

## **APPENDIX I**

**Roadway Improvement Right-of-Way Cost Estimate**

**Roadway Improvement Construction Cost Estimate**

**Intersection Improvement Right-of-Way Cost Estimate**

**Intersection Improvement Construction Cost Estimate**

**Benefit/Cost Analysis Spreadsheets**

## South Meridian Transportation Plan Roadway Right-of-Way Estimate

### East-West Arterials

Road	Location	2030 Roadway Classification	Total Required Right-of-Way (ft <sup>2</sup> )	Total Required Right-of-Way (acres)	Integrity Avg Sales Unit Cost (\$/acre)	Total Cost
Overland Road	E/O McDermott	Local Road	380,009	8.72	\$45,782	\$399,000
Overland Road	E/O Black Cat	Minor Arterial	288,348	6.62	\$61,290	\$406,000
Overland Road	E/O Ten Mile	Principal Arterial	90,000	2.07	\$44,425	\$92,000
Overland Road	E/O Linder	Principal Arterial	0	0.00	\$201,238	\$0
Overland Road	E/O State Highway 69	Principal Arterial	0	N/A	N/A	N/A
Overland Road	E/O Locust Grove	Principal Arterial	0	N/A	N/A	N/A
Overland Road	E/O Eagle	Principal Arterial	0	N/A	N/A	N/A
Victory Road	E/O McDermott	Minor Arterial	73,643	1.69	\$47,814	\$81,000
Victory Road	E/O Black Cat	Minor Arterial	94,603	2.17	\$47,814	\$104,000
Victory Road	E/O Ten Mile	Minor Arterial	81,004	1.86	\$59,287	\$110,000
Victory Road	E/O Linder	Minor Arterial	86,439	1.98	\$201,238	\$399,000
Victory Road	E/O State Highway 69	Minor Arterial	60,613	1.39	\$306,783	\$427,000
Victory Road	E/O Locust Grove	Minor Arterial	71,110	1.63	\$144,875	\$237,000
Victory Road	E/O Eagle	Minor Arterial	33,912	0.78	\$164,089	\$128,000
Amity Road	E/O McDermott	Principal Arterial	203,874	4.68	\$30,449	\$143,000
Amity Road	E/O Black Cat	Principal Arterial	165,363	3.80	\$30,449	\$116,000
Amity Road	E/O Ten Mile	Principal Arterial	210,206	4.83	\$29,544	\$143,000
Amity Road	E/O Linder	Principal Arterial	185,532	4.26	\$58,429	\$249,000
Amity Road	E/O State Highway 69	Minor Arterial	166,551	3.82	\$65,532	\$251,000
Amity Road	E/O Locust Grove	Minor Arterial	157,663	3.62	\$97,763	\$354,000
Amity Road	E/O Eagle Road	Major Collector	94,981	2.18	\$50,544	\$110,000
Lake Hazel Road	E/O McDermott	Principal Arterial	177,655	4.08	\$28,112	\$115,000
Lake Hazel Road	E/O Black Cat	Principal Arterial	194,495	4.46	\$28,112	\$126,000
Lake Hazel Road	E/O Ten Mile	Principal Arterial	157,719	3.62	\$83,885	\$304,000
Lake Hazel Road	E/O Linder	Principal Arterial	181,848	4.17	\$40,218	\$168,000
Lake Hazel Road	E/O State Highway 69	Principal Arterial	182,095	4.18	\$22,248	\$93,000
Lake Hazel Road	E/O Locust Grove	Principal Arterial	181,028	4.16	\$42,990	\$179,000
Lake Hazel Road	E/O Eagle	Principal Arterial	96,731	2.22	\$168,721	\$375,000
Columbia Road	E/O Linder	Minor Arterial	22,448	0.52	\$51,250	\$26,000
Columbia Road	E/O State Highway 69	Minor Arterial	69,107	1.59	\$11,661	\$18,000
Columbia Road	E/O Locust Grove	Minor Arterial	84,534	1.94	\$95,938	\$186,000
Columbia Road	E/O Eagle	Minor Arterial	17,393	0.40	\$85,959	\$34,000

### North-South Arterials

Road	Location	2030 Roadway Classification	Total Required Right-of-Way (ft <sup>2</sup> )	Total Required Right-of-Way (acres)	Integrity Avg Sales Unit Cost (\$/acre)	Total Cost
McDermott Road	N/O Overland	Principal Arterial	128,646	2.95	\$45,782	\$135,000
McDermott Road	N/O Victory	Principal Arterial	120,532	2.77	\$47,814	\$132,000
McDermott Road	N/O Amity	Principal Arterial	126,172	2.90	\$30,449	\$88,000
McDermott Road	N/O Lake Hazel	Principal Arterial	216,150	4.96	\$28,112	\$139,000
Black Cat Road	N/O Overland	Minor Arterial	38,805	0.89	\$61,290	\$55,000
Black Cat Road	N/O Victory	Minor Arterial	72,023	1.65	\$47,814	\$79,000
Black Cat Road	N/O Amity	Minor Arterial	88,111	2.02	\$30,449	\$62,000
Black Cat Road	N/O Lake Hazel	Minor Arterial	90,045	2.07	\$28,112	\$58,000
Ten Mile Road	N/O Overland	Principal Arterial	0	0.00	\$44,425	\$0
Ten Mile Road	N/O Victory	Principal Arterial	79,654	1.83	\$59,287	\$108,000
Ten Mile Road	N/O Amity	Principal Arterial	173,074	3.97	\$29,544	\$117,000
Ten Mile Road	N/O Lake Hazel	Principal Arterial	163,497	3.75	\$83,885	\$315,000
Linder Road	N/O Overland	Minor Arterial	N/A	N/A	N/A	N/A
Linder Road	N/O Victory	Minor Arterial	115,427	2.65	\$59,287	\$157,000
Linder Road	N/O Amity	Minor Arterial	195,964	4.50	\$58,429	\$263,000
Linder Road	N/O Lake Hazel	Minor Arterial	138,565	3.18	\$40,218	\$128,000
Meridian Road (SH 69)	N/O Overland	Principal Arterial	N/A	N/A	N/A	N/A
Meridian Road (SH 69)	N/O Victory	Principal Arterial	0	0.00	\$306,783	\$0
Meridian Road (SH 69)	N/O Amity	Principal Arterial	N/A	N/A	N/A	N/A
Meridian Road (SH 69)	N/O Lake Hazel	Principal Arterial	N/A	N/A	N/A	N/A
Meridian Road (SH 69)	N/O Columbia	Principal Arterial	N/A	N/A	N/A	N/A
Meridian Road (SH 69)	S/O Columbia	Principal Arterial	N/A	N/A	N/A	N/A
Locust Grove Road	N/O Overland	Minor Arterial	N/A	N/A	N/A	N/A
Locust Grove Road	N/O Victory	Minor Arterial	63,155	1.45	\$144,875	\$210,000
Locust Grove Road	N/O Amity	Minor Arterial	50,521	1.16	\$97,763	\$113,000
Locust Grove Road	N/O Lake Hazel	Minor Arterial	72,112	1.66	\$168,721	\$279,000
Locust Grove Road	N/O Columbia	Minor Arterial	94,911	2.18	\$95,938	\$209,000
Locust Grove Road	S/O Columbia	Minor Arterial	42,875	0.98	\$95,938	\$94,000
Eagle Road	N/O Overland	Principal Arterial	N/A	N/A	N/A	N/A
Eagle Road	N/O Victory	Principal Arterial	0	0.00	\$164,089	\$0
Eagle Road	N/O Amity	Principal Arterial	29,840	0.69	\$50,544	\$35,000
Eagle Road	N/O Lake Hazel	Principal Arterial	138,145	3.17	\$168,721	\$535,000
Eagle Road	N/O Columbia	Minor Arterial	83,597	1.92	\$85,959	\$165,000
Eagle Road	S/O Columbia	Local Road	48,559	1.11	\$85,959	\$96,000
<b>Total (acres)</b>				<b>141.86</b>		<b>\$8,945,000</b>

## South Meridian Transportation Plan Roadway Construction Cost Estimate

### East-West Arterials

Road	Location	2030 Roadway Classification	Roadway Construction Length (ft)	Roadway Cross Section (# lanes)	Roadway Construction Unit Cost (\$/ft)	Total Roadway Construction Cost
Overland Road	E/O McDermott	Local Road	3,916	5	\$900	\$3,524,000
Overland Road	E/O Black Cat	Minor Arterial	2,973	5	\$900	\$2,676,000
Overland Road	E/O Ten Mile	Principal Arterial	2,973	5	\$900	\$2,676,000
Overland Road	E/O Linder	Principal Arterial	N/A	N/A	N/A	N/A
Overland Road	E/O State Highway 69	Principal Arterial	N/A	N/A	N/A	N/A
Overland Road	E/O Locust Grove	Principal Arterial	N/A	N/A	N/A	N/A
Overland Road	E/O Eagle	Principal Arterial	N/A	N/A	N/A	N/A
Victory Road	E/O McDermott	Minor Arterial	3,884	3	\$600	\$2,330,000
Victory Road	E/O Black Cat	Minor Arterial	3,867	3	\$600	\$2,320,000
Victory Road	E/O Ten Mile	Minor Arterial	3,877	3	\$600	\$2,326,000
Victory Road	E/O Linder	Minor Arterial	3,808	3	\$600	\$2,285,000
Victory Road	E/O State Highway 69	Minor Arterial	3,690	3	\$600	\$2,214,000
Victory Road	E/O Locust Grove	Minor Arterial	3,963	3	\$600	\$2,378,000
Victory Road	E/O Eagle	Minor Arterial	3,160	3	\$600	\$1,896,000
Amity Road	E/O McDermott	Principal Arterial	4,456	5	\$900	\$4,010,000
Amity Road	E/O Black Cat	Principal Arterial	4,485	5	\$900	\$4,037,000
Amity Road	E/O Ten Mile	Principal Arterial	4,538	5	\$900	\$4,084,000
Amity Road	E/O Linder	Principal Arterial	3,977	5	\$900	\$3,579,000
Amity Road	E/O State Highway 69	Minor Arterial	3,268	5	\$900	\$2,941,000
Amity Road	E/O Locust Grove	Minor Arterial	3,977	5	\$900	\$3,579,000
Amity Road	E/O Eagle Road	Major Collector	3,160	5	\$900	\$2,844,000
Lake Hazel Road	E/O McDermott	Principal Arterial	3,252	5	\$900	\$2,927,000
Lake Hazel Road	E/O Black Cat	Principal Arterial	3,478	5	\$900	\$3,130,000
Lake Hazel Road	E/O Ten Mile	Principal Arterial	3,482	5	\$900	\$3,134,000
Lake Hazel Road	E/O Linder	Principal Arterial	3,437	5	\$900	\$3,093,000
Lake Hazel Road	E/O State Highway 69	Principal Arterial	3,251	5	\$900	\$2,926,000
Lake Hazel Road	E/O Locust Grove	Principal Arterial	3,509	5	\$900	\$3,158,000
Lake Hazel Road	E/O Eagle	Principal Arterial	2,980	5	\$900	\$2,682,000
Columbia Road	E/O Linder	Minor Arterial	1,737	3	\$600	\$1,042,000
Columbia Road	E/O State Highway 69	Minor Arterial	3,823	3	\$600	\$2,294,000
Columbia Road	E/O Locust Grove	Minor Arterial	4,296	3	\$600	\$2,578,000
Columbia Road	E/O Eagle	Minor Arterial	3,453	3	\$600	\$2,072,000

### North-South Arterials

Road	Location	2030 Roadway Classification	Roadway Construction Length (ft)	Roadway Cross Section (# lanes)	Roadway Construction Unit Cost (\$/ft)	Total Roadway Construction Cost
McDermott Road	N/O Overland	Principal Arterial	2,737	5	\$900	\$2,463,000
McDermott Road	N/O Victory	Principal Arterial	2,232	5	\$900	\$2,009,000
McDermott Road	N/O Amity	Principal Arterial	4,030	5	\$900	\$3,627,000
McDermott Road	N/O Lake Hazel	Principal Arterial	4,003	5	\$900	\$3,603,000
Black Cat Road	N/O Overland	Minor Arterial	1,962	3	\$600	\$1,177,000
Black Cat Road	N/O Victory	Minor Arterial	3,118	3	\$600	\$1,871,000
Black Cat Road	N/O Amity	Minor Arterial	4,449	3	\$600	\$2,669,000
Black Cat Road	N/O Lake Hazel	Minor Arterial	3,993	3	\$600	\$2,396,000
Ten Mile Road	N/O Overland	Principal Arterial	0	5	\$900	\$0
Ten Mile Road	N/O Victory	Principal Arterial	1,976	5	\$900	\$1,778,000
Ten Mile Road	N/O Amity	Principal Arterial	4,032	5	\$900	\$3,629,000
Ten Mile Road	N/O Lake Hazel	Principal Arterial	4,000	5	\$900	\$3,600,000
Linder Road	N/O Overland	Minor Arterial	188	5	\$900	\$169,000
Linder Road	N/O Victory	Minor Arterial	3,938	5	\$900	\$3,544,000
Linder Road	N/O Amity	Minor Arterial	4,535	5	\$900	\$4,082,000
Linder Road	N/O Lake Hazel	Minor Arterial	4,014	5	\$900	\$3,613,000
Meridian Road (SH 69)	N/O Overland	Principal Arterial	N/A	N/A	N/A	N/A
Meridian Road (SH 69)	N/O Victory	Principal Arterial	N/A	N/A	N/A	N/A
Meridian Road (SH 69)	N/O Amity	Principal Arterial	N/A	N/A	N/A	N/A
Meridian Road (SH 69)	N/O Lake Hazel	Principal Arterial	N/A	N/A	N/A	N/A
Meridian Road (SH 69)	N/O Columbia	Principal Arterial	N/A	N/A	N/A	N/A
Meridian Road (SH 69)	S/O Columbia	Principal Arterial	N/A	N/A	N/A	N/A
Locust Grove Road	N/O Overland	Minor Arterial	N/A	N/A	N/A	N/A
Locust Grove Road	N/O Victory	Minor Arterial	4,001	5	\$900	\$3,601,000
Locust Grove Road	N/O Amity	Minor Arterial	3,907	3	\$600	\$2,344,000
Locust Grove Road	N/O Lake Hazel	Minor Arterial	3,574	3	\$600	\$2,144,000
Eagle Road	N/O Columbia	Minor Arterial	3,930	3	\$600	\$2,358,000
Eagle Road	S/O Columbia	Minor Arterial	2,067	3	\$600	\$1,240,000
Eagle Road	N/O Overland	Principal Arterial	N/A	N/A	N/A	N/A
Eagle Road	N/O Victory	Principal Arterial	2,000	5	\$900	\$1,800,000
Eagle Road	N/O Amity	Principal Arterial	3,471	5	\$900	\$3,124,000
Eagle Road	N/O Lake Hazel	Principal Arterial	3,543	5	\$900	\$3,189,000
Eagle Road	N/O Columbia	Minor Arterial	3,917	3	\$600	\$2,350,000
Eagle Road	S/O Columbia	Local Road	1,940	3	\$600	\$1,164,000
<b>Total Cost</b>						<b>\$142,279,000</b>

## South Meridian Transportation Plan Intersections Right-of-Way Estimate

Intersection	Northwest Quadrant Required Right-of-Way (ft <sup>2</sup> )	Northeast Quadrant Required Right-of-Way (ft <sup>2</sup> )	Southwest Quadrant Required Right-of-Way (ft <sup>2</sup> )	Southeast Quadrant Required Right-of-Way (ft <sup>2</sup> )	Total Required Right-of-Way (ft <sup>2</sup> )	Total Required Right-of-Way (acres)	Integrity Avg Sales Unit Cost (\$/acre)	Total Cost
Overland Road and McDermott Road	68,177	68,177	68,257	68,257	272,868	6.26	\$45,782	\$287,000
Overland Road and Black Cat Road	59,702	74,589	0	0	134,291	3.08	\$61,290	\$189,000
Overland Road and Ten Mile Road	282,894	122,171	0	0	405,065	9.30	\$44,425	\$413,000
Overland Road and Linder Road	11,405	0	13,803	16,444	41,652	0.96	\$201,238	\$192,000
Overland Road and Meridian Road	7,188	0	0	0	7,188	0.17	\$157,265	\$26,000
Overland Road and Locust Grove Road	1,259	788	3,419	0	5,466	0.13	\$173,913	\$22,000
Overland Road and Eagle Road	23,154	23,154	35,373	25,341	107,022	2.46	\$119,725	\$294,000
Victory Road and McDermott Road	21,121	21,121	21,135	21,135	84,512	1.94	\$47,814	\$93,000
Victory Road and Black Cat Road	9,746	17,211	11,606	15,376	53,939	1.24	\$47,814	\$59,000
Victory Road and Ten Mile Road	17,884	28,958	27,647	27,477	101,966	2.34	\$59,287	\$139,000
Victory Road and Linder Road	19,048	23,138	25,093	22,821	90,100	2.07	\$201,238	\$416,000
Victory Road and Meridian Road	0	0	23,299	0	23,299	0.53	\$306,783	\$164,000
Victory Road and Locust Grove Road	9,444	6,086	14,259	16,286	46,075	1.06	\$144,875	\$153,000
Victory Road and Eagle Road	9,772	0	7,106	9,120	25,998	0.60	\$164,089	\$98,000
Amity Road and McDermott Road	20,339	20,339	22,030	22,030	84,738	1.95	\$30,449	\$59,000
Amity Road and Black Cat Road	18,438	12,714	21,133	30,971	83,256	1.91	\$30,449	\$58,000
Amity Road and Ten Mile Road	20,805	21,595	15,566	20,946	78,912	1.81	\$29,544	\$54,000
Amity Road and Linder Road	20,360	21,075	13,934	21,575	76,944	1.77	\$58,429	\$103,000
Amity Road and Meridian Road	15,987	17,368	26,425	24,007	83,787	1.92	\$65,532	\$126,000
Amity Road and Locust Grove Road	37,443	24,147	14,272	49,269	125,131	2.87	\$97,763	\$281,000
Amity Road and Eagle Road	47,505	29,889	45,551	33,802	156,747	3.60	\$50,544	\$182,000
Lake Hazel Road and McDermott Road	41,854	41,854	41,579	41,579	166,866	3.83	\$28,112	\$108,000
Lake Hazel Road and Black Cat Road	49,881	32,680	33,315	43,452	159,328	3.66	\$28,112	\$103,000
Lake Hazel Road and Ten Mile Road	49,518	14,042	47,318	37,917	148,795	3.42	\$83,885	\$287,000
Lake Haze Road and Linder Road	23,877	38,830	39,037	44,566	146,310	3.36	\$40,218	\$135,000
Lake Hazel Road and Meridian Road	23,042	24,672	24,615	24,731	97,060	2.23	\$22,248	\$50,000
Lake Hazel Road and Locust Grove Road	39,796	45,555	42,152	42,988	170,491	3.91	\$168,721	\$660,000
Lake Hazel Road and Eagle Road	21,699	46,110	41,662	47,916	157,387	3.61	\$168,721	\$610,000
Columbia Road and Meridian Road	5,181	8,927	5,115	6,648	25,871	0.59	\$51,250	\$30,000
Columbia Road and Locust Grove Road	13,666	13,367	14,004	17,243	58,280	1.34	\$95,938	\$128,000
Columbia Road and Eagle Road	14,624	10,642	13,872	14,677	53,815	1.24	\$85,959	\$106,000
<b>Total (acres)</b>					<b>Total (acres)</b>	<b>75.14</b>		<b>\$5,625,000</b>

## South Meridian Transportation Plan Intersections Construction Cost Estimate

Intersection	North Leg Construction length (ft)	North Leg Cross Section (# Lanes)	Intersection Construction Unit Cost (\$/ft)	South Leg Construction length (ft)	South Leg Cross Section (# Lanes)	Intersection Construction Unit Cost (\$/ft)	East Leg Construction length (ft)	East Leg Cross Section (# Lanes)	Intersection Construction Unit Cost (\$/ft)	West Leg Construction length (ft)	West Leg Cross Section (# Lanes)	Intersection Construction Unit Cost (\$/ft)	Roundabout Additional Cost	Traffic Signal Installation Cost	Total Intersection Construction Cost
Overland Road and McDermott Road	900	5	\$900	900	5	\$900	900	5	\$900			\$600		\$250,000	\$2,680,000
Overland Road and Black Cat Road	383	4	\$700	383	4	\$700	573	5	\$900	383	5	\$900	\$443,000		\$1,840,000
Overland Road and Ten Mile Road	1,125	7	\$1,200	1,077	7	\$1,200	570	7	\$1,200	1,750	7	\$1,200		\$250,000	\$5,676,000
Overland Road and Linder Road	1,000	7	\$1,200	983	7	\$1,200	500	7	\$1,200	950	7	\$1,200		\$250,000	\$4,370,000
Overland Road and Meridian Road	500	1	\$600	0	7	\$1,200	0	7	\$1,200	0	7	\$1,200		\$0	\$300,000
Overland Road and Locust Grove Road	0	6	\$1,000	0	6	\$1,000	500	1	\$600	0	7	\$1,200		\$0	\$300,000
Overland Road and Eagle Road	0	7	\$1,200	500	1	\$600	500	1	\$600	500	1	\$600		\$0	\$900,000
Victory Road and McDermott Road	900	5	\$900	900	5	\$900	900	3	\$600	900	3	\$600		\$250,000	\$2,950,000
Victory Road and Black Cat Road	500	3	\$600	500	3	\$600	500	3	\$600	500	3	\$600	\$180,000		\$1,380,000
Victory Road and Ten Mile Road	900	5	\$900	900	5	\$900	900	3	\$600	900	3	\$600		\$250,000	\$2,950,000
Victory Road and Linder Road	383	5	\$900	383	5	\$900	582	4	\$700	582	4	\$700	\$443,000		\$1,947,000
Victory Road and Meridian Road	0	6	\$1,000	500	6	\$1,000	0	4	\$700	500	1	\$600		\$0	\$800,000
Victory Road and Locust Grove Road	500	5	\$900	500	3	\$600	500	3	\$600	500	3	\$600	\$180,000		\$1,530,000
Victory Road and Eagle Road	900	6	\$1,000	900	6	\$1,000	900	4	\$700	900	4	\$700		\$250,000	\$3,310,000
Amity Road and McDermott Road	383	5	\$900	383	5	\$900	383	5	\$900	383	5	\$900	\$443,000		\$1,822,000
Amity Road and Black Cat Road	383	4	\$700	383	4	\$700	383	5	\$900	383	5	\$900	\$443,000		\$1,669,000
Amity Road and Ten Mile Road	383	5	\$900	383	5	\$900	383	5	\$900	383	5	\$900	\$443,000		\$1,822,000
Amity Road and Linder Road	383	5	\$900	383	5	\$900	383	5	\$900	383	5	\$900	\$443,000		\$1,822,000
Amity Road and Meridian Road	900	7	\$1,200	900	7	\$1,200	980	7	\$1,200	980	7	\$1,200		\$0	\$4,512,000
Amity Road and Locust Grove Road	383	5	\$900	383	5	\$900	383	5	\$900	383	5	\$900	\$443,000	\$0	\$1,822,000
Amity Road and Eagle Road	383	5	\$900	383	5	\$900	383	5	\$900	383	5	\$900	\$443,000	\$0	\$1,822,000
Lake Hazel Road and McDermott Road	900	5	\$900	900	5	\$900	900	5	\$900	900	5	\$900		\$250,000	\$3,490,000
Lake Hazel Road and Black Cat Road	900	4	\$700	900	4	\$700	900	6	\$1,000	900	6	\$1,000		\$250,000	\$3,310,000
Lake Hazel Road and Ten Mile Road	900	6	\$1,000	900	6	\$1,000	900	6	\$1,000	900	6	\$1,000		\$250,000	\$3,850,000
Lake Haze Road and Linder Road	900	5	\$900	900	5	\$900	900	5	\$900	900	5	\$900		\$250,000	\$3,490,000
Lake Hazel Road and Meridian Road	900	7	\$1,200	900	7	\$1,200	980	7	\$1,200	980	7	\$1,200		\$250,000	\$4,762,000
Lake Hazel Road and Locust Grove Road	900	4	\$700	900	4	\$700	900	6	\$1,000	900	6	\$1,000		\$250,000	\$3,310,000
Lake Hazel Road and Eagle Road	900	6	\$1,000	900	6	\$1,000	900	6	\$1,000	900	6	\$1,000		\$250,000	\$3,850,000
Columbia Road and Meridian Road	500	1	\$600	500	1	\$600	900	4	\$700	900	4	\$700		\$250,000	\$2,110,000
Columbia Road and Locust Grove Road	500	3	\$600	500	3	\$600	500	3	\$600	500	3	\$600	\$180,000		\$1,380,000
Columbia Road and Eagle Road	383	3	\$600	573	3	\$600	573	3	\$600	573	3	\$600	\$180,000		\$1,441,000
														<b>Total Cost</b>	<b>\$77,217,000</b>

## Benefit/Cost Analysis - South Meridian Transportation Plan

2010 Intersection Improvements Benefit / Cost Analysis			
Intersections	Ten Mile Road and Overland Road	Victory Road and Eagle Road	Amity Road and Locust Grove Road
<b>COSTS</b>			
<b>One Time Investment (2008 \$)</b>			
Estimated Construction Cost	\$5,676,000	\$3,310,000	\$1,822,000
Estimated Right-of-Way Cost	\$413,000	\$98,000	\$281,000
<b>Total Present Worth Costs</b>	<b>\$6,089,000</b>	<b>\$3,408,000</b>	<b>\$2,103,000</b>
<b>BENEFITS</b>			
Number of Vehicles through the intersection in Peak Hour	1,459	1,582	1,305
Average Delay per Vehicle without Improvements (s)	87	100	54
Average Delay per Vehicle with Improvements (s)	25	35	15
Delay Reduction (s)	61	65	39
Average Wage (\$/hr)	\$18.90	\$18.90	\$18.90
Annual Travel Delay Cost Savings (\$)	\$243,764	\$280,294	\$140,065
<b>Total Present Worth Benefits</b>	<b>\$4,875,278</b>	<b>\$5,605,880</b>	<b>\$2,801,307</b>
<b>Benefit / Cost Ratio</b>	<b>0.8</b>	<b>1.6</b>	<b>1.3</b>

## Benefit/Cost Analysis - South

	2010 Intersection Improvements Benefit / Cost Analysis		
Intersections	Amity Road and Eagle Road	Lake Hazel Road and Meridian Road	Lake Hazel Road and Eagle Road
<b>COSTS</b>			
<b>One Time Investment (2008 \$)</b>			
Estimated Construction Cost	\$1,822,000	\$4,762,000	\$1,822,000
Estimated Right-of-Way Cost	\$182,000	\$50,000	\$610,000
<b>Total Present Worth Costs</b>	<b>\$2,004,000</b>	<b>\$4,812,000</b>	<b>\$2,432,000</b>
<b>BENEFITS</b>			
<b>Number of Vehicles through the intersection in Peak Hour</b>	1,400	3,148	1,435
<b>Average Delay per Vehicle without Improvements (s)</b>	66	100	72
<b>Average Delay per Vehicle with Improvements (s)</b>	15	32	24
<b>Delay Reduction (s)</b>	51	68	48
<b>Average Wage (\$/hr)</b>	\$18.90	\$18.90	\$18.90
<b>Annual Travel Delay Cost Savings (\$)</b>	\$194,387	\$587,035	\$188,368
<b>Total Present Worth Benefits</b>	<b>\$3,887,738</b>	<b>\$11,740,702</b>	<b>\$3,767,370</b>
<b>Benefit / Cost Ratio</b>	<b>1.9</b>	<b>2.4</b>	<b>1.5</b>

## Benefit/Cost Analysis - South

	<b>2010 Intersection Improvements Benefit / Cost Analysis</b>
<b>Intersections</b>	<b>Columbia Road and Meridian Road</b>
<b>COSTS</b>	
<b>One Time Investment (2008 \$)</b>	
Estimated Construction Cost	\$2,110,000
Estimated Right-of-Way Cost	\$30,000
<b>Total Present Worth Costs</b>	<b>\$2,140,000</b>
<b>BENEFITS</b>	
<b>Number of Vehicles through the intersection in Peak Hour</b>	2,293
<b>Average Delay per Vehicle without Improvements (s)</b>	100
<b>Average Delay per Vehicle with Improvements (s)</b>	32
<b>Delay Reduction (s)</b>	68
<b>Average Wage (\$/hr)</b>	\$18.90
<b>Annual Travel Delay Cost Savings (\$)</b>	\$425,703
<b>Total Present Worth Benefits</b>	<b>\$8,514,069</b>
<b>Benefit / Cost Ratio</b>	<b>4.0</b>



## Benefit/Cost Analysis - South Meridian Transportation Plan

	2015 Intersection Improvements Benefit / Cost Analysis		
Intersections	Overland Road and Meridian Road	Victory Road and McDermott Road	Victory Road and Ten Mile Road
<b>COSTS</b>			
<b>One Time Investment (2008 \$)</b>			
Estimated Construction Cost	\$300,000	\$2,950,000	\$2,950,000
Estimated Right-of-Way Cost	\$26,000	\$93,000	\$139,000
<b>Total Present Worth Costs</b>	<b>\$326,000</b>	<b>\$3,043,000</b>	<b>\$3,089,000</b>
<b>BENEFITS</b>			
<b>Number of Vehicles through the intersection in Peak Hour</b>	5,676	1,111	1601
<b>Average Delay per Vehicle without Improvements (s)</b>	100	67	100
<b>Average Delay per Vehicle with Improvements (s)</b>	80	27	31
<b>Delay Reduction (s)</b>	20	40	69
<b>Average Wage (\$/hr)</b>	\$18.90	\$18.90	\$18.90
<b>Annual Travel Delay Cost Savings (\$)</b>	\$309,923	\$122,204	\$301,533
<b>Total Present Worth Benefits</b>	<b>\$4,648,849</b>	<b>\$1,833,054</b>	<b>\$4,522,999</b>
<b>Benefit / Cost Ratio</b>	<b>14.3</b>	<b>0.6</b>	<b>1.5</b>

## Benefit/Cost Analysis - South

Intersections	2015 Intersection Improvements Benefit / Cost Analysis		
	Victory Road and Locust Grove Road	Amity Road and McDermott Road	Amity Road and Ten Mile Road
<b>COSTS</b>			
<b>One Time Investment (2008 \$)</b>			
Estimated Construction Cost	\$1,530,000	\$1,822,000	\$1,822,000
Estimated Right-of-Way Cost	\$153,000	\$59,000	\$54,000
<b>Total Present Worth Costs</b>	<b>\$1,683,000</b>	<b>\$1,881,000</b>	<b>\$1,876,000</b>
<b>BENEFITS</b>			
Number of Vehicles through the intersection in Peak Hour	1345	1200	1524
Average Delay per Vehicle without Improvements (s)	52	65	100
Average Delay per Vehicle with Improvements (s)	15	15	15
Delay Reduction (s)	37	50	85
Average Wage (\$/hr)	\$18.90	\$18.90	\$18.90
Annual Travel Delay Cost Savings (\$)	\$135,821	\$163,783	\$353,615
<b>Total Present Worth Benefits</b>	<b>\$2,037,309</b>	<b>\$2,456,744</b>	<b>\$5,304,228</b>
<b>Benefit / Cost Ratio</b>	<b>1.2</b>	<b>1.3</b>	<b>2.8</b>

## Benefit/Cost Analysis - South

	2015 Intersection Improvements Benefit / Cost Analysis		
Intersections	Amity Road and Linder Road	Amity Road and Meridian Road	Lake Hazel Road and Ten Mile Road
<b>COSTS</b>			
<b>One Time Investment (2008 \$)</b>			
Estimated Construction Cost	\$1,822,000	\$4,512,000	\$3,850,000
Estimated Right-of-Way Cost	\$103,000	\$126,000	\$287,000
<b>Total Present Worth Costs</b>	<b>\$1,925,000</b>	<b>\$4,638,000</b>	<b>\$4,137,000</b>
<b>BENEFITS</b>			
Number of Vehicles through the intersection in Peak Hour	1393	3987	1613
Average Delay per Vehicle without Improvements (s)	76	100	100
Average Delay per Vehicle with Improvements (s)	15	34	25
Delay Reduction (s)	61	67	75
Average Wage (\$/hr)	\$18.90	\$18.90	\$18.90
Annual Travel Delay Cost Savings (\$)	\$232,039	\$723,865	\$328,449
<b>Total Present Worth Benefits</b>	<b>\$3,480,581</b>	<b>\$10,857,980</b>	<b>\$4,926,742</b>
<b>Benefit / Cost Ratio</b>	<b>1.8</b>	<b>2.3</b>	<b>1.2</b>

## Benefit/Cost Analysis - South

2015 Intersection Improvements Benefit / Cost Analysis		
Intersections	Lake Hazel Road and Linder Road	Lake Hazel Road and Locust Grove Road
<b>COSTS</b>		
<b>One Time Investment (2008 \$)</b>		
Estimated Construction Cost	\$3,490,000	\$3,310,000
Estimated Right-of-Way Cost	\$135,000	\$660,000
<b>Total Present Worth Costs</b>	<b>\$3,625,000</b>	<b>\$3,970,000</b>
<b>BENEFITS</b>		
<b>Number of Vehicles through the intersection in Peak Hour</b>	1519	1933
<b>Average Delay per Vehicle without Improvements (s)</b>	100	100
<b>Average Delay per Vehicle with Improvements (s)</b>	24	28
<b>Delay Reduction (s)</b>	76	72
<b>Average Wage (\$/hr)</b>	\$18.90	\$18.90
<b>Annual Travel Delay Cost Savings (\$)</b>	\$313,385	\$381,534
<b>Total Present Worth Benefits</b>	<b>\$4,700,768</b>	<b>\$5,723,004</b>
<b>Benefit / Cost Ratio</b>	<b>1.3</b>	<b>1.4</b>

## Benefit/Cost Analysis - South Meridian Transportation Plan

	<b>2020 Intersection Improvements Benefit / Cost Analysis</b>		
<b>Intersections</b>	<b>Overland Road and McDermott Road</b>	<b>Overland Road and Linder Road</b>	<b>Victory Road and Linder Road</b>
<b>COSTS</b>			
<b>One Time Investment (2008 \$)</b>			
Estimated Construction Cost	\$2,680,000	\$4,370,000	\$1,947,000
Estimated Right-of-Way Cost	\$287,000	\$192,000	\$416,000
<b>Total Present Worth Costs</b>	<b>\$2,967,000</b>	<b>\$4,562,000</b>	<b>\$2,363,000</b>
<b>BENEFITS</b>			
<b>Number of Vehicles through the intersection in Peak Hour</b>	1,506	3,288	1,628
<b>Average Delay per Vehicle without Improvements (s)</b>	100	100	100
<b>Average Delay per Vehicle with Improvements (s)</b>	22	45	15
<b>Delay Reduction (s)</b>	78	55	85
<b>Average Wage (\$/hr)</b>	\$18.90	\$18.90	\$18.90
<b>Annual Travel Delay Cost Savings (\$)</b>	\$320,688	\$493,718	\$377,797
<b>Total Present Worth Benefits</b>	<b>\$3,206,876</b>	<b>\$4,937,182</b>	<b>\$3,777,967</b>
<b>Benefit / Cost Ratio</b>	<b>1.1</b>	<b>1.1</b>	<b>1.6</b>

## Benefit/Cost Analysis - South

2020 Intersection Improvements Benefit / Cost Analysis		
Intersections	Lake Hazel Road and McDermott Road	Lake Hazel Road and Black Cat Road
<b>COSTS</b>		
<b>One Time Investment (2008 \$)</b>		
Estimated Construction Cost	\$3,490,000	\$3,310,000
Estimated Right-of-Way Cost	\$108,000	\$103,000
<b>Total Present Worth Costs</b>	<b>\$3,598,000</b>	<b>\$3,413,000</b>
<b>BENEFITS</b>		
Number of Vehicles through the intersection in Peak Hour	2,039	1,629
Average Delay per Vehicle without Improvements (s)	100	100
Average Delay per Vehicle with Improvements (s)	31	19
Delay Reduction (s)	69	81
Average Wage (\$/hr)	\$18.90	\$18.90
Annual Travel Delay Cost Savings (\$)	\$384,102	\$360,202
<b>Total Present Worth Benefits</b>	<b>\$3,841,021</b>	<b>\$3,602,023</b>
<b>Benefit / Cost Ratio</b>	<b>1.1</b>	<b>1.1</b>

## Benefit/Cost Analysis - South Meridian Transportation Plan

	2025 Intersection Improvements Benefit / Cost Analysis	
Intersections	Victory Road and Meridian Road	
<b>COSTS</b>		
<b>One Time Investment (2008 \$)</b>		
Estimated Construction Cost		\$800,000
Estimated Right-of-Way Cost		\$164,000
<b>Total Present Worth Costs</b>		<b>\$964,000</b>
<b>BENEFITS</b>		
<b>Number of Vehicles through the intersection in Peak Hour</b>		4,744
<b>Average Delay per Vehicle without Improvements (s)</b>		81
<b>Average Delay per Vehicle with Improvements (s)</b>		69
<b>Delay Reduction (s)</b>		12
<b>Average Wage (\$/hr)</b>		\$18.90
<b>Annual Travel Delay Cost Savings (\$)</b>		\$155,404
<b>Total Present Worth Benefits</b>		<b>\$777,019</b>
<b>Benefit / Cost Ratio</b>		<b>0.8</b>