

**Appendix E:
Noise Supporting Information**

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Mobile Construction Activity Noise Calculation

Receptor: Receiving residential property line		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements									
No.	Equipment Description	Reference (dBA) 50 ft	Quantity	Usage factor[1]	Distance to Receptor	Ground Effect[2]	Shielding (dBA)[3]	Calculated (dBA)		Energy	
		Lmax							Lmax		Leq
1	Grader	85	1	40	35	1	0	88.1	85.7	368778735.9	
2	Excavator	85	1	40	85	1	0	80.4	74.1	25746205.25	
3	Dozer	85	1	40	85	1	0	80.4	74.1	25746205.25	
4	Front End Loader	80	1	40	85	1	0	75.4	69.1	8141664.97	
5	Backhoe	80	1	40	85	1	0	75.4	69.1	8141664.97	
6											
7											
8											
9											
10											
								Lmax[4]	88	Leq	86

Notes:

[1] Percentage of time activity occurs each hour

[2] Soft ground terrain between project site and receptor.

[3] Shielding due to terrain or structures

[4] Calculated Lmax is the Loudest value.

Residential-Grade Mechanical Equipment

Receptor:	Nearest Residential Receptor	Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
		Reference (dBA) 3 ft	Quantity	Usage factor[1]	Distance to Receptor	Ground Effect[2]	Shielding (dBA)[3]	culated (dBA)		Energy
		Lmax						Lmax	Leq	
No.	Equipment Description									
1	Residential grade mechanical ventilation equipment	70	1	80	6	0	0	64.0	63.0	2000000
2										
3										
4										
5										
6										
7										
8										
9										
10										
Notes:								Leq	63	

- [1] Percentage of time activity occurs each hour
- [2] Soft ground terrain between project site and receptor
- [3] Shielding due to structural/soundwall shielding

TABLE 4-2: HORIZON YEAR (2050) ROADWAY SEGMENT ANALYSIS

#	Roadway	Segment Limits	Jurisdiction	Roadway Section	LOS Capacity ¹	No Project			With Project			Change in V/C
						2050	V/C ²	LOS ³	2050	V/C ²	LOS ³	
1	Valley Blvd.	Eucalyptus Av. to Pepper Av.	Colton	4D	31,100	33,702	1.084	F	33,937	1.091	F	0.008
2	Rancho Av.	Citrus St. to Laurel St.	Colton	4U	31,100	16,942	0.545	A	17,083	0.549	A	0.005
3	Rancho Av.	Agua Mansa Rd. to Fogg St.	Colton	4D	31,100	19,271	0.620	B	19,092	0.614	B	-0.006
4	La Cadena Dr.	Rancho Av. to Litton Av.	Colton	4D	31,100	31,375	1.009	F	31,511	1.013	F	0.004
5	La Cadena Dr.	M St. to O St.	Colton	4D	31,100	19,312	0.621	B	19,755	0.635	B	0.014
6	Colton Av.	10th St. to Mt. Vernon Av.	Colton	2U	14,600	6,458	0.442	A	6,471	0.443	A	0.001
7	Mt. Vernon Av.	Laurel St. to Colton Av.	Colton	4D	31,100	16,107	0.518	A	16,416	0.528	A	0.010
8	Mt. Vernon Av.	Fairway Dr. to Valley Blvd.	Colton	4D	31,100	12,739	0.410	A	13,859	0.446	A	0.036
9	Washington St.	Cooley Dr. to Reche Canyon Rd.	Colton	4D	31,100	24,542	0.789	C	24,550	0.789	C	0.000

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

¹ These maximum roadway capacities are based on the applicable agency's thresholds.

² V/C = Volume to Capacity Ratio

³ LOS = Level of Service

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