

APPENDIX I

Noise Data

Appendix I
Long-Term 24 Hour Continuous Noise Monitoring
Model Input Sheet

Project: Folsom South of 50 Specific Plan

Date: February 18-19, 2009

Site: A - White Rock Road

Hour	Leq	Lmax	L50	L90
12:00	63.6	86.8	55	40
13:00	62.8	79.4	55	40
14:00	63.9	82.5	58	44
15:00	65.1	81.9	61	48
16:00	66.5	76.8	65	55
17:00	67.6	75.4	67	59
18:00	65.1	79.3	62	50
19:00	61.4	73.5	54	48
20:00	60.4	79.2	51	47
21:00	58.3	76.0	49	41
22:00	57.9	82.0	42	37
23:00	55.5	77.4	43	32
0:00	52.7	76.2	34	29
1:00	49.2	72.5	30	28
2:00	50.4	72.6	31	27
3:00	52.3	78.4	31	28
4:00	55.6	74.1	40	32
5:00	62.4	77.2	52	41
6:00	67.7	80.5	66	54
7:00	69.1	81.2	68	60
8:00	66.4	77.8	64	52
9:00	64.0	79.3	56	44
10:00	64.1	83.8	53	40
11:00	61.3	76.7	52	41

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Averages			
Leq	Lmax	L50	L90
64.8	79.3	58.1	47.2
60.2	76.8	40.9	34.1

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Uppermost-Level			
Leq	Lmax	L50	L90
69.1	86.8	68.2	60.0
67.7	82.0	65.9	53.7

Percentage of Energy	
Daytime	83%
Nighttime	17%

Calculated L_{dn}, dBA
67.6

Appendix I
Long-Term 24 Hour Continuous Noise Monitoring
Model Input Sheet

Project: Folsom South of 50 Specific Plan

Date: February 18-19, 2009

Site: B - US 50 at Placerville Road

Hour	Leq	Lmax	L50	L90
13:00	69.0	82.8	68	65
14:00	70.6	85.9	70	67
15:00	70.6	83.6	70	68
16:00	71.4	83.0	71	69
17:00	71.5	81.5	71	70
18:00	70.5	75.8	70	68
19:00	69.2	77.6	69	65
20:00	68.1	75.7	68	64
21:00	67.4	79.5	67	63
22:00	66.3	77.1	66	62
23:00	63.1	75.4	62	54
0:00	62.1	73.3	60	51
1:00	61.0	75.4	57	47
2:00	60.0	73.2	57	44
3:00	60.6	76.0	57	45
4:00	63.3	75.2	62	55
5:00	66.7	75.6	66	61
6:00	69.7	77.1	69	67
7:00	71.3	77.1	71	68
8:00	71.0	84.9	71	68
9:00	70.4	88.9	70	67
10:00	69.7	79.8	69	66
11:00	69.1	77.9	69	66
12:00	68.6	78.9	68	65

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Averages			
Leq	Lmax	L50	L90
70.0	80.9	69.4	66.7
64.9	75.3	61.7	53.9

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Uppermost-Level			
Leq	Lmax	L50	L90
71.5	88.9	71.2	69.5
69.7	77.1	69.3	66.7

Percentage of Energy	
Daytime	85%
Nighttime	15%

Calculated L_{dn}, dBA
72.5

Appendix I
Long-Term 24 Hour Continuous Noise Monitoring
Model Input Sheet

Project: Folsom South of 50 Specific Plan

Date: February 18-19, 2009

Site: C - Prairie City Road

Hour	Leq	Lmax	L50	L90
16:00	60.3	77.9	58	50
17:00	60.7	76.6	59	51
18:00	57.6	72.4	54	44
19:00	54.5	69.9	47	43
20:00	51.9	67.7	44	41
21:00	53.0	72.3	44	41
22:00	50.9	72.7	43	40
23:00	48.7	69.9	39	35
0:00	42.8	62.7	35	31
1:00	41.8	62.4	32	29
2:00	42.6	63.1	33	30
3:00	44.4	67.3	33	30
4:00	51.5	71.7	40	35
5:00	54.9	68.5	48	40
6:00	58.3	69.4	56	48
7:00	60.7	72.2	59	54
8:00	60.0	78.3	58	50
9:00	58.0	73.5	54	43
10:00	59.2	78.9	50	39
11:00	57.9	75.2	55	48
12:00	57.0	75.7	50	40
13:00	56.4	74.5	50	39
14:00	56.4	69.8	51	39
15:00	58.3	72.9	55	43

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Averages			
Leq	Lmax	L50	L90
58.1	73.8	52.5	44.3
51.9	67.5	39.9	35.3

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Uppermost-Level			
Leq	Lmax	L50	L90
60.7	78.9	59.5	53.8
58.3	72.7	56.3	48.4

Percentage of Energy	
Daytime	87%
Nighttime	13%

Calculated L_{dn}, dBA
60.0

Appendix I
Long-Term 24 Hour Continuous Noise Monitoring
Model Input Sheet

Project: Folsom South of 50 Specific Plan

Date: February 18-19, 2009

Site: D - Scott Road

Hour	Leq	Lmax	L50	L90
15:00	61.9	75.7	58	45
16:00	63.0	75.8	61	49
17:00	63.9	83.1	62	52
18:00	65.1	78.0	62	52
19:00	61.3	74.0	55	51
20:00	59.9	73.9	55	51
21:00	58.8	80.2	51	47
22:00	56.3	71.0	50	46
23:00	53.4	72.1	44	40
0:00	54.0	72.8	40	37
1:00	45.6	69.0	38	34
2:00	47.3	69.7	37	33
3:00	49.9	71.8	40	34
4:00	52.8	71.8	45	42
5:00	58.4	73.4	51	46
6:00	63.0	79.7	58	52
7:00	63.9	77.7	60	54
8:00	71.4	87.3	59	52
9:00	60.5	81.4	50	42
10:00	58.6	75.9	48	41
11:00	58.8	75.8	51	43
12:00	59.0	75.6	50	44
13:00	59.7	82.1	49	44
14:00	60.4	77.5	54	45

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Averages			
Leq	Lmax	L50	L90
63.5	78.2	55.0	47.5
56.4	72.4	44.7	40.3

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Uppermost-Level			
Leq	Lmax	L50	L90
71.4	87.3	62.1	53.9
63.0	79.7	57.8	52.3

Percentage of Energy	
Daytime	90%
Nighttime	10%

Calculated L_{dn}, dBA
64.9

Appendix I
Long-Term 24 Hour Continuous Noise Monitoring
Model Input Sheet

Project: Folsom South of 50 Specific Plan

Date: February 18-19, 2009

Site: E - US 50 at Empire Ranch

Hour	Leq	Lmax	L50	L90
15:00	61.9	75.7	58	45
16:00	63.0	75.8	61	49
17:00	63.9	83.1	62	52
18:00	65.1	78.0	62	52
19:00	61.3	74.0	55	51
20:00	59.9	73.9	55	51
21:00	58.8	80.2	51	47
22:00	56.3	71.0	50	46
23:00	53.4	72.1	44	40
0:00	54.0	72.8	40	37
1:00	45.6	69.0	38	34
2:00	47.3	69.7	37	33
3:00	49.9	71.8	40	34
4:00	52.8	71.8	45	42
5:00	58.4	73.4	51	46
6:00	63.0	79.7	58	52
7:00	63.9	77.7	60	54
8:00	71.4	87.3	59	52
9:00	60.5	81.4	50	42
10:00	58.6	75.9	48	41
11:00	58.8	75.8	51	43
12:00	59.0	75.6	50	44
13:00	59.7	82.1	49	44
14:00	60.4	77.5	54	45

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Averages			
Leq	Lmax	L50	L90
63.5	78.2	55.0	47.5
56.4	72.4	44.7	40.3

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Uppermost-Level			
Leq	Lmax	L50	L90
71.4	87.3	62.1	53.9
63.0	79.7	57.8	52.3

Percentage of Energy	
Daytime	90%
Nighttime	10%

Calculated L_{dn}, dBA
64.9

Appendix I
Project-Generated Construction Source Noise Prediction Model

Project Name

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L _{eq} dBA)	Assumptions:	Reference Emission	Usage
				Noise Levels (L _{max}) at 50 feet ¹	Factor ¹
Threshold*	6,708	45.0	Grader	85	0.4
	50	87.6	Vibrating Hopper	85	0.5
	100	81.5	Paver	85	0.5
	150	78.0	Scraper	85	0.4
	200	75.5			
	250	73.6			
	300	72.0			
	350	70.7	Ground Type	Hard	
	400	69.5	Source Height	8	
	450	68.5	Receiver Height	5	
	500	67.6	Ground Factor	0.00	
	550	66.7			
	600	66.0			
				Predicted Noise Level ²	L_{eq} dBA at 50 feet²
				Grader	81.0
				Vibrating Hopper	82.0
				Paver	82.0
				Scraper	81.0
				Combined Predicted Noise Level (L_{eq} dBA at 50 feet)	
				87.6	

Sources:

¹ Obtained from the FHWA Roadway Construction Noise Model, January 2006.

² Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

$$L_{eq}(\text{equip}) = E.L. + 10 \cdot \log(\text{U.F.}) - 20 \cdot \log(D/50) - 10 \cdot G \cdot \log(D/50)$$

Where: E.L. = Emission Level;

U.F. = Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

Appendix I
Project-Generated Construction Source Vibration Prediction Model

Folsom South of 50 Specific Plan

Location	Distance to Nearest Receiver in feet	Predicted Vibration Level (PPV)		Predicted Vibration Level (VdB)		Equipment	Reference Distance	PPV at 25 feet (in/sec) ¹	Approximate Lv (VdB) at 25 feet ²
		Blasting	Bulldozer	Blasting	Bulldozer				
Threshold (0.0 8PPV)	25	1.130	0.089			Blasting	25	1.13	109
Threshold (80VdB)	50			100	78	Bulldozer	25	0.089	87
On-Site Receptors	30	0.860	0.068	107	85				
Powell St Residences	65	0.270	0.021	97	74				
California St Residences	85	0.180	0.014	93	71				
Pacific – Union Club	350	0.022	0.002	75	53				
Huntington Park	575	0.010	0.001	68	46				
Grace Cathedral School	900	0.005	0.000	62	40				

Notes:

¹ Where PPV is the peak particle velocity

² Where Lv is the RMS velocity expressed in vibration decibels (VdB), assuming a crest factor of 4.

Source: Caltrans 2002, FTA 2006