BILL OF MATERIALS

ITEM	UNIT	EST. QUANTITIES (*)
Model 336 Controller	Each	1
Controller Cabinet	Each	1
Concrete Base for Controller	Each	–
Traffic Signal w/ Mast Arm (See Chart B)	Each	3
Traffic Signal Pedestal	Each	1
Pedestrian Signal Pole	Each	1
Concrete Base for Signal Poles	Each	1
Traffic Signal Head (Type A) w/ Backplate & Brkt	Each	8
Traffic Signal Head (Type C) w/ Backplate & Brkt	Each	–
Traffic Signal Head (Type J)	Each	–
Pedestrian Indication (16"X18") W/ Countdown (Type K)	Each	1
Traffic Signal Lamp (Red LED Kit)	Each	8
Traffic Signal Lamp (Yellow LED Kit)	Each	8
Traffic Signal Lamp (Green LED Kit)	Each	8
Traffic Signal Lamp (Red Arrow LED Kit)	Each	–
Traffic Signal Lamp (Yellow Arrow LED Kit)	Each	–
Traffic Signal Lamp (Green Arrow LED Kit)	Each	–
R10-10 (Left Turn Signal) w/ Mtg. Brackets	Each	–
D3 Assy. (Street Name Size) w. Mtg. Brackets	Each	3
Pedestrian Puchbutton w/ Sign	Each	9
Ground Rod & Clamp	Each	5
Service Box	Each	1
3" RGC Conduit	L.F.	36
2" RGC Conduit	L.F.	–
1 1/2" RGC Conduit	L.F.	–
2" PVC (Street Light Conduit)	L.F.	36
Video Detection Camera and Mounting Hardware	Each	3
Video Detection Processor	Each	1
Camera Housing	Each	3
Video Power Cable No. 16 AWG 3/C (V3)	L.F.	171
Video Cable 75 OHM Coaxial (Beldon 8281)(CX)	L.F.	171
TV Monitor	Each	–
Camera Charged Coupling Device	Each	–
Multi-Conductor Cable 7C #14 AWG	L.F.	376
Ground Wire 1C (THHN #8 AWG)	L.F.	376
Power Supply Wire (THHN #6 AWG)	L.F.	–

(*) For Information Only

GENERAL NOTES

1. The Contractor shall be responsible for furnishing and installing the controller, cabinet, concrete base, and all other 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 poles/boxes and do not include lengths for elbows and risers.
3. Signal heads, pedestrian signals, traffic signals, & etc. shall INCLUDE all brackets, hardware, & other incidentals necessary for installation.
4. See City of Wichita Standard Specifications for additional wiring notes.

TYPE 2070 CONTROLLER SPECIFICATIONS

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

1. The 2070L controllers 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 Monitors supplied shall be 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.

CHART 'A' - SIGNAL INVENTORY

NO. WAYS	NO. SECTIONS (Per Face)	SIGNAL FACE ARRANGEMENT	MOUNTING TYPE	QTY
1	3	A	TYPE I	4
1	3	A	TYPE III	4
1	2	K (SYMB)	TYPE II	-

CHART 'B' - TRAFFIC SIGNAL POLES

STATION		DIST.	SIDE	ARM LENGTH	NO. OF SIGNALS ON ARM	SIGNAL SPACING	TYPE*
Sta 8+73.06	William	20.8'	Lt.	25.0'	1	23.0'	JU
Sta 8+81.41	William	37.6'	Rt.	40.0'	1	23.0' - 11.0'	JU
Sta 9+56.06	William	33.9'	Rt.	-	-	-	-
Sta 9+70.44	William	3.6'	Rt.	15.0'	1	12.5'	STD

* Signal Poles and Arms supplied by the City of Wichita.

CHART 'C' -PEDESTRIAN SIGNAL POLE SUMMARY

STATION	DISTANCE	SIDE
Sta 9+47.45	38.7'	Lt.

CHART 'D' - CONDUIT

CONDUIT SIZE	TRENCHED	PUSHED
1.5" RGC	-	-
2" PVC	7.59	-
2" PVC	-	28.25
3" RGC	7.59	-
3" RGC	-	28.25

CHART 'E' -TRAFFIC MANHOLE SUMMARY

STATION	DISTANCE	SIDE
Sta 9+62.82	3.0'	Rt.

CHART 'F' - STREET NAME SIGN SUMMARY

LEGEND	TYPE	QTY	UNITS	SIZE	ADDRESS
William	D-3	1	EA	2.5' X 5.0'	300 E
Topeka	D-3	1	EA	2.5' X 5.0'	100 S
Topeka	D-3	1	EA	2.5' X 5.0'	200 S

CHART 'G' - MAST ARM REPLACEMENT SUMMARY

STATION	DIST.	SIDE	ARM LENGTH	NO. OF SIGNALS ON ARM	SIGNAL SPACING	DIRECTION

SPECIAL FINISH FOR TRAFFIC SIGNAL EQUIPMENT:

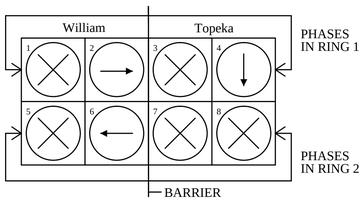
The traffic signal controller cabinet, brackets, sign blank backs, signal backs and other exposed surfaces shall be shop painted with an aerosol lacquer cellulose ester to match the traffic signal pole color. The Contractor shall submit two copies of the proposed coating system to the City for approval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

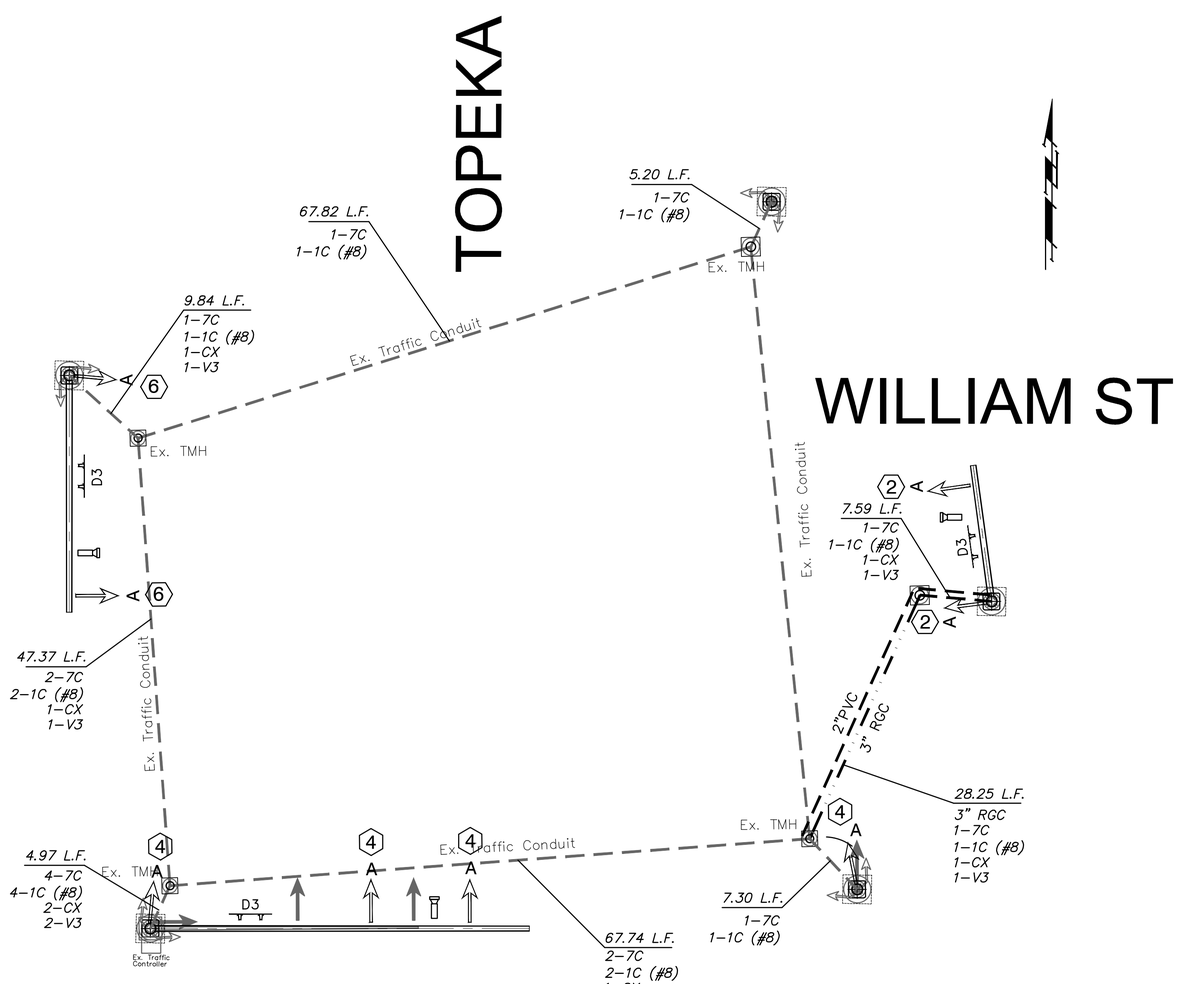
TRAFFIC SIGNAL POLE EXTERIOR COATING:

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° 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 a minimum of 350° Fahrenheit and a maximum of 400° Fahrenheit.

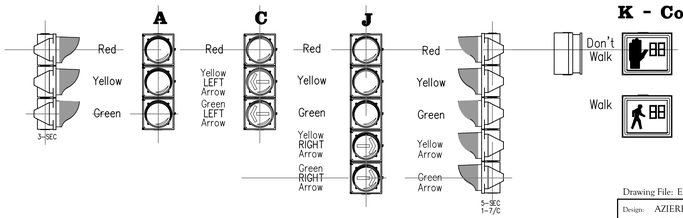
The intermediate coat shall be top coated with one coat of high-build acrylic polyurethane enamel to a minimum dry film thickness of 2.0 mils. The coating shall be electrostatically applied and cured by heating the the steel substrate in a convection oven to a minimum of 225° Fahrenheit. The final top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





* Install video detection and pedestrian pushbuttons (2) on each signal pole.

TYPICAL TRAFFIC SIGNAL HEADS



K - Combination

Drawing File: E:\Projects\William Signalization — JULY, 2013

Design:	AZIERE
Drawn:	AZIERE
Approved:	AZIERE
Scale:	NONE

Project No. 12-10-E822 CAPITAL IMPROVEMENT PROJECT

Topeka Wiring Diagram

William Street

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

SHEET 7 OF 10