

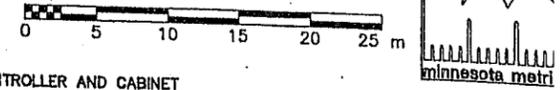
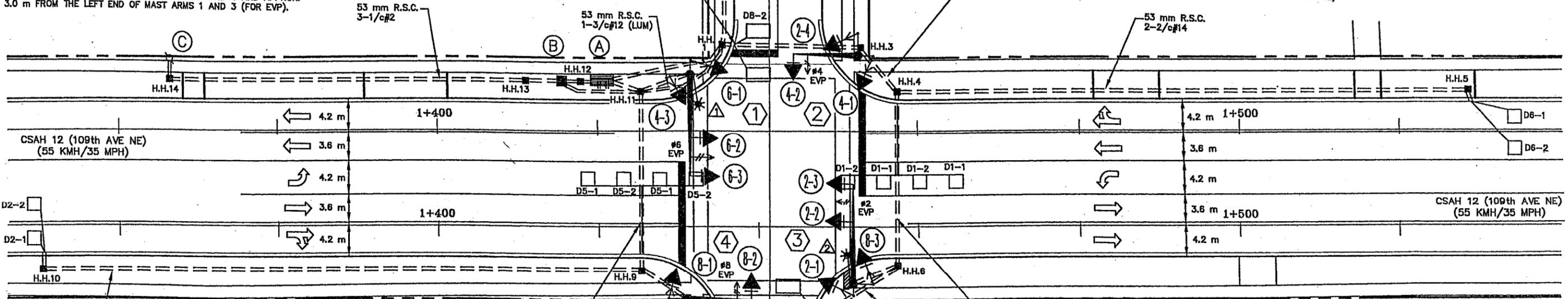
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- NOTES:
- 1) LOCATION OF POLES, CONTROLLER CABINET, SERVICE CABINET, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
  - 2) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
  - 3) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 21 mm N.M.C. SEE SPECIAL PROVISIONS AND DETAILS.
  - 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS, PER Mn/DOT STANDARD PLATE NO. M8114A.
  - 5) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
  - 6) EACH PEDESTRIAN INDICATION SHALL BE A ONE SECTION HAND/WALKING PERSON INDICATION. SEE SPECIAL PROVISIONS.
  - 7) ALL "RED" VEHICLE SIGNAL INDICATIONS AND ALL "HAND" PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS.
  - 8) SEE SPECIAL PROVISIONS AND DETAILS REGARDING SIGN PANELS TO BE FURNISHED AND INSTALLED BY CONTRACTOR.
  - 9) CONTRACTOR SHALL PROVIDE EXTENDED BRACKETS FOR POLE MOUNTED VEHICLE SIGNAL FACES.
  - 10) A 21 mm HALF COUPLING, 21 mm PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED APPROX. 1.2 m FROM THE LEFT END OF MAST ARMS 2 AND 4 AND APPROX. 3.0 m FROM THE LEFT END OF MAST ARMS 1 AND 3 (FOR EVP).

LOOP DETECTORS (N.M.C.)			
NUMBER	SIZE (m)	LOCATION	FUNCTION
D1-1	2-1.7 x 1.7	1.5 m x 10.5 m	7
D1-2	2-1.7 x 1.7	0 m x 6 m	7
D2-1	1.7 x 1.7	80 m	1
D2-2	1.7 x 1.7	80 m	1
D4-1	1.7 x 1.7	30 m	3
D4-2	2-1.7 x 1.7	1.5 m	7
D5-1	2-1.7 x 1.7	1.5 m x 10.5 m	7
D5-2	2-1.7 x 1.7	0 m x 6 m	7
D6-1	1.7 x 1.7	80 m	1
D6-2	1.7 x 1.7	80 m	1
D8-1	1.7 x 1.7	37 m	3
D8-2	2-1.7 x 1.7	1.5 m	7

- 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

NOTE: LOCATION-DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.



- 1) PA100 POLE FOUNDATION  
 TYPE PA100-A-12.2-D12.2-2.7 (DAVIT AT 350°)  
 LUMINAIRE-200 WATT H.P.S. WITH PEC AND CHECK SWITCH  
 2-ONE WAY SIGNALS-OVERHEAD (0 m AND 4.8 m FROM LEFT END OF MAST ARM)  
 2-TYPE 10B-POLE MOUNTED 90° AND 180°  
 2-PEDESTRIAN PUSH BUTTONS  
 TYPE "D" SIGN PANEL (2440 mm x 480 mm)-OVERHEAD (D-1)  
 R10-12 SIGN PANEL (915 mm x 1220 mm)-OVERHEAD (ADJACENT TO 6-3)  
 ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (#8)  
 EXTEND INTO H.H.11:  
 78 mm R.S.C.  
 2-12/c#12  
 3-3/c#12  
 1-3/c#20  
 4-2/c#14

- 78 mm R.S.C.  
 2-12/c#12  
 2-3/c#12  
 1-3/c#20  
 4-2/c#14

- 2) PAB5 POLE FOUNDATION  
 TYPE PAB5-A-7.6  
 ONE WAY SIGNAL-OVERHEAD  
 2-TYPE 10B-POLE MOUNTED 90° AND 180°  
 2-PEDESTRIAN PUSH BUTTONS  
 TYPE "D" SIGN PANEL (2595 mm x 480 mm)-OVERHEAD (D-2)  
 ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (#4)  
 EXTEND INTO H.H.3:  
 78 mm R.S.C.  
 2-12/c#12  
 2-3/c#12  
 1-3/c#20

- A) INSTALL CONTROLLER AND CABINET (FURNISHED BY COUNTY)  
 CABINET FOUNDATION  
 EXTEND INTO H.H.12:  
 METERED SIGNAL SERVICE  
 35 mm R.S.C.  
 3-1/c#8  
 EXTEND INTO H.H.1:  
 103 mm R.S.C.  
 4-12/c#12  
 5-3/c#12  
 2-3/c#20  
 8-2/c#14

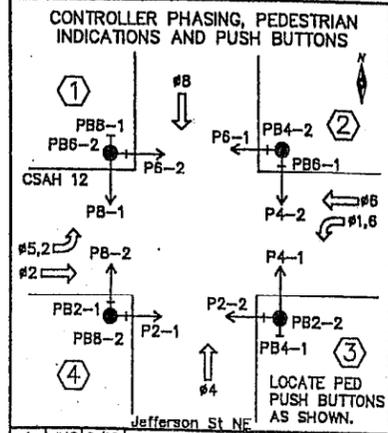
- EXTEND INTO H.H.11:  
 103 mm R.S.C.  
 4-12/c#12  
 5-3/c#12  
 2-3/c#20  
 4-2/c#14
- STUB OUT 1-53 mm R.S.C. AND 1-78 mm R.S.C. FROM CABINET TO SOUTH (THREAD AND CAP BOTH ENDS-FOR FUTURE USE)

- C) INPLACE WOOD POLE (S.O.P.) (AEC)  
 53 mm R.S.C. RISER AND WEATHERHEAD  
 3-1/c#2  
 EXTEND INTO H.H.14:  
 53 mm R.S.C.  
 3-1/c#2

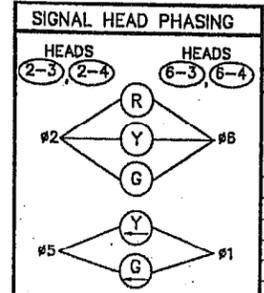
- B) SERVICE CABINET FOUNDATION  
 CABINET FOUNDATION  
 EXTEND INTO H.H.12:  
 METERED SIGNAL SERVICE  
 35 mm R.S.C.  
 3-1/c#8  
 EXTEND INTO H.H.11:  
 UNMETERED STREET LIGHT SERVICE  
 35 mm R.S.C.  
 2-3/c#12 (LUM)  
 EXTEND INTO H.H.13:  
 53 mm R.S.C.  
 3-1/c#2

- 3) PA100 POLE FOUNDATION  
 TYPE PA100-A-12.2-D12.2-2.7 (DAVIT AT 350°)  
 LUMINAIRE-200 WATT H.P.S. WITH PEC AND CHECK SWITCH  
 2-ONE WAY SIGNALS-OVERHEAD (0 m AND 4.8 m FROM LEFT END OF MAST ARM)  
 2-TYPE 10B-POLE MOUNTED 90° AND 180°  
 2-PEDESTRIAN PUSH BUTTONS  
 TYPE "D" SIGN PANEL (2440 mm x 480 mm)-OVERHEAD (D-3)  
 R10-12 SIGN PANEL (915 mm x 1220 mm)-OVERHEAD (ADJACENT TO 2-3)  
 ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (#2)  
 EXTEND INTO H.H.6:  
 78 mm R.S.C.  
 2-12/c#12  
 3-3/c#12  
 1-3/c#20  
 1-3/c#12 (LUM)

- 4) PAB5 POLE FOUNDATION  
 TYPE PAB5-A-7.6  
 ONE WAY SIGNAL-OVERHEAD  
 2-TYPE 10B-POLE MOUNTED 90° AND 180°  
 2-PEDESTRIAN PUSH BUTTONS  
 TYPE "D" SIGN PANEL (2595 mm x 480 mm)-OVERHEAD (D-4)  
 ONE WAY EVP DETECTOR AND LIGHT-OVERHEAD (#8)  
 EXTEND INTO H.H.8:  
 78 mm R.S.C.  
 2-12/c#12  
 2-3/c#12  
 1-3/c#20



- SIGNAL SYSTEM OPERATIONS:  
 - SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.  
 - NORMAL OPERATION SHALL BE 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED/PERMISSIVE LEFT TURN PHASES.  
 - VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.



SIGNAL FACE	ALL SIGNAL INDICATIONS SHALL BE 300 mm.					
	LED R	Y	G	LED R	Y	G
2-1, 2-2	•	•	•			
2-3, 2-4	•	•	•			
4-1, 4-2, 4-3	•	•	•	←	←	
6-1, 6-2	•	•	•			
6-3, 6-4	•	•	•	←	←	
8-1, 8-2, 8-3	•	•	•	←	←	

NO.	BY	DATE	REVISIONS	ITEM	DESIGN	DATE
1	JMG	6/16		RELOCATED CABINETS TO NORTHWEST CORNER		

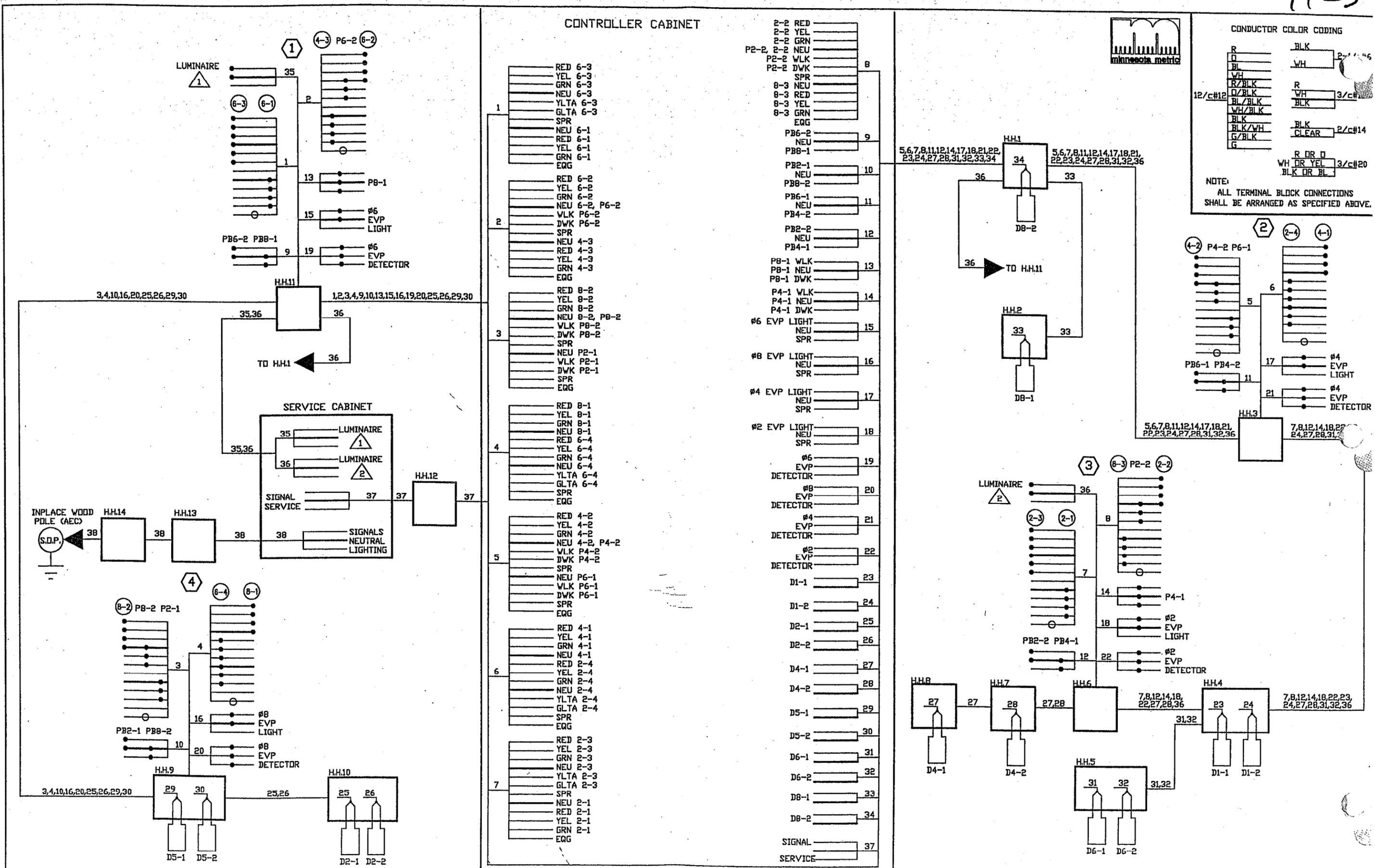
I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of Minnesota.



ANOKA COUNTY, MINNESOTA  
 CITY OF BLAINE  
 STATE AID PROJECT NO. 02-612-08

TRAFFIC SIGNAL SYSTEM  
 INTERSECTION LAYOUT  
 FILE NO. ANOKC9901

7125



1	JMG 6/16	RELOCATE CABINETS, REVISE NUMBERING			
NO.	BY	DATE	REVISIONS	ITEM	DESIGN

I hereby certify that this plan 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.

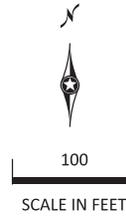
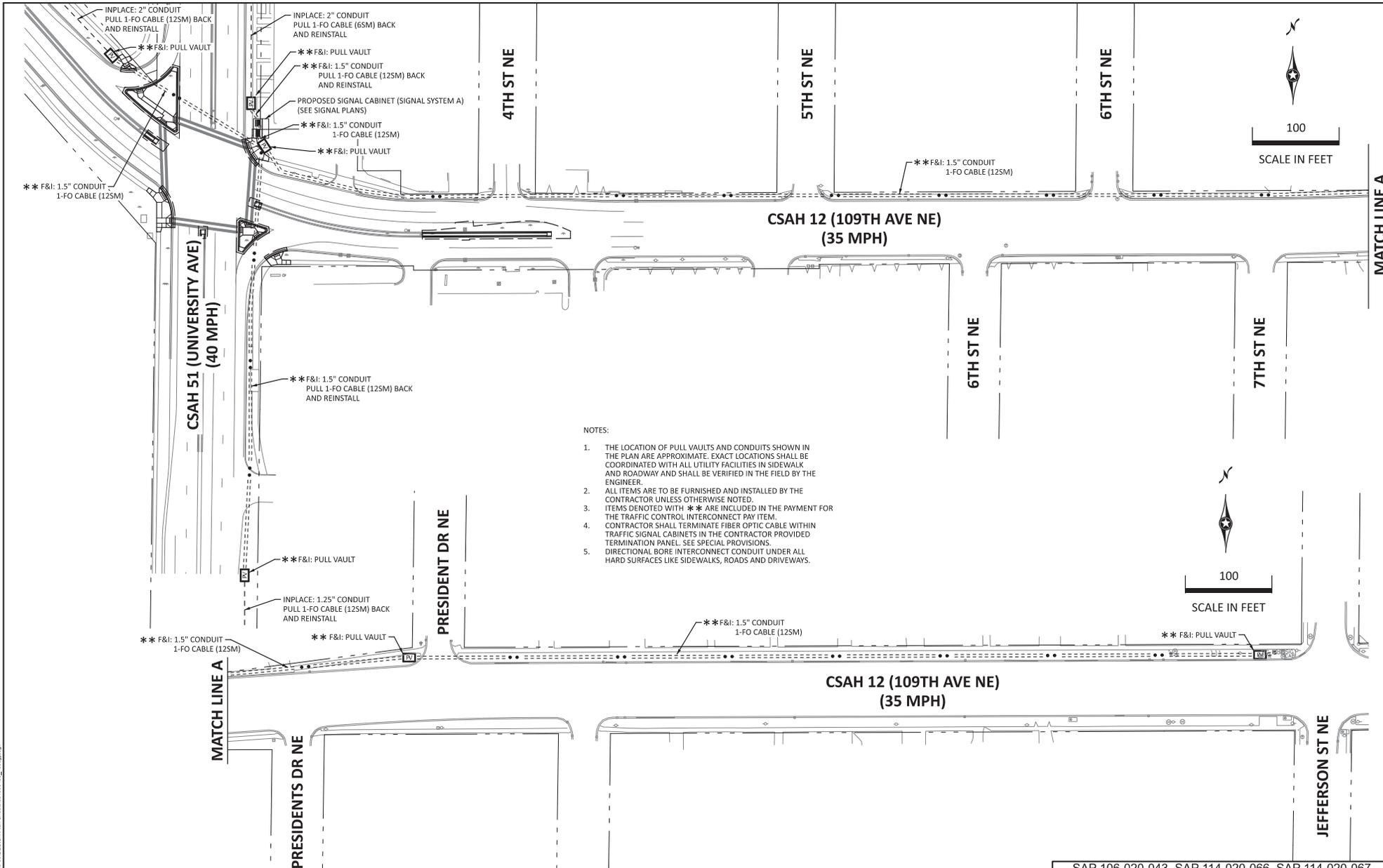
*John M. [Signature]*



**ANOKA COUNTY, MINNESOTA**  
**CITY OF BLAINE**  
 STATE AID PROJECT NO. 02-612-08

**TRAFFIC SIGNAL SYSTEM**  
 FIELD WIRING DIAGRAM

FILE NO.	ANOKC9901
DATE	



- NOTES:
1. THE LOCATION OF PULL VAULTS AND CONDUITS SHOWN IN THE PLAN ARE APPROXIMATE. EXACT LOCATIONS SHALL BE COORDINATED WITH ALL UTILITY FACILITIES IN SIDEWALK AND ROADWAY AND SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER.
  2. ALL ITEMS ARE TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
  3. ITEMS DENOTED WITH \*\* ARE INCLUDED IN THE PAYMENT FOR THE TRAFFIC CONTROL INTERCONNECT PAY ITEM.
  4. CONTRACTOR SHALL TERMINATE FIBER OPTIC CABLE WITHIN TRAFFIC SIGNAL CABINETS IN THE CONTRACTOR PROVIDED TERMINATION PANEL. SEE SPECIAL PROVISIONS.
  5. DIRECTIONAL BORE INTERCONNECT CONDUIT UNDER ALL HARD SURFACES LIKE SIDEWALKS, ROADS AND DRIVEWAYS.

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NO	DATE	DWN	CKD	REVISIONS



I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: MICHAEL P. MCCURDY  
 SIGNATURE: *Michael P. McCurdy*  
 DATE: 02/14/2025 LICENSE # 459027

TRAFFIC CONTROL SIGNAL SYSTEM PLANS  
 INTERCONNECT PLAN

SAP 106-020-043, SAP 114-020-066, SAP 114-020-067			
SAP 002-612-037, SAP 002-612-036 (CSAH 12)			
SHEET NO.	98	OF	98 SHEETS