

STATEMENT OF ESTIMATED QUANTITIES

NOTES	ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED
	2021.501	MOBILIZATION	LUMP SUM	1
1,2	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	12
1,2	2104.503	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT	498
2	2104.504	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	39
3	2104.504	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	950
3	2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	2123
4,5	2123.510	MOTOR GRADER	HOUR	24
	2130.523	WATER	M GALLON	296
6	2211.509	AGGREGATE BASE CLASS 5	TON	89
	2215.504	STABILIZED FULL DEPTH RECLAMATION	SQ YD	42330
4	2215.507	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	50
7	2221.509	SHOULDER BASE AGGREGATE CLASS 5	TON	895
8	2232.504	MILL BITUMINOUS SURFACE (2.0")	SQ YD	70
	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	2223
9	2360.509	TYPE SP 9.5 WEARING COURSE MIX (3;B)	TON	111
10	2360.509	TYPE SP 12.5 WEARING COURSE MIX (4;C)	TON	244
	2360.509	TYPE SP 12.5 WEARING COURSE MIX (4;C)	TON	10427
	2531.504	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	39
11	2540.602	MAIL BOX SUPPORT	EACH	55
12	2563.601	TRAFFIC CONTROL	LUMP SUM	1
13	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UDAY	20
14	2574.507	COMMON TOPSOIL BORROW	CU YD	50
14	2575.504	EROSION CONTROL BLANKETS CATEGORY 0	SQ YD	213
15	2581.503	REMOVABLE PREFORM PAVEMENT MARKING TAPE	LIN FT	588
16	2582.503	4" SOLID LINE MULTI COMP	LIN FT	33920
16	2582.503	4" BROKEN LINE MULTI COMP	LIN FT	1658
16	2582.503	4" DBLE SOLID LINE MULTI COMP	LIN FT	6390

CONSTRUCTION NOTES

1	REFERENCE DETAILS (PAGE 4) FOR REMOVAL DETAILS
2	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 AND DRIVEWAYS.
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 ST 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 EACH END OF PROJECT, SHALL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
14	ITEM USED AT ENGINEER'S DISCRETION FOR RESTORATION OF DISTURBED AREAS ALONG DRIVEWAYS AND STREET APPROACHES
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.

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

MNDOT STANDARD PLATES

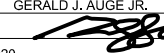
PLATE NO.	DESCRIPTION
8000J	CHANNELIZERS
9350A	MAILBOX SUPPORT (SWING-AWAY TYPE)

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

NO	DATE	BY	CKD	APPR	REVISION	
	03/11/2020					11:52:04 AM

NAME: P:\20-01-00\CSAH_76_(CSAH85-CSAH35)\Base\Proposed\Proposed.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: 02-21-2020 LICENSE NO. 26511

DRAWN BY: APA DATE: 1/15/2020
 DESIGN BY: APA DATE: 1/15/2020
 CHECKED BY: CO DATE: 1/28/2020



**ANOKA COUNTY
HIGHWAY DEPT.**

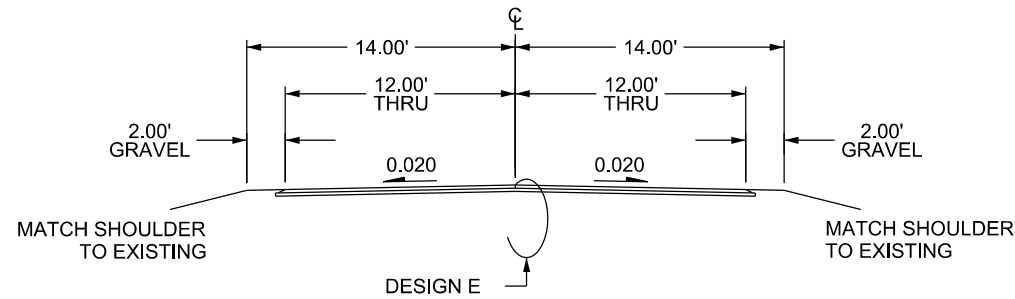
STATE AID PROJECT SAP 002-676-002

STATEMENT OF ESTIMATED QUANTITIES

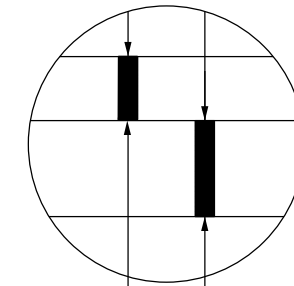
Sheet 2 of 21 Sheets

CSAH 76 - (FAWN LAKE DRIVE)
(EXISTING) SECTION

12+00.00 - 159+70.00



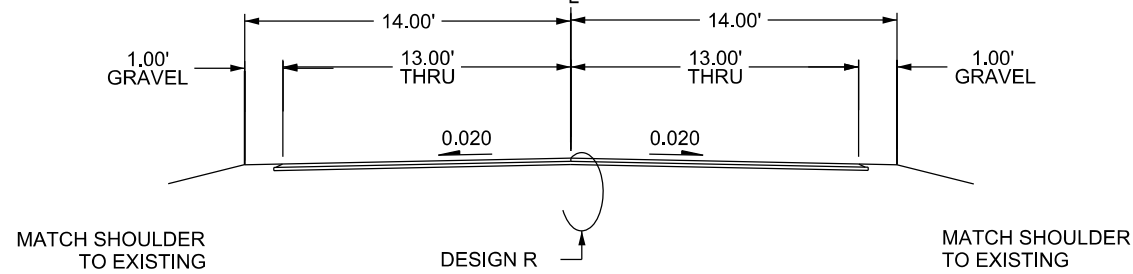
DESIGN E
EXISTING SECTION



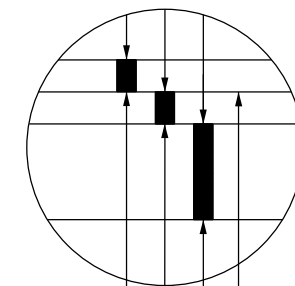
6.5" +/- EXISTING BITUMINOUS
EXISTING SUBGRADE

CSAH 76 -(FAWN LAKE DRIVE)
(PROPOSED) SECTION

12+00.00 - 129+00.00



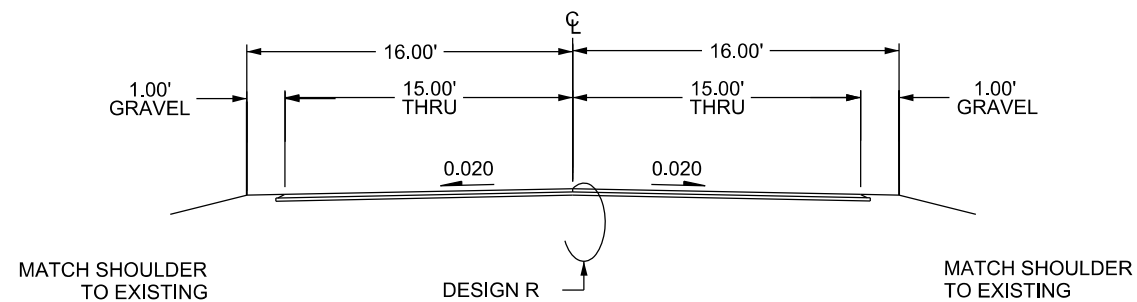
DESIGN R
RECLAIM SECTION



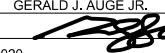
2.0" BITUMINOUS WEAR(SPWEB440C)
2.0" BITUMINOUS WEAR(SPWEB440C)
STABILIZED FULL DEPTH RECLAMATION
BIT MATERIAL FOR TACK COAT MNDOT SPEC 2357

CSAH 76 -(FAWN LAKE DRIVE)
(PROPOSED) SECTION

129+00 - 159+70



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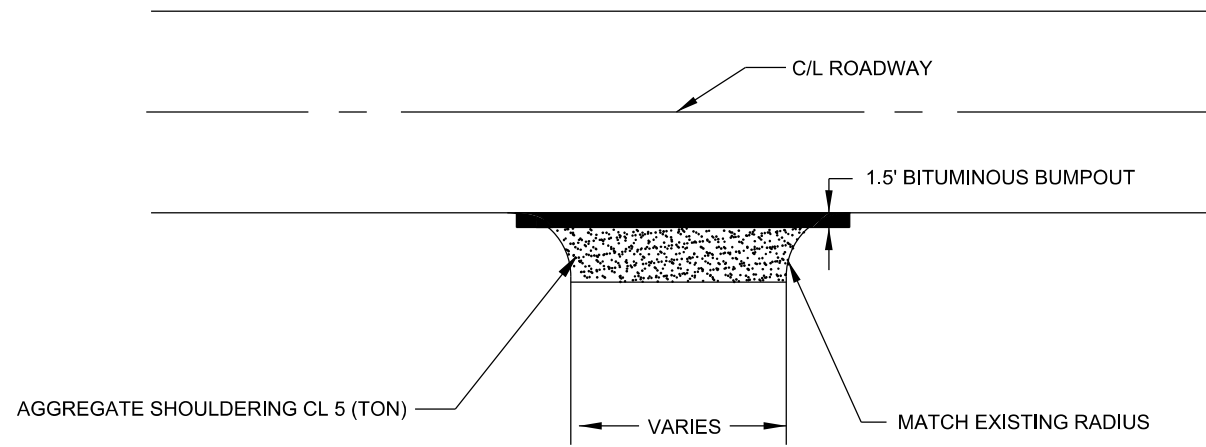
ANOKA COUNTY
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TYPICAL SECTIONS
Sheet 3 of 21 Sheets

DRIVEWAY DETAIL

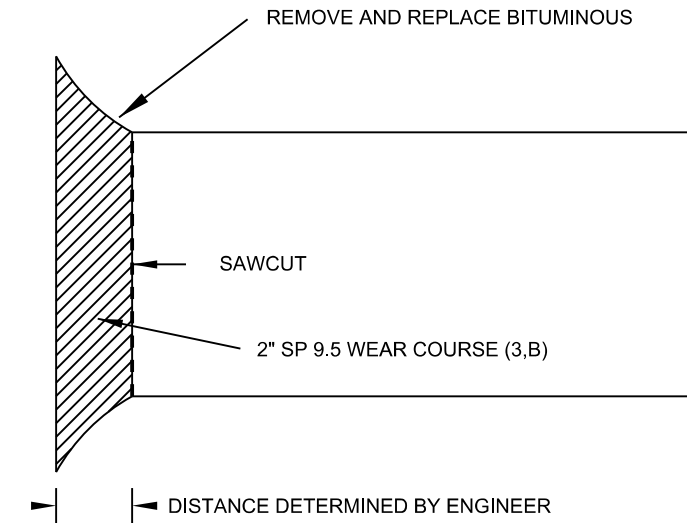
GRAVEL / FIELD ENTRANCE



RECLAIM AREA - DRIVEWAY DETAIL

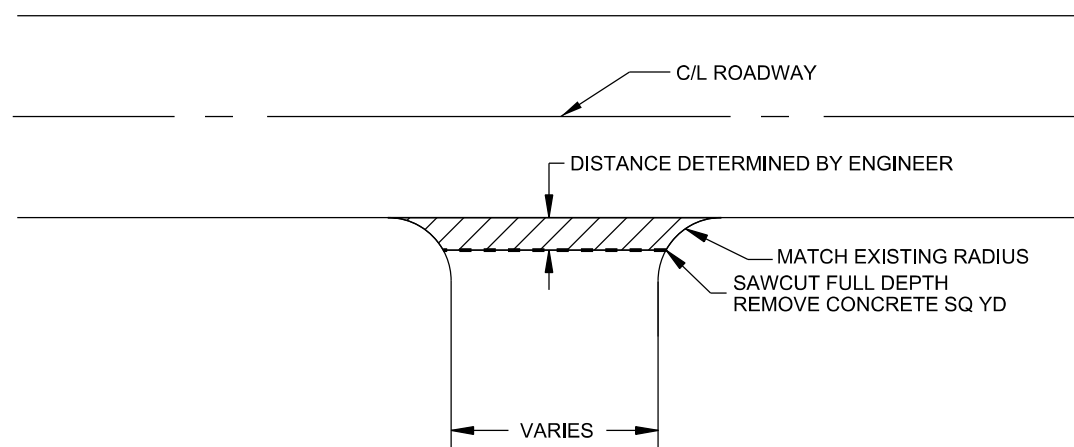
BITUMINOUS

PLAN VIEW



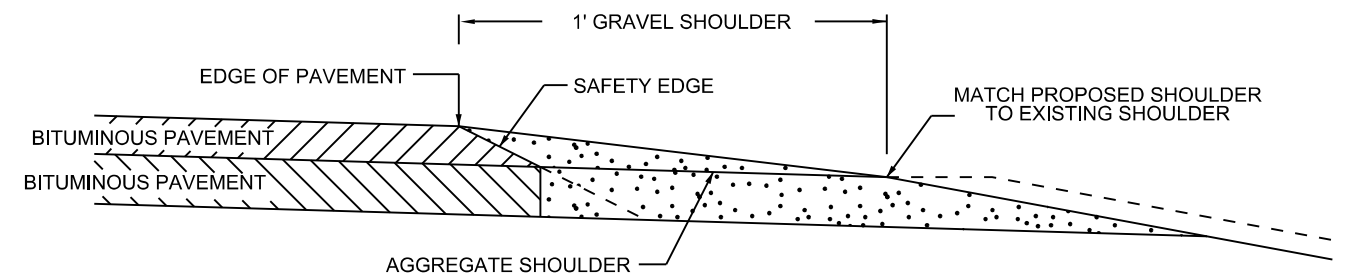
DRIVEWAY DETAIL

CONCRETE DRIVEWAY



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 .

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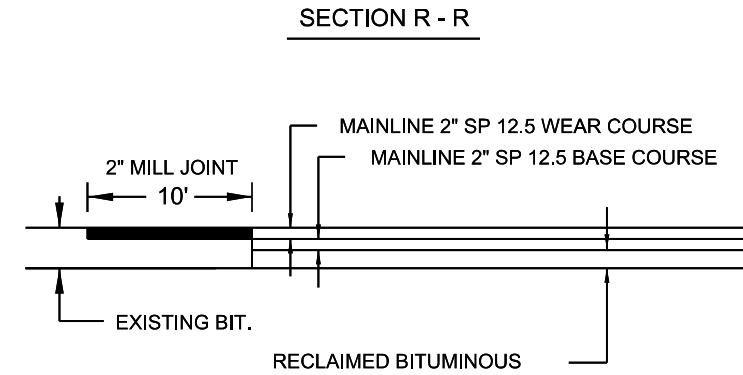
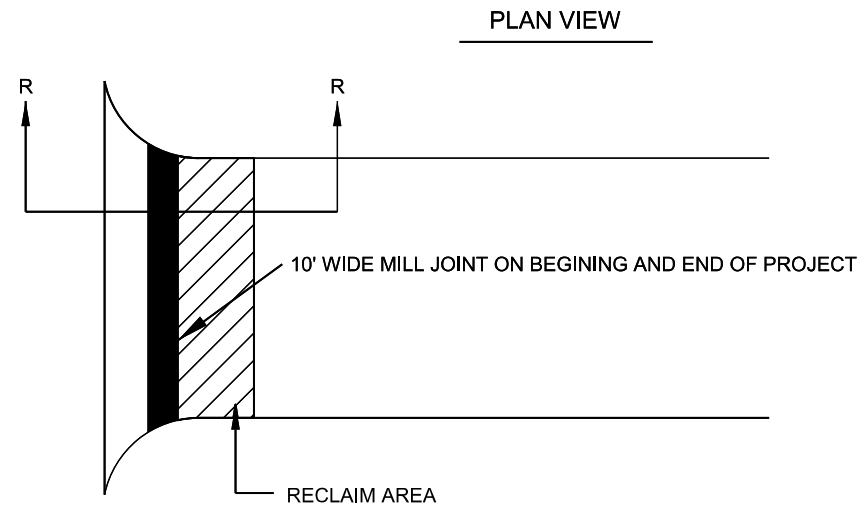


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DETAILS

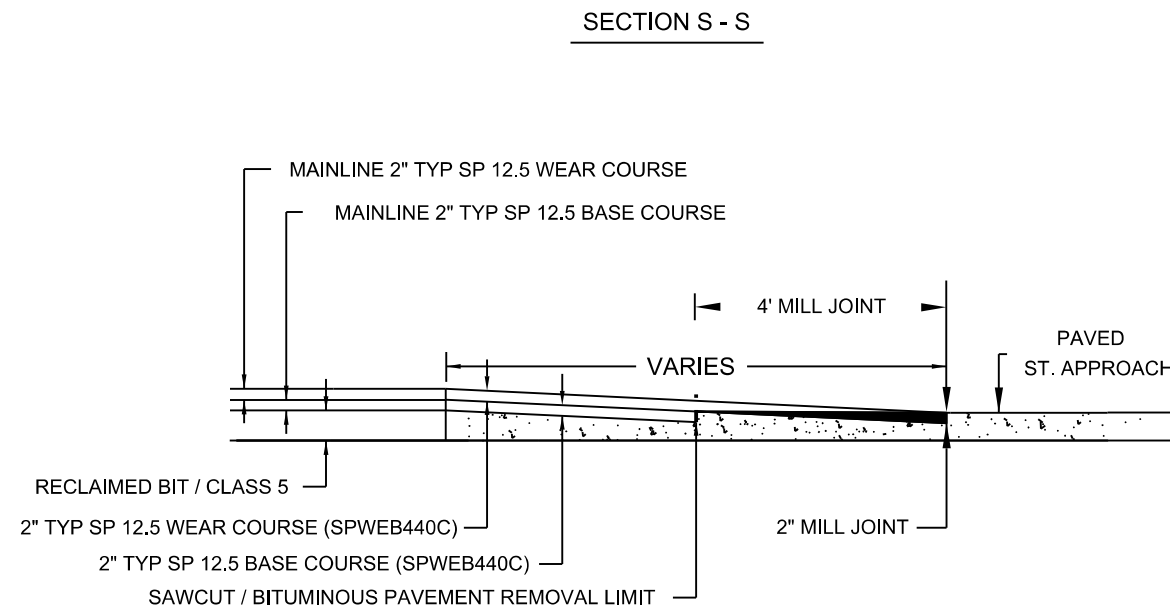
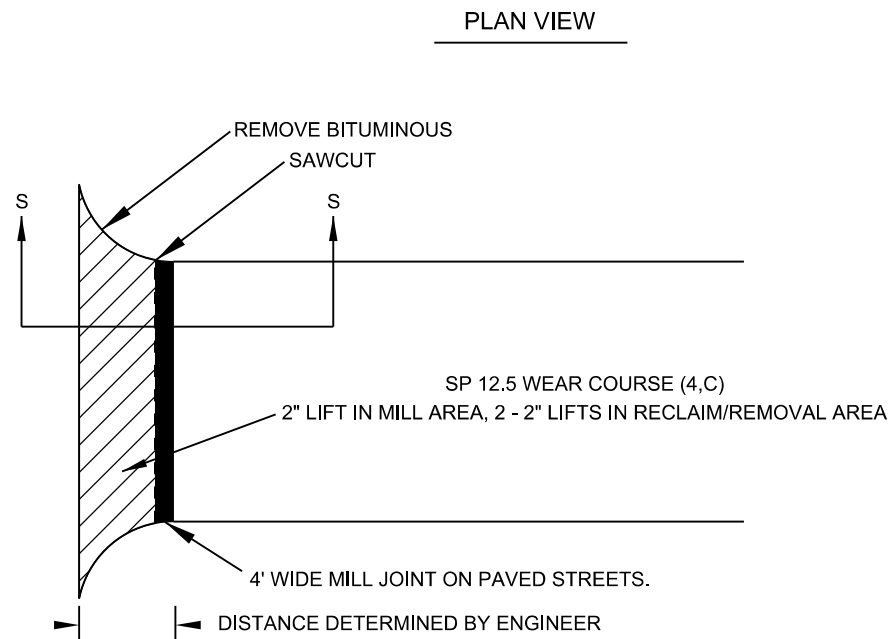
Sheet 4 of 21 Sheets

MAINLINE JOINT DETAIL (RECLAIM)



STREET APPROACH DETAIL (RECLAIM)

BITUMINOUS STREET



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DETAILS

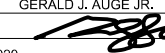
Sheet 5 of 21 Sheets

SUPERELEVATION CORRECTION TAB CURVE 1			
STATION	POINT	LEFT GRADE	RIGHT GRADE
17+00		-2.0%	-2.0%
17+50	BEGIN SUPER RT	-2.0%	-2.0%
18+00		-2.0%	-3.1%
18+50	BEGIN SUPER LT	-2.0%	-4.3%
19+00		0.0%	-5.4%
19+25	BEGIN FULL SUPER RT	1.0%	-6.0%
19+50		2.0%	-6.0%
20+00		4.0%	-6.0%
20+50	BEGIN FULL SUPER LT	6.0%	-6.0%
21+00		6.0%	-6.0%
21+50		6.0%	-6.0%
22+00		6.0%	-6.0%
22+50	END FULL SUPER LT	6.0%	-6.0%
23+00	END FULL SUPER RT	4.7%	-6.0%
23+50		3.3%	-5.0%
24+00		2.0%	-4.0%
24+50		0.7%	-3.0%
25+00	END SUPER RT	-0.7%	-2.0%
25+50	END SUPER LT	-2.0%	-2.0%
26+00		-2.0%	-2.0%
26+50		-2.0%	-2.0%
27+00		-2.0%	-2.0%

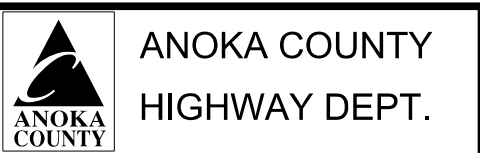
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STATION	POINT	LEFT GRADE	RIGHT GRADE
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27+50	BEGIN SUPER RT/LT	-2.0%	-2.0%
28+00		-3.0%	-0.7%
28+50		-4.0%	0.7%
29+00		-5.0%	2.0%
29+50	BEGIN FULL SUPER LT	-6.0%	3.3%
30+00		-6.0%	4.7%
30+50	BEGIN FULL SUPER RT	-6.0%	6.0%
31+00		-6.0%	6.0%
31+50		-6.0%	6.0%
32+00		-6.0%	6.0%
32+50		-6.0%	6.0%
33+00	END FULL SUPER RT	-6.0%	6.0%
33+50		-6.0%	4.9%
34+00		-6.0%	3.7%
34+50		-6.0%	2.6%
35+00	END FULL SUPER LT	-6.0%	1.4%
35+50		-5.0%	0.3%
36+00		-4.0%	-0.9%
36+50	END SUPER RT	-3.0%	-2.0%
37+00	END SUPER LT	-2.0%	-2.0%
37+50		-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB CURVE 3			
STATION	POINT	LEFT GRADE	RIGHT GRADE
36+50		-2.0%	-2.0%
37+00		-2.0%	-2.0%
37+50	BEGIN SUPER RT	-2.0%	-2.0%
38+00	BEGIN SUPER LT	-2.0%	-3.0%
38+50		0.0%	-4.0%
39+00		2.0%	-5.0%
39+50	BEGIN FULL SUPER RT	4.0%	-6.0%
40+00	BEGIN FULL SUPER LT	6.0%	-6.0%
40+50		6.0%	-6.0%
41+00		6.0%	-6.0%
41+50	END FULL SUPER RT	6.0%	-6.0%
42+00		6.0%	-5.4%
42+50	END FULL SUPER LT	6.0%	-4.9%
43+00		3.3%	-4.3%
43+50		0.7%	-3.7%
44+00	END SUPER LT	-2.0%	-3.1%
44+50		-2.0%	-2.6%
45+00	END SUPER RT	-2.0%	-2.0%
45+50		-2.0%	-2.0%
46+00		-2.0%	-2.0%
46+50		-2.0%	-2.0%
47+00		-2.0%	-2.0%

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SUPERELEVATION TABULATION
 Sheet 6 of 21 Sheets

SUPERELEVATION CORRECTION TAB CURVE 4/5

STATION	POINT	LEFT GRADE	RIGHT GRADE
62+00		-2.0%	-2.0%
62+50		-2.0%	-2.0%
63+00	BEGIN SUPER RT/LT	-2.0%	-2.0%
63+50		-0.7%	-2.7%
64+00		0.7%	-3.3%
64+50		2.0%	-4.0%
65+00		3.3%	-4.7%
65+50		4.7%	-5.3%
66+00	BEGIN FULL SUPER LT/RT	6.0%	-6.0%
66+50		6.0%	-6.0%
67+00		6.0%	-6.0%
67+50		6.0%	-6.0%
68+00		6.0%	-6.0%
68+50		6.0%	-6.0%
69+00		6.0%	-6.0%
69+50		6.0%	-6.0%
70+00		6.0%	-6.0%
70+50		6.0%	-6.0%
71+00		6.0%	-6.0%
71+50		6.0%	-6.0%
72+00		6.0%	-6.0%
72+50		6.0%	-6.0%
73+00		6.0%	-6.0%
73+50	END FULL SUPER LT	6.0%	-6.0%
74+00		4.9%	-6.0%
74+50		3.8%	-6.0%
75+00	END FULL SUPER RT	2.7%	-6.0%
75+50		1.6%	-4.7%
76+00		0.5%	-3.3%
76+50		-0.5%	-2.0%
77+00		-1.6%	-0.7%
77+50		-2.7%	0.7%
78+00		-3.8%	2.0%
78+50		-4.9%	3.3%
79+00	BEGIN FULL SUPER LT	-6.0%	4.7%
79+50	BEGIN FULL SUPER RT	-6.0%	6.0%
80+00		-6.0%	6.0%
80+50		-6.0%	6.0%
81+00		-6.0%	6.0%
81+50		-6.0%	6.0%
82+00		-6.0%	6.0%
82+50		-6.0%	6.0%
83+00		-6.0%	6.0%
83+50		-6.0%	6.0%
84+00		-6.0%	6.0%
84+50		-6.0%	6.0%
85+00	END FULL SUPER LT	-6.0%	6.0%
85+50	END FULL SUPER RT	-5.3%	6.0%
86+00		-4.7%	5.0%
86+50		-4.0%	4.0%
87+00		-3.3%	3.0%
87+50		-2.7%	2.0%
88+00	END SUPER LT	-2.0%	1.0%
88+50		-2.0%	0.0%
89+00		-2.0%	-1.0%
89+50	END SUPER RT	-2.0%	-2.0%
90+00		-2.0%	-2.0%
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91+00		-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB CURVE 6

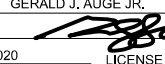
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106+00		-2.0%	-2.0%
106+50	BEGIN SUPER RT	-2.0%	-2.0%
107+00		-2.0%	-0.4%
107+50	BEGIN SUPER LT	-2.0%	1.2%
108+00		-3.0%	2.8%
108+50		-4.0%	4.4%
109+00	BEGIN FULL SUPER RT	-5.0%	6.0%
109+50	BEGIN FULL SUPER LT	-6.0%	6.0%
110+00		-6.0%	6.0%
110+50	END FULL SUPER RT/LT	-6.0%	6.0%
111+00		-5.2%	4.7%
111+50		-4.4%	3.3%
112+00		-3.6%	2.0%
112+50		-2.8%	0.7%
113+00	END SUPER LT	-2.0%	-0.7%
113+50	END SUPER RT	-2.0%	-2.0%
114+00		-2.0%	-2.0%
114+50		-2.0%	-2.0%
115+00		-2.0%	-2.0%
115+50		-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB CURVE 7


STATION	POINT	LEFT GRADE	RIGHT GRADE
115+00		2.0%	-2.0%
115+50		2.0%	-2.0%
116+00		2.0%	-2.0%
116+50	BEGIN SUPER RT/LT	2.0%	-2.0%
117+00		3.0%	-3.3%
117+50		4.0%	-4.7%
118+00	BEGIN FULL SUPER RT	5.0%	-6.0%
118+50	BEGIN FULL SUPER LT	6.0%	-6.0%
119+00		6.0%	-6.0%
119+50		6.0%	-6.0%
120+00	END FULL SUPER LT	6.0%	-6.0%
120+50		4.8%	-6.0%
121+00	END FULL SUPER RT	3.6%	-6.0%
121+50		2.4%	-4.7%
122+00		1.2%	-3.3%
122+50		0.0%	-2.0%
123+00		-1.2%	-0.7%
123+50		-2.4%	0.7%
124+00		-3.6%	2.0%
124+50		-4.8%	3.3%
125+00	BEGIN FULL SUPER LT	-6.0%	4.7%
125+50	BEGIN FULL SUPER RT	-6.0%	6.0%
126+00		-6.0%	6.0%
126+50	END FULL SUPER LT/RT	-6.0%	6.0%
127+00		-4.0%	4.7%
127+50		-2.0%	3.3%
128+00	END SUPER RT	0.0%	2.0%
128+50	END SUPER LT	2.0%	2.0%
129+00		2.0%	2.0%

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\20-01-00\CSAH_76_(CSAH85-CSAH35)\Base\Proposed\Proposed.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: 02-21-2020 LICENSE NO. 26511

DRAWN BY: APA DATE: 1/15/2020
 DESIGN BY: APA DATE: 1/15/2020
 CHECKED BY: CO DATE: 1/28/2020

 **ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-676-002

**SUPERELEVATION
TABULATION**
 Sheet 7 of 21 Sheets

APAnders

POT. 10+00.00

BEGIN CONSTRUCTION
SAP 002-676-002
STATION:12+00.00

PI . 16+33.14

CL CSAH 76

WEST TYPO LAKE DR

#6847

#6828

PT. 23+76.75

#6847



0 100
SCALE IN FEET

LEGEND

(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE (RECLAIM)
(C)	CONCRETE	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
(G)	GRAVEL	[Dashed Line]	SAWCUT
(●)	CORE LOCATION	[Solid Line]	R / W

MATCH LINE 24+50

TYPO CREEK

TYPO LAKE

PC. 28+09.77

PCC. 29+89.93

PT. 34+30.84

PAVE BITUMINOUS APPROACH

TYPO LAKE BOAT ACCESS



0 100
SCALE IN FEET

#6940

#6940

CL CSAH 76

#7024

MATCH LINE 38+00

NO	DATE	BY	CHKD	APPR	REVISION	DATE	TIME
	03/11/2020					11:52:25 AM	

NAME: P:\20-01-00\CSAH_76_(CSAH85-CSAH35)\Base\Proposed\Proposed.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: 02-21-2020 LICENSE NO. 26511

DRAWN BY: APA DATE: 1/15/2020

DESIGN BY: APA DATE: 1/15/2020

CHECKED BY: CO DATE: 1/28/2020

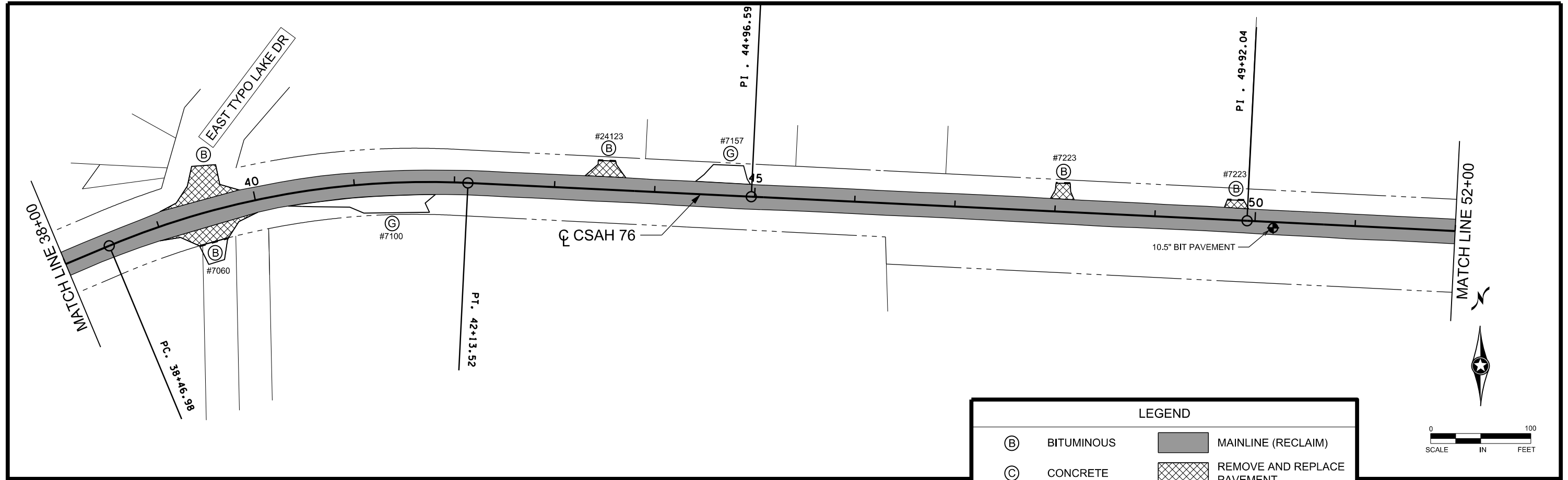


**ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-676-002

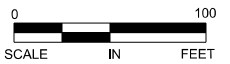
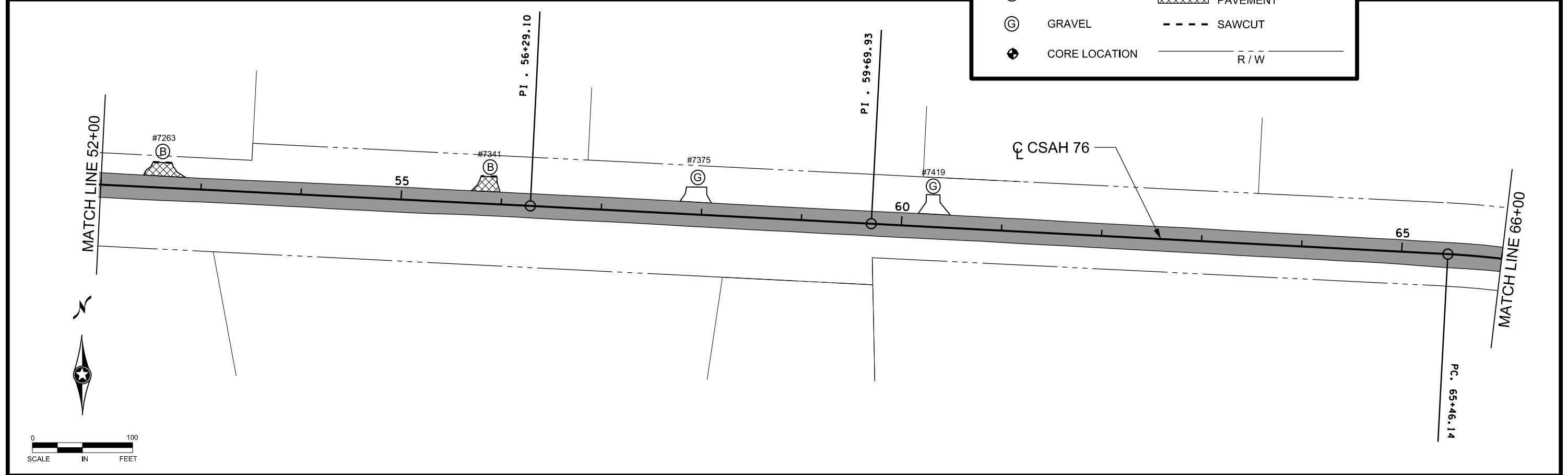
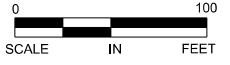
CONSTRUCTION PLAN
STA 12+00 TO 38+00
Sheet 8 of 21 Sheets

APAnders



LEGEND

(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE (RECLAIM)
(C)	CONCRETE	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
(G)	GRAVEL	[Dashed Line]	SAWCUT
⊕	CORE LOCATION	[Solid Line]	R / W



NO	DATE	BY	CKD	APPR	REVISION	
	03/11/2020					11:52:25 AM

NAME: P:\20-01-00\CSAH_76_(CSAH85-CSAH35)\Base\Proposed\Proposed.dgn

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PRINT NAME: GERALD J. AUGER JR.

SIGNATURE: *[Signature]*

DATE: 02-21-2020 LICENSE NO. 26511

DRAWN BY: APA DATE: 1/15/2020

DESIGN BY: APA DATE: 1/15/2020

CHECKED BY: CO DATE: 1/28/2020

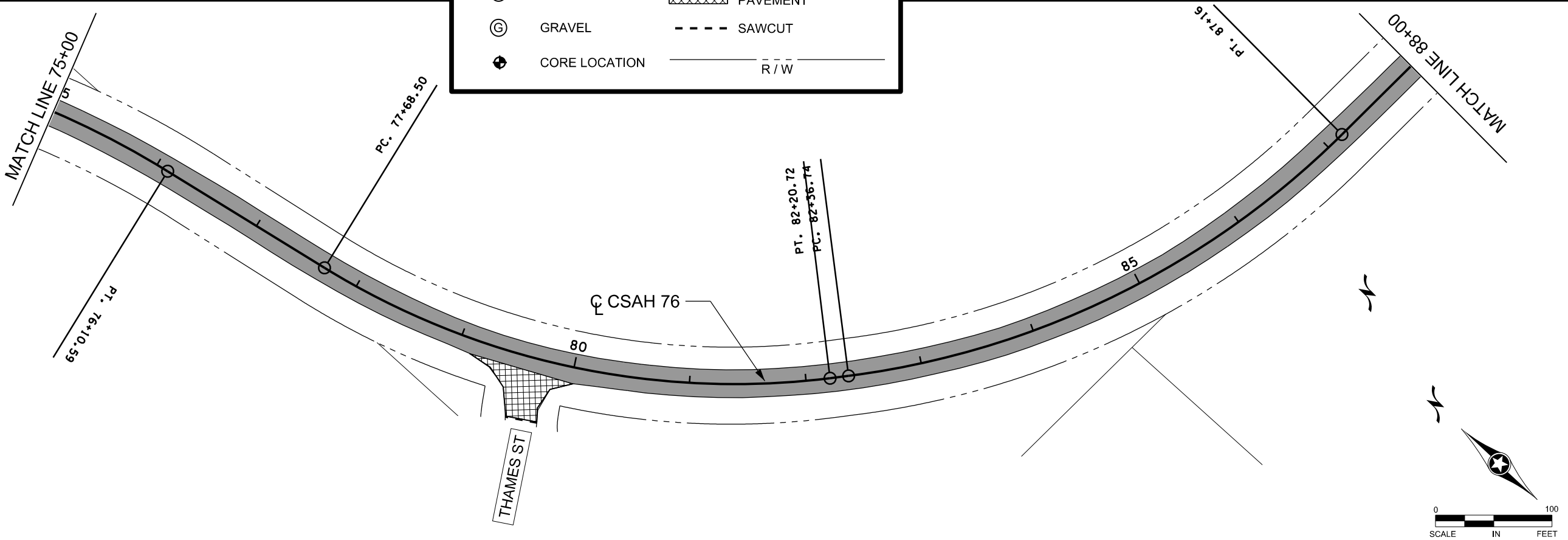
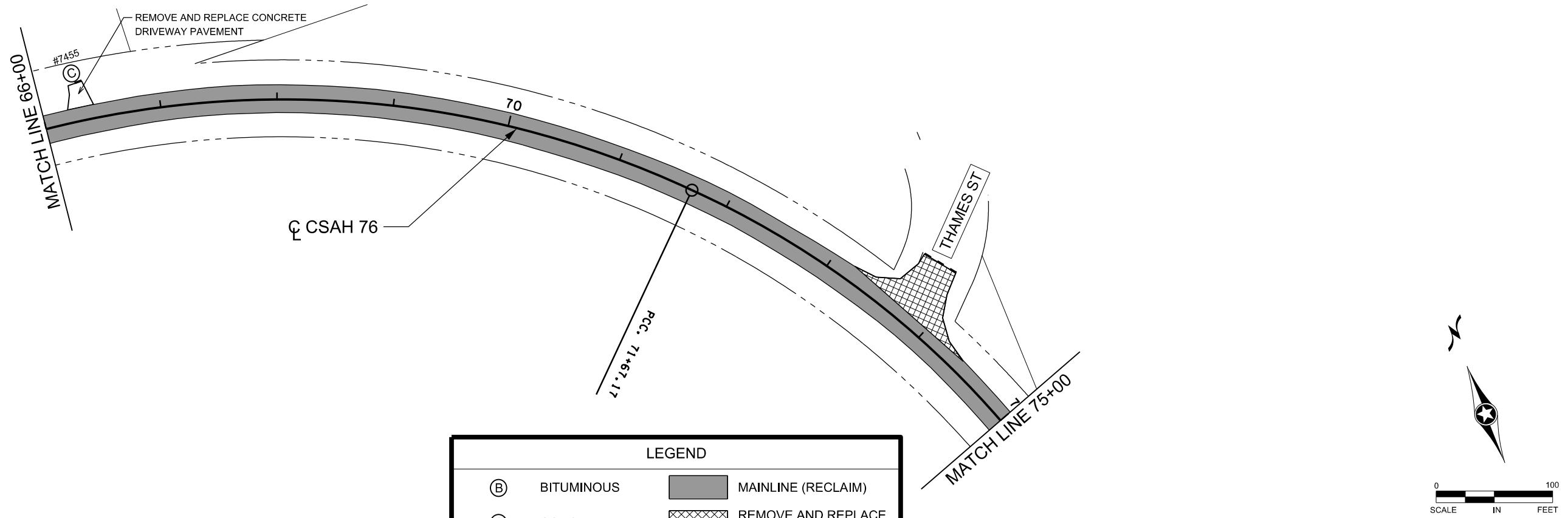
**ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-676-002

CONSTRUCTION PLAN

STA 38+00 TO 66+00

Sheet 9 of 21 Sheets



LEGEND			
(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE (RECLAIM)
(C)	CONCRETE	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
(G)	GRAVEL	[Dashed Line]	SAWCUT
(•)	CORE LOCATION	[Dotted Line]	R / W

NO	DATE	BY	CKD	APPR	REVISION	
	03/11/2020					11:52:26 AM

NAME: P:\20-01-00\CSAH_76_(CSAH85-CSAH35)\Base\Proposed\Proposed.dgn

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PRINT NAME: GERALD J. AUGER JR.

SIGNATURE: *[Signature]*

DATE: 02-21-2020 LICENSE NO. 26511

DRAWN BY: APA DATE: 1/15/2020

DESIGN BY: APA DATE: 1/15/2020

CHECKED BY: CO DATE: 1/28/2020

ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-676-002

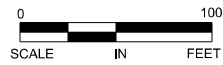
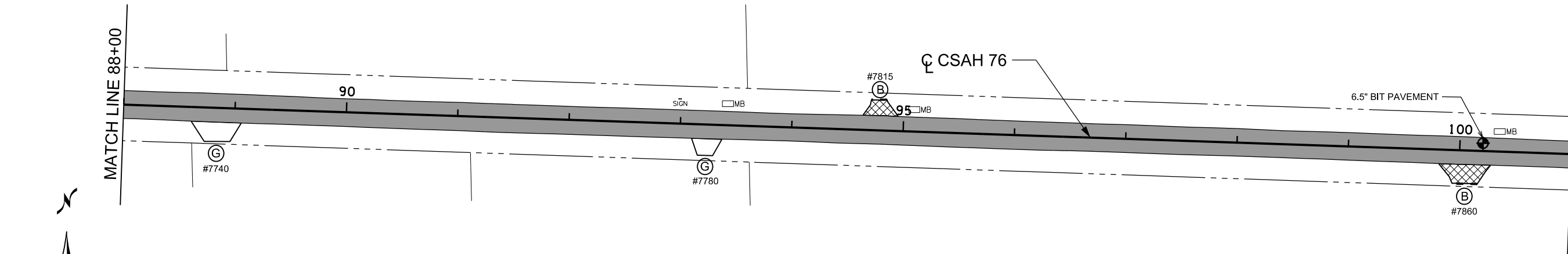
CONSTRUCTION PLAN

STA 66+00 TO 88+00

Sheet 10 of 21 Sheets

MATCH LINE 88+00

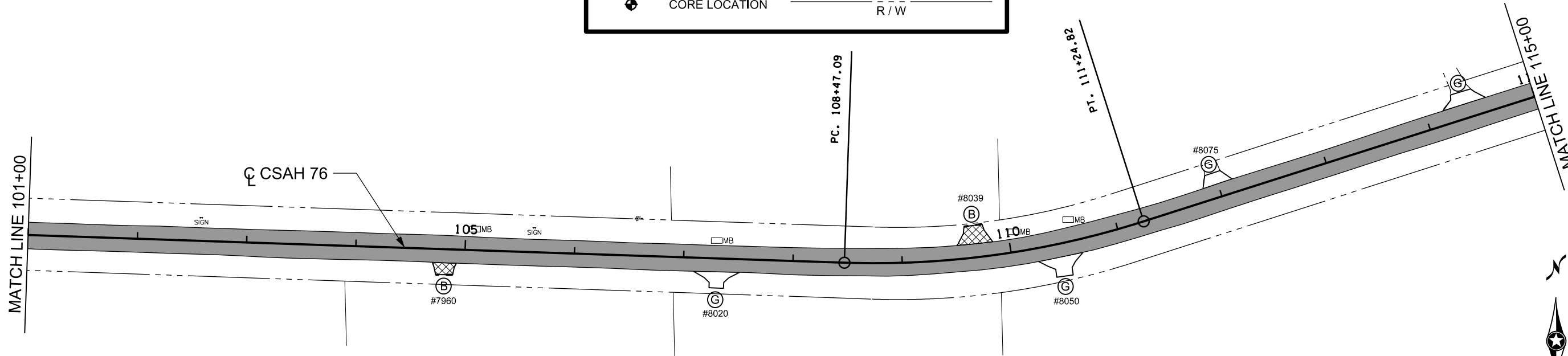
MATCH LINE 101+00



LEGEND			
(B)	BITUMINOUS	[Shaded Box]	MAINLINE (RECLAIM)
(C)	CONCRETE	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
(G)	GRAVEL	[Dashed Line]	SAWCUT
(C with dot)	CORE LOCATION	[Solid Line]	R / W

MATCH LINE 101+00

MATCH LINE 115+00



NO	DATE	BY	CKD	APPR	REVISION	03/11/2020	11:52:27 AM
NAME: P:\20-01-00\CSAH_76_(CSAH85-CSAH35)\Base\Proposed\Proposed.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: 02-21-2020 LICENSE NO. 26511

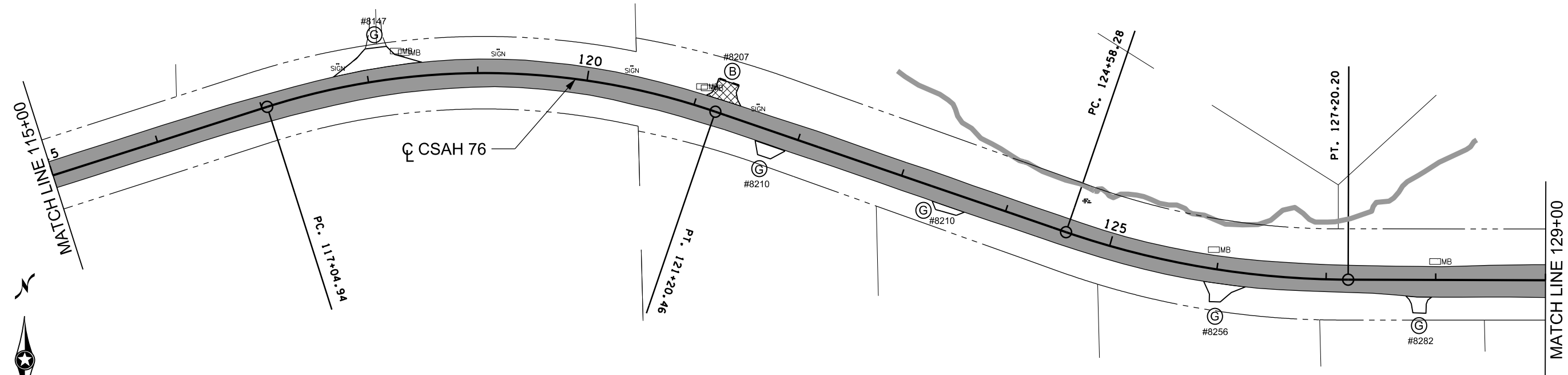
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 DESIGN BY: APA DATE: 1/15/2020
 CHECKED BY: CO DATE: 1/28/2020



**ANOKA COUNTY
HIGHWAY DEPT.**

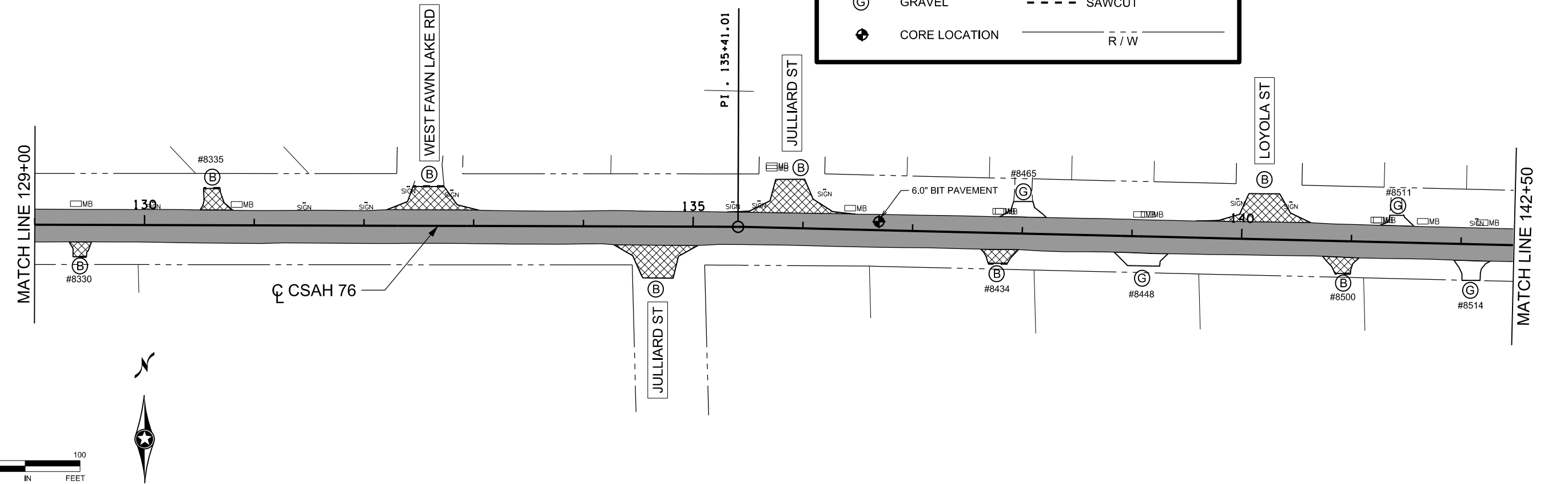
STATE AID PROJECT 002-676-002

CONSTRUCTION PLAN
 STA 88+00 TO 115+00
 Sheet 11 of 21 Sheets



LEGEND

(B)	BITUMINOUS	[Hatched Box]	REMOVE AND REPLACE PAVEMENT
(C)	CONCRETE	[Dashed Line]	SAWCUT
(G)	GRAVEL	[Solid Line]	R / W
(●)	CORE LOCATION	[Grey Box]	MAINLINE (RECLAIM)



NO	DATE	BY	CKD	APPR	REVISION	03/11/2020	11:52:27 AM

NAME: P:\20-01-00\CSAH_76_(CSAH85-CSAH35)\Base\Proposed\Proposed.dgn

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PRINT NAME: GERALD J. AUGER, JR.

SIGNATURE: *[Signature]*

DATE: 02-21-2020 LICENSE NO. 26511

DRAWN BY: APA DATE: 1/15/2020

DESIGN BY: APA DATE: 1/15/2020

CHECKED BY: CO DATE: 1/28/2020

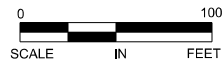
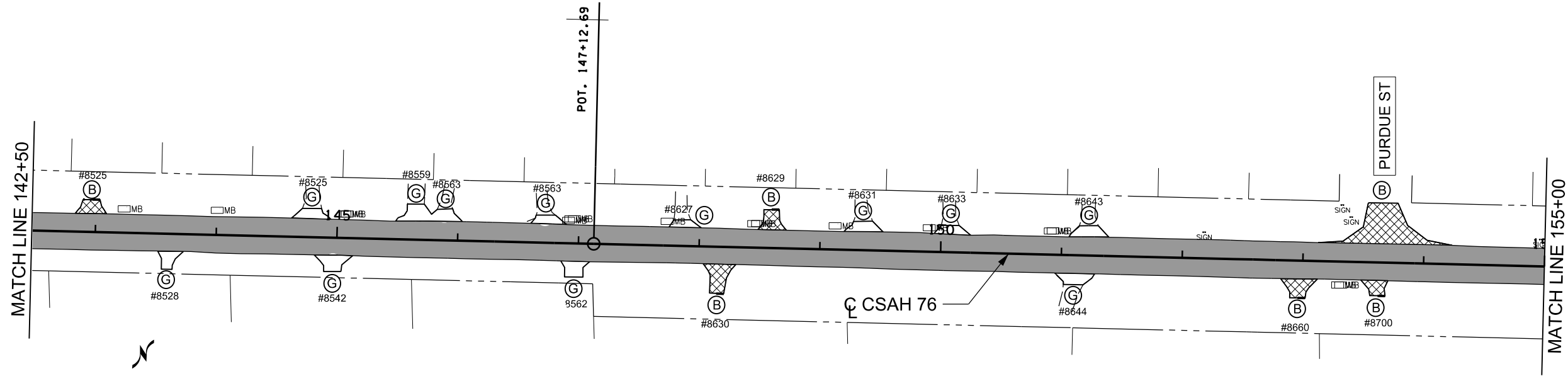
**ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-676-002

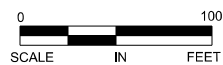
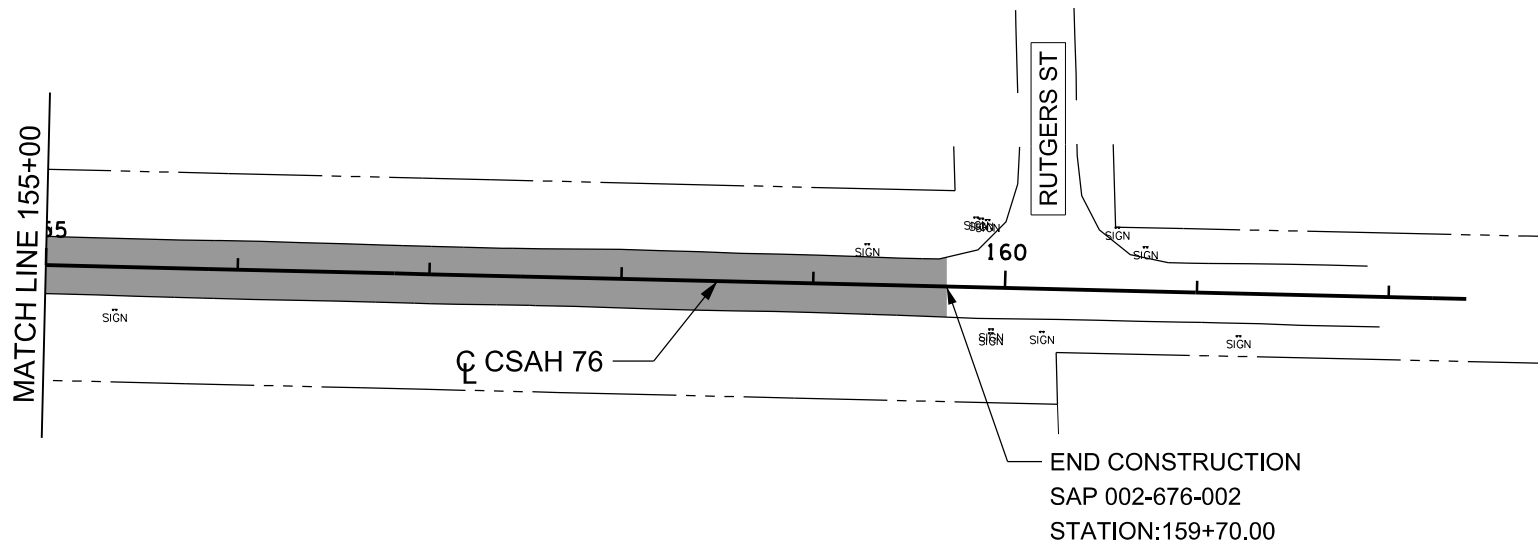
CONSTRUCTION PLAN

STA 115+00 TO 142+50

Sheet 12 of 21 Sheets



LEGEND			
(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE (RECLAIM)
(C)	CONCRETE	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
(G)	GRAVEL	[Dashed Line]	SAWCUT
(*)	CORE LOCATION	[Solid Line]	R / W



NO	DATE	BY	CKD	APPR	REVISION	
	03/11/2020					11:52:28 AM

NAME: P:\20-01-00\CSAH_76_(CSAH85-CSAH35)Base\Proposed\Proposed.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: 02-21-2020 LICENSE NO. 26511

DRAWN BY: APA DATE: 1/15/2020

DESIGN BY: APA DATE: 1/15/2020

CHECKED BY: CO DATE: 1/28/2020



**ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-676-002

CONSTRUCTION PLAN
STA 142+50 TO 159+70
Sheet 13 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 FAHRENHEIT 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	29560
4" BROKEN LINE YELLOW - MULTI COMP	LIN FT	1658
4" SOLID LINE YELLOW - MULTI COMP	LIN FT	4360
4" DOUBLE LINE YELLOW - MULTI COMP	LIN FT	6390

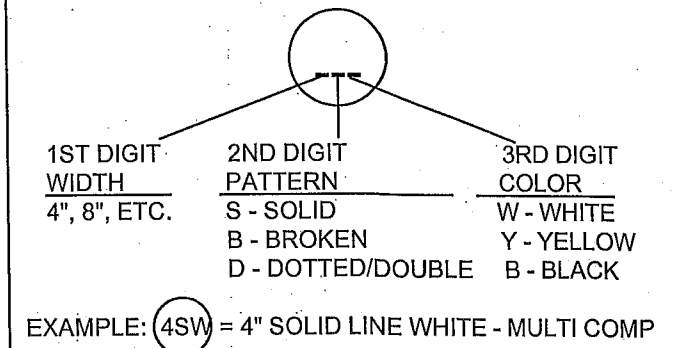
1 10' STRIPE, 40' GAP

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	CHKD	APPR	REVISION

NAME: P:\20-01-00\CR 76\BaselTrafficPerm Pvrmt 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: 2-21-19 REG. NO. 46732

DRAWN BY: TMV DATE: 12/20/19
 DESIGN BY: DATE:
 CHECKED BY: DATE:



**ANOKA COUNTY
HIGHWAY DEPT.**

SAP 002-676-002

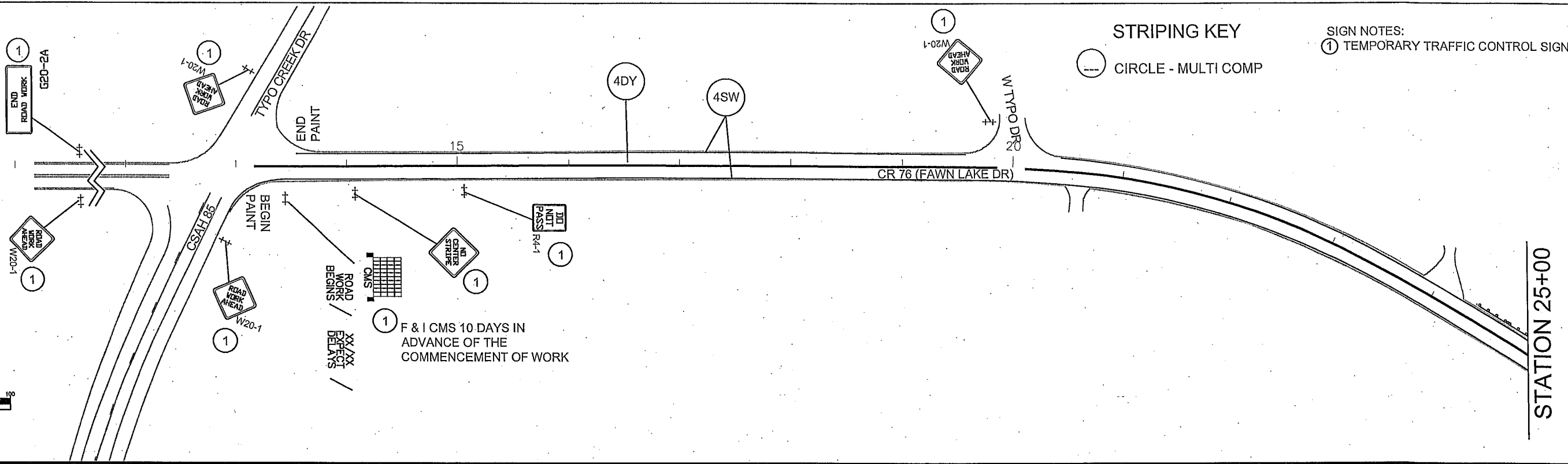
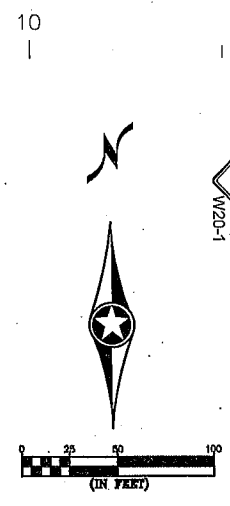
**PERMANENT MARKING
TABULATION**

Sheet 14 of 21 Sheets

STRIPING KEY

CIRCLE - MULTI COMP

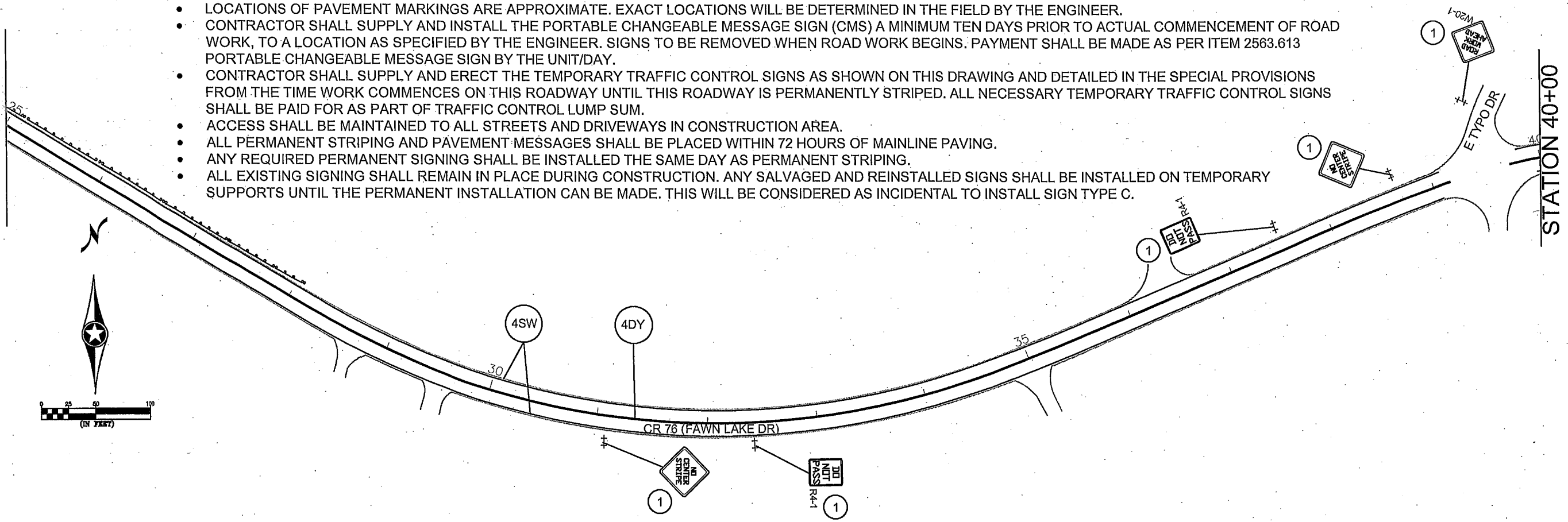
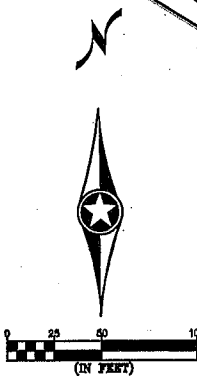
SIGN NOTES:
 ① TEMPORARY TRAFFIC CONTROL SIGN



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 INSTALL 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 25+00



STATION 40+00

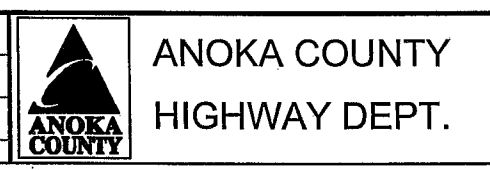
NO	DATE	BY	CKD	APPR	REVISION

NAME: P120-01-00\CSAH 76\Base\Traffic\Perm 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: JOSEPH W. MACPHERSON
 SIGNATURE: *[Signature]*
 DATE: 2/21/19 LICENSE NO. 48732

DRAWN BY: TMV DATE: 12/17/19
 DESIGN BY: DATE: _____
 CHECKED BY: DATE: _____



SAP 002-676-002

TEMPORARY SIGNING
 PERMANENT STRIPING

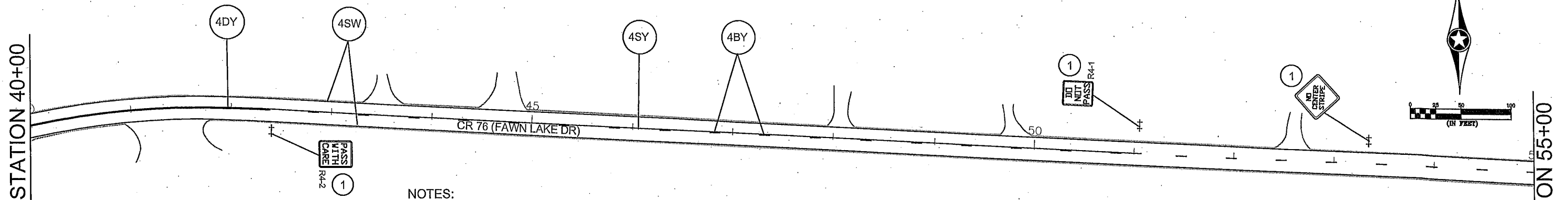
Sheet 15 of 21 Sheets

STRIPING KEY

○ CIRCLE - MULTI COMP

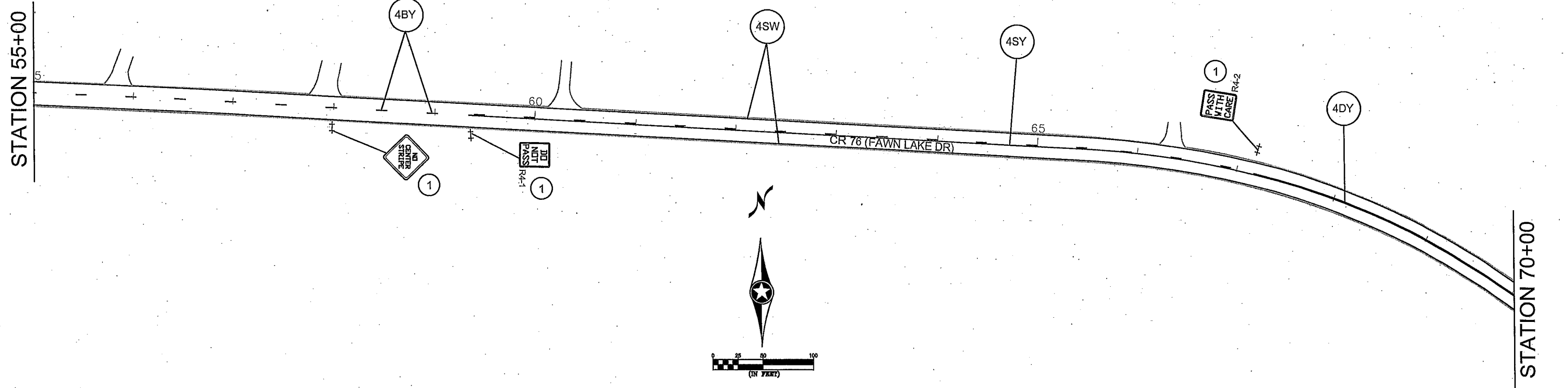
SIGN NOTES:

① TEMPORARY TRAFFIC CONTROL SIGN



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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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. MATTHEWSON
 SIGNATURE: *[Signature]*
 DATE: 2/24/20 LICENSE NO. 48732

DRAWN BY: TMV DATE 12/17/19
 DESIGN BY: DATE
 CHECKED BY: DATE



ANOKA COUNTY
 HIGHWAY DEPT.

SAP 002-676-002

TEMPORARY SIGNING
 PERMANENT STRIPING

Sheet 16 of 21 Sheets

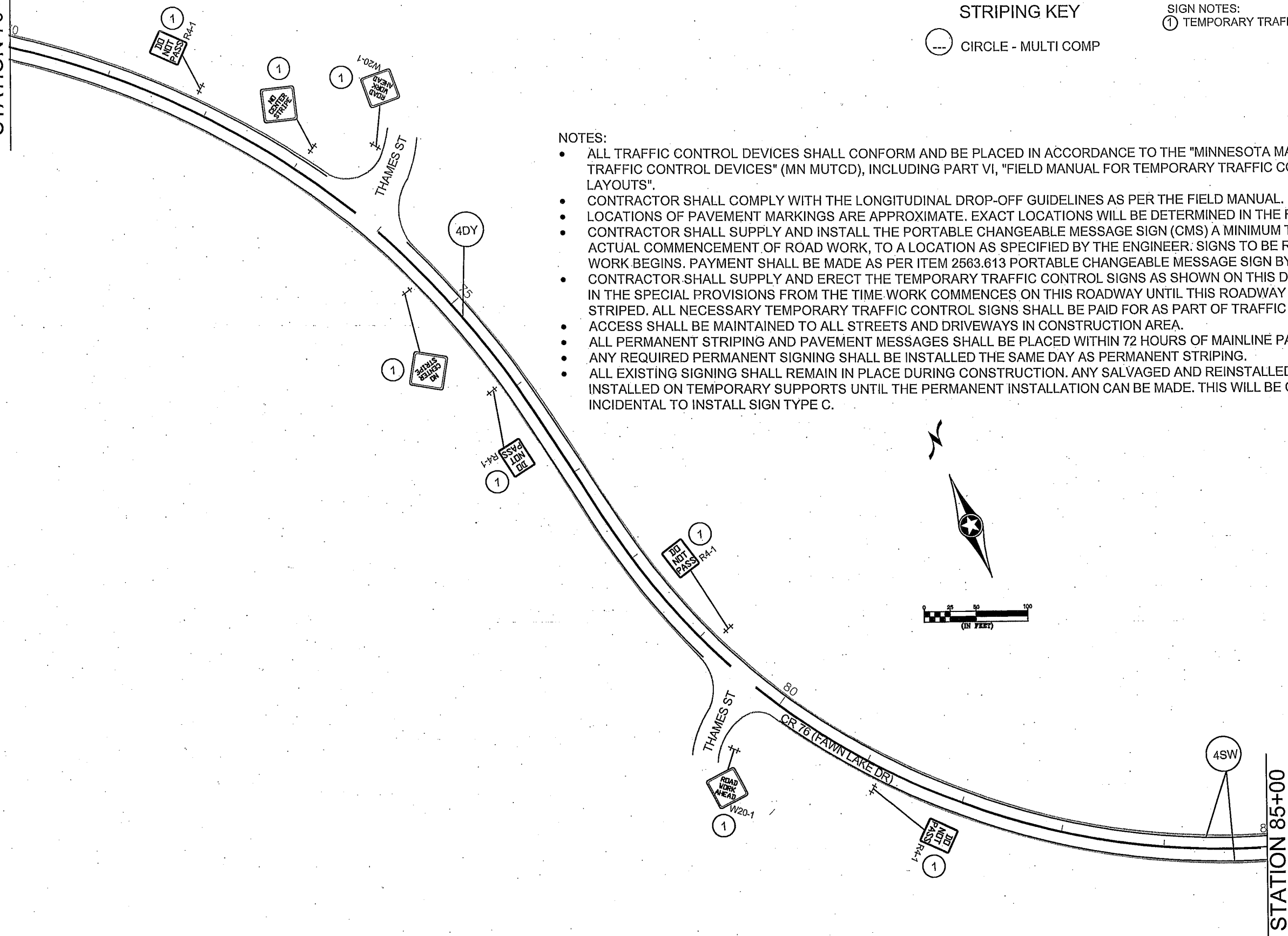
NO	DATE	BY	CKD	APPR	REVISION

STATION 70+00

STRIPING KEY

CIRCLE - MULTI COMP

SIGN NOTES:
 ① TEMPORARY TRAFFIC CONTROL SIGN



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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
 SIGNATURE: *[Signature]*
 DATE: 2-24-20 LICENSE NO. 48732

DRAWN BY: TMV DATE: 12/17/19
 DESIGN BY: DATE: _____
 CHECKED BY: DATE: _____



ANOKA COUNTY
 HIGHWAY DEPT.

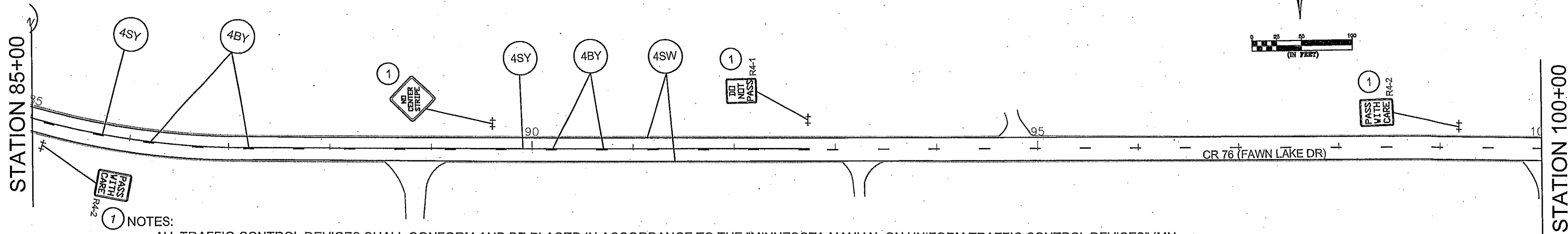
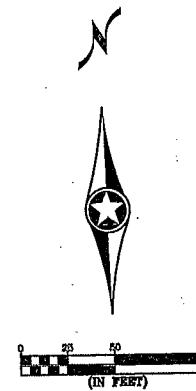
SAP 002-676-002

TEMPORARY SIGNING
 PERMANENT STRIPING

NAME: P120-01-00\CSAH 76\Base\Traffic\Perm Striping

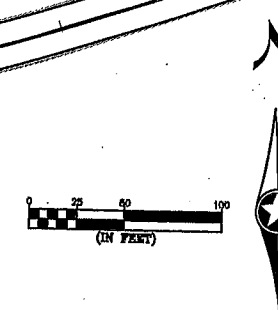
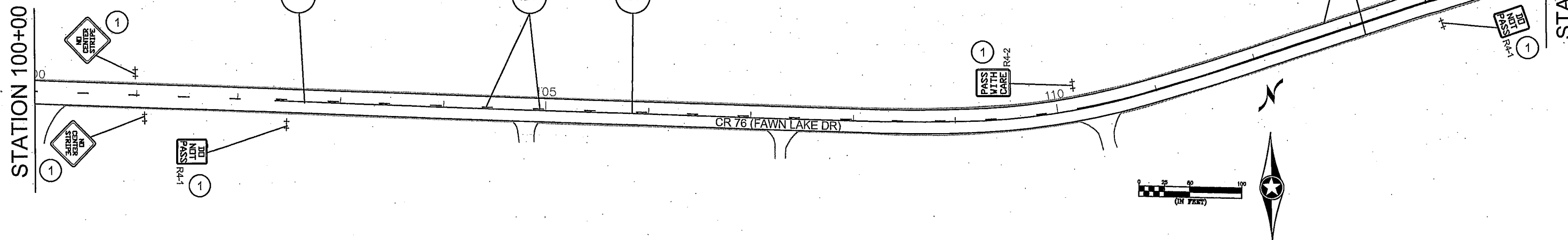
SIGN NOTES:
 ① TEMPORARY TRAFFIC CONTROL SIGN

STRIPING KEY
 ○ CIRCLE - MULTI COMP



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 PRINT NAME: JOSEPH J. MACPHERSON
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 DATE: 2-24-20 LICENSE NO. 46732

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 CHECKED BY: DATE:



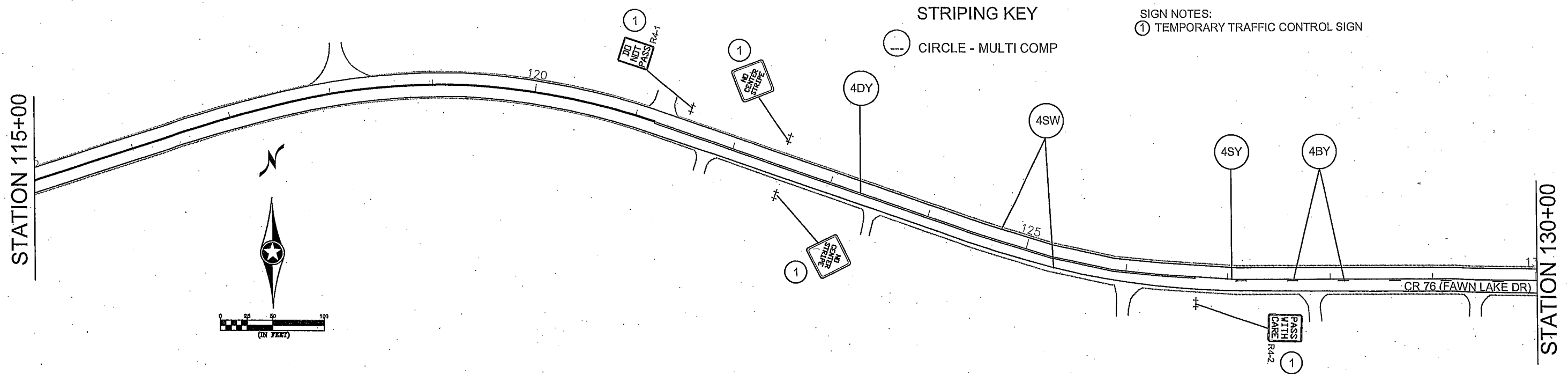
ANOKA COUNTY
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TEMPORARY SIGNING
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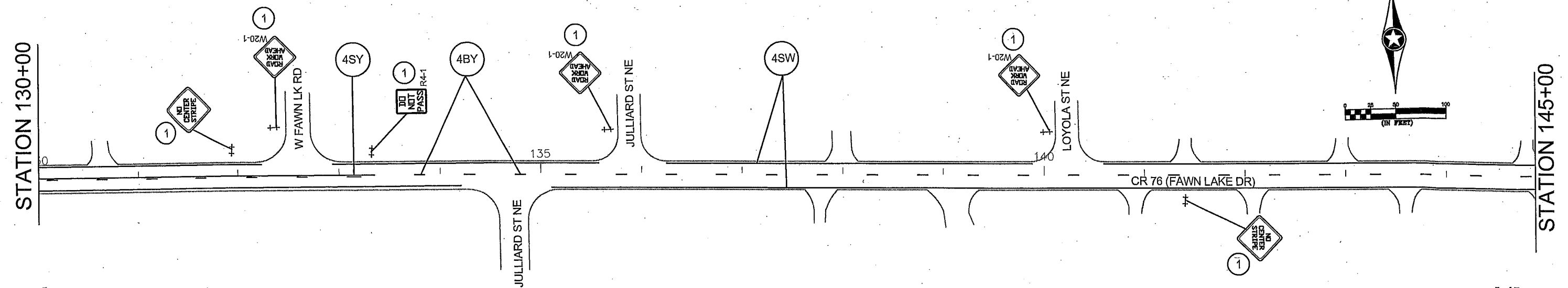
NO	DATE	BY	CKD	APPR	REVISION

NAME: P20-01-00\CSAH 76\Base\Traffic\Perm Striping



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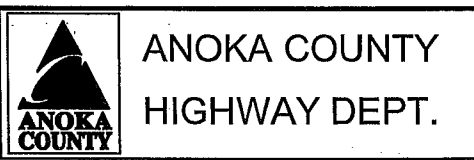
NO	DATE	BY	CKD	APPR	REVISION

NAME: P120-01-001CSAH 7@BaseTrafficPerm Striping

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PRINT NAME: JOSEPH J. MACHERSON
 SIGNATURE: *[Signature]*
 DATE: 2-24-20 LICENSE NO. 46732

DRAWN BY: TMV DATE: 12/17/19
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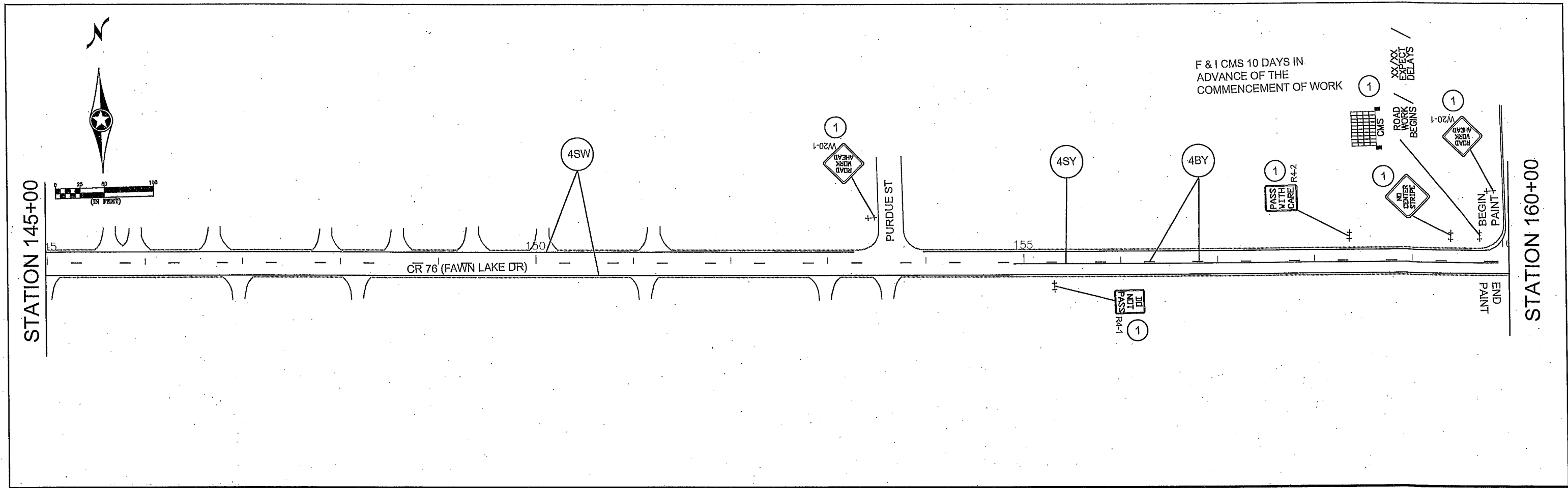


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TEMPORARY SIGNING
 PERMANENT STRIPING

Sheet 19 of 21 Sheets



STRIPING KEY

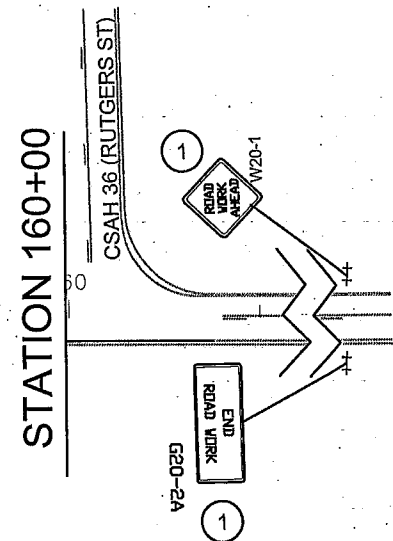
○ CIRCLE - MULTI COMP

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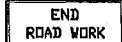









DRAWN BY: TMV DATE: 12/17/19
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ANOKA COUNTY
 HIGHWAY DEPT.

SAP 002-676-002

TEMPORARY SIGNING
 PERMANENT STRIPING

TEMPORARY TRAFFIC CONTROL SIGNS						
M.U.T.C.D. CODE	SIZE	PANEL AREA	INSERT	QUANTITY		MOUNTING HEIGHT (to pavement edge) FT.
		FT. ²			No. POST	
W8-12	48" x 48"	16.00		15	2	7.0'
R4-1	24" x 30"	5.00		15	1	7.0'
R4-2	24" x 30"	5.00		6	1	7.0'
G20-2A	48" x 24"	8.00		2	2	7.0'
W8-1A	48" x 48"	16.00		AS NEEDED		
W8-1A	48" x 48"	16.00		AS NEEDED		
W8-8	48" x 48"	16.00		AS NEEDED		
W8-9	48" x 48"	16.00		AS NEEDED		
	48" x 48"	16.00		AS NEEDED		
W8-11	48" x 48"	16.00		AS NEEDED		
W20-1	48" x 48"	16.00		AS NEEDED (ESTIMATED 13)		
REFLECTORIZED REBOUNDABLE DRUM				AS NEEDED (ESTIMATED 10)		
CMS sign to be installed 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	

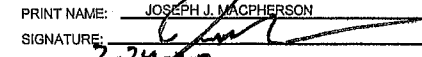
	<	D	A	T	E	>	
	E	X	P	E	C	T	
	D	E	L	A	Y	S	

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NO	DATE	BY	CKD	APPR	REVISION

NAME: P20-01-00(CSAH 76)BaseTrafficPerm Striping

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PRINT NAME: JOSEPH J. MACPHERSON
 SIGNATURE: 
 DATE: 2-21-10 LICENSE NO. 46732

DRAWN BY: TMV DATE: 12/17/09
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ANOKA COUNTY
 HIGHWAY DEPT.

SAP 002-676-002

TEMPORARY SIGNING
 QUANTITIES