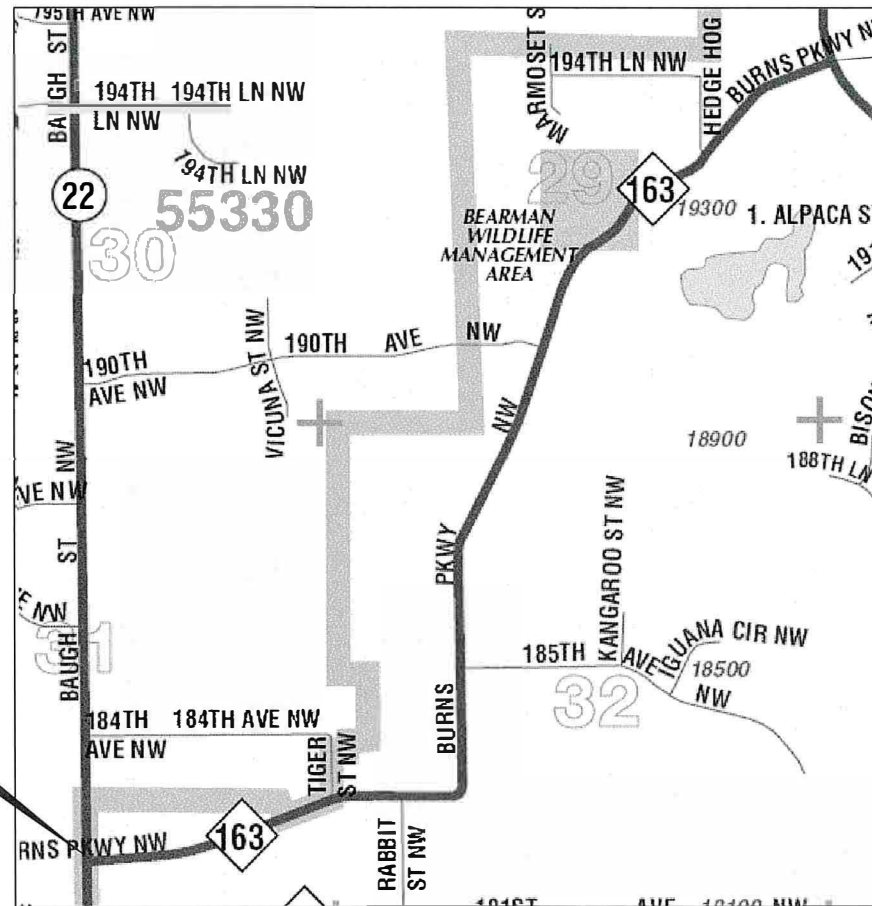


# MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

CONSTRUCTION PLAN FOR BITUMINOUS SURFACING  
LOCATED ON CR 163 BETWEEN BAUGH ST (CSAH 22) AND NOWTHEN BLVD (CSAH 5)

GROSS LENGTH 13144.66 FEET 2.490 MILES  
EXCEPTIONS-LENGTH 0.00 FEET 0.000 MILES  
NET LENGTH 13144.66 FEET 2.490 MILES

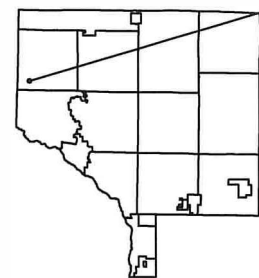


END CP 24-12-163  
CR 163, STA: 142+42.66

BEGIN CP 24-12-163  
CR 163, STA: 10+98.00



## PROJECT LOCATION



CITY OF NOWTHEN  
ANOKA COUNTY  
MN/DOT TRANSPORTATION DISTRICT - METRO  
SECTION 29, 31, AND 32  
TOWNSHIP 32 NORTH  
RANGE 25 WEST

### GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD 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.

THIS PLAN CONTAINS 17 SHEETS

### INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4 - 5	DETAILS
6 - 10	CONSTRUCTION PLAN
11	PERMANENT PAVEMENT MARKING PLAN NOTES & TABULATIONS
12 - 16	TEMPORARY SIGNING AND PERMANENT STRIPING
17	SIGNING & STRIPING PLAN

#### DESIGN DESIGNATION ( CR 163 )

ESAL 20	58,242	FUNCTIONAL CLASSIFICATION	MINOR COLLECTOR
R VALUE	70	NO. OF TRAFFIC LANES	2
ADT (2024)	493	NO. OF PARKING LANES	0
PROJ. ADT (2044)	493	DESIGN SPEED	40-45 MPH
PROJ. HCADT (2044)	29	STOPPING SIGHT DISTANCE BASED ON:	
SOIL FACTOR	N/A	HEIGHT OF EYE	3.5'
		HEIGHT OF OBJECT	2.0'
		DESIGN SPEED NOT ACHIEVED AT:	
		STA. _____ TO STA. _____	MPH _____

Approved 1-29-24  
ANOKA COUNTY ENGINEER

<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: <u>GERALD J. AUGER, JR.</u></p> <p>SIGNATURE: </p> <p>DATE: <u>01-29-2024</u> LICENSE NO. <u>26511</u></p>	<p>DRAWN BY <u>SPH</u> DATE <u>1/11/2024</u></p> <p>DESIGN BY <u>SPH</u> DATE <u>1/11/2024</u></p> <p>CHECKED BY <u>CO</u> DATE <u>1/11/2024</u></p>	 <b>ANOKA COUNTY HIGHWAY DEPT.</b>	<p>COUNTY PROJECT <u>24-12-163</u></p> <p style="font-size: 1.2em;">TITLE SHEET</p> <p>Sheet <u>1</u> of <u>17</u> Sheets</p>
--	--	---	---

STATEMENT OF ESTIMATED QUANTITIES				
Notes	Item Number	Code	ITEM DESCRIPTION	TOTAL PROJECT QUANTITIES ESTIMATED
	2021.501	00010	MOBILIZATION	LUMP SUM 1
2	2221.509	00080	SHOULDER BASE AGGREGATE CLASS 5	TON 532
1,3	2232.604	00470	MILL BITUMINOUS PAVEMENT (SPECIAL)	SQ YD 190
	2357.506	00010	BITUMINOUS MATERIAL FOR TACK COAT	GALLON 1950
	2360.509	14300	TYPE SP 9.5 WEARING COURSE MIXTURE (4:C)	TON 3357
4	2540.602	00150	MAIL BOX SUPPORT	EACH 43
	2563.601	00001	TRAFFIC CONTROL SUPERVISOR	LUMP SUM 1
5,6	2563.601	00010	TRAFFIC CONTROL	LUMP SUM 1
7	2563.613	01100	PORTABLE CHANGEABLE MESSAGE SIGN	UNIT DAY 20
	2573.501	00030	EROSION CONTROL SUPERVISOR	LUMP SUM 1
	2581.503	00010	REMOVABLE PREFORMED PAVEMENT MARKING TAPE	LIN FT 525
8	2582.503	30104	4" SOLID LINE MULTI-COMPONENT	LIN FT 29376
8	2582.503	30204	4" BROKEN LINE MULTI-COMPONENT	LIN FT 1280
8	2582.503	30404	4" DOUBLE SOLID LINE MULTI-COMPONENT	LIN FT 6802

CONSTRUCTION NOTES	
1	REFERENCE DETAILS (PAGE 4 - 5) FOR REMOVAL DETAILS
2	ITEM INCLUDES 7 TONS FOR EACH GRAVEL ENTRANCE AND GRAVEL STREET APPROACH.
3	TO BE USED FOR BUTT MILLING BEGINNING/END TIE-INS AND SIDE STREETS ACCORDING TO DETAILS (PAGE 6-7)
4	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.
5	CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN TEMPORARY SIGNAGE WHENEVER EXISTING SIGNAGE IS REMOVED. TEMPORARY SIGNAGE SHALL BE INCIDENTAL TO TRAFFIC CONTROL.
6	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 PERMANENT PAVEMENT MARKINGS ARE NOT PRESENT.
7	2 MESSAGE BOARDS, ONE ON THE EACH END OF PROJECT, SHALL BE INSTALLED 10 DAYS PRIOR TO ANY CONSTRUCTION; REFERENCE STRIPING PLAN FOR DETAILS.
8	FINAL STRIPING SHALL BE INSTALLED WITHIN 72 HOURS OF COMPLETION OF MAINLINE WEAR COURSE PAVING.

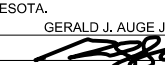
THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT	
MNDOT STANDARD PLATES	
PLATE NO.	DESCRIPTION
8000K	TEMPORARY CHANNELIZERS (3 SHEETS)
9350B	MAILBOX SUPPORT - SWING-AWAY TYPE

BASIS OF PLANNED QUANTITIES		
2357	BITUMINOUS MATERIAL FOR TACK COAT	0.05 GAL / SQ YD
2211	AGGREGATE BASE CLASS 5	1.8 TONS / CU YD
2360	ALL BITUMINOUS PAVEMENT	115 LBS / SQ YD / IN THICKNESS
2581	REMOVABLE PREFORM PAVEMENT MARKING TAPE	2' AT 50' INTERVALS

NO	DATE	BY	CKD	APPR	REVISION	01/29/2024	1:40:14 PM
NAME: P:\24-01-00\CR_163_(BAUGH ST-NOWTHEN BLVD)\Base\Proposed -OVERLAY\CR163_SEQ - higher bit cost.dgn							

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

PRINT NAME: GERALD J. AUGER JR.

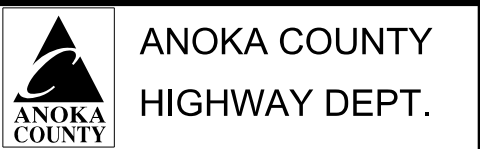
SIGNATURE: 

DATE: 01-29-2024 LICENSE NO. 26511

DRAWN BY SPH DATE 1/11/2024

DESIGN BY SPH DATE 1/11/2024

CHECKED BY CO DATE 1/11/2024



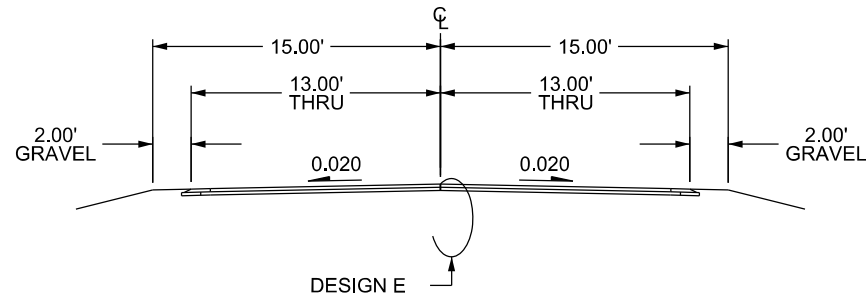
COUNTY PROJECT 24-12-163

STATEMENT OF ESTIMATED QUANTITIES

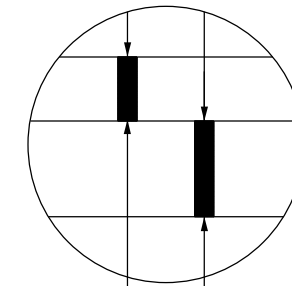
Sheet 2 of 17 Sheets

**CR 163 - Burns Parkway**  
EXISTING SECTION

10+98.00 - 142+42.66



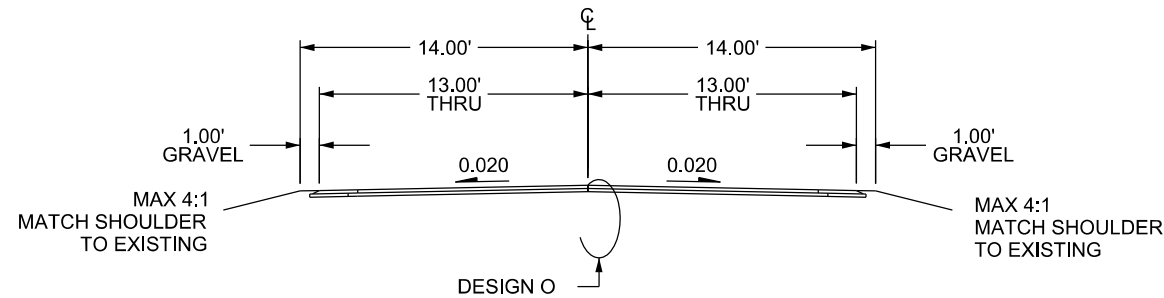
**DESIGN E**  
EXISTING SECTION



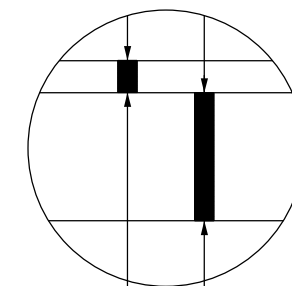
2.25" EXISTING BITUMINOUS  
EXISTING AGGREGATE BASE

**CR 163 - Burns Parkway**  
PROPOSED SECTION

10+98.00 - 142+42.66



**DESIGN O**  
OVERLAY SECTION



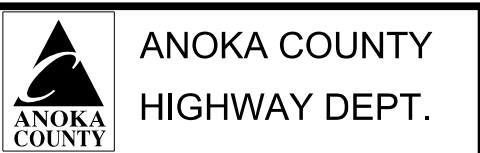
1.5" BITUMINOUS WEAR (SPWEB440C)  
EXISTING BITUMINOUS

NO	DATE	BY	CKD	APPR	REVISION	1:40:17 PM
	01/29/2024					

NAME: P:\24-01-00\CR\_163\_(BAUGH ST-NOWTHEN BLVD)\Base\Proposed -OVERLAY\CR163\_TYPICALS.dgn

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 PRINT NAME: GERALD J. AUGER JR.  
 SIGNATURE:   
 DATE: 01-29-2024 LICENSE NO. 26511

DRAWN BY SPH DATE 1/11/2024  
 DESIGN BY SPH DATE 1/11/2024  
 CHECKED BY CO DATE 1/11/2024

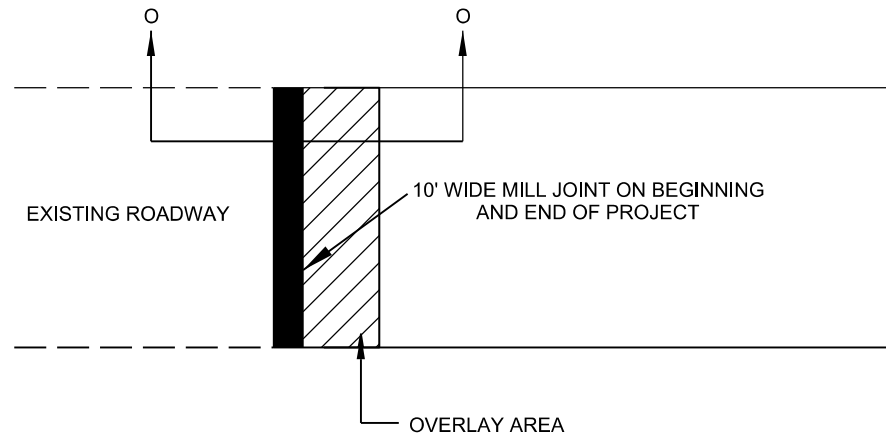


COUNTY PROJECT 24-12-163

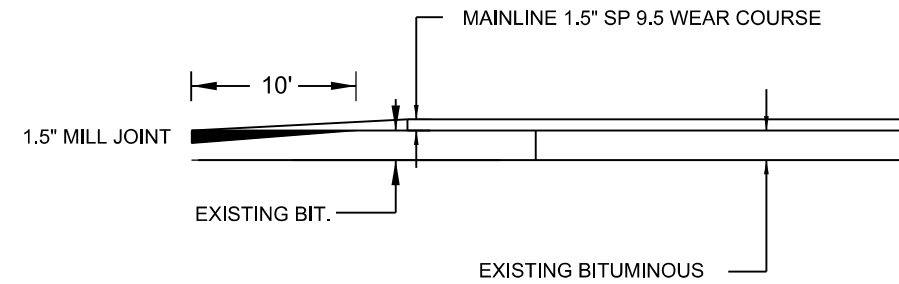
TYPICAL SECTIONS  
 Sheet 3 of 17 Sheets

### MAINLINE JOINT DETAIL (OVERLAY)

PLAN VIEW



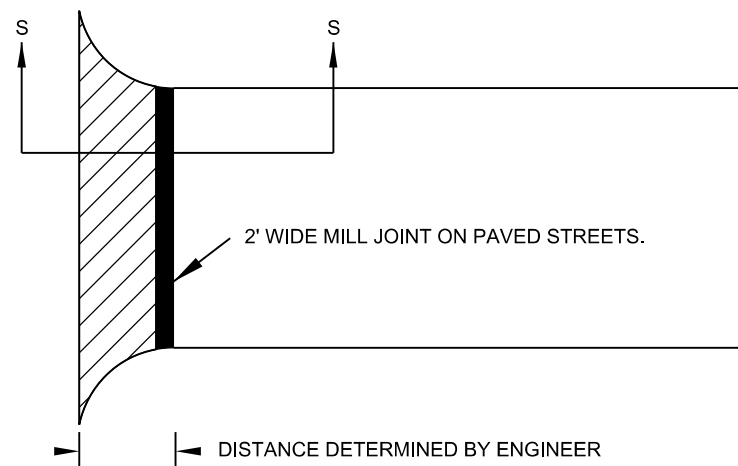
SECTION O - O



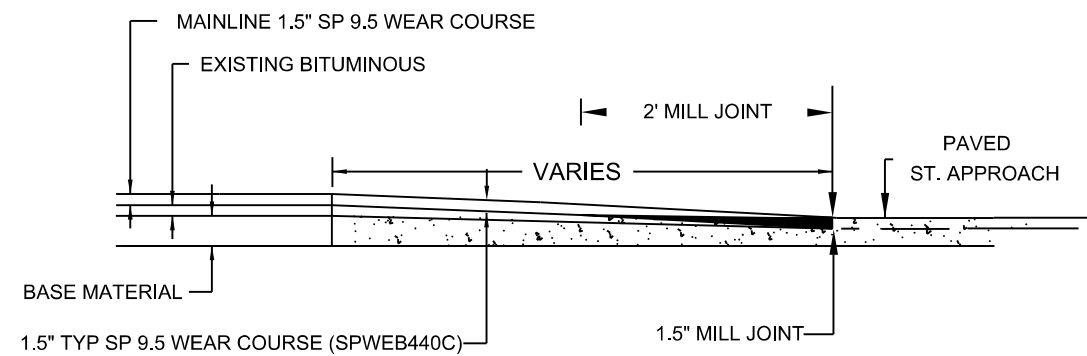
### STREET APPROACH DETAIL (SIMPLE OVERLAY)

BITUMINOUS STREET

PLAN VIEW



SECTION S - S



NO	DATE	BY	CKD	APPR	REVISION	1:40:18 PM
					01/29/2024	

NAME: P:\24-01-00\CR\_163\_(BAUGH ST-NOWTHEN BLVD)\Base\Proposed -OVERLAY\CR163\_DETAILS.dgn

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

PRINT NAME: GERALD J. AUGER JR.  
 SIGNATURE: *[Signature]*  
 DATE: 01-29-2024 LICENSE NO. 26511

DRAWN BY SPH DATE 1/11/2024  
 DESIGN BY SPH DATE 1/11/2024  
 CHECKED BY CO DATE 1/11/2024

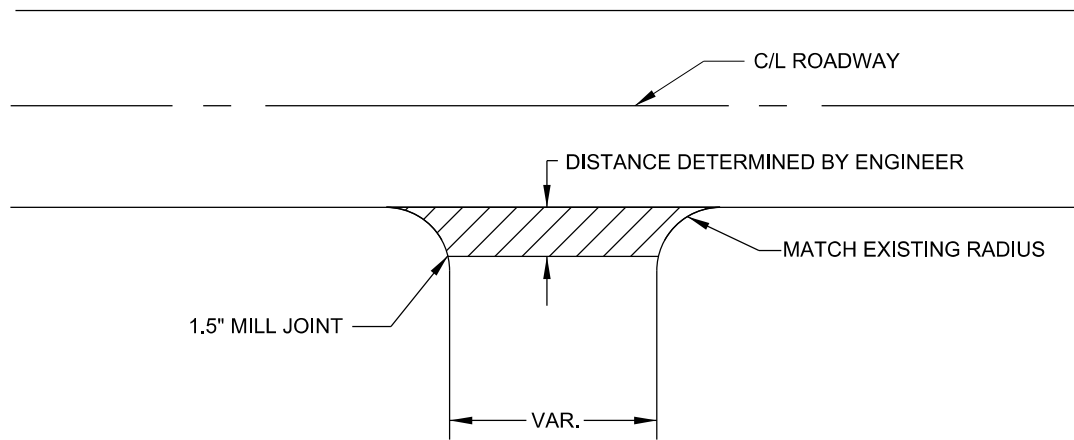


COUNTY PROJECT 24-12-163

DETAILS  
 Sheet 4 of 17 Sheets

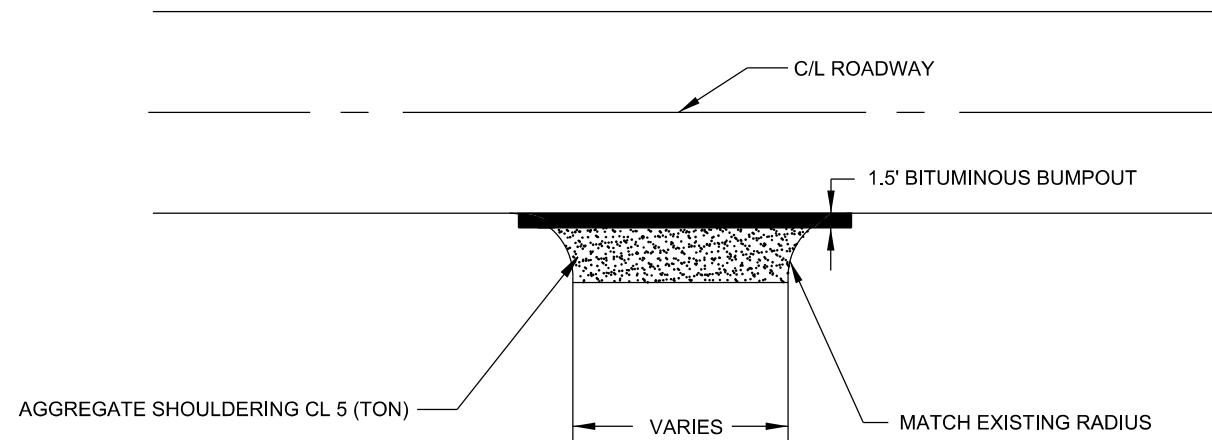
### DRIVEWAY DETAIL

BITUMINOUS DRIVEWAY  
PAVED DR. WAYS



### DRIVEWAY DETAIL

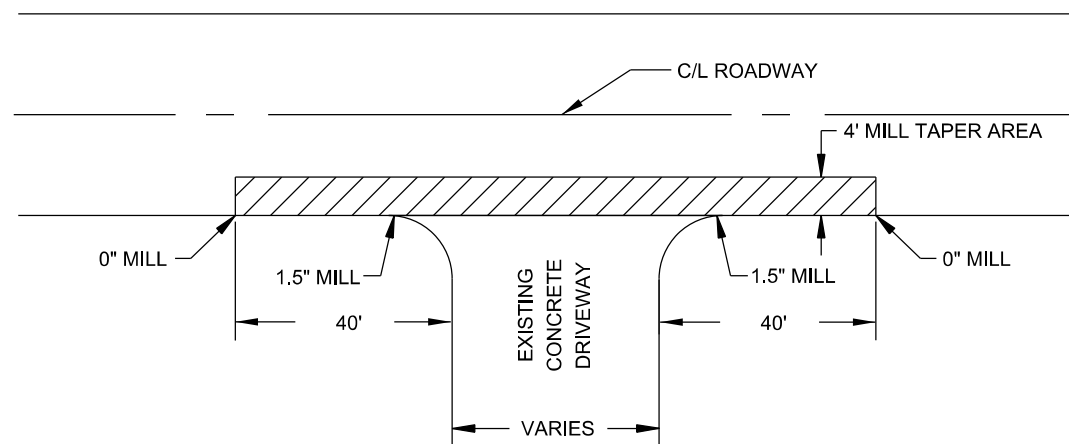
GRAVEL / FIELD ENTRANCE



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.

### DRIVEWAY DETAIL

CONCRETE DRIVEWAY



NO	DATE	BY	CKD	APPR	REVISION	01/29/2024	1:40:18 PM
NAME: P:\24-01-00\CR_163_(BAUGH ST-NOWTHEN BLVD)\Base\Proposed -OVERLAY\CR163_DETAILS.dgn							

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

PRINT NAME: GERALD J. AUGER JR.

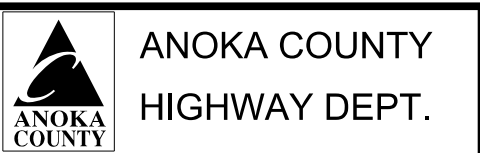
SIGNATURE: *[Signature]*

DATE: 01-29-2024 LICENSE NO. 26511

DRAWN BY SPH DATE 1/11/2024

DESIGN BY SPH DATE 1/11/2024

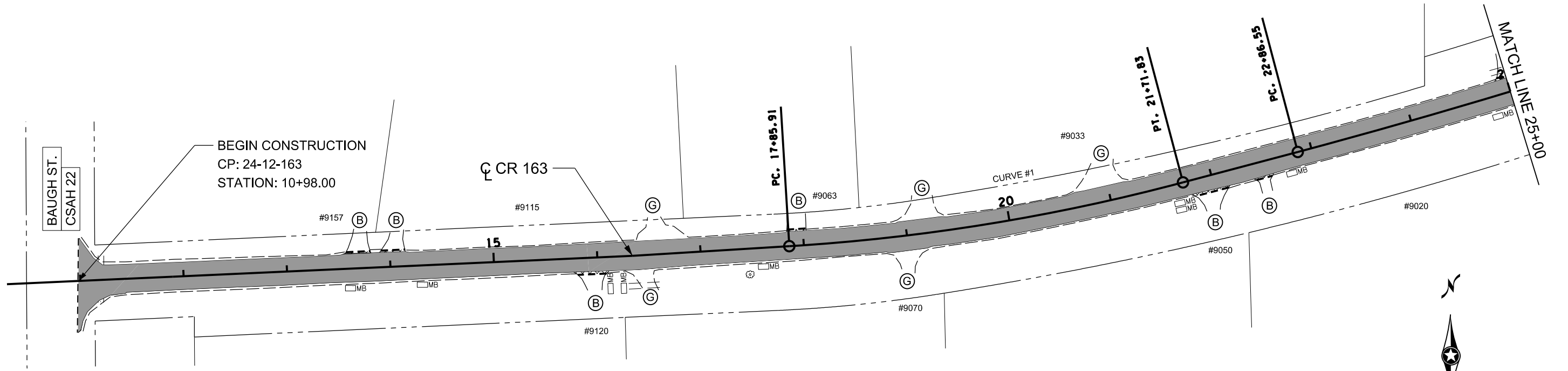
CHECKED BY CO DATE 1/11/2024



COUNTY PROJECT 24-12-163

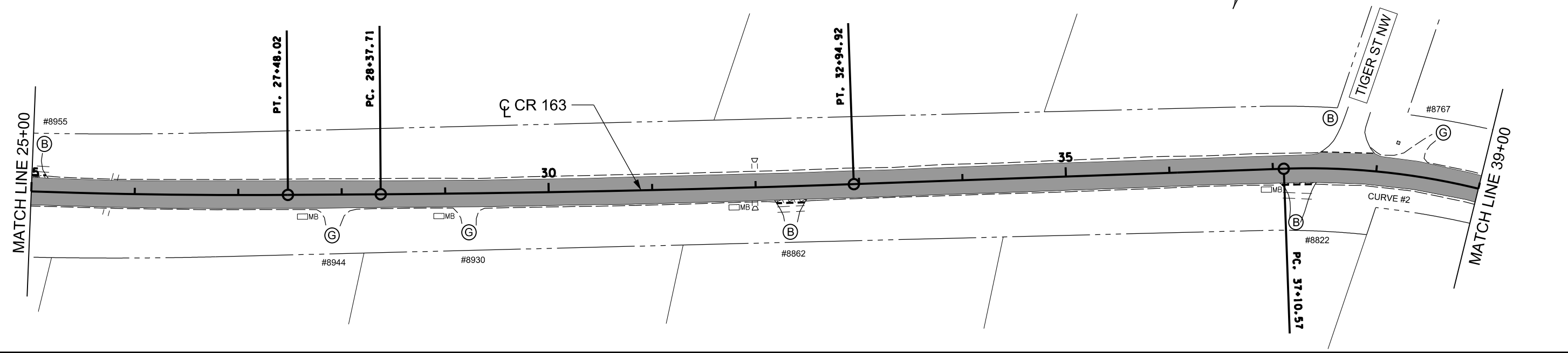
DETAILS

Sheet 5 of 17 Sheets



**LEGEND**

- (B) BITUMINOUS
- (C) CONCRETE
- (G) GRAVEL
- ◆ CORE LOCATION
- - - MILL LINE
- - - CROSS CULVERT
- █ MAINLINE OVERLAY AREA
- ▨ BUTT MILL DRIVEWAY / STREET APPROACH AREA
- R/W



NO	DATE	BY	CHKD	APPR	REVISION	TIME
	01/29/2024					1:40:21 PM

NAME: P:\24-01-00\CR\_163\_(BAUGH ST-NOWTHEN BLVD)\Base\Proposed -OVERLAY\CR163\_CP1-overlay.dgn

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

PRINT NAME: GERALD J. AUGER JR.

SIGNATURE: *[Signature]*

DATE: 01-29-2024 LICENSE NO. 26511

DRAWN BY SPH DATE 01/11/2024

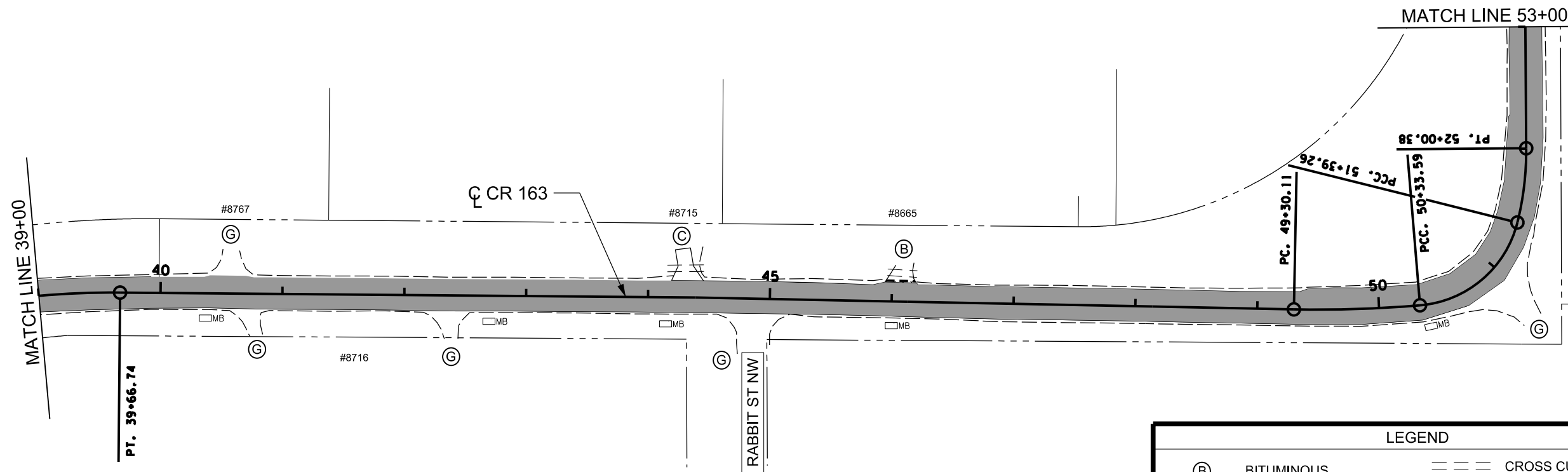
DESIGN BY SPH DATE 01/11/2024

CHECKED BY CO DATE 01/11/2024

**ANOKA COUNTY**  
HIGHWAY DEPT.

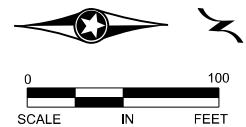
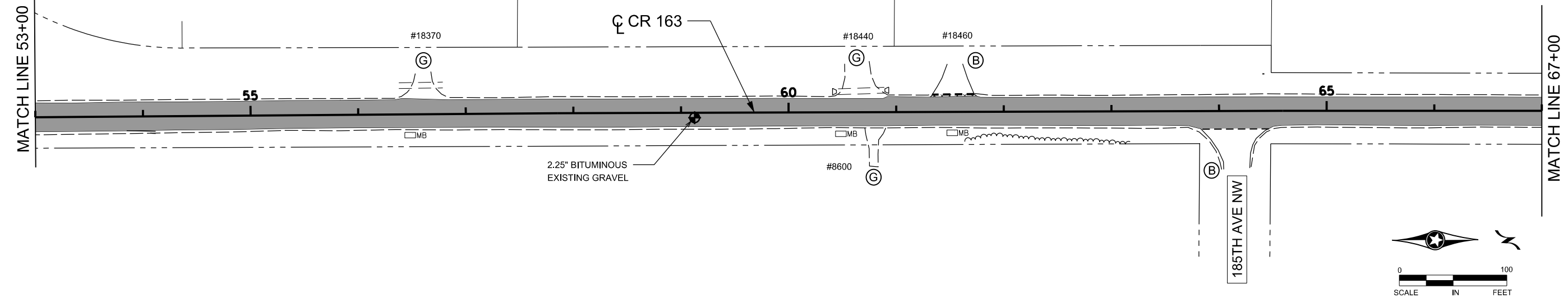
COUNTY PROJECT 24-12-163

**CONSTRUCTION PLAN**  
STA 10+98.00 TO 39+00.00  
Sheet 6 of 17 Sheets



**LEGEND**

- (B) BITUMINOUS
- (C) CONCRETE
- (G) GRAVEL
- ⊕ CORE LOCATION
- - - - MILL LINE
- - - - CROSS CULVERT
- ▒ MAINLINE OVERLAY AREA
- ▨ BUTT MILL DRIVEWAY / STREET APPROACH AREA
- \_\_\_\_\_ R / W



NO	DATE	BY	CKD	APPR	REVISION	TIME
	01/29/2024					1:40:22 PM

NAME: P:\24-01-00\CR\_163\_(BAUGH ST-NOWTHEN BLVD)\Base\Proposed -OVERLAY\CR163\_CP2-overlay.dgn

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

PRINT NAME: GERALD J. AUGER JR.

SIGNATURE: *[Signature]*

DATE: 01-29-2024 LICENSE NO. 26511

DRAWN BY SPH DATE 01/11/2024

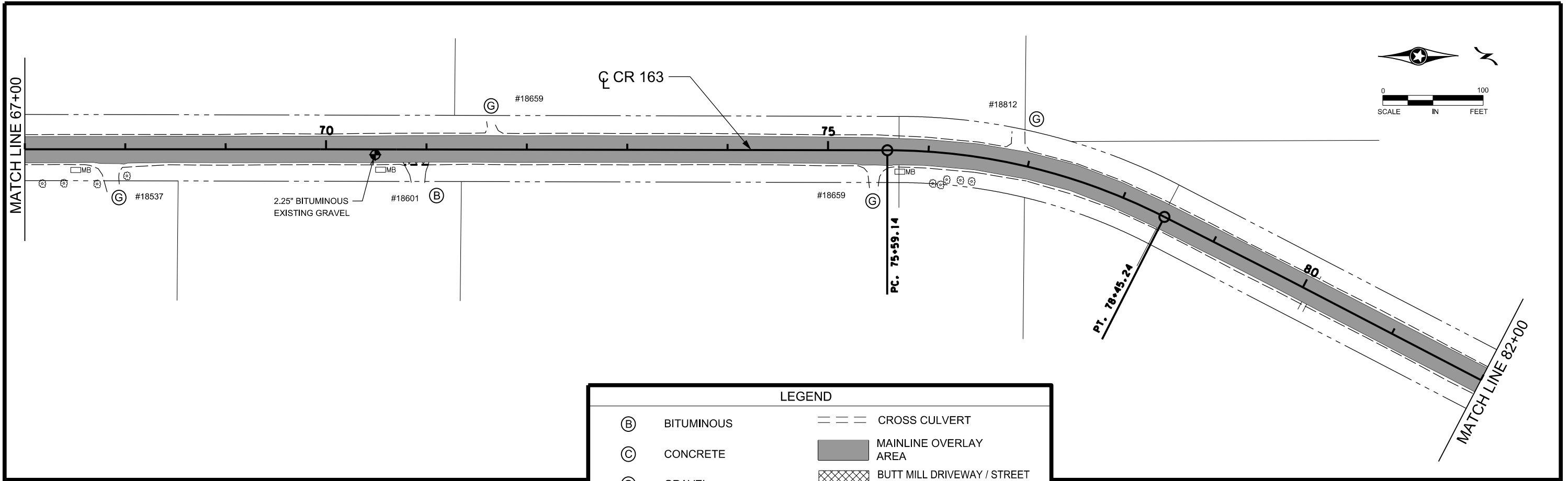
DESIGN BY SPH DATE 01/11/2024

CHECKED BY CO DATE 01/11/2024

**ANOKA COUNTY  
HIGHWAY DEPT.**

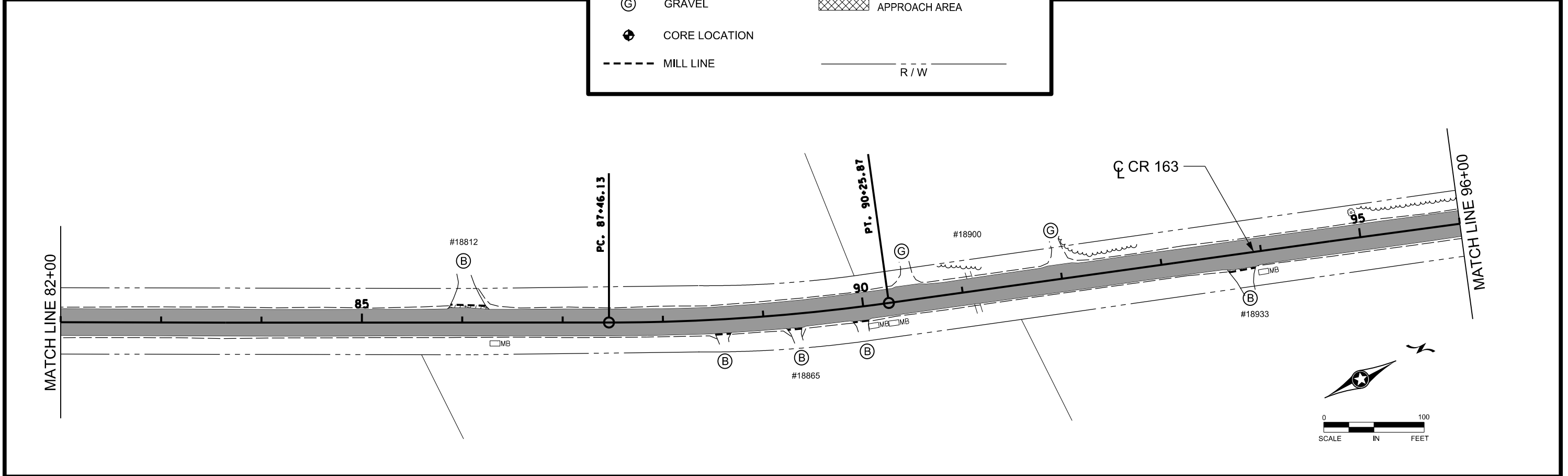
COUNTY PROJECT 24-12-163

**CONSTRUCTION PLAN**  
STA 39+00.00 TO 67+00.00  
Sheet 7 of 17 Sheets



**LEGEND**

(B)	BITUMINOUS	--- --	CROSS CULVERT
(C)	CONCRETE	■	MAINLINE OVERLAY AREA
(G)	GRAVEL	▨	BUTT MILL DRIVEWAY / STREET APPROACH AREA
⊕	CORE LOCATION	— — — —	R / W
- - - -	MILL LINE		



NO	DATE	BY	CKD	APPR	REVISION	TIME
	01/29/2024					1:40:23 PM

NAME: P:\24-01-00\CR\_163\_(BAUGH ST-NOWTHEN BLVD)\Base\Proposed -OVERLAY\CR163\_CP3-overlay.dgn

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

PRINT NAME: GERALD J. AUGER JR.  
 SIGNATURE: *[Signature]*  
 DATE: 01-29-2024 LICENSE NO. 26511

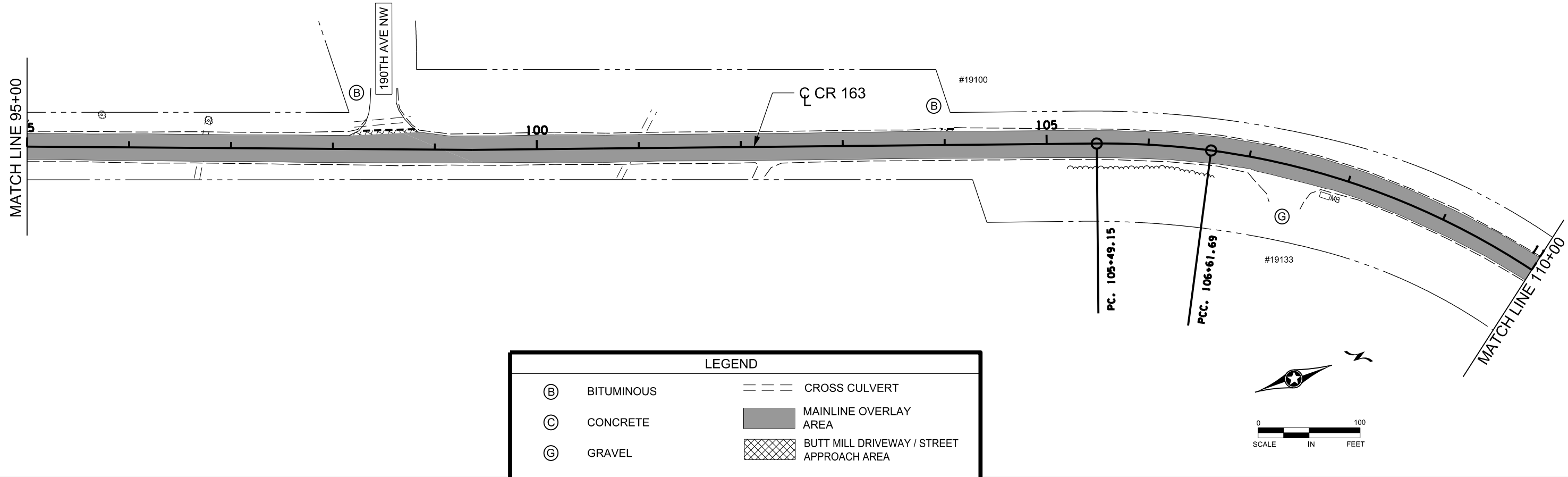
DRAWN BY SPH DATE 01/11/2024  
 DESIGN BY SPH DATE 01/11/2024  
 CHECKED BY CO DATE 01/11/2024

**ANOKA COUNTY  
HIGHWAY DEPT.**

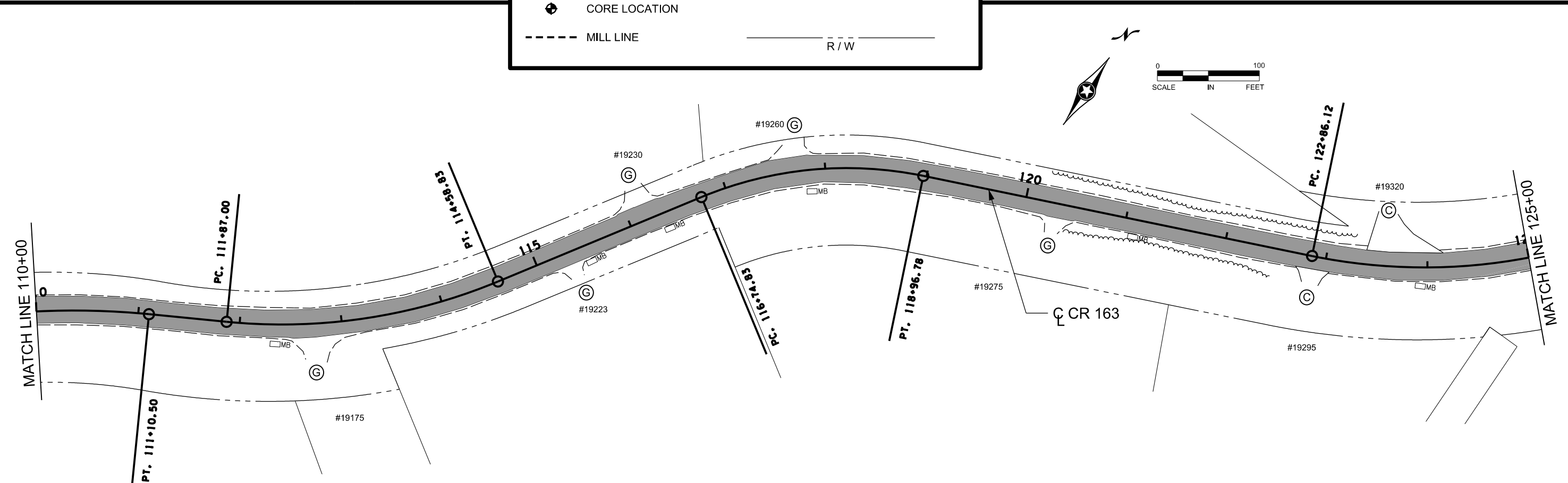
COUNTY PROJECT 24-12-163

**CONSTRUCTION PLAN**  
 STA 67+00.00 TO 96+00.00  
 Sheet 8 of 17 Sheets





LEGEND			
(B)	BITUMINOUS	---	CROSS CULVERT
(C)	CONCRETE	█	MAINLINE OVERLAY AREA
(G)	GRAVEL	▨	BUTT MILL DRIVEWAY / STREET APPROACH AREA
⊕	CORE LOCATION	---	R / W
---	MILL LINE		



NO	DATE	BY	CKD	APPR	REVISION	TIME
	01/29/2024					1:40:23 PM

NAME: P:\24-01-00\CR\_163\_(BAUGH ST-NOWTHEN BLVD)\Base\Proposed -OVERLAY\CR163\_CP4-overlay.dgn

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

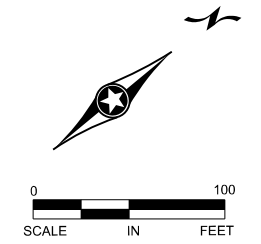
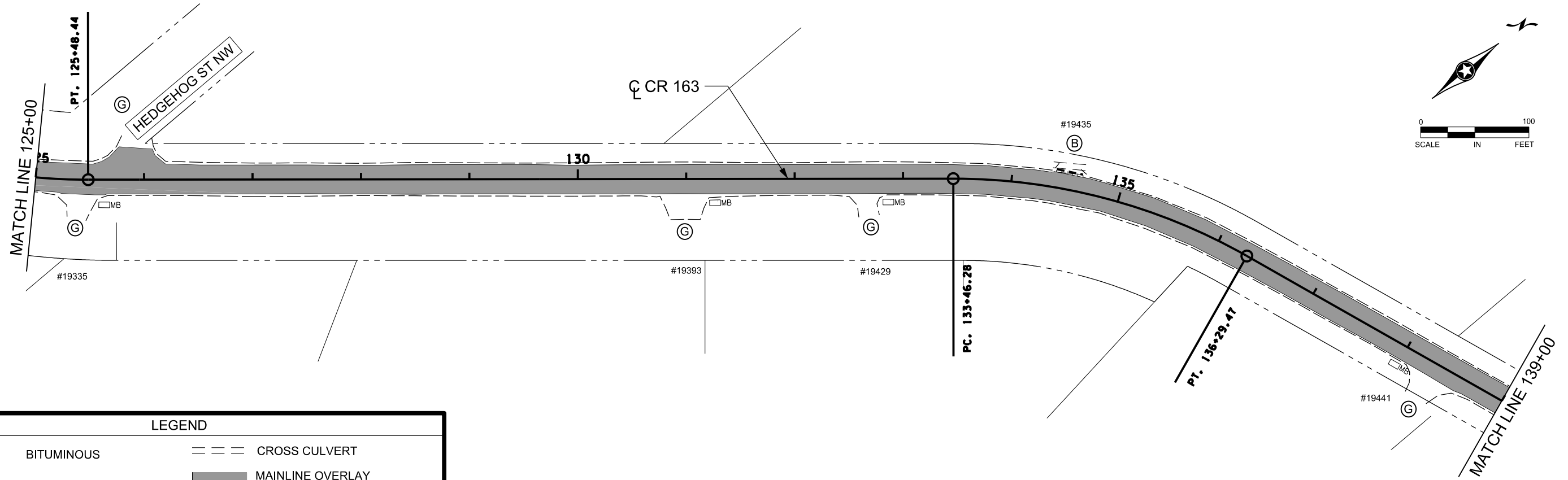
PRINT NAME: GERALD J. AUGER JR.  
 SIGNATURE: *[Signature]*  
 DATE: 01-29-2024 LICENSE NO. 26511

DRAWN BY: SPH DATE: 01/11/2024  
 DESIGN BY: SPH DATE: 01/11/2024  
 CHECKED BY: CO DATE: 01/11/2024

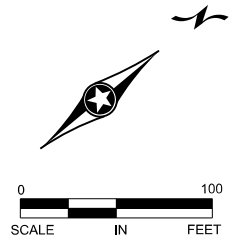
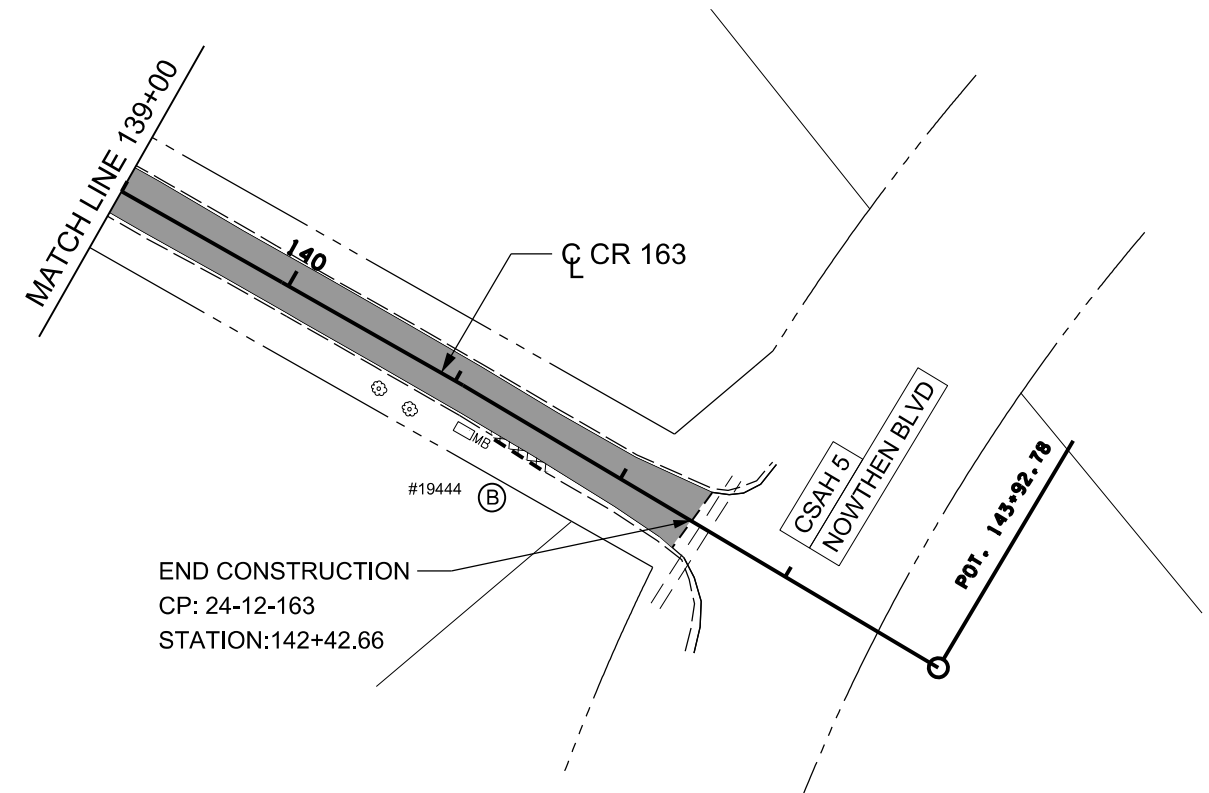
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

COUNTY PROJECT 24-12-163

CONSTRUCTION PLAN  
 STA 95+00.00 TO 125+00.00  
 Sheet 9 of 17 Sheets



LEGEND			
(B)	BITUMINOUS	---	CROSS CULVERT
(C)	CONCRETE	█	MAINLINE OVERLAY AREA
(G)	GRAVEL	▨	BUTT MILL DRIVEWAY / STREET APPROACH AREA
●	CORE LOCATION		
---	MILL LINE	---	R/W



NO	DATE	BY	CKD	APPR	REVISION	TIME
	01/29/2024					1:40:24 PM

NAME: P:\24-01-00\CR\_163\_(BAUGH ST-NOWTHEN BLVD)\Base\Proposed -OVERLAY\CR163\_CP5-overlay.dgn

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

PRINT NAME: GERALD J. AUGER JR.

SIGNATURE: *[Signature]*

DATE: 01-29-2024 LICENSE NO. 26511

DRAWN BY SPH DATE 01/11/2024

DESIGN BY SPH DATE 01/11/2024

CHECKED BY CO DATE 01/11/2024

**ANOKA COUNTY**  
**HIGHWAY DEPT.**

COUNTY PROJECT 24-12-163

CONSTRUCTION PLAN  
STA 125+00.00 TO 142+42.66  
Sheet 10 of 17 Sheets

**PERMANENT PAVEMENT MARKING PLAN  
NOTES & GUIDELINES**

**GENERAL INFORMATION:**

1. 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.
2. 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.
3. 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.
4. PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.
5. 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.

**MULTI-COMPONENT (MULTI-COMP):**

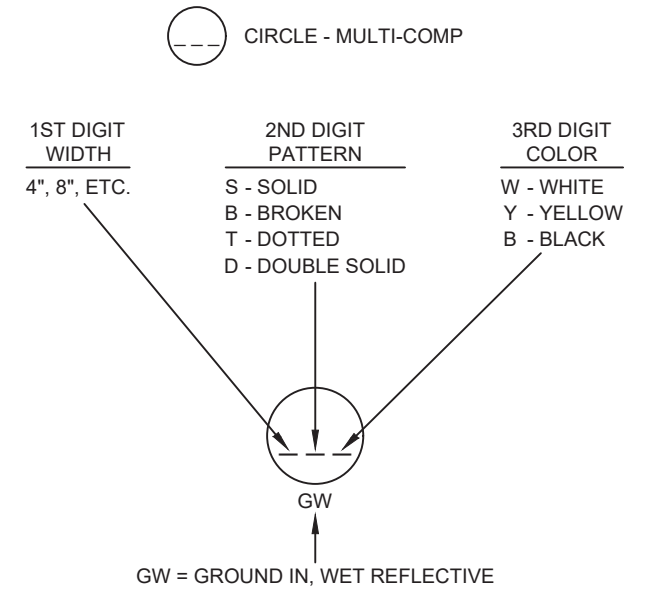
1. THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER. NEW PORTLAND CEMENT CONCRETE SURFACES 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 MULTI-COMP PAVEMENT MARKINGS.
2. THE MULTI-COMP MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE MULTI-COMP LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.
3. A MULTI-COMP LINE SHALL BE APPLIED WITH A MINIMUM THICKNESS OF 20 MILS (WET) AND 4" WIDE. GLASS BEADS SHALL BE APPLIED AT A MINIMUM RATE OF 25 LBS POUNDS PER GALLON RATE SUFFICIENT TO ACHIEVE AN ACCEPTABLE NO-TRACK SYSTEM.
4. PAVEMENT MARKINGS SHALL ONLY BE APPLIED IN SEASONABLE WEATHER WHEN AIR AND PAVEMENT SURFACE TEMPERATURES ARE 40° 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.

PAVEMENT MARKING TABULATION		
ITEM	UNIT	TOTAL QUANTITY
4" SOLID LINE WHITE - MULTI COMP	LIN FT	26100
4" DOUBLE LINE YELLOW - MULTI COMP	LIN FT	6802
4" SOLID LINE YELLOW - MULTI COMP	LIN FT	3276
4" BROKEN LINE YELLOW - MULTI COMP	LIN FT	1280

**PAVEMENT MARKING SYMBOLS & MATERIALS LEGEND**

— — BROKEN LINE - 50' CYCLE (10' LINE, 40' GAP)

**STRIPING KEY**



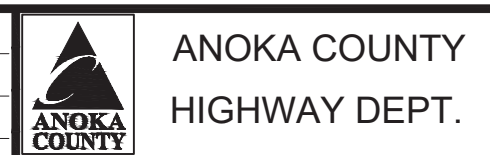
EXAMPLE: (4SW) = 4" SOLID LINE WHITE MULTI-COMP

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\24-01-00\CR\_71\_(AMBASSADOR-N.CNTY LINE)\Base\Traffic\Permanent Pavement Marking Plan Notes & Tabulations.dwg

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: SEAN R. THIEL  
 SIGNATURE: *Sean R. Thiel*  
 DATE: 1/18/2024 LICENSE NO. 45129

DRAWN BY LJK DATE 1/17/24  
 DESIGN BY LJK DATE 1/17/24  
 CHECKED BY SRT DATE 1/18/24



CP 24-12-163


PERMANENT PAVEMENT MARKING PLAN NOTES & TABULATIONS  
 Sheet 11 of 17 Sheets

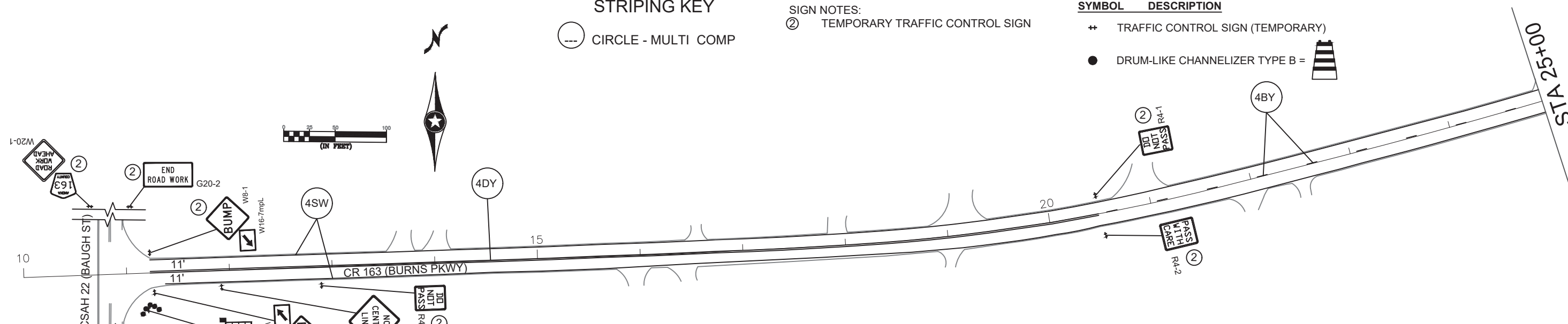
**STRIPING KEY**

○ CIRCLE - MULTI COMP

SIGN NOTES:  
 ② TEMPORARY TRAFFIC CONTROL SIGN

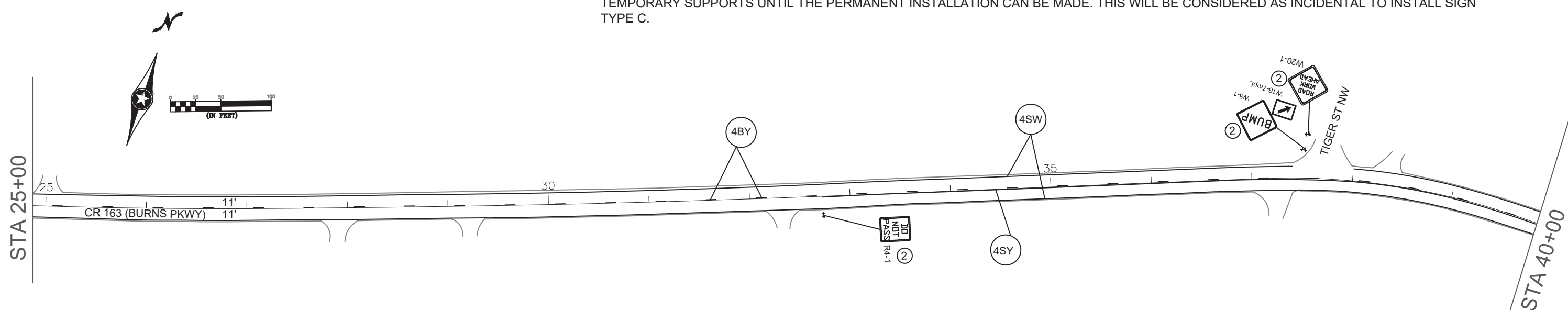
**TRAFFIC CONTROL DEVICES & SYMBOLS LEGEND**

SYMBOL DESCRIPTION  
 ++ TRAFFIC CONTROL SIGN (TEMPORARY)  
 ● DRUM-LIKE CHANNELIZER TYPE B = 




**NOTES (TYP.):**

- 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 PLACE THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM TEN 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.
- ACCESS SHALL BE MAINTAINED TO ALL STREETS AND DRIVEWAYS IN CONSTRUCTION AREA.
- 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. ANY 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.

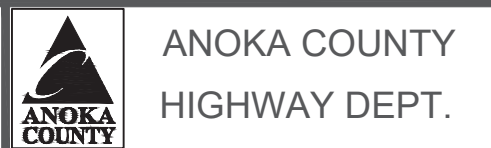


NO	DATE	BY	CKD	APPR	REVISION

NAME: P:124-01-00\CR\_163\_(Baugh St-Nowthen Blvd)\Base\Traffic\TC.dwg

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: SEAN R. THIEL  
 SIGNATURE:   
 DATE: 1/18/2024 LICENSE NO. 45129

DRAWN BY: LJK DATE: 1/17/24  
 DESIGN BY: LJK DATE: 1/17/24  
 CHECKED BY: SRT DATE: 1/18/24



ANOKA COUNTY  
 HIGHWAY DEPT.  
 CP 24-12-163


TEMPORARY SIGNING AND  
 PERMANENT STRIPING  
 Sheet 12 of 17 Sheets

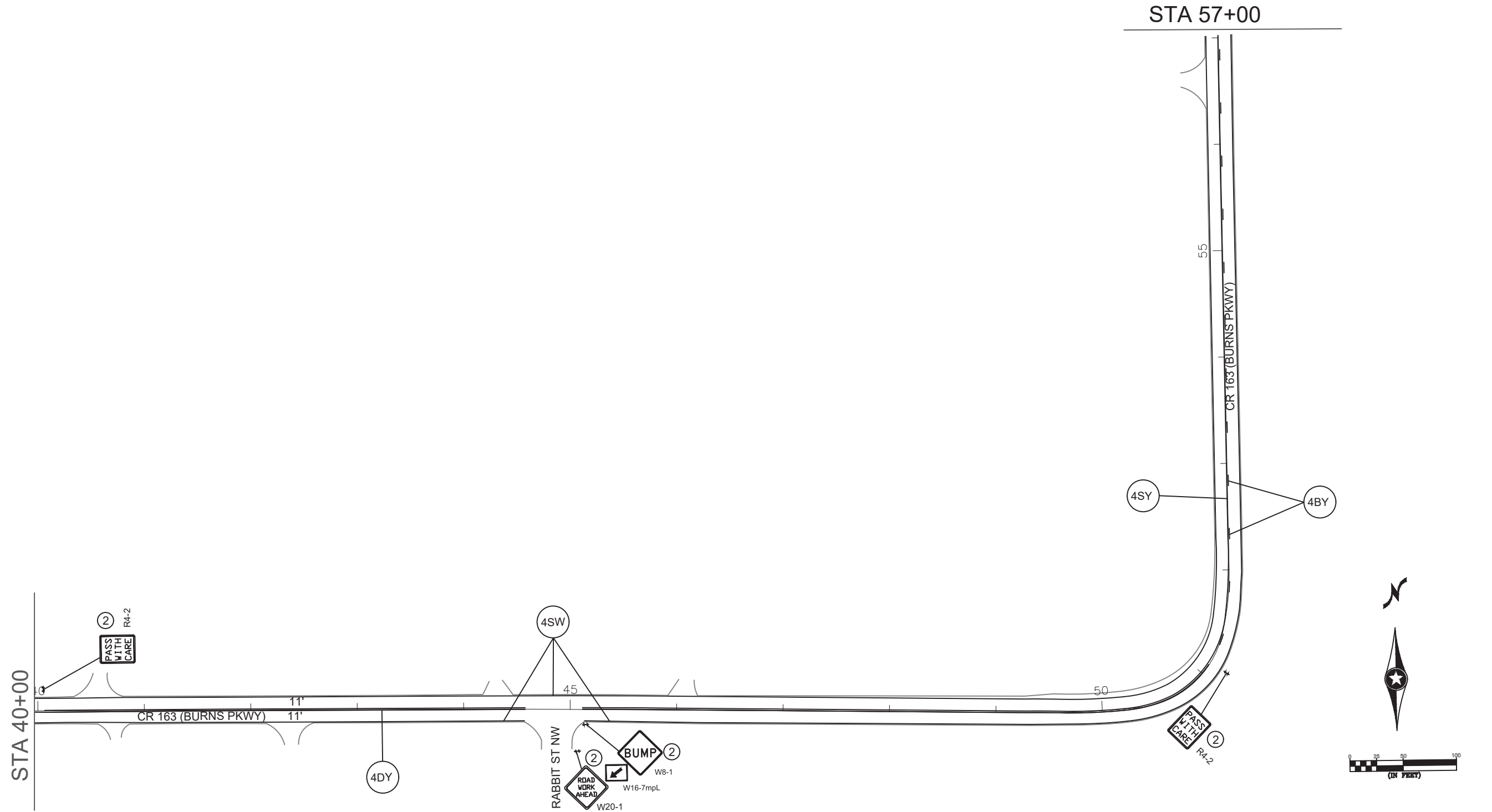
STRIPING KEY

○ CIRCLE - MULTI COMP

SIGN NOTES:  
 ② TEMPORARY TRAFFIC CONTROL SIGN

TRAFFIC CONTROL DEVICES & SYMBOLS LEGEND

SYMBOL	DESCRIPTION
+	TRAFFIC CONTROL SIGN (TEMPORARY)
●	DRUM-LIKE CHANNELIZER TYPE B = 



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:124-01-00\CR\_163 (Baugh St-Nowthen Blvd)\Base\Traffic\TC.dwg

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: SEAN R. THIEL  
 SIGNATURE: *Sean R. Thiel*  
 DATE: 1/18/2024 LICENSE NO. 45129

DRAWN BY: LJK DATE: 1/17/24  
 DESIGN BY: LJK DATE: 1/17/24  
 CHECKED BY: SRT DATE: 1/18/24




ANOKA COUNTY  
 HIGHWAY DEPT.

CP 24-12-163

TEMPORARY SIGNING AND  
 PERMANENT STRIPING  
 Sheet 13 of 17 Sheets

**TRAFFIC CONTROL DEVICES & SYMBOLS LEGEND**

**SYMBOL DESCRIPTION**

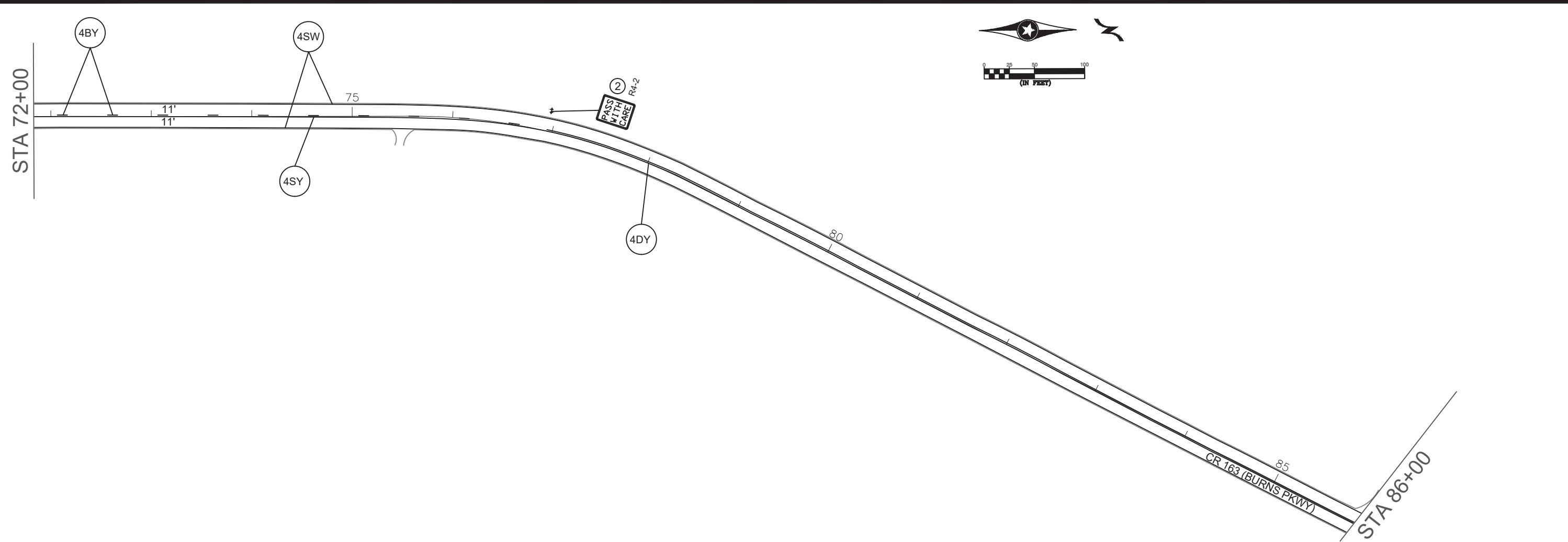
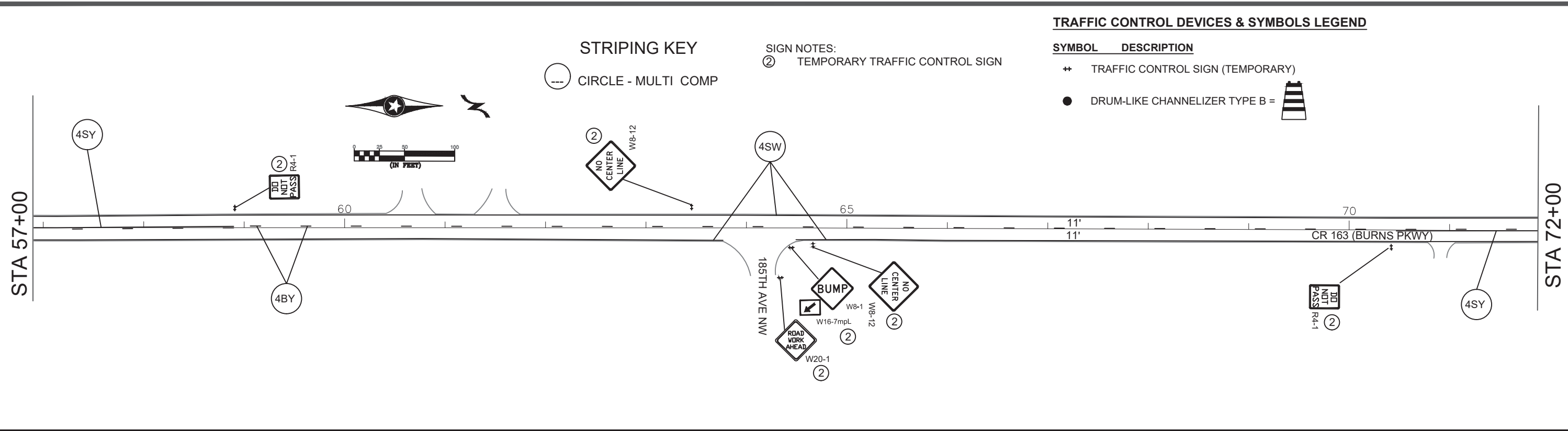
- ++ TRAFFIC CONTROL SIGN (TEMPORARY)
- DRUM-LIKE CHANNELIZER TYPE B = 

**STRIPING KEY**

--- CIRCLE - MULTI COMP

**SIGN NOTES:**

② TEMPORARY TRAFFIC CONTROL SIGN

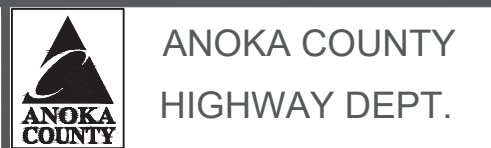


NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\24-01-00\CR\_163\_(Baugh St-Nowthen Blvd)\Base\Traffic\TC.dwg

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: SEAN R. THIEL  
 SIGNATURE: *Sean R. Thiel*  
 DATE: 1/18/2024 LICENSE NO. 45129

DRAWN BY LJK DATE 1/17/24  
 DESIGN BY LJK DATE 1/17/24  
 CHECKED BY SRT DATE 1/18/24



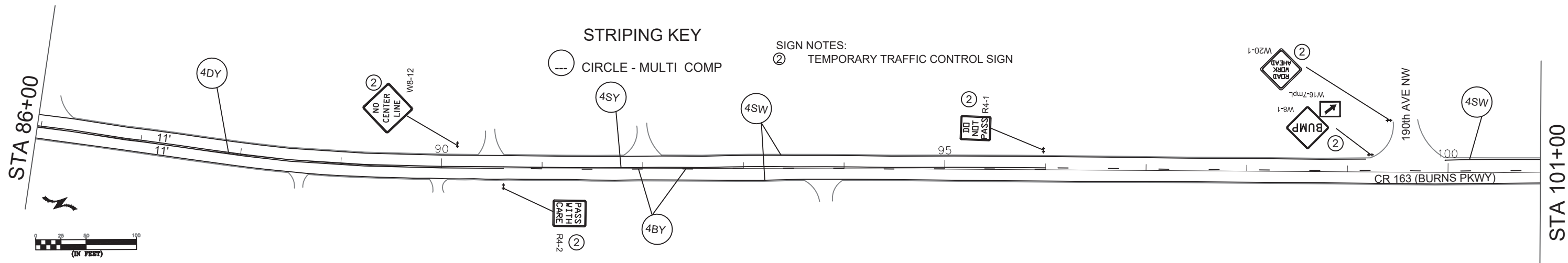
CP 24-12-163

TEMPORARY SIGNING AND PERMANENT STRIPING  
 Sheet 14 of 27 Sheets

STRIPING KEY


○ CIRCLE - MULTI COMP

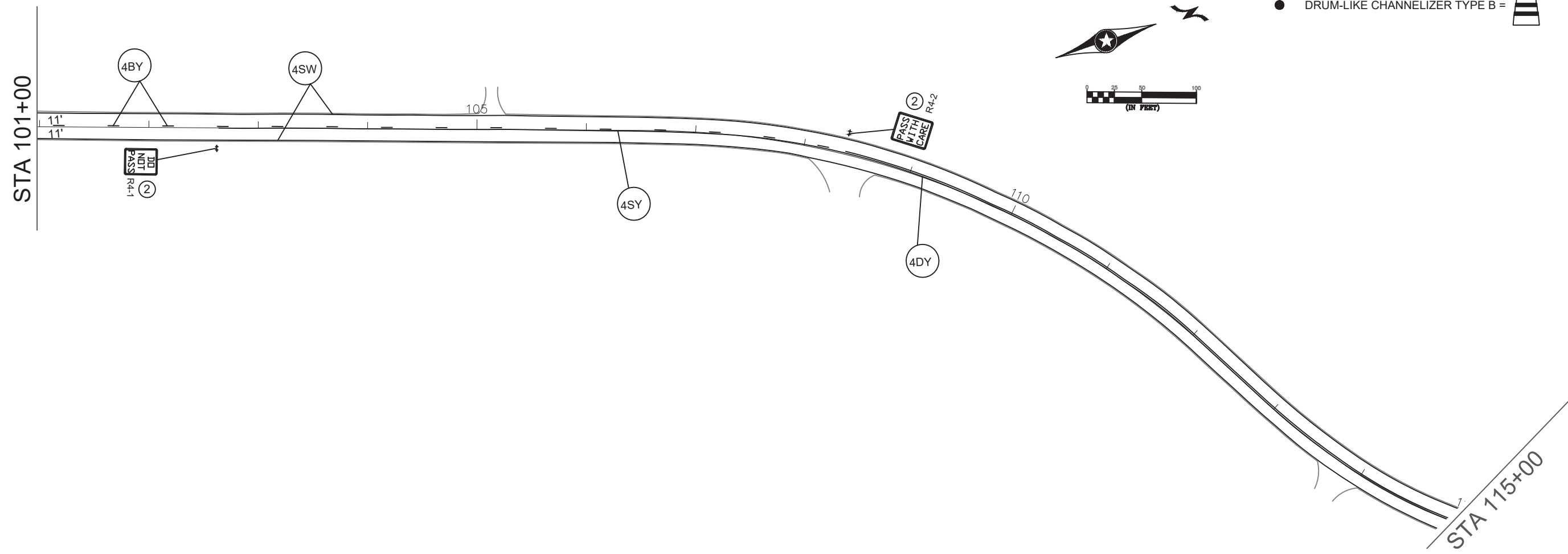
SIGN NOTES:  
 ② TEMPORARY TRAFFIC CONTROL SIGN



TRAFFIC CONTROL DEVICES & SYMBOLS LEGEND

SYMBOL DESCRIPTION

- ++ TRAFFIC CONTROL SIGN (TEMPORARY)
- DRUM-LIKE CHANNELIZER TYPE B = 



NO	DATE	BY	CKD	APPR	REVISION

NAME: P:124-01-00\CR\_163\_(Baugh St-Nowthen Blvd)\Base\Traffic\TC.dwg

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: SEAN R. THIEL  
 SIGNATURE: *Sean R. Thiel*  
 DATE: 1/18/2024 LICENSE NO. 45129

DRAWN BY LJK DATE 1/17/24  
 DESIGN BY LJK DATE 1/17/24  
 CHECKED BY SRT DATE 1/18/24



ANOKA COUNTY  
 HIGHWAY DEPT.







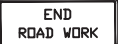











CP 24-12-163

TEMPORARY SIGNING AND  
 PERMANENT STRIPING  
 Sheet 15 of 17 Sheets







TEMPORARY TRAFFIC CONTROL SIGNS							
M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY	M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
W8-12	48" x 48"		6	W8-11	48" x 48"		AS NEEDED
R4-1	24" x 30"		8	W8-23	48" x 48"		AS NEEDED
R4-2	24" x 30"		6	M1-6M	24" x 24"		4
G20-2	36" x 18"		4	W20-1	48" x 48"		AS NEEDED (ESTIMATED 9)
W8-1	48" x 48"		9	W20-4	48" x 48"		AS NEEDED
W16-7P	30" x 18"		9	W20-7	48" x 48"		AS NEEDED (ESTIMATED 2)
W3-4	48" x 48"		AS NEEDED	REFLECTORIZED REBOUNDABLE DRUM			AS NEEDED (ESTIMATED 10)
W8-1	48" x 48"		AS NEEDED	CMS sign to be placed a minimum of ten days prior to actual commencement of road work. Signs to be removed when road work begins.			2 AT 10 DAYS EA
W8-8	48" x 48"		AS NEEDED				
W8-9	48" x 48"		AS NEEDED				

CHANGEABLE MESSAGE BOARD - MESSAGE SEQUENCE LAYOUT

		R	O	A	D					<	D	A	T	E	>		
		W	O	R	K					E	X	P	E	C	T		
		B	E	G	I	N	S			D	E	L	A	Y	S		


CMS SIGN TO BE PLACED A MINIMUM OF TEN DAYS PRIOR TO ACTUAL COMMENCEMENT OF ROAD WORK. SIGNS TO BE REMOVED WHEN ROAD WORK BEGINS.

NOTES (TYP):

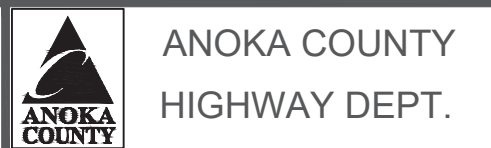
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE PLACED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD), INCLUDING PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".
- DAYTIME LANE CLOSURES FOR CONSTRUCTION DURING THIS STAGE SHALL CONFORM AND BE 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.
- CONTRACTOR SHALL SUPPLY AND PLACE THE PORTABLE CHANGEABLE MESSAGE SIGN (CMS) A MINIMUM TEN 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.
- ACCESS SHALL BE MAINTAINED TO ALL STREETS AND DRIVEWAYS IN CONSTRUCTION AREA.

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:124-01-00\CR\_163 (Baugh St-Nowthen Blvd)\Base\Traffic\TC.dwg

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: SEAN R. THIEL  
 SIGNATURE:   
 DATE: 1/18/2024 LICENSE NO. 45129

DRAWN BY: LJK DATE: 1/17/24  
 DESIGN BY: LJK DATE: 1/17/24  
 CHECKED BY: SRT DATE: 1/18/24



CP 24-12-163