

## Appendix A

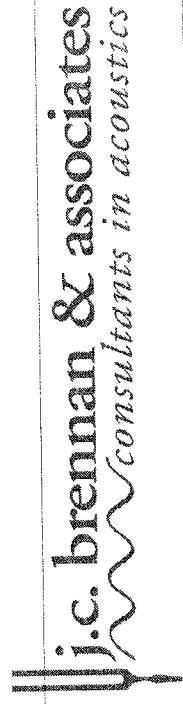
### Acoustical Terminology

<b>Acoustics</b>	The science of sound.
<b>Ambient Noise</b>	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
<b>Attenuation</b>	The reduction of an acoustic signal.
<b>A-Weighting</b>	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
<b>Decibel or dB</b>	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
<b>CNEL</b>	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
<b>Frequency</b>	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
<b>Ldn</b>	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
<b>Leq</b>	Equivalent or energy-averaged sound level.
<b>Lmax</b>	The highest root-mean-square (RMS) sound level measured over a given period of time.
<b>L(n)</b>	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one hour period.
<b>Loudness</b>	A subjective term for the sensation of the magnitude of sound.
<b>Noise</b>	Unwanted sound.
<b>Peak Noise</b>	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.
<b>RT<sub>60</sub></b>	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
<b>Sabin</b>	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
<b>Threshold of Hearing</b>	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
<b>Threshold of Pain</b>	Approximately 120 dB above the threshold of hearing.
<b>Impulsive</b>	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
<b>Simple Tone</b>	Any sound which can be judged as audible as a single pitch or set of single pitches.

Appendix B-1  
**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**  
**Data Input Sheet**

Project #: 2005-086 Canyon Springs Subdivision  
 Description: Existing without Project  
 Ldn/CNEL: Ldn  
 Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hwy. Trucks	Speed	Distance	Offset (dB)
1	Glenshire Dr.	West of Dorchester Dr.	7770	85		15	2	1	30	50	
2	Glenshire Dr.	East of Dorchester Dr.	5020	85		15	2	1	30	50	
3	Glenshire Dr.	West of Martis Peak Rd.	2450	85		15	2	1	30	50	
4	Glenshire Dr.	East of Martis Peak Rd.	2570	85		15	2	1	30	50	
5	Hirschdale Rd	North of Glenshire Rd.	2,700	85		15	2	1	30	50	
6	Hirschdale Rd	South of Glenshire Rd.	210	85		15	2	1	30	50	
7	Martis Peak Rd	South of Glenshire Rd.	266	85		15	2	1	30	50	
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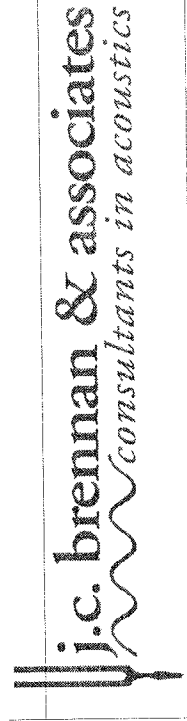
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**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**

**Predicted Levels**

Project #: 2005-086 Canyon Springs Subdivision  
 Description: Existing without Project  
 Ldn/CNEL: Ldn  
 Hard/Soft: Soft

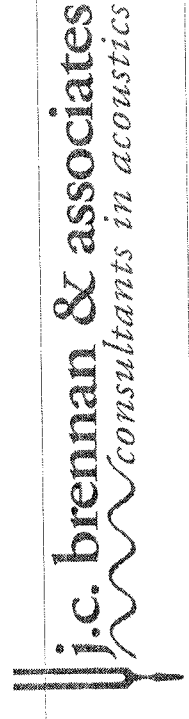
Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	Glenshire Dr.	West of Dorchester Dr.	59.8	53.5	57.7	62
2	Glenshire Dr.	East of Dorchester Dr.	57.9	51.6	55.8	61
3	Glenshire Dr.	West of Martis Peak Rd.	54.8	48.5	52.6	57
4	Glenshire Dr.	East of Martis Peak Rd.	55.0	48.7	52.9	58
5	Hirschdale Rd	North of Glenshire Rd.	55.2	49.0	53.1	58
6	Hirschdale Rd	South of Glenshire Rd.	44.1	37.9	42.0	47
7	Martis Peak Rd	South of Glenshire Rd.	45.2	38.9	43.0	48



Appendix D-1  
**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**  
**Noise Contour Output**

Project #: 2005-086 Canyon Springs Subdivision  
 Description: Existing without Project  
 Ldn/CNEL: Ldn  
 Hard/Soft: Soft

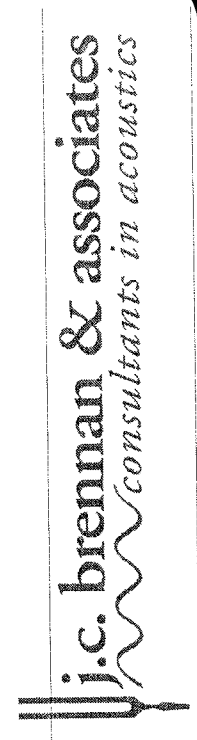
Segment	Roadway Name	Segment Description	Distances to Traffic Noise Contours -----						
			75	70	65	60	55		
1	Glenshire Dr.	West of Dorchester Dr.	7	16	34	73	158		
2	Glenshire Dr.	East of Dorchester Dr.	5	12	25	55	118		
3	Glenshire Dr.	West of Martis Peak Rd.	3	7	16	34	73		
4	Glenshire Dr.	East of Martis Peak Rd.	4	8	16	35	75		
5	Hirschdale Rd	North of Glenshire Rd.	4	8	17	36	78		
6	Hirschdale Rd	South of Glenshire Rd.	1	1	3	7	14		
7	Martis Peak Rd	South of Glenshire Rd.	1	2	4	8	17		



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**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**  
**Data Input Sheet**

Project #: 2005-086 Canyon Springs Subdivision  
 Description: Existing with Project  
 Ldn/CNEL: Ldn  
 Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Glenshire Dr.	West of Dorchester Dr.	9320	85		15	2	1	30	50	
2	Glenshire Dr.	East of Dorchester Dr.	6700	85		15	2	1	30	50	
3	Glenshire Dr.	West of Martis Peak Rd.	2616	85		15	2	1	30	50	
4	Glenshire Dr.	East of Martis Peak Rd.	4740	85		15	2	1	30	50	
5	Hirschdale Rd	North of Glenshire Rd.	3,820	85		15	2	1	30	50	
6	Hirschdale Rd	South of Glenshire Rd.	210	85		15	2	1	30	50	
7	Martis Peak Rd	South of Glenshire Rd.	1,660	85		15	2	1	30	50	
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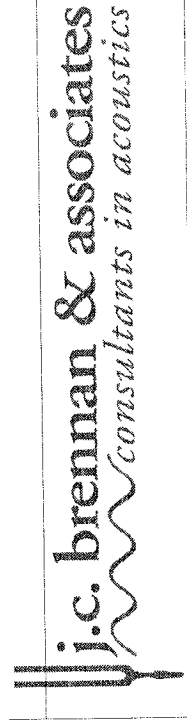
Appendix C-1

**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**

**Predicted Levels**

Project #: 2005-086 Canyon Springs Subdivision  
 Description: Existing with Project  
 Ldn/CNEL: Ldn  
 Hard/Soft: Soft

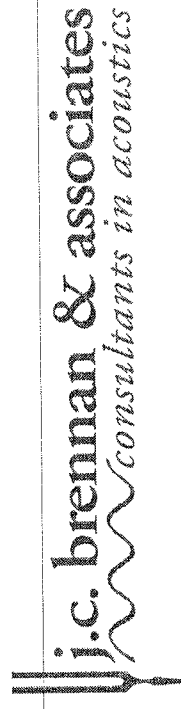
Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	Glenshire Dr.	West of Dorchester Dr.	60.6	54.3	58.4	63
2	Glenshire Dr.	East of Dorchester Dr.	59.2	52.9	57.0	62
3	Glenshire Dr.	West of Martis Peak Rd.	55.1	48.8	52.9	58
4	Glenshire Dr.	East of Martis Peak Rd.	57.7	51.4	55.5	60
5	Hirschdale Rd	North of Glenshire Rd.	56.7	50.5	54.6	59
6	Hirschdale Rd	South of Glenshire Rd.	44.1	37.9	42.0	47
7	Martis Peak Rd	South of Glenshire Rd.	53.1	46.8	51.0	56



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**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**  
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Project #: 2005-086 Canyon Springs Subdivision  
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 Hard/Soft: Soft

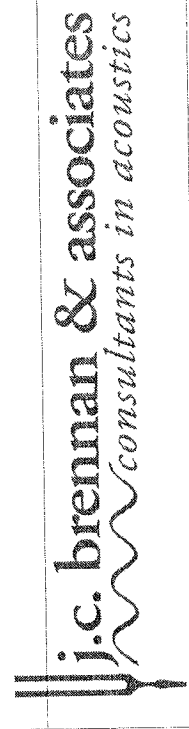
Segment	Roadway Name	Segment Description	Distances to Traffic Noise Contours -----				
			75	70	65	60	55
1	Glenshire Dr.	West of Dorchester Dr.	8	18	38	83	178
2	Glenshire Dr.	East of Dorchester Dr.	7	14	31	66	143
3	Glenshire Dr.	West of Martis Peak Rd.	4	8	16	35	76
4	Glenshire Dr.	East of Martis Peak Rd.	5	11	24	53	113
5	Hirschdale Rd	North of Glenshire Rd.	5	10	21	46	98
6	Hirschdale Rd	South of Glenshire Rd.	1	1	3	7	14
7	Martis Peak Rd	South of Glenshire Rd.	3	6	12	26	56



Appendix B-1  
**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**  
**Data Input Sheet**

Project #: 2005-086 Canyon Springs Subdivision  
 Description: 2025 No Project  
 Ldn/CNEL: Ldn  
 Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Glenshire Dr.	West of Dorchester Dr.	11230	85		15	2	1	30	50	
2	Glenshire Dr.	East of Dorchester Dr.	7890	85		15	2	1	30	50	
3	Glenshire Dr.	West of Martis Peak Rd.	2440	85		15	2	1	30	50	
4	Glenshire Dr.	East of Martis Peak Rd.	2520	85		15	2	1	30	50	
5	Hirschdale Rd	North of Glenshire Rd.	3,250	85		15	2	1	30	50	
6	Hirschdale Rd	South of Glenshire Rd.	2,120	85		15	2	1	30	50	
7	Martis Peak Rd	South of Glenshire Rd.	260	85		15	2	1	30	50	
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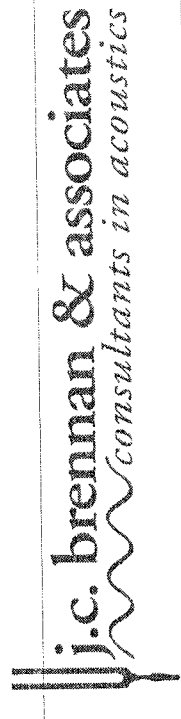
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**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**

**Predicted Levels**

Project #: 2005-086 Canyon Springs Subdivision  
 Description: 2025 No Project  
 Ldn/CNEL: Ldn  
 Hard/Soft: Soft

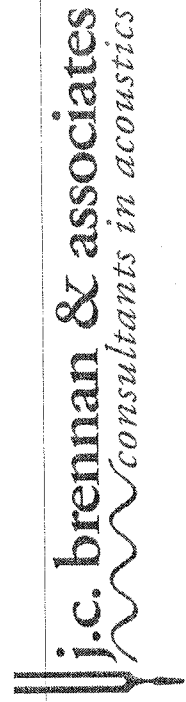
Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	Glenshire Dr.	West of Dorchester Dr.	61.4	55.1	59.3	64
2	Glenshire Dr.	East of Dorchester Dr.	59.9	53.6	57.7	63
3	Glenshire Dr.	West of Martis Peak Rd.	54.8	48.5	52.6	57
4	Glenshire Dr.	East of Martis Peak Rd.	54.9	48.7	52.8	58
5	Hirschdale Rd	North of Glenshire Rd.	56.0	49.8	53.9	59
6	Hirschdale Rd	South of Glenshire Rd.	54.2	47.9	52.0	57
7	Martis Peak Rd	South of Glenshire Rd.	45.1	38.8	42.9	48



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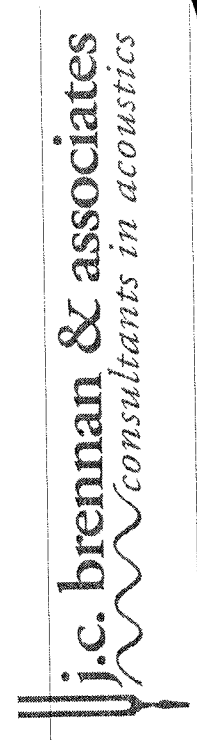
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	Glenshire Dr.	West of Dorchester Dr.	9	20	43	94	202
2	Glenshire Dr.	East of Dorchester Dr.	7	16	34	74	159
3	Glenshire Dr.	West of Martis Peak Rd.	3	7	16	34	73
4	Glenshire Dr.	East of Martis Peak Rd.	3	7	16	35	74
5	Hirschdale Rd	North of Glenshire Rd.	4	9	19	41	88
6	Hirschdale Rd	South of Glenshire Rd.	3	7	14	31	66
7	Martis Peak Rd	South of Glenshire Rd.	1	2	4	8	16



Appendix B-1  
**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**  
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Project #: 2005-086 Canyon Springs Subdivision  
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 Ldn/CNEL: Ldn  
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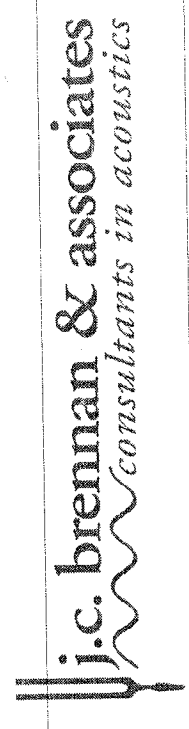
Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Glenshire Dr.	West of Dorchester Dr.	12950	85		15	2	1	30	50	
2	Glenshire Dr.	East of Dorchester Dr.	9740	85		15	2	1	30	50	
3	Glenshire Dr.	West of Martis Peak Rd.	2640	85		15	2	1	30	50	
4	Glenshire Dr.	East of Martis Peak Rd.	3470	85		15	2	1	30	50	
5	Hirschdale Rd	North of Glenshire Rd.	5,130	85		15	2	1	30	50	
6	Hirschdale Rd	South of Glenshire Rd.	2,150	85		15	2	1	30	50	
7	Martis Peak Rd	South of Glenshire Rd.	1,490	85		15	2	1	30	50	
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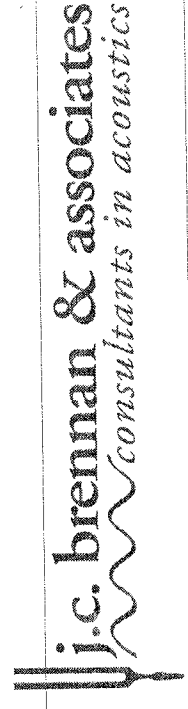
Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	Glenshire Dr.	West of Dorchester Dr.	62.0	55.8	59.9	65
2	Glenshire Dr.	East of Dorchester Dr.	60.8	54.5	58.6	63
3	Glenshire Dr.	West of Martis Peak Rd.	55.1	48.9	53.0	58
4	Glenshire Dr.	East of Martis Peak Rd.	56.3	50.0	54.2	59
5	Hirschdale Rd	North of Glenshire Rd.	58.0	51.7	55.9	61
6	Hirschdale Rd	South of Glenshire Rd.	54.2	48.0	52.1	57
7	Martis Peak Rd	South of Glenshire Rd.	52.7	46.4	50.5	55



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**FHWA-RD-77-108 Highway Traffic Noise Prediction Model**  
**Noise Contour Output**

Project #: 2005-086 Canyon Springs Subdivision  
 Description: 2025 With Project  
 Ldn/CNEL: Ldn  
 Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Distances to Traffic Noise Contours -----				
			75	70	65	60	55
1	Glenshire Dr.	West of Dorchester Dr.	10	22	48	103	222
2	Glenshire Dr.	East of Dorchester Dr.	9	18	39	85	183
3	Glenshire Dr.	West of Martis Peak Rd.	4	8	17	36	77
4	Glenshire Dr.	East of Martis Peak Rd.	4	9	20	43	92
5	Hirschdale Rd	North of Glenshire Rd.	6	12	26	55	120
6	Hirschdale Rd	South of Glenshire Rd.	3	7	14	31	67
7	Martis Peak Rd	South of Glenshire Rd.	2	5	11	24	52



2005-086 Traffic Summary

Multiplier= 10

Roadway	Segment	Existing		Existing + Project		2025 No Project		2025 + Project	
		PM Peak Hour	ADT	PM Peak Hour	ADT	PM Peak Hour	ADT	PM Peak Hour	ADT
2W	Glenshire Dr	777	7770	932	9320	1123	11230	1295	12950
2E	Glenshire Dr	502	5020	670	6700	789	7890	974	9740
4W	Glenshire Dr	245	2450	261	2610	244	2440	264	2640
4E	Glenshire Dr	257	2570	474	4740	252	2520	347	3470
5N	Hirschdale Rd	270	2700	382	3820	325	3250	513	5130
5S	Hirschdale Rd	21	210	21	210	212	2120	215	2150
4S	Martis Peak Rd	26	260	166	1660	26	260	149	1490