FHWA REG NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	87 N-0196-01	2001	31	55

BY	DATE
REFERENCES NOTED	
REFERENCES CHECKED	

BILL OF MATERIALS (FOR INFORMATION ONLY)

ITEM	UNIT	QUANTITY
TRAFFIC SIGNAL POLE STEEL W/MASTARM (JOINT USE)	EACH	1
TRAFFIC SIGNAL POLE STEEL W/MASTARM (STD. POLE)	EACH	3
CONCRETE CONTROLLER PAD	EACH	1
CONCRETE FOOTING - POLE	EACH	4
		0
SERVICE BOX - 915 mm DIA.	EACH	4
JUNCTION BOX - 609 mm DIA. (INCLUDES INTERCONNECT)	EACH	
GROUND ROD & CLAMP	EACH	6
CONDUIT CLAMP	EACH	AS REQUIRED
TRAFFIC SIGNAL LAMP 135 WATT	EACH	44
PEDESTRIAN SIGNAL LAMP 105 WATT	EACH	16
RED LENS L.E.D. UNIT	EACH	20
ENTRANCE HEAD	EACH	1
CIRCUIT BREAKER & BOX	EACH	1
TRAFFIC SIGNAL HEAD - 305 mm (TYPE A) W/MOUNTING BRACKET	EACH	14
TRAFFIC SIGNAL HEAD - 305 mm (TYPE C) W/MOUNTING BRACKET	EACH	4
TRAFFIC SIGNAL HEAD - 305 mm (TYPE I) W/MOUNTING BRACKET	EACH	2
PEDESTRIAN SIGNAL - 305 mm (TYPE K) W/MOUNTING BRACKET	EACH	8
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	8
PAD MOUNTED CABINET & CONTROLLER SYSTEM-TYPE 170(SEE NOTE)	EACH	1
LEAD-IN WIRE NO. 6 AWG 1/c (TYPE THHN)	m	0
MULTI-CONDUCTOR CABLE NO. 14 AWG 5/c	m	0
MULTI-CONDUCTOR CABLE NO. 14 AWG 7/c	m	592.0
SHIELDED DETECTOR LEAD-IN NO. 14 AWG 4/C	m	0
SHIELDED DETECTOR LEAD-IN NO. 14 AWG 2/C	m	0
6 PR. #19 COMMUNICATION CABLE	m	0
CONDUIT 18 mm	m	0
CONDUIT 25 mm	m	0
CONDUIT 31 mm	m	0
CONDUIT 50 mm (INCLUDES INTERCONNECT)	m	0
CONDUIT 50 mm PVC w/ PULL WIRE	m	0
CONDUIT 75 mm	m	194.0
STANDARD 1/c #8 (TYPE THHN)(GROUND)	m	0
STREET NAME SIGNS	EACH	4
LEFT TURN YIELD ON GREEN W/MOUNTING HARDWARE (R10-12)	EACH	2
LEFT TURN SIGNAL W/ MOUNTING HARDWARE (R10-10)	EACH	2
WIND DAMPER	EACH	4
CAMERA HOUSING	EACH	4
VIDEO DETECTION CAMERA AND MOUNTING HARDWARE (RISER BRACKETS)	EACH	4
VIDEO DETECTION PROCESSOR UNIT	EACH	4
VIDEO POWER CABLE NO. 16 AWG 3/C	m	335
VIDEO CABLE 75 OHM COAXIAL (BELDON #8281)	m	335
TV MONITER	EACH	1
CAMERA CHARGED COUPLING DEVICE	EACH	4

TYPE 170 TRAFFIC CONTROLLER SYSTEM TO INCLUDE:

ONE (1) MODEL 170 CONTROLLER UNIT COMPLETE WITH 412B2 SYSTEM MEMORY MODULE CAPABLE OF SUPPORTING WAPITI MICRO SYSTEM W41KS (LATEST REVISION) TRAFFIC PROGRAM ON 27256 EPROM.

ONE (1) MODEL 332 CABINET COMPLETE WITH ALL ACCESSORIES INCLUDING FOUR (4) MODEL 430 TRANSFER RELAYS, TWO (2) MODEL 204 FLASHER UNITS AND ONE (1) MODEL 210PC CONFLICT MONITOR.

THREE (3) MODEL 242 TWO CHANNEL ISOLATORS.

TEN (10) MODEL 222 TWO CHANNEL LOOP DETECTOR SENSOR UNITS.

ELEVEN (11) MODEL 200 SWITCH PACKS.

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.

CX - VIDEO COAX CABLE (75 OHM)
V3 - VIDEO POWER CABLE (#16 AWG, 3/C)

JOINT-USE POLE ON SW CORNER ONLY

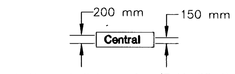
TRAFFIC SIGNAL POLE SUMMARY

STATION	TYPE	ARM LENGTH	SIGNALS ON ARM	X_1	X_2	OTHER EQUIP. ON ARM	SIGNALS ON POLE
4+980.5, Lt.	A	21.2 m	5-E	2.44	3.35	C, G, H, I	1-E, 2-F
4+984.9, Rt.	B	12.7 m	4-E	2.44	3.35	D, G, H, I	1-E, 2-F
5+014.5, Lt.	B	12.8 m	4-E	2.44	3.35	D, G, H, I	1-E, 2-F
5+016.8, Rt.	B	19.5 m	5-E	2.44	3.35	C, G, H, I	1-E, 2-F

A JOINT USE STEEL POLE WITH MAST ARM
B STANDARD STEEL POLE WITH MAST ARM
C LEFT TURN SIGNAL SIGN (R10-10L)
D LEFT TURN YIELD ON GREEN SIGN (R10-12)
E TRAFFIC SIGNAL
F PEDESTRIAN SIGNAL WITH PUSH BUTTON
G STREET NAME SIGN
H WIND DAMPER
I VIDEO DETECTION CAMERA

STREET NAME SIGN SUMMARY

LEGEND	QUANTITY
Central	2
Rock	2
TOTAL	4



Letters shall be series "E Modified".

SCALE: 1:200

TRAFFIC SIGNAL HEAD SUMMARY

SIGNAL NO.	TYPE	SIZE	MOUNTING BRACKET	QUANTITY
1	I	3-300mm	TYPE I	1
2	A	3-300mm	TYPE I	2
3	A	3-300mm	TYPE III	1
4	K	2-300mm	TYPE II	2
5	C	3-300mm	TYPE I	2
6	A	3-300mm	TYPE I	3
7	A	3-300mm	TYPE III	1
8	K	2-300mm	TYPE II	2
9	I	3-300mm	TYPE I	1
10	A	3-300mm	TYPE I	2
11	A	3-300mm	TYPE III	1
12	K	2-300mm	TYPE II	2
13	C	3-300mm	TYPE I	2
14	A	3-300mm	TYPE I	3
15	A	3-300mm	TYPE III	1
16	K	2-300mm	TYPE II	2

RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES

BID ITEM	QUANTITY	UNIT
TRAFFIC SIGNAL INSTALLATION (CENTRAL & ROCK)	LUMP SUM	L.S.

LEGEND

- Steel Traffic Signal Pole (Joint use)
- Steel Traffic Signal Pole (Std. Pole)
- Traffic Signal Indication (Type A)
- Mast Arm Suspended Traffic Signal
- Service Box
- Controller
- Pedestrian Indication
- Junction Box
- Rigid Galvanized Conduit (RGC)
- Meter Box and Power Disconnect
- Overhead Street Name Sign
- Overhead Sign R10-10L or R10-12
- Wind Damper
- Video Detection Camera

SIGNAL FACE ARRANGEMENT

Red lens in each head shall be L.E.D. unit per Note 1.

NOTES

1. Red L.E.D. Signal Heads: The red lens in each signal head shall be a self-contained, sealed unit designed to fit a regular 300 mm 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, 300 mm 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.

3. Terminate conduit at KGE riser pole with vertical stub extended above grade. Coordinate with KGE.

4. Install a Splice Kit and Riser at first Power Pole inside construction limits West of Rock Road, South side of Central. Reroute Communication Cable to controller.

NO.	DATE	REVISIONS	BY	APP'D
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION

CENTRAL & ROCK INTERSECTION TRAFFIC SIGNAL SUMMARY

PROJ. NO. 87 N-0196-01 SEDGWICK CO.

MKEC ENGINEERING CONSULTANTS, INC.
WICHITA, KANSAS

DESIGNED BY:	DCH	CHECKED BY:	DCH	
DRAWN BY:	DAG	DATE: OCT. 2000	SHEET	31 OF 55

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