

MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR BITUMINOUS SURFACING, CURB & GUTTER, BITUMINOUS RECLAMATION

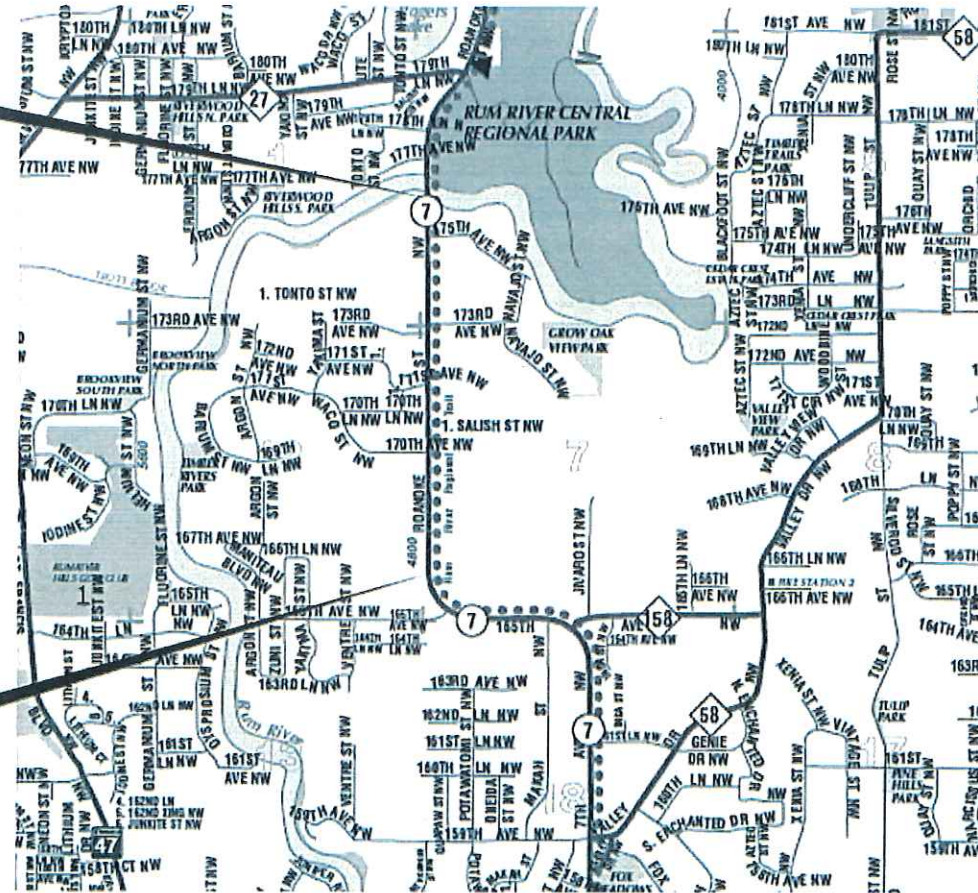
LOCATED ON CSAH 7 BETWEEN 1130' NORTH OF 165TH AVE NW AND ANDOVER CITY LINE (BRIDGE)

CSAH 7

GROSS LENGTH	6,338.00 FEET	1.200 MILES
EXCEPTIONS-LENGTH	0.00 FEET	0.000 MILES
NET LENGTH	6,338.00 FEET	1.200 MILES

END SAP 002-607-024
CSAH 7, STA: 77+18.00

BEGIN SAP 002-607-024
CSAH 7, STA: 13+80.00



PROJECT LOCATION



DESIGN DESIGNATION (CSAH 07)

ESAL 20	1,004,401	FUNCTIONAL CLASSIFICATION	A MINOR ARTERIAL
R VALUE	60	NO. OF TRAFFIC LANES	2
ADT (2016)	8502	DESIGN SPEED	55 MPH
PROJ. ADT (2036)	8502	STOPPING SIGHT DISTANCE BASED ON:	
PROJ. HCA DT (2036)	502	HEIGHT OF EYE	3.5'
SOIL FACTOR	N/A	HEIGHT OF OBJECT	2.0'
10 TON DESIGN		DESIGN SPEED NOT ACHIEVED AT:	
		STA. _____ TO STA. _____	MPH _____

CITY OF ANDOVER
ANOKA COUNTY
MN/DOT TRANSPORTATION DISTRICT - METRO
SECTIONS 6, 7 & 1, 12
TOWNSHIP 32 NORTHWEST
RANGES 24 & 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 13 SHEETS

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4-5	DETAILS
6-8	CONSTRUCTION PLAN
9-13	SIGNING AND STRIPING PLANS

Approved: *[Signature]* 4/20/18
CITY OF ANDOVER ENGINEER

Approved: *[Signature]* 4/18/18
ANOKA COUNTY ENGINEER

[Signature] DATE 5/2/18
DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

[Signature] DATE 5/2/18
STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING

NO	DATE	BY	CKD	APPR	REVISION	TIME
1	4/27/2018	SPH	DFF	HG	REVISED STATIONING & PROJECT LENGTH	

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: _____ LICENSE NO.: 48732

DRAWN BY: SPH DATE: 1-29-18
DESIGN BY: SPH DATE: 1-29-18
CHECKED BY: HG DATE: 1-29-18

ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-607-024

TITLE SHEET
Sheet 1 of 13 Sheets

dfrey

STATEMENT OF ESTIMATED QUANTITIES				
NOTES	ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED
	2021.501	MOBILIZATION	LUMP SUM	1
	2104.502	REMOVE BITUMINOUS FLUME	EACH	2
	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	428
1	2104.504	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	544
	2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	410
2	2123.510	MOTOR GRADER	HOURL	12
	2130.523	WATER	MGAL	225
3	2211.509	AGGREGATE BASE CLASS 5	TON	231
	2215.504	FULL DEPTH RECLAMATION	SQ YD	32200
4	2215.507	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	60
	2221.509	SHOULDER BASE AGGREGATE CLASS 5	TON	556
5	2232.504	MILL BITUMINOUS SURFACE (2.0")	SQ YD	297
	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	1626
1,6	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,B)	TON	62
7	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4,C)	TON	94
	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (4,C)	TON	7743
	2511.504	GEOTEXTILE FILTER TYPE 4	SQ YD	16
	2511.507	RANDOM RIPRAP CLASS II	CU YD	11
	2531.503	CONCRETE CURB AND GUTTER DESIGN B418	LIN FT	1428
	2531.504	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	9
12	2540.602	MAIL BOX SUPPORT	EACH	14
8	2563.601	TRAFFIC CONTROL	LUMP SUM	1
9	2563.613	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY	20
	2564.518	SIGN PANELS TYPE C	SQ FT	12.5
13	2574.507	COMMON TOPSOIL BORROW (LV)	CU YD	30
14	2575.504	EROSION CONTROL BLANKETS CATEGORY 0	SQ YD	150
10	2581.503	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	LIN FT	252
11	2582.503	4" SOLID LINE MULTI-COMPONENT	LIN FT	18395
11	2582.503	4" BROKEN LINE MULTI-COMPONENT	LIN FT	1390
11	2582.503	4" DOUBLE SOLID LINE MULTI-COMPONENT	LIN FT	134

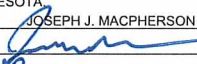
CONSTRUCTION NOTES	
1	CONTRACTOR IS RESPONSIBLE FOR CONTACTING PROPERTY OWNER 48 HOURS BEFORE STARTING OPERATION.
2	ITEM USED TO MOVE EXCESS RECLAIM MATERIAL AT THE RECLAIM AREA LIMITS TO CREATE A SMOOTH TRANSITION BETWEEN THE PROPOSED AND EXISTING PAVEMENT.
3	GRAVEL BASE FOR CONCRETE / BITUMINOUS DRIVEWAYS, AND BITUMINOUS STREET APPROACHES ALSO 7 TONS FOR EACH GRAVEL DRIVEWAY
4	MATERIAL SHALL BE HAULED AND USED FOR PROFILE CORRECTION AREAS. ITEM INCLUDES PLACEMENT, SHAPING, COMPACTION, AND MAINTENANCE OF MATERIAL. EXCESS MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
5	MILLING FOR TRANSVERSE PAVING JOINTS.
6	ITEM FOR BITUMINOUS DRIVEWAYS. DRIVEWAYS SHALL BE PAVED AFTER MAINLINE PAVING AND BEFORE FINAL STRIPING.
7	ITEM FOR STREET APPROACHES. STREET APPROACHES SHALL BE PAVED AFTER MAINLINE, AND BEFORE FINAL STRIPING.
8	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, AND NO CENTER STRIPE SIGNS SHALL BE INPLACE WHENEVER PAVEMENT MARKINGS ARE NOT PRESENT.
9	2 MESSAGE BOARDS, ONE ON EACH END OF PROJECT, WILL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
10	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.
11	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING.
12	MAILBOXES SHALL BE INSTALLED AT THE EXISTING MAILBOX LOCATION OR AS DIRECTED BY THE LOCAL POSTAL AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE LOCAL POSTAL AUTHORITY. MAILBOX REMOVAL AND ALL MATERIALS NECESSARY FOR INSTALLATION ARE INCIDENTAL TO THIS ITEM.
13	ITEM USED AT ENGINEER'S DISCRETION FOR RESTORATION OF DISTURBED AREAS ALONG DRIVEWAYS, STREET APPROACHES AND BEHIND CURB
14	TYPE 1 FERTILIZER AND TYPE 25-121 SEED ARE INCIDENTAL TO THIS ITEM. SEE "BASIS OF PLANNED QUANTITIES" FOR APPLICATION RATES.

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 (CV)
2360	ALL BITUMINOUS PAVEMENT	115 LBS / SQ YD / IN THICKNESS
2574	FERTILIZER TYPE 1	350 LBS / ACRE
2575	SEED MIXTURE TYPE 25-121	61 LBS / ACRE
2581	REMOVABLE PREFORM PAVEMENT MARKING TAPE	2' AT 50' INTERVALS

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

MNDOT STANDARD PLATES	
PLATE NUMBER	DESCRIPTION
7100H	CONCRETE CURB AND GUTTER (DESIGN B & V)
8000J	CHANNELIZERS (3 SHEETS)
9350A	MAILBOX SUPPORT (SWING-AWAY TYPE)

NO	DATE	BY	CKD	APPR	REVISION	
					04/26/2018	1:59:00 PM
NAME: P:\18-01-00\CSAH_07_(No165th-AndoverCL)\Base\PROPOSED\PROPOSED PLAN2D.dgn						

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 PRINT NAME: JOSEPH J. MACPHERSON
 SIGNATURE: 
 DATE: 4.27.18 LICENSE NO. 46732

DRAWN BY: SPH DATE: 1-29-18
 DESIGN BY: SPH DATE: 1-29-18
 CHECKED BY: HG DATE: 1-29-18



ANOKA COUNTY
 HIGHWAY DEPT.

STATE AID PROJECT 002-607-024

STATEMENT OF ESTIMATED QUANTITIES

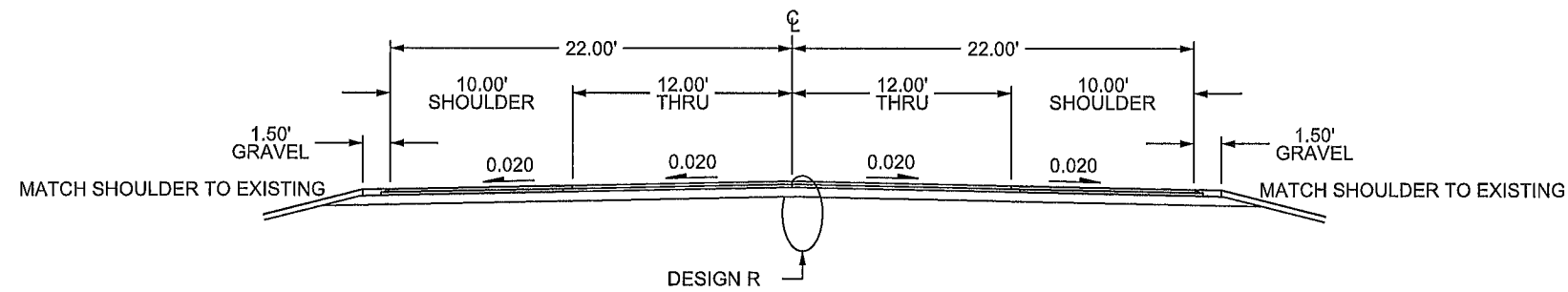
Sheet 2 of 13 Sheets

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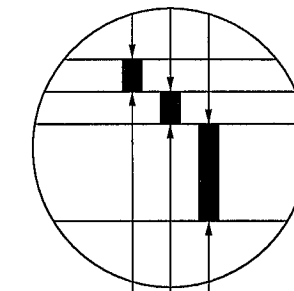
CSAH 7- Roanoke St. NW

PROPOSED SECTION

13+80 - 27+20
53+30 - 63+70
68+50 - 76+90



DESIGN R RECLAIM SECTION

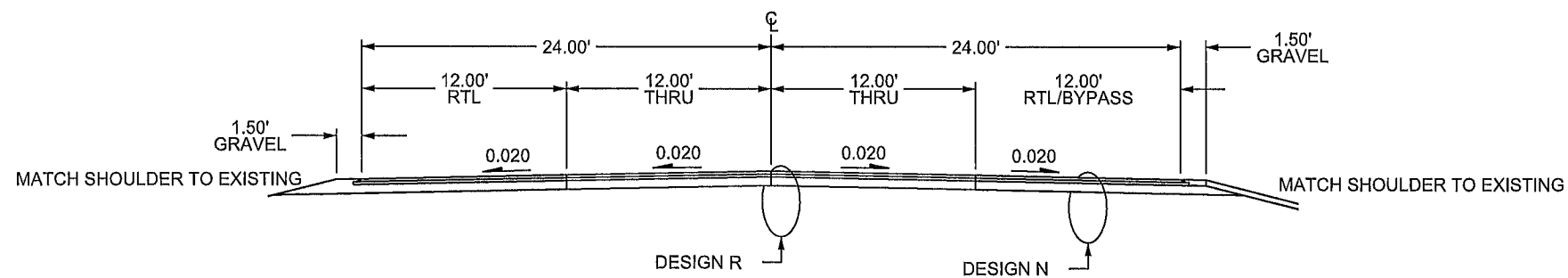


2.0" BITUMINOUS WEAR(SPWEB440C)
2.0" BITUMINOUS WEAR(SPWEB440C)
RECLAIMED BITUMINOUS

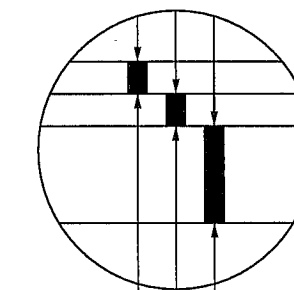
CSAH 7- Roanoke St. NW

RIGHT TURN / BYPASS LANE

27+20 - 33+40
30+90 - 35+70
41+05 - 47+25
42+90 - 47+70
48+50 - 53+30
63+70 - 68+50



DESIGN N RTL/BYPASS



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

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PRINT NAME: JOSEPH J. MACPHERSON
SIGNATURE: *[Signature]*
DATE: 1-18-19 LICENSE NO. 46732

DRAWN BY SPH DATE 1-29-18
DESIGN BY SPH DATE 1-29-18
CHECKED BY HG DATE 1-29-18



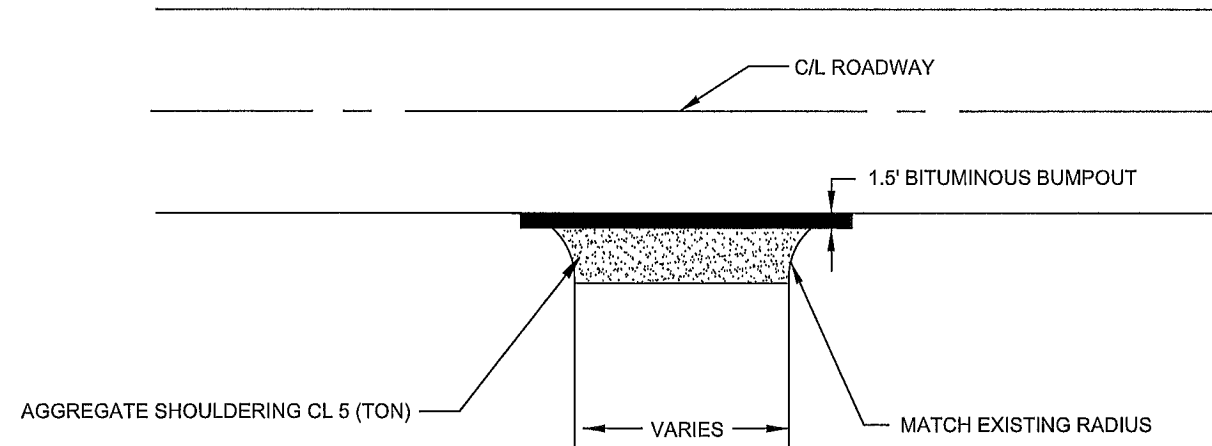
ANOKA COUNTY
HIGHWAY DEPT.

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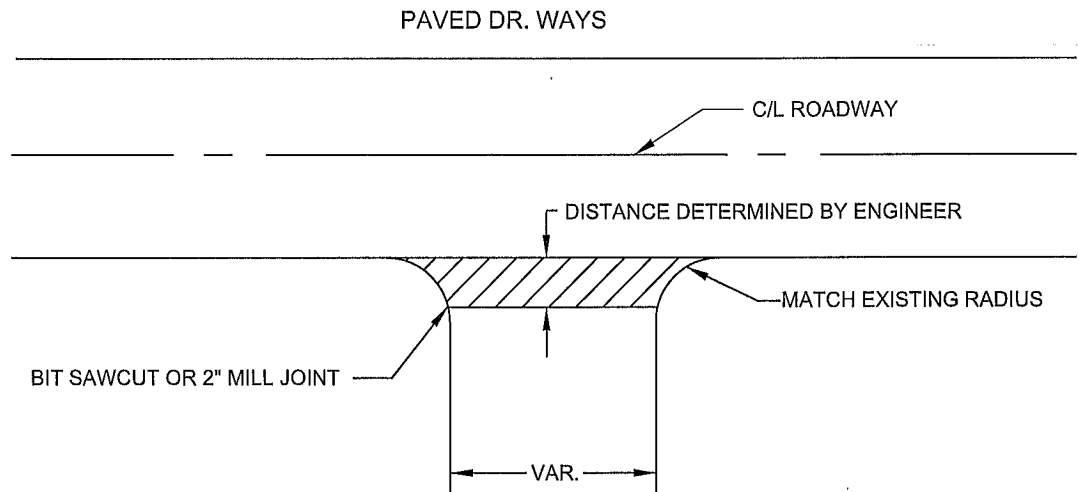
TYPICAL SECTIONS
Sheet 3 of 13 Sheets

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DRIVEWAY DETAIL GRAVEL / FIELD ENTRANCE

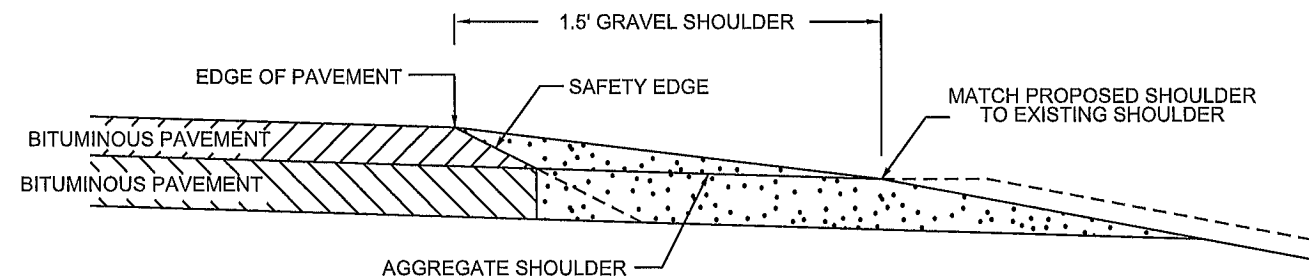


DRIVEWAY DETAIL BITUMINOUS DRIVEWAY



DRIVEWAYS BUMPED OUT AND PAVED WITH MAINLINE PAID AS MAINLINE.
DRIVEWAYS PAVED IN DIFFERENT OPERATION FROM MAIN LINE PAVING PAID AS DRIVEWAY OR STREET APPROACH.

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	10:35:01 AM	

NAME: P:\18-01-00\CSAH_07_(No165th-AndoverCL)\Base\PROPOSED\PROPOSED PLAN2D.dgn

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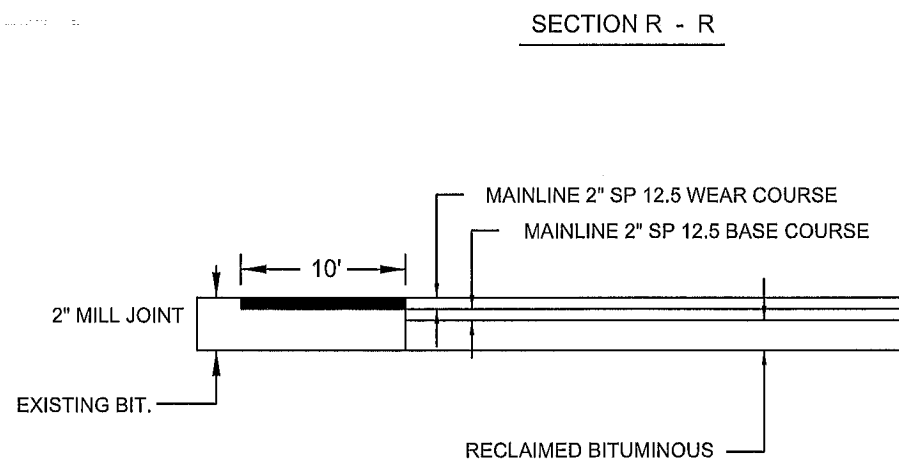
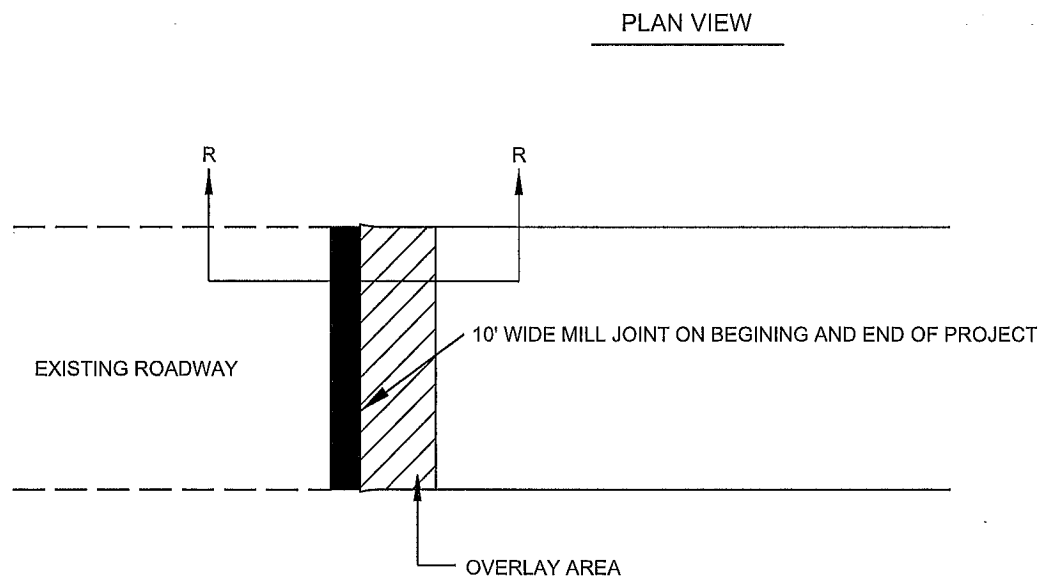
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**ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-607-024

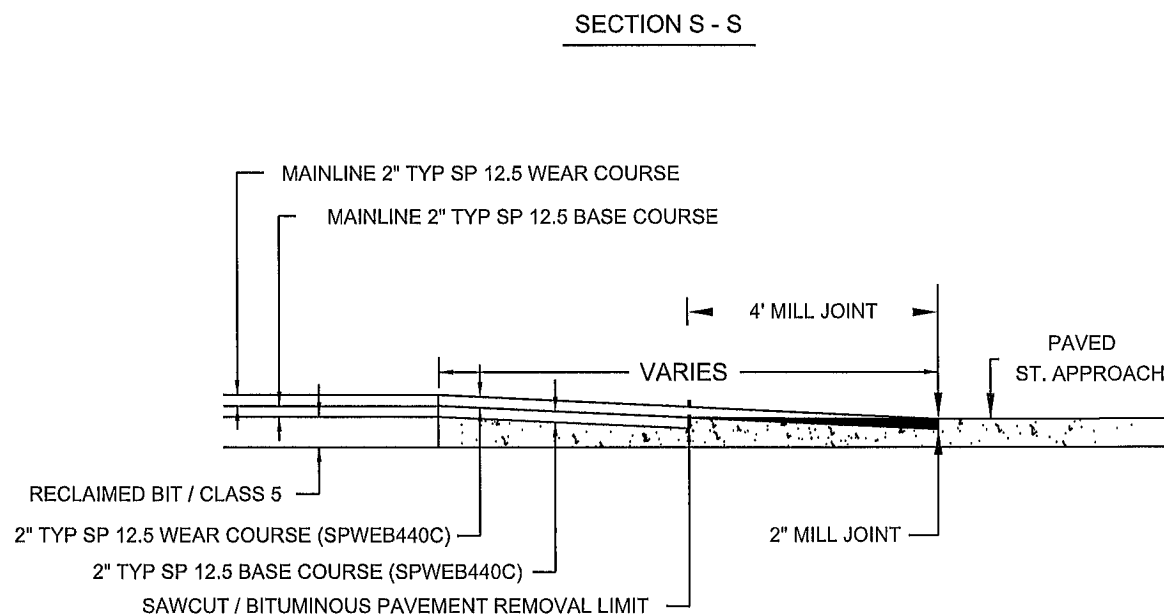
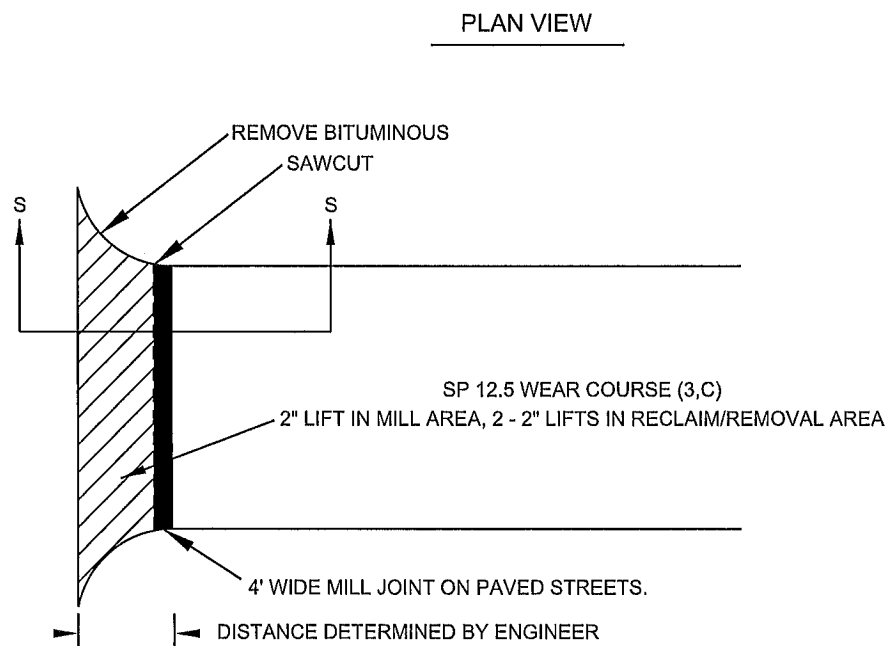
DETAILS
Sheet 4 of 13 Sheets

MAINLINE JOINT DETAIL (RECLAIM)



STREET APPROACH DETAIL (RECLAIM)


BITUMINOUS STREET



NO	DATE	BY	CKD	APPR	REVISION	DATE	TIME

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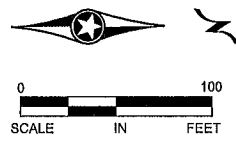
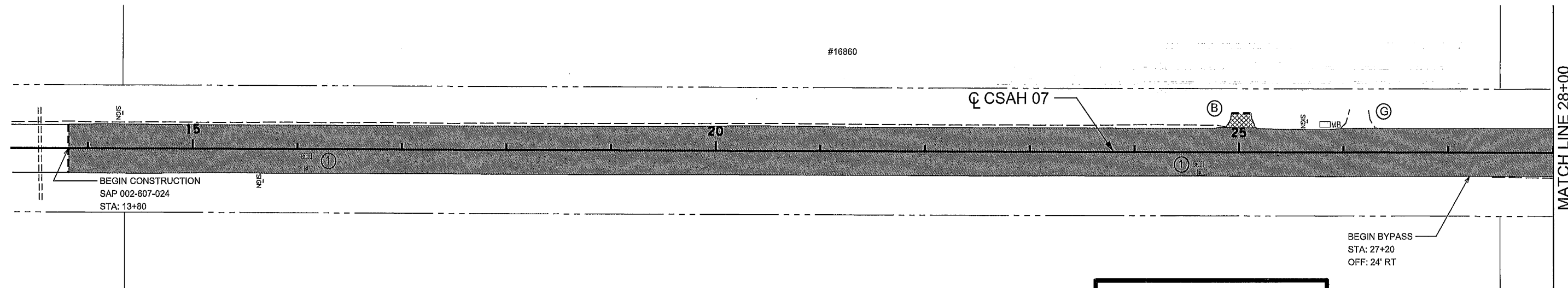
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**ANOKA COUNTY
HIGHWAY DEPT.**

STATE AID PROJECT 002-607-024

DETAILS
 Sheet 5 of 13 Sheets

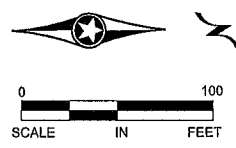
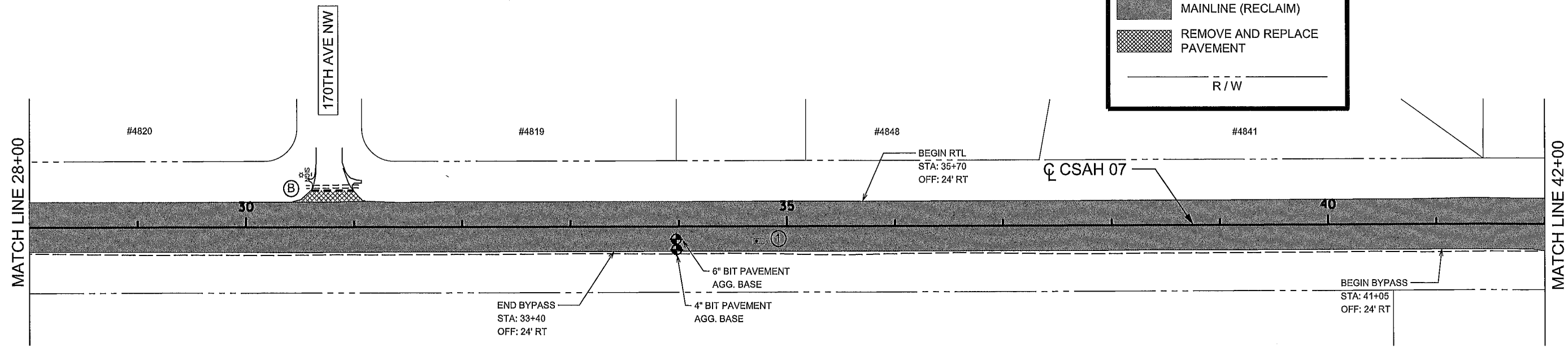
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① UTILITY MANHOLES ADJUSTED BY OTHERS.

LEGEND

- Ⓟ BITUMINOUS
- Ⓞ GRAVEL
- ☐ TELEPHONE MANHOLE
- ☆ LIGHT POLE
- ⊕ CORE LOCATION
- - - SAWCUT
- ===== CROSS CULVERT
- █ MAINLINE (RECLAIM)
- ▨ REMOVE AND REPLACE PAVEMENT
- R/W



① UTILITY MANHOLES ADJUSTED BY OTHERS.

NO	DATE	BY	CHKD	APPR	REVISION	TIME

NAME: P:\18-01-00\CSAH_07_(No165th-AndoverCL)\Base\PROPOSED\PROPOSED PLAN2D.dgn

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PRINT NAME: JOSEPH J. MACPHERSON

SIGNATURE: *Joseph J. MacPherson*

DATE: 1-29-18 LICENSE NO. 48732

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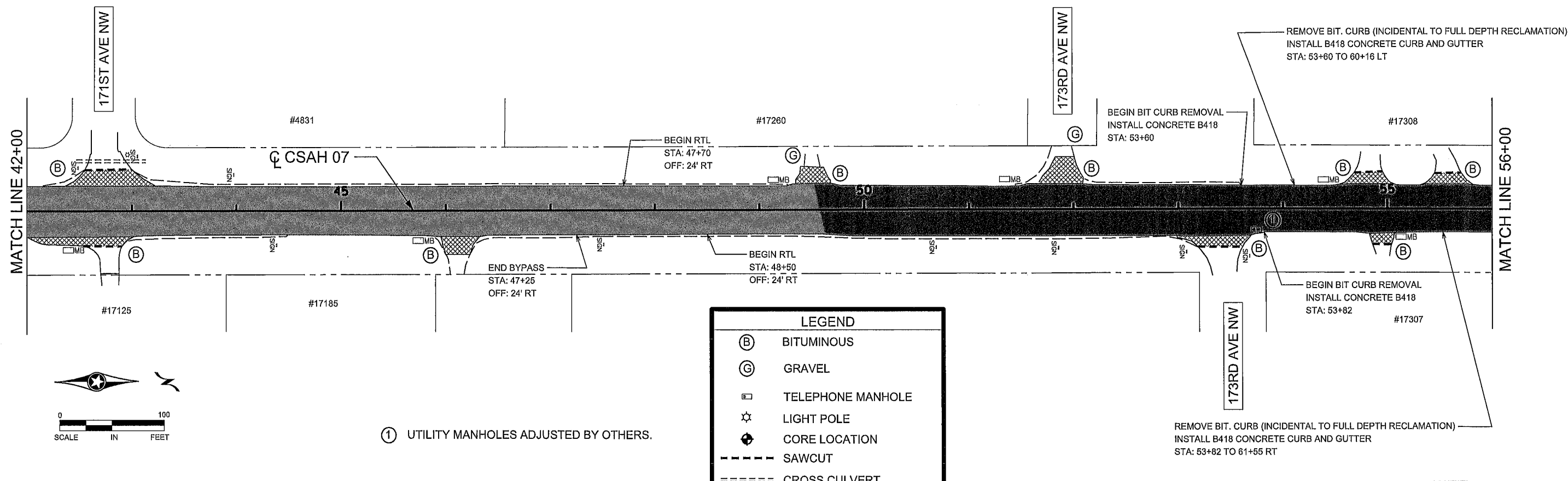
CHECKED BY: HG DATE: 1-29-18

ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-607-024

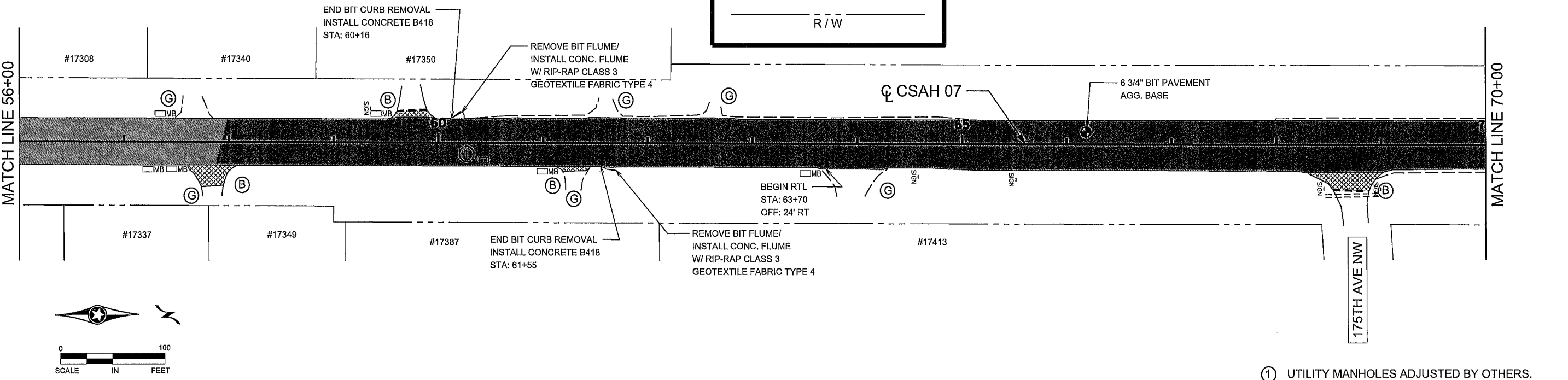
CONSTRUCTION PLAN
STA 13+80 TO 42+00
Sheet 6 of 13 Sheets

sp/acs



① UTILITY MANHOLES ADJUSTED BY OTHERS.

REMOVE BIT. CURB (INCIDENTAL TO FULL DEPTH RECLAMATION) INSTALL B418 CONCRETE CURB AND GUTTER STA: 53+82 TO 61+55 RT



① UTILITY MANHOLES ADJUSTED BY OTHERS.

NO	DATE	BY	CKD	APPR	REVISION	TIME
NAME: P:\18-01-00\CSAH_07 (No165th-AndoverCL)\Base\PROPOSED\PROPOSED PLAN2.dgn						

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ANOKA COUNTY HIGHWAY DEPT.

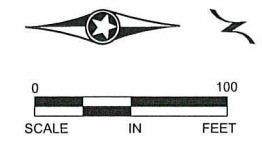
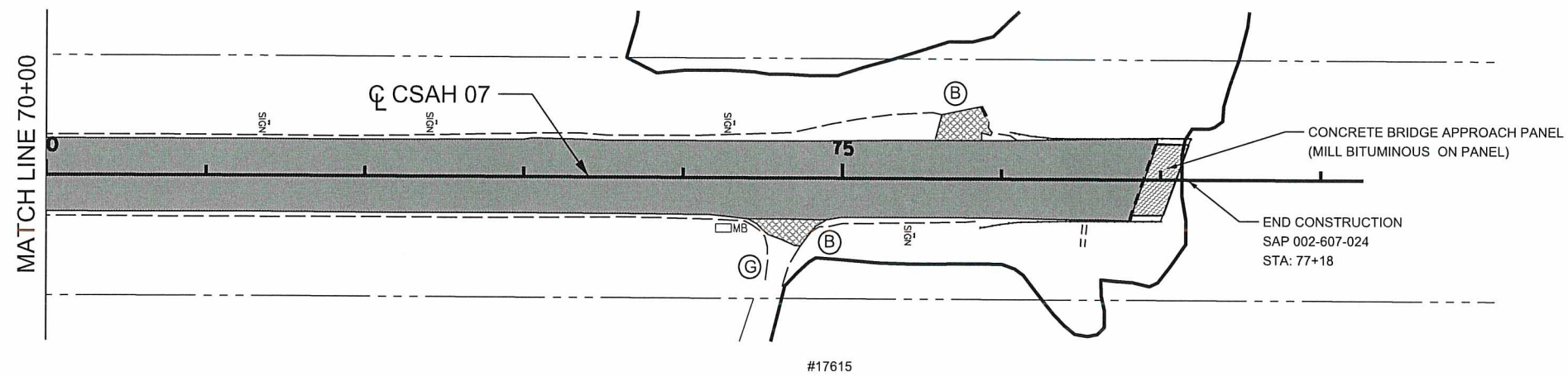
STATE AID PROJECT 002-607-024

CONSTRUCTION PLAN

STA 42+00 TO 70+00

Sheet 7 of 13 Sheets

dfrey



LEGEND	
(B)	BITUMINOUS
(G)	GRAVEL
☐	TELEPHONE MANHOLE
☆	LIGHT POLE
⊕	CORE LOCATION
----	SAWCUT
=====	CROSS CULVERT
▒	MAINLINE (RECLAIM)
▨	REMOVE AND REPLACE PAVEMENT
---	R / W

NO	DATE	BY	CKD	APPR	REVISION	04/27/2018	2:18:46 PM

NAME: P:\18-01-00\CSAH_07_(No165th-AndoverCL)\BaselPROPOSEDI\PROPOSED PLAN2D.dgn

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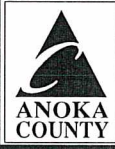
SIGNATURE: *[Signature]*

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ANOKA COUNTY
HIGHWAY DEPT.

STATE AID PROJECT 002-607-024

CONSTRUCTION PLAN
STA 70+00 TO 76+90
Sheet 8 of 13 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.

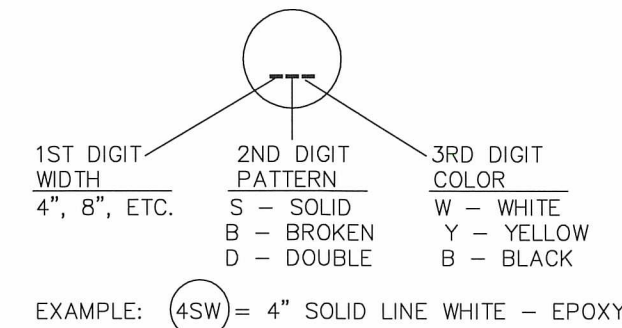
PERMANENT MARKING QUANTITIES		
ITEM	UNIT	TOTAL QUANTITY
4" SOLID LINE WHITE - EPOXY PAINT	LIN FT	13500
4" BROKEN LINE WHITE - EPOXY PAINT	LIN FT	80
4" SOLID LINE YELLOW - EPOXY PAINT	LIN FT	4895
4" BROKEN LINE YELLOW - EPOXY PAINT	LIN FT	1310
4" DOUBLE SOLID LINE YELLOW - EPOXY PAINT	LIN FT	134

SYMBOLS & MATERIALS LEGEND

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

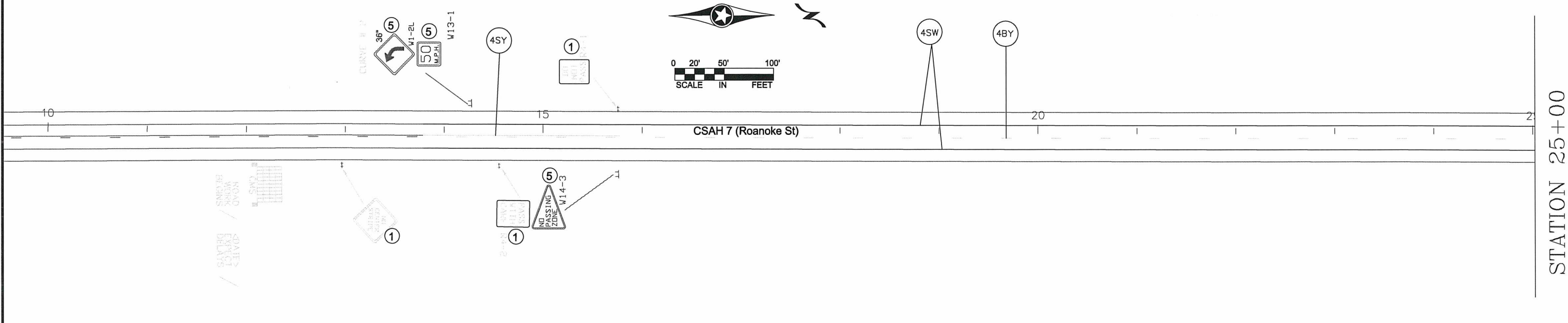
STRIPING KEY

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



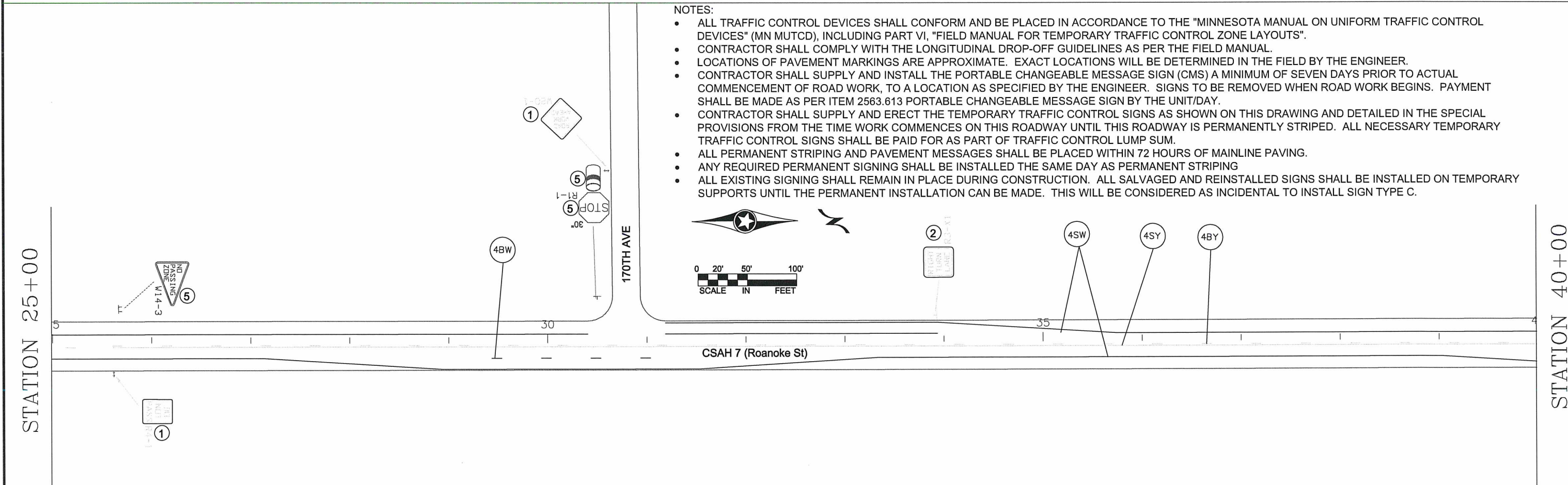
					I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.		DRAWN BY: RLB DATE: 1/25/18			ANOKA COUNTY HIGHWAY DEPT.	STATE PROJECT NO. _____		PERMANENT MARKING TABULATION
					PRINT NAME: DOUGLAS W. FISCHER		DESIGN BY: RLB DATE: 1/25/18				STATE AID PROJECT NO. 002-607-024		
					SIGNATURE:		CHECKED BY: JR DATE: 1/25/18		LICENSE NO. 20235		STATE AID PROJECT NO. _____		Sheet 9 of 13 Sheets
					DATE: 4/18/18						COUNTY PROJECT NO. 18-15-07		

- 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:

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NO	DATE	BY	CKD	APPR	REVISION

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ANOKA COUNTY
HIGHWAY DEPT.

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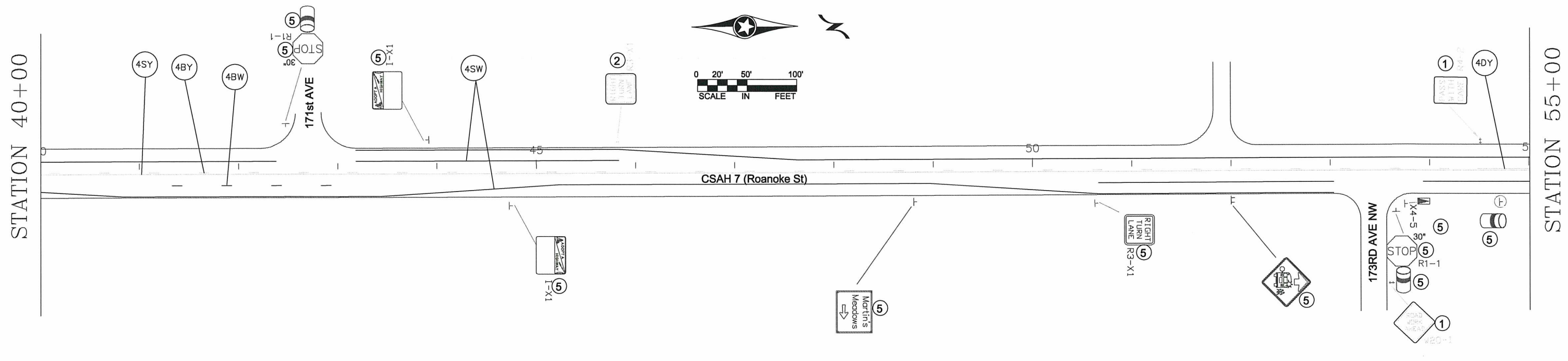
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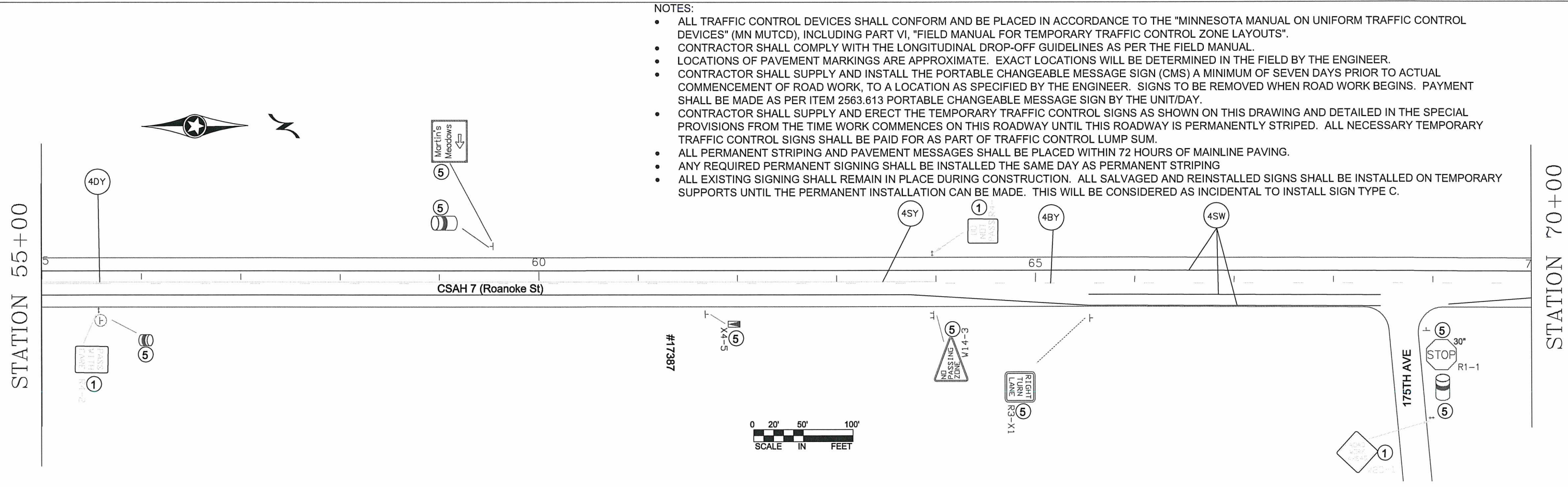
TEMPORARY SIGNING,
PERMANENT SIGNING
AND STRIPING

Sheet 10 of 13 Sheets

- SIGN NOTES:
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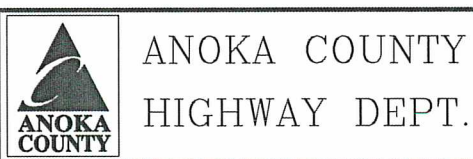


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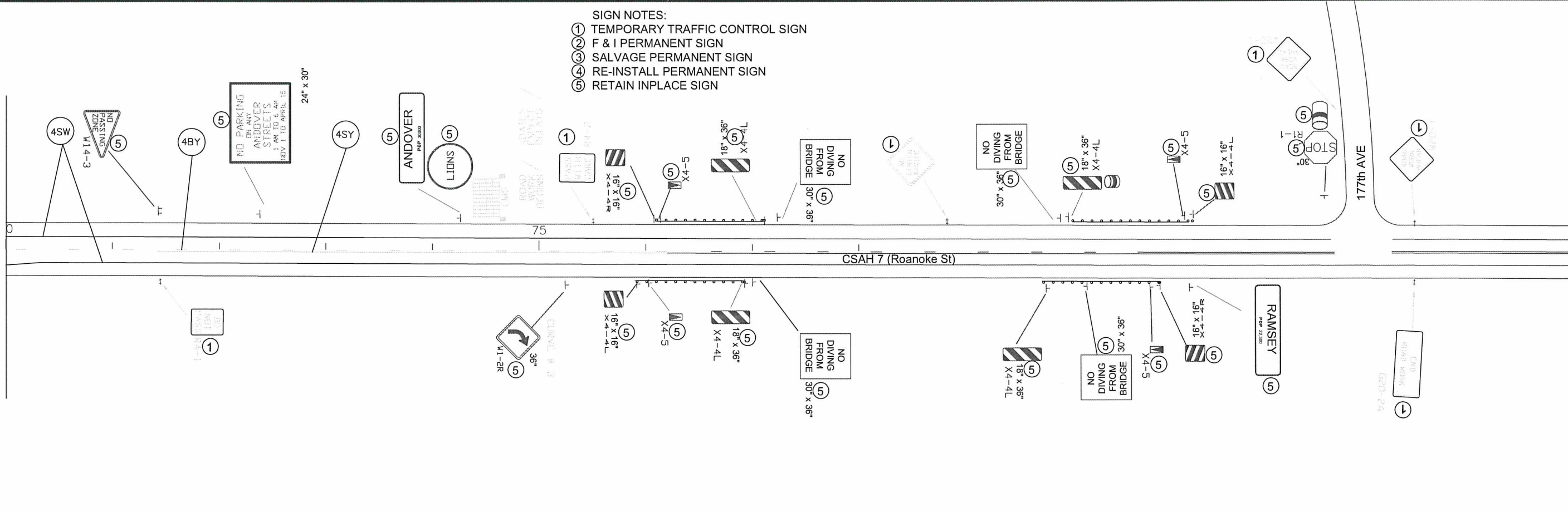
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TEMPORARY SIGNING,
 PERMANENT SIGNING
 AND STRIPING

Sheet 11 of 13 Sheets

STATION 70+00

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ANOKA COUNTY
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TEMPORARY SIGNING,
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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		4	1	7.0'
R4-2	24" x 30"	5.00		4	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 6)		
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		

SIGN PANELS TYPE C							E
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY	SQ FT PANEL AREA	SQ FT TOTAL AREA	MOUNTING POST PER INSTALLATION	MOUNTING HEIGHT
R3-X1	30" x 30"		2	6.25	12.50	1	7.0'

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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

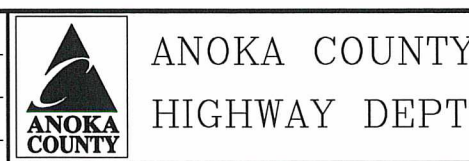
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NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\16-01-00\CR 60\base\Traffic\Signing_Signing.dwg

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TRAFFIC CONTROL QUANTITY
 Sheet 13 of 13 Sheets