

BILL OF MATERIALS (For Information Only)		
ITEM	QUANTITY	UNIT
Traffic Signal Pole Steel w/Mastarm (Joint Use)	-	Each
Traffic Signal Pole Steel w/Mastarm (Std.)	4	Each
Traffic Signal Pedestal Aluminum (10')	1	Each
Concrete Controller Pad	1	Each
Concrete Footing - Pole	4	Each
Concrete Footing - Pedestal	1	Each
Service Box - 36" Dia.	4	Each
Ground Rod and Clamp	5	Each
Conduit Clamp	As Needed	Each
Pedestrian Signal Lamp L.E.D. (12" Combination)	16	Each
12" L.E.D. Unit	60	Each
Back Plate for Signal Head (Type A)	8	Each
Back Plate for Signal Head (Type C)	8	Each
Entance Head	1	Each
Circuit Breaker and Box	1	Each
Traffic Signal Head - 12" (Type A) w/Mounting Bracket	12	Each
Traffic Signal Head - 12" (Type C) w/Mounting Bracket	8	Each
Pedestrian Signal - 12" (Type K) w/Mounting Bracket	8	Each
Pedestrian Pushbutton w/Sign	8	Each
Pad Mounted Cabinet and Controller System - Type 2070 (See Note)	1	Each
Lead-In Wire No. 6 Awg 1/c (Type THHN)	296	L.F.
Multi-Conductor Cable No. 14 Awg 2/c	29	L.F.
Multi-Conductor Cable No. 14 Awg 5/c	620	L.F.
Multi-Conductor Cable No. 14 Awg 7/c	2149	L.F.
Stranded No. 8 Awg 1/c (Type THHN)(Ground)	1054	L.F.
Conduit 1" (RG)	141	L.F.
Conduit 2" (RG)	80	L.F.
Conduit 3" (RG)	526	L.F.
Video Detection Camera and Mounting Hardware (Riser Bracket)	1	Each
Video Detection Processor Unit (Iteris Vantage or Apr'vd Equal)	1	Each
Video Power Cable No. 16 Awg 3/c	652	L.F.
Video Cable 75 ohm Coaxial (Beldon #8281)	652	L.F.
TV Monitor	1	Each
Video System Programming Unit	1	Each
Street Name Signs	4	Each
Left Turn Sign (R10-10) w/Mounting Hardware	4	Each
Remove Existing Traffic Signals	1	Lump Sum

TRAFFIC SIGNAL POLE SUMMARY							
POLE NO.	STATION	TYPE	ARM LENGTH	SIGNALS ON ARM	X1 X2 X3	OTHER EQUIPMENT ON ARM	SIGNALS ON POLE
1	9+33.73, 68.9' Lt.	B	76'	4-E	12' 11.5' 11'	1-D, 1-G, 1-H, 1-I	1-E, 2-F
2	9+34.92, 68.5' Rt.	B	70'	4-E	12' 11.5' 11'	1-D, 1-G, 1-H, 1-I	1-E, 2-F
3	10+42.07, 72.1' Lt.	B	52'	4-E	12' 11.5' 11'	1-D, 1-G, 1-H, 1-I	1-E, 1-F
4	10+59.96, 54.8' Lt.	C	73'	4-E	12' 11.5' 11'	1-D, 1-G, 1-H, 1-I	1-E, 2-F
5	10+73.41, 66.1' Rt.	B	73'	4-E	12' 11.5' 11'	1-D, 1-G, 1-H, 1-I	1-E, 2-F

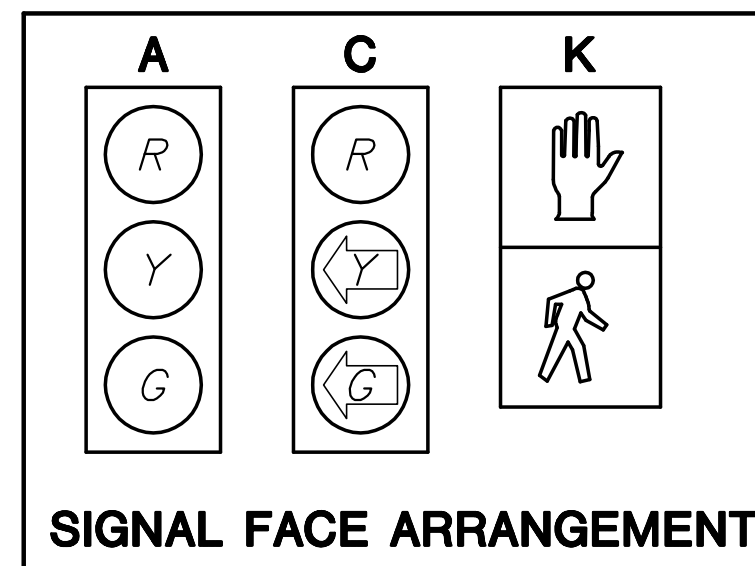
- A - Joint Use Steel Pole with Mast Arm
- B - Standard Steel Pole with Mast Arm
- C - Pedestal Pole (10' Aluminum)
- D - Left Turn Sign (R10-10)
- E - Traffic Signal
- F - Pedestrian Signal with Push Button
- G - Street Name Sign
- H - Video Detection Camera
- I - Wind Damper

STREET NAME SIGN SUMMARY	
LEGEND	QUANTITY
Harry	2
Oliver	2
TOTAL	4

Letters shall be series "E" Modified

TRAFFIC SIGNAL HEAD SUMMARY				
SIGNAL NO.	TYPE	SIZE	MOUNTING BRACKET	QUANTITY
1	C	3-12"	TYPE I	2
2	A	3-12"	TYPE I	2
3	A	3-12"	TYPE III	1
4	K	2-12"	TYPE II	2
5	C	3-12"	TYPE I	2
6	A	3-12"	TYPE I	2
7	A	3-12"	TYPE III	1
8	K	2-12"	TYPE II	2
9	C	3-12"	TYPE I	2
10	A	3-12"	TYPE I	2
11	A	3-12"	TYPE III	1
12	K	2-12"	TYPE II	2
13	C	3-12"	TYPE I	2
14	A	3-12"	TYPE I	2
15	A	3-12"	TYPE III	1
16	K	2-12"	TYPE II	2

All Signal Heads to be L.E.D.



SIGNAL FACE ARRANGEMENT

All lenses in each head shall be L.E.D. unit per note.

* All Poles, Mastarms and Cabinet shall be Powder Coated Black.

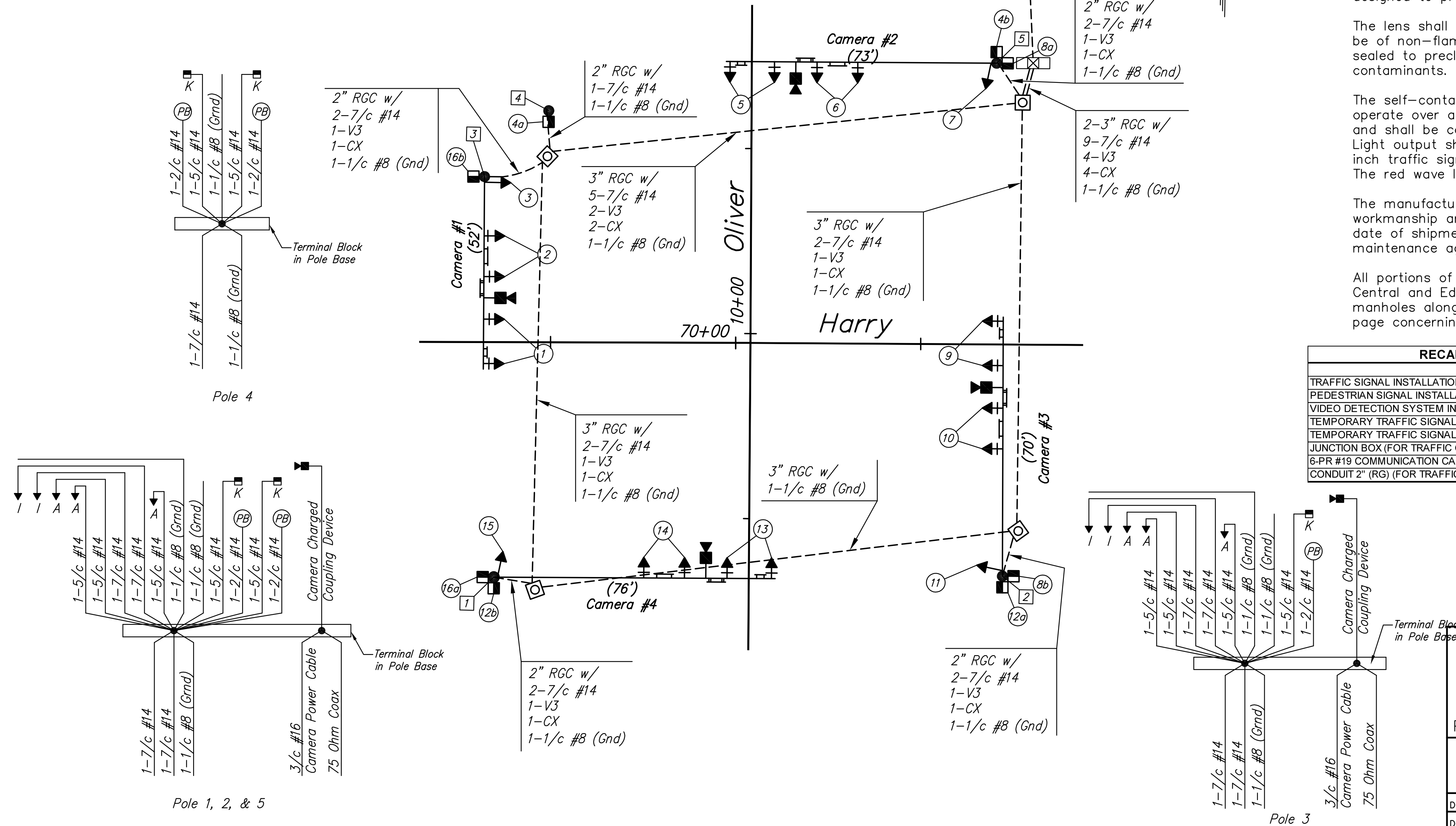
EQUIPMENT SPECIFICATIONS 2070 CONTROLLER

Controller Units: The 2070L controllers supplied shall meet the requirements requirements:

- A.
 - The 2070L controllers shall have a 19" EIA rack mountable chassis (mated to the 170 cabinet). Controllers shall be EAGLE or ECONOLITE.
 - 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 monitors:

The Conflict Monitors 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.

Note: The contractor shall supply and install all necessary material and equipment for the complete installation and operation of the Traffic Signal whether specifically mentioned or not.



STATE	PROJECT NO.	YEAR	SHEET NO.	SHEETS
KANSAS	87 N-0357-01	2008	118	185

LEGEND

- Steel Traffic Signal Pole (Joint use)
- Steel Traffic Signal Pole (Std. Pole)
- ▶ Traffic Signal Indication (Type A) w/Backplate
- ▶ Mast Arm Suspended Traffic Signal
- Video Detection Camera
- Service Box
- Controller
- Pedestrian Indication
- Junction Box
- Vehicle Detection Zone
- ① Detector Number
- ② Signal Number
- ③ Pole Number
- Rigid Galvanized Conduit (RGC)
- PVC Conduit
- TTT Overhead Street Name Sign
- TTT Overhead Signal R10-10 (Lt. Turn Signal)
- TTT Wind Damper
- PP Power Pole
- CX Video Coax Cable
- V3 Video Power Cable (#16 AWG 3/c)
- Ⓜ Meter Box and Power Disconnect

L.E.D. Signal Heads: All lenses in each signal head shall be a self-contained, sealed unit designed to fit a regular 12-inch traffic signal housing. It shall incorporate a minimum of 186 high reliability, high intensity LED indicators. The lens shall provide a light beam spread of 30 degrees on all sides of its center axis which shall be designed to provide a 5 to 7 degree downward angle.

The lens shall be made of UV stabilized plastic. The rear cover shall be of non-flammable material and the entire unit shall be totally sealed to preclude the entrance of water, dust or other contaminants.

The self-contained, regulated power supply shall allow the unit to operate over an input voltage range between 89 and 135 volts A.C. and shall be configured in at least 3 parallel circuits for reliability. Light output shall be comparable to that provided by a standard, 12 inch traffic signal lens illuminated by a 150 watt incandescent lamp. The red wave length shall be 630 to 660 nm.

The manufacturer shall warrant the unit against defects in workmanship and materials for a period of at least five years after date of shipment. This warranty shall be assigned to the maintenance agency.

All portions of the existing traffic signal at the intersection of Central and Edgemoor shall be removed including the traffic signal manholes along all approaches. Refer to the previous note on this page concerning salvaging of portions of the signal.

RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES		
BID ITEM	QUANTITY	UNIT
TRAFFIC SIGNAL INSTALLATION	1	LUMP SUM
PEDESTRIAN SIGNAL INSTALLATION	1	LUMP SUM
VIDEO DETECTION SYSTEM INSTALLATION	1	LUMP SUM
TEMPORARY TRAFFIC SIGNAL, HARRY AND OLIVER	1	LUMP SUM
TEMPORARY TRAFFIC SIGNAL, LINCOLN AND OLIVER	1	LUMP SUM
JUNCTION BOX (FOR TRAFFIC COMMUNICATION CABLE)	18	EACH
6-PR #19 COMMUNICATION CABLE (FOR TRAFFIC COMMUNICATION CABLE)	2550	L.F.
CONDUIT 2" (RG) (FOR TRAFFIC COMMUNICATION CABLE)	2470	L.F.

KANSAS DEPARTMENT OF TRANSPORTATION
**OLIVER IMPROVEMENTS
 OLIVER & HARRY INTERSECTION
 WIRING PLAN**
 PROJ. NO. 87 N-0135-01 SEDGWICK CO.
M K E C ENGINEERING CONSULTANTS, INC.
 WICHITA, KANSAS

DESIGNED BY: JRA	CHECKED BY: JRA
DRAWN BY: JSB	DATE: JUN 07