

Noise Measurement Survey

Project Number: SC0110 Test Personnel: Jason Lui
 Project Name: West of Devers Equipment: Larson Davis 831

Site Number: ST-1 Date: 1-30-13 Time: From 11:11 am To 11:31 am

Site Location: 11750 Mount Vernon Ave The Highlands Apartment Homes
near Building Q (162-165, 262-265) & Building R (166-169, 266-269)

Primary Noise Sources: Traffic on Canal Street, aircraft noise, dog barking faintly. Traffic noise on I-215 is faint. Faint train horn.

Measurement Results

	dBA
L _{eq}	57.0
L _{max}	74.1
L _{min}	47.7
L _{peak}	85.6
L ₂	64.7
L ₈	61.6
L ₁₀	
L ₂₅	56.2
L ₅₀	52.4
L ₉₀	
SEL	87.8

Atmospheric Conditions:

Maximum Wind Velocity (mph)	3.3
Average Wind Velocity (mph)	0.7
Temperature (F)	60.3
Relative Humidity (%)	44.5
Comments:	

Comments: The ^{Highlands} ~~Hills~~ Apartment ^{Homes} Complex
wrought iron fence along the property line
Apartment complex is same elevation as Canal Street, but higher in
elevation than I-215. Edge of the berm shields majority of the noise
from I-215.

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SC1110
 Project Name: West of Devers

Test Personnel: Jason Lui
 Equipment: Larson Davis 831

Site Number: ST-2 Date: 1-30-13 Time: From 11:54 pm To 12:14 pm

Site Location: 22790 Vista Grande Way
near 2775 Vista Grande Way (in front)

Primary Noise Sources: Faint traffic noise on I-215, trash truck passby,
birds chirping, emergency sirens & dogs barking, vehicle passby.

Measurement Results

	dBA
L _{eq}	54.0
L _{max}	72.5
L _{min}	46.6
L _{peak}	83.8
L ₂	62.1
L ₈	55.5
L ₁₀	
L ₂₅	52.2
L ₅₀	51.1
L ₉₀	
SEL	84.8

Atmospheric Conditions:

Maximum Wind Velocity (mph)	4.6
Average Wind Velocity (mph)	1.1
Temperature (F)	74.5
Relative Humidity (%)	45.1
Comments:	

Comments: single-family residential area.

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SCE1110 Test Personnel: Jason Lui
 Project Name: West of Devers Equipment: Larson Davis 821
 Site Number: ST-3 Date: 1-30-13 Time: From 12:40 pm To 1:00 pm

Site Location: 2096 Skyview Drive
on the side of the property

Primary Noise Sources: Dog barking faintly, some aircraft noise

Measurement Results

	dBA
L _{eq}	44.4
L _{max}	61.2
L _{min}	38.1
L _{peak}	81.7
L ₂	51.3
L ₈	47.8
L ₁₀	
L ₂₅	44.6
L ₅₀	42.4
L ₉₀	
SEL	75.2

Atmospheric Conditions:

Maximum Wind Velocity (mph)	2.1
Average Wind Velocity (mph)	0.0
Temperature (F)	68.2
Relative Humidity (%)	33.4
Comments:	

Comments: _____

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SCE1110 Test Personnel: Jason Lui
 Project Name: West of Devers Equipment: Larson Davis 831

Site Number: SF4 Date: 1-30-13 Time: From 1:28 To 1:48

Site Location: 11862 Deche Canyon Road: In the backyard.

Primary Noise Sources: Traffic on Deche Canyon, some aircraft noise, chickens crowing

Measurement Results

	dB(A)
L _{eq}	50.5
L _{max}	65.8
L _{min}	34.1
L _{peak}	78.5
L ₂	56.3
L ₈	54.0
L ₁₀	-
L ₂₅	51.5
L ₅₀	48.9
L ₉₀	
SEL	81.3

Atmospheric Conditions:

Maximum Wind Velocity (mph)	2.4
Average Wind Velocity (mph)	0.6
Temperature (F)	72.2
Relative Humidity (%)	31.9
Comments:	

Comments: single-family residence.

58.0 dBA L_{max} - chicken.

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SCE1110 Test Personnel: Jason Lui
 Project Name: West of Devers Equipment: Larson Davis 831

Site Number: ST-5 Date: 1-30-13 Time: From 3:08 To 3:18

Site Location: 11019 Ragsdale Road ; near the backyard.

Primary Noise Sources: vehicle passby, aircraft noise.

Measurement Results

	dB(A)
L _{eq}	44.1
L _{max}	63.3
L _{min}	31.7
L _{peak}	84.5
L ₂	50.6
L ₈	45.5
L ₁₀	
L ₂₅	42.8
L ₅₀	41.3
L ₉₀	
SEL	74.9

Atmospheric Conditions:

Maximum Wind Velocity (mph)	5.3
Average Wind Velocity (mph)	1.1
Temperature (F)	71.9
Relative Humidity (%)	29.3
Comments:	

Comments: two trains passbys during (not included in the noise measurement)
railroad tracks nearby.

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SC1110
 Project Name: West of Devers

Test Personnel: Jason Lui
 Equipment: Larson Davis 881

Site Number: ST-6 Date: 1-30-13 Time: From 3:37 To 3:57

Site Location: Near ~~Between~~ 25896 Juniper Street; in the cul-de-sac.

Primary Noise Sources: faint traffic on I-10, birds chirping, faint aircraft noise.

Measurement Results

	dBA
L _{eq}	48.1
L _{max}	55.8
L _{min}	44.2
L _{peak}	78.7
L ₂	50.6
L ₈	49.6
L ₁₀	
L ₂₅	48.6
L ₅₀	47.9
L ₉₀	
SEL	79.0

Atmospheric Conditions:

Maximum Wind Velocity (mph)	6.4
Average Wind Velocity (mph)	3.0
Temperature (F)	69.3
Relative Humidity (%)	34.3
Comments:	

Comments: _____

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SCE1110 Test Personnel: Jason Lui
 Project Name: West of Devers Equipment: Larson Davis 821

Site Number: ST-7 Date: 1-30-13 Time: From 4:21 pm To 4:41 pm

Site Location: 1255 Research Drive,
office/Industrial area.

Primary Noise Sources: Traffic on I-70 and Lugonia Avenue
reverse signals

Measurement Results

	dBA
L _{eq}	63.1
L _{max}	71.9
L _{min}	58.4
L _{peak}	86.1
L ₂	66.0
L ₈	64.7
L ₁₀	
L ₂₅	63.7
L ₅₀	62.8
L ₉₀	
SEL	93.9

Atmospheric Conditions:

Maximum Wind Velocity (mph)	7.2
Average Wind Velocity (mph)	2.6
Temperature (F)	63.9
Relative Humidity (%)	41.7
Comments:	

Comments: _____

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SCE/1110 Test Personnel: Jason Lui
 Project Name: West of Devers Equipment: LD 831

Site Number: ST-8 Date: 1-31-13 Time: From 11:20 am To 11:40 am

Site Location: 32300 San Timoteo Canyon Road Fisherman's Retreat.
at the southwest corner of the property.

Primary Noise Sources: Bulldozer idling, hammering noise faintly, aircraft noise.
activity from mobile home, faint train horn, dogs barking intermittently.

Measurement Results

	dBA
L _{eq}	51.8
L _{max}	75.8
L _{min}	28.9
L _{peak}	88.0
L ₂	59.2
L ₈	52.9
L ₁₀	
L ₂₅	48.6
L ₅₀	46.0
L ₉₀	
SEL	82.6

Atmospheric Conditions:

Maximum Wind Velocity (mph)	2.8
Average Wind Velocity (mph)	0.8
Temperature (F)	77.2
Relative Humidity (%)	23.1
Comments:	

Comments: 55.0 dBA L_{max} = aircraft noise.
75.8 dBA L_{max} = bulldozer pass by.
52.0 dBA L_{max} = vehicle pass by.

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SCE1110
 Project Name: West of Devers

Test Personnel: Jason Lui
 Equipment: Larson Davis 831

Site Number: ST-9 Date: 1-31-13 Time: From 12:47 pm To 1:07 pm

Site Location: 34556 Venturi Avenue

Primary Noise Sources: faint dog barking, aircraft noise, reverse signal intermittent

Measurement Results

	dBA
L _{eq}	39.2
L _{max}	57.0
L _{min}	29.8
L _{peak}	78.1
L ₂	47.1
L ₈	43.4
L ₁₀	
L ₂₅	39.0
L ₅₀	35.6
L ₉₀	
SEL	70.0

Atmospheric Conditions:

Maximum Wind Velocity (mph)	6.4
Average Wind Velocity (mph)	2.0
Temperature (F)	70.3
Relative Humidity (%)	28.5
Comments:	

Comments: single family residences

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SCE1110
 Project Name: West of Devers

Test Personnel: Jason Liu
 Equipment: Larson Davis P31

Site Number: SF/0 Date: 1-31-13 Time: From 1:27 pm To 1:47 pm

Site Location: Park at picnic table.

Primary Noise Sources: faint traffic on I-10 freeway
some traffic on Cherry Valley Parkway (
faint train horn. Blvd.

Measurement Results

	dB(A)
L _{eq}	47.6
L _{max}	57.2
L _{min}	42.5
L _{peak}	77.9
L ₂	51.5
L ₈	50.1
L ₁₀	
L ₂₅	48.3
L ₅₀	46.8
L ₉₀	
SEL	78.4

Atmospheric Conditions:

Maximum Wind Velocity (mph)	7.5
Average Wind Velocity (mph)	1.7
Temperature (F)	68.8
Relative Humidity (%)	27.3
Comments:	

Comments: _____

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SC1110
 Project Name: West of Devers

Test Personnel: Jason Lui
 Equipment: Larson Davis 831

Site Number: SF11 Date: 1-31-13 Time: From 1:58 pm To 2:18 pm

Site Location: Near W1145^(Left) at the corner of Pecan Avenue and Cherry Tree Lane
at 1096^(Right) Desert Lawn Drive

Primary Noise Sources: Traffic on I10 freeway, some activity in the community.
birds chirping, some aircraft noise.

Measurement Results

	dBA
L _{eq}	56.5
L _{max}	64.1
L _{min}	50.1
L _{peak}	89.4
L ₂	60.1
L ₈	58.9
L ₁₀	8
L ₂₅	57.4
L ₅₀	56.1
L ₉₀	
SEL	87.3

Atmospheric Conditions:

Maximum Wind Velocity (mph)	6.0
Average Wind Velocity (mph)	1.9
Temperature (F)	71.2
Relative Humidity (%)	25.6
Comments:	

Comments: 557 Community.

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SCE1110
 Project Name: West of Devers

Test Personnel: Jason Lui
 Equipment: Larson Davis 831

Site Number SF12 Date: 1-31-13 Time: From 3:02 pm To 3:22 pm

Site Location: 1106 Cedar Hollow Road at the cul-de-sac.
Residential

Primary Noise Sources: some aircraft noise, person talking briefly, vehicle pass by.

Measurement Results

	dBA
L _{eq}	46.1
L _{max}	59.4
L _{min}	40.6
L _{peak}	80.9
L ₂	52.1
L ₈	49.9
L ₁₀	
L ₂₅	46.3
L ₅₀	44.2
L ₉₀	
SEL	76.9

Atmospheric Conditions:

Maximum Wind Velocity (mph)	10.6
Average Wind Velocity (mph)	6.5
Temperature (F)	67.3
Relative Humidity (%)	29.8
Comments:	

Comments: _____

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SCE1110 Test Personnel: Jason Lui
 Project Name: West of Devers. Equipment: Larson Davis 831

Site Number: SF-13 Date: 1-31-13 Time: From 3:39 pm To 3:59 pm

Site Location: 4565 Hillside Drive at the cul-de-sac.
single family residential.

Primary Noise Sources: some aircraft noise, dogs barking briefly.

Measurement Results

	dBA
L _{eq}	46.2
L _{max}	68.7
L _{min}	34.7
L _{peak}	84.3
L ₂	52.5
L ₈	48.0
L ₁₀	
L ₂₅	44.9
L ₅₀	42.1
L ₉₀	
SEL	77.0

Atmospheric Conditions:

Maximum Wind Velocity (mph)	10.0
Average Wind Velocity (mph)	4.0
Temperature (F)	63.5
Relative Humidity (%)	31.3
Comments:	

Comments: 68.7 dBA L_{max} - dogs barking.

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SC01110
 Project Name: West of Devers

Test Personnel: Jason Lui
 Equipment: Larson Davis 831

Site Number: SF14 Date: 1-31-13 Time: From 4:16 pm To 4:36 pm

Site Location: 2384 Murray Street at the cul-de-sac

Primary Noise Sources: Faint train horn, aircraft noise, bird noise.

Measurement Results

	dB(A)
L _{eq}	47.6
L _{max}	48.1
L _{min}	47.0
L _{peak}	—
L ₂	47.9
L ₈	47.8
L ₁₀	
L ₂₅	47.6
L ₅₀	47.4
L ₉₀	
SEL	44.6

Atmospheric Conditions:

Maximum Wind Velocity (mph)	8.4
Average Wind Velocity (mph)	3.6
Temperature (F)	62.9
Relative Humidity (%)	31.2
Comments:	

Comments: _____

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SCE1110 Test Personnel: J.T. Stephens
 Project Name: West of Devers Equipment: LD824

Site Number: SF/5 Date: 2-13-13 Time: From 12:01p To 12:21p

Site Location: 1 Southern terminus of Dailey Rd.

Primary Noise Sources: Planes, birds, distant traffic.

Measurement Results #1

	dBA
L _{eq}	53.7
L _{max}	74.5
L _{min}	31.6
L _{peak}	
L ₂	
L ₈	
L ₁₀	
L ₂₅	
L ₅₀	
L ₉₀	
SEL	

Atmospheric Conditions:

Maximum Wind Velocity (mph)	2.0
Average Wind Velocity (mph)	0.6
Temperature (F)	72.1
Relative Humidity (%)	14.4
Comments:	

Comments: Fog audible, lots of aircraft

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SE1110 Test Personnel: Jason Lui
 Project Name: West of Devers Equipment: Larson Davis 831

Site Number: SF 16 Date: 2-13-13 Time: From 12:01 To 12:21

Site Location: 12824 Fields Road (Maliki Road)
12812

13000 Maliki Road - Community Center,

Primary Noise Sources: Traffic I-10, Maliki Road. Some aircraft noise, bird noise
Vehicle passby at community center parking lot.
buses passby at a parking lot.

Measurement Results

	dBA
L _{eq}	60.5
L _{max}	81.8
L _{min}	50.2
L _{peak}	93.4
L ₂	66.5
L ₈	61.8
L ₁₀	
L ₂₅	58.7
L ₅₀	56.3
L ₉₀	53.9
SEL	

144

Atmospheric Conditions:

Maximum Wind Velocity (mph)	4.6
Average Wind Velocity (mph)	1.1
Temperature (F)	73.8
Relative Humidity (%)	13.0
Comments:	

56-58 - traffic on I-10.
 60.8 traffic on I-10 & Maliki Road.
 80. Vehicle passby.

Comments: noise level measurement taken at the community center to represent the
closest backyard area on

noise level conducted at equivalent distance from Maliki Road to represent
the closest backyard.
11 Backs @ 6 inch

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

Noise Measurement Survey

Project Number: SC1110 Test Personnel: Jason Lui
 Project Name: West of Devers Equipment: Larson Davis 831

Site Number: SF-17 Date: 2-13-13 Time: From 11:06 To _____

Site Location: 54210 Kalsman Drive

Primary Noise Sources: Bird noise Aircraft noise, very faint train rumble.
some dog barking in the background faintly.

Measurement Results

#143

	dBA
L _{eq}	47.2
L _{max}	68.2
L _{min}	32.1
L _{peak}	
L ₂	57.8
L ₈	48.3
L _{10 25}	42.2
L _{25 50}	39.4
L _{50 90}	35.8
L _{90 99}	33.9
SEL	

Atmospheric Conditions:

Maximum Wind Velocity (mph)	3.8
Average Wind Velocity (mph)	1.1
Temperature (F)	71.2
Relative Humidity (%)	26.0
Comments:	

Comments: _____

Traffic Description:

Roadway	# Lanes	Speeds	NB/EB Counts			SB/WB Counts		
			Auto	MT	HT	Auto	MT	HT

NOISE CALCULATIONS

West of Devers - Substation

Receptor: Residential
Substation: Devers

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements											
No.	Equipment Description	Reference (dBA)		Quantity	Usage factor**	Distance to Receptor	Ground Effect	Shielding (dBA)	Calculated (dBA)		Energy
		50 ft	Lmax						Lmax	Leq	
1	Auger Drill Rig	84.4	1	20	1000	0.5		58.4	44.9	30793.21303	
2	Pick-up Truck	75.0	2	40	1000	0.5		49.0	41.5	14142.13562	
3	Crane	80.6	1	16	1000	0.5		54.6	40.1	10269.39819	
4	Dump Truck	76.5	2	40	1000	0.5		50.5	43.0	19976.29753	
5	Flat Bed Truck	74.3	1	40	1000	0.5		48.3	37.8	6018.454785	
6	Excavator	80.7	1	40	1000	0.5		54.7	44.2	26271.50799	
								Lmax*	58.4	Leq	50.3

Notes:
*Calculated Lmax is the Loudest value.
** Percentage of time during a construction noise operation that a piece of equipment is operating at full power

Receptor: Residential (Calimesa)
Substation: El Casco

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements											
No.	Equipment Description	Reference (dBA)		Quantity	Usage factor**	Distance to Receptor	Ground Effect	Shielding (dBA)	Calculated (dBA)		Energy
		50 ft	Lmax						Lmax	Leq	
1	Pick-up Truck	75.0	2	40	950	0.5		49.4	42.1	16077.03601	
2	Dump Truck	76.5	2	40	950	0.5		50.9	43.6	22709.41698	
3	Backhoe	77.6	1	40	950	0.5		52.0	41.7	14627.69812	
4	Flat Bed Truck	74.3	1	40	950	0.5		48.7	38.4	6841.888446	
5	Excavator	80.7	1	40	950	0.5		55.1	44.8	29865.92629	
								Lmax*	55.1	Leq	49.5

Notes:
*Calculated Lmax is the Loudest value.
** Percentage of time during a construction noise operation that a piece of equipment is operating at full power

Receptor: Residential
Substation: Vista

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements											
No.	Equipment Description	Reference (dBA)		Quantity	Usage factor**	Distance to Receptor	Ground Effect	Shielding (dBA)	Calculated (dBA)		Energy
		50 ft	Lmax						Lmax	Leq	
1	Auger Drill Rig	84.4	1	20	50	0.5		84.4	77.4	55084574.07	
2	Pick-up Truck	75.0	2	40	50	0.5		75.0	74.0	25298221.28	
3	Crane	80.6	1	16	50	0.5		80.6	72.6	18370457.94	
4	Dump Truck	76.5	2	40	50	0.5		76.5	75.5	35734687.37	
5	Backhoe	77.6	1	40	50	0.5		77.6	73.6	23017597.49	
6	Flat Bed Truck	74.3	1	40	50	0.5		74.3	70.3	10766139.22	
7	Excavator	80.7	1	40	50	0.5		80.7	76.7	46995902.2	
								Lmax*	84.4	Leq	83.3

Notes:
*Calculated Lmax is the Loudest value.
** Percentage of time during a construction noise operation that a piece of equipment is operating at full power

Receptor: Residential
Substation: San Bernardino

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements											
No.	Equipment Description	Reference (dBA)		Quantity	Usage factor**	Distance to Receptor	Ground Effect	Shielding (dBA)	Calculated (dBA)		Energy
		50 ft	Lmax						Lmax	Leq	
1	Auger Drill Rig	84.4	1	20	875	0.5		59.5	46.3	42996.67517	
2	Pick-up Truck	75.0	2	40	875	0.5		50.1	43.0	19746.71532	
3	Crane	80.6	1	16	875	0.5		55.7	41.6	14339.19798	
4	Dump Truck	76.5	2	40	875	0.5		51.6	44.5	27892.97678	
5	Backhoe	77.6	1	40	875	0.5		52.7	42.5	17966.55742	
6	Flat Bed Truck	74.3	1	40	875	0.5		49.4	39.2	8403.590271	
7	Excavator	80.7	1	40	875	0.5		55.8	45.6	36683.00201	
								Lmax*	59.5	Leq	52.3

Notes:
*Calculated Lmax is the Loudest value.
** Percentage of time during a construction noise operation that a piece of equipment is operating at full power

Receptor: Residential
Substation: Etiwanda

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements											
No.	Equipment Description	Reference (dBA)		Quantity	Usage factor**	Distance to Receptor	Ground Effect	Shielding (dBA)	Calculated (dBA)		Energy
		50 ft	Lmax						Lmax	Leq	
1	Pick-up Truck	75.0	1	40	50	0.5		75.0	71.0	12649110.64	
								Lmax*	75.0	Leq	71.0

Notes:
*Calculated Lmax is the Loudest value.
** Percentage of time during a construction noise operation that a piece of equipment is operating at full power

Receptor: Residential
Substation: Timotoe

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements											
No.	Equipment Description	Reference (dBA)		Quantity	Usage factor**	Distance to Receptor	Ground Effect	Shielding (dBA)	Calculated (dBA)		Energy
		50 ft	Lmax						Lmax	Leq	
1	Pick-up Truck	75.0	1	40	50	0.5		75.0	71.0	12649110.64	
2	Dump Truck	76.5	1	40	50	0.5		76.5	72.5	17867343.69	
3	Backhoe	77.6	1	40	50	0.5		77.6	73.6	23017597.49	
								Lmax*	77.6	Leq	77.3

Notes:
*Calculated Lmax is the Loudest value.
** Percentage of time during a construction noise operation that a piece of equipment is operating at full power

Receptor: Residential
Substation: Tennessee

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements											
No.	Equipment Description	Reference (dBA)		Quantity	Usage factor**	Distance to Receptor	Ground Effect	Shielding (dBA)	Calculated (dBA)		Energy
		50 ft	Lmax						Lmax	Leq	
1	Pick-up Truck	75.0	1	40	50	0.5		75.0	71.0	12649110.64	
2	Dump Truck	76.5	1	40	50	0.5		76.5	72.5	17867343.69	
3	Backhoe	77.6	1	40	50	0.5		77.6	73.6	23017597.49	
								Lmax*	77.6	Leq	77.3

Notes:
*Calculated Lmax is the Loudest value.
** Percentage of time during a construction noise operation that a piece of equipment is operating at full power

West of Devers - Transmission and Subtransmission Line

Phase Roads & Landing Work

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements

No.	Equipment Description	Reference (dBA)	Quantity	Usage factor**	Distance to Receptor	Ground Effect	Shielding (dBA)	Calculated (dBA)		Energy
		50 ft						Lmax	Leq	
2	Motor Grader	85.0	1	40	50	0.5		85.0	81.0	126491106.4
5	Drum Type Compactor	83.2	1	20	50	0.5		83.2	76.2	41785922.62
6	Track Type Dozer	81.7	1	40	50	0.5		81.7	77.7	59164335.53
							Lmax*	85.0	Leq	83.6

Notes:

*Calculated Lmax is the Loudest value.

** Percentage of time during a construction noise operation that a piece of equipment is operating at full power

Source Level	distance (ft)	Receiver Noise Level
83.6	77	79.8
85.0	77	81.2
83.6	73	80.3
85.0	73	81.7

West of Devers - Telecommunications

Phase		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements									
Telecommunications work for OPGW and work		Reference (dBA)	Quantity	Usage factor**	Distance to Receptor	Ground Effect	Shielding (dBA)	Calculated (dBA)		Energy	
No.	Equipment Description	50 ft						Lmax	Leq		
1	Bucket Truck	74.7	1	40	50	0.5		74.7	70.7	11804836.91	
2	Back hoe	77.6	1	40	50	0.5		77.6	73.6	23017597.49	
3	Crew Truck	75.0	1	40	50	0.5		75.0	71.0	12649110.64	
								Lmax*	77.6	Leq	76.8

Notes:

*Calculated Lmax is the Loudest value.

** Percentage of time during a construction noise operation that a piece of equipment is operating at full power

Source Level	distance (ft)	Receiver Noise Level
76.8	77	73.0
77.6	77	73.8
76.8	73	73.5
77.6	73	74.3

West of Devers - Staging Yard

Phase Telecommunications work for OPGW and work

Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements

No.	Equipment Description	Reference (dBA) 50 ft	Quantity	Usage factor**	Distance to Receptor	Ground Effect	Shielding (dBA)	Calculated (dBA)		Energy	
		Lmax						Lmax	Leq		
1	Trucks	75.0	1	5	50	0.5		75.0	62.0	1581138.83	
2	Trucks	75.0	1	5	50	0.5		75.0	62.0	1581138.83	
							Lmax*	75.0	Leq	65.0	

Notes:

*Calculated Lmax is the Loudest value.

** Percentage of time during a construction noise operation that a piece of equipment is operating at full power

Staging Yard	City/County	Distance (ft)	Lmax	Leq
Beaumont No. 1 Material and Equipment Staging Area	City of Beaumont	374	57.5	47.5
Beaumont No. 2 Material and Equipment Staging Area	City of Beaumont	253	60.9	50.9
Devers Material and Equipment Staging Area	County of Riverside	2,000	25.5	15.5
Grand Terrace Material and Equipment Staging Area	City of Grand Terrace	320	58.9	48.9
Hathaway No. 1 Material and Equipment Staging Area	City of Banning	52	74.7	64.7
Hathaway No. 2 Material and Equipment Staging Area	City of Banning	54	74.3	64.3
Lugonia Material and Equipment Staging Area	City of Redlands	1,094	48.2	38.2
Mountain View No. 1 Material and Equipment Staging Area	City of San Bernardino	14	86.1	76.1
Poultry Material and Equipment Staging Area	County of Riverside	52	74.7	64.7
San Timoteo Material and Equipment Staging Area	County of Riverside	11	88.2	78.2

Helicopter
Ref level

100.7 at 100 ft

Banning

Distance to 85 dBA contour 610 ft. 85 dBA

Calimesa

Distance to 90 dBA contour 343 ft. 90 dBA

Distance to 87 dBA contour 484 ft. 87 dBA

Distance to 84 dBA contour 684 ft. 84 dBA

Distance to 81 dBA contour 966 ft. 81 dBA

Distance to 78 dBA contour 1,365 ft. 78 dBA

Distance to 75 dBA contour 1,928 ft. 75 dBA

Ground Prep

Ref level

83.6 at 50 ft

Banning

Distance to 85 dBA contour 43 ft. 85 dBA

Calimesa

Distance to 90 dBA contour 24 ft. 90 dBA

Distance to 87 dBA contour 34 ft. 87 dBA

Distance to 84 dBA contour 48 ft. 84 dBA

Distance to 81 dBA contour 67 ft. 81 dBA

Distance to 78 dBA contour 95 ft. 78 dBA

Distance to 75 dBA contour 135 ft. 75 dBA

Helicopter

Ref level

86.8 at 100 ft

Banning

Distance to 85 dBA contour

123 ft. 85 dBA

Calimesa

Distance to 90 dBA contour

69 ft. 90 dBA

Distance to 87 dBA contour

98 ft. 87 dBA

Distance to 84 dBA contour

138 ft. 84 dBA

Distance to 81 dBA contour

195 ft. 81 dBA

Distance to 78 dBA contour

275 ft. 78 dBA

Distance to 75 dBA contour

389 ft. 75 dBA

Ground Prep

Ref level

83.6 at 50 ft

Banning

Distance to 85 dBA contour

43 ft. 85 dBA

Calimesa

Distance to 90 dBA contour

24 ft. 90 dBA

Distance to 87 dBA contour

34 ft. 87 dBA

Distance to 84 dBA contour

48 ft. 84 dBA

Distance to 81 dBA contour

67 ft. 81 dBA

Distance to 78 dBA contour

95 ft. 78 dBA

Distance to 75 dBA contour

135 ft. 75 dBA

