APPENDIX O

NOISE DOCUMENTATION

OFFSITE TRUCKING - CONSTRUCTION							NAME		
		DAYTIME			NIGHTTIME		ADT	12793	0
Existing Peak Hour	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40	
---	---	---	---	---	---	---	DISTANCE	50	
INPUT PARAMETERS									
Vehicles per hour	638	81	23	159	20	6	% A	86	
Speed in MPH	40	40	40	40	40	40	% MT	10.9	
Left angle	-90	-90	-90	-90	-90	-90	% HT	3.1	
Right angle	90	90	90	90	90	90	LEFT	-90	
							RIGHT	90	
NOISE CALCULATIONS									
Reference levels	67.4	76.3	81.2	67.4	76.3	81.2	Ldn	NA	
ADJUSTMENTS							DAY LEQ	**68.6**	
Flow	21.7	12.8	7.3	15.7	6.7	1.3			
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	Day hour	742	
Finite Roadway	0	0	0	0	0	0			
Barrier	0	0	0	0	0	0	Absorptive?	no	
Grade	0	0	0	0	0	0			
Constant	-25	-25	-25	-25	-25	-25	Use hour?	yes	
LEQ	64.0	64.0	63.4	58.0	58.0	57.3	GRADE dB	0	
	DAY LEQ	68.6		NIGHT LEQ	62.5				
		DAYTIME			NIGHTTIME		ADT	6397	
Existing Off Peak	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40	
---	---	---	---	---	---	---	DISTANCE	50	
INPUT PARAMETERS									
Vehicles per hour	319	40	12	79	10	3	% A	86	
Speed in MPH	40	40	40	40	40	40	% MT	10.9	
Left angle	-90	-90	-90	-90	-90	-90	% HT	3.1	
Right angle	90	90	90	90	90	90	LEFT	-90	
							RIGHT	90	
NOISE CALCULATIONS									
Reference levels	67.4	76.3	81.2	67.4	76.3	81.2	Ldn	NA	
ADJUSTMENTS							DAY LEQ	**65.6**	
Flow	18.7	9.7	4.3	12.7	3.7	-1.8			
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	Day hour	371	
Finite Roadway	0	0	0	0	0	0			
Barrier	0	0	0	0	0	0	Absorptive?	no	
Grade	0	0	0	0	0	0			
Constant	-25	-25	-25	-25	-25	-25	Use hour?	yes	
LEQ	61.0	61.0	60.4	55.0	54.9	54.3	GRADE dB	0	
	DAY LEQ	65.6		NIGHT LEQ	59.5				

		DAYTIME			NIGHTTIME		ADT	6397	
Existing Off Peak Plus 20 Heavy Trucks	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40	
---	---	---	---	---	---	---	DISTANCE	50	
INPUT PARAMETERS									
Vehicles per hour	319	40	32	79	10	3	% A	86	
Speed in MPH	40	40	40	40	40	40	% MT	10.9	
Left angle	-90	-90	-90	-90	-90	-90	% HT	3.1	
Right angle	90	90	90	90	90	90	LEFT	-90	
							RIGHT	90	
NOISE CALCULATIONS									
Reference levels	67.4	76.3	81.2	67.4	76.3	81.2	Ldn	NA	
ADJUSTMENTS							DAY LEQ	**67.4**	
Flow	18.7	9.7	8.7	12.7	3.7	-1.8			
Distance	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	Day hour	371	
Finite Roadway	0	0	0	0	0	0			
Barrier	0	0	0	0	0	0	Absorptive?	no	
Grade	0	0	0	0	0	0			
Constant	-25	-25	-25	-25	-25	-25	Use hour?	yes	
LEQ	61.0	61.0	64.8	55.0	54.9	54.3	GRADE dB	0	
	DAY LEQ	67.4		NIGHT LEQ	59.5				

CONSTRUCTION EQUIPMENT										
	N2=N1-20 LOG D2/D1			**Point source - Hard surface**						
	N2=Noise at receptor at distance D2									
	N1=Source noise at distance D1									
	Assume	N1 is a group of construction equipment with maximum noise level of 90 to 97 dBA at 50 feet								
		and a hourl average noise level of 5 to 10 dBA less than the maximum								
	N1	D1	D2	N2						
	97	23	1150	63.0						
	90	23	1150	56.0						
	92	23	1150	58.0						
	80	23	1150	46.0						
	97	23	1400	61.3						
	90	23	1400	54.3						
	92	23	1400	56.3						
	80	23	1400	44.3						
OPERATIONS - OFF SITE TRAFFIC										
	SPL2 - SPL1 = 10 x log(10) (Vol 2/Vol 1)				No change in traffic speed or mix					
	SPL2 = Sound pressure level 2, decibels									
	SPL1 = Sound pressure level 1, decibels									
	Vol 2 = Traffic volume 2									
	Vol 1 = Traffic volume 1									
	Existing volume west of Pauma Res Road				12240					
	Existing volume west of Pala Mission Road				14970					
	Project Volume				4848					
	Project volume to west at 92%				4460					
	Future volume west of Pauma Res Road				16700					
	Future volume west of Pala Mission Road				19430					
	Vol 1	Vol 2	Vol2/Vol1	SPL2-SPL1						
	12240	16700	1.36	1.35						
	14970	19430	1.30	1.13						