BILL OF MATERIALS

ITEM	UNIT	QTY
PAD MOUNTED CONTROLLER & CABINET	EACH	2
TRAFFIC SIGNAL HEAD (SEE CHART A) W/ MOUNTING HARDWARE	EACH	20
PEDESTRIAN SIGNAL HEAD (16" COMB.) W/ MOUNTING HARDWARE	EACH	8
TRAFFIC SIGNAL POLE – STEEL	EACH	6
PEDESTRIAN SIGNAL POLE – STEEL	EACH	6
CONCRETE CONTROLLER PAD	EACH	2
CONCRETE FOOTING – POLE	EACH	12
CONDUIT ELBOW 90°	EACH	As Req'd
CONDUIT ELBOW 90° 3"	EACH	As Req'd
BACK PLATE 5" – 3 SECTION	EACH	12
BACK PLATE 5" – 5 SECTION	EACH	2
TRAFFIC MANHOLE	EACH	8
GROUND ROD & CLAMP	EACH	6
CONDUIT CLAMP	EACH	As Req'd
TRAFFIC SIGNAL LAMP RED LED KIT	EACH	20
TRAFFIC SIGNAL LAMP YELLOW LED KIT	EACH	20
TRAFFIC SIGNAL LAMP GREEN LED KIT	EACH	20
TRAFFIC SIGNAL LAMP GREEN ARROW LED KIT	EACH	2
TRAFFIC SIGNAL LAMP YELLOW ARROW LED KIT	EACH	2
TRAFFIC SIGNAL LAMP LED (16" COMBINATION)	EACH	8
CLASS 4 – WOOD POLE	EACH	0
ENTRANCE HEAD	EACH	XX
CIRCUIT BREAKER & BOX	EACH	XX
GUY WIRE GUARD	EACH	As Req'd
GUY WIRE CLAMP	EACH	As Req'd
THIMBLE EYE ANCHOR ROD	EACH	As Req'd
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	4
LEAD–IN WIRE No. 4 A.W.G. 1/C (TYPE THNN)	LIN. FT.	--
STANDARD 1/C #8 (GROUND)	LIN. FT.	725.3
MULTI–CONDUCTOR CABLE No. 16 A.W.G. 3/C (V3)	LIN. FT.	815.2
MULTI–CONDUCTOR CABLE No. 14 A.W.G. 7/C	LIN. FT.	1,939.1
VIDEO CABLE 75 OHM COAXIAL (BELDON 8281) (CX)	LIN. FT.	815.2
CONDUIT 1.5" RGC	LIN. FT.	50.6
CONDUIT 2" RGC	LIN. FT.	182.4
CONDUIT 3" RGC	LIN. FT.	815.1
CAMERA HOUSING	EACH	6
VIDEO DETECTION CAMERA & MOUNTING HARDWARE (RISER BRACKET)	EACH	6
VIDEO DETECTION PROCESSOR UNIT	EACH	1
VIDEO MONITOR	EACH	1
TETHER WIRE 1/4" ASTM A475 SIEMENS–MARTIN GRADE MIN.	LIN. FT.	As Req'd
STREET NAME SIGNS W/MOUNTING HARDWARE (D–3)	EACH	2
NO LEFT TURN SYMBOL SIGN W/MOOUNTING HARDWARE R3–2	EACH	2
LEFT TURN YIELD ON GREEN W/MOUNTING HARDWARE (R10–12)	EACH	2

SIGNAL INVENTORY

NO. WAYS	NO. SECTIONS (Per Face)	SIGNAL FACE ARRANGEMENT	MOUNTING TYPE	QTY
1	3	A	TYPE I	12
1	5	I	TYPE I	2
1	3	A	TYPE III	6
1	1	K (SYMB)	TYPE II	8

TRAFFIC SIGNAL POLES

STATION	DIST.	SIDE	ARM LENGTH	NO. OF SIGNALS ON ARM	SIGNAL SPACING	TYPE
Sta. 171+95.00	36.50'	Lt.	38.0'	3	14.0'-11.0'-11.5'	STD
Sta. 172+71.98	47.00'	Rt.	25.0'	2	11.0'-12.0'	STD
Sta. 173+00.00	36.50'	Rt.	26.0'	2	14.0'-11.0'	STD
Sta. 177+60.00	36.50'	Lt.	26.0'	2	14.0'-11.0'	STD
Sta. 177+60.00	36.50'	Lt.	25.0'	2	11.0'-12.0'	STD
Sta. 178+65.00	36.50'	Rt.	38.0'	3	14.0'-11.0'-11.5'	STD

PEDESTRIAN SIGNAL POLES

STATION	DIST. - SIDE
Sta. 172+16.02	46.20' Rt.
Sta. 172+25.39	46.28' Lt.
Sta. 172+85.12	46.20' Lt.
Sta. 177+72.00	46.20' Rt.
Sta. 178+33.34	46.20' Rt.
Sta. 178+37.30	46.20' Lt.

CONDUIT

CONDUIT SIZE	TRENCHED	PUSHED
1.5" RGC	50.6'	-
2" RGC	182.4'	-
3" RGC	815.1'	-

TRAFFIC MANHOLE

STATION	DIST. - SIDE
Sta. 172+05.00	36.50' Lt.
Sta. 172+06.02	36.50' Rt.
Sta. 172+90.00	36.50' Rt.
Sta. 172+95.65	36.50' Lt.
Sta. 177+64.16	36.50' Rt.
Sta. 177+70.00	36.50' Lt.
Sta. 178+50.00	36.50' Lt.
Sta. 178+55.00	36.50' Rt.

GENERAL NOTES

1. The Contractor shall be responsible for furnishing and installing the controller, cabinet, concrete base, and for all equipment necessary for the complete and satisfactory operation of the traffic signal, whether said equipment is specifically mentioned or not.
2. Lengths given are to the centerline of pole/box and do not include lengths for elbows and risers.
3. Signal heads, pedestrian signals, traffic signs, etc. shall include all brackets, hardware, & other incidentals necessary for installation.
4. See City of Wichita Standard Specifications for additional wiring notes.
5. Quantities are for Information Only.

SPECIAL FINISH FOR TRAFFIC SIGNAL EQUIPMENT:

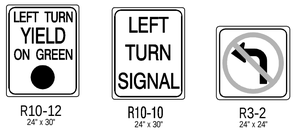
The brackets, sign blank backs, signal backs and other exposed surfaces shall be shop painted with an aerosol lacquer cellulose ester to match the traffic signal pole color. The contractor shall submit two copies of the proposed coating system to the City for approval to application.

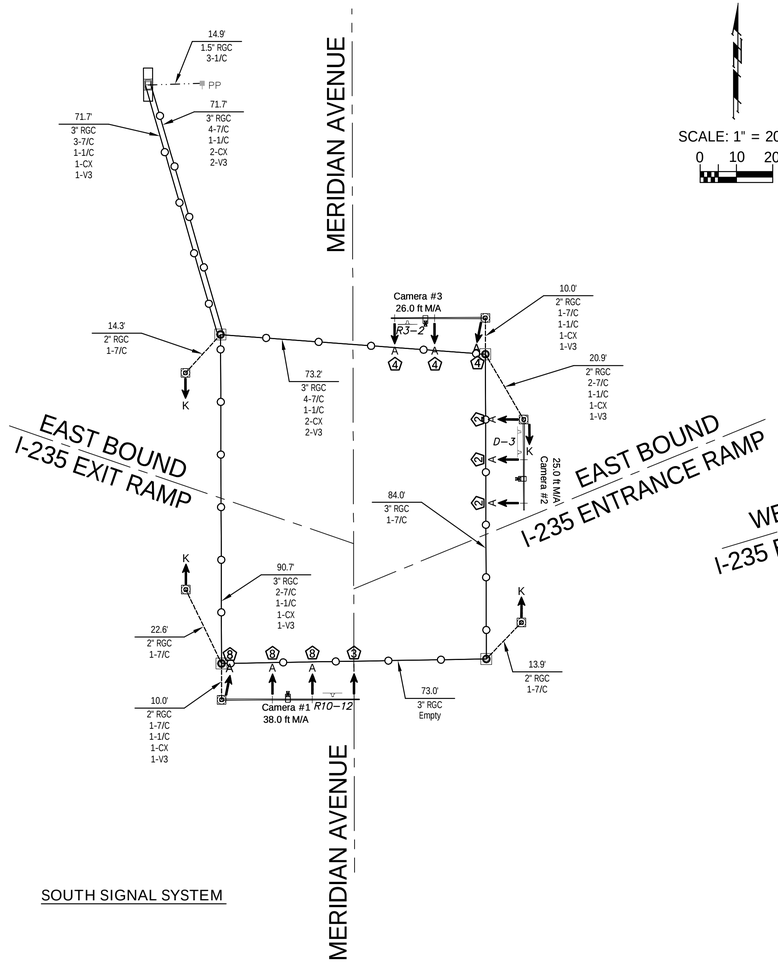
TRAFFIC SIGNAL POLE, PEDESTAL, & CONTROLLER CABINET EXTERIOR COATING:

In addition to being galvanized, all exterior surfaces shall be coated with a zinc rich epoxy powder to a minimum dry film thickness of 2.0 mils. The coating shall be electrostatically applied and partially cured in a gas fired convection oven by heating the steel substrate to a minimum of 250 degrees Fahrenheit.

The powder primed surface shall be coated with an intermediate coat of polyester powder to a minimum dry film thickness of 2.0 mils. The coating shall be electrostatically applied and cured by heating the steel substrate in a convection oven to minimum of 350 degrees and a maximum of 400 degrees Fahrenheit.

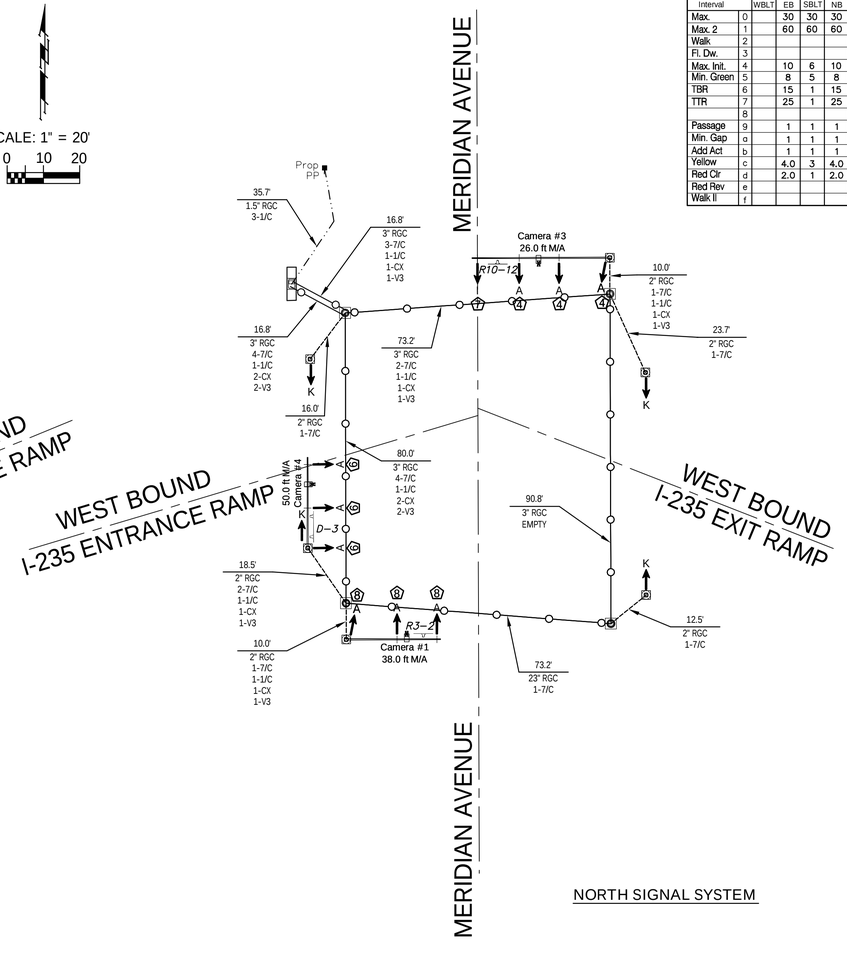
The intermediate coat shall be top coated with one coat of high-build acrylic polyurethane enamel to a minimum dry film thickness of 2.0 mils. The coating shall be electrostatically applied and cured by heating the substrate in a convection oven to a minimum of 225 degrees Fahrenheit. The final top coating color shall be BLACK.





SOUTH SIGNAL SYSTEM

SCALE: 1" = 20'
0 10 20



NORTH SIGNAL SYSTEM

TYPE 2070 CONTROLLER SETTINGS - NORTH SIGNAL SYSTEM

		WAPITI PROGRAM										Nominal Display									
		Phase								Time Clock		Features									
		1	2	3	4	5	6	7	8			Phase									
Interval		WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB			1	2	3	4	5	6	7	8		
Max.	0				30		30	30	30	0	Year	Veh Recall				X				X
Max. 2	1				60		60	60	60	1	Month	Ped Recall									
Walk	2									2	Day/Month	Red Lock									
Fl. Dw.	3									3	Day/Week	Yel Lock									
Max. Init.	4				10		10	6	10	4	Hour	0 Permit				X		X	X	X	
Min. Green	5				8		8	5	8	5	Minute	Ped Phases									
TBR	6				15		15	1	15	6	Second	Lead Phases	X		X		X		X		
TTR	7				25		25	1	25	7		Dbl Entry									
	8									8		Sequential									
Passage	9				1		1	1	1	9		Start Up Yel					X				
Min. Gap	o				1		1	1	1	o		Overlap A									
Add Act	b				1		1	1	1	b		Overlap B									
Yellow	c				4.0		4.0	3	4.0	c		Overlap C									
Red Clr	d				2.0		2.0	1	2.0	d		Overlap D									
Red Rev	e									e		Exclusive									
Walk II	f									f		Sim Gap									

TYPE 170 CONTROLLER SETTINGS - SOUTH SIGNAL SYSTEM

		WAPITI PROGRAM										Nominal Display									
		Phase								Time Clock		Features									
		1	2	3	4	5	6	7	8			Phase									
Interval		WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB			1	2	3	4	5	6	7	8		
Max.	0		30	30	30				30	0	Year	Veh Recall				X				X	
Max. 2	1		60	60	60				60	1	Month	Ped Recall									
Walk	2									2	Day/Month	Red Lock									
Fl. Dw.	3									3	Day/Week	Yel Lock									
Max. Init.	4		10	6	10				10	4	Hour	0 Permit		X	X	X				X	
Min. Green	5		8	5	8				8	5	Minute	Ped Phases									
TBR	6		15	1	15				15	6	Second	Lead Phases	X		X		X		X		
TTR	7		25	1	25				25	7		Dbl Entry									
	8									8		Sequential									
Passage	9		1	1	1				1	9		Start Up Yel		X							
Min. Gap	o		1	1	1				1	o		Overlap A									
Add Act	b		1	1	1				1	b		Overlap B									
Yellow	c		4.0	3	4.0				4.0	c		Overlap C									
Red Clr	d		2.0	1	2.0				2.0	d		Overlap D									
Red Rev	e									e		Exclusive									
Walk II	f									f		Sim Gap									

3" RIGID CONDUIT
2" RIGID CONDUIT
1.5" RIGID CONDUIT
VEHICLE DETECTION CAMERA (VDC)

EQUIPMENT SPECIFICATIONS
2070 CONTROLLER

A. Controller Units: The 2070L controllers supplied shall meet the requirements outlined in CalTrans TEES 2002 (latest revision), and the following requirements:

1. The 2070L controller shall have a 19" EIA rack mountable chassis (mated to the 170 cabinet).
2. 2070-1B CPU module with RJ-45 Ethernet port.
3. 2070-2A C1 field I/O module for compatibility with CalTrans style C1 connector.
4. 2070-3B 8X40 front panel with LCD display.
5. 2070-4A 10 amp power supply.
6. 2070-7A asynchronous serial communications module (RS-232).
7. Any unused slot position shall have a cover plate.

B. Conflict Monitors: The Conflict Monitors supplied shall be Model 2010 ECL conflict monitors with Ethernet capabilities.

C. 1 - Loop-back cable for 2070-2A Field I/O (Type 170, 104 pin and 37 pin connector.

D. 1 - Loop-back cable for 2070-7A Port

Drawing File: E:\eng\Meridian, 47th to 31st\Land\dwg\Base.dwg [Signal] — September 2009

Design: TPV
Drawn: TPV
Approved: TPV
Scale: NOTED

Project No. 05-10-E396 CAPITAL IMPROVEMENT PROJECT

MERIDIAN AVENUE & I-235 RAMP
WIRING PLAN
MERIDIAN AVENUE - 47TH STREET SOUTH to 31ST STREET SOUTH

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE