BILL OF MATERIALS

ITEM	UNIT	QTY
PAD MOUNTED CONTROLLER & CABINET	EACH	1
TRAFFIC SIGNAL HEAD (SEE CHART A) W/ MOUNTING HARDWARE	EACH	10
PEDESTRIAN SIGNAL HEAD (12" COMB.) W/ MOUNTING HARDWARE	EACH	0
TRAFFIC SIGNAL POLE (SEE CHART B) STEEL	EACH	3
CONCRETE CONTROLLER PAD	EACH	1
CONCRETE FOOTING – POLE	EACH	3
CONDUIT ELBOW 90°	EACH	As Req'd
CONDUIT ELBOW 90° 3"	EACH	As Req'd
BACK PLATE 5" – 3 SECTION	EACH	8
BACK PLATE 5" – 5 SECTION	EACH	0
TRAFFIC MANHOLE	EACH	5
GROUND ROD & CLAMP	EACH	As Req'd
CONDUIT CLAMP	EACH	As Req'd
TRAFFIC SIGNAL LAMP RED LED KIT	EACH	10
TRAFFIC SIGNAL LAMP YELLOW LED KIT	EACH	8
TRAFFIC SIGNAL LAMP GREEN LED KIT	EACH	8
TRAFFIC SIGNAL LAMP GREEN ARROW LED KIT	EACH	2
TRAFFIC SIGNAL LAMP YELLOW ARROW LED KIT	EACH	2
TRAFFIC SIGNAL LAMP LED (12" COMBINATION)	EACH	0
CLASS 4 – WOOD POLE	EACH	0
ENTRANCE HEAD	EACH	1
CIRCUIT BREAKER & BOX	EACH	1
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	0
LEAD–IN WIRE No. 4 A.W.G. 1/C (TYPE THNN)	LIN. FT.	---
STANDARD 1/C #8 (GROUND)	LIN. FT.	300
MULTI–CONDUCTOR CABLE No. 16 A.W.G. 3/C (V3)	LIN. FT.	530
MULTI–CONDUCTOR CABLE No. 14 A.W.G. 7/C	LIN. FT.	530
VIDEO CABLE 75 OHM COAXIAL (BELDON 8281) (CX)	LIN. FT.	530
CONDUIT 2" RGC – WESTAR	LIN. FT.	---
CONDUIT 1.5" RGC	LIN. FT.	0
CONDUIT 2" RGC	LIN. FT.	0
CONDUIT 3" RGC	LIN. FT.	548
CAMERA HOUSING	EACH	3
VIDEO DETECTION CAMERA & MOUNTING HARDWARE (RISER BRACKET)	EACH	3
VIDEO DETECTION PROCESSOR UNIT	EACH	1
VIDEO MONITOR	EACH	1
PC906 YAGI ANTENNA	EACH	1
S8963 OMNI ANTENNA	EACH	0
MODEL 5100 RACK MOUNT	EACH	1
LIGHTNING ARRESTER	EACH	1
LMR 400 ANTENNA CABLE (On Pole 6' Above MA to Cabinet via UG conduit)	EACH	52'
TETHER WIRE 1/4" ASTM A475 SIEMENS–MARTIN GRADE MIN.	LIN. FT.	As Req'd
STREET NAME SIGNS W/MOUNTING HARDWARE (0–3)	EACH	0
LEFT TURN SIGNAL SIGN W/MOUNTING HARDWARE (R10–10)	EACH	1
NO LEFT TURN SIGN W/MOUNTING HARDWARE (R3–2)	EACH	1

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 traffic signal controller cabinet, 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 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.

QUANTITIES ARE FOR INFORMATION ONLY. The Contractor shall supply and install all necessary materials and equipment for the complete installation and operation of the traffic signal system whether specifically mentioned or not.

TYPE 2070 CONTROLLER SETTINGS

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

CHART 'A' – SIGNAL INVENTORY

NO. WAYS	NO. SECTIONS (Per Face)	SIGNAL FACE ARRANGEMENT	MOUNTING TYPE	QTY
1	3	A	TYPE I	6
1	3	C	TYPE I	2
1	3	A	TYPE III	2

CHART 'B' – TRAFFIC SIGNAL POLES

STATION	DIST.	SIDE	ARM LENGTH	NO. OF SIGNALS ON ARM	SIGNAL SPACING	TYPE
Sta. 15+88.37	56.05'	Lt.	36.00'	2	23.50'-12.00'	STD
Sta. 16+40.33	78.20'	Lt.	40.00'	2	28.00'-11.00'	STD
Sta. 17+49.31	58.08'	Rt.	61.00'	4	24.50'-12.00'-12.00'-12.00'	STD

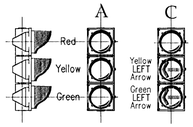
CHART 'C' – CONDUIT

CONDUIT SIZE	TRENCHED	PUSHED
2" PVC - Westar	-	-
1.5" RGC	-	-
2" RGC	208'	-
3" RGC	-	548'
1" RGC		-

TRAFFIC MANHOLE SUMMARY

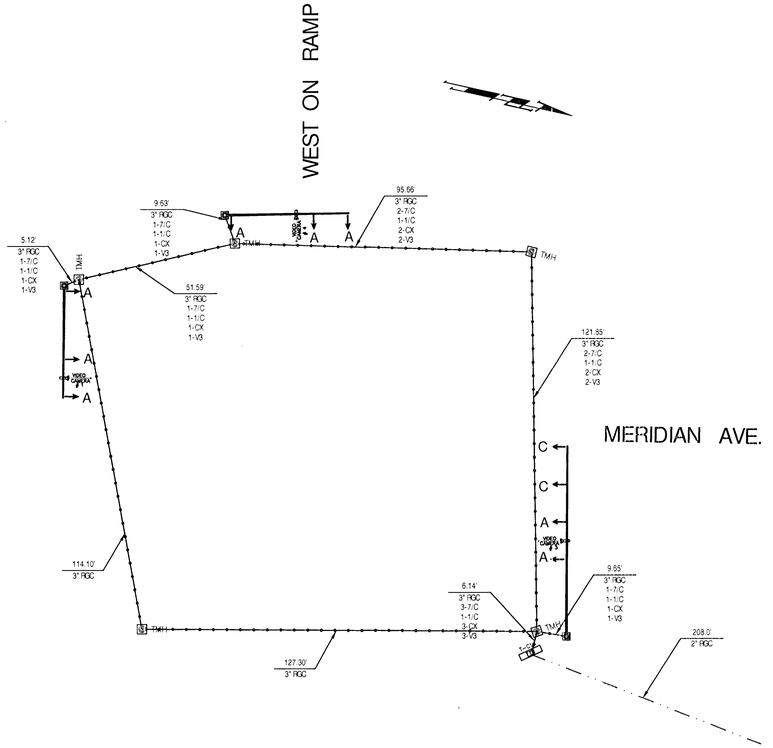
STATION	DIST. - SIDE
Sta. 15+ 93.07	56.02' Lt.
Sta. 16+ 42.65	66.29' Lt.
Sta. 17+ 39.09	65.48' Lt.
Sta. 17+ 41.35	56.22' Rt.

TYPICAL SIGNAL HEADS



R10-10
24" x 30"

R3-2
24" x 24"



3" Rigid Conduit

2" Rigid Conduit

1 1/4" Rigid Conduit

1" Rigid Conduit (Traffic Interconnect)

TYPE 2070 CONTROLLER SPECIFICATIONS

A. Controller Unit: The 2070L controller 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 chasis (mated to the 107 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 Monitor supplied shall be 2010 ECL conflict monitors.
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:\Engr\I235 and meridian signalation\Land\baseLayout1.dwg — December, 2007

Designs	TCA
Drawn	TCA
Approved	ENGINEER
Scale	NOTED

Project No. 07-02-E7-58 — CAPITAL IMPROVEMENT PROJECT

I-235 & MERIDIAN SIGNALIZATION
MERIDIAN WEST ON RAMP
PROJECT DESCRIPTION

Baughman Company, P.A.
315 Ellis St. Wichita, KS 67211 P 316.263.7271 F 316.263.2149
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

SHEET 5 OF 8