

STATEMENT OF ESTIMATED QUANTITIES

Notes	Item Number	Code	ITEM DESCRIPTION	Unit	TOTAL PROJECT QUANTITIES ESTIMATED
	2021.501	00010	MOBILIZATION	LUMP SUM	1
	2104.502	02490	SALVAGE PIPE APRON	EACH	1
	2104.502	03450	SALVAGE SIGN PANEL TYPE C	EACH	5
1	2104.503	00205	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	2276
1,2	2104.504	00110	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	277
1,2	2104.504	00120	REMOVE BITUMINOUS PAVEMENT	SQ YD	1042
	2105.607	00015	COMMON EXCAVATION	CU YD	325
	2105.607	00190	SELECT GRANULAR BORROW (LV)	CU YD	2651
3	2123.510	00020	MOTOR GRADER	HOURL	24
4	2123.510	00130	DOZER	HOURL	8
	2130.523	00010	WATER	M GALLON	488
5	2211.509	00070	AGGREGATE BASE CLASS 5	TON	1119
	2215.504	00010	FULL DEPTH RECLAMATION	SQ YD	69710
6	2215.507	00010	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	80
7	2215.509	00030	AGGREGATE BASE	TON	1904
8	2221.509	00080	SHOULDER BASE AGGREGATE CLASS 5	TON	1346
9	2232.504	00060	MILL BITUMINOUS SURFACE (2.0")	SQ YD	257
	2357.506	00010	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	3538
10	2360.509	13200	TYPE SP 9.5 WEARING COURSE MIXTURE (3;B)	TON	40
11	2360.509	24300	TYPE SP 12.5 WEARING COURSE MIXTURE (4;C)	TON	264
	2360.509	24300	TYPE SP 12.5 WEARING COURSE MIXTURE (4;C)	TON	16682
	2501.502	45070	INSTALL PIPE APRON	EACH	1
	2501.503	05036	36" CP PIPE CULVERT	LIN FT	16
12	2540.602	00150	MAIL BOX SUPPORT	EACH	33
13	2563.601	00010	TRAFFIC CONTROL	LUMP SUM	1
14	2563.613	01100	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	40
	2564.502	00113	INSTALL SIGN PANEL TYPE C	EACH	5
	2564.518	00130	SIGN PANELS TYPE C	SQ FT	12.50
	2573.503	00023	SILT FENCE, TYPE MS	LIN FT	1272
	2574.507	00100	COMMON TOPSOIL BORROW	CU YD	508
15	2575.508	40003	HYDRAULIC REINFORCED FIBER MATRIX	POUND	3764
16	2581.503	00010	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	LIN FT	1900
17	2582.503	30104	4" SOLID LINE MULTI-COMPONENT	LIN FT	52018
17	2582.503	30204	4" BROKEN LINE MULTI-COMPONENT	LIN FT	2480
17	2582.503	30308	8" DOTTED LINE MULTI-COMPONENT	LIN FT	180
17	2582.503	30404	4" DOUBLE SOLID LINE MULTI-COMPONENT	LIN FT	11574

CONSTRUCTION NOTES

1	REFERENCE DETAILS (PAGE 5-6) 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 MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIM AREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING PAVEMENT
4	TO BE USED FOR DITCH GRADING AT NEW BYPASSES TO PROVIDE POSITIVE DRAINAGE.
5	INCLUDES GRAVEL BASE FOR BITUMINOUS DRIVEWAYS.
6	ITEM USED TO HAUL EXCESS RECLAIM FROM TIE-IN POINTS AND REUSED ON SITE FOR SUPERELEVATION CORRECTIONS.
7	PLACE 2" OF AGGREGATE BASE OVER THE ENTIRE WIDTH OF THE ROADWAY BETWEEN STATIONS 25+00 - 85+00. PLACE AGGREGATE IN FRONT OF RECLAMATION PROCESS TO COMBINE IN WITH EXISTING PAVEMENT AND BASE. SEE SPECIAL PROVISIONS FOR GRADATION
8	ITEM INCLUDES 7 TONS FOR EACH GRAVEL ENTRANCE AND GRAVEL STREET APPROACH.
9	ITEM INCLUDES 2" DEEP MILL AT BEGINNING AND END OF PROJECT, ALL PAVED ST APPROACHES, AND DRIVEWAYS; SEE DETAILS FOR DIMENSIONS
10	ITEM FOR BITUMINOUS DRIVEWAYS. DRIVEWAYS SHALL BE PAVED AFTER MAINLINE AND BEFORE FINAL STRIPING.
11	ITEM FOR STREET APPROACHES. STREET APPROACHES SHALL BE PAVED AFTER MAINLINE, AND BEFORE FINAL STRIPING
12	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.
13	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.
14	4 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT, SHALL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
15	TYPE 3 FERTILIZER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM. SEE "BASIS OF PLANNED QUANTITIES" FOR APPLICATION RATES.
16	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.
17	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING. CANNOT BE INSTALLED SOONER THAN 48 HOURS.

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

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

NO	DATE	BY	CKD	APPR	REVISION	1:14:22 PM
					02/09/2022	

NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR 76 SEQ.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: AARON P. ANDERSON

SIGNATURE: 

DATE: 2/9/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021

DESIGN BY SRK DATE 12/01/2021

CHECKED BY APA DATE 2/9/2022



**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 21-37-76

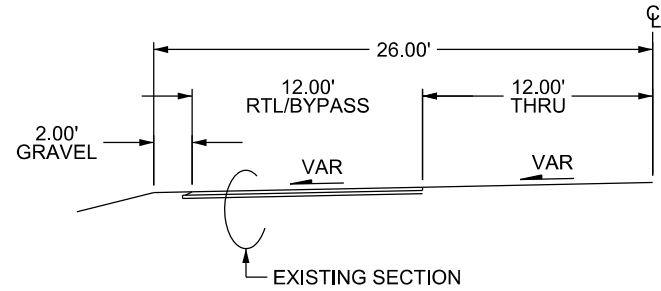
STATEMENT OF ESTIMATED QUANTITIES

Sheet 2 of 33 Sheets

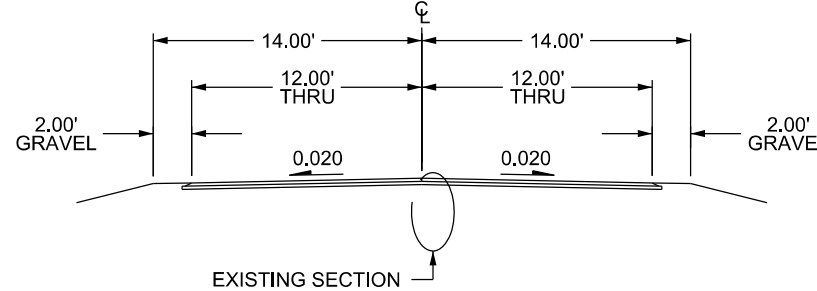
CR 76 - FAWN LAKE DRIVE

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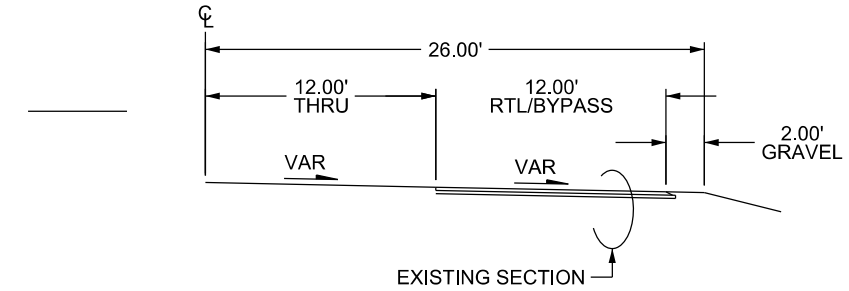
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205+87.00 - 212+03.00 222+38.00 - 227+83.00



11+00.00 - 175+62.00 184+24.00 - 191+89.00
197+56.00 - 203+71.00 212+03.00 - 219+12.00
227+83.00 - 235+16.00



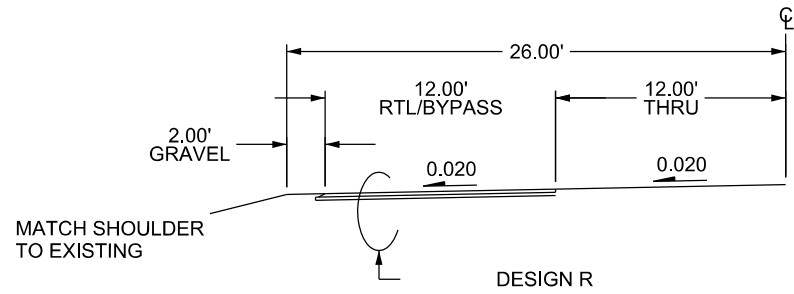
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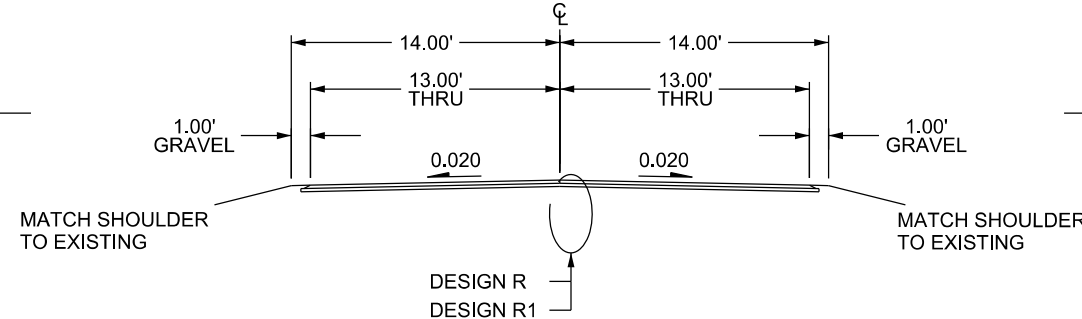
CR 76 - FAWN LAKE DRIVE

PROPOSED SECTION

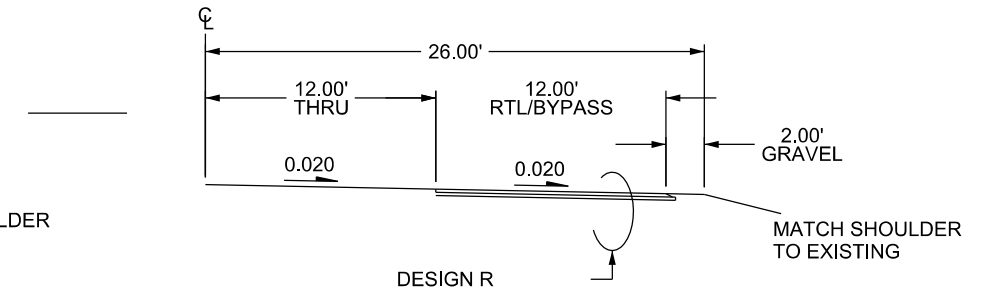
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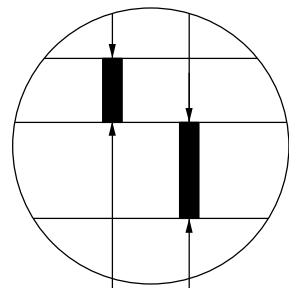
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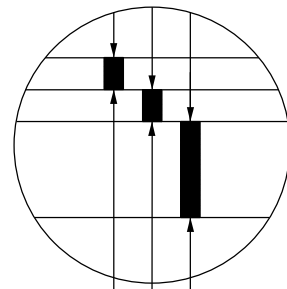


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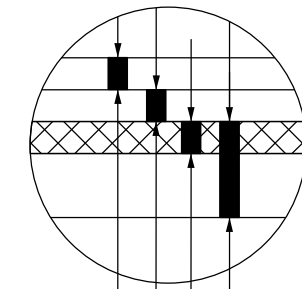
3.75" - 6.75" EXISTING BITUMINOUS
EXISTING GRANULAR BASE

DESIGN R RECLAIM SECTION



2.0" BITUMINOUS WEAR(SPWEB440C)
2.0" BITUMINOUS WEAR(SPWEB440C)
RECLAIMED BITUMINOUS

DESIGN R1 RECLAIM SECTION STA: 25+00 - 85+00



2.0" BITUMINOUS WEAR(SPWEB440C)
2.0" BITUMINOUS WEAR(SPWEB440C)
2" AGGREGATE BASE
RECLAIMED AGGREGATE & BITUMINOUS

NO	DATE	BY	CKD	APPR	REVISION	TIME
	02/09/2022					1:14:28 PM

NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR 76_TYPICALS.dgn

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PRINT NAME: AARON P. ANDERSON
SIGNATURE:

DATE: 2/9/2022 LICENSE NO. 58657

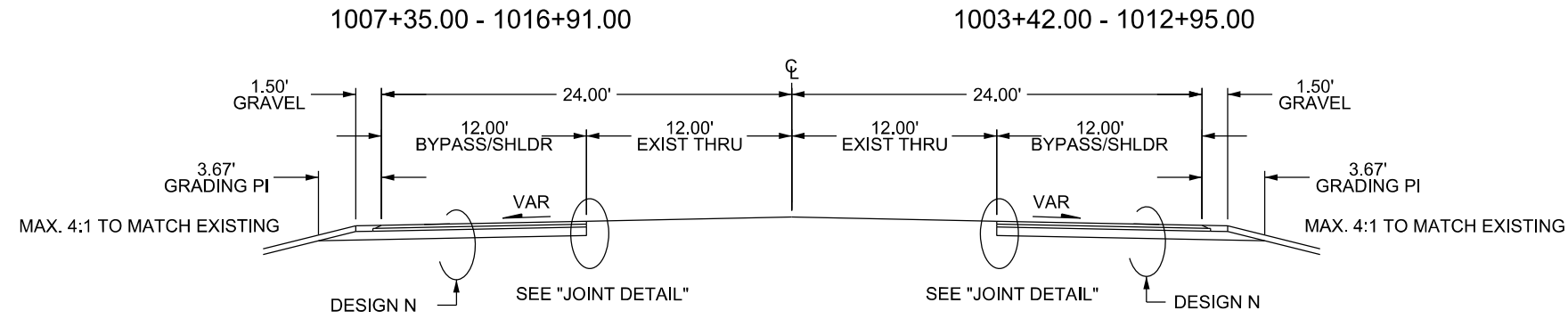
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DESIGN BY: SRK DATE: 12/01/2021
CHECKED BY: APA DATE: 2/9/2022

ANOKA COUNTY
HIGHWAY DEPT.

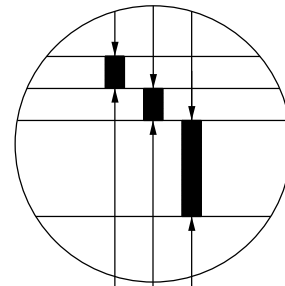
COUNTY PROJECT 21-37-76

TYPICAL SECTIONS
Sheet 3 of 33 Sheets

CSAH 76 THAMES ST BYPASS/SHOULDER

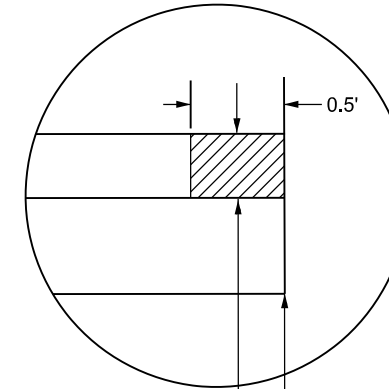


DESIGN N RIGHT TURN & BYPASS LANE



2.0" BITUMINOUS WEAR(SPWEB440C)
2.0" BITUMINOUS WEAR(SPWEB440C)
6" AGGREGATE BASE, CLASS 5

JOINT DETAIL



2" MILL JOINT
SAWCUT LOCATION

NO	DATE	BY	CKD	APPR	REVISION	TIME
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NAME: P:\20-01-00\CSAH_76_(CSAH85-CSAH35)\Base\Proposed\Bypass Plans\TYPICAL_Thames Bypass Lanes.dgn

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HIGHWAY DEPT.**

COUNTY PROJECT 21-37-76

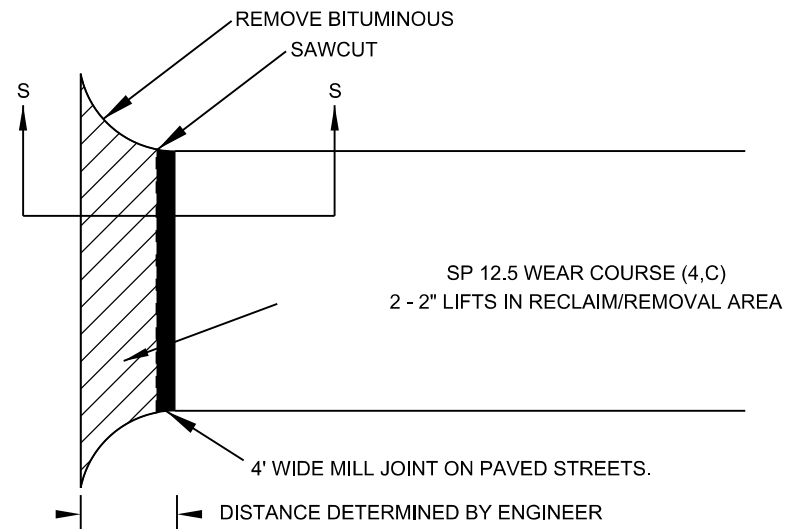
TYPICAL SECTIONS

Sheet 4 of 33 Sheets

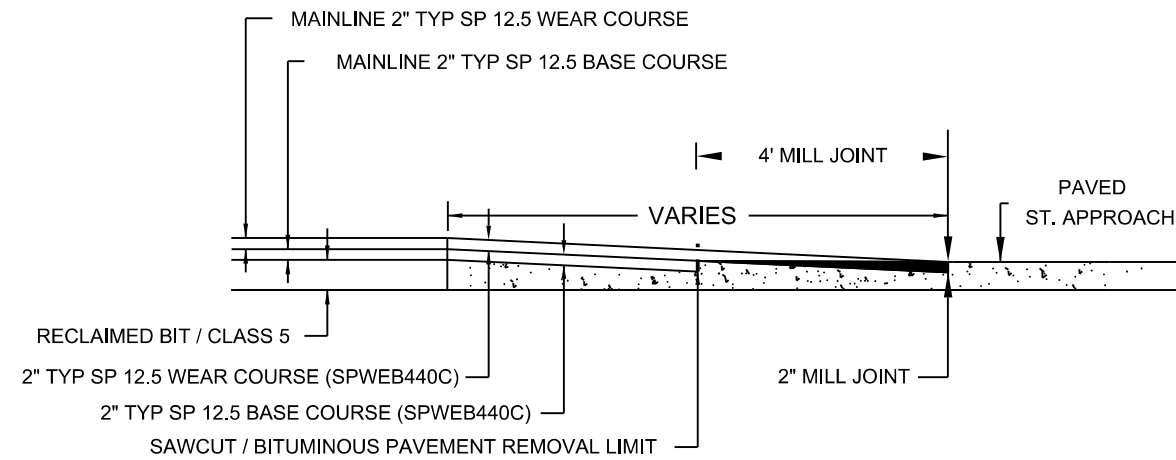
STREET APPROACH DETAIL (RECLAIM)

BITUMINOUS STREET

PLAN VIEW



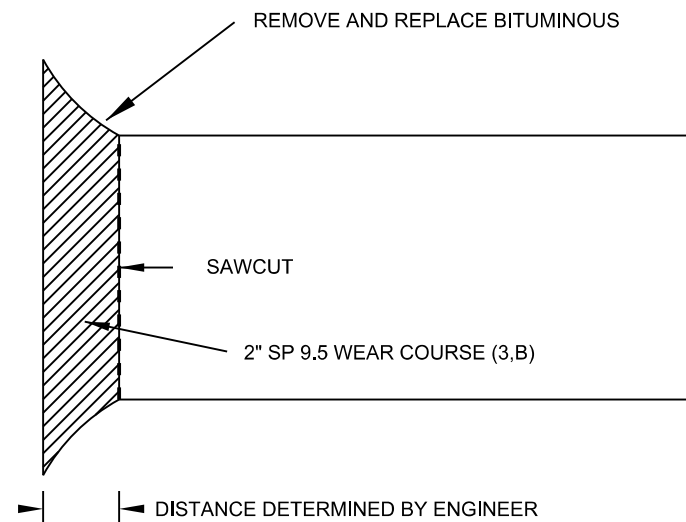
SECTION S - S



RECLAIM AREA - DRIVEWAY DETAIL

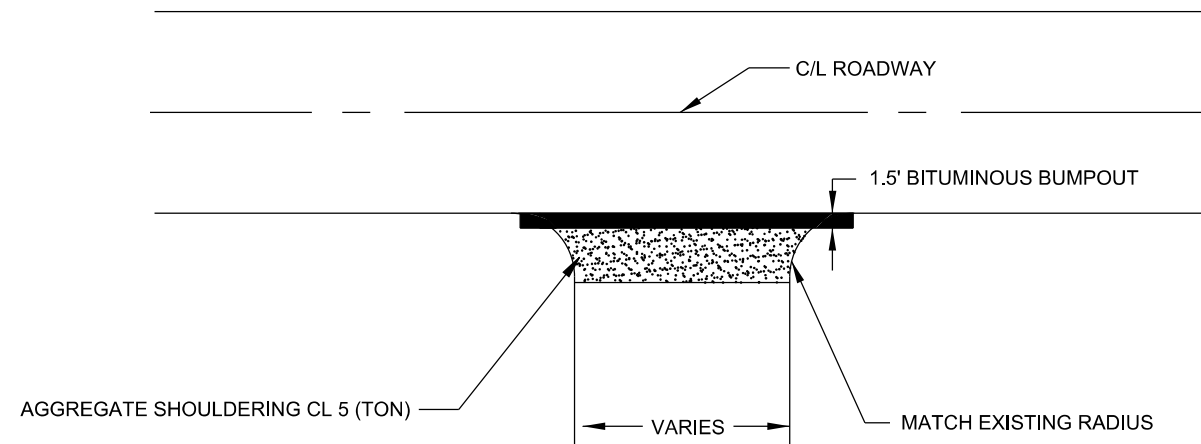
BITUMINOUS

PLAN VIEW



DRIVEWAY DETAIL

GRAVEL / FIELD ENTRANCE




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**ANOKA COUNTY
HIGHWAY DEPT.**

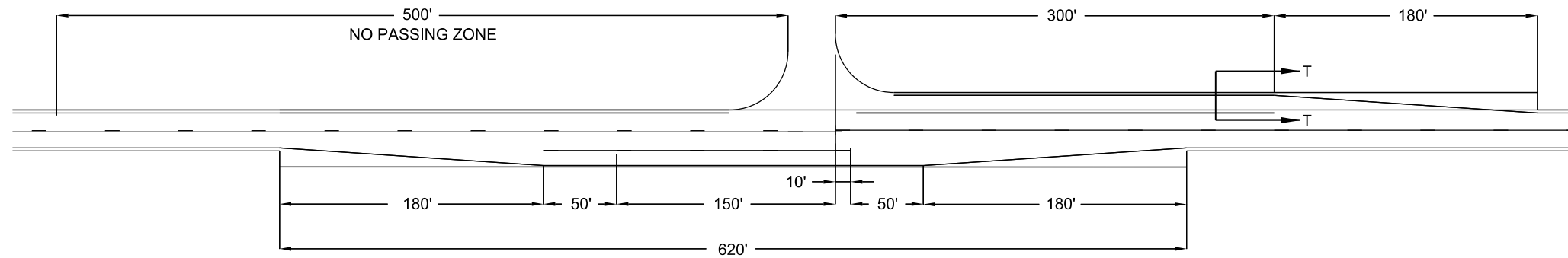
COUNTY PROJECT 21-37-76

DETAILS

Sheet 5 of 33 Sheets

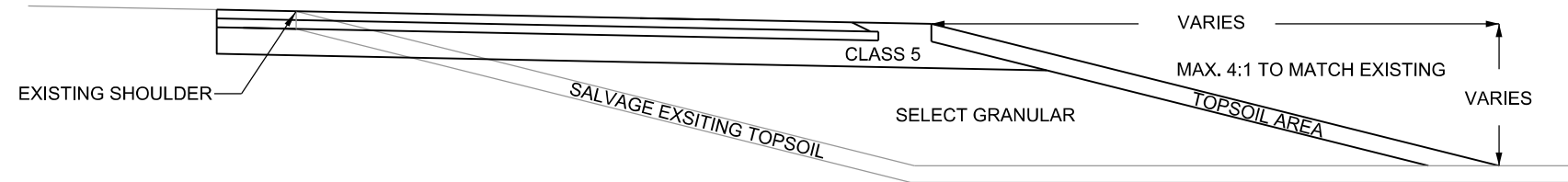
RIGHT TURN AND BYPASS LANE

GENERAL LAYOUT PLAN VIEW



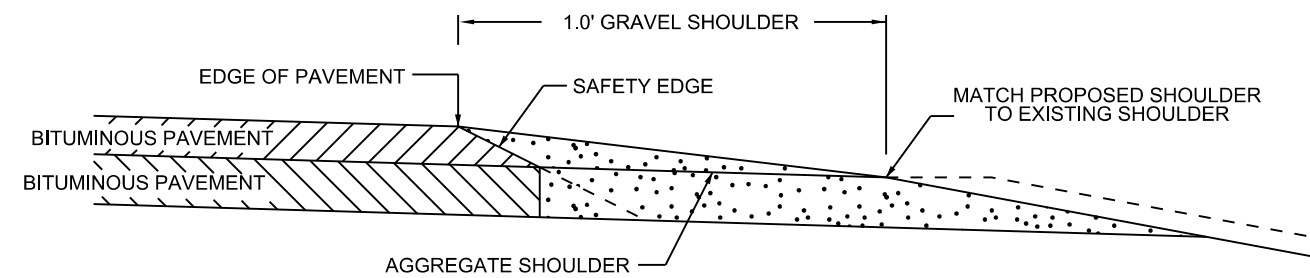
RIGHT TURN AND BYPASS LANE

SECTION T - T



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	
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**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 21-37-76

DETAILS

Sheet 6 of 33 Sheets

SUPERELEVATION CORRECTION TAB CURVE 1

STATION	POINT	LEFT GRADE	RIGHT GRADE
22+00	BEGIN SUPER RT/LT	-2.0%	-2.0%
22+50		-1.0%	-2.5%
23+00		0.0%	-3.0%
23+50		1.0%	-3.5%
24+00		2.0%	-4.0%
24+50		3.0%	-4.5%
25+00		4.0%	-5.0%
25+50		5.0%	-5.5%
26+00	BEGIN FULL SUPER RT/LT	6.0%	-6.0%
26+50		6.0%	-6.0%
27+00		6.0%	-6.0%
27+50		6.0%	-6.0%
28+00		6.0%	-6.0%
28+50		6.0%	-6.0%
29+00	END FULL SUPER RT/LT	6.0%	-6.0%
29+50		6.0%	-6.0%
30+00		6.0%	-6.0%
30+50		4.7%	-5.3%
31+00		3.3%	-4.7%
31+50		2.0%	-4.0%
32+00		0.7%	-3.3%
32+50		-0.7%	-2.7%
33+00	END SUPER RT/LT	-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB CURVE 2

STATION	POINT	LEFT GRADE	RIGHT GRADE
42+00	BEGIN SUPER RT/LT	-2.0%	-2.0%
42+50		-2.6%	-0.9%
43+00		-3.1%	0.3%
43+50		-3.7%	1.4%
44+00		-4.3%	2.6%
44+50		-4.9%	3.7%
45+00		-5.4%	4.9%
45+50	BEGIN FULL SUPER RT/LT	-6.0%	6.0%
46+00		-6.0%	6.0%
46+50		-6.0%	6.0%
47+00		-6.0%	6.0%
47+50	END FULL SUPER RT/LT	-6.0%	6.0%
48+00		-5.4%	4.9%
48+50		-4.9%	3.7%
49+00		-4.3%	2.6%
49+50		-3.7%	1.4%
50+00		-3.1%	0.3%
50+50		-2.6%	-0.9%
51+00	END SUPER RT/LT	-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB CURVE 3


STATION	POINT	LEFT GRADE	RIGHT GRADE
56+00	BEGIN SUPER RT/LT	-2.0%	-2.0%
56+50		-2.5%	-1.0%
57+00		-3.0%	0.0%
57+50		-3.5%	1.0%
58+00		-4.0%	2.0%
58+50		-4.5%	3.0%
59+00		-5.0%	4.0%
59+50		-5.5%	5.0%
60+00	BEGIN FULL SUPER RT/LT	-6.0%	6.0%
60+50		-6.0%	6.0%
61+00		-6.0%	6.0%
61+50		-6.0%	6.0%
62+00		-6.0%	6.0%
62+50		-6.0%	6.0%
63+00	END FULL SUPER RT/LT	-6.0%	6.0%
63+50		-5.5%	5.0%
64+00		-5.0%	4.0%
64+50		-4.5%	3.0%
65+00		-4.0%	2.0%
65+50		-3.5%	1.0%
66+00		-3.0%	0.0%
66+50		-2.5%	-1.0%
67+00	END SUPER RT/LT	-2.0%	-2.0%

NO	DATE	BY	CKD	APPR	REVISION	TIME
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NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR 76 DETAILS&SUPER.dgn

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HIGHWAY DEPT.**

COUNTY PROJECT 21-37-76

**SUPERELEVATION
TABULATION**

Sheet 7 of 33 Sheets


SUPERELEVATION CORRECTION TAB CURVE 4 & 5			
STATION	POINT	LEFT GRADE	RIGHT GRADE
69+50	BEGIN SUPER RT/LT	-2.0%	-2.0%
70+00		-0.4%	-2.8%
70+50		1.2%	-3.6%
71+00		2.8%	-4.4%
71+50		4.4%	-5.2%
72+00	BEGIN FULL SUPER RT/LT	6.0%	-6.0%
72+50		6.0%	-6.0%
73+00		6.0%	-6.0%
73+50		6.0%	-6.0%
74+00		6.0%	-6.0%
74+50		6.0%	-6.0%
75+00	END FULL SUPER RT/LT	6.0%	-6.0%
75+50		6.0%	-6.0%
76+00		6.0%	-6.0%
76+50		6.0%	-6.0%
77+00		6.0%	-6.0%
77+50		6.0%	-6.0%
78+00		4.7%	-5.3%
78+50	END SUPER RT/LT & BEGIN SUPER RT/LT (CURVE 5)	-2.0%	-2.0%
79+00		-2.6%	-0.9%
79+50		-3.1%	0.3%
80+00		-3.7%	1.4%
80+50		-4.3%	2.6%
81+00		-4.9%	3.7%
81+50		-5.4%	4.9%
82+00	BEGIN FULL SUPER RT/LT	-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		-6.0%	6.0%
85+50	END FULL SUPER RT/LT	-6.0%	6.0%
86+00		-5.4%	4.9%
86+50		-4.9%	3.7%
87+00		-4.3%	2.6%
87+50		-3.7%	1.4%
88+00		-3.1%	0.3%
88+50		-2.6%	-0.9%
89+00	END SUPER RT/LT	-2.0%	-2.0%

SUPERELEVATION CORRECTION TAB CURVE 6 & 7			
STATION	POINT	LEFT GRADE	RIGHT GRADE
92+50	BEGIN SUPER RT/LT	-2.0%	-2.0%
93+00		-3.0%	0.3%
93+50		-4.0%	2.7%
94+00	BEGIN FULL SUPER RT/LT	-5.0%	5.0%
94+50		-5.0%	5.0%
95+00		-5.0%	5.0%
95+50	END FULL SUPER RT/LT	-5.0%	5.0%
96+00		-4.0%	2.7%
96+50		-3.0%	0.3%
97+00	END SUPER RT/LT & BEGIN SUPER RT/LT (CURVE 7)	-2.0%	-2.0%
97+50		-0.3%	-2.8%
98+00		1.5%	-3.5%
98+50		3.3%	-4.3%
99+00	BEGIN FULL SUPER RT/LT	5.0%	-5.0%
99+50		5.0%	-5.0%
100+00		5.0%	-5.0%
100+50	END FULL SUPER RT/LT	5.0%	-5.0%
101+00		3.3%	-4.3%
101+50		1.5%	-3.5%
102+00		-0.3%	-2.8%
102+50	END SUPER RT/LT	-2.0%	-2.0%

NO	DATE	BY	CKD	APPR	REVISION	02/09/2022	1:14:34 PM
NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR 76 DETAILS&SUPER.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: AARON P. ANDERSON

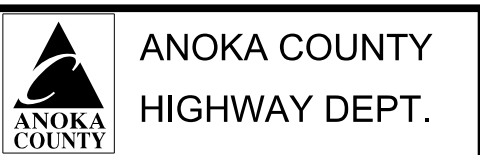
SIGNATURE: 

DATE: 2/9/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021

DESIGN BY SRK DATE 12/01/2021

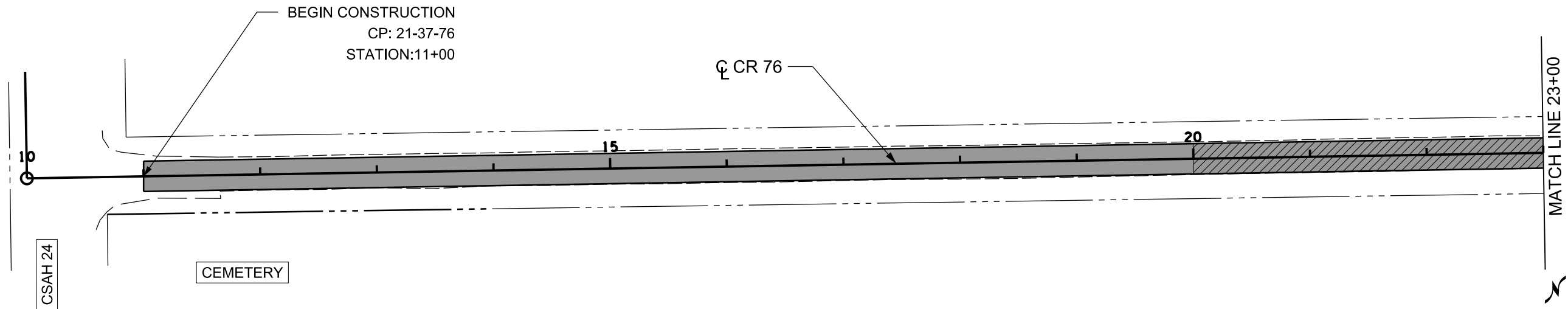
CHECKED BY APA DATE 2/9/2022



COUNTY PROJECT 21-37-76

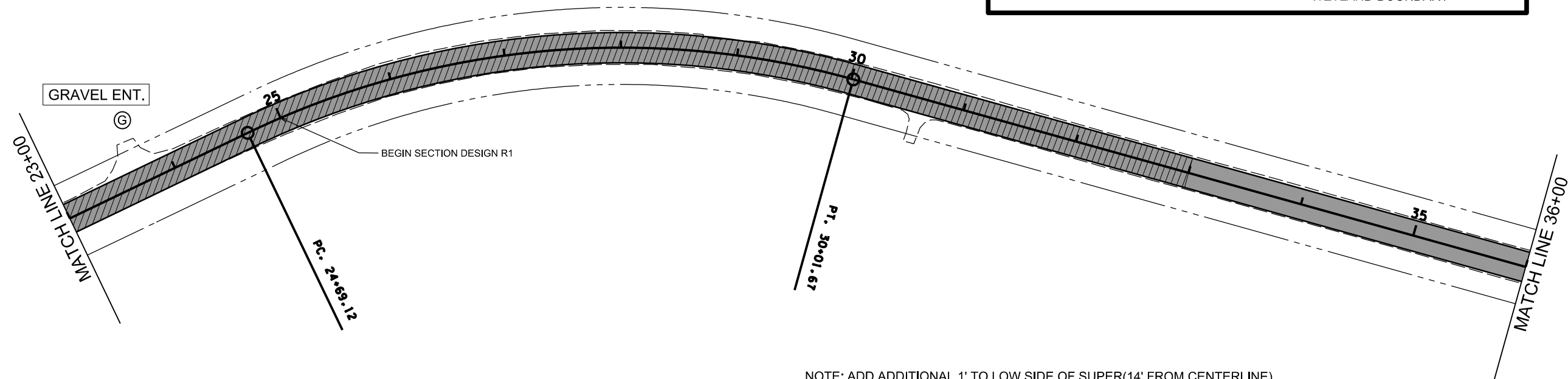
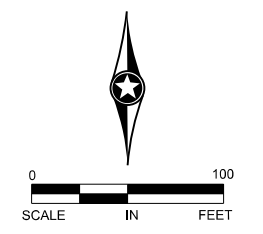
SUPERELEVATION
TABULATION

Sheet 8 of 33 Sheets

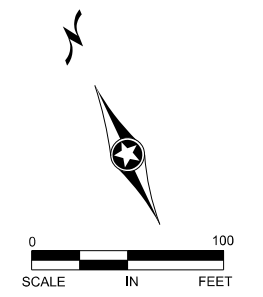


NOTE: ADD ADDITIONAL 1' TO LOW SIDE OF SUPER(14' FROM CENTERLINE) BETWEEN STA 22+00 - 33+00.

LEGEND			
(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE RECLAIM
(G)	GRAVEL	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
(C)	CORE LOCATION	[Diagonal Hatched Box]	SUPER TRANSITION AREA
- - -	SAWCUT	[Cross-hatched Box]	CONSTRUCT BYPASS LANE/ SHOULDER
- - -	CONSTRUCTION LIMITS	[Dashed Line]	R / W
- - -	SILT FENCE	[Dotted Line]	WETLAND BOUNDARY



NOTE: ADD ADDITIONAL 1' TO LOW SIDE OF SUPER(14' FROM CENTERLINE) BETWEEN STA 22+00 - 33+00. ADD 2" OF AGGREGATE BASE ACROSS ENTIRE WIDTH OF ROADWAY BETWEEN STA 25+00 - 85+00. PERFORM AGGREGATE BASE SPREADING OPERATION INFRONT OF RECLAIMER.



NO	DATE	BY	CKD	APPR	REVISION	
	02/09/2022					1:14:39 PM

NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR76 CP 1.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.

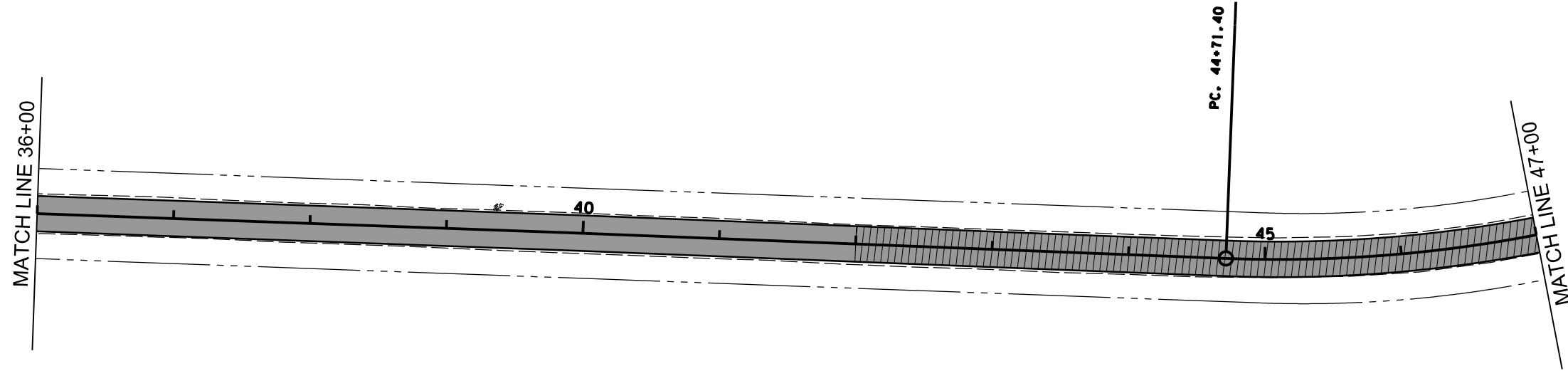
PRINT NAME: AARON P. ANDERSON
 SIGNATURE: *[Signature]*
 DATE: 2/9/2022 LICENSE NO. 58657

DRAWN BY: SRK DATE: 12/01/2021
 DESIGN BY: SRK DATE: 12/01/2021
 CHECKED BY: APA DATE: 2/9/2022

ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 21-37-76

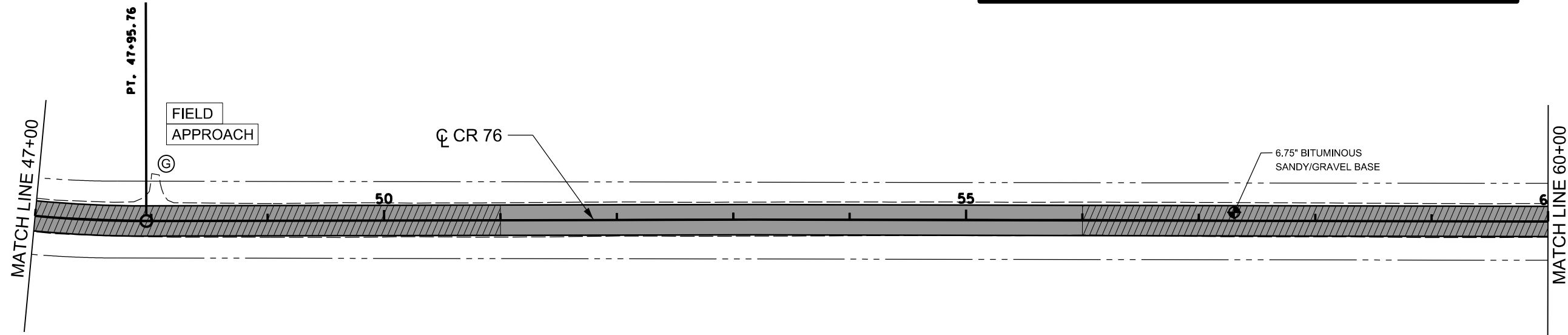
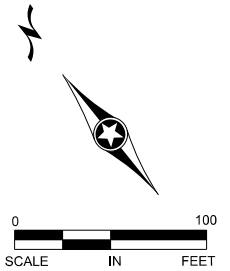
CONSTRUCTION PLAN
 STA 11+00 TO 36+00
 Sheet 9 of 33 Sheets



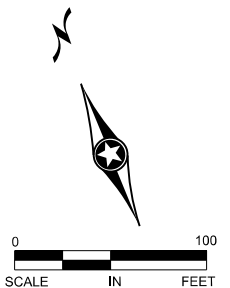
NOTE: ADD ADDITIONAL 1' TO LOW SIDE OF SUPER (14' FROM CENERLINE) BETWEEN STA 42+00 - 51+00. ADD 2" OF AGGREGATE BASE ACROSS ENTIRE WIDTH OF ROADWAY BETWEEN STA 25+00 - 85+00. PERFORM AGGREGATE BASE SPREADING OPERATION INFRONT OF RECLAIMER.

LEGEND

ⓑ	BITUMINOUS		MAINLINE RECLAIM
Ⓒ	GRAVEL		REMOVE AND REPLACE PAVEMENT
⊕	CORE LOCATION		SUPER TRANSITION AREA
- - -	SAWCUT		CONSTRUCT BYPASS LANE/ SHOULDER
- - -	CONSTRUCTION LIMITS		R / W
- - -	SILT FENCE		WETLAND BOUNDARY



NOTE: ADD ADDITIONAL 1' TO LOW SIDE OF SUPER (14' FROM CENERLINE) BETWEEN STA 56+00 - 67+00. ADD 2" OF AGGREGATE BASE ACROSS ENTIRE WIDTH OF ROADWAY BETWEEN STA 25+00 - 85+00. PERFORM AGGREGATE BASE SPREADING OPERATION INFRONT OF RECLAIMER.



NO	DATE	BY	CKD	APPR	REVISION	TIME
	02/09/2022					1:14:40 PM

NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR76 CP 2.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: AARON P. ANDERSON

SIGNATURE:

DATE: 2/9/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021

DESIGN BY SRK DATE 12/01/2021

CHECKED BY APA DATE 2/9/2022

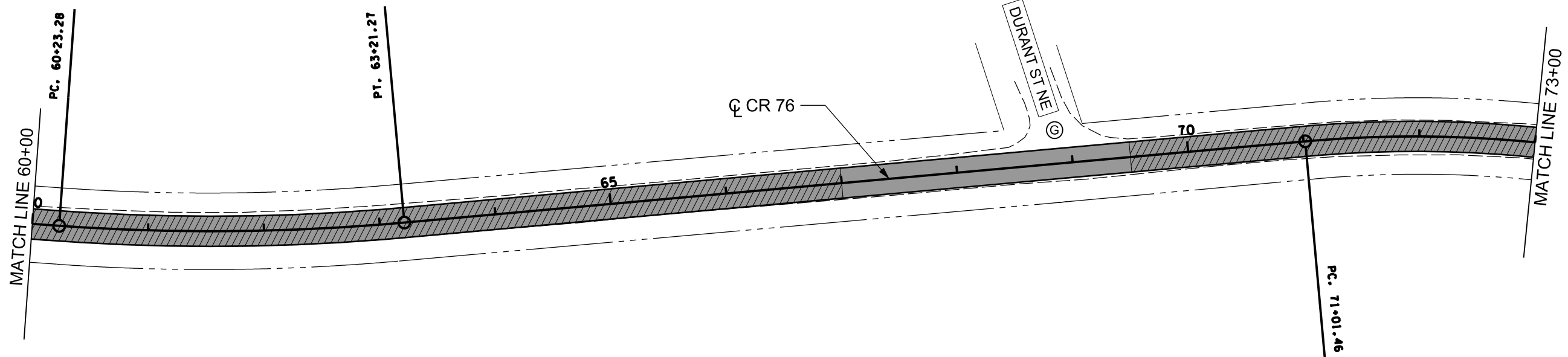
ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 21-37-76

CONSTRUCTION PLAN

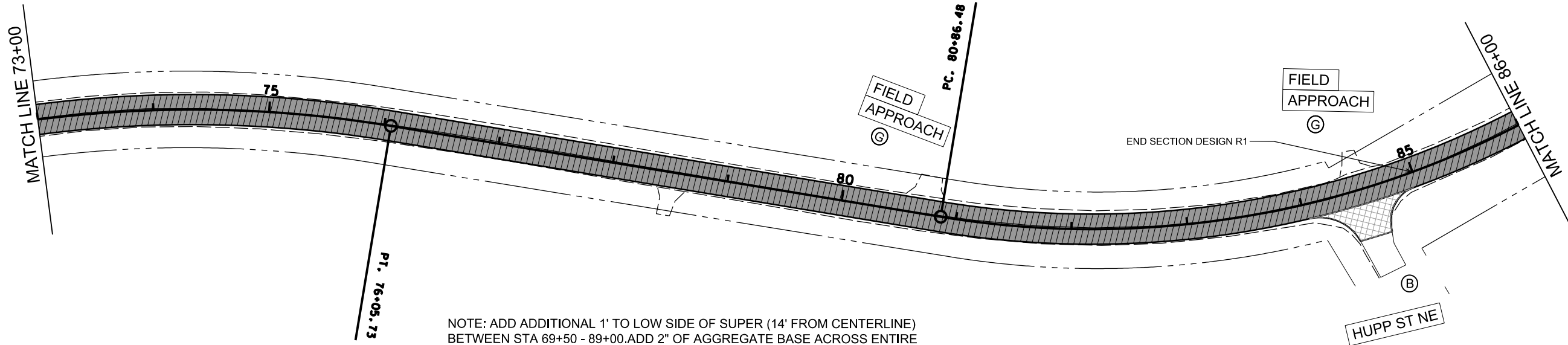
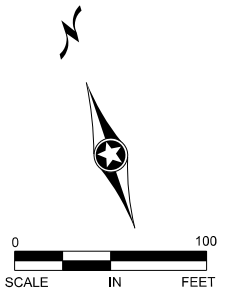
STA 36+00 TO 60+00

Sheet 10 of 33 Sheets

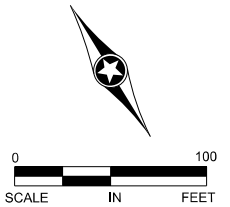


NOTE: ADD ADDITIONAL 1' TO LOW SIDE OF SUPER (14' FROM CENTERLINE) BETWEEN STA 56+00 - 67+00.
 ADD ADDITIONAL 1' TO LOW SIDE OF SUPER (14' FROM CENTERLINE) BETWEEN STA 69+50 - 89+00. ADD 2" OF AGGREGATE BASE ACROSS ENTIRE WIDTH OF ROADWAY BETWEEN STA 25+00 - 85+00. PERFORM AGGREGATE BASE SPREADING OPERATION INFRONT OF RECLAIMER.

LEGEND			
(B)	BITUMINOUS	[Solid Grey]	MAINLINE RECLAIM
(G)	GRAVEL	[Cross-hatch]	REMOVE AND REPLACE PAVEMENT
(C)	CORE LOCATION	[Diagonal Hatch]	SUPER TRANSITION AREA
- - -	SAWCUT	[Grid Hatch]	CONSTRUCT BYPASS LANE/ SHOULDER
- - -	CONSTRUCTION LIMITS	[Dashed Line]	R / W
- - -	SILT FENCE	[Dotted Line]	WETLAND BOUNDARY



NOTE: ADD ADDITIONAL 1' TO LOW SIDE OF SUPER (14' FROM CENTERLINE) BETWEEN STA 69+50 - 89+00. ADD 2" OF AGGREGATE BASE ACROSS ENTIRE WIDTH OF ROADWAY BETWEEN STA 25+00 - 85+00. PERFORM AGGREGATE BASE SPREADING OPERATION INFRONT OF RECLAIMER.



NO	DATE	BY	CKD	APPR	REVISION	
	02/09/2022					1:14:41 PM

NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR76 CP 3.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: AARON P. ANDERSON
 SIGNATURE: *[Signature]*
 DATE: 2/9/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021
 DESIGN BY SRK DATE 12/01/2021
 CHECKED BY APA DATE 2/9/2022



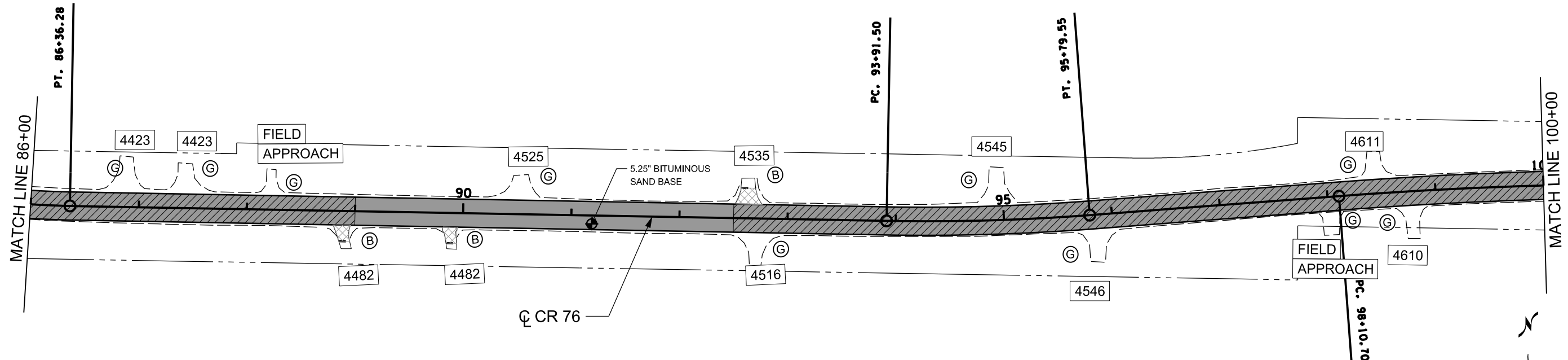
**ANOKA COUNTY
 HIGHWAY DEPT.**

COUNTY PROJECT 21-37-76

CONSTRUCTION PLAN

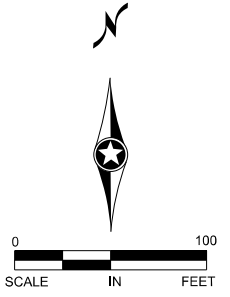
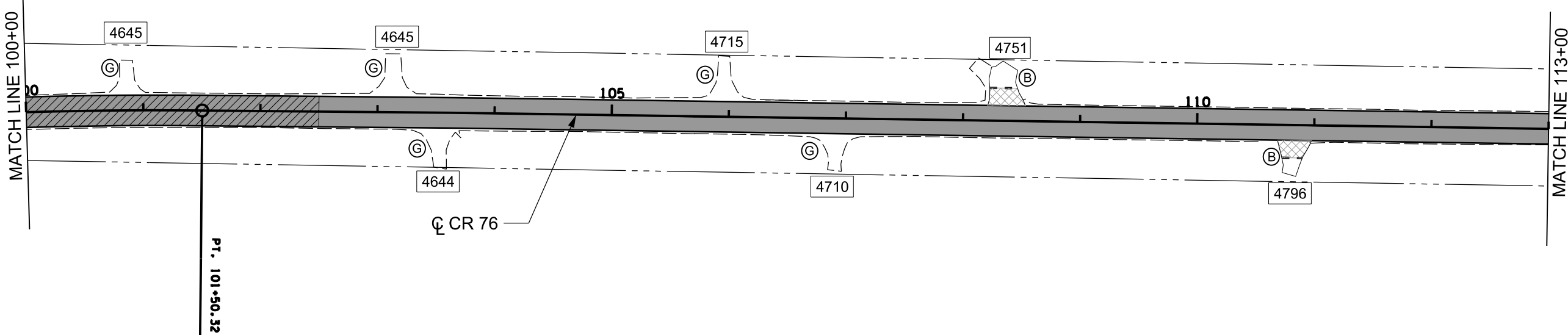
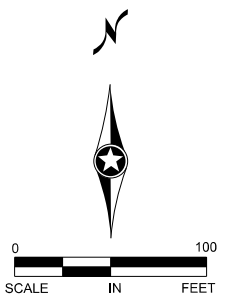
STA 60+00 TO 86+00

Sheet 11 of 33 Sheets



NOTE: ADD ADDITIONAL 1' TO LOW SIDE OF SUPER (14' FROM CENTERLINE) BETWEEN STA 92+50 - 102+50.

LEGEND			
(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE RECLAIM
(G)	GRAVEL	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
(C)	CORE LOCATION	[Diagonal-hatched Box]	SUPER TRANSITION AREA
- - -	SAWCUT	[Cross-hatched Box]	CONSTRUCT BYPASS LANE/ SHOULDER
- - -	CONSTRUCTION LIMITS	[Dashed Line]	R / W
- - -	SILT FENCE	[Dotted Line]	WETLAND BOUNDARY



NO	DATE	BY	CKD	APPR	REVISION	
	02/09/2022					1:14:41 PM

NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR76 CP 4.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.

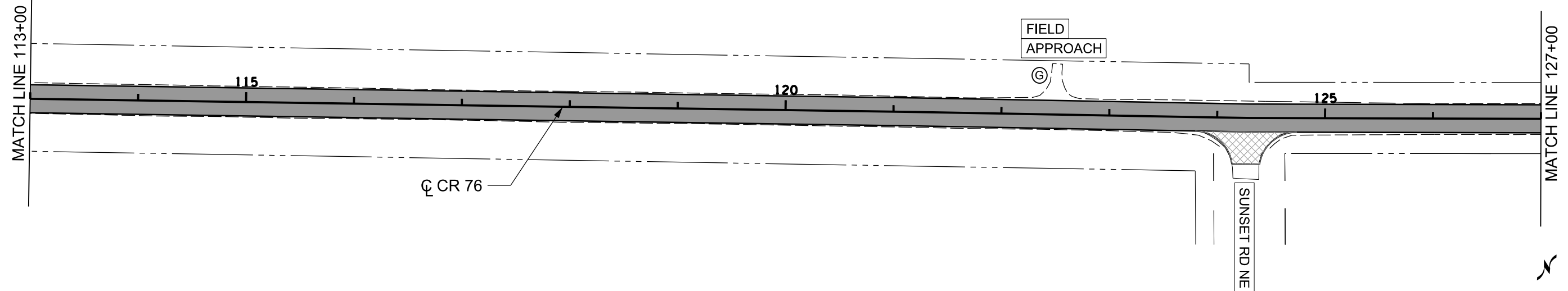
PRINT NAME: AARON P. ANDERSON
 SIGNATURE: *[Signature]*
 DATE: 2/9/2022 LICENSE NO. 58657

DRAWN BY: SRK DATE: 12/01/2021
 DESIGN BY: SRK DATE: 12/01/2021
 CHECKED BY: APA DATE: 2/9/2022

**ANOKA COUNTY
HIGHWAY DEPT.**

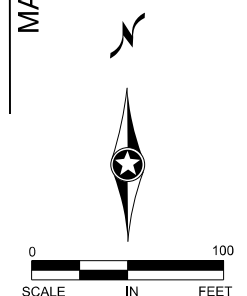
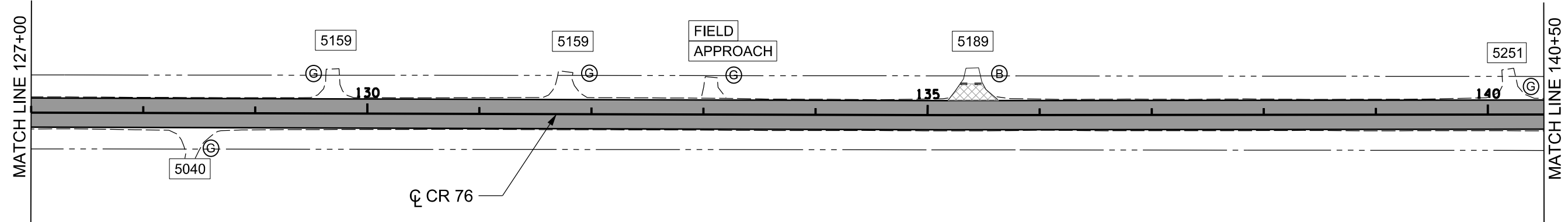
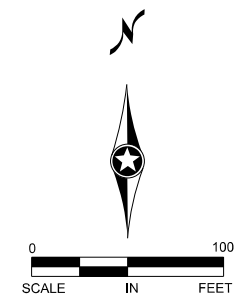
COUNTY PROJECT 21-37-76

CONSTRUCTION PLAN
 STA 86+00 TO 113+00
 Sheet 12 of 33 Sheets



LEGEND

(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE RECLAIM
(G)	GRAVEL	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
+	CORE LOCATION	[Diagonal Hatched Box]	SUPER TRANSITION AREA
- - -	SAWCUT	[Cross-hatched Box]	CONSTRUCT BYPASS LANE/ SHOULDER
- - -	CONSTRUCTION LIMITS	[Dashed Line]	R / W
- · -	SILT FENCE	[Dashed Line with Dots]	WETLAND BOUNDARY



NO	DATE	BY	CKD	APPR	REVISION	
					02/09/2022	1:14:42 PM

NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR76 CP 5.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: AARON P. ANDERSON

SIGNATURE:

DATE: 2/9/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021

DESIGN BY SRK DATE 12/01/2021

CHECKED BY APA DATE 2/9/2022

ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 21-37-76

CONSTRUCTION PLAN

STA 113+00 TO 140+50

Sheet 13 of 33 Sheets

MATCH LINE 140+50

MATCH LINE 154+00

CR 76

5431

3.75" BITUMINOUS SAND BASE

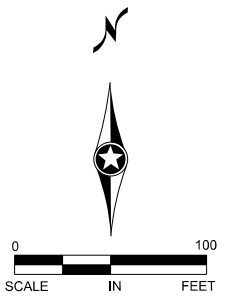
145

150

5370

LEGEND

- (B) BITUMINOUS
- (G) GRAVEL
- ⊕ CORE LOCATION
- - - SAWCUT
- - - CONSTRUCTION LIMITS
- - - SILT FENCE
- MAINLINE RECLAIM
- REMOVE AND REPLACE PAVEMENT
- SUPER TRANSITION AREA
- CONSTRUCT BYPASS LANE/ SHOULDER
- R / W
- WETLAND BOUNDARY



MATCH LINE 154+00

MATCH LINE 168+00

FIELD APPROACH

155

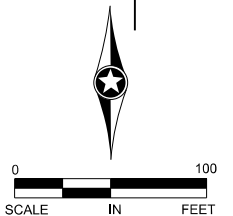
160

165

FIELD APPROACH

5640

CR 76



NO	DATE	BY	CKD	APPR	REVISION	
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NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR76 CP 6.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: AARON P. ANDERSON

SIGNATURE: *[Signature]*

DATE: 2/9/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021

DESIGN BY SRK DATE 12/01/2021

CHECKED BY APA DATE 2/9/2022



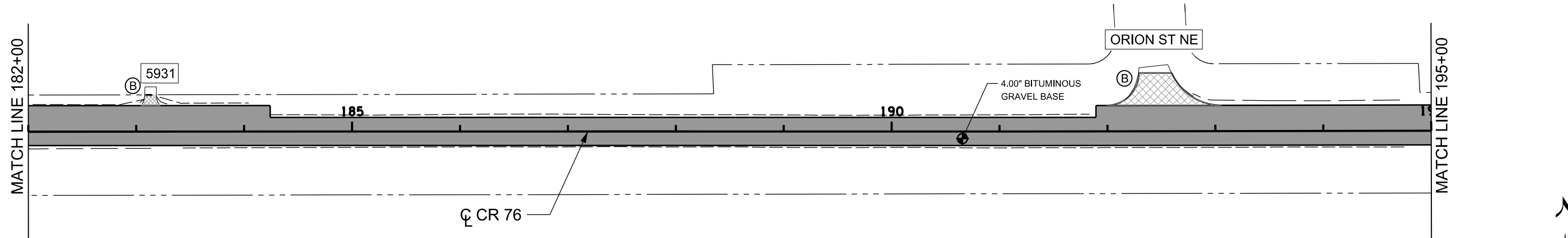
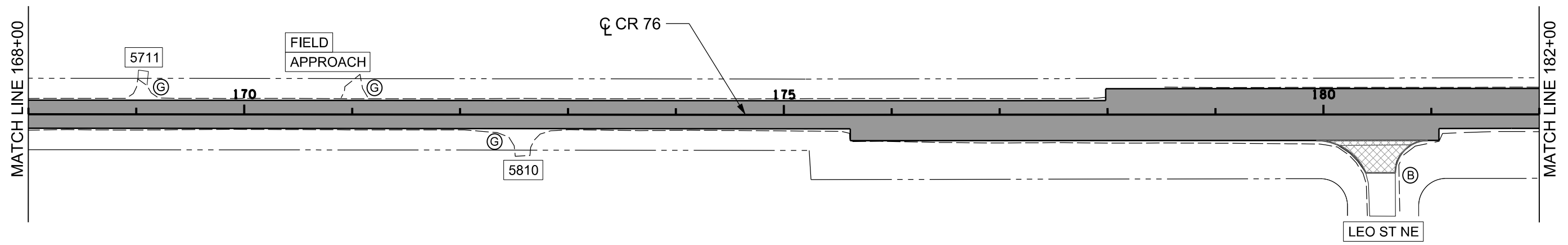
ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 21-37-76

CONSTRUCTION PLAN

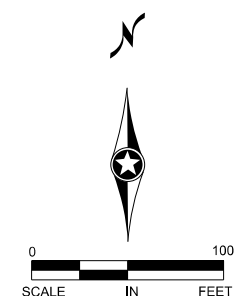
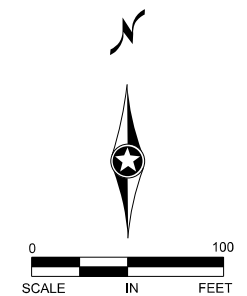
STA 140+50 TO 168+00

Sheet 14 of 33 Sheets



LEGEND

(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE RECLAIM
(G)	GRAVEL	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
⊕	CORE LOCATION	[Diagonal Hatched Box]	SUPER TRANSITION AREA
- - -	SAWCUT	[Cross-hatched Box]	CONSTRUCT BYPASS LANE/ SHOULDER
- - -	CONSTRUCTION LIMITS	---	R / W
—	SILT FENCE	—	WETLAND BOUNDARY



NO	DATE	BY	CKD	APPR	REVISION	
	02/09/2022					1:14:44 PM

NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR76 CP 7.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: AARON P. ANDERSON

SIGNATURE:

DATE: 2/9/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021

DESIGN BY SRK DATE 12/01/2021

CHECKED BY APA DATE 2/9/2022

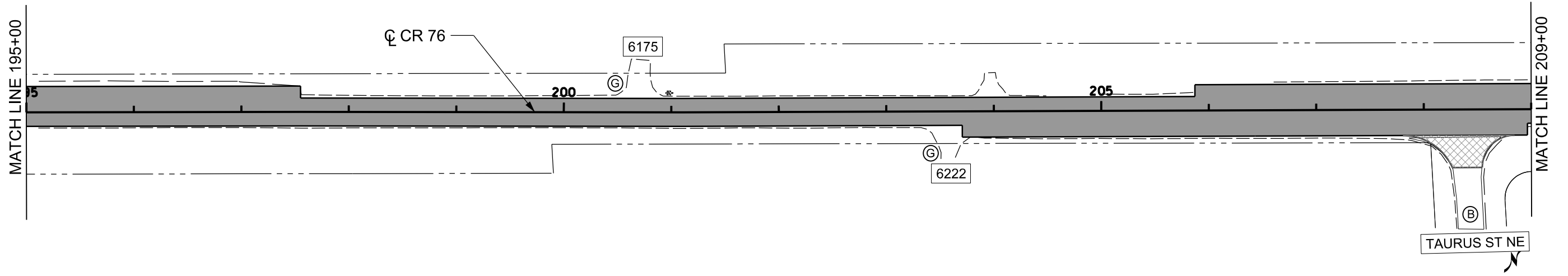
**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 21-37-76

CONSTRUCTION PLAN

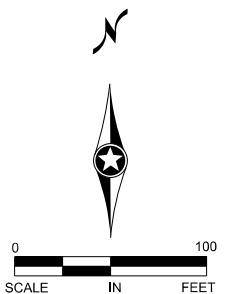
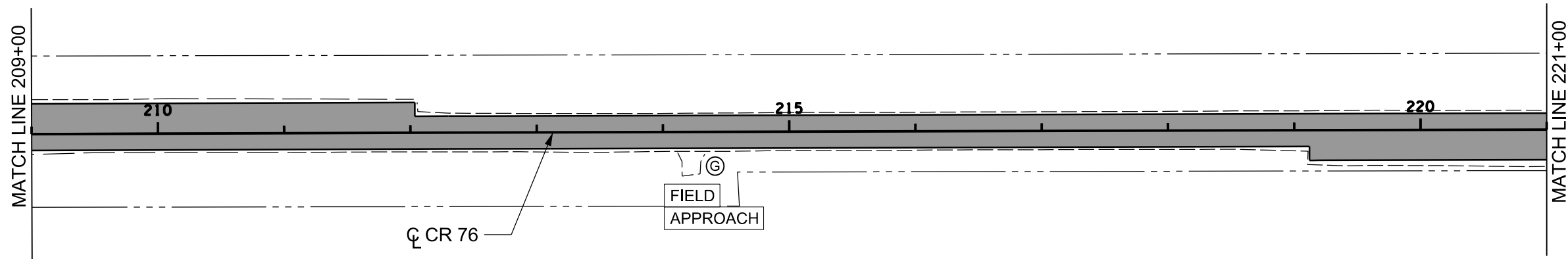
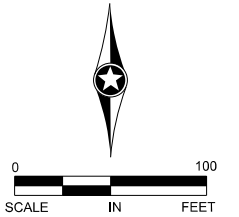
STA 168+00 TO 195+00

Sheet 15 of 33 Sheets



LEGEND

(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE RECLAIM
(G)	GRAVEL	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
+	CORE LOCATION	[Diagonal Hatched Box]	SUPER TRANSITION AREA
- - -	SAWCUT	[Cross-hatched Box]	CONSTRUCT BYPASS LANE/ SHOULDER
- - -	CONSTRUCTION LIMITS	---	R / W
- · -	SILT FENCE	---	WETLAND BOUNDARY



NO	DATE	BY	CKD	APPR	REVISION	TIME
	02/09/2022					1:14:45 PM

NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR76 CP 8.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: AARON P. ANDERSON

SIGNATURE:

DATE: 2/9/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021

DESIGN BY SRK DATE 12/01/2021

CHECKED BY APA DATE 2/9/2022

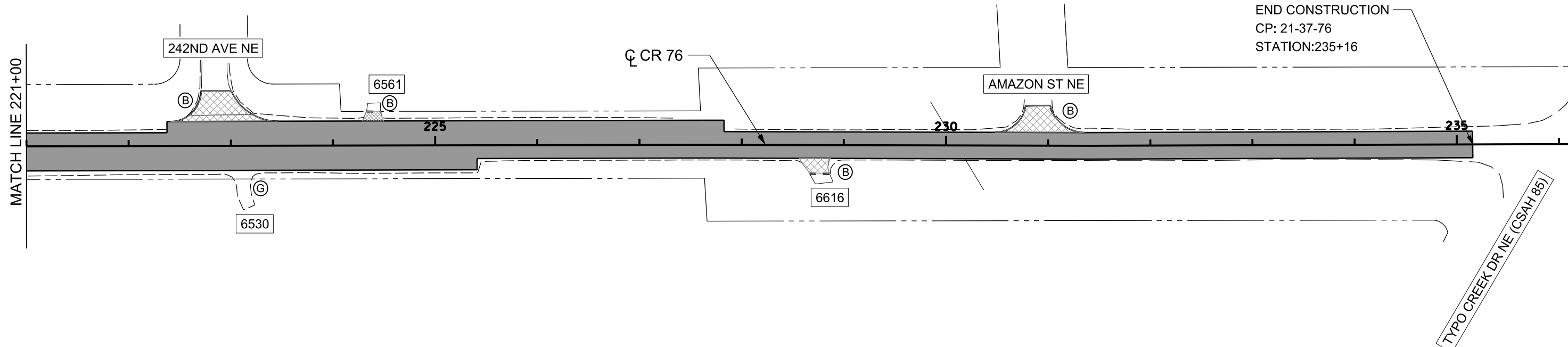
ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 21-37-76

CONSTRUCTION PLAN

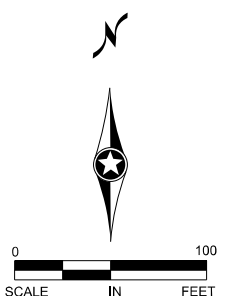
STA 195+00 TO 221+00

Sheet 16 of 33 Sheets



LEGEND

(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE RECLAIM
(G)	GRAVEL	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
⊕	CORE LOCATION	[Diagonal Hatched Box]	SUPER TRANSITION AREA
- - -	SAWCUT	[Cross-hatched Box]	CONSTRUCT BYPASS LANE/ SHOULDER
- - -	CONSTRUCTION LIMITS	— R / W —	
— ° —	SILT FENCE	— WETLAND BOUNDARY —	



NO	DATE	BY	CKD	APPR	REVISION	
	02/09/2022					1:14:45 PM

NAME: P:\22-01-00\CSAH_76_(CSAH 24-TYPO CREEK DR)\Base\Proposed\CR76 CP 9.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: AARON P. ANDERSON

SIGNATURE:

DATE: 2/9/2022 LICENSE NO. 58657

DRAWN BY SRK DATE 12/01/2021

DESIGN BY SRK DATE 12/01/2021

CHECKED BY APA DATE 2/9/2022

**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 21-37-76

CONSTRUCTION PLAN

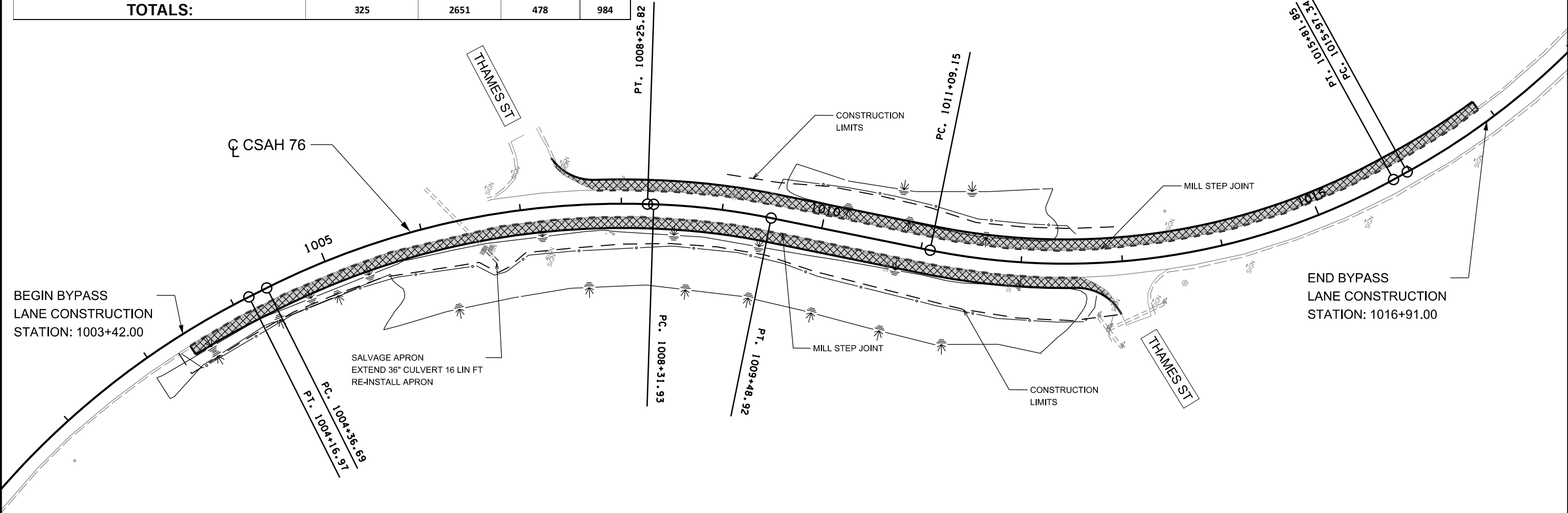
STA 221+00 TO 235+16

Sheet 17 of 33 Sheets

APAnders

BYPASS LANE TAB

STREET	STATION RANGE	RTL / BYPASS	COMMON EXCAVATION (CU YDS)	GRANULAR BORROW (CV) (CU YDS)	TOPSOIL BORROW (LV) (CU YDS)	CLASS 5 (TON)
THAMES ST (N.)	1003+42 - 1012+95	BYPASS	166	1568	300	513
THAMES ST (S.)	1007+35 - 1016+91	BYPASS	159	1083	178	471
TOTALS:			325	2651	478	984



LEGEND

(B)	BITUMINOUS	[Solid Grey Box]	MAINLINE RECLAIM
(G)	GRAVEL	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
⊕	CORE LOCATION	[Diagonal Hatched Box]	SUPER TRANSITION AREA
- - -	SAWCUT	[Cross-hatched Box]	CONSTRUCT BYPASS LANE/ SHOULDER
- - -	CONSTRUCTION LIMITS	[Dashed Line]	R / W
- - -	SILT FENCE	[Wavy Line]	WETLAND BOUNDARY



NO	DATE	BY	CKD	APPR	REVISION	TIME
	02/09/2022					1:14:47 PM

NAME: P:\20-01-00\CSAH_76_(CSAH85-CSAH35)\Base\Proposed\Bypass Plans\CP_Thames Bypass Lanes.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: AARON P. ANDERSON

SIGNATURE:

DATE: 2/9/2022 LICENSE NO. 58657

DRAWN BY: APA DATE: 12/01/2021

DESIGN BY: APA DATE: 12/01/2021

CHECKED BY: APA DATE: 2/9/2022

**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 21-37-76

CONSTRUCTION PLAN

STA 1003+42 TO 1016+91

Sheet 18 of 33 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
4" SOLID LINE WHITE - MULTI COMP	LIN FT	48958
1 8" DOTTED LINE WHITE - MULTICOMP	LIN FT	180
2 4" BROKEN LINE YELLOW - MULTICOMP	LIN FT	2480
4" SOLID LINE YELLOW - MULTICOMP	LIN FT	3060
4" SOLID DOUBLE LINE YELLOW - MULTICOMP	LIN FT	11574

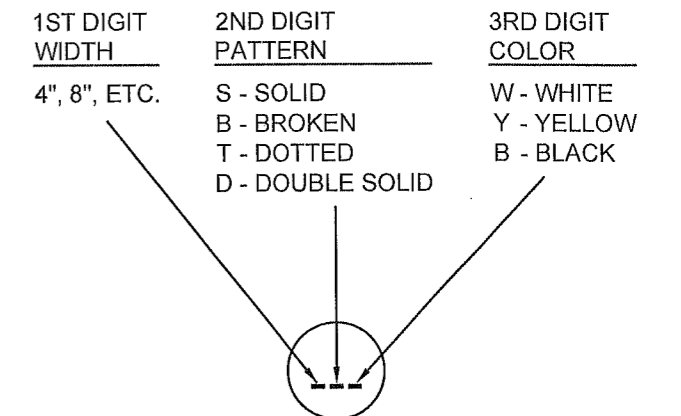
- 1 3' STRIPE, 12' GAP
- 2 10' STRIPE, 40' GAP


SYMBOLS & MATERIALS LEGEND



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

STRIPING KEY

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



EXAMPLE:  = 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

NO	DATE	BY	CKD	APPR	REVISION
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 PRINT NAME: SEAN R. THIEL DATE: 2/9/22
 SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 11/15/21
 DESIGN BY: _____ DATE: _____
 CHECKED BY: SRT DATE: 12/17/21



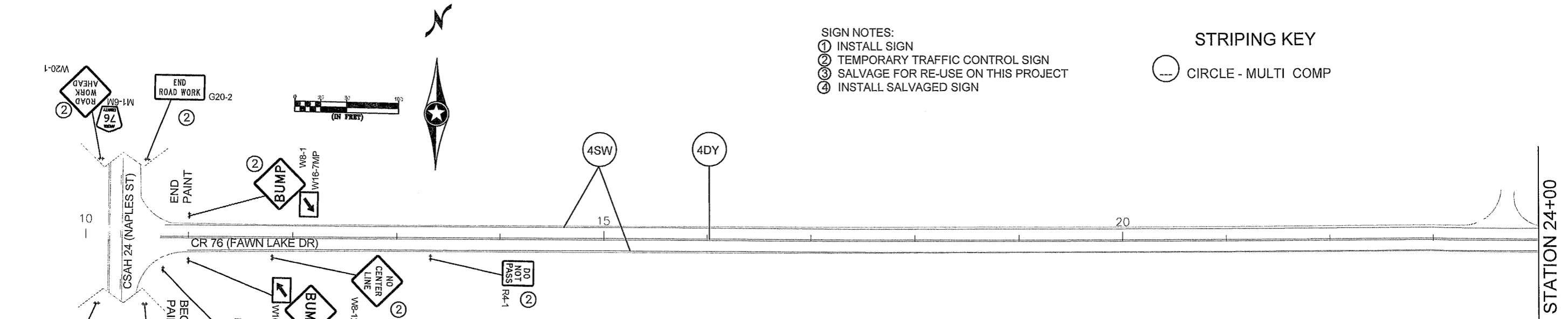
**ANOKA COUNTY
HIGHWAY DEPT.**

CP 21-37-76

PERMANENT MARKING
TABULATION
SHEET 19 OF 33 SHEETS

- SIGN NOTES:
- ① INSTALL SIGN
 - ② TEMPORARY TRAFFIC CONTROL SIGN
 - ③ SALVAGE FOR RE-USE ON THIS PROJECT
 - ④ INSTALL SALVAGED SIGN

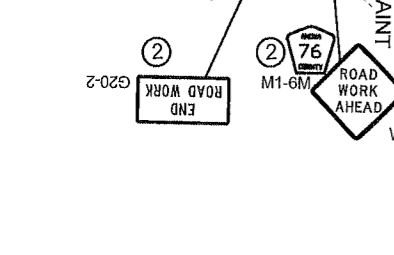
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F & I CMS 10 DAYS IN ADVANCE OF THE COMMENCEMENT OF WORK

(DATE) EXPECT DELAYS / ROAD WORK BEGINS / BEGIN PAINT

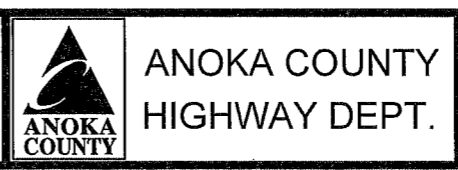


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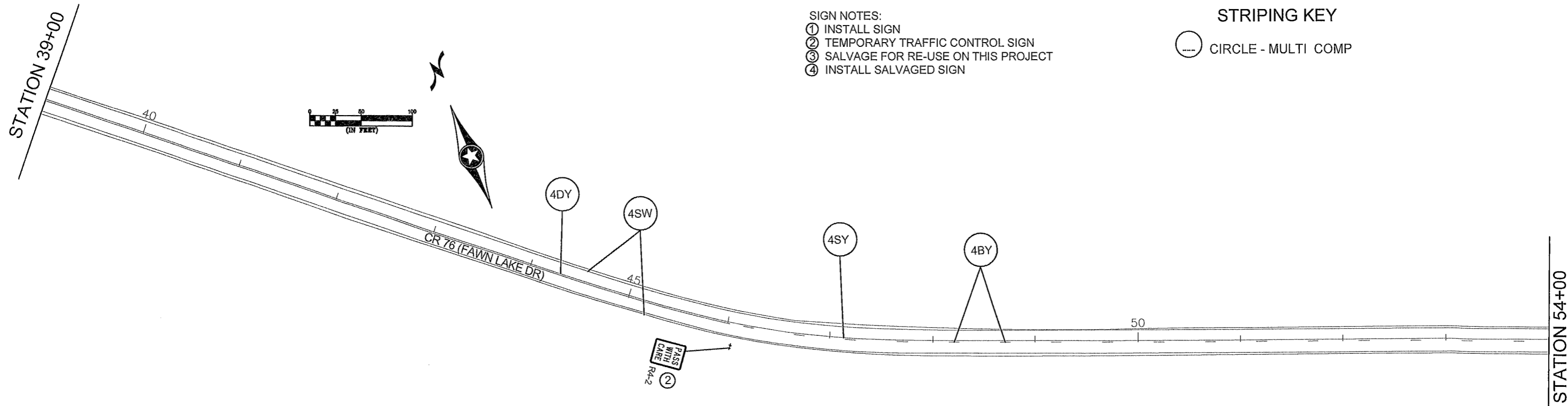
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CP 21-37-76

TEMPORARY SIGNING
 PERMANENT SIGNING &
 STRIPING
 SHEET 20 OF 33 SHEETS

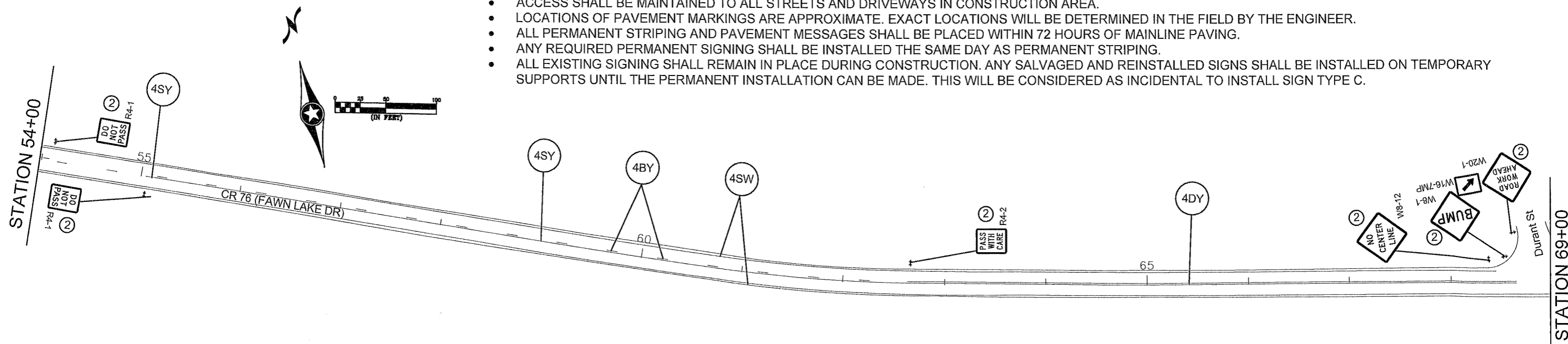


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STRIPING KEY
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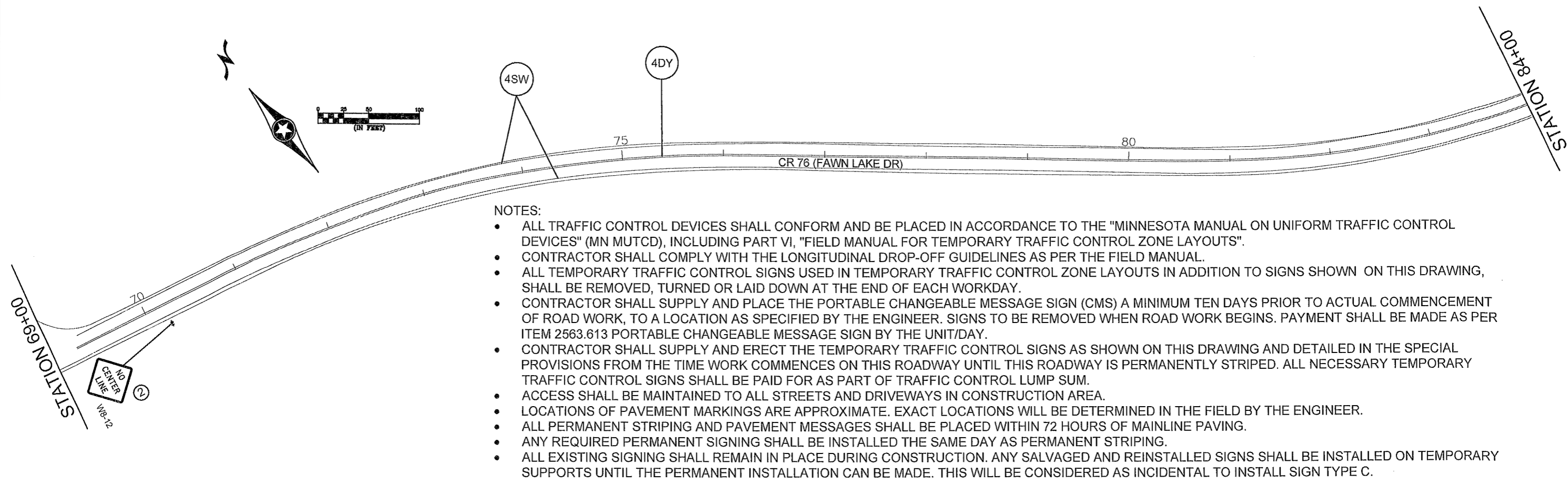


ANOKA COUNTY
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CP 21-37-76

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 STRIPING

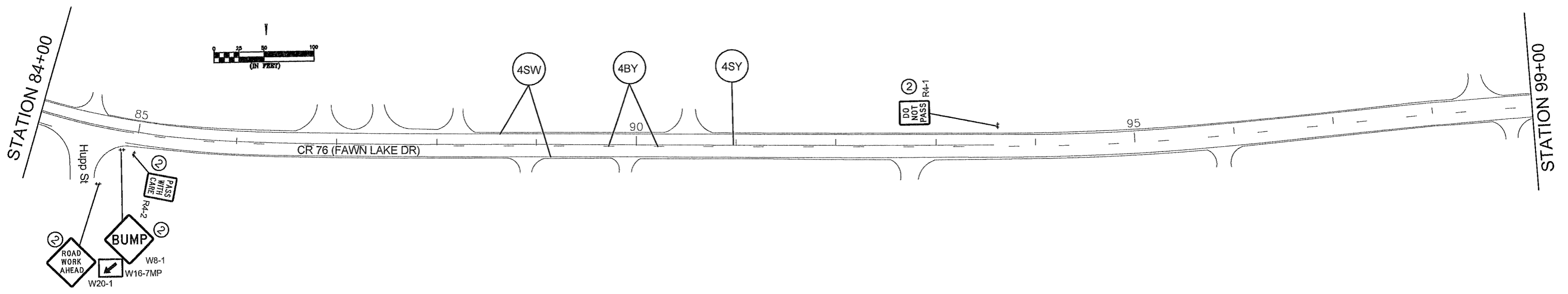
SHEET 21 OF 33 SHEETS



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STRIPING KEY
 ○ CIRCLE - MULTI COMP



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\22-01-00\CSAH_76 (CSAH24-Typo Creek Dr)\Base\Traffic\Temp Sign & Perm S&S.dwg

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CP 21-37-76

TEMPORARY SIGNING
 PERMANENT SIGNING &
 STRIPING

SHEET 22 OF 33 SHEETS

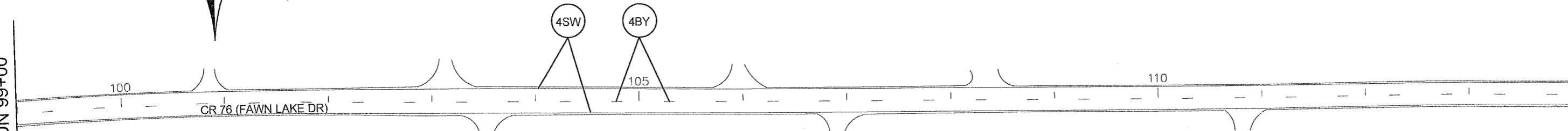
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STRIPING KEY

○ --- CIRCLE - MULTI COMP

STATION 99+00

STATION 114+00

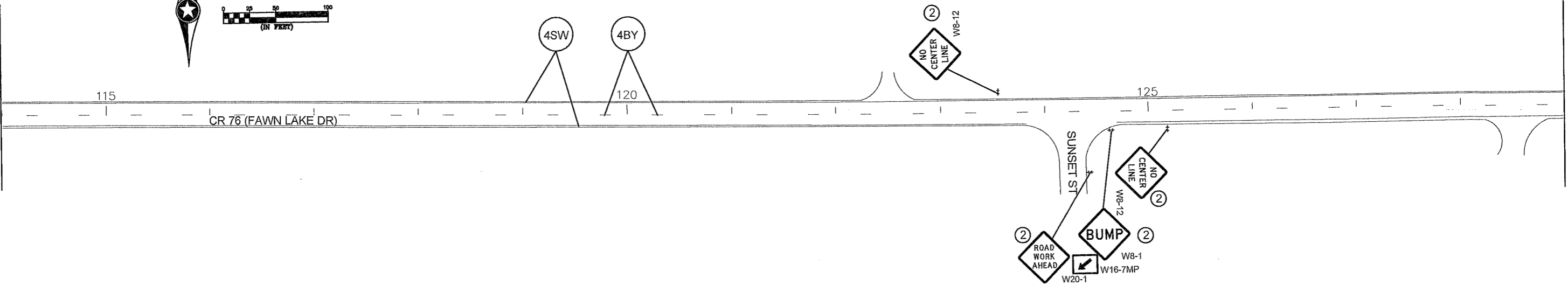


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STATION 114+00

STATION 129+00



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ANOKA COUNTY
HIGHWAY DEPT.

CP 21-37-76

TEMPORARY SIGNING
PERMANENT SIGNING &
STRIPING

SHEET 23 OF 33 SHEETS

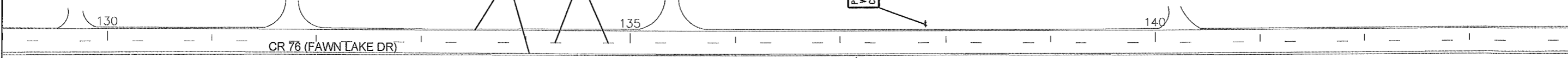
STATION 129+00

STATION 144+00

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STRIPING KEY

○ CIRCLE - MULTI COMP



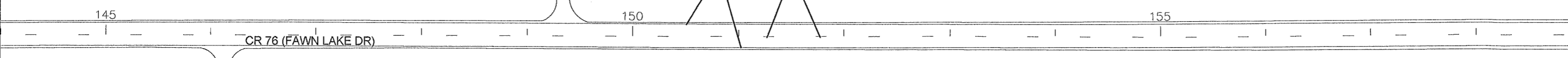
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STATION 144+00

STATION 159+00



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ANOKA COUNTY
HIGHWAY DEPT.

CP 21-37-76

TEMPORARY SIGNING
PERMANENT SIGNING &
STRIPING

SHEET 24 OF 33 SHEETS

STATION 159+00

STATION 174+00



160

CR 76 (Fawn Lake Dr)

165

4SW

4BY

170

SIGN NOTES:

- ① INSTALL SIGN
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- ④ INSTALL SALVAGED SIGN

STRIPING KEY

○ --- CIRCLE - MULTI COMP

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STATION 174+00

STATION 189+00



175

CR 76 (Fawn Lake Dr)

180

4SW

4DY

8DW

185

4BY

4SY

② PASS WITH CARE R4-2

② NO CENTER LINE W8-12

② DO NOT PASS R4-1

② NO CENTER LINE W8-12

② ROAD WORK AHEAD W20-1

② BUMP W8-1 W16-7MP

② PASS WITH CARE R4-2

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\22-01-00\CSAH_76_(CSAH24-Typo Creek Dr)\Base\Traffic\Temp Sign & Perm S&S.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: SEAN R. THIEL DATE: 2/9/22
SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 11/15/21
DESIGN BY: _____ DATE: _____
CHECKED BY: SRT DATE: 12/17/21



ANOKA COUNTY
HIGHWAY DEPT.

CP 21-37-76

TEMPORARY SIGNING
PERMANENT SIGNING &
STRIPING

SHEET 25 OF 33 SHEETS

STATION 189+00

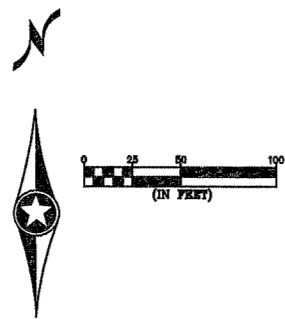
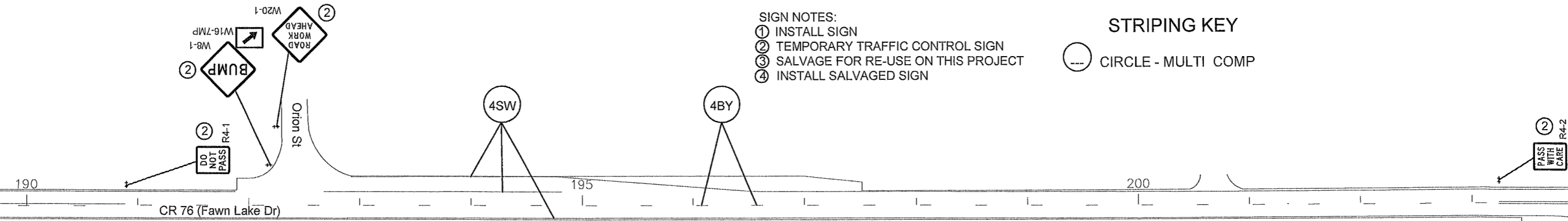
STATION 204+00

SIGN NOTES:

- ① INSTALL SIGN
- ② TEMPORARY TRAFFIC CONTROL SIGN
- ③ SALVAGE FOR RE-USE ON THIS PROJECT
- ④ INSTALL SALVAGED SIGN

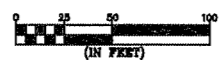
STRIPING KEY

○ CIRCLE - MULTI COMP



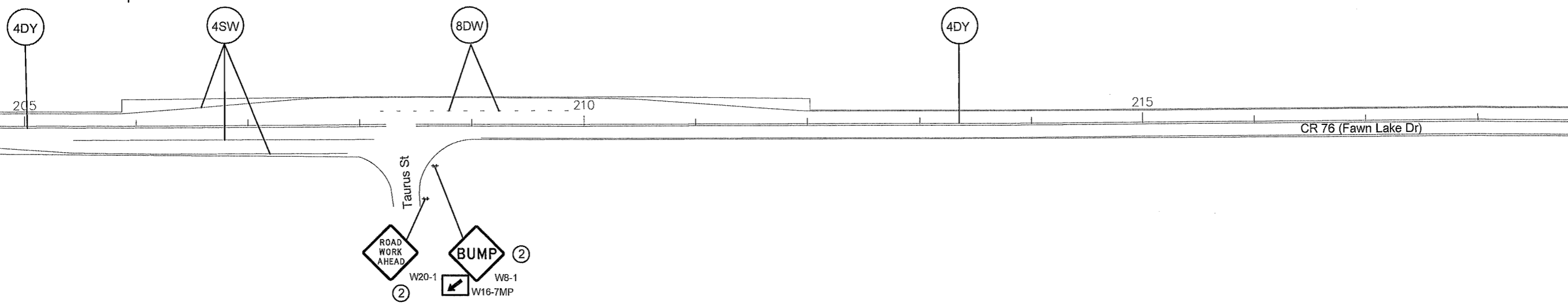
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STATION 204+00

STATION 219+00



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\22-01-00\CSAH_76_CSAH24-Typo Creek Dr\Base\Traffic\Temp Sign & Perm S&S.dwg

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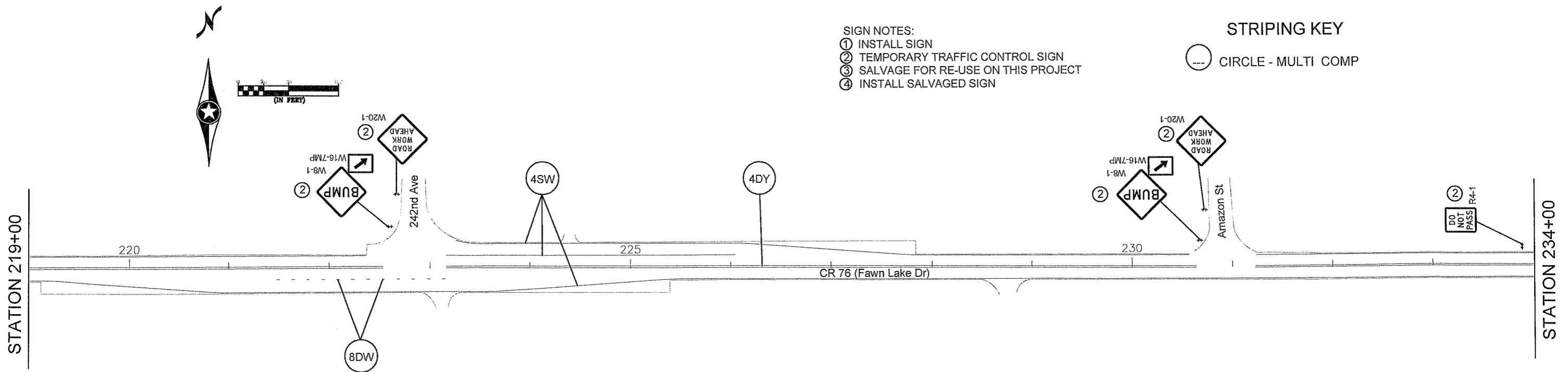


ANOKA COUNTY
HIGHWAY DEPT.

CP 21-37-76

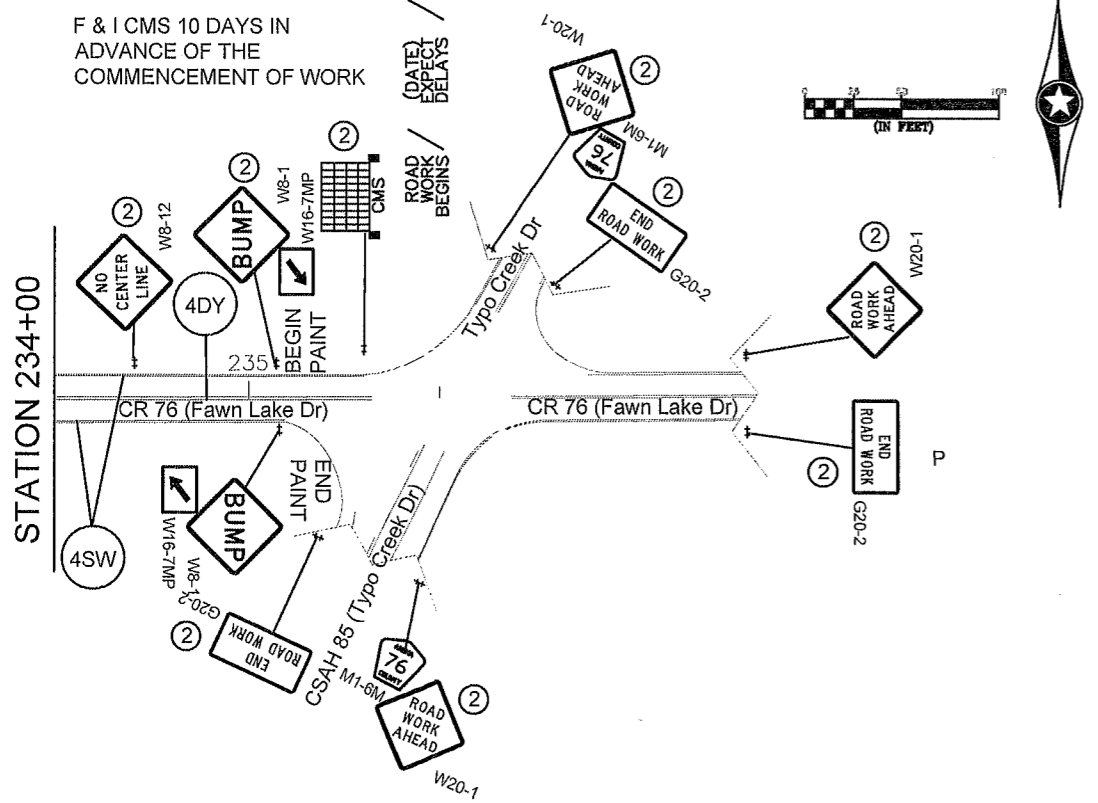
TEMPORARY SIGNING
PERMANENT SIGNING &
STRIPING

SHEET 26 OF 33 SHEETS



SIGN NOTES:
 ① INSTALL SIGN
 ② TEMPORARY TRAFFIC CONTROL SIGN
 ③ SALVAGE FOR RE-USE ON THIS PROJECT
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STRIPING KEY
 ○ CIRCLE - MULTI COMP



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NO	DATE	BY	CKD	APPR	REVISION

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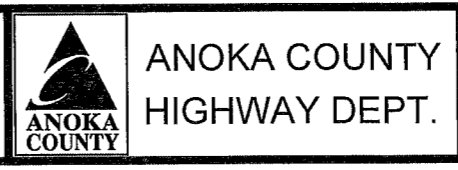
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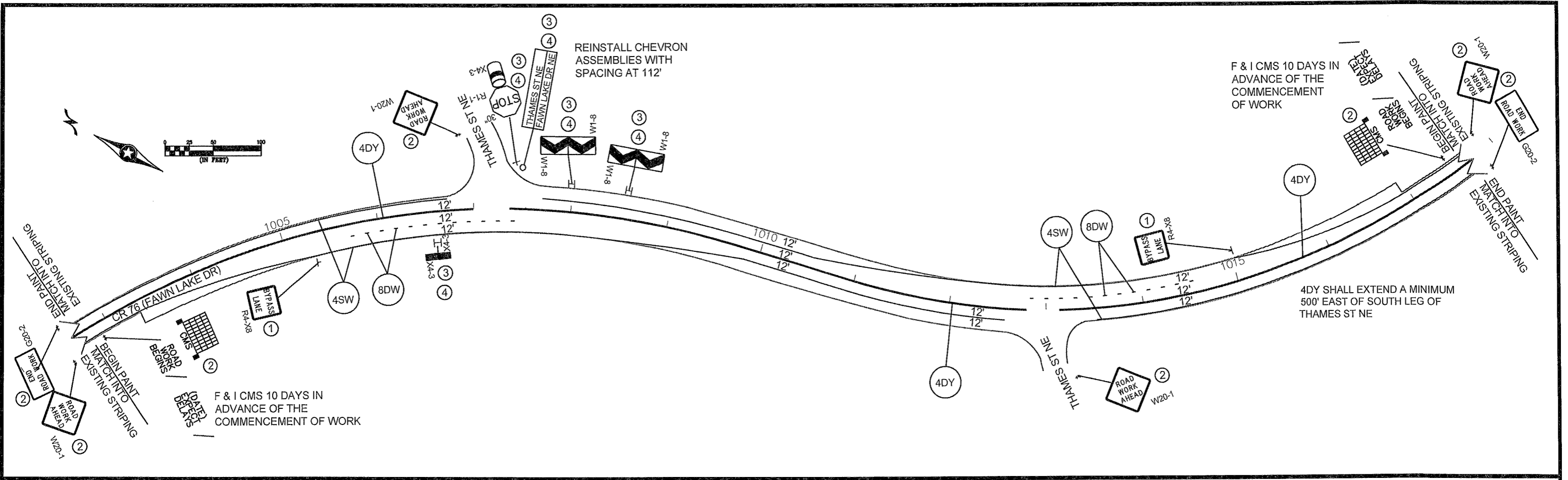
CHECKED BY: SRT DATE: 12/17/21



CP 21-37-76

TEMPORARY SIGNING
 PERMANENT SIGNING &
 STRIPING

SHEET 27 OF 33 SHEETS



SIGN NOTES:
 ① INSTALL SIGN
 ② TEMPORARY TRAFFIC CONTROL SIGN
 ③ SALVAGE FOR RE-USE ON THIS PROJECT
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STRIPING KEY
 --- CIRCLE - MULTI COMP

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NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\22-01-00\CSAH_76_(CSAH24-Typo Creek Dr\Base\Traffic\Temp Sign & Perm S&S Thames Bypass.dwg

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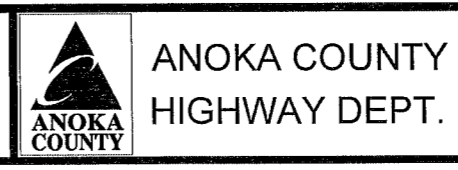
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CP 21-37-76

TEMPORARY SIGNING
 PERMANENT SIGNING &
 STRIPING

SHEET 28 OF 33 SHEETS

TEMPORARY TRAFFIC CONTROL SIGNS			
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
W8-12	48" x 48"		8
R4-1	24" x 30"		8
R4-2	24" x 30"		8
G20-2	36" x 18"		7
W8-1	48" x 48"		12
W16-7P	30" x 18"		12
W3-4	48" x 48"		AS NEEDED
W8-1	48" x 48"		AS NEEDED
W8-8	48" x 48"		AS NEEDED

TEMPORARY TRAFFIC CONTROL SIGNS			
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
W8-9	48" x 48"		AS NEEDED
W8-11	48" x 48"		AS NEEDED
W8-23	48" x 48"		AS NEEDED
MI-6M	24" x 24"		4
W20-1	48" x 48"		AS NEEDED (ESTIMATED 17)
W20-4	48" x 48"		AS NEEDED
W20-7	48" x 48"		AS NEEDED
REFLECTORIZED REBOUNDBLE 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.			4 AT 10 DAYS EA

F & I SIGN PANELS							
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY	PANEL AREA	TOTAL AREA	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT To pavement edge
				SQ. FT.	SQ. FT.		
R4-X8	30" x 30"		2	6.25	12.50	1	7.0'
PROJECT TOTAL SQ FT					12.50		

EXISTING SIGN TAB					
STATION	ADDRESS/ DESCRIPTION (NOTES)	SALVAGE SIGN	REINSTALL SALVAGE SIGN	SIGN NUMBER	SIGN LEGEND
		EACH	EACH		
1006+62	RT	1	1	X4-3	CULVERT MKR
1007+40	LT	1	1	R1-1	STOP
				X4-3	DELINEATOR
1007+45	LT	1	1		STREET SIGN
1008+00	LT	1	1	W1-8	CHEVRON
				W1-8	CHEVRON
1009+12	LT	1	1	W1-8	CHEVRON
				W1-8	CHEVRON
TOTAL		5	5		

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 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

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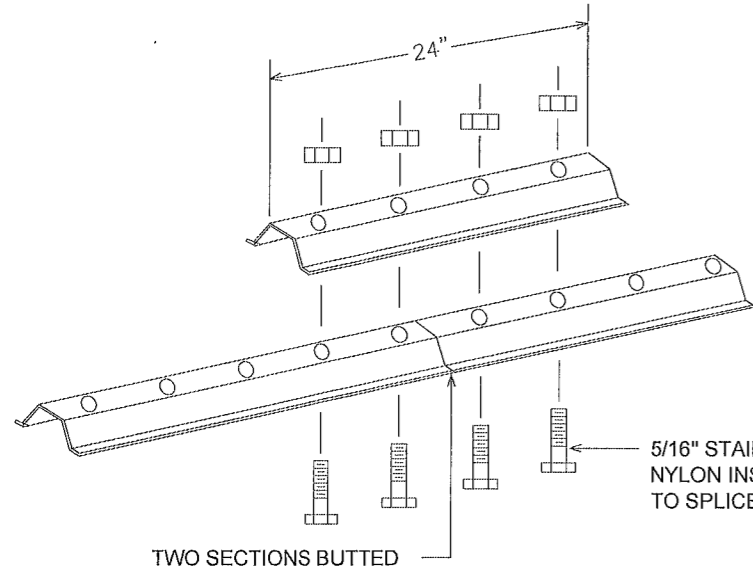


ANOKA COUNTY
HIGHWAY DEPT.

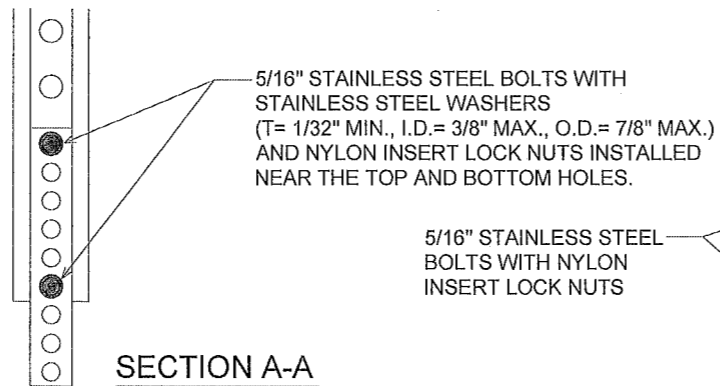
CP 21-37-76

TEMPORARY SIGNING &
PERMANENT SIGNING
QUANTITIES

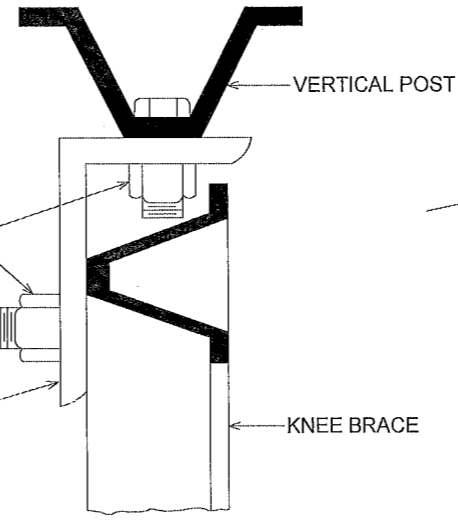
SHEET 29 OF 33 SHEETS



LATERAL BRACE OR STRINGER
SPLICE DETAIL (EXPLODED VIEW)



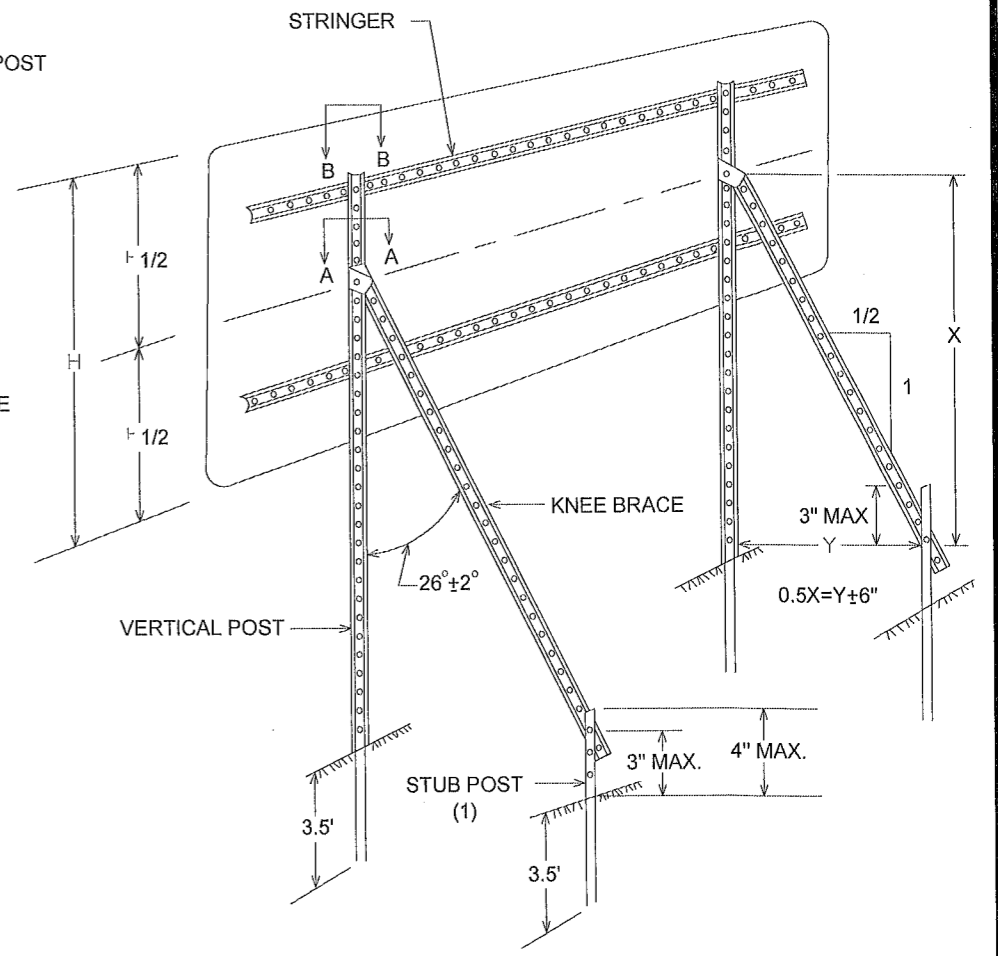
SECTION A-A



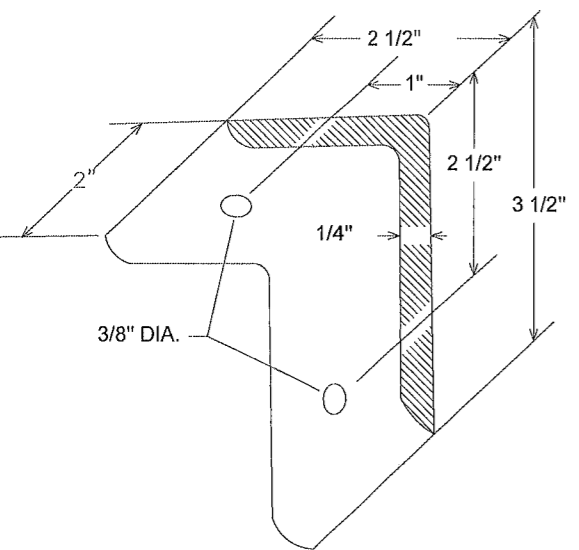
BRACKET

VERTICAL POST

KNEE BRACE

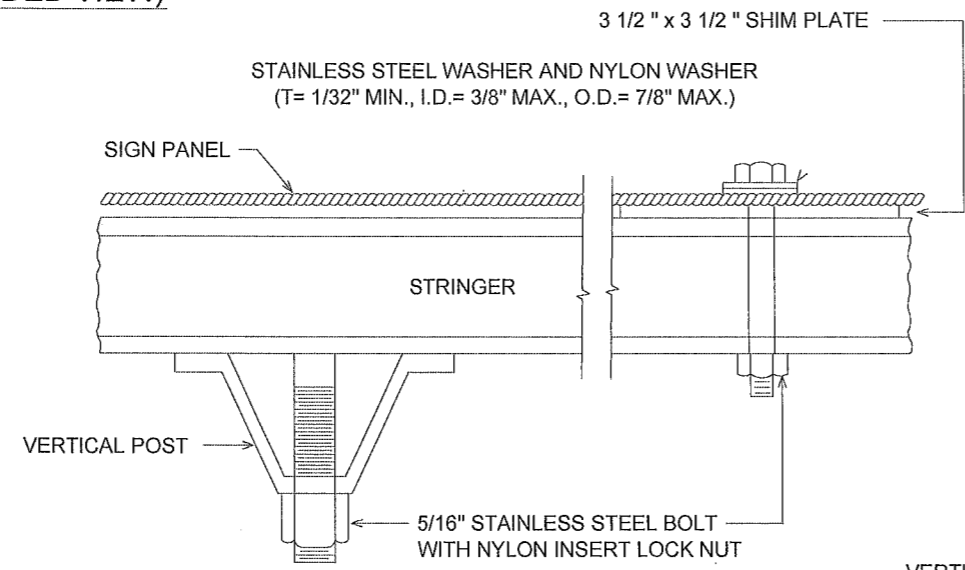


TYPICAL "A-FRAME" INSTALLATION
TYPE "D" SIGNS



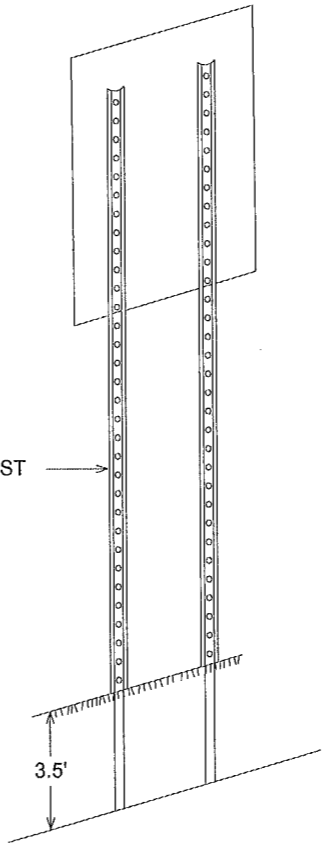
A-FRAME BRACKET

(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)

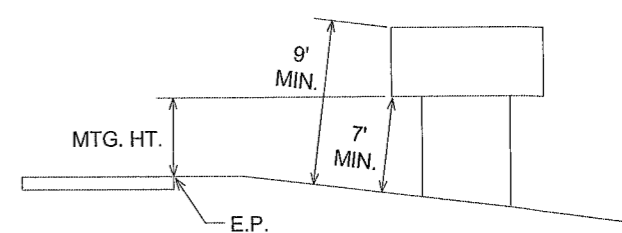


SECTION B-B

VERTICAL POST

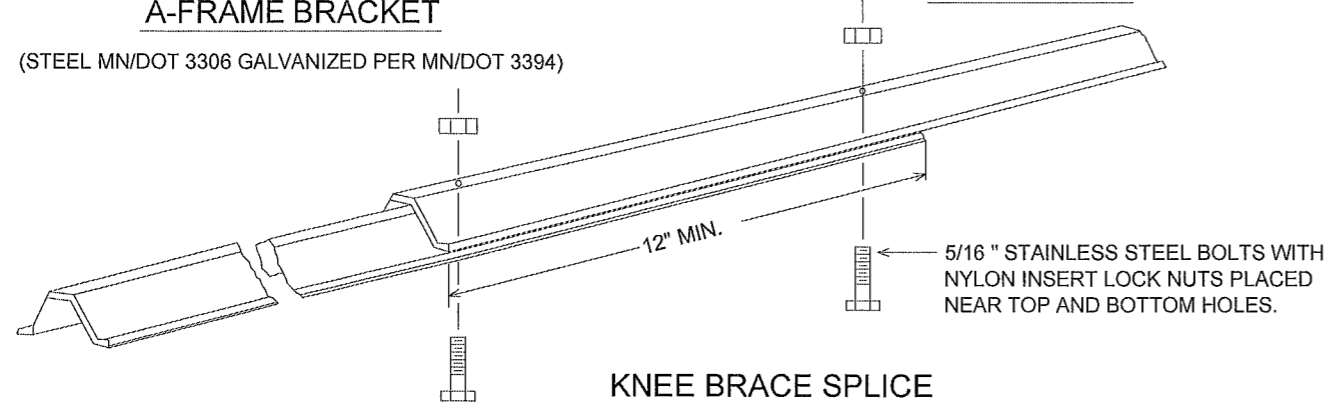


TYPICAL INSTALLATION 36" AND LARGER
TYPE "C" SIGNS



TYPICAL MOUNTING

(1) OFFSET STUB POST 1' TOWARD ROADWAY
RELATIVE TO VERTICAL POST.



KNEE BRACE SPLICE

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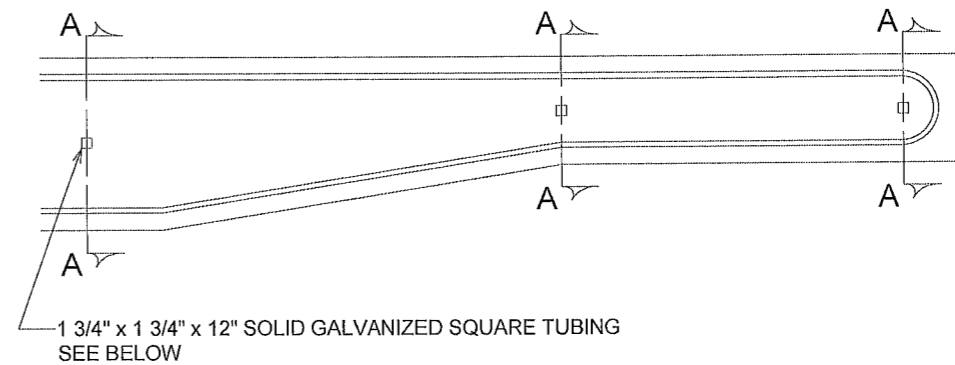
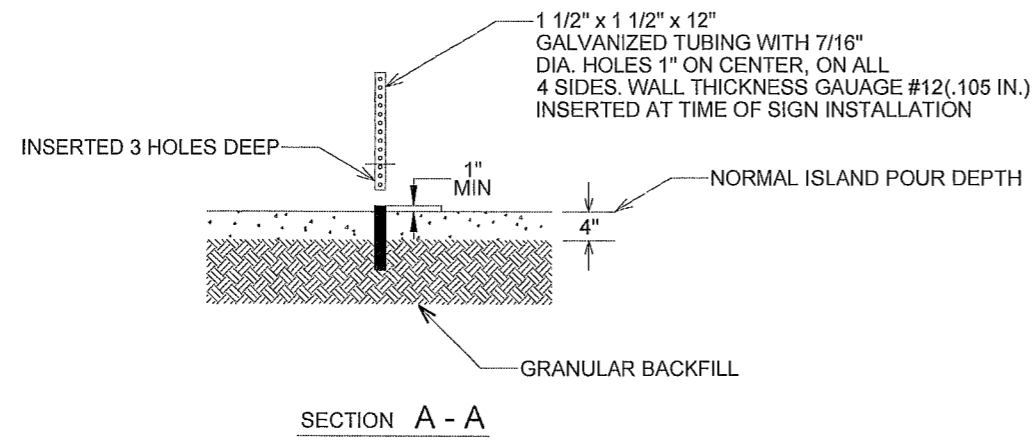
ANOKA COUNTY
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CP 21-37-76

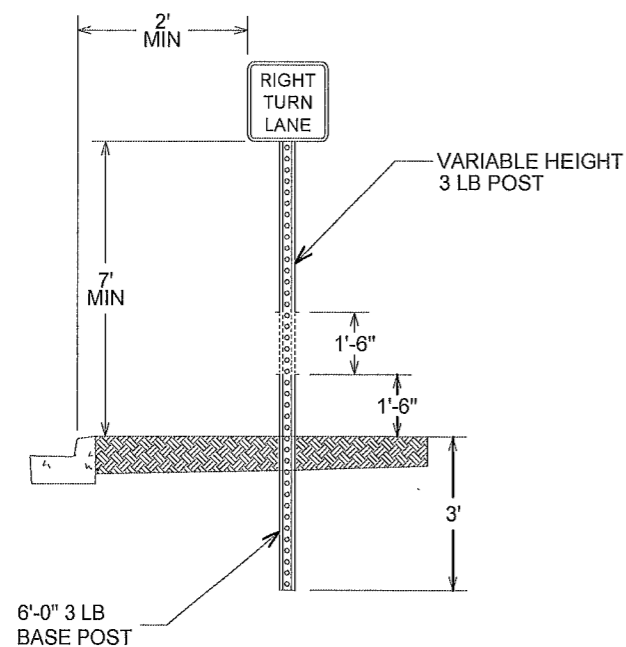
SIGNING & STRIPING
DETAILS
SHEET 30 OF 33 SHEETS

NO	DATE	BY	CKD	APPR	REVISION

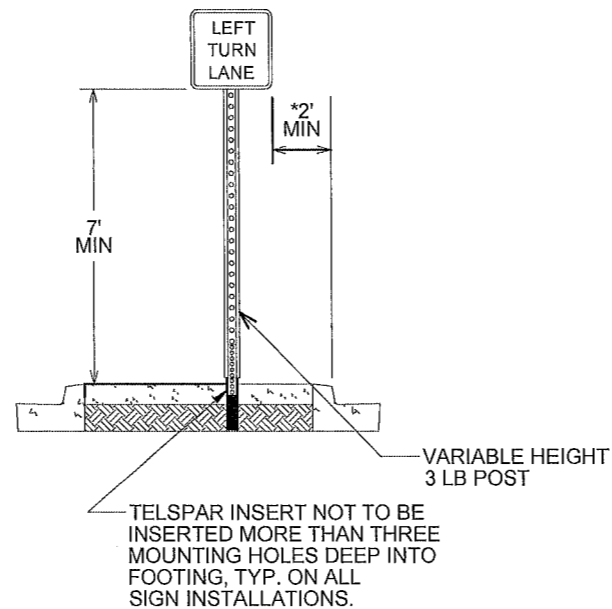
NAME: P:\22-01-00\CSAH_76_(CSAH 24-Typo Creek Dr)\Base\Traffic\Sign&Stripe Details.dwg



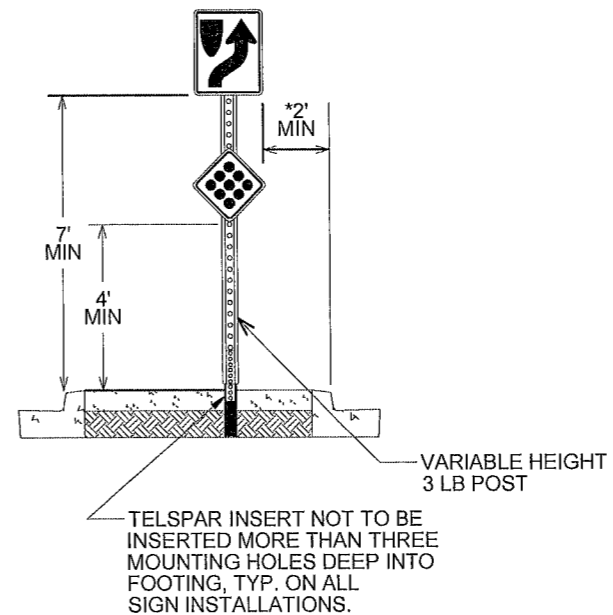
GROUND POST MOUNT SIGN
INSTALLATION TYPICAL



ISLAND MOUNT BREAK-AWAY SIGN
INSTALLATION TYPICAL



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



*1' MIN FOR NARROW URBAN LOCATIONS

INSTALLATION NEAR SIDEWALK (MN MUTCD)
The minimum height, measured vertically from the bottom of the sign to the sidewalk, of signs installed above sidewalks shall be 7 feet. If the bottom of a secondary sign that is mounted below another sign is mounted lower than 7 feet above a pedestrian sidewalk or pathway, the secondary sign shall not project more than 4 inches into the pedestrian facility.

NO	DATE	BY	CKD	APPR	REVISION
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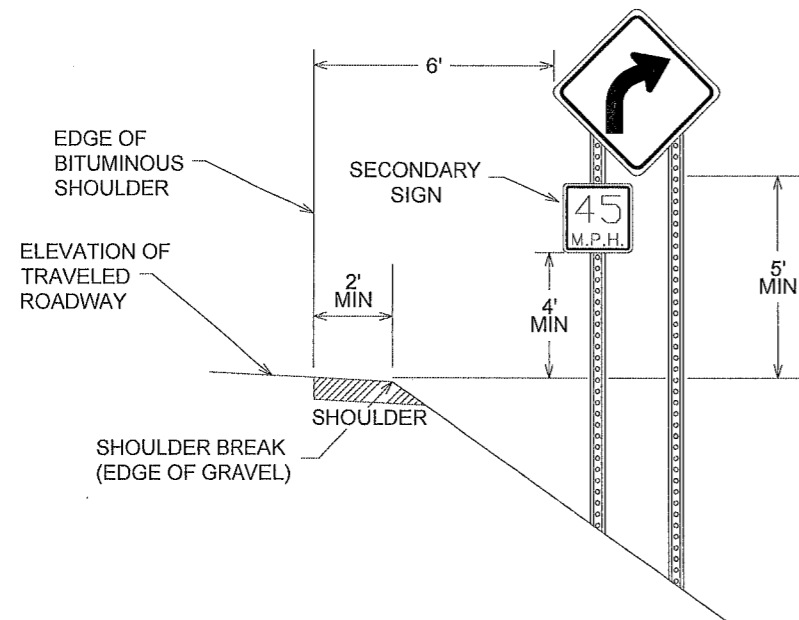


ANOKA COUNTY
HIGHWAY DEPT.

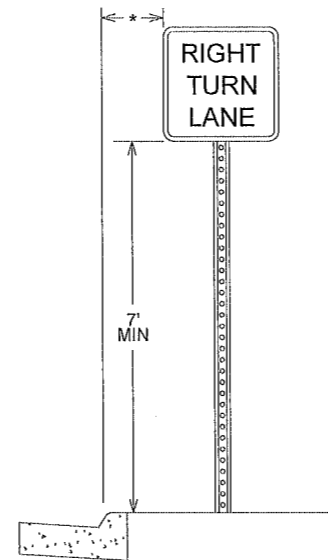
CP 21-37-76

SIGNING & STRIPING
DETAILS
SHEET 31 OF 33 SHEETS

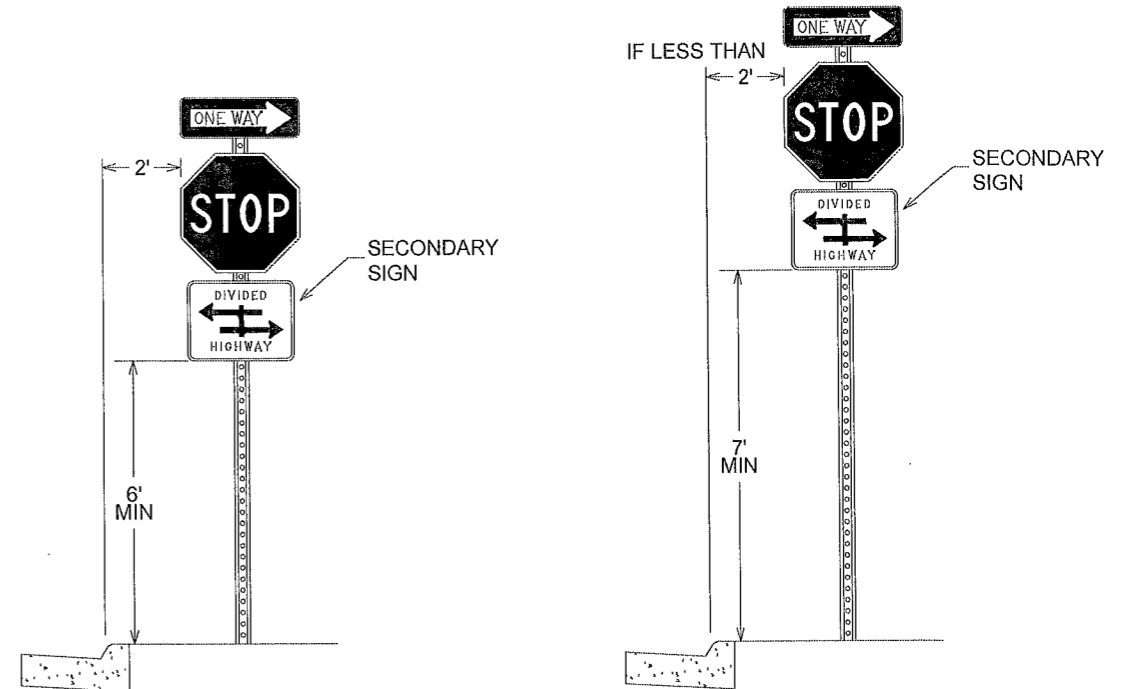
TYPICAL SIGN PLACEMENT
(RURAL)



TYPICAL SIGN PLACEMENT
(URBAN)



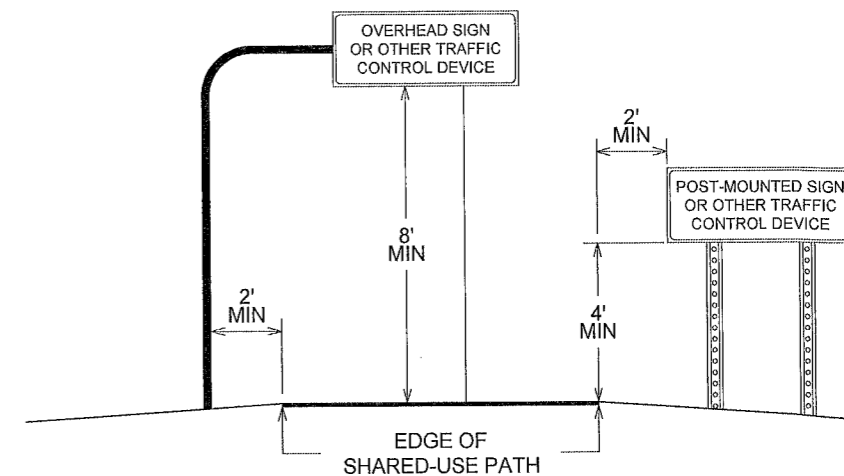
*2' - NARROW BOULEVARD (≤ 8' WIDE)
6' - WIDE BOULEVARD



NOTES:

- ALL DIMENSIONS ARE MINIMUMS
- MAINTAIN A DISTANCE OF 2' BETWEEN SIGNS AND BITUMINOUS TRAIL
- 7' SIGN CLEARANCE IF A 2' DISTANCE BETWEEN SIGN AND BITUMINOUS TRAIL CANNOT BE MAINTAINED

TYPICAL SIGN PLACEMENT
SHARED-USE PATH



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: SEAN R. THIEL DATE: 2/9/22
SIGNATURE: *Sean R. Thiel* LICENSE NO. 45129

DRAWN BY: TMV DATE: 12/22/21
DESIGN BY: DATE:
CHECKED BY: DATE:



ANOKA COUNTY
HIGHWAY DEPT.

CP 21-37-76

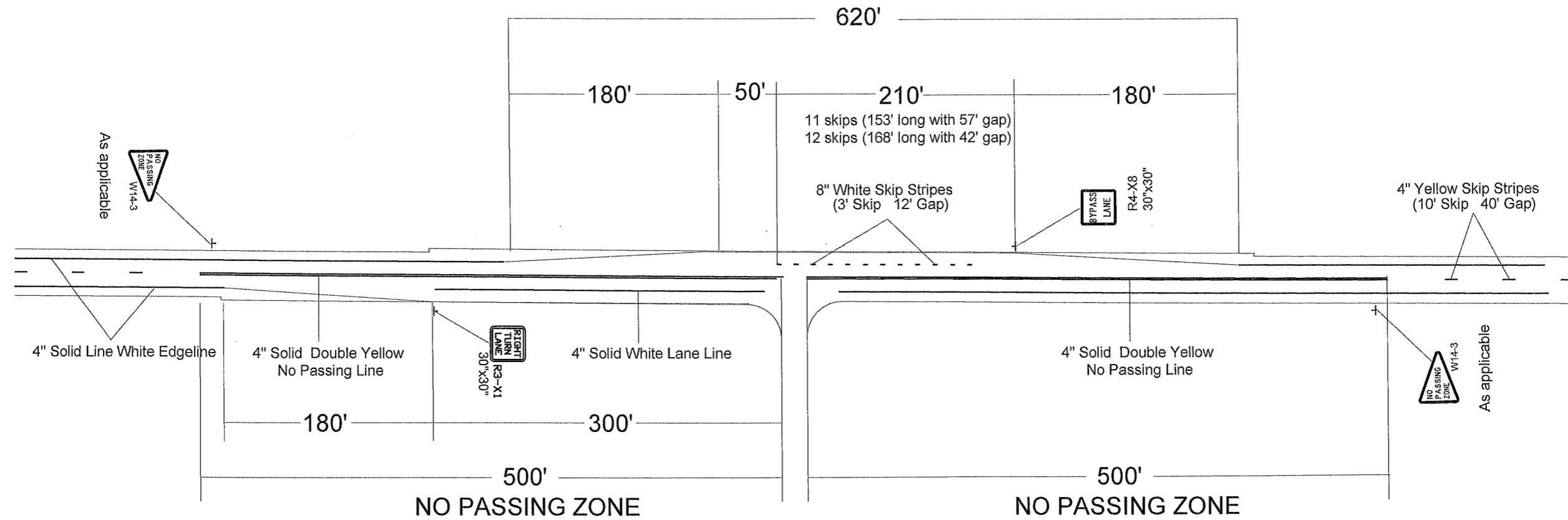
SIGNING & STRIPING
DETAILS

SHEET 32 OF 33 SHEETS

A.C.H.D.

BY-PASS TYPICAL

REVISED 10.8.18



4 OF 4

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.

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SHEET 33 OF 33 SHEETS