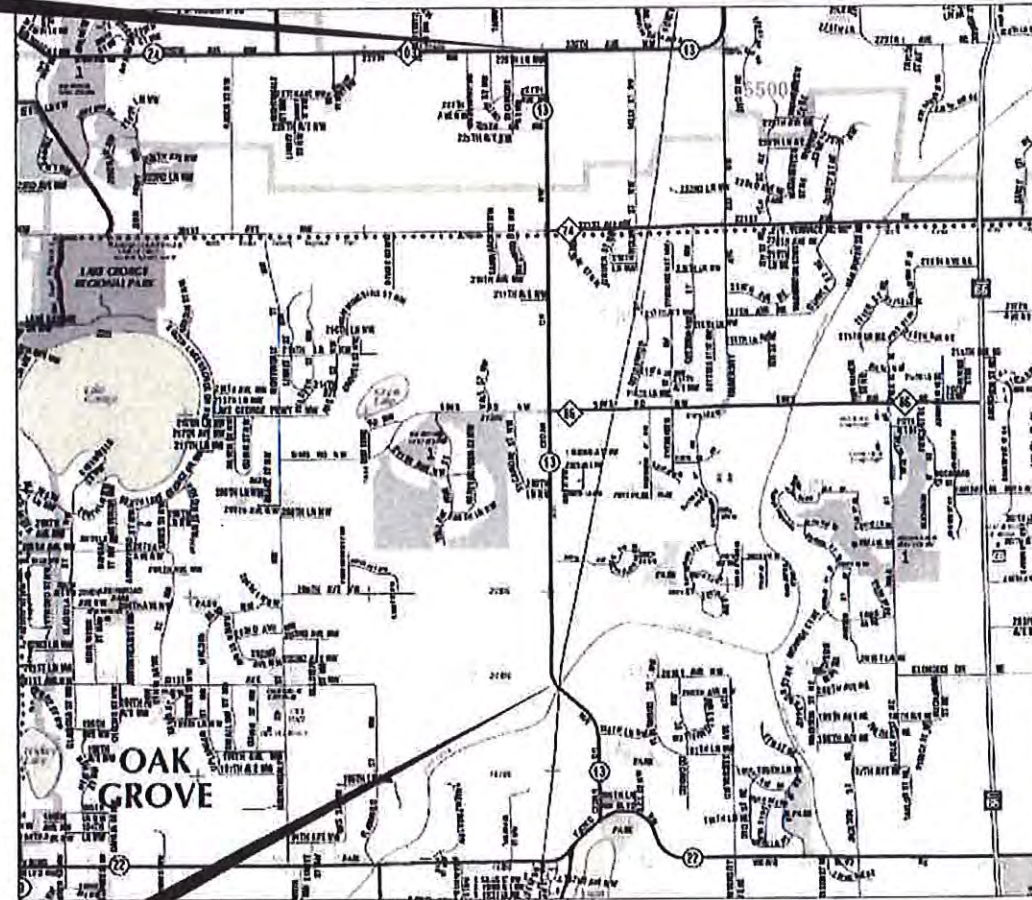


MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR BITUMINOUS RECLAMATION AND BITUMINOUS SURFACING
LOCATED ON CSAH 13 BETWEEN BNSF RR TRACKS AND 229TH AVE NW (CR 103)

CSAH #13
GROSS LENGTH 18,774 FEET 3.555 MILES
EXCEPTIONS-LENGTH 0.000 FEET 0.000 MILES
NET LENGTH 18,774 FEET 3.555 MILES

END SAP 002-613-002
CSAH 13, STA: 198+44.00



BEGIN SAP 002-613-002
CSAH 13, STA: 10+70.00

PROJECT LOCATION



DESIGN DESIGNATION (CSAH 13)			
ESAL 20	183,585	FUNCTIONAL CLASSIFICATION	A MINOR CONNECTOR
R VALUE	60	NO. OF TRAFFIC LANES	2
ADT (2019)	1,554	NO. OF PARKING LANES	0
PROJ. ADT (2039)	1,554	DESIGN SPEED	50 MPH
PROJ. HCADT (2039)	92	STOPPING SIGHT DISTANCE BASED ON:	
SOIL FACTOR	N/A	HEIGHT OF EYE	3.5'
		HEIGHT OF OBJECT	2.0'
		DESIGN SPEED NOT ACHIEVED AT:	
		STA. _____ TO STA. _____	MPH _____

CITY OF OAK GROVE
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
SECTIONS 1, 2, 11, 12, 13, 14, 23, 24
TOWNSHIP 33 NORTH
RANGE 24 WEST

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

THIS PLAN CONTAINS 28 SHEETS

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	QUANTITY TABULATIONS
4	TYPICAL SECTIONS
5 - 7	DETAILS
8 - 14	CONSTRUCTION PLAN
15 - 28	SIGNING AND STRIPING PLANS

Approved Chad O. Smith 5/6/2019
CITY OF OAK GROVE ENGINEER

Approved [Signature] 4/25/2019
ANOKA COUNTY ENGINEER

Janelle Dneal DATE 5/7/19
DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

Janelle Dneal DATE 5/7/19
STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

NO	DATE	BY	CHKD	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: 5/7/19 LICENSE NO. 46732

DRAWN BY SPH DATE 04/17/2019
DESIGN BY AA DATE 04/17/2019
CHECKED BY HG DATE 04/17/2019

**ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-613-002

TITLE SHEET
Sheet 1 of 28 Sheets

STATEMENT OF ESTIMATED QUANTITIES

NOTES	ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED
	2021.501	MOBILIZATION	LUMP SUM	1
	2102.503	PAVEMENT MARKING REMOVAL	LIN FT	200
	2104.502	SALVAGE SIGN TYPE C	EACH	6
	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	24
	2104.503	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT	723
	2104.504	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	15
1	2104.504	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	1067
	2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	1726
16	2105.602	CONSTRUCT TURN LANE	EACH	3
2	2123.510	MOTOR GRADER	HOUR	20
17	2123.510	DOZER	HOUR	12
	2130.523	WATER	MGAL	426
3	2211.509	AGGREGATE BASE CLASS 5	TON	547
	2215.504	FULL DEPTH RECLAMATION	SQ YD	60881
4	2215.507	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	60
	2221.509	SHOULDER BASE AGGREGATE CLASS 5	TON	1239
5	2232.504	MILL BITUMINOUS SURFACE (2.0")	SQ YD	97
	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	3130
1,6	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,B)	TON	123
7	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4,C)	TON	397
	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4,C)	TON	14444
	2531.504	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	15
12	2540.602	MAIL BOX SUPPORT	EACH	71
8	2563.601	TRAFFIC CONTROL	LUMP SUM	1
9	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20
	2564.502	INSTALL SIGN TYPE C	EACH	6
	2564.518	SIGN PANELS TYPE C	SQ FT	18.75
15	2573.503	SEDIMENT CONTROL LOG TYPE WOOD FIBER	LIN FT	1700
13	2574.507	COMMON TOPSOIL BORROW (LV)	CU YD	40
14	2575.504	EROSION CONTROL BLANKETS CATEGORY 0	SQ YD	1600
10	2581.503	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	LIN FT	751
11	2582.503	4" SOLID LINE MULTI COMP	LIN FT	45650
11	2582.503	4" BROKEN LINE MULTI COMP	LIN FT	3350
11	2582.503	4" DBLE SOLID LINE MULTI COMP	LIN FT	2000
11	2582.518	PAVT MSSG PREF THERMO	SQ FT	62
11	2582.603	PAVEMENT MARKING SPECIAL	LIN FT	36

CONSTRUCTION NOTES

1	CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
2	ITEM USED TO MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIM AREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING PAVEMENT.
3	GRAVEL BASE FOR CONCRETE / BITUMINOUS DRIVEWAYS, AND BITUMINOUS STREET APPROACHES ALSO 7 TONS FOR EACH GRAVEL ENTRANCE MATERIAL SHALL BE HAULED AND USED FOR PROFILE CORRECTION AREAS. ITEM INCLUDES PLACEMENT, SHAPING, COMPACTION, AND MAINTENANCE OF MATERIAL. EXCESS MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
4	ITEM INCLUDES 2" DEEP MILL AT BEGINNING AND END OF PROJECT. ALL PAVED STREET APPROACHES AND DRIVEWAYS. SEE DETAILS FOR DIMENSIONS.
5	ITEM FOR BITUMINOUS DRIVEWAYS. DRIVEWAYS SHALL BE PAVED AFTER MAINLINE PAVING AND BEFORE FINAL STRIPING.
6	ITEM FOR BITUMINOUS STREET APPROACHES. STREET APPROACHES SHALL BE PAVED AFTER MAINLINE PAVING AND BEFORE FINAL STRIPING.
7	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 IN PLACE WHENEVER PAVEMENT MARKINGS ARE NOT PRESENT.
8	2 MESSAGE BOARDS, ONE ON EACH END OF PROJECT, SHALL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
9	CENTERLINE AND LANE DESIGNATION SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON EACH NEW LIFT OF PAVEMENT; SKIPS MUST BE IN PLACE BEFORE THE CONTRACTOR LEAVES FOR THE DAY. CONTRACTOR IS TO REMOVE PRIOR TO FINAL PAINT STRIPING.
10	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING.
11	MAILBOXES SHALL BE INSTALLED AT THE EXISTING MAILBOX LOCATION OR AS DIRECTED BY THE LOCAL POSTAL AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE LOCAL POSTAL AUTHORITY. MAILBOX REMOVAL AND ALL MATERIALS NECESSARY FOR INSTALLATION ARE INCIDENTAL TO THIS ITEM.
12	ITEM USED AT ENGINEER'S DISCRETION FOR RESTORATION OF DISTURBED AREAS ALONG DRIVEWAYS AND STREET APPROACHES.
13	TYPE 1 FERTILIZER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM.
14	PLACE LOGS ON SMOOTHED, PREPPED SOILS WITH NO GAPS BETWEEN LOG AND SOIL. INSTALL LOGS ALONG CONTOURS WITH ENDS TURNED UP SLOPE IN A J-HOOKED MANNER.
15	ITEMS INCLUDED IN THE TURNLANE BY THE EACH ARE - COMMON EXCAVATION, SELECT GRANULAR BORROW, TOPSOIL, AGG BASE CL-5 AND REMOVE AND REPLACE TRAFFIC SIGNS.
16	ITEM USED FOR DITCH GRADING FOLLOWING CONSTRUCTION OF RIGHT TURN LANE. ITEM SHALL BE USED ONLY AS NECESSARY AS DETERMINED BY THE ENGINEER.
17	

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	
	04/17/2019					9:46:01 AM

NAME: P:\19-01-00\CSAH_13_(RR-CR103)\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: JOSEPH J. MacPHERSON
 SIGNATURE: *[Signature]*
 DATE: 4/25/19 LICENSE NO. 48732

DRAWN BY: SPH DATE: 04/17/2019
 DESIGN BY: AA DATE: 04/17/2019
 CHECKED BY: HG DATE: 04/17/2019



**ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-613-002

STATEMENT OF ESTIMATED QUANTITIES

Sheet 2 of 28 Sheets

SUPERELEVATION CORRECTION TAB			
STATION	POINT	LEFT GRADE	RIGHT GRADE
10+70		0.0%	0.0%
11+00		-0.5%	0.8%
11+50		-0.1%	-2.0%
12+00		0.8%	-2.5%
12+50		2.0%	-3.0%
13+00		2.0%	-3.5%
13+50		1.3%	-4.0%
14+00		0.5%	-4.5%
14+50	BEGIN FULL SUPER RT	-0.3%	-5.0%
15+00	BEGIN FULL SUPER LT	-1.0%	-5.0%
15+50		-1.0%	-5.0%
16+00		-1.0%	-5.0%
16+50	END FULL SUPER RT	-1.0%	-5.0%
17+00		-1.0%	-4.5%
17+50	END FULL SUPER LT	-1.0%	-4.0%
18+00		-1.3%	-3.5%
18+50		-1.5%	-3.0%
19+00		-1.8%	-2.5%
19+50	END SUPER RT/LT	-2.0%	-2.0%
20+00		-2.0%	-2.0%
20+50		-2.0%	-2.0%
21+00		-2.0%	-2.0%

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

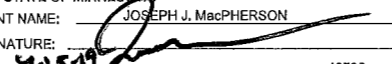
MNDOT STANDARD PLATES	
PLATE NUMBER	DESCRIPTION
8000J	CHANNELIZERS (3 SHEETS)
9350A	MAILBOX SUPPORT (SWING-AWAY TYPE)

RIGHT TURN LANE AND 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)
221ST AVE NW	141+69 - 146+22	RTL	320	500	120	180
227TH AVE NW	185+89 - 190+69.5	RTL	350	533	120	192
229TH AVE NW	102+51 - 107+30	RTL	350	533	120	192
TOTALS:			1020	1566	360	564

NO	DATE	BY	CHKD	APPR	REVISION	DATE	TIME
						04/17/2019	9:48:07 AM

NAME: P:\19-01-00\CSAH_13_(RR-CR103)\Base\PROPOSED\PROPOSED.dgn

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PRINT NAME: JOSEPH J. MacPHERSON
 SIGNATURE: 
 DATE: 4/17/19 LICENSE NO. 48732

DRAWN BY SPH DATE 04/17/2019
 DESIGN BY AA DATE 04/17/2019
 CHECKED BY HG DATE 04/17/2019

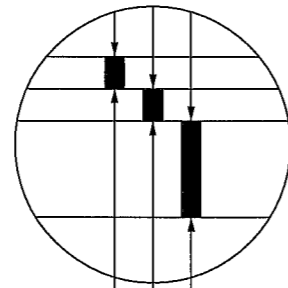


ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-613-002

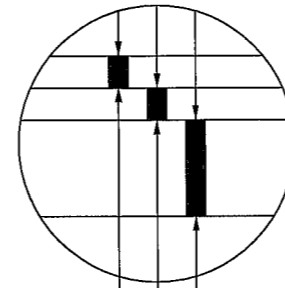
QUANTITY TABULATIONS
Sheet 3 of 28 Sheets

DESIGN N RIGHT TURN LANE AND BYPASS LANE



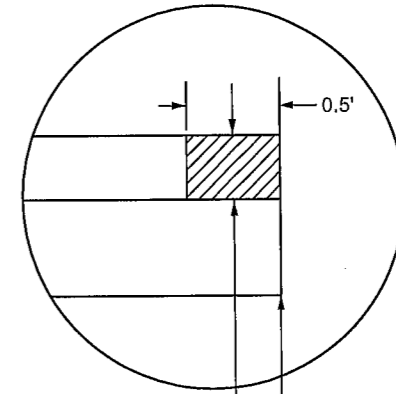
2.0" BITUMINOUS WEAR(SPWEB440C)
2.0" BITUMINOUS WEAR(SPWEB440C)
6" AGGREGATE CLASS 5

DESIGN R RECLAIM SECTION



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

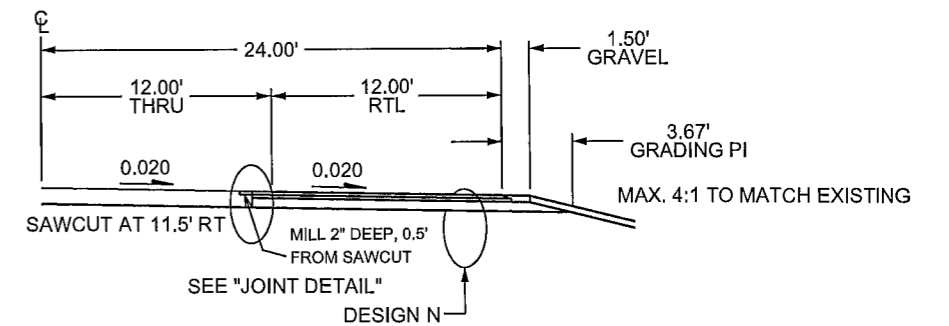
JOINT DETAIL



2" MILL JOINT
SAWCUT LOCATION

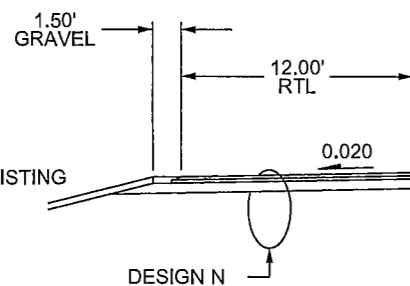
PROPOSED RIGHT TURN LANE SECTION

RTL @ 229TH AVE



CSAH 13 - CEDAR DRIVE NW (PROPOSED) SECTION

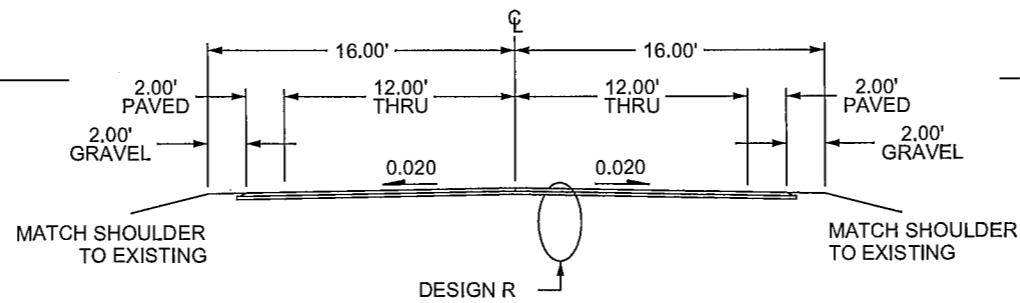
145+45 - 151+53



MAX. 4:1 TO MATCH EXISTING

DESIGN N

10+70 - 198+44

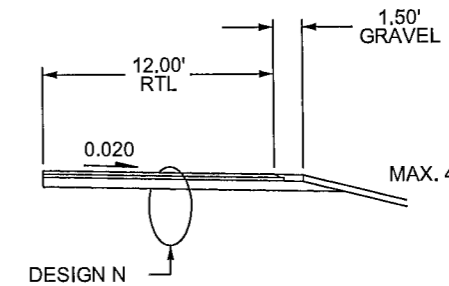


MATCH SHOULDER TO EXISTING

DESIGN R

MATCH SHOULDER TO EXISTING

67+30 - 71+38



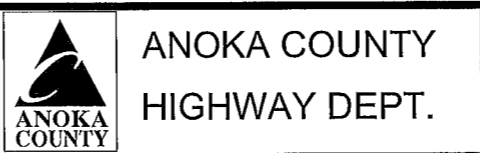
MAX. 4:1 TO MATCH EXISTING

DESIGN N

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NAME: P:\19-01-00\CSAH_13_(RR-CR103)\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: JOSEPH J. MacPHERSON
 SIGNATURE: *[Signature]*
 DATE: 4-25-19 LICENSE NO. 46732

DRAWN BY: SPH DATE: 04/05/2019
 DESIGN BY: AA DATE: 04/05/2019
 CHECKED BY: HG DATE: 04/05/2019

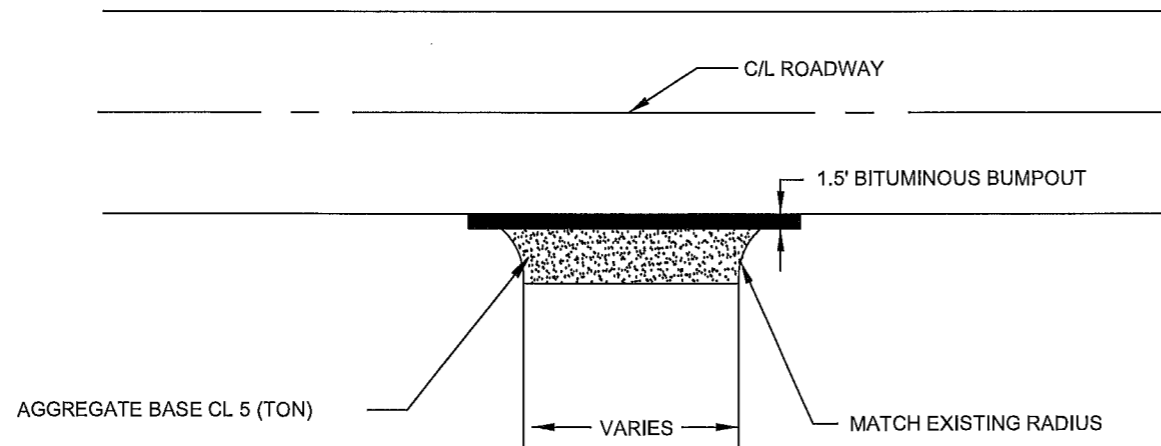


STATE AID PROJECT 002-613-002

TYPICAL SECTIONS
 Sheet 4 of 28 Sheets

DRIVEWAY DETAIL

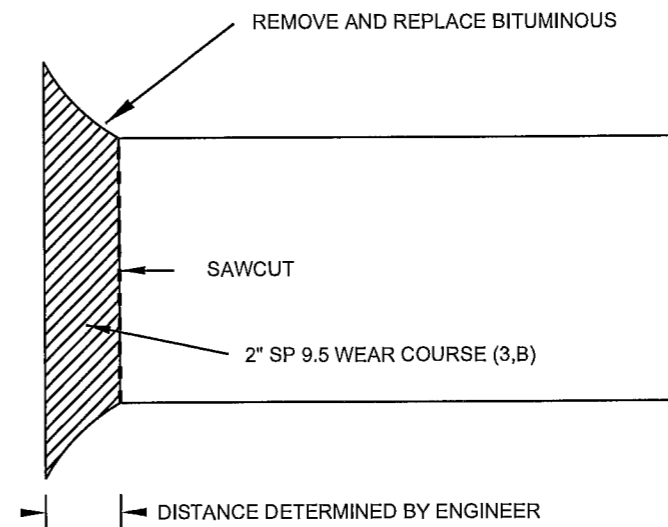
GRAVEL / FIELD ENTRANCE



RECLAIM AREA - DRIVEWAY DETAIL

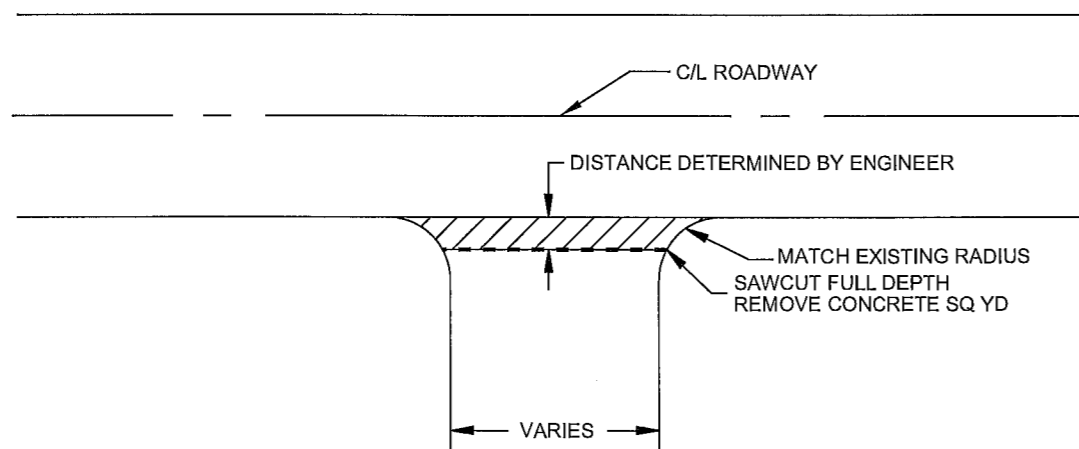
BITUMINOUS DRIVEWAY

PLAN VIEW



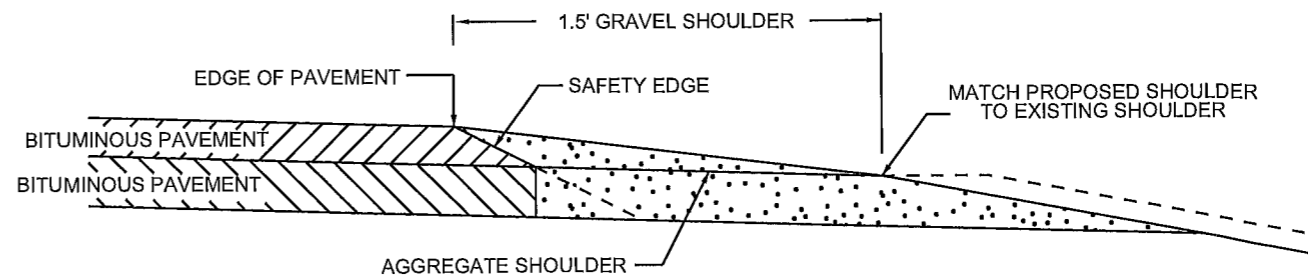
DRIVEWAY DETAIL

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 .

NO	DATE	BY	CHKD	APPR	REVISION	DATE	TIME

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: 9-26 LICENSE NO. 48732

DRAWN BY SPH DATE 03/27/2019

DESIGN BY AA DATE 03/27/2019

CHECKED BY HG DATE 03/27/2019



ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-613-002

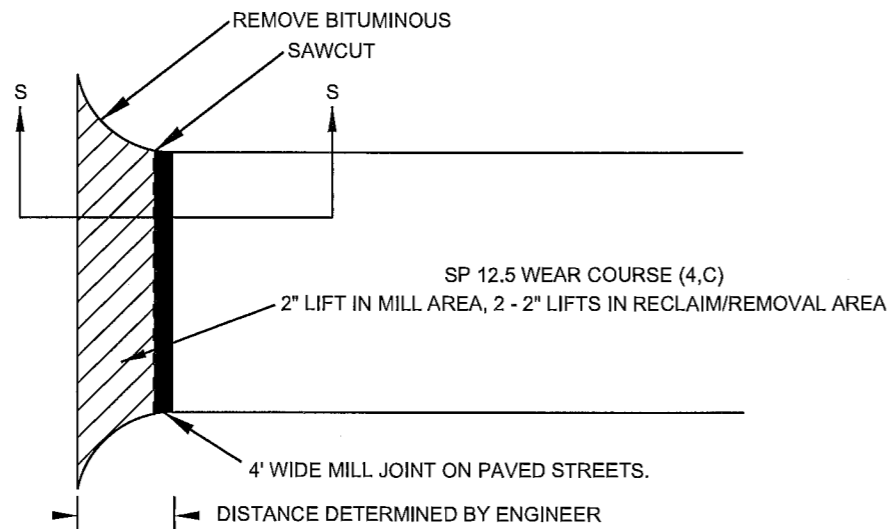
DETAILS

Sheet 5 of 28 Sheets

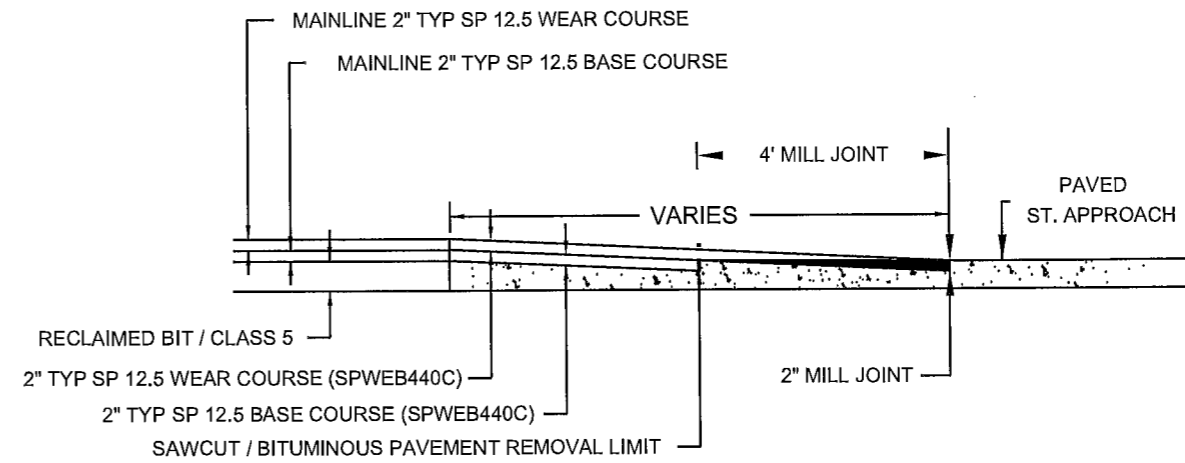
STREET APPROACH DETAIL (RECLAIM)

BITUMINOUS STREET

PLAN VIEW



SECTION S - S



NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME
						03/27/2019	7:06:53 AM

NAME: P:\19-01-00\CSAH_13_(RR-CR103)\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: JOSEPH J. MacPHERSON

SIGNATURE: *[Signature]*

DATE: 4.26.19 LICENSE NO. 46732

DRAWN BY SPH DATE 03/27/2019

DESIGN BY AA DATE 03/27/2019

CHECKED BY HG DATE 03/27/2019



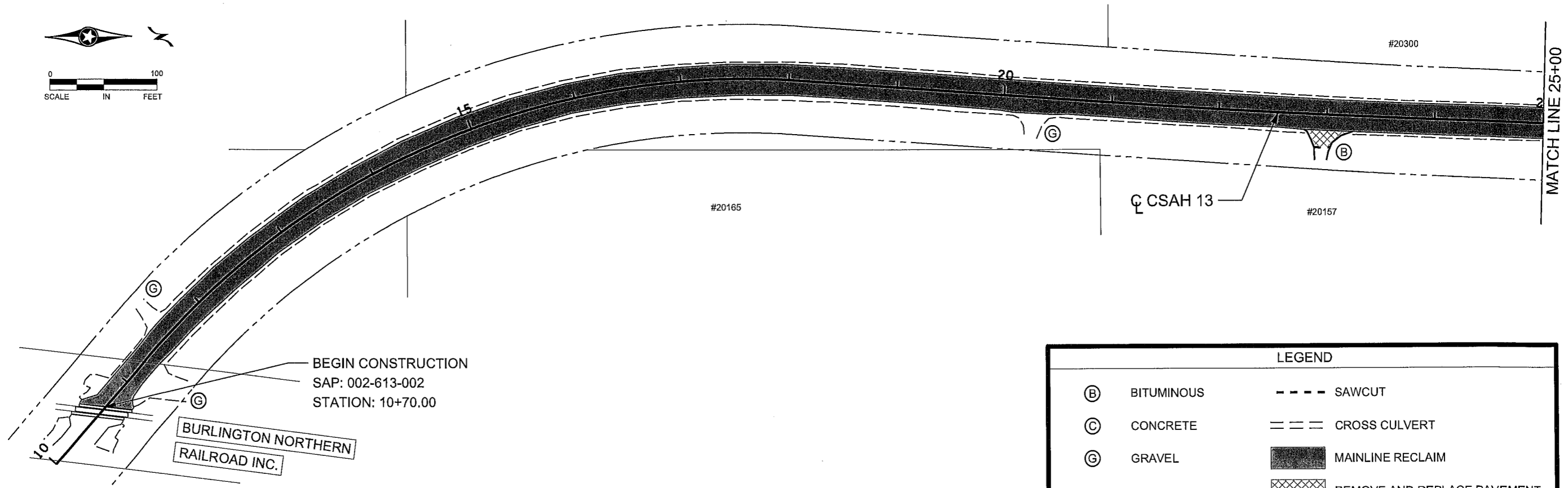
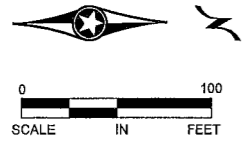
ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-613-002

DETAILS

Sheet 7 of 28 Sheets

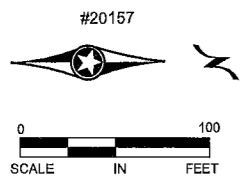
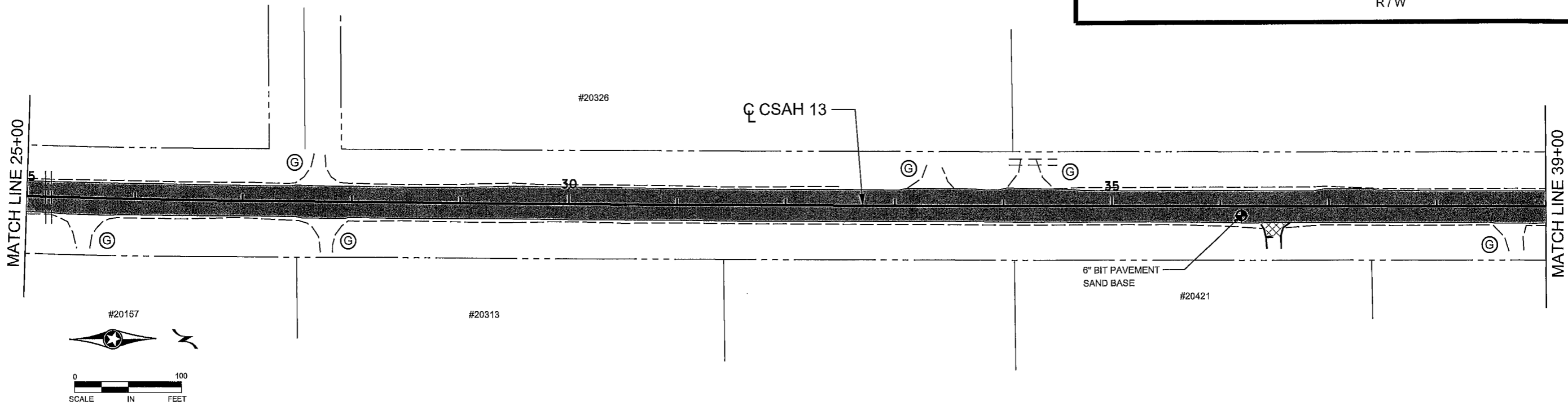
APAnders



BEGIN CONSTRUCTION
SAP: 002-613-002
STATION: 10+70.00

BURLINGTON NORTHERN
RAILROAD INC.

LEGEND			
(B)	BITUMINOUS	---	SAWCUT
(C)	CONCRETE	==	CROSS CULVERT
(G)	GRAVEL	[Solid Black]	MAINLINE RECLAIM
(●)	CORE LOCATION	[Cross-hatch]	REMOVE AND REPLACE PAVEMENT
---	BIOLOG	[Diagonal Hatch]	CONSTRUCT TURN LANE
		---	R / W

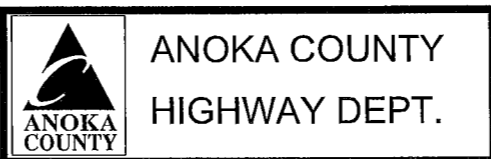


NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME

NAME: P:\19-01-00\CSAH_13_(RR-CR103)\Base\PROPOSED\PROPOSED.dgn

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PRINT NAME: JOSEPH J. MacPHERSON
SIGNATURE: *[Signature]*
DATE: 4-28-19 LICENSE NO. 46732

DRAWN BY SPH DATE 04/17/2019
DESIGN BY AA DATE 04/17/2019
CHECKED BY HG DATE 04/17/2019



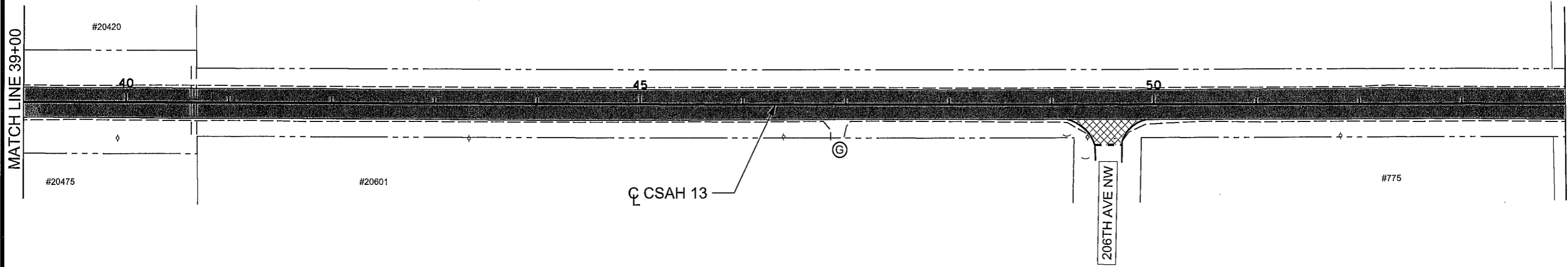
STATE AID PROJECT 002-613-002

CONSTRUCTION PLAN
STA 10+70 TO 39+00
Sheet 8 of 28 Sheets

APAnders

MATCH LINE 39+00

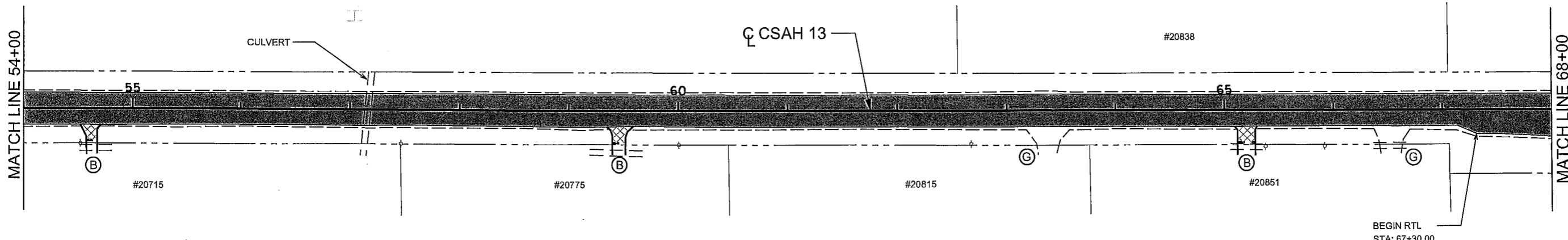
MATCH LINE 54+00



LEGEND			
(B)	BITUMINOUS	---	SAWCUT
(C)	CONCRETE	==	CULVERT
(G)	GRAVEL	[Hatched Box]	MAINLINE RECLAIM
(*)	CORE LOCATION	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
—•—	BIOLOG	[Diagonal Hatched Box]	CONSTRUCT TURN LANE
		—	R/W

MATCH LINE 54+00

MATCH LINE 68+00



NO	DATE	BY	CKD	APPR	REVISION	

NAME: P:\19-01-00\CSAH_13_(RR-CR103)\Base\PROPOSED\PROPOSED.dgn

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SIGNATURE: *[Signature]*

DATE: *[Date]* LICENSE NO. 48732

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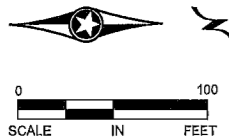
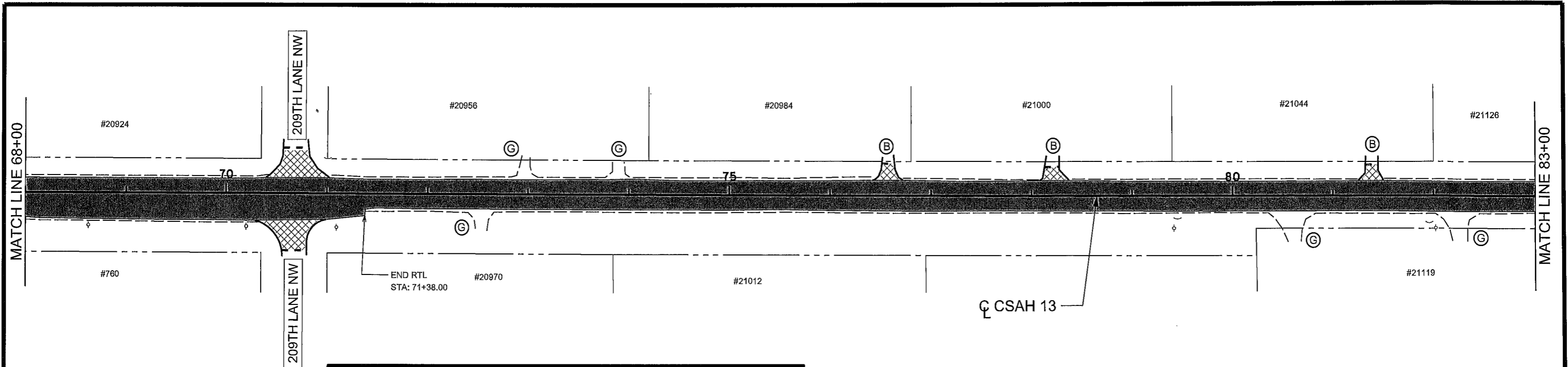
ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-613-002

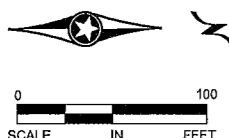
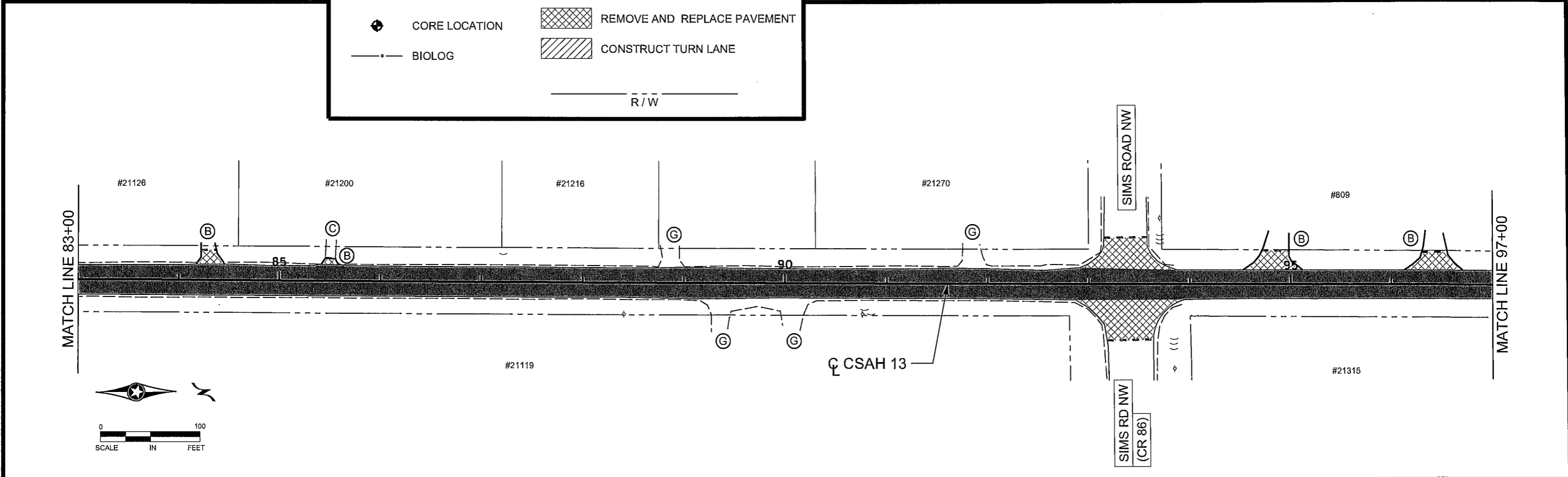
CONSTRUCTION PLAN

STA 39+00 TO 68+00

Sheet 9 of 28 Sheets



LEGEND			
(B)	BITUMINOUS	---	SAWCUT
(C)	CONCRETE	==	CROSS CULVERT
(G)	GRAVEL	[Hatched Box]	MAINLINE RECLAIM
(*)	CORE LOCATION	[Cross-hatched Box]	REMOVE AND REPLACE PAVEMENT
(-o-)	BIOLOG	[Diagonal Hatched Box]	CONSTRUCT TURN LANE
		---	R / W



NO	DATE	BY	CKD	APPR	REVISION
	04/17/2019				

NAME: P:\19-01-00\CSAH_13_(RR-CR103)\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: JOSEPH J. MacPHERSON

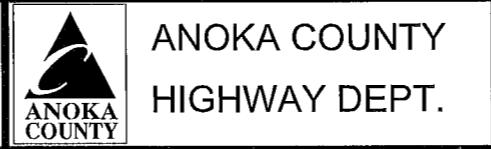
SIGNATURE: *[Signature]*

DATE: 4-23-19 LICENSE NO. 46732

DRAWN BY: SPH DATE: 04/17/2019

DESIGN BY: AA DATE: 04/17/2019

CHECKED BY: HG DATE: 04/17/2019

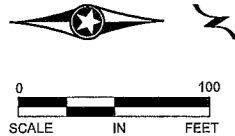
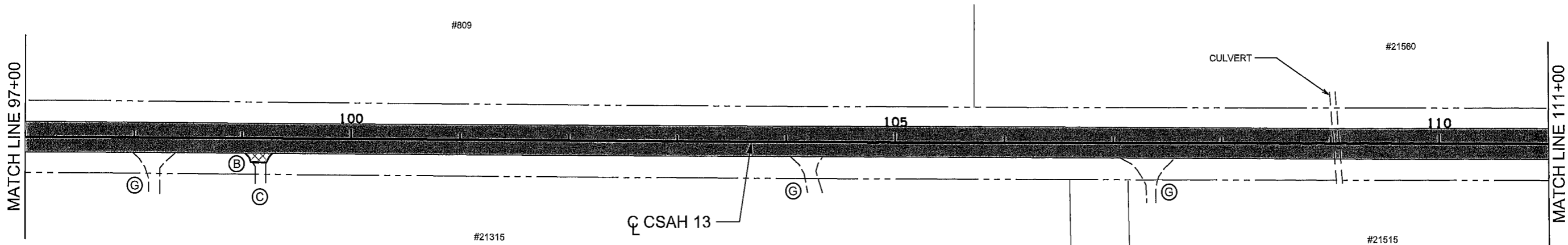


STATE AID PROJECT 002-613-002

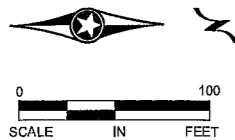
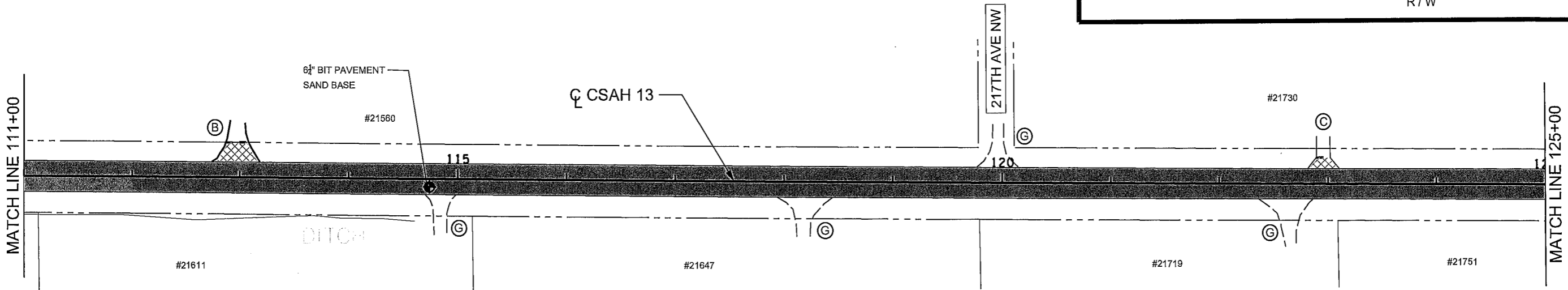
CONSTRUCTION PLAN

STA 68+00 TO 97+00

Sheet 10 of 28 Sheets



LEGEND			
(B)	BITUMINOUS	---	SAWCUT
(C)	CONCRETE	==	CROSS CULVERT
(G)	GRAVEL	█	MAINLINE RECLAIM
◆	CORE LOCATION	▨	REMOVE AND REPLACE PAVEMENT
---	SILT FENCE	▩	CONSTRUCT TURN LANE
		R/W	



NO	DATE	BY	CKD	APPR	REVISION	04/17/2019	9:46:13 AM
NAME: P:\19-01-00\CSAH_13_(RR-CR103)\Base\PROPOSED\PROPOSED.dgn							

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PRINT NAME: JOSEPH J. MacPHERSON

SIGNATURE: *[Signature]*

DATE: 4/17/2019 LICENSE NO. 46732

DRAWN BY SPH DATE 04/17/2019

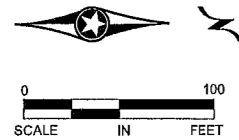
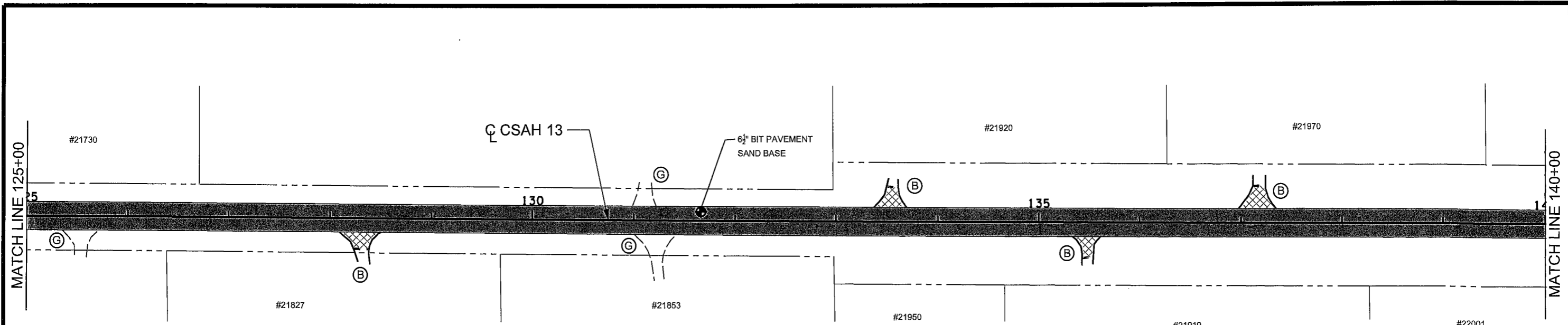
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CHECKED BY HG DATE 04/17/2019

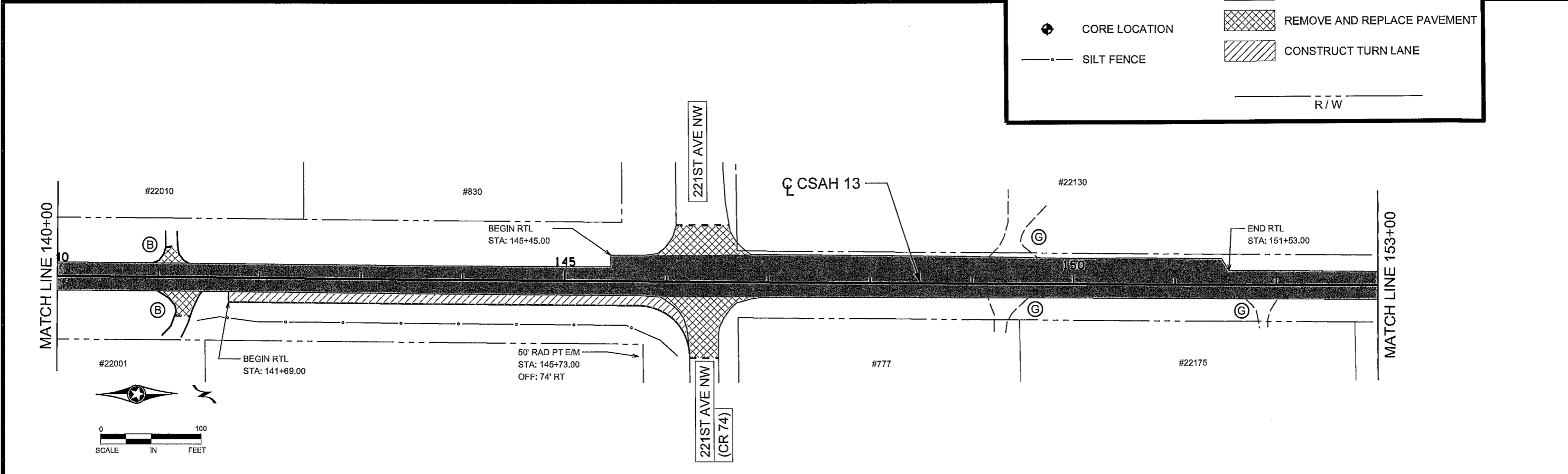
ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-613-002

CONSTRUCTION PLAN
STA 97+00 TO 125+00
Sheet 11 of 28 Sheets



LEGEND			
(B)	BITUMINOUS	---	SAWCUT
(C)	CONCRETE	==	CROSS CULVERT
(G)	GRAVEL	█	MAINLINE RECLAIM
⊕	CORE LOCATION	▨	REMOVE AND REPLACE PAVEMENT
---	SILT FENCE	▩	CONSTRUCT TURN LANE
		R/W	



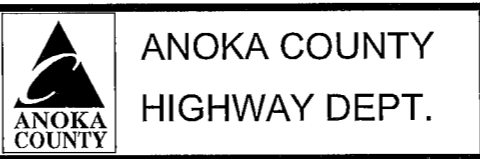
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NAME: P:\19-01-00\CSAH_13_(RR-CR103)\Base\PROPOSED\PROPOSED.dgn

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PRINT NAME: JOSEPH J. MacPHERSON
 SIGNATURE: *[Signature]*
 DATE: 4/26/19 LICENSE NO. 46732

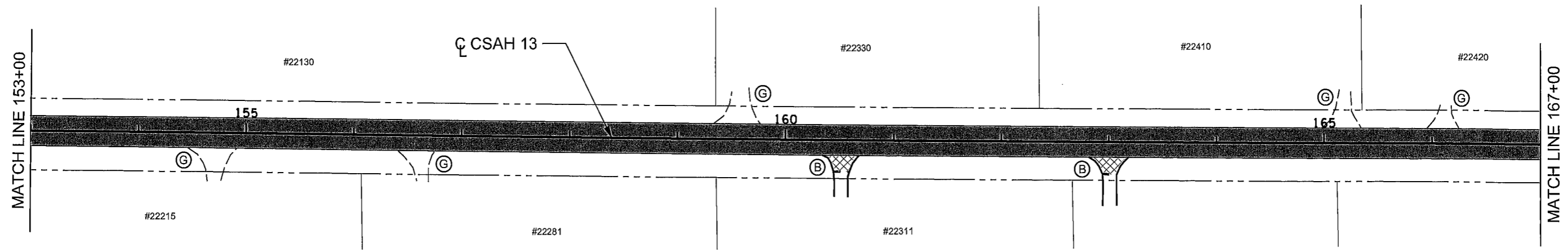
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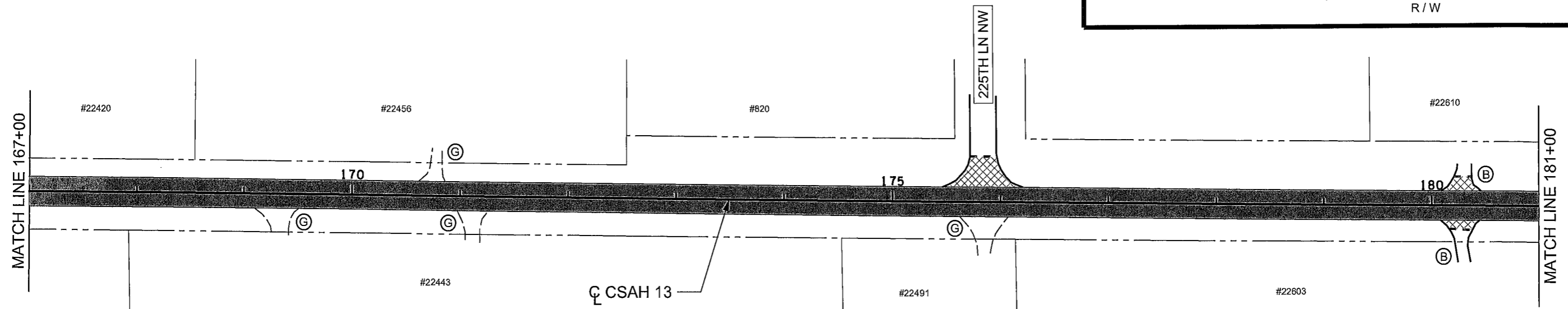
STATE AID PROJECT 002-613-002

CONSTRUCTION PLAN
 STA 125+00 TO 153+00
 Sheet 12 of 28 Sheets

APAnders



LEGEND			
(B)	BITUMINOUS	---	SAWCUT
(C)	CONCRETE	==	CROSS CULVERT
(G)	GRAVEL	█	MAINLINE RECLAIM
⊕	CORE LOCATION	▨	REMOVE AND REPLACE PAVEMENT
---	SILT FENCE	▧	CONSTRUCT TURN LANE
		R/W	



NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME

NAME: P:\19-01-00\CSAH_13_(RR-CR103)\Base\PROPOSED\PROPOSED.dgn

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PRINT NAME: JOSEPH J. MacPHERSON
 SIGNATURE: *[Signature]*
 DATE: 9-25-19 LICENSE NO. 48732

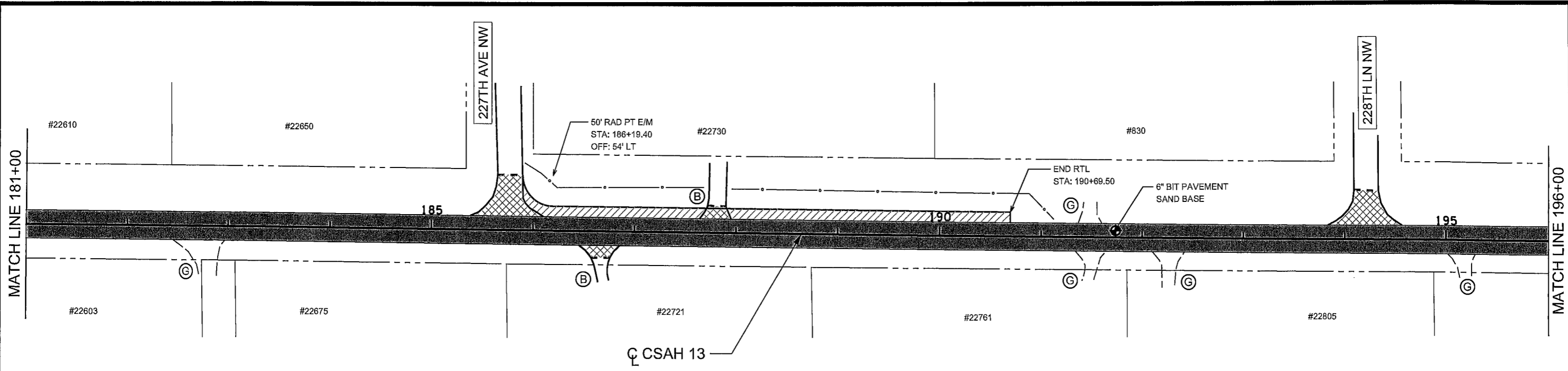
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 CHECKED BY HG DATE 04/17/2019

ANOKA COUNTY
HIGHWAY DEPT.

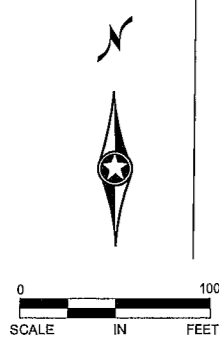
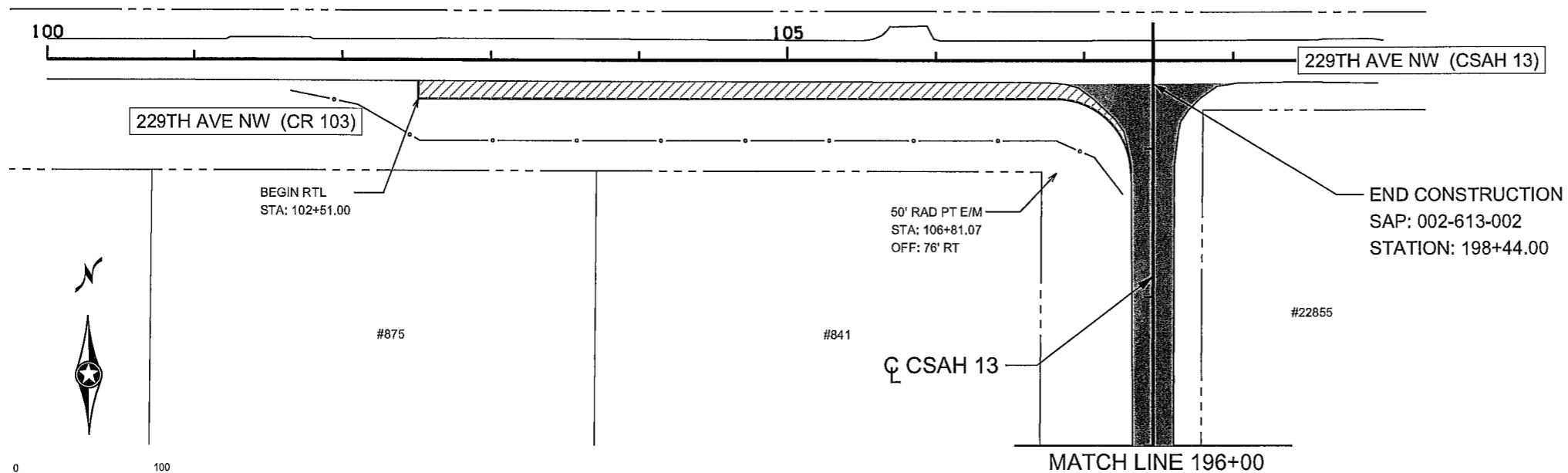
STATE AID PROJECT 002-613-002

CONSTRUCTION PLAN
 STA 153+00 TO 181+00
 Sheet 13 of 28 Sheets

APAnders



LEGEND	
(B)	BITUMINOUS
(C)	CONCRETE
(G)	GRAVEL
⊕	CORE LOCATION
— · —	SILT FENCE
- - -	SAWCUT
==	CROSS CULVERT
█	MAINLINE RECLAIM
▨	REMOVE AND REPLACE PAVEMENT
▩	CONSTRUCT TURN LANE
—	R / W



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NAME: P:\19-01-00\CSAH_13_(RR-CR103)\Base\PROPOSED\PROPOSED.dgn

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SIGNATURE: *[Signature]*

DATE: 4-25-19 LICENSE NO. 46732

DRAWN BY: SPH DATE: 04/17/2019

DESIGN BY: AA DATE: 04/17/2019

CHECKED BY: HG DATE: 04/17/2019



ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-613-002

CONSTRUCTION PLAN
STA 181+00 TO 198+44
Sheet 14 of 28 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 BEANS 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	39360
4" SOLID LINE YELLOW - MULTI COMP	LIN FT	6290
4" DOUBLE LINE YELLOW - MULTI COMP	LIN FT	2000
4" BROKEN LINE YELLOW - MULTI COMP	LIN FT	3350
REMOVAL 4" SOLID LINE WHITE - MULTI COMP	LIN FT	200
24" SOLID LINE WHITE - PREFORMED THERMOPLASTIC (PMS*)	LIN FT	36
R X R CROSSING SYMBOL P PREFORMED THERMOPLASTIC (PMS*)	SQ FT	62

1 10' STRIPE, 40' GAP

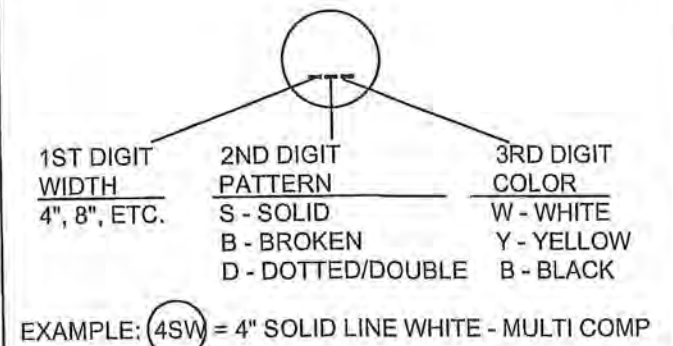
* PAVEMENT MARKING SPECIAL

SYMBOLS & MATERIALS LEGEND

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

STRIPING KEY

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



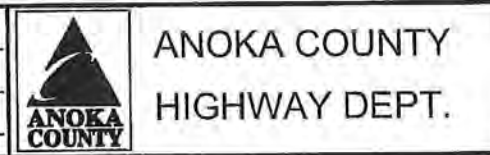
NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\19-01-00\CSAH 13 (RR-CR103)\Base\Traffic\Perm Pmt Mrg 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: DOUGLAS W. FISCHER
SIGNATURE: *[Signature]*
DATE: 4/25/19 REG. NO. 20235

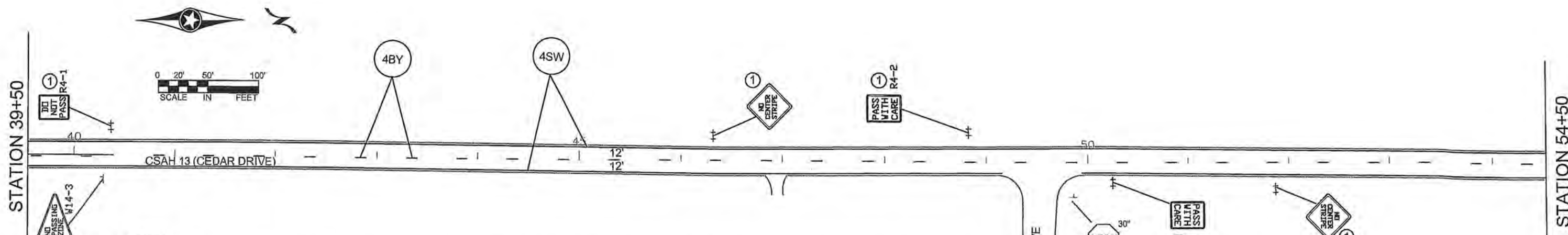
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DESIGN BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____



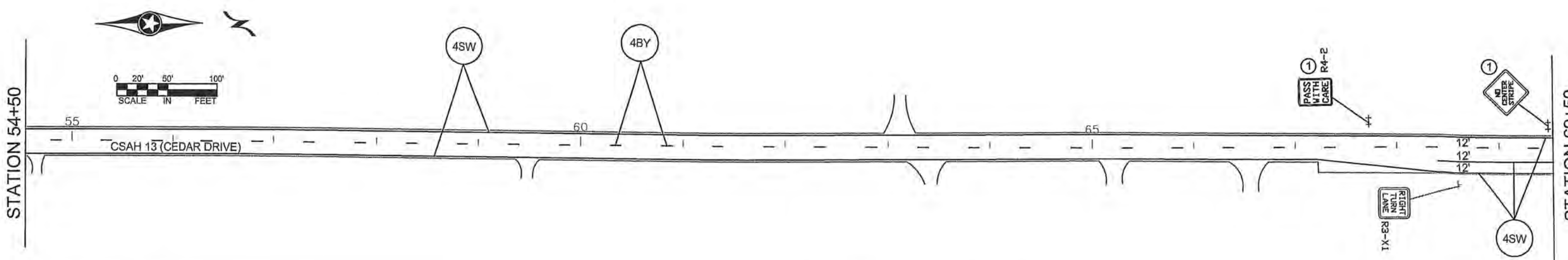
STATE PROJECT NO. _____
STATE AID PROJECT NO. 002-613-002
CITY PROJECT NO. _____
COUNTY PROJECT NO. _____

PERMANENT MARKING TABULATION
Sheet 15 of 28 Sheets

- SIGN NOTES:
- ① TEMPORARY TRAFFIC CONTROL SIGN
 - ② F & I PERMANENT SIGN
 - ③ SALVAGE PERMANENT SIGN
 - ④ RE-INSTALL PERMANENT 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. ALL 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.



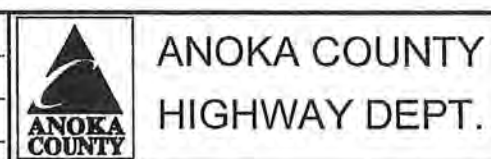
NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\19-01-00\CSAH 13 (RR-CR103)\Base\Traffic\Signing & Striping.dwg

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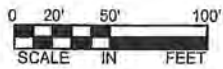
PRINT NAME: DOUGLAS W. FISCHER
 SIGNATURE: *[Signature]*
 DATE: 4/25/19 REG. NO. 20235

DRAWN BY: TMV DATE: 02/21/19
 DESIGN BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____



STATE PROJECT NO. _____
 STATE AID PROJECT NO. 002-613-002
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. _____

TEMPORARY SIGNING,
 PERMANENT SIGNING
 AND STRIPING
 Sheet 17 of 28 Sheets



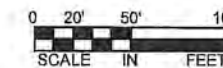
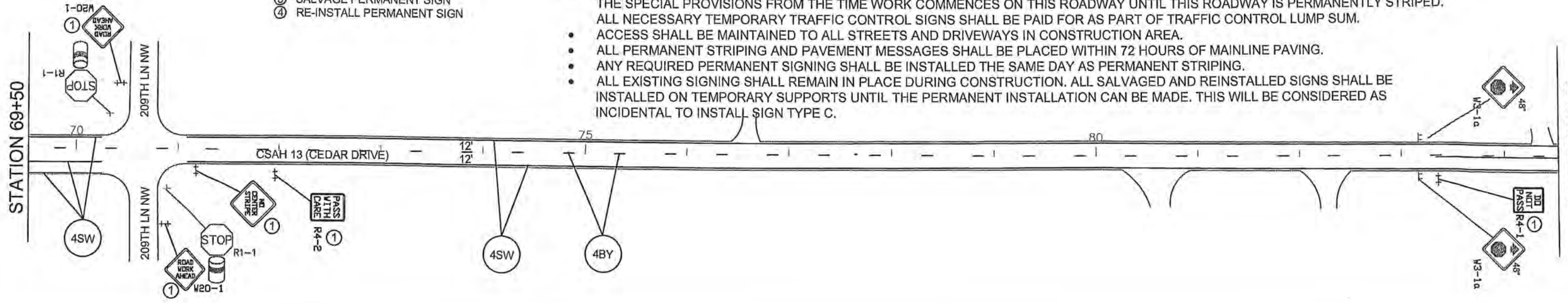
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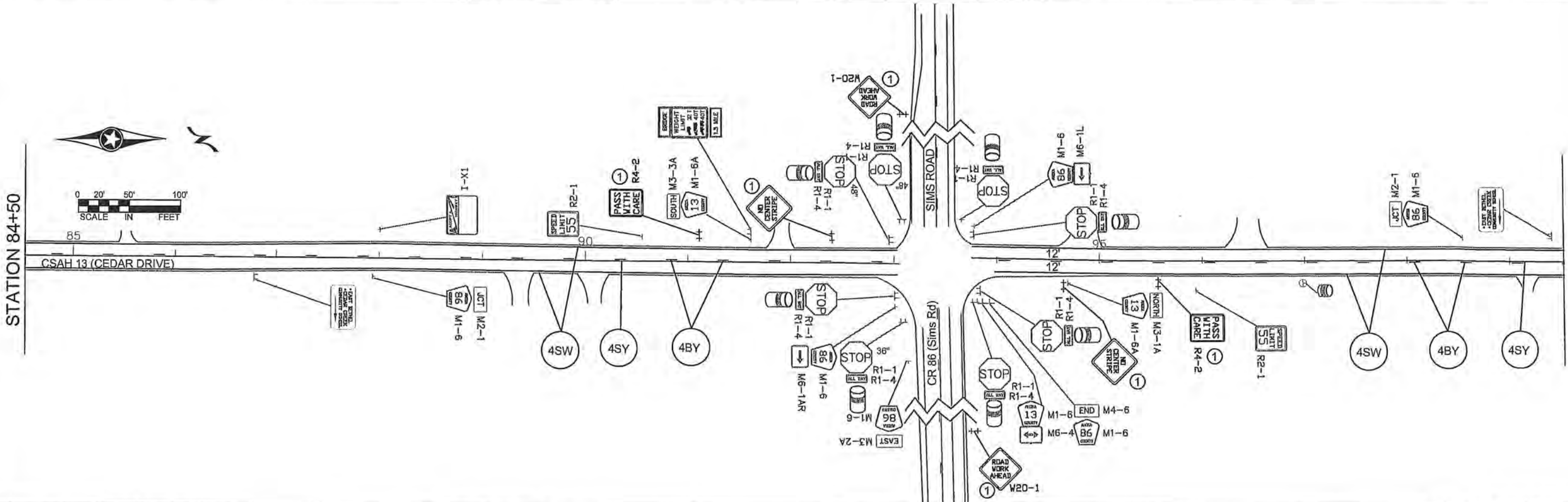
STATION 69+50

STATION 84+50



STATION 84+50

STATION 99+50



NO	DATE	BY	CHKD	APPR	REVISION

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PRINT NAME: DOUGLAS W. FISCHER

SIGNATURE: *[Signature]*

DATE: 4/25/19 REG. NO. 20235

DRAWN BY: TMV DATE: 02/21/19

DESIGN BY: DATE: _____

CHECKED BY: DATE: _____

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-613-002

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

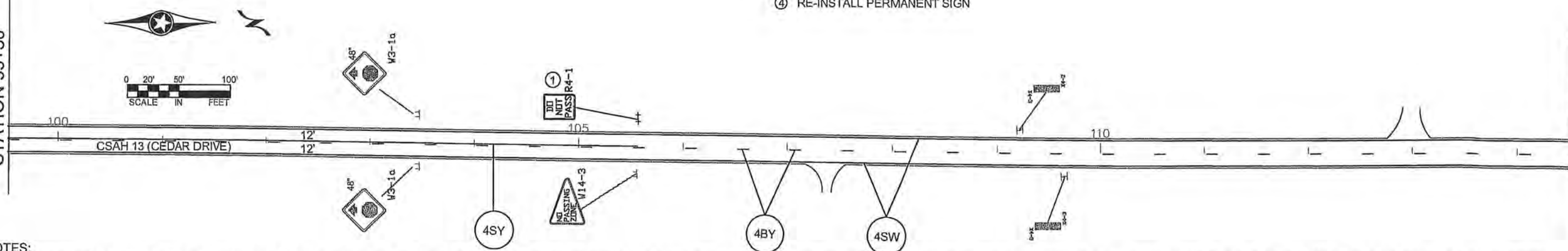
TEMPORARY SIGNING,
PERMANENT SIGNING
AND STRIPING

Sheet 18 of 28 Sheets

- SIGN NOTES:
 ① TEMPORARY TRAFFIC CONTROL SIGN
 ② F & I PERMANENT SIGN
 ③ SALVAGE PERMANENT SIGN
 ④ RE-INSTALL PERMANENT SIGN

STATION 99+50

STATION 114+50

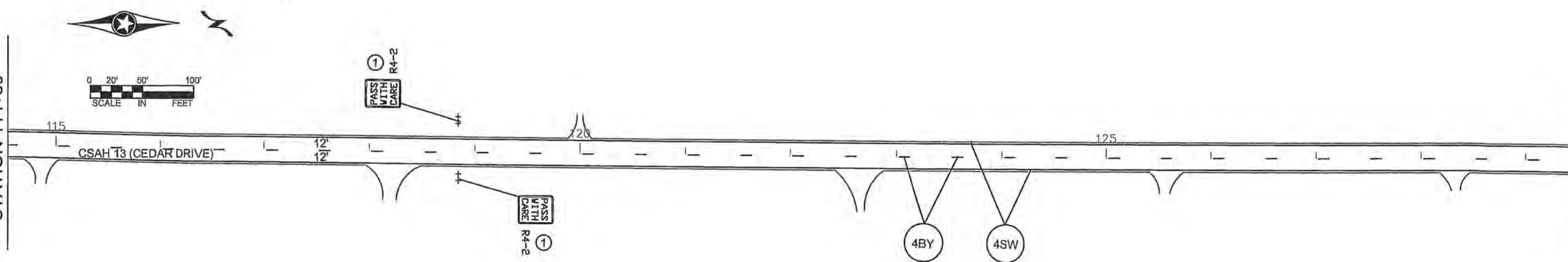


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- ALL EXISTING SIGNING SHALL REMAIN IN PLACE DURING CONSTRUCTION. ALL SALVAGED AND REINSTALLED SIGNS SHALL BE INSTALLED ON TEMPORARY SUPPORTS UNTIL THE PERMANENT INSTALLATION CAN BE MADE. THIS WILL BE CONSIDERED AS INCIDENTAL TO INSTALL SIGN TYPE C.

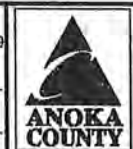
STATION 114+50

STATION 129+50



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: DOUGLAS W. FISCHER
 SIGNATURE: *[Signature]*
 DATE: 1/25/19 REG. NO. 20235

DRAWN BY: TMV DATE: 02/21/19
 DESIGN BY: DATE: _____
 CHECKED BY: DATE: _____



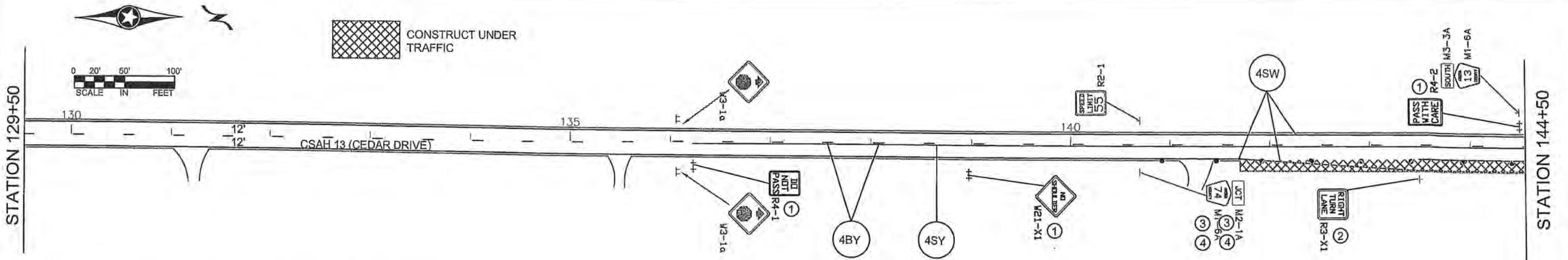
ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. 002-613-002
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. _____

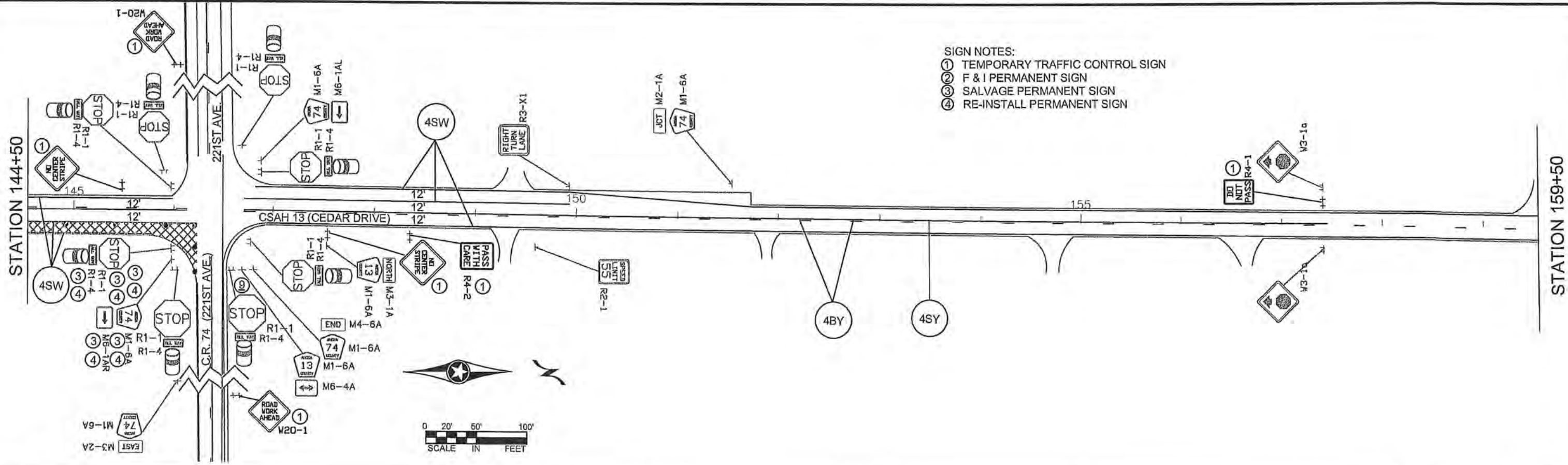
TEMPORARY SIGNING,
 PERMANENT SIGNING
 AND STRIPING
 Sheet 19 of 28 Sheets

NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\18-01-00\CSAH 13 (RR-CR103)\Base\Traffic\Signing & Striping.dwg



- 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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 - 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.
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- SIGN NOTES:
- ① TEMPORARY TRAFFIC CONTROL SIGN
 - ② F & I PERMANENT SIGN
 - ③ SALVAGE PERMANENT SIGN
 - ④ RE-INSTALL PERMANENT SIGN

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\18-01-00\CSAH 13 (RR-CR103)\Base\Traffic\Signing & Striping.dwg

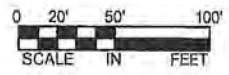
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: DOUGLAS W. FISCHER
 SIGNATURE: *[Signature]*
 DATE: 4/25/19 REG. NO. 20235

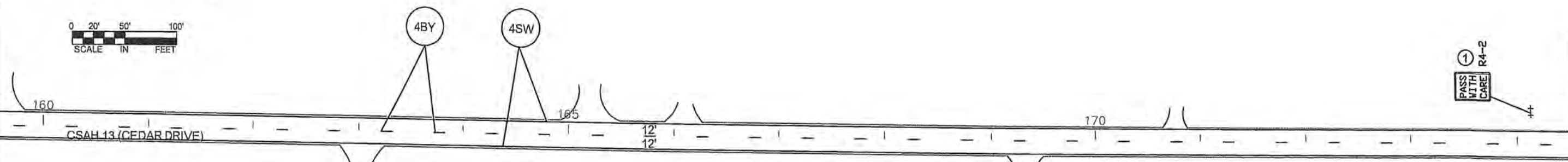
DRAWN BY: TMV DATE 02/21/19
 DESIGN BY: DATE
 CHECKED BY: DATE

ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. 002-613-002
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. _____



STATION 159+50

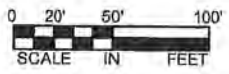


STATION 174+50

NOTES:

- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
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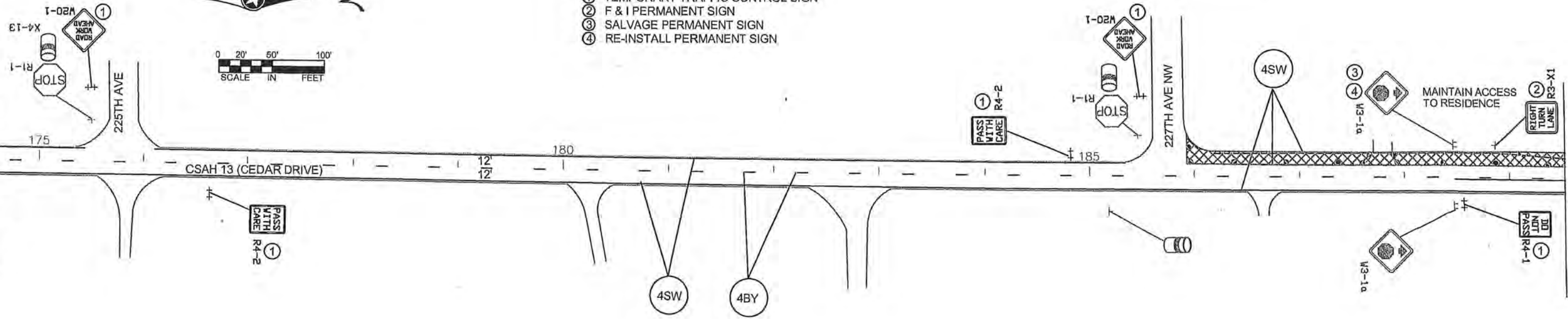
CONSTRUCT UNDER TRAFFIC



SIGN NOTES:

- ① TEMPORARY TRAFFIC CONTROL SIGN
- ② F & I PERMANENT SIGN
- ③ SALVAGE PERMANENT SIGN
- ④ RE-INSTALL PERMANENT SIGN

STATION 174+50



STATION 189+50

NO	DATE	BY	CRD	APPR	REVISION

NAME: P:\10-01-00\CSAH 13 (RR-CR103)\Base\Traffic\Signing & Striping.dwg

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PRINT NAME: DOUGLAS W. FISCHER

SIGNATURE:

DATE: 4/25/19 REG. NO. 20235

DRAWN BY: TMV DATE 02/21/19

DESIGN BY: DATE

CHECKED BY: DATE



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-613-002

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

TEMPORARY SIGNING,
PERMANENT SIGNING
AND STRIPING

Sheet 21 of 28 Sheets

TEMPORARY TRAFFIC CONTROL SIGNS						
M.U.T.C.D. CODE	SIZE	PANEL AREA FT. ²	INSERT	QUANTITY		MOUNTING HEIGHT To pavement edge FT.
					No. POST	
W8-12	48" x 48"	16.00		11	2	7.0'
R4-1	24" x 30"	5.00		8	1	7.0'
R4-2	24" x 30"	5.00		15	1	7.0'
G20-2A	48" x 24"	8.00		3	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 (ESTIMATED 3)		
W8-11	48" x 48"	16.00		AS NEEDED		
W20-1	48" x 48"	16.00		AS NEEDED (ESTIMATED 12)		
REFLECTORIZED REBOUNDABLE DRUM				AS NEEDED (ESTIMATED 43)		
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		

EXISTING SIGN TAB					
STATION	ADDRESS/ DESCRIPTION (NOTES)	SALVAGE SIGN TYPE C	REINSTALL SIGN TYPE C	SIGN NUMBER	SIGN LEGEND
		EACH	EACH		
146+00	RT	1	1	R1-1	48" STOP
				R1-4	ALL WAY
					DELINEATOR
140+70	RT	1	1	M2-1A	JCT
146+00	RT	1	1	M1-6A	74 RTE MKR
				M6-1AR	RT ARROW
188+50	LT	1	1	W3-1a	38" STOP AHEAD
106+70	RT	1	1	M1-6A	13 RTE MKR
				M6-6AR	UP/RT ARROW
106+70	RT	1	1	M4-6A	END
				M1-6A	103 RTE MKR
TOTAL		6	6		

SIGN PANELS TYPE C							
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY	SQ FT PANEL AREA	SQ FT TOTAL AREA	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
R3-X1	30" x 30"		3	6.25	18.75	1	7.0'

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 installed a minimum of ten days prior to actual commencement of road work. Signs to be removed when road work begins.

REINSTALL SALVAGED SIGN ASSEMBLIES TYPE C				
SIZE	INSERT	QUANTITY	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT To pavement edge
48" x 48"		1	2	7.0'
18" x 6"				
4" x 15"				
36" x 36"		1	2	7.0'
24" x 24"		1	1	7.0'
21" x 15"				
24" x 24"			1	7.0'
21" x 15"		2		
21" x 15"				
24" x 12"		1	1	7.0'
24" x 24"				
TOTAL TYPE C SIGN ASSEMBLIES		6		

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NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\19-01-00\CSAH 13 (RR-CR103)\Base\Traffic\Signing & Striping.dwg

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 PRINT NAME: DOUGLAS W. FISCHER
 SIGNATURE:
 DATE: 4/25/19 REG. NO. 20235

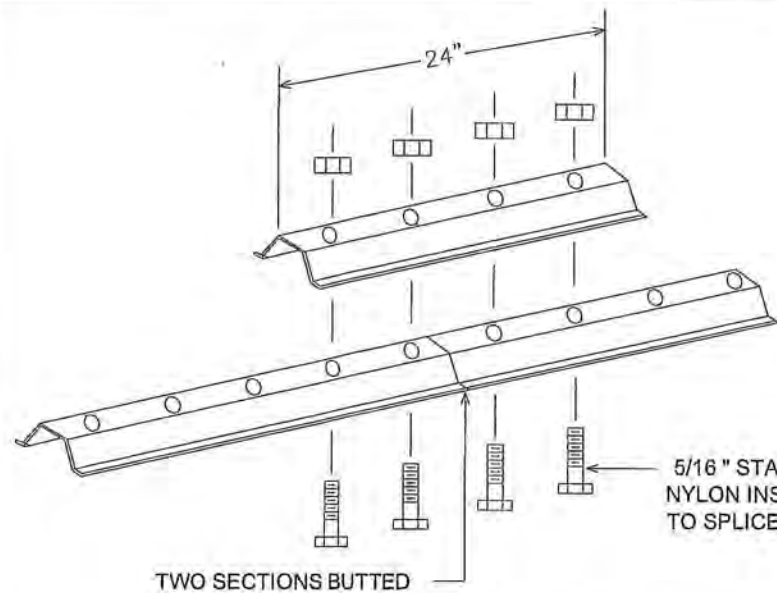
DRAWN BY: TMV DATE: 02/21/19
 DESIGN BY: DATE: _____
 CHECKED BY: DATE: _____



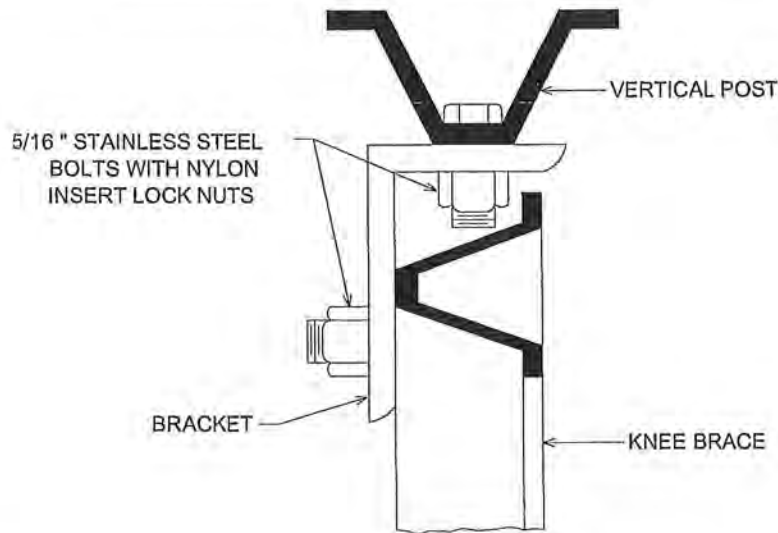
ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. 002-613-002
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. _____

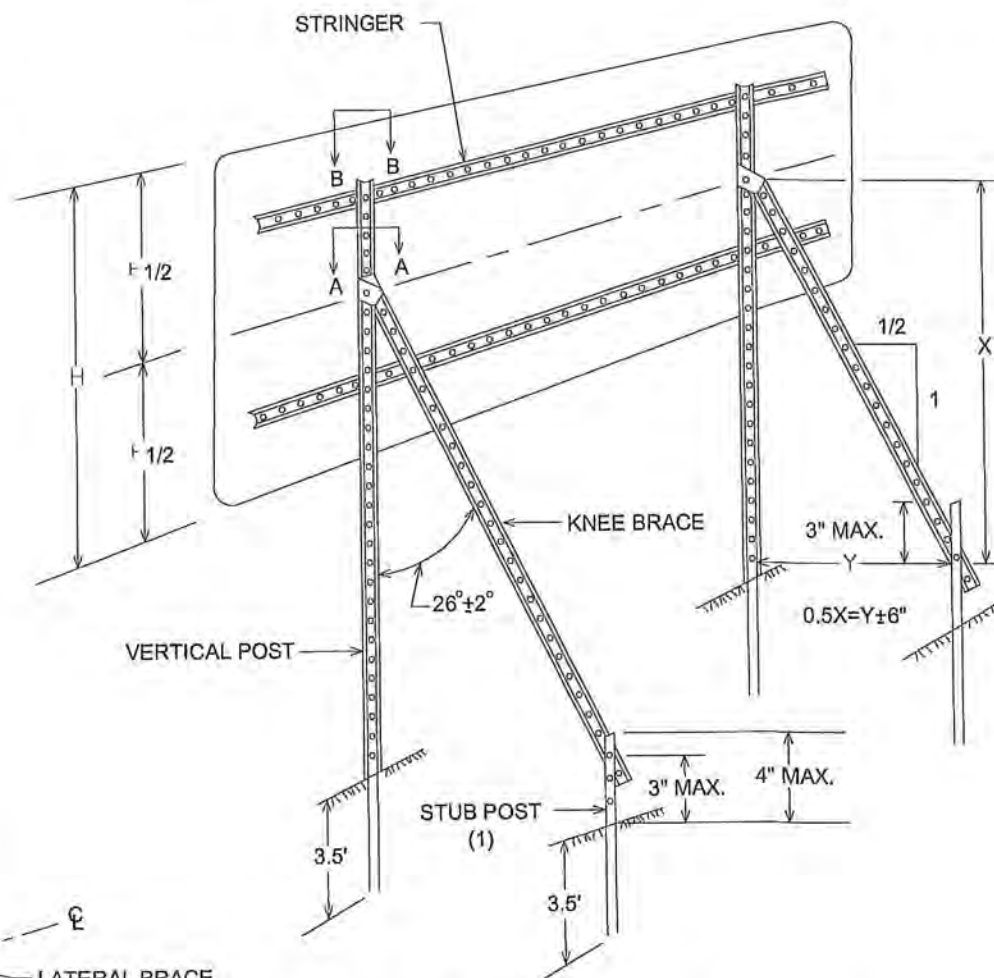
TEMPORARY SIGNING,
 PERMANENT SIGNING &
 STRIPING QUANTITIES
 Sheet 23 of 28 Sheets



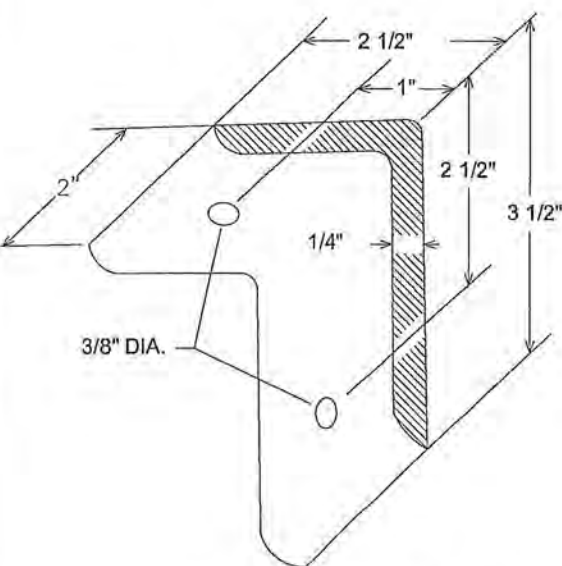
LATERAL BRACE OR STRINGER
SPLICE DETAIL (EXPLODED VIEW)



SECTION A-A

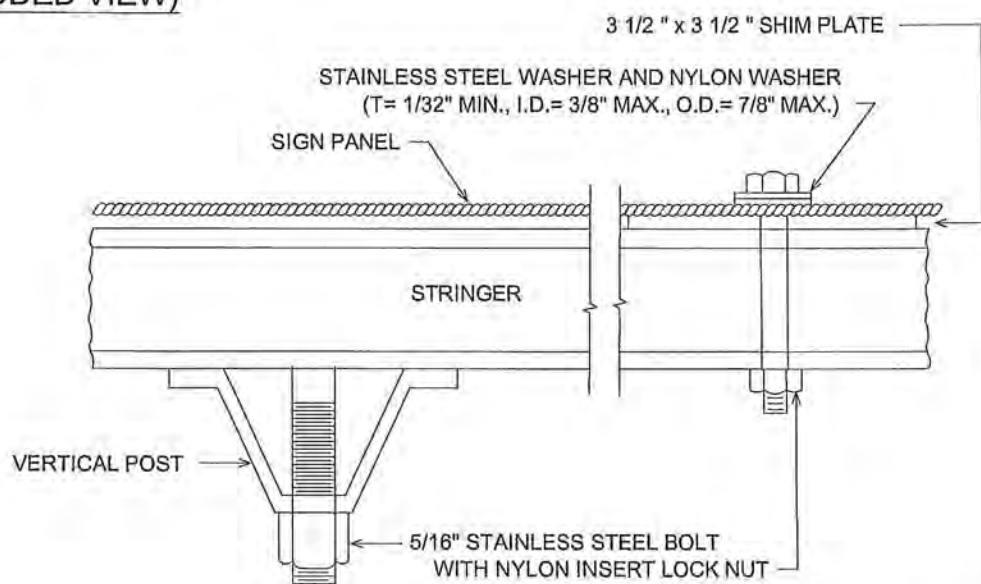


TYPICAL "A-FRAME" INSTALLATION
TYPE "D" SIGNS

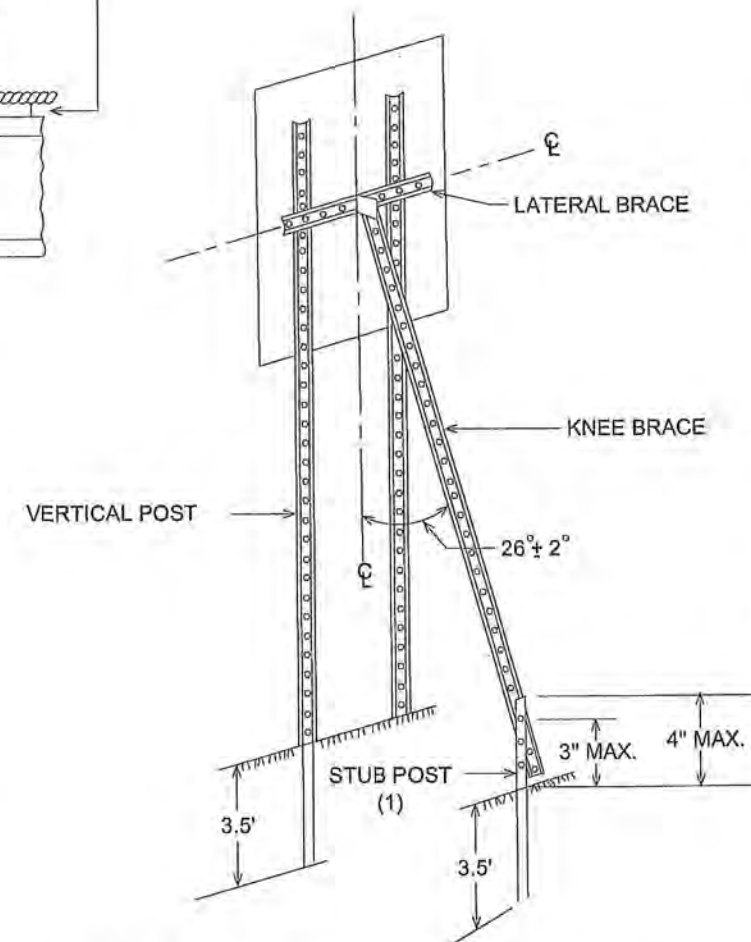


A-FRAME BRACKET

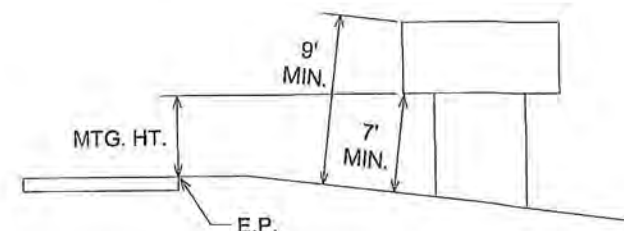
(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)



SECTION B-B



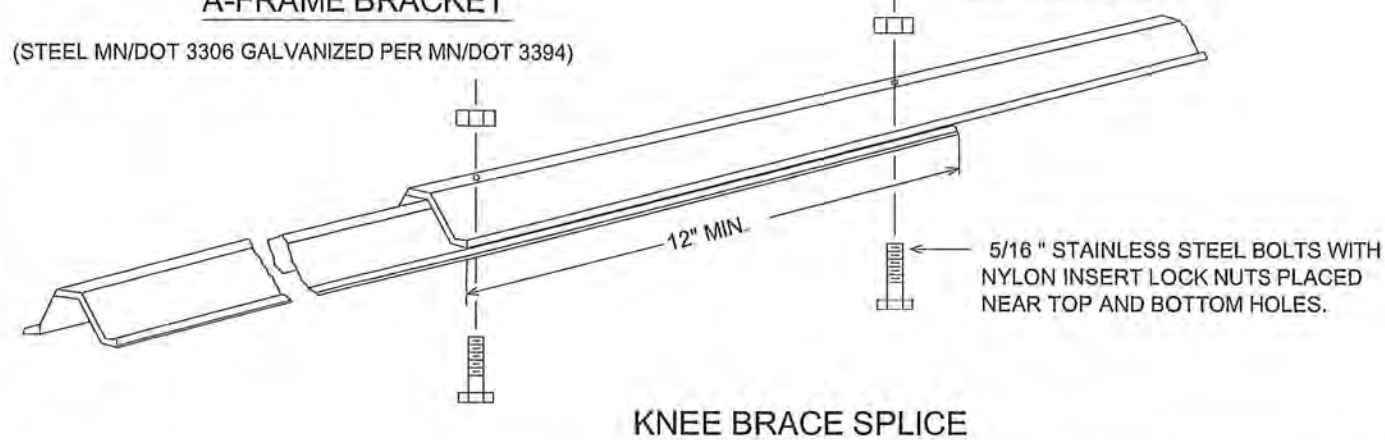
TYPICAL "A-FRAME" INSTALLATION
TYPE "C" SIGNS



TYPICAL MOUNTING

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

TYPE C & D SIGN
STRUCTURAL DETAILS



KNEE BRACE SPLICE

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME
OR UNDER MY DIRECT SUPERVISION AND THAT I AM A
DULY REGISTERED PROFESSIONAL ENGINEER UNDER
THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: DOUGLAS W. FISCHER, P.E.
SIGNATURE: *Douglas W. Fischer*
DATE: 4/25/19 REG. NO. 20235

DRAWN BY: TMV DATE: 02/21/18
DESIGN BY: DATE:
CHECKED BY: DATE:

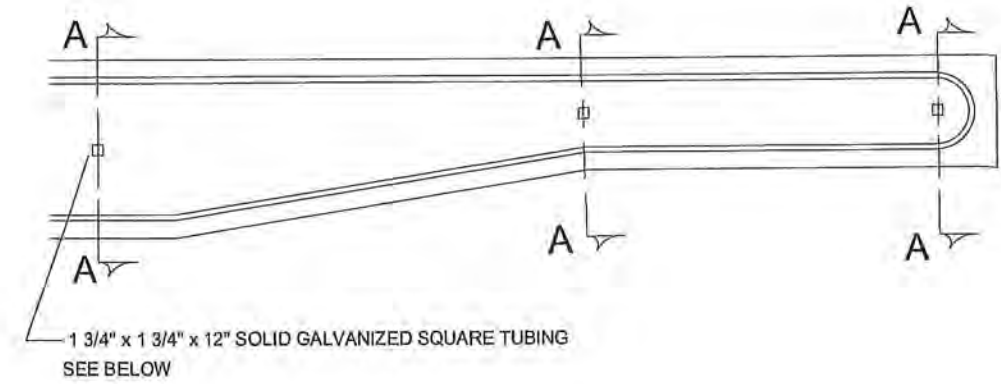
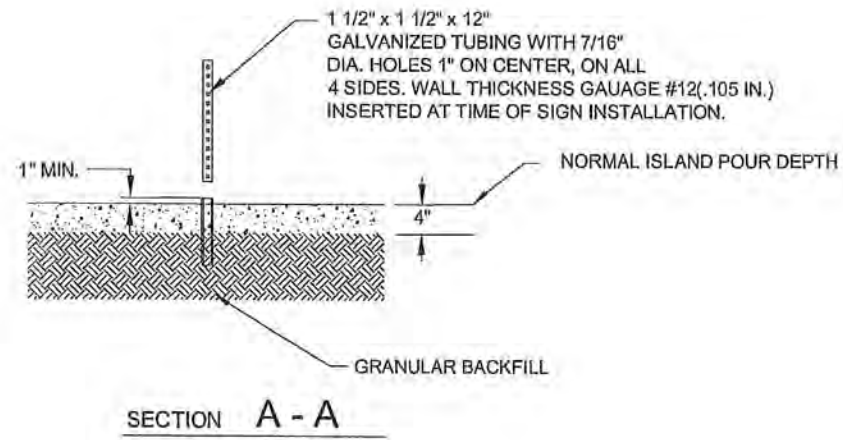


ANOKA COUNTY
HIGHWAY DEPT.

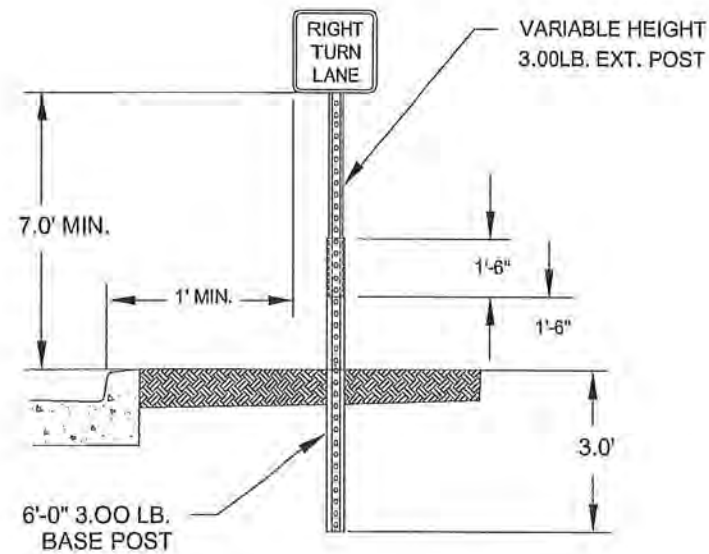
STATE PROJECT NO. _____
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STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

SIGNING & STRIPING
DETAILS

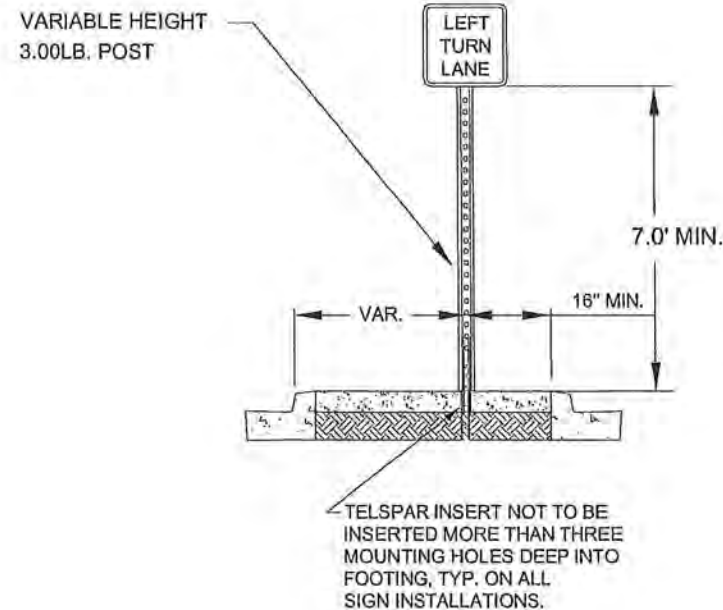
Sheet 24 of 28 Sheets



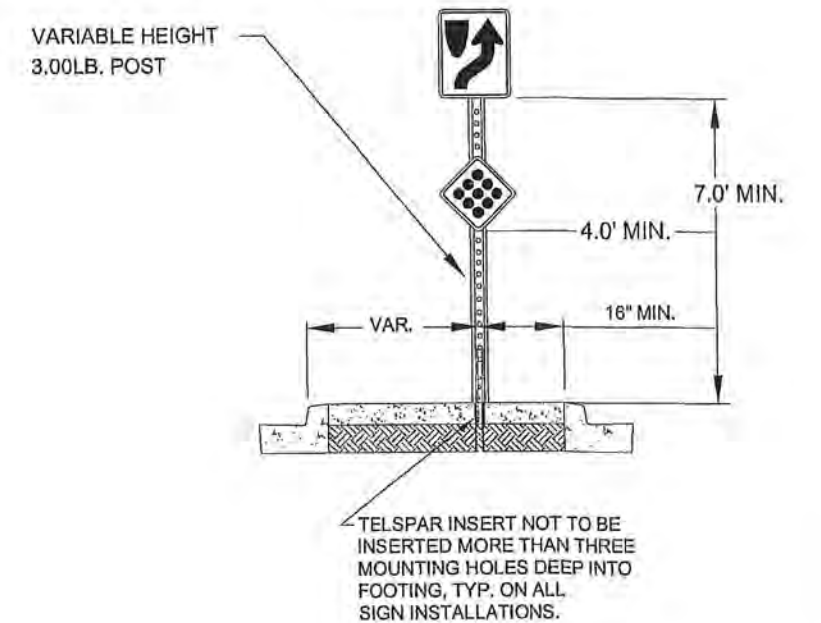
GROUND POST MOUNT SIGN
INSTALLATION TYPICAL



ISLAND MOUNT BREAK-AWAY SIGN
INSTALLATION TYPICAL



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



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\19-01-00\CSAH 13 (RR-CR103)\Base\Traffic\Sign & Strip Detail.dwg

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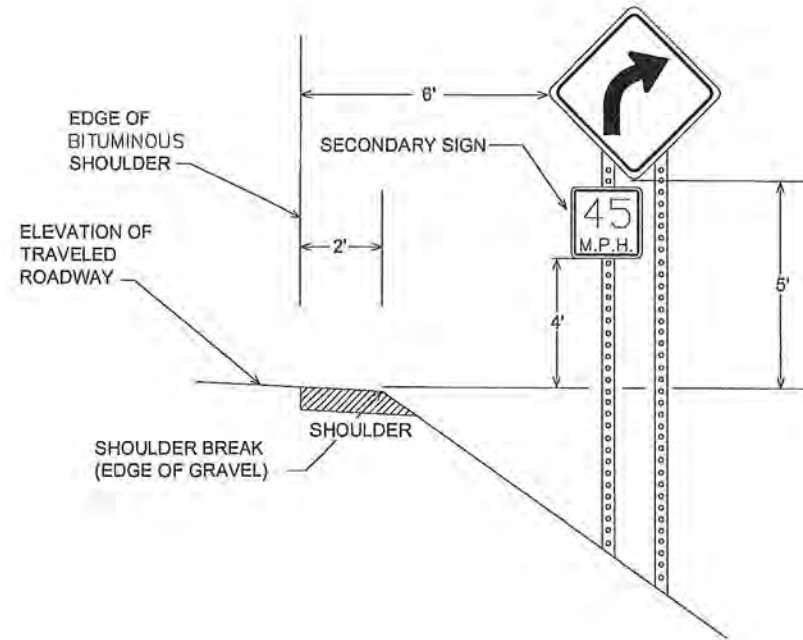
STATE AID PROJECT NO. _____

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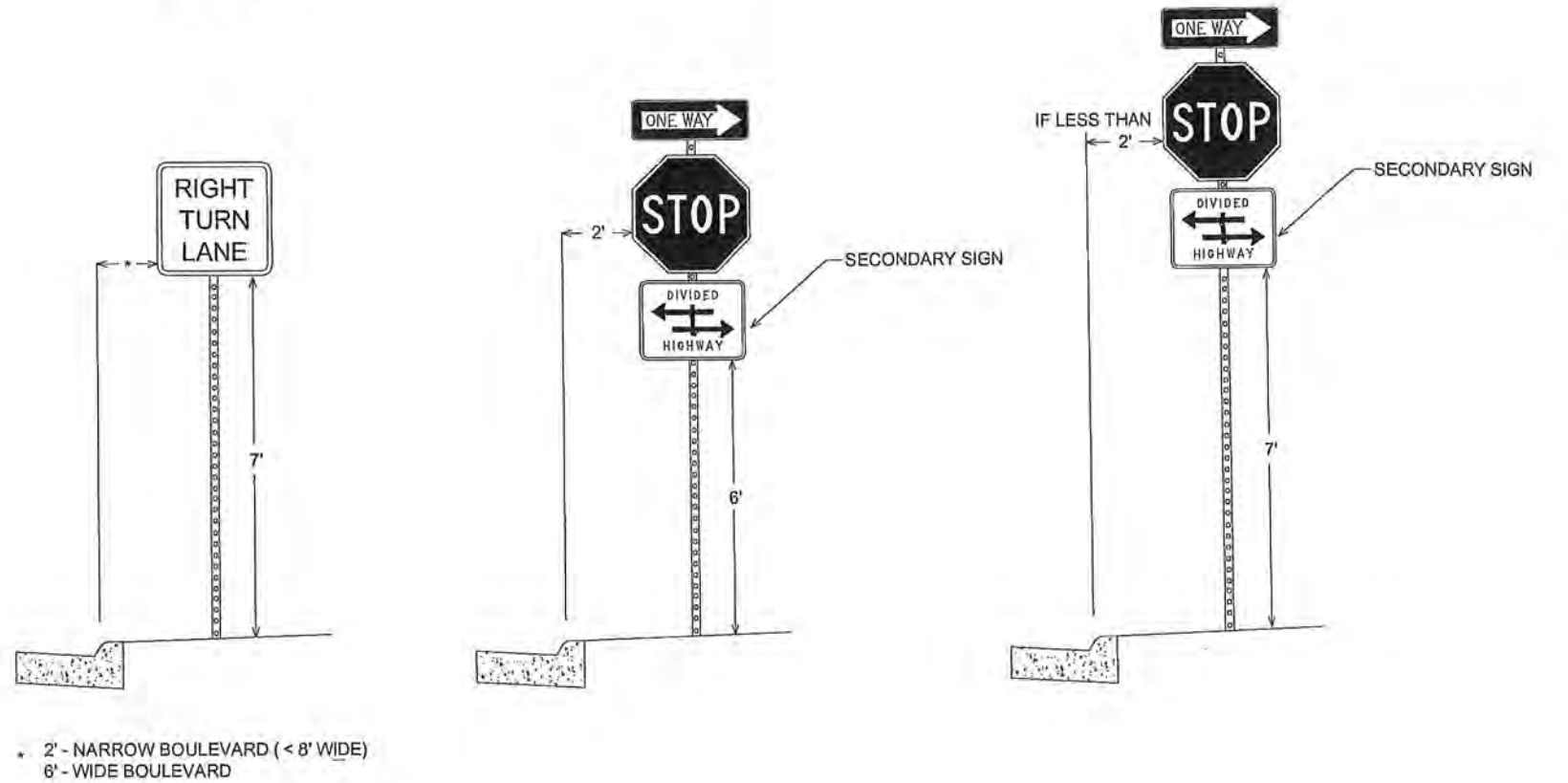
SIGNING & STRIPING
DETAILS

Sheet 25 of 28 Sheets

TYPICAL SIGN PLACEMENT
(RURAL)

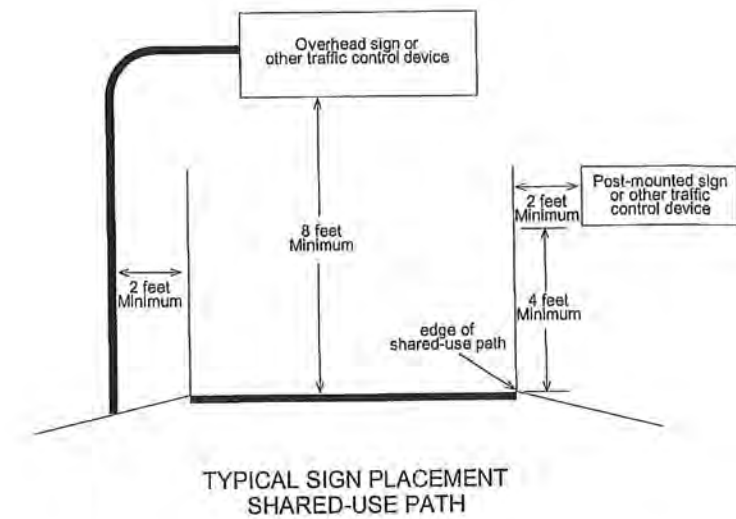


TYPICAL SIGN PLACEMENT
(URBAN)



NOTES:

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



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 SIGNATURE: *[Signature]*
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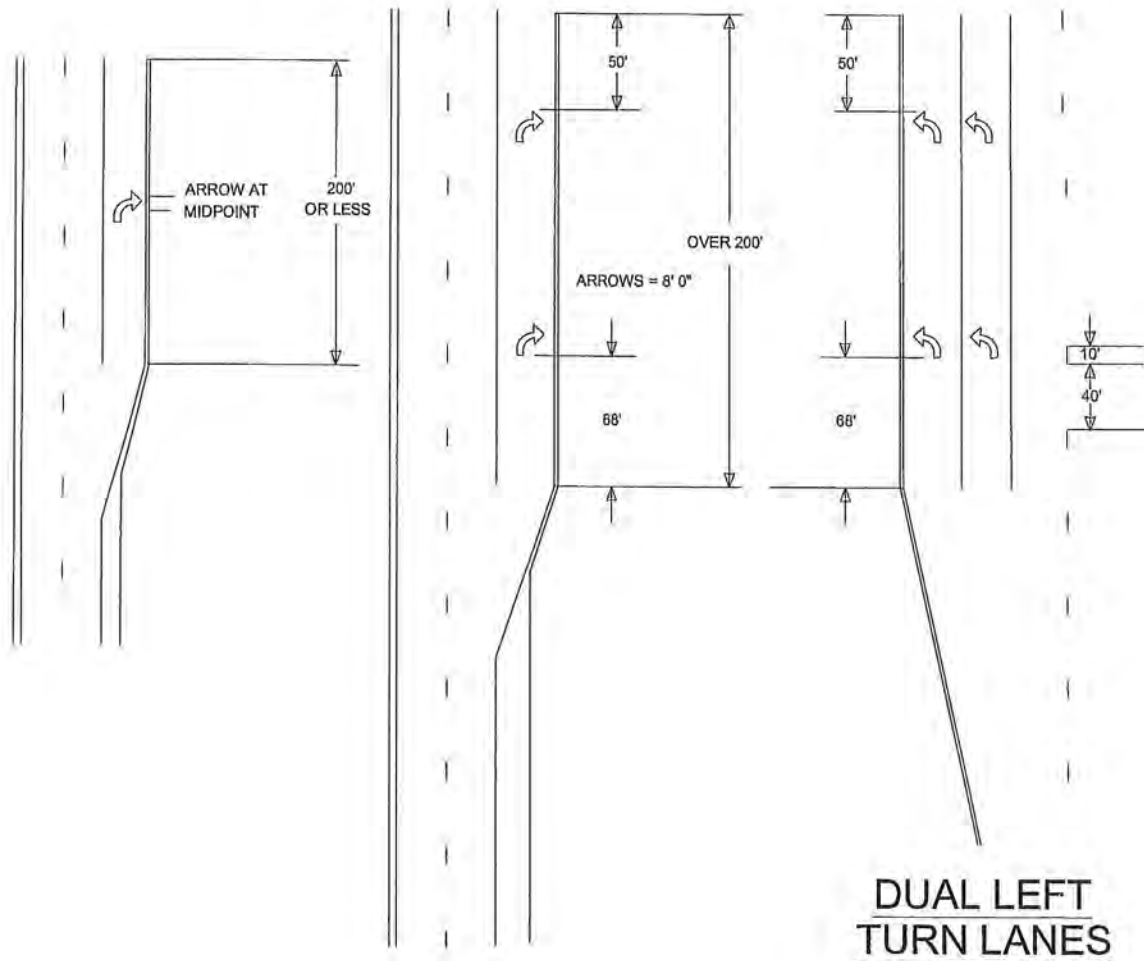
ANOKA COUNTY
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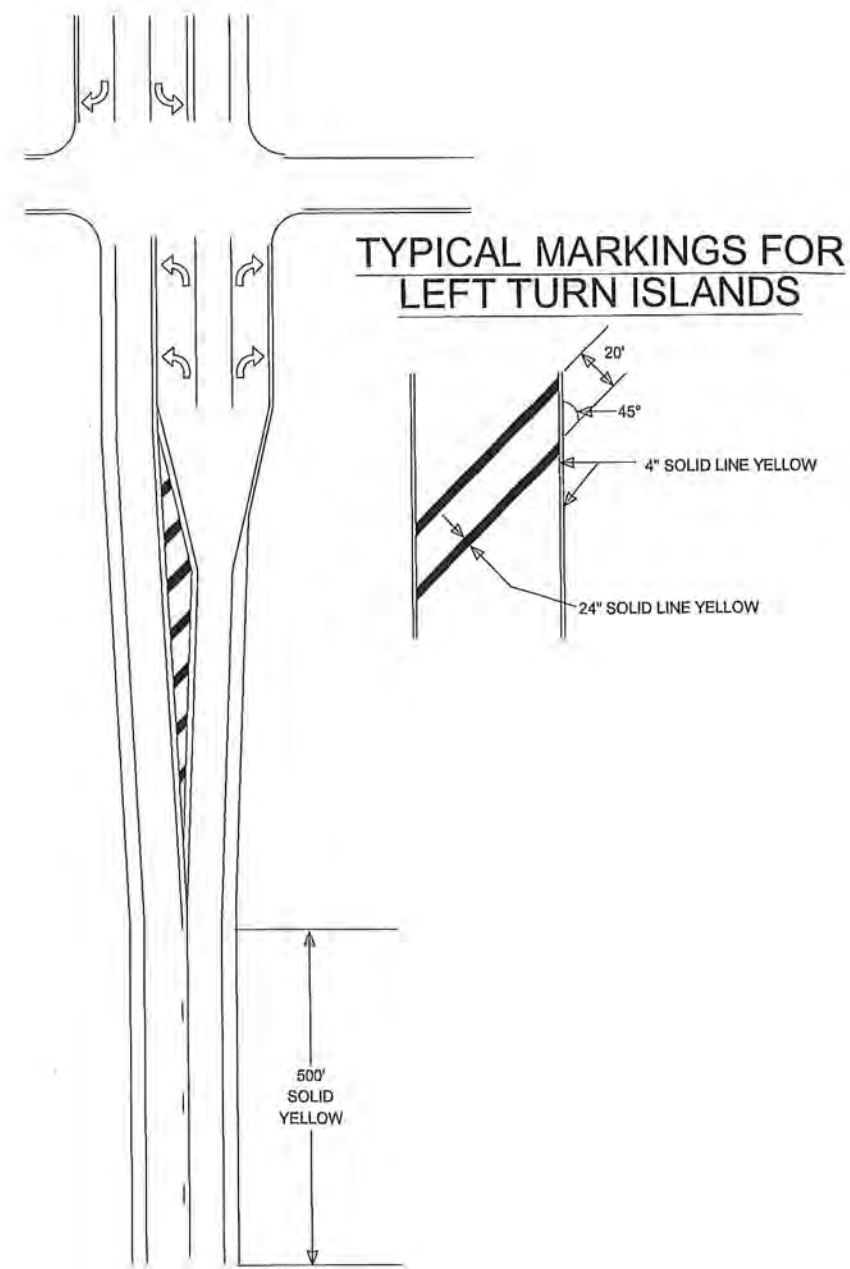
SIGNING & STRIPING
DETAILS

Sheet 26 of 28 Sheets

**TYPICAL MESSAGE PLACEMENT
FOR TURN LANES**



**TYPICAL MARKINGS FOR
LEFT TURN ISLANDS**



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\18-01-00\CSAH 13 (RR-CR103)\Base\Traffic\Sign & Strip Details.dwg

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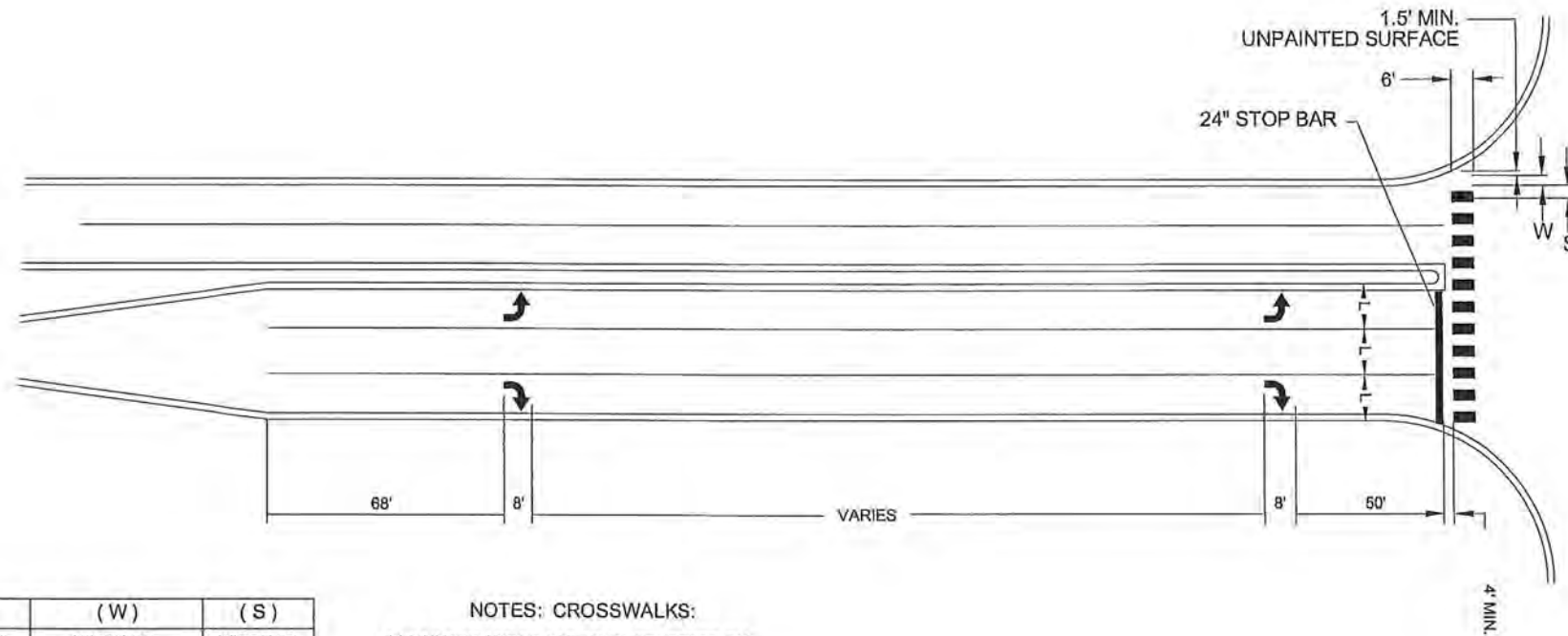
STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

**SIGNING & STRIPING
DETAILS**

Sheet 27 of 28 Sheets

MARKINGS FOR PEDESTRIAN CROSSWALKS

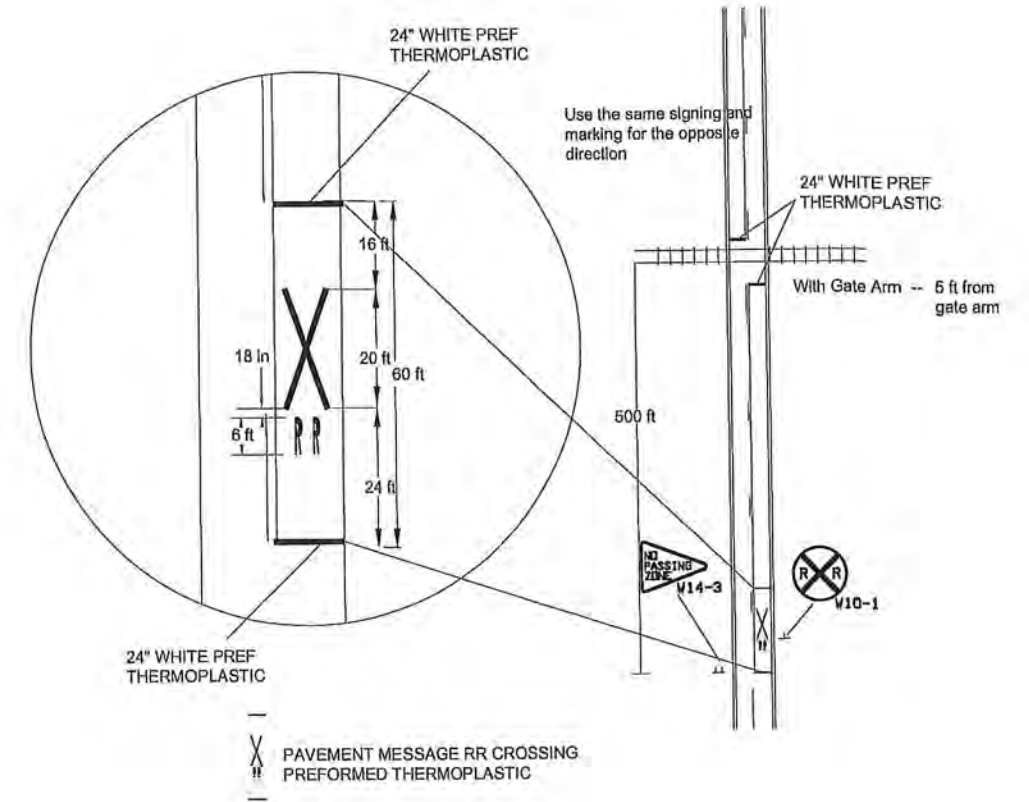


(L)	(W)	(S)
WIDTH OF INSIDE LANE	WIDTH OF PAINTED AREAS	WIDTH OF SPACE
9'	2.0'	2.5'
10'	2.5'	2.5'
11'	2.5'	3.0'
12'	3.0'	3.0'
13'	3.0'	3.5'

NOTES: CROSSWALKS:

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

RAILROAD CROSSING PAVEMENT MARKINGS



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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: DOUGLAS W. FISCHER, P.E.

SIGNATURE: *[Signature]*

DATE: 4/25/19 REG. NO. 20235

DRAWN BY: TMV DATE: 02/21/19

DESIGN BY: DATE: _____

CHECKED BY: DATE: _____



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 002-613-002

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

SIGNING & STRIPING
DETAILS

Sheet 28 of 28 Sheets