

MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

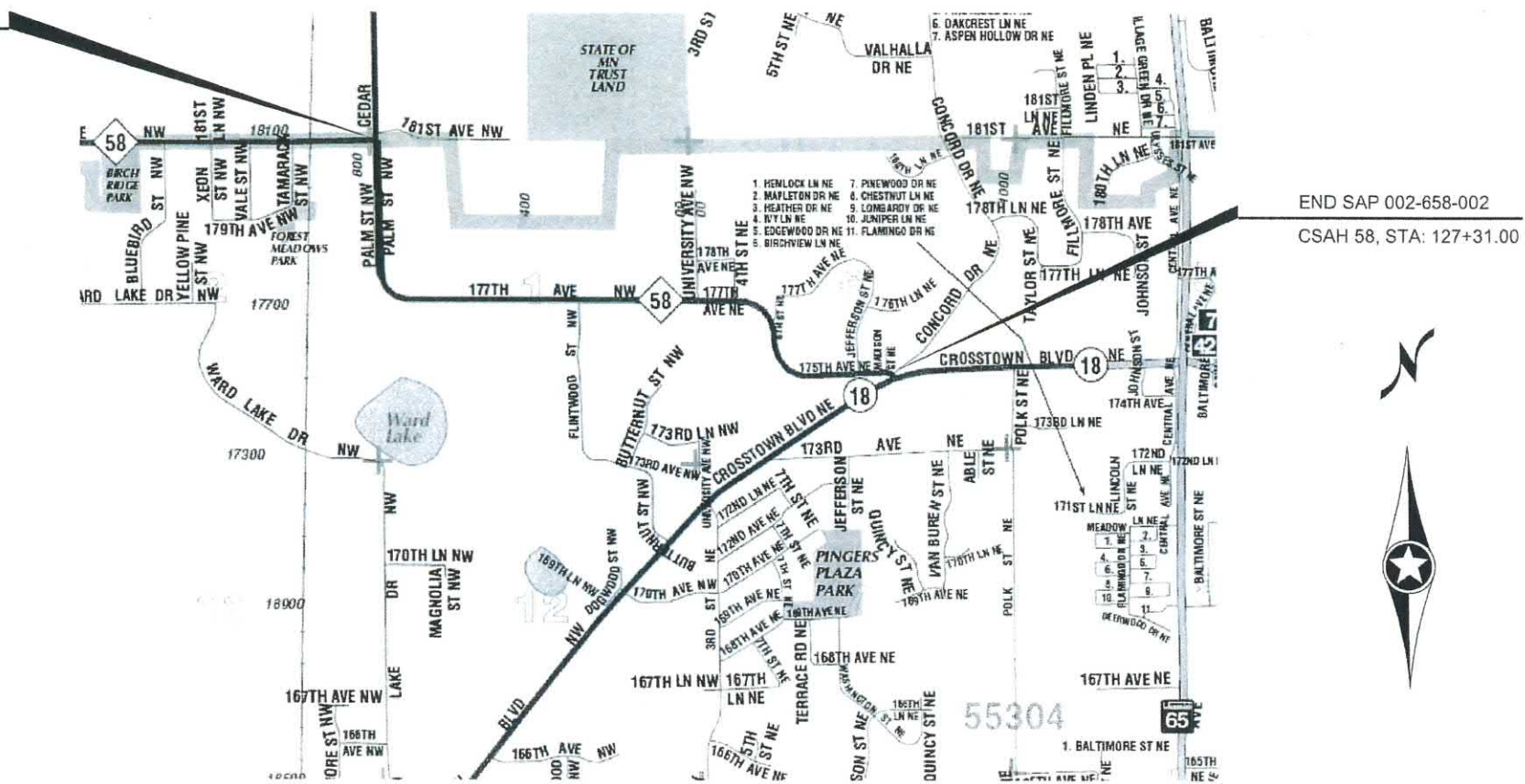
CONSTRUCTION PLAN FOR BITUMINOUS SURFACING AND BITUMINOUS RECLAMATION

LOCATED ON CSAH 58 BETWEEN 181ST AVE NW AND CROSTOWN BLVD NE

CSAH 58

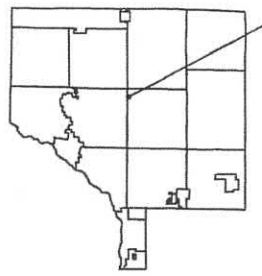
GROSS LENGTH	11703.00 FEET	2.216 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	11703.00 FEET	2.216 MILES

BEGIN SAP 002-658-002
CSAH 58, STA: 10+28.00



END SAP 002-658-002
CSAH 58, STA: 127+31.00

PROJECT LOCATION



CITY OF ANDOVER, HAM LAKE
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
SECTION 1, 6
TOWNSHIP 32 NORTH
RANGE 23, 24 WEST

GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE "SUPPLEMENTAL SPECIFICATIONS" DATED SEPTEMBER 2022 SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

THIS PLAN CONTAINS 18 SHEETS

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4 - 5	DETAILS
6	SUPERELEVATION TABULATION
7 - 12	CONSTRUCTION PLAN
13-18	SIGNING AND STRIPING PLANS

Approved 1-12, 2023
ANOKA COUNTY ENGINEER

Approved 1/12, 2023
CITY OF HAM LAKE ENGINEER

Approved 1/12, 2023
CITY OF ANDOVER ENGINEER

For 1/17, 2023
STATE AID ENGINEER:
APPROVED FOR STATE AID FUNDING

For 1/17, 2023
DISTRICT STATE AID ENGINEER: REVIEWED FOR
COMPLIANCE WITH STATE AID RULES/POLICY

DESIGN DESIGNATION (CSAH 58)			
ESAL 20	212,174	FUNCTIONAL CLASSIFICATION	MAJOR COLLECTOR
R VALUE	70	NO. OF TRAFFIC LANES	2 NO. OF PARKING LANES 0
ADT (2023)	1,796	DESIGN SPEED	55 MPH
PROJ. ADT (2043)	1,796	STOPPING SIGHT DISTANCE BASED ON:	
PROJ. HCACT (2043)	106	HEIGHT OF EYE	3.5' HEIGHT OF OBJECT 2.0'
SOIL FACTOR	N/A	DESIGN SPEED NOT ACHIEVED AT:	
10 TON DESIGN		STA.	TO STA. MPH

NO	DATE	BY	CKD	APPR	REVISION	01/12/2023	1:54:33 PM
NAME: P:\23-01-00\CSAH_58_(181ST-CROSTOWN)\Base\Proposed\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:
DATE: 12-06-2022 LICENSE NO. 26511

DRAWN BY: MR DATE: 2/10/2022
DESIGN BY: MR DATE: 2/10/2022
CHECKED BY: CO DATE: 01/12/2023

ANOKA COUNTY

HIGHWAY DEPT.

STATE AID PROJECT 002-658-002

TITLE SHEET

Sheet 1 of 18 Sheets

STATEMENT OF ESTIMATED QUANTITIES

Notes	Item Number	ITEM DESCRIPTION	Unit	TOTAL PROJECT QUANTITIES ESTIMATED
	2013.601	SURVEY EQUIPMENT	LUMP SUM	1
	2021.501	MOBILIZATION	LUMP SUM	1
1	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	53
1	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	322
1,2	2104.504	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	99
1,3	2104.504	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	514
1,3	2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	824
4,5	2123.510	MOTOR GRADER	HOUR	16
	2130.523	WATER	M GALLON	249
6	2211.509	AGGREGATE BASE CLASS 5	TON	318
	2215.504	FULL DEPTH RECLAMATION	SQ YD	35570
5	2215.507	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	97
7	2221.509	SHOULDER BASE AGGREGATE CLASS 5	TON	1190
8	2232.604	MILL BITUMINOUS PAVEMENT (SPECIAL)	SQ YD	52
	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	1781
9	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3;B)	TON	118
10	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4;C)	TON	189
	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4;C)	TON	8181
	2531.504	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	99
11	2540.602	MAIL BOX SUPPORT	EACH	29
12	2563.601	TRAFFIC CONTROL	LUMP SUM	1
13	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20
	2574.507	COMMON TOPSOIL BORROW	CU YD	639
14	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	POUND	3120
15	2581.503	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	LIN FT	935
16	2582.503	4" SOLID LINE MULTI-COMPONENT GROUND IN	LIN FT	27020
16	2582.503	4" BROKEN LINE MULTI-COMPONENT GROUND IN	LIN FT	1660
16	2582.503	4" DOUBLE SOLID LINE MULTI-COMPONENT GROUND IN	LIN FT	3200
16	2582.503	8" BROKEN LINE MULTI-COMPONENT GROUND IN	LIN FT	36

CONSTRUCTION NOTES

1	REFERENCE DETAILS (PAGE 4) FOR REMOVAL DETAILS
2	ITEM FOR CONCRETE DRIVEWAYS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
3	ITEM FOR BITUMINOUS DRIVEWAYS AND STREET APPROACHES. CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
4	ITEM FOR SUPERELEVATION / GRADE CORRECTION.
5	ITEM USED TO MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIM AREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING PAVEMENT
6	GRAVEL BASE FOR CONCRETE AND BITUMINOUS STREET APPROACHES, DRIVEWAYS AND SUPER ELEVATION AREAS
7	ITEM INCLUDES 7 TONS FOR EACH GRAVEL ENTRANCE AND GRAVEL STREET APPROACH.
8	ITEM INCLUDES 2" DEEP MILL AT BEGINNING AND END OF PROJECT, ALL PAVED STREET APPROACHES, AND DRIVEWAYS; SEE DETAILS FOR DIMENSIONS.
9	ITEM FOR BITUMINOUS DRIVEWAYS. DRIVEWAYS SHALL BE PAVED AFTER MAINLINE AND BEFORE FINAL STRIPING.
10	ITEM FOR STREET APPROACHES. STREET APPROACHES SHALL BE PAVED AFTER MAINLINE, AND BEFORE FINAL STRIPING.
11	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.
12	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.
13	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT, SHALL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
14	TYPE 3 FERTILIZER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM. SEE "BASIS OF PLANNED QUANTITIES" FOR APPLICATION RATES.
15	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.
16	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING. CANNOT BE INSTALLED SOONER THAN 48 HOURS.

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

MNDOT STANDARD PLATES

PLATE NO.	DESCRIPTION
8000K	TEMPORARY CHANNELIZERS (3 SHEETS)
9350B	MAILBOX SUPPORT - SWING-AWAY TYPE

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

BITUMINOUS STREET SUMMARY

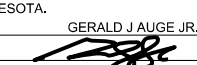
LOCATION	BITUMINOUS	NOTES
	2360 TYPE SP 12.5 WEAR (4,C)	
	TON	
Flintwood St NW	34	[1]
6th St NE	45	[1]
176th Lane NE	32	[1]
173rd Lane NE	20	[1]
Jefferson St NE	23	[1]
Madison St NE	18	[1]
Concord Dr NE	18	[1]
PROJECT TOTAL	189	

BITUMINOUS SUMMARY NOTES:
[1] QUANTITY ESTIMATED FOR 2 LIFTS

NO	DATE	BY	CKD	APPR	REVISION	
	02/28/2023					9:07:17 AM

NAME: P:\23-01-00\CSAH_58_(181ST-CROSSSTOWN)\Base\Proposed\SEQ.dgn

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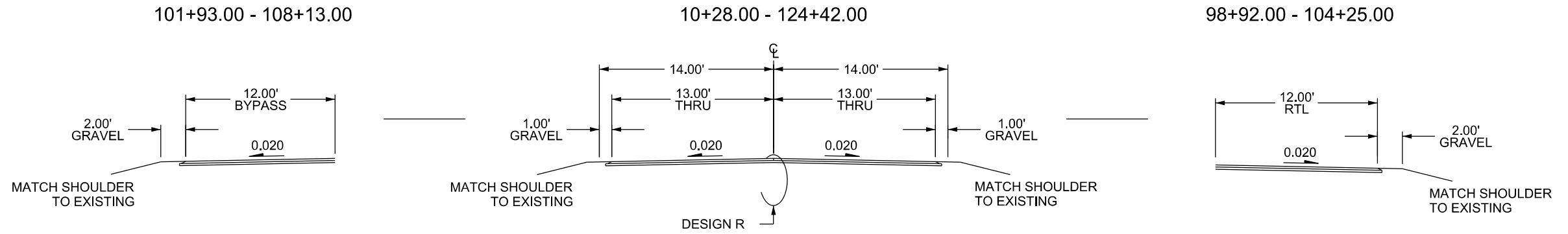
**ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-658-002

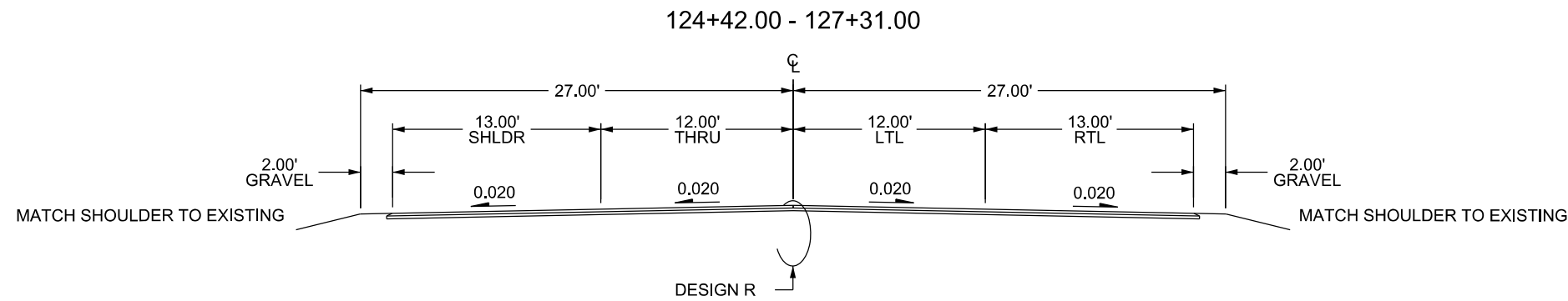
STATEMENT OF ESTIMATED QUANTITIES

Sheet 2 of 18 Sheets

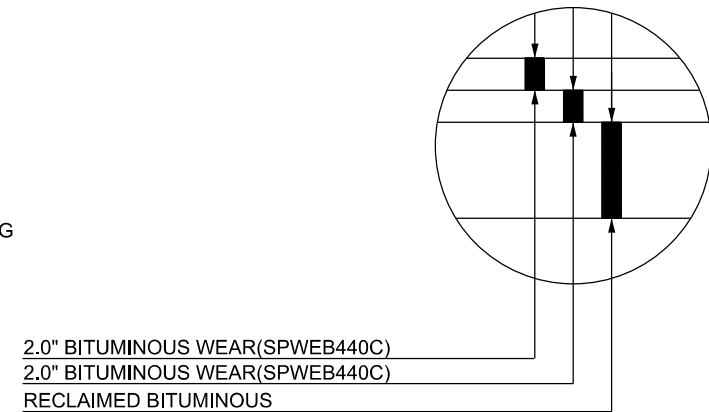
CSAH 58 - 177TH AVE NW / PALM ST. NW / 175TH AVE. NW / 6TH ST. NW EXISTING/PROPOSED SECTION



CSAH 58 - 175TH AVE NW EXISTING/PROPOSED SECTION



DESIGN R RECLAIM SECTION



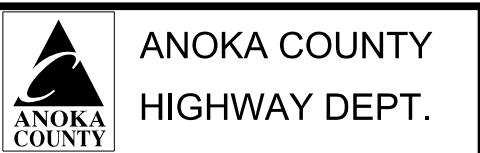
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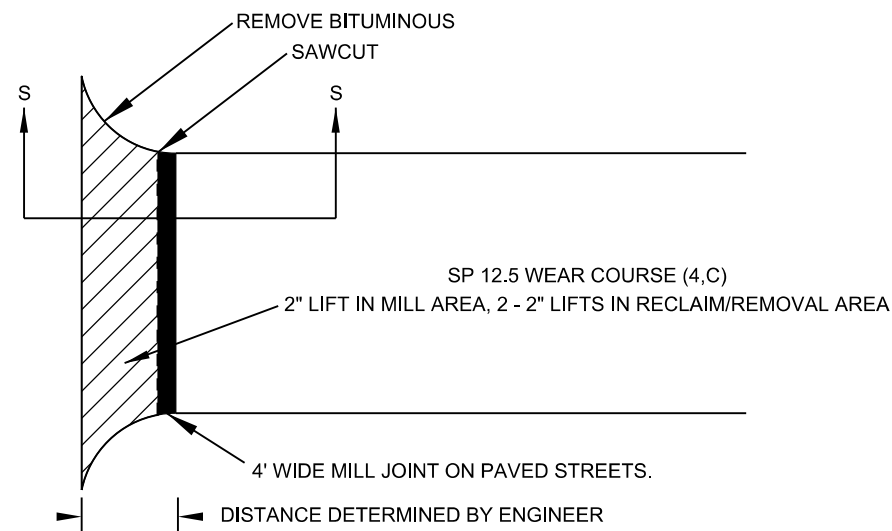
STATE AID PROJECT 002-658-002

TYPICAL SECTIONS
 Sheet 3 of 18 Sheets

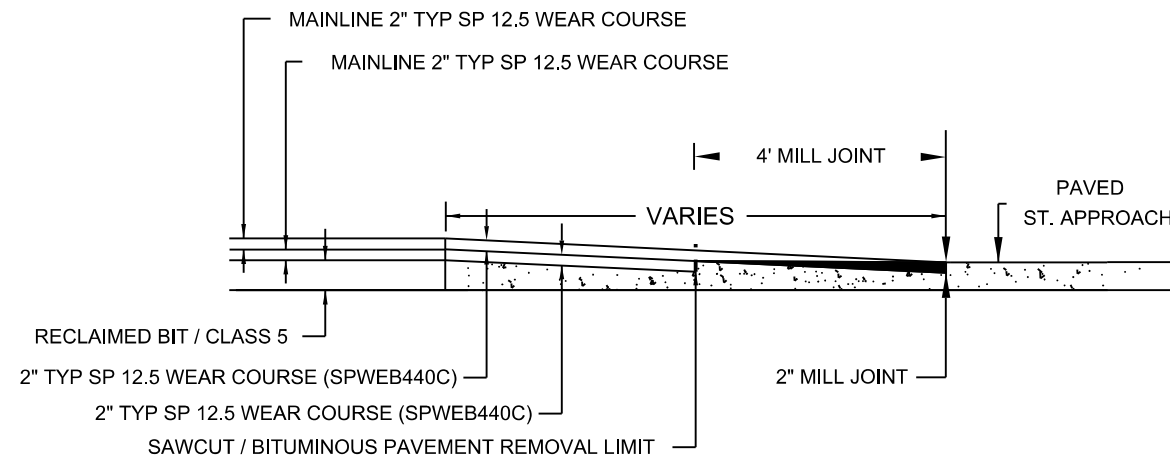
STREET APPROACH DETAIL (RECLAIM)

BITUMINOUS STREET

PLAN VIEW

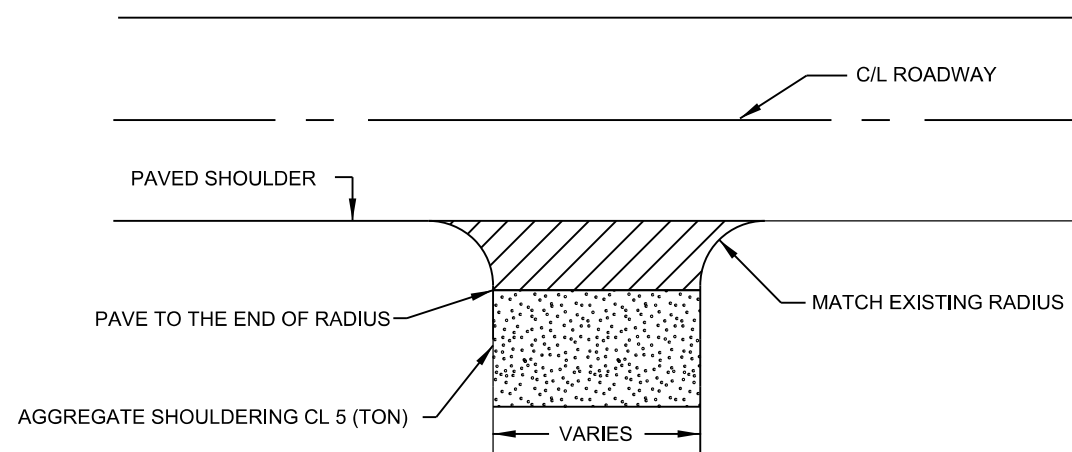


SECTION S - S



STREET APPROACH DETAIL

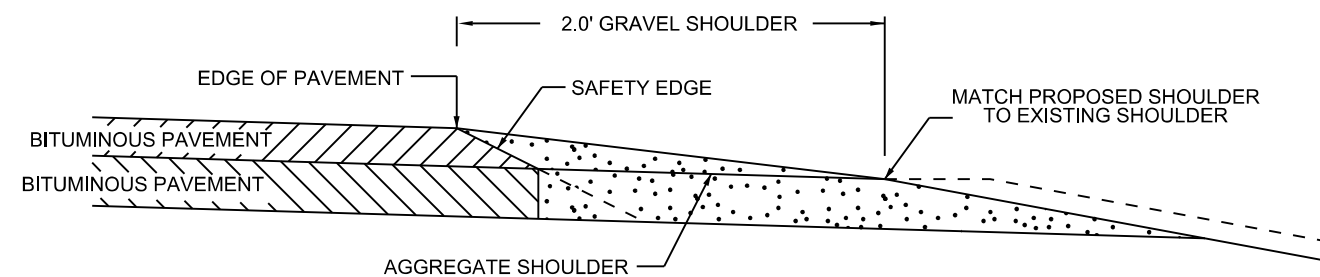
UNPAVED STREET



UNPAVED STREET APPROACHES, PAVED SEPRATE FROM MAINLINE

SHOULDER DETAIL

BITUMINOUS SAFETY EDGE GRAVEL SHOULDER



SAFETY EDGE TO BE USED IN ALL NON-CURB AREAS ON SHOULDER.

OPTIONAL DESIGN EXTENDS SAFETY EDGE DEEPER THAN 6" AND WIDER THAN 10.5". SEE SPECIAL PROVISIONS .

NO	DATE	BY	CKD	APPR	REVISION	1:54:46 PM
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NAME: P:\23-01-00\CSAH_58_(181ST-CROSSTOWN)\Base\Proposed\DETAILS.dgn

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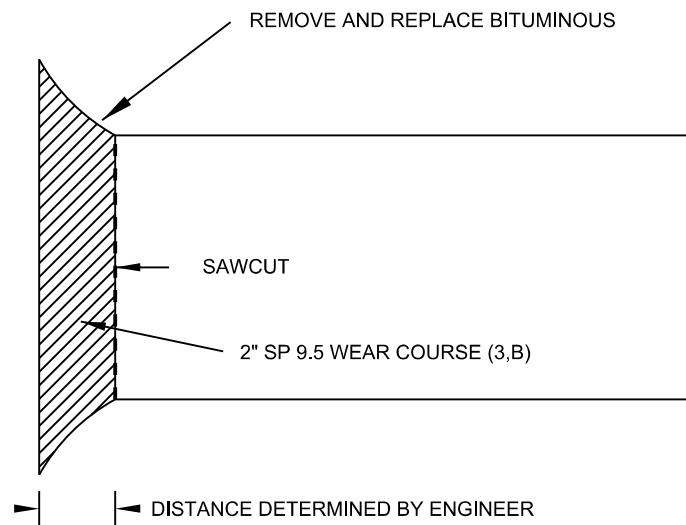
ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-658-002

RECLAIM AREA - DRIVEWAY DETAIL

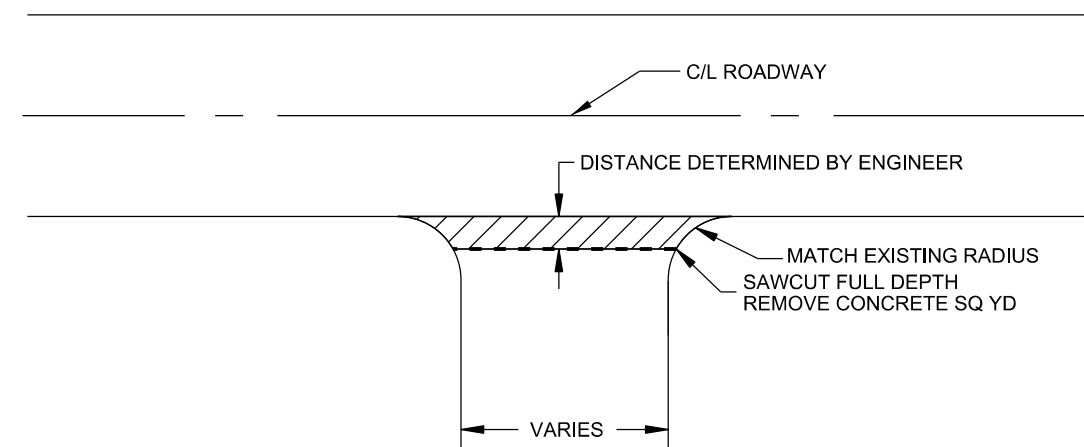
BITUMINOUS

PLAN VIEW



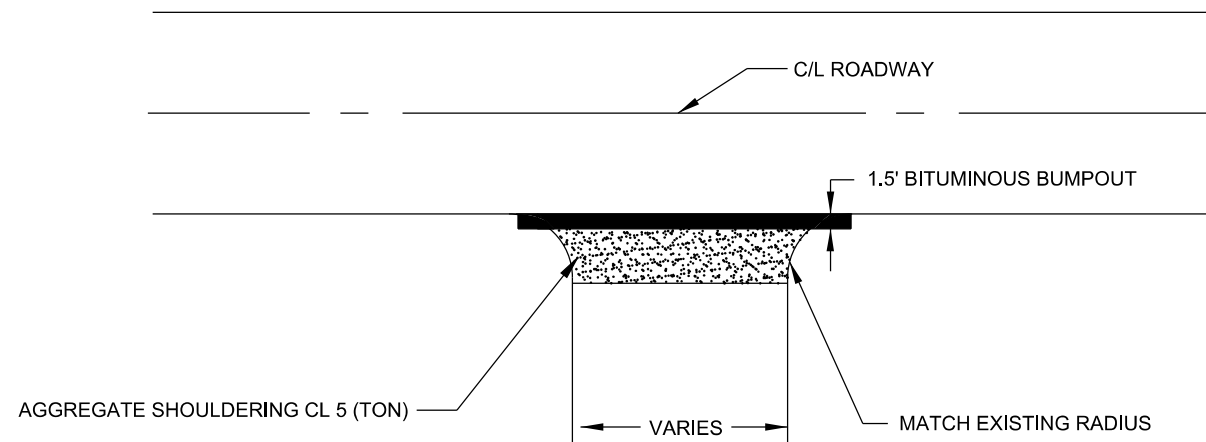
DRIVEWAY DETAIL

CONCRETE DRIVEWAY



DRIVEWAY DETAIL

GRAVEL / FIELD ENTRANCE



NO	DATE	BY	CKD	APPR	REVISION	1:54:47 PM
					01/12/2023	

NAME: P:\23-01-00\CSAH_58_(181ST-CROSSTOWN)\Base\Proposed\DETAILS.dgn

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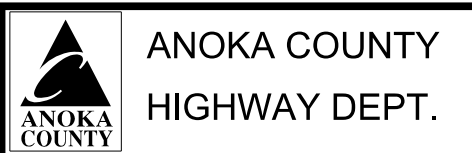
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STATE AID PROJECT 002-658-002

DETAILS

Sheet 5 of 18 Sheets


SUPERELEVATION CORRECTION TAB			
STATION	POINT	LEFT GRADE	RIGHT GRADE
28+00		-2.0%	-2.0%
28+50		-2.0%	-2.0%
29+00	BEGIN SUPER RT	-2.0%	-2.0%
29+50	BEGIN SUPER LT	-2.0%	-0.7%
30+00		-2.7%	0.7%
30+50		-3.3%	2.0%
31+00		-4.0%	3.3%
31+30	PC	-4.4%	4.1%
31+50		-4.7%	4.7%
32+00	BEGIN FULL SUPER RT	-5.3%	6.0%
32+50	BEGIN FULL SUPER LT	-6.0%	6.0%
33+00		-6.0%	6.0%
33+50		-6.0%	6.0%
34+00		-6.0%	6.0%
34+50		-6.0%	6.0%
35+00		-6.0%	6.0%
35+50		-6.0%	6.0%
36+00		-6.0%	6.0%
36+50		-6.0%	6.0%
37+00		-6.0%	6.0%
37+50		-6.0%	6.0%
38+00		-6.0%	6.0%
38+50	END FULL SUPER RT	-6.0%	6.0%
39+00	END FULL SUPER LT	-6.0%	5.5%
39+50		-5.3%	4.9%
40+00		-4.7%	4.4%
40+42	PT	-4.1%	4.0%
40+50		-4.0%	3.9%
41+00		-3.3%	3.3%
41+50		-2.7%	2.8%
42+00	END SUPER LT	-2.0%	2.3%
42+50		-2.0%	1.7%
43+00	END SUPER RT	-2.0%	-2.0%
43+50		-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB					
STATION	POINT	BYPASS GRADE	LEFT GRADE	RIGHT GRADE	RTL GRADE
91+00			-2.0%	-2.0%	
91+50			-2.0%	-2.0%	
92+00	BEING SUPER LT		-2.0%	-2.0%	
92+50			-0.4%	-2.0%	
93+00	BEGIN SUPER RT		1.2%	-2.0%	
93+50			2.8%	-3.0%	
93+89	PC		4.0%	-3.8%	
94+00			4.4%	-4.0%	
94+50	BEGIN FULL SUPER LT		6.0%	-5.0%	
95+00	BEGIN FULL SUPER RT		6.0%	-6.0%	
95+50			6.0%	-6.0%	
96+00			6.0%	-6.0%	
96+50			6.0%	-6.0%	
96+87	PCC		6.0%	-6.0%	
97+00			6.0%	-6.0%	
97+50			6.0%	-6.0%	
98+00			6.0%	-6.0%	
98+50			6.0%	-6.0%	
98+92	BEGIN RTL		6.0%	-6.0%	-6.0%
99+00			6.0%	-6.0%	-6.0%
99+50			6.0%	-6.0%	-6.0%
99+99	PCC		6.0%	-6.0%	-6.0%
100+00			6.0%	-6.0%	-6.0%
100+50			6.0%	-6.0%	-6.0%
101+00			6.0%	-6.0%	-6.0%
101+50			6.0%	-6.0%	-6.0%
101+93	BEGIN BYPASS LANE		6.0%	-6.0%	-6.0%
102+00	END FULL SUPER LT/RT	6.0%	6.0%	-6.0%	-6.0%
102+50		4.0%	4.0%	-4.5%	-4.5%
103+00		2.0%	2.0%	-3.0%	-3.0%
103+03	PT	1.9%	1.9%	-2.9%	-2.9%
103+50		0.0%	0.0%	-1.5%	-1.5%
104+00		-2.0%	-2.0%	0.0%	0.0%
104+10	PC	-2.4%	-2.4%	0.3%	0.3%
104+25	END RTL	-3.0%	-3.0%	0.8%	0.8%
104+50		-4.0%	-4.0%	1.5%	1.5%
105+00	BEGIN FULL SUPER LT	-6.0%	-6.0%	3.0%	
105+50		-6.0%	-6.0%	4.5%	
106+00	BEGIN FULL SUPER RT	-6.0%	-6.0%	6.0%	
106+50		-6.0%	-6.0%	6.0%	
107+00		-6.0%	-6.0%	6.0%	
107+50		-6.0%	-6.0%	6.0%	
108+13	END BYPASS LANE	-6.0%	-6.0%	6.0%	
108+00		-6.0%	-6.0%	6.0%	
108+50			-6.0%	6.0%	
109+00			-6.0%	6.0%	
109+50			-6.0%	6.0%	
110+00	PCC		-6.0%	6.0%	
110+50			-6.0%	6.0%	
111+00			-6.0%	6.0%	
111+50			-6.0%	6.0%	
112+00			-6.0%	6.0%	
112+50	END FULL SUPER RT		-6.0%	6.0%	
113+00	END FULL SUPER LT		-6.0%	4.7%	
113+20	PT		-5.6%	4.1%	
113+50			-5.0%	3.3%	
114+00			-4.0%	2.0%	
114+50			-3.0%	0.7%	
115+00	END SUPER LT		-2.0%	-0.7%	
115+50	END SUPER RT		-2.0%	-2.0%	
116+00			-2.0%	-2.0%	
116+50			-2.0%	-2.0%	

NO	DATE	BY	CKD	APPR	REVISION	01/12/2023	1:54:47 PM
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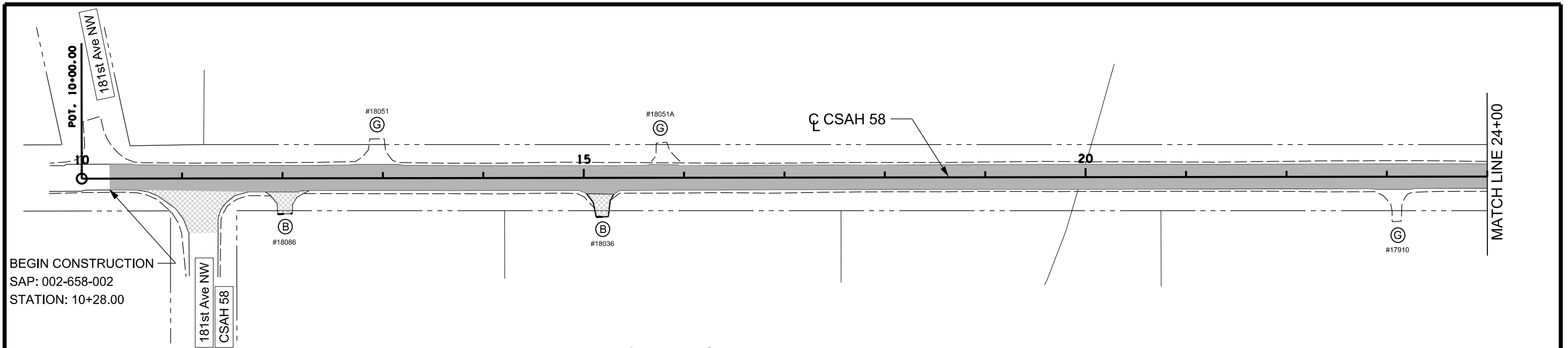
**ANOKA COUNTY
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STATE AID PROJECT 002-658-002

SUPERELEVATION TABULATION

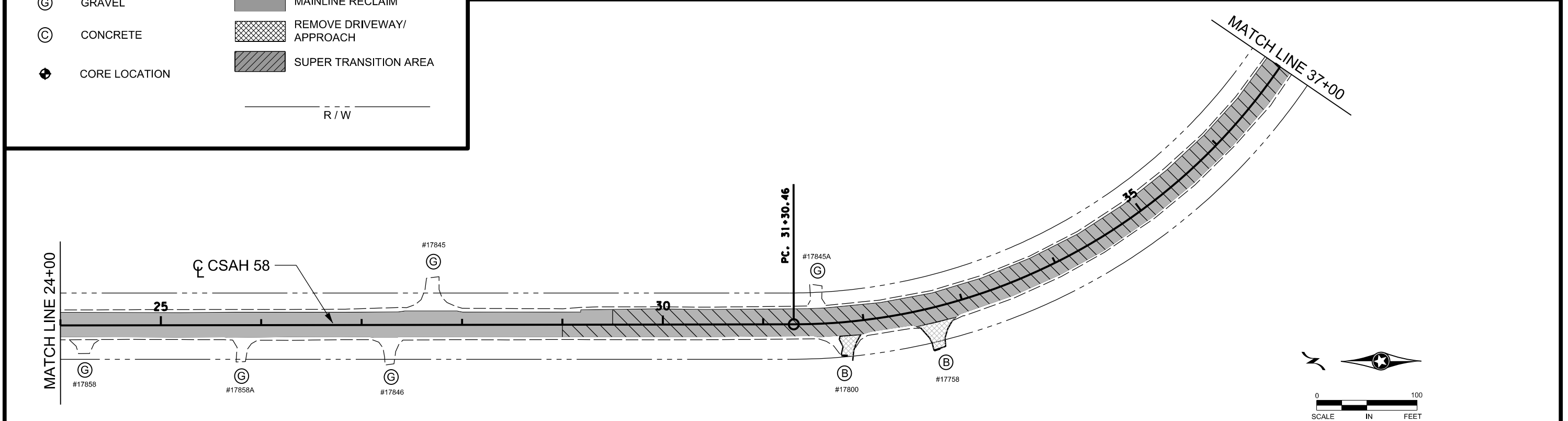
Sheet 6 of 18 Sheets

SPH005



LEGEND

(B)	BITUMINOUS	- - - -	SAWCUT
(G)	GRAVEL	[Solid Grey Box]	MAINLINE RECLAIM
(C)	CONCRETE	[Cross-hatched Box]	REMOVE DRIVEWAY/ APPROACH
(*)	CORE LOCATION	[Diagonal Hatched Box]	SUPER TRANSITION AREA
		— — — —	R / W



NOTE: ADD ADDITIONAL 1' TO LOW SIDE OF SUPER (14' FROM CENTERLINE) BETWEEN STA 29+50 - 43+50

NO	DATE	BY	CKD	APPR	REVISION	TIME
	01/12/2023					1:54:53 PM

NAME: P:\23-01-00\CSAH_58_(181ST-CROSSTOWN)\Base\Proposed\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.

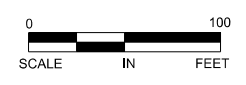
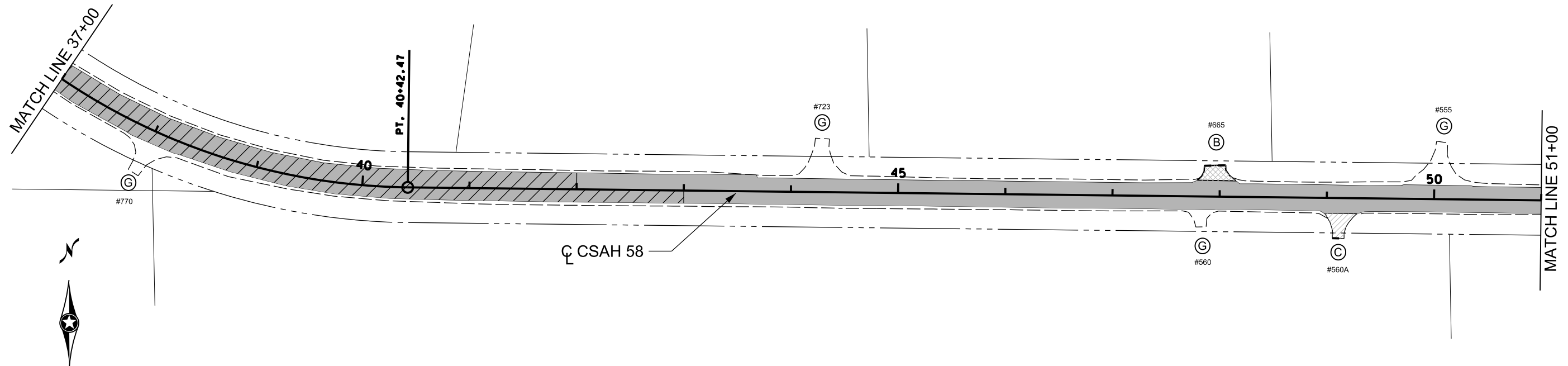
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 SIGNATURE: *[Signature]*
 DATE: 12-06-2022 LICENSE NO. 26511

DRAWN BY MR DATE 2/10/2022
 DESIGN BY MR DATE 2/10/2022
 CHECKED BY CO DATE 01/12/2023

ANOKA COUNTY
HIGHWAY DEPT.

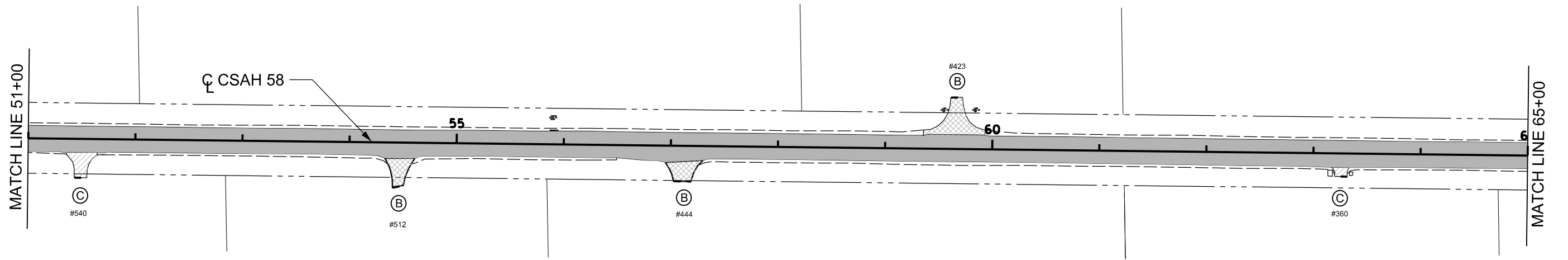
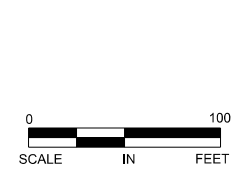
STATE AID PROJECT 002-658-002

CONSTRUCTION PLAN
 STA 10+28 TO 37+00
 Sheet 7 of 18 Sheets



NOTE: ADD ADDITIONAL 1' TO LOW SIDE OF SUPER (14' FROM CENTERLINE)
BETWEEN STA 29+50 - 43+50

LEGEND			
(B)	BITUMINOUS	---	SAWCUT
(G)	GRAVEL	[Solid Grey Box]	MAINLINE RECLAIM
(C)	CONCRETE	[Cross-hatched Box]	REMOVE DRIVEWAY/ APPROACH
(+)	CORE LOCATION	[Diagonal Hatched Box]	SUPER TRANSITION AREA
		---	R / W



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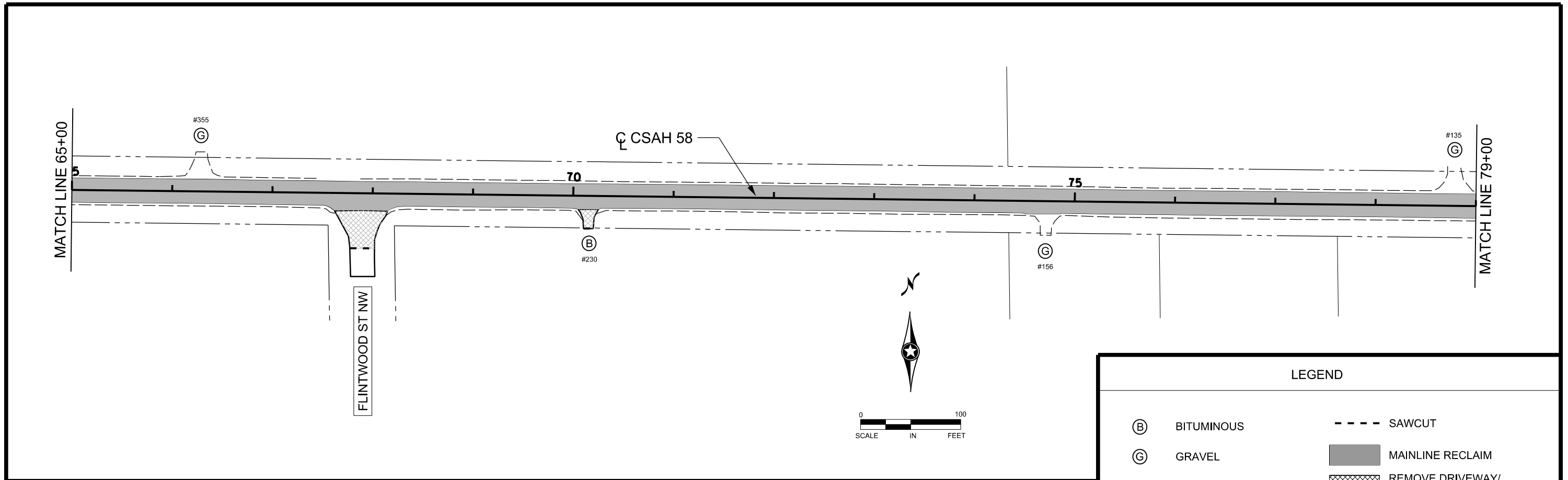
PRINT NAME: GERALD J AUGER JR.
SIGNATURE: *[Signature]*
DATE: 12-06-2022 LICENSE NO. 26511

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DESIGN BY: MR DATE 2/10/2022
CHECKED BY: CO DATE 01/12/2023

**ANOKA COUNTY
HIGHWAY DEPT.**

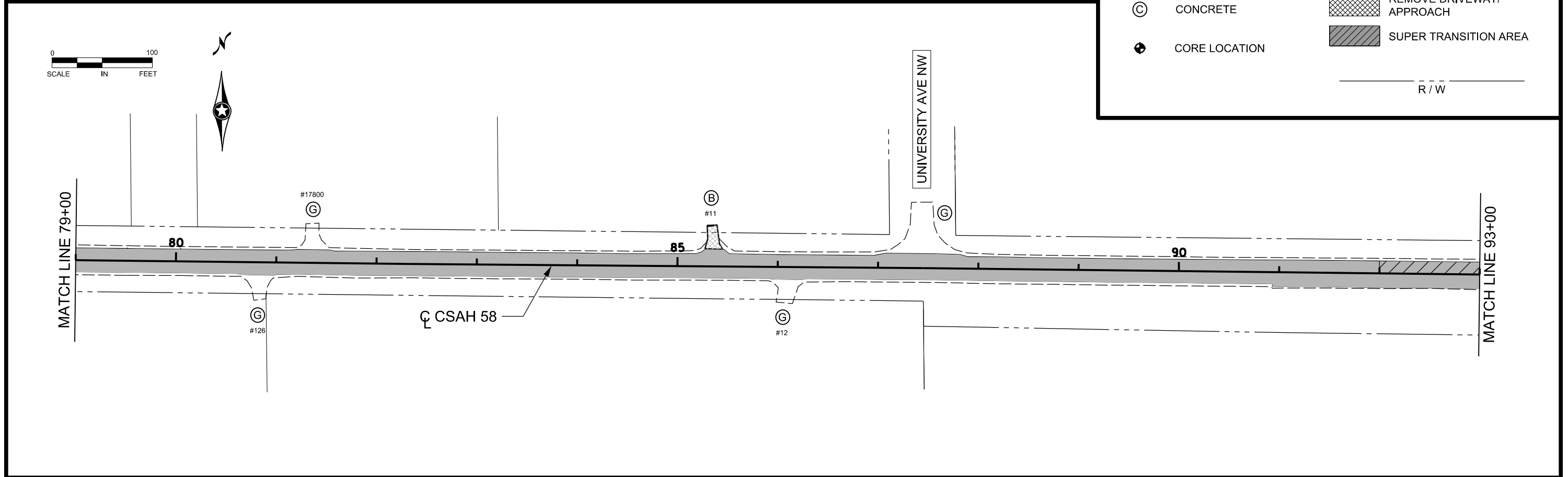
STATE AID PROJECT 002-658-002

CONSTRUCTION PLAN
STA 37+00 TO 65+00
Sheet 8 of 18 Sheets



LEGEND

(B)	BITUMINOUS	---	SAWCUT
(G)	GRAVEL	[Solid Grey Box]	MAINLINE RECLAIM
(C)	CONCRETE	[Cross-hatched Box]	REMOVE DRIVEWAY/ APPROACH
(◆)	CORE LOCATION	[Diagonal-hatched Box]	SUPER TRANSITION AREA
		---	R / W



NO	DATE	BY	CKD	APPR	REVISION	

NAME: P:\23-01-00\CSAH_58_(181ST-CROSSTOWN)\Base\Proposed\CP3.dgn

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PRINT NAME: GERALD J AUGER JR.

SIGNATURE: *[Signature]*

DATE: 12-06-2022 LICENSE NO. 26511

DRAWN BY MR DATE 2/10/2022

DESIGN BY MR DATE 2/10/2022

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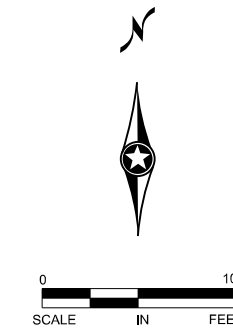
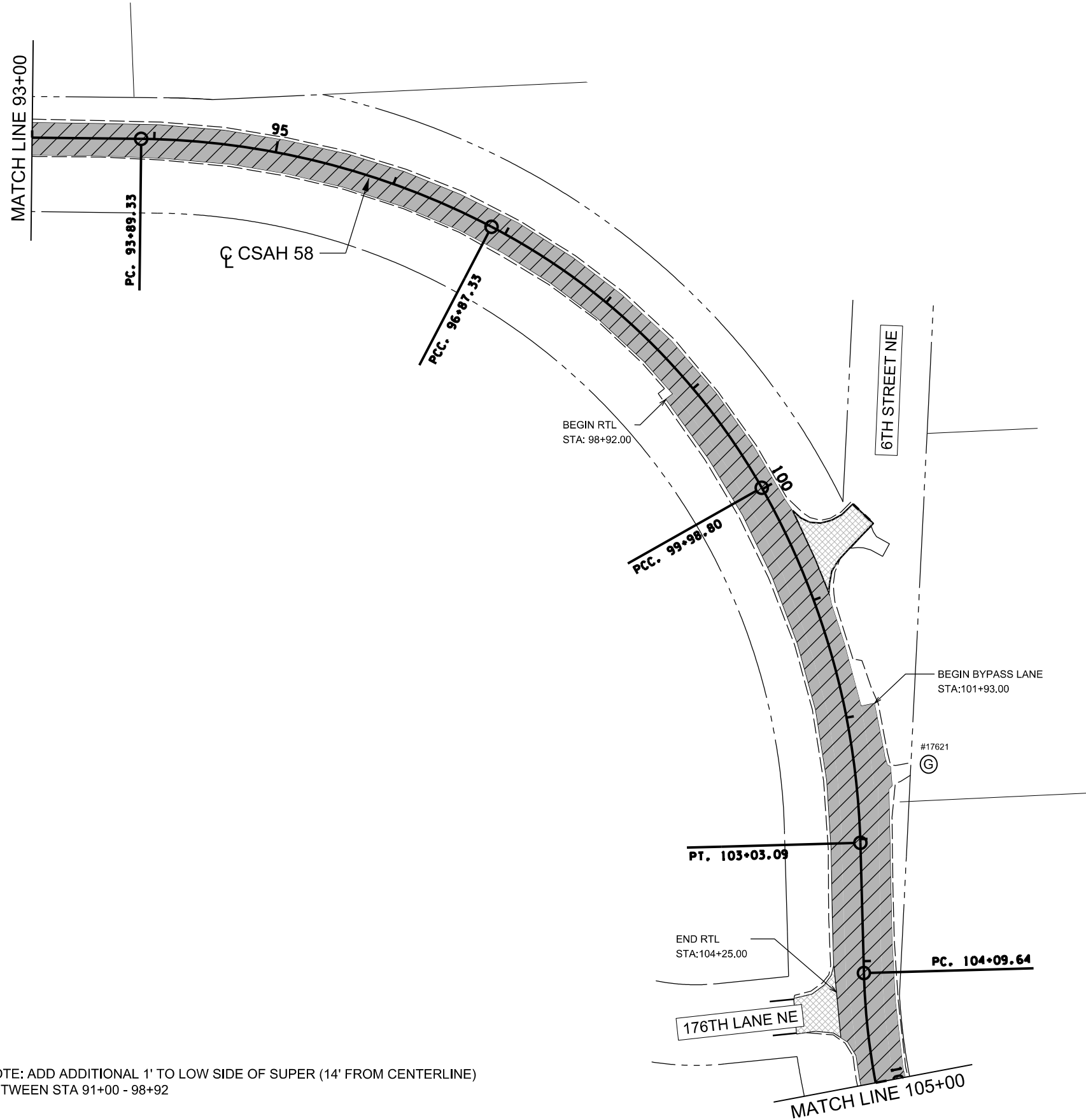
**ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-658-002

CONSTRUCTION PLAN

STA 65+00 TO 93+00

Sheet 9 of 18 Sheets



LEGEND			
(B)	BITUMINOUS	---	SAWCUT
(G)	GRAVEL	[Hatched Box]	MAINLINE RECLAIM
(C)	CONCRETE	[Cross-hatched Box]	REMOVE DRIVEWAY/ APPROACH
(+)	CORE LOCATION	[Diagonal-hatched Box]	SUPER TRANSITION AREA
		----- R / W -----	

NOTE: ADD ADDITIONAL 1' TO LOW SIDE OF SUPER (14' FROM CENTERLINE) BETWEEN STA 91+00 - 98+92

NO	DATE	BY	CKD	APPR	REVISION	
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NAME: P:\23-01-00\CSAH_58_(181ST-CROSSTOWN)\Base\Proposed\CP4.dgn

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 SIGNATURE: *[Signature]*
 DATE: 12-06-2022 LICENSE NO. 26511

DRAWN BY MR DATE 2/10/2022
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ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-658-002

CONSTRUCTION PLAN
 STA 93+00 TO 105+00
 Sheet 10 of 18 Sheets

MATCH LINE 105+00

#17545
ⓐ

END BYPASS LANE
STA: 108+13.00

P.C.C. 110+01.25

P.T. 113+19.91

☉ CSAH 58

#535
ⓑ

MATCH LINE 120+00

ⓐ #534

173RD LANE NE

LEGEND

- ⓑ BITUMINOUS
- ⓐ GRAVEL
- ⓒ CONCRETE
- ⊕ CORE LOCATION
- - - SAWCUT
- █ MAINLINE RECLAIM
- ▨ REMOVE DRIVEWAY/ APPROACH
- ▩ SUPER TRANSITION AREA
- R / W



NOTE: ADD ADDITIONAL 1' TO LOW SIDE OF SUPER (14' FROM CENTERLINE) BETWEEN STA 108+13 - 116+00

NO	DATE	BY	CKD	APPR	REVISION	TIME
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PRINT NAME: GERALD J AUGER JR.

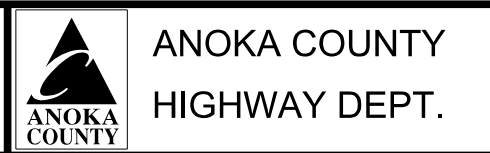
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DATE: 12-06-2022 LICENSE NO. 26511

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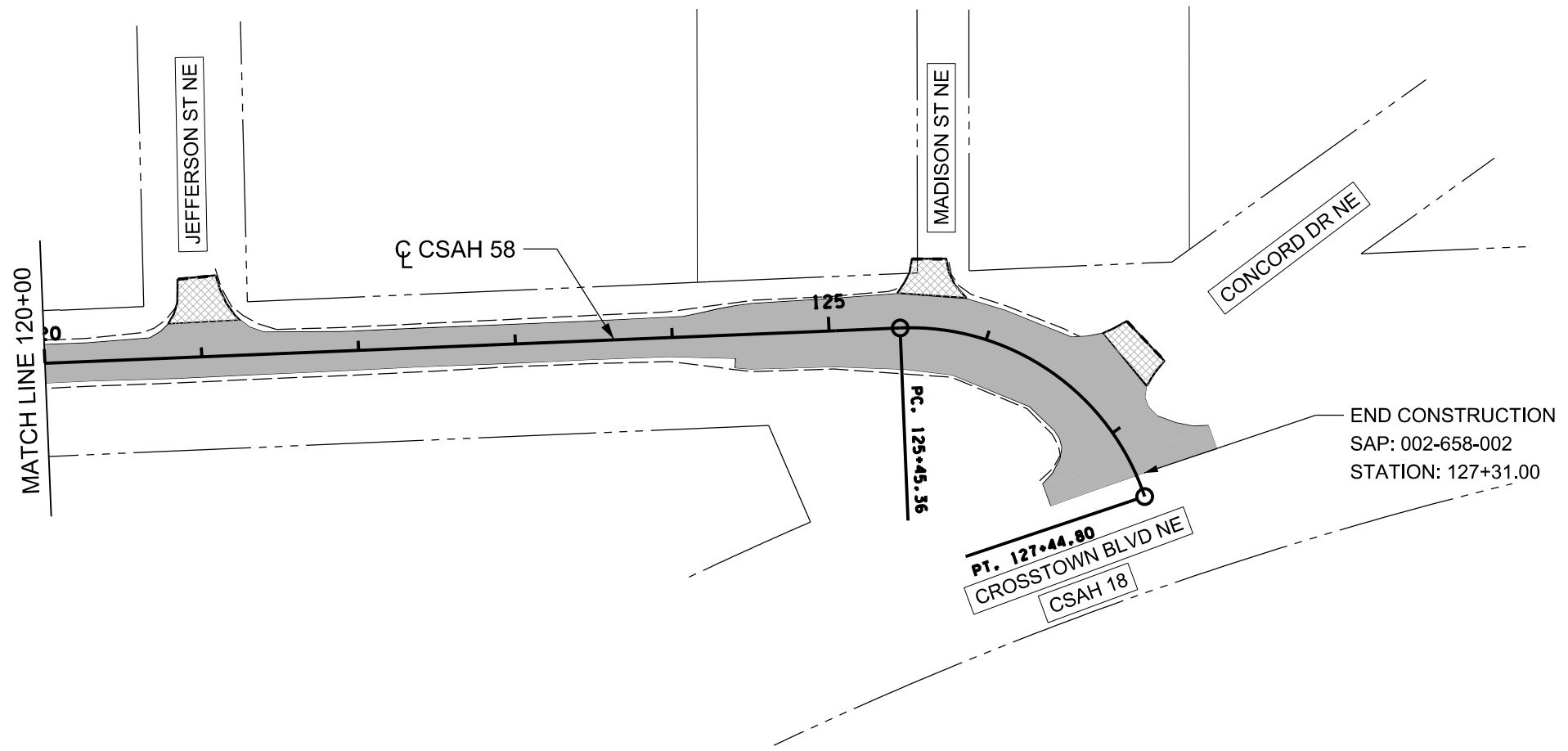
DESIGN BY: MR DATE 2/10/2022

CHECKED BY: CO DATE 01/12/2023



STATE AID PROJECT 002-658-002

CONSTRUCTION PLAN
STA 105+00 TO 120+00
Sheet 11 of 18 Sheets



LEGEND

- (B) BITUMINOUS
- (G) GRAVEL
- (C) CONCRETE
- ⊕ CORE LOCATION
- SAWCUT
- █ MAINLINE RECLAIM
- ▨ REMOVE DRIVEWAY/ APPROACH
- ▩ SUPER TRANSITION AREA
- R / W



NO	DATE	BY	CKD	APPR	REVISION	1:54:59 PM

NAME: P:\23-01-00\CSAH_58_(181ST-CROSSTOWN)\Base\Proposed\CP6.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.

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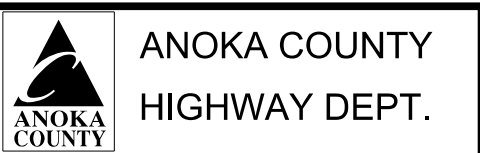
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DRAWN BY: MR DATE 2/10/2022

DESIGN BY: MR DATE 2/10/2022

CHECKED BY: CO DATE 01/12/2023



STATE AID PROJECT 002-658-002

CONSTRUCTION PLAN
STA 120+00 TO 127+31
Sheet 12 of 18 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 BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE MULTI COMP LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.

A MULTI COMP 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	NOTES
4" SOLID LINE MULTI COMP GROUND IN (WHITE)	LIN FT	23540	
4" SOLID LINE MULTICOMP GROUND IN (YELLOW)	LIN FT	3480	
4" BROKEN LINE MULTICOMP GROUND IN (YELLOW)	LIN FT	1660	1
8" BROKEN LINE MULTICOMP GROUND IN (WHITE)	LIN FT	36	2
4" SOLID DBL LINE MULTICOMP GROUND IN (YELLOW)	LIN FT	3200	

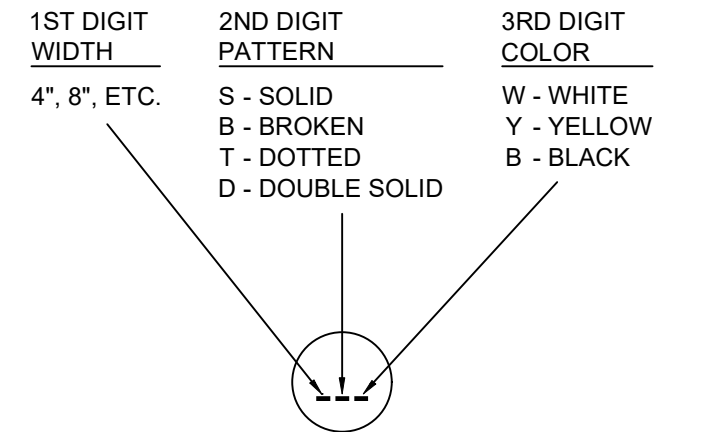
- 1 10' STRIPE, 40' GAP
- 2 3' STRIPE, 12' GAP

SYMBOLS & MATERIALS LEGEND

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

STRIPING KEY

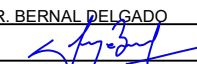
-  CIRCLE - MULTI COMP GROUND IN
-  TRIANGLE - PAINT
-  SQUARE - POLY PREFORM THERMOPLASTIC
-  PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



EXAMPLE: (4SW) = SOLID LINE WHITE - MULTI COMP

- - - - - BROKEN LINE - 50' CYCLE (10' LINE, 40' GAP)
- DOTTED LINE - 15' CYCLE (3' LINE, 12' GAP) UNLESS SHOWN OTHERWISE IN THE PLAN

1	02/27/23	TMV	JRB	02/28/23	
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\23-01-00\CSAH_58_(181st-Crosstown)\Base\Traffic\Perm Mrkg Guide.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: JORGE R. BERNAL DELGADO DATE: 02-28-22
 SIGNATURE:  LICENSE NO. 57216

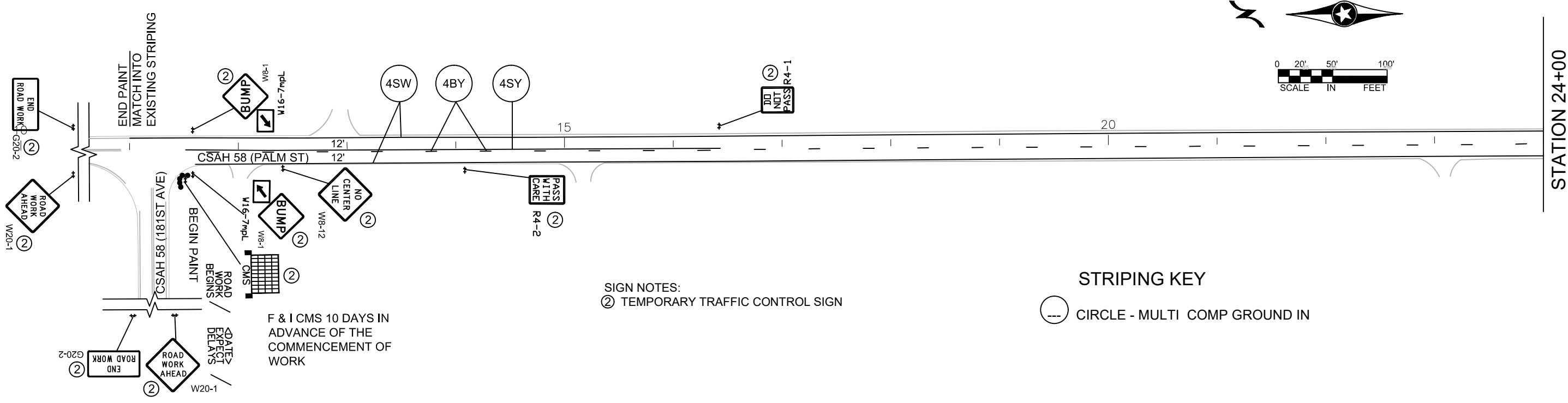
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 DESIGN BY: TMV DATE: 10/06/22
 CHECKED BY: JRB DATE: 10/24/22



**ANOKA COUNTY
HIGHWAY DEPT.**

SAP 002-658-002

PERMANENT PAVEMENT MARKING PLAN DETAILS
 SHEET 13A OF 18 SHEETS

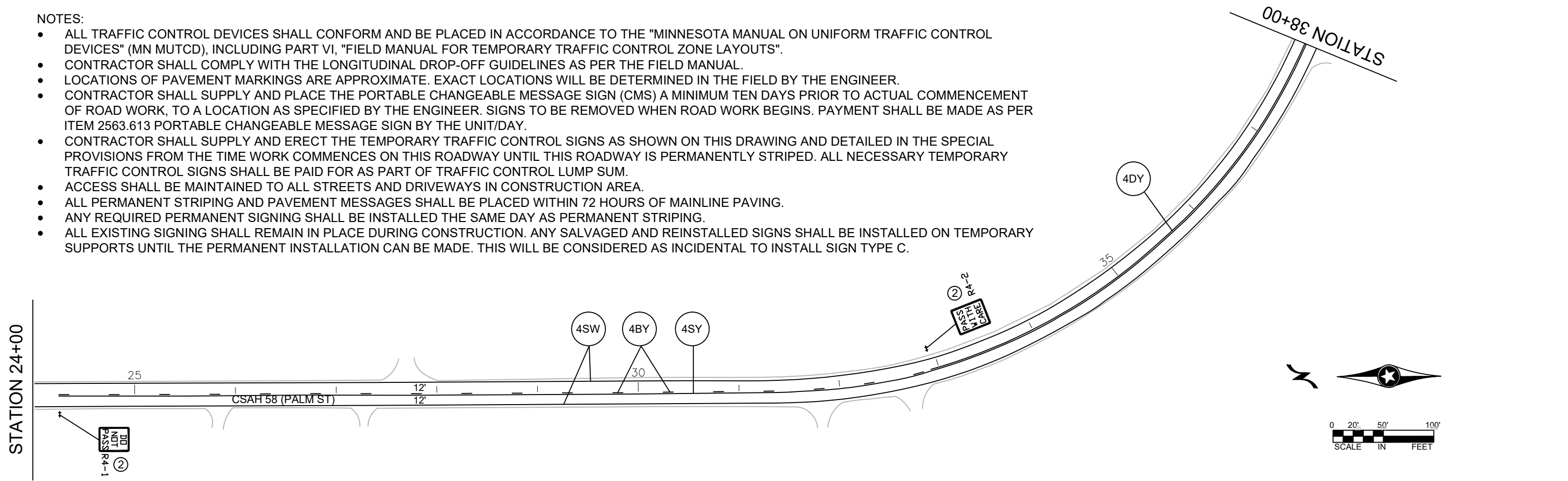


SIGN NOTES:
 ② TEMPORARY TRAFFIC CONTROL SIGN

STRIPING KEY
 ○ CIRCLE - MULTI COMP GROUND IN

F & I CMS 10 DAYS IN ADVANCE OF THE COMMENCEMENT OF WORK

- 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.
 - LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - CONTRACTOR SHALL SUPPLY AND PLACE THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) 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.
 - 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.
 - 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.
 - 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.



1	02/27/23	TMV	JRB	02/28/23	
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\23-01-00\CSAH_58_(181ST-CROSSTOWN)\BASE\TRAFFIC\TEMP SIGN & PERM STRIPING.DWG					

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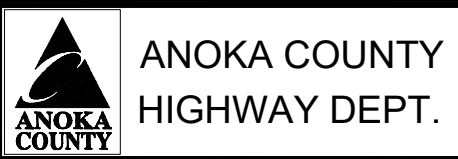
PRINT NAME: JORGE R. BERNAL DELGADO DATE: 02-28-22

SIGNATURE: [Signature] LICENSE NO. 57216

DRAWN BY TMV DATE 10/21/22

DESIGN BY TMV DATE 10/21/22

CHECKED BY JRB DATE 10/24/22



SAP 002-658-002

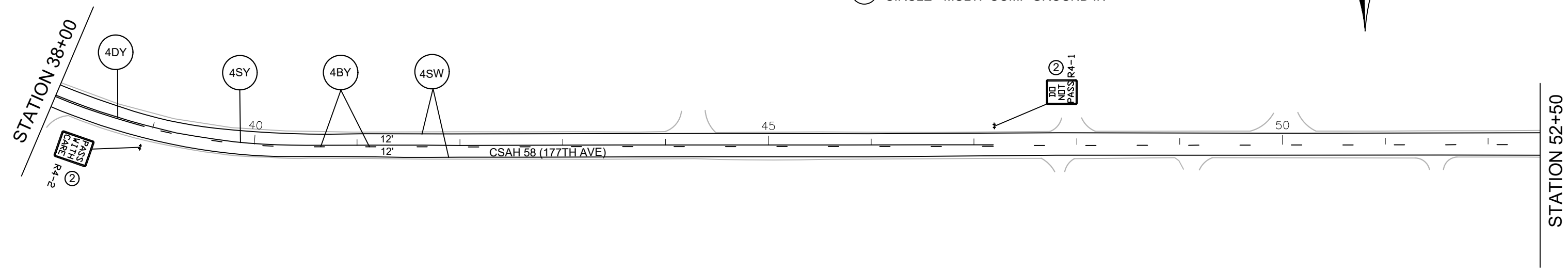
TEMPORARY SIGNING & PERMANENT STRIPING

SHEET 14A OF 18 SHEETS



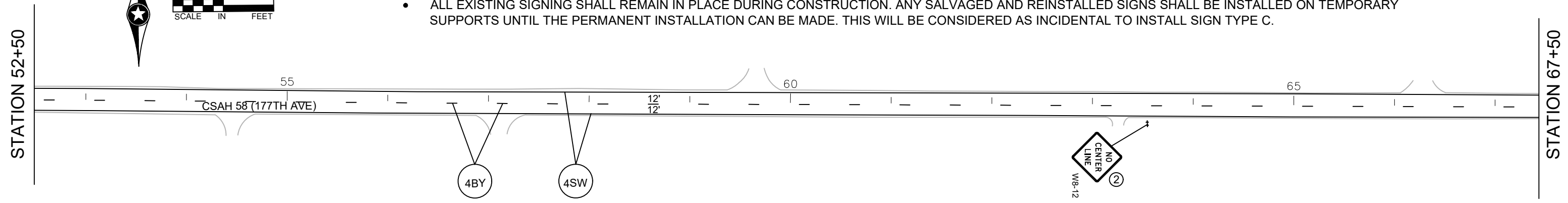
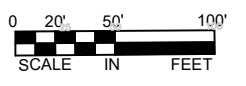
SIGN NOTES:
 ② TEMPORARY TRAFFIC CONTROL SIGN

STRIPING KEY
 --- CIRCLE - MULTI COMP GROUND IN



NOTES:

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1	02/27/23	TMV	JRB	02/28/23	
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SIGNATURE: LICENSE NO. 57216

DRAWN BY: TMV DATE: 10/21/22

DESIGN BY: TMV DATE: 10/21/22

CHECKED BY: JRB DATE: 10/24/22



ANOKA COUNTY
 HIGHWAY DEPT.

SAP 002-658-002

TEMPORARY SIGNING & PERMANENT STRIPING

SHEET 15A OF 18 SHEETS

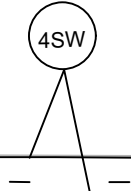
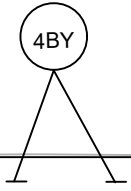
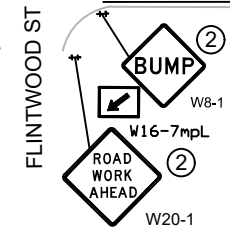


SIGN NOTES:
② TEMPORARY TRAFFIC CONTROL SIGN

STRIPING KEY
○ CIRCLE - MULTI COMP GROUND IN

STATION 67+50

STATION 82+50



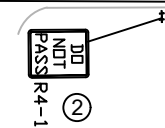
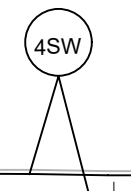
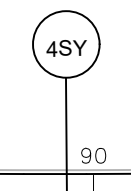
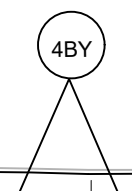
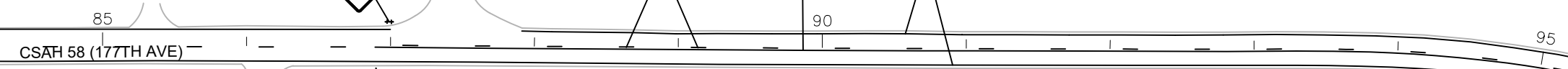
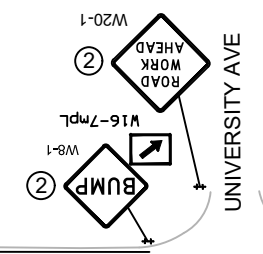
NOTES:

- 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.
- LOCATIONS OF PAVEMENT MARKINGS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR SHALL SUPPLY AND PLACE THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) 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.
- 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.
- 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.
- 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.



STATION 82+50

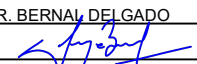
STATION 97+50



1	02/27/23	TMV	JRB	02/28/23	
NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\23-01-00\CSAH_58_(181ST-CROSSTOWN)\BASE\TRAFFIC\TEMP SIGN & PERM 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: JORGE R. BERNAL DELGADO DATE: 02-28-22

SIGNATURE:  LICENSE NO. 57216

DRAWN BY TMV DATE 10/21/22

DESIGN BY TMV DATE 10/21/22

CHECKED BY JRB DATE 10/24/22

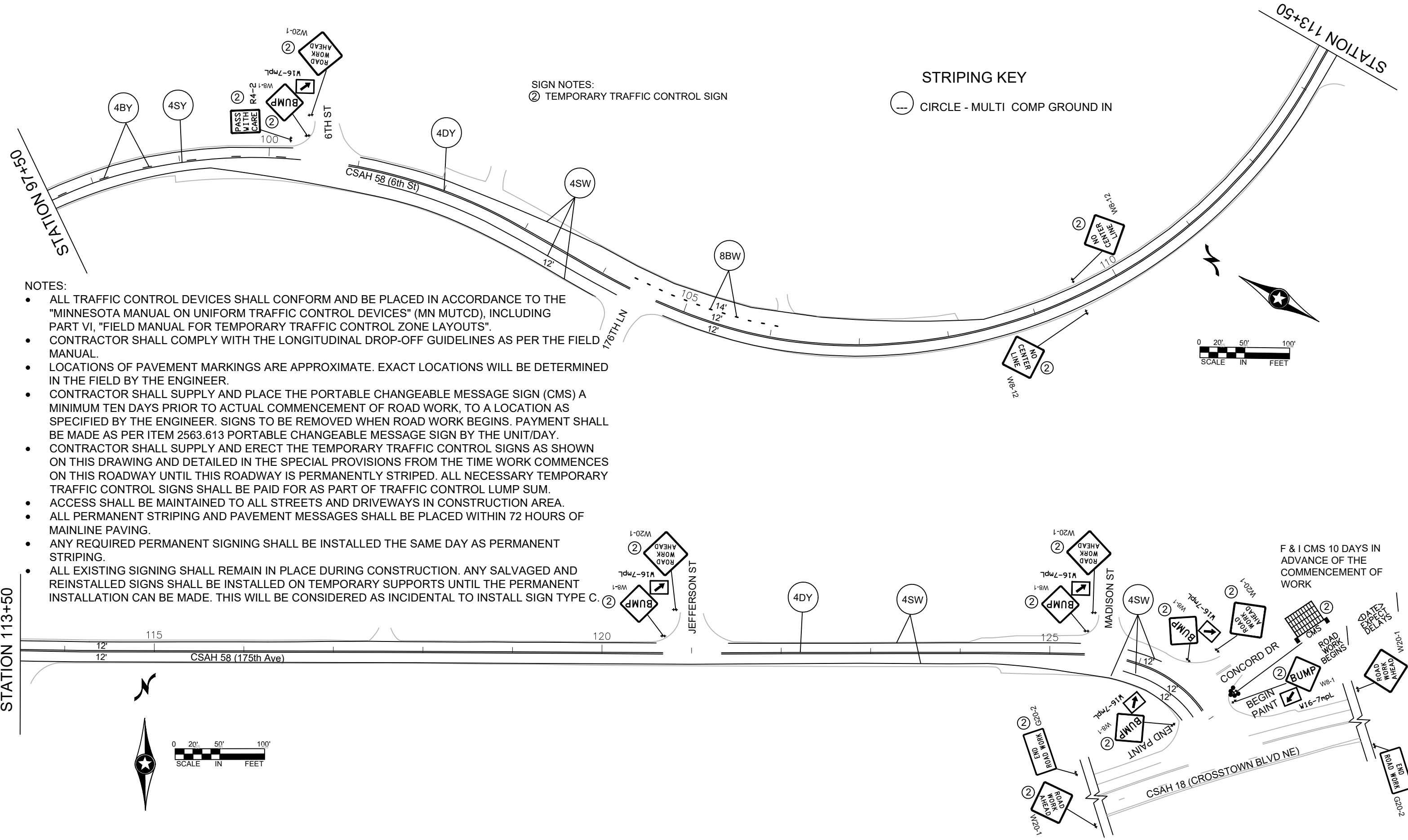


ANOKA COUNTY
HIGHWAY DEPT.

SAP 002-658-002

TEMPORARY SIGNING & PERMANENT STRIPING

SHEET 16A OF 18 SHEETS



SIGN NOTES:
 ② TEMPORARY TRAFFIC CONTROL SIGN

STRIPING KEY
 ○ CIRCLE - MULTI COMP GROUND IN

- 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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F & I CMS 10 DAYS IN ADVANCE OF THE COMMENCEMENT OF WORK

STATION 113+50

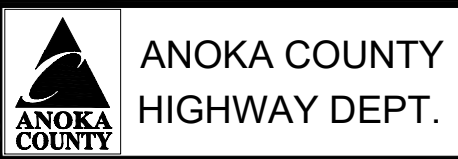
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NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\23-01-00\CSAH_58_(181ST-CROSSTOWN)\BASE\TRAFFIC\TEMP SIGN & PERM STRIPING.DWG					

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PRINT NAME: JORGE R. BERNAL DE GADO DATE: 02-28-22







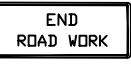










SIGNATURE: *[Signature]* LICENSE NO. 57216

DRAWN BY TMV DATE 10/21/22
 DESIGN BY TMV DATE 10/21/22
 CHECKED BY JRB DATE 10/24/22



SAP 002-658-002

TEMPORARY SIGNING & PERMANENT STRIPING
 SHEET 17A OF 18 SHEETS

TEMPORARY TRAFFIC CONTROL SIGNS				TEMPORARY TRAFFIC CONTROL SIGNS			
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY	M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
W8-12	48" x 48"		4	W8-9	48" x 48"		AS NEEDED
R4-1	24" x 30"		4	W8-11	48" x 48"		AS NEEDED
R4-2	24" x 30"		4	W8-23	48" x 48"		AS NEEDED
G20-2	36" x 18"		4	W20-1	48" x 48"		AS NEEDED (ESTIMATED 10)
W8-1	48" x 48"		10	W20-4	48" x 48"		AS NEEDED
W16-7P	30" x 18"		10	W20-7	48" x 48"		AS NEEDED (ESTIMATED 2)
W3-4	48" x 48"		AS NEEDED	REFLECTORIZED REBOUNDABLE DRUM			AS NEEDED (ESTIMATED 10)
W8-1	48" x 48"		AS NEEDED	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
W8-8	48" x 48"		AS NEEDED				

CHANGEABLE MESSAGE BOARD - MESSAGE SEQUENCE LAYOUT

		R	O	A	D					<	D	A	T	E	>		
		W	O	R	K					E	X	P	E	C	T		
		B	E	G	I	N	S			D	E	L	A	Y	S		

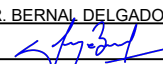
CMS SIGN TO BE PLACED A MINIMUM OF TEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\23-01-00\CSAH_58_(181ST-CROSSTOWN)\BASE\TRAFFIC\TEMP SIGN & PERM STRIPING.DWG

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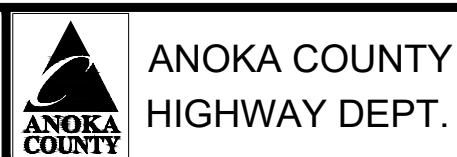
PRINT NAME: JORGE R. BERNAL DELGADO DATE: 01-12-23

SIGNATURE:  LICENSE NO. 57216

DRAWN BY: TMV DATE: 10/21/22

DESIGN BY: TMV DATE: 10/21/22

CHECKED BY: JRB DATE: 10/24/22



SAP 002-658-002