

MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR MILL BITUMINOUS, BITUMINOUS SURFACING, CURB & GUTTER, AND SEWER REPAIRS

LOCATED ON CSAH 24 BETWEEN CSAH 28 (AMBASSADOR BLVD) AND RUM RIVER BRIDGE

GOVERNING SPECIFICATIONS

THE 2014 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE 2014 EDITION OF THE "MATERIALS LAB SUPPLEMENTAL 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."

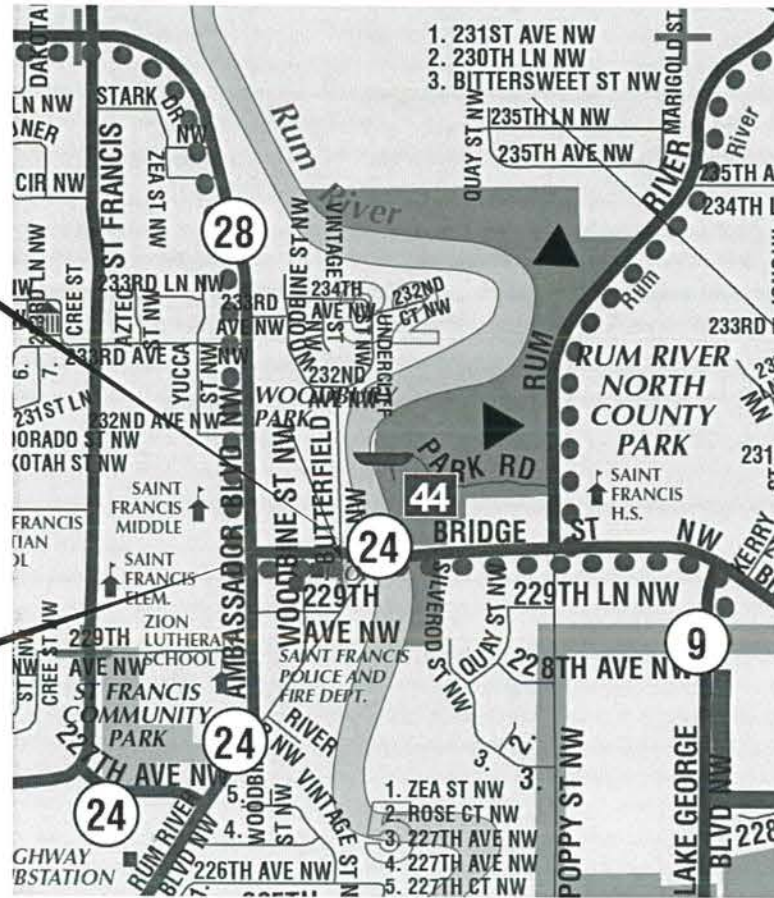
THIS PLAN CONTAINS 10 SHEETS

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4-5	DETAILS
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END CP 15-19-24
CSAH #24, STA: 10+02

BEGIN CP 15-19-24
CSAH #24, STA: 21+85



PROJECT LOCATION



	CSAH / CR #	
GROSS LENGTH	1183.00 FEET	0.224 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	1183.00 FEET	0.224 MILES
DESIGN SPEED	30 MPH	
CURRENT ADT	8,573	

CITY OF ST. FRANCIS
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
SECTION 32
TOWNSHIP 34 NORTH
RANGE 24 WEST

Approved: 4/2/15
ANOKA COUNTY ENGINEER

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO</th> <th>DATE</th> <th>BY</th> <th>CKD</th> <th>APPR</th> <th>REVISION</th> </tr> </thead> <tbody> <tr> <td></td> <td>03/19/2015</td> <td></td> <td></td> <td></td> <td>11:57:24 AM</td> </tr> </tbody> </table> <p>NAME: P:\15-01-00\CSAH_24(Ambassador-Bridge)\Base\PROPOSED\PLAN.dgn</p>	NO	DATE	BY	CKD	APPR	REVISION		03/19/2015				11:57:24 AM	<p>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.</p> <p>PRINT NAME: MATTHEW J. JOHN SIGNATURE: DATE: 4/2/15 LICENSE NO. 51639</p>	<p>DRAWN BY: CSO DATE: 2/17/2015 DESIGN BY: CSO DATE: 2/17/2015 CHECKED BY: MJJ DATE: 3/3/2015</p>	 ANOKA COUNTY HIGHWAY DEPT.	<p>COUNTY PROJECT <u>15-19-24</u></p>	<p>TITLE SHEET</p> <p>Sheet <u>1</u> of <u>10</u> Sheets</p>
NO	DATE	BY	CKD	APPR	REVISION												
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STATEMENT OF ESTIMATED QUANTITIES

ITEM NUMBER	(CODE)	ITEM DESCRIPTION	NOTES	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED
2021.501	00010	MOBILIZATION		LUMP SUM	1
2104.501	00022	REMOVE CURB & GUTTER	5	LN FT	1189
2104.503	00021	REMOVE CONCRETE WALK	5	SQ FT	960
2104.503	00121	REMOVE BITUMINOUS PAVEMENT	5	SQ YD	664
2104.505	00110	REMOVE CONCRETE PAVEMENT	17	SQ YD	37
2104.511	00011	SAWING CONCRETE PAVEMENT (FULL DEPTH)	5	LN FT	65
2104.513	00011	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	5	LN FT	1610
2211.501	00050	AGGREGATE BASE CLASS 5	4	TON	20
2232.501	00050	MILL BITUMINOUS SURFACE (2.0")	3	SQ YD	5554
2232.604	00010	MILL BITUMINOUS PAVEMENT (SPECIAL)	1	SQ YD	540
2357.502	00010	BITUMINOUS MATERIAL FOR TACK COAT		GALLON	305
2360.501	23200	TYPE SP 12.5 WEARING COURSE MIX (3.B)	13	TON	107
2360.501	24500	TYPE SP 12.5 WEARING COURSE MIX (4.E)		TON	639
2360.505	20100	TYPE SP 12.5 BIT MIXTURE FOR PATCHING	2	TON	65
2504.602	00033	ADJUST GATE VALVE	14	EACH	2
2506.516	00010	CASTING ASSEMBLY	15	EACH	5
2506.602	00003	GROUT CATCH BASIN OR MANHOLE	8	EACH	2
2506.602	00009	ADJUST FRAME & RING CASTING	7	EACH	0
2521.501	00060	6" CONCRETE WALK		SQ FT	960
2531.501	02315	CONCRETE CURB & GUTTER DESIGN B618		LN FT	872
2531.501	19216	CONCRETE CURB & GUTTER DESIGN S518 (MOD)	18	LN FT	333
2531.604	00108	8" CONCRETE VALLEY GUTTER	17	SQ YD	37
2531.618	00010	TRUNCATED DOMES		SQ FT	96
2563.601	00010	TRAFFIC CONTROL		LUMP SUM	1
2563.613	01100	PORTABLE CHANGEABLE MESSAGE SIGN	6	UDAY	14
2573.530	00010	STORM DRAIN INLET PROTECTION	12	EACH	6
2575.523	00009	EROSION CONTROL BLANKET CATEGORY 0	16	SQ YD	400
2581.501	00010	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	9	LN FT	100
2582.502	41104	4" SOLID LINE WHITE-EPOXY	10	LN FT	2790
2582.502	42104	4" SOLID LINE YELLOW-EPOXY	10	LN FT	360
2582.502	42204	4" BROKEN LINE YELLOW-EPOXY	10	LN FT	300
2582.602		24" SOLID LINE WHITE PREFORMED THERMOPLASTIC	10	LN FT	67
2582.618		3' X 6' ZEBRA CROSSWALK - PREFORMED THERMOPLASTIC	10	SQ FT	432

CONSTRUCTION NOTES

1	TO BE USED FOR JOINT MATCHING AT EXISTING STREET APPROACHES AND/OR DETAIL MILLING ALONG FACE OF CONCRETE CURB AND GUTTER. DETAIL MILLING AROUND MANHOLES, CATCH BASINS, GATE VALVES AND ALONG CURB LINE IS INCIDENTAL TO THIS ITEM.
2	ITEM INCLUDES BITUMINOUS PATCHING AROUND NEW CURB, STORM STRUCTURE REPAIRS, AND ANY POTHOLES.
3	DETAIL MILLING AROUND MANHOLES, CATCH BASINS, GATE VALVES AND ALONG CURB LINE IS INCIDENTAL TO THIS ITEM.
4	ITEM TO BE USED AS BASE FOR NEW CONCRETE WALK
5	REFERENCE DETAILS FOR REMOVAL
6	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT WILL BE INSTALLED 7 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
7	SEE STORM TABULATIONS FOR RING HEIGHTS.
8	ITEM INCLUDES GROUTING OF INVERTS, DOGHOUSES, RINGS, AND CASTINGS AS REQUIRED
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	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT WILL BE INSTALLED 7 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
12	ALL DRAINAGE STRUCTURES AFFECTED BY THIS PROJECT MUST HAVE INLET PROTECTION.
13	FOR CITY STREET APPROACHES AND FOR PAVED BLVD BETWEEN STA 18+40 - 21+30 LT. CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION
14	TO BE ADJUSTED AS NECESSARY AS DETERMINED BY THE ENGINEER.
15	ITEM INCLUDES FULL REPLACEMENT OF CASTING, ADJUSTMENT RINGS. SEE STORM TABULATION FOR RING HEIGHTS.
16	TYPE 1 FERTILIZER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM. 4" OF TOPSOIL IS INCIDENTAL TO ALL TURF ESTABLISHMENT.
17	REMOVE VALLEY GUTTER WITH WINGS. INSTALL 8" VALLEY GUTTER WITH EPOXY COATED REBAR
18	HIGH EARLY CONCRETE TO BE USED FOR BOTH THE MAIN POUR AND THE 24' OPENING FOR ACCESS TO LOCAL BUSINESS

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
2401	REINFORCEMENT BARS (EPOXY COATED) #4 BAR	0.668 LBS / LN FT

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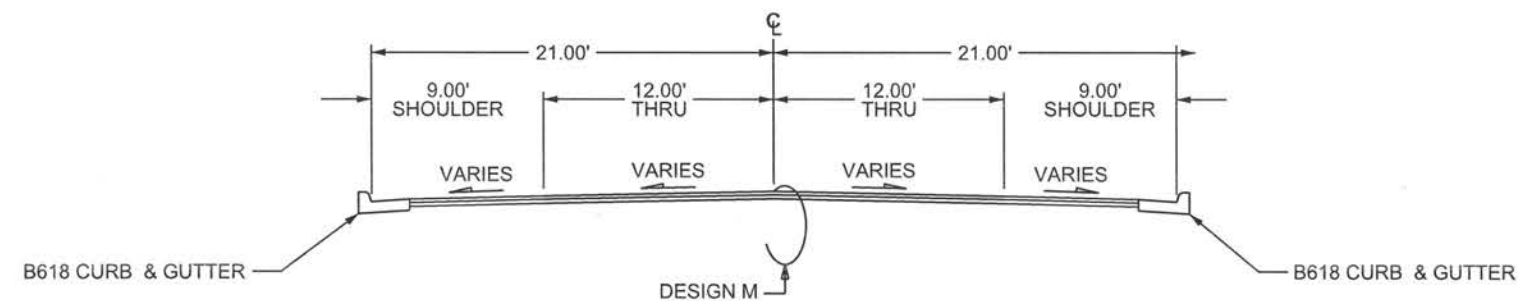
ANOKA COUNTY
 HIGHWAY DEPT.

COUNTY PROJECT 15-19-24

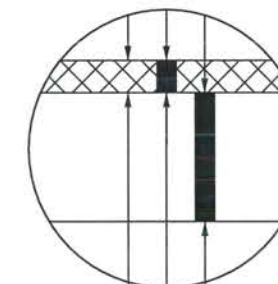
STATEMENT OF ESTIMATED QUANTITIES
 Sheet 2 of 10 Sheets

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CSAH 24 (BRIDGE STREET) PROPOSED SECTION 10+05 TO 21+85



DESIGN M MILL SECTION



2.0" MILL BITUMINOUS
2" BITUMINOUS WEAR(SPWEB440E)
REMAINING BITUMINOUS

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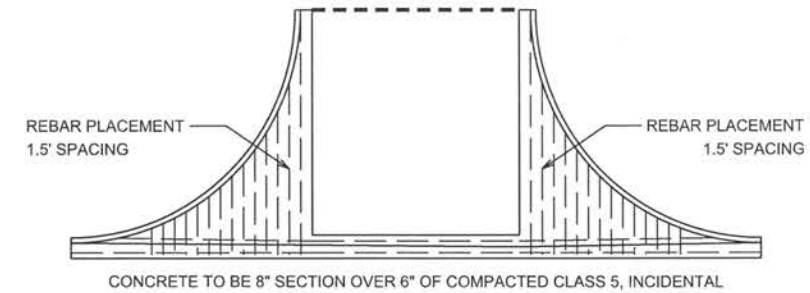
COUNTY PROJECT 15-19-24

TYPICAL SECTIONS
Sheet 3 of 10 Sheets

MNDOT STANDARD PLATES

PLATE NUMBER	DESCRIPTION
4026A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4035N	CONCRETE WALK
4101D	RING CASTING FOR MANHOLE OR CATCH BASIN
4110F	COVER CASTING FOR MANHOLE
7038A	DETECTABLE WARNING SURFACE
7100H	CONCRETE CURB AND GUTTER
7113A	CONCRETE APPROACH NOSE DETAIL

VALLEY GUTTER DETAILS



STORM DRAINAGE TAB

NUMBER	TYPE	ACTION	NEW CASTING	FURNISH AND INSTALL CASTING ASSEMBLY	STRUCTURE TYPE	CASTING RING HEIGHT (LIN FT)	GROUT CATCH BASIN OR MANHOLE (EACH)	SAWING CONCRETE PAVEMENT (FULL DEPTH)	REMOVE CURB & GUTTER	CONCRETE CURB & GUTTER DESIGN B618	CONCRETE CURB & GUTTER DESIGN S518 (MOD)	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	REMOVE BITUMINOUS PAVEMENT	TYPE SP 12.5 BIT MIXTURE FOR PATCHING	NOTES
								LIN FT	LIN FT	LIN FT	LIN FT	SQ YD	TON		
100	MH SAN	RE-RING STRUCTURE	A-7D	1	CONE	0.4									
101	MH SAN	RE-RING STRUCTURE	A-7D	1	CONE	1.0									
102	CB				BOX										
103	CB				H										
104	CB	GROUT STRUCTURE			BOX		1								
105	CB				BOX										
106	MH SAN	RE-RING STRUCTURE	A-7D	1	CONE	1.1						24	4.0	0.9	
107	CB	RE-RING STRUCTURE	R-3246-CL	1	BOX	1.0		5	13	13		17	2.9	0.7	
108	CB	GROUT & RE-RING STRUCTURE	R-3246-CL	1	BOX	0.6	1	5	12	12		16	2.7	0.6	

CURB REPLACEMENT

		NE COR 24 & 28						5	16	16		20	4.4	1.0	LT OF CL
		SE COR 24 & 28						5	24	24		28	6.2	1.4	RT OF CL
		SW COR 24 & 28						5	16	16		20	4.4	1.0	RT OF CL
		13+02 TO WOOD BRIDGE STREET						5	198	198		202	44.9	10.3	RT OF CL
		WOOD BRIDGE STREET TO BUTERFIELD						5	327	327		331	73.6	16.9	RT OF CL
		BUTERFIELD TO 18+73						5	33	33		37	8.2	1.9	RT OF CL
		SW COR OF RUM RIVER BLVD						5	16	16		20	4.4	1.0	RT OF CL
		SE COR OF RUM RIVER BLVD						5	16	16		20	4.4	1.0	RT OF CL
		15+05 TO 16+74						5	169	169		173	38.4	8.8	LT OF CL
		NW COR BUTTERFIELD ST.						5	16	16		20	4.4	1.0	LT OF CL
		NE COR BUTTERFIELD ST. TO 21+85						5	333		333	682	460.0	17.6	LT OF CL
		NW COR 24 & 28								16					LT OF CL
TOTALS				5			2	65	1189	872	333	1610	664.0	65.0	

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ANOKA COUNTY HIGHWAY DEPT.

COUNTY PROJECT 15-19-24

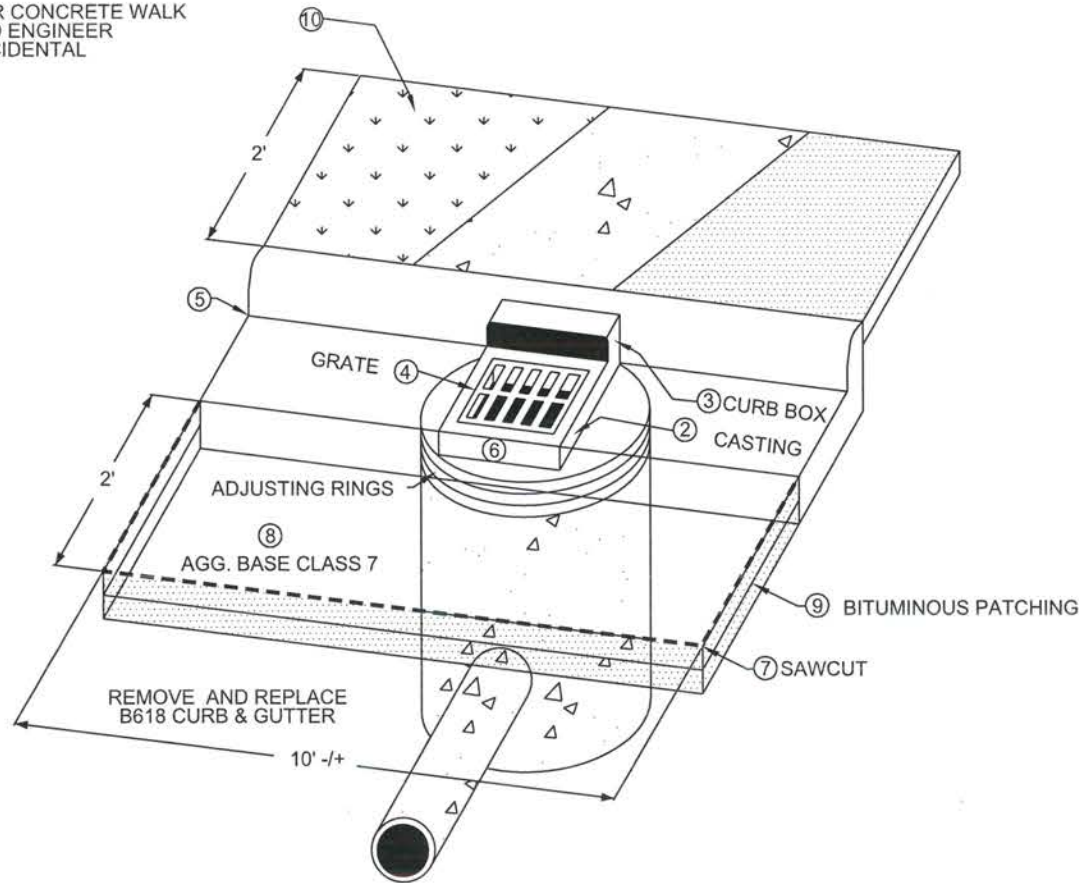
DETAILS
 Sheet 4 of 10 Sheets

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CATCH BASIN DETAIL

SEE STRUCTURE TAB FOR LOCATION
(PAGE 3)

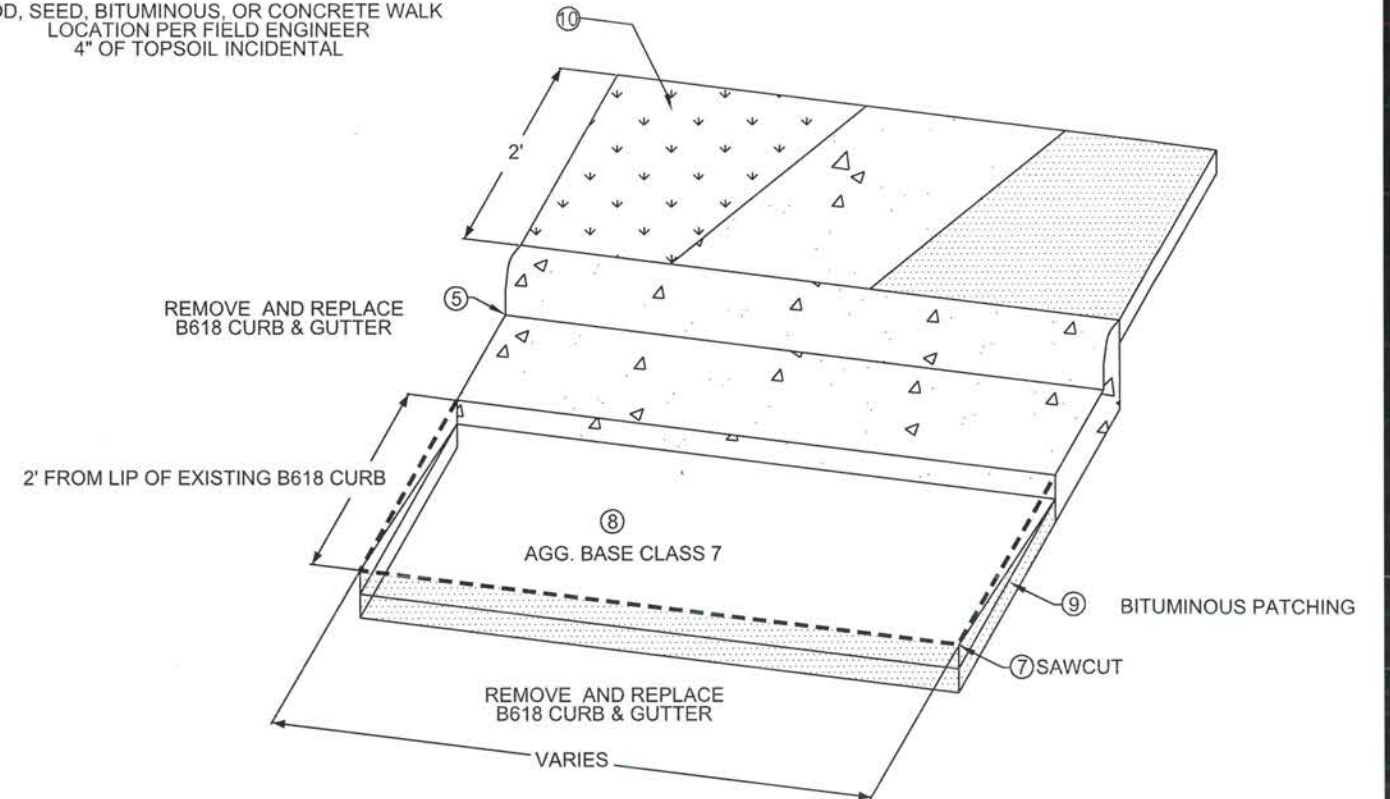
SOD, SEED, BITUMINOUS, OR CONCRETE WALK
LOCATION PER FIELD ENGINEER
4" OF TOPSOIL INCIDENTAL



NEW CURB DETAIL

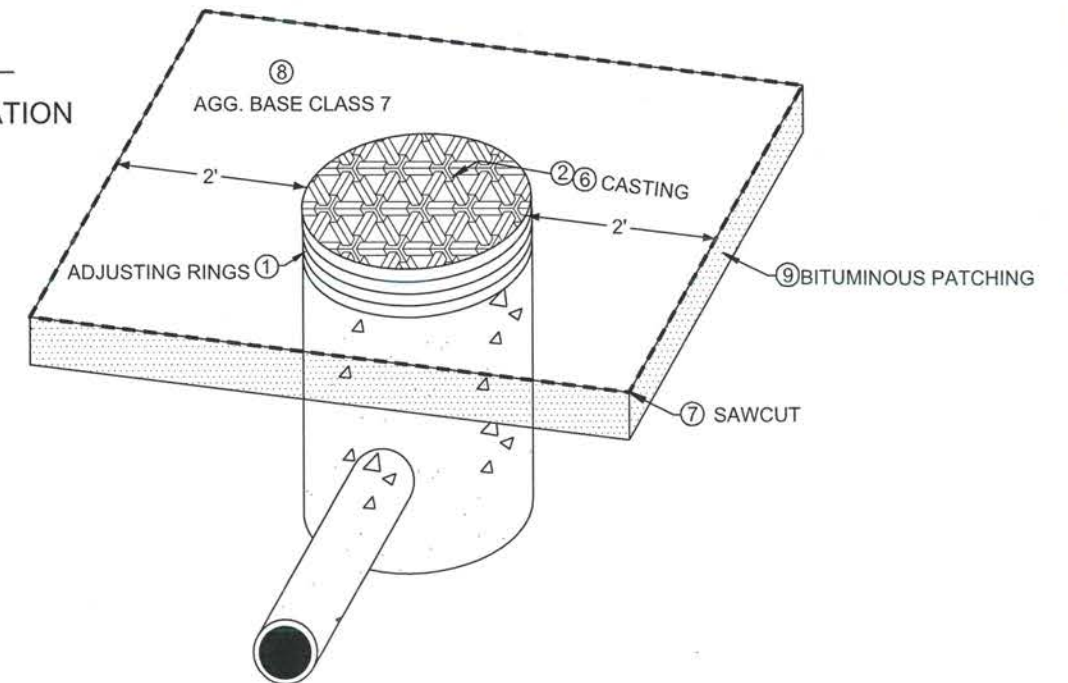
SEE PLAN FOR LOCATION

SOD, SEED, BITUMINOUS, OR CONCRETE WALK
LOCATION PER FIELD ENGINEER
4" OF TOPSOIL INCIDENTAL



MANHOLE DETAIL

SEE STRUCTURE TAB FOR LOCATION
(PAGE 3)



NOTES

FOR TRAFFIC CONTROL AT CATCH BASIN AND MANHOLE REPAIRS REFER TO THE MINNESOTA
MANUAL ON TEMPORARY TRAFFIC CONTROL LAYOUTS FIELD MANUAL.

- ① CONCRETE ENCASED CONCRETE ADJUSTING RINGS STANDARD PLATE 4026A
- ② RING AND FRAME CASTING; REFERENCE CASTING ASSEMBLIES SUMMARY CHART FOR CASTING TYPE
- ③ CURB BOX MATCHES CASTING REFERENCE CHART FOR CASTING TYPE
- ④ GRATE CASTING; REFERENCE CASTING ASSEMBLIES SUMMARY CHART FOR CASTING TYPE
- ⑤ CONCRETE CURB AND GUTTER DESIGN B STANDARD PLATE 7100G
- ⑥ INSTALLATION OF CATCH BASIN OR MANHOLE CASTINGS; REFERENCE STANDARD PLATE PER TYPE OF CASTING
- ⑦ SAWCUT BITUMINOUS PAVEMENT / CONCRETE CURB FULL DEPTH.
- ⑧ ADD AND COMPACT AGGREGATE BASE CLASS 7 AROUND REPAIRED STRUCTURE. ITEM INCIDENTAL TO ENTIRE STRUCTURE REPAIR
- ⑨ REMOVE VARIABLE DEPTH BITUMINOUS, PATCH WITH 2, 3" LIFTS OF BITUMINOUS, TOP LIFT SHOULD TAPER TO BOTTOM LIFT AT CURB.
- ⑩ REPLACE DISTURBED AREA BEHIND CATCH BASIN WITH EITHER SOD (RESIDENTIAL AREAS),
EROSION CONTROL BLANKET, BITUMINOUS, OR CONCRETE

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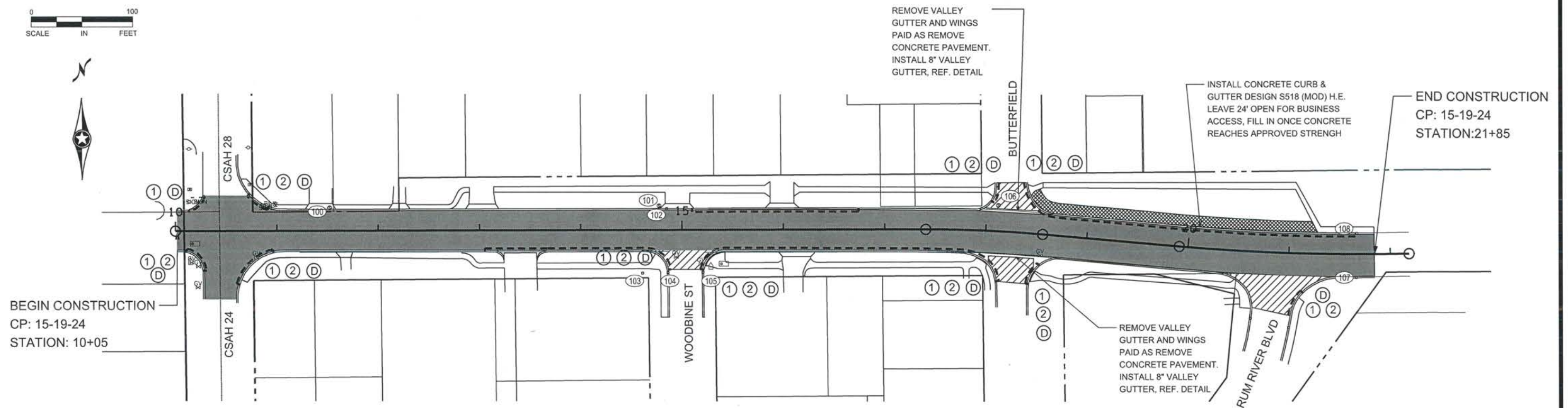
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COUNTY PROJECT 15-19-24

DETAILS
Sheet 5 of 10 Sheets

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-  2" MAINLINE MILL
-  BITUMINOUS REMOVAL
-  MILL SPECIAL (SIDE STREETS)
-  TRUNCATED DOMES
-  REMOVE CONCRETE WALK
-  6" CONCRETE WALK
-  SAWCUT



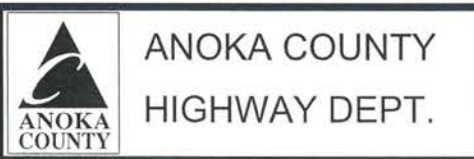
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COUNTY PROJECT 15-19-24

CONSTRUCTION PLAN
STA 10+05 TO 21+85
Sheet 6 of 10 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 BEANS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE EPOXY RESIN LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.

AN EPOLY 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 APPLICAITON 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.

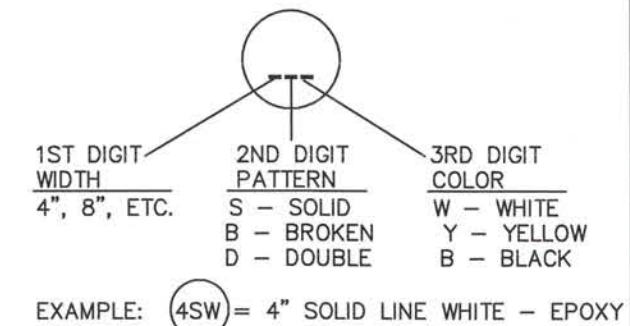
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4" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	360
4" BROKEN LINE YELLOW - EPOXY PAINT	LIN FT	300
24" SOLID LINE WHITE - PREFORMED THERMOPLASTIC	LIN FT	67
3'X6' ZEBRA CROSSWALK - PREFORMED THERMOPLASTIC	SQ FT	432

SYMBOLS & MATERIALS LEGEND

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

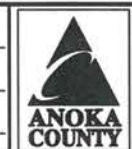
STRIPING KEY

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



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: MATTHEW J. JOHN
SIGNATURE: *[Signature]*
DATE: 4/2/15 LICENSE NO. 51639

DRAWN BY: RLB DATE: 2/14/14
DESIGN BY: RLB DATE: 2/14/14
CHECKED BY: JR DATE: 2/14/14



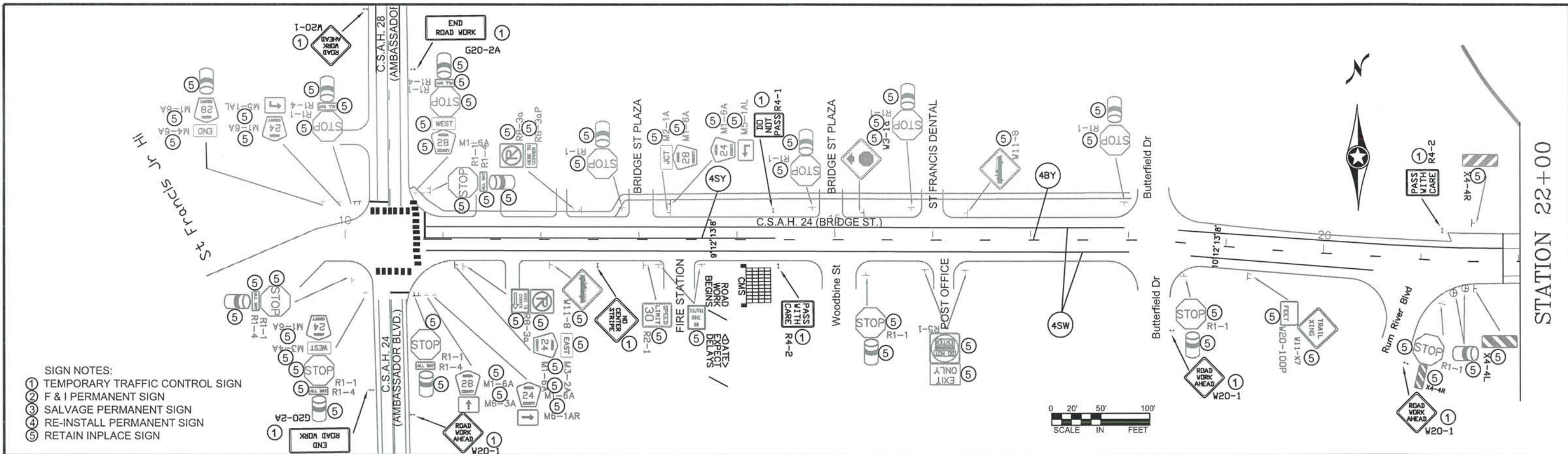
ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. _____
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. 15-19-24

PERMANENT MARKING
TABULATION
Sheet 7 of 10 Sheets

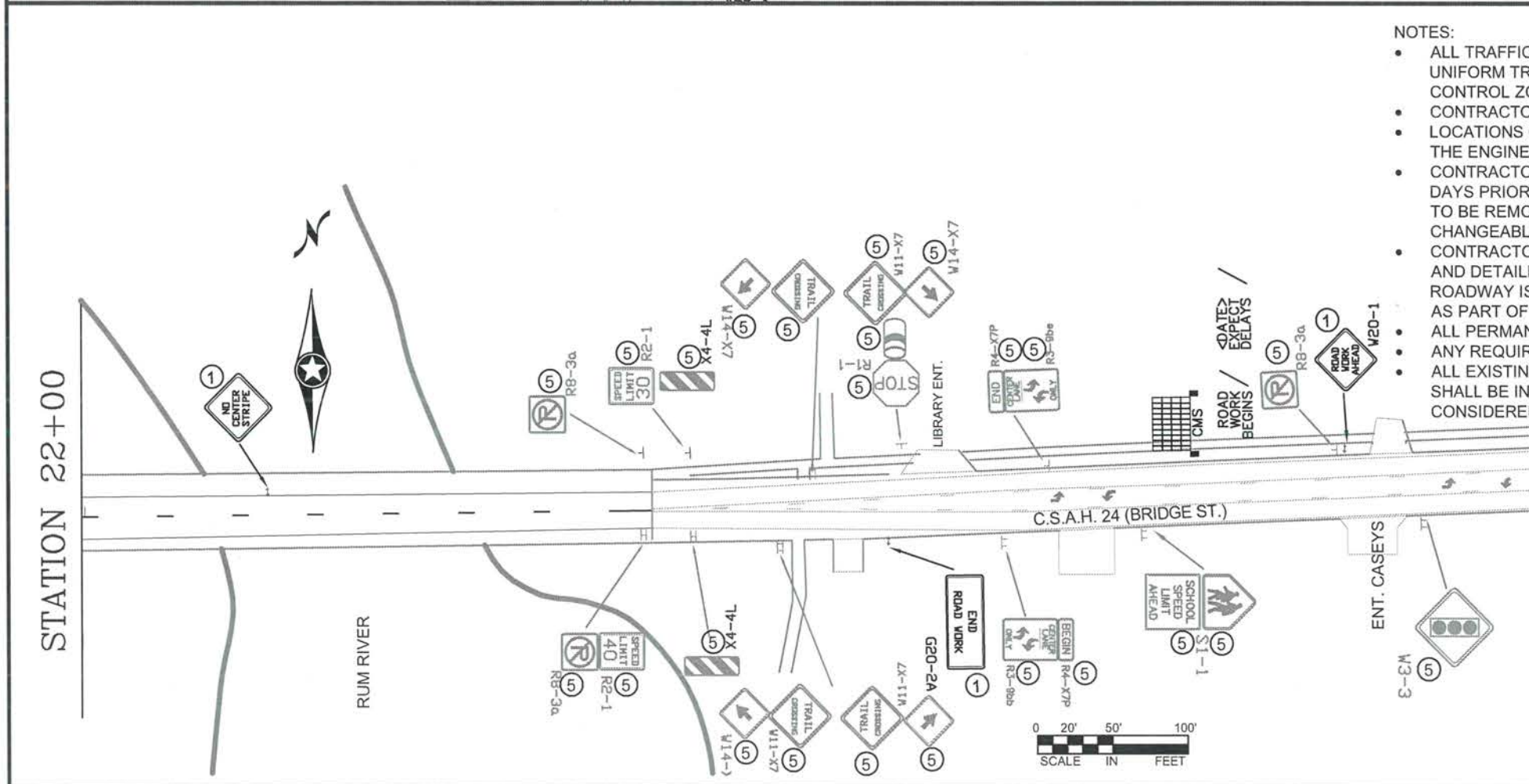
NO	DATE	BY	CKD	APPR	REVISION

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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
 - ⑤ RETAIN INPLACE 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 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:\02-617-19\base\Traffic\Curves from CSAH 18 to CSAH 22.dwg

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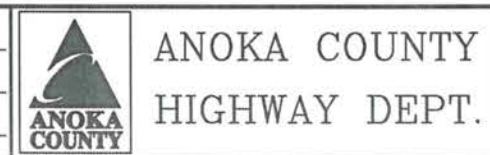
SIGNATURE: *[Signature]*

DATE: 4/2/15 REG. NO. 51639

DRAWN BY: RLB DATE 1/7/14

DESIGN BY: RLB DATE 1/7/14

CHECKED BY: JR DATE 1/7/14



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COUNTY PROJECT NO. 15-19-24

TEMPORARY SIGNING,
PERMANENT SIGNING
AND STRIPING

Sheet 8 of 10 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		2	2	7.0'
R4-1	24" x 30"	5.00		3	1	7.0'
R4-2	24" x 30"	5.00		3	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		
W8-11	48" x 48"	16.00		AS NEEDED		
W20-1	48" x 48"	16.00		AS NEEDED (ESTIMATED 5)		
CMS sign to be installed a minimum of seven 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".
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CHANGEABLE MESSAGE BOARD - MESSAGE SEQUENCE LAYOUT

		R	O	A	D		
		W	O	R	K		
	B	E	G	I	N	S	

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

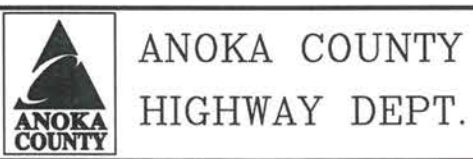
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NO	DATE	BY	CHKD	APPR	REVISION

NAME: P:\02-617-19\base\Traffic\Curves from CSAH 18 to CSAH 22.dwg

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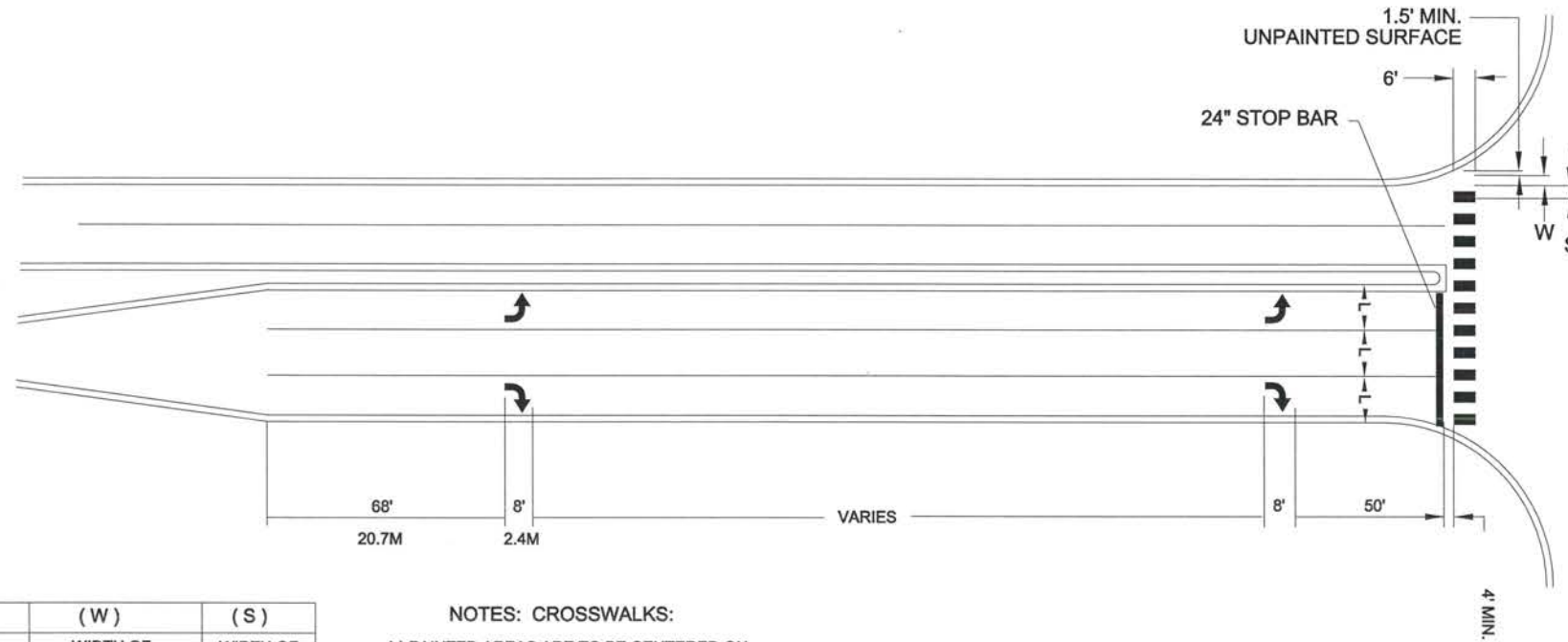
DRAWN BY: RLB DATE: 1/7/14
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 COUNTY PROJECT NO. 15-19-24

TRAFFIC CONTROL QUANTITY
 Sheet 9 of 10 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.

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**ANOKA COUNTY
HIGHWAY DEPT.**

STATE PROJECT NO. _____
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SIGNING & STRIPING
DETAILS

NO	DATE	BY	CKD	APPR	REVISION