Appendix G

Noise Calculation Worksheets

Sunset Gower Project

Noise Calculations Worksheets

Provided by Acoustical Engineering Services

Ambient Noise Measurements

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R1 -
Date: 4/24/2018

Time	Overload	Leq	Lmax	L10	L90
10:04:07 AM	No	59.3	69.2	62.9	50.9
10:05:07 AM	No	62.2	71.3	66.6	53.6
10:06:07 AM	No	56.9	64.4	61	50.8
10:07:07 AM	No	59.5	70.2	63.5	50.1
10:08:07 AM	No	61.1	66.9	65	53.4
10:09:07 AM	No	60.9	68.4	65.2	52.9
10:10:07 AM	No	59.7	68.3	63.7	52.9
10:11:07 AM	No	60.1	69.5	63.1	53
10:12:07 AM	No	60.8	68.6	64.9	50.8
10:13:07 AM	No	63.2	73.4	67.8	52.5
10:14:07 AM	No	60.7	67.8	65	57.7
10:15:07 AM	No	65.6	73.9	70.3	57.6
10:16:07 AM	No	59	65	62.7	51.8
10:17:07 AM	No	57.5	65.3	61.1	53.1
10:18:07 AM	No	61.5	69.1	65.7	50.9
		61.1			

Time	Overload	Leq	Lmax	L10	L90
10:00:29 PM	No	45.9	50.5	47	44.9
10:01:29 PM	No	49.6	57.1	52.7	47.1
10:02:29 PM	No	56.1	68.3	58.7	47.3
10:03:29 PM	No	46.9	48.4	47.6	46.3
10:04:29 PM	No	46.9	52.9	47.5	45.9
10:05:29 PM	No	47.9	51	49.6	46.5
10:06:29 PM	No	49.3	60	49.6	46.4
10:07:29 PM	No	50.6	60.1	55.3	45.3
10:08:29 PM	No	55.2	65.7	59.4	47.3
10:09:29 PM	No	66.2	73.8	70.8	47.5
10:10:29 PM	No	57.1	66.5	61	49
10:11:29 PM	No	57.7	69.6	61.7	47.7
10:12:29 PM	No	53.1	65.4	55.4	45.8
10:13:29 PM	No	56.2	67.5	61	45.9
10:14:29 PM	No	54.1	64.7	58.7	46.8
		56.9			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R2 -
Date: 4/24/2018

Time	Overload	Leq	Lmax	L10	L90
10:23:13 AM	No	62.2	69.5	66.8	49.3
10:24:13 AM	No	63.3	73.9	65.6	55.4
10:25:13 AM	No	67.8	77.9	72.1	54.6
10:26:13 AM	No	63.5	69.2	66	59.1
10:27:13 AM	No	61.3	69.5	65.8	55.4
10:28:13 AM	No	59.1	68.2	63.4	51.3
10:29:13 AM	No	65.6	73.5	69.4	57.9
10:30:13 AM	No	61.8	68.2	66.4	52.5
10:31:13 AM	No	62.2	71.7	65.7	52.7
10:32:13 AM	No	62.4	67.8	66.4	53.2
10:33:13 AM	No	63.3	69	67.2	55
10:34:13 AM	No	64.1	73	67.6	53.6
10:35:13 AM	No	58.9	68.6	62.7	51.7
10:36:13 AM	No	62.1	68.7	64.6	58.8
10:37:13 AM	No	75.1	83.2	80.2	64.8
		66.2			

Time	Overload	Leq	Lmax	L10	L90
10:19:17 PM	No	60.8	69.8	66.1	48.6
10:20:17 PM	No	50.5	60.1	54.3	45.4
10:21:17 PM	No	62.6	71.8	66.5	51.5
10:22:17 PM	No	60.6	67.7	66	45
10:23:17 PM	No	59.4	67.1	64.7	46.7
10:24:17 PM	No	59.5	67.8	64.8	47.7
10:25:17 PM	No	56.2	69	59.1	45.3
10:26:17 PM	No	61.7	70.2	66.1	48.3
10:27:17 PM	No	56.3	68	61	44.8
10:28:17 PM	No	55.8	61.5	59.3	46.5
10:29:17 PM	No	61.3	70.3	66.5	48.6
10:30:17 PM	No	60.7	69.9	65.4	49.4
10:31:17 PM	No	59.3	68	63.7	48
10:32:17 PM	No	60.5	68.6	66	48.2
10:33:17 PM	No	60.8	70.3	66.9	47.9
		59.8			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R3
Date: 4/24/2018

Time	Overload	Leq	Lmax	L10	L90
10:46:13 AM	No	64.2	70.7	68.7	52.9
10:47:13 AM	No	64.5	68.2	67	56.4
10:48:13 AM	No	62.9	67.5	65.5	55.9
10:49:13 AM	No	65.7	73	68.5	59.5
10:50:13 AM	No	66.3	73.9	69.4	54.4
10:51:13 AM	No	64.9	71.2	68.1	52.3
10:52:13 AM	No	63.4	69.6	66.8	57.5
10:53:13 AM	No	69.8	79.9	73.2	59.6
10:54:13 AM	No	67.3	76.1	69.4	61.7
10:55:13 AM	No	66.7	73.5	69.8	61.1
10:56:13 AM	No	64.4	70.1	67.9	58.5
10:57:13 AM	No	67.5	72.6	70.6	63.2
10:58:13 AM	No	66.9	74.5	69.7	60.8
10:59:13 AM	No	68.6	77.6	72.6	57.8
11:00:13 AM	No	61.1	68.7	65	53.2
		66.2			

Time	Overload	Leq	Lmax	L10	L90
10:40:02 PM	No	60.7	68.7	64	48.2
10:41:02 PM	No	63.6	72.7	68.2	46.9
10:42:02 PM	No	53.4	62.8	58.7	44.8
10:43:02 PM	No	61.5	69.4	66.9	47.6
10:44:02 PM	No	60.4	67.4	65.5	46.9
10:45:02 PM	No	62.3	71.9	66	47.3
10:46:02 PM	No	62.9	69.8	67	54.1
10:47:02 PM	No	61.9	69	66.3	49.3
10:48:02 PM	No	57.3	66.1	63.1	45.9
10:49:02 PM	No	58	66	63.5	48.2
10:50:02 PM	No	65	75.2	67.5	49.1
10:51:02 PM	No	58.8	66.6	62.8	51.3
10:52:02 PM	No	64.4	71.3	68.2	53.5
10:53:02 PM	No	59.3	68.9	65.4	46.8
10:54:02 PM	No	64.4	71	67.6	47.7
		61.8			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R4
Date: 4/24/2018

Time	Overload	Leq	Lmax	L10	L90
11:08:46 AM	No	69.9	75.1	73	65.6
11:09:46 AM	No	72.4	79.7	75.6	67.8
11:10:46 AM	No	71.4	76.9	74.7	65.4
11:11:46 AM	No	72.0	79.7	75.9	59.8
11:12:46 AM	No	71.3	75.8	74.4	61
11:13:46 AM	No	66.3	71	69.1	58
11:14:46 AM	No	72.9	75.1	74.4	70.7
11:15:46 AM	No	68.7	75.1	72.8	55.7
11:16:46 AM	No	71.3	75.9	74.2	56.7
11:17:46 AM	No	70.6	76.6	74.3	57.7
11:18:46 AM	No	80.5	93.4	84.7	65
11:19:46 AM	No	75.8	84.6	78.9	71.9
11:20:46 AM	No	70.7	82.5	74.9	59.7
11:21:46 AM	No	72.5	76.7	73.8	71
11:22:46 AM	No	71.6	78.4	74.9	60.1
		73.3			

Time	Overload	Leq	Lmax	L10	L90
11:07:46 PM	No	71.1	76.9	75.6	56.6
11:08:46 PM	No	69.9	75.9	72.5	66
11:09:46 PM	No	71.2	75.7	73.6	62.4
11:10:46 PM	No	73.9	81.8	78.2	66.9
11:11:46 PM	No	72.5	79.6	74.8	65.8
11:12:46 PM	No	67.3	73.3	72	59.1
11:13:46 PM	No	72.4	80.2	74.9	64.8
11:14:46 PM	No	72.3	78.3	75.8	63.2
11:15:46 PM	No	75.6	88.1	79.3	55.9
11:16:46 PM	No	70.3	78.1	74.3	57.6
11:17:46 PM	No	69.7	74.7	72.6	64.1
11:18:46 PM	No	80.9	93.5	83.3	61.2
11:19:46 PM	No	69.9	76.4	73.8	62.8
11:20:46 PM	No	72.8	78.9	76.1	69
11:21:46 PM	No	72.3	78.2	75.3	64.5
		72.0			

AES
ACOUSTICAL ENGINEERING SERVICES

Location: R5
Date: 4/24/2018

Time	Overload	Leq	Lmax	L10	L90
11:28:35 AM	No	61.5	67.2	64.5	58.6
11:29:35 AM	No	62	70.5	63.8	59.3
11:30:35 AM	No	65.5	72.9	68.6	61.7
11:31:35 AM	No	76.8	86.7	83.4	61.6
11:32:35 AM	No	66	74.2	70.7	60.5
11:33:35 AM	No	61.5	66.6	63.5	58.2
11:34:35 AM	No	62.8	69.6	65.5	59.9
11:35:35 AM	No	67.7	76.8	72.2	62.5
11:36:35 AM	No	62.8	68.9	65.4	59.4
11:37:35 AM	No	62.1	67.5	63.9	56.3
11:38:35 AM	No	59	62.8	61.2	54.4
11:39:35 AM	No	62.6	67.8	65.8	56.8
11:40:35 AM	No	68.6	78.6	72.7	59.1
11:41:35 AM	No	64.4	71.6	65.8	62.5
11:42:35 AM	No	63.6	71.4	66.1	60.2
		67.6			

Time	Overload	Leq	Lmax	L10	L90
11:26:19 PM	No	59.8	66.5	65	52.8
11:27:19 PM	No	62.6	70.6	65.8	52.8
11:28:19 PM	No	66	73.8	69.2	60.6
11:29:19 PM	No	63.1	67.5	65.5	58.1
11:30:19 PM	No	65.5	76.9	66.1	57.5
11:31:19 PM	No	61.2	66.3	64.3	52.8
11:32:19 PM	No	65.5	76.4	67.5	53.4
11:33:19 PM	No	65.9	73	69.2	60.1
11:34:19 PM	No	64.4	71.3	68	57.5
11:35:19 PM	No	63.5	70.4	67	58.3
11:36:19 PM	No	62.1	67	65.3	55.1
11:37:19 PM	No	61	66	64.1	52.8
11:38:19 PM	No	60.8	70.3	65.4	49.1
11:39:19 PM	No	62.7	66	65	59.6
11:40:19 PM	No	61.2	67.7	65.2	53.3
		63.5			

Construction Noise & Vibration Calculations Project

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete Saw	1	90	20%	60	0
Skid Steer Loader	1	79	40%	60	0
Rubber Tired Loader	1	79	40%	85	0
Tractor/Loader/Backhoe	1	79	40%	85	0
Excavator	1	81	40%	110	0
Air Compressor	1	78	40%	110	0
Aerial Lift	1	75	20%	135	0
Tractor/Loader/Backhoe	1	79	40%	135	0
Air Compressor	1	78	40%	135	0
Aerial Lift	1	75	20%	160	0
Concrete Saw	1	90	20%	160	0
Water truck	1	82	10%	160	0
	12				

Receptor: ***R1***

Results:

1-hour Leq: 83.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	60	0
Excavator	1	81	40%	60	0
Crane	1	81	16%	85	0
Tractor/Loader/Backhoe	1	79	40%	85	0
Air Compressor	1	78	40%	110	0
Bore/Drill Rig	1	84	20%	110	0
Excavator	1	81	40%	135	0
Crane	1	81	16%	135	0
Tractor/Loader/Backhoe	1	79	40%	160	0
Water truck	1	82	10%	160	0

10

Receptor: ***R1***

Results:

1-hour Leq: 80.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	60	0
Concrete Pump	1	81	20%	60	0
Tractor/Loader/Backhoe	1	79	40%	85	0
Welders	1	74	40%	85	0
Crane	1	81	16%	110	0
Cement and Mortar Mixer	3	80	50%	110	0
Concrete Pump	3	81	20%	135	0
Welders	1	74	40%	135	0
Crane	1	81	16%	160	0

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Receptor: ***R1***

Results:

1-hour Leq: 80.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	60	0
Air Compressor	1	78	40%	60	0
Aerial Lift	1	75	20%	85	0
Fork Lift	1	75	20%	85	0
Concrete Pump	1	81	20%	110	0
Crane	1	81	16%	110	0
Tractor/Loader/Backhoe	2	79	40%	135	0
Welders	2	74	40%	135	0
Air Compressor	1	78	40%	160	0
Aerial Lift	1	75	20%	160	0
Fork Lift	1	75	20%	185	0
Crane	1	81	16%	185	0
	14				

Receptor: ***R1***

Results:

1-hour Leq: 79.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 2***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	200	0
Excavator	1	81	40%	200	0
Crane	1	81	16%	225	0
Tractor/Loader/Backhoe	1	79	40%	225	0
Air Compressor	1	78	40%	250	0
Bore/Drill Rig	1	84	20%	250	0
Excavator	1	81	40%	275	0
Crane	1	81	16%	275	0
Tractor/Loader/Backhoe	1	79	40%	300	0
Water truck	1	82	10%	300	0

10

Receptor: ***R1***

Results:

1-hour Leq: 71.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 2***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	200	0
Concrete Pump	1	81	20%	200	0
Tractor/Loader/Backhoe	1	79	40%	225	0
Welders	1	74	40%	225	0
Crane	1	81	16%	250	0
Cement and Mortar Mixer	3	80	50%	250	0
Concrete Pump	3	81	20%	275	0
Welders	1	74	40%	275	0
Crane	1	81	16%	300	0

13

Receptor: ***R1***

Results:

1-hour Leq: 72.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	200	0
Air Compressor	1	78	40%	200	0
Aerial Lift	1	75	20%	225	0
Fork Lift	1	75	20%	225	0
Tractor/Loader/Backhoe	1	79	40%	250	0
Welders	1	74	40%	250	0
Crane	1	81	16%	275	0
Concrete Pump	1	81	20%	275	0
Air Compressor	1	78	40%	300	0
Aerial Lift	1	75	20%	300	0
Fork Lift	1	75	20%	325	0
Crane	1	81	16%	325	0
Tractor/Loader/Backhoe	1	79	40%	325	0
Welders	1	74	40%	325	0

14

Receptor: ***R1***

Results:

1-hour Leq: 70.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 3***
Buildings C and D

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	395	15
Excavator	1	81	40%	395	15
Crane	1	81	16%	420	15
Tractor/Loader/Backhoe	1	79	40%	420	15
Bore/Drill Rig	1	84	20%	445	15
Excavator	1	81	40%	445	15
Crane	1	81	16%	470	15
Tractor/Loader/Backhoe	1	79	40%	470	15
Water truck	1	82	10%	495	15

9

Receptor: ***R1***

Results:

1-hour Leq: 51.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 3 Buildings C and D***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	395	15
Concrete Pump	1	81	20%	395	15
Tractor/Loader/Backhoe	1	79	40%	420	15
Welders	1	74	40%	420	15
Crane	1	81	16%	445	15
Cement and Mortar Mixer	3	80	50%	445	15
Concrete Pump	3	81	20%	470	15
Welders	1	74	40%	470	15
Crane	1	81	16%	495	15

13

Receptor: ***R1***

Results:

1-hour Leq: 52.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction Phase 3***
Buildings C and D

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	395	15
Air Compressor	1	78	40%	395	15
Aerial Lift	1	75	20%	420	15
Fork Lift	1	75	20%	420	15
Concrete Pump	1	81	20%	445	15
Tractor/Loader/Backhoe	1	79	40%	445	15
Welders	1	74	40%	470	15
Crane	1	81	16%	470	15
Air Compressor	1	78	40%	495	15
Aerial Lift	1	75	20%	495	15
Fork Lift	1	75	20%	520	15
Crane	1	81	16%	520	15
Tractor/Loader/Backhoe	1	79	40%	520	15
Welders	1	74	40%	520	15
	14				

Receptor: ***R1***

Results:

1-hour Leq: 50.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete Saw	1	90	20%	65	0
Skid Steer Loader	1	79	40%	65	0
Rubber Tired Loader	1	79	40%	90	0
Tractor/Loader/Backhoe	1	79	40%	90	0
Excavator	1	81	40%	115	0
Air Compressor	1	78	40%	115	0
Aerial Lift	1	75	20%	140	0
Tractor/Loader/Backhoe	1	79	40%	140	0
Air Compressor	1	78	40%	140	0
Aerial Lift	1	75	20%	165	0
Concrete Saw	1	90	20%	165	0
Water truck	1	82	10%	165	0
	12				

Receptor: ***R2***

Results:

1-hour Leq: 83.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	65	0
Excavator	1	81	40%	65	0
Crane	1	81	16%	90	0
Tractor/Loader/Backhoe	1	79	40%	90	0
Air Compressor	1	78	40%	115	0
Bore/Drill Rig	1	84	20%	115	0
Excavator	1	81	40%	140	0
Crane	1	81	16%	140	0
Tractor/Loader/Backhoe	1	79	40%	165	0
Water truck	1	82	10%	165	0

10

Receptor: ***R2***

Results:

1-hour Leq: 80.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	65	0
Concrete Pump	1	81	20%	65	0
Tractor/Loader/Backhoe	1	79	40%	90	0
Welders	1	74	40%	90	0
Crane	1	81	16%	115	0
Cement and Mortar Mixer	3	80	50%	115	0
Concrete Pump	3	81	20%	140	0
Welders	1	74	40%	140	0
Crane	1	81	16%	165	0

13

Receptor: ***R2***

Results:

1-hour Leq: 80.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	65	0
Air Compressor	1	78	40%	65	0
Aerial Lift	1	75	20%	90	0
Fork Lift	1	75	20%	90	0
Concrete Pump	1	81	20%	115	0
Crane	1	81	16%	115	0
Tractor/Loader/Backhoe	2	79	40%	140	0
Welders	2	74	40%	140	0
Air Compressor	1	78	40%	165	0
Aerial Lift	1	75	20%	165	0
Fork Lift	1	75	20%	190	0
Crane	1	81	16%	190	0
	14				

Receptor: ***R2***

Results:

1-hour Leq: 78.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 2***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	280	10
Excavator	1	81	40%	280	10
Crane	1	81	16%	305	10
Tractor/Loader/Backhoe	1	79	40%	305	10
Air Compressor	1	78	40%	330	10
Bore/Drill Rig	1	84	20%	330	10
Excavator	1	81	40%	355	10
Crane	1	81	16%	355	10
Tractor/Loader/Backhoe	1	79	40%	380	10
Water truck	1	82	10%	380	10
	10				

Receptor: ***R2***

Results:

1-hour Leq: 59.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 2***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	280	10
Concrete Pump	1	81	20%	280	10
Tractor/Loader/Backhoe	1	79	40%	305	10
Welders	1	74	40%	305	10
Crane	1	81	16%	330	10
Cement and Mortar Mixer	3	80	50%	330	10
Concrete Pump	3	81	20%	355	10
Welders	1	74	40%	355	10
Crane	1	81	16%	380	10

13

Receptor: ***R2***

Results:

1-hour Leq: 59.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	280	10
Air Compressor	1	78	40%	280	10
Aerial Lift	1	75	20%	305	10
Fork Lift	1	75	20%	305	10
Tractor/Loader/Backhoe	1	79	40%	330	10
Welders	1	74	40%	330	10
Crane	1	81	16%	355	10
Concrete Pump	1	81	20%	355	10
Air Compressor	1	78	40%	380	10
Aerial Lift	1	75	20%	380	10
Fork Lift	1	75	20%	405	10
Crane	1	81	16%	405	10
Tractor/Loader/Backhoe	1	79	40%	405	10
Welders	1	74	40%	405	10
	14				

Receptor: ***R2***

Results:

1-hour Leq: 57.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 3***
Buildings C and D

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	330	5
Excavator	1	81	40%	330	5
Crane	1	81	16%	355	5
Tractor/Loader/Backhoe	1	79	40%	355	5
Bore/Drill Rig	1	84	20%	380	5
Excavator	1	81	40%	380	5
Crane	1	81	16%	405	5
Tractor/Loader/Backhoe	1	79	40%	405	5
Water truck	1	82	10%	430	5

9

Receptor: ***R2***

Results:

1-hour Leq: 62.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 3 Buildings C and D***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	330	5
Concrete Pump	1	81	20%	330	5
Tractor/Loader/Backhoe	1	79	40%	355	5
Welders	1	74	40%	355	5
Crane	1	81	16%	380	5
Cement and Mortar Mixer	3	80	50%	380	5
Concrete Pump	3	81	20%	405	5
Welders	1	74	40%	405	5
Crane	1	81	16%	430	5

13

Receptor: ***R2***

Results:

1-hour Leq: 63.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction Phase 3***
Buildings C and D

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	330	5
Air Compressor	1	78	40%	330	5
Aerial Lift	1	75	20%	355	5
Fork Lift	1	75	20%	355	5
Concrete Pump	1	81	20%	380	5
Tractor/Loader/Backhoe	1	79	40%	380	5
Welders	1	74	40%	405	5
Crane	1	81	16%	405	5
Air Compressor	1	78	40%	430	5
Aerial Lift	1	75	20%	430	5
Fork Lift	1	75	20%	455	5
Crane	1	81	16%	455	5
Tractor/Loader/Backhoe	1	79	40%	455	5
Welders	1	74	40%	455	5
	14				

Receptor: ***R2***

Results:

1-hour Leq: 61.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete Saw	1	90	20%	275	15
Skid Steer Loader	1	79	40%	275	15
Rubber Tired Loader	1	79	40%	300	15
Tractor/Loader/Backhoe	1	79	40%	300	15
Excavator	1	81	40%	325	15
Air Compressor	1	78	40%	325	15
Aerial Lift	1	75	20%	350	15
Tractor/Loader/Backhoe	1	79	40%	350	15
Air Compressor	1	78	40%	375	15
Aerial Lift	1	75	20%	375	15
Concrete Saw	1	90	20%	380	15
Water truck	1	82	10%	380	15
	12				

Receptor: ***R3***

Results:

1-hour Leq: 57.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	500	15
Excavator	1	81	40%	500	15
Crane	1	81	16%	525	15
Tractor/Loader/Backhoe	1	79	40%	525	15
Air Compressor	1	78	40%	550	15
Bore/Drill Rig	1	84	20%	550	15
Excavator	1	81	40%	575	15
Crane	1	81	16%	575	15
Tractor/Loader/Backhoe	1	79	40%	575	15
Water truck	1	82	10%	575	15
	10				

Receptor: ***R3***

Results:

1-hour Leq: 49.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	500	15
Concrete Pump	1	81	20%	500	15
Tractor/Loader/Backhoe	1	79	40%	525	15
Welders	1	74	40%	525	15
Crane	1	81	16%	550	15
Cement and Mortar Mixer	3	80	50%	550	15
Concrete Pump	3	81	20%	575	15
Welders	1	74	40%	575	15
Crane	1	81	16%	575	15

13

Receptor: ***R3***

Results:

1-hour Leq: 50.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	500	15
Air Compressor	1	78	40%	500	15
Aerial Lift	1	75	20%	525	15
Fork Lift	1	75	20%	525	15
Concrete Pump	1	81	20%	550	15
Crane	1	81	16%	550	15
Tractor/Loader/Backhoe	2	79	40%	575	15
Welders	2	74	40%	575	15
Air Compressor	1	78	40%	575	15
Aerial Lift	1	75	20%	575	15
Fork Lift	1	75	20%	575	15
Crane	1	81	16%	575	15
	14				

Receptor: ***R3***

Results:

1-hour Leq: 48.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 2***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	385	15
Excavator	1	81	40%	385	15
Crane	1	81	16%	410	15
Tractor/Loader/Backhoe	1	79	40%	410	15
Air Compressor	1	78	40%	435	15
Bore/Drill Rig	1	84	20%	435	15
Excavator	1	81	40%	460	15
Crane	1	81	16%	460	15
Tractor/Loader/Backhoe	1	79	40%	460	15
Water truck	1	82	10%	460	15
	10				

Receptor: ***R3***

Results:

1-hour Leq: 51.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 2 Below Grade Parking***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	385	15
Concrete Pump	1	81	20%	385	15
Tractor/Loader/Backhoe	1	79	40%	410	15
Welders	1	74	40%	410	15
Crane	1	81	16%	435	15
Cement and Mortar Mixer	3	80	50%	435	15
Concrete Pump	3	81	20%	460	15
Welders	1	74	40%	460	15
Crane	1	81	16%	460	15

13

Receptor: ***R3***

Results:

1-hour Leq: 52.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	385	15
Air Compressor	1	78	40%	385	15
Aerial Lift	1	75	20%	410	15
Fork Lift	1	75	20%	410	15
Tractor/Loader/Backhoe	1	79	40%	435	15
Welders	1	74	40%	435	15
Crane	1	81	16%	460	15
Concrete Pump	1	81	20%	460	15
Air Compressor	1	78	40%	460	15
Aerial Lift	1	75	20%	460	15
Fork Lift	1	75	20%	460	15
Crane	1	81	16%	460	15
Tractor/Loader/Backhoe	1	79	40%	460	15
Welders	1	74	40%	460	15
	14				

Receptor: ***R3***

Results:

1-hour Leq: 50.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 3***
Buildings C and D

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	275	15
Excavator	1	81	40%	275	15
Crane	1	81	16%	300	15
Tractor/Loader/Backhoe	1	79	40%	300	15
Bore/Drill Rig	1	84	20%	325	15
Excavator	1	81	40%	325	15
Crane	1	81	16%	350	15
Tractor/Loader/Backhoe	1	79	40%	350	15
Water truck	1	82	10%	350	15

9

Receptor: ***R3***

Results:

1-hour Leq: 54.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 3 Buildings C and D***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	275	15
Concrete Pump	1	81	20%	275	15
Tractor/Loader/Backhoe	1	79	40%	300	15
Welders	1	74	40%	300	15
Crane	1	81	16%	325	15
Cement and Mortar Mixer	3	80	50%	325	15
Concrete Pump	3	81	20%	350	15
Welders	1	74	40%	350	15
Crane	1	81	16%	350	15

13

Receptor: ***R3***

Results:

1-hour Leq: 54.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction Phase 3***
Buildings C and D

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	275	15
Air Compressor	1	78	40%	275	15
Aerial Lift	1	75	20%	300	15
Fork Lift	1	75	20%	300	15
Concrete Pump	1	81	20%	325	15
Tractor/Loader/Backhoe	1	79	40%	325	15
Welders	1	74	40%	350	15
Crane	1	81	16%	350	15
Air Compressor	1	78	40%	350	15
Aerial Lift	1	75	20%	350	15
Fork Lift	1	75	20%	350	15
Crane	1	81	16%	350	15
Tractor/Loader/Backhoe	1	79	40%	350	15
Welders	1	74	40%	350	15
	14				

Receptor: ***R3***

Results:

1-hour Leq: 53.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete Saw	1	90	20%	185	0
Skid Steer Loader	1	79	40%	185	0
Rubber Tired Loader	1	79	40%	210	0
Tractor/Loader/Backhoe	1	79	40%	210	0
Excavator	1	81	40%	235	0
Air Compressor	1	78	40%	235	0
Aerial Lift	1	75	20%	260	0
Tractor/Loader/Backhoe	1	79	40%	260	0
Air Compressor	1	78	40%	285	0
Aerial Lift	1	75	20%	285	0
Concrete Saw	1	90	20%	285	0
Water truck	1	82	10%	285	0
	12				

Receptor: ***R4***

Results:

1-hour Leq: 75.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	185	0
Excavator	1	81	40%	185	0
Crane	1	81	16%	210	0
Tractor/Loader/Backhoe	1	79	40%	210	0
Air Compressor	1	78	40%	235	0
Bore/Drill Rig	1	84	20%	235	0
Excavator	1	81	40%	260	0
Crane	1	81	16%	260	0
Tractor/Loader/Backhoe	1	79	40%	285	0
Water truck	1	82	10%	285	0

10

Receptor: ***R4***

Results:

1-hour Leq: 72.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	185	0
Concrete Pump	1	81	20%	185	0
Tractor/Loader/Backhoe	1	79	40%	210	0
Welders	1	74	40%	210	0
Crane	1	81	16%	235	0
Cement and Mortar Mixer	3	80	50%	235	0
Concrete Pump	3	81	20%	260	0
Welders	1	74	40%	260	0
Crane	1	81	16%	285	0

13

Receptor: ***R4***

Results:

1-hour Leq: 72.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	185	0
Air Compressor	1	78	40%	185	0
Aerial Lift	1	75	20%	210	0
Fork Lift	1	75	20%	210	0
Concrete Pump	1	81	20%	235	0
Crane	1	81	16%	235	0
Tractor/Loader/Backhoe	2	79	40%	260	0
Welders	2	74	40%	260	0
Air Compressor	1	78	40%	285	0
Aerial Lift	1	75	20%	285	0
Fork Lift	1	75	20%	310	0
Crane	1	81	16%	310	0
	14				

Receptor: ***R4***

Results:

1-hour Leq: 71.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 2***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	770	15
Excavator	1	81	40%	770	15
Crane	1	81	16%	795	15
Tractor/Loader/Backhoe	1	79	40%	795	15
Air Compressor	1	78	40%	820	15
Bore/Drill Rig	1	84	20%	820	15
Excavator	1	81	40%	845	15
Crane	1	81	16%	845	15
Tractor/Loader/Backhoe	1	79	40%	870	15
Water truck	1	82	10%	870	15
	10				

Receptor: ***R4***

Results:

1-hour Leq: 46.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 2***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	770	15
Concrete Pump	1	81	20%	770	15
Tractor/Loader/Backhoe	1	79	40%	795	15
Welders	1	74	40%	795	15
Crane	1	81	16%	820	15
Cement and Mortar Mixer	3	80	50%	820	15
Concrete Pump	3	81	20%	845	15
Welders	1	74	40%	845	15
Crane	1	81	16%	870	15

13

Receptor: ***R4***

Results:

1-hour Leq: 46.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	770	15
Air Compressor	1	78	40%	770	15
Aerial Lift	1	75	20%	795	15
Fork Lift	1	75	20%	795	15
Tractor/Loader/Backhoe	1	79	40%	820	15
Welders	1	74	40%	820	15
Crane	1	81	16%	845	15
Concrete Pump	1	81	20%	845	15
Air Compressor	1	78	40%	870	15
Aerial Lift	1	75	20%	870	15
Fork Lift	1	75	20%	895	15
Crane	1	81	16%	895	15
Tractor/Loader/Backhoe	1	79	40%	920	15
Welders	1	74	40%	920	15
	14				

Receptor: ***R4***

Results:

1-hour Leq: 45.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 3***
Buildings C and D

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	615	15
Excavator	1	81	40%	615	15
Crane	1	81	16%	640	15
Tractor/Loader/Backhoe	1	79	40%	640	15
Bore/Drill Rig	1	84	20%	665	15
Excavator	1	81	40%	665	15
Crane	1	81	16%	690	15
Tractor/Loader/Backhoe	1	79	40%	690	15
Water truck	1	82	10%	715	15

9

Receptor: ***R4***

Results:

1-hour Leq: 47.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 3 Buildings C and D***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	615	15
Concrete Pump	1	81	20%	615	15
Tractor/Loader/Backhoe	1	79	40%	640	15
Welders	1	74	40%	640	15
Crane	1	81	16%	665	15
Cement and Mortar Mixer	3	80	50%	665	15
Concrete Pump	3	81	20%	690	15
Welders	1	74	40%	690	15
Crane	1	81	16%	715	15

13

Receptor: ***R4***

Results:

1-hour Leq: 48.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction Phase 3***
Buildings C and D

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	615	15
Air Compressor	1	78	40%	615	15
Aerial Lift	1	75	20%	640	15
Fork Lift	1	75	20%	640	15
Concrete Pump	1	81	20%	665	15
Tractor/Loader/Backhoe	1	79	40%	665	15
Welders	1	74	40%	690	15
Crane	1	81	16%	690	15
Air Compressor	1	78	40%	715	15
Aerial Lift	1	75	20%	715	15
Fork Lift	1	75	20%	740	15
Crane	1	81	16%	740	15
Tractor/Loader/Backhoe	1	79	40%	765	15
Welders	1	74	40%	765	15
	14				

Receptor: ***R4***

Results:

1-hour Leq: 46.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete Saw	1	90	20%	385	15
Skid Steer Loader	1	79	40%	385	15
Rubber Tired Loader	1	79	40%	410	15
Tractor/Loader/Backhoe	1	79	40%	410	15
Excavator	1	81	40%	435	15
Air Compressor	1	78	40%	435	15
Aerial Lift	1	75	20%	460	15
Tractor/Loader/Backhoe	1	79	40%	460	15
Air Compressor	1	78	40%	485	15
Aerial Lift	1	75	20%	485	15
Concrete Saw	1	90	20%	485	15
Water truck	1	82	10%	485	15
	12				

Receptor: ***R5***

Results:

1-hour Leq: 54.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	385	15
Excavator	1	81	40%	385	15
Crane	1	81	16%	410	15
Tractor/Loader/Backhoe	1	79	40%	410	15
Air Compressor	1	78	40%	435	15
Bore/Drill Rig	1	84	20%	435	15
Excavator	1	81	40%	455	15
Crane	1	81	16%	455	15
Tractor/Loader/Backhoe	1	79	40%	455	15
Water truck	1	82	10%	455	15

10

Receptor: ***R5***

Results:

1-hour Leq: 51.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	385	15
Concrete Pump	1	81	20%	385	15
Tractor/Loader/Backhoe	1	79	40%	410	15
Welders	1	74	40%	410	15
Crane	1	81	16%	435	15
Cement and Mortar Mixer	3	80	50%	435	15
Concrete Pump	3	81	20%	455	15
Welders	1	74	40%	455	15
Crane	1	81	16%	455	15

13

Receptor: ***R5***

Results:

1-hour Leq: 52.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction Phase 2***
Building A, Parking Structure F

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	385	15
Air Compressor	1	78	40%	385	15
Aerial Lift	1	75	20%	410	15
Fork Lift	1	75	20%	410	15
Concrete Pump	1	81	20%	435	15
Crane	1	81	16%	435	15
Tractor/Loader/Backhoe	2	79	40%	455	15
Welders	2	74	40%	455	15
Air Compressor	1	78	40%	455	15
Aerial Lift	1	75	20%	455	15
Fork Lift	1	75	20%	455	15
Crane	1	81	16%	455	15
	14				

Receptor: ***R5***

Results:

1-hour Leq: 50.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 2***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	610	15
Excavator	1	81	40%	610	15
Crane	1	81	16%	635	15
Tractor/Loader/Backhoe	1	79	40%	635	15
Air Compressor	1	78	40%	660	15
Bore/Drill Rig	1	84	20%	660	15
Excavator	1	81	40%	680	15
Crane	1	81	16%	680	15
Tractor/Loader/Backhoe	1	79	40%	680	15
Water truck	1	82	10%	680	15

10

Receptor: ***R5***

Results:

1-hour Leq: 48.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 2 Below Grade Parking***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	610	15
Concrete Pump	1	81	20%	610	15
Tractor/Loader/Backhoe	1	79	40%	635	15
Welders	1	74	40%	635	15
Crane	1	81	16%	660	15
Cement and Mortar Mixer	3	80	50%	660	15
Concrete Pump	3	81	20%	680	15
Welders	1	74	40%	680	15
Crane	1	81	16%	680	15

13

Receptor: ***R5***

Results:

1-hour Leq: 48.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction***
Below Grade Parking

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	610	15
Air Compressor	1	78	40%	610	15
Aerial Lift	1	75	20%	635	15
Fork Lift	1	75	20%	635	15
Tractor/Loader/Backhoe	1	79	40%	660	15
Welders	1	74	40%	660	15
Crane	1	81	16%	680	15
Concrete Pump	1	81	20%	680	15
Air Compressor	1	78	40%	680	15
Aerial Lift	1	75	20%	680	15
Fork Lift	1	75	20%	680	15
Crane	1	81	16%	680	15
Tractor/Loader/Backhoe	1	79	40%	680	15
Welders	1	74	40%	680	15
	14				

Receptor: ***R5***

Results:

1-hour Leq: 47.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Grading/Excavation Phase 3***
Buildings C and D

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	550	15
Excavator	1	81	40%	550	15
Crane	1	81	16%	575	15
Tractor/Loader/Backhoe	1	79	40%	575	15
Bore/Drill Rig	1	84	20%	600	15
Excavator	1	81	40%	600	15
Crane	1	81	16%	620	15
Tractor/Loader/Backhoe	1	79	40%	620	15
Water truck	1	82	10%	620	15

9

Receptor: ***R5***

Results:

1-hour Leq: 48.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Mat Foundation Phase 3 Buildings C and D***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	550	15
Concrete Pump	1	81	20%	550	15
Tractor/Loader/Backhoe	1	79	40%	575	15
Welders	1	74	40%	575	15
Crane	1	81	16%	600	15
Cement and Mortar Mixer	3	80	50%	600	15
Concrete Pump	3	81	20%	620	15
Welders	1	74	40%	620	15
Crane	1	81	16%	620	15

13

Receptor: ***R5***

Results:

1-hour Leq: 49.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Construction Phase: ***Building Construction Phase 3***
Buildings C and D

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	550	15
Air Compressor	1	78	40%	550	15
Aerial Lift	1	75	20%	575	15
Fork Lift	1	75	20%	575	15
Concrete Pump	1	81	20%	600	15
Tractor/Loader/Backhoe	1	79	40%	600	15
Welders	1	74	40%	620	15
Crane	1	81	16%	620	15
Air Compressor	1	78	40%	620	15
Aerial Lift	1	75	20%	620	15
Fork Lift	1	75	20%	620	15
Crane	1	81	16%	620	15
Tractor/Loader/Backhoe	1	79	40%	620	15
Welders	1	74	40%	620	15
	14				

Receptor: ***R5***

Results:

1-hour Leq: 47.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project

Concurrent Construction and Operation - Off-Site Analysis

Off-Site	Gordon St.	Fountain Ave.	Gower St.
Project construction traffic	72.2	67.9	67.2
Project operation interim	67.7	71.1	70.5
Composite	73.5	72.8	72.2
Ambient	61.1	66.2	66.2
Composite + Ambient	73.8	73.7	73.1
Significance threshold	66.1	71.2	71.2
	7.7	2.5	1.9

On-Site	Estimated Construction & Operation Noise Levels, dBA Leq								
Rec.	Construction - P3 Foundation	Operation - Mechanical	Operation - Loading	Operation - People	Operation - Speakers	Operation - Parking	Operation - All Sources	Ambient	Project + Ambient
R1	52.1	27.0	33.4	34.5	46.5	49.9	51.7	61.1	62.0
R2	63.5	20.5	31.3	28.7	38.9	45.8	46.8	66.2	68.1
R3	54.9	26.2	36.1	41.5	50.7	24.2	51.3	66.2	66.6
R4	48.5	33.7	28.8	49.8	62.5	20.4	62.7	73.3	73.7
R5	49.5	35.4	30.3	39.8	60.6	33.3	60.7	67.6	68.5

Off-Site	Gordon St.	Fountain Ave.	Gower St.
Operation - Existing	64.6	70.4	70.3
Existing + Project	66.4	70.8	70.4
Adjustment for Interm	3.0	3.0	3.0
Existing + Project, Interim	69.4	73.8	73.4
Project Only, Interim	67.7	71.1	70.5

Project ADT	4110
Interim ADT	8244

Project: Sunset and Gower Project

AES
Acoustical Engineering Services

Off-Site Haul Trucks

	Maximum Number of Truck One Way Trips (delivery/haul)		Worker Trips		Estimated Noise Levels, Leq (from TNM Model)			
Phase	Per Day	Per Hour (8-hr day)	Daily Trips	Trips during Pk Hr.	Sunset Blvd.	Gordon St.	Fountain Ave.	Gower St.
1. Demolition	80	10	60	24	62.3	63.7	59.7	59.1
2. Grading - All Phases	314	40	60	24	68.0	69.4	65.1	64.5
3. Mat Foundation P1	832	70	60	24	70.4	71.8	67.4	66.8
4. Building P1	60	8	400	160	63.6	65.0	62.3	61.7
5. Grading P2	314	40	60	24	68.0	69.4	65.1	64.5
6. Mat Foundation P2	1148	96	60	24	71.7	73.1	68.8	68.1
7. Building P2	60	8	400	160	63.6	65.0	62.3	61.7
8. Grading P3	314	40	60	24	68.0	69.4	65.1	64.5
9. Mat Foundation P3	918	77	60	24	70.8	72.2	67.9	67.2
10. Building P3	60	8	400	160	63.6	65.0	62.3	61.7

	Number of trips per day Trucks/Workers	Estimated Noise Levels, dBA Leq				Existing Ambient, dBA Leq			
		Sunset Blvd.	Gordon St.	Fountain Ave.	Gower St.	Sunset Blvd.	Gordon St.	Fountain Ave.	Gower St.
Demolition	80/60	62.3	63.7	59.7	59.1	73.3	61.1	66.2	66.2
Grading - All Phases	314/60	68.0	69.4	65.1	64.5	73.3	61.1	66.2	66.2
Foundation - Phase 1	832/60	70.4	71.8	67.4	66.8	73.3	61.1	66.2	66.2
Foundation - Phase 2	1148/60	71.7	73.1	68.8	68.1	73.3	61.1	66.2	66.2
Foundation - Phase 3	918/60	70.8	72.2	67.9	67.2	73.3	61.1	66.2	66.2
Building Construction - All Ph	60/400	63.6	65.0	62.3	61.7	73.3	61.1	66.2	66.2

	Project + Ambient Noise Levels, dBA Leq				Noise Exceedance over Threshold, dBA Leq			
	Sunset Blvd.	Gordon St.	Fountain Ave.	Gower St.	Sunset Blvd.	Gordon St.	Fountain Ave.	Gower St.
Demolition	73.6	65.6	67.1	67	-4.7	-0.5	-4.1	-4.2
Grading - All Phases	74.4	70.0	68.7	68.4	-3.9	3.9	-2.5	-2.8
Foundation - Phase 1	75.1	72.2	69.9	69.5	-3.2	6.1	-1.3	-1.7
Foundation - Phase 2	75.6	73.4	70.7	70.3	-2.7	7.3	-0.5	-0.9
Foundation - Phase 3	75.2	72.5	70.1	69.7	-3.1	6.4	-1.1	-1.5
Building Construction - All Phases	73.7	66.5	67.7	67.5	-4.6	0.4	-3.5	-3.7
			Maximum Exceedance		-2.7	7.3	-0.5	-0.9

	Maximum Number of Truck		Worker Trips	
Overlapping Construction	Per Day	Per Hour (8-hr day)	Daily Trips	Trips during Pk Hr.
P1 Building and P2 Grading	374	48	460	184
P1 Building and P2 Foundation	1208	104	460	184
P1 and P2 Building	120	16	800	320

	Estimated Noise Levels, dBA Leq				Project + Ambient, dBA Leq			
Overlapping Construction	Sunset Blvd.	Gordon St.	Fountain Ave.	Gower St.	Sunset Blvd.	Gordon St.	Fountain Ave.	Gower St.
P1 Building and P2 Grading	69.4	70.8	66.9	66.3	74.8	71.2	69.6	69.3
P1 Building and P2 Foundation	72.4	73.8	69.7	69.0	75.9	74.0	71.3	70.8
P1 and P2 Building	66.7	68.0	65.3	64.7	74.2	68.8	68.8	68.5

	Noise Exceedance over Threshold, dBA Leq			
Overlapping Construction	Sunset Blvd.	Gordon St.	Fountain Ave.	Gower St.
P1 Building and P2 Grading	-3.5	5.1	-1.6	-1.9
P1 Building and P2 Foundation	-2.4	7.9	0.1	-0.4
P1 and P2 Building	-4.1	2.7	-2.4	-2.7
Maximum Exceedance	-2.4	7.9	0.1	-0.4

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - 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					Flow Control				
Name	Width	Name	No.	Coordinates (pavement)						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 **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Construction Trucks - Demo 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	10	35	0	0	0	0
	point2	2										

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - 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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui
25 March 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - 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	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Gordon St.	1	1	0.0	63.7	71	63.7	5	----	63.7	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	2	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 25 March 2019
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - Grading 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					Flow Control				
Name	Width	Name	No.	Coordinates (pavement)						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 **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Construction Trucks - Grading 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	40	35	0	0	0	0
	point2	2										

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - Grading 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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
25 March 2019
Sean Bui
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - Grading 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
Along Gordon St.	1	1	0.0	69.4	71	69.4	5	----	69.4	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0

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

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2A

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 **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Foundation Phase 2A**

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	70	35	0	0	0	0
	point2	2										

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2A

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

25 March 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2A
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	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Gordon St.	1	1	0.0	71.8	71	71.8	5	Snd Lvl	71.8	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	70.4	66	70.4	10	Snd Lvl	70.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	2	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					**25 March 2019**						
Sean Bui					**TNM 2.5**						
INPUT: ROADWAYS							**Average pavement type shall be used unless**				
PROJECT/CONTRACT:	**Sunset Gower Project**						**a State highway agency substantiates the use**				
RUN:	**Foundation Phase 2B**						**of a different type with the approval of FHWA**				
Roadway		**Points**									
Name	**Width**	**Name**	**No.**	**Coordinates (pavement)**			**Flow Control**			**Segment**	
				X	**Y**	**Z**	**Control**	**Speed**	**Percent**	**Pvmt**	**On**
							Device	**Constraint**	**Vehicles**	**Type**	**Struct?**
									Affected		
	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 **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Foundation Phase 2B**

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	96	35	0	0	0	0
	point2	2										

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2B

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui
25 March 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2B
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	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Gordon St.	1	1	0.0	73.1	71	73.1	5	Snd Lvl	73.1	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	71.7	66	71.7	10	Snd Lvl	71.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	2	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 25 March 2019
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 3

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 **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Foundation Phase 3**

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	77	35	0	0	0	0
	point2	2										

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 3

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui
25 March 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 3
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		Increase over existing		Type Impact	With Barrier Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Gordon St.	1	1	0.0	72.2	71	72.2	5	Snd Lvl	72.2	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	70.8	66	70.8	10	Snd Lvl	70.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	2	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 25 March 2019
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Building 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 **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Construction Building 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	160	35	0	0	8	35	0	0	0	0
	point2	2										

Eyestone Environmental **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Construction Building 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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

25 March 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Building 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
Along Gordon St.	1	1	0.0	65.0	71	65.0	5	----	65.0	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	2	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 25 March 2019
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 1

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 **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Overlapping 1**

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	184	35	0	0	48	35	0	0	0	0
	point2	2										

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 1

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui
25 March 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 1
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	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Gordon St.	1	1	0.0	70.8	71	70.8	5	----	70.8	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	8	-8.0

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

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 2

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 **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Overlapping 2**

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	184	35	0	0	104	35	0	0	0	0
	point2	2										

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 2

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

25 March 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 2
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	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Gordon St.	1	1	0.0	73.8	71	73.8	5	Snd Lvl	73.8	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	72.4	66	72.4	10	Snd Lvl	72.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	2	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 25 March 2019
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 3

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 **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Overlapping 3**

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	320	35	0	0	16	35	0	0	0	0
	point2	2										

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 3

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

25 March 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 3
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		Increase over existing		Type Impact	With Barrier Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Gordon St.	1	1	0.0	68.0	71	68.0	5	----	68.0	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0

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

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - 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					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 **11 May 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Construction Trucks - Demo 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	5	35	0	0	0	0
	point2	2										

Eyestone Environmental
Sean Bui

11 May 2020
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - 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	
Along Fountain Ave.	1	1	250.0	40.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Gower St.	8	1	250.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

11 May 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - 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	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
Along Fountain Ave.	1	1	0.0	59.7	71	59.7	5	----	59.7	0.0	0	0.0
Along Gower St.	8	1	0.0	59.1	66	59.1	10	----	59.1	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	2	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 11 May 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - Grading 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					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 **11 May 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Construction Trucks - Grading 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	20	35	0	0	0	0
	point2	2										

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - Grading 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	
Along Fountain Ave.	1	1	250.0	40.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Gower St.	8	1	250.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

11 May 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - Grading 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
Along Fountain Ave.	1	1	0.0	65.1	71	65.1	5	----	65.1	0.0	0	0.0
Along Gower St.	8	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	2	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 11 May 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2A

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 **11 May 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Foundation Phase 2A**

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	35	35	0	0	0	0
	point2	2										

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2A

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	
Along Fountain Ave.	1	1	250.0	40.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Gower St.	8	1	250.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

11 May 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2A
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
Along Fountain Ave.	1	1	0.0	67.4	71	67.4	5	----	67.4	0.0	0	0.0
Along Gower St.	8	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0

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

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2B

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 **11 May 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Foundation Phase 2B**

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	48	35	0	0	0	0
	point2	2										

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2B

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	
Along Fountain Ave.	1	1	250.0	40.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Gower St.	8	1	250.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

11 May 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2B
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
Along Fountain Ave.	1	1	0.0	68.8	71	68.8	5	----	68.8	0.0	0	0.0
Along Gower St.	8	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0

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

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 3

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 **11 May 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Foundation Phase 3**

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	39	35	0	0	0	0
	point2	2										

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 3

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	
Along Fountain Ave.	1	1	250.0	40.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Gower St.	8	1	250.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

11 May 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 3
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
Along Fountain Ave.	1	1	0.0	67.9	71	67.9	5	----	67.9	0.0	0	0.0
Along Gower St.	8	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0

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

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Building 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 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 **11 May 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Construction Building 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	160	35	0	0	4	35	0	0	0	0
	point2	2										

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Building Phase

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Along Fountain Ave.	1	1	250.0	40.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Gower St.	8	1	250.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

11 May 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Building 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
Along Fountain Ave.	1	1	0.0	62.3	71	62.3	5	----	62.3	0.0	0	0.0
Along Gower St.	8	1	0.0	61.7	66	61.7	10	----	61.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	2	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 11 May 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 1

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 **11 May 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Overlapping 1**

Roadway Name	Points Name	No.	Segment Autos V	Autos S	MTrucks V	MTrucks S	HTrucks V	HTrucks S	Buses V	Buses S	Motorcycles V	Motorcycles S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Haul Route	point1	1	184	35	0	0	24	35	0	0	0	0
	point2	2										

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 1

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	
Along Fountain Ave.	1	1	250.0	40.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Gower St.	8	1	250.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

11 May 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 1
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
Along Fountain Ave.	1	1	0.0	66.9	71	66.9	5	----	66.9	0.0	0	0.0
Along Gower St.	8	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0

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

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 2

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 **11 May 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Overlapping 2**

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	184	35	0	0	52	35	0	0	0	0
	point2	2										

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 2

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	
Along Fountain Ave.	1	1	250.0	40.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Gower St.	8	1	250.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

11 May 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 2
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
Along Fountain Ave.	1	1	0.0	69.7	71	69.7	5	----	69.7	0.0	0	0.0
Along Gower St.	8	1	0.0	69.0	66	69.0	10	Snd Lvl	69.0	0.0	8	-8.0

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

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 3

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 **11 May 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Overlapping 3**

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	320	35	0	0	8	35	0	0	0	0
	point2	2										

Eyestone Environmental 11 May 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 3

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	
Along Fountain Ave.	1	1	250.0	40.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Gower St.	8	1	250.0	45.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

11 May 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 3
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
Along Fountain Ave.	1	1	0.0	65.3	71	65.3	5	----	65.3	0.0	0	0.0
Along Gower St.	8	1	0.0	64.7	66	64.7	10	----	64.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	2	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

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Project: Sunset Gower 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: Estimated 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						
		Single-Story Commercial Building to the North	Two-Story Commercial Building the South	Residential buildings to the West	Residential buildings to the East	On-Site Structure	Bldg. 25	
		100	65	275	60	10	25	
Large Bulldozer	0.089	0.011	0.021	0.002	0.024	0.244	0.089	
Caisson Drilling	0.089	0.011	0.021	0.002	0.024	0.244	0.089	
Loaded Trucks	0.076	0.010	0.018	0.002	0.020	0.208	0.076	
Jackhammer	0.035	0.004	0.008	0.001	0.009	0.096	0.035	
Small bulldozer	0.003	0.000	0.001	0.000	0.001	0.008	0.003	
Significance Threshold, PPV		0.3	0.3	0.2	0.2	0.12	0.2	

Table 2: Estimated 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	R5		
		60	65	275	185	385		
Large Bulldozer	87	76	75	56	61	51		
Caisson Drilling	87	76	75	56	61	51		
Loaded Trucks	86	75	74	55	60	50		
Jackhammer	79	68	67	48	53	43		
Small bulldozer	58	47	46	27	32	22		
Significance Threshold, VdB		72	72	72	72	75		

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						
		30						
Typical road surface	63	70						
Significance Threshold, VdB		72						

Ref. Levels based on FTA Figure 7-3

Operation Noise Calculations Project

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Project Composite Noise Calculations (CNEL)

Project: Sunset Gower

Receptor	Ambient	Traffic[a]	Mechanical	Parking	Loading	Outdoor		Project Composite	Ambient + Project	Increase
R1	62.8	50.7	39.0	56.6	30.6	50.0		58.3	64.1	1.3
R2	66.6	60.2	42.9	52.5	28.5	45.1		61.1	67.7	1.1
R3	67.7	54.0	37.1	30.9	33.3	61.1		61.9	68.7	1.0
R4	77.0	60.7	41.8	27.1	26.0	65.1		66.4	77.4	0.4
R5	69.3	61.7	45.8	40.0	27.5	63.1		65.5	70.8	1.5

[a] - traffic noise levels at each receptor is based on the traffic noise analysis for the roadway segment in front of the receptor.

		Traffic Noise Levels, CNEL								
Receptor	Roadway Segment	Existing	Existing + Project	Project Only	distance to roadway, ft	Existing	Existing + Project	barrier	distance to Center Line	adj. for distance
R1	Gordon St.	60.9	61.3	50.7	10	60.9	61.3	0	30	0.0
R2	Fountain Ave.	70.4	70.8	60.2	10	70.4	70.8	0	30	0.0
R3	Gower St.	70.3	70.4	54.0	10	70.3	70.4	0	35	0.0
R4	Sunset Blvd.	74.0	74.2	60.7	10	74.0	74.2	0	40	0.0
R5	Gordon St.	64.6	66.4	61.7	10	64.6	66.4	0	30	0.0

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Outdoor Mechanical Equipment Noise Calculations

Project: Sunset Gower

			Hours of Operations		
	Estimated Noise Levels, Leq from SOUNDPLAN		Ld (7am to 7pm)	Le (7pm to 10pm)	Ln (10pm to 7am)
Receptor	Leq	CNEL	12	3	9
R1	32.3	39.0	32.3	32.3	32.3
R2	36.2	42.9	36.2	36.2	36.2
R3	30.4	37.1	30.4	30.4	30.4
R4	35.1	41.8	35.1	35.1	35.1
R5	39.1	45.8	39.1	39.1	39.1

Receptor	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	ambient (Leq)	Ambient + Project (Leq)
R1	62.8	62.8	0.0	56.9	56.9
R2	66.6	66.6	0.0	59.8	59.8
R3	67.7	67.7	0.0	61.8	61.8
R4	77.0	77.0	0.0	72.0	72.0
R5	69.3	69.3	0.0	63.5	63.5

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Parking Structure Noise Calculations

Project: Sunset Gower

	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	49.9	56.6	49.9	49.9	49.9
R2	45.8	52.5	45.8	45.8	45.8
R3	24.2	30.9	24.2	24.2	24.2
R4	20.4	27.1	20.4	20.4	20.4
R5	33.3	40.0	33.3	33.3	33.3

Receptor	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	nighttime ambient (Leq)	Ambient + Project (Leq)	Increase (Leq)
R1	62.8	63.7	0.9	56.9	57.7	0.8
R2	66.6	66.8	0.2	59.8	60.0	0.2
R3	67.7	67.7	0.0	61.8	61.8	0.0
R4	77.0	77.0	0.0	72.0	72.0	0.0
R5	69.3	69.3	0.0	63.5	63.5	0.0

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Outdoor Noise Calculations

Project: Sunset Gower

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	11	**3**	**2**
R1	47.4	35.4	47.7	50.0	47.3	47.7	41.2
R2	42.5	31.4	42.8	45.1	42.4	42.8	36.3
R3	58.5	46.6	58.8	61.1	58.4	58.8	52.3
R4	62.6	49.8	62.8	65.1	62.4	62.8	56.3
R5	60.8	40.3	60.8	63.1	60.4	60.8	54.3

TOTAL COMBINED

Receptor	Project (CNEL)	Ambient (CNEL)	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	Ambient (Leq)	Ambient + Project (Leq)
R1	50.0	62.8	63.0	0.2	47.7	56.9	57.4
R2	45.1	66.6	66.6	0.0	42.8	59.8	59.9
R3	61.1	67.7	68.6	0.9	58.8	61.8	63.6
R4	65.1	77.0	77.3	0.3	62.8	72.0	72.5
R5	63.1	69.3	70.2	0.9	60.8	63.5	65.4

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Loading and Trash Compactor Noise Calculations

Project: Sunset Gower

	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	33.4	30.6	27.4	33.4	0.0
R2	31.3	28.5	25.3	31.3	0.0
R3	36.1	33.3	30.1	36.1	0.0
R4	28.8	26.0	22.8	28.8	0.0
R5	30.3	27.5	24.3	30.3	0.0

Receptor	Project CNEL	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	daytime ambient (Leq)	Ambient + Project (Leq)
R1	30.6	62.8	62.8	0.0	33.4	61.1	61.1
R2	28.5	66.6	66.6	0.0	31.3	66.2	66.2
R3	33.3	67.7	67.7	0.0	36.1	66.2	66.2
R4	26.0	77.0	77.0	0.0	28.8	73.3	73.3
R5	27.5	69.3	69.3	0.0	30.3	67.6	67.6

Sunset Gower
Source Levels in dB(A) - Mechanical

Name	Source type	Lw dB(A)	
Building B - Mechanical L1	Point	90.0	
Building B - Mechanical L2	Point	90.0	
Building B - Mechanical L3	Point	90.0	
Building B - Mechanical L4	Point	90.0	
Building B - Mechanical L5	Point	90.0	
Building B - Mechanical L6	Point	90.0	
Building C - Mechanical L1	Point	90.0	
Building C - Mechanical L2	Point	90.0	
Building C - Mechanical L3	Point	90.0	
Building C - Mechanical L4	Point	90.0	
Building C - Mechanical L5	Point	90.0	
Building C - Mechanical L6	Point	90.0	
Cooling Tower 1	Point	100.0	
Cooling Tower 2	Point	100.0	
Cooling Tower 3	Point	100.0	

Sunset Gower
Assessed contribution level - Mechanical

Source	Ld dB(A)	
Receiver R1 Ld 32.3 dB(A)		
Cooling Tower 1	23.9	
Cooling Tower 2	21.4	
Cooling Tower 3	20.6	
Building B - Mechanical L1	22.3	
Building C - Mechanical L1	22.2	
Building B - Mechanical L2	19.9	
Building C - Mechanical L2	20.6	
Building B - Mechanical L3	19.6	
Building C - Mechanical L3	20.1	
Building B - Mechanical L4	19.2	
Building C - Mechanical L4	19.5	
Building B - Mechanical L5	18.8	
Building C - Mechanical L5	18.8	
Building B - Mechanical L6	18.8	
Building C - Mechanical L6	18.3	
Receiver R2 Ld 36.2 dB(A)		
Cooling Tower 1	15.3	
Cooling Tower 2	15.5	
Cooling Tower 3	16.3	
Building B - Mechanical L1	23.3	
Building C - Mechanical L1	24.0	
Building B - Mechanical L2	21.8	
Building C - Mechanical L2	23.2	
Building B - Mechanical L3	24.4	
Building C - Mechanical L3	26.2	
Building B - Mechanical L4	24.7	
Building C - Mechanical L4	26.7	
Building B - Mechanical L5	25.1	
Building C - Mechanical L5	27.2	
Building B - Mechanical L6	25.3	
Building C - Mechanical L6	27.7	
Receiver R3 Ld 30.4 dB(A)		
Cooling Tower 1	21.8	
Cooling Tower 2	22.0	
Cooling Tower 3	20.2	
Building B - Mechanical L1	16.3	
Building C - Mechanical L1	19.3	
Building B - Mechanical L2	15.8	
Building C - Mechanical L2	18.4	

Sunset Gower
Assessed contribution level - Mechanical

Source	Ld dB(A)	
Building B - Mechanical L3	15.8	
Building C - Mechanical L3	17.1	
Building B - Mechanical L4	15.9	
Building C - Mechanical L4	17.2	
Building B - Mechanical L5	16.3	
Building C - Mechanical L5	17.5	
Building B - Mechanical L6	18.7	
Building C - Mechanical L6	19.2	
Receiver R4 Ld 35.1 dB(A)		
Cooling Tower 1	28.2	
Cooling Tower 2	28.2	
Cooling Tower 3	30.2	
Building B - Mechanical L1	19.2	
Building C - Mechanical L1	17.8	
Building B - Mechanical L2	19.8	
Building C - Mechanical L2	16.1	
Building B - Mechanical L3	20.6	
Building C - Mechanical L3	15.2	
Building B - Mechanical L4	22.6	
Building C - Mechanical L4	15.2	
Building B - Mechanical L5	16.2	
Building C - Mechanical L5	14.9	
Building B - Mechanical L6	18.8	
Building C - Mechanical L6	17.4	
Receiver R5 Ld 39.1 dB(A)		
Cooling Tower 1	30.6	
Cooling Tower 2	30.6	
Cooling Tower 3	30.6	
Building B - Mechanical L1	22.4	
Building C - Mechanical L1	22.1	
Building B - Mechanical L2	22.4	
Building C - Mechanical L2	21.7	
Building B - Mechanical L3	26.4	
Building C - Mechanical L3	25.3	
Building B - Mechanical L4	27.2	
Building C - Mechanical L4	25.9	
Building B - Mechanical L5	28.0	
Building C - Mechanical L5	26.6	
Building B - Mechanical L6	28.8	
Building C - Mechanical L6	27.3	

Sunset Gower
Source Levels in dB(A) - People

Name	Source type	Lw dB(A)	
People - Building A Level 2	Area	86.9	
People - Building A Level 3	Area	85.8	
People - Building A Level 4	Area	86.9	
People - Building A Level 5	Area	85.8	
People - Building A Level 6	Area	86.9	
People - Building A Level 7	Area	85.8	
People - Building A Level 7 SW	Area	87.4	
People - Building A Level 8	Area	88.1	
People - Building A Level 9	Area	85.8	
People - Building A Level 10 NW	Area	95.1	
People - Building A Level 10 SE	Area	90.7	
People - Building A Level 11	Area	85.8	
People - Building A Level 12	Area	83.6	
People - Building A Level 12	Area	83.6	
People - Building A Level 13	Area	85.8	
People - Building A Level 15	Area	85.8	
People - Building A Level 16 E	Area	83.6	
People - Building A Level 16 NW	Area	96.2	
People - Building A Level 17	Area	85.8	
People - Building A Level 18	Area	94.5	
People - Building B Level 3 E	Area	84.8	
People - Building B Level 3 N	Area	84.1	
People - Building B Level 3 S	Area	84.1	
People - Building B Level 3 W	Area	89.0	
People - Building B Level 6	Area	98.2	
People - Building B&C Level 2	Area	87.8	
People - Building B&C Level 4	Area	93.4	
People - Building B&C Level 4	Area	84.4	
People - Building B&C Level 5	Area	94.2	
People - Building C Level 6	Area	90.8	
People - Level 1 Central Plaza	Area	100.4	
People - Level 1 Paseo	Area	95.8	
People - Level 1 Plaza	Area	91.3	
People - Level 1 Plaza (Bldg B&C)	Area	91.1	

Sunset Gower
Assessed contribution level - People

Source	Ld dB(A)	
Receiver R1 Ld 35.4 dB(A)		
People - Level 1 Plaza	10.9	
People - Level 1 Paseo	19.7	
People - Level 1 Plaza (Bldg B&C)	16.5	
People - Level 1 Central Plaza	27.4	
People - Building A Level 2	16.1	
People - Building B&C Level 2	12.1	
People - Building B Level 3 W	12.9	
People - Building B Level 3 S	13.1	
People - Building B Level 3 E	19.2	
People - Building B Level 3 N	6.3	
People - Building A Level 3	5.5	
People - Building B&C Level 4	15.9	
People - Building B&C Level 4	12.6	
People - Building A Level 4	20.1	
People - Building B&C Level 5	16.7	
People - Building A Level 5	6.8	
People - Building C Level 6	13.8	
People - Building B Level 6	24.5	
People - Building A Level 6	22.3	
People - Building A Level 7 SW	17.9	
People - Building A Level 7	7.5	
People - Building A Level 8	24.1	
People - Building A Level 9	8.3	
People - Building A Level 10 NW	14.0	
People - Building A Level 10 SE	29.3	
People - Building A Level 11	8.5	
People - Building A Level 12	20.0	
People - Building A Level 13	7.9	
People - Building A Level 12	19.8	
People - Building A Level 15	7.7	
People - Building A Level 16 NW	11.2	
People - Building A Level 16 E	20.8	
People - Building A Level 17	8.4	
People - Building A Level 18	24.7	

Sunset Gower
Assessed contribution level - People

Source	Ld dB(A)	
Receiver R2 Ld 31.4 dB(A)		
People - Level 1 Plaza	8.3	
People - Level 1 Paseo	18.4	
People - Level 1 Plaza (Bldg B&C)	18.1	
People - Level 1 Central Plaza	24.6	
People - Building A Level 2	12.9	
People - Building B&C Level 2	12.2	
People - Building B Level 3 W	12.6	
People - Building B Level 3 S	21.6	
People - Building B Level 3 E	14.5	
People - Building B Level 3 N	3.2	
People - Building A Level 3	1.3	
People - Building B&C Level 4	15.7	
People - Building B&C Level 4	22.7	
People - Building A Level 4	13.2	
People - Building B&C Level 5	17.7	
People - Building A Level 5	1.3	
People - Building C Level 6	16.0	
People - Building B Level 6	21.3	
People - Building A Level 6	14.4	
People - Building A Level 7 SW	11.3	
People - Building A Level 7	1.3	
People - Building A Level 8	16.1	
People - Building A Level 9	1.3	
People - Building A Level 10 NW	13.3	
People - Building A Level 10 SE	18.6	
People - Building A Level 11	1.2	
People - Building A Level 12	8.0	
People - Building A Level 13	1.4	
People - Building A Level 12	8.9	
People - Building A Level 15	1.2	
People - Building A Level 16 NW	10.4	
People - Building A Level 16 E	10.8	
People - Building A Level 17	0.7	
People - Building A Level 18	15.2	

Sunset Gower
Assessed contribution level - People

Source	Ld dB(A)	
Receiver R3 Ld 46.6 dB(A)		
People - Level 1 Plaza	14.3	
People - Level 1 Paseo	31.7	
People - Level 1 Plaza (Bldg B&C)	35.6	
People - Level 1 Central Plaza	33.3	
People - Building A Level 2	20.0	
People - Building B&C Level 2	31.8	
People - Building B Level 3 W	32.8	
People - Building B Level 3 S	10.3	
People - Building B Level 3 E	10.2	
People - Building B Level 3 N	11.3	
People - Building A Level 3	5.2	
People - Building B&C Level 4	37.8	
People - Building B&C Level 4	10.2	
People - Building A Level 4	26.0	
People - Building B&C Level 5	38.7	
People - Building A Level 5	5.1	
People - Building C Level 6	36.4	
People - Building B Level 6	38.4	
People - Building A Level 6	28.9	
People - Building A Level 7 SW	32.1	
People - Building A Level 7	5.1	
People - Building A Level 8	32.7	
People - Building A Level 9	5.1	
People - Building A Level 10 NW	35.1	
People - Building A Level 10 SE	31.0	
People - Building A Level 11	5.5	
People - Building A Level 12	2.6	
People - Building A Level 13	5.2	
People - Building A Level 12	3.0	
People - Building A Level 15	5.2	
People - Building A Level 16 NW	29.5	
People - Building A Level 16 E	3.2	
People - Building A Level 17	5.2	
People - Building A Level 18	20.5	

Sunset Gower
Assessed contribution level - People

Source	Ld dB(A)	
Receiver R4 Ld 49.8 dB(A)		
People - Level 1 Plaza	47.5	
People - Level 1 Paseo	40.1	
People - Level 1 Plaza (Bldg B&C)	14.4	
People - Level 1 Central Plaza	30.7	
People - Building A Level 2	12.9	
People - Building B&C Level 2	6.2	
People - Building B Level 3 W	8.6	
People - Building B Level 3 S	0.3	
People - Building B Level 3 E	9.3	
People - Building B Level 3 N	9.4	
People - Building A Level 3	41.0	
People - Building B&C Level 4	12.5	
People - Building B&C Level 4	0.6	
People - Building A Level 4	12.9	
People - Building B&C Level 5	13.5	
People - Building A Level 5	36.0	
People - Building C Level 6	9.1	
People - Building B Level 6	21.6	
People - Building A Level 6	12.8	
People - Building A Level 7 SW	10.9	
People - Building A Level 7	33.8	
People - Building A Level 8	13.1	
People - Building A Level 9	31.4	
People - Building A Level 10 NW	31.7	
People - Building A Level 10 SE	29.2	
People - Building A Level 11	27.6	
People - Building A Level 12	22.4	
People - Building A Level 13	27.2	
People - Building A Level 12	21.1	
People - Building A Level 15	26.0	
People - Building A Level 16 NW	28.2	
People - Building A Level 16 E	20.1	
People - Building A Level 17	24.0	
People - Building A Level 18	31.3	

Sunset Gower
Assessed contribution level - People

Source	Ld dB(A)	
Receiver R5 Ld 40.3 dB(A)		
People - Level 1 Plaza	21.1	
People - Level 1 Paseo	19.4	
People - Level 1 Plaza (Bldg B&C)	14.9	
People - Level 1 Central Plaza	32.9	
People - Building A Level 2	15.7	
People - Building B&C Level 2	10.2	
People - Building B Level 3 W	11.0	
People - Building B Level 3 S	2.6	
People - Building B Level 3 E	19.9	
People - Building B Level 3 N	16.6	
People - Building A Level 3	12.4	
People - Building B&C Level 4	16.7	
People - Building B&C Level 4	2.8	
People - Building A Level 4	16.9	
People - Building B&C Level 5	16.3	
People - Building A Level 5	20.0	
People - Building C Level 6	13.9	
People - Building B Level 6	29.3	
People - Building A Level 6	19.6	
People - Building A Level 7 SW	9.3	
People - Building A Level 7	21.4	
People - Building A Level 8	19.1	
People - Building A Level 9	24.1	
People - Building A Level 10 NW	28.4	
People - Building A Level 10 SE	35.1	
People - Building A Level 11	22.2	
People - Building A Level 12	25.3	
People - Building A Level 13	20.6	
People - Building A Level 12	24.0	
People - Building A Level 15	19.2	
People - Building A Level 16 NW	25.3	
People - Building A Level 16 E	23.4	
People - Building A Level 17	19.1	
People - Building A Level 18	30.3	

Sunset Gower
Source Levels in dB(A) - Speakers

Name	Source type	Lw dB(A)	
Speakers - Building A Level 16	Point	118.6	
Speakers - Building A Level 16	Point	118.6	
Speakers - Building A Level 16	Point	118.6	
Speakers - Building A Level 16	Point	118.6	
Speakers - Building A Level 16	Point	118.6	
Speakers - Building A Level 18	Point	118.6	
Speakers - Building A Level 18	Point	118.6	
Speakers - Building A Level 18	Point	118.6	
Speakers - Building A Level 18	Point	118.6	
Speakers - Building A Level 18	Point	118.6	
Speakers - Building A Level 18	Point	118.6	
Speakers - Building A Level 18	Point	118.6	
Speakers Building A Level 10	Point	113.6	
Speakers Building A Level 10	Point	113.6	
Speakers Building A Level 10	Point	113.6	
Speakers Building A Level 10	Point	113.6	
Speakers Building A Level 10	Point	113.6	
Speakers Building A Level 10	Point	113.6	
Speakers Building A Level 10	Point	113.6	
Speakers Building A Level 10	Point	113.6	
Speakers Building A Level 10	Point	113.6	
Speakers Building B Level 6	Point	118.6	
Speakers Building B Level 6	Point	118.6	
Speakers Building B Level 6	Point	118.6	
Speakers Building B Level 6	Point	118.6	
Speakers Building B Level 6	Point	118.6	
Speakers Building B Level 6	Point	118.6	
Speakers Building B Level 6	Point	118.6	
Speakers Building B Level 6	Point	118.6	
Speakers Building B Level 6	Point	118.6	
Speakers Level 1	Point	113.6	
Speakers Level 1	Point	113.6	
Speakers Level 1	Point	113.6	
Speakers Level 1	Point	113.6	
Speakers Level 1	Point	113.6	
Speakers Level 1 Central Plaza	Point	118.6	
Speakers Level 1 Central Plaza	Point	118.6	
Speakers Level 1 Central Plaza	Point	118.6	
Speakers Level 1 Central Plaza	Point	118.6	

Sunset Gower
Source Levels in dB(A) - Speakers

Name	Source type	Lw dB(A)	
Speakers Level 1 Central Plaza	Point	118.6	
Speakers Level 1 Central Plaza	Point	118.6	

Sunset Gower
Assessed contribution level - Speakers

Source	Ld dB(A)	
Receiver R1 Ld 47.4 dB(A)		
Speakers Level 1	7.8	
Speakers Level 1	7.8	
Speakers Level 1	7.8	
Speakers Level 1 Central Plaza	34.6	
Speakers Level 1 Central Plaza	22.8	
Speakers Level 1 Central Plaza	38.4	
Speakers Level 1 Central Plaza	22.5	
Speakers Level 1 Central Plaza	20.1	
Speakers Level 1 Central Plaza	32.0	
Speakers Level 1	27.9	
Speakers Level 1	18.6	
Speakers Building B Level 6	29.8	
Speakers Building B Level 6	29.5	
Speakers Building B Level 6	29.5	
Speakers Building B Level 6	20.9	
Speakers Building B Level 6	29.7	
Speakers Building B Level 6	18.1	
Speakers Building B Level 6	30.4	
Speakers Building B Level 6	35.8	
Speakers Building B Level 6	32.0	
Speakers Building A Level 10	8.6	
Speakers Building A Level 10	8.9	
Speakers Building A Level 10	7.4	
Speakers Building A Level 10	5.9	
Speakers Building A Level 10	6.3	
Speakers Building A Level 10	36.4	
Speakers Building A Level 10	38.2	
Speakers Building A Level 10	7.7	
Speakers Building A Level 10	7.5	
Speakers - Building A Level 16	10.9	
Speakers - Building A Level 16	12.2	
Speakers - Building A Level 16	12.3	
Speakers - Building A Level 16	12.4	
Speakers - Building A Level 16	13.5	
Speakers - Building A Level 18	40.3	
Speakers - Building A Level 18	40.3	
Speakers - Building A Level 18	13.0	
Speakers - Building A Level 18	15.8	
Speakers - Building A Level 18	12.2	
Speakers - Building A Level 18	12.8	

Sunset Gower
Assessed contribution level - Speakers

Source	Ld dB(A)	
Speakers - Building A Level 18	13.6	
Receiver R2 Ld 42.5 dB(A)		
Speakers Level 1	7.4	
Speakers Level 1	6.5	
Speakers Level 1	6.4	
Speakers Level 1 Central Plaza	35.8	
Speakers Level 1 Central Plaza	18.1	
Speakers Level 1 Central Plaza	30.1	
Speakers Level 1 Central Plaza	19.8	
Speakers Level 1 Central Plaza	20.2	
Speakers Level 1 Central Plaza	28.4	
Speakers Level 1	36.6	
Speakers Level 1	29.9	
Speakers Building B Level 6	21.3	
Speakers Building B Level 6	25.9	
Speakers Building B Level 6	26.1	
Speakers Building B Level 6	28.9	
Speakers Building B Level 6	26.8	
Speakers Building B Level 6	22.3	
Speakers Building B Level 6	28.1	
Speakers Building B Level 6	28.0	
Speakers Building B Level 6	28.5	
Speakers Building A Level 10	7.9	
Speakers Building A Level 10	8.3	
Speakers Building A Level 10	5.7	
Speakers Building A Level 10	4.0	
Speakers Building A Level 10	4.0	
Speakers Building A Level 10	10.0	
Speakers Building A Level 10	21.9	
Speakers Building A Level 10	7.4	
Speakers Building A Level 10	7.4	
Speakers - Building A Level 16	8.7	
Speakers - Building A Level 16	12.1	
Speakers - Building A Level 16	12.2	
Speakers - Building A Level 16	12.4	
Speakers - Building A Level 16	12.9	
Speakers - Building A Level 18	30.9	
Speakers - Building A Level 18	26.4	
Speakers - Building A Level 18	9.1	
Speakers - Building A Level 18	9.7	
Speakers - Building A Level 18	8.9	

Sunset Gower
Assessed contribution level - Speakers

Source	Ld dB(A)	
Speakers - Building A Level 18	12.8	
Speakers - Building A Level 18	13.4	
Receiver R3 Ld 58.5 dB(A)		
Speakers Level 1	11.4	
Speakers Level 1	12.6	
Speakers Level 1	15.6	
Speakers Level 1 Central Plaza	35.3	
Speakers Level 1 Central Plaza	40.8	
Speakers Level 1 Central Plaza	32.1	
Speakers Level 1 Central Plaza	35.6	
Speakers Level 1 Central Plaza	40.2	
Speakers Level 1 Central Plaza	28.7	
Speakers Level 1	35.7	
Speakers Level 1	47.9	
Speakers Building B Level 6	47.2	
Speakers Building B Level 6	39.1	
Speakers Building B Level 6	39.6	
Speakers Building B Level 6	47.8	
Speakers Building B Level 6	38.7	
Speakers Building B Level 6	51.3	
Speakers Building B Level 6	52.3	
Speakers Building B Level 6	45.0	
Speakers Building B Level 6	47.0	
Speakers Building A Level 10	19.7	
Speakers Building A Level 10	39.2	
Speakers Building A Level 10	45.7	
Speakers Building A Level 10	14.4	
Speakers Building A Level 10	11.0	
Speakers Building A Level 10	6.6	
Speakers Building A Level 10	11.6	
Speakers Building A Level 10	39.2	
Speakers Building A Level 10	40.3	
Speakers - Building A Level 16	15.2	
Speakers - Building A Level 16	32.5	
Speakers - Building A Level 16	32.7	
Speakers - Building A Level 16	34.0	
Speakers - Building A Level 16	39.2	
Speakers - Building A Level 18	17.7	
Speakers - Building A Level 18	17.7	
Speakers - Building A Level 18	14.7	
Speakers - Building A Level 18	16.3	

Sunset Gower
Assessed contribution level - Speakers

Source	Ld dB(A)	
Speakers - Building A Level 18	15.5	
Speakers - Building A Level 18	37.5	
Speakers - Building A Level 18	29.6	
Receiver R4 Ld 62.6 dB(A)		
Speakers Level 1	58.9	
Speakers Level 1	57.2	
Speakers Level 1	55.9	
Speakers Level 1 Central Plaza	30.2	
Speakers Level 1 Central Plaza	38.9	
Speakers Level 1 Central Plaza	30.4	
Speakers Level 1 Central Plaza	42.4	
Speakers Level 1 Central Plaza	36.2	
Speakers Level 1 Central Plaza	32.5	
Speakers Level 1	33.8	
Speakers Level 1	31.4	
Speakers Building B Level 6	24.5	
Speakers Building B Level 6	29.8	
Speakers Building B Level 6	29.0	
Speakers Building B Level 6	23.3	
Speakers Building B Level 6	28.2	
Speakers Building B Level 6	19.0	
Speakers Building B Level 6	28.0	
Speakers Building B Level 6	24.0	
Speakers Building B Level 6	28.2	
Speakers Building A Level 10	42.6	
Speakers Building A Level 10	15.3	
Speakers Building A Level 10	30.1	
Speakers Building A Level 10	37.0	
Speakers Building A Level 10	40.0	
Speakers Building A Level 10	17.7	
Speakers Building A Level 10	36.4	
Speakers Building A Level 10	15.3	
Speakers Building A Level 10	15.1	
Speakers - Building A Level 16	36.4	
Speakers - Building A Level 16	23.3	
Speakers - Building A Level 16	19.3	
Speakers - Building A Level 16	23.1	
Speakers - Building A Level 16	20.3	
Speakers - Building A Level 18	37.7	
Speakers - Building A Level 18	38.1	
Speakers - Building A Level 18	35.3	

Source	Ld dB(A)	
Speakers - Building A Level 18	36.5	
Speakers - Building A Level 18	34.2	
Speakers - Building A Level 18	19.5	
Speakers - Building A Level 18	18.9	
Receiver R5 Ld 60.8 dB(A)		
Speakers Level 1	28.7	
Speakers Level 1	18.7	
Speakers Level 1	18.2	
Speakers Level 1 Central Plaza	34.3	
Speakers Level 1 Central Plaza	36.4	
Speakers Level 1 Central Plaza	38.6	
Speakers Level 1 Central Plaza	30.2	
Speakers Level 1 Central Plaza	36.0	
Speakers Level 1 Central Plaza	39.9	
Speakers Level 1	29.2	
Speakers Level 1	26.3	
Speakers Building B Level 6	30.9	
Speakers Building B Level 6	41.7	
Speakers Building B Level 6	40.6	
Speakers Building B Level 6	33.5	
Speakers Building B Level 6	40.0	
Speakers Building B Level 6	22.1	
Speakers Building B Level 6	38.5	
Speakers Building B Level 6	34.7	
Speakers Building B Level 6	36.1	
Speakers Building A Level 10	40.9	
Speakers Building A Level 10	12.7	
Speakers Building A Level 10	20.9	
Speakers Building A Level 10	16.7	
Speakers Building A Level 10	17.8	
Speakers Building A Level 10	54.2	
Speakers Building A Level 10	57.4	
Speakers Building A Level 10	11.9	
Speakers Building A Level 10	12.0	
Speakers - Building A Level 16	21.3	
Speakers - Building A Level 16	17.4	
Speakers - Building A Level 16	17.8	
Speakers - Building A Level 16	17.5	
Speakers - Building A Level 16	16.3	
Speakers - Building A Level 18	51.6	
Speakers - Building A Level 18	51.8	

Sunset Gower
Assessed contribution level - Speakers

Source	Ld dB(A)	
Speakers - Building A Level 18	29.0	
Speakers - Building A Level 18	33.3	
Speakers - Building A Level 18	24.2	
Speakers - Building A Level 18	18.0	
Speakers - Building A Level 18	17.9	

Sunset Gower
Source Levels in dB(A) - Parking

Name	Source type	Lw dB(A)	
Parking Level 1	PLot	87.0	
Parking Level 2	PLot	89.7	
Parking Level 3	PLot	89.7	
Parking Level 4	PLot	89.7	
Parking Level 5	PLot	89.7	
Parking Level 6	PLot	89.7	

Sunset Gower
Assessed contribution level - Parking

Source	Ld dB(A)	
Receiver R1 Ld 49.9 dB(A)		
Parking Level 1	47.2	
Parking Level 2	43.7	
Parking Level 3	39.9	
Parking Level 4	37.7	
Parking Level 5	35.9	
Parking Level 6	34.3	
Receiver R2 Ld 45.8 dB(A)		
Parking Level 1	42.5	
Parking Level 2	39.2	
Parking Level 3	36.9	
Parking Level 4	35.3	
Parking Level 5	33.4	
Parking Level 6	32.1	
Receiver R3 Ld 24.2 dB(A)		
Parking Level 1	13.5	
Parking Level 2	15.4	
Parking Level 3	15.0	
Parking Level 4	16.6	
Parking Level 5	17.5	
Parking Level 6	18.6	
Receiver R4 Ld 20.4 dB(A)		
Parking Level 1	7.7	
Parking Level 2	9.8	
Parking Level 3	10.3	
Parking Level 4	11.0	
Parking Level 5	14.7	
Parking Level 6	16.2	
Receiver R5 Ld 33.3 dB(A)		
Parking Level 1	18.5	
Parking Level 2	22.9	
Parking Level 3	26.5	
Parking Level 4	26.7	
Parking Level 5	26.8	
Parking Level 6	26.9	

Sunset Gower
Source Levels in dB(A) - Loading & Trash Compactor

Name	Source type	Lw dB(A)	
Loading (two trucks)	Point	104.9	
Trash Compactor	Point	91.5	

Sunset Gower
Assessed contribution level - Loading & Trash Compactor

Source	Ld dB(A)	
Receiver R1 Ld 33.4 dB(A)		
Trash Compactor	22.9	
Loading (two trucks)	33.0	
Receiver R2 Ld 31.3 dB(A)		
Trash Compactor	19.0	
Loading (two trucks)	31.1	
Receiver R3 Ld 36.1 dB(A)		
Trash Compactor	24.0	
Loading (two trucks)	35.8	
Receiver R4 Ld 28.8 dB(A)		
Trash Compactor	16.7	
Loading (two trucks)	28.6	
Receiver R5 Ld 30.3 dB(A)		
Trash Compactor	17.3	
Loading (two trucks)	30.0	

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Off-Site Traffic Noise Calculations
Project: Sunset Gower 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

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
Vine Street										
- Between Hollywood Blvd. and Sunset Blvd.	70	10	45	35	2,312	23,120	10%	0	0	72.0
- Between Sunset Blvd. and Fountain Ave.	70	10	45	35	2,569	25,690	10%	0	0	72.5
- Between Fountain Ave. and Santa Monica Blvd.	70	10	45	35	2,449	24,490	10%	0	0	72.2
Gower Street										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	1,319	13,190	10%	0	0	70.7
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	1,221	12,210	10%	0	0	70.3
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	1,207	12,070	10%	0	0	70.3
Bronson Avenue										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	843	8,430	10%	0	0	68.7
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	778	7,780	10%	0	0	68.4
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	728	7,280	10%	0	0	68.1
Beachwood Drive										
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	838	10%	0	0	59.5
Gordon Street										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	35	269	2,690	10%	0	0	64.6
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,167	10%	0	0	60.9
Tamarind Avenue										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	25	--	2,046	10%	0	0	63.4
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,280	10%	0	0	61.3
Hollywood Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	1,839	18,390	10%	0	0	71.5
- Between Gower St. and Bronson Ave.	60	10	40	35	1,797	17,970	10%	0	0	71.4
Sunset Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	3,058	30,580	10%	0	0	73.7
- Between Gower St. and Gordon St.	60	10	40	35	3,237	32,370	10%	0	0	74.0
- Between Gordon St. and Bronson Ave.	60	10	40	35	3,247	32,470	10%	0	0	74.0

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EXISTING CONDITIONS

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
De Longpre Avenue										
- Between Vine St, and Gower St.	40	10	30	25	--	2,206	10%	0	0	63.7
Afton Place										
- Between Vine St, and Gower St.	40	10	30	25	--	777	10%	0	0	59.2
Fountain Avenue										
- Between Vine St, and Gower St.	40	10	30	35	1,030	10,300	10%	0	0	70.4
- Between Gower St. and Gordon St.	40	10	30	35	1,028	10,280	10%	0	0	70.4
- Between Gordon St. and Bronson Ave.	40	10	30	35	884	8,840	10%	0	0	69.7
Santa Monica Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	2,481	24,810	10%	0	0	72.8
- Between Gower St. and Bronson Ave.	60	10	40	35	2,602	26,020	10%	0	0	73.0

* Estimated based on Google Earth map.

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

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Off-Site Traffic Noise Calculations
Project: Sunset Gower 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

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
Vine Street										
- Between Hollywood Blvd. and Sunset Blvd.	70	10	45	35	2,342	23,420	10%	0	0	72.1
- Between Sunset Blvd. and Fountain Ave.	70	10	45	35	2,582	25,820	10%	0	0	72.5
- Between Fountain Ave. and Santa Monica Blvd.	70	10	45	35	2,473	24,730	10%	0	0	72.3
Gower Street										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	1,340	13,400	10%	0	0	70.7
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	1,221	12,210	10%	0	0	70.3
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	1,243	12,430	10%	0	0	70.4
Bronson Avenue										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	876	8,760	10%	0	0	68.9
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	778	7,780	10%	0	0	68.4
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	783	7,830	10%	0	0	68.4
Beachwood Drive										
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	838	10%	0	0	59.5
Gordon Street										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	35	416	4,160	10%	0	0	66.4
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,270	10%	0	0	61.3
Tamarind Avenue										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	25	--	2,046	10%	0	0	63.4
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,280	10%	0	0	61.3
Hollywood Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	1,839	18,390	10%	0	0	71.5
- Between Gower St. and Bronson Ave.	60	10	40	35	1,797	17,970	10%	0	0	71.4
Sunset Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	3,168	31,680	10%	0	0	73.9
- Between Gower St. and Gordon St.	60	10	40	35	3,401	34,010	10%	0	0	74.2
- Between Gordon St. and Bronson Ave.	60	10	40	35	3,418	34,180	10%	0	0	74.2

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ACOUSTICAL ENGINEERING SERVICES

EXISTING + PROJECT CONDITIONS

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
De Longpre Avenue										
- Between Vine St, and Gower St.	40	10	30	25	--	2,206	10%	0	0	63.7
Afton Place										
- Between Vine St, and Gower St.	40	10	30	25	--	777	10%	0	0	59.2
Fountain Avenue										
- Between Vine St, and Gower St.	40	10	30	35	1,112	11,120	10%	0	0	70.7
- Between Gower St. and Gordon St.	40	10	30	35	1,145	11,450	10%	0	0	70.8
- Between Gordon St. and Bronson Ave.	40	10	30	35	939	9,390	10%	0	0	70.0
Santa Monica Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	2,500	25,000	10%	0	0	72.8
- Between Gower St. and Bronson Ave.	60	10	40	35	2,607	26,070	10%	0	0	73.0

* Estimated based on Google Earth map.

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

Date Printed: 3/25/2019

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ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Sunset Gower 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

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
Vine Street										
- Between Hollywood Blvd. and Sunset Blvd.	70	10	45	35	2,715	27,150	10%	0	0	72.7
- Between Sunset Blvd. and Fountain Ave.	70	10	45	35	3,045	30,450	10%	0	0	73.2
- Between Fountain Ave. and Santa Monica Blvd.	70	10	45	35	2,872	28,720	10%	0	0	72.9
Gower Street										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	1,647	16,470	10%	0	0	71.6
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	1,437	14,370	10%	0	0	71.0
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	1,431	14,310	10%	0	0	71.0
Bronson Avenue										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	1,042	10,420	10%	0	0	69.6
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	851	8,510	10%	0	0	68.8
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	779	7,790	10%	0	0	68.4
Beachwood Drive										
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	853	10%	0	0	59.6
Gordon Street										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	35	274	2,740	10%	0	0	64.6
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,188	10%	0	0	61.0
Tamarind Avenue										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	25	--	2,083	10%	0	0	63.4
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,303	10%	0	0	61.4
Hollywood Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	2,666	26,660	10%	0	0	73.1
- Between Gower St. and Bronson Ave.	60	10	40	35	2,671	26,710	10%	0	0	73.1
Sunset Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	4,351	43,510	10%	0	0	75.2
- Between Gower St. and Gordon St.	60	10	40	35	4,477	44,770	10%	0	0	75.4
- Between Gordon St. and Bronson Ave.	60	10	40	35	4,505	45,050	10%	0	0	75.4

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FUTURE NO PROJECT CONDITIONS

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
De Longpre Avenue										
- Between Vine St, and Gower St.	40	10	30	25	--	2,246	10%	0	0	63.8
Afton Place										
- Between Vine St, and Gower St.	40	10	30	25	--	791	10%	0	0	59.2
Fountain Avenue										
- Between Vine St, and Gower St.	40	10	30	35	1,070	10,700	10%	0	0	70.5
- Between Gower St. and Gordon St.	40	10	30	35	1,077	10,770	10%	0	0	70.6
- Between Gordon St. and Bronson Ave.	40	10	30	35	927	9,270	10%	0	0	69.9
Santa Monica Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	3,247	32,470	10%	0	0	74.0
- Between Gower St. and Bronson Ave.	60	10	40	35	3,299	32,990	10%	0	0	74.0

* Estimated based on Google Earth map.

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

Date Printed: 3/25/2019

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ACOUSTICAL ENGINEERING SERVICES

Off-Site Traffic Noise Calculations
Project: Sunset Gower 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

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
Vine Street										
- Between Hollywood Blvd. and Sunset Blvd.	70	10	45	35	2,745	27,450	10%	0	0	72.7
- Between Sunset Blvd. and Fountain Ave.	70	10	45	35	3,058	30,580	10%	0	0	73.2
- Between Fountain Ave. and Santa Monica Blvd.	70	10	45	35	2,896	28,960	10%	0	0	73.0
Gower Street										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	1,668	16,680	10%	0	0	71.7
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	1,437	14,370	10%	0	0	71.0
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	1,466	14,660	10%	0	0	71.1
Bronson Avenue										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	1,074	10,740	10%	0	0	69.8
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	851	8,510	10%	0	0	68.8
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	834	8,340	10%	0	0	68.7
Beachwood Drive										
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	853	10%	0	0	59.6
Gordon Street										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	35	421	4,210	10%	0	0	66.5
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,291	10%	0	0	61.4
Tamarind Avenue										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	25	--	2,083	10%	0	0	63.4
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,303	10%	0	0	61.4
Hollywood Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	2,666	26,660	10%	0	0	73.1
- Between Gower St. and Bronson Ave.	60	10	40	35	2,671	26,710	10%	0	0	73.1
Sunset Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	4,461	44,610	10%	0	0	75.3
- Between Gower St. and Gordon St.	60	10	40	35	4,641	46,410	10%	0	0	75.5
- Between Gordon St. and Bronson Ave.	60	10	40	35	4,676	46,760	10%	0	0	75.6

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FUTURE + PROJECT CONDITIONS

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
De Longpre Avenue										
- Between Vine St, and Gower St.	40	10	30	25	--	2,246	10%	0	0	63.8
Afton Place										
- Between Vine St, and Gower St.	40	10	30	25	--	791	10%	0	0	59.2
Fountain Avenue										
- Between Vine St, and Gower St.	40	10	30	35	1,151	11,510	10%	0	0	70.9
- Between Gower St. and Gordon St.	40	10	30	35	1,194	11,940	10%	0	0	71.0
- Between Gordon St. and Bronson Ave.	40	10	30	35	982	9,820	10%	0	0	70.2
Santa Monica Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	3,266	32,660	10%	0	0	74.0
- Between Gower St. and Bronson Ave.	60	10	40	35	3,304	33,040	10%	0	0	74.0

* Estimated based on Google Earth map.

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

Date Printed: 3/25/2019

Sunset Gower Project
Alternative 2

Noise Calculations Worksheets

Provided by Acoustical Engineering Services

Construction Noise & Vibration Calculations

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete Saw	1	90	20%	60	0
Skid Steer Loader	1	79	40%	60	0
Rubber Tired Dozer	1	79	40%	85	0
Tractor/Loader/Backhoe	1	79	40%	85	0
Excavator	1	81	40%	110	0
Air Compressor	1	78	40%	110	0
Aerial Lift	1	75	20%	135	0
Tractor/Loader/Backhoe	1	79	40%	135	0
Air Compressor	1	78	40%	135	0
Aerial Lift	1	75	20%	160	0
Concrete Saw	1	90	20%	160	0
Water truck	1	82	10%	160	0
	12				

Receptor: ***R1***

Results:

1-hour Leq: 83.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	60	0
Excavator	1	81	40%	60	0
Crane	1	81	16%	85	0
Tractor/Loader/Backhoe	1	79	40%	85	0
Air Compressor	1	78	40%	110	0
Bore/Drill Rig	1	84	20%	110	0
Excavator	1	81	40%	135	0
Crane	1	81	16%	135	0
Tractor/Loader/Backhoe	1	79	40%	160	0
Water truck	1	82	10%	160	0

10

Receptor: ***R1***

Results:

1-hour Leq: 80.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	60	0
Concrete Pump	1	81	20%	60	0
Tractor/Loader/Backhoe	1	79	40%	85	0
Welders	1	74	40%	85	0
Crane	1	81	16%	110	0
Cement and Mortar Mixer	3	80	50%	110	0
Concrete Pump	3	81	20%	135	0
Welders	1	74	40%	135	0
Crane	1	81	16%	160	0

13

Receptor: ***R1***

Results:

1-hour Leq: 80.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	60	0
Air Compressor	1	78	40%	60	0
Aerial Lift	1	75	20%	85	0
Fork Lift	1	75	20%	85	0
Concrete Pump	1	81	20%	110	0
Crane	1	81	16%	110	0
Tractor/Loader/Backhoe	2	79	40%	135	0
Welders	2	74	40%	135	0
Air Compressor	1	78	40%	160	0
Aerial Lift	1	75	20%	160	0
Fork Lift	1	75	20%	185	0
Crane	1	81	16%	185	0
	14				

Receptor: ***R1***

Results:

1-hour Leq: 79.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 2***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	860	15
Excavator	1	81	40%	860	15
Crane	1	81	16%	885	15
Tractor/Loader/Backhoe	1	79	40%	885	15
Air Compressor	1	78	40%	910	15
Bore/Drill Rig	1	84	20%	910	15
Excavator	1	81	40%	935	15
Crane	1	81	16%	935	15
Tractor/Loader/Backhoe	1	79	40%	960	15
Water truck	1	82	10%	960	15

10

Receptor: ***R1***

Results:

1-hour Leq: 45.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 2***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	860	15
Concrete Pump	1	81	20%	860	15
Tractor/Loader/Backhoe	1	79	40%	885	15
Welders	1	74	40%	885	15
Crane	1	81	16%	910	15
Cement and Mortar Mixer	3	80	50%	910	15
Concrete Pump	3	81	20%	935	15
Welders	1	74	40%	935	15
Crane	1	81	16%	960	15

13

Receptor: ***R1***

Results:

1-hour Leq: 45.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	860	15
Air Compressor	1	78	40%	860	15
Aerial Lift	1	75	20%	885	15
Fork Lift	1	75	20%	885	15
Tractor/Loader/Backhoe	1	79	40%	910	15
Welders	1	74	40%	910	15
Crane	1	81	16%	935	15
Concrete Pump	1	81	20%	935	15
Air Compressor	1	78	40%	960	15
Aerial Lift	1	75	20%	960	15
Fork Lift	1	75	20%	985	15
Crane	1	81	16%	985	15
Tractor/Loader/Backhoe	1	79	40%	985	15
Welders	1	74	40%	985	15

14

Receptor: ***R1***

Results:

1-hour Leq: 44.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	410	10
Excavator	1	81	40%	410	10
Crane	1	81	16%	435	10
Tractor/Loader/Backhoe	1	79	40%	435	10
Bore/Drill Rig	1	84	20%	460	10
Excavator	1	81	40%	460	10
Crane	1	81	16%	485	10
Tractor/Loader/Backhoe	1	79	40%	485	10
Water truck	1	82	10%	510	10
Air Compressor	1	78	40%	510	10

10

Receptor: ***R1***

Results:

1-hour Leq: 56.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	410	10
Concrete Pump	1	81	20%	410	10
Tractor/Loader/Backhoe	1	79	40%	435	10
Welders	1	74	40%	435	10
Crane	1	81	16%	460	10
Cement and Mortar Mixer	3	80	50%	460	10
Concrete Pump	3	81	20%	485	10
Welders	1	74	40%	485	10
Crane	1	81	16%	510	10

13

Receptor: ***R1***

Results:

1-hour Leq: 56.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	410	10
Air Compressor	1	78	40%	410	10
Aerial Lift	1	75	20%	435	10
Fork Lift	1	75	20%	435	10
Concrete Pump	1	81	20%	460	10
Tractor/Loader/Backhoe	1	79	40%	460	10
Welders	1	74	40%	485	10
Crane	1	81	16%	485	10
Air Compressor	1	78	40%	510	10
Aerial Lift	1	75	20%	510	10
Fork Lift	1	75	20%	535	10
Crane	1	81	16%	535	10
Tractor/Loader/Backhoe	1	79	40%	535	10
Welders	1	74	40%	535	10
	14				

Receptor: ***R1***

Results:

1-hour Leq: 55.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete Saw	1	90	20%	65	0
Skid Steer Loader	1	79	40%	65	0
Rubber Tired Dozer	1	79	40%	90	0
Tractor/Loader/Backhoe	1	79	40%	90	0
Excavator	1	81	40%	115	0
Air Compressor	1	78	40%	115	0
Aerial Lift	1	75	20%	140	0
Tractor/Loader/Backhoe	1	79	40%	140	0
Air Compressor	1	78	40%	140	0
Aerial Lift	1	75	20%	165	0
Concrete Saw	1	90	20%	165	0
Water truck	1	82	10%	165	0
	12				

Receptor: ***R2***

Results:

1-hour Leq: 83.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	65	0
Excavator	1	81	40%	65	0
Crane	1	81	16%	90	0
Tractor/Loader/Backhoe	1	79	40%	90	0
Air Compressor	1	78	40%	115	0
Bore/Drill Rig	1	84	20%	115	0
Excavator	1	81	40%	140	0
Crane	1	81	16%	140	0
Tractor/Loader/Backhoe	1	79	40%	165	0
Water truck	1	82	10%	165	0

10

Receptor: ***R2***

Results:

1-hour Leq: 80.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	65	0
Concrete Pump	1	81	20%	65	0
Tractor/Loader/Backhoe	1	79	40%	90	0
Welders	1	74	40%	90	0
Crane	1	81	16%	115	0
Cement and Mortar Mixer	3	80	50%	115	0
Concrete Pump	3	81	20%	140	0
Welders	1	74	40%	140	0
Crane	1	81	16%	165	0

13

Receptor: ***R2***

Results:

1-hour Leq: 80.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	65	0
Air Compressor	1	78	40%	65	0
Aerial Lift	1	75	20%	90	0
Fork Lift	1	75	20%	90	0
Concrete Pump	1	81	20%	115	0
Crane	1	81	16%	115	0
Tractor/Loader/Backhoe	2	79	40%	140	0
Welders	2	74	40%	140	0
Air Compressor	1	78	40%	165	0
Aerial Lift	1	75	20%	165	0
Fork Lift	1	75	20%	190	0
Crane	1	81	16%	190	0
	14				

Receptor: ***R2***

Results:

1-hour Leq: 78.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 2***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	1020	15
Excavator	1	81	40%	1020	15
Crane	1	81	16%	1045	15
Tractor/Loader/Backhoe	1	79	40%	1045	15
Air Compressor	1	78	40%	1070	15
Bore/Drill Rig	1	84	20%	1070	15
Excavator	1	81	40%	1095	15
Crane	1	81	16%	1095	15
Tractor/Loader/Backhoe	1	79	40%	1120	15
Water truck	1	82	10%	1120	15
	10				

Receptor: ***R2***

Results:

1-hour Leq: 43.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 2***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	1020	15
Concrete Pump	1	81	20%	1020	15
Tractor/Loader/Backhoe	1	79	40%	1045	15
Welders	1	74	40%	1045	15
Crane	1	81	16%	1070	15
Cement and Mortar Mixer	3	80	50%	1070	15
Concrete Pump	3	81	20%	1095	15
Welders	1	74	40%	1095	15
Crane	1	81	16%	1120	15

13

Receptor: ***R2***

Results:

1-hour Leq: **44.4**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	1020	15
Air Compressor	1	78	40%	1020	15
Aerial Lift	1	75	20%	1045	15
Fork Lift	1	75	20%	1045	15
Tractor/Loader/Backhoe	1	79	40%	1070	15
Welders	1	74	40%	1070	15
Crane	1	81	16%	1095	15
Concrete Pump	1	81	20%	1095	15
Air Compressor	1	78	40%	1120	15
Aerial Lift	1	75	20%	1120	15
Fork Lift	1	75	20%	1145	15
Crane	1	81	16%	1145	15
Tractor/Loader/Backhoe	1	79	40%	1145	15
Welders	1	74	40%	1145	15
	14				

Receptor: ***R2***

Results:

1-hour Leq: **42.7**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	405	10
Excavator	1	81	40%	405	10
Crane	1	81	16%	430	10
Tractor/Loader/Backhoe	1	79	40%	430	10
Bore/Drill Rig	1	84	20%	455	10
Excavator	1	81	40%	455	10
Crane	1	81	16%	480	10
Tractor/Loader/Backhoe	1	79	40%	480	10
Water truck	1	82	10%	505	10
Air Compressor	1	78	40%	505	10

10

Receptor: ***R2***

Results:

1-hour Leq: 56.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	405	10
Concrete Pump	1	81	20%	405	10
Tractor/Loader/Backhoe	1	79	40%	430	10
Welders	1	74	40%	430	10
Crane	1	81	16%	455	10
Cement and Mortar Mixer	3	80	50%	455	10
Concrete Pump	3	81	20%	480	10
Welders	1	74	40%	480	10
Crane	1	81	16%	505	10

13

Receptor: ***R2***

Results:

1-hour Leq: 56.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	405	10
Air Compressor	1	78	40%	405	10
Aerial Lift	1	75	20%	430	10
Fork Lift	1	75	20%	430	10
Concrete Pump	1	81	20%	455	10
Tractor/Loader/Backhoe	1	79	40%	455	10
Welders	1	74	40%	480	10
Crane	1	81	16%	480	10
Air Compressor	1	78	40%	505	10
Aerial Lift	1	75	20%	505	10
Fork Lift	1	75	20%	530	10
Crane	1	81	16%	530	10
Tractor/Loader/Backhoe	1	79	40%	530	10
Welders	1	74	40%	530	10
	14				

Receptor: ***R2***

Results:

1-hour Leq: 55.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete Saw	1	90	20%	275	15
Skid Steer Loader	1	79	40%	275	15
Rubber Tired Dozer	1	79	40%	300	15
Tractor/Loader/Backhoe	1	79	40%	300	15
Excavator	1	81	40%	325	15
Air Compressor	1	78	40%	325	15
Aerial Lift	1	75	20%	350	15
Tractor/Loader/Backhoe	1	79	40%	350	15
Air Compressor	1	78	40%	375	15
Aerial Lift	1	75	20%	375	15
Concrete Saw	1	90	20%	380	15
Water truck	1	82	10%	380	15
	12				

Receptor: ***R3***

Results:

1-hour Leq: 57.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	385	15
Excavator	1	81	40%	385	15
Crane	1	81	16%	410	15
Tractor/Loader/Backhoe	1	79	40%	410	15
Air Compressor	1	78	40%	435	15
Bore/Drill Rig	1	84	20%	435	15
Excavator	1	81	40%	460	15
Crane	1	81	16%	460	15
Tractor/Loader/Backhoe	1	79	40%	460	15
Water truck	1	82	10%	460	15

10

Receptor: ***R3***

Results:

1-hour Leq: 51.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	385	15
Concrete Pump	1	81	20%	385	15
Tractor/Loader/Backhoe	1	79	40%	410	15
Welders	1	74	40%	410	15
Crane	1	81	16%	435	15
Cement and Mortar Mixer	3	80	50%	435	15
Concrete Pump	3	81	20%	460	15
Welders	1	74	40%	460	15
Crane	1	81	16%	460	15

13

Receptor: ***R3***

Results:

1-hour Leq: 52.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	385	15
Air Compressor	1	78	40%	385	15
Aerial Lift	1	75	20%	410	15
Fork Lift	1	75	20%	410	15
Concrete Pump	1	81	20%	435	15
Crane	1	81	16%	435	15
Tractor/Loader/Backhoe	2	79	40%	460	15
Welders	2	74	40%	460	15
Air Compressor	1	78	40%	460	15
Aerial Lift	1	75	20%	460	15
Fork Lift	1	75	20%	460	15
Crane	1	81	16%	460	15
	14				

Receptor: ***R3***

Results:

1-hour Leq: 50.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 2***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	500	15
Excavator	1	81	40%	500	15
Crane	1	81	16%	525	15
Tractor/Loader/Backhoe	1	79	40%	525	15
Air Compressor	1	78	40%	550	15
Bore/Drill Rig	1	84	20%	550	15
Excavator	1	81	40%	575	15
Crane	1	81	16%	575	15
Tractor/Loader/Backhoe	1	79	40%	575	15
Water truck	1	82	10%	575	15

10

Receptor: ***R3***

Results:

1-hour Leq: **49.8**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 2***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	500	15
Concrete Pump	1	81	20%	500	15
Tractor/Loader/Backhoe	1	79	40%	525	15
Welders	1	74	40%	525	15
Crane	1	81	16%	550	15
Cement and Mortar Mixer	3	80	50%	550	15
Concrete Pump	3	81	20%	575	15
Welders	1	74	40%	575	15
Crane	1	81	16%	575	15

13

Receptor: ***R3***

Results:

1-hour Leq: 50.2

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	500	15
Air Compressor	1	78	40%	500	15
Aerial Lift	1	75	20%	525	15
Fork Lift	1	75	20%	525	15
Tractor/Loader/Backhoe	1	79	40%	550	15
Welders	1	74	40%	550	15
Crane	1	81	16%	575	15
Concrete Pump	1	81	20%	575	15
Air Compressor	1	78	40%	575	15
Aerial Lift	1	75	20%	575	15
Fork Lift	1	75	20%	575	15
Crane	1	81	16%	575	15
Tractor/Loader/Backhoe	1	79	40%	575	15
Welders	1	74	40%	575	15
	14				

Receptor: ***R3***

Results:

1-hour Leq: 48.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	275	15
Excavator	1	81	40%	275	15
Crane	1	81	16%	300	15
Tractor/Loader/Backhoe	1	79	40%	300	15
Bore/Drill Rig	1	84	20%	325	15
Excavator	1	81	40%	325	15
Crane	1	81	16%	350	15
Tractor/Loader/Backhoe	1	79	40%	350	15
Water truck	1	82	10%	350	15
Air Compressor	1	78	40%	350	15

10

Receptor: ***R3***

Results:

1-hour Leq: 54.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	275	15
Concrete Pump	1	81	20%	275	15
Tractor/Loader/Backhoe	1	79	40%	300	15
Welders	1	74	40%	300	15
Crane	1	81	16%	325	15
Cement and Mortar Mixer	3	80	50%	325	15
Concrete Pump	3	81	20%	350	15
Welders	1	74	40%	350	15
Crane	1	81	16%	350	15

13

Receptor: ***R3***

Results:

1-hour Leq: **54.9**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	275	15
Air Compressor	1	78	40%	275	15
Aerial Lift	1	75	20%	300	15
Fork Lift	1	75	20%	300	15
Concrete Pump	1	81	20%	325	15
Tractor/Loader/Backhoe	1	79	40%	325	15
Welders	1	74	40%	350	15
Crane	1	81	16%	350	15
Air Compressor	1	78	40%	350	15
Aerial Lift	1	75	20%	350	15
Fork Lift	1	75	20%	350	15
Crane	1	81	16%	350	15
Tractor/Loader/Backhoe	1	79	40%	350	15
Welders	1	74	40%	350	15
	14				

Receptor: ***R3***

Results:

1-hour Leq: 53.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete Saw	1	90	20%	185	0
Skid Steer Loader	1	79	40%	185	0
Rubber Tired Dozer	1	79	40%	210	0
Tractor/Loader/Backhoe	1	79	40%	210	0
Excavator	1	81	40%	235	0
Air Compressor	1	78	40%	235	0
Aerial Lift	1	75	20%	260	0
Tractor/Loader/Backhoe	1	79	40%	260	0
Air Compressor	1	78	40%	285	0
Aerial Lift	1	75	20%	285	0
Concrete Saw	1	90	20%	285	0
Water truck	1	82	10%	285	0
	12				

Receptor: ***R4***

Results:

1-hour Leq: **75.2**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	735	15
Excavator	1	81	40%	735	15
Crane	1	81	16%	760	15
Tractor/Loader/Backhoe	1	79	40%	760	15
Air Compressor	1	78	40%	785	15
Bore/Drill Rig	1	84	20%	785	15
Excavator	1	81	40%	810	15
Crane	1	81	16%	810	15
Tractor/Loader/Backhoe	1	79	40%	835	15
Water truck	1	82	10%	835	15
	10				

Receptor: ***R4***

Results:

1-hour Leq: 46.6

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	735	15
Concrete Pump	1	81	20%	735	15
Tractor/Loader/Backhoe	1	79	40%	760	15
Welders	1	74	40%	760	15
Crane	1	81	16%	785	15
Cement and Mortar Mixer	3	80	50%	785	15
Concrete Pump	3	81	20%	810	15
Welders	1	74	40%	810	15
Crane	1	81	16%	835	15

13

Receptor: ***R4***

Results:

1-hour Leq: 47.1

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	735	15
Air Compressor	1	78	40%	735	15
Aerial Lift	1	75	20%	760	15
Fork Lift	1	75	20%	760	15
Concrete Pump	1	81	20%	785	15
Crane	1	81	16%	785	15
Tractor/Loader/Backhoe	2	79	40%	810	15
Welders	2	74	40%	810	15
Air Compressor	1	78	40%	835	15
Aerial Lift	1	75	20%	835	15
Fork Lift	1	75	20%	860	15
Crane	1	81	16%	860	15
	14				

Receptor: ***R4***

Results:

1-hour Leq: 45.4

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 2***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	185	0
Excavator	1	81	40%	185	0
Crane	1	81	16%	210	0
Tractor/Loader/Backhoe	1	79	40%	210	0
Air Compressor	1	78	40%	235	0
Bore/Drill Rig	1	84	20%	235	0
Excavator	1	81	40%	260	0
Crane	1	81	16%	260	0
Tractor/Loader/Backhoe	1	79	40%	285	0
Water truck	1	82	10%	285	0
	10				

Receptor: ***R4***

Results:

1-hour Leq: 72.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 2***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	185	0
Concrete Pump	1	81	20%	185	0
Tractor/Loader/Backhoe	1	79	40%	210	0
Welders	1	74	40%	210	0
Crane	1	81	16%	235	0
Cement and Mortar Mixer	3	80	50%	235	0
Concrete Pump	3	81	20%	260	0
Welders	1	74	40%	260	0
Crane	1	81	16%	285	0

13

Receptor: ***R4***

Results:

1-hour Leq: 72.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	185	0
Air Compressor	1	78	40%	185	0
Aerial Lift	1	75	20%	210	0
Fork Lift	1	75	20%	210	0
Tractor/Loader/Backhoe	1	79	40%	235	0
Welders	1	74	40%	235	0
Crane	1	81	16%	260	0
Concrete Pump	1	81	20%	260	0
Air Compressor	1	78	40%	285	0
Aerial Lift	1	75	20%	285	0
Fork Lift	1	75	20%	310	0
Crane	1	81	16%	310	0
Tractor/Loader/Backhoe	1	79	40%	335	0
Welders	1	74	40%	335	0
	14				

Receptor: ***R4***

Results:

1-hour Leq: 70.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	700	15
Excavator	1	81	40%	700	15
Crane	1	81	16%	725	15
Tractor/Loader/Backhoe	1	79	40%	725	15
Bore/Drill Rig	1	84	20%	750	15
Excavator	1	81	40%	750	15
Crane	1	81	16%	775	15
Tractor/Loader/Backhoe	1	79	40%	775	15
Water truck	1	82	10%	800	15
Air Compressor	1	78	40%	800	15

10

Receptor: ***R4***

Results:

1-hour Leq: 47.0

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	700	15
Concrete Pump	1	81	20%	700	15
Tractor/Loader/Backhoe	1	79	40%	725	15
Welders	1	74	40%	725	15
Crane	1	81	16%	750	15
Cement and Mortar Mixer	3	80	50%	750	15
Concrete Pump	3	81	20%	775	15
Welders	1	74	40%	775	15
Crane	1	81	16%	800	15

13

Receptor: ***R4***

Results:

1-hour Leq: 47.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	700	15
Air Compressor	1	78	40%	700	15
Aerial Lift	1	75	20%	725	15
Fork Lift	1	75	20%	725	15
Concrete Pump	1	81	20%	750	15
Tractor/Loader/Backhoe	1	79	40%	750	15
Welders	1	74	40%	775	15
Crane	1	81	16%	775	15
Air Compressor	1	78	40%	800	15
Aerial Lift	1	75	20%	800	15
Fork Lift	1	75	20%	825	15
Crane	1	81	16%	825	15
Tractor/Loader/Backhoe	1	79	40%	850	15
Welders	1	74	40%	850	15
	14				

Receptor: ***R4***

Results:

1-hour Leq: 45.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Demolition***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Concrete Saw	1	90	20%	385	15
Skid Steer Loader	1	79	40%	385	15
Rubber Tired Dozer	1	79	40%	410	15
Tractor/Loader/Backhoe	1	79	40%	410	15
Excavator	1	81	40%	435	15
Air Compressor	1	78	40%	435	15
Aerial Lift	1	75	20%	460	15
Tractor/Loader/Backhoe	1	79	40%	460	15
Air Compressor	1	78	40%	485	15
Aerial Lift	1	75	20%	485	15
Concrete Saw	1	90	20%	485	15
Water truck	1	82	10%	485	15
	12				

Receptor: ***R5***

Results:

1-hour Leq: 54.5

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	565	15
Excavator	1	81	40%	565	15
Crane	1	81	16%	590	15
Tractor/Loader/Backhoe	1	79	40%	590	15
Air Compressor	1	78	40%	615	15
Bore/Drill Rig	1	84	20%	615	15
Excavator	1	81	40%	635	15
Crane	1	81	16%	635	15
Tractor/Loader/Backhoe	1	79	40%	635	15
Water truck	1	82	10%	635	15

10

Receptor: ***R5***

Results:

1-hour Leq: **48.8**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	565	15
Concrete Pump	1	81	20%	565	15
Tractor/Loader/Backhoe	1	79	40%	590	15
Welders	1	74	40%	590	15
Crane	1	81	16%	615	15
Cement and Mortar Mixer	3	80	50%	615	15
Concrete Pump	3	81	20%	635	15
Welders	1	74	40%	635	15
Crane	1	81	16%	635	15

13

Receptor: ***R5***

Results:

1-hour Leq: 49.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction Phase 1***
Base Camp, Bldg. D, Parking Structure

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	565	15
Air Compressor	1	78	40%	565	15
Aerial Lift	1	75	20%	590	15
Fork Lift	1	75	20%	590	15
Concrete Pump	1	81	20%	615	15
Crane	1	81	16%	615	15
Tractor/Loader/Backhoe	2	79	40%	635	15
Welders	2	74	40%	635	15
Air Compressor	1	78	40%	635	15
Aerial Lift	1	75	20%	635	15
Fork Lift	1	75	20%	635	15
Crane	1	81	16%	635	15
	14				

Receptor: ***R5***

Results:

1-hour Leq: **47.7**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 2***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	385	15
Excavator	1	81	40%	385	15
Crane	1	81	16%	410	15
Tractor/Loader/Backhoe	1	79	40%	410	15
Air Compressor	1	78	40%	435	15
Bore/Drill Rig	1	84	20%	435	15
Excavator	1	81	40%	455	15
Crane	1	81	16%	455	15
Tractor/Loader/Backhoe	1	79	40%	455	15
Water truck	1	82	10%	455	15

10

Receptor: ***R5***

Results:

1-hour Leq: 51.9

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 2***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	385	15
Concrete Pump	1	81	20%	385	15
Tractor/Loader/Backhoe	1	79	40%	410	15
Welders	1	74	40%	410	15
Crane	1	81	16%	435	15
Cement and Mortar Mixer	3	80	50%	435	15
Concrete Pump	3	81	20%	455	15
Welders	1	74	40%	455	15
Crane	1	81	16%	455	15

13

Receptor: ***R5***

Results:

1-hour Leq: 52.3

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction***
Building A

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	385	15
Air Compressor	1	78	40%	385	15
Aerial Lift	1	75	20%	410	15
Fork Lift	1	75	20%	410	15
Tractor/Loader/Backhoe	1	79	40%	435	15
Welders	1	74	40%	435	15
Crane	1	81	16%	455	15
Concrete Pump	1	81	20%	455	15
Air Compressor	1	78	40%	455	15
Aerial Lift	1	75	20%	455	15
Fork Lift	1	75	20%	455	15
Crane	1	81	16%	455	15
Tractor/Loader/Backhoe	1	79	40%	455	15
Welders	1	74	40%	455	15

14

Receptor: ***R5***

Results:

1-hour Leq: 50.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Grading/Excavation Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Bore/Drill Rig	1	84	20%	565	15
Excavator	1	81	40%	565	15
Crane	1	81	16%	590	15
Tractor/Loader/Backhoe	1	79	40%	590	15
Bore/Drill Rig	1	84	20%	615	15
Excavator	1	81	40%	615	15
Crane	1	81	16%	635	15
Tractor/Loader/Backhoe	1	79	40%	635	15
Water truck	1	82	10%	635	15
Air Compressor	1	78	40%	635	15

10

Receptor: ***R5***

Results:

1-hour Leq: 48.8

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Mat Foundation Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	565	15
Concrete Pump	1	81	20%	565	15
Tractor/Loader/Backhoe	1	79	40%	590	15
Welders	1	74	40%	590	15
Crane	1	81	16%	615	15
Cement and Mortar Mixer	3	80	50%	615	15
Concrete Pump	3	81	20%	635	15
Welders	1	74	40%	635	15
Crane	1	81	16%	635	15

13

Receptor: ***R5***

Results:

1-hour Leq: **49.3**

Source for Ref. Noise Levels: FHWA RCNM, 2006

AES
ACOUSTICAL ENGINEERING SERVICES

Project: Sunset and Gower Project - Alternative 2

Construction Phase: ***Building Construction Phase 3***
Buildings B and E

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Cement and Mortar Mixer	1	80	50%	565	15
Air Compressor	1	78	40%	565	15
Aerial Lift	1	75	20%	590	15
Fork Lift	1	75	20%	590	15
Concrete Pump	1	81	20%	615	15
Tractor/Loader/Backhoe	1	79	40%	615	15
Welders	1	74	40%	635	15
Crane	1	81	16%	635	15
Air Compressor	1	78	40%	635	15
Aerial Lift	1	75	20%	635	15
Fork Lift	1	75	20%	635	15
Crane	1	81	16%	635	15
Tractor/Loader/Backhoe	1	79	40%	635	15
Welders	1	74	40%	635	15
	14				

Receptor: ***R5***

Results:

1-hour Leq: 47.7

Source for Ref. Noise Levels: FHWA RCNM, 2006

Project: Sunset and Gower Project - Alternative 2

AES
ACOUSTICAL ENGINEERING SERVICES

Off-Site Haul Trucks

	Maximum Number of Truck One Way Trips (delivery/haul)		Worker Trips		Estimated Noise Levels, Leq (from TNM Model)		Ambient	
Phase	Per Day	Per Hour (8-hr day)	Daily Trips	Trips during Pk Hr.	at 30 feet (Gordon St.)	at 40 feet (Sunset)	Gordon St.	Sunset Blvd.
1. Demolition	80	10	60	24	63.7	62.3	61.1	73.3
2. Grading - All Phases	314	40	60	24	69.4	68.0	61.1	73.3
3. Mat Foundation P1	828	69	60	24	71.7	70.3	61.1	73.3
4. Building P1	60	8	400	160	65.0	63.6	61.1	73.3
5. Grading P2	314	40	60	24	69.4	68.0	61.1	73.3
6. Mat Foundation P2	1028	86	60	24	72.7	71.3	61.1	73.3
7. Building P2	60	8	400	160	65.0	63.6	61.1	73.3
8. Grading P3	314	40	60	24	69.4	68.0	61.1	73.3
9. Mat Foundation P3	880	74	60	24	72.0	70.6	61.1	73.3
10. Building P3	60	8	400	160	65.0	63.6	61.1	73.3

	Number of trips per day Trucks/Workers	Estimated Noise Levels, dBA Leq		Existing Ambient, dBA Leq		Project + Ambient, dBA Leq	
		Sunset Blvd.	Gordon St.	Sunset Blvd.	Gordon St.	Sunset Blvd.	Gordon St.
Demolition	80/60	62.3	63.7	73.3	61.1	73.6	65.6
Grading - All Phases	314/60	68.0	69.4	73.3	61.1	74.4	70.0
Foundation - Phase 1	828/60	70.3	71.7	73.3	61.1	75.1	72.1
Foundation - Phase 2	1028/60	71.3	72.7	73.3	61.1	75.4	73.0
Foundation - Phase 3	880/60	70.6	72.0	73.3	61.1	75.2	72.3
Building Construction - All Phases	60/400	63.6	65.0	73.3	61.1	73.7	66.5
Maximum Exceedance						-2.9	6.9

	Maximum Number of Truck		Worker Trips	
Overlapping Construction	Per Day	Per Hour (8-hr day)	Daily Trips	Trips during Pk Hr.
P1 Building and P2 Grading	374	48	460	184
P1 Building and P2 Foundation	1088	94	460	184
P1 and P2 Building	120	16	800	320
P2 Building and P3 Grading	374	48	460	184
P2 Building and P3 Foundation	940	82	460	184
P2 and P3 Building	120	16	800	320

	Estimated Noise Levels, dBA Leq		Existing Ambient, dBA Leq		Project + Ambient, dBA Leq		Significance Threshold, dBA Leq	
Overlapping Construction	Sunset Blvd.	Gordon St.	Sunset Blvd.	Gordon St.	Sunset Blvd.	Gordon St.	Sunset Blvd.	Gordon St.
P1 Building and P2 Grading	69.4	70.8	73.3	61.1	74.8	71.2	78.3	66.1
P1 Building and P2 Foundation	72.0	73.4	73.3	61.1	75.7	73.6	78.3	66.1
P1 and P2 Building	66.7	68.0	73.3	61.1	74.2	68.8	78.3	66.1
P2 Building and P3 Grading	69.4	70.8	73.3	61.1	74.8	71.2	78.3	66.1
P2 Building and P3 Foundation	71.4	72.8	73.3	61.1	75.5	73.1	78.3	66.1
P2 and P3 Building	66.7	68.0	73.3	61.1	74.2	68.8	78.3	66.1

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - 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					Flow Control				
Name	Width	Name	No.	Coordinates (pavement)						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 **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Construction Trucks - Demo 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	10	35	0	0	0	0
	point2	2										

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - 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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui
25 March 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - 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	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Along Gordon St.	1	1	0.0	63.7	71	63.7	5	----	63.7	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	62.3	66	62.3	10	----	62.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	2	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 25 March 2019
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - Grading 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					Flow Control				
Name	Width	Name	No.	Coordinates (pavement)						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 **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Construction Trucks - Grading 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	40	35	0	0	0	0
	point2	2										

Eyestone Environmental 25 March 2019
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - Grading 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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
25 March 2019
Sean Bui
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Trucks - Grading 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
Along Gordon St.	1	1	0.0	69.4	71	69.4	5	----	69.4	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	68.0	66	68.0	10	Snd Lvl	68.0	0.0	8	-8.0

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

Eyestone Environmental 28 April 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 1 Alt 2

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 **28 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Foundation Phase 1 Alt 2**

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	69	35	0	0	0	0
	point2	2										

Eyestone Environmental 28 April 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 1 Alt 2

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

28 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 1 Alt 2
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
Along Gordon St.	1	1	0.0	71.7	71	71.7	5	Snd Lvl	71.7	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	70.3	66	70.3	10	Snd Lvl	70.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	2	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 28 April 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2 Alt2

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 **28 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Foundation Phase 2 Alt2**

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	86	35	0	0	0	0
	point2	2										

Eyestone Environmental 28 April 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2 Alt2

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

28 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 2 Alt2
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
Along Gordon St.	1	1	0.0	72.7	71	72.7	5	Snd Lvl	72.7	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	71.3	66	71.3	10	Snd Lvl	71.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Noise Reduction Avg dB	Noise Reduction Max dB
All Selected	2	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	28 April 2020
Sean Bui	TNM 2.5

INPUT: ROADWAYS	Average pavement type shall be used unless
PROJECT/CONTRACT:	Sunset Gower Project
RUN:	Foundation Phase 3 Alt 2

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 **28 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Foundation Phase 3 Alt 2**

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	74	35	0	0	0	0
	point2	2										

Eyestone Environmental 28 April 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 3 Alt 2

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

28 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Foundation Phase 3 Alt 2
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
Along Gordon St.	1	1	0.0	72.0	71	72.0	5	Snd Lvl	72.0	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	2	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 25 March 2019
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Building 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 **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Construction Building 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	160	35	0	0	8	35	0	0	0	0
	point2	2										

Eyestone Environmental **25 March 2019**
Sean Bui **TNM 2.5**

INPUT: RECEIVERS
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Construction Building 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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

25 March 2019
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Construction Building 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
Along Gordon St.	1	1	0.0	65.0	71	65.0	5	----	65.0	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	2	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 28 April 2020
Sean Bui TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 1 Alt 2

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 **28 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Overlapping 1 Alt 2**

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	184	35	0	0	48	35	0	0	0	0
	point2	2										

Eyestone Environmental 28 April 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 1 Alt 2

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

28 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 1 Alt 2
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
Along Gordon St.	1	1	0.0	70.8	71	70.8	5	----	70.8	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	8	-8.0

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

Eyestone Environmental					**28 April 2020**						
Sean Bui					**TNM 2.5**						
INPUT: ROADWAYS							**Average pavement type shall be used unless**				
PROJECT/CONTRACT:	**Sunset Gower Project**						**a State highway agency substantiates the use**				
RUN:	**Overlapping 2 Alt 2**						**of a different type with the approval of FHWA**				
Roadway		**Points**									
Name	**Width**	**Name**	**No.**	**Coordinates (pavement)**			**Flow Control**			**Segment**	
				X	**Y**	**Z**	**Control**	**Speed**	**Percent**	**Pvmt**	**On**
							Device	**Constraint**	**Vehicles**	**Type**	**Struct?**
									Affected		
	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 **28 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Overlapping 2 Alt 2**

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	184	35	0	0	94	35	0	0	0	0
	point2	2										

Eyestone Environmental 28 April 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 2 Alt 2

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

28 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 2 Alt 2
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
Along Gordon St.	1	1	0.0	73.4	71	73.4	5	Snd Lvl	73.4	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	72.0	66	72.0	10	Snd Lvl	72.0	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	2	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	28 April 2020
Sean Bui	TNM 2.5

INPUT: ROADWAYS	Average pavement type shall be used unless
PROJECT/CONTRACT:	Sunset Gower Project	a State highway agency substantiates the use
RUN:	Overlapping 3 Alt 2	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 **28 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Overlapping 3 Alt 2**

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	320	35	0	0	16	35	0	0	0	0
	point2	2										

Eyestone Environmental 28 April 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 3 Alt 2

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

28 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 3 Alt 2
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
Along Gordon St.	1	1	0.0	68.0	71	68.0	5	----	68.0	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0

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

Eyestone Environmental	28 April 2020
Sean Bui	TNM 2.5

INPUT: ROADWAYS	Average pavement type shall be used unless
PROJECT/CONTRACT:	Sunset Gower Project	a State highway agency substantiates the use
RUN:	Overlapping 4 Alt 2	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 **28 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Overlapping 4 Alt 2**

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	184	35	0	0	48	35	0	0	0	0
	point2	2										

Eyestone Environmental 28 April 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 4 Alt 2

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

28 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 4 Alt 2
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
Along Gordon St.	1	1	0.0	70.8	71	70.8	5	----	70.8	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	8	-8.0

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

Eyestone Environmental	28 April 2020
Sean Bui	TNM 2.5

INPUT: ROADWAYS	Average pavement type shall be used unless
PROJECT/CONTRACT:	Sunset Gower Project	a State highway agency substantiates the use
RUN:	Overlapping 5 Alt 2	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 **28 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Overlapping 5 Alt 2**

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	184	35	0	0	82	35	0	0	0	0
	point2	2										

Eyestone Environmental 28 April 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 5 Alt 2

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

28 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 5 Alt 2
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
Along Gordon St.	1	1	0.0	72.8	71	72.8	5	Snd Lvl	72.8	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	71.4	66	71.4	10	Snd Lvl	71.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	2	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	28 April 2020
Sean Bui	TNM 2.5

INPUT: ROADWAYS	Average pavement type shall be used unless
PROJECT/CONTRACT:	Sunset Gower Project	a State highway agency substantiates the use
RUN:	Overlapping 6 Alt 2	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 **28 April 2020**
Sean Bui **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **Sunset Gower Project**
RUN: **Overlapping 6 Alt 2**

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	320	35	0	0	16	35	0	0	0	0
	point2	2										

Eyestone Environmental 28 April 2020
Sean Bui TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 6 Alt 2

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	
Along Gordon St.	1	1	250.0	30.0	0.00	4.92	0.00	71	5.0	0.0	Y
Along Sunset Blvd.	8	1	250.0	40.0	0.00	4.92	0.00	66	10.0	8.0	Y

Eyestone Environmental
Sean Bui

28 April 2020
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: Sunset Gower Project
RUN: Overlapping 6 Alt 2
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
Along Gordon St.	1	1	0.0	68.0	71	68.0	5	----	68.0	0.0	0	0.0
Along Sunset Blvd.	8	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0

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

Operation Noise Calculations

Project Composite Noise Calculations (CNEL)

Project: Sunset Gower - ALTERNATIVE 2

Receptor	Ambient	Traffic[a]	Mechanical	Parking	Loading	Outdoor		Project Composite	Ambient + Project	Increase
R1	62.8	50.7	53.6		30.3	50.8		56.7	63.8	1.0
R2	66.6	60.2	49.1		30.6	51.0		61.0	67.7	1.1
R3	67.7	54.0	39.2		34.1	58.4		59.8	68.3	0.6
R4	77.0	60.7	41.3		26.4	65.2		66.5	77.4	0.4
R5	69.3	62.5	50.7		31.5	66.0		67.7	71.6	2.3

[a] - traffic noise levels at each receptor is based on the traffic noise analysis for the roadway segment in front of the receptor.

		Traffic Noise Levels, CNEL								
Receptor	Roadway Segment	Existing	Existing + Project	Project Only	distance to roadway, ft	Existing	Existing + Project	barrier	distance to Center Line	adj. for distance
R1	Gordon St.	60.9	61.3	50.7	10	60.9	61.3	0	30	0.0
R2	Fountain Ave.	70.4	70.8	60.2	10	70.4	70.8	0	30	0.0
R3	Gower St.	70.3	70.4	54.0	10	70.3	70.4	0	35	0.0
R4	Sunset Blvd.	74.0	74.2	60.7	10	74.0	74.2	0	40	0.0
R5	Gordon St.	64.6	66.7	62.5	10	64.6	66.7	0	30	0.0

AES
Acoustical Engineering Services

Outdoor Mechanical Equipment Noise Calculations

Project: Sunset Gower - ALTERNATIVE 2

	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	46.9	53.6	46.9	46.9	46.9
R2	42.4	49.1	42.4	42.4	42.4
R3	32.5	39.2	32.5	32.5	32.5
R4	34.6	41.3	34.6	34.6	34.6
R5	44.0	50.7	44.0	44.0	44.0

Receptor	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	ambient (Leq)	Ambient + Project (Leq)
R1	62.8	63.3	0.5	56.9	57.3
R2	66.6	66.7	0.1	59.8	59.9
R3	67.7	67.7	0.0	61.8	61.8
R4	77.0	77.0	0.0	72.0	72.0
R5	69.3	69.4	0.1	63.5	63.5

Loading and Trash Compactor Noise Calculations

Project: Sunset Gower - ALTERNATIVE 2

	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	33.1	30.3	27.1	33.1	0.0
R2	33.4	30.6	27.4	33.4	0.0
R3	36.9	34.1	30.9	36.9	0.0
R4	29.2	26.4	23.2	29.2	0.0
R5	34.3	31.5	28.3	34.3	0.0

Receptor	Project CNEL	Ambient CNEL	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	daytime ambient (Leq)	Ambient + Project (Leq)
R1	30.3	62.8	62.8	0.0	33.1	61.1	61.1
R2	30.6	66.6	66.6	0.0	33.4	66.2	66.2
R3	34.1	67.7	67.7	0.0	36.9	66.2	66.2
R4	26.4	77.0	77.0	0.0	29.2	73.3	73.3
R5	31.5	69.3	69.3	0.0	34.3	67.6	67.6

Outdoor Noise Calculations

Project: Sunset Gower - ALTERNATIVE 2

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	11	**3**	**2**
R1	48.2	37.3	48.5	50.8	48.1	48.5	42.0
R2	48.4	36.7	48.7	51.0	48.3	48.7	42.2
R3	55.3	48.4	56.1	58.4	55.7	56.1	49.6
R4	62.7	49.9	62.9	65.2	62.5	62.9	56.4
R5	63.7	41.8	63.7	66.0	63.3	63.7	57.2

TOTAL COMBINED

Receptor	Project (CNEL)	Ambient (CNEL)	Ambient + Project (CNEL)	Increase (CNEL)	Project Noise, (Leq)	Ambient (Leq)	Ambient + Project (Leq)
R1	50.8	62.8	63.1	0.3	48.5	56.9	57.5
R2	51.0	66.6	66.7	0.1	48.7	59.8	60.1
R3	58.4	67.7	68.2	0.5	56.1	61.8	62.8
R4	65.2	77.0	77.3	0.3	62.9	72.0	72.5
R5	66.0	69.3	71.0	1.7	63.7	63.5	66.6

Sunset Gower Alternative 2
Source Levels in dB(A) - Alt 2 - Mechanical (2020)

Name	Source type	Lw dB(A)	
Building B - Mechanical L1	Point	90.0	
Building B - Mechanical L2	Point	90.0	
Building B - Mechanical L3	Point	90.0	
Building B - Mechanical L4	Point	90.0	
Building B - Mechanical L5	Point	90.0	
Building B - Mechanical L6	Point	90.0	
Building C - Mechanical L1	Point	90.0	
Building C - Mechanical L2	Point	90.0	
Building C - Mechanical L3	Point	90.0	
Building C - Mechanical L4	Point	90.0	
Building C - Mechanical L5	Point	90.0	
Building C - Mechanical L6	Point	90.0	
Building D - Mechanical 1	Point	90.0	
Building D - Mechanical 2	Point	90.0	
Building E - Mechanical 1	Point	90.0	
Building E - Mechanical 2	Point	90.0	
Cooling Tower 1	Point	100.0	
Cooling Tower 2	Point	100.0	
Cooling Tower 3	Point	100.0	

Sunset Gower Alternative 2
Assessed contribution level - Alt 2 - Mechanical (2020)

Source	Source type	Leq dB(A)
Receiver R1	Ld 46.9	dB(A)
Cooling Tower 1	Point	32.7
Cooling Tower 2	Point	32.8
Cooling Tower 3	Point	31.7
Building B - Mechanical L1	Point	22.3
Building C - Mechanical L1	Point	37.6
Building B - Mechanical L2	Point	20.7
Building C - Mechanical L2	Point	36.4
Building B - Mechanical L3	Point	20.9
Building C - Mechanical L3	Point	37.2
Building B - Mechanical L4	Point	22.3
Building C - Mechanical L4	Point	37.7
Building B - Mechanical L5	Point	25.8
Building C - Mechanical L5	Point	38.4
Building B - Mechanical L6	Point	31.8
Building C - Mechanical L6	Point	38.8
Building D - Mechanical 1	Point	33.7
Building E - Mechanical 1	Point	26.5
Building E - Mechanical 2	Point	29.7
Building D - Mechanical 2	Point	32.5
Receiver R2	Ld 42.4	dB(A)
Cooling Tower 1	Point	27.1
Cooling Tower 2	Point	27.1
Cooling Tower 3	Point	27.2
Building B - Mechanical L1	Point	24.6
Building C - Mechanical L1	Point	27.1
Building B - Mechanical L2	Point	23.1
Building C - Mechanical L2	Point	26.7
Building B - Mechanical L3	Point	25.5
Building C - Mechanical L3	Point	30.4
Building B - Mechanical L4	Point	26.3
Building C - Mechanical L4	Point	31.4
Building B - Mechanical L5	Point	28.2
Building C - Mechanical L5	Point	32.5
Building B - Mechanical L6	Point	32.6
Building C - Mechanical L6	Point	33.6
Building D - Mechanical 1	Point	27.2
Building E - Mechanical 1	Point	28.2
Building E - Mechanical 2	Point	32.3
Building D - Mechanical 2	Point	31.8
Receiver R3	Ld 32.5	dB(A)
Cooling Tower 1	Point	22.6
Cooling Tower 2	Point	22.6
Cooling Tower 3	Point	22.8

Sunset Gower Alternative 2
Assessed contribution level - Alt 2 - Mechanical (2020)

Source	Source type	Leq dB(A)	
Building B - Mechanical L1	Point	21.8	
Building C - Mechanical L1	Point	17.6	
Building B - Mechanical L2	Point	20.3	
Building C - Mechanical L2	Point	17.1	
Building B - Mechanical L3	Point	19.9	
Building C - Mechanical L3	Point	17.1	
Building B - Mechanical L4	Point	15.9	
Building C - Mechanical L4	Point	17.2	
Building B - Mechanical L5	Point	16.3	
Building C - Mechanical L5	Point	17.5	
Building B - Mechanical L6	Point	18.7	
Building C - Mechanical L6	Point	19.2	
Building D - Mechanical 1	Point	14.8	
Building E - Mechanical 1	Point	18.5	
Building E - Mechanical 2	Point	23.4	
Building D - Mechanical 2	Point	16.8	
Receiver R4	Ld 34.6	dB(A)	
Cooling Tower 1	Point	28.5	
Cooling Tower 2	Point	27.9	
Cooling Tower 3	Point	27.6	
Building B - Mechanical L1	Point	19.2	
Building C - Mechanical L1	Point	17.8	
Building B - Mechanical L2	Point	19.8	
Building C - Mechanical L2	Point	16.1	
Building B - Mechanical L3	Point	20.6	
Building C - Mechanical L3	Point	15.2	
Building B - Mechanical L4	Point	22.6	
Building C - Mechanical L4	Point	15.2	
Building B - Mechanical L5	Point	16.2	
Building C - Mechanical L5	Point	14.9	
Building B - Mechanical L6	Point	18.8	
Building C - Mechanical L6	Point	17.4	
Building D - Mechanical 1	Point	12.5	
Building E - Mechanical 1	Point	17.3	
Building E - Mechanical 2	Point	15.1	
Building D - Mechanical 2	Point	11.4	
Receiver R5	Ld 44.0	dB(A)	
Cooling Tower 1	Point	38.1	
Cooling Tower 2	Point	38.2	
Cooling Tower 3	Point	38.1	
Building B - Mechanical L1	Point	22.6	
Building C - Mechanical L1	Point	19.3	
Building B - Mechanical L2	Point	22.5	
Building C - Mechanical L2	Point	17.7	

Sunset Gower Alternative 2
Assessed contribution level - Alt 2 - Mechanical (2020)

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Source	Source type	Leq dB(A)	
Building B - Mechanical L3	Point	26.4	
Building C - Mechanical L3	Point	18.1	
Building B - Mechanical L4	Point	27.2	
Building C - Mechanical L4	Point	19.4	
Building B - Mechanical L5	Point	28.1	
Building C - Mechanical L5	Point	21.6	
Building B - Mechanical L6	Point	28.8	
Building C - Mechanical L6	Point	23.4	
Building D - Mechanical 1	Point	28.6	
Building E - Mechanical 1	Point	27.9	
Building E - Mechanical 2	Point	23.5	
Building D - Mechanical 2	Point	25.0	

Sunset Gower Alternative 2
Source Levels in dB(A) - Alt 2 - Loading & Trash Compactor (2020)

Name	Source type	Lw dB(A)	
Loading (two trucks)	Point	104.9	
Trash Compactor	Point	91.5	

Sunset Gower Alternative 2
Assessed contribution level - Alt 2 - Loading & Trash

Source	Source type	Leq dB(A)	
Receiver R1	Leq 33.1	dB(A)	
Loading (two trucks)	Point	32.7	
Trash Compactor	Point	22.1	
Receiver R2	Leq 33.4	dB(A)	
Loading (two trucks)	Point	33.1	
Trash Compactor	Point	22.6	
Receiver R3	Leq 36.9	dB(A)	
Loading (two trucks)	Point	36.6	
Trash Compactor	Point	24.9	
Receiver R4	Leq 29.2	dB(A)	
Loading (two trucks)	Point	28.7	
Trash Compactor	Point	19.3	
Receiver R5	Leq 34.3	dB(A)	
Loading (two trucks)	Point	34.0	
Trash Compactor	Point	22.9	

Sunset Gower Alternative 2
Source Levels in dB(A) - Alt 2 - People (2020)

Name	Source type	Lw dB(A)	
Building A Level 2 People	Area	85.8	
Building A Level 3 People S	Area	87.1	
Building A Level 4 People NE	Area	85.8	
Building A Level 4 People NW	Area	85.0	
Building A Level 5 People S	Area	87.1	
Building A Level 8 People N	Area	95.0	
Building A Level 8 People S	Area	95.0	
Building A Level 9 People E	Area	83.6	
Building A Level 9 People NW	Area	85.0	
Building A Level 10 People E	Area	85.8	
Building A Level 11 People E	Area	83.6	
Building A Level 11 People NW	Area	85.0	
Building A Level 12 People NE	Area	85.8	
Building A Level 13 People deck	Area	96.2	
Building A Level 13 People E	Area	83.6	
Building A Level 14 People NE	Area	85.8	
Building A Level 15 People	Area	94.7	
Building Level 6 People NE	Area	85.8	
Building Level 6 People NW	Area	85.0	
Builidng A Level 7 People S	Area	87.1	
People - Building B Level 3 E	Area	84.8	
People - Building B Level 3 N	Area	84.1	
People - Building B Level 3 S	Area	84.1	
People - Building B Level 3 W	Area	89.0	
People - Building B Level 6	Area	98.2	
People - Building B&C Level 2	Area	87.8	
People - Building B&C Level 4	Area	93.4	
People - Building B&C Level 4	Area	84.4	
People - Building B&C Level 5	Area	94.2	
People - Building B&C Level 5	Area	94.2	
People - Building C Level 6	Area	90.8	
People - Level 1 Central Plaza	Area	100.4	
People - Level 1 Paseo	Area	95.8	
People - Level 1 Plaza	Area	91.3	
People - Level 1 Plaza (Bldg B&C)	Area	91.1	

Sunset Gower Alternative 2
Assessed contribution level - Alt 2 - People (2020)

Source	Source type	Leq dB(A)
Receiver R1 Leq 37.3 dB(A)		
People - Level 1 Plaza	Area	11.0
People - Level 1 Paseo	Area	19.8
People - Level 1 Plaza (Bldg B&C)	Area	20.2
People - Level 1 Central Plaza	Area	25.6
People - Building B&C Level 5	Area	27.2
People - Building B&C Level 5	Area	27.2
Building A Level 5 People S	Area	16.3
People - Building C Level 6	Area	24.3
People - Building B Level 6	Area	30.8
Building Level 6 People NE	Area	7.0
Building Level 6 People NW	Area	-0.3
Builidng A Level 7 People S	Area	23.2
Building A Level 8 People S	Area	28.0
Building A Level 8 People N	Area	25.0
Building A Level 9 People NW	Area	-0.3
Building A Level 9 People E	Area	19.3
Building A Level 10 People E	Area	7.5
Building A Level 11 People NW	Area	-0.3
Building A Level 11 People E	Area	19.4
Building A Level 12 People NE	Area	7.2
Building A Level 13 People deck	Area	11.2
Building A Level 13 People E	Area	21.1
Building A Level 14 People NE	Area	7.1
Building A Level 15 People	Area	25.2
People - Building B&C Level 2	Area	14.0
Building A Level 2 People	Area	3.2
People - Building B Level 3 W	Area	20.5
People - Building B Level 3 S	Area	16.8
People - Building B Level 3 E	Area	10.9
People - Building B Level 3 N	Area	3.8
Building A Level 3 People S	Area	14.9
People - Building B&C Level 4	Area	19.3
People - Building B&C Level 4	Area	16.8
Building A Level 4 People NE	Area	5.6
Building A Level 4 People NW	Area	-0.4
Receiver R2 Leq 36.7 dB(A)		
People - Level 1 Plaza	Area	10.4
People - Level 1 Paseo	Area	21.1
People - Level 1 Plaza (Bldg B&C)	Area	19.9
People - Level 1 Central Plaza	Area	25.8
People - Building B&C Level 5	Area	21.9
People - Building B&C Level 5	Area	21.9
Building A Level 5 People S	Area	20.2

Sunset Gower Alternative 2
Assessed contribution level - Alt 2 - People (2020)

Source	Source type	Leq dB(A)	
People - Building C Level 6	Area	17.0	
People - Building B Level 6	Area	31.0	
Building Level 6 People NE	Area	2.9	
Building Level 6 People NW	Area	0.7	
Builidng A Level 7 People S	Area	25.3	
Building A Level 8 People S	Area	29.4	
Building A Level 8 People N	Area	23.0	
Building A Level 9 People NW	Area	0.6	
Building A Level 9 People E	Area	17.8	
Building A Level 10 People E	Area	3.3	
Building A Level 11 People NW	Area	0.6	
Building A Level 11 People E	Area	18.0	
Building A Level 12 People NE	Area	3.2	
Building A Level 13 People deck	Area	12.7	
Building A Level 13 People E	Area	19.3	
Building A Level 14 People NE	Area	3.0	
Building A Level 15 People	Area	22.7	
People - Building B&C Level 2	Area	13.1	
Building A Level 2 People	Area	3.3	
People - Building B Level 3 W	Area	16.1	
People - Building B Level 3 S	Area	22.0	
People - Building B Level 3 E	Area	13.8	
People - Building B Level 3 N	Area	5.5	
Building A Level 3 People S	Area	16.1	
People - Building B&C Level 4	Area	17.0	
People - Building B&C Level 4	Area	23.3	
Building A Level 4 People NE	Area	2.5	
Building A Level 4 People NW	Area	0.7	
Receiver R3 Leq 48.4 dB(A)			
People - Level 1 Plaza	Area	13.5	
People - Level 1 Paseo	Area	30.7	
People - Level 1 Plaza (Bldg B&C)	Area	35.6	
People - Level 1 Central Plaza	Area	33.2	
People - Building B&C Level 5	Area	39.9	
People - Building B&C Level 5	Area	39.9	
Building A Level 5 People S	Area	28.1	
People - Building C Level 6	Area	38.2	
People - Building B Level 6	Area	41.5	
Building Level 6 People NE	Area	4.3	
Building Level 6 People NW	Area	18.5	
Builidng A Level 7 People S	Area	31.3	
Building A Level 8 People S	Area	36.4	
Building A Level 8 People N	Area	30.0	
Building A Level 9 People NW	Area	18.9	

Sunset Gower Alternative 2
Assessed contribution level - Alt 2 - People (2020)

Source	Source type	Leq dB(A)	
Building A Level 9 People E	Area	0.0	
Building A Level 10 People E	Area	4.2	
Building A Level 11 People NW	Area	18.0	
Building A Level 11 People E	Area	1.4	
Building A Level 12 People NE	Area	4.5	
Building A Level 13 People deck	Area	31.0	
Building A Level 13 People E	Area	0.7	
Building A Level 14 People NE	Area	4.8	
Building A Level 15 People	Area	22.7	
People - Building B&C Level 2	Area	34.5	
Building A Level 2 People	Area	4.5	
People - Building B Level 3 W	Area	34.9	
People - Building B Level 3 S	Area	9.5	
People - Building B Level 3 E	Area	12.1	
People - Building B Level 3 N	Area	11.8	
Building A Level 3 People S	Area	26.4	
People - Building B&C Level 4	Area	37.9	
People - Building B&C Level 4	Area	10.0	
Building A Level 4 People NE	Area	4.3	
Building A Level 4 People NW	Area	18.4	
Receiver R4 Leq 49.9 dB(A)			
People - Level 1 Plaza	Area	47.7	
People - Level 1 Paseo	Area	40.3	
People - Level 1 Plaza (Bldg B&C)	Area	14.4	
People - Level 1 Central Plaza	Area	30.8	
People - Building B&C Level 5	Area	13.5	
People - Building B&C Level 5	Area	13.5	
Building A Level 5 People S	Area	11.4	
People - Building C Level 6	Area	10.7	
People - Building B Level 6	Area	23.3	
Building Level 6 People NE	Area	34.8	
Building Level 6 People NW	Area	20.2	
Builidng A Level 7 People S	Area	11.3	
Building A Level 8 People S	Area	25.6	
Building A Level 8 People N	Area	38.0	
Building A Level 9 People NW	Area	19.3	
Building A Level 9 People E	Area	21.6	
Building A Level 10 People E	Area	29.5	
Building A Level 11 People NW	Area	18.5	
Building A Level 11 People E	Area	23.2	
Building A Level 12 People NE	Area	27.4	
Building A Level 13 People deck	Area	29.5	
Building A Level 13 People E	Area	21.8	
Building A Level 14 People NE	Area	25.9	

Sunset Gower Alternative 2
Assessed contribution level - Alt 2 - People (2020)

Source	Source type	Leq dB(A)	
Building A Level 15 People	Area	31.3	
People - Building B&C Level 2	Area	6.4	
Building A Level 2 People	Area	38.5	
People - Building B Level 3 W	Area	8.8	
People - Building B Level 3 S	Area	-0.1	
People - Building B Level 3 E	Area	9.3	
People - Building B Level 3 N	Area	9.4	
Building A Level 3 People S	Area	11.5	
People - Building B&C Level 4	Area	12.7	
People - Building B&C Level 4	Area	0.4	
Building A Level 4 People NE	Area	37.1	
Building A Level 4 People NW	Area	20.5	
Receiver R5 Leq 41.8 dB(A)			
People - Level 1 Plaza	Area	17.4	
People - Level 1 Paseo	Area	21.4	
People - Level 1 Plaza (Bldg B&C)	Area	14.6	
People - Level 1 Central Plaza	Area	33.4	
People - Building B&C Level 5	Area	15.4	
People - Building B&C Level 5	Area	15.4	
Building A Level 5 People S	Area	21.6	
People - Building C Level 6	Area	13.9	
People - Building B Level 6	Area	32.8	
Building Level 6 People NE	Area	18.2	
Building Level 6 People NW	Area	7.9	
Builidng A Level 7 People S	Area	20.6	
Building A Level 8 People S	Area	33.2	
Building A Level 8 People N	Area	35.9	
Building A Level 9 People NW	Area	7.4	
Building A Level 9 People E	Area	27.6	
Building A Level 10 People E	Area	23.1	
Building A Level 11 People NW	Area	8.0	
Building A Level 11 People E	Area	26.3	
Building A Level 12 People NE	Area	21.3	
Building A Level 13 People deck	Area	28.6	
Building A Level 13 People E	Area	25.7	
Building A Level 14 People NE	Area	20.2	
Building A Level 15 People	Area	31.7	
People - Building B&C Level 2	Area	10.0	
Building A Level 2 People	Area	12.1	
People - Building B Level 3 W	Area	10.5	
People - Building B Level 3 S	Area	0.8	
People - Building B Level 3 E	Area	19.9	
People - Building B Level 3 N	Area	16.8	
Building A Level 3 People S	Area	20.7	

Sunset Gower Alternative 2
Assessed contribution level - Alt 2 - People (2020)

9

Source	Source type	Leq dB(A)	
People - Building B&C Level 4	Area	14.1	
People - Building B&C Level 4	Area	1.2	
Building A Level 4 People NE	Area	13.5	
Building A Level 4 People NW	Area	7.7	

Sunset Gower Alternative 2
Source Levels in dB(A) - Alt 2 - Speakers (2020)

Name	Source type	Lw dB(A)	
Level 8 Speaker 1	Point	113.6	
Level 8 Speaker 2	Point	113.6	
Level 8 Speaker 3	Point	113.6	
Level 8 Speaker 4	Point	113.6	
Level 8 Speaker 5	Point	113.6	
Level 8 Speaker 6	Point	113.6	
Level 8 Speaker 7	Point	113.6	
Level 8 Speaker 8	Point	113.6	
Level 8 Speaker 9	Point	113.6	
Level 8 Speaker 10	Point	113.6	
Level 13 Speaker 1	Point	113.6	
Level 13 Speaker 3	Point	113.6	
Level 13 Speaker 4	Point	113.6	
Level 13 Speaker 2	Point	113.6	
Level 15 Speaker 1	Point	118.6	
Level 15 Speaker 2	Point	118.6	
Level 15 Speaker 3	Point	118.6	
Level 15 Speaker 4	Point	118.6	
Speakers Level 1	Point	113.6	
Speakers Level 1	Point	113.6	
Speakers Level 1	Point	113.6	
Speakers Level 1	Point	113.6	
Speakers Level 1	Point	113.6	
Speakers Level 1 Central Plaza	Point	118.6	
Speakers Level 1 Central Plaza	Point	118.6	
Speakers Level 1 Central Plaza	Point	118.6	
Speakers Level 1 Central Plaza	Point	118.6	
Speakers Level 1 Central Plaza	Point	118.6	
Speakers Level 1 Central Plaza	Point	118.6	

Sunset Gower Alternative 2
Assessed contribution level - Alt 2 - Speakers (2020)

Source	Source type	Ld dB(A)
Receiver R1 Leq 48.2 dB(A)		
Speakers Level 1	Point	8.2
Speakers Level 1	Point	7.8
Speakers Level 1	Point	7.7
Speakers Level 1 Central Plaza	Point	31.9
Speakers Level 1 Central Plaza	Point	17.8
Speakers Level 1 Central Plaza	Point	37.3
Speakers Level 1 Central Plaza	Point	24.1
Speakers Level 1 Central Plaza	Point	18.7
Speakers Level 1 Central Plaza	Point	28.2
Speakers Level 1	Point	34.8
Speakers Level 1	Point	16.8
Level 8 Speaker 1	Point	15.6
Level 8 Speaker 2	Point	7.0
Level 8 Speaker 3	Point	35.8
Level 8 Speaker 4	Point	36.6
Level 8 Speaker 5	Point	7.5
Level 8 Speaker 6	Point	9.6
Level 8 Speaker 7	Point	10.2
Level 8 Speaker 8	Point	43.1
Level 8 Speaker 9	Point	37.7
Level 8 Speaker 10	Point	38.5
Level 13 Speaker 4	Point	6.1
Level 13 Speaker 3	Point	7.5
Level 13 Speaker 2	Point	7.4
Level 13 Speaker 1	Point	8.1
Level 15 Speaker 1	Point	41.0
Level 15 Speaker 2	Point	13.5
Level 15 Speaker 3	Point	12.0
Level 15 Speaker 4	Point	13.4
Receiver R2 Leq 48.4 dB(A)		
Speakers Level 1	Point	8.9
Speakers Level 1	Point	8.7
Speakers Level 1	Point	8.7
Speakers Level 1 Central Plaza	Point	35.6
Speakers Level 1 Central Plaza	Point	18.7
Speakers Level 1 Central Plaza	Point	34.4
Speakers Level 1 Central Plaza	Point	20.8
Speakers Level 1 Central Plaza	Point	24.9
Speakers Level 1 Central Plaza	Point	31.2
Speakers Level 1	Point	37.2
Speakers Level 1	Point	34.2
Level 8 Speaker 1	Point	16.6
Level 8 Speaker 2	Point	6.8

Source	Source type	Ld dB(A)	
Level 8 Speaker 3	Point	31.3	
Level 8 Speaker 4	Point	31.0	
Level 8 Speaker 5	Point	9.3	
Level 8 Speaker 6	Point	13.2	
Level 8 Speaker 7	Point	13.8	
Level 8 Speaker 8	Point	46.1	
Level 8 Speaker 9	Point	33.6	
Level 8 Speaker 10	Point	34.5	
Level 13 Speaker 4	Point	6.2	
Level 13 Speaker 3	Point	9.6	
Level 13 Speaker 2	Point	9.4	
Level 13 Speaker 1	Point	9.9	
Level 15 Speaker 1	Point	36.6	
Level 15 Speaker 2	Point	16.1	
Level 15 Speaker 3	Point	12.0	
Level 15 Speaker 4	Point	12.5	
Receiver R3 Leq 55.3 dB(A)			
Speakers Level 1	Point	11.4	
Speakers Level 1	Point	11.8	
Speakers Level 1	Point	15.6	
Speakers Level 1 Central Plaza	Point	35.9	
Speakers Level 1 Central Plaza	Point	41.0	
Speakers Level 1 Central Plaza	Point	31.6	
Speakers Level 1 Central Plaza	Point	35.6	
Speakers Level 1 Central Plaza	Point	39.7	
Speakers Level 1 Central Plaza	Point	28.5	
Speakers Level 1	Point	35.8	
Speakers Level 1	Point	47.9	
Level 8 Speaker 1	Point	14.6	
Level 8 Speaker 2	Point	9.9	
Level 8 Speaker 3	Point	11.1	
Level 8 Speaker 4	Point	12.6	
Level 8 Speaker 5	Point	39.1	
Level 8 Speaker 6	Point	40.1	
Level 8 Speaker 7	Point	41.0	
Level 8 Speaker 8	Point	52.5	
Level 8 Speaker 9	Point	11.9	
Level 8 Speaker 10	Point	15.9	
Level 13 Speaker 4	Point	10.7	
Level 13 Speaker 3	Point	30.1	
Level 13 Speaker 2	Point	29.7	
Level 13 Speaker 1	Point	34.9	
Level 15 Speaker 1	Point	16.8	
Level 15 Speaker 2	Point	44.0	

Source	Source type	Ld dB(A)
Level 15 Speaker 3	Point	16.1
Level 15 Speaker 4	Point	15.4
Receiver R4 Leq 62.7 dB(A)		
Speakers Level 1	Point	58.6
Speakers Level 1	Point	57.2
Speakers Level 1	Point	55.9
Speakers Level 1 Central Plaza	Point	30.0
Speakers Level 1 Central Plaza	Point	38.9
Speakers Level 1 Central Plaza	Point	30.4
Speakers Level 1 Central Plaza	Point	40.8
Speakers Level 1 Central Plaza	Point	34.8
Speakers Level 1 Central Plaza	Point	32.5
Speakers Level 1	Point	33.8
Speakers Level 1	Point	31.4
Level 8 Speaker 1	Point	44.6
Level 8 Speaker 2	Point	47.4
Level 8 Speaker 3	Point	46.1
Level 8 Speaker 4	Point	41.3
Level 8 Speaker 5	Point	17.6
Level 8 Speaker 6	Point	15.8
Level 8 Speaker 7	Point	15.7
Level 8 Speaker 8	Point	14.6
Level 8 Speaker 9	Point	38.1
Level 8 Speaker 10	Point	35.0
Level 13 Speaker 4	Point	33.8
Level 13 Speaker 3	Point	15.5
Level 13 Speaker 2	Point	16.2
Level 13 Speaker 1	Point	16.4
Level 15 Speaker 1	Point	41.2
Level 15 Speaker 2	Point	19.5
Level 15 Speaker 3	Point	36.2
Level 15 Speaker 4	Point	37.4
Receiver R5 Leq 63.7 dB(A)		
Speakers Level 1	Point	29.0
Speakers Level 1	Point	20.9
Speakers Level 1	Point	18.2
Speakers Level 1 Central Plaza	Point	36.7
Speakers Level 1 Central Plaza	Point	36.5
Speakers Level 1 Central Plaza	Point	39.5
Speakers Level 1 Central Plaza	Point	30.7
Speakers Level 1 Central Plaza	Point	36.1
Speakers Level 1 Central Plaza	Point	40.0
Speakers Level 1	Point	29.2
Speakers Level 1	Point	26.3

Sunset Gower Alternative 2
Assessed contribution level - Alt 2 - Speakers (2020)

Source	Source type	Ld dB(A)	
Level 8 Speaker 1	Point	43.4	
Level 8 Speaker 2	Point	34.5	
Level 8 Speaker 3	Point	56.8	
Level 8 Speaker 4	Point	56.8	
Level 8 Speaker 5	Point	12.8	
Level 8 Speaker 6	Point	12.6	
Level 8 Speaker 7	Point	11.7	
Level 8 Speaker 8	Point	19.4	
Level 8 Speaker 9	Point	57.1	
Level 8 Speaker 10	Point	55.6	
Level 13 Speaker 4	Point	16.8	
Level 13 Speaker 3	Point	11.5	
Level 13 Speaker 2	Point	11.6	
Level 13 Speaker 1	Point	11.8	
Level 15 Speaker 1	Point	56.6	
Level 15 Speaker 2	Point	17.2	
Level 15 Speaker 3	Point	25.3	
Level 15 Speaker 4	Point	33.5	

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Off-Site Traffic Noise Calculations

Project: Sunset Gower Project - Alternative 2

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

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
Vine Street										
- Between Hollywood Blvd. and Sunset Blvd.	70	10	45	35	2,312	23,120	10%	0	0	72.0
- Between Sunset Blvd. and Fountain Ave.	70	10	45	35	2,569	25,690	10%	0	0	72.5
- Between Fountain Ave. and Santa Monica Blvd.	70	10	45	35	2,449	24,490	10%	0	0	72.2
Gower Street										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	1,319	13,190	10%	0	0	70.7
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	1,221	12,210	10%	0	0	70.3
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	1,207	12,070	10%	0	0	70.3
Bronson Avenue										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	843	8,430	10%	0	0	68.7
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	778	7,780	10%	0	0	68.4
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	743	7,430	10%	0	0	68.2
Beachwood Drive										
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	838	10%	0	0	59.5
Gordon Street										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	35	269	2,690	10%	0	0	64.6
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,167	10%	0	0	60.9
Tamarind Avenue										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	25	--	2,046	10%	0	0	63.4
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,280	10%	0	0	61.3
Hollywood Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	1,839	18,390	10%	0	0	71.5
- Between Gower St. and Bronson Ave.	60	10	40	35	1,797	17,970	10%	0	0	71.4
Sunset Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	3,058	30,580	10%	0	0	73.7
- Between Gower St. and Gordon St.	60	10	40	35	3,237	32,370	10%	0	0	74.0
- Between Gordon St. and Bronson Ave.	60	10	40	35	3,247	32,470	10%	0	0	74.0
De Longpre Avenue										

EXISTING CONDITIONS

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
- Between Vine St, and Gower St.	40	10	30	25	--	2,206	10%	0	0	63.7
Afton Place										
- Between Vine St, and Gower St.	40	10	30	25	--	777	10%	0	0	59.2
Fountain Avenue										
- Between Vine St, and Gower St.	40	10	30	35	1,030	10,300	10%	0	0	70.4
- Between Gower St. and Gordon St.	40	10	30	35	1,028	10,280	10%	0	0	70.4
- Between Gordon St. and Bronson Ave.	40	10	30	35	884	8,840	10%	0	0	69.7
Santa Monica Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	2,481	24,810	10%	0	0	72.8
- Between Gower St. and Bronson Ave.	60	10	40	35	2,618	26,180	10%	0	0	73.0

* Estimated based on Google Earth map.

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

Date Printed: 3/22/2020

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Off-Site Traffic Noise Calculations

Project: Sunset Gower Project - Alternative 2

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

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
Vine Street										
- Between Hollywood Blvd. and Sunset Blvd.	70	10	45	35	2,342	23,420	10%	0	0	72.1
- Between Sunset Blvd. and Fountain Ave.	70	10	45	35	2,582	25,820	10%	0	0	72.5
- Between Fountain Ave. and Santa Monica Blvd.	70	10	45	35	2,474	24,740	10%	0	0	72.3
Gower Street										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	1,342	13,420	10%	0	0	70.7
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	1,221	12,210	10%	0	0	70.3
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	1,243	12,430	10%	0	0	70.4
Bronson Avenue										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	876	8,760	10%	0	0	68.9
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	778	7,780	10%	0	0	68.4
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	774	7,740	10%	0	0	68.3
Beachwood Drive										
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	838	10%	0	0	59.5
Gordon Street										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	35	442	4,420	10%	0	0	66.7
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,270	10%	0	0	61.3
Tamarind Avenue										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	25	--	2,046	10%	0	0	63.4
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,280	10%	0	0	61.3
Hollywood Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	1,839	18,390	10%	0	0	71.5
- Between Gower St. and Bronson Ave.	60	10	40	35	1,797	17,970	10%	0	0	71.4
Sunset Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	3,169	31,690	10%	0	0	73.9
- Between Gower St. and Gordon St.	60	10	40	35	3,404	34,040	10%	0	0	74.2
- Between Gordon St. and Bronson Ave.	60	10	40	35	3,445	34,450	10%	0	0	74.2
De Longpre Avenue										

Date Printed: 3/22/2020

EXISTING + PROJECT CONDITIONS

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
- Between Vine St, and Gower St.	40	10	30	25	--	2,206	10%	0	0	63.7
Afton Place										
- Between Vine St, and Gower St.	40	10	30	25	--	777	10%	0	0	59.2
Fountain Avenue										
- Between Vine St, and Gower St.	40	10	30	35	1,112	11,120	10%	0	0	70.7
- Between Gower St. and Gordon St.	40	10	30	35	1,146	11,460	10%	0	0	70.8
- Between Gordon St. and Bronson Ave.	40	10	30	35	915	9,150	10%	0	0	69.9
Santa Monica Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	2,501	25,010	10%	0	0	72.8
- Between Gower St. and Bronson Ave.	60	10	40	35	2,623	26,230	10%	0	0	73.0

* Estimated based on Google Earth map.

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

Date Printed: 3/22/2020

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Off-Site Traffic Noise Calculations

Project: Sunset Gower Project - Alternative 2

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

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
Vine Street										
- Between Hollywood Blvd. and Sunset Blvd.	70	10	45	35	2,715	27,150	10%	0	0	72.7
- Between Sunset Blvd. and Fountain Ave.	70	10	45	35	3,045	30,450	10%	0	0	73.2
- Between Fountain Ave. and Santa Monica Blvd.	70	10	45	35	2,872	28,720	10%	0	0	72.9
Gower Street										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	1,647	16,470	10%	0	0	71.6
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	1,437	14,370	10%	0	0	71.0
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	1,431	14,310	10%	0	0	71.0
Bronson Avenue										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	1,042	10,420	10%	0	0	69.6
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	851	8,510	10%	0	0	68.8
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	794	7,940	10%	0	0	68.5
Beachwood Drive										
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	853	10%	0	0	59.6
Gordon Street										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	35	274	2,740	10%	0	0	64.6
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,188	10%	0	0	61.0
Tamarind Avenue										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	25	--	2,083	10%	0	0	63.4
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,303	10%	0	0	61.4
Hollywood Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	2,666	26,660	10%	0	0	73.1
- Between Gower St. and Bronson Ave.	60	10	40	35	2,671	26,710	10%	0	0	73.1
Sunset Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	4,351	43,510	10%	0	0	75.2
- Between Gower St. and Gordon St.	60	10	40	35	4,477	44,770	10%	0	0	75.4
- Between Gordon St. and Bronson Ave.	60	10	40	35	4,505	45,050	10%	0	0	75.4
De Longpre Avenue										

FUTURE NO PROJECT CONDITIONS

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
- Between Vine St, and Gower St.	40	10	30	25	--	2,246	10%	0	0	63.8
Afton Place										
- Between Vine St, and Gower St.	40	10	30	25	--	791	10%	0	0	59.2
Fountain Avenue										
- Between Vine St, and Gower St.	40	10	30	35	1,070	10,700	10%	0	0	70.5
- Between Gower St. and Gordon St.	40	10	30	35	1,077	10,770	10%	0	0	70.6
- Between Gordon St. and Bronson Ave.	40	10	30	35	927	9,270	10%	0	0	69.9
Santa Monica Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	3,247	32,470	10%	0	0	74.0
- Between Gower St. and Bronson Ave.	60	10	40	35	3,315	33,150	10%	0	0	74.1

* Estimated based on Google Earth map.

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

Date Printed: 3/22/2020

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Off-Site Traffic Noise Calculations

Project: Sunset Gower Project - Alternative 2

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

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
Vine Street										
- Between Hollywood Blvd. and Sunset Blvd.	70	10	45	35	2,745	27,450	10%	0	0	72.7
- Between Sunset Blvd. and Fountain Ave.	70	10	45	35	3,058	30,580	10%	0	0	73.2
- Between Fountain Ave. and Santa Monica Blvd.	70	10	45	35	2,897	28,970	10%	0	0	73.0
Gower Street										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	1,670	16,700	10%	0	0	71.7
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	1,437	14,370	10%	0	0	71.0
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	1,467	14,670	10%	0	0	71.1
Bronson Avenue										
- Between Hollywood Blvd. and Sunset Blvd.	50	10	35	35	1,075	10,750	10%	0	0	69.8
- Between Sunset Blvd. and Fountain Ave.	50	10	35	35	851	8,510	10%	0	0	68.8
- Between Fountain Ave. and Santa Monica Blvd.	50	10	35	35	825	8,250	10%	0	0	68.6
Beachwood Drive										
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	853	10%	0	0	59.6
Gordon Street										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	35	447	4,470	10%	0	0	66.8
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,291	10%	0	0	61.4
Tamarind Avenue										
- Between Sunset Blvd. and Fountain Ave.	40	10	30	25	--	2,083	10%	0	0	63.4
- Between Fountain Ave. and Santa Monica Blvd.	40	10	30	25	--	1,303	10%	0	0	61.4
Hollywood Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	2,666	26,660	10%	0	0	73.1
- Between Gower St. and Bronson Ave.	60	10	40	35	2,671	26,710	10%	0	0	73.1
Sunset Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	4,462	44,620	10%	0	0	75.4
- Between Gower St. and Gordon St.	60	10	40	35	4,644	46,440	10%	0	0	75.5
- Between Gordon St. and Bronson Ave.	60	10	40	35	4,702	47,020	10%	0	0	75.6
De Longpre Avenue										

FUTURE + PROJECT CONDITIONS

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
- Between Vine St, and Gower St.	40	10	30	25	--	2,246	10%	0	0	63.8
Afton Place										
- Between Vine St, and Gower St.	40	10	30	25	--	791	10%	0	0	59.2
Fountain Avenue										
- Between Vine St, and Gower St.	40	10	30	35	1,152	11,520	10%	0	0	70.9
- Between Gower St. and Gordon St.	40	10	30	35	1,195	11,950	10%	0	0	71.0
- Between Gordon St. and Bronson Ave.	40	10	30	35	958	9,580	10%	0	0	70.1
Santa Monica Boulevard										
- Between Vine St, and Gower St.	60	10	40	35	3,266	32,660	10%	0	0	74.0
- Between Gower St. and Bronson Ave.	60	10	40	35	3,320	33,200	10%	0	0	74.1

* Estimated based on Google Earth map.

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

Date Printed: 3/22/2020