

TRAFFIC SIGNAL INSTALLATION

BID ITEM	QUANTITY	UNIT
TRAFFIC SIGNAL INSTALLATION	LUMP SUM	LUMP SUM
VIDEO DETECTION SYSTEM	LUMP SUM	LUMP SUM

CHART A SIGNAL SUMMARY

NO. WAYS	NO. SECTIONS (per face)	SIGNAL FACE ARRANGEMENT	MOUNTING TYPE	QUANTITY
	5	I	RIGID MAST ARM	4
	3	A	RIGID MAST ARM	7
	3	A	VERTICAL BRACKET	4
			VERTICAL BRACKET	

CHART B TRAFFIC SIGNAL POLES

STATION	ARM SIZE	NO. OF SIGNALS ON ARM	SIGNAL SPACING
137+33.04	37'	2	27.7', 36.7'
137+73.87	46'	3	24.6', 36.6', 45.6'
138+70.35	58'	3	36.2', 48.2', 57.2'
138+72.12	46'	3	25.5', 36.5', 45.5'
137+33.60	-	1	-
137+82.85	-	1	-

SERVICE BOX SUMMARY

STATION	DIST.-SIDE
137+28.53	40.14'-LT
137+30.96	53.53'-RT
137+73.10	75.78'-RT
137+81.39	53.76'-LT
138+67.54	64.00'-RT
138+69.07	58.88'-LT

JUNCTION BOX SUMMARY

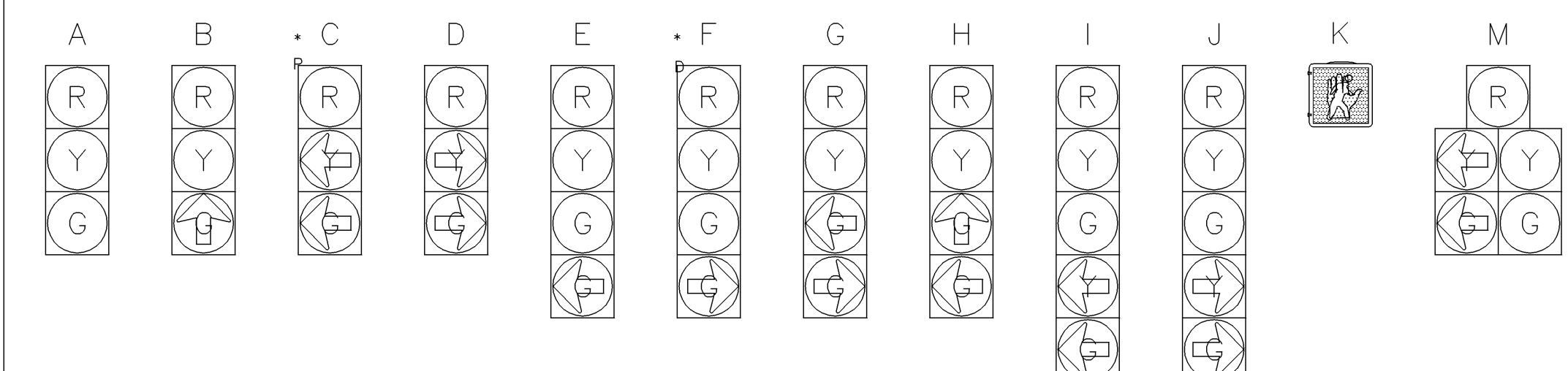
STATION	DIST.-SIDE

CHART C

CONDUIT	TRENCHED	PUSHED
3/4"		
1"		
1-1/4"		
2"	228.2'	256.6'
3"	217.0'	308.8'

CHART D STREET NAME SIGN SUMMARY

LEGEND	SIZE
Ridge Rd	60" x 18"
29th St N	66" x 18"



12" lenses - vehicular and pedestrian

BILL OF MATERIALS

ITEM	UNIT	QUANT.
POLE MOUNTED CONTROLLER & CABINET	EACH	5
PEDESTAL MOUNTED CONTROLLER & CABINET	EACH	5
PAD MOUNTED CONTROLLER & CABINET	EACH	3
TRAFFIC SIGNAL HEAD (SEE CHART A) W/ MOUNTING HARDWARE	EACH	5
TRAFFIC SIGNAL POLE (SEE CHART B) STEEL	EACH	3
TRAFFIC SIGNAL POLE (SEE CHART B) ALUMINUM	EACH	5
PEDESTRIAN PEDESTAL ALUMINUM 15'	EACH	3
CONCRETE CONTROLLER PAD	EACH	5
CONCRETE FOOTING - PEDESTAL	EACH	5
CONCRETE FOOTING - POLE	EACH	3
CONDUIT ELBOW 90	EACH	5
CONDUIT ELBOW 90 3"	EACH	3
BACK PLATE 5" 3 SECTION	EACH	5
BACK PLATE 5" 4 SECTION	EACH	3
BACK PLATE 5" 5 SECTION	EACH	5
TERMINAL BLOCK	EACH	5
SERVICE BOX	EACH	3
JUNCTION BOX	EACH	5
GROUND ROD & CLAMP	EACH	3
CONDUIT CLAMP	EACH	5
TRAFFIC SIGNAL LAMP 150 watt	EACH	3
TRAFFIC SIGNAL LAMP 67 watt	EACH	5
CLASS 4, WOOD POLE	EACH	5
ENTRANCE HEAD	EACH	3
CIRCUIT BREAKER & BOX AMP	EACH	5
GUY WIRE GUARD	EACH	3
GUY WIRE CLAMP	EACH	5
THIMBLE EYE ANCHOR ROD	EACH	3
PEDESTRIAN PUSHBUTTON W/SIGN	EACH	3
PEDESTRIAN INDICATOR HEAD	EACH	5
VIDEO COMM./POWER CABLE (BELDEN 9556 OR APP. EQUAL)	LIN. FT.	850.4'
COMMUNICATION CABLE 6 PAIR NO. 19 A.W.G.	LIN. FT.	-
DETECTOR LOOP WIRE NO. 14 A.W.G 1/c (TYPE THHN)	LIN. FT.	-
LEAD-IN WIRE NO. 6 A.W.G. 1/c (TYPE THHN)	LIN. FT.	-
MULTI-CONDUCTOR CABLC NO. 14 A.W.G. 5/c	LIN. FT.	1161.8'
MULTI-CONDUCTOR CABLE NO. 14 A.W.G. 7/c	LIN. FT.	1963.8'
MULTI-CONDUCTOR CABLE NO. 14 A.W.G. 2/c	LIN. FT.	-
SHIELDED DETECTOR LEAD-IN NO. 16 A.W.G. 2/c	LIN. FT.	-
CONDUIT 3/4"	SEE CHART C	LIN. FT. -
CONDUIT 1"	SEE CHART C	LIN. FT. -
CONDUIT 1-1/4"	SEE CHART C	LIN. FT. -
CONDUIT 2"	SEE CHART C	LIN. FT. 484.8'
CONDUIT 3"	SEE CHART C	LIN. FT. 525.8'
STANDARD IC #8 (GROUND)	LIN. FT.	679.2'
TETHER WIRE 1/4" ASTM A475 Siemens-Martin Grade Min.	LIN. FT.	-
REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT **	L. S.	-
STREET NAME SIGNS - SEE CHART D	EACH	4
LEFT TURN YIELD ON GREEN W/ MOUNTING HARDWARE (R10-12)	EACH	4
LIGHTING DISTRIBUTION CABLE NO. 8 A.W.G. 2/c	LIN. FT.	850.4'

- Quantities For Information Only -

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.

* Subscript "P" indicates programmed signals. Subscript "D" indicates dual-mode green/yellow arrow section.

** Removal of existing traffic signal equipment shall include removal of foundations, service boxes, and junction boxes. See construction traffic control regarding removal of existing signals.

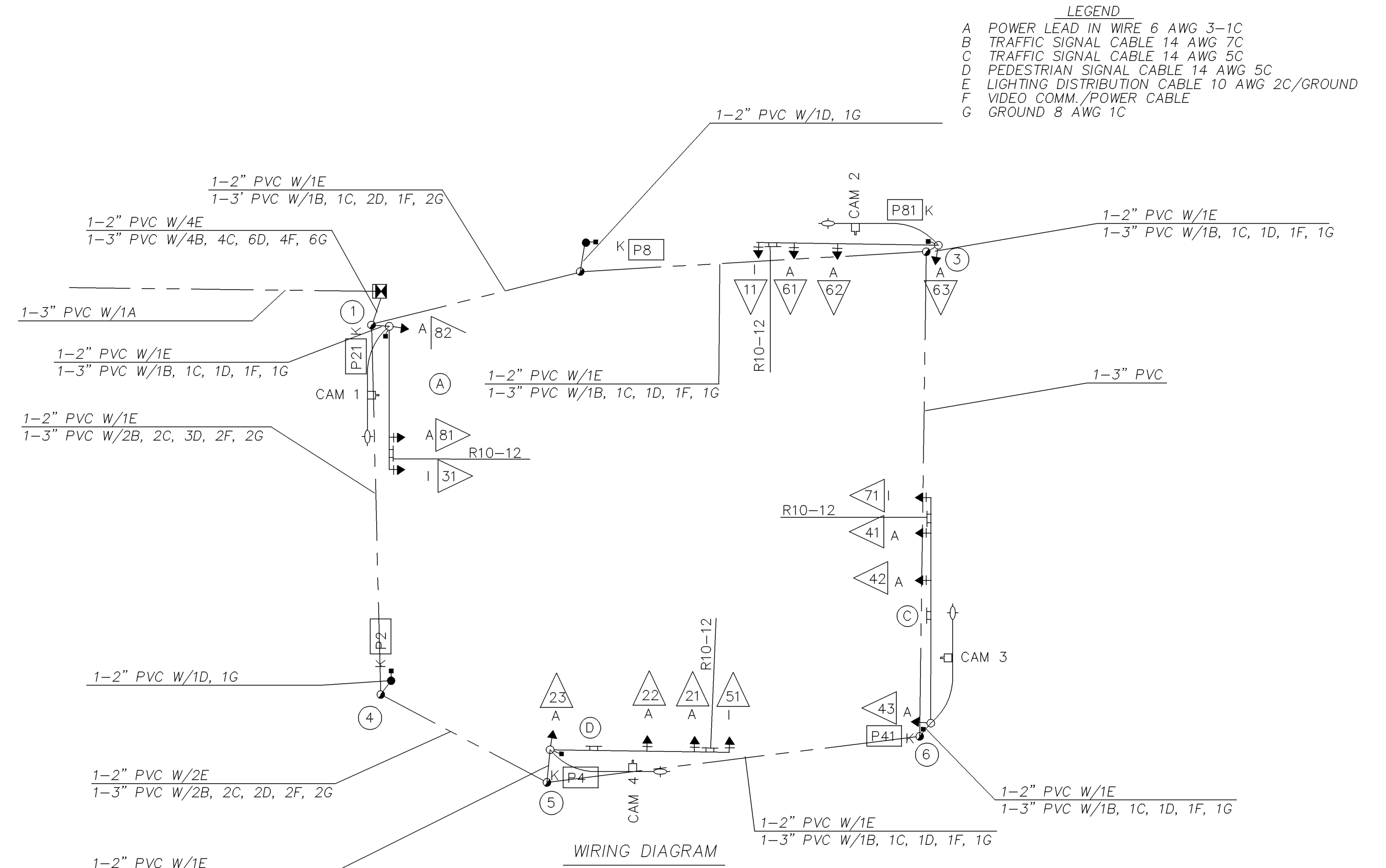
PRELIMINARY TIMINGS

Interval	Phase							
	1	2	3	4	5	6	7	8
Walk		5.0		5.0		5.0		5.0
Flash Don't Walk		15.0		4		6		8
Minimum	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Extension	1.5	4.0	1.5	4.0	1.5	4.0	1.5	4.0
Max. Extension	10.0	22.0	4.5	20.5	4.0	28.0	4.0	21.0
Yellow	3.5	4.0	3.5	4.0	3.5	4.0	3.5	4.0
Red Clear	0.5	1.0	0.5	1.0	0.5	1.0	0.5	1.0

LOOP OPERATION CHART

Camera No. (Pole #)	Detection Zone	Mode	Size (ft)	Phase Called	Phase Extended	Delay/Stretch Timer	Initial Setting (sec.)
1	31	P	6 x 50	3	3		
1	81	P	6 x 30	8	8	81	7.0
1	82	Pulse	6 x 6	8	8		
2	11	P	6 x 50	1	1		
2	61,62	P	6 x 50	6	6		
2	63,64,65,66	Pulse	6 x 6	6	6		
3	71	P	6 x 50	7	7		
3	41,42	P	6 x 50	4	4	42	7.0
3	43,44,45,46	Pulse	6 x 6	4	4		
4	51	P	6 x 50	5	5		
4	21,22	P	6 x 50	2	2		
4	23,24,25,26	Pulse	6 x 6	2	2		

P = Presence



NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1	5/3/99	REPLACED "L" FACE WITH "K" PEDESTRIAN SYMBOLS	LRB	

KANSAS DEPARTMENT OF TRANSPORTATION

SIGNAL QUANTITIES SHEET

SHEET NO.	OF	SCALE	APP'D
DESIGNED		DETAILED	QUANTITIES
DESIGN CK.		DETAIL CK.	QUAN. CK.
			TRACED
			TRACE CK.