

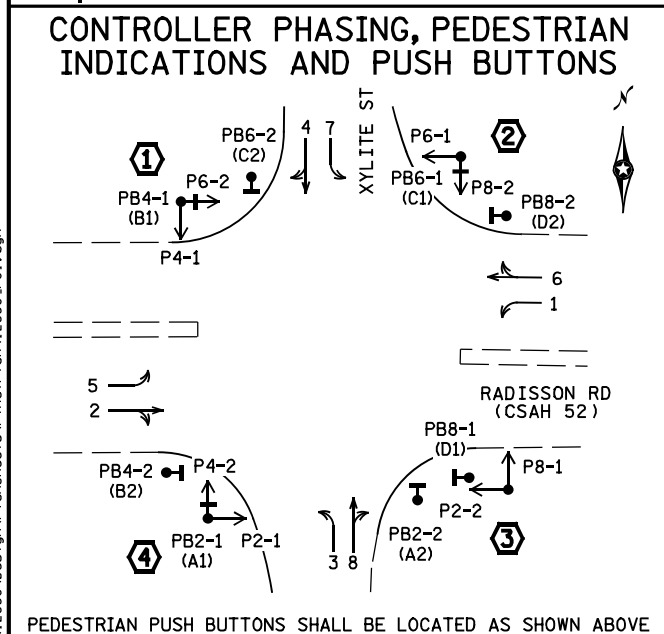
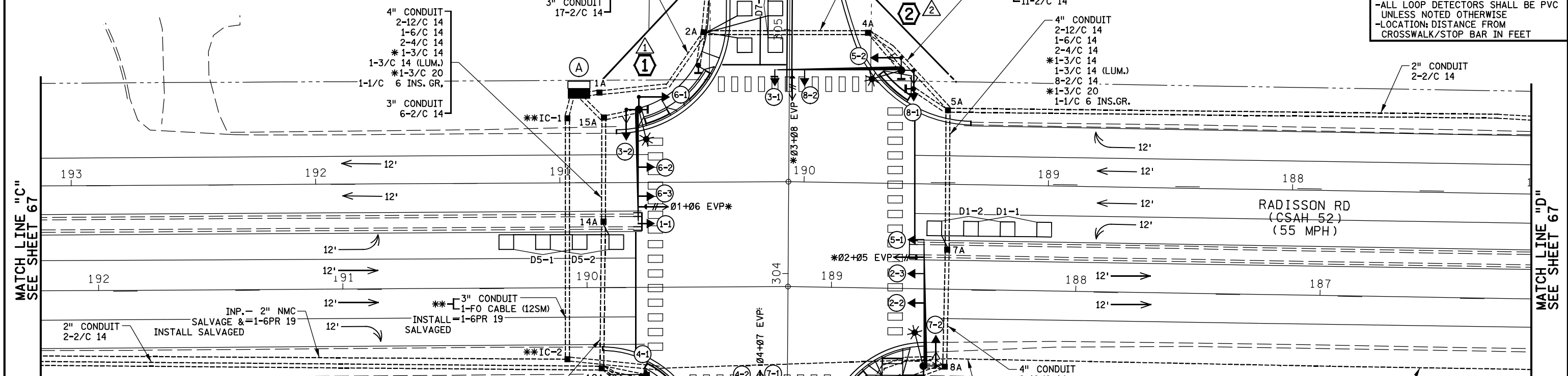
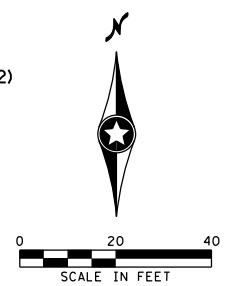
SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1, 1-2	←	←	←	←
2-1, 2-2, 2-3	●	●	●	●
3-1, 3-2	←	←	←	←
4-1, 4-2	●	●	●	●
5-1, 5-2	←	←	←	←
6-1, 6-2, 6-3	●	●	●	●
7-1, 7-2	←	←	←	←
8-1, 8-2	●	●	●	●

-ALL SIGNAL INDICATIONS SHALL BE 12" LED  
 -ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONATE WITH BACKGROUND SHIELDS  
 -FYA DENOTES FLASHING YELLOW ARROW

PED PB STATION  
 1-PED PB AND SIGN (R10-3e) (RT ARROW) (PB6-2)  
 EXTEND INTO HH 2A:  
 1" NOM. DIA. CONDUIT  
 1-2/C 14  
 1-1/C 6 INS. GR.

LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1	2-6x6	20 & 50
D1-2	2-6x6	5 & 35
D2-1, D2-2	6x6	475
D3-1	2-6x6	20 & 50
D3-2	2-6x6	5 & 35
D4-1	6x6	120
D4-2	2-6x6	5 & 20
D5-1	2-6x6	20 & 50
D5-2	2-6x6	5 & 35
D6-1, D6-2	6x6	475
D7-1	2-6x6	20 & 50
D7-2	2-6x6	5 & 35
D8-1	6x6	120
D8-2	2-6x6	5 & 20

-ALL LOOP DETECTORS SHALL BE PVC UNLESS NOTED OTHERWISE  
 -LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET



### SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 1, 3, 5, AND 7 BEING FLASHING YELLOW ARROWS BY TIME OF DAY.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

NOTES:

- SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
- ENSURE THE EXACT LOCATION OF THE HANDHOLES, POLES, LOOP DETECTORS AND EQUIPMENT PAD ARE VERIFIED IN THE FIELD BY COUNTY OFFICE PERSONNEL.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONNECTION OF THE POWER FOR THE TRAFFIC SIGNAL SYSTEM.
- FOR TYPE D SIGNS SEE DETAIL SHEET. ALL SIGNS REQUIRED ON SIGNAL SYSTEM ARE INCIDENTAL.
- FOR PAVEMENT MARKINGS, SEE SIGNING AND PAVEMENT MARKING PLANS.
- FOR CONSTRUCTION OF PEDESTRIAN CURB RAMPS, CONCRETE WALK AND MEDIAN WORK SEE DETAIL SHEET.
- THIS PLAN SPECIFIES CONDUIT SIZES, TYPES, AND GENERAL LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD. CONDUITS UNDER THE ROADWAYS REQUIRE BORING.
- USE PVC FOR ALL NEW CONDUIT.
- CONDUIT SIZES ARE NOMINAL DIAMETER.
- ALL WIRES LISTED ARE AWG (AMERICAN WIRE GAUGE).
- ITEMS DENOTED WITH AN \* ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.
- ITEMS DENOTED WITH AN \*\* ARE INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL INTERCONNECTION PAY ITEM.
- ADJUST OR REPLACE EXISTING CONDUIT AS NECESSARY TO AVOID CONFLICTS WITH SIGNAL POLE FOUNDATION.
- SEE SHEET 59 FOR INTERSECTION NOTES.

NO	DATE	BY	CKD	APPR	REVISION

I hereby certify that this plan, specification, or report 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: NATHAN A. POOLE

*Nathan A. Poole*

Date: 6/19/20 License #: 56071

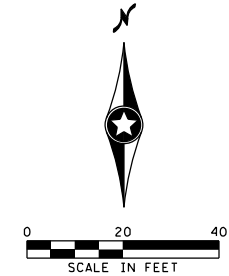
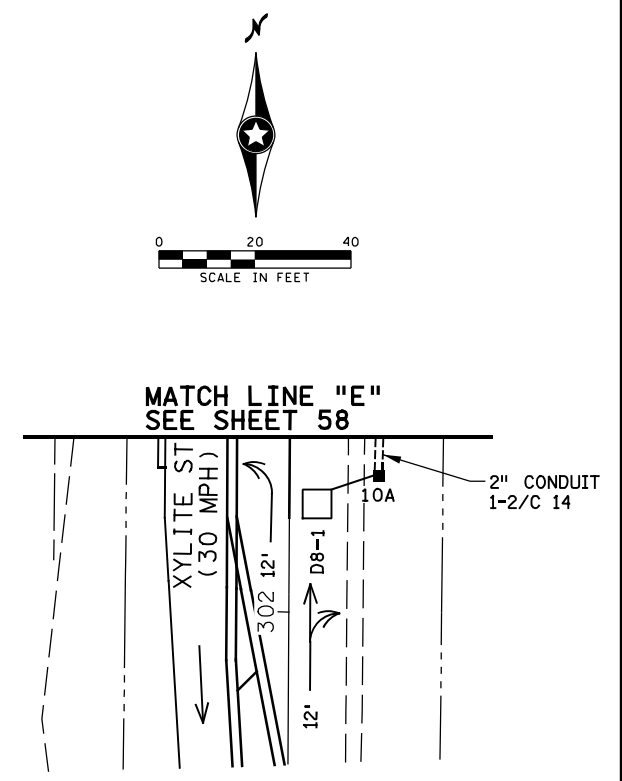
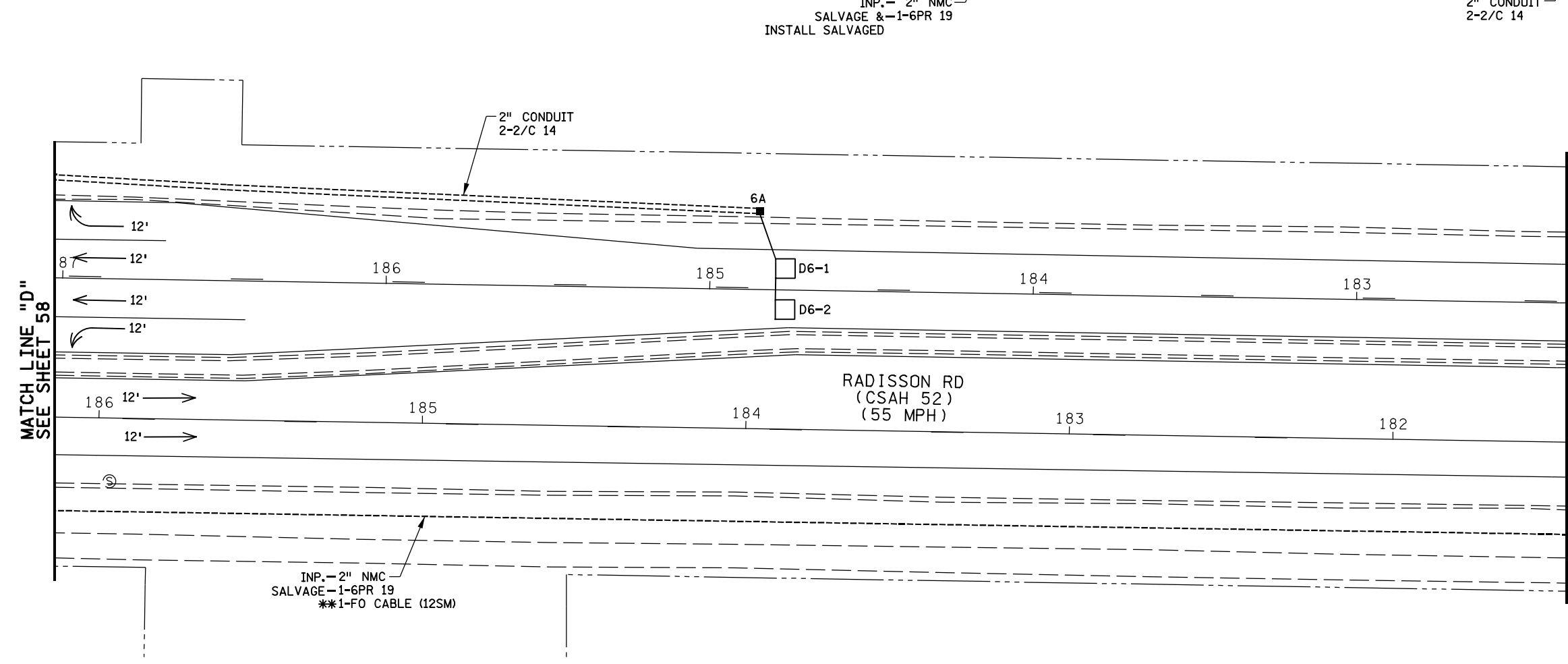
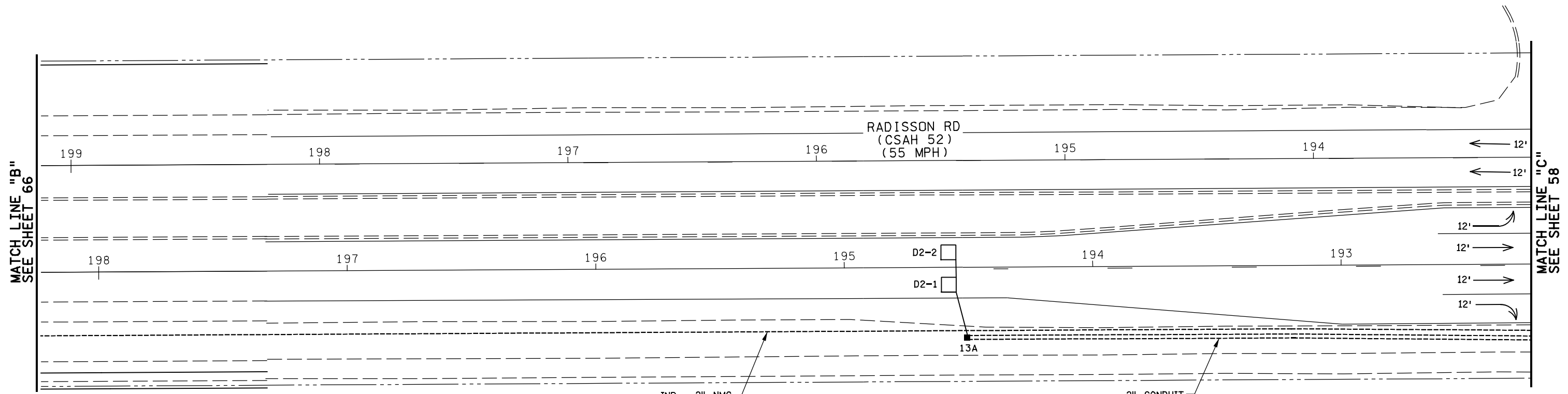
STATE AID PROJECT NO. 002-652-007, 002-652-008, 106-020-035 CITY PROJ. NO. 19-09

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 DESIGNED BY M. BRESSLER  
 CHECKED BY N. POOLE  
 COMM. NO. 1912330



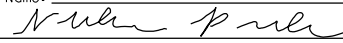
ANOKA COUNTY  
 TRAFFIC SIGNAL PLANS  
 CSAH 52 AT XYLITE STREET, 101ST AVE  
 INTERSECTION LAYOUT (SYSTEM "A")  
 RADISSON RD (CSAH 52) AT XYLITE ST

SHEET 58 OF 76



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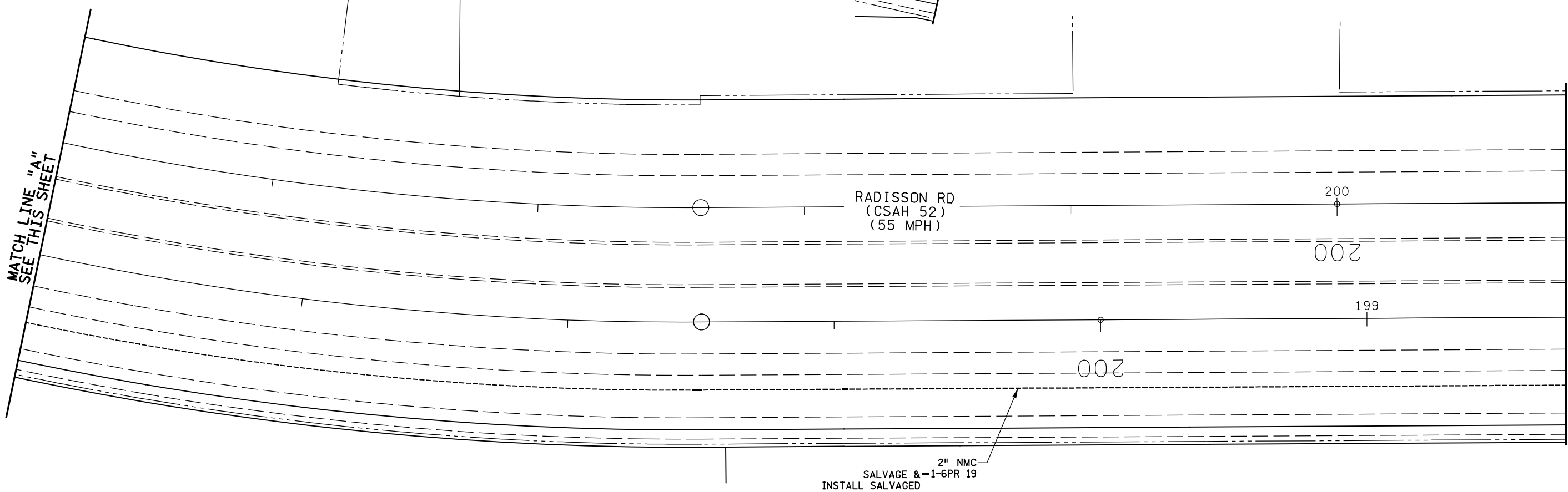
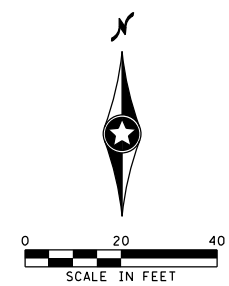
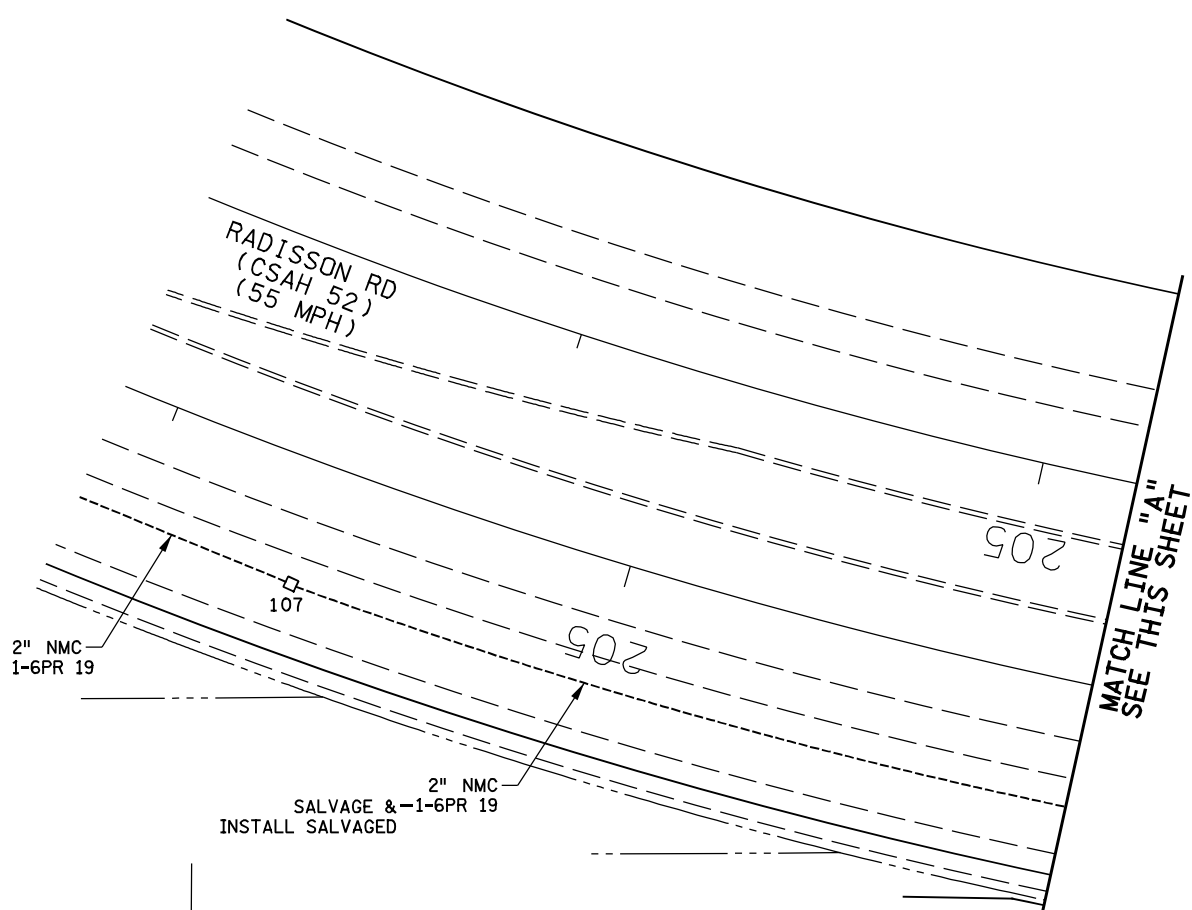
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 M. BRESSLER  
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 N. POOLE  
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ENGINEERS  
 PLANNERS  
 DESIGNERS

ANOKA COUNTY  
 TRAFFIC SIGNAL PLANS  
**CSAH 52 AT XYLITE STREET, 101ST AVE**  
 MATCH LINE/INTERCONNECT LAYOUT (SYSTEM "A")  
 RADISSON RD (CSAH 52) AT XYLITE ST

SHEET  
 67  
 OF  
 76



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*Nathan A. Poole*

Date 6/19/20 License # 56071

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002-652-008,  
106-020-035  
CITY PROJ NO.  
19-09

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M. BRESSLER  
CHECKED BY  
N. POOLE  
COMM. NO. 1912330



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PLANNERS  
DESIGNERS

ANOKA COUNTY  
TRAFFIC SIGNAL PLANS  
CSAH 52 AT XYLITE STREET, 101ST AVE  
INTERCONNECT LAYOUT

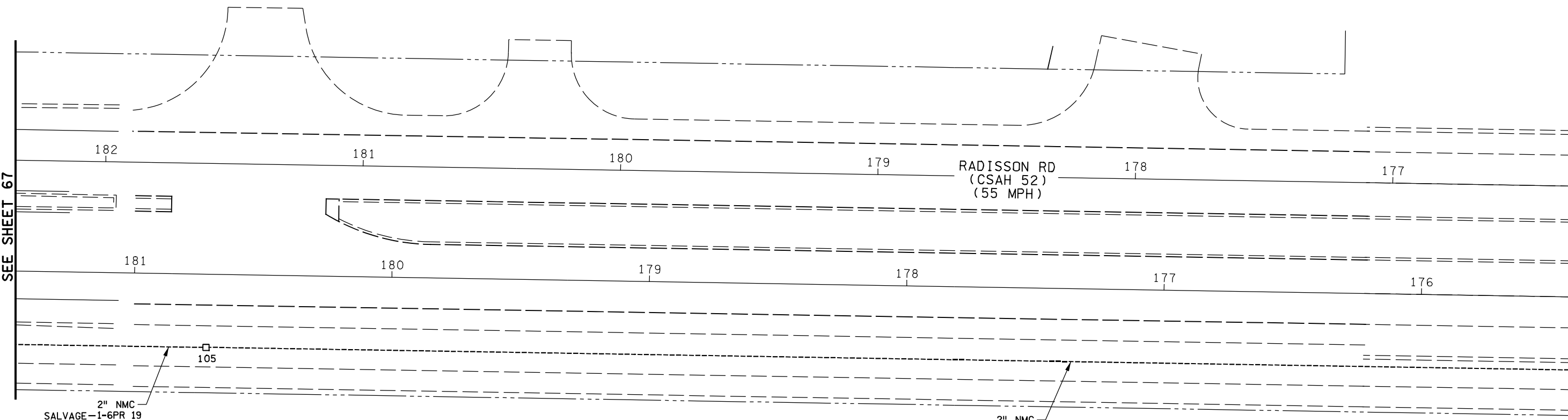
SHEET  
66  
OF  
76

MATCH LINE "F"  
SEE SHEET 67

MATCH LINE "G"  
SEE THIS SHEET

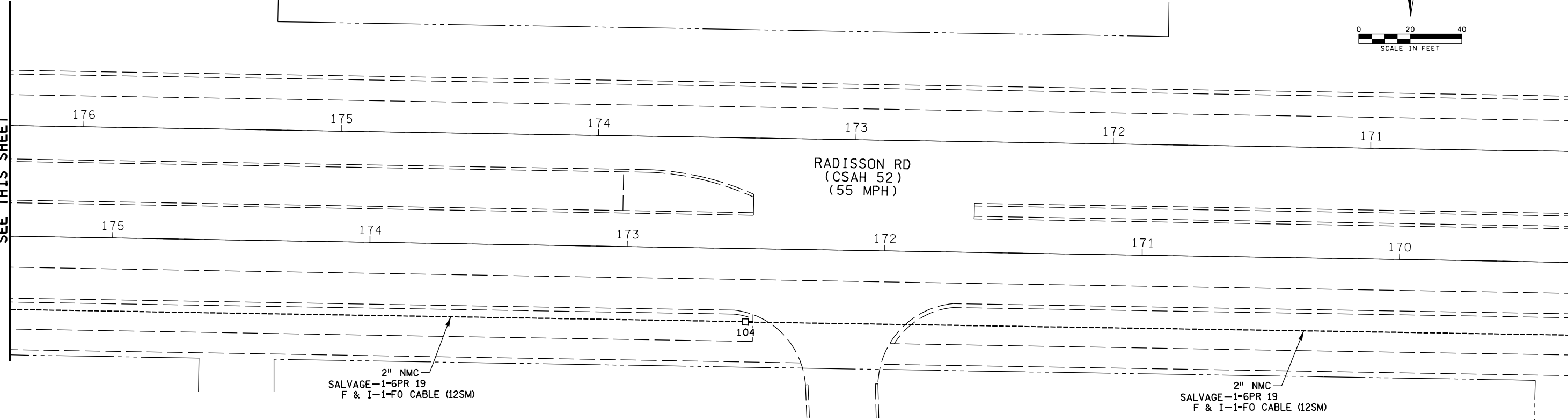
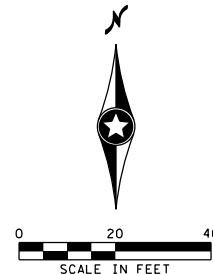
MATCH LINE "G"  
SEE THIS SHEET

MATCH LINE "H"  
SEE SHEET 68



2" NMC  
SALVAGE-1-6PR 19  
F & I-1-FO CABLE (12SM)

2" NMC  
SALVAGE-1-6PR 19  
F & I-1-FO CABLE (12SM)



2" NMC  
SALVAGE-1-6PR 19  
F & I-1-FO CABLE (12SM)

2" NMC  
SALVAGE-1-6PR 19  
F & I-1-FO CABLE (12SM)

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M. BRESSLER  
CHECKED BY  
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DESIGNERS

ANOKA COUNTY  
TRAFFIC SIGNAL PLANS  
CSAH 52 AT XYLITE STREET, 101ST AVE  
INTERCONNECT LAYOUT

SHEET  
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OF  
76

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## INTERSECTION NOTES

**1** PA100 POLE FOUNDATION  
 INSTALL—TYPE PA100-A-45-D30-9 (DAVIT AT 350 DEG)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 10' AND 22'  
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG  
 2-ANGLE MOUNT C. D. PED HEADS AT 90 AND 180 DEG  
 INSTALL—1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 1+6)  
 LUMINIRIE-LED (FOR 30' MOUNTING HEIGHT)  
 1-PED PB AND SIGN (R10-3e) (LT ARROW) (PB4-1)  
 1-R10-X12 SIGN ADJACENT TO HEAD (1-1)  
 1-TYPE D SIGN (D-2) (SEE SIGN DETAILS)  
 2-R6-1 SIGNS POLE MOUNTED  
 3" CONDUIT TO HH 15A:  
 2-12/C 14  
 1-6/C 14  
 2-4/C 14  
 \* 1-3/C 14  
 1-3/C 14 (LUM.)  
 1-2/C 14  
 \* 1-3/C 20  
 1-1/C 6 INS. GR.

**3** PA100 POLE FOUNDATION  
 INSTALL—TYPE PA100-A-50-D25-9 (DAVIT AT 350 DEG)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 12' AND 24'  
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG  
 2-ANGLE MOUNT C. D. PED HEADS AT 90 AND 180 DEG  
 INSTALL—1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 2+5)  
 LUMINIRIE-LED (FOR 25' MOUNTING HEIGHT)  
 1-R10-X12 SIGN ADJACENT TO HEAD (5-1)  
 1-TYPE D SIGN (D-2) (SEE SIGN DETAILS)  
 2-R6-1 SIGNS POLE MOUNTED  
 3" CONDUIT TO HH 8A:  
 2-12/C 14  
 1-6/C 14  
 2-4/C 14  
 \* 1-3/C 14  
 1-3/C 14 (LUM.)  
 \* 1-3/C 20  
 1-1/C 6 INS. GR.

**2** PA100 POLE FOUNDATION  
 INSTALL—TYPE PA100-A-50-D25-9 (DAVIT AT 350 DEG)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'  
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG  
 2-ANGLE MOUNT C. D. PED HEADS AT 90 AND 180 DEG  
 INSTALL—1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 3+8)  
 LUMINIRIE-LED (FOR 25' MOUNTING HEIGHT)  
 1-PED PB AND SIGN (R10-3e) (LT ARROW) (PB6-1)  
 1-R10-X12 SIGN ADJACENT TO HEAD (3-1)  
 1-TYPE D SIGN (D-1) (SEE SIGN DETAILS)  
 3" CONDUIT TO HH 4A:  
 2-12/C 14  
 1-6/C 14  
 2-4/C 14  
 \* 1-3/C 14  
 1-3/C 14 (LUM.)  
 1-2/C 14  
 \* 1-3/C 20  
 1-1/C 6 INS. GR.

**4** PA100 POLE FOUNDATION  
 INSTALL—TYPE PA100-A-45-D30-9 (DAVIT AT 350 DEG)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'  
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'  
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG  
 2-ANGLE MOUNT C. D. PED HEADS AT 90 AND 180 DEG  
 INSTALL—1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 4+7)  
 LUMINIRIE-LED (FOR 30' MOUNTING HEIGHT)  
 1-PED PB AND SIGN (R10-3e) (LT ARROW) (PB2-1)  
 1-R10-X12 SIGN ADJACENT TO HEAD (7-1)  
 1-TYPE D SIGN (D-1) (SEE SIGN DETAILS)  
 3" CONDUIT TO HH 12A:  
 2-12/C 14  
 1-6/C 14  
 2-4/C 14  
 \* 1-3/C 14  
 1-3/C 14 (LUM.)  
 1-2/C 14  
 \* 1-3/C 20  
 1-1/C 6 INS. GR.

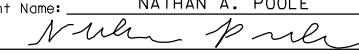
**A** EQUIPMENT PAD (SEE DETAIL SHEET)  
 SERVICE CABINET (SSB)  
 INSTALL—CONTROLLER AND CABINET (COUNTY FURNISHED)  
 4" CONDUIT TO HH 1A:  
 2-12/C 14  
 1-6/C 14  
 2-4/C 14  
 \* 1-3/C 14  
 \* 1-3/C 20  
 4" CONDUIT TO HH 15A:  
 2-12/C 14  
 1-6/C 14  
 2-4/C 14  
 \* 1-3/C 14  
 \* 1-3/C 20  
 1-1/C 6 INS. GR.  
 3" CONDUIT TO HH 1A:  
 17-2/C 14  
 4" CONDUIT TO HH 15A:  
 2-12/C 14  
 1-6/C 14  
 2-4/C 14  
 \* 1-3/C 14  
 \* 1-3/C 20  
 1-1/C 6 INS. GR.  
 3" CONDUIT TO HH 15A:  
 7-2/C 14  
 \*\* 2" CONDUIT TO IC-1:  
 1-F0 CABLE (12SM)  
 INSTALL SALVAGED—1-6PR 19

GROUND WIRE AND GROUND ROD - MIN 8' OUT FROM PAD  
 2-3" AND 1-1" CONDUIT STUBBED OUT (CAPPED BOTH ENDS)  
 CONTROLLER CABINET TO SERVICE CABINET:  
 2" CONDUIT  
 3-1/C 6  
 CONTROLLER CABINET TO SERVICE CABINET (COMMS):  
 2" CONDUIT  
 1-4/C 14  
 1-6PR 19  
 SERVICE CABINET TO HH 16A TO POLE MOUNTED TRANSFORMER:  
 2" CONDUIT  
 3-1/C 2  
 SERVICE CABINET TO HH 1A:  
 1 1/4" CONDUIT  
 2-3/C 14 (LUM)  
 SERVICE CABINET TO HH 15A:  
 1 1/4" CONDUIT  
 2-3/C 14 (LUM)  
 SERVICE CABINET TO EXTERNAL GR. RD.:  
 1" CONDUIT  
 1-1/C 6 INS. GR.  
 (SEE EQUIPMENT PAD LAYOUT)

**B** SOP-WOOD POLE MOUNTED  
 TRANSFORMER (LOCATION TO BE DETERMINED)  
 2" CONDUIT TO HH 16A TO SERVICE CABINET:  
 3-1/C 2

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 Print Name: NATHAN A. POOLE  
  
 Date 6/19/20 License # 56071

STATE AID PROJECT NO.  
 002-652-007,  
 002-652-008,  
 106-020-035  
 CITY PROJ NO.  
 19-09

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 M. BRESSLER  
 DESIGNED BY  
 M. BRESSLER  
 CHECKED BY  
 N. POOLE  
 COMM. NO. 1912330

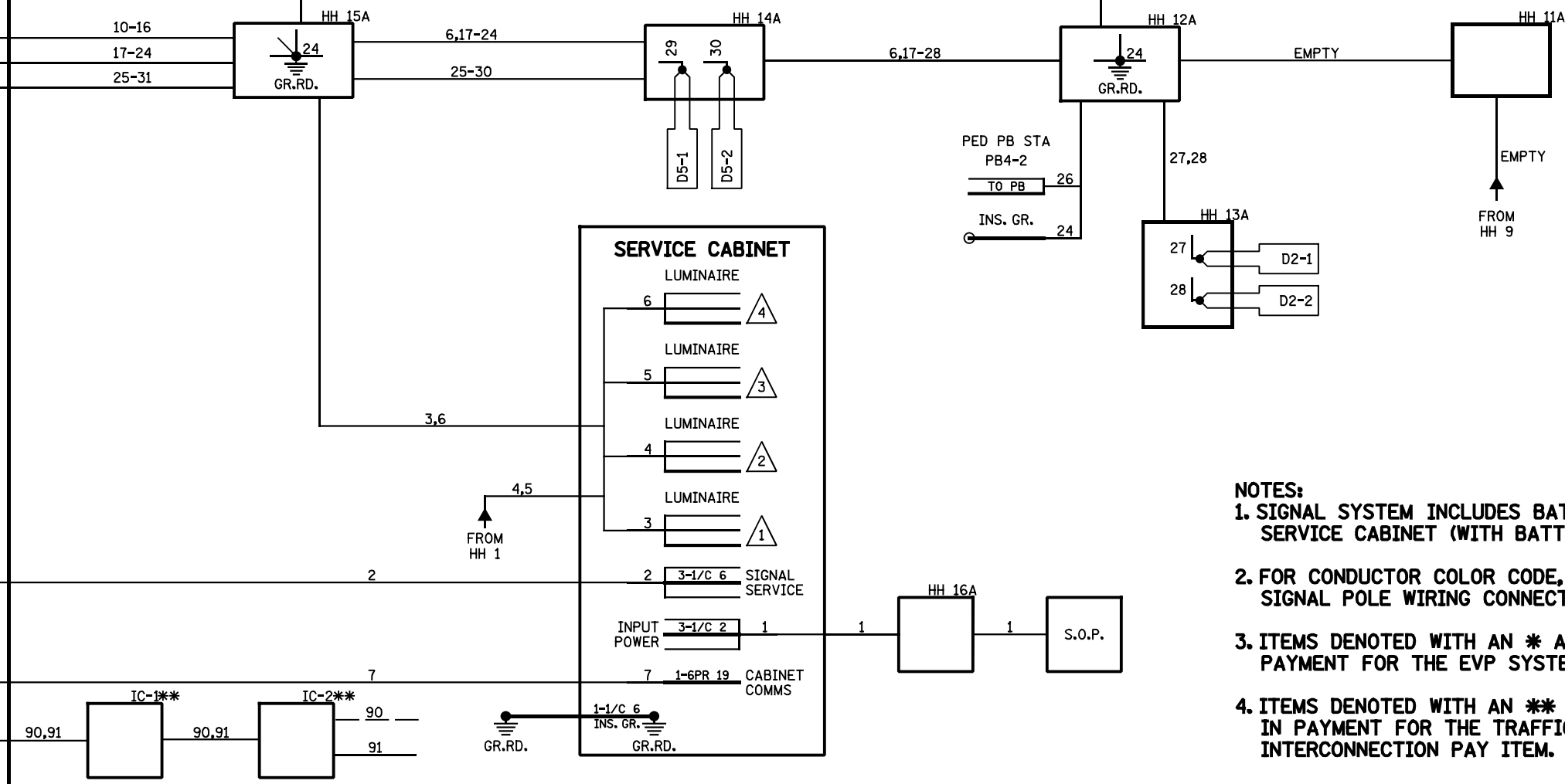
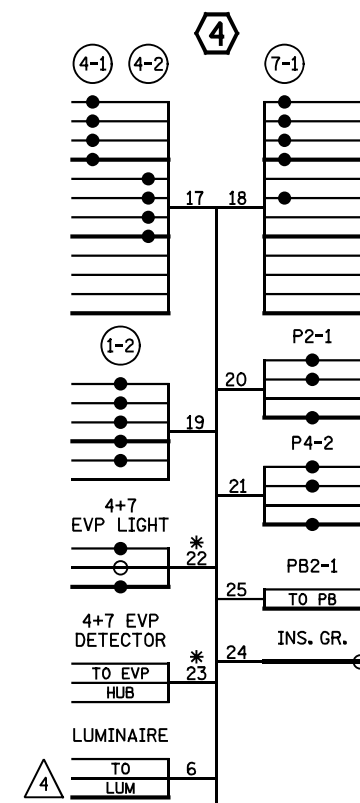
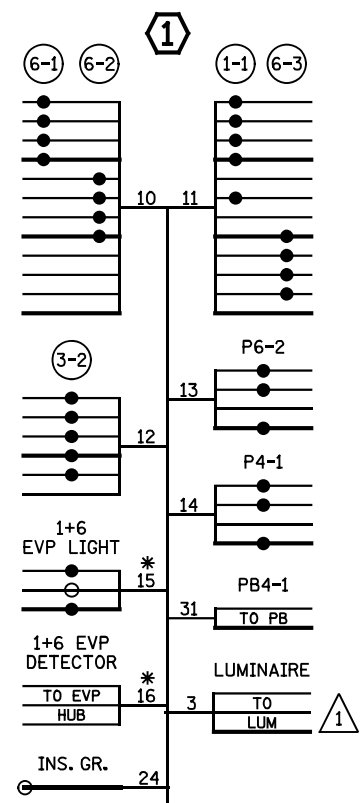
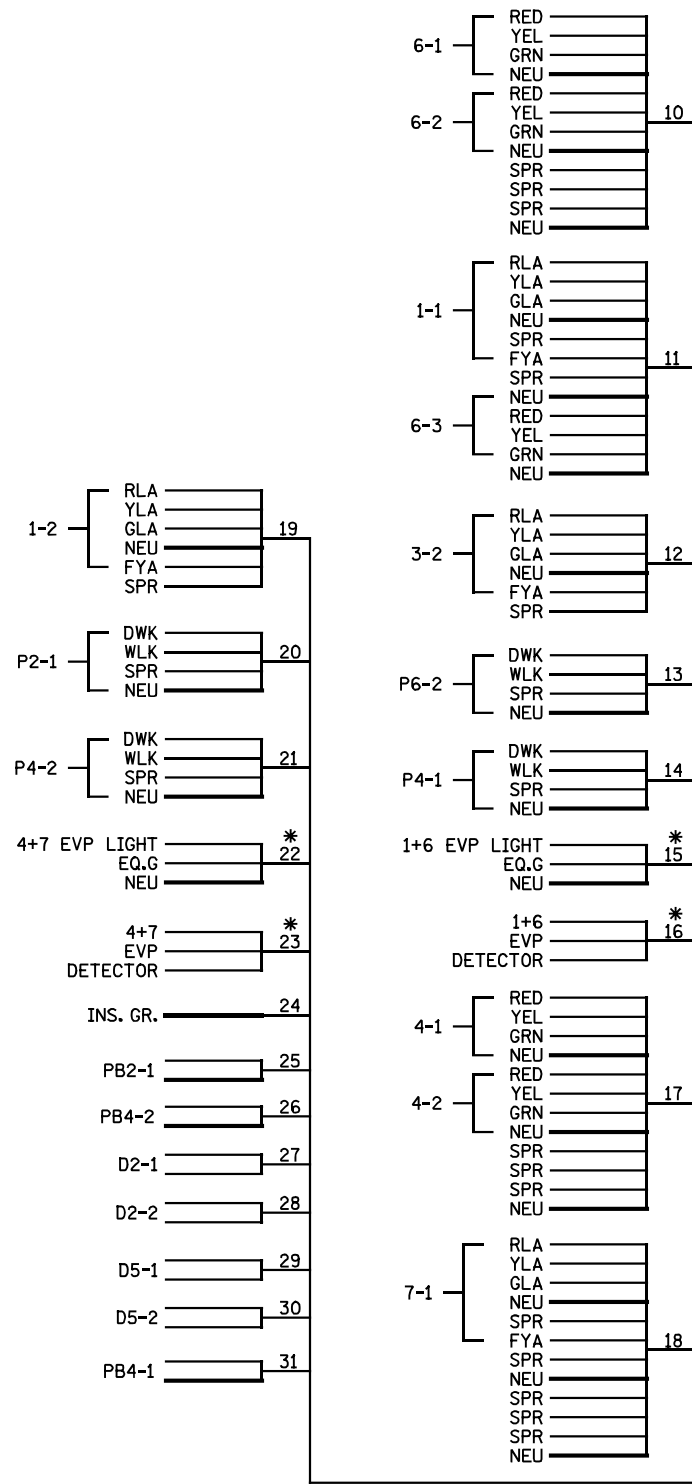


ENGINEERS  
 PLANNERS  
 DESIGNERS

**ANOKA COUNTY**  
 TRAFFIC SIGNAL PLANS  
**CSAH 52 AT XYLITE STREET, 101ST AVE**  
 INTERSECTION NOTES (SYSTEM "A")  
 RADISSON RD (CSAH 52) AT XYLITE ST

SHEET  
 59  
 OF  
 76

# CONTROLLER CABINET



- NOTES:**
1. SIGNAL SYSTEM INCLUDES BATTERY BACKUP SERVICE CABINET (WITH BATTERIES & UPS).
  2. FOR CONDUCTOR COLOR CODE, SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.
  3. ITEMS DENOTED WITH AN \* ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.
  4. ITEMS DENOTED WITH AN \*\* ARE INCLUDED IN PAYMENT FOR THE TRAFFIC CONTROL INTERCONNECTION PAY ITEM.

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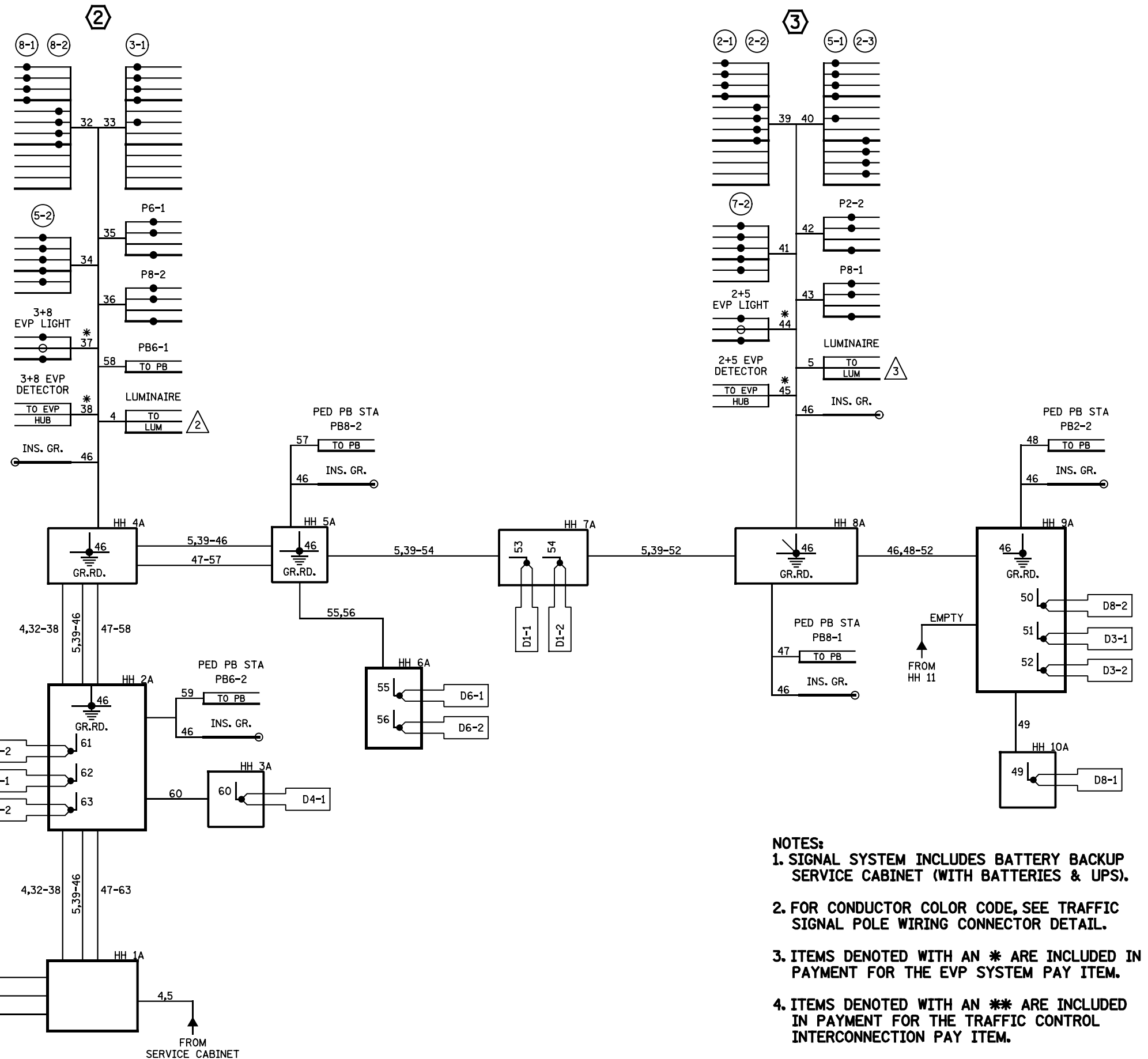
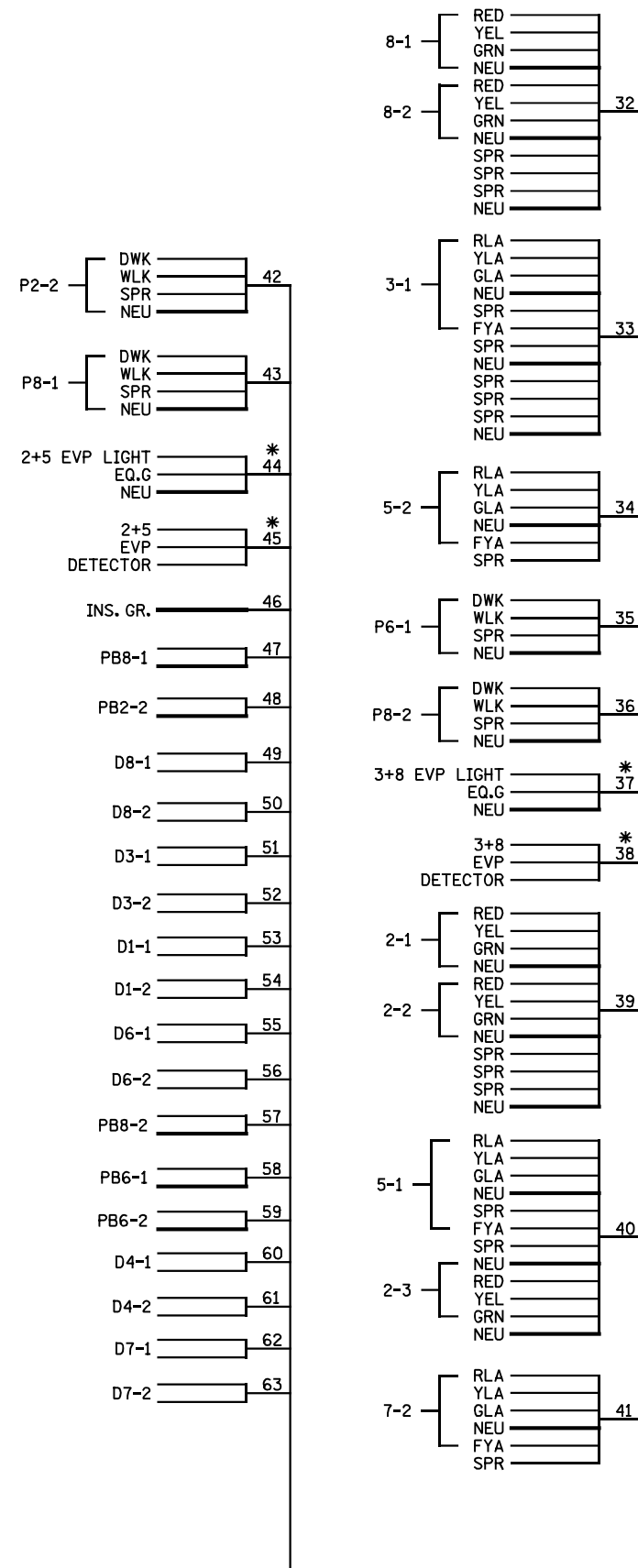
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ANOKA COUNTY  
TRAFFIC SIGNAL PLANS  
CSAH 52 AT XYLITE STREET, 101ST AVE  
FIELD WIRING DIAGRAM (SYSTEM "A")  
RADISSON RD (CSAH 52) AT XYLITE ST

SHEET 60 OF 76

# CONTROLLER CABINET



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TRAFFIC SIGNAL PLANS  
CSAH 52 AT XYLITE STREET, 101ST AVE  
FIELD WIRING DIAGRAM (SYSTEM "A")  
RADISSON RD (CSAH 52) AT XYLITE ST

SHEET 61 OF 76