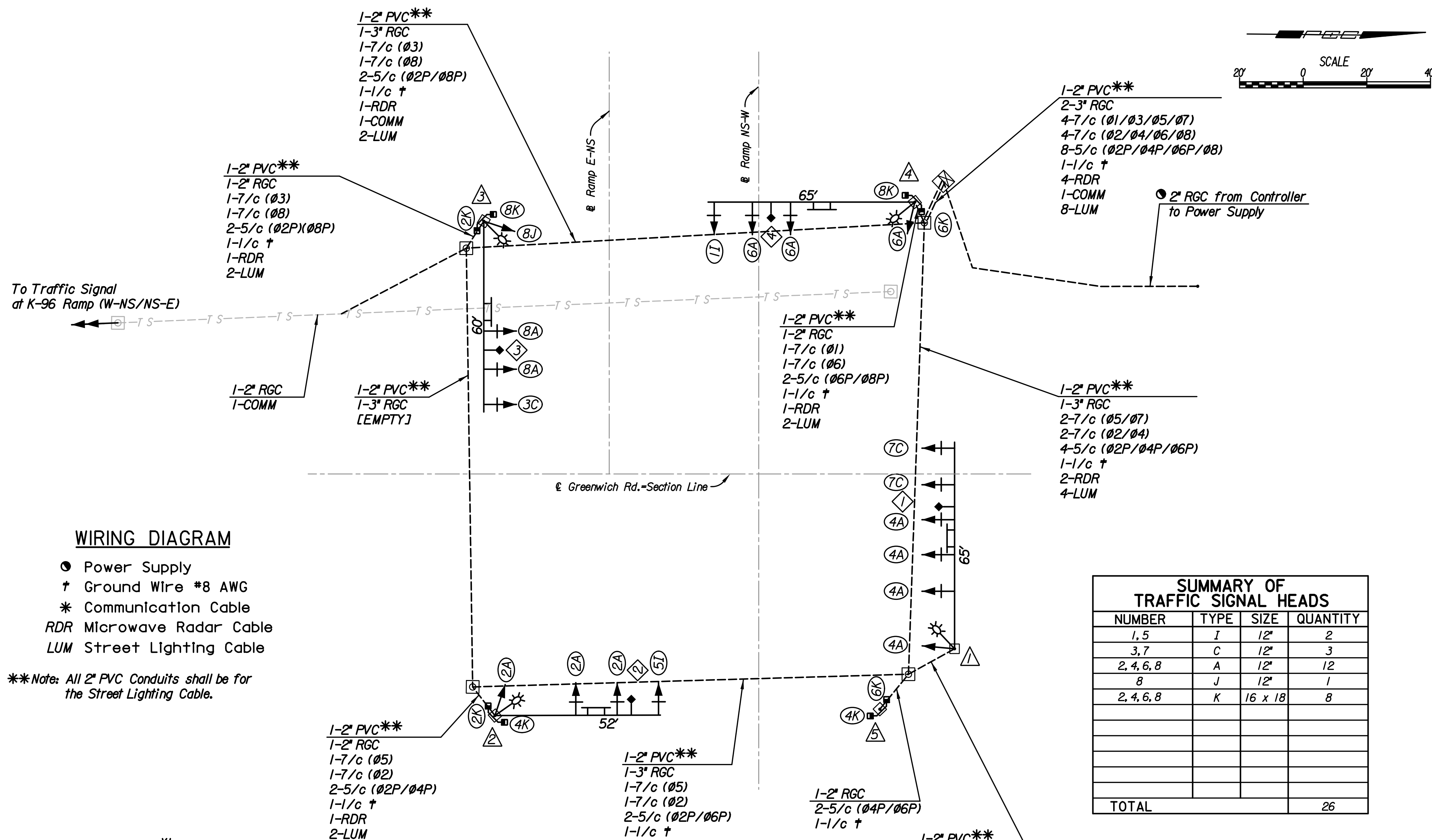


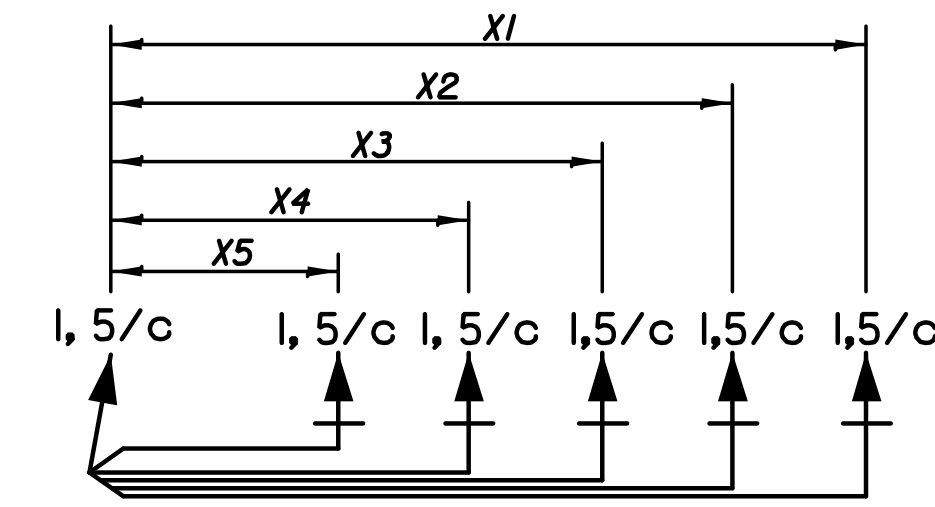
Plotted By: svb Date: 12/31/2013 9:52:44 AM
 FILE: I:\2009\0952\Traffic Signal\0952-Signal_Rp_E-NS-01y.dgn



WIRING DIAGRAM

- Power Supply
- † Ground Wire #8 AWG
- * Communication Cable
- RDR Microwave Radar Cable
- LUM Street Lighting Cable

**Note: All 2" PVC Conduits shall be for the Street Lighting Cable.



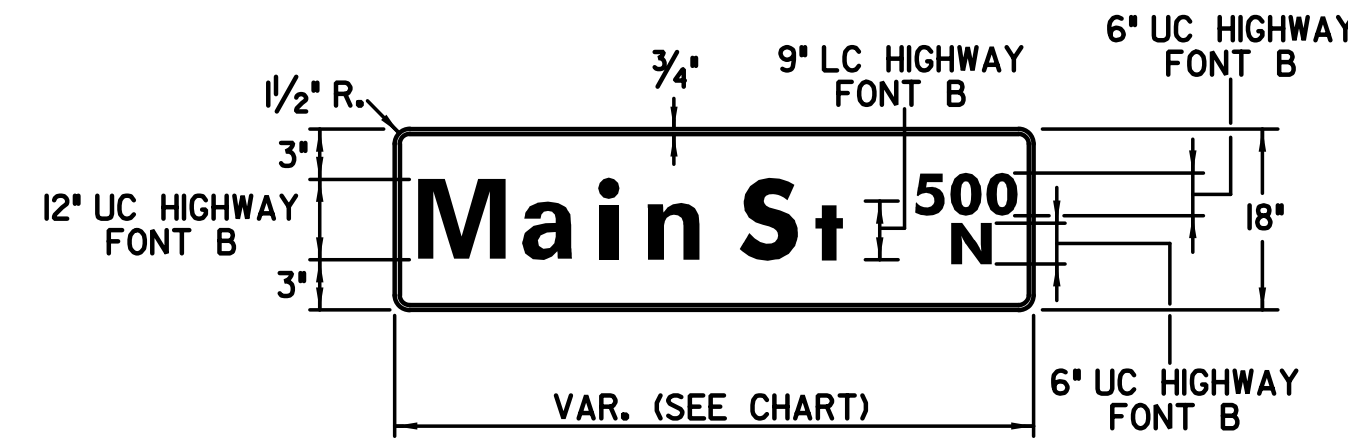
TYPICAL POLE WIRING

Note: Each Pushbutton to be wired with 1, 2/C to pole base connection.

All splices to be in pole base, no splices permitted within service box.

OVERHEAD STREET NAME SIGNS

LEGEND	LENGTH	QUANTITY
K-96	3'-0"	2
Greenwich 2800 W	7'-6"	2



SUMMARY OF TRAFFIC SIGNAL HEADS

NUMBER	TYPE	SIZE	QUANTITY
1, 5	I	12"	2
3, 7	C	12"	3
2, 4, 6, 8	A	12"	12
8	J	12"	1
2, 4, 6, 8	K	16 x 18	8
TOTAL			26

SERVICE BOX SUMMARY

STATION *	DIST.-SIDE *
129+28	71' Lt.
129+30	67' Rt.
130+67	63' Rt.
130+72	79' Lt.

* Using Greenwich Baseline

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.

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
PAD MOUNTED CONTROLLER & CABINET	EACH	1
TRAFFIC SIGNAL HEAD W/MOUNTING HARDWARE	EACH	26
TRAFFIC SIGNAL POLE, STEEL (SEE POLE SUMMARY)	EACH	4
TRAFFIC SIGNAL PEDESTAL ALUM. (10')	EACH	1
TRAFFIC SIGNAL PEDESTAL (JOINT USE) ALUM. (30')	EACH	-
LUMINAIRE POLE W/15' ARM (SEE POLE SUMMARY)	EACH	-
CONCRETE CONTROLLER PAD	EACH	1
CONCRETE FOOTING - PEDESTAL	EACH	1
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	EACH	12
BACK PLATE 5' 5 SECTION	EACH	2
TERMINAL BLOCK	EACH	5
SERVICE BOX	EACH	4
JUNCTION BOX (PRE-FAB)	EACH	-
GROUND ROD & CLAMP	EACH	6
PEDESTRIAN INDICATIONS LED (16"x18" COMBINATION) (COUNTDOWN)	EACH	8
LED TRAFFIC SIGNAL LENS (12")	EACH	-
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	8
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.	1,370
DETECTOR LOOP WIRE NO.14 AWG 1/c	LIN.FT.	-
LEAD-IN WIRE NO.6 AWG 1/c	LIN.FT.	AS REQ'D
MULTI-CONDUCTOR CABLE NO.14 AWG 7/c	LIN.FT.	2,510
MULTI-CONDUCTOR CABLE NO.14 AWG 5/c	LIN.FT.	1,635
MULTI-CONDUCTOR CABLE NO.14 AWG 2/c	LIN.FT.	25
SHIELDED DETECTOR LEAD-IN NO.14 AWG 2/c	LIN.FT.	-
LIGHTING CABLE NO.8 AWG 1/c	LIN.FT.	1,590
POLE/BRAKET CABLE NO.10 AWG 1/c	LIN.FT.	320
CONDUIT 1"(RGC)	LIN.FT.	AS REQ'D
CONDUIT 1 1/2"(RGC)	LIN.FT.	-
CONDUIT 2"(PVC)	LIN.FT.	635
CONDUIT 2"(RGC)	LIN.FT.	234
CONDUIT 3"(RGC)	LIN.FT.	304
#8 AWG GROUND (GREEN)	LIN.FT.	595
STREET NAME SIGN	EACH	4
LEFT TURN SIGNAL (RIO-10) SIGN	EACH	3
LEFT TURN YIELD (RIO-12) SIGN	EACH	2
L.E.D. LUMINAIRE W/MOUNTING ARM	EACH	4
WAVETRONIC SMART SENSOR ADVANCE W/MOUNTING HARDWARE	EACH	4
LIGHTNING PROTECTION - WAVETRONIC CLICKI200	EACH	4
POWER SUPPLY - WAVETRONIC CLICKI20I	EACH	1
MICROWAVE CABLE (BELDEN 9331OR APPROVED EQUAL)	LIN.FT.	1,105

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

RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES

ITEM	UNIT	QUANTITY
TRAFFIC SIGNALIZATION (Greenwich and Ramps E-NS & NS-W)	LUMP SUM	1

-QUANTITIES FOR INFORMATION ONLY-
 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.

TRAFFIC SIGNAL POLE SUMMARY

POLE NO.	POLE HEIGHT	ARM HEIGHT	ARM LENGTH	NO. OF SIGNALS ON ARM	BRACKET TYPE	X1	X2	X3	X4	X5	NO. OF SIGNALS ON POLE	BRACKET TYPE	NO. OF PUSH BUTTONS ON POLE	LUMINAIRE MOUNTING HEIGHT
1	35'	19'	65'	5	I	63'	52'	41'	30'	18'	1	II	-	40'
2	35'	19'	52'	3	I	51'	38'	25'	-	-	3	II	2	40'
3	35'	19'	60'	3	I	58'	47'	35'	-	-	3	II	2	40'
4	35'	19'	65'	3	I	63'	51'	39'	-	-	3	II	2	40'
5	10'	-	-	-	-	-	-	-	-	-	2	II	2	-

Revision: _____ By: _____ Date: _____

K-96 AND GREENWICH ROAD

WIRING AND QUANTITIES
 GREENWICH & RAMPS E-NS & NS-W

GARY JANZEN, P.E.-CITY ENGINEER
 CITY OF WICHITA PROJECT NO. 472-85066

PEC PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 303 SOUTH TOPEKA WICHITA, KS 67202
 316-262-2691 www.pec1.com

Designed by: JPS Job No: 09521
 Drawn by: DRP Date: Jan., 2014 Sht. 161 of 388