Appendix A

Table 1: Socio-economic Data for Grand County and Spanish Valley Areas

Areas	Population	Dwelling Units	Employment
Grand County – 2005	8,826[1]	3,678[2]	5,446[3]
Spanish Valley – 2005	3,428[4]	1,428[5]	2,146[6]
Grand County – 2015	9,439[7]	4,290[8]	5,912[9]
Spanish Valley – 2015	3,706[10]	1,685[11]	2,320[12]
Grand County – 2025	9,974[13]	4,750[14]	6,241[15]
Spanish Valley – 2025	3,921[16]	1,867[17]	2,455[18]

[1] Source: Utah Population Estimates Committee (UPEC)
[2] Derived using GOPB's 2005 Baseline Projections of population and divided by a household size of 2.4
[3] Source: 2005 Baseline Projections, GOPB
[4] Source: 2005 Baseline Projections, GOPB (The population is based on the assumption that the balance of the population of the county after Moab, Castle Valley, and Green River populations are deducted from the Grand Co. population total is equivalent to the Spanish Valley population.)
[5] Derived using GOPB's 2005 Baseline Projections of population and divided by a household size of 2.4
[6] Derived by applying Grand County's population to employment ratio of .626 to the "Spanish Valley" population
[7] Source: 2005 Baseline Projections, GOPB
[8] Derived using GOPB's 2005 Baseline Projections of population divided by a household size of 2.2
[9] Source: 2005 Baseline Projections, GOPB
[10] The 2015 population is derived by averaging GOPB's 2005 Baseline Projections for 2010 and 2020
[11] Derived by dividing the household size of 2.2 into the Spanish Valley population
[12] Derived by applying Grand County's population to employment ratio of .626 to the "Spanish Valley" population
[13] Source: 2005 Baseline Projections, GOPB
[14] Derived using GOPB's 2005 Baseline Projections of population and divided by a household size of 2.1
[15] Source: 2005 Baseline Projections, GOPB
[16] The 2015 population is derived by averaging GOPB's 2005 Baseline Projections for 2020 and 2030
[17] Derived using GOPB's 2005 Baseline Projections of population and divided by a household size of 2.1
[18] Derived by applying Grand County's population to employment ratio of .626 to the "Spanish Valley" population

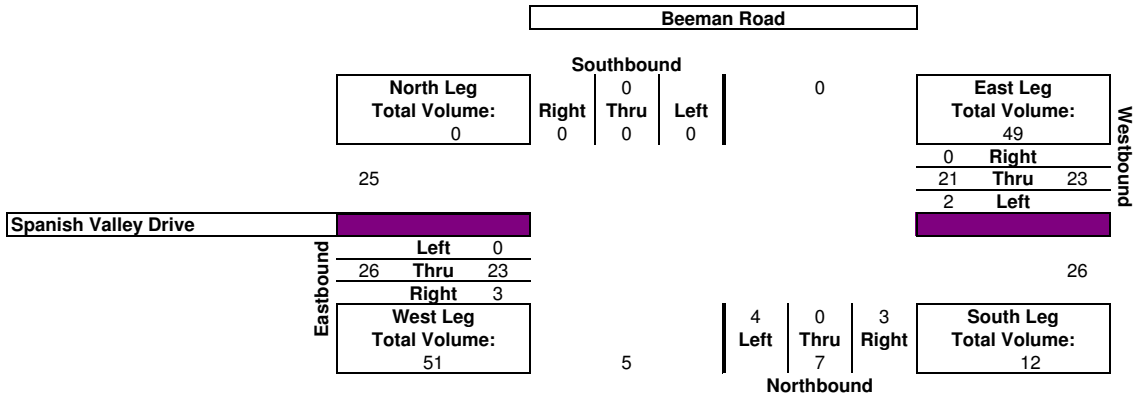
Appendix B

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Beeman Road**
E-W Street: **Spanish Valley Drive**
Date: **02-Mar-05**
Begin Time: **5:35**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	15 Min	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	All Moves	Totals	Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
05:35 PM	05:40 PM					0	0	2	1	0	0	0	1	0	0	3	0	7		
05:40 PM	05:45 PM					0	0	5	0	0	1	0	0	0	0	3	0	9		
05:45 PM	05:50 PM					0	0	4	0	0	0	0	0	0	1	2	0	7	23	
05:50 PM	05:55 PM					0	0	2	0	0	0	0	0	0	1	4	0	7		
05:55 PM	06:00 PM					0	0	3	0	0	1	0	2	0	0	5	0	11		
06:00 PM	06:05 PM																	0	18	
06:05 PM	06:10 PM																	0		
06:10 PM	06:15 PM																	0		
06:15 PM	06:20 PM																	0	0	
06:20 PM	06:25 PM																	0		
06:25 PM	06:30 PM																	0		
06:30 PM	06:35 PM																	0	0	41
06:35 PM	06:40 PM																	0		
06:40 PM	06:45 PM																	0		
06:45 PM	06:50 PM																	0	0	18
06:50 PM	06:55 PM																	0		
06:55 PM	07:00 PM																	0		
07:00 PM	07:05 PM																	0	0	0
07:05 PM	07:10 PM																	0		
07:10 PM	07:15 PM																	0		
07:15 PM	07:20 PM																	0	0	0
07:20 PM	07:25 PM																	0		
07:25 PM	07:30 PM																	0		
07:30 PM	07:35 PM																	0	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.00
Count:	1.00

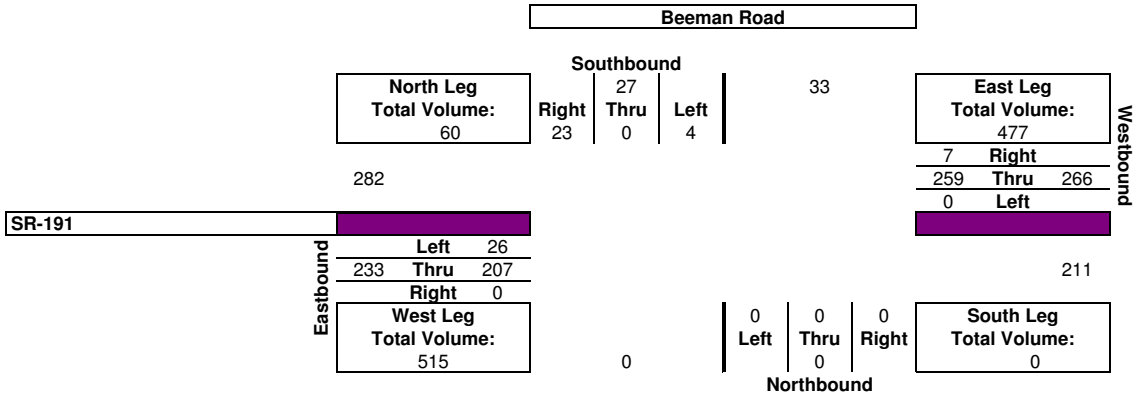
ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	0	0	2	21	0	4	0	3	0	23	3	
	0			23			7			26		
Trucks:		0%	Trucks:		0%	Trucks:		0%	Trucks:		0%	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Beeman Road**
E-W Street: **SR-191**
Date: **04-Mar-05**
Begin Time: **4:00**
Interval Length: **15 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB					
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Total	Hourly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals
04:00 PM	04:15 PM	0	3	0	0	11	1	58	0					4	0	36	4	102	
04:15 PM	04:30 PM	0	5	0	1	4	0	40	0					11	0	42	8	96	
04:30 PM	04:45 PM	0	8	0	0	10	1	48	0					8	0	46	4	107	
04:45 PM	05:00 PM	0	1	0	2	10	3	53	0					5	0	35	4	98	403
05:00 PM	05:15 PM																	0	301
05:15 PM	05:30 PM																	0	205
05:30 PM	05:45 PM																	0	98
05:45 PM	06:00 PM																	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.00
Count:	1.00
Total:	1.3

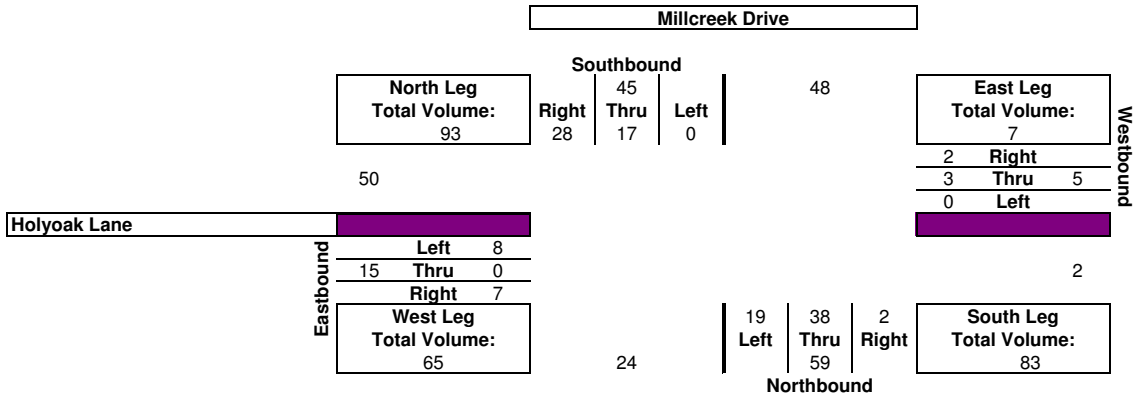
ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	0	23	0	259	7	0	0	0	26	207	0	
27			266			0			233			
Trucks:		0%	Trucks:		17%	Trucks:		0%	Trucks:		16%	
Peak Hour:		04:00 PM to 05:00 PM				Peak Vol:		526	PHF:		0.94	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Millcreek Drive**
E-W Street: **Holyoak Lane**
Date: **02-Mar-05**
Begin Time: **7:00**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	15 Min	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	All Moves	Totals	Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
07:00 AM	07:05 AM	0	2	5	0	0	1	0	0	0	0	2	1	0	1	0	0	12		
07:05 AM	07:10 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2		
07:10 AM	07:15 AM	0	0	0	0	0	0	0	0	0	1	4	2	0	0	0	0	7	21	
07:15 AM	07:20 AM	0	2	0	0	0	0	0	0	0	0	4	1	0	0	0	0	7		
07:20 AM	07:25 AM	0	4	1	0	0	0	0	0	0	0	4	2	1	0	0	1	12		
07:25 AM	07:30 AM	0	2	3	0	0	0	0	0	1	0	6	0	0	3	0	2	16	35	
07:30 AM	07:35 AM	0	6	1	0	0	0	1	0	0	0	4	2	0	0	0	1	15		
07:35 AM	07:40 AM	0	4	3	0	0	0	1	0	0	0	5	6	0	1	0	1	21		
07:40 AM	07:45 AM																	0	36	
07:45 AM	07:50 AM																	0		
07:50 AM	07:55 AM																	0		
07:55 AM	08:00 AM																	0	0	92
08:00 AM	08:05 AM																	0		
08:05 AM	08:10 AM																	0		
08:10 AM	08:15 AM																	0	0	71
08:15 AM	08:20 AM																	0		
08:20 AM	08:25 AM																	0		
08:25 AM	08:30 AM																	0	0	36
08:30 AM	08:35 AM																	0		
08:35 AM	08:40 AM																	0		
08:40 AM	08:45 AM																	0	0	0
08:45 AM	08:50 AM																	0		
08:50 AM	08:55 AM																	0		
08:55 AM	09:00 AM																	0	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.00
Count:	1.00

ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	17	28	0	3	2	19	38	2	8	0	7	
	45			5			59			15		
Trucks:		0%	Trucks:		0%	Trucks:		2%	Trucks:		18%	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Millcreek Drive**
E-W Street: **Holyoak Lane**
Date: **01-Mar-05**
Begin Time: **5:00**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	15 Min	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	All Moves	Totals	Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
05:00 PM	05:05 PM	0	3	2	1	0	0	1	0	0	0	6	7	0	9	0	2	31		
05:05 PM	05:10 PM	0	2	6	0	0	0	1	0	0	0	4	3	0	3	0	5	24		
05:10 PM	05:15 PM	0	5	6	0	0	0	0	0	0	0	8	3	0	2	1	9	34	89	
05:15 PM	05:20 PM	0	3	4	0	0	0	1	0	1	0	7	6	0	0	1	5	27		
05:20 PM	05:25 PM	0	5	4	0	0	1	0	0	0	1	3	2	0	3	1	8	28		
05:25 PM	05:30 PM	0	4	4	1	0	2	0	0	0	0	6	3	0	4	0	2	26	81	
05:30 PM	05:35 PM																	0		
05:35 PM	05:40 PM																	0		
05:40 PM	05:45 PM																	0	0	
05:45 PM	05:50 PM																	0		
05:50 PM	05:55 PM																	0		
05:55 PM	06:00 PM																	0	0	170
06:00 PM	06:05 PM																	0		
06:05 PM	06:10 PM																	0		
06:10 PM	06:15 PM																	0	0	81
06:15 PM	06:20 PM																	0		
06:20 PM	06:25 PM																	0		
06:25 PM	06:30 PM																	0	0	0
06:30 PM	06:35 PM																	0		
06:35 PM	06:40 PM																	0		
06:40 PM	06:45 PM																	0	0	0
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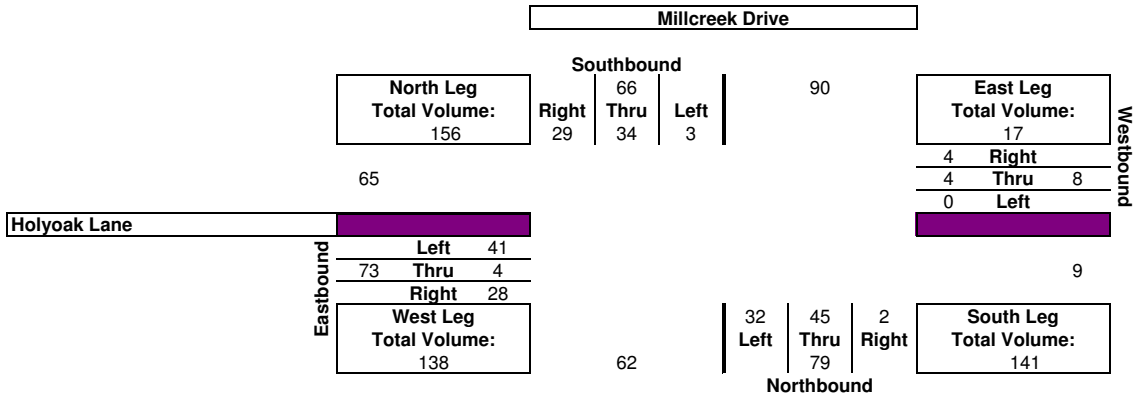
06:50 PM	06:55 PM																	0		
06:55 PM	07:00 PM																	0	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.00
Count:	1.00

ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	34	29	0	4	4	32	45	2	41	4	28	
	66			8			79			73		
Trucks:		0%	Trucks:		0%	Trucks:		2%	Trucks:		0%	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Millcreek Drive**
E-W Street: **Murphy Lane**
Date: **02-Mar-05**
Begin Time: **7:40**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	15 Min	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals	Totals
07:40 AM	07:45 AM	0	0	4	2	0	7	0	4	0	2	7	0					26		
07:45 AM	07:50 AM	0	0	3	2	0	1	0	4	0	2	6	0					18		
07:50 AM	07:55 AM	0	0	10	2	0	9	0	1	2	0	7	0					29	73	
07:55 AM	08:00 AM	0	0	1	1	0	11	0	3	0	2	13	0					31		
08:00 AM	08:05 AM	0	0	4	0	0	7	0	3	2	2	14	0					30		
08:05 AM	08:10 AM	1	0	4	6	0	6	0	0	0	1	13	0					30	91	
08:10 AM	08:15 AM																	0		
08:15 AM	08:20 AM																	0		
08:20 AM	08:25 AM																	0	0	
08:25 AM	08:30 AM																	0		
08:30 AM	08:35 AM																	0		
08:35 AM	08:40 AM																	0	0	164
08:40 AM	08:45 AM																	0		
08:45 AM	08:50 AM																	0		
08:50 AM	08:55 AM																	0	0	91
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09:15 AM	09:20 AM																	0		
09:20 AM	09:25 AM																	0	0	0
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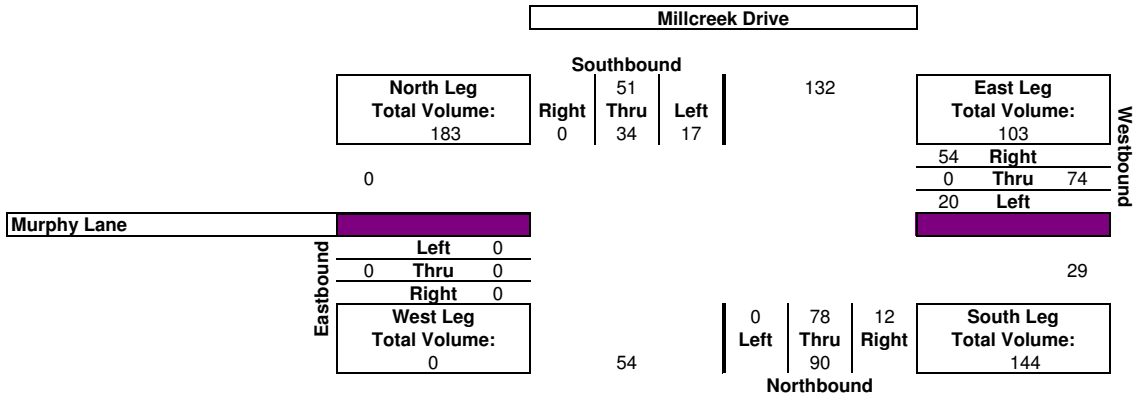

OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.00
Count:	1.00

ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17	34	0	20	0	54	0	78	12	0	0	0	
	51			74			90			0		
Trucks:		3%	Trucks:		0%	Trucks:		6%	Trucks:		0%	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Millcreek Drive**
E-W Street: **Murphy Lane**
Date: **01-Mar-05**
Begin Time: **5:30**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	15 Min	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	All Moves	Totals	Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
05:30 PM	05:35 PM	0	0	9	3	0	2	0	4	0	3	9	0					30		
05:35 PM	05:40 PM	0	0	4	4	0	1	0	2	0	3	4	0					18		
05:40 PM	05:45 PM	0	0	3	8	0	9	0	1	0	1	4	0					26	74	
05:45 PM	05:50 PM	1	0	4	7	0	3	0	2	0	4	7	0					27		
05:50 PM	05:55 PM	0	0	7	6	0	4	0	2	0	0	14	0					33		
05:55 PM	06:00 PM	0	0	5	3	0	3	0	3	0	0	5	0					19	79	
06:00 PM	06:05 PM																	0		
06:05 PM	06:10 PM																	0		
06:10 PM	06:15 PM																	0	0	
06:15 PM	06:20 PM																	0		
06:20 PM	06:25 PM																	0		
06:25 PM	06:30 PM																	0	0	153
06:30 PM	06:35 PM																	0		
06:35 PM	06:40 PM																	0		
06:40 PM	06:45 PM																	0	0	79
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06:50 PM	06:55 PM																	0		
06:55 PM	07:00 PM																	0	0	0
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07:05 PM	07:10 PM																	0		
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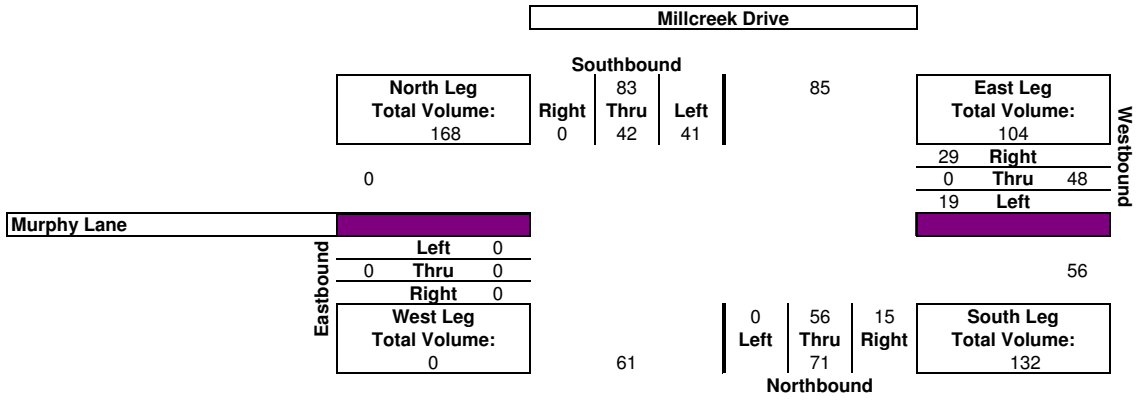


OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.00
Count:	1.00

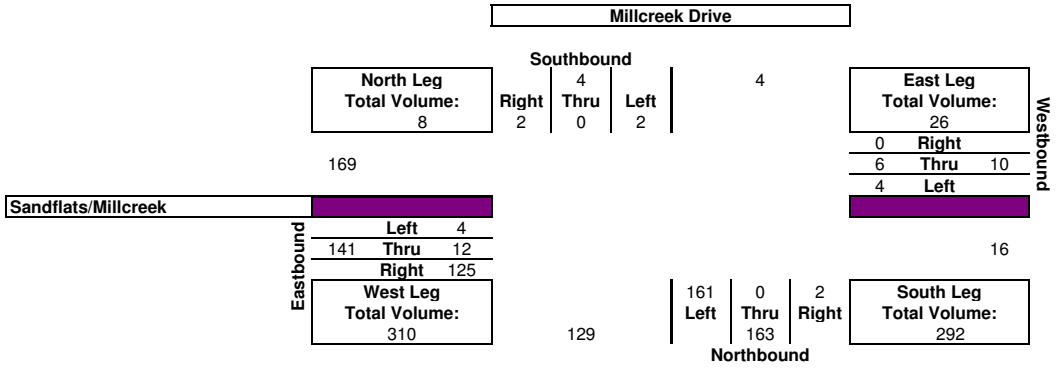
ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
41	42	0	19	0	29	0	56	15	0	0	0	
	83			48			71			0		
Trucks:		2%	Trucks:		0%	Trucks:		0%	Trucks:		0%	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Millcreek Drive**
E-W Street: **Sandflats/Millcreek**
Date: **02-Mar-05**
Begin Time: **08:10 AM**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	15 Min	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals	Totals
08:10 AM	08:15 AM	0	0	0	0	0	0	1	0	0	0	0	18	0	12	0	0	31		
08:15 AM	08:20 AM	0	0	0	0	0	0	1	0	0	1	0	11	0	10	1	1	25		
08:20 AM	08:25 AM	0	0	0	0	0	0	0	2	0	0	0	11	0	9	1	0	23	79	
08:25 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	8	0	7	1	0	16		
08:30 AM	08:35 AM	0	0	0	0	0	0	0	0	0	0	0	5	0	3	1	0	9		
08:35 AM	08:40 AM	0	0	0	0	0	0	0	0	0	0	0	6	0	7	1	1	15	40	
08:40 AM	08:45 AM	0	1	0	0	0	0	0	0	0	0	0	7	0	3	0	0	11		
08:45 AM	08:50 AM	0	0	0	1	0	0	1	0	0	0	0	11	0	9	1	0	23		
08:50 AM	08:55 AM	0	0	0	0	0	0	0	0	0	0	0	8	0	6	0	0	14	48	
08:55 AM	09:00 AM																	0		
09:00 AM	09:05 AM																	0		
09:05 AM	09:10 AM																	0	0	167
09:10 AM	09:15 AM																	0		
09:15 AM	09:20 AM																	0		
09:20 AM	09:25 AM																	0	0	88
09:25 AM	09:30 AM																	0		
09:30 AM	09:35 AM																	0		
09:35 AM	09:40 AM																	0	0	48
09:40 AM	09:45 AM																	0		
09:45 AM	09:50 AM																	0		
09:50 AM	09:55 AM																	0	0	0
09:55 AM	10:00 AM																	0		
10:00 AM	10:05 AM																	0		
10:05 AM	10:10 AM																	0	0	0



OPTIONAL Adjustment Factors	
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Daily:	1.00
Interval:	1.09
Count:	1.33
Total:	1.89

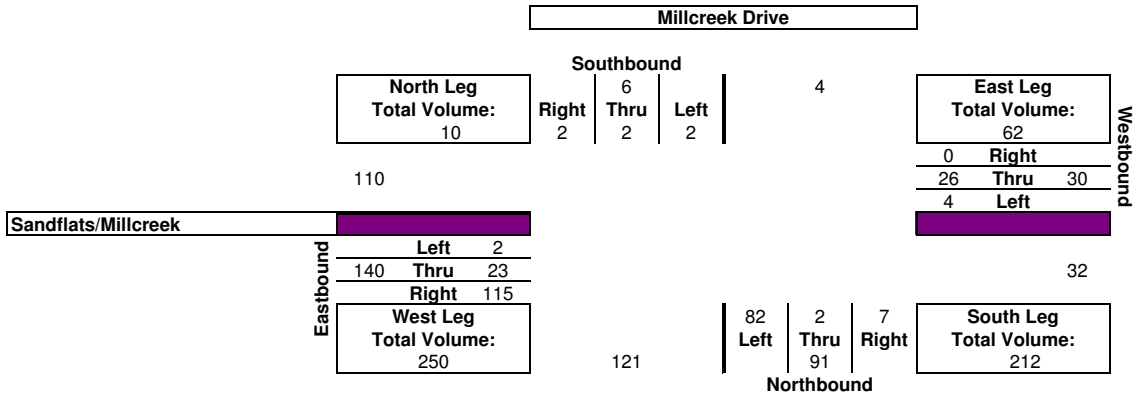
ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	0	2	4	6	0	161	0	2	4	12	125	
4			10			163			141			
Trucks:		0%	Trucks:		0%	Trucks:		0%	Trucks:		0%	
Peak Hour:		07:30 AM to 08:30 AM				Peak Vol:		318	PHF:		0.90	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Millcreek Drive**
E-W Street: **Sandflats/Millcreek**
Date: **01-Mar-05**
Begin Time: **4:05**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	15 Min	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	All Moves	Totals	Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
04:05 PM	04:10 PM	0	1	0	0	0	0	5	0	0	0	0	7	0	10	2	0	25		
04:10 PM	04:15 PM	0	0	0	0	0	0	3	0	0	2	0	9	0	15	3	1	33		
04:15 PM	04:20 PM	0	0	0	1	0	0	2	1	0	1	1	17	0	13	4	0	40	98	
04:20 PM	04:25 PM	0	0	0	0	0	0	4	2	0	1	0	10	0	21	2	0	40		
04:25 PM	04:30 PM	0	0	0	0	0	0	3	0	0	1	0	6	0	8	2	0	20		
04:30 PM	04:35 PM	0	0	0	0	0	0	1	0	0	0	0	7	0	12	2	0	22	82	
04:35 PM	04:40 PM	0	0	1	0	0	0	2	0	0	0	0	7	0	9	2	0	21		
04:40 PM	04:45 PM																	0		
04:45 PM	04:50 PM																	0	21	
04:50 PM	04:55 PM																	0		
04:55 PM	05:00 PM																	0		
05:00 PM	05:05 PM																	0	0	201
05:05 PM	05:10 PM																	0		
05:10 PM	05:15 PM																	0		
05:15 PM	05:20 PM																	0	0	103
05:20 PM	05:25 PM																	0		
05:25 PM	05:30 PM																	0		
05:30 PM	05:35 PM																	0	0	21
05:35 PM	05:40 PM																	0		
05:40 PM	05:45 PM																	0		
05:45 PM	05:50 PM																	0	0	0
05:50 PM	05:55 PM																	0		
05:55 PM	06:00 PM																	0		
06:00 PM	06:05 PM																	0	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.00
Count:	1.00

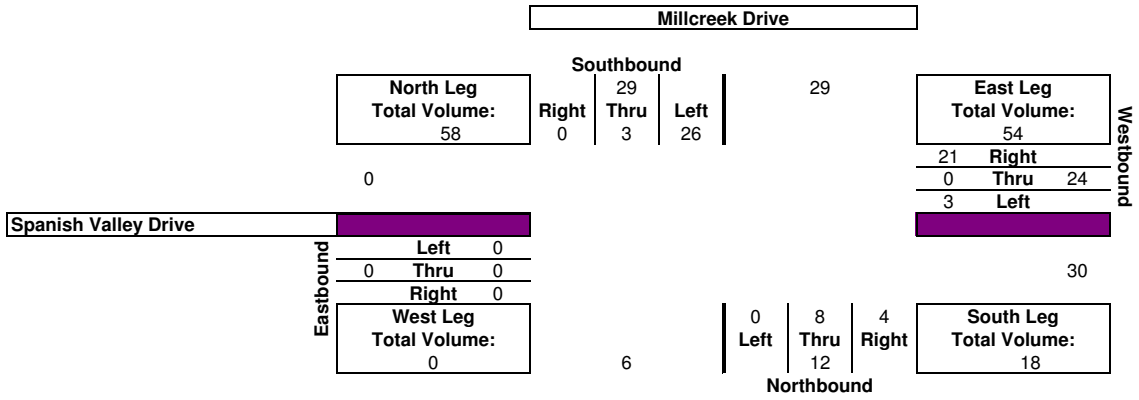
ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	2	2	4	26	0	82	2	7	2	23	115	
	6			30			91			140		
Trucks:		0%	Trucks:		0%	Trucks:		0%	Trucks:		0%	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Millcreek Drive**
E-W Street: **Spanish Valley Drive**
Date: **01-Mar-05**
Begin Time: **4:45**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	15 Min	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	All Moves	Totals	Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
04:45 PM	04:50 PM	0	0	2	5	0	4	0	1	0	2	5	0					19		
04:50 PM	04:55 PM	0	0	0	9	0	7	0	0	0	1	1	0					18		
04:55 PM	05:00 PM	0	0	0	6	0	5	0	1	0	0	0	0					12	49	
05:00 PM	05:05 PM																	0		
05:05 PM	05:10 PM																	0		
05:10 PM	05:15 PM																	0	0	
05:15 PM	05:20 PM																	0		
05:20 PM	05:25 PM																	0		
05:25 PM	05:30 PM																	0	0	
05:30 PM	05:35 PM																	0		
05:35 PM	05:40 PM																	0		
05:40 PM	05:45 PM																	0	0	49
05:45 PM	05:50 PM																	0		
05:50 PM	05:55 PM																	0		
05:55 PM	06:00 PM																	0	0	0
06:00 PM	06:05 PM																	0		
06:05 PM	06:10 PM																	0		
06:10 PM	06:15 PM																	0	0	0
06:15 PM	06:20 PM																	0		
06:20 PM	06:25 PM																	0		
06:25 PM	06:30 PM																	0	0	0
06:30 PM	06:35 PM																	0		
06:35 PM	06:40 PM																	0		
06:40 PM	06:45 PM																	0	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.00
Count:	1.00

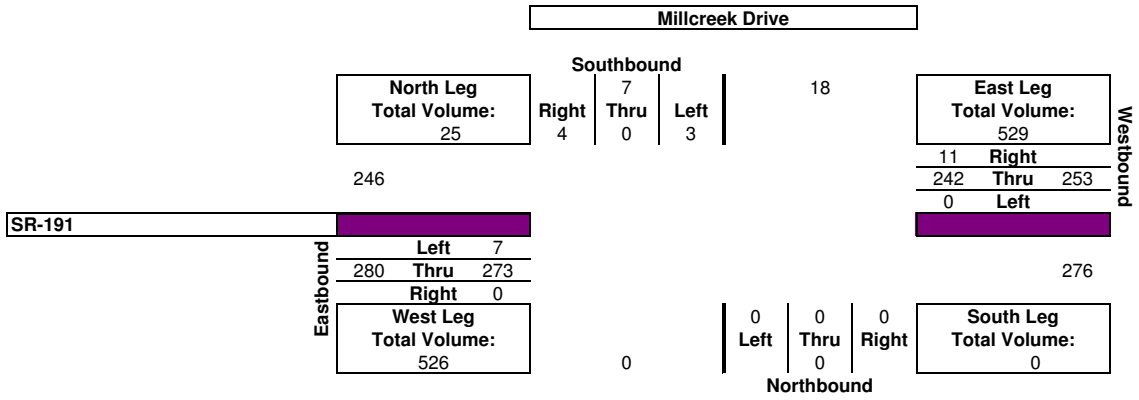
ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
26	3	0	3	0	21	0	8	4	0	0	0	
29			24			12			0			
Trucks:		0%	Trucks:		0%	Trucks:		0%	Trucks:		0%	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Millcreek Drive**
E-W Street: **SR-191**
Date: **02-Mar-05**
Begin Time: **5:00**
Interval Length: **5 min**

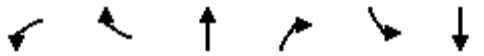
HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	15 Min	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals	Totals
05:00 PM	05:05 PM	0	0	0	0	2	2	33	0					3	0	43	0	78		
05:05 PM	05:10 PM	0	0	0	1	5	2	37	0					1	0	27	4	71		
05:10 PM	05:15 PM	0	1	0	0	7	1	37	0					3	0	51	0	90	239	
05:15 PM	05:20 PM	0	1	0	0	5	2	28	0					2	0	31	1	63		
05:20 PM	05:25 PM	0	0	0	1	1	0	13	0					3	0	24	0	38		
05:25 PM	05:30 PM	0	1	0	0	5	1	38	0					1	0	34	0	74	175	
05:30 PM	05:35 PM																	0		
05:35 PM	05:40 PM																	0		
05:40 PM	05:45 PM																	0	0	
05:45 PM	05:50 PM																	0		
05:50 PM	05:55 PM																	0		
05:55 PM	06:00 PM																	0	0	414
06:00 PM	06:05 PM																	0		
06:05 PM	06:10 PM																	0		
06:10 PM	06:15 PM																	0	0	175
06:15 PM	06:20 PM																	0		
06:20 PM	06:25 PM																	0		
06:25 PM	06:30 PM																	0	0	0
06:30 PM	06:35 PM																	0		
06:35 PM	06:40 PM																	0		
06:40 PM	06:45 PM																	0	0	0
06:45 PM	06:50 PM																	0		
06:50 PM	06:55 PM																	0		
06:55 PM	07:00 PM																	0	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.00
Count:	1.00

ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	0	4	0	242	11	0	0	0	7	273	0	
	7			253			0			280		
Trucks:		0%	Trucks:		13%	Trucks:		0%	Trucks:		6%	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	39	105	153	23	34	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	69	186	271	41	60	119
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	531	291			312	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	531	291			312	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	86	75			95	
cM capacity (veh/h)	485	748			1249	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	255	312	179
Volume Left	69	0	60
Volume Right	186	41	0
cSH	652	1700	1249
Volume to Capacity	0.39	0.18	0.05
Queue Length 95th (ft)	46	0	4
Control Delay (s)	14.0	0.0	3.0
Lane LOS	B		A
Approach Delay (s)	14.0	0.0	3.0
Approach LOS	B		

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	41	63	123	32	89	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	45	68	134	35	97	100
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	445	151			168	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	445	151			168	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	92			93	
cM capacity (veh/h)	532	895			1409	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	113	168	197
Volume Left	45	0	97
Volume Right	68	35	0
cSH	705	1700	1409
Volume to Capacity	0.16	0.10	0.07
Queue Length 95th (ft)	14	0	6
Control Delay (s)	11.1	0.0	4.1
Lane LOS	B		A
Approach Delay (s)	11.1	0.0	4.1
Approach LOS	B		

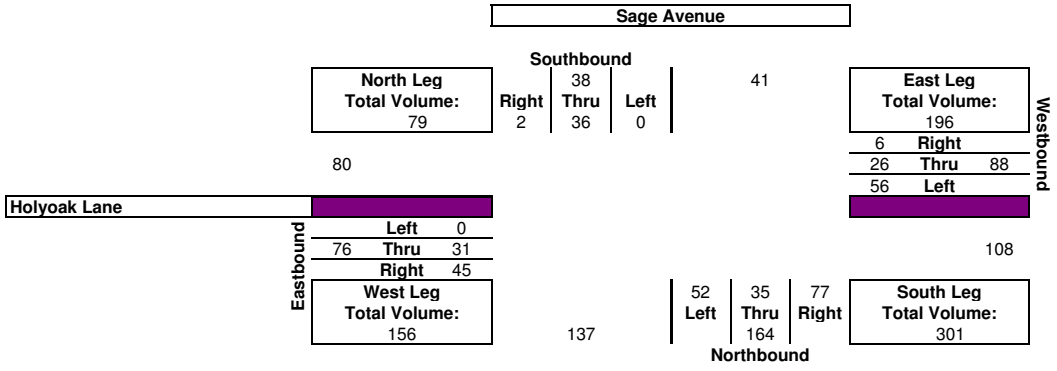
Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Sage Avenue**
E-W Street: **Holyoak Lane**
Date: **02-Mar-05**
Begin Time: **3:35**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB						
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Total	15 Min	Hourly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals	Totals
03:35 PM	03:40 PM	0	0	1	0	0	0	1	3	0	1	3	2	0	4	1	0	16		
03:40 PM	03:45 PM	0	0	1	0	0	1	3	0	0	5	2	4	0	2	4	0	22		
03:45 PM	03:50 PM	0	0	1	0	0	1	1	5	1	6	3	5	0	2	0	0	24	62	
03:50 PM	03:55 PM	1	1	2	0	0	1	0	7	0	4	2	4	1	5	3	0	29		
03:55 PM	04:00 PM	0	0	2	0	1	0	0	3	0	3	2	2	0	2	1	0	15		
04:00 PM	04:05 PM	0	0	1	0	0	0	2	2	0	4	1	3	0	6	2	0	21	65	
04:05 PM	04:10 PM	0	0	3	0	1	0	1	4	0	6	3	2	0	0	0	0	19		
04:10 PM	04:15 PM	0	0	2	0	0	0	0	3	0	4	1	3	0	1	1	0	15		
04:15 PM	04:20 PM	0	0	3	0	0	0	3	2	0	9	2	1	0	1	1	0	22	56	
04:20 PM	04:25 PM	0	0	4	0	0	0	3	2	0	1	0	3	0	2	4	0	19		
04:25 PM	04:30 PM																	0		
04:30 PM	04:35 PM																	0	19	202
04:35 PM	04:40 PM																	0		
04:40 PM	04:45 PM																	0		
04:45 PM	04:50 PM																	0	0	140
04:50 PM	04:55 PM																	0		
04:55 PM	05:00 PM																	0		
05:00 PM	05:05 PM																	0	0	75
05:05 PM	05:10 PM																	0		
05:10 PM	05:15 PM																	0		
05:15 PM	05:20 PM																	0	0	19
05:20 PM	05:25 PM																	0		
05:25 PM	05:30 PM																	0		
05:30 PM	05:35 PM																	0	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.15
Count:	1.20
Total:	1.79

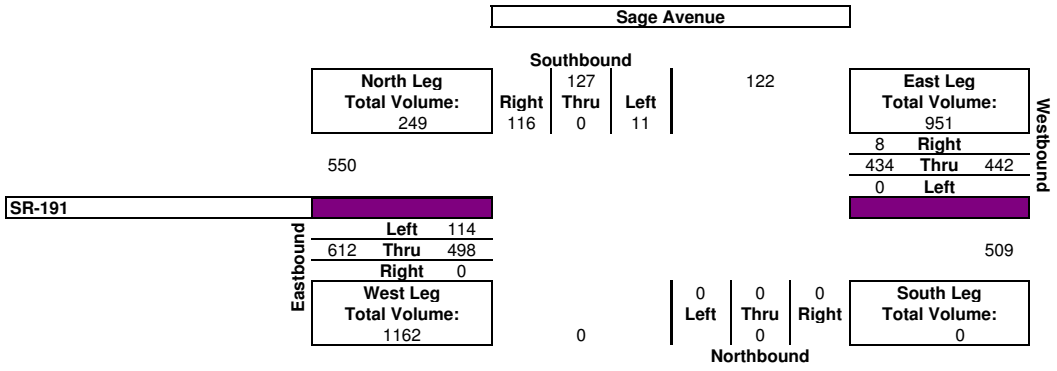
ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	36	2	56	26	6	52	35	77	0	31	45	
38			88			164			76			
Trucks:		5%	Trucks:		4%	Trucks:		1%	Trucks:		2%	
Peak Hour:		04:45 PM to 05:45 PM				Peak Vol:		366	PHF:		0.91	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Sage Avenue**
E-W Street: **SR-191**
Date: **02-Mar-05**
Begin Time: **4:30**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB						
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Total	15 Min	Hourly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals	Totals
04:30 PM	04:35 PM	0	6	0	1	6	0	27	0					5	0	27	6	67		
04:35 PM	04:40 PM	0	5	0	0	4	1	28	0					6	0	33	11	78		
04:40 PM	04:45 PM	0	4	0	0	2	0	33	0					3	0	27	6	70	215	
04:45 PM	04:50 PM	0	8	0	0	2	2	19	0					7	0	45	4	78		
04:50 PM	04:55 PM	0	12	0	0	2	0	20	0					4	0	31	6	69		
04:55 PM	05:00 PM	0	9	0	3	1	0	38	0					3	0	26	10	86	233	
05:00 PM	05:05 PM																	0		
05:05 PM	05:10 PM																	0		
05:10 PM	05:15 PM																	0	0	
05:15 PM	05:20 PM																	0		
05:20 PM	05:25 PM																	0		
05:25 PM	05:30 PM																	0	0	448
05:30 PM	05:35 PM																	0		
05:35 PM	05:40 PM																	0		
05:40 PM	05:45 PM																	0	0	233
05:45 PM	05:50 PM																	0		
05:50 PM	05:55 PM																	0		
05:55 PM	06:00 PM																	0	0	0
06:00 PM	06:05 PM																	0		
06:05 PM	06:10 PM																	0		
06:10 PM	06:15 PM																	0	0	0
06:15 PM	06:20 PM																	0		
06:20 PM	06:25 PM																	0		
06:25 PM	06:30 PM																	0	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.01
Count:	2.00
Total:	2.63

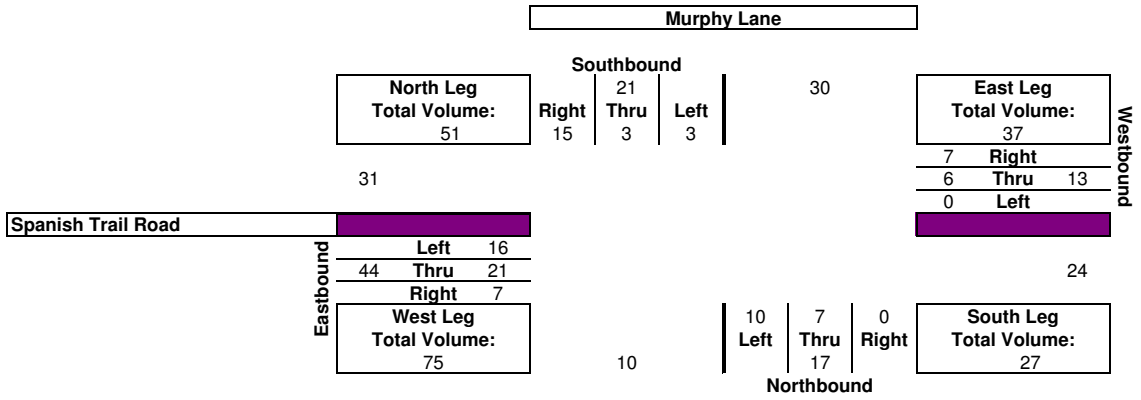
ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11	0	116	0	434	8	0	0	0	114	498	0	
127			442			0			612			
Trucks:		0%	Trucks:		10%	Trucks:		0%	Trucks:		12%	
Peak Hour:		04:45 PM to 05:45 PM				Peak Vol:		1181	PHF:		0.91	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Murphy Lane**
E-W Street: **Spanish Trail Road**
Date: **01-Mar-05**
Begin Time: **5:15**
Interval Length: **5 min**

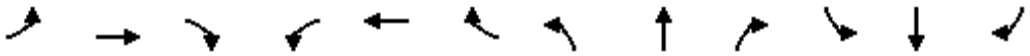
HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	15 Min	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	All Moves	Totals	Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
05:15 PM	05:20 PM	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2	4	9		
05:20 PM	05:25 PM	0	2	0	0	0	0	2	0	0	0	2	3	1	1	1	1	12		
05:25 PM	05:30 PM	0	1	0	0	0	1	0	0	0	0	0	1	0	1	2	1	7	28	
05:30 PM	05:35 PM	0	1	1	1	0	1	1	0	0	0	0	2	0	1	4	1	13		
05:35 PM	05:40 PM	0	1	0	0	0	1	0	0	0	0	2	0	1	0	3	3	10		
05:40 PM	05:45 PM	0	3	0	0	0	0	1	0	0	0	1	1	0	0	4	1	11	34	
05:45 PM	05:50 PM	0	2	0	1	0	1	0	0	0	0	0	0	0	2	0	1	7		
05:50 PM	05:55 PM																	0		
05:55 PM	06:00 PM																	0	7	
06:00 PM	06:05 PM																	0		
06:05 PM	06:10 PM																	0		
06:10 PM	06:15 PM																	0	0	69
06:15 PM	06:20 PM																	0		
06:20 PM	06:25 PM																	0		
06:25 PM	06:30 PM																	0	0	41
06:30 PM	06:35 PM																	0		
06:35 PM	06:40 PM																	0		
06:40 PM	06:45 PM																	0	0	7
06:45 PM	06:50 PM																	0		
06:50 PM	06:55 PM																	0		
06:55 PM	07:00 PM																	0	0	0
07:00 PM	07:05 PM																	0		
07:05 PM	07:10 PM																	0		
07:10 PM	07:15 PM																	0	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.00
Count:	1.00

ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3	3	15	0	6	7	10	7	0	16	21	7	
21			13			17			44			
Trucks:		0%	Trucks:		0%	Trucks:		0%	Trucks:		6%	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Volume (veh/h)	28	37	12	0	10	12	16	12	0	5	5	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	40	13	0	11	13	17	13	0	5	5	27
Approach Volume (veh/h)		84			24			30			38	
Crossing Volume (veh/h)		11			61			76			28	
High Capacity (veh/h)		1373			1320			1305			1354	
High v/c (veh/h)		0.06			0.02			0.02			0.03	
Low Capacity (veh/h)		1151			1103			1089			1134	
Low v/c (veh/h)		0.07			0.02			0.03			0.03	

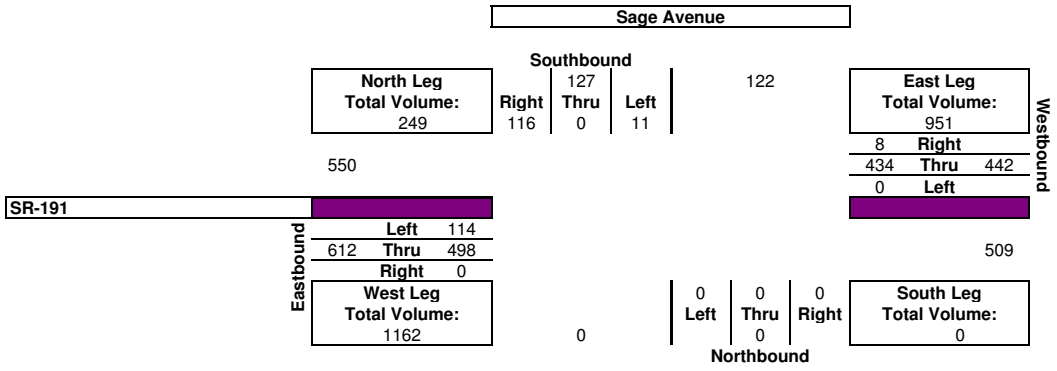
Intersection Summary					
Maximum v/c High	0.06				
Maximum v/c Low	0.07				
Intersection Capacity Utilization	22.0%	ICU Level of Service		A	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Sage Avenue**
E-W Street: **SR-191**
Date: **02-Mar-05**
Begin Time: **4:30**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB						
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Total	15 Min	Hourly
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	All Moves	Totals	Totals
04:30 PM	04:35 PM	0	6	0	1	6	0	27	0					5	0	27	6	67		
04:35 PM	04:40 PM	0	5	0	0	4	1	28	0					6	0	33	11	78		
04:40 PM	04:45 PM	0	4	0	0	2	0	33	0					3	0	27	6	70	215	
04:45 PM	04:50 PM	0	8	0	0	2	2	19	0					7	0	45	4	78		
04:50 PM	04:55 PM	0	12	0	0	2	0	20	0					4	0	31	6	69		
04:55 PM	05:00 PM	0	9	0	3	1	0	38	0					3	0	26	10	86	233	
05:00 PM	05:05 PM																	0		
05:05 PM	05:10 PM																	0		
05:10 PM	05:15 PM																	0	0	
05:15 PM	05:20 PM																	0		
05:20 PM	05:25 PM																	0		
05:25 PM	05:30 PM																	0	0	448
05:30 PM	05:35 PM																	0		
05:35 PM	05:40 PM																	0		
05:40 PM	05:45 PM																	0	0	233
05:45 PM	05:50 PM																	0		
05:50 PM	05:55 PM																	0		
05:55 PM	06:00 PM																	0	0	0
06:00 PM	06:05 PM																	0		
06:05 PM	06:10 PM																	0		
06:10 PM	06:15 PM																	0	0	0
06:15 PM	06:20 PM																	0		
06:20 PM	06:25 PM																	0		
06:25 PM	06:30 PM																	0	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.01
Count:	2.00
Total:	2.63

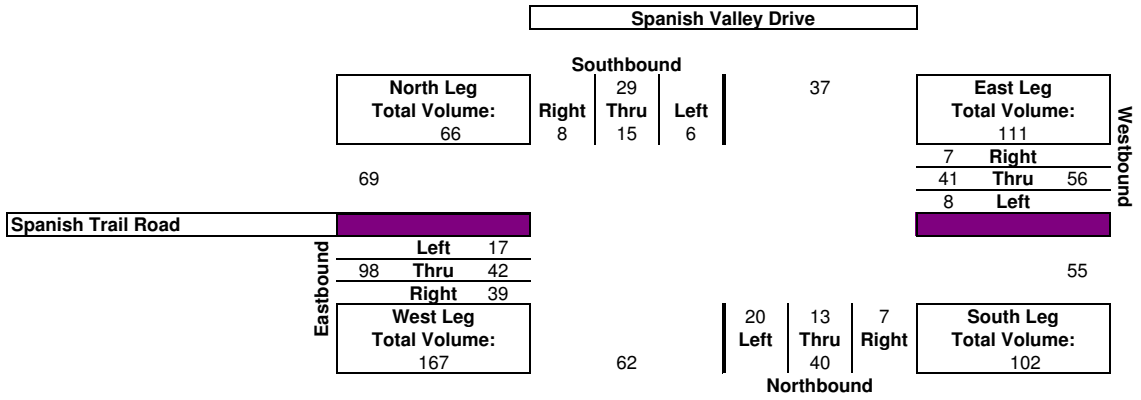
ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11	0	116	0	434	8	0	0	0	114	498	0	
127			442			0			612			
Trucks:		0%	Trucks:		10%	Trucks:		0%	Trucks:		12%	
Peak Hour:		04:45 PM to 05:45 PM				Peak Vol:		1181	PHF:		0.91	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **Spanish Valley Drive**
E-W Street: **Spanish Trail Road**
Date: **01-Mar-05**
Begin Time: **4:35**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	15 Min	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	All Moves	Totals	Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
04:35 PM	04:40 PM	0	1	0	2	0	1	0	0	0	0	0	2	0	5	4	2	17		
04:40 PM	04:45 PM	0	0	2	0	0	1	6	2	0	0	3	2	0	4	5	1	26		
04:45 PM	04:50 PM	0	0	2	0	0	1	7	1	0	2	0	2	0	3	4	2	24	67	
04:50 PM	04:55 PM	0	2	2	0	0	0	2	1	0	1	1	4	1	6	4	0	23		
04:55 PM	05:00 PM	0	2	3	1	0	1	5	1	0	0	1	1	0	2	7	4	28		
05:00 PM	05:05 PM	0	1	1	0	0	0	6	1	0	1	2	2	0	4	2	0	20	71	
05:05 PM	05:10 PM	0	0	1	1	0	1	5	0	0	1	3	2	0	6	6	4	30		
05:10 PM	05:15 PM																	0		
05:15 PM	05:20 PM																	0	30	
05:20 PM	05:25 PM																	0		
05:25 PM	05:30 PM																	0		
05:30 PM	05:35 PM																	0	0	168
05:35 PM	05:40 PM																	0		
05:40 PM	05:45 PM																	0		
05:45 PM	05:50 PM																	0	0	101
05:50 PM	05:55 PM																	0		
05:55 PM	06:00 PM																	0		
06:00 PM	06:05 PM																	0	0	30
06:05 PM	06:10 PM																	0		
06:10 PM	06:15 PM																	0		
06:15 PM	06:20 PM																	0	0	0
06:20 PM	06:25 PM																	0		
06:25 PM	06:30 PM																	0		
06:30 PM	06:35 PM																	0	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.00
Count:	1.00

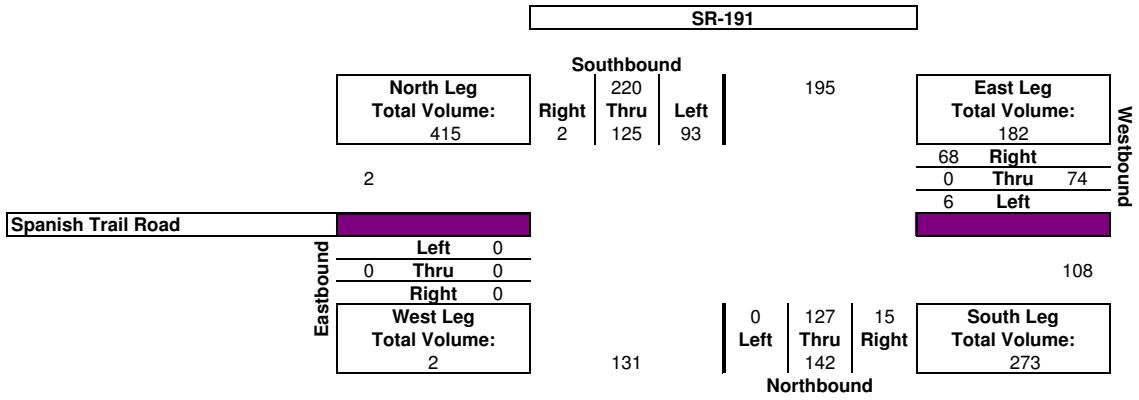
ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	15	8	8	41	7	20	13	7	17	42	39	
	29			56			40			98		
Trucks:		0%	Trucks:		0%	Trucks:		0%	Trucks:		1%	

TRAFFIC COUNT SUMMARY

City: **Spanish Valley**
N-S Street: **SR-191**
E-W Street: **Spanish Trail Road**
Date: **01-Mar-05**
Begin Time: **4:00**
Interval Length: **5 min**

HORROCKS ENGINEERS

Time Interval		SB				WB				NB				EB				Total	15 Min	Hourly
		Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	Trucks	Right	Thru	Left	All Moves	Totals	Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
04:00 PM	04:05 PM	5	0	19	14	0	6	0	1	1	1	10	0					51		
04:05 PM	04:10 PM	2	0	16	10	0	10	0	1	2	0	13	0					50		
04:10 PM	04:15 PM	1	0	11	8	1	12	0	0	2	0	6	0					37	138	
04:15 PM	04:20 PM	4	0	20	8	0	2	0	1	4	2	11	0					44		
04:20 PM	04:25 PM	1	0	8	2	0	5	0	1	2	2	16	0					34		
04:25 PM	04:30 PM	3	0	12	13	0	7	0	0	1	1	14	0					47	125	
04:30 PM	04:35 PM	0	1	10	16	1	10	0	0	4	5	27	0					69		
04:35 PM	04:40 PM																	0		
04:40 PM	04:45 PM																	0	69	
04:45 PM	04:50 PM																	0		
04:50 PM	04:55 PM																	0		
04:55 PM	05:00 PM																	0	0	332
05:00 PM	05:05 PM																	0		
05:05 PM	05:10 PM																	0		
05:10 PM	05:15 PM																	0	0	194
05:15 PM	05:20 PM																	0		
05:20 PM	05:25 PM																	0		
05:25 PM	05:30 PM																	0	0	69
05:30 PM	05:35 PM																	0		
05:35 PM	05:40 PM																	0		
05:40 PM	05:45 PM																	0	0	0
05:45 PM	05:50 PM																	0		
05:50 PM	05:55 PM																	0		
05:55 PM	06:00 PM																	0	0	0



OPTIONAL Adjustment Factors	
Monthly:	1.30
Daily:	1.00
Interval:	1.00
Count:	1.00

ADJUSTED PEAK HOUR TRAFFIC VOLUMES												
Southbound			Westbound			Northbound			Eastbound			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
93	125	2	6	0	68	0	127	15	0	0	0	
	220			74			142			0		
Trucks:		10%	Trucks:		4%	Trucks:		15%	Trucks:		0%	

Begin Time	Tue. 01-Mar-05	NB	SB		RAW	Moving AVG	Hourly		Raw Hourly	
03:30 PM		24	55	79	84.5					
03:45 PM		21	53	74	86.5					
04:00 PM		16	56	72	83.5	91.1	395.8	372.2	388.5	
04:15 PM		33	63	96	101	95	412.7	393.6	425.5	
04:30 PM		35	63	98	100	101.8	425.1	419.4	438.5	
04:45 PM		22	66	88	104	107.9	424.3	431.8	440	PHF 0.91
05:00 PM		40	72	112	120.5	108	409.5	430.8	433	
05:15 PM		28	82	110	114	107.4	390.2	416.8	384.5	
05:30 PM		35	76	111	101.5	101	367	388.2	351.5	
05:45 PM		32	55	87	97	93.1	341.8	363.6	342	
06:00 PM		22	50	72	72	88.7	321.7	345.8	324	
06:15 PM		26	55	81	81	84.2	296.8	320	307	
06:30 PM		34	58	92	92	75.8	273	297.6	284	
06:45 PM		26	53	79	79	73	255	273.6	227	
07:00 PM		12	43	55	55	63.8	238	248.4	223	
07:15 PM		15	43	58	58	60.4	226.8	236.4	234	
07:30 PM		14	21	35	35	57.8	219	227.6	222	
07:45 PM		25	50	75	75	56	208.4	217.2	228	
08:00 PM		12	54	66	66	52.6	198	210.4	188	
08:15 PM		12	34	46	46	52.6	190.8	199.6	170	
08:30 PM		14	27	41	41	47.2	183	185.6	182	
08:45 PM		10	25	35	35	45.6	178.4	182	186	
09:00 PM		15	33	48	48	45.4	171.2	180.4	189	
09:15 PM		17	41	58	58	44.8	157.4	174.8	165	
09:30 PM		14	31	45	45	42.6	139.8	162	134	
09:45 PM		11	27	38	38	38.4	121.2	140	113	
10:00 PM		6	18	24	24	31.6	105.8	117.6	98	
10:15 PM		10	17	27	27	27.2	95.8	102.4	96	
10:30 PM		8	16	24	24	24	91.2	94	88	
10:45 PM		9	14	23	23	23	90.8	89.2	84	
11:00 PM		9	13	22	22	21.6	90.2	88.4	90	
11:15 PM		6	13	19	19	22.6	90	92.4	96	
11:30 PM		5	15	20	20	23.6	89.8	92	93	
11:45 PM		9	20	29	29	22.4	85.2	87.6	87	
12:00 AM	02-Mar-05	17	11	28	28	21.4	78.8	87.6	83	
12:15 AM		5	11	16	16	22.4	71.4	82.8	67	
12:30 AM		9	5	14	14	19	61.8	70	64	
12:45 AM		10	15	25	25	16	53.2	60	56	
01:00 AM		5	7	12	12	14	47	53.6	39	
01:15 AM		8	5	13	13	12.8	42.8	46.4	40	
01:30 AM		4	2	6	6	10.4	41	40.4	36	
01:45 AM		1	7	8	8	9.8	40.6	39.2	43	
02:00 AM		5	8	13	13	9.8	40.4	41.6	47	
02:15 AM		4	5	9	9	11	39.2	42	37	
02:30 AM		7	6	13	13	10	35.4	39.2	39	

02:45 AM	7	5	12	12	9.6	33.6	36.4	30
03:00 AM	2	1	3	3	8.6	33.6	31.6	24
03:15 AM	3	8	11	11	7.2	37	30.8	38
03:30 AM	3	1	4	4	8.2	42.6	35.6	37
03:45 AM	5	1	6	6	9.6	49.8	43.2	56
04:00 AM	10	7	17	17	12	57.2	49.6	58
04:15 AM	6	4	10	10	12.8	65.6	56.4	60
04:30 AM	13	10	23	23	15.4	74.8	64.8	75
04:45 AM	2	6	8	8	17	86.4	74.8	79
05:00 AM	6	13	19	19	20.4	101.2	84.8	102
05:15 AM	7	18	25	25	22	113.2	98	116
05:30 AM	8	19	27	27	27	129.4	117.6	134
05:45 AM	10	21	31	31	31.8	148.6	128.4	135
06:00 AM	5	28	33	33	32.4	171.4	141.2	160
06:15 AM	16	27	43	43	38.2	202.2	168.8	198
06:30 AM	8	20	28	28	46.2	240.8	201.6	230
06:45 AM	17	39	56	56	54.6	275	235.6	288
07:00 AM	26	45	71	71	63.2	304.4	280	328
07:15 AM	26	49	75	75	76.8	323.2	314.4	331
07:30 AM	39	47	86	86	80.4	326.2	328.8	345
07:45 AM	42	54	96	96	84	321.4	332	324
08:00 AM	24	50	74	74	82	307.4	323.6	303
08:15 AM	24	65	89	89	79.8	292.4	310.8	304
08:30 AM	21	44	65	65	75.6	280.8	291.2	261
08:45 AM	29	46	75	75	70	275.2	274	270
09:00 AM	24	51	75	75	67	273.2	270.4	266
09:15 AM	17	29	46	46	68.2	281.6	276.4	275
09:30 AM	31	43	74	74	70	286.4	276	294
09:45 AM	24	47	71	71	68	291.6	286.8	303
10:00 AM	29	55	84	84	75.4	296.8	296.8	294
10:15 AM	15	50	65	65	73	293.2	296.4	292
10:30 AM	23	60	83	83	75.2	294.8	296.8	301
10:45 AM	27	35	62	62	73.2	298.2	290	276
11:00 AM	21	61	82	82	71.8	305	292.8	311
11:15 AM	19	55	74	74	74.6	315.4	306.4	311
11:30 AM	11	47	58	58	78.6	329.6	317.2	326
11:45 AM	23	74	97	97	80	339.2	324.4	353
12:00 PM	21	61	82	82	82.2	349.6	342	347
12:15 PM	36	53	89	89	88.8	359.2	354	359
12:30 PM	19	66	85	85	88.2	362.4	357.2	363
12:45 PM	34	57	91	91	90.4	368.2	364.4	374
01:00 PM	27	67	94	94	91.8	368.2	367.6	369
01:15 PM	27	66	93	93	92	363	372	376
01:30 PM	24	72	96	96	94	356.4	368.8	359
01:45 PM	26	60	86	86	90.4	352.4	354	337
02:00 PM	40	61	101	101	86.6	352.4	344	341
02:15 PM	25	51	76	76	85.4	357.9	350.8	349
02:30 PM	20	54	74	74	90	367.1	360.8	376

02:45 PM	28	62					90	90	90.4	370.4	365	386.5	
03:00 PM	31	78	NB	SB			109	109	92.1	371.7	373.4	383	
03:15 PM	30	73	1713	3610	5323		103	103	94.6	370.7	375.8	357.5	
03:30 PM	25	65	1714	3620	5334		90	84.5	93.3	371.1	370	355.5	
03:45 PM	27	72	1720	3639	5359		99	86.5	91.7	379.6	365.6	371	
04:00 PM	30	65	1734	3648	5382		95	83.5	91.1	395.8	372.2	388.5	
04:15 PM	37	69	1738	3654	5392		106	101	95	412.7	393.6	425.5	
04:30 PM	34	68	1737	3659	5396		102	100	101.8	425.1	419.4	438.5	
04:45 PM	28	92	1743	3685	5428		120	104	107.9	424.3	431.8	440	
05:00 PM	49	80	1752	3693	5445		129	120.5	108	409.5	430.8	433	
05:15 PM	47	71	1771	3682	5453		118	114	107.4	390.2	416.8	384.5	
05:30 PM	36	56	1772	3662	5434		92	101.5	101	367			
05:45 PM	35	72	1775	3679	5454		107	97	93.1	341.8			
06:00 PM								72	88.7	321.7			
06:15 PM				Avg	5400			81	84.2				
06:30 PM								92	75.8				
06:45 PM								79	73				
07:00 PM								55	63.8				
07:15 PM								58	60.4				
07:30 PM								35	57.8				
07:45 PM								75	56				
08:00 PM								66	52.6				
08:15 PM								46	52.6				
08:30 PM								41	47.2				
08:45 PM								35	45.6				
09:00 PM								48	45.4				
09:15 PM								58	44.8				
09:30 PM								45	42.6				
09:45 PM								38	38.4				
10:00 PM								24	31.6				
10:15 PM								27	27.2				
10:30 PM								24	24				
10:45 PM								23	23				
11:00 PM								22	21.6				
11:15 PM								19	22.6				
11:30 PM								20	23.6				
11:45 PM								29	22.4				
12:00 PM								28	21.4				
12:15 AM								16	22.4				
12:30 AM								14	19				
12:45 AM								25	16				
01:00 AM								12	14				
01:15 AM								13	12.8				
01:30 AM								6	10.4				
01:45 AM								8	9.8				
02:00 AM								13	9.8				
02:15 AM								9	11				
02:30 AM								13	11.75				

02:45 AM	12	11.3333333
03:00 AM		8.6
03:15 AM		7.2
03:30 AM		8.2
03:45 AM		9.6
04:00 AM		12
04:15 AM		12.8
04:30 AM		15.4
04:45 AM		17
05:00 AM		20.4
05:15 AM		22
05:30 AM		27

SR-191
North of Beeman Road

Begin	Tue.	NB		SB		Combined		Wed.	NB		SB		Combined	
Time	01-Mar-05	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	02-Mar-05	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		*	*	*	*	*	*		17	21	11	61	28	82
12:15		*	*	*	*	*	*		5	36	11	53	16	89
12:30		*	*	*	*	*	*		9	19	5	66	14	85
12:45		*	*	*	*	*	*		10	34	15	57	25	91
1:00		*	*	*	*	*	*		5	27	7	67	12	94
1:15		*	*	*	*	*	*		8	27	5	66	13	93
1:30		*	*	*	*	*	*		4	24	2	72	6	96
1:45		*	*	*	*	*	*		1	26	7	60	8	86
2:00		*	*	*	*	*	*		5	40	8	61	13	101
2:15		*	*	*	*	*	*		4	25	5	51	9	76
2:30		*	*	*	*	*	*		7	20	6	54	13	74
2:45		*	*	*	*	*	*		7	28	5	62	12	90
3:00		*	*	*	*	*	*		2	31	1	78	3	109
3:15		*	*	*	*	*	*		3	30	8	73	11	103
3:30		*	24	*	55	*	79		3	25	1	65	4	90
3:45		*	21	*	53	*	74		5	27	1	72	6	99
4:00		*	16	*	56	*	72		10	30	7	65	17	95
4:15		*	33	*	63	*	96		6	37	4	69	10	106
4:30		*	35	*	63	*	98		13	34	10	68	23	102
4:45		*	22	*	66	*	88		2	28	6	92	8	120
5:00		*	40	*	72	*	112		6	49	13	80	19	129
5:15		*	28	*	82	*	110		7	47	18	71	25	118
5:30		*	35	*	76	*	111		8	36	19	56	27	92
5:45		*	32	*	55	*	87		10	35	21	72	31	107
6:00		*	22	*	50	*	72		5	*	28	*	33	*
6:15		*	26	*	55	*	81		16	*	27	*	43	*
6:30		*	34	*	58	*	92		8	*	20	*	28	*
6:45		*	26	*	53	*	79		17	*	39	*	56	*
7:00		*	12	*	43	*	55		26	*	45	*	71	*
7:15		*	15	*	43	*	58		26	*	49	*	75	*
7:30		*	14	*	21	*	35		39	*	47	*	86	*
7:45		*	25	*	50	*	75		42	*	54	*	96	*
8:00		*	12	*	54	*	66		24	*	50	*	74	*
8:15		*	12	*	34	*	46		24	*	65	*	89	*
8:30		*	14	*	27	*	41		21	*	44	*	65	*
8:45		*	10	*	25	*	35		29	*	46	*	75	*
9:00		*	15	*	33	*	48		24	*	51	*	75	*
9:15		*	17	*	41	*	58		17	*	29	*	46	*
9:30		*	14	*	31	*	45		31	*	43	*	74	*
9:45		*	11	*	27	*	38		24	*	47	*	71	*
10:00		*	6	*	18	*	24		29	*	55	*	84	*
10:15		*	10	*	17	*	27		15	*	50	*	65	*
10:30		*	8	*	16	*	24		23	*	60	*	83	*
10:45		*	9	*	14	*	23		27	*	35	*	62	*
11:00		*	9	*	13	*	22		21	*	61	*	82	*
11:15		*	6	*	13	*	19		19	*	55	*	74	*
11:30		*	5	*	15	*	20		11	*	47	*	58	*
11:45		*	9	*	20	*	29		23	*	74	*	97	*

Begin Time	Tue. 01-Mar-05	NB	SB			Hourly
03:30 PM						
03:45 PM		7	6	13	16.5	64.5
04:00 PM		14	5	19	17.5	60
04:15 PM		7	11	18	15	63
04:30 PM		8	6	14	15.5	61.5
04:45 PM		5	4	9	12	59
05:00 PM		10	8	18	20.5	57.5
05:15 PM		7	7	14	13.5	51
05:30 PM		11	6	17	13	48.5
05:45 PM		4	4	8	10.5	39.5
06:00 PM		9	6	15	14	34
06:15 PM		7	4	11	11	25
06:30 PM		2	2	4	4	18
06:45 PM		3	2	5	5	
07:00 PM		2	3	5	5	
07:15 PM		2	2	4	4	
07:30 PM		2	1	3	3	
07:45 PM		3	2	5	5	
08:00 PM		2	3	5	5	
08:15 PM		1	6	7	7	
08:30 PM		2	1	3	3	
08:45 PM		2	1	3	3	
09:00 PM		0	0	0	0	
09:15 PM		0	1	1	1	
09:30 PM		1	2	3	3	
09:45 PM		1	1	2	2	
10:00 PM		0	0	0	0	
10:15 PM		0	0	0	0	
10:30 PM		1	0	1	1	
10:45 PM		1	0	1	1	
11:00 PM		0	0	0	0	
11:15 PM		0	0	0	0	
11:30 PM		0	1	1	1	
11:45 PM		0	0	0	0	
12:00 AM	02-Mar-05	1	0	1	1	
12:15 AM		0	1	1	1	
12:30 AM		0	1	1	1	
12:45 AM		0	1	1	1	
01:00 AM		0	0	0	0	
01:15 AM		0	0	0	0	
01:30 AM		0	0	0	0	
01:45 AM		0	0	0	0	
02:00 AM		1	0	1	1	
02:15 AM		0	0	0	0	
02:30 AM		0	0	0	0	

02:45 AM	0	0	0	0
03:00 AM	0	0	0	0
03:15 AM	1	1	2	2
03:30 AM	0	0	0	0
03:45 AM	0	0	0	0
04:00 AM	0	0	0	0
04:15 AM	0	0	0	0
04:30 AM	0	0	0	0
04:45 AM	0	0	0	0
05:00 AM	0	0	0	0
05:15 AM	1	1	2	2
05:30 AM	0	0	0	0
05:45 AM	0	0	0	0
06:00 AM	1	0	1	1
06:15 AM	3	0	3	3
06:30 AM	3	1	4	4
06:45 AM	3	2	5	5
07:00 AM	5	0	5	5
07:15 AM	1	3	4	4
07:30 AM	9	4	13	13
07:45 AM	5	5	10	10
08:00 AM	5	2	7	7
08:15 AM	8	6	14	14
08:30 AM	11	6	17	17
08:45 AM	3	4	7	7
09:00 AM	2	2	4	4
09:15 AM	5	3	8	8
09:30 AM	7	6	13	13
09:45 AM	6	5	11	11
10:00 AM	10	2	12	12
10:15 AM	1	3	4	4
10:30 AM	2	3	5	5
10:45 AM	7	2	9	9
11:00 AM	3	3	6	6
11:15 AM	3	2	5	5
11:30 AM	5	5	10	10
11:45 AM	1	8	9	9
12:00 PM	3	9	12	12
12:15 PM	8	5	13	13
12:30 PM	8	2	10	10
12:45 PM	10	4	14	14
01:00 PM	4	4	8	8
01:15 PM	4	9	13	13
01:30 PM	8	8	16	16
01:45 PM	8	8	16	16
02:00 PM	6	3	9	9
02:15 PM	4	4	8	8
02:30 PM	7	3	10	10

02:45 PM	4	6						10	10
03:00 PM	7	6	NB		SB			13	13
03:15 PM	7	4						11	11
03:30 PM	7	8		322	260	582		15	15
03:45 PM	13	7		328	261	589		20	16.5
04:00 PM	8	8		322	264	586		16	17.5
04:15 PM	7	5		322	258	580		12	15
04:30 PM	9	8		323	260	583		17	15.5
04:45 PM	7	8		325	264	589		15	12
05:00 PM	12	11		327	267	594		23	20.5
05:15 PM	9	4		329	264	593		13	13.5
05:30 PM	6	3		324	261	585		9	13
05:45 PM	8	5		328	262	590		13	10.5
06:00 PM	6	7		325	263	588		13	14
					Avg	587	588		

Spanish Valley Drive
South of Chapmans Lane

Begin	Tue.	NB		SB		Combined		Wed.	NB		SB		Combined	
Time	01-Mar-05	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	02-Mar-05	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		*	*	*	*	*	*		1	3	0	9	1	12
12:15		*	*	*	*	*	*		0	8	1	5	1	13
12:30		*	*	*	*	*	*		0	8	1	2	1	10
12:45		*	*	*	*	*	*		0	10	1	4	1	14
1:00		*	*	*	*	*	*		0	4	0	4	0	8
1:15		*	*	*	*	*	*		0	4	0	9	0	13
1:30		*	*	*	*	*	*		0	8	0	8	0	16
1:45		*	*	*	*	*	*		0	8	0	8	0	16
2:00		*	*	*	*	*	*		1	6	0	3	1	9
2:15		*	*	*	*	*	*		0	4	0	4	0	8
2:30		*	*	*	*	*	*		0	7	0	3	0	10
2:45		*	*	*	*	*	*		0	4	0	6	0	10
3:00		*	*	*	*	*	*		0	7	0	6	0	13
3:15		*	*	*	*	*	*		1	7	1	4	2	11
3:30		*	*	*	*	*	*		0	7	0	8	0	15
3:45		*	7	*	6	*	13		0	13	0	7	0	20
4:00		*	14	*	5	*	19		0	8	0	8	0	16
4:15		*	7	*	11	*	18		0	7	0	5	0	12
4:30		*	8	*	6	*	14		0	9	0	8	0	17
4:45		*	5	*	4	*	9		0	7	0	8	0	15
5:00		*	10	*	8	*	18		0	12	0	11	0	23
5:15		*	7	*	7	*	14		1	9	1	4	2	13
5:30		*	11	*	6	*	17		0	6	0	3	0	9
5:45		*	4	*	4	*	8		0	8	0	5	0	13
6:00		*	9	*	6	*	15		1	6	0	7	1	13
6:15		*	7	*	4	*	11		3	*	0	*	3	*
6:30		*	2	*	2	*	4		3	*	1	*	4	*
6:45		*	3	*	2	*	5		3	*	2	*	5	*
7:00		*	2	*	3	*	5		5	*	0	*	5	*
7:15		*	2	*	2	*	4		1	*	3	*	4	*
7:30		*	2	*	1	*	3		9	*	4	*	13	*
7:45		*	3	*	2	*	5		5	*	5	*	10	*
8:00		*	2	*	3	*	5		5	*	2	*	7	*
8:15		*	1	*	6	*	7		8	*	6	*	14	*
8:30		*	2	*	1	*	3		11	*	6	*	17	*
8:45		*	2	*	1	*	3		3	*	4	*	7	*
9:00		*	0	*	0	*	0		2	*	2	*	4	*
9:15		*	0	*	1	*	1		5	*	3	*	8	*
9:30		*	1	*	2	*	3		7	*	6	*	13	*
9:45		*	1	*	1	*	2		6	*	5	*	11	*
10:00		*	0	*	0	*	0		10	*	2	*	12	*
10:15		*	0	*	0	*	0		1	*	3	*	4	*
10:30		*	1	*	0	*	1		2	*	3	*	5	*
10:45		*	1	*	0	*	1		7	*	2	*	9	*
11:00		*	0	*	0	*	0		3	*	3	*	6	*
11:15		*	0	*	0	*	0		3	*	2	*	5	*
11:30		*	0	*	1	*	1		5	*	5	*	10	*
11:45		*	0	*	0	*	0		1	*	8	*	9	*

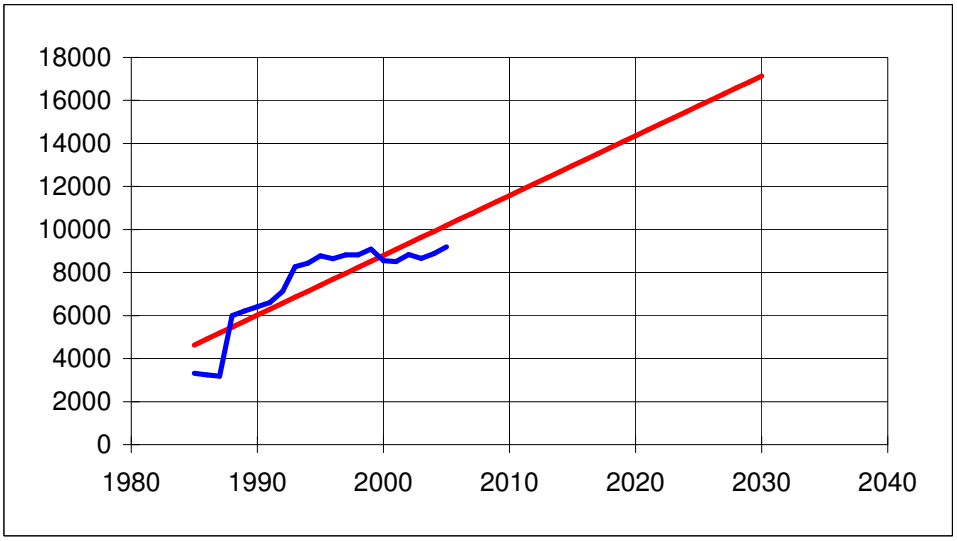
Route *SR 191*

Limits *SAN JUAN GRAND CL*

Year	AADT	Forecast
1985	3,310	4628
1986	3,245	4906
1987	3,180	5184
1988	5,995	5462
1989	6,225	5740
1990	6,410	6018
1991	6,605	6296
1992	7,120	6574
1993	8,265	6852
1994	8,430	7130
1995	8,780	7408
1996	8,650	7686
1997	8,823	7965
1998	8,823	8243
1999	9,087	8521
2000	8,550	8799
2001	8,510	9077
2002	8,835	9355
2003	8,660	9633
2004	8,875	9911
2005	9,200	10189
2006		10467
2007		10745
2008		11023
2009		11301
2010		11579
2011		11857
2012		12135
2013		12413
2014		12691
2015		12969
2016		13247
2017		13525
2018		13803
2019		14081
2020		14359
2021		14637
2022		14915
2023		15193
2024		15471
2025		15749
2026		16027
2027		16305
2028		16583
2029		16861
2030		17139

Projection based on 1985 to 2005 data

2.8% growth rate → 278 vehicles/year



Notes

This future traffic projection is based on historical volumes. It should be used for comparison purposes only. The local Metropolitan Planning Organization will have a more analytical future traffic projection based on their Travel Demand Model.

10/30/2007

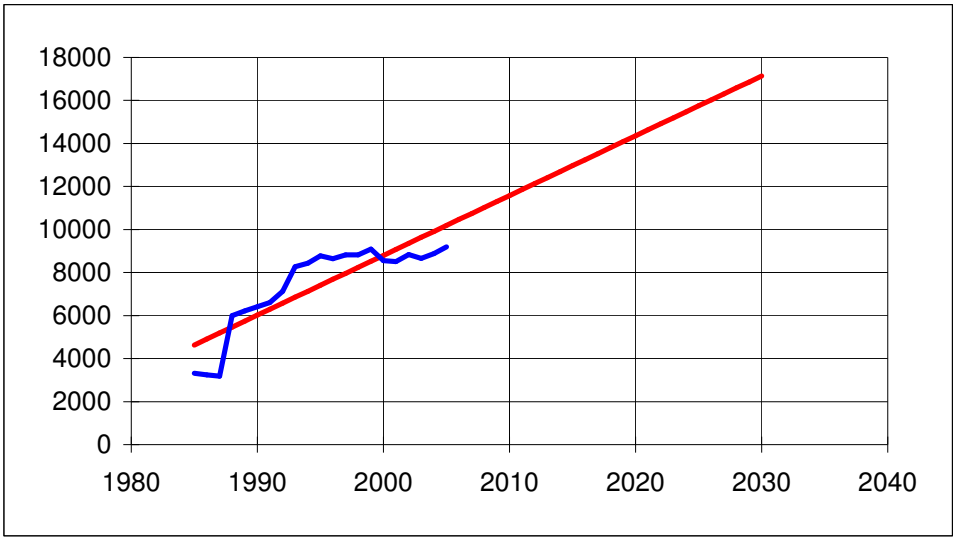
Route *SR 191*

Limits *MILLCREEK DR RIGHT TO MOAB*

Year	AADT	Forecast
1985	3,310	4628
1986	3,245	4906
1987	3,180	5184
1988	5,995	5462
1989	6,225	5740
1990	6,410	6018
1991	6,605	6296
1992	7,120	6574
1993	8,265	6852
1994	8,430	7130
1995	8,780	7408
1996	8,650	7686
1997	8,823	7965
1998	8,823	8243
1999	9,087	8521
2000	8,550	8799
2001	8,510	9077
2002	8,835	9355
2003	8,660	9633
2004	8,875	9911
2005	9,200	10189
2006		10467
2007		10745
2008		11023
2009		11301
2010		11579
2011		11857
2012		12135
2013		12413
2014		12691
2015		12969
2016		13247
2017		13525
2018		13803
2019		14081
2020		14359
2021		14637
2022		14915
2023		15193
2024		15471
2025		15749
2026		16027
2027		16305
2028		16583
2029		16861
2030		17139

Projection based on 1985 to 2005 data

2.8% growth rate ⟶ 278 vehicles/year



Notes

This future traffic projection is based on historical volumes. It should be used for comparison purposes only. The local Metropolitan Planning Organization will have a more analytical future traffic projection based on their Travel Demand Model.

10/30/2007

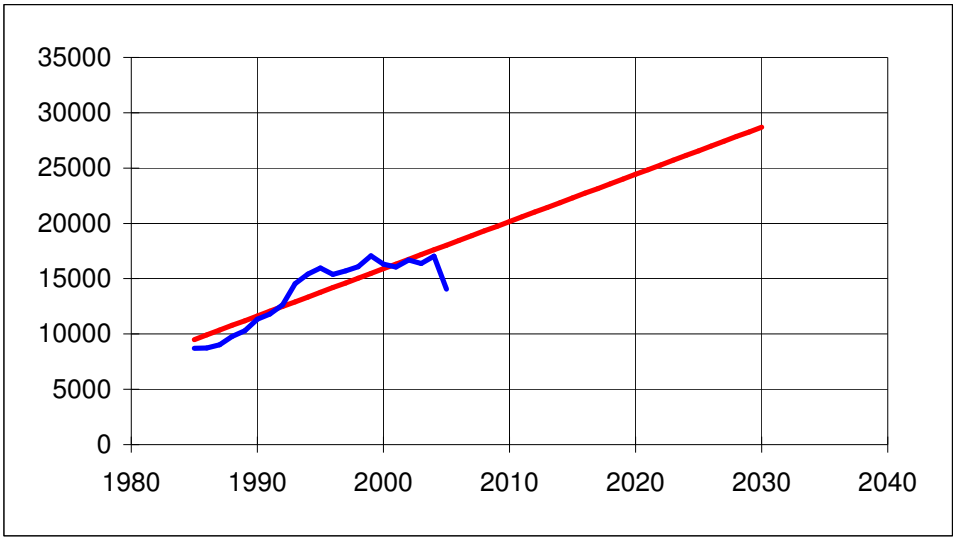
Route *SR 191*

Limits *SOUTH INCL MOAB*

Year	AADT	Forecast
1985	8,700	9496
1986	8,750	9923
1987	9,025	10349
1988	9,770	10776
1989	10,295	11203
1990	11,345	11630
1991	11,800	12056
1992	12,645	12483
1993	14,540	12910
1994	15,405	13337
1995	15,965	13763
1996	15,390	14190
1997	15,700	14617
1998	16,092	15043
1999	17,075	15470
2000	16,320	15897
2001	16,045	16324
2002	16,700	16750
2003	16,366	17177
2004	17,030	17604
2005	14,070	18030
2006		18457
2007		18884
2008		19311
2009		19737
2010		20164
2011		20591
2012		21018
2013		21444
2014		21871
2015		22298
2016		22724
2017		23151
2018		23578
2019		24005
2020		24431
2021		24858
2022		25285
2023		25712
2024		26138
2025		26565
2026		26992
2027		27418
2028		27845
2029		28272
2030		28699

Projection based on 1985 to 2005 data

2.4% growth rate → 427 vehicles/year



Notes

This future traffic projection is based on historical volumes. It should be used for comparison purposes only. The local Metropolitan Planning Organization will have a more analytical future traffic projection based on their Travel Demand Model.

10/30/2007

Appendix C

UTAH DEPARTMENT OF TRANSPORTATION
OPERATIONAL SAFETY REPORT

Route Number	0191	**Section Length**	6.45000
Begin Milepoint	119.78	**End Milepoint**	126.23

Year	Number of Accidents	Accident Rates	Fatal Accident Totals	Fatal Accident Rates	Fatalities	Fatality Rate	Average Daily Traffic	Severity Index
2003	20	92.62	0	0.00	0	0.00	9172	1.85
2002	18	82.82	0	0.00	0	0.00	9231	1.28

Accidents Totals And Averages

Total Accidents	38	2 **Year Average**	19.00
		2 **Year Average Severity**	1.57
2 **Year Average ADT**	9,201.50	2 **Year Average Accident Rate**	~~87.72~~ .877

Sum Of Count	Acc Severity Cd					
Coll Type Cd	Coll Desc	1	2	3	4	Grand Total
02	HEAD ON (LFT)	2				2
02 Total		**2**	**0**	**0**	**0**	**2**
03	REAR END	2	4	2		8
03 Total		**2**	**4**	**2**	**0**	**8**
05	SAME DIRECTION TURN LEFT REAREND	1			1	2
05 Total		**1**	**0**	**0**	**1**	**2**
06	SIDE SWIPE (OPP)	1				1
06 Total		**1**	**0**	**0**	**0**	**1**
07	SIDE SWIPE (SAME)	1				1
07 Total		**1**	**0**	**0**	**0**	**1**
08	SAME DIR (RT)	1				1
08 Total		**1**	**0**	**0**	**0**	**1**
13	FROM LFT (LFT)	1				1
13 Total		**1**	**0**	**0**	**0**	**1**
14	FROM RT (LFT)		1			1
14 Total		**0**	**1**	**0**	**0**	**1**
16	OTHER	1				1
16 Total		**1**	**0**	**0**	**0**	**1**
17	SINGLE VEHICLE	12		1	2	15
17 Total		**12**	**0**	**1**	**2**	**15**
18	BACKING			1		1
18 Total		**0**	**0**	**1**	**0**	**1**
19	SAME DIR (2 RT)	1				1
19 Total		**1**	**0**	**0**	**0**	**1**
21	ANGLE (2 LFT)	1				1
21 Total		**1**	**0**	**0**	**0**	**1**
22	UTURN (1 STR)	1				1
22 Total		**1**	**0**	**0**	**0**	**1**
26	PARKED	1				1
26 Total		**1**	**0**	**0**	**0**	**1**
Grand Total		**26**	**5**	**4**	**3**	**38**

$\frac{10}{38} = 26\%$

$\frac{2}{38} = 5\%$

$\frac{15}{38} = 39\%$

Total Single Veh $\frac{27}{75} = 36\%$

Rear End. $\frac{24}{75} = 32\%$

From left $\frac{8}{75} = 11\%$

UTAH DEPARTMENT OF TRANSPORTATION

Light Condition

Route No. 0191 **Begin Milepoint** 119.78 **End Milepoint** 126.23

End Year 2003 **No. of Years** 2

Light Condition	Count	Percent
1 DAYLIGHT	19	50.00
2 DAWN	2	5.26
3 DARKNESS STREET OR HIGHWAY NOT	8	21.05
4 DARKNESS STREET OR HIGHWAY LIG	8	21.05
5 DUSK	1	2.63
Total	38	100.00

UTAH DEPARTMENT OF TRANSPORTATION

Accident Types

Route No. 0191 **Begin Milepoint** 119.78 **End Milepoint** 126.23

End Year 2003 **No. of Years** 2

	Accident Type	Count	Percent
1	MV-PEDESTRIAN	1	2.63
2	MV-MV	23	60.53
4	MV-BICYCLE	1	2.63
5	MV-ANIMAL(WILD)	8	21.05
7	MV-OTHER OBJECT	2	5.26
D	MV - ANIMAL (DOMESTIC)	2	5.26
R	RAN OFF ROAD RIGHT	1	2.63
	Total	38	100.00

UTAH DEPARTMENT OF TRANSPORTATION

Surface Condition

Route No. 0191 **Begin Milepoint** 119.78 **End Milepoint** 126.23

End Year 2003 **No. of Years** 2

Surface Condition	Count	Percent
1 DRY	37	97.37
2 WET	1	2.63
Total	38	100.00

UTAH DEPARTMENT OF TRANSPORTATION

DYNAMIC QUICKLISTING

6/20/2007

Route Number:0191 Years: 2002 - 2003

Beginning MP: 119.78 Ending MP:126.23

MP	KP	Inter sect Type	Ramp Num	Accident Year	Month	Day	Time	Light	Weather	Severity	Acc Type One	Acc Type Two	Acc Type Three	Vehicle Number	Vehicle Type	Vehicle Dir	Coll Type	Road Cond	Contrib Circ One	Contrib Circ Two	Driver Intent	Fix Obj	Traff cntrl	Surf Cond	Ped Act	City	County	ADT	Acc Ctrl Num	C Fl uns cs	Urb Rur	D Res g
119.78				2002	10	17	19:20	3	1	1	5	U		1	07	N	17		08		01	M		1	00000	37	2965	43159	02	1	
119.78				2002	10	17	19:20	3	1	1	5	U		1	07	N	17		08		01	M		1	00000	19	8550	43159	02	1	
119.79				2002	9	21	12:15	1	1	2	2	U		1	45	N	03		07		06		B	1	00000	19	8550	97250	02	1	
119.79				2002	9	21	12:15	1	1	2	2	U		2	02	N	03		00		06		B	1	00000	19	8550	97250	02	1	
119.79				2003	7	26	19:06	1	1	4	R	L	8	1	02	N	17		28	99	01	L	B	1	00000	19	8550	90933	02	1	
119.79				2003	1	30	19:10	3	1	1	5	U		1	07	N	17		55	99	01	M	B	1	00000	19	8550	99134	02	1	
119.85				2002	5	28	11:20	1	1	2	2	U		1	07	N	03		07	01	06		B	1	00000	19	8550	22987	02	1	
119.85				2002	5	28	11:20	1	1	2	2	U		2	02	N	03		05	99	06		B	1	00000	19	8550	22987	02	1	
121.11				2002	3	2	05:30	3	1	1	D	U		1	38	S	17	8	00	99	01	N	B	1	00000	19	8550	09250	02	1	
121.21				2003	11	30	18:00	3	1	1	5	U		1	07	N	17		00	99	01	M	9	1	00000	19	8550	39127	02	1	
121.68				2002	3	2	05:30	3	1	1	D	U		1	38	S	17		00	99	01	N	B	1	00000	19	8550	09341	02	1	
122.21		C		2003	9	30	18:15	5	1	1	2	U		1	02	N	22		16	99	04		B	1	00000	19	8510	86812	02	1	
122.21		C		2003	9	30	18:15	5	1	1	2	U		2	02	N	22		00	99	01		B	1	00000	19	8510	86812	02	1	
122.22				2002	3	24	20:55	3	1	1	5	U		1	07	N	17		00	99	01	M	B	1	00000	19	8550	13312	02	1	
122.23		A		2003	8	13	17:45	1	1	1	2	U		1	38	N	02		00	99	01		B	1	00000	19	8510	89392	02	1	
122.23		A		2003	8	13	17:45	1	1	1	2	U		2	02	S	02		28	08	04		B	1	00000	19	8510	89392	02	1	
122.83				2003	5	19	07:15	1	1	1	5	U		1	47	N	17		00	99	01	M	B	1	00000	19	8510	94277	02	1	
123.50				2002	1	2	08:31	2	1	1	7	U		1	07	S	17	6	25	99	01	Q	A	1	00000	19	8550	00091	02	1	
123.61				2002	2	21	07:52	1	1	1	2	U		1	07	N	08		22	99	03		B	1	00000	19	8550	07793	02	1	
123.61				2002	2	21	07:52	1	1	1	2	U		2	02	N	08		02	99	02		B	1	00000	19	8550	07793	02	1	
124.41				2003	2	10	17:04	1	1	1	7	U		1	02	S	17		99	99	01	T	9	1	00000	19	8510	05209	02	1	
124.41				2003	2	10	17:04	1	1	1	7	U		2	07	S	17		44	55	01		9	1	00000	19	8510	05209	02	1	

UTAH DEPARTMENT OF TRANSPORTATION

DYNAMIC QUICKLISTING

6/20/2007

Route Number:0191 Years: 2002 - 2003

Beginning MP: 119.78 Ending MP:126.23

MP	KP	Inter sect Type	Ramp Num	Accident Year	Month	Day	Time	Light	Weather	Severity	Acc Type One	Two	Three	Vehicle Number	Type	Dir	Coll Type	Road Cond	Contrib Circ One	Two	Driver Intent	Fix Obj	Traff cntrl	Surf Cond	Ped	City	County	ADT	Acc Ctrl Num	Func Class	Urb Desig
124.96				2003	10	17	20:12	3	1	1	5	U		1	02	N	17		00	99	01	M	9	1		00000	19	8510	33392	02	1
125.02				2003	1	10	19:55	4	1	4	2	2		1	07	N	05		28	16	01		B	1		00000	19	8510	99781	02	1
125.02				2003	1	10	19:55	4	1	4	2	2		2	07	N	05		00	99	04		B	1		00000	19	8510	99781	02	1
125.02				2003	1	10	19:55	4	1	4	2	2		3	38	S	05		00	99	11		B	1		00000	19	8510	99781	02	1
125.22		A		2003	10	30	20:35	4	1	1	2	2		1	02	W	02		26	16	04		B	1		00000	19	8510	83559	02	1
125.22		A		2003	10	30	20:35	4	1	1	2	2		2	07	N	02		00	99	01		B	1		00000	19	8510	83559	02	1
125.22		A		2003	10	30	20:35	4	1	1	2	2		3	07	N	02		00	99	01		B	1		00000	19	8510	83559	02	1
125.23		A		2003	5	19	14:37	1	1	1	2	U		1	02	W	05		00	99	04		5	1		00000	19	8510	14778	02	1
125.23		A		2003	5	19	14:37	1	1	1	2	U		2	07	W	05		00	99	04		5	1		00000	19	8510	14778	02	1
125.28				2003	11	27	20:25	4	1	1	2	U		1	02	S	07		18	99	12		B	1		50700	19	16045	41430	02	1
125.28				2003	11	27	20:25	4	1	1	2	U		2	02	S	07		99	99	01		B	1		50700	19	16045	41430	02	1
125.36				2003	4	18	14:40	1	1	1	5	U		1	07	S	17		00	99	01	M	B	1		50700	19	16045	11350	02	1
125.42				2002	12	28	23:10	4	1	1	5	U		1	02	S	17		00		01	M		1		50700	19	16320	92677	02	1
125.63		B		2003	9	10	14:42	1	1	1	2	U		1	07	E	16		16	99	03		5	1		50700	19	16045	30641	02	1
125.63		B		2003	9	10	14:42	1	1	1	2	U		2	07	E	16		00	99	04		5	1		50700	19	16045	30641	02	1
125.75				2003	7	23	07:10	2	1	3	2	8		1	07	N	03		16	13	01		3	1		50700	19	16045	24879	02	1
125.75				2003	7	23	07:10	2	1	3	2	8		2	19	N	03		00	00	01		3	1		50700	19	16045	24879	02	1
125.77				2003	5	16	21:15	4	1	3	2	U		1	02	S	03		16	03	01		3	1		50700	19	16045	15935	02	1
125.77				2003	5	16	21:15	4	1	3	2	U		2	02	S	03		00	00	06		3	1		50700	19	16045	15935	02	1
125.77				2003	5	16	21:15	4	1	3	2	U		3	07	N	03		00	99	01		3	1		50700	19	16045	15935	02	1
125.78		B		2002	10	15	19:30	4	1	1	2	U		1	02	S	06		47	21	12		3	1		50700	19	16320	44292	02	1
125.78		B		2002	10	15	19:30	4	1	1	2	U		2	02	N	06		00		04		3	1		50700	19	16320	44292	02	1
125.79		B		2003	5	6	21:27	3	1	4	4	U		1	07	S	17		20	16	04		9	1	21	50700	19	16045	14856	02	1

UTAH DEPARTMENT OF TRANSPORTATION

DYNAMIC QUICKLISTING

6/20/2007

Route Number:0191 Years: 2002 - 2003

Beginning MP: 119.78 Ending MP:126.23

MP	KP	Inter sect Type	Ramp Num	Accident Year	Month	Day	Time	Light	Weather	Severity	Acc Type One	Acc Type Two	Acc Type Three	Vehicle Number	Vehicle Type	Vehicle Dir	Coll Type	Road Cond	Contrib Circ One	Contrib Circ Two	Driver Intent	Fix Obj	Traff cntrl	Surf Cond	Ped	City	County	ADT	Acc Ctrl Num	Functs Class	Urb Rsg Urb
125.79		B		2003	5	6	21:27	3	1	4	4	U		1	07	S	17		20	16	04		9	1		50700	19	16045	14856	02	1
125.85				2003	4	22	13:30	1	1	3	2	U		1	07	E	18		49	16	09		9	1		50700	19	16045	13331	02	1
125.85				2003	4	22	13:30	1	1	3	2	U		2	02	N	18		00	00	04		9	1		50700	19	16045	13331	02	1
125.95		C		2002	5	8	15:32	1	1	1	2	U		1	02	N	03		07	16	06		9	1		50700	19	16320	20107	02	1
125.95		C		2002	5	8	15:32	1	1	1	2	U		2	07	N	03		00	00	10		9	1		50700	19	16320	20107	02	1
126.12		A		2002	1	3	13:51	1	1	2	2	U		1	07	N	14		06	16	01		3	1		50700	19	16320	03454	02	1
126.12		A		2002	1	3	13:51	1	1	2	2	U		2	02	W	14		00	00	04		3	1		50700	19	16320	03454	02	1
126.12		A		2002	9	26	17:25	1	1	3	1	U		1	07	S	17		02	16	07		3	1	01	50700	19	16320	42835	02	1
126.12		A		2002	9	26	17:25	1	1	3	1	U		1	07	S	17		02	16	07		3	1		50700	19	16320	42835	02	1
126.13				2002	9	12	20:13	4	8	1	2	U		1	07	W	19		02		03		9	2		50700	19	16320	39316	02	1
126.13				2002	9	12	20:13	4	8	1	2	U		2	07	W	19		08		05		9	2		50700	19	16320	39316	02	1
126.14				2002	3	29	10:00	1	1	1	2	U		1	07	N	26		27	99	11		9	1		50700	19	16320	14709	02	1
126.14				2002	3	29	10:00	1	1	1	2	U		2	40	S	26		08	99	09		9	1		50700	19	16320	14709	02	1
126.21				2003	4	19	22:10	4	1	2	2	U		1	07	S	03		07	99	01		9	1		50700	19	16045	12321	02	1
126.21				2003	4	19	22:10	4	1	2	2	U		2	02	S	03		07	99	06		9	1		50700	19	16045	12321	02	1
126.21				2003	4	19	22:10	4	1	2	2	U		3	02	S	03		00	99	06		9	1		50700	19	16045	12321	02	1
126.22				2002	3	1	13:00	1	1	1	2	U		1	07	S	03		07	16	01		1	1		50700	19	16320	11462	02	1
126.22				2002	3	1	13:00	1	1	1	2	U		2	07	S	03		00	00	06		1	1		50700	19	16320	11462	02	1
126.22		F		2002	8	16	11:18	1	1	1	2	U		1	07	S	21		02		04		5	1		50700	19	16320	35120	02	1
126.22		F		2002	8	16	11:18	1	1	1	2	U		2	02	E	21		00		04		5	1		50700	19	16320	35120	02	1
126.23		A		2002	5	18	18:05	1	1	1	2	U		1	07	W	13		02	99	04		5	1		50700	19	16320	22252	02	1
126.23		A		2002	5	18	18:05	1	1	1	2	U		2	38	S	13		00	99	01		5	1		50700	19	16320	22252	02	1
126.23		A		2003	7	30	19:24	1	1	2	2	U		1	02	S	03		07	16	10		9	1		50700	19	16045	24893	02	1

UTAH DEPARTMENT OF TRANSPORTATION

DYNAMIC QUICKLISTING

6/20/2007

Route Number:0191 Years: 2002 - 2003

Beginning MP: 119.78 Ending MP:126.23

MP	KP	Inter sect Type	Ramp Num	Accident				Light	Weather	Severity	Acc Type			Vehicle			Coll Type	Road Cond	Contrib Circ		Driver Intent	Fix Obj	Traff cntrl	Surf Cond	Ped	City	County	ADT	Acc Ctrl Num	C Flans	D Resg	Urb Rur
				Year	Month	Day	Time				One	Two	Three	Number	Type	Dir			One	Two												
126.23		A		2003	7	30	19:24	1	1	2	2	U		2	02	S	03		00	00	01		9	1		50700	19	16045	24893	02		1

SR-191

2002-2003

119.78 to 126.23

Milepoint	1	2	3	4	Grand Total
119.78	1				1
119.79	1	1		1	3
119.85		1			1
121.11	1				1
121.21	1				1
121.68	1				1
122.21	1				1
122.22	1				1
122.23	1				1
122.83	1				1
123.5	1				1
123.61	1				1
124.41	1				1
124.96	1				1
125.02				1	1
125.22	1				1
125.23	1				1
125.28	1				1
125.36	1				1
125.42	1				1
125.63	1				1
125.75			1		1
125.77			1		1
125.78	1				1
125.79				1	1
125.85			1		1
125.95	1				1
126.12		1	1		2
126.13	1				1
126.14	1				1
126.21		1			1
126.22	2				2
126.23	1	1			2
rand Total	**26**	**5**	**4**	**3**	**38**

SR – 191

2004 – 2005

119.78 to 126.23

Milepoint	02	03	05	06	07	08	13	14	16	17	18	19	21	22	26	Grand Total
119.78										1						1
119.79		1								2						3
119.85		1														1
121.11										1						1
121.21										1						1
121.68										1						1
122.21														1		1
122.22										1						1
122.23	1															1
122.83										1						1
123.5										1						1
123.61						1										1
124.41										1						1
124.96										1						1
125.02			1													1
125.22	1															1
125.23			1													1
125.28					1											1
125.36										1						1
125.42										1						1
125.63									1							1
125.75		1														1
125.77		1														1
125.78				1												1
125.79										1						1
125.85											1					1
125.95		1														1
126.12								1		1						2
126.13												1				1
126.14															1	1
126.21		1														1
126.22		1											1			2
126.23		1					1									2
nd Total	**2**	**8**	**2**	**1**	**1**	**1**	**1**	**1**	**1**	**15**	**1**	**1**	**1**	**1**	**1**	**38**

UTAH DEPARTMENT OF TRANSPORTATION
OPERATIONAL SAFETY REPORT

Route Number	0191	**Section Length**	6.44999
Begin Milepoint	119.04	**End Milepoint**	125.49

Year	Number of Accidents	Accident Rates	Fatal Accident Totals	Fatal Accident Rates	Fatalities	Fatality Rate	Average Daily Traffic	Severity Index
2005	24	118.45	1	4.94	1	4.94	8606	1.88
2004	23	113.52	0	0.00	0	0.00	8606	1.35

Accidents Totals And Averages

Total Accidents	47	2 **Year Average**	23.50
		2 **Year Average Severity**	1.62
2 **Year Average ADT**	8,606.00	2 **Year Average Accident Rate**	~~115.99~~ 1.159

Acc-Rate
2003 - .926
2004 1.135
2005 1.185
3 year Avg 1.08

Exp Acc Rate — 1.73

Exp Sev 1.67

Sum Of Count	Acc Severity Cd						
Coll Type Cd	Coll Desc	1	2	3	4	5	Grand Total
02	HEAD ON (LFT)	2					2
02 Total		**2**	**0**	**0**	**0**	**0**	**2**
03	REAR END	7	3	1			11
03 Total		**7**	**3**	**1**	**0**	**0**	**11**
04	SAME DIRECTION TURN RIGHT REAR END	1					1
04 Total		**1**	**0**	**0**	**0**	**0**	**1**
05	SAME DIRECTION TURN LEFT REAREND		2				2
05 Total		**0**	**2**	**0**	**0**	**0**	**2**
07	SIDE SWIPE (SAME)	2	1				3
07 Total		**2**	**1**	**0**	**0**	**0**	**3**
08	SAME DIR (RT)			1			1
08 Total		**0**	**0**	**1**	**0**	**0**	**1**
09	SAME DIR (1 LFT)		1			1	2
09 Total		**0**	**1**	**0**	**0**	**1**	**2**
11	ANGLE (2 STR)	1					1
11 Total		**1**	**0**	**0**	**0**	**0**	**1**
13	FROM LFT (LFT)	1		1			2
13 Total		**1**	**0**	**1**	**0**	**0**	**2**
14	FROM RT (LFT)	5	1				6
14 Total		**5**	**1**	**0**	**0**	**0**	**6**
17	SINGLE VEHICLE	7	2	2	1		12
17 Total		**7**	**2**	**2**	**1**	**0**	**12**
22	UTURN (1 STR)	1		1			2
22 Total		**1**	**0**	**1**	**0**	**0**	**2**
26	PARKED	2					2
26 Total		**2**	**0**	**0**	**0**	**0**	**2**
Grand Total		**29**	**10**	**6**	**1**	**1**	**47**

$\frac{14}{47} = 30\%$

$\frac{6}{47} = 13\%$

$\frac{12}{47} = 26\%$

UTAH DEPARTMENT OF TRANSPORTATION

Light Condition

Route No. 0191 **Begin Milepoint** 119.04 **End Milepoint** 125.49

End Year 2005 **No. of Years** 2

Light Condition	Count	Percent
1 DAYLIGHT	31	65.96
2 DAWN	4	8.51
3 DARKNESS STREET OR HIGHWAY NOT	9	19.15
4 DARKNESS STREET OR HIGHWAY LIG	3	6.38
Total	47	100.00

UTAH DEPARTMENT OF TRANSPORTATION

Accident Types

Route No. 0191 **Begin Milepoint** 119.04 **End Milepoint** 125.49

End Year 2005 **No. of Years** 2

	Accident Type	Count	Percent
1	MV-PEDESTRIAN	1	2.13
2	MV-MV	33	70.21
4	MV-BICYCLE	1	2.13
5	MV-ANIMAL(WILD)	5	10.64
6	MV-FIXED OBJECT	4	8.51
L	RAN OFF ROAD LEFT	2	4.26
R	RAN OFF ROAD RIGHT	1	2.13
	Total	47	100.00

UTAH DEPARTMENT OF TRANSPORTATION

Surface Condition

Route No. 0191 **Begin Milepoint** 119.04 **End Milepoint** 125.49

End Year 2005 **No. of Years** 2

Surface Condition	Count	Percent
	1	2.13
1 DRY	42	89.36
2 WET	3	6.38
4 SNOWY	1	2.13
Total	47	100.00

UTAH DEPARTMENT OF TRANSPORTATION

DYNAMIC QUICKLISTING

6/20/2007

Route Number:0191 Years: 2004 - 2005

Beginning MP: 119.04 Ending MP:125.49

MP	KP	Intersect Type	Ramp Num	Accident Year	Month	Day	Time	Light	Weather	Severity	Acc Type One	Acc Type Two	Acc Type Three	Vehicle Number	Vehicle Type	Vehicle Dir	Coll Type	Road Cond	Contrib Circ One	Contrib Circ Two	Driver Intent	Fix Obj	Traff cntrl	Surf Cond	Ped	City	County	ADT	Acc Ctrl Num	Functs	Urb Rest	DD
119.06				2005	2	27	05:20	3	1	2	L	8		1	07	N	17		12	28	01		B	1	00000	37	2965	95031	02	1	
119.30				2005	2	27	06:30	2	1	1	2			1	47	N	26		16		13		B	1	00000	37	2965	95030	02	1	
119.30				2005	2	27	06:30	2	1	1	2			2	02	N	26		00		11		B	1	00000	37	2965	95030	02	1	
119.31		C		2005	1	17	15:57	1	1	5	6	2	8	1	02	E	09		00		04		B	1	00000	37	2965	97176	02	1	
119.31		C		2005	1	17	15:57	1	1	5	6	2	8	2	07	S	09		14		01	E	B	1	00000	37	2965	97176	02	1	
119.79				2004	10	8	00:30	3	1	1	R	6		1	02	S	17		01	09	01	L	B	1	00000	19	8550	79888	02	1	
120.00				2004	12	9	18:15	3	1	1	5			1	02	N	17		00	99	01	M	B	1	00000	19	8550	42111	02	1	
120.50				2005	7	10	06:35	2	1	3	6	L	8	1	07	N	17		12	16	01	E	B	1	00000	19	8550	84996	02	1	
120.61		D		2005	7	6	08:30	1	1	1	2			1	07	W	03	1	16	52	10		5	1	00000	19	8550	19674	02	1	
120.61		D		2005	7	6	08:30	1	1	1	2			2	02	W	03	1	09	07	10		5	1	00000	19	8550	19674	02	1	
120.95				2005	10	29	23:39	3	1	3	2			1	06	E	22		08	17	05		B	1	00000	19	8550	33863	02	1	
120.95				2005	10	29	23:39	3	1	3	2			2	07	S	22		00	00	01		B	1	00000	19	8550	33863	02	1	
121.40				2004	12	27	07:16	2	8	1	5	U		1	07	N	17		00	99	01	M	B	1	00000	19	8550	71568	02	1	
121.50		A		2004	9	27	15:00	1	1	1	2	U		1	07	W	04		16	99	03		5	1	00000	19	8550	32701	02	1	
121.50		A		2004	9	27	15:00	1	1	1	2	U		2	02	W	04		00	99	03		5	1	00000	19	8550	32701	02	1	
121.61				2004	3	21	04:47	3	1	1	5	U		1	07	N	17		00	99	01	M		1	00000	19	8550	93961	02	1	
122.10				2005	9	21	03:25	3	1	4	L	6	8	1	10	S	17		28	12	01	D	B	1	00000	19	8510	79064	02	1	
122.80				2004	9	18	07:40	2	2	3	6	2	8	1	02	N	13		16	02	07		B	2	00000	19	8510	82486	02	1	
122.80				2004	9	18	07:40	2	2	3	6	2	8	2	02	N	13		01	99	01	D	B	2	00000	19	8510	82486	02	1	
123.00				2004	7	18	14:45	1	1	2	2	R		1	07	S	09		16	99	01		B	1	00000	19	8510	85096	02	1	
123.00				2004	7	18	14:45	1	1	2	2	R		2	07	S	09		26	99	04		B	1	00000	19	8510	85096	02	1	
124.18		C		2004	10	28	18:55	3	8	1	5	U		1	02	S	17		00	99	01	M	B	2	00000	19	8510	36428	02	1	
124.38				2005	5	14	21:25	4	1	1	2			1	02	N	02	2	21		01		B	1	00000	19	8510	13802	02	1	

UTAH DEPARTMENT OF TRANSPORTATION

DYNAMIC QUICKLISTING

6/20/2007

Route Number:0191 Years: 2004 - 2005
Beginning MP: 119.04 Ending MP:125.49

MP	KP	Inter sect Type	Ramp Num	Accident Year	Month	Day	Time	Light	Weather	Severity	Acc Type One	Acc Type Two	Acc Type Three	Vehicle Number	Vehicle Type	Vehicle Dir	Coll Type	Road Cond	Contrib Circ One	Contrib Circ Two	Driver Intent	Fix Obj	Traff cntrl	Surf Cond	Ped	City	County	ADT	Acc Ctrl Num	C Fluns c	D Urb_Rur	Reg
124.38				2005	5	14	21:25	4	1	1	2			2	19	S	02	2	00		04		B	1		00000	19	8510	13802	02	1	
124.43		A		2005	8	26	16:46	1	1	2	2			1	07	N	03		07	16	06		3	1		00000	19	8510	25670	02	1	
124.43		A		2005	8	26	16:46	1	1	2	2			2	02	N	03		00	00	10		3	1		00000	19	8510	25670	02	1	
124.46		C		2004	6	4	03:56	3	1	1	5	8		1	19	N	17		00	99	01	M	B	1		00000	19	8510	20083	02	1	
124.48		A		2004	3	13	12:00	1	1	1	2	U		1	02	E	14	6	02	99	04		2	1		00000	19	8510	08709	02	1	
124.48		A		2004	3	13	12:00	1	1	1	2	U		2	02	N	14	6	99	99	01		2	1		00000	19	8510	08709	02	1	
124.48		E		2004	3	22	15:00	1	1	1	2	U		1	07	E	11	6	02	99	01		B	1		00000	19	8510	10927	02	1	
124.48		E		2004	3	22	15:00	1	1	1	2	U		2	07	N	11	6	99	99	01		B	1		00000	19	8510	10927	02	1	
124.48		A		2005	12	15	08:03	1	1	1	2			1	07	N	14		06	02	01		3	1		00000	19	8510	39196	02	1	
124.48		A		2005	12	15	08:03	1	1	1	2			2	07	W	14		00	00	04		3	1		00000	19	8510	39196	02	1	
124.49		A		2004	1	7	13:00	1	3	1	2	U		1	07	S	03		01	99	06		5	4		00000	19	8510	01160	02	1	
124.49		A		2004	1	7	13:00	1	3	1	2	U		2	02	S	03		99	99	10		5	4		00000	19	8510	01160	02	1	
124.49				2004	5	22	13:35	1		2	2	U		1	07	N	05		03	54	01		9			00000	19	8510	17878	02	1	
124.49				2004	5	22	13:35	1		2	2	U		2	07	N	05		00	00	04		9			00000	19	8510	17878	02	1	
124.50				2005	3	22	10:25	1	1	2	2			1	07	N	05		00		04		3	1		00000	19	8510	08007	02	1	
124.50				2005	3	22	10:25	1	1	2	2			2	07	N	05		06	16	01		3	1		00000	19	8510	08007	02	1	
124.84				2005	5	24	07:40	1	1	3	1			1	02	N	17		00	00	04		3	1	01	00000	19	8510	15078	02	1	
124.84				2005	5	24	07:40	1	1	3	1			1	02	N	17		00	00	04		3	1		00000	19	8510	15078	02	1	
124.89		B		2004	4	15	18:16	1	1	2	2	U		1	02	E	14		02	41	04		5	1		00000	19	8510	12579	02	1	
124.89		B		2004	4	15	18:16	1	1	2	2	U		2	02	S	14		00	99	01		5	1		00000	19	8510	12579	02	1	
124.89		C		2005	6	30	21:30	4	1	3	2			1	38	S	08		08		03		9	1		00000	19	8510	20040	02	1	
124.89		C		2005	6	30	21:30	4	1	3	2			2	02	S	08		00		01		9	1		00000	19	8510	20040	02	1	
124.89		B		2005	11	15	18:50	3	1	1	2			1	02	E	14		02	16	04		5	1		00000	19	8510	35161	02	1	

UTAH DEPARTMENT OF TRANSPORTATION

DYNAMIC QUICKLISTING

6/20/2007

Route Number:0191 Years: 2004 - 2005

Beginning MP: 119.04 Ending MP:125.49

MP	KP	Inter sect Type	Ramp Num	Accident Year	Month	Day	Time	Light	Weather	Severity	Acc Type One	Acc Type Two	Acc Type Three	Vehicle Number	Vehicle Type	Vehicle Dir	Coll Type	Road Cond	Contrib Circ One	Contrib Circ Two	Driver Intent	Fix Obj	Traff cntrl	Surf Cond	Ped	City	County	ADT	Acc Ctrl Num	Functs	Urb Rsg	Dsg
124.89		B		2005	11	15	18:50	3	1	1	2			2	07	S	14				01		5	1		00000	19	8510	35161	02	1	
124.93				2005	6	13	15:20	1	1	1	2			1	02	N	02		16	02	04		9	1		00000	19	8510	17432	02	1	
124.93				2005	6	13	15:20	1	1	1	2			2	19	S	02		00	00	01		9	1		00000	19	8510	17432	02	1	
125.01				2004	3	31	14:40	1	1	1	2	U		1	02	N	22		08	16	05		9	1		00000	19	8510	10953	02	1	
125.01				2004	3	31	14:40	1	1	1	2	U		2	07	N	22		00	00	01		9	1		00000	19	8510	10953	02	1	
125.03		B		2004	4	7	13:00	1	8	1	2	6		1	13	N	07	2	16	99	12	J	3	1		00000	19	8510	11460	02	1	
125.03		B		2004	4	7	13:00	1	8	1	2	6		2	02	N	07	2	99	99	01		3	1		00000	19	8510	11460	02	1	
125.03				2005	6	14	11:52	1	1	2	4			1	02	E	17	2	16		03		9	1	22	00000	19	8510	18011	02	1	
125.03				2005	6	14	11:52	1	1	2	4			1	02	E	17	2	16		03		9	1		00000	19	8510	18011	02	1	
125.04		A		2005	5	21	15:22	1	1	1	2			1	07	S	03		16		01		3	1		00000	19	8510	14781	02	1	
125.04		A		2005	5	21	15:22	1	1	1	2			2	07	S	03		00		10		3	1		00000	19	8510	14781	02	1	
125.04		C		2005	12	9	13:00	1	1	1	2			1	07	W	03	2	16		01		3	1		00000	19	8510	38329	02	1	
125.04		C		2005	12	9	13:00	1	1	1	2			2	07	W	03	2			10		3	1		00000	19	8510	38329	02	1	
125.06		B		2005	11	19	09:54	1	1	2	2			1	07	S	03	2	16		01		B	1		00000	19	8510	35310	02	1	
125.06		B		2005	11	19	09:54	1	1	2	2			2	02	S	03	2		16	10		B	1		00000	19	8510	35310	02	1	
125.20				2004	5	21	11:51	1	1	1	2	U		1	07	E	14		02	99	04		B	1		00000	19	8510	17877	02	1	
125.20				2004	5	21	11:51	1	1	1	2	U		2	02	S	14		99	99	01		B	1		00000	19	8510	17877	02	1	
125.25				2004	6	13	17:30	1	1	1	2	U		1	45	S	26	2	16	99	08		9	1		00000	19	8510	20102	02	1	
125.25				2004	6	13	17:30	1	1	1	2	U		2	07	S	26	2	16	99	11		9	1		00000	19	8510	20102	02	1	
125.31		C		2004	4	10	16:00	1	1	3	2	U		1	07	N	03	2	16	99	01		3	1		50700	19	16045	11890	02	1	
125.31		C		2004	4	10	16:00	1	1	3	2	U		2	07	N	03	2	99	99	10		3	1		50700	19	16045	11890	02	1	
125.31		C		2004	4	10	16:00	1	1	3	2	U		3	07	N	03	2	99	99	10		3	1		50700	19	16045	11890	02	1	
125.34				2004	5	18	09:21	1	1	1	2	U		1	36	S	03		16	07	01		B	1		50700	19	16045	27377	02	1	

UTAH DEPARTMENT OF TRANSPORTATION

DYNAMIC QUICKLISTING

6/20/2007

Route Number:0191 Years: 2004 - 2005

Beginning MP: 119.04 Ending MP:125.49

MP	KP	Intersect Type	Ramp Num	Accident Year	Month	Day	Time	Light	Weather	Severity	Acc Type One	Acc Type Two	Acc Type Three	Vehicle Number	Vehicle Type	Vehicle Dir	Coll Type	Road Cond	Contrib Circ One	Contrib Circ Two	Driver Intent	Fix Obj	Traff cntrl	Surf Cond	Ped	City	County	ADT	Acc Ctrl Num	C Fl uns c	U rb R ur l	D Res g
125.34				2004	5	18	09:21	1	1	1	2	U		2	36	S	03		99	99	01		B	1		50700	19	16045	27377	02	1	
125.36				2005	6	21	16:30	1	8	1	2			1	07	W	13	1	12		04		B	1		50700	19	16045	18176	02	1	
125.36				2005	6	21	16:30	1	8	1	2			2	02	S	13	1			01		B	1		50700	19	16045	18176	02	1	
125.38		A		2004	8	11	16:16	1	1	1	2	U		1	07	S	03		07	16	01		3	1		50700	19	16045	26245	02	1	
125.38		A		2004	8	11	16:16	1	1	1	2	U		2	07	S	03		00	00	06		3	1		50700	19	16045	26245	02	1	
125.38		A		2005	1	7	11:40	1	1	1	2			1	02	N	14		06	02	01		3	1		50700	19	16045	00575	02	1	
125.38		A		2005	1	7	11:40	1	1	1	2			2	07	W	14		00	00	04		3	1		50700	19	16045	00575	02	1	
125.40		A		2004	3	27	16:10	1	1	2	2	U		1	02	S	03		16	07	01		3	1		50700	19	16045	13701	02	1	
125.40		A		2004	3	27	16:10	1	1	2	2	U		2	07	S	03		07	00	01		3	1		50700	19	16045	13701	02	1	
125.42				2004	4	6	11:00	1	1	1	2	U		1	02	N	03		16	07	01		3	1		50700	19	16045	11783	02	1	
125.42				2004	4	6	11:00	1	1	1	2	U		2	02	N	03		00	99	10		3	1		50700	19	16045	11783	02	1	
125.42				2005	6	6	08:26	1	1	2	2			1	02	S	07		16		12		9	1		50700	19	16045	16641	02	1	
125.42				2005	6	6	08:26	1	1	2	2			2	02	S	07		16		01		9	1		50700	19	16045	16641	02	1	
125.44				2005	3	19	22:15	4	2	1	6			1	07	N	17		02	01	04	G	9	2		50700	19	16045	07699	02	1	
125.49		A		2005	7	29	17:30	1	1	1	2			1	02	N	07		16		12		5	1		50700	19	16045	22610	02	1	
125.49		A		2005	7	29	17:30	1	1	1	2			2	02	N	07		00		01		5	1		50700	19	16045	22610	02	1	

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2004 - 2005

119.04 to 125.49

Milepoint	02	03	04	05	07	08	09	11	13	14	17	22	26	Grand Total
119.06											1			1
119.3													1	1
119.31							1							1
119.79											1			1
120											1			1
120.5											1			1
120.61		1												1
120.95												1		1
121.4											1			1
121.5			1											1
121.61											1			1
122.1											1			1
122.8									1					1
123							1							1
124.18											1			1
124.38	1													1
124.43		1												1
124.46											1			1
124.48								1		2				3
124.49		1		1										2
124.5				1										1
124.84											1			1
124.89						1				2				3
124.93	1													1
125.01												1		1
125.03					1						1			2
125.04		2												2
125.06		1												1
125.2										1				1
125.25													1	1
125.31		1												1
125.34		1												1
125.36									1					1
125.38		1								1				2
125.4		1												1
125.42		1			1									2
125.44											1			1

Milepoint	02	03	04	05	07	08	09	11	13	14	17	22	26	Grand Total
125.49					1									1
and Total	**2**	**11**	**1**	**2**	**3**	**1**	**2**	**1**	**2**	**6**	**12**	**2**	**2**	**47**

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2004 - 2005

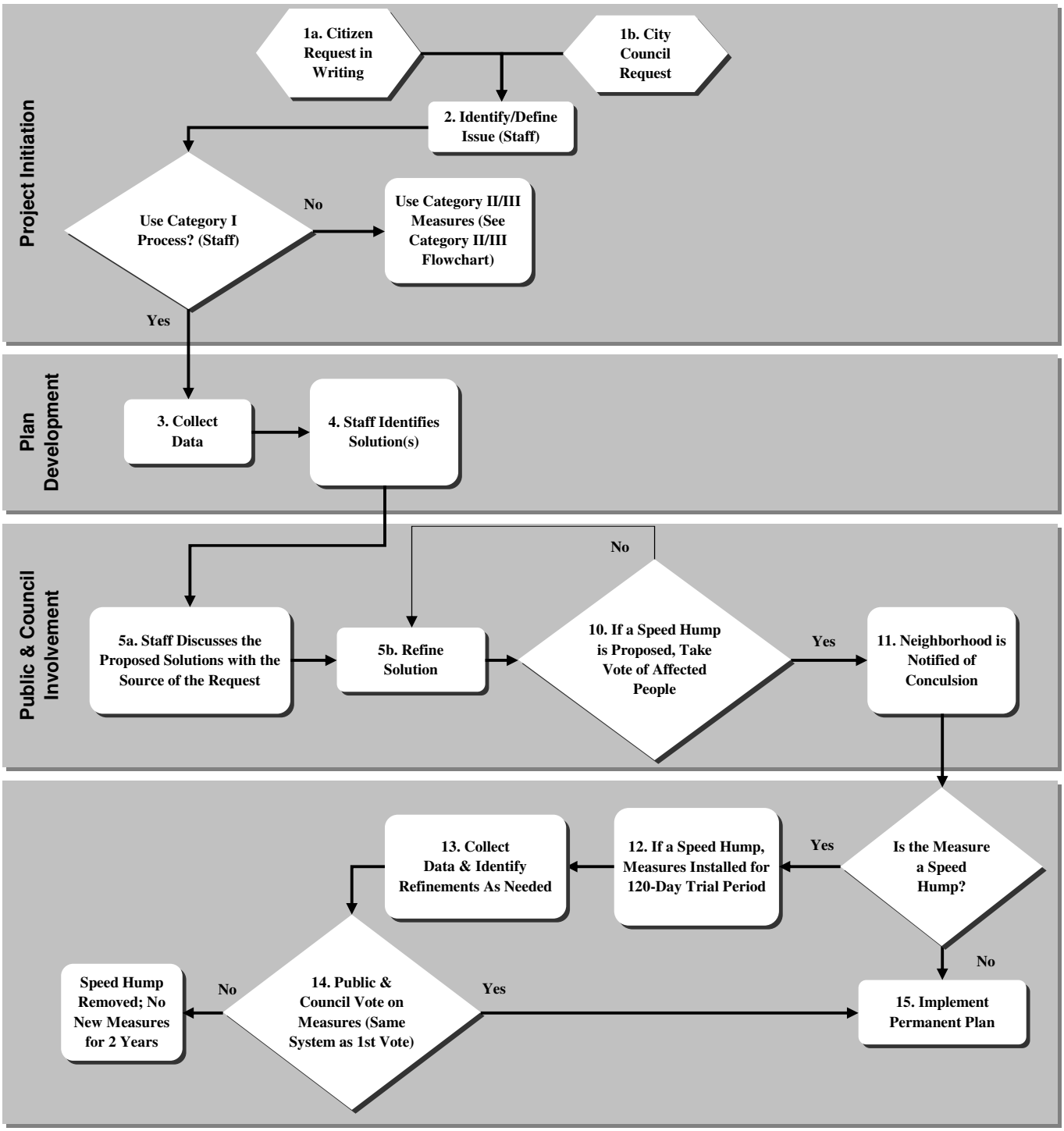
119.04 to 125.49

Milepoint	1	2	3	4	5	Grand Total
119.06		1				1
119.3	1					1
119.31					1	1
119.79	1					1
120	1					1
120.5			1			1
120.61	1					1
120.95			1			1
121.4	1					1
121.5	1					1
121.61	1					1
122.1				1		1
122.8			1			1
123		1				1
124.18	1					1
124.38	1					1
124.43		1				1
124.46	1					1
124.48	3					3
124.49	1	1				2
124.5		1				1
124.84			1			1
124.89	1	1	1			3
124.93	1					1
125.01	1					1
125.03	1	1				2
125.04	2					2
125.06		1				1
125.2	1					1
125.25	1					1
125.31			1			1
125.34	1					1
125.36	1					1
125.38	2					2
125.4		1				1
125.42	1	1				2
125.44	1					1

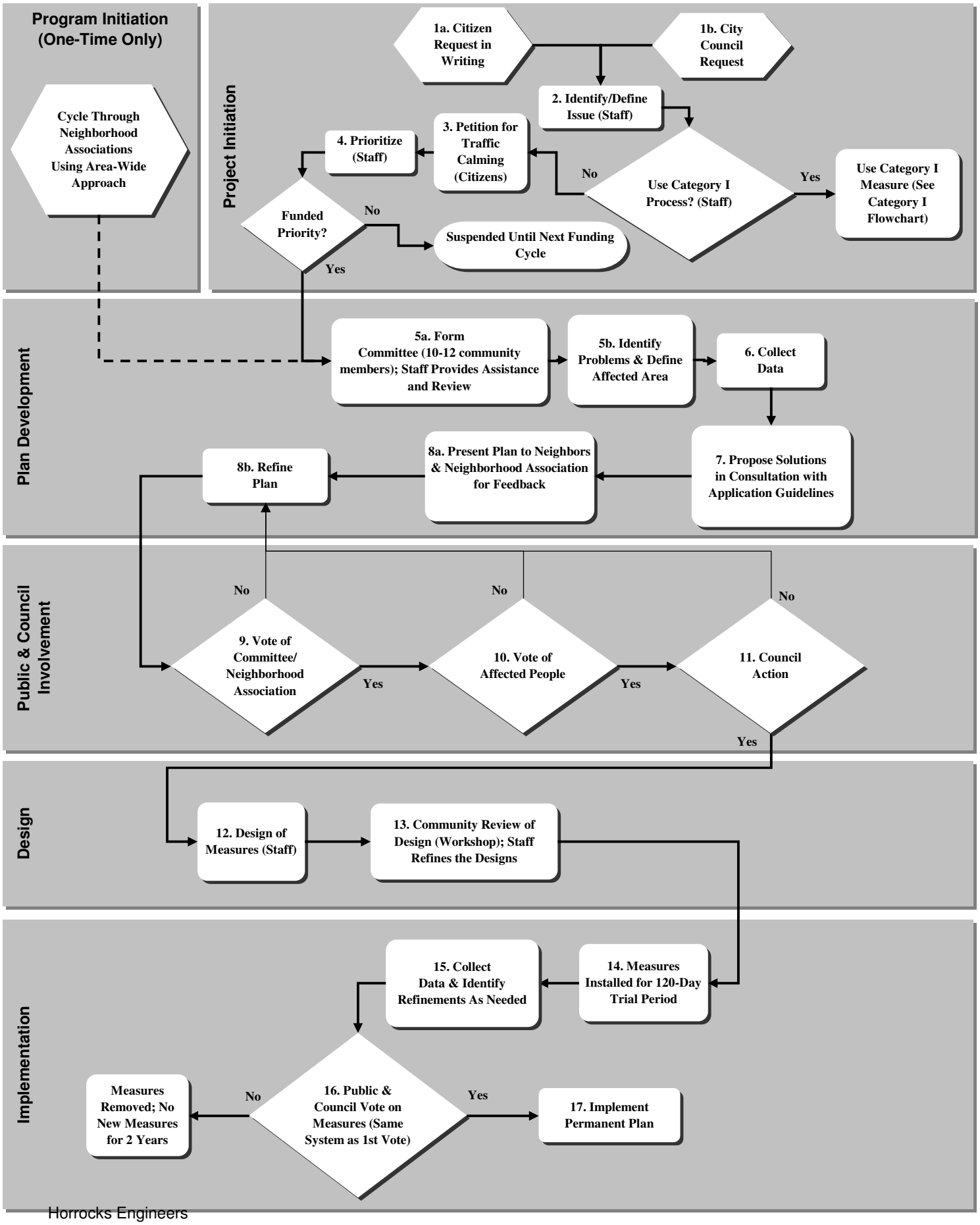
Milepoint	1	2	3	4	5	Grand Total
125.49	1					1
rand Total	**29**	**10**	**6**	**1**	**1**	**47**

Appendix D

Neighborhood Traffic Calming Process - Category I Flowchart



Neighborhood Traffic Calming Process - Category II/III Flowchart



Notes:

[1] Selection of the appropriate process for responding to a citizen request will use the following guidelines:

Conditions	Traditional Engineering Response	Neighborhood Traffic Management
Likely Type of Device	Category I (Uniform Traffic Control Devices plus Speed Humps)	Category II/III (Traffic Calming Devices)
Scope of Issue	Localized	Area-Wide

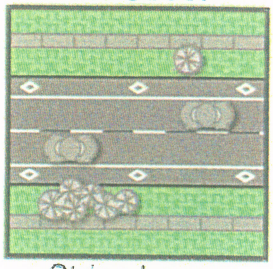
[2] The scope of the vote will consist of residents within 500 feet of each proposed device as well as residents who would be required to pass through the device to access the street system. For Category II measures, a 25% response rate and 50% approval rate will be required to advance the plan; for Category III measures, a 50% response rate and a 66% approval rate will be required.

[3] Trial measures will be installed if any of the following conditions apply:

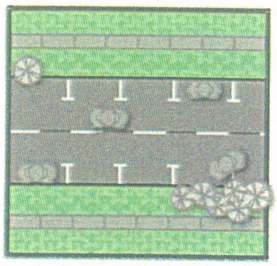
- The proposed measure is a full or partial closure or diverter;
- The proposed measure has not been previously used within the city; or
- The proposed application of the measure requires an exception to the adopted application guidelines.

Menu of Traffic Calming Devices

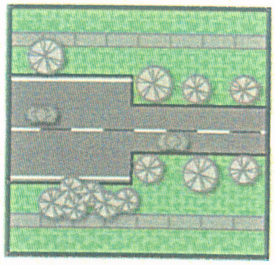
Narrowing the Street



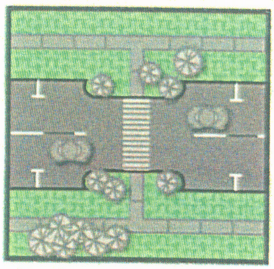
Stripe Lanes



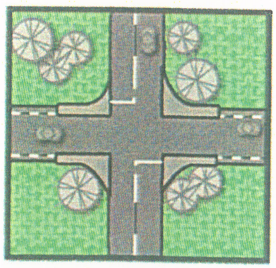
Parking



Rebuild Street

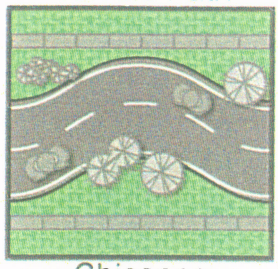


Bulbout Midblock

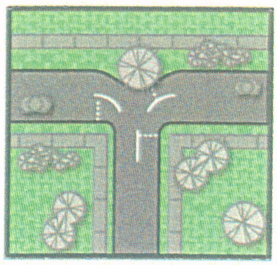


Bulbout Intersection

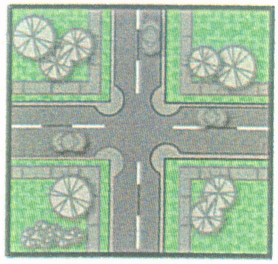
Deflecting the Vehicle Path



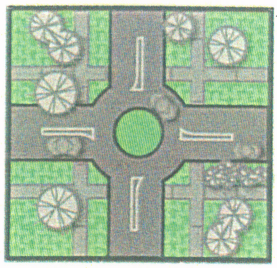
Chicanes



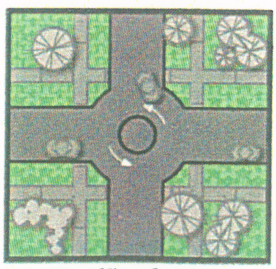
Modified Intersection



Knockdown

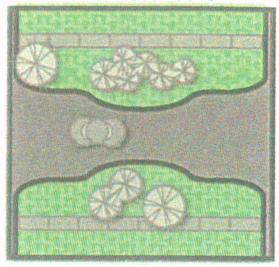


Roundabout

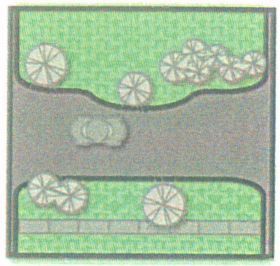


Traffic Circle

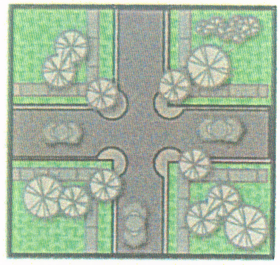
Sharing the Pavement



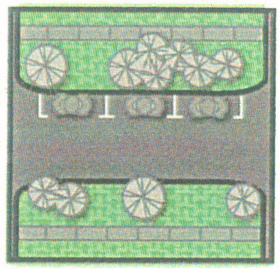
Centered Mid-block Yield Point



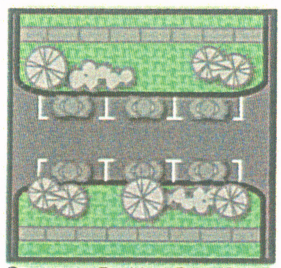
Offset Yield Point



Intersection Yield Point



On-street Parking One Side



On-street Parking Both Sides

Appendix E

CHAPTER 2: Summary of Available Corridor Preservation Tools

This chapter will provide an overview of the methods available for accomplishing corridor preservation. Major topics of this chapter include the following:

- Preservation versus interim protection
- Major techniques of corridor preservation
  - Fee-simple acquisitions
  - Donations and exactions
  - Zoning and land use controls
  - Transfer of density/development rights
  - Purchase of easements
  - Developer/landowner agreements
  - Official maps
  - Access management

Preservation vs. Interim Protection

According to FHWA, corridor preservation strategies are classified into two groups: interim protection and preservation measures. Interim protection measures serve to hold land out of development *until* purchase can be made, while preservation measures definitively ensure that right-of-way will be available when needed for a transportation facility. This almost invariably involves full transfer of title of other rights to a public transportation agency or other government entity. From several case studies and the AASHTO Task Force report, FHWA has identified 20 specific techniques that can be used singly or in combination in corridor preservation programs (Rivkin Associates, 1996). One technique, access management and control, can be classified as both a preservation method and interim protection measure. While this list is not a comprehensive summary of all available preservation techniques, it does serve as an introductory summary of some of the tools commonly used. These interim protection and preservation measures are summarized in Table 2.1 below.

Table 2.1: Preservation vs. interim protection

Preservation	Interim Protection
1. Fee-simple acquisition	1. Options to purchase at a later date
2. Development easement acquisitions	2. Official maps of reservation
3. Landowner donations	3. General plan corridor designations
4. Public/private partnerships (toll facilities)	4. Zoning and subdivision controls
5. Zoning and subdivision controls requiring dedications/exactions	5. Agricultural zoning
6. Transferable development rights to other properties or land swaps	6. Density transfer within a single property
7. Special assessment districts involving right-of-way dedications	7. Interim uses on right-of-way
8. Access management and control	8. Irrevocable offers to dedicate
	9. Highway right-of-way platting
	10. Development agreements (commitment to reserve)
	11. Tax abatements
	12. Voluntary developer reservations
	13. Access management and control

As noted earlier, the primary aims of corridor preservation programs include reducing project land acquisition costs, preserving environmentally sound alternatives, and preventing the foreclosure of project options due to encroaching development. In some cases, implementation of corridor preservation strategies must occur many years prior to project development in order to accomplish these goals. In other cases, corridor preservation

techniques may need to be applied only a few months prior to construction. This determination must be made on a case-by-case basis, but can be influenced by several factors, including the following:

- Importance of the corridor,
- Timetable for project completion,
- Presence of encroaching development,
- Available funding, and
- Public opinion/support.

Interim protection methods are generally sufficient to preserve designated highway corridors on a short-term basis, while preservation methods may likely be required to reserve corridors for longer periods of time. Each of these preservation techniques is analyzed in detail in this and subsequent sections.

Available Tools for Corridor Preservation

In this section the major techniques of corridor preservation are introduced and briefly analyzed in terms of their benefits and limitations. These techniques can generally be grouped into five fundamental categories:

- Local land use planning and development controls,
- Corridor mapping laws,
- Access management,
- Land acquisition, and
- Voluntary developer/landowner agreements.

The first three categories are called *police power measures. Police power* is the authority of states and their political subdivisions to adopt laws and regulations that secure public health, welfare, safety, and morals. State and local governments enact land use regulations under this power. Courts have held that when properly applied, police power measures do not require compensation. However, land acquisition for corridor preservation does require payment of just compensation for taking property. Voluntary agreements with developers and landowners may not require payment of compensation but could require other incentives, such as tax abatements. Since these agreements are voluntary, legal disputes and associated costs can be minimized, however.

Within these five fundamental categories of corridor preservation measures are numerous techniques available for use as listed in Table 2.1. In the following sections, brief overviews of the following tools are discussed:

- Fee-simple acquisitions,
- Donations and exactions,
- Zoning and land use controls,
- Transfer of density/development rights,
- Purchase of easements,
- Developer/landowner agreements,
- Official maps, and
- Access management

Fee-Simple Acquisition

Fee-simple acquisition is the simplest and most easily implemented corridor preservation technique. State or local government entities purchase properties needed for future transportation corridors outright, gaining full title to the land and therefore complete control over its use. This preservation method has the fewest institutional complications, but it also requires the most substantial capital outlay. For this and other reasons, fee-simple property acquisition for transportation projects in Utah has generally been limited to small, discrete parcels rather than full-scale right-of-way purchase.

Through fee-simple acquisition, the state or local government gains full title to land within proposed transportation corridors. This eliminates the possibility of development foreclosing desirable alignment alternatives and preserves the corridor for extended periods of time, allowing for flexibility in construction scheduling. Fee-simple acquisition is viewed by many transportation agencies as an "environmentally friendly" preservation technique because preferred alignments with minimal environmental impacts can be preserved for highway construction. According to federal regulations, however, NEPA compliance and public hearings are required prior to any full-scale right-of-way acquisition on federal-aid projects. Limited exceptions are allowed in two cases:

- To alleviate hardship to property owner, and
- To avoid increased acquisition costs and limiting effect of development.

Other limitations include the potential of advance right-of-way acquisition to prejudice the project decision process, property management concerns with acquired parcels, and the large capital costs to government agencies. According to NEPA, advance property acquisition cannot influence the decision process, including the selection of a preferred alternative and consideration of the "no-build" alternative. Acquired properties must also be maintained by the title holder prior to construction, the result being additional management costs. Table 2.2 summarizes the benefits and limitations of fee-simple acquisition in corridor preservation programs.

Table 2.2: Fee-Simple Acquisition

Preservation Technique: Fee-Simple Acquisition	
Benefits	**Limitations**
• State has full title & controls property • Eliminates threat of development • Flexibility in construction scheduling • Environmentally friendly • Undeveloped property can be purchased at lower cost	• NEPA compliance required • Public hearings necessary • Cannot influence project decisions • Property management concerns • High capital costs • Can decrease local property tax base

Dedications and Exactions

Dedications and exactions are an exercise of police power, generally used by local governments. A dedication or exaction is an impact fee paid with land instead of cash. These forms of impact fees are paid by or assessed to a developer in exchange for development approval, such as a zoning change or approval of a conditional use permit. In general, a dedication is land donated by the developer in lieu of cash payments, while an exaction is a *required* donation that cannot be substituted with cash payments. Dedications and exactions are means through which government entities obtain land necessary to construct highways needed to serve new developments without the substantial capital costs associated with fee-simple acquisition.

While dedications and exactions do not require any initial capital outlay for property acquisition, they are subject to the *rational nexus*, or reasonable relationship test. This means that the impact fee (or exaction) assessed on a development must bear a reasonable relationship to the increased tax burden on a community created by that development. This creates a question whether dedications can be used for arterial streets serving primarily through traffic not generated by new development. To this point, dedications and exactions for transportation use have generally been reserved for local facilities (i.e., local circulation streets) as opposed to regional highways. In Utah, the state does not have the authority to require dedications or exactions, because impact fees are collected by the local government that provides services to the development. UDOT is dependent upon local governments to assess appropriate impact fees for new transportation facilities. Table 2.3 summarizes the benefits and limitations of exactions and dedications in corridor preservation programs.

Table 2.3: Exactions and Dedications

Preservation Technique: Exactions & Dedications	
Benefits	Limitations
• Reduces capital costs of acquisition • Attributes partial cost of new highways to new developments that create the costs • Prevents development by transferring title	• Rational nexus must be met • State must rely on local government to assess & collect fees • Standard criteria must be developed, & careful traffic studies are required • Requires increased administration at local level

Land Use Controls

Land use controls allow government entities to use police power to regulate intensity and types of land use. Zoning ordinances are the primary controls over land use and the most important land use tools available for use in corridor preservation programs. Other common types of land use regulations with potential applications in corridor preservation programs include setback requirements, conditional use permits, site plan reviews, and interim uses. Land use controls are attractive for use in corridor preservation because they are an exercise of police power, and as such generally do not require payment of compensation to landowners. This allows corridor preservation to be accomplished without substantial investment of public funds.

Zoning ordinances are used in corridor preservation to preserve undeveloped land until it is needed for new highway right-of-way, at which time it can be purchased for use. Setback requirements can be used to reserve land for widening of an existing highway. Other land use controls, such as conditional use permits, can allow compatible interim uses within proposed highway corridors until construction begins. Examples of such uses include parking lots, agriculture, or open spaces.

While land use controls are perhaps the most attractive method of corridor preservation, several obstacles exist. Land use regulation is a function of police power given to local governments. The state must therefore rely heavily on cooperation of these entities in corridor preservation programs. Cities and counties are often wary of using police power to support corridor preservation for fear of legal challenge. Zoning in particular must be carefully applied, as land uses must be common throughout an area. Downzoning an area simply to preserve land in an agricultural state for later highway use has been found to be unconstitutional by the courts. Zoning with "acquisitory intent" to reduce property values for later acquisition has also been successfully opposed. Aside from these limitations, however, zoning regulations and other land use controls remain attractive tools in corridor preservation programs. Table 2.4 summarizes the benefits and limitations of land use controls in corridor preservation programs.

Table 2.4: Land Use Controls

Preservation Technique: Land Use Controls	
Benefits	**Limitations**
• Low initial capital investment • Preserves future right-of-way in undeveloped state • Provides opportunity for developer cooperation in preservation process • Does not require payment of compensation prior to acquisition	• State has no land use regulation powers • Potential for substantial taking-of-property issues • Isolated downzoning is viewed as unconstitutional • Zoning with acquisitory intent is unlawful

Transfer of Development Rights and Density Transfers

Government entities can provide incentives for developers and landowners to participate in corridor preservation programs using the transfer of development rights and density transfers. These are two related techniques that preserve undeveloped land within highway corridors while still allowing the landowner to receive the full benefits of developing his property. With density transfers, a landowner is allowed to use "clustering" to develop the portion of his property outside the highway corridor at a higher intensity, resulting in the same number of units that would have been allowed on the entire property in absence of the highway corridor. With transfer of development rights, a landowner is allowed to develop a separate piece of property at the same density that would have been allowed on the parcel now reserved for transportation use.

These techniques allow a landowner to use all aspects of his property rights while still preserving necessary highway corridors in an undeveloped state. This may eliminate the legal "takings" issue of too-stringent land use regulations and allow the owner to retain the property for agricultural use until highway construction begins. However, these techniques do require cooperation of landowners and developers, and may be less effective for smaller parcels or developments. In addition, adequate staff and administration is required for these programs to succeed. Table 2.5 summarizes the benefits and limitations of density transfers and transfer of development rights in corridor preservation programs.

Table 2.5: Transfer of Development Rights and Density Transfers

Preservation Technique: Transfer of Development Rights & Density Transfers	
Benefits	**Limitations**
• No initial capital investment • Preserves future right-of-way in undeveloped state • Landowner retains full benefits of property ownership	• Difficulties in administration • State must rely on local government cooperation • May require additional staff at local level

Purchase of Options and Easements

Options and easements allow government entities to purchase interests in property that lies within highway corridors without obtaining full title to the land. Options are generally contracts that give the agency the right to purchase the property at a later date. Rights of first refusal give the public agency the first chance to purchase the property if and when the landowner decides to sell. Options are generally purchased for less than fee-simple acquisition and have a limited time period during which they are effective.

Easements are a method through which the state or other government agency can purchase a landowner's development rights to a parcel. Under this agreement, the landowner retains title to the land, but is not allowed to develop it or make significant improvements. Interim uses are allowed, and the owner retains all other property rights.

Options and easements are attractive because they can often be acquired for less than fee-simple acquisition of the entire parcel. In addition, landowners retain title, existing uses, and maintenance responsibility of the land; and the property remains on local tax rolls until needed for highway construction. While initially less expensive than fee-simple acquisition, the costs of these options over extended periods of time, or easements in areas with substantial development pressure, can approach those of outright acquisition. In addition, if the preferred alignment changes or the property is never acquired, the costs of options and easements represent a lost investment of public funds. Table 2.6 summarizes the benefits and limitations of options and easements in corridor preservation programs.

Table 2.6: Purchase of Options and Easements

Preservation Technique: Options and Easements	
Benefits	**Limitations**
• Low initial capital investment • Preserves future right-of-way in undeveloped state • Provides opportunity for developer cooperation in preservation process • Does not require payment of compensation prior to acquisition	• State has no land use regulation powers • Potential for substantial taking of property issues • Isolated downzoning is viewed as unconstitutional • Cost of development rights can approach that of fee-simple acquisition • Zoning with acquisitory intent is unlawful

Developer Incentives and Agreements

Corridor preservation programs can also be conducted using voluntary landowner and developer agreements. Public agencies can offer incentives, in the form of tax abatements or timely site plan approvals, to developers who maintain property within proposed transportation corridors in an undeveloped state. If proper coordination between public and private groups occurs, developers may understand the impact of necessary transportation corridors on their developments, and voluntarily keep these areas as open space. This cooperation and support greatly facilitates corridor preservation.

Voluntary cooperation of private groups in corridor preservation reduces initial capital investments. Land is preserved as open space until required for right-of-way. Acquisition costs are lower because the land has been preserved in an undeveloped state. This method *requires* participation by the private sector in order to be successful, and it may not work in areas where development pressures are high. Tax abatements also reduce revenue to local government entities. This technique is most likely to succeed in locations where large-scale developments are proposed, as compared to areas with numerous small parcels. Table 2.7 summarizes the benefits and limitations of incentives and voluntary agreements in corridor preservation programs.

Table 2.7: Developer Incentives and Agreements

Preservation Technique: Developer Incentives & Agreements	
Benefits	Limitations
• Low initial capital investment of public funds • Preserves future right-of-way in undeveloped state • Provides opportunity for developer cooperation in preservation process • Can provide landowner incentives for maintaining open space	• Generally successful only for large-scale developments • Tax abatements can reduce revenue to local jurisdictions • Depends on willingness of landowners and developers • May not succeed in areas with high development pressures

Official Maps

In some states transportation agencies use official maps, sometimes known as maps of reservation, in corridor preservation programs. Official maps allow land within proposed future transportation corridors to be reserved for a specified period of time before it must be put into use as a highway facility. Official maps do not prevent development, but do provide a moratorium or grace period during which transportation agencies must commit to acquisition of property in question or allow development to proceed. This also provides a period for negotiation of an acceptable site plan with the developer that will permit development while still accommodating transportation facility. Use of such maps in corridor preservation must be authorized by state law. In addition, close coordination with counties and municipalities is required so that comprehensive and general plans are in harmony with state maps of reservation.

Under prior Utah law, official maps provided a one-year period of reservation. This preservation method was used to reserve right-of-way prior to construction of the Bangerter Highway on the west side of the Salt Lake Valley. Utah's official map law was repealed in 1992. Until new enabling legislation is passed, official maps will be unavailable for use in UDOT corridor preservation programs. Table 2.8 summarizes the benefits and limitations of official maps in corridor preservation programs.

Table 2.8: Official Maps (Maps of Reservation)

Preservation Technique: Official Maps (Maps of Reservation)	
Benefits	Limitations
• Can promote orderly development • Preserves foreclosure of alternatives due to development • Encourages community involvement	• Reservation period must be short • Prohibition of development raises potential taking-of-property issues • Requires specific statutory authority • Requires coordination with local general plans

Access Management

Corridor preservation programs are designed to help meet future transportation needs by preserving land for future highway use. By preserving capacity of existing highways, however, future needs for additional highway construction can be reduced. Access management along existing routes protects the capacity of these highways by limiting curb cuts and driveway access. Frontage roads are constructed to meet local circulation needs and provide access to private property. This reduces friction on highways created by entering vehicles and promotes through movement of traffic, delaying the need for new highway construction.

Access management strategies are beneficial because UDOT generally has jurisdiction over access to state highways. While access to private property cannot be denied simply to protect capacity of the highway, UDOT can work with developers to devise an acceptable site plan prior to granting an access permit. UDOT currently manages access along its roads, and local cooperation is not as critical to the success of access management programs. The most significant limitation to access management programs is the question of existing accesses. While these cannot be eliminated unless purchased by the state, a grandfather clause could allow such accesses while preventing new accesses that do not meet UDOT standards. While access management as a corridor preservation strategy is designed to preserve capacity of existing routes, standard criteria could be effectively applied to new routes as well. Table 2.9 summarizes the benefits and limitations of access management as a corridor preservation tool.

Table 2.9: Access Management

Preservation Technique: Access Management	
Benefits	**Limitations**
• Can be administered at state level with minimal local cooperation • Minimal capital investment • Delays need for construction of new highways	• Existing, nonconforming accesses can't be eliminated without compensation • Flexibility in program is necessary • Coordination of local street networks with state standards is necessary • Reasonable access is a property right subject to takings clause

The following segments of the Utah Code are of primary intersect with respect to corridor preservation activities. There may be other segments of the Utah Code that are also relevant, but they have not been included in this summary.

Transportation corridor preservation powers.

72-5-401. Definitions.

As used in this part:

(1) "Corridor" means the path or proposed path of a transportation facility that exists or that may exist in the future. A corridor may include the land occupied or to be occupied by a transportation facility, and any other land that may be needed for expanding a transportation facility or for controlling access to it.

(2) "Corridor preservation" means planning or acquisition processes intended to:

(a) protect or enhance the capacity of existing corridors; and

(b) protect the availability of proposed corridors in advance of the need for and the actual commencement of the transportation facility construction.

(3) "Development" means:

(a) the subdividing of land;

(b) the construction of improvements, expansions, or additions; or

(c) any other action that will appreciably increase the value of and the future acquisition cost of land.

(4) "Official map" means a map, drawn by government authorities and recorded in county recording offices that:

(a) shows actual and proposed rights-of-way, centerline alignments, and setbacks for highways and other transportation facilities;

(b) provides a basis for restricting development in designated rights-of-way or between designated setbacks to allow the government authorities time to purchase or otherwise reserve the land; and

(c) for counties and municipalities may be adopted as an element of the general plan, pursuant to Title 17, Chapter 27a, Part 4, General Plan, or Title 10, Chapter 9a, Part 4, General Plan.

(5) "Taking" means an act or regulation, either by exercise of eminent domain or other police power, whereby government puts private property to public use or restrains use of private property for public purposes, and that requires compensation to be paid to private property owners.

72-5-402**. Public purpose.**

(1) The Legislature finds and declares that the planning and preservation of transportation corridors is a public purpose, that the acquisition of public rights in private property for possible use as a transportation corridor years in advance is a public purpose, and that acquisition of public rights in private property for possible use as alternative transportation corridors is a public purpose, even if one or more of the transportation corridors is eventually not used for a public purpose, so long as reasonable evidence exists at the time of acquisition that the transportation facility will be developed within the time period established under this part.

(2) The Legislature finds and declares that the acquisition of private property rights for

the preservation of transportation corridors should be done on a voluntary basis and not by the use of eminent domain powers.

72-5-403. Transportation corridor preservation powers.

(1) The department, counties, and municipalities may:

(a) act in cooperation with one another and other government entities to promote planning for and enhance the preservation of transportation corridors and to more effectively use the monies available in the Transportation Corridor Preservation Revolving Loan Fund created in Section 72-2-117;

(b) undertake transportation corridor planning, review, and preservation processes; and

(c) acquire fee simple rights and other rights of less than fee simple, including easement and development rights, or the rights to limit development, including rights in alternative transportation corridors, and to make these acquisitions up to a projected 30 years in advance of using those rights in actual transportation facility construction.

(2) In addition to the powers described under Subsection (1), counties and municipalities may:

(a) limit development for transportation corridor preservation by land use regulation and by official maps; and

(b) by ordinance prescribe procedures for approving limited development in transportation corridors until the time transportation facility construction begins.

72-5-404. Disposition of excess property rights.

If the department has acquired property rights in land in proposed transportation corridors, and some or all of that land is eventually not used for the proposed transportation corridors, the department shall dispose of the property rights in accordance with the provisions of Section 78-34-20.

72-5-405. Private owner rights.

(1) The department, counties, and municipalities shall observe all protections conferred on private property rights, including Title 63, Chapter 90, Private Property Protection Act, Title 63, Chapter 90a, Constitutional Taking Issues, and compensation for takings.

(2) Private property owners from whom less than fee simple rights are obtained for transportation corridors or transportation corridor preservation have the right to petition the department, a county, or a municipality to acquire the entire fee simple interest in the affected property.

(3) (a) A private property owner whose property's development is limited or restricted by a power granted under this part may petition the county or municipality that adopted the official map to acquire less than or the entire fee simple interest in the affected property, at the option of the property owner.

(b) If the county or municipality petitioned under Subsection (3)(a) does not acquire the interest in the property requested by the property owner, then the county or municipality may not exercise any of the powers granted under this part to limit or restrict the affected property's development.

H.B. 214 Enrolled

CORRIDOR PRESERVATION FUNDING DISTRIBUTION

2001 GENERAL SESSION

STATE OF UTAH

Sponsor: David L. Hogue

This act modifies the Transportation Code by amending the considerations to be used to prioritize the Corridor Preservation Revolving Loan Fund monies. This act also provides membership guidelines for the Corridor Preservation Advisory Council.

This act affects sections of Utah Code Annotated 1953 as follows:

AMENDS:

72-2-117, as last amended by Chapter 34, Laws of Utah 2000

Be it enacted by the Legislature of the state of Utah:

Section 1. Section **72-2-117** is amended to read:

72-2-117. Transportation Corridor Preservation Revolving Loan Fund -- Distribution -- Repayment -- Rulemaking.

(1) There is created the Transportation Corridor Preservation Revolving Loan Fund within the Transportation Fund.

(2) The fund shall be funded from the following sources:

(a) motor vehicle rental tax imposed under Section 59-12-1201 ;

(b) appropriations made to the fund by the Legislature;

(c) contributions from other public and private sources for deposit into the fund;

(d) interest earnings on cash balances;

(e) all monies collected for repayments and interest on fund monies;

(f) all monies collected from rents and sales of real property acquired with fund monies; and

(g) proceeds from revenue bonds or other obligations issued in accordance with Title 63, Chapter 9a, State Building Ownership, and Title 63B, Bonds.

(3) All monies appropriated to the Transportation Corridor Preservation Revolving Loan Fund are nonlapsing.

(4) (a) The commission shall authorize the expenditure of fund monies to allow the department to acquire real property or any interests in real property for state, county, and municipal transportati corridors subject to:

(i) monies available in the fund;

(ii) rules made under Subsection (7); and

(iii) Subsection (9).

(b) Fund monies may be used to pay interest on debts incurred in accordance with this section.

(5) Administrative costs of the Transportation Corridor Preservation Revolving Loan Fund shall be paid from the fund.

(6) The department:
(a) may apply to the commission under this section for monies from the Transportation Corridor Preservation Revolving Loan Fund for a specified transportation corridor project, including for county and
municipal projects; and
(b) shall repay the fund monies authorized for the project to the fund as required under Subsection (7).
(7) The commission shall:
(a) administer the Transportation Corridor Preservation Revolving Loan Fund to preserve transportation corridors, promote long-term statewide transportation planning, save on acquisition costs,
and promote the best interests of the state in a manner which minimizes impact on prime agricultural land;
(b) prioritize fund monies based on considerations, including:
(i) areas with rapidly expanding population;
(ii) the willingness of local governments to complete studies and impact statements that meet department standards;
(iii) the preservation of corridors by the use of local planning and zoning processes; [and]
(iv) the availability of other public and private matching funds for a project; and
(v) the cost-effectiveness of the preservation projects; and
(c) make rules in accordance with Title 63, Chapter 46a, Utah Administrative Rulemaking Act, establishing:
(i) the procedures for the awarding of fund monies;
(ii) the procedures for the department to apply for transportation corridor preservation monies for projects; *and*
(iii) repayment conditions of the monies to the fund from the specified project funds[~~; and~~].
[~~(iv) an advisory council to assist with and help coordinate the corridor preservation efforts of the department and local governments and to provide recommendations and priorities concerning corridor~~
~~preservation and the use of fund monies to the department and to the commission.~~]
(8) (a) The proceeds from the revenue bonds or other obligations issued on revenues of the Transportation Corridor Preservation Revolving Loan Fund shall be used for:
(i) the acquisition of real property in hardship cases; and
(ii) any of the purposes authorized for funds in the Transportation Corridor Preservation Revolving Loan Fund under this section.
(b) The commission shall pledge the necessary part of the revenues of the Transportation Corridor Preservation Revolving Loan Fund to the payment of principal of and interest on the revenue bonds or other
obligations.
(9) (a) The department may not apply for monies under this section for a highway authority that does not have an access management policy or ordinance in effect that meets the requirements under Subsection (9)(b).
(b) The access management policy or ordinance shall:
(i) be for the purpose of balancing the need for reasonable access to land uses with the need to preserve the smooth flow of traffic on the highway system in terms of safety, capacity, and speed; and

(ii) include provisions:
(A) limiting the number of conflict points at driveway locations;
(B) separating conflict areas;
(C) reducing the interference of through traffic;
(D) spacing at-grade signalized intersections; and
(E) providing for adequate on-site circulation and storage.
(c) The department shall develop a model access management policy or ordinance that meets the requirements of this Subsection (9) for the benefit of a county or municipality under this section.
(10) (a) In accordance with Title 63, Chapter 46a, Utah Administrative Rulemaking Act, the commission shall make rules establishing a corridor preservation advisory council.
(b) The corridor preservation advisory council shall:
(i) assist with and help coordinate the corridor preservation efforts of the department and local governments;
(ii) provide recommendations and priorities concerning corridor preservation and the use of fund
monies to the department and to the commission; and
(iii) include members designated by each metropolitan planning organization in the state to represent local governments that are involved with corridor preservation through official maps and planning.

Appendix F

Utah Department of Transportation
Traffic Impact Study Requirements

This memo and preceding information is prepared to assist an access permit applicant fulfilling the requirement of performing a traffic impact study when requesting access to a state highway. Each permit application is unique. The agreed requirements of traffic study and assessment may vary accordingly as agreed to by the Department and the applicant and/or their representative who will perform the traffic study.

Please refer to the Department document, *Accommodation of Utilities and the Control and Protection of State Highway Rights of Way: Section 7, State Highway Access* for full information concerning the grant of access application requirements. A downloadable copy of the document is available on the Department website at http://www.udot.utah.gov.

The following are taken from the Utah state rule 930-6, Accommodation of Utilities and the Control and protection of State Highway Rights of Way. Statements for this guideline are also added which do not appear in the Rule.

7.2.5 Preparing The Access Application

Pre-Application/Concept Meeting

Prior to submitting a permit application, contact the appropriate Department Region or District office for information about the application process and the type of information required. The applicant is advised to consult with the Region Permit Officer during a pre-application meeting to determine the appropriate access category, permit application level, and traffic impact study requirements, and scope for the project.

Permit Level

The level of application required is based upon the size and magnitude of the proposed project applying for a permit. Threshold criteria for different levels of projects have been developed to avoid placing an undue burden on applicants with small projects, while ensuring that large projects with significant impacts are thoroughly evaluated.

Four application levels have been developed based on site-generated traffic of AADT and or peak hour volumes. Each level defines specific threshold elements related to required applicant site plan elements, permitting process, permitting schedule, applicant fees, traffic study requirements, and other permit related issues. The information and level of detail required to review an application will vary according to the type and usage of the access connection requested and will be determined based on the thresholds outlines in, Table 7.2-2: Guidelines for Access Permit Levels. The Region Permit Officer, Traffic Engineer and/or designee will determine the Permit Application Level based on preliminary data supplied by the applicant.

A Traffic Impact Study (TIS) is required of all access permit applications. The purpose of the TIS is to identify system and immediate area impacts associated with the proposed connection(s). Identification of impacts and appropriate mitigation measures allows the Department to assess the existing and future system safety, performance, maintenance, and capacity needs.

Determination of the extent of the TIS study area is at the determination of the attending Region Traffic Engineer and /or other Department employees. The study area, depending on the size and

intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary. An acceptable traffic study boundary, based on travel time, may be identified as a ten or twenty minute travel time or even by market area influence.

The TIS shall, at a minimum, incorporate traffic engineering principles and the standards as presented in this Rule. Additional requirements and investigation may be imposed upon the applicant as necessary.

Likely information presented in the TIS may include, but is not limited to, site location and proposed access point(s), phased and/or full development trip generation, connection point design elements, adjacent and relevant development, existing and future traffic volumes, assessment of the system impacts, and mitigation measures as appropriate.

The applicant will be responsible for performance and delivery of an acceptable traffic impact study. The TIS should be performed by an individual or entity demonstrating capability to analyze and report mobility, traffic engineering elements, and design elements as necessary for the application study area and site design. The TIS should be prepared directly, or by direct supervision by a State of Utah Licensed Professional Engineer. The Region Traffic Engineer may waive the licensing requirement for Permit Level I and II, and may also waive the Utah Licensure requirement.

7.2.6 Application Review

For an access permit, submit one complete application with attachments to the Region Permits Officer at the appropriate Department Region Office. The Region Permits Officer is the primary contact for the applicant with the Department throughout the process. Direct inquires regarding a permit application or review, are directed to the Region Permit Officer.

7.2.11 Traffic Impact Studies

Need for Traffic Impact Study

A traffic study is necessary to identify, review, and make recommendations for mitigation of the potential impacts a development may have on the roadway system. Physical characteristics and operational characteristics of the roadway are typically identified. The Region Permits Officer and/or Region Traffic Engineer determine the need for a traffic impact study.

An applicant may be required to submit a traffic study for any proposed access or connection within an area identified by the Department. Area definition may be defined by, but not limited to, an identified safety problem, accident review, congested locations, or as a result of a change in land use and/or access in accordance with an access permit application. The study area may also be defined by a travel time boundary, area of influence, physical boundaries, or political boundaries.

Purpose of the Traffic Impact Study

TIS are intended to:

- Document whether or not the access request can meet the standards and requirements of this Rule and other applicable regulations.
- Analyze appropriate location, spacing, and design of the access connection(s) necessary to mitigate the traffic.

- Analyze operational impacts on the highway and permissible under the highway's assigned access category and in accordance with applicable requirements and standards of this Rule.
- Recommend the need for any improvements to the adjacent and nearby roadway system to maintain a satisfactory level of service and safety and to protect the function of the highway system while providing appropriate and necessary access to the proposed development.
- Assure that the internal traffic circulation of the proposed development is designed to provide safe and efficient access to and from the adjacent and nearby roadway system consistent with the purpose of this Rule.
- Analyze and recommend the means for land uses to minimize their external transportation costs to the traveling public through traffic improvements necessitated by that development as well as making the fullest use of alternative travel modes.

Traffic Impact Study Requirements

When a Traffic Impact Study is required (See Table 7.2-2), prepare the study according to the Department Traffic Impact Study Requirements. The appropriate Region Traffic Engineer in consultation with the permit applicant will determine the traffic study area limits.

All existing and proposed access points, driveways and streets, shall be identified for each site, including access on the opposite side of the site and within the influence area of the proposed site access. The influence area will be defined by the Region Traffic Engineer and/or designee. Each access will be labeled for proposed accesses as P1, P2, P3… and existing accesses as E1, E2, E3,…

Accommodation of Utilities and the Control and Protection of State Highway Rights of Way
Table 7.2-2

Guidelines for Access Permit Levels

Permit Type App. Level	Thresholds	Typical Land Use Intensity Thresholds (ITE Trip Generation)		Traffic Impact Study Required
I	Projected site traffic < 100 ADT **and** No proposed modifications to traffic signals or elements of the roadway	Single Family Apartment Lodging General Office Retail	< 10 units < 15 units < 11 occupied rooms < 9,000 square feet < 2,500 square feet	YES Conditions Apply
II	Projected site traffic between 100 and 3,000 ADT **or** Projected peak hour traffic < 500 **and** Minor modifications to traffic signals or elements of the roadway	Single Family Apartment Lodging General Office Retail Gas Station Fast Food Restaurant	10 to 315 units 15 to 450 units 11 to 330 occupied rooms 9,000 to 270,000 sq. ft. 2,500 to 70,000 sq. ft. 1 to 18 fueling positions 1,000 to 6, 000 sq. ft. 1,000 to 26,000 sq. ft.	YES
III	Projected site traffic between 3,000 and 10,000 ADT **or** Projected peak hour traffic between 500 and 1,200 **or** Proposed installation or modification to traffic signals or elements of the roadway, regardless of project size	Single Family Apartment Lodging General Office Retail Fast Food	315 to 1,000 units 450 to 1,500 units 330 to 1,100 occupied rooms 270,000 to 900,000 sq. ft. 70,000 to 230,000 sq. ft. 6,000 to 20, 000 sq. ft.	YES
IV	Projected site traffic > 10,000 ADT **or** Proposed installation /modification of two or more traffic signals, addition of travel lanes to State Highway or proposed modification of freeway interchange, regardless of project size	Single Family Apartment Lodging General Office Retail	> 1,000 units > 1,500 units > 1,100 occupied rooms > 900,000 square feet > 230,000 square feet	YES

Permit Level / Traffic Study level I

Project ADT < 100 trips.
No proposed modifications to traffic signals or roadway elements or geometry.

The traffic study shall, at a minimum, incorporate traffic engineering principles and standards as presented in the State Highway Access Management Rule, Department standards, and national practices. Additional requirements and investigation may be imposed upon the applicant as necessary.

The Region Permits officer and/or the Region Traffic Engineer determine the need and requirements for a traffic impact study.

1. Study Area.
   Defined by Region Permits Officer and/or Region Traffic Engineer.
   The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary.

   Study area may be limited to or include property frontage and include neighboring and adjacent parcels. Identify site, cross, and next adjacent up and down stream access points within access category distance of property boundaries.

2. Design year.
   Opening day of project.
3. Analysis Conditions and Period
   Identify site traffic volumes and characteristics.
   Identify adjacent street(s) traffic volume and characteristics.
4. Identify right-of-way, geometric boundaries and physical conflicts.
   Investigate existence of federal or state, no access or limited access control line.
5. Generate access point capacity analysis as necessary.
   Analyze site and adjacent road traffic for the following time periods: weekday A.M. and P.M. peak hours including Saturday peak hours. Identify special event peak hour as necessary (per roadway peak and site peak).
6. Design and Mitigation.
   Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

Permit Level / Traffic Study Level II

The traffic study shall, at a minimum, incorporate traffic engineering principles and standards as presented in the State Highway Access Management Rule, Department standards, and national practices. Additional requirements and investigation may be imposed upon the applicant as necessary.

The Region Permits officer and/or the Region Traffic Engineer determine the need and requirements for a traffic impact study.

Project ADT 100 to 500 trips.

1. Study Area.
   Defined by Region Permits Officer or Region Traffic Engineer.
   The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary.

   Intersection of site access drives with state highways and any signalized and unsignalized intersection within access category distance of property line. Include any identified queuing distance at site and study intersections

2. Design Year.
   Opening day of project.
3. Analysis Period.
   Identify site and adjacent road traffic for weekday A.M. and P.M. peak hours.
4. Data Collection
   Identify site and adjacent street roadway and intersection geometries.
   Identify adjacent street(s) traffic volume and characteristics.
5. Conflict / Capacity Analysis
   Diagram flow of traffic at access point(s) for site and adjacent development.
   Perform capacity analysis as determined by Region Traffic Engineer.
6. Right-of-Way Access
   Identify right-of-way, geometric boundaries and physical conflicts. Investigate existence of federal or state, no access or limited access control line.
7. Design and Mitigation
   Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

Project ADT 500 to 3,000 trips or peak hour < 500 trips.

Any proposed modification to traffic signals or roadway elements or geometry.

1. Study Area.
   Defined by Region Permits Officer or Region Traffic Engineer.
   The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary. An acceptable traffic study boundary, based on travel time, may be identified as a ten or twenty minute travel time or even by market area influence.

Intersection of site access drives with state highways and any signalized and unsignalized intersection within access category distance of property line. Include any identified queuing distance at site and study intersections.

2. Design Year.
   Opening day of project and five year after project completion. Document and include all phases of development (includes out pad parcels).
3. Analysis Period.
   Analyze site and adjacent road traffic for weekday A.M. and P.M. peak hours including Saturday peak hours. Identify special event peak hour as necessary (adjacent roadway peak and site peak).
4. Data Collection
   a. Daily and Turning Movement counts.
   b. Identify site and adjacent street roadway and intersection geometries.
   c. Traffic control devices including traffic signals and regulatory signs.
   d. Traffic accident data
5. Trip Generation.
   Use equations or rates available in latest edition of ITE Trip Generation. Where developed equations are unavailable for intended land use, perform trip rate study and estimation following ITE procedures or develop justified trip rate agreed to by the Department.
6. Trip Distribution and Assignment
   Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.
7. Conflict / Capacity Analysis.
   Diagram flow of traffic at access point(s) for site and adjacent development.
   Perform capacity analysis for daily and peak hour volumes
8. Traffic Signal Impacts. For modified and proposed traffic signals:
   a. Traffic Signal Warrants as identified.
   b. Traffic Signal drawings as identified.
   c. Queuing Analysis
9. Right-of-Way Access
   Identify right-of-way, geometric boundaries and physical conflicts. Investigate existence of federal or state, no access or limited access control line.
10. Design and Mitigation.
    Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

Permit Level / Traffic Study Level III

Project ADT 3,000 to10,000 trips or peak hour traffic 500 to 1,200 trips.
Proposed installation or modification to traffic signals or roadway elements or geometry, regardless of project size or trip generation.

The traffic study shall, at a minimum, incorporate traffic engineering principles and standards as presented in the State Highway Access Management Rule, Department standards, and national practices. Additional requirements and investigation may be imposed upon the applicant as necessary.

The Region Permits officer and/or the Region Traffic Engineer determine the need and requirements for a traffic impact study.

1. Study Area.
   Defined by Region Permits Officer or Region Traffic Engineer
   The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary. An acceptable traffic study boundary, based on travel time, may be identified as a ten or twenty minute travel time or even by market area influence.

   Intersection of site access drives with state highways and any intersection within 1/2 mile of property line on each side of project site.

2. Design Year.
   Opening day of project, five years and twenty years after opening. Document and include all phases of development (includes out pad parcels).
3. Analysis period.
   For each design year analyze site and adjacent road traffic for weekday A.M. and P.M. peak hours including Saturday peak hours. Identify special event peak hour as necessary (adjacent roadway peak and site peak).
4. Data Collection.
   a. Daily and Turning movement counts.
   b. Identify site and adjacent street roadway and intersection geometries.
   c. Traffic control devices including traffic signals and regulatory signs.
   d. Automatic continuous traffic counts for at least 48 hours.
   e. Traffic accident data.
5. Trip Generation.
   Use equations or rates available in latest edition of ITE Trip Generation. Where developed equations are unavailable for intended land use, perform trip rate study and estimation following ITE procedures or develop justified trip rate agreed to by the Department.
6. Trip Distributions and Assignment.
   Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.
7. Capacity Analysis.
   a. Level of Service (LOS) for all intersections.
   b. LOS for existing conditions, design year without project, design year with project.
8. Traffic Signal Impacts. For proposed Traffic Signals:
   a. Traffic Signal Warrants as identified.
   b. Traffic Signal drawings as identified.

c. Queuing Analysis.
d. Traffic Systems Analysis. Includes acceleration, deceleration and weaving.
e. Traffic Coordination Analysis

9. Right-of-Way Access
   Identify right-of-way, geometric boundaries and physical conflicts. Investigate existence of federal or state, no access or limited access control line.
10. Accident and Traffic Safety Analysis. Existing vs. as proposed development.
11. Design and Mitigation.
    Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

Permit Level / Traffic Study Level IV

Project ADT greater than 10,000 trips or peak hour traffic > 1,200 vehicles per hour.
Proposed installation or modification of two or more traffic signals, addition of traffic lanes or modification of freeway interchange.

The traffic study shall, at a minimum, incorporate traffic engineering principles and standards as presented in the State Highway Access Management Rule, Department standards, and national practices. Additional requirements and investigation may be imposed upon the applicant as necessary.

The Region Permits officer and/or the Region Traffic Engineer determine the need and requirements for a traffic impact study.

1. Study Area.
   Defined by Region Permits Officer or Region Traffic Engineer
   The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary. An acceptable traffic study boundary, based on travel time, may be identified as a ten or twenty minute travel time or even by market area influence.

   Intersection of site access drives with state highways and any intersection within 1/2 mile of property line of each side of project site and any intersection or freeway interchange impacted by more than 500 peak hour trips.

2. Design Year.
   Opening day of project, five years and twenty years after opening. Document and include all phases of development (includes out pad parcels).
3. Analysis period.
   For each design year analyze site and adjacent road traffic for weekday A.M. and P.M. peak hours including Saturday peak hours. Identify special event peak hour as necessary (adjacent roadway peak and site peak).
4. Data Collection.
   a. Daily and Turning movement counts.
   b. Identify site and adjacent street roadway and intersection geometries.
   c. Traffic control devices including traffic signals and regulatory signs.

d. Automatic continuous traffic counts for at least 48 hours.
e. Traffic accident data.

5. Trip Generation
   Use equations or rates available in latest edition of ITE Trip Generation. Where developed equations are unavailable for intended land use, perform trip rate study and estimation following ITE procedures or develop justified trip rate agreed to by the Department.
6. Trip Distributions and Assignment.
   Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.
7. Capacity Analysis.
   a. Level of Service (LOS) for all intersections.
   b. LOS for existing conditions, design year without project, design year with project.
8. Traffic Signal Impacts. For proposed traffic signals:
   a. Traffic Signal Warrants as identified.
   b. Traffic Signal drawings as identified.
   c. Queuing Analysis.
   d. Traffic Systems Analysis. Includes acceleration, deceleration and weaving.
   e. Traffic Coordination Analysis.
9. Right-of-Way Access
   Identify right-of-way, geometric boundaries and physical conflicts. Investigate existence of federal or state, no access or limited access control line.
10. Accident and Traffic Safety Analysis. Existing vs. as proposed develop.
11. Design and Mitigation.
    Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

STUDY AND REPORT FORMAT

The Traffic impact study should follow the recommended format below. Traffic impact studies shall be presented by a firm or individual recognized by the Department of Transportation as capable of performing a traffic analysis and when necessary, include engineered drawings based on Department standards drawings and specifications.

(1) INTRODUCTION AND SUMMARY

(2) PROPOSED PROJECT

(3) STUDY AREA CONDITIONS

(4) ANALYSIS OF EXISTING CONDITIONS

(5) PROJECTED TRAFFIC

(6) TRAFFIC ANALYSIS

(7) CONCLUSIONS

(8) RECOMMENDATIONS

(9) APPENDICES

a) Traffic Counts
b) Traffic Capacity Analysis
c) Accident Summary
d) Request for change of access (if applicable)

(10) FIGURES AND TABLES

The following items shall be documented in the study:

a) Site location – showing area roadways
b) Site Plan
   Identify geometric / physical concerns relating to area, site and specific access points. Include adjacent street and access points.
c) Existing roadway and traffic control features (number of lanes, lane widths, alignment, location of traffic signals, signs) Include off-system features as related to site plan and access point(s).
d) Existing daily volumes (directional if possible) and peak hour turning volumes. Discuss traffic characteristics (vehicle mix, % make-up and any special vehicle requirements).
e) Collision diagram summary.
f) Site generated trip summary. Discuss trip/vehicle make-up and any special vehicle requirements. Discuss trip reduction strategies if applicable.
g) Directional distribution of site generated traffic.
h) Assignment of Non-site related traffic (existing, background and future). Document both existing and committed development, and when appropriate other background planned development traffic. Assignment of total future non-site traffic for design year.
i) Assignment of Site Traffic
j) Traffic Capacity Analysis
   Projected levels of service without the project – coincide with development phase years.
   Projected levels of service with the project (by development phase years)
   Recommended mitigation / improvement

(Scaled schematic drawings illustrating alignment, number of lanes, lane widths, signing, pavement markings. If traffic signal modifications are proposed, signal phasing, signal head locations, lane marking shall be shown.)

Appendix G

SPANISH VALLEY TRANSPORTATION STUDY

SPANISH VALLEY DRIVE WIDENING ESTIMATE PER 100' OF ROADWAY
WIDEN FROM 2 LANES TO 3-4 LANES

ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
CLEARING AND GRUBBING	ACRE	0.1	$3,250.00	$325
4' CONCRETE SIDEWALK 4" THICK	SQ. YD.	89	$20.75	$1,847
CONCRETE CURB AND GUTTER (M1)	LIN. FT.	200	$15.00	$3,000
ASPHALT CONCRETE (10" THICK)	TON	322	$50.00	$16,100
UNTREATED BASE COURSE (12" THICK)	CU. YD.	186	$16.00	$2,976
GRANULAR BORROW (12" THICK)	CU. YD.	185	$23.00	$4,255
DRAINAGE	LIN. FT.	100	$75.00	$7,500
	SUBTOTAL			**$36,003**
CONTINGENCY (20%)				$7,201
	SUBTOTAL			**$43,203**
MOBILIZATION (6%)				$2,160
	SUBTOTAL			**$45,363**
PRECONSTRUCTION ENGINEERING (12%)				$5,444
CONSTRUCTION ENGINEERING (10%)				$4,536
UTILITIES BY OWNER (15%)				$6,805
RIGHT-OF-WAY	SQ. FT	600	$3.00	$1,800
			TOTAL	**$63,948**
			USE	**$36,950**
BRIDGE RECONSTRUCTION (1)	SQ. FT	1000	$130.00	$130,000
BOX CULVERT RECONSTRUCTION (3)	EACH	3	$220,000.00	$660,000
			TOTAL	$17,709,208

ASSUMPTIONS:

1. R/W assumed at $3.00/sq. ft.
2. Road 100' long
3. 66' R/W.
4. Asphalt Concrete 155 lbs/cu. ft.
5. Utility relocation assumed at 15% of construction cost.
6. No removal items included.
7. Drainage - 24" pipe culvert, catch basins every 300', 18" cross culverts.
8. 50' wide pavement.

1 sf = 0.11 sy

26400	264

SPANISH VALLEY TRANSPORTATION STUDY

SPANISH TRAIL ROAD WIDENING ESTIMATE PER 100' OF ROADWAY
WIDEN FROM 2 LANES TO 4-5 LANES

ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
CLEARING AND GRUBBING	ACRE	0.1	$3,250.00	$325
4' CONCRETE SIDEWALK 4" THICK	SQ. YD.	89	$20.75	$1,847
CONCRETE CURB AND GUTTER (M1)	LIN. FT.	200	$15.00	$3,000
ASPHALT CONCRETE (5" THICK)	TON	200	$50.00	$10,000
UNTREATED BASE COURSE (6" THICK)	CU. YD.	115	$16.00	$1,840
GRANULAR BORROW (12" THICK)	CU. YD.	230	$23.00	$5,290
DRAINAGE	LIN. FT.	100	$75.00	$7,500
	SUBTOTAL			**$29,802**
CONTINGENCY (20%)				$5,960
	SUBTOTAL			**$35,762**
MOBILIZATION (6%)				$1,788
	SUBTOTAL			**$37,550**
PRECONSTRUCTION ENGINEERING (12%)				$4,506
CONSTRUCTION ENGINEERING (10%)				$3,755
UTILITIES BY OWNER (15%)				$5,633
RIGHT-OF-WAY	SQ. FT	1500	$3.00	$4,500
			TOTAL	**$55,944**
			USE	**$40,000**
BOX CULVERT RECONSTRUCTION (2)	EACH	2	$220,000.00	$440,000
			TOTAL	$3,286,140

ASSUMPTIONS:

1. R/W assumed at $3.00/sq. ft.
2. Road 100' long
3. 80' R/W.
4. Asphalt Concrete 155 lbs/cu. ft.
5. Utility relocation assumed at 15% of construction cost.
6. No removal items included.
7. Drainage - 24" pipe culvert, catch basins every 300', 18" cross culverts.
8. 62' wide pavement.

5016 50.16

SPANISH VALLEY TRANSPORTATION STUDY

MILL CREEK DRIVE WIDENING ESTIMATE PER 100' OF ROADWAY
WIDEN FROM 2 LANES TO 3-4 LANES

ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
CLEARING AND GRUBBING	ACRE	0.1	$3,250.00	$325
4' CONCRETE SIDEWALK 4" THICK	SQ. YD.	89	$20.75	$1,847
CONCRETE CURB AND GUTTER (B1)	LIN. FT.	200	$15.00	$3,000
ASPHALT CONCRETE (5" THICK)	TON	161	$50.00	$8,050
UNTREATED BASE COURSE (6" THICK)	CU. YD.	93	$16.00	$1,488
GRANULAR BORROW (12" THICK)	CU. YD.	185	$23.00	$4,255
DRAINAGE	LIN. FT.	100	$75.00	$7,500
	SUBTOTAL			**$26,465**
CONTINGENCY (20%)				$5,293
	SUBTOTAL			**$31,758**
MOBILIZATION (6%)				$1,905
	SUBTOTAL			**$33,663**
PRECONSTRUCTION ENGINEERING (12%)				$4,040
CONSTRUCTION ENGINEERING (10%)				$3,366
UTILITIES BY OWNER (15%)				$5,049
RIGHT-OF-WAY	SQ. FT	600	$3.00	$1,800
			TOTAL	**$47,919**
			USE	**$36,950**
BRIDGE RECONSTRUCTION (2)	EACH	1	$200,000.00	$200,000
			TOTAL	$4,917,632

ASSUMPTIONS:

1. R/W assumed at $3.00/sq. ft.
2. Road 100' long
3. 66' R/W.
4. Asphalt Concrete 155 lbs/cu. ft.
5. Utility relocation assumed at 15% of construction cost.
6. No removal items included.
7. Drainage - 24" pipe culvert, catch basins every 300', 18" cross culverts.
8. 50' wide pavement.

Murphy-US19	$2,868,252
Murphy to Moa	$2,286,330

9768	97.68
5491.2	54.912
4276.8	42.768

SPANISH VALLEY TRANSPORTATION STUDY

US-191 WIDENING ESTIMATE PER 100' OF ROADWAY
WIDEN FROM 2-3 LANES TO 5 LANES

ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
CLEARING AND GRUBBING	ACRE	0.16	$3,250.00	$520
6' CONCRETE SIDEWALK 4" THICK	SQ. YD.	133	$20.75	$2,760
CONCRETE CURB AND GUTTER (M1)	LIN. FT.	200	$15.00	$3,000
ASPHALT CONCRETE (10" THICK)	TON	400	$50.00	$20,000
UNTREATED BASE COURSE (12" THICK)	CU. YD.	230	$16.00	$3,680
GRANULAR BORROW (12" THICK)	CU. YD.	230	$23.00	$5,290
DRAINAGE	LIN. FT.	100	$82.00	$8,200
	SUBTOTAL			**$43,450**
CONTINGENCY (20%)				$8,690
	SUBTOTAL			**$52,140**
MOBILIZATION (6%)				$3,128
	SUBTOTAL			**$55,268**
PRECONSTRUCTION ENGINEERING (12%)				$6,632
CONSTRUCTION ENGINEERING (10%)				$5,527
UTILITIES BY OWNER (15%)				$8,290
RIGHT-OF-WAY	SQ. FT.	4200	$3.00	$12,600
			TOTAL	**$88,317**
			USE	**$47,450**
BOX CULVERT RECONSTRUCTION (3)	EACH	3	$220,000.00	$660,000
			TOTAL	$10,966,384

ASSUMPTIONS:

1. R/W assumed at $3.00/sq. ft.
2. Road 100' long
3. 102' R/W.
4. Asphalt Concrete 155 lbs/cu. ft.
5. Utility relocation assumed at 15% of construction cost.
6. No removal items included.
7. Drainage - 36" pipe culvert, catch basins every 300', 18" cross culverts.
8. 62' wide pavement.

11616 116.16

SPANISH VALLEY TRANSPORTATION STUDY

US-191 WIDENING ESTIMATE PER 100' OF ROADWAY
WIDEN FROM 2 LANES TO 5 LANES

ITEM	UNIT	QUANTITY	UNIT PRICE	AMOUNT
CLEARING AND GRUBBING	ACRE	0.16	$3,250.00	$520
6' CONCRETE SIDEWALK 4" THICK	SQ. YD.	133	$20.75	$2,760
CONCRETE CURB AND GUTTER (M1)	LIN. FT.	200	$15.00	$3,000
ASPHALT CONCRETE (10" THICK)	TON	400	$50.00	$20,000
UNTREATED BASE COURSE (12" THICK)	CU. YD.	230	$16.00	$3,680
GRANULAR BORROW (12" THICK)	CU. YD.	230	$23.00	$5,290
DRAINAGE	LIN. FT.	100	$82.00	$8,200
	SUBTOTAL			**$43,450**
CONTINGENCY (20%)				$8,690
	SUBTOTAL			**$52,140**
MOBILIZATION (6%)				$2,607
	SUBTOTAL			**$54,747**
PRECONSTRUCTION ENGINEERING (12%)				$6,570
CONSTRUCTION ENGINEERING (10%)				$5,475
UTILITIES BY OWNER (15%)				$8,212
RIGHT-OF-WAY	SQ. FT.	4200	$3.00	$12,600
			TOTAL	**$87,603**
			USE	**$47,450**
BOX CULVERT RECONSTRUCTION (2)	EACH	2	$220,000.00	$440,000
			TOTAL	$14,363,759

ASSUMPTIONS:

1. R/W assumed at $3.00/sq. ft.
2. Road 100' long
3. 102' R/W.
4. Asphalt Concrete 155 lbs/cu. ft.
5. Utility relocation assumed at 15% of construction cost.
6. No removal items included.
7. Drainage - 36" pipe culvert, catch basins every 300', 18" cross culverts.
8. 62' wide pavement.

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