



**DETECTOR CHART**

LOOP DETECTORS

DESIGNATION	PHASE	SIZE (FT.)	FUNCTION	DISTANCE FROM STOP BAR
D1-1	1	4-6'X6'	1	-
D1-2	1	4-6'X6'	1	-
D2-1	2	1-6'X6'	1	400'
D2-2	2	1-6'X6'	1	400'
D3-1	3	2-6'X6'	1	5' AND 35'
D3-2	3	2-6'X6'	1	5' AND 35'
D4-1	4	1-6'X6'	1	120'
D4-2	4	2-6'X6'	1	5' AND 20'
D5-1	5	4-6'X6'	1	-
D6-1	6	1-6'X6'	1	400'
D6-2	6	1-6'X6'	1	400'
D7-1	7	2-6'X6'	1	5' AND 35'
D8-1	8	1-6'X6'	1	120'
D8-2	8	2-6'X6'	1	5' AND 20'
D8-3	8	3-6'X6'	2	-

1) CALL AND EXTEND DETECTOR  
2) DELAY CALL, IMMEDIATE EXTEND

**LEGEND**

SIGNAL BASE NO. 2

SIGNAL FACE NO. 8-1

CONTROLLER AND CABINET

HANDHOLE

RIGID STEEL CONDUIT (RSC)

SIGNAL FACE WITH BACKGROUND SHIELD

PEDESTRIAN INDICATIONS

PEDESTRIAN PUSH BUTTON ON POLE

TRAFFIC SIGNAL POLE AND MAST ARM

MAST ARM AND LUMINAIRE

SOURCE OF POWER

PEDESTRIAN CROSSING STRIPING

1	TYPE PA100-A-45-D40-9 1-ONE WAY SIGNAL (OVERHEAD), END MOUNTED 1-ONE WAY SIGNAL (OVERHEAD), MID MAST ARM MOUNTED 12' FROM END 2-TYPE 10B-POLE MOUNTED AT 0° AND 270° LUMINAIRE AT 350°-200 WATT HPS W/PEC/CH.SW. 2-PEDESTRIAN PUSH BUTTONS W/2-PEDESTRIAN INSTRUCTION SIGNS (R10-4C) EXTEND INTO INP. HH#5 : 3"RSC 2-12/C#12 2-3/C#12 2-1/C#10
2	TYPE 2D, INPLACE PEDESTAL POLE, BASE & FOUNDATION INPLACE 1-PEDESTRIAN PUSH BUTTON WITH PEDESTRIAN INSTRUCTION SIGN (R10-4C) EXTEND INTO HH#9 : 3"RSC 1-12/C#12 2-3/C#12
3	TYPE P90-A-35-D40-9, INPLACE 1-ONE WAY SIGNAL (OVERHEAD), END MOUNTED, INPLACE 1-ONE WAY SIGNAL (OVERHEAD), MID MAST ARM MOUNTED 11' FROM END, INPLACE 1-TYPE 20C-POLE MOUNTED AT 270° LUMINAIRE AT 350°-200 WATT HPS W/PEC/CH.SW. (INPLACE) 2-PEDESTRIAN PUSH BUTTONS W/2-PEDESTRIAN INSTRUCTION SIGNS (R10-4C) EXTEND INTO INP. HH#10 : 3"RSC (INP.) 2-12/C#12 2-3/C#12 2-1/C#10
4	TYPE P90-A-35-D40-9, END MOUNTED 1-ONE WAY SIGNAL (OVERHEAD), END MOUNTED 18' FROM END 1-ONE WAY SIGNAL (OVERHEAD), MID MAST ARM MOUNTED AT 0° 1-TYPE 10B, INPLACE-REMOVE EXISTING PED. HEAD. LUMINAIRE AT 350°-200 WATT HPS W/PEC/CH.SW. 1-PEDESTRIAN PUSH BUTTON WITH PEDESTRIAN INSTRUCTION SIGN (R10-4C) EXTEND INTO INP. HH#15 : 3"RSC (INP.) 2-12/C#12 1-3/C#12 2-1/C#10
5	TYPE 2A, INPLACE PEDESTAL POLE, BASE & FOUNDATION INPLACE EXTEND INTO HH#14 : 3"RSC 1-12/C#12
6	TYPE PA100-A-40-D40-9 1-ONE WAY SIGNAL (OVERHEAD), END MOUNTED 1-ONE WAY SIGNAL (OVERHEAD), MID MAST ARM MOUNTED 12' FROM END 1-TYPE 10A-POLE MOUNTED AT 0° 1-TYPE 10B-POLE MOUNTED AT 270° LUMINAIRE AT 350°-200 WATT HPS W/PEC/CH.SW. 1-PEDESTRIAN PUSH BUTTON WITH PEDESTRIAN INSTRUCTION SIGN (R10-4C) EXTEND INTO HH#1 : 3"RSC 2-12/C#12 1-3/C#12 4-1/C#10

Ⓢ EQUIPMENT PAD (SEE DETAIL)  
CONTROLLER AND CABINET (SEE DETAIL)  
EXTEND INTO HH1: 4"RSC, 5-12/C#12, 2-3/C#12, AND 4-2/C#14  
EXTEND INTO HH2: 4"RSC, 5-12/C#12, 6-3/C#12, AND 11-2/C#14;  
2"RSC; 6 PR. #19  
PAD MOUNTED METER AND DISCONNECT  
EXTEND INTO HH1 FROM DISCONNECT 1-1/4"RSC WITH 4-1/C#10,  
2-1/C#6 AND 1-1/C#6 BR.GR.  
DISCONNECT TO METER: 1-1/4"RSC WITH 3-1/C#6  
DISCONNECT TO CABINET: 1-1/4"RSC WITH 2-1/C#6 AND 1-1/C#6  
BR. GR.  
EXTEND FROM METER: 2"RSC STUB OUT FOR POWER.

**SIGNAL INDICATION CHART**

FACE	FLASH	PHASE	TYPE AND SIZE IN INCHES						
			R	Y	G	R	Y	G	
1-1		R	1	-	-	-	12	12	12
1-2		R	1	-	-	-	12	12	12
2-1		R	2	12	12	12	-	-	-
2-2		R	2	12	12	12	-	-	-
2-3		R	2	12	12	12	-	-	-
3-1		R	3	-	-	-	12	12	12
3-2		R	3	-	-	-	12	12	12
4-1		R	4	12	12	12	-	-	-
4-2		R	4	12	12	12	-	-	-
5-1		R	5	-	-	-	12	12	12
6-1		R	6	12	12	12	-	-	-
6-2		R	6	12	12	12	-	-	-
6-3		R	6	12	12	12	-	-	-
7-1		R	7	-	-	-	12	12	12
7-2		R	7	-	-	-	12	12	12
8-1		R	8	12	12	12	-	-	-
8-2		R	8	12	12	12	-	-	-

- NOTES
- SEE SPECIAL PROVISIONS FOR Mn/DOT FURNISHED EQUIPMENT.
  - PEDESTRIAN INDICATIONS SHALL BE 12" X 12".
  - ALL SIGNAL FACES SHALL HAVE BACKGROUND SHIELDS.
  - ALL HANDHOLES SHALL BE PVC HANDHOLES WITH TYPE C COVERS, EXCEPT ALL HANDHOLES LOCATED IN SIDEWALKS, MEDIANS OR OTHER PAVED SURFACES SHALL HAVE TYPE LD COVERS.
  - EACH LUMINAIRE SHALL HAVE A PHOTO-ELECTRIC CELL AND CHECK SWITCH.
  - WHERE INDICATED, THE CONTRACTOR SHALL ADJUST EXISTING HANDHOLES TO THE ELEVATION OF THE NEW SURFACE AS DIRECTED BY THE ENGINEER.
  - EXISTING MAST ARM SIGNING SHALL BE SALVAGED AND REINSTALLED ON NEW MAST ARMS IN CORRESPONDING LOCATIONS, AS DIRECTED BY THE ENGINEER.
  - RELOCATE EXISTING GUARDPOSTS IN T.H.169 MEDIUM AS DIRECTED BY THE ENGINEER.

INCLUDED FOR INFORMATIONAL PURPOSES ONLY

RECORD PLAN  
JANUARY 1996

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

*George M. Stumpfl*  
DATE 4/19/94 REG. NO. 1876

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

*George M. Stumpfl*  
DATE 4/19/94 REG. NO. 21849



1526 ENERGY PARK DRIVE  
ST. PAUL, MINNESOTA 55108  
(612) 444-4389

9800 SHELARD PARKWAY  
MINNEAPOLIS, MINNESOTA 55441  
(612) 546-0432

DATE	DESCRIPTION	DESIGNED	GMS
6-13-94	MANDOT COMMENTS	CHECKED	MRF
		DRAWN	

GRAPHIC SCALE  
0 HORIZ 30  
0 VERT 5

CITY OF ELK RIVER  
INTERSECTION LAYOUT  
SYSTEM "C"  
T.H. 169 AT SCHOOL STREET  
S.A.P. 204-010-02/204-107-04

DATE APRIL 1994 SHEET 22 OF 22 SHEETS PROJECT NO. 230-216