

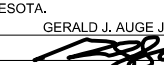
STATEMENT OF ESTIMATED QUANTITIES				SAP: 002-601-065
Notes	Item Number	ITEM DESCRIPTION	Unit	TOTAL PROJECT QUANTITIES ESTIMATED
	2021.501	MOBILIZATION	LUMP SUM	1
	2104.502	REMOVE DRAINAGE STRUCTURE	EACH	8
2	2104.502	SALVAGE SIGN TYPE C	EACH	23
1	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	647
1	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	820
1	2104.503	REMOVE CURB AND GUTTER	LIN FT	5774
1,3	2104.504	REMOVE CONCRETE PAVEMENT	SQ YD	9499
1	2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	28665
1	2104.518	REMOVE CONCRETE MEDIAN	SQ FT	7887
	2105.607	COMMON EXCAVATION	CU YD	175
	2105.607	GRANULAR BORROW (LV)	CU YD	782
4	2123.510	MOTOR GRADER	HOUR	8
5	2130.523	WATER	M GALLON	20
6	2211.509	AGGREGATE BASE CLASS 5	TON	2389
7	2232.604	MILL BITUMINOUS PAVEMENT (SPECIAL)	SQ YD	257
	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	4305
8	2360.509	TYPE SP 12.5 BITUMINOUS MIXTURE FOR PATCHING	TON	161
9	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4;C)	TON	29
	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4;C)	TON	6689
	2360.509	TYPE SP 12.5 NON WEARING COURSE MIXTURE (4;C)	TON	3290
10	2504.602	ADJUST GATE VALVE	EACH	8
12	2506.502	CASTING ASSEMBLY	EACH	31
11	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN H	LIN FT	24.2
11	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	LIN FT	19.4
14	2506.602	RECONSTRUCT DRAINAGE STRUCTURE	EACH	1
13	2506.602	GROUT CATCH BASIN OR MANHOLE	EACH	18
	2506.602	REPAIR CATCH BASINS	EACH	5
16	2521.518	4" CONCRETE WALK	SQ FT	22188
	2531.503	CONCRETE CURB AND GUTTER DESIGN B612	LIN FT	6203
	2531.503	CONCRETE CURB AND GUTTER DESIGN B618	LIN FT	200
	2531.602	CONCRETE MEDIAN NOSE-SPECIAL	EACH	7
15	2550.602	LOOP DETECTOR DESIGN NMC	EACH	13
	2563.601	TRAFFIC CONTROL SUPERVISOR	LUMP SUM	1
17,18	2563.601	TRAFFIC CONTROL	LUMP SUM	1
19	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20
2	2564.502	INSTALL SIGN TYPE C	EACH	23
	2565.602	ADJUST HANDHOLE	EACH	5
	2573.501	EROSION CONTROL SUPERVISOR	LUMP SUM	1
20	2573.502	STORM DRAIN INLET PROTECTION	EACH	34
	2574.507	COMMON TOPSOIL BORROW	CU YD	93
	2575.504	ROLLED EROSION PREVENTION CATEGORY 15	SQ YD	167
21	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	POUND	130
22	2581.503	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	LIN FT	125
23	2582.503	4" SOLID LINE MULTI-COMPONENT	LIN FT	16633
23	2582.503	4" BROKEN LINE MULTI-COMPONENT	LIN FT	1481
24	2582.503	24" SOLID LINE PREFORM THERMO GROUND IN	LIN FT	196
24	2582.518	PAVEMENT MESSAGE PREFORM THERMOPLASTIC	SQ FT	62
24	2582.518	CROSSWALK PREFORM THERMOPLASTIC GROUND IN	SQ FT	1152

CONSTRUCTION NOTES	
1	REFERENCE DETAILS (PAGE 9-10) FOR REMOVAL DETAILS
2	ITEM USED FOR SIGNS IN MEDIAN AREAS.
3	ITEM INCLUDES REMOVAL QUANTITIES FOR BUS PAD REMOVAL.
4	ITEM USED TO MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIM AREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING PAVEMENT AND FOR SUPER ELEVATION/GRADE CORRECTION AREAS.
5	WATER TO BE USE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
6	ITEM TO BE USED AS BASE FOR NEW CONCRETE WALK AND CURB PATCHES.
7	TO BE USED FOR MILLING STREET APPROACHES AND/OR DETAIL MILLING AREAS AS IDENTIFIED IN THE PLAN.
8	ITEM INCLUDES BITUMINOUS PATCHING AROUND NEW CURB, STORM STRUCTURE REPAIRS, AND ANY POTHOLES.
9	STREET APPROACHES SHALL BE PAVED AFTER MAINLINE, AND BEFORE FINAL STRIPING
10	GATE VALVES TO BE ADJUSTED ONLY AS NECESSARY AS DETERMINED BY THE ENGINEER.
11	PAY HEIGHT IS MEASURED FROM INVERT OF OUTLET PIPE TO TOP OF PRECAST CONCRETE STRUCTURE PLUS AN ALLOWANCE OF 0.70 FEET FOR THE DEPTH OF THE CONCRETE BASE, REGARDLESS OF ITS ACTUAL THICKNESS. CONCRETE ADJUSTMENT RINGS ARE INCIDENTAL. CONNECTIONS TO EXISTING STORM SEWER ARE INCIDENTAL.
12	ITEM INCLUDES FULL REPLACEMENT OF CASTING ADJUSTMENT RINGS. SEE STORM TABULATIONS FOR RING HEIGHTS. CASTINGS IN ROADWAY SHALL BE INSTALLED BETWEEN BASE AND WEAR LIFT PAVING
13	ITEM INCLUDES GROUTING OF INVERTS, DOGHOUSES, RINGS, STRUCTURES AND CASTINGS AS DIRECTED BY PLAN AND ENGINEER. SEE DRAINAGE TAB, PAGE 3-4.
14	ITEM USED TO REPLACE PRECAST CONCRETE STRUCTURE HAT.
15	FULL LOOP REPLACEMENT REQUIRED. CONTRACTOR SHALL CONTACT ANOKA COUNTY TO DETERMINE PLACEMENT. SIGNAL PLANS ARE INCLUDED AT THE END OF THIS PLAN.
16	ITEM USED FOR CONCRETE MEDIAN.
17	CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TEMPORARY SIGNAGE WHENEVER EXISTING SIGNAGE IS REMOVED. TEMPORARY SIGNAGE SHALL BE INCIDENTAL TO TRAFFIC CONTROL.
18	ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO, AND BE INSTALLED IN ACCORDANCE WITH, THE MOST CURRENT REVISION OF THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". "DO NOT PASS, PASS WITH CARE, NO CENTER STRIPE, AND STOP HERE ON RED SIGNS SHALL BE INPLACE WHENEVER PERMANENT PAVEMENT MARKINGS ARE NOT PRESENT.
19	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT, SHALL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
20	ALL DRAINAGE STRUCTURES AFFECTED BY THIS PROJECT MUST HAVE INLET PROTECTION.
21	TYPE 3 FERTILIZER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM. SEE "BASIS OF PLANNED QUANTITIES" FOR APPLICATION RATES.
22	CENTERLINE AND LANE DESIGNATION SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON MILLED SURFACE AND EACH NEW LIFT OF PAVEMENT; SKIPS MUST BE IN PLACE BEFORE THE CONTRACTOR LEAVES FOR THE DAY. CONTRACTOR IS TO REMOVE PRIOR TO FINAL STRIPING.
23	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING. CANNOT BE INSTALLED SOONER THAN 48 HOURS.
24	INCLUDES ALL THERMOPLASTIC STOP BARS, GORE AREA HATCHING, CROSSWALKS, LANE DESIGNATION ARROWS, AND PAVEMENT MESSAGES.

NO	DATE	BY	CKD	APPR	REVISION	01/22/2024	11:04:43 AM
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PRINT NAME: GERALD J. AUGER JR.

SIGNATURE: 

DATE: 12-12-2023 LICENSE NO. 26511

DRAWN BY SPH DATE 12/12/2023

DESIGN BY SPH DATE 12/12/2023

CHECKED BY CO DATE 12/12/2023



ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-601-065

STATEMENT OF ESTIMATED QUANTITIES

Sheet 2 of 35 Sheets

BITUMINOUS STREET SUMMARY		
LOCATION	BITUMINOUS	
	2360 TYPE SP 12.5 WEAR (4,C)	
	TON	
JAY ST	10	[1]
IBIS ST	10	[1]
HUMMINGBIRD ST	9	[1]
PROJECT TOTAL	29	

BITUMINOUS SUMMARY NOTES:
 [1] QUANTITY ESTIMATED FOR 1 LIFTS

CASTING ASSEMBLIES SUMMARY						
ASSEMBLY	RING OR FRAME CASTING	COVER OR GRATE CASTING	CURB BOX	DESCRIPTION	NOTES	QUANTITY
A-7D	700-7	715		301-CP LID WITH RUBBER GASKET ON BOTTOM	CASTING COVER STAMPED "STORM SEWER" (NEENAH R-1733 WITH LID 301-CP)	2
A-7D	700-7	715		301-CP LID WITH RUBBER GASKET ON BOTTOM	CASTING COVER STAMPED "SANITARY SEWER" (NEENAH R-1733 WITH LID 301-CP)	7
A	NEENAH R-3250-DVSP	V	YES	NEENAH R-3250-DVSP		22

ALL CASTING HEIGHTS ARE TO BE VERIFIED IN THE FIELD
 ALL MANHOLE COVERS SHOULD BE LABELED AS STORM OR SANITARY
 NEW MANHOLE CASTINGS TO BE INSTALLED FLUSH WITH THE MILLED ASPHALT SURFACE.
 ALL MANHOLES TO BE WRAPPED WITH INFI-SHIELD. THIS WORK IS INCIDENTAL TO THE CASTING ASSEMBLY.
 ADJUSTING RINGS TO BE INSTALLED AND GLUED DURING THE PAVING OPERATION.
 ADJUSTING RINGS TO BE RECESSED 1/4" FROM TOP OF FINISHED MAT

GATE VALVE TAB			
NUMBER	STATION	OFFSET	ADJUST
507	133+17	20.5 LT	1
506	135+07	22.0 LT	1
505	139+71	22.0 LT	1
504	143+25	23.0 LT	1
503	143+29	17.0 LT	1
502	143+90	27.5 LT	1
501	143+96	16.5 LT	1
500	144+22	20.0 LT	1
TOTAL			8

GATE VALVES TO BE ADJUSTED ONLY AS NECESSARY AS DETERMINED BY THE ENGINEER.

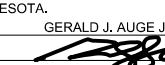
THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT

MNDOT STANDARD PLATES	
PLATE NO.	DESCRIPTION
3000M	REINFORCED CONCRETE PIPE (6 SHEETS)
3007F	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
4011E	PRECAST CONCRETE BASE
4020J	MANHOLE OR CATCH BASIN (FOR USE WITH OR WITHOUT TRAFFIC LOADS) (2 SHEETS)
4024A	48" DIA. PRECAST SHALLOW DEPTH CATCH BASIN - DESIGN SD
4026B	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4110F	COVER CASTING FOR MANHOLE (FOR USE IN ALL TRAFFIC AREAS) - CASTING NO. 715 AND 716
4134A	CURB BOX CASTING FOR CATCH BASIN (FOR DESIGN B CURBS)- CASTING NO. 825
7100H	CONCRETE CURB AND GUTTER (DESIGN B AND DESIGN V)
7111J	INSTALLATION OF CATCH BASIN CASTINGS (CONCRETE CURB AND GUTTER)
7113A	CONCRETE APPROACH NOSE DETAIL
8000K	TEMPORARY CHANNELIZERS (3 SHEETS)

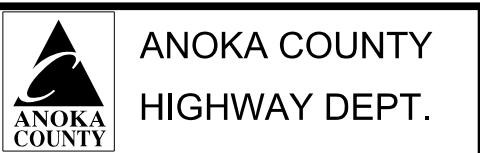
BASIS OF PLANNED QUANTITIES		
2357	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL / SQ YD
2211	AGGREGATE BASE CLASS 5	1.8 TONS / CU YD
2360	ALL BITUMINOUS PAVEMENT	115 LBS / SQ YD / IN THICKNESS
2581	REMOVABLE PREFORM PAVEMENT MARKING TAPE	2' AT 50' INTERVALS
2575	SEED MIXTURE 25-121	61 LBS./ ACRE
2574	FERTILIZER TYPE 3	350 LBS./ ACRE
2575	HYDRAULIC REINFORCED FIBER MATRIX	3900 LBS./ ACRE

NO	DATE	BY	CKD	APPR	REVISION	
	01/22/2024					11:07:31 AM

NAME: P:\24-01-00\CSAH_01_(550 E HANSON-EGRET)\Base\Proposed\CSAH_01_SEQ.dgn

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 SIGNATURE: 
 DATE: 12-12-2023 LICENSE NO. 26511

DRAWN BY: SPH DATE 12/12/2023
 DESIGN BY: SPH DATE 12/12/2023
 CHECKED BY: CO DATE 12/12/2023



STATE AID PROJECT 002-601-065

STATEMENT OF ESTIMATED QUANTITIES
 Sheet 3 of 35 Sheets

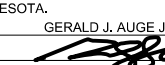
STORM DRAINAGE TAB

NUMBER	TYPE	ACTION	NEW CASTING TYPE	FURNISH AND INSTALL CASTING ASSEMBLY	RING HEIGHT (INCIDENTAL)	REMOVE STRUCTURE	GROUT CATCH BASIN OR MANHOLE	CONSTRUCT DRAINAGE STRUCTURE DESIGN H	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48"	CONNECT TO EXISTING STORM SEWER (INCIDENTAL)	REPAIR CATCH BASIN (REBUILD INVERT AND/OR DOGHOUSE)	NOTES
				EACH	LIN FT	EACH	EACH	LIN FT	LIN FT	EACH	EACH	
100	CB	GROUT					1					CLEAN AND GROUT DOGHOUSE & W/E INV
101	CB	GROUT					1					CEAN & GROUT STRUCTURE
102	CB	RE-RING	A	1	0.4							
103	CB	RE-RING	A	1	0.9							CLEAN
104	CB	RE-RING	A	1	0.5						1	CLEAN & NEW INV
105	CB	RE-RING	A	1	0.6						1	CLEAN & NEW INV
106	CB	GROUT					1				1	GROUT STRUCTURE & NEW INV
107	CB	RECONSTRUCT	A	1	0.4	1			12.2	3		30" W 11.2' INV, 30" E 11.2' INV, 15" NW 6.6' INV, BLOCK STRUCTURE WITH CONE NEW E,W INV
108	CB	RE-RING	A	1	0.8						1	
109	CB	RE-RING	A	1	0.2							
110	CB	RE-RING	A	1	0.6							
111	CB	RE-RING	A	1	0.2							
112	CB	RE-RING	A	1	0.2		1					GROUT STRUCTURE SEALS, MOISTURE PRESENT
113	CB	RE-RING	A	1	0.4							
114	CB	RE-RING	A	1	0.8						1	NEW INV
115	CB	GROUT					1					CLEAN AND GROUT RINGS
116	CB	RECONSTRUCT	A	1	0.4	1			7.2	2		18" W 6.1' INV, 15" E 6.1' INV, BLOCK STRUCTURE
117	CB	RE-RING	A	1	0.4							
118	CB	RE-RING	A	1	0.4							
119	CB	GROUT					1					CLEAN & GROUT RINGS
120	CB	GROUT					1					
121	CB	RECONSTRUCT	A	1	0.4	1		4.55		2		12" PVC NW 3.2' INV, 12" S 3.25' INV
122	CB	GROUT					1					GROUT RINGS
123	CB	RE-RING	A	1	0.2							
124	CB	RECONSTRUCT	A	1	0.4	1		2.7		1		12" S 2.0' INV
125	CB	RECONSTRUCT	A	1	0.2	1		3.5		2		12" NE 2.8' INV, 15" SE 2.8' INV
126	CB	RECONSTRUCT	A	1	0.4	1		4.4		2		12" S 3.1' INV, 12" N 3.0' INV
127	CB	OK										
128	CB	GROUT					1					GROUT RINGS & DOGHOUSES
129	CB	RECONSTRUCT	A	1	0.4	1		4.9		1		12" S 3.5' INV
130	CB	OK										
131	CB	RECONSTRUCT	A	1	0.2	1		4.1		2		12" S 3.4' INV, 12" N 3.4' INV
132	CB	OK										
133	CB	GROUT					1					GROUT ALL
200	MH	RE-RING	A-7D	1	0.7		1					GROUT INVERT
201	MH	RECONSTRUCT	A-7D	1	0.3		1					GROUT STRUCTURE & NEW TOPHAT FOR 48" STRUCT
202	MH	GROUT					1					GROUT RINGS
300	MH	OK										
301	MH	OK										WATER MAIN
302	MH	GROUT					1					GROUT RINGS, SANITARY
303	MH	RE-RING	A-7D	1	0.4							SANITARY
304	MH	RE-RING	A-7D	1	1.0							SANITARY
305	MH	GROUT					1					GROUT RINGS, SANITARY
306	MH	GROUT					1					GROUT RINGS, SANITARY
307	MH	RE-RING	A-7D	1	0.4							SANITARY
308	MH	RE-RING	A-7D	1	0.7							SANITARY
309	MH	RE-RING	A-7D	1	0.7							SANITARY
310	MH	GROUT					1					GROUT RINGS, SANITARY
311	MH	RE-RING	A-7D	1	0.7							SANITARY
312	MH	RE-RING	A-7D	1	0.4							SANITARY
301A	MH	GROUT					1					GROUT RINGS, WATER MAIN
TOTALS				31	14.7	8	18	24.2	19.4	15	5	

NO	DATE	BY	CKD	APPR	REVISION	12/11/2023	1:33:22 PM
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PRINT NAME: GERALD J. AUGER JR.


SIGNATURE: 

DATE: 12-08-2023 LICENSE NO. 26511

DRAWN BY: SPH DATE: 12/11/2023

DESIGN BY: SPH DATE: 12/11/2023

CHECKED BY: CO DATE: 12/11/2023



ANOKA COUNTY

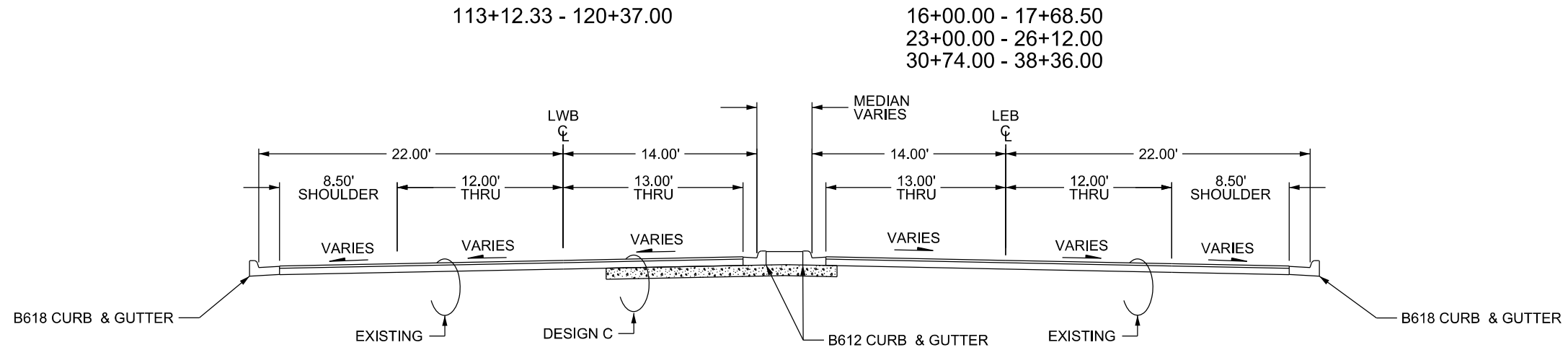
HIGHWAY DEPT.

STATE AID PROJECT 002-601-065

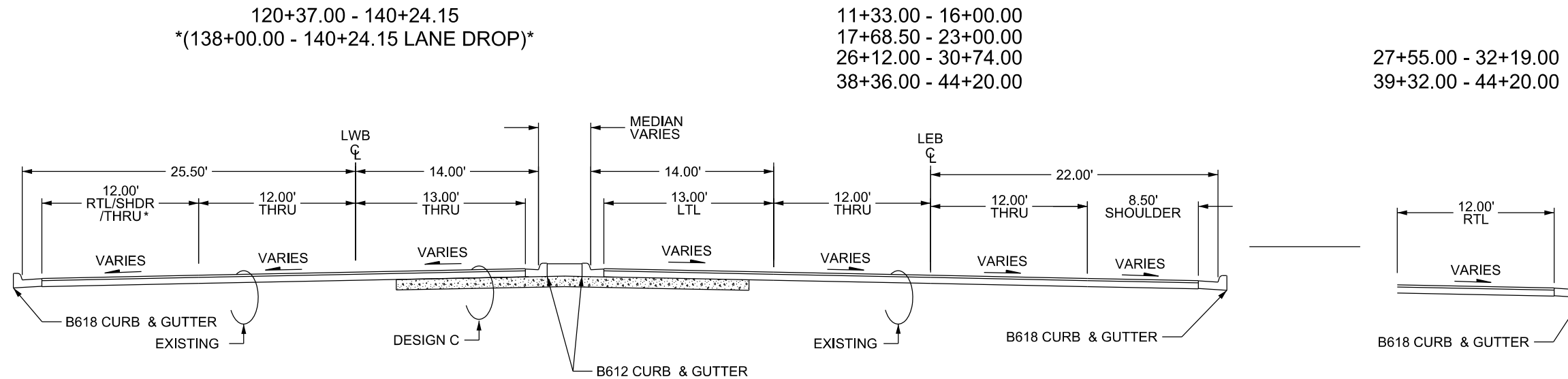
STORM SEWER TABULATIONS

Sheet 4 of 35 Sheets

CSAH 01 - COON RAPIDS BLVD EXISTING SECTION



CSAH 01 - COON RAPIDS BLVD EXISTING SECTION



NOTE: CONCRETE SECTION UNDER ROADWAY IS SHOWN IN AN APPROXIMATE LOCATION

NO	DATE	BY	CKD	APPR	REVISION	01/23/2024	9:08:45 AM
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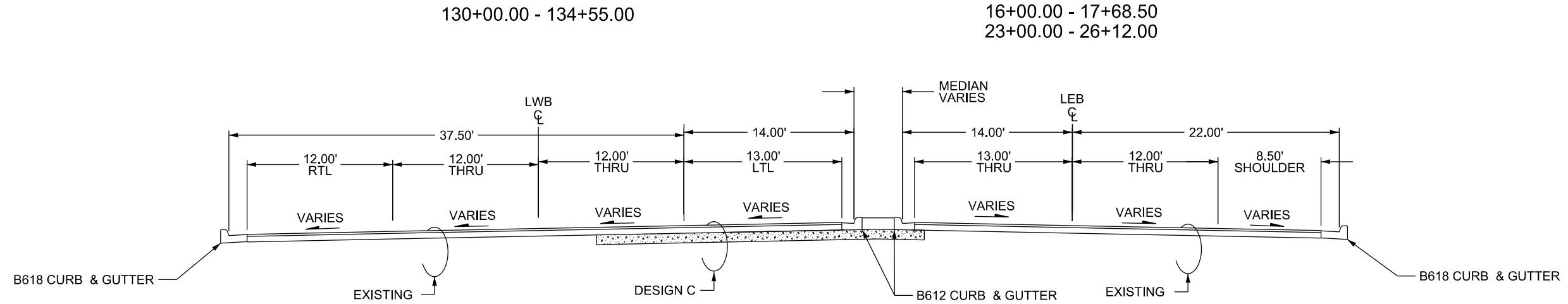
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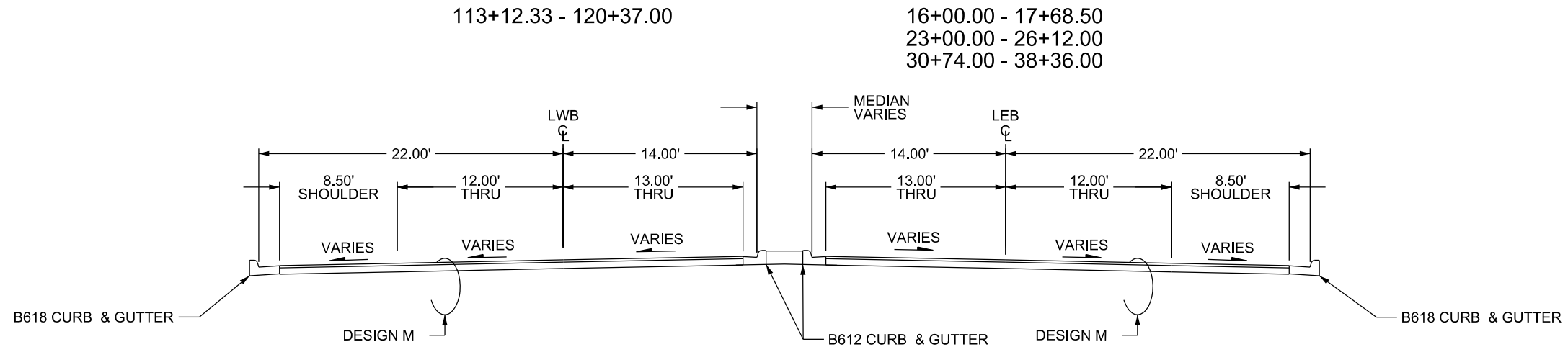
STATE AID PROJECT 002-601-065

TYPICAL SECTIONS
 Sheet 5 of 35 Sheets

CSAH 01 - COON RAPIDS BLVD EXISTING SECTION



CSAH 01 - COON RAPIDS BLVD PROPOSED SECTION



NOTE: CONCRETE SECTION UNDER ROADWAY IS SHOWN IN AN APPROXIMATE LOCATION

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STATE AID PROJECT 002-601-065

TYPICAL SECTIONS
 Sheet 6 of 35 Sheets

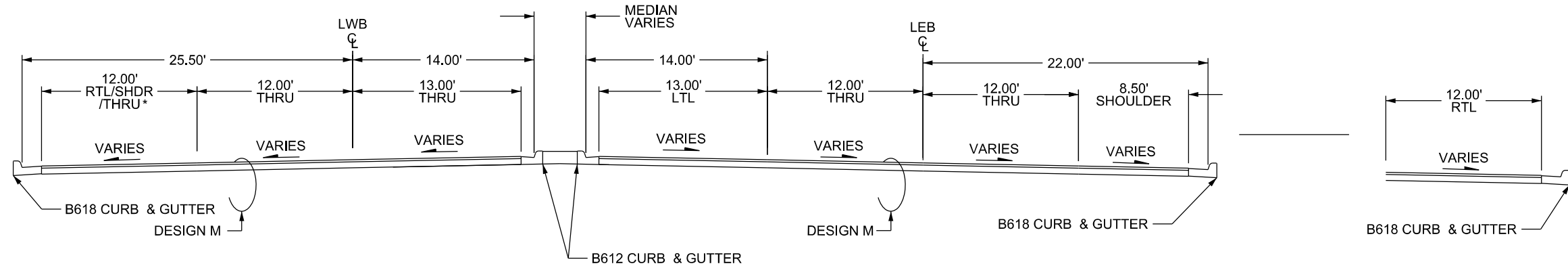
SPH005

CSAH 01 - COON RAPIDS BLVD PROPOSED SECTION

120+37.00 - 140+24.15
(135+07.00 - 140+24.15 LANE DROP)

11+33.00 - 16+00.00
17+68.50 - 23+00.00
26+12.00 - 30+74.00
38+36.00 - 44+20.00

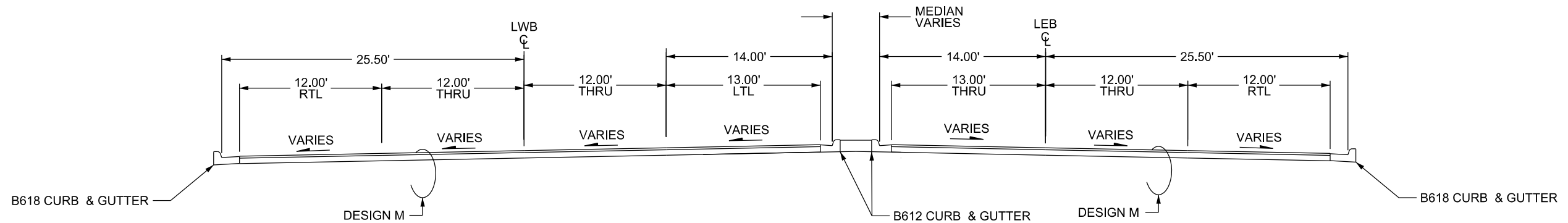
27+55.00 - 32+19.00
39+32.00 - 44+20.00



CSAH 01 - COON RAPIDS BLVD PROPOSED SECTION

130+00.00 - 134+55.00

16+00.00 - 17+68.50
23+00.00 - 26+12.00

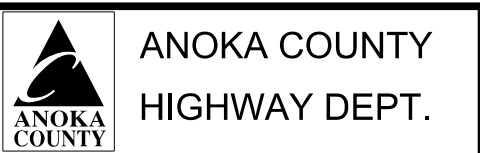


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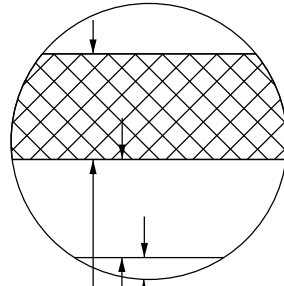
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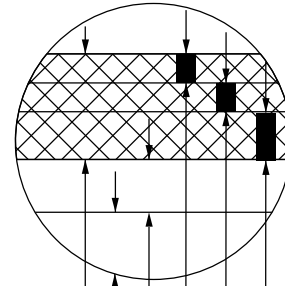
TYPICAL SECTIONS
 Sheet 7 of 35 Sheets

DESIGN C
CONCRETE REMOVAL SECTION



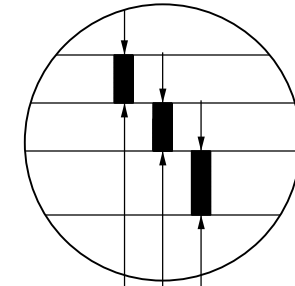
7.0 - 9.0" REMOVE & REPLACE BITUMINOUS *
REMOVE 8.0" CONCRETE PAVEMENT
1" - 4" COMMON EXCAVATION

DESIGN M
MILL / RECLAIM SECTION



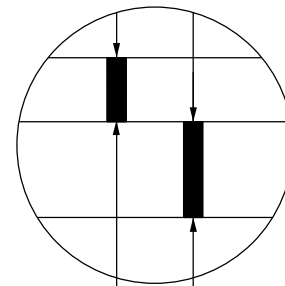
7.0 - 9.0" REMOVE & REPLACE BITUMINOUS
1" - 4" COMMON EXCAVATION
AGGREGATE CLASS 5 BASE
2.0" BITUMINOUS WEAR(SPWEB440C)
2.0" BITUMINOUS WEAR(SPWEB440C)
2.0" BITUMINOUS NON WEAR(SPNWB430C)

BUS PAD
BITUMINOUS PATCH SECTION



2.0" TYPE SP 12.5 BITUMINOUS WEAR (SPWEB440C)
3.0" TYPE SP 12.5 BITUMINOUS WEAR (SPWEB440C)
3.0" TYPE SP 12.5 BITUMINOUS MIXTURE (PATCH)

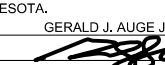
EXISTING SECTION



7.0" - 9.0" EXISTING BITUMINOUS
EXISTING AGGREGATE BASE

NOTE: CONCRETE SECTION UNDER ROADWAY IS SHOWN IN AN APPROXIMATE LOCATION

NO	DATE	BY	CKD	APPR	REVISION	
					02/20/2024	9:00:10 AM
NAME: P:\24-01-00\CSAH_01_(550 E HANSON-EGRET)\Base\Proposed\CSAH_01_TYPICALS.dgn						

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.
PRINT NAME: GERALD J. AUGER JR.
SIGNATURE: 
DATE: 12-12-2023 LICENSE NO. 26511

DRAWN BY SPH DATE 12/12/2023
DESIGN BY SPH DATE 12/12/2023
CHECKED BY CO DATE 12/12/2023



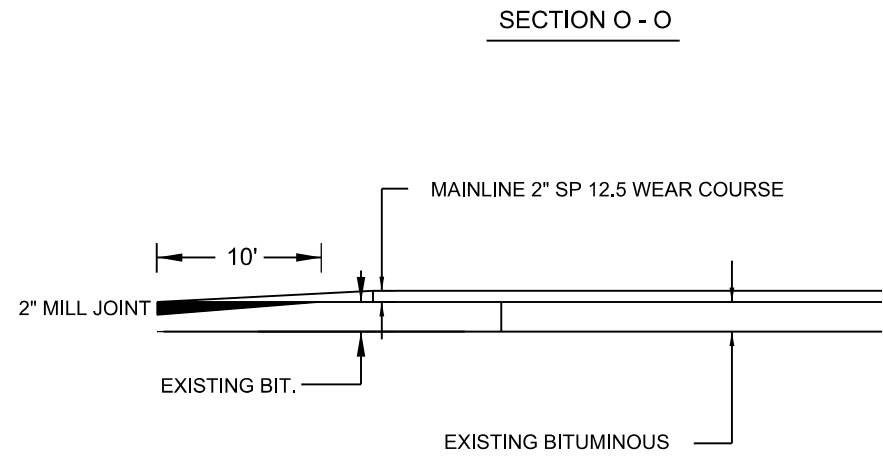
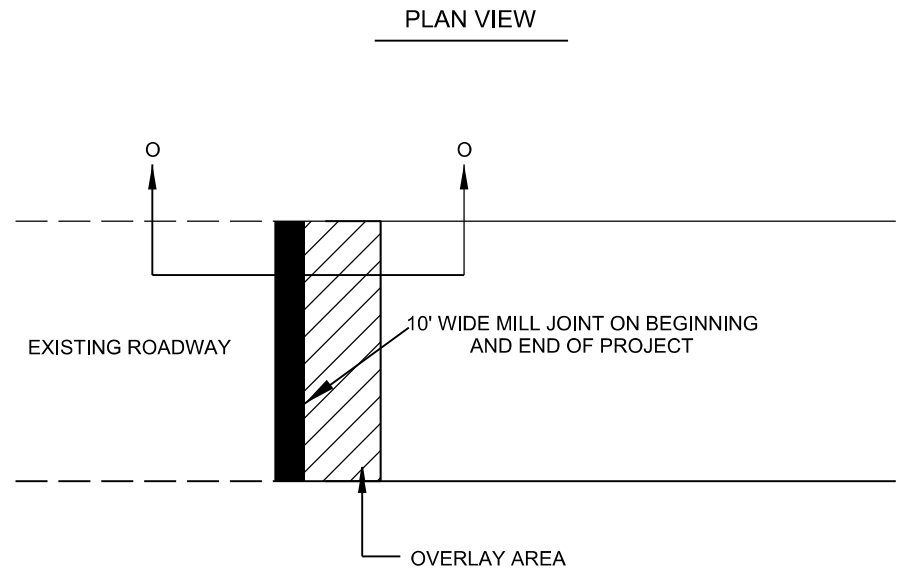
ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-601-065

TYPICAL SECTIONS

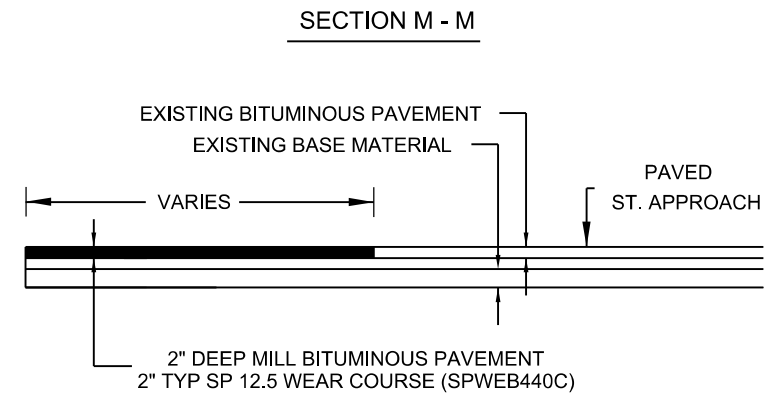
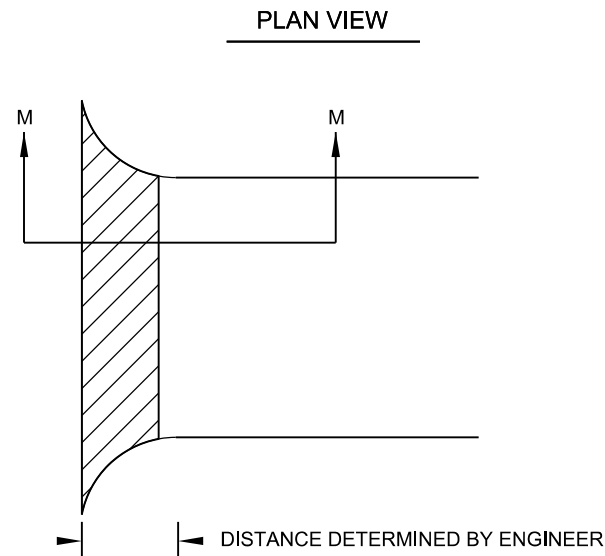
Sheet 8 of 35 Sheets

MAINLINE JOINT DETAIL (OVERLAY)



STREET APPROACH DETAIL (MILL & OVERLAY)

BITUMINOUS STREET



NO	DATE	BY	CKD	APPR	REVISION	12/11/2023	1:33:27 PM
NAME: P:\24-01-00\CSAH_01_(550 E HANSON-EGRET)\Base\Proposed\CSAH_01_DETAIL.dgn							

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.

PRINT NAME: GERALD J. AUGER JR.

SIGNATURE: *[Signature]*

DATE: 12-08-2023 LICENSE NO. 26511

DRAWN BY SPH DATE 12/11/2023

DESIGN BY SPH DATE 12/11/2023

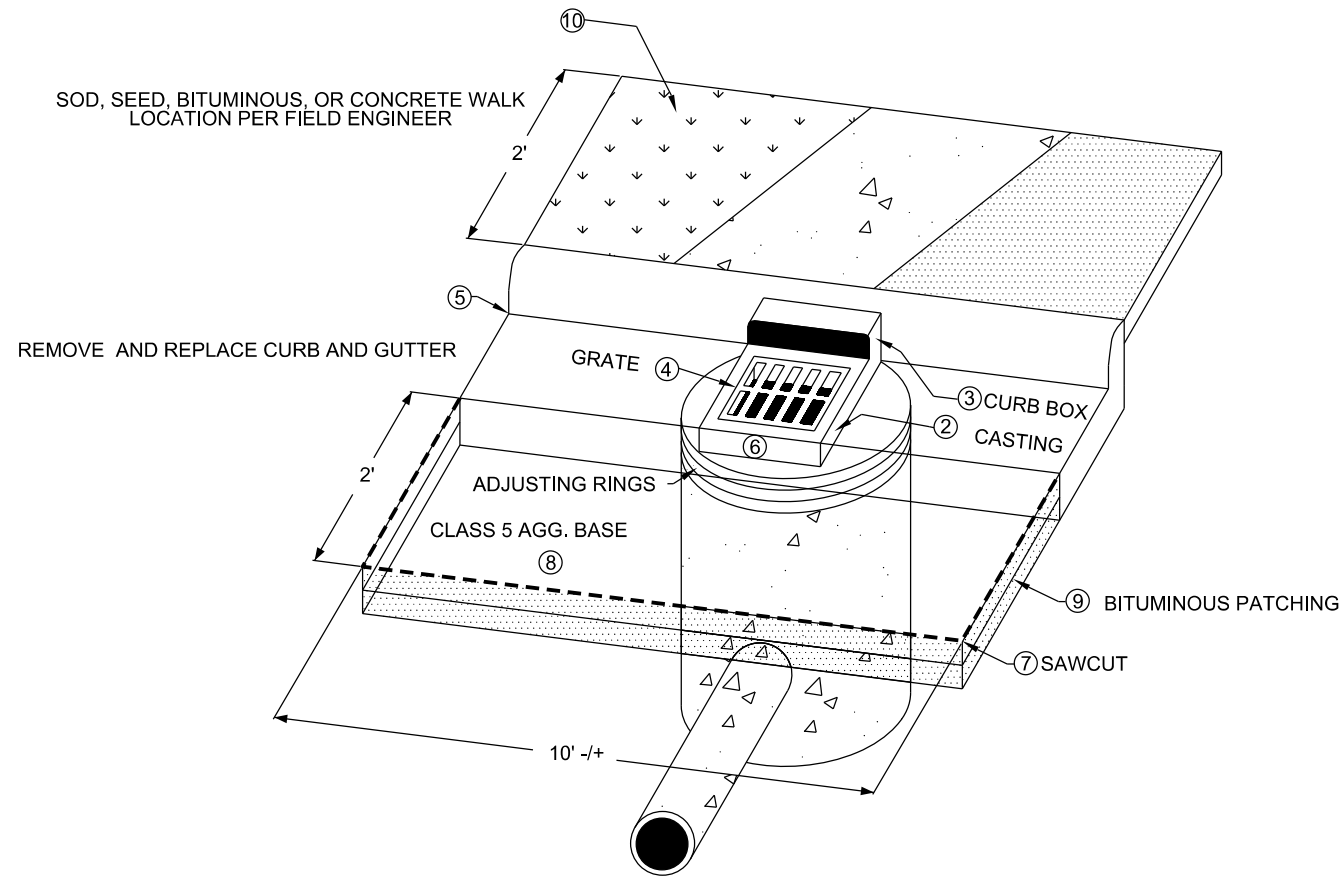
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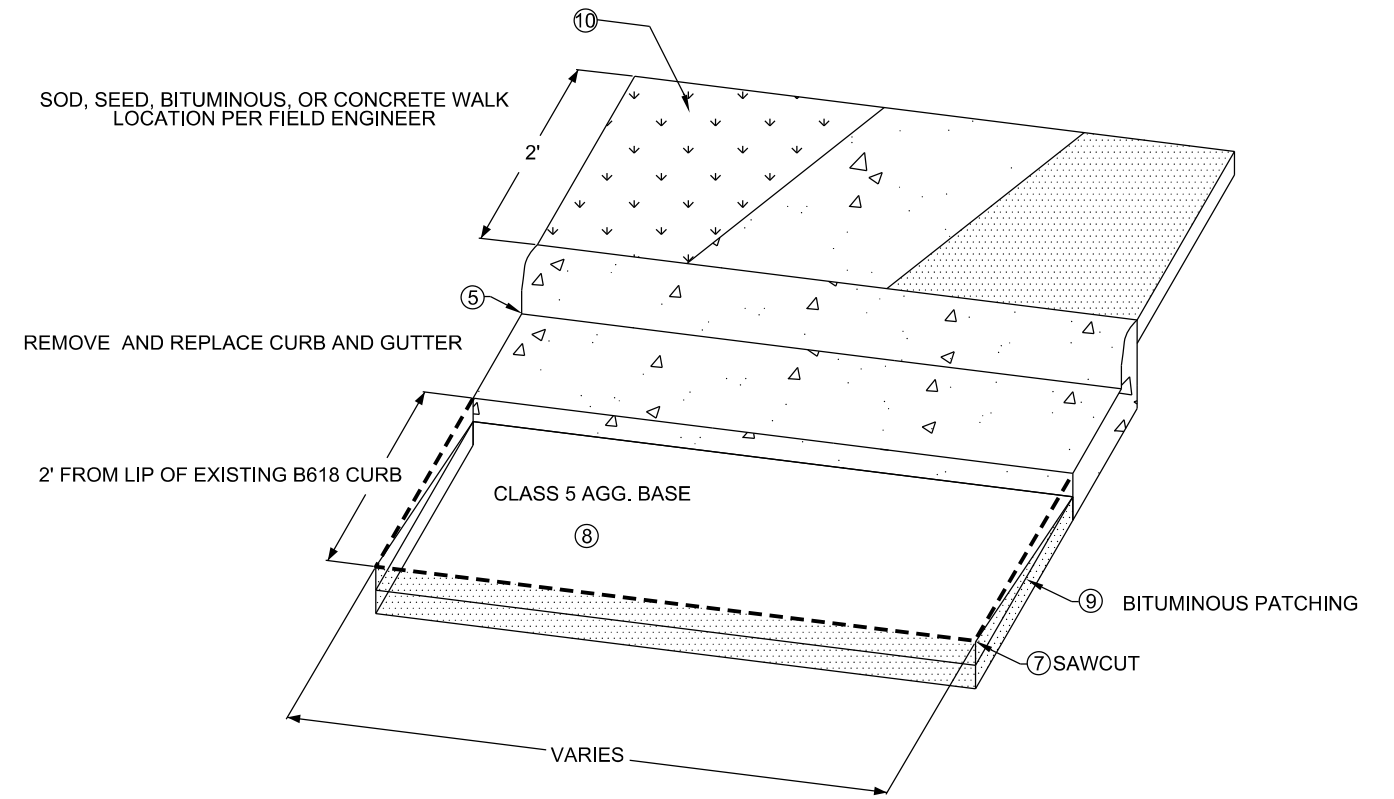
CATCH BASIN DETAIL

SEE STRUCTURE TAB FOR LOCATION
(PAGE 3-4)



NEW CURB DETAIL

SEE PLAN FOR LOCATION



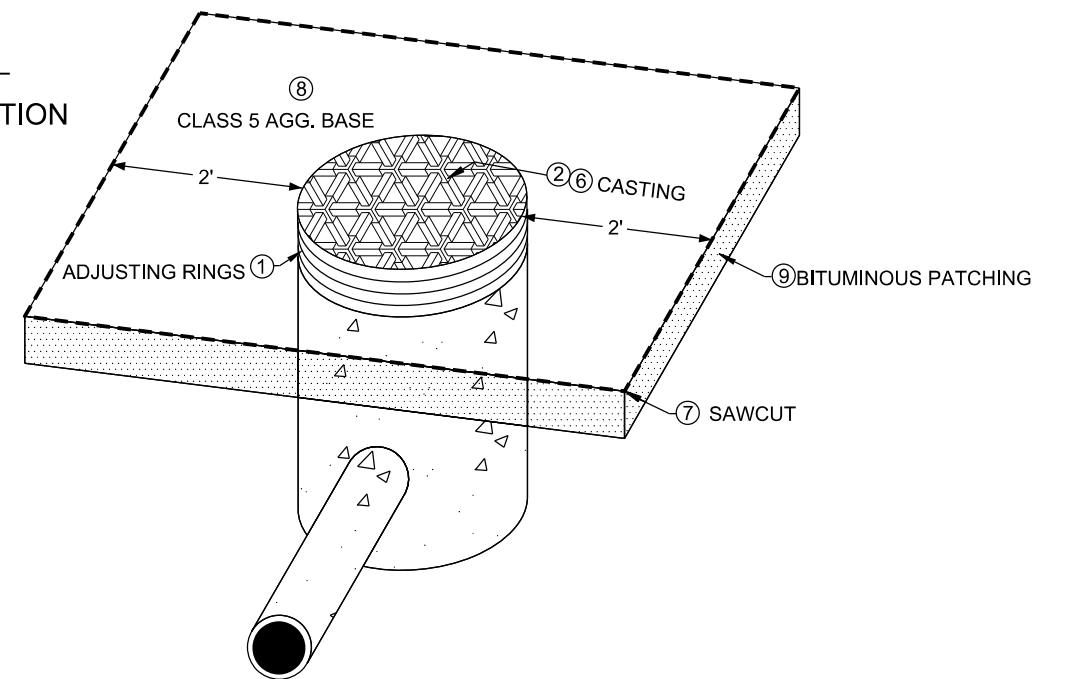
NOTES

FOR TRAFFIC CONTROL AT CATCH BASIN AND MANHOLE REPAIRS REFER TO THE MINNESOTA MANUAL ON TEMPORARY TRAFFIC CONTROL LAYOUTS FIELD MANUAL.

- ① CONCRETE ENCASED CONCRETE ADJUSTING RINGS STANDARD PLATE 4026A
- ② RING AND FRAME CASTING; REFERENCE CASTING ASSEMBLIES SUMMARY CHART FOR CASTING TYPE
- ③ CURB BOX MATCHES CASTING REFERENCE CHART FOR CASTING TYPE
- ④ GRATE CASTING; REFERENCE CASTING ASSEMBLIES SUMMARY CHART FOR CASTING TYPE
- ⑤ CONCRETE CURB AND GUTTER DESIGN B STANDARD PLATE 7100H, FORM CURB TO FIT CASTING
- ⑥ INSTALLATION OF CATCH BASIN OR MANHOLE CASTINGS; REFERENCE STANDARD PLATE PER TYPE OF CASTING
- ⑦ SAWCUT BITUMINOUS PAVEMENT / CONCRETE CURB FULL DEPTH.
- ⑧ ADD AND COMPACT AGGREGATE BASE CLASS 5 AROUND REPAIRED STRUCTURE. ITEM INCIDENTAL TO ENTIRE STRUCTURE REPAIR
- ⑨ REMOVE VARIABLE DEPTH BITUMINOUS, PATCH WITH 2, 3" LIFTS OF BITUMINOUS, TOP LIFT SHOULD TAPER TO BOTTOM LIFT AT CURB.
- ⑩ REPLACE DISTURBED AREA BEHIND CATCH BASIN WITH EITHER SOD (RESIDENTIAL AREAS), EROSION CONTROL BLANKET, BITUMINOUS, OR CONCRETE

MANHOLE DETAIL

SEE STRUCTURE TAB FOR LOCATION
(PAGE 3-4)



NO	DATE	BY	CKD	APPR	REVISION	12/11/2023	1:33:27 PM
NAME: P:\24-01-00\CSAH_01_(550 E HANSON-EGRET)\Base\Proposed\CSAH_01_DETAIL.dgn							

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.
 PRINT NAME: GERALD J. AUGER JR.
 SIGNATURE: *[Signature]*
 DATE: 12-08-2023 LICENSE NO. 26511

DRAWN BY SPH DATE 12/11/2023
 DESIGN BY SPH DATE 12/11/2023
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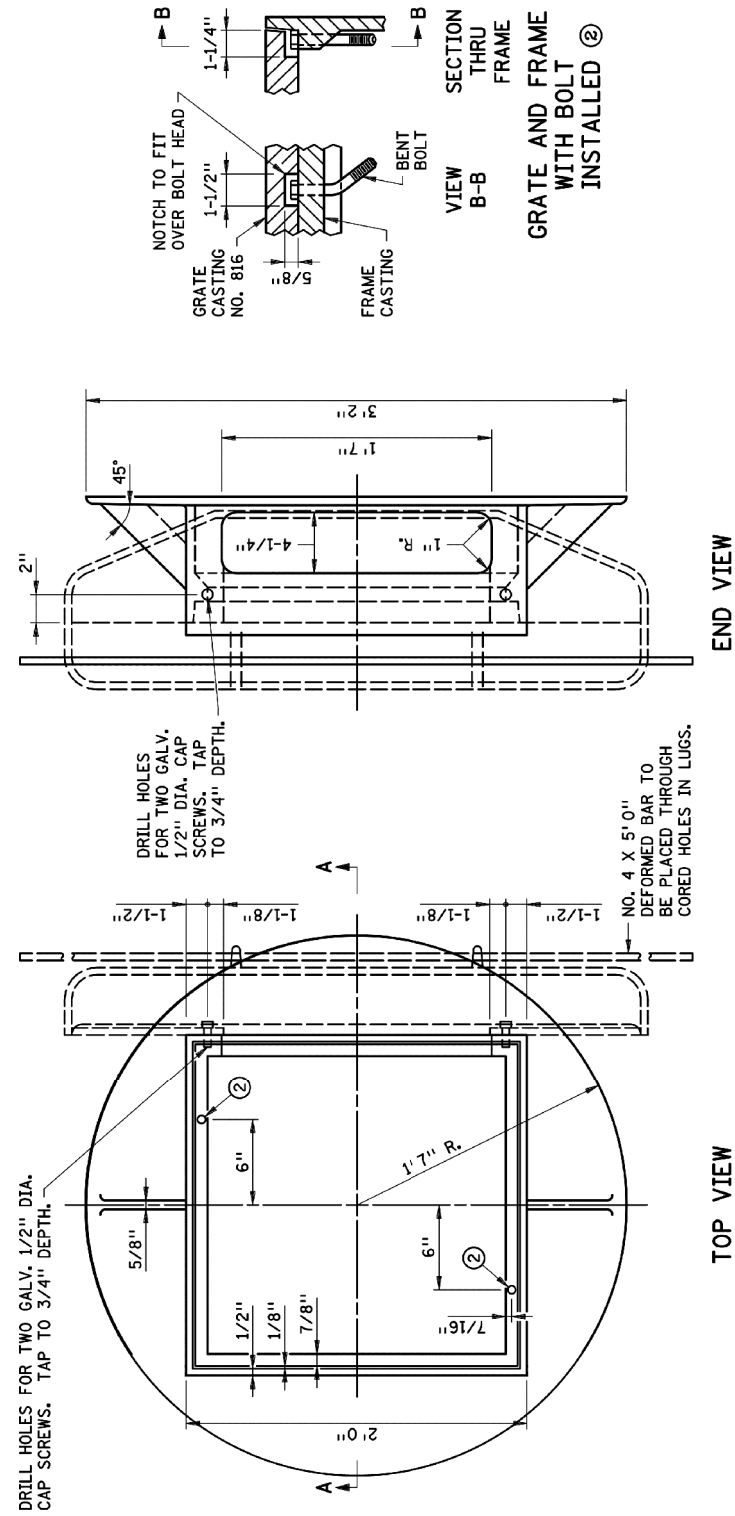


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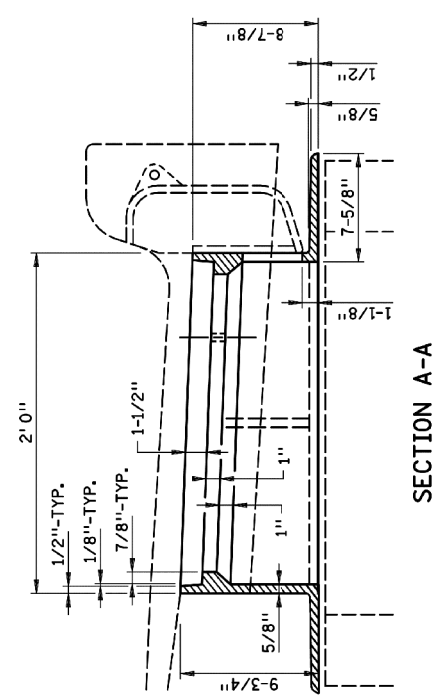
DETAILS
Sheet 10 of 35 Sheets

FRAME RING AND CASTING TYPE A

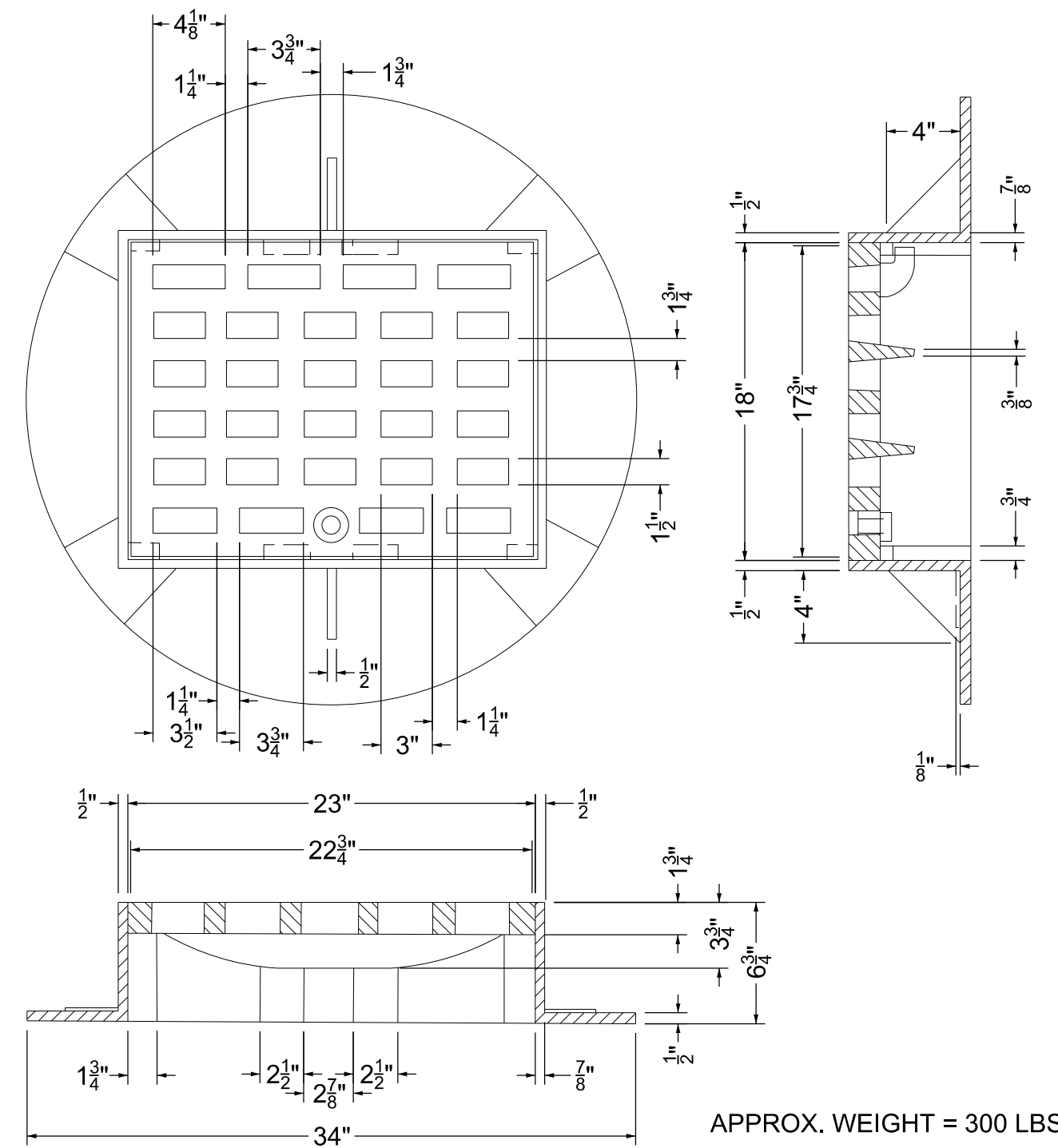


CASTINGS USED FOR ASSEMBLY
 GRATE NO. 816 (MNDOT STD PLATE 4154B)
 CURB BOX ① NO. 823A (MNDOT STD PLATE 4160) OR

NOTES:
 USE 1/4" FILLETS IN ALL CORNERS. SEE MNDOT STANDARD PLATE 7111 FOR INSTALLATION REQUIREMENTS.
 ① APPLIES TO DESIGN B OR V CURB AND GUTTER.
 ② AT LOCATIONS INDICATED IN TOP VIEW, PROVIDE 9/16" DIA. HOLES WHEN GRATE NO. 816 (MNDOT STD PLATE 4154) IS USED WITH THIS FRAME. FIELD PLATE 1/2" DIA X 4" LONG GALV BOLT IN UP STREAM SIDE AND BENT UNDERSIDE TO PREVENT REMOVAL. THIS WILL PREVENT GRATE NO. 816 (MNDOT STD PLATE 4154) FROM BEING PLACED IN WRONG AND NOT BEING BICYCLE SAFE



FRAME RING AND CASTING TYPE A



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DRAWN BY SPH DATE 12/11/2023
 DESIGN BY SPH DATE 12/11/2023
 CHECKED BY CO DATE 12/11/2023

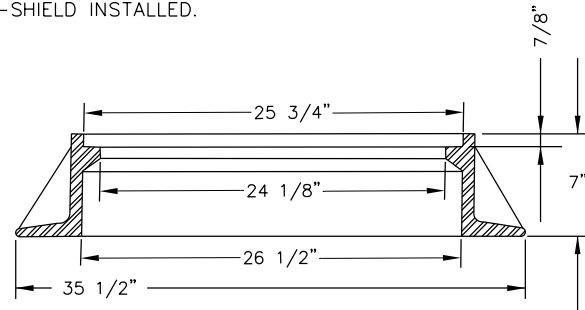
ANOKA COUNTY
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STATE AID PROJECT 002-601-065

DETAILS
 Sheet 11 of 35 Sheets

STANDARD MANHOLE CASTING

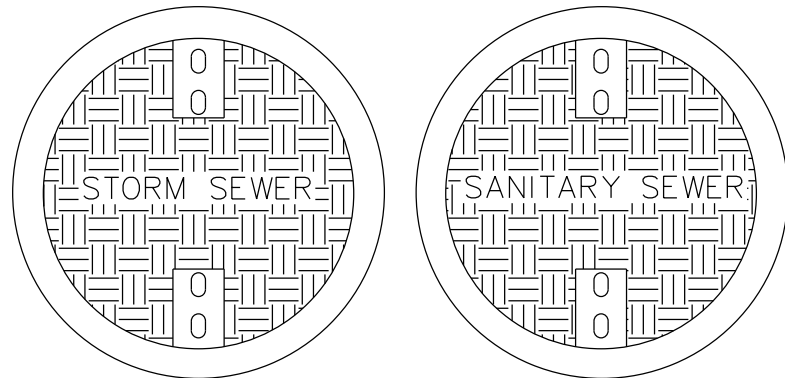
CASTING - NEENAH FOUNDRY NO. R-1733 SERIES MANHOLE FRAME OR APPROVED EQUAL. CASTING & RINGS TO HAVE INFI-SHIELD INSTALLED.



COVER-ESS BROTHER 301-CP LID. OR EQUAL WITH RUBBER GASKET ON THE BOTTOM OF THE LID.


NEENAH R1733-5044

NEENAH R1733-5044



NOTE: ALL LIDS MUST HAVE RUBBER GASKET ON THE BOTTOM OF THE LID.

NO	DATE	BY	CKD	APPR	REVISION	
	12/11/2023					1:33:29 PM
NAME: P:\24-01-00\CSAH_01_(550 E HANSON-EGRET)\Base\Proposed\CSAH_01_DETAIL.dgn						

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 PRINT NAME: GERALD J. AUGER JR.
 SIGNATURE: 
 DATE: 12-08-2023 LICENSE NO. 26511

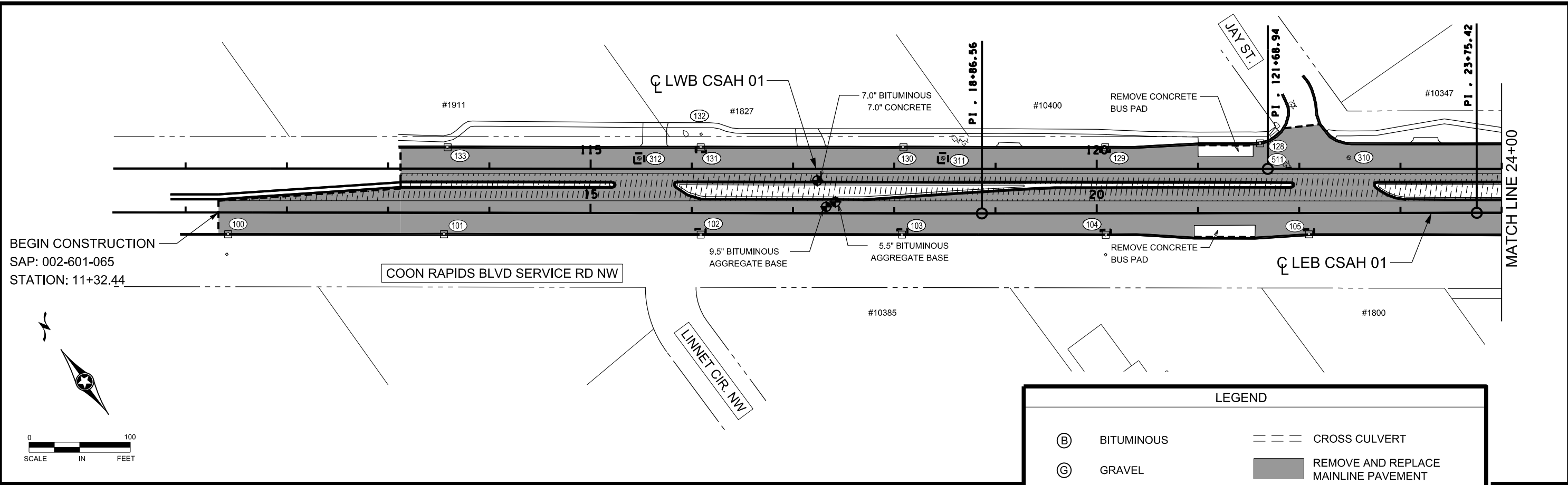
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 DESIGN BY SPH DATE 12/11/2023
 CHECKED BY CO DATE 12/11/2023



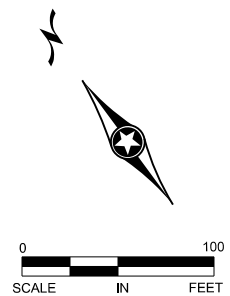
ANOKA COUNTY
 HIGHWAY DEPT.

STATE AID PROJECT 002-601-065

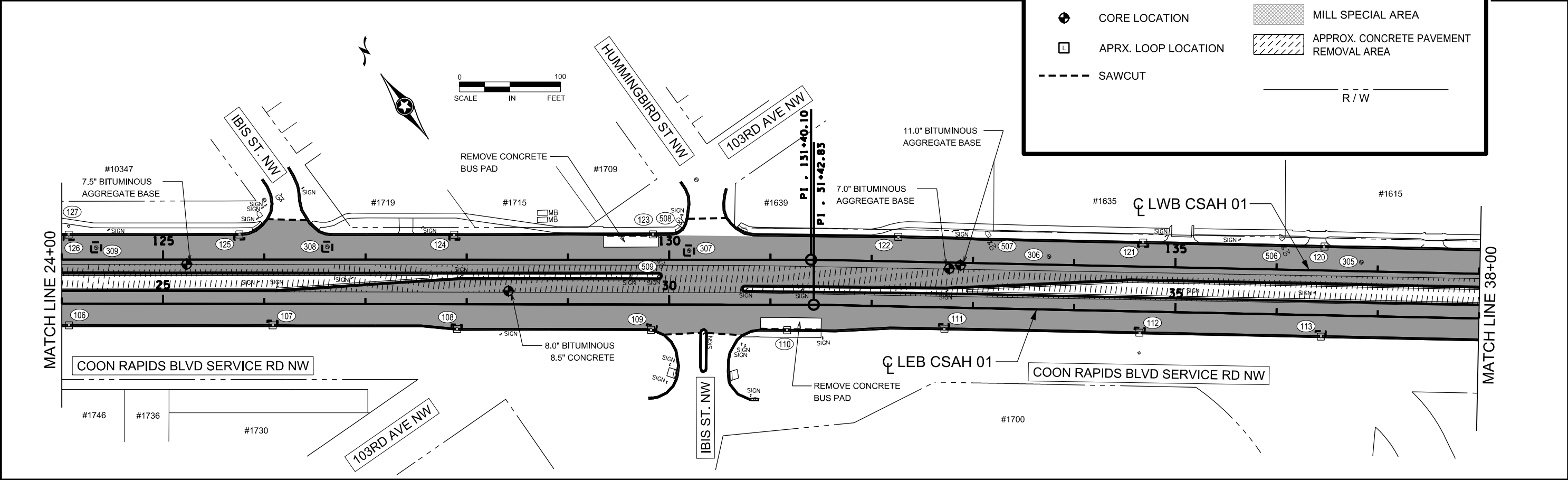
DETAILS
 Sheet 12 of 35 Sheets



BEGIN CONSTRUCTION
 SAP: 002-601-065
 STATION: 11+32.44



LEGEND			
(B)	BITUMINOUS	---	CROSS CULVERT
(G)	GRAVEL	[Solid Grey Box]	REMOVE AND REPLACE MAINLINE PAVEMENT
(C)	CORE LOCATION	[Cross-hatched Box]	MILL SPECIAL AREA
(L)	APRX. LOOP LOCATION	[Diagonal Hatched Box]	APPROX. CONCRETE PAVEMENT REMOVAL AREA
- - -	SAWCUT	---	R / W



NO	DATE	BY	CKD	APPR	REVISION	01/23/2024	10:10:33 AM

NAME: P:\24-01-00\CSAH_01_(550 E HANSON-EGRET)\Base\Proposed\CSAH_01_CP.dgn

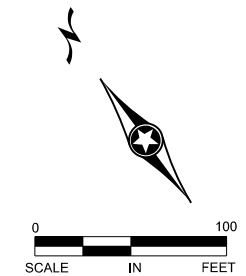
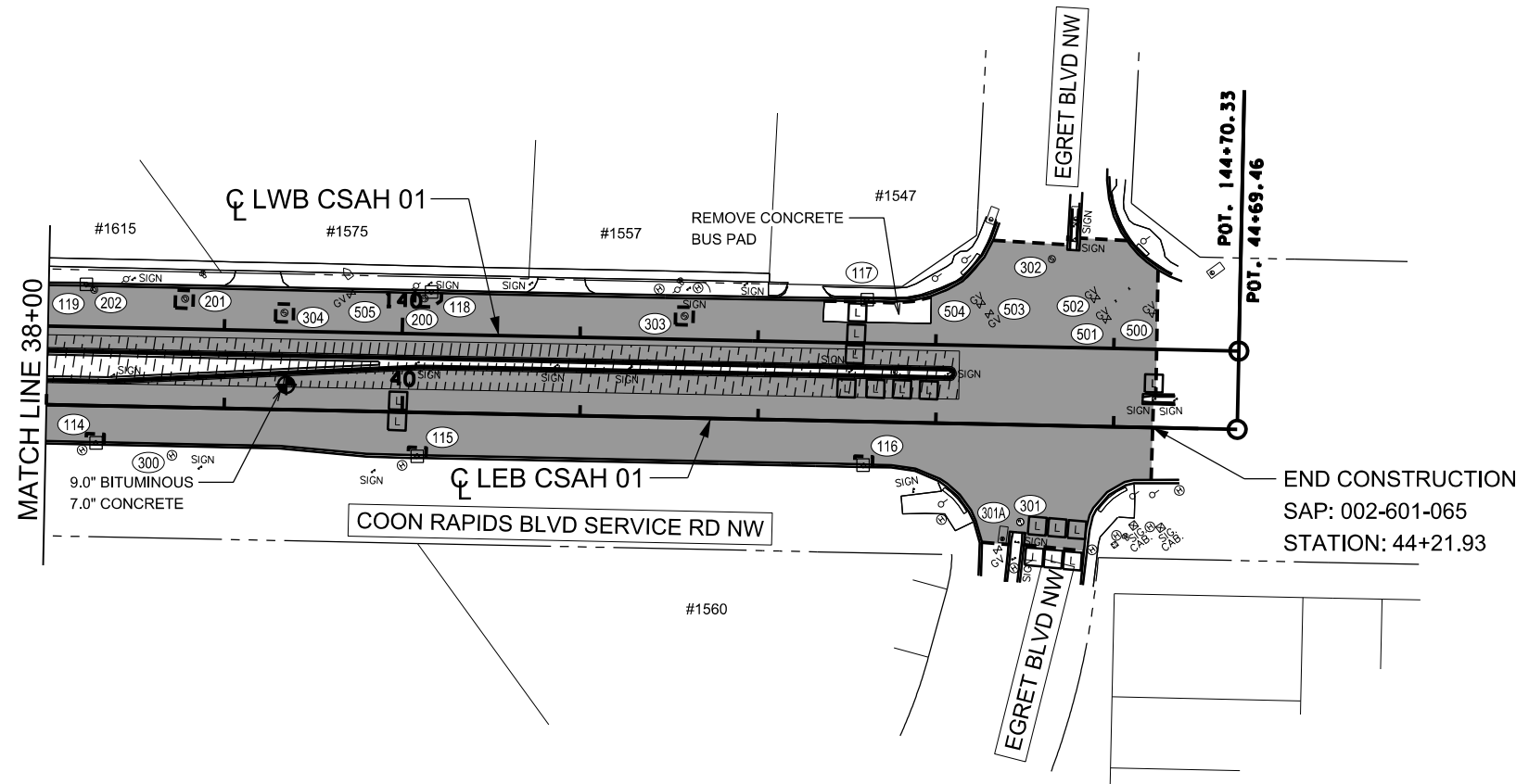
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: GERALD J. AUGER JR.
 SIGNATURE: *[Signature]*
 DATE: 12-12-2023 LICENSE NO. 26511

DRAWN BY SPH DATE 12/12/2023
 DESIGN BY SPH DATE 12/12/2023
 CHECKED BY CO DATE 12/12/2023

**ANOKA COUNTY
 HIGHWAY DEPT.**

STATE AID PROJECT 002-601-065

CONSTRUCTION PLAN
 STA 11+32.44 TO 38+00.00
 Sheet 13 of 35 Sheets



CONSTRUCTION NOTES:

- STAGE 1:** WORK IN THIS STAGE CONSISTS OF CONCRETE CURB AND GUTTER REPAIR, CATCH BASIN REPAIR, PEDESTRIAN RAMP IMPROVEMENTS, LOOP REPLACEMENT, AND SIDE-STREET LOOP REPLACEMENTS ON THE OUTSIDE LANE OF BOTH EASTBOUND AND WESTBOUND. LOOPS TO BE PLACED IN GRAVEL. MILL TAPER ALONG WESTBOUND LANE BETWEEN BEGINNING AND END OF CONCRETE REMOVAL AREA IN COMPLIANCE WITH BOTH MMUTCD AND THE MNDOT TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS FIELD MANUAL. EROSION CONTROL SHALL BE APPLIED BEFORE COMMENCING WITH STAGE 2.
- STAGE 2:** WORK IN THIS STAGE CONSISTS OF BITUMINOUS REMOVAL, CONCRETE PAVEMENT REMOVAL, COMMON EXCAVATION, GRADING OF GRAVEL BASE, LOOP REPLACEMENT, CONSTRUCT MEDIAN, AND ONE LIFT OF BITUMINOUS BASE AND ONE LIFT OF BITUMINOUS BINDER. LOOPS TO BE PLACED IN GRAVEL. THIS STAGE IS ON THE INSIDE LANES OF EASTBOUND AND WESTBOUND ONLY.
- STAGE 3:** WORK IN THIS STAGE CONSISTS OF BITUMINOUS REMOVAL, COMMON EXCAVATION, GRADING OF GRAVEL BASE, LOOP REPLACEMENT, AND ONE LIFT OF BITUMINOUS BASE AND ONE LIFT OF BITUMINOUS BINDER. LOOPS TO BE PLACED IN GRAVEL. THIS STAGE IS THE OUTSIDE LANES OF EASTBOUND AND WESTBOUND. MILL EGRET BLVD INTERSECTION AND NORTH LEG (CITY PORTION) TO RAILROAD TRACKS.
- STAGE 4:** WORK IN THIS STAGE CONSISTS OF FINAL PAVING OVER ENTIRE SITE THAT WAS ENCOMPASSED WITH STAGES 1-3. FINAL WEARING COURSE TO BE PAVED UNDER TRAFFIC, IN A MOVING WORKZONE TRAFFIC CONTROL LAYOUT.

LEGEND			
(B)	BITUMINOUS	— — —	CROSS CULVERT
(G)	GRAVEL	[Solid Grey Box]	REMOVE AND REPLACE MAINLINE PAVEMENT
(C)	CORE LOCATION	[Cross-hatched Box]	MILL SPECIAL AREA
(L)	APRX. LOOP LOCATION	[Diagonal Hatched Box]	APPROX. CONCRETE PAVEMENT REMOVAL AREA
- - - -	SAWCUT	— — — — —	R / W

NO	DATE	BY	CHKD	APPR	REVISION	DATE	TIME
	01/23/2024					10:11:22 AM	

NAME: P:\24-01-00\CSAH_01_(550 E HANSON-EGRET)\Base\Proposed\CSAH_01_CP2.dgn

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.

PRINT NAME: GERALD J. AUGER JR.

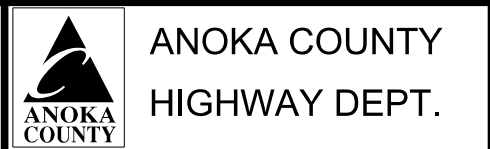
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DATE: 12-12-2023 LICENSE NO. 26511

DRAWN BY: SPH DATE: 12/12/2023

DESIGN BY: SPH DATE: 12/12/2023

CHECKED BY: CO DATE: 12/12/2023



STATE AID PROJECT 002-601-065

CONSTRUCTION PLAN
STA 38+00.00 TO 44+21.93
Sheet 14 of 35 Sheets

PERMANENT PAVEMENT MARKING PLAN NOTES & GUIDELINES

GENERAL INFORMATION:

1. THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. ANOKA COUNTY HIGHWAY DEPARTMENT WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING AND TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS. LONGITUDINAL JOINTS, PAVEMENT EDGES AND EXISTING MARKINGS MAY SERVE AS HORIZONTAL CONTROL WHEN SO DIRECTED.
2. EDGE LINES AND LANE LINES ARE TO BE BROKEN ONLY AT INTERSECTIONS WITH PUBLIC ROADS AND AT PRIVATE ENTRANCES IF THEY ARE CONTROLLED BY A YIELD SIGN, STOP SIGN OR TRAFFIC SIGNAL. THE BREAK POINT IS TO BE AT THE START OF THE RADIUS FOR THE INTERSECTION OR AT MARKED STOP LINES OR CROSSWALKS.
3. A TOLERANCE OF 1/4 INCH UNDER OR 1/4 INCH OVER THE SPECIFIED WIDTH WILL BE ALLOWED FOR STRIPING PROVIDED THE VARIATION IS GRADUAL AND DOES NOT DETRACT FROM THE GENERAL APPEARANCE. BROKEN LINE SEGMENTS MAY VARY UP TO ONE-HALF FOOT FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 1 INCH. MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINTS. ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.
4. PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.
5. THE FILLING OF TANKS, POURING OF MATERIALS OR CLEANING OF EQUIPMENT SHALL NOT BE PERFORMED ON UNPROTECTED PAVEMENT SURFACES UNLESS ADEQUATE PROVISIONS ARE MADE TO PREVENT SPILLAGE OF MATERIAL.

MULTI-COMPONENT (MULTI-COMP):

1. THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER. NEW PORTLAND CEMENT CONCRETE SURFACES SHALL BE SANDBLAST CLEANED TO REMOVE ANY SURFACE TREATMENT AND/OR LAITANCE ON LOW SPEED (SPEED LIMIT 35 MPH OR LESS) URBAN PORTLAND CEMENT CONCRETE ROADWAYS. SANDBLAST CLEANING SHALL BE USED FOR ALL MULTI-COMP PAVEMENT MARKINGS.
2. THE MULTI-COMP MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE MULTI-COMP LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.
3. A MULTI-COMP LINE SHALL BE APPLIED WITH A MINIMUM THICKNESS OF 20 MILS (WET) AND 4" WIDE . GLASS BEADS SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATIONS.
4. PAVEMENT MARKINGS SHALL ONLY BE APPLIED IN SEASONABLE WEATHER WHEN AIR AND PAVEMENT SURFACE TEMPERATURES ARE 40° OR HIGHER AND SHALL NOT BE APPLIED WHEN THE WIND OR OTHER CONDITIONS CAUSE A FILM OR DUST TO BE DEPOSITED ON THE PAVEMENT SURFACE AFTER CLEANING AND BEFORE THE MARKING MATERIAL CAN BE APPLIED.

PERMANENT STRIPING

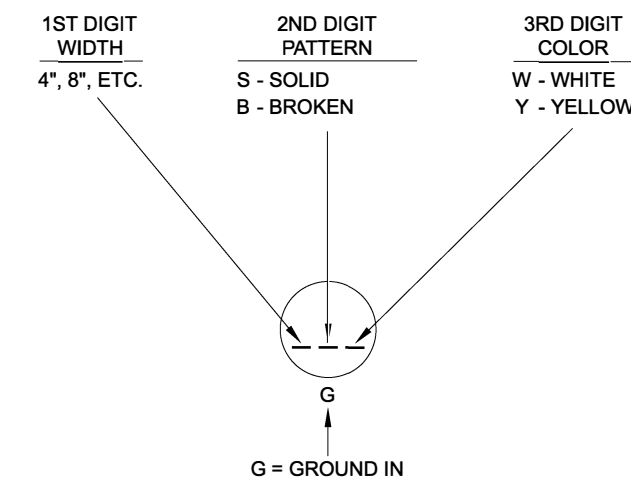
PERMANENT PAVEMENT MARKING TABULATION				
ITEM DESCRIPTION	UNIT	TOTAL QUANTITY		
		WHITE	YELLOW	
4" SOLID LINE MULTI-COMP	LIN FT	9911	6722	
4" BROKEN LINE MULTI-COMP	LIN FT	1481		
3'X6' ZEBRA CROSSWALK PREF THERMOPLASTIC, GROUND IN	SQ FT	1152		
24" SOLID LINE, PREF THERMOPLASTIC, GROUND IN	LIN FT	196		
PAVEMENT MESSAGE, PREF THERMOPLASTIC, RIGHT ARROW	SQ FT	31		
PAVEMENT MESSAGE, PREF THERMOPLASTIC, LEFT ARROW	SQ FT	31		

PAVEMENT MARKING SYMBOLS & MATERIALS LEGEND

- — BROKEN LINE - 50' CYCLE (10' LINE, 40' GAP)
- ↶ ↷ PAVEMENT MESSAGE - LEFT/RIGHT ARROW
- CROSSWALK BLOCK

STRIPING KEY

- CIRCLE - MULTI-COMP
- OCTAGON - PREF THERMO



EXAMPLE: = 4" SOLID LINE WHITE MULTI-COMP

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\24-01-00\CSAH_01_(550 E HANSON-EGRET)\Base\Traffic\CSAH 1 - Signing and Striping

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.

PRINT NAME: SEAN R. THIEL
SIGNATURE: *Sean R. Thiel*
DATE: 1/22/2024 LICENSE NO. 45129

DRAWN BY: ALS DATE: 12/08/23
DESIGN BY: ALS DATE: 12/08/23
CHECKED BY: _____ DATE: _____

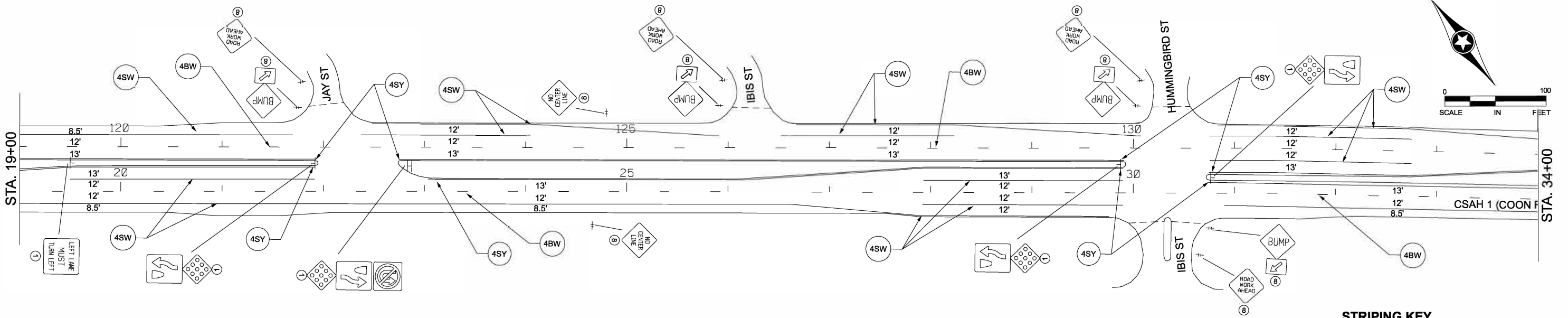
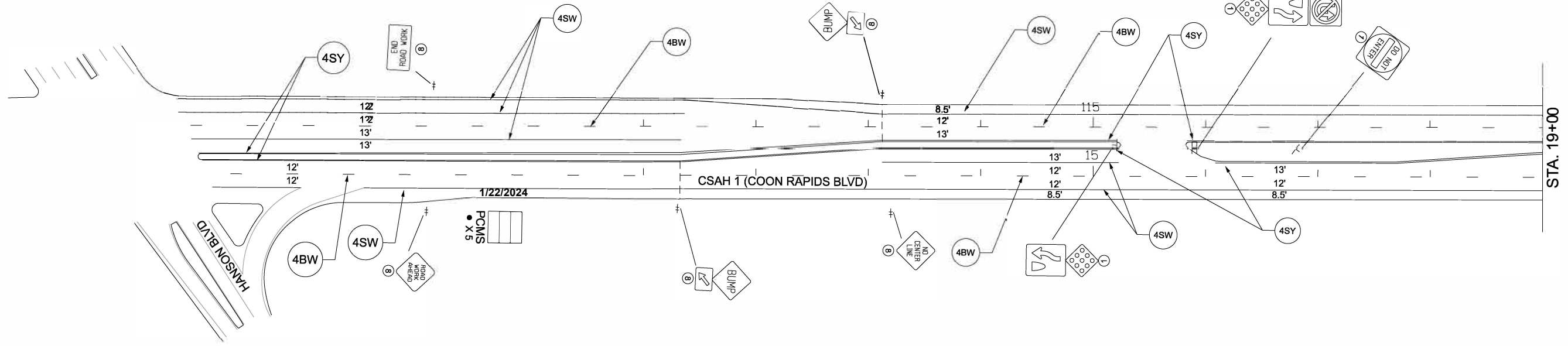


**ANOKA COUNTY
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SAP 002-601-065

PERMANENT PAVEMENT
MARKING NOTES AND
TABULATIONS

Sheet 15 of 35 Sheets



STRIPING KEY

- MULTI-COMP
- OCTAGON - PREF THERMO
- G GROUND IN

SIGNING NOTES

- ① F. & I.
- ⑧ TEMPORARY TRAFFIC CONTROL SIGN

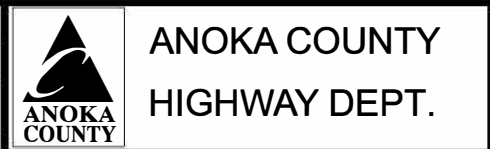
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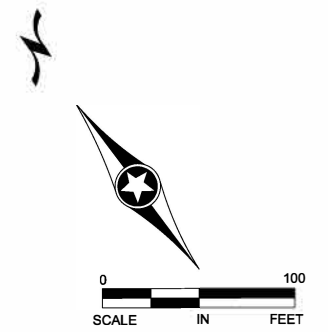
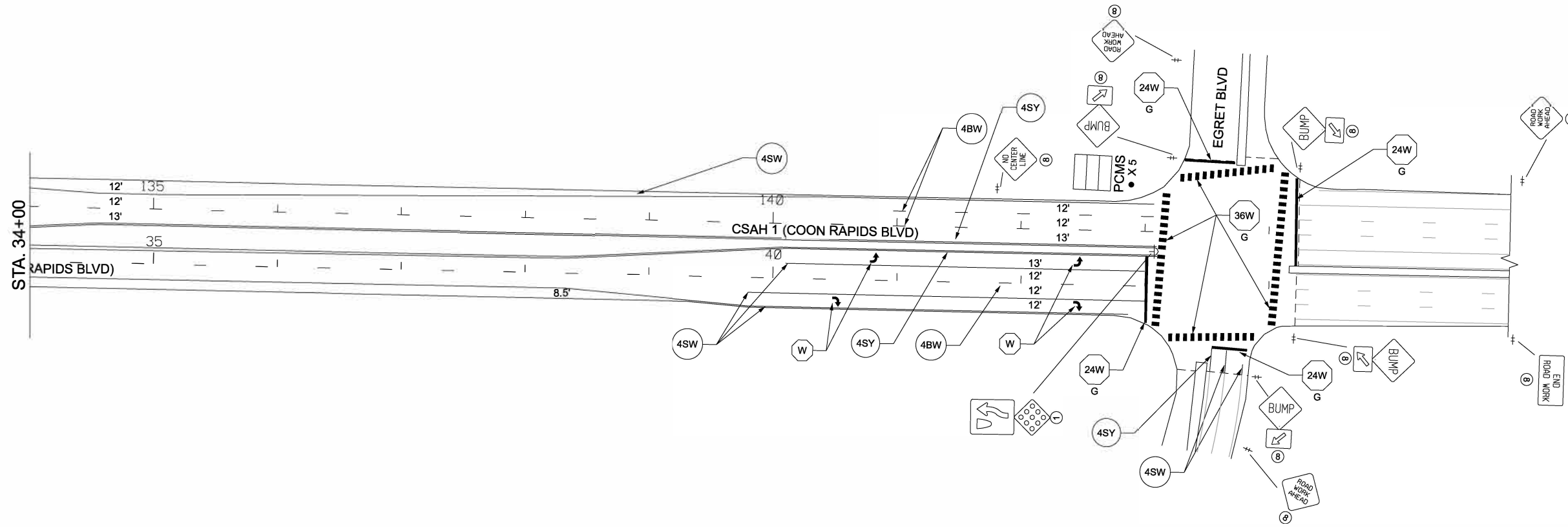
PRINT NAME: SEAN R. THIEL
 SIGNATURE: *Sean R. Thiel*
 DATE: 1/22/2024 LICENSE NO. 45129

DRAWN BY: ALS DATE: 12/08/23
 DESIGN BY: ALS DATE: 12/08/23
 CHECKED BY: _____ DATE: _____



SAP 002-601-065

TEMPORARY SIGNING AND PERMANENT STRIPING
 Sheet 16 of 35 Sheets



SIGNING NOTES

- ① F. & I.
- ⑧ TEMPORARY TRAFFIC CONTROL SIGN

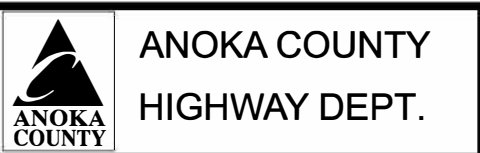
STRIPING KEY

- MULTI-COMP
- OCTAGON - PREF THERMO
- G GROUND IN

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\24-01-00\CSAH_01_(550 E HANSON-EGRET)\Base\Traffic\CSAH 1 - Signing and Striping					

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.
 PRINT NAME: SEAN R. THIEL
 SIGNATURE: *Sean R. Thiel*
 DATE: 1/22/2024 LICENSE NO. 45129












DRAWN BY ALS DATE 12/08/23
 DESIGN BY ALS DATE 12/08/23
 CHECKED BY _____ DATE _____






SAP 002-601-065



TEMPORARY SIGNING AND PERMANENT STRIPING
 Sheet 17 of 35 Sheets

TEMPORARY TRAFFIC CONTROL SIGNS AND DEVICES

"W" SERIES				
SIGN	MUTCD CODE	COLOR	SIZE	QUANTITY
	W3-4	BLACK ON ORANGE	48" X 48"	AS NEEDED
	W8-1	BLACK ON ORANGE	48" X 48"	10
	W16-7PL	BLACK ON ORANGE	30" X 18"	10
	W8-8	BLACK ON ORANGE	48" X 48"	AS NEEDED
	W8-9	BLACK ON ORANGE	48" X 48"	AS NEEDED
	W8-11	BLACK ON ORANGE	48" X 48"	AS NEEDED
	W8-12	BLACK ON ORANGE	48" X 48"	4
	W8-23	BLACK ON ORANGE	48" X 48"	AS NEEDED
	W20-1	BLACK ON ORANGE	48" X 48"	AS NEEDED
	W20-4	BLACK ON ORANGE	48" X 48"	AS NEEDED
	W20-7	BLACK ON ORANGE	48" X 48"	AS NEEDED

"R" SERIES				
SIGN	MUTCD CODE	COLOR	SIZE	QUANTITY
	R4-1	BLACK ON WHITE	24" X 30"	AS NEEDED
	R4-2	BLACK ON WHITE	24" X 30"	AS NEEDED

"G" SERIES				
SIGN	MUTCD CODE	COLOR	SIZE	QUANTITY
	G20-2	BLACK ON ORANGE	48" X 24"	2

DEVICES		
ITEM	MUTCD CODE	QUANTITY
	DRUM	AS NEEDED (ESTIMATED 10)
	TYPE C	2 (10 DAYS EACH)

PCMS - MESSAGE SEQUENCE LAYOUT

	R	O	A	D	
	W	O	R	K	
	B	E	G	I	N
	S				

	<	D	A	T	E	>	
	E	X	P	E	C	T	
	D	E	L	A	Y	S	

NOTES:



1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."
2. ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE MN MUTCD.
3. CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
4. LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
5. CONTRACTOR SHALL SUPPLY AND PLACE THE PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) A MINIMUM TEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK, TO A LOCATION AS SPECIFIED BY THE ENGINEER. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS. PAYMENT SHALL BE MADE AS PER ITEM 2563.613 PORTABLE CHANGEABLE MESSAGE SIGN BY THE UNIT/DAY.
6. CONTRACTOR SHALL SUPPLY AND ERECT THE TEMPORARY TRAFFIC CONTROL SIGNS AS SHOWN ON THIS DRAWING AND DETAILED IN THE SPECIAL PROVISIONS FROM THE TIME WORK COMMENCES ON THIS ROADWAY UNTIL THIS ROADWAY IS PERMANENTLY STRIPED. ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE PAID FOR AS PART OF TRAFFIC CONTROL LUMP SUM.
7. ACCESS SHALL BE MAINTAINED TO ALL STREETS AND DRIVEWAYS IN CONSTRUCTION AREA.
8. ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
9. ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING.
10. ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ANY SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.

SIGNING NOTES

- ① F. & I.
- ⑧ TEMPORARY TRAFFIC CONTROL SIGN

TRAFFIC CONTROL DEVICES & SYMBOLS LEGEND


SYMBOL DESCRIPTION

- ⊥ TRAFFIC CONTROL SIGN (SINGLE POST)
- ⊕ TRAFFIC CONTROL SIGN (TEMPORARY)
- DRUM-LIKE CHANNELIZER TYPE B = 
-  PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)


NO	DATE	BY	CKD	APPR	REVISION

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 SIGNATURE: 
 DATE: 1/22/2024 LICENSE NO. 45129

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 CHECKED BY: _____ DATE: _____

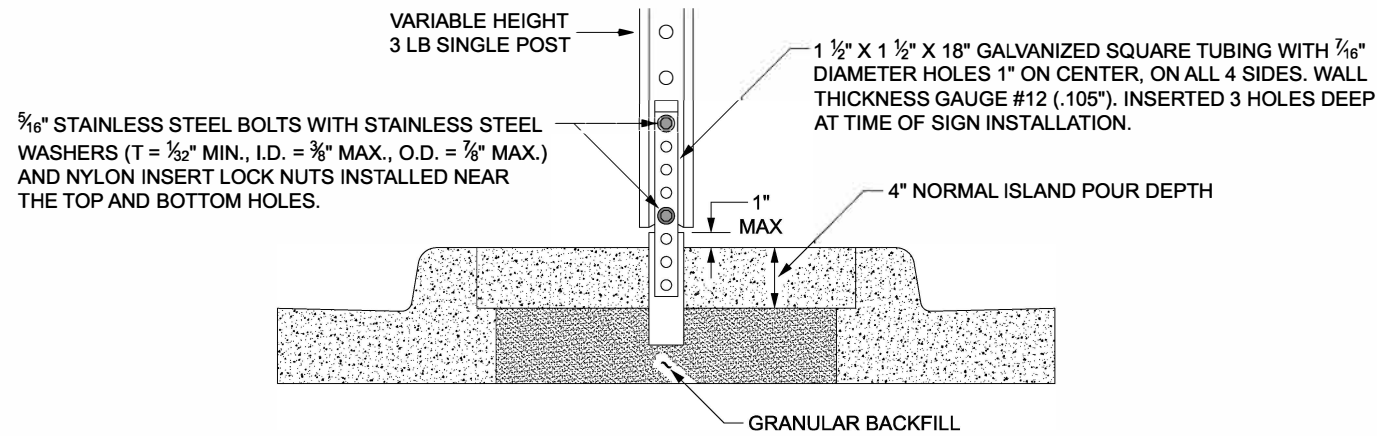


ANOKA COUNTY

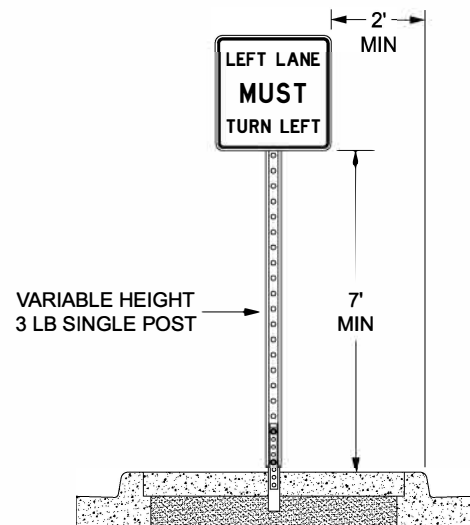
HIGHWAY DEPT.

SAP 002-601-065

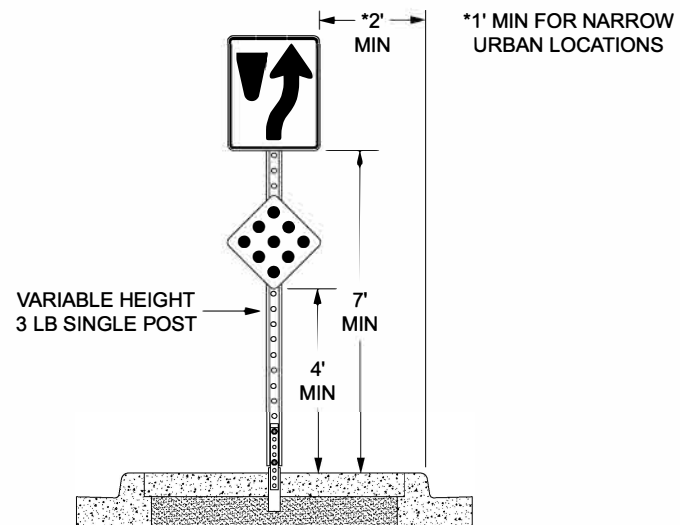
SIGN INSTALLATION TYPICALS



**ISLAND MOUNT, BREAK-AWAY
SIGN INSTALLATION TYPICAL**



**ISLAND MOUNT, BREAK-AWAY
SIGN INSTALLATION TYPICAL
KEEP RIGHT/CLUSTER**



SIGN NOTES:

- TELES PAR INSERT NOT TO BE INSERTED MORE THAN 3 MOUNTING HOLES DEEP INTO BASE. TYPICAL ON ALL SIGN INSTALLATIONS.

INSTALLATION NEAR SHARED-USE PATHWAY (MN MUTCD):

- THE MINIMUM HEIGHT MEASURED VERTICALLY FROM THE SHARED-USE PATHWAY TO THE BOTTOM OF THE SIGN SHALL BE 7 FEET. IF A SECONDARY SIGN IS MOUNTED BELOW THE PRIMARY SIGN AND IS MOUNTED LESS THAN 7 FEET, IT SHALL NOT PROJECT MORE THAN 4 INCHES INTO THE SHARED-USE PATHWAY.

PERMANENT SIGNING TABULATIONS

TYPE C SIGN PANELS							
MUTCD CODE	SIGN	SIZE	QUANTITY	SQ FT PANEL AREA	SQ FT TOTAL AREA	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
R4-7		24" X 30"	7	5.0	35.0	1	7.0
R3-4		24" X 24"	2	4.0	8.0	1	7.0
R5-1		36" X 36"	1	9.0	9.0	1	7.0
R3-7L		36" X 36"	1	9.0	9.0	1	7.0
OM1-1		18" X 18"	7	2.25	15.75	1	7.0
TYPE C SIGN PANEL TOTAL AREA					76.75		

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**ANOKA COUNTY
HIGHWAY DEPT.**

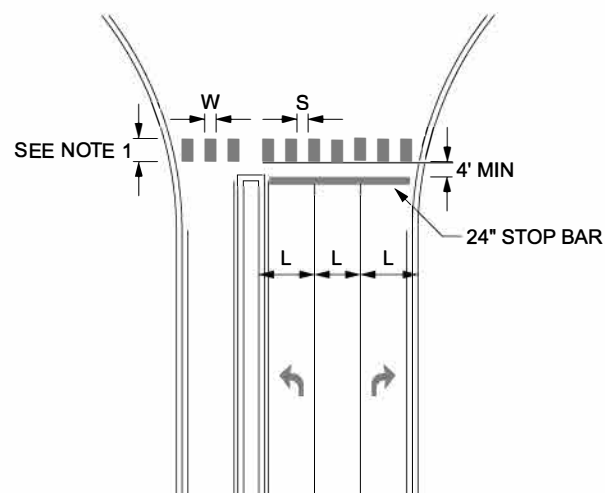
SAP 002-601-065

PERMANENT SIGNING TYPICAL
AND TABULATIONS

Sheet 19 of 35 Sheets

PAVEMENT MARKING TYPICAL

PEDESTRIAN CROSSWALK



(L) WIDTH OF INSIDE LANE	(W) WIDTH OF PAINTED AREAS	(S) WIDTH OF SPACE
9'	2.0'	2.5'
10'	2.5'	2.5'
11'	2.5'	3.0'
12'	3.0'	3.0'
13'	3.0'	3.5'

CROSSWALK NOTES:

1. THE BLOCKS SHALL BE A MINIMUM OF 6' AND AT LEAST AS LONG AS THE TRUNCATED DOMES. FOR FANNED TRUNCATED DOMES THE BLOCKS SHALL BE AT LEAST AS LONG AS THE APPROACHING SIDEWALK OR SHARED-USE PATH.
2. BLOCKS TO BE CENTERED ON CENTERLINE AND LANE LINES.
3. A MINIMUM OF 1.5' CLEAR DISTANCE SHALL BE LEFT ADJACENT TO THE CURB FACE. IF BLOCK FALLS INTO THIS DISTANCE IT MUST BE OMITTED.
4. ON TWO LANE TWO WAY STREETS, USE SPACING SHOWN FOR AN 11' INSIDE LANE.
5. FOR DIVIDED ROADWAYS, ADJUSTMENTS IN SPACING OF THE BLOCKS SHOULD BE MADE IN THE MEDIAN SO THAT THE BLOCKS ARE MAINTAINED IN THEIR PROPER LOCATION ACROSS THE TRAVELED PORTION OF THE ROADWAY.
6. AT SKEWED CROSSWALKS, THE BLOCKS ARE TO REMAIN PARALLEL TO THE LANE LINES.
7. THE BLOCKS SHALL BE PLACED SO THAT THEY ARE NOT LOCATED IN THE WHEEL PATH OF THE VEHICLES.
8. LOCATION OF CROSSWALK BLOCKS, STOP BARS, SIGNAL LOOPS AND PEDESTRIAN RAMPS ARE APPROXIMATE. FINAL LOCATIONS TO BE DETERMINED AND FIELD VERIFIED DURING CONSTRUCTION BY THE FIELD ENGINEER.

SIGN NOTES:

- TELES PAR INSERT NOT TO BE INSERTED MORE THAN 3 MOUNTING HOLES DEEP INTO BASE. TYPICAL ON ALL SIGN INSTALLATIONS.

INSTALLATION NEAR SHARED-USE PATHWAY (MN MUTCD):

- THE MINIMUM HEIGHT MEASURED VERTICALLY FROM THE SHARED-USE PATHWAY TO THE BOTTOM OF THE SIGN SHALL BE 7 FEET. IF A SECONDARY SIGN IS MOUNTED BELOW THE PRIMARY SIGN AND IS MOUNTED LESS THAN 7 FEET, IT SHALL NOT PROJECT MORE THAN 4 INCHES INTO THE SHARED-USE PATHWAY.

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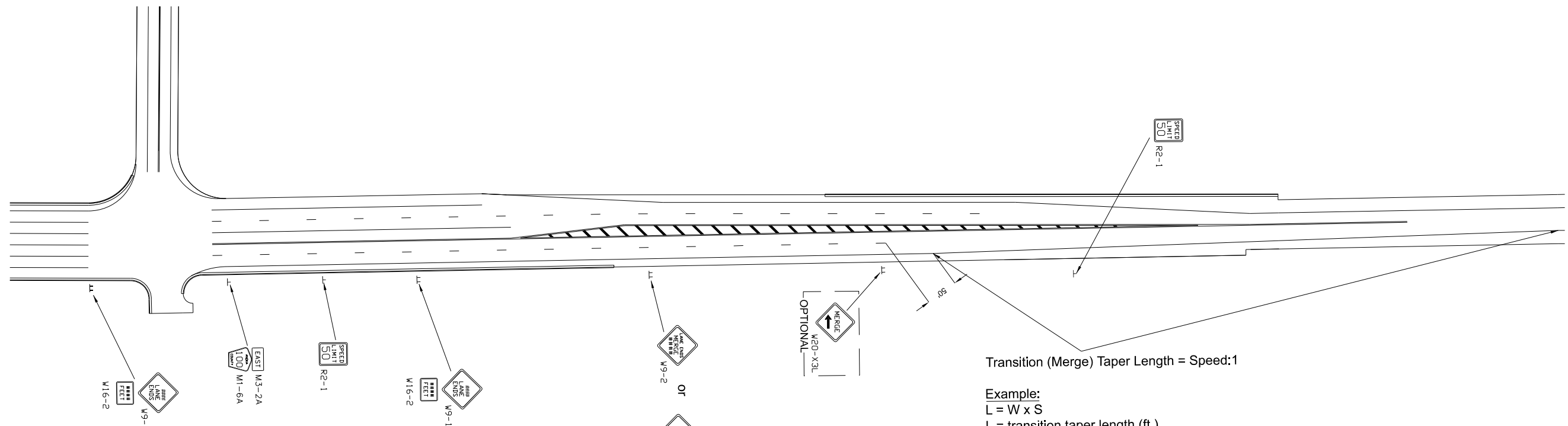
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ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-601-065



If the merge point is located less than 300 ft. from a major intersection, or spacing is limited as a result of sign clutter, the W9-1 sign may be placed prior to the intersection which precedes the lane reduction. In these situations, the W16-2 distance plaque should be utilized.

Place 1st Advance Warning Sign (W9-1) at Condition 'A' distance from beginning of merge taper.
 If Condition 'A' spacing can't be attained due to roadway conditions, warning sign placement should be based on engineering judgement.

The W16-2 distance plaque should be used on high speed approaches (> 40 mph) and is optional in low speed situations.

Minimum Advance Warning Sign requirement for lane reduction. Either the W9-2 word sign or the W4-2 symbol sign may be used.

W9-2 or W4-2 Advance Warning Sign placement: Use appropriate sign spacing with regards to beginning of merge taper and the location of the W9-1 warning sign.

Note: On divided highways where the width of the median will permit, two Lane Ends signs (W9-2 or W4-2) may be placed, one on the right side of the roadway and one on the median.

Transition (Merge) Taper Length = Speed:1

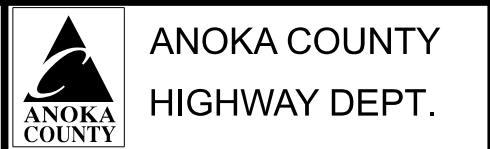
Example:
 $L = W \times S$
 L = transition taper length (ft.)
 W = width of offset (typically 12 ft.)
 S = speed limit (mph)
 L = (12 ft.) x (50 mph)
 L = 600 ft.

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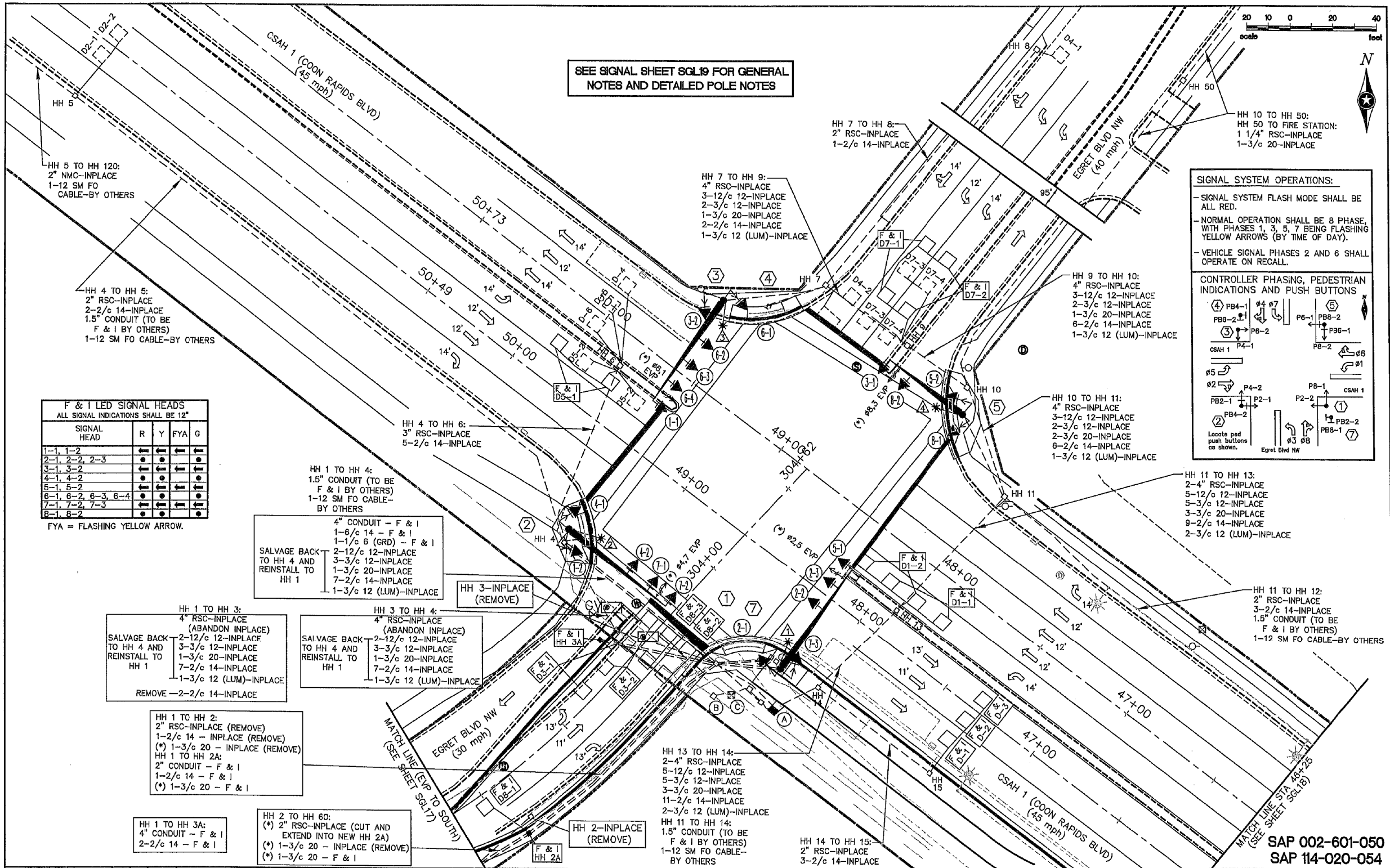
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SAP 002-601-065

FOR REFERENCE PURPOSES ONLY



F & I LED SIGNAL HEADS
ALL SIGNAL INDICATIONS SHALL BE 12"

SIGNAL HEAD	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, 6-4	←	←	←	←
7-1, 7-2, 7-3	←	←	←	←
8-1, 8-2	←	←	←	←

FYA = FLASHING YELLOW ARROW.

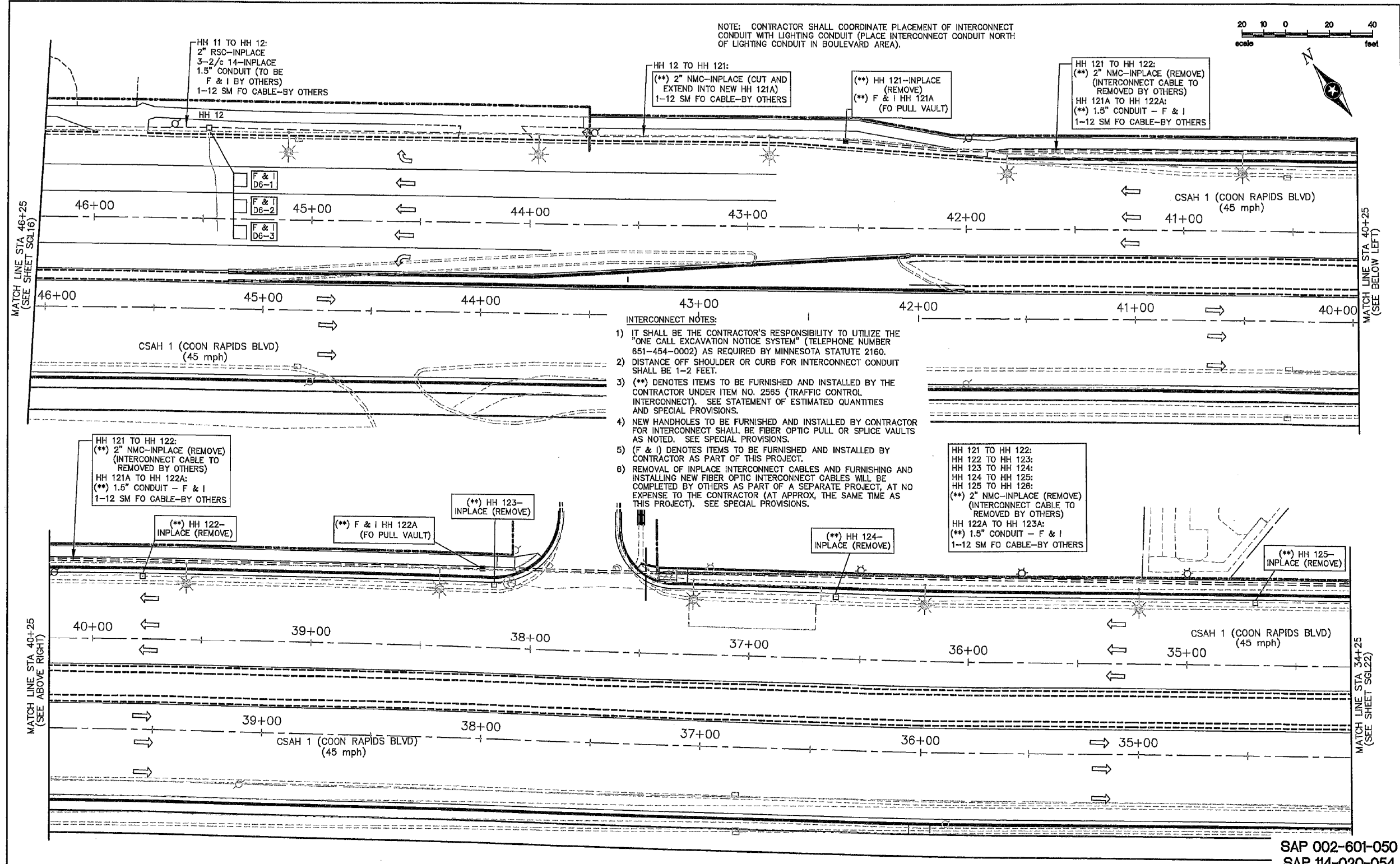
SIGNAL SYSTEM OPERATIONS:

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

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS

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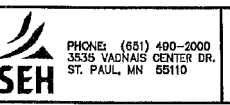


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 DESIGNER: JMG
 CHECKED BY: JMG

DESIGN TEAM	NO.	BY	DATE	REVISIONS

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John M. Gray
 Name: John M. Gray, PE
 Date: April 22, 2019
 Lic. No. 22457



ANOKA COUNTY, MINNESOTA
 CITY OF COON RAPIDS

TRAFFIC SIGNAL SYSTEM 'A' AND INTERCONNECT
 CSAH 1 (COON RAPIDS BLVD) AT EGRET BOULEVARD NW

SAP 002-601-050
 SAP 114-020-054

FILE NO. ANOKO 148053 142
 SIGNAL SHEET SGL16 OF SGL35 285

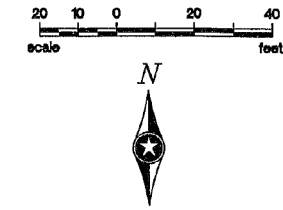
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ANOKA COUNTY HIGHWAY DEPT.

STATE AID PROJECT 002-601-065

EXISTING SIGNAL DETAILS
 Sheet 23 of 35 Sheets



⑥ INPLACE (MAINTAIN INPLACE) PEDESTAL FOUNDATION (5' DEEP)
14' PEDESTAL POLE (INCLUDES BASE)
WIND COLLAR FOR PEDESTAL POLE
PEDESTAL POLE SLIPFITTER COLLAR
EXTENDED INTO H.H.63:
2" R.S.C.

INPLACE (REMOVE) (*) ONE WAY EVP DETECTOR
(*) 1-3/c #20
INSTALL (FURNISHED BY COUNTY) (*) ONE WAY EVP DETECTOR (#8,3)
F & I - (*) 1-3/c 20

HH 2 TO HH 60:
(*) 2" RSC-INPLACE (CUT AND EXTEND INTO NEW HH 2A)
(*) 1-3/c 20 - INPLACE (REMOVE)
(*) 1-3/c 20 - F & I

HH 60 TO HH 63:
2" RSC-INPLACE
(*) 1-3/c 20 - INPLACE (REMOVE)
(*) 1-3/c 20 - F & I

HH 63 TO POLE 6:
2" RSC-INPLACE (BORED UNDER WALL)
(*) 1-3/c 20 - INPLACE (REMOVE)
(*) 1-3/c 20 - F & I

NMC LOOP DETECTORS				
NUMBER	SIZE (FT.)	LOCATION	FUNCTION	STATUS
D1-1	2-6x6	15' & 45'	1	F & I
D1-2	2-6x6	0' & 30'	1	F & I
D2-1, D2-2	6x6	300'	1	INPLACE
D3-1	2-6x6	20' & 50'	1	F & I
D3-2	2-6x6	5' & 35'	1	F & I
D4-1	6x6	250'	3,8	INPLACE
D4-2	6x10&8x6	5' & 20'	7	INPLACE
D5-1	2-6x6	20' & 50'	1	2
D5-2	2-6x6	5' & 35'	1	1
D6-1, D6-2, D6-3	6x6	300'	1	F & I
D7-1	2-6x6	20' & 50'	1	2
D7-2	2-6x6	20' & 50'	1	2
D7-3	2-6x6	5' & 35'	1	1
D7-4	2-6x6	5' & 35'	1	1
D8-1	6x6	120'	3,8	F & I
D8-2	2-6x6	5' & 20'	7	F & I
D8-3	2-6x6	5' & 20'	1	F & I
D-1, D-2, D-3	6x6	50'	COUNT	F & I
D-4, D-5, D-6	6x6	50'	COUNT	INPLACE

LOOP DETECTORS FUNCTIONS:
1) CALL AND EXTEND
3) EXTEND ONLY
7) DELAYED CALL, IMMEDIATE EXTEND
8) CARRY OVER (STRETCH)

LOOP DETECTOR STATUS:
1 = DETACH EXISTING FRONT (5') LOOP DETECTOR FROM EXISTING LEAD-IN CABLE AND SPLICE TO EXISTING BACK (35') LOOP DETECTOR AND FRONT LEAD-IN CABLE (F & I NEW SPLICE KIT). PROTECT EXISTING 5'/35' LOOP DETECTORS IN ROADWAY.
2 = FURNISH & INSTALL NEW PVC LOOP DETECTORS AT 20' AND 50' FROM STOP BAR. SPLICE THESE NEW LOOP DETECTORS TO EXISTING BACK LEAD-IN CABLE (F & I NEW SPLICE KIT).

LOCATION = DISTANCE FROM STOP BAR TO FRONT OF DETECTOR.

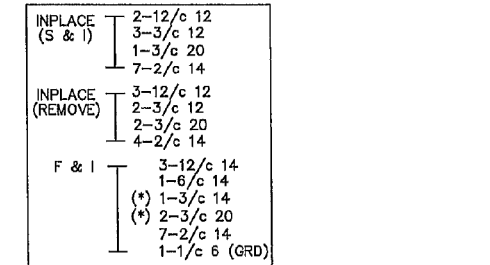
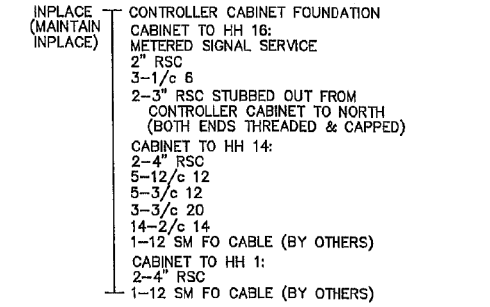
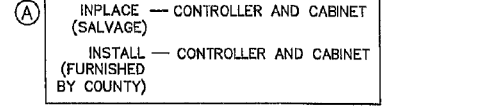
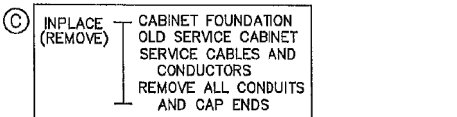
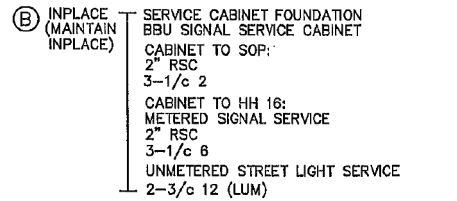
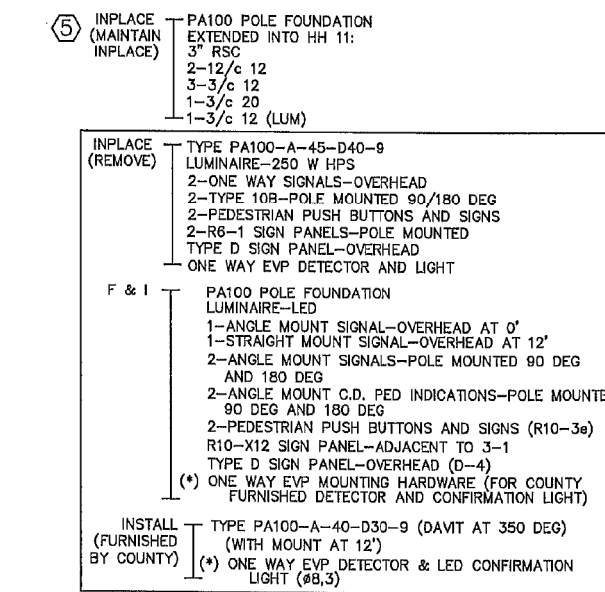
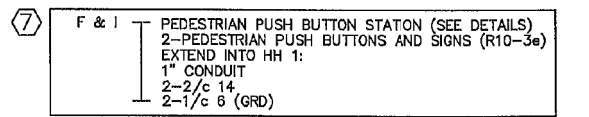
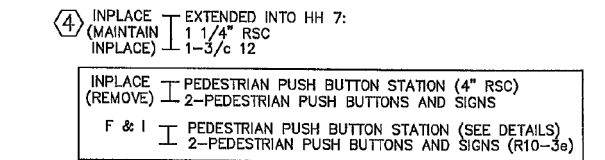
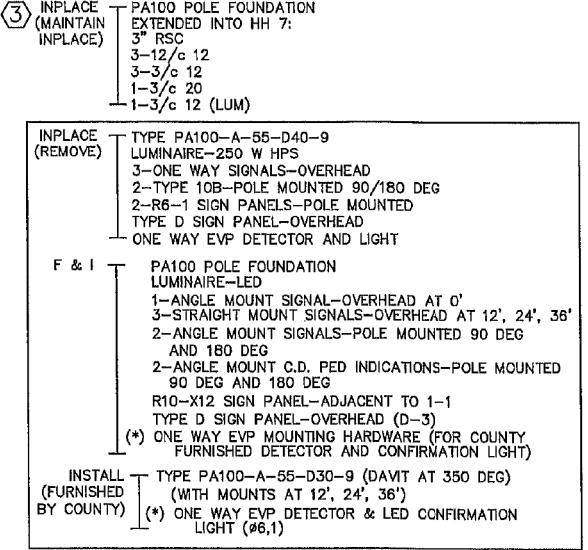
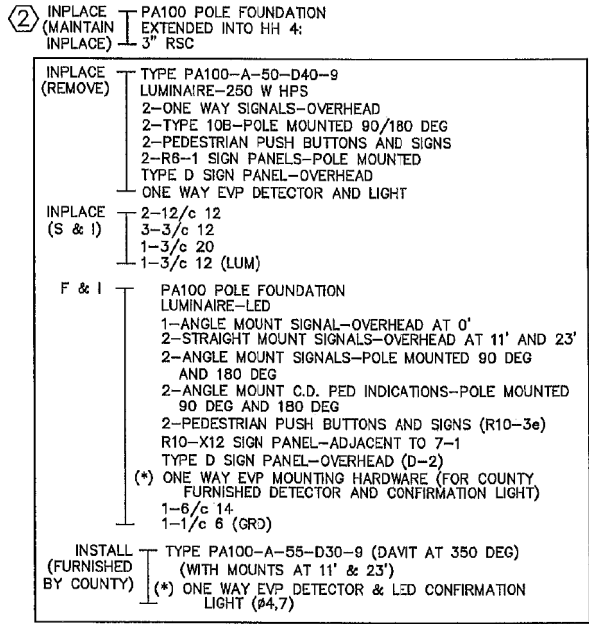
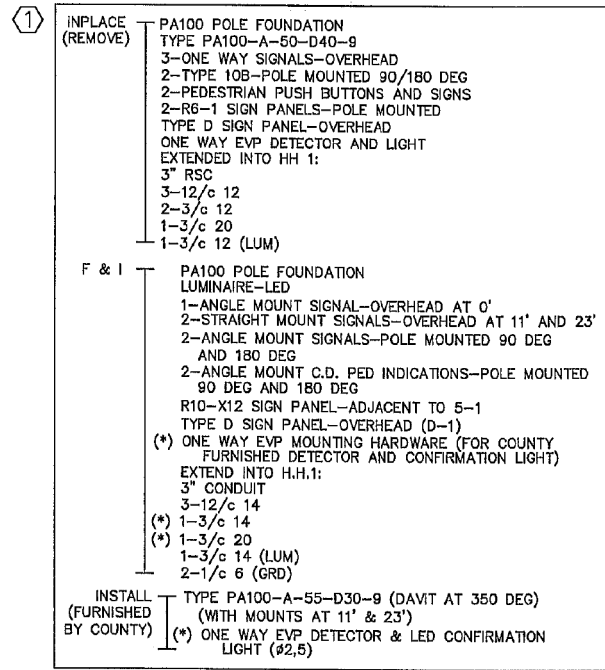
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FOR REFERENCE PURPOSES ONLY

SYSTEM "A" NOTES:

- ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE, UNLESS OTHERWISE NOTED ON PLANS.
- LOCATION OF NEW HANDHOLES, LOOP DETECTORS, PUSH BUTTON STATION, AND FOUNDATION SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING HANDHOLES IN THE VICINITY OF CONSTRUCTION; SHALL ADJUST HANDHOLES 1, 14, AND 15 (AND ALSO BOTH CONCRETE HANDHOLES ADJACENT TO NEW POLE 1) TO MATCH FINISHED SURROUNDING SIDEWALK/BOULEVARD GRADE; SHALL REMOVE THE EXISTING TYPE C CONCRETE FRAME AND COVER FROM THESE 5 EXISTING HANDHOLES AND SHALL FURNISH AND INSTALL A NEW PVC METAL FRAME AND COVER IN THEIR PLACE; SHALL REMOVE INPLACE HANDHOLES 2 AND 3, AND SHALL FURNISH AND INSTALL NEW HANDHOLES 2A AND 3A (PVC HANDHOLES WITH METAL FRAMES AND COVERS) (ALL INCIDENTAL). SEE SPECIAL PROVISIONS FOR FURTHER INFORMATION.
- SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
- A 3/4" HALF COUPLING, 3/4" PIPE NIPPLE & CONDUIT OUTLET BODY WILL BE FURNISHED AND INSTALLED 6 FEET FROM END OF EACH MAST ARM (FOR EWP).
- SEE SPECIAL PROVISIONS AND DETAILS REGARDING SIGNS TO BE FURNISHED AND INSTALLED BY CONTRACTOR (INCLUDED AS PART OF PAY ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM A").
- EACH PEDESTRIAN INDICATION SHALL BE ONE SECTION LED FILLED COUNTDOWN TIMER "HAND/WALKING PERSON" INDICATION.
- EACH SIGNAL FACE SHALL HAVE A BACKGROUND SHIELD.
- ALL LOOP DETECTORS ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE AND OPERATIONAL, EXCEPT AS NOTED IN THE PLANS FOR NEW LOOP DETECTORS TO BE FURNISHED & INSTALLED BY THE CONTRACTOR. LOOP DETECTOR WIRES FOR NEW LOOP DETECTORS SHALL BE CROSS-LINKED POLY-ETHYLENE (XLP) 12 AWG IN 3/4" NMC (SEE SPECIAL PROVISIONS).
- (*) DENOTES ITEMS TO BE INCLUDED AS PART OF THE PAY ITEM FOR ITEM NO. 2565 (EMERGENCY VEHICLE PREEMPTION SYSTEM A). SEE STATEMENT OF ESTIMATED AND SPECIAL PROVISIONS.
- (**) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECT). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- ANY DAMAGE TO INPLACE TRAFFIC SIGNAL FACILITIES (CONDUIT, CABLES, HANDHOLES, FOUNDATIONS, ETC.), EITHER DUE TO TRAFFIC SIGNAL REVISION WORK OR SIDEWALK/MEDIAN/ROAD CONSTRUCTION WORK, SHALL BE REPAIRED BY CONTRACTOR TO SATISFACTION OF THE ENGINEER, AT NO EXPENSE TO THE COUNTY.
- CONTRACTOR SHALL MAINTAIN OPERATION OF A SIGNAL SYSTEM AT THIS INTERSECTION AT ALL TIMES - SEE TEMPORARY SIGNAL PLANS AND SPECIAL PROVISIONS.
- F & I = NEW, FURNISH AND INSTALL.
S & I = INPLACE, SALVAGE AND INSTALL.
- ALL CONDUIT, CABLES AND CONDUCTORS, HANDHOLES, AND LOOP DETECTORS ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE, EXCEPT WHERE BOXED IN AND DENOTED OTHERWISE.
- THE CONTRACTOR SHALL REMOVE, SALVAGE AND DISPOSE OF PORTIONS OF EXISTING PERMANENT SIGNAL SYSTEM IN ACCORDANCE WITH THE PLANS AND SPECIAL PROVISIONS (TO BE MEASURED AND PAID FOR SEPARATELY).
- SEE SPECIAL PROVISIONS FOR FURTHER INFORMATION REGARDING FIBER OPTIC INTERCONNECT INSTALLATION WORK TO BE COMPLETED BY OTHERS AT NO EXPENSE TO CONTRACTOR, AT APPROXIMATELY THE SAME TIME AS THIS PROJECT.
- CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION AND WORK TO ACCOMMODATE OPERATION OF BOTH THE TEMPORARY SIGNAL SYSTEM AND THE NEW PERMANENT SIGNAL SYSTEM, INCLUDING ALL REQUIRED WORK AT POLE 1 (REMOVAL AND REPLACEMENT OF PA100 FOUNDATION, RELOCATION OF INPLACE MAST ARM AND POLE ONTO NEW FOUNDATION FOR TEMPORARY SIGNAL SYSTEM, AND REMOVAL OF INPLACE MAST ARM AND POLE FROM FOUNDATION WHEN NEW COUNTY FURNISHED MAST ARM AND POLE IS AVAILABLE FOR INSTALLATION BY THE CONTRACTOR) (INCIDENTAL TO BOTH THE NEW AND TEMPORARY SIGNAL SYSTEM PAY ITEMS).

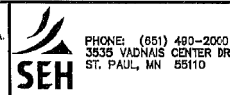


SAP 002-601-050
SAP 114-020-054

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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.

John M. Gray
Name: John M. Gray, PE
Date: April 22, 2019
Lic. No. 22457



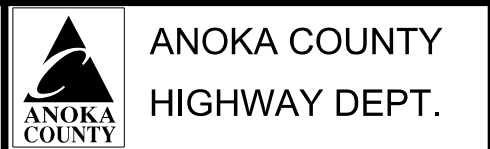
ANOKA COUNTY,
MINNESOTA
CITY OF COON RAPIDS

TRAFFIC SIGNAL SYSTEM "A"
POLE, GENERAL AND CABINET NOTES
CSAH 1 (COON RAPIDS BLVD)
AT EGRET BOULEVARD NW

FILE NO.	143
ANOKC 148053	
SIGNAL SHEET	285
S&L19 OF S&L35	

FOR REFERENCE PURPOSES ONLY

NO.	DATE	BY	CKD	APPR	REVISION	01/23/2024	2:12:19 PM
NAME: P:\24-01-00\CSAH_01_(550 E HANSON-EGRET)\Base\Proposed\CSAH_01_SIGNALS.dgn							

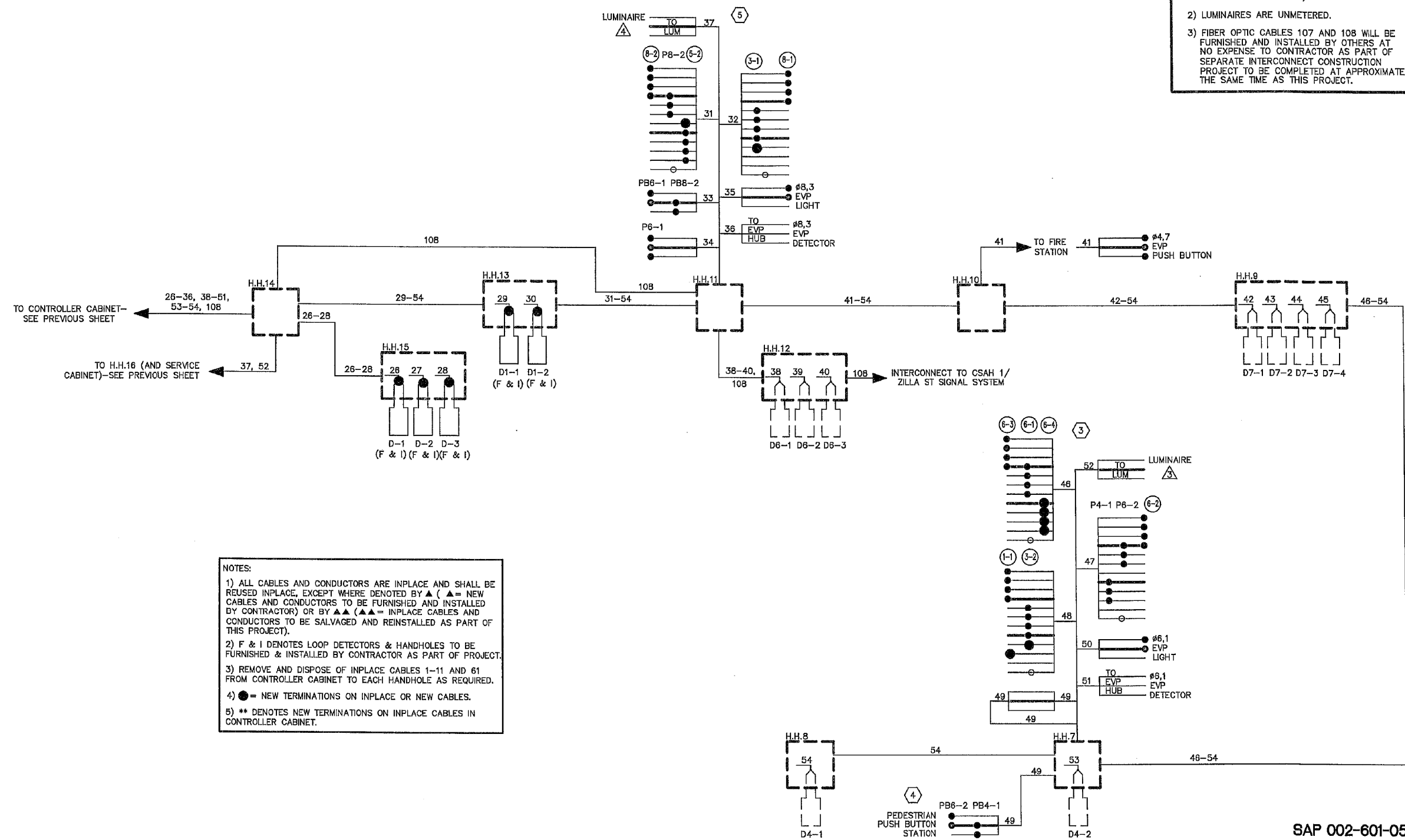


STATE AID PROJECT 002-601-065

EXISTING SIGNAL DETAILS
Sheet 26 of 35 Sheets

NOTES:

- 1) SIGNAL SYSTEM INCLUDES BATTERY BACK-UP SERVICE CABINET (WITH BATTERIES AND BACK UP SYSTEM EQUIPMENT).
- 2) LUMINAIRES ARE UNMETERED.
- 3) FIBER OPTIC CABLES 107 AND 108 WILL BE FURNISHED AND INSTALLED BY OTHERS AT NO EXPENSE TO CONTRACTOR AS PART OF SEPARATE INTERCONNECT CONSTRUCTION PROJECT TO BE COMPLETED AT APPROXIMATELY THE SAME TIME AS THIS PROJECT.



NOTES:

- 1) ALL CABLES AND CONDUCTORS ARE INPLACE AND SHALL BE REUSED INPLACE, EXCEPT WHERE DENOTED BY ▲ (▲ = NEW CABLES AND CONDUCTORS TO BE FURNISHED AND INSTALLED BY CONTRACTOR) OR BY ▲▲ (▲▲ = INPLACE CABLES AND CONDUCTORS TO BE SALVAGED AND REINSTALLED AS PART OF THIS PROJECT).
- 2) F & I DENOTES LOOP DETECTORS & HANDHOLES TO BE FURNISHED & INSTALLED BY CONTRACTOR AS PART OF PROJECT.
- 3) REMOVE AND DISPOSE OF INPLACE CABLES 1-11 AND 61 FROM CONTROLLER CABINET TO EACH HANDHOLE AS REQUIRED.
- 4) ● = NEW TERMINATIONS ON INPLACE OR NEW CABLES.
- 5) ** DENOTES NEW TERMINATIONS ON INPLACE CABLES IN CONTROLLER CABINET.

SAP 002-601-050
SAP 114-020-054

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.		PHONE: (651) 490-2000 3535 MADONNA CENTER DR. ST. PAUL, MN 55110	ANOKA COUNTY, MINNESOTA CITY OF COON RAPIDS	TRAFFIC SIGNAL SYSTEM 'A' FIELD WIRING DIAGRAM CSAH 1 (COON RAPIDS BLVD) AT EGRET BOULEVARD NW	FILE NO. ANOKC 148053 SIGNAL SHEET 145 SBL21 OF SBL35
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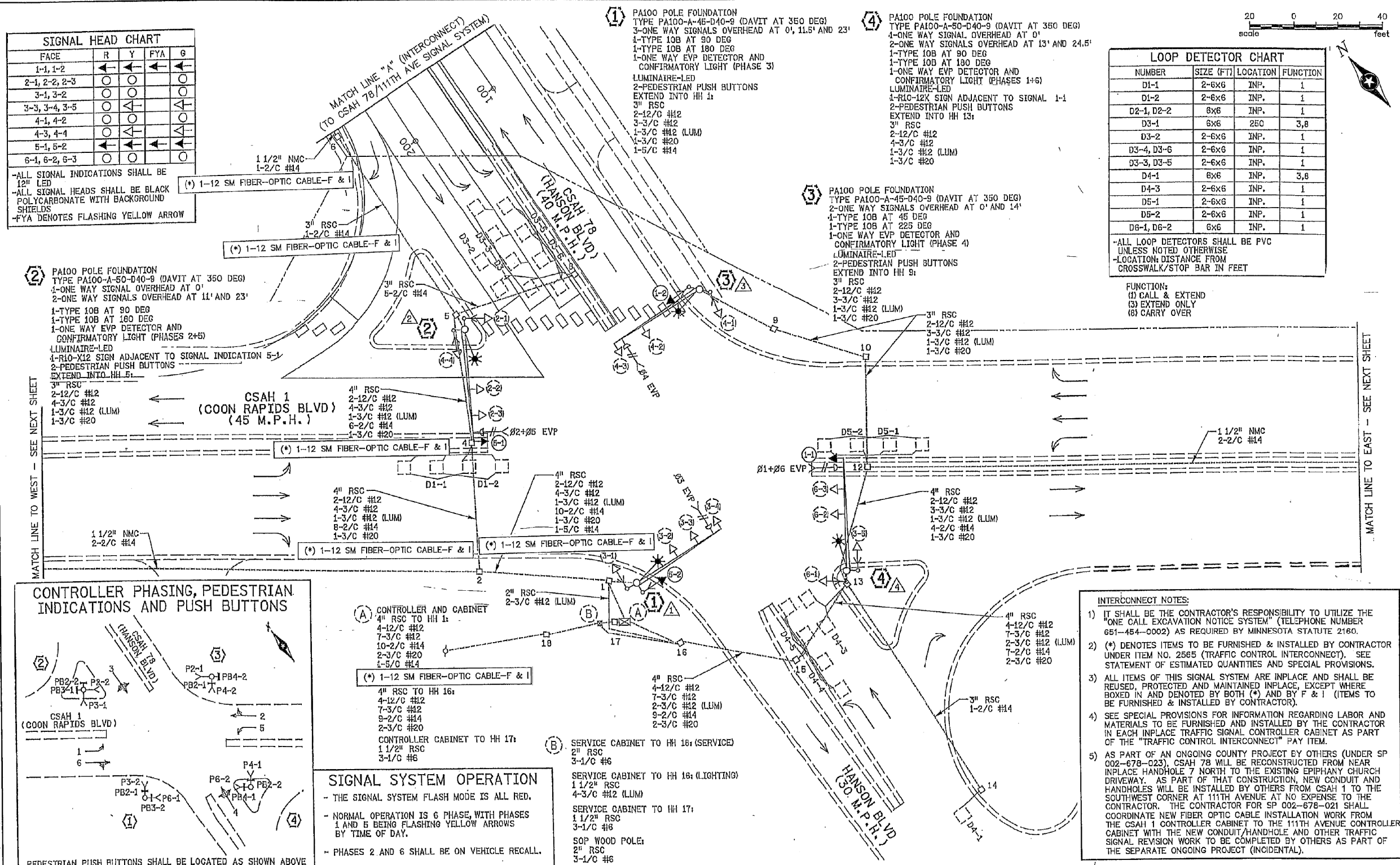
SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1, 1-2	←	←	←	←
2-1, 2-2, 2-3	○	○	○	○
3-1, 3-2	○	○	○	○
3-3, 3-4, 3-5	○	○	○	○
4-1, 4-2	○	○	○	○
4-3, 4-4	○	○	○	○
5-1, 5-2	←	←	←	←
6-1, 6-2, 6-3	○	○	○	○

-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	FUNCTION
D1-1	2-6x6	INP.	1
D1-2	2-6x6	INP.	1
D2-1, D2-2	6x6	INP.	1
D3-1	6x6	260	3,8
D3-2	2-6x6	INP.	1
D3-4, D3-6	2-6x6	INP.	1
D3-3, D3-5	2-6x6	INP.	1
D4-1	6x6	INP.	3,8
D4-3	2-6x6	INP.	1
D5-1	2-6x6	INP.	1
D5-2	2-6x6	INP.	1
D6-1, D6-2	6x6	INP.	1

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

FUNCTION:
 (1) CALL & EXTEND
 (3) EXTEND ONLY
 (6) CARRY OVER



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DESIGNER:	JMG
CHECKED BY:	JMG

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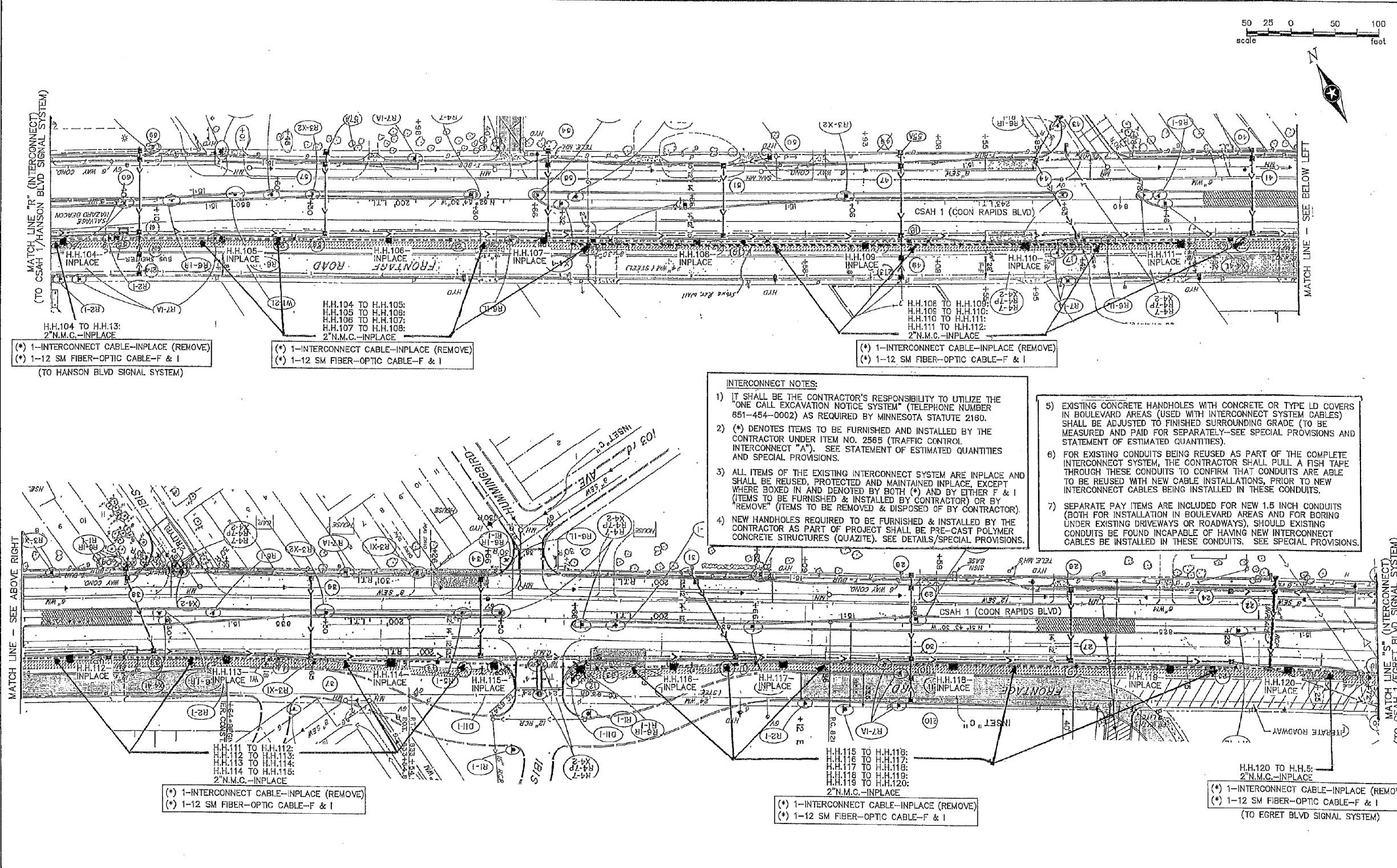
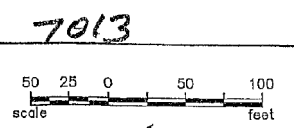
John M. Gray, PE
 Lib. No. 22457
 Date: May 29, 2018

ANOKA COUNTY, MN
 CITY OF COON RAPIDS
 STATE PROJECT 002-678-021

TRAFFIC SIGNAL INTERCONNECT
 INTERSECTION LAYOUT
 CSAH 78 (HANSON BLVD) AT
 CSAH 1 (COON RAPIDS BLVD)

FILE NO.
 ANOKC 122828
 4
 29

FOR REFERENCE PURPOSES ONLY



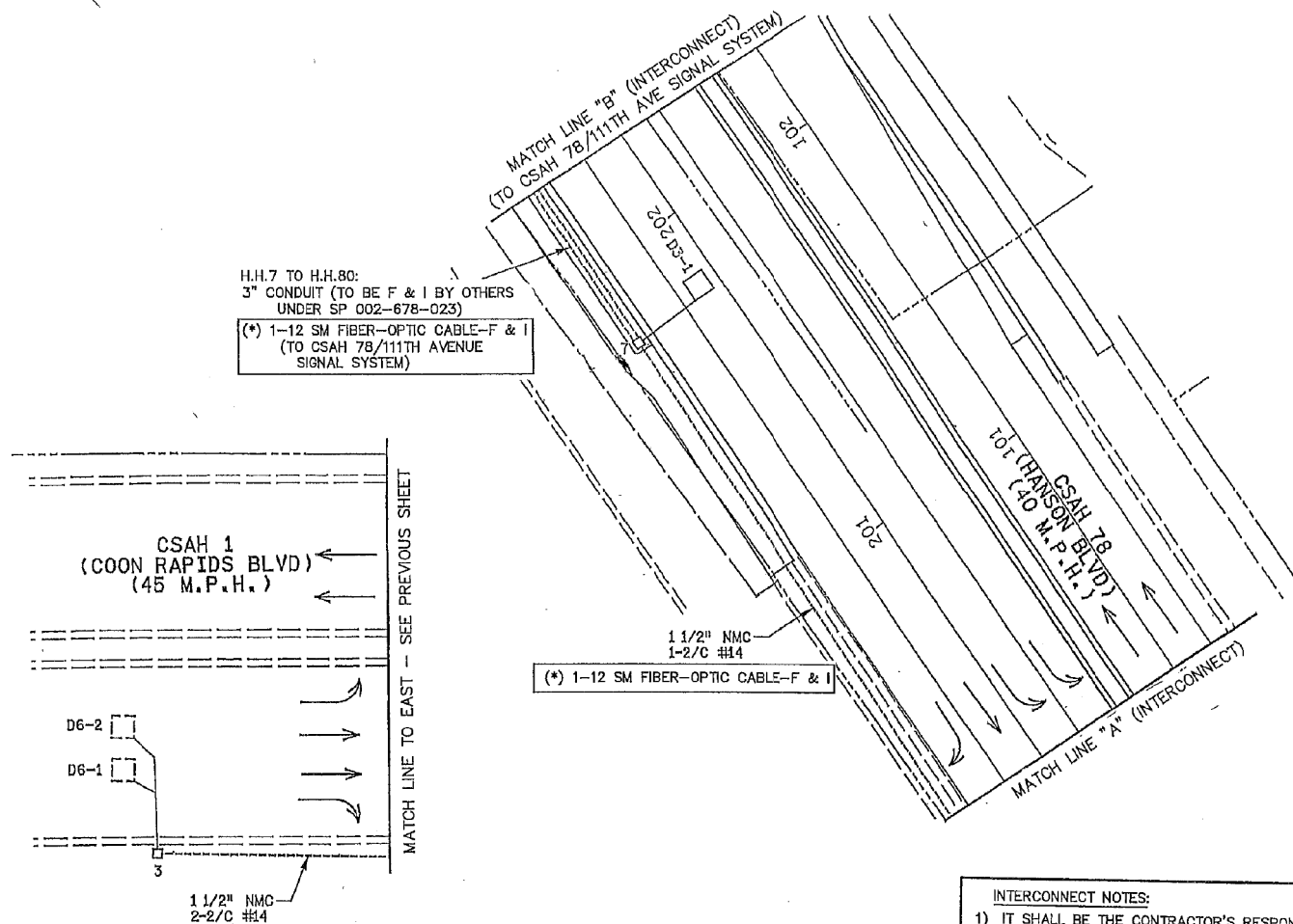
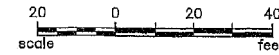
INTERCONNECT NOTES:

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 851-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2160.
- (*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECT "A"). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- ALL ITEMS OF THE EXISTING INTERCONNECT SYSTEM ARE INPLACE AND SHALL BE REUSED, PROTECTED AND MAINTAINED INPLACE, EXCEPT WHERE BOXED IN AND DENOTED BY BOTH (*) AND BY EITHER F & I (ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR) OR BY REMOVE (ITEMS TO BE REMOVED & DISPOSED OF BY CONTRACTOR).
- NEW HANDHOLES REQUIRED TO BE FURNISHED & INSTALLED BY THE CONTRACTOR AS PART OF PROJECT SHALL BE PRE-CAST POLYMER CONCRETE STRUCTURES (QUAZITE). SEE DETAILS/SPECIAL PROVISIONS.
- EXISTING CONCRETE HANDHOLES WITH CONCRETE OR TYPE LD COVERS IN BOULEVARD AREAS (USED WITH INTERCONNECT SYSTEM CABLES) SHALL BE ADJUSTED TO FINISHED SURROUNDING GRADE (TO BE MEASURED AND PAID FOR SEPARATELY-SEE SPECIAL PROVISIONS AND STATEMENT OF ESTIMATED QUANTITIES).
- FOR EXISTING CONDUITS BEING REUSED AS PART OF THE COMPLETE INTERCONNECT SYSTEM, THE CONTRACTOR SHALL PULL A FISH TAPE THROUGH THESE CONDUITS TO CONFIRM THAT CONDUITS ARE ABLE TO BE REUSED WITH NEW CABLE INSTALLATIONS, PRIOR TO NEW INTERCONNECT CABLES BEING INSTALLED IN THESE CONDUITS.
- SEPARATE PAY ITEMS ARE INCLUDED FOR NEW 1.5 INCH CONDUITS (BOTH FOR INSTALLATION IN BOULEVARD AREAS AND FOR BORING UNDER EXISTING DRIVEWAYS OR ROADWAYS), SHOULD EXISTING CONDUITS BE FOUND INCAPABLE OF HAVING NEW INTERCONNECT CABLES BE INSTALLED IN THESE CONDUITS. SEE SPECIAL PROVISIONS.

FOR REFERENCE PURPOSES ONLY

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: July 6, 2018 Name: John M. Gray, PE Lic. No. 22457	PHONE: (851) 490-3000 3635 WINDING CENTER DR. ST. PAUL, MN 55110	ANOKA COUNTY, MN CITY OF COON RAPIDS SAP 002-030-010	TRAFFIC SIGNAL INTERCONNECT "A" INTERSECTION LAYOUT CSAH 1 (COON RAPIDS BLVD) (HANSON BLVD TO EGRET BLVD)	FILE NO. 29 ANOKG 142312 115
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INTERCONNECT NOTES:

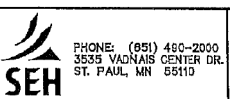
- 1) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2160.
- 2) (*) DENOTES ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR UNDER ITEM NO. 2665 (TRAFFIC CONTROL INTERCONNECT). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 3) ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED, PROTECTED AND MAINTAINED INPLACE, EXCEPT WHERE BOXED IN AND DENOTED BY BOTH (*) AND BY F & I (ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR).
- 4) SEE SPECIAL PROVISIONS FOR INFORMATION REGARDING LABOR AND MATERIALS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN EACH INPLACE TRAFFIC SIGNAL CONTROLLER CABINET AS PART OF THE "TRAFFIC CONTROL INTERCONNECT" PAY ITEM.
- 5) AS PART OF AN ONGOING COUNTY PROJECT BY OTHERS (UNDER SP 002-678-023), CSAH 78 WILL BE RECONSTRUCTED FROM NEAR INPLACE HANDHOLE 7 NORTH TO THE EXISTING EPIPHANY CHURCH DRIVEWAY. AS PART OF THAT CONSTRUCTION, NEW CONDUIT AND HANDHOLES WILL BE INSTALLED BY OTHERS FROM CSAH 1 TO THE SOUTHWEST CORNER AT 111TH AVENUE AT NO EXPENSE TO THE CONTRACTOR. THE CONTRACTOR FOR SP 002-678-021 SHALL COORDINATE NEW FIBER OPTIC CABLE INSTALLATION WORK FROM THE CSAH 1 CONTROLLER CABINET TO THE 111TH AVENUE CONTROLLER CABINET WITH THE NEW CONDUIT/HANDHOLE AND OTHER TRAFFIC SIGNAL REVISION WORK TO BE COMPLETED BY OTHERS AS PART OF THE SEPARATE ONGOING PROJECT (INCIDENTAL).

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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.

John M. Gray
 Name: John M. Gray, PE
 Date: May 29, 2018
 Lic. No.: 22457



ANOKA COUNTY, MN
 CITY OF COON RAPIDS
 STATE PROJECT 002-678-021

TRAFFIC SIGNAL INTERCONNECT
 INTERSECTION LAYOUT
 CSAH 78 (HANSON BLVD) AT
 CSAH 1 (COON RAPIDS BLVD)

FILE NO.
 ANOKC 122928

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 29

FOR REFERENCE PURPOSES ONLY

NO.	DATE	BY	CKD	APPR	REVISION	01/23/2024	2:11:58 PM
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ANOKA COUNTY
HIGHWAY DEPT.

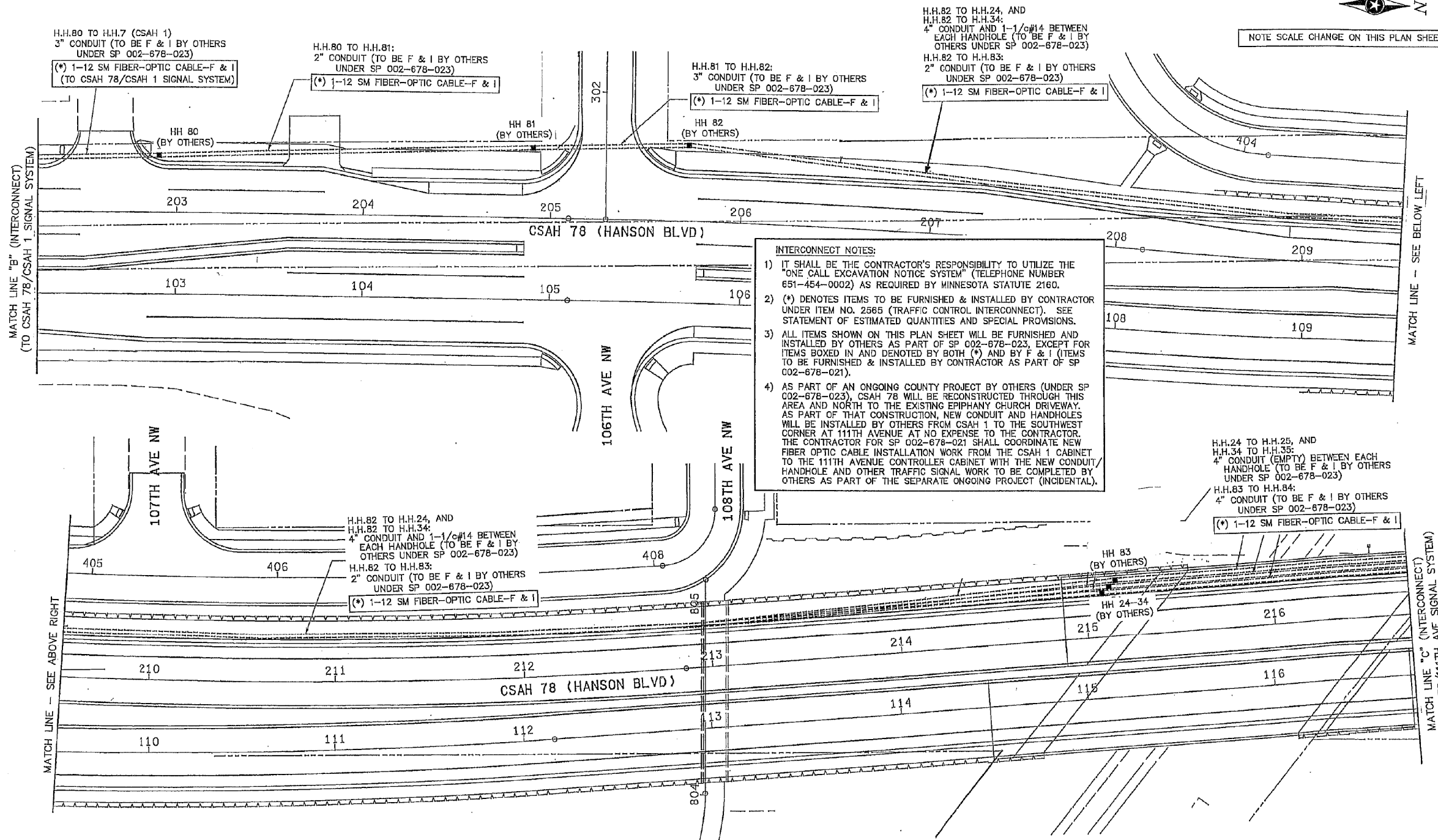
STATE AID PROJECT 002-601-065

EXISTING SIGNAL
 DETAILS

Sheet 31 of 35 Sheets



NOTE SCALE CHANGE ON THIS PLAN SHEET.



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 & INSTALLED BY CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECT). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 3) ALL ITEMS SHOWN ON THIS PLAN SHEET WILL BE FURNISHED AND INSTALLED BY OTHERS AS PART OF SP 002-678-023, EXCEPT FOR ITEMS BOXED IN AND DENOTED BY BOTH (*) AND BY F & I (ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR AS PART OF SP 002-678-021).
- 4) AS PART OF AN ONGOING COUNTY PROJECT BY OTHERS (UNDER SP 002-678-023), CSAH 78 WILL BE RECONSTRUCTED THROUGH THIS AREA AND NORTH TO THE EXISTING EPIPHANY CHURCH DRIVEWAY. AS PART OF THAT CONSTRUCTION, NEW CONDUIT AND HANDHOLES WILL BE INSTALLED BY OTHERS FROM CSAH 1 TO THE SOUTHWEST CORNER AT 111TH AVENUE AT NO EXPENSE TO THE CONTRACTOR. THE CONTRACTOR FOR SP 002-678-021 SHALL COORDINATE NEW FIBER OPTIC CABLE INSTALLATION WORK FROM THE CSAH 1 CABINET TO THE 111TH AVENUE CONTROLLER CABINET WITH THE NEW CONDUIT/HANDHOLE AND OTHER TRAFFIC SIGNAL WORK TO BE COMPLETED BY OTHERS AS PART OF THE SEPARATE ONGOING PROJECT (INCIDENTAL).

S:\NEW\ANOKA COUNTY\COMMON SIGNALS\EGRET_INTERCONNECT\HANSON-BASE.DWG

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 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: May 29, 2018 Name: John M. Gray, PE Lta. No. 22457

SEH
 PHONE: (651) 498-2000
 3535 WADSWORTH CENTER DR.
 ST. PAUL, MN 55110

ANOKA COUNTY, MN
CITY OF COON RAPIDS
 STATE PROJECT 002-678-021

TRAFFIC SIGNAL INTERCONNECT
INTERSECTION LAYOUT
CSAH 78 (HANSON BLVD)
(CSAH 1 TO 111TH AVENUE)

FILE NO. **7**
 ANOKA 122928
29

FOR REFERENCE PURPOSES ONLY

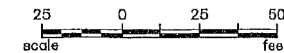
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NAME: P:\24-01-00\CSAH_01_(550 E HANSON-EGRET)\Base\Proposed\CSAH_01_SIGNALS.dgn

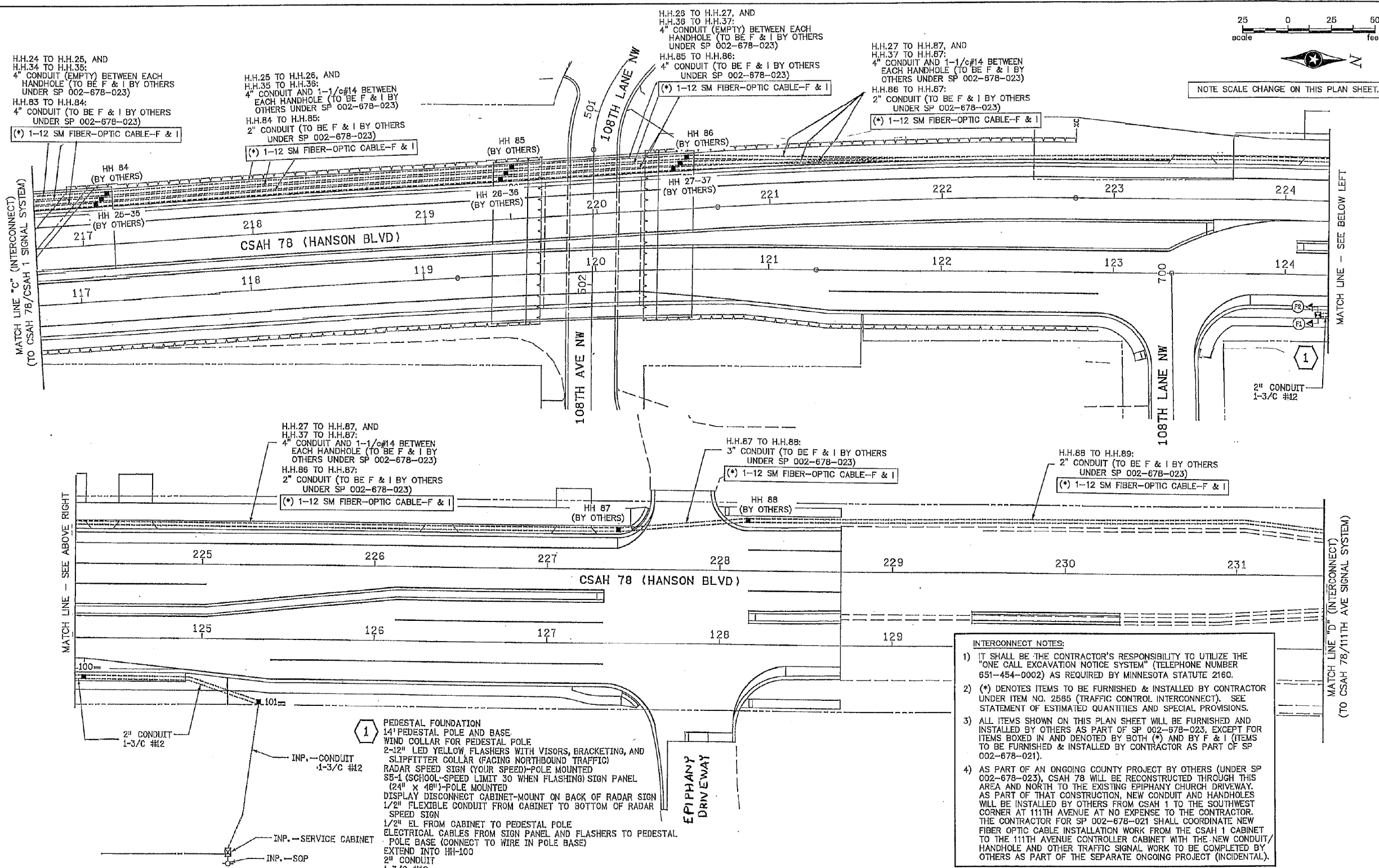
ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-601-065

EXISTING SIGNAL DETAILS
 Sheet 32 of 35 Sheets



NOTE SCALE CHANGE ON THIS PLAN SHEET.



- 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 & INSTALLED BY CONTRACTOR UNDER ITEM NO. 2585 (TRAFFIC CONTROL INTERCONNECT). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
 - 3) ALL ITEMS SHOWN ON THIS PLAN SHEET WILL BE FURNISHED AND INSTALLED BY OTHERS AS PART OF SP 002-678-023, EXCEPT FOR ITEMS BOXED IN AND DENOTED BY BOTH (*) AND BY F & I (ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR AS PART OF SP 002-678-021).
 - 4) AS PART OF AN ONGOING COUNTY PROJECT BY OTHERS (UNDER SP 002-678-023), CSAH 78 WILL BE RECONSTRUCTED THROUGH THIS AREA AND NORTH TO THE EXISTING EPIPHANY CHURCH DRIVEWAY. AS PART OF THAT CONSTRUCTION, NEW CONDUIT AND HANDHOLES WILL BE INSTALLED BY OTHERS FROM CSAH 1 TO THE SOUTHWEST CORNER AT 11TH AVENUE AT NO EXPENSE TO THE CONTRACTOR. THE CONTRACTOR FOR SP 002-678-021 SHALL COORDINATE NEW FIBER OPTIC CABLE INSTALLATION WORK FROM THE CSAH 1 CABINET TO THE 11TH AVENUE CONTROLLER CABINET WITH THE NEW CONDUIT/HANDHOLE AND OTHER TRAFFIC SIGNAL WORK TO BE COMPLETED BY OTHERS AS PART OF THE SEPARATE ONGOING PROJECT (INCIDENTAL).

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: May 29, 2018 Name: John M. Gray, PE Lic. No. 22457



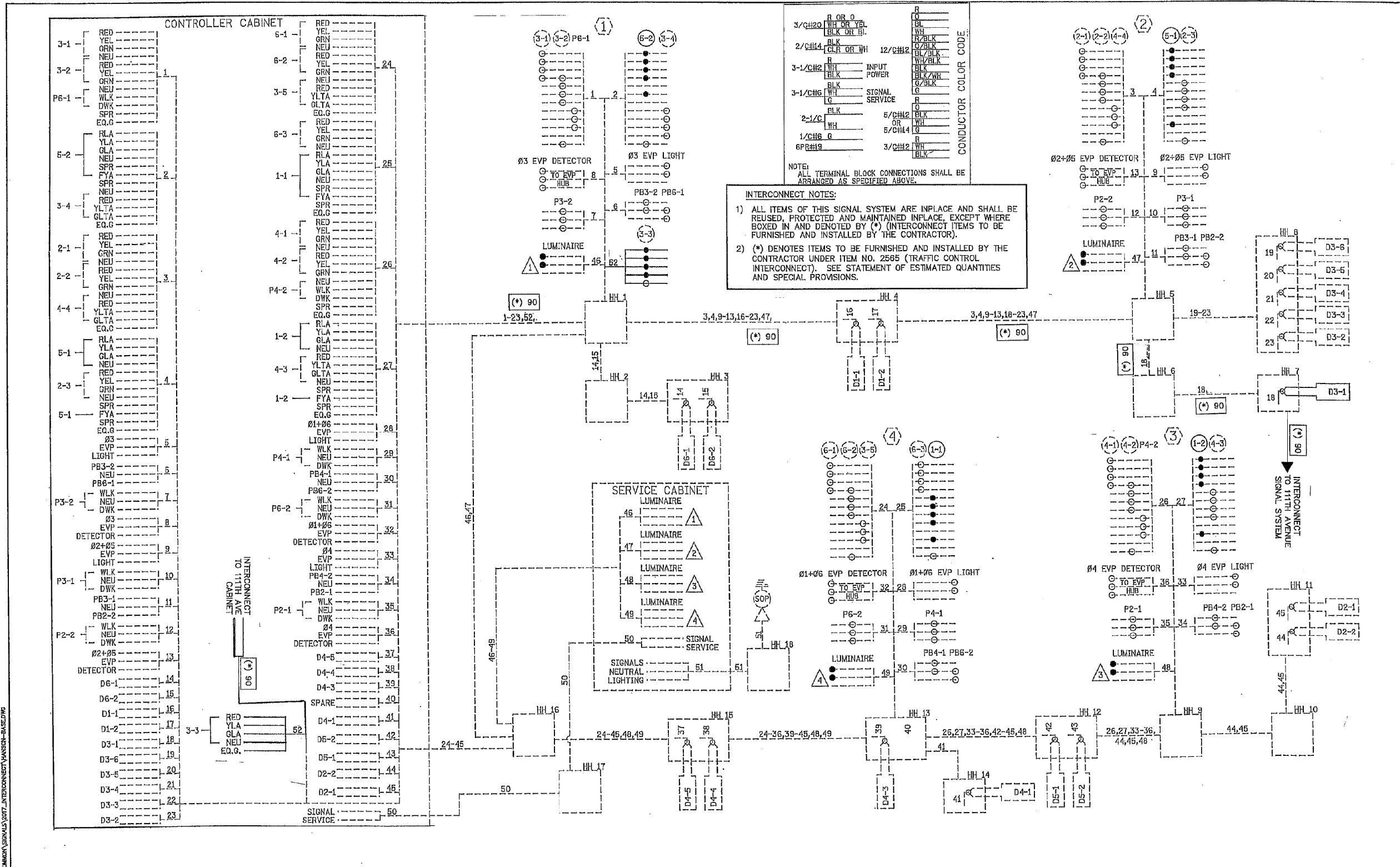
ANOKA COUNTY, MN
CITY OF COON RAPIDS
STATE PROJECT 002-678-021

TRAFFIC SIGNAL INTERCONNECT
INTERSECTION LAYOUT
CSAH 78 (HANSON BLVD)
CSAH 1 TO 11TH AVENUE

FILE NO. 8
ANOKG 122828
29

FOR REFERENCE PURPOSES ONLY

FOR REFERENCE PURPOSES ONLY

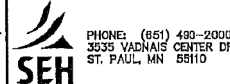


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 CHECKED BY: JMG

NO.	BY	DATE	REVISIONS

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John M. Gray
 Name: John M. Gray, PE
 Date: May 29, 2018
 Lic. No.: 22457



ANOKA COUNTY, MN
 CITY OF COON RAPIDS
 STATE PROJECT 002-678-021

TRAFFIC SIGNAL INTERCONNECT
 FIELD WIRING DIAGRAM
 CSAH 78 (HANSON BLVD) AT
 CSAH 1 (COON RAPIDS BLVD)

FILE NO. ANCKC 122928
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NO.	DATE	BY	CKD	APPR	REVISION	

NAME: P:\24-01-00\CSAH_01_(550 E HANSON-EGRET)\Base\Proposed\CSAH_01_SIGNALS.dgn

ANOKA COUNTY HIGHWAY DEPT.

STATE AID PROJECT 002-601-065

EXISTING SIGNAL DETAILS
 Sheet 35 of 35 Sheets