

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.	350
MULTI-CONDUCTOR CABLE No. 16 A.W.G. 3/C (V3)	LIN. FT.	618
MULTI-CONDUCTOR CABLE No. 14 A.W.G. 7/C	LIN. FT.	618
VIDEO CABLE 75 OHM COAXIAL (BELDON 8281) (CX)	LIN. FT.	618
CONDUIT 2" RGC - WESTAR	LIN. FT.	--
CONDUIT 1.5" RGC	LIN. FT.	0
CONDUIT 2" RGC	LIN. FT.	0
CONDUIT 3" RGC	LIN. FT.	567
CAMERA HOUSING	EACH	3
VIDEO DETECTION CAMERA & MOUNTING HARDWARE (RISER BRACKET)	EACH	3
VIDEO DETECTION PROCESSOR UNIT	EACH	1
PC906 YAGI ANTENNA	EACH	0
S8963 OMNI ANTENNA	EACH	1
MODEL 5100 RACK MOUNT	EACH	1
LIGHTNING ARRESTER	EACH	1
LMR 400 ANTENNA CABLE	EACH	50'
(On Pole 6" Above MA to Cabinet via UG conduit)		
TETHER WIRE 1/4" ASTM A475 SIEMENS-MARTIN GRADE MIN.	LIN. FT.	As Req'd
STREET NAME SIGNS W/MOUNTING HARDWARE (D-3)	EACH	0
LEFT TURN SIGNAL SIGN W/MOUNTING HARDWARE (R10-10)	EACH	1
NO LEFT TURN SIGNAL W/MOUNTING HARDWARE (R3-2)	EACH	1

NOTE: Install wireless interconnect at the intersection of 37th and Womer. Cost to be paid as "Traffic Signal Interconnect @ 37th & Womer"

MATERIALS REQ'D @ 37th & WOMER		
ITEM	UNIT	QTY
PC906 YAGI ANTENNA	EACH	1
S8963 OMNI ANTENNA	EACH	0
MODEL 5100 RACK MOUNT	EACH	1
LIGHTNING ARRESTER	EACH	1
LMR 400 ANTENNA CABLE	EACH	125'

**GENERAL NOTES**

- 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.
- Lengths given are to the centerline of pole/box and do not include lengths for elbows and risers.
- Signal heads, pedestrian signals, traffic signs, etc. shall include all brackets, hardware, & other incidentals necessary for installation.
- See City of Wichita Standard Specifications for additional wiring notes.
- 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															
Interval	Phase								Time Clock	Features											
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8				
Max.	0								0 Year	Veh Recall											
Max. 2	1								1 Month	Red Recall			X								X
Walk	2								2 Day/Month	Red Lock											
Fl. Dv.	3								3 Day/Week	Yel Lock											
Max. Init.	4								4 Hour	0 Permit				X	X	X					
Min. Green	5								5 Minute	Pad 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 Cir	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. 1+21.48	56.57'	Lt.	63.0'	4	26.50'-12.00'-12.00'-12.00'	STD
Sta. 2+35.36	75.11'	Rt.	40.0'	2	28.00'-11.00'	STD
Sta. 2+89.96	54.36'	Rt.	35.0'	2	22.00'-12.00'	STD

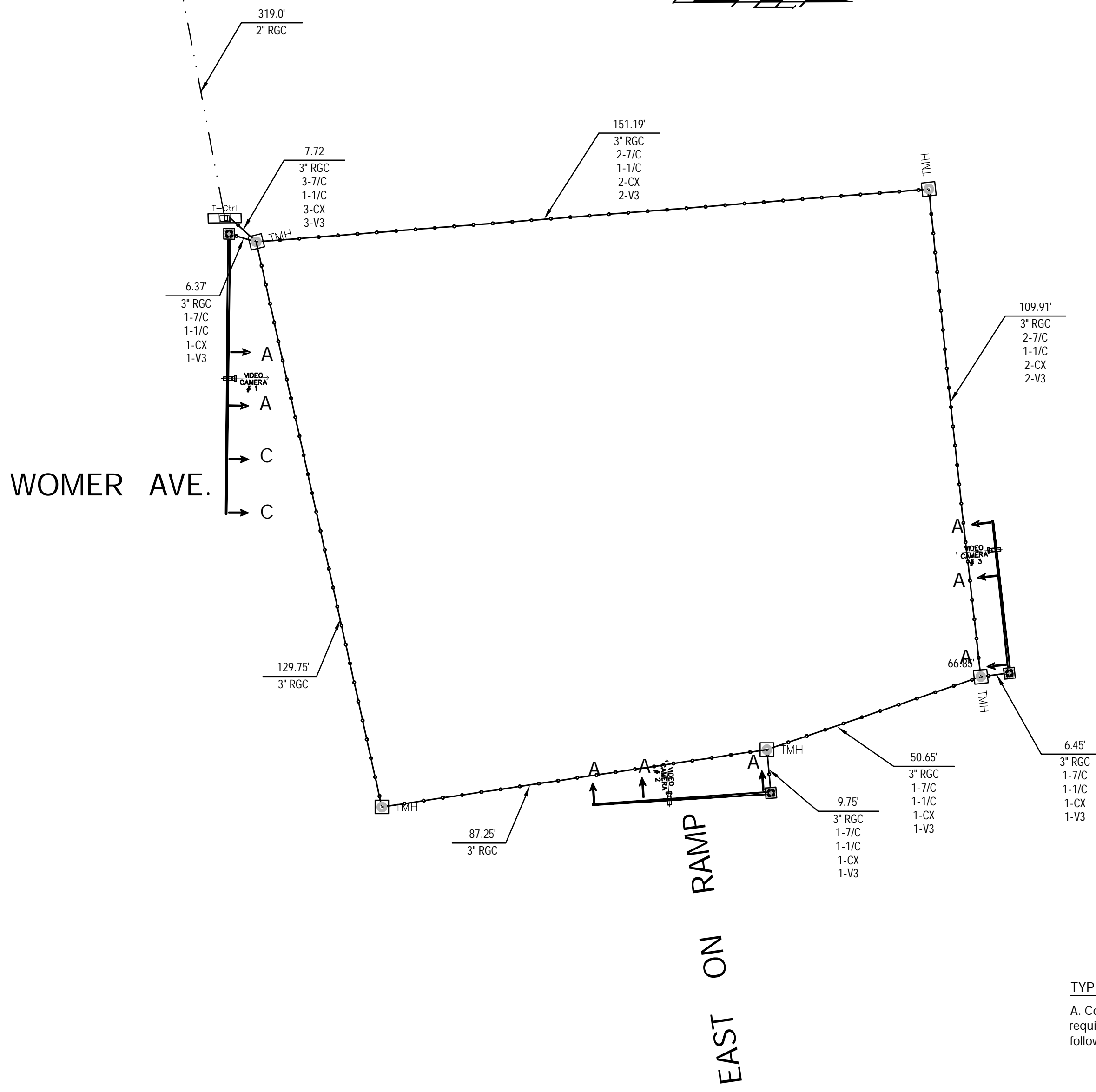
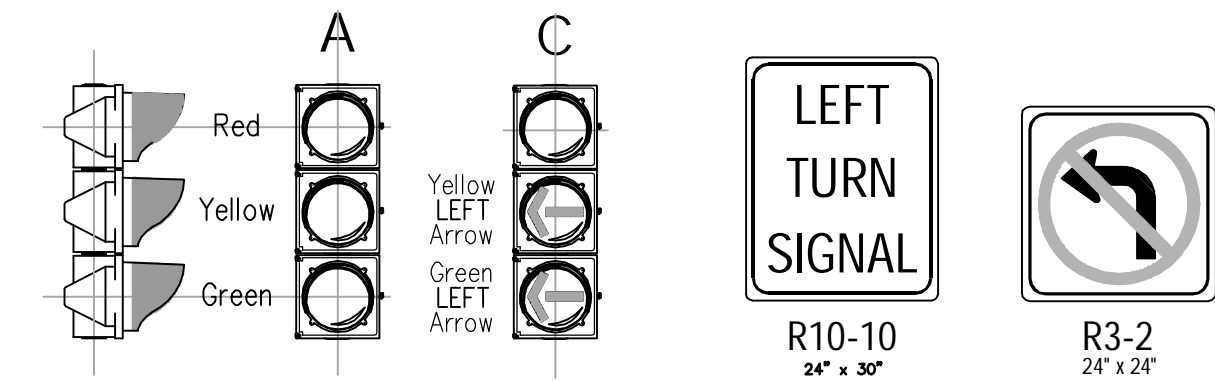
CHART 'C' - CONDUIT			
CONDUIT SIZE	TRENCHED	PUSHED	
2" PVC - Westar	-	-	
1.5" RGC	-	-	
2" RGC	319'	-	
3" RGC	-	567'	
1" RGC	-	-	

TRAFFIC MANHOLE SUMMARY (3' I.D.)		
STATION	DIST. - SIDE	
Sta. 1+29.36	55.40' Lt.	
Sta. 2+33.29	62.84' Rt.	
Sta. 2+85.08	54.90' Rt.	
Sta. 2+90.85	55.41' Lt.	

JUNCTION BOX SUMMARY (2' I.D.)		
STATION	DIST. - SIDE	
*Sta. 5+54.05	62.03' Lt.	
*Sta. 8+95.79	60.85' Lt.	
*Sta. 13+20.67	59.84' Lt.	

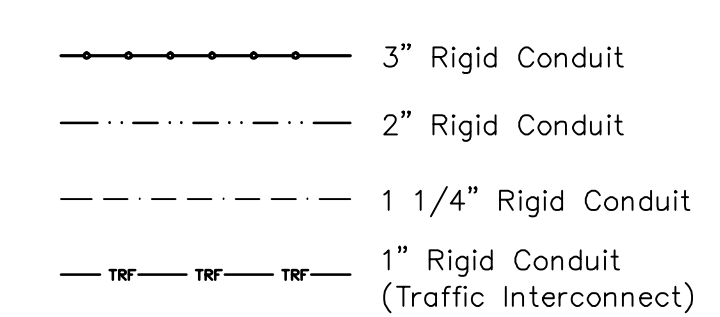
\*For Hard Wire Traffic Interconnect

**TYPICAL SIGNAL HEADS**



**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:
- The 2070L controller shall have a 19" EIA rack mountable chassis (mated to the 107 cabinet).
  - 2070-1B CPU module with RJ-45 Ethernet port.
  - 2070-2A C1 field I/O module for compatibility with CalTrans style C1 connector.
  - 2070-3B 8X40 front panel with LCD display.
  - 2070-4A 10 amp power supply.
  - 2070-7A asynchronous serial communications module (RS-232).
  - 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.



Design: TCA  
 Drawn: TCA  
 Approved: ENGINEER  
 Scale: NOTED

Project No. 0702E758 CAPITAL IMPROVEMENT PROJECT  
**I-235 & MERIDIAN SIGNALIZATION**  
**WOMER & EAST ON RAMP**  
 PROJECT DESCRIPTION

**Baughman Company, P.A.**  
 315 Ellis St. Wichita, KS 67211 P 316-262-7171 F 316-262-0149  
 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

December, 2007  
 SHEET 3 OF 8