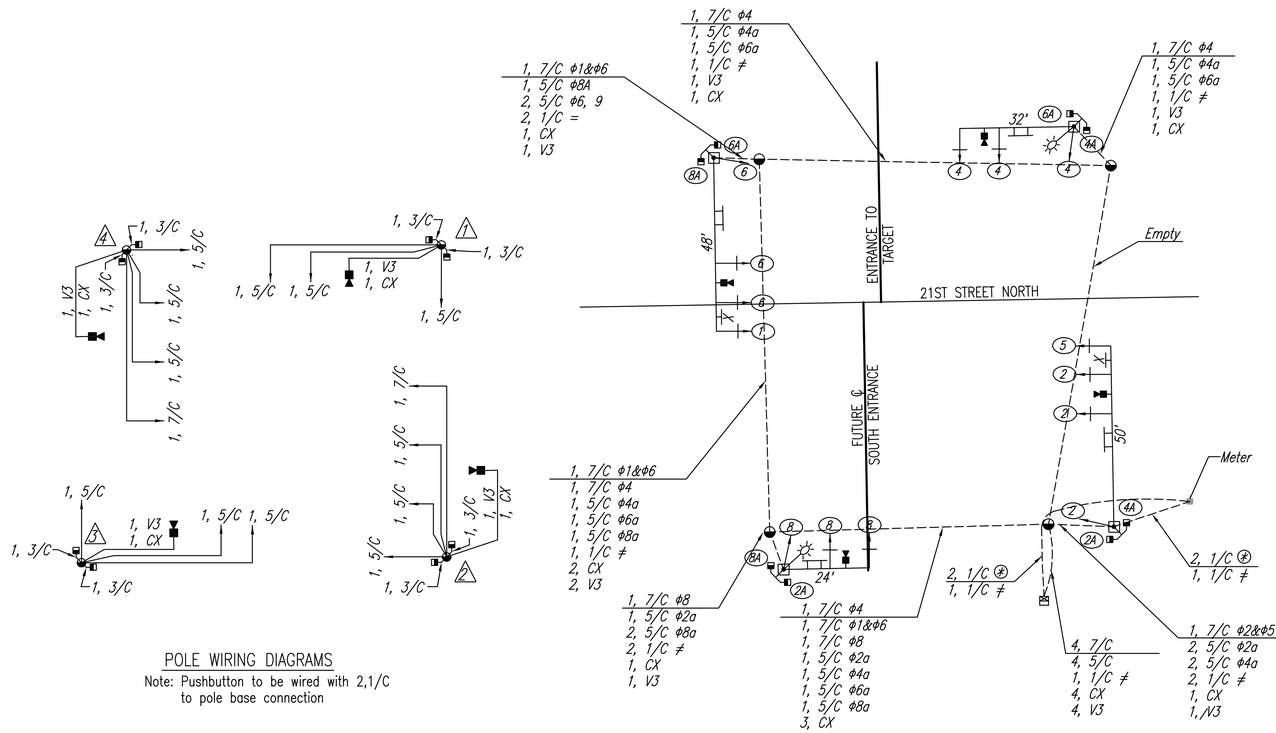

POLE WIRING DIAGRAMS

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

21st St — Sign A, Pole 1 & 3

Street Name Sign Legends use 6" series EM lettering

≠ #8AWG Equipment Ground (Green)

ϕ Power Supply

V3 Video Power Cable

CX Video Coax Cable

/1/ Signal Pole Reference Number

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

TRAFFIC SIGNAL POLE SUMMARY

POLE NO	TYPE (1)	ARM LENGTH	NO.OF SIGNALS ON ARM	BRACKET TYPE	X1	X2	X3	NO.OF SIGNALS ON POLE	BRACKET TYPE	NO.OF PUSH BUTTONS ON POLE	REMARKS
1	C	32	2	I	32	20	–	3	II/III	2	
2	B	50	3	I	50	42	30	3	II/III	2	
3	C	24	2	I	24	12	–	3	II/III	2	
4	B	48	3	I	48	40	29	3	II/III	2	

(1) A–10'Pedestal (Alum.)
B–20'Steel with Mast Arm(s)
C–35'Steel (Joint Use) with Mast Arm(s)
D–40'Steel with Mast Arm

The Contractor shall secure, furnish, and install traffic signal poles that have been pre–ordered for this project from Valmont. The Contractor shall contact Gades Sales Co. @ 943–1219 % Graham Montgomery for additional information regarding the cost and delivery date for poles prior to submitting his bid. All costs associated with the procurement and installation of traffic signal poles shall be considered subsidiary to "Traffic Signal Installation".

SUMMARY OF TRAFFIC SIGNAL HEADS

NUMBER	TYPE	SIZE	QUANTITY
1, 5	I	12'	2
2, 4, 6, 8	A	12'	12
2a, 4a, 6a, 8a	K	12'	8
TOTAL			22

Top Coat Finish for Traffic Signal Poles & Controller Cabinet

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 2.0 mils. Prior to application of the top coat, the surface shall be mechanically etched and pre–heated to 450 degrees F for a minimum of one hour. The coating shall be electro–statically applied and cured at a minimum temperature of 400 degrees F. The finished color for the poles shall be black and approved by the Engineer prior to application on the basis of color chip submittals.

Special Finish for Traffic Signal Equipment

The traffic signal, mounting brackets, signal head backs, sign backs, meter box, disconnect box, and miscellaneous hardware shall be shop painted with an aerosol lacquor celulose ester to match the traffic signal pole color. The Contractor shall submit two copies of the proposed coating system to the Engineer for approval prior to application. In addition to the requirements stipulated in the Standard Specifications, banding material shall be coated with ethylene–vinly–alcohol (EVA) copolymer. The color shall be black.

NOTE:
The contractor shall supply and install all necessary materials and equipment for the complete installation and operation of the traffic signal system whether specifically mentioned or not.

SERVICE BOX SUMMARY

STATION	DIST.–SIDE
119+32	51' LT.
119+32	53.37' RT.
120+10	52.52' RT.
120+30	47.39' LT.

RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES

ITEM	UNIT	QUANTITY
TRAFFIC SIGNAL INSTALLATION (21st St. N. & REGENCY LAKES)	LUMP SUM	LUMP SUM
	1	1

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
PAD MOUNTED CONTROLLER & CABINET	EACH	1
TRAFFIC SIGNAL HEAD W/MOUNTING HARDWARE	EACH	22
TRAFFIC SIGNAL POLE STEEL (20')	EACH	2
TRAFFIC SIGNAL POLE (JOINT USE) STEEL (35')	EACH	2
CONCRETE CONTROLLER PAD	EACH	1
CONCRETE FOOTING – PEDESTAL	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	EACH	8
BACK PLATE 5" 5 SECTION	EACH	2
TERMINAL BLOCK	EACH	–
SERVICE BOX	EACH	4
JUNCTION BOX (PRE–FAB)	EACH	–
GROUND ROD & CLAMP	EACH	6
PEDESTRIAN INDICATIONS LED (12" COMBINATION)	EACH	8
LED TRAFFIC SIGNAL LENS	EACH	46
ENTRANCE HEAD	EACH	2
CIRCUIT BREAKER & BOX 50 AMP.	EACH	1
SURGE ARRESTOR – A.C.SERVICE	EACH	1
SURGE ARRESTOR – DETECTOR	EACH	–
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	8
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.	200
MULTI–CONDUCTOR CABLE NO.14 AWG 7/c	LIN.FT.	1900
MULTI–CONDUCTOR CABLE NO.14 AWG 5/c	LIN.FT.	3250
MULTI–CONDUCTOR CABLE NO.14 AWG 3/c	LIN.FT.	150
SHEILDED DETECTOR LEAD–IN NO.14 AWG 2/c	LIN.FT.	–
CONDUIT 1"(PVC)	LIN.FT.	–
CONDUIT 1 1/2"(RGC)	LIN.FT.	70
CONDUIT 2"(PVC)	LIN.FT.	666
CONDUIT 2"(RGC)	LIN.FT.	142
CONDUIT 3"(RGC)	LIN.FT.	561
#8 AWG GROUND (GREEN)	LIN.FT.	1000
STREET NAME SIGN	EACH	4
VIDEO DETECTION CAMERA (VANTAGE OZ2), MOUNTING HARDWARE	EACH	4
VIDEO DETECTION UNIT (VANTAGE EDGE MODULE)	EACH	1ϕ
VIDEO POWER CABLE #16 A.W.G. 3/C	LIN.FT.	2000
VIDEO CABLE 75 OHM COAXIAL (BELDON #8281 OR APPROVED EQUAL)	LIN.FT.	2000
TV MONITOR	EACH	1
ITERIS LENS ADJUSTMENT UNIT	EACH	1
VIDEO SYSTEM PROGRAMMING UNIT	EACH	1

ϕ 4 Modules required

–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

CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E.– ACTING CITY ENGINEER
21ST STREET NORTH AND REGENCY LAKES

TRAFFIC SIGNAL WIRING AND QUANTITIES

CITY OF WICHITA PROJECT NO. 472–83954

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

Designed by	BER	Job No.	04106–001	Sht. 4 of 8
Drawn by	SAW	Date	MARCH 2004	

DSNR: BER OPER: SAW SCALE: 1=40.00
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