APPENDIX 4.8

Noise Monitoring

Impact Sciences, Inc.
Prepared by S. Morton
11-Feb-08
C:\LARDAV\SLM Interval Data

Location	Wind Meas Number	Wind Avg Date	Wind Min Time	RMS Max Duration	Peak Avg Leq	Uwpk Min SEL	Max Lmax	Avg Lmin	Min Peak	Max Uwpk	Avg L(10)	Max L(25)	Dir L(50)	Excd L(90)	Excd L(100)	Excd L(100)
0	5-Feb	8	11:03:48	671.5	55	83.3	77.7	43	97.5	104.9	58.7	52.2	47.1	44.5	0	
1	5-Feb	8	11:15:00	348	62.1	87.5	92.8	42	112.1	115.1	59.8	54.9	48.3	43.7	0	
0	5-Feb	8	12:25:02	297.4	52.3	77.1	81.2	43.1	100.2	108.4	51.7	49.8	48.2	45.9	0	
2	5-Feb	8	12:30:00	565.1	48.9	76.5	76.4	38.7	96	106.9	49.2	46.8	44.8	41.3	0	
0	5-Feb	8	12:53:36	383	56.3	82.2	69.7	42.8	86.7	0	59.8	57.8	54.7	46.2	0	
3	5-Feb	8	13:00:00	505	62.2	89.2	96.1	41.9	120.2	120.8	59.2	57.2	55	49.1	0	

Impact Sciences, Inc.
Prepared by S. Morton
11-Feb-08
Long-Term Interval Data

Location	Measure Number	Date	Time	Duration	Leq	SEL	Lmax	Lmin	Peak	Uwpk	L(10)	L(25)	L(50)	L(90)	Wind Avg L(100)	Wind Min L(100)	Wind Max *	RMS Avg *	Peak Min *	Uwpk Max *	Avg *	Min *	Max Hz	Avg Hz @ Max *	Dir Hz	Excd Count	Excd Count	Excd loads	Over	
Pepper Tree Lane	longterm	5-Feb	11:49:59	600.7	79.1	106.9	114.5	42.4	137.4	135.6	59.8	54	46.5	43.5	0	0	0	0	0	0	0	0	32	32	32	0	0	N	40	8
Pepper Tree Lane	longterm	5-Feb	12:00:00	3600	52	87.6	70.7	40.8	81.2	0	55.7	52.3	48.3	43.2	0	0	0	0	0	0	0	0	32	32	32	0	0	N	2	0
Pepper Tree Lane	longterm	5-Feb	13:00:00	3600	52.2	87.7	71.9	40.4	86.8	0	55.1	51.7	47.4	43.5	0	0	0	0	0	0	0	0	32	32	32	0	0	N	15	0
Pepper Tree Lane	longterm	5-Feb	14:00:00	3600	51.2	86.8	67.8	40.4	83	0	55.2	51.6	46.8	42.8	0	0	0	0	0	0	0	0	32	32	32	0	0	N	2	0
Pepper Tree Lane	longterm	5-Feb	15:00:00	3600	51	86.6	67.8	40.2	78.6	0	55	51.3	46.5	42.8	0	0	0	0	0	0	0	0	32	32	32	0	0	N	1	0
Pepper Tree Lane	longterm	5-Feb	16:00:00	3600	51	86.5	74.9	40.7	85.8	0	54.6	50.6	46.2	42.7	0	0	0	0	0	0	0	0	32	32	32	0	0	N	8	0
Pepper Tree Lane	longterm	5-Feb	17:00:00	3600	52.4	88	64.9	41	80	0	56.4	53.1	48.7	44.4	0	0	0	0	0	0	0	0	32	32	32	0	0	N	0	0
Pepper Tree Lane	longterm	5-Feb	18:00:00	3600	53	88.6	77.3	41.1	91.8	0	55.2	51.8	48.1	44.6	0	0	0	0	0	0	0	0	32	32	32	0	0	N	2	0
Pepper Tree Lane	longterm	5-Feb	19:00:00	3600	50.4	86	65	44.1	82.2	0	53.6	50.2	47.6	45.6	0	0	0	0	0	0	0	0	32	32	32	0	0	N	0	0
Pepper Tree Lane	longterm	5-Feb	20:00:00	3600	49.2	84.8	63.9	42.2	76.1	0	52.5	48.6	46.1	44.1	0	0	0	0	0	0	0	0	32	32	32	0	0	N	0	0
Pepper Tree Lane	longterm	5-Feb	21:00:00	3600	49.4	85	68.7	41.6	89.3	0	52.4	47.8	45.2	43.2	0	0	0	0	0	0	0	0	32	32	32	0	0	N	3	0
Pepper Tree Lane	longterm	5-Feb	22:00:00	3600	48	83.6	65	42	77.7	0	49.9	46.8	45.2	43.5	0	0	0	0	0	0	0	0	32	32	32	0	0	N	0	0
Pepper Tree Lane	longterm	5-Feb	23:00:00	3600	47.4	83	62.5	39.9	75.3	0	50.2	46.6	45.1	42.6	0	0	0	0	0	0	0	0	32	32	32	0	0	N	0	0
Pepper Tree Lane	longterm	6-Feb	0:00:00	3600	43.6	79.2	62.7	38.5	75	0	44.2	42.3	41.2	40.1	0	0	0	0	0	0	0	0	32	32	32	0	0	N	0	0
Pepper Tree Lane	longterm	6-Feb	1:00:00	3600	43.5	79	66.4	39.1	79	0	42.8	41.9	41.3	40.2	0	0	0	0	0	0	0	0	32	32	32	0	0	N	1	0
Pepper Tree Lane	longterm	6-Feb	2:00:00	3600	43.7	79.3	63.9	39.9	75	0	44.2	43.6	42.8	41.4	0	0	0	0	0	0	0	0	32	32	32	0	0	N	0	0
Pepper Tree Lane	longterm	6-Feb	3:00:00	3600	43	78.5	63.8	39.4	72	0	44.6	43.3	42.3	40.8	0	0	0	0	0	0	0	0	32	32	32	0	0	N	0	0
Pepper Tree Lane	longterm	6-Feb	4:00:00	3600	45.4	81	68.4	39	82.9	0	46	43.9	41.5	40.1	0	0	0	0	0	0	0	0	32	32	32	0	0	N	1	0
Pepper Tree Lane	longterm	6-Feb	5:00:00	3600	46.8	82.4	67.7	41.6	78.9	0	46.9	45.8	44.8	43.3	0	0	0	0	0	0	0	0	32	32	32	0	0	N	1	0
Pepper Tree Lane	longterm	6-Feb	6:00:00	3600	51.1	86.7	66.7	43.5	81	0	54	51.1	48.4	45.9	0	0	0	0	0	0	0	0	32	32	32	0	0	N	4	0
Pepper Tree Lane	longterm	6-Feb	7:00:00	3600	53.3	88.9	70.5	45.7	83.2	0	57	53.8	49.9	47.3	0	0	0	0	0	0	0	0	32	32	32	0	0	N	3	0
Pepper Tree Lane	longterm	6-Feb	8:00:00	3600	52.3	87.9	66.6	42.7	88.6	0	56.3	52.7	49.2	46.2	0	0	0	0	0	0	0	0	32	32	32	0	0	N	2	0
Pepper Tree Lane	longterm	6-Feb	9:00:00	3600	51.6	87.2	76.4	40.4	93.8	0	54.8	50.9	47.1	43.2	0	0	0	0	0	0	0	0	32	32	32	0	0	N	12	0
Pepper Tree Lane	longterm	6-Feb	10:00:00	3600	50	85.6	73.8	40.9	87	0	52.9	48.8	45.4	42.4	0	0	0	0	0	0	0	0	32	32	32	0	0	N	5	0
Pepper Tree Lane	longterm	6-Feb	11:00:00	3600	49.3	84.9	64.9	40.5	81.4	0	53	48.5	45.6	42.7	0	0	0	0	0	0	0	0	32	32	32	0	0	N	0	0
Pepper Tree Lane	longterm	6-Feb	12:00:00	3600	50.8	86.4	71	40.8	82.3	0	53.8	50	46.3	43.2	0	0	0	0	0	0	0	0	32	32	32	0	0	N	4	0
Pepper Tree Lane	longterm	6-Feb	13:00:00	3600	51.6	87.2	70	43.3	82.2	0	54.8	51.1	47.7	45.2	0	0	0	0	0	0	0	0	32	32	32	0	0	N	3	0
Pepper Tree Lane	longterm	6-Feb	14:00:00	3600	52.5	88.1	69.8	44.6	86.8	0	55.9	52.6	49.5	47	0	0	0	0	0	0	0	0	32	32	32	0	0	N	2	0
Pepper Tree Lane	longterm	6-Feb	15:00:00	1345.3	72.3	103.6	109.7	44.3	132.9	133.4	55.2	51.7	48.4	46.3	0	0	0	0	0	0	0	0	32	32	32	0	0	N	20	6

Impact Sciences, Inc.
Prepared by S. Morton
5-Feb-08
900 Kiely Boulevard
24-hour measurement
Location: Pepper Tree Lane
Calculated Ldn/CNEL from long-term noise monitoring data

			Hrly Leq		Evening/Night Penalties 10 dBA	5 dBA
		TIME	dBA	Numbers...	More Numbers...	
Midnight		0 / 24	43.6	22909	229087	72444
am	1:00	100	43.5	22387	223872	70795
	2:00	200	43.7	23442	234423	74131
	3:00	300	43	19953	199526	63096
	4:00	400	45.4	34674	346737	109648
	5:00	500	46.8	47863	478630	151356
	6:00	600	51.1	128825	1288250	407380
	7:00	700	53.3	213796	2137962	676083
	8:00	800	52.3	169824	1698244	537032
	9:00	900	51.6	144544	1445440	457088
	10:00	1000	50	100000	1000000	316228
	11:00	1100	49.3	85114	851138	269153
	12:00	1200	50.8	120226	1202264	380189
pm	1:00	1300	51.6	144544	1445440	457088
	2:00	1400	52.5	177828	1778279	562341
	3:00	1500	51	125893	1258925	398107
	4:00	1600	51	125893	1258925	398107
	5:00	1700	52.4	173780	1737801	549541
	6:00	1800	53	199526	1995262	630957
	7:00	1900	50.4	109648	1096478	346737
	8:00	2000	49.2	83176	831764	263027
	9:00	2100	49.4	87096	870964	275423
	10:00	2200	48	63096	630957	199526
pm	11:00	2300	47.4	54954	549541	173780

Leq Morning Peak Hour 7:00-10:00 a.m.
52 dBA

Leq Evening Peak Hour 4:00-8:00 p.m.
52 dBA

Leq Nighttime 10:00 pm-7:00 a.m. (not penalized)
47 dBA

Leq Daytime 7:00 am-10:00 p.m.
51 dBA

Leq 24-Hour
50 dBA

Ldn: 10 dBA penalty for noise between 10:00 p.m. and 7:00 a.m.
54 dBA

CNEL: 5 dBA penalty for noise between 7:00p.m. and 10:00 p.m., and 10 dBA penalty for noise between 10:00 p.m. and 7:00 a.m.
55 dBA

Difference between CNEL and Ldn
CNEL - Ldn 0.40193978

Gallery at Central Park
CNEL at On and Off-Site Noise-Sensitive Land Uses
Existing (2008) Conditions

ROADWAY NAME Segment	Noise-Sensitive Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha (1) Factor	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	dB(A) CNEL
ROADWAY											
Pepper Tree Lane/North of Homestead Road	**Residential**	2	0	1225	45	50	0	0	1.8%	0.7%	56.7
Homestead Road/Pomeroy Avenue to Pepper Tree Lane	**Residential**	4	0	17930	45	50	0	0	1.8%	0.7%	68.6
Homestead Road/Pepper Tree Lane to Kiely Blvd.	**Residential**	4	0	19315	45	60	0	0	1.8%	0.7%	68.0
Kaiser Drive/West of Kiely Blvd.	**Residential**	2	0	1,340	45	50	0	0	1.8%	0.7%	57.1
Kiely Boulevard/ Benton Street to El Camino Real	**Residential**	4	10	16,955	45	50	0	0	1.8%	0.7%	68.6
Kiely Boulevard/Kaiser Drive to Benton Street	**Residential/Park**	4	10	15,990	45	50	0	0	1.8%	0.7%	68.3
Kiely Boulevard/Homestead Road to Kaiser Drive	**Residential/Park**	4	10	14,270	45	50	0	0	1.8%	0.7%	67.8
Kiely Boulevard/Pruneridge Avenue to Homestead Road	**Residential**	4	10	12,790	45	60	0	0	1.8%	0.7%	66.4

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Impact Sciences, Inc.
Prepared by Sara Morton
February 11, 2008

Gallery at Central Park
CNEL at On and Off-Site Noise-Sensitive Land Uses
Existing Plus Project Conditions

ROADWAY NAME Segment	Noise-Sensitive Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha (1) Factor	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	dB(A) CNEL
ROADWAY											
Pepper Tree Lane/North of Homestead Road	**Residential**	2	0	1790	45	50	0	0	1.8%	0.7%	58.3
Homestead Road/Pomeroy Avenue to Pepper Tree Lane	**Residential**	4	0	19190	45	50	0	0	1.8%	0.7%	68.9
Homestead Road/Pepper Tree Lane to Kiely Blvd.	**Residential**	4	0	20315	45	60	0	0	1.8%	0.7%	68.3
Kaiser Drive/West of Kiely Blvd.	**Residential**	2	0	3095	45	50	0	0	1.8%	0.7%	60.7
Kiely Boulevard/ Benton Street to El Camino Real	**Residential**	4	10	17845	45	50	0	0	1.8%	0.7%	68.8
Kiely Boulevard/Kaiser Drive to Benton Street	**Residential/Park**	4	10	17060	45	50	0	0	1.8%	0.7%	68.6
Kiely Boulevard/Homestead Road to Kaiser Drive	**Residential/Park**	4	10	15585	45	50	0	0	1.8%	0.7%	68.2
Kiely Boulevard/Pruneridge Avenue to Homestead Road	**Residential**	4	10	13560	45	60	0	0	1.8%	0.7%	66.6

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Impact Sciences, Inc.
Prepared by Sara Morton
February 11, 2008

Gallery at Central Park
CNEL at On and Off-Site Noise-Sensitive Land Uses
Cumulative (2010) Conditions

ROADWAY NAME Segment	Noise-Sensitive Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha (1) Factor	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	dB(A) CNEL
ROADWAY											
Pepper Tree Lane/North of Homestead Road	**Residential**	2	0	1295	45	50	0	0	1.8%	0.7%	56.9
Homestead Road/Pomeroy Avenue to Pepper Tree Lane	**Residential**	4	0	18850	45	50	0	0	1.8%	0.7%	68.8
Homestead Road/Pepper Tree Lane to Kiely Blvd.	**Residential**	4	0	20395	45	60	0	0	1.8%	0.7%	68.3
Kaiser Drive/West of Kiely Blvd.	**Residential**	2	0	1,375	45	50	0	0	1.8%	0.7%	57.2
Kiely Boulevard/ Benton Street to El Camino Real	**Residential**	4	10	20,080	45	50	0	0	1.8%	0.7%	69.3
Kiely Boulevard/Kaiser Drive to Benton Street	**Residential/Park**	4	10	18,710	45	50	0	0	1.8%	0.7%	69.0
Kiely Boulevard/Homestead Road to Kaiser Drive	**Residential/Park**	4	10	16,990	45	50	0	0	1.8%	0.7%	68.6
Kiely Boulevard/Pruneridge Avenue to Homestead Road	**Residential**	4	10	15,035	45	60	0	0	1.8%	0.7%	67.1

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Impact Sciences, Inc.
Prepared by Sara Morton
February 11, 2008

Gallery at Central Park
CNEL at On and Off-Site Noise-Sensitive Land Uses
Cumulative Plus Project (2010) Conditions

ROADWAY NAME Segment	Noise-Sensitive Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha (1) Factor	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	dB(A) CNEL
ROADWAY											
Pepper Tree Lane/North of Homestead Road	**Residential**	2	0	1860	45	50	0	0	1.8%	0.7%	58.5
Homestead Road/Pomeroy Avenue to Pepper Tree Lane	**Residential**	4	0	20110	45	50	0	0	1.8%	0.7%	69.1
Homestead Road/Pepper Tree Lane to Kiely Blvd.	**Residential**	4	0	21395	45	60	0	0	1.8%	0.7%	68.5
Kaiser Drive/West of Kiely Blvd.	**Residential**	2	0	3,130	45	50	0	0	1.8%	0.7%	60.8
Kiely Boulevard/ Benton Street to El Camino Real	**Residential**	4	10	20,970	45	50	0	0	1.8%	0.7%	69.5
Kiely Boulevard/Kaiser Drive to Benton Street	**Residential/Park**	4	10	19,780	45	50	0	0	1.8%	0.7%	69.2
Kiely Boulevard/Homestead Road to Kaiser Drive	**Residential/Park**	4	10	18,305	45	50	0	0	1.8%	0.7%	68.9
Kiely Boulevard/Pruneridge Avenue to Homestead Road	**Residential**	4	10	15,805	45	60	0	0	1.8%	0.7%	67.3

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as aspalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Impact Sciences, Inc.
Prepared by Sara Morton
February 11, 2008