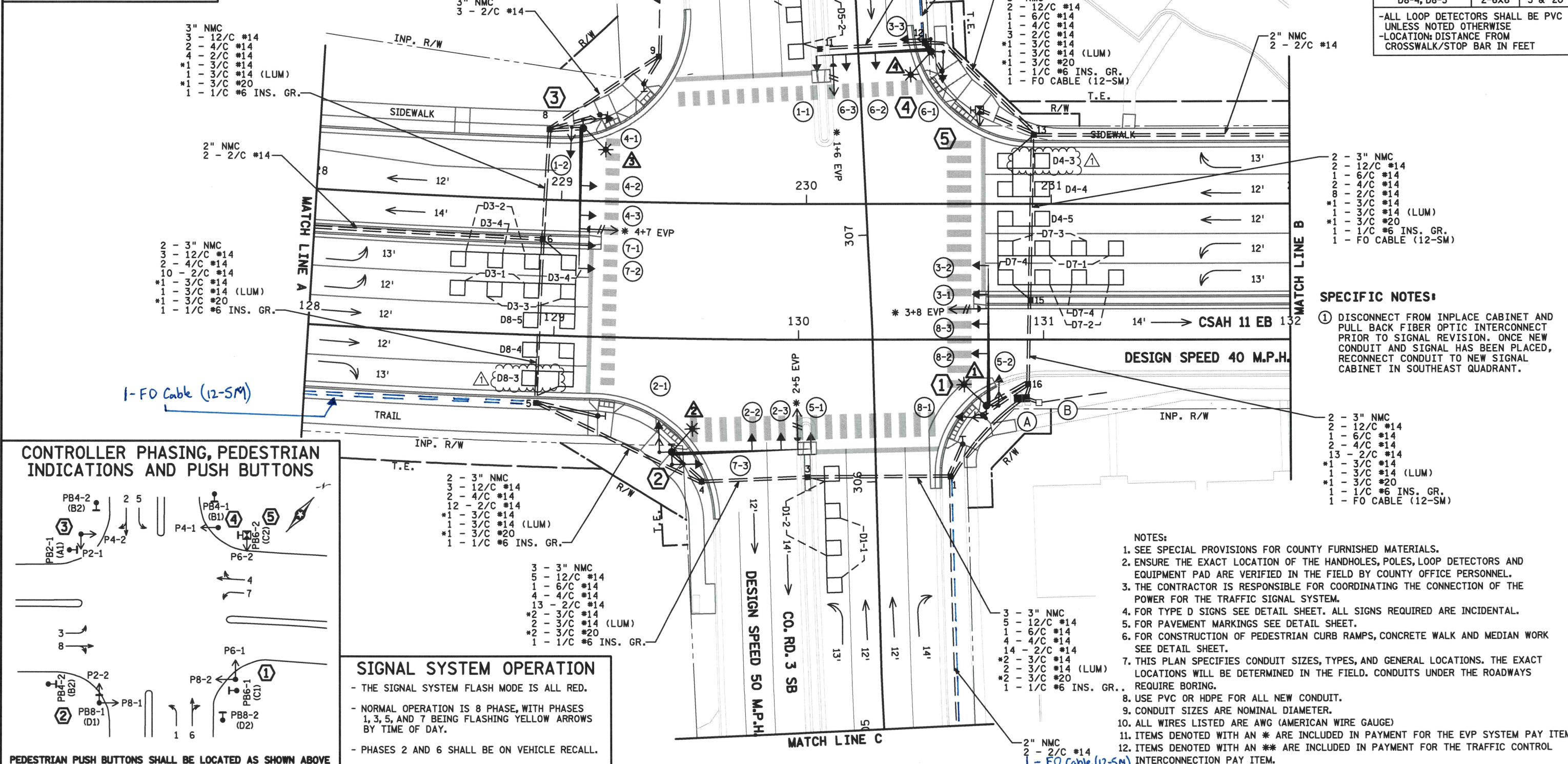


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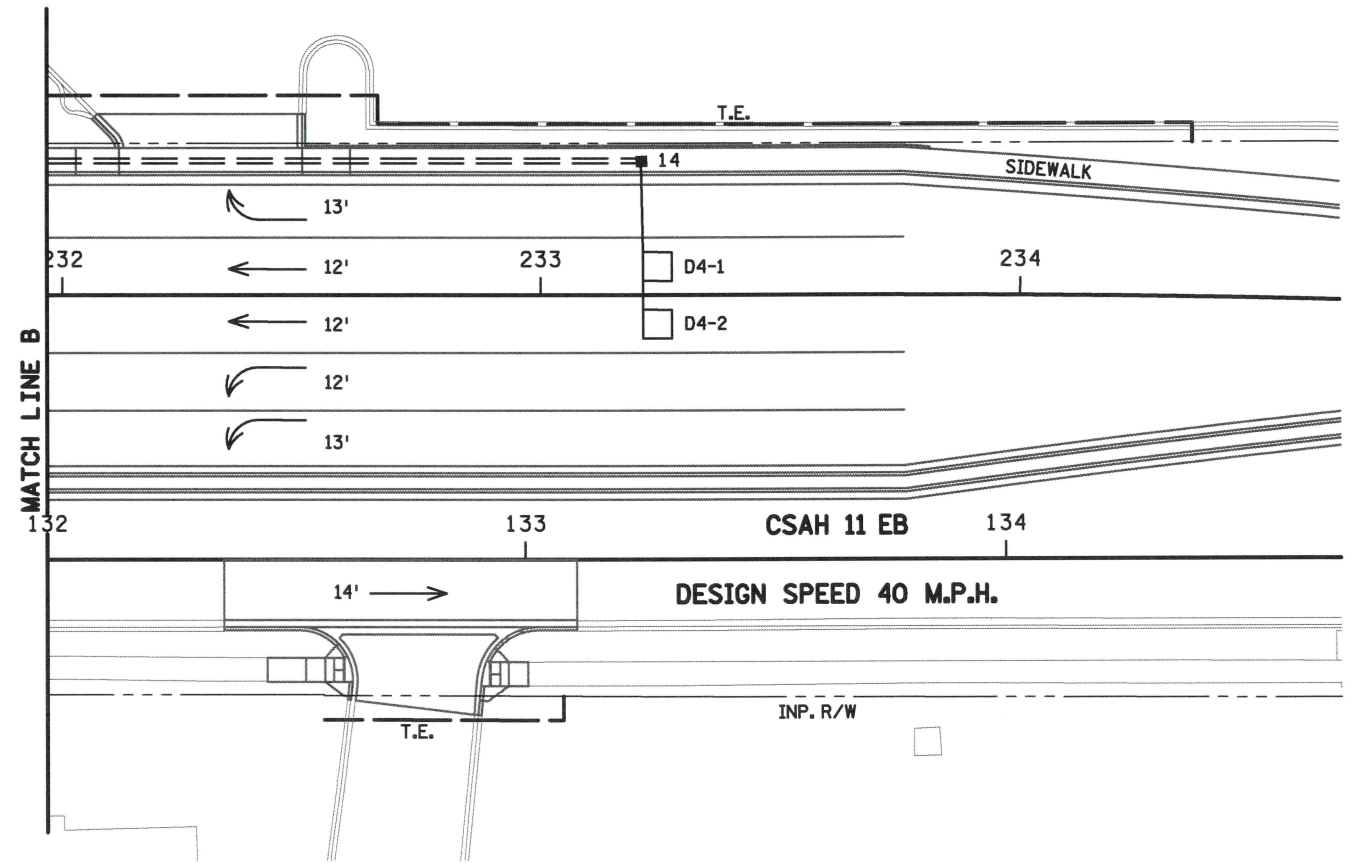
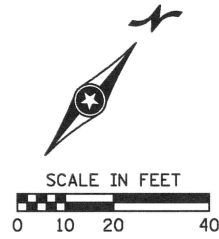
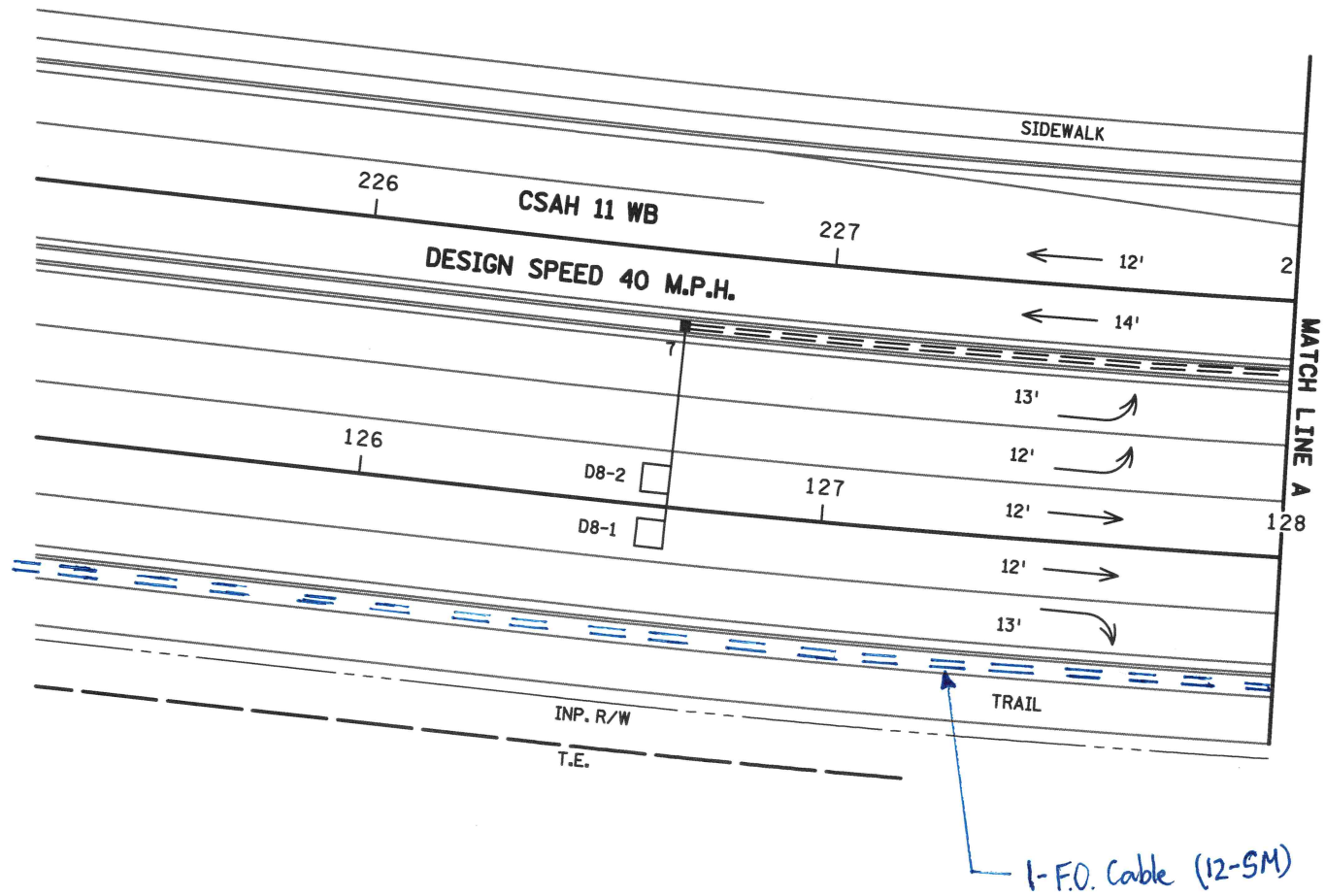
SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1, 1-2	←	←	←	←
2-1, 2-2, 2-3	●	●	●	●
3-1, 3-2, 3-3	←	←	←	←
4-1, 4-2, 4-3	●	●	●	●
5-1, 5-2	←	←	←	←
6-1, 6-2, 6-3	●	●	●	●
7-1, 7-2, 7-3	←	←	←	←
8-1, 8-2, 8-3	●	●	●	●
-ALL SIGNAL INDICATIONS SHALL BE 12" LED				
-ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONATE WITH BACKGROUND SHIELDS				
-FYA DENOTES FLASHING YELLOW ARROW				

LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1, D5-1	2-6x6	20 & 50
D1-2, D5-2	2-6x6	5 & 35
D2-1, D2-2	6x6	400
D3-1, D3-2	2-6x6	20 & 50
D3-3, D3-4	2-6x6	5 & 35
D4-1, D4-2	6x6	250
D4-3, D8-3	2-6x6	5 & 20
D4-4, D4-5	2-6x6	5 & 20
D6-1, D6-2	6x6	400
D7-1, D7-2	2-6x6	20 & 50
D7-3, D7-4	2-6x6	5 & 35
D8-1, D8-2	6x6	250
D8-4, D8-5	2-6x6	5 & 20
-ALL LOOP DETECTORS SHALL BE PVC UNLESS NOTED OTHERWISE		
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET		



DES: JSB				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.				SIGNAL SYSTEM C INTERSECTION LAYOUT CSAH 11 AT CO. RD. 3		TRAFFIC SIGNAL PLAN	
DRW: RRC				SIGNATURE: <i>Jeffrey A. Hilden</i> LIC. NO. 20781 DATE: 4/8/2021				STATE PROJ. NO. 002-611-036		SHEET NO. 403R OF 416 SHEETS	
CHK: JAH											
NO. DATE BY				DESCRIPTION OF REVISIONS							
1 4/8/21 JAH				ADD SECOND LOOP DETECTOR TO EB AND WB RIGHT TURN LANES							

DATE: 11/25/2020 TIME: 8:05:31 AM



NO.	DATE	BY	DESCRIPTION OF REVISIONS

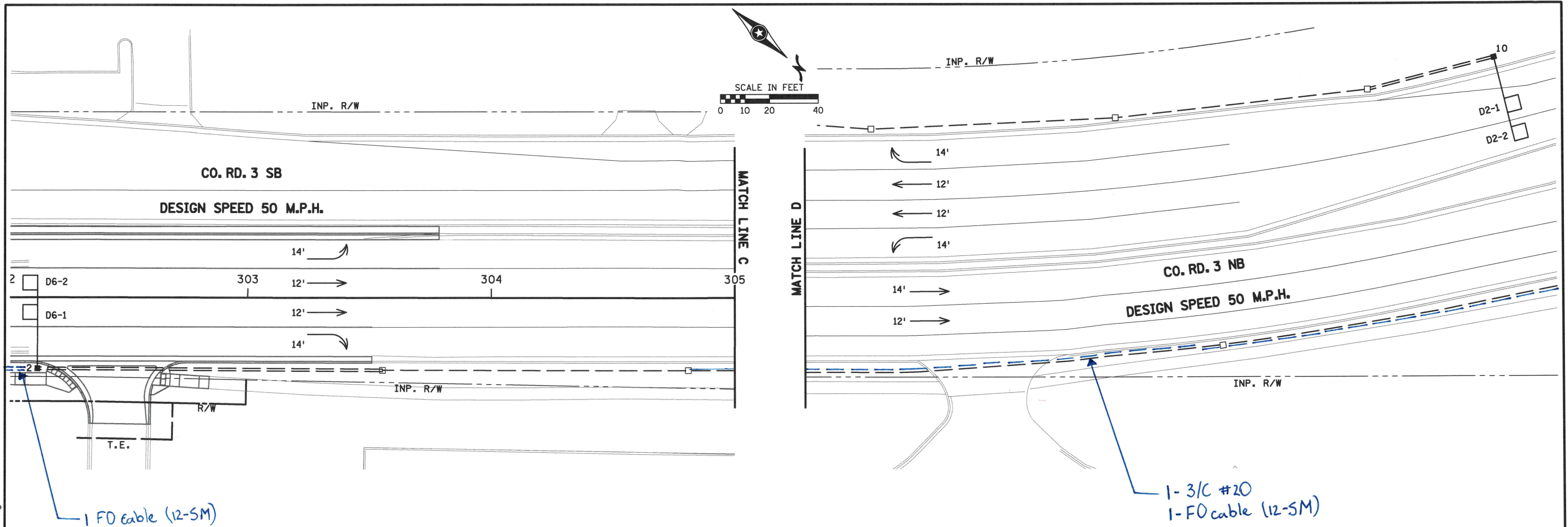
DES: JSB	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		
DRW: RRC			
CHK: JAH	SIGNATURE: <u>Jeffrey A. Hilden</u>	LIC. NO. <u>20781</u>	DATE: <u>11/25/2020</u>
	JEFFREY A. HILDEN		



SIGNAL SYSTEM C MATCH LINE LAYOUT CSAH 11 AT CO. RD. 3
STATE PROJ. NO. 002-611-036

TRAFFIC SIGNAL PLAN
SHEET NO. 404 OF 416 SHEETS

DATE: 11/25/2020 TIME: 8:06:17 AM



				DES: JSB	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. SIGNATURE: <u>Jeffrey A. Hilden</u> LIC. NO. <u>20781</u> DATE: <u>11/25/2020</u> <u>JEFFREY A. HILDEN</u>		SIGNAL SYSTEM C MATCH LINE LAYOUT CSAH 11 AT CR. RD. 3	TRAFFIC SIGNAL PLAN
				DRW: RRC				
NO.	DATE	BY	DESCRIPTION OF REVISIONS	CHK: JAH			STATE PROJ. NO. 002-611-036	SHEET NO. 405 OF 416 SHEETS



H.H.128 TO H.H.50:

- (**) 2" CONDUIT-F & I (BORE UNDER ROAD)
- (**) 1-12 SM FIBER-OPTIC CABLE-F & I
- (**) 1-1/c#14-F & I

(TO AVOCET STREET SIGNAL SYSTEM)

H.H.128 TO H.H.129:

- (**) 2" CONDUIT-F & I (CONDUIT SHALL BE INSTALLED ON NORTH SIDE OF ROAD AND UP EMBANKMENT-NOT CONNECTED TO BRIDGE)
- (**) 1-12 SM FIBER-OPTIC CABLE-F & I
- (**) 1-1/c#14-F & I

H.H.129 TO H.H.130:

- (**) 2" CONDUIT-F & I
- (**) 1-12 SM FIBER-OPTIC CABLE-F & I
- (**) 1-1/c#14-F & I

INTERCONNECT NOTES:

- 1) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2160.
- 2) (**) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECT "B"). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 3) ALL ITEMS OF INTERCONNECT SYSTEM "B" ARE BOXED IN AND DENOTED BY (**) AND BY F & I (ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR).
- 4) NEW HANDHOLES REQUIRED TO BE FURNISHED & INSTALLED BY THE CONTRACTOR AS PART OF THIS PROJECT SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
- 5) NEW CONDUIT TO BE FURNISHED AND INSTALLED NEAR BRIDGE 02522 SHALL BE INSTALLED IN BOULEVARD AREA ADJACENT TO BRIDGE AREA AND SHALL NOT BE ATTACHED TO BRIDGE STRUCTURE.

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG

NO.	BY	DATE

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN 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.

Date: September 20, 2017 Name: John M. Gray, PE Lic. No. 22457



PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

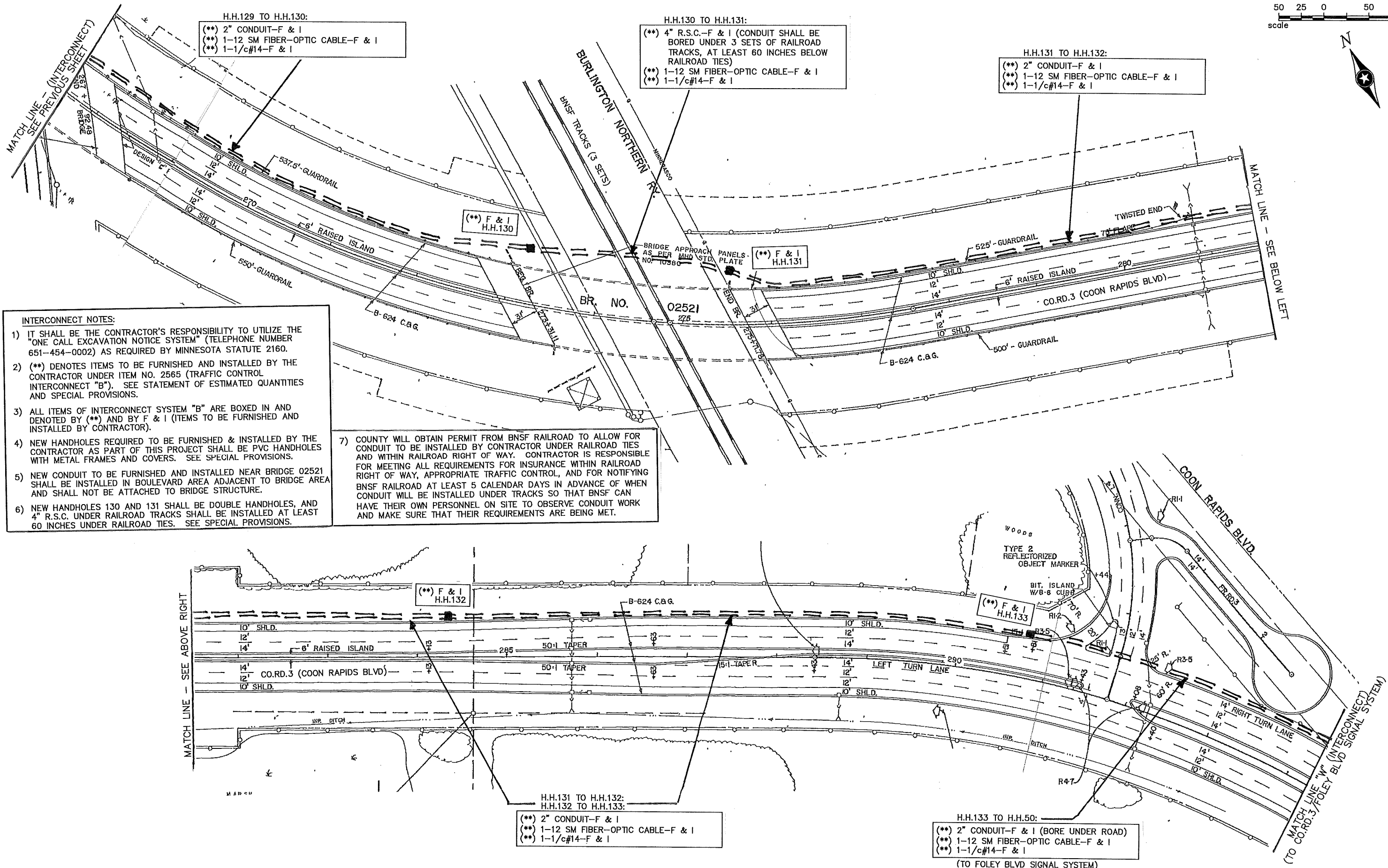
ANOKA COUNTY, MN
CITY OF COON RAPIDS
COUNTY PROJ. 17-10-00

TRAFFIC SIGNAL INTERCONNECT 'B'
INTERSECTION LAYOUT
CSAH 1-CO.RD.3 (COON RAPIDS BLVD)
(AVOCET STREET TO FOLEY BLVD)

FILE NO.
ANOKC 142312

37
119

50 25 0 50 100
scale feet



INTERCONNECT NOTES:

- 1) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2160.
- 2) (**) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECT "B"). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 3) ALL ITEMS OF INTERCONNECT SYSTEM "B" ARE BOXED IN AND DENOTED BY (**) AND BY F & I (ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR).
- 4) NEW HANDHOLES REQUIRED TO BE FURNISHED & INSTALLED BY THE CONTRACTOR AS PART OF THIS PROJECT SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
- 5) NEW CONDUIT TO BE FURNISHED AND INSTALLED NEAR BRIDGE 02521 SHALL BE INSTALLED IN BOULEVARD AREA ADJACENT TO BRIDGE AREA AND SHALL NOT BE ATTACHED TO BRIDGE STRUCTURE.
- 6) NEW HANDHOLES 130 AND 131 SHALL BE DOUBLE HANDHOLES, AND 4" R.S.C. UNDER RAILROAD TRACKS SHALL BE INSTALLED AT LEAST 60 INCHES UNDER RAILROAD TIES. SEE SPECIAL PROVISIONS.

- 7) COUNTY WILL OBTAIN PERMIT FROM BNSF RAILROAD TO ALLOW FOR CONDUIT TO BE INSTALLED BY CONTRACTOR UNDER RAILROAD TIES AND WITHIN RAILROAD RIGHT OF WAY. CONTRACTOR IS RESPONSIBLE FOR MEETING ALL REQUIREMENTS FOR INSURANCE WITHIN RAILROAD RIGHT OF WAY, APPROPRIATE TRAFFIC CONTROL, AND FOR NOTIFYING BNSF RAILROAD AT LEAST 5 CALENDAR DAYS IN ADVANCE OF WHEN CONDUIT WILL BE INSTALLED UNDER TRACKS SO THAT BNSF CAN HAVE THEIR OWN PERSONNEL ON SITE TO OBSERVE CONDUIT WORK AND MAKE SURE THAT THEIR REQUIREMENTS ARE BEING MET.

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG

DESIGN TEAM

NO.	BY	DATE

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN 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.

Date: September 20, 2017 Name: John M. Gray, PE Lic. No. 22457



PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

ANOKA COUNTY, MN
CITY OF COON RAPIDS
COUNTY PROJ. 17-10-00

TRAFFIC SIGNAL INTERCONNECT "B"
INTERSECTION LAYOUT
CSAH 1-CO.RD.3 (COON RAPIDS BLVD)
(AVOCET STREET TO FOLEY BLVD)

FILE NO.
ANOKC 142312

38
119

DATE: 12/18/2020 TIME: 1:41:00 PM
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③ PA100 POLE FOUNDATION
TYPE PA100-A-55-D30-9 (DAVIT AT 350 DEG)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
3-STRAIGHT MOUNT SIGNALS OVERHEAD
AT 8', 20' AND 32'
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
2-ANGLE MOUNT C.D. PED HEADS
AT 90 AND 180 DEG
* 1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASES 4+7)
LUMINAIRE-LED (FOR 30' MOUNTING HEIGHT)
1-R10-X12 SIGN ADJACENT TO HEAD (7-2)
1-TYPE D SIGN (D-7) (SEE SIGN DETAILS)
3" CONDUIT TO HH #8:
3-12/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.

④ PA100 POLE FOUNDATION
TYPE PA100-A-45-D30-9 (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
1-ANGLE MOUNT C.D. PED HEAD
AT 90 DEG
* 1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASES 1+6)
LUMINAIRE-LED (FOR 30' MOUNTING HEIGHT)
1-R10-X12 SIGN ADJACENT TO HEAD (1-1)
1-TYPE D SIGN (D-1) (SEE SIGN DETAILS)
3" CONDUIT TO HH #12:
2-12/C 14
1-6/C 14
1-4/C 14
* 1-3/C 14
1-3/C 14 (LUM)
* 1-3/C 20
1-1/C 6 INS. GR.

⑤ PEDESTAL FOUNDATION
13' PEDESTAL POLE PLUS BASE
1-STRAIGHT MOUNT C.D. PED HEAD
AT 270 DEG
1-PEDESTRIAN PUSH BUTTON AND SIGN (RT ARROW) (PB6-2)
3" CONDUIT TO HH #13:
1-4/C 14
1-2/C 14
1-1/C 6 INS. GR.

② PA100 POLE FOUNDATION
TYPE PA100-A-55-D30-9 (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
1-PEDESTRIAN PUSH BUTTON AND SIGN (LT ARROW) (PB8-1)
* 1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASES 2+5)
LUMINAIRE-LED (FOR 30' MOUNTING HEIGHT)
1-R10-X12 SIGN ADJACENT TO HEAD (5-1)
1-TYPE D SIGN (D-1) (SEE SIGN DETAILS)
3" CONDUIT TO HH #4:
2-12/C 14
1-6/C 14
2-4/C 14
1-2/C 14
* 1-3/C 14
1-3/C 14 (LUM)
* 1-3/C 20
1-1/C 6 INS. GR.

① PA100 POLE FOUNDATION
TYPE PA100-A-55-D30-9 (DAVIT AT 350 DEG)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
3-STRAIGHT MOUNT SIGNALS OVERHEAD
AT 12', 24' AND 36'
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
2-ANGLE MOUNT C.D. PED HEADS
AT 90 AND 180 DEG
* 1-ONE WAY EVP DETECTOR AND
CONFIRMATORY LIGHT (PHASES 3+8)
LUMINAIRE-LED (FOR 30' MOUNTING HEIGHT)
1-R10-X12 SIGN ADJACENT TO HEAD (3-2)
1-TYPE D SIGN (D-7) (SEE SIGN DETAILS)
3" CONDUIT TO HH #16:
3-12/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.

Ⓐ EQUIPMENT PAD (SEE DETAIL SHEET)
SERVICE CABINET (SSB) WITH BATTERY BACKUP SYSTEM AND BATTERIES
CONTROLLER AND CABINET (COUNTY FURNISHED)

CABINET TO HH 1:
3 - 3" NMC
5 - 12/C 14
1 - 6/C 14
4 - 4/C 14
15 - 2/C 14
* 2 - 3/C 14
* 2 - 3/C 20
1 - 1/C 6 INS. GR..

CABINET TO HH 16:
3 - 3" NMC
5 - 12/C 14
1 - 6/C 14
4 - 4/C 14
14 - 2/C 14
* 2 - 3/C 14
* 2 - 3/C 20
1 - 1/C 6 INS. GR.
1 - FO CABLE (12-SM)

Ⓑ SOP-GROUND MOUNTED
TRANSFORMER (CONNEXUS ENERGY)
2" CONDUIT INTO SERVICE CABINET:
3-1/C 2

GROUND WIRE AND GROUND ROD - MIN 8' OUT FROM PAD
2-2" AND 1-3" CONDUIT STUBBED OUT (CAPPED BOTH ENDS)
1-1/2" CONDUIT TO HH:
1-FO PIGTAIL (12-SM) (FOR FUTURE USE)
CONTROLLER CABINET TO SERVICE CABINET:
2" CONDUIT
3-1/C 6
CONTROLLER CABINET TO SERVICE CABINET (COMMS):
2" CONDUIT
1-6PR 19
SERVICE CABINET TO GROUND MOUNTED TRANSFORMER:
2" CONDUIT
3-1/C 2

SERVICE CABINET TO EXTERNAL GR. RD.:
1" CONDUIT
1-1/C 6 INS. GR.
(SEE EQUIPMENT PAD LAYOUT)

SERVICE CABINET TO HH1:
1-1/4" CONDUIT AND LUMINAIRE CABLES (2 - 3/C #14)

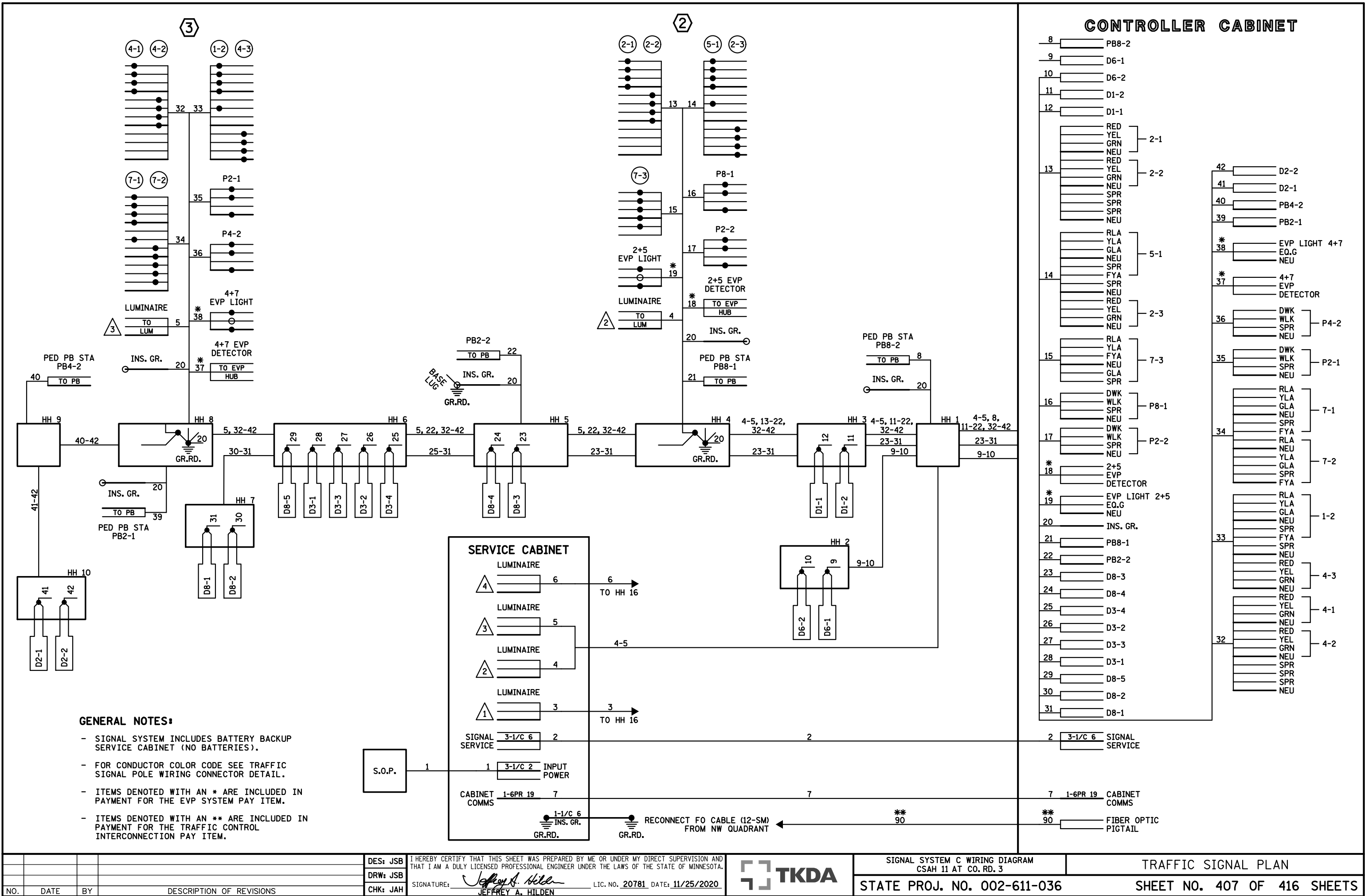
SERVICE CABINET TO HH16:
1-1/4" CONDUIT AND LUMINAIRE CABLES (2 - 3/C #14)

GENERAL NOTES:

- ITEMS DENOTED WITH AN * ARE INCLUDED
IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.

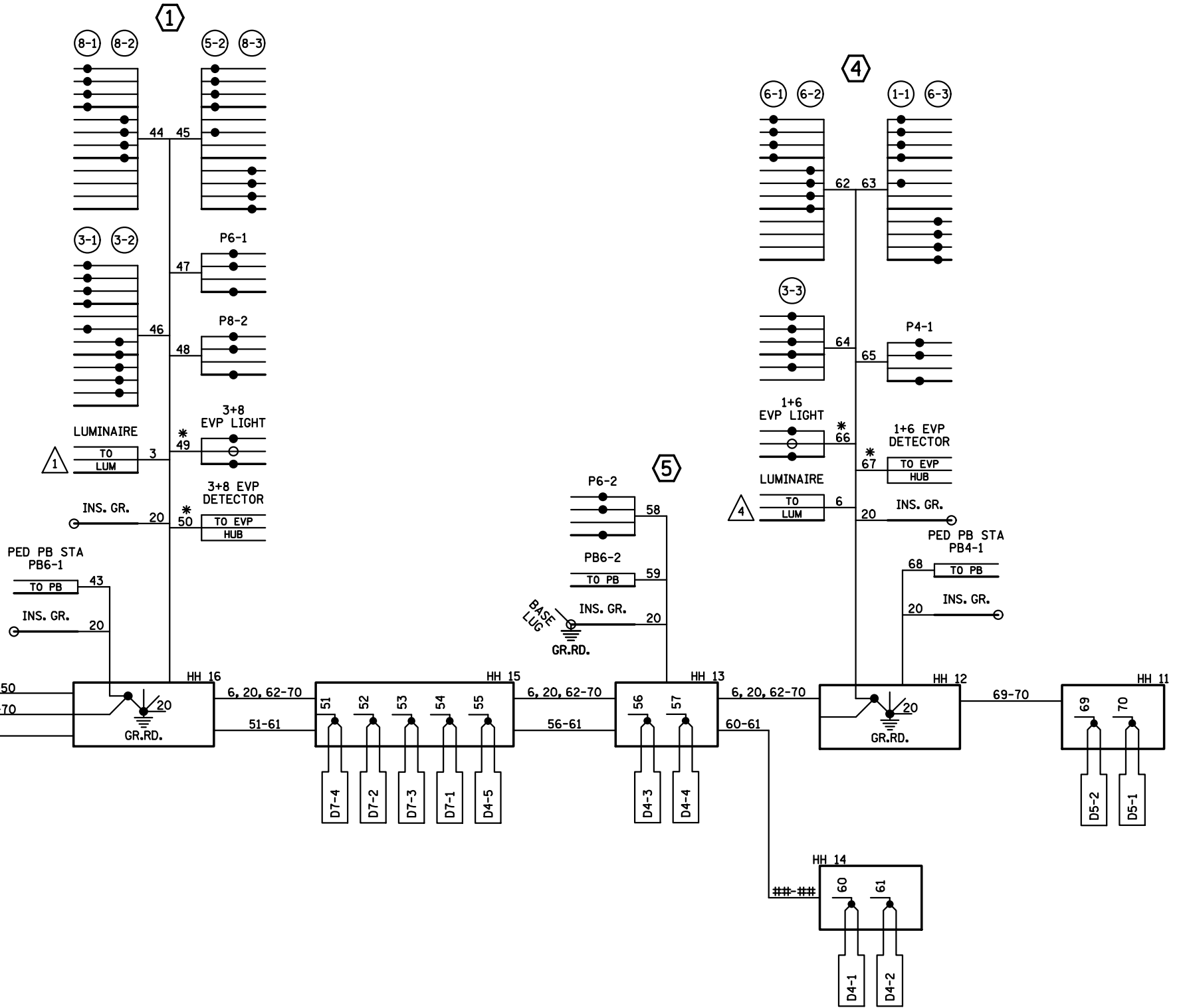
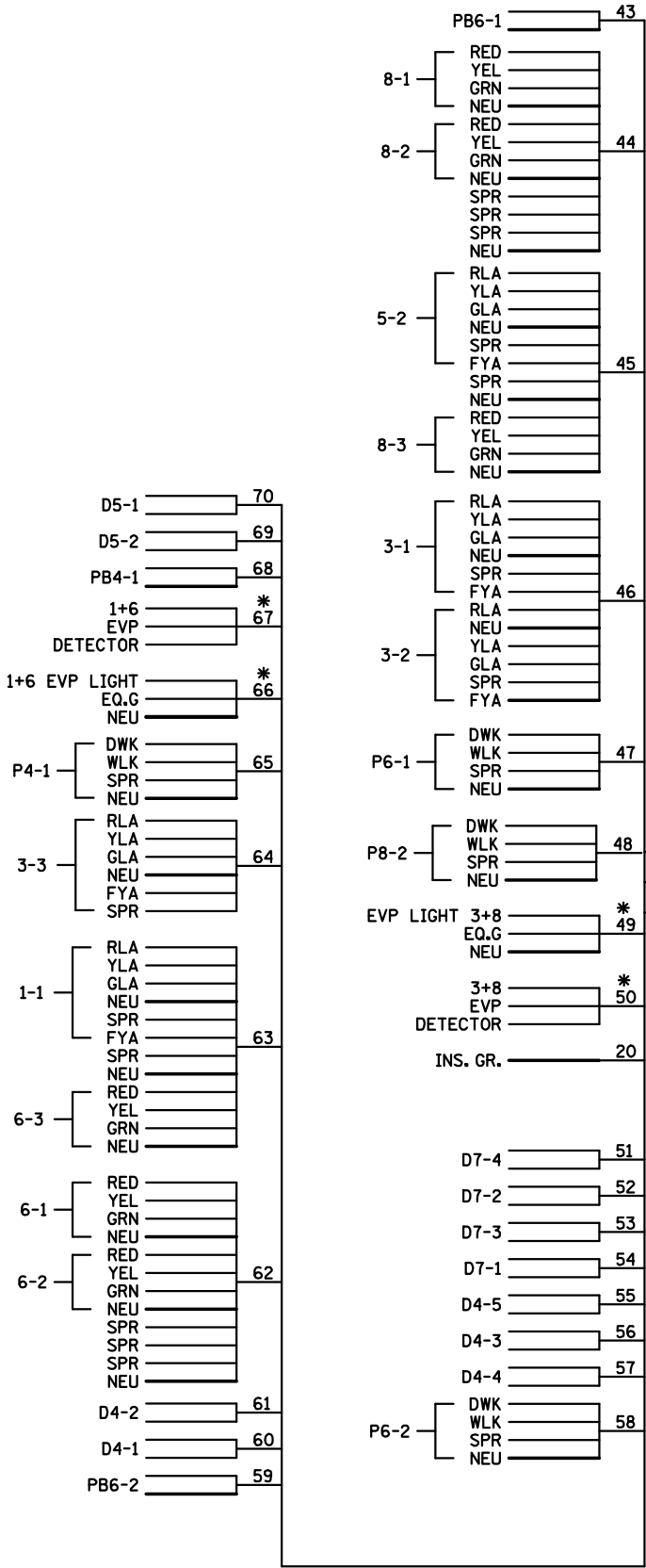
				DES: JSB	I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: <i>Jeffrey A. Hilden</i> LIC. NO. 20781 DATE: 12/18/2020 JEFFREY A. HILDEN		SIGNAL SYSTEM C POLE NOTES CSAH 11 AT CO. RD. 3		TRAFFIC SIGNAL PLAN	
				DRW: RRC						
NO.	DATE	BY	DESCRIPTION OF REVISIONS	CHK: JAH			STATE PROJ. NO. 002-611-036		SHEET NO. 406 OF 416 SHEETS	

DATE: 11/25/2020 TIME: 8:06:23 AM
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DATE: 11/25/2020 TIME: 8:06:26 AM
FILENAME: c:\tkda_projects\se\m.vangstad\dms01247\cd00261036...s13f.dgn

CONTROLLER CABINET



- GENERAL NOTES:
- SIGNAL SYSTEM INCLUDES BATTERY BACKUP SERVICE CABINET (NO BATTERIES).
 - FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.
 - 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.

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DES: JSB	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.
DRW: JSB	SIGNATURE: <i>Jeffrey A. Hilden</i> LIC. NO. 20781 DATE: 11/25/2020
CHK: JAH	JEFFREY A. HILDEN



SIGNAL SYSTEM C WIRING DIAGRAM
CSAH 11 AT CO. RD. 3
STATE PROJ. NO. 002-611-036

TRAFFIC SIGNAL PLAN
SHEET NO. 408 OF 416 SHEETS