

Agenda #<u>13</u>

Commission Meeting Date: August 21, 2012

### CITY OF GREAT FALLS COMMISSION AGENDA REPORT

**Item:** FY 2013 Traffic Signal and Sign Maintenance Agreement with the

Montana Department of Transportation

**From:** Jerry McKinley, Traffic Supervisor

**Initiated By:** Public Works Department

**Presented By:** Jim Rearden, Public Works Director

**Action Requested:** Accept Agreement

### **Suggested Motion:**

1. Commissioner moves:

"I move that the City Commission (accept/reject) the FY 2013 Traffic Signal and Sign Maintenance Agreement with the Montana Department of Transportation and authorize the City Manager to sign the agreement."

2. Mayor calls for a second, discussion, inquiries from the public, and calls for the vote.

**Staff Recommendation:** Staff recommends that the City Commission approve the attached Traffic Signal and Sign Maintenance Agreement with the Montana Department of Transportation (MDT) for FY 2013.

### **Background:**

### Significant Impacts

The attached agreement between the City of Great Falls and the Montana Department of Transportation outline each agencies responsibility and details the States reimbursement to the City for maintaining State traffic signals and signs located within the City limits. The City is currently maintaining sixty-six (66) MDT traffic signals in addition to those at twenty-three (23) City signalized intersections. Three (3) flashing signal lights are also maintained for the State. The City is currently maintaining 1,878 standard traffic control signs that are in MDT right-of-ways.

On July 24, 2008 Jim Rearden and Jerry McKinley, representing the City met with Mick Johnson and Dave Hand, representing MDT District 3 and agreed in principle to the idea of an agreement that would compensate the City of Great Falls for its expenses in

maintaining certain traffic control signs in MDT right-of-ways. These are signs that traditionally have been maintained by the City of Great Falls at no cost to the State. The City would continue to be responsible for all curb control (parking) signing, as well as non-standard signage installed by the City in MDT right-of-ways as described in the current agreement.

### Workload Impacts

The City employs two Traffic Signal Technicians to maintain signals on State and City routes, as well as City owned signals. The City provides all maintenance necessary for the operation of the Traffic Control System and is reimbursed by MDT in accordance with Exhibit B for costs of labor, equipment, engineering, and materials required. The technicians also maintain the over-height detection system located on US 87 by Fleet Supply on an on-call basis with reimbursement per event.

The City employs two Traffic Sign Technicians to maintain signs on State and City routes, as well as City owned signs. The City provides all maintenance necessary for the operation of the Traffic Sign System and is reimbursed by MDT in accordance with Exhibit B for costs of labor, equipment, engineering, and materials required.

### <u>Purpose</u>

The City has an annual agreement with the Montana Department of Transportation for Traffic Signal and Sign Maintenance.

**Concurrences:** The State has agreed to this agreement and signed the needed documents.

**Fiscal Impact:** Last year's agreement was for a total of \$90,722. This agreement includes a 1.75% cost increase as compared to last year's Traffic Signal and Sign Maintenance Agreement, bringing the total compensation to \$92,364.

**Alternatives:** The City Commission could vote to reject this agreement.

**Attachments/Exhibits:** Traffic Signal and Sign Maintenance Agreement Item Justification and Exhibits.



### Item Justification

Fiscal Year 2012-13

State Owned % of Total

74.20%

Opticom

ITEM #1

Hourly Rate \$32.13 \$40.85 WAGE COST PER HOUR 1.75 % increase for 2012-13 1792 charged hours Signal Technician Sign Specialist 1,852 99 68 State owned signs State owned signals Total City & State owned signals

cleaned, inspected and checked for proper range and proper interface/operation with Checked once per year. It requires 1/2 man-hour per year per signal. Equipment is

control equipment.

(Tech Rate) \* .5 hr / 12 months = ITEM #2

Conflict Monitor

per signal/mo 66 Signals

\$1.70

unit is temporarily installed while original CMU is brought back to shop to be tested by CMU monitors are operational. It requires .75 man-hour per year per intersection. Shop tested This is a preventive maintenance check that has been initiated to ensure installed conflict

tester, then reinstalled at intersection. Performed once per year all intersections

(Tech Rate \* .75 hr ) / 12 months / 66 / 12months=

new in 2005-06 per signal/mo 66 Signals \$2.55 \$1,400 \$10,000 CARTEGRAPH SOFTWARE UPGRADE/MAINTENANCE PURCHASED FY 05-06 New Tools & Test Equipment (7 year life) ITEM #3

CARTEGRAPH SOFTWARE UPGRADE/MAINTENANCE PURCHASED FY 07-08 Reno LF310 with LP300 Loop finder, probe w/ spray wand, Purchased FY2009-10 3M opticom emitter for shop testing cards & heads Purchased FY 2008-09

TRAFFIC SIGNAL CONFLICT MONITOR TESTER PURCHASED IN FY 06-07

\$995 \$519 \$285 \$983 \$404

\$1,687

Shelf & rack detector tester Model 330 Purchased FY 2009-10 Universal Programmer (chip burner) Purchased FY 2009-10 Reno ST-300 44 Pin card slot tester purchased FY09-10

4 Signal Transfer switches w/connectors Purchased FY2010-11 Fluke 1630 Earth Ground Clamp Purchased FY2010-11

new in 2009-10

new in 2010-11 new in 2010-11 new in 2010-11

\$1,340 \$1,200 \$1,500 \$1,200 \$370

\$1,500 \$23,382.70

new in 2006-07 new in 2007-08 new in 2008-09 new in 2009-10 new in 2009-10 new in 2009-10

> 4 Signal Transfer switches w/connectors FY2011-12 -aptop Computer Purchased FY2010-11

Signal Transfer switches w/connectors FY2012-13 Lifan Portable Generator 1000W

\$3.13

((\$23382.70 / 7 yrs) \* 74.2%) / 66 units / 12 months =

per signal/mo 66 Signals



# Item Justification

ITEM #4	Master Controllers			
	This figure was derived using previous years average maintenance on the master controllers and telemetry systems. We estimate about 2.75 manhours/yr per signal working on master controllers and telemetry equipment.			
a i i wasan a i i i i i i i i i i i i i i i i i i	Master Controller = ((181 hrs * Tech Rate) / 12) /66 signals ≖	\$9.34	Affected signals per signal/mo	99
11 EW #5	Vehicle Detectors  If takes about two signal tech manhours to install a microwave detector. Sensys wireless vehicle detection has been added. We estimate 4 signal tech manhours to install this system.			
	Sensys wireloss vehicle detection for 2 intersection approaches MICROWAVE DETECTORS: average 2 each year Microwave="labor:(2 hrs * Tech Rate * 2 ) / "&TEXT(\$\\$48,0)\&" signals / 12 mos =" Sensys="labor:(4 hrs * Tech Rate * 2) / "&TEXT(\$\\$48,0)\&" signals / 12 mos =" Sensys wireless: \$4 100.00	\$0.30 \$0.61	Affected signals	45
	Microwave detector: \$638 each Total	\$0.00	per signal/mo	
ITEM #6	Overtime		) 	
	Overtime is tracked each year and billed accordingly. We averaged 2.5 hours/mth overtime in 2011-12. (30hrs) 5/30/2011 thru 5/1/2012			
	(C5/(C56C2/ hrs * 1ech Rate * 1.5) / 66 signals / 12 months =	\$2.32	per signal/mo 66 Signals	
ITEM #7:	Travel			
	Travel to Helena for annual signal tech meeting per man (2011-12 expenses) (((Tech Rate * 24 hrs)*2 men+(expenses 225.00) * 2 Men) / 66signats / 12	\$225.00	elemei 98 Simple	
ITEM #8	Material Control/ Recordkeeping		Significance of Silving	
	Includes ordering & stocking of parts, recordkeeping 18% of work hours for 1 technician. (Tech Rate * Hours/Year * 74.2% * 18%) / 66 stgnals / 12 months =	\$12.34	ner signal/mo 68 Giognale	<u>.</u>
ITEM #9		-   -   -	2000	
	City's 2011-12 insurance costs for 2 men are \$3668 ((\$3668) "74.2%) / 66 signals / 12 months =	\$3,668	Annual Insurance Cost	
ITEM #10	Теїериопе	t 5	pei signamino oo signais	
	Signal Shop Telephone per year Long Distance Charges in 2011-12	\$153.27 \$53.94	110	;
	I WO Cell Priories @ \$30 per month 2012-13 Hill 57 Line @ \$46.00 per month cancelled We figure 25% MDT use for short coll behands 8 load all discours	\$960.00 \$0.00		
	((((191.40+113.28+930.60) *0.25) + ((627.60*74.2%))) / 66signals / 12 months	\$0.37	per signal/mo <b>66 Signals</b>	



# Traffic Signal Maintenance Agreement

## Item Justification

ITEM #11	Pole & Cabinet Preventive Maintenance Materials			1000	Г
	For this figure we attempt to take an average for the amount of materials consumed per intersection when we perform pole preventive maintenance. LED displays have replaced light bulbs, so annual lamp purchses have been eliminated from materials.  We perform pole maintenance on each signal every 3 years (22 signals). Cabinet maintenance is performed at each signal cabinet every year (66 signals). We attempt take an average amount of materials used each year for Cabinet maintenance.				٦
Cabinet \$ 27.99 \$ 535.40 \$ 111.00 \$ 33.00 \$ 5.00	Fan Motors(3 per/yr) @ \$9.33ea / 12 / 65 Heater Strips(5 per/yr) @ \$107.08ea / 12 / 66 Cabinet Filter material 2 rolls per yr x \$55.50 per roll x 74.2% /12/66 Compressed Gas 1 can per 2 cabinets (86/2*\$10 per can) Electro Wash @ \$5per can	0.04 0.68 0.10 \$6.00 \$5.00 \$11.82	per signal/yr per signal/yr per signal/yr per signal/yr per signal/yr	66.0 Signals 66.0 Signals 66.0 Signals 66.0 Signals 66.0 Signals	
\$ 6.81 \$ 6.81 \$ 13.00 \$ 17.00	Removed - 1 CAN @ \$5.50 (Econolite green) 1 CAN Red IRON Primer @ \$6.81 1 CAN FLAT BLACK @ \$6.81 1 CAN FLAT BLACK @ \$13.00/MO DIVIDED BY 22.0 UNITS RAGS FOR CLEANING @ \$13.00/MO DIVIDED BY 22.0 UNITS Safety Glasses for spray painting during maintenance	\$0.00 \$6.81 \$6.81 \$5.26 \$1.42 \$20.30	per signallyr per signallyr per signallyr per signallyr per signallyr	22.0 Signals 22.0 Signals 22.0 Signals 22.0 Signals 22.0 Signals	
TEM #12	Pole Cabinet Pole & Cabinet Preventive Maintenance Labor History 275 hours for 175 hou	\$0.56 \$0.99 \$1.55	per signal/yr per signal/yr per signal/mo	22.0 Signais 66.0 Signais 66 Signais	
	It sakes 1.73 hours for 1 lech and 1 Laborer to perform pole preventive maintenance on an intersection every three years. It takes 1 Laborer .5hrs per intersection to test & visually inspect every ped button and ped display twice a year.  Video camera lens cleaning has been added to preventative maintenance. It is performed every 4 months on 12 cameras at 8 signals.  Cabinet preventative maintenance has been added. 66 signals visited every year.  (.5 * Tech Rate * 66 cabinets / 12mth / 66 signals)  (.25 * Tech Rate * 12 cameras / 12mth / 8 signals)	\$1.70	per signal/mo 66 Signals	66 Signals 8 signals	1
ITEM #13	.5 hrs * Sign Specialist Rate / 12 months = ((2 hrs * Tech Rate) + (2 hrs * Laborer rate)) / 3 / 12 months  Emergency Repair Parts  These include all parts required due to damage from vandalism, unreported vehicle damage, weather related damages, etc. We use a five year average.	\$1.34 \$7.87 Affected signals	per signal/mo 66 Signals per signal/mo 66 Signals 66	66 Signals	
	4 Pelco Pole Base @ \$155 ea 1 - 12" Green LED's @ \$66.61 ea 1 - 12" Red LED's @ \$43.05 ea 1 - 8" Green LED's @ \$55.54 ea 1 - 12" Yellow LED's 2 \$65 ea 200 FT, 12 conductor AWG14 signal cable @ \$1.58/FT = 200 FT, 4 CONDUCTOR OPTICOM LEAD-IN CABLE @ \$0.21/FT =	\$0.78 \$0.08 \$0.05 \$0.07 \$0.04 \$0.08 \$0.08	per signal/mo per signal/mo per signal/mo per signal/mo per signal/mo per signal/mo per signal/mo		
City of Great	City of Great Falls/MDT Signal Agreement 8/3/2012	\$0.00 \$0.00	per signal/mo per signal/mo		







## Item Justification

per signal/mo per signal/mo per signal/mo	per signal/mo		99
\$0.00 \$4.44 \$0.85	\$6.84		Affected signals
VISURS (10) @ \$21.00 = 2-Opticom 762 Phase Selectors @ \$1759 ea. 1 OPTICOM 722 DETECTOR HEAD @ \$675 EA	Total	The Benefit Cabol	i lie City has averaged 90 manhours per year on emergency maintenance in recent years.

per signal/mo

\$3.44

(90 hrs \* 74.2% \* Tech Rate) / 66 signals / 12 months =

		per signal/mo <b>66 Signals</b> per signal/mo <b>66 Signais</b>
		\$0.19 \$0.55 <b>\$3.55</b>
ITEM #15: Signal Control & Communications Parts	The cost of signal control parts/repairs, radio replacement/repair is estimated at \$3,000 per year.	202.80 annual shipping for repairs 585.00 annual conflict monitor tester calibration & certification 3000 + 245 + 585 x 74.2% / 66/12

# Traffic Signal Maintenance Agreement



## Item Justification

1TEM #16	Signal On-site Observation SIGNAL OBSERVATION: On site observation by a qualified technician for traffic flow analysis, proper functioning and equipment repair is on average .25 manhours per signal per month.		
	((Tech Rate * 0.25 manhours * 12 months * 66 signals) / 66 units) / 12 mos ≂ ^USE 0.30 MANHOURS PER MONTH	\$10.21	
TFM #17	Cirnol Contests & Commenced Contests	\$10.21	per signal/mo <b>66 Signals</b>
	This includes controllers, radios, detectors, conflict monitors, switch packs, and flashers.		
	We average 12 hrs/month. (Tech Rate * 12 hrs * 74.2%) / 66 units =	\$5.51	per signal/mo 66 Signals
ITEM #18	Signal Vehicle )		
	Rather than charge rental fees for the signal vehicle, we estimate actual cost to the City. If		77.
	we used industrially recognized tental rates, the cost would be much higher.  Amortizing the signal truck over 11 years (15% trade-in) at an initial cost of \$70,000,  Amortizing the action of \$70,000,		Initial Cost Avg. Annual Repairs
	This signal truck was purchased in Jan. 2002. It uses diesel fuel only. We have six years		\$70,000.00
	of fuel usage and maintenance repair data.	917	2011 first responsible
	Annual Amortization = (\$ 70,000 * 0.85 * 74.2 %) / 11 years	\$4,014	zon idel daggergallons
	Fuel price per gallon estimate for 2012-13 (\$3.50). Fuel usage in 2011 \$917 gallyr	\$3.50	
ITEM #19	((( \$4,014 + \$2,000 + (917 gals. * \$3.50 )) * 74.2 % (66 signals ) / 12 months  Niscellaneous Hardware	\$8.64	per signal/mo 66 Signals
	This figure includes nuts, botts, cones, stakon terminals, connectors, solder, gas for blow torch, small indicator bulbs, shrink tube, etc. @ \$600/YEAR.		
\$600.00		\$0.56	per signal/mo 66 Signals
24 14 1	A I ED DED Modules 64.0		
	4 LED FED Modules \$140 ea 8-Push Button Housing 5"x7 3/4" Green P#DDCDCC57HG @\$28 71 ea	\$560.00	
	8- Bull Dog PPB w/SS cab, momentary LED & heener - dark green @ \$75 nn ea	90.00	
	1-Ped Push Button-Tactile @ \$1,000 ea	\$1,000,00	
	F F	\$2,160.00	
ITEM 21		\$2.73	per signal/mo 66 Signals
	49 SIGNALS NOT 10 AVE S (2nd-49th)	Affected signals	49
	Real-time clocks are checked and adjusted quarterly, one manhour/signal/year Tech Rate * 1 hr / 12 months no longer necessary	000	: :
	i monogoni i obi	90.0¢	per signal/mo
ITEM 22	F		
6.25	Recently locates have averaged 6.25 manhours per month - many consultants, EPA well monitoring. We estimate 12 manhrs/yr on signal plan reviews.	07.73	and of the state o
ITEM 23	Maintenance to State owned Traffic Signs	) 	pei signamito eo signais
\$ 2,387.74	ı		
\$ 1,794.50			
\$ 4,182.24	Total cost of maintenance/repair actions performed from 5/1/2011 to 5/1/2012	\$0.19	per sign/mo 1852

### CITY OF GREAT PALLS MONTANA

### Item Justification

### SUMMARY

Item	Per	Per Month
	2011-12	2012-13
Opticom		
Conflict Monitors		<i>a</i> (
Tools & Test Equip.	00.691	9 168.30 100.50
Master Controllers		<i>o</i> (
Vehicle Detectors		<i>o</i> (
Overtime		99
Travel	100000	(A)
Material Control		ω
EBUILV INSUITABLE	GLASSIN.	₩.
Phone		69
Cabinat Maintanages ma		69
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TO EXPONENT INVITIENT LEGISLA		69
unitaryong nepali ratis Emergening nepali ratis		69
zilieletiky kebali Labori		69
opin state rairs		es
COOT. & USSETVATION		69
Solid State Repair		œ
V OFFICIOR IN VOICE IN VIOLENCE IN VIOLENC		H
Large Sign Truck		
Wisc. Hardware	36 08	
Pedestrian Hardware		00.90 40.40
Underground Locates	\$ 290.40	5 296.34
Sign Waintenance (12% admin is already included in monthly cost)	ě	\$ 348.18
Sub Total	4	4
Admin (12.0% of prev.)	<b>`</b>	- 100
	\$ 756.43	\$ 787.33
10(3)	\$ 7,564.38	\$ 7,696.64
change from last year 1.75%	\$ 90.772.56	\$ 92 359 62

### Exhibit A

# Itemized Cost Matrix

Yearly Total		68 \$ 1,784.16		17 4 1 272	18 \$ 1,784.1	37 \$ 1,372.4	37 \$ 1,372.4	97 \$ 1,372.4	37 \$ 1,372.4	37 \$ 1,372.4	37 \$ 1,372.4	77 \$ 1,372.43	18 8 1,784.16	1,784.16	17 \$ 1,372.43	17 \$ 1,372.43	87 \$ 1,372.43	1,372.4	58 \$ 1,784.16	1,258.15	95 \$ 1,258.19	1,258.1	1 258 45	4 COO.	8 999.	8 869.1	76 \$ 989.10	37 \$ 1,372.43	13 \$ 1,784.1	6 \$ 989.10	8 5 969.10	2 200	9.00	9.09.10	9 \$ 1,057.10	989.10	9 968.10	8 5 989.10	7 \$ 1379.6	8 \$ 1,784.1	7 \$ 1,372.4	7 \$ 1,372.4	7 \$ 1,372.A	7 6 1,372,4	9 5 1,784.1	7 \$ 1,372.43	7 \$ 1,372.4	7 \$ 1,372.43	7 \$ 1377.0	7 \$ 1,372.4	7 \$ 1,372.43	7 \$ 1,372.4	6 \$ 969.10	3 5 1 784 15	3 \$ 1,784.18	7 \$ 1,372,43	7 \$ 1,372.43	7 \$ 1,372.43	7 6 1,372,43	4,178.11		ļ.
Monthly, Adjusted for Complexity		148,88		40	\$ 148.68	•	s	s	۵.	_	40		*		5	<u>د</u>		<b>.</b>			۵.	104.85								80.76		_	\$ 60.76	*	4	\$ B0.7	\$ 80.7	\$ 80.7	114.3			40	۵,	ا د	148.68	4	\$ 114.37	414.37	1143	114.37	s		5 50.76	ľ	148.88			i	146.57	\$ 348.18		
Monthly Total	١,	\$ 114.37			\$ 114.37		4					ļ.,		۱.,					\$ 114.37	104.85	104.65	104 BE	304.83	\$ 104.85	201018	104.85	\$ 104.85	\$ 114.37	114.37	104.85	40.00	\$ 104.85	\$ 104.85	\$ 104.65	114.37	104.85	104.85	104.85	114.37	\$ 114.37	114.37	114.37	14.37	114.37	\$ 114.37	\$ 114.37	114.37	114.37	114.37	114,87	114.37	114.37	104 BS	114.37	114.37	114.37	114.37 \$	1437	114.37	348 18		
Admin @ 12.0%		12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	11.23	27	2 2 2	11.23	11.23	1123	11.23	11.23	12.25	12.25	11.23	1,23	11,23	11.23	11.23	12.25	133	11.23	12.22	12.26	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.26	12.75	12.25	12.25	12.25	12.26	11.23	12.25	12.25	12.25	12.25	12.25	12.25			
Phone Charges		0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	ž:	100	0.37	0.87	0.37	0.37	0.37	0.37	0.37	0.37	19.0	0.37	0.37	0.37	0.37	0.37	0.37	0.37	033	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0,37	0.37	0.37	0.37	0.37	0.37	200	0.37	0.37	0.37	0.37	75.0	0.37			
Ped. Signal Maint.	:	2.73	2.78	2.73	2.73	273	2.73	2.73	273	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	273	27.2	2 2	27.6	2.73	2.73	2.73	2.73	2.73	2.73	2.73	2.73	27.6	273	2.73	2.73	2.73	273	273	27.2	2.73	2.73	2.73	2.73	2.73	273	2.73	2.73	2.73	273	273	2.73	2.73	2.73	273	27.8	273	273	2.73	273	273	2.73			
Time		ı			П	ı	-	١		ļ		l		Ī		-		İ	ı	1						İ	ı		ı			i		- [		-					1	١	1			ı				0.00	0.00	000	9	0.00	0.00	0.00	0.00	8	0.00			
Misc. Iardware	93.0	0.56	0.56	0.56	928	0.68	0.55	0.56	0.56	0.56	0.58	0.58	0.58	0.58	0.56	0.58	85	0.56	90'0	0.50	920	950	99.0	0,56	0.56	0.58	0.56	0.58	0.58	8 9	990	0.56	0.56	0.56	0.58	900	0.00	0.58	0.56	0,56	98	0.56	8 5	0.58	0.56	0.56	99'0	0.56	99'0	0.58	0.56	98.0	35	99'0	0.56	0.56	0.56	99.0	0.56			
Signal Misc. Vehicles Hardware	864	8.64	8.64	8.64	8.64	78.	9.64	9.64	8.64	8.64	9.64	9.64	3.64	8.64	8.64	9.64	9.84	9.04	200	70.0	3.64	798	8.84	8.64	8.64	8.64	9.84	3.64	99.0	788	8.64	9.64	8.64	3.64	8864	60.09	8.64	25.6	8.64	6.64	8.64	8.64	4 8 B	9.64	9,84	20.00	9.84	29.6	8.84	3.64	8.84	9.84	9.84	8.84	3.84	9.64	8.64	8.84	9.64			
State Repairs	29.5	5.5	5,51	5.51	5.51	5.5	5	55	6.51	5.51	F.54	5,51	5,51	53	5.51	5.51	6	2 4	5.57	100	5.51	5.5	5.51	5.51	5.61	5.51	5.51	15. E	0.0	5.54	5.51	9.51	6.54	5.57	20.0	, N	100	5.51	5.51	5.51	6.51	5.51	55	5.51	5.51	5.61	2 2	5,51	5.61	5.51	2.5	5.5	5.54	5.51	6.51	5,51	25.2	12.5	5.51	i		
Solid State Parts	92.50	3,55	3.55	3.65	3.55	93.5	8.8	25	3.55	3.55	3,55	3.55	3.55	3.55	3.55	3.65	2 5	3.55	2	3.65	3.55	3.55	3.55	3,55	3.55	3.65	3.55	35.5	20.0	355	3,65	3,55	3.55	3.55	6. 5	0 5 E	3 6	3.56	3.55	3.55	98 5	3.55	2 13	3.65	3.65	3,55	8 1	3.55	3.55	3,55	9 20	20 19	38	3.55	33.5	3.56	9.65	3.56	3.55			
UG Coord, & Locates Observation	10.21	10.21	10.21	10.21	10.24	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10.21	10 S	10.04	10.25	10.24	10.21	10.21	10.21	10.21	10.21	10.21	10.24	10.21	1024	10.21	1021	10.21	10.21	10.21	10.21	5 2	10.0	10.21	10.21	10.21	10.21	10.21	10.21	10,21	10.21	10.21	10.21	10.24	10.21	10.21	10.21	10.21	10,21	10.21	10.21	10.21	10.21	10.25	10.21	10.21			
UG ocates O	4.49	6.49	4.49	4.4B	4.49	3 .	4.43	9	9	9	5 .	4,48	4.49	448	4,49	448	4.49	68.	9	9,6	4.49	4.48	4.49	4.49	4.49	69.	9	8 7	4.40	4.49	4.48	4,49	4.49	6.48	9 40	67.7	4.48	4.48	4.49	448	4.49	448	649	4.49	449	4.49	69.0	67.9	4.49	4.49	4.48	4.48	4.49	4.49	449	4.49	6 49	6.69	4.49			
Emerg. Labor	3.64	3.44	3.44	3.44	3,44	44.0	49.	2	4	200	9	3.44	3.44	3.44	3.46	5 .	3.44	3.44	3.44	3,44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.64	344	3.44	3.44	3.44	3.44	3.44	77.6	3.64	3.44	3.44	3.44	34.	3.44	3.44	3.44	3.44	3.44	3,44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	4 4	3.44	3.44			
Emerg. Repair Parts	6.84	6.84	6.84	35	5.84	70.0	6.0	*	0.54	Z S	20 0	28.9	8.8	49.0	45.00	6 8	8 B B	8.8	6.84	6.84	6.84	6.84	8.84	6.84	6.84	9.84	9.0	6.84 A B A	18.9	6.84	6.84	8.84 8.84	6.84	5 6	884	88	78.9 9	6.84	6.84	78.0	5.84 A R.4	\$ 88 8 84	48.8	5.84	æ ;	6.84	89	98.9	98.8	78.9	48.84 48.84	6.84	8.84	6.84	8,84	9.0	6.84	5.84	984			
Pole & Cabinet Pm Matoriat	1.55	1.55	28	.55	20 1	30, 12	8 4	8	6 4	8	8 5	8	23	8 1	6 2		1.55	159	1 65	1.58	1,65	1.55	7.98	1.55	22	1.65	2	8 5	185	1.65	1.55	1.55	1.55	9 4	155	1.55	8	1.55	1.55	6 5	58.	1 18	1.55	1.55	1.55	5 5	55	1.58	1,55	1,55	6 5	3 13	1.55	1.55	1.55	96,	102	1.65	1,55			
Pole & Cabinet (PM Labor	١.,	7.87	7.87	87	787	7.87	100	100	70.2	10.1	10,	7.87	7.87	7 87	787	787	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	10.	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	197	7.87	7.87	7.37	i		
Liability Insurance (	3,44	3.44	3.44	4	3.44	3.64	2.44	3.44	2.64	170	3.44	3.44	244	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3,44	3.44	3.44	344	4	3,44	7.0	3.44	3.44	3.44	3.44	3.44	3.44	29.46	3.64	3,44	3.44	3.44	3.44	3.64	3.44	342	3.44	3.44	# :	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.4	2 44	3.44	3,44	3,44			
Material Control/ I Record Keeping	12.34	12.34	12.34	12.34	12.34	12.34	12.84	45.24	12.84	12.03	40.34	12.34	12.36	1236	1232	12.34	12.34	12.84	12.34	12.34	12.34	12.34	1234	1234	1234	12.34	12.63	12.34	12.34	12.34	12.34	1234	12.34	42.34	12.34	12.34	12.34	12.34	1234	12.34	1234	12.34	12.34	1234	12.34	12.34	12.34	12.34	12.34	1234	1234	12.34	12.34	12.34	12.34	10.34	12.34	12.34	12.34			
Travel	3.04	3.04	3 6	5 8	308	3.04	304	304	308	305	300	3 6	5 2	305	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	80.0	308	90%	50.0	70%	3.04	3.04	3.04	304	304	90.0	30%	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3,04	3.04	3.04	3.04	3.04	900	3.04	102	3,04	3.04	3.04	3,04	\$ PO 8	300	3.04	3.04			
Overtime	232	232	707	7.07	232	232	2.32	2.82	232	28.6	233	202	232	232	232	232	2.32	2.32	2:32	2.32	232	2.32	7.95	7.37	2.32	757	2 8 2	2.82	2.32	2.32	232	2.32	2.72	232	2.32	2.32	2.32	232	232	232	232	232	232	232	2.32	2.32	2.32	2.32	232	2.32	232	2.32	232	2.32	2.32	282	2.32	2.32	232			
	3.13	3.13	9 24	212	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	2 62	3.13	8.13	3.13	3.13	3.13	3.13	3.13	3,13	3.13	200	2	3.15	21.0	3.13	3.13	3.13	3.13	3.13	51.5	3 43	3.13	3.13	3.13	3.13	3.13	3.13	is 13	3.13	3.13	3.13	3.13	2. 5. 5. 5.	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3,13	3.13	3.13	3.13	3.13	3.13			
	8.50	5.50	5 5	5	8,50	9.50	9.50	8,50	8.50	8.50	8.50	8	8	8,50	8.8	8.50	8.50	8,50	Ą	Ā	≨ :	⊈ :	£ 2	47	¥ 2	42	3.50	8.50	Ą	¥	<u> </u>	2 2	4	8.3	ΝΑ	X.	¥	≱ 3	2 2	8,50	98.8	8.50	9.50	9.50	8.50	8,50	8.50	8.50	06,8	3.50	8.50	¥	ž	8.50	9.50	8.50	8.50	8.50	8.50	بر	, ,,,	
Controllers D	9.34	934	72.6	78.6	9.34	8.34	9.34	9.34	934	9.34	9.34	9.34	8,34	9.34	B.34	9,34	8.34	9.34	9.34	9.34	45.	9.34	9.04	100	2.3	834	9,34	9.34	9.34	9.34	9.34	40 H	834	9.34	9.34	8.34	9.34	45.9	40.00	9.34	9.84	8.34	9.34	8.34	9.34	9.34	9.34	9,34	45.2	9.34	9.34	B.34	9.34	200	9.34	9,34	9.34	9.34	9.34	NO CHARGE - SELECAM REGARE MAINTENANCE	RECURE MAINTENANC	
	52	255	255	2.65	2.55	2.55	2.55	2.55	2.55	2.55	2.55	255	2.55	2.55	2.55	2,55	2.65	2.55	2.65	265	2 .	200	198	2.55	2.55	2.55	2.65	265	2.55	2.95	6 3	2.55	2.55	2.56	2.55	2.55	2.65	2.55	2.65	2.55	2.55	2.55	2.56	2.55	2.55	2.55	2.55	2.66	2.60	2.65	2.55	2.65	2.55	2.65	2.55	2.65	2,65	2.55	2.55	SELDOWRED	SELDOW REC	
	1.70	2, 5	1,70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1,70	1,70	1,70	1.70	1.70	1.70	2	1.70	1.70	1,70	0/1	2 2	120	120	12	1,70	1.70	1.70	1.70	2	2 4	1.70	1.70	1.70	1.70	1.70	1.70	02.	170	1.70	1.70	1.70	1,70	2 2	2.5	1.70	1.70	1.70	7. 7.	170	1.70	1,70	2	2 2	1.70	1.70	1.70	1.70	1.70	) CHARGE .	CHARGE - SELDON	
Controller Type Opticom	TMP 390	TWP 390	TMP 390	390/TMM500	TMP 390	TMP 390	TMP 390	TMP 390	TMP 390	TMP 380	TMP 390	TMP390/TMM500	TMP-390	TKP-390	TMP-390	TMP-390	TMP-390	TMP-390	TMP-390	MP-380	Tub sen	TMP.360	TRP-390	TWP-330	TWP-390	TMP-390	TMP-350	TMP-390	TMP-390	TMP.390	TED. 300	TMP-390	TMP-390	TMP-390	TMP-390	TMP-390	TMP-380	TUP-380	TMP-390	TMP-390	TIRP-390	TMP-390	TMP-390	TMP-390	TMP-380	TMP-360	TMP-390	TMP-390	HMP 40	SP-40	8P-40	TMP-390	TMP-390	TMP.390	TMP-390	TMP-390	TMP-391	TMP 390	TMP-380		FLASHER NO	
	1	+		-	Н		-			_		TMP.	L			+			+	1	-	1		_					-		+			<u> </u>			+		-	Ц	Ц		1				-						1									
តិខឹក	1,30 P	8 8	L		1.00 M	æ 00	E 00:	_	1,00 M	8	1.00 M		1.30 p	.00 M		1.00 M	1	$\perp$	1	1	00 E	100	H 77.	0.77 H	L	H 77.0	M 00	d E	77 H	1 2	Z	77 H	0,77 H	0,77 H	± 1	± :	H 2	1.00	L	1.00 M	₩ 00	4	8 8	1,30 F	1.00 M		┙	00. E 20	L	1.00 M	1.00 M	1	E 0	1.30	. W	M 00	1.00 M	a :	1.00 M		-	ľ
Factor	+	1	-	1	4	+	-	-	1	+	-	1,	1,	۳	÷	-	+			- -	-	-	6	o	0	0	ř	-	0	3 6	100	0.77	ő	0.0	0.77	0		3 2	12	1,1	7	1,1	- -		2,	1,1	= :		1	1,6	1.6	7.0	1 30	1.5	1	1.0	1.0		1,4	Н		
Location	10th S. @ Fox Farm	. @ 5th St.	10th S. @ 7th St.	S. @ 9th St.	10th S. @ 11th St	. @ 13th St.	.@ 14th St.	10th S. @ 15th St.	10th S. @ 20th St.	. @ 23rd St.	@ 25th St,	@ 26th St.	10th S. @ 32nd St.	@ 38th St.	@ 39th St.	@ 43rd St.	10th S. (8 48th St.	@ 3rd St	E 310 01.	# 5th 8t	Ø eth 3t.	Znd N. 20 9th St.	2nd N. @ 14th St.	@ 15th St.	2nd N. @ 25th St.	@ 26th St.	@ 38th St.	2nd N. @ 57th St.	22 2nd St.	a Ath St	1st N, @ 6th St.	1st N. @ 6th St.	1st N. @ 7th St.	1st N. @ 9th St.	14th St.	15th St.	20th 84	1st N. @ Park Drive	st N. @ River Drive	NW Bypass @ 3rd St.	lass @ 6th St.	ass @ 8th St.	M E TATH AVE.	Smaller @ 5th St.	@ 8th st.	@ 10th St.	Bridge N.	Gth S. @ 14th St.	15th St.	8th N. @ 14th St.	8th N. @ 15th 8t.	Central @ 14th St.	W # 3rd St	W. @ 6th St.	Central W. @ 9th St.	River Drive @ 9th St.	River Drive @ 38th St.	14th SW @ 1315	Intenance	10th S E. of Fox Farm	9 37th St.	







Fiscal Year 2012-13

Item Description	Fiscal Year N	lonthly Charges	Change from FY 2011-12
item Description	2011-12	2012-13	
Opticom	\$ 110.22	\$ 112.20	1.80%
Conflict Monitor	<b>\$</b> 165.00	\$ 168.30	2.00%
Master Controllers	\$ 603.90	\$ 616.44	2.08%
Vehicle Detectors	\$ 381.60	\$ 382.50	0.24%
Tools & Test Equipment	\$ 190.08	\$ 206.58	8.68%
Overtime	\$ 135,30	<b>\$</b> 153.12	13.17%
Travel	\$ 200.64	\$ 200.64	-0.00%
Material Control\ Recordkeeping	\$ 798.60	\$ 814.44	1.98%
Liability Insurance	\$ 217.80	\$ 227.04	4.24%
Pole & Cabinet PM Labor	\$ 508.84	\$ 519.25	2.05%
Pole & Cabinet PM Material	\$ 96.36	\$ 102.30	6.16%
Emergency Repair Parts	\$ 382.80	\$ 451.44	17.93%
Emergency Repair Labor	\$ 247.50	\$ 227.04	-8.27%
Underground Locates	\$ 290.40	\$ 296.34	2.05%
Coordination & Observation	\$ 660.66	\$ 673.86	2.00%
Signal Control & Communications Parts	<b>\$</b> 150.32	\$ 234.17	55.78%
Signal Control & Communications Labor	\$ 356.40	\$ 363.66	2.04%
Signal Vehicles	\$ 570.90	\$ 570.24	-0.12%
Miscellaneous Hardware	\$ 36.96	\$ 36.96	-0.00%
Time Clocks	\$	\$ -	0.00%
Pedestrian parts	\$ 133.32	\$ 180.18	35.15%
Telephone	\$ 66.00	\$ 24.42	-63.00%
Administration	\$ 756.43	\$ 787.33	4.09%
Sign Maintenance	\$ 504.35	\$ 348.18	-30.97%
Monthly Total	\$ 7,564.38	\$ 7,696.64	1.75%
Yearly Total	\$ 90,772.56	\$ 92,359.62	1.75%



### **Exhibit C**

### **Monthly Payment Schedule**

Fiscal Year 2012-13

Month		arge *(rounded rest whole dollar)*
July, 2012		\$ 7,697
August, 2012		\$ 7,697
September, 2012		\$ 7,697
October, 2012		\$ 7,697
November, 2012		\$ 7,697
December, 2012		\$ 7,697
January, 2013		\$ 7,697
February, 2013		\$ 7,697
March, 2013		\$ 7,697
April, 2013		\$ 7,697
May, 2013		\$ 7,697
June, 2013		\$ 7,697
	Total	\$ 92,364

(FY total of rounded monthly amount)

### CITI OF GREATIFALLS

### **Exhibit D**

### **Maintenance Cost Summary (per intersection)**

Fiscal Year 2012-13

Intersection Location	N	onthly Cos	ŧ	Yearly Cost	
10th S. @ Fox Farm	\$	148.68	\$	1,784.16	
10th S. @ 2nd St.	\$	148.68	_		
10th S. @ 5th St.	\$	114.37	_	1,372.43	
10th S. @ 7th St.	\$	114.37		1,372.43	
10th S. @ 9th St.	\$	148.68		1,784.16	
10th S. @ 11th St	\$	114.37		1,372.43	
10th S. @ 13th St.	\$	114.37		1,372.43	
10th S. @ 14th St.	\$	114.37		1,372.43	
10th S. @ 15th St. 10th S. @ 20th St.	\$	114.37		1,372.43	
10th S. @ 23rd St.	\$	114.37	\$	1,372.43	
10th S. @ 25th St.	\$	114.37 114.37	\$	1,372.43 1,372.43	
10th S. @ 26th St.	\$	148.68	\$	1,784.16	
10th S. @ 32nd St.	\$	148.68	\$	1,784.16	
10th S. @ 38th St.	\$	114.37	\$	1,372.43	
10th S. @ 39th St.	\$	114.37	\$	1,372.43	
10th S. @ 43rd St.	\$	114.37	\$	1,372.43	
10th S. @ 49th St.	\$	114.37	\$	1,372.43	
10th N. @ 57th St.	\$	148.68	\$	1,784.16	
2nd N. @ 3rd St.	\$	104.85	\$	1,258.19	
2nd N. @ 4th St.	\$	104.85	\$	1,258.19	
2nd N. @ 5th St.	\$	104.85	\$	1,258.19	
2nd N. @ 6th St.	\$	104.85	\$	1,258.19	
2nd N. @ 9th St.	\$	104.85	\$	1,258.19	
2nd N. @ 14th St.	\$	80.76	\$	969.10	
2nd N. @ 15th St.	\$	80.76	\$	969.10	
2nd N. @ 25th St.	- \$	80.76	\$	969.10	
2nd N. @ 26th St.	\$	80.76	\$	969.10	
2nd N. @ 38th St.	\$	114.37	\$	1,372.43	
2nd N. @ 57th St.	\$	148.68	\$	1,784.16	
Ist N. @ 2nd St.	\$	80.76	\$	969.10	
1st N. @ 3rd St.	\$	80.76	\$	969.10	
1st N. @ 4th St. 1st N. @ 5th St.	\$	80.76	\$	969.10	
1st N. @ 6th St.	\$	80.76 80.76	\$	969.10	
1st N. @ 7th St.	\$	80.76	\$	969.10	
Ist N. @ 9th St.	\$	88.09	\$	969.10 1,057.10	
Ist N. @ 14th St.	\$	80.76	\$	969.10	
Ist N. @ 15th St.	\$	80.76	\$	969.10	
st N. @ 25th St.	\$	80.76	\$	969.10	
st N. @ 26th St.	\$	80.76	\$	969.10	
st N. @ Park Drive	\$	114.37	\$	1,372.43	
st N. @ River Drive	\$	148.68	\$	1,784.16	
IW Bypass @ 3rd St.	\$	114.37	\$	1,372.43	
IW Bypass @ 6th St.	\$	114.37	\$	1,372.43	
IW Bypass @ 9th St.	\$	114.37	\$	1,372.43	
rd St. NW @ 14th Ave.	\$	114.37	\$	1,372.43	
melter @ 5th St.	\$	114.37	\$	1,372.43	
melter @ 6th St.	\$	148.68	\$	1,784.16	
melter @ 8th St.	\$	114.37	\$	1,372.43	
melter @ 10th St.	\$	114.37	\$	1,372.43	
5th St. Bridge N.	\$	114.37	\$	1,372.43	
5th St. Bridge S. th S. @ 14th St.	\$	114.37	\$	1,372.43	
th S. @ 15th St.	. \$	114.37	\$	1,372.43	
th N. @ 14th St.	\$	114.37	\$	1,372.43	
th N. @ 15th St.	\$	114.37 114.37	\$	1,372.43	
entral @ 14th St.	\$	80.76	\$	1,372.43 969.10	
entral @ 15th St.	\$	80.76	\$	969.10	
entral W. @ 3rd St.	\$	148.68	\$	1,784.16	
entral W. @ 6th St.	\$	148.68	\$	1,784.16	
entral W. @ 9th St.	\$	114.37	\$	1,372.43	
iver Drive @ 9th St.	\$	114.37	\$	1,372.43	
iver Drive @ 38th St.	\$	114.37	\$	1,372.43	
4th SW @ 1315	\$	148.68	\$	1,784.16	
4th SW @ 16th Ave.	\$	114.37	\$	1,372.43	
ign Maintenance for MDT	\$	348.18	\$	4,178.11	
Tota		7,696.64	\$	•• •••••	% Chan
IOta		2011-12	<u> </u>	92,359.62	% Chan
					1.75%