

MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

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

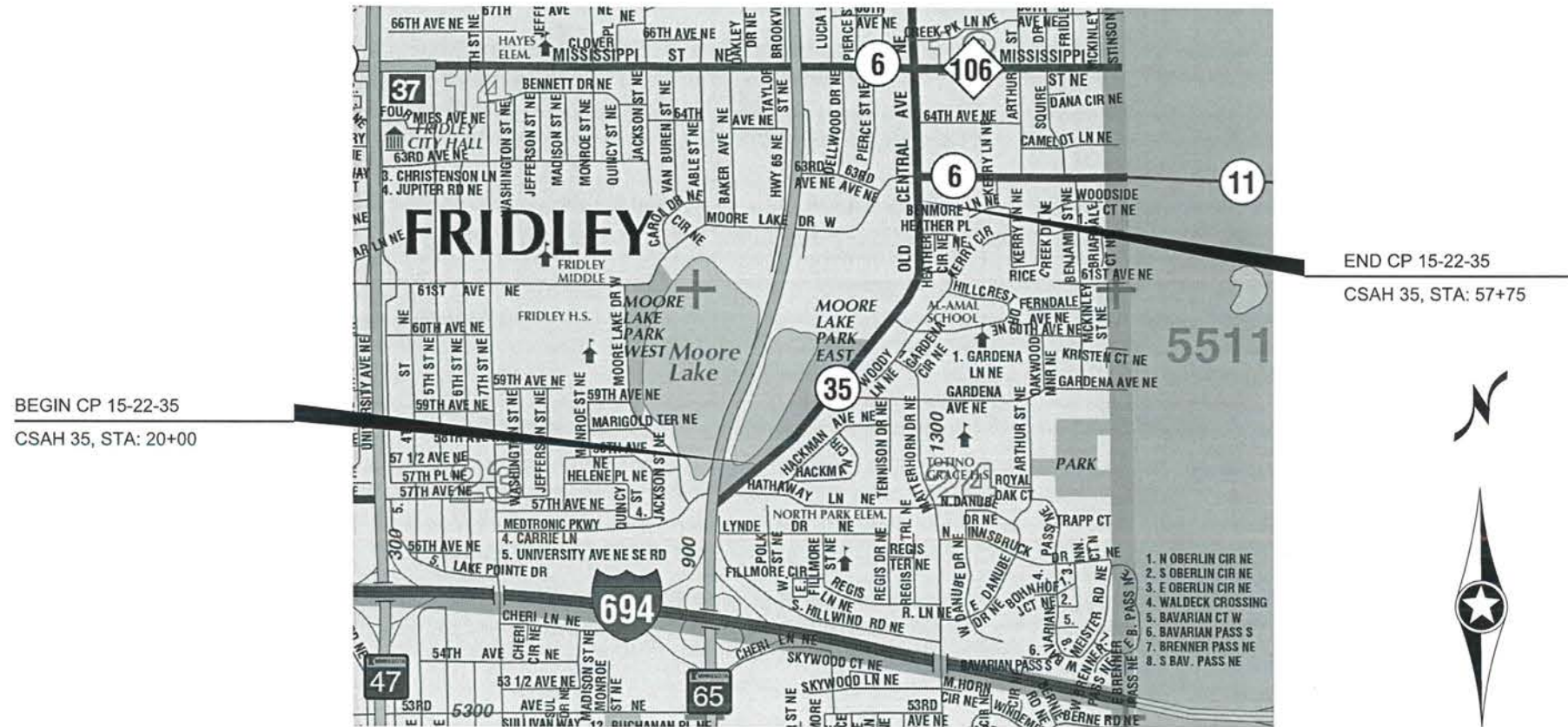
LOCATED ON CSAH 35 BETWEEN 1000' NORTH OF TH 65 AND 150' SOUTH OF E. MOORE LK DR.

CSAH 35
 GROSS LENGTH 3775 FEET 0.714 MILES
 EXCEPTIONS-LENGTH 0.00 FEET 0.000 MILES
 NET LENGTH 3775 FEET 0.714 MILES

GOVERNING SPECIFICATIONS
 THE 2014 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND THE "MATERIALS LAB SUPPLEMENTAL SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

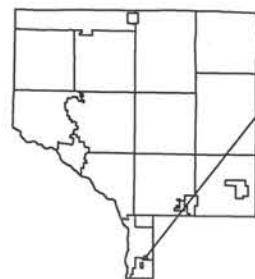
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14	TRAFFIC CONTROL QUANTITY



THIS PLAN CONTAINS 14 SHEETS

PROJECT LOCATION



CITY OF FRIDLEY
 ANOKA COUNTY
 MN/DOT TRANSPORTATION DISTRICT - METRO
 SECTION 24
 TOWNSHIP 30 NORTH
 RANGE 23 WEST

DESIGN SPEED 35 MPH
 CURRENT ADT 8643

Approved: 4/2/15
 ANOKA COUNTY ENGINEER

NO	DATE	BY	CKD	APPR	REVISION	SDATES	STIMES
NAME: SDGNS							

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

DRAWN BY JCF DATE 03/24/2015
 DESIGN BY JCF DATE 03/24/2015
 CHECKED BY MJJ DATE 03/27/2015



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 15-22-35

TITLE SHEET
 Sheet 1 of 14 Sheets

STATEMENT OF ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	NOTES	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED
2021.501	MOBILIZATION		LUMP SUM	1
2104.501	REMOVE CURB & GUTTER	1	LIN FT	7239
2104.505	REMOVE CONCRETE PAVEMENT	2	SQ YD	106
2104.505	REMOVE BITUMINOUS PAVEMENT (DRIVEWAYS)	3	SQ YD	331
2104.505	REMOVE BITUMINOUS PAVEMENT (MAINLINE)	4	SQ YD	1606
2104.509	REMOVE CASTING	1	EACH	8
2104.509	REMOVE DRAINAGE STRUCTURE	1	EACH	3
2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH) (DRIVEWAYS)	5	LIN FT	146
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH) (DRIVEWAYS / STORM REPAIRS)	5	LIN FT	475
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH) (MAINLINE)	5	LIN FT	7239
2211.501	AGGREGATE BASE CLASS 5	6	TON	241
2232.501	MILL BITUMINOUS SURFACE (2.0")		SQ YD	17749
2357.502	BITUMINOUS MATERIAL FOR TACK COAT		GALLON	887
2360.501	TYPE SP 9.5 WEARING COURSE MIXTURE (4,E)	9	TON	2041
2360.501	TYPE SP 12.5 WEARING COURSE MIXTURE (3,B)	10	TON	38
2360.505	TYPE SP 12.5 BIT MIXTURE FOR PATCHING	11	TON	185
2504.602	ADJUST GATE VALVE	12	EACH	4
2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	13	LIN FT	3.2
2506.501	CONSTRUCT DRAINAGE STRUCTURE DESIGN 60-4020	13	LIN FT	9
2506.516	CASTING ASSEMBLY (ROUND)	14	EACH	1
2506.516	CASTING ASSEMBLY (RECTANGLE)	14	EACH	6
2506.522	ADJUST FRAME RING & CASTING		EACH	1
2506.602	GROUT CATCH BASIN OR MANHOLE		EACH	5
2531.501	CONCRETE CURB AND GUTTER DESIGN B418		LIN FT	7239
2531.507	6" CONCRETE DRIVEWAY PAVEMENT	15	SQ YD	106
2540.602	MAIL BOX SUPPORT	16	EACH	30
2540.602	RELOCATE MAIL BOX SUPPORT	17	EACH	30
2563.601	TRAFFIC CONTROL	18,19	LUMP SUM	1
2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	20	UNIT DAY	14
2573.530	STORM DRAIN INLET PROTECTION	21	EACH	12
2574.525	COMMON TOPSOIL BORROW		CU YD	485
2575.523	EROSION CONTROL BLANKET CAT 0	22	SQ YD	4409
2581.501	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	23	LIN FT	604
2582.502	4" SOLID LINE WHITE-EPOXY		LIN FT	7935
2582.502	4" BROKEN LINE WHITE-EPOXY		LIN FT	40
2582.502	4" SOLID LINE YELLOW-EPOXY		LIN FT	670
2582.502	4" DOUBLE SOLID LINE YELLOW-EPOXY		LIN FT	1690
2582.502	4" BROKEN LINE YELLOW-EPOXY		LIN FT	468
2582.503	3' X 6' ZEBRA CROSSWALK - PREFORMED THERMOPLASTIC		SQ FT	126
2582.602	24" SOLID LINE WHITE PREFORMED THERMOPLASTIC		LIN FT	39
2582.602	24" SOLID LINE YELLOW PREFORMED THERMOPLASTIC		LIN FT	10

CONSTRUCTION NOTES

1	REFERENCE DETAILS (PAGE 6) FOR REMOVAL DETAILS
2	ITEM FOR CONCRETE DRIVEWAYS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION
3	ITEM FOR BITUMINOUS DRIVEWAYS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION
4	ITEM FOR REMOVING 2' STRIP OF BITUMINOUS ALONG CURB FOR CURB REPLACEMENT AND STORM REPAIRS.
5	LOCATION DETERMINED BY ENGINEER.
6	GRAVEL BASE FOR REMOVAL AREA ALONG NEW CURB PRIOR TO BITUMINOUS PATCHING AND CULVERT PATCHES.
7	MAINLINE MILLING. DETAIL MILLING AROUND MANHOLES, CATCH BASINS, GATE VALVES AND ALONG CURB LINE IS INCIDENTAL TO THIS ITEM.
8	NOTE REMOVED
9	MAINLINE WEARING COURSE QUANTITY.
10	BITUMINOUS DRIVEWAYS, CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
11	ITEM INCLUDES BITUMINOUS PATCHING AROUND NEW CURB, STORM STRUCTURE REPAIRS, AND POTENTIAL BIT. REPAIR.
12	GATE VALVES TO BE ADJUSTED ONLY AS NECESSARY AS DETERMINED BY THE ENGINEER.
13	PAY HEIGHT IS MEASURED FROM INVERT OF OUTLET PIPE TO TOP OF PRECAST CONCRETE STRUCTURE PLUS AN ALLOWANCE OF 0.70 FEET FOR THE DEPTH OF THE CONCRETE BASE, REGARDLESS OF ITS ACTUAL THICKNESS. CONCRETE ADJUSTMENT RINGS ARE INCIDENTAL. CONNECTIONS TO EXISTING STORM SEWER ARE INCIDENTAL.
14	ITEM INCLUDES FULL REPLACEMENT OF CASTING, GRATE AND ADJUSTMENT RINGS. SEE STORM TABULATIONS FOR RING HEIGHTS.
15	CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
16	MAILBOXES ARE TO BE INSTALLED AT THE EXISTING MAILBOX LOCATION OR AS DIRECTED BY THE LOCAL POSTAL AUTHORITY, CONTRACTOR IS RESPONSIBLE FOR CONTACTING. MAILBOX REMOVAL AND ALL MATERIALS ARE INCIDENTAL TO INSTALLATION.
17	MAILBOXES ARE TO BE TEMPORARY RELOCATED TO A TO TEMPORARY LOCATION AS DIRECTED BY THE LOCAL POSTAL AUTHORITY, CONTRACTOR IS RESPONSIBLE FOR CONTACTING POSTAL AUTHORITY AND HOME OWNER.
18	CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TEMPORARY SIGNAGE WHENEVER EXISTING SIGNAGE IS REMOVED. TEMPORARY SIGNAGE SHALL BE INCIDENTAL TO TRAFFIC CONTROL.
19	DO NOT PASS, PASS WITH CARE AND NO CENTER STRIPE SIGNS MUST BE INPLACE DURING MILLING AND PAVING OPERATIONS.
20	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT WILL BE INSTALLED 7 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
21	ALL DRAINAGE STRUCTURES AFFECTED BY THIS PROJECT MUST HAVE INLET PROTECTION.
22	SEEDING, TYPE 25-151 SEED AND TYPE 3 FERTILIZER ARE INCIDENTAL TO THIS ITEM.
23	CENTERLINE AND LANE DESIGNATION SKIPS TO BE APPLIED AS SOON AS POSSIBLE ON MILLED SURFACE AND EACH NEW LIFT OF PAVEMENT; SKIPS MUST BE INPLACE BEFORE THE CONTRACTOR LEAVES FOR THE DAY. CONTRACTOR IS TO REMOVE PRIOR TO FINAL PAINT STRIPING.

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
2574	FERTILIZER ANALYSIS TYPE 3	350LB / ACRE
2575	SEED MIXTURE 25-151	120LB / ACRE
2581	REMOVABLE PREFORM PAVEMENT MARKING TAPE	2' AT 50' INTERVALS

MNDOT STANDARD PLATES

PLATE NUMBER	DESCRIPTION
4006L	MANHOLE OR CATCH BASIN
4020J	MANHOLE OR CATCH BASIN
4026A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4126F	CATCH BASIN FRAM CASTING
4149C	GRATE CASTING FOR CATCH BASIN
7100H	CONCRETE CURB AND GUTTER

NO	DATE	BY	CKD	APPR	REVISION	SDATES	\$TIMES

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ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 15-22-35

STATEMENT OF ESTIMATED QUANTITIES

Sheet 2 of 14 Sheets

\$USER\$

BITUMINOUS , MILLING & DRIVEWAY TABULATIONS

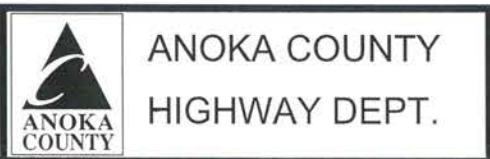
ADDRESS	STATION	LOC.	REMOVE CONCRETE CURB	REMOVE CONCRETE PAVEMENT	REMOVE BITUMINOUS PAVEMENT (MAINLINE)	REMOVE BITUMINOUS PAVEMENT (DRIVEWAYS)	SAWCUT CONCRETE FULL DEPTH (DRIVEWAYS)	SAWCUT BITUMINOUS FULL DEPTH (DRIVEWAYS)	SAWCUT BITUMINOUS FULL DEPTH (MAINLINE)	MILL BITUMINOUS SURFACE (2")	BITUMINOUS MATERIAL FOR TACK COAT	TYPE SP 12.5 WEARING COUSE MIXTURE (3,B) DRIVEWAYS	TYPE SP 9.5 WEARING COUSE MIXTURE (4,E) MAINLINE	CONCRETE CURB AND GUTTER DESIGN B418	6" CONCRETE DRIVEWAY PAVEMENT	MAIL BOX SUPPORT	RELOCATE MAILBOX SUPPORT		
			PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM
			2104.501 LIN FT	2104.505 SQ YD	2104.505 SQ YD	2104.505 SQ YD	2104.511 LIN FT	2104.513 LIN FT	2104.513 LIN FT	2232.501 SQ YD	2357.502 GALLON	2360.501 TON	2360.501 TON	2531.501 LIN FT	2531.507 SQ YD	2540.602 EACH	2540.602 EACH		
	20+00 - 57+75	MAIN							3464	17749	887		2041.1						
	20+00 - 57+75	MAIN LT	3775		835				3775					3775					
	20+00 - 57+75	MAIN RT	3464		771									3464					
BEGIN PROJECT 20+00																			
5819	20+70	RT				14		21				1.6				1	1		
5827	21+25	RT		19				29							19	1	1		
5835	21+70	RT		7				10							7	1	1		
5843	22+90	RT		12				16							12	1	1		
5851	23+15	RT				12		16				1.4				1	1		
5859	24+25	RT				11		16				1.3				1	1		
5867	24+75	RT				11		17				1.3				1	1		
5875	26+00	RT		11				17							11	1	1		
5887	27+25	RT				9		13				1.0				1	1		
5895	27+80	RT		12				18							12	1	1		
BEACH	28+00	LT				17		21				2.0							
BEACH	28+75	LT				17		22				2.0							
GARDENA AVE																			
5927	31+10	RT				13		18				1.5				1	1		
5947	32+75	RT				10		11				1.2				1	1		
5971	33+20	RT				12		18				1.4				1	1		
6001	34+05	RT		12				13							12	1	1		
PARK S	34+05	LT				17		21				2.0							
6021	35+00	RT				15		23				1.7				1	1		
6053	35+80	RT		9				12							9	1	1		
PARK N	35+80	LT				18		22				2.1							
6057	39+20	RT				13		20				1.5				1	1		
6059	39+80	RT		13				20							13	1	1		
6044	40+40	LT		11				11							11	1	1		
HILLCREST DR																			
6063	42+50	RT				8		12				0.9				1	1		
6065	43+00	RT				9		11				1.0				1	1		
6062	43+00	LT				13		16				1.5				1	1		
6067	43+80	RT				11		13				1.3				1	1		
6080	44+00	LT				13		17				1.5				1	1		
6075	44+90	RT				13		19				1.5				1	1		
6085	45+40	RT				16		23				1.8				1	1		
6134	46+60	RT				24		34				2.8				1	1		
WOODY LN																			
HEATHER LN																			
6229	55+05	RT				7		11				0.8				1	1		
6245	55+50	RT				14		16				1.6				1	1		
6271	56+80	RT				14		16				1.6				1	1		
END PROJECT 57+75																			
TOTALS			7239	106	1606	331	146	447	7239	17749	887	38.1	2041.1	7239	106	30	30		

NO	DATE	BY	CKD	APPR	REVISION	SDATES	STIMES
NAME: SDGNS							

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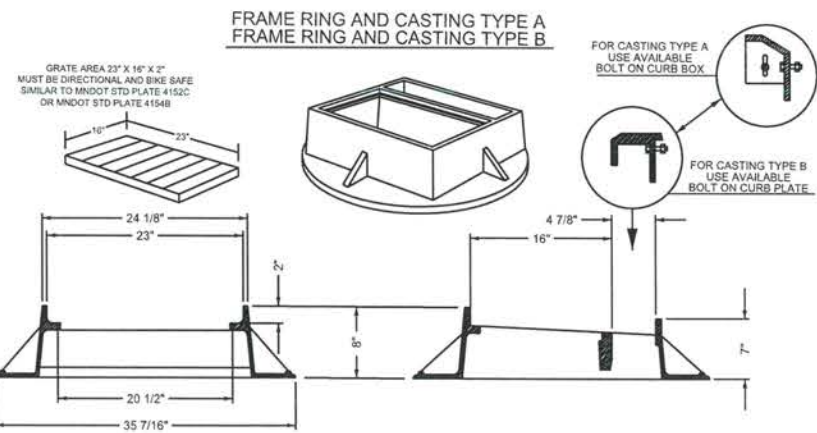
COUNTY PROJECT 15-22-35

TABULATIONS

Sheet 3 of 14 Sheets

DRAINAGE & EROSION TABULATIONS

STRUCTURE NUMBER	STATION	LOC.	MH/CB	CURB BOX	EXISTING STR.TYP	EXISTING CASTING	EXISTING RING HT	REMOVE EXISTING CASTING	REMOVE DRAINAGE STRUCTURE	SAWCUT BITUMINOUS FULL DEPTH (CB REPAIR)	AGGREGATE BASE CLASS 5	TYPE SP 12.5 BIT MIX FOR PATCHING	ADJUST GATE VALVE	CONSTRUCT DRAINAGE STRUCTURE 48-4020	CONSTRUCT DRAINAGE STRUCTURE 60-4020	CASTING "ROUND" INCLUDES GRATE, INSTALL AND RINGS CAST. C	CASTING 16"X23" INCLUDES GRATE, INSTALL AND RINGS CAST A&B	ADJUST FRAME RING CASTING	GROUT CATCH BASIN OR MANHOLE	STORM DRAIN INLET PROTECTION	COMMON TOPSOIL BORROW	EROSION CONTROL BLANKET CAT 0	COMMENTS					
								PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM		PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM	PAY ITEM
								2104.509	2104.509	2104.513	2211.501	2360.505	2504.602	2506.501	2506.501	2506.516	2506.516	2506.522	2506.602	2573.530	2574.525	2575.523		EACH	EACH	EACH	EACH	EACH
D.INLET	16+70																						1ST CB OUTSIDE PROJECT					
D.INLET	17+20																						1ST CB OUTSIDE PROJECT					
	20+00 - 57+75	RT								115.6		88.6																
	20+00 - 57+75	LT								125.3		96.1																
317	24+50	RT	CB	NO	CHANNEL DRAIN	0.70	0.90	1		4							1B		1	1								
318	24+50	LT	CB	YES	BLOCK	0.75	0.00	1	1	4					3.6		1A		1				BUILD AS A 60-4020					
	24+60	RT																					ADJUSTED BY UTILITY OWNER					
	27+00	RT											1															
322	28+00	RT	CB	YES	48-4020	0.90	0.00	1	1	4					3.2		1A		1				BUILD AS A 48-4020					
	28+00	RT											1															
	28+05	RT											1															
327	29+25	RT	CB	YES	H	0.90	1.00	1		4							1A		1	1								
	32+60	RT																					ADJUSTED BY UTILITY OWNER					
	33+85	RT																					ADJUSTED BY UTILITY OWNER					
328	33+90	RT	CB	YES	BLOCK	0.70	1.20	1	1	4					5.4		1A		1				BUILD AS A 60-4020					
328A	33+90	RT	MH	NO	48-4020	0.66	0.00	1								1C		1	1				REPLACE BROKEN CASTING					
329	33+90	LT	CB	NO	BLOCK	0.83	0.00	1		4							1B		1	1			STRUCTURE 2'X2' BLOCK					
	39+50	RT																					ADJUSTED BY UTILITY OWNER					
	41+05	RT																					ADJUSTED BY UTILITY OWNER					
331	46+90	LT	CB	YES	BOX			1		4								1	1	1			OPEN BOX STRUCTURE					
	47+00	RT																					ADJUSTED BY UTILITY OWNER					
	52+80	LT											1										ADJUSTED BY UTILITY OWNER					
	55+45	RT																					ADJUSTED BY UTILITY OWNER					
D.INLET	58+60	LT																					1ST CB OUTSIDE PROJECT					
D.INLET	58+90	RT																					1ST CB OUTSIDE PROJECT					
TOTALS								8	3	28	240.9	184.7	4	3.2	9.0	1	6	1	5	12	485	4409						



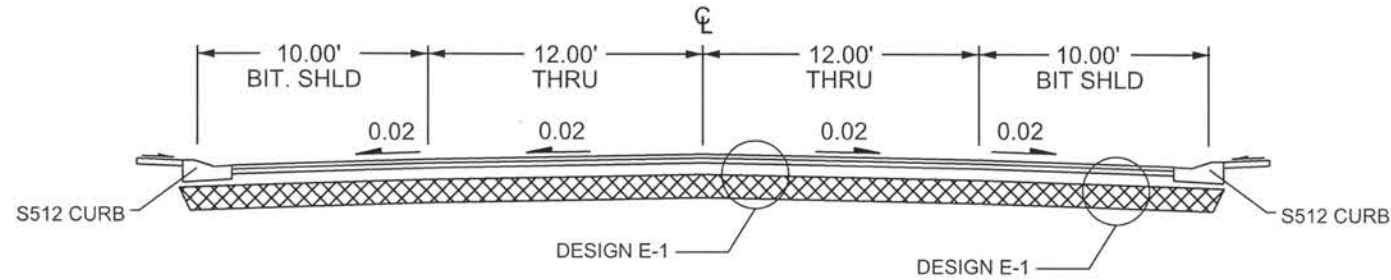
CASTING ASSEMBLIES TYPE	CURB BOX	QUANTITY	DESCRIPTION	TYPE
A	YES	4	18" GRATE WITH CURB BOX	CATCH BASIN
B	NO	2	18" GRATE WITH COVER PLATE	CATCH BASIN
C	NO	1	ROUND MANHOLE CASTING	MANHOLE

ALL CASTING HEIGHTS ARE TO BE VERIFIED IN THE FIELD.
 ALL MANHOLE COVERS SHALL BE STAMPED AS STORM SEWER OR SANITARY SEWER.

FOR TYPE C CASTINGS USE CASTING 801 & GRATE NO 810
 MNDOT STD PLATE 4126F & MNDOT STD PLATE 4149C

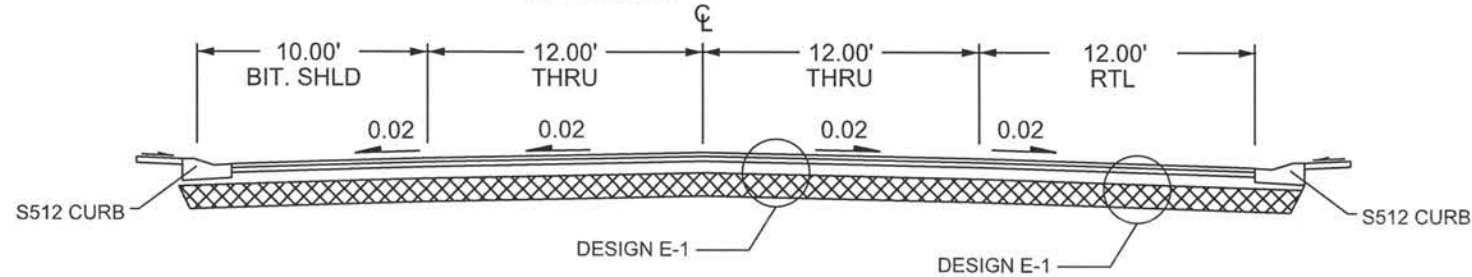
EXISTING C.S.A.H. 35

STANDARD 20+00 - 57+75



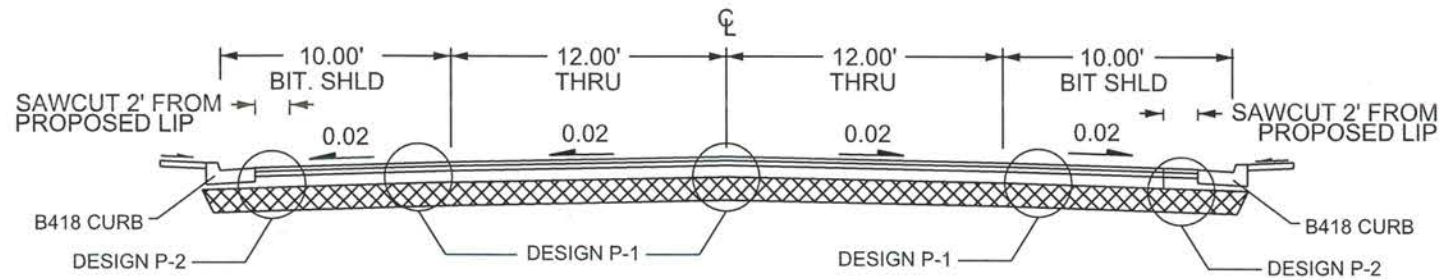
EXISTING C.S.A.H. 35

RTL
GARDENA AVE RTL
HILLCREST DR RTL
WOODY LN RTL
HEATHER LN RTL



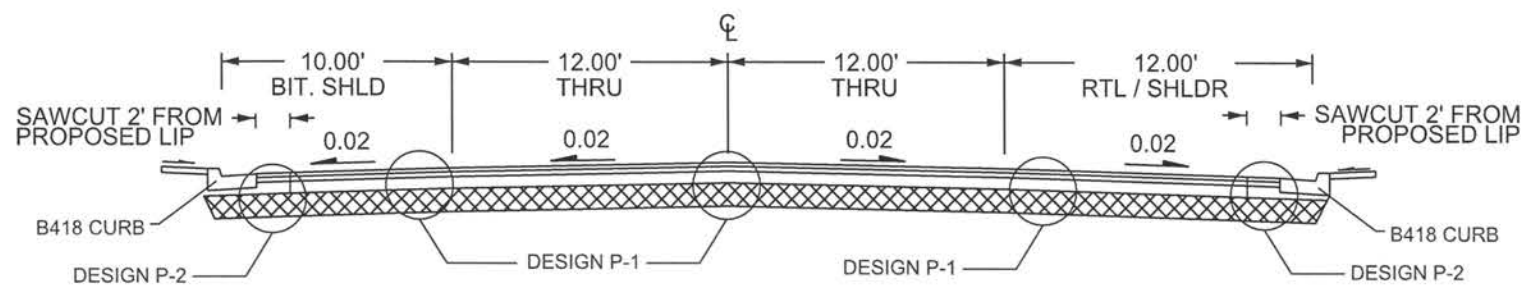
PROPOSED C.S.A.H. 35

STANDARD 20+00 - 57+75

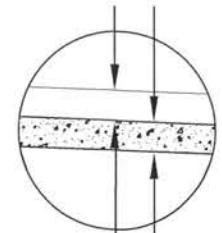


PROPOSED C.S.A.H. 35

RTL / SHLDR
GARDENA AVE STA 23+50 - 28+00 LNB RT
HILLCREST DR STA 36+15 - 40+50 LNB RT
WOODY LN STA 43+50 - HEATHER LN 52+25 LNB RT

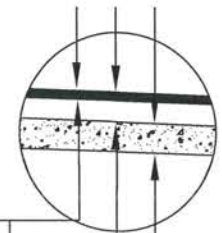


DESIGN E-1



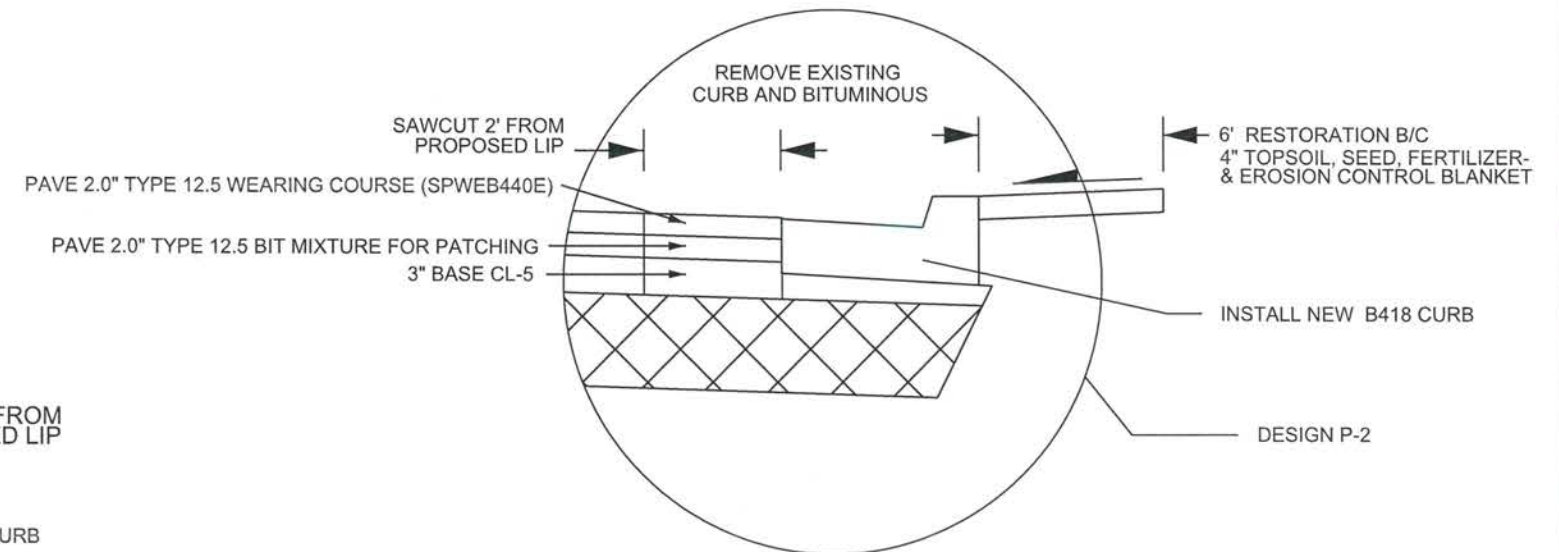
6" EXISTING BITUMINOUS
EXISTING BASE

DESIGN P-1



MILL 2.0" OF INPLACE BITUMINOUS
PAVE 2.0" TYPE 12.5 WEARING COURSE (SPWEB440E)
EXISTING BITUMINOUS
EXISTING BASE

DESIGN P-2



NO	DATE	BY	CKD	APPR	REVISION

NAME: SDGNS

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

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HIGHWAY DEPT.**

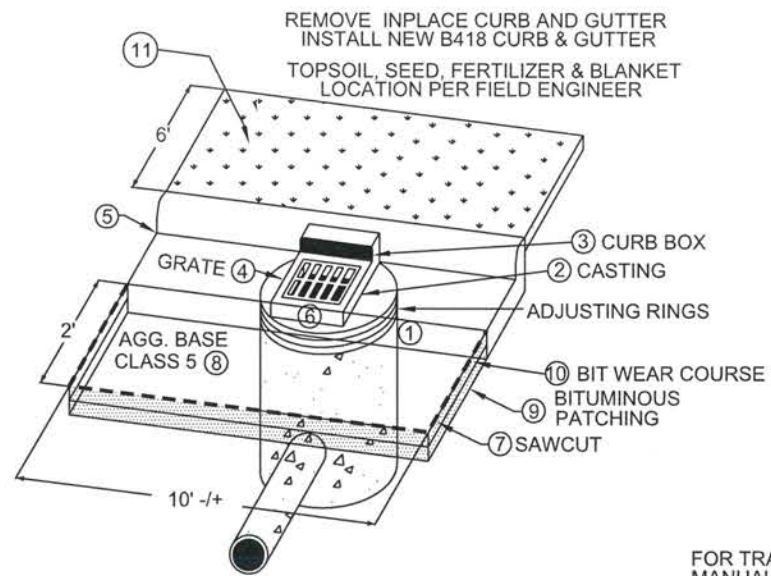
COUNTY PROJECT NO. 15-22-35

TYPICAL SECTIONS

Sheet 5 of 14 Sheets

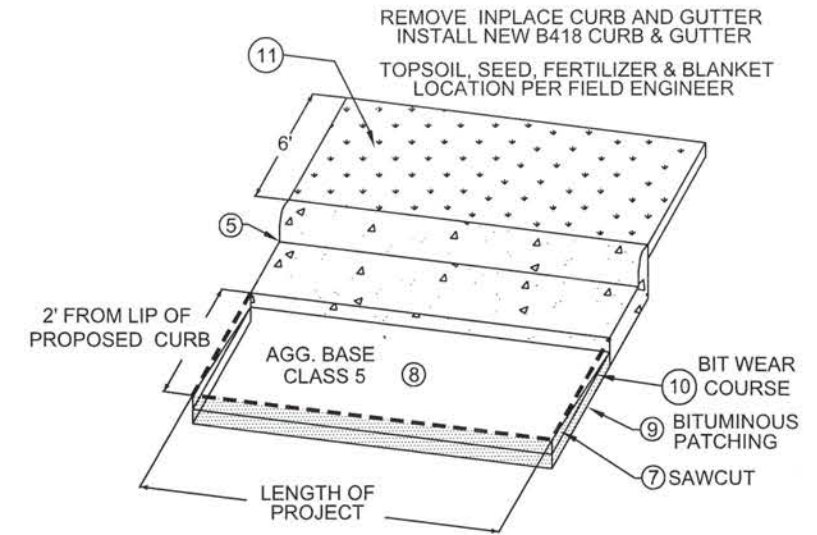
CATCH BASIN REPAIR DETAIL

SEE STRUCTURE TAB FOR LOCATION



NEW CURB DETAIL

SEE PLAN FOR LOCATION



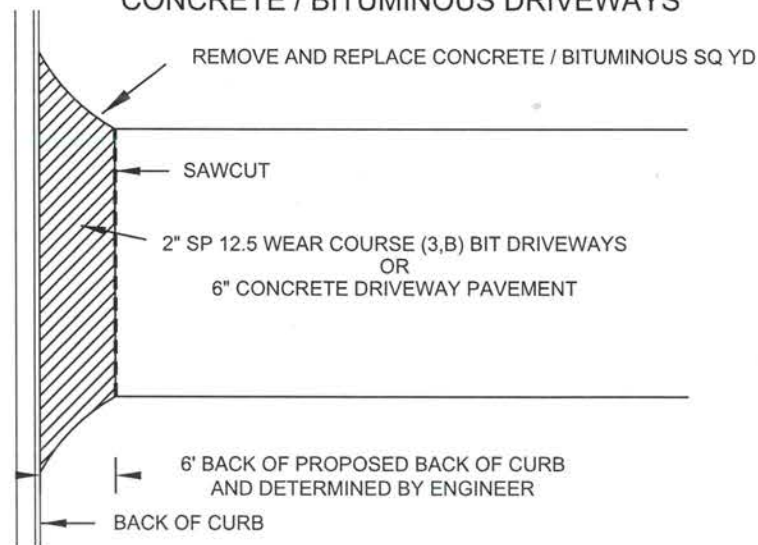
NOTES

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 5 AROUND REPAIRED STRUCTURE. ITEM INCIDENTAL TO ENTIRE STRUCTURE REPAIR
- ⑨ PATCH WITH 1 - 2" LIFT OF BIT PATCHING TO TOP OF MILLED BIT SURFACE, PLACE OVER 3" OF COMPACTED CL-5.
- ⑩ OVERLAY ENTIRE PATCH AREA WITH 1 - 2" LIFT FINAL WEAR COURSE (4,E) DURING FINAL PAVING.
- ⑪ REPLACE DISTURBED AREA BEHIND CURB WITH TOPSOIL, SEED, FERTILIZER AND BLANKET

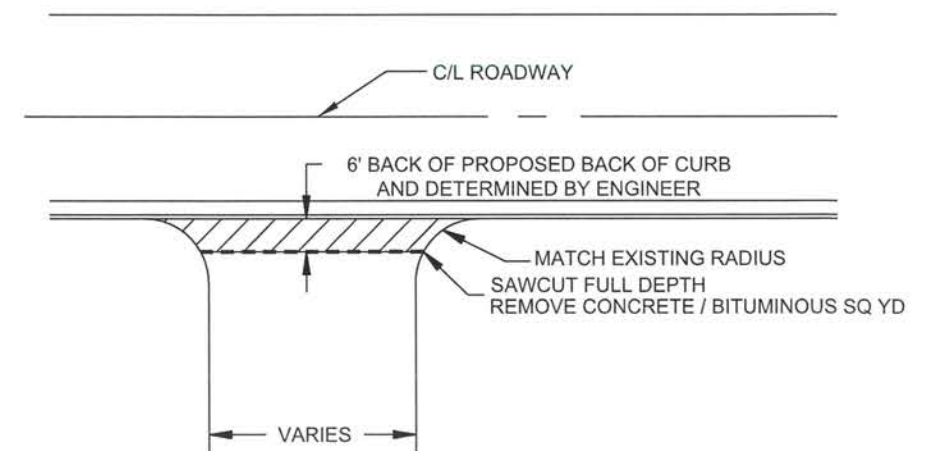
DRIVEWAY DETAIL

CONCRETE / BITUMINOUS DRIVEWAYS



DRIVEWAY DETAIL

CONCRETE / BITUMINOUS DRIVEWAYS



NO	DATE	BY	CKD	APPR	REVISION	SDATES	STIMES

NAME: SDGNS

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: *Matthew J. John*
 DATE: 4/2/15 LICENSE NO. 51639

DRAWN BY JCF DATE 03/24/2015
 DESIGN BY JCF DATE 03/24/2015
 CHECKED BY MJJ DATE 03/27/2015

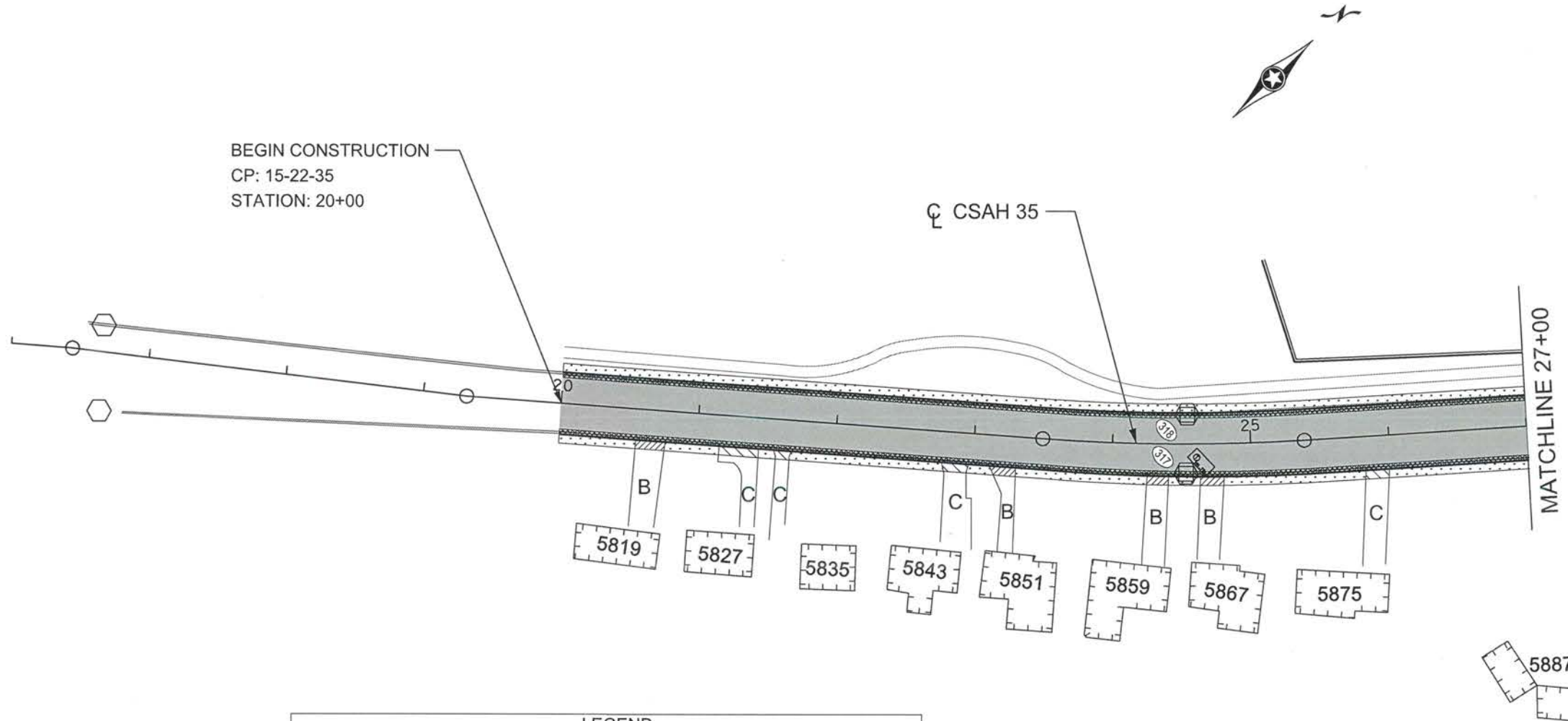


ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 15-22-35

DETAILS
Sheet 6 of 14 Sheets

TH 65



BEGIN CONSTRUCTION
CP: 15-22-35
STATION: 20+00

CSAH 35

MATCHLINE 27+00

LEGEND			
	MAINLINE MILL AREA		CATCH BASIN REPAIR OR REPLACEMENT
	BIT / CURB REMOVAL & REPLACEMENT		STORM MANHOLE REPAIR OR REPLACEMENT
	BIT DRIVEWAY CONSTRUCTION		ADJUST GATE VALVE
	CONC DRIVEWAY CONSTRUCTION		GAS VALVE ADJUSTED BY OTHERS
	4" TOPSOIL, SEED 25-151, FERTILIZER 22-5-10 & BLANKET CAT 0		MH-TELE ADJUSTED BY OTHERS
			B BITUMINOUS DRIVEWAY
			C CONCRETE DRIVEWAY
			STORM INLET PROTECTION

CONTRACTOR RESPONSIBLE FOR CONTACTING GAS / TELE UTILITIES FOR THE PURPOSE OF ADJUSTING GAS VALVES AND TELE MANHOLES ADJUSTED FOR MILLING AND PAVING OPERATIONS.

INFORMATIONAL ROAD CORES WERE TAKEN @
 1. MAINLINE CENTER LINE, STATION 40+00, 6" EX-BIT OVER GRAVEL BASE
 2. LSB SHOULDER AT HEATHER PL 16' LT OF CL, 6" BIT OVER GRAVEL BASE
 3. LNB SHOULDER 50' N. OF GARDENS AVE, 15' RT OF CL, 5 3/4" BIT OVER GRAVEL BASE.
 CONTRACTOR RESPONSIBLE TO VERIFY CORE INFORMATION



NO	DATE	BY	CKD	APPR	REVISION	\$DATES	STIMES

NAME: SDGNS

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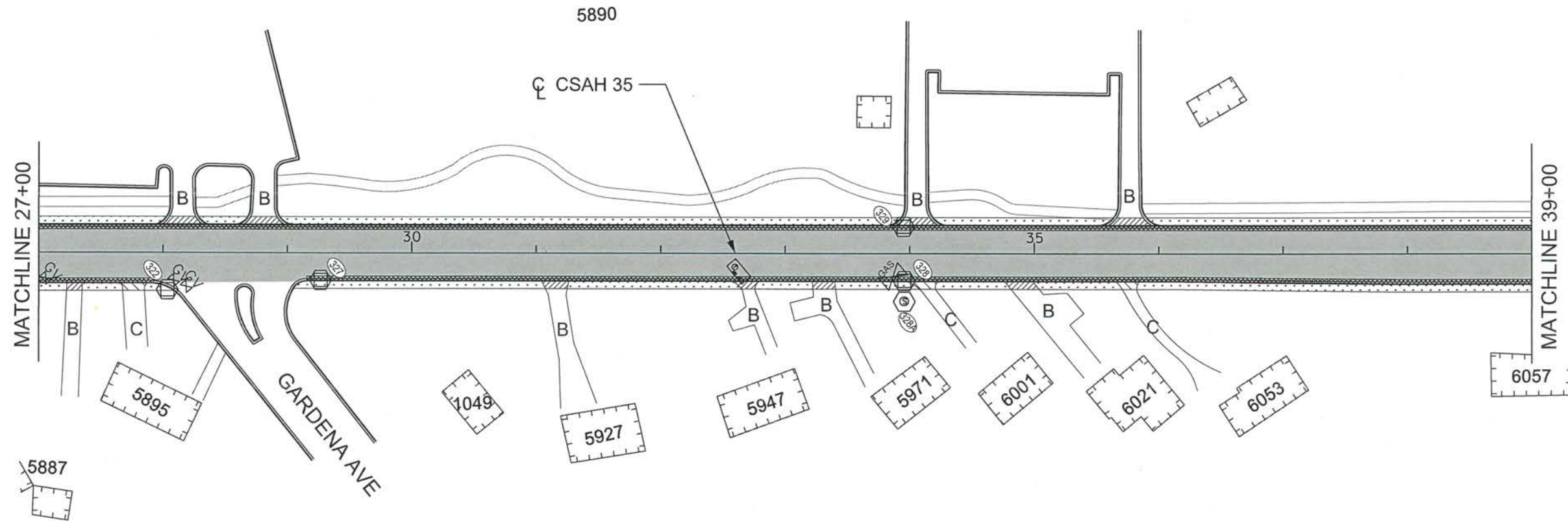
DRAWN BY: JCF DATE: 03/24/2015
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 CHECKED BY: MJJ DATE: 03/27/2015



ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 15-22-35

CONSTRUCTION PLAN
 STA 20+00 TO 27+00
 Sheet 7 of 14 Sheets



LEGEND			
	MAINLINE MILL AREA		CATCH BASIN REPAIR OR REPLACEMENT
	BIT / CURB REMOVAL & REPLACEMENT		STORM MANHOLE REPAIR OR REPLACEMENT
	BIT DRIVEWAY CONSTRUCTION		ADJUST GATE VALVE
	CONC DRIVEWAY CONSTRUCTION		GAS VALVE ADJUSTED BY OTHERS
	4" TOPSOIL, SEED 25-151, FERTILIZER 22-5-10 & BLANKET CAT 0		MH-TELE ADJUSTED BY OTHERS
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			CONCRETE DRIVEWAY
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 3. LNB SHOULDER 50' N. OF GARDENS AVE, 15' RT OF CL, 5 3/4" BIT OVER GRAVEL BASE.
 CONTRACTOR RESPONSIBLE TO VERIFY CORE INFORMATION



NO	DATE	BY	CKD	APPR	REVISION	SDATES	STIMES

NAME: SDGNS

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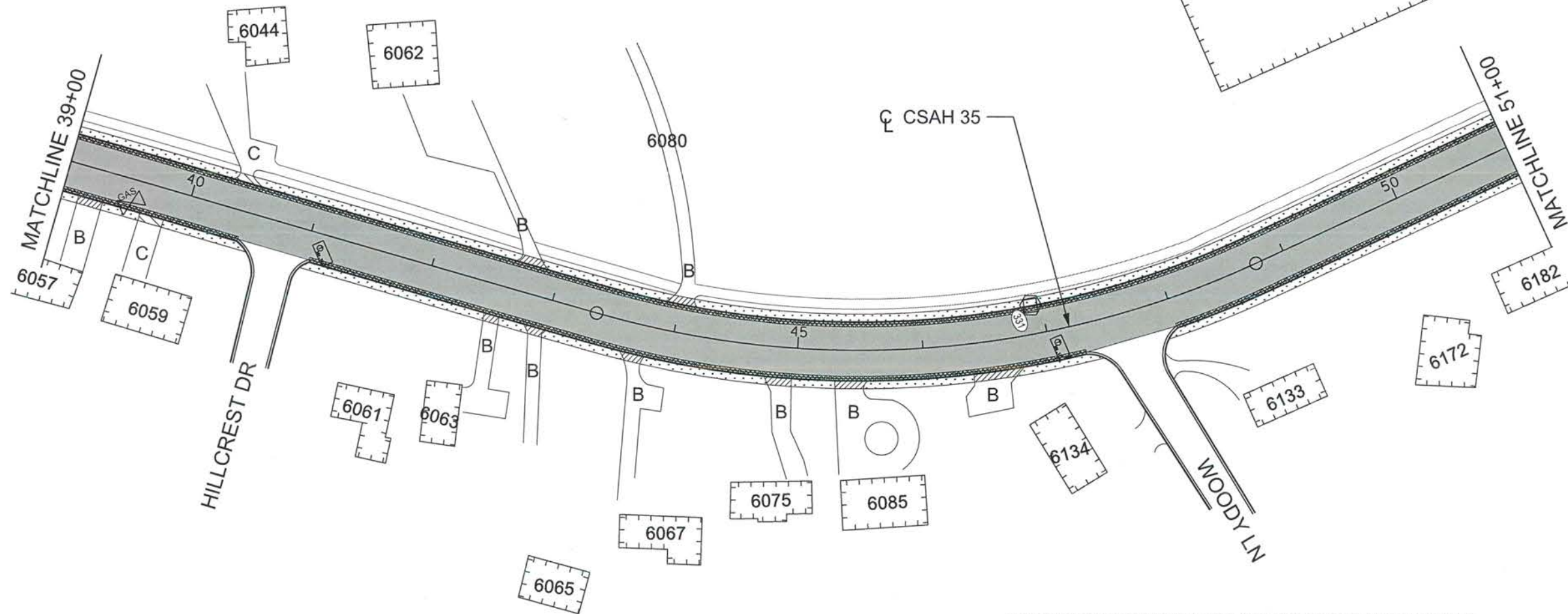
DRAWN BY: JCF DATE: 03/24/2015
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**ANOKA COUNTY
HIGHWAY DEPT.**

COUNTY PROJECT 15-22-35

CONSTRUCTION PLAN
 STA 27+00 TO 39+00
 Sheet 8 of 14 Sheets

LEGEND			
	MAINLINE MILL AREA		CATCH BASIN REPAIR OR REPLACEMENT
	BIT / CURB REMOVAL & REPLACEMENT		STORM MANHOLE REPAIR OR REPLACEMENT
	BIT DRIVEWAY CONSTRUCTION		ADJUST GATE VALVE
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	4" TOPSOIL, SEED 25-151, FERTILIZER 22-5-10 & BLANKET CAT 0		MH-TELE ADJUSTED BY OTHERS
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			CONCRETE DRIVEWAY
			STORM INLET PROTECTION



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NO	DATE	BY	CKD	APPR	REVISION	SDATES	STIMES

NAME: SDGNS

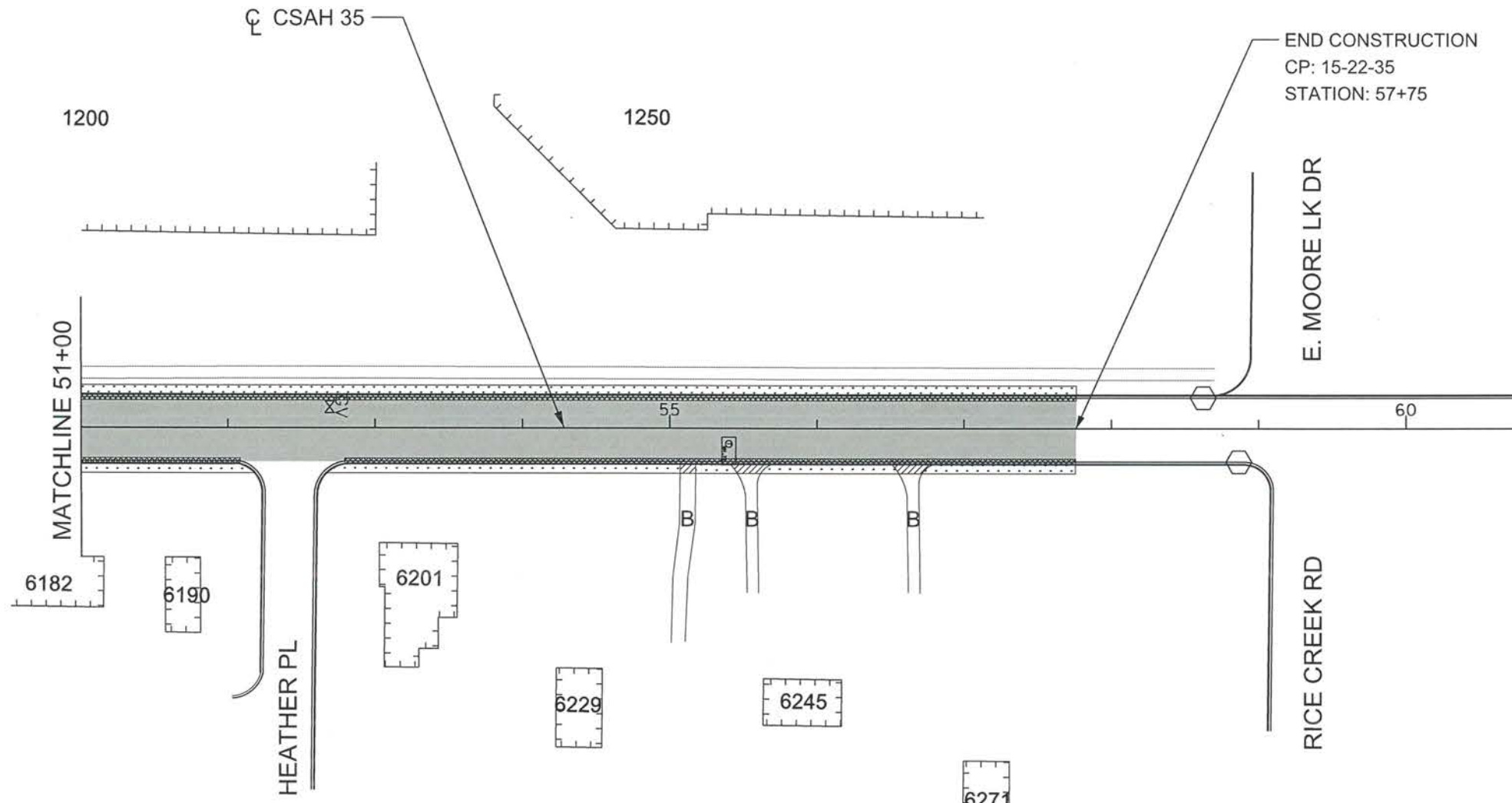
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ANOKA COUNTY
HIGHWAY DEPT.

COUNTY PROJECT 15-22-35

CONSTRUCTION PLAN
 STA 39+00 TO 51+00
 Sheet 9 of 14 Sheets



END CONSTRUCTION
 CP: 15-22-35
 STATION: 57+75

LEGEND			
	MAINLINE MILL AREA		CATCH BASIN REPAIR OR REPLACEMENT
	BIT / CURB REMOVAL & REPLACEMENT		STORM MANHOLE REPAIR OR REPLACEMENT
	BIT DRIVEWAY CONSTRUCTION		ADJUST GATE VALVE
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	4" TOPSOIL, SEED 25-151, FERTILIZER 22-5-10 & BLANKET CAT 0		MH-TELE ADJUSTED BY OTHERS
			BITUMINOUS DRIVEWAY
			CONCRETE DRIVEWAY
			STORM INLET PROTECTION

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 3. LNB SHOULDER 50' N. OF GARDENS AVE, 15' RT OF CL, 5 3/4" BIT OVER GRAVEL BASE.
 CONTRACTOR RESPONSIBLE TO VERIFY CORE INFORMATION



NO	DATE	BY	CKD	APPR	REVISION	DATES	STMS

NAME: SOGNS

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ANOKA COUNTY HIGHWAY DEPT.

COUNTY PROJECT 15-22-35

CONSTRUCTION PLAN
 STA 51+00 TO 57+75
 Sheet 10 of 14 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 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	7935
4" BROKEN LINE WHITE - EPOXY PAINT	LIN FT	40
4" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	670
4" BROKEN LINE YELLOW - EPOXY PAINT	LIN FT	468
4" DOUBLE SOLID LINE YELLOW - EPOXY PAINT	LIN FT	1690
24" SOLID LINE YELLOW - PREFORMED THERMOPLASTIC	LIN FT	10
24" SOLID LINE WHITE - PREFORMED THERMOPLASTIC	LIN FT	39
3'x6' ZEBRA CROSSWALK - PREFORMED THERMOPLASTIC	SQ FT	126

SYMBOLS & MATERIALS LEGEND

■ CROSSWALK BLOCK WHITE PREFORMED THERMOPLASTIC

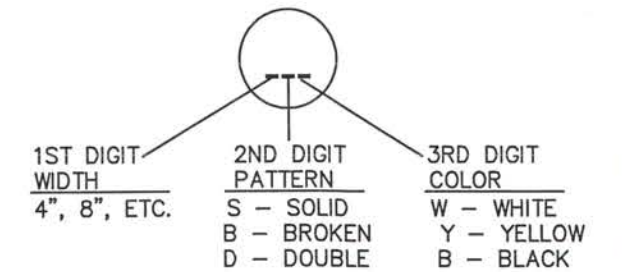
↩ PAVEMENT MESSAGE (LEFT ARROW) PREFORMED THERMOPLASTIC

STRIPING KEY

○ CIRCLE - EPOXY □ SQUARE PREFORMED THERMOPLASTIC

△ TRIANGLE - PAINT

⬠ PENTAGON - REMOVABLE PREFORMED PLASTIC MARKING

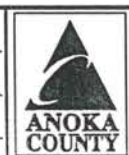


EXAMPLE: (4SW) = 4" SOLID LINE WHITE - EPOXY

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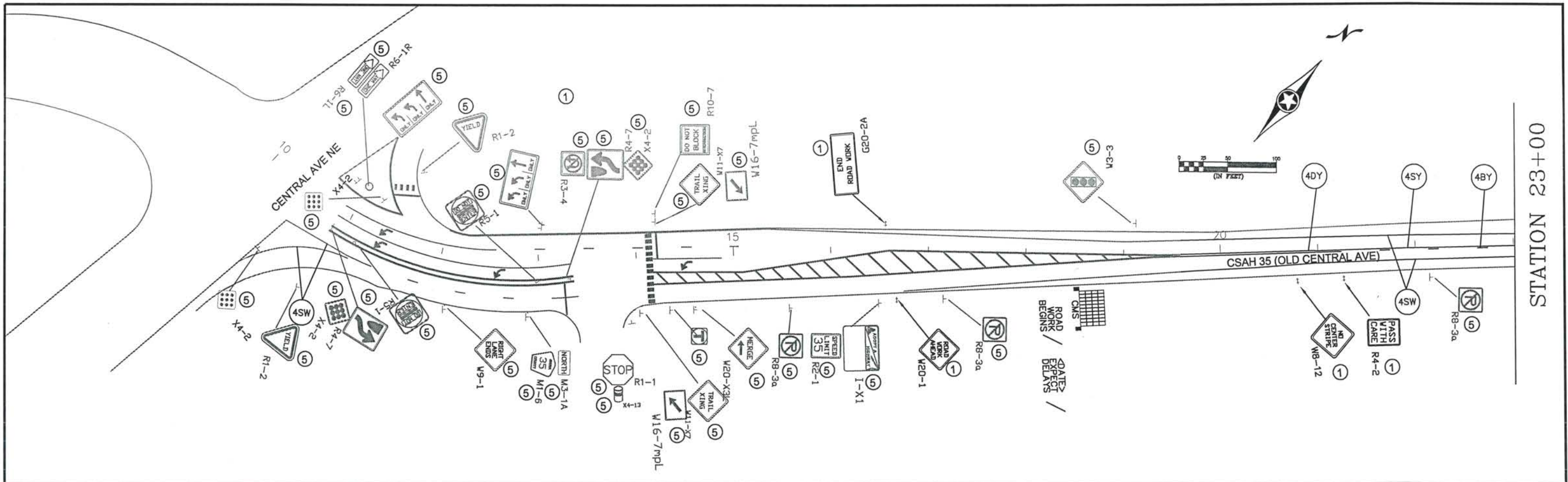
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 DESIGN BY: RLB DATE: 2/14/14
 CHECKED BY: JR DATE: 2/14/14



ANOKA COUNTY
HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 15-22-35

PERMANENT MARKING TABULATION
 Sheet 11 of 14 Sheets



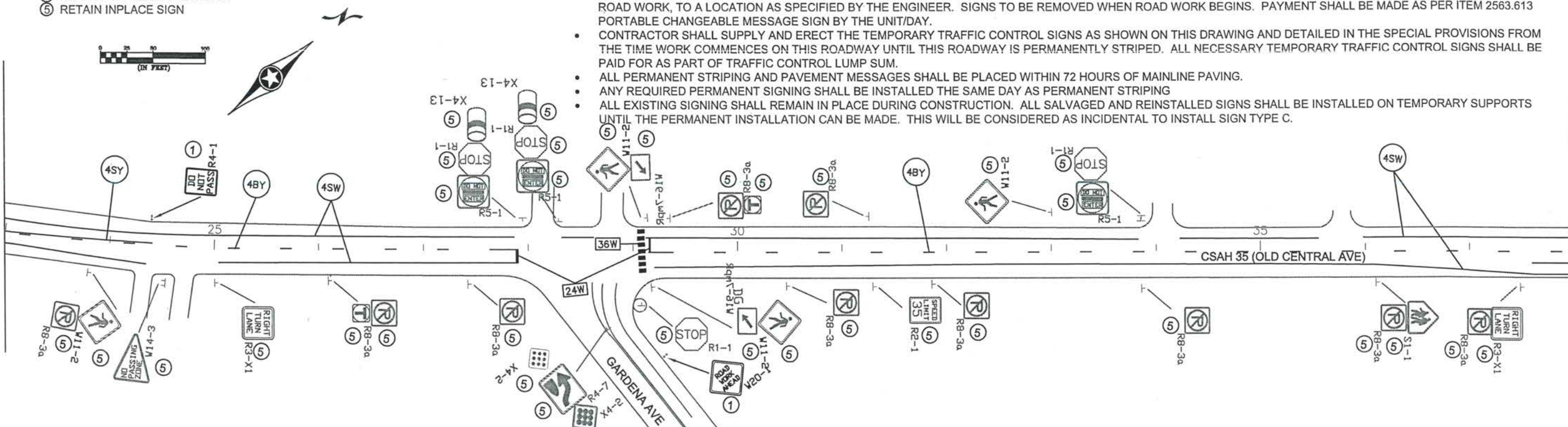
STATION 23+00

- 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.

STATION 23+00



STATION 38+00

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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PRINT NAME: MATTHEW J. JOHN

SIGNATURE: *Matthew J. John*

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

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. _____

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. 15-22-35

TEMPORARY SIGNING, PERMANENT SIGNING AND STRIPING

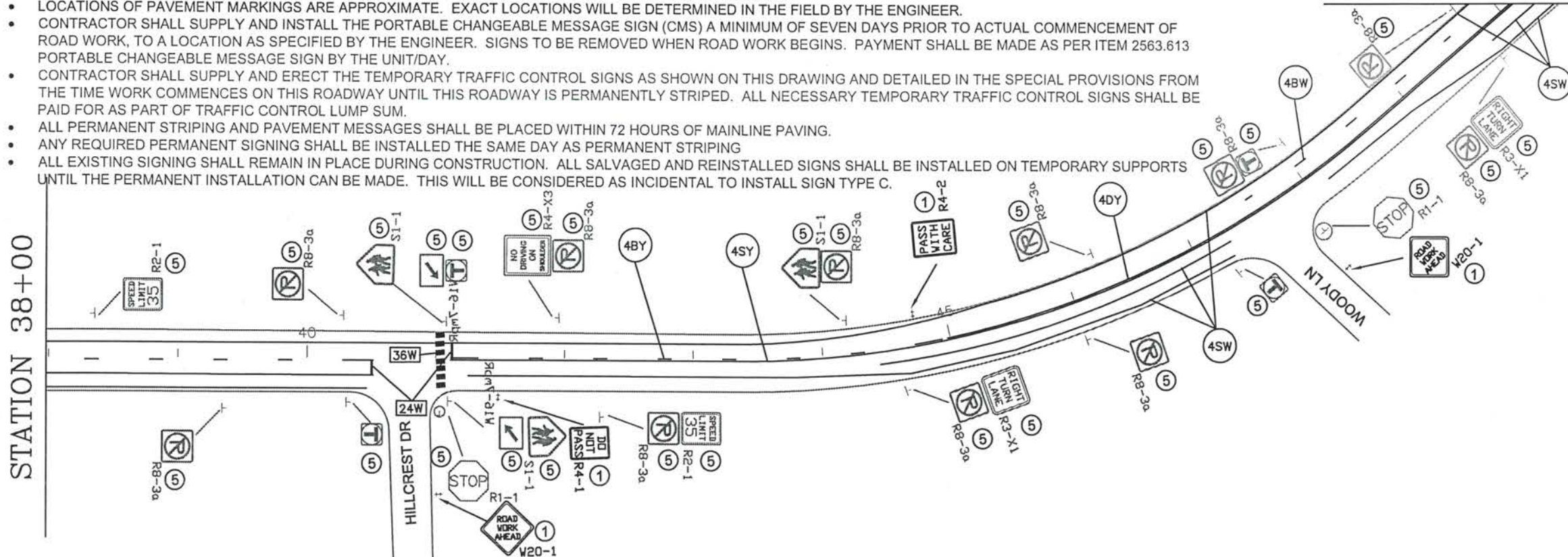
Sheet 12 of 14 Sheets

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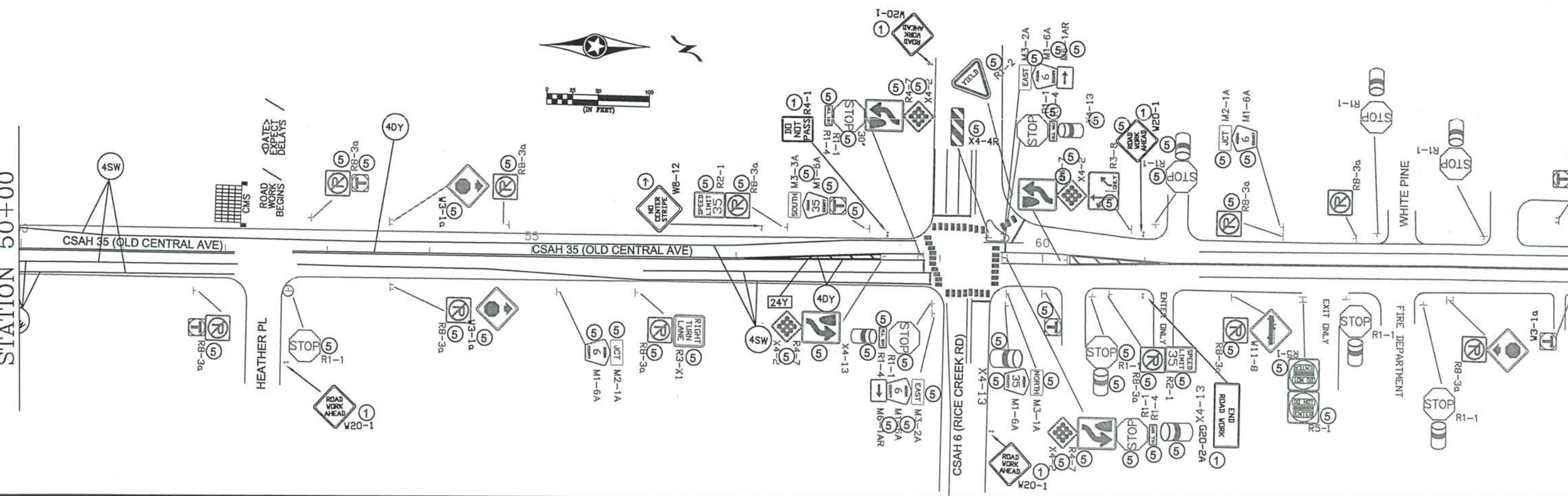
STATION 38+00

STATION 50+00



- 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 50+00



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 DESIGN BY: RLB DATE: 1/7/14
 CHECKED BY: JR DATE: 1/7/14



ANOKA COUNTY
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 COUNTY PROJECT NO. 15-22-35

TEMPORARY SIGNING,
 PERMANENT SIGNING
 AND STRIPING
 Sheet 13 of 14 Sheets

NO	DATE	BY	CKD	APPR	REVISION

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

TEMPORARY TRAFFIC CONTROL SIGNS

M.U.T.C.D. CODE	SIZE	PANEL AREA	INSERT	QUANTITY		MOUNTING HEIGHT TO PAVEMENT EDGE (FT.)
		FT. ²			No. POST	
W8-12	48" x 48"	16.00		2	2	7.0'
R4-1	24" x 30"	5.00		2	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 seven days prior to actual commencement of road work. Signs to be removed when road work begins.				2		

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- 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 seven days prior to actual commencement of road work. Signs to be removed when road work begins.

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: MATTHEW J. JOHN
 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



ANOKA COUNTY
 HIGHWAY DEPT.

STATE PROJECT NO. _____
 STATE AID PROJECT NO. _____
 STATE AID PROJECT NO. _____
 COUNTY PROJECT NO. 15-22-35

TRAFFIC CONTROL
 QUANTITY