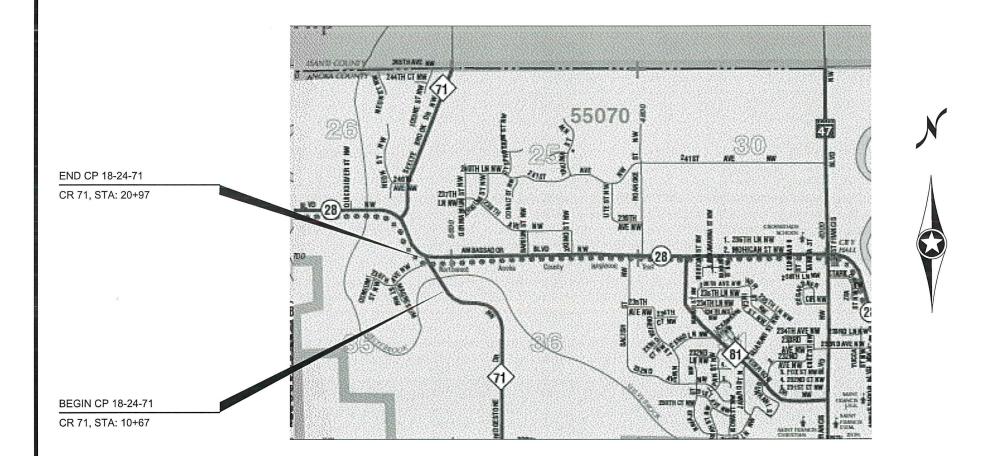
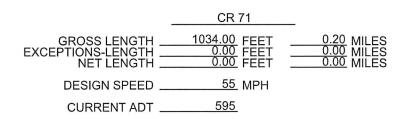
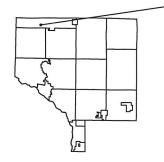
# MINNESOTA DEPARTMENT OF TRANSPORTATION **ANOKA COUNTY**

BITUMINOUS MILLING, AND BITUMINOUS SURFACING CONSTRUCTION PLAN FOR \_\_\_ LOCATED ON \_\_\_\_\_ CR 71 \_\_\_\_ BETWEEN \_ 1000' SOUTH of AMBASSADOR BLVD \_\_\_ AND \_\_\_



# **PROJECT LOCATION**





CITY OF ST FRANCIS ANOKA COUNTY MN/DOT TRANSPORTATION DISTRICT - METRO **SECTION 36** 

> TOWNSHIP 34 NORTH RANGE 25 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 TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MNMUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

# THIS PLAN CONTAINS 8 SHEETS

# **INDEX**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4	DETAILS
5	CONSTRUCTION PLAN
6-8	SIGNING AND STRIPING PLANS

NO DATE BY CKD APPR REVISION \$DATE\$

OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

**ANOKA COUNTY** HIGHWAY DEPT.

TITLE SHEET

18-24-71 **COUNTY PROJECT** 

Sheet 1 of 8 Sheets

STATEMENT OF ESTIMATED QUANTITIES								
				TOTAL PROJECT				
ITEM NUMBER	ITEM DESCRIPTION	NOTES	UNIT	QUANTITIES ESTIMATED				
2021.501	MOBILIZATION		LUMP SUM	1				
2104.504	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	1	. SQ YD	30				
2104.505	REMOVE BITUMINOUS PAVEMENT	2	SQ YD	256				
2221.509	SHOULDER BASE AGGREGATE CLASS 5		TON	555				
2232.504	MILL BITUMINOUS SURFACE (2.0")	3	SQ YD	4620				
2357.506	BITUMINOUS MATERIAL FOR TACK COAT		GAL	1626				
2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,B)	1,4	TON	4				
2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4,B)	5	TON	35				
2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4,C)		TON	531				
2540.602	MAIL BOX SUPPORT	6	EACH	1				
2563.601	TRAFFIC CONTROL	7	LUMP SUM	1				
2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	8	UNIT DAY	20				
2574.507	COMMON TOPSOIL BORROW (LV)	11	CU YD	8				
2575.504	EROSION CONTROL BLANKETS CATEGORY 0	12	SQ YD	90				
2581.503	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	9	LIN FT	252				
2582.503	4" SOLID LINE EPOXY	10	LIN FT	2200				
2582.503	4" DOUBLE SOLID LINE EPOXY	10	LIN FT	1100				

	CONSTRUCTION NOTES
1	CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
2	AFTER MAINLINE MILLING OPERATION, CONTRACTOR SHALL REMOVE PAVEMENT TO EXPOSE WOODEN BRIDGE DECK.
3	DETAIL MILLING AROUND MANHOLES, CATCH BASINS, GATE VALVES, AND ALONG CURB LINE IS INCIDENTAL TO THIS ITEM.
4	MIX FOR PAVING BACK DRIVEWAYS.
5	MIX FOR PATCHING BACK BASE LIFT OVER BRIDGE DECK.
6	MAILBOXES SHALL BE INSTALLED AT THE EXISTING MAILBOX LOCATION OR AS DIRECTED BY THE LOCAL POSTAL AUTHORITY. THE CONTRACTOR IS RESPONSIBILE FOR CONTACTING THE LOCAL POSTAL AUTHORITY. MAILBOX REMOVAL AND ALL MATERIALS NECESSARY FOR INSTALLATION ARE INCIDENTAL TO THIS ITEM.
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 INPLACE WHENEVER PAVEMENT MARKINGS ARE NOT PRESENT.
8	2 MESSAGE BOARDS, ONE ON EACH END OF PROJECT, WILL 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 INPLACE 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	ITEM USED AT ENGINEER'S DISCRETION FOR RESTORATION OF DISTURBED AREAS ALONG DRIVEWAYS, STREET APPROACHES AND BEHIND CURB
12	TYPE 1 FERTILIZER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM.

BASIS OF PLANNED QUANTITIES							
2357	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					

								I H OR LIV
NO	DATE	BY	CKD	APPR	REVISION	\$DATE\$	\$TIME\$	— PF — SI
NAME:		БТ	CKD	AFFR	REVISION	\$DATE\$	\$TIME\$	D/

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 MINNESOTY.

PRINT NAME:

JOSEPH J. MACPHERSON

SIGNATURE:

DATE:

LICENSE NO. 46732

DRAWN BY <u>SAT</u> DATE <u>4-18-18</u>



ANOKA COUNTY HIGHWAY DEPT. STATEMENT OF ESTIMATED QUANTITIES

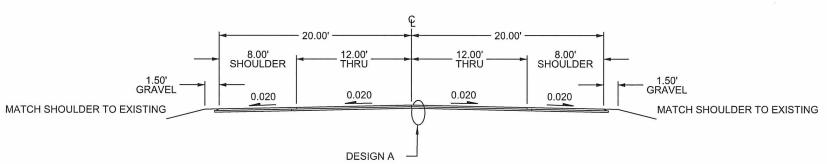
COUNTY PROJECT \_\_\_\_\_\_17-24-71

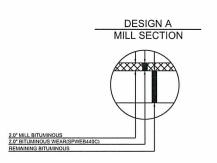
Sheet 2 of 8 Sheets

# CR 71- Bridgestone Road NW

(PROPOSED) SECTION

10+67 - 20+97





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NO	DATE	BY	CKD	APPR	REVISION	\$DATE\$	\$TIME\$	ı
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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME
OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY
LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF
THE STATE OF MINNESOTA,
PRINT NAME: JOSEPH J. MACPHERSON
SIGNATURE:

DRAWN BY <u>SAT</u> DATE <u>4-18-18</u>

DESIGN BY <u>SAT</u> DATE <u>4-18-18</u>

CHECKED BY <u>JM</u> DATE <u>4-18-18</u>



ANOKA COUNTY HIGHWAY DEPT.

TYPICAL SECTIONS

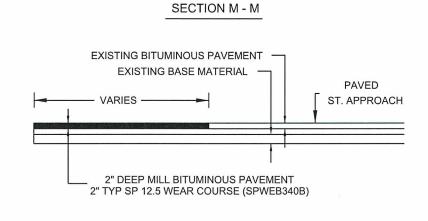
COUNTY PROJECT \_\_\_\_\_\_18-24-71

Sheet 3 of 8 Sheets

# STREET APPROACH DETAIL (MILL & OVERLAY)

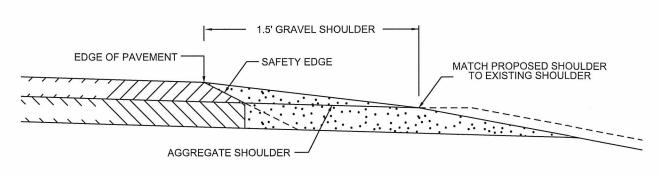
# **BITUMINOUS STREET**

# PLAN VIEW M DISTANCE DETERMINED BY ENGINEER



# 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

NI DI VICTORIO	LIBERTON DIVALE							
								_
NO	DATE	BY	CKD	APPR	REVISION	\$DATE\$	\$TIME\$	N.
NAME: \$	DGN\$							

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ANOKA COUNTY

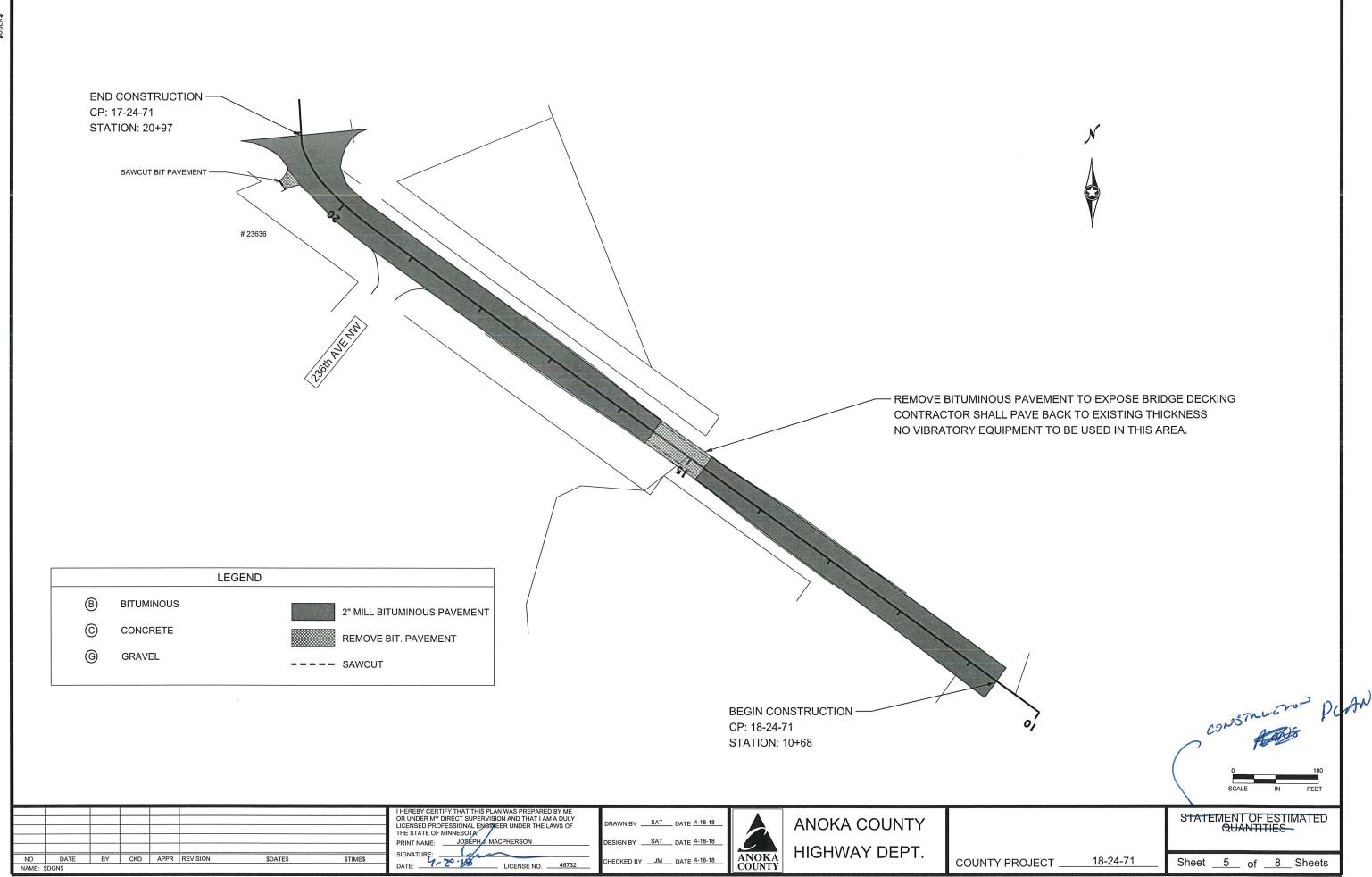
ANOKA COUNTY HIGHWAY DEPT.

COUNTY PRO

DETAILS

COUNTY PROJECT \_\_\_\_\_\_18-24-71

Sheet 4 of 8 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  $\frac{1}{4}$  INCH UNDER OR  $\frac{1}{4}$  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.

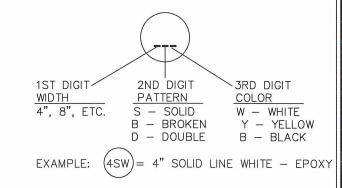
0	PERMANENT MARKING QUANTITIES		
ITEM		UNIT	TOTAL QUANTITY
4" SOLID LIN	NEWHITE-EPOXY PAINT	LINFT	2200
4" DOUBLE	SOLID LINE YELLOW - EPOXY PAINT	LIN FT	1100

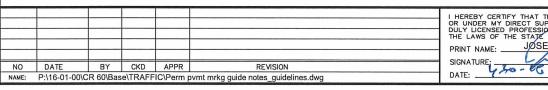
# SYMBOLS & MATERIALS LEGEND

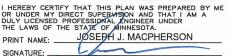
- CROSSWALK BLOCK WHITE PREFORMED THERMOPLASTIC
- A PAVEMENT MESSAGE (LEFT ARROW)
  PREFORMED THERMOPLASTIC

# STRIPING KEY

- --- CIRCLE EPOXY --- SQUARE PREFORMED THERMOPLASTIC
- --- TRIANGLE PAINT
- PENTAGON REMOVABLE PREFORMED PLASTIC MARKING

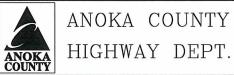


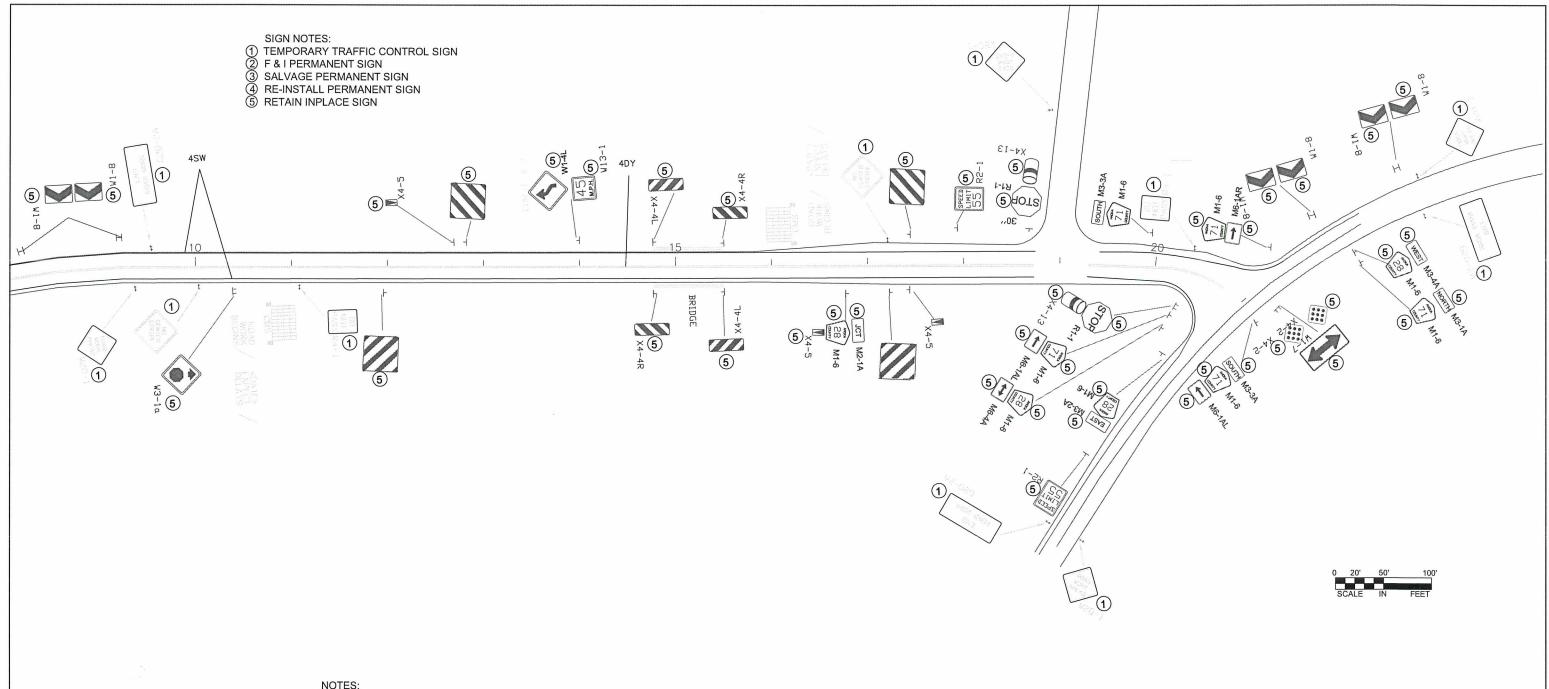




LICENSE NO.\_

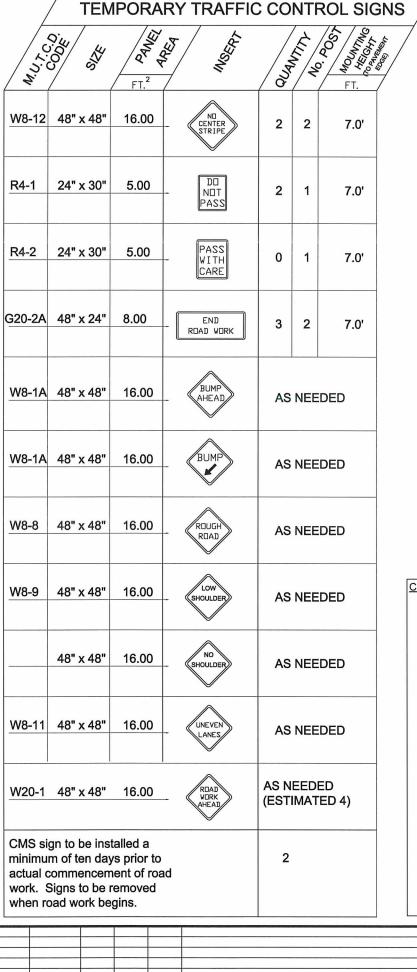






- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- CONTRACTOR SHALL COMPLY WITH THE LONGITUDINAL DROP-OFF GUIDELINES AS PER THE 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 WID DIRECT SUPERVISION AND THAT I AM A DRAWN BY RLB DATE 1/10/17  PRINT NAME: DOUGLAS W. FISCHER  SIGNATURE: PROJECT NO. DESIGN BY RLB DATE 1/10/17  DATE: 1/10/18  REG. NO. 20235  DATE: 1/10/17  CHECKED BY JR DATE 1/10/17



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CHANGEABLE MESSAGE BOARD - MESSAGE SEQUENCE LAYOUT

	R	0	Α	D		
	W	0	R	K		
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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.

PRINT NAME: DOUGLAS W. FISCHER
SIGNATURE: BY CKD APPR DATE: 4/21/18/ \_\_ REG. NO.

RAWN BY RLB DATE 1/10/17 DESIGN BY RLB DATE 1/10/17

CHECKED BY JR DATE 1/10/17



ANOKA COUNTY HIGHWAY DEPT

STATE PROJECT NO. STATE AID PROJECT NO. \_ STATE AID PROJECT NO. 18 - 24 - 71COUNTY PROJECT NO.

TRAFFIC CONTROL QUANTITY

Sheet <u>8</u> of <u>8</u> Sheets