

TRAFFIC SIGNAL HEADS		SUMMARY OF TRAFFIC SIGNAL HEADS						
A	C	H	K	SIGNAL FACE NUMBER	SIGNAL FACE ARRANGEMENT	NO. SECTIONS (PER FACE)	SIGNAL MOUNTING TYPE	QUANTITY
				3,7	H	5	MAST ARM W/BACKPLATE	2
				4,6,8	A	3	SIDE-OF-POLE	3
				2,8	K	1	SIDE-OF-POLE	4
TOTAL								16

NOTE: ALL LENSES ARE 12" L.E.D. UNLESS OTHERWISE NOTED.

TRAFFIC SIGNAL POLE SUMMARY													
POLE NO.	POLE HEIGHT	ARM HEIGHT	ARM LENGTH	NO. OF SIGNALS ON ARM	BRACKET TYPE	X1	X2	X3	X4	NO. OF SIGNALS ON POLE	BRACKET TYPE	NO. OF PUSH BUTTONS ON POLE	LUMINAIRE MOUNTING HEIGHT
1	35'	19'	22'	1	I	20.5'	---	---	---	2	III	1	40'
2	20'	19'	36'	3	I	34.5'	26.5'	16.0'	---	1	III	---	---
3	20'	19'	60'	2	I	58.0'	46.0'	---	---	1	III	1	---
4	20'	19'	36'	3	I	35.0'	27.0'	16.0'	---	2	III	1	---
5	15'	---	---	---	---	---	---	---	---	1	III	1	---
6													
7													
8													
9													
10													
11													
12													

DETECTOR SUMMARY							
DETECTOR NO.	DETECTION ZONE	MODE	SIZE (LxW)	PHASE CALLED	PHASE EXTENDED	DELAY/STRETCH (SEC)	INITIAL SETTING (SEC)
1	6-01	Presence	20x6	6	6	D	8.0
2	7-01	Presence	60x6	7	7	D	5.0
2	4-01	Presence	60x6	4	4	---	---
2	4-02	Presence	60x6	4	4	D	8.0
2	4-03	Pulse	6x6	4	4	S	1.0
2	4-04	Pulse	6x6	4	4	S	1.0
3	2-01	Presence	60x6	2	2	D	5.0
3	2-02	Presence	60x6	2	2	D	8.0
3	2-03	Pulse	6x6	2	2	S	1.0
4	3-01	Presence	60x6	3	3	D	5.0
4	8-01	Presence	60x6	8	8	---	---
4	8-02	Presence	60x6	8	8	---	---
4	8-03	Presence	60x6	8	8	D	8.0
4	8-04	Pulse	6x6	8	8	S	1.0
4	8-05	Pulse	6x6	8	8	S	1.0

BILL OF MATERIALS		
ITEM	UNIT	QUANTITY
PAD MOUNTED CABINET	EACH	Ex.
SIGNAL CONTROLLER (2070)	EACH	CITY
CONFLICT MONITOR (MODEL 2010 ECLIP)	EACH	Ex.
BATTERY BACKUP SYSTEM	EACH	---
TRAFFIC SIGNAL HEAD W/MOUNTING HARDWARE	EACH	16
TRAFFIC SIGNAL POLE, STEEL (SEE POLE SUMMARY)	EACH	4
TRAFFIC SIGNAL PEDESTAL ALUM. (15')	EACH	1
TRAFFIC SIGNAL PEDESTAL (JOINT USE) ALUM. (35')	EACH	---
LUMINAIRE POLE W/15' ARM (SEE POLE SUMMARY)	EACH	---
CONCRETE CONTROLLER PAD	EACH	1
CONCRETE FOOTING - PEDESTAL (15')	EACH	1
CONCRETE FOOTING - PEDESTAL (35')	EACH	---
CONCRETE FOOTING - POLE	EACH	4
CONDUIT ELBOW 90° 2"	EACH	AS REQ'D
CONDUIT ELBOW 90° 3"	EACH	AS REQ'D
BACK PLATE 5" 3 SECTION (2" RETROREFLECTIVE)	EACH	7
BACK PLATE 5" 5 SECTION (2" RETROREFLECTIVE)	EACH	2
TERMINAL BLOCK	EACH	---
SERVICE BOX	EACH	8
JUNCTION BOX (PRE-FAB)	EACH	---
GROUND ROD & CLAMP	EACH	6
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	4
PEDESTRIAN INDICATIONS LED (16"x18" COMBINATION) (COUNTDOWN)	EACH	4
LED TRAFFIC SIGNAL LENS (12')	EACH	40
ENTRANCE HEAD	EACH	1
CIRCUIT BREAKER & BOX 50 AMP.	EACH	1
SURGE ARRESTOR - A.C.SERVICE	EACH	1
SURGE ARRESTOR - DETECTOR	EACH	---
6 PR. COMMUNICATION CABLE	LIN.FT.	---
DETECTOR LOOP WIRE NO.14 AWG 1/c	LIN.FT.	---
SHIELDED DETECTOR LEAD-IN NO.14 AWG 2/c	LIN.FT.	---
MULTI-CONDUCTOR CABLE NO.14 AWG 15/c	LIN.FT.	---
MULTI-CONDUCTOR CABLE NO.14 AWG 7/c	LIN.FT.	1,125
MULTI-CONDUCTOR CABLE NO.14 AWG 5/c	LIN.FT.	940
MULTI-CONDUCTOR CABLE NO.14 AWG 3/c	LIN.FT.	20
*#8 AWG GROUND (GREEN)	LIN.FT.	600
CONDUIT 1"(RGC)	LIN.FT.	AS REQ'D
CONDUIT 1 1/2"(RGC)	LIN.FT.	---
CONDUIT 2"(PVC)	LIN.FT.	577
CONDUIT 2"(RGC)	LIN.FT.	1,424
CONDUIT 3"(RGC)	LIN.FT.	856
STREET NAME SIGN	EACH	4
LEFT TURN SIGNAL (R10-I0) SIGN	EACH	---
LEFT TURN SIGNAL (R10-I2) SIGN	EACH	2
RADAR DETECTION UNIT	EACH	4
RADAR DETECTION CABLE	LIN. FT.	925

POLE AND EQUIPMENT FINISH:

Surface preparation

The exterior steel surface shall be blasted clean in accordance with the requirements outlined in the Steel Structures Painting Council Surface Preparation Specification No. 6, (SSPCSP60) utilizing a dry abrasive, closed cycle, recirculating system with centrifugal wheels and abrasive. The abrasive used shall be steel shot conforming to the Society of Automotive Engineers (SAE) Recommended Practice No. J827 with particle size meeting SAE Shot No. S280.

Zinc Coating

The pole assembly shall be hot-dip galvanized to the requirements of either ASTM A123 (Fabricated items) or ASTM A153 (Hardware items) by immersion in a molten bath of prime western grade zinc maintained between 810°F and 850°F. Maximum aluminum content of the bath shall not exceed 0.01%.

Top Coat

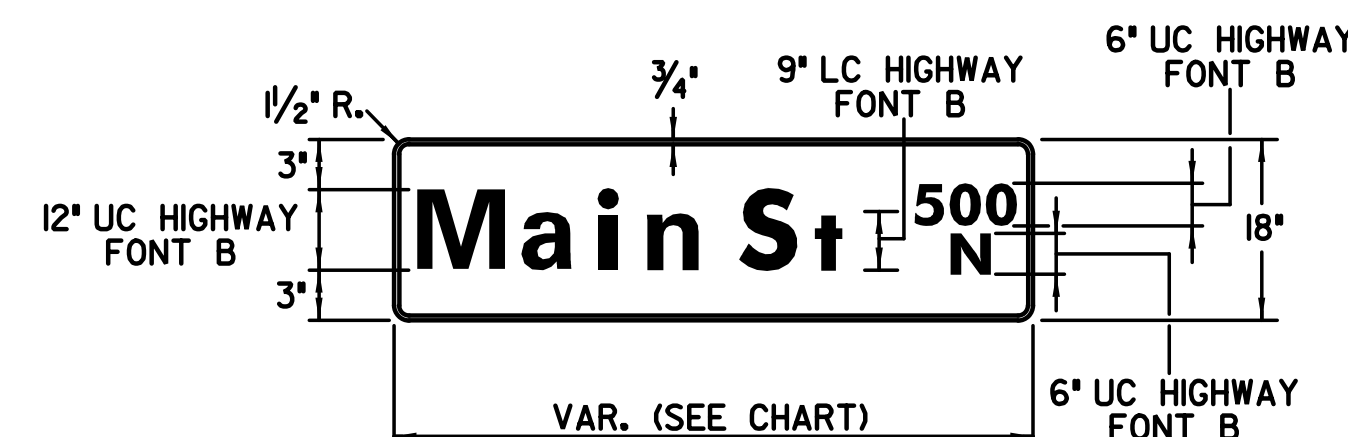
All visually exposed exterior surfaces shall be coated with a urethane or triglycidyl isocyanurate (TGIC) polyester powder to a minimum dry film thickness (DFT) of 0.05mm (2.0 mils). Prior to application of the topcoat, the surface shall be mechanically etched and pre-heated to 450°F for a minimum of one hour. The coating shall be electrostatically applied and cured at a minimum temperature of 400°F and the color shall be BLACK.

FUNCTION	PHASE TIMING							
	1	2	3	4	5	6	7	8
MINIMUM GREEN	---	10.0	5.0	10.0	---	10.0	5.0	10.0
MAXIMUM GREEN	---	50.0	20.0	50.0	---	30.0	40.0	40.0
YELLOW CHANGE	---	3.9	3.9	3.6	---	3.9	3.6	3.9
RED CLEAR	---	1.0	1.0	1.0	---	1.0	1.0	1.0
ADDED INITIAL	---	2.0	1.0	2.0	---	2.0	1.0	2.0
MAXIMUM INITIAL	---	15.0	10.0	15.0	---	10.0	10.0	15.0

Phase Timing reflects initial operation. Phases 4 & 8 to Soft Recall.

OVERHEAD STREET NAME SIGNS

LEGEND		LENGTH	QUANTITY
A	Oliver 1700 N	6'-0"	1
B	Oliver 1800 N	6'-0"	1
C	17th 4700 E	5'-0"	1
D	17th 4800 E	5'-0"	1



-QUANTITIES FOR INFORMATION ONLY-

NOTES: The traffic signal pushbuttons shall be Accessible Pedestrian Signals (APS) units per City Standard Specifications.

**EQUIPMENT SPECIFICATIONS
2070 CONTROLLER**

A. Controller Unit: The 2070L ATC 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 170 cabinet).
- 2070-1B CPU module with RJ-45 Ethernet port.
- 2070-2A CI field I/O module for compatibility with CalTrans style CI 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: The Conflict Monitor supplied shall be 2010 ECLIP conflict monitor.

C. Backup System: The controller shall have a battery backup UPS system and accessories per City and/or KDOT Specifications.

SERVICE/JUNCTION BOX SUMMARY			
BOX NO.	STATION	DIST.-SIDE	BASELINE
1	126+18.7	32.0' Rt.	OLIVER
2	126+20.2	57.5' Lt.	OLIVER
3	126+91.5	32.0' Rt.	OLIVER
4	126+95.0	60.6' Lt.	OLIVER
5	134+93.3	28.0' Rt.	OLIVER
6	134+81.1	63.0' Lt.	OLIVER
7	135+77.0	28.0' Rt.	OLIVER
8	135+82.6	63.0' Lt.	OLIVER

RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES		
ITEM	UNIT	QUANTITY
TRAFFIC SIGNALIZATION (OLIVER AVE. & 17TH ST.)	LUMP SUM	1

NOTE: The traffic signal system shall be complete and the contractor shall furnish and install all equipment and materials necessary for the satisfactory operation of electrical apparatus and for the complete operation of the traffic signal system whether specifically mentioned or not.

No.	Revision	By	Date
17TH STREET AND OLIVER INTERSECTION			
GEN. NOTES AND QUANTITIES			
OLIVER AVE. & 17TH ST.			
GARY JANZEN, P.E.-CITY ENGINEER CITY OF WICHITA PROJECT NO. 472-85214			
PROFESSIONAL ENGINEERING CONSULTANTS, P.A. 303 SOUTH TOPEKA WICHITA, KS 67202 316-262-2691 www.pec1.com			
Designed by	SAC	Job No.	15081
Drawn by	SAC	Date	Dec., 2017
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