

INFRASTRUCTURE SERVICES DIVISION  
DEPARTMENT OF PUBLIC WORKS  
STATE PROJECT I.D.#2090-10-91  
2005 SURFACE TRANSPORTATION PROGRAM  
W. SILVER SPRING DR. - S. 27th ST. to N. 43rd ST.

TRAFFIC SIGNS

<u>COST ESTIMATE</u>		<u>TRAFFIC SIGNS</u>		TOTAL
<u>ITEM</u>	<u>DESCRIPTION</u>	<u>QUAN.</u>	<u>UNIT COST</u>	<u>ITEM COST</u>
73000	30 X 30 STOP	16	\$52.59	\$841.44
73004	36 X 36 YIELD	1	\$56.51	\$56.51
73020	30X30 DO NOT ENTER	2	\$53.15	\$106.30
73022	18X24 ONE WAY (LA)	2	\$31.83	\$63.66
73024	18X24 ONE WAY (RA)	3	\$31.83	\$95.49
73034	12X18 PARKING-SINGLE MESSAGE	36	\$21.98	\$791.28
73036	18X24 PARKING-DOUBLE MESSAGE	14	\$48.00	\$672.00
73038	36X42 OVERNIGHT PARKING ORDINANCE	1	\$104.55	\$104.55
73056	30X30 SCHOOL	11	\$57.59	\$633.49
73060	24X48 SCHOOL SPEED LIMIT 20 WCAP	8	\$79.96	\$639.68
73078	18X18 YELLOW TARGET	2	\$29.02	\$58.04
73081	12x36 HAZARD MARKER (LEFT MOUNT)	2	\$28.98	\$57.96
73083	24X24 DOUBLE DOWN ARROW	6	\$28.91	\$173.46
73097	24X30 KEEP RIGHT	5	\$44.93	\$224.65
73120	30X30 MERGING TRAFFIC FROM RIGHT	3	\$48.01	\$144.03
73127	30X30 TWO WAY TRAFFIC	1	\$48.01	\$48.01
73135	36X36 LOW CLEARANCE ___'___"	2	\$72.44	\$144.88
73138	30X30 DEAD END	1	\$48.01	\$48.01
73140	15X21 PUSH BUTTON FOR WALK SIGNAL	10	\$17.76	\$177.60
73177	24X36 NO TRUCKS 3 TONS OR OVER	12	\$51.34	\$616.08
73181	24X24 NO LEFT TURN	2	\$38.22	\$76.44
73188	18X24 BIKE ROUTE	1	\$31.83	\$31.83
73193	18X24 SPEED LIMIT 15 MPH	2	\$31.83	\$63.66
73194	24X30 SPEED LIMIT ___	8	\$44.93	\$359.44
73199	12X24 AHEAD (PLAQUE)	1	\$26.87	\$26.87
73294	3' RSP SOCKET	85	\$35.92	\$3,053.20
73295	SOC. (CONC. INST.)	5	\$33.62	\$168.10
73296	2" X 9'6" PIPE	76	\$46.36	\$3,523.36
73298	2' X 11'-0" PIPE	14	\$51.30	\$718.20
73310	MOUNTING HARDWARE CP/SS/AP	91	\$3.21	\$292.11
73311	MOUNTING HARDWARE PS	111	\$4.17	\$462.87
73312	SNS MOUNTING CP	30	\$21.60	\$648.00
73318	GREEN SNS 30"	20	\$36.74	\$734.80
73319	GREEN SNS 36"	17	\$40.91	\$695.47
73325	SNS MOUNTING SIGNALS	12	\$15.65	\$187.80
73326	9X12 PUSH BUTTON FOR WALK SIGNAL	2	\$17.54	\$35.08
73327	6X8 PUSH BUTTON FOR WALK SIGNAL	12	\$12.30	\$147.60
73329	24X30 BICYCLE LANE BEGINS	2	\$44.93	\$89.86
73330	24X30 BICYCLE LANE ENDS	2	\$44.93	\$89.86
73332	24X30 CURB LANE BICYCLE AND PARKING ONLY	18	\$44.93	\$808.74
73333	12X24 AHEAD	7	\$28.28	\$197.96
73338	12X24 DIAGONAL DOWN	4	\$28.28	\$113.12
			TOTAL=	\$18,221.49

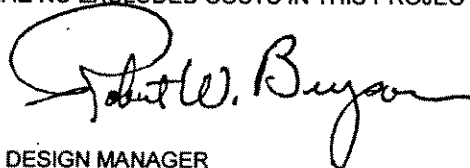
COST ESTIMATE

2005 SURFACE TRANSPORTATION PROGRAM = \$18,221.49

THERE ARE NO EXCLUDED COSTS IN THIS PROJECT.

APPROVED BY:

ROBERT W. BRYSON  
TRAFFIC AND LIGHTING DESIGN MANAGER



TRANSPORTATION SECTION  
TRAFFIC & LIGHTING DESIGN UNIT  
JOSEPH A. HALVORSON  
DECEMBER 21, 2004

AGREED UNIT PRICE (AUP) UNIT COST ANALYSIS  
 INFRASTRUCTURE SERVICES DIVISION - TRANSPORTATION  
 DEPARTMENT OF PUBLIC WORKS - CITY OF MILWAUKEE  
 STATE PROJECT I.D.#2090-10-91  
 WEST SILVER SPRING DRIVE  
 NORTH 43RD STREET TO NORTH 27TH STREET

**SUMMARY COST ESTIMATE - TRAFFIC SIGNALS**


DRAWING # F-05-500-T  
 F-04-520-T  
 F-01-534-T  
 F-05-503-T

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL UNIT COST</u>
71052B	303-8 CONTROLLER WITHOUT FOUNDATION	EACH	1	\$8,518.06	\$8,518.06
71034	DETECTOR 4-CHANNEL	EACH	4	\$631.89	\$2,527.56
71062L	312 SIG. HOUS. LED	EACH	22	\$591.90	\$13,021.80
71066L	COMBINATION DW-W 12" SIG. LED	EACH	30	\$456.76	\$13,702.80
71071L	38 SIG. HOUS. LED	EACH	32	\$508.85	\$16,283.20
71125	PUSH BUTTON	EACH	15	\$120.36	\$1,805.40
71158	4 PR. #16 DSTP	PER LF	115	\$2.27	\$261.05
71156	LEAD IN CABLE (PROBE)	PER LF	1520	\$1.92	\$2,918.40
71170	9#14 LTP	PER LF	1440	\$2.13	\$3,067.20
71171	12#14 LTP	PER LF	1025	\$2.23	\$2,285.75
71172	17#14 LTP	PER LF	1865	\$2.38	\$4,438.70
71173	20#14 LTP	PER LF	540	\$2.48	\$1,339.20
71197	SS 13'	EACH	30	\$850.74	\$25,522.20
90030B	INSTALL 3#4/1#8 LTP UNDERGROUND CABLE	PER LF	310	\$3.26	\$1,010.60
90030P	INSTALL 2.5" PVC CONDUIT (HOLE HOG/BORE)	PER LF	1090	\$5.98	\$6,518.20
90030Q	INSTALL 2.5" PVC CONDUIT (TRENCH)	PER LF	1870	\$6.40	\$11,968.00
90005GQ	RECTANGULAR VAULT	EACH	9	\$232.79	\$2,095.11

**TOTAL \$117,283.23**

ESTIMATED COST OF 2005 PAVING PROGRAM

APPROVED BY:



ROBERT W. BRYSON  
 TRAFFIC & LIGHTING ENGINEER V

TRANSPORTATION SECTION  
 TRAFFIC & LIGHTING DESIGN UNIT  
 JOSEPH A. BONDOWSKI  
 January 14, 2005

AGREED UNIT PRICE (AUP) UNIT COST ANALYSIS  
 INFRASTRUCTURE SERVICES DIVISION - TRANSPORTATION  
 DEPARTMENT OF PUBLIC WORKS - CITY OF MILWAUKEE  
 STATE PROJECT I.D.#2090-10-91  
 W. SILVER SPRING DR. & N. 27TH ST.

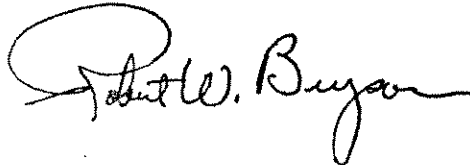
COST ESTIMATE - TRAFFIC SIGNALS

DRAWING # F-05-503-T

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL UNIT COST</u>
71034	DETECTOR 4-CHANNEL	EACH	1	\$631.89	\$631.89
71062L	312 SIG. HOUS. LED	EACH	8	\$591.90	\$4,735.20
71066L	COMBINATION DW-W 12" SIG. LED	EACH	8	\$456.76	\$3,654.08
71071L	38 SIG. HOUS. LED	EACH	6	\$508.85	\$3,053.10
71125	PUSH BUTTON	EACH	6	\$120.36	\$722.16
71156	LEAD IN CABLE (PROBE)	PER LF	700	\$1.92	\$1,344.00
71170	9#14 LTP	PER LF	765	\$2.13	\$1,629.45
71171	12#14 LTP	PER LF	265	\$2.23	\$590.95
71172	17#14 LTP	PER LF	410	\$2.38	\$975.80
71173	20#14 LTP	PER LF	275	\$2.48	\$682.00
71197	SS 13'	EACH	7	\$850.74	\$5,955.18
90030P	INSTALL 2.5" PVC CONDUIT (HOLE HOG/BORE)	PER LF	310	\$5.98	\$1,853.80
90030Q	INSTALL 2.5" PVC CONDUIT (TRENCH)	PER LF	1020	\$6.40	\$6,528.00
90030B	INSTALL 3#4/1#8 LTP UNDERGROUND CABLE	PER LF	45	\$3.26	\$146.70
				<b>TOTAL</b>	<b>\$32,502.31</b>

ESTIMATED COST OF 2005 PAVING PROGRAM

APPROVED BY:



ROBERT W. BRYSON  
 TRAFFIC & LIGHTING ENGINEER V

TRANSPORTATION SECTION  
 TRAFFIC & LIGHTING DESIGN UNIT  
 JOSEPH A. BONDOWSKI  
 January 14, 2005

AGREED UNIT PRICE (AUP) UNIT COST ANALYSIS  
 INFRASTRUCTURE SERVICES DIVISION - TRANSPORTATION  
 DEPARTMENT OF PUBLIC WORKS - CITY OF MILWAUKEE  
 STATE PROJECT I.D.#2090-10-91  
 W. SILVER SPRING DR. & N. 35TH ST.

COST ESTIMATE - TRAFFIC SIGNALS

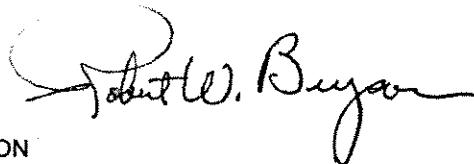
DRAWING # F-01-534-T

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL UNIT COST</u>
71034	DETECTOR 4-CHANNEL	EACH	1	\$631.89	\$631.89
71062L	312 SIG. HOUS. LED	EACH	4	\$591.90	\$2,367.60
71066L	COMBINATION DW-W 12" SIG. LED	EACH	8	\$456.76	\$3,654.08
71071L	38 SIG. HOUS. LED	EACH	10	\$508.85	\$5,088.50
71156	LEAD IN CABLE (PROBE)	PER LF	70	\$1.92	\$134.40
71170	9#14 LTP	PER LF	330	\$2.13	\$702.90
71171	12#14 LTP	PER LF	205	\$2.23	\$457.15
71172	17#14 LTP	PER LF	650	\$2.38	\$1,547.00
71197	SS 13'	EACH	8	\$850.74	\$6,805.92
90030P	INSTALL 2.5" PVC CONDUIT (HOLE HOG/BORE)	PER LF	275	\$5.98	\$1,644.50
90030Q	INSTALL 2.5" PVC CONDUIT (TRENCH)	PER LF	390	\$6.40	\$2,496.00
90005GQ	RECTANGULAR VAULT	EACH	5	\$232.79	\$1,163.95
90030B	INSTALL 3#4/1#8 LTP UNDERGROUND CABLE	PER LF	225	\$3.26	\$733.50

**TOTAL \$27,427.39**

ESTIMATED COST OF 2005 PAVING PROGRAM

APPROVED BY:



ROBERT W. BRYSON  
 TRAFFIC & LIGHTING ENGINEER V

TRANSPORTATION SECTION  
 TRAFFIC & LIGHTING DESIGN UNIT  
 JOSEPH A. BONDOWSKI  
 January 14, 2005

AGREED UNIT PRICE (AUP) UNIT COST ANALYSIS  
 INFRASTRUCTURE SERVICES DIVISION - TRANSPORTATION  
 DEPARTMENT OF PUBLIC WORKS - CITY OF MILWAUKEE  
 STATE PROJECT I.D.#2090-10-91  
 W. SILVER SPRING DR. & N. 37TH ST.

COST ESTIMATE - TRAFFIC SIGNALS

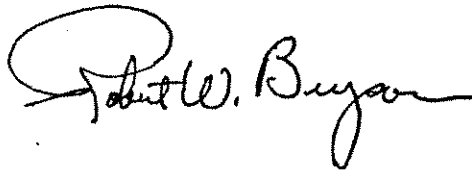
DRAWING # F-04-520-T

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL UNIT COST</u>
71034	DETECTOR 4-CHANNEL	EACH	1	\$631.89	\$631.89
71062L	312 SIG. HOUS. LED	EACH	4	\$591.90	\$2,367.60
71066L	COMBINATION DW-W 12" SIG. LED	EACH	8	\$456.76	\$3,654.08
71071L	38 SIG. HOUS. LED	EACH	8	\$508.85	\$4,070.80
71125	PUSH BUTTON	EACH	6	\$120.36	\$722.16
71156	LEAD IN CABLE (PROBE)	PER LF	620	\$1.92	\$1,190.40
71158	4 PR. #16 DSTP	PER LF	115	\$2.27	\$261.05
71170	9#14 LTP	PER LF	285	\$2.13	\$607.05
71171	12#14 LTP	PER LF	435	\$2.23	\$970.05
71172	17#14 LTP	PER LF	290	\$2.38	\$690.20
71173	20#14 LTP	PER LF	170	\$2.48	\$421.60
71197	SS 13'	EACH	9	\$850.74	\$7,656.66
90030P	INSTALL 2.5" PVC CONDUIT (HOLE HOG/BORE)	PER LF	255	\$5.98	\$1,524.90
90030Q	INSTALL 2.5" PVC CONDUIT (TRENCH)	PER LF	300	\$6.40	\$1,920.00
90005GQ	RECTANGULAR VAULT	EACH	1	\$232.79	\$232.79

**TOTAL \$26,921.23**

ESTIMATED COST OF 2005 PAVING PROGRAM

APPROVED BY:



ROBERT W. BRYSON  
 TRAFFIC & LIGHTING ENGINEER V

TRANSPORTATION SECTION  
 TRAFFIC & LIGHTING DESIGN UNIT  
 JOSEPH A. BONDOWSKI  
 January 14, 2005

AGREED UNIT PRICE (AUP) UNIT COST ANALYSIS  
 INFRASTRUCTURE SERVICES DIVISION - TRANSPORTATION  
 DEPARTMENT OF PUBLIC WORKS - CITY OF MILWAUKEE  
 STATE PROJECT I.D.#2090-10-91  
 N. HOPKINS ST., W. SILVER SPRING DR. & N. 43RD ST.

**COST ESTIMATE - TRAFFIC SIGNALS**

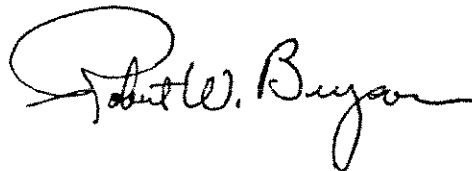
DRAWING # F-05-500-T

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>TOTAL UNIT COST</u>
71052B	303-8 CONTROLLER WITHOUT FOUNDATION	EACH	1	\$8,518.06	\$8,518.06
71034	DETECTOR 4-CHANNEL	EACH	1	\$631.89	\$631.89
71062L	312 SIG. HOUS. LED	EACH	6	\$591.90	\$3,551.40
71066L	COMBINATION DW-W 12" SIG. LED	EACH	6	\$456.76	\$2,740.56
71071L	38 SIG. HOUS. LED	EACH	8	\$508.85	\$4,070.80
71125	PUSH BUTTON	EACH	3	\$120.36	\$361.08
71156	LEAD IN CABLE (PROBE)	PER LF	130	\$1.92	\$249.60
71170	9#14 LTP	PER LF	60	\$2.13	\$127.80
71171	12#14 LTP	PER LF	120	\$2.23	\$267.60
71172	17#14 LTP	PER LF	515	\$2.38	\$1,225.70
71173	20#14 LTP	PER LF	95	\$2.48	\$235.60
71197	SS 13'	EACH	6	\$850.74	\$5,104.44
90030B	INSTALL 3#4/1#8 LTP UNDERGROUND CABLE	PER LF	40	\$3.26	\$130.40
90030P	INSTALL 2.5" PVC CONDUIT (HOLE HOG/BORE)	PER LF	250	\$5.98	\$1,495.00
90030Q	INSTALL 2.5" PVC CONDUIT (TRENCH)	PER LF	160	\$6.40	\$1,024.00
90005GQ	RECTANGULAR VAULT	EACH	3	\$232.79	\$698.37

**TOTAL \$30,432.30**

ESTIMATED COST OF 2005 PAVING PROGRAM

APPROVED BY:



ROBERT W. BRYSON  
 TRAFFIC & LIGHTING ENGINEER V

TRANSPORTATION SECTION  
 TRAFFIC & LIGHTING DESIGN UNIT  
 JOSEPH A. BONDOWSKI  
 January 14, 2005