4	10	11,000	30	170	0	0	1.8%	0.7%	57.3	#####	173	69	10	2	15	6	62.5	73.1	80.3	-5.3	55.5	49.3	52.4	57.9	52.5	41.7	42.2	53.2	39.3	39.8	43.2	45.9	
Existing Baseline (2020) No Project PM		4	10	18,016	30	170	0	0	1.8%	0.7%	59.4	#####	284	112	16	4	24	10	62.5	73.1	80.3	-5.3	57.6	51.4	54.5	60.0	54.6	43.8	44.4	55.4	41.5	42.0	45.3	48.0	
Existing Baseline (2020) Plus Project AM		4	10	11,008	30	170	0	0	1.8%	0.7%	57.3	#####	173	69	10	2	15	6	62.5	73.1	80.3	-5.3	55.5	49.3	52.4	57.9	52.5	41.7	42.2	53.2	39.3	39.8	43.2	45.9	
Existing Baseline (2020) Plus Project PM		4	10	17,936	30	170	0	0	1.8%	0.7%	59.4	#####	282	112	16	4	24	10	62.5	73.1	80.3	-5.3	57.6	51.4	54.5	60.0	54.6	43.8	44.4	55.3	41.4	41.9	45.3	48.0	
Opening Year (2026) No Project AM		4	10	11,808	30	170	0	0	1.8%	0.7%	57.6	#####	186	74	11	2	16	7	62.5	73.1	80.3	-5.3	55.8	49.6	52.7	58.2	52.8	42.0	42.5	53.5	39.6	40.1	43.5	46.2	
Opening Year (2026) No Project PM		4	10	18,392	30	170	0	0	1.8%	0.7%	59.5	#####	289	115	17	4	25	10	62.5	73.1	80.3	-5.3	57.7	51.5	54.6	60.1	54.7	43.9	44.5	55.4	41.5	42.1	45.4	48.1	
Opening Year (2026) Plus Project AM		4	10	11,816	30	170	0	0	1.8%	0.7%	57.6	#####	186	74	11	2	16	7	62.5	73.1	80.3	-5.3	55.8	49.6	52.7	58.2	52.8	42.0	42.6	53.5	39.6	40.1	43.5	46.2	
Opening Year (2026) Plus Project PM		4	10	18,312	30	170	0	0	1.8%	0.7%	59.5	#####	288	114	17	4	25	10	62.5	73.1	80.3	-5.3	57.7	51.5	54.6	60.1	54.7	43.9	44.5	55.4	41.5	42.0	45.4	48.1	
Atlantic Avenue s/o Wardlow Road																																			
Existing Baseline (2020) No Project AM		4	0	10,368	30	170	0	0	1.8%	0.7%	57.0	#####	995	163	65	9	2	14	6	62.5	73.1	80.3	-5.4	55.2	49.0	52.1	57.6	52.2	41.4	42.0	52.9	39.0	39.6	42.9	45.6
Existing Baseline (2020) No Project PM		4	0	16,648	30	170	0	0	1.8%	0.7%	59.1	#####	262	104	15	3	23	9	62.5	73.1	80.3	-5.4	57.3	51.1	54.2	59.7	54.3	43.5	44.0	55.0	41.1	41.6	45.0	47.7	
Existing Baseline (2020) Plus Project AM		4	0	10,120	30	170	0	0	1.8%	0.7%	56.9	#####	972	159	63	9	2	14	6	62.5	73.1	80.3	-5.4	55.1	48.9	52.0	57.5	52.1	41.3	41.9	52.8	38.9	39.4	42.8	45.5
Existing Baseline (2020) Plus Project PM		4	0	16,424	30	170	0	0	1.8%	0.7%	59.0	#####	258	102	15	3	22	9	62.5	73.1	80.3	-5.4	57.2	51.0	54.1	59.6	54.2	43.4	44.0	54.9	41.0	41.5	44.9	47.6	
Opening Year (2026) No Project AM		4	0	11,176	30	170	0	0	1.8%	0.7%	57.3	#####	176	70	10	2	15	6	62.5	73.1	80.3	-5.4	55.5	49.3	52.5	57.9	52.6	41.7	42.3	53.3	39.4	39.9	43.2	46.0	
Opening Year (2026) No Project PM		4	0	17,216	30	170	0	0	1.8%	0.7%	59.2	#####	271	107	16	3	23	10	62.5	73.1	80.3	-5.4	57.4	51.2	54.3	59.8	54.4	43.6	44.2	55.1	41.2	41.8	45.1	47.8	
Opening Year (2026) Plus Project AM		4	0	10,928	30	170	0	0	1.8%	0.7%	57.2	#####	172	68	10	2	15	6	62.5	73.1	80.3	-5.4	55.4	49.2	52.4	57.8	52.5	41.7	42.2	53.2	39.3	39.8	43.1	45.9	
Opening Year (2026) Plus Project PM		4	0	16,992	30	170	0	0	1.8%	0.7%	59.2	#####	267	106	15	3	23	10	62.5	73.1	80.3	-5.4	57.4	51.2	54.3	59.7	54.4	43.6	44.1	55.1	41.2	41.7	45.0	47.8	
Wardlow Road e/o Atlantic Avenue																																			
Existing Baseline (2020) No Project AM		4	0	8,984	35	35	0	0	1.8%	0.7%	65.0	#####	862	141	56	8	2	12	5	65.1	74.8	80.0	2.1	64.0	56.9	58.1	65.6	61.0	49.4	48.0	61.5	47.9	47.5	48.9	52.9
Existing Baseline (2020) No Project PM		4	0	12,760	35	35	0	0	1.8%	0.7%	66.5	#####	201	80	12	3	17	7	65.1	74.8	80.0	2.1	65.6	58.5	59.7	67.2	62.6	50.9	49.5	63.1	49.4	49.0	50.4	54.4	
Existing Baseline (2020) Plus Project AM		4	0	9,408	35	35	0	0	1.8%	0.7%	65.2	#####	903	148	59	9	2	13	5	65.1	74.8	80.0	2.1	64.2	57.1	58.3	65.8	61.2	49.6	48.2	61.7	48.1	47.7	49.1	53.1
Existing Baseline (2020) Plus Project PM		4	0	13,296	35	35	0	0	1.8%	0.7%	66.7	#####	209	83	12	3	18	8	65.1	74.8	80.0	2.1	65.7	58.6	59.8	67.4	62.7	51.1	49.7	63.2	49.6	49.2	50.6	54.6	
Opening Year (2026) No Project AM		4	0	8,208	35	35	0	0	1.8%	0.7%	64.6	#####	788	129	51	7	2	11	5	65.1	74.8	80.0	2.1	63.6	56.5	57.7	65.3	60.7	49.0	47.6	61.1	47.5	47.1	48.5	52.5
Opening Year (2026) No Project PM		4	0	13,064	35	35	0	0	1.8%	0.7%	66.6	#####	206	81	12	3	18	7	65.1	74.8	80.0	2.1	65.7	58.6	59.8	67.3	62.7	51.0	49.6	63.2	49.5	49.1	50.5	54.5	
Opening Year (2026) Plus Project AM		4	0	8,632	35	35	0	0	1.8%	0.7%	64.8	#####	829	136	54	8	2	12	5	65.1	74.8	80.0	2.1	63.9	56.8	58.0	65.5	60.9	49.2	47.8	61.4	47.7	47.3	48.7	52.7
Opening Year (2026) Plus Project PM		4	0	13,600	35	35	0	0	1.8%	0.7%	66.8	#####	214	85	12	3	18	8	65.1	74.8	80.0	2.1	65.8	58.7	59.9	67.4	62.8	51.2	49.8	63.3	49.7	49.3	50.7	54.7	
Wardlow Road w/o Atlantic Avenue																																			
Existing Baseline (2020) No Project AM		4	0	11,552	35	40	0	0	1.8%	0.7%	65.3	#####	182	72	11	2	16	7	65.1	74.8	80.0	1.4	64.4	57.3	58.5	66.0	61.4	49.7	48.3	61.9	48.2	47.8	49.2	53.2	
Existing Baseline (2020) No Project PM		4	0	17,392	35	40	0	0	1.8%	0.7%	67.1	#####	274	108	16	3	24	10	65.1	74.8	80.0	1.4	66.1	59.0	60.2	67.8	63.2	51.5	50.1	63.6	50.0	49.6	51.0	55.0	
Existing Baseline (2020) Plus Project AM		4	0	11,736	35	40	0	0	1.8%	0.7%	65.4	#####	185	73	11	2	16	7	65.1	74.8	80.0	1.4	64.4	57.3	58.5	66.1	61.5	49.8	48.4	61.9	48.3	47.9	49.3	53.3	
Existing Baseline (2020) Plus Project PM		4	0	17,624	35	40	0	0	1.8%	0.7%	67.1	#####	277	110	16	4	24	10	65.1	74.8	80.0	1.4	66.2	59.1	60.3	67.8	63.2	51.5	50.1	63.7	50.0	49.7	51.1	55.1	
Opening Year (2026) No Project AM		4	0	11,864	35	40	0	0	1.8%	0.7%	65.4	#####	187	74	11	2	16	7	65.1	74.8	80.0	1.4	64.5	57.4	58.6	66.1	61.5	49.8	48.4	62.0	48.3	47.9	49.3	53.3	
Opening Year (2026) No Project PM		4	0	17,856	35	40	0	0	1.8%	0.7%	67.2	#####	281	111	16	4	24	10	65.1	74.8	80.0	1.4	66.3	59.2	60.4	67.9	63.3	51.6	50.2	63.8	50.1	49.7	51.1	55.1	
Opening Year (2026) Plus Project AM		4	0	12,048	35	40	0	0	1.8%	0.7%	65.5	#####	190	75	11	2	16	7	65.1	74.8	80.0	1.4	64.5	57.5	58.7	66.2	61.6	49.9	48.5	62.0	48.4	48.0	49.4	53.4	
Opening Year (2026) Plus Project PM		4	0	18,088	35	40	0	0	1.8%	0.7%	67.2	#####	285	113	16	4	24	10	65.1	74.8	80.0	1.4	66.3	59.2	60.4	67.9	63.3	51.6	50.3	63.8	50.1	49.8	51.2	55.2	

(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%

Project Name: Long Beach Riverpark AM Peak Hour and PM Peak Hour				rev. (Date)				If Peak Hour = 6% of ADT, Scaling Factor = 16.667				If Peak Hour = 7% of ADT, Scaling Factor = 14.286				If Peak Hour = 8% of ADT, Scaling Factor = 12.5				If Peak Hour = 9% of ADT, Scaling Factor = 11.111				If Peak Hour = 10% of ADT, Scaling Factor = 10					
Intersection: Magnolia Avenue & Spring Street				6																									
Magnolia Avenue																													
Southbound										ADT					Magnolia Avenue					Spring Street									
										Road					Leg					Cross Street									
										right					through					left									
										North of					South of					East of					West of				
										Spring Street					Magnolia Avenue														
Existing Baseline (2020) No Project AM										5					111					39									
Existing Baseline (2020) No Project PM										11					225					60									
Existing Baseline (2020) Plus Project AM										7					116					43									
Existing Baseline (2020) Plus Project PM										12					228					62									
Opening Year (2026) No Project AM										6					114					41									
Opening Year (2026) No Project PM										12					231					57									
Opening Year (2026) Plus Project AM										8					119					45									
Opening Year (2026) Plus Project PM										13					234					59									
Eastbound										Westbound					right					through					left				
										left					through					right									
Existing Baseline (2020) No Project AM										22					100					5									
Existing Baseline (2020) No Project PM										16					150					3									
Existing Baseline (2020) Plus Project AM										23					100					5									
Existing Baseline (2020) Plus Project PM										18					140					3									
Opening Year (2026) No Project AM										23					103					6									
Opening Year (2026) No Project PM										17					164					4									
Opening Year (2026) Plus Project AM										24					103					6									
Opening Year (2026) Plus Project PM										19					154					4									
Northbound										right					through					left									
										left					through					right									
Existing Baseline (2020) No Project AM										3					137					69									
Existing Baseline (2020) No Project PM										6					224					130									
Existing Baseline (2020) Plus Project AM										3					138					69									
Existing Baseline (2020) Plus Project PM										6					229					140									
Opening Year (2026) No Project AM										4					151					71									
Opening Year (2026) No Project PM										7					240					129									
Opening Year (2026) Plus Project AM										4					152					71									
Opening Year (2026) Plus Project PM										7					245					139									

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

ROADWAY NAME Segment	Land Use	Median Lanes	Width	ADT Volume	Design Dist. from		Barrier Alpha	Vehicle Mix dB(A)	CNEL	Traffic Volumes												Ref. Energy Level: Dist					Le			Ln						
					Speed (mph)	Center tc Receptor				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				
Magnolia Avenue n/o Spring Street																																				
Existing Baseline (2020) No Project AM		2	11	2,792	35	30	0	0	1.8%	0.7%	60.2	####	355	268	44	17	3	1	4	2	65.1	74.8	80.0	2.5	59.3	52.2	53.4	60.9	56.3	44.6	43.2	56.8	43.1	42.8	44.2	48.2
Existing Baseline (2020) No Project PM		2	11	4,760	35	30	0	0	1.8%	0.7%	62.5	####	605	457	75	30	4	1	6	3	65.1	74.8	80.0	2.5	61.6	54.5	55.7	63.2	58.6	46.9	45.6	59.1	45.4	45.1	46.5	50.5
Existing Baseline (2020) Plus Project AM		2	11	2,904	35	30	0	0	1.8%	0.7%	60.4	####	369	279	46	18	3	1	4	2	65.1	74.8	80.0	2.5	59.5	52.4	53.6	61.1	56.5	44.8	43.4	57.0	43.3	42.9	44.3	48.3
Existing Baseline (2020) Plus Project PM		2	11	4,992	35	30	0	0	1.8%	0.7%	62.7	####	634	479	79	31	5	1	7	3	65.1	74.8	80.0	2.5	61.8	54.7	55.9	63.4	58.8	47.1	45.8	59.3	45.6	45.3	46.7	50.7
Opening Year (2026) No Project AM		2	11	2,928	35	30	0	0	1.8%	0.7%	60.4	####	372	281	46	18	3	1	4	2	65.1	74.8	80.0	2.5	59.5	52.4	53.6	61.1	56.5	44.8	43.4	57.0	43.3	43.0	44.4	48.4
Opening Year (2026) No Project PM		2	11	4,944	35	30	0	0	1.8%	0.7%	62.7	####	628	475	78	31	4	1	7	3	65.1	74.8	80.0	2.5	61.8	54.7	55.9	63.4	58.8	47.1	45.7	59.3	45.6	45.2	46.7	50.6
Opening Year (2026) Plus Project AM		2	11	3,040	35	30	0	0	1.8%	0.7%	60.6	####	386	292	48	19	3	1	4	2	65.1	74.8	80.0	2.5	59.7	52.6	53.8	61.3	56.7	45.0	43.6	57.2	43.5	43.1	44.5	48.5
Opening Year (2026) Plus Project PM		2	11	5,176	35	30	0	0	1.8%	0.7%	62.9	####	657	497	81	32	5	1	7	3	65.1	74.8	80.0	2.5	62.0	54.9	56.1	63.6	59.0	47.3	45.9	59.5	45.8	45.4	46.8	50.8
Magnolia Avenue s/o Spring Street																																				
Existing Baseline (2020) No Project AM		2	11	3,344	35	30	0	0	1.8%	0.7%	61.0	####	425	321	53	21	3	1	5	2	65.1	74.8	80.0	2.5	60.1	53.0	54.2	61.7	57.1	45.4	44.0	57.6	43.9	43.5	45.0	48.9
Existing Baseline (2020) No Project PM		2	11	6,360	35	30	0	0	1.8%	0.7%	63.8	####	808	611	100	40	6	1	9	4	65.1	74.8	80.0	2.5	62.9	55.8	57.0	64.5	59.9	48.2	46.8	60.4	46.7	46.3	47.7	51.7
Existing Baseline (2020) Plus Project AM		2	11	3,392	35	30	0	0	1.8%	0.7%	61.1	####	431	326	53	21	3	1	5	2	65.1	74.8	80.0	2.5	60.1	53.1	54.3	61.8	57.2	45.5	44.1	57.6	44.0	43.6	45.0	49.0
Existing Baseline (2020) Plus Project PM		2	11	6,584	35	30	0	0	1.8%	0.7%	63.9	####	836	632	104	41	6	1	9	4	65.1	74.8	80.0	2.5	63.0	55.9	57.1	64.6	60.0	48.3	47.0	60.5	46.8	46.5	47.9	51.9
Opening Year (2026) No Project AM		2	11	3,536	35	30	0	0	1.8%	0.7%	61.2	####	449	339	56	22	3	1	5	2	65.1	74.8	80.0	2.5	60.3	53.2	54.4	61.9	57.3	45.6	44.3	57.8	44.1	43.8	45.2	49.2
Opening Year (2026) No Project PM		2	11	6,488	35	30	0	0	1.8%	0.7%	63.9	####	824	623	102	40	6	1	9	4	65.1	74.8	80.0	2.5	63.0	55.9	57.1	64.6	60.0	48.3	46.9	60.5	46.8	46.4	47.8	51.8
Opening Year (2026) Plus Project AM		2	11	3,584	35	30	0	0	1.8%	0.7%	61.3	####	455	344	56	22	3	1	5	2	65.1	74.8	80.0	2.5	60.4	53.3	54.5	62.0	57.4	45.7	44.3	57.9	44.2	43.8	45.3	49.2
Opening Year (2026) Plus Project PM		2	11	6,712	35	30	0	0	1.8%	0.7%	64.0	####	852	644	106	42	6	1	9	4	65.1	74.8	80.0	2.5	63.1	56.0	57.2	64.7	60.1	48.4	47.0	60.6	46.9	46.6	48.0	52.0
Spring Street e/o Magnolia Avenue																																				
Existing Baseline (2020) No Project AM		2	11	3,144	30	30	0	0	1.8%	0.7%	59.7	####	399	302	49	20	3	1	4	2	62.5	73.1	80.3	2.5	57.9	51.7	54.8	60.3	54.9	44.1	44.6	55.6	41.7	42.2	45.6	48.3
Existing Baseline (2020) No Project PM		2	11	6,208	30	30	0	0	1.8%	0.7%	62.6	####	788	596	98	39	6	1	8	4	62.5	73.1	80.3	2.5	60.8	54.6	57.8	63.2	57.9	47.0	47.6	58.6	44.7	45.2	48.5	51.3
Existing Baseline (2020) Plus Project AM		2	11	3,192	30	30	0	0	1.8%	0.7%	59.7	####	405	306	50	20	3	1	4	2	62.5	73.1	80.3	2.5	58.0	51.7	54.9	60.3	55.0	44.2	44.7	55.7	41.8	42.3	45.6	48.4
Existing Baseline (2020) Plus Project PM		2	11	6,264	30	30	0	0	1.8%	0.7%	62.7	####	796	601	99	39	6	1	8	4	62.5	73.1	80.3	2.5	60.9	54.7	57.8	63.3	57.9	47.1	47.6	58.6	44.7	45.2	48.6	51.3
Opening Year (2026) No Project AM		2	11	3,248	30	30	0	0	1.8%	0.7%	59.8	####	412	312	51	20	3	1	4	2	62.5	73.1	80.3	2.5	58.0	51.8	54.9	60.4	55.0	44.2	44.8	55.8	41.9	42.4	45.7	48.4
Opening Year (2026) No Project PM		2	11	6,384	30	30	0	0	1.8%	0.7%	62.8	####	811	613	100	40	6	1	9	4	62.5	73.1	80.3	2.5	61.0	54.8	57.9	63.3	58.0	47.2	47.7	58.7	44.8	45.3	48.6	51.4
Opening Year (2026) Plus Project AM		2	11	3,296	30	30	0	0	1.8%	0.7%	59.9	####	419	316	52	21	3	1	4	2	62.5	73.1	80.3	2.5	58.1	51.9	55.0	60.5	55.1	44.3	44.8	55.8	41.9	42.4	45.8	48.5
Opening Year (2026) Plus Project PM		2	11	6,440	30	30	0	0	1.8%	0.7%	62.8	####	818	618	101	40	6	1	9	4	62.5	73.1	80.3	2.5	61.0	54.8	57.9	63.4	58.0	47.2	47.8	58.7	44.8	45.3	48.7	51.4
Spring Street w/o Magnolia Avenue																																				
Existing Baseline (2020) No Project AM		2	0	1,536	25	30	0	0	1.8%	0.7%	54.8	####	195	147	24	10	1	0	2	1	59.4	71.1	78.7	2.2	52.2	47.1	50.7	55.3	49.3	39.5	40.5	50.2	36.1	37.6	41.5	43.8
Existing Baseline (2020) No Project PM		2	0	2,848	25	30	0	0	1.8%	0.7%	57.4	####	362	273	45	18	3	1	4	2	59.4	71.1	78.7	2.2	54.9	49.8	53.4	57.9	51.9	42.2	43.2	52.9	38.7	40.3	44.2	46.5
Existing Baseline (2020) Plus Project AM		2	0	1,568	25	30	0	0	1.8%	0.7%	54.8	####	199	151	25	10	1	0	2	1	59.4	71.1	78.7	2.2	52.3	47.2	50.8	55.4	49.3	39.6	40.6	50.3	36.2	37.7	41.6	43.9
Existing Baseline (2020) Plus Project PM		2	0	2,624	25	30	0	0	1.8%	0.7%	57.1	####	333	252	41	16	2	1	4	1	59.4	71.1	78.7	2.2	54.6	49.4	53.0	57.6	51.6	41.8	42.9	52.5	38.4	39.9	43.8	46.1
Opening Year (2026) No Project AM		2	0	1,648	25	30	0	0	1.8%	0.7%	55.1	####	209	158	26	10	1	0	2	1	59.4	71.1	78.7	2.2	52.5	47.4	51.0	55.6	49.6	39.8	40.8	50.5	36.4	37.9	41.8	44.1
Opening Year (2026) No Project PM		2	0	3,128	25	30	0	0	1.8%	0.7%	57.8	####	397	300	49	20	3	1	4	2	59.4	71.1	78.7	2.2	55.3	50.2	53.8	58.4	52.3	42.6	43.6	53.3	39.2	40.7	44.6	46.9
Opening Year (2026) Plus Project AM		2	0	1,680	25	30	0	0	1.8%	0.7%	55.1	####	213	161	26	10	2	0	2	1	59.4	71.1	78.7	2.2	52.6	47.5	51.1	55.7	49.6	39.9	40.9	50.6	36.5	38.0	41.9	44.2
Opening Year (2026) Plus Project PM		2	0	2,904	25	30	0	0	1.8%	0.7%	57.5	####	369	279	46	18	3	1	4	2	59.4	71.1	78.7	2.2	55.0	49.8	53.5	58.0	52.0	42.3	43.3	53.0	38.8	40.4	44.2	46.5

(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%

Project Name: Long Beach Riverpark AM Peak Hour and PM Peak Hour				rev. (Date)				If Peak Hour = 6% of ADT, Scaling Factor = 16.667 If Peak Hour = 7% of ADT, Scaling Factor = 14.286 If Peak Hour = 8% of ADT, Scaling Factor = 12.5 If Peak Hour = 9% of ADT, Scaling Factor = 11.111 If Peak Hour = 10% of ADT, Scaling Factor = 10											
Intersection: Pacific Avenue & Spring Street				7															
Pacific Avenue								ADT											
Southbound				right		through		left		Road		Pacific Avenue		Spring Street					
										Leg		North of		South of					
										Cross Street		Spring Street		Pacific Avenue					
Existing Baseline (2020) No Project AM				8		185		59		Existing Baseline (2020) No Project AM		5,392.0		6,904.0					
Existing Baseline (2020) No Project PM				25		346		76		Existing Baseline (2020) No Project PM		7,376.0		9,752.0					
Existing Baseline (2020) Plus Project AM				8		190		61		Existing Baseline (2020) Plus Project AM		5,464.0		6,984.0					
Existing Baseline (2020) Plus Project PM				25		349		77		Existing Baseline (2020) Plus Project PM		7,464.0		9,848.0					
Opening Year (2026) No Project AM				9		190		61		Opening Year (2026) No Project AM		5,552.0		7,096.0					
Opening Year (2026) No Project PM				26		355		78		Opening Year (2026) No Project PM		7,576.0		10,016.0					
Opening Year (2026) Plus Project AM				9		195		63		Opening Year (2026) Plus Project AM		5,624.0		7,176.0					
Opening Year (2026) Plus Project PM				26		358		79		Opening Year (2026) Plus Project PM		7,664.0		10,112.0					
Eastbound				left		through		right		Westbound				right		through		left	
Existing Baseline (2020) No Project AM				16		178		14		Existing Baseline (2020) No Project AM				45		158		107	
Existing Baseline (2020) No Project PM				21		294		25		Existing Baseline (2020) No Project PM				77		372		140	
Existing Baseline (2020) Plus Project AM				16		180		16		Existing Baseline (2020) Plus Project AM				45		159		107	
Existing Baseline (2020) Plus Project PM				21		295		26		Existing Baseline (2020) Plus Project PM				78		375		140	
Opening Year (2026) No Project AM				17		183		15		Opening Year (2026) No Project AM				47		162		110	
Opening Year (2026) No Project PM				22		302		26		Opening Year (2026) No Project PM				79		382		144	
Opening Year (2026) Plus Project AM				17		185		17		Opening Year (2026) Plus Project AM				47		163		110	
Opening Year (2026) Plus Project PM				22		303		27		Opening Year (2026) Plus Project PM				80		385		144	
Northbound				left		through		right											
Existing Baseline (2020) No Project AM				19		361		177											
Existing Baseline (2020) No Project PM				39		377		292											
Existing Baseline (2020) Plus Project AM				20		363		177											
Existing Baseline (2020) Plus Project PM				41		383		292											
Opening Year (2026) No Project AM				20		370		182											
Opening Year (2026) No Project PM				40		387		300											
Opening Year (2026) Plus Project AM				21		372		182											
Opening Year (2026) Plus Project PM				42		393		300											

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

ROADWAY NAME Segment	Land Use	Median Lanes	Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor (ft)	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix		dB(A) CNEL	Traffic Volumes											Ref. Energy Level: Dist					Le			Ln						
									Medium Trucks	Heavy Trucks		Day	Even	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total	
Pacific Avenue n/o Spring Street												62.4	####	685	518	85	34	5	1	7	3	67.4	76.3	81.2	0.5	61.8	54.0	54.8	63.2	58.9	46.4	44.6	59.2	45.7	44.5	45.6	50.0
Existing Baseline (2020) No Project AM		4	12	5,392	40	50	0	0	1.8%	0.7%	62.4	####	685	518	85	34	5	1	7	3	67.4	76.3	81.2	0.5	61.8	54.0	54.8	63.2	58.9	46.4	44.6	59.2	45.7	44.5	45.6	50.0	
Existing Baseline (2020) No Project PM		4	12	7,376	40	50	0	0	1.8%	0.7%	63.8	####	937	708	116	46	7	1	10	4	67.4	76.3	81.2	0.5	63.2	55.3	56.2	64.5	60.2	47.8	46.0	60.6	47.0	45.9	46.9	51.4	
Existing Baseline (2020) Plus Project AM		4	12	5,464	40	50	0	0	1.8%	0.7%	62.5	####	694	525	86	34	5	1	7	3	67.4	76.3	81.2	0.5	61.9	54.0	54.9	63.2	58.9	46.4	44.7	59.3	45.7	44.6	45.6	50.1	
Existing Baseline (2020) Plus Project PM		4	12	7,464	40	50	0	0	1.8%	0.7%	63.8	####	948	717	117	47	7	1	10	4	67.4	76.3	81.2	0.5	63.2	55.4	56.2	64.6	60.3	47.8	46.0	60.7	47.1	45.9	47.0	51.5	
Opening Year (2026) No Project AM		4	12	5,552	40	50	0	0	1.8%	0.7%	62.6	####	705	533	87	35	5	1	8	3	67.4	76.3	81.2	0.5	62.0	54.1	54.9	63.3	59.0	46.5	44.8	59.4	45.8	44.6	45.7	50.2	
Opening Year (2026) No Project PM		4	12	7,576	40	50	0	0	1.8%	0.7%	63.9	####	962	727	119	47	7	2	10	4	67.4	76.3	81.2	0.5	63.3	55.5	56.3	64.7	60.3	47.9	46.1	60.7	47.1	46.0	47.0	51.5	
Opening Year (2026) Plus Project AM		4	12	5,624	40	50	0	0	1.8%	0.7%	62.6	####	714	540	89	35	5	1	8	3	67.4	76.3	81.2	0.5	62.0	54.2	55.0	63.4	59.0	46.6	44.8	59.4	45.8	44.7	45.7	50.2	
Opening Year (2026) Plus Project PM		4	12	7,664	40	50	0	0	1.8%	0.7%	64.0	####	973	736	121	48	7	2	10	4	67.4	76.3	81.2	0.5	63.4	55.5	56.3	64.7	60.4	47.9	46.2	60.8	47.2	46.0	47.1	51.6	
Pacific Avenue s/o Spring Street												62.1	####	877	663	109	43	6	1	9	4	65.1	74.8	80.0	0.5	61.2	54.1	55.3	62.8	58.2	46.5	45.1	58.7	45.0	44.7	46.1	50.1
Existing Baseline (2020) No Project AM		4	11	6,904	35	50	0	0	1.8%	0.7%	62.1	####	877	663	109	43	6	1	9	4	65.1	74.8	80.0	0.5	61.2	54.1	55.3	62.8	58.2	46.5	45.1	58.7	45.0	44.7	46.1	50.1	
Existing Baseline (2020) No Project PM		4	11	9,752	35	50	0	0	1.8%	0.7%	63.6	####	####	936	153	61	9	2	13	6	65.1	74.8	80.0	0.5	62.7	56.6	56.8	64.3	59.7	48.0	46.6	60.2	46.5	46.2	47.6	51.6	
Existing Baseline (2020) No Project PM		4	11	6,984	35	50	0	0	1.8%	0.7%	62.2	####	887	670	110	44	6	1	9	4	65.1	74.8	80.0	0.5	61.3	54.2	55.4	62.9	58.3	46.6	45.2	58.8	45.1	44.7	46.1	50.1	
Existing Baseline (2020) Plus Project AM		4	11	9,848	35	50	0	0	1.8%	0.7%	63.7	####	####	945	155	61	9	2	13	6	65.1	74.8	80.0	0.5	62.8	55.7	56.9	64.4	59.8	48.1	46.7	60.3	46.6	46.2	47.6	51.6	
Existing Baseline (2020) Plus Project PM		4	11	7,096	35	50	0	0	1.8%	0.7%	62.3	####	901	681	112	44	6	1	10	4	65.1	74.8	80.0	0.5	61.3	54.2	55.4	62.9	58.3	46.7	45.3	58.8	45.2	44.8	46.2	50.2	
Opening Year (2026) No Project AM		4	11	10,016	35	50	0	0	1.8%	0.7%	63.7	####	####	962	158	62	9	2	14	6	65.1	74.8	80.0	0.5	62.8	55.7	56.9	64.4	59.8	48.1	46.8	60.3	46.7	46.3	47.7	51.7	
Opening Year (2026) No Project PM		4	11	7,176	35	50	0	0	1.8%	0.7%	62.3	####	911	689	113	45	7	1	10	4	65.1	74.8	80.0	0.5	61.4	54.3	55.5	63.0	58.4	46.7	45.3	58.9	45.2	44.8	46.2	50.2	
Opening Year (2026) Plus Project AM		4	11	10,112	35	50	0	0	1.8%	0.7%	63.8	####	####	971	159	63	9	2	14	6	65.1	74.8	80.0	0.5	62.9	55.8	57.0	64.5	59.9	48.2	46.8	60.4	46.7	46.3	47.7	51.7	
Spring Street e/o Pacific Avenue												62.4	####	736	556	91	36	5	1	8	3	62.5	73.1	80.3	2.5	60.6	54.4	57.5	63.0	57.6	46.8	47.3	58.3	44.4	44.9	48.3	51.0
Existing Baseline (2020) No Project AM		2	12	5,792	30	30	0	0	1.8%	0.7%	62.4	####	736	556	91	36	5	1	8	3	62.5	73.1	80.3	2.5	60.6	54.4	57.5	63.0	57.6	46.8	47.3	58.3	44.4	44.9	48.3	51.0	
Existing Baseline (2020) No Project PM		2	12	10,008	30	30	0	0	1.8%	0.7%	64.7	####	####	961	157	62	9	2	14	6	62.5	73.1	80.3	2.5	62.9	56.7	59.9	65.3	60.0	49.2	49.7	60.7	46.8	47.3	50.6	53.4	
Existing Baseline (2020) Plus Project AM		2	12	5,832	30	30	0	0	1.8%	0.7%	62.4	####	741	560	92	36	5	1	8	3	62.5	73.1	80.3	2.5	60.6	54.4	57.5	63.0	57.6	46.8	47.4	58.3	44.4	44.9	48.3	51.0	
Existing Baseline (2020) Plus Project PM		2	12	10,056	30	30	0	0	1.8%	0.7%	64.8	####	####	965	158	63	9	2	14	6	62.5	73.1	80.3	2.5	63.0	56.8	59.9	65.4	60.0	49.2	49.7	60.7	46.8	47.3	50.7	53.4	
Opening Year (2026) No Project AM		2	12	5,960	30	30	0	0	1.8%	0.7%	62.5	####	757	572	94	37	5	1	8	3	62.5	73.1	80.3	2.5	60.7	54.5	57.6	63.1	57.7	46.9	47.4	58.4	44.5	45.0	48.4	51.1	
Opening Year (2026) No Project PM		2	12	10,280	30	30	0	0	1.8%	0.7%	64.9	####	####	987	162	64	9	2	14	6	62.5	73.1	80.3	2.5	63.1	56.9	60.0	65.4	60.1	49.3	49.8	60.8	46.9	47.4	50.7	53.5	
Opening Year (2026) Plus Project AM		2	12	6,000	30	30	0	0	1.8%	0.7%	62.5	####	762	576	94	37	5	1	8	3	62.5	73.1	80.3	2.5	60.7	54.5	57.6	63.1	57.7	46.9	47.5	58.5	44.6	45.1	48.4	51.1	
Opening Year (2026) Plus Project PM		2	12	10,328	30	30	0	0	1.8%	0.7%	64.9	####	####	991	163	64	9	2	14	6	62.5	73.1	80.3	2.5	63.1	56.9	60.0	65.5	60.1	49.3	49.8	60.8	46.9	47.4	50.8	53.5	
Spring Street w/o Pacific Avenue												59.7	####	399	302	49	20	3	1	4	2	62.5	73.1	80.3	2.5	57.9	51.7	54.8	60.3	54.9	44.1	44.6	55.6	41.7	42.2	45.6	48.3
Existing Baseline (2020) No Project AM		2	11	3,144	30	30	0	0	1.8%	0.7%	59.7	####	399	302	49	20	3	1	4	2	62.5	73.1	80.3	2.5	57.9	51.7	54.8	60.3	54.9	44.1	44.6	55.6	41.7	42.2	45.6	48.3	
Existing Baseline (2020) No Project PM		2	11	6,208	30	30	0	0	1.8%	0.7%	62.6	####	788	596	98	39	6	1	8	4	62.5	73.1	80.3	2.5	60.8	54.6	57.8	63.2	57.9	47.0	47.6	58.6	44.7	45.2	48.5	51.3	
Existing Baseline (2020) Plus Project AM		2	11	3,192	30	30	0	0	1.8%	0.7%	59.7	####	405	306	50	20	3	1	4	2	62.5	73.1	80.3	2.5	58.0	51.7	54.9	60.3	55.0	44.2	44.7	55.7	41.8	42.3	45.6	48.4	
Existing Baseline (2020) Plus Project PM		2	11	6,264	30	30	0	0	1.8%	0.7%	62.7	####	796	601	99	39	6	1	8	4	62.5	73.1	80.3	2.5	60.9	54.7	57.8	63.3	57.9	47.1	47.6	58.6	44.7	45.2	48.6	51.3	
Opening Year (2026) No Project AM		2	11	3,248	30	30	0	0	1.8%	0.7%	59.8	####	412	312	51	20	3	1	4	2	62.5	73.1	80.3	2.5	58.0	51.8	54.9	60.4	55.0	44.2	44.8	55.8	41.9	42.4	45.7	48.4	
Opening Year (2026) No Project PM		2	11	6,384	30	30	0	0	1.8%	0.7%	62.8	####	811	613	100	40	6	1	9	4	62.5	73.1	80.3	2.5	61.0	54.8	57.9	63.3	58.0	47.2	47.7	58.7	44.8	45.3	48.6	51.4	
Opening Year (2026) Plus Project AM		2	11	3,296	30	30	0	0	1.8%	0.7%	59.9	####	419	316	52	21	3	1	4	2	62.5	73.1	80.3	2.5	58.1	51.9	55.0	60.5	55.1	44.3	44.8	55.8	41.9	42.4	45.8	48.5	
Opening Year (2026) Plus Project PM		2	11	6,440	30	30	0	0	1.8%	0.7%	62.8	####	818	618	101	40																					