

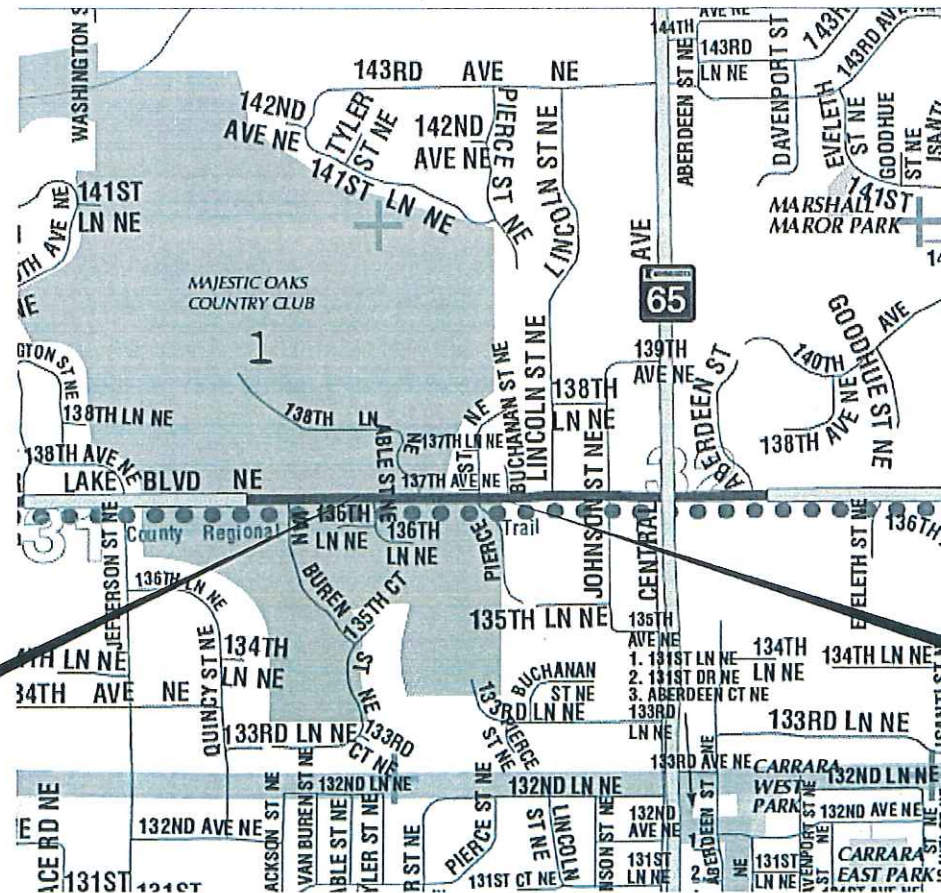
# MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR \_\_\_\_\_ BITUMINOUS OVERLAY \_\_\_\_\_

LOCATED ON CSAH 116 BETWEEN 200' WEST OF ABLE ST AND BUCHANAN ST. NE

CSAH 116

GROSS LENGTH	1528.00 FEET	0.289 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	1528.00 FEET	0.289 MILES



BEGIN SAP 002-716-018  
CSAH 116, STA: 10+52.00

END SAP 002-716-018  
CSAH 116, STA: 25+80.00

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 TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MNMUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

THIS PLAN CONTAINS 9 SHEETS

### INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
3-5	DETAILS
6	CONSTRUCTION PLAN
7-9	SIGNING AND STRIPING PLANS

Approved Thomas P. Collins 4/19/18  
CITY OF HAM LAKE ENGINEER

Approved [Signature] 4/19/18  
ANOKA COUNTY ENGINEER

Janie Dresel DATE 5/2/18  
DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY  
For  
Janie Dresel DATE 5/2/18  
STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

## PROJECT LOCATION



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

DESIGN DESIGNATION (CSAH 01)			
ESAL 20	1,353,732	FUNCTIONAL CLASSIFICATION	A MINOR ARTERIAL
R VALUE	40	NO. OF TRAFFIC LANES	2 NO. OF PARKING LANES 0
ADT (2014)	11,459	DESIGN SPEED	50 MPH
PROJ. ADT (2034)	11,459	STOPPING SIGHT DISTANCE BASED ON:	
PROJ. HCADT (2034)	676	HEIGHT OF EYE	3.5' HEIGHT OF OBJECT 2.0'
SOIL FACTOR	N/A	DESIGN SPEED NOT ACHIEVED AT:	
10 TON DESIGN		STA.	TO STA. MPH

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\18-01-00\CSAH\_116\_(VanBuren-TH65)\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: 4/19/18 LICENSE NO. 46732

DRAWN BY: SPH DATE 2-1-18  
DESIGN BY: SPH DATE 2-1-18  
CHECKED BY: HG DATE 2-1-18

ANOKA COUNTY  
HIGHWAY DEPT.

STATE AID PROJECT 002-716-018

TITLE SHEET  
Sheet 1 of 9 Sheets

STATEMENT OF ESTIMATED QUANTITIES				
NOTES	ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED
	2021.501	MOBILIZATION	LUMP SUM	1
1	2211.509	AGGREGATE BASE CLASS 5	TON	21
	2221.509	SHOULDER BASE AGGREGATE CLASS 5	TON	134
2	2232.504	MILL BITUMINOUS SURFACE (2.0")	SQ YD	218
	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	381
	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4,B)	TON	863
3	2563.601	TRAFFIC CONTROL	LUMP SUM	1
4	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20
5	2581.503	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	LIN FT	61
6	2582.503	4" SOLID LINE MULTI COMP	LIN FT	3890
6	2582.503	4" BROKEN LINE MULTI COMP	LIN FT	800
6	2582.503	4" DOUBLE SOLID LINE MULTI COMP	LIN FT	950

CONSTRUCTION NOTES	
1	GRAVEL BASE FOR CONCRETE / BITUMINOUS DRIVEWAYS, AND BITUMINOUS STREET APPROACHES ALSO 7 TONS FOR EACH GRAVEL ENTRANCE
2	MILLING FOR TRANSVERSE PAVING JOINTS AND STREET APPROACHES.
3	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 PAVEMENT MARKINGS ARE NOT PRESENT.
4	2 MESSAGE BOARDS, ONE ON EACH END OF PROJECT, WILL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
5	CENTERLINE AND LANE DESIGNATION SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON EACH NEW LIFT OF PAVEMENT; SKIPS MUST BE INPLACE BEFORE THE CONTRACTOR LEAVES FOR THE DAY. CONTRACTOR IS TO REMOVE PRIOR TO FINAL PAINT STRIPING.
6	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING.

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

NO	DATE	BY	CKD	APPR	REVISION	04/12/2018	10:50:02 AM
NAME: P:\18-01-00\CSAH_116_(VanBuren-TH65)\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: 4/10/18 LICENSE NO. 48732

DRAWN BY: SPH DATE: 2-1-18  
 DESIGN BY: SPH DATE: 2-1-18  
 CHECKED BY: HG DATE: 2-1-18



ANOKA COUNTY  
 HIGHWAY DEPT.

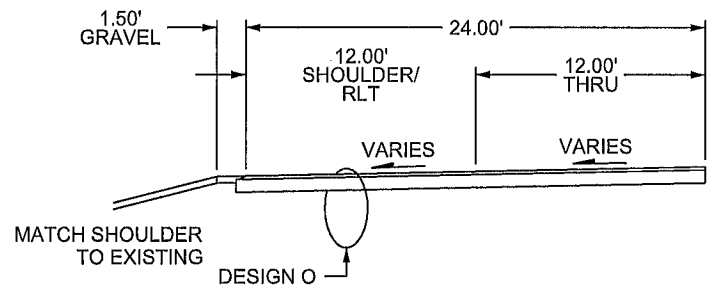
STATE AID PROJECT 002-716-018

STATEMENT OF ESTIMATED QUANTITIES  
 Sheet 2 of 9 Sheets

sphtcas

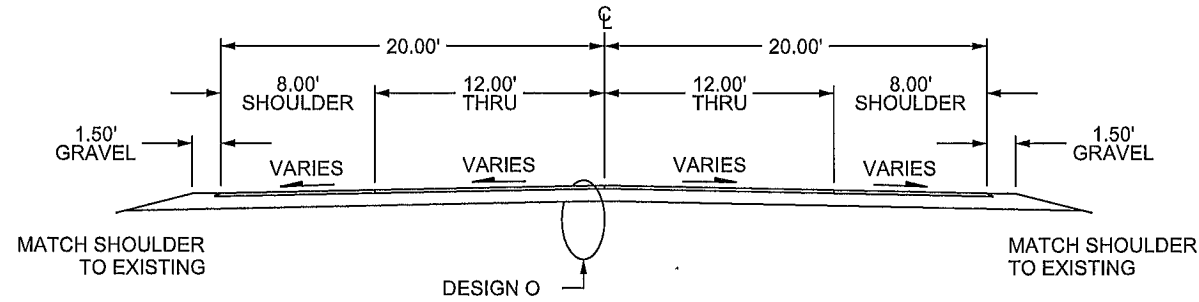
### CSAH 116 - BUNKER LAKE BLVD. PROPOSED SECTION

17+00 - 22+27



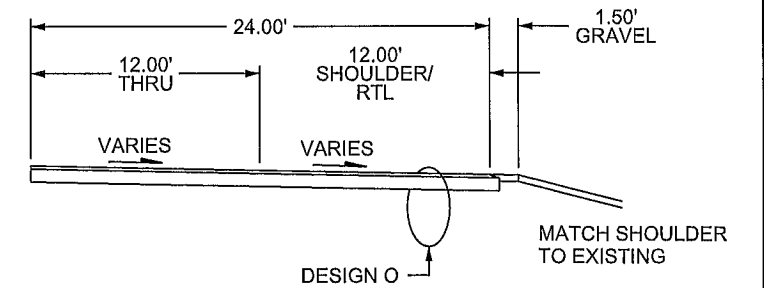
### CSAH 116 - BUNKER LAKE BLVD. PROPOSED SECTION

10+52 - 25+80

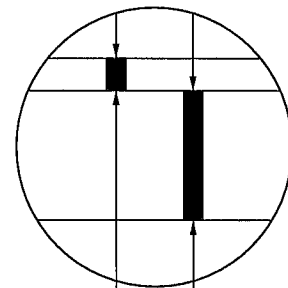


### CSAH 116 - BUNKER LAKE BLVD. RIGHT TURN LANE PROPOSED SECTION

10+52 - 23+00



### DESIGN O OVERLAY SECTION



2.0" BITUMINOUS WEAR(SPWEB440B)

EXISTING BITUMINOUS

**CONSTRUCTION NOTE:**  
ALL PAVING SHALL BE PULLED IN THE SAME  
DIRECTION AS TRAFFIC FOR THAT LANE OF TRAVEL.

NO	DATE	BY	CKD	APPR	REVISION	04/12/2018	10:50:07 AM

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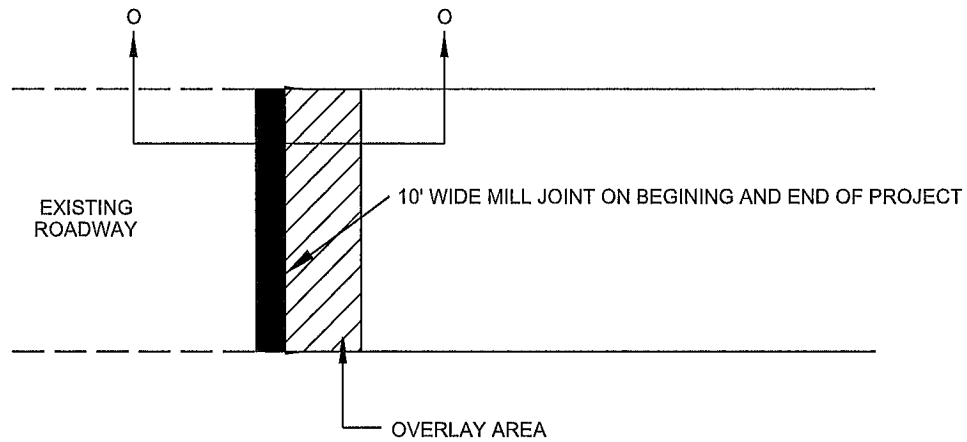
**ANOKA COUNTY  
HIGHWAY DEPT.**

STATE AID PROJECT 002-716-018

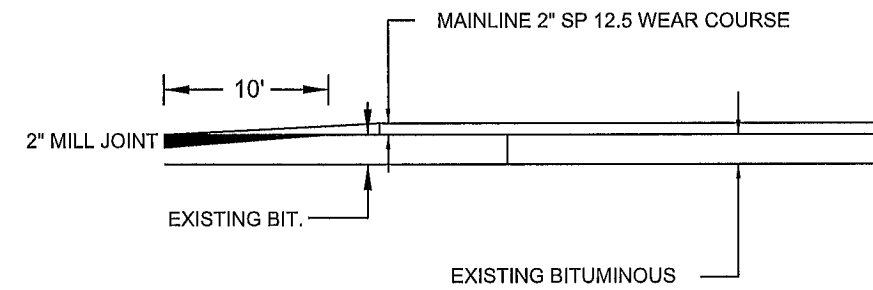
TYPICAL SECTIONS  
 Sheet 3 of 9 Sheets

# MAINLINE JOINT DETAIL

PLAN VIEW

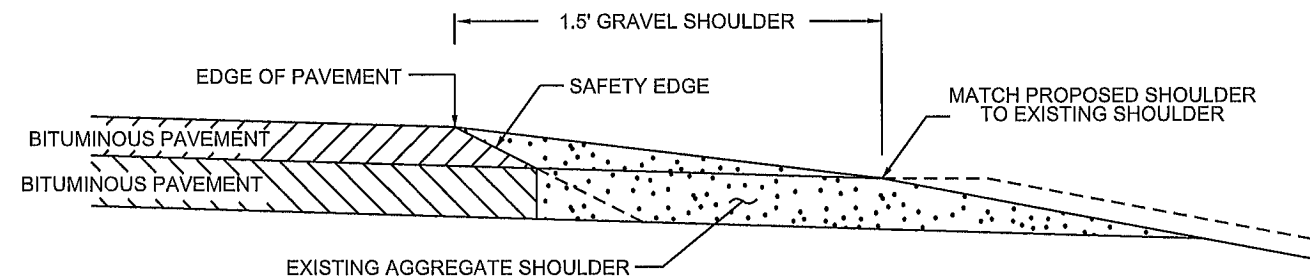


SECTION O - O



# 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	04/12/2018	10:50:12 AM

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: 4/12/18 LICENSE NO. 48732

DRAWN BY: SPH DATE 2-1-18  
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ANOKA COUNTY  
HIGHWAY DEPT.

STATE AID PROJECT 002-716-018

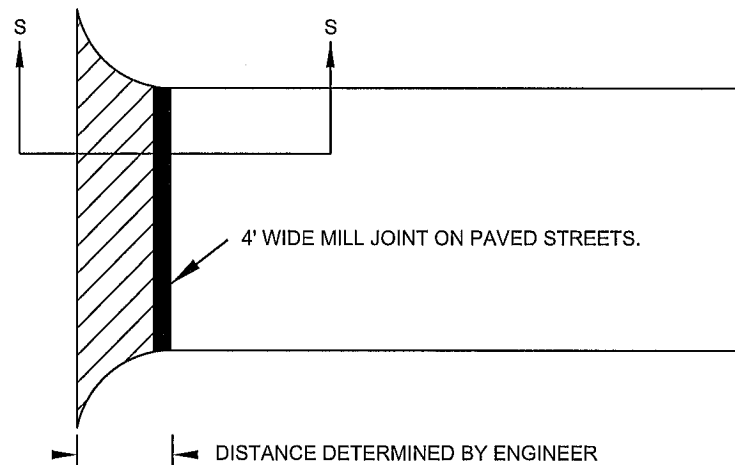
DETAILS  
Sheet 4 of 9 Sheets

sp/acs

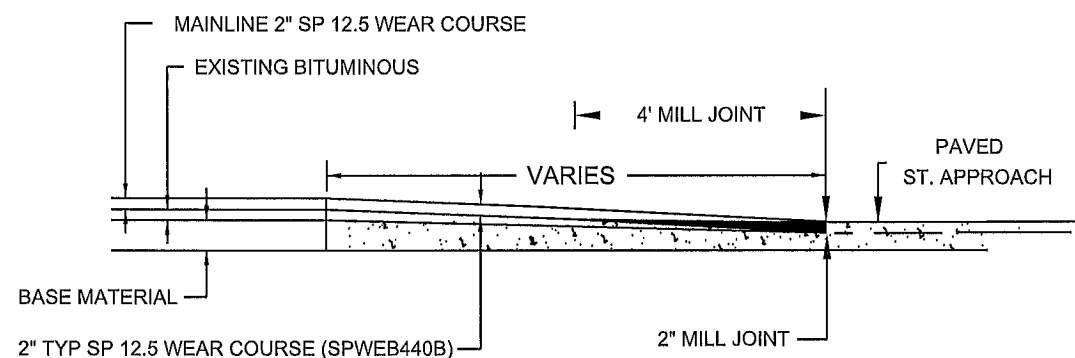
# STREET APPROACH DETAIL

## BITUMINOUS STREET

PLAN VIEW

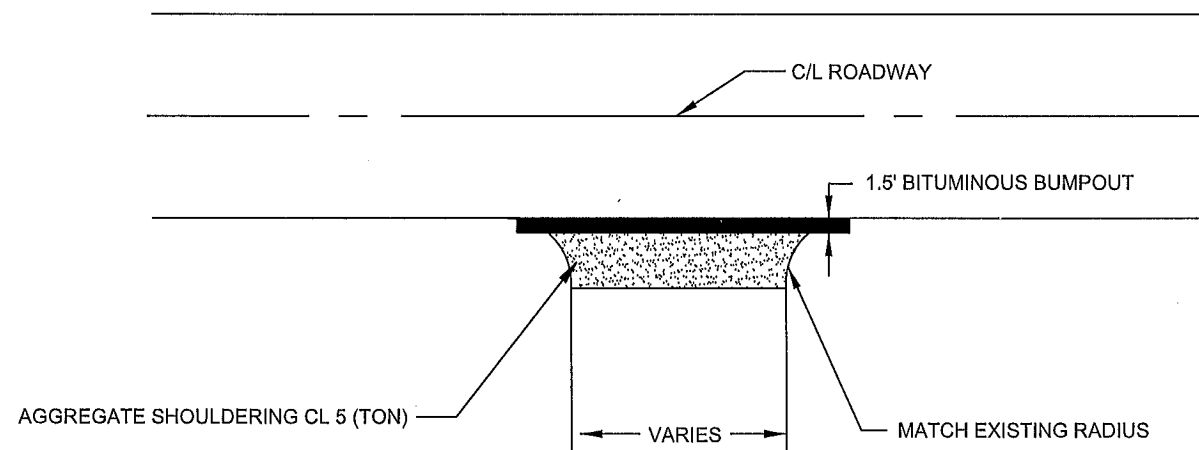


SECTION S - S



# DRIVEWAY DETAIL

## GRAVEL / FIELD ENTRANCE



NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME
						04/12/2018	10:59:19 AM

NAME: P:\18-01-00\CSAH\_116\_(VanBuren-TH65)\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: 4/12/18 LICENSE NO. 46732

DRAWN BY: SPH DATE: 2-1-18

DESIGN BY: SPH DATE: 2-1-18

CHECKED BY: HG DATE: 2-1-18



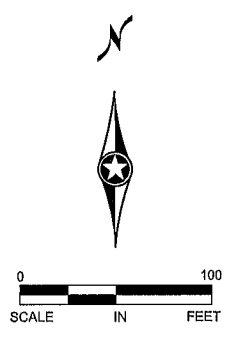
ANOKA COUNTY  
HIGHWAY DEPT.

STATE AID PROJECT 002-716-018

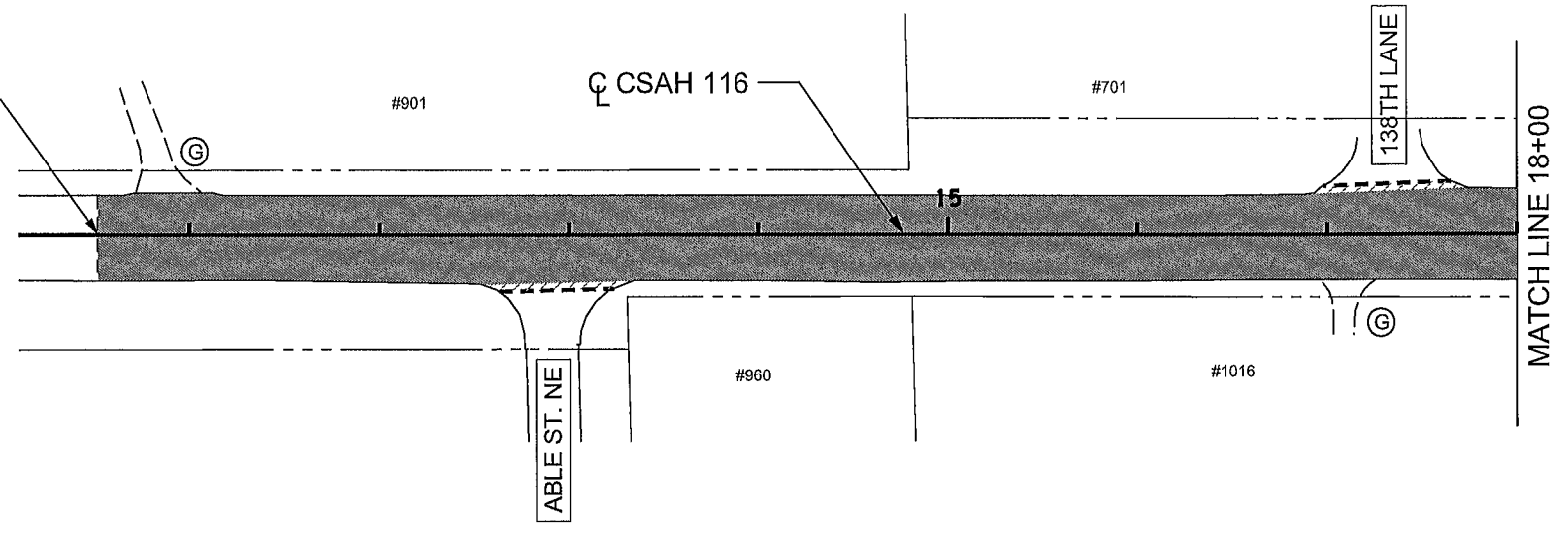
DETAILS

Sheet 5 of 9 Sheets

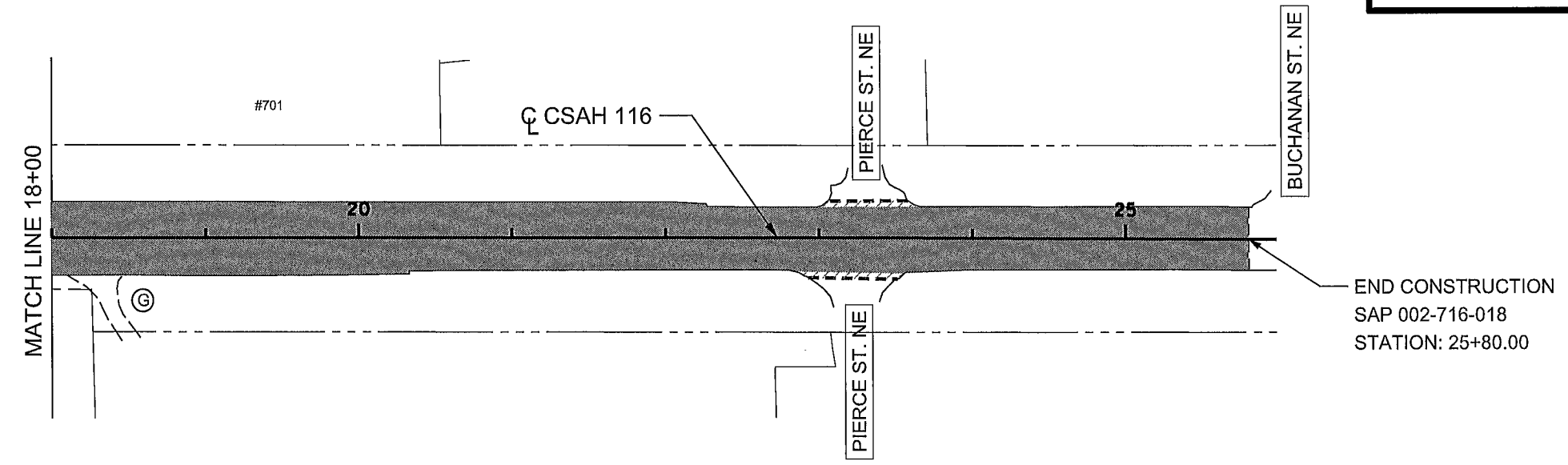
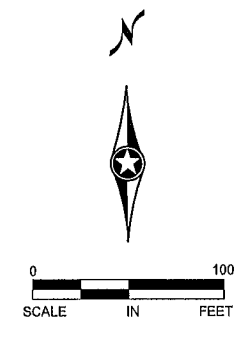
sp/raas



BEGIN CONSTRUCTION  
SAP 002-716-018  
STATION: 10+52.00



LEGEND	
(B)	BITUMINOUS
(G)	GRAVEL
- - - -	MILL LINE
[Shaded Area]	MAINLINE OVERLAY
[Hatched Area]	MILL AREA
—	R/W



END CONSTRUCTION  
SAP 002-716-018  
STATION: 25+80.00

NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME

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 PRINT NAME: JOSEPH J. MACPHERSON  
 SIGNATURE: *[Signature]*  
 DATE: 4/12/18 LICENSE NO. 46732

DRAWN BY: SPH DATE: 2-1-18  
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 CHECKED BY: HG DATE: 2-1-18

**ANOKA COUNTY**  
HIGHWAY DEPT.

STATE AID PROJECT 002-716-018

CONSTRUCTION PLAN  
 STA 10+52 TO 25+80  
 Sheet 6 of 9 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.

**EPOXY:**

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 EPOXY PAVEMENT MARKINGS.

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

AN EPOXY RESIN LINE 4" WIDE AND 15 MILL THICKNESS (WET), REQUIRES AN APPLICATION RATE OF ONE (1) GALLON OF COMPONENTS FOR 320 FEET OF LINE. GLASS BEADS SHALL BE APPLIED AT A POUND 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 FILM 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.

PERMANENT MARKING QUANTITIES		
ITEM	UNIT	TOTAL QUANTITY
4" SOLID LINE WHITE - EPOXY PAINT	LIN FT	3740
4" BROKEN LINE WHITE - EPOXY PAINT	LIN FT	40
4" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	150
4" BROKEN LINE YELLOW - EPOXY PAINT	LIN FT	760
4" DOUBLE SOLID LINE YELLOW - EPOXY PAINT	LIN FT	950

**SYMBOLS & MATERIALS LEGEND**

■ CROSSWALK BLOCK WHITE PREFORMED THERMOPLASTIC

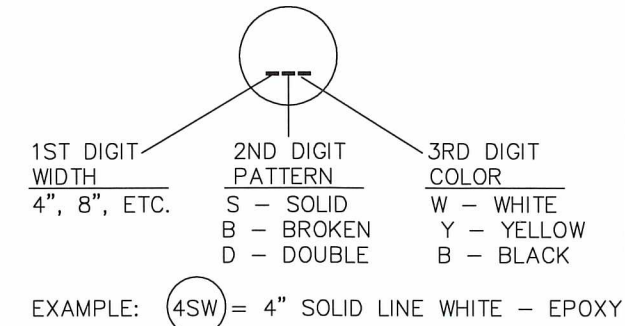
↩ PAVEMENT MESSAGE (LEFT ARROW) PREFORMED THERMOPLASTIC

**STRIPING KEY**

○ CIRCLE - EPOXY      □ SQUARE PREFORMED THERMOPLASTIC

△ TRIANGLE - PAINT

⬠ PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING



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: DOUGLAS W. FISCHER  
 SIGNATURE: *[Signature]*  
 DATE: 4/18/18 LICENSE NO. 20235

DRAWN BY: RLB DATE: 1/26/18  
 DESIGN BY: RLB DATE: 1/26/18  
 CHECKED BY: JR DATE: 1/26/18

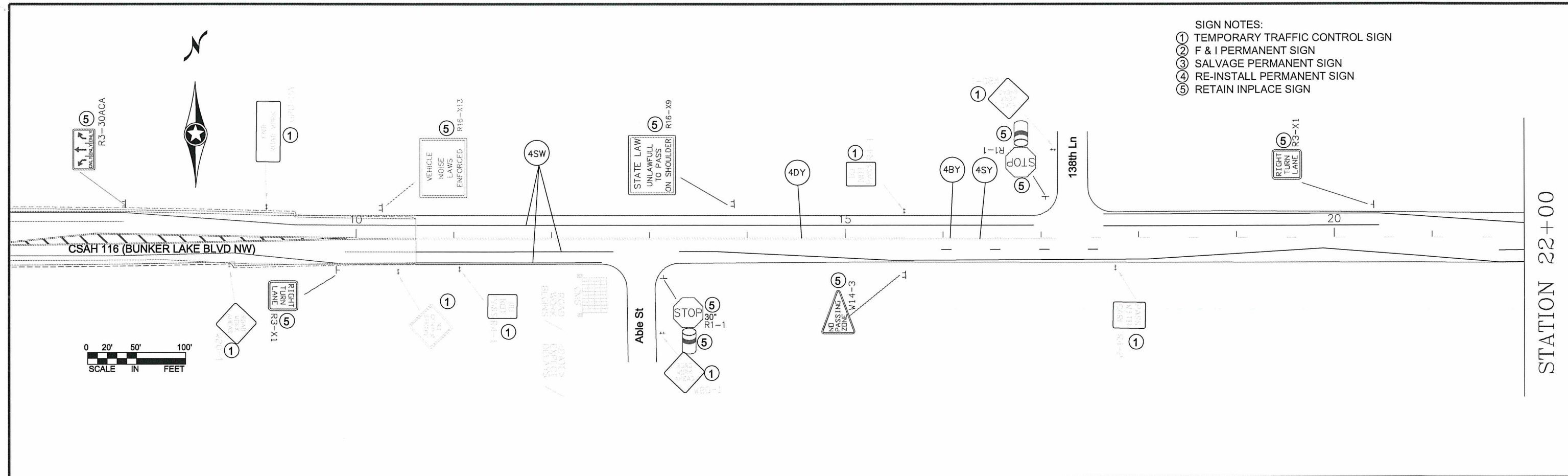


ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. 002-716-018  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 18-26-116

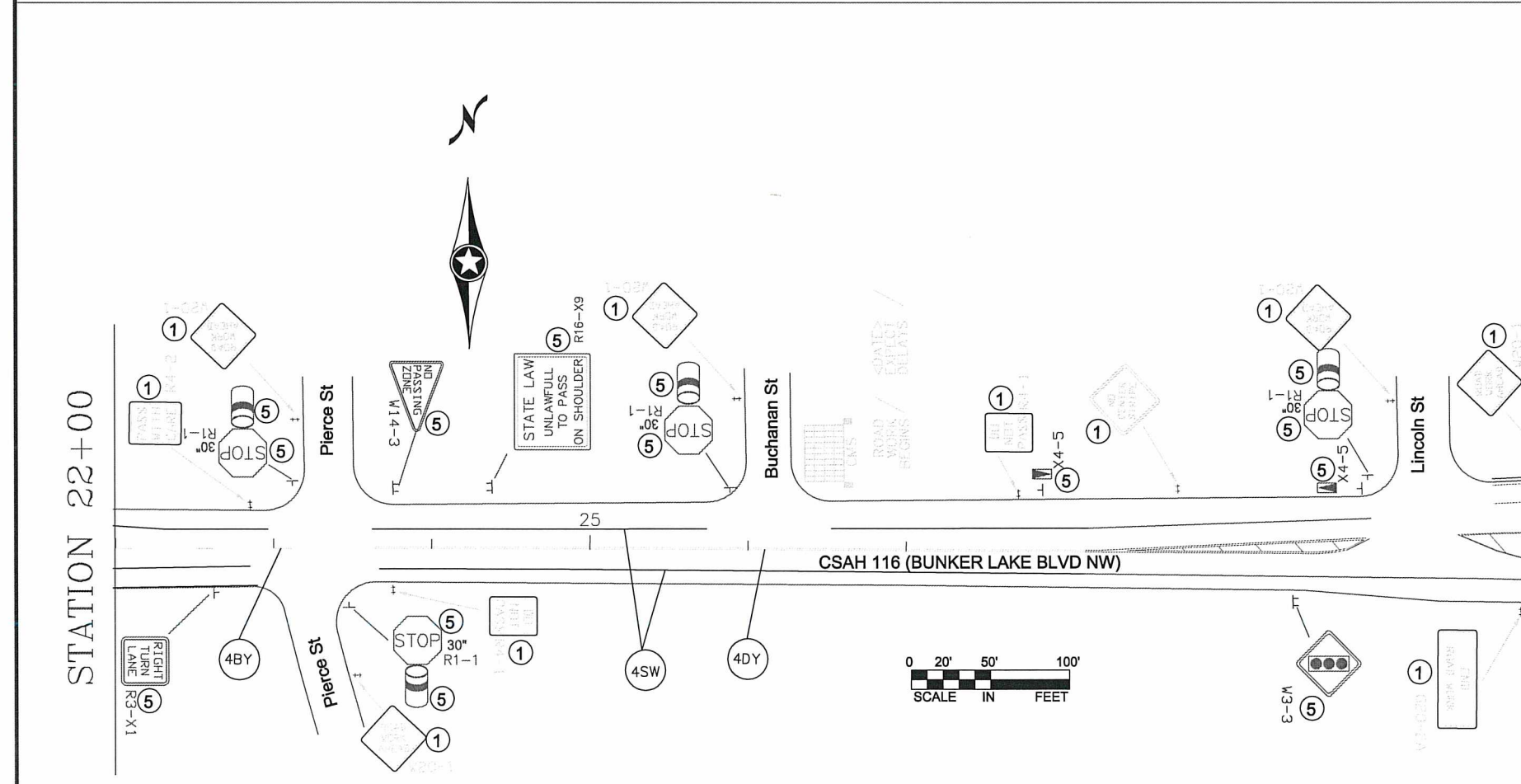
PERMANENT MARKING  
TABULATION  
 Sheet 7 of 9 Sheets

- SIGN NOTES:
- ① TEMPORARY TRAFFIC CONTROL SIGN
  - ② F & I PERMANENT SIGN
  - ③ SALVAGE PERMANENT SIGN
  - ④ RE-INSTALL PERMANENT SIGN
  - ⑤ RETAIN INPLACE SIGN



STATION 22+00

- 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 OF SEVEN 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.
  - 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	CKD	APPR	REVISION

NAME: P:\16-01-00\CR 60\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

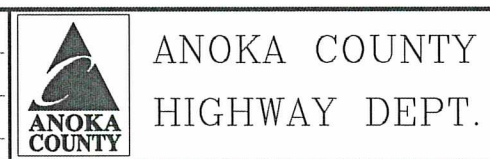
SIGNATURE: *[Signature]*

DATE: 4/18/18 REG. NO. 20235

DRAWN BY: RLB DATE: 1/26/18

DESIGN BY: RLB DATE: 1/26/18

CHECKED BY: JR DATE: 1/26/18



STATE PROJECT NO. \_\_\_\_\_

STATE AID PROJECT NO. 002-716-018

STATE AID PROJECT NO. \_\_\_\_\_

COUNTY PROJECT NO. 18-26-116

TEMPORARY SIGNING,  
PERMANENT SIGNING  
AND STRIPING

Sheet 8 of 9 Sheets



TEMPORARY TRAFFIC CONTROL SIGNS

M.U.T.C.D. CODE	SIZE	PANEL AREA FT. <sup>2</sup>	INSERT	QUANTITY		MOUNTING HEIGHT (TO PAVEMENT EDGE) FT.
					No. POST	
W8-12	48" x 48"	16.00		2	2	7.0'
R4-1	24" x 30"	5.00		4	1	7.0'
R4-2	24" x 30"	5.00		2	1	7.0'
G20-2A	48" x 24"	8.00		2	2	7.0'
W8-1A	48" x 48"	16.00		AS NEEDED		
W8-1A	48" x 48"	16.00		AS NEEDED		
W8-8	48" x 48"	16.00		AS NEEDED		
W8-9	48" x 48"	16.00		AS NEEDED		
	48" x 48"	16.00		AS NEEDED		
W8-11	48" x 48"	16.00		AS NEEDED		
W20-1	48" x 48"	16.00		AS NEEDED (ESTIMATED 8)		
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		

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 OF SEVEN 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.
- 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.

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.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\16-01-00\CR 60\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: 4/18/18 REG. NO. 20235

DRAWN BY: RLB DATE: 1/26/18  
 DESIGN BY: RLB DATE: 1/26/18  
 CHECKED BY: JR DATE: 1/26/18



ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_  
 STATE AID PROJECT NO. 002-716-018  
 STATE AID PROJECT NO. \_\_\_\_\_  
 COUNTY PROJECT NO. 18-26-116

TRAFFIC CONTROL  
 QUANTITY  
 Sheet 9 of 9 Sheets