Appendix O

Noise Calculation Worksheets

Our Lady of Mt. Lebanon Project

Noise Calculations Worksheets

Provided by Acoustical Engineering Services

Ambient Noise Measurements

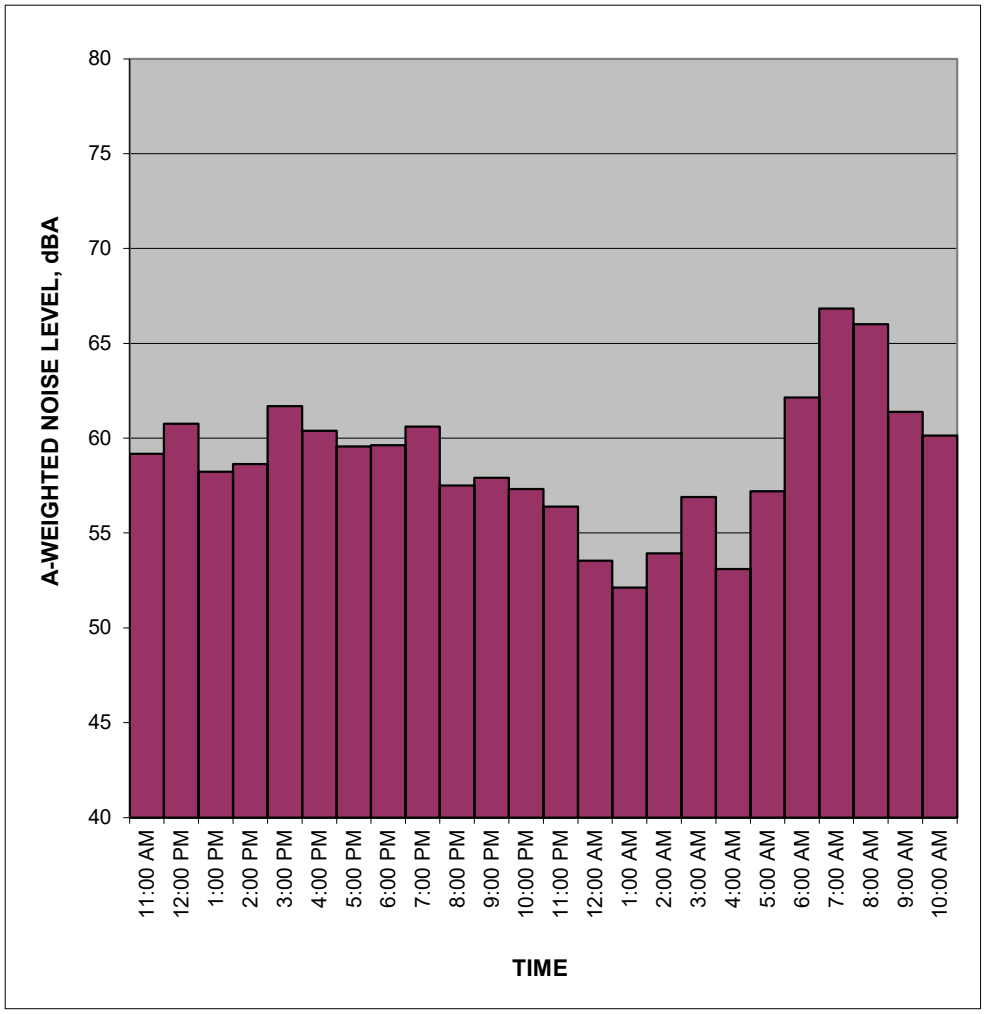
Measured Ambient Noise Levels

AES
Acoustical Engineering Services

Project: Mt. Lebanon
Location: R1
Sources: Ambient

Date: 9/12/2019

TIME	HNL, dB(A)
11:00 AM	59.2
12:00 PM	60.8
1:00 PM	58.2
2:00 PM	58.6
3:00 PM	61.7
4:00 PM	60.4
5:00 PM	59.6
6:00 PM	59.6
7:00 PM	60.6
8:00 PM	57.5
9:00 PM	57.9
10:00 PM	57.3
11:00 PM	56.4
12:00 AM	53.5
1:00 AM	52.1
2:00 AM	53.9
3:00 AM	56.9
4:00 AM	53.1
5:00 AM	57.2
6:00 AM	62.2
7:00 AM	66.8
8:00 AM	66.0
9:00 AM	61.4
10:00 AM	60.1
CNEL, dB(A):	**64.7**



NOTES:

Daytime average	61.5	dBA Leq
Nighttime average	57.0	dBA Leq

Project: Our Lady of Mt. Lebanon
Location: R2
Date: 9/12/2019

Time	Overload	Leq	Lmax	L10	L90
10:58:13 AM	No	61.6	66.6	65.4	55.5
10:59:13 AM	No	57.2	63.7	60.6	54.2
11:00:13 AM	No	62.0	67.8	66.3	55.2
11:01:13 AM	No	58.2	63.4	60.9	54.3
11:02:13 AM	No	61.7	67.3	65.8	53.6
11:03:13 AM	No	59.5	66.5	62.5	54.2
11:04:13 AM	No	64.3	76.0	66.7	56.1
11:05:13 AM	No	58.9	63.4	62.2	53.8
11:06:13 AM	No	60.8	66.3	64.8	53.0
11:07:13 AM	No	60.3	66.0	64.1	53.2
11:08:13 AM	No	62.0	67.5	65.2	55.8
11:09:13 AM	No	60.2	66.3	64.4	52.8
11:10:13 AM	No	61.4	67.5	64.7	53.9
11:11:13 AM	No	59.6	64.4	62.6	53.5
11:12:13 AM	No	62.6	70.9	66.6	52.2
		61.0			

Time	Overload	Leq	Lmax	L10	L90
10:17:30 PM	No	59.0	66.2	62.2	53.3
10:18:30 PM	No	58.5	70.8	61.4	52.6
10:19:30 PM	No	57.6	63.9	61.4	50.5
10:20:30 PM	No	55.2	60.8	56.8	53.6
10:21:30 PM	No	60.2	69.1	63.7	52.5
10:22:30 PM	No	56.7	63.4	60.0	53.2
10:23:30 PM	No	57.9	65.3	62.7	52.1
10:24:30 PM	No	61.5	74.5	63.1	50.5
10:25:30 PM	No	58.3	67.2	62.3	51.7
10:26:30 PM	No	56.9	69.3	60.0	51.9
10:27:30 PM	No	60.7	69.0	64.3	50.6
10:28:30 PM	No	51.4	55.7	53.2	49.4
10:29:30 PM	No	57.0	65.0	60.3	51.6
10:30:30 PM	No	55.2	63.8	59.6	49.5
10:31:30 PM	No	60.0	70.0	63.1	51.9
		58.4			

Project: Our Lady of Mt. Lebanon
Location: R3
Date: 9/12/2019

Time	Overload	Leq	Lmax	L10	L90
11:17:35 AM	No	67.2	78.0	72.0	56.1
11:18:35 AM	No	64.6	74.6	69.1	54.5
11:19:35 AM	No	65.5	72.9	69.4	59.4
11:20:35 AM	No	59.9	69.8	62.5	53.6
11:21:35 AM	No	64.0	71.7	67.6	56.0
11:22:35 AM	No	62.5	69.1	66.3	55.4
11:23:35 AM	No	65.4	70.8	69.3	56.8
11:24:35 AM	No	60.8	66.4	64.0	55.5
11:25:35 AM	No	68.4	79.6	72.0	59.1
11:26:35 AM	No	66.6	78.4	69.0	58.7
11:27:35 AM	No	62.0	67.0	64.1	57.5
11:28:35 AM	No	62.8	68.7	66.0	54.6
11:29:35 AM	No	61.3	70.3	62.3	57.1
11:30:35 AM	No	63.1	71.6	68.8	55.0
11:31:35 AM	No	66.9	71.4	70.3	58.5
		64.8			

Time	Overload	Leq	Lmax	L10	L90
10:36:10 PM	No	61.2	68.7	67.1	54.3
10:37:10 PM	No	60.2	65.9	63.7	54.7
10:38:10 PM	No	60.6	67.5	64.7	53.8
10:39:10 PM	No	61.7	68.1	66.5	53.7
10:40:10 PM	No	59.3	68.8	64.1	53.2
10:41:10 PM	No	61.0	66.2	65.0	54.2
10:42:10 PM	No	63.3	70.0	67.4	52.5
10:43:10 PM	No	60.8	70.6	65.7	53.2
10:44:10 PM	No	61.5	69.2	66.8	51.1
10:45:10 PM	No	60.5	72.4	64.5	52.5
10:46:10 PM	No	55.1	63.6	59.1	48.6
10:47:10 PM	No	59.9	68.2	64.4	52.2
10:48:10 PM	No	61.7	70.0	67.8	47.9
10:49:10 PM	No	62.3	70.9	66.2	54.5
10:50:10 PM	No	62.9	71.0	67.8	52.5
		61.1			

Project: Our Lady of Mt. Lebanon
Location: R4
Date: 9/12/2019

Time	Overload	Leq	Lmax	L10	L90
11:46:01 AM	No	59.6	63.8	62.4	56.2
11:47:01 AM	No	58.6	64.6	62.1	55.5
11:48:01 AM	No	57.6	62.0	59.7	53.6
11:49:01 AM	No	64.9	75.8	69.3	55.3
11:50:01 AM	No	58.4	64.5	61.7	53.3
11:51:01 AM	No	58.8	61.5	60.2	57.0
11:52:01 AM	No	60.9	69.1	63.7	56.9
11:53:01 AM	No	59.4	64.0	61.3	57.3
11:54:01 AM	No	61.8	68.7	64.8	58.5
11:55:01 AM	No	61.9	68.7	64.7	55.3
11:56:01 AM	No	60.6	65.2	63.2	57.6
11:57:01 AM	No	56.6	62.9	58.0	52.4
11:58:01 AM	No	58.8	63.9	61.7	53.9
11:59:01 AM	No	60.3	69.3	64.5	53.6
12:00:01 PM	No	58.6	64.1	62.4	52.2
		60.3			

Time	Overload	Leq	Lmax	L10	L90
10:56:11 PM	No	57.8	62.5	60.5	51.3
10:57:11 PM	No	55.2	59.9	58.0	49.4
10:58:11 PM	No	59.5	65.4	63.0	53.5
10:59:11 PM	No	58.5	64.8	63.0	51.5
11:00:11 PM	No	55.5	62.7	59.2	49.6
11:01:11 PM	No	60.3	69.7	63.7	54.6
11:02:11 PM	No	57.7	62.1	59.8	53.0
11:03:11 PM	No	56.2	61.6	58.7	50.3
11:04:11 PM	No	57.3	66.8	59.1	50.3
11:05:11 PM	No	55.0	60.5	58.5	49.3
11:06:11 PM	No	56.7	64.4	59.1	50.5
11:07:11 PM	No	58.2	65.2	61.2	53.2
11:08:11 PM	No	58.7	65.0	61.9	51.7
11:09:11 PM	No	54.3	59.2	57.2	49.7
11:10:11 PM	No	58.6	69.0	61.1	52.3
		57.6			

Construction Noise & Vibration Calculations

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***DemolitionDeconstruction of Cathedral***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	30	0
Excavator	1	81	40%	55	0
Rubber Tired Loaders	1	79	40%	80	0

3

Receptor: ***R1***

Results:

1-hour Leq: 85.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: *Grading/Excavation*

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Grader	1	85	40%	30	0
Bore/Drill Rig	2	84	20%	55	0
Excavator	1	81	40%	80	0
Rubber Tired Loaders	1	79	40%	80	0
Air Compressor	2	78	40%	105	0
Crane (Mobile)	1	81	16%	105	0
Generator Set	1	81	50%	100	0
Other Equipment	1	85	50%	100	0

10

Receptor: ***R1***

Results:

1-hour Leq: 87.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Pumps	1	81	20%	30	0
Crane (Mobile)	1	81	16%	55	0
Forklift	1	75	20%	80	0
Generator Set	1	81	50%	80	0
Pumps	1	81	20%	105	0
Pumps	1	81	20%	105	0
Pumps	1	81	20%	100	0

7

Receptor: ***R1***

Results:

1-hour Leq: 81.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Foundation/Concrete***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	30	0
Crane (Mobile)	1	81	16%	55	0
Forklift	1	75	20%	80	0
Plate Compactors	1	83	20%	80	0
Pumps	1	81	20%	105	0
Air Compressor	1	78	40%	105	0
Rubber Tired Loaders	1	79	40%	100	0
Plate Compactors	1	83	20%	100	0
Plate Compactors	1	83	20%	125	0
	9				

Receptor: ***R1***

Results:

1-hour Leq: 85.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	30	0
Crane (Mobile)	1	81	16%	55	0
Forklift	1	75	20%	80	0
Air Compressor	1	78	40%	80	0
Plate Compactors	1	83	20%	105	0
Pumps	1	81	20%	105	0
Crane (Tower)	1	81	16%	100	0
Crane (Mobile)	1	81	16%	100	0
Forklift	1	75	20%	125	0
Air Compressor	1	78	40%	125	0
Plate Compactors	1	83	20%	150	0
Pumps	1	81	20%	150	0

12

Receptor: ***R1***

Results:

1-hour Leq: 85.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Paving/Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Roller	1	80	20%	30	0
Paving Equipment	1	77	50%	25	0
Cement/Mortar Mixers	1	79	40%	50	0
	3				

Receptor: ***R1***

Results:

1-hour Leq: 82.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***DemolitionDeconstruction of Cathedral***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	65	0
Excavator	1	81	40%	65	0
Rubber Tired Loaders	1	79	40%	90	0

3

Receptor: ***R2***

Results:

1-hour Leq: 80.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: *Grading/Excavation*

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Grader	1	85	40%	65	0
Bore/Drill Rig	2	84	20%	65	0
Excavator	1	81	40%	90	0
Rubber Tired Loaders	1	79	40%	90	0
Air Compressor	2	78	40%	115	0
Crane (Mobile)	1	81	16%	115	0
Generator Set	1	81	50%	100	0
Other Equipment	1	85	50%	100	0

10

Receptor: ***R2***

Results:

1-hour Leq: 83.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Pumps	1	81	20%	65	0
Crane (Mobile)	1	81	16%	65	0
Forklift	1	75	20%	90	0
Generator Set	1	81	50%	90	0
Pumps	1	81	20%	115	0
Pumps	1	81	20%	115	0
Pumps	1	81	20%	100	0

7

Receptor: ***R2***

Results:

1-hour Leq: 78.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Foundation/Concrete***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	65	0
Crane (Mobile)	1	81	16%	65	0
Forklift	1	75	20%	90	0
Plate Compactors	1	83	20%	90	0
Pumps	1	81	20%	115	0
Air Compressor	1	78	40%	115	0
Rubber Tired Loaders	1	79	40%	100	0
Plate Compactors	1	83	20%	100	0
Plate Compactors	1	83	20%	125	0
	9				

Receptor: ***R2***

Results:

1-hour Leq: 80.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	65	0
Crane (Mobile)	1	81	16%	65	0
Forklift	1	75	20%	90	0
Air Compressor	1	78	40%	90	0
Plate Compactors	1	83	20%	115	0
Pumps	1	81	20%	115	0
Crane (Tower)	1	81	16%	100	0
Crane (Mobile)	1	81	16%	100	0
Forklift	1	75	20%	125	0
Air Compressor	1	78	40%	125	0
Plate Compactors	1	83	20%	150	0
Pumps	1	81	20%	150	0
	12				

Receptor: ***R2***

Results:

1-hour Leq: 80.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Paving/Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Roller	1	80	20%	65	0
Paving Equipment	1	77	50%	25	0
Cement/Mortar Mixers	1	79	40%	50	0
	3				

Receptor: ***R2***

Results:

1-hour Leq: 81.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***DemolitionDeconstruction of Cathedral***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	175	0
Excavator	1	81	40%	175	0
Rubber Tired Loaders	1	79	40%	195	0

3

Receptor: ***R3***

Results:

1-hour Leq: 71.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: *Grading/Excavation*

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Grader	1	85	40%	175	0
Bore/Drill Rig	2	84	20%	175	0
Excavator	1	81	40%	195	0
Rubber Tired Loaders	1	79	40%	195	0
Air Compressor	2	78	40%	215	0
Crane (Mobile)	1	81	16%	215	0
Generator Set	1	81	50%	235	0
Other Equipment	1	85	50%	235	0

10

Receptor: ***R3***

Results:

1-hour Leq: 75.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Pumps	1	81	20%	175	0
Crane (Mobile)	1	81	16%	175	0
Forklift	1	75	20%	195	0
Generator Set	1	81	50%	195	0
Pumps	1	81	20%	215	0
Pumps	1	81	20%	215	0
Pumps	1	81	20%	235	0
	7				

Receptor: ***R3***

Results:

1-hour Leq: 70.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Foundation/Concrete***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	175	0
Crane (Mobile)	1	81	16%	175	0
Forklift	1	75	20%	195	0
Plate Compactors	1	83	20%	195	0
Pumps	1	81	20%	215	0
Air Compressor	1	78	40%	215	0
Rubber Tired Loaders	1	79	40%	235	0
Plate Compactors	1	83	20%	235	0
Plate Compactors	1	83	20%	255	0
	9				

Receptor: ***R3***

Results:

1-hour Leq: 73.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	175	0
Crane (Mobile)	1	81	16%	175	0
Forklift	1	75	20%	195	0
Air Compressor	1	78	40%	195	0
Plate Compactors	1	83	20%	215	0
Pumps	1	81	20%	215	0
Crane (Tower)	1	81	16%	235	0
Crane (Mobile)	1	81	16%	235	0
Forklift	1	75	20%	255	0
Air Compressor	1	78	40%	255	0
Plate Compactors	1	83	20%	275	0
Pumps	1	81	20%	275	0
	12				

Receptor: ***R3***

Results:

1-hour Leq: 73.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Paving/Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Roller	1	80	20%	175	0
Paving Equipment	1	77	50%	175	0
Cement/Mortar Mixers	1	79	40%	195	0

3

Receptor: ***R3***

Results:

1-hour Leq: 67.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***DemolitionDeconstruction of Cathedral***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	535	10
Excavator	1	81	40%	535	10
Rubber Tired Loaders	1	79	40%	555	10

3

Receptor: ***R4***

Results:

1-hour Leq: 52.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Grading/Excavation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Grader	1	85	40%	535	10
Bore/Drill Rig	2	84	20%	535	10
Excavator	1	81	40%	555	10
Rubber Tired Loaders	1	79	40%	555	10
Air Compressor	2	78	40%	575	10
Crane (Mobile)	1	81	16%	575	10
Generator Set	1	81	50%	595	10
Other Equipment	1	85	50%	595	10

10

Receptor: ***R4***

Results:

1-hour Leq: 56.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Mat Foundation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Pumps	1	81	20%	535	10
Crane (Mobile)	1	81	16%	535	10
Forklift	1	75	20%	555	10
Generator Set	1	81	50%	555	10
Pumps	1	81	20%	575	10
Pumps	1	81	20%	575	10
Pumps	1	81	20%	595	10

7

Receptor: ***R4***

Results:

1-hour Leq: 51.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Foundation/Concrete***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	535	10
Crane (Mobile)	1	81	16%	535	10
Forklift	1	75	20%	555	10
Plate Compactors	1	83	20%	555	10
Pumps	1	81	20%	575	10
Air Compressor	1	78	40%	575	10
Rubber Tired Loaders	1	79	40%	595	10
Plate Compactors	1	83	20%	595	10
Plate Compactors	1	83	20%	615	10
	9				

Receptor: ***R4***

Results:

1-hour Leq: 54.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Building Construction***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Tractors/Loaders/Backhoes	1	84	40%	535	10
Crane (Mobile)	1	81	16%	535	10
Forklift	1	75	20%	555	10
Air Compressor	1	78	40%	555	10
Plate Compactors	1	83	20%	575	10
Pumps	1	81	20%	575	10
Crane (Tower)	1	81	16%	595	10
Crane (Mobile)	1	81	16%	595	10
Forklift	1	75	20%	615	10
Air Compressor	1	78	40%	615	10
Plate Compactors	1	83	20%	635	10
Pumps	1	81	20%	635	10
	12				

Receptor: ***R4***

Results:

1-hour Leq: 54.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Phase: ***Paving/Landscaping***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Roller	1	80	20%	535	10
Paving Equipment	1	77	50%	535	10
Cement/Mortar Mixers	1	79	40%	555	10

3

Receptor: ***R4***

Results:

1-hour Leq: 48.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Off-Site Construction Traffic

					Distance to travel lane, feet					
					120	35	45	45	30	120
	Number of Truck One Way Trips		Worker Trips		Estimated Construction Traffic Noise Levels (from TNM), dBA Leq					
Phase	Per Day	Per Hour (8-hr day)	Daily Trips	Trips during Pk Hr.	Burton	Holt Ave.	3rd St.	La Cienega	Cadillac	San Vicente
1. Demolition	40	3	50	20	52.1	57.7	56.5	58.2	58.5	52.1
2. Grading/Excavation	136	12	60	24	57.2	62.8	61.6	64.2	63.6	57.2
3. Mat Foundation	696	44	60	24	62.5	68.1	66.9	69.8	68.9	62.5
4. Foundation/Concrete	40	3	60	24	52.3	57.9	56.7	58.4	58.7	52.3
5. Building Construction	128	8	350	140	57.9	63.5	62.4	64.1	64.3	57.9
6. Paving/Landscaping	10	1	20	8	47.5	53.1	52.0	54.2	53.9	47.5
6-hour haulings				Ambient, dBA	64.8	61.0	62.8	64.4	61.3	61.5
				Significance Criteria, dBA	69.8	66.0	67.8	69.4	66.3	66.5
				Pk. Hr. traffic volume	2743	1498	1747	2522	1242	1276

	Estimated Noise Levels plus Ambient, dBA Leq					
	Burton	Holt Ave.	3rd St.	La Cienega	Cadillac	San Vicente
1. Demolition	65.0	62.7	63.7	65.3	63.1	62.0
2. Grading/Excavation	65.5	65.0	65.3	67.3	65.6	62.9
3. Mat Foundation	66.8	68.9	68.3	70.9	69.6	65.0
4. Foundation/Concrete	65.0	62.7	63.8	65.4	63.2	62.0
5. Building Construction	65.6	65.4	65.6	67.3	66.1	63.1
6. Paving/Landscaping	64.9	61.7	63.1	64.8	62.0	61.7
Ambient, dBA	64.8	61.0	62.8	64.4	61.3	61.5
Significance Criteria, dBA	69.8	66.0	67.8	69.4	66.3	66.5
Maximum Noise Increase over Ambient	2.0	7.9	5.5	6.5	8.3	3.5

Eyestone Environmental 8 April 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Demo Phase

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **8 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Our Lady of Mt. Lebanon Project**
RUN: **Demo Phase**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	20	35	0	0	3	35	0	0	0	0
	point2	2										

Eyestone Environmental 8 April 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Demo Phase

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
At 30 feet from roadway centerline	1	1	500.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
At 35 feet from roadway centerline	10	1	500.0	35.0	0.00	4.92	0.00	66	10.0	8.0	Y
At 45 feet from roadway centerline	11	1	500.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y
At 120 feet from roadway centerline	14	1	500.0	120.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

8 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Demo Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
At 30 feet from roadway centerline	1	1	0.0	58.5	71	58.5	5	----	58.5	0.0	0	0.0
At 35 feet from roadway centerline	10	1	0.0	57.7	66	57.7	10	----	57.7	0.0	8	-8.0
At 45 feet from roadway centerline	11	1	0.0	56.5	66	56.5	10	----	56.5	0.0	8	-8.0
At 120 feet from roadway centerline	14	1	0.0	52.1	66	52.1	10	----	52.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	4	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental **10 January 2020**
Sean Bui **TNM 2.5**

INPUT: ROADWAYS
PROJECT/CONTRACT: **Our Lady of Mt. Lebanon Project**
RUN: **Demo Phase - La Cienega Only**

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental				**10 January 2020**								
Sean Bui				**TNM 2.5**								
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**											
RUN:	**Demo Phase - La Cienega Only**											
Roadway	**Points**											
Name	**Name**	**No.**	**Segment**									
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**	
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	20	35	0	0	5	35	0	0	0	0
	point2	2										

Eyestone Environmental						**10 January 2020**					
Sean Bui						**TNM 2.5**					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**										
RUN:	**Demo Phase - La Cienega Only**										
Receiver											
Name	**No.**	**#DUs**	**Coordinates (ground)**			**Height**	**Input Sound Levels and Criteria**				**Active**
			X	**Y**	**Z**	**above**	**Existing**	**Impact Criteria**		**NR**	**in**
						Ground	**LAeq1h**	**LAeq1h**	**Sub'l**	**Goal**	**Calc.**
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along La Cienega	10	1	500.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

10 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Demo Phase - La Cienega Only
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along La Cienega	10	1	0.0	58.2	66	58.2	10	----	58.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Eyestone Environmental					**18 September 2020**						
Sean Bui					**TNM 2.5**						
INPUT: ROADWAYS							**Average pavement type shall be used unless**				
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**						**a State highway agency substantiates the use**				
RUN:	**Grading**						**of a different type with the approval of FHWA**				
Roadway		**Points**									
Name	**Width**	**Name**	**No.**	**Coordinates (pavement)**			**Flow Control**			**Segment**	
				X	**Y**	**Z**	**Control Device**	**Speed Constraint**	**Percent Vehicles Affected**	**Pvmt Type**	**On Struct?**
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental				**18 September 2020**								
Sean Bui				**TNM 2.5**								
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**											
RUN:	**Grading**											
Roadway	**Points**											
Name	**Name**	**No.**	**Segment**									
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**	
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	24	35	0	0	12	35	0	0	0	0
	point2	2										

Eyestone Environmental 18 September 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Grading

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
At 30 feet from roadway centerline	1	1	500.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
At 35 feet from roadway centerline	10	1	500.0	35.0	0.00	4.92	0.00	66	10.0	8.0	Y
At 45 feet from roadway centerline	11	1	500.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y
At 120 feet from roadway centerline	14	1	500.0	120.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

18 September 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Grading
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
At 30 feet from roadway centerline	1	1	0.0	63.6	71	63.6	5	----	63.6	0.0	0	0.0
At 35 feet from roadway centerline	10	1	0.0	62.8	66	62.8	10	----	62.8	0.0	8	-8.0
At 45 feet from roadway centerline	11	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0
At 120 feet from roadway centerline	14	1	0.0	57.2	66	57.2	10	----	57.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	4	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 18 September 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Grading Phase - La Cienega Only

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental				**18 September 2020**								
Sean Bui				**TNM 2.5**								
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**											
RUN:	**Grading Phase - La Cienega Only**											
Roadway	**Points**											
Name	**Name**	**No.**	**Segment**									
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**	
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	24	35	0	0	23	35	0	0	0	0
	point2	2										

Eyestone Environmental						**18 September 2020**					
Sean Bui						**TNM 2.5**					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**										
RUN:	**Grading Phase - La Cienega Only**										
Receiver											
Name	**No.**	**#DUs**	**Coordinates (ground)**			**Height**	**Input Sound Levels and Criteria**				**Active**
			X	**Y**	**Z**	**above**	**Existing**	**Impact Criteria**		**NR**	**in**
						Ground	**LAeq1h**	**LAeq1h**	**Sub'l**	**Goal**	**Calc.**
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along La Cienega	10	1	500.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

18 September 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Grading Phase - La Cienega Only
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along La Cienega	10	1	0.0	64.2	66	64.2	10	----	64.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Eyestone Environmental 8 April 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Mat Foundation Phase

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **8 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Our Lady of Mt. Lebanon Project**
RUN: **Mat Foundation Phase**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	24	35	0	0	44	35	0	0	0	0
	point2	2										

Eyestone Environmental 8 April 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Mat Foundation Phase

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
At 30 feet from roadway centerline	1	1	500.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
At 35 feet from roadway centerline	10	1	500.0	35.0	0.00	4.92	0.00	66	10.0	8.0	Y
At 45 feet from roadway centerline	11	1	500.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y
At 120 feet from roadway centerline	14	1	500.0	120.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

8 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Mat Foundation Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
At 30 feet from roadway centerline	1	1	0.0	68.9	71	68.9	5	----	68.9	0.0	0	0.0
At 35 feet from roadway centerline	10	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0
At 45 feet from roadway centerline	11	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0
At 120 feet from roadway centerline	14	1	0.0	62.5	66	62.5	10	----	62.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	4	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 10 January 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Mat Foundation Phase - La Cienega Only

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **10 January 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Our Lady of Mt. Lebanon Project**
RUN: **Mat Foundation Phase - La Cienega Only**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	24	35	0	0	87	35	0	0	0	0
	point2	2										

Eyestone Environmental						**10 January 2020**					
Sean Bui						**TNM 2.5**					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**										
RUN:	**Mat Foundation Phase - La Cienega Only**										
Receiver											
Name	**No.**	**#DUs**	**Coordinates (ground)**			**Height**	**Input Sound Levels and Criteria**				**Active**
			X	**Y**	**Z**	**above**	**Existing**	**Impact Criteria**		**NR**	**in**
						Ground	**LAeq1h**	**LAeq1h**	**Sub'l**	**Goal**	**Calc.**
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along La Cienega	10	1	500.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

10 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Mat Foundation Phase - La Cienega Only
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver												
Name	No.	#DUs	Existing	No Barrier					With Barrier			
			LAeq1h	LAeq1h		Increase over existing		Type	Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc	Impact	LAeq1h	Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along La Cienega	10	1	0.0	69.8	66	69.8	10	Snd Lvl	69.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Eyestone Environmental 8 April 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Foundation Phase

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **8 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Our Lady of Mt. Lebanon Project**
RUN: **Foundation Phase**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	24	35	0	0	3	35	0	0	0	0
	point2	2										

Eyestone Environmental **8 April 2020**
Sean Bui **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: **Our Lady of Mt. Lebanon Project**
RUN: **Foundation Phase**

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
At 30 feet from roadway centerline	1	1	500.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
At 35 feet from roadway centerline	10	1	500.0	35.0	0.00	4.92	0.00	66	10.0	8.0	Y
At 45 feet from roadway centerline	11	1	500.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y
At 120 feet from roadway centerline	14	1	500.0	120.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

8 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Foundation Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
At 30 feet from roadway centerline	1	1	0.0	58.7	71	58.7	5	----	58.7	0.0	0	0.0
At 35 feet from roadway centerline	10	1	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0
At 45 feet from roadway centerline	11	1	0.0	56.7	66	56.7	10	----	56.7	0.0	8	-8.0
At 120 feet from roadway centerline	14	1	0.0	52.3	66	52.3	10	----	52.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	4	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental **10 January 2020**
Sean Bui **TNM 2.5**

INPUT: ROADWAYS
PROJECT/CONTRACT: **Our Lady of Mt. Lebanon Project**
RUN: **Foundation Phase - La Cienega Only**

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental				**10 January 2020**								
Sean Bui				**TNM 2.5**								
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**											
RUN:	**Foundation Phase - La Cienega Only**											
Roadway	**Points**											
Name	**Name**	**No.**	**Segment**									
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**	
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	24	35	0	0	5	35	0	0	0	0
	point2	2										

Eyestone Environmental						**10 January 2020**					
Sean Bui						**TNM 2.5**					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**										
RUN:	**Foundation Phase - La Cienega Only**										
Receiver											
Name	**No.**	**#DUs**	**Coordinates (ground)**			**Height**	**Input Sound Levels and Criteria**				**Active**
			X	**Y**	**Z**	**above**	**Existing**	**Impact Criteria**		**NR**	**in**
						Ground	**LAeq1h**	**LAeq1h**	**Sub'l**	**Goal**	**Calc.**
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along La Cienega	10	1	500.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

10 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Foundation Phase - La Cienega Only
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along La Cienega	10	1	0.0	58.4	66	58.4	10	----	58.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Eyestone Environmental 8 April 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Building Construction Phase

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **8 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Our Lady of Mt. Lebanon Project**
RUN: **Building Construction Phase**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	140	35	0	0	8	35	0	0	0	0
	point2	2										

Eyestone Environmental **8 April 2020**
Sean Bui **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Building Construction Phase

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
At 30 feet from roadway centerline	1	1	500.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
At 35 feet from roadway centerline	10	1	500.0	35.0	0.00	4.92	0.00	66	10.0	8.0	Y
At 45 feet from roadway centerline	11	1	500.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y
At 120 feet from roadway centerline	14	1	500.0	120.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

8 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Building Construction Phase
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
At 30 feet from roadway centerline	1	1	0.0	64.3	71	64.3	5	----	64.3	0.0	0	0.0
At 35 feet from roadway centerline	10	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0
At 45 feet from roadway centerline	11	1	0.0	62.4	66	62.4	10	----	62.4	0.0	8	-8.0
At 120 feet from roadway centerline	14	1	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	4	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 10 January 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Building Construction - La Cienega Only

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental				**10 January 2020**								
Sean Bui				**TNM 2.5**								
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**											
RUN:	**Building Construction - La Cienega Only**											
Roadway	**Points**											
Name	**Name**	**No.**	**Segment**									
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**	
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	140	35	0	0	16	35	0	0	0	0
	point2	2										

Eyestone Environmental						**10 January 2020**					
Sean Bui						**TNM 2.5**					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**										
RUN:	**Building Construction - La Cienega Only**										
Receiver											
Name	**No.**	**#DUs**	**Coordinates (ground)**			**Height**	**Input Sound Levels and Criteria**				**Active**
			X	**Y**	**Z**	**above**	**Existing**	**Impact Criteria**		**NR**	**in**
						Ground	**LAeq1h**	**LAeq1h**	**Sub'l**	**Goal**	**Calc.**
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along La Cienega	10	1	500.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

10 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Building Construction - La Cienega Only
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along La Cienega	10	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Eyestone Environmental 8 April 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Paving/Landscape

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway		Points					Flow Control			Segment	
Name	Width	Name	No.	Coordinates (pavement) X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental **8 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Our Lady of Mt. Lebanon Project**
RUN: **Paving/Landscape**

Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	8	35	0	0	1	35	0	0	0	0
	point2	2										

Eyestone Environmental **8 April 2020**
Sean Bui **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: **Our Lady of Mt. Lebanon Project**
RUN: **Paving/Landscape**

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
At 30 feet from roadway centerline	1	1	500.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
At 35 feet from roadway centerline	10	1	500.0	35.0	0.00	4.92	0.00	66	10.0	8.0	Y
At 45 feet from roadway centerline	11	1	500.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y
At 120 feet from roadway centerline	14	1	500.0	120.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

8 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Paving/Landscape
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
At 30 feet from roadway centerline	1	1	0.0	53.9	71	53.9	5	----	53.9	0.0	0	0.0
At 35 feet from roadway centerline	10	1	0.0	53.1	66	53.1	10	----	53.1	0.0	8	-8.0
At 45 feet from roadway centerline	11	1	0.0	52.0	66	52.0	10	----	52.0	0.0	8	-8.0
At 120 feet from roadway centerline	14	1	0.0	47.5	66	47.5	10	----	47.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	4	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	1	0.0	0.0	0.0

Eyestone Environmental 10 January 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Paving/Landscape - La Cienega Only

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Haul Route	12.0	point1	1	0.0	0.0	0.00	Signal	0.00	100	Average	
		point2	2	1,000.0	0.0	0.00					

Eyestone Environmental				**10 January 2020**								
Sean Bui				**TNM 2.5**								
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**											
RUN:	**Paving/Landscape - La Cienega Only**											
Roadway	**Points**											
Name	**Name**	**No.**	**Segment**									
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**	
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	8	35	0	0	2	35	0	0	0	0
	point2	2										

Eyestone Environmental						**10 January 2020**					
Sean Bui						**TNM 2.5**					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	**Our Lady of Mt. Lebanon Project**										
RUN:	**Paving/Landscape - La Cienega Only**										
Receiver											
Name	**No.**	**#DUs**	**Coordinates (ground)**			**Height**	**Input Sound Levels and Criteria**				**Active**
			X	**Y**	**Z**	**above**	**Existing**	**Impact Criteria**		**NR**	**in**
						Ground	**LAeq1h**	**LAeq1h**	**Sub'l**	**Goal**	**Calc.**
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along La Cienega	10	1	500.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

10 January 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Our Lady of Mt. Lebanon Project
RUN: Paving/Landscape - La Cienega Only
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along La Cienega	10	1	0.0	54.2	66	54.2	10	----	54.2	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	1	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Our Lady of Mt. Lebanon Project

Construction Vibration Impacts

Reference Levels at 25 feet are based on FTA, 2006 (Transit Noise and Vibration Impact Assessment)
Calculations using FTA procedure with n= **1.5** (for receptors 25 feet or greater)
n= **1.1** (for receptors less than 25 feet, per Caltrans procedure)

ON-SITE CONSTRUCTION ACTIVITIES

Table 1: Construction Equipment Vibration Levels (PPV) - Building Damages

Equipment	Reference Vibration Levels at 25 ft., PPV	Estimated Vibration Levels at nearest off-site building structures (distance in feet), PPV						
		11-story Residential Bldg to the North	5-story Residential Bldg to the South	3-story Parking Structure to the East	5-story Residential Bldg to the West			
		30	175	100	65			
Large Bulldozer	0.089	0.068	0.005	0.011	0.021			
Caisson Drilling	0.089	0.068	0.005	0.011	0.021			
Loaded Trucks	0.076	0.058	0.004	0.010	0.018			
Jackhammer	0.035	0.027	0.002	0.004	0.008			
Small bulldozer	0.003	0.002	0.000	0.000	0.001			
Significance Threshold, PPV		0.5	0.3	0.5	0.3			

Table 2: Construction Equipment Vibration Levels (VdB) - Human Annoyance

Equipment	Reference Vibration Levels at 25 ft., VdB	Estimated Vibration Levels at Off-Site Receptors (at note distance in feet), VdB						
		R1	R2	R3	R4			
		30	65	175	535			
Large Bulldozer	87	85	75	62	47			
Caisson Drilling	87	85	75	62	47			
Loaded Trucks	86	84	74	61	46			
Jackhammer	79	77	67	54	39			
Small bulldozer	58	56	46	33	18			
Significance Threshold, VdB		72	72	72	72			

OFF-SITE CONSTRUCTION HAUL TRUCKS

Table 3: Off-Site Haul Trucks - Building Damage

Equipment	Reference Vibration Levels at 50 ft., PPV	Estimated Vibration Levels at noted distance in feet, PPV						
		20						
Typical road surface	0.00565	0.022						
Significance Threshold, PPV		0.12						

Ref. Levels based on FTA Figure 7-3 (converted from VdB to PPV)

Table 4: Off-Site Haul Trucks - Human Annoyance

Equipment	Reference Vibration Levels at 50 ft., VdB	Estimated Vibration Levels at noted distance in feet, VdB						
		20	25	35				
Typical road surface	63	75	72	68				
Significance Threshold, VdB		72	72	72				

Ref. Levels based on FTA Figure 7-3

Operation Noise Calculations

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Project Composite Noise Calculations (CNEL)

Project: Our Lady of Mt. Lebanon Project

Receptor	Ambient	Traffic[a]	Mechanical		Loading	Outdoor	Project Composite	Ambient + Project	Increase
R1	64.7	31.6	53.5		53.7	50.9	57.7	65.5	0.8
R1U	64.7	35.8	55.8		61.2	61.5	64.9	67.8	3.1
R2	63.7	39.7	53.2		28.1	49.9	55.0	64.3	0.6
R2U	63.7	38.9	53.6		27.7	63.3	63.8	66.8	3.1
R3	66.8	43.8	52.0		29.4	59.3	60.2	67.6	0.8
R3U	66.8	40.4	53.0		29.1	59.1	60.1	67.6	0.8
R4	62.9	35.8	38.9		19.3	36.2	42.0	63.0	0.1

[a] - Project traffic noise levels at each receptor is based on the traffic noise analysis for the roadway segment in front of the receptor, adjusted for distance and barrier (if present), as provided in the table below.
U - Represents upper levels.

Receptor	Roadway Segment	Traffic Noise Levels, CNEL		Project Only	distance to roadway, ft	Project Only at 10ft	barrier	distance to Center Line	adj. for distance
R1	Burton Way			31.6	160	43.8	5	35	-7.2
R1U	Burton Way			35.8	194	43.8	0	35	-8.0
R2	Burton Way			39.7	65	43.8	0	35	-4.1
R2U	Burton Way			38.9	82	43.8	0	35	-4.9
R3	Burton Way			43.8	10	43.8	0	35	0.0
R3U	Burton Way			40.4	51	43.8	0	35	-3.4
R4	La Cienega			35.8	140	42.5	0	35	-6.7

For report, base on the worst-case (highest noise impacts)

Receptor	Ambient	Traffic	Mechanical		Loading	Outdoor	Project Composite	Ambient + Project	Increase
R1	64.7	35.8	55.8		61.2	61.5	64.9	67.8	3.1
R2	63.7	38.9	53.6		27.7	63.3	63.8	66.8	3.1
R3	66.8	43.8	52.0		29.4	59.3	60.2	67.6	0.8
R4	62.9	35.8	38.9		19.3	36.2	42.0	63.0	0.1

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Outdoor Mechanical Equipment Noise Calculations

Project: Our Lady of Mt. Lebanon Project

	Estimated Noise Levels, Leq from SOUNDPLAN		Hours of Operations Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	12	3	9
R1	46.8	53.5	46.8	46.8	46.8
R1U	49.1	55.8	49.1	49.1	49.1
R2	46.5	53.2	46.5	46.5	46.5
R2U	46.9	53.6	46.9	46.9	46.9
R3	45.3	52.0	45.3	45.3	45.3
R3U	46.3	53.0	46.3	46.3	46.3
R4	32.2	38.9	32.2	32.2	32.2

Receptor	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	ambient (Leq)	Ambient + Project (Leq)
R1	64.7	65.0	0.3	57.0	57.4
R1U	64.7	65.2	0.5	57.0	57.7
R2	63.7	64.1	0.4	58.4	58.7
R2U	63.7	64.1	0.4	58.4	58.7
R3	66.8	66.9	0.1	61.1	61.2
R3U	66.8	67.0	0.2	61.1	61.2
R4	62.9	63.0	0.0	57.6	57.6

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Loading and Trash Compactor Noise Calculations

Project: Our Lady of Mt. Lebanon Project

LOADING

	Estimated Noise Levels, Leq from SOUNDPLAN		Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	1	1	0
R1	61.1	53.5	50.3	56.3	0.0
R1U	68.8	61.2	58.0	64.0	0.0
R2	35.6	28.0	24.8	30.8	0.0
R2U	35.1	27.5	24.3	30.3	0.0
R3	37.0	29.4	26.2	32.2	0.0
R3U	36.7	29.1	25.9	31.9	0.0
R4	26.5	19.1	15.7	21.7	0.0

TRASH COMPACTOR

	Estimated Noise Levels, Leq from SOUNDPLAN		Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	3	3	0
R1	44.1	41.3	38.1	44.1	0.0
R1U	36.1	33.3	30.1	36.1	0.0
R2	14.7	12.8	8.7	14.7	0.0
R2U	14.7	12.8	8.7	14.7	0.0
R3	0.3	6.3	-5.7	0.3	0.0
R3U	0.6	6.4	-5.4	0.6	0.0
R4	-8.0	5.8	-14.0	-8.0	0.0

Receptor	Project CNEL	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	Ambient (Leq)	Ambient + Project (Leq)
R1	53.7	64.7	65.0	0.3	61.2	61.5	64.4
R1U	61.2	64.7	66.3	1.6	68.8	61.5	69.5
R2	28.1	63.7	63.7	0.0	35.6	61.0	61.0
R2U	27.7	63.7	63.7	0.0	35.1	61.0	61.0
R3	29.4	66.8	66.8	0.0	37.0	64.8	64.8
R3U	29.1	66.8	66.8	0.0	36.7	64.8	64.8
R4	19.3	62.9	62.9	0.0	26.5	60.3	60.3

Receptor	Ambient	Project	Amb+Project	Criteria	Exceedance
R1	61.5	68.8	69.5	66.5	3.0
R2	61.0	35.6	61.0	66.0	0.0
R3	64.8	37.0	64.8	69.8	0.0
R4	60.3	26.5	60.3	65.3	0.0

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Outdoor Noise Calculations

Project: Our Lady of Mt. Lebanon Project

ALL LEVEL

	Estimated noise levels, Leq (FROM SOUNDPLAN)				Hours of Operations Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Sound System	Occupants	Total, Leq	CNEL	12	**2**	**2**
R1	45.4	46.4	48.9	50.9	48.9	47.1	42.4
R1U	57.6	55.0	59.5	61.5	59.5	57.7	53.0
R2	46.4	42.5	47.9	49.9	47.9	46.1	41.4
R2U	60.6	53.3	61.3	63.3	61.3	59.5	54.8
R3	55.2	53.1	57.3	59.3	57.3	55.5	50.8
R3U	54.2	53.9	57.1	59.1	57.1	55.3	50.6
R4	32.3	29.8	34.2	36.2	34.2	32.4	27.7

TOTAL COMBINED

Receptor	Project (CNEL)	Ambient (CNEL)	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	Ambient (Leq)	Ambient + Project (Leq)
R1	50.9	64.7	64.9	0.2	48.9	57.0	57.6
R1U	61.5	64.7	66.4	1.7	59.5	57.0	61.4
R2	49.9	63.7	63.9	0.2	47.9	58.4	58.8
R2U	63.3	63.7	66.5	2.8	61.3	58.4	63.1
R3	59.3	66.8	67.5	0.7	57.3	61.1	62.6
R3U	59.1	66.8	67.5	0.7	57.1	61.1	62.6
R4	36.2	62.9	62.9	0.0	34.2	57.6	57.6

Receptor	Ambient	Project	Amb+Project	Criteria	Exceedance
R1	57.0	59.5	61.4	62.0	0.0
R2	58.4	61.3	63.1	63.4	0.0
R3	61.1	57.3	62.6	66.1	0.0
R4	57.6	34.2	57.6	62.6	0.0

Our Lady of Mt. Lebanon Project
Source Levels in dB(A) - Mechanical

Name	Source type	Lw dB(A)	
Mechanical - Level 01	Point	90.0	
Mechanical - Level 01	Point	90.0	
Mechanical - Level 02	Point	90.0	
Mechanical - Level 02	Point	90.0	
Mechanical Roof Level	Point	90.0	
Mechanical Roof Level	Point	90.0	
Mechanical Roof Level	Point	90.0	
Mechanical Roof Level	Point	90.0	
Mechanical Roof Level	Point	90.0	

Our Lady of Mt. Lebanon Project
Assessed contribution level - Mechanical

Source	Source type	Leq dB(A)	
Receiver R1 Fl G Leq 46.8 dB(A)			
Mechanical - Level 01	Point	33.7	
Mechanical - Level 01	Point	46.4	
Mechanical Roof Level	Point	28.1	
Mechanical Roof Level	Point	25.9	
Mechanical Roof Level	Point	25.4	
Mechanical Roof Level	Point	25.5	
Mechanical Roof Level	Point	26.8	
Mechanical - Level 02	Point	21.8	
Mechanical - Level 02	Point	23.2	
Receiver R1 Fl F2 Leq 49.1 dB(A)			
Mechanical - Level 01	Point	31.6	
Mechanical - Level 01	Point	44.9	
Mechanical Roof Level	Point	33.8	
Mechanical Roof Level	Point	32.4	
Mechanical Roof Level	Point	30.7	
Mechanical Roof Level	Point	30.4	
Mechanical Roof Level	Point	30.8	
Mechanical - Level 02	Point	42.4	
Mechanical - Level 02	Point	43.9	
Receiver R2 Fl G Leq 46.5 dB(A)			
Mechanical - Level 01	Point	46.3	
Mechanical - Level 01	Point	19.3	
Mechanical Roof Level	Point	26.0	
Mechanical Roof Level	Point	25.2	
Mechanical Roof Level	Point	24.0	
Mechanical Roof Level	Point	23.7	
Mechanical Roof Level	Point	23.5	
Mechanical - Level 02	Point	16.2	
Mechanical - Level 02	Point	25.1	
Receiver R2 Fl F2 Leq 46.9 dB(A)			
Mechanical - Level 01	Point	46.6	
Mechanical - Level 01	Point	19.7	
Mechanical Roof Level	Point	28.2	
Mechanical Roof Level	Point	27.2	
Mechanical Roof Level	Point	26.0	
Mechanical Roof Level	Point	25.5	
Mechanical Roof Level	Point	25.1	
Mechanical - Level 02	Point	16.6	
Mechanical - Level 02	Point	24.4	

Our Lady of Mt. Lebanon Project
Assessed contribution level - Mechanical

Source	Source type	Leq dB(A)	
Receiver R3 Fl G Leq 45.3 dB(A)			
Mechanical - Level 01	Point	22.8	
Mechanical - Level 01	Point	32.7	
Mechanical Roof Level	Point	22.8	
Mechanical Roof Level	Point	22.2	
Mechanical Roof Level	Point	22.5	
Mechanical Roof Level	Point	23.1	
Mechanical Roof Level	Point	25.0	
Mechanical - Level 02	Point	31.3	
Mechanical - Level 02	Point	44.6	
Receiver R3 Fl F2 Leq 46.3 dB(A)			
Mechanical - Level 01	Point	23.5	
Mechanical - Level 01	Point	27.7	
Mechanical Roof Level	Point	24.5	
Mechanical Roof Level	Point	23.9	
Mechanical Roof Level	Point	24.5	
Mechanical Roof Level	Point	25.4	
Mechanical Roof Level	Point	27.5	
Mechanical - Level 02	Point	36.7	
Mechanical - Level 02	Point	45.5	
Receiver R4 Fl G Leq 32.2 dB(A)			
Mechanical - Level 01	Point	8.5	
Mechanical - Level 01	Point	20.8	
Mechanical Roof Level	Point	20.7	
Mechanical Roof Level	Point	21.5	
Mechanical Roof Level	Point	23.4	
Mechanical Roof Level	Point	24.4	
Mechanical Roof Level	Point	24.4	
Mechanical - Level 02	Point	24.5	
Mechanical - Level 02	Point	23.5	

Our Lady of Mt. Lebanon Project
Source Levels in dB(A) - Loading w 6ft Wall

Name	Source type	Lw dB(A)	
Loading East Side	Point	101.9	
Loading West Side	Point	101.9	

Our Lady of Mt. Lebanon Project
Assessed contribution level - Loading w 6ft Wall

Source	Source type	Leq dB(A)	
Receiver R1 Fl G Leq,d 61.1 dB(A)			
Loading East Side	Point	50.7	
Loading West Side	Point	60.7	
Receiver R1 Fl F2 Leq,d 68.8 dB(A)			
Loading East Side	Point	50.1	
Loading West Side	Point	68.7	
Receiver R2 Fl G Leq,d 35.6 dB(A)			
Loading East Side	Point	31.6	
Loading West Side	Point	33.3	
Receiver R2 Fl F2 Leq,d 35.1 dB(A)			
Loading East Side	Point	30.9	
Loading West Side	Point	33.1	
Receiver R3 Fl G Leq,d 37.4 dB(A)			
Loading East Side	Point	36.9	
Loading West Side	Point	27.8	
Receiver R3 Fl F2 Leq,d 36.7 dB(A)			
Loading East Side	Point	36.2	
Loading West Side	Point	27.0	
Receiver R4 Fl G Leq,d 26.5 dB(A)			
Loading East Side	Point	20.3	
Loading West Side	Point	25.3	

Our Lady of Mt. Lebanon Project
Source Levels in dB(A) - Trash

Name	Source type	Lw dB(A)	
Trash Compactor	Point	73.4	

Our Lady of Mt. Lebanon Project
Assessed contribution level - Trash

Source	Source type	Leq dB(A)	
Receiver R1 Fl G Leq 44.1 dB(A)			
Trash Compactor	Point	44.1	
Receiver R1 Fl F2 Leq 36.1 dB(A)			
Trash Compactor	Point	36.1	
Receiver R2 Fl G Leq 14.7 dB(A)			
Trash Compactor	Point	14.7	
Receiver R2 Fl F2 Leq 14.7 dB(A)			
Trash Compactor	Point	14.7	
Receiver R3 Fl G Leq 0.3 dB(A)			
Trash Compactor	Point	0.3	
Receiver R3 Fl F2 Leq 0.6 dB(A)			
Trash Compactor	Point	0.6	
Receiver R4 Fl G Leq -8.0 dB(A)			
Trash Compactor	Point	-8.0	

Our Lady of Mt. Lebanon Project
Source Levels in dB(A) - People

Name	Source type	Lw dB(A)	
People Level 1	Area	95.6	
People Level 02 Deck 1	Area	85.2	
People Level 02 Deck 2	Area	83.6	
People Level 02 Deck 3	Area	87.0	
People Level 04 Rec. Deck	Area	94.2	
People Level 04 Space Deck	Area	90.1	

Our Lady of Mt. Lebanon Project
Assessed contribution level - People

Source	Source type	Leq dB(A)	
Receiver R1 Fl G Leq 46.4 dB(A)			
People Level 1	Area	30.0	
People Level 02 Deck 2	Area	28.8	
People Level 02 Deck 1	Area	43.0	
People Level 02 Deck 3	Area	26.9	
People Level 04 Rec. Deck	Area	43.1	
People Level 04 Space Deck	Area	25.9	
Receiver R1 Fl F2 Leq 55.0 dB(A)			
People Level 1	Area	40.5	
People Level 02 Deck 2	Area	22.4	
People Level 02 Deck 1	Area	43.2	
People Level 02 Deck 3	Area	26.8	
People Level 04 Rec. Deck	Area	54.5	
People Level 04 Space Deck	Area	26.6	
Receiver R2 Fl G Leq 42.5 dB(A)			
People Level 1	Area	27.8	
People Level 02 Deck 2	Area	10.9	
People Level 02 Deck 1	Area	16.0	
People Level 02 Deck 3	Area	15.8	
People Level 04 Rec. Deck	Area	23.7	
People Level 04 Space Deck	Area	42.3	
Receiver R2 Fl F2 Leq 53.3 dB(A)			
People Level 1	Area	28.5	
People Level 02 Deck 2	Area	11.4	
People Level 02 Deck 1	Area	16.5	
People Level 02 Deck 3	Area	16.9	
People Level 04 Rec. Deck	Area	25.5	
People Level 04 Space Deck	Area	53.2	
Receiver R3 Fl G Leq 53.1 dB(A)			
People Level 1	Area	52.7	
People Level 02 Deck 2	Area	28.1	
People Level 02 Deck 1	Area	11.7	
People Level 02 Deck 3	Area	39.1	
People Level 04 Rec. Deck	Area	34.2	
People Level 04 Space Deck	Area	38.2	
Receiver R3 Fl F2 Leq 53.9 dB(A)			
People Level 1	Area	53.0	
People Level 02 Deck 2	Area	29.9	
People Level 02 Deck 1	Area	13.2	

Our Lady of Mt. Lebanon Project
Assessed contribution level - People

Source	Source type	Leq dB(A)	
People Level 02 Deck 3	Area	40.5	
People Level 04 Rec. Deck	Area	39.0	
People Level 04 Space Deck	Area	43.9	
Receiver R4 Fl G Leq 29.8 dB(A)			
People Level 1	Area	23.0	
People Level 02 Deck 2	Area	21.2	
People Level 02 Deck 1	Area	4.5	
People Level 02 Deck 3	Area	17.7	
People Level 04 Rec. Deck	Area	27.2	
People Level 04 Space Deck	Area	13.8	

Our Lady of Mt. Lebanon Project
Source Levels in dB(A) - Speakers

Name	Source type	Lw dB(A)	
Speaker Level 01	Point	99.2	
Speaker Level 01	Point	99.2	
Speaker Level 01	Point	99.2	
Speaker Level 01	Point	99.2	
Speaker Level 01	Point	99.2	
Speaker Level 04 Rec Deck	Point	99.2	
Speaker Level 04 Rec Deck	Point	99.2	
Speaker Level 04 Rec Deck	Point	99.2	
Speaker Level 04 Rec Deck	Point	99.2	
Speaker Level 04 Rec Deck	Point	99.2	
Speaker Level 04 Rec Deck	Point	99.2	
Speaker Level 04 Rec Deck	Point	99.2	
Speaker Level 04 Space Deck	Point	99.2	
Speaker Level 04 Space Deck	Point	99.2	
Speaker Level 04 Space Deck	Point	99.2	
Speaker Level 04 Space Deck	Point	99.2	
Speaker Level 04 Space Deck	Point	99.2	

Our Lady of Mt. Lebanon Project
Assessed contribution level - Speakers

Source	Source type	Leq dB(A)	
Receiver R1 Fl G Leq 45.4 dB(A)			
Speaker Level 01	Point	12.7	
Speaker Level 01	Point	18.5	
Speaker Level 01	Point	20.1	
Speaker Level 01	Point	32.6	
Speaker Level 01	Point	21.2	
Speaker Level 04 Space Deck	Point	16.2	
Speaker Level 04 Space Deck	Point	13.7	
Speaker Level 04 Space Deck	Point	23.3	
Speaker Level 04 Space Deck	Point	23.9	
Speaker Level 04 Space Deck	Point	26.1	
Speaker Level 04 Rec Deck	Point	39.5	
Speaker Level 04 Rec Deck	Point	38.4	
Speaker Level 04 Rec Deck	Point	26.0	
Speaker Level 04 Rec Deck	Point	32.9	
Speaker Level 04 Rec Deck	Point	35.6	
Speaker Level 04 Rec Deck	Point	39.3	
Speaker Level 04 Rec Deck	Point	32.1	
Receiver R1 Fl F2 Leq 57.6 dB(A)			
Speaker Level 01	Point	19.7	
Speaker Level 01	Point	15.3	
Speaker Level 01	Point	24.0	
Speaker Level 01	Point	38.6	
Speaker Level 01	Point	26.1	
Speaker Level 04 Space Deck	Point	15.8	
Speaker Level 04 Space Deck	Point	13.8	
Speaker Level 04 Space Deck	Point	23.2	
Speaker Level 04 Space Deck	Point	23.1	
Speaker Level 04 Space Deck	Point	25.0	
Speaker Level 04 Rec Deck	Point	39.8	
Speaker Level 04 Rec Deck	Point	38.9	
Speaker Level 04 Rec Deck	Point	36.5	
Speaker Level 04 Rec Deck	Point	48.8	
Speaker Level 04 Rec Deck	Point	51.9	
Speaker Level 04 Rec Deck	Point	54.6	
Speaker Level 04 Rec Deck	Point	44.4	
Receiver R2 Fl G Leq 46.4 dB(A)			
Speaker Level 01	Point	9.9	
Speaker Level 01	Point	11.1	
Speaker Level 01	Point	20.2	

Source	Source type	Leq dB(A)	
Speaker Level 01	Point	24.5	
Speaker Level 01	Point	15.8	
Speaker Level 04 Space Deck	Point	41.1	
Speaker Level 04 Space Deck	Point	36.8	
Speaker Level 04 Space Deck	Point	38.2	
Speaker Level 04 Space Deck	Point	38.6	
Speaker Level 04 Space Deck	Point	40.6	
Speaker Level 04 Rec Deck	Point	10.8	
Speaker Level 04 Rec Deck	Point	10.4	
Speaker Level 04 Rec Deck	Point	10.1	
Speaker Level 04 Rec Deck	Point	15.3	
Speaker Level 04 Rec Deck	Point	18.5	
Speaker Level 04 Rec Deck	Point	18.6	
Speaker Level 04 Rec Deck	Point	9.5	
Receiver R2 Fl F2 Leq 60.6 dB(A)			
Speaker Level 01	Point	10.4	
Speaker Level 01	Point	10.1	
Speaker Level 01	Point	18.8	
Speaker Level 01	Point	23.6	
Speaker Level 01	Point	15.7	
Speaker Level 04 Space Deck	Point	57.1	
Speaker Level 04 Space Deck	Point	53.3	
Speaker Level 04 Space Deck	Point	53.6	
Speaker Level 04 Space Deck	Point	48.2	
Speaker Level 04 Space Deck	Point	50.6	
Speaker Level 04 Rec Deck	Point	13.5	
Speaker Level 04 Rec Deck	Point	13.8	
Speaker Level 04 Rec Deck	Point	11.8	
Speaker Level 04 Rec Deck	Point	17.0	
Speaker Level 04 Rec Deck	Point	18.3	
Speaker Level 04 Rec Deck	Point	19.8	
Speaker Level 04 Rec Deck	Point	11.6	
Receiver R3 Fl G Leq 55.2 dB(A)			
Speaker Level 01	Point	45.0	
Speaker Level 01	Point	49.9	
Speaker Level 01	Point	50.3	
Speaker Level 01	Point	41.9	
Speaker Level 01	Point	48.3	
Speaker Level 04 Space Deck	Point	30.8	
Speaker Level 04 Space Deck	Point	34.7	

Source	Source type	Leq dB(A)	
Speaker Level 04 Space Deck	Point	32.7	
Speaker Level 04 Space Deck	Point	35.3	
Speaker Level 04 Space Deck	Point	30.6	
Speaker Level 04 Rec Deck	Point	19.5	
Speaker Level 04 Rec Deck	Point	18.4	
Speaker Level 04 Rec Deck	Point	27.4	
Speaker Level 04 Rec Deck	Point	31.3	
Speaker Level 04 Rec Deck	Point	22.3	
Speaker Level 04 Rec Deck	Point	18.5	
Speaker Level 04 Rec Deck	Point	23.7	
Receiver R3 Fl F2 Leq 54.2 dB(A)			
Speaker Level 01	Point	44.3	
Speaker Level 01	Point	48.0	
Speaker Level 01	Point	48.3	
Speaker Level 01	Point	40.1	
Speaker Level 01	Point	46.4	
Speaker Level 04 Space Deck	Point	39.2	
Speaker Level 04 Space Deck	Point	40.5	
Speaker Level 04 Space Deck	Point	34.7	
Speaker Level 04 Space Deck	Point	40.3	
Speaker Level 04 Space Deck	Point	39.4	
Speaker Level 04 Rec Deck	Point	22.9	
Speaker Level 04 Rec Deck	Point	24.4	
Speaker Level 04 Rec Deck	Point	36.6	
Speaker Level 04 Rec Deck	Point	32.4	
Speaker Level 04 Rec Deck	Point	28.4	
Speaker Level 04 Rec Deck	Point	18.8	
Speaker Level 04 Rec Deck	Point	16.4	
Receiver R4 Fl G Leq 32.3 dB(A)			
Speaker Level 01	Point	15.5	
Speaker Level 01	Point	16.5	
Speaker Level 01	Point	5.5	
Speaker Level 01	Point	13.0	
Speaker Level 01	Point	16.5	
Speaker Level 04 Space Deck	Point	-0.9	
Speaker Level 04 Space Deck	Point	-0.1	
Speaker Level 04 Space Deck	Point	2.1	
Speaker Level 04 Space Deck	Point	13.6	
Speaker Level 04 Space Deck	Point	12.0	
Speaker Level 04 Rec Deck	Point	25.4	

Our Lady of Mt. Lebanon Project
Assessed contribution level - Speakers

Source	Source type	Leq dB(A)	
Speaker Level 04 Rec Deck	Point	24.9	
Speaker Level 04 Rec Deck	Point	28.0	
Speaker Level 04 Rec Deck	Point	16.5	
Speaker Level 04 Rec Deck	Point	15.0	
Speaker Level 04 Rec Deck	Point	14.5	
Speaker Level 04 Rec Deck	Point	21.2	

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Mt. Lebanon Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

EXISTING CONDITIONS - WEEKDAY

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Robertson Boulevard										
- Between 3rd St. and Burton Way	50	10	35	35	1,336	13,360	10%	0	0	67.2
- Between Burton Way and Wilshire Blvd.	50	10	35	35	1,498	14,980	10%	0	0	67.7
San Vicente Boulevard										
- Between Melrose Ave. and Beverly Blvd.	80	10	50	25	1,672	16,720	10%	0	0	63.4
- Between Beverly Blvd. and 3rd St.	80	10	50	25	1,839	18,390	10%	0	0	63.8
- Between 3rd St. and Burton Way	80	10	50	25	1,276	12,760	10%	0	0	62.2
La Cienega Boulevard										
- Between Melrose Ave. and Beverly Blvd.	70	10	45	35	2,590	25,900	10%	0	0	68.9
- Between Beverly Blvd. and 3rd St.	80	10	50	35	2,830	28,300	10%	0	0	68.9
- Between 3rd St. and San Vicente Blvd.	80	10	50	35	2,806	28,060	10%	0	0	68.8
- Between San Vicente Blvd. and Wilshire Blvd.	70	10	45	35	2,522	25,220	10%	0	0	68.8
3rd Street										
- Between Robertson Blvd. and San Vicente Blvd.	50	10	35	35	1,747	17,470	10%	0	0	68.4
Burton Way										
- Between Robertson Blvd. and San Vicente Blvd.	140	10	80	35	2,743	27,430	10%	0	0	66.7

* Approximate distance based on Google Earth map.

** Calculated using FHWA's TNM Version 2.5 Computer Noise Model.

Date Printed: 2/18/2020

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Mt. Lebanon Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

EXISTING CONDITIONS - WEEKEND

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Robertson Boulevard										
- Between 3rd St. and Burton Way	50	10	35	35	921	9,210	10%	0	0	65.6
- Between Burton Way and Wilshire Blvd.	50	10	35	35	1,033	10,330	10%	0	0	66.1
San Vicente Boulevard										
- Between Melrose Ave. and Beverly Blvd.	80	10	50	25	1,154	11,540	10%	0	0	61.8
- Between Beverly Blvd. and 3rd St.	80	10	50	25	1,269	12,690	10%	0	0	62.2
- Between 3rd St. and Burton Way	80	10	50	25	880	8,800	10%	0	0	60.6
La Cienega Boulevard										
- Between Melrose Ave. and Beverly Blvd.	70	10	45	35	1,788	17,880	10%	0	0	67.3
- Between Beverly Blvd. and 3rd St.	80	10	50	35	1,953	19,530	10%	0	0	67.3
- Between 3rd St. and San Vicente Blvd.	80	10	50	35	1,937	19,370	10%	0	0	67.2
- Between San Vicente Blvd. and Wilshire Blvd.	70	10	45	35	1,741	17,410	10%	0	0	67.2
3rd Street										
- Between Robertson Blvd. and San Vicente Blvd.	50	10	35	35	1,205	12,050	10%	0	0	66.8
Burton Way										
- Between Robertson Blvd. and San Vicente Blvd.	140	10	80	35	1,893	18,930	10%	0	0	65.1

* Approximate distance based on Google Earth map.

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AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Mt. Lebanon Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

EXISTING + PROJECT CONDITIONS - WEEKDAY

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Robertson Boulevard										
- Between 3rd St. and Burton Way	50	10	35	35	1,339	13,390	10%	0	0	67.2
- Between Burton Way and Wilshire Blvd.	50	10	35	35	1,505	15,050	10%	0	0	67.7
San Vicente Boulevard										
- Between Melrose Ave. and Beverly Blvd.	80	10	50	25	1,677	16,770	10%	0	0	63.4
- Between Beverly Blvd. and 3rd St.	80	10	50	25	1,844	18,440	10%	0	0	63.8
- Between 3rd St. and Burton Way	80	10	50	25	1,281	12,810	10%	0	0	62.2
La Cienega Boulevard										
- Between Melrose Ave. and Beverly Blvd.	70	10	45	35	2,595	25,950	10%	0	0	68.9
- Between Beverly Blvd. and 3rd St.	80	10	50	35	2,838	28,380	10%	0	0	68.9
- Between 3rd St. and San Vicente Blvd.	80	10	50	35	2,811	28,110	10%	0	0	68.8
- Between San Vicente Blvd. and Wilshire Blvd.	70	10	45	35	2,527	25,270	10%	0	0	68.8
3rd Street										
- Between Robertson Blvd. and San Vicente Blvd.	50	10	35	35	1,757	17,570	10%	0	0	68.4
Burton Way										
- Between Robertson Blvd. and San Vicente Blvd.	140	10	80	35	2,754	27,540	10%	0	0	66.8

* Approximate distance based on Google Earth map.

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AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Mt. Lebanon Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

EXISTING + PROJECT CONDITIONS - WEEKEND

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Robertson Boulevard										
- Between 3rd St. and Burton Way	50	10	35	35	925	9,250	10%	0	0	65.6
- Between Burton Way and Wilshire Blvd.	50	10	35	35	1,044	10,440	10%	0	0	66.1
San Vicente Boulevard										
- Between Melrose Ave. and Beverly Blvd.	80	10	50	25	1,161	11,610	10%	0	0	61.8
- Between Beverly Blvd. and 3rd St.	80	10	50	25	1,276	12,760	10%	0	0	62.2
- Between 3rd St. and Burton Way	80	10	50	25	888	8,880	10%	0	0	60.6
La Cienega Boulevard										
- Between Melrose Ave. and Beverly Blvd.	70	10	45	35	1,795	17,950	10%	0	0	67.3
- Between Beverly Blvd. and 3rd St.	80	10	50	35	1,964	19,640	10%	0	0	67.3
- Between 3rd St. and San Vicente Blvd.	80	10	50	35	1,943	19,430	10%	0	0	67.2
- Between San Vicente Blvd. and Wilshire Blvd.	70	10	45	35	1,748	17,480	10%	0	0	67.2
3rd Street										
- Between Robertson Blvd. and San Vicente Blvd.	50	10	35	35	1,219	12,190	10%	0	0	66.8
Burton Way										
- Between Robertson Blvd. and San Vicente Blvd.	140	10	80	35	1,908	19,080	10%	0	0	65.2

* Approximate distance based on Google Earth map.

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AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Mt. Lebanon Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

FUTURE NO PROJECT CONDITIONS - WEEKDAY

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Robertson Boulevard										
- Between 3rd St. and Burton Way	50	10	35	35	1,448	14,480	10%	0	0	67.6
- Between Burton Way and Wilshire Blvd.	50	10	35	35	1,597	15,970	10%	0	0	68.0
San Vicente Boulevard										
- Between Melrose Ave. and Beverly Blvd.	80	10	50	25	1,821	18,210	10%	0	0	63.8
- Between Beverly Blvd. and 3rd St.	80	10	50	25	2,049	20,490	10%	0	0	64.3
- Between 3rd St. and Burton Way	80	10	50	25	1,405	14,050	10%	0	0	62.6
La Cienega Boulevard										
- Between Melrose Ave. and Beverly Blvd.	70	10	45	35	2,910	29,100	10%	0	0	69.4
- Between Beverly Blvd. and 3rd St.	80	10	50	35	3,092	30,920	10%	0	0	69.3
- Between 3rd St. and San Vicente Blvd.	80	10	50	35	3,110	31,100	10%	0	0	69.3
- Between San Vicente Blvd. and Wilshire Blvd.	70	10	45	35	2,818	28,180	10%	0	0	69.3
3rd Street										
- Between Robertson Blvd. and San Vicente Blvd.	50	10	35	35	1,879	18,790	10%	0	0	68.7
Burton Way										
- Between Robertson Blvd. and San Vicente Blvd.	140	10	80	35	2,924	29,240	10%	0	0	67.0

* Approximate distance based on Google Earth map.

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AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Mt. Lebanon Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

FUTURE NO PROJECT CONDITIONS - WEEKEND

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Robertson Boulevard										
- Between 3rd St. and Burton Way	50	10	35	35	999	9,990	10%	0	0	66.0
- Between Burton Way and Wilshire Blvd.	50	10	35	35	1,102	11,020	10%	0	0	66.4
San Vicente Boulevard										
- Between Melrose Ave. and Beverly Blvd.	80	10	50	25	1,257	12,570	10%	0	0	62.1
- Between Beverly Blvd. and 3rd St.	80	10	50	25	1,415	14,150	10%	0	0	62.7
- Between 3rd St. and Burton Way	80	10	50	25	970	9,700	10%	0	0	61.0
La Cienega Boulevard										
- Between Melrose Ave. and Beverly Blvd.	70	10	45	35	2,008	20,080	10%	0	0	67.8
- Between Beverly Blvd. and 3rd St.	80	10	50	35	2,133	21,330	10%	0	0	67.6
- Between 3rd St. and San Vicente Blvd.	80	10	50	35	2,145	21,450	10%	0	0	67.7
- Between San Vicente Blvd. and Wilshire Blvd.	70	10	45	35	1,945	19,450	10%	0	0	67.6
3rd Street										
- Between Robertson Blvd. and San Vicente Blvd.	50	10	35	35	1,297	12,970	10%	0	0	67.1
Burton Way										
- Between Robertson Blvd. and San Vicente Blvd.	140	10	80	35	2,018	20,180	10%	0	0	65.4

* Approximate distance based on Google Earth map.

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ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Mt. Lebanon Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

FUTURE + PROJECT CONDITIONS - WEEKDAY

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Robertson Boulevard										
- Between 3rd St. and Burton Way	50	10	35	35	1,451	14,510	10%	0	0	67.6
- Between Burton Way and Wilshire Blvd.	50	10	35	35	1,604	16,040	10%	0	0	68.0
San Vicente Boulevard										
- Between Melrose Ave. and Beverly Blvd.	80	10	50	25	1,826	18,260	10%	0	0	63.8
- Between Beverly Blvd. and 3rd St.	80	10	50	25	2,054	20,540	10%	0	0	64.3
- Between 3rd St. and Burton Way	80	10	50	25	1,411	14,110	10%	0	0	62.7
La Cienega Boulevard										
- Between Melrose Ave. and Beverly Blvd.	70	10	45	35	2,915	29,150	10%	0	0	69.4
- Between Beverly Blvd. and 3rd St.	80	10	50	35	3,100	31,000	10%	0	0	69.3
- Between 3rd St. and San Vicente Blvd.	80	10	50	35	3,115	31,150	10%	0	0	69.3
- Between San Vicente Blvd. and Wilshire Blvd.	70	10	45	35	2,823	28,230	10%	0	0	69.3
3rd Street										
- Between Robertson Blvd. and San Vicente Blvd.	50	10	35	35	1,889	18,890	10%	0	0	68.7
Burton Way										
- Between Robertson Blvd. and San Vicente Blvd.	140	10	80	35	2,936	29,360	10%	0	0	67.0

* Approximate distance based on Google Earth map.

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Off-Site Traffic Noise Calculations
Project: Mt. Lebanon Project

Traffic Distribution as % of ADT				
Vehicle Type	**Day**	**Eve**	**Night**	**Sub total**
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

PHV to ADT factor 10%

FUTURE + PROJECT CONDITIONS - WEEKEND

Roadway Segment	Roadway Width*, ft	Distance to Edge of Roadway, ft	Distance to Centerline, feet	Speed mph	Traffic Volume PHV	Traffic Volume ADT	PHV to ADT factor	Barrier Atten.	Site Adjust., dBA	24-Hour CNEL
Robertson Boulevard										
- Between 3rd St. and Burton Way	50	10	35	35	1,003	10,030	10%	0	0	66.0
- Between Burton Way and Wilshire Blvd.	50	10	35	35	1,113	11,130	10%	0	0	66.4
San Vicente Boulevard										
- Between Melrose Ave. and Beverly Blvd.	80	10	50	25	1,264	12,640	10%	0	0	62.2
- Between Beverly Blvd. and 3rd St.	80	10	50	25	1,422	14,220	10%	0	0	62.7
- Between 3rd St. and Burton Way	80	10	50	25	978	9,780	10%	0	0	61.1
La Cienega Boulevard										
- Between Melrose Ave. and Beverly Blvd.	70	10	45	35	2,015	20,150	10%	0	0	67.8
- Between Beverly Blvd. and 3rd St.	80	10	50	35	2,144	21,440	10%	0	0	67.7
- Between 3rd St. and San Vicente Blvd.	80	10	50	35	2,151	21,510	10%	0	0	67.7
- Between San Vicente Blvd. and Wilshire Blvd.	70	10	45	35	1,952	19,520	10%	0	0	67.7
3rd Street										
- Between Robertson Blvd. and San Vicente Blvd.	50	10	35	35	1,311	13,110	10%	0	0	67.1
Burton Way										
- Between Robertson Blvd. and San Vicente Blvd.	140	10	80	35	2,033	20,330	10%	0	0	65.4

* Approximate distance based on Google Earth map.

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