

MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR MILL BITUMINOUS, BITUMINOUS SURFACING, CURB & GUTTER, BITUMINOUS RECLAMATION, AND SEWER REPAIRS

LOCATED ON CSAH 35 BETWEEN 81 ST AVE AND TH 10

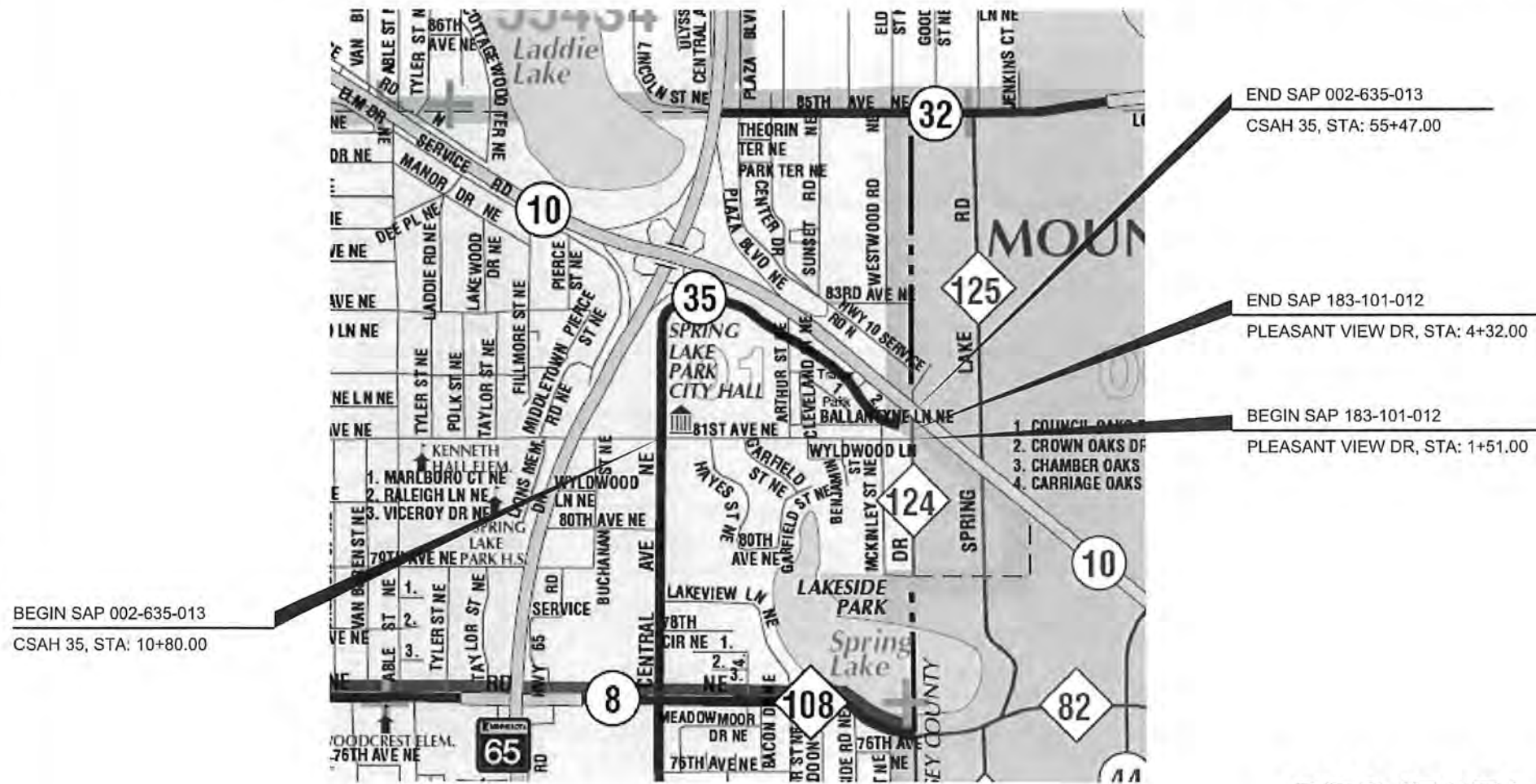
	<u>CSAH 35</u>	<u>PLEASANT VIEW DR</u>
GROSS LENGTH	4467.00 FEET 0.846 MILES	281.00 FEET 0.053 MILES
EXCEPTIONS-LENGTH	0.00 FEET 0.000 MILES	0.00 FEET 0.000 MILES
NET LENGTH	4467.00 FEET 0.846 MILES	281.00 FEET 0.053 MILES

GOVERNING SPECIFICATIONS
THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE WITH THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MNMUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

THIS PLAN CONTAINS 21 SHEETS

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
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10-11	CONSTRUCTION PLAN
12	PERMANENT MARKING TABULATION
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15	SIGNING & STRIPING QUANTITIES
16-17	SIGNING & STRIPING DETAILS
18-21	EXISTING SIGNAL PLANS



PROJECT LOCATION



CITY OF SPRING LAKE PARK
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
SECTION 04
TOWNSHIP 31 NORTH
RANGE 24 WEST

DATE _____
DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

DATE _____
STATE AID ENGINEER:
APPROVED FOR STATE AID FUNDING

Approved _____, 20____
CITY OF SPRING LAKE PARK ENGINEER

Approved *[Signature]* 3-3, 2021
ANOKA COUNTY ENGINEER

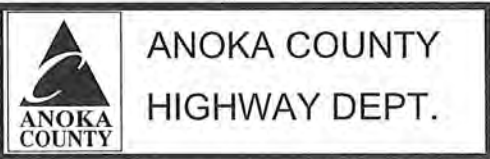
DESIGN DESIGNATION (CSAH 35)			
ESAL 20	95691	FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR
R VALUE	70	NO. OF TRAFFIC LANES	2
ADT (2021)	810	NO. OF PARKING LANES	0
PROJ. ADT (2041)	810	DESIGN SPEED	40 MPH
PROJ. HCADT (2041)	48	STOPPING SIGHT DISTANCE BASED ON:	
SOIL FACTOR	N/A	HEIGHT OF EYE	3.5'
		HEIGHT OF OBJECT	2.0'
		DESIGN SPEED NOT ACHIEVED AT:	
		STA.	TO STA.
			MPH

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\21-01-00\CSAH_35_(81ST-TH10)\Base\Proposed\CSAH35_TITLE.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: 02-24-2021 LICENSE NO. 26511

DRAWN BY: KPR DATE: 12/11/2020
DESIGN BY: KPR DATE: 12/11/2020
CHECKED BY: CSO DATE: 01/28/2021



**ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-635-013
STATE AID PROJECT 183-101-012

TITLE SHEET

Sheet 1 of 21 Sheets

STATEMENT OF ESTIMATED QUANTITIES

NOTES	ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED	ANOKA COUNTY SAP 002-678-022	SPRING LAKE PARK SAP 183-101-012
	2021.501	MOBILIZATION	LUMP SUM	1	1	
1	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	44	44	
1	2104.503	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT	1855	1855	
	2104.503	REMOVE CURB & GUTTER	LIN FT	60	60	
2	2104.504	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	153	153	
	2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	177	177	
3	2105.507	COMMON EXCAVATION	CU YD	671	546	125
4	2123.510	MOTOR GRADER	HOUR	32	32	
	2130.523	WATER	M GALLON	289	289	
5	2211.509	AGGREGATE BASE CLASS 5	TON	44	44	
	2215.504	FULL DEPTH RECLAMATION	SQ YD	13893	12764	1129
6	2215.507	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	339	339	
	2221.509	SHOULDER BASE AGGREGATE CLASS 5	TON	190	190	
	2232.504	MILL BITUMINOUS SURFACE (2.0")	SQ YD	2060	2060	
	2232.504	MILL BITUMINOUS SURFACE (4.0")	SQ YD	3442	3442	
7	2232.604	MILL BITUMINOUS PAVEMENT (SPECIAL)	SQ YD	106	106	
	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	1153	1097	56
8	2360.509	TYPE SP 9.5 WEARING COURSE MIX (3:B)	TON	18	18	
9	2360.509	TYPE SP 12.5 BIT MIXTURE FOR PATCHING	TON	31	31	
10	2360.509	TYPE SP 12.5 WEARING COURSE MIX (4:C)	TON	19	19	
	2360.509	TYPE SP 12.5 WEARING COURSE MIX (4:C)	TON	4400	4133	267
11, 12	2504.602	ADJUST GATE VALVE	EACH	6	4	2
13	2506.502	CASTING ASSEMBLY	EACH	4	4	
14	2506.602	GROUT CATCH BASIN OR MANHOLE	EACH	19	19	
	2511.504	GEOTEXTILE FILTER TYPE 4	SQ YD	13	13	
	2511.507	RANDOM RIPRAP CLASS III	CU YD	4	4	
	2531.503	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	418	418	
	2531.604	CONCRETE DRAINAGE FLUME	SQ YD	9	9	
15	2540.602	MAIL BOX SUPPORT	EACH	1	1	
	2550.602	LOOP DETECTOR DESIGN NMC	EACH	7	7	
	2563.601	TRAFFIC CONTROL SUPERVISOR	LUMP SUM	1	1	
16	2563.601	TRAFFIC CONTROL	LUMP SUM	1	1	
	2563.610	POLICE OFFICER	HOUR	48	48	
17	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20	20	
	2573.501	EROSION CONTROL SUPERVISOR	LUMP SUM	1	1	
	2573.501	CULVERT END CONTROLS	LUMP SUM	1	1	
18	2573.502	STORM DRAIN INLET PROTECTION	EACH	25	25	
	2573.503	SEDIMENT CONTROL LOG TYPE WOOD FIBER	LIN FT	400	400	
	2574.507	COMMON TOPSOIL BORROW	CU YD	59	59	
19	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	POUND	128	128	
20	2581.503	REMOVABLE PREFORM PAVEMENT MARKING TAPE	LIN FT	397	397	
21	2582.503	4" SOLID LINE MULTI COMP	LIN FT	12266	12266	
21	2582.503	4" BROKEN LINE MULTI COMP	LIN FT	276	276	
21	2582.503	4" DBLE SOLID LINE MULTI COMP	LIN FT	4195	4195	
21	2582.518	PAVT MSSG PREF THERMO	SQ FT	156	156	
21	2582.518	CROSSWALK PREF THERMO	SQ FT	360	360	
21	2582.603	PAVEMENT MARKING SPECIAL	LIN FT	122	122	

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	HYDRAULIC REINFORCED FIBER MATRIX	3900 LBS./ ACRE
2575	SEED MIXTURE 25-121	61 LBS./ ACRE
2574	FERTILIZER TYPE 3	350 LBS./ ACRE

CONSTRUCTION NOTES


1	REFERENCE DETAILS (PAGE 7, 8, 9) FOR REMOVAL DETAILS
2	ITEM FOR BITUMINOUS DRIVEWAYS AND STREET APPROACHES. CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
3	ITEM USED TO REMOVE EXCESS RECLAIM MATERIAL.
4	ITEM USED TO MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIM AREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING PAVEMENT
5	GRAVEL BASE FOR BITUMINOUS DRIVEWAYS, AND CURB PATCHES.
6	MATERIAL SHALL BE HAULED AND USED FOR PROFILE CORRECTION AREAS. ITEM INCLUDES PLACEMENT, SHAPING, COMPACTION, AND MAINTENANCE OF MATERIAL.
7	TO BE USED FOR MILLING STREET APPROACHES AND/OR DETAIL MILLING AREAS AS IDENTIFIED IN THE PLAN. DETAIL MILLING AROUND MANHOLES, CATCH BASINS, GATE VALVES, AND ALONG CURB LINE IS INCIDENTAL TO THIS ITEM.
8	ITEM FOR BITUMINOUS DRIVEWAYS. DRIVEWAYS SHALL BE PAVED AFTER MAINLINE AND BEFORE FINAL STRIPING.
9	ITEM INCLUDES BITUMINOUS PATCHING AROUND NEW CURB, STORM STRUCTURE REPAIRS, AND ANY POTHOLES
10	ITEM FOR STREET APPROACHES. STREET APPROACHES SHALL BE PAVED AFTER MAINLINE, AND BEFORE FINAL STRIPING
11	GATE VALVES TO BE ADJUSTED ONLY AS NECESSARY AS DETERMINED BY THE ENGINEER.
12	ELEVATION PRIOR TO OR IN CONJUNCTION WITH RECLAIMING OPERATION, AND FINAL ADJUSTMENT TO FINISH GRADE BETWEEN PAVING BASE AND WEAR LIFTS
13	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
14	ITEM INCLUDES GROUTING OF INVERTS, DOGHOUSES, RINGS, AND CASTINGS AS REQUIRED (SEE DRAINAGE TAB, SHEET 3).
15	MAILBOXES ARE TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION OR AS DIRECTED BY THE LOCAL POSTAL AUTHORITY, CONTRACTOR IS RESPONSIBLE FOR CONTACTING. MAILBOX REMOVAL AND ALL MATERIALS ARE INCIDENTAL TO INSTALLATION.
16	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.
17	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT, SHALL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
18	ALL DRAINAGE STRUCTURES AFFECTED BY THIS PROJECT MUST HAVE INLET PROTECTION.
19	TYPE 3 FERTILIZER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM. SEE "BASIS OF PLANNED QUANTITIES" FOR APPLICATION RATES.
20	CENTERLINE AND LANE DESIGNATION SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON MILLED SURFACE AND EACH NEW LIFT OF PAVEMENT; SKIPS MUST BE INPLACE BEFORE THE CONTRACTOR LEAVES FOR THE DAY. CONTRACTOR IS TO REMOVE PRIOR TO FINAL STRIPING.
21	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING.

THE FOLLOWING STANDARD PLATES APPROVED BY THE DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY TO THIS PROJECT.

MNDOT STANDARD PLATES

PLATE NO.	DESCRIPTION
4026A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4134A	CURB BOX CASTING FOR CATCH BASIN (FOR DESIGN B CURBS)- CASTING NO. 825
4154B	CATCH BASIN GRATE CASTING - CASTING NO. 816
7100H	CONCRETE CURB AND GUTTER (DESIGN B AND DESIGN V)
7111J	INSTALLATION OF CATCH BASIN CASTINGS (CONCRETE CURB AND GUTTER)
8000J	CHANNELIZERS
9350A	MAILBOX SUPPORT (SWING-AWAY TYPE)

NO	DATE	BY	CKD	APPR	REVISION	03/02/2021	12:40:45 PM
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**ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-635-013
 STATE AID PROJECT 183-101-012

STATEMENT OF ESTIMATED QUANTITIES

Sheet 2 of 21 Sheets

STORM DRAINAGE TAB

NUMBER	TYPE	ACTION	NEW CASTING	FURNISH AND INSTALL CASTING ASSEMBLY	RING HEIGHT -INCIDENTAL-	GROUT CATCH BASIN OR MANHOLE	NOTES
				EACH	LIN FT	EACH	
100	CB	GROUT				1	GROUT RINGS AND CASTING
101	MH	GROUT				1	GROUT RINGS AND CASTING
102	CB	OK				1	
103	CB	GROUT				1	GROUT RINGS AND CASTING
104	CB	GROUT				1	GROUT RINGS AND CASTING
105	CB	RE-RING	A	1	0.7		
106	CB	GROUT				1	GROUT RINGS AND DOGHOUSE
107	CB	GROUT				1	GROUT RINGS AND CASTING
108	CB	GROUT				1	GROUT RINGS AND CASTING
109	CB	GROUT				1	GROUT RINGS AND CASTING
110	CB	RE-RING	A	1	0.4		
111	CB	GROUT				1	GROUT RINGS AND CASTING
112	CB	RE-RING	A	1	0.7		
113	CB	GROUT				1	GROUT RINGS AND CASTING
113A	MH	GROUT				1	GROUT RINGS, CASTING, AND DOGHOUSE
114	CB	RE-RING	A	1	0.2		
115	CB	GROUT				1	GROUT RINGS AND CASTING
116	CB	GROUT				1	GROUT RINGS AND CASTING
117	CB	GROUT				1	GROUT RINGS AND CASTING
118	CB	GROUT				1	GROUT RINGS AND CASTING
118A	CB	GROUT				1	GROUT RINGS AND CASTING
200	MH	GROUT				1	GROUT RINGS AND CASTING
201	MH	GROUT				1	GROUT RINGS AND CASTING
202	MH	GROUT				1	GROUT RINGS AND CASTING
TOTALS:				4	2.0	19	

SUPERELEVATION CORRECTION TAB


STATION	POINT	LEFT GRADE	RIGHT GRADE
19+87	BEGIN SUPER LT	-2.0%	-2.0%
20+00		-1.7%	-2.0%
20+50		-0.7%	-2.0%
20+83		0.0%	-2.0%
21+00		0.4%	-2.0%
21+49		1.4%	-2.0%
21+79	BEGIN SUPER RT	2.0%	-2.0%
21+90		2.2%	-2.2%
22+00		2.4%	-2.4%
22+12	PC	2.7%	-2.7%
22+50		3.5%	-3.5%
22+75	BEGIN FULL SUPER	4.0%	-4.0%
23+00		4.0%	-4.0%
23+50		4.0%	-4.0%
24+00		4.0%	-4.0%
24+50		4.0%	-4.0%
24+83	END FULL SUPER	4.0%	-4.0%
25+00		3.6%	-3.6%
25+46	PT	2.7%	-2.7%
25+79	MODIFIED SUPER	2.0%	-2.0%
26+00		2.0%	-2.0%
26+50		2.0%	-2.0%
27+00		2.0%	-2.0%
27+50		2.0%	-2.0%
28+00		2.0%	-2.0%
28+50		2.0%	-2.0%
28+81	MODIFIED SUPER	2.0%	-2.0%
29+00		2.4%	-2.4%
29+14	PC	2.7%	-2.7%
29+50		3.4%	-3.4%
29+77	BEGIN FULL SUPER	4.0%	-4.0%
30+50		4.0%	-4.0%
31+00		4.0%	-4.0%
31+50		4.0%	-4.0%
32+00		4.0%	-4.0%
32+50		4.0%	-4.0%
33+00		4.0%	-4.0%
33+50		4.0%	-4.0%
34+00		4.0%	-4.0%
34+50		4.0%	-4.0%
35+00		4.0%	-4.0%
35+50		4.0%	-4.0%
36+00		4.0%	-4.0%
36+38	END FULL SUPER	4.0%	-4.0%
36+50		3.8%	-3.8%
37+01	PT	2.7%	-2.7%
37+34	END SUPER RT	2.0%	-2.0%
37+73		1.2%	-2.0%
38+00		0.6%	-2.0%
38+30		0.0%	-2.0%
38+50		-0.4%	-2.0%
39+00		-1.5%	-2.0%
39+26	END SUPER LT	-2.0%	-2.0%

CASTING ASSEMBLIES SUMMARY

ASSEMBLY	RING OR FRAME CASTING	COVER OR GRATE CASTING	CURB BOX	DESCRIPTION	NOTES	QUANTITY
A	NEENAH R-3250-DVSP	V	YES	24" GRATE, CURB BOX		4
ALL CASTING HEIGHTS ARE TO BE VERIFIED IN THE FIELD						
ALL MANHOLE COVERS SHOULD BE LABELED AS STORM OR SANITARY						
NEW CASTINGS TO BE INSTALLED AFTER ASPHALT MILLING IS COMPLETED						
MANHOLE CASTINGS TO BE RECESSED 1/4" FROM TOP OF FINISHED MAT						

NO	DATE	BY	CKD	APPR	REVISION
	03/02/2021				12:40:52 PM

NAME: P:\21-01-00\CSAH_35_(81ST-TH10)\Base\Proposed\CSAH35_TABULATION.dgn

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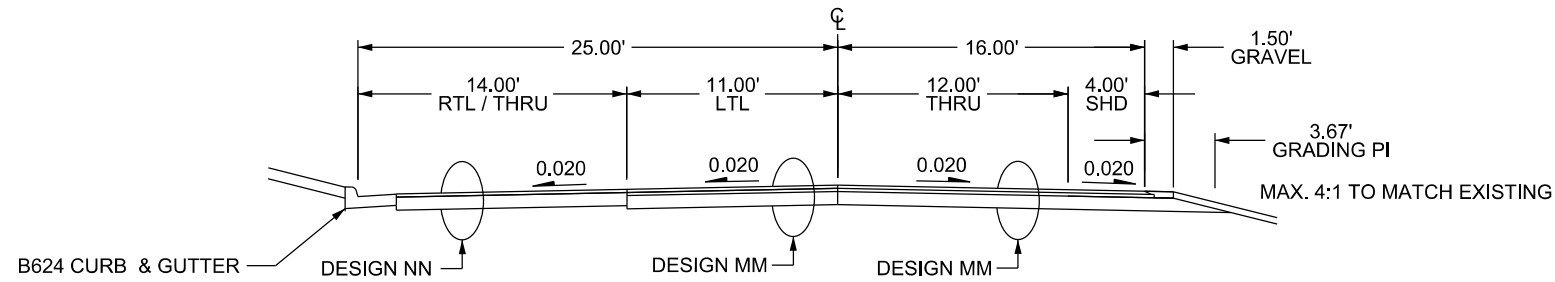
STATE AID PROJECT 002-635-013
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TABULATIONS
 Sheet 3 of 21 Sheets

CSAH 35 - OLD CENTRAL AVE.

PROPOSED SECTION

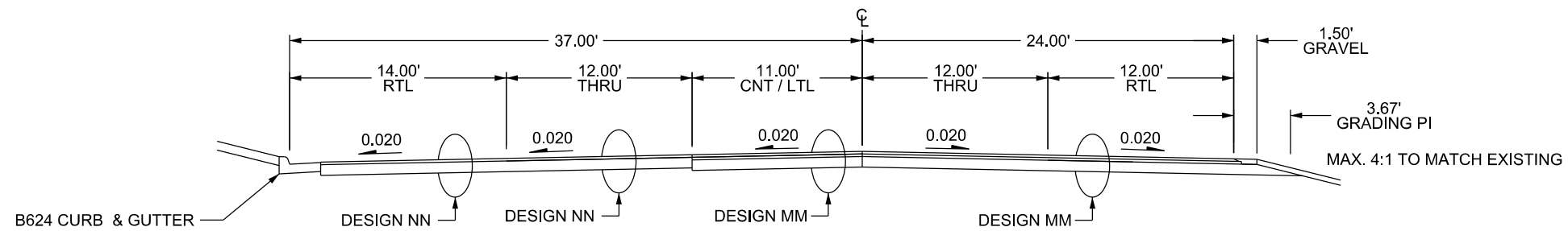
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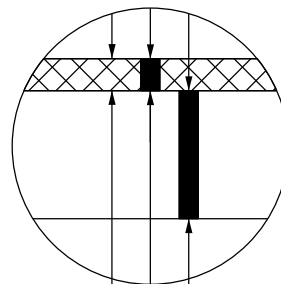
CSAH 35 - OLD CENTRAL AVE.

PROPOSED SECTION

15+10.00 - 19+79.00

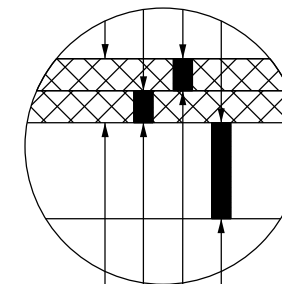


**DESIGN NN
MILL SECTION**




2.0" MILL BITUMINOUS
2.0" BITUMINOUS WEAR (SPWEB440C)
REMAINING BITUMINOUS

**DESIGN MM
MILL SECTION**

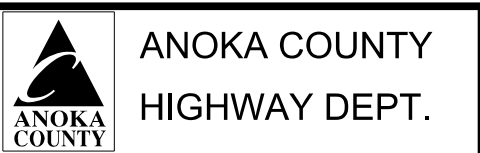


4.0" MILL BITUMINOUS
2.0" BITUMINOUS WEAR (SPWEB440C)
2.0" BITUMINOUS WEAR (SPWEB440C)
REMAINING BITUMINOUS / CONCRETE

NO	DATE	BY	CKD	APPR	REVISION	03/02/2021	12:41:30 PM
NAME: P:\21-01-00\CSAH_35_(81ST-TH10)\Base\Proposed\CSAH35_TYPICALS.dgn							

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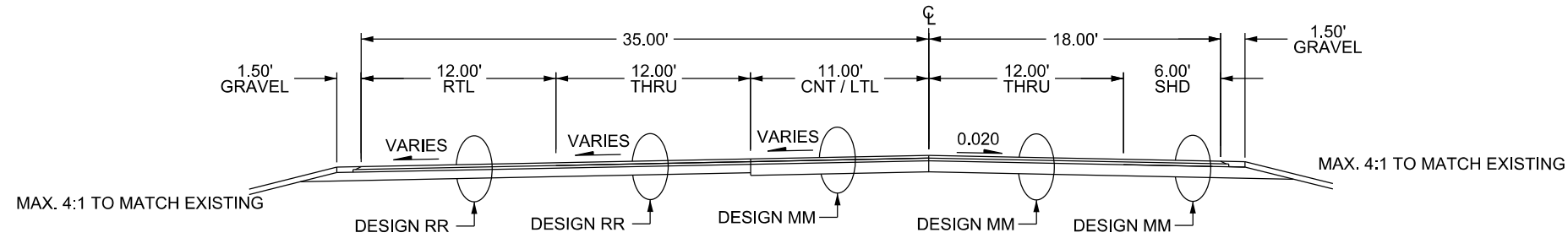
STATE AID PROJECT 002-635-013
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TYPICAL SECTIONS
Sheet 4 of 21 Sheets

CSAH 35 - OLD CENTRAL AVE.

PROPOSED SECTION

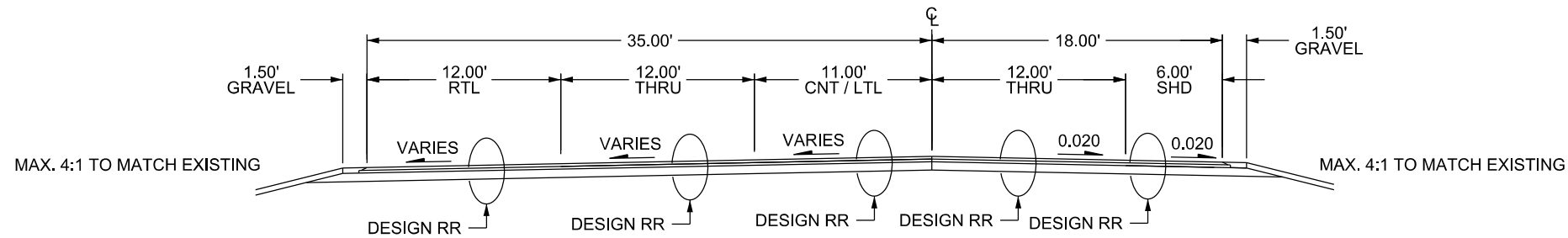
19+79.00 - 22+08.00



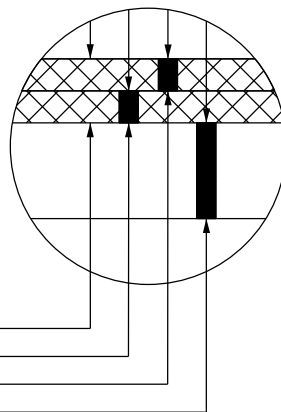
CSAH 35 - OLD CENTRAL AVE.

PROPOSED SECTION

22+08.00 - 22+80.00

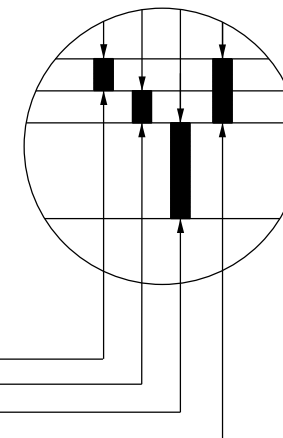


DESIGN MM MILL SECTION



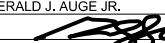
4.0" MILL BITUMINOUS
2.0" BITUMINOUS WEAR (SPWEB440C)
2.0" BITUMINOUS WEAR (SPWEB440C)
REMAINING BITUMINOUS / CONCRETE

DESIGN RR RECLAIM SECTION

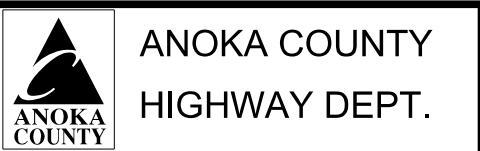


2.0" BITUMINOUS WEAR (SPWEB440C)
2.0" BITUMINOUS WEAR (SPWEB440C)
RECLAIMED BITUMINOUS
REMOVE 4" RECLAIM BITUMINOUS

NO	DATE	BY	CKD	APPR	REVISION	03/02/2021	12:41:31 PM
NAME: P:\21-01-00\CSAH_35_(81ST-TH10)\Base\Proposed\CSAH35_TYPICALS.dgn							

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CHECKED BY: CSO DATE: 01/28/2021



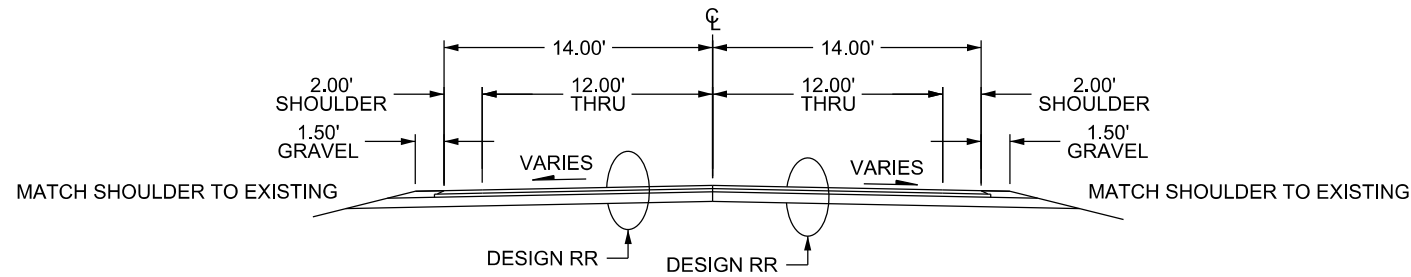
STATE AID PROJECT 002-635-013
STATE AID PROJECT 183-101-012

TYPICAL SECTIONS
Sheet 5 of 21 Sheets

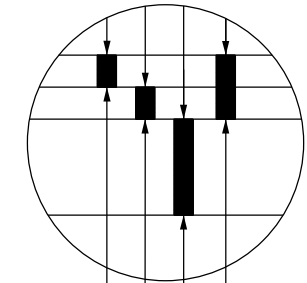
CSAH 35 - OLD CENTRAL AVE.

PROPOSED SECTION

22+80.00 - 37+11.00



**DESIGN RR
RECLAIM SECTION**

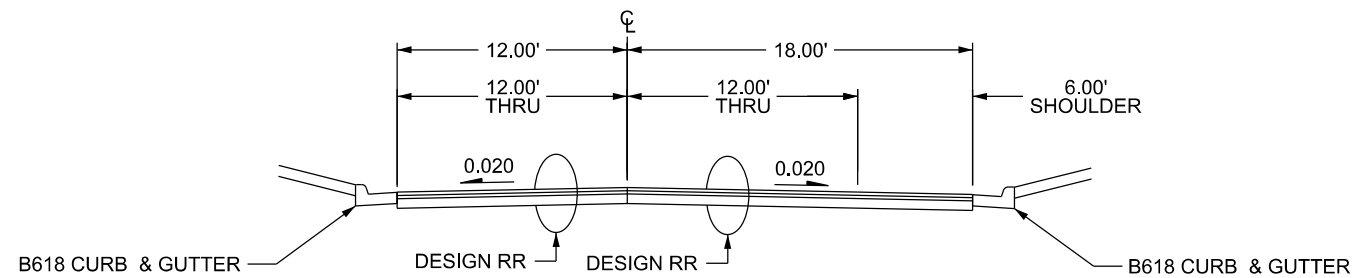


2.0" BITUMINOUS WEAR (SPWEB440C)
 2.0" BITUMINOUS WEAR (SPWEB440C)
 RECLAIMED BITUMINOUS
 REMOVE 4" RECLAIM BITUMINOUS

CSAH 35 - OLD CENTRAL AVE.

PROPOSED SECTION

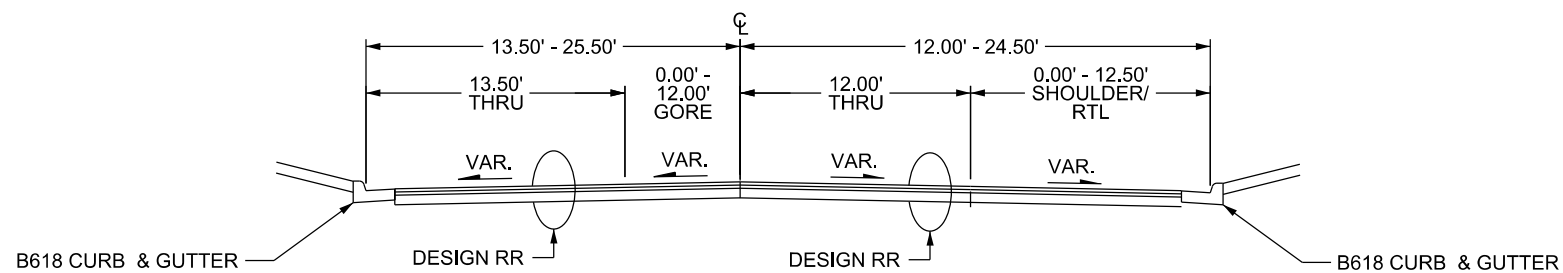
37+11.00 - 54+90.00



PLEASANT VIEW DR


PROPOSED SECTION

1+51.00 - 4+32.00




NO	DATE	BY	CKD	APPR	REVISION	03/02/2021	12:41:31 PM

NAME: P:\21-01-00\CSAH_35_(81ST-TH10)\Base\Proposed\CSAH35_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: 02-24-2021 LICENSE NO. 26511

DRAWN BY: KPR DATE: 12/11/2020
 DESIGN BY: KPR DATE: 12/11/2020
 CHECKED BY: CSO DATE: 01/28/2021

 **ANOKA COUNTY
HIGHWAY DEPT.**

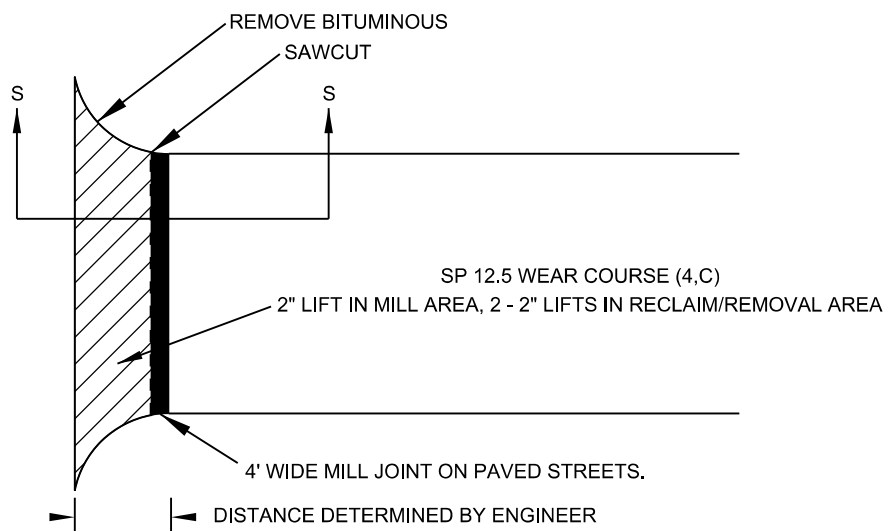
STATE AID PROJECT 002-635-013
 STATE AID PROJECT 183-101-012

TYPICAL SECTIONS
 Sheet 6 of 21 Sheets

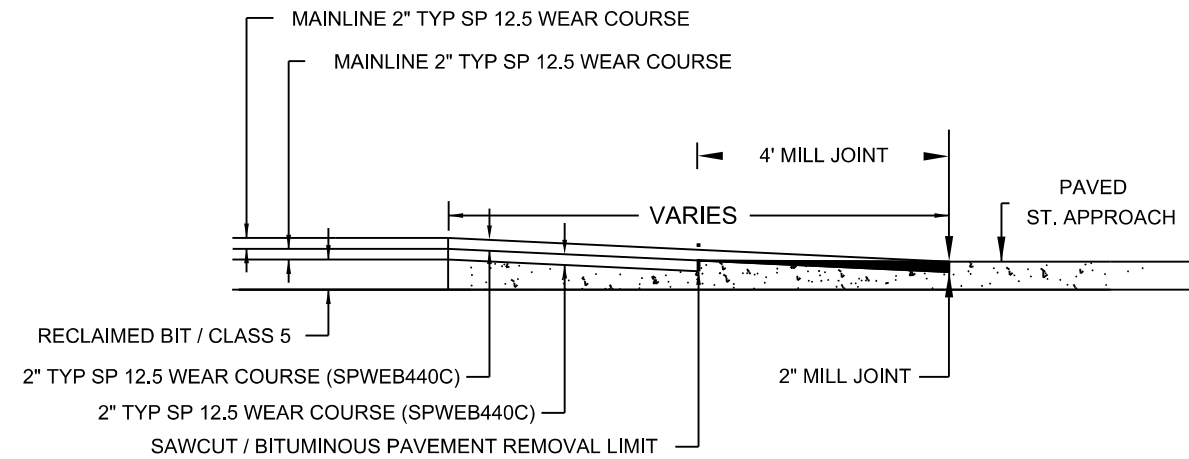
STREET APPROACH DETAIL (RECLAIM)

BITUMINOUS STREET

PLAN VIEW




SECTION S - S



NO	DATE	BY	CKD	APPR	REVISION	
	03/02/2021					12:41:34 PM

NAME: P:\21-01-00\CSAH_35_(81ST-TH10)\Base\Proposed\CSAH35_DETAILS.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: 02-24-2021 LICENSE NO. 26511

DRAWN BY KPR DATE 12/11/2020
 DESIGN BY KPR DATE 12/11/2020
 CHECKED BY CSO DATE 01/28/2021



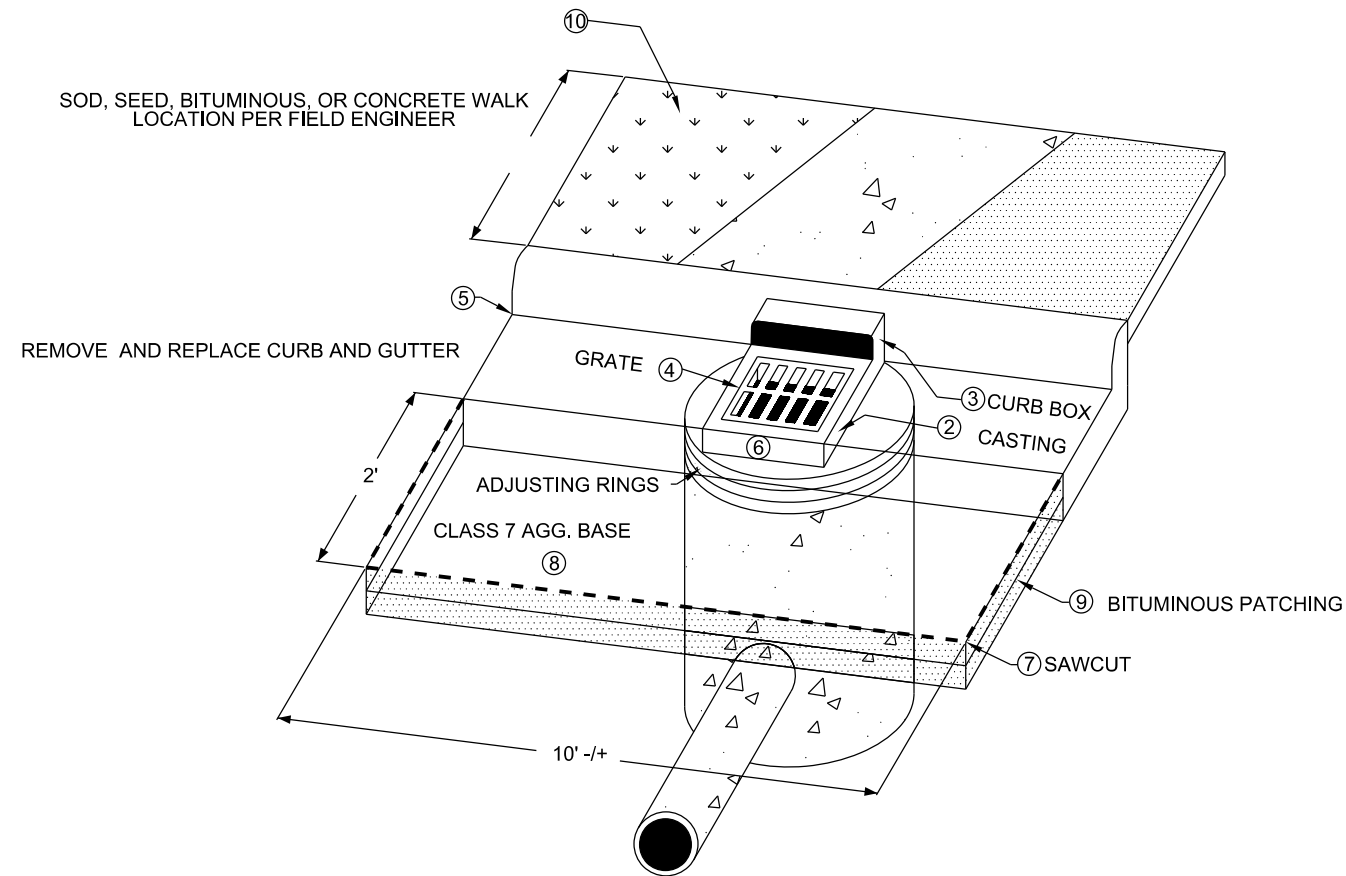
**ANOKA COUNTY
 HIGHWAY DEPT.**

STATE AID PROJECT 002-635-013
 STATE AID PROJECT 183-101-012

DETAILS
 Sheet 7 of 21 Sheets

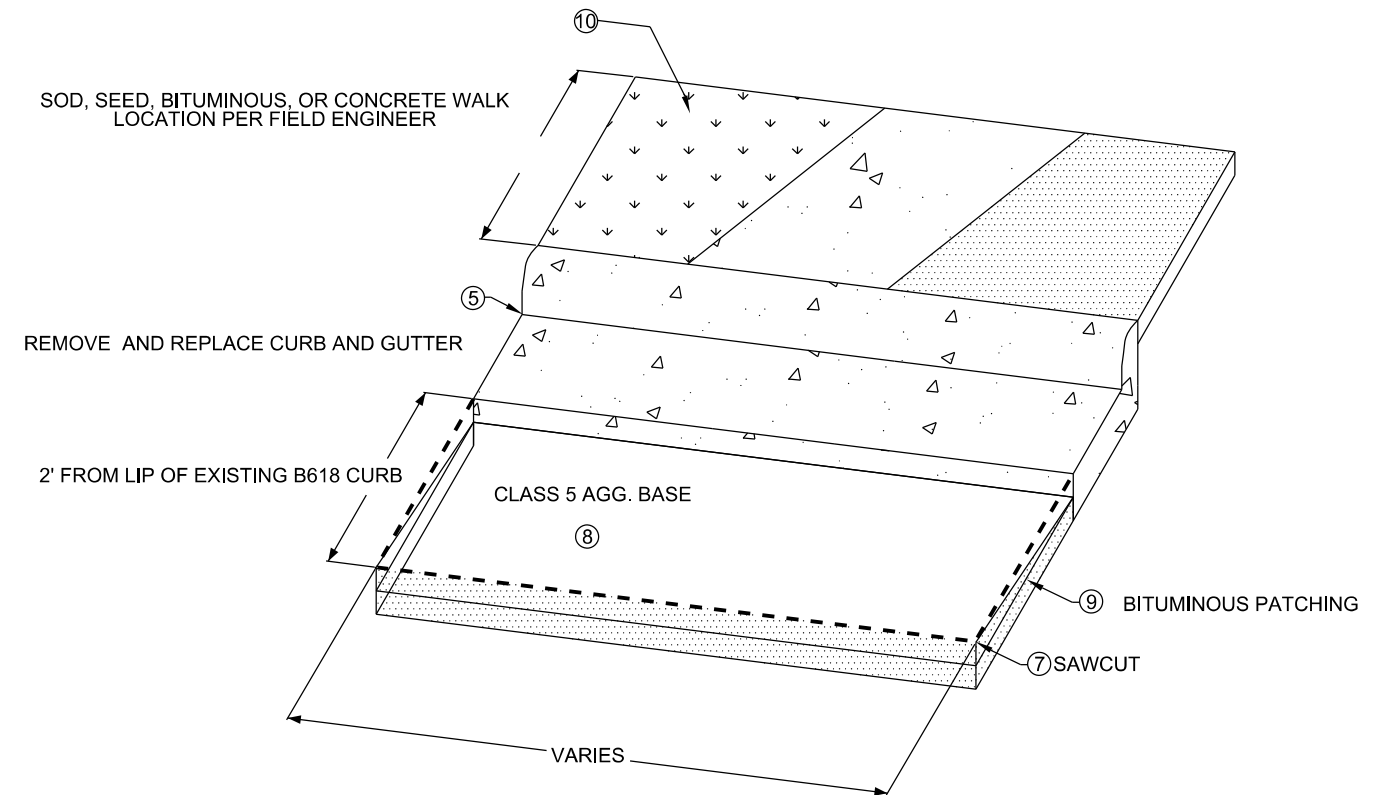
CATCH BASIN DETAIL

SEE STRUCTURE TAB FOR LOCATION
(PAGE 3)



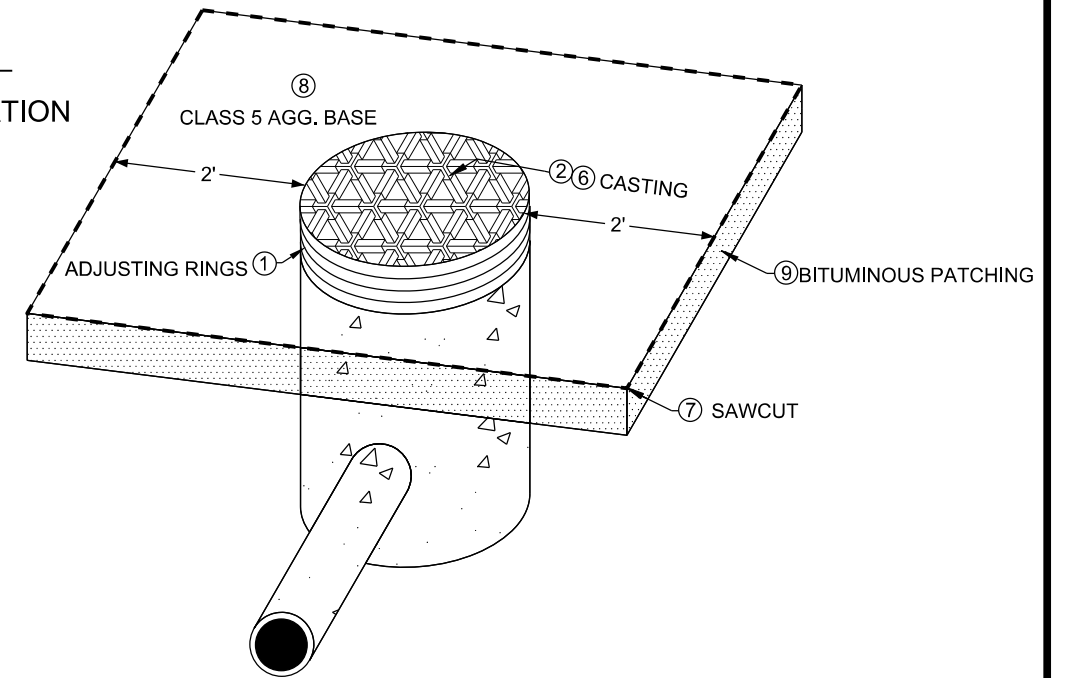
NEW CURB DETAIL

SEE PLAN FOR LOCATION



MANHOLE DETAIL

SEE STRUCTURE TAB FOR LOCATION
(PAGE 3)




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), HYDAULIC REINFORCED FIBER MATRIX OR EROSION CONTROL BLANKET, BITUMINOUS, CONCRETE.

NO	DATE	BY	CKD	APPR	REVISION	03/02/2021	12:41:39 PM
NAME: P:\21-01-00\CSAH_35_(81ST-TH10)\Base\Proposed\CSAH35_DETAILS.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: 02-24-2021 LICENSE NO. 26511

DRAWN BY KPR DATE 12/11/2020
 DESIGN BY KPR DATE 12/11/2020
 CHECKED BY CSO DATE 01/28/2021

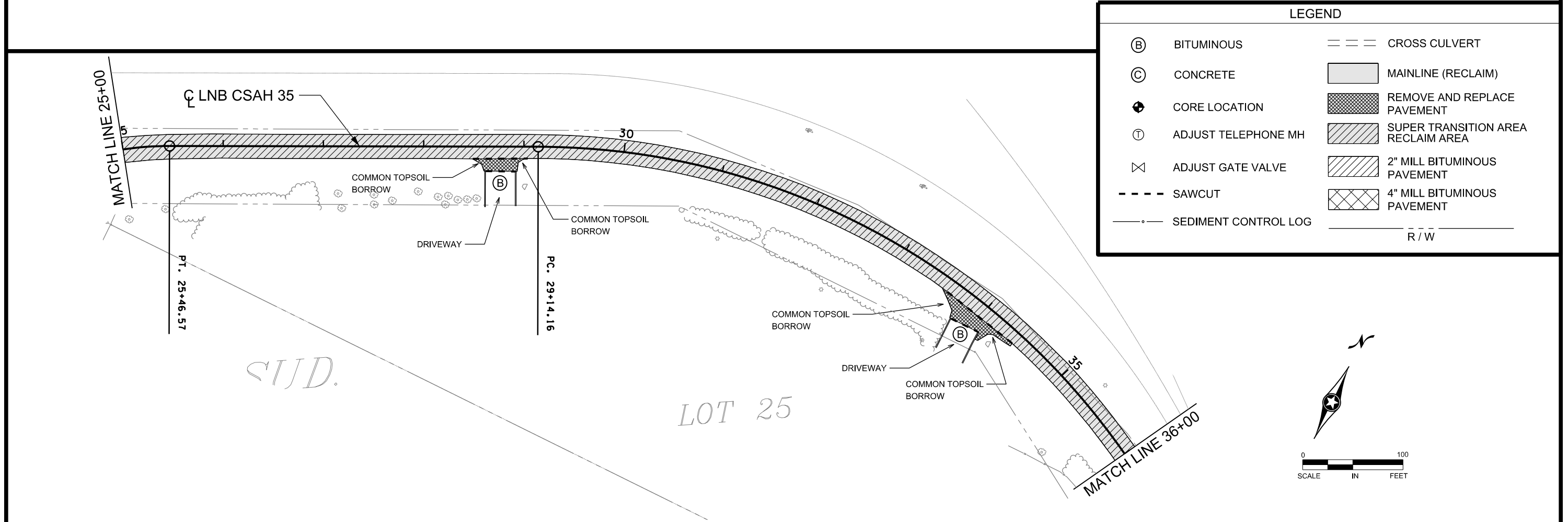
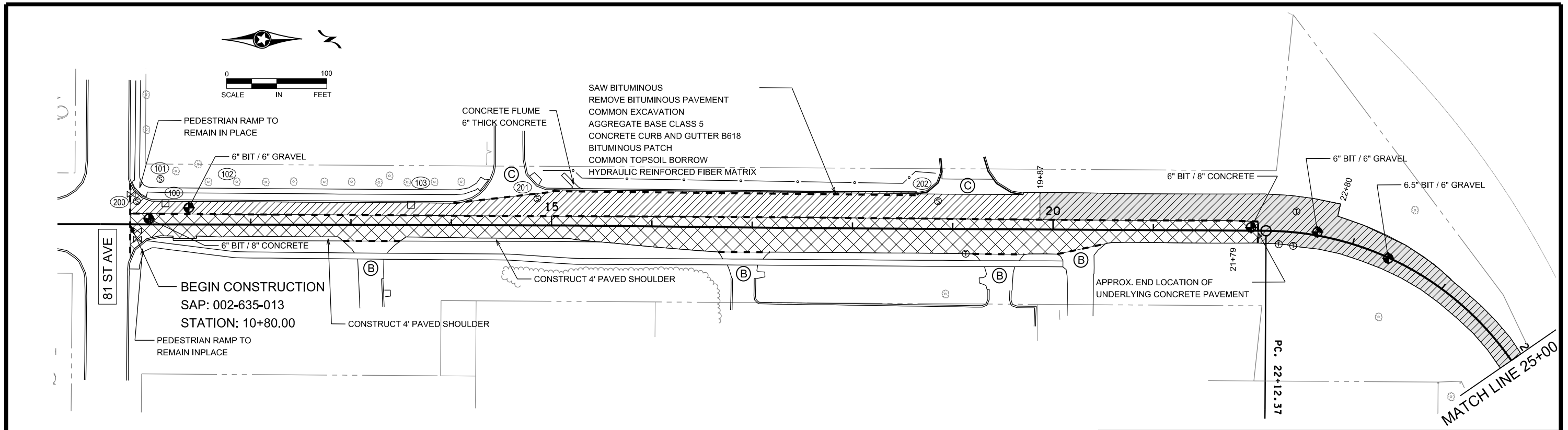


ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-635-013
 STATE AID PROJECT 183-101-012

DETAILS

Sheet 9 of 21 Sheets



LEGEND

(B)	BITUMINOUS	---	CROSS CULVERT
(C)	CONCRETE	[Hatched]	MAINLINE (RECLAIM)
⊙	CORE LOCATION	[Cross-hatched]	REMOVE AND REPLACE PAVEMENT
Ⓢ	ADJUST TELEPHONE MH	[Diagonal lines]	SUPER TRANSITION AREA RECLAIM AREA
⊗	ADJUST GATE VALVE	[Diagonal lines]	2" MILL BITUMINOUS PAVEMENT
---	SAWCUT	[Cross-hatched]	4" MILL BITUMINOUS PAVEMENT
—○—	SEDIMENT CONTROL LOG		R / W

NO	DATE	BY	CKD	APPR	REVISION	03/02/2021	12:41:43 PM
NAME: P:\21-01-00\CSAH_35_(81ST-TH10)\Base\Proposed\CSAH35_CP1.dgn							

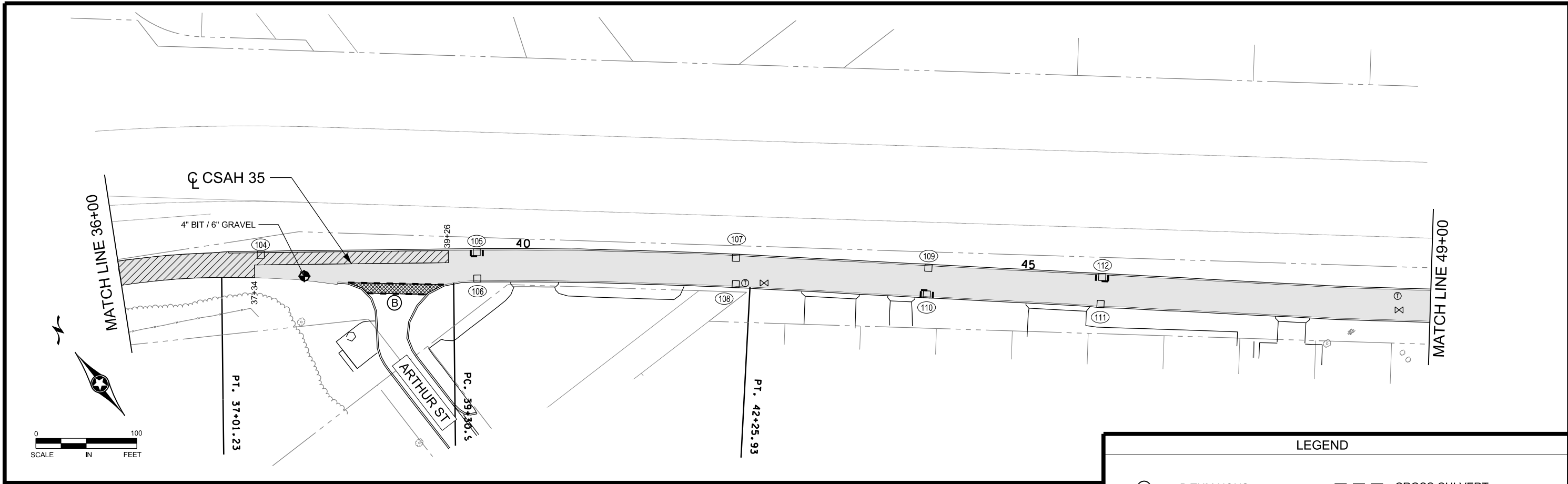
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: GERALD J. AUGER JR.
 SIGNATURE:
 DATE: 02-24-2021 LICENSE NO. 26511

DRAWN BY KPR DATE 12/11/2020
 DESIGN BY KPR DATE 12/11/2020
 CHECKED BY CSO DATE 01/28/2021

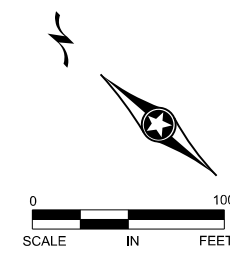
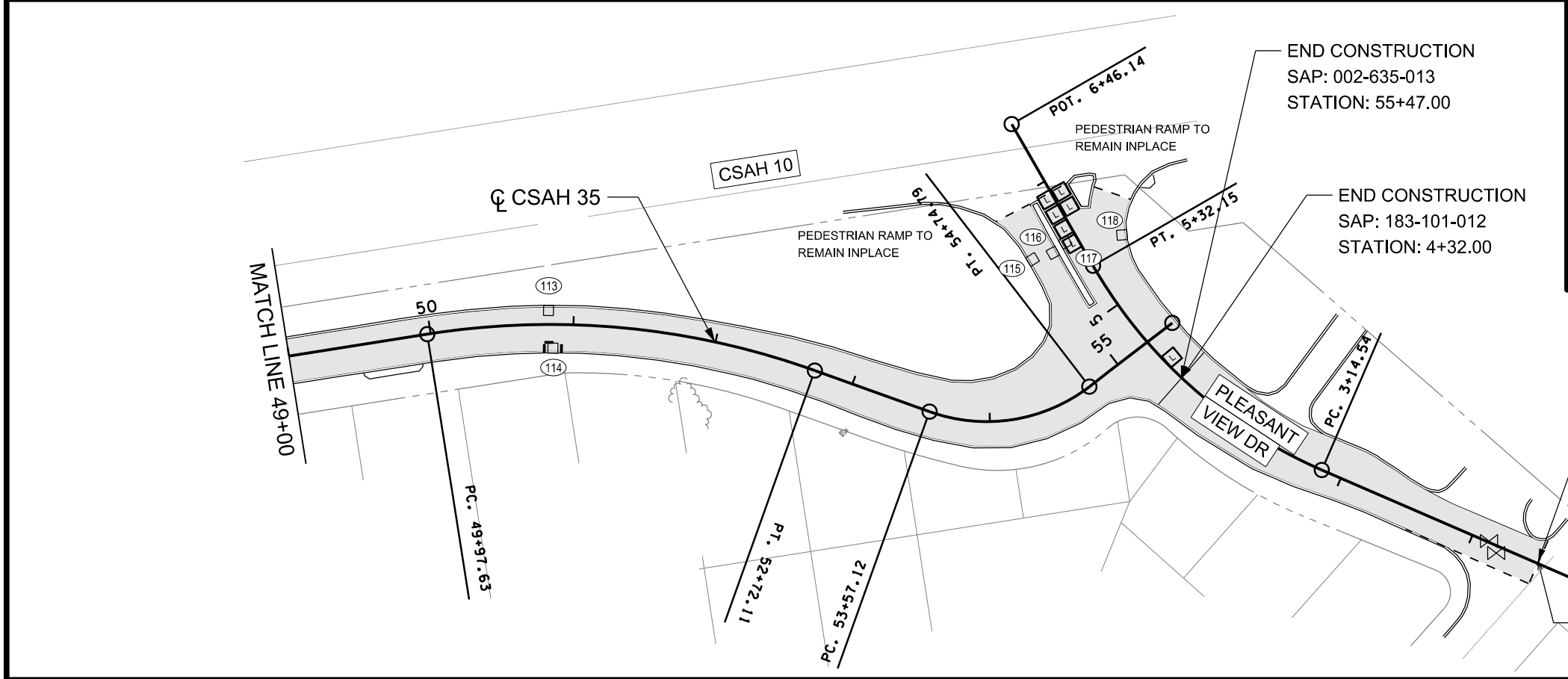
ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-635-013
 STATE AID PROJECT 183-101-012

CONSTRUCTION PLAN
 STA 10+80 TO 36+00
 Sheet 10 of 21 Sheets



LEGEND			
(B)	BITUMINOUS	---	CROSS CULVERT
(C)	CONCRETE	[Solid Grey]	MAINLINE (RECLAIM)
(◆)	CORE LOCATION	[Cross-hatched]	REMOVE AND REPLACE PAVEMENT
(Ⓣ)	ADJUST TELEPHONE MH	[Diagonal Hatched]	SUPER TRANSITION AREA
(⊗)	ADJUST GATE VALVE	---	R/W
- - -	SAWCUT		
[□]	APRX. LOOP LOCATION		



NO	DATE	BY	CKD	APPR	REVISION	
	03/02/2021					12:41:45 PM

NAME: P:\21-01-00\CSAH_35_(81ST-TH10)\Base\Proposed\CSAH35_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.

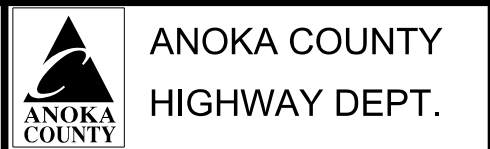
SIGNATURE: *[Signature]*

DATE: 02-24-2021 LICENSE NO. 26511

DRAWN BY: KPR DATE: 12/11/2020

DESIGN BY: KPR DATE: 12/11/2020

CHECKED BY: CSO DATE: 01/28/2021



STATE AID PROJECT 002-635-013

STATE AID PROJECT 183-101-012

CONSTRUCTION PLAN

STA 36+00 TO 55+47

Sheet 11 of 21 Sheets

PERMANENT PAVEMENT MARKING PLAN
NOTES AND GUIDELINES

GENERAL INFORMATION:

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.

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.

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.

MULTI COMPONENT (MULTI COMP):

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.

THE MULTI COMP MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEANS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE MULTI COMP RESIN LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.

A MULTI COMP RESIN LINE SHALL BE APPLIED WITH A MINIMUM THICKNESS OF 20 MILS (WET) AND 4" WIDE. GLASS BEADS SHALL BE APPLIED AT A MINIMUM RATE OF 25LBS POUNDS PER GALLON RATE SUFFICIENT TO ACHIEVE AN ACCEPTABLE NO-TRACK SYSTEM.

OPERATIONS SHALL BE CONDUCTED ONLY WHEN THE ROAD PAVEMENT SURFACE TEMPERATURES ARE 50 DEGREES FAHRENHEIT OR GREATER.

PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.

PREFORMED THERMOPLASTIC:

THE PREFORMED THERMOPLASTIC MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS ON CLEAN AND DRY SURFACES. SEE SPECIAL PROVISIONS FOR PREFORMED THERMOPLASTIC MARKING SPECIFICATIONS.

PAINT:

AT THE TIME OF APPLYING THE MARKING MATERIAL, THE APPLICATION AREA SHALL BE FREE OF CONTAMINATION. THE CONTRACTOR SHALL CLEAN THE ROADWAY SURFACE PRIOR TO THE LINE APPLICATION IN A MANNER AND TO THE EXTENT REQUIRED BY THE ENGINEER.

GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE PAINT LINE.

EXCEPT WHEN USED AS A TEMPORARY MARKING, PAVEMENT MARKINGS SHALL ONLY BE APPLIED IN SEASONABLE WEATHER WHEN AIR TEMPERATURE IS 50 DEGREES FARHENHEIT OR HIGHER AND SHALL NOT BE APPLIED WHEN THE WIND OR OTHER CONDITIONS CAUSE A FILD OR DUST TO BE DEPOSITED ON THE PAVEMENT SURFACE AFTER CLEANING AND BEFORE THE MARKING MATERIAL CAN BE APPLIED.

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.

PAVEMENT MARKING TABULATION		
ITEM	UNIT	TOTAL QUANTITY
4" SOLID LINE WHITE - MULTI COMP	LIN FT	10737
4" BROKEN LINE YELLOW - MULTI COMP	LIN FT	276
4" SOLID LINE YELLOW - MULTI COMP	LIN FT	1529
4" DOUBLE LINE YELLOW - MULTI COMP	LIN FT	4195
24" SOLID LINE YELLOW - THERMOPLASTIC (PMS*)	LIN FT	47
24" SOLID LINE WHITE - THERMOPLASTIC (PMS*)	LIN FT	75
3'x6' ZEBRA CROSSWALK - PREFORMED THERMOPLASTIC	SQ FT	360
PAVEMENT MESSAGE (RT ARROW) - PREFORMED THERMOPLASTIC	SQ FT	78
PAVEMENT MESSAGE (LT ARROW) - PREFORMED THERMOPLASTIC	SQ FT	78

1 10' STRIPE, 40' GAP

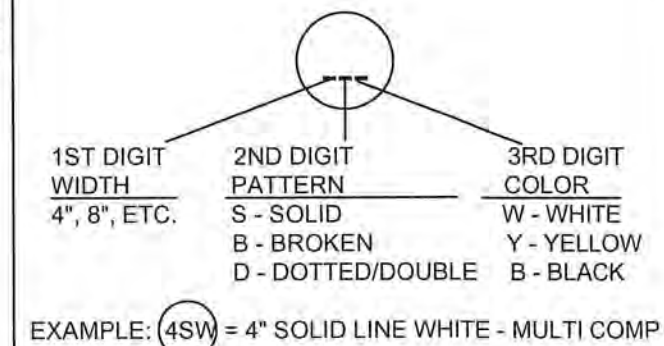
* PAVEMENT MARKING SPECIAL

SYMBOLS & MATERIALS LEGEND

- █ CROSSWALK BLOCK WHITE-POLY PREFORM
- ↩ PAVEMENT MESSAGE (LEFT ARROW) POLY PREFORM

STRIPING KEY

- CIRCLE - MULTI COMP
- SQUARE - POLY PREFORM THERMOPLASTIC
- △ TRIANGLE - PAINT
- ⬠ PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\21-01-00\CSAH 35 (81st-TH10)\Base\Traffic\Perm Pvmt Mrkg Guide Notes.dwg

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: JOSEPH J. MACPHERSON, P.E.

SIGNATURE: *[Signature]*

DATE: 7-3-21 LICENSE NO. 46732

DRAWN BY: TMV DATE: 12/18/20

DESIGN BY: TMV DATE: 12/18/20

CHECKED BY: CO DATE: 01/27/21

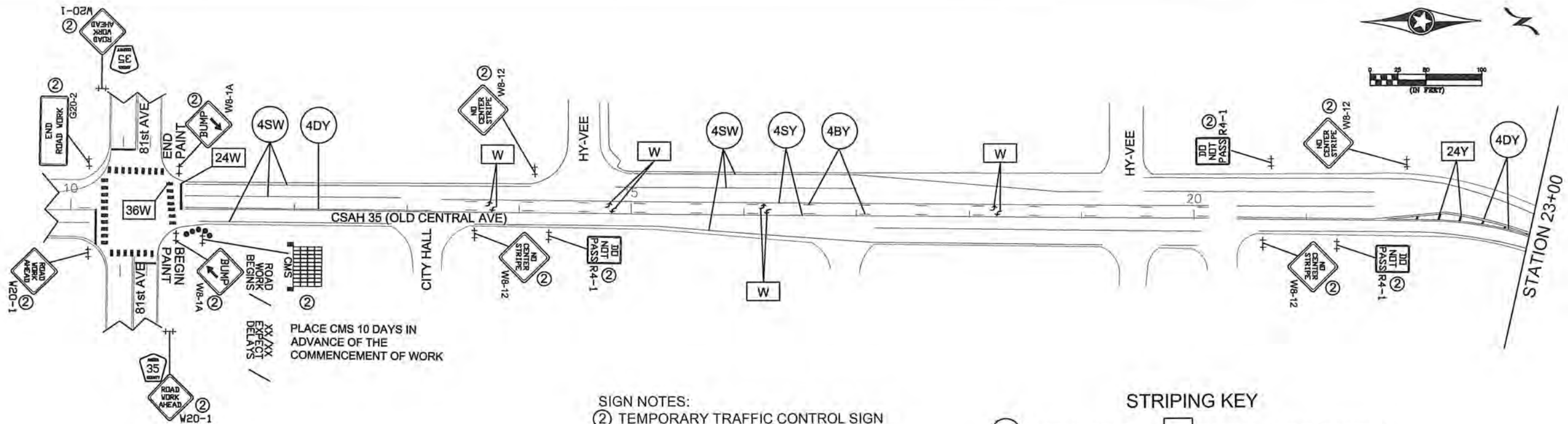


ANOKA COUNTY
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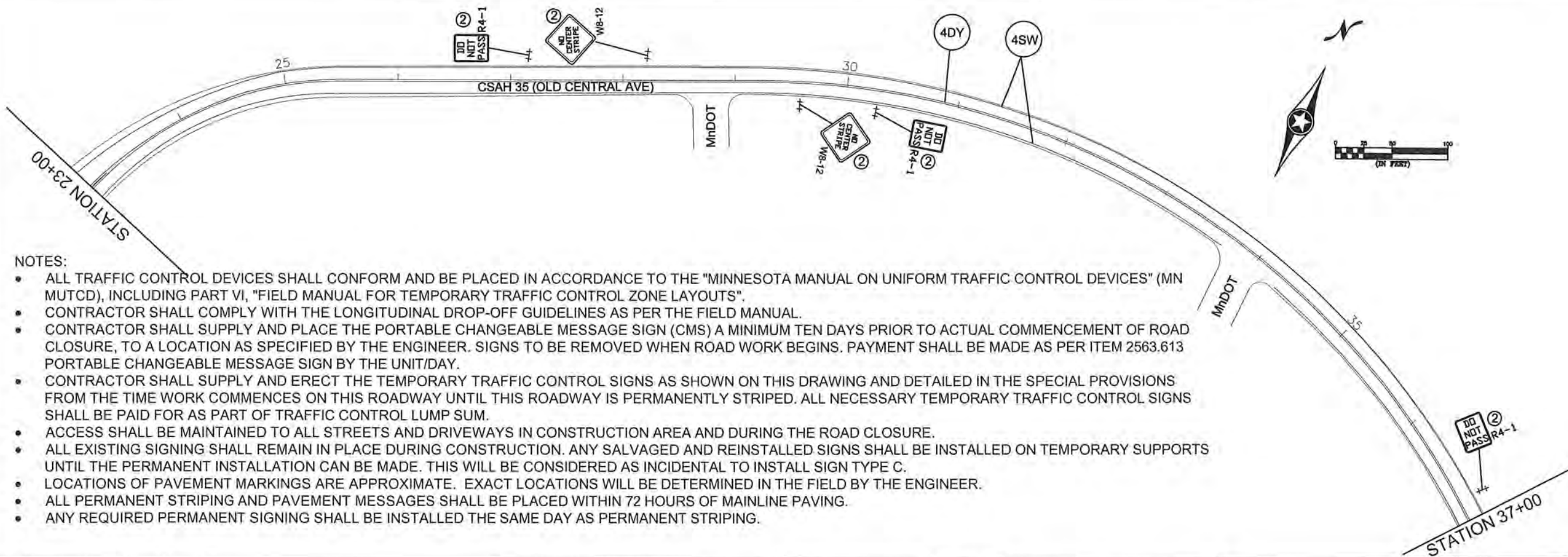
PERMANENT MARKING
TABULATION

Sheet 12 of 21 Sheets



SIGN NOTES:
 (2) TEMPORARY TRAFFIC CONTROL SIGN

STRIPING KEY
 CIRCLE - MULTI COMP
 SQUARE - POLY PREFORM



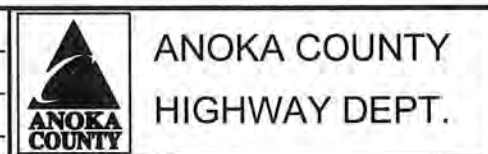
NOTES:

- 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".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE FIELD MANUAL.
- CONTRACTOR SHALL SUPPLY AND PLACE THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM TEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD CLOSURE, 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.
- 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.
- ACCESS SHALL BE MAINTAINED TO ALL STREETS AND DRIVEWAYS IN CONSTRUCTION AREA AND DURING THE ROAD CLOSURE.
- 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.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- ALL PERMANENT STRIPING AND PAVEMENT MESSAGES SHALL BE PLACED WITHIN 72 HOURS OF MAINLINE PAVING.
- ANY REQUIRED PERMANENT SIGNING SHALL BE INSTALLED THE SAME DAY AS PERMANENT STRIPING.

NO	DATE	BY	CKD	APPR	REVISION

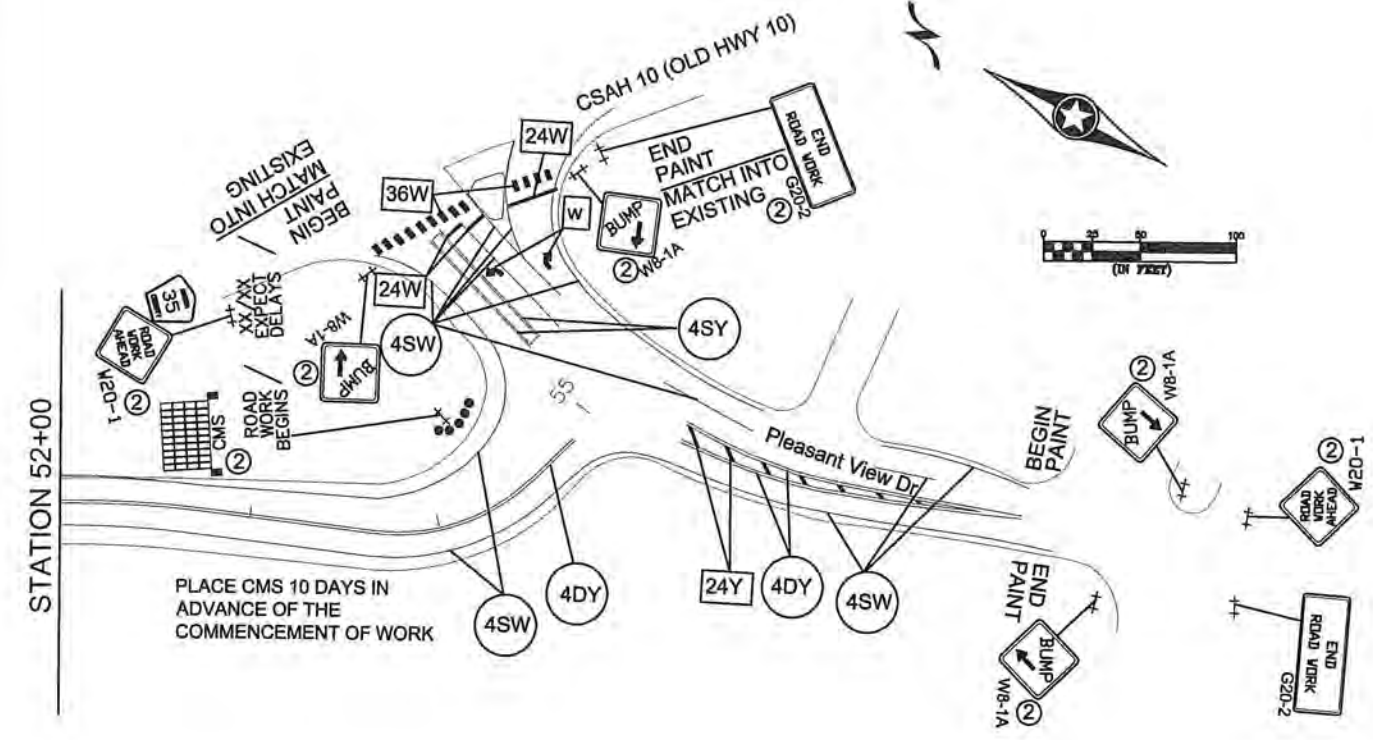
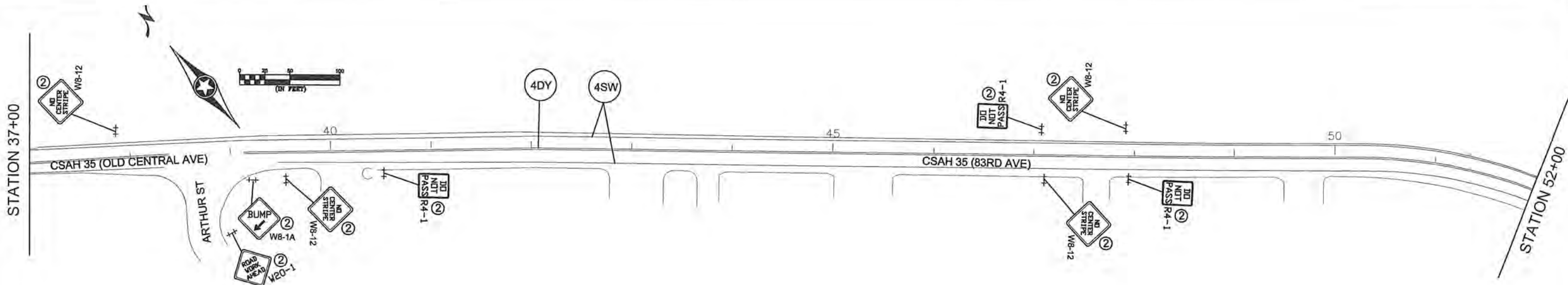
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: JOSEPH J. MACPHERSON, P.E.
 SIGNATURE: *[Signature]*
 DATE: 3-3-21 LICENSE NO. 46732

DRAWN BY: TMV DATE: 12/18/20
 DESIGN BY: TMV DATE: 12/18/20
 CHECKED BY: CO DATE: 01/27/21



STATE AID PROJECT 002-635-013
 STATE AID PROJECT 183-101-012

SIGNING & STRIPING PLAN
 Sheet 13 of 21 Sheets



SIGN NOTES:
 (2) TEMPORARY TRAFFIC CONTROL SIGN

STRIPING KEY
 (---) CIRCLE - MULTI COMP
 (---) SQUARE - POLY PREFORM

- NOTES:
- 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".
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NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\21-01-00\CSAH_35_(81st-TH10)\Base\Traffic\Signing&Striping.dwg

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.



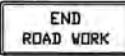










PRINT NAME: JOSEPH J. MACPHERSON, P.E.
 SIGNATURE: *[Signature]*
 DATE: 3.3.24 LICENSE NO. 46732

DRAWN BY: TMV DATE: 12/18/20
 DESIGN BY: TMV DATE: 12/18/20
 CHECKED BY: CO DATE: 01/27/21

ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-635-013
 STATE AID PROJECT 183-101-012

SIGNING & STRIPING PLAN
 Sheet 14 of 21 Sheets

TEMPORARY TRAFFIC CONTROL SIGNS						
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY		MOUNTING HEIGHT (TO PAVEMENT EDGE) FT.	
				No. POST		
W8-12	48" x 48"		10	2		7.0'
R4-1	24" x 30"		9	1		7.0'
G20-2	36" x 18"		3	2		7.0'
W8-1	48" x 48"		AS NEEDED			
W8-1A	48" x 48"		AS NEEDED (ESTIMATED 7)			
W8-8	48" x 48"		AS NEEDED			
W8-9	48" x 48"		AS NEEDED			
	48" x 48"		AS NEEDED			
W8-11	48" x 48"		AS NEEDED			
M1-6	24" x 24"		3			
W20-1	48" x 48"		AS NEEDED (ESTIMATED 6)			
REFLECTORIZED REBOUNDABLE DRUM			AS NEEDED (ESTIMATED 10)			
CMS sign to be placed a minimum of ten days prior to actual commencement of road work. Signs to be removed when road work begins.			2 AT 10 DAYS EA			


CHANGEABLE MESSAGE BOARD - 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	

CMS SIGN TO BE PLACED A MINIMUM OF TEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS.

NO	DATE	BY	CKD	APPR	REVISION

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: JOSEPH J. MACPHERSON, P.E.
 SIGNATURE: 
 DATE: 3-3-21 LICENSE NO. 46732

DRAWN BY: TMV DATE: 12/18/20
 DESIGN BY: TMV DATE: 12/18/20
 CHECKED BY: CO DATE: 01/27/21

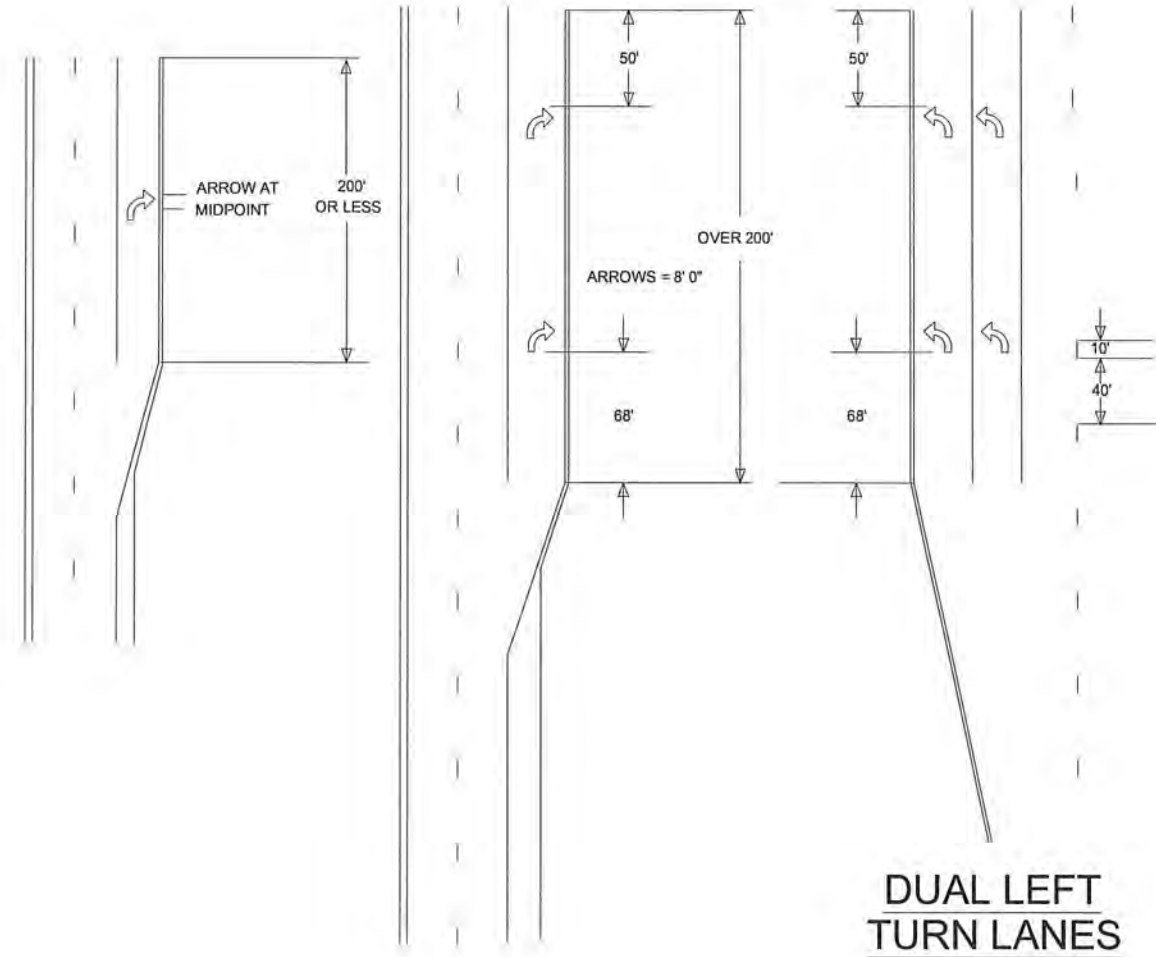


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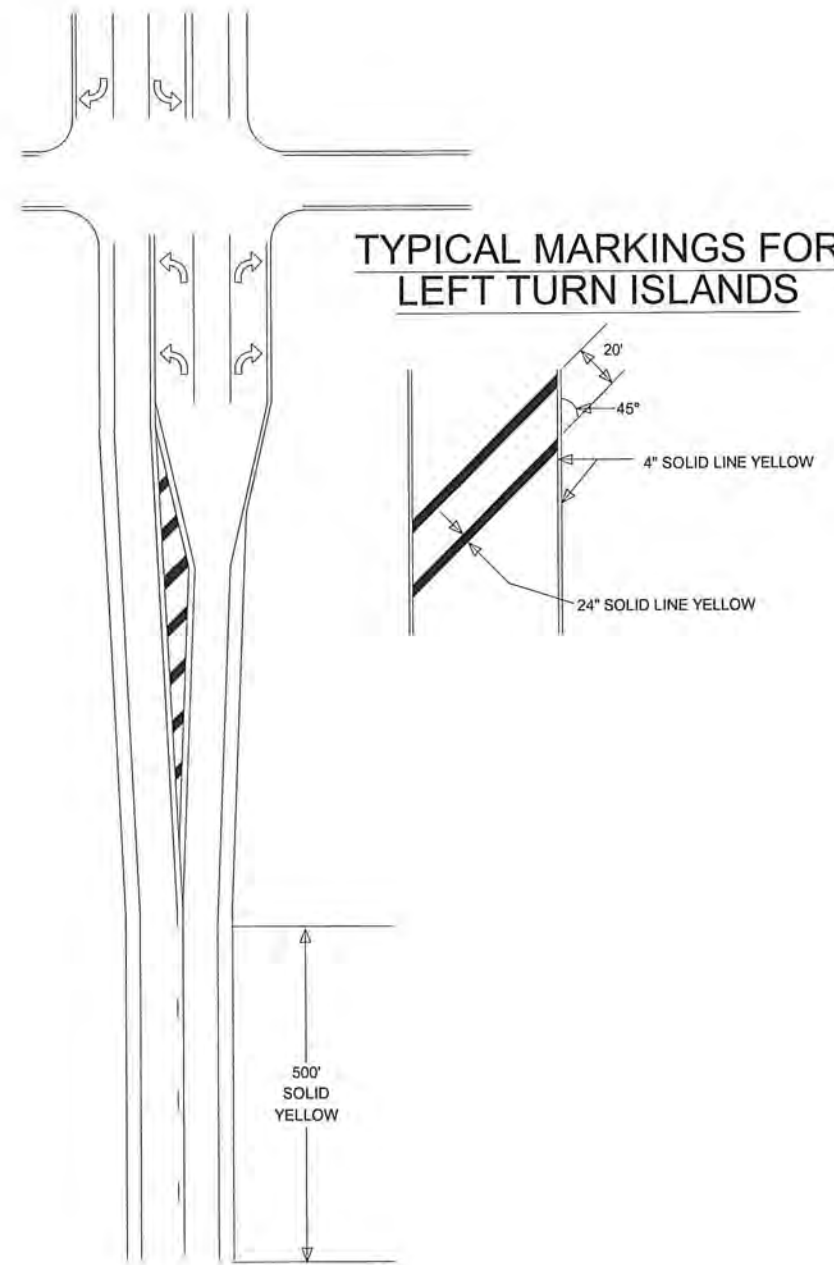
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 STATE AID PROJECT 183-101-012

SIGNING & STRIPING
 QUANTITIES

**TYPICAL MESSAGE PLACEMENT
FOR TURN LANES**



**TYPICAL MARKINGS FOR
LEFT TURN ISLANDS**



NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: JOSEPH J. MACPHERSON, P.E.

SIGNATURE: *[Signature]*

DATE: 3-3-21 LICENSE NO. 46732

DRAWN BY: TMV DATE: 12/21/20

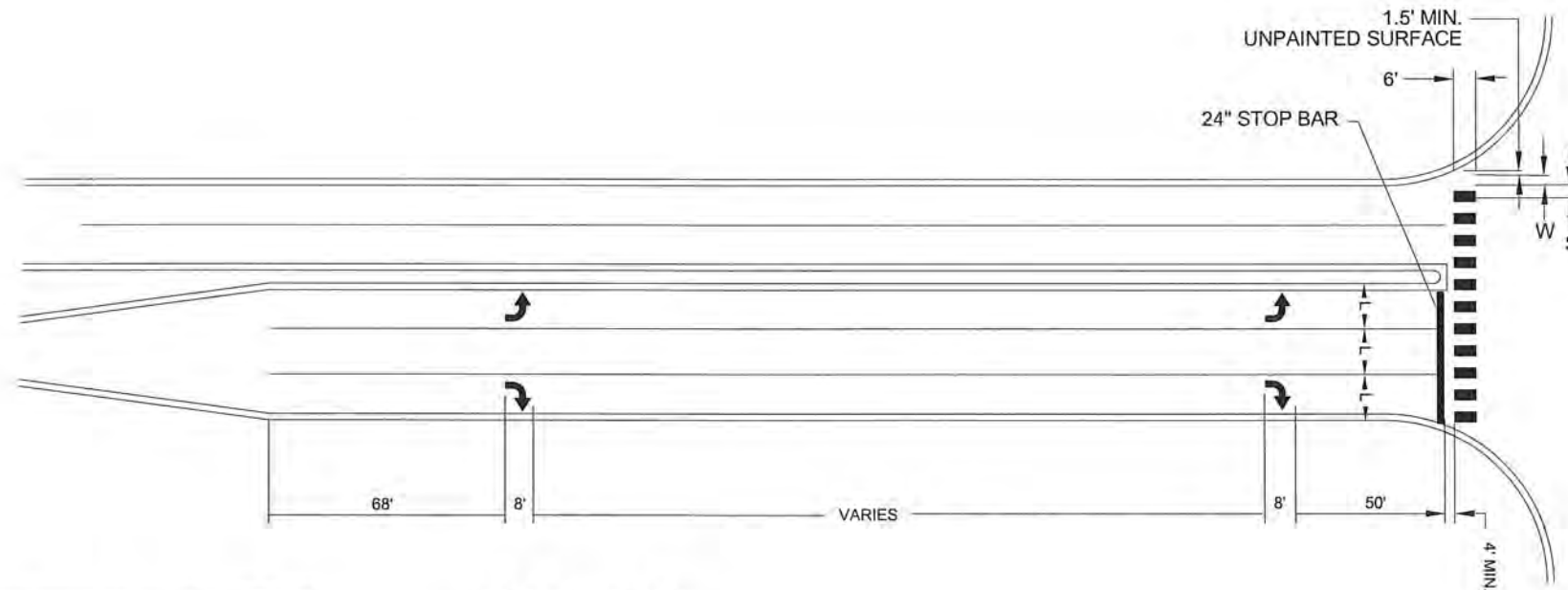
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STATE AID PROJECT 183-101-012

MARKINGS FOR PEDESTRIAN CROSSWALKS



(L)	(W)	(S)
WIDTH OF INSIDE LANE	WIDTH OF PAINTED AREAS	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'

NOTES: CROSSWALKS:

- 1.) PAINTED AREAS ARE TO BE CENTERED ON CENTER AND LANE LINES, EVEN IF INTERSECTION IS NOT ALIGNED.
- 2.) LOCATION OF ZEBRA CROSSWALKS AND STOP BARS, SIGNAL LOOPS AND PED RAMPS ARE APPROXIMATE. FINAL LOCATIONS ARE TO BE DETERMINED AND FIELD VERIFIED DURING CONSTRUCTION BY THE FIELD ENGR.
- 3.) ZEBRA CROSSWALKS ARE TO BE PARALLEL TO THE DRIVING LANE OR LANES, EVEN IF THE STREET IS ON AN ANGLE TO THE INTERSECTION.
- 4.) A MIN. OF 1.5' (450mm) CLEAR DISTANCE MUST BE LEFT ADJACENT TO THE CURB. IF LAST PAINTED AREA FALLS INTO THIS AREA, IT MUST BE OMITTED.
- 5.) ON TWO LANE STREETS, USE SPACING SHOWN FOR AN 11' (3.3mm) INSIDE LANE.

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\21-01-00\CSAH_35_(81st-TH10)\Base\Traffic\Sign&Stripe Details.dwg

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PRINT NAME: JOSEPH J. MACPHERSON, P.E.

SIGNATURE: *[Signature]*

DATE: 3-3-21 LICENSE NO. 46732

DRAWN BY: TMV DATE: 12/21/20

DESIGN BY: TMV DATE: 12/21/20

CHECKED BY: CO DATE: 01/27/21



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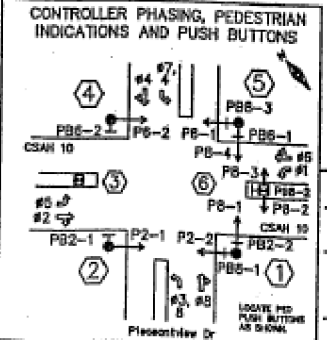
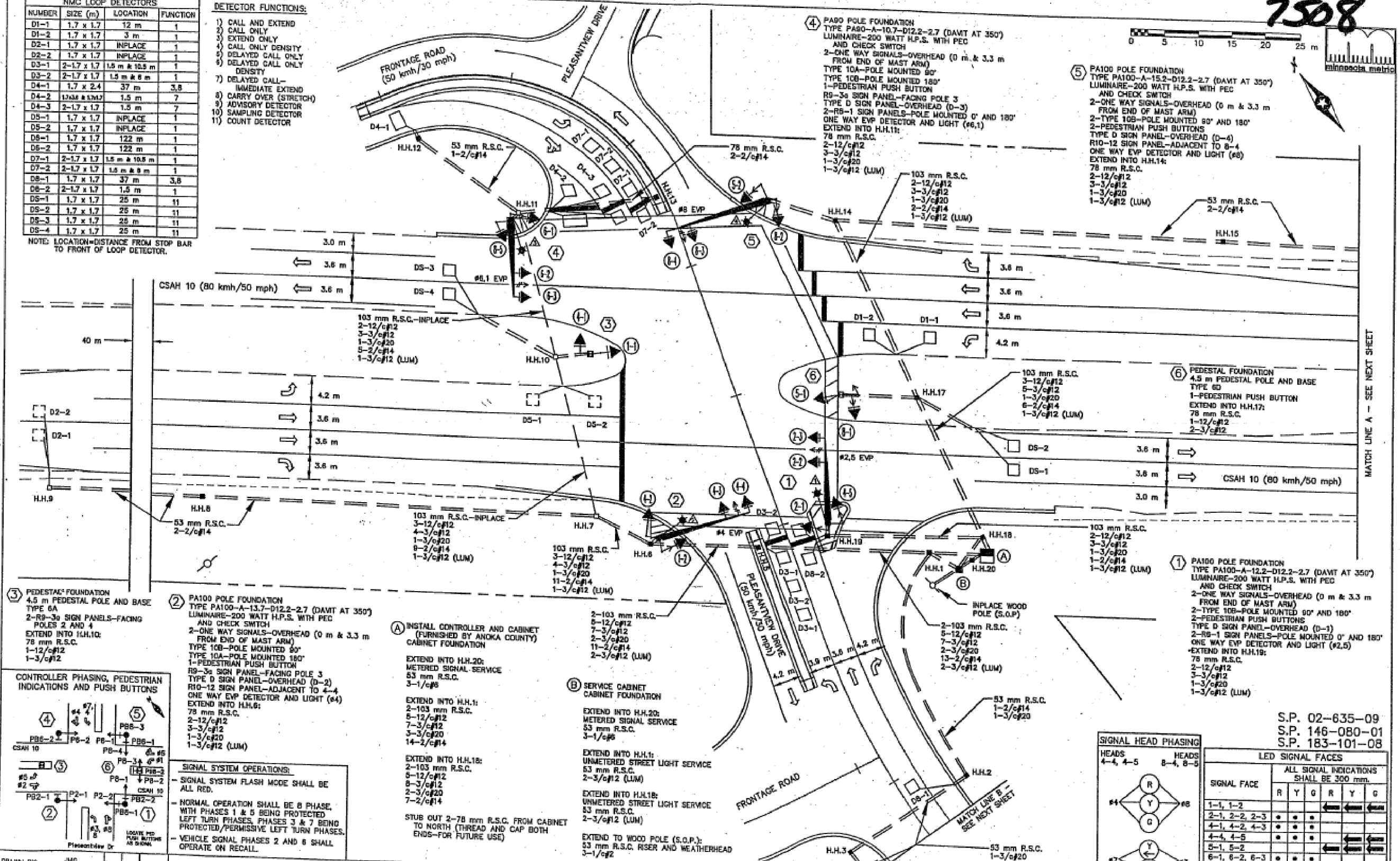
**SIGNING & STRIPING
DETAILS**

7508

NMC LOOP DETECTORS			
NUMBER	SIZE (m)	LOCATION	FUNCTION
D1-1	1.7 x 1.7	12 m	1
D1-2	1.7 x 1.7	3 m	1
D2-1	1.7 x 1.7	INPLACE	1
D2-2	1.7 x 1.7	INPLACE	1
D3-1	2-1.7 x 1.7	1.5 m & 10.5 m	1
D3-2	2-1.7 x 1.7	1.5 m & 8 m	1
D4-1	1.7 x 2.4	37 m	3,8
D4-2	1.7 x 2.4	1.5 m	7
D4-3	2-1.7 x 1.7	1.5 m	7
D5-1	1.7 x 1.7	INPLACE	1
D5-2	1.7 x 1.7	INPLACE	1
D6-1	1.7 x 1.7	122 m	1
D6-2	1.7 x 1.7	122 m	1
D7-1	2-1.7 x 1.7	1.5 m & 10.5 m	1
D7-2	2-1.7 x 1.7	1.5 m & 8 m	1
D8-1	1.7 x 1.7	37 m	3,8
D8-2	2-1.7 x 1.7	1.5 m	1
D9-1	1.7 x 1.7	25 m	11
D9-2	1.7 x 1.7	25 m	11
D9-3	1.7 x 1.7	25 m	11
D9-4	1.7 x 1.7	25 m	11

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

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



SIGNAL SYSTEM OPERATIONS:

- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
- NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1 & 5 BEING PROTECTED LEFT TURN PHASES, PHASES 3 & 7 BEING PROTECTED/PERMISSIVE LEFT TURN PHASES.
- VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.

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DESIGNER:	JMG
CHECKED BY:	JMG
DESIGN TEAM	NO. BY DATE
REVISIONS	

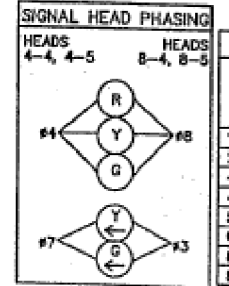
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John M. Gray, P.E.
 Name: John M. Gray, P.E.
 License No.: 22452
 Date: August 27, 2001



ANOKA & RAMSEY COUNTIES, MINNESOTA
 CITIES OF MOONDA VIEW & SPRING LAKE PARK



LED SIGNAL FACES

ALL SIGNAL INDICATIONS SHALL BE 300 mm.

SIGNAL FACE	R	Y	G	R	Y	G
1-1, 1-2	•	•	•	•	•	•
2-1, 2-2, 2-3	•	•	•	•	•	•
4-1, 4-2, 4-3	•	•	•	•	•	•
4-4, 4-5	•	•	•	•	•	•
5-1, 5-2	•	•	•	•	•	•
6-1, 6-2, 6-3	•	•	•	•	•	•
8-1, 8-2, 8-3	•	•	•	•	•	•
8-4, 8-5	•	•	•	•	•	•

TRAFFIC SIGNAL SYSTEM INTERSECTION LAYOUT
 CSAH 10 AT PLEASANTVIEW DRIVE

FILE NO. 47
 ANOKA0105.00
 DATE 05/27/01

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DESIGN BY	DATE
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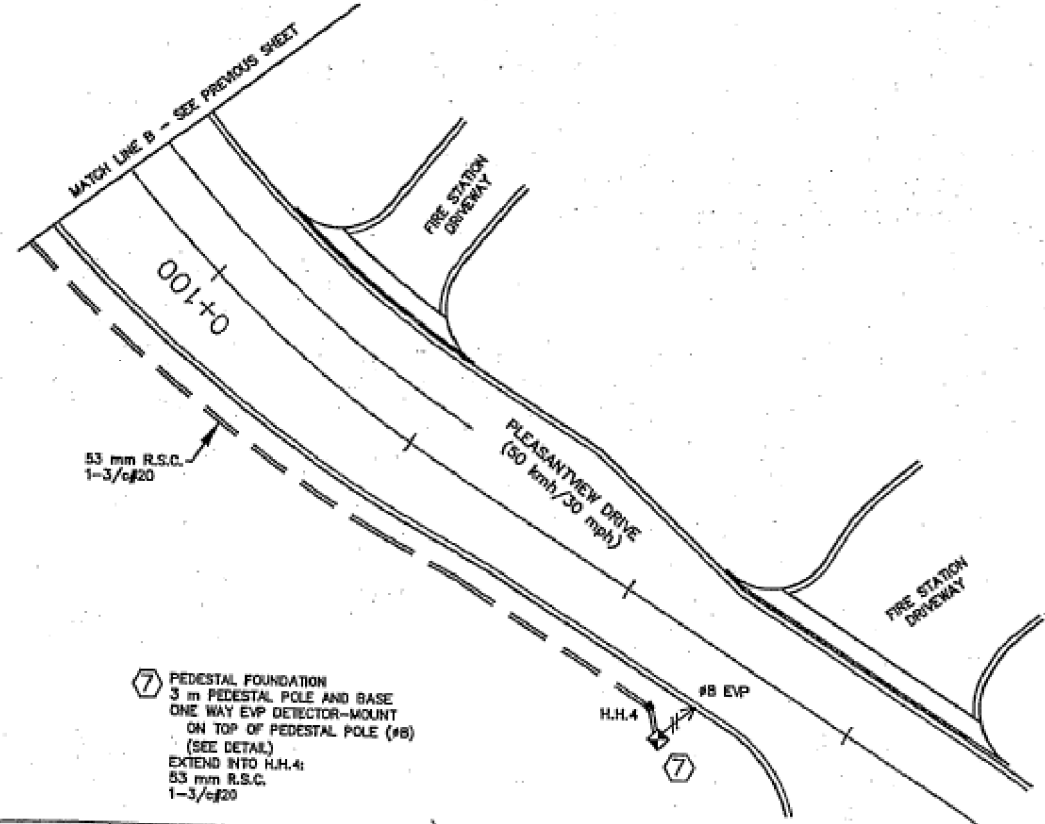
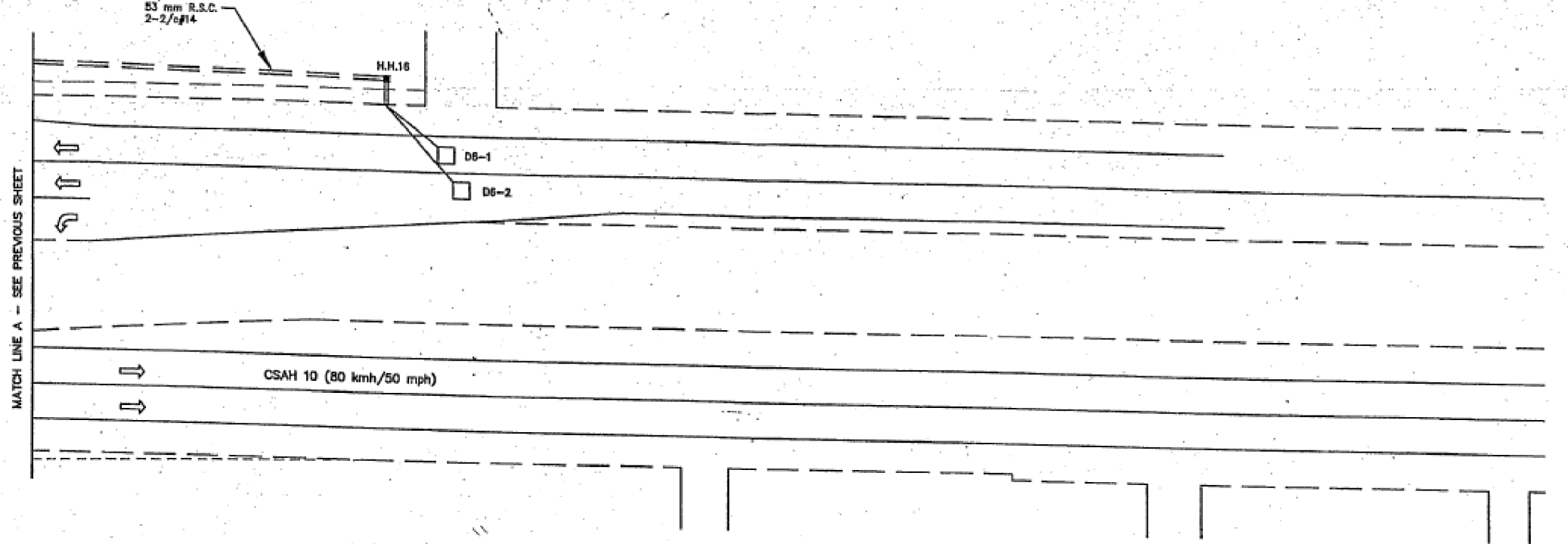
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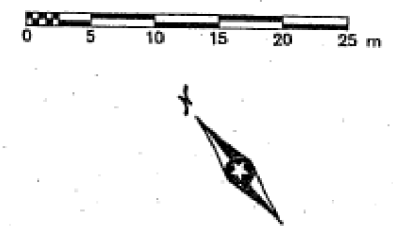
EXISTING SIGNAL PLANS
 Sheet 18 of 21 Sheets

FOR REFERENCE PURPOSES ONLY

8025



- NOTES:**
- 1) LOCATION OF POLES, CONTROLLER CABINET, SERVICE CABINET, LOOP DETECTORS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 2) SEE SPECIAL PROVISIONS FOR ANOKA COUNTY FURNISHED MATERIALS.
 - 3) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 19 mm N.M.C. SEE SPECIAL PROVISIONS AND DETAILS.
 - 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS, PER Mn/DOT STANDARD PLATE NO. W8114A.
 - 5) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD.
 - 6) EACH PEDESTRIAN INDICATION SHALL BE A ONE SECTION HAND/WALKING PERSON INDICATION. SEE SPECIAL PROVISIONS.
 - 7) ALL VEHICLE AND PEDESTRIAN SIGNAL INDICATIONS SHALL BE LED. SEE SPECIAL PROVISIONS.
 - 8) CONTRACTOR SHALL PROVIDE EXTENDED BRACKETS FOR EACH POLE MOUNTED VEHICLE AND PEDESTRIAN SIGNAL FACE.
 - 9) A 21 mm HALF COUPLING, 21 mm PIPE NIPPLE AND CONDUIT OUTLET BODY SHALL BE FURNISHED AND INSTALLED 1.8 m FROM END OF EACH MAST ARM (FOR EVP).
 - 10) SEE SPECIAL PROVISIONS, DETAILS AND REMAINDER OF PLANS FOR INFORMATION REGARDING SIGN PANELS, STRIPING AND CONCRETE WALKWAY TO BE FURNISHED AND INSTALLED BY CONTRACTOR.
 - 11) CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL TRAFFIC SIGNAL MATERIALS WITH ROAD CONSTRUCTION TO BE COMPLETED BY OTHERS.



7 PEDESTAL FOUNDATION
 3 m PEDESTAL POLE AND BASE
 ONE WAY EVP DETECTOR—MOUNT
 ON TOP OF PEDESTAL POLE (#8)
 (SEE DETAIL)
 EXTEND INTO H.H.4:
 53 mm R.S.C.
 1-3/c#20

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CHECKED BY: JMG				
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 Date: August 27, 2007
 Name: John M. Gray, P.E.
 Lic. No.: 22457



ANOKA & RAMSEY COUNTIES, MINNESOTA
 CITIES OF MOUNDS VIEW & SPRING LAKE PARK

TRAFFIC SIGNAL SYSTEM INTERSECTION LAYOUT
 CSAH 10 AT PLEASANTVIEW DRIVE

FILE NO. 48
 AANOK00105.00
 DATE 08/27/07

S.P. 02-635-09
 S.P. 146-080-01
 S.P. 183-101-08

NO	DATE	BY	CKD	APPR	REVISION	03/02/2021	12:41:56 PM
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ANOKA COUNTY
 HIGHWAY DEPT.

STATE AID PROJECT 002-635-013
 STATE AID PROJECT 183-101-012

EXISTING SIGNAL PLANS
 Sheet 19 of 21 Sheets

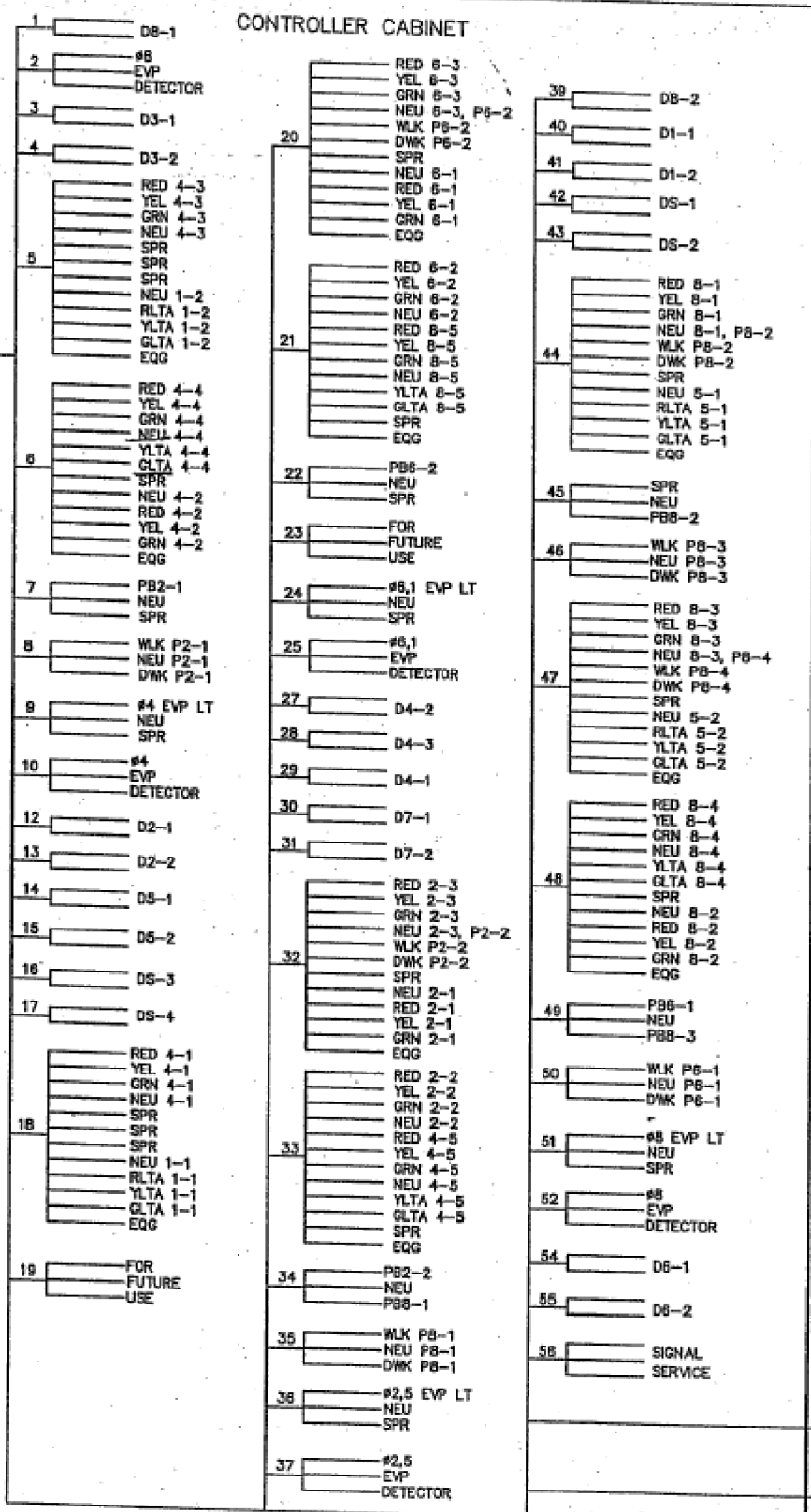
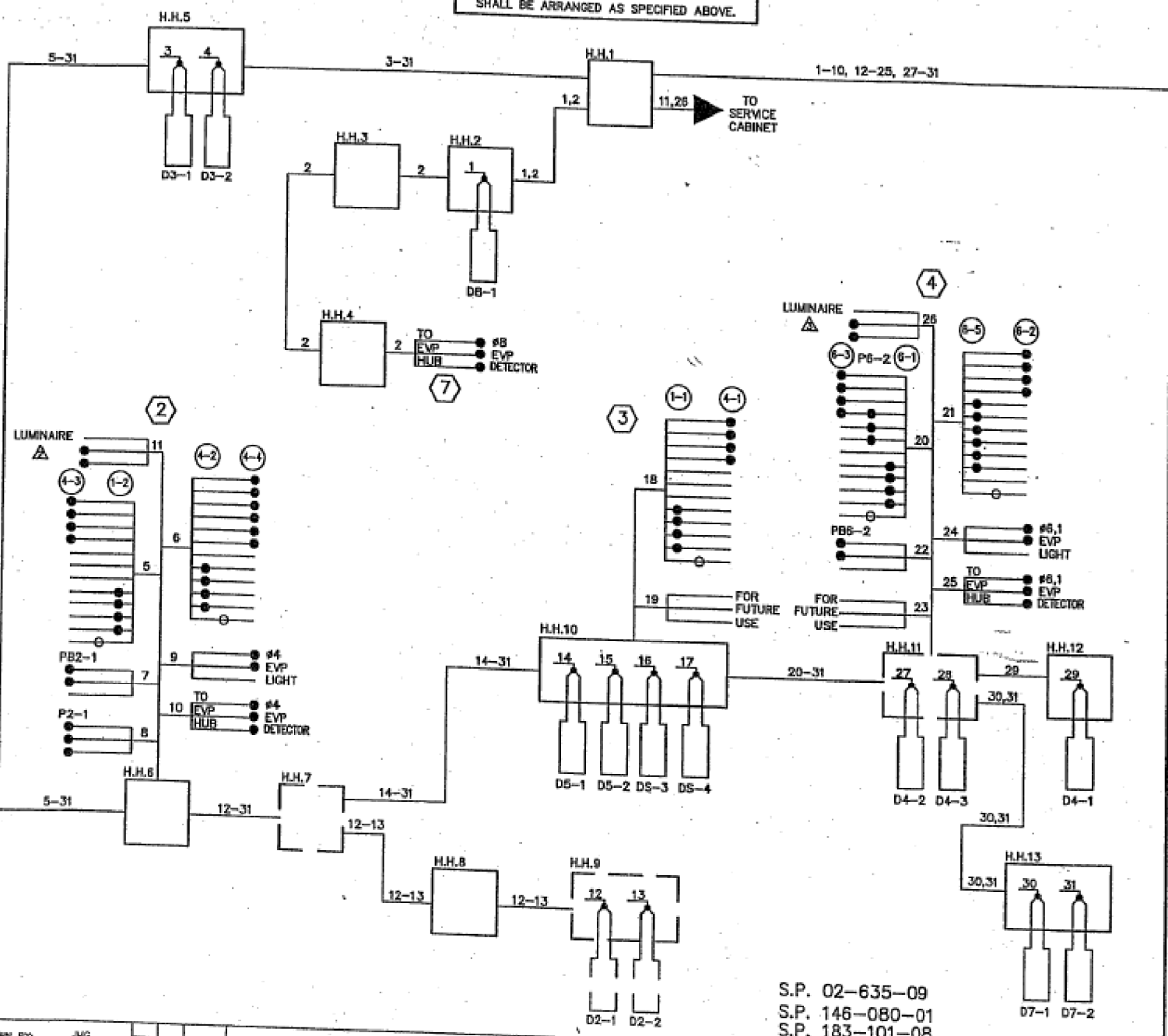
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7508

CONDUCTOR COLOR CODING

R	BLK	2-1/c#4
O	WH	2-1/c#8
BL	R	3/c#12
R/BLK	WH	2-1/c#10
O/BLK	BLK	
BL/BLK	BLK	
BLK/WH	BLK	
BLK	BLK	
Y/BLK	BLK	
Y	CLEAR	2/c#14
WH	BL	3/c#20
G	O	
	Y	
	BL	3/c#20
	O	

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



S.P. 02-635-09
S.P. 146-080-01
S.P. 183-101-08

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John M. Gray, P.E.
Lic. No. 22452
Date: August 27, 2001



ANOKA & RAMSEY COUNTIES, MINNESOTA
CITIES OF MOUNDS VIEW & SPRING LAKE PARK

TRAFFIC SIGNAL SYSTEM
FIELD WIRING DIAGRAM
CSAH 10 AT PLEASANTVIEW DRIVE

FILE NO.	49
AANORC0105.00	
DATE	06/27/01

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NO.	DATE	BY	CKD	APPR	REVISION	03/02/2021	12:42:04 PM

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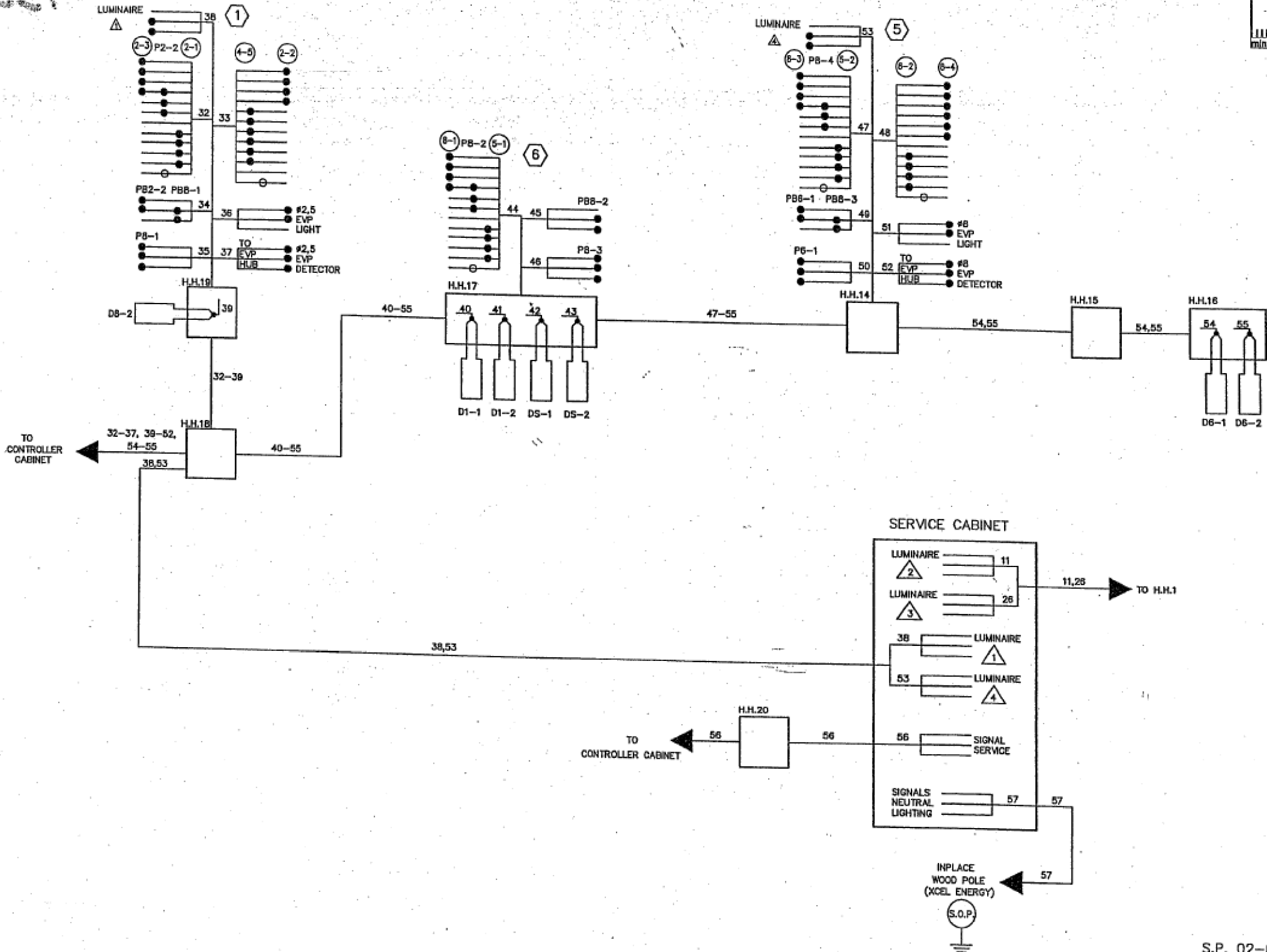
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ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-635-013
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EXISTING SIGNAL PLANS
Sheet 20 of 21 Sheets

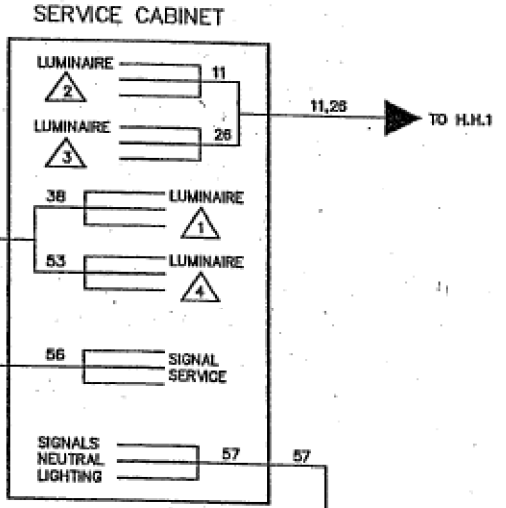
8027



CONDUCTOR COLOR CODING

R	BLK	2-1/c#4
O	WH	2-1/c#5
R/BLK	WH	2-1/c#10
O/BLK	R	3/c#12
12/c#12	BL/BLK	BLK
	BLK/WH	BLK
	Y/BLK	BLK
	Y	BLK
	WH	CLEAR
	O	2/c#4
		3/c#20

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



S.P. 02-635-09
S.P. 146-080-01
S.P. 183-101-08

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John M. Gray
Name: John M Gray, P.E.
Date: August 27, 2008
Lic. No. 22457



ANOKA & RAMSEY COUNTIES, MINNESOTA
CITIES OF MOUNDS VIEW & SPRING LAKE PARK

TRAFFIC SIGNAL SYSTEM
FIELD WIRING DIAGRAM
CSAH 10 AT PLEASANTVIEW DRIVE

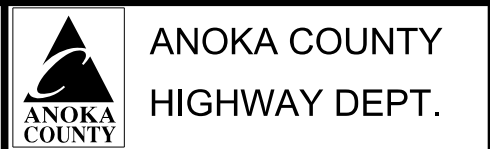
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EXISTING SIGNAL PLANS
Sheet 21 of 21 Sheets