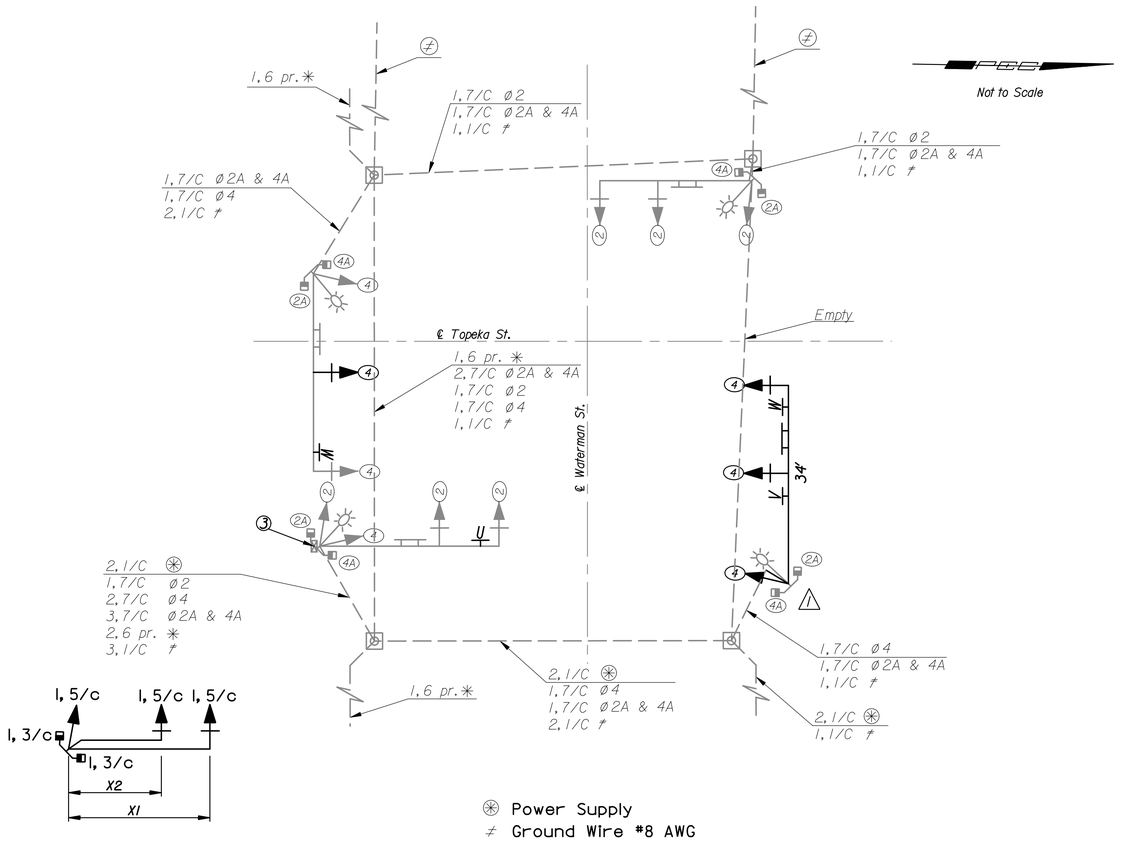


TYPICAL POLE WIRING

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

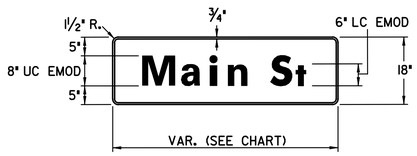
Pushbutton to be wired with 1, 2/C to pole base connection

⊛ Power Supply
≠ Ground Wire #8 AWG
✳ Communication Cable
Ⓔ See Lighting Plan

WIRING DIAGRAM

SUMMARY OF TRAFFIC SIGNAL HEADS			
NUMBER	TYPE	SIZE	QUANTITY
4	A	12"	2 ②
TOTAL			2 ②

OVERHEAD STREET NAME SIGNS		
LEGEND	LENGTH	QUANTITY
Waterman	6'-6"	1



BILL OF MATERIALS		
ITEM	UNIT	QUANTITY
POLE-MOUNTED CONTROLLER & CABINET	EACH	- ③
TRAFFIC SIGNAL HEAD W/MOUNTING HARDWARE	EACH	2 ②
TRAFFIC SIGNAL POLE (JOINT USE) STEEL (30')	EACH	1 ②
TRAFFIC SIGNAL POLE STEEL (20')	EACH	-
TRAFFIC SIGNAL PEDESTAL	EACH	-
CONCRETE CONTROLLER PAD	EACH	-
CONCRETE FOOTING - PEDESTAL	EACH	-
CONCRETE FOOTING - POLE	EACH	-
CONDUIT ELBOW 90°2"	EACH	AS REQ'D
CONDUIT ELBOW 90°3"	EACH	AS REQ'D
BACK PLATE 5" 3 SECTION	EACH	2 ②
BACK PLATE 5" 5 SECTION	EACH	-
TERMINAL BLOCK	EACH	-
SERVICE BOX	EACH	-
JUNCTION BOX (PRE-FAB)	EACH	-
GROUND ROD & CLAMP	EACH	-
PEDESTRIAN INDICATIONS LED (12" COMBINATION)	EACH	-
LED TRAFFIC SIGNAL LENS	EACH	6 ②
ENTRANCE HEAD	EACH	-
CIRCUIT BREAKER & BOX 50 AMP.	EACH	-
SURGE ARRESTOR - A.C.SERVICE	EACH	-
SURGE ARRESTOR - DETECTOR	EACH	-
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	-
6 PR. COMMUNICATION CABLE	LIN.FT.	-
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.	-
MULTI-CONDUCTOR CABLE NO.14 AWG 5/c	LIN.FT.	120
MULTI-CONDUCTOR CABLE NO.14 AWG 3/c	LIN.FT.	-
SHEILDED DETECTOR LEAD-IN NO.14 AWG 2/c	LIN.FT.	-
CONDUIT 1"(RGC)	LIN.FT.	AS REQ'D
CONDUIT 1 1/2"(RGC)	LIN.FT.	-
CONDUIT 2"(PVC)	LIN.FT.	-
CONDUIT 2"(RGC)	LIN.FT.	
CONDUIT 3"(RGC)	LIN.FT.	
#8 AWG GROUND (GREEN)	LIN.FT.	70
STREET NAME SIGN	EACH	1
R3-2 SIGN	EACH	1
R3-5L SIGN	EACH	2
R3-5R SIGN	EACH	1

② *Retrieve Mast Arm & Traffic Signal Heads from City Yard for Installation.*

③ *The existing Traffic Signal Controller shall remain. All existing time settings shall be retained.*

TRAFFIC SIGNAL POLE SUMMARY												
POLE NO.	TYPE ⓘ	ARM LENGTH	NO. OF SIGNALS ON ARM	BRACKET TYPE	XI	X2	X3	X4	NO. OF SIGNALS ON POLE	BRACKET TYPE	NO.OF PUSH BUTTONS ON POLE	REMARKS
1	C	34	2	1	33	22	-	-	-	-	-	Pole is Exist.

ⓘ *A-10'Pedestal (Alum.)*
B-20'Steel with Mast Arm(s)
C-30'Steel (Joint Use) with Mast Arm(s)
D-40'Steel with Mast Arm

RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES		
ITEM	UNIT	QUANTITY
TRAFFIC SIGNAL MODIFICATION Topeka & Waterman	LUMP SUM 1	LUMP SUM 1

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.

-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.

No.	Revision	By	Date

TOPEKA STREET

WIRING AND QUANTITIES TOPEKA AND WATERMAN

JAMES L. ARMOUR, P.E.-CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-84745

Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Designed by	DRM	Job No.	08457	Sht. R34 of R52
Drawn by	DRP	Date	Feb., 2009	

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