

MATCHLINE "B"

MATCHLINE "D"

2" RSC
2-2/C#14
*1-6/C FIBER OPTIC CABLE
(INTERCONNECT)
*1-1/C#14 (INTERCONNECT)
TO TH 242 AT ULYSSES ST.

3" RSC
2-12/C#12
1-5/C#12
4-3/C#12
8-2/C#14
1-3/C#20

3" RSC
1-12/C#12
1-5/C#12
2-3/C#12
8-2/C#14
1-3/C#20

4" RSC (BY OTHERS)
F&I: 6-12/C#12
4" RSC (BY OTHERS)
F&I: 1-5/C#12
8-3/C#12
10-2/C#14
3-3/C#20
*1-6/C FIBER
*1-1/C#14
(INTERCONNECT)

4" RSC
6-12/C#12
4" RSC
1-5/C#12
8-3/C#12
10-2/C#14
3-3/C#20
*1-6/C FIBER
*1-1/C#14
(INTERCONNECT)

4" RSC (BY OTHERS)
6-12/C#12
4" RSC (BY OTHERS)
1-5/C#12
6-3/C#12
10-2/C#14
3-3/C#20
*1-6/C FIBER
*1-1/C#14
(INTERCONNECT)

4" RSC (BY OTHERS)
F&I: 2-12/C#12
1-5/C#12
6-3/C#12
10-2/C#14
1-3/C#20
*1-6/C FIBER
*1-1/C#14
(INTERCONNECT)

4" RSC (BY OTHERS)
F&I: 2-12/C#12
1-5/C#12
4-3/C#12
10-2/C#14
1-3/C#20
*1-6/C FIBER
*1-1/C#14 (INTERCONNECT)

3" RSC
1-12/C#12
1-3/C#12
4-2/C#14

3" RSC
1-12/C#12
3-3/C#12
6-2/C#14
*1-6/C FIBER
*1-1/C#14 (INTERCONNECT)

3" RSC
1-12/C#12
3-3/C#12
6-2/C#14
*1-6/C FIBER
*1-1/C#14 (INTERCONNECT)

2" RSC
1-3/C#12
2-2/C#14

2" RSC
2-2/C#14
*1-6/C FIBER OPTIC CABLE
(INTERCONNECT)
*1-1/C#14 (INTERCONNECT)
TO CO. RD. 14 AT ABERDEEN ST.

SEE SHEET FOR GENERAL AND POLE NOTES

DRAWN BY: MAS/SJK	REVISED BY:	REVISED BY:	AS BUILT BY:
CKD BY: MPG	CKD BY:	CKD BY:	CKD BY:
DATE: 12/28/06	DATE:	DATE:	DATE:
SYSTEM ID: 21174	T.E.		
METER ADDRESS:	T.E.		
MASTER ID:	T.E.		
S.A.P. NO.			

CERTIFIED BY: *Michael P. Librosky*
LICENSED PROFESSIONAL ENGINEER
STATE PROJ. NO. 0208-123 (T.H. 65)

LIC. NO. 19863 DATE: 2/2/2007
SHEET NO. 665 OF 872 SHEETS

INTERSECTION LAYOUT
TRAFFIC CONTROL SIGNAL SYSTEM "B"
TH 65 AT TH 242
IN CITY OF BLAINE, ANOKA COUNTY

A E.B. STA. 235+17, 83' RT.
 INSTALL CONTROLLER CABINET (FURNISHED BY ANOKA COUNTY)
 CABINET FOUNDATION
 3/4" PVC CONDUIT STUBBED OUT
 (CAPPED AT BOTH ENDS FOR FUTURE TELEPHONE LINE)
 F&I: 2-3" RSC STUBBED OUT (THREADED AND CAPPED BOTH ENDS)
 EXTEND INTO HH 3:
 METERED SIGNAL SERVICE
 2" RSC
 3-1/C#6
 EXTEND INTO HH 4:
 3" RSC
 2-12/C#12
 1-5/C#12
 2-3/C#12
 10-2/C#14
 1-3/C#20
 * 1-6/C FIBER OPTIC CABLE (INTERCONNECT)
 * 1-1/C#14 (INTERCONNECT)
 EXTEND INTO HH 26: EXTEND INTO HH 26:
 3" RSC 3" RSC
 1-5/C#12 6-12/C#12
 6-3/C#12
 10-2/C#14
 3-3/C#20
 * 1-6/C FIBER OPTIC CABLE (INTERCONNECT)
 * 1-1/C#14 (INTERCONNECT)

B E.B. STA. 235+22, 94' RT.
 F&I: SERVICE CABINET
 F&I: CABINET FOUNDATION
 EXTEND INTO HH 1 VIA HH 2:
 2" RSC
 3-1/C#2
 EXTEND INTO HH 3:
 2" RSC
 METERED SIGNAL SERVICE
 3-1/C#6
 METERED LUMINAIRE SERVICE
 4-3/C#12
 BETWEEN HH 26 AND HH 4:
 2" RSC
 2-3/C#12
 BETWEEN HH 26 AND HH 27:
 2" RSC
 2-3/C#12
 BETWEEN HH 3 AND HH 26:
 2" RSC
 4-3/C#12

GENERAL NOTES:

- 1) LOCATION OF POLES, CONTROLLER CABINET, SERVICE CABINET, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY ANOKA COUNTY TRAFFIC PERSONNEL.
- 2) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
- 3) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 3/4" N.M.C. SEE SPECIAL PROVISIONS.
- 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS.
- 5) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
- 6) EACH PEDESTRIAN INDICATION SHALL BE ONE SECTION "FILLED" HAND/WALKING PERSON INDICATIONS.
- 7) ALL VEHICLE SIGNAL INDICATIONS, AND ALL PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED.
- 8) SEE SPECIAL PROVISIONS AND DETAILS REGARDING SIGNS TO BE FURNISHED & INSTALLED BY CONTRACTOR (INCIDENTAL TO ITEM NO. 2565 FOR THIS SIGNAL SYSTEM).
- 9) A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED AS INDICATED
- 10) CONTRACTOR SHALL COORDINATE ALL TRAFFIC SIGNAL INSTALLATION WORK WITH ROAD CONSTRUCTION TO BE COMPLETED BY OTHERS AS PART OF ENTIRE PROJECT.
- 11) ALL MAST ARM POLE AND PEDESTAL POLE MOUNTED VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE MOUNTED USING ONE-WAY SIGNAL HEAD MOUNTS. SEE SPECIAL PROVISIONS.
- 12) ITEMS DENOTED BY (INTERCONNECT) SHALL BE PAID FOR AS PART OF THE INTERCONNECT SYSTEM PAY ITEM.
- 13) STRIPING IS TO BE COMPLETE BY OTHERS AND PAID FOR SEPARATELY. SEE STRIPING PLAN FOR REFERENCE.
- 14) INTERCONNECT ITEMS ARE DESIGNATED BY * AND ARE PART OF THE INTERCONNECT PAY ITEM.
- 15) BRIDGE MOUNTED SIGNAL ITEMS ARE LABELED "BY OTHERS". AND ARE PAID FOR SEPARATELY. SEE BRIDGE PLAN FOR REFERENCE.
- 16) THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE POWER COMPANY TO ARRANGE FOR THE POWER CONNECTION.

1 E.B. STA. 236+09, 54' RT.
 13' PEDESTAL AND BASE
 PEDESTAL FOUNDATION
 2-ONE WAY SIGNALS POLE MOUNTED
 AT 90° AND 270° (SEE DETAIL)
 1-PEDESTRIAN INDICATION POLE MOUNTED AT 90° (SEE DETAIL)
 1-PEDESTRIAN PUSHBUTTON AND SIGN
 (R10-4b) (IEA. LEFT)
 1-(R9-3a) SIGN FACING POLE #2
 EXTEND INTO HH 7:
 3" RSC
 1-12/C#12
 1-3/C#12

2 W.B. STA. 236+20, 47' LT.
 13' PEDESTAL AND BASE
 PEDESTAL FOUNDATION
 3-ONE WAY SIGNALS POLE MOUNTED
 AT 180°, 270° AND 315° (SEE DETAIL)
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (POLE MOUNTED)
 2-(R9-3a) SIGNS FACING POLES #1 AND #3
 EXTEND INTO HH 9:
 3" RSC
 1-12/C#12
 1-5/C#12
 1-3/C#12
 1-3/C#20

3 W.B. STA. 238+45, 46' LT.
 13' PEDESTAL AND BASE
 PEDESTAL FOUNDATION
 2-ONE WAY SIGNALS POLE MOUNTED
 AT 90° AND 270° (SEE DETAIL)
 2-(R9-3a) SIGNS FACING POLE #2 AND #4
 EXTEND INTO HH 14:
 3" RSC
 1-12/C#12

4 E.B. STA. 238+25, 56' RT.
 13' PEDESTAL AND BASE
 PEDESTAL FOUNDATION
 3-ONE WAY SIGNALS POLE MOUNTED
 AT 180°, 270° AND 315° (SEE DETAIL)
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (POLE MOUNTED)
 1-PEDESTRIAN INDICATION POLE MOUNTED AT 270° (SEE DETAIL)
 1-PEDESTRIAN PUSHBUTTON AND SIGN
 (R10-4b) (IEA. RIGHT)
 1-(R9-3a) SIGN FACING POLE #3
 EXTEND INTO HH 19:
 3" RSC
 1-12/C#12
 1-5/C#12
 2-3/C#12
 1-3/C#20

C S.O.P. GROUND MOUNTED TRANSFORMER TO BE FURNISHED AND INSTALLED BY CONNEXUS ENERGY (LOCATION SHOWN IS APPROXIMATE)
 EXTEND INTO HH 1:
 2" RSC
 3-1/C#2

5 E.B. STA. 237+75, 85' RT.
 13' PEDESTAL AND BASE (PEDESTAL SUPPORT, ANCHORS AND BOLTS BY OTHERS)
 1-PEDESTRIAN INDICATION POLE MOUNTED AT 90°
 1-PEDESTRIAN PUSH BUTTON AND SIGN
 (R10-4b)(IEA.LEFT)
 EXTEND INTO JUNCTION BOX 22 (BY OTHERS):
 1 1/2" RSC (BY OTHERS)
 F&I: 2-3/C#12

6 E.B. STA. 237+27, 54' RT.
 OVERHEAD TRAFFIC SIGNAL SUPPORT (SEE DETAIL)
 10-ONE WAY SIGNALS OVERHEAD
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT PHASES 2&5
 ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT PHASES 6&1
 2- TYPE D SIGNS
 EXTEND INTO JUNCTION BOX 23 (BY OTHERS):
 2-2" RSC (BY OTHERS)
 F&I: 4-12/C#12
 2-3/C#20

7 E.B. STA. 236+66, 76' RT.
 13' PEDESTAL AND BASE (PEDESTAL SUPPORT, ANCHORS AND BOLTS BY OTHERS)
 1-PEDESTRIAN INDICATION POLE MOUNTED AT 270°
 1-PEDESTRIAN PUSH BUTTON AND SIGN
 (R10-4b)(IEA. RIGHT)
 EXTEND INTO JUNCTION BOX 24 (BY OTHERS):
 1 1/2" RSC (BY OTHERS)
 F&I: 2-3/C#12

1 E.B. STA. 235+31, 127' RT.
 1-LIGHTING UNIT TYPE 6B-40
 EXTEND INTO HH 27:
 2" RSC
 2-3/C#12

5 W.B. STA. 239+26, 143' LT.
 1-LIGHTING UNIT TYPE 6B-40
 EXTEND INTO HH 13:
 2" RSC
 1-3/C#12

2 E.B. STA. 235+87, 54' RT.
 1-LIGHTING UNIT TYPE 9-40
 1-LIGHTING BASE TYPE E
 EXTEND INTO HH 7:
 2" RSC
 1-3/C#12

6 W.B. STA. 238+64, 48' LT.
 1-LIGHTING UNIT TYPE 9-40
 1-LIGHTING BASE TYPE E
 EXTEND INTO HH 14:
 2" RSC
 1-3/C#12

3 W.B. STA. 235+92, 47' LT.
 1-LIGHTING UNIT TYPE 9-40
 1-LIGHTING BASE TYPE E
 EXTEND INTO HH 9:
 2" RSC
 2-3/C#12

7 E.B. STA. 238+61, 50' RT.
 1-LIGHTING UNIT TYPE 9-40
 1-LIGHTING BASE TYPE E
 EXTEND INTO HH 16:
 2" RSC
 2-3/C#12

4 W.B. STA. 235+46, 158' LT.
 1-LIGHTING UNIT TYPE 6B-40
 EXTEND INTO HH 12:
 2" RSC
 1-3/C#12

8 E.B. STA. 254+00, 158' RT.
 1-LIGHTING UNIT TYPE 6B-40
 EXTEND INTO HH 21:
 2" RSC
 1-3/C#12

DRAWN BY: MAS/SJK	REVISED BY:	REVISED BY:	AS BUILT BY:	GENERAL AND POLE NOTES TRAFFIC CONTROL SIGNAL SYSTEM "B" TH 65 AT TH 242 IN CITY OF BLAINE, ANOKA COUNTY
CKD BY: MPG DATE: 12/28/06	CKD BY: DATE:	CKD BY: DATE:	CKD BY: DATE:	
SYSTEM ID: 21174	T.E.			
METER ADDRESS:	T.E.			
MASTER ID:	T.E.			
S.A.P. NO.				
CERTIFIED BY: <i>Michael P. Lubinsky</i> LICENSED PROFESSIONAL ENGINEER				LIC. NO. 19863 DATE: 2/2/2007
STATE PROJ. NO. 0208-123 (T.H. 65)				SHEET NO. 666 OF 872 SHEETS

sys b MATCHLINES CHARTS

FILENAME: S:\TRAFFIC\Signal Design\plans\TH 65\21174\SP 0208-123\System B\System B.dgn

PLOTTED: 13-FEB-2007 05:58

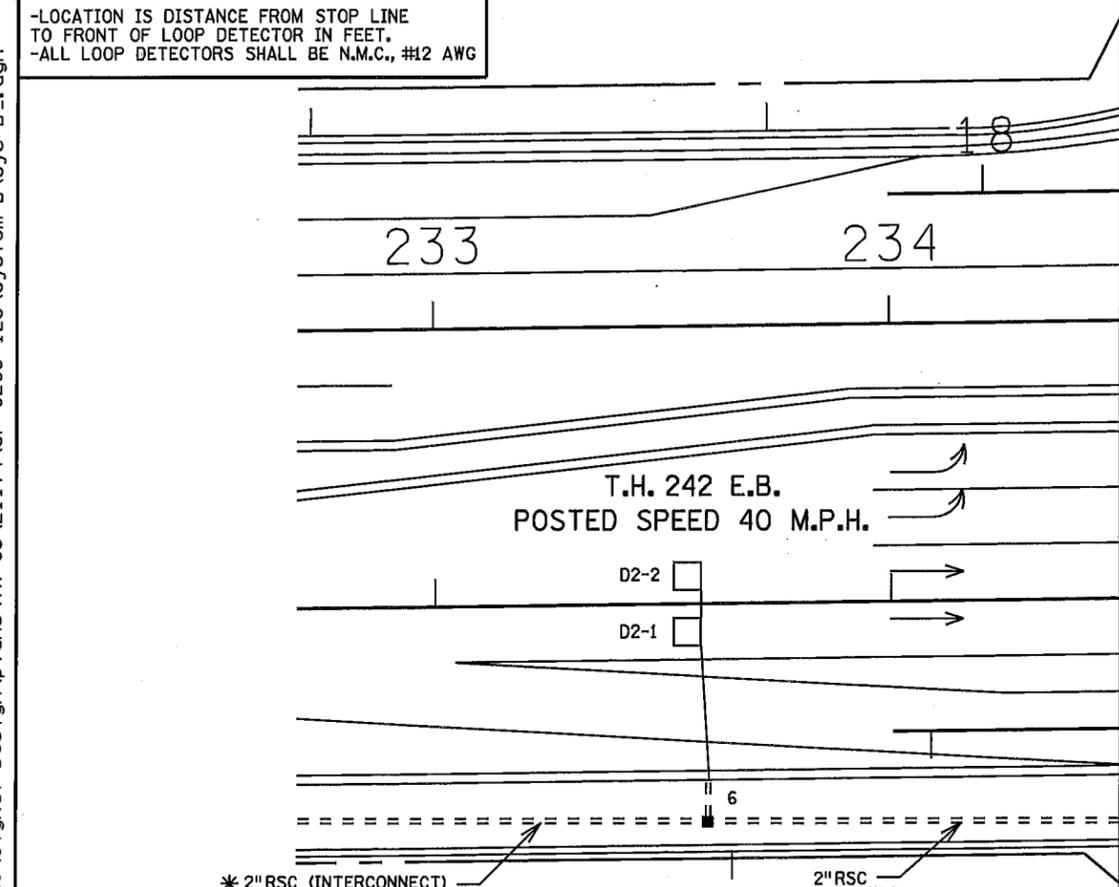
LOOP DETECTOR CHART

NUMBER	SIZE (FT)	LOCATION	FUNCTION
D1-1,D1-2	6X6	40'	
D1-3,D1-4	6X6	10'	
D2-1,D2-2	6X6	250'	
D4-1,D4-2	6X6	120'	
D4-3,D4-4	6X6	5'&14'	
D5-1,D5-2	6X6	40'	
D5-3,D5-4	6X6	10'	
D6-1,D6-2	6X6	250'	
D8-1,D8-2	6X6	120'	
D8-3,D8-4	6X6	5'&14'	

LOOP DETECTORS FUNCTIONS:

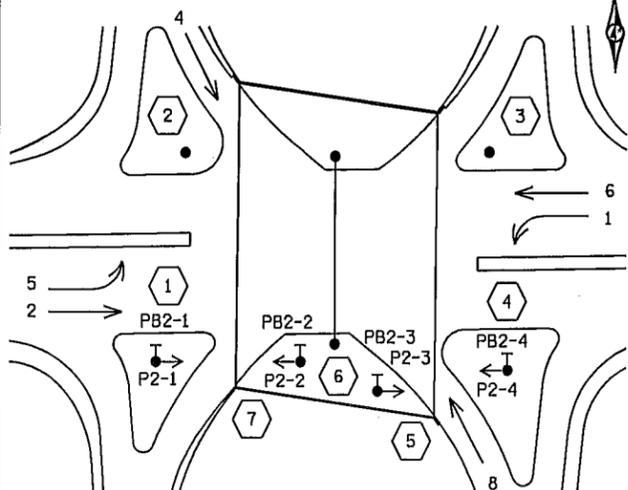
- 1) CALL AND EXTEND
- 2) CALL ONLY
- 3) EXTEND ONLY
- 4) CALL ONLY DENSITY
- 5) DELAYED CALL ONLY
- 6) DELAYED CALL ONLY DENSITY
- 7) DELAYED CALL- IMMEDIATE EXTEND
- 8) CARRY OVER (STRETCH)
- 9) ADVISORY DETECTOR
- 10) SAMPLING DETECTOR
- 11) SPECIAL DETECTOR

-LOCATION IS DISTANCE FROM STOP LINE TO FRONT OF LOOP DETECTOR IN FEET.
 -ALL LOOP DETECTORS SHALL BE N.M.C., #12 AWG



MATCHLINE "B"

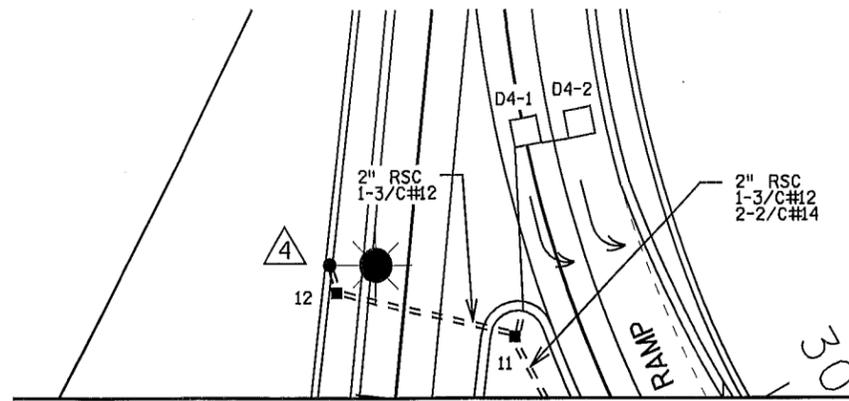
CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED AS SHOWN ABOVE

SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASES.

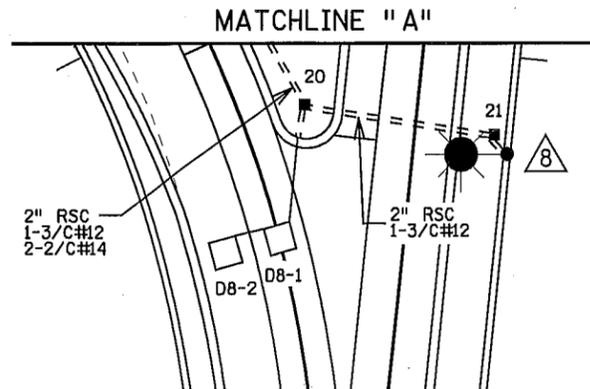


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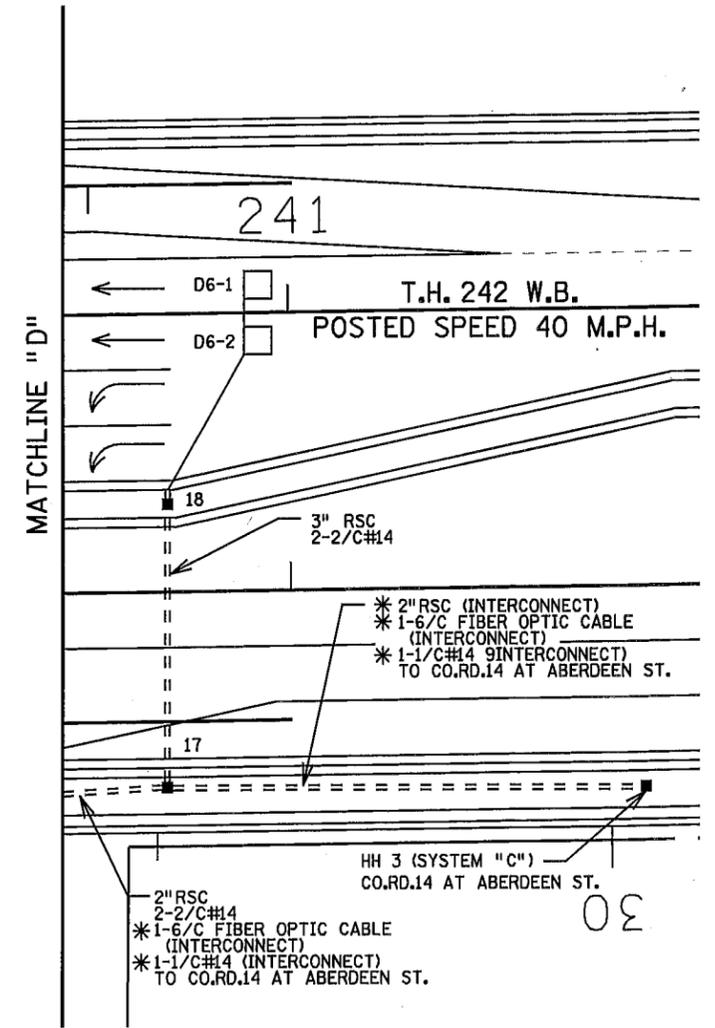


SIGNAL FACES			
FACE	R	Y	G
1-1,1-2,1-3	←	←	←
2-1,2-2,2-3,2-4	●	●	●
4-1,4-2,4-3	←	←	←
5-1,5-2,5-3	←	←	←
6-1,6-2,6-3,6-4	●	●	●
8-1,8-2,8-3	←	←	←

-ALL SIGNAL INDICATIONS SHALL BE 12"
 -ALL SIGNAL INDICATIONS SHALL BE LED
 -ALL SIGNAL FACES SHALL HAVE A BACKGROUND SHIELD



MATCHLINE "A"



MATCHLINE "D"

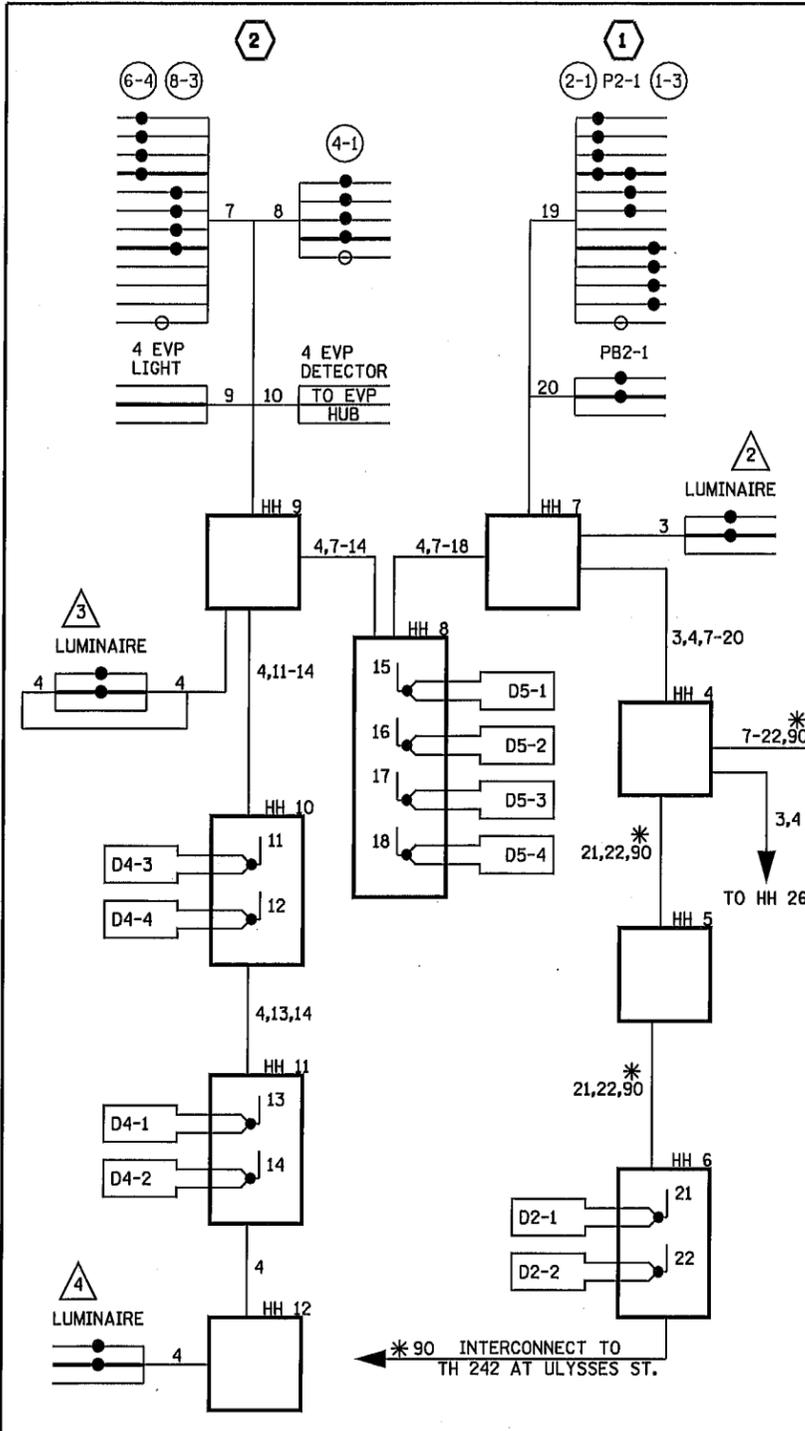
SEE NEXT SHEET FOR GENERAL AND POLE NOTES

DRAWN BY: MAS	REVISED BY:	REVISED BY:	AS BUILT BY:
CKD BY:MPG DATE:12/28/06	CKD BY: DATE:	CKD BY: DATE:	CKD BY: DATE:
SYSTEM ID: 21174	T.E.		
METER ADDRESS:	T.E.		
MASTER ID:	T.E.		
S.A.P. NO.			

MATCHLINES AND CHARTS
 TRAFFIC CONTROL SIGNAL SYSTEM "B"
 TH 65 AT TH 242
 IN CITY OF BLAINE, ANOKA COUNTY

CERTIFIED BY *Michael P. Labinsky* LIC. NO. 19863 DATE: 2/2/2007
 LICENSED PROFESSIONAL ENGINEER

STATE PROJ. NO. 0208-123 (T.H. 65) SHEET NO. 667 OF 872 SHEETS



CONDUCTOR COLOR CODE

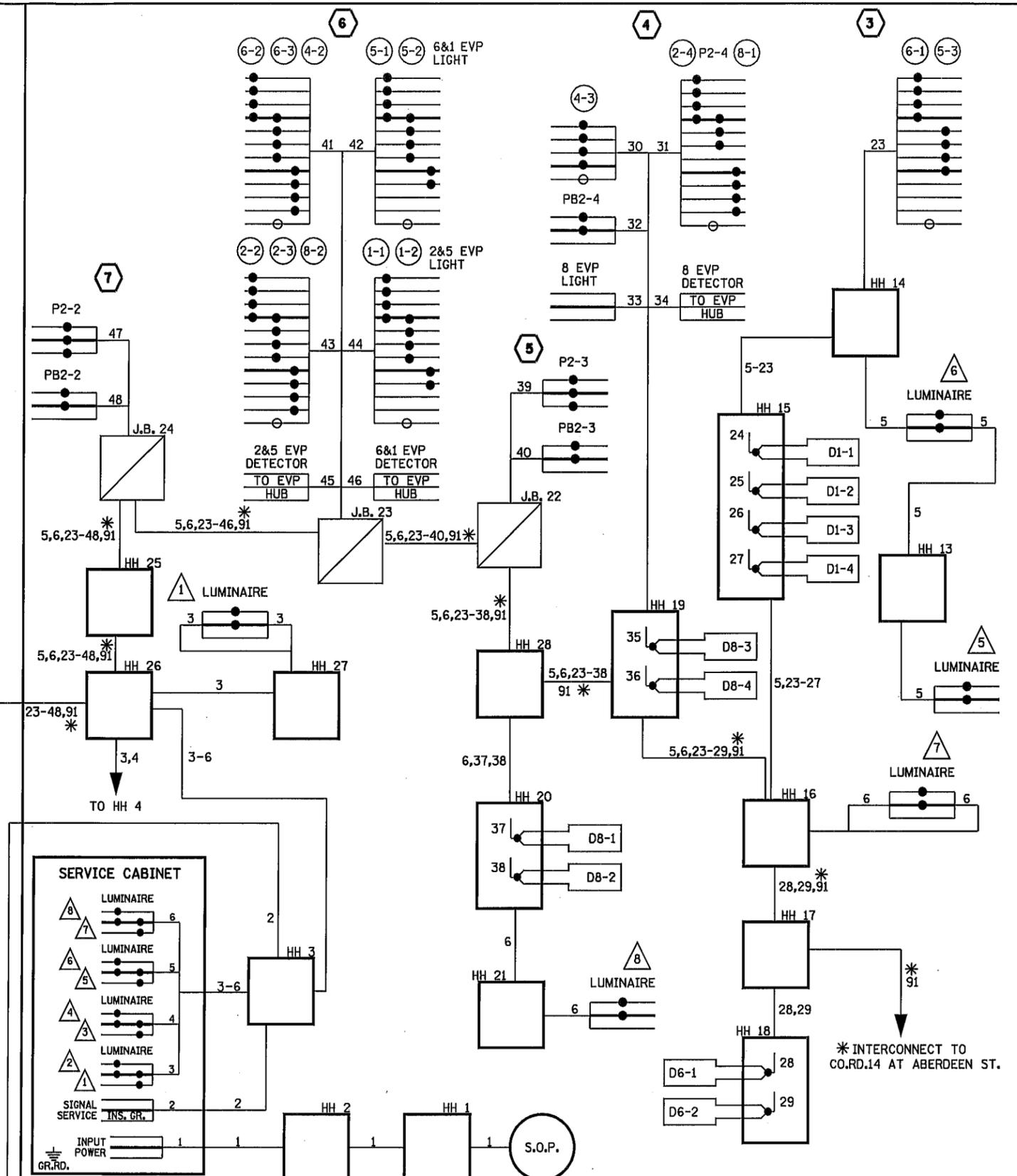
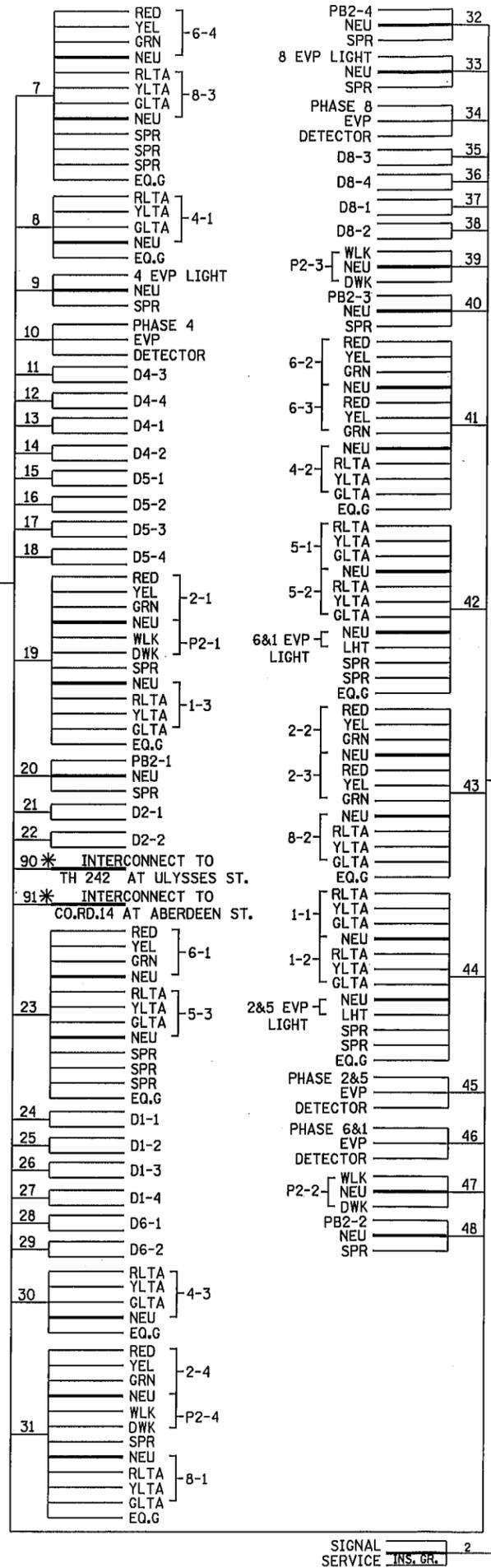
TO SIGNAL CABINET		TO DEVICE	
3/C#20	R OR O WH OR YEL BLK OR BL	12/C#12	R O BL WH R/BLK O/BLK BL/BLK BLK BLK/WH G/BLK G
2/C#14	BLK CLR	5/C#14	R O BL WH BLK
2-1/C	BLK WH	4/C#14	R BL WH BLK
6PR#19		3/C#12	R WH BLK

BASE OF POLE OR PEDESTAL

7/C#14	R O BL WH Y BLK BRN	5-SECTION SIGNAL INDICATION
5/C#14	R O BL WH BLK	3 & 4-SECTION SIGNAL INDICATION
4/C#14	R BL WH BLK	PEDESTRIAN INDICATION
2/C#14	BLK WH	EVP/PB/FLASHER NEU

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

CONTROLLER CABINET



DRAWN BY: MAS	REVISED BY:	REVISED BY:	AS BUILT BY:
CKD BY: MPG	CKD BY:	CKD BY:	CKD BY:
DATE: 12/28/06	DATE:	DATE:	DATE:
SYSTEM ID: 21174	T.E.		
METER ADDRESS:	T.E.		
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CERTIFIED BY: <i>Michael P. Suberby</i>	LIC. NO. 19863	DATE: 2/2/2007	
STATE PROJ. NO. 0208-123 (T.H. 65)		SHEET NO. 668 OF 872 SHEETS	

WIRING DIAGRAM
TRAFFIC CONTROL SIGNAL SYSTEM "B"
 TH 65 AT TH 242.
 IN CITY OF BLAINE, ANOKA COUNTY