

LAX

FEBRUARY 2023

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control)
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 318



06

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

REEDSBURG - WISCONSIN DELLS  
 STH 136 INTERSECTION  
 STH 23  
 SAUK COUNTY

STATE PROJECT NUMBER  
**5050-01-76**

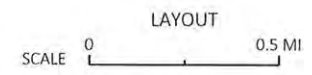
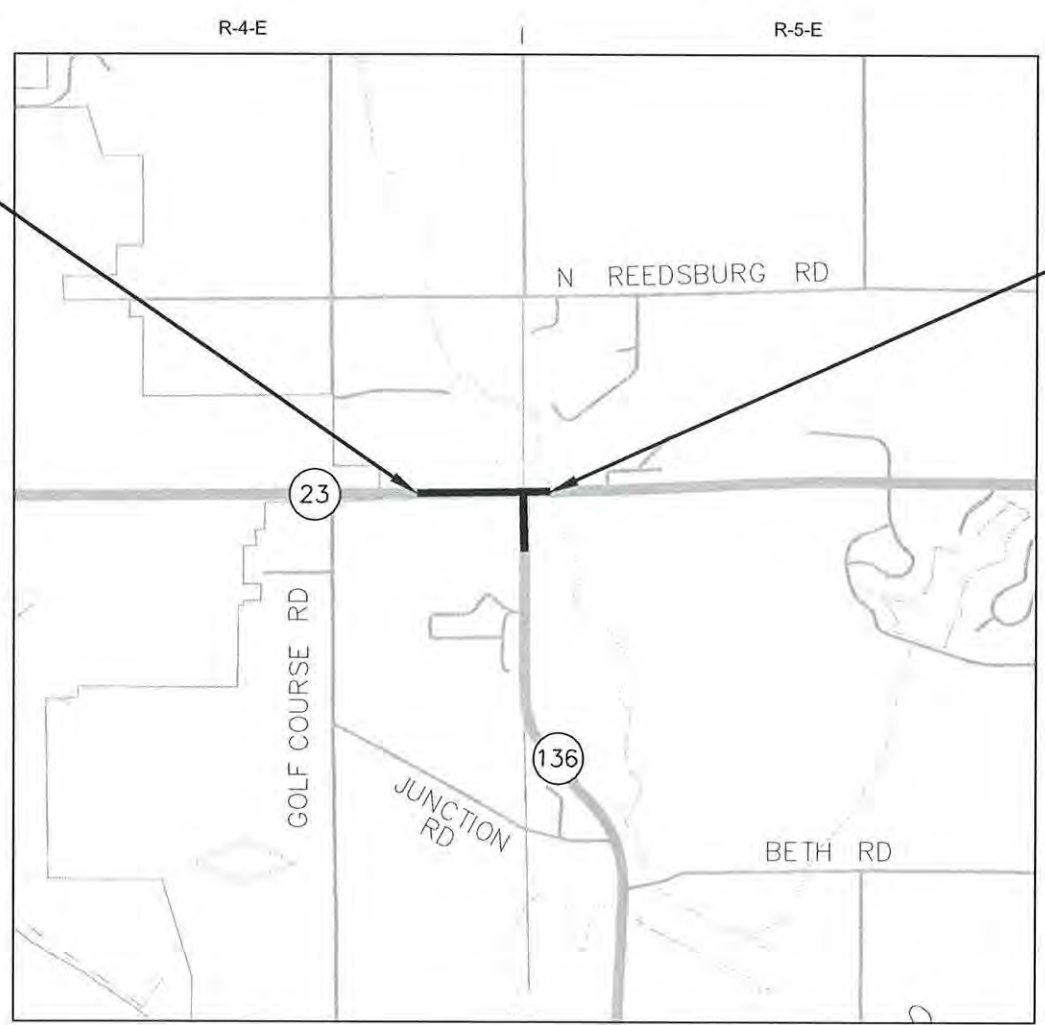
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5050-01-76	WISC 2023220	1

DESIGN DESIGNATION

A.A.D.T. (2023)	=	12,500 (STH 23), 1,430 (STH 136)
A.A.D.T. (2043)	=	13,700 (STH 23), 1,730 (STH 136)
D.H.V.	=	1,662
D.D.	=	50/50
T.	=	8.7%
DESIGN SPEED	=	50 MPH
ESALS	=	4,500,000

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

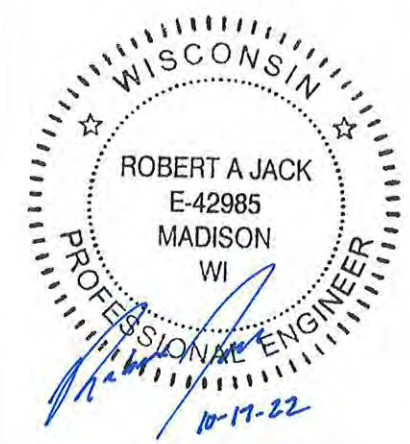


TOTAL NET LENGTH OF CENTERLINE = 0.361 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, SAUK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES. GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATION SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88 (2012).

ORIGINAL PLANS PREPARED BY



STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

Prepared By	WISDOT
Designer	STRAND ASSOCIATES INC
Project Manager	NATHANIEL SCHUMAKER
Regional Examiner	SOUTHWEST REGION
Regional Supervisor	DANIEL KLEINERTZ

APPROVED FOR THE DEPARTMENT  
 DATE: Nathaniel Schumaker  
Digitally signed by Nathaniel Schumaker  
 Contact Info: WisDOT PM  
 Date: 2022.10.19 07:03:13-0500  
 (Signature)

E

PROJECT ID: 5050-01-76

COUNTY: SAUK

WITH: N/A

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT OF WAY SHALL BE RESTORED AS DIRECTED BY THE ENGINEER

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

ANY SIGNS REMOVED DUE TO CONTRACTOR MEANS AND METHODS SHALL BE REPLACED BY THE CONTRACTOR AT THEIR EXPENSE.

THE CONTRACTORS PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING LANE.

UTILITY LABELS SHOWN IN THE CROSS SECTIONS REPRESENT PRE-EXISTING LOCATIONS AND DO NOT REPRESENT FACILITIES RELOCATED PRIOR TO CONSTRUCTION.

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

HMA PAVEMENT SUMMARY TABLE

STH 136		
LAYER	THICKNESS	HMA TYPE
UPPER LAYER	1.75	HMA 4 LT 58-28 S
LOWER LAYER	2.25	HMA 4 LT 58-28 S

GOLF VIEW COURT		
LAYER	THICKNESS	HMA TYPE
UPPER LAYER	1.75	HMA 4 LT 58-28 S
LOWER LAYER	1.75	HMA 4 LT 58-28 S

SHOULDERS (ADJACENT TO CONCRETE PAVEMENT)		
LAYER	THICKNESS	HMA TYPE
SINGLE LIFT	3.5	HMA 4 LT 58-28 S

SECTION 2 ORDER OF SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- CURB RAMP DETAILS
- INTERSECTION DETAILS
- PLAN DETAILS
- EROSION CONTROL
- STORM SEWER
- PERMANENT SIGNING
- LIGHTING PLAN
- PAVEMENT MARKING
- TRAFFIC CONTROL - DETOUR
- TRAFFIC CONTROL
- ALIGNMENT DETAILS (WITH CONTROL POINT DATA)

**WISDOT CONTACT**  
 NATHANIEL SCHUMAKER, P.E.  
 WISDOT, SW-REGION LA CROSSE  
 3550 MORMON COULEE RD  
 LA CROSSE, WI 54601  
 (608) 789-5538  
 EMAIL: NATHANIEL.SCHUMAKER@DOT.WI.GOV

**DESIGN CONTACT**  
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 MADISON, WI 53715  
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**DNR LIAISON**  
 ANDY BARTA  
 SOUTH CENTRAL REGION  
 3911 FISH HATCHERY ROAD  
 FITCHBURG, WI 53711-5397  
 (608) 275-3308  
 EMAIL: ANDREW.BARTA@WISCONSIN.GOV

UTILITIES

- \* ALLIANT ENERGY - GAS/ELECTRIC  
 MIKE LONG  
 520 COMMERCE AVE  
 BARABOO, WI 53913  
 MICHAELLONG@ALLIANTENERGY.COM
- \* FRONTIER COMMUNICATIONS OF WISCONSIN - COMMUNICATIONS  
 JEREMY ZEHM  
 1851 NORTH 14TH AVE.  
 WAUSAU, WI 54401  
 JEREMY.ZEHM@FTR.COM
- \* REEDSBURG UTILITY COMMISSION - COMMUNICATIONS  
 KEN LAS  
 501 UTILITY CT.  
 P.O. BOX 230  
 REEDSBURG, WI 53959  
 KLAS@RUCLS.NET
- \* SPECTRUM - COMMUNICATIONS  
 TERRY BLAKE  
 E10704 WIS 33  
 BARABOO, WI 53913  
 TERRY.BLAKE@CHARTER.COM

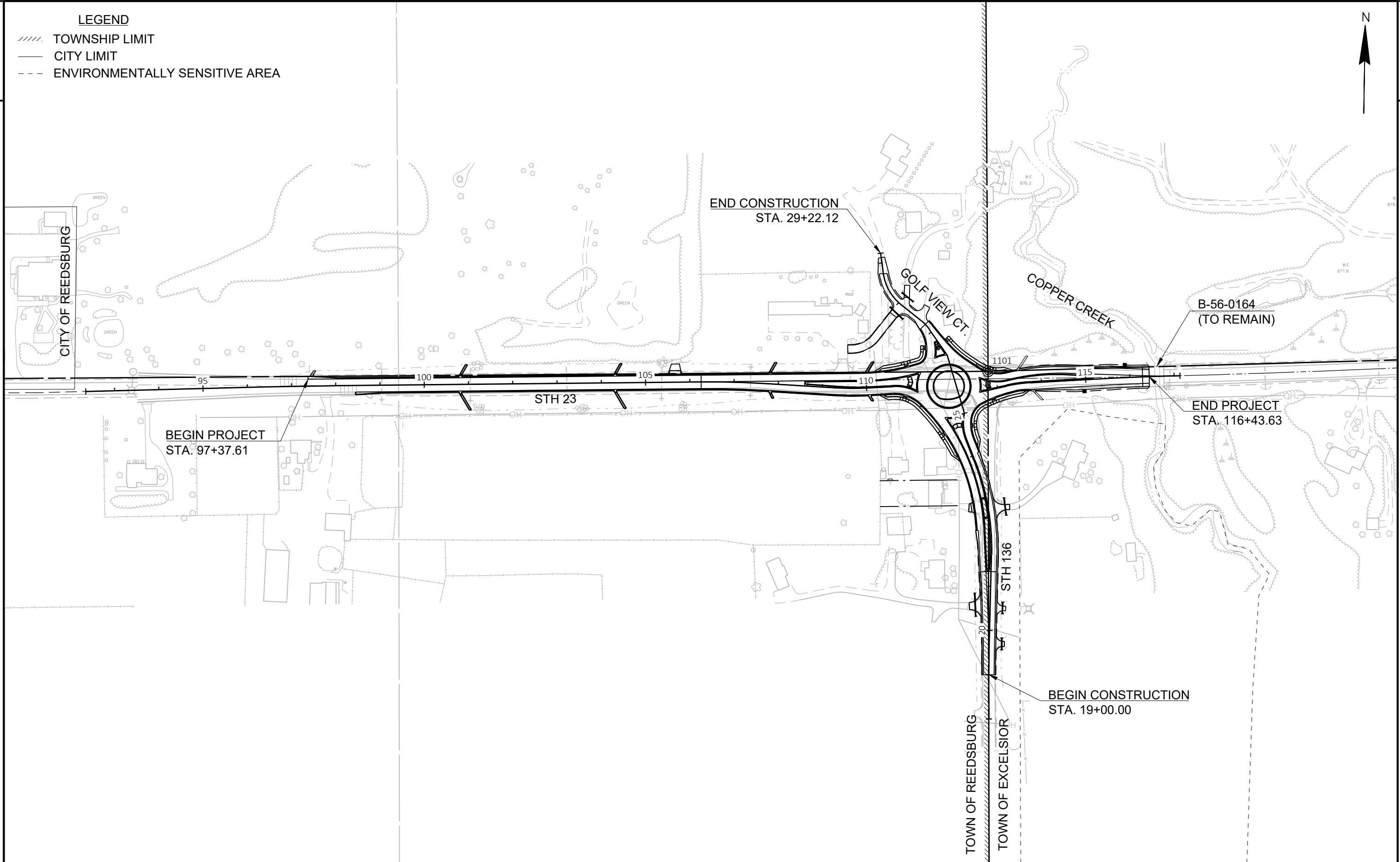
\*DENOTES DIGGERS HOTLINE MEMBERS



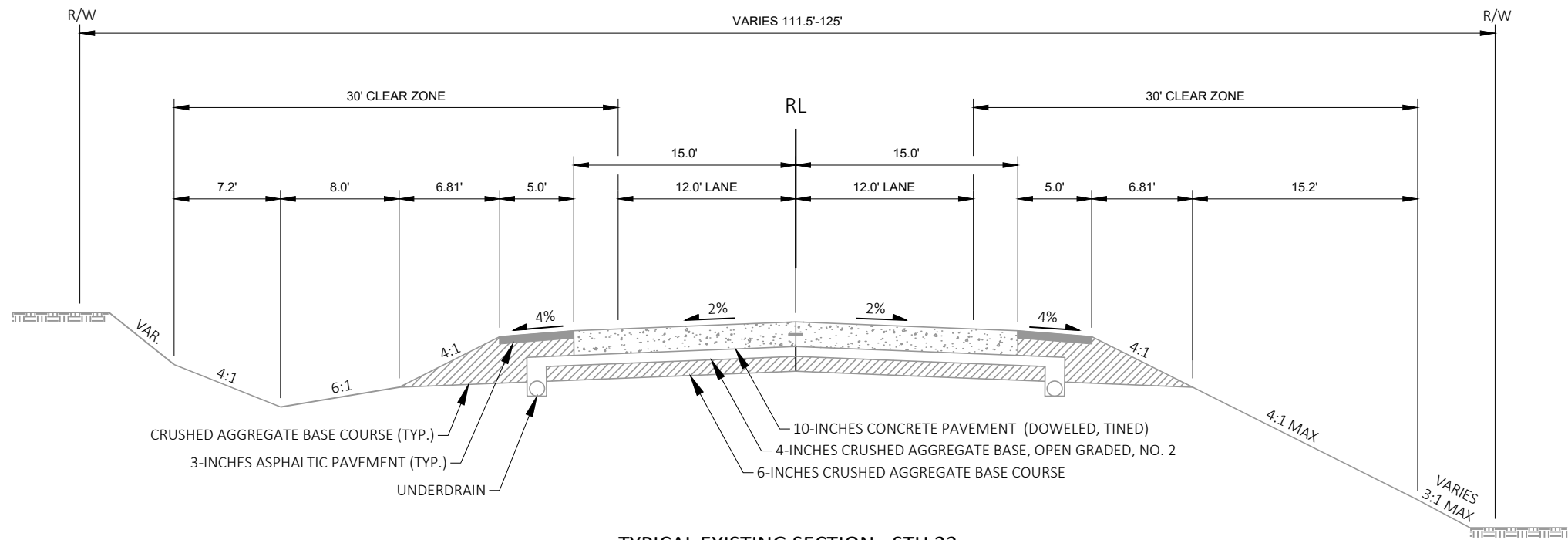
PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	GENERAL NOTES	SHEET	E
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LEGEND

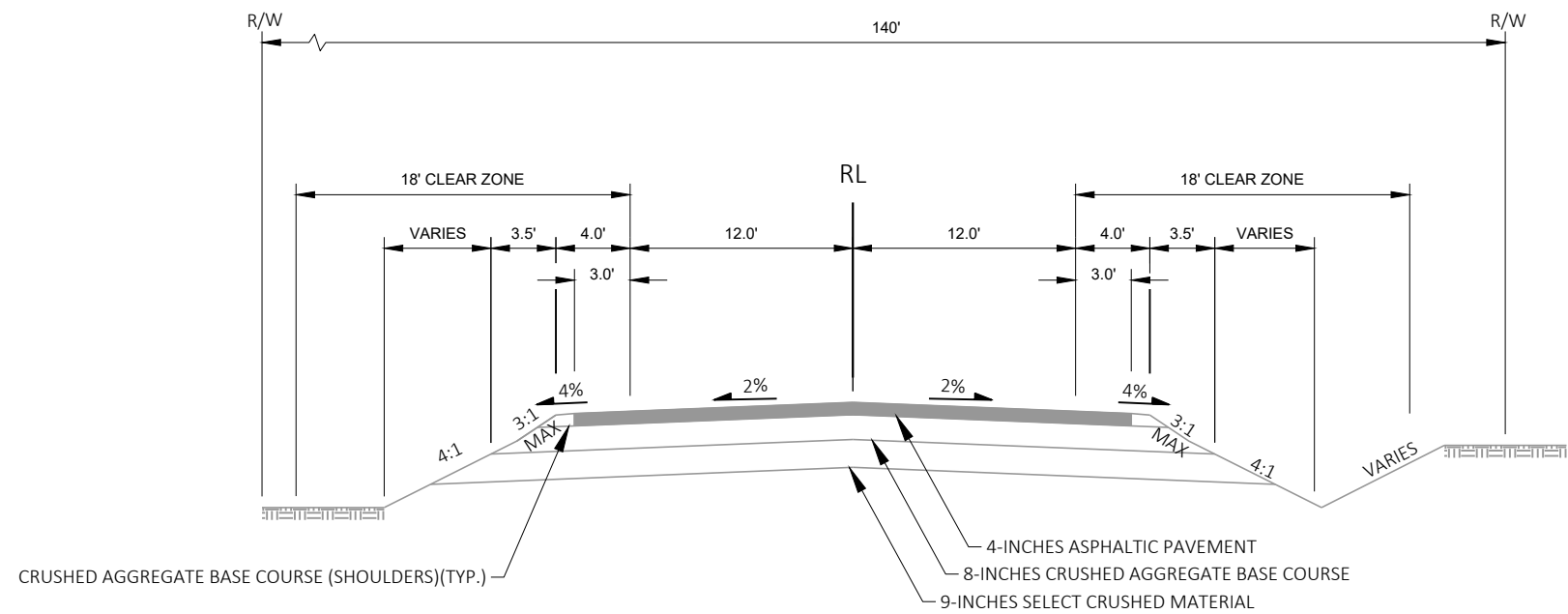
- ////// TOWNSHIP LIMIT
- CITY LIMIT
- - - ENVIRONMENTALLY SENSITIVE AREA



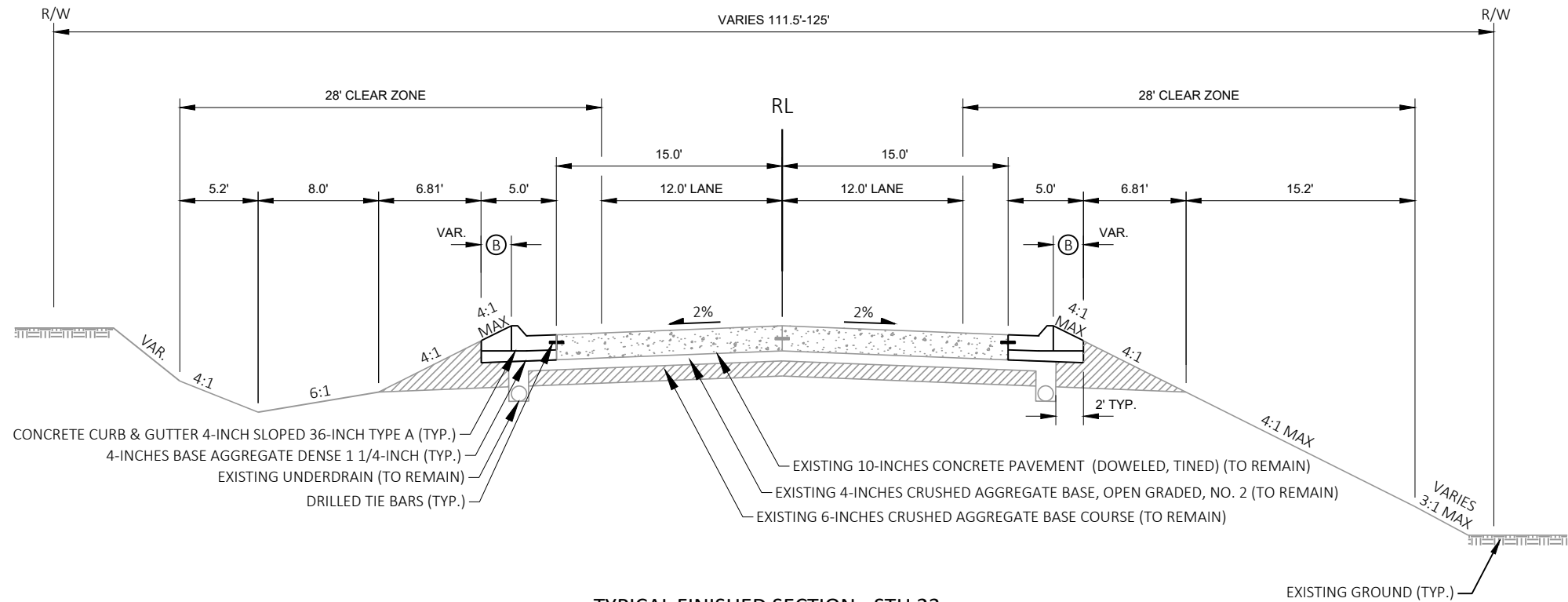
PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	PROJECT OVERVIEW	SHEET	<b>E</b>
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**TYPICAL EXISTING SECTION - STH 23**  
 STA. 97+37.61 - STA. 116+43.63

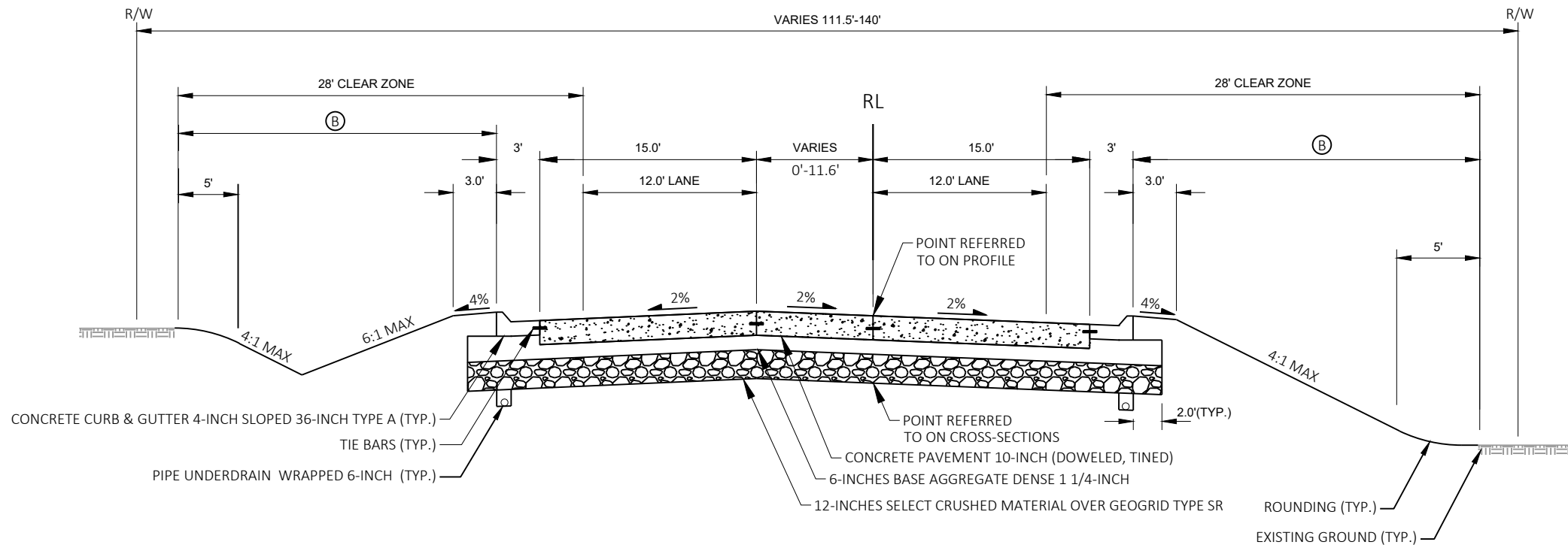


**TYPICAL EXISTING SECTION - STH 136**  
 STA. 19+00.00 - STA. 25+55.00

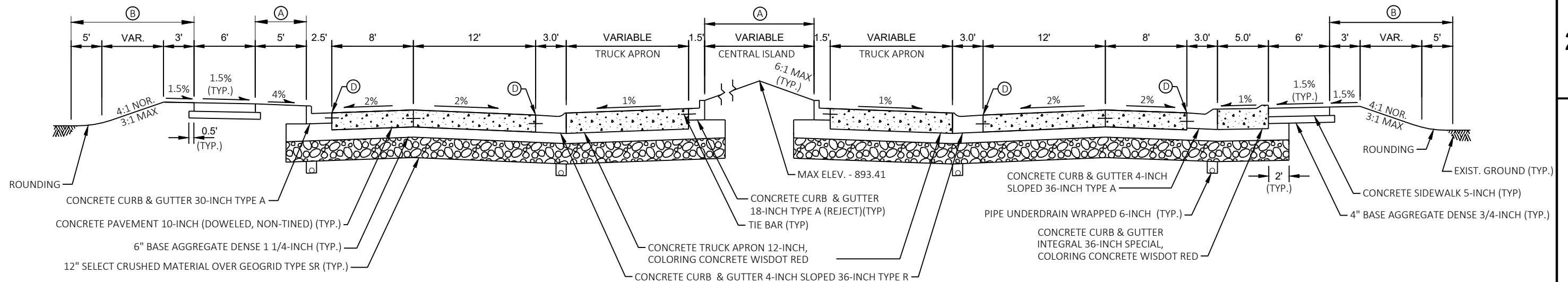


**TYPICAL FINISHED SECTION - STH 23**  
 STA. 97+37.61 - STA. 106+25.63

- (A) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE A.
- (B) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE B.
- (C) SEEDING MIXTURE NO. 30 & FERTILIZER TYPE B.



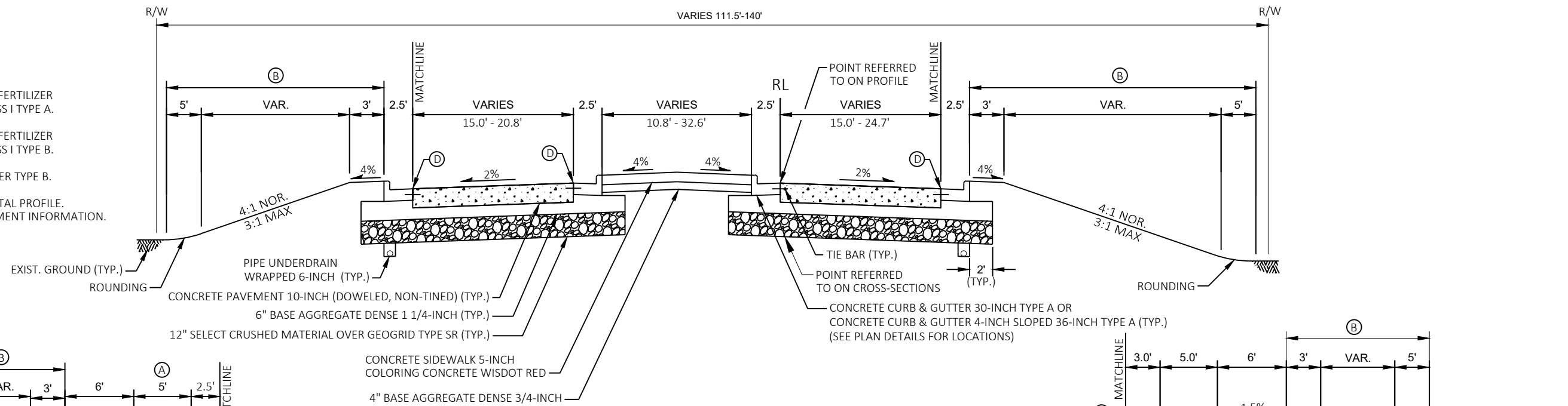
**TYPICAL FINISHED SECTION - STH 23 / GOLF VIEW COURT**  
 STA. 106+25.63 - STA. 108+59.69  
 STA. 26+73.45 - STA. 27+22.38



TYPICAL FINISHED SECTION THROUGH ROUNDABOUT

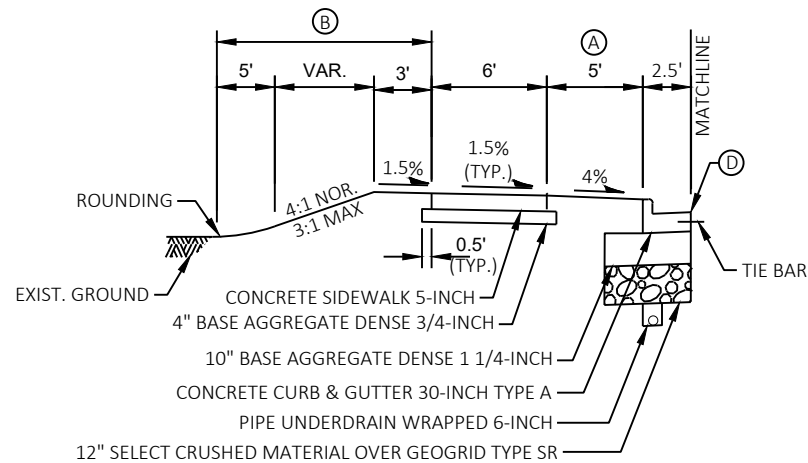
STA. 10+00.00 A - STA. 13+17.30 A

- (A) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE A.
- (B) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE B.
- (C) SEEDING MIXTURE NO. 30 & FERTILIZER TYPE B.
- (D) POINT REFERRED TO ON SUPPLEMENTAL PROFILE. SEE PLAN DETAIL SHEETS FOR ALIGNMENT INFORMATION.

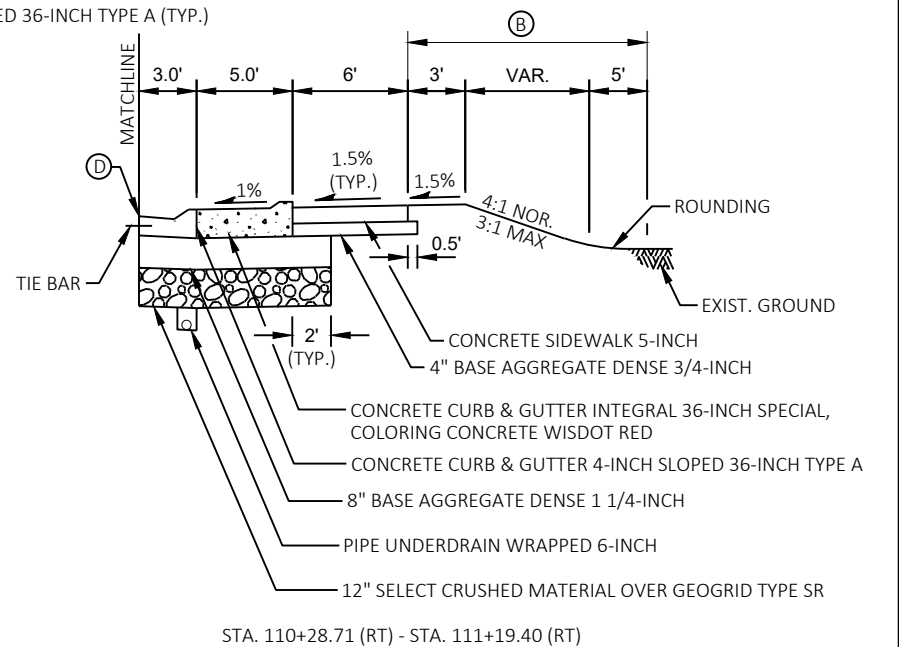


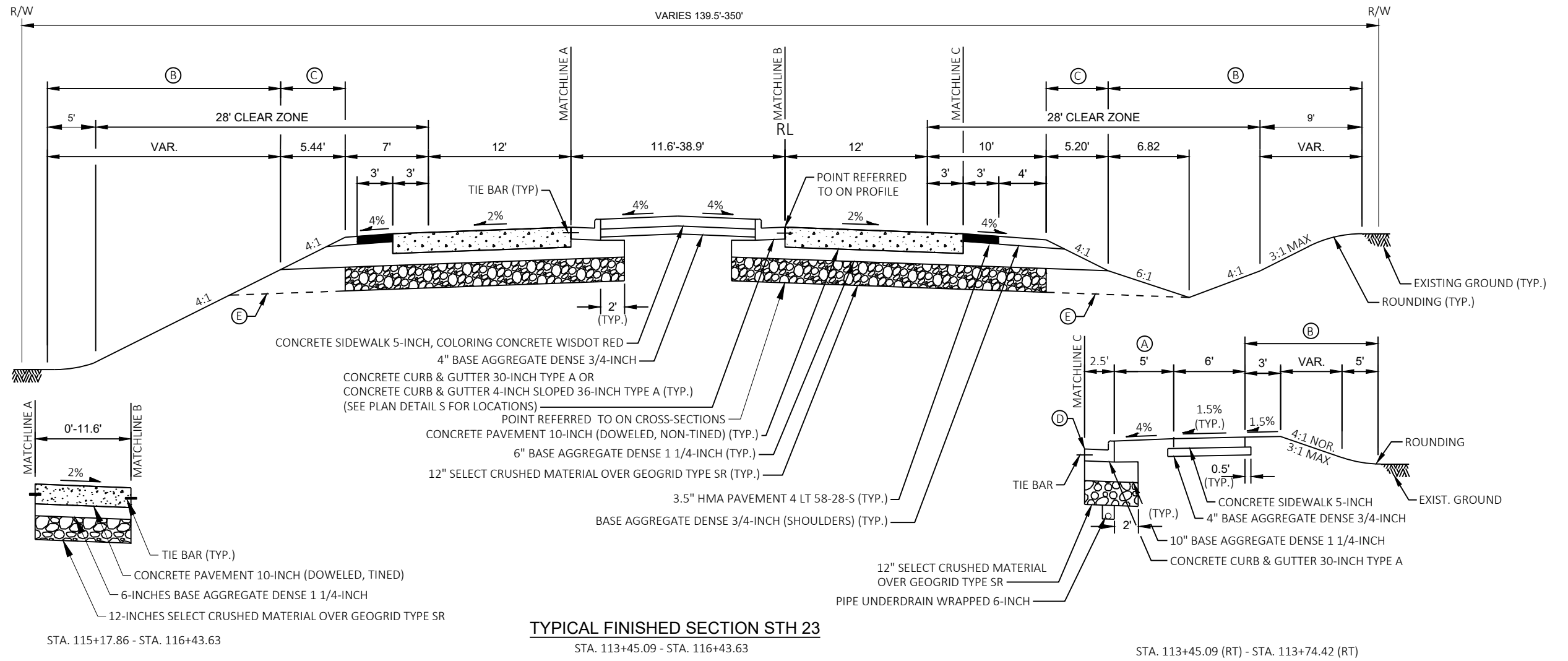
TYPICAL FINISHED SECTION STH 23 AND STH 136

STA. 108+59.69 - STA. 111+19.40  
STA. 112+57.58 - STA. 113+45.09  
STA. 26+37.03 - STA. 26+73.45



STA. 110+18.90 (LT) - STA. 111+19.40 (LT)  
STA. 112+57.58 (LT) - STA. 113+45.09 (LT)  
STA. 112+57.58 (RT) - STA. 113+45.09 (RT)  
STA. 26+37.03 (RT/LT) - STA. 26+73.45 (RT/LT)  
\*REVERSED FOR RIGHT SIDE



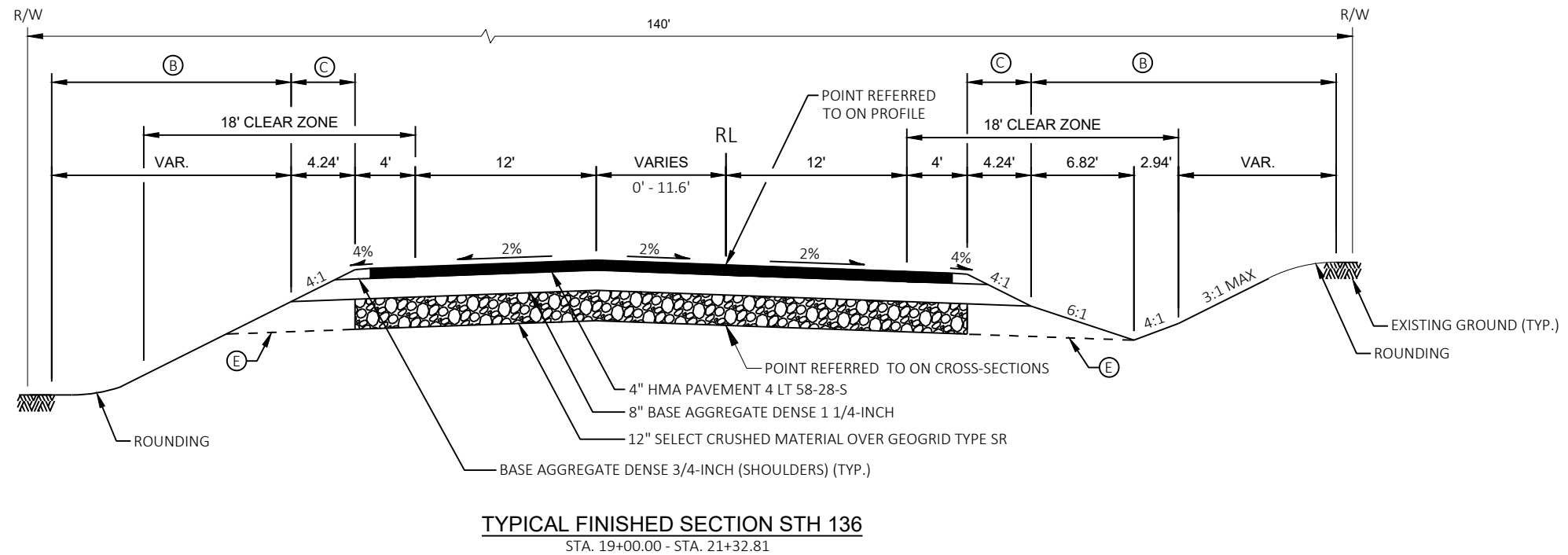


TYPICAL FINISHED SECTION STH 23

STA. 113+45.09 - STA. 116+43.63

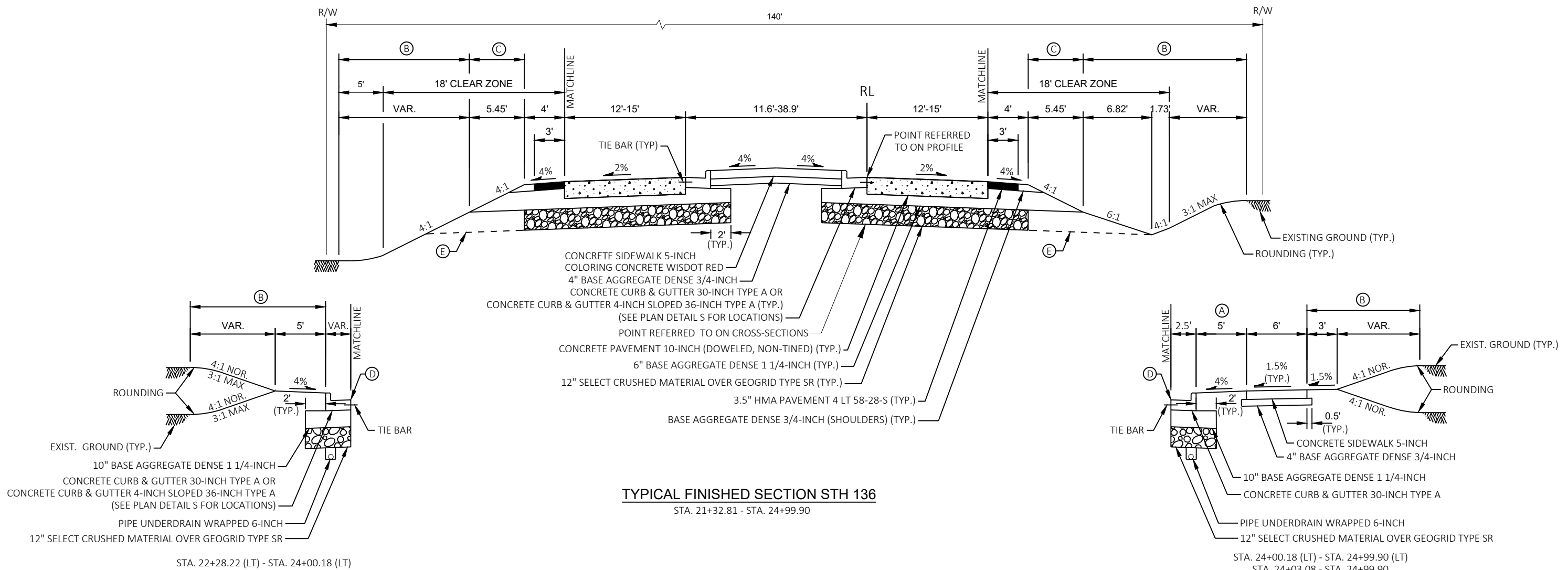
STA. 113+45.09 (RT) - STA. 113+74.42 (RT)

- (A) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE A.
- (B) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE B.
- (C) SEEDING MIXTURE NO. 30 & FERTILIZER TYPE B.
- (D) POINT REFERRED TO ON SUPPLEMENTAL PROFILE. SEE PLAN DETAIL SHEETS FOR ALIGNMENT INFORMATION.
- (E) CONSTRUCT RELIEF TRENCHES AT 250' INTERVALS AND AT PROFILE SAG POINTS - SEE CONSTRUCTION DETAILS.

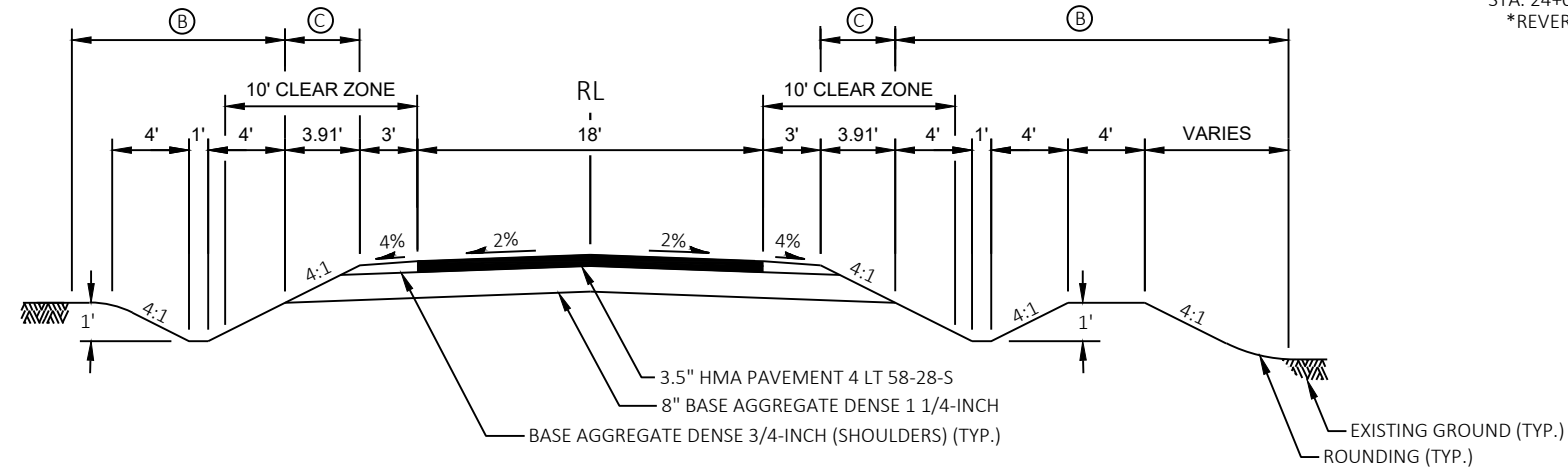


TYPICAL FINISHED SECTION STH 136

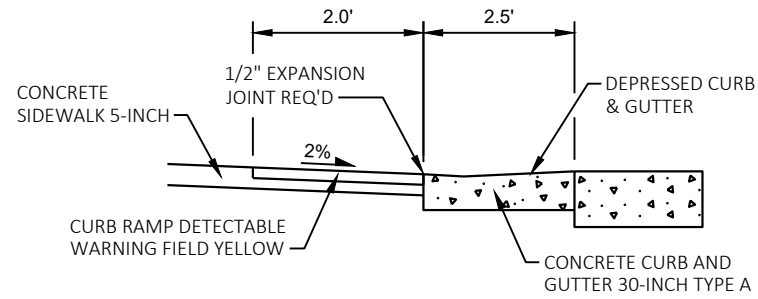
STA. 19+00.00 - STA. 21+32.81



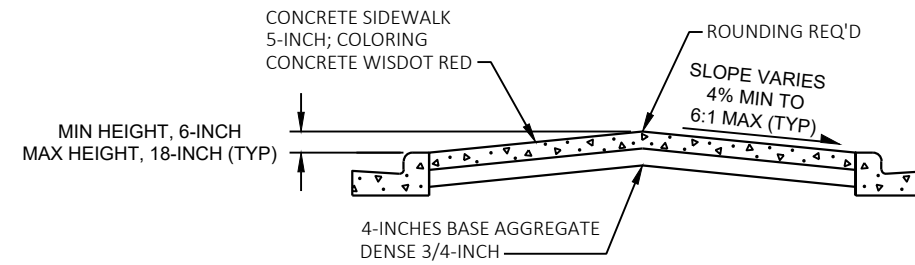
- (A) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE A.
- (B) TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE B.
- (C) SEEDING MIXTURE NO. 30 & FERTILIZER TYPE B.
- (D) POINT REFERRED TO ON SUPPLEMENTAL PROFILE. SEE PLAN DETAIL SHEETS FOR ALIGNMENT INFORMATION.
- (E) CONSTRUCT RELIEF TRENCHES AT 250' INTERVALS AND AT PROFILE SAG POINTS - SEE CONSTRUCTION DETAILS.



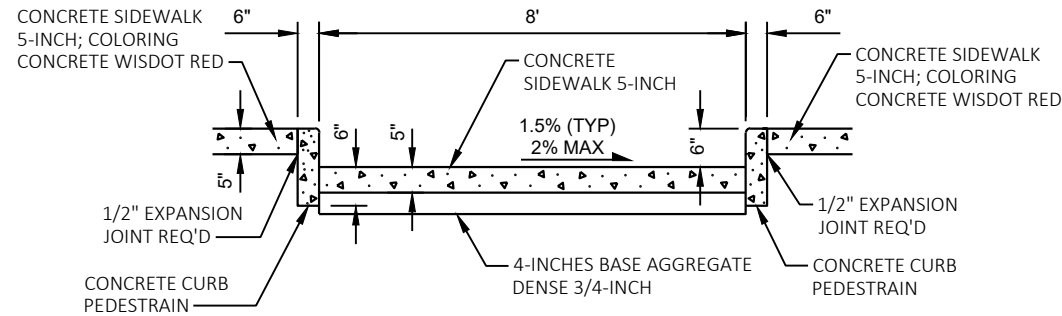




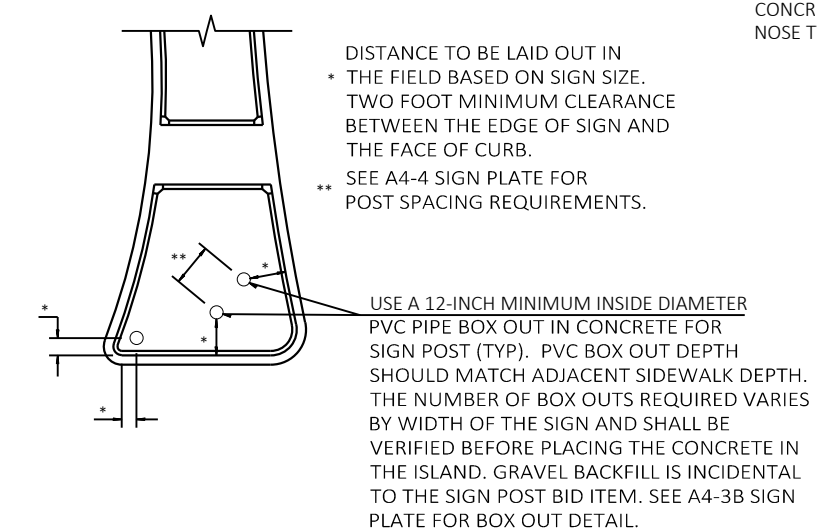
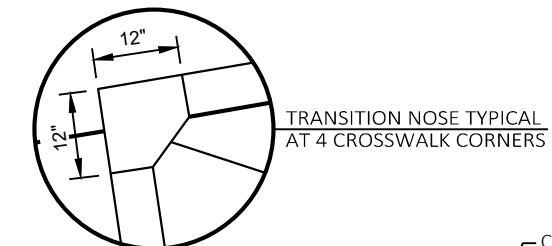
SECTION A-A



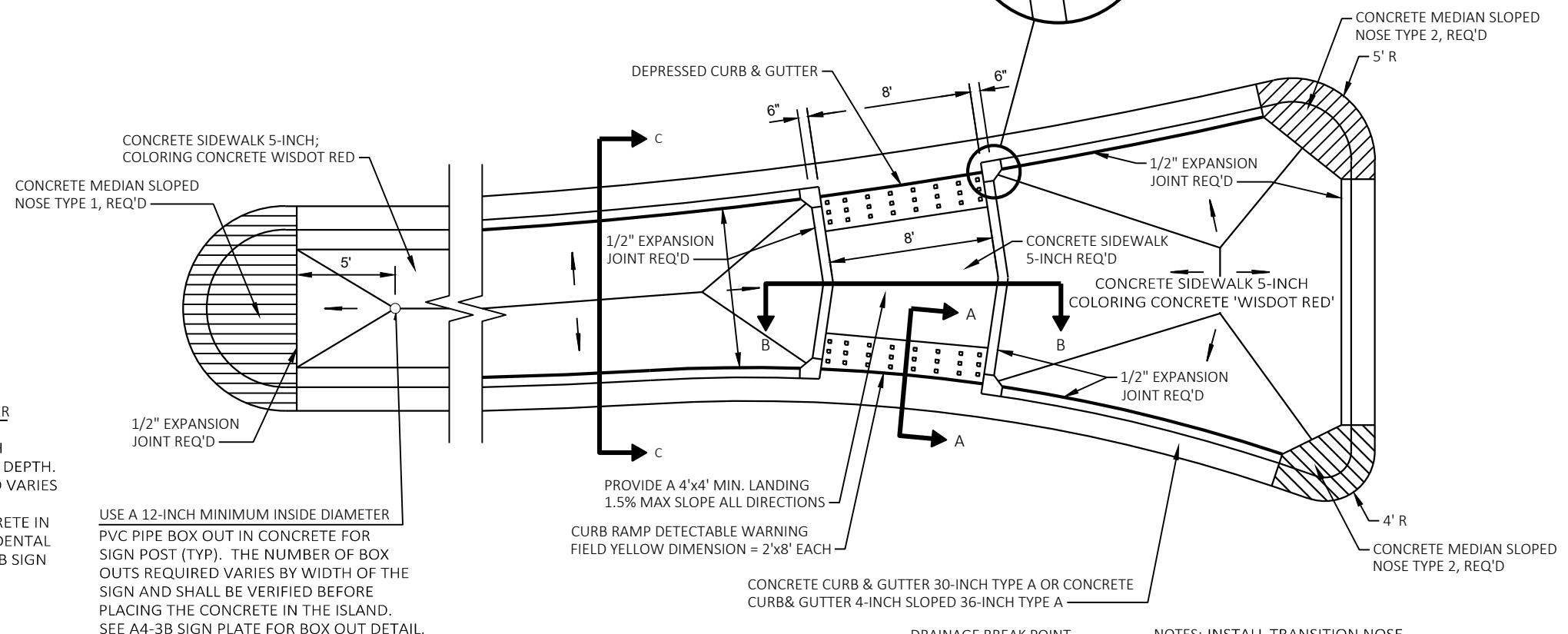
SECTION C-C



SECTION B-B

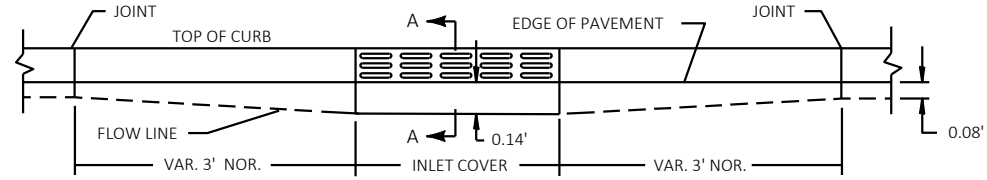


CENTER AND SPLITTER ISLAND SIGN LOCATION DETAIL (TYP)

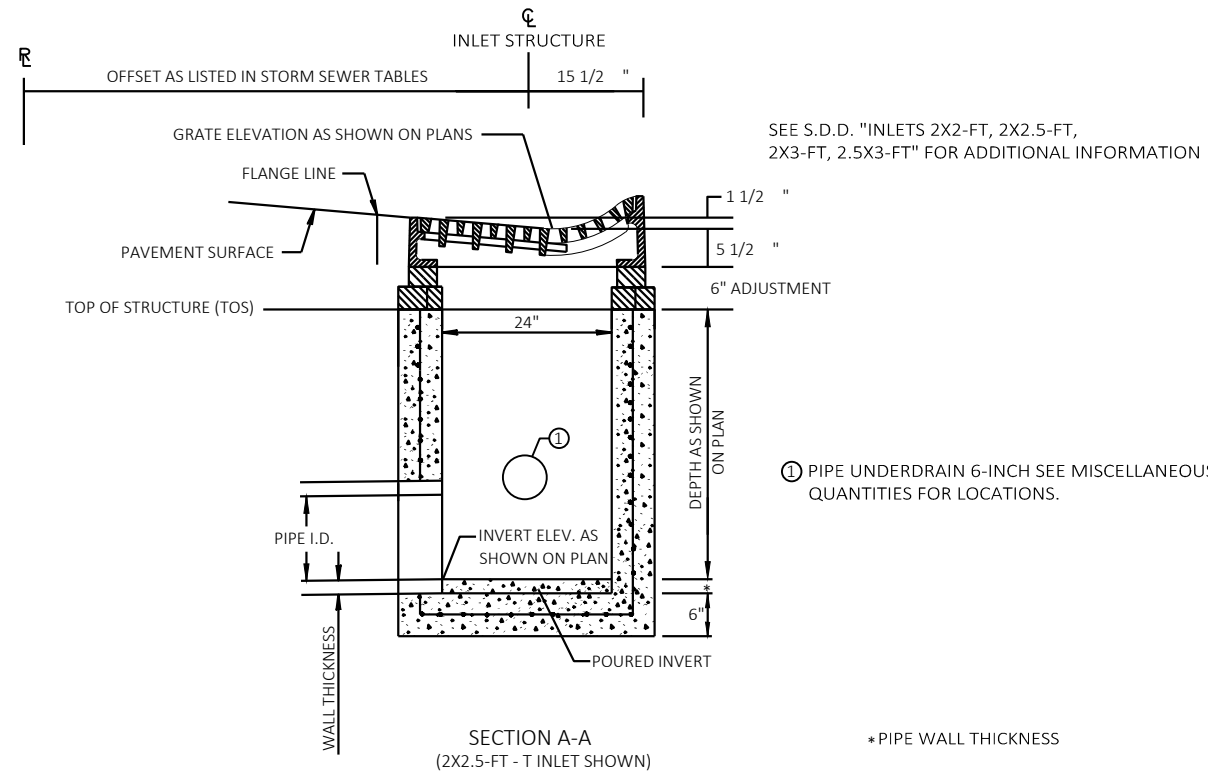
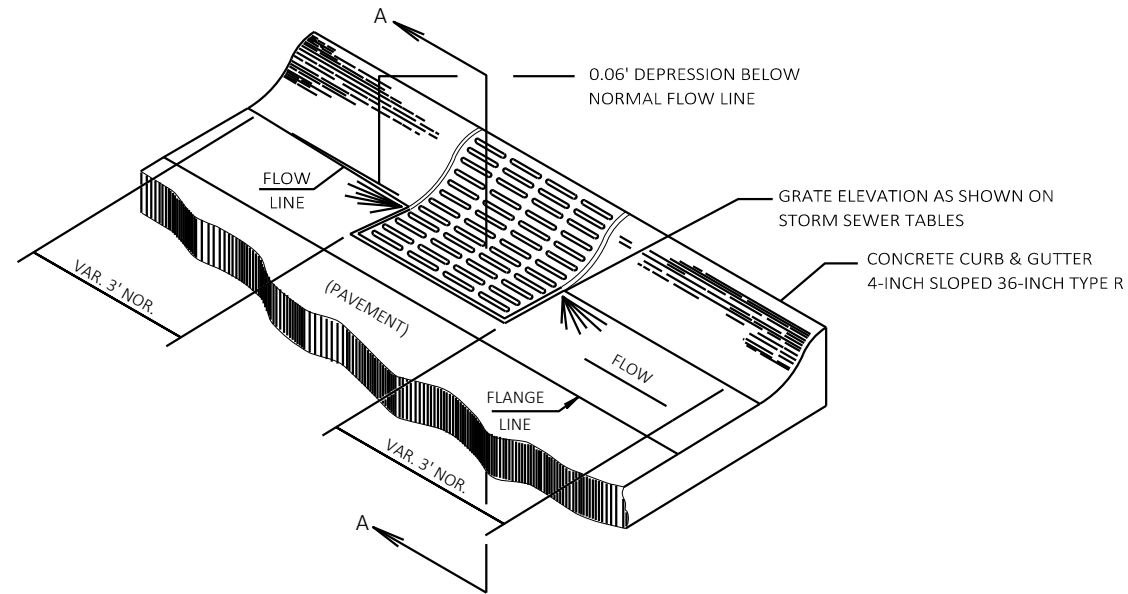


SPLITTER ISLAND DETAIL

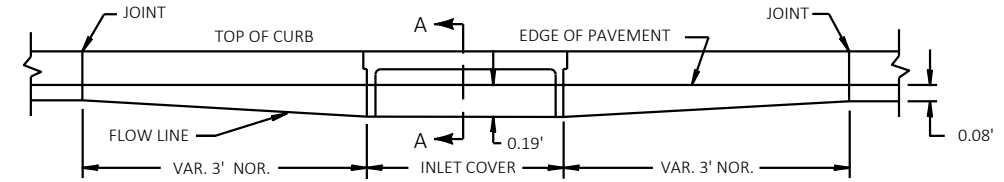
NOTES: INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE. CONTRACTOR TO USE FULL WIDTH DETECTABLE WARNING FIELD PANELS.



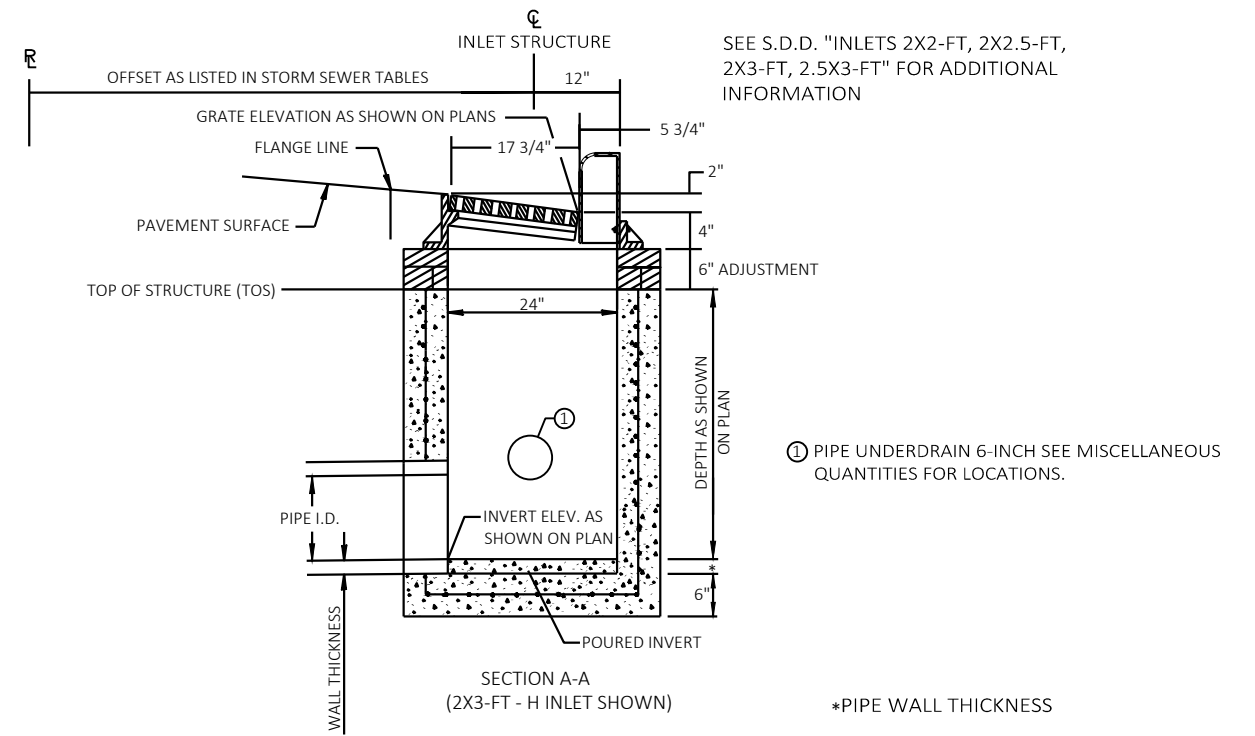
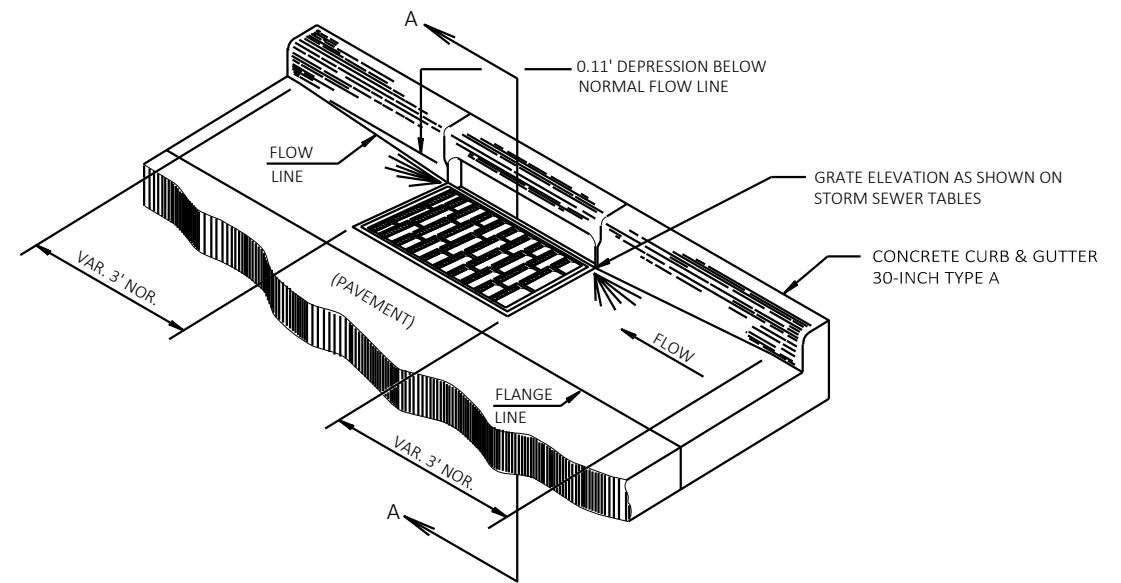
ELEVATION



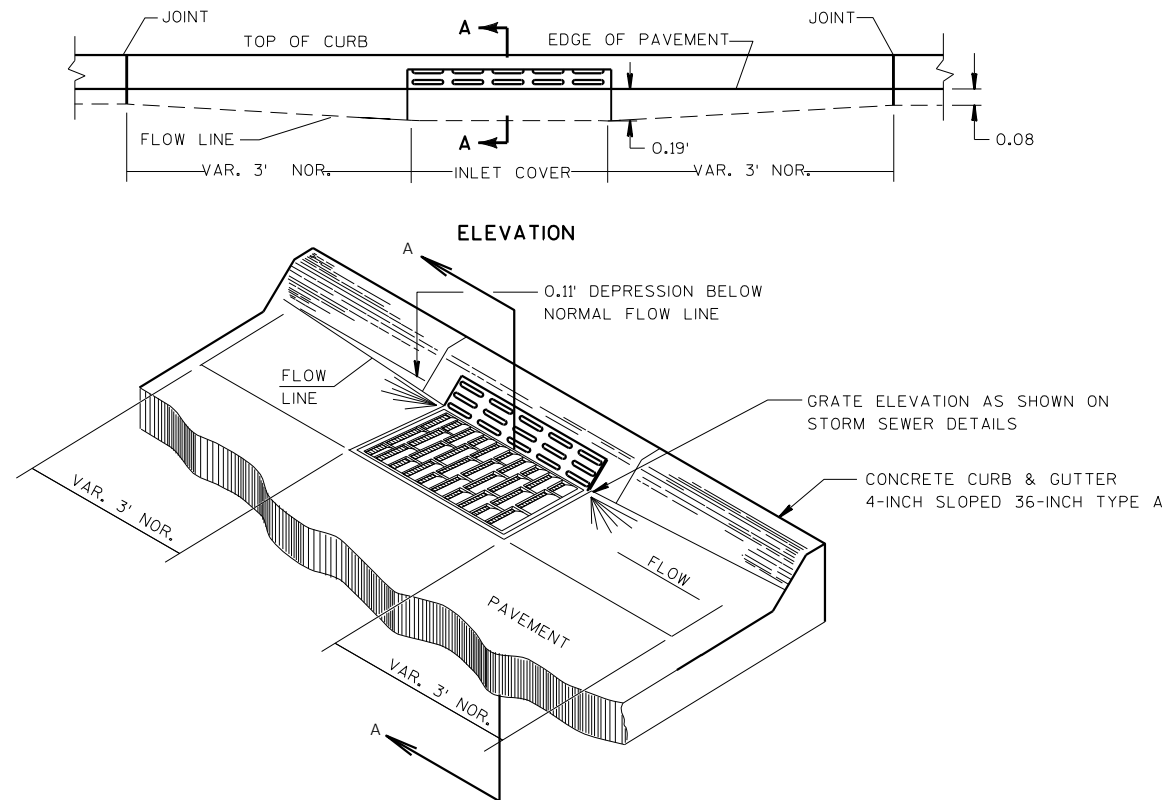
DETAIL OF CONCRETE CURB & GUTTER 36-INCH TYPE R AT INLETS



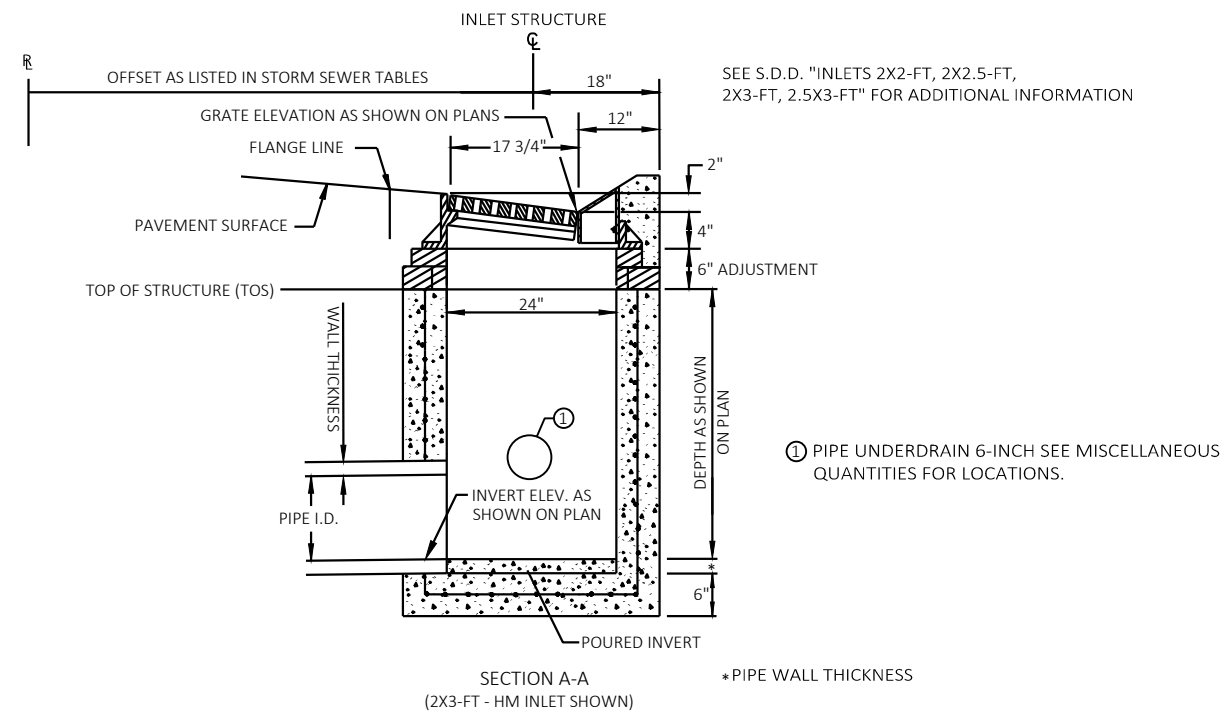
ELEVATION



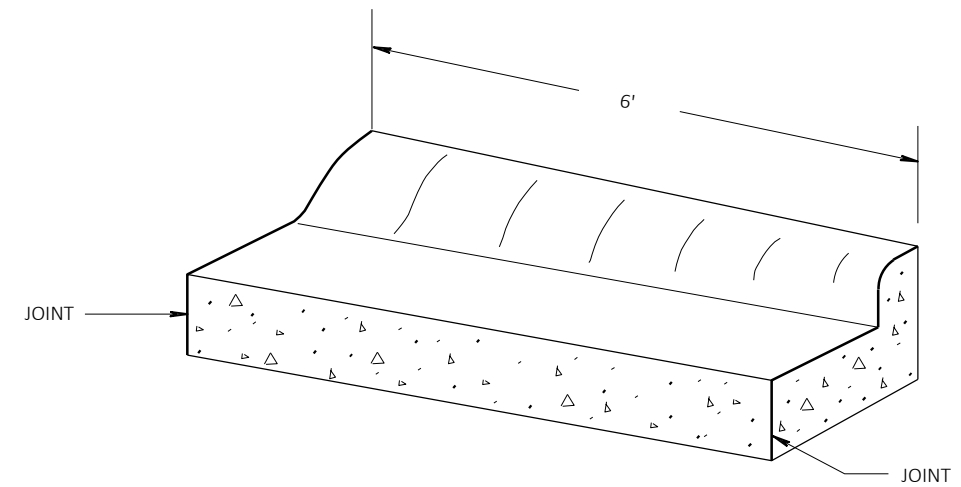
DETAIL OF CONCRETE CURB & GUTTER 30-INCH TYPE A AT INLETS



**DETAIL OF CURB AND GUTTER AT INLETS**  
(2X3-FT - HM INLET SHOWN)

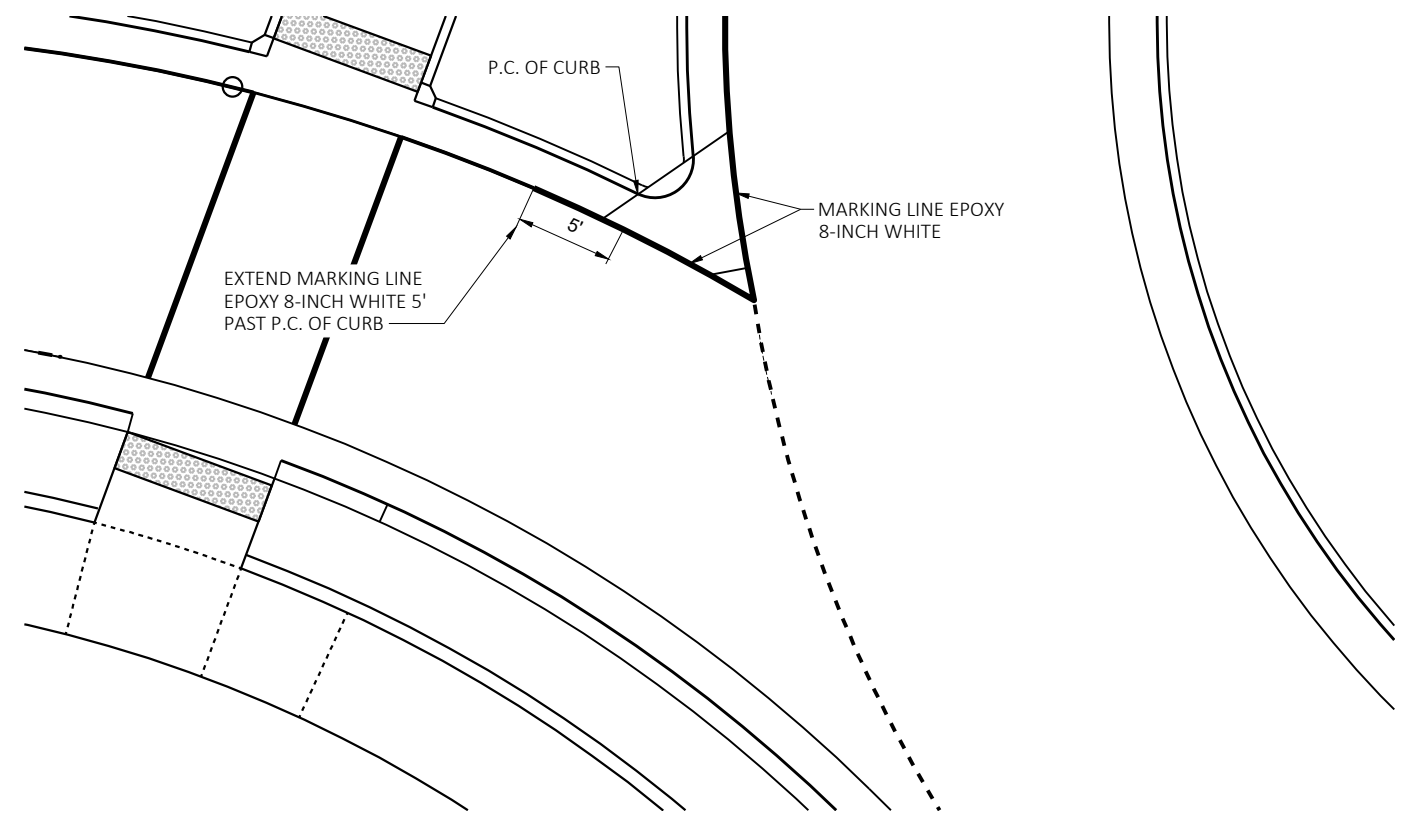


**DETAIL OF CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A AT INLETS**

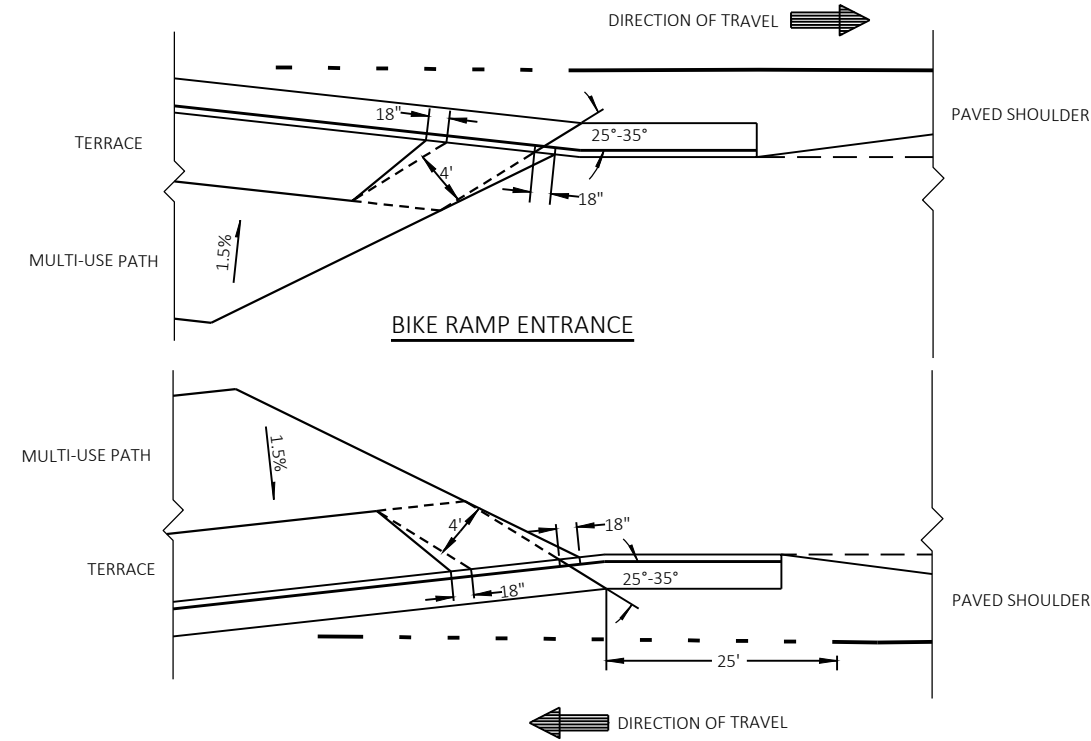


**TRANSITION DETAIL**

CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A TO CONCRETE CURB AND GUTTER 30-INCH TYPE A CURB & GUTTER (TO BE MEASURED & PAID FOR AS CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE A)

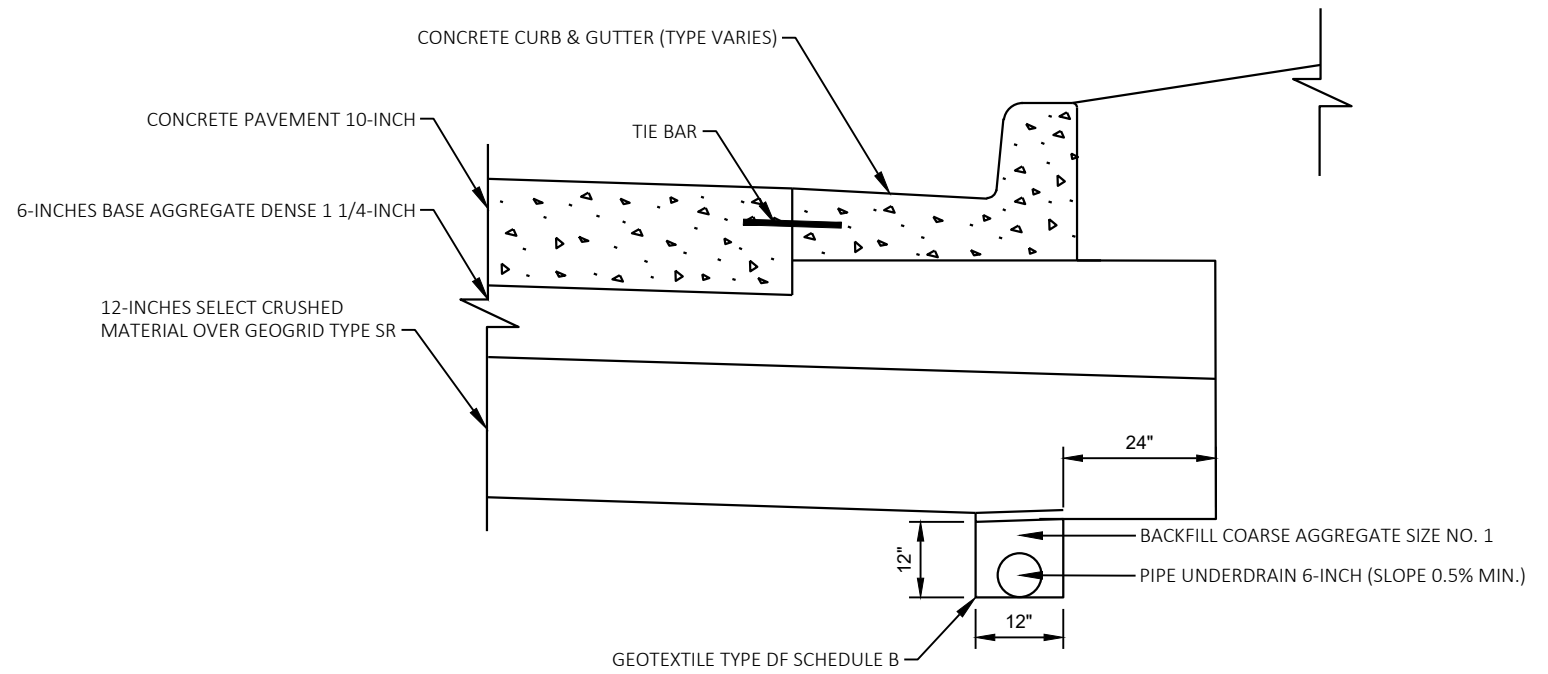


**ROUNDBABOUT MARKING DETAILS**



**BIKE RAMP ENTRANCE AND EXIT**

STA. 24+04 (LT)    STA. 110+32 (RT)  
 STA. 24+12 (RT)    STA. 113+38 (LT)  
 STA. 110+22 (LT)    STA. 113+67 (RT)



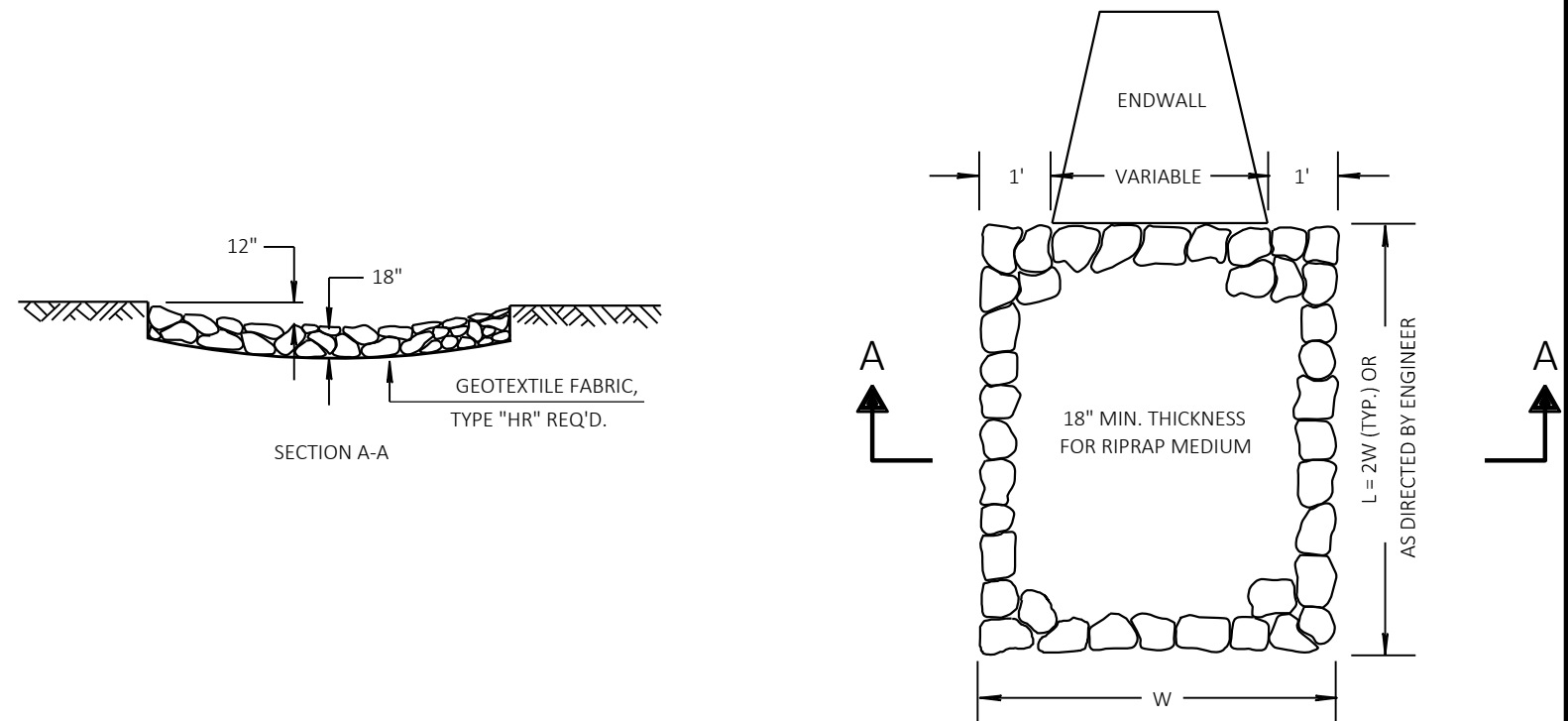
**DETAIL FOR PIPE UNDERDRAIN 6-INCH**

NOTE: PIPE UNDERDRAIN IS TO BE DISCHARGED INTO A STORM SEWER INLET.

**RUNOFF COEFFICIENT TABLE**

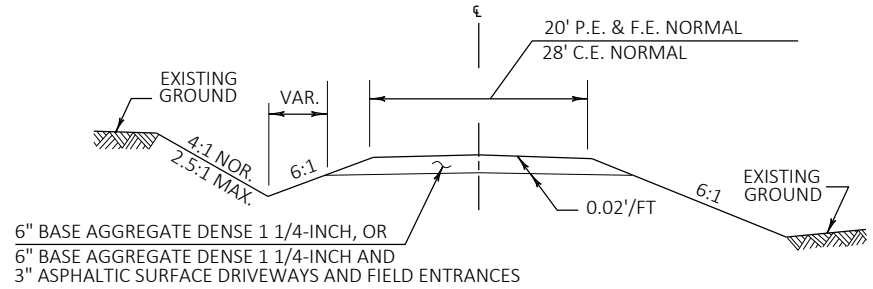
LAND USE:	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
SIDE SLOPE-TURF			.25			.27			.28			.30
PAVEMENT:												
ASPHALT						.70 - .95						
CONCRETE						.80 - .95						
BRICK						.70 - .80						
DRIVES, WALKS						.75 - .85						
ROOFS						.75 - .95						
GRAVEL ROADS, SHOULDERS						.40 - .60						

TOTAL PROJECT AREA = 9.59 ACRES  
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 5.15 ACRES

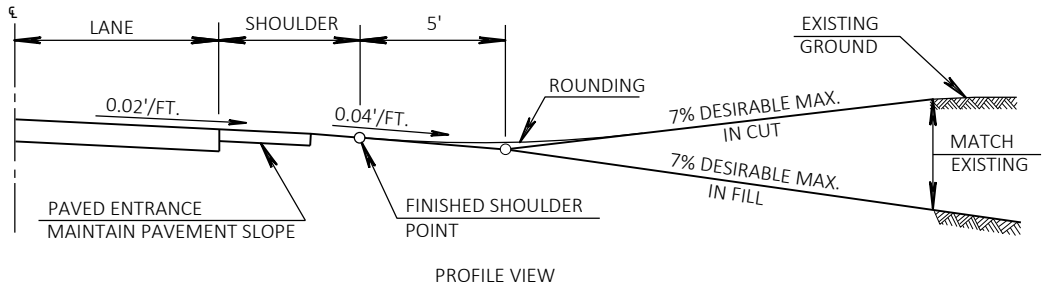


**RIPRAP MEDIUM TREATMENT AT CULVERTS**

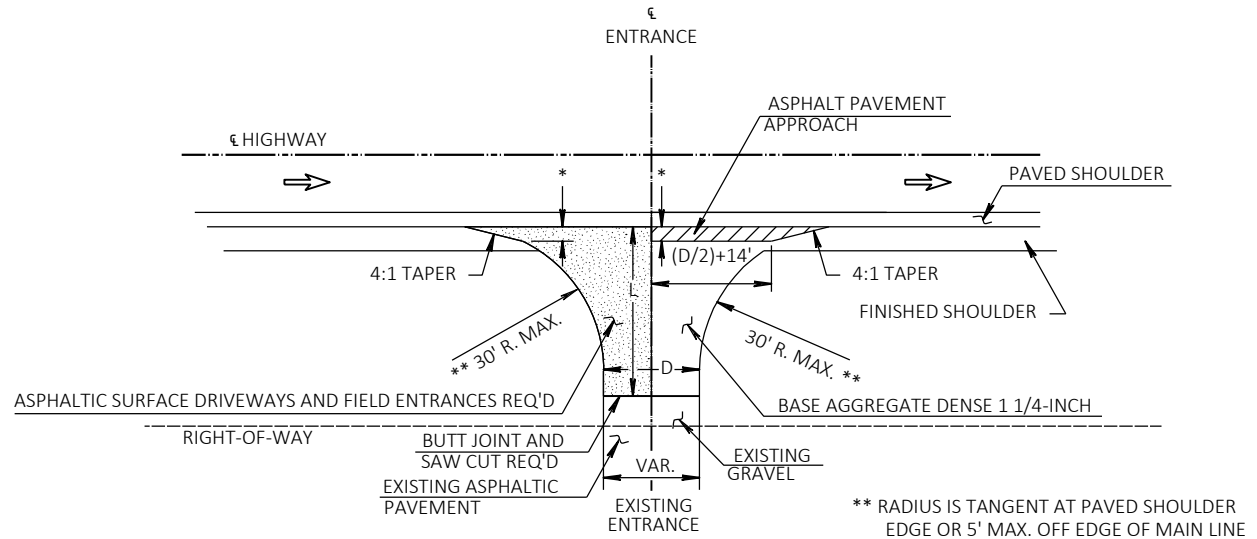
SEE EROSION CONTROL PLANS FOR LOCATIONS



TYPICAL CROSS SECTION



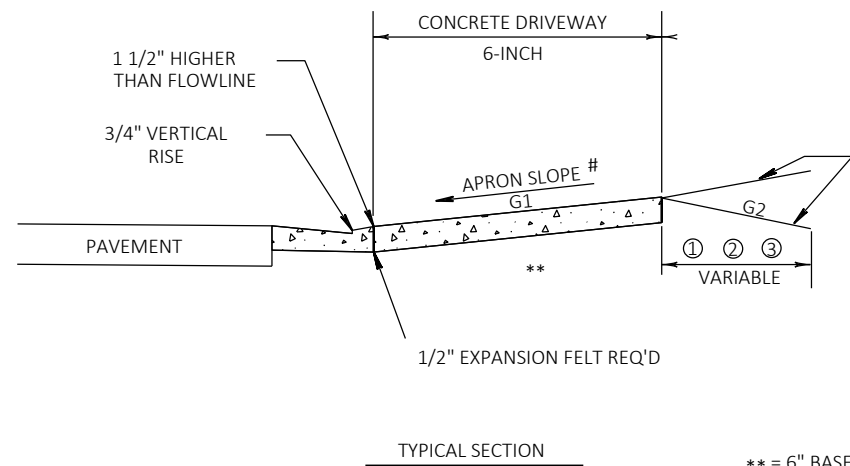
PROFILE VIEW



L=VARIABLE, EXACT LENGTH TO BE DETERMINED IN THE FIELD BY THE ENGINEER. BLEND BACK ON THE ENTRANCE FAR ENOUGH TO GET A SMOOTH PROFILE.  
 D=DRIVEWAY WIDTH  
 D=20'TYP.(PE's & FE's) (16'MIN.-24'MAX.)  
 D=28'TYP.(CE's & FARM ENT.) (24'MIN.-35'MAX.)

PLAN VIEW

RURAL DRIVEWAY INTERSECTION DETAIL  
 (PE's, FE's & CE's)  
 (FOR NEW CONSTRUCTION)



TYPICAL SECTION

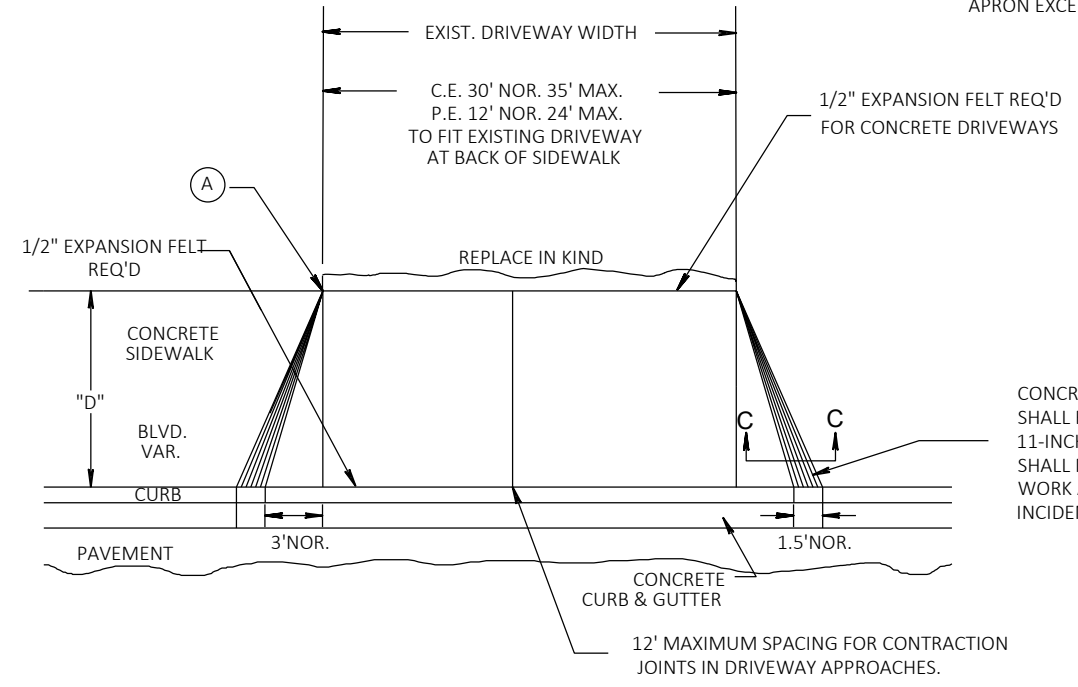
DRIVEWAY SLOPE  
 7% DESIRABLE MAX, 10% MAX

- ①— 6-INCH CONCRETE DRIVEWAY OR H.E.S. 6-INCH CONCRETE DRIVEWAY
- ②— 6-INCH BASE AGG. DENSE 1 1/4-INCH
- ③— 6-INCH BASE AGG. DENSE 1 1/4-INCH BASE WITH 3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

\*\* = 6" BASE AGG. DENSE 1 1/4-INCH REQ'D UNDER CONCRETE DRWY

#	TERRACE WIDTH	APRON SLOPE (G1)		
		MIN %	DESIRABLE %	MAX %
	3 FT	7.0	8.5	9.0
	4 FT	5.0	7.0	9.0
	5 FT	4.0	7.0	9.0
	6 FT	4.0	7.0	9.0
	7 FT	3.5	7.0	9.0
	8 FT	3.0	7.0	9.0

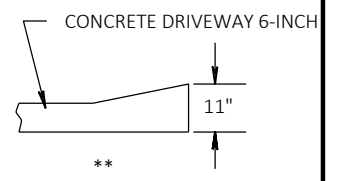
NOTE: ALGEBRAIC DIFFERENCE BETWEEN TANGENT GRADES G1 & G2 TO NOT EXCEED 15%  
 DEPRESS SIDEWALK PROFILE IF DRIVEWAY APRON EXCEEDS MAX SLOPE



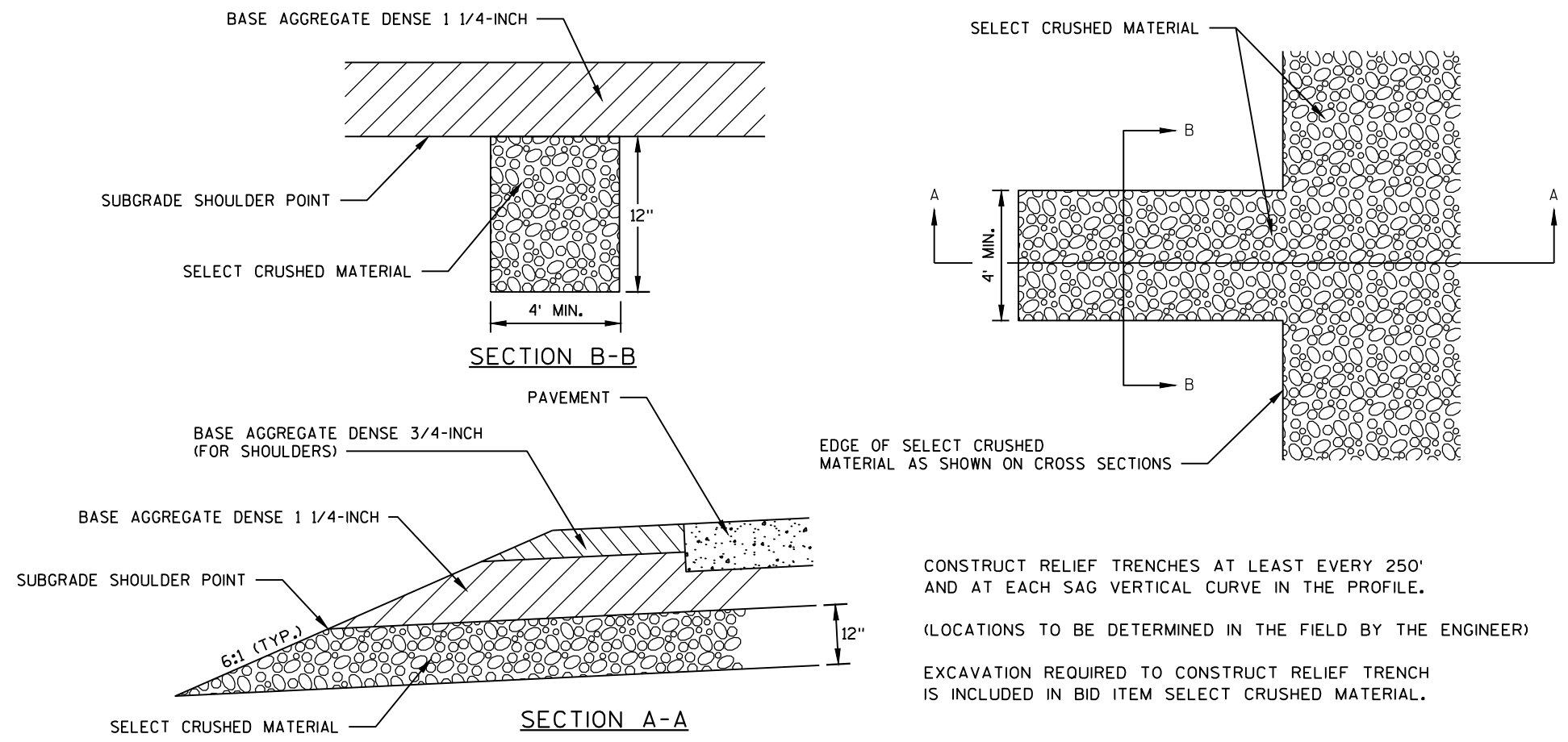
PLAN VIEW

DRIVEWAY ENTRANCE DETAIL WITH CURB & GUTTER

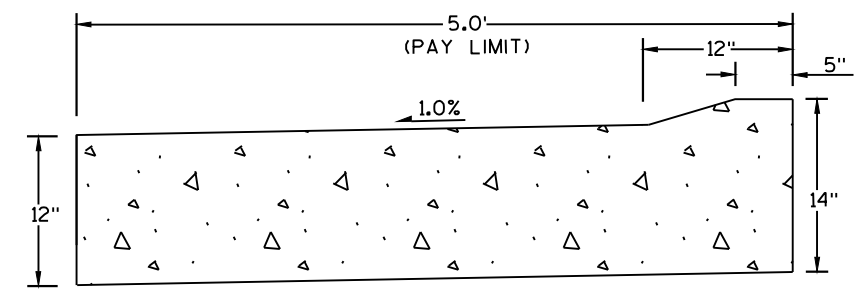
CONCRETE IN THE 1.5' TAPER AREA SHALL BE TAPERED TO A DEPTH OF 11-INCHES AND THE EXPANSION FELT SHALL MATCH THIS DEPTH. THIS WORK AND MATERIAL WILL BE INCIDENTAL TO THE BID ITEM.



SECTION C-C



RELIEF TRENCH DETAIL



NOTE: COLORING CONCRETE WISDOT RED PAID SEPARATELY

CONCRETE CURB & GUTTER INTEGRAL 36-INCH SPECIAL

STA. 115+44.57 - STA. 116+07.20 LT, MGS GUARDRAIL TERMINAL EAT  
STA. 116+07.20 - STA. 116+44.41 LT, MGS THRIE BEAM TRANSITION

\* PAVE TO FACE OF RAIL



BEGIN TAPER  
114+95.75  
32.64' LT

BEGIN TAPER  
115+44.57  
27.3' LT  
EAT POST #1  
115+54.62  
27.4' LT

EAT POST #5  
115+79.39  
25.3' LT

EAT POST #9  
116+04.11  
23.3' LT

15:1

STH 23

12+00

115+00

116+00

117+00

B-56-0164  
(TO REMAIN)

114+00

15:1

BEGIN TAPER  
114+18.08  
18' RT

EAT POST #1  
114+78.08  
22' RT

EAT POST #5  
115+03.08  
22' RT

EAT POST #9  
115+28.08  
22' RT

STA. 114+78.08 - STA. 115+31.21 RT, MGS GUARDRAIL TERMINAL EAT  
STA. 115+31.21 - STA. 116+06.52 RT, MGS GUARDRAIL 3  
STA. 116+06.52 - STA. 116+44.30 RT, MGS THRIE BEAM TRANSITION  
\* PAVE TO FACE OF RAIL

### GENERAL NOTES

THE SILT FENCE RELIEF DETAIL IS A SUPPLEMENTAL DETAIL TO THE SILT FENCE STANDARD DETAILS AND SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

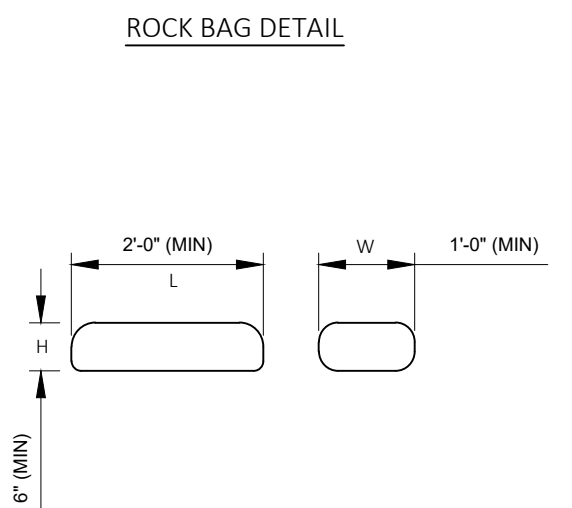
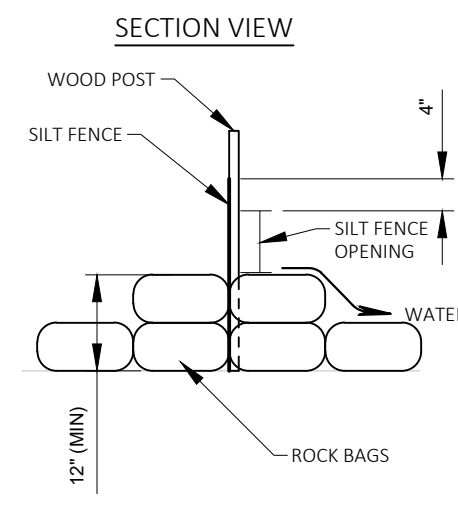
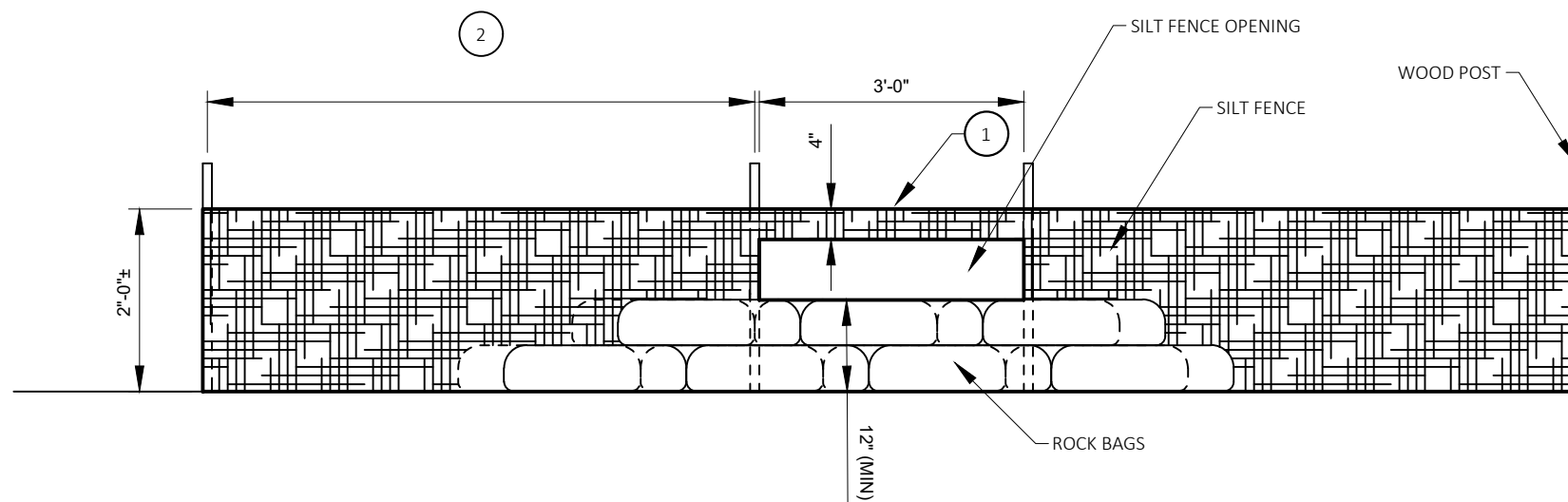
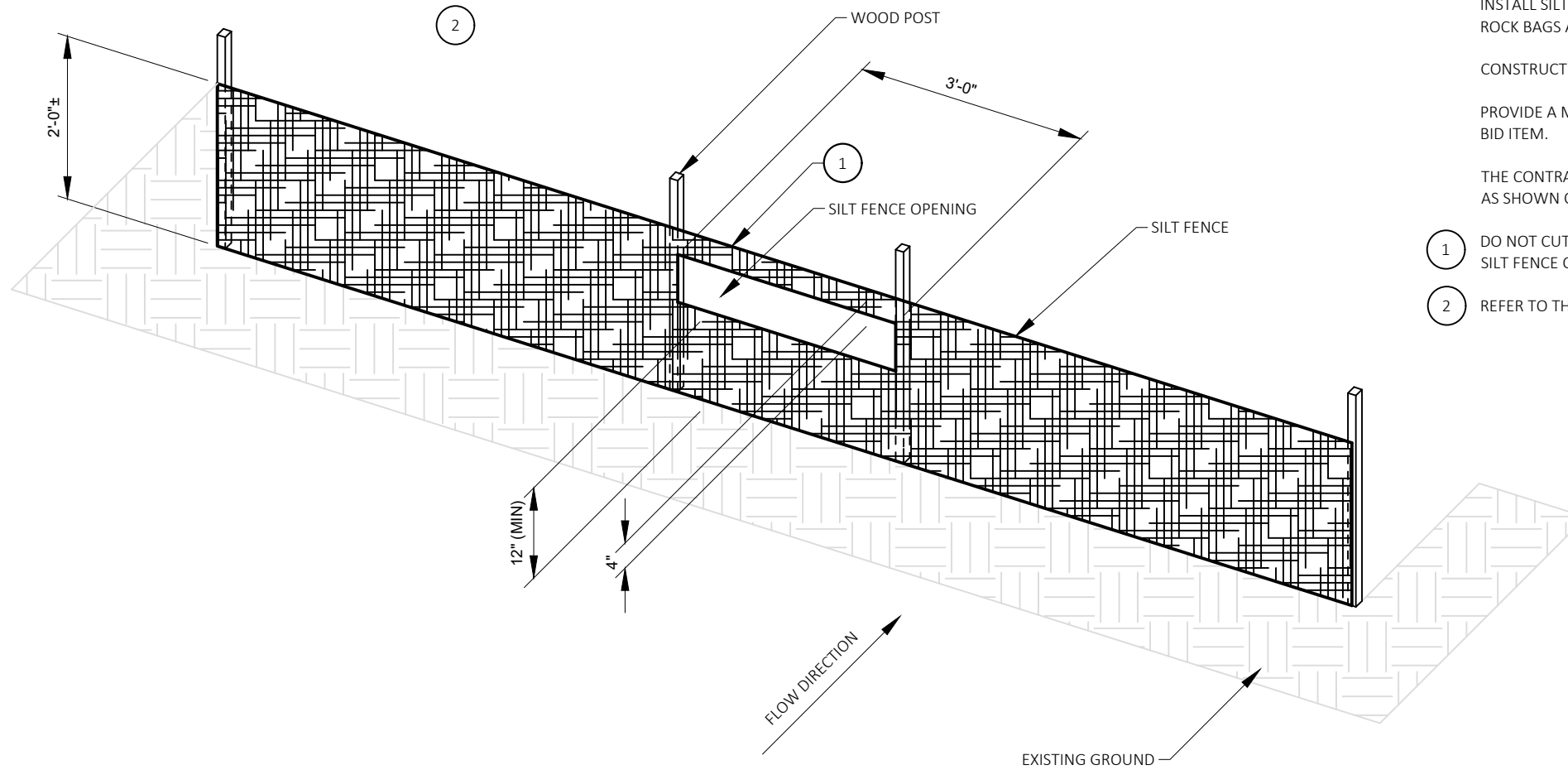
INSTALL SILT FENCE PRIOR TO CONSTRUCTING THE SILT FENCE OPENING. PRIOR TO CONSTRUCTING THE SILT FENCE OPENING, PLACE ROCK BAGS AT THE SILT FENCE OPENING AS SHOWN IN THIS DETAIL.

CONSTRUCTION OF THE SILT FENCE OPENING SHALL BE INCIDENTAL TO THE COST OF THE SILT FENCE BID ITEM.

PROVIDE A MINIMUM OF 22 ROCK BAGS PER 3 FOOT OPENING. ROCK BAGS SHALL BE PAID UNDER THE ROCK BAGS BID ITEM.

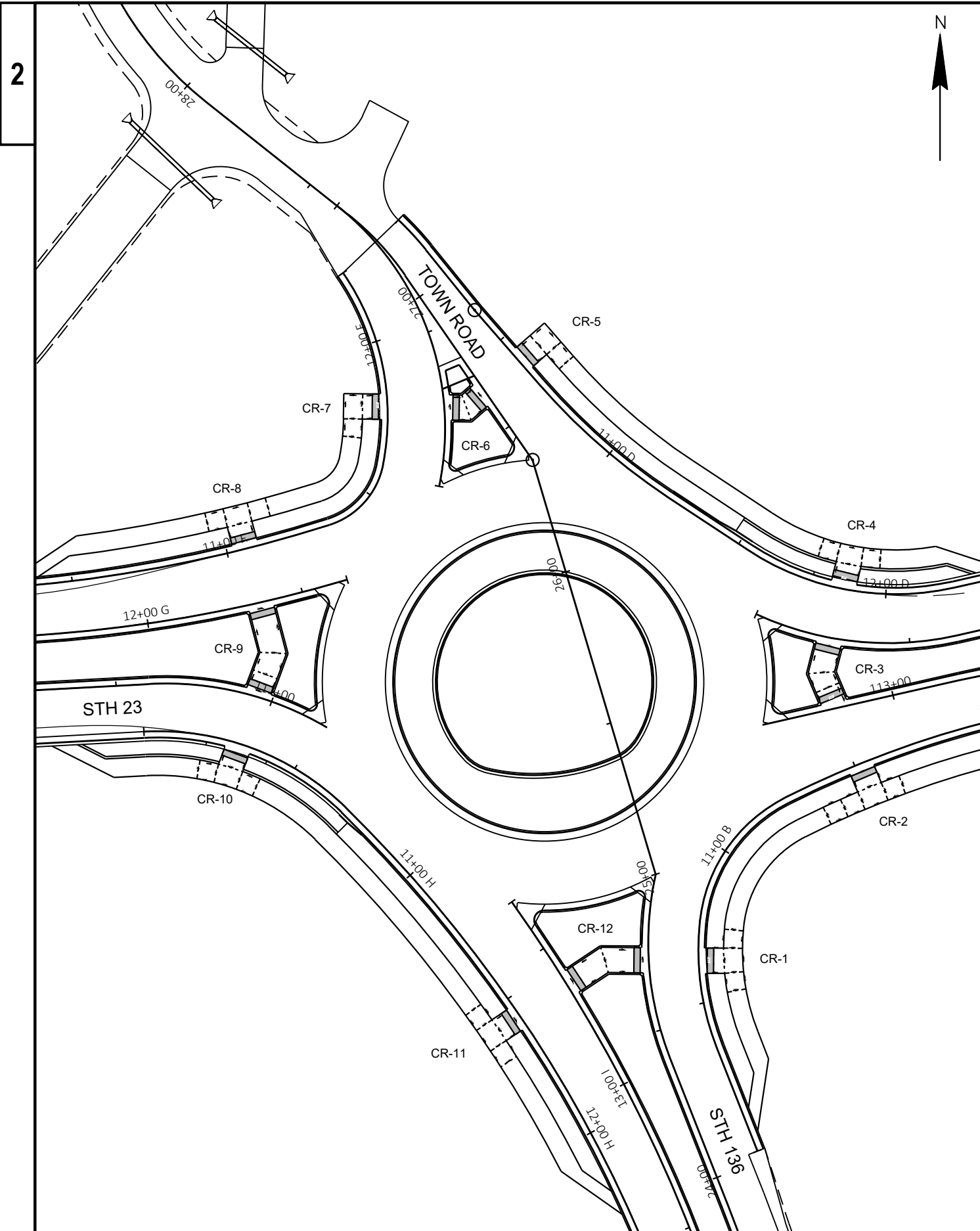
THE CONTRACTOR SHALL ADJUST THE SILT FENCE RELIEF OPENINGS WITHIN THE SILT FENCE AS NECESSARY TO PROVIDE RELIEF: AS SHOWN ON THE PLANS, TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE FIELD ENGINEER.

- 1 DO NOT CUT THE SUPPORT CORD OR TENSION TAPE WHEN CONSTRUCTING THE SILT FENCE OPENING. KEEP THE TOP OF THE SILT FENCE OPENING 1"± BELOW THE 3" FOLD AT THE SUPPORT CORD OR TENSION TAPE.
- 2 REFER TO THE SILT FENCE STANDARD DETAILS FOR ALLOWABLE ADJUSTMENTS TO POST SPACING.



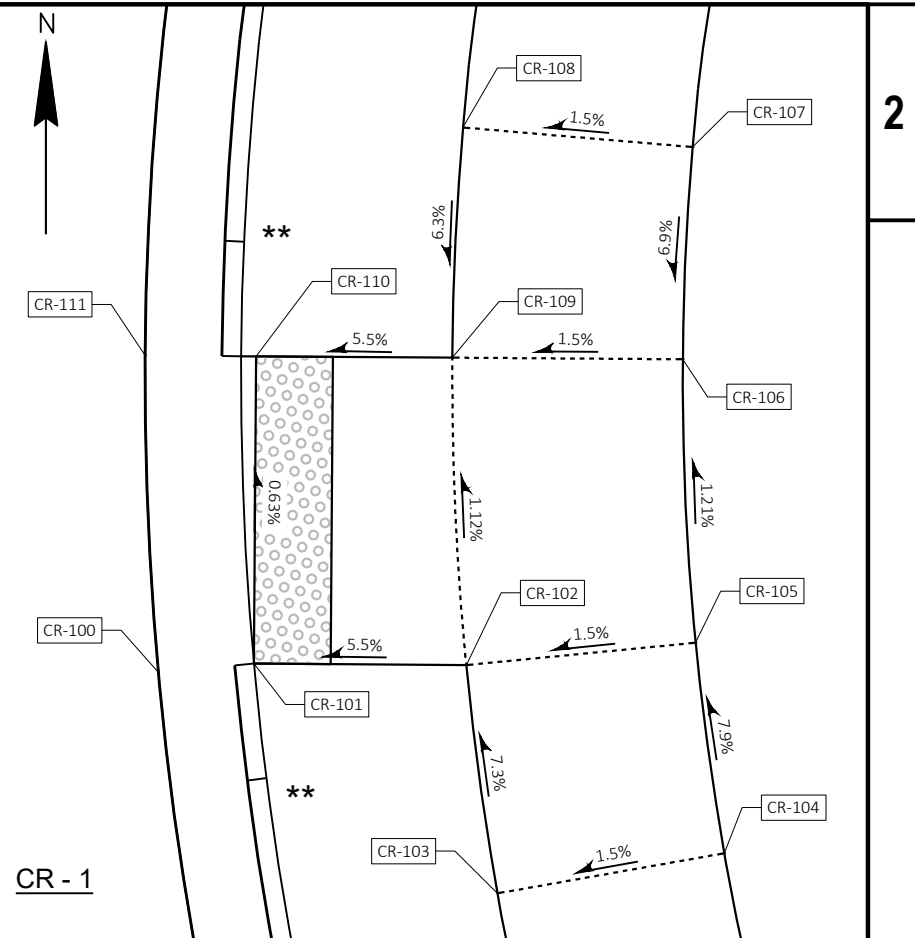
**SILT FENCE RELIEF DETAIL**  
SEE EROSION CONTROL PLANS FOR LOCATIONS





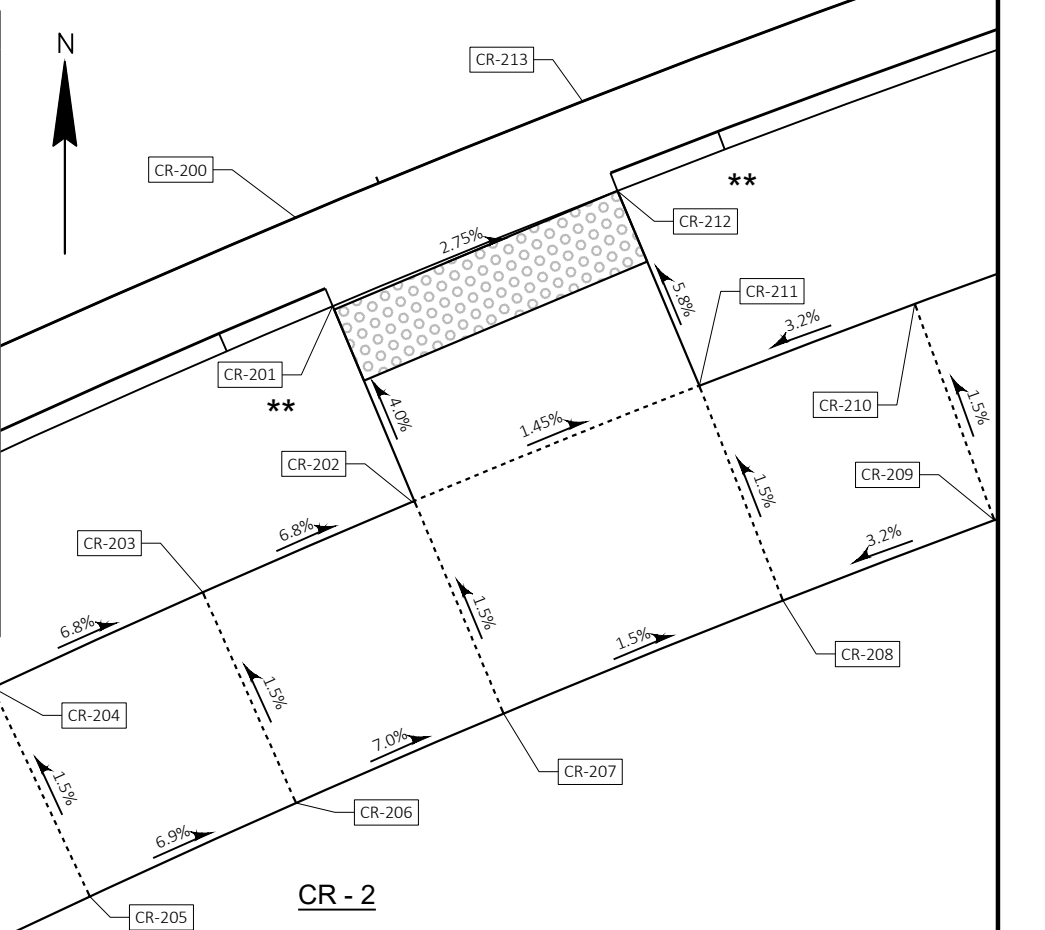
STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEV.
CR-100	10+59.31 B	0.00	259860.98	594477.58	888.44
CR-101	10+59.31 B	2.50	259861.20	594480.07	888.37
CR-102	10+58.71 B	8.00	259861.16	594485.60	888.69
CR-103	10+52.09 B	8.00	259855.22	594486.41	889.13
CR-104	10+52.09 B	14.00	259856.26	594492.32	889.22
CR-105	10+58.71 B	14.00	259861.74	594491.57	888.78
CR-106	10+67.56 B	14.00	259869.12	594491.24	888.69
CR-107	10+74.18 B	14.00	259874.65	594491.49	889.07
CR-108	10+74.18 B	8.00	259875.16	594485.51	888.98
CR-109	10+67.56 B	8.00	259869.16	594485.24	888.60
CR-110	10+67.56 B	2.89	259869.20	594480.13	888.32
CR-111	10+67.56 B	0.00	259869.22	594477.24	888.39

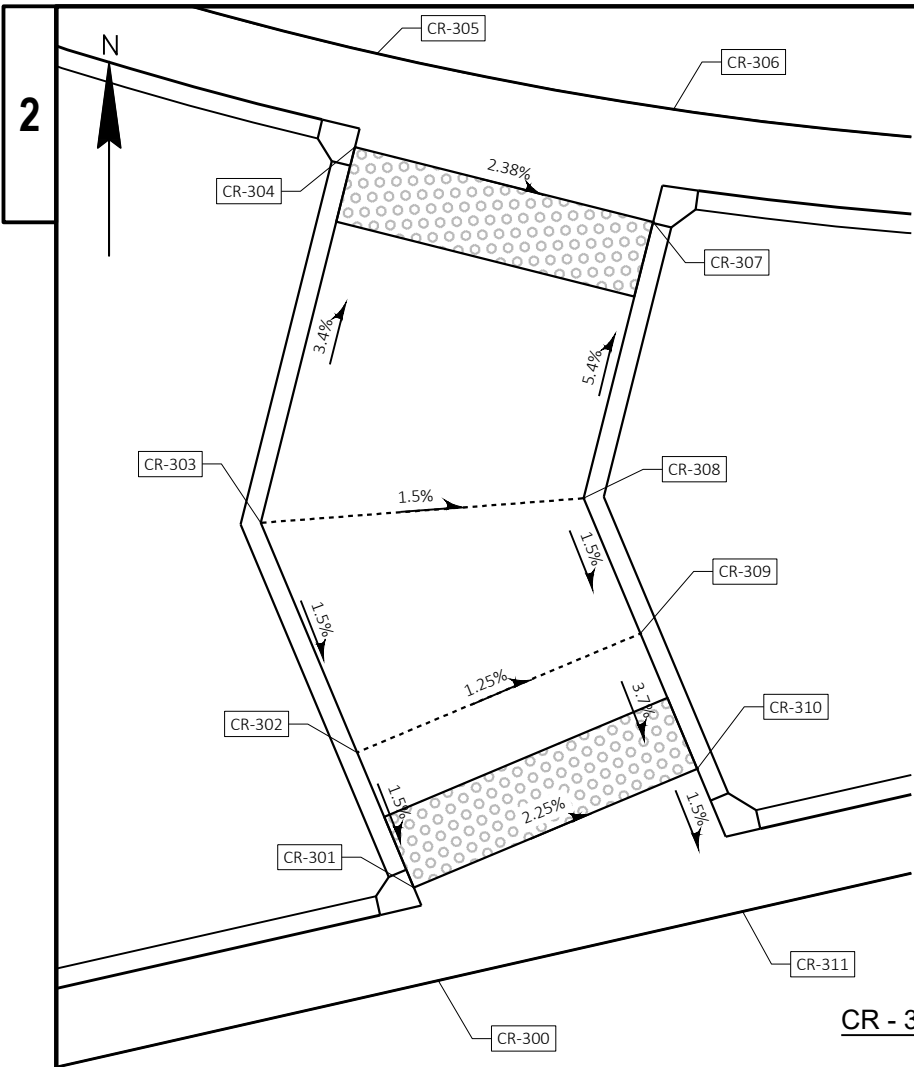
\*\* GRASS TERRACE - 1/6 SLOPE MAX CURB HEAD TRANSITION RATE



STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEV.
CR-200	11+47.65 B	0.00	259926.09	594524.70	886.77
CR-201	11+47.65 B	2.50	259923.78	594525.67	886.71
CR-202	11+47.59 B	8.00	259918.69	594527.74	886.93
CR-203	11+41.50 B	8.00	259916.34	594522.29	887.34
CR-204	11+35.33 B	8.00	259913.85	594516.81	887.75
CR-205	11+35.33 B	14.00	259908.41	594519.34	887.84
CR-206	11+41.50 B	14.00	259910.85	594524.71	887.43
CR-207	11+47.65 B	14.00	259913.18	594530.12	887.02
CR-208	11+55.86 B	14.00	259916.12	594537.39	886.90
CR-209	11+62.01 B	14.00	259918.21	594542.89	887.09
CR-210	11+62.01 B	8.00	259923.84	594540.82	887.00
CR-211	11+55.86 B	8.00	259921.71	594535.21	886.81
CR-212	11+55.72 B	2.50	259926.79	594533.08	886.49
CR-213	11+55.71 B	0.00	259929.12	594532.17	886.54

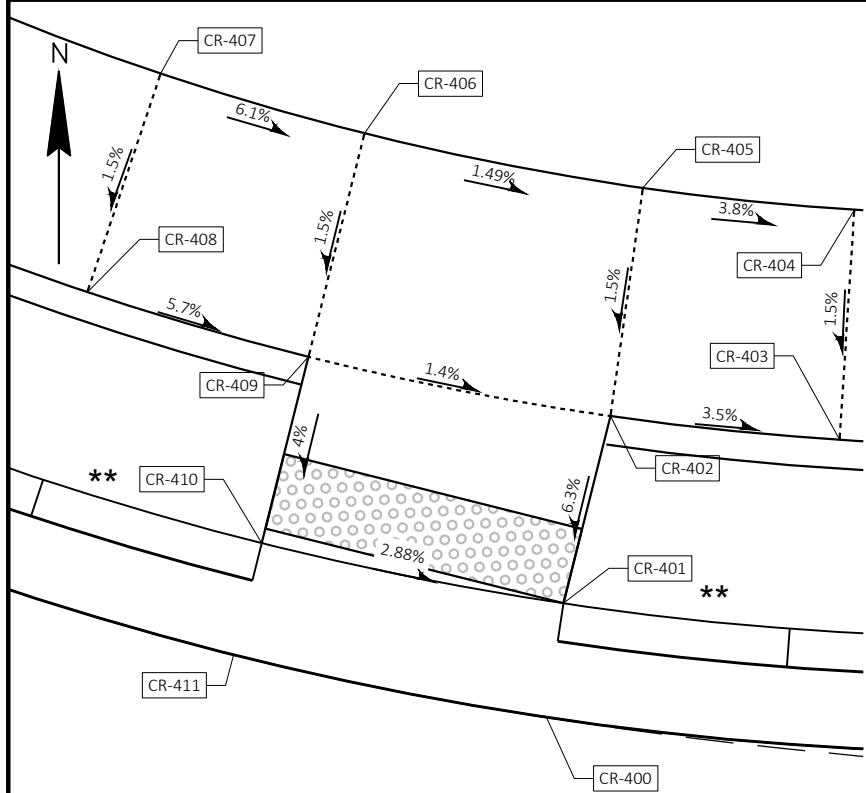
\*\* GRASS TERRACE - 1/6 SLOPE MAX CURB HEAD TRANSITION RATE





STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEV.
CR-300	112+77.14	0.00	259944.30	594516.68	887.04
CR-301	112+77.05	-2.50	259946.72	594516.04	886.97
CR-302	112+76.39	-6.26	259950.24	594514.56	887.03
CR-303	112+75.26	-12.64	259956.21	594512.05	887.12
CR-304	112+79.82	-21.64	259965.99	594514.51	886.78
CR-305	112+80.91	-23.89	259968.43	594515.08	886.85
CR-306	112+88.12	-20.77	259966.98	594522.80	886.65
CR-307	112+86.95	-18.02	259964.05	594522.27	886.59
CR-308	112+83.60	-11.41	259956.85	594520.46	886.99
CR-309	112+84.27	-7.65	259953.33	594521.94	886.93
CR-310	112+84.93	-3.89	259949.81	594523.42	886.79
CR-311	112+85.26	0.00	259946.09	594524.60	886.84

CR - 3



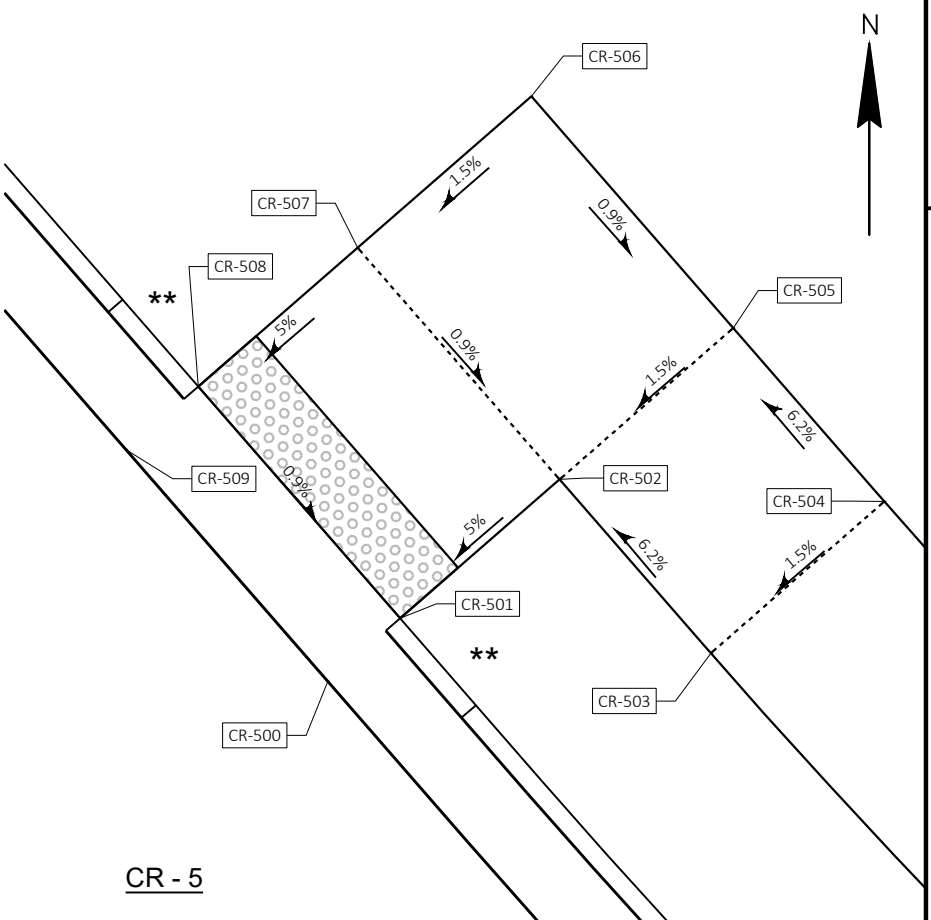
STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEV.
CR-400	11+90.42	0.00	259982.36	594527.16	886.44
CR-401	11+90.42	-3.00	259985.33	594527.61	886.42
CR-402	11+90.96	-8.00	259990.20	594528.83	886.74
CR-403	11+97.59	-8.00	259989.59	594534.80	886.53
CR-404	11+97.59	-14.00	259995.57	594535.18	886.62
CR-405	11+90.96	-14.00	259996.14	594529.68	886.83
CR-406	11+82.12	-14.00	259997.56	594522.43	886.94
CR-407	11+75.49	-14.00	259999.12	594517.12	887.28
CR-408	11+75.49	-8.00	259993.43	594515.21	887.19
CR-409	11+82.12	-8.00	259991.75	594520.97	886.85
CR-410	11+82.12	-3.00	259986.90	594519.75	886.65
CR-411	11+82.12	0.00	259983.99	594519.02	886.69

\*\* CONCRETE TERRACE - 1/12 SLOPE MAX CURB HEAD TRANSITION RATE

CR - 4

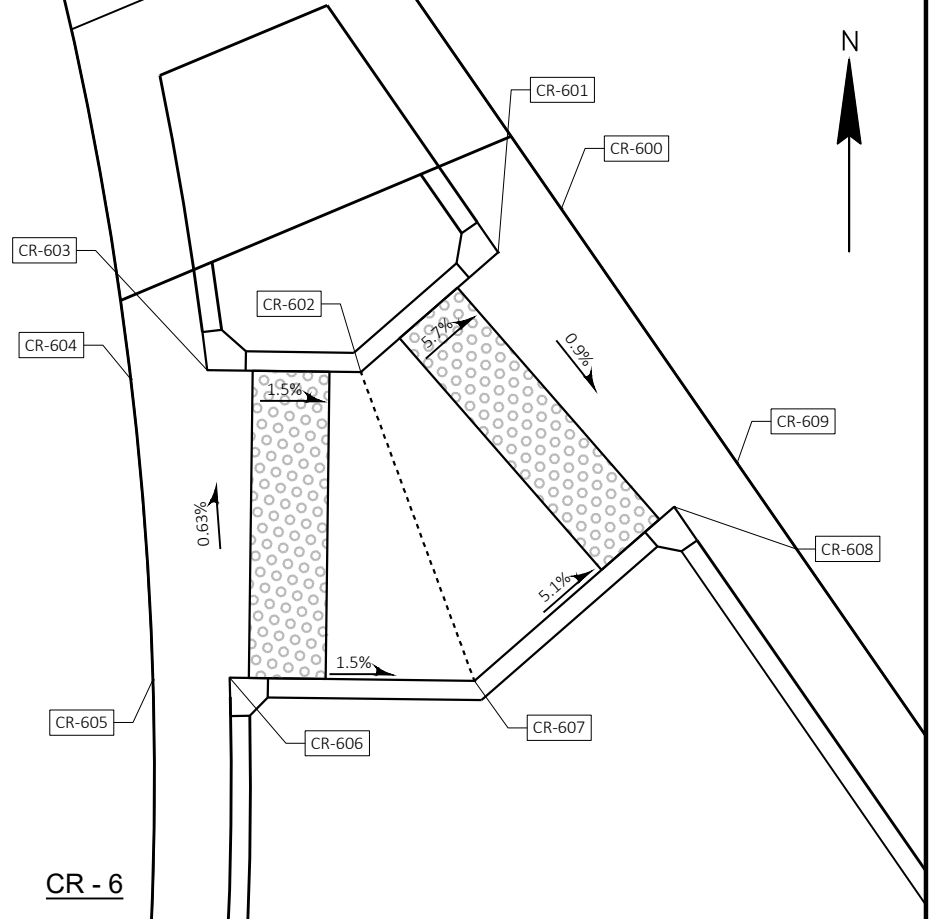
STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEV.
CR-500	10+63.10	0.00	260052.16	594423.11	888.71
CR-501	10+63.10	-2.50	260053.80	594425.00	888.68
CR-502	10+63.10	-8.00	260057.41	594429.14	888.93
CR-503	10+69.12	-8.01	260052.90	594433.09	889.30
CR-504	10+69.12	-14.00	260056.84	594437.60	889.39
CR-505	10+63.10	-14.00	260061.36	594433.67	889.02
CR-506	10+55.10	-14.00	260067.39	594428.41	889.09
CR-507	10+55.10	-8.00	260063.45	594423.89	889.00
CR-508	10+55.10	-2.50	260059.83	594419.74	888.75
CR-509	10+55.10	0.00	260058.19	594417.86	888.70

\*\* GRASS TERRACE - 1/6 SLOPE MAX CURB HEAD TRANSITION RATE

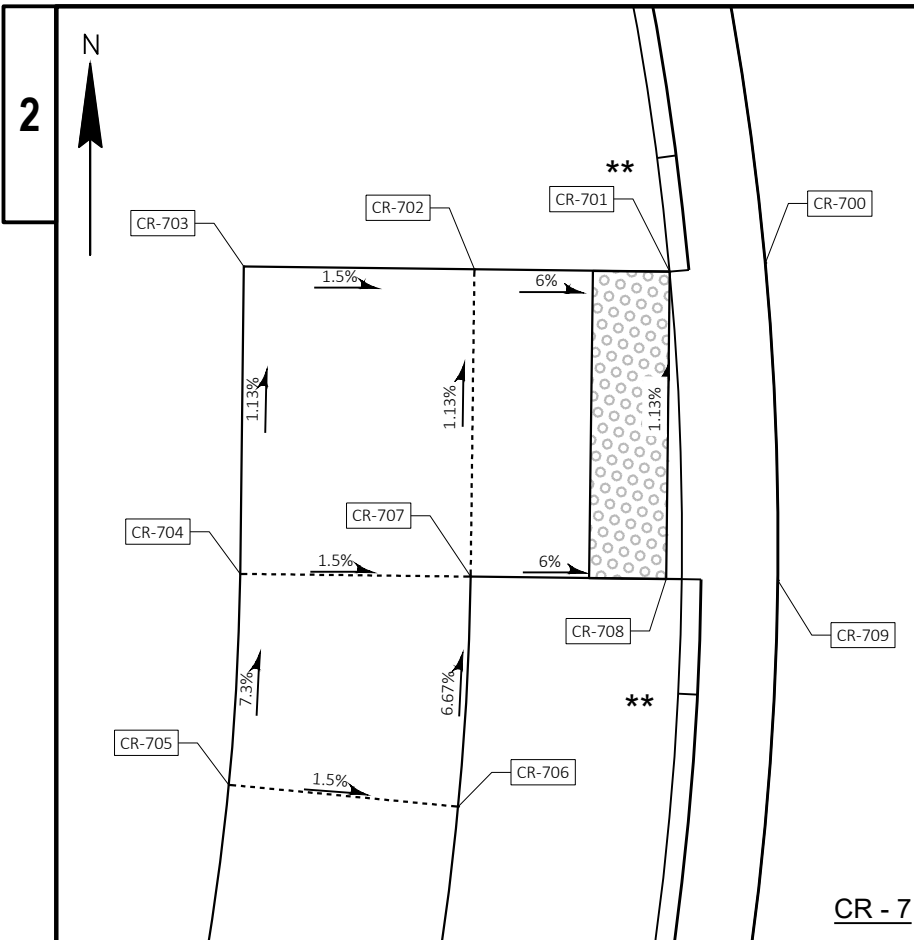


CR - 5

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEV.
CR-600	26+67.25	0.00	260048.83	594407.45	889.05
CR-601	26+67.25	-2.00	260047.69	594405.81	888.97
CR-602	26+66.72	-6.71	260044.58	594402.23	889.24
CR-603	26+69.04	-9.97	260044.62	594398.23	889.30
CR-604	26+69.98	-11.74	260044.39	594396.24	889.28
CR-605	26+63.21	-15.72	260036.56	594396.82	889.33
CR-606	26+62.12	-14.05	260036.62	594398.82	889.35
CR-607	26+58.43	-8.85	260036.54	594405.18	889.25
CR-608	26+59.20	-2.00	260041.07	594410.38	888.90
CR-609	26+59.20	0.00	260042.21	594412.03	888.98



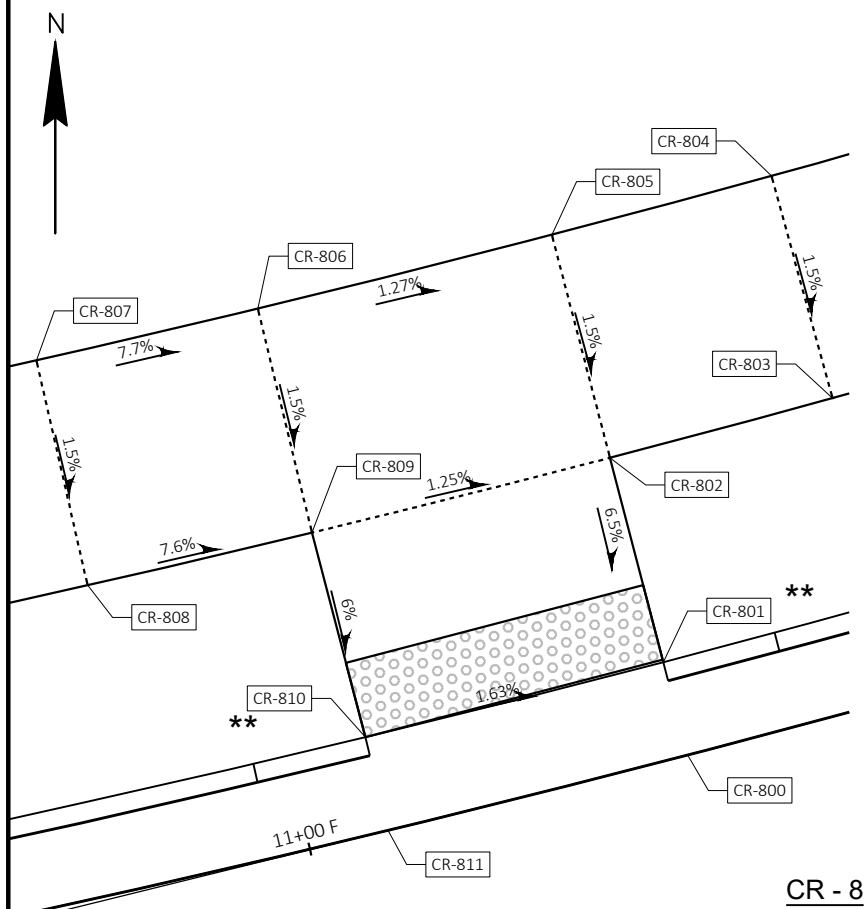
CR - 6



STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEV.
CR-700	11+83.20	0.00	260045.13	594378.35	889.11
CR-701	11+83.20	-2.50	260044.90	594375.86	889.12
CR-702	11+83.78	-7.56	260044.96	594370.78	889.43
CR-703	11+84.58	-13.52	260045.03	594364.78	889.52
CR-704	11+74.93	-14.00	260037.03	594364.68	889.61
CR-705	11+68.26	-14.00	260031.54	594364.38	890.01
CR-706	11+68.26	-8.00	260030.97	594370.35	889.92
CR-707	11+74.93	-8.00	260036.96	594370.68	889.52
CR-708	11+74.93	-2.91	260036.90	594375.76	889.21
CR-709	11+74.93	0.00	260036.86	594378.68	889.21

\*\* GRASS TERRACE - 1/6 SLOPE MAX CURB HEAD TRANSITION RATE

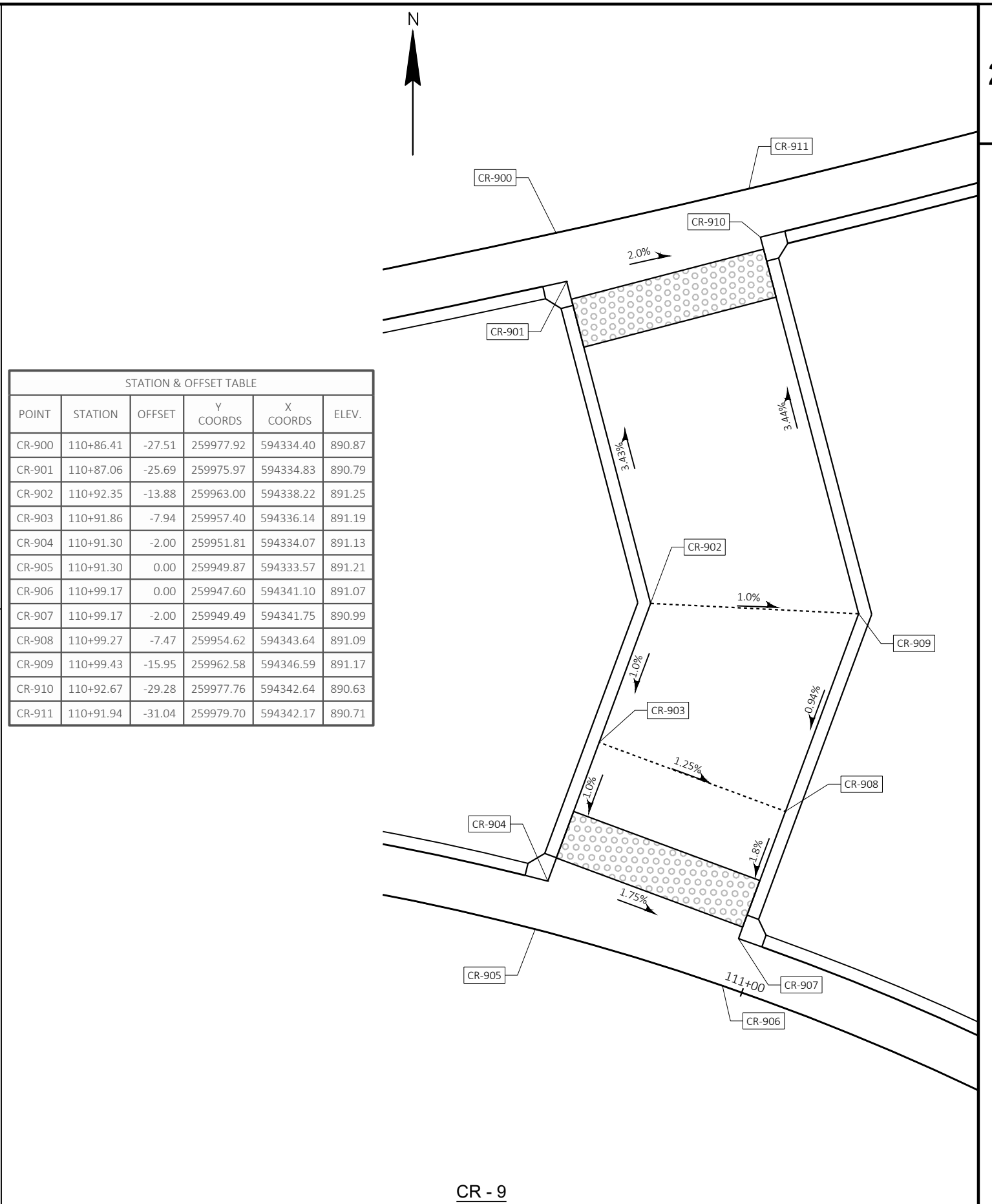
CR - 7



STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEV.
CR-800	11+10.13	0.00	259996.85	594337.66	890.43
CR-801	11+10.13	-2.50	259999.27	594337.02	890.38
CR-802	11+10.13	-8.00	260004.60	594335.64	890.74
CR-803	11+16.24	-8.00	260006.15	594341.43	890.98
CR-804	11+16.24	-14.00	260011.93	594339.84	891.07
CR-805	11+10.13	-14.00	260010.40	594334.12	890.83
CR-806	11+01.99	-14.00	260008.48	594326.47	890.93
CR-807	10+95.88	-14.00	260007.13	594320.71	891.39
CR-808	10+95.88	-8.00	260001.28	594322.04	891.30
CR-809	11+01.98	-8.00	260002.65	594327.88	890.84
CR-810	11+02.09	-2.50	259997.32	594329.27	890.51
CR-811	11+02.10	0.00	259994.89	594329.86	890.56

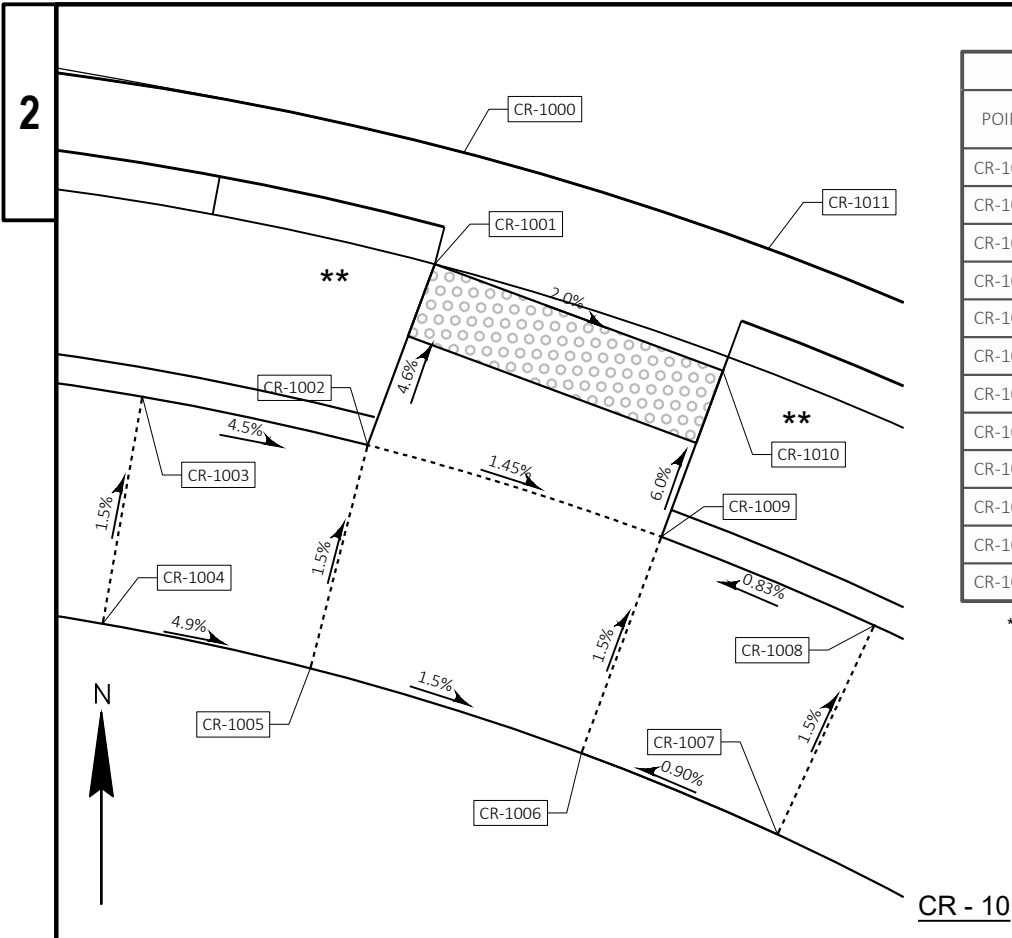
\*\* GRASS TERRACE - 1/6 SLOPE MAX CURB HEAD TRANSITION RATE

CR - 8



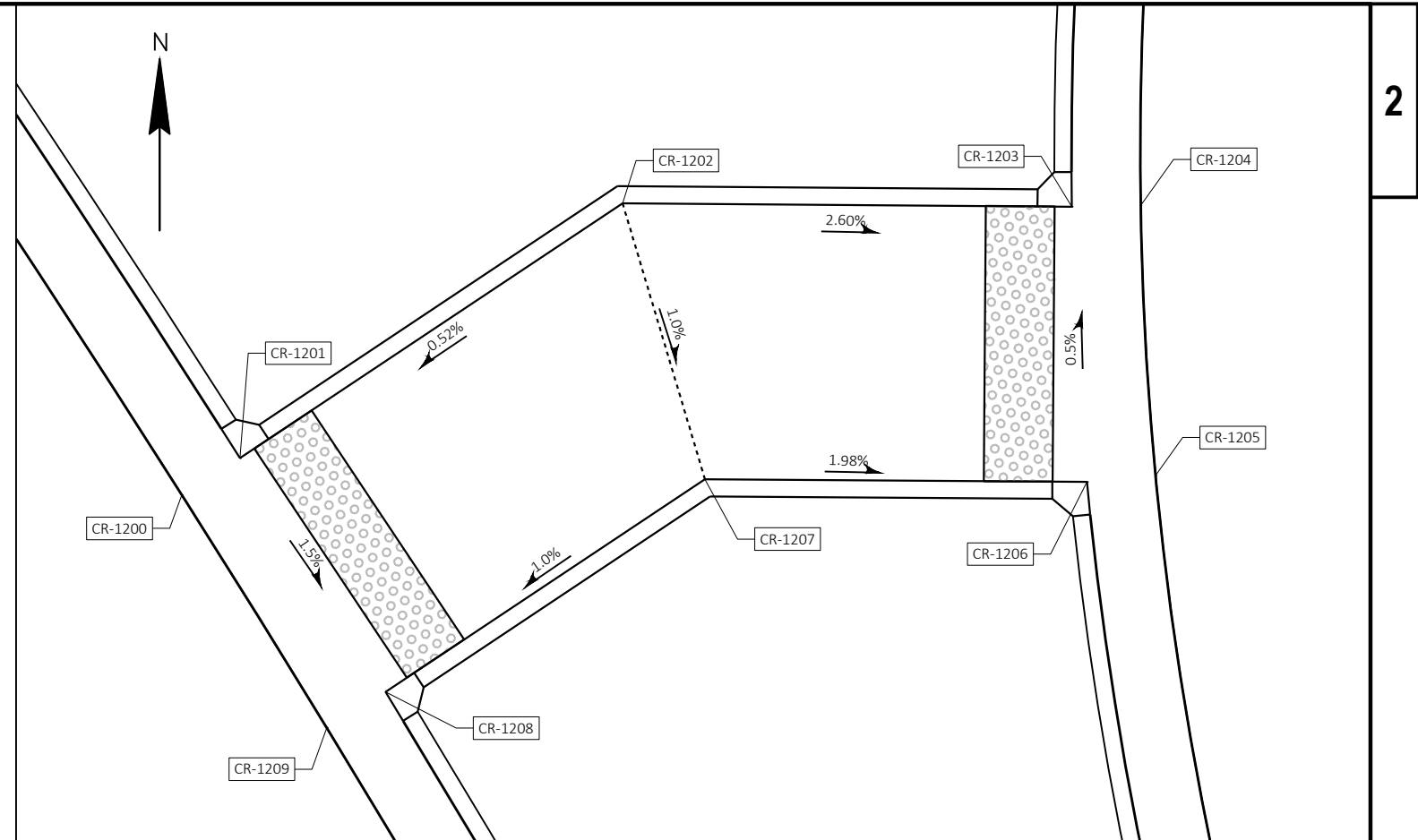
STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEV.
CR-900	110+86.41	-27.51	259977.92	594334.40	890.87
CR-901	110+87.06	-25.69	259975.97	594334.83	890.79
CR-902	110+92.35	-13.88	259963.00	594338.22	891.25
CR-903	110+91.86	-7.94	259957.40	594336.14	891.19
CR-904	110+91.30	-2.00	259951.81	594334.07	891.13
CR-905	110+91.30	0.00	259949.87	594333.57	891.21
CR-906	110+99.17	0.00	259947.60	594341.10	891.07
CR-907	110+99.17	-2.00	259949.49	594341.75	890.99
CR-908	110+99.27	-7.47	259954.62	594343.64	891.09
CR-909	110+99.43	-15.95	259962.58	594346.59	891.17
CR-910	110+92.67	-29.28	259977.76	594342.64	890.63
CR-911	110+91.94	-31.04	259979.70	594342.17	890.71

CR - 9



STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEV.
CR-1000	10+26.45	0.00	259935.15	594327.58	891.05
CR-1001	10+26.45	3.00	259932.25	594326.82	890.99
CR-1002	10+25.91	8.00	259927.54	594325.08	891.22
CR-1003	10+19.29	8.00	259928.80	594319.21	891.49
CR-1004	10+19.29	14.00	259922.89	594318.18	891.58
CR-1005	10+25.91	14.00	259921.72	594323.59	891.31
CR-1006	10+34.76	14.00	259919.52	594330.64	891.20
CR-1007	10+41.38	14.00	259917.40	594335.74	891.15
CR-1008	10+41.38	8.00	259922.84	594338.26	891.06
CR-1009	10+34.76	8.00	259925.15	594332.72	891.11
CR-1010	10+34.76	3.39	259929.47	594334.32	890.83
CR-1011	10+34.76	0.00	259932.65	594335.50	890.89

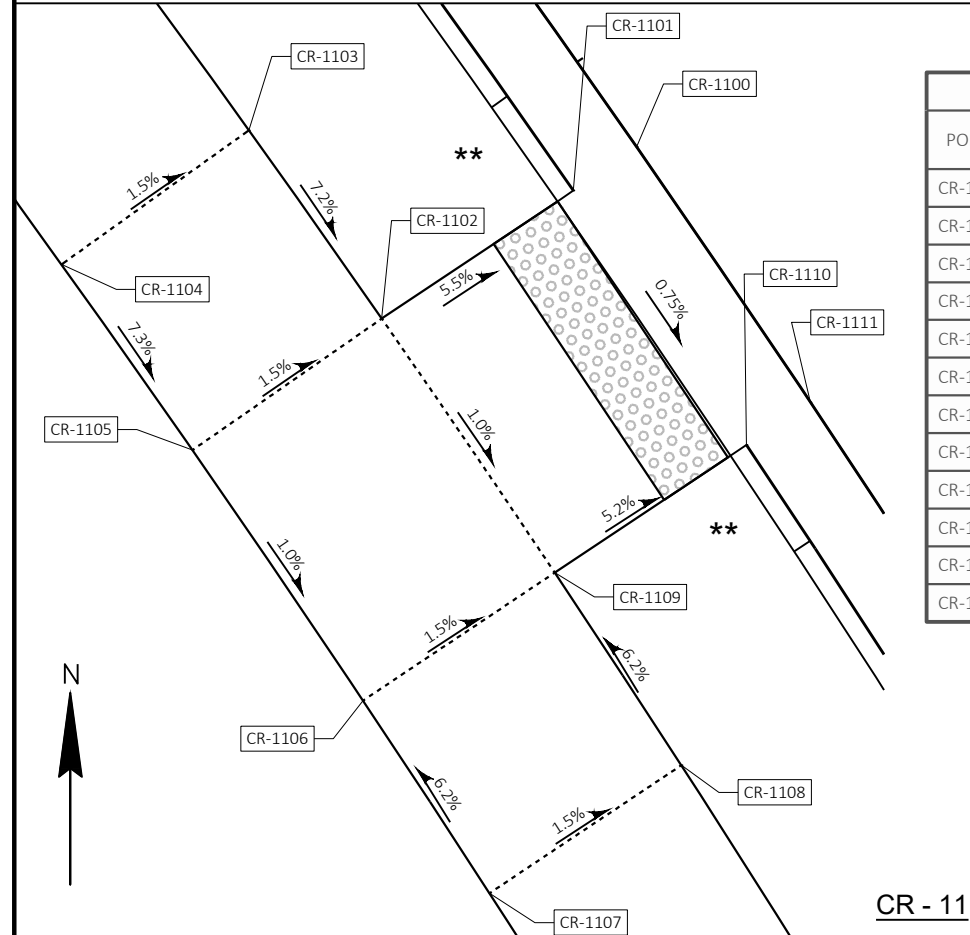
\*\* CONCRETE TERRACE - 1/12 SLOPE MAX CURB HEAD TRANSITION RATE



STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEV.
CR-1200	24+70.36	-28.24	259860.97	594433.47	888.99
CR-1201	24+71.10	-26.48	259862.04	594435.16	888.91
CR-1202	24+76.85	-15.06	259869.44	594446.28	888.98
CR-1203	24+76.59	-2.00	259869.35	594459.34	888.64
CR-1204	24+76.59	0.00	259869.38	594461.34	888.72
CR-1205	24+68.73	0.00	259861.53	594461.77	888.76
CR-1206	24+68.73	-2.00	259861.34	594459.78	888.68
CR-1207	24+69.72	-13.05	259861.42	594448.67	888.90
CR-1208	24+65.34	-22.94	259855.24	594439.39	888.79
CR-1209	24+64.69	-24.77	259854.20	594437.68	888.87

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEV.
CR-1100	11+52.69	0.00	259850.95	594418.42	889.06
CR-1101	11+52.69	2.00	259849.81	594416.78	888.98
CR-1102	11+52.58	8.00	259846.47	594411.79	889.31
CR-1103	11+46.47	8.00	259851.38	594408.33	889.74
CR-1104	11+46.47	14.00	259847.89	594403.45	889.83
CR-1105	11+52.58	14.00	259843.05	594406.86	889.40
CR-1106	11+60.73	14.00	259836.53	594411.30	889.32
CR-1107	11+66.94	14.00	259831.52	594414.60	889.69
CR-1108	11+66.85	8.00	259834.85	594419.59	889.60
CR-1109	11+60.73	8.00	259839.86	594416.29	889.23
CR-1110	11+60.74	2.00	259843.19	594421.29	888.92
CR-1111	11+60.74	0.00	259844.30	594422.95	889.00

\*\* GRASS TERRACE - 1/6 SLOPE MAX CURB HEAD TRANSITION RATE









CR - 11

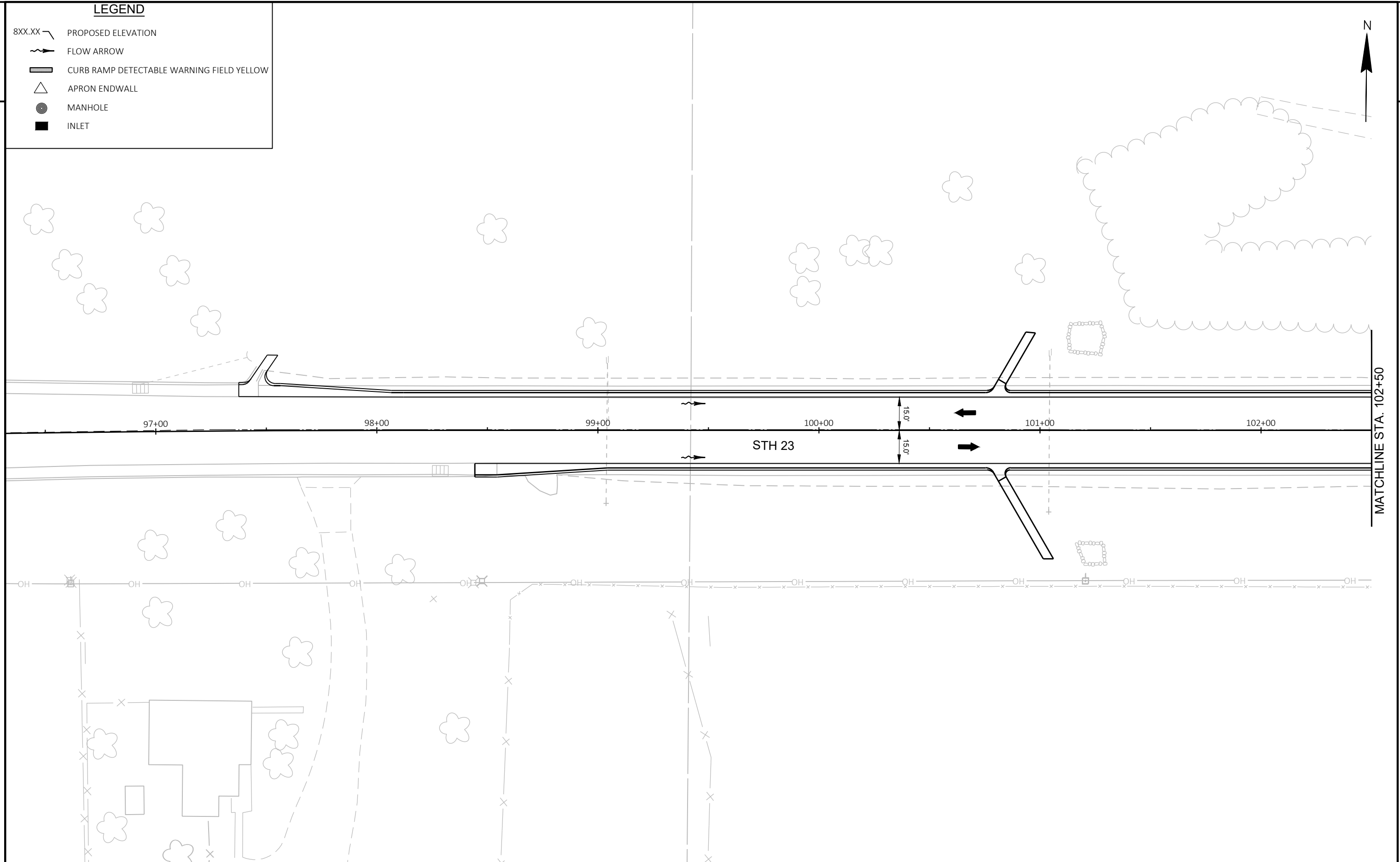
CR - 12

2

2

**LEGEND**

- 8XX.XX  PROPOSED ELEVATION
-  FLOW ARROW
-  CURB RAMP DETECTABLE WARNING FIELD YELLOW
-  APRON ENDWALL
-  MANHOLE
-  INLET









MATCHLINE STA. 102+50

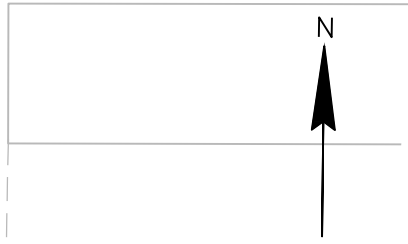
PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	INTERSECTION DETAILS	SHEET	<b>E</b>
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2

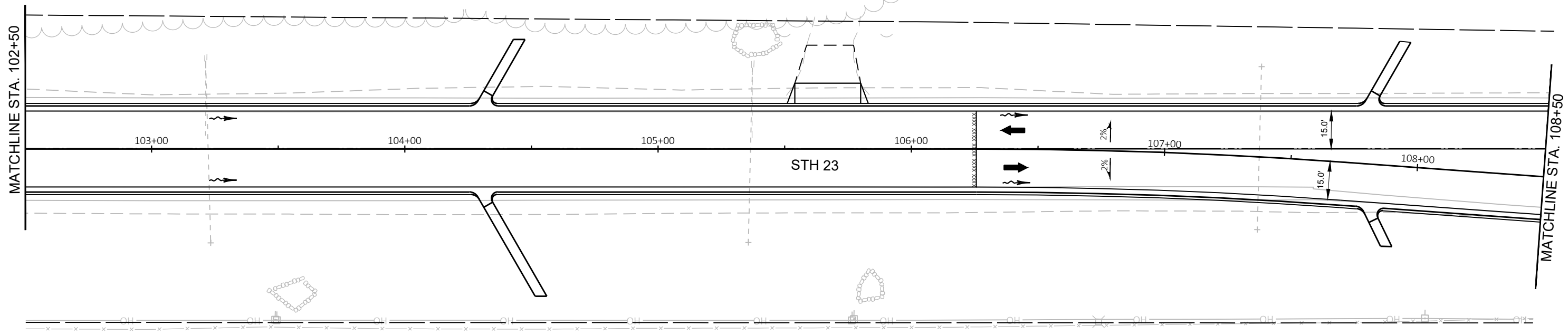
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**LEGEND**

- 8XX.XX  PROPOSED ELEVATION
-  FLOW ARROW
-  CURB RAMP DETECTABLE WARNING FIELD YELLOW
-  APRON ENDWALL
-  MANHOLE
-  INLET



GREEN



PROJECT NO: 5050-01-76

HWY: STH 23







COUNTY: SAUK

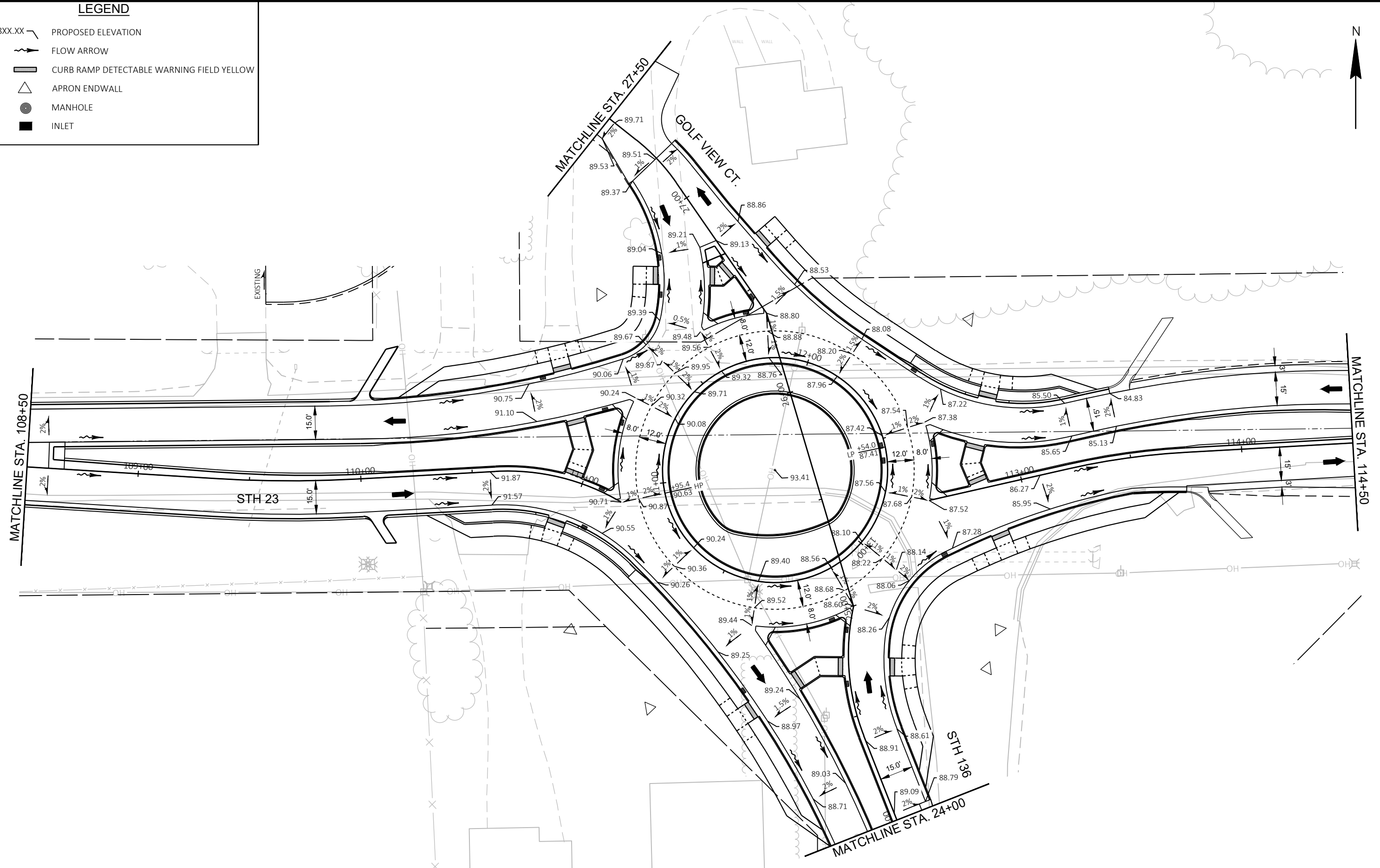
INTERSECTION DETAILS

SHEET

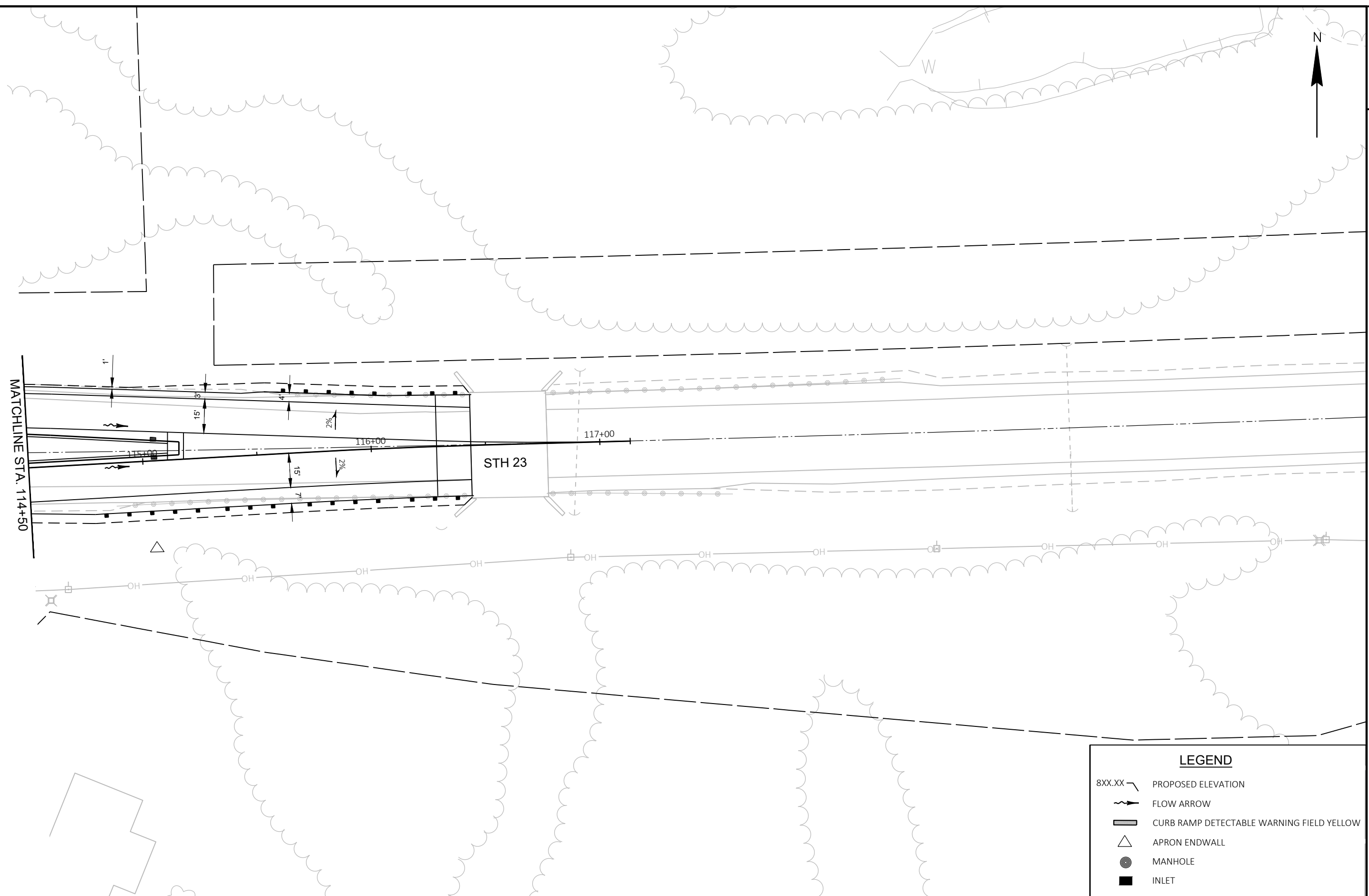
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LEGEND

- 8XX.XX  PROPOSED ELEVATION
-  FLOW ARROW
-  CURB RAMP DETECTABLE WARNING FIELD YELLOW
-  APRON ENDWALL
-  MANHOLE
-  INLET



PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	INTERSECTION DETAILS	SHEET	E
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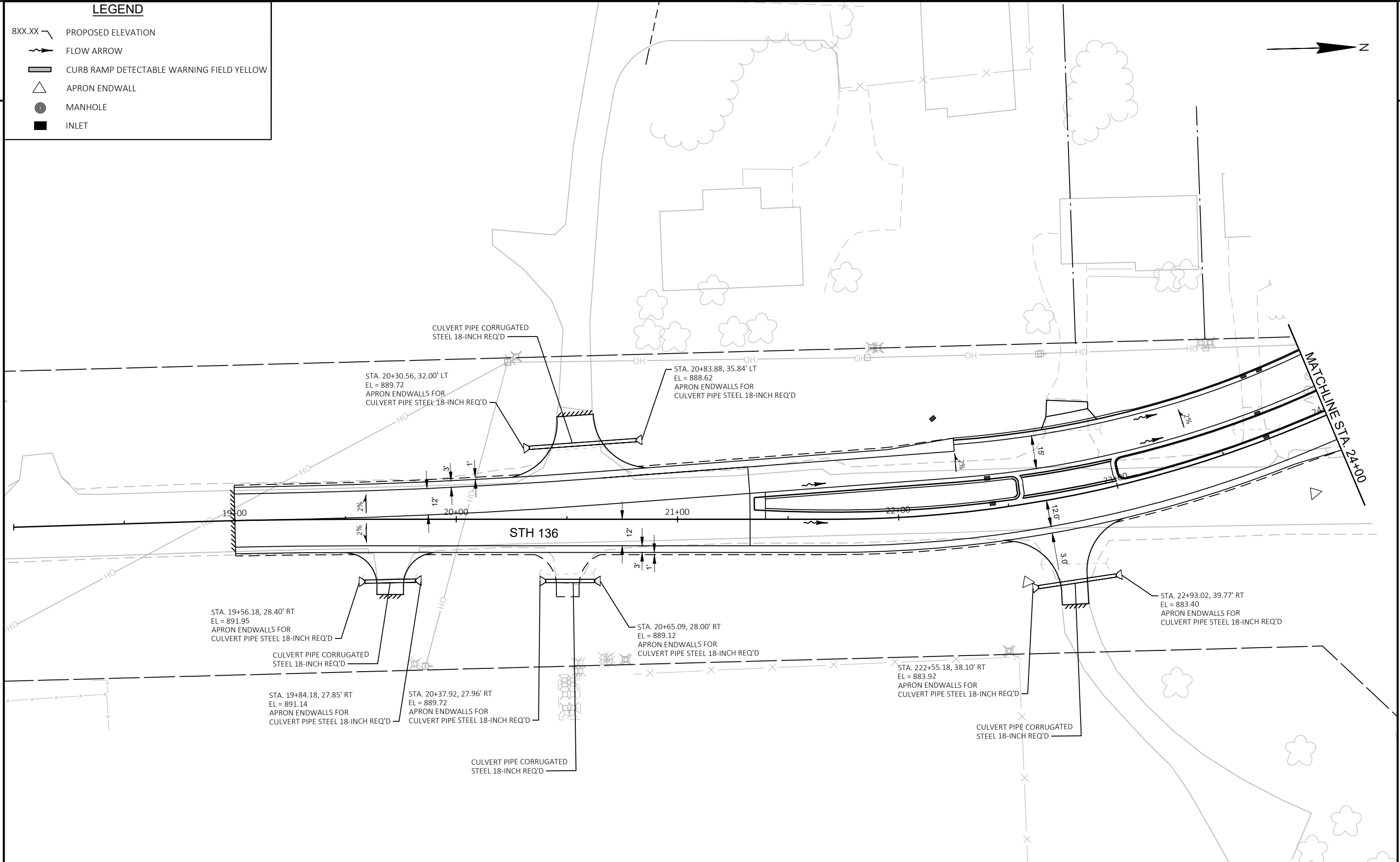


LEGEND	
8XX.XX	PROPOSED ELEVATION
	FLOW ARROW
	CURB RAMP DETECTABLE WARNING FIELD YELLOW
	APRON ENDWALL
	MANHOLE
	INLET









LEGEND

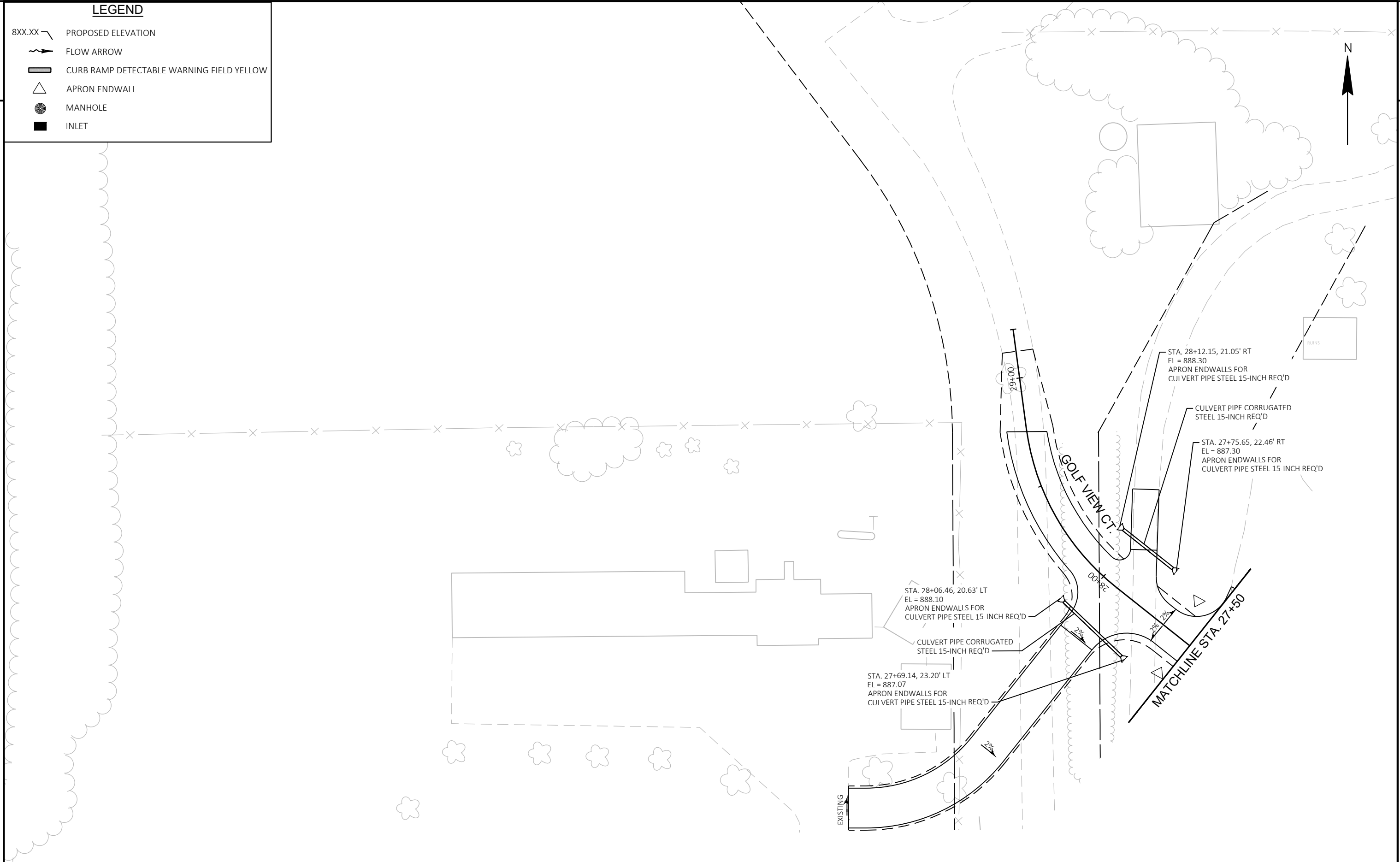
- 8XX.XX PROPOSED ELEVATION
- FLOW ARROW
- ▬ CURB RAMP DETECTABLE WARNING FIELD YELLOW
- △ APRON ENDWALL
- MANHOLE
- INLET

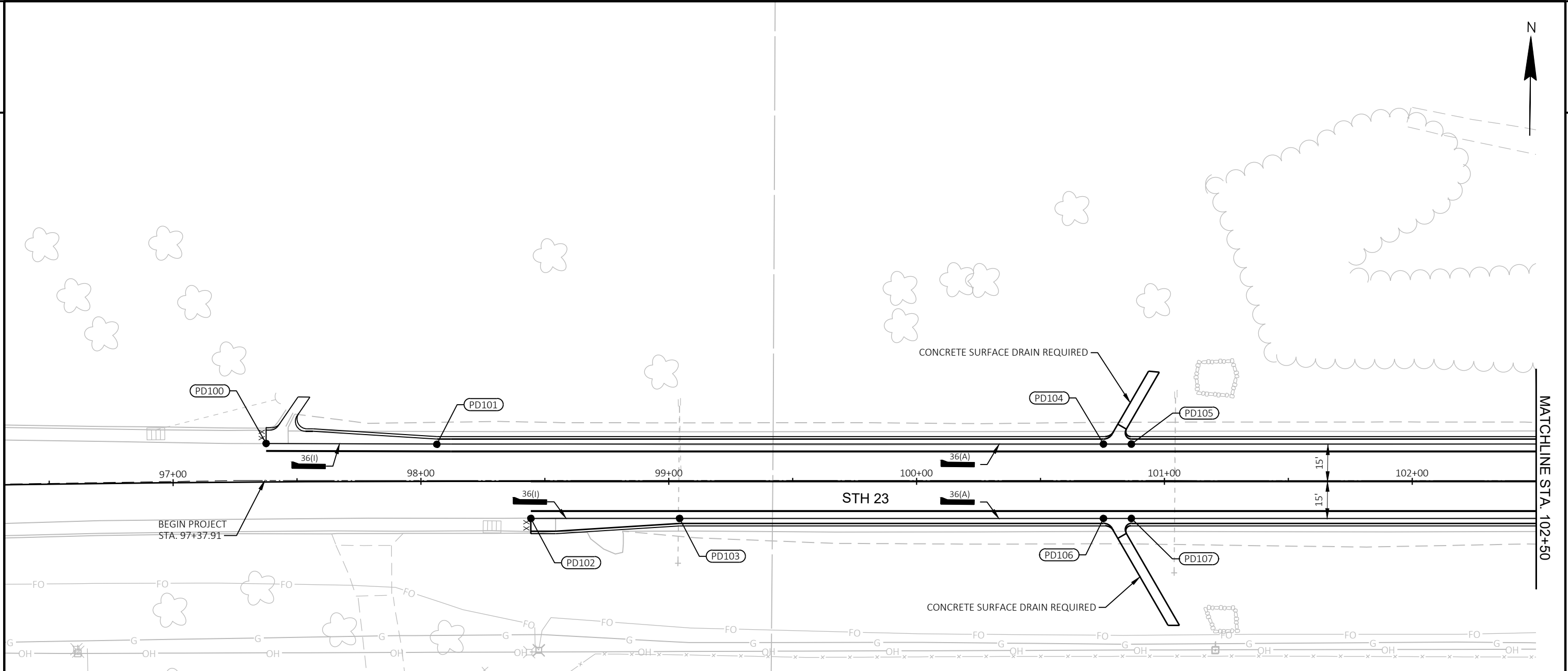


PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	INTERSECTION DETAILS	SHEET	<b>E</b>
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**LEGEND**

- 8XX.XX  PROPOSED ELEVATION
-  FLOW ARROW
-  CURB RAMP DETECTABLE WARNING FIELD YELLOW
-  APRON ENDWALL
-  MANHOLE
-  INLET

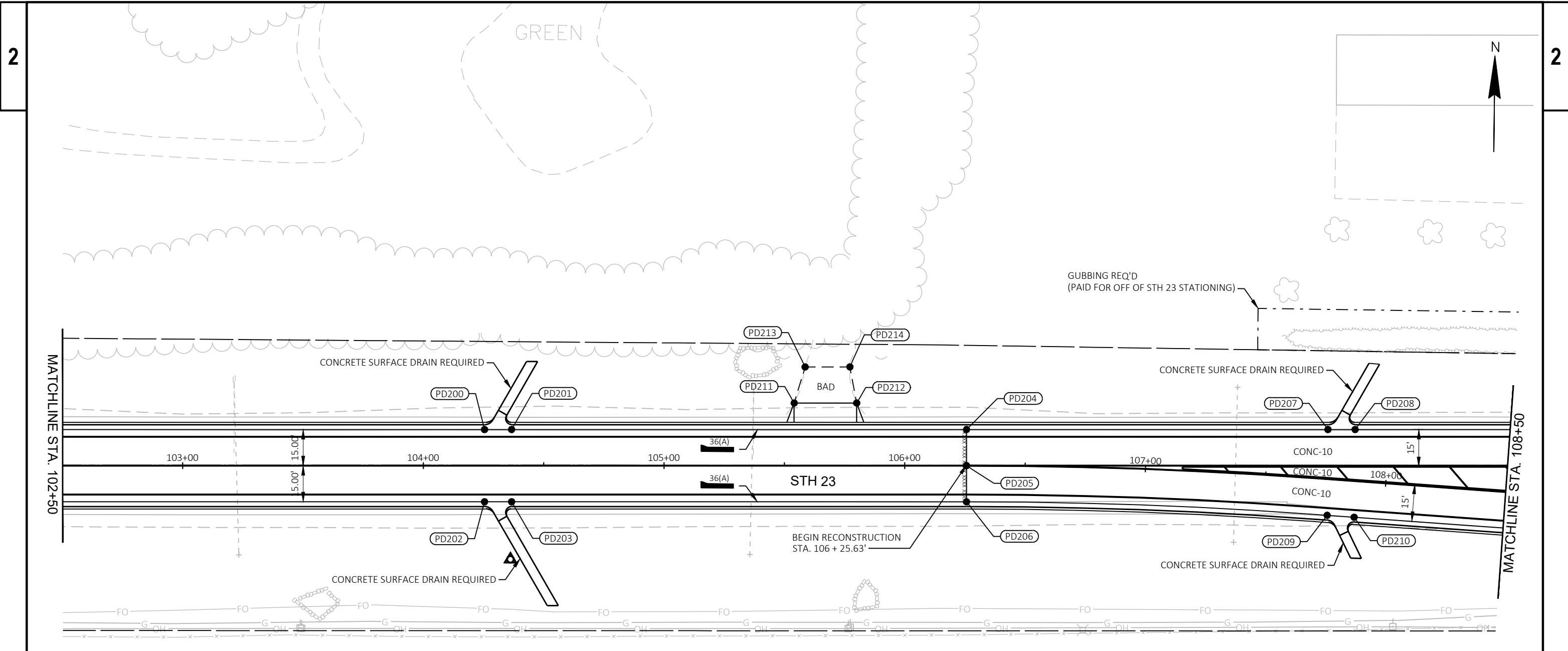




**LEGEND**

	CONCRETE CURB PEDESTRIAN		CS-5 CONCRETE SIDEWALK 5-INCH
	CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)		CD-6 CONCRETE DRIVEWAY 6-INCH
	CONCRETE CURB & GUTTER 30-INCH TYPE A		CONC-10 CONCRETE PAVEMENT 10-INCH
	CONCRETE CURB & GUTTER INTEGRAL 4-INCH SLOPED 36-INCH		HMA HMA PAVEMENT, 4-INCH
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A		HMA-3.5" HMA PAVEMENT, 3.5-INCH
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R		CURB RAMP DETECTABLE WARNING FIELD YELLOW
	REVERSE SLOPE GUTTER		(A) CONCRETE MEDIAN SLOPE NOSE (TYPE 1)
	BAD BASE AGGREGATE DENSE 3/4-INCH		(B) CONCRETE MEDIAN SLOPE NOSE (TYPE 2)
	CCS-5 CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED		(250) LAYOUT POINT NUMBER
	CRTA-12(R) CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED		////// SAWING ASPHALT REQ'D
	ASPH-D ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES		XXXX SAWING CONCRETE REQ'D

POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	REMARKS
PD100	97+37.61	15.49 LT	259969.64	592980.46	MATCH EX.	EOP
PD101	98+06.42	14.93 LT	259970.04	593049.36	MATCH EX.	EOP
PD102	98+44.35	15.00 RT	259940.50	593087.61	MATCH EX.	EOP
PD103	99+04.35	15.00 RT	259941.12	593147.60	MATCH EX.	EOP
PD104	100+75.38	15.00 LT	259972.89	593318.31	MATCH EX.	EOP
PD105	100+86.64	15.00 LT	259973.01	593329.57	MATCH EX.	EOP
PD106	100+75.38	15.00 RT	259942.89	593318.63	MATCH EX.	EOP
PD107	100+86.64	15.00 RT	259943.01	593329.88	MATCH EX.	EOP



**LEGEND**

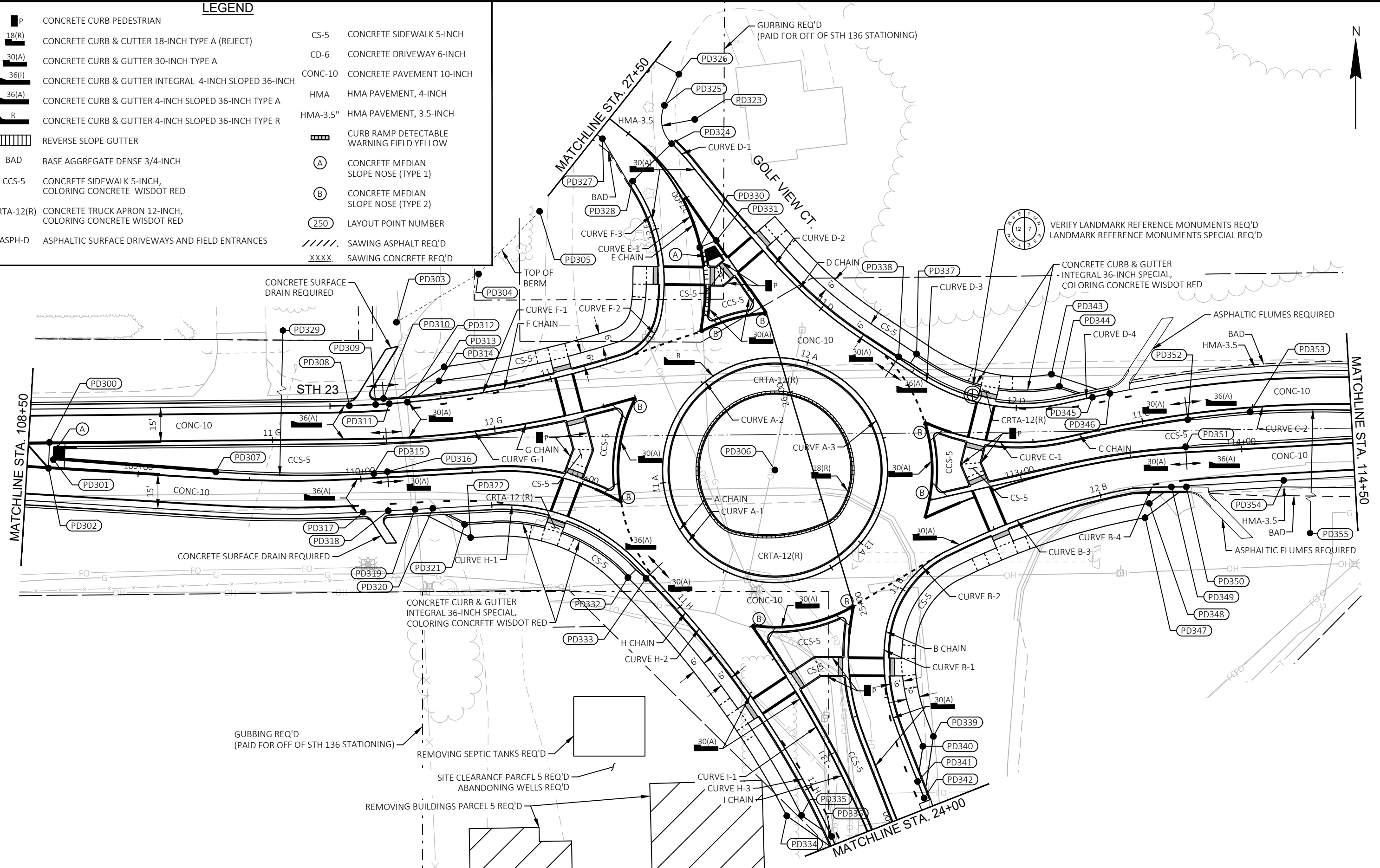
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|--|--|--|---|
|  | CONCRETE CURB PEDESTRIAN                                   |  | CS-5 CONCRETE SIDEWALK 5-INCH             |
|  | CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)             |  | CD-6 CONCRETE DRIVEWAY 6-INCH             |
|  | CONCRETE CURB & GUTTER 30-INCH TYPE A                      |  | CONC-10 CONCRETE PAVEMENT 10-INCH         |
|  | CONCRETE CURB & GUTTER INTEGRAL 4-INCH SLOPED 36-INCH      |  | HMA HMA PAVEMENT, 4-INCH                  |
|  | CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A        |  | HMA-3.5" HMA PAVEMENT, 3.5-INCH           |
|  | CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R        |  | CURB RAMP DETECTABLE WARNING FIELD YELLOW |
|  | REVERSE SLOPE GUTTER                                       |  | CONCRETE MEDIAN SLOPE NOSE (TYPE 1)       |
|  | BASE AGGREGATE DENSE 3/4-INCH                              |  | CONCRETE MEDIAN SLOPE NOSE (TYPE 2)       |
|  | CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED     |  | LAYOUT POINT NUMBER                       |
|  | CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED |  | SAWING ASPHALT REQ'D                      |
|  | ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES            |  | SAWING CONCRETE REQ'D                     |

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	REMARKS
PD200	104+25.38	15.00 LT	259976.51	593668.30	MATCH EX.	EOP
PD201	104+36.64	15.00 LT	259976.63	593679.55	MATCH EX.	EOP
PD202	104+25.38	15.00 RT	259946.52	593668.61	MATCH EX.	EOP
PD203	104+36.64	15.00 RT	259946.63	593679.86	MATCH EX.	EOP
PD204	106+25.63	15.00 LT	259978.59	593868.54	MATCH EX.	EOP
PD205	106+25.63	0.00	259963.59	593868.69	MATCH EX.	CL
PD206	106+25.63	15.00 RT	259948.59	593868.84	MATCH EX.	EOP
PD207	107+74.46	20.54 LT	259980.14	594018.70	901.47	EOP

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	REMARKS
PD208	107+85.71	21.35 LT	259980.26	594029.98	901.05	EOP
PD209	107+76.68	15.00 RT	259944.53	594018.72	901.28	EOP
PD210	107+87.94	15.00 RT	259943.84	594029.96	900.84	EOP
PD211	105+54.03	26.00 LT	259988.85	593796.82	909.88	BOA
PD212	105+80.00	26.00 LT	259989.11	593822.79	908.94	BOA
PD213	105+58.59	41.00 LT	260003.89	593801.23	MATCH EX.	---
PD214	105+77.18	41.00 LT	260004.08	593819.82	MATCH EX.	---

LEGEND

	CONCRETE CURB PEDESTRIAN	CS-5	CONCRETE SIDEWALK 5-INCH
	CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)	CD-6	CONCRETE DRIVEWAY 6-INCH
	CONCRETE CURB & GUTTER 30-INCH TYPE A	CONC-10	CONCRETE PAVEMENT 10-INCH
	CONCRETE CURB & GUTTER INTEGRAL 4-INCH SLOPED 36-INCH	HMA	HMA PAVEMENT, 4-INCH
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A	HMA-3.5"	HMA PAVEMENT, 3.5-INCH
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R		CURB RAMP DETECTABLE WARNING FIELD YELLOW
	REVERSE SLOPE GUTTER		CONCRETE MEDIAN SLOPE NOSE (TYPE 1)
	BASE AGGREGATE DENSE 3/4-INCH		CONCRETE MEDIAN SLOPE NOSE (TYPE 2)
	CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED		LAYOUT POINT NUMBER
	CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED		SAWING ASPHALT REQ'D
	ASPH-D ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES		SAWING CONCRETE REQ'D

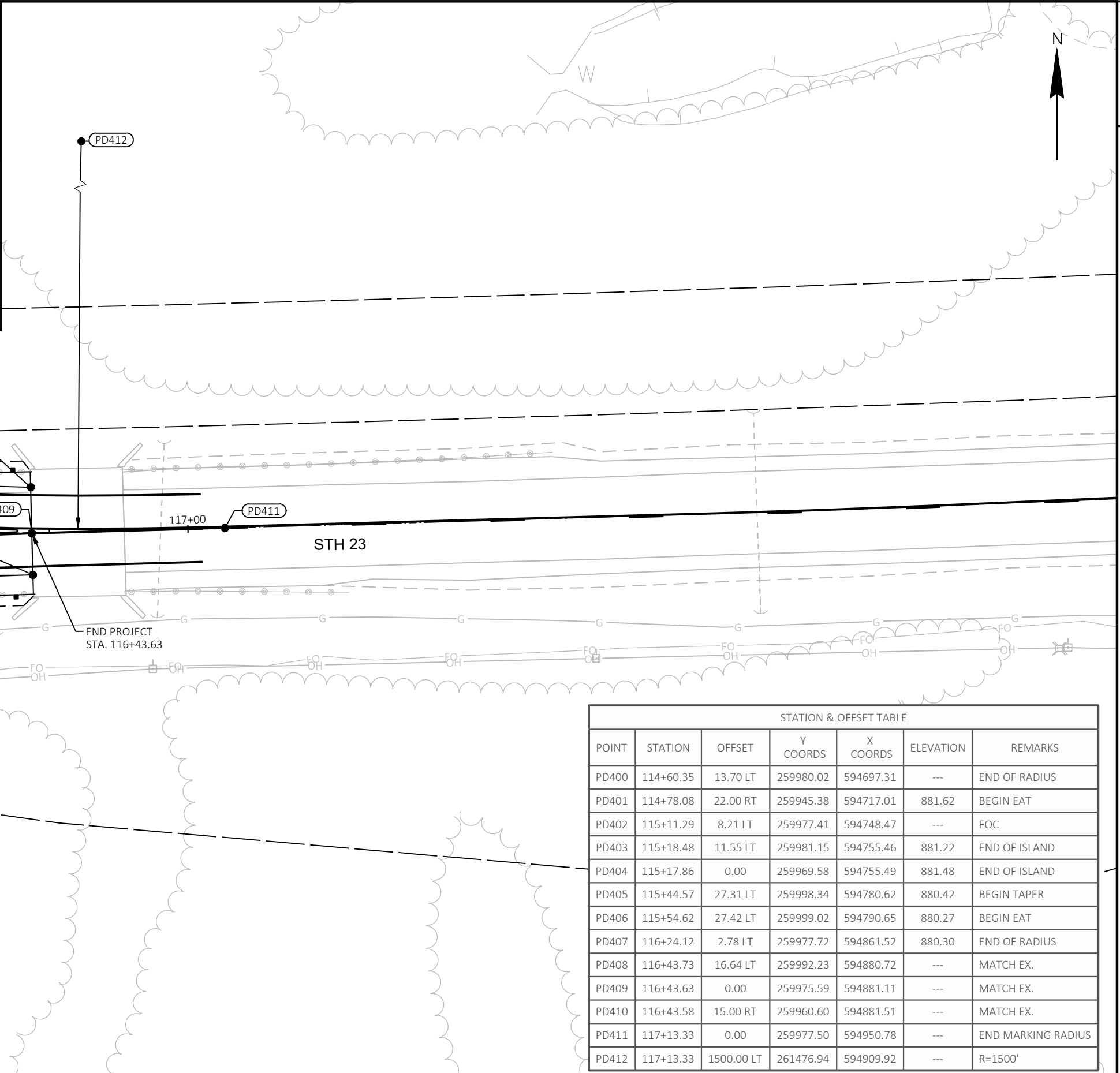


STATION & OFFSET TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	REMARKS
PD300	108+59.35	11.63 LT	259966.01	594102.88	898.58	END OF ISLAND
PD301	108+61.57	4.02 LT	259958.29	594104.63	---	FOC
PD302	108+59.69	0.00	259954.39	594102.50	898.34	END OF ISLAND
PD303	10+32.90 F	36.19 LT	260019.92	594258.61	891.50	TOP OF BERM
PD304	10+76.61 F	52.83 LT	260041.58	594295.45	892.00	TOP OF BERM
PD305	11+15.00 F	74.22 LT	260069.72	594322.86	893.00	TOP OF BERM
PD306	11+15.79 A	50.50 RT	259953.57	594428.42	893.41	TOP OF MOUND
PD307	109+34.70	2.99 LT	259952.76	594177.55	---	FOC
PD308	109+96.53	33.05 LT	259982.49	594237.46	893.16	EOP
PD309	110+08.45	32.92 LT	259983.00	594249.29	892.76	EOP
PD310	110+12.09	35.44 LT	259985.71	594252.79	---	C&G TRANSITION
PD311	110+14.55	32.98 LT	259983.38	594255.38	892.55	EOP
PD312	110+22.70	33.18 LT	259984.02	594263.51	892.30	EOP
PD313	110+40.01	48.13 LT	259999.89	594279.99	892.48	BOS
PD314	110+37.41	41.93 LT	259993.56	594277.73	892.48	FOS
PD315	110+05.93	2.00 LT	259951.99	594248.44	---	FOC
PD316	110+12.09	2.50 LT	259952.82	594254.57	---	C&G TRANSITION
PD317	110+00.24	15.00 RT	259934.70	594243.68	893.02	EOP
PD318	110+11.50	15.00 RT	259935.31	594254.92	892.71	EOP
PD319	110+23.51	15.00 RT	259935.96	594266.92	892.39	EOP
PD320	110+31.51	15.00 RT	259936.39	594274.91	892.19	EOP
PD321	110+45.37	23.00 RT	259929.15	594289.18	892.47	FOS
PD322	110+47.76	29.00 RT	259923.29	594291.89	892.51	BOS
PD323	110+97.40	171.17 LT	260110.92	594392.42	---	R=15'
PD324	110+94.88	157.72 LT	260100.06	594382.07	889.31	PAVEMENT TYPE TRANSITION
PD325	110+91.94	173.35 LT	260117.22	594378.81	889.00	EOP
PD326	110+92.87	188.61 LT	260131.27	594385.32	---	MATCH EX.
PD327	110+82.83	152.80 LT	260102.27	594351.01	889.53	EOP
PD328	110+89.81	136.92 LT	260083.26	594364.54	889.37	PAVEMENT TYPE TRANSITION
PD329	110+05.93	549.00 LT	260498.19	594218.93	---	R=547'

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	REMARKS
PD330	111+55.38	114.16 LT	260053.50	594394.70	889.21	END OF ISLAND
PD331	111+62.78	117.21 LT	260056.59	594402.08	889.13	END OF ISLAND
PD332	111+22.23	33.77 RT	259905.36	594362.46	890.83	FOS
PD333	111+30.33	34.19 RT	259905.00	594370.57	---	C&G TRANSITION
PD334	111+92.83	141.15 RT	259798.43	594433.74	889.44	BOS
PD335	111+99.45	140.95 RT	259798.66	594440.35	---	FOS
PD336	112+12.85	150.51 RT	259789.19	594453.81	---	BIKE RAMP OPENING
PD337	112+66.60	65.34 LT	260005.69	594491.96	887.88	END TRUCK APRON
PD338	112+44.30	64.51 LT	260004.40	594483.92	888.12	C&G TRANSITION
PD339	0+00.00	0.00	259834.08	594499.52	889.39	BOS
PD340	112+54.11	110.30 RT	259829.66	594494.82	889.31	FOS
PD341	112+51.63	126.11 RT	259813.83	594492.44	---	BIKE RAMP OPENING
PD342	112+54.51	133.57 RT	259806.39	594495.37	---	BIKE RAMP OPENING
PD343	113+23.38	43.09 LT	259996.59	594552.48	886.30	BOS
PD344	113+25.49	37.05 LT	259991.19	594556.08	886.14	FOS
PD345	113+37.82	29.44 LT	259986.31	594570.89	---	BIKE RAMP OPENING
PD346	113+45.09	29.82 LT	259987.96	594578.68	---	BIKE RAMP OPENING
PD347	113+53.11	27.57 RT	259932.22	594594.49	884.54	BOS
PD348	113+56.02	21.42 RT	259938.64	594596.42	885.43	FOS
PD349	113+67.27	15.02 RT	259946.05	594606.35	---	BIKE RAMP OPENING
PD350	113+74.26	15.50 RT	259946.03	594613.02	---	BIKE RAMP OPENING
PD351	113+74.98	2.50 LT	259964.04	594612.70	---	C&G TRANSITION
PD352	113+76.67	14.55 LT	259976.17	594613.71	---	C&G TRANSITION
PD353	114+04.79	16.51 LT	259979.70	594641.68	---	END OF RADIUS
PD354	114+18.08	15.00 RT	259948.99	594656.72	883.28	EOP
PD355	114+04.96	480.34 RT	259483.65	594669.78	---	R=497'

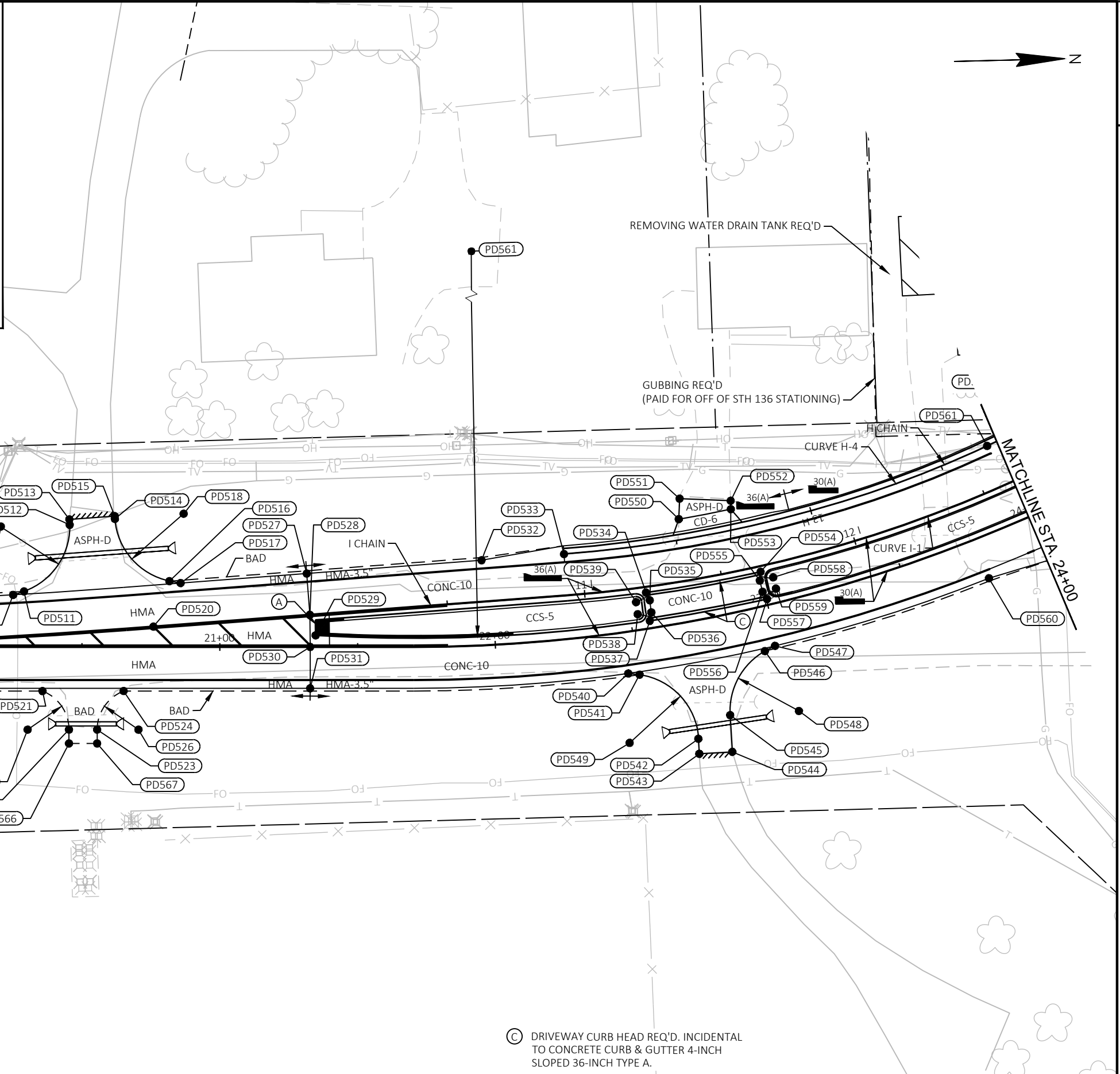
**LEGEND**

	CONCRETE CURB PEDESTRIAN	CS-5	CONCRETE SIDEWALK 5-INCH
	CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)	CD-6	CONCRETE DRIVEWAY 6-INCH
	CONCRETE CURB & GUTTER 30-INCH TYPE A	CONC-10	CONCRETE PAVEMENT 10-INCH
	CONCRETE CURB & GUTTER INTEGRAL 4-INCH SLOPED 36-INCH	HMA	HMA PAVEMENT, 4-INCH
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A	HMA-3.5"	HMA PAVEMENT, 3.5-INCH
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R		CURB RAMP DETECTABLE WARNING FIELD YELLOW
	REVERSE SLOPE GUTTER	(A)	CONCRETE MEDIAN SLOPE NOSE (TYPE 1)
BAD	BASE AGGREGATE DENSE 3/4-INCH	(B)	CONCRETE MEDIAN SLOPE NOSE (TYPE 2)
CCS-5	CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED	(250)	LAYOUT POINT NUMBER
CRTA-12(R)	CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED	////	SAWING ASPHALT REQ'D
ASPH-D	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	XXXX	SAWING CONCRETE REQ'D



STATION & OFFSET TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	REMARKS
PD400	114+60.35	13.70 LT	259980.02	594697.31	---	END OF RADIUS
PD401	114+78.08	22.00 RT	259945.38	594717.01	881.62	BEGIN EAT
PD402	115+11.29	8.21 LT	259977.41	594748.47	---	FOC
PD403	115+18.48	11.55 LT	259981.15	594755.46	881.22	END OF ISLAND
PD404	115+17.86	0.00	259969.58	594755.49	881.48	END OF ISLAND
PD405	115+44.57	27.31 LT	259998.34	594780.62	880.42	BEGIN TAPER
PD406	115+54.62	27.42 LT	259999.02	594790.65	880.27	BEGIN EAT
PD407	116+24.12	2.78 LT	259977.72	594861.52	880.30	END OF RADIUS
PD408	116+43.73	16.64 LT	259992.23	594880.72	---	MATCH EX.
PD409	116+43.63	0.00	259975.59	594881.11	---	MATCH EX.
PD410	116+43.58	15.00 RT	259960.60	594881.51	---	MATCH EX.
PD411	117+13.33	0.00	259977.50	594950.78	---	END MARKING RADIUS
PD412	117+13.33	1500.00 LT	261476.94	594909.92	---	R=1500'

LEGEND	
	CONCRETE CURB PEDESTRIAN
	CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)
	CONCRETE CURB & GUTTER 30-INCH TYPE A
	CONCRETE CURB & GUTTER INTEGRAL 4-INCH SLOPED 36-INCH
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R
	REVERSE SLOPE GUTTER
	BASE AGGREGATE DENSE 3/4-INCH
	CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED
	CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED
	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
	CONCRETE SIDEWALK 5-INCH
	CONCRETE DRIVEWAY 6-INCH
	CONCRETE PAVEMENT 10-INCH
	HMA PAVEMENT, 4-INCH
	HMA PAVEMENT, 3.5-INCH
	CURB RAMP DETECTABLE WARNING FIELD YELLOW
	CONCRETE MEDIAN SLOPE NOSE (TYPE 1)
	CONCRETE MEDIAN SLOPE NOSE (TYPE 2)
	LAYOUT POINT NUMBER
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D
	CONCRETE SIDEWALK 5-INCH
	CONCRETE DRIVEWAY 6-INCH
	CONCRETE PAVEMENT 10-INCH
	HMA PAVEMENT, 4-INCH
	HMA PAVEMENT, 3.5-INCH
	CURB RAMP DETECTABLE WARNING FIELD YELLOW
	CONCRETE MEDIAN SLOPE NOSE (TYPE 1)
	CONCRETE MEDIAN SLOPE NOSE (TYPE 2)
	LAYOUT POINT NUMBER
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D



© DRIVEWAY CURB HEAD REQ'D. INCIDENTAL TO CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A.



STATION & OFFSET TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	REMARKS
PD500	19+00.00	0.00	259302.02	594518.69	---	MATCH EX.
PD501	19+39.29	0.31 LT	259341.32	594518.76	895.33	END OF RADIUS
PD502	19+50.52	15.00 RT	259352.21	594534.30	894.60	EOP
PD503	19+54.55	16.00 RT	259356.18	594535.39	---	END OF RADIUS
PD504	19+64.20	30.01 RT	259365.47	594549.64	893.96	---
PD505	19+76.20	30.01 RT	259377.47	594549.93	893.31	---
PD506	19+85.81	16.00 RT	259387.43	594536.17	---	END OF RADIUS
PD507	19+89.81	15.00 RT	259391.45	594535.27	893.39	EOP
PD508	19+49.11	30.00 RT	259350.48	594549.27	---	R=15'
PD509	19+91.20	30.00 RT	259392.46	594550.29	---	R=15'
PD510	20+25.08	18.88 LT	259427.54	594502.27	892.37	EOP
PD511	20+29.01	20.12 LT	259431.50	594501.13	---	END OF RADIUS
PD512	20+45.58	44.28 LT	259448.67	594477.39	893.72	---
PD513	20+45.47	46.24 LT	259448.60	594475.42	---	MATCH EX.
PD514	20+61.99	46.43 LT	259465.12	594475.64	893.65	---
PD515	20+61.92	47.42 LT	259465.08	594474.65	---	MATCH EX.
PD516	20+81.75	23.85 LT	259484.32	594498.70	---	MATCH EX.
PD517	20+85.81	23.16 LT	259488.37	594499.50	890.98	EOP
PD518	20+86.92	48.31 LT	259490.09	594474.38	---	R=25'
PD519	20+20.59	43.66 LT	259423.67	594477.39	---	R=25'
PD520	20+75.94	7.37 LT	259478.10	594515.04	891.54	END OF RADIUS
PD521	20+35.71	16.00 RT	259437.31	594537.40	892.15	EDGE OF AGG.
PD522	20+45.33	30.00 RT	259446.57	594551.63	891.84	---
PD523	20+55.53	30.00 RT	259456.78	594551.89	891.68	---
PD524	20+65.15	16.00 RT	259466.74	594538.13	891.50	EDGE OF AGG.
PD525	20+30.33	30.00 RT	259431.58	594551.26	---	R=15'
PD526	20+70.53	30.00 RT	259471.77	594552.26	---	R=15'
PD527	21+31.57	26.62 LT	259534.19	594497.17	890.63	PAVEMENT TYPE TRANSITION
PD528	21+32.70	11.66 LT	259534.95	594512.15	890.99	END OF ISLAND
PD529	21+34.77	4.20 LT	259536.83	594519.66	---	FOC
PD530	21+32.81	0.00	259534.77	594523.81	890.76	END OF ISLAND
PD531	21+32.80	15.00 RT	259534.39	594538.80	890.40	PAVEMENT TYPE TRANSITION
PD532	21+96.43	30.84 LT	259597.69	594493.94	889.81	EOP
PD533	22+28.22	30.83 LT	259627.65	594492.41	889.42	END OF CURB
PD534	22+57.01	13.10 LT	259657.01	594507.09	889.38	FLOW LINE
PD535	22+57.95	10.09 LT	259658.32	594509.95	889.54	---
PD536	22+57.83	5.68 LT	259658.80	594514.34	889.72	---
PD537	22+56.78	2.74 LT	259658.16	594517.39	889.74	---
PD538	22+52.78	5.78 LT	259653.83	594514.89	---	R=5'
PD539	22+52.85	10.19 LT	259653.35	594510.50	---	R=5'

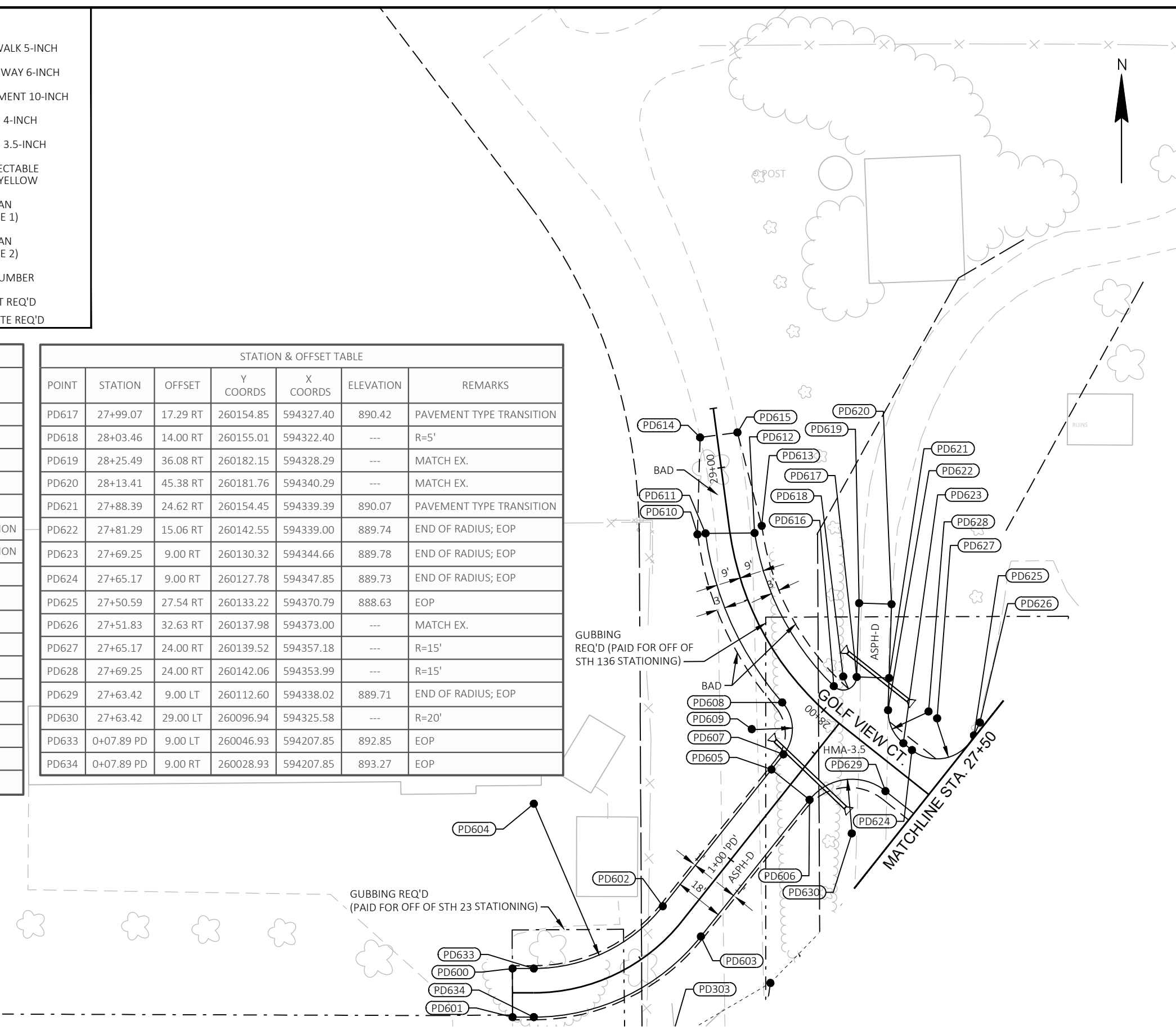
STATION & OFFSET TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	REMARKS
PD540	22+46.36	15.00 RT	259649.87	594536.29	889.51	EOP
PD541	22+50.25	16.00 RT	259653.96	594536.82	889.45	---
PD542	22+66.74	42.35 RT	259674.73	594560.58	886.63	---
PD543	22+66.16	47.79 RT	259674.92	594566.05	---	MATCH EX.
PD544	22+77.11	49.28 RT	259686.91	594565.63	---	MATCH EX.
PD545	22+78.78	36.06 RT	259686.44	594552.30	887.32	---
PD546	22+95.21	16.00 RT	259699.62	594529.39	889.22	---
PD547	22+99.11	15.00 RT	259703.33	594527.59	889.24	EOP
PD548	23+01.87	40.00 RT	259711.43	594551.43	---	R=25'
PD549	22+43.59	40.00 RT	259649.74	594561.46	---	R=25'
PD550	22+74.09	37.26 LT	259669.57	594480.79	889.26	BOA
PD551	22+75.93	44.50 LT	259670.06	594473.38	---	MATCH EX.
PD552	22+95.40	39.91 LT	259688.57	594474.58	---	MATCH EX.
PD553	22+94.73	36.92 LT	259688.55	594477.64	889.28	BOA
PD554	23+00.29	12.34 LT	259698.79	594500.61	889.04	FLOW LINE
PD555	22+99.24	9.30 LT	259698.42	594503.80	889.24	---
PD556	22+99.25	5.10 LT	259699.30	594507.90	889.48	---
PD557	23+00.22	2.16 LT	259700.86	594510.57	889.52	FLOW LINE
PD558	23+04.33	9.29 LT	259703.31	594502.75	---	R=5'
PD559	23+04.30	5.10 LT	259704.19	594506.84	---	R=5'
PD560	23+78.40	15.00 RT	259781.52	594505.01	888.85	BEGIN TAPER; EOP
PD561	23+96.12	29.60 LT	259782.03	594457.02	---	BIKE RAMP OPENING
PD562	28+52.14	2419.53 LT	259341.32	592018.76	---	R=2,500'
PD563	24+06.34	589.97 LT	259586.52	593931.76	---	R=590'
PD564	19+64.20	34.01 RT	259365.37	594553.64	---	MATCH EX.
PD565	19+76.20	34.01 RT	259377.37	594553.93	---	MATCH EX.
PD566	20+45.33	35.00 RT	259446.45	594556.63	---	MATCH EX.
PD567	20+55.53	35.00 RT	259456.66	594556.89	---	MATCH EX.

LEGEND

	CONCRETE CURB PEDESTRIAN	CS-5	CONCRETE SIDEWALK 5-INCH
	CONCRETE CURB & CUTTER 18-INCH TYPE A (REJECT)	CD-6	CONCRETE DRIVEWAY 6-INCH
	CONCRETE CURB & GUTTER 30-INCH TYPE A	CONC-10	CONCRETE PAVEMENT 10-INCH
	CONCRETE CURB & GUTTER INTEGRAL 4-INCH SLOPED 36-INCH	HMA	HMA PAVEMENT, 4-INCH
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A	HMA-3.5"	HMA PAVEMENT, 3.5-INCH
	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R		CURB RAMP DETECTABLE WARNING FIELD YELLOW
	REVERSE SLOPE GUTTER		CONCRETE MEDIAN SLOPE NOSE (TYPE 1)
	BASE AGGREGATE DENSE 3/4-INCH		CONCRETE MEDIAN SLOPE NOSE (TYPE 2)
	CONCRETE SIDEWALK 5-INCH, COLORING CONCRETE WISDOT RED		LAYOUT POINT NUMBER
	CONCRETE TRUCK APRON 12-INCH, COLORING CONCRETE WISDOT RED		SAWING ASPHALT REQ'D
	ASPH-D ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES		SAWING CONCRETE REQ'D

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	REMARKS
PD600	0+00.00 PD	9.00 LT	260046.93	594199.96	---	MATCH EX.
PD601	0+00.00 PD	9.00 RT	260028.93	594199.96	---	MATCH EX.
PD602	0+70.83 PD	9.00 LT	260069.97	594255.60	891.43	EOP
PD603	0+70.83 PD	9.00 RT	260058.77	594269.70	891.07	EOP
PD604	0+07.89 PD	70.00 LT	260107.93	594207.85	---	R=61'
PD605	1+35.48 PD	9.00 LT	260120.58	594295.83	890.57	PAVEMENT TYPE TRANSITION
PD606	1+35.48 PD	9.00 RT	260109.38	594309.92	890.21	PAVEMENT TYPE TRANSITION
PD607	1+42.65 PD	9.00 LT	260126.19	594300.29	890.50	END OF RADIUS
PD608	28+12.23	9.00 LT	260145.41	594299.83	890.46	END OF RADIUS; EOP
PD609	28+12.23	24.00 LT	260135.53	594288.54	---	R=15'
PD610	28+76.70	12.00 LT	260207.62	594268.44	891.68	BEGIN AGG. TAPER
PD611	28+76.68	9.00 LT	260207.99	594271.41	891.80	EOP
PD612	28+74.19	9.00 RT	260208.12	594289.58	891.75	EOP
PD613	28+76.66	12.00 RT	260210.77	594292.23	891.68	BEGIN AGG. TAPER
PD614	29+12.12	6.27 LT	260243.48	594269.41	---	MATCH EX.
PD615	29+12.12	7.66 RT	260245.33	594283.23	---	MATCH EX.
PD616	28+03.46	9.00 RT	260151.43	594318.91	890.30	END OR RADIUS; EOP

STATION & OFFSET TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	REMARKS
PD617	27+99.07	17.29 RT	260154.85	594327.40	890.42	PAVEMENT TYPE TRANSITION
PD618	28+03.46	14.00 RT	260155.01	594322.40	---	R=5'
PD619	28+25.49	36.08 RT	260182.15	594328.29	---	MATCH EX.
PD620	28+13.41	45.38 RT	260181.76	594340.29	---	MATCH EX.
PD621	27+88.39	24.62 RT	260154.45	594339.39	890.07	PAVEMENT TYPE TRANSITION
PD622	27+81.29	15.06 RT	260142.55	594339.00	889.74	END OF RADIUS; EOP
PD623	27+69.25	9.00 RT	260130.32	594344.66	889.78	END OF RADIUS; EOP
PD624	27+65.17	9.00 RT	260127.78	594347.85	889.73	END OF RADIUS; EOP
PD625	27+50.59	27.54 RT	260133.22	594370.79	888.63	EOP
PD626	27+51.83	32.63 RT	260137.98	594373.00	---	MATCH EX.
PD627	27+65.17	24.00 RT	260139.52	594357.18	---	R=15'
PD628	27+69.25	24.00 RT	260142.06	594353.99	---	R=15'
PD629	27+63.42	9.00 LT	260112.60	594338.02	889.71	END OF RADIUS; EOP
PD630	27+63.42	29.00 LT	260096.94	594325.58	---	R=20'
PD633	0+07.89 PD	9.00 LT	260046.93	594207.85	892.85	EOP
PD634	0+07.89 PD	9.00 RT	260028.93	594207.85	893.27	EOP



A CHAIN

CURVE A-1  
 PI STA = 11+11.77 A  
 Y = 259853.938  
 X = 594356.893  
 DELTA = 131°22'19"  
 D = 113°27'25"  
 T = 111.77'  
 L = 115.79'  
 R = 50.50'  
 PC STA = 10+00.00 A  
 Y = 259909.841  
 X = 594453.681  
 PT STA = 11+15.79 A  
 Y = 259963.520  
 X = 594378.913  
 BK = S59°59'24.2"W  
 AH = N11°21'43.3"E

CURVE A-2  
 PI STA = 12+00.74 A  
 Y = 260046.810  
 X = 594395.650  
 DELTA = 118°32'33"  
 D = 113°27'25"  
 T = 84.95'  
 L = 104.48'  
 R = 50.50'  
 PC STA = 11+15.79 A  
 Y = 259963.520  
 X = 594378.913  
 PT STA = 12+20.27 A  
 Y = 259992.310  
 X = 594460.820  
 BK = N11°21'43.3"E  
 AH = S50°05'43.5"E

CURVE A-3  
 PI STA = 12+92.51 A  
 Y = 259945.971  
 X = 594516.233  
 DELTA = 110°05'05"  
 D = 113°39'25"  
 T = 72.24'  
 L = 97.03'  
 R = 50.50'  
 PC STA = 12+20.27 A  
 Y = 259992.310  
 X = 594460.820  
 PT STA = 13+17.30 A  
 Y = 259909.842  
 X = 594453.682  
 BK = S50°05'43.5"E  
 AH = S59°59'21.7"W

B CHAIN

10+00.00 B  
 Y = 259,804.83  
 X = 594,495.98

CURVE B-1  
 PI STA = 10+55.97 B  
 Y = 259856.922  
 X = 594475.500  
 DELTA = 27°33'43"  
 D = 67°24'24"  
 T = 20.85'  
 L = 40.89'  
 R = 85.00'  
 PC STA = 10+35.12 B  
 Y = 259837.520  
 X = 594483.128  
 PT STA = 10+76.01 B  
 Y = 259877.652  
 X = 594477.716  
 BK = N21°27'41.4"W  
 AH = N06°06'01.7"E

CURVE B-2  
 PI STA = 11+03.30 B  
 Y = 259904.784  
 X = 594480.616  
 DELTA = 57°14'43"  
 D = 114°35'30"  
 T = 27.29'  
 L = 49.96'  
 R = 50.00'  
 PC STA = 10+76.01 B  
 Y = 259877.652  
 X = 594477.716  
 PT STA = 11+25.97 B  
 Y = 259917.025  
 X = 594505.003  
 BK = N06°06'01.7"E  
 AH = N63°20'44.8"E

CURVE B-3  
 PI STA = 11+70.71 B  
 Y = 259937.099  
 X = 594544.995  
 DELTA = 15°55'15"  
 D = 17°54'18"  
 T = 44.75'  
 L = 88.92'  
 R = 320.00'  
 PC STA = 11+25.97 B  
 Y = 259917.025  
 X = 594505.003  
 PT STA = 12+14.88 B  
 Y = 259945.433  
 X = 594588.960  
 BK = N63°20'44.8"E  
 AH = N79°15'59.9"E

CURVE B-4  
 PI STA = 12+27.01 B  
 Y = 259946.197  
 X = 594601.059  
 DELTA = 4°23'38"  
 D = 18°07'54"  
 T = 12.12'  
 L = 24.23'  
 R = 316.00'  
 PC STA = 12+14.88 B  
 Y = 259945.433  
 X = 594588.960  
 PT STA = 12+39.12 B  
 Y = 259946.031  
 X = 594613.180  
 BK = N86°23'15.2"E  
 AH = S89°13'06.8"E

C CHAIN

CURVE C-1  
 PI STA = 10+33.86 C  
 Y = 259960.912  
 X = 594526.318  
 DELTA = 37°24'28"  
 D = 57°17'45"  
 T = 33.86'  
 L = 65.29'  
 R = 100.00'  
 PC STA = 10+00.00 C  
 Y = 259975.072  
 X = 594495.565  
 PT STA = 10+65.29 C  
 Y = 259968.347  
 X = 594559.347  
 BK = S65°16'39.0"E  
 AH = N77°18'52.5"E

CURVE C-2  
 PI STA = 11+41.48 C  
 Y = 259985.078  
 X = 594633.676  
 DELTA = 14°32'04"  
 D = 11°27'33"  
 T = 63.76'  
 L = 126.84'  
 R = 500.00'  
 PC STA = 10+77.72 C  
 Y = 259971.076  
 X = 594571.472  
 PT STA = 12+04.55 C  
 Y = 259983.021  
 X = 594697.404  
 BK = N77°18'52.5"E  
 AH = S88°09'03.5"E

12+62.64 B  
 Y = 259981.15  
 X = 594,755.46

D CHAIN

CURVE D-1  
 PI STA = 10+06.44 D  
 Y = 260095.614  
 X = 594386.735  
 DELTA = 7°22'14"  
 D = 57°17'45"  
 T = 6.44'  
 L = 12.86'  
 R = 100.00'  
 PC STA = 10+00.00 D  
 Y = 260100.059  
 X = 594382.074  
 PT STA = 10+12.86 D  
 Y = 260090.608  
 X = 594390.788  
 BK = S46°21'53.3"E  
 AH = S38°59'38.8"E

CURVE D-2  
 PI STA = 10+96.20 D  
 Y = 260027.202  
 X = 594444.856  
 DELTA = 15°30'04"  
 D = 28°21'51"  
 T = 27.49'  
 L = 54.65'  
 R = 202.00'  
 PC STA = 10+68.71 D  
 Y = 260047.930  
 X = 594426.795  
 PT STA = 11+23.36 D  
 Y = 260012.054  
 X = 594467.799  
 BK = S41°03'55.1"E  
 AH = S56°33'59.1"E

CURVE D-3  
 PI STA = 11+89.60 D  
 Y = 259975.558  
 X = 594523.077  
 DELTA = 46°07'08"  
 D = 67°24'24"  
 T = 36.18'  
 L = 68.42'  
 R = 85.00'  
 PC STA = 11+53.42 D  
 Y = 259995.495  
 X = 594492.880  
 PT STA = 12+21.83 D  
 Y = 259983.504  
 X = 594558.379  
 BK = S56°33'59.1"E  
 AH = N77°18'52.5"E

CURVE D-4  
 PI STA = 12+37.25 D  
 Y = 259986.889  
 X = 594573.415  
 DELTA = 1°11'40"  
 D = 11°07'31"  
 T = 5.37'  
 L = 10.74'  
 R = 515.00'  
 PC STA = 12+31.88 D  
 Y = 259985.710  
 X = 594568.178  
 PT STA = 12+42.62 D  
 Y = 259987.958  
 X = 594578.676  
 BK = N77°18'52.5"E  
 AH = N78°30'32.3"E

E CHAIN

CURVE E-1  
 PI STA = 10+55.63 E  
 Y = 260070.108  
 X = 594406.272  
 DELTA = 63°26'26"  
 D = 63°39'43"  
 T = 55.63'  
 L = 99.65'  
 R = 90.00'  
 PC STA = 10+00.00 E  
 Y = 260104.561  
 X = 594362.596  
 PT STA = 10+99.65 E  
 Y = 260015.636  
 X = 594394.985  
 BK = S51°43'59.8"E  
 AH = S11°42'25.8"W

F CHAIN

CURVE F-1  
 PI STA = 10+67.30 F  
 Y = 259983.014  
 X = 594296.059  
 DELTA = 17°00'39"  
 D = 12°43'56"  
 T = 67.30'  
 L = 133.60'  
 R = 450.00'  
 PC STA = 10+00.00 F  
 Y = 259982.318  
 X = 594228.766  
 PT STA = 11+33.60 F  
 Y = 260003.368  
 X = 594360.205  
 BK = N89°24'24.4"E  
 AH = N72°23'45.2"E

CURVE F-2  
 PI STA = 11+48.40 F  
 Y = 260007.843  
 X = 594374.308  
 DELTA = 61°14'20"  
 D = 229°10'59"  
 T = 14.80'  
 L = 26.72'  
 R = 25.00'  
 PC STA = 11+33.60 F  
 Y = 260003.368  
 X = 594360.205  
 PT STA = 11+60.32 F  
 Y = 260022.359  
 X = 594377.171  
 BK = N72°23'45.0"E  
 AH = N11°09'25.5"E

CURVE F-3  
 PI STA = 11+94.08 F  
 Y = 260055.475  
 X = 594383.703  
 DELTA = 45°45'06"  
 D = 71°37'11"  
 T = 33.75'  
 L = 63.88'  
 R = 80.00'  
 PC STA = 11+60.32 F  
 Y = 260022.359  
 X = 594377.171  
 PT STA = 12+24.21 F  
 Y = 260083.260  
 X = 594364.538  
 BK = N11°09'25.5"E  
 AH = N34°35'40.1"W

G CHAIN

10+00.00 G  
 Y = 259,966.01  
 X = 594,102.88

CURVE G-1  
 PI STA = 12+02.59 G  
 Y = 259968.111  
 X = 594305.456  
 DELTA = 15°56'11"  
 D = 12°43'57"  
 T = 62.99'  
 L = 125.16'  
 R = 450.00'  
 PC STA = 11+39.60 G  
 Y = 259967.459  
 X = 594242.470  
 PT STA = 12+64.76 G  
 Y = 259986.032  
 X = 594365.841  
 BK = N89°24'24.5"E  
 AH = N73°28'13.4"E

H CHAIN

CURVE H-1  
 PI STA = 10+37.39 H  
 Y = 259939.839  
 X = 594338.710  
 DELTA = 47°29'07"  
 D = 67°24'24"  
 T = 37.39'  
 L = 70.45'  
 R = 85.00'  
 PC STA = 10+00.00 H  
 Y = 259937.822  
 X = 594301.376  
 PT STA = 10+70.45 H  
 Y = 259913.684  
 X = 594365.426  
 BK = N86°54'25.8"E  
 AH = S45°36'27.7"E

CURVE H-2  
 PI STA = 11+17.40 H  
 Y = 259880.835  
 X = 594398.979  
 DELTA = 12°19'19"  
 D = 13°10'17"  
 T = 46.96'  
 L = 93.55'  
 R = 435.00'  
 PC STA = 10+70.45 H  
 Y = 259913.684  
 X = 594365.426  
 PT STA = 11+64.00 H  
 Y = 259841.582  
 X = 594424.749  
 BK = S45°36'27.7"E  
 AH = S33°17'08.8"E

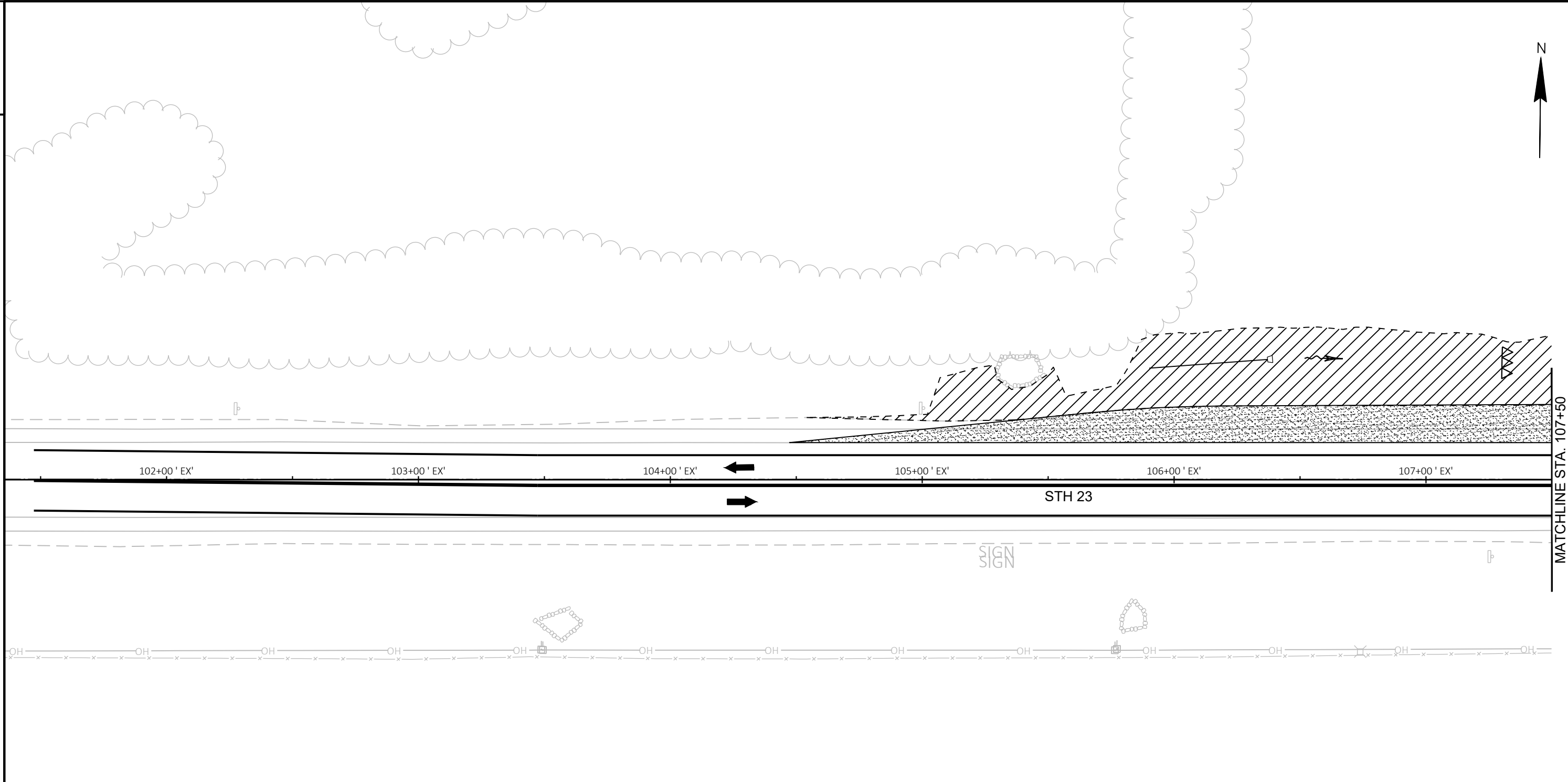
CURVE H-3  
 PI STA = 12+26.67 H  
 Y = 259789.189  
 X = 594459.147  
 DELTA = 17°43'24"  
 D = 14°15'10"  
 T = 62.68'  
 L = 124.35'  
 R = 402.00'  
 PC STA = 11+64.00 H  
 Y = 259841.582  
 X = 594424.749  
 PT STA = 12+88.35 H  
 Y = 259728.811  
 X = 594475.962  
 BK = S33°17'08.8"E  
 AH = S15°33'45.2"E

CURVE H-4  
 PI STA = 13+39.91 H  
 Y = 259679.142  
 X = 594489.795  
 DELTA = 12°39'15"  
 D = 12°19'18"  
 T = 51.56'  
 L = 102.70'  
 R = 465.00'  
 PC STA = 12+88.35 H  
 Y = 259728.811  
 X = 594475.962  
 PT STA = 13+91.05 H  
 Y = 259627.649  
 X = 594492.411  
 BK = S15°33'45.2"E  
 AH = S02°54'29.8"E






I CHAIN

10+00.00 I  
 Y = 259,534.94  
 X = 594,512.15

CURVE I-1  
 PI STA = 12+34.63 I  
 Y = 259769.267  
 X = 594500.226  
 DELTA = 32°44'29"  
 D = 11°56'12"  
 T = 141.00'  
 L = 274.29'  
 R = 480.00'  
 PC STA = 10+93.62 I  
 Y = 259628.444  
 X = 594507.390  
 PT STA = 13+67.92 I  
 Y = 259883.841  
 X = 594418.036  
 BK = N02°54'44.7"W  
 AH = N35°39'13.4"W



**LEGEND**

-  TEMPORARY PAVEMENT PLACED IN CURRENT STAGE
-  SEEDING TEMPORARY, MULCHING
-  TEMPORARY DITCH CHECKS
-  SURFACE WATER FLOW
-  CULVERT PIPE CHECKS

PROJECT NO: 5050-01-76

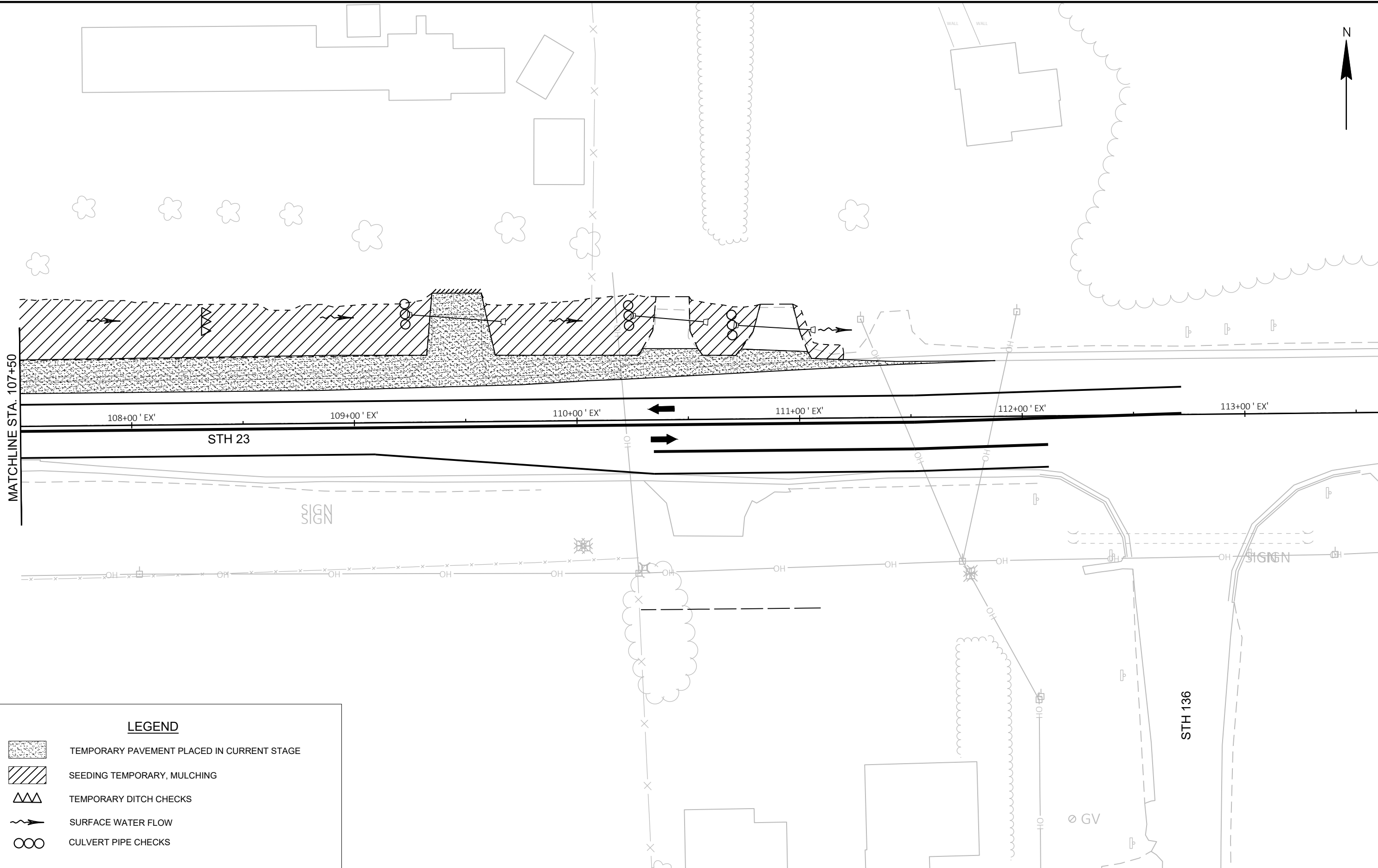
HWY: STH 23

COUNTY: SAUK






EROSION CONTROL - STAGE 1

SHEET











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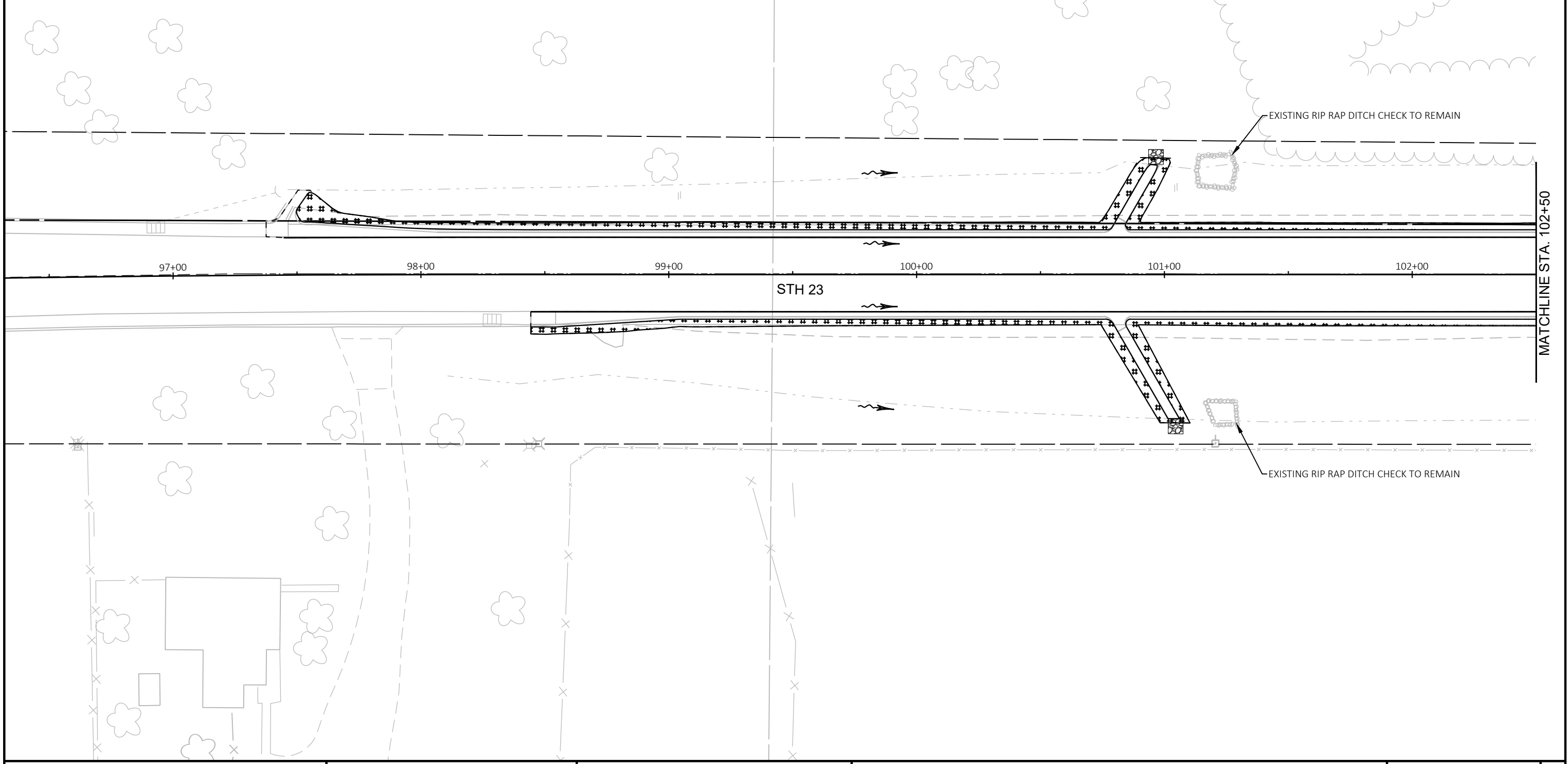


**LEGEND**

-  TEMPORARY PAVEMENT PLACED IN CURRENT STAGE
-  SEEDING TEMPORARY, MULCHING
-  TEMPORARY DITCH CHECKS
-  SURFACE WATER FLOW
-  CULVERT PIPE CHECKS











LEGEND

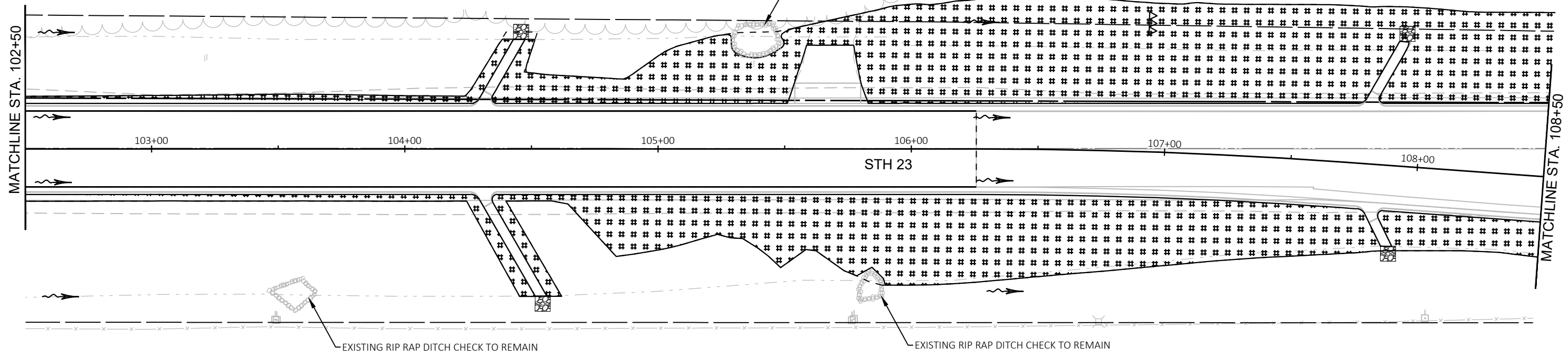
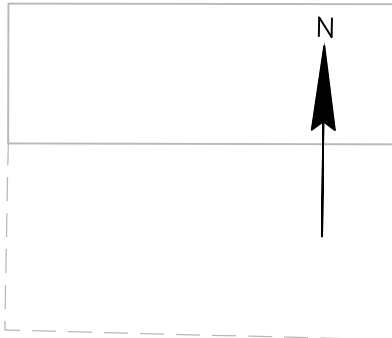
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  -  TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
  -  SILT FENCE
  -  RIPRAP MEDIUM (UNLESS OTHERWISE NOTED)
  -  SURFACE WATER FLOW
  -  TEMPORARY DITCH CHECK
  -  CULVERT PIPE CHECKS
-  (A/B) PLACE INLET PROTECTION TYPE A UNTIL INLET IS PLACED THEN PLACE INLET PROTECTION TYPE B.
  -  (A/C) PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE C.
  -  (A/D) PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE D.










PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	EROSION CONTROL	SHEET	<b>E</b>
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LEGEND

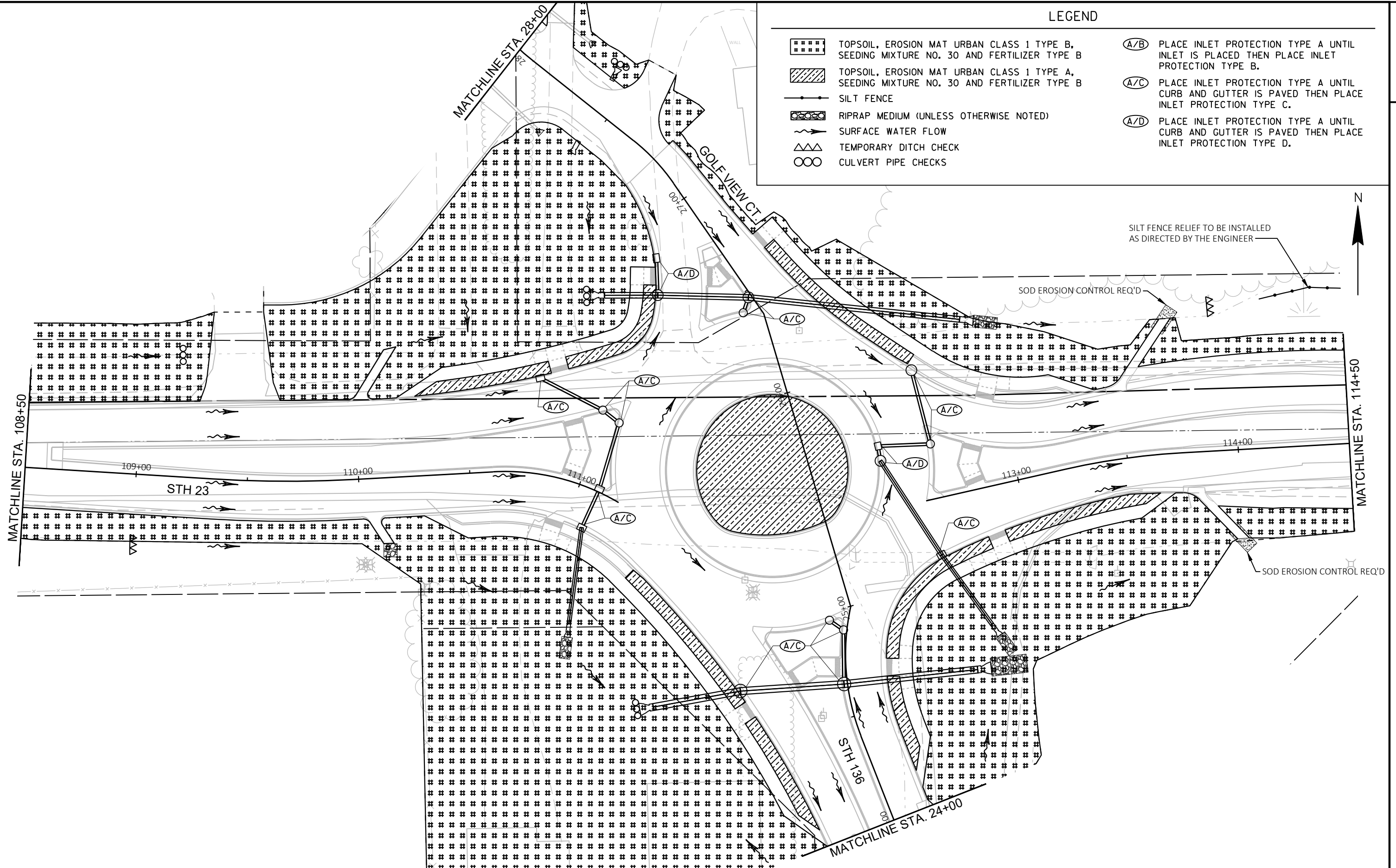
-  TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE B, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
  -  TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
  -  SILT FENCE
  -  RIPRAP MEDIUM (UNLESS OTHERWISE NOTED)
  -  SURFACE WATER FLOW
  -  TEMPORARY DITCH CHECK
  -  CULVERT PIPE CHECKS
-  (A/B) PLACE INLET PROTECTION TYPE A UNTIL INLET IS PLACED THEN PLACE INLET PROTECTION TYPE B.
  -  (A/C) PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE C.
  -  (A/D) PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE D.



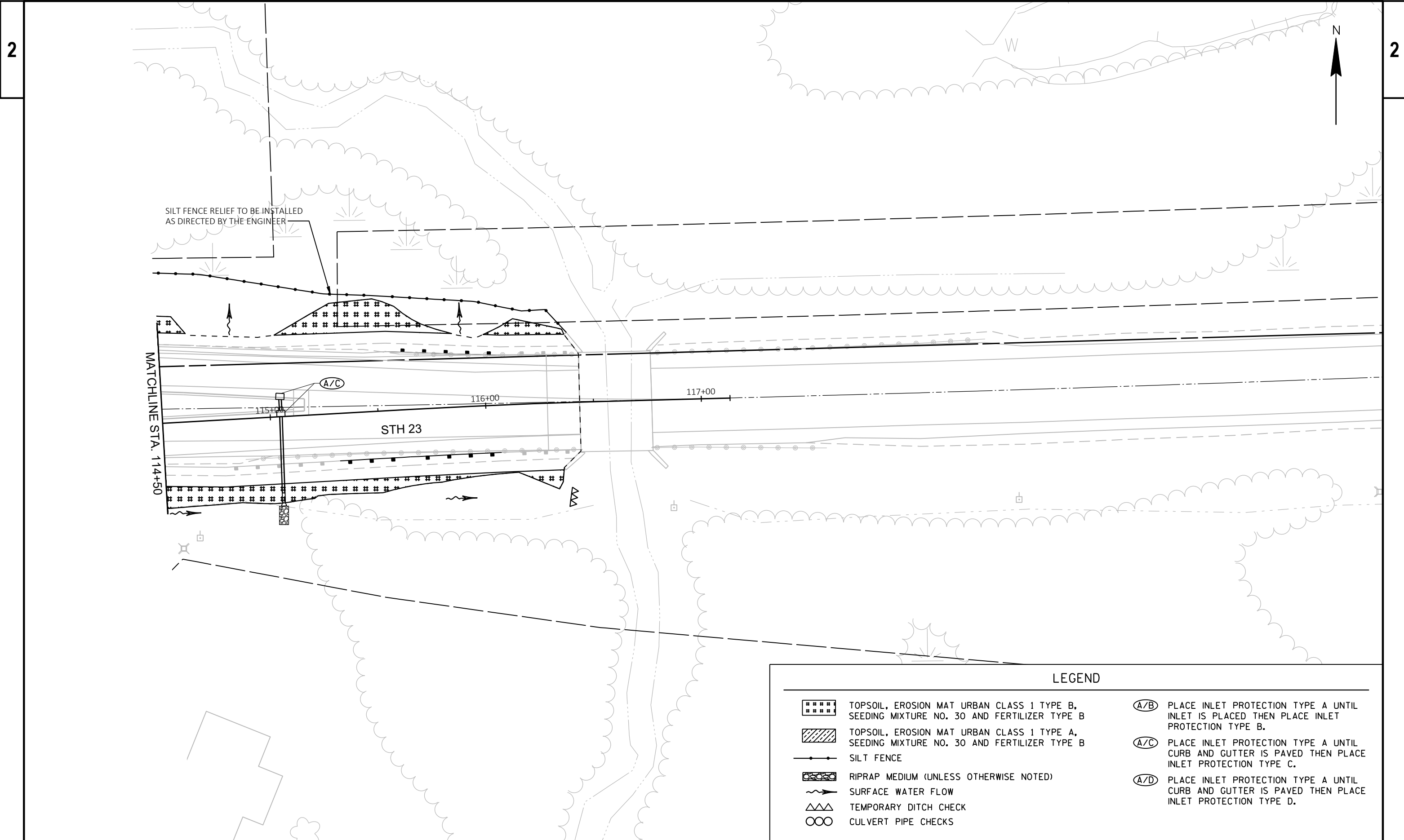
LEGEND

-  TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE B, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
-  TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
-  SILT FENCE
-  RIPRAP MEDIUM (UNLESS OTHERWISE NOTED)
-  SURFACE WATER FLOW
-  TEMPORARY DITCH CHECK
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-  (A/D) PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE D.

















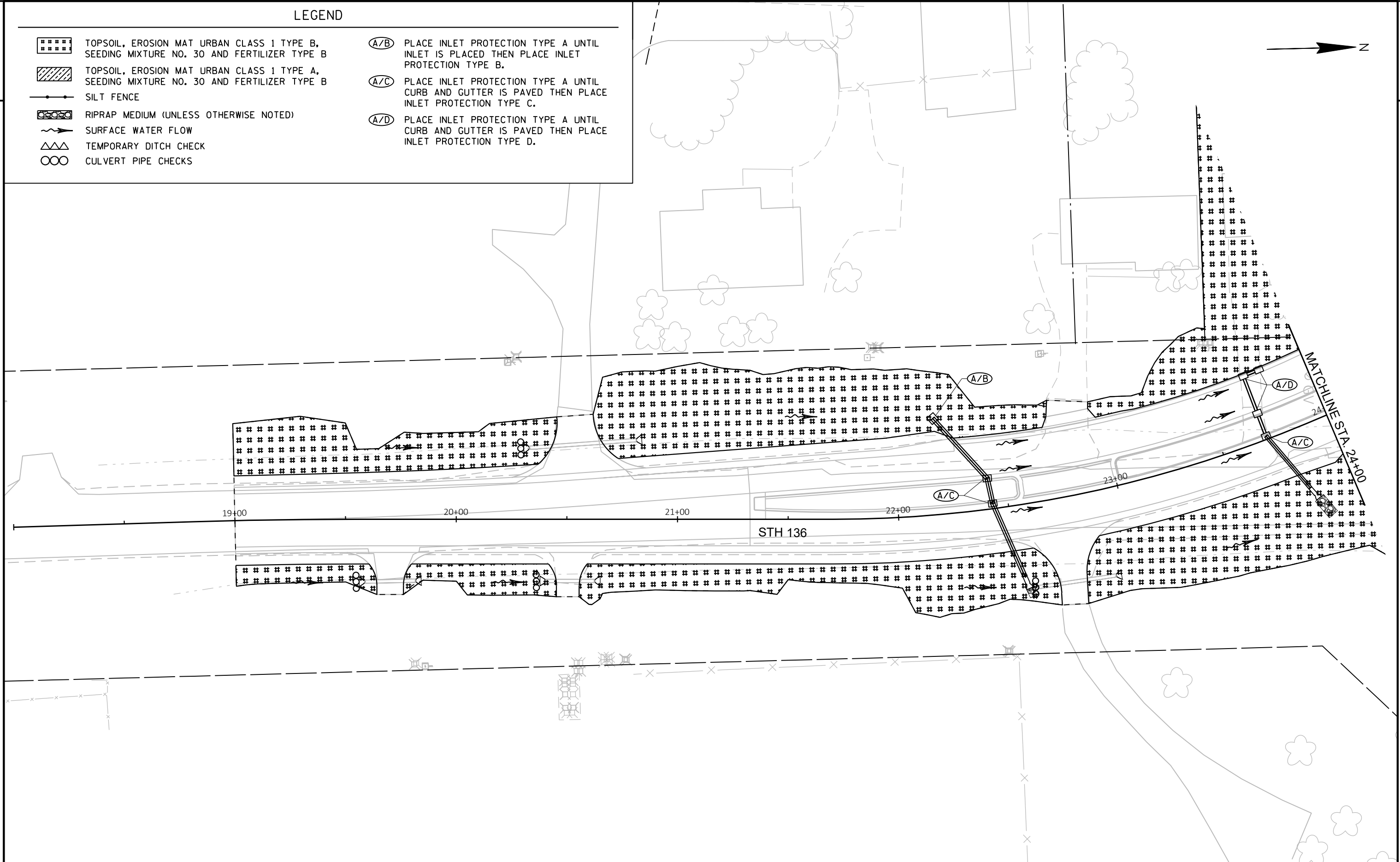
**LEGEND**

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li> TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE B, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B</li> <li> TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B</li> <li> SILT FENCE</li> <li> RIPRAP MEDIUM (UNLESS OTHERWISE NOTED)</li> <li> SURFACE WATER FLOW</li> <li> TEMPORARY DITCH CHECK</li> <li> CULVERT PIPE CHECKS</li> </ul> | <ul style="list-style-type: none"> <li> PLACE INLET PROTECTION TYPE A UNTIL INLET IS PLACED THEN PLACE INLET PROTECTION TYPE B.</li> <li> PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE C.</li> <li> PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE D.</li> </ul> |
|---|--|

LEGEND








-  TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE B, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
-  TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
-  SILT FENCE
-  RIPRAP MEDIUM (UNLESS OTHERWISE NOTED)
-  SURFACE WATER FLOW
-  TEMPORARY DITCH CHECK
-  CULVERT PIPE CHECKS




-  (A/B) PLACE INLET PROTECTION TYPE A UNTIL INLET IS PLACED THEN PLACE INLET PROTECTION TYPE B.
-  (A/C) PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE C.
-  (A/D) PLACE INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS PAVED THEN PLACE INLET PROTECTION TYPE D.



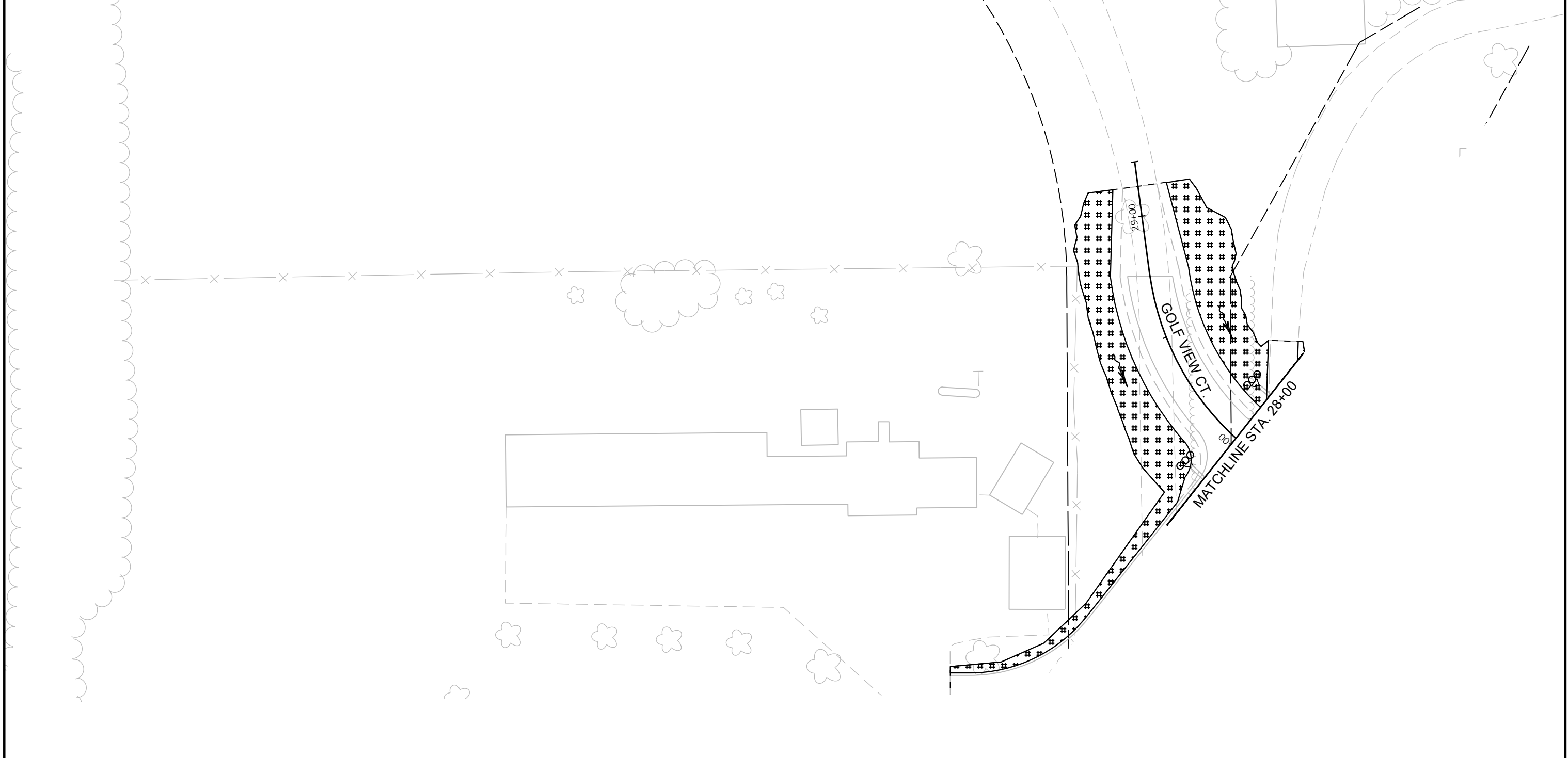
PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	EROSION CONTROL
SHEET			<b>E</b>

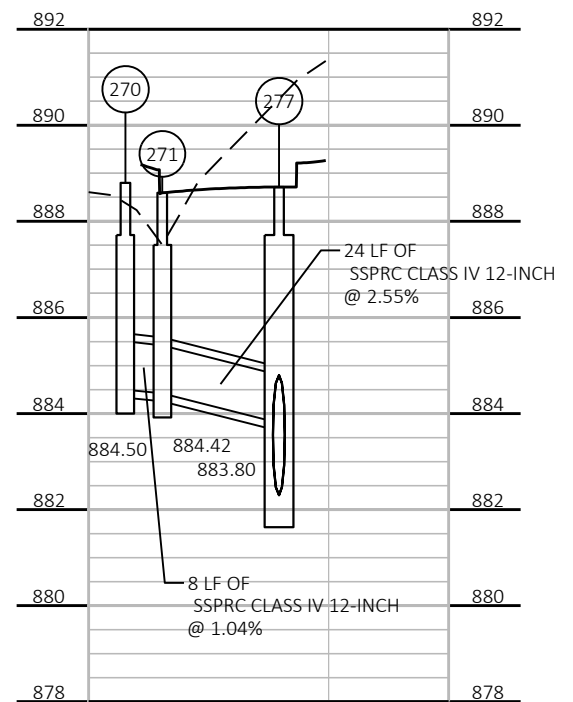
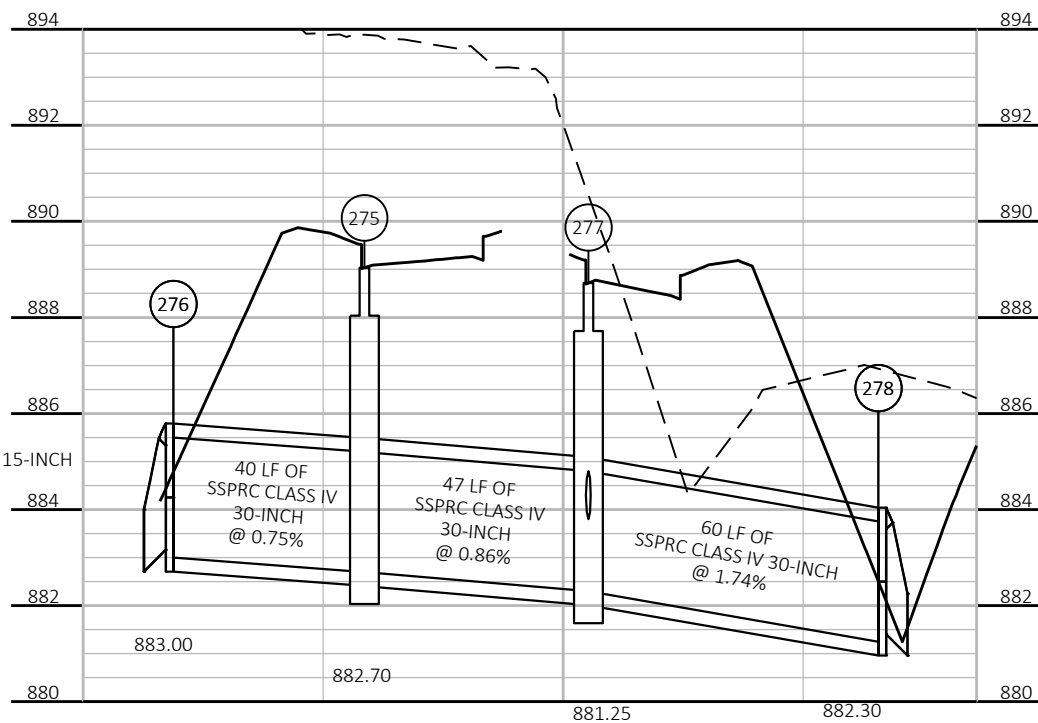
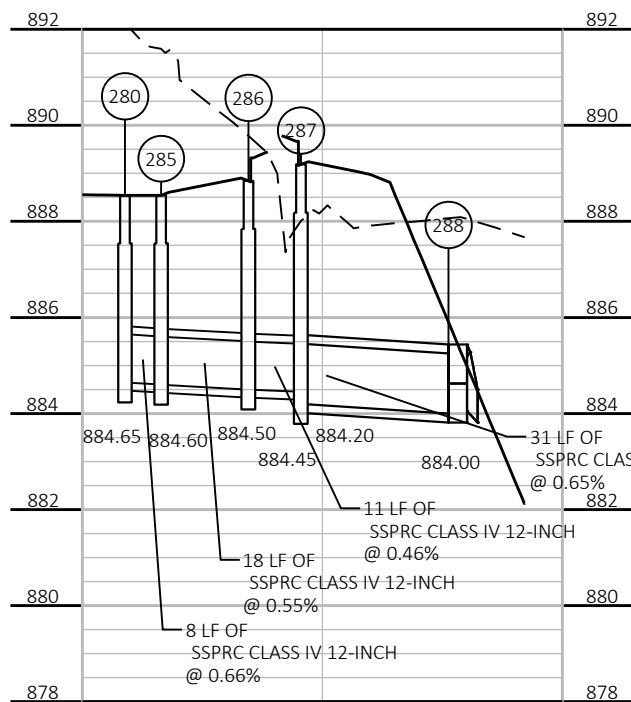
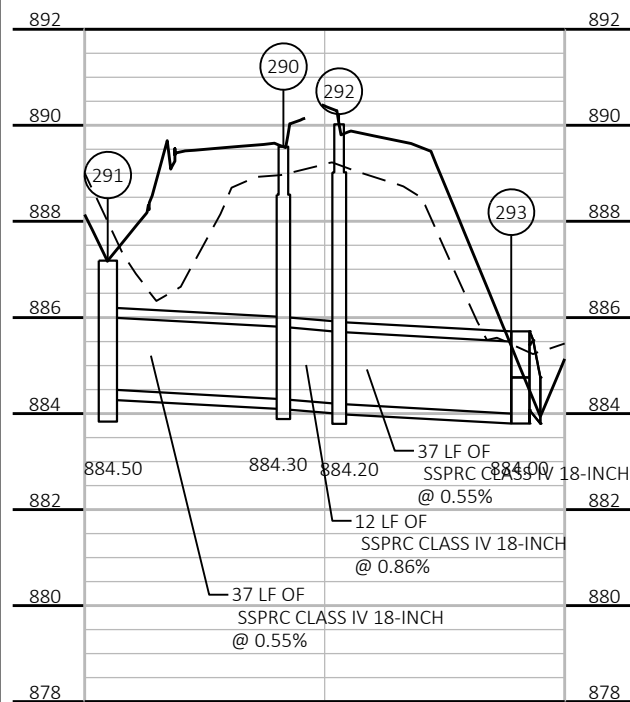
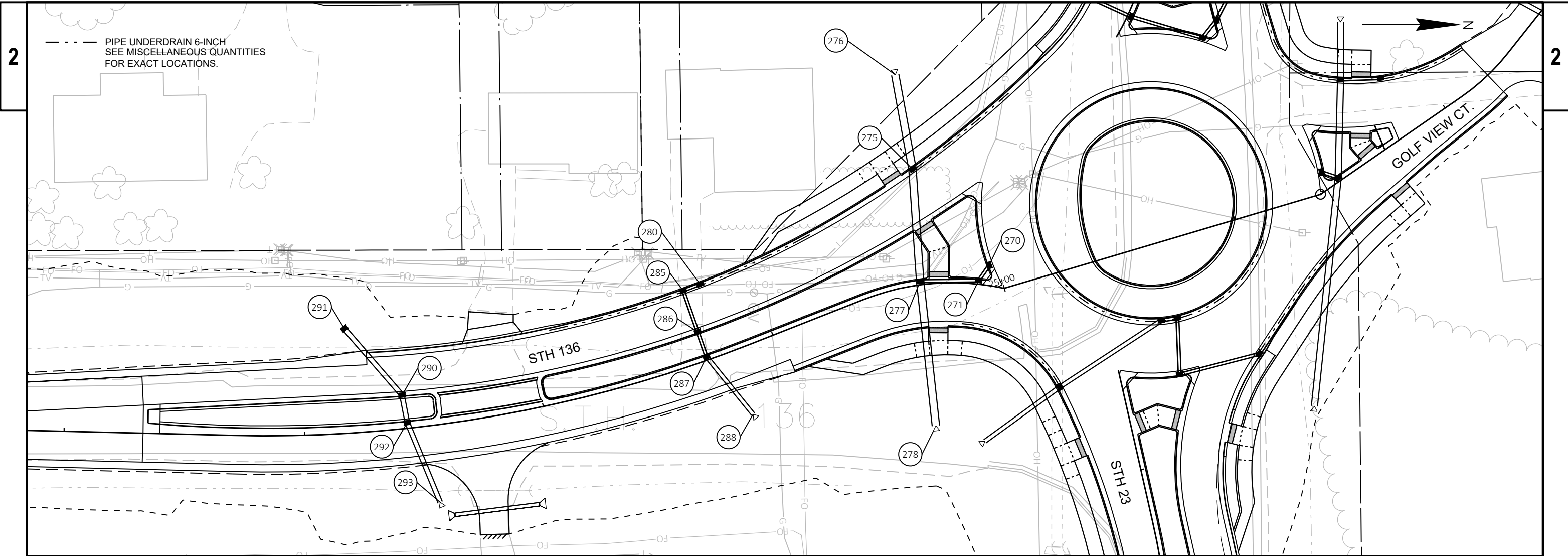
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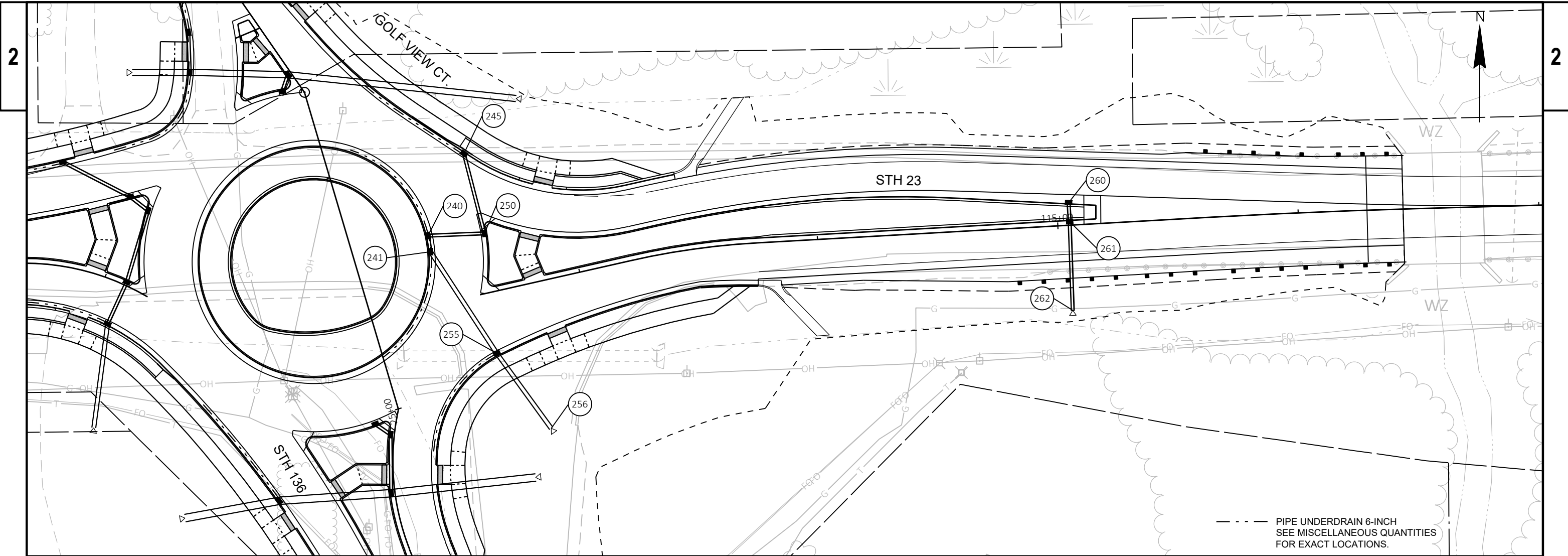
-  TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE B, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
-  TOPSOIL, EROSION MAT URBAN CLASS 1 TYPE A, SEEDING MIXTURE NO. 30 AND FERTILIZER TYPE B
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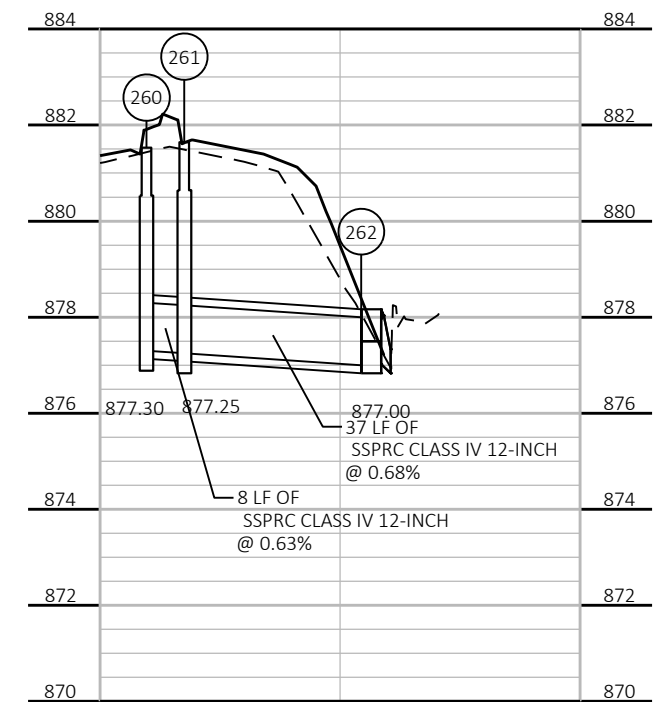
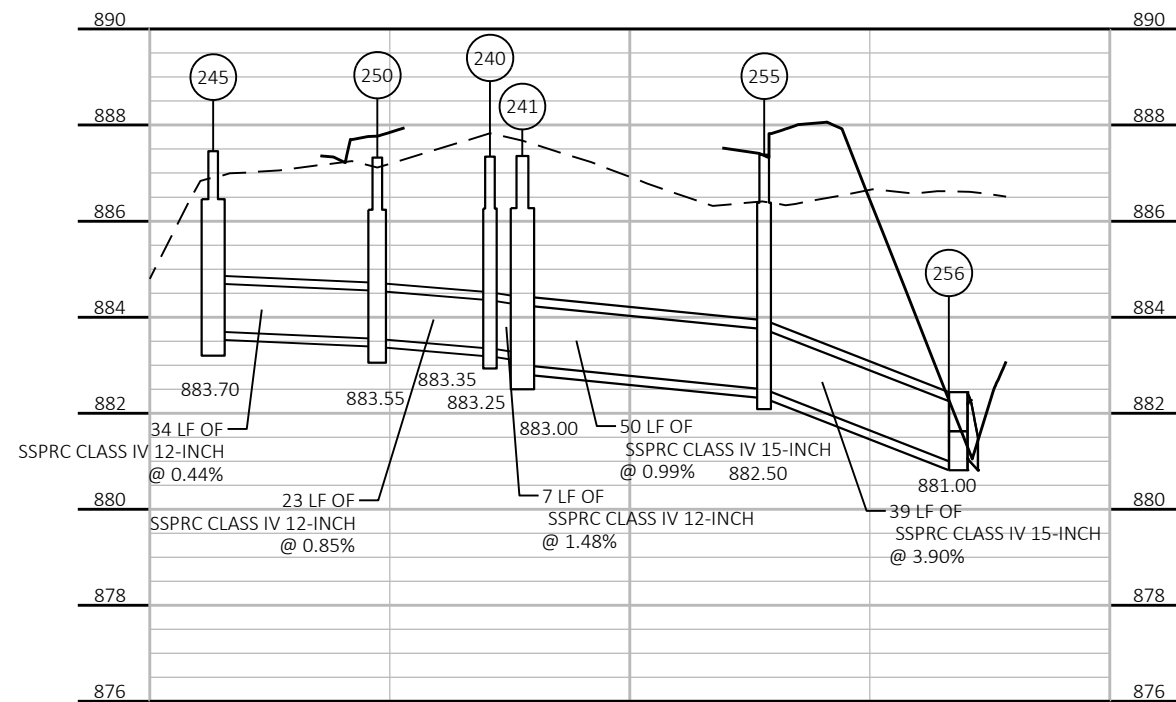
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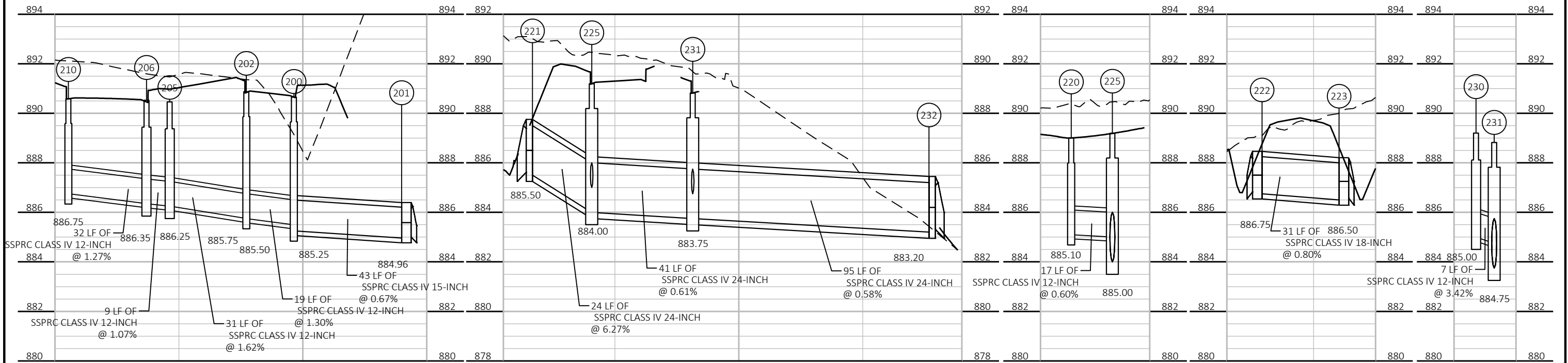
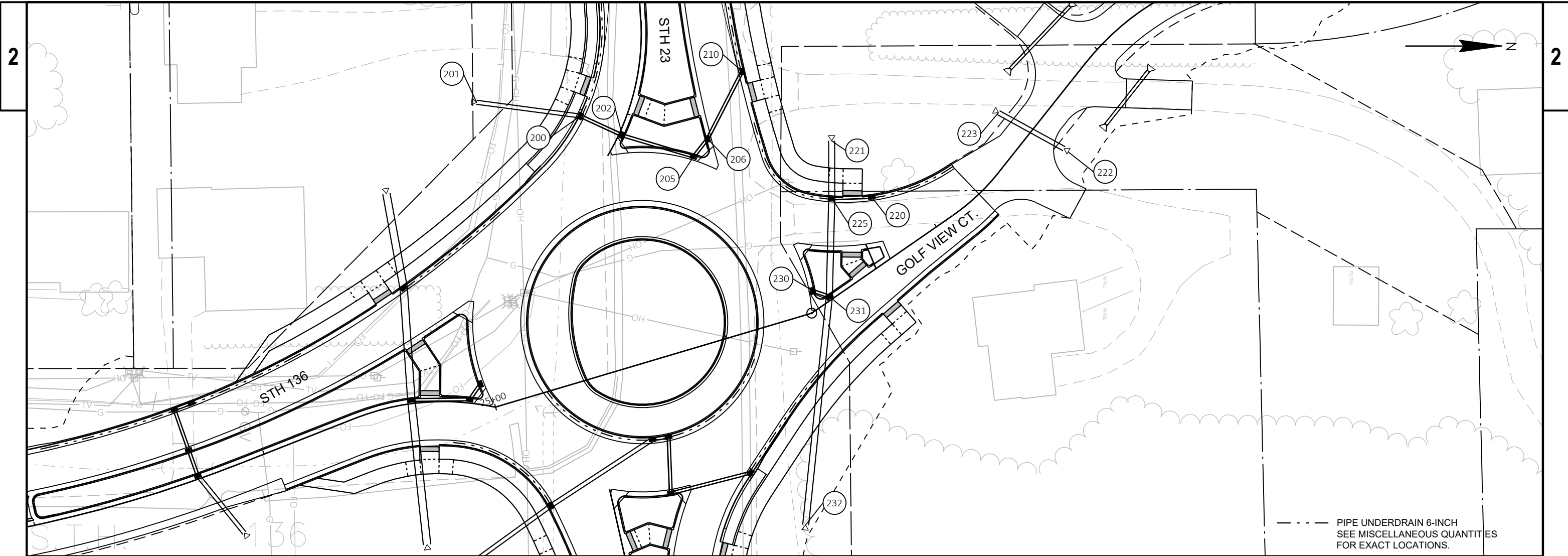






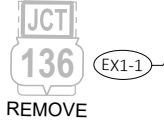
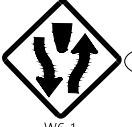
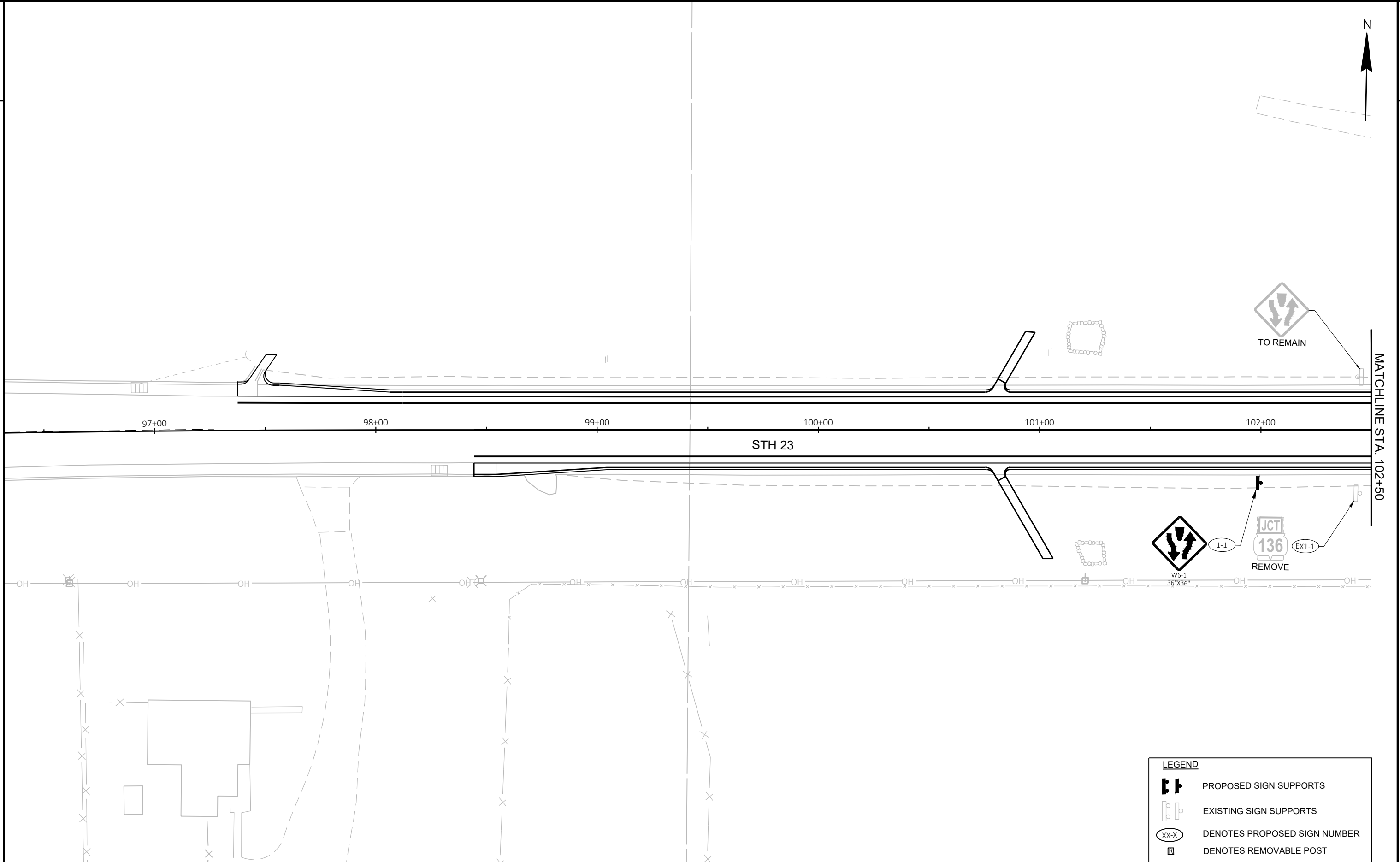
--- PIPE UNDERDRAIN 6-INCH  
SEE MISCELLANEOUS QUANTITIES  
FOR EXACT LOCATIONS.





PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      STORM SEWER      SHEET      E

STRUCT NO.	STATION		OFFSET	C-C (FT)	TO STRUCT	INLET TYPE	COVER	MH TYPE	COVER	RIM/GRATE ELEV.	T.O.S. ELEV.	DEPTH (FT)	DISCHARGE PIPE					PIPE TABLE REMARKS
													SIZE (IN)	INLET ELEV.	DISCHARGE ELEV.	LENGTH (FT)	SLOPE (%)	
200	111+09.00	STH 23	17.7 'RT	37.5	201	2X3-FT	H	-	-	890.50	889.67	4.42	15	885.25	885.00	37	0.67%	
201	25+28.51	STH 23	123.5 'LT	-	-	-	-	-	-	-	-	-	15	884.96	-	-	-	APRON ENDWALLS FOR RCCP 15" REQ'D
202	111+09.00	STH 23	1.5 'LT	19.2	200	2X3-FT	H	-	-	890.80	889.97	4.22	12	885.75	885.25	19	2.61%	
205	26+08.51	STH 136	76.3 'LT	30.9	202	3-FT	A-S	-	-	890.30	889.38	3.38	12	886.00	885.75	31	0.81%	
206	110+99.00	STH 23	34.9 'LT	9.4	205	3-FT	A	-	-	890.35	889.43	3.08	12	886.35	886.25	9	1.07%	
210	110+77.00	STH 23	42.9 'LT	31.5	206	4-FT	H	-	-	890.70	889.87	3.12	12	886.75	886.35	32	1.27%	
220	26+85.00	STH 136	25.5 'LT	16.6	225	2X3-FT	H-S	-	-	888.90	888.07	2.97	12	885.10	885.00	17	0.60%	
221	26+84.58	STH 136	54.2 'LT	23.9	225	-	-	-	-	-	-	-	24	885.50	884.00	24	6.27%	APRON ENDWALLS FOR RCCP 24" REQ'D
222	27+59.17	STH 136	15.2 'RT	31.1	223	-	-	-	-	-	-	-	18	886.75	886.50	31	0.80%	APRON ENDWALLS FOR RCCP 18" REQ'D
223	27+53.90	STH 136	15.5 'LT	-	-	-	-	-	-	-	-	-	18	886.50	-	-	-	APRON ENDWALLS FOR RCCP 18" REQ'D
225	26+71.00	STH 136	34.4 'LT	40.8	231	4-FT	H-S	-	-	889.15	888.32	4.32	24	884.00	883.75	41	0.61%	
230	26+42.63	STH 136	7.4 'LT	7.3	231	3-FT	A-S	-	-	889.20	888.28	3.28	12	885.00	884.75	7	3.42%	
231	26+47.00	STH 136	1.5 'LT	95.3	232	4-FT	H	-	-	889.10	888.27	4.52	24	883.75	883.00	95	0.79%	
232	112+90.19	STH 23	76.2 'LT	-	-	-	-	-	-	-	-	-	24	883.00	-	-	-	APRON ENDWALLS FOR RCCP 24" REQ'D
240	112+36.10	STH 23	24.7 'LT	6.8	241	2X2.5-FT	T	-	-	887.41	886.49	3.14	12	883.35	883.25	7	1.48%	
241	112+37.11	STH 23	18.0 'LT	50.4	255	4-FT	T	-	-	887.41	886.49	3.49	15	883.00	882.50	50	1.00%	
245	112+64.00	STH 23	58.7 'LT	34.2	250	4-FT	H	-	-	887.50	886.67	2.97	12	883.70	883.55	34	0.44%	
250	112+65.00	STH 23	24.5 'LT	23.5	240	3-FT	A-S	-	-	887.40	886.48	2.93	12	883.55	883.35	23	0.85%	
255	112+59.00	STH 23	25.2 'RT	38.5	256	2X3-FT	H	-	-	887.28	886.45	3.95	15	882.50	882.00	38	1.30%	
256	24+99.90	STH 136	64.0 'RT	-	-	-	-	-	-	-	-	-	15	882.00	-	-	-	APRON ENDWALLS FOR RCCP 15" REQ'D
260	115+05.00	STH 23	9.4 'LT	7.9	261	2X3-FT	H	-	-	881.30	880.47	3.17	12	877.30	877.25	8	0.62%	
261	115+05.00	STH 23	1.5 'LT	36.9	262	2X3-FT	H	-	-	881.55	880.72	3.47	12	877.25	877.00	37	0.68%	
262	115+04.21	STH 23	35.4 'RT	-	-	-	-	-	-	-	-	-	12	877.00	-	-	-	APRON ENDWALLS FOR RCCP 12" REQ'D
270	24+92.39	STH 136	8.3 'LT	7.7	271	3-FT	A-S	-	-	888.80	887.88	3.38	12	884.50	884.42	8	1.04%	
271	24+89.00	STH 136	1.5 'LT	24.3	277	3-FT	A	-	-	888.70	887.78	3.36	12	884.42	883.80	24	2.55%	
275	24+67.00	STH 136	48.1 'LT	46.7	277	-	H	5-FT	-	889.10	888.27	5.57	30	882.70	882.30	47	0.85%	FLAT SLAB TOP REQ'D
276	24+65.52	STH 136	87.8 'LT	39.8	275	-	-	-	-	-	-	-	30	883.00	882.70	40	0.75%	APRON ENDWALLS FOR RCCP 30" REQ'D
277	24+65.00	STH 136	1.5 'LT	60.4	278	-	H	5-FT	-	888.78	887.95	5.65	30	882.30	882.00	60	0.50%	FLAT SLAB TOP REQ'D
278	24+61.67	STH 136	58.8 'RT	-	-	-	-	-	-	-	-	-	30	882.00	-	-	-	APRON ENDWALLS FOR RCCP 30" REQ'D
280	23+79.00	STH 136	30.7 'LT	7.5	285	2X3-FT	H-S	-	-	888.60	887.77	3.12	12	884.65	884.60	8	0.66%	
285	23+71.00	STH 136	30.6 'LT	18.2	286	2X3-FT	H-S	-	-	888.60	887.77	3.17	12	884.60	884.50	18	0.56%	
286	23+71.00	STH 136	12.4 'LT	10.9	287	2X3-FT	H-S	-	-	888.90	888.07	3.57	12	884.50	884.45	11	0.45%	
287	23+71.00	STH 136	1.5 'LT	30.8	288	2X3-FT	H	-	-	888.95	888.12	3.92	15	884.20	884.00	31	0.65%	
288	23+80.83	STH 136	27.6 'RT	-	-	-	-	-	-	-	-	-	15	884.00	-	-	-	APRON ENDWALLS FOR RCCP 15" REQ'D
290	22+42.00	STH 136	14.0 'LT	11.6	292	2X3-FT	H	-	-	889.65	888.82	4.52	18	884.30	884.20	12	0.86%	
291	22+19.25	STH 136	43.5 'LT	36.6	290	MEDIAN 1 GRATE	MS	-	-	-	-	-	18	884.50	884.30	37	0.55%	APRON ENDWALLS FOR RCCP 18" REQ'D
292	22+43.00	STH 136	2.4 'LT	39.2	293	2X3-FT	H	-	-	889.70	888.87	4.67	18	884.20	884.00	39	0.51%	
293	22+53.33	STH 136	35.4 'RT	-	-	-	-	-	-	-	-	-	18	884.00	-	-	-	APRON ENDWALLS FOR RCCP 18" REQ'D



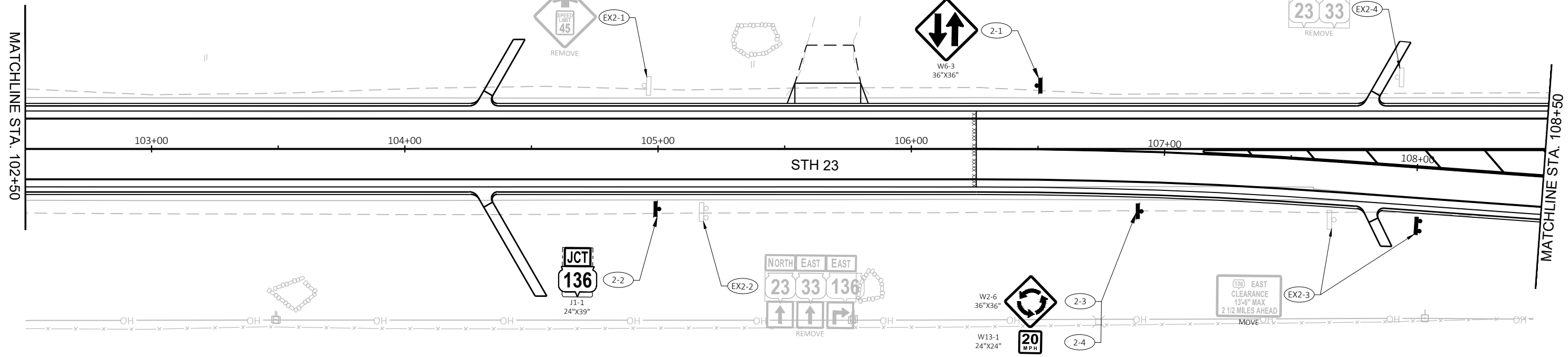
W6-1  
36" X 36"

LEGEND	
	PROPOSED SIGN SUPPORTS
	EXISTING SIGN SUPPORTS
	DENOTES PROPOSED SIGN NUMBER
	DENOTES REMOVABLE POST

PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	PERMANENT SIGNING	SHEET	<b>E</b>
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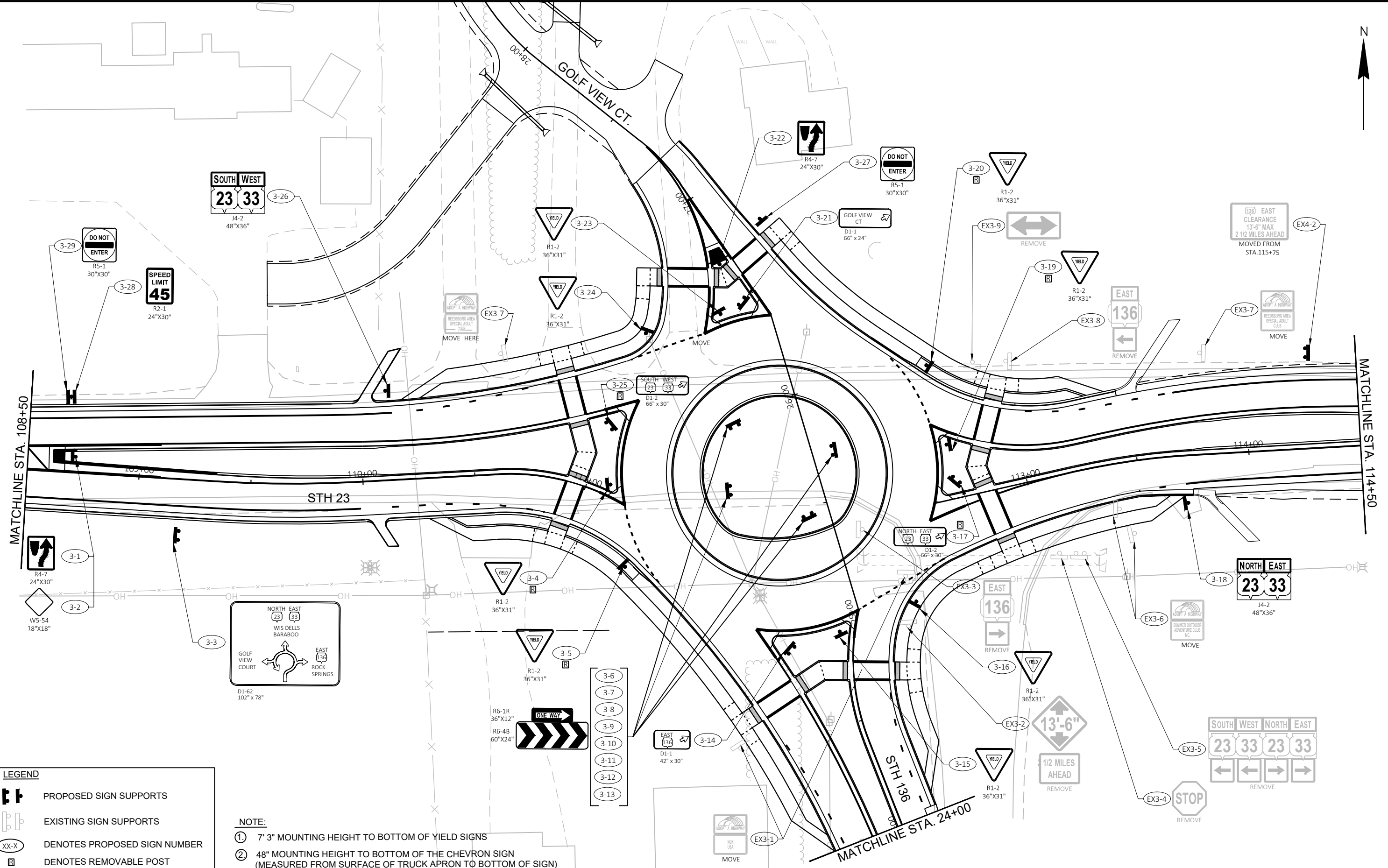
GREEN



**LEGEND**

	PROPOSED SIGN SUPPORTS
	EXISTING SIGN SUPPORTS
	DENOTES PROPOSED SIGN NUMBER
	DENOTES REMOVABLE POST

PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	PERMANENT SIGNING	SHEET	<b>E</b>
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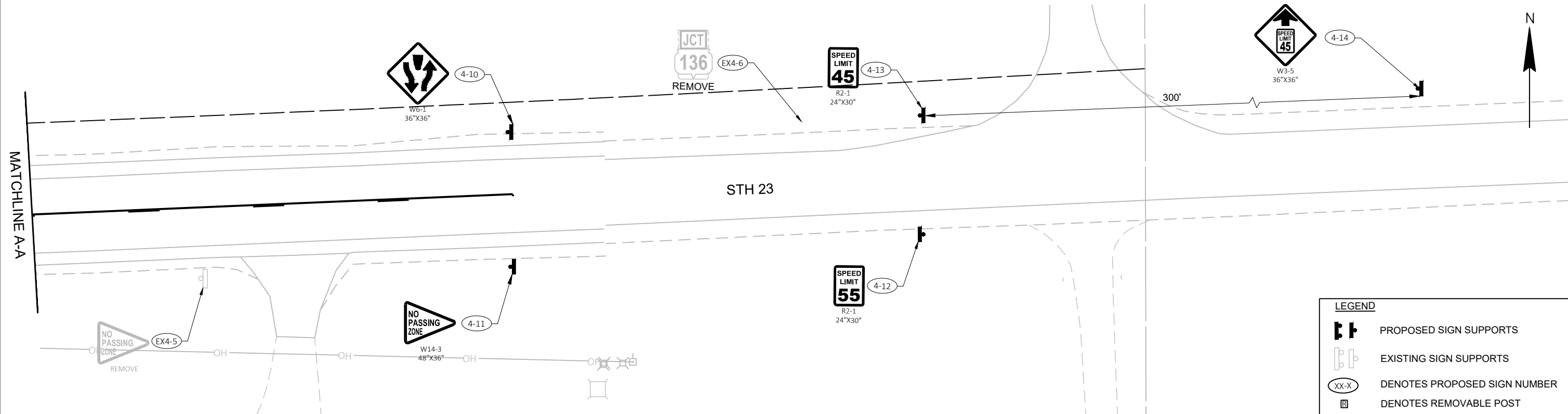
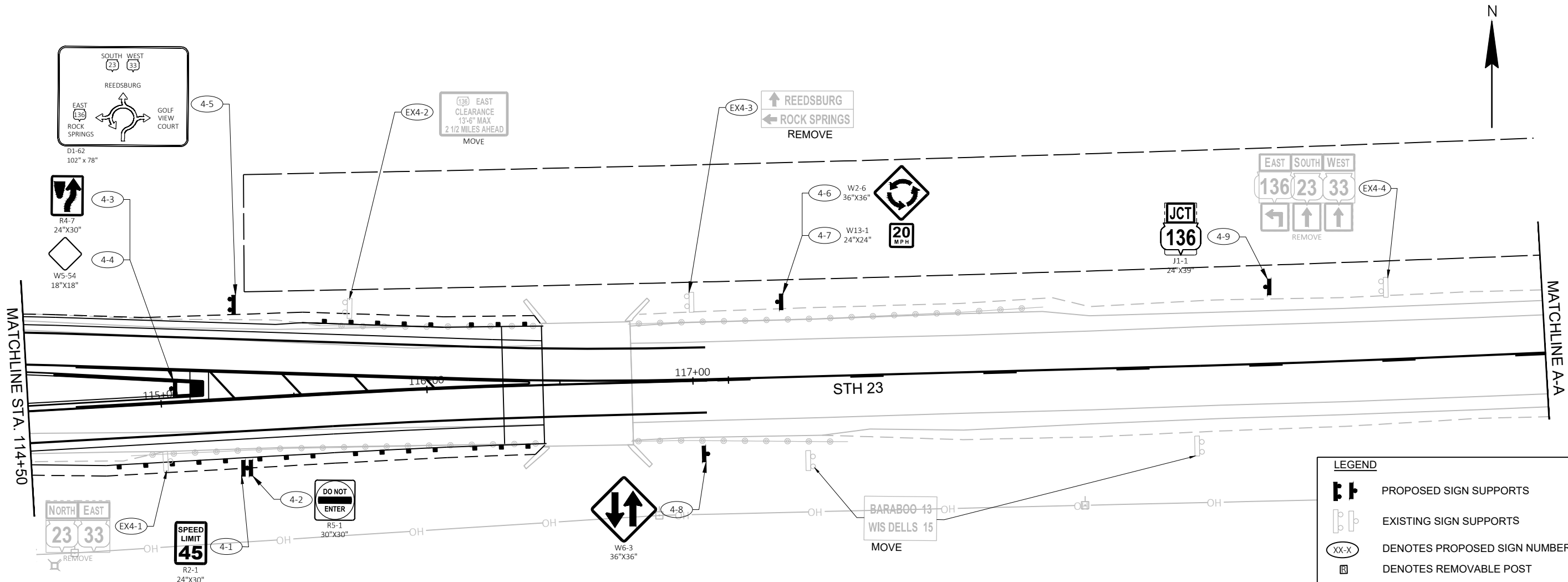
**LEGEND**

- PROPOSED SIGN SUPPORTS
- EXISTING SIGN SUPPORTS
- DENOTES PROPOSED SIGN NUMBER
- DENOTES REMOVABLE POST

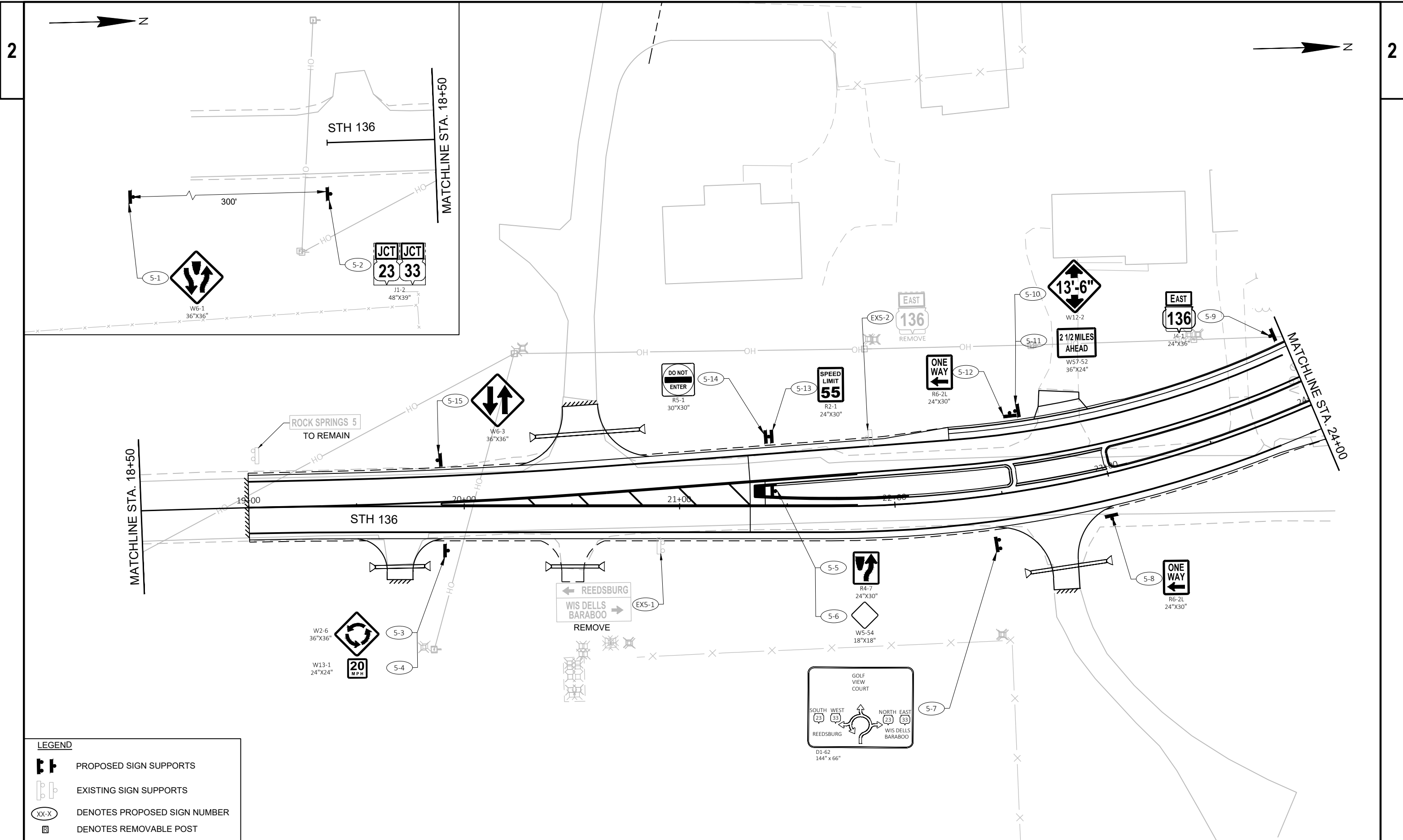
**NOTE:**

- ① 7' 3" MOUNTING HEIGHT TO BOTTOM OF YIELD SIGNS
- ② 48" MOUNTING HEIGHT TO BOTTOM OF THE CHEVRON SIGN (MEASURED FROM SURFACE OF TRUCK APRON TO BOTTOM OF SIGN)

PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	PERMANENT SIGNING
SHEET			<b>E</b>



PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      PERMANENT SIGNING      SHEET      E








**LEGEND**

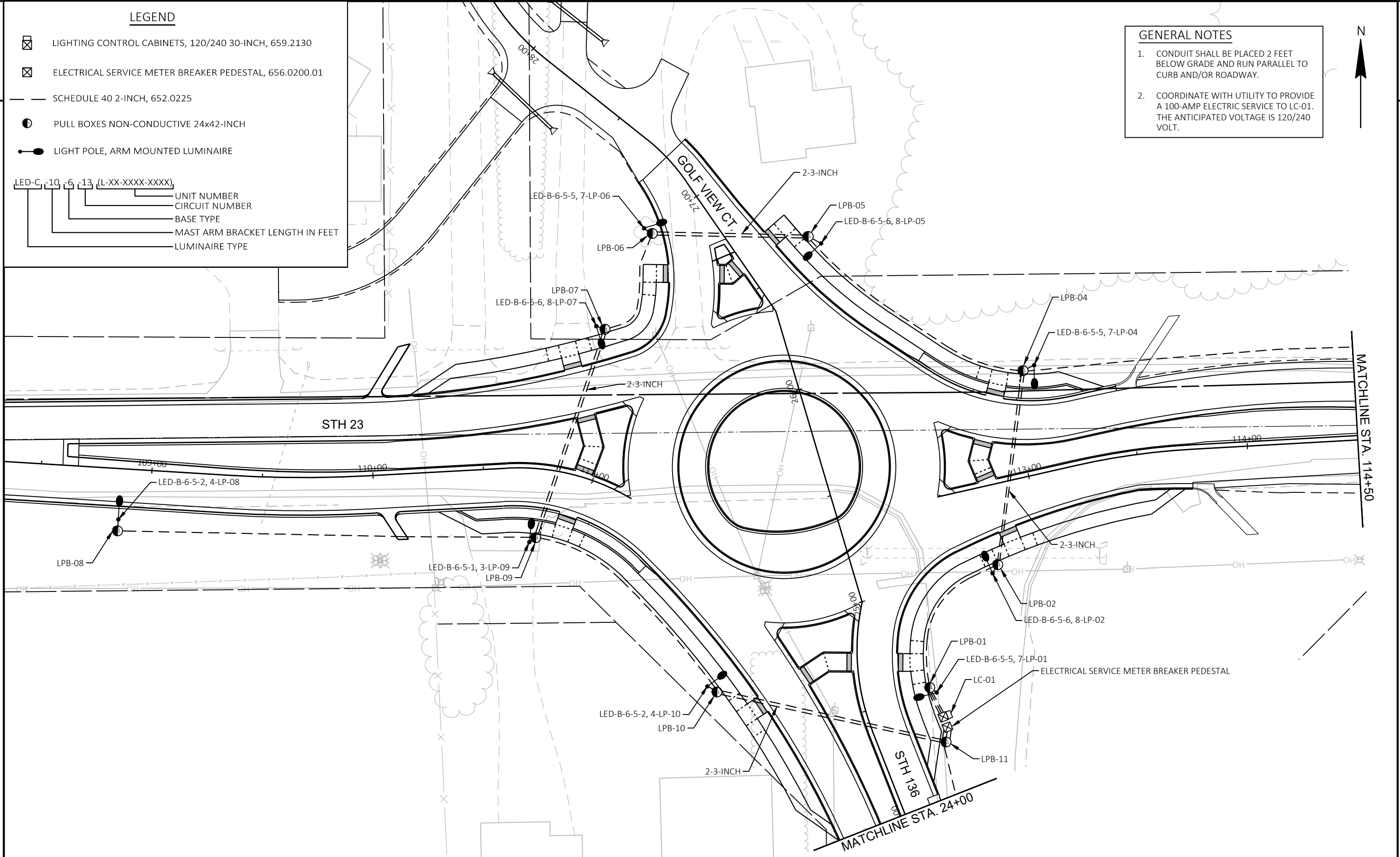
	PROPOSED SIGN SUPPORTS
	EXISTING SIGN SUPPORTS
	DENOTES PROPOSED SIGN NUMBER
	DENOTES REMOVABLE POST

PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	PERMANENT SIGNING	SHEET	<b>E</b>
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LEGEND

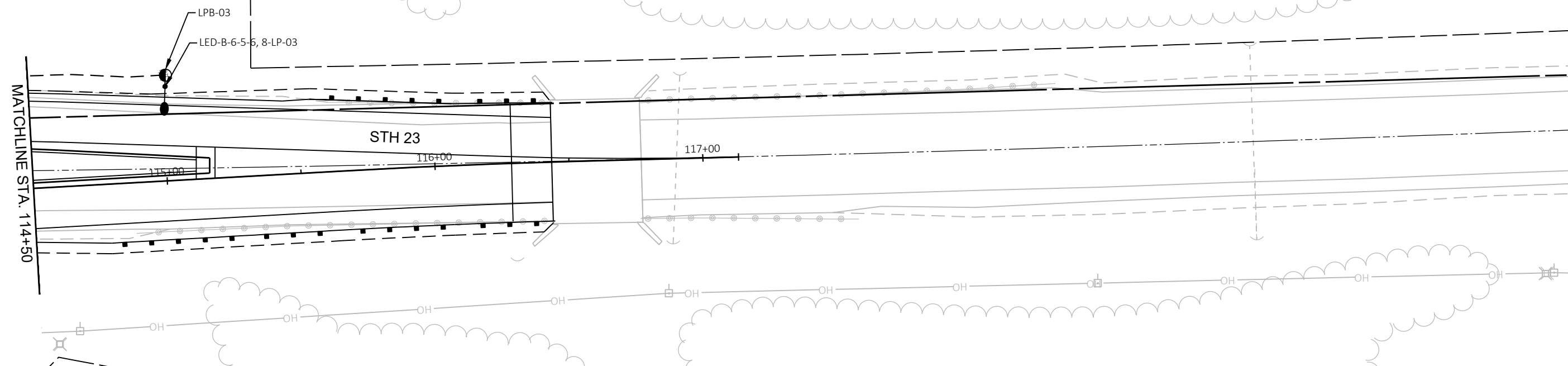
-  LIGHTING CONTROL CABINETS, 120/240 30-INCH, 659.2130
  -  ELECTRICAL SERVICE METER BREAKER PEDESTAL, 656.0200.01
  -  SCHEDULE 40 2-INCH, 652.0225
  -  PULL BOXES NON-CONDUCTIVE 24x42-INCH
  -  LIGHT POLE, ARM MOUNTED LUMINAIRE
- LED-C-10-6-13 (L-XX-XXXX-XXXX)
- UNIT NUMBER
  - CIRCUIT NUMBER
  - BASE TYPE
  - MAST ARM BRACKET LENGTH IN FEET
  - LUMINAIRE TYPE

- GENERAL NOTES
1. CONDUIT SHALL BE PLACED 2 FEET BELOW GRADE AND RUN PARALLEL TO CURB AND/OR ROADWAY.
  2. COORDINATE WITH UTILITY TO PROVIDE A 100-AMP ELECTRIC SERVICE TO LC-01. THE ANTICIPATED VOLTAGE IS 120/240 VOLT.



**GENERAL NOTES**

1. CONDUIT SHALL BE PLACED 2 FEET BELOW GRADE AND RUN PARALLEL TO CURB AND/OR ROADWAY.
2. COORDINATE WITH UTILITY TO PROVIDE A 100-AMP ELECTRIC SERVICE TO LC-01. THE ANTICIPATED VOLTAGE IS 120/240 VOLT.








**LEGEND**

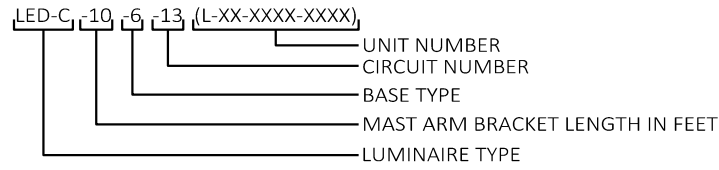
- LIGHTING CONTROL CABINETS, 120/240 30-INCH, 659.2130
- ELECTRICAL SERVICE METER BREAKER PEDESTAL, 656.0200.01
- SCHEDULE 40 2-INCH, 652.0225
- PULL BOXES NON-CONDUCTIVE 24x42-INCH
- LIGHT POLE, ARM MOUNTED LUMINAIRE

LED-C, -10, -6, -13 (L-XX-XXXX-XXXX)

- UNIT NUMBER
- CIRCUIT NUMBER
- BASE TYPE
- MAST ARM BRACKET LENGTH IN FEET
- LUMINAIRE TYPE

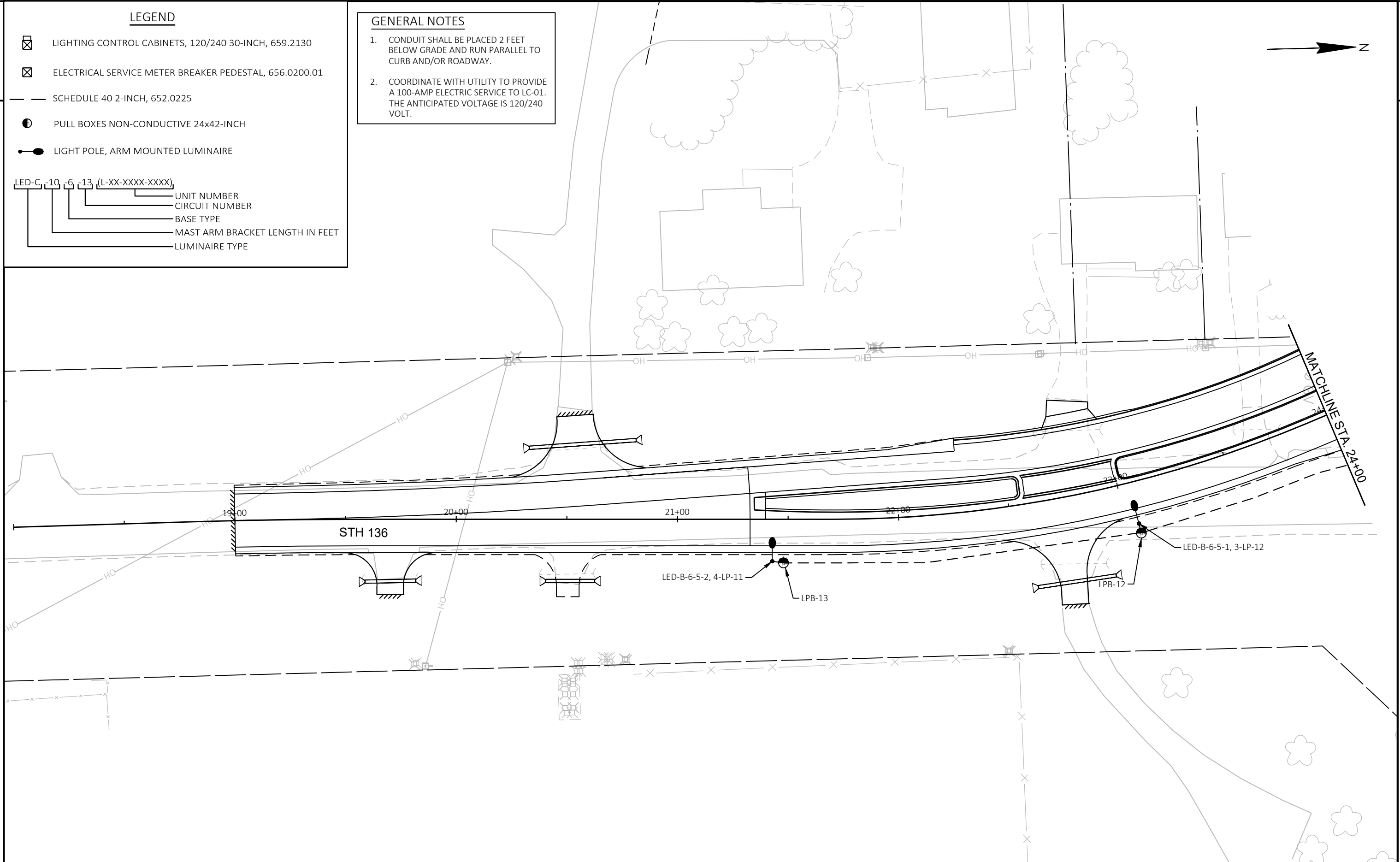
**LEGEND**

-  LIGHTING CONTROL CABINETS, 120/240 30-INCH, 659.2130
-  ELECTRICAL SERVICE METER BREAKER PEDESTAL, 656.0200.01
-  SCHEDULE 40 2-INCH, 652.0225
-  PULL BOXES NON-CONDUCTIVE 24x42-INCH
-  LIGHT POLE, ARM MOUNTED LUMINAIRE








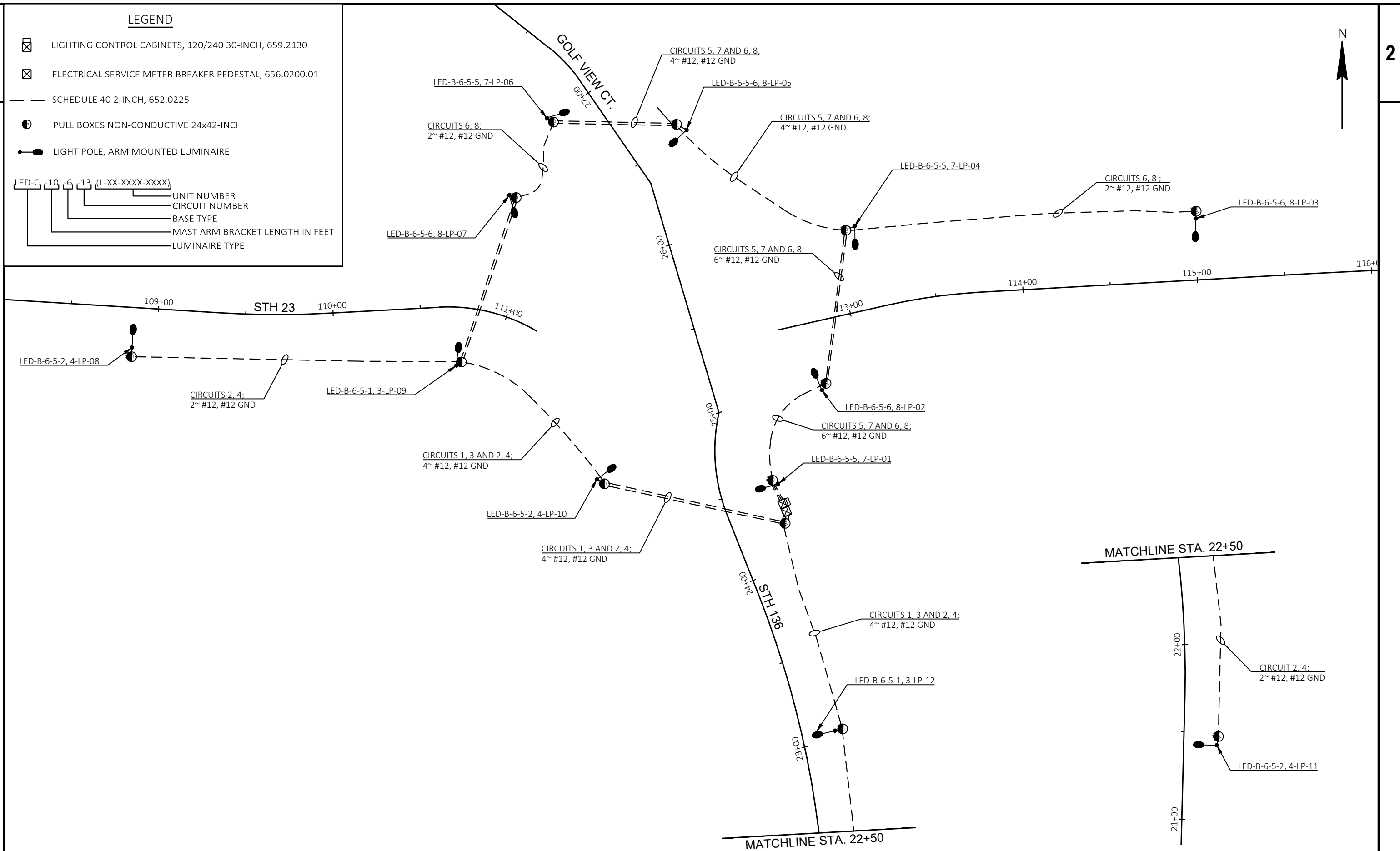
**GENERAL NOTES**

1. CONDUIT SHALL BE PLACED 2 FEET BELOW GRADE AND RUN PARALLEL TO CURB AND/OR ROADWAY.
2. COORDINATE WITH UTILITY TO PROVIDE A 100-AMP ELECTRIC SERVICE TO LC-01. THE ANTICIPATED VOLTAGE IS 120/240 VOLT.



LEGEND

-  LIGHTING CONTROL CABINETS, 120/240 30-INCH, 659.2130
  -  ELECTRICAL SERVICE METER BREAKER PEDESTAL, 656.0200.01
  -  SCHEDULE 40 2-INCH, 652.0225
  -  PULL BOXES NON-CONDUCTIVE 24x42-INCH
  -  LIGHT POLE, ARM MOUNTED LUMINAIRE
- LED-C-10-6-13 (L-XX-XXXX-XXXX)
- UNIT NUMBER
  - CIRCUIT NUMBER
  - BASE TYPE
  - MAST ARM BRACKET LENGTH IN FEET
  - LUMINAIRE TYPE

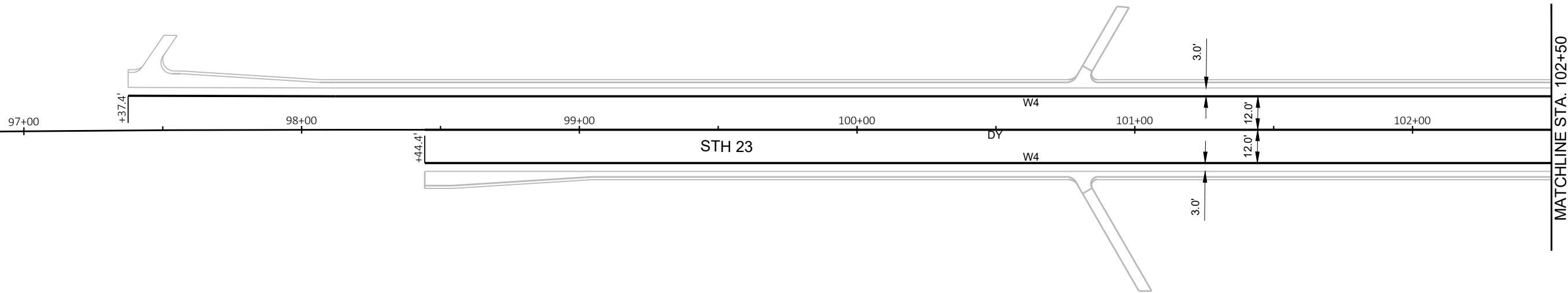


PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	CIRCUIT DIAGRAM	SHEET	<b>E</b>
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LEGEND

- W4 MARKING LINE EPOXY 4-INCH, (WHITE)
- Y4 MARKING LINE EPOXY 4-INCH, (YELLOW)
- YS-12.5 MARKING LINE EPOXY 4-INCH, (YELLOW SKIP 12.5' SEG., 37.5' GAP)
- DY MARKING LINE EPOXY 4-INCH, (DOUBLE YELLOW)
- Y12 MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
- WS-2 MARKING DOTTED EXTENSION EPOXY 18-INCH, (WHITE SKIP, 2' SEG., 2' GAP)
- WS-9 MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
- WC6 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
- W8 MARKING LINE EPOXY 8-INCH, (WHITE)
- IN MARKING ISLAND NOSE EPOXY, (YELLOW)
- C MARKING CURB EPOXY, (YELLOW).



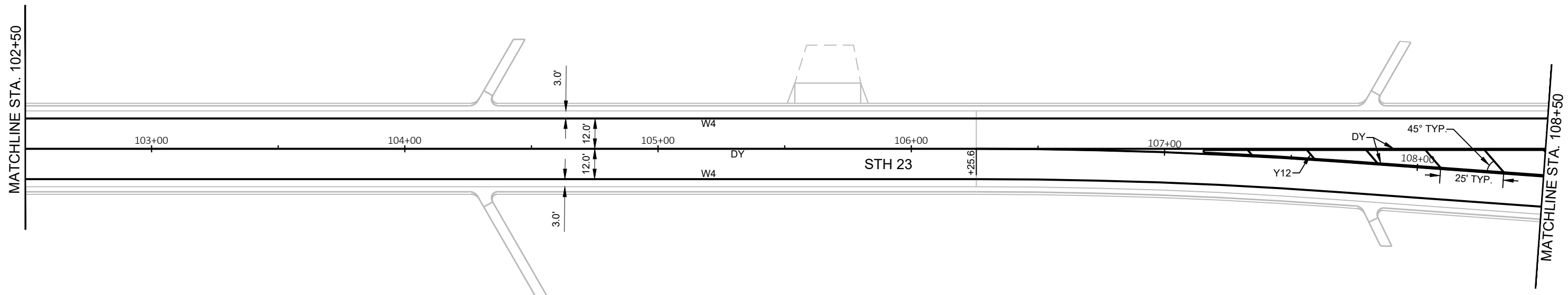
**LEGEND**

- W4 MARKING LINE EPOXY 4-INCH, (WHITE)
- Y4 MARKING LINE EPOXY 4-INCH, (YELLOW)
- YS-12.5 MARKING LINE EPOXY 4-INCH, (YELLOW SKIP 12.5' SEG., 37.5' GAP)
- DY MARKING LINE EPOXY 4-INCH, (DOUBLE YELLOW)
- Y12 MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
- WS-2 MARKING DOTTED EXTENSION EPOXY 18-INCH, (WHITE SKIP, 2' SEG., 2' GAP)
- WS-9 MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
- WC6 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
- W8 MARKING LINE EPOXY 8-INCH, (WHITE)
- IN MARKING ISLAND NOSE EPOXY, (YELLOW)
- C MARKING CURB EPOXY, (YELLOW).



2

2



PROJECT NO: 5050-01-76

HWY: STH 23

COUNTY: SAUK

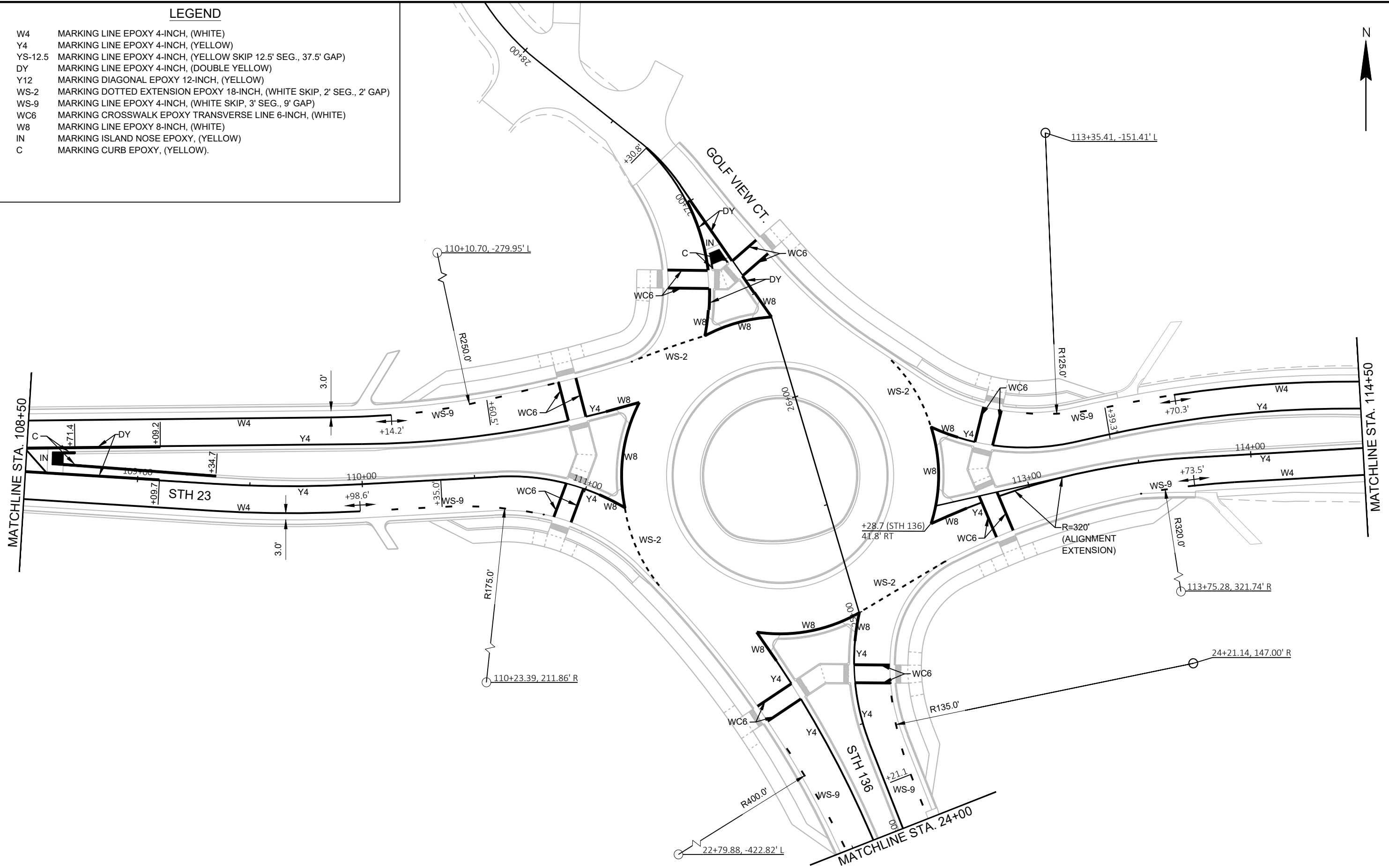
PAVEMENT MARKING

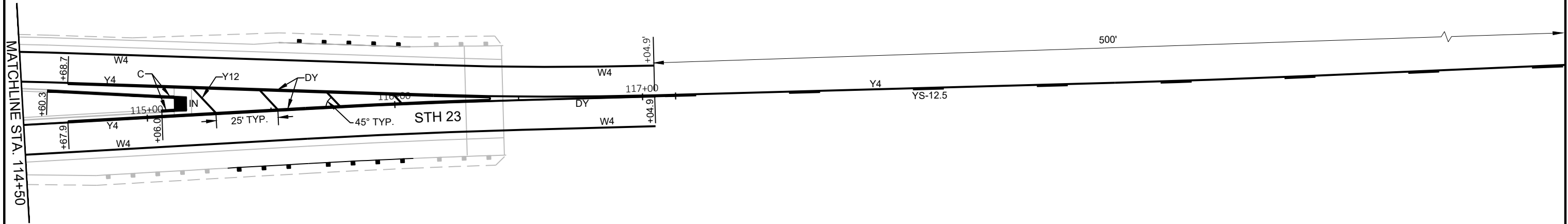
SHEET

E

LEGEND

- W4 MARKING LINE EPOXY 4-INCH, (WHITE)
- Y4 MARKING LINE EPOXY 4-INCH, (YELLOW)
- YS-12.5 MARKING LINE EPOXY 4-INCH, (YELLOW SKIP 12.5' SEG., 37.5' GAP)
- DY MARKING LINE EPOXY 4-INCH, (DOUBLE YELLOW)
- Y12 MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
- WS-2 MARKING DOTTED EXTENSION EPOXY 18-INCH, (WHITE SKIP, 2' SEG., 2' GAP)
- WS-9 MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
- WC6 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
- W8 MARKING LINE EPOXY 8-INCH, (WHITE)
- IN MARKING ISLAND NOSE EPOXY, (YELLOW)
- C MARKING CURB EPOXY, (YELLOW).

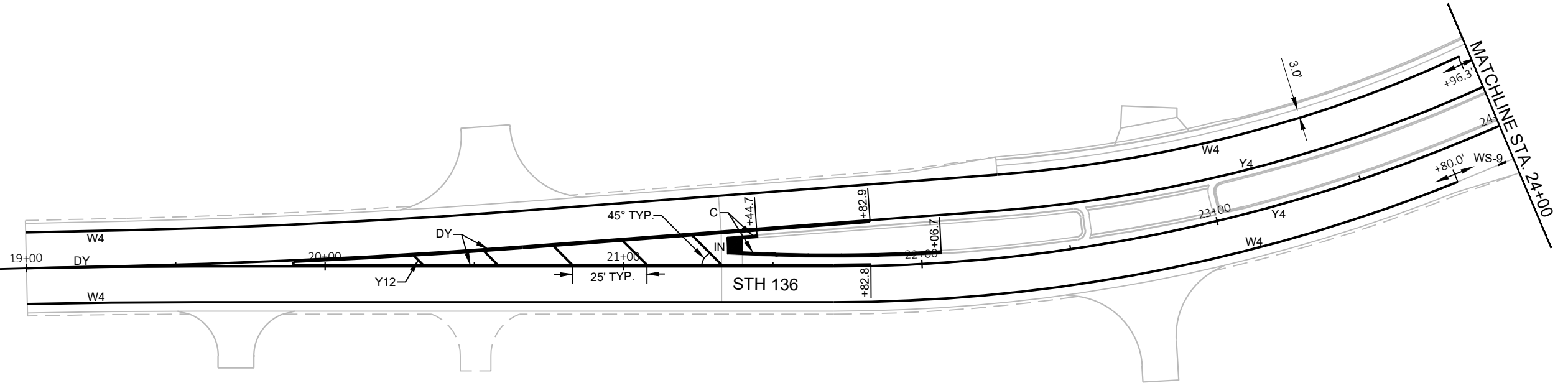




LEGEND	
W4	MARKING LINE EPOXY 4-INCH, (WHITE)
Y4	MARKING LINE EPOXY 4-INCH, (YELLOW)
YS-12.5	MARKING LINE EPOXY 4-INCH, (YELLOW SKIP 12.5' SEG., 37.5' GAP)
DY	MARKING LINE EPOXY 4-INCH, (DOUBLE YELLOW)
Y12	MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
WS-2	MARKING DOTTED EXTENSION EPOXY 18-INCH, (WHITE SKIP, 2' SEG., 2' GAP)
WS-9	MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
WC6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
W8	MARKING LINE EPOXY 8-INCH, (WHITE)
IN	MARKING ISLAND NOSE EPOXY, (YELLOW)
C	MARKING CURB EPOXY, (YELLOW).

LEGEND

- W4 MARKING LINE EPOXY 4-INCH, (WHITE)
- Y4 MARKING LINE EPOXY 4-INCH, (YELLOW)
- YS-12.5 MARKING LINE EPOXY 4-INCH, (YELLOW SKIP 12.5' SEG., 37.5' GAP)
- DY MARKING LINE EPOXY 4-INCH, (DOUBLE YELLOW)
- Y12 MARKING DIAGONAL EPOXY 12-INCH, (YELLOW)
- WS-2 MARKING DOTTED EXTENSION EPOXY 18-INCH, (WHITE SKIP, 2' SEG., 2' GAP)
- WS-9 MARKING LINE EPOXY 4-INCH, (WHITE SKIP, 3' SEG., 9' GAP)
- WC6 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, (WHITE)
- W8 MARKING LINE EPOXY 8-INCH, (WHITE)
- IN MARKING ISLAND NOSE EPOXY, (YELLOW)
- C MARKING CURB EPOXY, (YELLOW).





**GENERAL NOTES**

DETOUR ROUTE MARKER SIGNING TO BE INSTALLED AND MAINTAINED BY CONTRACTOR. DETOUR TO BE SIGNED AND MAINTAINED DURING STAGE 2 AS SPECIFIED IN THE SPECIAL PROVISIONS.

THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.




REMOVE OR COVER ANY SIGN, TEMPORARY OR EXISTING, WHICH CONFLICTS WITH TRAFFIC CONTROL "IN USE", OR AS APPROVED BY THE ENGINEER.

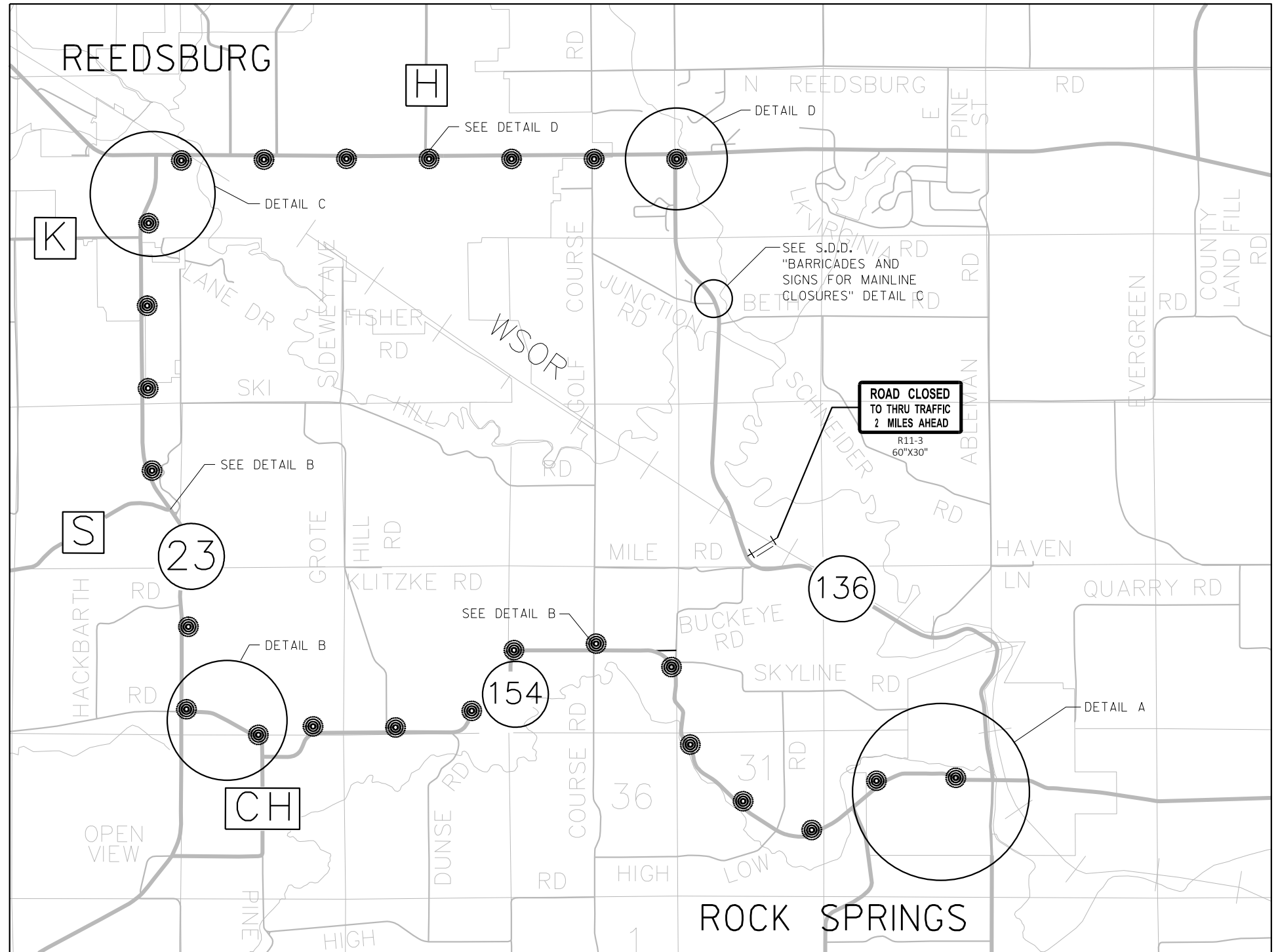
"WO" OR "MO" AND "W" SIGNS SHALL BE 48"x48" UNLESS OTHERWISE NOTED.

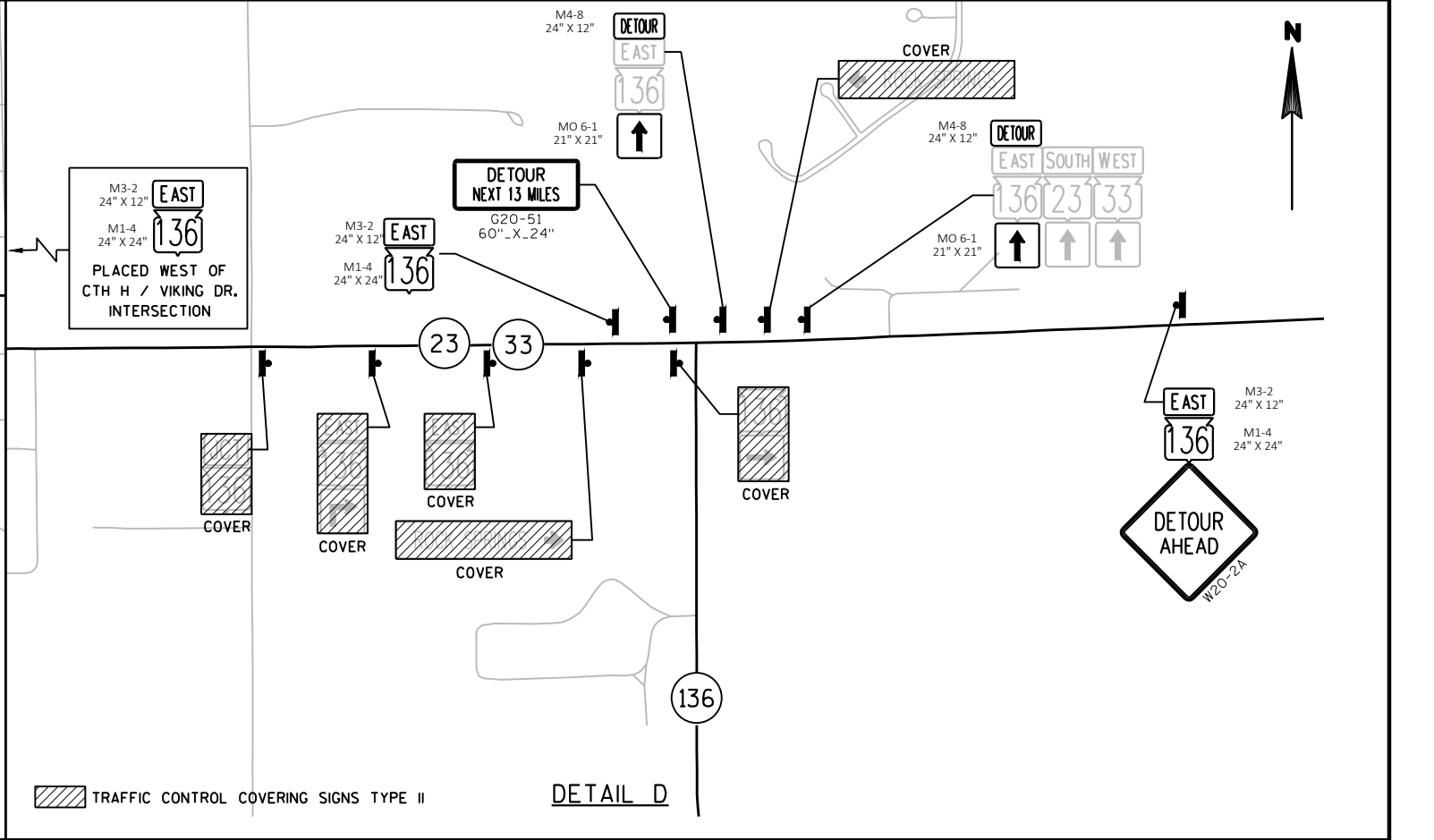
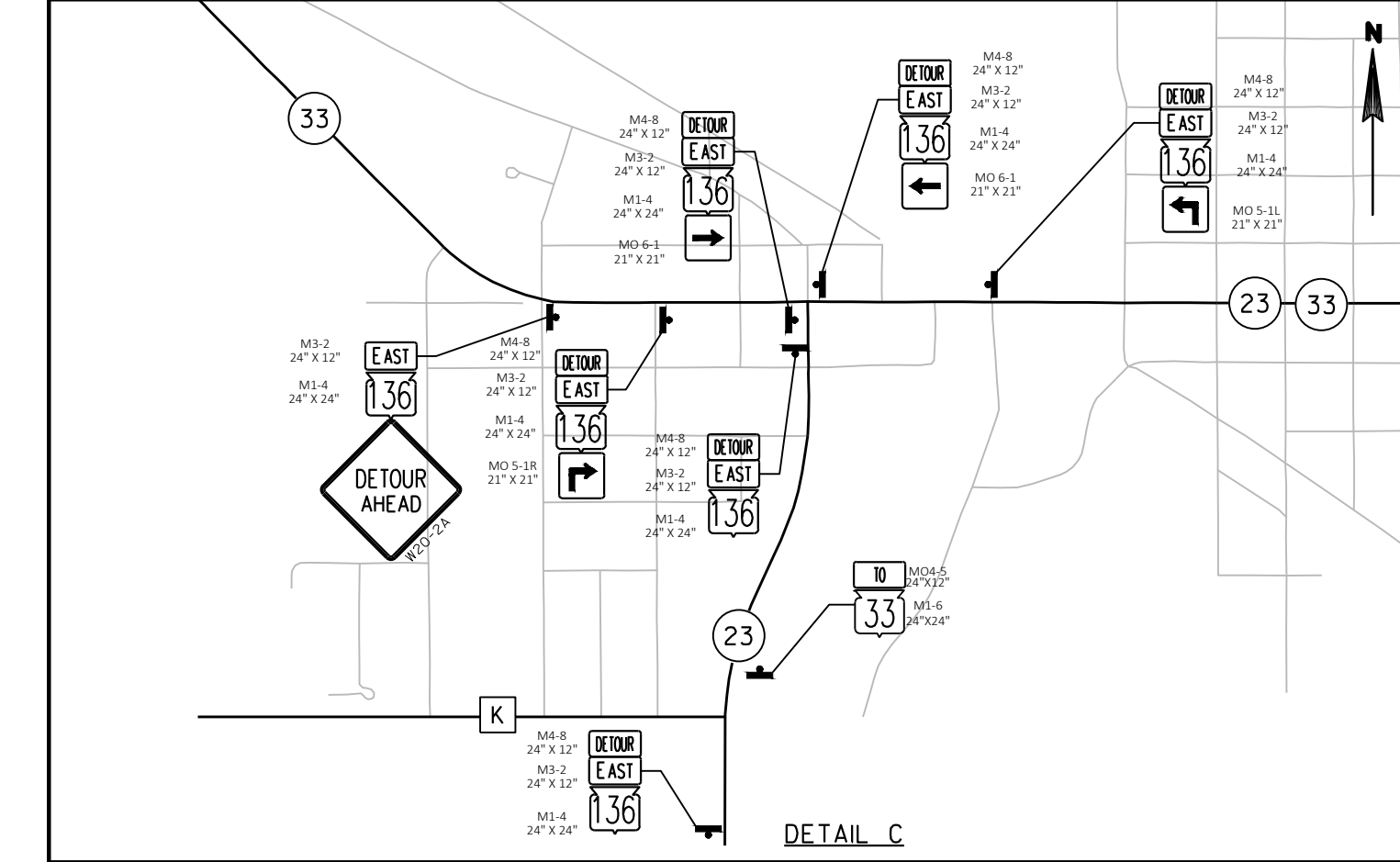
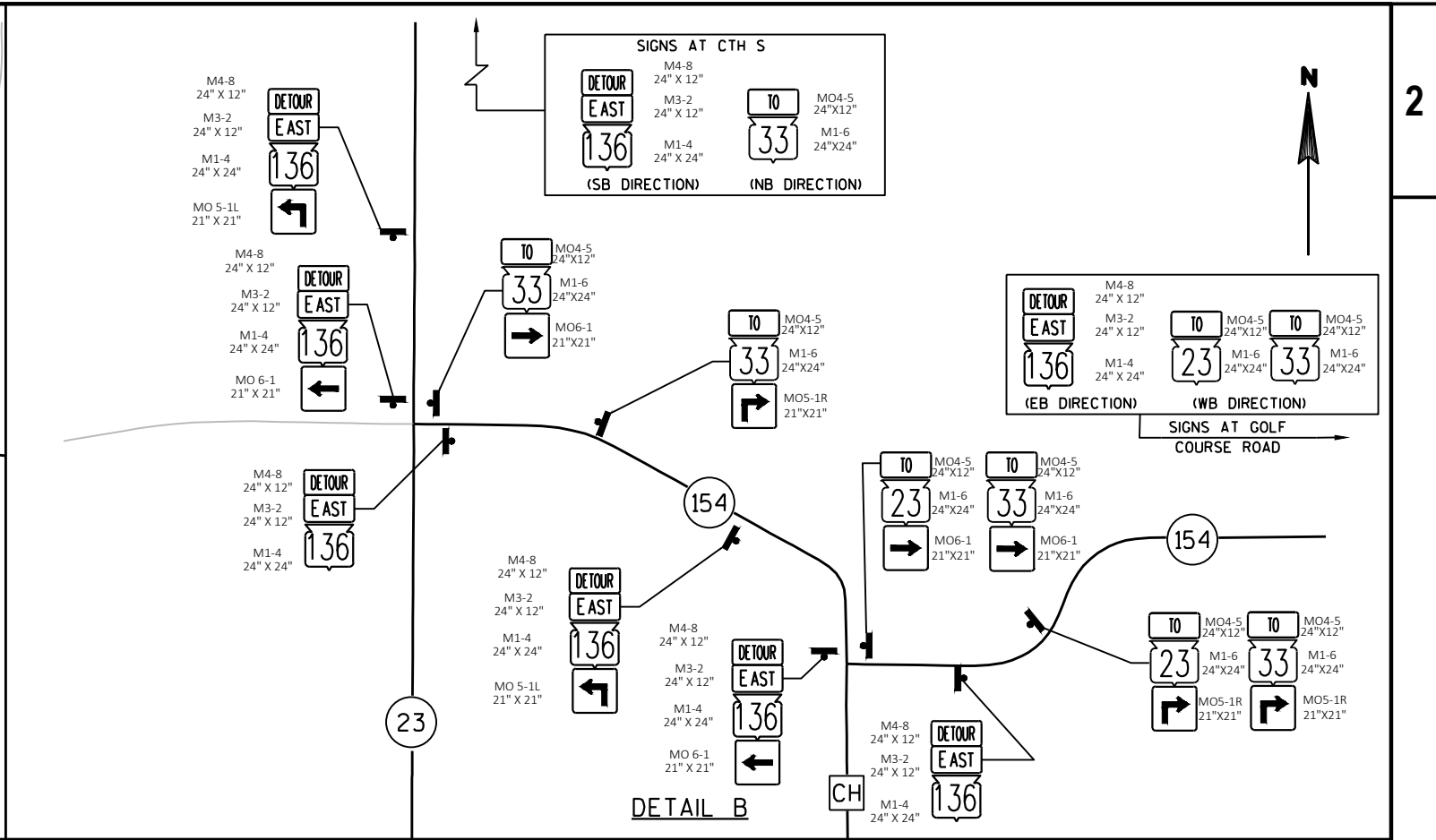
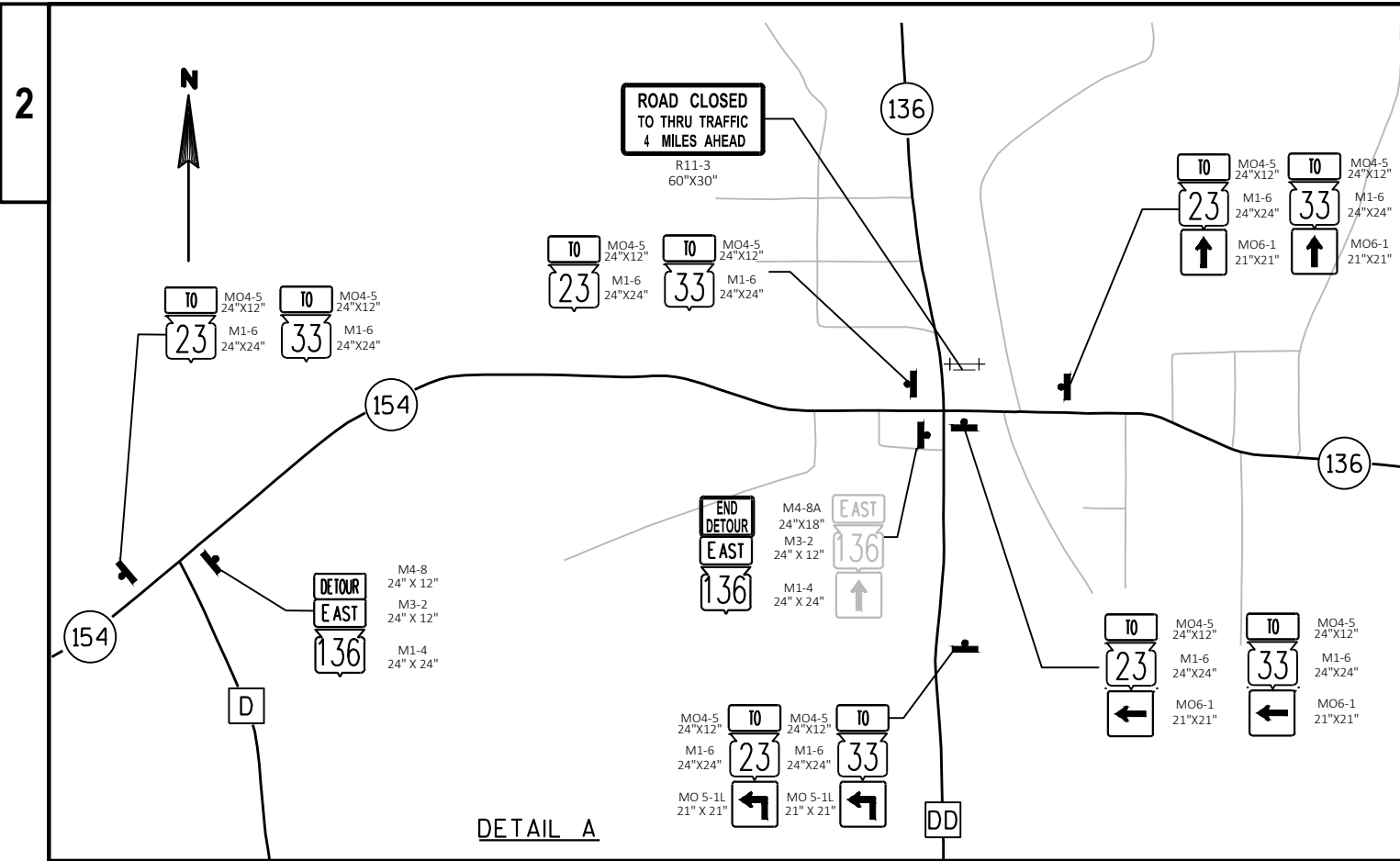
TRAFFIC CONTROL SIGNS PORTABLE CHANGEABLE MESSAGE TO BE INSTALLED ONE WEEK PRIOR TO IMPLEMENTATION OF DETOUR ROUTE.

SEE S.D.D. "DETOUR SIGNING FOR MAINLINE CLOSURES", "BARRICADES AND SIGNS FOR MAINLINE CLOSURES".

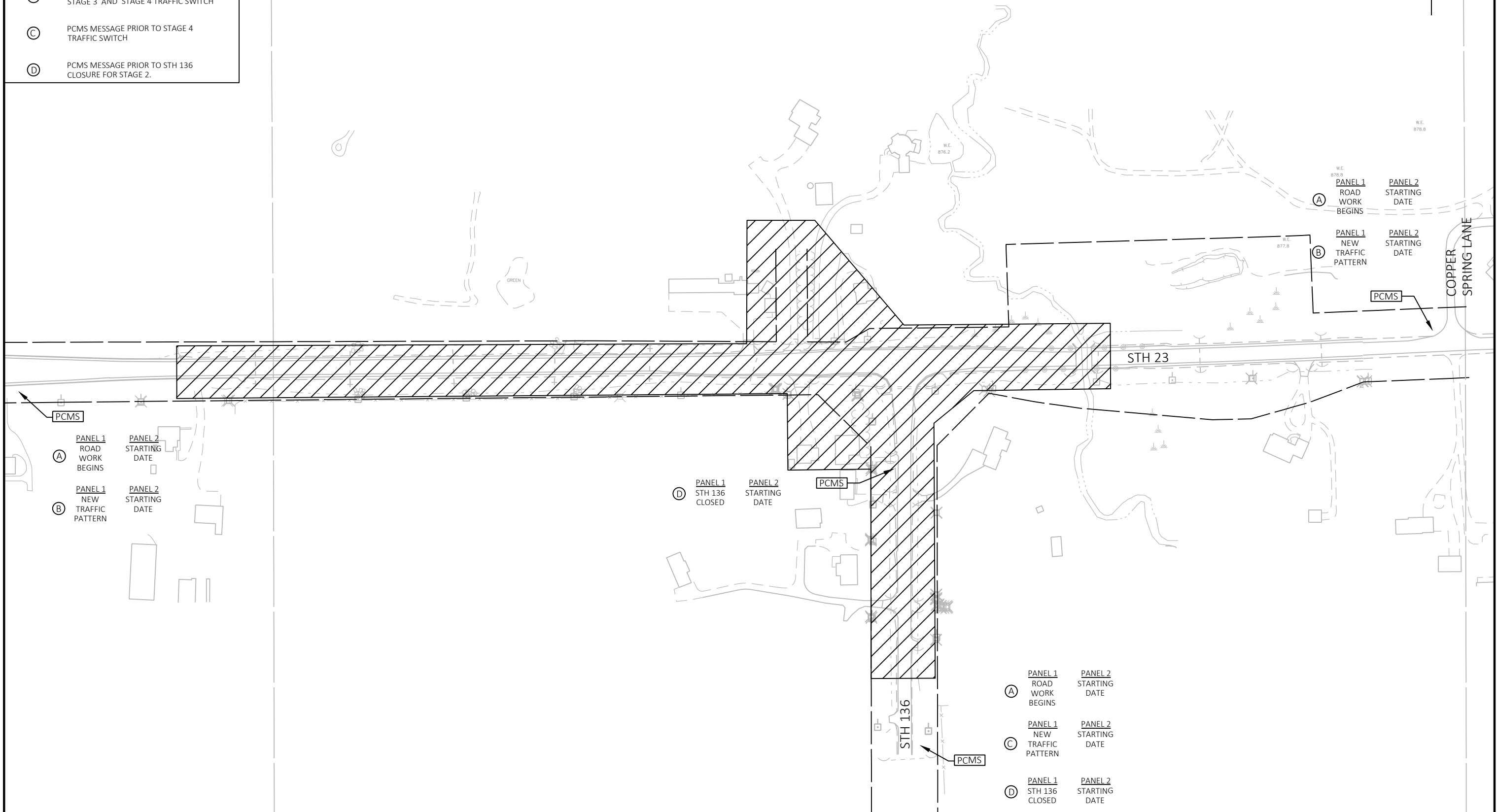
**LEGEND**

-  DETOUR ROUTE
-  WOOD POST WITH ATTACHED SIGN
-  TRAFFIC CONTROL BARRICADES TYPE III WITH ATTACHED SIGN

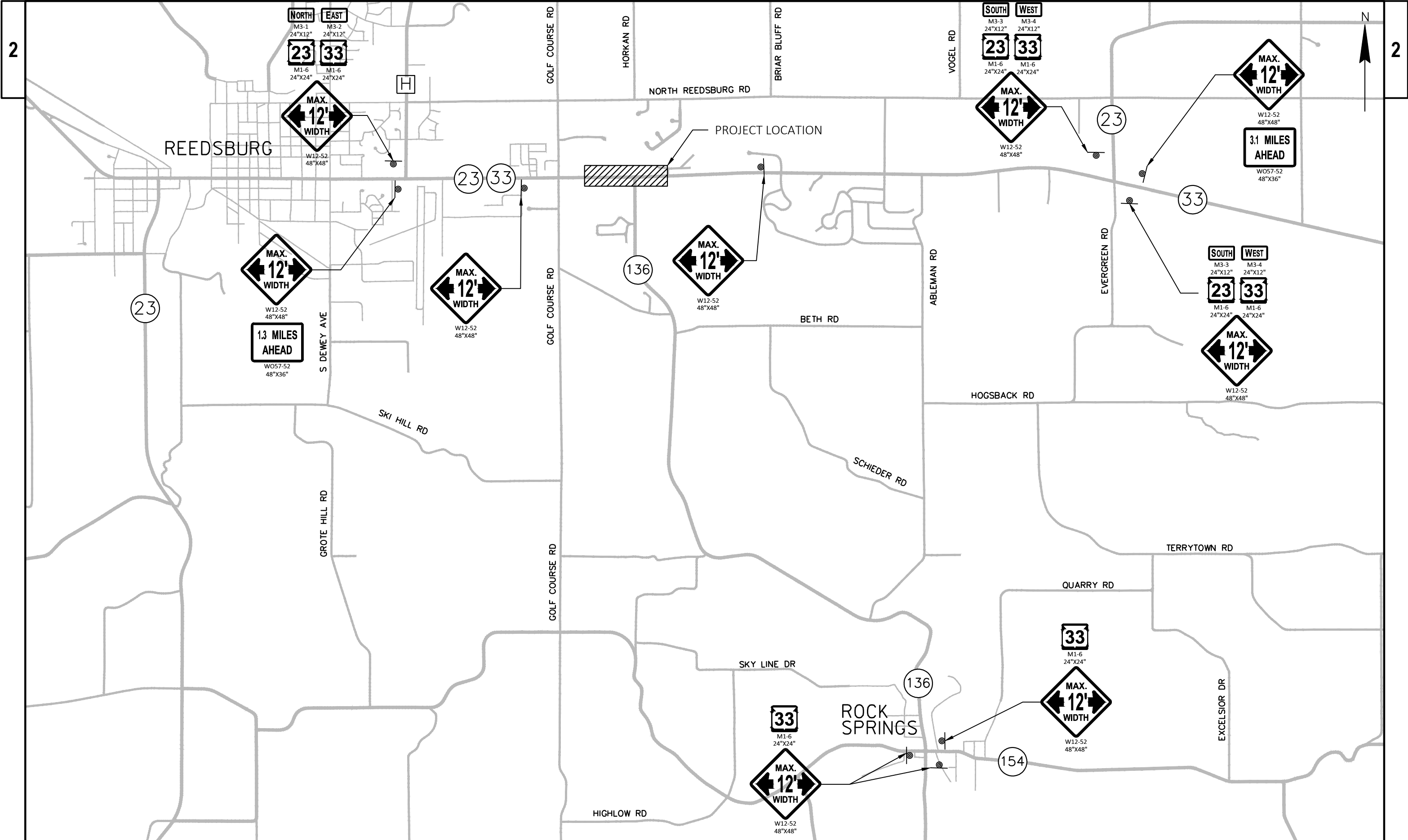




- PCMS TRAFFIC CONTROL SIGNS PCMS
- WORK ZONE
- Ⓐ PCMS MESSAGE PRIOR TO CONSTRUCTION OPERATIONS
- Ⓑ PCMS MESSAGE PRIOR TO STAGE 2, STAGE 3 AND STAGE 4 TRAFFIC SWITCH
- Ⓒ PCMS MESSAGE PRIOR TO STAGE 4 TRAFFIC SWITCH
- Ⓓ PCMS MESSAGE PRIOR TO STH 136 CLOSURE FOR STAGE 2.







PROJECT NO: 5050-01-76

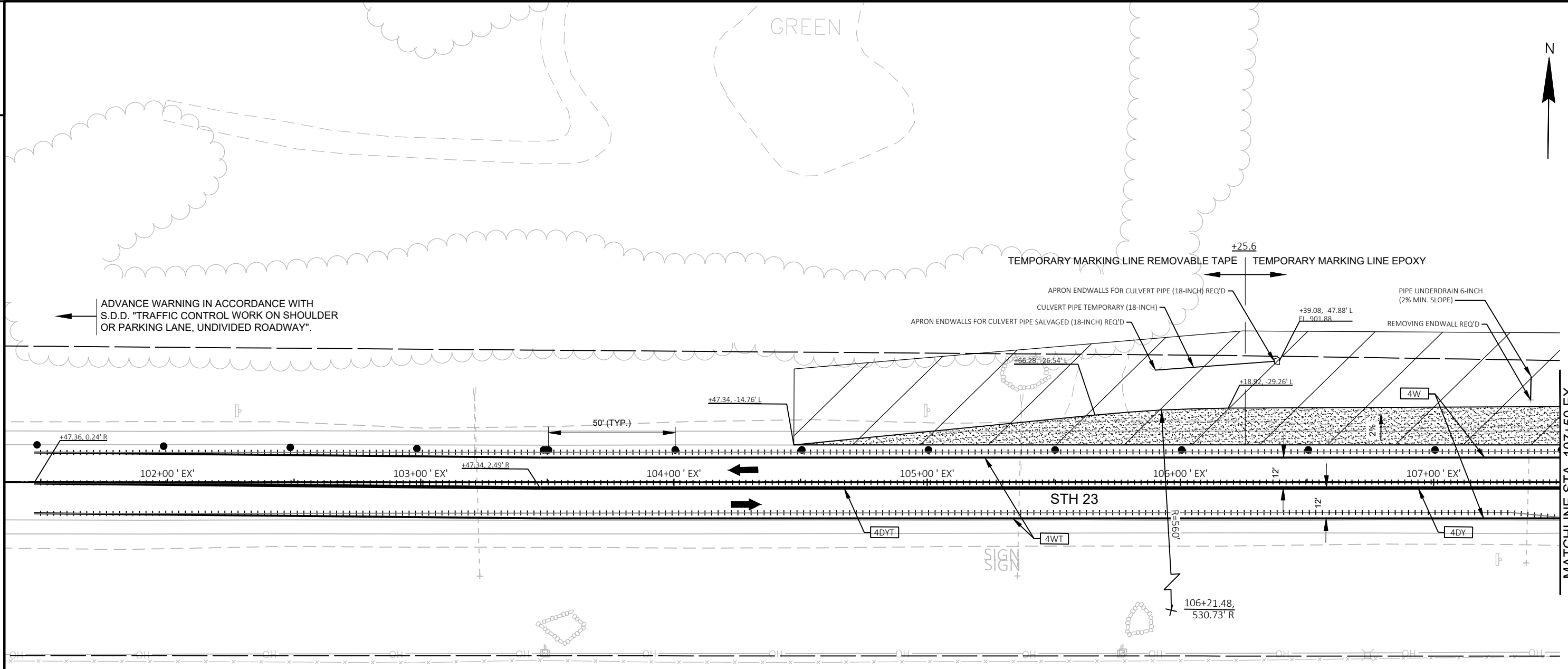
HWY: STH 23

COUNTY: SAUK

TRAFFIC CONTROL - WIDTH RESTRICTION SIGNING

SHEET

E

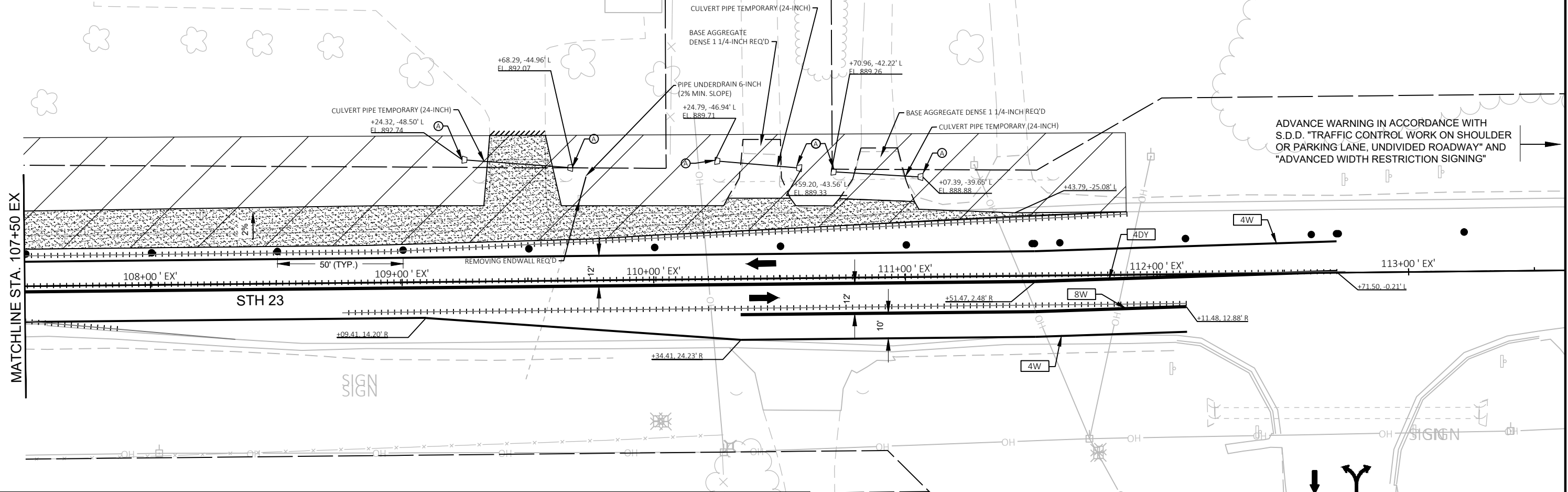












LEGEND	
	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
	WORK ZONE
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
	MARKING REMOVAL LINE WATER BLASTING
	TRAFFIC FLOW ARROW
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

COMPLETE SHOULDER WORK/TEMPORARY WIDENING CONSTRUCTION UNDER FLAGGING OPERATIONS. SEE S.D.D. "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS" FOR ADDITIONAL INFORMATION.










COMPLETE SHOULDER WORK UNDER FLAGGING OPERATIONS. SEE S.D.D. "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS" FOR ADDITIONAL INFORMATION.



-  TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
-  TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
-  WORK ZONE
-  SAWING ASPHALT REQ'D
-  SAWING CONCRETE REQ'D
-  TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
-  TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
-  TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
-  MARKING REMOVAL LINE WATER BLASTING
-  TRAFFIC FLOW ARROW

**LEGEND**

	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)




















COMPLETE SHOULDER WORK UNDER FLAGGING OPERATIONS. SEE S.D.D. "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS" FOR ADDITIONAL INFORMATION.

ADVANCE WARNING IN ACCORDANCE WITH S.D.D. "TRAFFIC CONTROL WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY" AND "ADVANCED WIDTH RESTRICTION SIGNING"

MATCHLINE STA. 107+50 EX

STH 23

STH 136

	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE		TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH		TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	WORK ZONE		TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	SAWING ASPHALT REQ'D		TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	SAWING CONCRETE REQ'D		TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)		TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)		TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)		
	MARKING REMOVAL LINE WATER BLASTING		
	TRAFFIC FLOW ARROW		

PROJECT NO: 5050-01-76

HWY: STH 23











COUNTY: SAUK








TRAFFIC CONTROL - STAGE 1

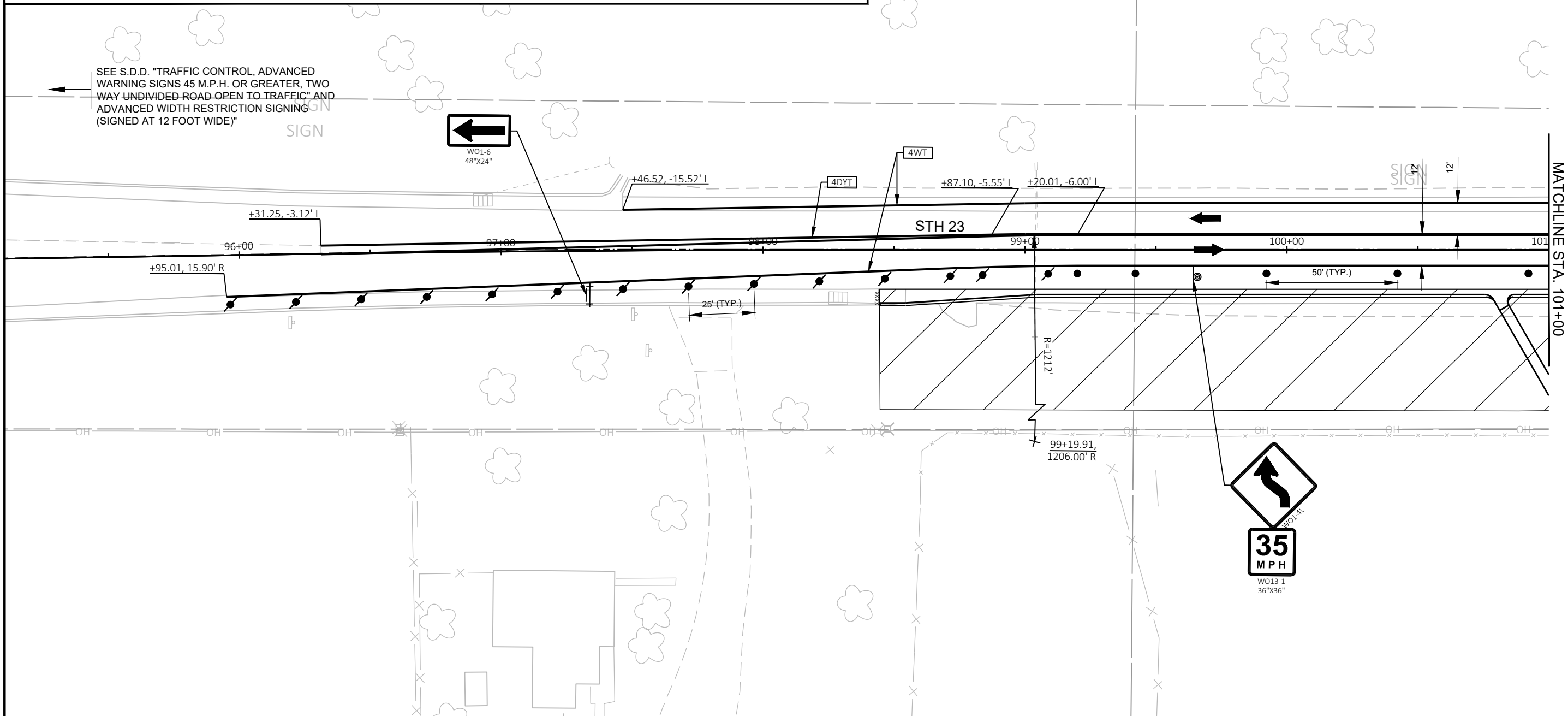
SHEET











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






-  TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
-  TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES;  
3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER  
10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
-  WORK ZONE
-  SAWING ASPHALT REQ'D
-  SAWING CONCRETE REQ'D
-  TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
-  TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
-  TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
-  MARKING REMOVAL LINE WATER BLASTING
-  TRAFFIC FLOW ARROW

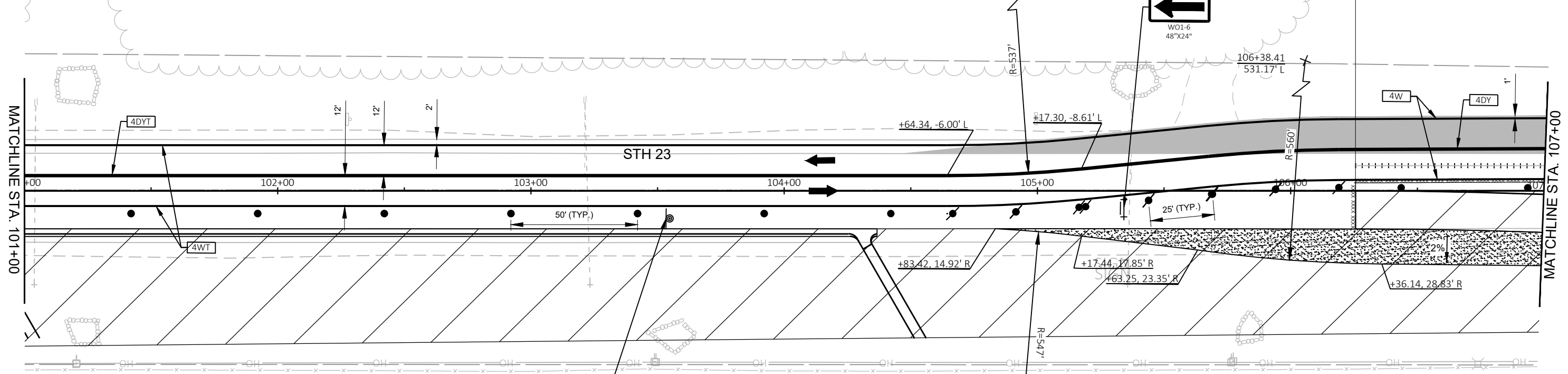
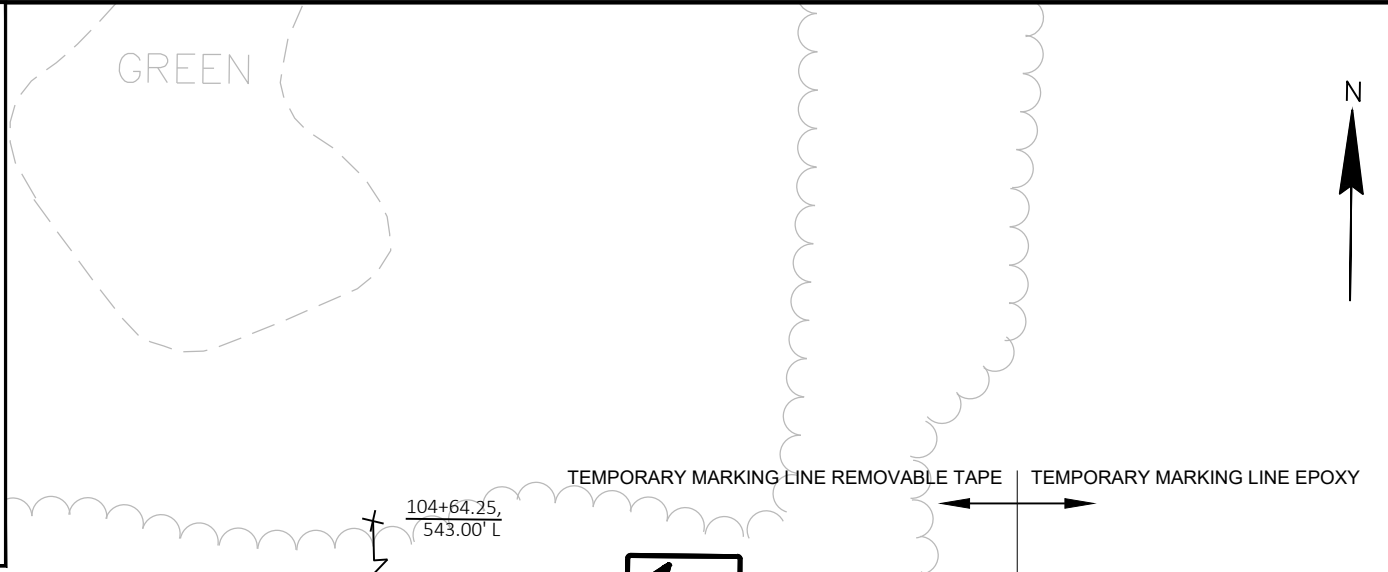
- LEGEND**
-  4W TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
  -  4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
  -  4DY TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
  -  4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
  -  4YT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
  -  8W TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
  -  18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

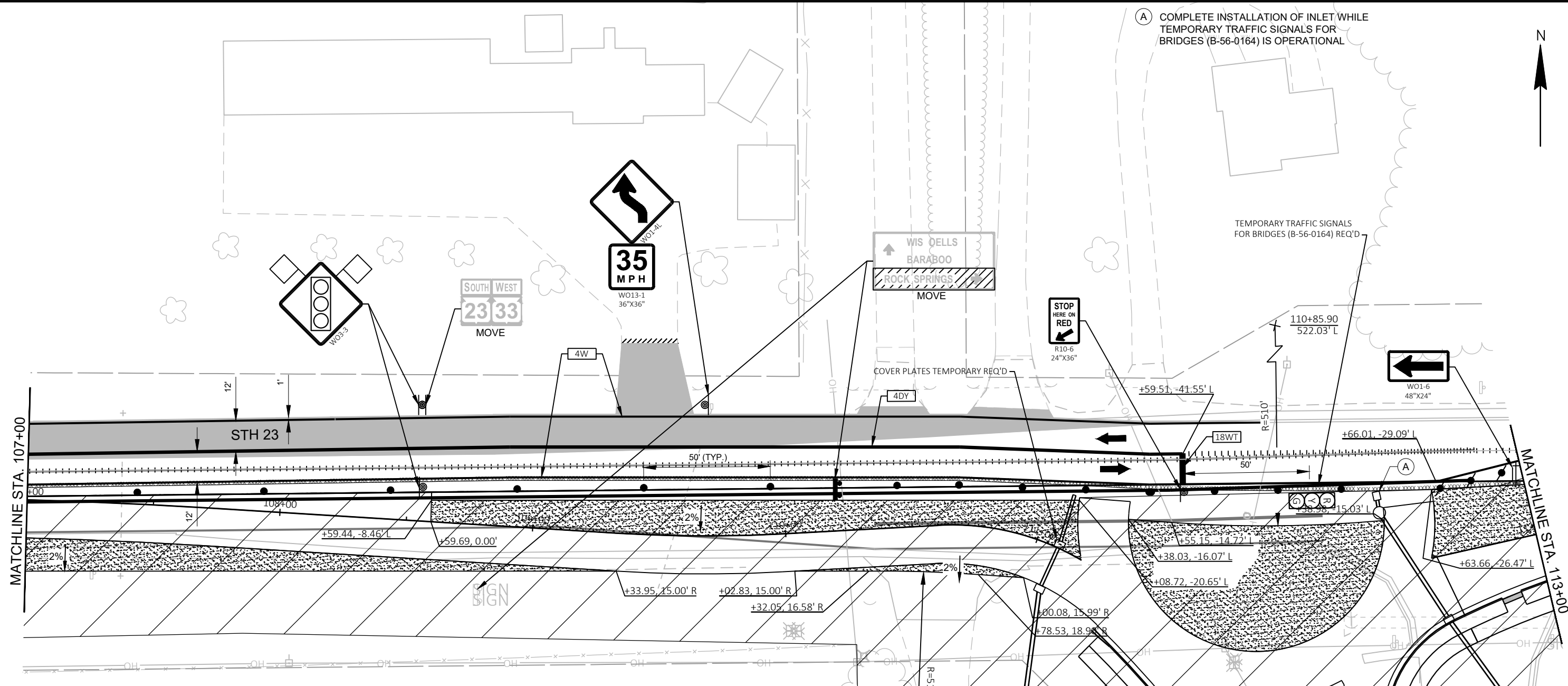


-  TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
-  TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES;  
3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER  
10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
-  WORK ZONE
-  SAWING ASPHALT REQ'D
-  SAWING CONCRETE REQ'D
-  TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
-  TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
-  TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
-  MARKING REMOVAL LINE WATER BLASTING
-  TRAFFIC FLOW ARROW











LEGEND

-  4W TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
-  4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
-  4DY TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
-  4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
-  4YT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
-  8W TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
-  18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)










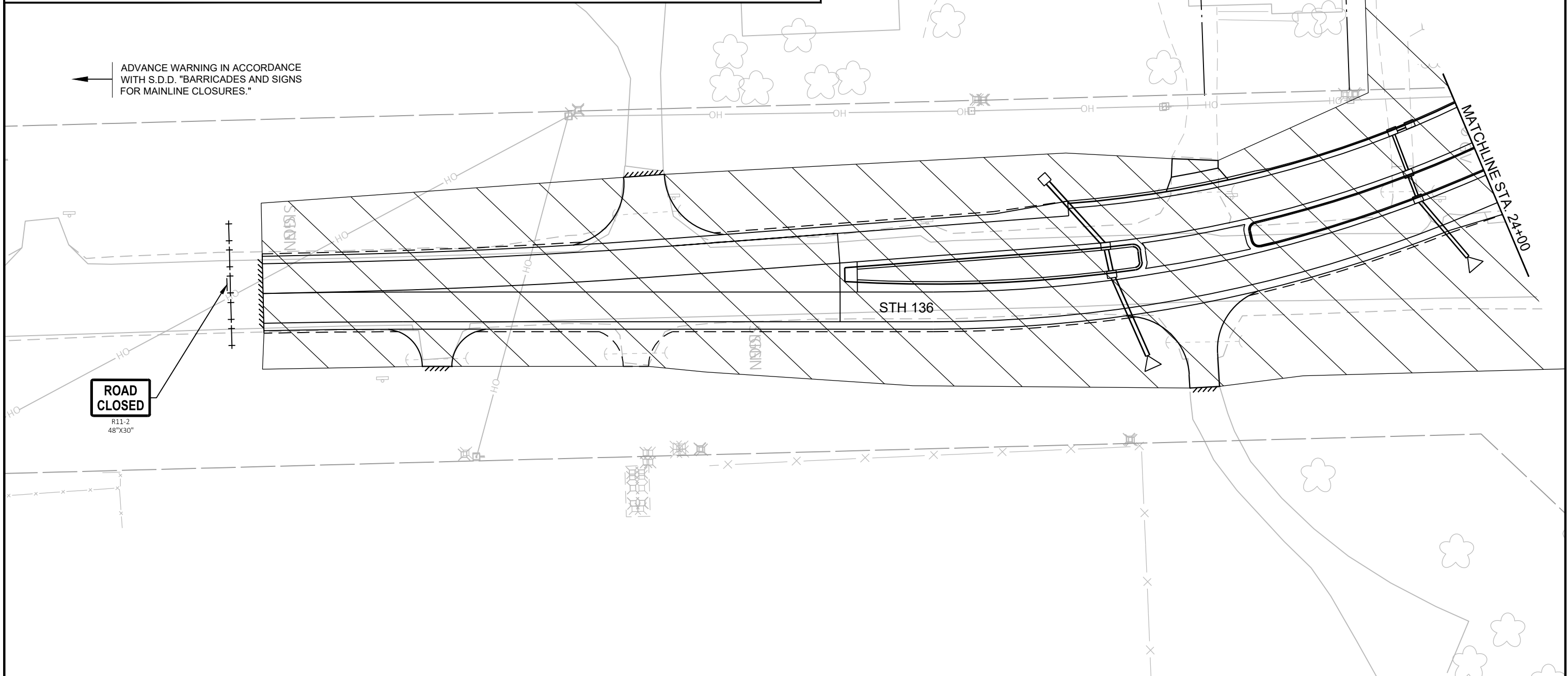
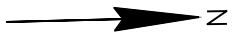


LEGEND	
	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
	WORK ZONE
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
	MARKING REMOVAL LINE WATER BLASTING
	TRAFFIC FLOW ARROW
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

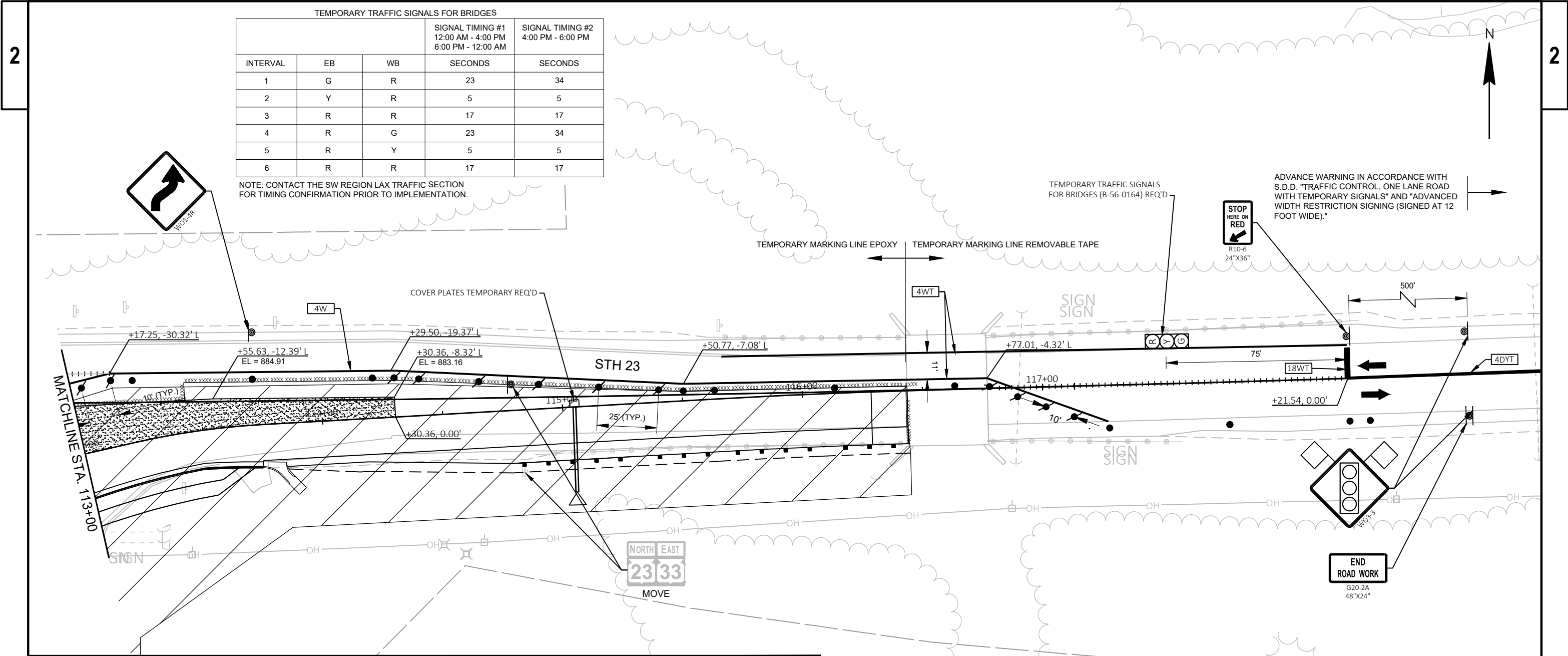
-  TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
-  TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
-  WORK ZONE
-  SAWING ASPHALT REQ'D
-  SAWING CONCRETE REQ'D
-  TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
-  TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
-  TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
-  MARKING REMOVAL LINE WATER BLASTING
-  TRAFFIC FLOW ARROW

**LEGEND**

-  4W TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
-  4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
-  4DY TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
-  4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
-  4YT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
-  8W TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
-  18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)







TEMPORARY TRAFFIC SIGNALS FOR BRIDGES

INTERVAL	EB	WB	SIGNAL TIMING #1	SIGNAL TIMING #2
			12:00 AM - 4:00 PM 6:00 PM - 12:00 AM	4:00 PM - 6:00 PM
SECONDS	SECONDS		SECONDS	SECONDS
1	G	R	23	34
2	Y	R	5	5
3	R	R	17	17
4	R	G	23	34
5	R	Y	5	5
6	R	R	17	17

NOTE: CONTACT THE SW REGION LAX TRAFFIC SECTION FOR TIMING CONFIRMATION PRIOR TO IMPLEMENTATION.

TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (B-56-0164) REQ'D

ADVANCE WARNING IN ACCORDANCE WITH S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" AND "ADVANCED WIDTH RESTRICTION SIGNING (SIGNED AT 12 FOOT WIDE)."

TEMPORARY MARKING LINE EPOXY      TEMPORARY MARKING LINE REMOVABLE TAPE

COVER PLATES TEMPORARY REQ'D

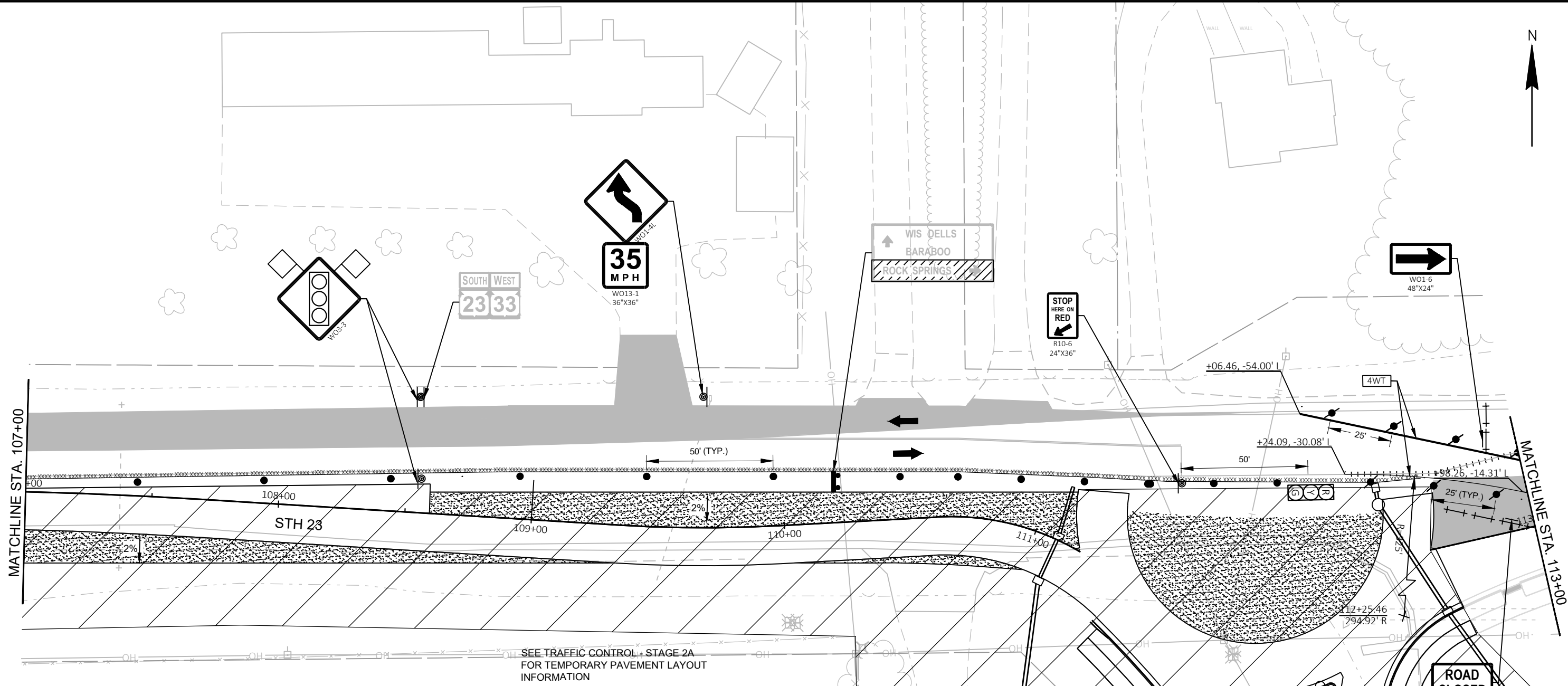
STH 23

NORTH EAST  
23 33  
MOVE

MATCHLINE STA. 113+00

**LEGEND**

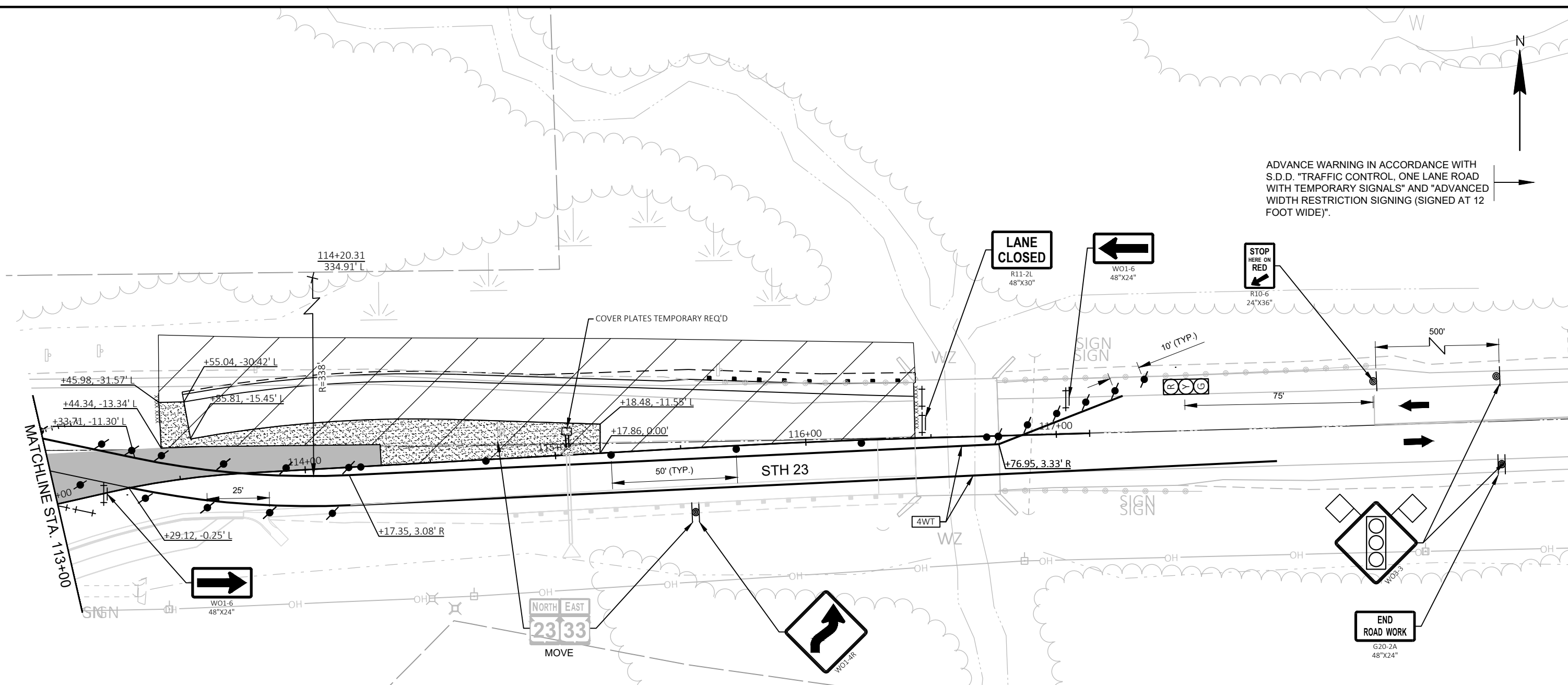
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	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH		TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	WORK ZONE		TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	SAWING ASPHALT REQ'D		TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	SAWING CONCRETE REQ'D		TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)		TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)		TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)		
	MARKING REMOVAL LINE WATER BLASTING		
	TRAFFIC FLOW ARROW		



SEE TRAFFIC CONTROL - STAGE 2A  
FOR TEMPORARY PAVEMENT LAYOUT  
INFORMATION

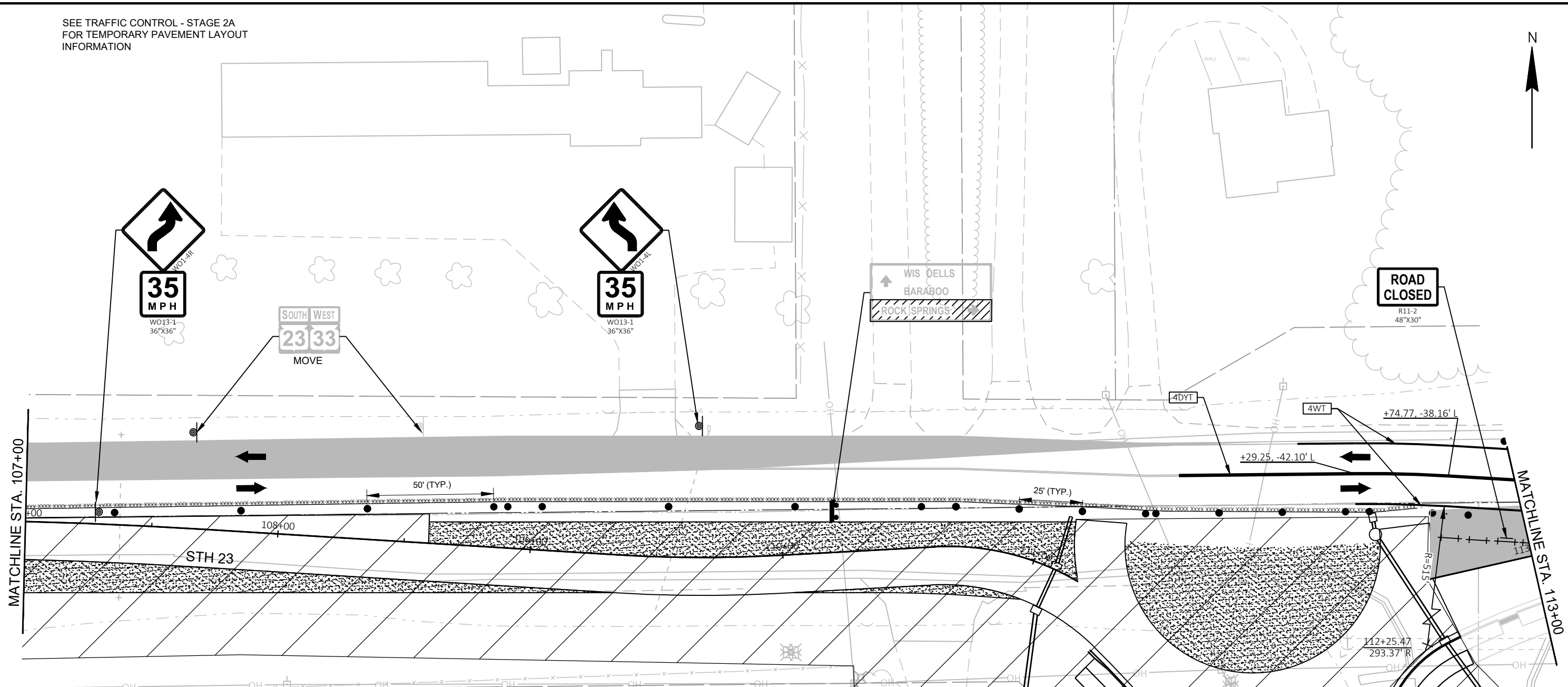
LEGEND	
	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
	WORK ZONE
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
	MARKING REMOVAL LINE WATER BLASTING
	TRAFFIC FLOW ARROW
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

ADVANCE WARNING IN ACCORDANCE WITH S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" AND "ADVANCED WIDTH RESTRICTION SIGNING (SIGNED AT 12 FOOT WIDE)".



LEGEND	
	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
	WORK ZONE
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
	MARKING REMOVAL LINE WATER BLASTING
	TRAFFIC FLOW ARROW
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

SEE TRAFFIC CONTROL - STAGE 2A FOR TEMPORARY PAVEMENT LAYOUT INFORMATION



	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE	<b>LEGEND</b>		TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH			TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	WORK ZONE			TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	SAWING ASPHALT REQ'D			TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	SAWING CONCRETE REQ'D			TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)			TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)			TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)			
	MARKING REMOVAL LINE WATER BLASTING			
	TRAFFIC FLOW ARROW			

PROJECT NO: 5050-01-76

HWY: STH 23

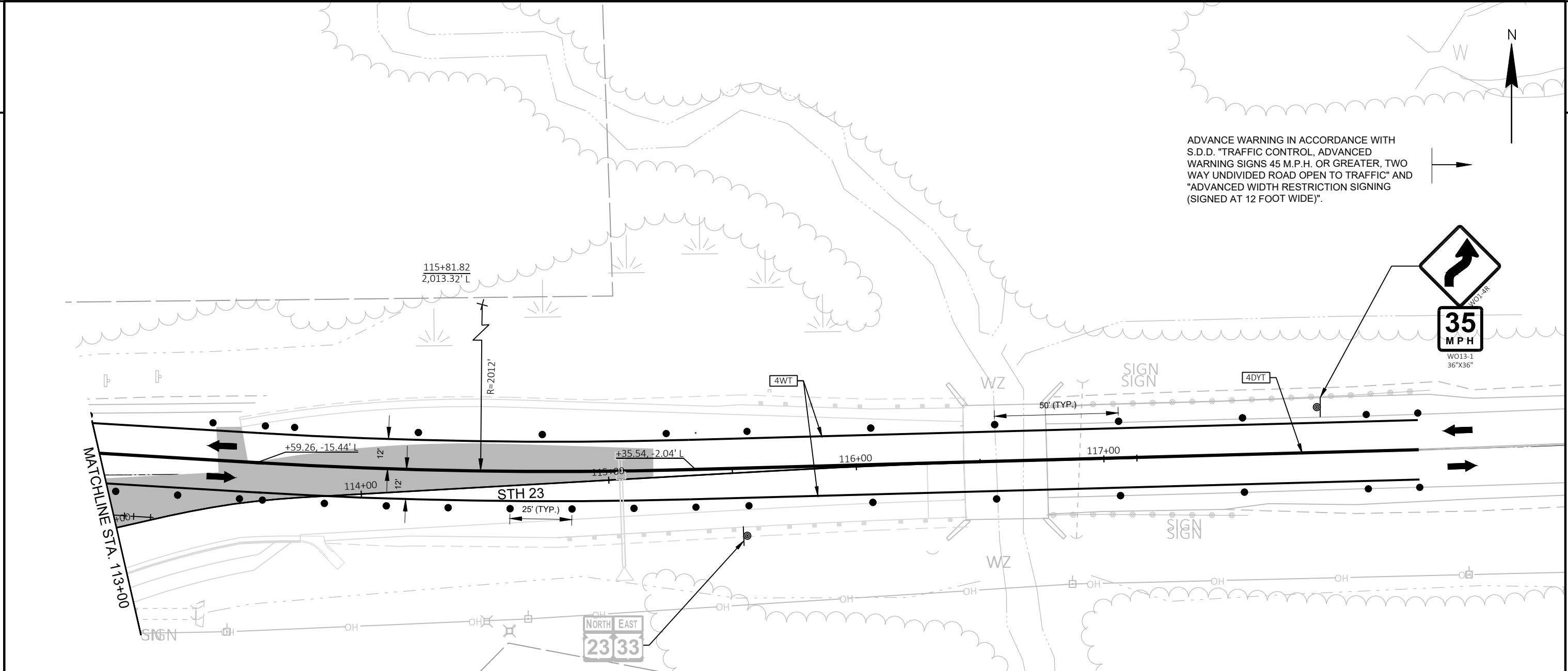
COUNTY: SAUK

TRAFFIC CONTROL - STAGE 2C

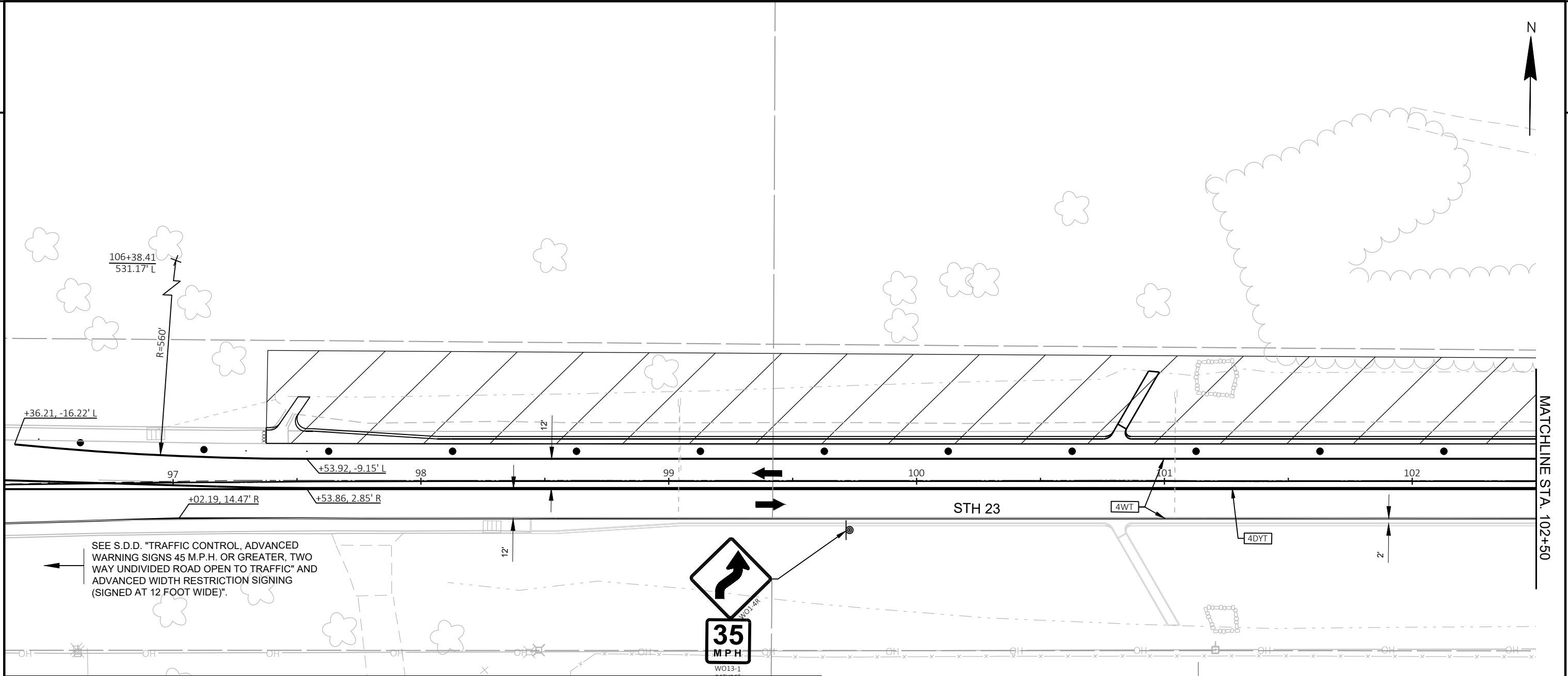
SHEET

E

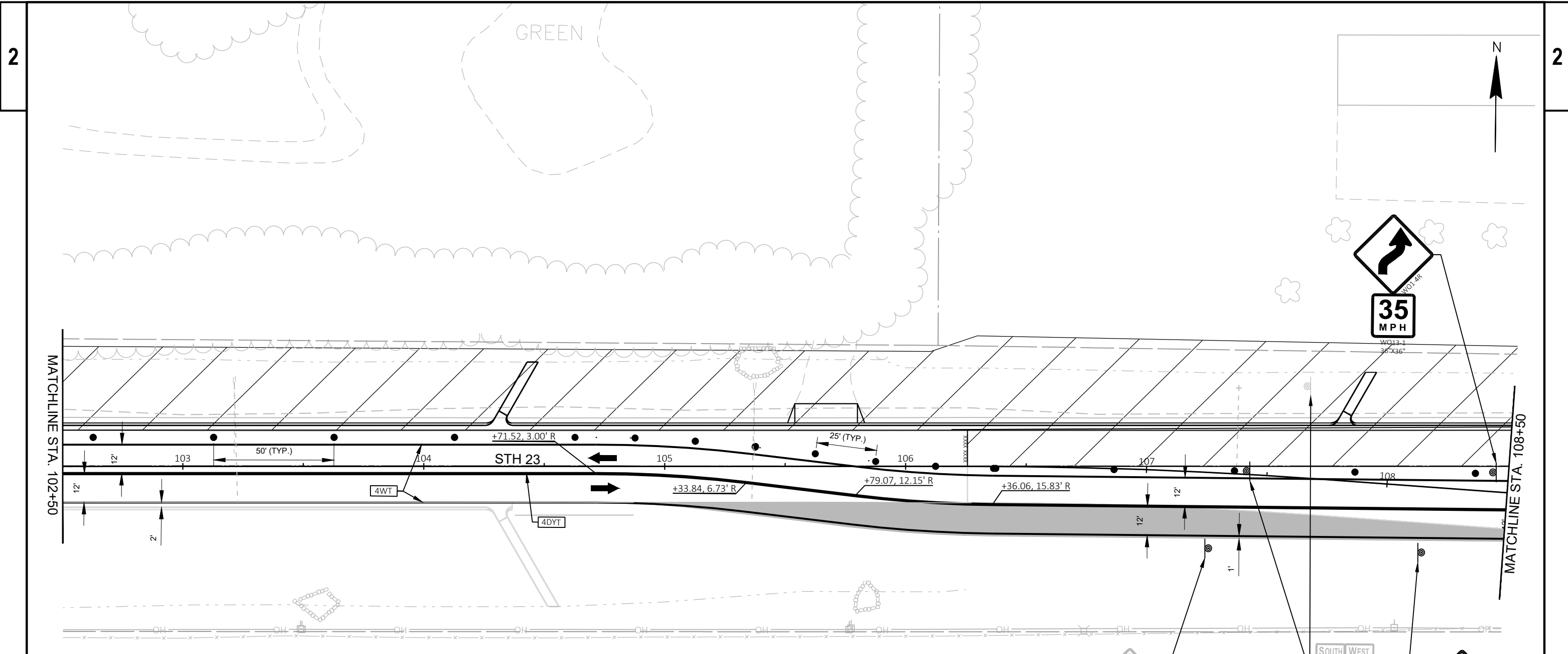
ADVANCE WARNING IN ACCORDANCE WITH S.D.D. "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" AND "ADVANCED WIDTH RESTRICTION SIGNING (SIGNED AT 12 FOOT WIDE)".



LEGEND	
	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
	WORK ZONE
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
	MARKING REMOVAL LINE WATER BLASTING
	TRAFFIC FLOW ARROW
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

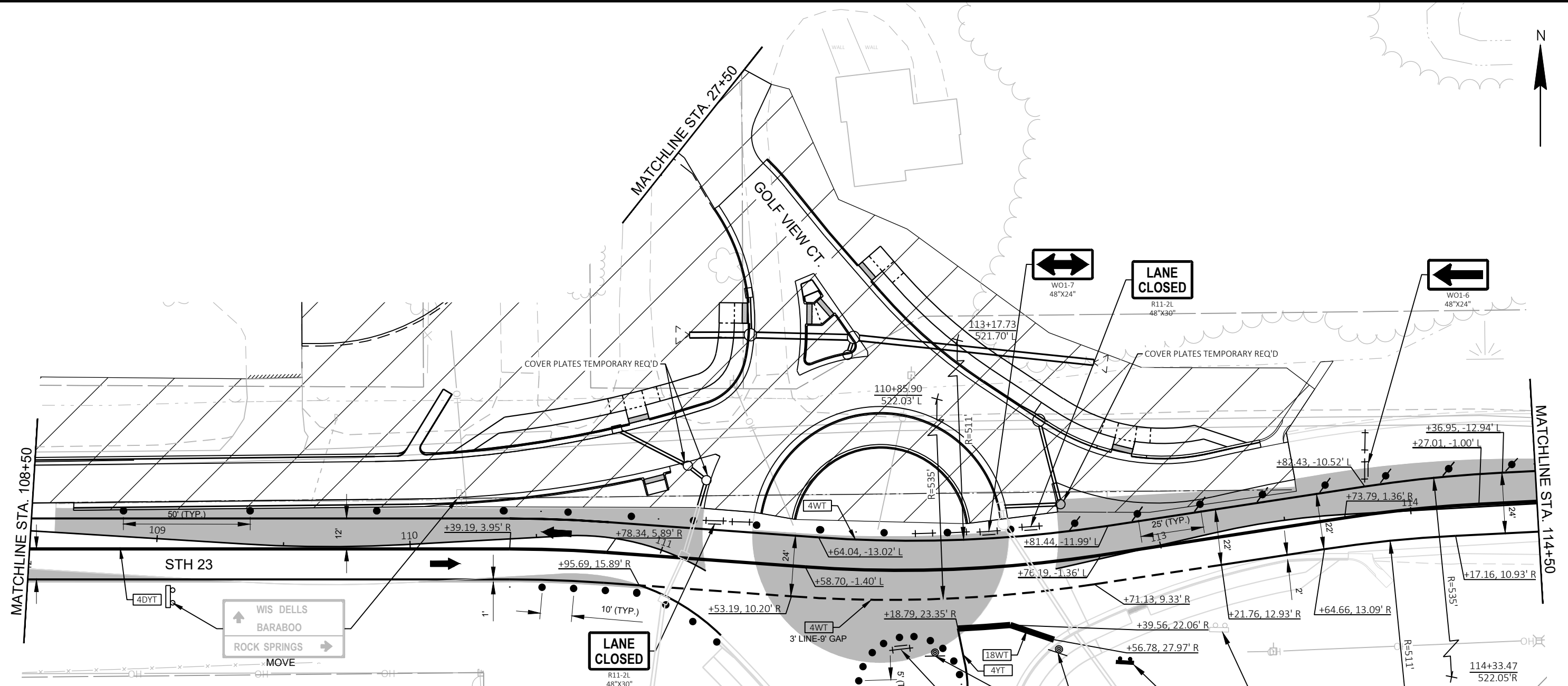


LEGEND	
	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
	WORK ZONE
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
	MARKING REMOVAL LINE WATER BLASTING
	TRAFFIC FLOW ARROW
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)



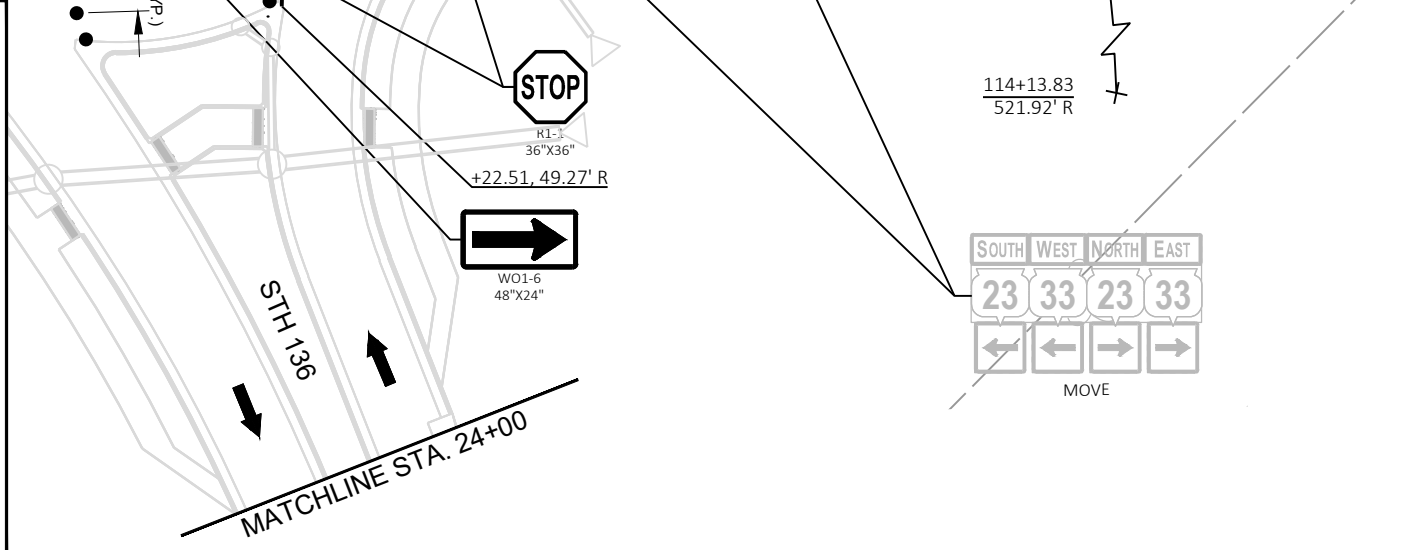
LEGEND	
	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
	WORK ZONE
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
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	MARKING REMOVAL LINE WATER BLASTING
	TRAFFIC FLOW ARROW
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
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	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      TRAFFIC CONTROL - STAGE 3      SHEET      E

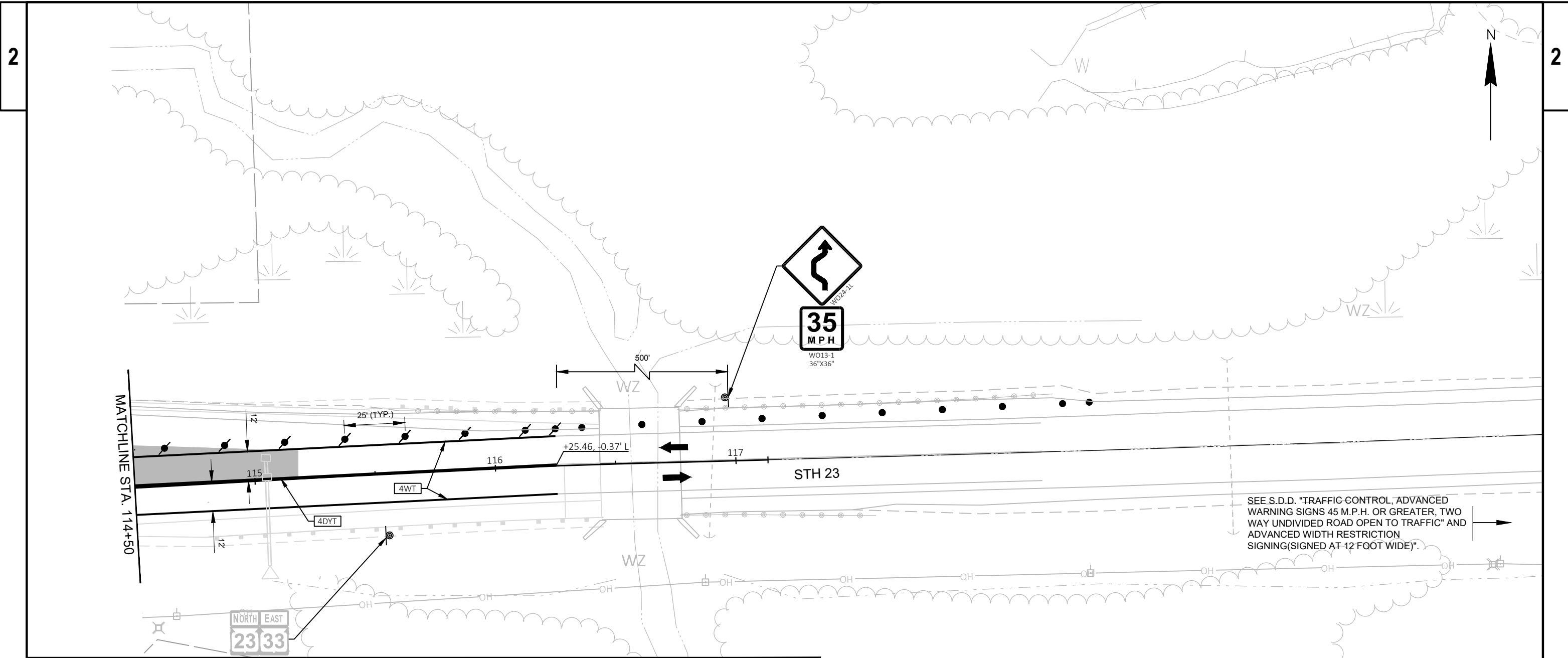


**LEGEND**

	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE		TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH		TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	WORK ZONE		TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	SAWING ASPHALT REQ'D		TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	SAWING CONCRETE REQ'D		TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)		TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)		TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)		
	MARKING REMOVAL LINE WATER BLASTING		
	TRAFFIC FLOW ARROW		
























LEGEND	
	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
	WORK ZONE
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
	MARKING REMOVAL LINE WATER BLASTING
	TRAFFIC FLOW ARROW
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

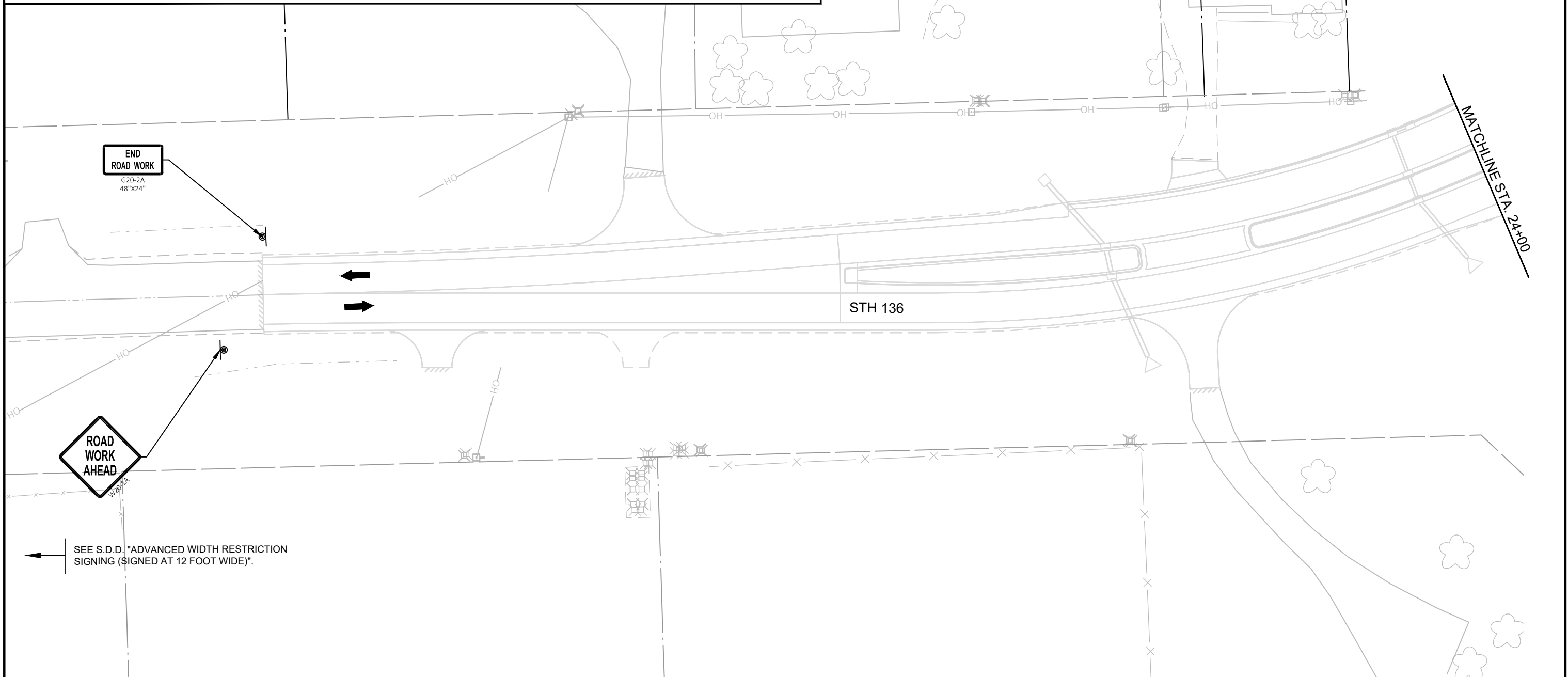
SEE S.D.D. "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" AND ADVANCED WIDTH RESTRICTION SIGNING(SIGNED AT 12 FOOT WIDE)".











-  TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
-  TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
-  WORK ZONE
-  SAWING ASPHALT REQ'D
-  SAWING CONCRETE REQ'D
-  TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
-  TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
-  TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
-  MARKING REMOVAL LINE WATER BLASTING
-  TRAFFIC FLOW ARROW

**LEGEND**








 4W	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
 4WT	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
 4DY	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
 4DYT	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
 4YT	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
 8W	TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
 18WT	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

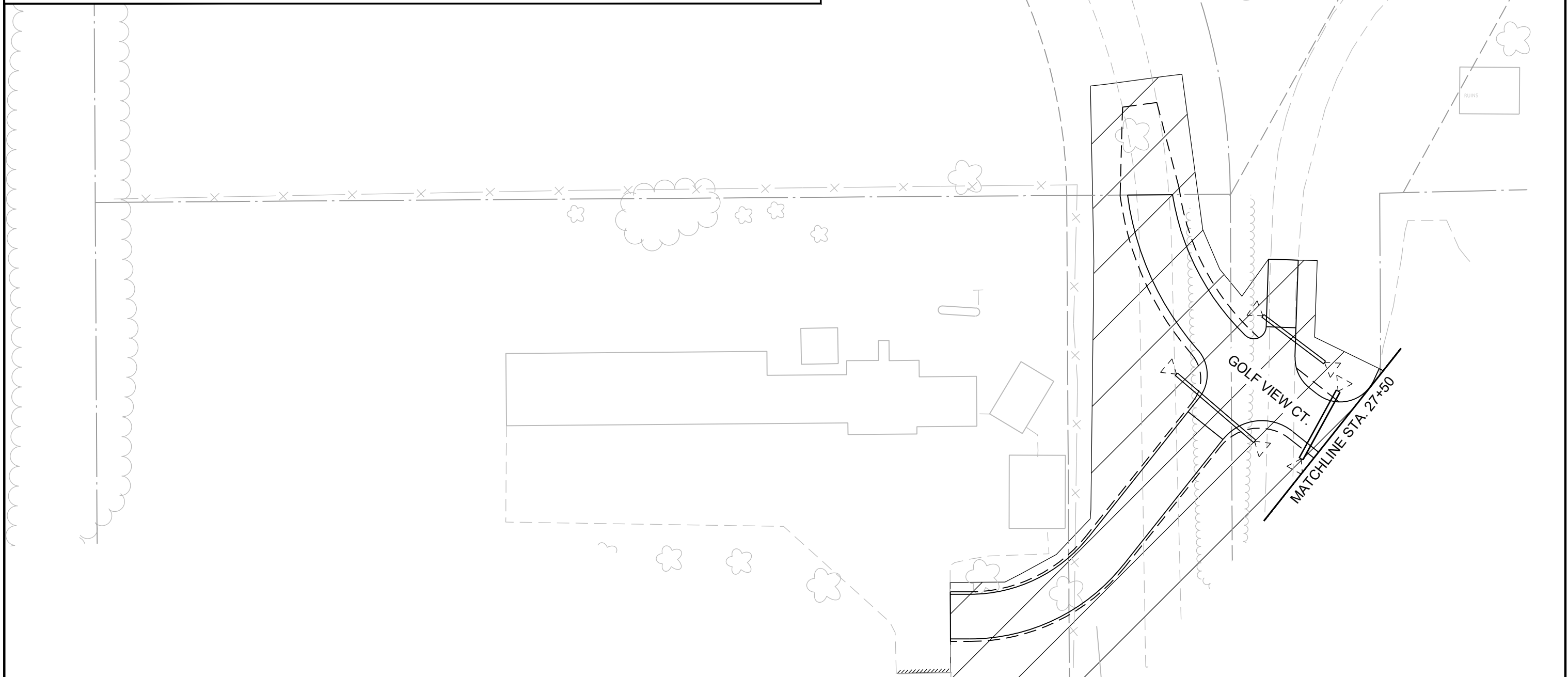
NOTE: FINAL PAVEMENT MARKING AND SIGNING TO BE PLACED AND IN USE WHERE WORK IS COMPLETED.

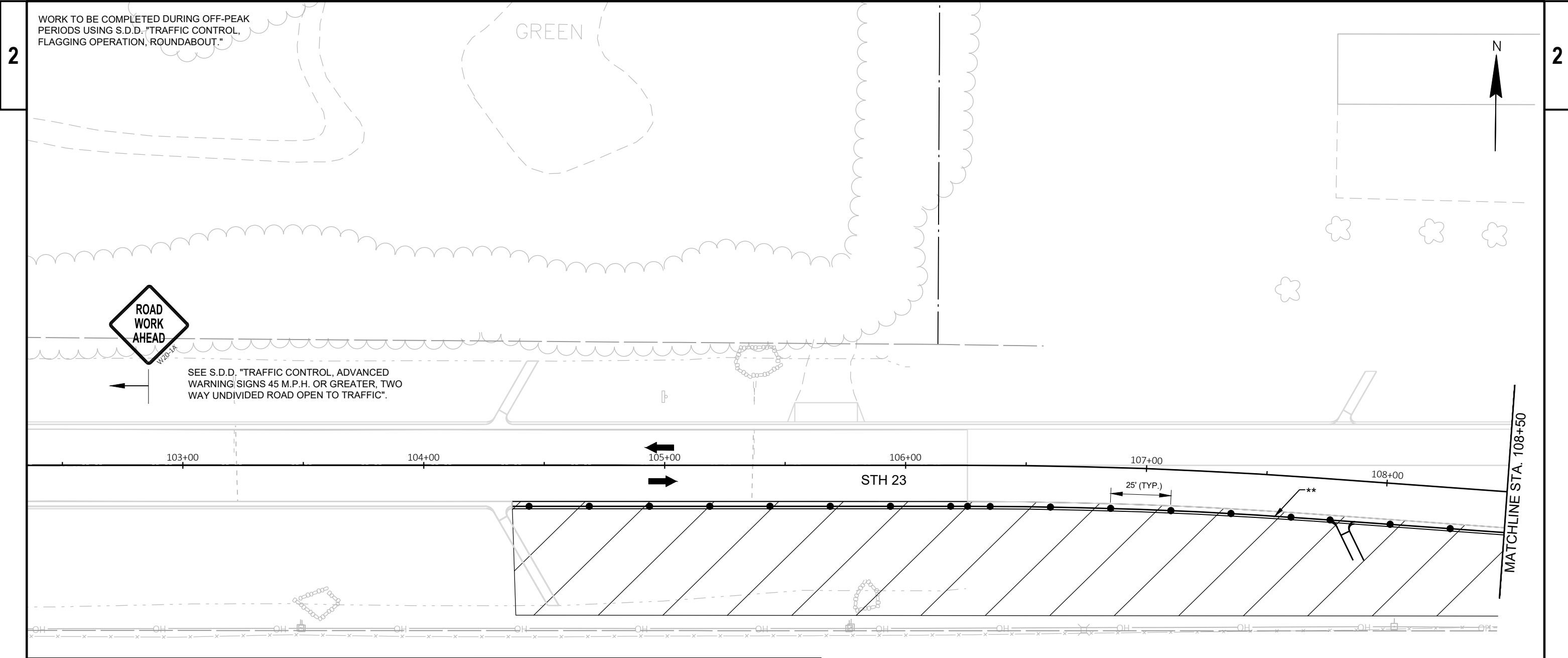



-  TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
-  TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES;  
3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER  
10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
-  WORK ZONE
-  SAWING ASPHALT REQ'D
-  SAWING CONCRETE REQ'D
-  TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
-  TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
-  TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
-  MARKING REMOVAL LINE WATER BLASTING
-  TRAFFIC FLOW ARROW

**LEGEND**

-  TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
-  TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
-  TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
-  TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
-  TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
-  TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
-  TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)





WORK TO BE COMPLETED DURING OFF-PEAK PERIODS USING S.D.D. "TRAFFIC CONTROL, FLAGGING OPERATION, ROUNDABOUT."

GREEN



SEE S.D.D. "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC".

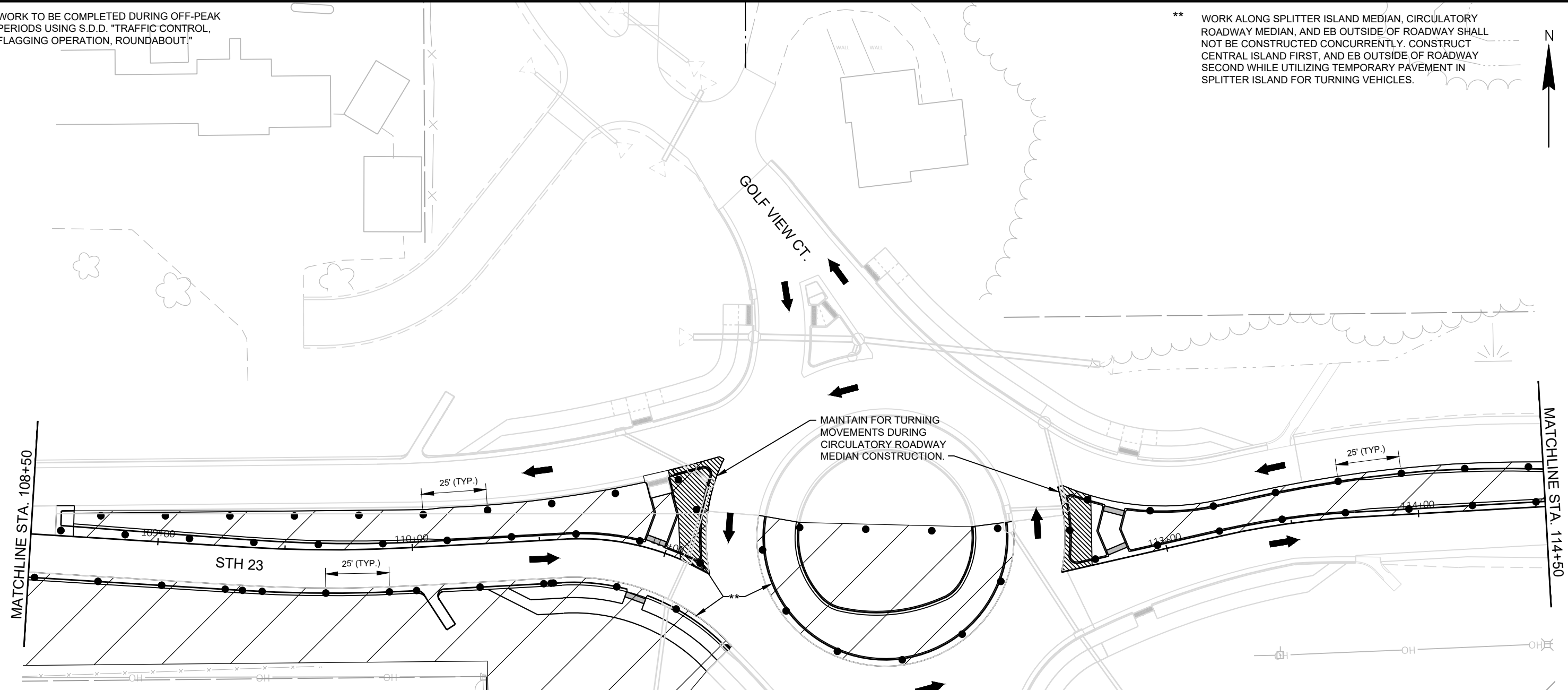
MATCHLINE STA. 108+50

LEGEND	
	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
	WORK ZONE
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
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	MARKING REMOVAL LINE WATER BLASTING
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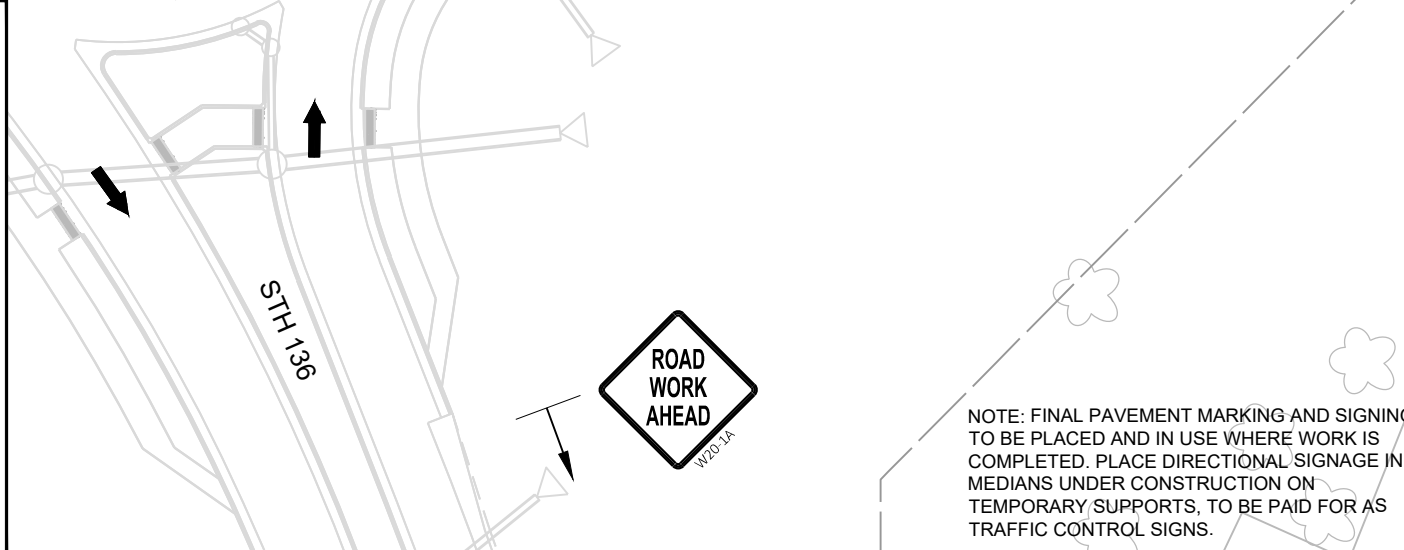
NOTE: FINAL PAVEMENT MARKING AND SIGNING TO BE PLACED AND IN USE WHERE WORK IS COMPLETED. PLACE DIRECTIONAL SIGNAGE IN MEDIANS UNDER CONSTRUCTION ON TEMPORARY SUPPORTS, TO BE PAID FOR AS TRAFFIC CONTROL SIGNS.

WORK TO BE COMPLETED DURING OFF-PEAK PERIODS USING S.D.D. "TRAFFIC CONTROL, FLAGGING OPERATION, ROUNDABOUT."

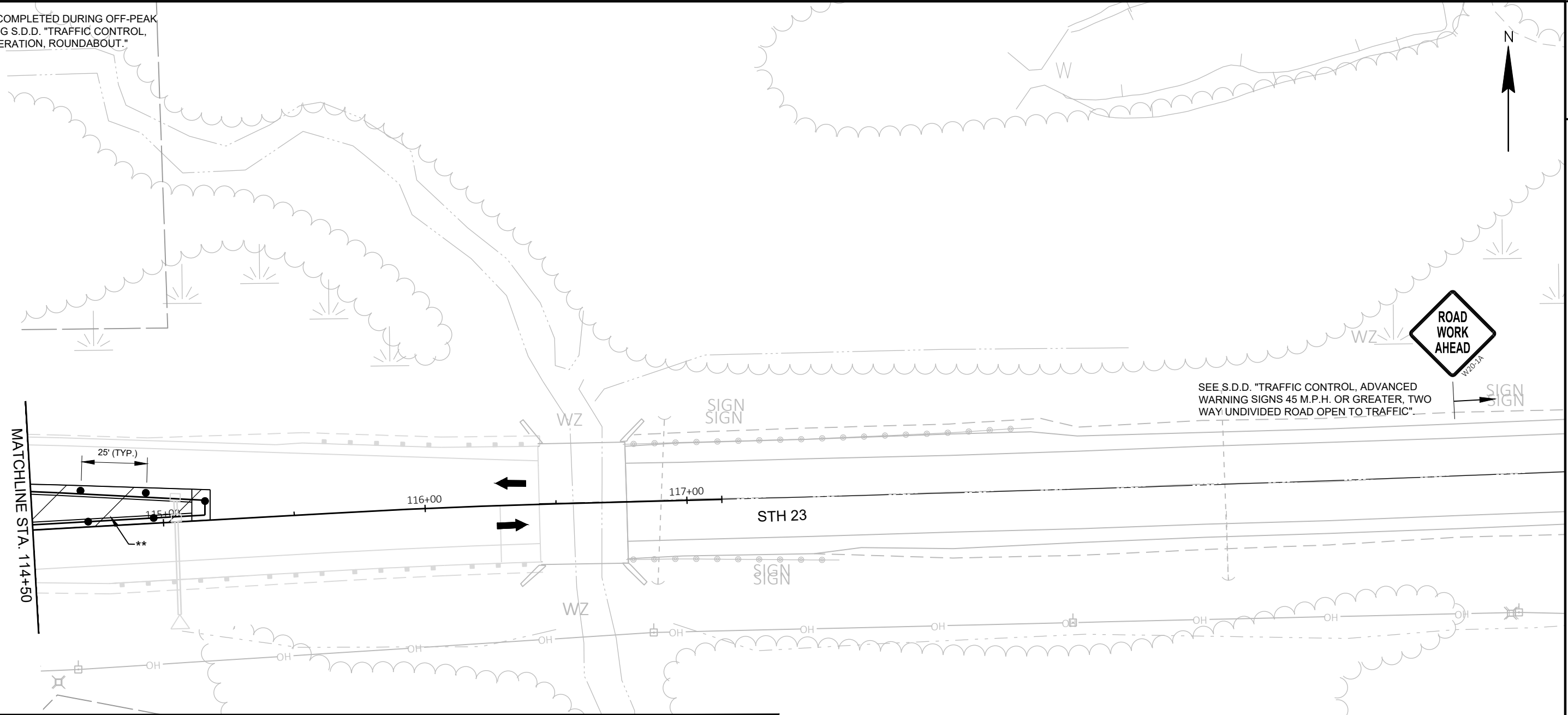
\*\* WORK ALONG SPLITTER ISLAND MEDIAN, CIRCULATORY ROADWAY MEDIAN, AND EB OUTSIDE OF ROADWAY SHALL NOT BE CONSTRUCTED CONCURRENTLY. CONSTRUCT CENTRAL ISLAND FIRST, AND EB OUTSIDE OF ROADWAY SECOND WHILE UTILIZING TEMPORARY PAVEMENT IN SPLITTER ISLAND FOR TURNING VEHICLES.



LEGEND	
	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
	WORK ZONE
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
	MARKING REMOVAL LINE WATER BLASTING
	TRAFFIC FLOW ARROW
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
	TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)



WORK TO BE COMPLETED DURING OFF-PEAK PERIODS USING S.D.D. "TRAFFIC CONTROL, FLAGGING OPERATION, ROUNDABOUT."



SEE S.D.D. "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

LEGEND	
	TEMPORARY PAVEMENT PLACED IN PREVIOUS STAGE
	TEMPORARY PAVEMENT TO BE USED IN FUTURE STAGES; 3-INCHES ASPHALTIC SURFACE TEMPORARY, OVER 10-INCHES BASE AGGREGATE DENSE 1 1/4 -INCH
	WORK ZONE
	SAWING ASPHALT REQ'D
	SAWING CONCRETE REQ'D
	TRAFFIC CONTROL DRUMS (WITH/WITHOUT LIGHT, TYPE C)
	TRAFFIC CONTROL SIGNS (MOUNTED ON TEMPORARY SUPPORT)
	TRAFFIC CONTROL BARRICADES TYPE III (WITH/WITHOUT SIGN)
	MARKING REMOVAL LINE WATER BLASTING
	TRAFFIC FLOW ARROW
	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
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	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

NOTE: FINAL PAVEMENT MARKING AND SIGNING TO BE PLACED AND IN USE WHERE WORK IS COMPLETED. PLACE DIRECTIONAL SIGNAGE IN MEDIANS UNDER CONSTRUCTION ON TEMPORARY SUPPORTS, TO BE PAID FOR AS TRAFFIC CONTROL SIGNS.



**CP-908 (IRON BAR)**  
 STA. 94+29.07  
 Y: 260,000.73  
 X: 592,670.86

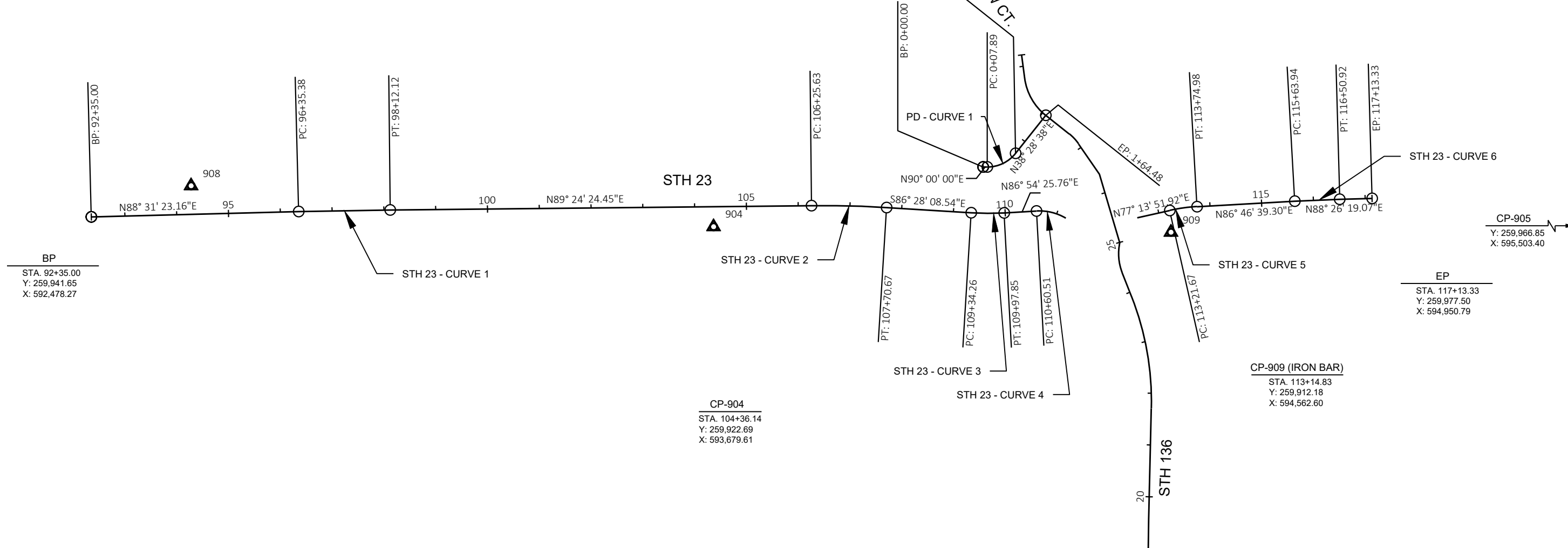
**BP (PRIVATE DRIVEWAY)**  
 STA. 0+00.00  
 Y: 260,037.93  
 X: 594,199.96

**PD - CURVE 1**  
 PI STA = 0+41.67  
 Y = 260037.928  
 X = 594241.631  
 DELTA = 51°31'22"  
 D = 81°51'04"  
 T = 33.78'  
 L = 62.95'  
 R = 70.00'  
 PC STA = 0+07.89  
 Y = 260037.928  
 X = 594207.850  
 PT STA = 0+70.83  
 Y = 260064.374  
 X = 594262.650  
 BK = N90°00'00.00"E  
 AH = N38°28'37.83"E

**EP (PRIVATE DRIVEWAY)**  
 STA. 1+64.48  
 Y: 260,137.69  
 X: 594,320.92

**STH 23 - CURVE 5**  
 PI STA = 113+48.39  
 Y = 259960.044  
 X = 594586.164  
 DELTA = 9°32'47"  
 D = 17°54'18"  
 T = 26.72'  
 L = 53.32'  
 R = 320.00'  
 PC STA = 113+21.67  
 Y = 259954.139  
 X = 594560.104  
 PT STA = 113+74.98  
 Y = 259961.546  
 X = 594612.842  
 BK = N77°13'51.92"E  
 AH = N86°46'39.30"E

**STH 23 - CURVE 6**  
 PI STA = 116+07.43  
 Y = 259974.613  
 X = 594844.924  
 DELTA = 1°39'40"  
 D = 1°54'35"  
 T = 43.49'  
 L = 86.97'  
 R = 3000.00'  
 PC STA = 115+63.94  
 Y = 259972.168  
 X = 594801.504  
 PT STA = 116+50.92  
 Y = 259975.798  
 X = 594888.397  
 BK = N86°46'39.30"E  
 AH = N88°26'19.07"E



**STH 23 - CURVE 1**  
 PI STA = 97+23.75  
 Y = 259954.251  
 X = 592966.853  
 DELTA = 0°53'01"  
 D = 0°30'00"  
 T = 88.37'  
 L = 176.74'  
 R = 11459.16'  
 PC STA = 96+35.38  
 Y = 259951.974  
 X = 592878.511  
 PT STA = 98+12.12  
 Y = 259955.166  
 X = 593055.219  
 BK = N88°31'23.16"E  
 AH = N89°24'24.45"E

**STH 23 - CURVE 2**  
 PI STA = 106+98.18  
 Y = 259964.340  
 X = 593941.236  
 DELTA = 4°07'27"  
 D = 2°50'36"  
 T = 72.55'  
 L = 145.04'  
 R = 2015.00'  
 PC STA = 106+25.63  
 Y = 259963.589  
 X = 593868.688  
 PT STA = 107+70.67  
 Y = 259959.871  
 X = 594013.650  
 BK = N89°24'24.45"E  
 AH = S86°28'08.54"E

**STH 23 - CURVE 3**  
 PI STA = 109+66.09  
 Y = 259947.836  
 X = 594208.699  
 DELTA = 6°37'26"  
 D = 10°25'03"  
 T = 31.83'  
 L = 63.58'  
 R = 550.00'  
 PC STA = 109+34.26  
 Y = 259949.796  
 X = 594176.932  
 PT STA = 109+97.85  
 Y = 259949.553  
 X = 594240.480  
 BK = S86°28'08.54"E  
 AH = N86°54'25.76"E

**STH 23 - CURVE 4**  
 PI STA = 110+90.84  
 Y = 259954.570  
 X = 594333.334  
 DELTA = 33°44'18"  
 D = 57°17'45"  
 T = 30.32'  
 L = 58.88'  
 R = 100.00'  
 PC STA = 110+60.51  
 Y = 259952.934  
 X = 594303.054  
 PT STA = 111+19.40  
 Y = 259939.114  
 X = 594359.422  
 BK = N86°54'25.76"E  
 AH = S59°21'16.70"E

**CP-904**  
 STA. 104+36.14  
 Y: 259,922.69  
 X: 593,679.61

**CP-909 (IRON BAR)**  
 STA. 113+14.83  
 Y: 259,912.18  
 X: 594,562.60

**CP-905**  
 Y: 259,966.85  
 X: 595,503.40

**EP**  
 STA. 117+13.33  
 Y: 259,977.50  
 X: 594,950.79

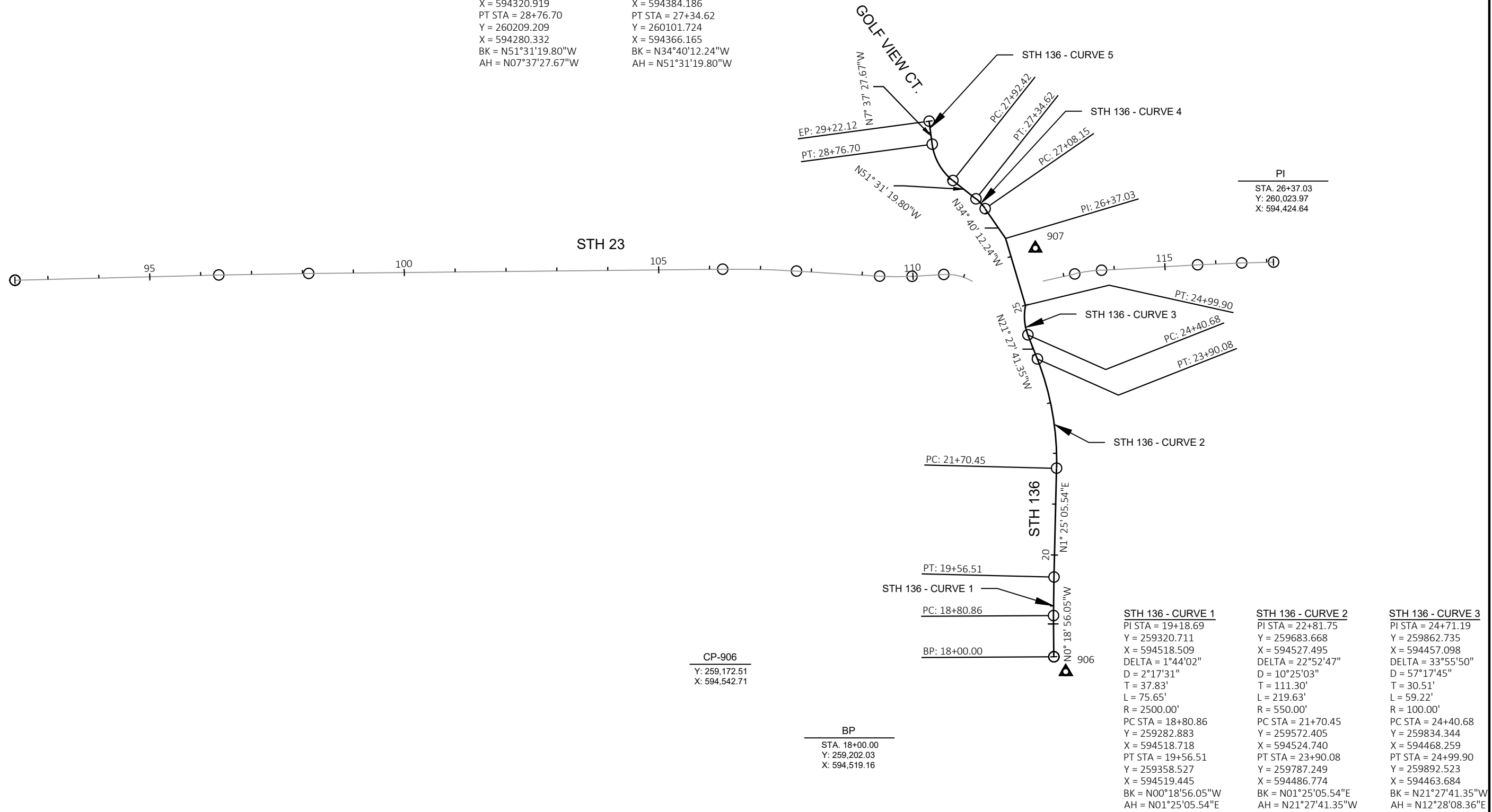


**STH 136 - CURVE 5**  
 PI STA = 28+36.75  
 Y = 260165.270  
 X = 594286.214  
 DELTA = 43°53'52"  
 D = 52°04'56"  
 T = 44.33'  
 L = 84.28'  
 R = 110.01'  
 PC STA = 27+92.42  
 Y = 260137.686  
 X = 594320.919  
 PT STA = 28+76.70  
 Y = 260209.209  
 X = 594280.332  
 BK = N51°31'19.80"W  
 AH = N07°37'27.67"W

**STH 136 - CURVE 4**  
 PI STA = 27+21.48  
 Y = 260093.429  
 X = 594376.602  
 DELTA = 16°51'08"  
 D = 63°39'43"  
 T = 13.33'  
 L = 26.47'  
 R = 90.00'  
 PC STA = 27+08.15  
 Y = 260082.464  
 X = 594384.186  
 PT STA = 27+34.62  
 Y = 260101.724  
 X = 594366.165  
 BK = N34°40'12.24"W  
 AH = N51°31'19.80"W

**EP**  
 STA. 29+22.12  
 Y: 260,254.22  
 X: 594,274.31

**PI**  
 STA. 26+37.03  
 Y: 260,023.97  
 X: 594,424.64



**CP-906**  
 Y: 259,172.51  
 X: 594,542.71

**BP**  
 STA. 18+00.00  
 Y: 259,202.03  
 X: 594,519.16

**STH 136 - CURVE 1**  
 PI STA = 19+18.69  
 Y = 259320.711  
 X = 594518.509  
 DELTA = 1°44'02"  
 D = 2°17'31"  
 T = 37.83'  
 L = 75.65'  
 R = 2500.00'  
 PC STA = 18+80.86  
 Y = 259282.883  
 X = 594518.718  
 PT STA = 19+56.51  
 Y = 259358.527  
 X = 594519.445  
 BK = N00°18'56.05"W  
 AH = N01°25'05.54"E

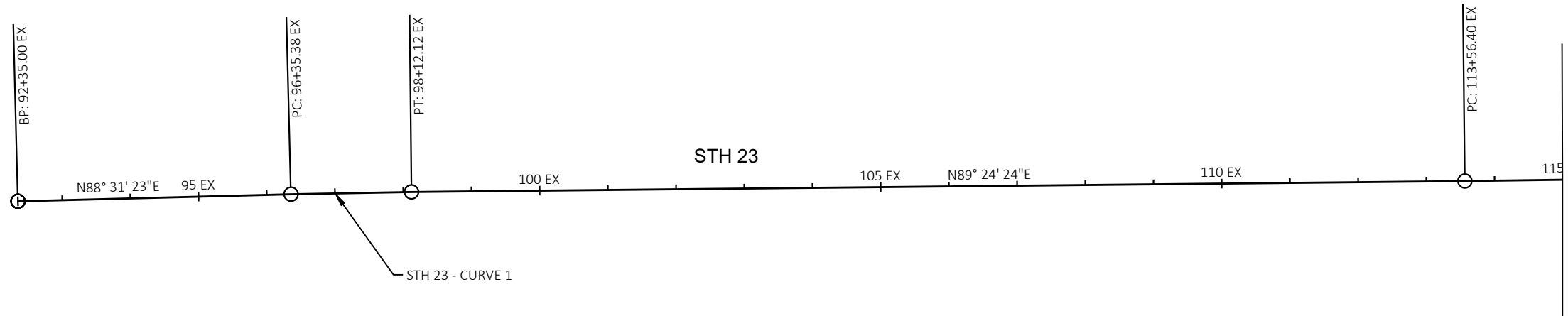
**STH 136 - CURVE 2**  
 PI STA = 22+81.75  
 Y = 259683.668  
 X = 594527.495  
 DELTA = 22°52'47"  
 D = 10°25'03"  
 T = 111.30'  
 L = 219.63'  
 R = 550.00'  
 PC STA = 21+70.45  
 Y = 259572.405  
 X = 594524.740  
 PT STA = 23+90.08  
 Y = 259787.249  
 X = 594486.774  
 BK = N01°25'05.54"E  
 AH = N21°27'41.35"W

**STH 136 - CURVE 3**  
 PI STA = 24+71.19  
 Y = 259862.735  
 X = 594457.098  
 DELTA = 33°55'50"  
 D = 57°17'45"  
 T = 30.51'  
 L = 59.22'  
 R = 100.00'  
 PC STA = 24+40.68  
 Y = 259834.344  
 X = 594468.259  
 PT STA = 24+99.90  
 Y = 259892.523  
 X = 594463.684  
 BK = N21°27'41.35"W  
 AH = N12°28'08.36"E





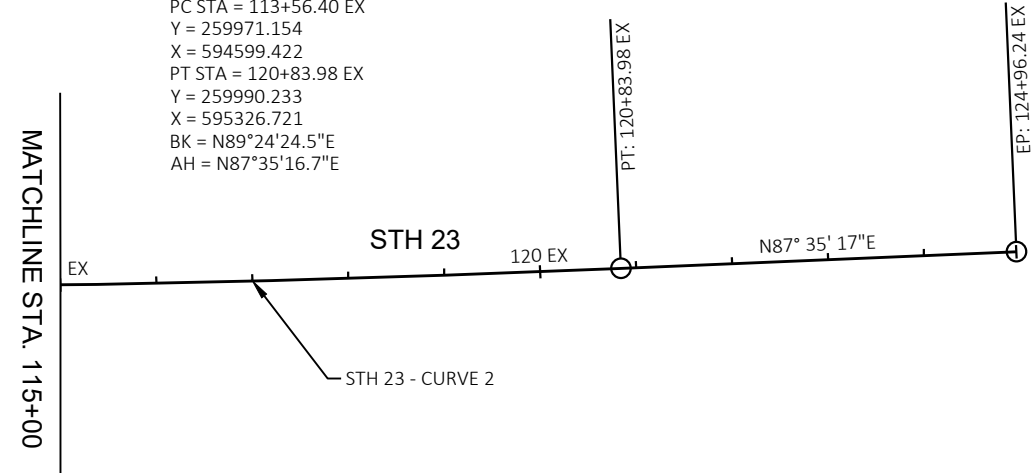
BP  
 STA. 92+35.00 EX  
 Y: 259,941.65  
 X: 592,478.27



STH 23 - CURVE 1  
 PI STA = 97+23.75 EX  
 Y = 259954.251  
 X = 592966.853  
 DELTA = 0°53'01"  
 D = 0°30'00"  
 T = 88.37'  
 L = 176.74'  
 R = 11459.16'  
 PC STA = 96+35.38 EX  
 Y = 259951.974  
 X = 592878.511  
 PT STA = 98+12.12 EX  
 Y = 259955.166  
 X = 593055.219  
 BK = N88°31'23.2"E  
 AH = N89°24'24.5"E

STH 23 - CURVE 2  
 PI STA = 117+20.22 EX  
 Y = 259974.921  
 X = 594963.223  
 DELTA = 1°49'08"  
 D = 0°15'00"  
 T = 363.82'  
 L = 727.58'  
 R = 22920.00'  
 PC STA = 113+56.40 EX  
 Y = 259971.154  
 X = 594599.422  
 PT STA = 120+83.98 EX  
 Y = 259990.233  
 X = 595326.721  
 BK = N89°24'24.5"E  
 AH = N87°35'16.7"E

EP  
 STA. 124+96.24 EX  
 Y: 260,007.58  
 X: 595,738.62



Estimate Of Quantities

5050-01-76

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	9.000	9.000
0004	203.0100	Removing Small Pipe Culverts	EACH	13.000	13.000
0006	203.0216.S	Abatement of Asbestos Containing Material	EACH	1.000	1.000
0008	204.0100	Removing Concrete Pavement	SY	4,957.000	4,957.000
0010	204.0165	Removing Guardrail	LF	156.000	156.000
0012	204.0185	Removing Masonry	CY	5.500	5.500
0014	204.0225	Removing Septic Tanks	EACH	1.000	1.000
0016	204.0236	Removing Building (parcel) 01. Parcel 5	EACH	1.000	1.000
0018	204.0241	Site Clearance (parcel) 01. Parcel 5	EACH	1.000	1.000
0020	204.0265	Abandoning Wells	EACH	1.000	1.000
0022	204.9060.S	Removing (item description) 01. Pipe Underdrain Endwall	EACH	2.000	2.000
0024	204.9060.S	Removing (item description) 02. Water Drain Tank	EACH	1.000	1.000
0026	205.0100	Excavation Common	CY	15,162.000	15,162.000
0028	208.0100	Borrow	CY	263.000	263.000
0030	209.0300.S	Backfill Coarse Aggregate (size) 01. No. 1	CY	15.000	15.000
0032	213.0100	Finishing Roadway (project) 01. 5050-01-76	EACH	1.000	1.000
0034	305.0110	Base Aggregate Dense 3/4-Inch	TON	492.000	492.000
0036	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	6,019.000	6,019.000
0038	312.0110	Select Crushed Material	TON	7,796.000	7,796.000
0040	405.0100	Coloring Concrete WisDOT Red	CY	291.000	291.000
0042	415.0100	Concrete Pavement 10-Inch	SY	5,621.000	5,621.000
0044	415.0410	Concrete Pavement Approach Slab	SY	74.000	74.000
0046	415.4100	Concrete Pavement Joint Filling	SY	5,872.000	5,872.000
0048	416.0160	Concrete Driveway 6-Inch	SY	37.000	37.000
0050	416.0512	Concrete Truck Apron 12-Inch	SY	368.000	368.000
0052	416.0610	Drilled Tie Bars	EACH	556.000	556.000
0054	416.0620	Drilled Dowel Bars	EACH	24.000	24.000
0056	416.1010	Concrete Surface Drains	CY	17.000	17.000
0058	450.4000	HMA Cold Weather Paving	TON	35.000	35.000
0060	455.0605	Tack Coat	GAL	67.000	67.000
0062	460.2000	Incentive Density HMA Pavement	DOL	240.000	240.000
0064	460.5224	HMA Pavement 4 LT 58-28 S	TON	363.000	363.000
0066	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	85.000	85.000
0068	465.0125	Asphaltic Surface Temporary	TON	462.000	462.000
0070	465.0315	Asphaltic Flumes	SY	35.000	35.000
0072	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	1.000	1.000
0074	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	6.000	6.000
0076	520.2018	Culvert Pipe Temporary 18-Inch	LF	47.000	47.000
0078	520.2024	Culvert Pipe Temporary 24-Inch	LF	103.000	103.000
0080	521.1015	Apron Endwalls for Culvert Pipe Steel 15-Inch	EACH	4.000	4.000
0082	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	8.000	8.000
0084	521.3115	Culvert Pipe Corrugated Steel 15-Inch	LF	65.000	65.000
0086	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	130.000	130.000
0088	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	1.000	1.000
0090	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	3.000	3.000
0092	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	4.000	4.000
0094	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	2.000	2.000
0096	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	2.000
0098	524.0618	Apron Endwalls for Culvert Pipe Salvaged 18-Inch	EACH	1.000	1.000

Estimate Of Quantities

5050-01-76

Line	Item	Item Description	Unit	Total	Qty
0100	601.0405	Concrete Curb & Gutter 18-Inch Type A	LF	213.000	213.000
0102	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	1,842.000	1,842.000
0104	601.0501	Concrete Curb & Gutter Integral 4-Inch Sloped 36-Inch	LF	129.000	129.000
0106	601.0551	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	LF	3,384.000	3,384.000
0108	601.0580	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type R	LF	302.000	302.000
0110	601.0600	Concrete Curb Pedestrian	LF	165.000	165.000
0112	602.0410	Concrete Sidewalk 5-Inch	SF	14,172.000	14,172.000
0114	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	256.000	256.000
0116	606.0200	Riprap Medium	CY	36.000	36.000
0118	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	293.000	293.000
0120	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	156.000	156.000
0122	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	119.000	119.000
0124	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	160.000	160.000
0126	608.0430	Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	LF	147.000	147.000
0128	611.0600	Inlet Covers Type A	EACH	2.000	2.000
0130	611.0603	Inlet Covers Type A-S	EACH	4.000	4.000
0132	611.0624	Inlet Covers Type H	EACH	13.000	13.000
0134	611.0639	Inlet Covers Type H-S	EACH	5.000	5.000
0136	611.0642	Inlet Covers Type MS	EACH	1.000	1.000
0138	611.0652	Inlet Covers Type T	EACH	2.000	2.000
0140	611.2005	Manholes 5-FT Diameter	EACH	2.000	2.000
0142	611.3003	Inlets 3-FT Diameter	EACH	6.000	6.000
0144	611.3004	Inlets 4-FT Diameter	EACH	5.000	5.000
0146	611.3225	Inlets 2x2.5-FT	EACH	1.000	1.000
0148	611.3230	Inlets 2x3-FT	EACH	12.000	12.000
0150	611.3901	Inlets Median 1 Grate	EACH	1.000	1.000
0152	611.8120.S	Cover Plates Temporary	EACH	6.000	6.000
0154	612.0106	Pipe Underdrain 6-Inch	LF	600.000	600.000
0156	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	20.000	20.000
0158	614.2300	MGS Guardrail 3	LF	75.000	75.000
0160	614.2500	MGS Thrie Beam Transition	LF	75.000	75.000
0162	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0164	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5050-01-76	EACH	1.000	1.000
0166	619.1000	Mobilization	EACH	1.000	1.000
0168	620.0300	Concrete Median Sloped Nose	SF	578.000	578.000
0170	623.0200	Dust Control Surface Treatment	SY	11,055.000	11,055.000
0172	624.0100	Water	MGAL	98.000	98.000
0174	625.0100	Topsoil	SY	15,320.000	15,320.000
0176	627.0200	Mulching	SY	6,283.000	6,283.000
0178	628.1504	Silt Fence	LF	243.000	243.000
0180	628.1520	Silt Fence Maintenance	LF	970.000	970.000
0182	628.1905	Mobilizations Erosion Control	EACH	12.000	12.000
0184	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0186	628.2006	Erosion Mat Urban Class I Type A	SY	860.000	860.000
0188	628.2008	Erosion Mat Urban Class I Type B	SY	14,459.000	14,459.000
0190	628.7005	Inlet Protection Type A	EACH	27.000	27.000
0192	628.7010	Inlet Protection Type B	EACH	1.000	1.000
0194	628.7015	Inlet Protection Type C	EACH	19.000	19.000
0196	628.7020	Inlet Protection Type D	EACH	7.000	7.000

Estimate Of Quantities

5050-01-76

Line	Item	Item Description	Unit	Total	Qty
0198	628.7504	Temporary Ditch Checks	LF	132.000	132.000
0200	628.7555	Culvert Pipe Checks	EACH	41.000	41.000
0202	628.7560	Tracking Pads	EACH	10.000	10.000
0204	628.7570	Rock Bags	EACH	20.000	20.000
0206	629.0210	Fertilizer Type B	CWT	10.000	10.000
0208	630.0130	Seeding Mixture No. 30	LB	276.000	276.000
0210	630.0200	Seeding Temporary	LB	47.000	47.000
0212	630.0300	Seeding Borrow Pit	LB	62.000	62.000
0214	630.0500	Seed Water	MGAL	383.000	383.000
0216	631.1100	Sod Erosion Control	SY	10.000	10.000
0218	633.5200	Markers Culvert End	EACH	12.000	12.000
0220	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	8.000	8.000
0222	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	10.000	10.000
0224	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	17.000	17.000
0226	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	10.000	10.000
0228	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	3.000	3.000
0230	634.0622	Posts Wood 4x6-Inch X 22-FT	EACH	5.000	5.000
0232	634.0811	Posts Tubular Steel 2x2-Inch X 11-FT	EACH	8.000	8.000
0234	637.2210	Signs Type II Reflective H	SF	453.000	453.000
0236	637.2230	Signs Type II Reflective F	SF	120.750	120.750
0238	638.2102	Moving Signs Type II	EACH	13.000	13.000
0240	638.2602	Removing Signs Type II	EACH	17.000	17.000
0242	638.3000	Removing Small Sign Supports	EACH	22.000	22.000
0244	642.5201	Field Office Type C	EACH	1.000	1.000
0246	643.0300	Traffic Control Drums	DAY	13,155.000	13,155.000
0248	643.0420	Traffic Control Barricades Type III	DAY	2,119.000	2,119.000
0250	643.0705	Traffic Control Warning Lights Type A	DAY	3,289.000	3,289.000
0252	643.0715	Traffic Control Warning Lights Type C	DAY	3,576.000	3,576.000
0254	643.0900	Traffic Control Signs	DAY	13,304.000	13,304.000
0256	643.0920	Traffic Control Covering Signs Type II	EACH	9.000	9.000
0258	643.1050	Traffic Control Signs PCMS	DAY	91.000	91.000
0260	643.3105	Temporary Marking Line Paint 4-Inch	LF	5,224.000	5,224.000
0262	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	19,223.000	19,223.000
0264	643.3205	Temporary Marking Line Paint 8-Inch	LF	177.000	177.000
0266	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	64.000	64.000
0268	643.5000	Traffic Control	EACH	1.000	1.000
0270	645.0112	Geotextile Type DF Schedule B	SY	340.000	340.000
0272	645.0120	Geotextile Type HR	SY	148.000	148.000
0274	645.0220	Geogrid Type SR	SY	9,597.000	9,597.000
0276	646.1020	Marking Line Epoxy 4-Inch	LF	10,646.000	10,646.000
0278	646.3020	Marking Line Epoxy 8-Inch	LF	282.000	282.000
0280	646.6320	Marking Dotted Extension Epoxy 18-Inch	LF	79.000	79.000
0282	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	1,025.000	1,025.000
0284	646.7120	Marking Diagonal Epoxy 12-Inch	LF	131.000	131.000
0286	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	270.000	270.000
0288	646.8120	Marking Curb Epoxy	LF	205.000	205.000
0290	646.8220	Marking Island Nose Epoxy	EACH	4.000	4.000
0292	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	4,819.000	4,819.000
0294	646.9110	Marking Removal Line Water Blasting 8-Inch	LF	335.000	335.000

Estimate Of Quantities

5050-01-76

Line	Item	Item Description	Unit	Total	Qty
0296	650.4000	Construction Staking Storm Sewer	EACH	27.000	27.000
0298	650.4500	Construction Staking Subgrade	LF	1,897.000	1,897.000
0300	650.5000	Construction Staking Base	LF	2,066.000	2,066.000
0302	650.6000	Construction Staking Pipe Culverts	EACH	11.000	11.000
0304	650.7000	Construction Staking Concrete Pavement	LF	1,664.000	1,664.000
0306	650.8501	Construction Staking Electrical Installations (project) 01. 5050-01-76	EACH	1.000	1.000
0308	650.9000	Construction Staking Curb Ramps	EACH	16.000	16.000
0310	650.9500	Construction Staking Sidewalk (project) 01. 5050-01-76	EACH	1.000	1.000
0312	650.9911	Construction Staking Supplemental Control (project) 01. 5050-01-76	EACH	1.000	1.000
0314	650.9920	Construction Staking Slope Stakes	LF	2,050.000	2,050.000
0316	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,079.000	1,079.000
0318	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	744.000	744.000
0320	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	13.000	13.000
0322	654.0105	Concrete Bases Type 5	EACH	12.000	12.000
0324	654.0230	Concrete Control Cabinet Bases Type L30	EACH	1.000	1.000
0326	655.0610	Electrical Wire Lighting 12 AWG	LF	8,771.000	8,771.000
0328	656.0201	Electrical Service Meter Breaker Pedestal (location) 01. STH 23 and STH 136 Intersection	EACH	1.000	1.000
0330	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	12.000	12.000
0332	657.0322	Poles Type 5-Aluminum	EACH	12.000	12.000
0334	657.0610	Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	EACH	12.000	12.000
0336	659.1120	Luminaires Utility LED B	EACH	12.000	12.000
0338	659.2130	Lighting Control Cabinets 120/240 30-Inch	EACH	1.000	1.000
0340	661.0101	Temporary Traffic Signals for Bridges (structure) 01. B-56-0164	EACH	1.000	1.000
0342	690.0150	Sawing Asphalt	LF	114.000	114.000
0344	690.0250	Sawing Concrete	LF	1,114.000	1,114.000
0346	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	1,686.000	1,686.000
0348	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	700.000	700.000
0350	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	575.000	575.000
0352	SPV.0060	Special 01. Verify Landmark Reference Monuments	EACH	1.000	1.000
0354	SPV.0060	Special 02. Landmark Reference Monuments Special	EACH	1.000	1.000
0356	SPV.0090	Special 01. Concrete Curb & Gutter Integral 36-Inch Special	LF	150.000	150.000

3

GRUBBING SUMMARY

CATEGORY	STATION - STATION	201.0205 GRUBBING STA
0010	107+00 - 110+00	3
	23+00 - 29+00	6
TOTAL		9

PARCEL 5 SUMMARY

CATEGORY	PARCEL	204.0236 REMOVING BULDING EACH	204.0241 SITE CLEARANCE EACH	204.0265 ABANDONING WELLS EACH
0010	.01 PARCEL 5	1	1	1

FINISHING ROADWAY

CATEGORY	PROJECT	213.0100 EACH
0010	5050-01-76	1

ABATEMENT OF ASBESTOS CONTAINING MATERIAL

CATEGORY	PROJECT	203.0216.S EACH
0010	5050-01-76	1

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	LOCATION	203.0100 EACH	LENGTH LF	REMARKS
0010	19+70	RT	1	24	18-INCH CMCP
	20+50	RT	1	24	18-INCH CMCP
	20+54	LT	1	26	18-INCH CMCP
	22+74	RT	1	30	18-INCH CMCP
	22+82	LT	1	30	18-INCH CMCP
	23+68	LT	1	21	18-INCH CMCP
	25+03	LT/RT	1	105	24-INCH RCCP
	25+08	LT/RT	1	105	24-INCH RCCP
	109+46	LT	1	35	24-INCH CMCP
	110+45	LT	1	31	24-INCH CMCP
	110+57	RT	1	50	24-INCH CMCP
	110+81	LT	1	31	24-INCH CMCP
	111+47	LT	1	30	24-INCH CMCP
TOTAL			13		

BORROW

CATEGORY	STAGE	LOCATION	208.0100 CY
0010	STAGE 1	LT	263

REMOVAL SUMMARY

CATEGORY	STATION - STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT	204.0165 REMOVING GUARDRAIL
0010	97+37 - 110+00	LT/RT	1,443	---
	110+00 - 116+44	LT/RT	3,514	156
TOTALS			4,957	156

REMOVING SEPTIC TANKS

CATEGORY	STATION	LOCATION	204.0225 EACH
0010	11+21 H	58' RT	1

REMOVING MASONRY

CATEGORY	STATION	OFFSET	204.0185 CY
0010	112+26	25.7' RT	2.7
	113+24	41.1' RT	2.8
TOTAL			5.5

REMOVING PIPE UNDERDRAIN ENDWALL

CATEGORY	STATION - STATION	LOCATION	204.9060.S.01 EACH
0010	107+38.3 EX (STAGE 1)	32' LT	1
	109+70.7 EX (STAGE 1)	32' LT	1
TOTAL			2

PROJECT NO: 5050-01-76

HWY: STH 23

COUNTY: SAUK

MISCELLANEOUS QUANTITIES

SHEET

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EARTHWORK

CATEGORY	STAGE	LOCATION	205.0100 EXCAVATION COMMON (1)		SALVAGED PAVEMENT MATERIAL	AVAILABLE MATERIAL	EXPANDED EBS BACKFILL	UNEXPANDED FILL	EXPANDED FILL	MASS ORDINATE +/-	WASTE	*312.0110 SELECT CRUSHED MATERIAL
			CUT	EBS EXCAVATION								TON
			5% OF CUT	5% OF CUT	5% OF CUT	5% OF CUT	FACTOR 1.25	FACTOR 1.25				
0010	1	WIDENING	392	20	0	392	25	524	655	-263	-238	47
		SUBTOTALS (STAGE 1)	392	20	0	392	25	524	655	-263	-238	47
	2	A CHAIN	631	32	0	631	39	372	465	166	205	75
		C CHAIN	229	11	0	229	14	0	0	229	243	27
		I CHAIN	2,355	118	0	2,355	147	0	0	2,355	2,502	280
		STH 136	2,239	112	0	2,239	140	504	629	1,610	1,750	266
		STH 23	2,724	136	787	1,937	170	411	514	1,422	1,593	323
		SUBTOTALS (STAGE 2)	8,178	409	787	7,391	511	1,287	1,609	5,781	6,293	971
	3	A CHAIN	631	32	0	631	39	372	465	166	205	75
		C CHAIN	148	7	0	148	9	52	65	83	92	18
		E CHAIN	398	20	0	398	25	0	0	398	423	47
		G CHAIN	1,415	71	0	1,415	88	28	35	1,380	1,468	168
		GOLF VIEW CT	592	30	0	592	37	29	36	557	594	70
		STH 23	1,054	53	590	464	66	6	7	457	523	125
		INFIELD	390	20	0	390	24	24	30	360	385	46
		PRIVATE DRIVEWAY	227	11	0	227	14	0	0	227	241	27
		SUBTOTALS (STAGE 3)	4,854	243	590	4,264	303	510	638	3,626	3,930	576
	4	STH 23	1,015	52	0	1,015	65	141	176	838	904	124
		SUBTOTALS (STAGE 4)	1,015	52	0	1,015	65	141	176	838	904	124
		TOTALS	14,439	724	1,377	13,062	904	2,463	3,079	9,983	10,888	1,718
		ITEM TOTAL		15,162								

- 1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100.
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- 3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL.
- 4) AVAILABLE MATERIAL = CUT - SALVAGED PAVEMENT MATERIAL.
- 5) EXPANDED EBS BACKFILL: THIS IS TO BE FILLED WITH SELECT CRUSHED MATERIAL. EBS BACKFILL EXPANSION FACTOR = 1.25.
- 6) EXPANDED FILL = (UNEXPANDED FILL)\* EXPANDED FILL FACTOR. EXPANDED FILL FACTOR = 1.25.
- 7) MASS ORDINATE: MASS ORDINATE = CUT - SALVAGED PAVEMENT MATERIAL - EXPANDED FILL  
PLUS MASS ORDINATE QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS MASS ORDINATE QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

REMOVING WATER DRAIN TANK

CATEGORY	STATION	OFFSET	EACH	REMARK
0010	23+87	103' LT	1	GARAGE FLOOR DRAIN TANK BETWEEN PARCELS 5 AND 6

CONCRETE ROUNDABOUT TRUCK APRON SUMMARY

CATEGORY	STAGE	STATION - STATION	LOCATION	SY	CY
0010	STAGE 3	110+00 - 116+44	LT/RT	157	52
		SUBTOTALS STAGE 3		157	52
	STAGE 4	110+00 - 116+44	LT/RT	211	70
		SUBTOTALS STAGE 4		211	70
TOTALS				368	123

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE

BASE AGGREGATE DENSE

CATEGORY	STAGE	STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER (FOR COMPACTION) MGAL
0010	STAGE 1	97+37 - 110+00	LT/RT	0	479	7
		110+00 - 116+44	LT/RT	0	79	1
		SUBTOTAL STAGE 1		0	558	8
	STAGE 2A	19+00 - 24+25	LT/RT	85	1,128	18
		97+37 - 110+00	LT/RT	0	753	11
		110+00 - 116+44	LT/RT	120	1,465	24
		SUBTOTAL STAGE 2A		205	3,346	53
	STAGE 2B	110+00 - 116+44	LT/RT	20	513	8
		SUBTOTAL STAGE 2B		20	513	8
	STAGE 3	27+22 - 29+23	LT/RT	27	425	7
		97+37 - 110+00	LT/RT	0	442	7
		110+00 - 116+44	LT/RT	68	609	10
		SUBTOTAL STAGE 3		96	1,475	24
	STAGE 4	97+37 - 110+00	LT/RT	32	23	1
		110+00 - 116+44	LT/RT	139	104	4
		SUBTOTAL STAGE 4		171	127	4
TOTALS				492	6,019	98

CONCRETE PAVEMENT SUMMARY

CATEGORY	STAGE	STATION - STATION	LOCATION	415.0100 CONCRETE PAVEMENT 10-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
0010	STAGE 2A	19+00 - 24+25	LT/RT	893	---
		97+37 - 110+00	LT/RT	736	---
		110+00 - 116+44	LT/RT	1,685	37
		SUBTOTALS STAGE 2A		3,314	37
	STAGE 2B	110+00 - 116+44	LT/RT	543	37
		SUBTOTALS STAGE 2B		543	37
	STAGE 3	97+37 - 110+00	LT/RT	621	---
		110+00 - 116+44	LT/RT	1,143	---
		SUBTOTALS STAGE 3		1,764	---
TOTALS				5,621	74

SELECT CRUSHED MATERIAL

CATEGORY	STAGE	STATION - STATION	LOCATION	*312.0110 TON
0010	STAGE 2A	19+00 - 24+25	LT/RT	1,471
		97+37 - 110+00	LT/RT	661
		110+00 - 116+44	LT/RT	1,545
		SUBTOTAL STAGE 2A		3,677
	STAGE 2B	110+00 - 116+44	LT/RT	477
		SUBTOTAL STAGE 2B		477
	STAGE 3	97+37 - 110+00	LT/RT	570
		110+00 - 116+44	LT/RT	1,156
		SUBTOTAL STAGE 3		1,726
	STAGE 4	110+00 - 116+44	LT/RT	197
		SUBTOTAL STAGE 4		197
TOTAL				6,078

\* ADDITIONAL QUANTITIES LISTED ELSEWHERE

PROJECT NO: 5050-01-76

HWY: STH 23

COUNTY: SAUK

MISCELLANEOUS QUANTITIES

SHEET

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CONCRETE SURFACE DRAINS

CATEGORY	LOCATION	STATION	LOCATION	416.1010 CY
0010	STH 23	97+47	LT	1
	STH 23	100+81	LT	2
	STH 23	100+81	RT	3
	STH 23	104+31	LT	2
	STH 23	104+31	RT	3
	STH 23	107+80	LT	2
	STH 23	107+82	RT	1
	STH 23	110+03	LT	2
	STH 23	110+06	RT	1
TOTAL				17

ASPHALTIC FLUMES

CATEGORY	STATION	LOCATION	465.0315 SY
0010	113+49	LT	19
	113+79	RT	16
TOTAL			35

DRILLED BAR SUMMARY

CATEGORY	STAGE	STATION - STATION	LOCATION	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH
0010	STAGE 2	97+37 - 110+00	RT	197	12
SUBTOTALS STAGE 2				197	12
	STAGE 3	97+37 - 110+00	LT	296	12
SUBTOTALS STAGE 3				296	12
	STAGE 4	97+37 - 110+00	RT	63	0
SUBTOTALS STAGE 4				63	0
TOTALS				556	24

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ASPHALTIC SURFACE TEMPORARY

CATEGORY	STAGE	STATION - STATION	465.0125 TON
0010	STAGE 1	97+37 - 110+00	145
		110+00 - 116+44	24
SUBTOTALS STAGE 1			169
	STAGE 2A	97+37 - 110+00	100
		110+00 - 116+44	153
SUBTOTALS STAGE 2A			253
	STAGE 2B	110+00 - 116+44	40
SUBTOTALS STAGE 2B			40
TOTAL			462

CONCRETE DRIVEWAY

CATEGORY	STATION - STATION	LOCATION	416.0160 CONCRETE DRIVEWAY 6-INCH SY
0010	19+00 - 24+25	LT/RT	11
	97+37 - 110+00	LT/RT	26
TOTAL			37

TRUCK OFF-TRACKING SUMMARY

CATEGORY	STAGE	STATION - STATION	LOCATION	SPV.0090.01 CONCRETE CURB & GUTTER INTEGRAL 36-INCH SPECIAL LF	*405.0100 COLORING CONCRETE WISDOT RED CY
0010	STAGE 3	110+00 - 116+44	LT/RT	69	14
SUBTOTALS STAGE 3				69	14
	STAGE 4	110+00 - 116+44	LT/RT	81	16
SUBTOTALS STAGE 4				81	16
TOTALS				150	30

CONCRETE PAVEMENT JOINT FILLING

CATEGORY	STATION - STATION	LOCATION	415.4100 SY
0010	19+00 - 24+25	LT/RT	1,153
	97+37 - 110+00	LT/RT	672
	110+00 - 116+44	LT/RT	4,047
TOTAL			5,872

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE

PROJECT NO: 5050-01-76

HWY: STH 23

COUNTY: SAUK

MISCELLANEOUS QUANTITIES

SHEET

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DRIVEWAY CULVERT PIPE SUMMARY

CATEGORY	STATION	LOCATION	521.1015	521.1018	521.3115	521.3118	*650.6000
			APRON ENDWALLS FOR CULVERT PIPE STEEL 15-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH	CULVERT PIPE CORRUGATED STEEL 15-INCH LF	CULVERT PIPE CORRUGATED STEEL 18-INCH LF	CONSTRUCTION STAKING PIPE CULVERTS EACH
0010	19+70	RT	---	2	---	23	1
	20+50	RT	---	2	---	22	1
	20+55	LT	---	2	---	49	1
	22+73	RT	---	2	---	36	1
	27+92	LT	2	---	36	---	1
	27+92	RT	2	---	29	---	1
TOTALS			4	8	65	130	6

\* ADDITIONAL QUANTITIES LISTED ELSEWHERE

ASPHALT

CATEGORY	STATION - STATION	LOCATION	450.4000	455.0605	460.5224	465.0120
			HMA COLD WEATHER PAVING TON	TACK COAT GAL	HMA PAVEMENT 4 LT 58-28 S TON	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTERANCES TON
0010	19+00 - 24+25	LT/RT	---	44	224	33
	27+22 - 29+23	LT/RT	35	22	87	52
	97+37 - 110+00	LT/RT	---	---	---	---
	110+00 - 116+44	LT/RT	---	---	52	---
TOTALS			35	67	363	85

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

TEMPORARY CULVERT PIPE SUMMARY

CATEGORY	STATION	LOCATION	520.1018	520.1024	520.2018	520.2024	524.0618	*650.6000
			APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE 24-INCH EACH	CULVERT PIPE TEMPORARY 18-INCH LF	CULVERT PIPE TEMPORARY 24-INCH LF	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 18-INCH EACH	CONSTRUCTION STAKING PIPE CULVERTS EACH
0010	106+13	LT	1	---	47	---	---	1
	109+47	LT	---	2	---	40	---	1
	110+42	LT	---	2	---	30	---	1
	110+89	LT	---	2	---	33	---	1
	105+90	LT	---	---	---	---	1	1
TOTALS			1	6	47	103	1	5

\* ADDITIONAL QUANTITIES LISTED ELSEWHERE

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STORM SEWER													
CATEGORY	FROM STRUCTURE	TO STRUCTURE	522.1012	522.1015	522.1018	522.1024	522.1030	608.0412	608.0415	608.0418	608.0424	608.0430	633.5200
			APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE					STORM SEWER PIPE REINFORCED CONCRETE					MARKERS
								CLASS IV					CULVERT
			12-INCH EACH	15-INCH EACH	18-INCH EACH	24-INCH EACH	30-INCH EACH	12-INCH LF	15-INCH LF	18-INCH LF	24-INCH LF	30-INCH LF	END EACH
0010	200	201	---	---	---	---	---	---	37	---	---	---	---
	201	-	---	1	---	---	---	---	---	---	---	---	1
	202	200	---	---	---	---	---	19	---	---	---	---	---
	205	202	---	---	---	---	---	31	---	---	---	---	---
	206	205	---	---	---	---	---	9	---	---	---	---	---
	210	206	---	---	---	---	---	32	---	---	---	---	---
	220	225	---	---	---	---	---	17	---	---	---	---	---
	221	225	---	---	---	1	---	---	---	---	24	---	1
	222	223	---	---	1	---	---	---	---	31	---	---	1
	223	-	---	---	1	---	---	---	---	---	---	---	1
	225	231	---	---	---	---	---	---	---	---	41	---	---
	230	231	---	---	---	---	---	7	---	---	---	---	---
	231	232	---	---	---	---	---	---	---	---	95	---	---
	232	-	---	---	---	1	---	---	---	---	---	---	1
	240	241	---	---	---	---	---	7	---	---	---	---	---
	241	255	---	---	---	---	---	---	50	---	---	---	---
	245	250	---	---	---	---	---	34	---	---	---	---	---
	250	240	---	---	---	---	---	23	---	---	---	---	---
	255	256	---	---	---	---	---	---	38	---	---	---	---
	256	-	---	1	---	---	---	---	---	---	---	---	1
	260	261	---	---	---	---	---	8	---	---	---	---	---
	261	262	---	---	---	---	---	37	---	---	---	---	---
	262	-	1	---	---	---	---	---	---	---	---	---	1
	270	271	---	---	---	---	---	8	---	---	---	---	---
	271	277	---	---	---	---	---	24	---	---	---	---	---
	275	277	---	---	---	---	---	---	---	---	---	47	---
	276	275	---	---	---	---	1	---	---	---	---	40	1
	277	278	---	---	---	---	---	---	---	---	---	60	---
	278	-	---	---	---	---	1	---	---	---	---	---	1
	280	285	---	---	---	---	---	8	---	---	---	---	---
	285	286	---	---	---	---	---	18	---	---	---	---	---
	286	287	---	---	---	---	---	11	---	---	---	---	---
	287	288	---	---	---	---	---	---	31	---	---	---	---
	288	-	---	1	---	---	---	---	---	---	---	---	1
	290	292	---	---	---	---	---	---	---	12	---	---	---
	291	290	---	---	1	---	---	---	---	37	---	---	1
	292	293	---	---	---	---	---	---	---	39	---	---	---
	293	-	---	---	1	---	---	---	---	-	---	---	1
	TOTALS		1	3	4	2	2	293	156	119	160	147	12

PROJECT NO: 5050-01-76

HWY: STH 23

COUNTY: SAUK

MISCELLANEOUS QUANTITIES

SHEET

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INLETS, MANHOLES, MANHOLE COVERS, AND INLET COVERS

CATEGORY	STRUCT. ID#	STATION	OFFSET	611.0600	611.0603	611.0624	611.0639	611.0642	611.0652	611.2005	611.3003	611.3004	611.3225	611.3230	611.3901	650.4000
				INLET COVERS TYPE A EACH	INLET COVERS TYPE A-S EACH	INLET COVERS TYPE H EACH	INLET COVERS TYPE H-S EACH	INLET COVERS TYPE MS EACH	INLET COVERS TYPE T EACH	MANHOLES 5-FT DIAMETER EACH	INLETS 3-FT DIAMETER EACH	INLETS 4-FT DIAMETER EACH	INLETS 2x2.5-FT EACH	INLETS 2x3-FT EACH	INLETS MEDIAN 1 GRATE EACH	CONSTRUCTION STAKING STORM SEWER EACH
0010	200	111+09.00	17.7 'RT	---	---	1	---	---	---	---	---	---	---	1	---	1
	202	111+09.00	1.5 'LT	---	---	1	---	---	---	---	---	---	---	1	---	1
	205	26+08.51	76.3 'LT	---	1	---	---	---	---	---	1	---	---	---	---	1
	206	110+99.00	34.9 'LT	1	---	---	---	---	---	---	1	---	---	---	---	1
	210	110+77.00	42.9 'LT	---	---	1	---	---	---	---	---	1	---	---	---	1
	220	26+85.00	25.5 'LT	---	---	---	1	---	---	---	---	---	---	1	---	1
	225	26+71.00	34.4 'LT	---	---	---	1	---	---	---	---	1	---	---	---	1
	230	26+42.63	7.4 'LT	---	1	---	---	---	---	---	1	---	---	---	---	1
	231	26+47.00	1.5 'LT	---	---	1	---	---	---	---	---	1	---	---	---	1
	240	112+36.10	24.7 'LT	---	---	---	---	---	1	---	---	---	1	---	---	1
	241	112+37.11	18.0 'LT	---	---	---	---	---	1	---	---	1	---	---	---	1
	245	112+64.00	58.7 'LT	---	---	1	---	---	---	---	---	1	---	---	---	1
	250	112+65.00	24.5 'LT	---	1	---	---	---	---	---	1	---	---	---	---	1
	255	112+59.00	25.2 'RT	---	---	1	---	---	---	---	---	---	---	1	---	1
	260	115+05.00	9.4 'LT	---	---	1	---	---	---	---	---	---	---	1	---	1
	261	115+05.00	1.5 'LT	---	---	1	---	---	---	---	---	---	---	1	---	1
	270	24+92.39	8.3 'LT	---	1	---	---	---	---	---	1	---	---	---	---	1
	271	24+89.00	1.5 'LT	1	---	---	---	---	---	---	1	---	---	---	---	1
	275	24+67.00	48.1 'LT	---	---	1	---	---	---	1	---	---	---	---	---	1
	277	24+65.00	1.5 'LT	---	---	1	---	---	---	1	---	---	---	---	---	1
	280	23+79.00	30.7 'LT	---	---	---	1	---	---	---	---	---	---	1	---	1
	285	23+71.00	30.6 'LT	---	---	---	1	---	---	---	---	---	---	1	---	1
	286	23+71.00	12.4 'LT	---	---	---	1	---	---	---	---	---	---	1	---	1
	287	23+71.00	1.5 'LT	---	---	1	---	---	---	---	---	---	---	1	---	1
	290	22+42.00	14.0 'LT	---	---	1	---	---	---	---	---	---	---	1	---	1
	291	22+19.25	43.5 'LT	---	---	---	---	1	---	---	---	---	---	---	1	1
	292	22+43.00	2.4 'LT	---	---	1	---	---	---	---	---	---	---	1	---	1
TOTALS				2	4	13	5	1	2	2	6	5	1	12	1	27

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CURB RAMP DETECTABLE WARNING FIELD YELLOW

CATEGORY	STATION	LOCATION	602.0505 SF
0010	24+61	LT	16
	24+69	LT	16
	24+71	RT	16
	24+73	LT	16
	26+63	LT	16
	26+65	LT	16
	26+65	RT	16
	26+79	LT	16
	110+83	LT	16
	110+90	LT	16
	110+94	RT	16
	110+95	LT	16
	112+81	LT	16
	112+83	LT	16
	112+85	RT	16
	112+93	LT	16
TOTAL			256

CONCRETE SIDEWALK

CATEGORY	STAGE	STATION - STATION	LOCATION	602.0410 CONCRETE SIDEWALK 5-INCH SF	*405.0100 COLORING CONCRETE WISDOT RED CY
0010	STAGE 2	19+00 - 24+25	LT/RT	2,171	31
		110+00 - 116+44	LT/RT	3,293	17
SUBTOTALS STAGE 2				5,463	48
	STAGE 3	110+00 - 116+44	LT/RT	2,277	4
SUBTOTALS STAGE 3				2,277	4
	STAGE 4	97+37 - 110+00	LT/RT	1,227	19
		110+00 - 116+44	LT/RT	5,204	67
SUBTOTALS STAGE 4				6,431	86
TOTALS				14,172	138

TRACKING PADS

CATEGORY	STAGE	628.7560 EACH
0010	STAGE 1	2
	STAGE 2	3
	STAGE 3	3
	UNDISTRIBUTED	2
TOTAL		10

COVER PLATES TEMPORARY

CATEGORY	STAGE	611.8120.S EACH
0010	STAGE 2A	2
	STAGE 2B	1
	STAGE 3	3
TOTAL		6

\* ADDITIONAL QUANTITIES LISTED ELSEWHERE

CURB AND GUTTER

CATEGORY	STAGE	STATION - STATION	LOCATION	601.0405 CONCRETE CURB & GUTTER 18-INCH TYPE A LF	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0501 CONCRETE CURB & GUTTER INTEGRAL 4-INCH SLOPED 36-INCH LF	601.0551 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A LF	601.0580 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R LF	601.0600 CONCRETE CURB PEDESTRIAN LF
0010	STAGE 2	19+00 - 24+25	LT/RT	---	379	---	321	---	---
		97+37 - 110+00	LT/RT	---	---	60	532	---	---
		110+00 - 116+44	LT/RT	---	525	---	---	---	49
SUBTOTALS STAGE 2				---	904	60	853	---	49
	STAGE 3	97+37 - 110+00	LT/RT	---	---	69	1,323	0	0
		110+00 - 116+44	LT/RT	98	560	---	100	136	36
SUBTOTALS STAGE 3				98	560	69	1,423	136	36
	STAGE 4	97+37 - 110+00	LT/RT	---	---	---	697	---	---
		110+00 - 116+44	LT/RT	114	377	---	410	165	80
SUBTOTALS STAGE 4				114	377	---	1,107	165	80
TOTALS				213	1,842	129	3,384	302	165

UNDERDRAIN SUMMARY

CATEGORY	LOCATION		OFFSET	209.0300.s.01	612.0206	612.0106	645.0112
	STATION	- STATION		BACKFILL COARSE AGGREGATE SIZE NO.1	PIPE UNDERDRAIN UNPERFORATED 6-INCH	PIPE UNDERDRAIN 6-INCH	GEOTEXTILE TYPE DF SCHEDULE B
				CY	LF	LF	SY
0010	110+50	- 111+09	18' RT	1	---	50	30
	10+44.5 F	- 10+96.5 F	2' LT	1	---	50	30
	11+16.8 F	- 12+24.2 F	2' LT	3	---	110	60
	10+95.9 H	- 11+47.3 H	2' RT	1	---	50	30
	11+96.7 H	- 13+21.4 H	2' RT	4	---	130	70
	10+71.7 B	- 11+25.0 B	2' RT	1	---	50	30
	12+00.1 A	- 13+13.8 A	3' RT	3	---	110	60
	10+97.5 D	- 11+50.1 D	2' LT	1	---	50	30
	107+38.3 EX	(STAGE 1)	32' LT	---	10	---	---
	109+70.7 EX	(STAGE 1)	32' LT	---	10	---	---
TOTALS				15	20	600	340

MOBILIZATION

CATEGORY	PROJECT	619.1000 EACH
0010	5050-01-76	1
MAINTENANCE AND REPAIR OF HAUL ROADS		
CATEGORY	PROJECT	618.0100 EACH
0010	5050-01-76	1

CONCRETE MEDIAN SLOPED NOSE

CATEGORY	STATION	LOCATION	620.0300 SF	REMARKS
0010	108+63	LT	83	TYPE 1
	111+05	LT	41	TYPE 2
	111+15	LT	29	TYPE 2
	112+61	LT	31	TYPE 2
	112+66	LT	29	TYPE 2
	115+14	LT	83	TYPE 1
	21+36	LT	83	TYPE 1
	24+85	LT	41	TYPE 2
	24+95	LT	29	TYPE 2
	26+41	LT	34	TYPE 2
	26+49	LT	28	TYPE 2
	26+73	LT	66	TYPE 1
TOTAL			578	

TEMPORARY PAVEMENT MARKING SUMMARY

CATEGORY	LOCATION	643.3105 TEMPORARY MARKING LINE PAINT 4-INCH		643.3150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH				643.3205	643.3850	
		(WHITE) LF	(DOUBLE YELLOW) LF	(WHITE) LF	(WHITE SKIP, 3' SEG. 9' GAP) LF	(YELLOW) LF	(DOUBLE YELLOW) LF	TEMPORARY MARKING LINE PAINT 8-INCH (WHITE) LF	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH LF	
0010	STAGE 1	1,232	1,292	957	0	0	957	177	0	
	STAGE 2A	1,638	1,062	2,181	0	0	3,390	0	25	
	STAGE 2B	0	0	1,089	0	0	0	0	0	
	STAGE 2C	0	0	1,214	0	0	1,331	0	0	
	STAGE 3	0	0	3,821	58	26	4,200	0	39	
TOTALS		2,871	2,353	9,262	58	26	9,877	177	64	
ITEM TOTALS		5,224		19,223						

TRAFFIC CONTROL SUMMARY

CATEGORY	STAGE	DURATION (DAYS)	643.0300 TRAFFIC CONTROL DRUMS		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0900 TRAFFIC CONTROL SIGNS		643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		643.1050 TRAFFIC CONTROL SIGNS PCMS		638.2102 MOVING SIGNS TYPE II
			QTY	DAY	QTY	DAY	QTY	DAY	QTY	DAY	QTY	DAY	EACH	QTY	DAY	QTY	DAY
0010	PRE-WARN	7	0	0	0	0	0	0	0	0	0	0	0	3	21	0	0
	DETOUR ROUTE	70	0	0	12	840	19	1,330	0	0	128	8,960	6	2	14	0	0
	STAGE 1	12	54	648	0	0	0	0	0	0	10	120	0	0	0	0	0
	STAGE 2	70	76	5,320	11	770	17	1,190	37	2,590	32	2,240	3	2	14	5	5
	STAGE 3	51	86	4,386	8	408	12	612	16	816	25	1,275	0	3	21	3	3
	STAGE 4	25	87	2,175	0	0	0	0	0	0	3	75	0	3	21	0	0
	UNDISTRIBUTED	---	---	626	---	101	---	157	---	170	---	634	0	---	---	5	5
TOTALS			13,155		2,119		3,289		3,576		13,304		9		91		13

PROJECT NO: 5050-01-76

HWY: STH 23

COUNTY: SAUK

MISCELLANEOUS QUANTITIES

SHEET

E

PERMANENT SIGNING SUMMARY

637.2210 637.2230 634.0612 634.0614 634.0616 634.0618 634.0620 634.0622 634.0811

CATEGORY	SIGN NO.	APPROX. STA.	LOC.	SIGN CODE	SIGN MESSAGE	(W x H)	SIGN SIZE	SIGN TYPE II REFLECTIVE H	SIGN TYPE II REFLECTIVE F	POSTS WOOD 4x6-INCH						POSTS TUBULAR STEEL 2x2-INCH	REMARKS			
										IN	SF	SF*	x 12-FT	x 14-FT	x 16-FT	x 18-FT		x 20-FT	x 22-FT	x 11-FT
0010	1 - 1	102+00	RT	W6-1	DIVIDED HIGHWAY AHEAD SYMBOL	36 x 36	---	9.00	---	---	---	1	---	---	---					
	2 - 1	106+50	LT	W6-3	TWOWAY TRAFFIC SYMBOL	36 x 36	---	9.00	---	---	---	1	---	---	---					
	2 - 2	105+00	RT	J1-1	JUNCTION OR END ASSEMBLY	24 x 39	6.50	---	---	---	1	---	---	---	---					
	2 - 3	106+90	RT	W2-6	CIRCULAR INTERSECTION SIGN	36 x 36	---	9.00	---	---	---	1	---	---	---					
	2 - 4	106+90	RT	W13-1	ADVISORY SPEED PLATE (YELLOW BACK) 20 MPH	24 x 24	---	4.00	---	---	---	---	---	---	---	MOUNT BELOW W2-6				
	3 - 1	108+71	MEDIAN	R4-7	KEEP RIGHT	24 x 30	5.00	---	---	---	1	---	---	---	---					
	3 - 2	108+81	MEDIAN	W5-54	CLEARANCE MARKER WITH YELLOW TYPE F SHEETING	18 x 18	---	2.25	---	---	---	---	---	---	---	MOUNT BELOW R4-7; 4-FT MOUNTING HEIGHT				
	3 - 3	109+20	RT	D1-62	ROUNDABOUT DESTINATION - DIRECTION SIGN	102 x 78	55.25	---	---	---	---	---	2	---	---					
	3 - 4	111+10	MEDIAN	R1-2	YIELD	36 x 31	3.88	---	---	---	---	---	---	1	---	REMOVABLE POST				
	3 - 5	111+20	RT	R1-2	YIELD	36 x 31	3.88	---	---	---	---	---	---	1	---	REMOVABLE POST				
	3 - 6	111+65	MEDIAN	R6-1R	ONE WAY RIGHT ARROW	36 x 12	3.00	---	---	---	---	---	---	---	---	MOUNT ABOVE R6-4B				
	3 - 7	111+65	MEDIAN	R6-4B	ROUNDABOUT CHEVRON BANK	60 x 24	10.00	---	2	---	---	---	---	---	---	4 FOOT MOUNTING HEIGHT TO BOTTOM OF SIGN FROM SURF,				
	3 - 8	111+68	MEDIAN	R6-1R	ONE WAY RIGHT ARROW	36 x 12	3.00	---	---	---	---	---	---	---	---	MOUNT ABOVE R6-4B				
	3 - 9	111+68	MEDIAN	R6-4B	ROUNDABOUT CHEVRON BANK	60 x 24	10.00	---	2	---	---	---	---	---	---	4 FOOT MOUNTING HEIGHT TO BOTTOM OF SIGN FROM SURF,				
	3 - 10	112+01	MEDIAN	R6-1R	ONE WAY RIGHT ARROW	36 x 12	3.00	---	---	---	---	---	---	---	---	MOUNT ABOVE R6-4B				
	3 - 11	112+01	MEDIAN	R6-4B	ROUNDABOUT CHEVRON BANK	60 x 24	10.00	---	2	---	---	---	---	---	---	4 FOOT MOUNTING HEIGHT TO BOTTOM OF SIGN FROM SURF,				
	3 - 12	112+13	MEDIAN	R6-1R	ONE WAY RIGHT ARROW	36 x 12	3.00	---	---	---	---	---	---	---	---	MOUNT ABOVE R6-4B				
	3 - 13	112+13	MEDIAN	R6-4B	ROUNDABOUT CHEVRON BANK	60 x 24	10.00	---	2	---	---	---	---	---	---	4 FOOT MOUNTING HEIGHT TO BOTTOM OF SIGN FROM SURF,				
	3 - 14	24+81	MEDIAN	D1-1	ONE DESTINATION (ARROW)	42 x 30	8.75	---	---	1	---	---	---	---	---					
	3 - 15	24+88	MEDIAN	R1-2	YIELD	36 x 31	3.88	---	---	1	---	---	---	---	---					
	3 - 16	112+49	RT	R1-2	YIELD	36 x 31	3.88	---	---	1	---	---	---	---	---					
	3 - 17	112+69	MEDIAN	D1-2	TWO DESTINATIONS (ARROWS)	66 x 30	13.75	---	---	---	---	---	---	---	2	REMOVABLE POSTS				
	3 - 18	113+71	RT	J4-2	REASSURANCE ASSEMBLY ( 2 HEADED ROUTE PANEL)	48 x 36	12.00	---	---	1	---	---	---	---	---					
	3 - 19	112+69	MEDIAN	R1-2	YIELD	36 x 31	3.88	---	---	---	---	---	---	1	---	REMOVABLE POST				
	3 - 20	25+96	RT	R1-2	YIELD	36 x 31	3.88	---	---	---	---	---	---	1	---	REMOVABLE POST				
	3 - 21	56+71	MEDIAN	D1-1	ROUNDABOUT EXIT GUIDE SIGN	66 x 24	11.00	---	---	2	---	---	---	---	---					
	3 - 22	26+69	MEDIAN	R4-7	KEEP RIGHT	24 x 30	5.00	---	---	1	---	---	---	---	---					
	3 - 23	26+61	MEDIAN	R1-2	YIELD	36 x 31	3.88	---	---	1	---	---	---	---	---					
	3 - 24	26+62	LT	R1-2	YIELD	36 x 31	3.88	---	---	1	---	---	---	---	---					
	3 - 25	111+00	MEDIAN	D1-2	TWO DESTINATIONS (ARROWS)	66 x 30	13.75	---	---	---	---	---	---	---	2	REMOVABLE POSTS				
	3 - 26	110+13	LT	J4-2	REASSURANCE ASSEMBLY ( 2 HEADED ROUTE PANEL)	48 x 36	12.00	---	---	1	---	---	---	---	---					
	3 - 27	26+75	RT	R5-1	DO NOT ENTER	30 x 30	6.25	---	---	1	---	---	---	---	---					
	3 - 28	108+67	LT	R2-1	ROUNDABOUT EXIT GUIDE SIGN	24 x 30	5.00	---	---	---	---	---	---	---	---	MOUNT OPPOSITE SIGN 3-29				
	3 - 29	108+67	LT	R5-1	DO NOT ENTER	30 x 30	6.25	---	---	1	---	---	---	---	---					
	4 - 1	115+31	RT	R2-1	SPEED LIMIT_ MPH	24 x 30	5.00	---	---	---	---	---	---	---	---	MOUNT OPPOSITE SIGN 4-2				
	4 - 2	115+31	RT	R5-1	DO NOT ENTER	30 x 30	6.25	---	---	1	---	---	---	---	---					
	4 - 3	115+04	MEDIAN	R4-7	KEEP RIGHT	24 x 30	5.00	---	---	1	---	---	---	---	---					
	4 - 4	115+04	MEDIAN	W5-54	CLEARANCE MARKER WITH YELLOW TYPE F SHEETING	18 x 18	---	2.25	---	---	---	---	---	---	---	MOUNT BELOW SIGN 4-3				
	4 - 5	115+29	LT	D1-62	ROUNDABOUT DESTINATION - DIRECTION SIGN	102 x 78	55.25	---	---	---	---	1	1	---	---					
	4 - 6	---	LT	W2-6	CIRCULAR INTERSECTION SIGN	36 x 36	---	9.00	---	---	---	1	---	---	---	SEE PLAN SHEET FOR LOCATION				
	4 - 7	---	LT	W13-1	ADVISORY SPEED PLATE (YELLOW BACK)	24 x 24	---	4.00	---	---	---	---	---	---	---	MOUNT BELOW SIGN 4-6				
	4 - 8	117+04	RT	W6-3	TWOWAY TRAFFIC SYMBOL	36 x 36	---	9.00	---	---	---	1	---	---	---					
	4 - 9	---	LT	J1-1	JUNCTION OR END ASSEMBLY	24 x 39	6.50	---	---	---	1	---	---	---	---	SEE PLAN SHEET FOR LOCATION				
	4 - 10	---	LT	W6-1	DIVIDED HIGHWAY AHEAD SYMBOL	36 x 36	---	9.00	---	---	---	1	---	---	---	SEE PLAN SHEET FOR LOCATION				
	4 - 11	---	RT	W14-3	NO PASSING ZONE	48 x 36	---	6.00	---	---	1	---	---	---	---	SEE PLAN SHEET FOR LOCATION				
	4 - 12	---	RT	R2-1	SPEED LIMIT 55 MPH	24 x 30	5.00	---	---	---	1	---	---	---	---	SEE PLAN SHEET FOR LOCATION				
	4 - 13	---	LT	R2-1	SPEED LIMIT 45 MPH	24 x 30	5.00	---	---	---	1	---	---	---	---	SEE PLAN SHEET FOR LOCATION				
	4 - 14	---	LT	W3-5	SPEED LIMIT 45 MPH AHEAD (ARROW)	36 x 36	---	9.00	---	---	---	1	---	---	---	SEE PLAN SHEET FOR LOCATION				
	5 - 1	---	RT	W6-1	DIVIDED HIGHWAY AHEAD SYMBOL	36 x 36	---	9.00	---	---	---	1	---	---	---	SEE PLAN SHEET FOR LOCATION				
	5 - 2	18+00	RT	J1-2	JUNCTION OR END ASSEMBLY (2 HEADED PANEL)	48 x 39	13.00	---	---	---	1	---	---	---	---					
	5 - 3	19+92	RT	W2-6	CIRCULAR INTERSECTION SIGN	36 x 36	---	9.00	---	---	---	1	---	---	---					
	5 - 4	19+95	RT	W13-1	ADVISORY SPEED PLATE (YELLOW BACK)	24 x 24	---	4.00	---	---	---	---	---	---	---	MOUNT BELOW SIGN 5-3				
	5 - 5	21+44	MEDIAN	R4-7	KEEP RIGHT	24 x 30	5.00	---	---	---	1	---	---	---	---					
	5 - 6	21+44	MEDIAN	W5-54	CLEARANCE MARKER WITH YELLOW TYPE F SHEETING	18 x 18	---	2.25	---	---	---	---	---	---	---	MOUNT BELOW SIGN 5-5				
	5 - 7	22+45	RT	D1-62	ROUNDABOUT DESTINATION - DIRECTION SIGN	144 x 66	66.00	---	---	---	---	2	2	---	---					
	5 - 8	22+97	RT	R6-2L	ONE WAY LEFT ARROW	36 x 36	9.00	---	---	---	1	---	---	---	---					
	5 - 9	29+95	LT	J4-1	REASSURANCE ASSEMBLY ( 1 HEADED ROUTE PANEL)	24 x 36	6.00	---	---	---	1	---	---	---	---					
	5 - 10	22+63	LT	W12-2	LOW CLEARANCE SYMBOL	36 x 36	---	9.00	---	---	---	1	---	---	---					
	5 - 11	22+63	LT	W57-52	2 1/2 MILES AHEAD	36 x 24	---	6.00	---	---	---	---	---	---	---					
	5 - 12	22+59	LT	R6-2L	ONE WAY LEFT ARROW	24 x 30	5.00	---	---	1	---	---	---	---	---					
	5 - 13	21+41	LT	R2-1	SPEED LIMIT 55 MPH	24 x 30	5.00	---	---	---	1	---	---	---	---					
	5 - 14	21+41	LT	R5-1	DO NOT ENTER	30 x 30	6.25	---	---	---	---	---	---	---	---	MOUNT OPPOSITE SIGN 5-13				
	5 - 15	19+88	LT	R5-1	W6-3	30 x 30	6.25	---	---	---	1	---	---	---	---					
TOTALS							453.00	120.75	8	10	17	10	3	5	8					

PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	MISCELLANEOUS QUANTITIES	SHEET	<b>E</b>
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REMOVING SIGN ITEMS

GEOGRID TYPE SR

MARKING REMOVAL LINE

CATEGORY	SIGN NUMBER	638.2602	638.3000
		REMOVNG SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH
0010	EX1-1	1	1
	EX2-1	1	1
	EX2-2	1	2
	EX2-4	1	1
	EX3-2	1	1
	EX3-3	1	1
	EX3-4	1	1
	EX3-5	1	2
	EX3-7	1	1
	EX3-8	1	1
	EX4-1	1	1
	EX4-3	1	2
	EX4-4	1	2
	EX4-5	1	1
	EX4-6	1	1
	EX5-1	1	2
	EX5-2	1	1
TOTALS		17	22

CATEGORY	STAGE	STATION - STATION	LOCATION	645.0220 SY
0010	STAGE 2A	19+00 - 24+25	LT/RT	2,322
		97+37 - 110+00	LT/RT	1,043
		110+00 - 116+44	LT/RT	2,440
SUBTOTAL STAGE 2				5,805
	STAGE 2B	110+00 - 116+44	LT/RT	754
SUBTOTAL STAGE 2B				754
	STAGE 3	97+37 - 110+00	LT/RT	900
		110+00 - 116+44	LT/RT	1,826
SUBTOTAL STAGE 3				2,726
	STAGE 4	110+00 - 116+44	LT/RT	312
SUBTOTAL STAGE 4				312
TOTAL				9,597

CATEGORY	STAGE	LOCATION	646.9010	646.9110
			WATER BLASTING 4-INCH LF	WATER BLASTING 8-INCH LF
0010	STAGE 1	LT/RT	3,640	335
(STAGE 1 SUBTOTALS)			3,640	335
	STAGE 2A	LT/RT	1,092	---
(STAGE 2A SUBTOTALS)			1,092	0
	STAGE 2B	LT/RT	87	---
(STAGE 2B SUBTOTALS)			87	0
TOTALS			4,819	335

DUST CONTROL SURFACE TREATMENT

CATEGORY	STATION	LOTCAION	623.0200 SY
0010	19+00 - 24+25	LT/RT	2,998
	27+22 - 29+23	LT/RT	831
	97+37 - 110+00	LT/RT	1,944
	110+00 - 116+44	LT/RT	5,282
TOTAL			11,055

GEOTEXTILE TYPE HR

CATEGORY	STATION - STATION	LOCATION	645.0120 SY
0010	19+00 - 24+25	LT/RT	17
	97+37 - 110+00	LT/RT	54
	110+00 - 116+44	LT/RT	78
TOTAL			148

FIELD OFFICE TYPE C

CATEGORY	PROJECT	642.5201 EACH
0010	5050-01-76	1

ROCK BAGS

CATEGORY	LOCATION	628.7570 EACH
0010	UNDISTRIBUTED	22

PAVEMENT MARKING SUMMARY

CATEGORY	STATION - STATION	646.1020 MARKING LINE EPOXY 4-INCH					646.3020 MARKING LINE EPOXY 8-INCH (WHITE)		646.6320 MARKING DOTTED EXTENSION EPOXY 18-INCH (2' SEG., 2' GAP)		646.6464 COLD WEATHER MARKING EPOXY 4-INCH	646.7120 MARKING DIAGONAL EPOXY 12-INCH (YELLOW)	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)	646.8120 MARKING CURB EPOXY (YELLOW)	646.8220 MARKING ISLAND NOSE EPOXY (YELLOW)
		(WHITE) LF	(WHITE SKIP, 3' SEG. 9' GAP) LF	(YELLOW) LF	(YELLOW SKIP, 12.5' SEG. 37.5' GAP) LF	(DOUBLE YELLOW) LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
0010	19+00 - 24+25	971	19	479	---	954	---	---	---	---	46	---	72	1	
	27+22 - 29+23	---	---	---	---	17	---	---	---	---	---	---	---	---	
	97+37 - 110+00	2,415	---	177	---	2,520	---	---	---	525	49	---	73	1	
	110+00 - 116+44	683	85	1,201	127	998	282	79	500	36	270	60	2		
TOTALS		4,069	104	1,857	127	4,489	282	79	1,025	131	270	205	4		
ITEM TOTALS		10,646													

PROJECT NO: 5050-01-76

HWY: STH 23

COUNTY: SAUK

MISCELLANEOUS QUANTITIES

SHEET

E



FINISHING ITEMS

CATEGORY	STAGE	STATION - STATION	606.0200 MEDIUM RIPRAP CY	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2006 EROSION MAT URBAN CLASS 1 TYPE A SY	628.2008 EROSION MAT URBAN CLASS 1 TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	630.0300 SEEDING BORROW PIT LB	630.0500 SEED WATER MGAL	631.1100 SOD EROSION CONTROL SY
0010	STAGE 1	97+37 - 110+00	---	---	1,267	0	0	---	---	30	3	---	---	34	---	28	---
		110+00 - 116+44	---	---	173	0	0	---	---	0	6	---	---	5	---	4	---
		SUBTOTAL STAGE 1	0	0	1,440	0	0	0	0	30	9	0	0	39	0	32	0
	STAGES 2-4	19+00 - 24+25	4	2,929	---	0	0	9	2,919	0	8	2	53	---	---	66	---
		27+22 - 29+23	---	941	---	0	0	---	941	0	6	1	17	---	---	21	---
		97+37 - 110+00	12	3,724	---	0	0	---	3,724	38	3	2	67	---	---	84	---
		110+00 - 116+44	20	5,172	---	243	970	707	4,465	43	8	3	93	---	---	116	10
		SUBTOTAL STAGES 2-4	36	12,766	0	243	970	717	12,049	80	25	8	230	0	0	287	10
	WASTE SITE	UNDISTRIBUTED	---	---	4,556	---	---	---	---	---	---	---	---	---	62	---	---
			---	2,553	288	---	---	143	2,410	22	7	2	46	8	---	64	0
	TOTALS		36	15,320	6,283	243	970	860	14,459	132	41	10	276	47	62	383	10

EROSION CONTROL MOBILIZATION SUMMARY

CATEGORY	PROJECT	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	5050-01-76	12	6

INLET PROTECTION SUMMARY

CATEGORY	STATION - STATION	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH
0010	19+00 - 24+25	7	1	3	3
	110+00 - 116+44	20	0	16	4
	TOTALS	27	1	19	7

TRAFFIC CONTROL

CATEGORY	PROJECT	643.5000 EACH
0010	5050-01-76	1

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GUARDRAIL ITEMS

CATEGORY	STATION - STATION	LOCATION	614.2300	614.2500	614.2610
			MGS GUARDRAIL 3	MGS THRIE BEAM TRANSITION	MGS GUARDRAIL TERMINAL EAT
			LF	LF	EACH
0010	114+78 - 116+44	RT	75	38	1
	115+55 - 116+44	LT	0	38	1
TOTALS			75	75	2

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

CATEGORY	PROJECT	650.9911
		EACH
0010	01. 5050-01-76	1

CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS

CATEGORY	PROJECT	650.8501
		LS
0010	01. 5050-01-76	1

CONSTRUCTION STAKING SUMMARY

CATEGORY	STATION - STATION	LOCATION	650.4500	650.5000	650.7000	650.9000	650.9920
			CONSTRUCTION STAKING SUBGRADE	CONSTRUCTION STAKING BASE	CONSTRUCTION STAKING CONCRETE PAVEMENT	CONSTRUCTION STAKING CURB RAMPS	CONSTRUCTION STAKING SLOPE STAKES
			LF	LF	LF	EACH	LF
0010	19+00 - 24+25	LT/RT	527	233	295	---	527
	27+22 - 29+23	LT/RT	---	153	---	---	153
	97+37 - 110+00	LT/RT	375	---	375	---	375
	110+00 - 116+44	LT/RT	995	---	995	16	995
	STAGE 1 (TEMP PAVEMENT)	LT	---	740	---	---	---
	STAGE 2 (TEMP PAVEMENT)	LT/RT	---	940	---	---	---
TOTALS			1,897	2,066	1,664	16	2,050

STREET LIGHTING WIRE SUMMARY

CATEGORY	LOCATION		*655.0610
	FROM	TO	ELECTRICAL WIRE LIGHTING 12 AWG LF
0010	LC-01	LP-01	86
	LP-01	LP-04	432
	LP-04	LP-06	568
	LC-01	LP-02	240
	LP-02	LP-05	516
	LP-05	LP-07	330
	LC-01	LP-10	392
	LP-10	LP-08	650
	LC-01	LP-11	720
	LC-01	LP-12	356
	LC-01	LP-09	622
	LP-02	LP-03	686
TOTAL			5,598

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE

LIGHTING PULL BOXES

CATEGORY	PULL BOX NUMBER	LOCATION		653.0164
		STATION	OFFSET	PULL BOXES NON-CONDUCTIVE 24X42-INCH EACH
0010	LPB-01	24+53	31.0' RT	1
	LPB-02	112+78	36.0' RT	1
	LPB-03	115+01	39.0' LT	1
	LPB-04	113+08	47.0' LT	1
	LPB-05	26+56	31.5' RT	1
	LPB-06	26+98	26.0' LT	1
	LPB-07	26+74	68.5' LT	1
	LPB-08	108+86	28.0' RT	1
	LPB-09	110+77	31.0' RT	1
	LPB-10	24+67	64.5' LT	1
	LPB-11	24+24	29.0' RT	1
	LPB-12	23+05	23.5' RT	1
	LPB-13	21+48	20.0' RT	1
TOTAL				13

LIGHTING CONDUIT SUMMARY

CATEGORY	LOCATION FROM	TO	CONDUIT RIGID NONMETALLIC	
			652.0225	652.0235
			SCHEDULE 40 2-INCH LF	SCHEDULE 40 3-INCH LF
0010	LC-01	LPB-01	30	---
	LPB-01	LPB-02	67	---
	LPB-02	LPB-04	---	184
	LPB-04	LPB-03	194	---
	LPB-04	LPB-05	109	---
	LPB-05	LPB-06	---	144
	LPB-06	LPB-07	37	---
	LC-01	LPB-11	69	---
	LPB-11	LPB-10	---	216
	LPB-10	LPB-09	105	---
	LPB-09	LPB-08	184	---
	LPB-09	LPB-07	---	200
	LPB-11	LPB-12	112	---
	LPB-12	LPB-13	172	---
TOTALS			1,079	744

CONSTRUCTION STAKING SIDEWALK

CATEGORY	PROJECT	650.9500
		EACH
0010	01. 5050-01-76	1

3

3

EQUIPMENT GROUNDING AND GROUNDED CONDUCTORS

CATEGORY	LOCATION		*655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
	FROM	TO	
0010	LC-01	LP-01	43
	LP-01	LP-02	90
	LP-02	LP-04	136
	LP-04	LP-03	217
	LP-04	LP-05	132
	LP-05	LP-06	115
	LP-06	LP-07	60
	LC-01	LP-10	196
	LP-10	LP-09	128
	LP-09	LP-08	207
	LC-01	LP-12	178
	LP-12	LP-11	195
TOTAL			1,697

\*ADDITIONAL QUANTITIES LISTED ELSEWHERE

LIGHTING CONTROL CABINET SUMMARY

CATEGORY	LOCATION	654.0230 CONCRETE CONTROL CABINET BASES TYPE L30 EACH	659.2130 LIGHTING CONTROL CABINETS 120/240 30-INCH EACH
		0010	LC-01

SAWING

CATEGORY	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
			0010	STAGE 1
	STAGE 2A	LT/RT	70	1,056
	STAGE 2B	LT/RT	---	37
	STAGE 3	LT/RT	22	21
TOTALS			114	1,114

TEMPORARY TRAFFIC SIGNALS FOR BRIDGES

CATEGORY	STRUCTURE	661.0101 EACH
0010	01. B-56-0164	1

SECTION CORNER SUMMARY

CATEGORY	STATION	LOCATION	SPV.0060.01 VERIFY LANDMARK REFERENCE MONUMENTS EACH	SPV.0060.02 LANDMARK REFERENCE MONUMENTS SPECIAL EACH
			0010	112+87.07

ELECTRICAL SERVICE METER BREAKER PEDESTAL

CATEGORY	LOCATION	STATION	OFFSET	656.0201 EACH
0010	STH 23 AND STH 126 INTERSECTION	24+32.0	32.5' RT	1

STREET LIGHTING SUMMARY

CATEGORY	LP. NO.	STATION	LOCATION	654.0105 CONCRETE BASES TYPE 5 EACH	*655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF		657.0255 TRANSFORMER BASES BREAKWAY 1 1/2-INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5 ALUMINUM EACH	657.0610 LUMINAIRE ARMS TRUSS TYPE 4 1/2-INCH CLAMP 6-FT EACH	659.1120 LUMINAIRES UTILITY LED B EACH
					LF	LF (GROUND)				
0010	LP-01	24+48.80	33.2' RT	1	82	41	1	1	1	1
	LP-02	112+74.40	39.1' RT	1	82	41	1	1	1	1
	LP-03	115+01.10	35.2' LT	1	82	41	1	1	1	1
	LP-04	113+13.45	48.3' LT	1	82	41	1	1	1	1
	LP-05	26+50.50	34.2' RT	1	82	41	1	1	1	1
	LP-06	27+01.68	27.7' LT	1	82	41	1	1	1	1
	LP-07	26+77.53	70.6' LT	1	82	41	1	1	1	1
	LP-08	108+86.17	23.0' RT	1	82	41	1	1	1	1
	LP-09	110+73.14	33.4' RT	1	82	41	1	1	1	1
	LP-10	24+68.29	68.4' LT	1	82	41	1	1	1	1
	LP-11	21+42.85	19.0' RT	1	82	41	1	1	1	1
	LP-12	23+05.29	19.0' RT	1	82	41	1	1	1	1
TOTALS				12	984	492	12	12	12	12
ITEM TOTALS				1,476						

\* ADDITIONAL QUANTITIES LISTED ELSEWHERE

# TRANSPORTATION PROJECT PLAT NO: 5050-01-26-4.01 AMENDMENT NO. 1

AMENDING TO ADD A COMPENSABLE SIGN TO PARCEL 2 OF TRANSPORTATION PROJECT PLAT 5050-01-26-4.01 RECORDED AS DOCUMENT NO. 1221989 AT THE SAUK COUNTY REGISTER OF DEEDS.

THAT PART OF LOT 2 OF CSM 4821, & PART OF OUTLOT 1 OF CSM 4804, & PART OF LOT 1 OF CSM 1475 AND OTHER LANDS IN THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 AND PART OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4, ALL IN SECTION 12, TOWNSHIP 12 NORTH, RANGE 4 EAST, TOWN OF REEDSBURG, SAUK COUNTY, WISCONSIN.

RELOCATION ORDER 5TH 23 REEDSBURG - WISCONSIN DELLS (5TH 136 INTERSECTION) SAUK COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:

- THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
- THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

## SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO THE DEPARTMENT

PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W NEW	S.F. REQUIRED EXISTING	TOTAL	TLE S.F.
1	REEDSBURG COUNTY CLUB CAPITAL PROJECTS CO LTD.	TLE	---	---	---	971
2	D & M OF REEDSBURG LLC. GAWRONSKI SIGNS	TLE	---	---	---	8302
3	GARY L. JERRETT JR. & BRENDA S. JERRETT	FEE,TLE	9324	---	9324	1839
4	RINGLING STONE LLC.	FEE,TLE	5529	---	5529	1724
5	EDWARD & LOUISE PUGH	FEE,AR,TLE	12225	---	12225	494
6	ROBERT A. & CINDY MAE SCHANKE	FEE,AR,TLE	552	---	552	1112
7	ROBERT J. GAVIN & DOUGLAS J. BLAKESLEE	TLE	---	---	---	2908

## UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
100	REEDSBURG UTILITY COMMISSION-COMMUNICATIONS	RELEASE OF RIGHTS
101	ALLIANT ENERGY-ELECTRIC	RELEASE OF RIGHTS
103	FRONTIER COMMUNICATIONS-COMMUNICATIONS	RELEASE OF RIGHTS

## SCHEDULE OF SIGN STRUCTURES

SIGN NUMBER	SIGN OWNER	OASIS NUMBER
2-1	GAWRONSKI SIGNS D & M OF REEDSBURG LLC.	14194

(100) REEDSBURG UTILITY COMMISSION-COMMUNICATIONS NO RECORDED EASEMENT PARCEL 5

(103) FRONTIER COMMUNICATIONS-COMMUNICATIONS (VERIZON NORTH) EASEMENT DOC. 743258 PARCEL 5

(101) ALLIANT ENERGY-ELECTRIC NO RECORDED EASEMENT PARCEL 3

(101) ALLIANT ENERGY-ELECTRIC (WISCONSIN POWER AND LIGHT) BLANKET EASEMENT WEST PART OF SE-NE V. 165, P. 557 DOC. 240979 PARCEL 1

(101) ALLIANT ENERGY-ELECTRIC (WISCONSIN POWER AND LIGHT) BLANKET EASEMENT NORTH 1/2 SE 1/4 V. 167, P. 103 DOC. 241789 PARCELS 5 & 6

PI STA = 106+98.18	PI STA = 109+66.09	PI STA = 110+90.84	PI STA = 111+19.40	PI STA = 113+48.39
Y = 259964.340	Y = 259947.836	Y = 259954.570	Y = 259939.114	Y = 259960.044
X = 593941.236	X = 594333.334	X = 594333.334	X = 594333.334	X = 594586.164
DELTA = 407°27'RT	DELTA = 63°27'26"LT	DELTA = 33°44'18"RT	DELTA = 31°00'07"LT	DELTA = 9°32'47"RT
D = 250'36"	D = 10°25'03"	D = 57°17'45"	D = 17°54'18"	D = 57°17'45"
T = 72.55'	T = 31.83'	T = 30.32'	T = 26.72'	T = 26.72'
L = 145.04'	L = 63.58'	L = 58.88'	L = 53.32'	L = 53.32'
R = 2015.00'	R = 550.00'	R = 100.00'	R = 320.00'	R = 320.00'
PC STA = 106+25.63	PC STA = 109+34.26	PC STA = 110+60.51	PC STA = 112+57.58	PC STA = 113+21.67
PT STA = 107+70.67	PT STA = 109+97.85	PT/PI STA = 111+19.40 DA = 559°21'17"E	PT STA = 113+74.98	PT STA = 113+74.98

PI STA = 22+81.75	ALIGNMENT SUB-CURVE	ALIGNMENT SUB-CURVE	PI STA = 24+71.19
Y = 259683.668	PC 21+70.45 TO STA. 22+73.07	STA. 23+24.73 TO PT 23+90.08	Y = 259862.735
X = 594527.495	R = 550.00'	R = 550.00'	X = 594457.098
DELTA = 22°52'47"LT	L = 102.62'	L = 65.35'	DELTA = 33°55'50"RT
D = 10°25'03"	LCH = 102.47'	LCH = 65.32'	D = 57°17'45"
T = 111.30'	LCB = N03°55'38"W	LCB = N18°03'26"W	T = 30.51'
L = 259.63'			L = 59.22'
R = 550.00'			R = 100.00'
PC STA = 21+70.45	STA. 22+73.07 TO STA. 23+24.73	PC STA = 24+40.68	PT/PI STA = 24+99.90
PT STA = 23+90.08	R = 550.00'	L = 51.65'	DA = N12°28'08"E
DB = N1°25'06"E	LCB = N11°57'46"W		

PI STA = 24+99.90	PI STA = 27+21.48	PI STA = 28+36.75	ALIGNMENT SUB-CURVE
Y = 259892.523	Y = 260093.429	Y = 260165.270	PC 27+92.42 TO STA. 28+75.54
X = 594463.684	X = 594376.602	X = 594286.214	R = 110.01'
DELTA = 29°00'38"LT	DELTA = 16°51'08"LT	DELTA = 43°53'52"RT	L = 83.12'
D = 63°39'43"	D = 52°04'56"	LCH = 81.16'	LCB = N11°57'46"W
T = 13.33'	T = 44.33'	T = 44.33'	LCB = N29°52'36"W
L = 26.47'	L = 84.28'	L = 84.28'	
R = 90.00'	R = 110.01'	R = 110.01'	
PC STA = 24+99.90	PC STA = 27+21.48	PC STA = 27+92.42	ALIGNMENT SUB-CURVE
PT STA = 27+34.62	PT STA = 27+34.62	PT STA = 28+76.70	STA. 28+75.54 TO PT 28+76.70
			R = 110.01'
			L = 1.16'
			LCH = 1.16'
			LCB = N7°53'39"W

### R/W COURSE TABLE

COURSE	BEARING	DISTANCE
SEC1 - 100	N 0° 19' 30" W	53.08'
TIE1 - SEC1	N 0° 06' 45" W	42.90'
115 - SEC1	N 89° 34' 47" E	726.23'
102 - SEC1	S 88° 24' 18" W	207.27'
100 - 126	N 89° 24' 05" E	84.19'
126 - 101	N 89° 20' 08" E	138.31'
	(N 89° 20' 17" E	138.20')
104 - 105	S 44° 41' 24" W	155.89'
	(N 45° 28' 56" E	156.09')
105 - 106	S 00° 06' 45" E	66.68'
109 - 110	N 00° 06' 45" W	8.53'
110 - 111	N 60° 31' 45" W	148.86'
111 - 112	N 26° 39' 47" W	103.20'
112 - 113	S 89° 35' 32" W	479.94'
116 - 125	N 89° 50' 49" E	68.51'
125 - 117	S 89° 43' 20" E	388.88'
117 - 118	N 00° 18' 57" W	196.11'
120 - 121	S 00° 18' 57" E	15.31'
121 - 122	S 48° 14' 19" E	75.92'
122 - 123	S 40° 06' 28" E	70.60'
123 - 124	S 45° 11' 58" E	68.93'
124 - 100	N 89° 24' 05" E	52.82'

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN LA CROSSE.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), SAUK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALLIES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

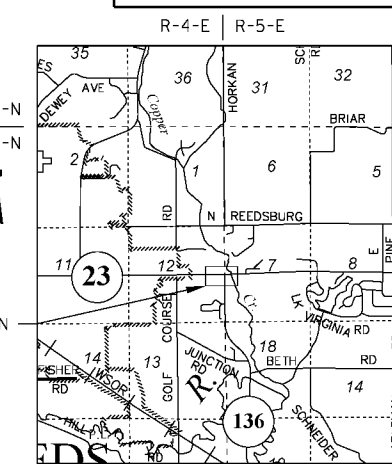
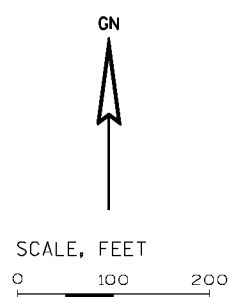
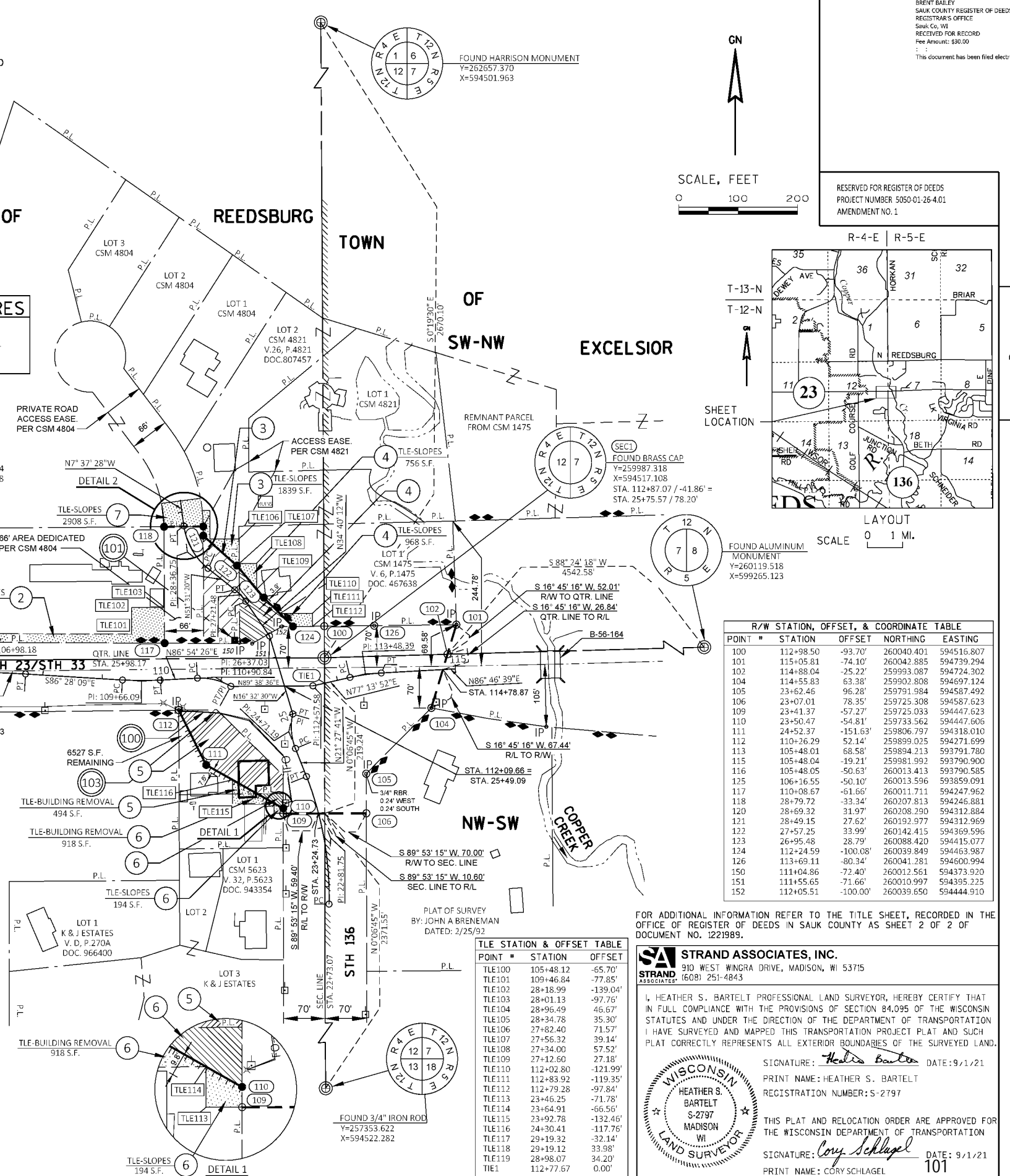
FOUND IRON PINS ARE 3/4" REBARS UNLESS OTHERWISE NOTED.

EXISTING HIGHWAY RIGHT-OF-WAY ON STH 23/STH 33 BASED ON PREVIOUS PROJECT: 5050-01-21, CSM 6469, CSM 1475, PLAT OF SURVEY BY JOHN A. BRENEMAN DATED: 2/25/92.

EXISTING HIGHWAY RIGHT-OF-WAY ON STH 136 BASED ON PREVIOUS PROJECT: 5050-01-21, CSM 5623, K & J ESTATES, PLAT OF SURVEY BY JOHN A. BRENEMAN.

EXISTING ACCESS CONTROL ALONG STH 23/STH 33 HAS BEEN ESTABLISHED FROM PREVIOUS PROJECT: 5050-1-29

BUILDINGS WILL NOT BE AFFECTED BY THE TLE'S ON PARCELS 2 AND 6.



### R/W STATION, OFFSET, & COORDINATE TABLE

POINT #	STATION	OFFSET	NORTHING	EASTING
100	112+98.50	-93.70'	260040.401	594516.807
101	115+05.81	-74.10'	260042.885	594739.294
102	114+88.04	-25.22'	259993.087	594724.302
104	114+55.83	63.38'	259902.808	594697.124
105	23+62.46	96.78'	259791.984	594587.492
106	23+07.01	78.35'	259725.308	594587.623
109	23+41.37	-57.27'	259725.033	59447.623
110	23+50.47	-54.81'	259733.562	59447.606
111	24+52.37	-151.63'	259806.797	594318.010
112	110+26.29	52.14'	259899.025	594271.699
113	105+48.01	68.58'	259894.213	593791.780
115	105+48.04	-19.21'	259981.992	593790.900
116	105+48.05	-50.63'	260013.413	593790.585
125	106+16.55	-50.10'	260013.596	593859.091
117	110+08.67	-16.66'	260011.711	594247.962
118	28+79.72	-33.34'	260207.813	594246.881
120	28+69.32	31.97'	260208.290	594312.884
121	28+49.15	27.62'	260192.977	594312.969
122	27+57.25	33.99'	260142.415	594369.596
123	26+95.48	28.79'	260088.420	594415.077
124	112+24.59	-100.08'	260039.849	594463.987
126	113+69.11	-80.34'	260041.281	594600.994
150	111+04.86	-72.40'	260012.561	594373.920
151	111+55.65	-71.66'	260010.997	594395.225
152	112+05.51	-100.00'	260039.650	594444.910

### TLE STATION & OFFSET TABLE

POINT #	STATION	OFFSET
TLE100	105+48.12	-65.70'
TLE101	109+46.84	-77.85'
TLE102	28+18.99	-139.04'
TLE103	28+01.13	-97.76'
TLE104	28+96.49	46.67'
TLE105	28+34.78	35.30'
TLE106	27+82.40	71.57'
TLE107	27+56.32	39.14'
TLE108	27+34.00	57.52'
TLE109	27+12.60	27.18'
TLE110	112+02.80	-121.99'
TLE111	112+83.92	-119.35'
TLE112	112+79.28	-97.84'
TLE113	23+46.25	-71.78'
TLE114	23+64.91	-66.56'
TLE115	23+92.78	-132.46'
TLE116	24+30.41	-117.76'
TLE117	29+19.32	-32.14'
TLE118	29+19.12	33.98'
TLE119	28+98.07	34.20'
TIE1	112+77.67	0.00'

**STRAND ASSOCIATES, INC.**  
910 WEST WINGRA DRIVE, MADISON, WI 53715  
(608) 251-4843

HEATHER S. BARTELT PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Heather Bartelt* DATE: 9/1/21  
PRINT NAME: HEATHER S. BARTELT  
REGISTRATION NUMBER: S-2797

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION  
SIGNATURE: *Cory Schlagel* DATE: 9/1/21  
PRINT NAME: CORY SCHLAGEL  
101

**TRANSPORTATION PROJECT PLAT NO: 5050-01-26 - 4.01**

THAT PART OF LOT 2 OF CSM 4821, & PART OF OUTLOT 1 OF CSM 4804, & PART OF LOT 1 OF CSM 1475 AND OTHER LANDS IN THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 AND PART OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4, ALL IN SECTION 12, TOWNSHIP 12 NORTH, RANGE 4 EAST, TOWN OF REEDSBURG, SAUK COUNTY, WISCONSIN.  
 RELOCATION ORDER STH 23 REEDSBURG - WISCONSIN DELLS (STH 136 INTERSECTION) SAUK COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:  
 1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.  
 2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

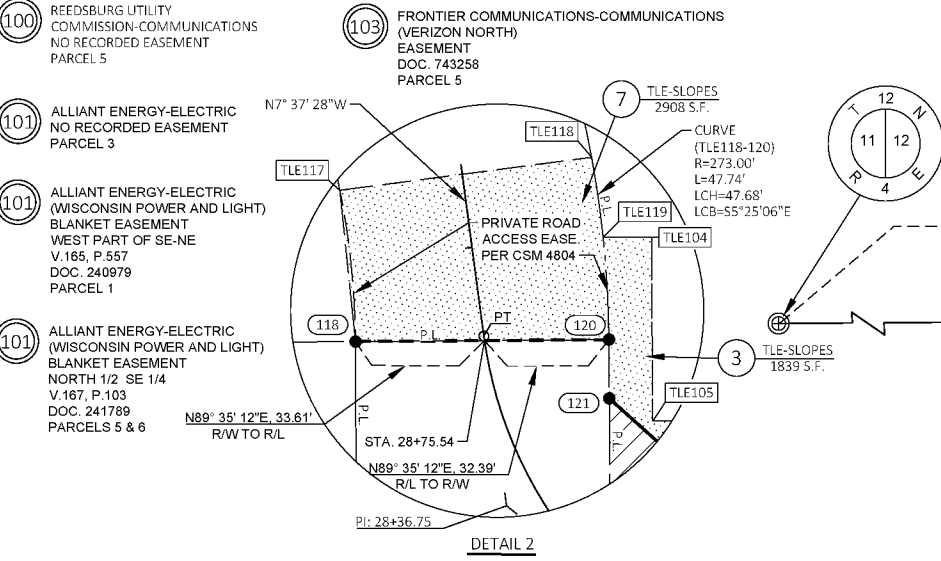
**SCHEDULE OF LANDS & INTERESTS REQUIRED**

PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W NEW	S.F. EXISTING	S.F. REQUIRED TOTAL	TLE S.F.
1	REEDSBURG COUNTY CLUB CAPITAL PROJECTS CO LTD.	TLE	---	---	---	971
2	D & M OF REEDSBURG LLC.	TLE	---	---	---	8302
3	GARY L. JERRETT JR. & BRENDA S. JERRETT	FEE,TLE	9324	---	9324	1839
4	RINGLING STONE LLC.	FEE,TLE	5529	---	5529	1724
5	EDWARD & LOUISE PUGH	FEE,AR,TLE	12225	---	12225	494
6	ROBERT A. & CINDY MAE SCHANKE	FEE,AR,TLE	552	---	552	1112
7	ROBERT J. GAVIN & DOUGLAS J. BLAKESLEE	TLE	---	---	---	2908

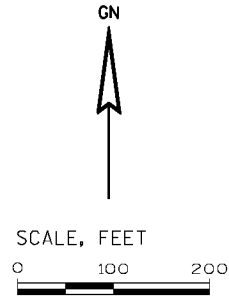
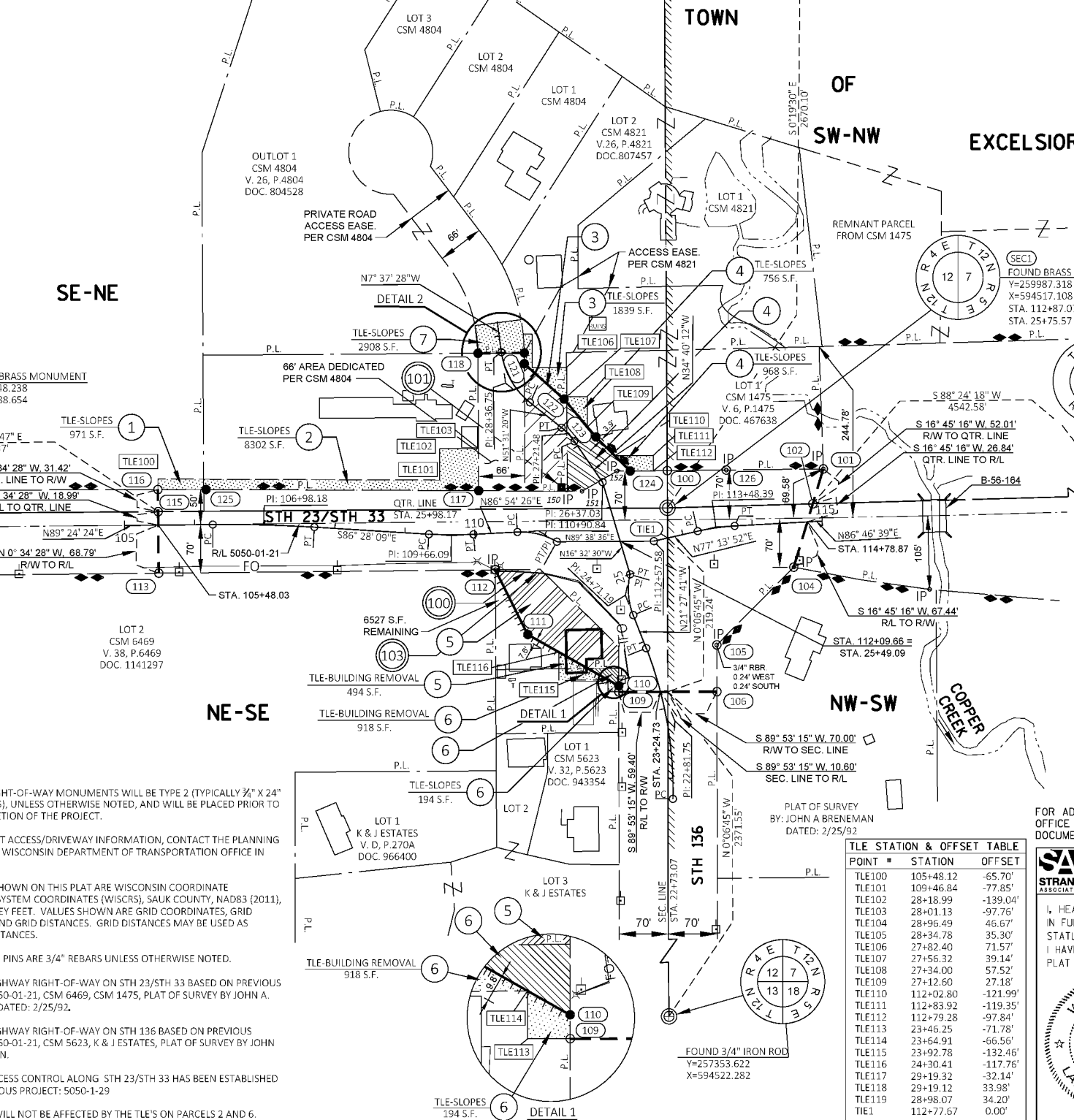
**UTILITY INTERESTS REQUIRED**

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
100	REEDSBURG UTILITY COMMISSION-COMMUNICATIONS	RELEASE OF RIGHTS
101	ALLIANT ENERGY-ELECTRIC	RELEASE OF RIGHTS
103	FRONTIER COMMUNICATIONS-COMMUNICATIONS	RELEASE OF RIGHTS

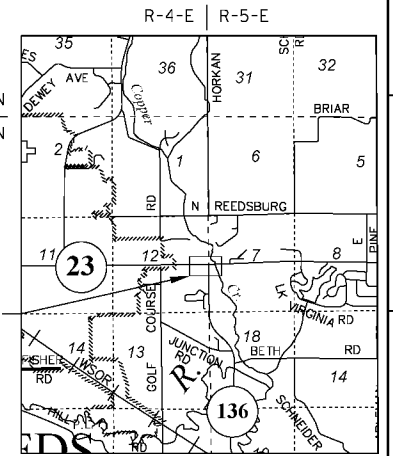
OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO THE DEPARTMENT



**TOWN OF REEDSBURG**



RESERVED FOR REGISTER OF DEEDS  
 PROJECT NUMBER 5050-01-26-4.01  
 SHEET 1 OF 2



PI STA	Y	X	DELTA	D	T	L	R	PC STA	PT STA
106+98.18	259964.340	593941.236	407°27'RT	2°50'36"	72.55'	145.04'	2015.00'	106+25.63	107+70.67
109+66.09	259947.836	594333.334	63°37'26"LT	10°25'03"	21.83'	63.58'	550.00'	109+34.26	109+97.85
110+90.84	259954.570	594359.422	33°44'18"RT	5°71'45"	31.83'	58.88'	100.00'	110+60.51	111+19.40
111+19.40	259939.114	594586.164	31°00'07"LT	17°54'18"	26.72'	53.32'	320.00'	111+57.58	111+19.40
113+48.39	259960.044	594586.164	9°32'47"RT	17°54'18"	26.72'	53.32'	320.00'	113+21.67	113+74.98

PI STA	Y	X	DELTA	D	T	L	R	PC STA	PT STA
22+81.75	259683.668	594527.495	22°52'47"LT	10°25'03"	21.83'	63.58'	550.00'	21+70.45	23+90.08
24+99.90	260093.523	594463.684	29°00'38"LT	63°39'43"	13.33'	26.47'	90.00'	27+08.15	27+34.62

PI STA	Y	X	DELTA	D	T	L	R	PC STA	PT STA
28+36.75	260093.429	594286.214	16°51'08"LT	63°39'43"	13.33'	26.47'	90.00'	27+08.15	27+34.62
28+75.54	260119.518	594522.282	18°07'42"LT	63°39'43"	13.33'	26.47'	90.00'	27+08.15	27+34.62

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN LA CROSSE.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), SAUK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALLIES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

FOUND IRON PINS ARE 3/4" REBARS UNLESS OTHERWISE NOTED.

EXISTING HIGHWAY RIGHT-OF-WAY ON STH 23/STH 33 BASED ON PREVIOUS PROJECT: 5050-01-21, CSM 6469, CSM 1475, PLAT OF SURVEY BY JOHN A. BRENNEMAN DATED: 2/25/92.

EXISTING HIGHWAY RIGHT-OF-WAY ON STH 136 BASED ON PREVIOUS PROJECT: 5050-01-21, CSM 5623, K & J ESTATES, PLAT OF SURVEY BY JOHN A. BRENNEMAN.

EXISTING ACCESS CONTROL ALONG STH 23/STH 33 HAS BEEN ESTABLISHED FROM PREVIOUS PROJECT: 5050-1-29

BUILDINGS WILL NOT BE AFFECTED BY THE TLE'S ON PARCELS 2 AND 6.

R/W STATION	OFFSET	NORTHING	EASTING
100	112+98.50	-93.70'	260040.401
101	115+05.81	-74.10'	260042.885
102	114+88.04	-25.27'	259993.087
104	114+55.83	63.38'	259902.808
105	23+62.46	96.78'	259791.984
106	23+07.01	78.35'	259725.308
109	23+41.37	-57.27'	259725.033
110	23+50.47	-54.81'	259733.562
111	24+52.37	-151.63'	259806.797
112	110+26.29	52.14'	259899.025
113	105+48.01	68.58'	259894.213
115	105+48.04	-19.21'	259981.992
116	105+48.05	-50.63'	260013.413
125	106+16.55	-50.10'	260013.596
117	110+08.67	-16.66'	260011.711
118	28+79.72	-33.34'	260207.813
120	28+69.32	31.97'	260208.290
121	28+49.15	27.62'	260192.977
122	27+57.25	33.99'	260142.415
123	26+95.48	28.79'	260088.420
124	112+24.59	-100.08'	260039.849
126	113+69.11	-80.34'	260041.281
150	111+04.86	-72.40'	260012.561
151	111+55.65	-71.66'	260010.997
152	112+05.51	-100.00'	260039.650

TLE STATION & OFFSET TABLE		
TLE100	105+48.12	-65.70'
TLE101	109+46.84	-77.85'
TLE102	28-18.99	-139.04'
TLE103	28-01.13	-97.76'
TLE104	28-96.49	46.67'
TLE105	28-34.78	35.30'
TLE106	27-82.40	71.57'
TLE107	27-56.32	39.14'
TLE108	27-34.00	57.52'
TLE109	27-12.60	27.18'
TLE110	112+02.80	-121.99'
TLE111	112+83.92	-119.35'
TLE112	112+79.28	-97.84'
TLE113	23+46.25	-71.78'
TLE114	23+64.91	-66.56'
TLE115	23+92.78	-132.46'
TLE116	24-30.41	-117.76'
TLE117	24-19.32	-32.14'
TLE118	29-19.12	33.98'
TLE119	28-98.07	34.20'
TLE1	112+77.67	0.00'

**STRAND ASSOCIATES, INC.**  
 910 WEST WINGRAVE DRIVE, MADISON, WI 53715  
 (608) 251-4843

HEATHER S. BARTELT PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Heather Bartelt* DATE: 7/26/21  
 PRINT NAME: HEATHER S. BARTELT  
 REGISTRATION NUMBER: S-2797

SIGNATURE: *Cory Schlager* DATE: 07/27/21  
 PRINT NAME: CORY SCHLAGER



# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION TRANSPORTATION PROJECT PLAT TITLE SHEET 5050-01-26 REEDSBURG - WISCONSIN DELLS

STH 136 INTERSECTION

## STH 23 SAUK COUNTY



### CONVENTIONAL SYMBOLS

SECTION LINE		SECTION CORNER SYMBOL		R/W MONUMENT (TO BE SET)	●
QUARTER LINE		SECTION CORNER MONUMENT		NON-MONUMENTED R/W POINT	○
SIXTEENTH LINE		GEODETIC SURVEY MONUMENT		FOUND IRON PIN (3/4-INCH UNLESS NOTED)	IP
NEW REFERENCE LINE		SIXTEENTH CORNER MONUMENT		SIGN	
NEW R/W LINE		OFF-PREMISE SIGN		COMPENSABLE	
EXISTING R/W OR HE LINE				NON-COMPENSABLE	
PROPERTY LINE					
LOT, TIE & OTHER MINOR LINES					
SLOPE INTERCEPT					
CORPORATE LIMITS					
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)					
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)					
TEMPORARY LIMITED EASEMENT AREA					
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)					
TRANSMISSION STRUCTURES					
BUILDING					
BRIDGE					
CULVERT					

### CONVENTIONAL ABBREVIATIONS

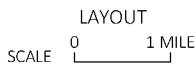
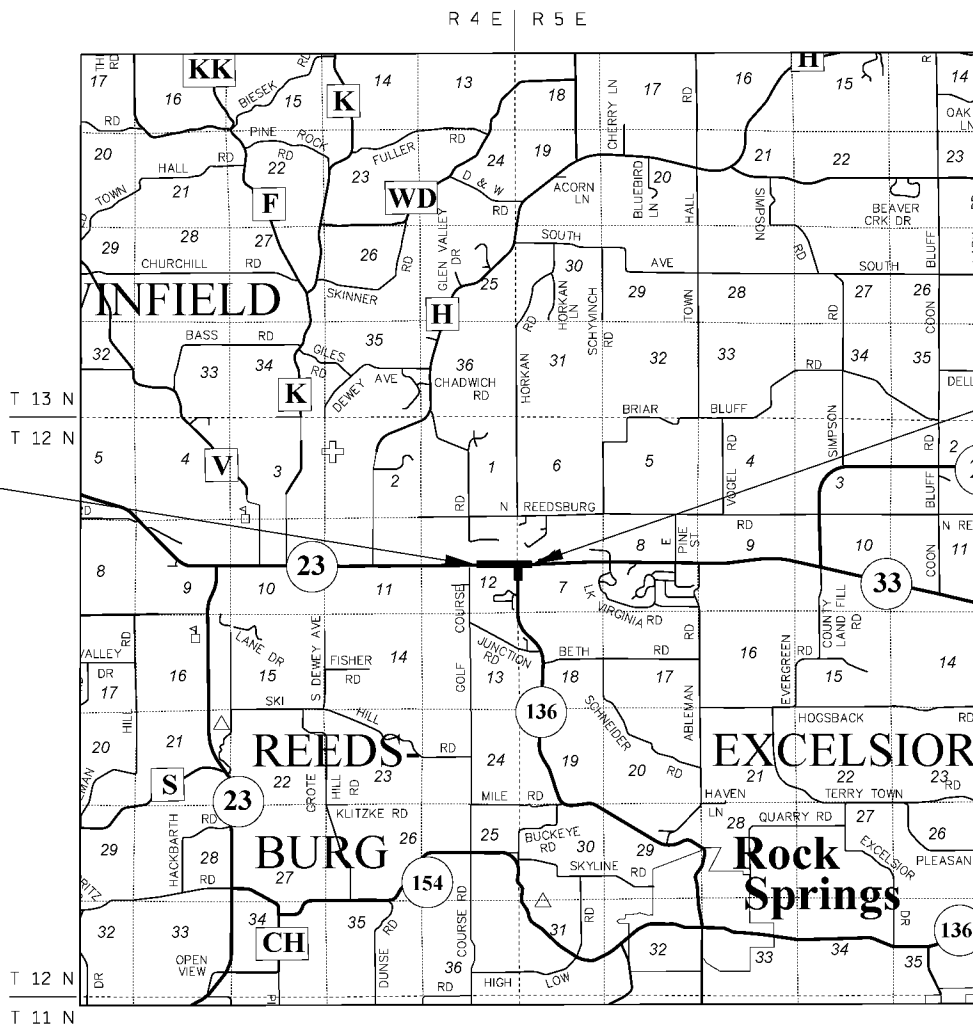
ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTRICTIVE DEVELOPMENT	RDE
CENTERLINE	C/L	EASEMENT	
CERTIFIED SURVEY MAP	CSM	RIGHT	RT
CONCRETE	CONC	RIGHT OF WAY	R/W
COUNTY	CO	SECTION	SEC
COUNTY TRUNK HIGHWAY	CTH	SEPTIC VENT	SEPV
DISTANCE	DIST	SQUARE FEET	SF
CORNER	COR	STATE TRUNK HIGHWAY	STH
DOCUMENT NUMBER	DOC	STATION	STA
EASEMENT	EASE	TELEPHONE PEDESTAL	TP
EXISTING	EX	TEMPORARY LIMITED	TLE
GAS VALVE	GV	EASEMENT	
GRID NORTH	GN	TRANSPORTATION PROJECT	TPP
HIGHWAY EASEMENT	HE	PLAT	
IDENTIFICATION	ID	UNITED STATES HIGHWAY	USH
LAND CONTRACT	LC	VOLUME	V
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

### CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

### CONVENTIONAL UTILITY SYMBOLS

	WATER
	GAS
	TELEPHONE
	OVERHEAD
	TRANSMISSION LINES
	ELECTRIC
	CABLE TELEVISION
	FIBER OPTIC
	FORCE MAIN
	SANITARY SEWER
	STORM SEWER



THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 5050-01-26.

### NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), SAUK COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLES) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

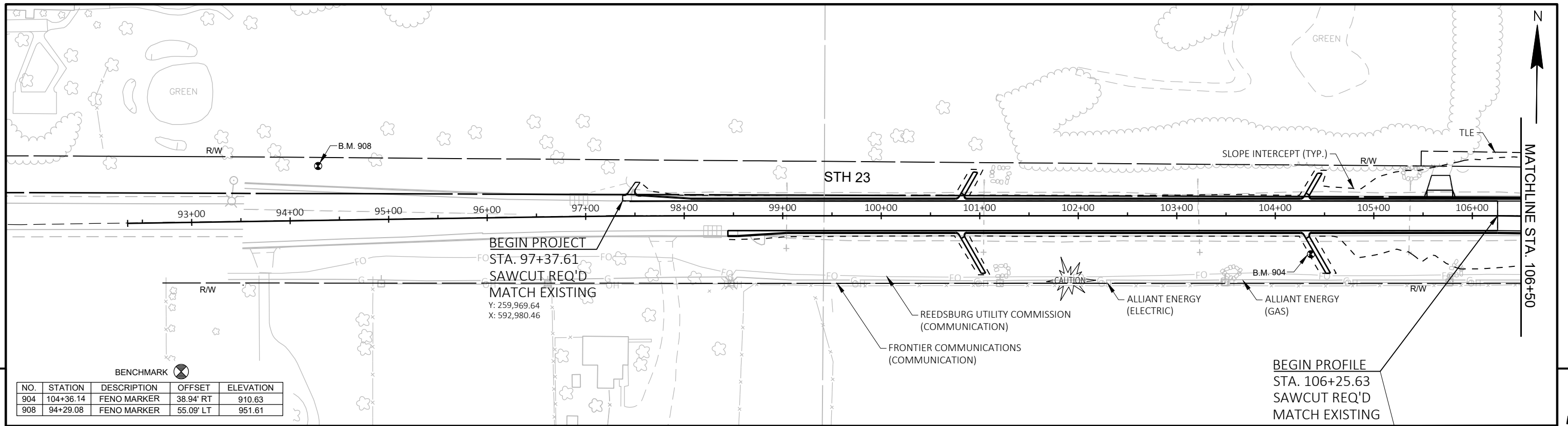
FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN LA CROSSE.

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE TPP DETAIL PAGES.

PROJECT NUMBER 5050-01-26-4.01  
SHEET 2 OF 2

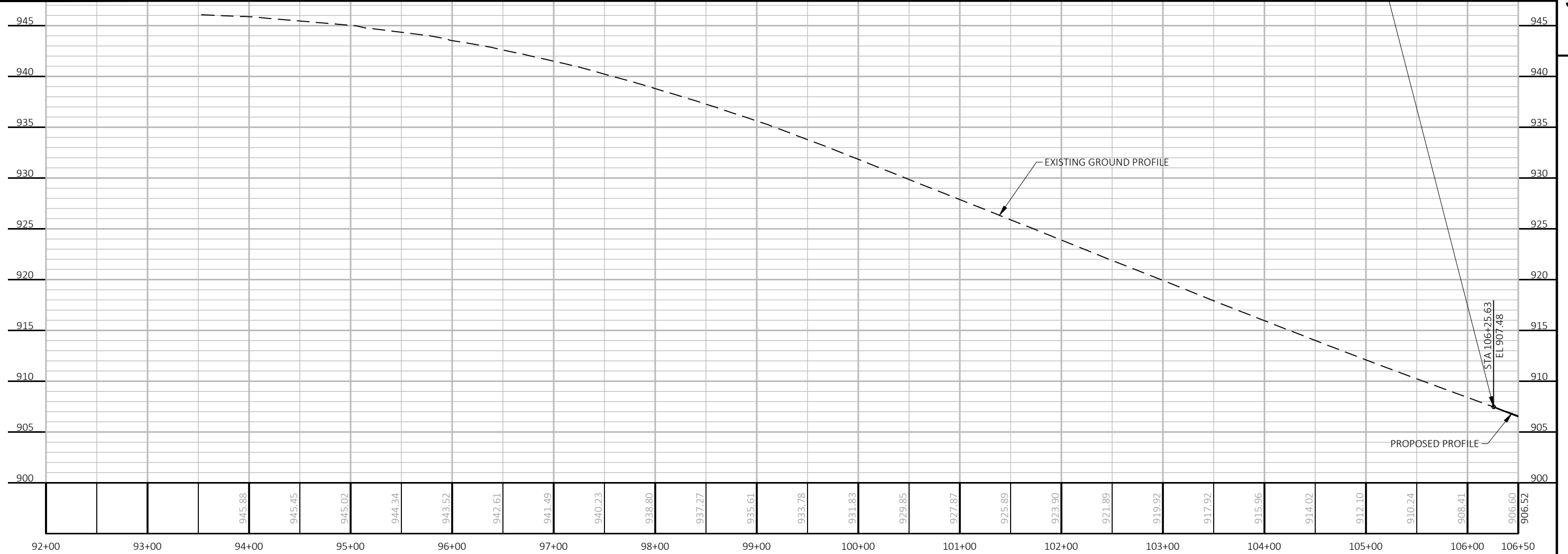
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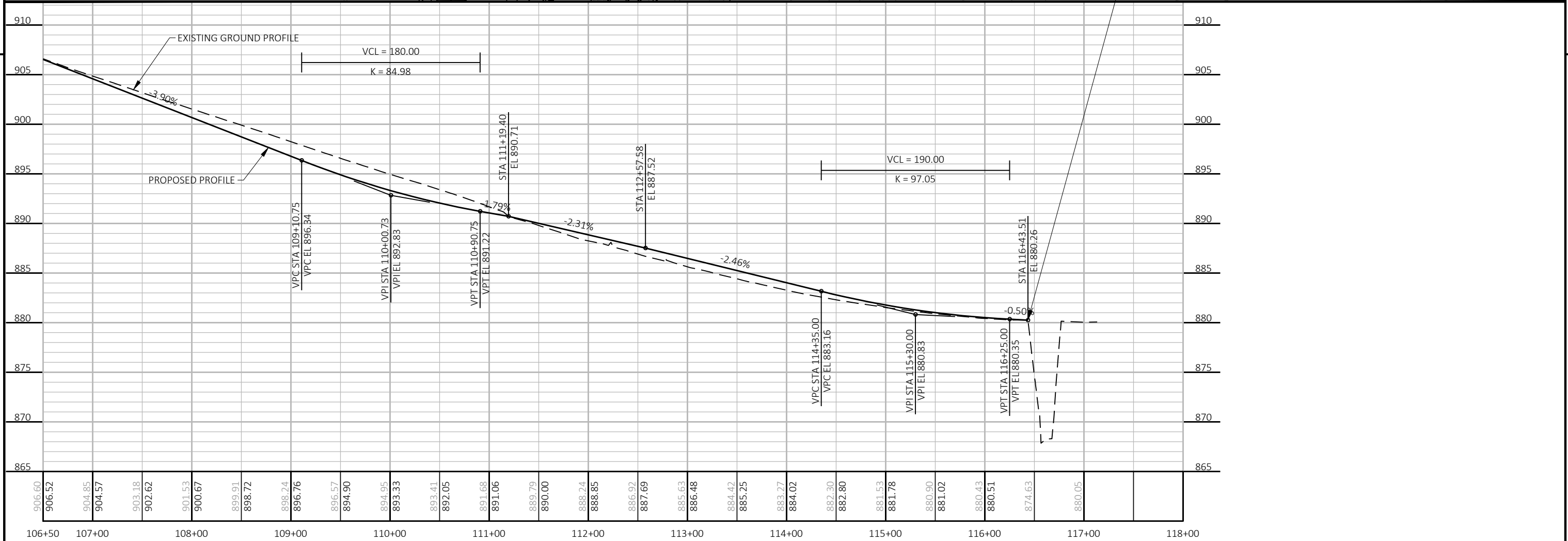
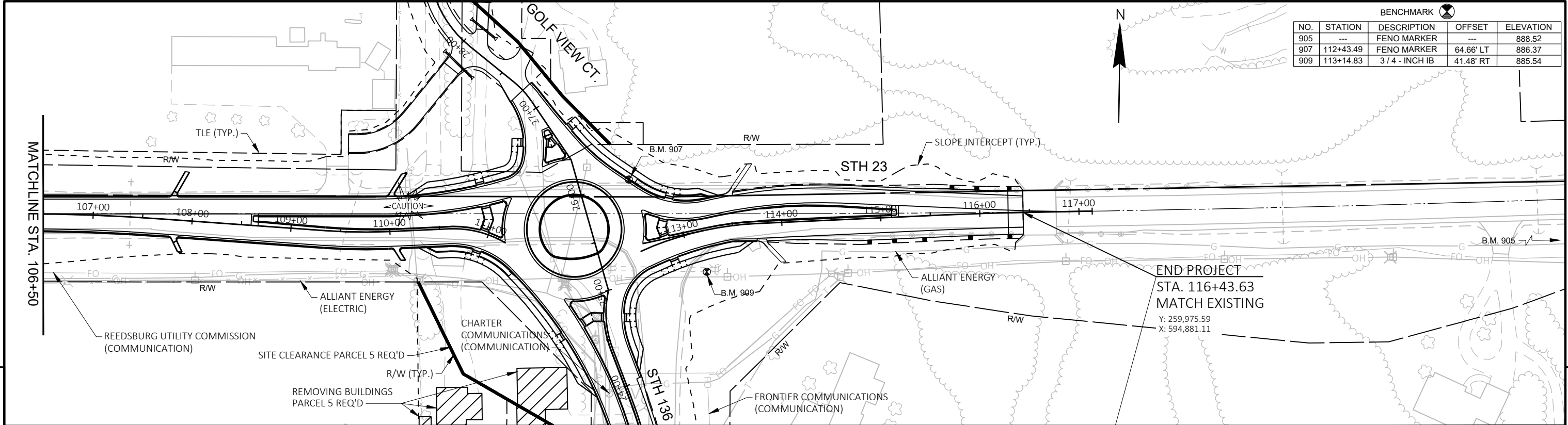
BEGIN PROJECT  
 STA. 97+37.61  
 SAWCUT REQ'D  
 MATCH EXISTING  
 Y: 259,969.64  
 X: 592,980.46

BEGIN PROFILE  
 STA. 106+25.63  
 SAWCUT REQ'D  
 MATCH EXISTING

NO.	STATION	DESCRIPTION	OFFSET	ELEVATION
904	104+36.14	FENO MARKER	38.94' RT	910.63
908	94+29.08	FENO MARKER	55.09' LT	951.61



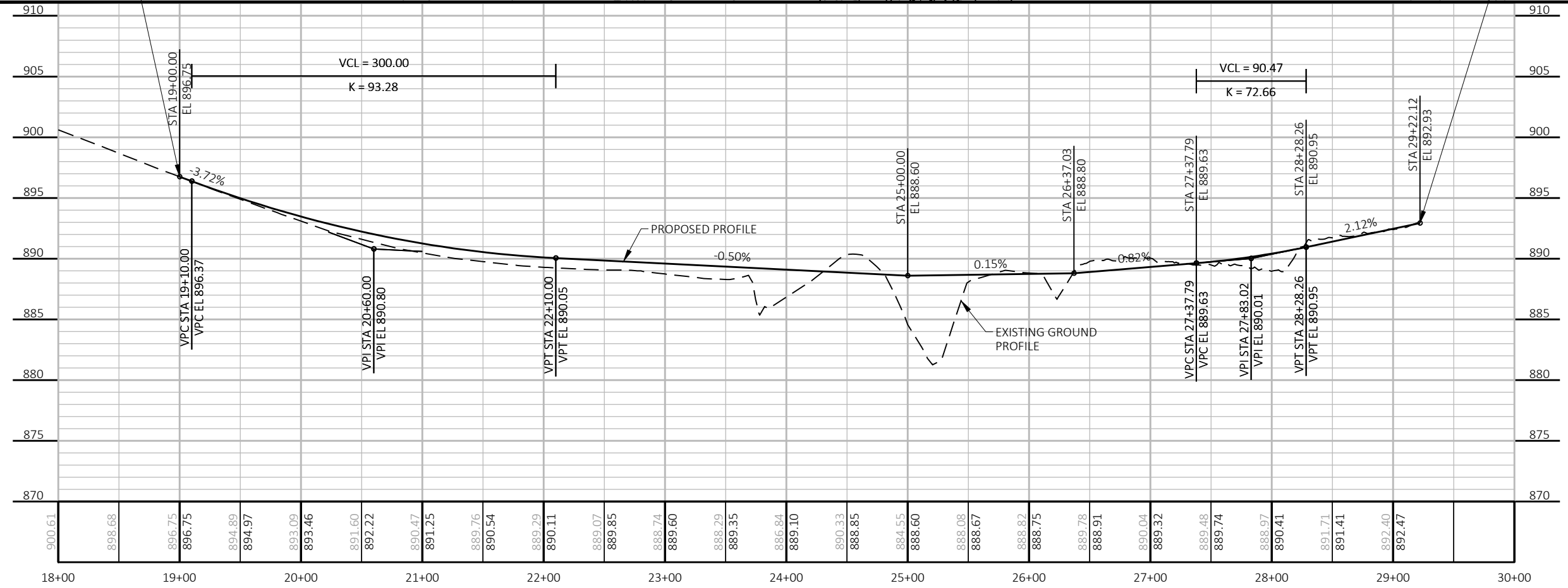
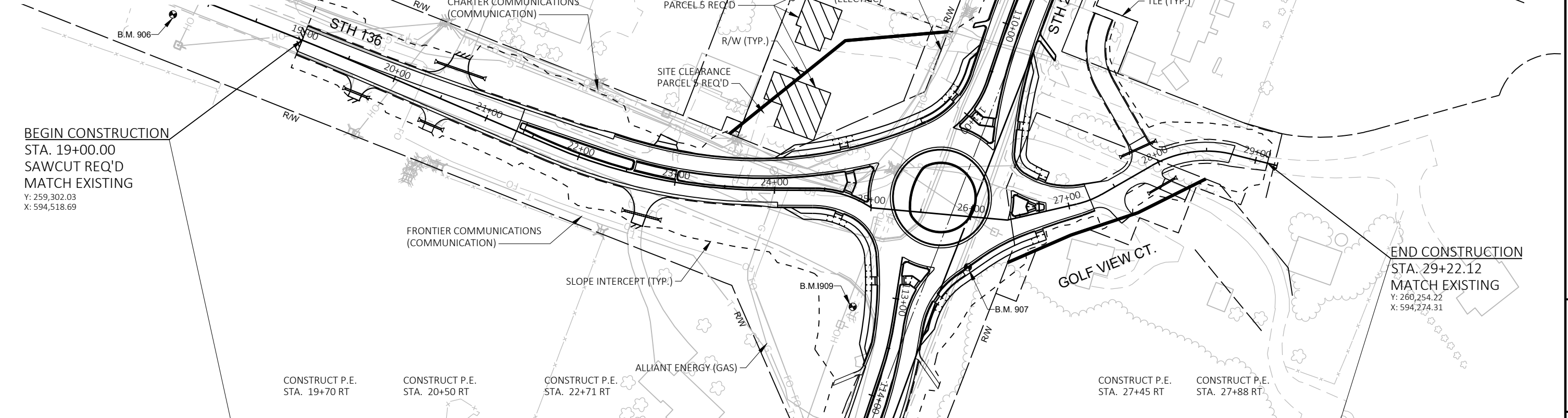
NO.	STATION	DESCRIPTION	OFFSET	ELEVATION
905	---	FENO MARKER	---	888.52
907	112+43.49	FENO MARKER	64.66' LT	886.37
909	113+14.83	3/4 - INCH IB	41.48' RT	885.54



PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      PLAN AND PROFILE - STH 23      SHEET      E

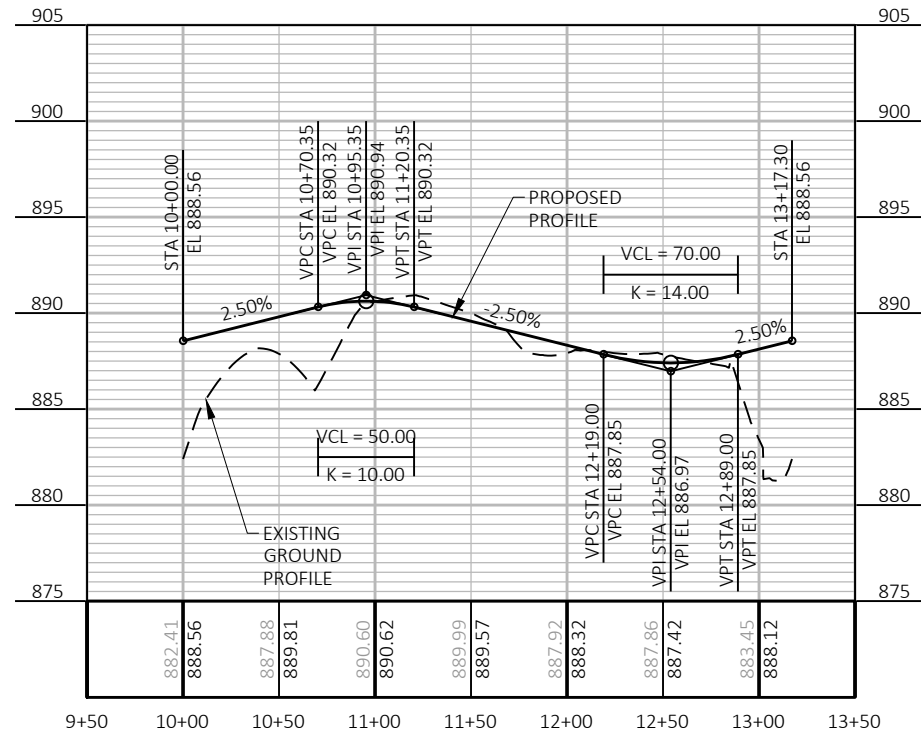


NO.	STATION	DESCRIPTION	OFFSET	ELEVATION
906	---	3 / 4 - INCH IB	---	899.87
907	112+43.49	FENO MARKER	64.66' LT	886.37
909	113+14.83	3 / 4 - INCH IB	41.48' RT	885.54

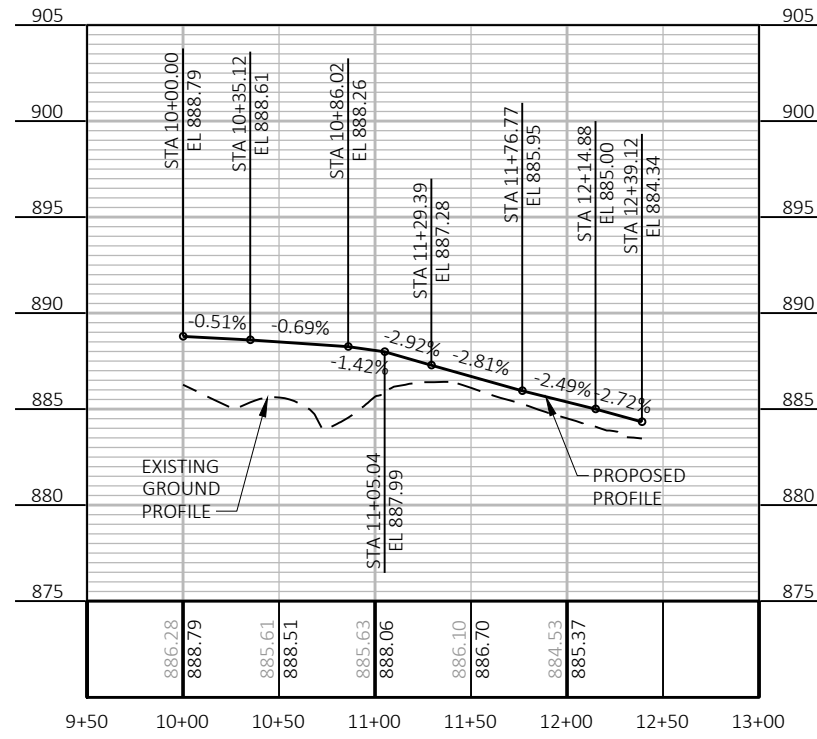


PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      PLAN AND PROFILE - STH 136      SHEET 5

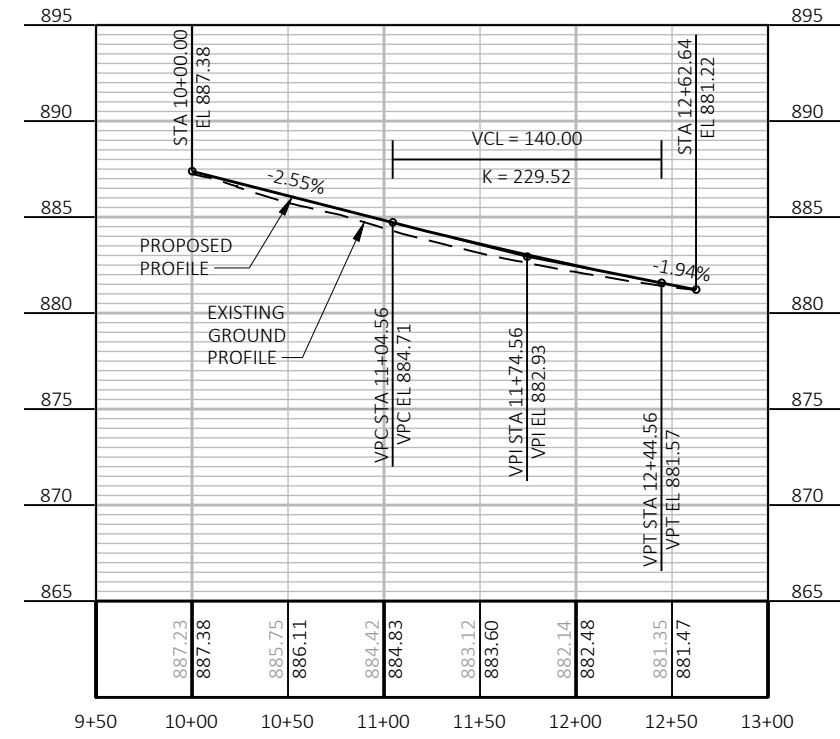
A CHAIN PROFILE



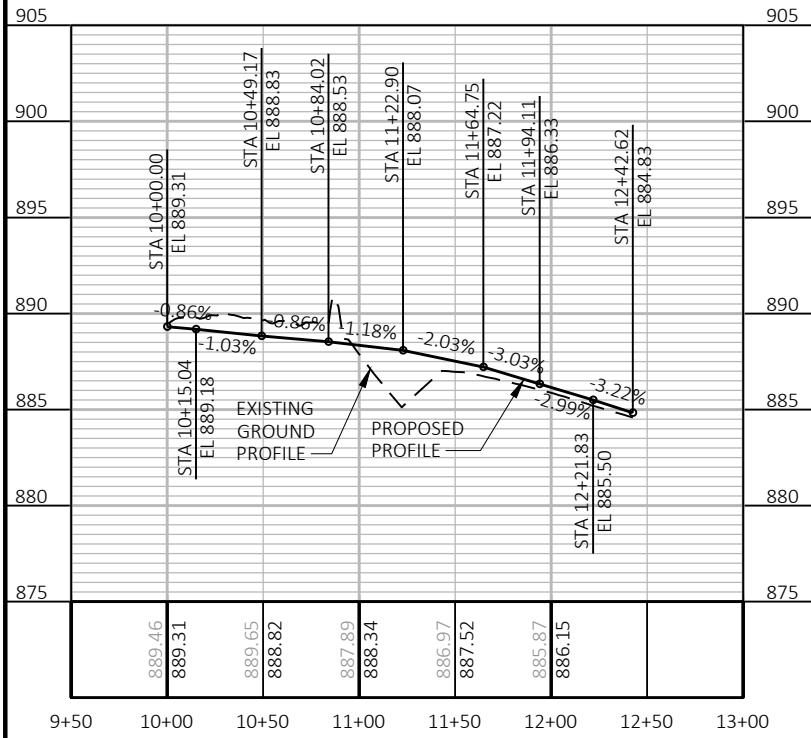
B CHAIN PROFILE



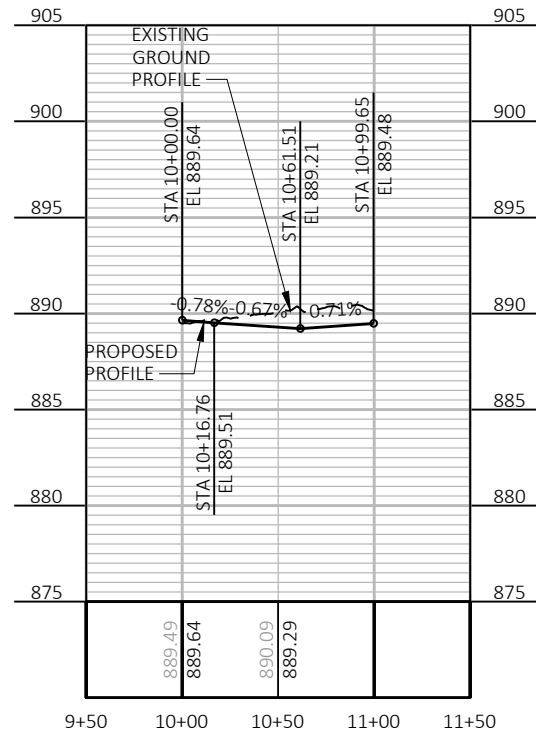
C CHAIN PROFILE



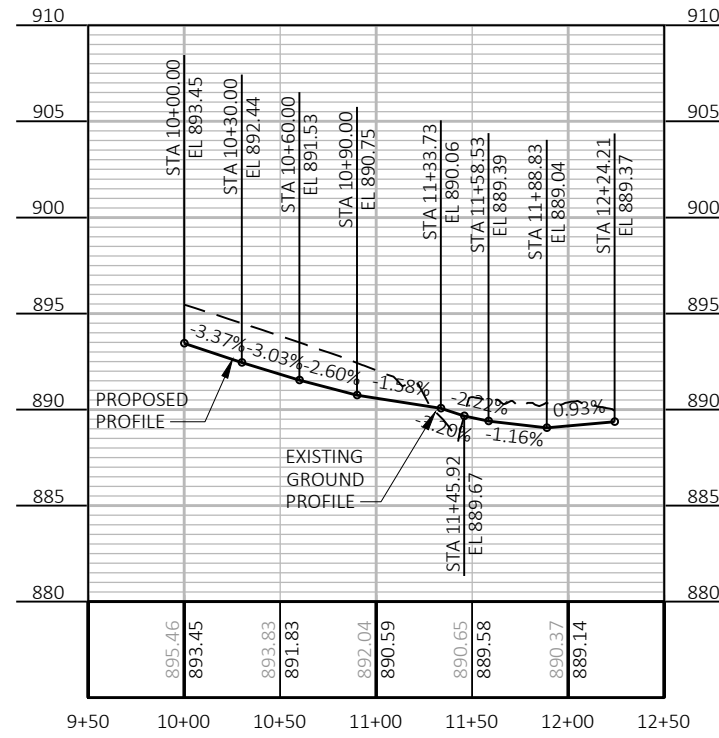
D CHAIN PROFILE



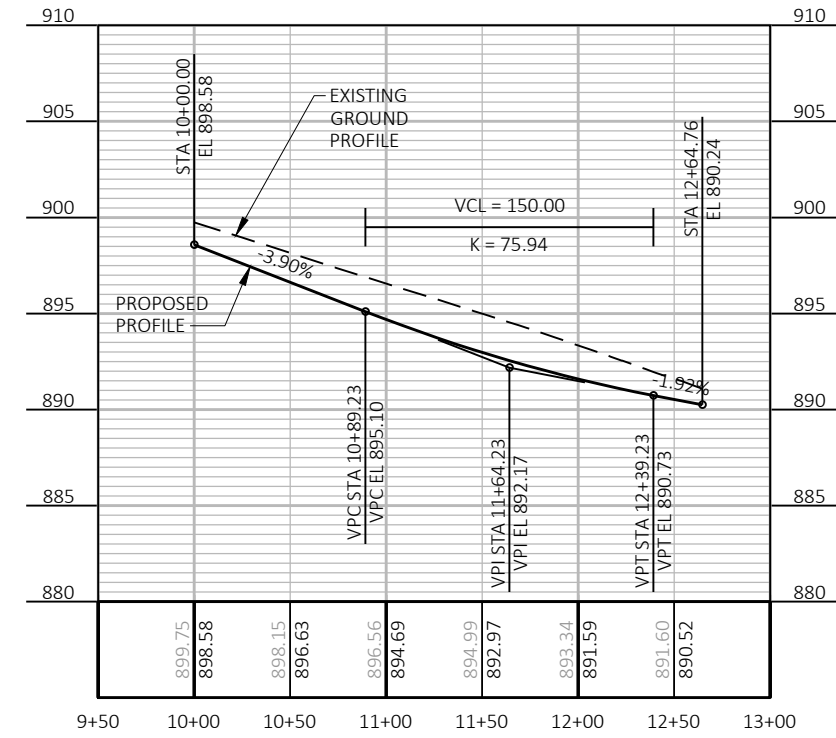
E CHAIN PROFILE



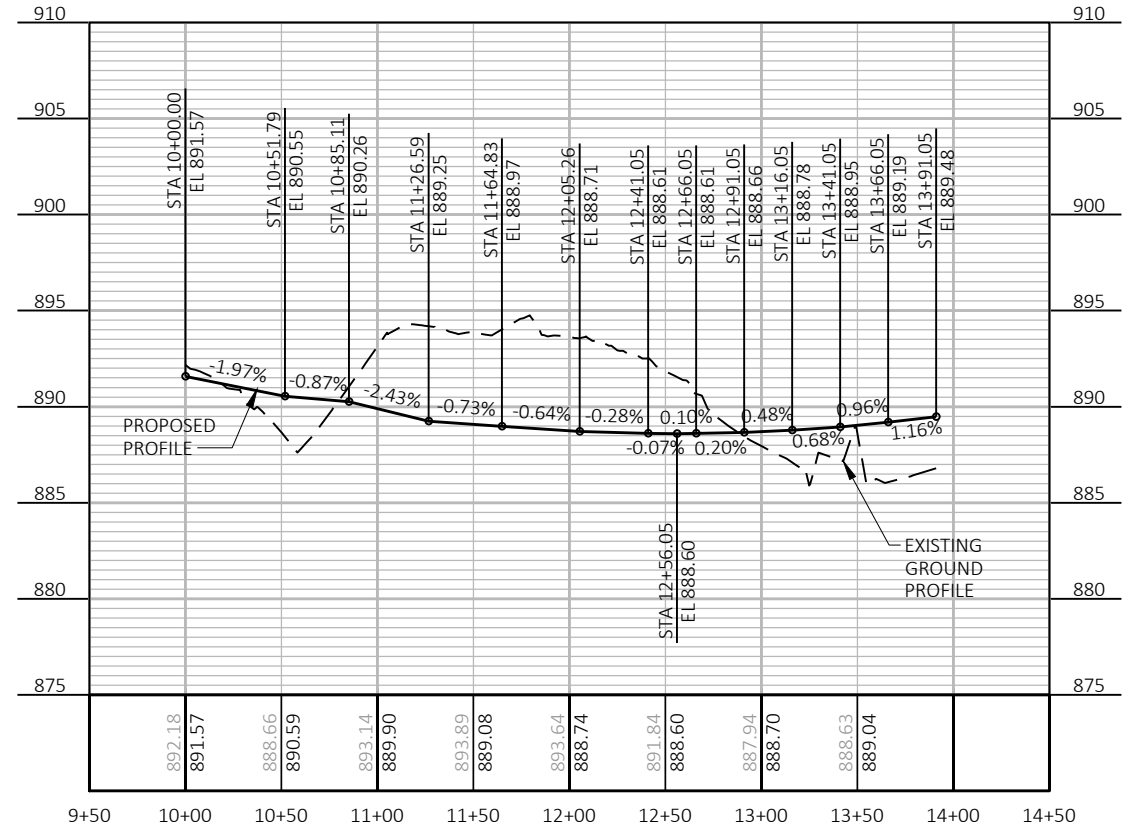
F CHAIN PROFILE



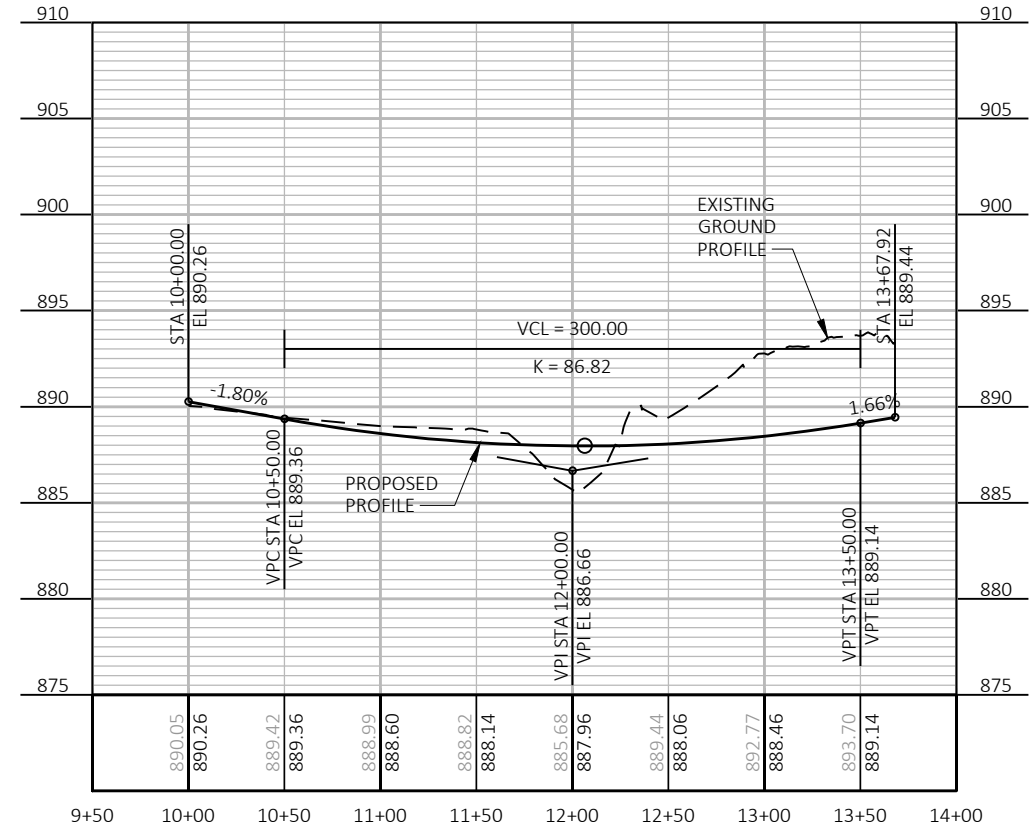
G CHAIN PROFILE



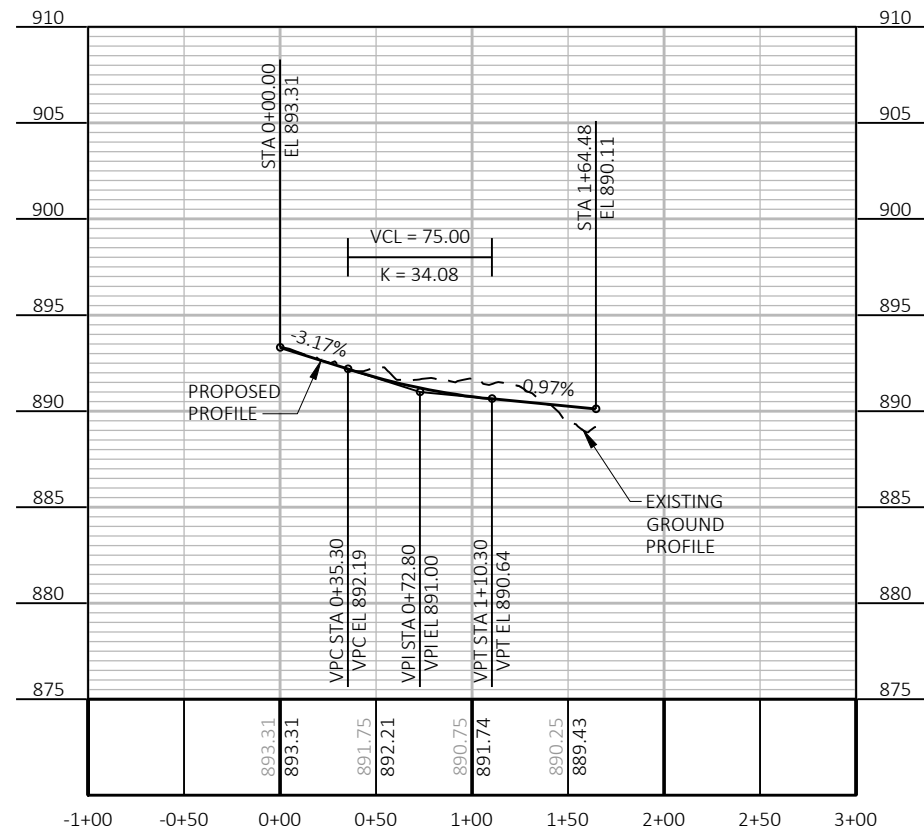
H CHAIN PROFILE



I CHAIN PROFILE



PD Chain PROFILE



5

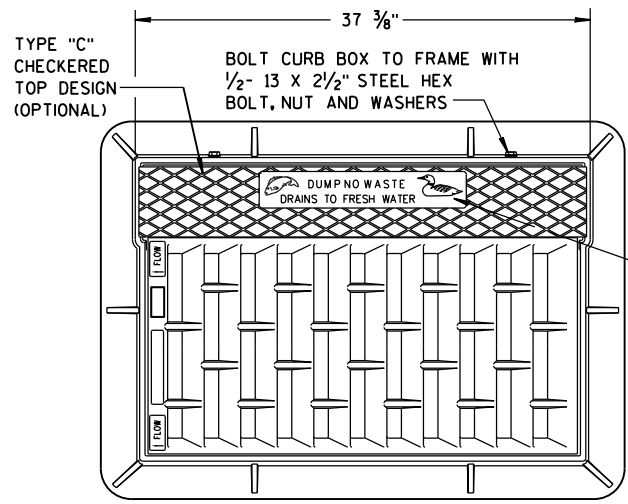
5

## Standard Detail Drawing List

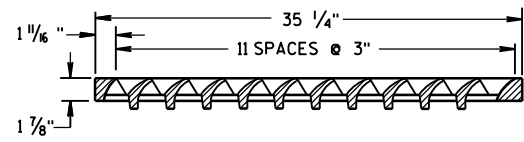
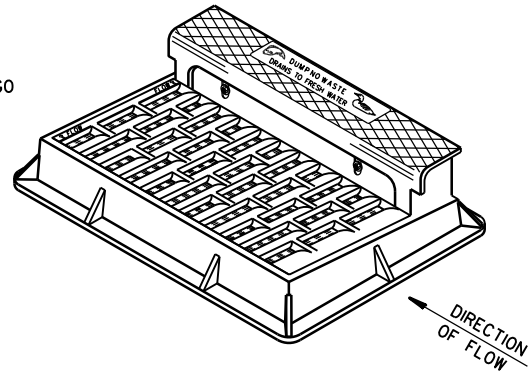
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-06	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
09B02-10	CONDUIT
09B16-02	PULL BOX NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C14-03	CONCRETE CONTROL CABINET BASE, TYPE L
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D04-03	LIGHTING CONTROL CABINET 120/240 VOLT
09E01-15D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
11B02-02	CONCRETE MEDIAN NOSE
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-10	URBAN DOWELED CONCRETE PAVEMENT
13C18-07A	CONCRETE PAVEMENT JOINTING
13C18-07B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-07C	CONCRETE PAVEMENT JOINT TYPES
13C18-07D	CONCRETE PAVEMENT JOINT TYPES AT UTILITY FIXTURES
13C18-07E	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
13C18-07F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)

## Standard Detail Drawing List

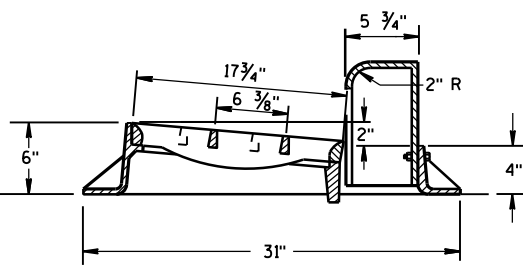
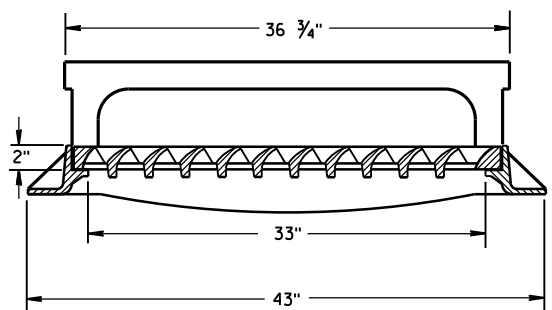
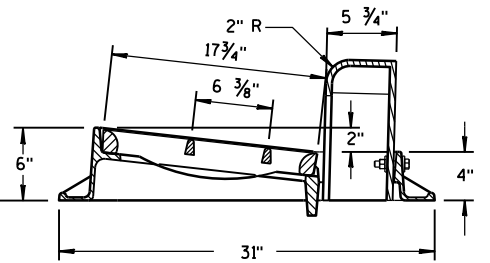
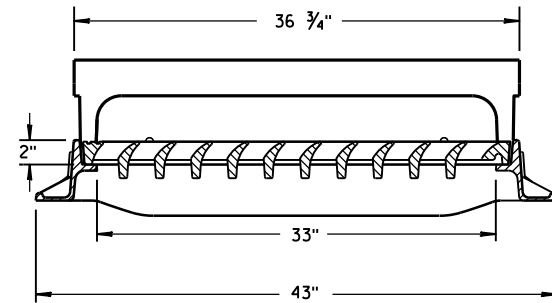
14B45-05L	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-08F	ADVANCED WIDTH RESTRICTION SIGNING
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-22A	LONGITUDINAL MARKING (MAINLINE)
15C08-22B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-06A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-06B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C19-07A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D29-06	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D33-07	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D37-03	TRAFFIC CONTROL, 2-LANE ROUNDABOUT
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS



**NOTE:  
GRATE IS REVERSIBLE.**

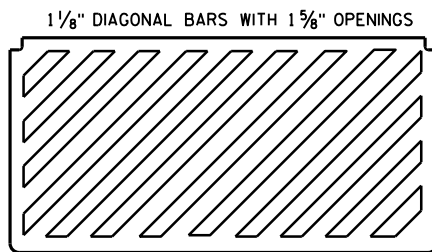


**NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"**

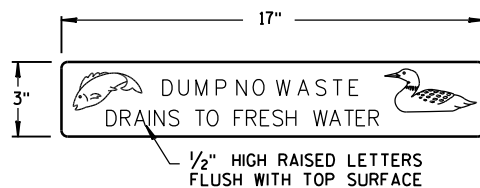


**TYPE "H"**

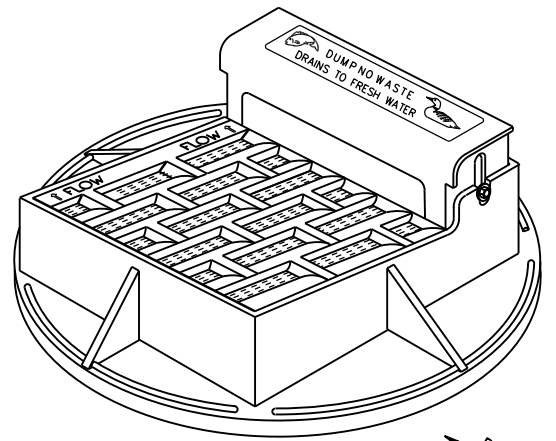
**NOTE: EITHER CASTING IS ACCEPTABLE**



**SPECIAL GRATE FOR  
TYPE "H" COVER**  
(MEASURES 35 1/4" X 17 3/4" X 2")  
(NOTED AS TYPE H-S ON DRAINAGE TABLE)

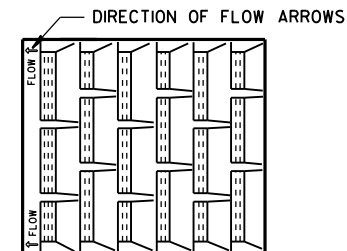


**LOGO DETAIL**

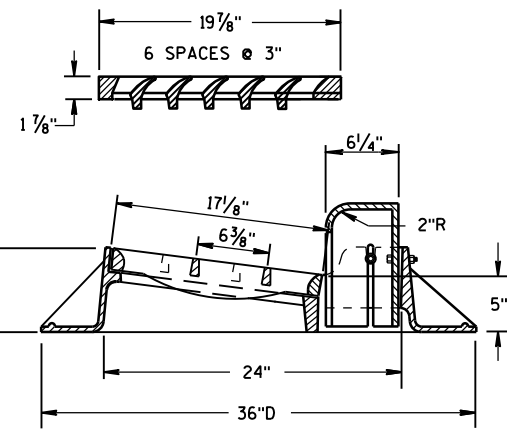
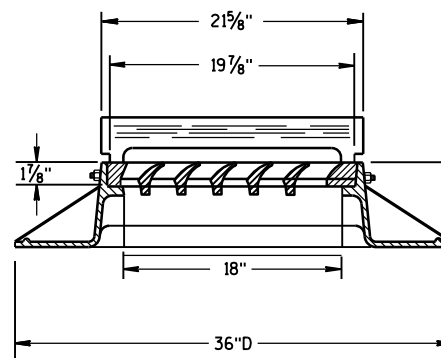


**NOTE: CURB BOX ADJUSTABLE 4" TO 9"**

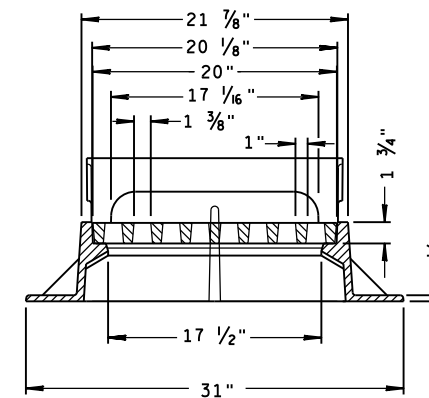
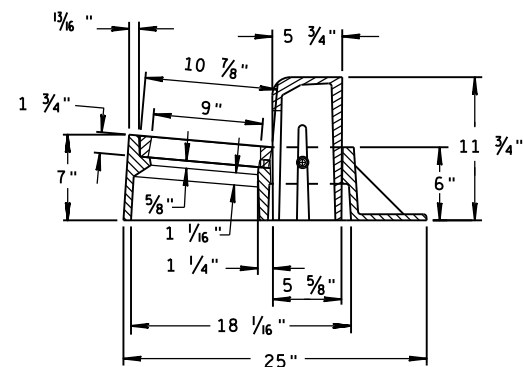
**NOTE:  
GRATE IS REVERSIBLE.**



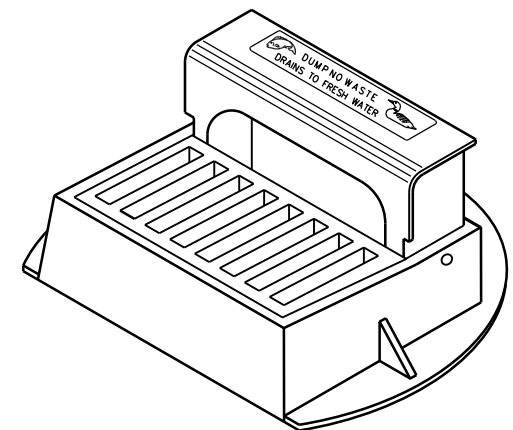
**SPECIAL GRATE FOR  
TYPE "A" COVER**  
(MEASURES 19 3/4" X 17" X 1 1/8")  
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



**TYPE "A"**



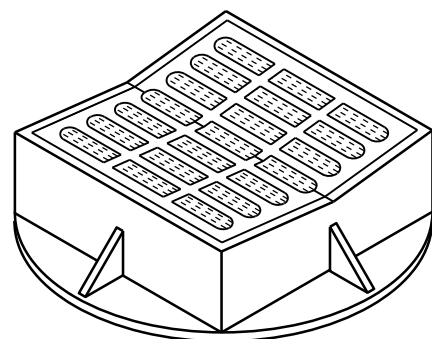
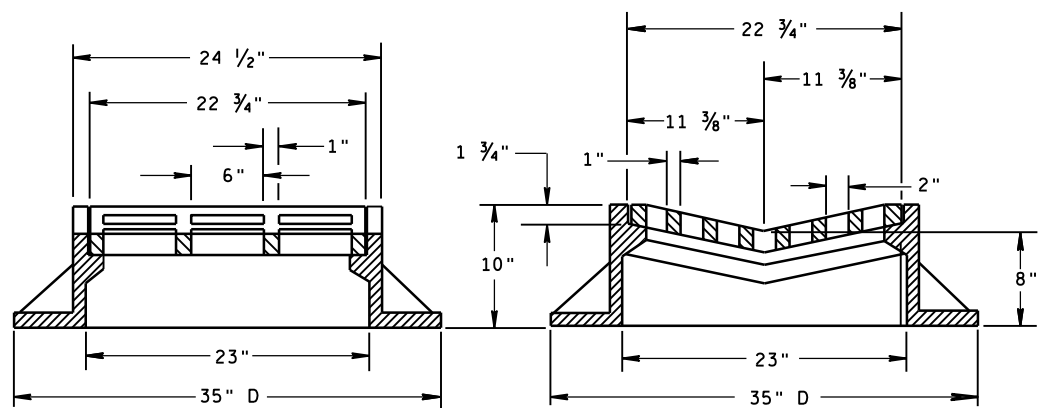
**TYPE "Z"**



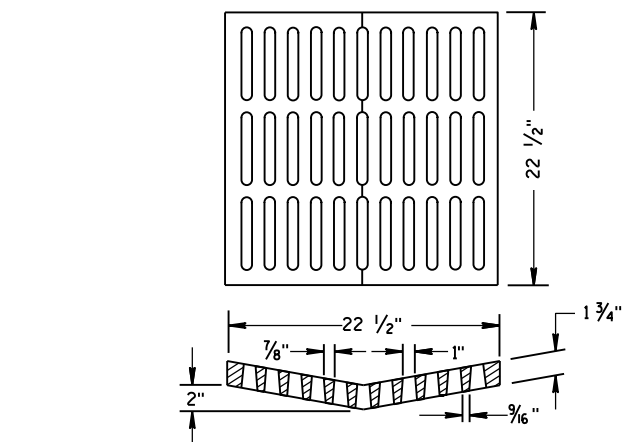
**INLET COVERS  
TYPE A, H, A-S, H-S & Z**

**STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION**

**APPROVED**  
11-27-13  
DATE  
/S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER  
FHWA

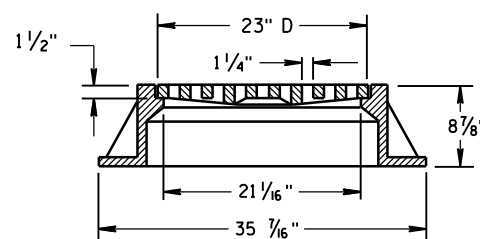
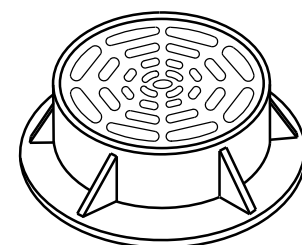
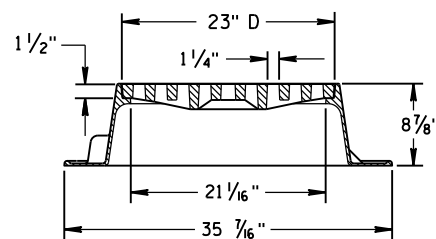
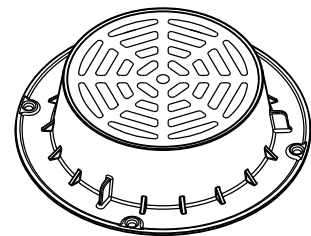


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.  
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

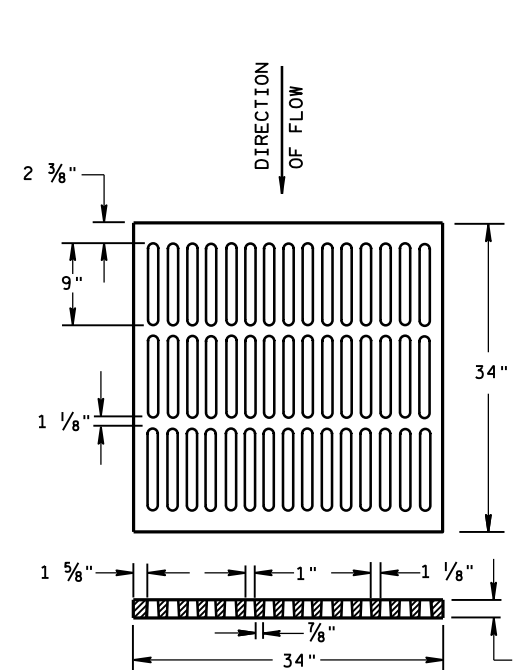
NOTE: EITHER CASTING IS ACCEPTABLE

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

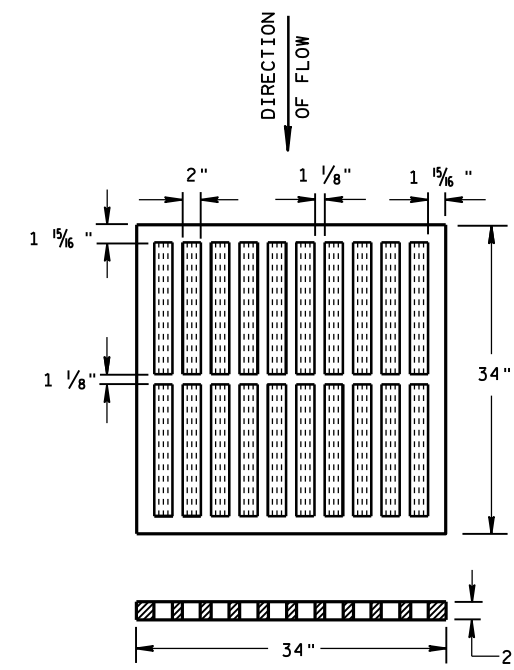
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



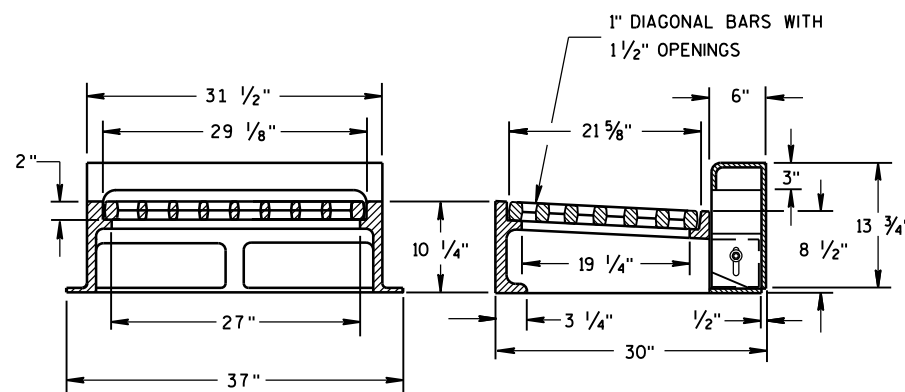
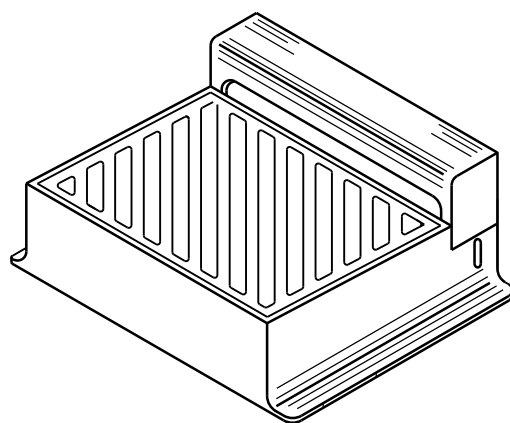
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED  
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS  
NOTED AS TYPE MS ON DRAINAGE TABLE



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

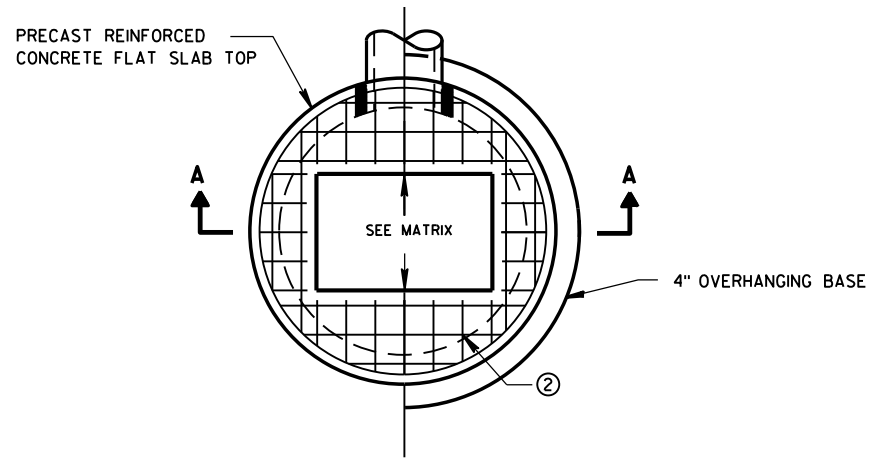
TYPE "WM"

DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

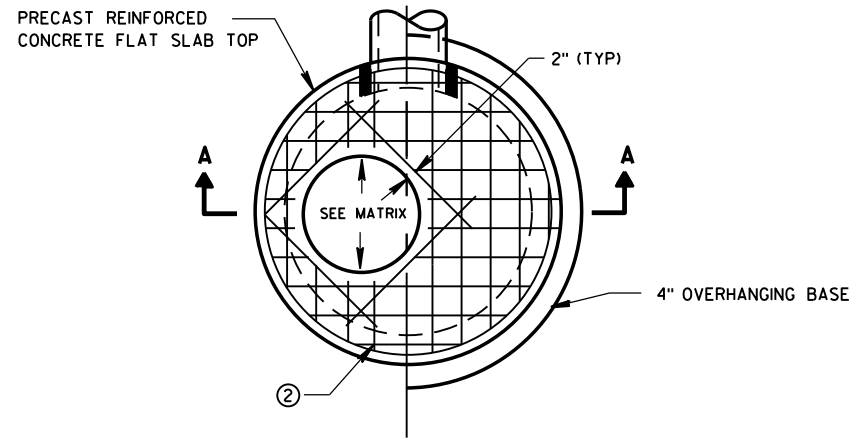
INLET COVERS  
TYPE B, B-A, C,  
MS, MS-A, & WM

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

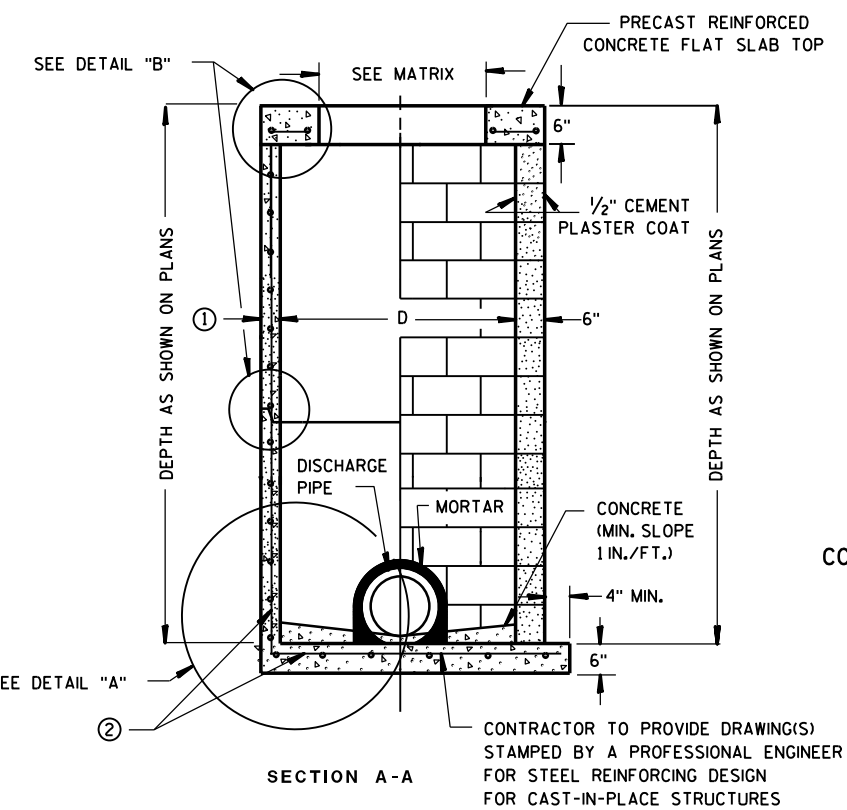
APPROVED  
DATE 11/27/2013 /S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT ENGINEER  
FHWA



PLAN VIEW RECTANGULAR OPENING



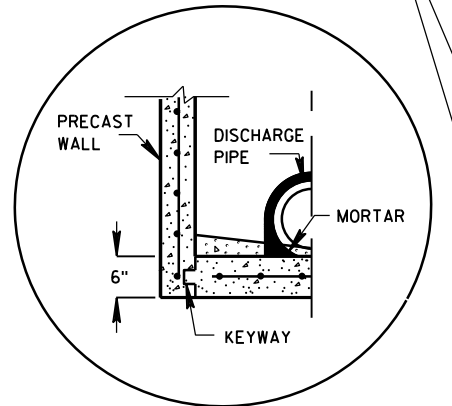
PLAN VIEW CIRCULAR OPENING



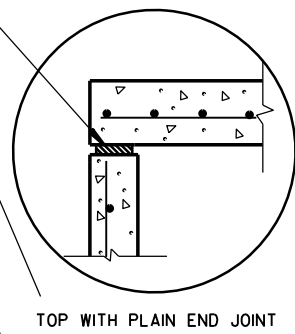
**PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE**      **CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②**

CIRCULAR INLETS W/ FLAT TOP

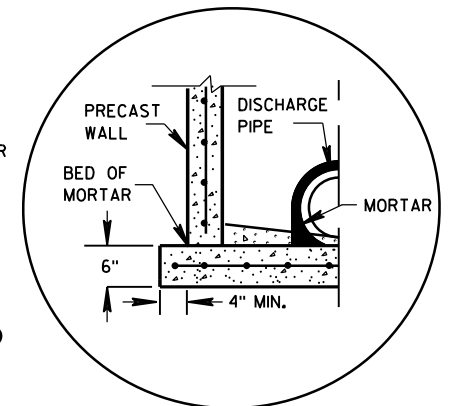
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)



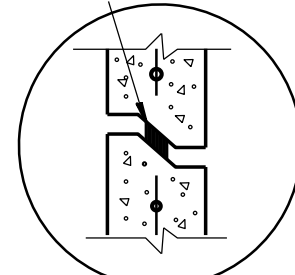
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



TOP WITH TONGUE AND GROOVE JOINT



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "A"

DETAIL "B"

INLETS 3-FT AND 4-FT DIAMETER

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

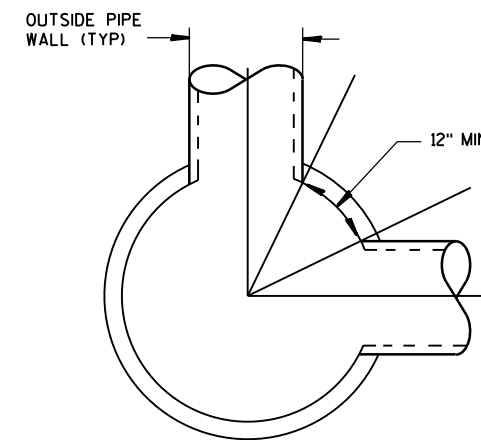
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

**INLET COVER OPENING MATRIX**

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X	X	
	2X2.5			X								
	2X3						X					
	2.5X3					X						



DETAIL "C"

**PIPE MATRIX**

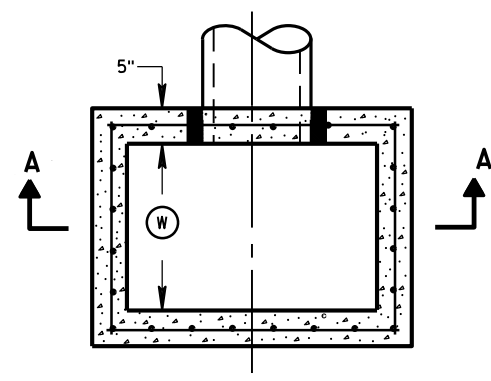
INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

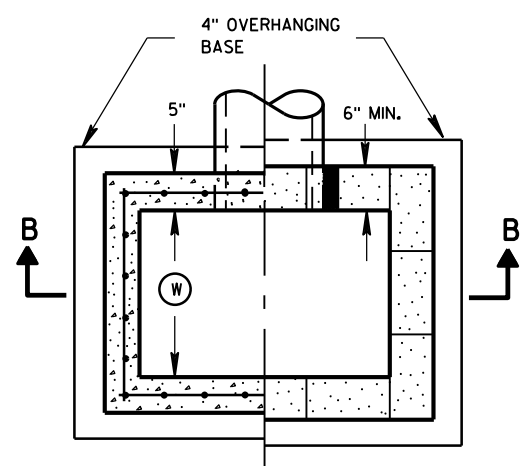
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED  
 Sept., 2016 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR  
 FHWA

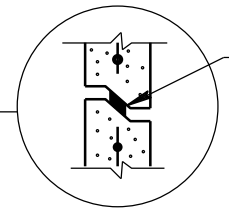




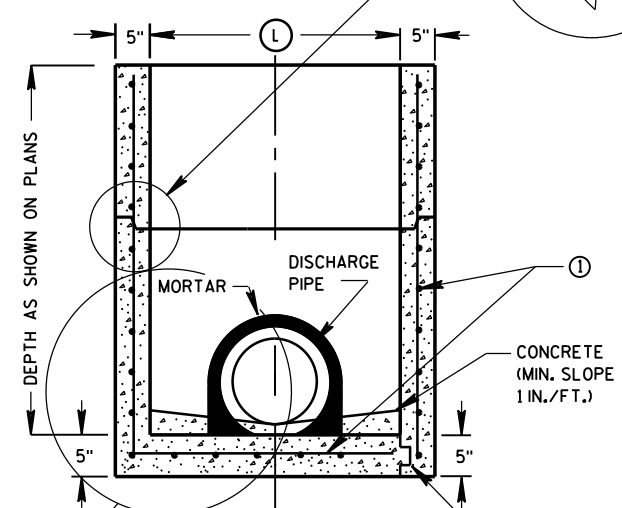
PLAN VIEW



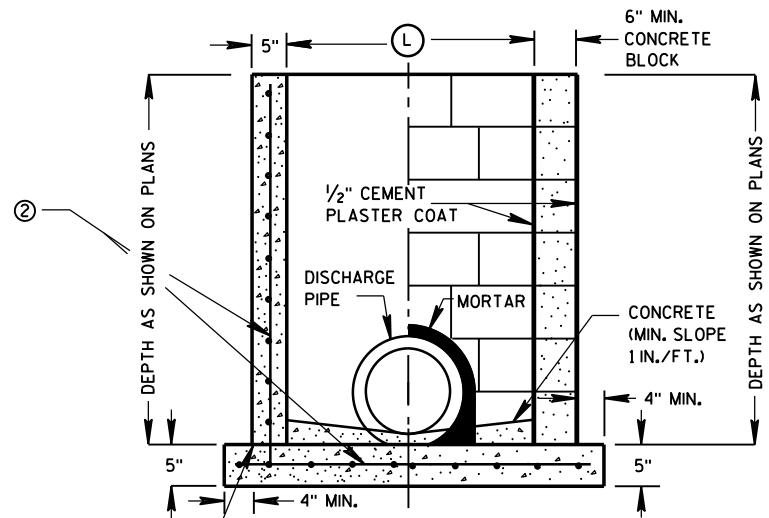
PLAN VIEW



RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



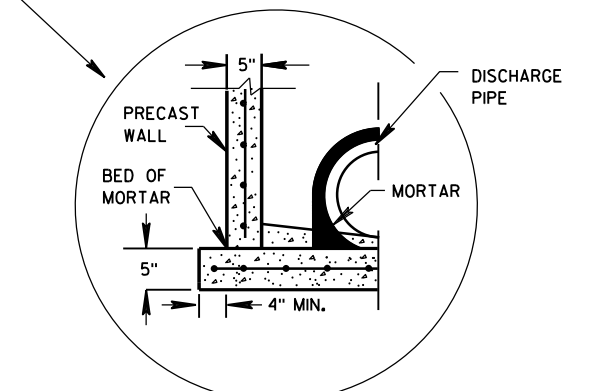
SECTION A-A



SECTION B-B

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE  
 PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE  
 KEYWAY  
 CONCRETE (MIN. SLOPE 1 IN./FT.)

CONSTRUCTION JOINT  
 CAST-IN-PLACE REINFORCED CONCRETE  
 CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ①



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

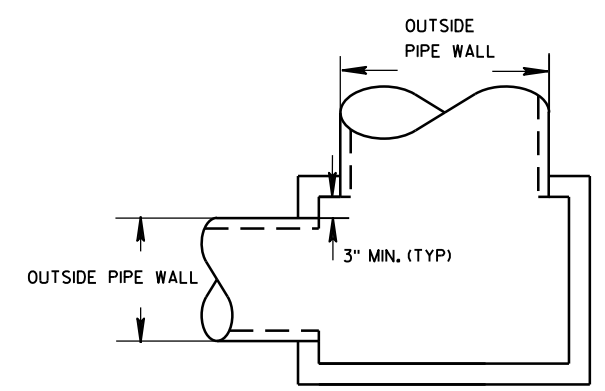
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

**INLET COVER MATRIX**

INLET SIZE	INLET COVER TYPE		ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

**PIPE MATRIX**

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



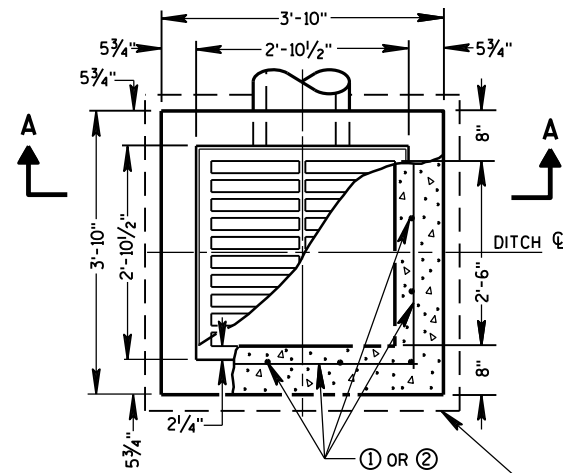
DETAIL "A"

**INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT**

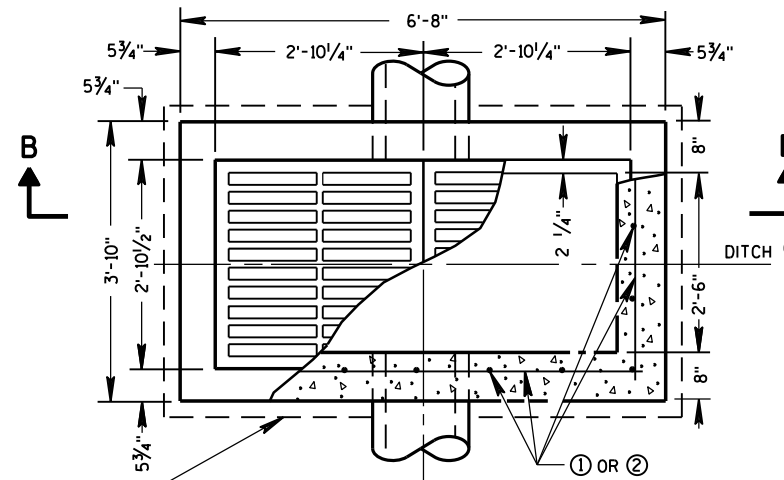
**INLETS 2X2-FT, 2X2.5-FT,  
2X3-FT AND 2.5X3-FT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
 Sept., 2016 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT  
 FHWA UNIT SUPERVISOR

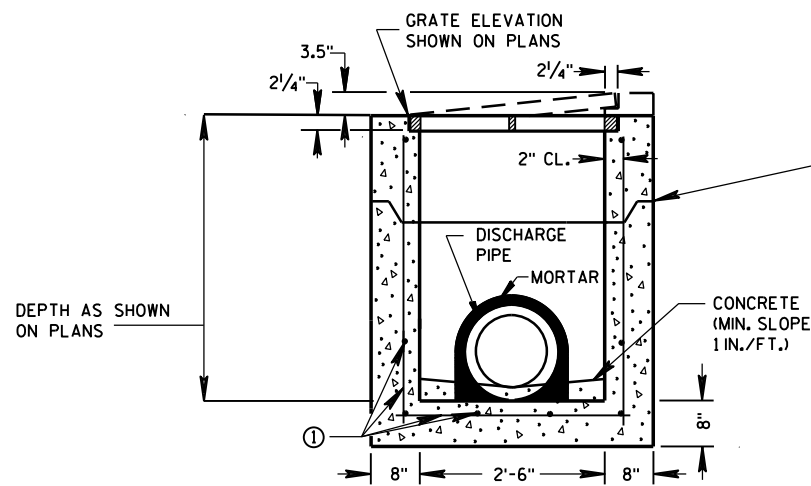


PLAN VIEW

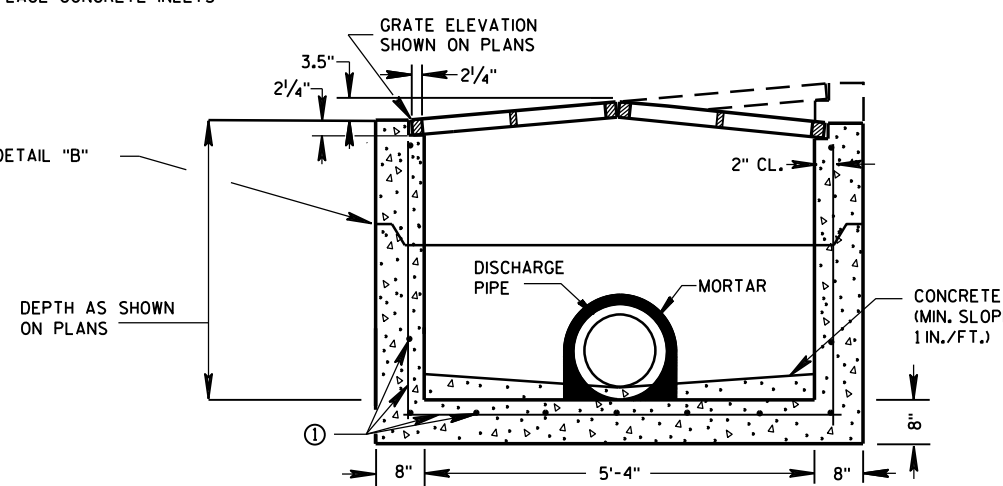


PLAN VIEW

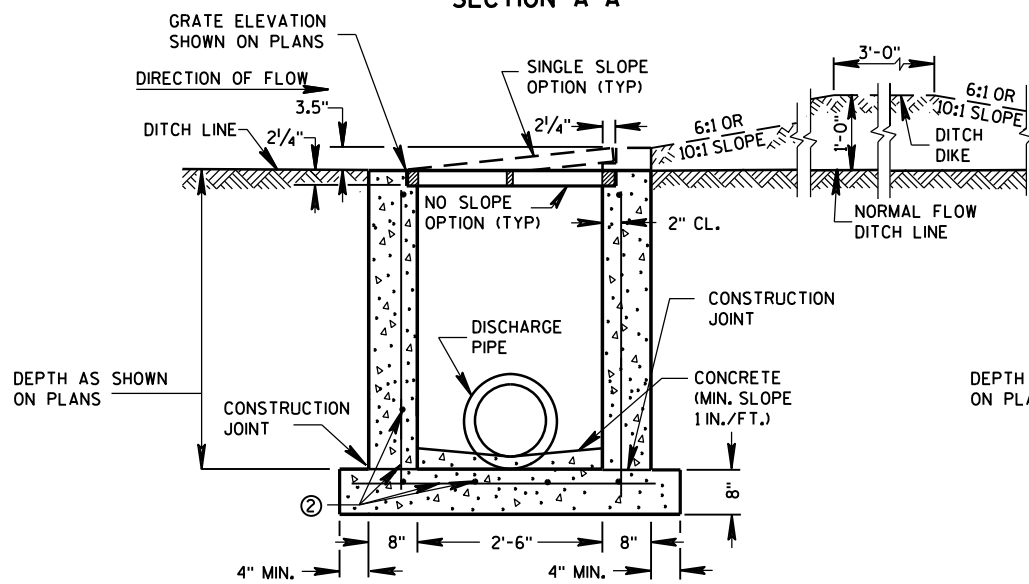
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



PRECAST REINFORCED CONCRETE SECTION A-A

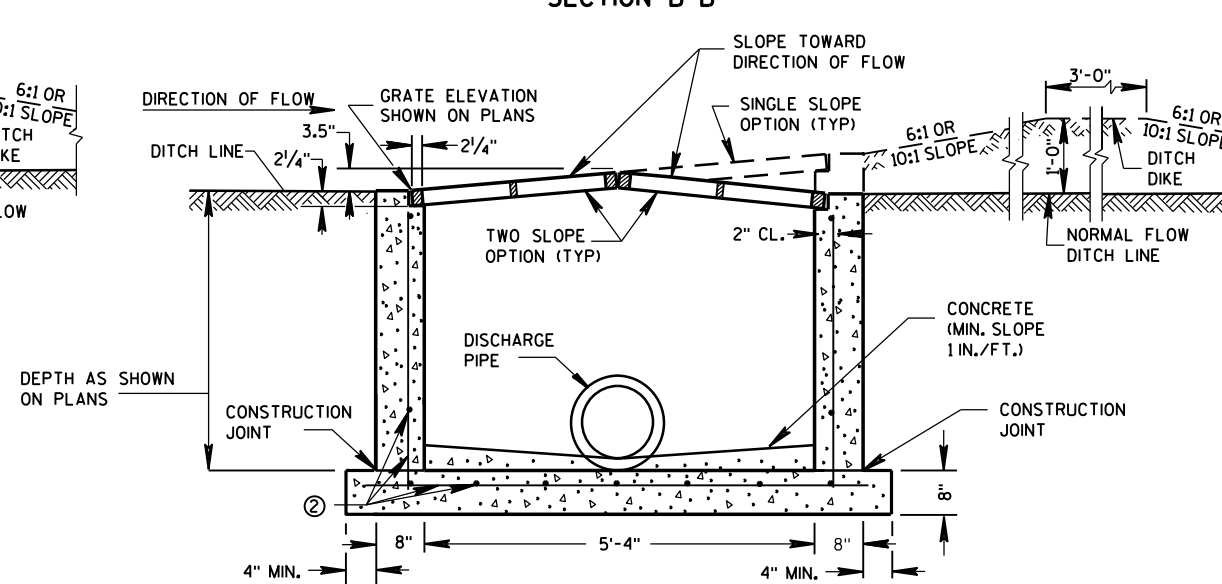


PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 2 GRATE

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, IG-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT. BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

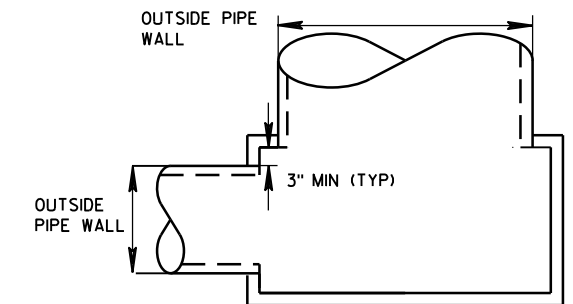
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

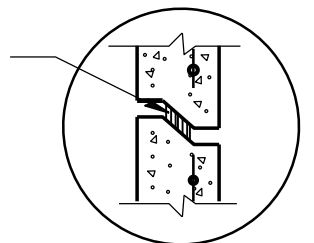
**PIPE MATRIX**

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

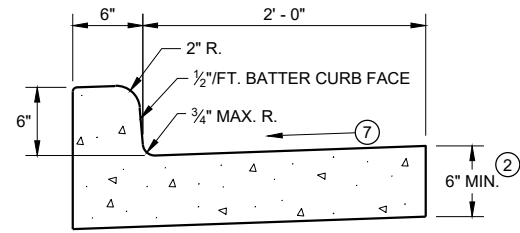


DETAIL "B"

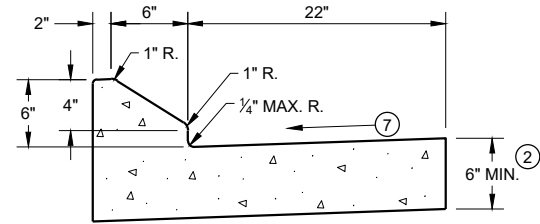
**INLETS MEDIAN 1 AND 2 GRATE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

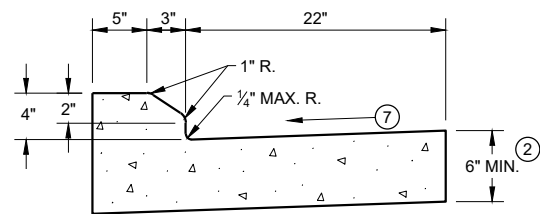
APPROVED  
Sept., 2016 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



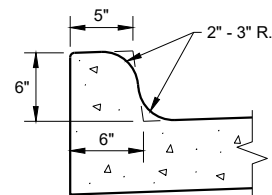
TYPES A<sup>1</sup> & D



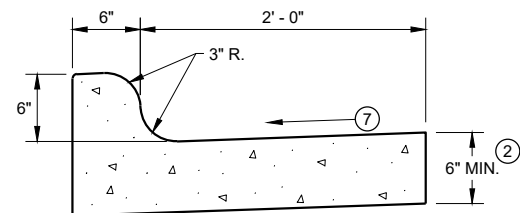
6" SLOPED CURB TYPES G<sup>1</sup> & J



4" SLOPED CURB TYPES G<sup>1</sup> & J

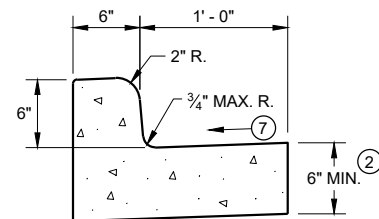


TYPES K<sup>1</sup> & L  
(OPTIONAL CURB SHAPE)



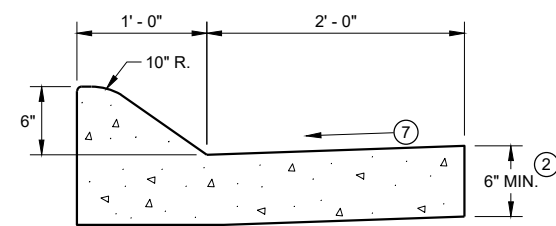
TYPES K<sup>1</sup> & L

CONCRETE CURB AND GUTTER 30"

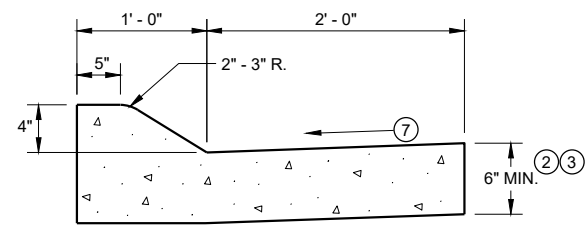


TYPES A<sup>1</sup> & D

CONCRETE CURB AND GUTTER 18"

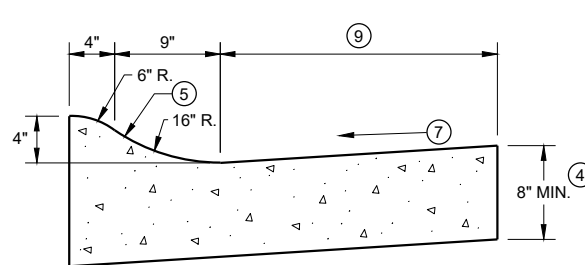


6" SLOPED CURB TYPES A<sup>1</sup> & D



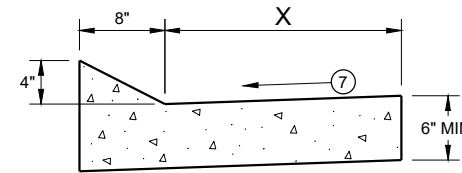
4" SLOPED CURB TYPES A<sup>1</sup> & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R<sup>1</sup> & T

TBT & TBTT	X
30"	22"
36"	28"

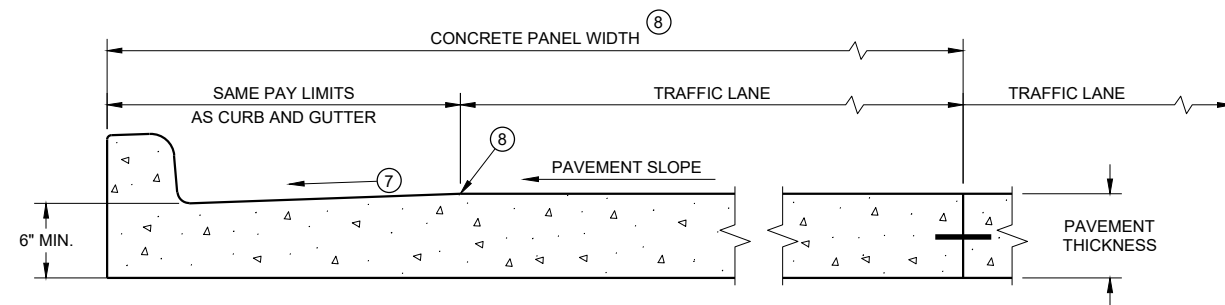


TYPES TBT & TBTT<sup>1</sup>

CONCRETE CURB AND GUTTER

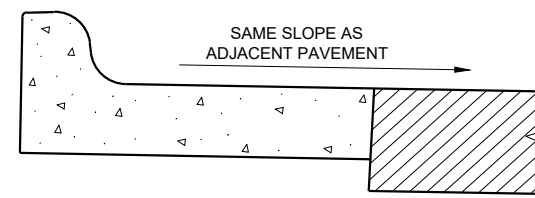
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT \*  
WITH INTEGRAL CURB AND GUTTER

\* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER<sup>6</sup>  
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

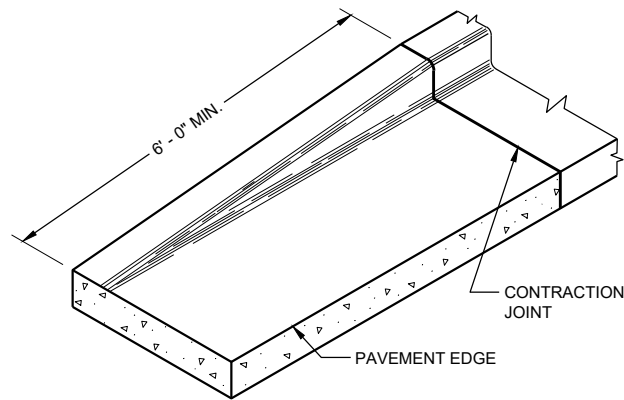
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

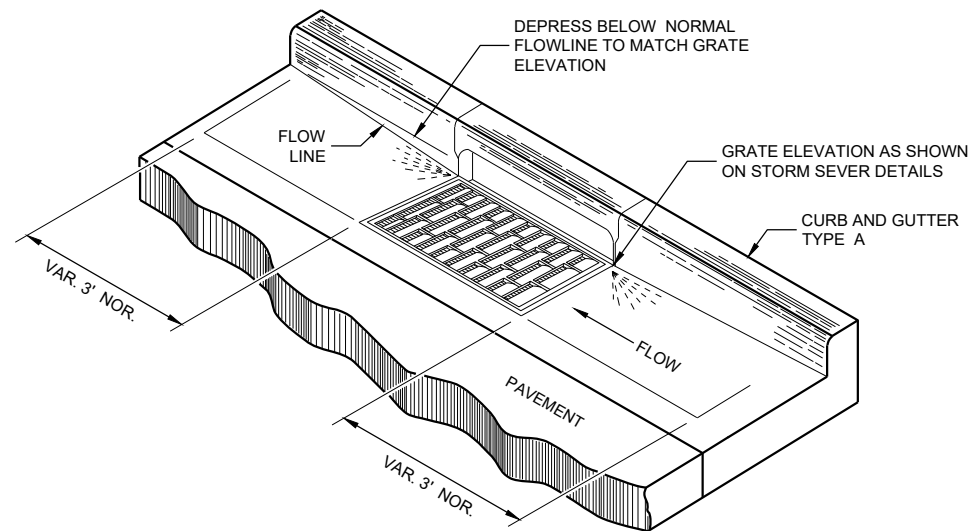
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES  
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES



**END SECTION CURB AND GUTTER**



**DETAIL OF CURB AND GUTTER AT INLETS**  
(TYPICAL H INLET COVER SHOWN)

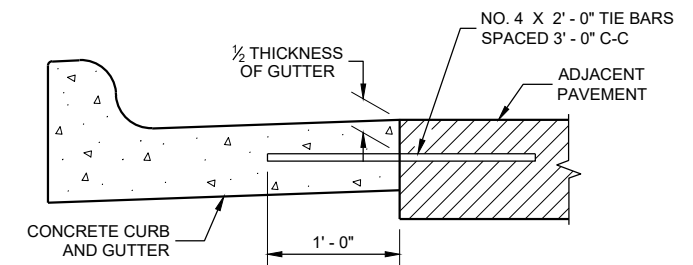
**GENERAL NOTES**

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

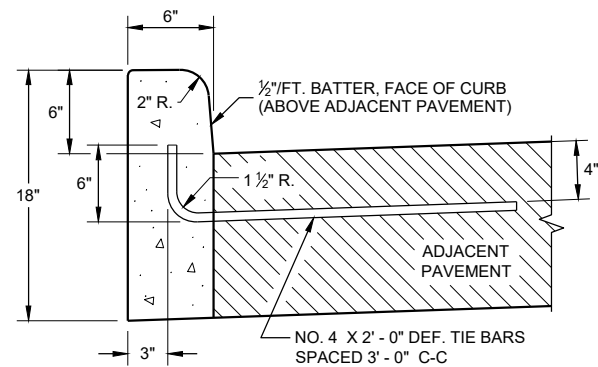
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

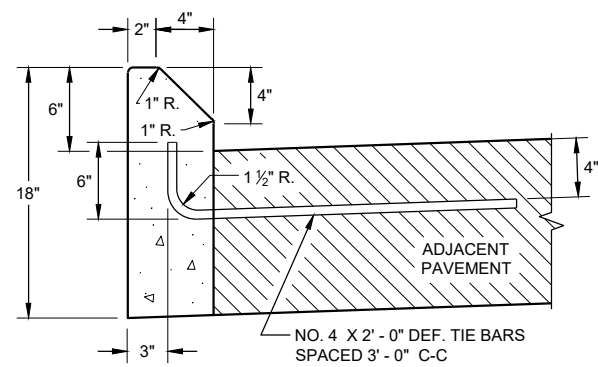
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



**TYPICAL TIE BAR LOCATION** ①

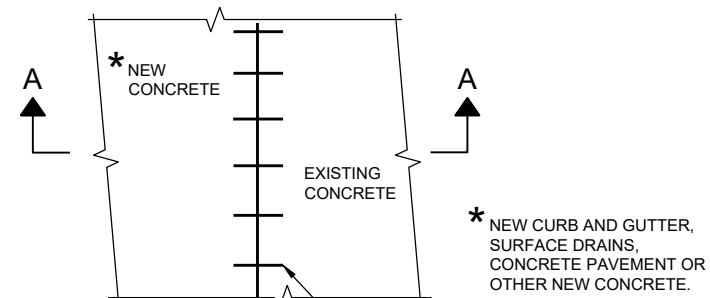


**TYPES A ① & D**

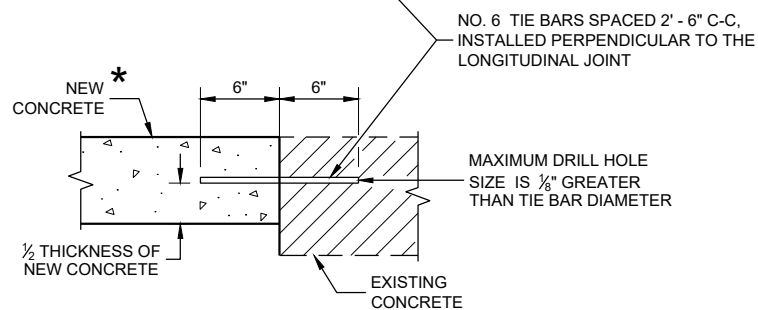


**TYPES G ① & J**

**CONCRETE CURB**

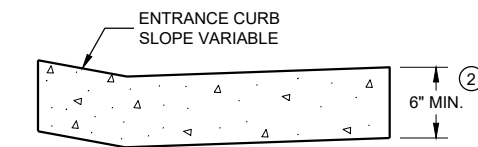


**PLAN VIEW**



**SECTION A - A**

**TIE BARS DRILLED INTO EXISTING PAVEMENT**



**DRIVEWAY ENTRANCE CURB** ⑨  
(WHEN DIRECTED BY THE ENGINEER)

**CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS**

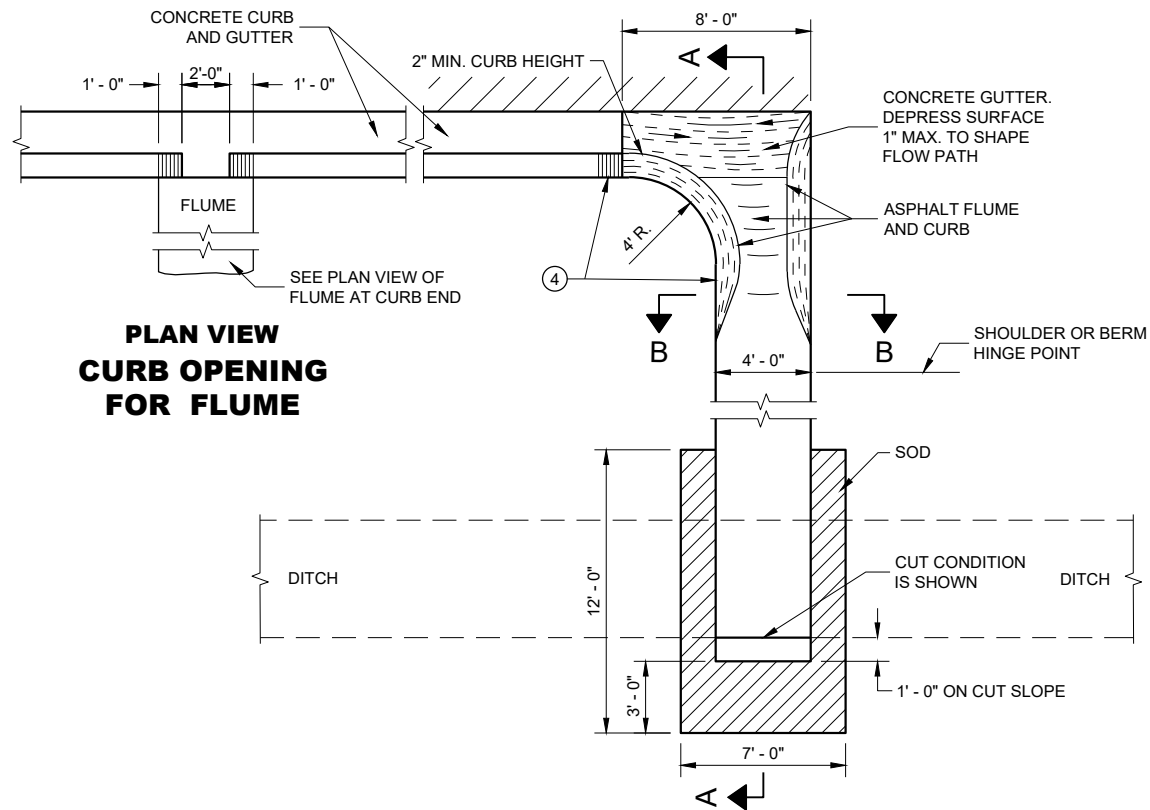
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2021 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

FHWA

NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

### ASPHALTIC FLUME



**PLAN VIEW  
CURB OPENING  
FOR FLUME**

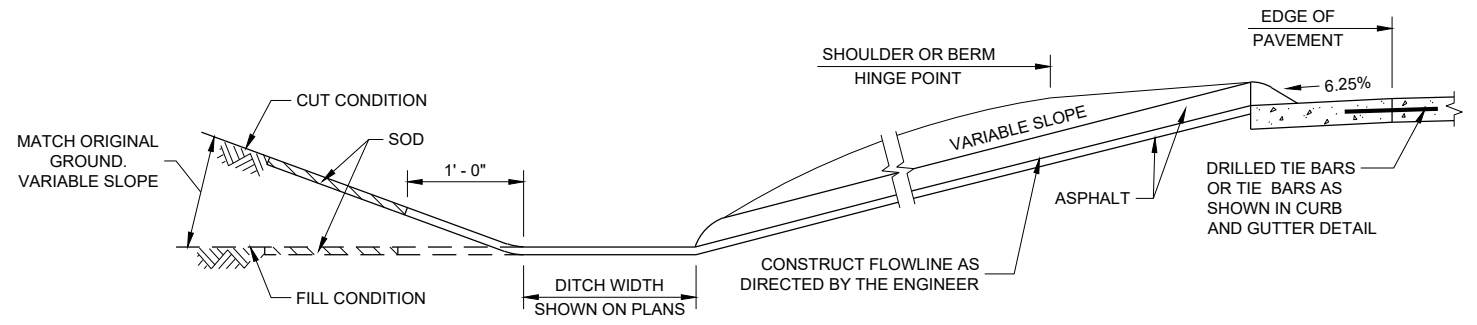
**PLAN VIEW  
FLUME AT CURB END**

### GENERAL NOTES

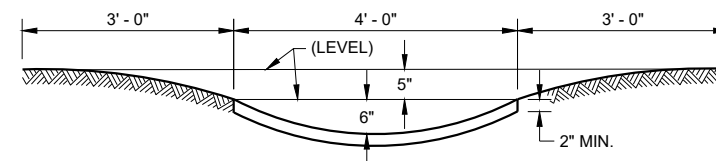
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

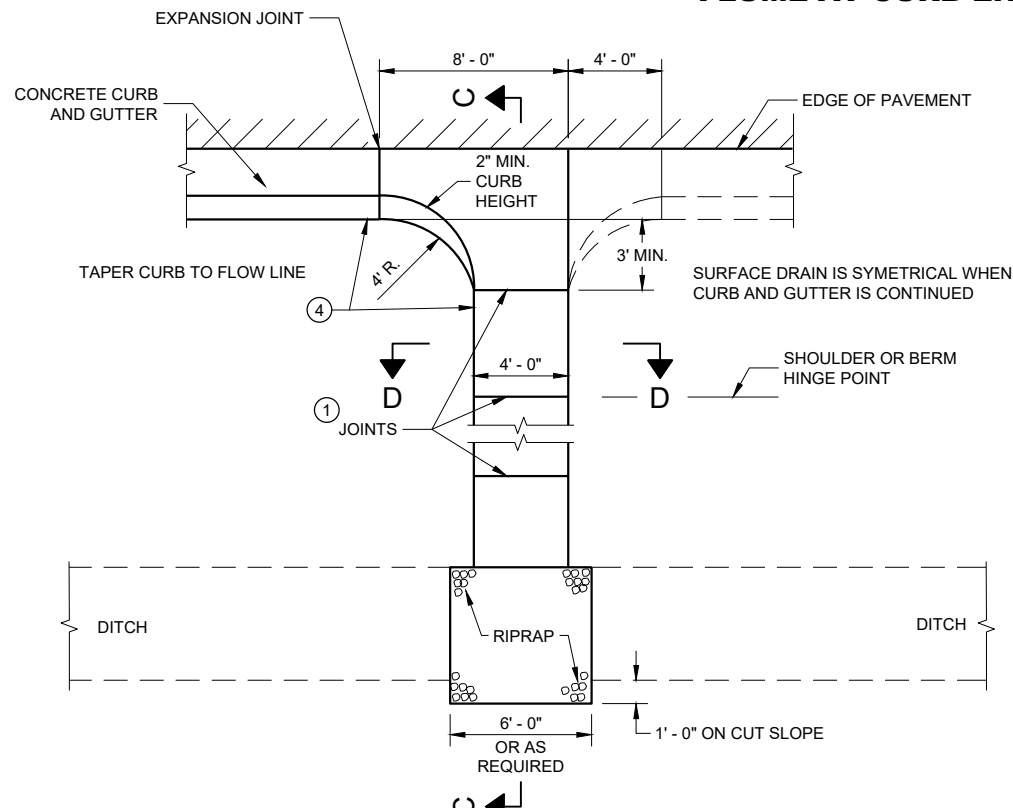
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



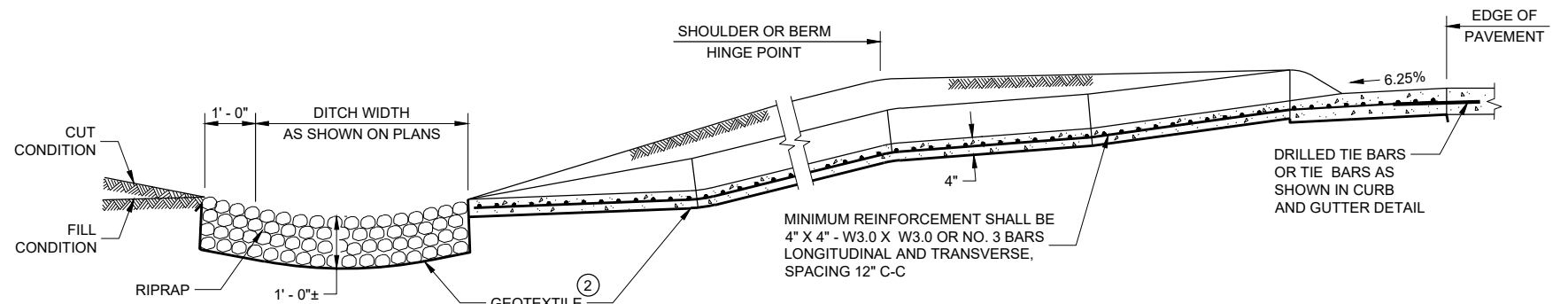
**SECTION A - A**



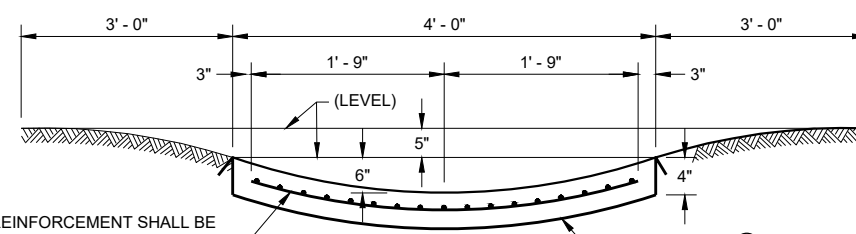
**SECTION B - B**



**PLAN VIEW  
CONCRETE SURFACE DRAIN**



**SECTION C - C**



**SECTION D - D**

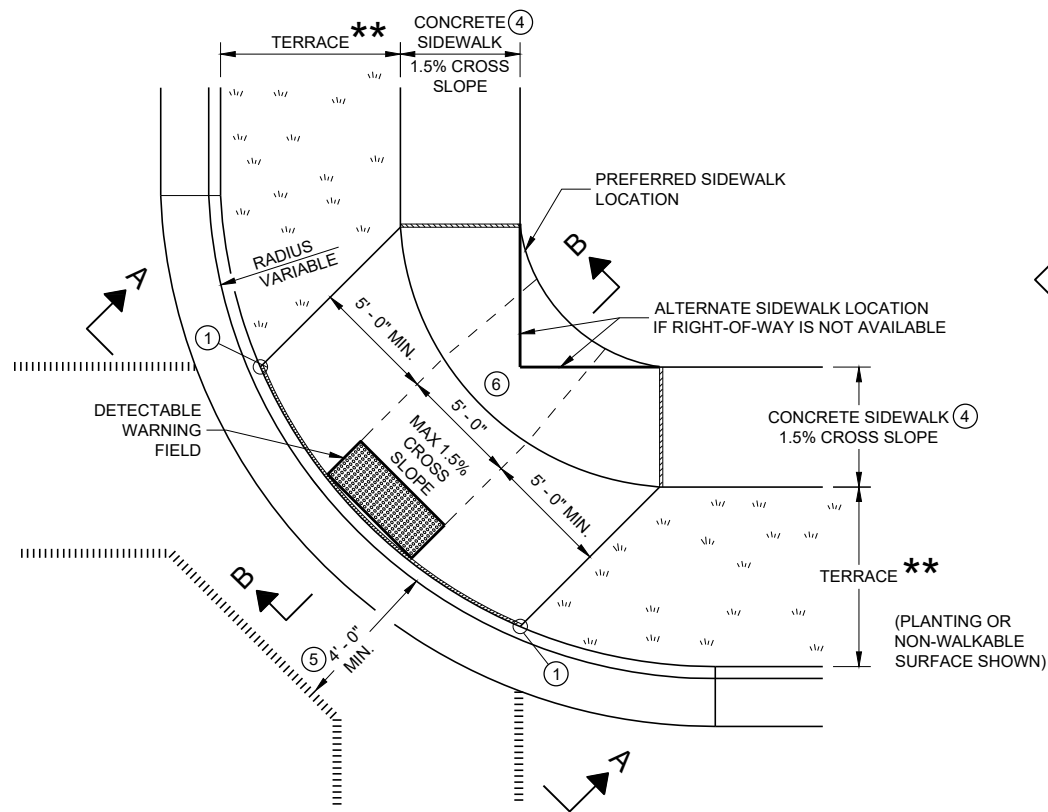
MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C

### CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

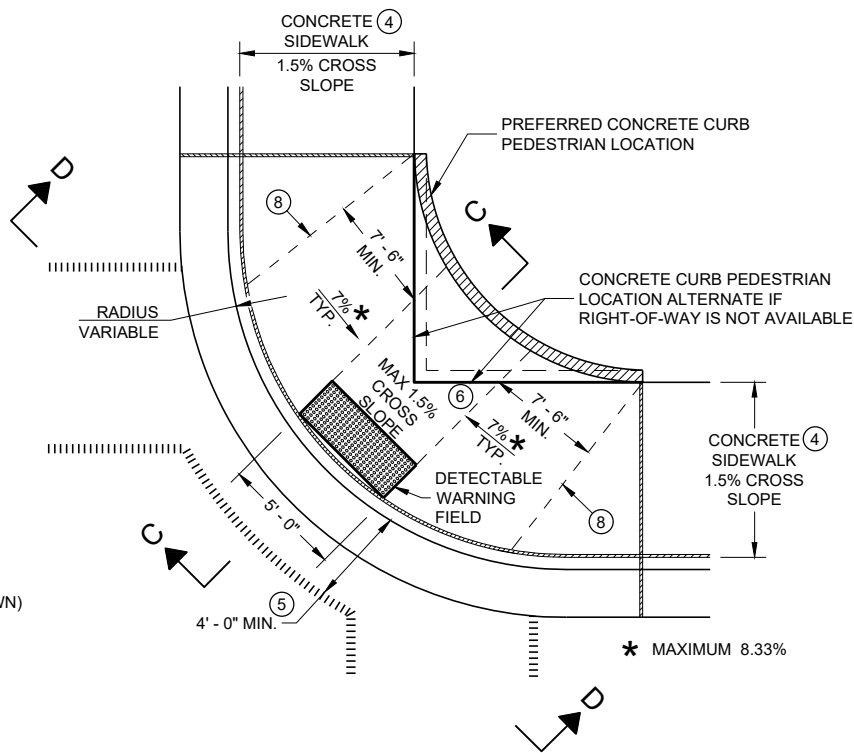
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2021 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

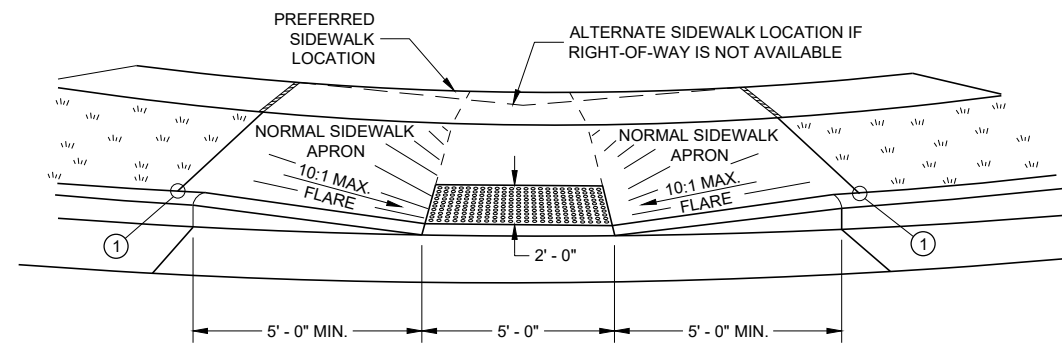
FHWA



**PLAN VIEW**  
**CURB RAMP TYPE 1**  
**(CENTER OF CORNER RADIUS)**

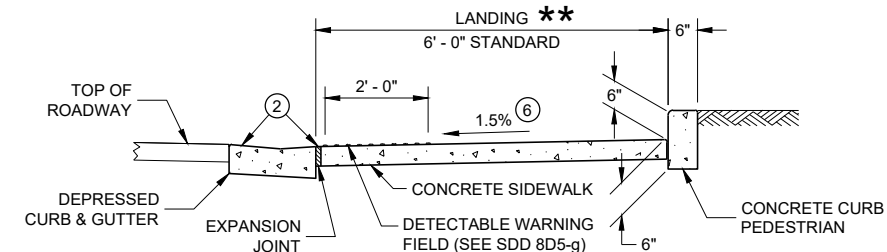


**PLAN VIEW**  
**CURB RAMP TYPE 1 - A**  
**(NO TERRACE)**

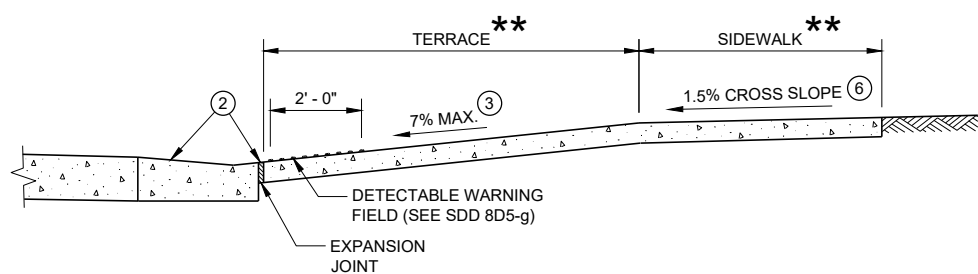


**VIEW A - A FOR TYPE 1**

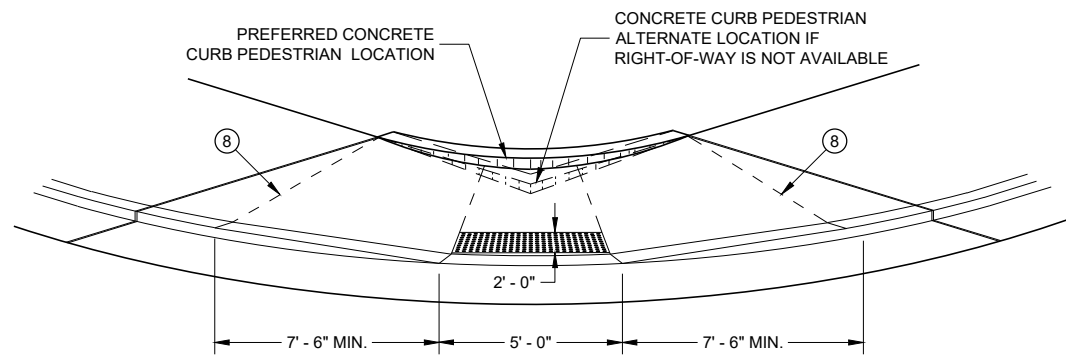
\*\* WIDTH SHOWN ELSEWHERE  
IN THE PLANS



**SECTION C - C FOR TYPE 1 - A**



**SECTION B - B FOR TYPE 1**



**VIEW D - D FOR TYPE 1 - A**

**GENERAL NOTES**

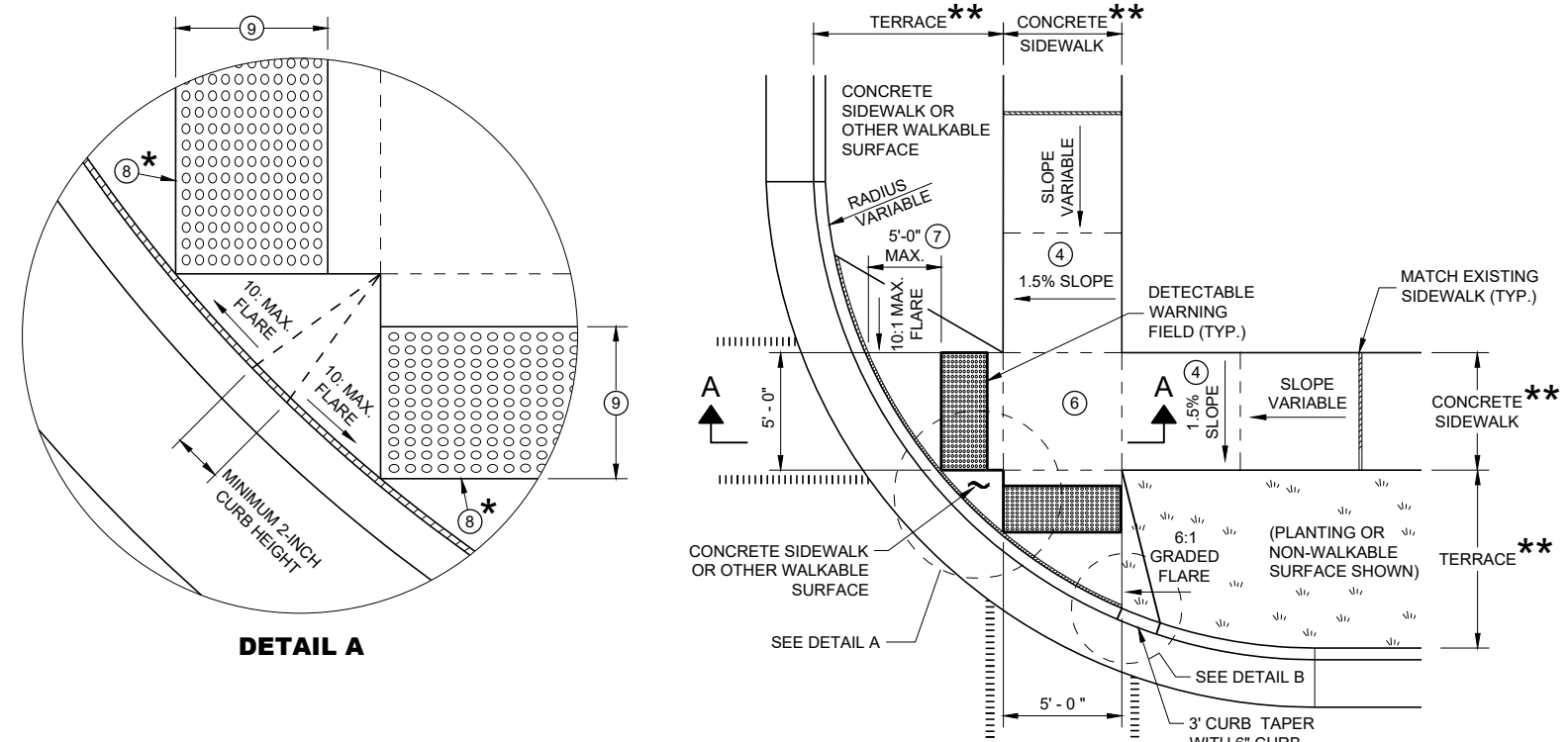
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.
- TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.
- DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.
- SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
  - ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
  - ③ MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
  - ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
  - ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
  - ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
  - ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

**LEGEND**

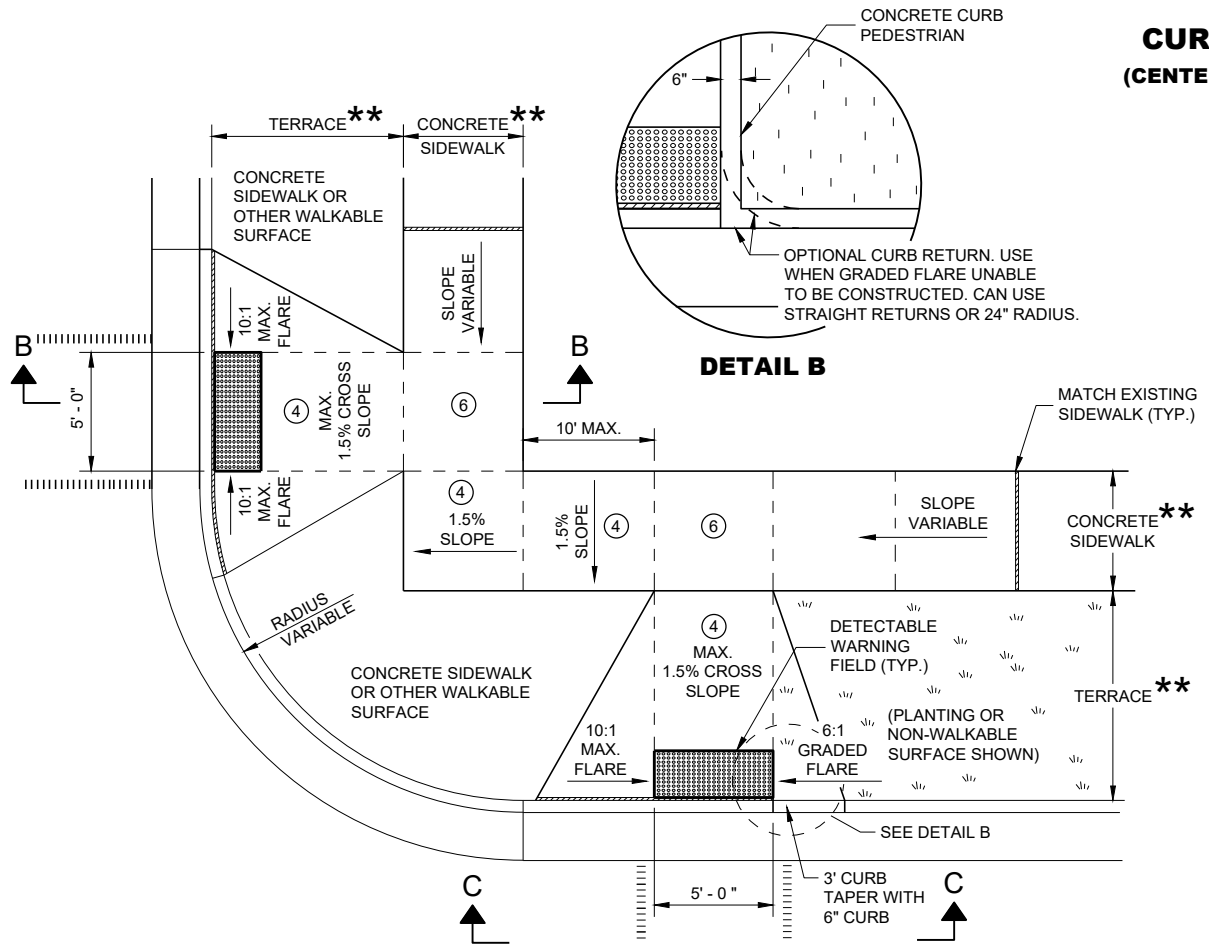
- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS**  
**TYPE 1 AND 1-A**

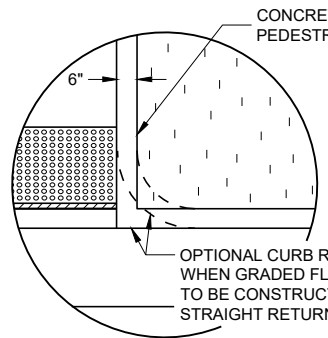
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**PLAN VIEW CURB RAMP TYPE 2 (CENTER OF CORNER RADIUS)**



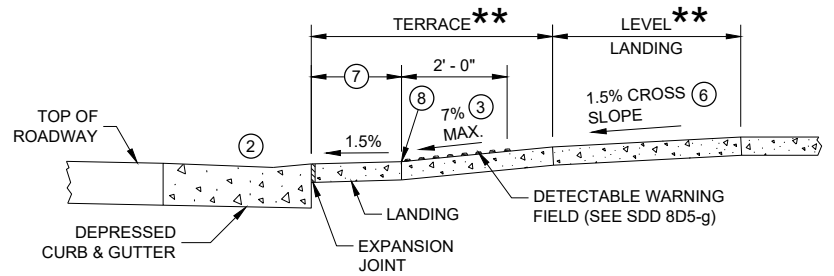
**PLAN VIEW CURB RAMP TYPE 3 (OUTSIDE OF CROSSWALK AREA)**



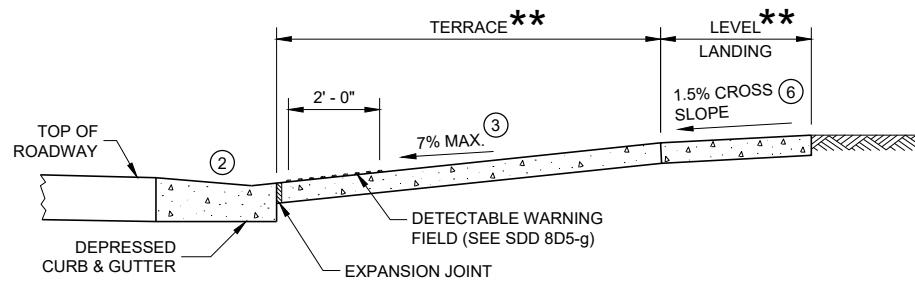
**DETAIL B**

**GENERAL NOTES**

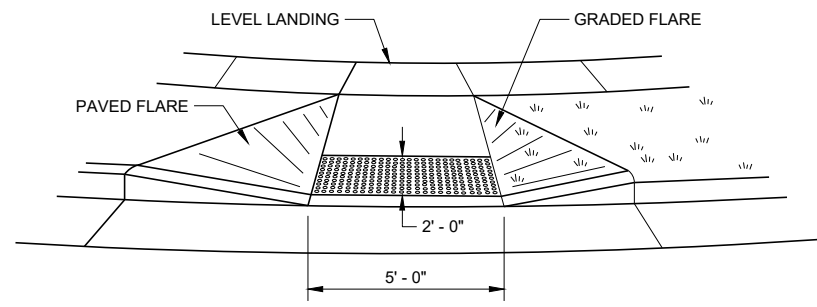
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



**SECTION A - A FOR TYPE 2**



**SECTION B - B FOR TYPE 3**



**VIEW C - C FOR TYPE 3**

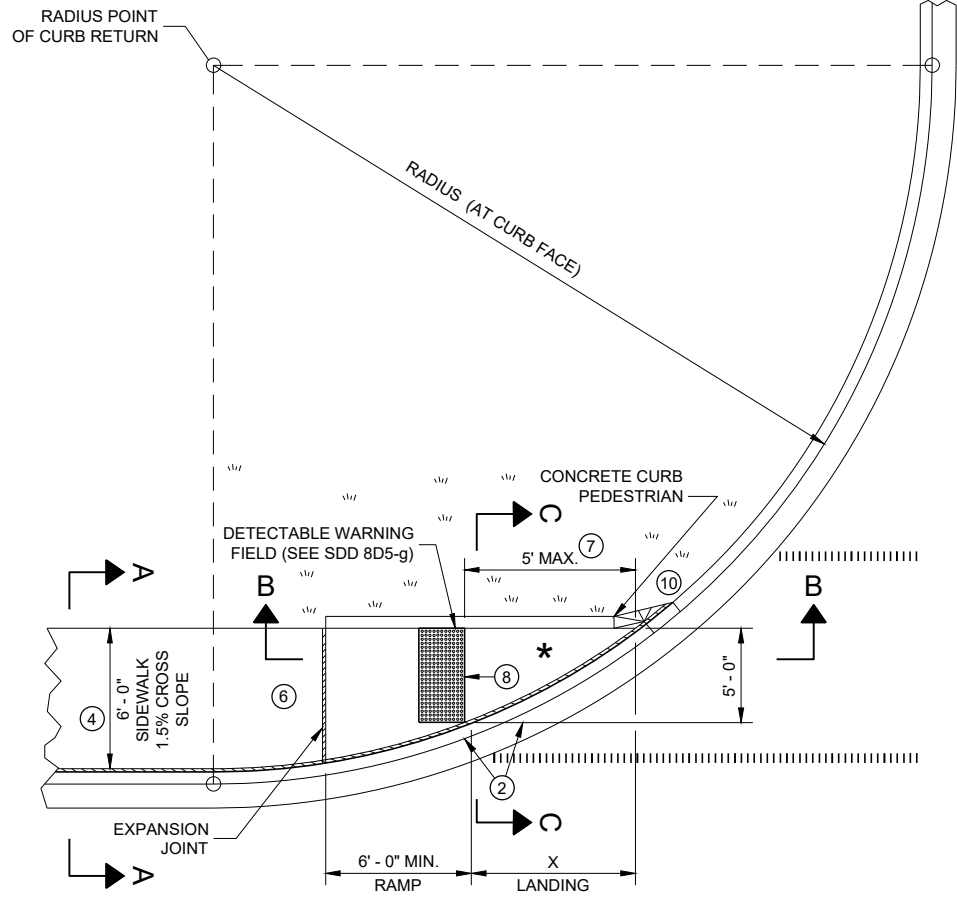
- \* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- \*\* WIDTH SHOWN ELSEWHERE IN THE PLANS

**LEGEND**

- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS  
TYPE 2 AND 3**

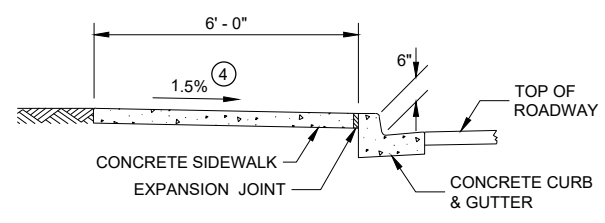
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**PLAN VIEW  
CURB RAMP TYPE 4A**

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



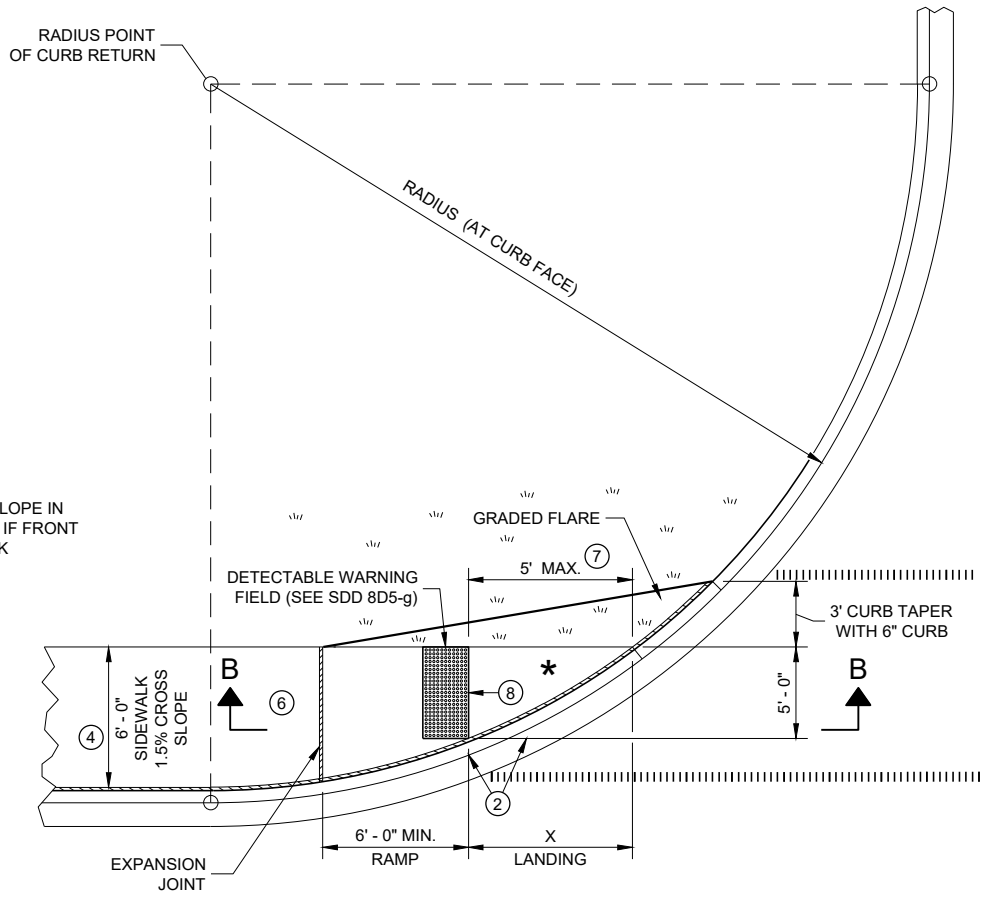
**SECTION A - A FOR TYPE 4A**

**GENERAL NOTES**

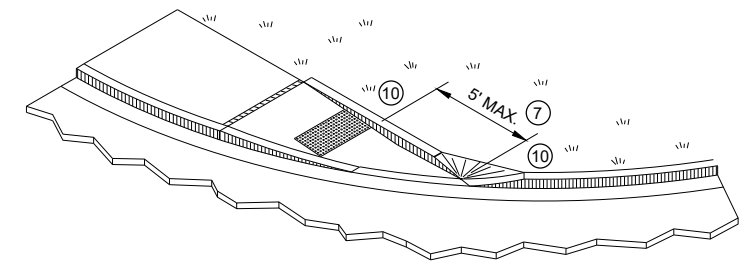
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

**LEGEND**

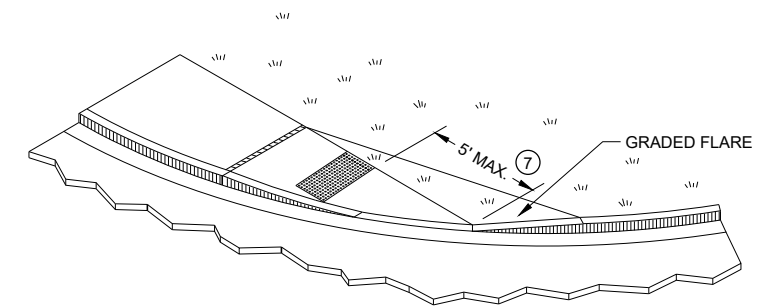
- 1/2" EXPANSION JOINT SIDEWALK
- - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)



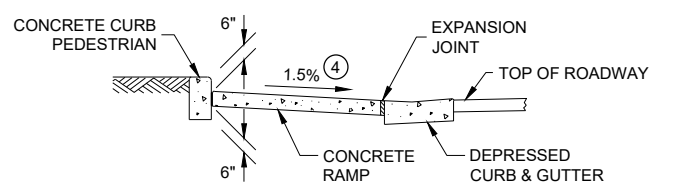
**PLAN VIEW  
CURB RAMP TYPE 4A1**



**ISOMETRIC VIEW FOR TYPE 4A**

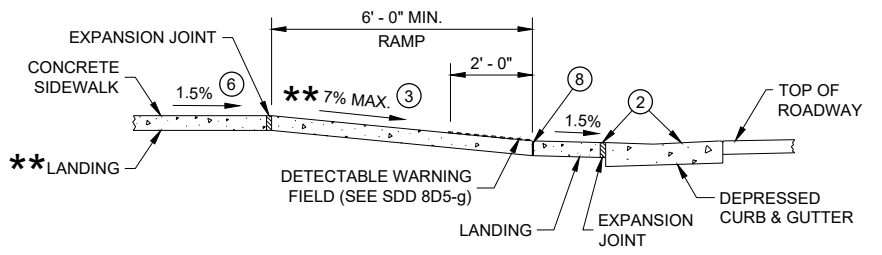


**ISOMETRIC VIEW FOR TYPE 4A1**



**SECTION C - C FOR TYPE 4A**

\* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK



**SECTION B - B FOR  
TYPE 4A AND TYPE 4A1**

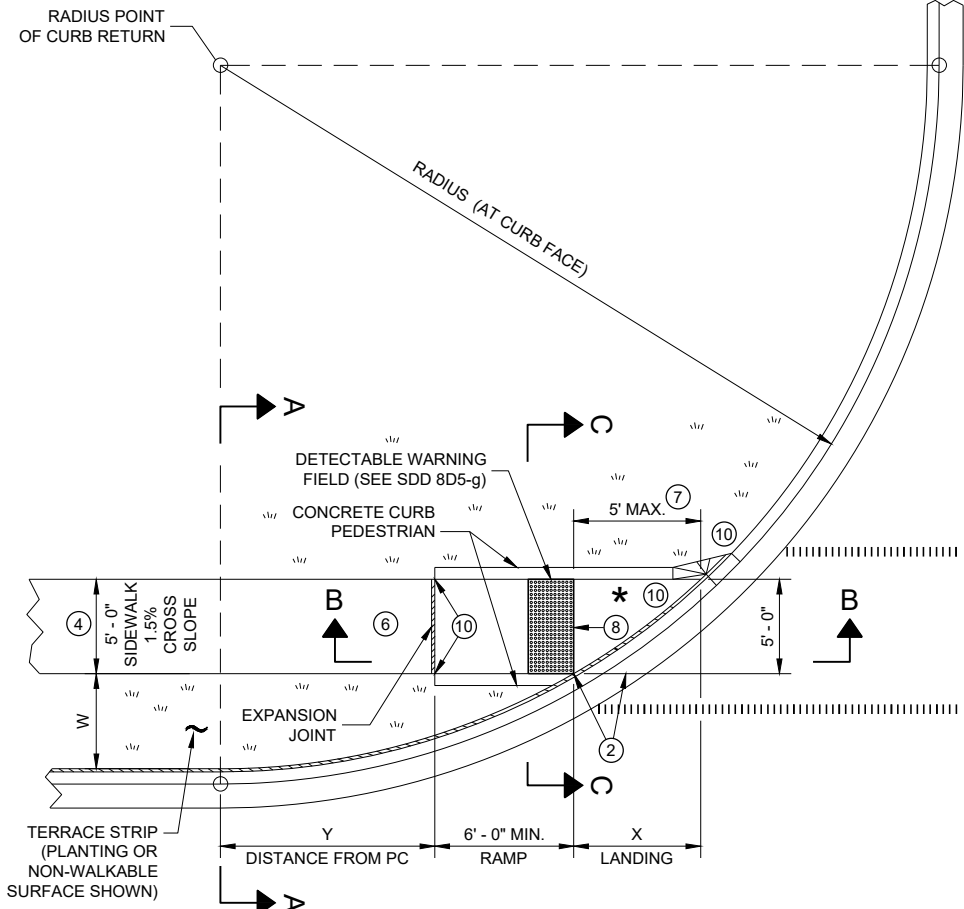
\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

**CURB RAMPS  
TYPE 4A AND 4A1**

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DEPARTMENT OF TRANSPORTATION



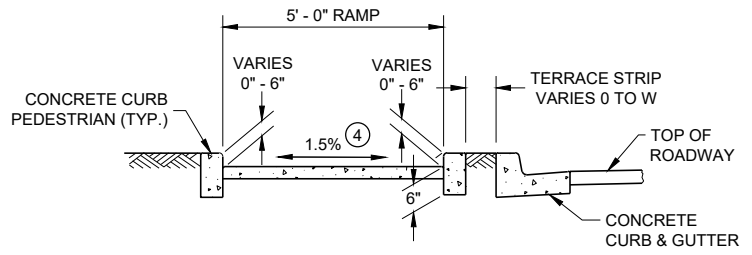


**PLAN VIEW CURB RAMP TYPE 4B**

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET	5' - 9 3/4"	3' - 6 1/2"	4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET			6' - 9 1/4"	7' - 11 1/4"	6' - 0 1/4"	9' - 8"	5' - 5"	11' - 1 3/4"	4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET									6' - 1 3/4"	15' - 8 1/2"	5' - 8"	17' - 2"	5' - 3"	18' - 5 3/4"	4' - 10 3/4"	19' - 8 1/4"
50 FEET															5' - 10 1/4"	23' - 2"

INTERMEDIATE RADII CAN BE INTERPOLATED  
 DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH  
 DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

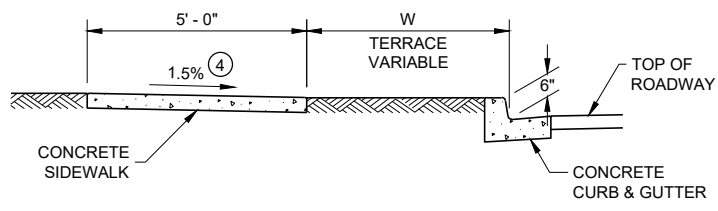
- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
  - CONTRACTION JOINT SIDEWALK
  - PAVEMENT MARKING CROSSWALK (WHITE)



**SECTION C - C FOR TYPE 4B**

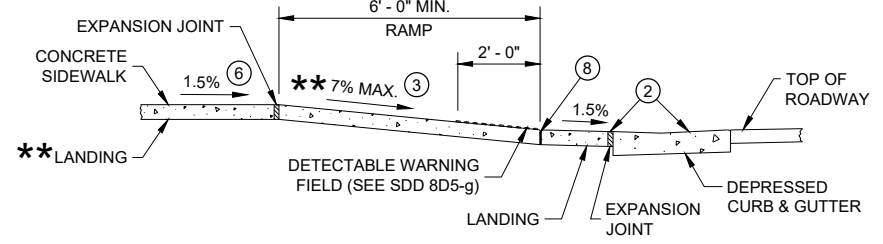
**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/2 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



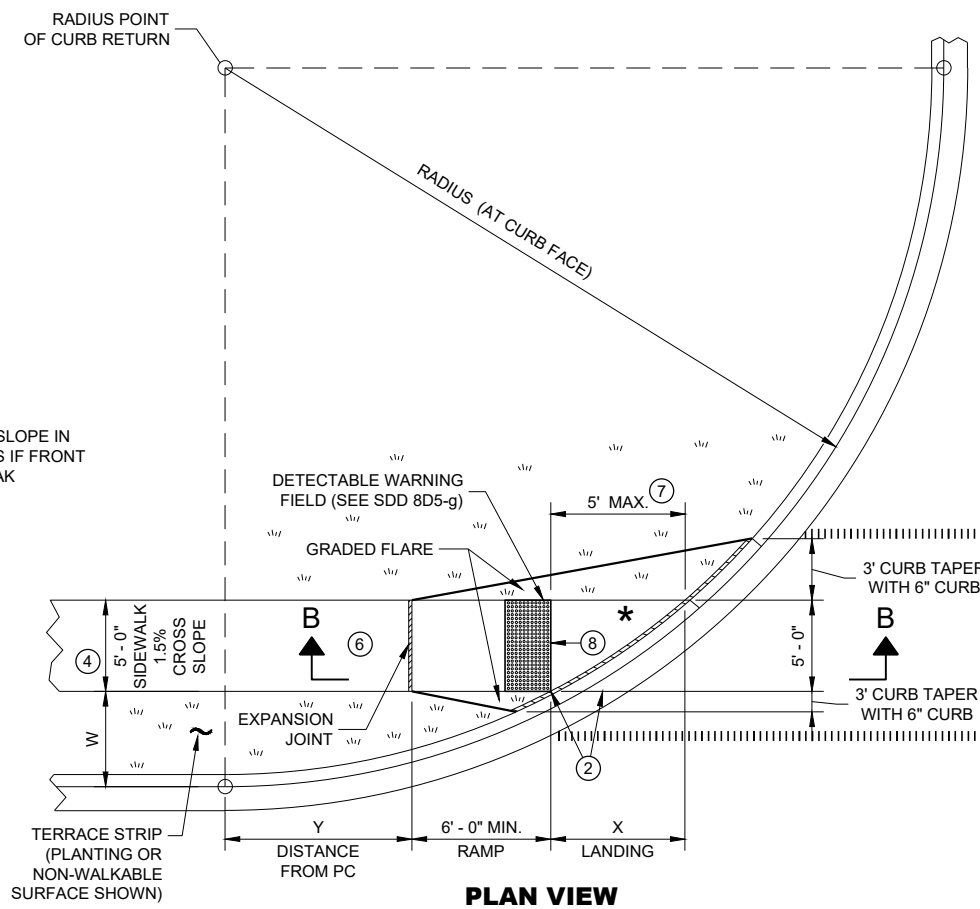
**SECTION A - A FOR TYPE 4B**

\* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

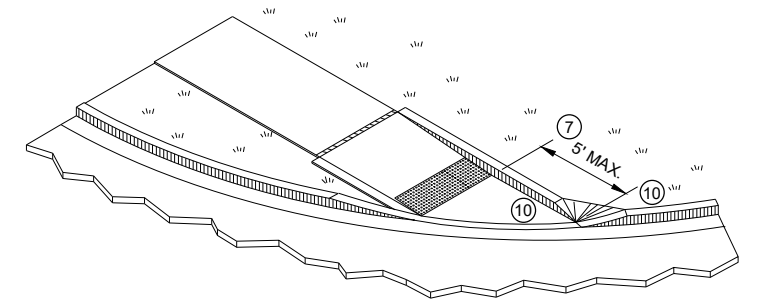


**SECTION B - B FOR TYPE 4B AND TYPE 4B1**

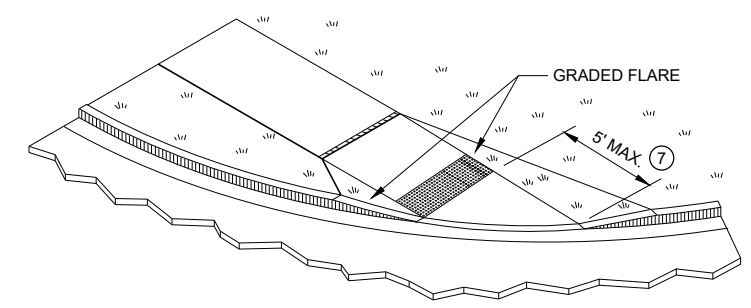
\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



**PLAN VIEW CURB RAMP TYPE 4B1**



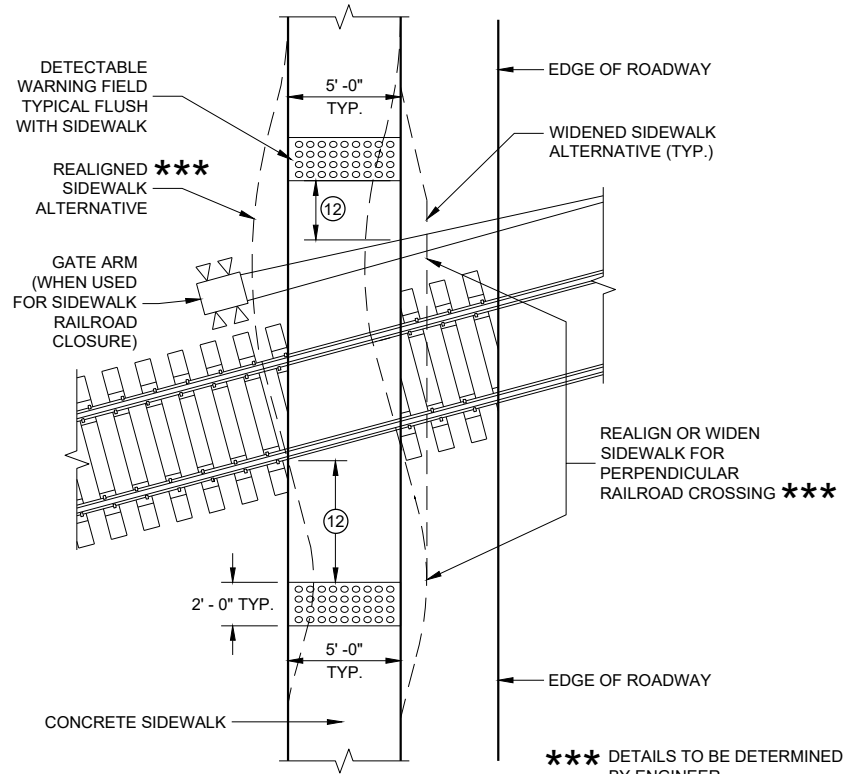
**ISOMETRIC VIEW FOR TYPE 4B**



**ISOMETRIC VIEW FOR TYPE 4B1**

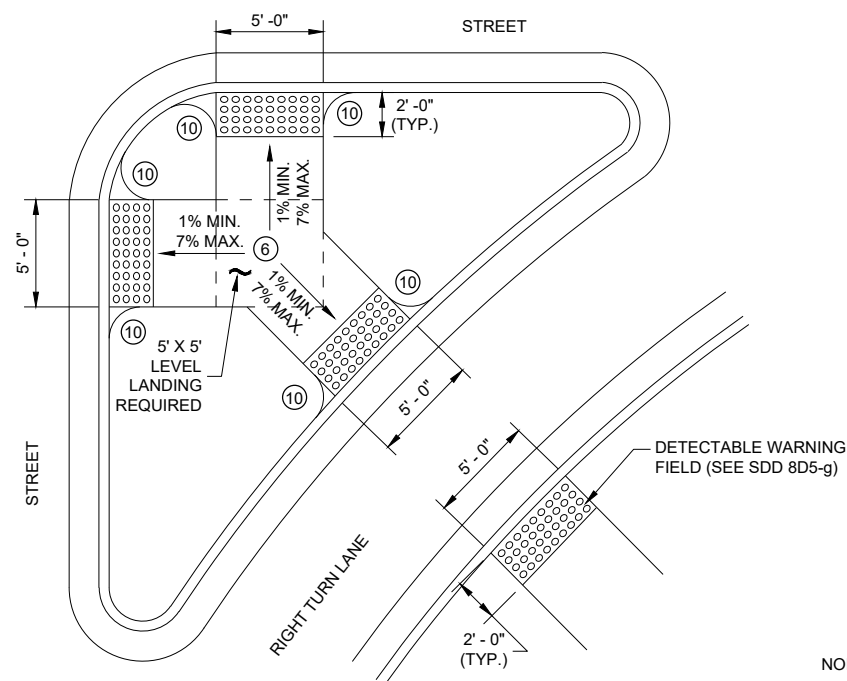
**CURB RAMPS TYPE 4B AND 4B1**

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**CURB RAMP TYPE 8**

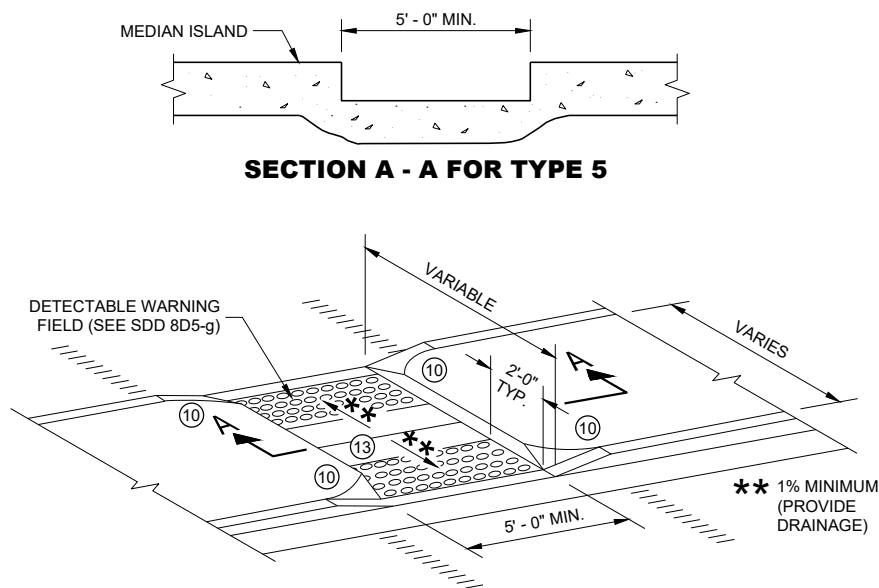
**DETECTABLE WARNINGS AT RAILROAD CROSSING**



**CURB RAMP TYPE 6**

**DETECTABLE WARNING AT ISLANDS**

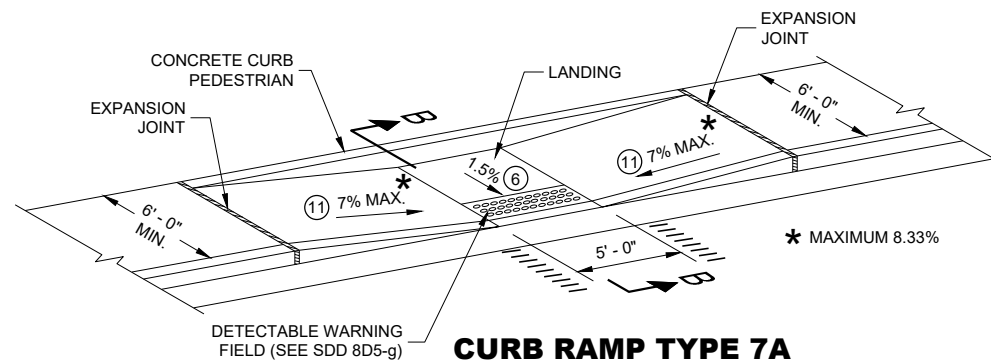
REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



**SECTION A - A FOR TYPE 5**

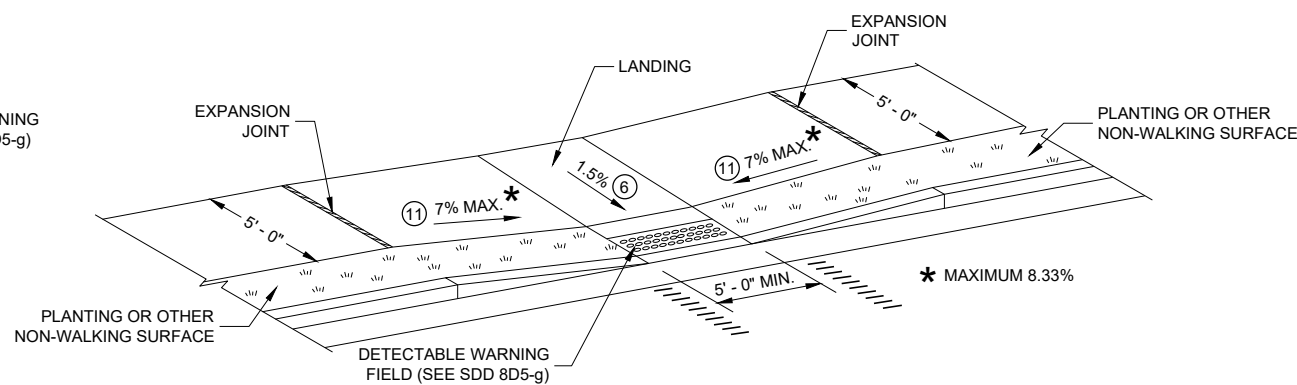
**CURB RAMP TYPE 5**

**MEDIAN ISLAND  
NON-ELEVATED PEDESTRIAN CROSSING**



**CURB RAMP TYPE 7A**

**MID BLOCK CROSSING**



**CURB RAMP TYPE 7B**

**MID BLOCK CROSSING**

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

**GENERAL NOTES**

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

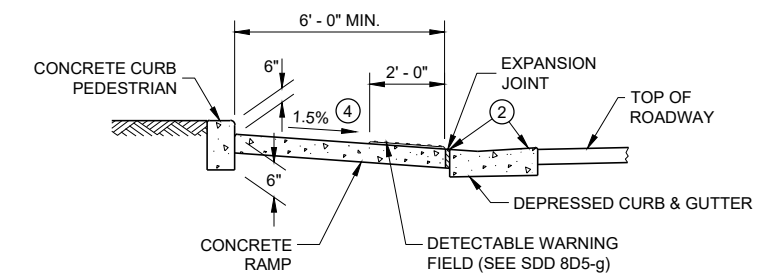
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- (10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- (11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- (12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- (13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

**LEGEND**

- ===== 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

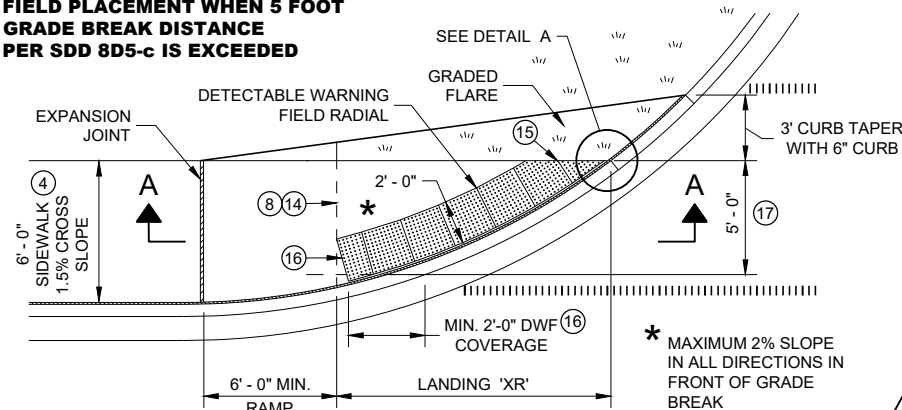


**SECTION B - B FOR TYPE 7A**

**CURB RAMPS  
TYPE 5, 6, 7A, 7B & 8**

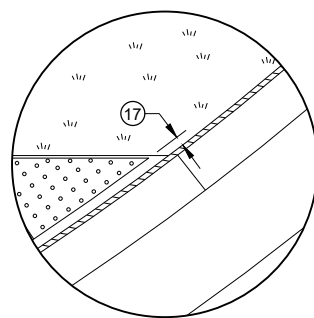
STATE OF WISCONSIN  
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**RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED**

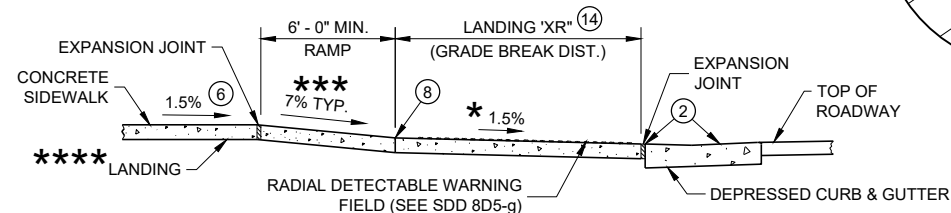


**PLAN VIEW  
CURB RAMP TYPE 4A1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**

- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
  - - - CONTRACTION JOINT SIDEWALK
  - ||||| PAVEMENT MARKING CROSSWALK (WHITE)



**DETAIL A**



**SECTION A - A FOR TYPE 4A1**

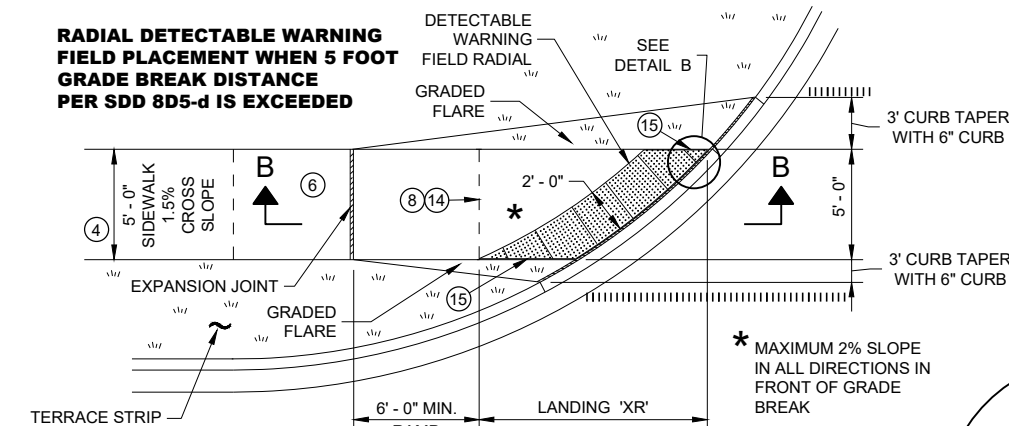
\*\*\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

\*\*\* MAXIMUM 8.33%

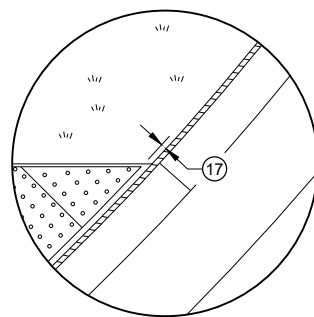
**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
  - 3 AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
  - 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
  - 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
  - 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
  - 14 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
  - 15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
  - 16 USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
  - 17 A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

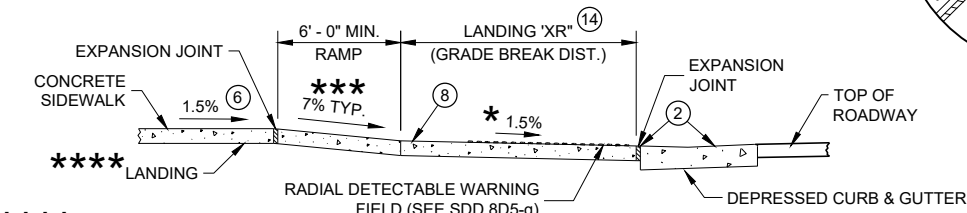
**RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED**



**PLAN VIEW  
CURB RAMP TYPE 4B1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



**DETAIL B**

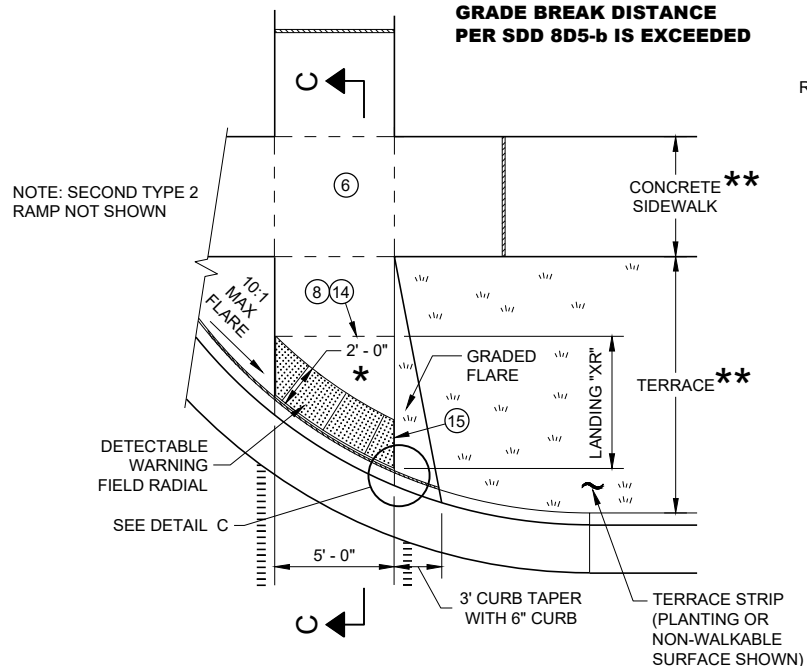


**SECTION B - B FOR TYPE 4B1**

\*\*\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

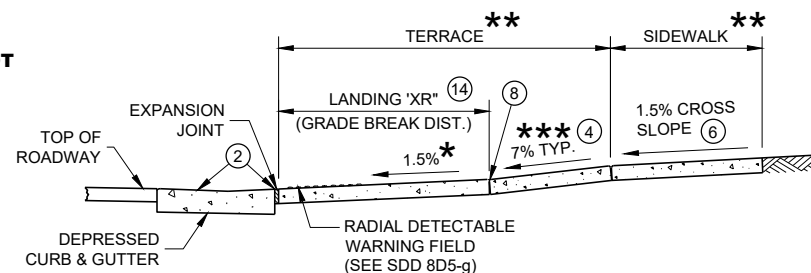
\*\*\* MAXIMUM 8.33%

**RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED**



**PLAN VIEW  
CURB RAMP TYPE 2  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)  
(ON LINE WITH SIDEWALK)**

NOTE: SECOND TYPE 2 RAMP NOT SHOWN

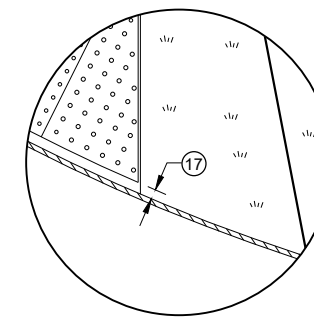


**SECTION C - C FOR TYPE 2**

\* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

\*\* WIDTH SHOWN ELSEWHERE IN THE PLANS

\*\*\* MAXIMUM 8.33%



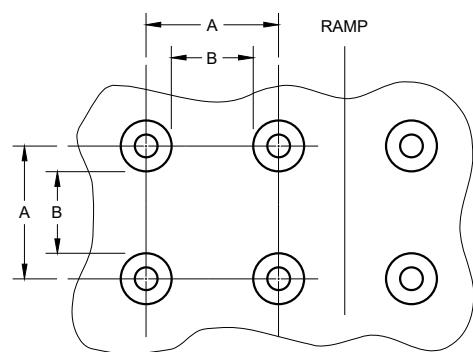
**DETAIL C**

**CURB RAMPS  
RADIAL DETECTABLE WARNING  
FIELD APPLICATIONS**

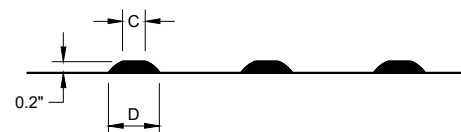
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

\* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

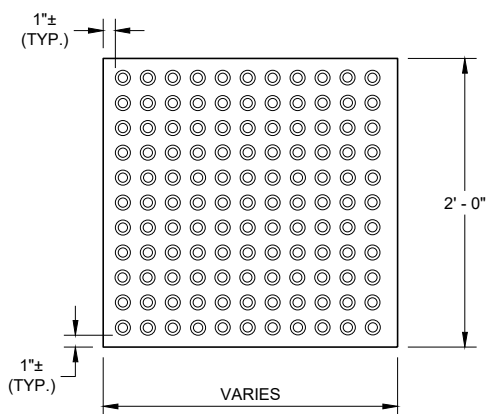


PLAN VIEW

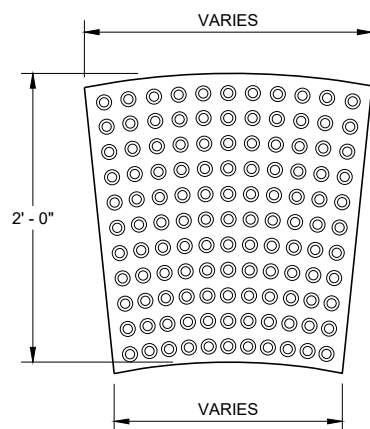


ELEVATION VIEW

**TRUNCATED DOMES  
DETECTABLE WARNING PATTERN DETAIL**

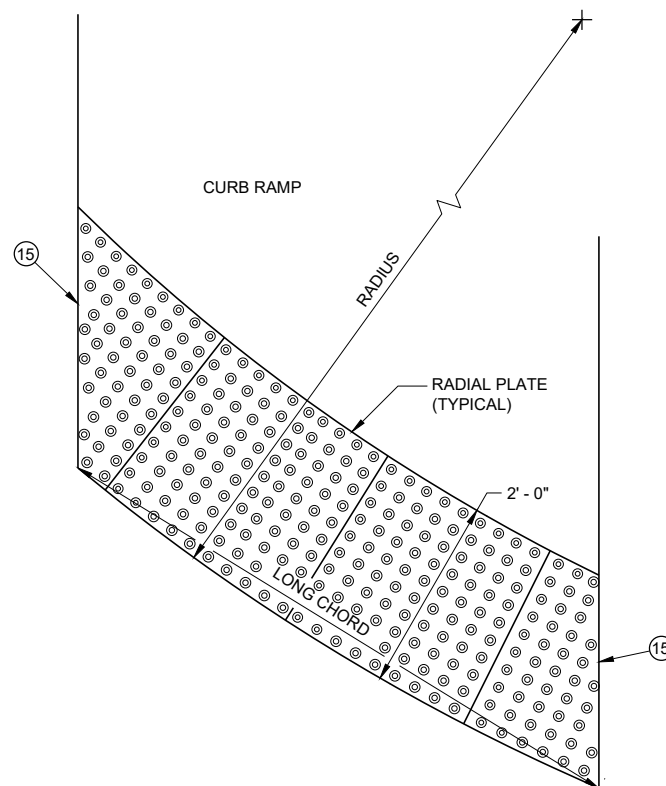


RECTANGULAR  
PLATES

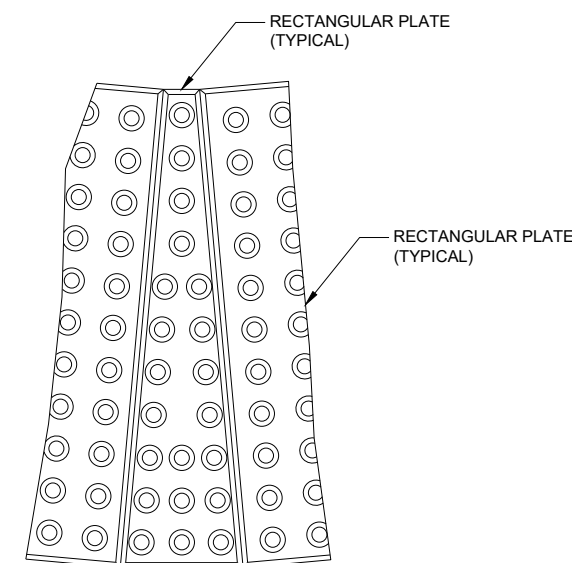


RADIAL  
PLATES

PLAN VIEW  
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW  
RADIAL DETECTABLE  
WARNING FIELD ATTRIBUTES



PLAN VIEW  
RADIAL WEDGE PLATE  
CONNECTION DETAIL

**GENERAL NOTES**

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

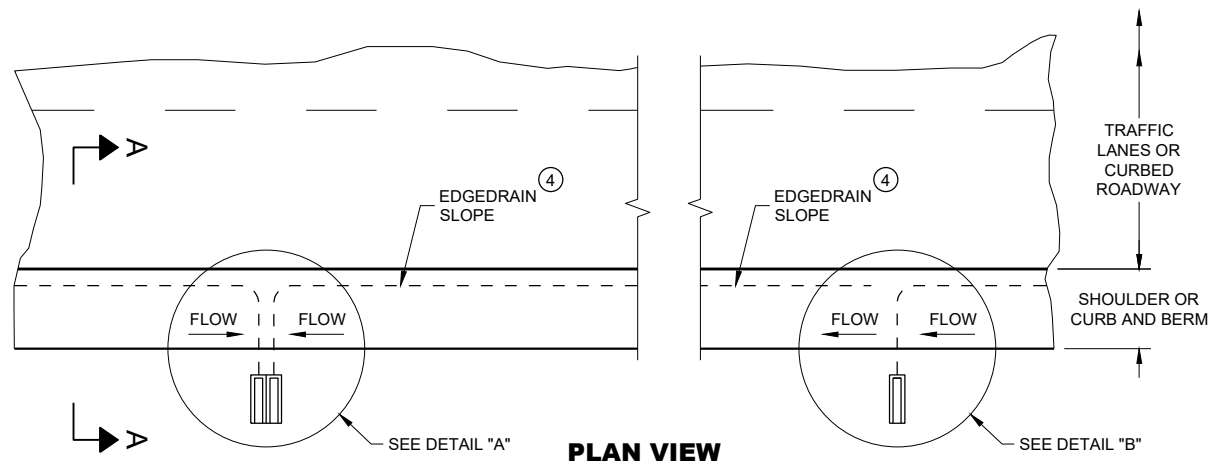
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

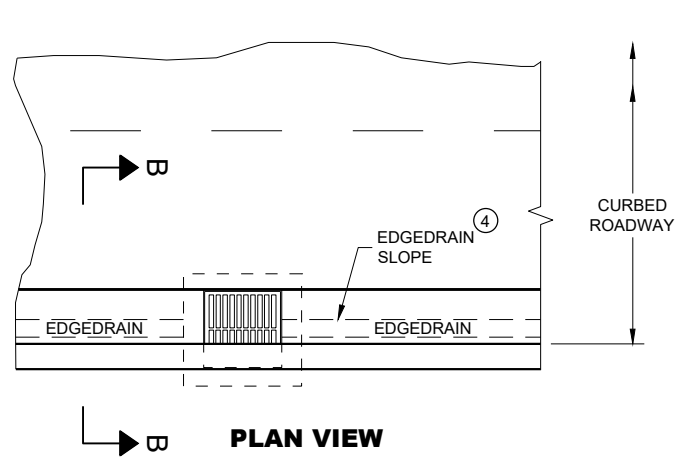
DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

<b>CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	



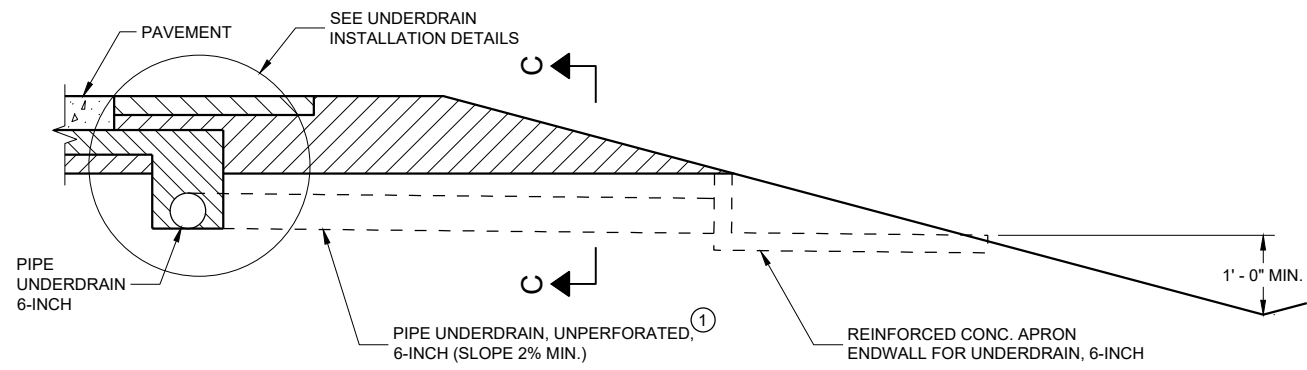
**ROADWAY WITH SHOULDERS OR CURBS  
(EDGEDRAIN CONNECTS TO ROADSIDE) ②**



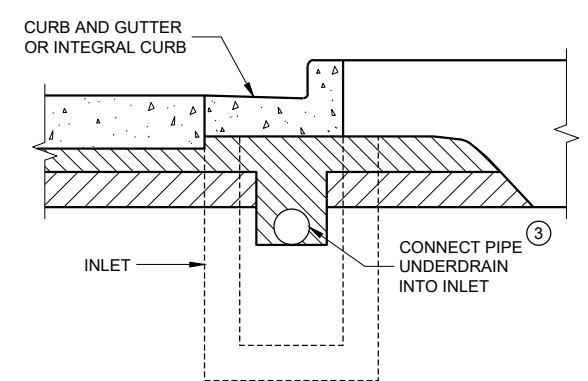
**ROADWAY WITH CURBS  
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)**

**GENERAL NOTES**

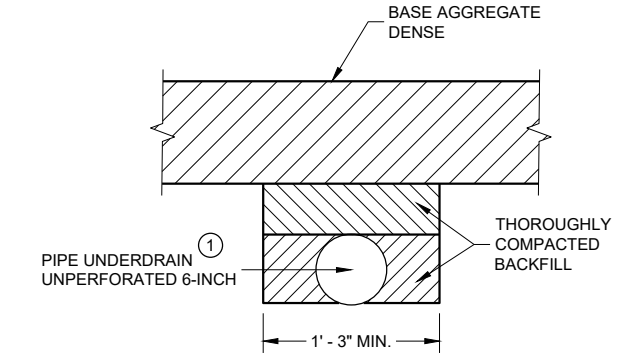
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- ① UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:  
  
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.  
  
TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.
  - ② MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.
  - ③ EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.
  - ④ EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



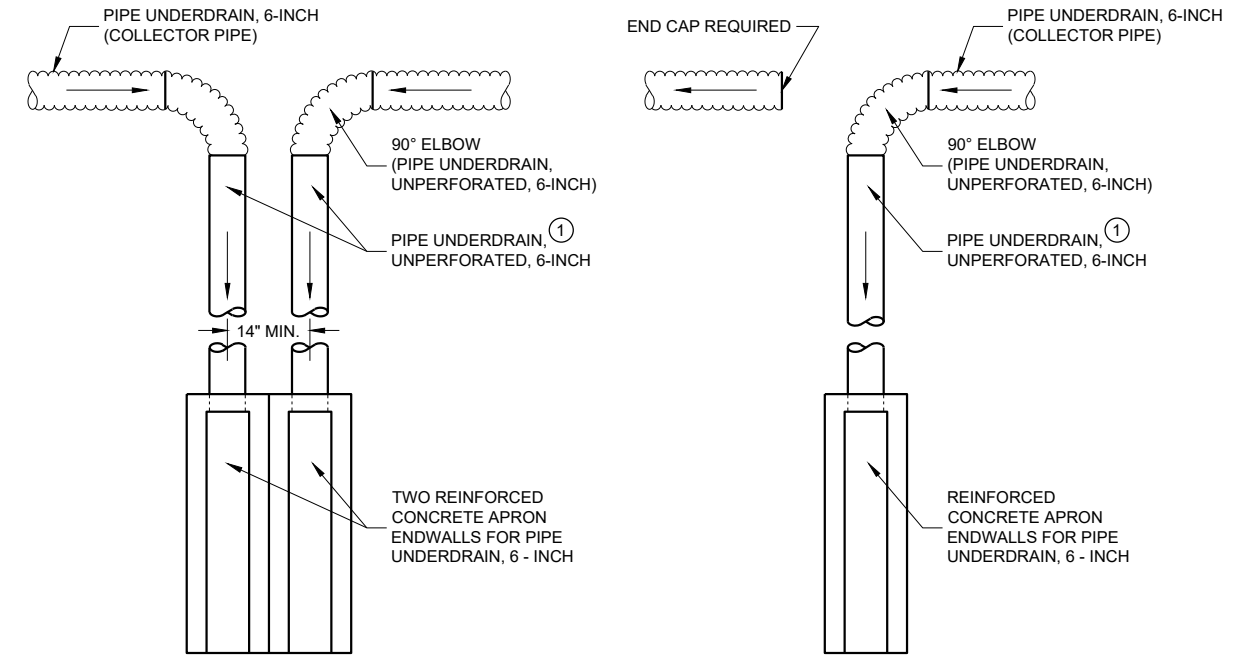
**SECTION A - A  
RURAL CROSS SECTION**



**SECTION B - B  
URBAN CROSS SECTION**



**SECTION C - C  
TRENCH FOR OUTFALL PIPE**



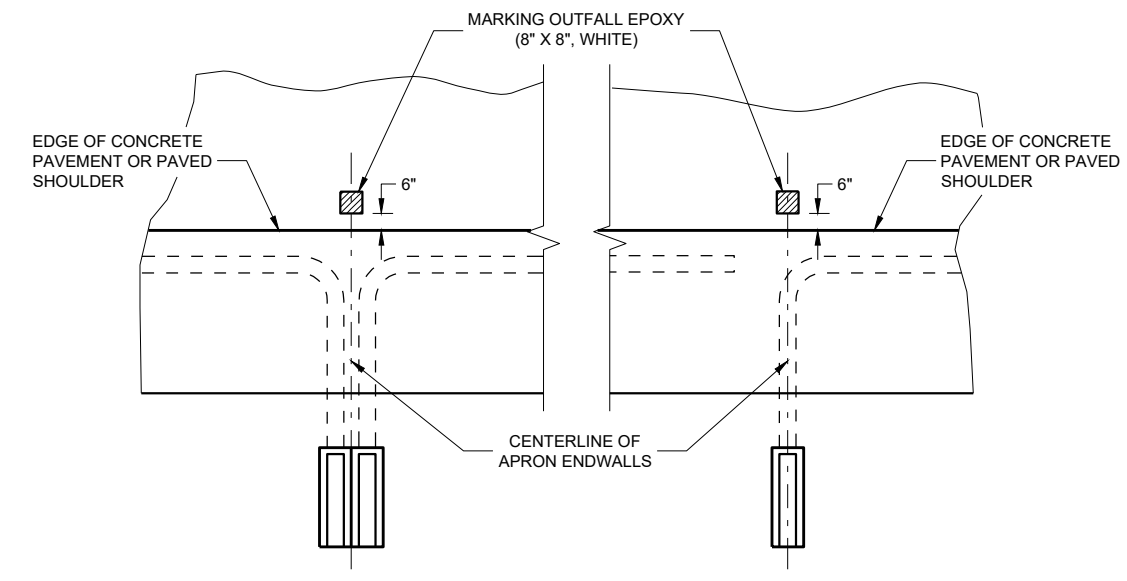
**DETAIL "A"**

TO BE USED AT LOW POINT LOCATIONS

**DETAIL "B"**

TO BE USED AT INTERMEDIATE LOCATIONS

**TYPICAL DRAIN OUT DETAILS**



LOW POINT LOCATIONS

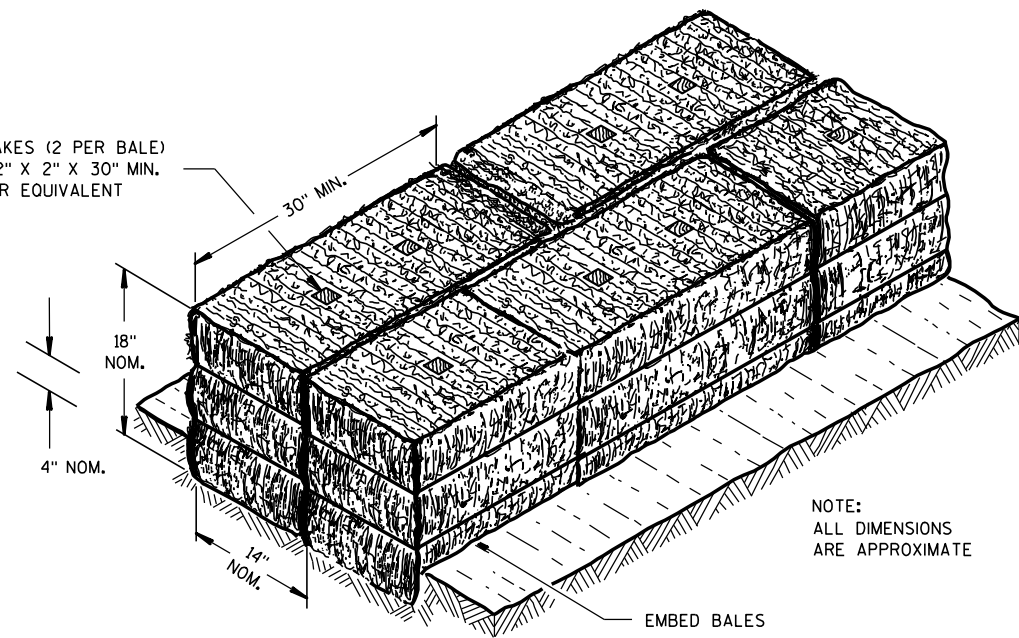
INTERMEDIATE LOCATIONS

**PAVEMENT MARKINGS FOR OUTFALL MARKERS**

**EDGEDRAIN OUTLET  
AND OUTFALL MARKERS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

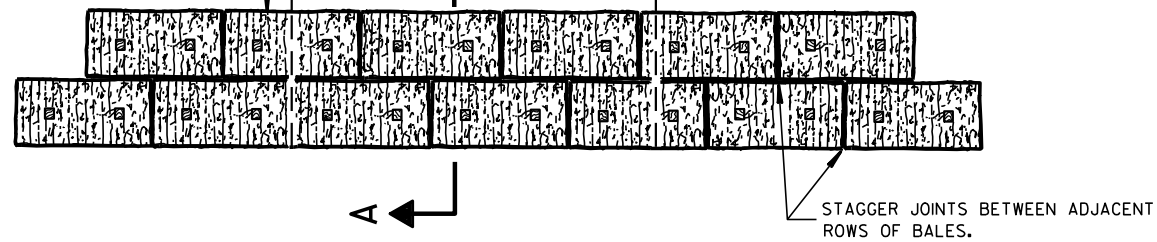
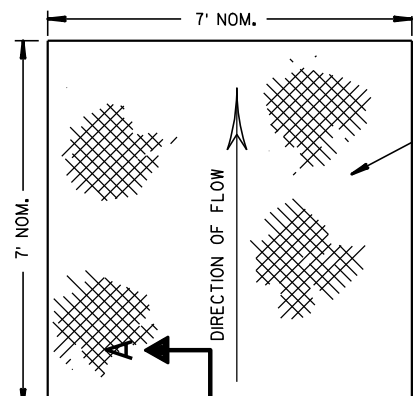
WOOD STAKES (2 PER BALE)  
NOMINAL 2" X 2" X 30" MIN.  
LENGTH OR EQUIVALENT



NOTE:  
ALL DIMENSIONS  
ARE APPROXIMATE

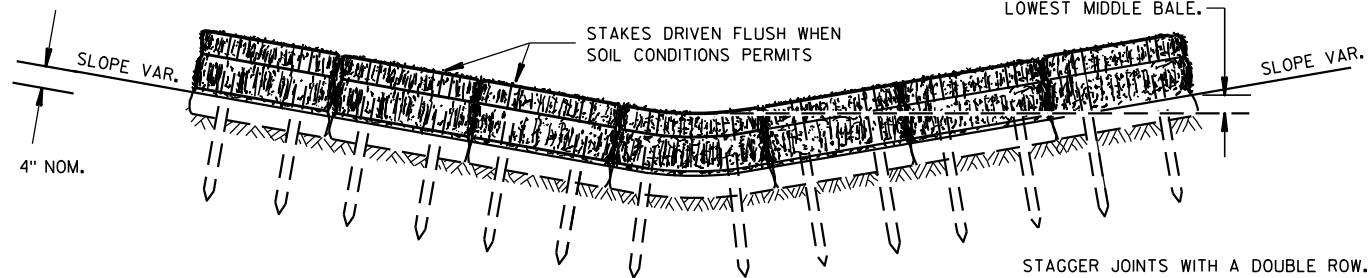
EMBED BALES

SECTION A-A



PLAN VIEW

BOTTOM ELEVATION OF END BALE SHALL BE EQUAL TO OR GREATER THAN TOP OF LOWEST MIDDLE BALE.



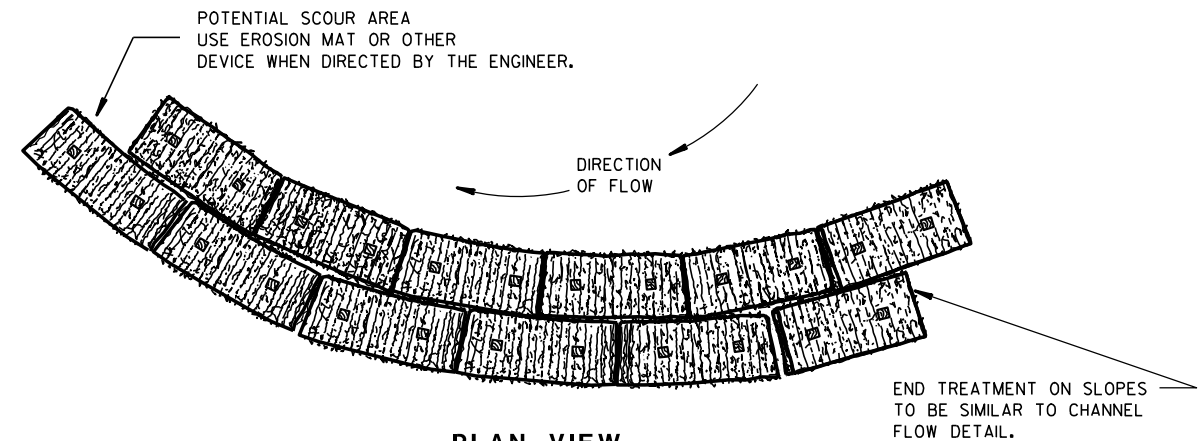
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

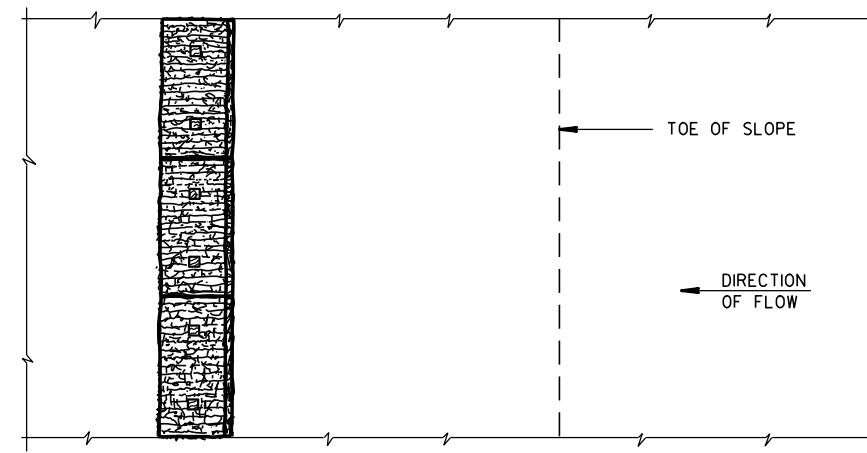
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

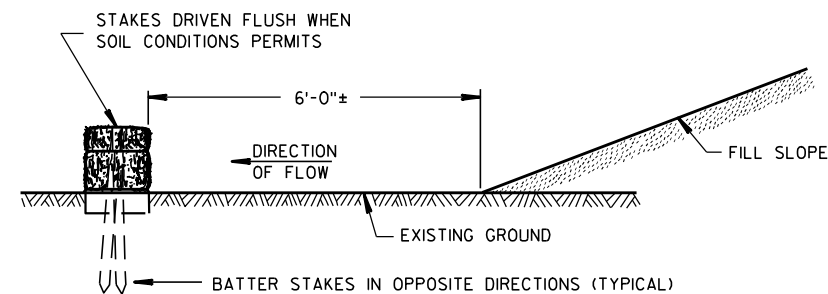


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

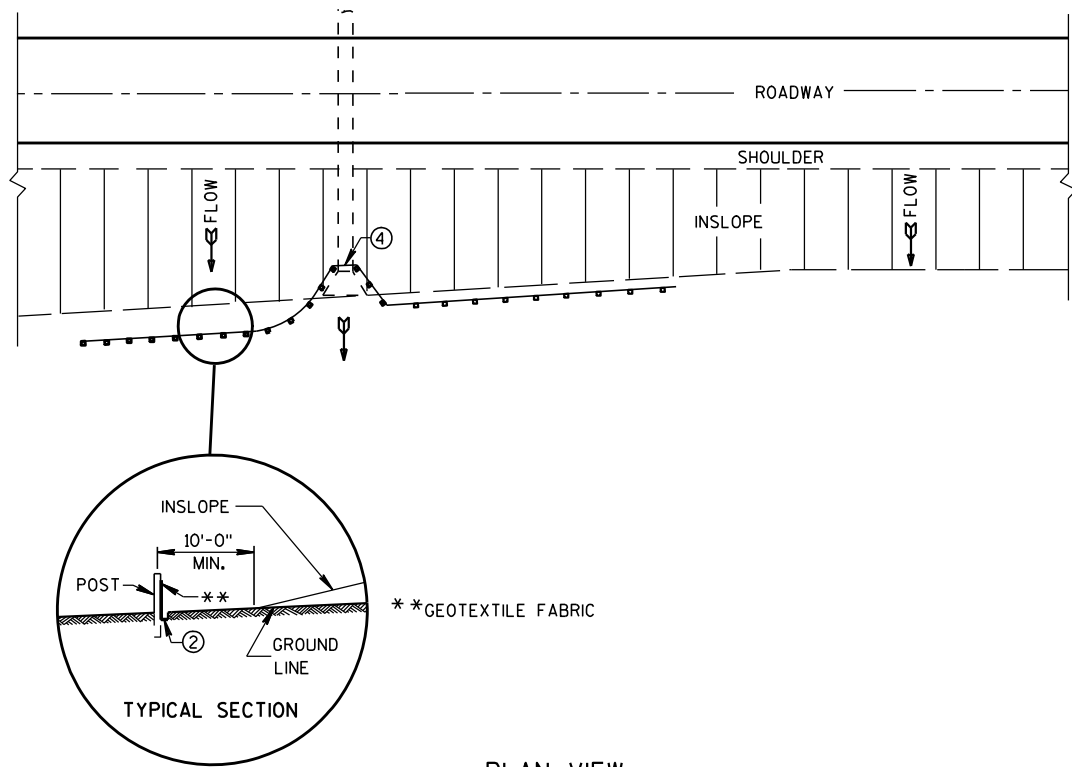
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

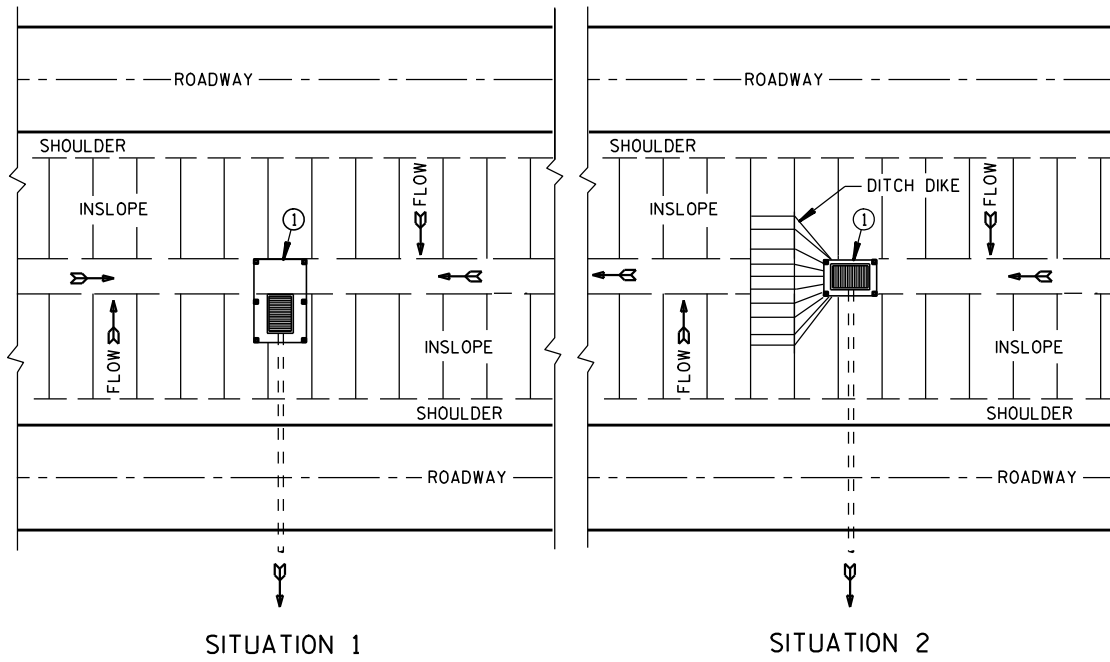
TYPICAL INSTALLATIONS OF  
EROSION BALES / TEMPORARY  
DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
 6/04/02 /S/ Beth Canestra  
 DATE / CHIEF ROADWAY DEVELOPMENT ENGINEER  
 FHWA



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

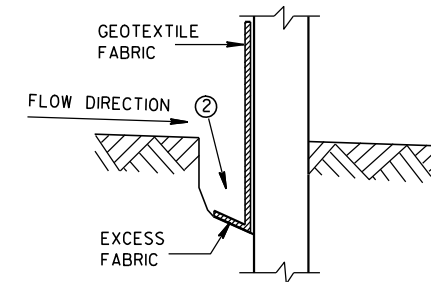


SITUATION 1 SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

**GENERAL NOTES**

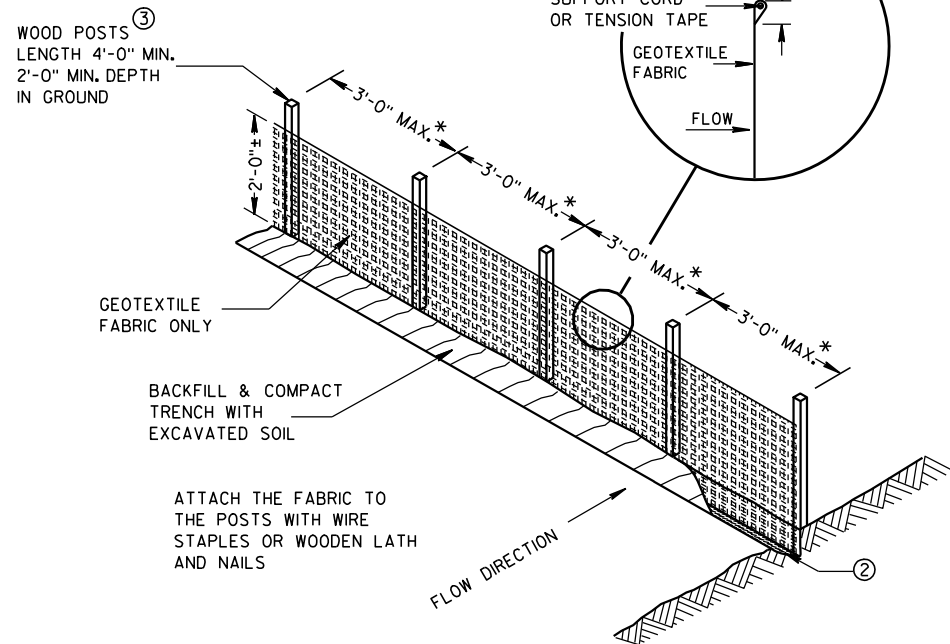
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



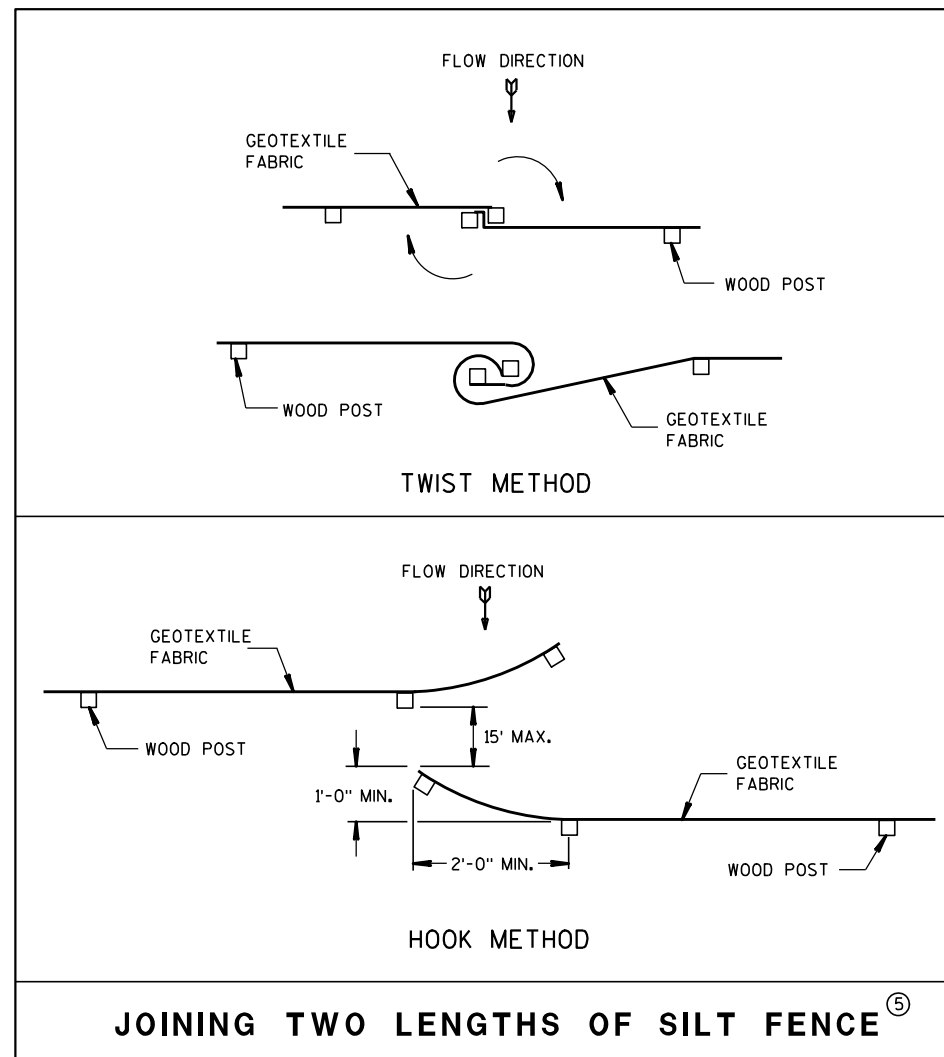
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

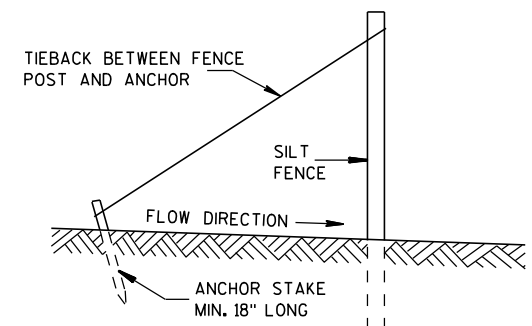


SILT FENCE

\* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

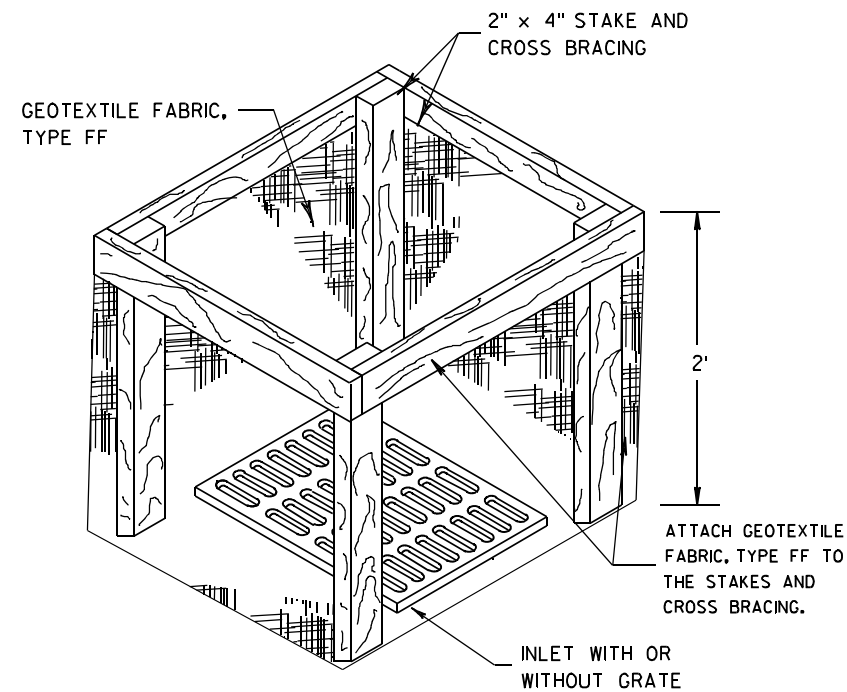
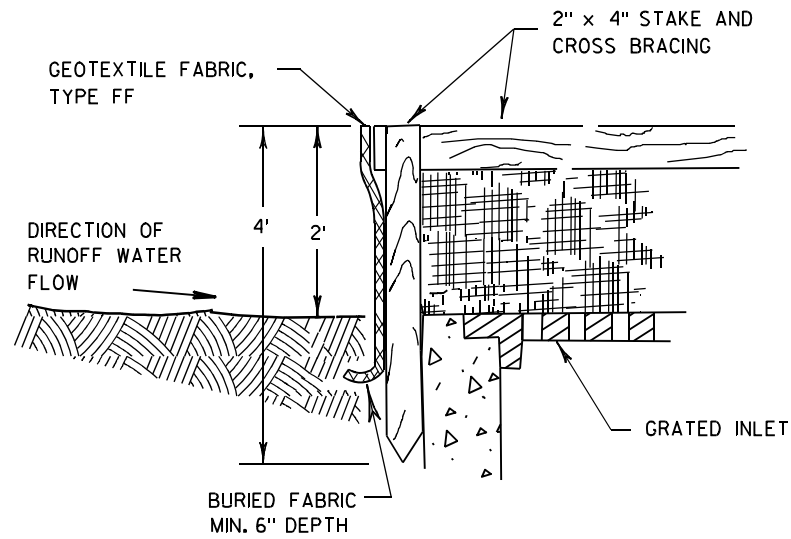
APPROVED

4-29-05

DATE

FHWA

/S/ Beth Cannestra  
CHIEF ROADWAY DEVELOPMENT ENGINEER



**INLET PROTECTION, TYPE A**

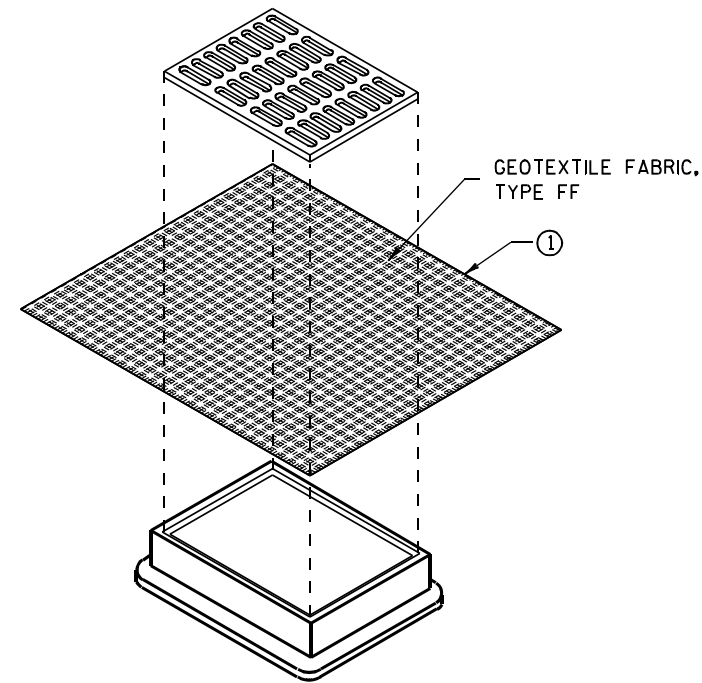
**GENERAL NOTES**

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

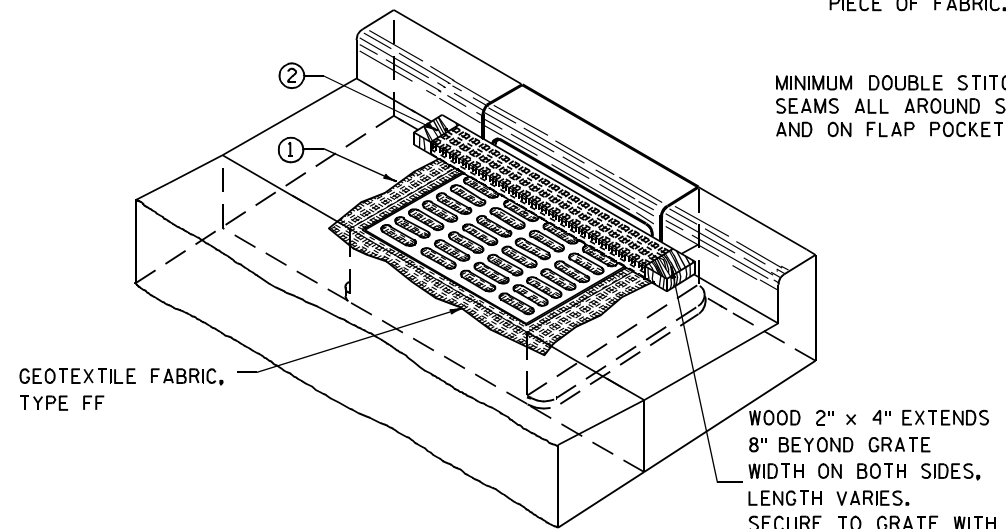
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B  
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

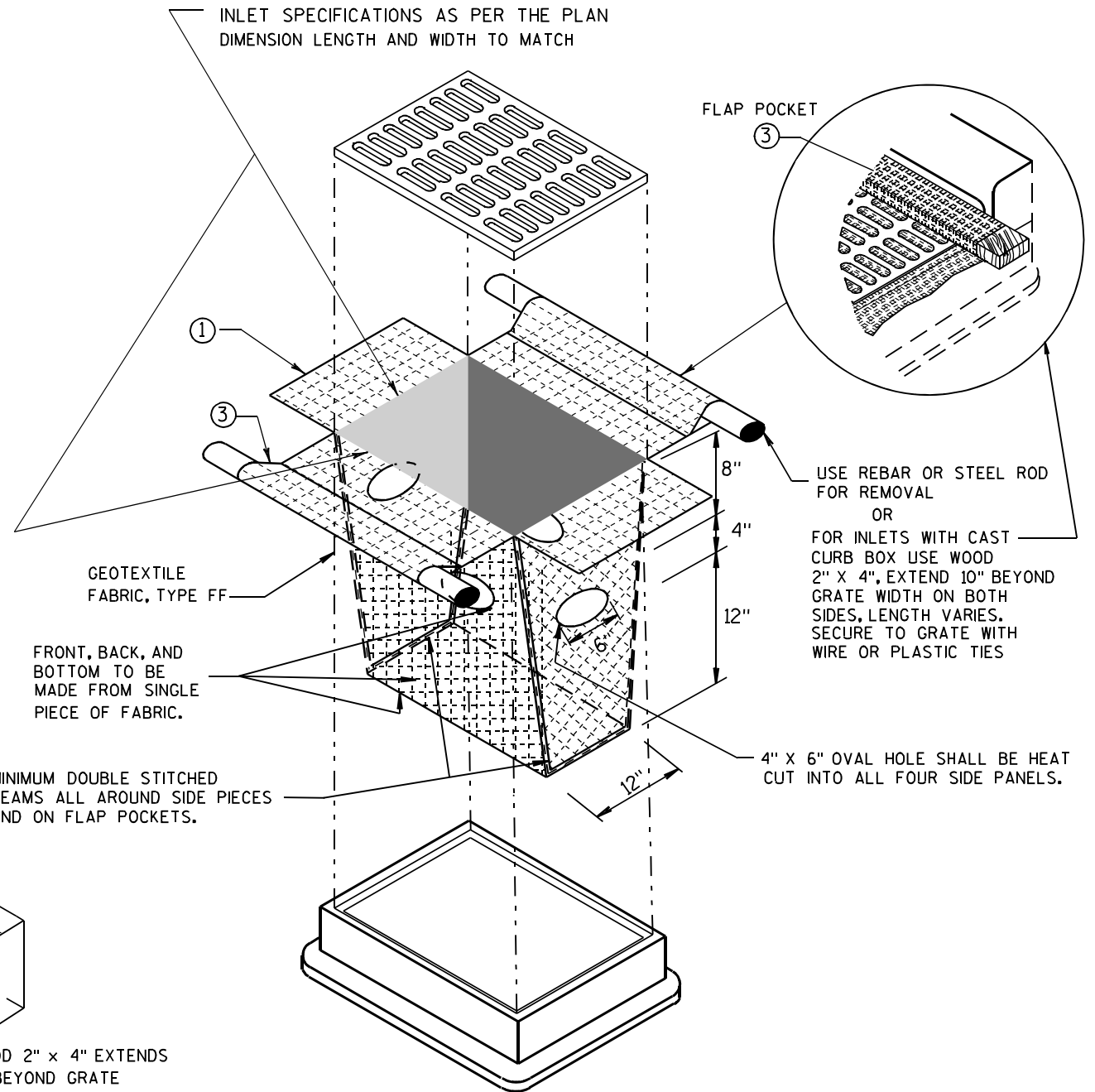
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



**INLET PROTECTION, TYPE D**

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

<b>INLET PROTECTION TYPE A, B, C, AND D</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/s/ Beth Conestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

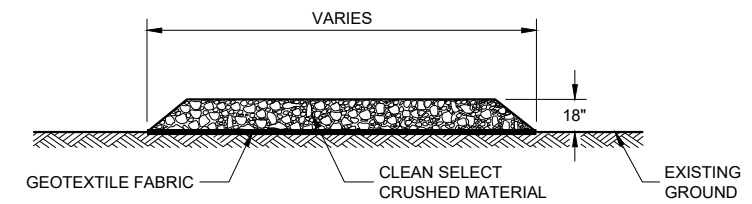
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

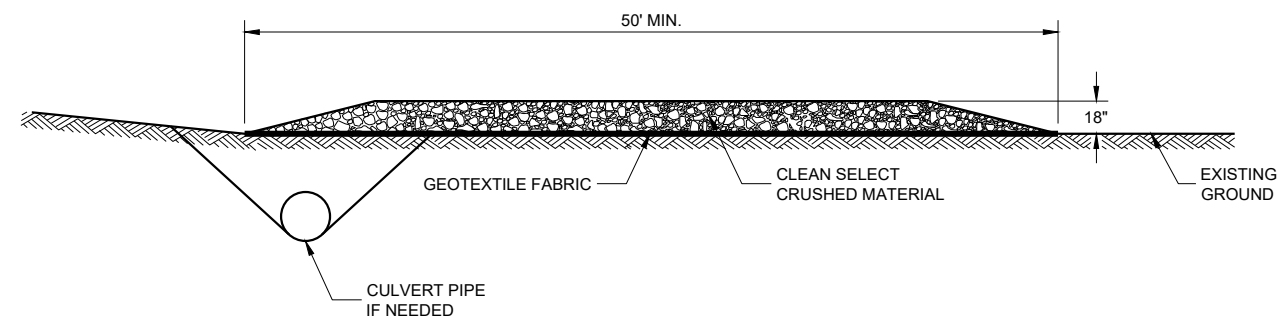
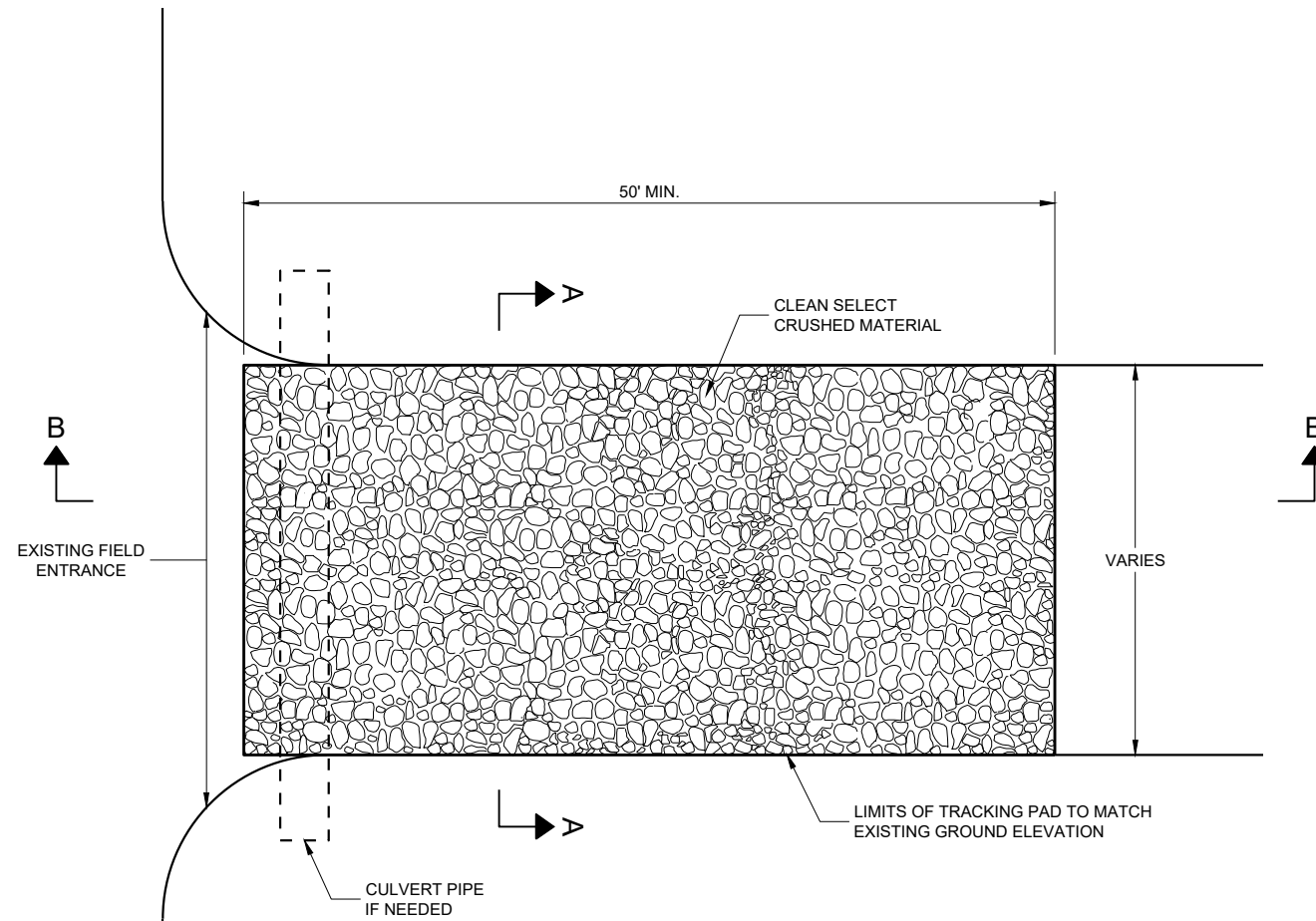
SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



**SECTION A - A**



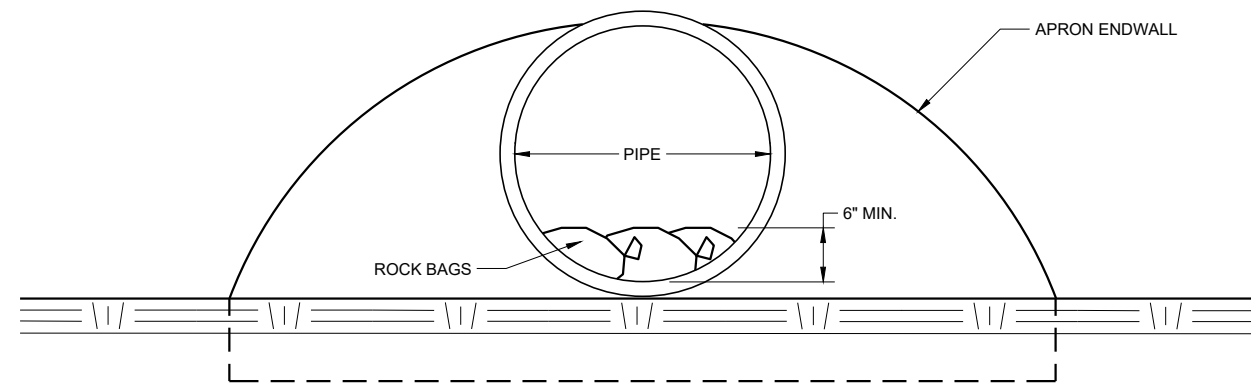
**SECTION B - B**

**TRACKING PAD**

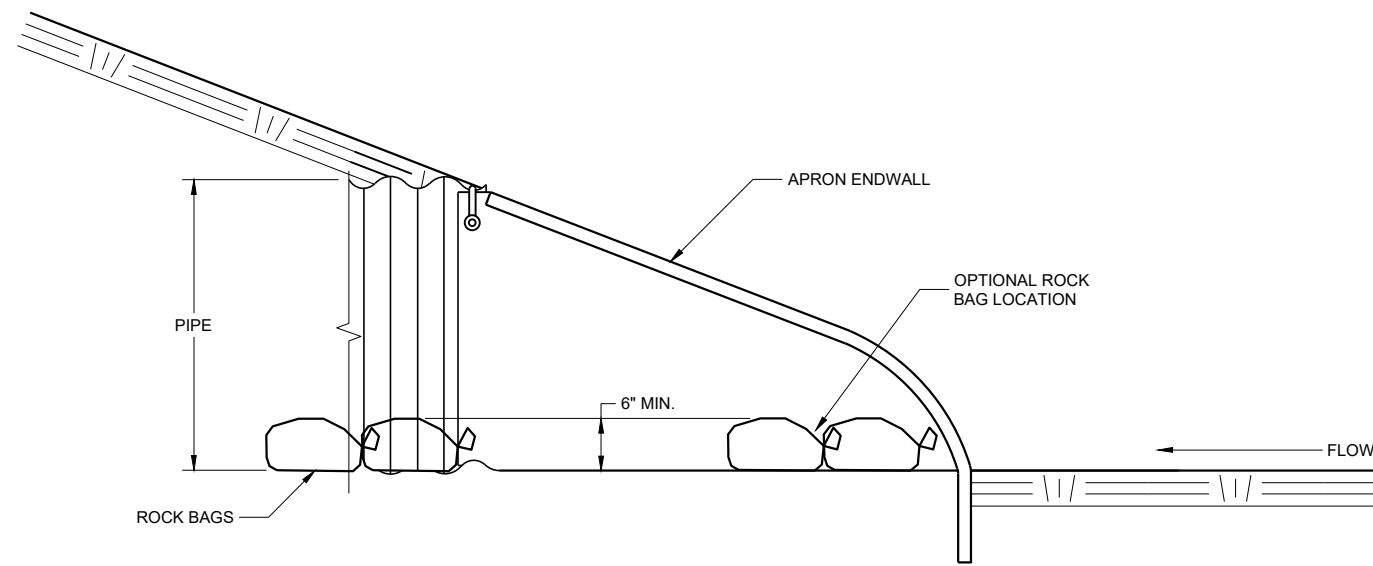
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
3/24/2011 DATE /S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



**END VIEW**



**SIDE VIEW**

**CULVERT PIPE CHECK**  
(INSTALL ON INLET END ONLY)

**CULVERT PIPE CHECK**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2019 /S/ Daniel Schave  
DATE EROSION CONTROL ENGINEER

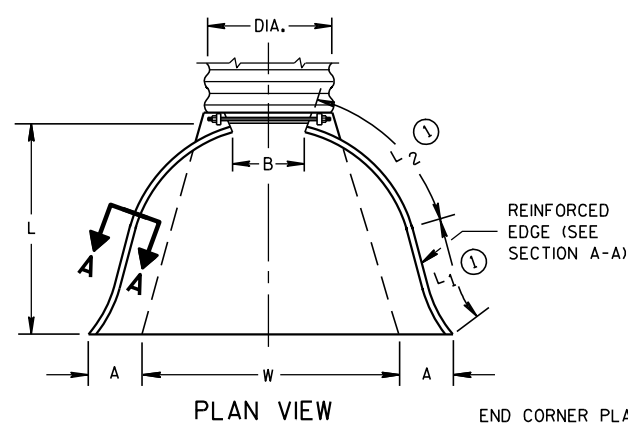
FHWA

METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY	
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1/2")	L <sub>1</sub> (1)	L <sub>2</sub> (1)	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.	
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.	
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.	
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.	
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.	
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.	
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.	
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.	
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.	
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.	
60	.109x	.105x	18	33	12	87	—	114	—	2 to 1	3 Pc.	
66	.109x	.105x	18	36	12	87	—	120	—	2 to 1	3 Pc.	
72	.109x	.105x	18	39	12	87	—	126	—	2 to 1	3 Pc.	
78	.109x	.105x	18	42	12	87	—	132	—	1 1/2 to 1	3 Pc.	
84	.109x	.105x	18	45	12	87	—	138	—	1 1/2 to 1	3 Pc.	
90	.109x	.105x	18	37	12	87	—	144	—	1 1/2 to 1	3 Pc.	
96	.109x	.105x	18	35	12	87	—	150	—	1 1/2 to 1	3 Pc.	

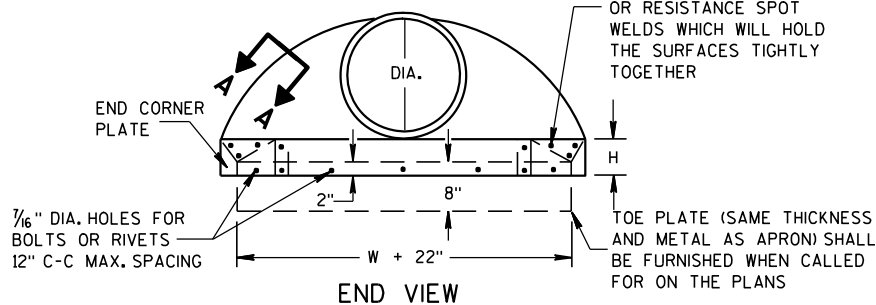
\* EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS										
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE		
	T	A	B	C	D	E	G			
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1		
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1		
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1		
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1		
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1		
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1		
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1		
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1		
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1		
48	5	24	72	26	98	84	5	3 to 1		
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1		
60	6	30-35	60	39	99	96	5	2 to 1		
66	6 1/2	30-35	72-78	21-27	99	102	5 1/2	2 to 1		
72	7	30-35	78	21	99	108	6	2 to 1		
78	7 1/2	30-35	78	21	99	114	6 1/2	2 to 1		
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1		
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1		

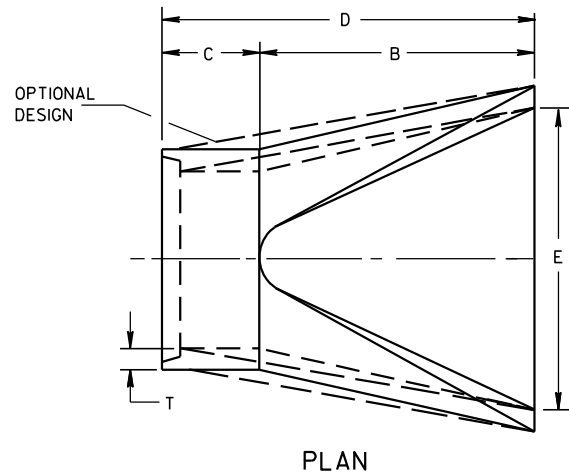
\*MINIMUM  
\*\*MAXIMUM



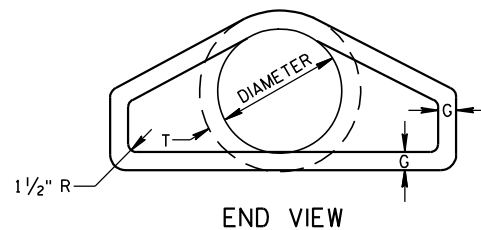
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



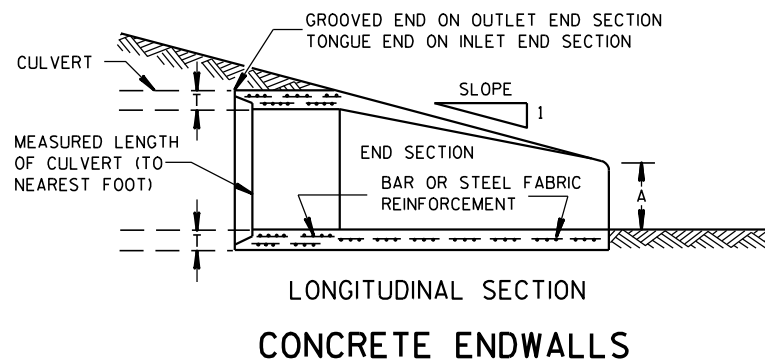
SIDE ELEVATION  
METAL ENDWALLS



PLAN

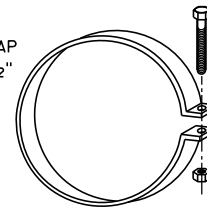


END VIEW

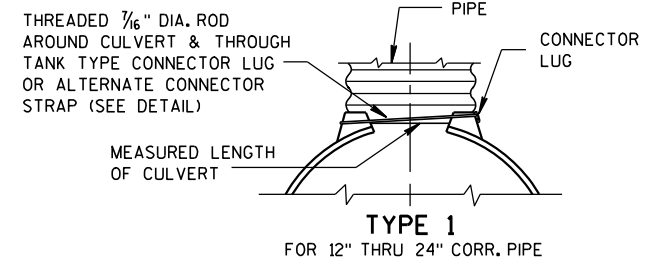


LONGITUDINAL SECTION  
CONCRETE ENDWALLS

1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT

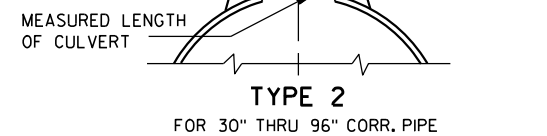


ALTERNATE FOR TYPE 1 CONNECTION  
END SECTION CONNECTOR STRAP

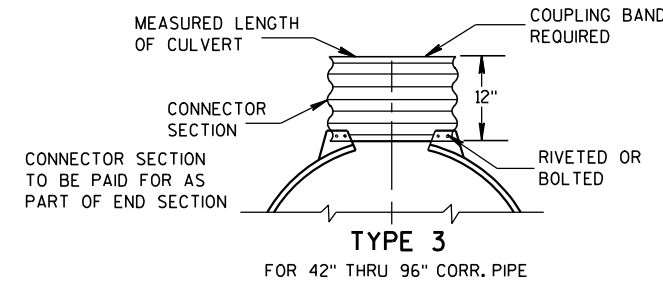


TYPE 1  
FOR 12" THRU 24" CORR. PIPE

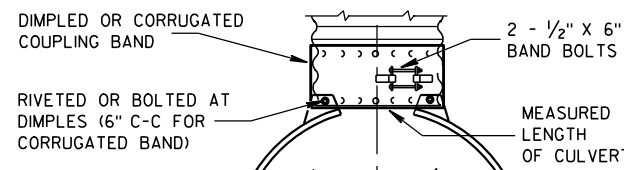
THREADED 1/16" DIA. ROD OVER TOP OF APRON, SIDE LUGS TO BE RIVETED TO APRON



TYPE 2  
FOR 30" THRU 96" CORR. PIPE



TYPE 3  
FOR 42" THRU 96" CORR. PIPE



TYPE 5  
ALTERNATE FOR:  
ALL SIZES CORRUGATED CIRCULAR PIPE

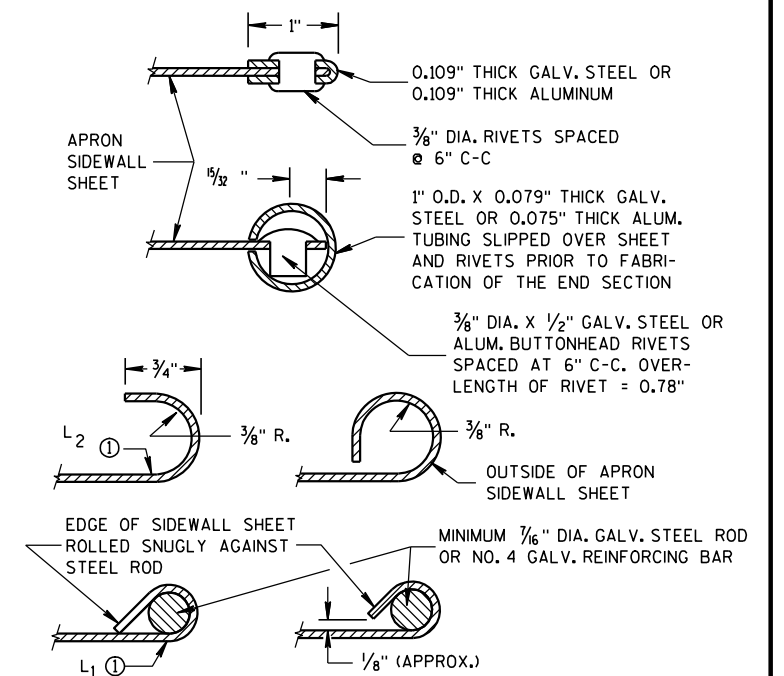
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

(1) FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR  
CULVERT PIPE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

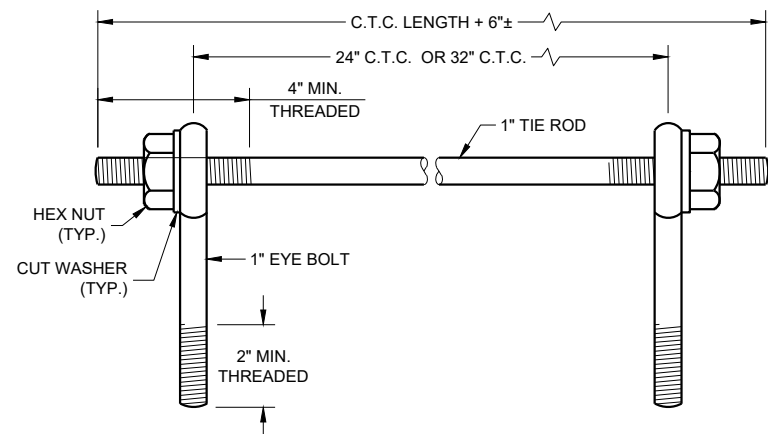
APPROVED

11/30/94

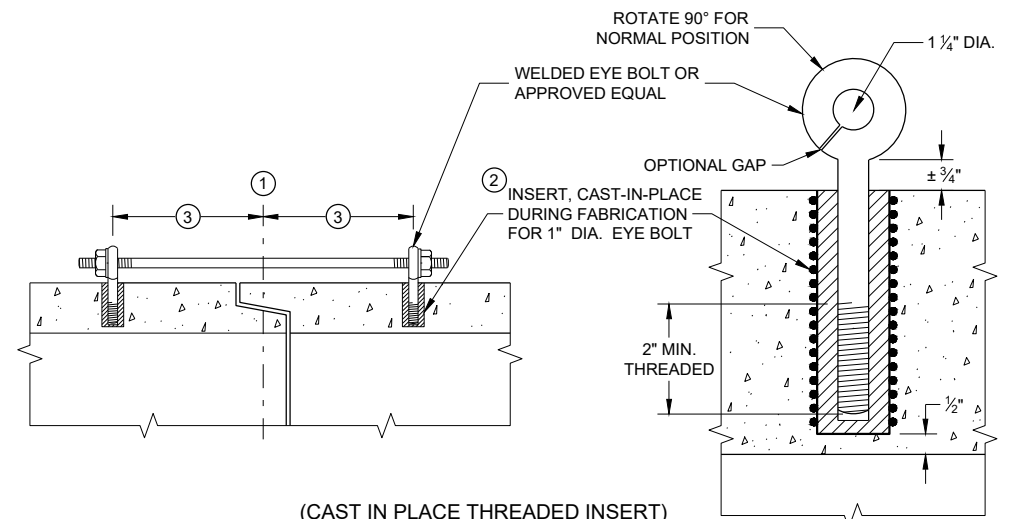
DATE

/s/ Rory L. Rhinesmith  
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



**EYE BOLTS AND TIE ROD**  
**EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)**



(CAST IN PLACE THREADED INSERT)  
**LONGITUDINAL SECTIONS**

**GENERAL NOTES**

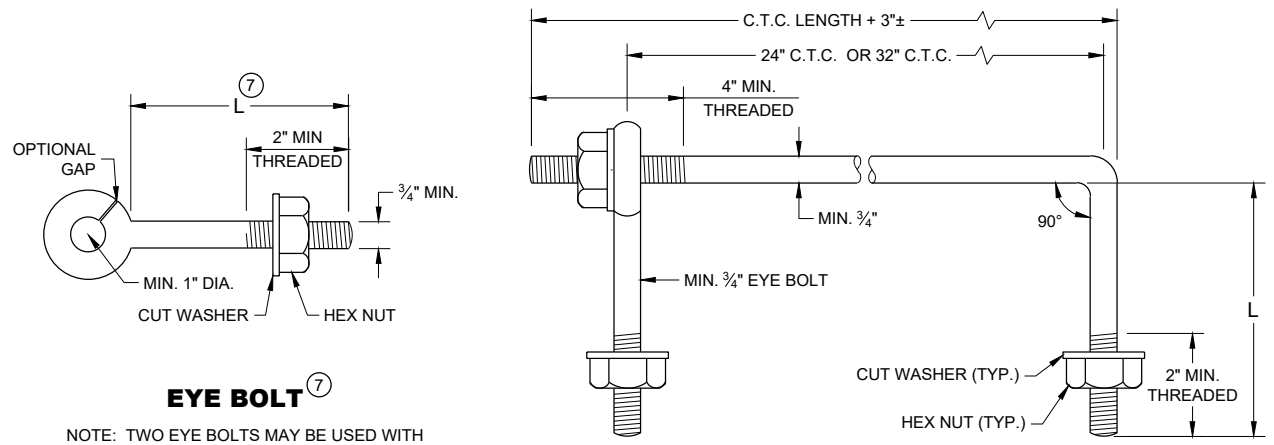
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

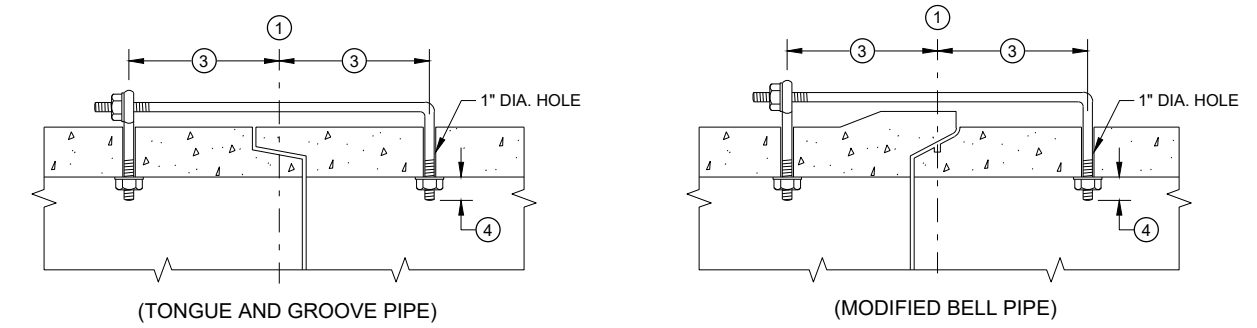
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- ① CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- ⑦ EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



**EYE BOLT AND TIE ROD**

**EYE BOLT**  
 NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



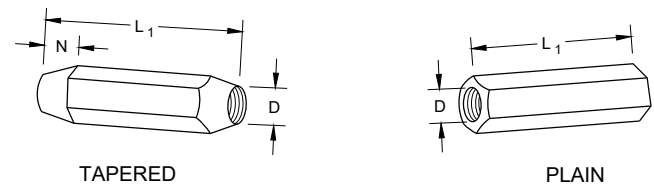
**LONGITUDINAL SECTION**  
 (JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

**EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)**

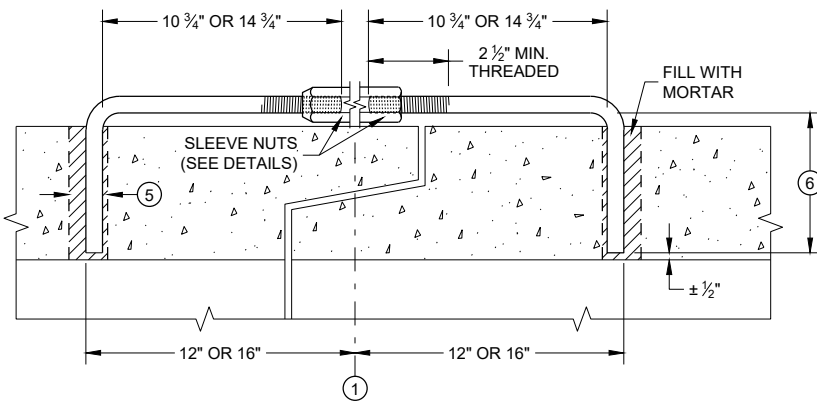
**ADJUSTABLE TIE ROD TABLE**

PIPE DIAMETER	TIE ROD DIAMETER	D	L <sub>1</sub>	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES

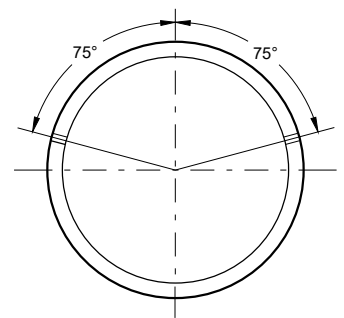


**RIGHT AND LEFT THREADS SLEEVE NUTS**



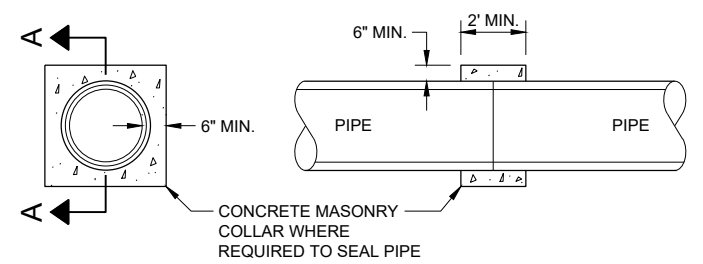
**LONGITUDINAL SECTION**

**ADJUSTABLE TIE ROD (ALTERNATE NO. 3)**



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

**TRANSVERSE SECTION**



**SECTION A - A**  
**CONCRETE COLLAR DETAIL**

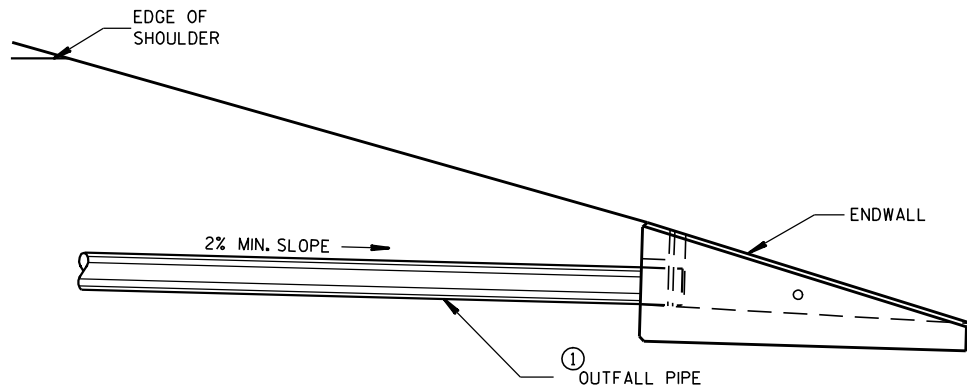
**JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

APPROVED  
 November 2021 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT  
 ENGINEER  
 FHWA

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

\*\* APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION DETAIL

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

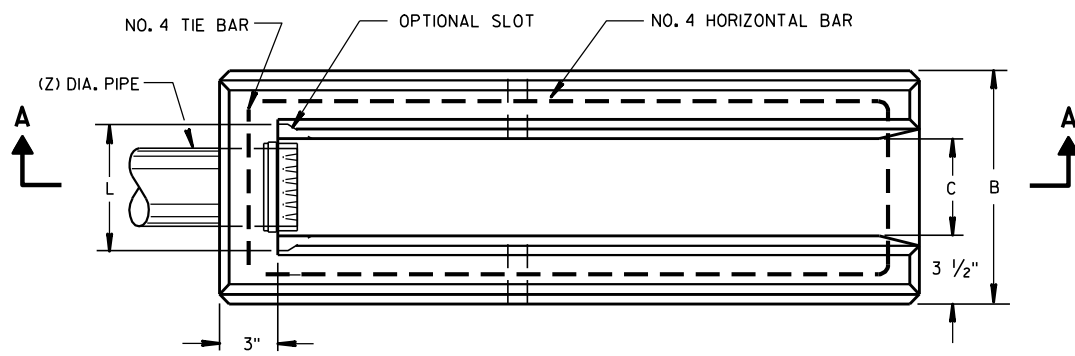
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

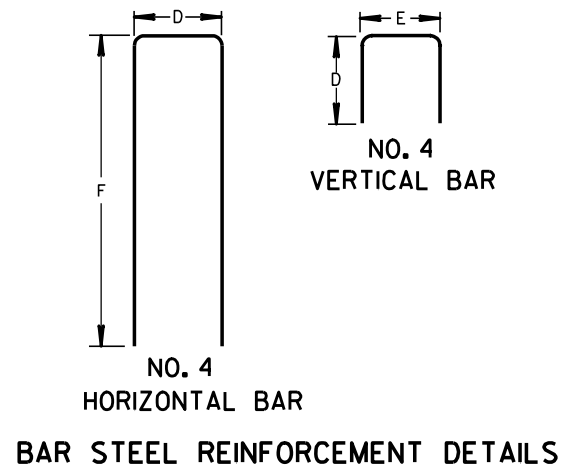
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

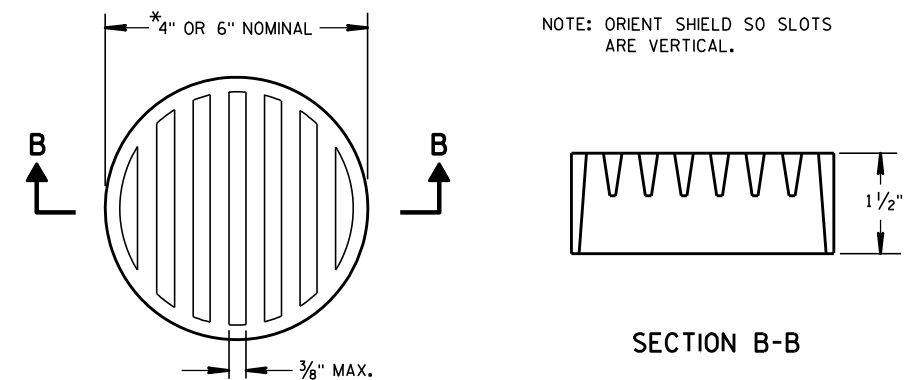
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



PLAN VIEW

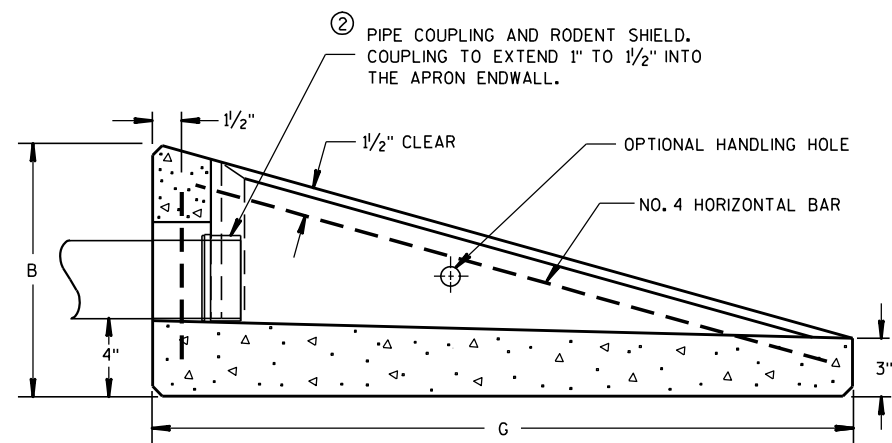


BAR STEEL REINFORCEMENT DETAILS

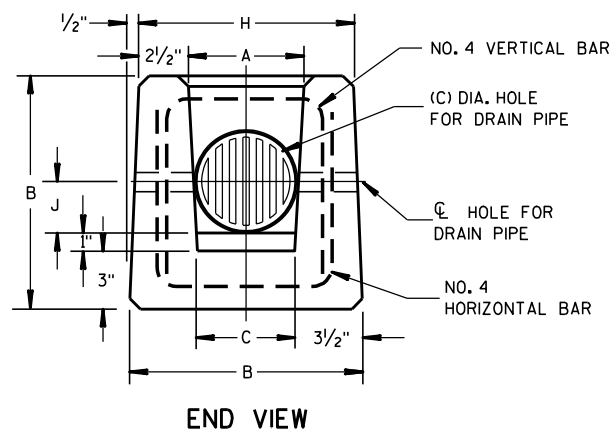


② RODENT SHIELD

\*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

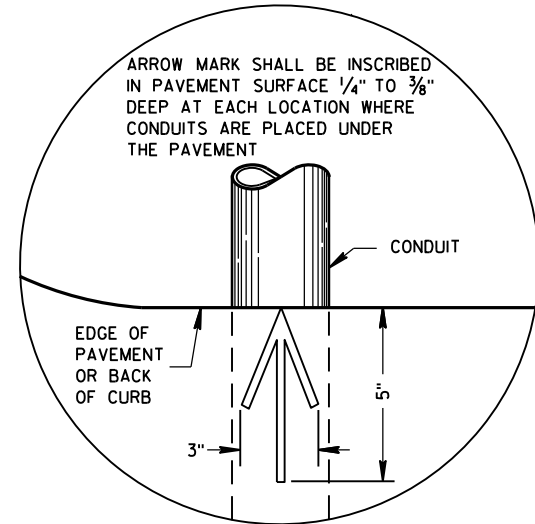


SECTION A-A  
CONCRETE APRON ENDWALL FOR UNDERDRAIN

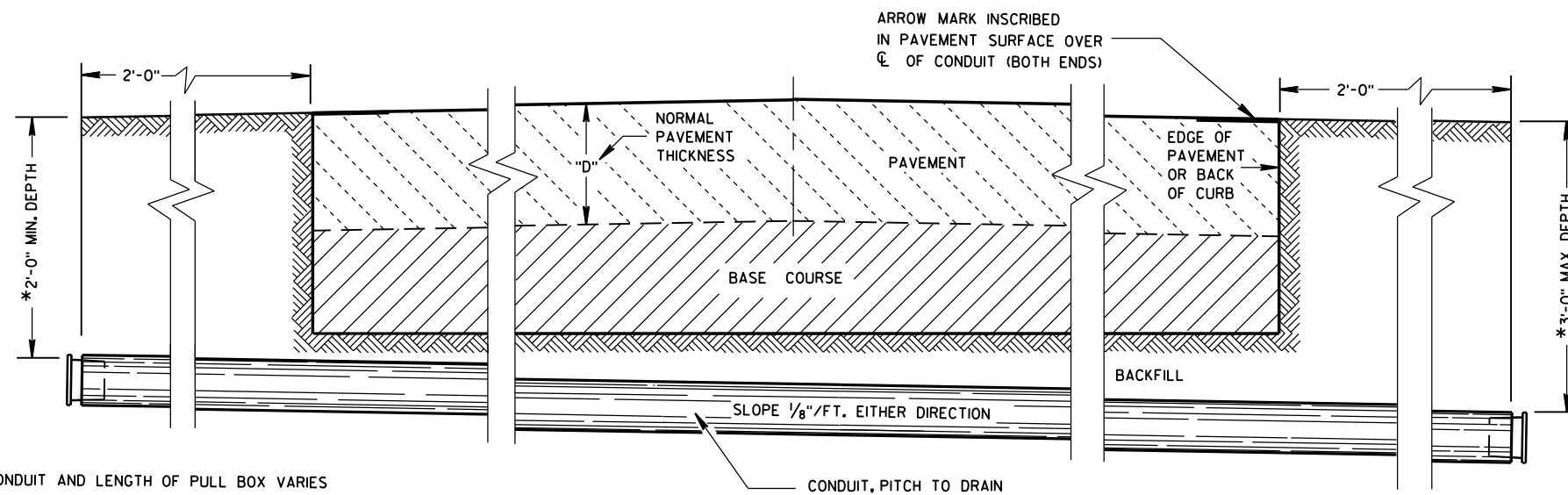


END VIEW

<b>REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/10/98 DATE	/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



**PLAN VIEW  
ARROW MARK**



**SIDE ELEVATION  
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS**

\*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

6

6

S.D.D. 9 B 2-10

S.D.D. 9 B 2-10

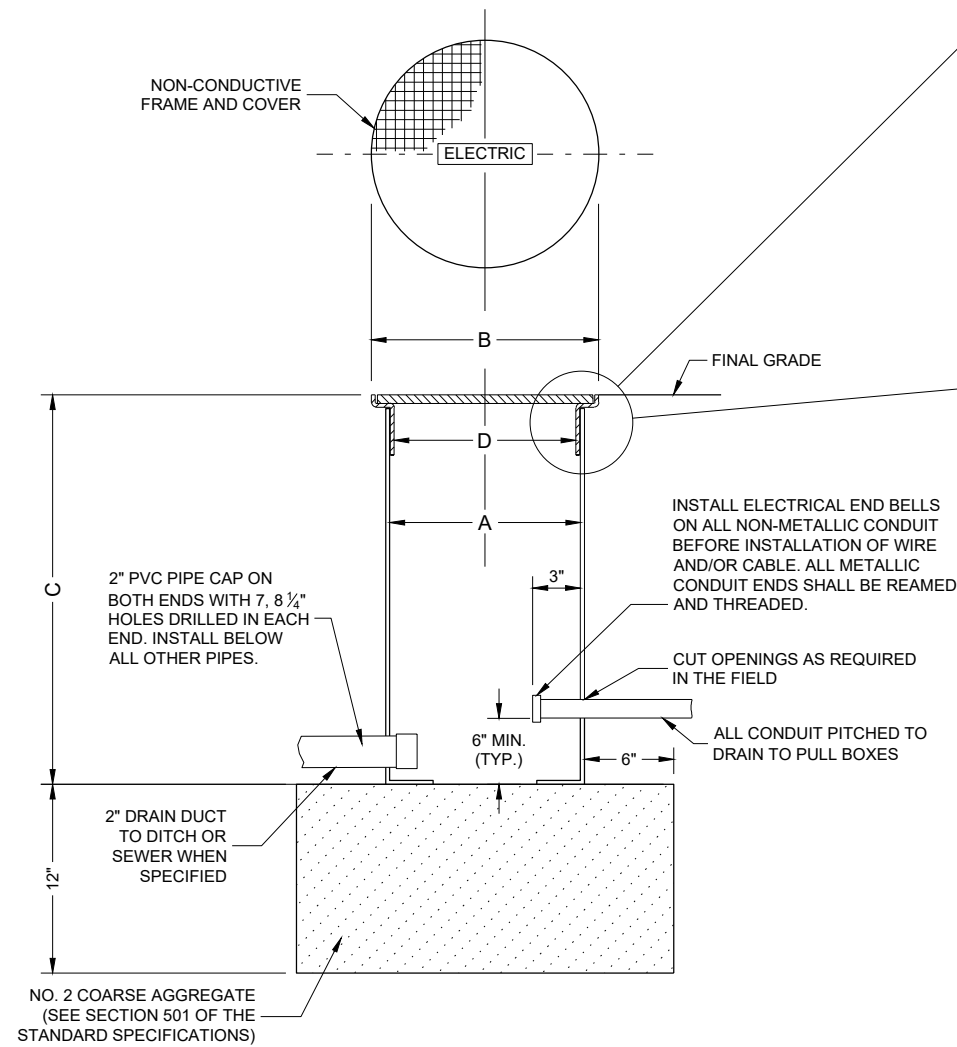
<b>CONDUIT</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March, 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

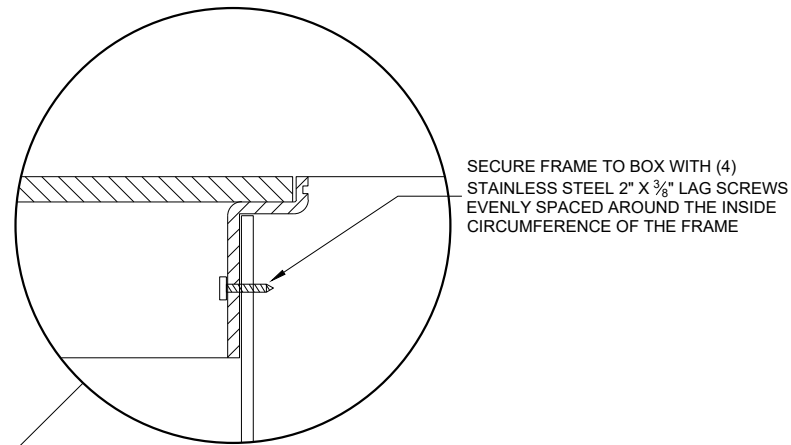
DIMENSION IN INCHES		NON- CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 1/2	22 1/2
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

\* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

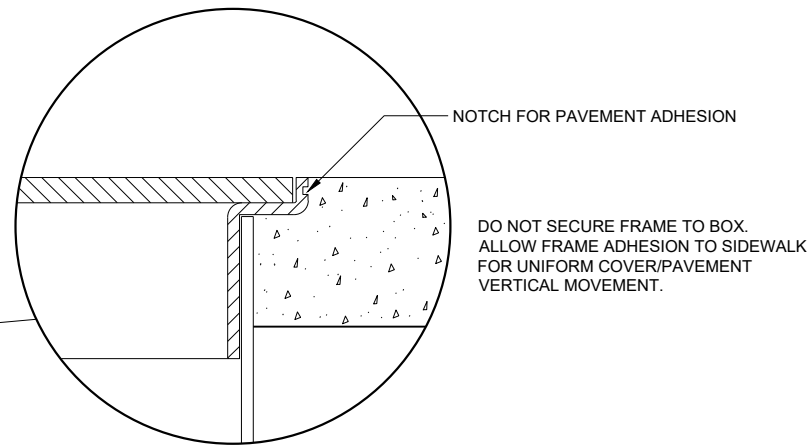
\*\* DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



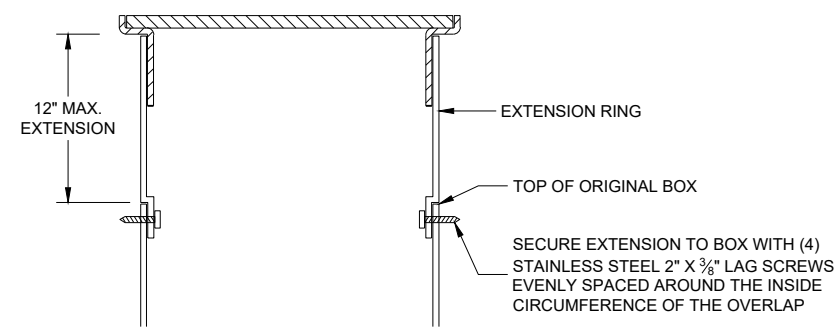
NON-CONDUCTIVE PULL BOX



INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



BOX EXTENSION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DISCONTINUITIES LESS THAN 1/4".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

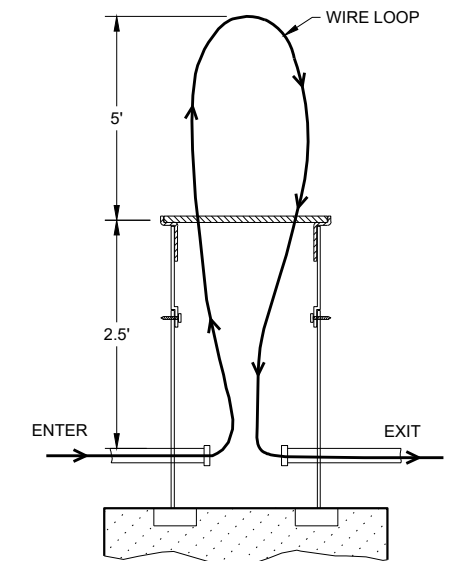
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

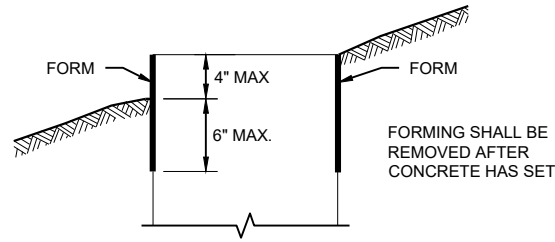
PULL BOXES NON-CONDUCTIVE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED May 2022 /S/ Ahmet Demirelek DATE STATE ELECTRICAL ENGINEER

FHWA

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



**FORMING DETAIL**

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

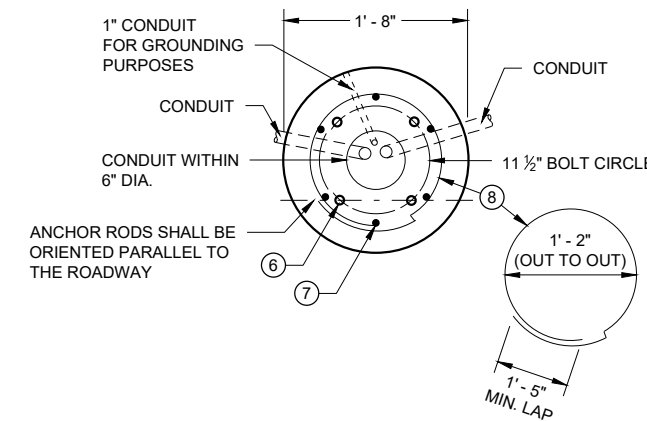
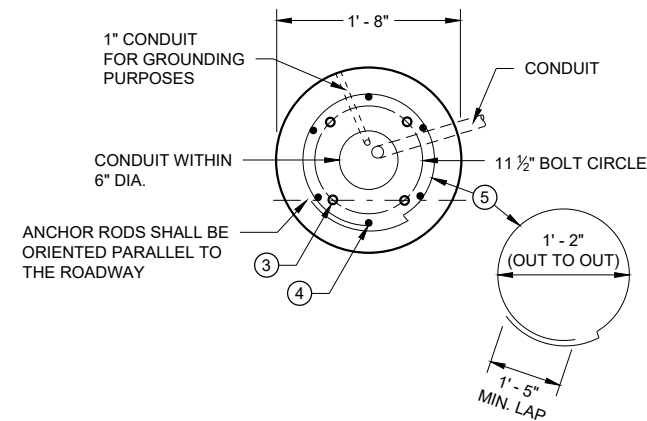
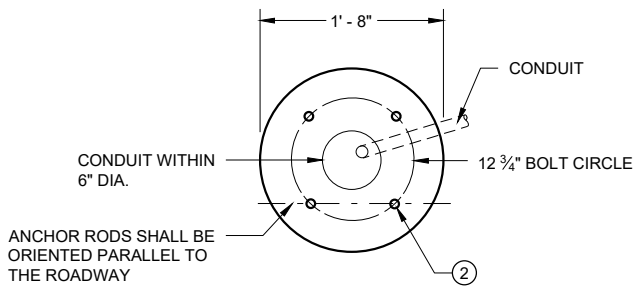
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

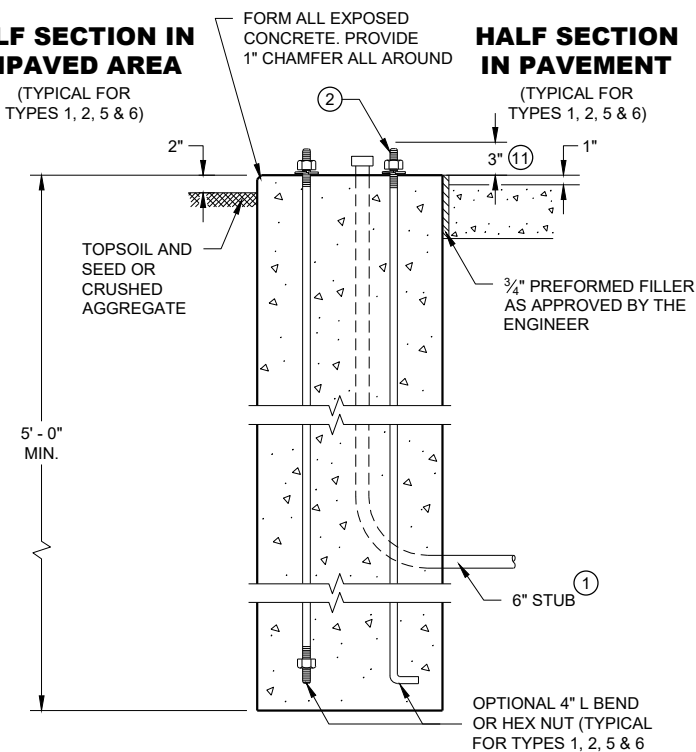
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

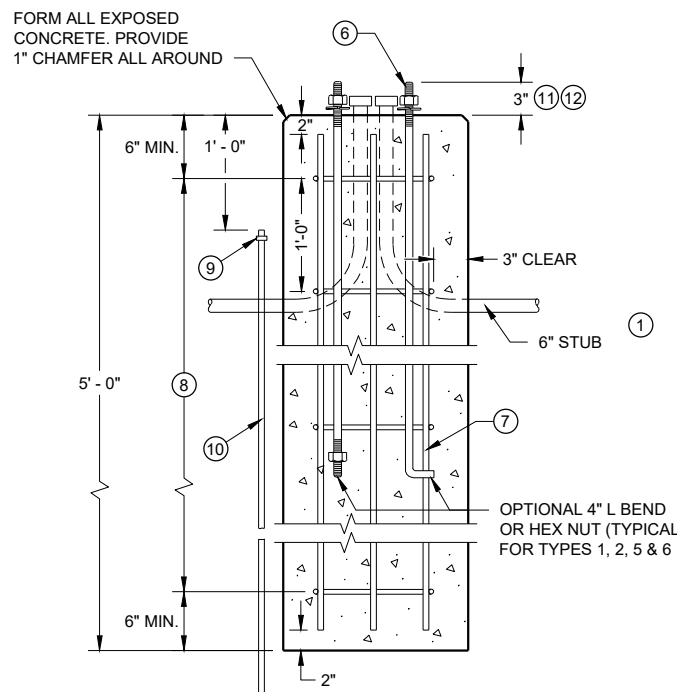
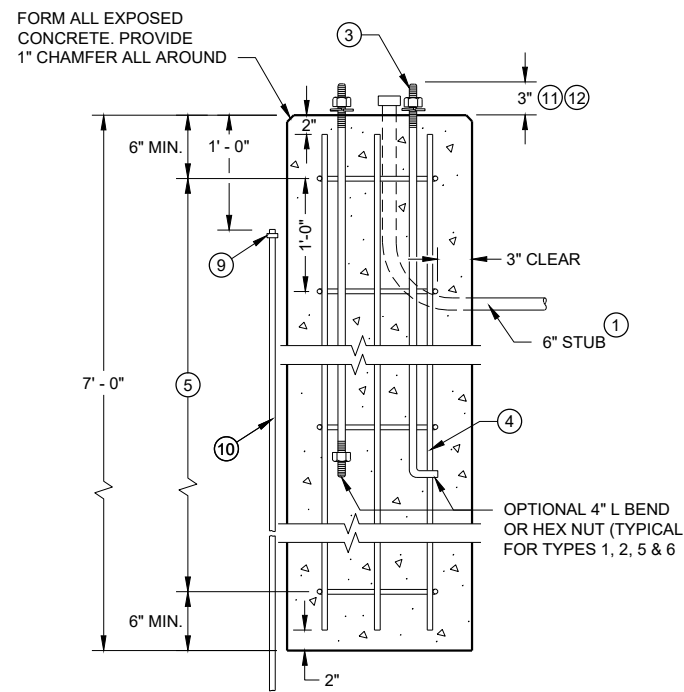
- ① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- ② (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ③ (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- ④ (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- ⑤ (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑥ (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ⑦ (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- ⑧ (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑨ EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- ⑩ 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- ⑪ ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.
- ⑫ FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.



**HALF SECTION IN UNPAVED AREA**



**HALF SECTION IN PAVEMENT**



**CONCRETE BASES**

6

6

SDD 09C02 - 09

SDD 09C02 - 09

**CONCRETE BASES  
TYPES 1, 2, 5, & 6**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2019 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER

FHWA



**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

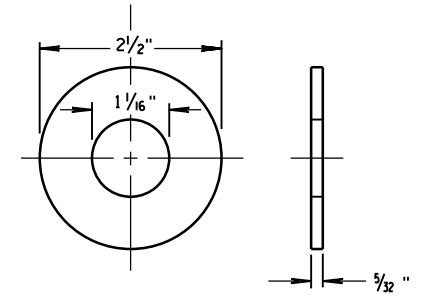
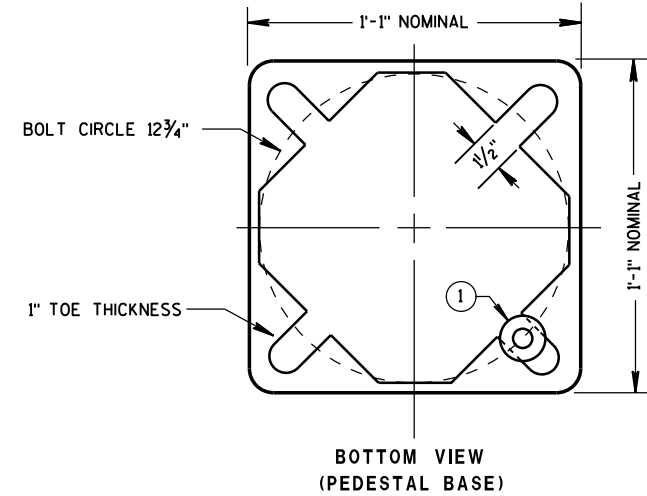
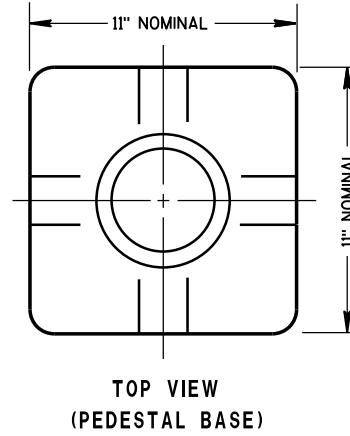
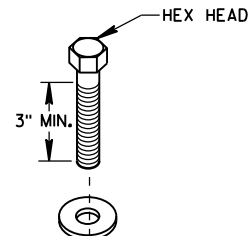
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

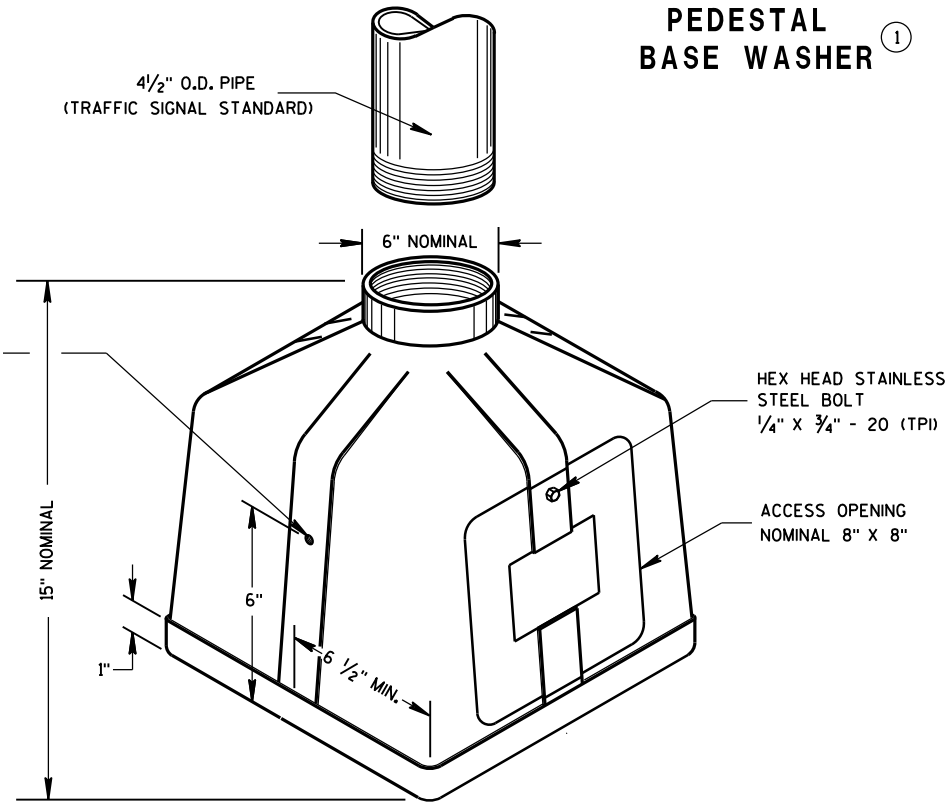
PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

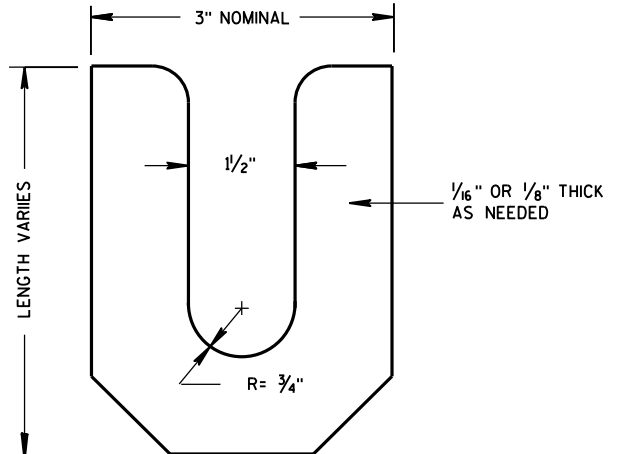
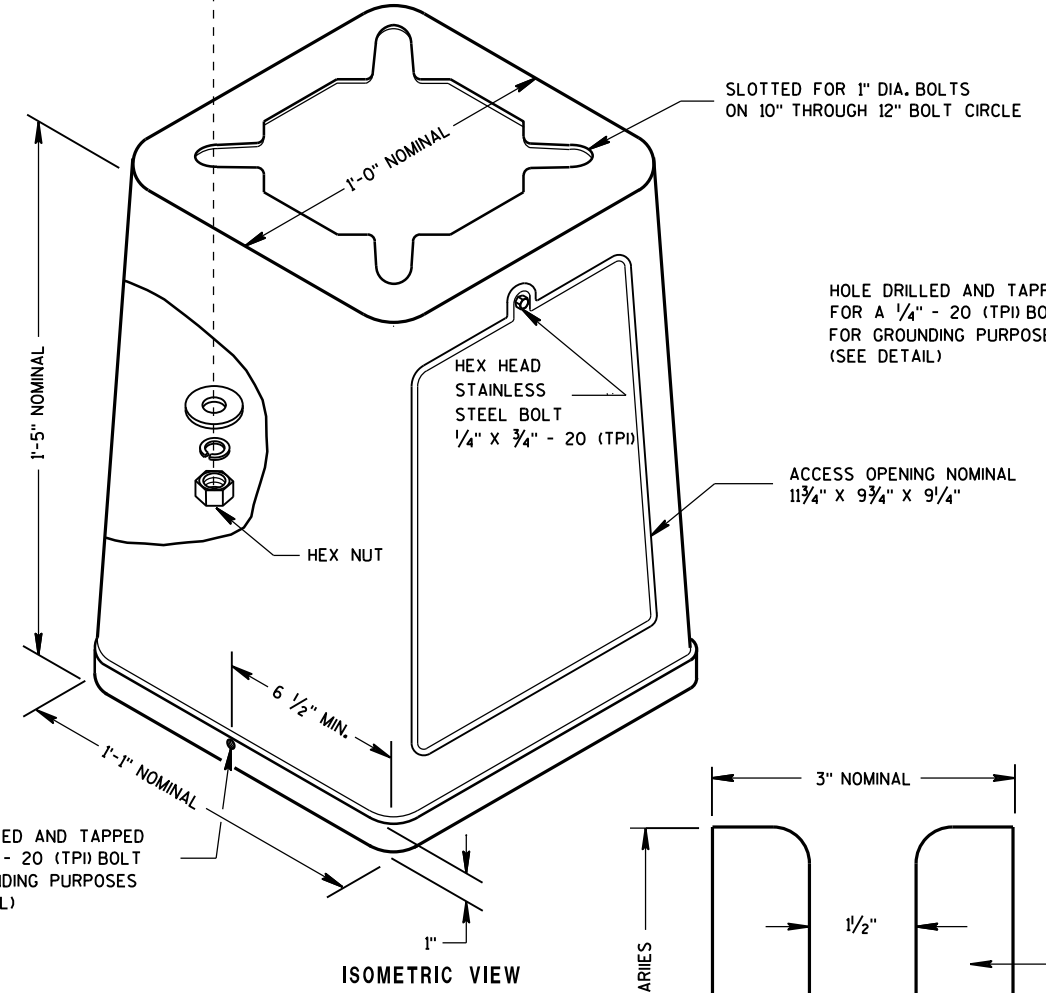
THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



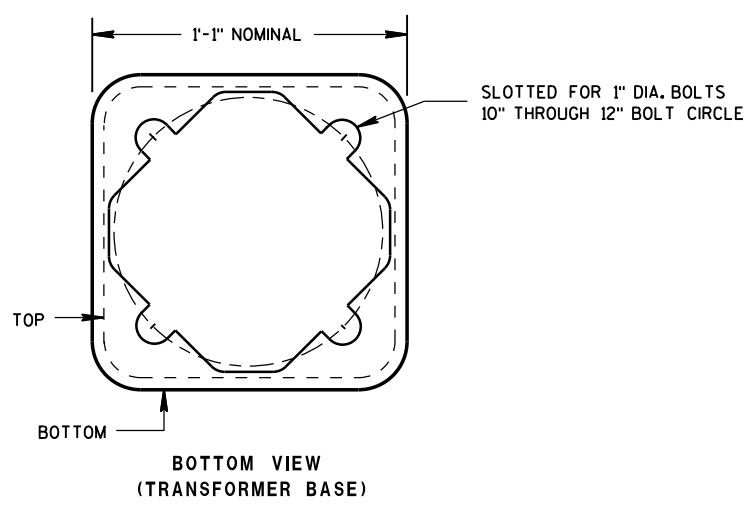
ZINC COATED STEEL WASHER TO BE PROVIDED BY THE CONTRACTOR  
**PEDESTAL BASE WASHER** ①



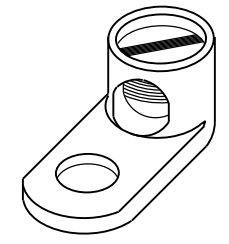
**ISOMETRIC VIEW PEDESTAL BASE**



**LEVELING SHIM**



**BOTTOM VIEW (TRANSFORMER BASE)**



**TYPICAL MECHANICAL CONNECTOR LUG**  
TO BE FURNISHED WITH EACH BASE

**TRANSFORMER BASE**  
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

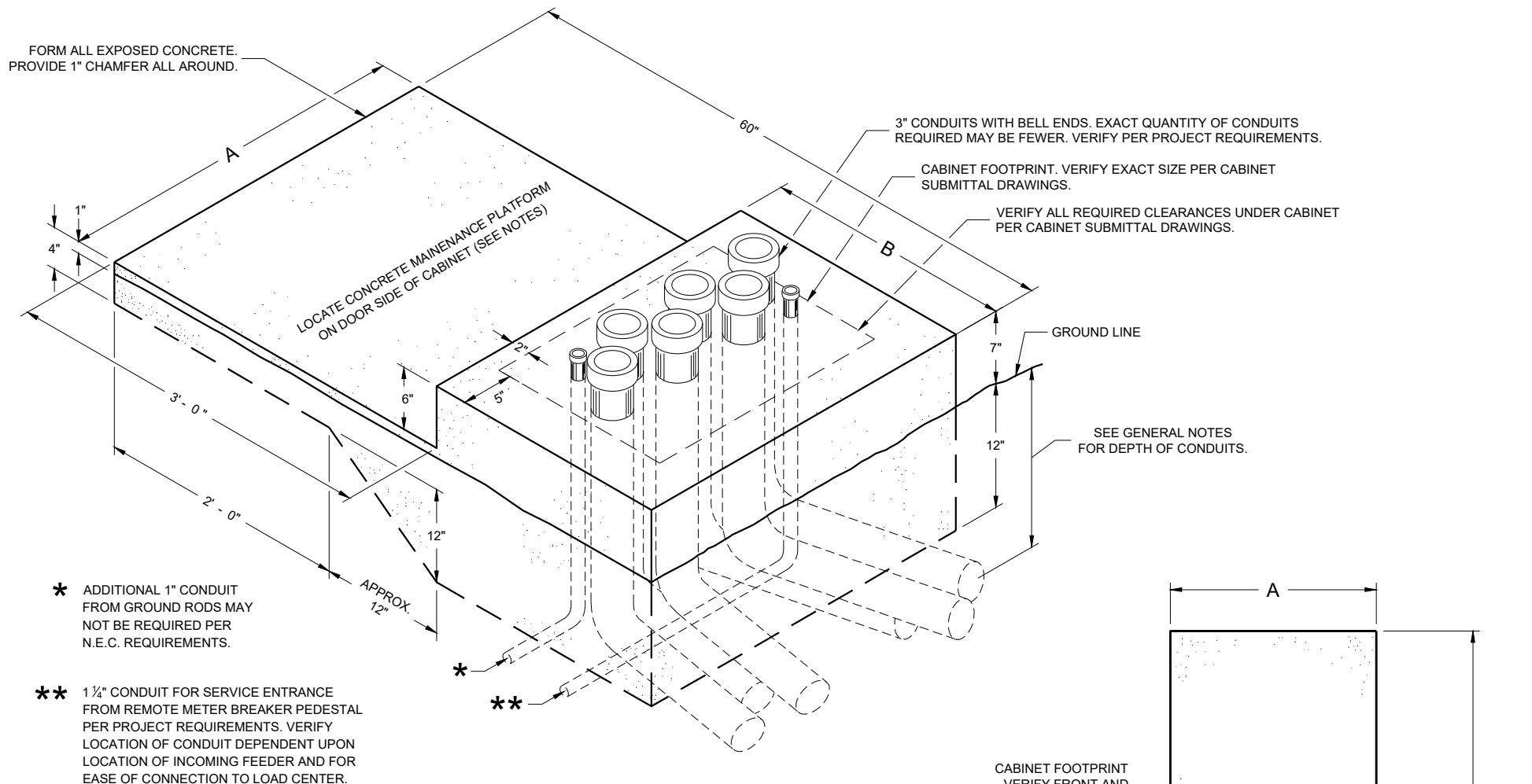
<b>TRANSFORMER/PEDESTAL BASES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

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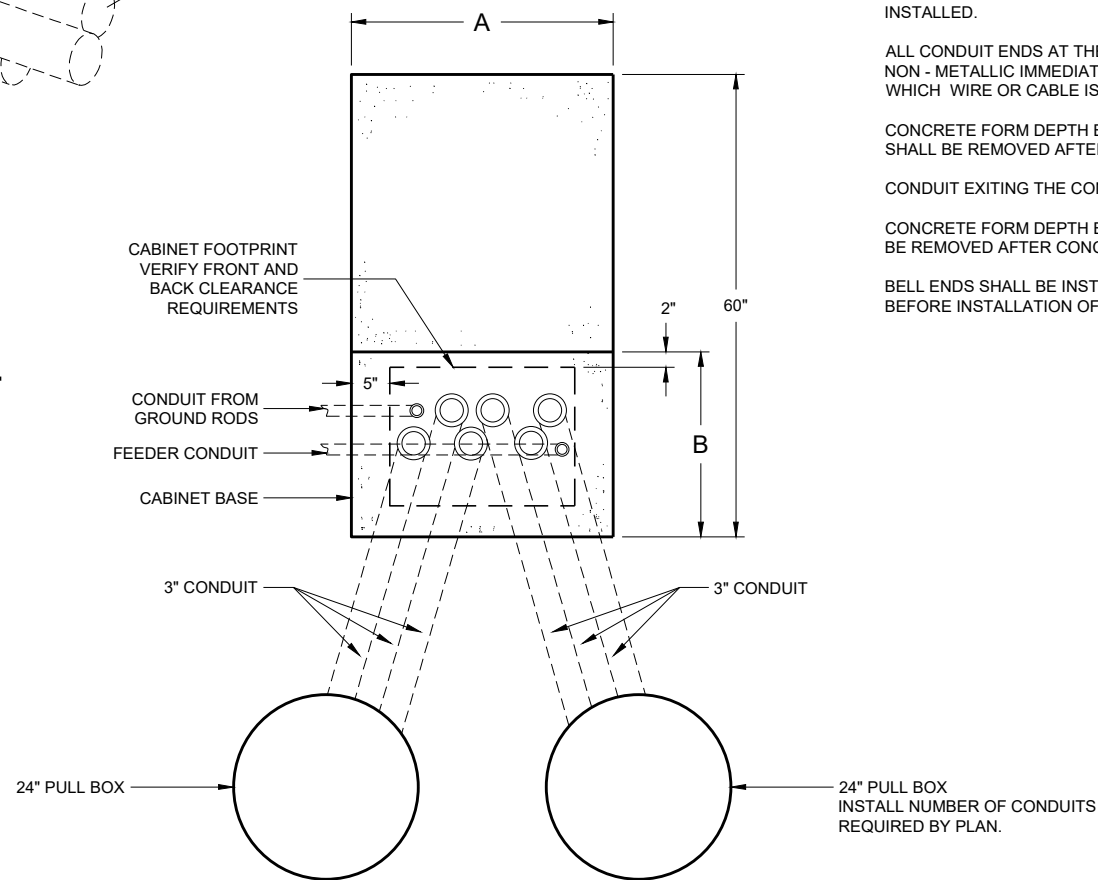
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**ISOMETRIC VIEW  
CONCRETE CONTROL CABINET BASE, TYPE L**  
(C.Y. CONCRETE = APPROX. 0.4)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSIONS		MAXIMUM 3" CONDUITS
		A	B	
L24	24"	34"	24"	4
L30	30"	40"	24"	6



**PLAN VIEW  
CONCRETE CONTROL CABINET BASE, TYPE L**

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NON - METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U. L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS UNLESS DETERMINED BY THE ENGINEER IN THE FIELD.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NON - METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON - METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCHES MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUIT EXITING THE CONCRETE BASE SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCH MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

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6

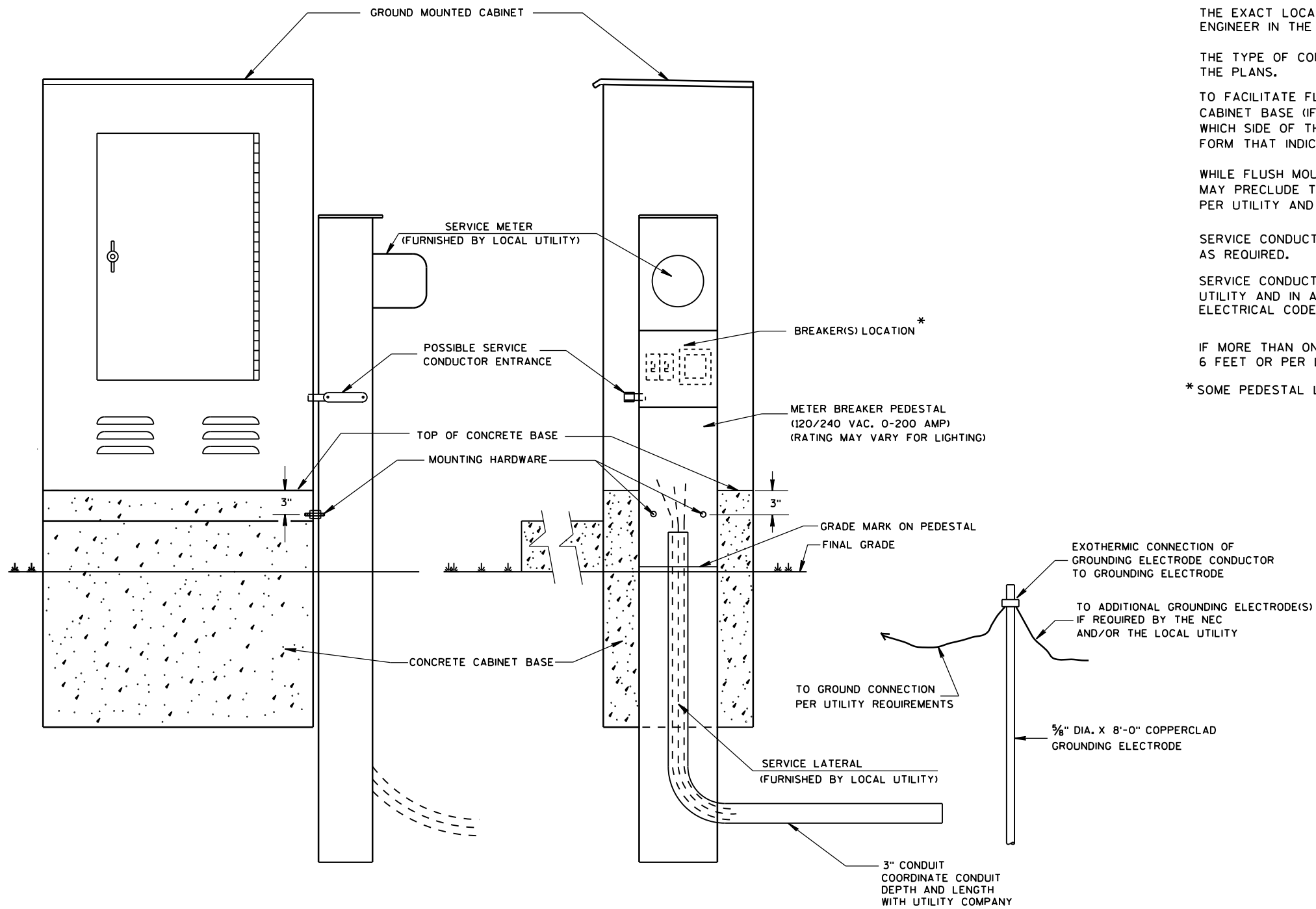
SDD 09C14 - 03

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**CONCRETE CONTROL  
CABINET BASE, TYPE L**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER  
FHWA



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH, THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

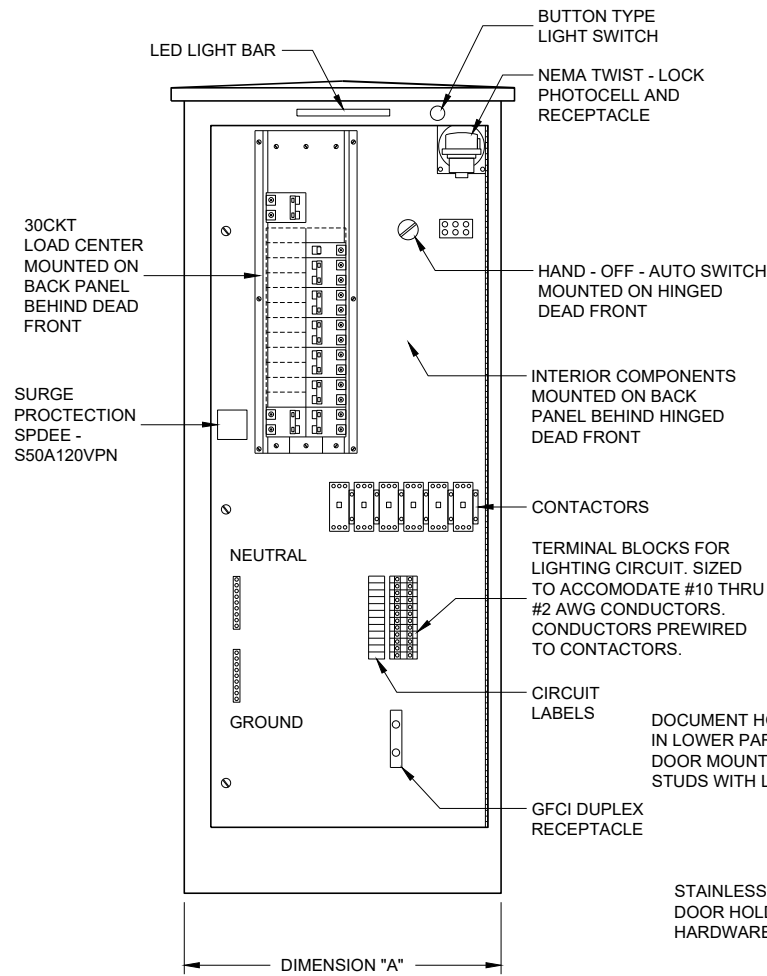
SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

\* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FHWA	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER

**FRONT INTERIOR ELEVATION**



**SIDE VIEW**

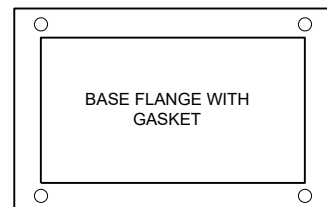
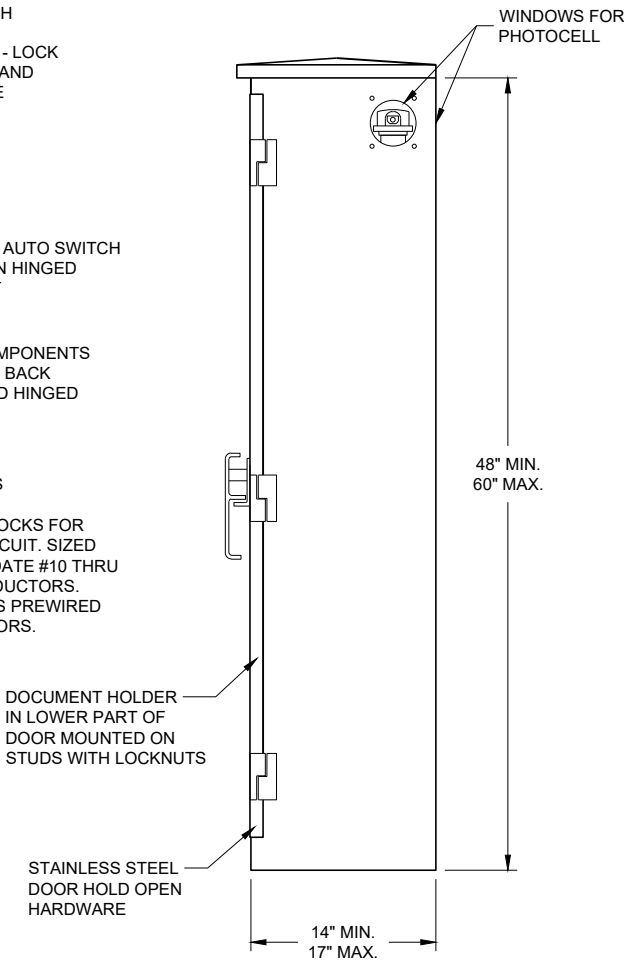


TABLE OF DIMENSIONS (INCHES)		
CONCRETE BASE TYPE	CABINET WIDTH	DIMENSION "A"
L24	24"	24"
L30	30"	30"

**LIGHTING CONTROL CABINET**

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

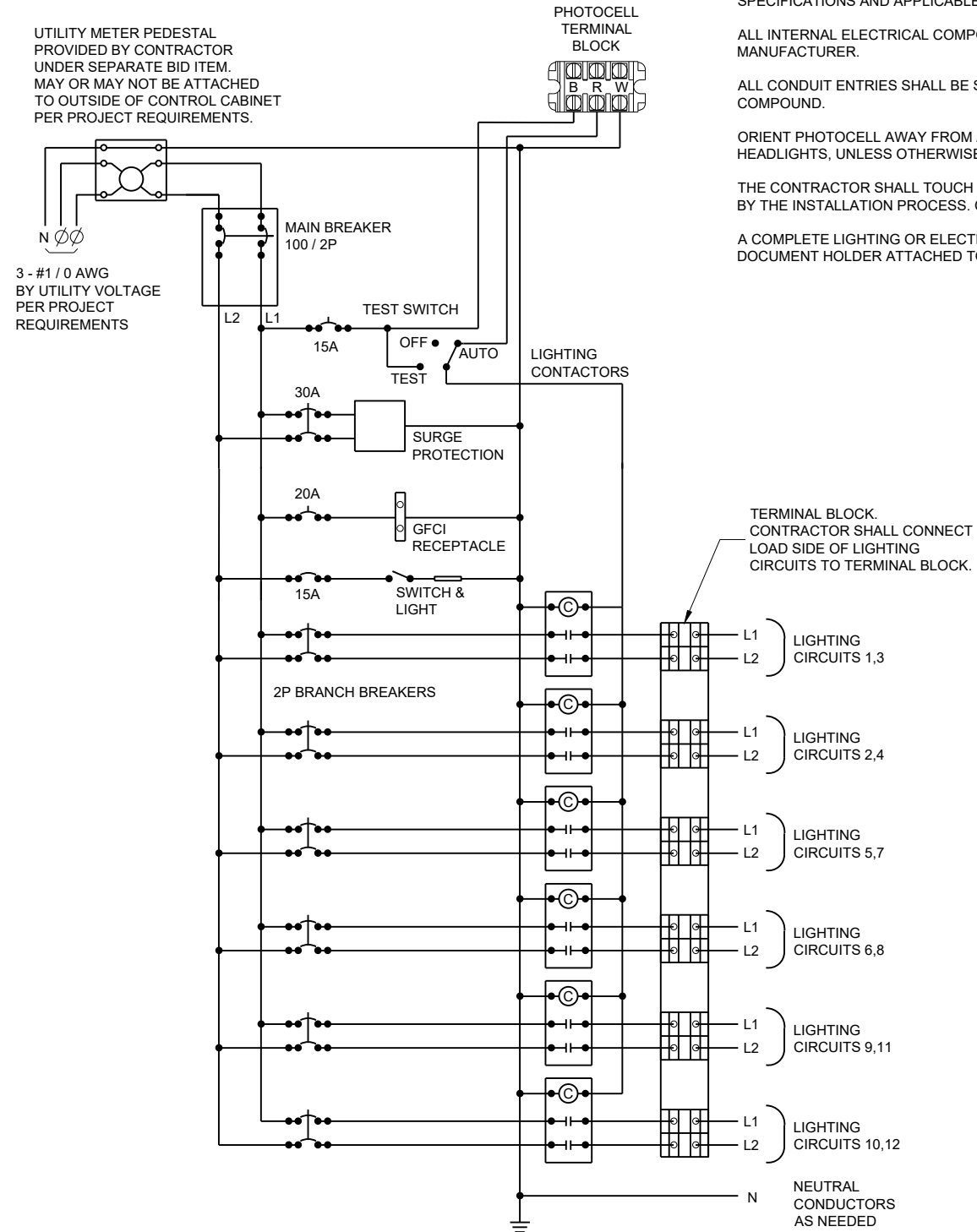
ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE - WIRED BY THE CABINET MANUFACTURER.

ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS, UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISION.

THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.

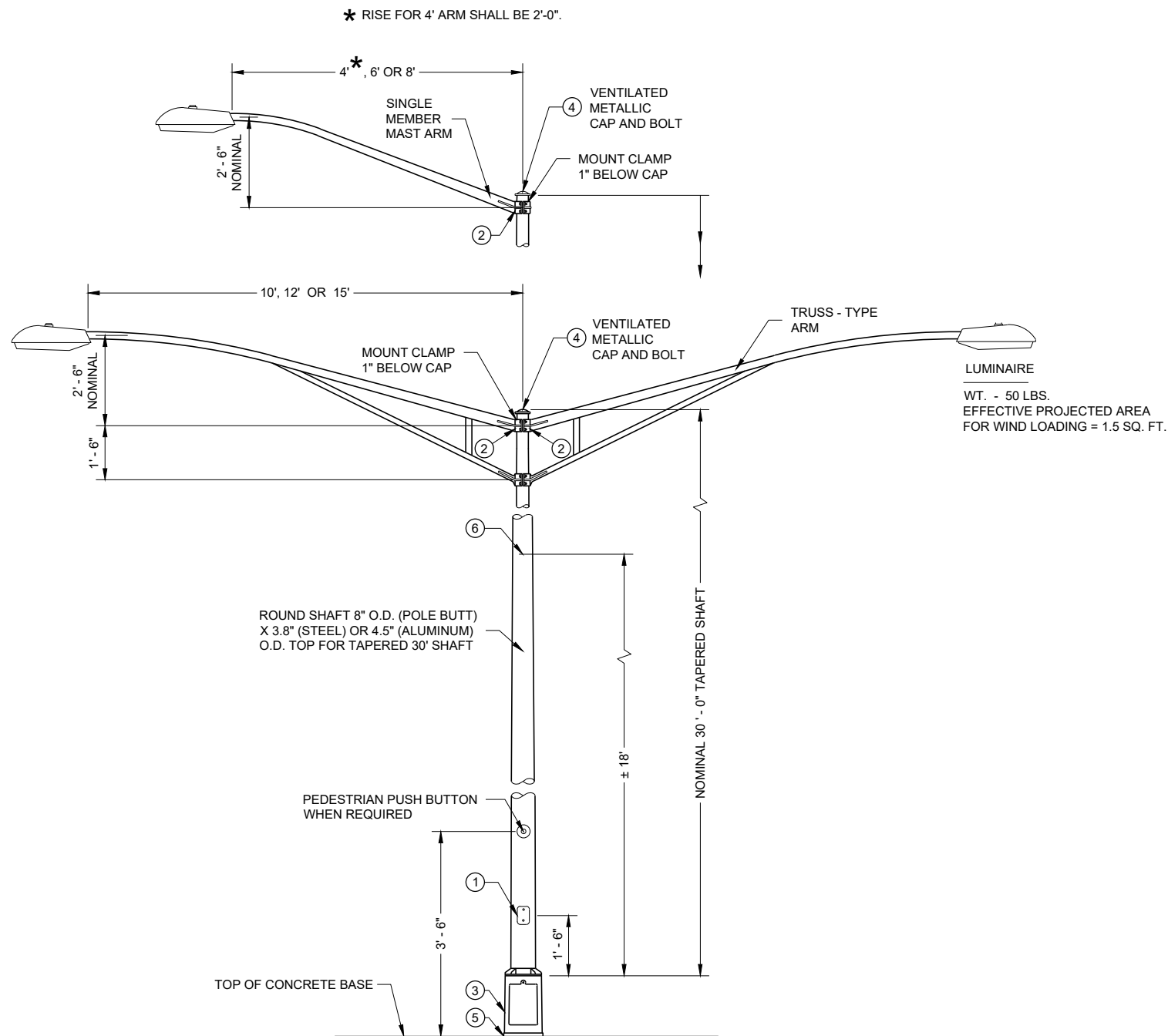


**CONTROL CABINET SCHEMATIC**

**LIGHTING CONTROL CABINET  
120 / 240 VOLT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER



**TYPE 5 POLE MOUNTING CONFIGURATION  
(MAXIMUM LOAD)  
LIGHTING ONLY**

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

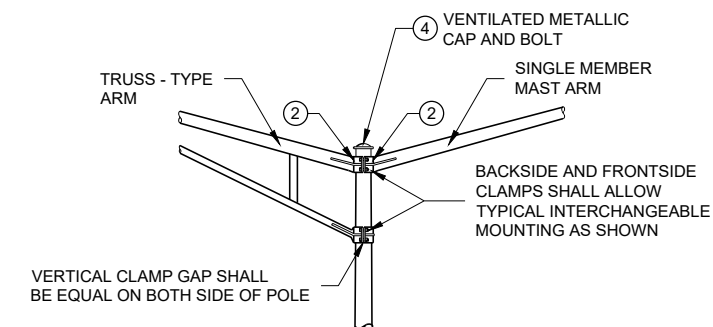
TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

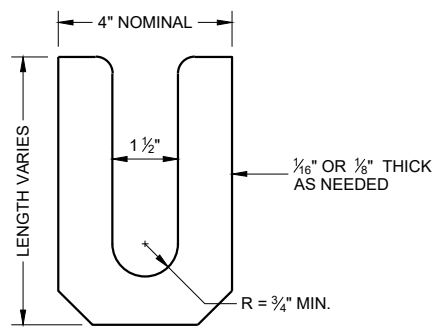
- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/4" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD BOLTS.
- ② GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ③ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ④ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑤ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑥ INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



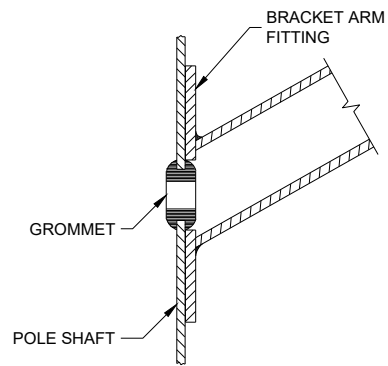
**INTERCHANGEABLE MOUNTING DETAIL**

**POLE MOUNTINGS FOR  
LIGHTING UNITS, TYPE 5  
( 30 FEET )**

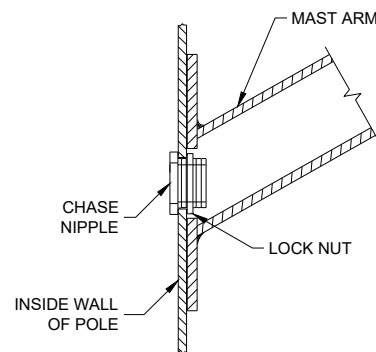
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**LEVELING SHIM**  
SHALL BE ALUMINUM



**TYPICAL APPLICATION OF GROMMET IN POLE SHAFT**



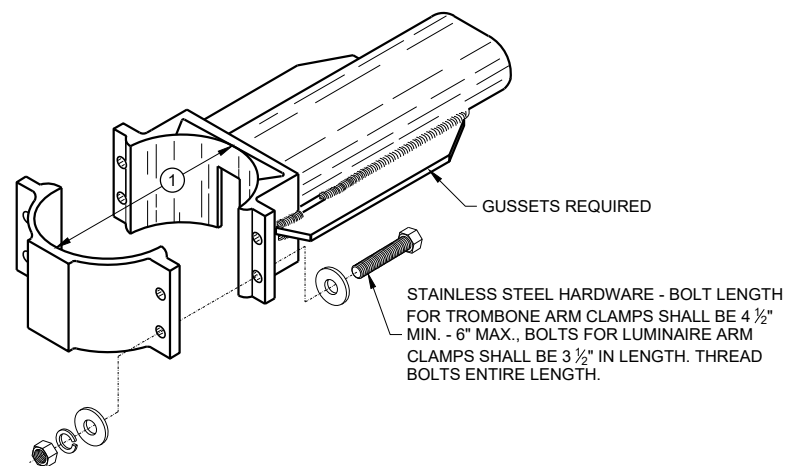
**TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT**

**GENERAL NOTES**

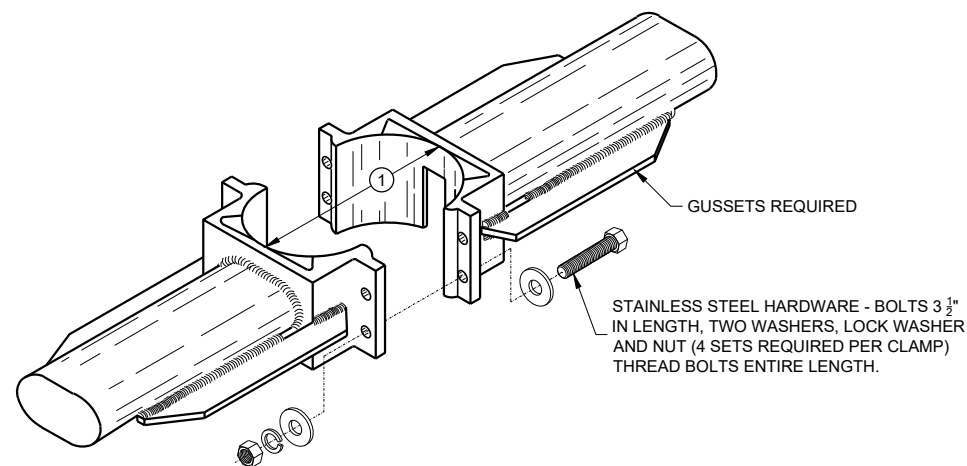
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- ② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- ③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
- ④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

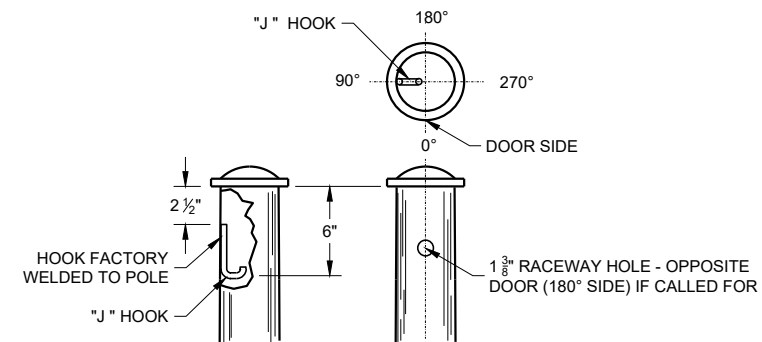
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



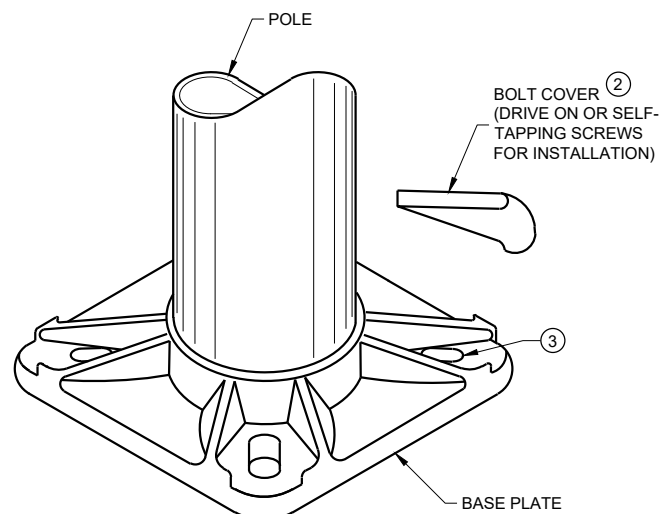
**TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP**



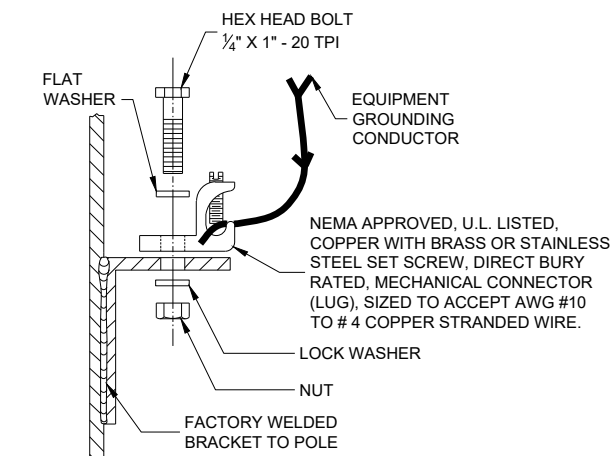
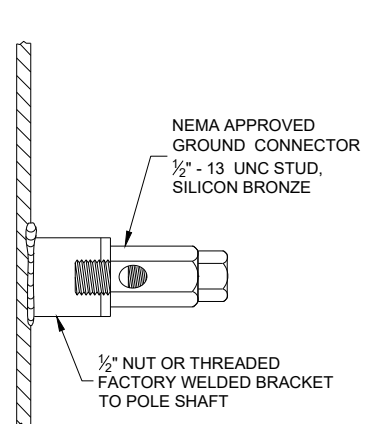
**TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS**



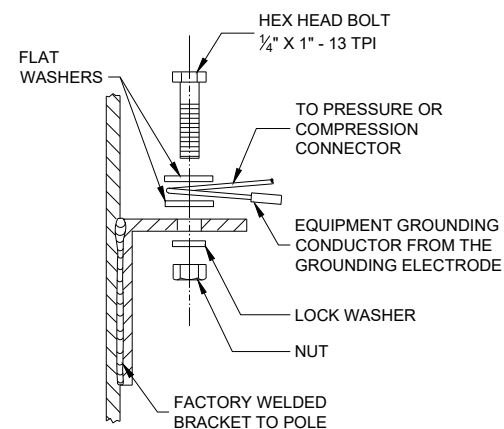
**TYPICAL "J" HOOK LOCATION**



**BASE PLATE**



**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



**HARDWARE DETAILS FOR POLE MOUNTING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER

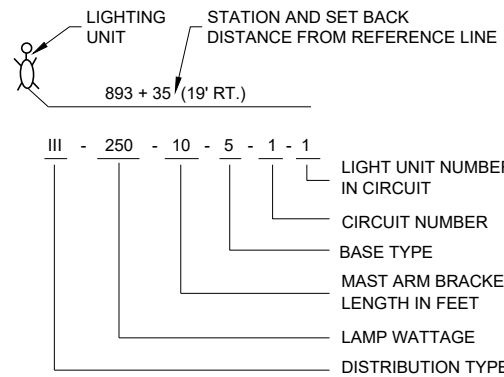
FHWA

**GENERAL NOTES**

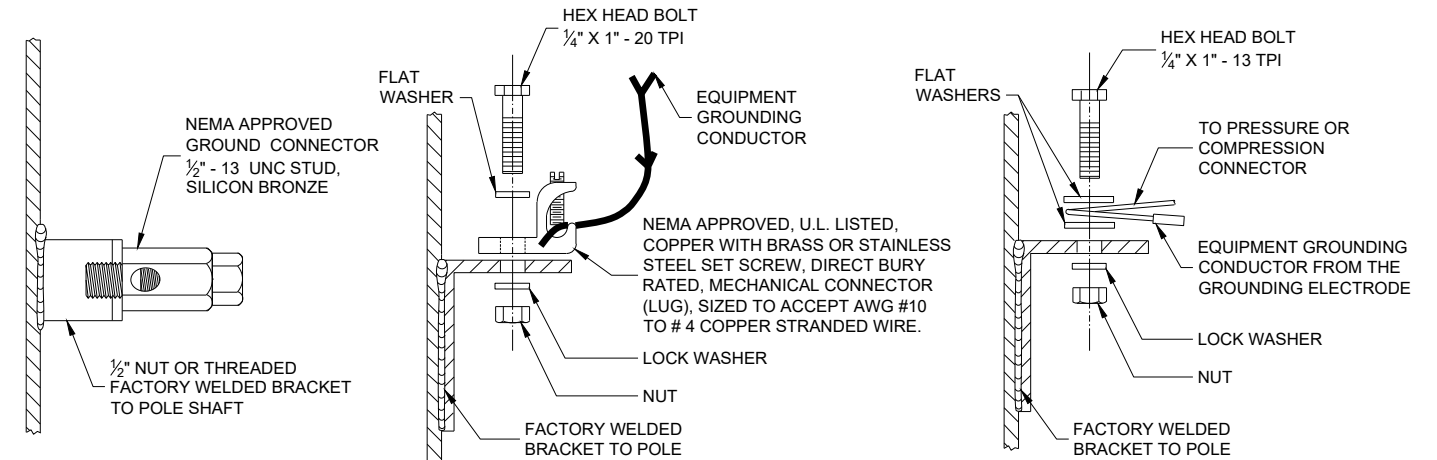
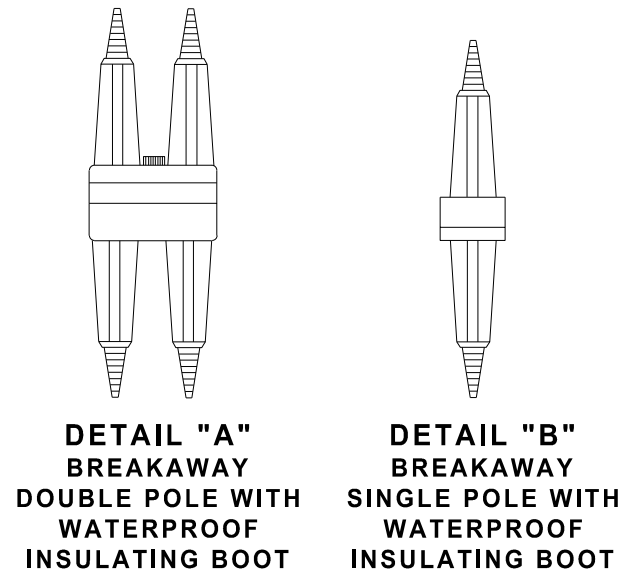
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

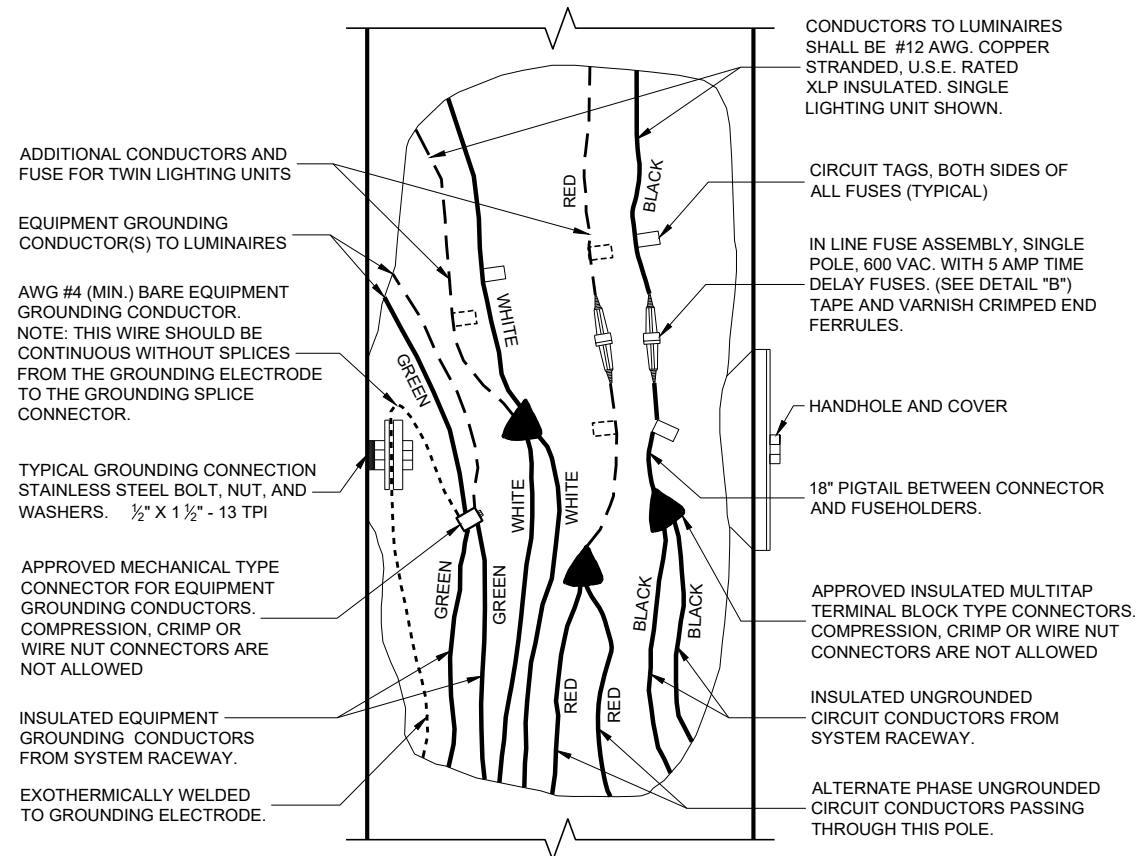


**LIGHTING UNIT CODE (TYPICAL)**



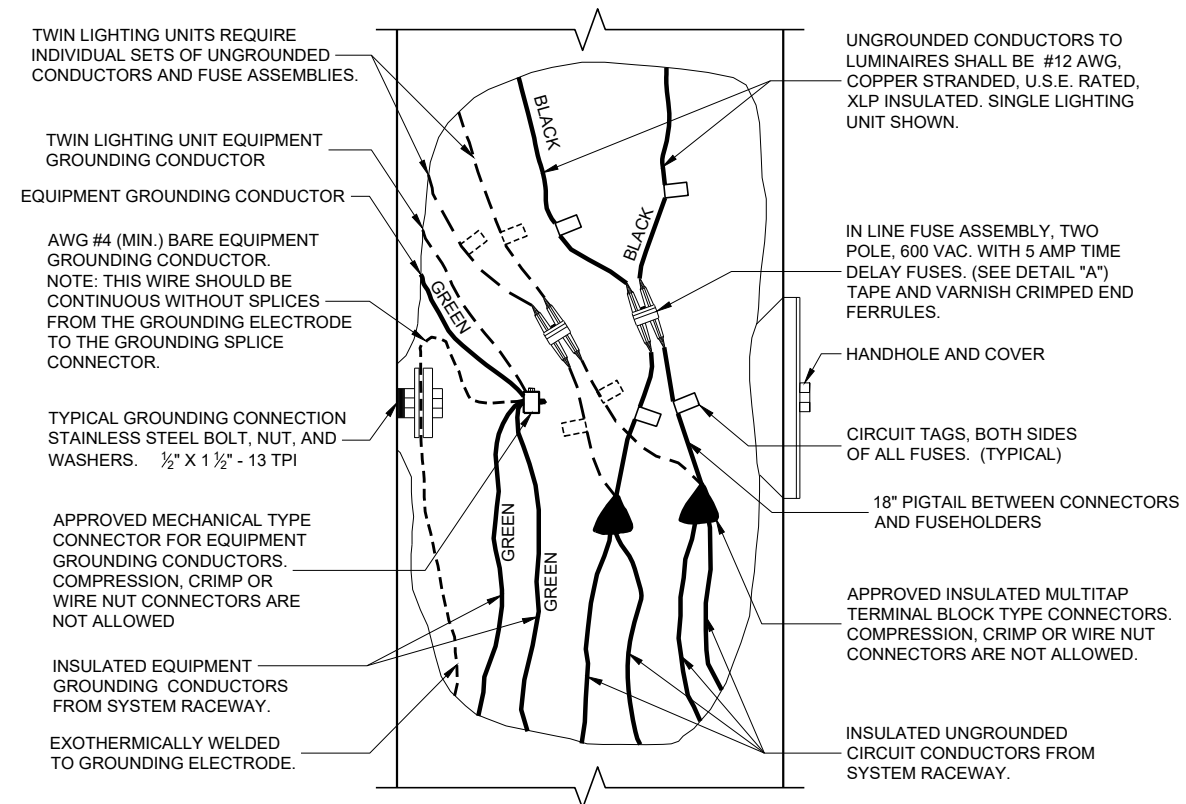
**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

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**3 WIRE - 120, 240 OR 480 VAC (UNGROUNDING CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR**

6



**2 WIRE - 240 OR 480 VAC (UNGROUNDING CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR**

SDD 09E03 - 06

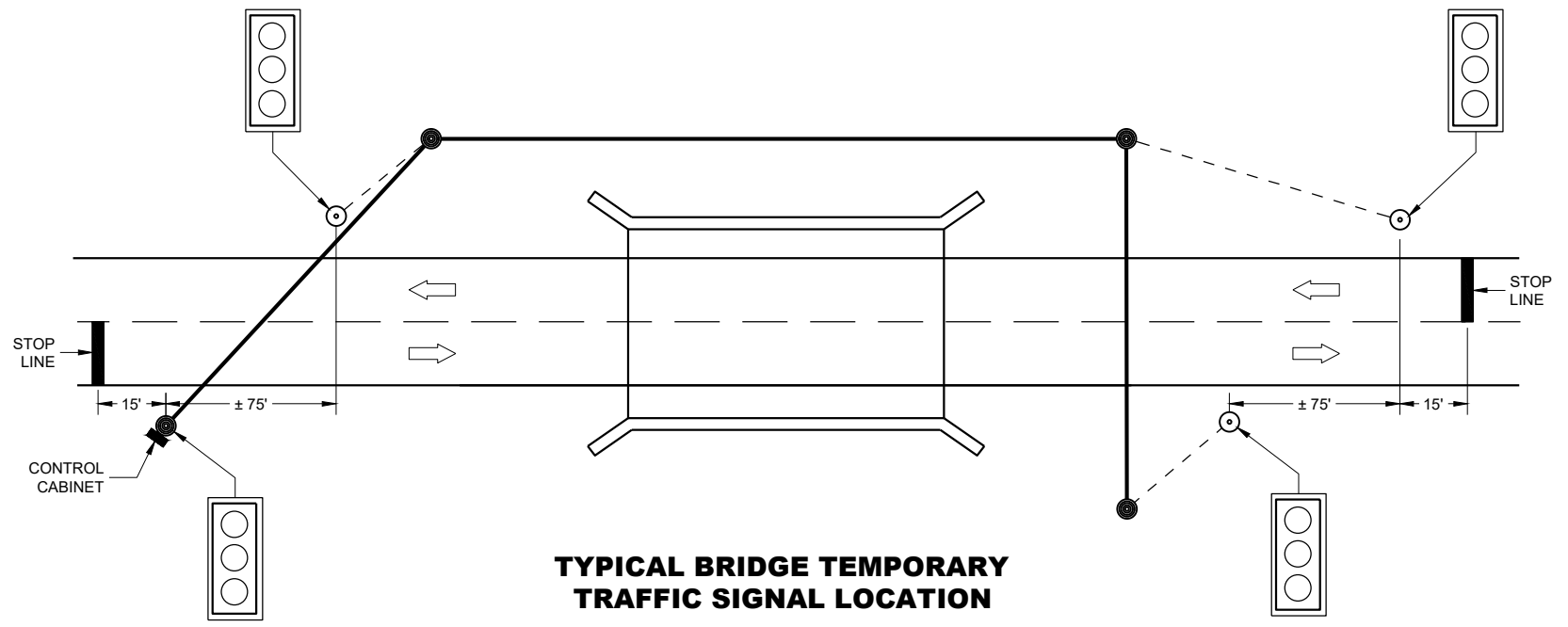
SDD 09E03 - 06

**NON - FREEWAY LIGHTING UNIT POLE WIRING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER

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**TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION**

**LEGEND**

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREAKAWAY)
- - - SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- ➡ DIRECTION OF TRAFFIC
- LED TRAFFIC SIGNAL WITH BACKPLATE  
3-12"

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAY BE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

WOOD POLES (NON-BREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

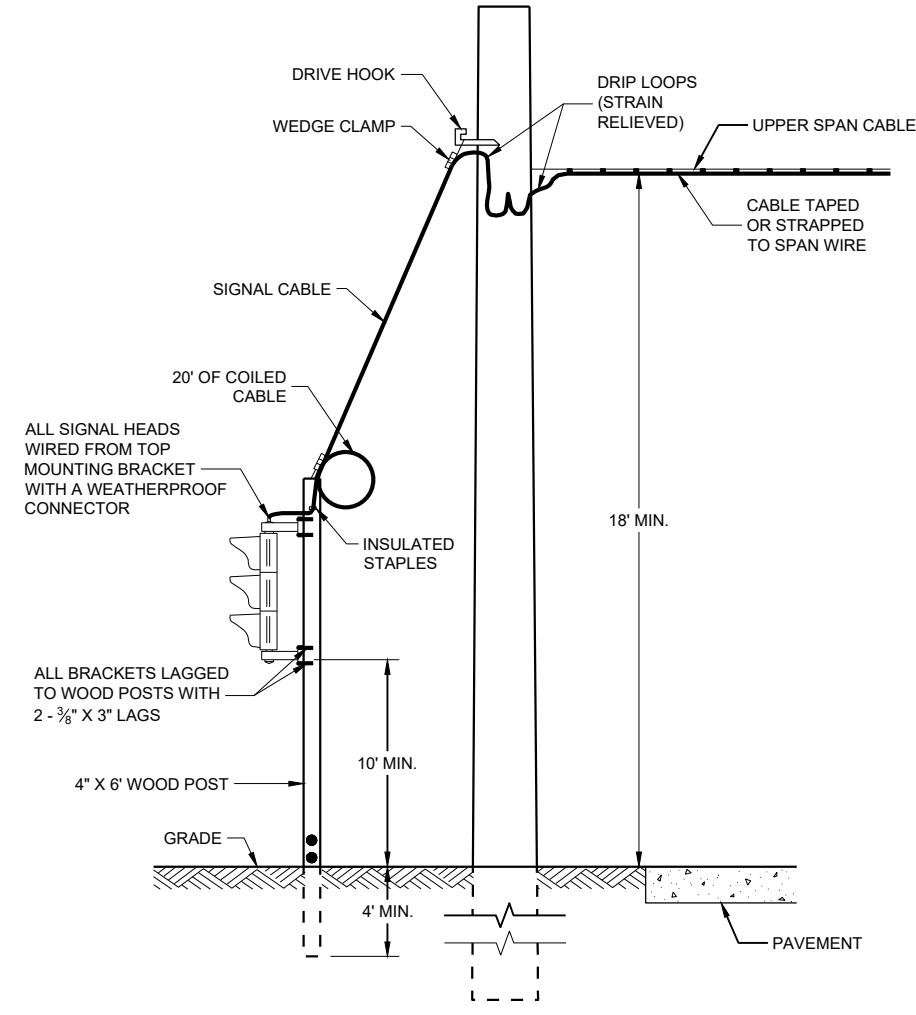
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

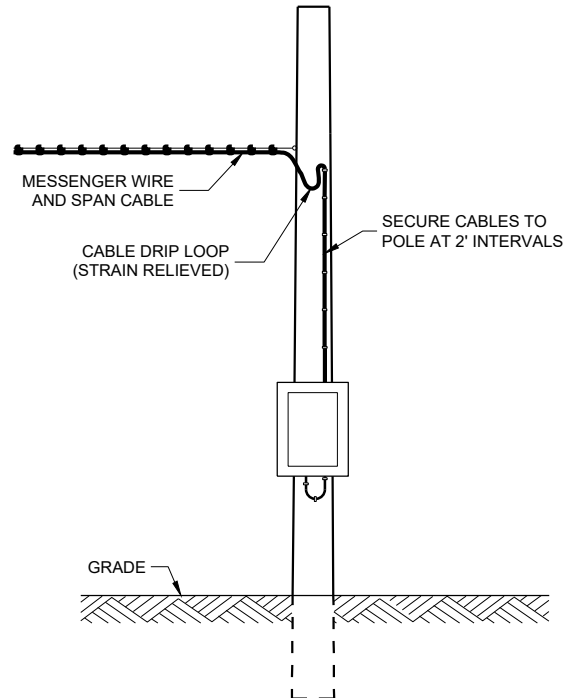
TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL SHALL HAVE A BACKPLATE.

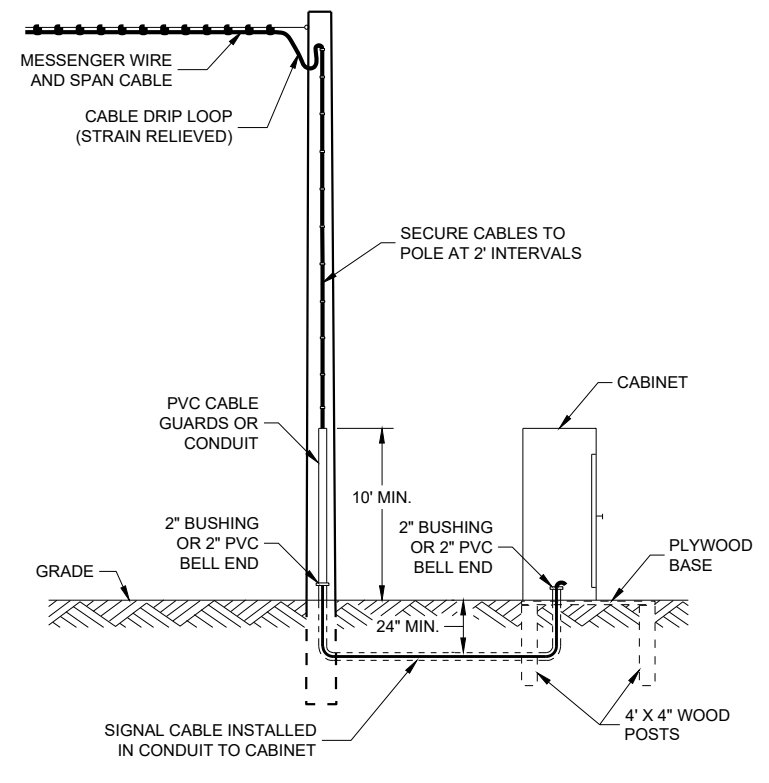
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



**TYPICAL DROP TO TRAFFIC SIGNAL FACE**



**POLE MOUNT CABINET INSTALLATION**



**GROUND MOUNT CABINET INSTALLATION**

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE*
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/CURBS	2 FT

\* NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.

**BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Ahmet Demirelek  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

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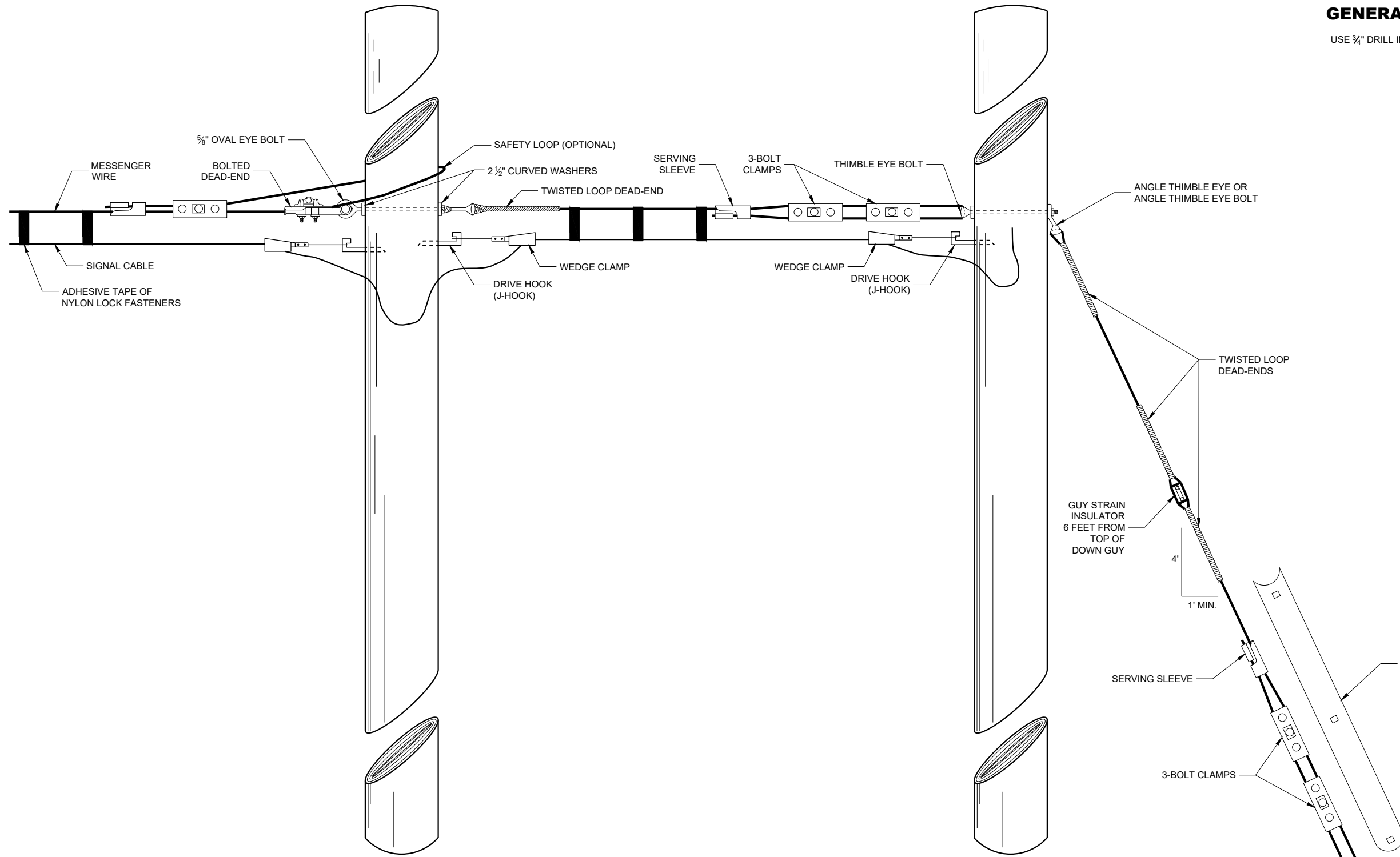
SDD09G02 - 05a

SDD09G02 - 05a



**GENERAL NOTES**

USE 3/4" DRILL IN WOOD POLE TO PROVIDE FOR 5/8" BOLTS.



**SPAN WIRE POLE**

**GUY POLE**

**TYPICAL DEAD-ENDINGS OR GUYING**

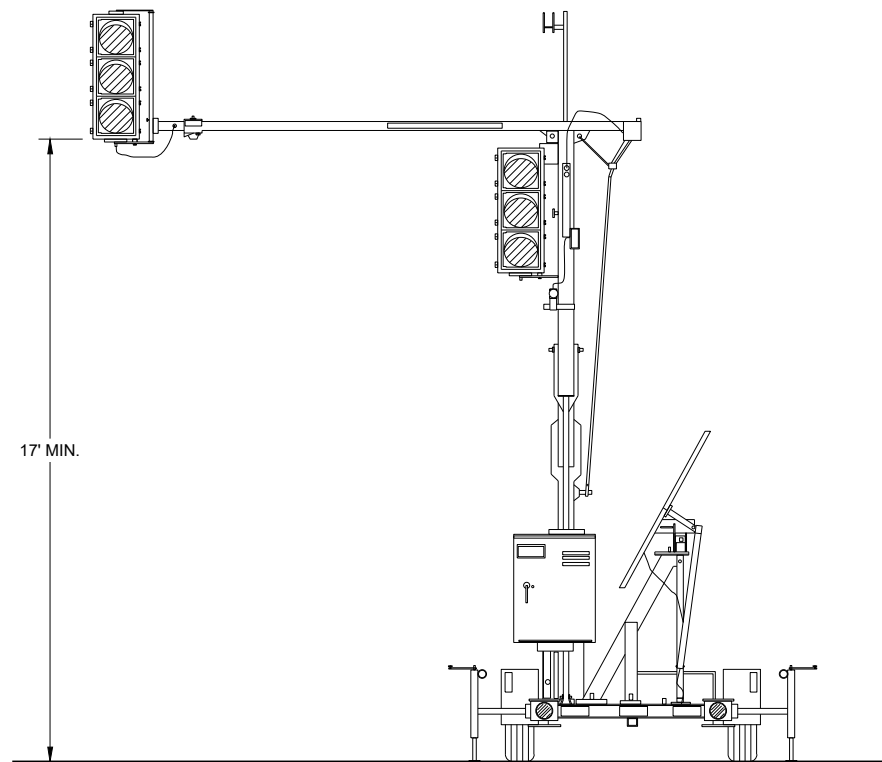
<b>BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2015 DATE	/S/ Ahmet Demerbilek ROADWAY STANDARDS DEVELOPMENT ENGINEER
<small>FHWA</small>	

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**SDD09G02 - 05b**

**SDD09G02 - 05b**

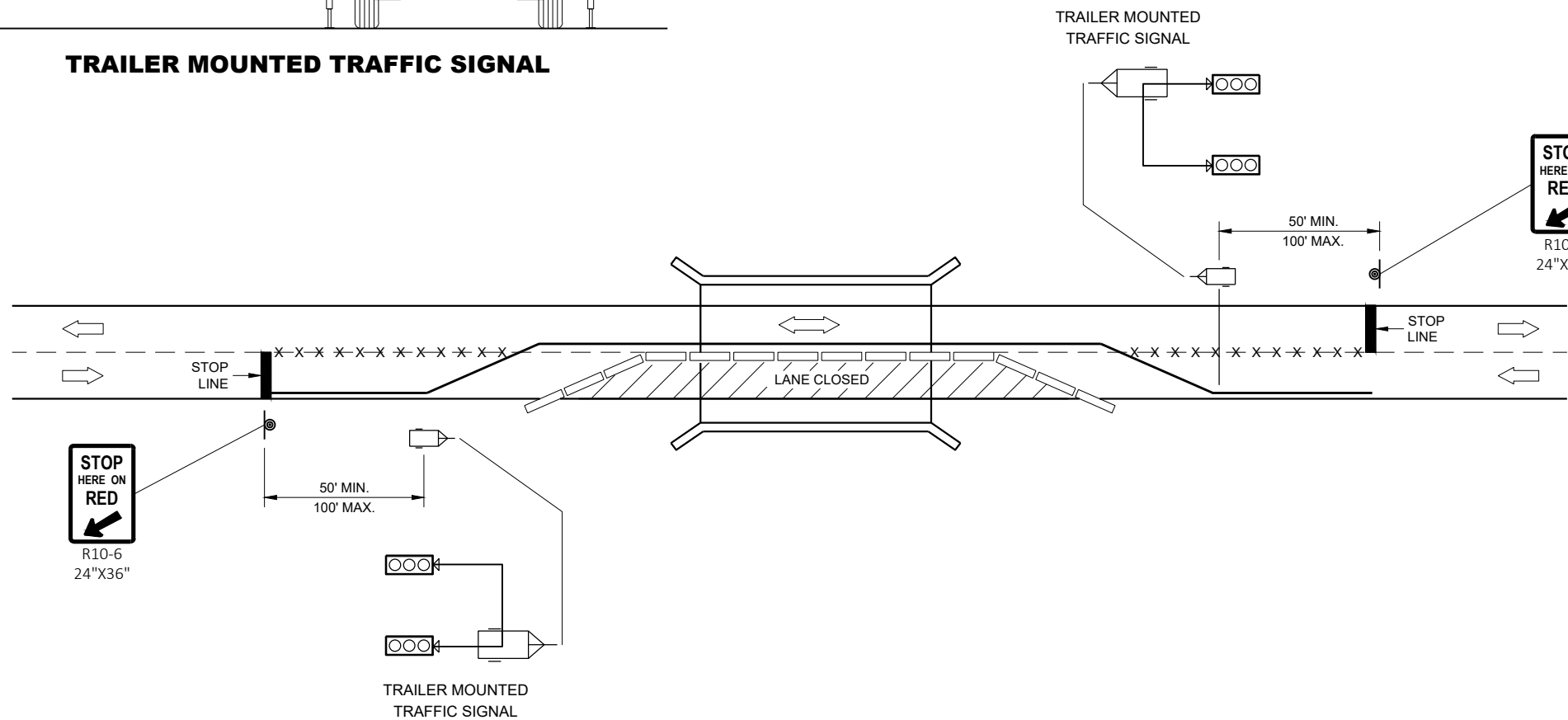


**TRAILER MOUNTED TRAFFIC SIGNAL**

**GENERAL NOTES**






DETAIL OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



**TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION**

**LEGEND**

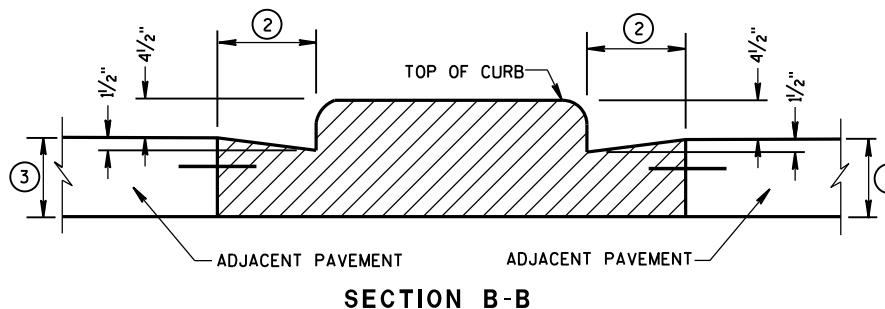
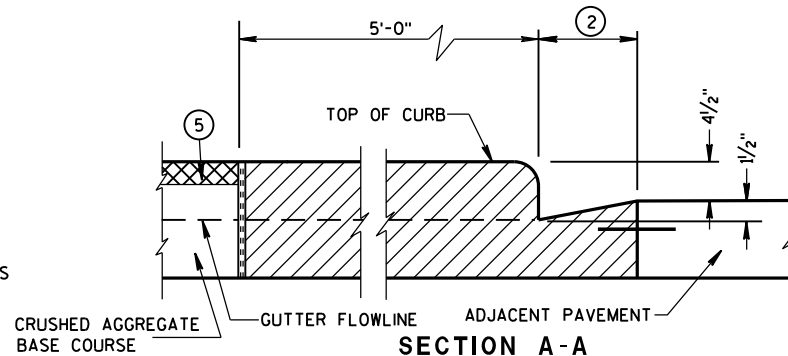
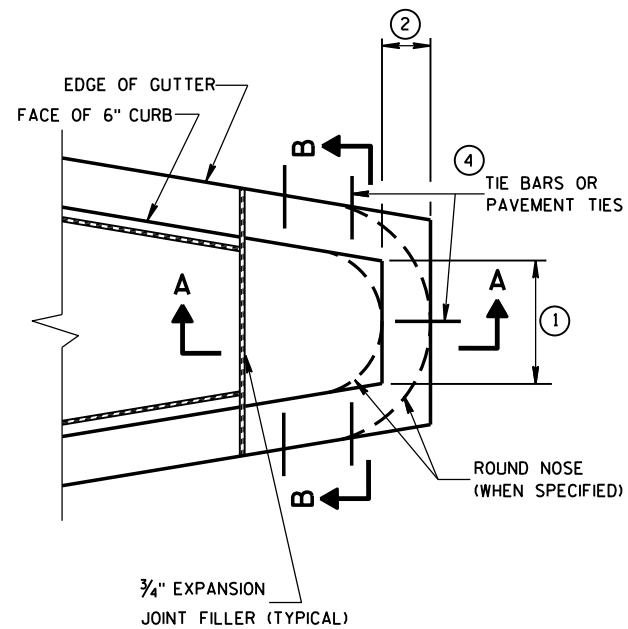
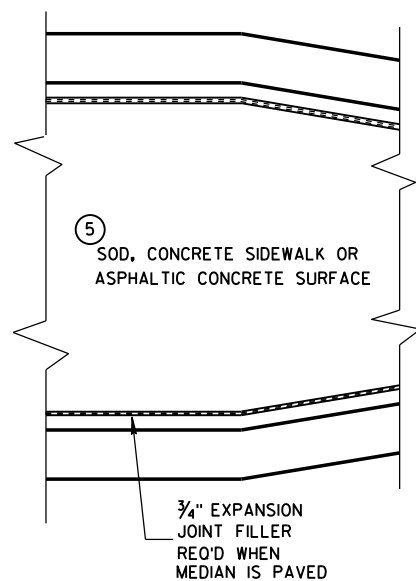
-  POST MOUNTED SIGN
-  TEMPORARY PRECAST CONCRETE BARRIER
-  TRAILER MOUNTED TRAFFIC SIGNAL
-  REMOVE PAVEMENT MARKINGS
-  DIRECTION OF TRAFFIC

**BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2015 /S/ Ahmet Demerbilek  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

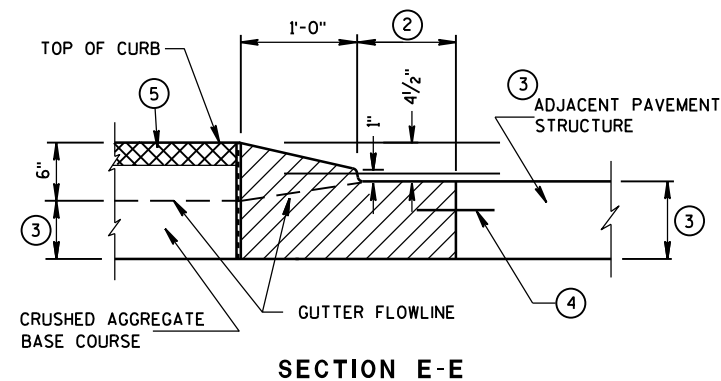
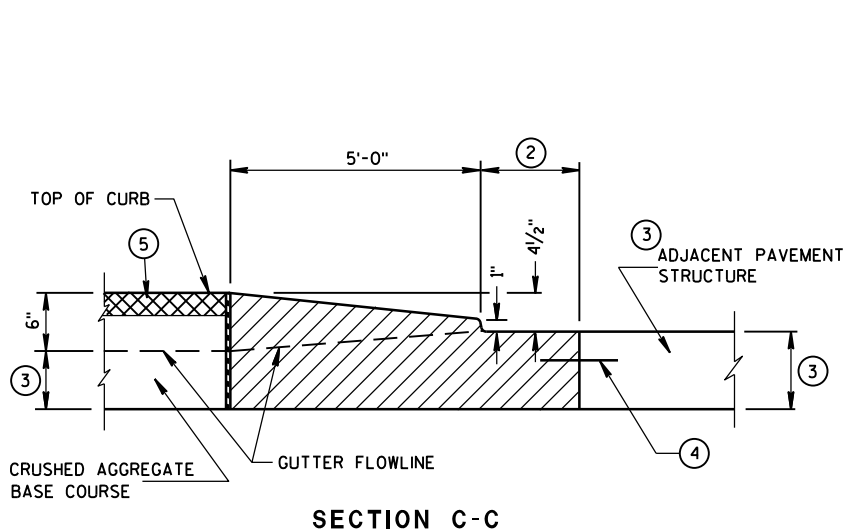
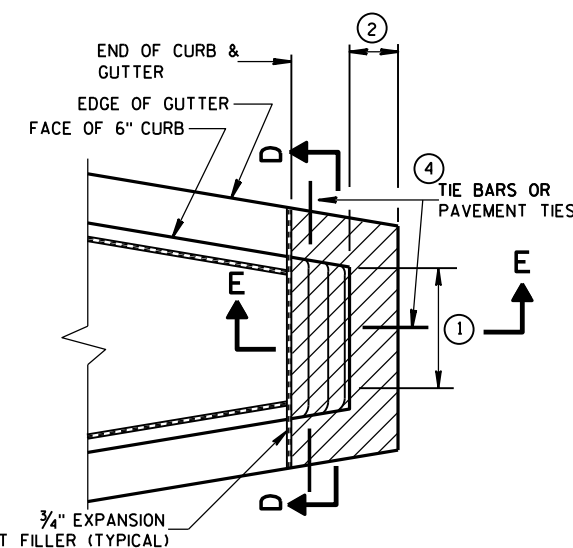


CONCRETE MEDIAN BLUNT NOSE DETAIL

**GENERAL NOTES**

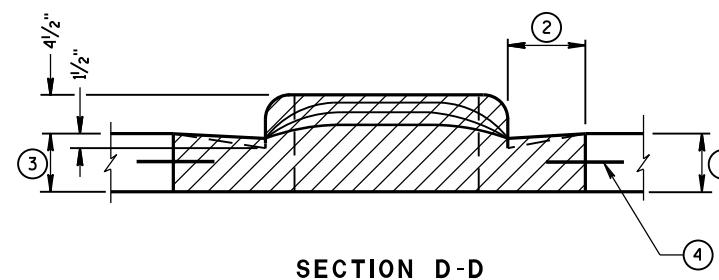
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
  - (1) NEW OR EXISTING CONCRETE PAVEMENT.
  - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
  - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.
- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.
- PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



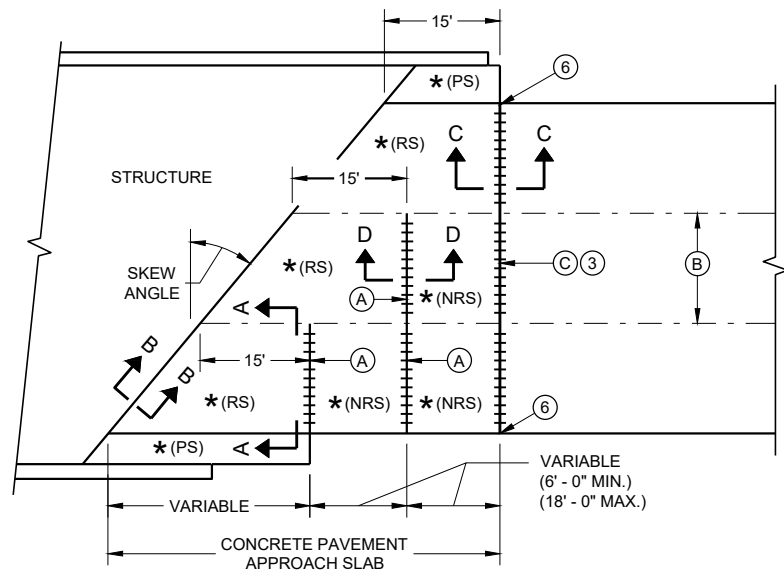
<b>CONCRETE MEDIAN NOSE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

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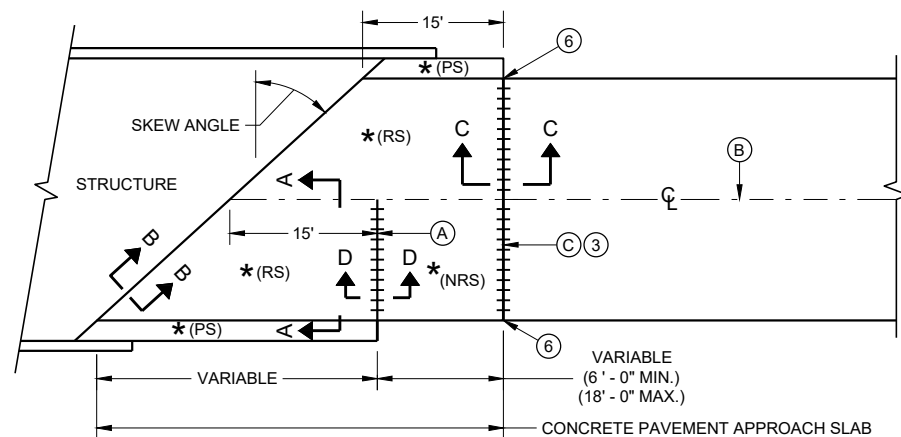
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S.D.D. 11 B 2-2

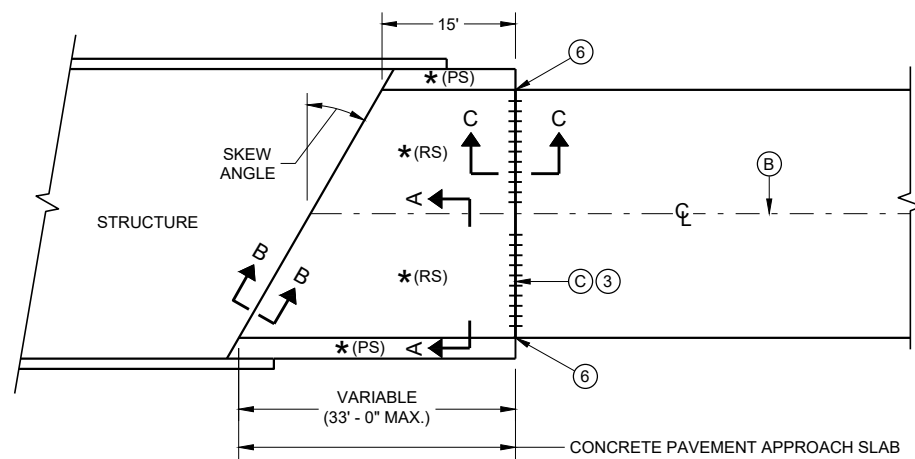
S.D.D. 11 B 2-2



**SKewed APPROACH  
(PAVEMENT MORE THAN TWO LANES)**

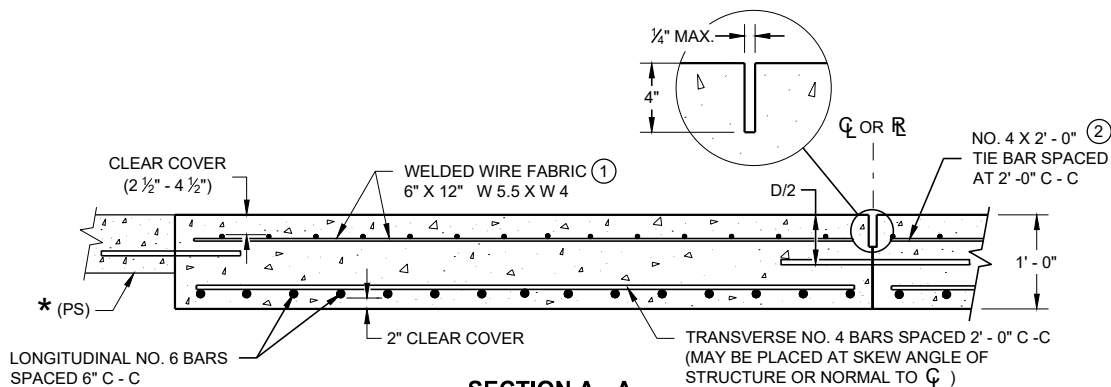


**SKews > 20°  
(PAVEMENT WIDTH ≤ 30')**

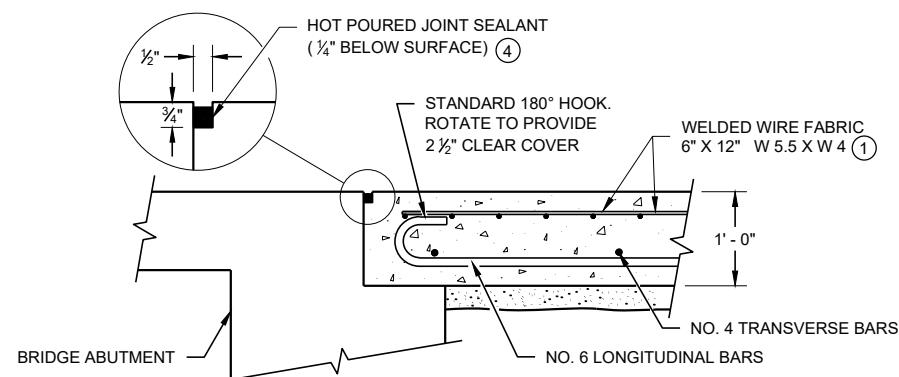


**SKews ≤ 20°  
(PAVEMENT WIDTH ≤ 30')**  
**APPROACH SLAB AND ADJACENT PAVEMENT**

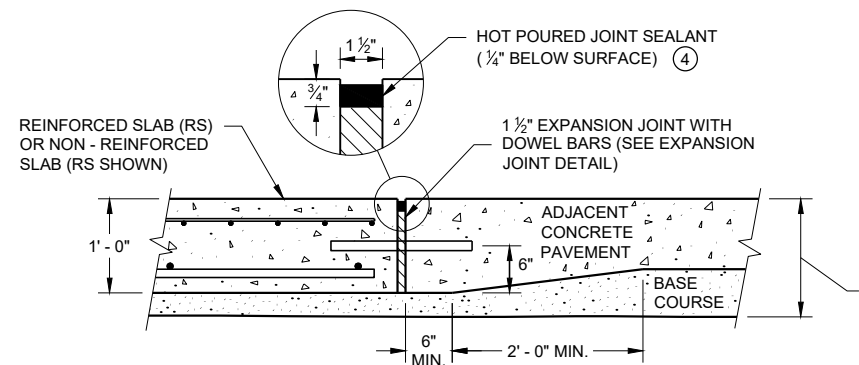
- \* (RS) = REINFORCED CONCRETE SLAB
- \* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
- \* (NRS) - NON - REINFORCED CONCRETE SLAB
- \*\*\* STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



**SECTION A - A  
REINFORCEMENT POSITIONING DETAIL**



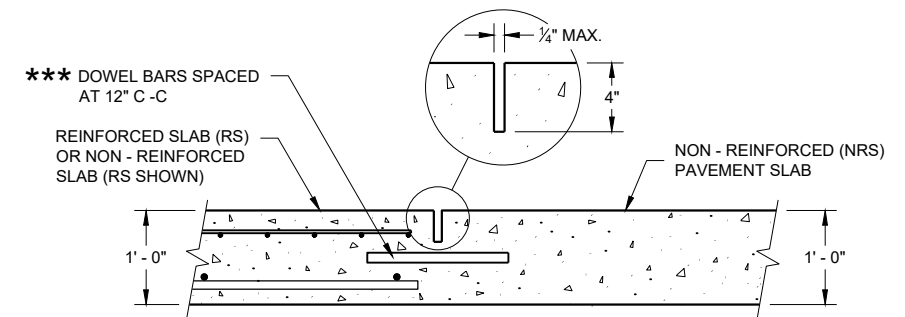
**SECTION B - B  
BEND DETAIL  
BOTTOM REINFORCEMENT**



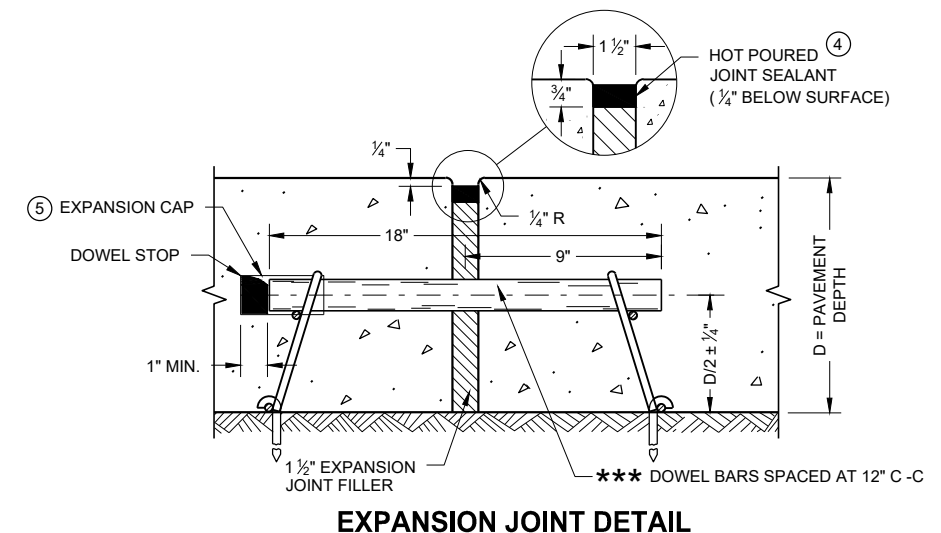
**SECTION C - C  
TRANSITION DETAIL  
APPROACH SLAB TO ADJACENT PAVEMENT**

**GENERAL NOTES**

- THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.
- TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.
- ① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0" C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
  - ② THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
  - ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
  - ④ USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
  - ⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.
  - ⑥ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
  - (A) STANDARD CONTRACTION JOINT NORMAL TO  $\bar{C}$  OR  $\bar{R}$ .
  - (B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.
  - (C) 1 1/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO  $\bar{C}$  OR  $\bar{R}$ .



**SECTION D - D  
CONTRACTION JOINT**



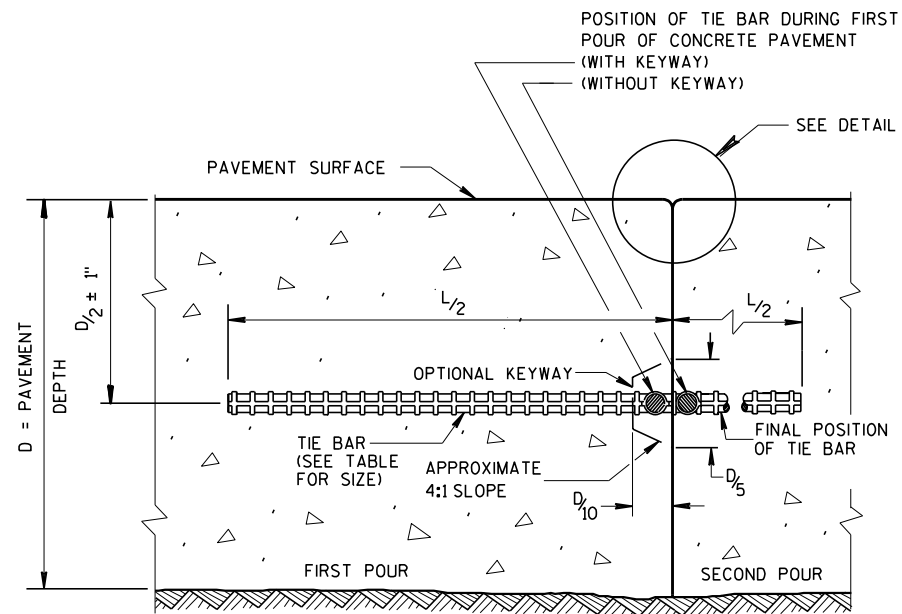
**EXPANSION JOINT DETAIL**

**CONCRETE PAVEMENT  
APPROACH SLAB**

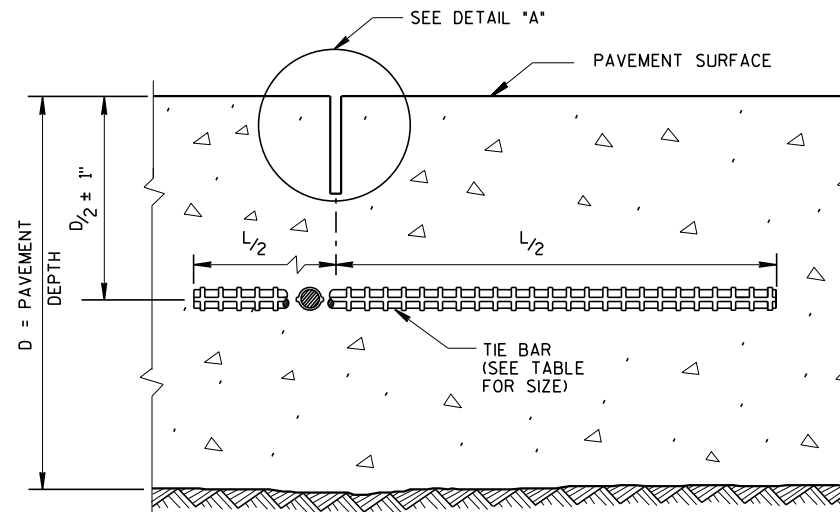
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Peter Kemp, P.E.  
DATE DATE PAVEMENT SUPERVISOR

FHWA



**CONSTRUCTION JOINT**



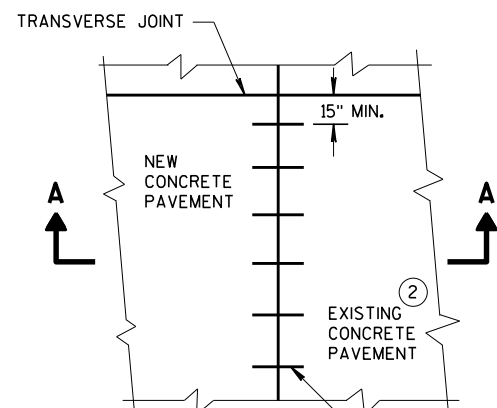
**SAWED JOINT**

**GENERAL NOTES**

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

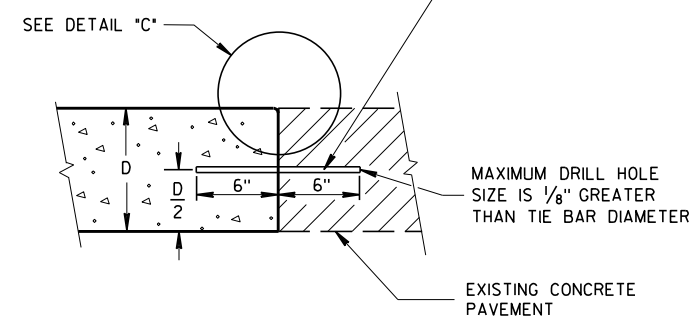
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

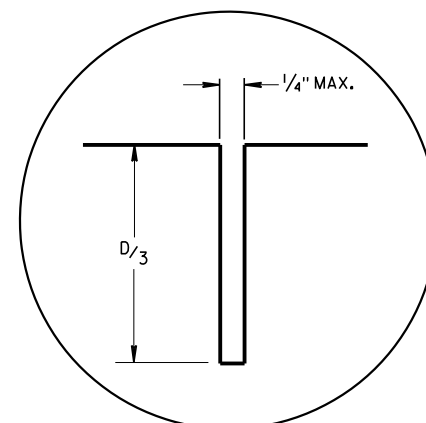


**PLAN VIEW**

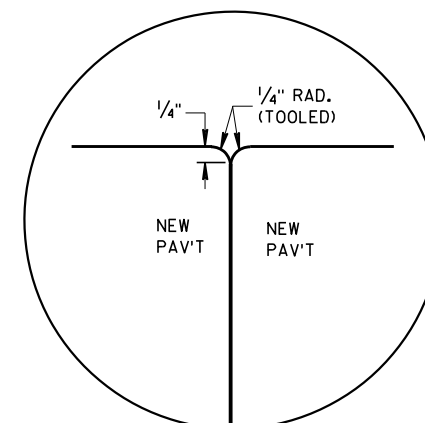
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



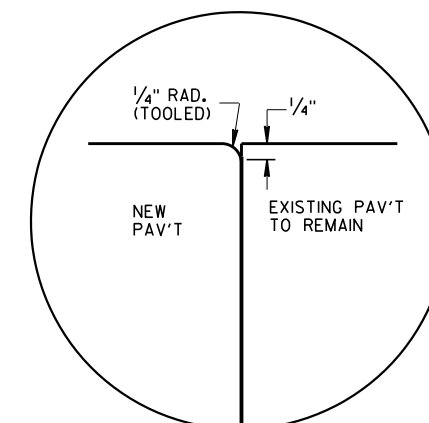
**SECTION A-A  
LONGITUDINAL CONSTRUCTION JOINT  
TIE BARS ANCHORED  
INTO EXISTING PAVEMENT**



**DETAIL "A"**



**DETAIL "B"**



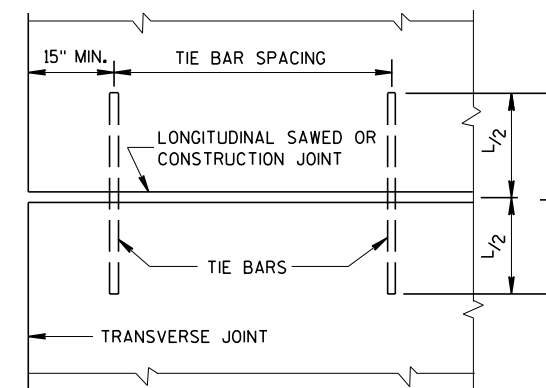
**DETAIL "C"**

**TIE BAR TABLE**

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

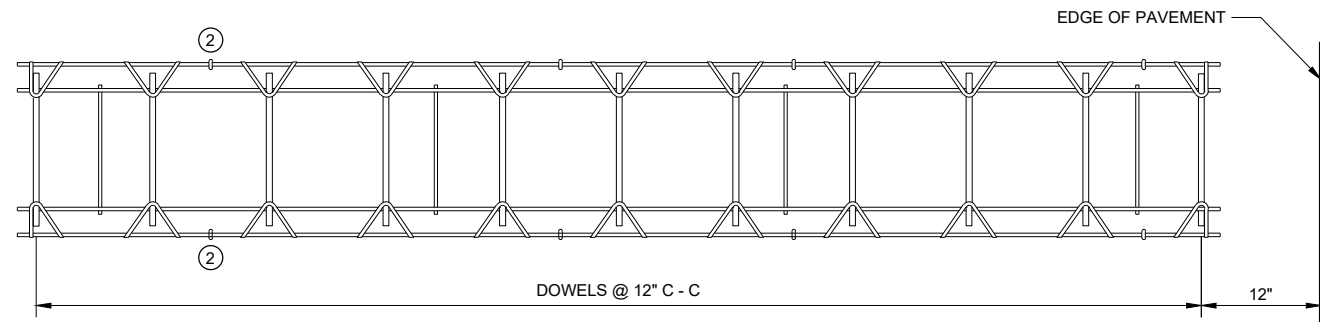


**PLAN VIEW  
SHOWING LOCATION OF TIE BARS**

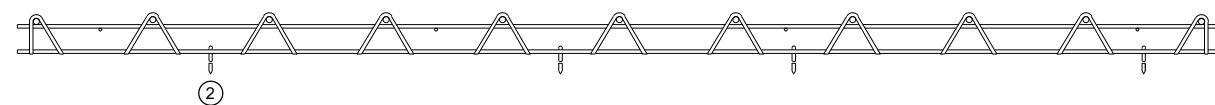
**CONCRETE PAVEMENT  
LONGITUDINAL JOINTS AND TIES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Peter Kemp, P.E.  
DATE PAVEMENT SUPERVISOR  
FHWA

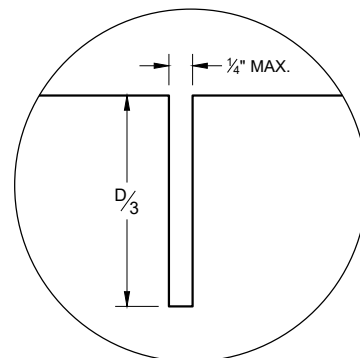


**PLAN VIEW**



**SIDE VIEW**

**CONTRACTION JOINT DOWEL ASSEMBLY** ①



**JOINT DETAIL**

**GENERAL NOTES**

**CONTRACTION JOINTS**

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

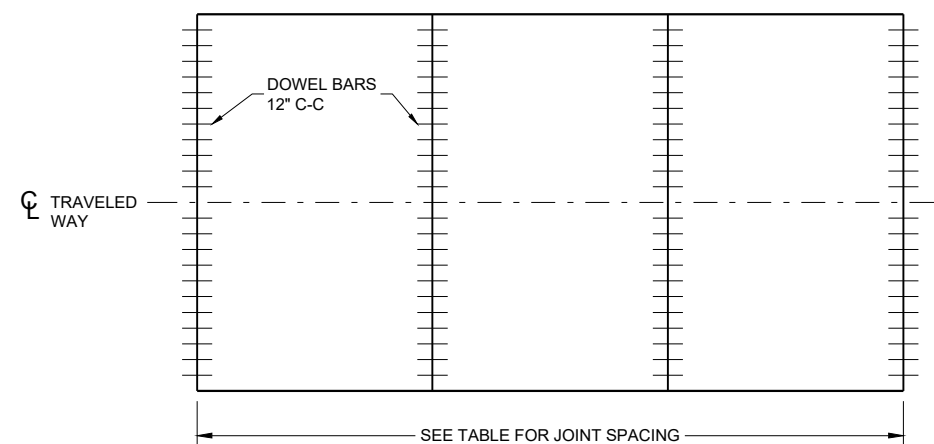
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES FROM AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

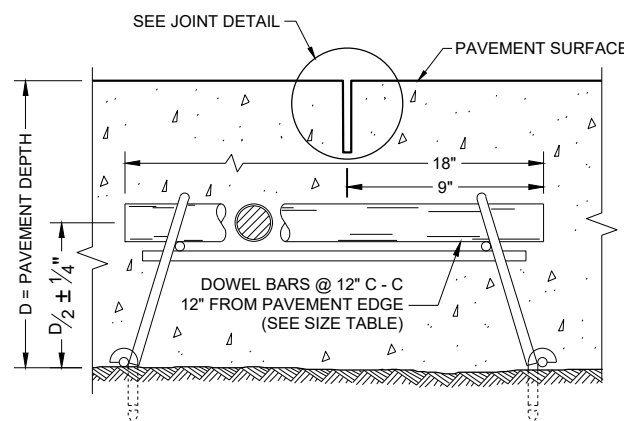
**CONSTRUCTION JOINTS**

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

- ① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION CONTRACTION JOINTS.
- ② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- ③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4" RADIUS AT FORMED JOINTS.
- ④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- ⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C - C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO THE "DRILLED DOWEL BAR CONSTRUCTION JOINT" DETAIL.
- ⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ⑦ ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



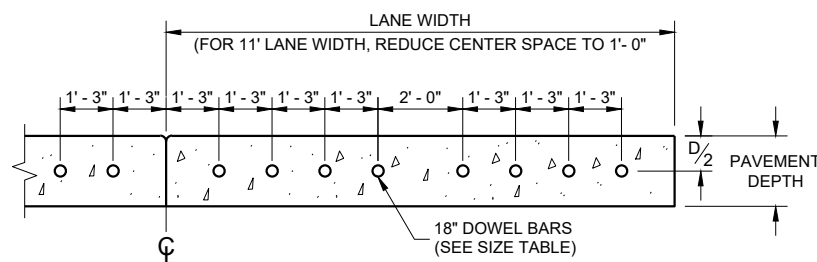
**CONTRACTION JOINT LOCATIONS**



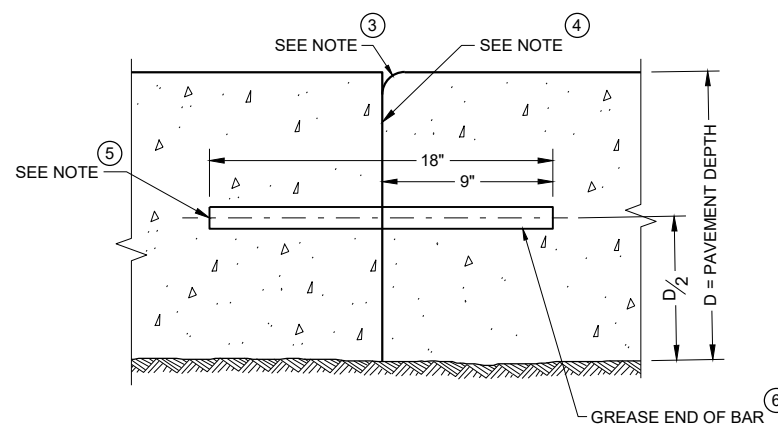
**DOWELED CONTRACTION JOINT**

**PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE**

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9" & ABOVE	1 1/4"	15'



**DRILLED DOWEL BAR CONSTRUCTION JOINT** ⑦



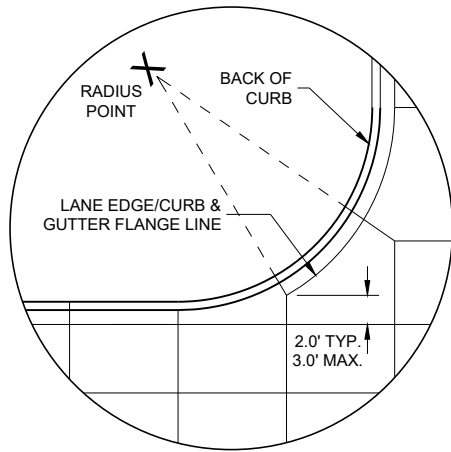
**TRANSVERSE CONSTRUCTION JOINT**

**URBAN DOWELED  
CONCRETE PAVEMENT**

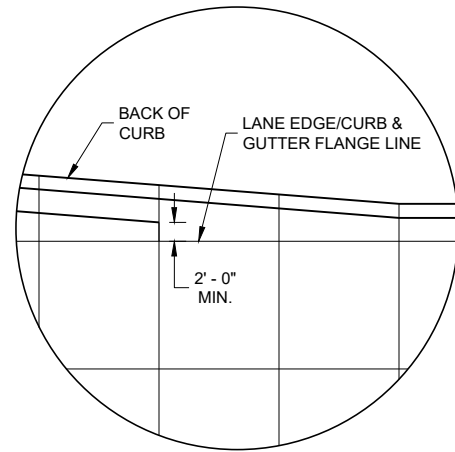
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2022 /S/ Peter Kemp P.E.  
DATE: \_\_\_\_\_ PAVEMENT SUPERVISOR

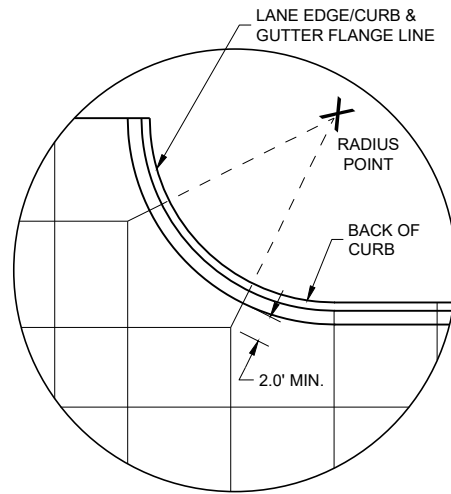
FHWA



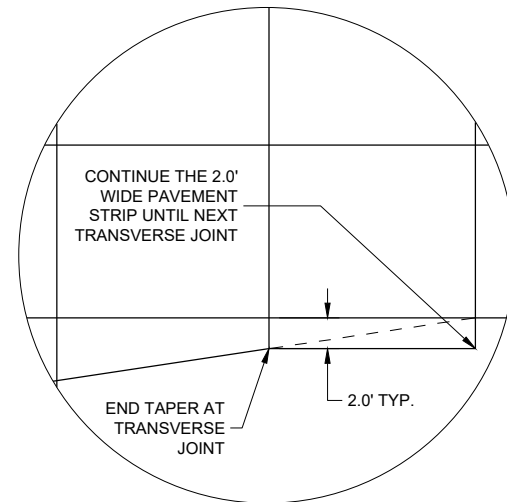
DETAIL "A"



DETAIL "B"



DETAIL "C"

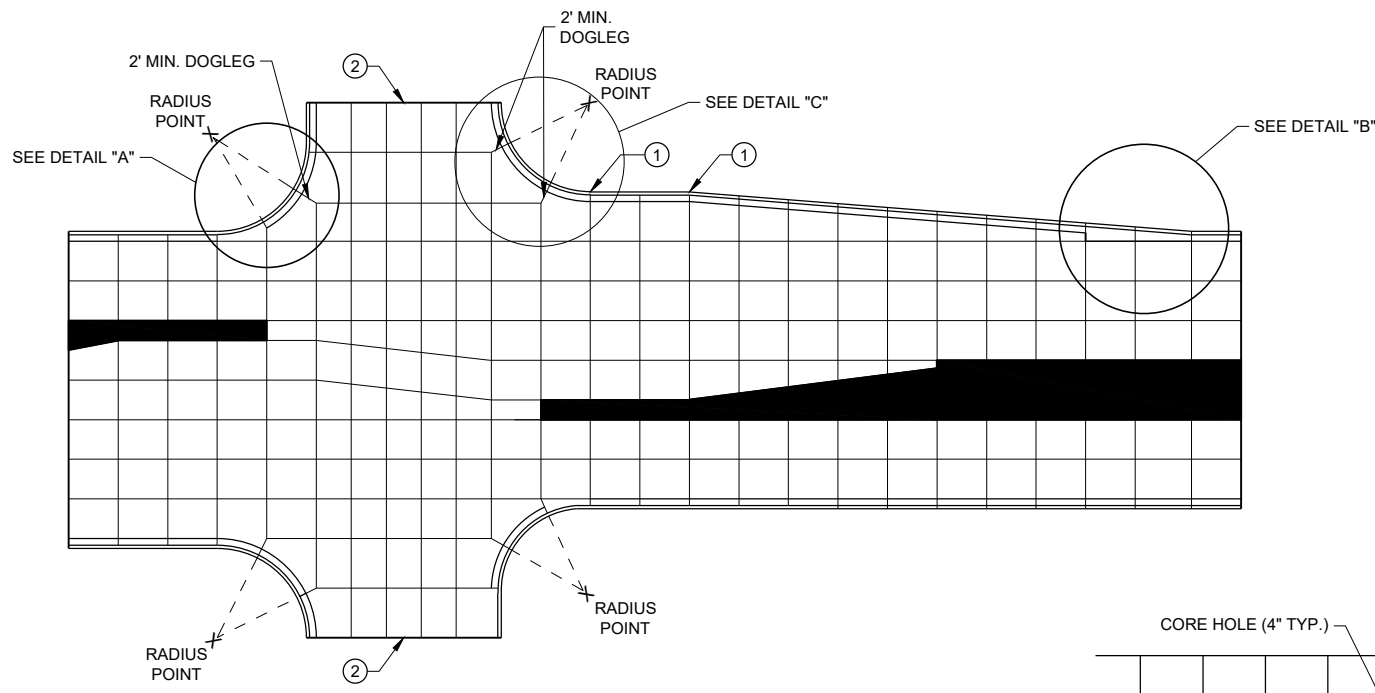


DETAIL "D"

**GENERAL NOTES**

- THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.
- ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.
- CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.
- ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.
- AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.
- SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.
- AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

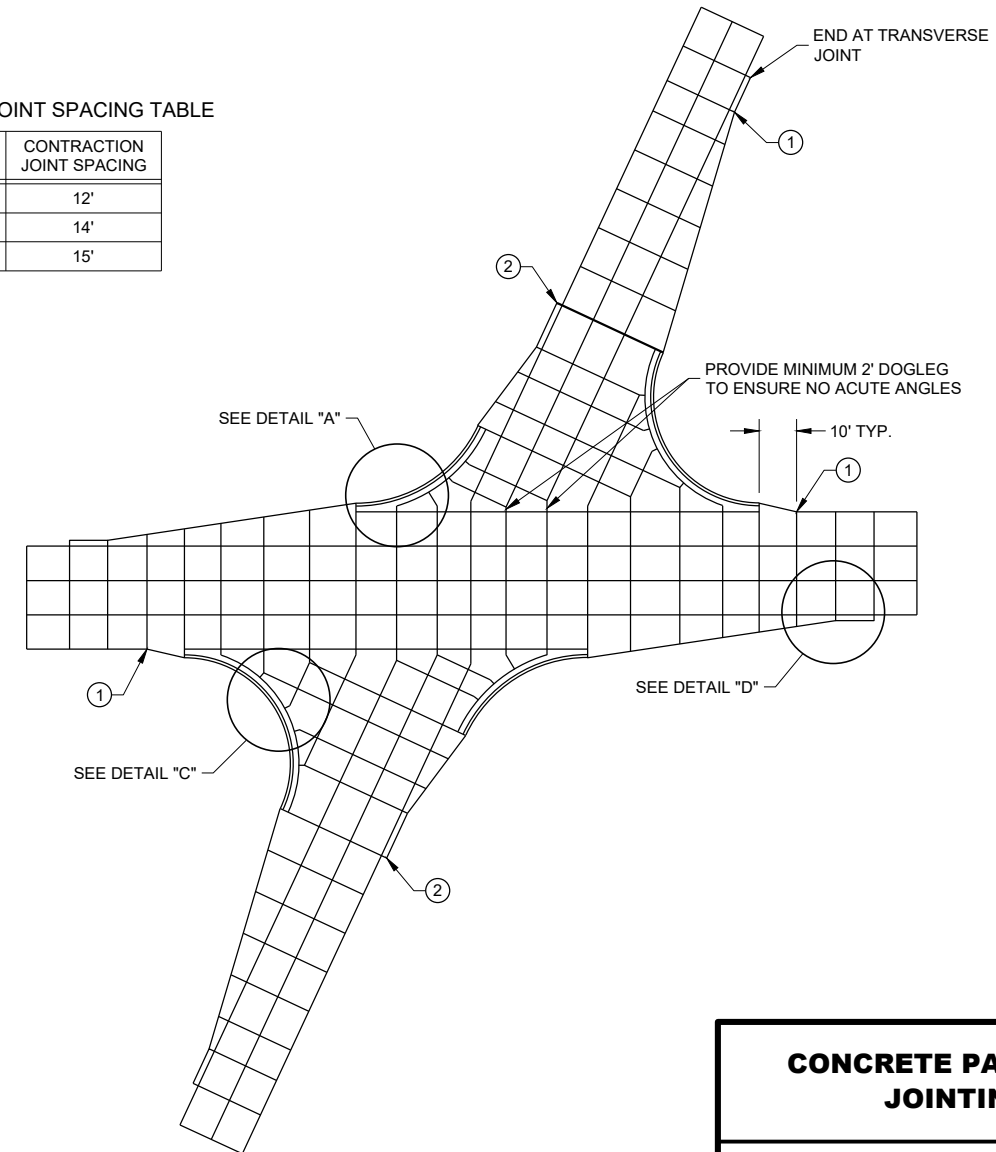
- ① PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
- ② CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
- ③ THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



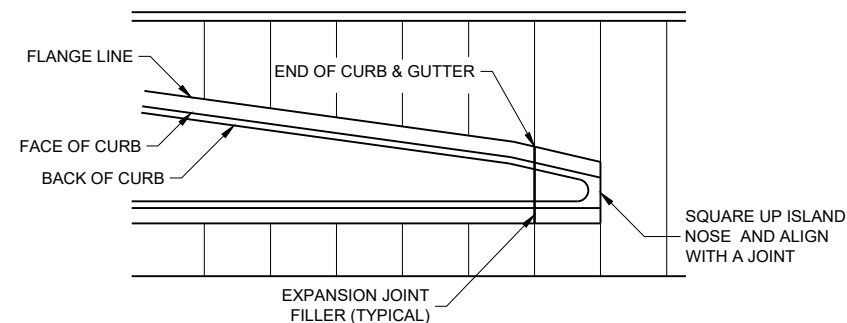
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

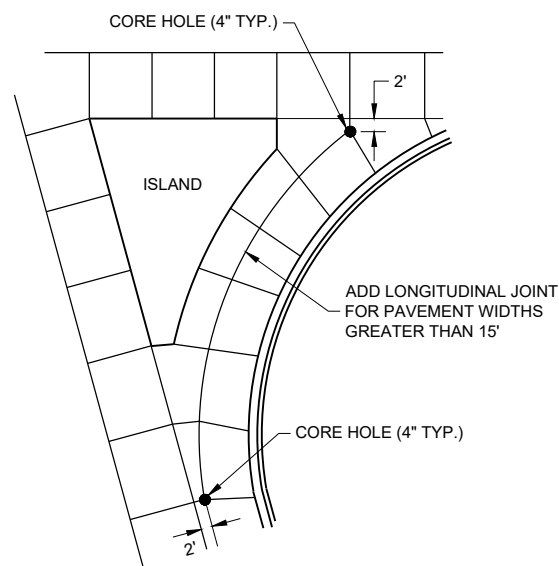
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



SKewed INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

**CONCRETE PAVEMENT JOINTING**

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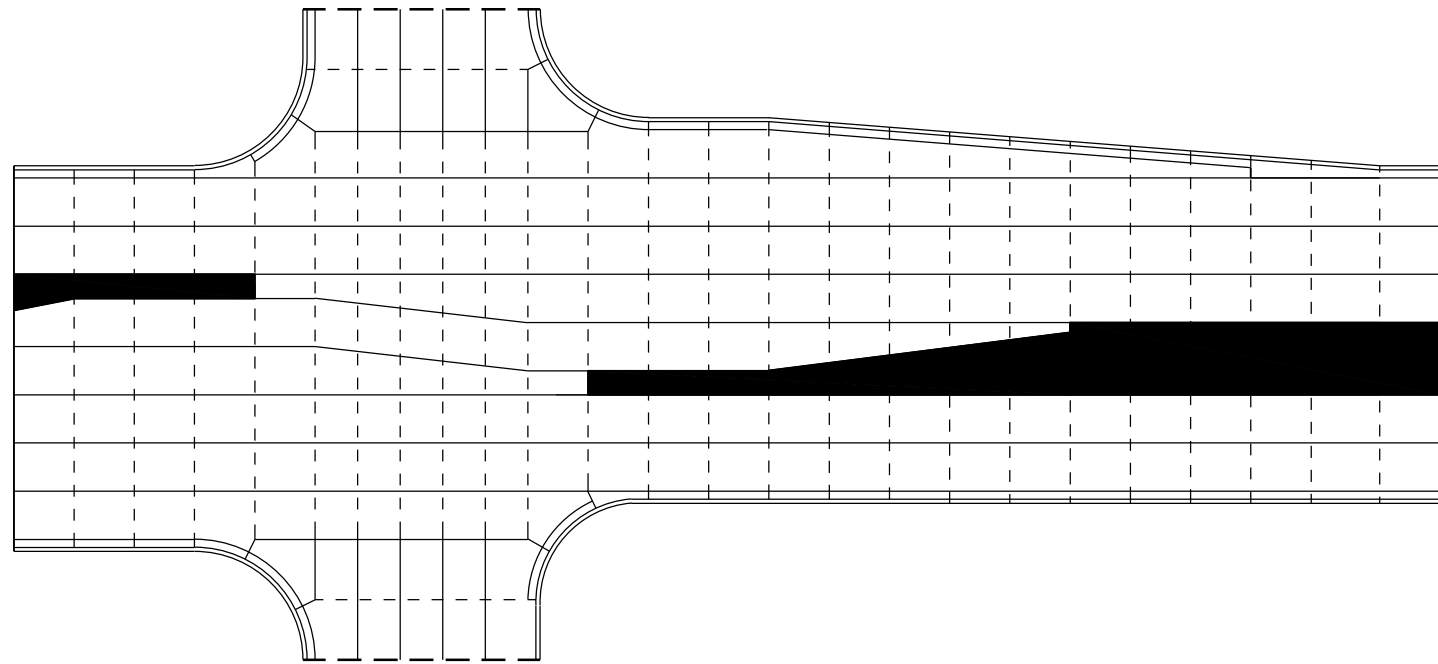
**LEGEND**

- POTENTIAL DOWELED EXPANSION JOINT
- - - DOWELED JOINT
- TIED JOINT

**GENERAL NOTES**

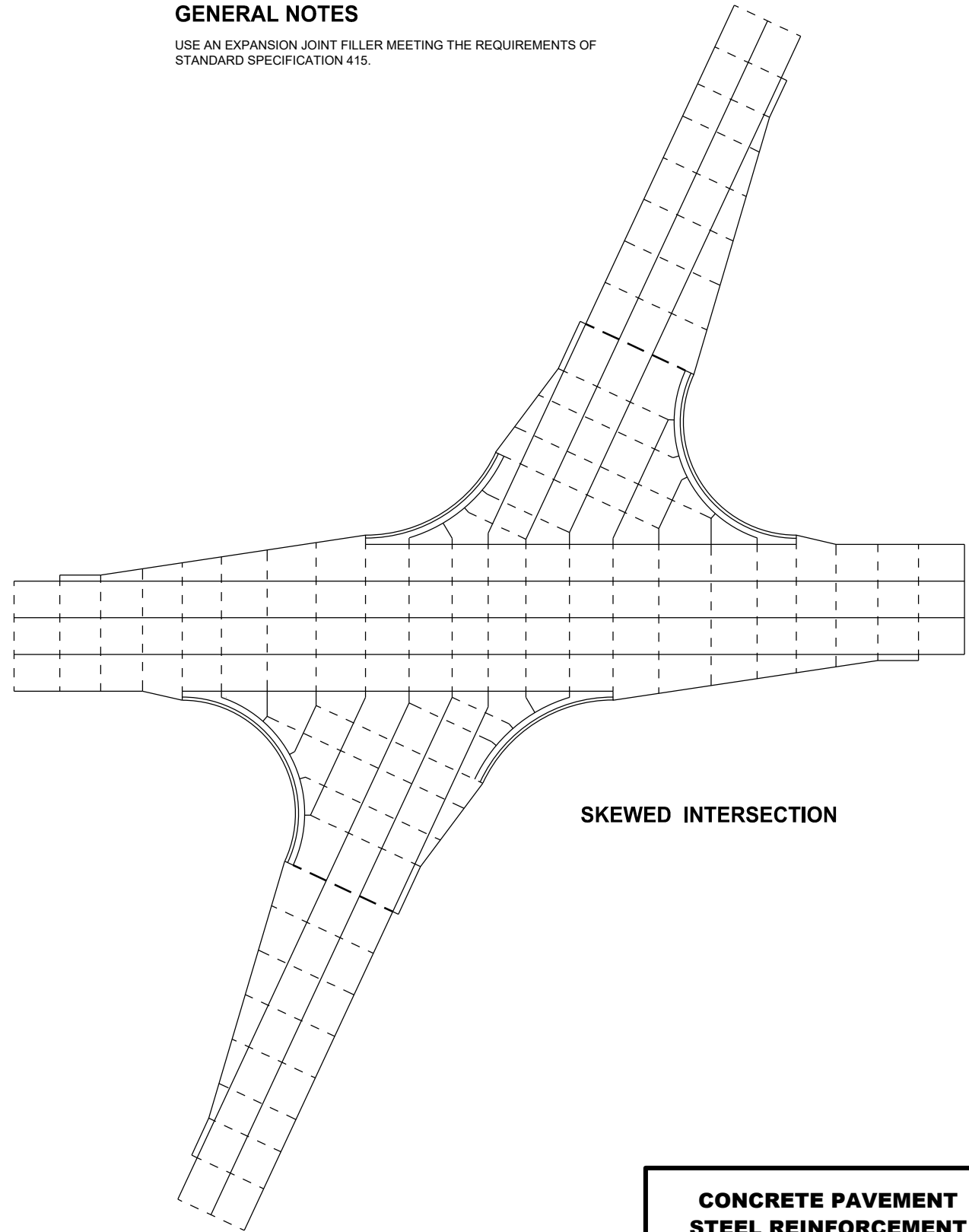
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

6



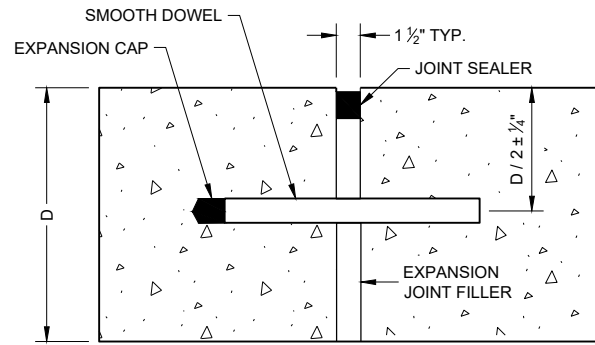
**STANDARD INTERSECTION**

6

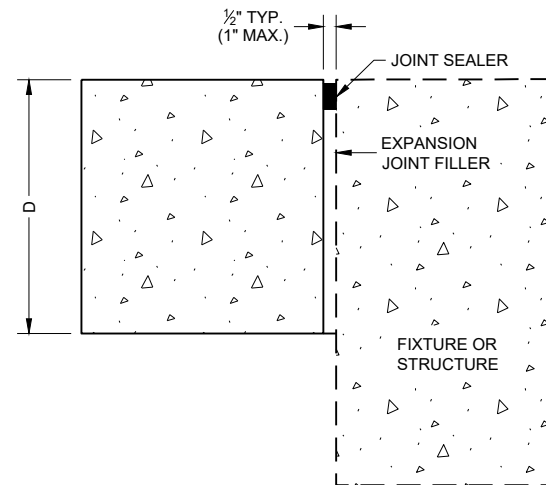


**SKEWED INTERSECTION**





**DOWELED TRANSVERSE** ①



**UNTIED - LONGITUDINAL**

**EXPANSION JOINTS**

**TIE BAR TABLE**

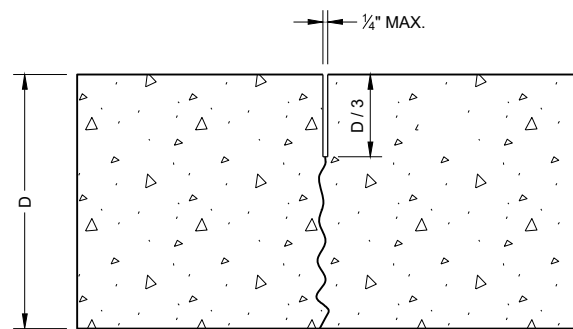
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24" **

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

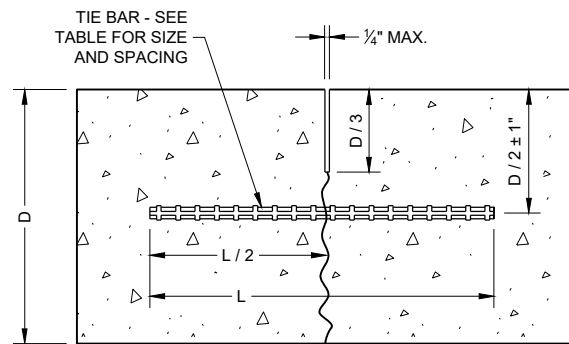
\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

**GENERAL NOTES**

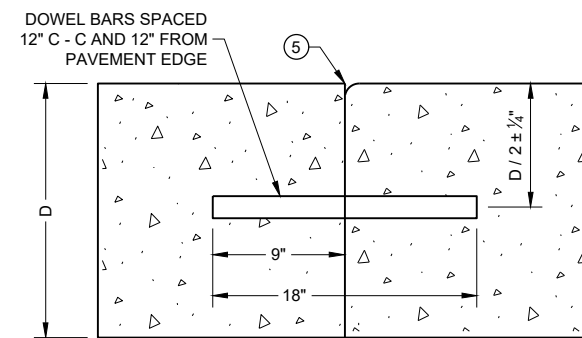
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
- ④ CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
- ⑤ IF JOINT IS FORMED, PROVIDE A 1/4" RADIUS.
- ⑥ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



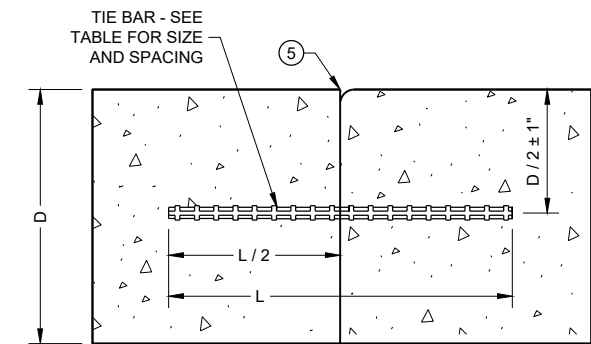
**UNDOWELED TRANSVERSE**



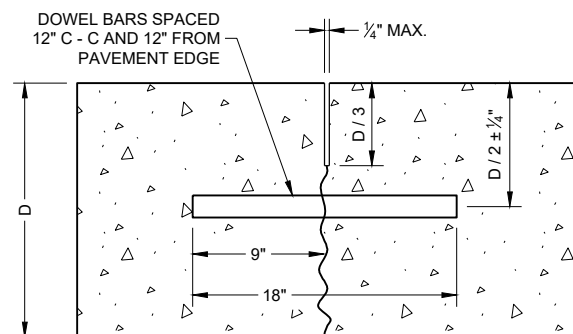
**TIED LONGITUDINAL**



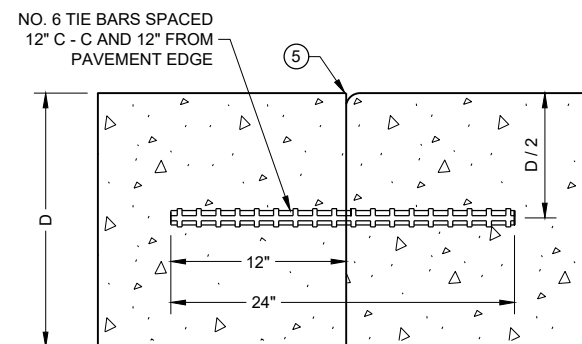
**DOWELED TRANSVERSE** ③



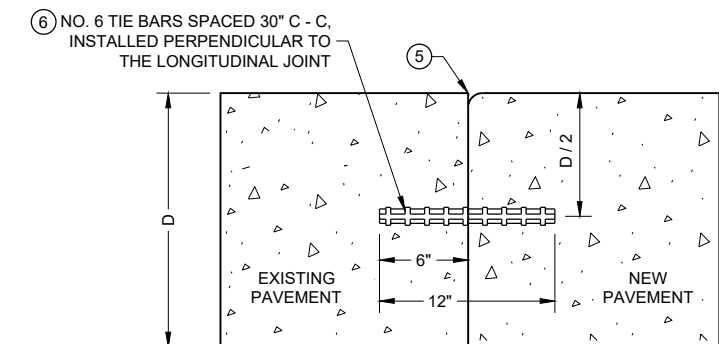
**TIED LONGITUDINAL**



**DOWELED TRANSVERSE**



**TIED TRANSVERSE** ③  
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



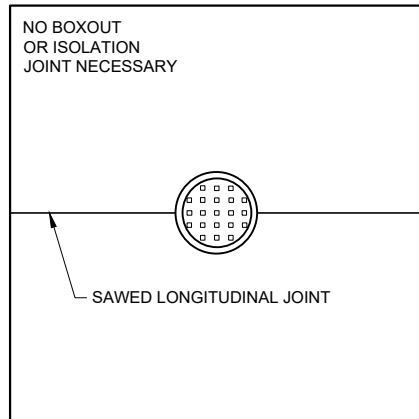
**TIED LONGITUDINAL TO EXISTING**

**CONTRACTION JOINTS** ②

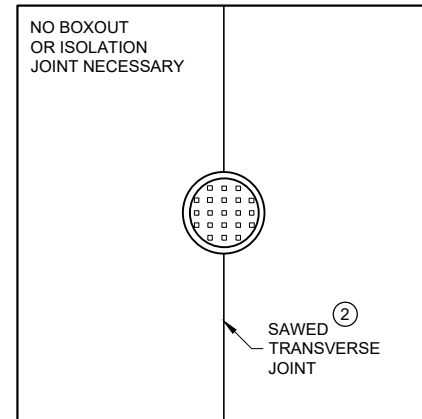
**CONSTRUCTION JOINTS** ④

**CONCRETE PAVEMENT JOINT TYPES**

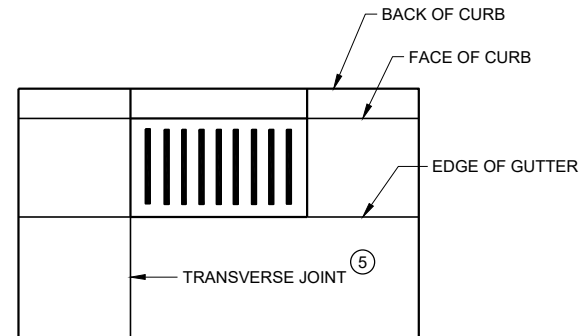
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**MANHOLE WITH LONGITUDINAL JOINT**



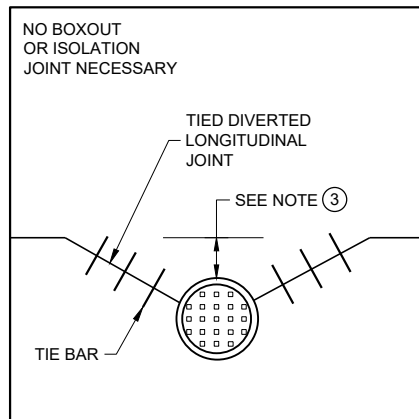
**MANHOLE WITH TRANSVERSE JOINT**



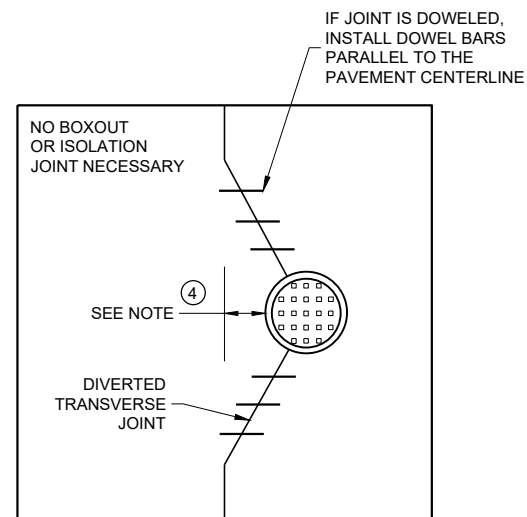
**INLET WITH TRANSVERSE JOINT**

**GENERAL NOTES**

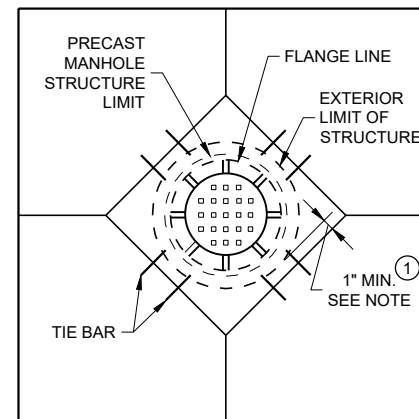
- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
- ④ IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.



**MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT**



**MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT**



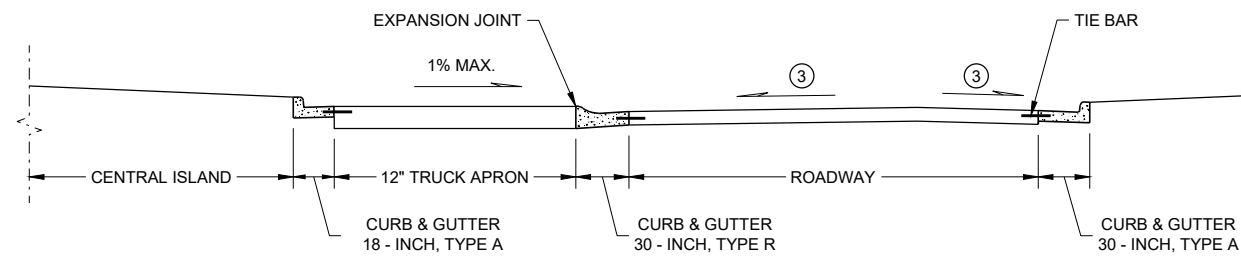
**DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS**

**CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES**

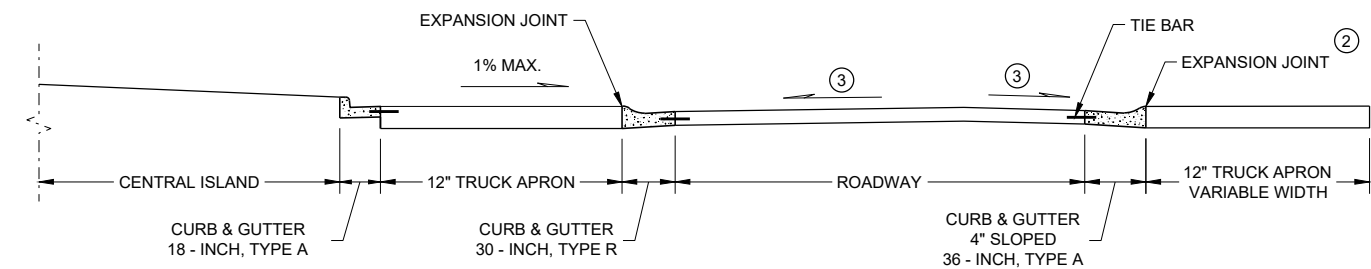
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November 2018 /S/ Peter Kemp P.E.  
DATE PAVEMENT SUPERVISOR

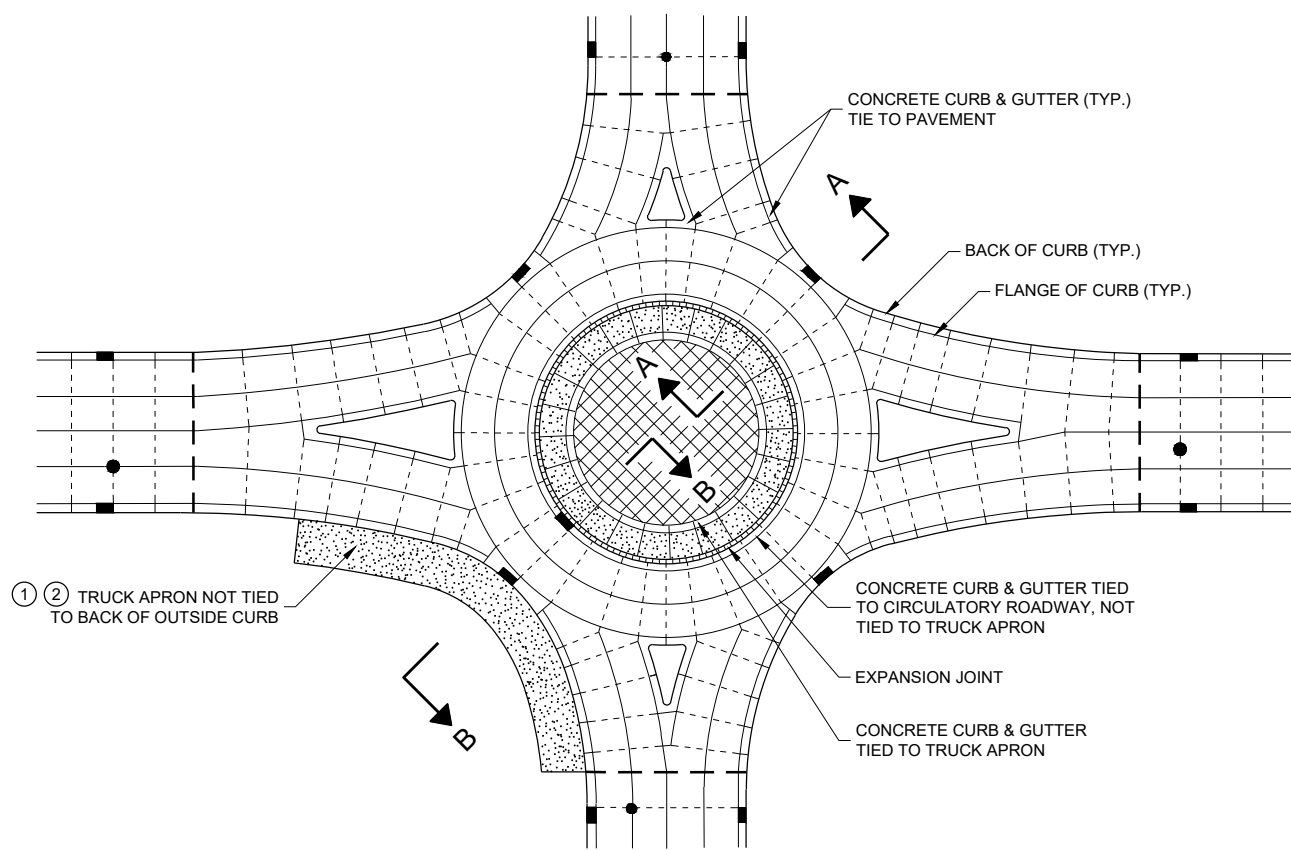
FHWA



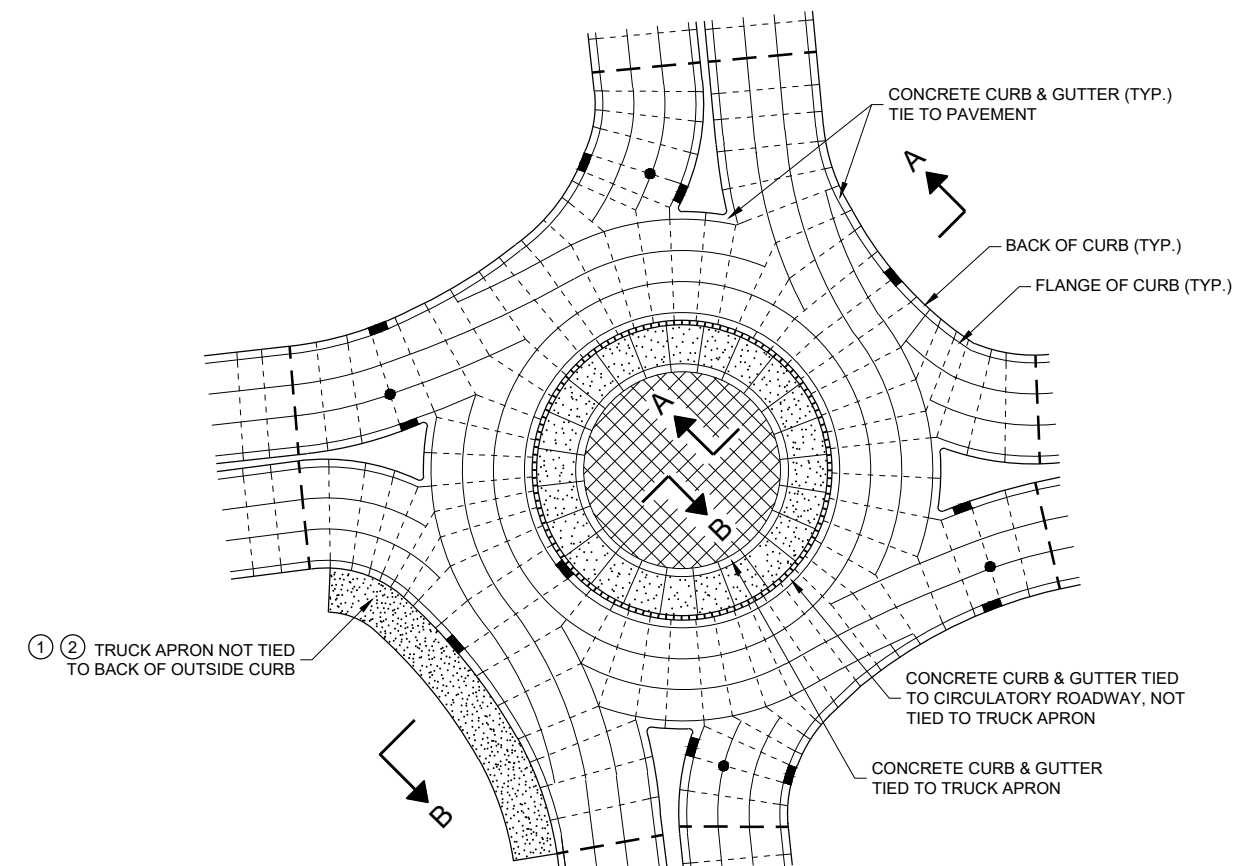
SECTION A - A



SECTION B - B



ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS



PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS

**GENERAL NOTES**

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 - SHEET "a"  
 USE EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.  
 DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.

- ① DESIGNER DETERMINES SIZE AND LOCATION(S) OF TRUCK APRON TO ACCOMMODATE TRACKING OF OVERSIZE / OVERWEIGHT VEHICLES.
- ② TIE THE OUTSIDE TRUCK APRON TO THE BACK SIDE OF CURB ONLY WHEN ENTIRE TRUCK APRON IS LESS THAN 3 FEET.
- ③ CONFORM TO PLAN CONSTRUCTION DETAILS FOR CIRCULATORY ROADWAY CROSS SLOPE.

**LEGEND**

- DOWELED JOINT
- TIED JOINT
- ===== EXPANSION JOINT
- — — — POTENTIAL DOWELED EXPANSION JOINT
- [Stippled Box] TRUCK APRON
- [Cross-hatched Box] CENTRAL ISLAND
- ● UTILITY STRUCTURES

**CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS**

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 DEPARTMENT OF TRANSPORTATION

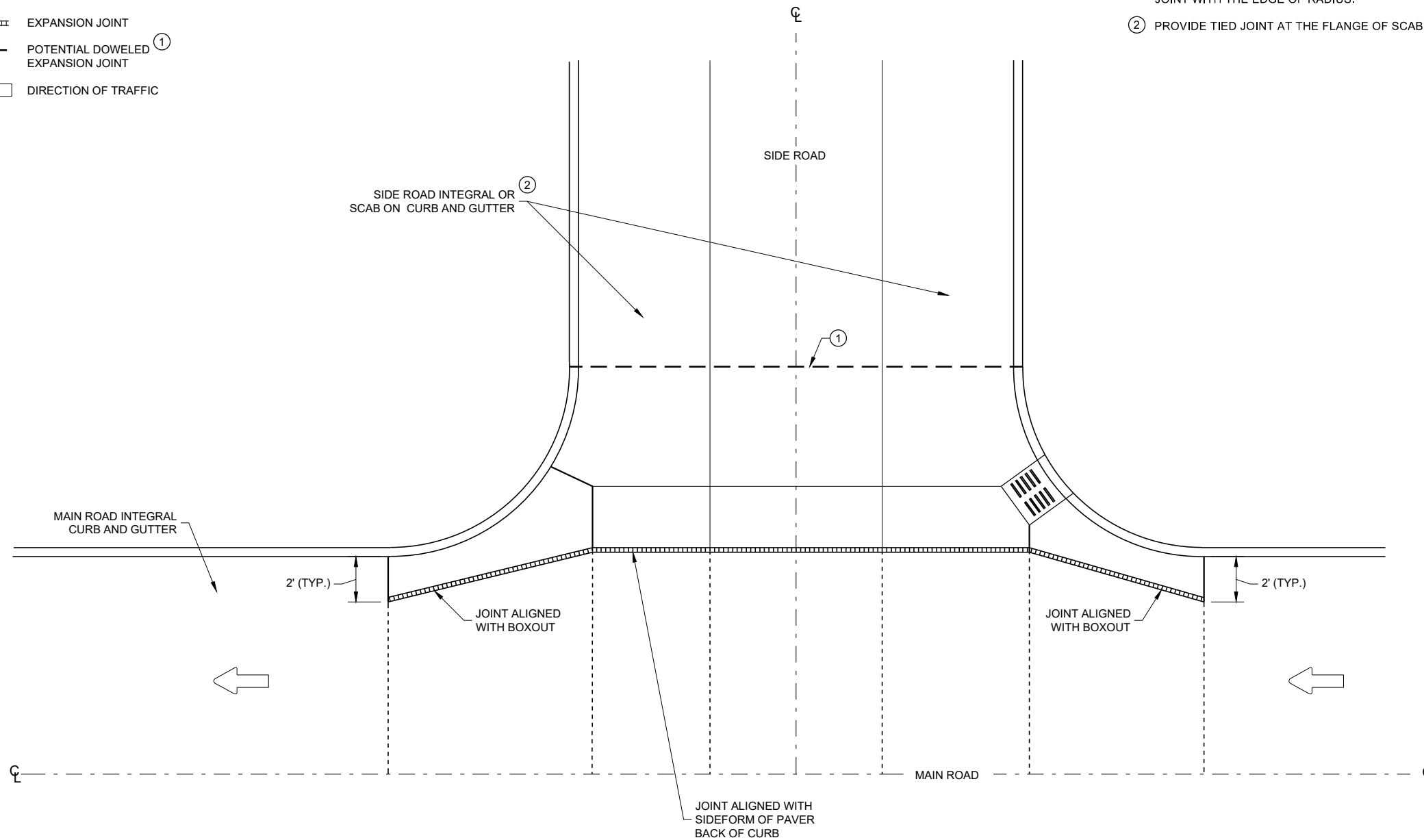
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 November 2018 /S/ Peter Kemp P.E.  
 DATE PAVEMENT SUPERVISOR  
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**LEGEND**

- DOWELED JOINT
- TIED JOINT
- ▤▤▤▤ EXPANSION JOINT
- — — — POTENTIAL DOWELED <sup>①</sup> EXPANSION JOINT
- ← DIRECTION OF TRAFFIC

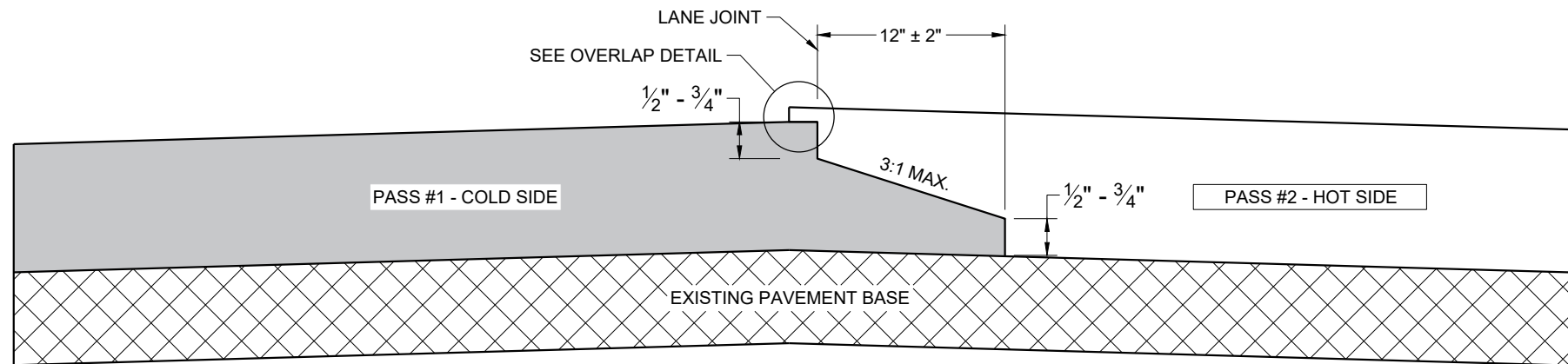
**GENERAL NOTES**

- ① CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH THE EDGE OF RADIUS.
- ② PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

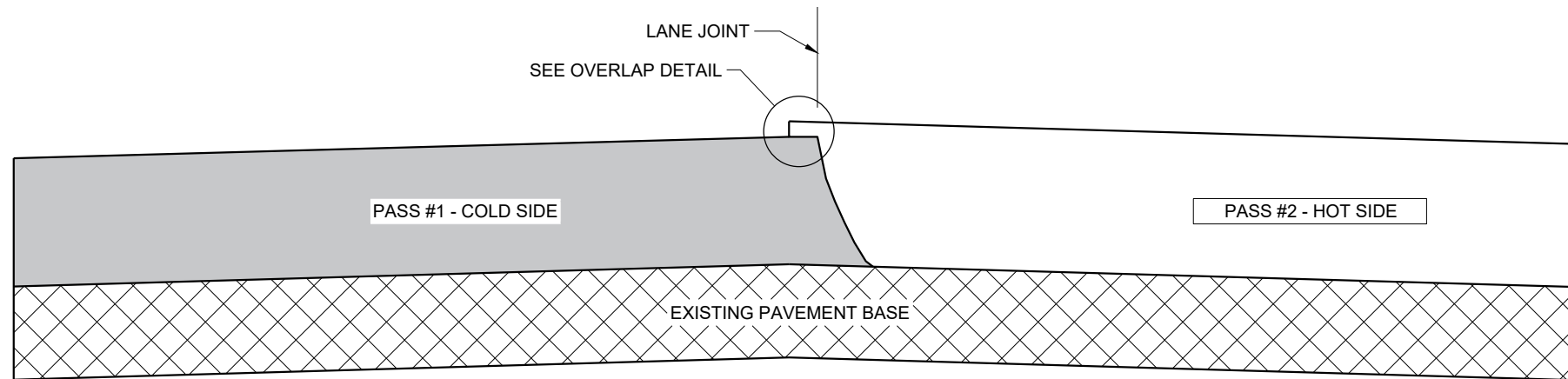


**INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER**

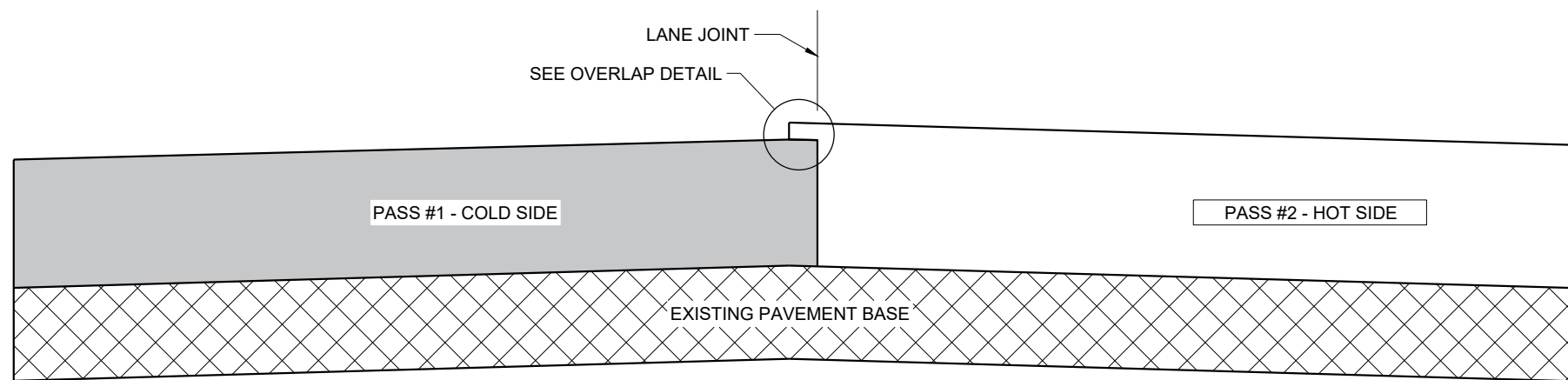
<b>CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2018 DATE	/S/ Peter Kemp P.E. ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)**

**GENERAL NOTES**

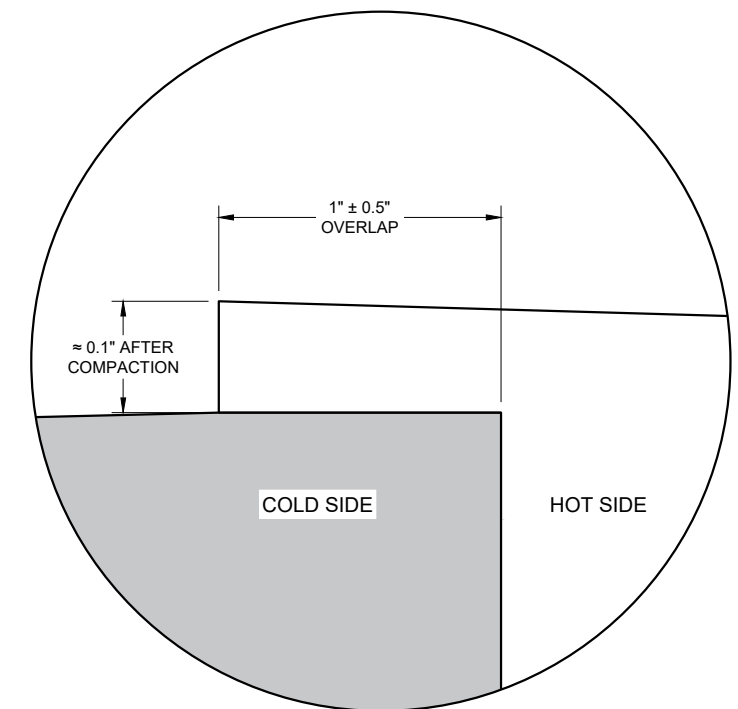
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY  $1" \pm 0.5"$  AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY  $0.1"$  AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO  $2"$  FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



**OVERLAP DETAIL (TYPICAL)**

6

6

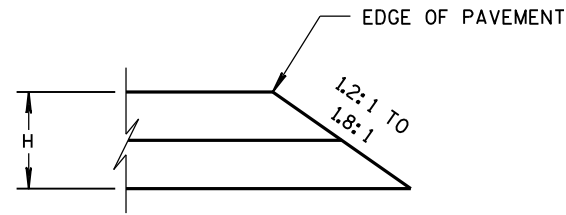
SDD 13C19 - 03

SDD 13C19 - 03

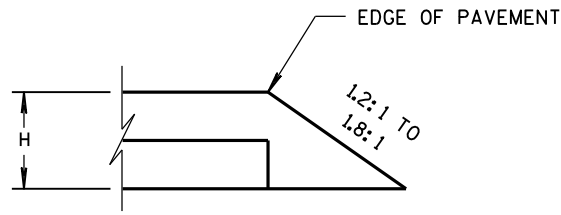
**HMA LONGITUDINAL JOINTS**

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DEPARTMENT OF TRANSPORTATION

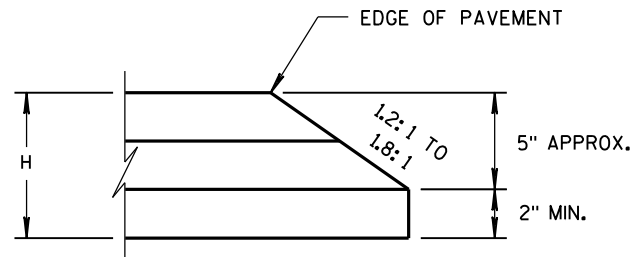
APPROVED  
November 2020 DATE /S/ Steven Hefel  
HMA PAVEMENT ENGINEER  
FHWA



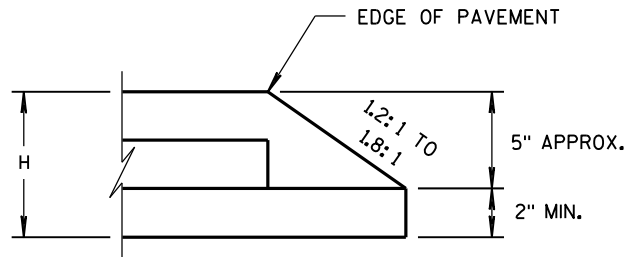
CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER  
FOR H 5" OR LESS

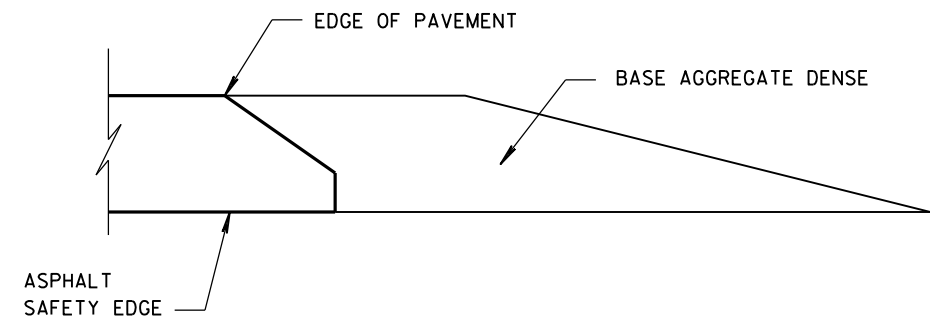


CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER  
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

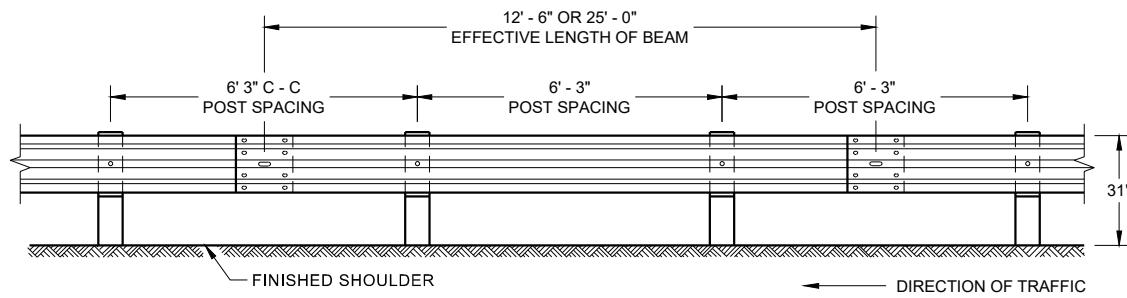
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S.D.D. 14 B 29-1

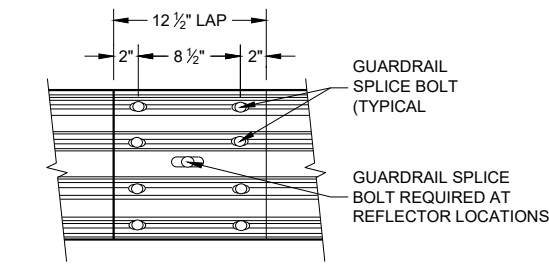
S.D.D. 14 B 29-1

SAFETY EDGE <sub>SM</sub>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 11/30/2012	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	





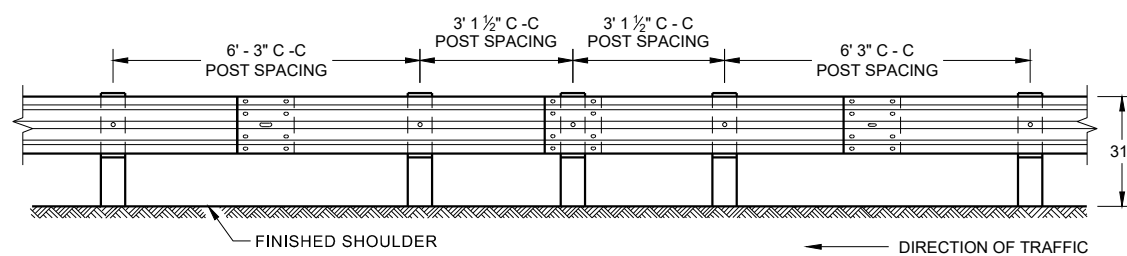
**FRONT VIEW  
POST SPACING STANDARD INSTALLATION**



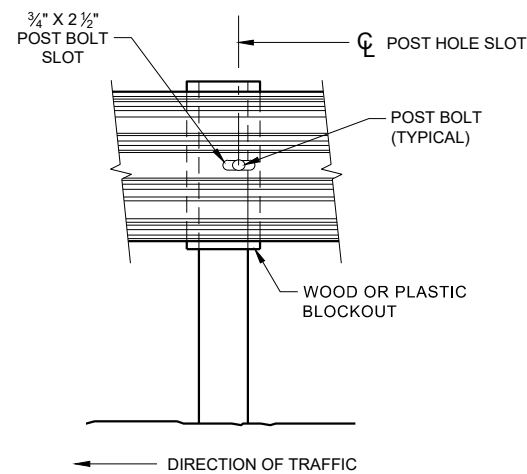
**FRONT VIEW  
MID-SPAN BEAM SPLICE**

**GENERAL NOTES**

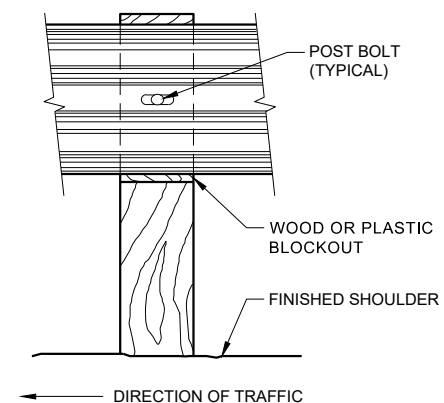
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
  - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



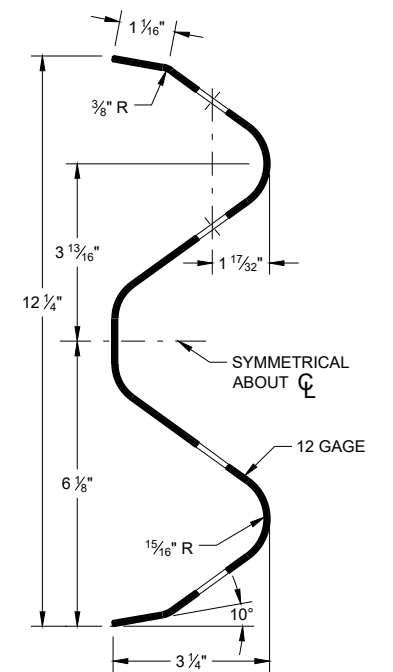
**FRONT VIEW  
HALF POST SPACING (HS) AND  
HALF POST SPACING WITH LONGER POSTS (K)**



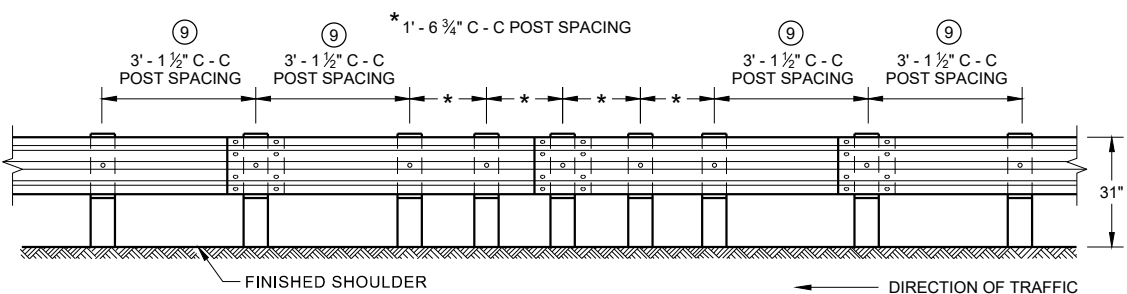
**FRONT VIEW AT STEEL POST**



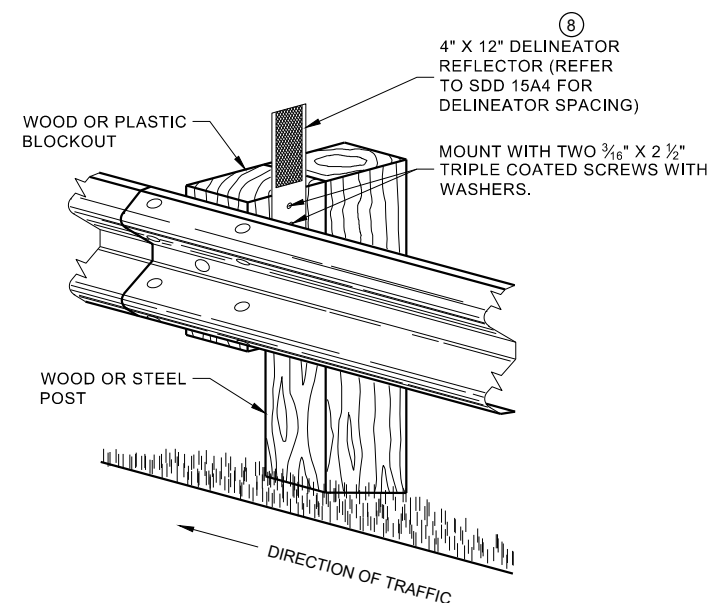
**FRONT VIEW AT WOOD POST**



**SECTION THRU W-BEAM RAIL**



**FRONT VIEW  
QUARTER POST SPACING (QS)**



**ONE SIDED REFLECTOR DETAIL  
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

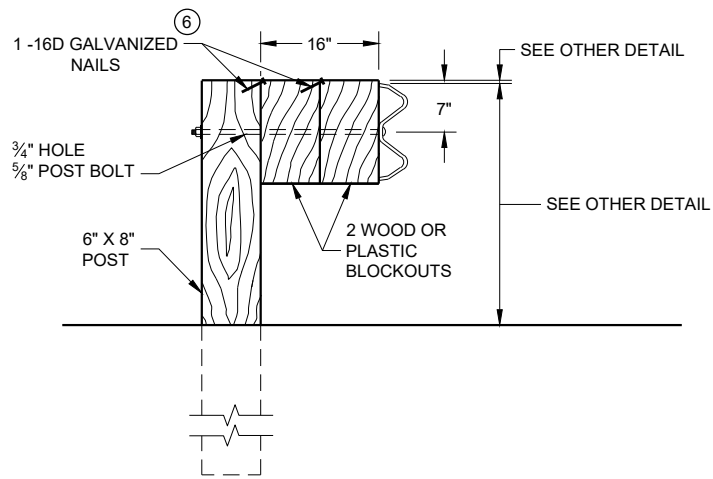
6

6

SDD 14B42 - 07b

SDD 14B42 - 07b



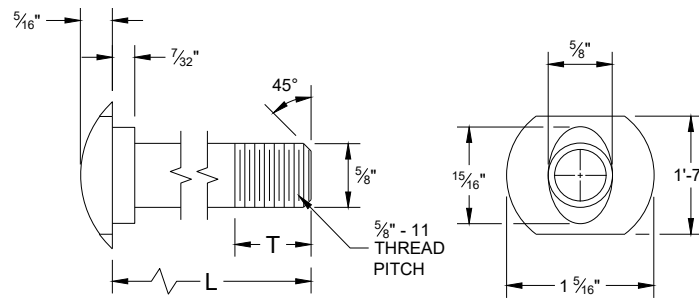


**DETAIL FOR 16" BLOCKOUT DEPTH**

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

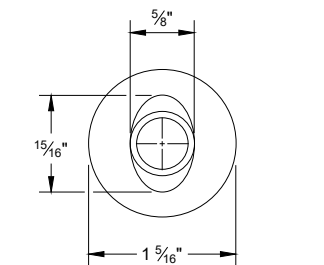
**NOTE:**

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

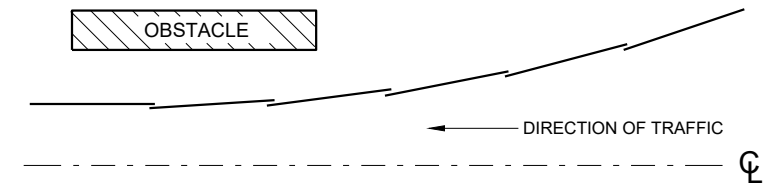


**POST BOLT TABLE**

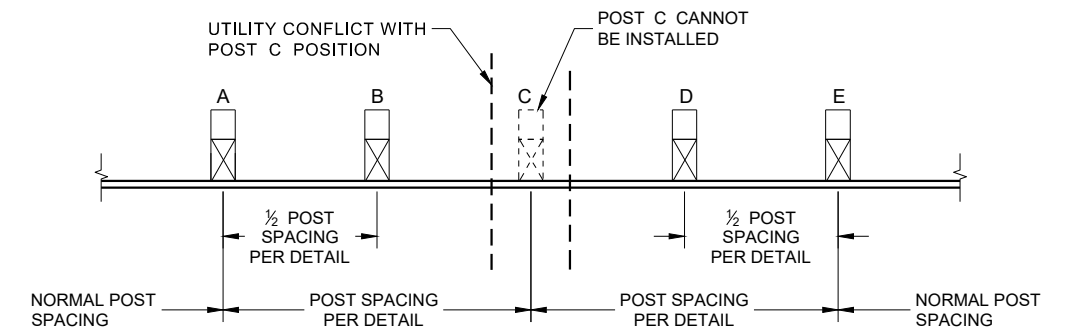
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



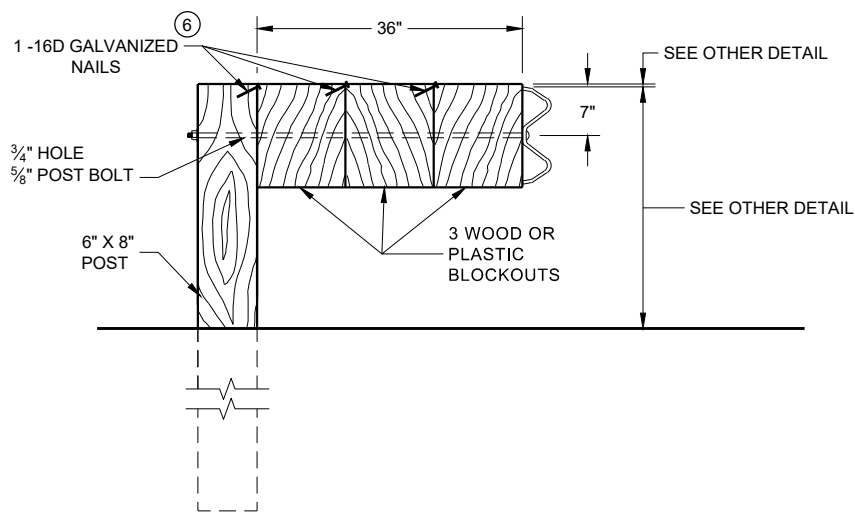
**ALTERNATE BOLT HEAD**



**PLAN VIEW  
BEAM LAPPING DETAIL**

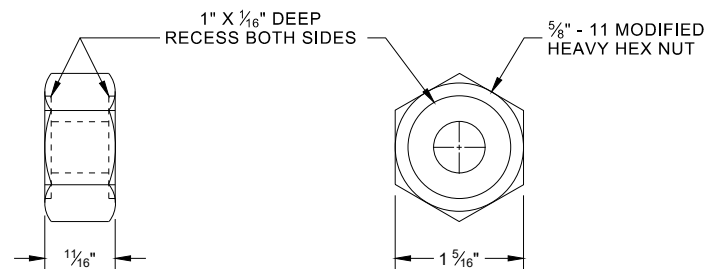


**POST DRIVING FOR CONTINUOUS  
UNDERGROUND OBSTRUCTION**

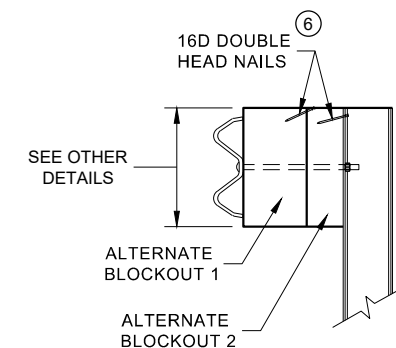


**DETAIL FOR 36" BLOCKOUT DEPTH**

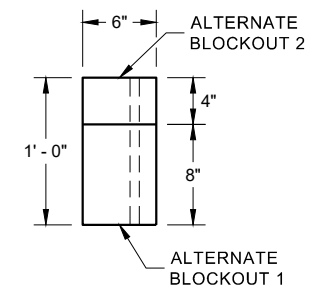
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.  
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



**POST BOLT, SPLICE BOLT  
AND RECESS NUT**



**SIDE VIEW**



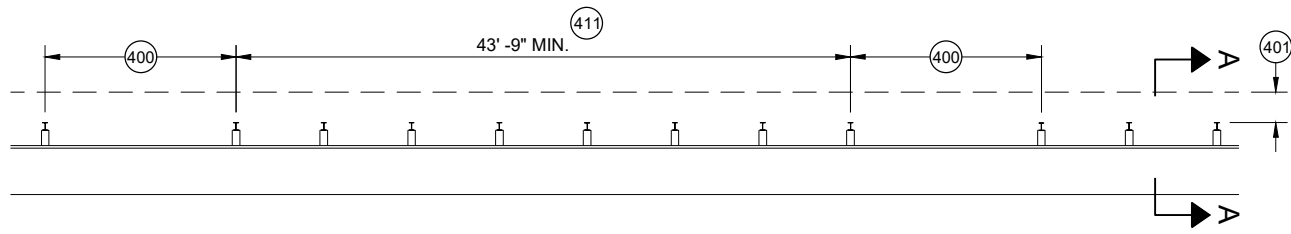
**PLAN VIEW**

**ALTERNATE WOOD  
BLOCKOUT DETAIL**

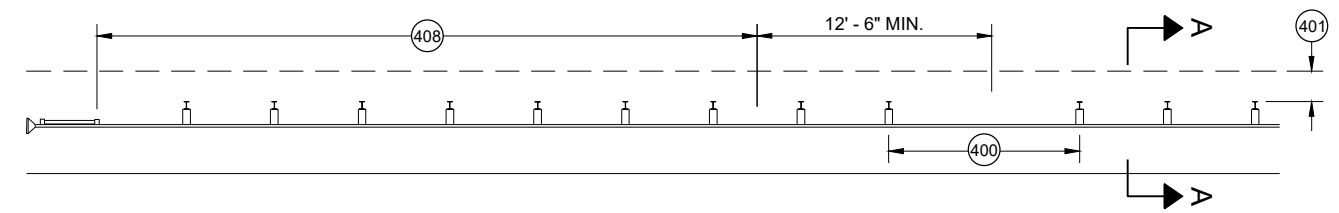
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL**

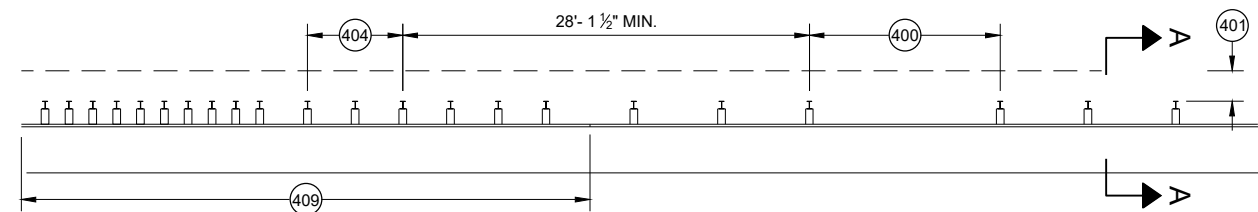
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



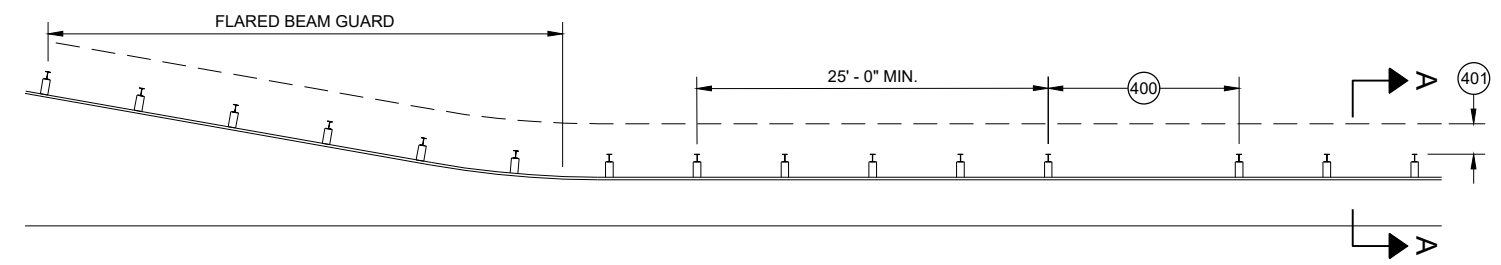
**MISSING POST IN MGS GUARDRAIL**



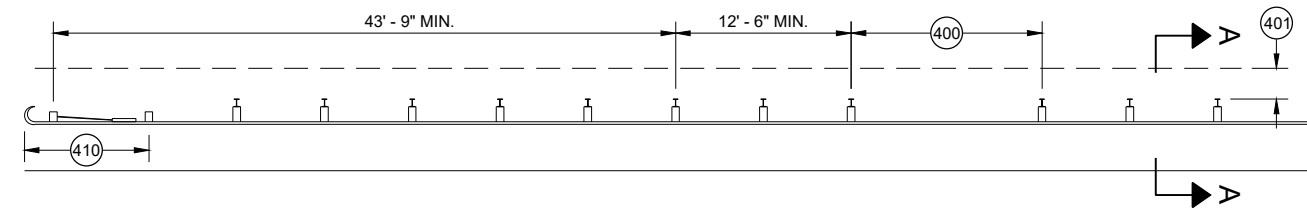
**MISSING POST IN MGS GUARDRAIL NEAR EAT**



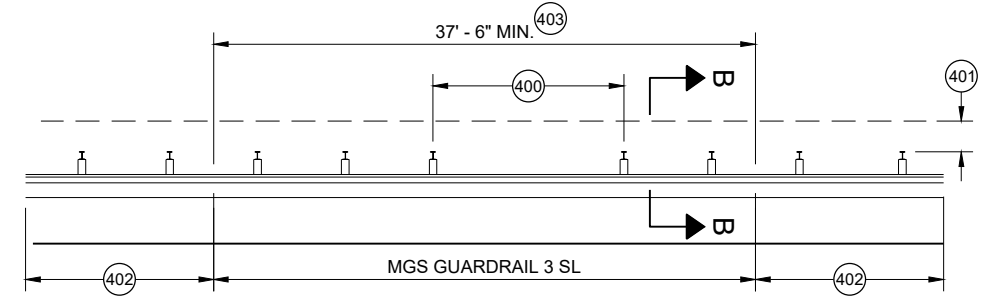
**MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION**



**MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD**

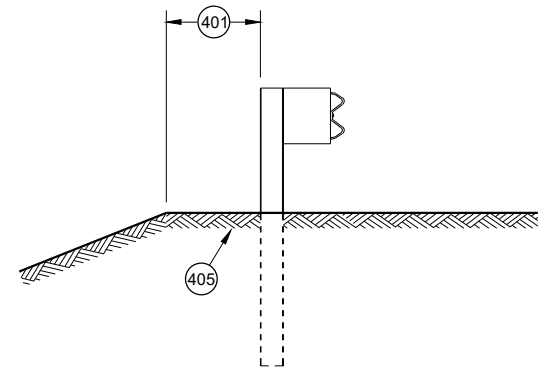


**MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL**

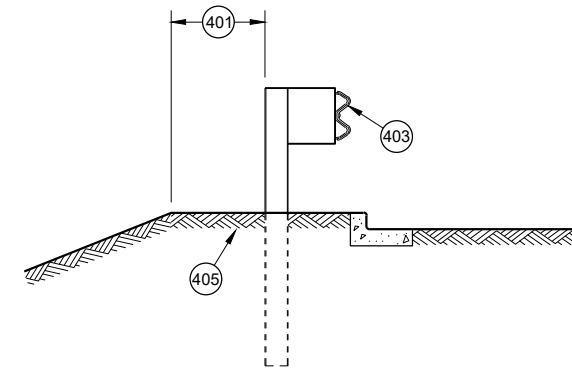


**MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)**

- ④00 MAX SPAN 12' - 6"
- ④01 2' MIN.
- ④02 MGS GUARDRAIL 3
- ④03 NESTING BEAM GUARD
- ④04 ASYMMETRIC TRANSITION
- ④05 SOIL WELL DRAINED AND COMPACTED
- ④06 SEE OTHER DRAWINGS IN THIS SDD
- ④07 SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- ④08 SEE SDD 14B44
- ④09 SEE SDD 14B45
- ④10 SEE SDD 14B47
- ④11 MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



**SECTION A - A**



**SECTION B - B**

<b>MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	

**GENERAL NOTES**

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
  - (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
  - (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
  - (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
  - (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.
- DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

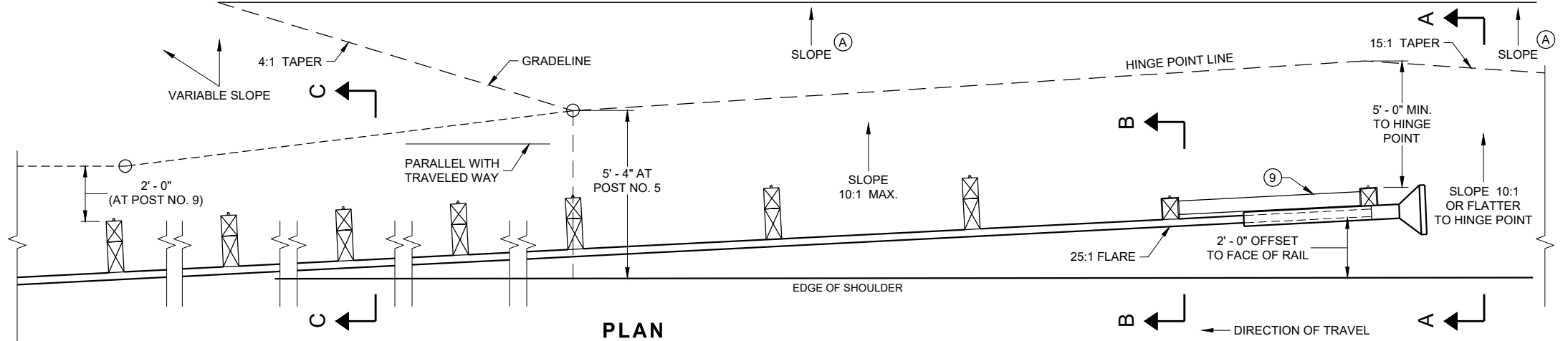
\* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

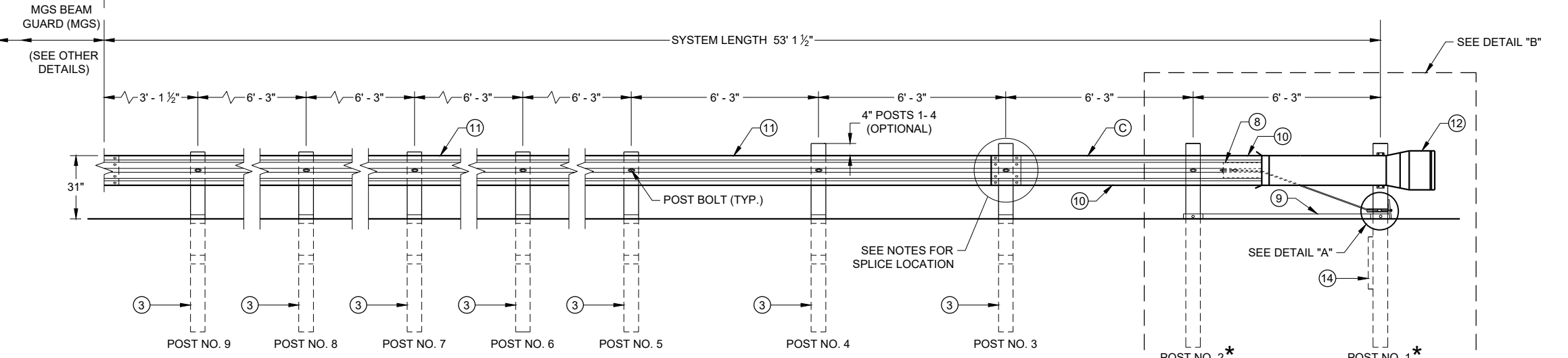
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

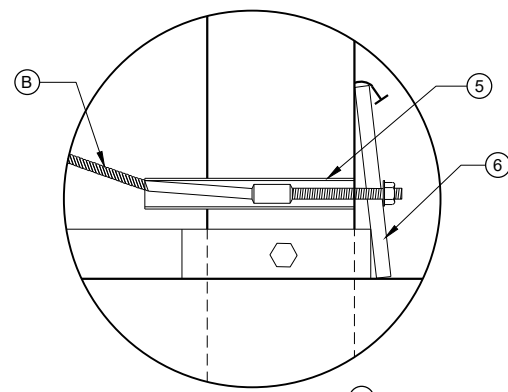
CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



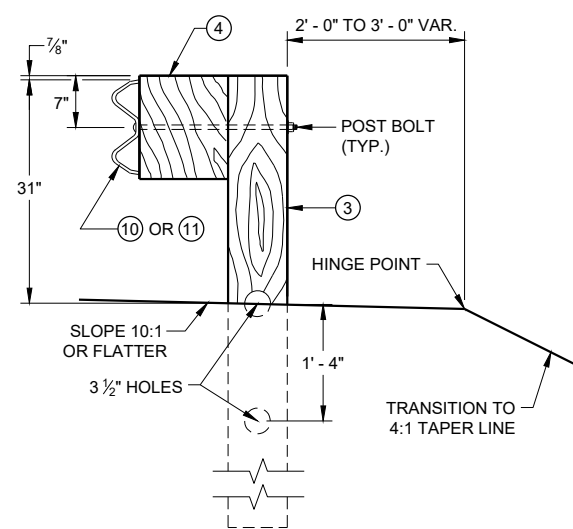
**PLAN**



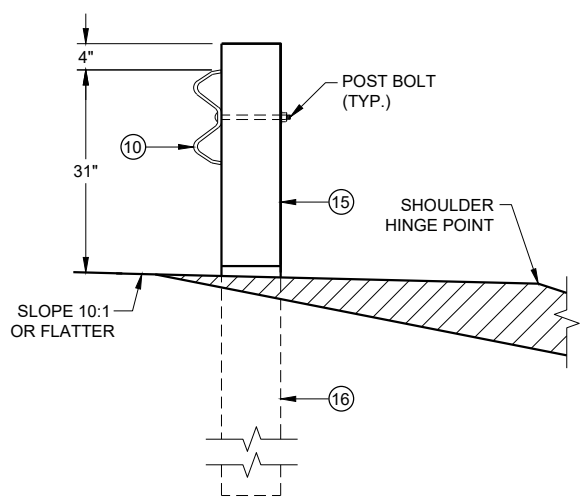
**ELEVATION**



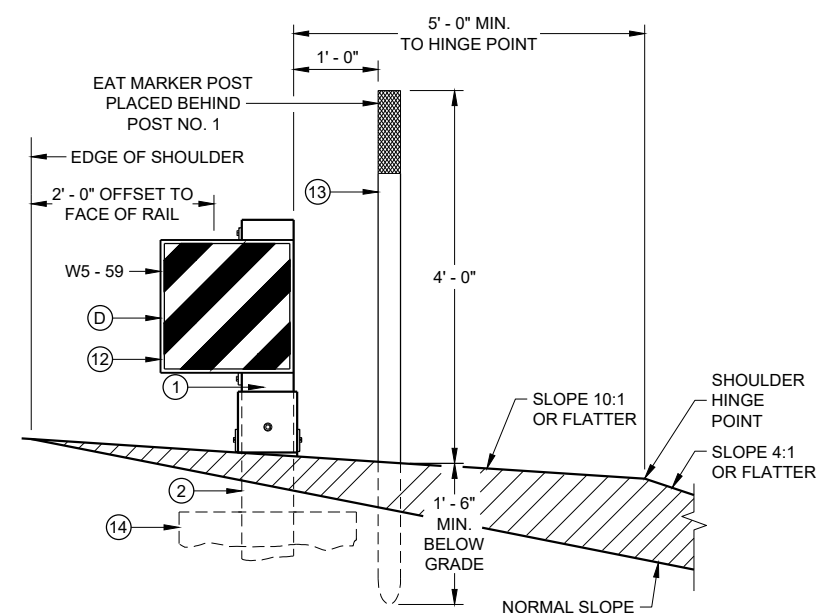
**DETAIL "A"**



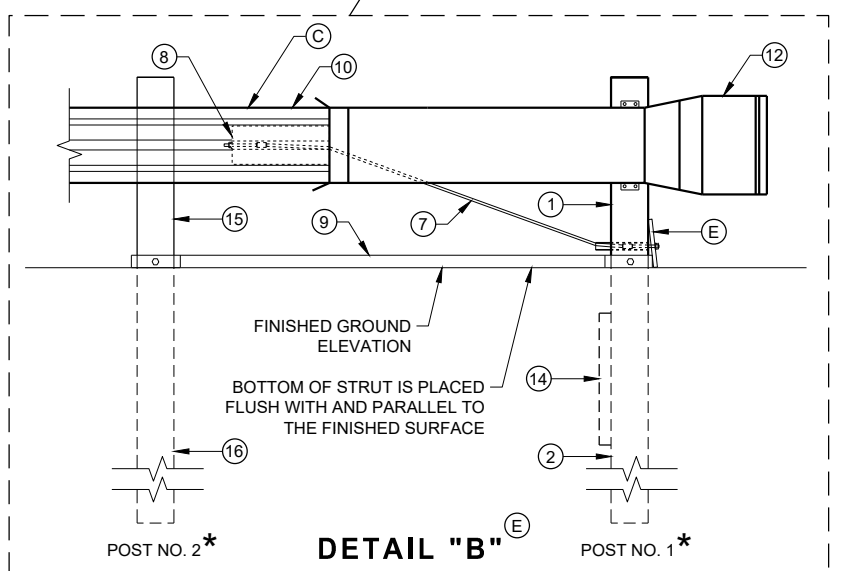
**SECTION C - C  
TYPICAL AT POST NOS. 3 - 9**



**SECTION B - B  
TYPICAL AT POST NO. 2\***



**SECTION A - A  
TYPICAL AT POST NO. 1\***



**DETAIL "B"**

**MIDWEST GUARDRAIL SYSTEM  
ENERGY ABSORBING TERMINAL  
(MGS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

6

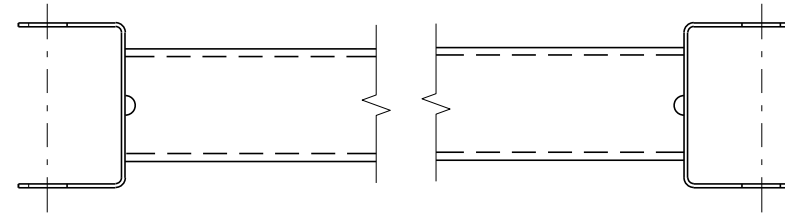
6

SDD 14B44 - 04a

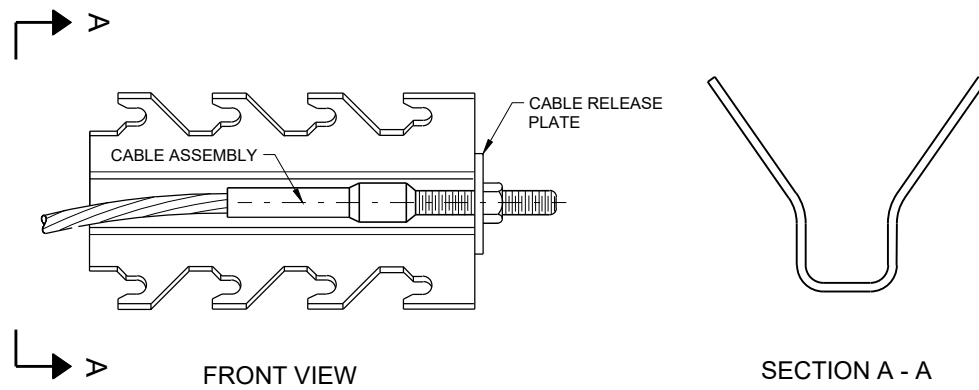
SDD 14B44 - 04a

**BILL OF MATERIALS**

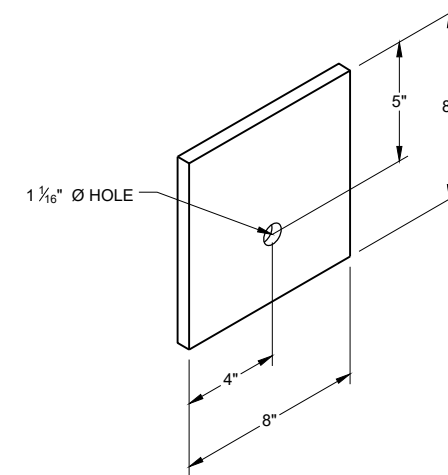
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



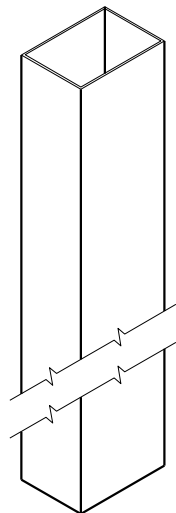
**GENERIC GROUND STRUT** ⑨ ⑤



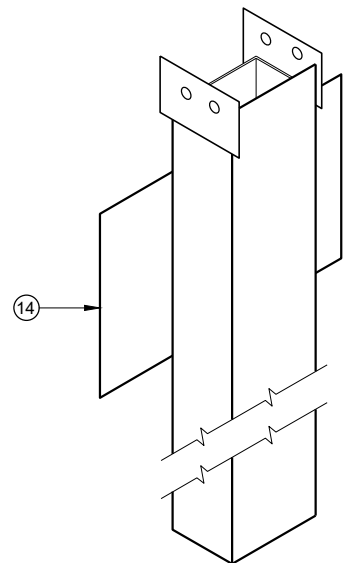
**GENERIC ANCHOR CABLE BOX** ⑨ ⑤



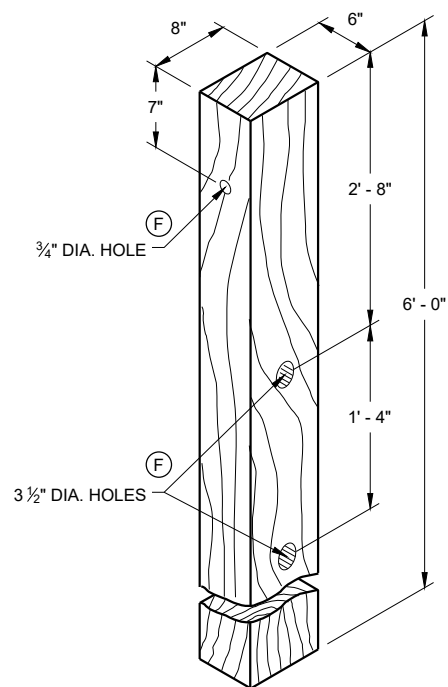
**BEARING PLATE** ⑥ ⑤



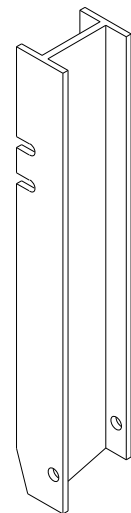
UPPER POST NO. 1 <sup>(1)</sup> (E)



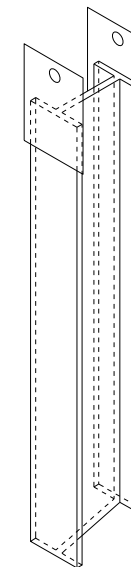
LOWER POST NO. 1 <sup>(2)</sup> (E)



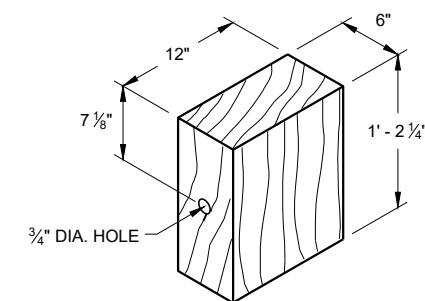
WOOD CRT POST <sup>(3)</sup> (E)  
POSTS NUMBER 3-9



UPPER POST NO. 2 <sup>(15)</sup> (E)

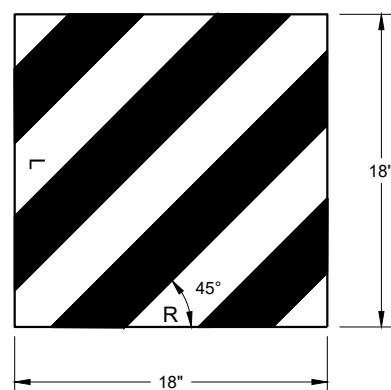


LOWER POST NO. 2 <sup>(16)</sup> (E)



WOOD BLOCKOUT <sup>(4)</sup>  
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

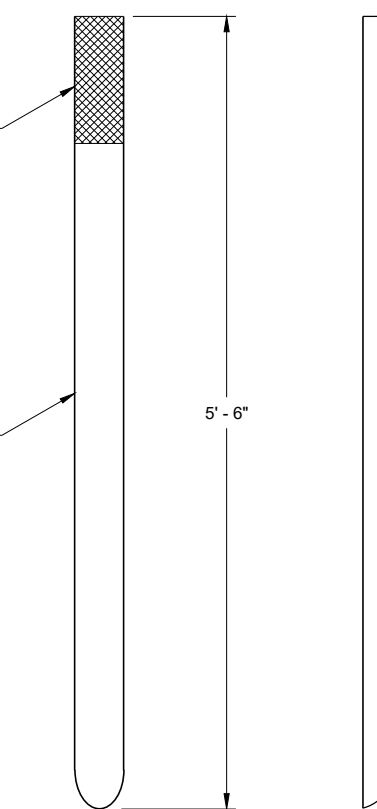
6



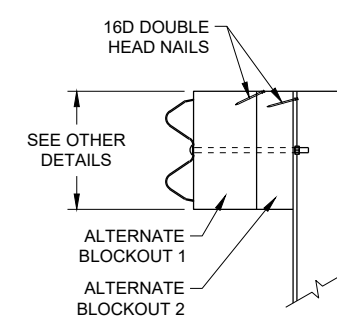
W5 - 59  
REFLECTIVE SHEETING DETAIL <sup>(E)</sup>

TYPE H  
YELLOW REFLECTIVE  
SHEETING 3" X 9".  
SEE STANDARD  
SPECIFICATION 637.

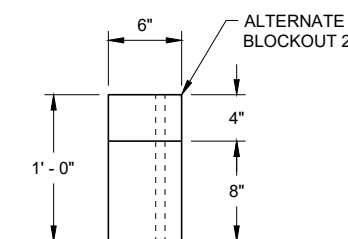
E.A.T. MARKER  
POST (YELLOW)



FRONT VIEW SIDE VIEW  
E.A.T. MARKER POST <sup>(13)</sup>



SIDE VIEW



TOP VIEW

ALTERNATE WOOD  
BLOCKOUT DETAIL

6

SDD 14B44 - 04c

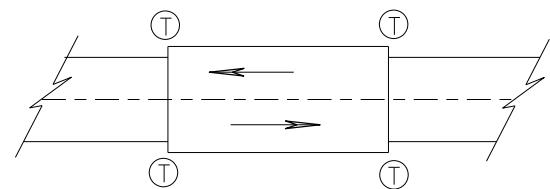
SDD 14B44 - 04c

**MIDWEST GUARDRAIL SYSTEM  
ENERGY ABSORBING TERMINAL  
(MGS)**

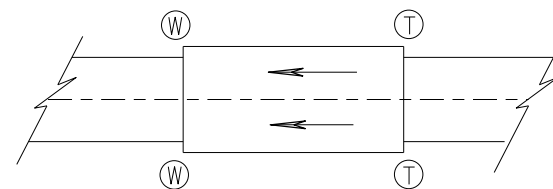
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
7/2018 DATE /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR

FHWA



**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

**TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE**

**GENERAL NOTES**

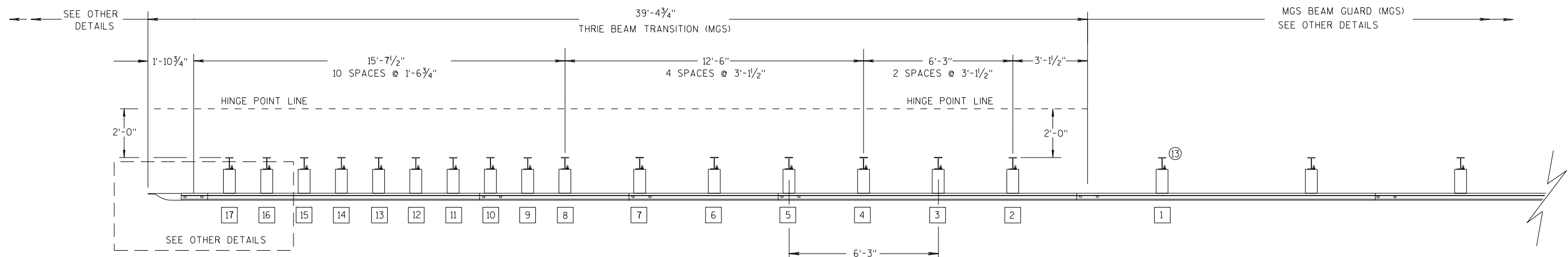
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

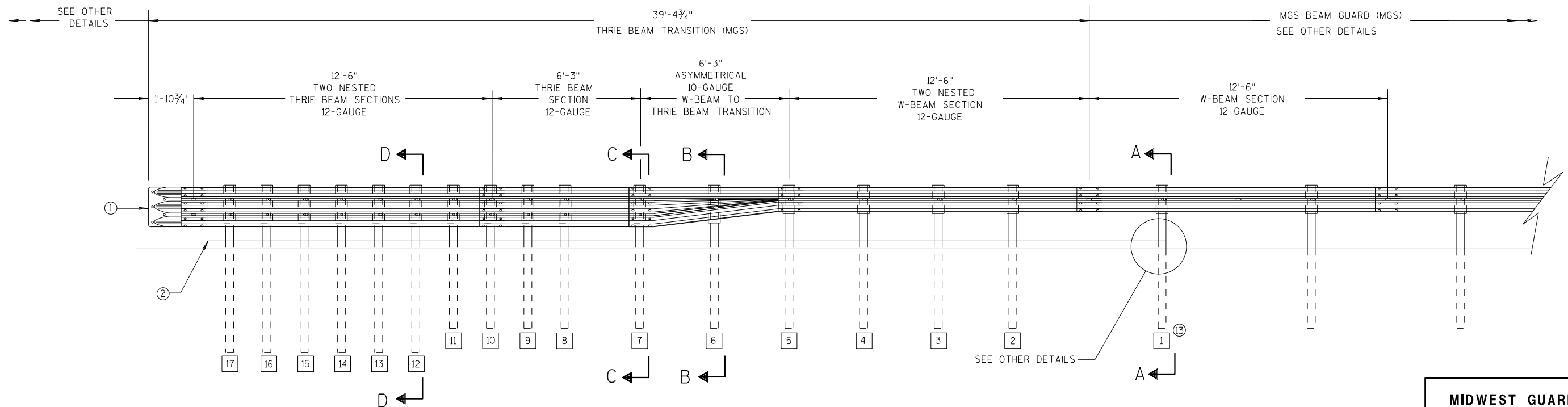
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



**PLAN VIEW**



**ELEVATION VIEW**

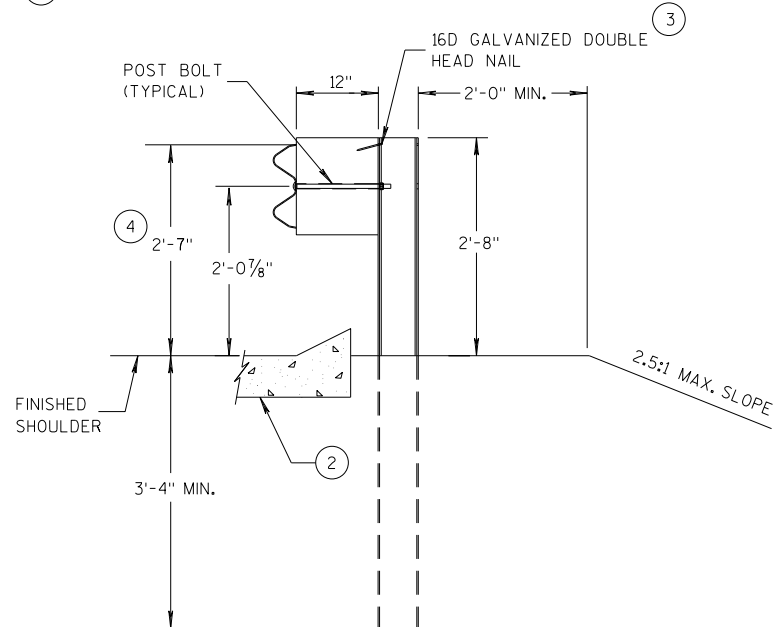
**MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION**

**MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)**

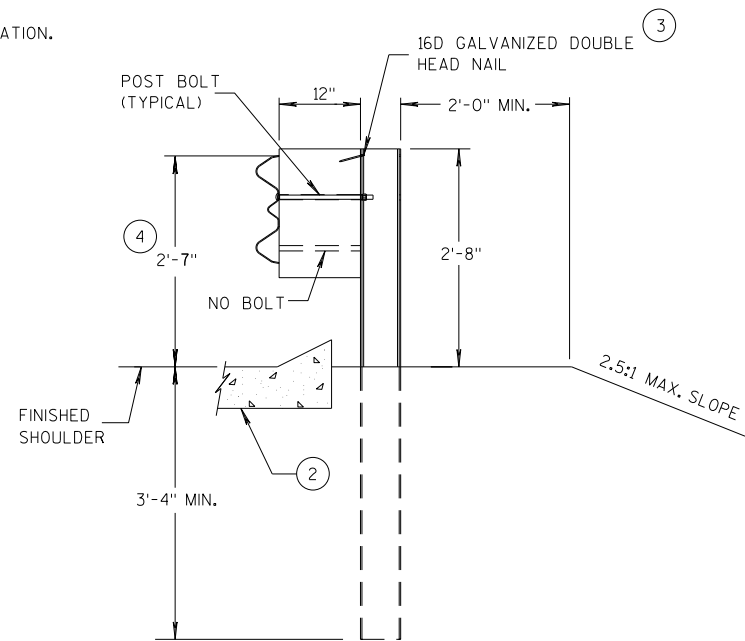
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES**

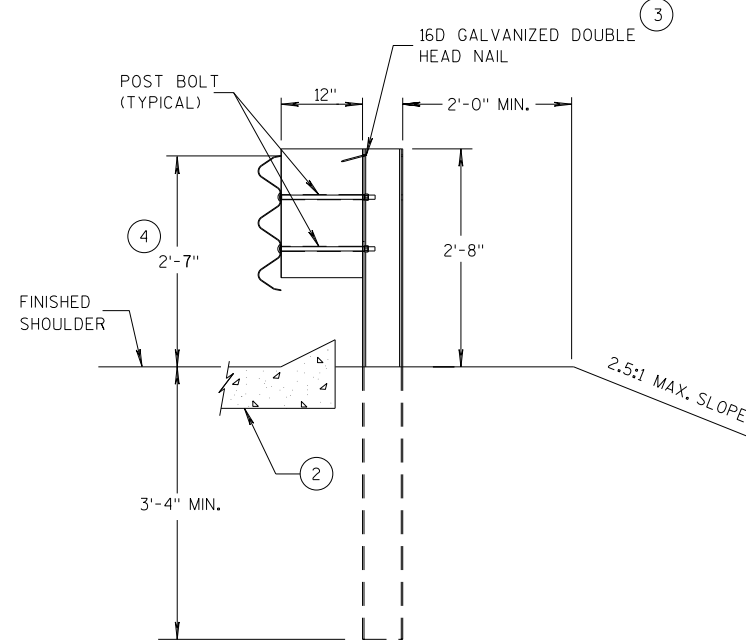
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



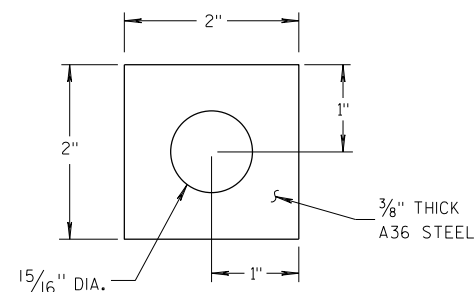
**SECTION A-A  
POSTS 1-5**



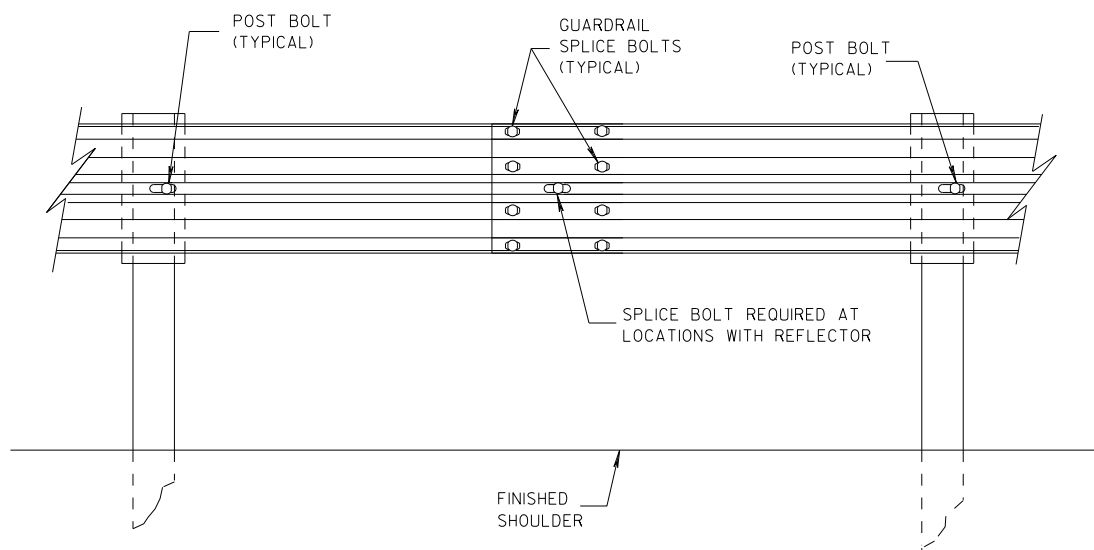
**SECTION B-B  
POST 6**



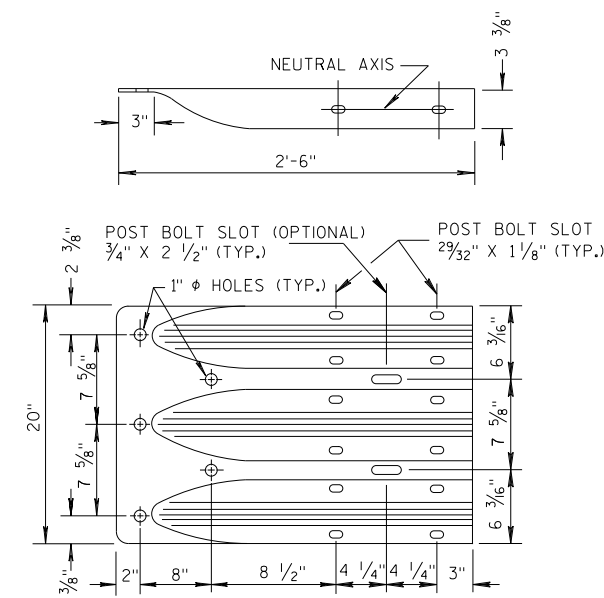
**SECTION C-C  
POSTS 7-11**



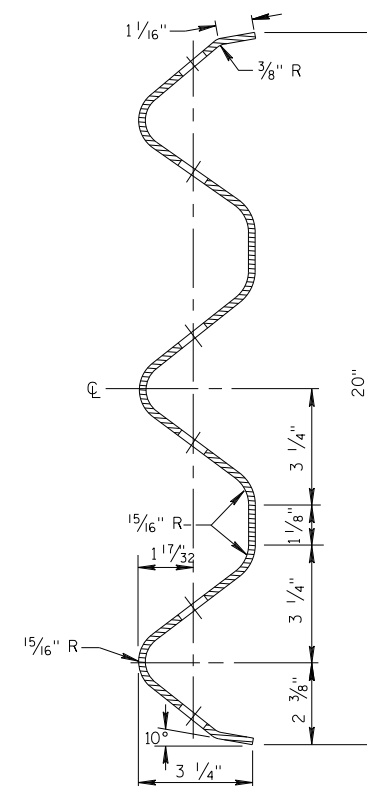
**PLATE WASHER DETAIL**



**SPLICE DETAIL**



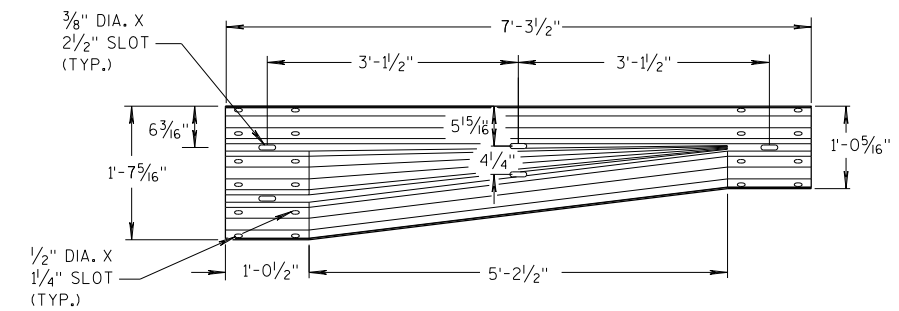
**THRIE BEAM  
TERMINAL CONNECTOR**



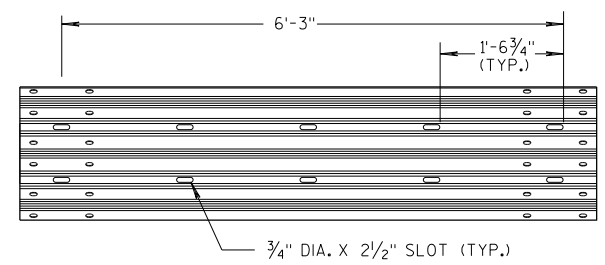
**SECTION THRU THRIE  
BEAM RAIL ELEMENT**

**MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)**

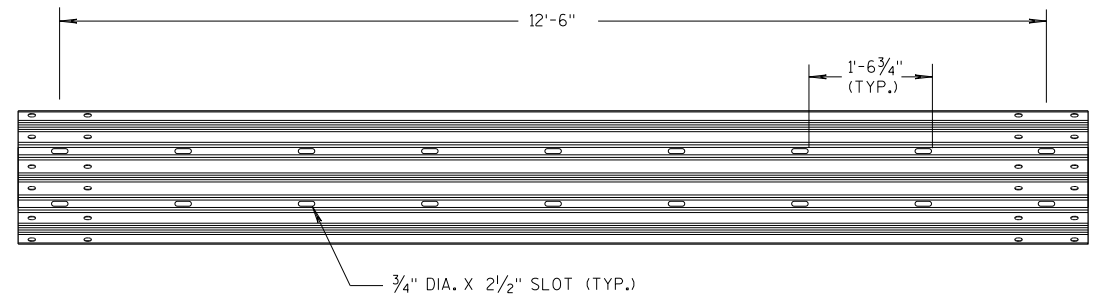
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



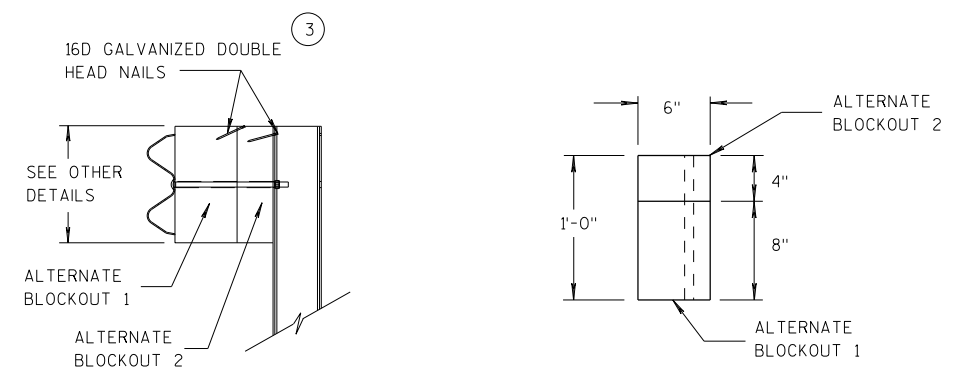
**W-BEAM TO THRIE BEAM TRANSITION SECTION**



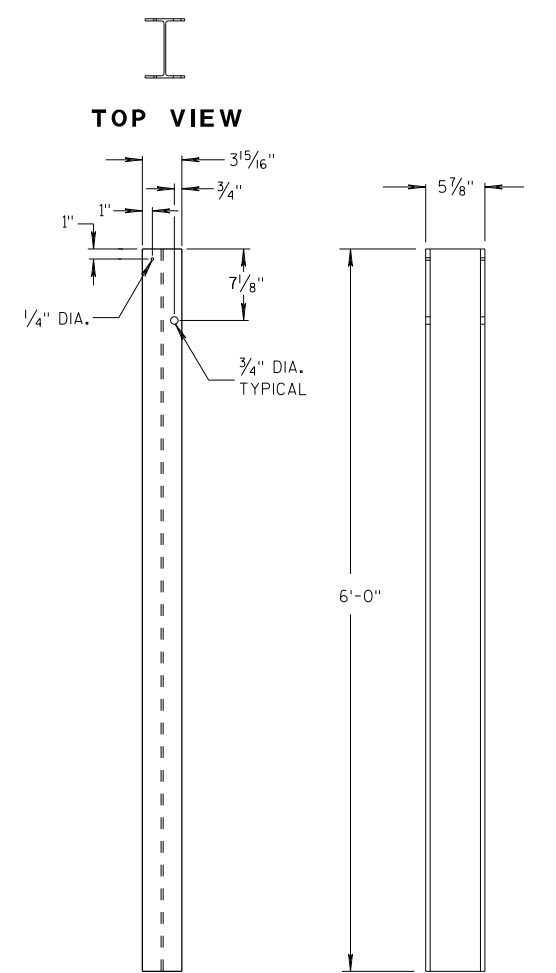
**6'-3\"/>**



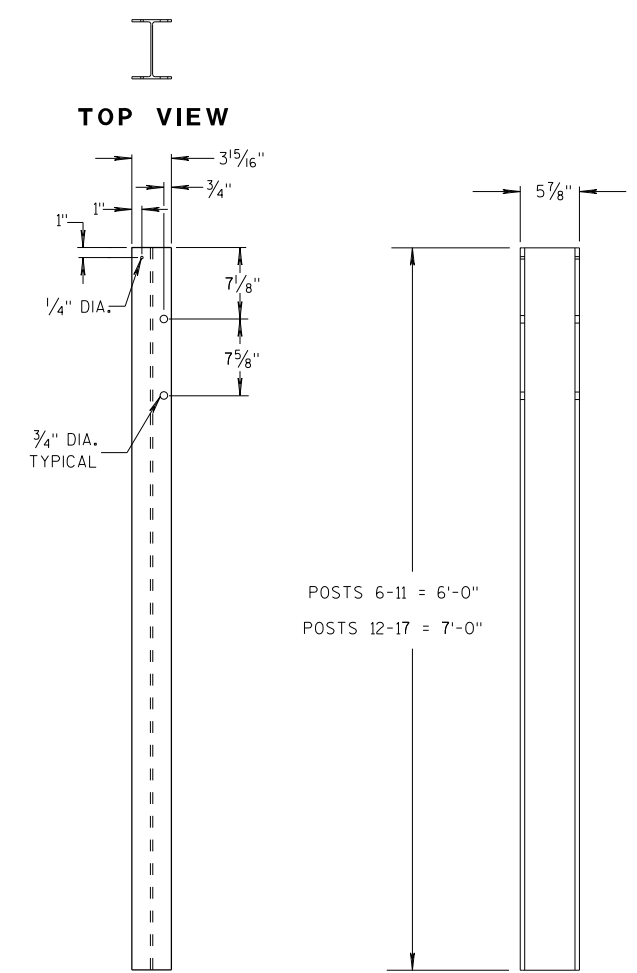
**12'-6\"/>**



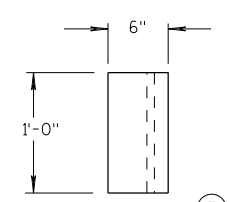
**ALTERNATE WOOD BLOCKOUT DETAIL**



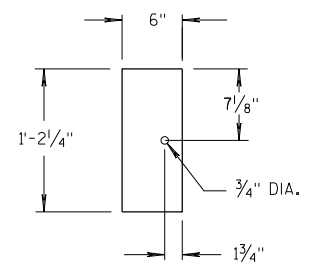
**STEEL POSTS 1-5**



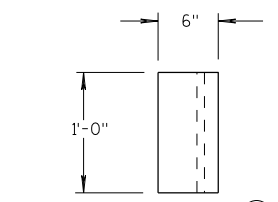
**STEEL POSTS 6-17**



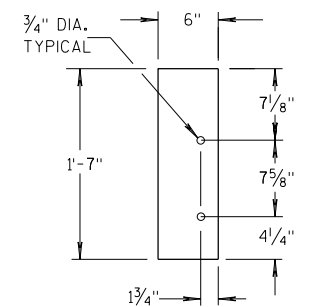
**TOP VIEW**



**FRONT VIEW  
BLOCKOUT  
POSTS 1-5**



**TOP VIEW**



**FRONT VIEW  
BLOCKOUT  
POSTS 6-17**

**GENERAL NOTES**

- STEEL POSTS ARE W6X9 OR W6X8.5.
- BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.
- (3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- (5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.
- (13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

**MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

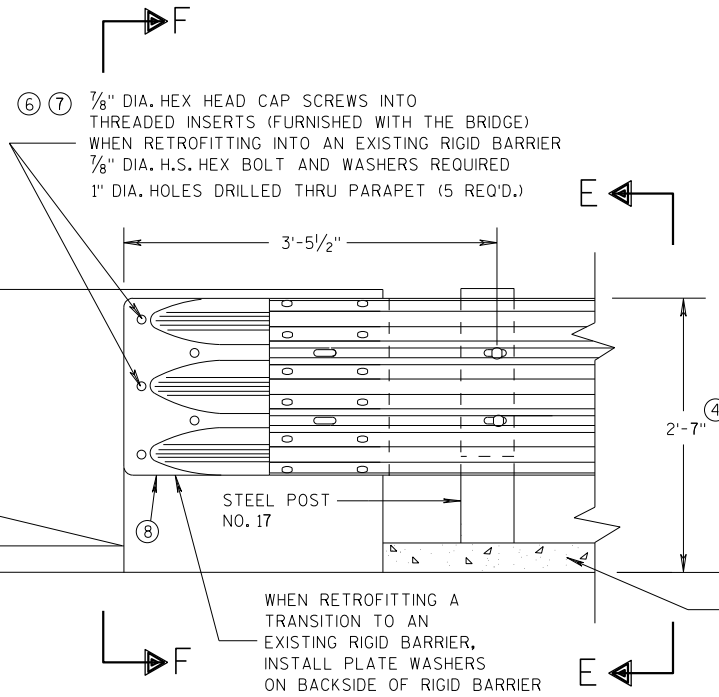
6

6

S.D.D. 14 B 45-5c

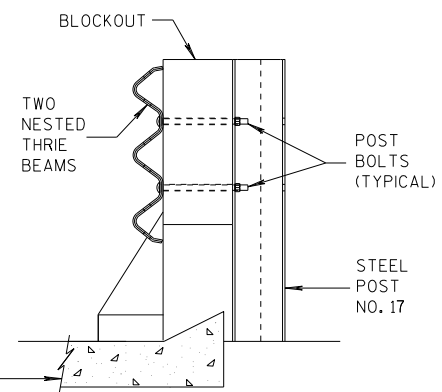
S.D.D. 14 B 45-5c





FRONT VIEW

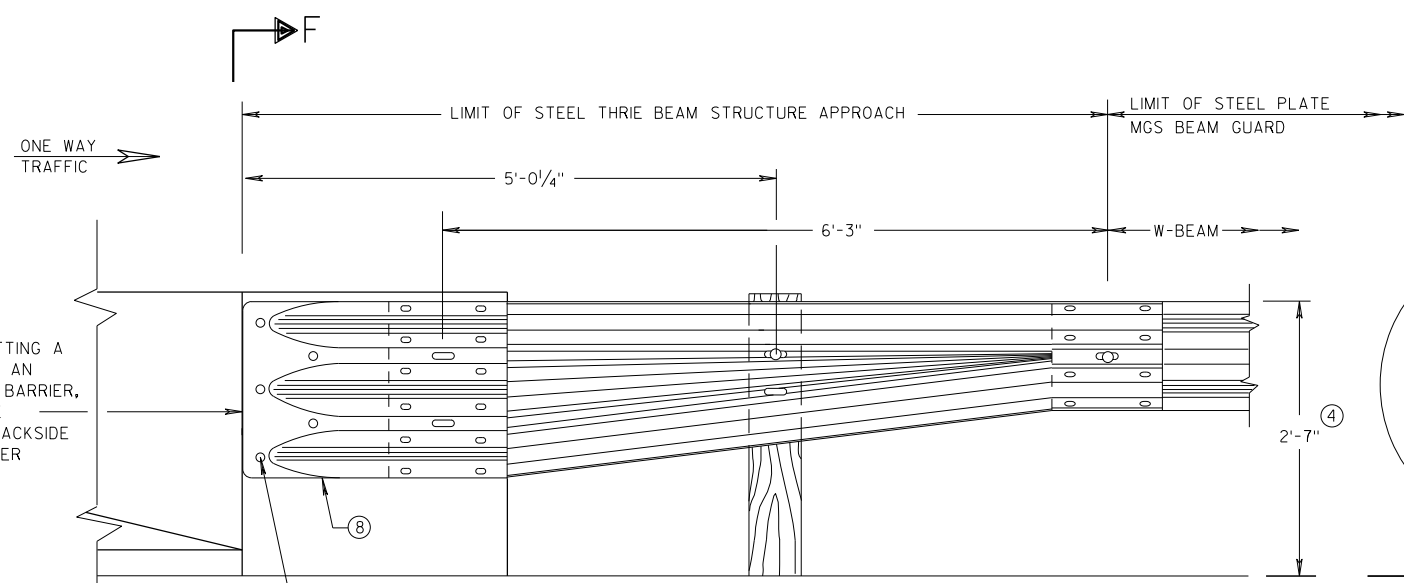
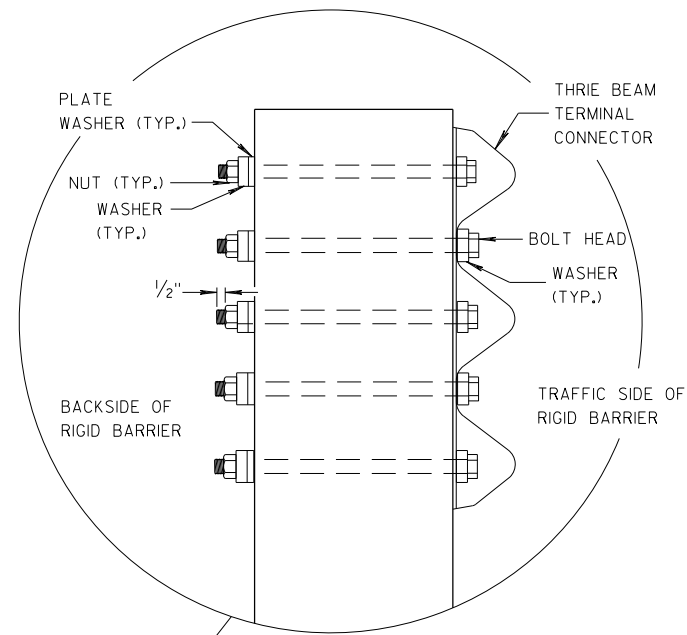
**THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS**



SECTION E-E

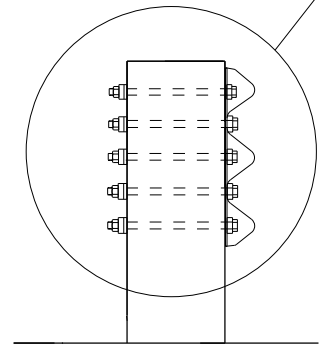
**GENERAL NOTES**

- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- (2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- (4) TOLERANCE FOR TOP OF BEAM IS  $\pm 1"$ .
- (6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- (7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- (8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

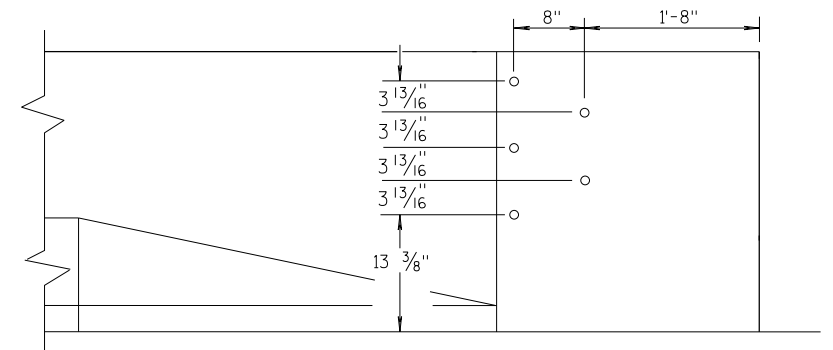


FRONT VIEW

**W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS  
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)**



SECTION F-F



DRILL HOLE LOCATION

<b>MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

6

6

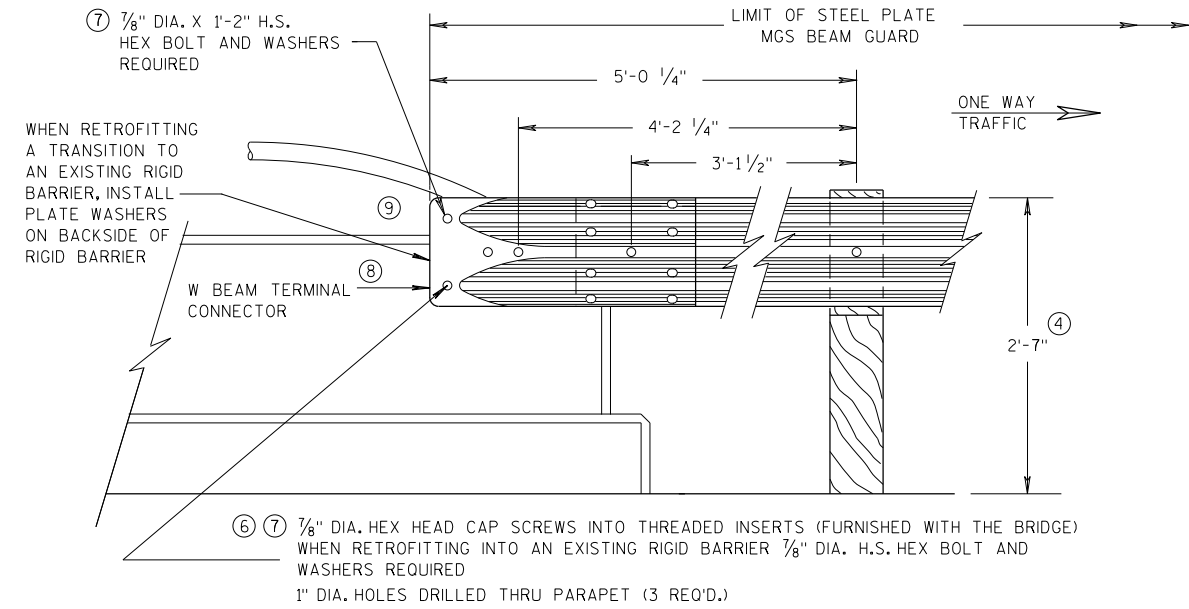
S.D.D. 14 B 45-5d

S.D.D. 14 B 45-5d

## GENERAL NOTES

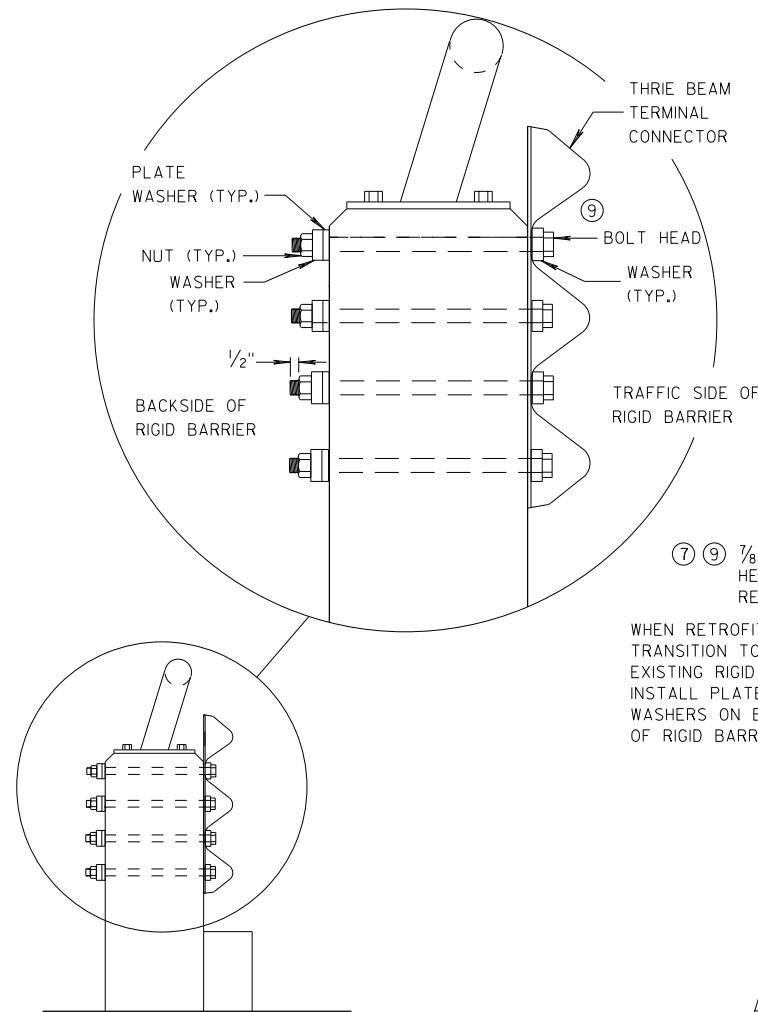
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS  $\pm 1"$ .
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X  $\frac{5}{32}"$  THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3  $\frac{1}{2}"$ .
- ⑨ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

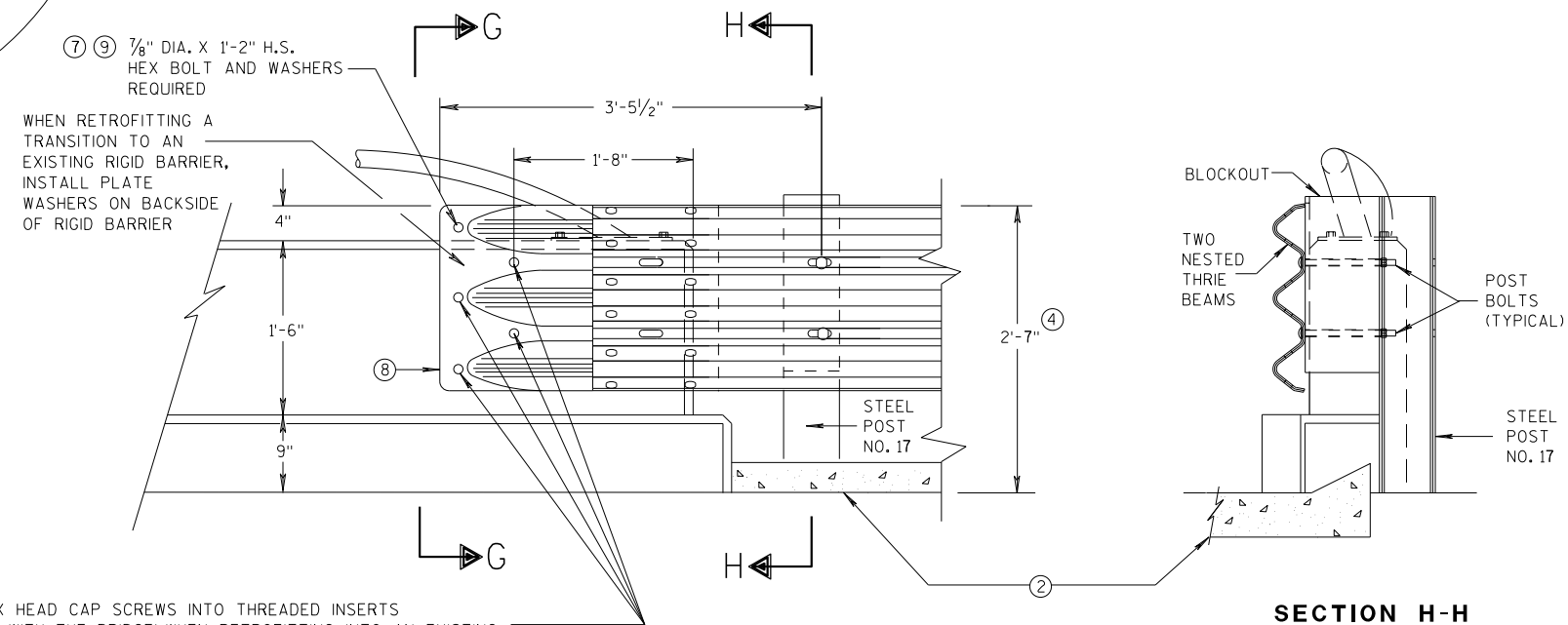


FRONT VIEW

### W BEAM CONNECTION TO VERTICAL FACE PARAPET (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



SECTION G-G



FRONT VIEW

### THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

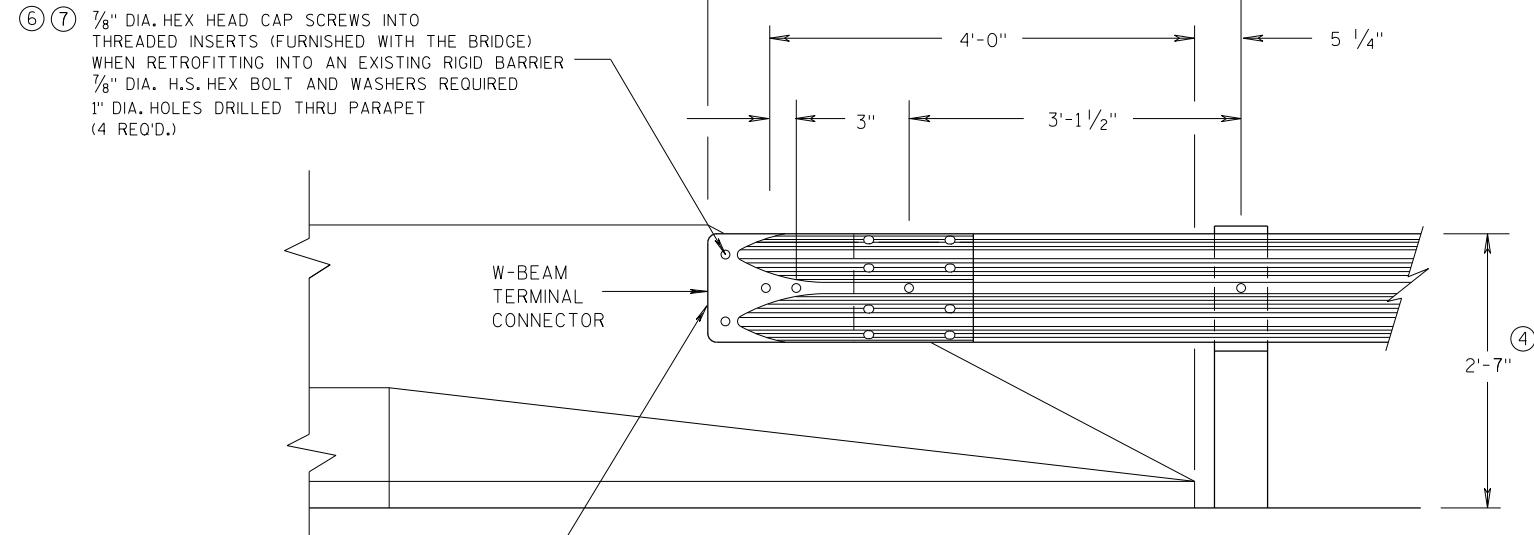
SECTION H-H

MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
07/2018 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR

ONE WAY  
TRAFFIC



W-BEAM  
TERMINAL  
CONNECTOR

FRONT VIEW

**W BEAM CONNECTION TO  
PARAPETS WITH SLOPED ENDS**

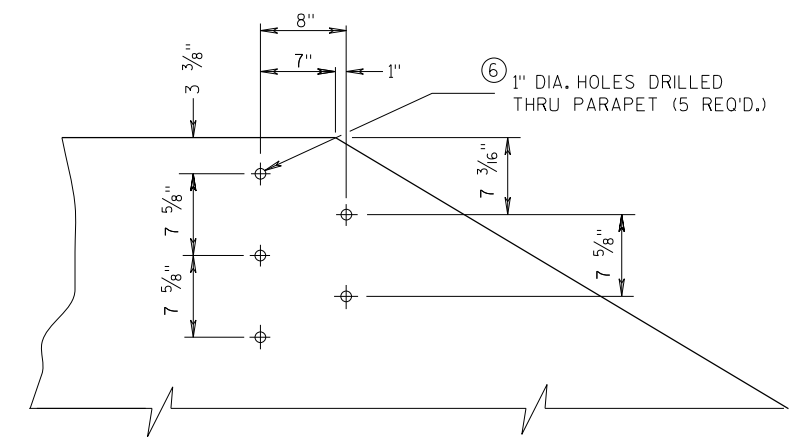
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

WHEN RETROFITTING A TRANSITION  
TO AN EXISTING RIGID BARRIER,  
INSTALL PLATE WASHERS ON  
BACKSIDE OF RIGID BARRIER.

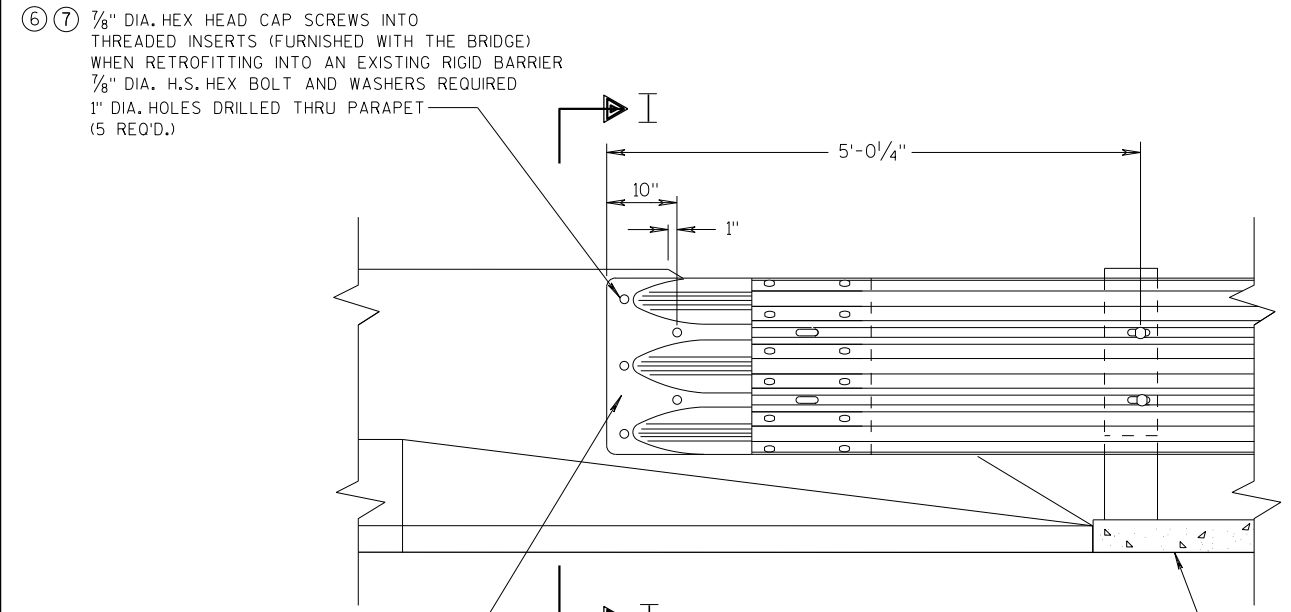
⑥ ⑦ 7/8" DIA. HEX HEAD CAP SCREWS INTO  
THREADED INSERTS (FURNISHED WITH THE BRIDGE)  
WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER  
7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED  
1" DIA. HOLES DRILLED THRU PARAPET  
(4 REQ'D.)

**GENERAL NOTES**

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS  $\pm 1"$ .
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



DRILL HOLE LOCATION AND PATTERN  
FOR THRIE BEAM CONNECTION

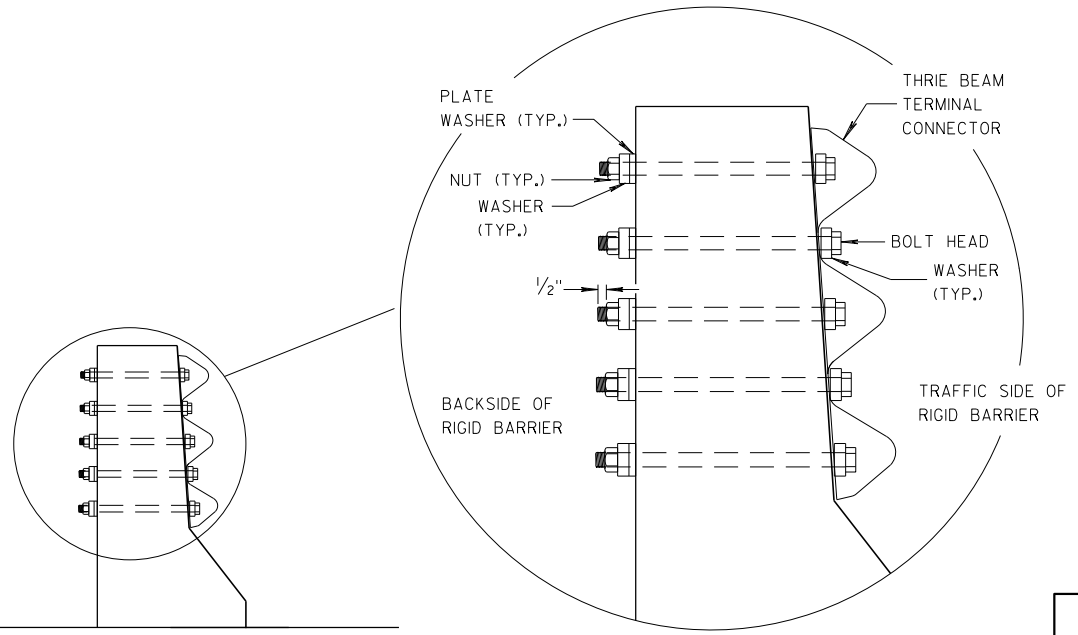


FRONT VIEW

**THRIE BEAM CONNECTION TO BRIDGE  
PARAPETS WITH SLOPED ENDS**

WHEN RETROFITTING A TRANSITION  
TO AN EXISTING RIGID BARRIER,  
INSTALL PLATE WASHERS ON  
BACKSIDE OF RIGID BARRIER.

⑥ ⑦ 7/8" DIA. HEX HEAD CAP SCREWS INTO  
THREADED INSERTS (FURNISHED WITH THE BRIDGE)  
WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER  
7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED  
1" DIA. HOLES DRILLED THRU PARAPET  
(5 REQ'D.)

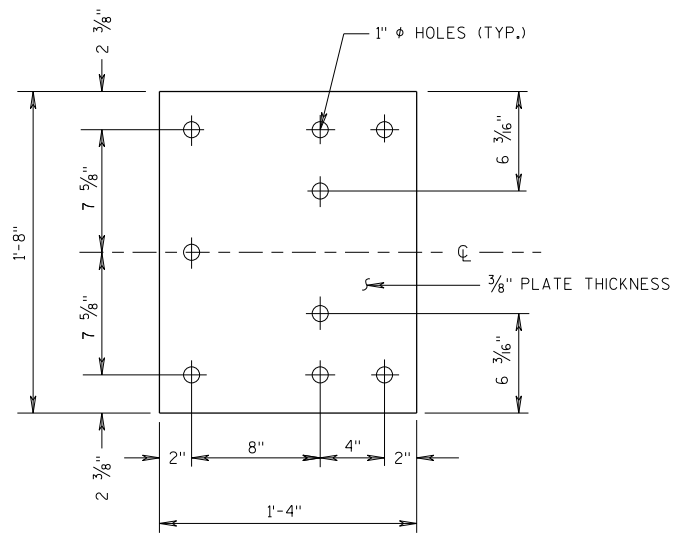


SECTION I-I

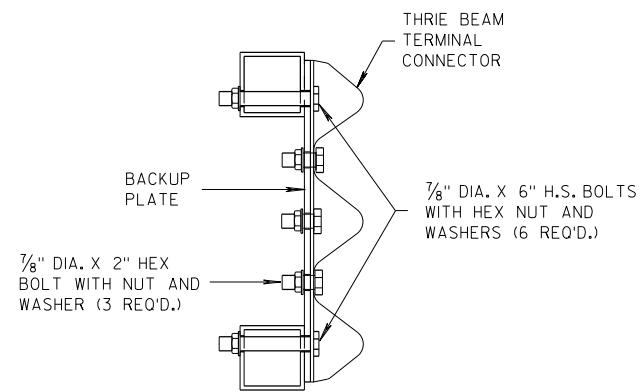
**MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

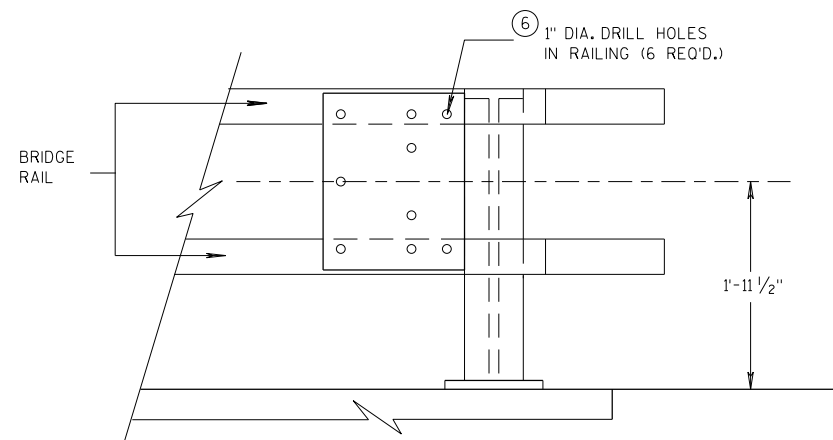
APPROVED  
DATE 07/2018 /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR  
FHWA



**BACK-UP PLATE DETAIL**



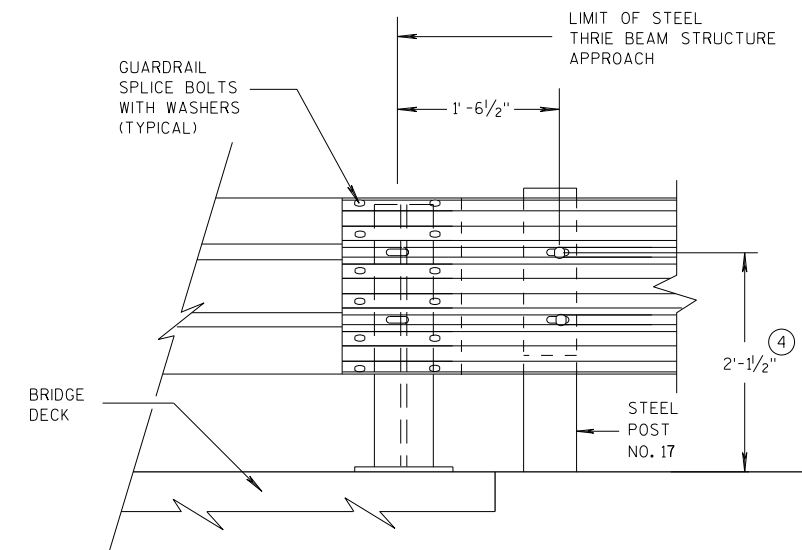
**SECTION J-J**



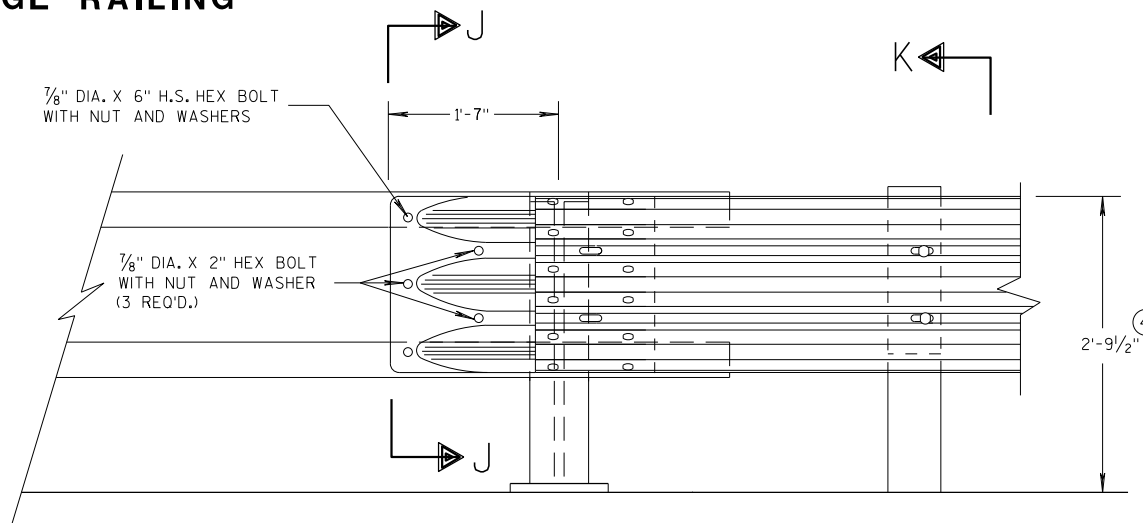
**BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING**

**GENERAL NOTES**

- ④ TOLERANCE FOR TOP OF BEAM IS ± 1".
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

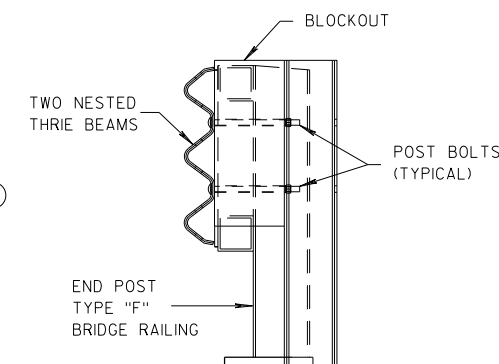


**FRONT VIEW  
THRIE BEAM CONNECTION TO  
STEEL RAILING TYPE "W"**



**FRONT VIEW**

**THRIE BEAM CONNECTION TO  
TUBULAR RAILING TYPE "F"**



**SECTION K-K**

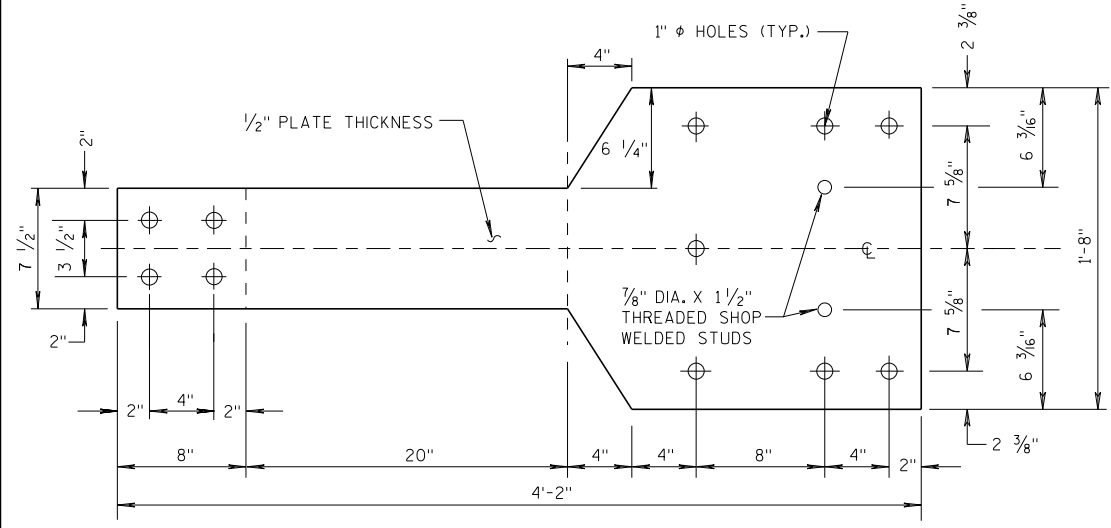
**MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

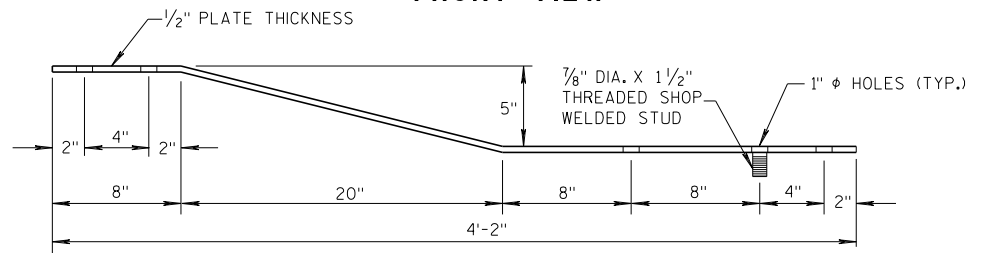
APPROVED  
07/2018 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR

**GENERAL NOTES**

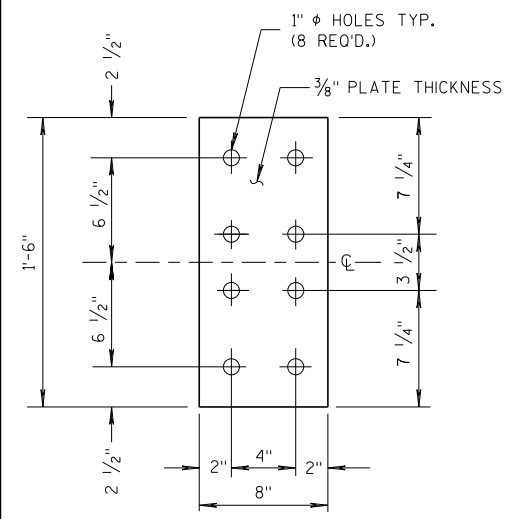
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



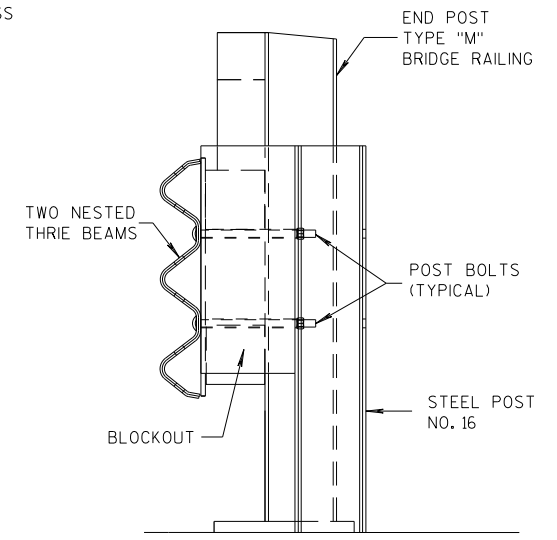
**FRONT VIEW**



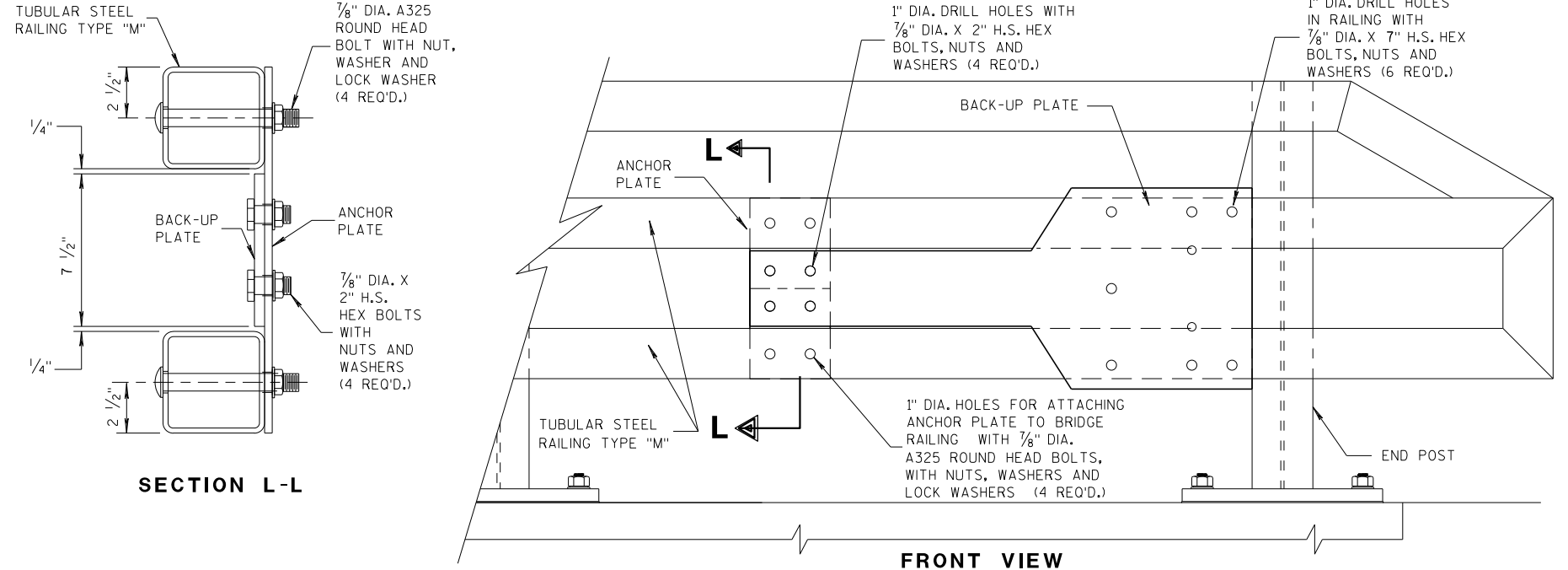
**PLAN VIEW  
BACK-UP PLATE DETAIL, TYPE "M"**



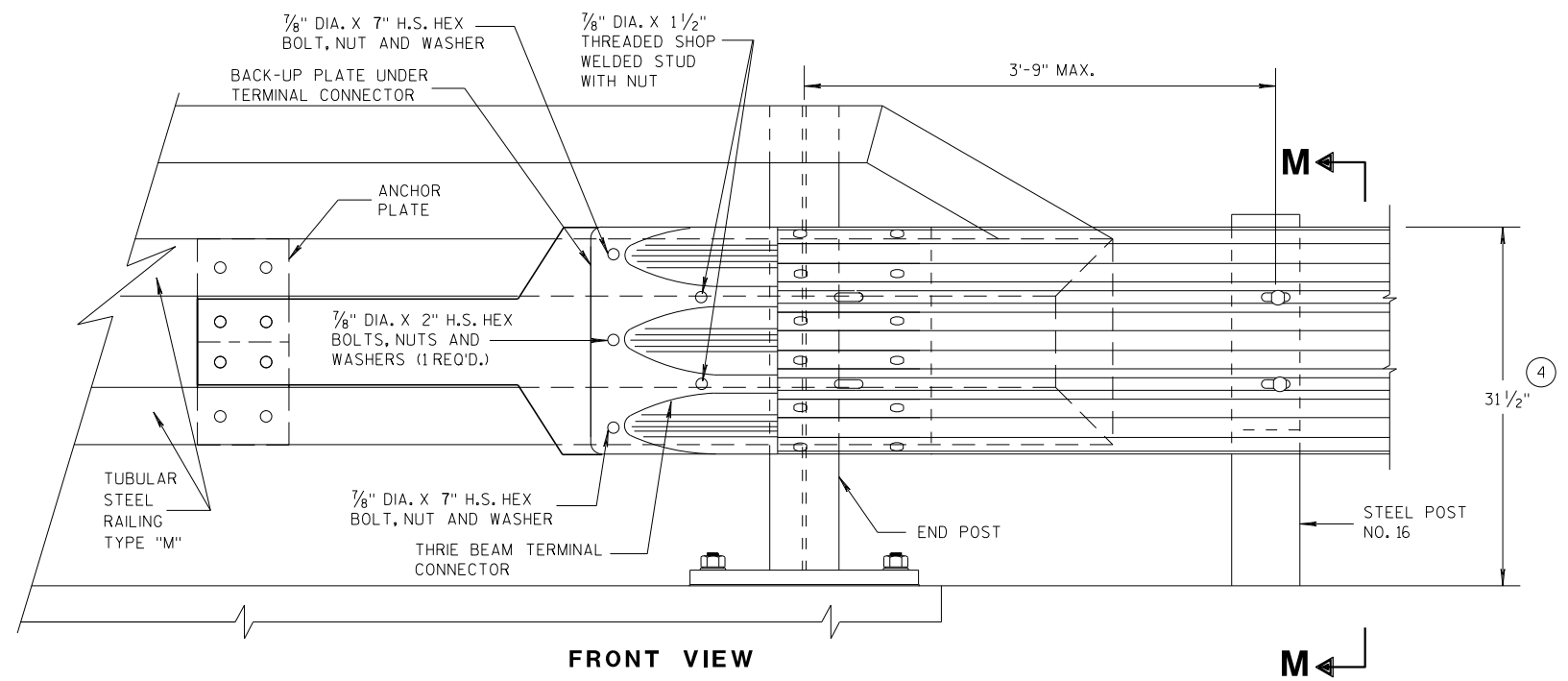
**FRONT VIEW  
ANCHOR PLATE DETAIL, TYPE "M"**



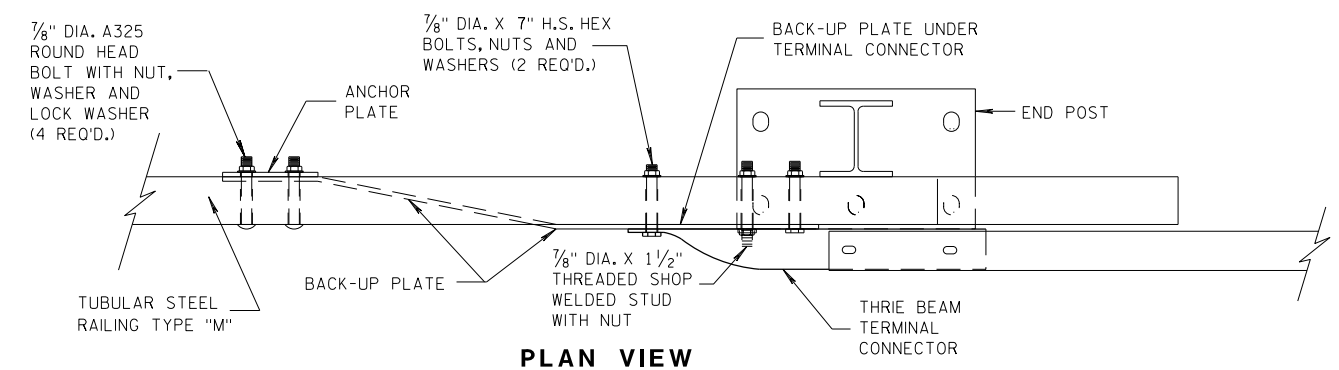
**SECTION M-M**



**ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"**



**FRONT VIEW**



**PLAN VIEW**

**THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"**

**MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)**

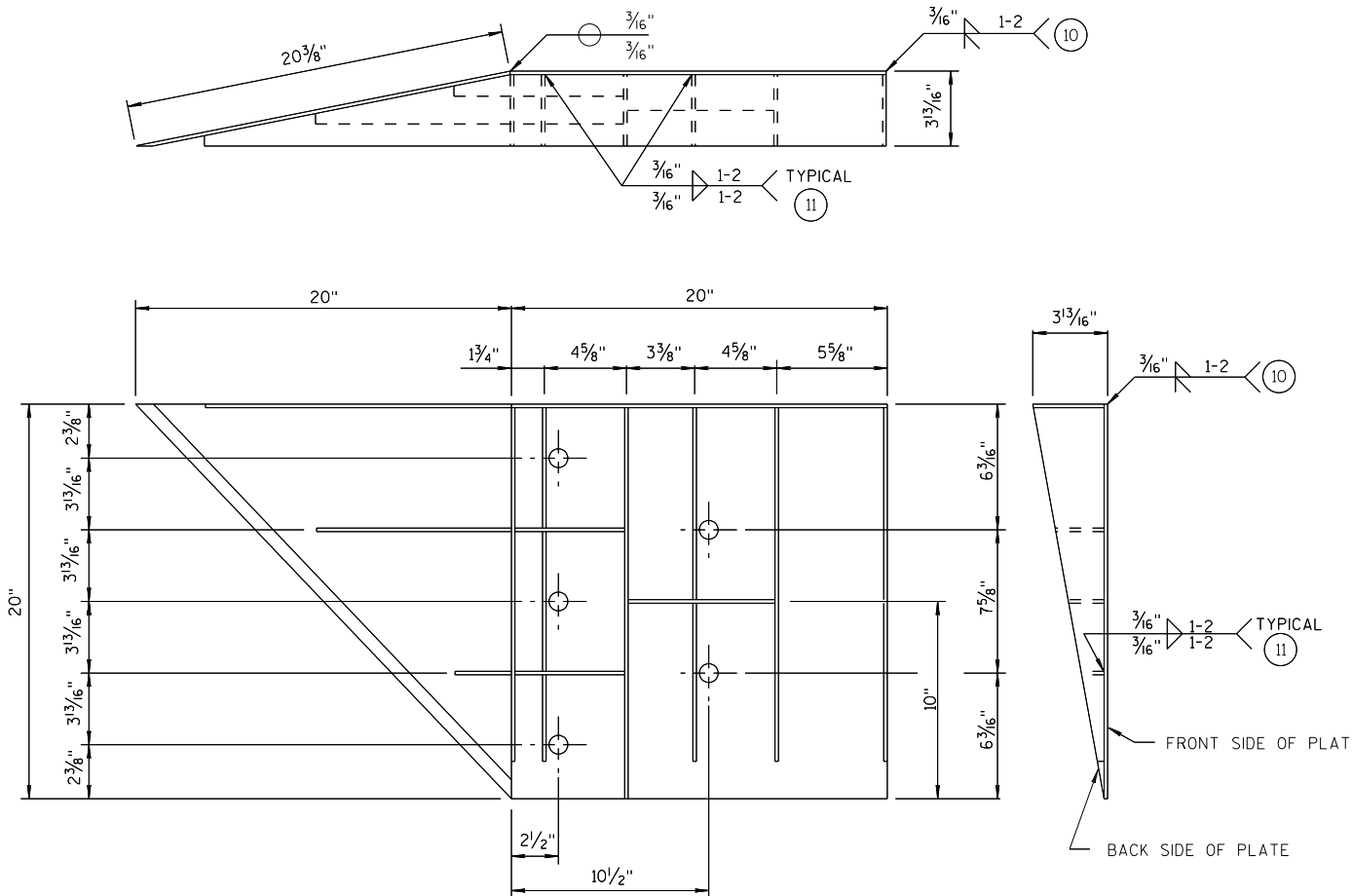
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE 07/2018  
DATE /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR  
FHWA

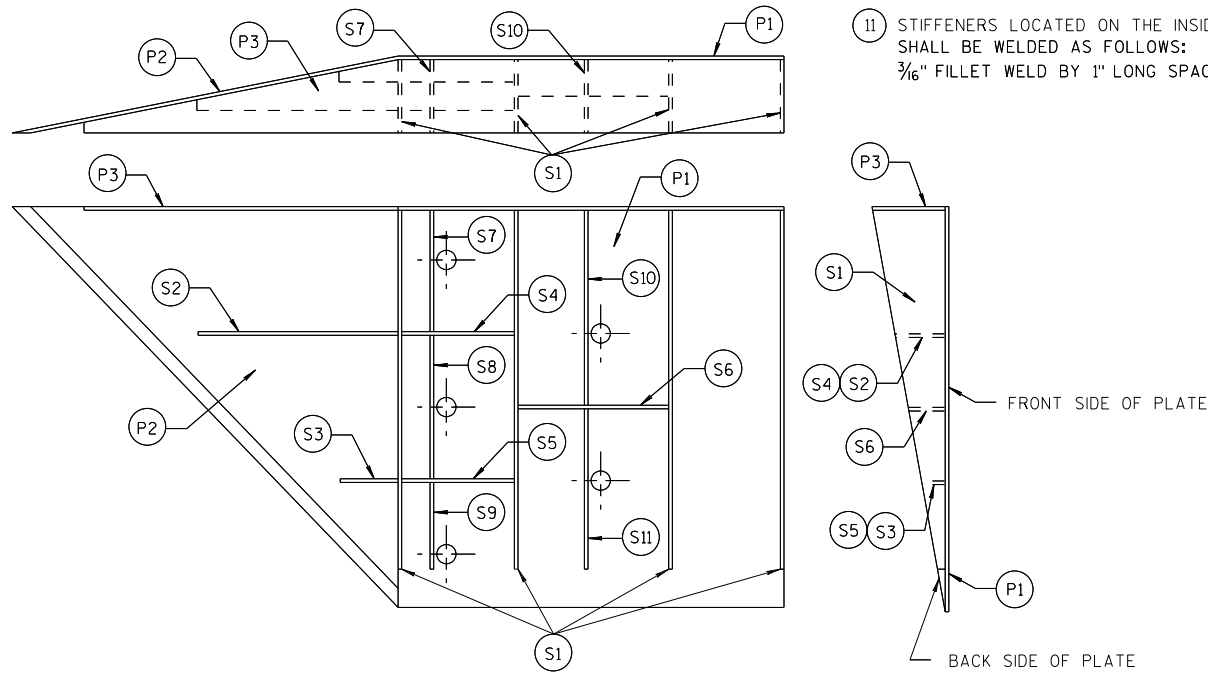
**GENERAL NOTES**

- COVER PLATE PANELS ARE 3/16" THICK.
- ALL STIFFENERS ARE 1/4" THICK.
- CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.
- FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.
- ALL HOLE DIAMETERS SHALL BE 1".
- FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

- (10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:  
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- (11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:  
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



**WELDING INSTRUCTION**  
(VIEWED FROM BACK SIDE OF PLATE)



**PLATE AND STIFFENER IDENTIFICATION**  
(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 3/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 1/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 3/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 3/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 3/8" x 9 1 1/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 3/16"	1/4"

**SINGLE SLOPE CONNECTION PLATE**

**MIDWEST GUARDRAIL SYSTEM  
THREE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

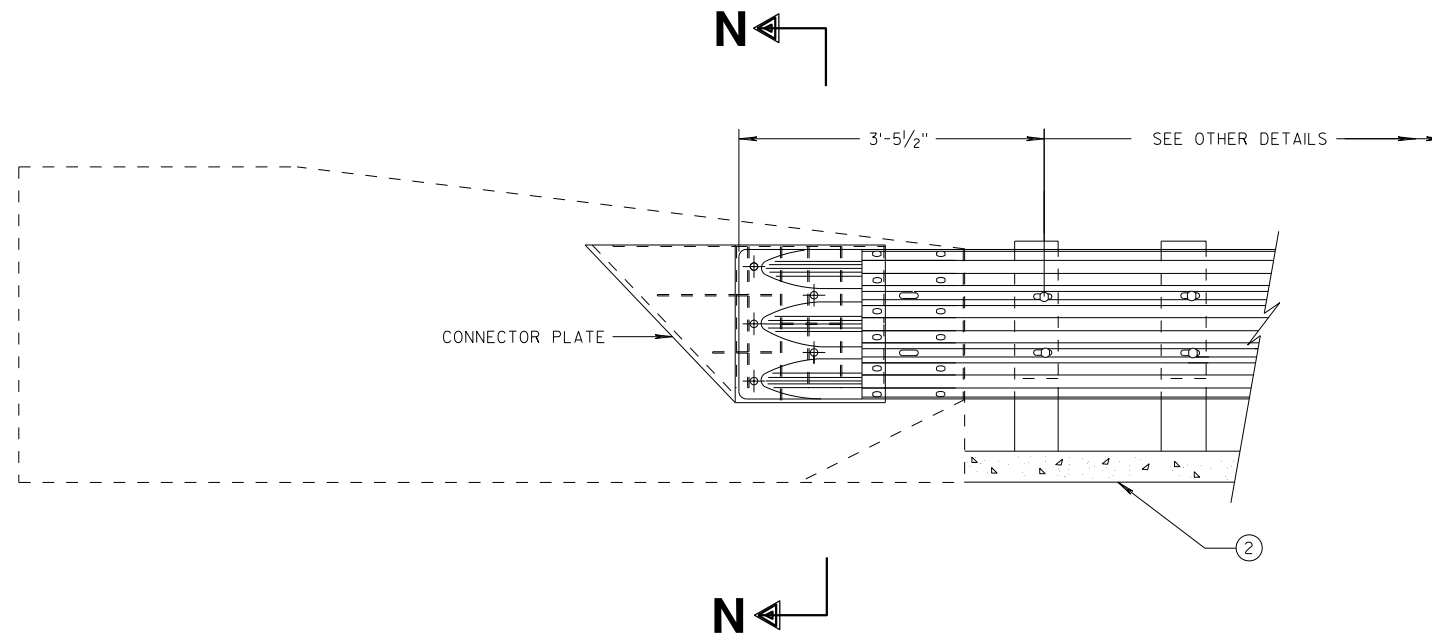
APPROVED: \_\_\_\_\_ /S/ Rodney Taylor  
DATE: 7/2018 ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR  
FHWA

**GENERAL NOTES**

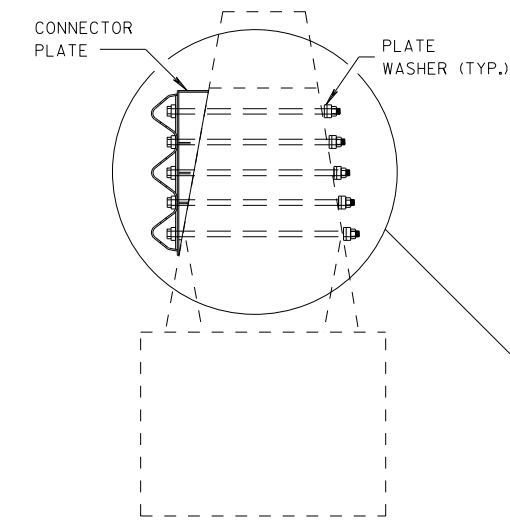
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

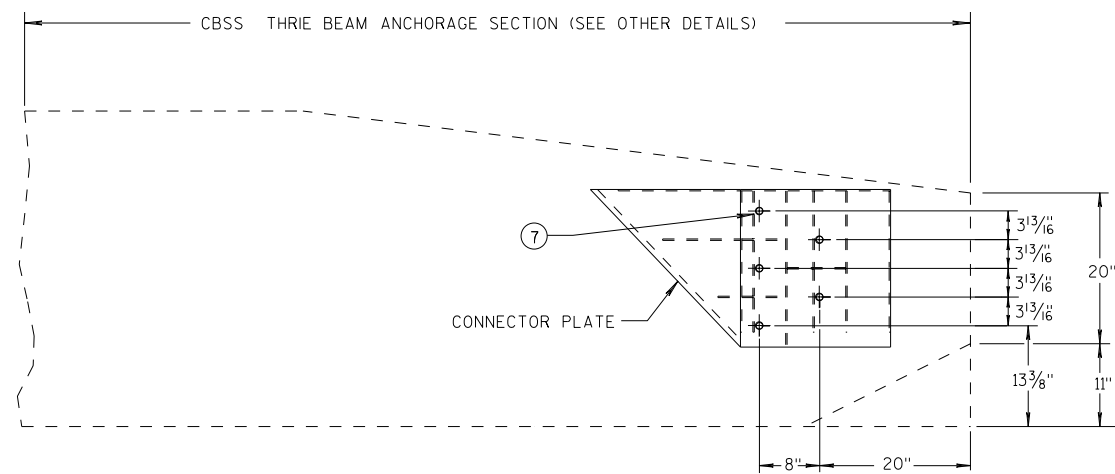
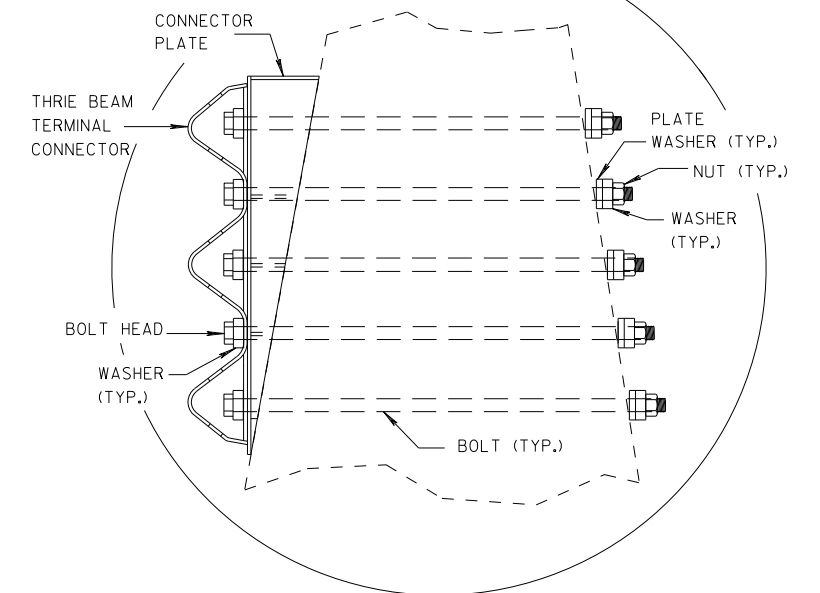
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTION PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



**THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER**



**SECTION N-N**

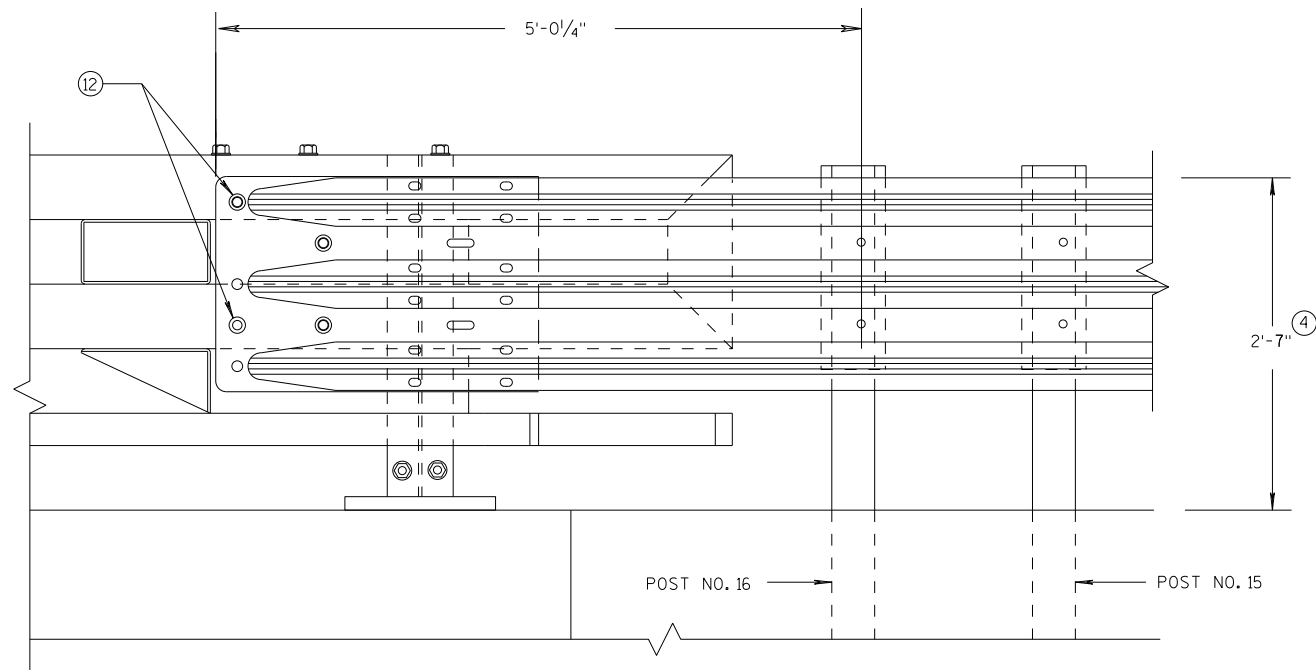


**SINGLE SLOPE CONNECTION PLATE PLACEMENT**

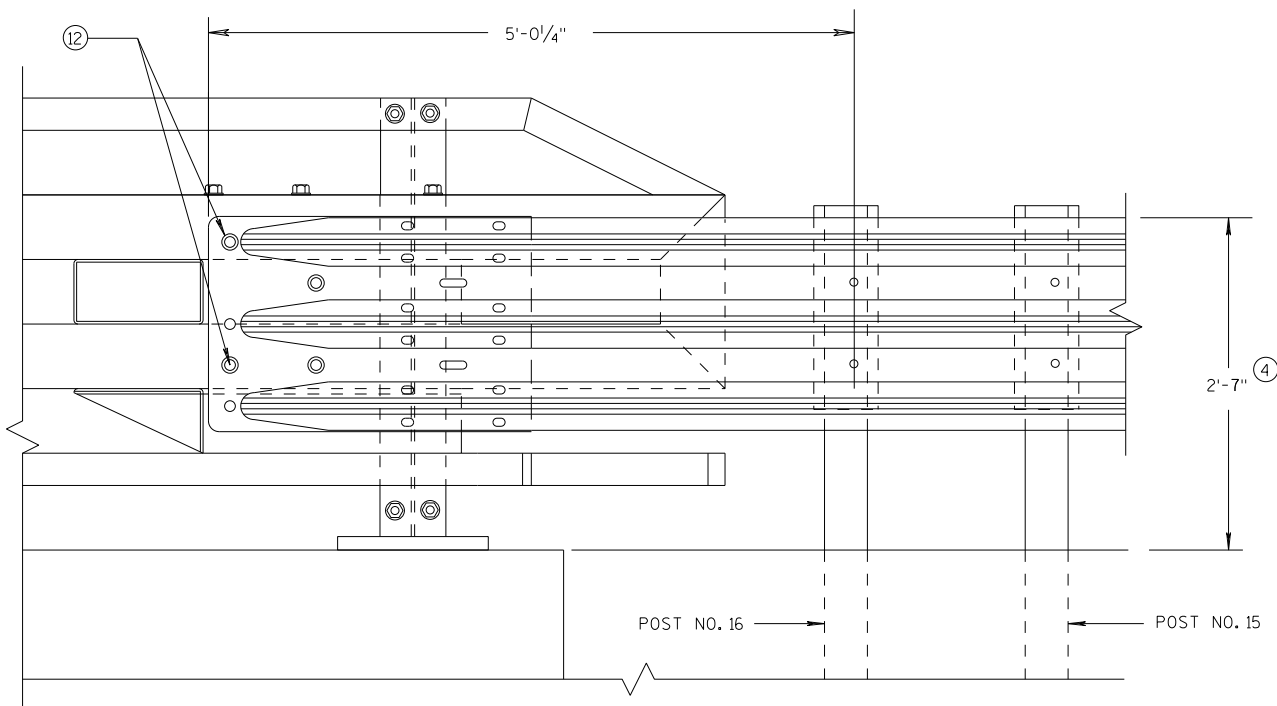
**MIDWEST GUARDRAIL SYSTEM  
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE 7/2018 /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR  
FHWA



**ELEVATION OF DETAIL AT NY3 END POST**  
**THRIE BEAM RAIL ATTACHMENT**



**ELEVATION OF DETAIL AT NY4 END POST**  
**THRIE BEAM RAIL ATTACHMENT**

**GENERAL NOTES**

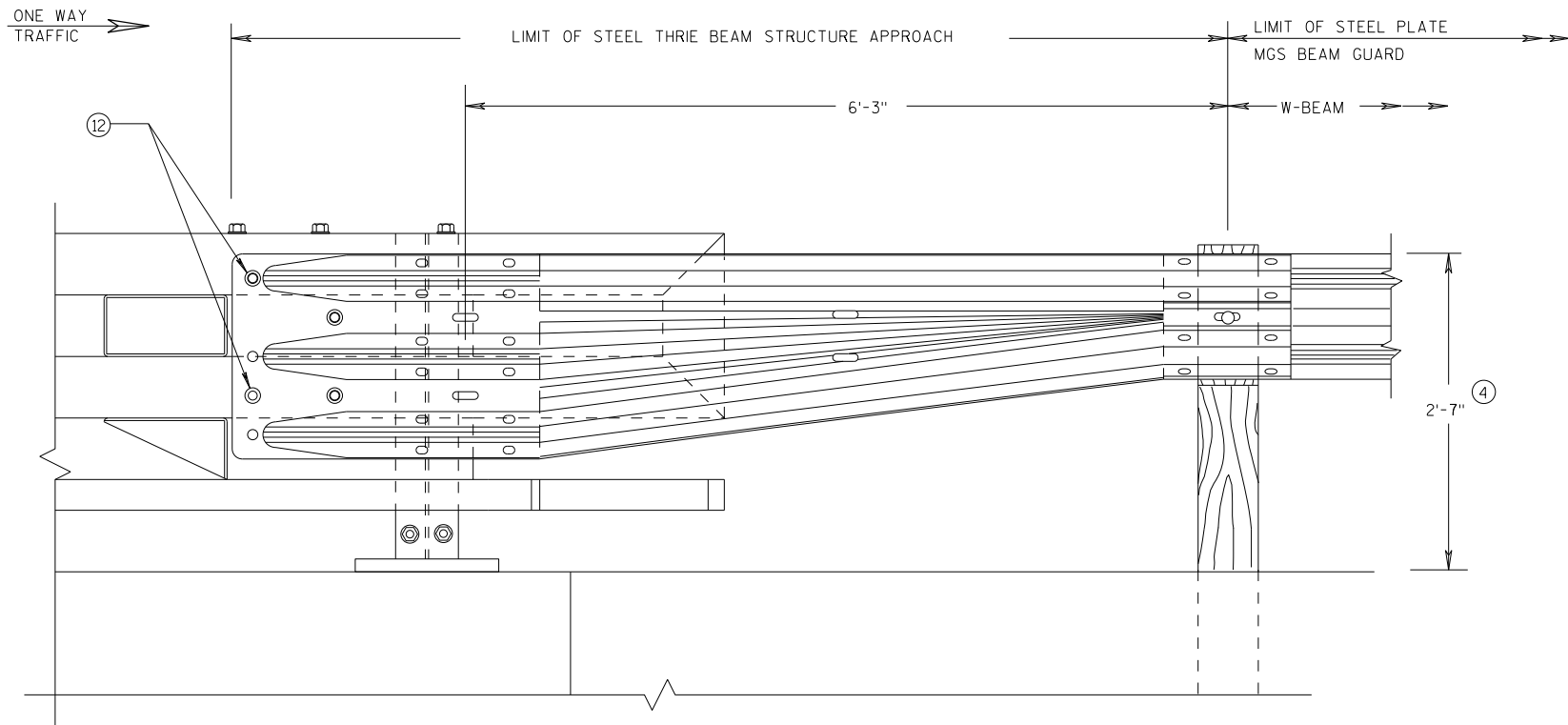
- ④ TOLERANCE FOR TOP OF BEAM IS  $\pm 1"$ .
- ⑫ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND  $\frac{1}{2}$ -INCH BEYOND NUT.

**MIDWEST GUARDRAIL SYSTEM**  
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

APPROVED  
 7/2018 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT  
 FHWA UNIT SUPERVISOR

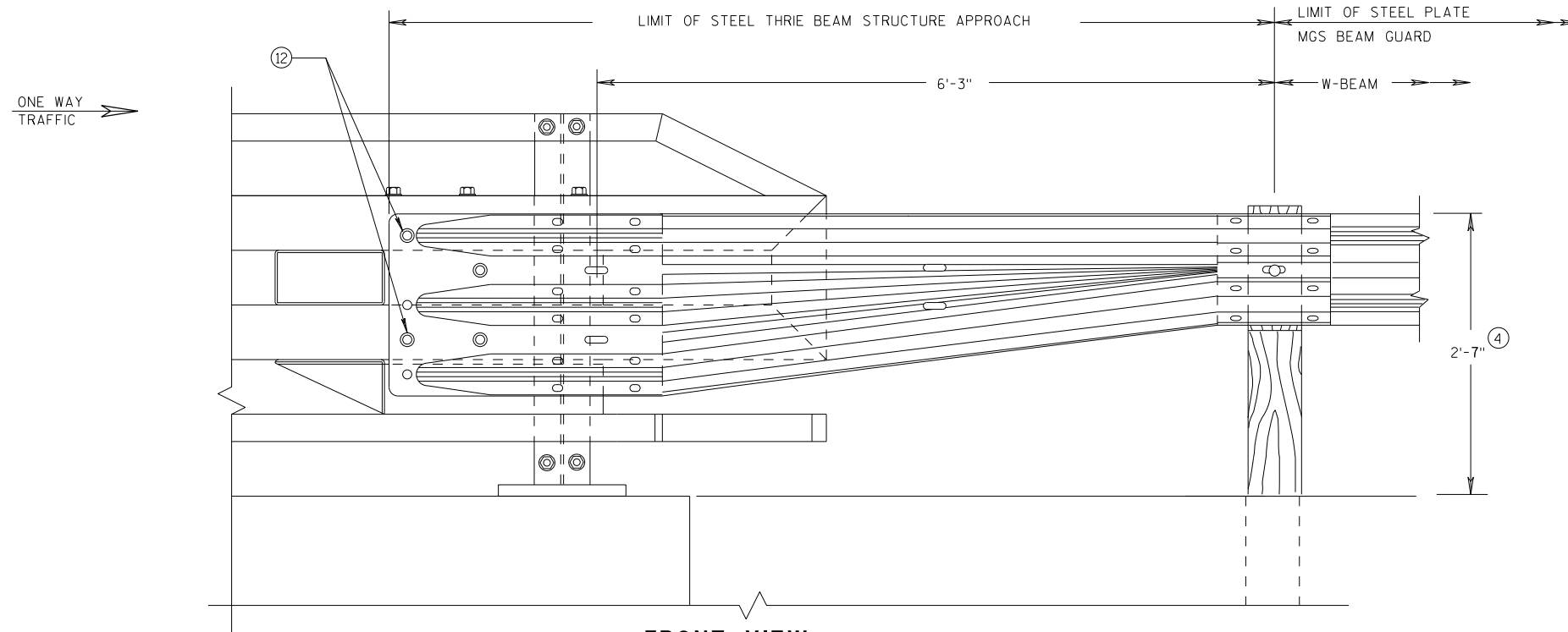




**FRONT VIEW**  
**W BEAM TRANSITION AND**  
**CONNECTION TO BRIDGE RAILING TYPE "NY3"**  
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

**GENERAL NOTES**

- ④ TOLERANCE FOR TOP OF BEAM IS  $\pm 1"$ .
- ⑫ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND  $\frac{1}{2}$ -INCH BEYOND NUT.

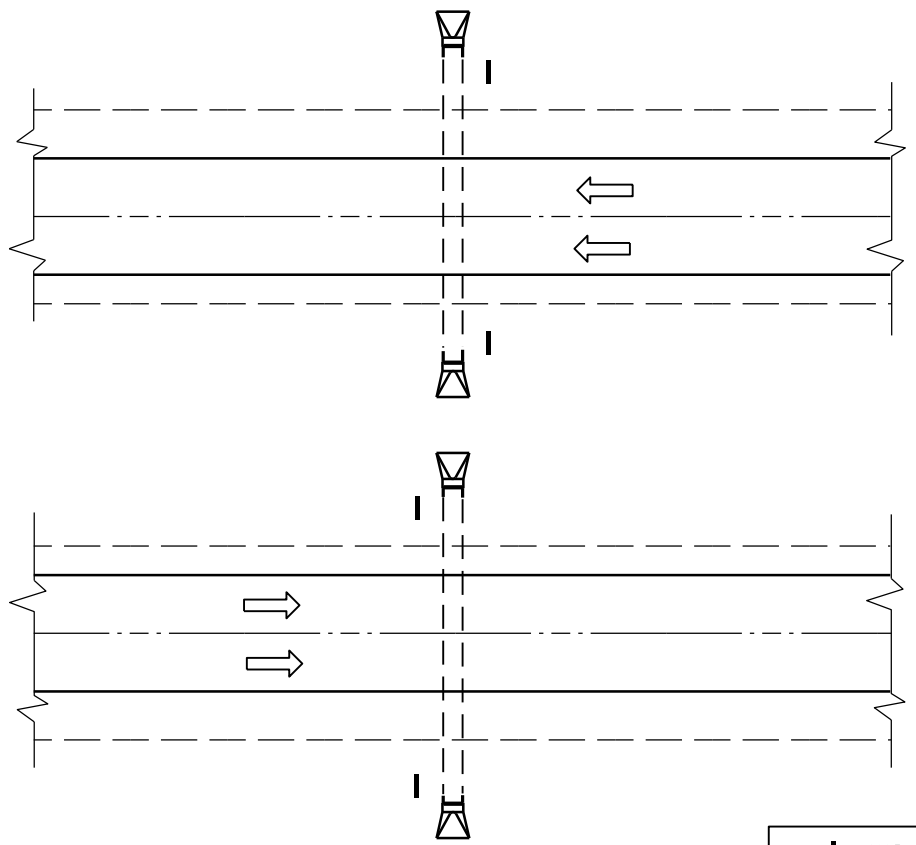


**FRONT VIEW**  
**W BEAM TRANSITION AND**  
**CONNECTION TO BRIDGE RAILING TYPE "NY4"**  
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

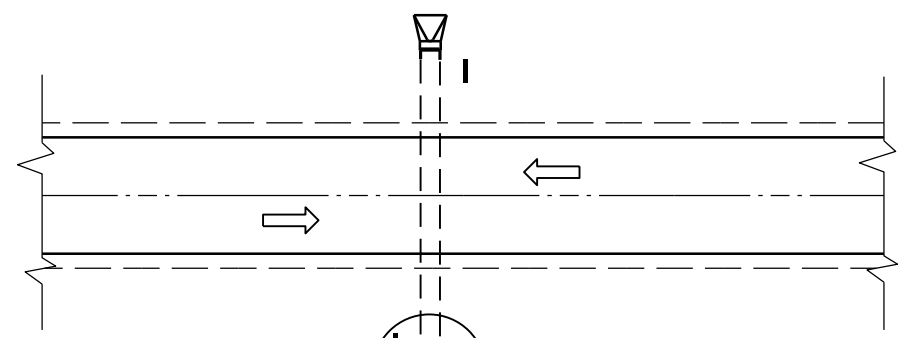
**MIDWEST GUARDRAIL SYSTEM**  
**THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

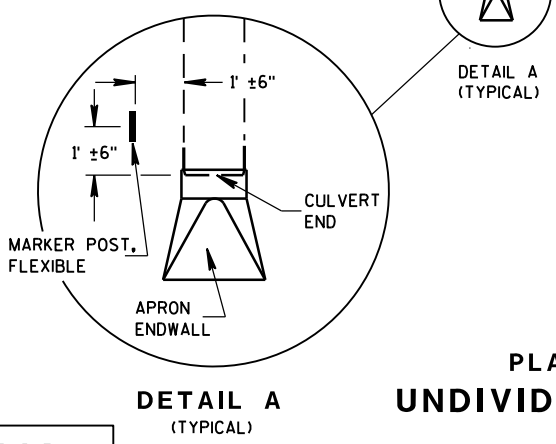
APPROVED  
 DATE 7/2018 /S/ Rodney Taylor  
 ROADWAY STANDARDS DEVELOPMENT  
 UNIT SUPERVISOR  
 FHWA



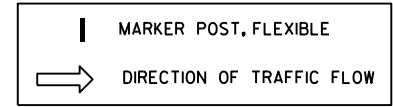
PLAN VIEW  
DIVIDED HIGHWAY



PLAN VIEW  
UNDIVIDED HIGHWAY

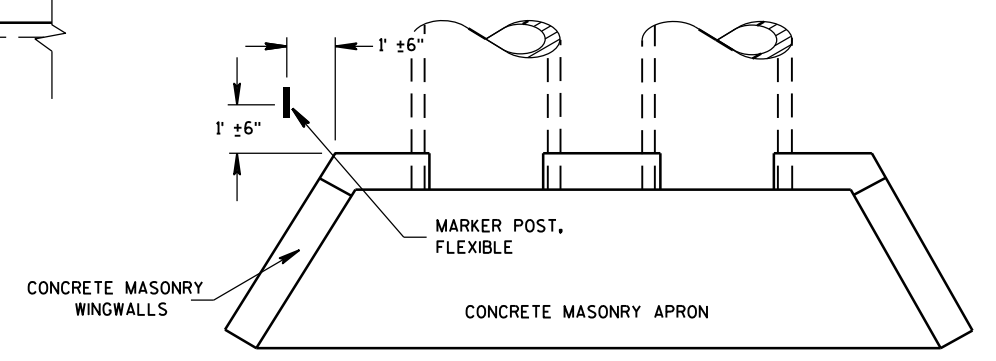


DETAIL A  
(TYPICAL)



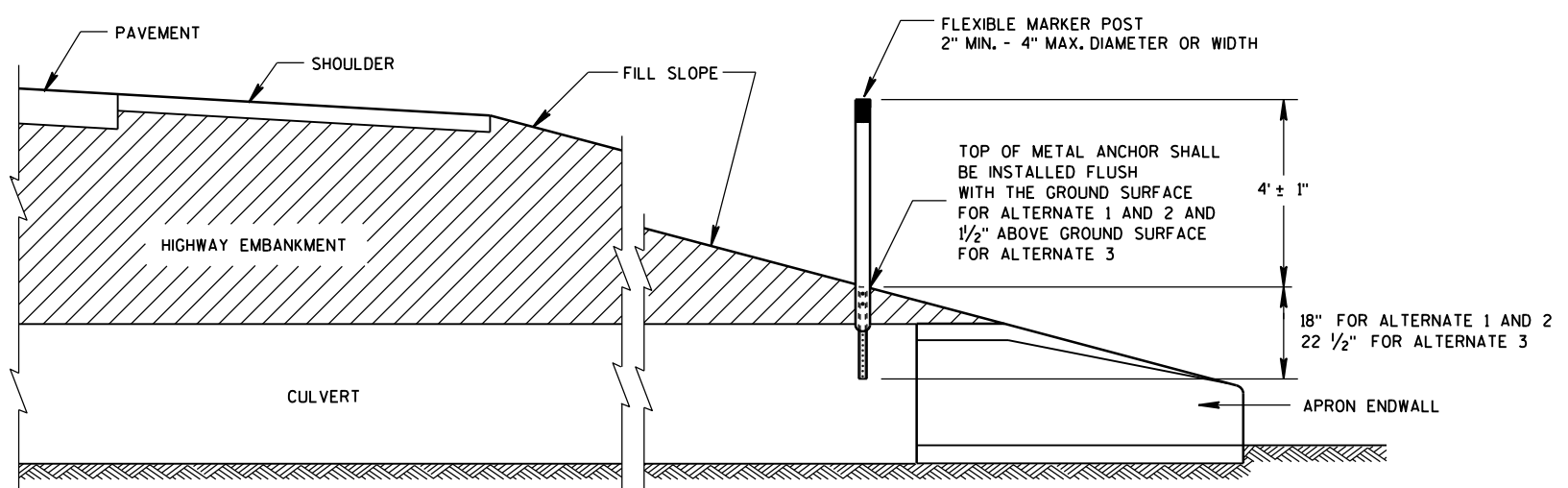
**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW  
CONCRETE MASONRY ENDWALLS FOR  
CULVERT PIPE AND PIPE ARCH

**FLEXIBLE MARKER POST LOCATION**



CROSS SECTION  
FLEXIBLE MARKER POST

**FLEXIBLE MARKER POST  
FOR CULVERT END**

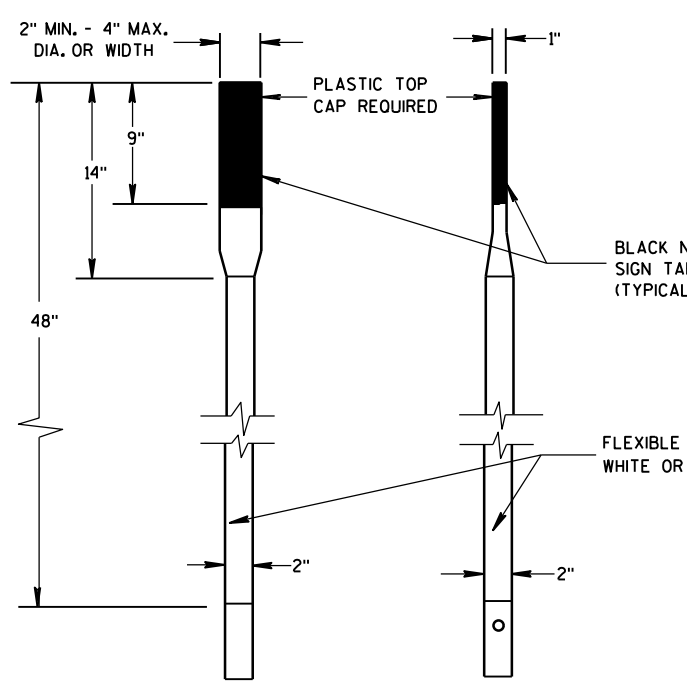
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

6

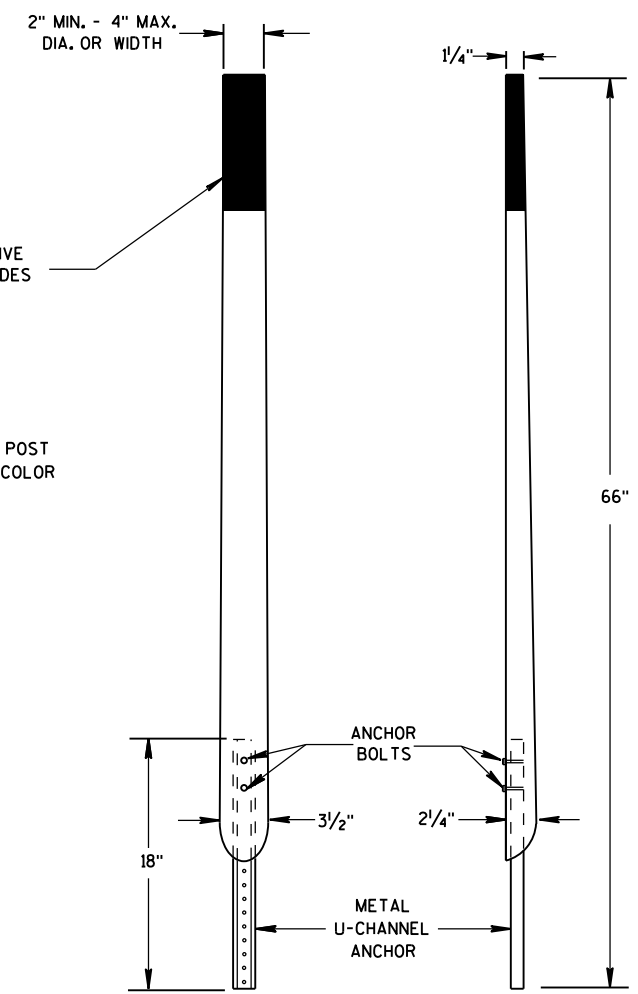
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S.D.D. 15 A 3-2a

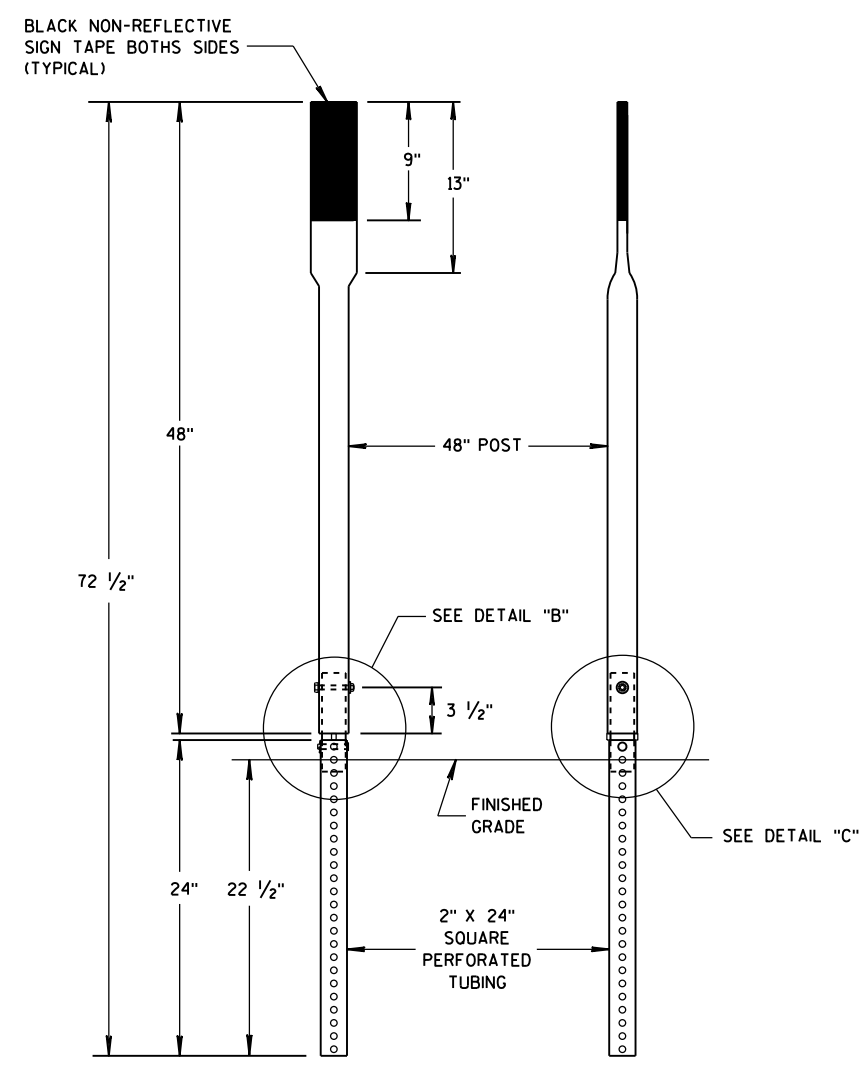
S.D.D. 15 A 3-2a



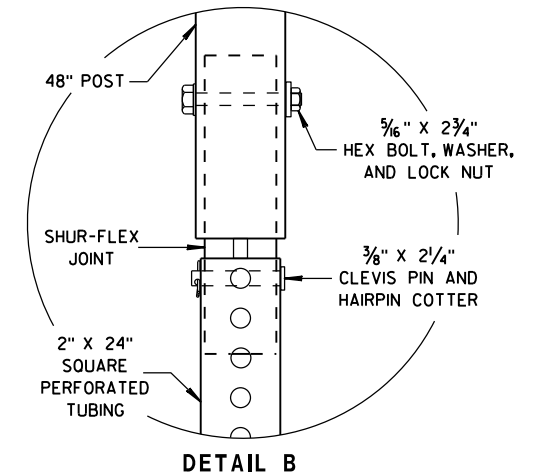
FRONT VIEW SIDE VIEW  
ALTERNATE 1



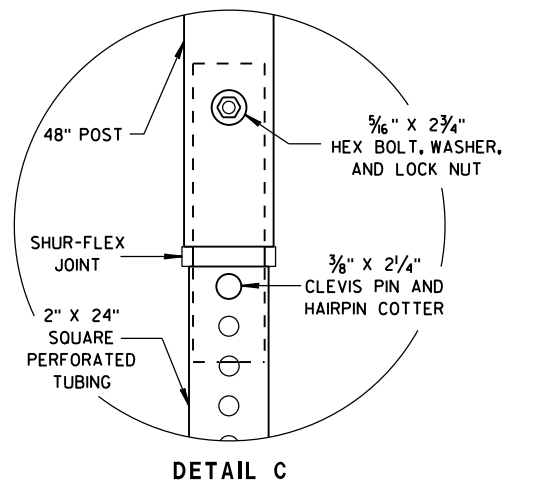
FRONT VIEW SIDE VIEW  
ALTERNATE 2



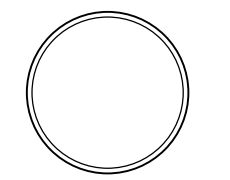
FRONT VIEW SIDE VIEW  
ALTERNATE 3



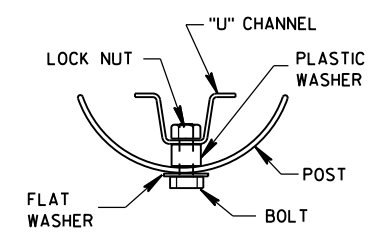
DETAIL B



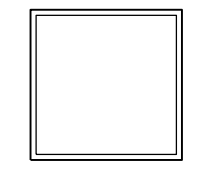
DETAIL C



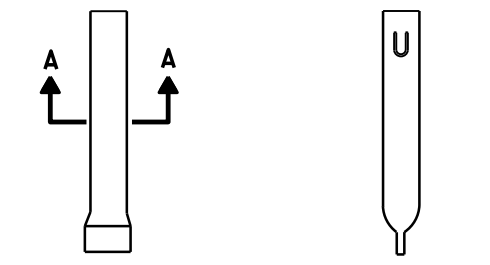
SECTION A-A



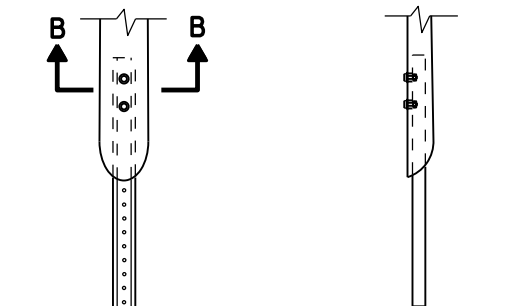
SECTION B-B



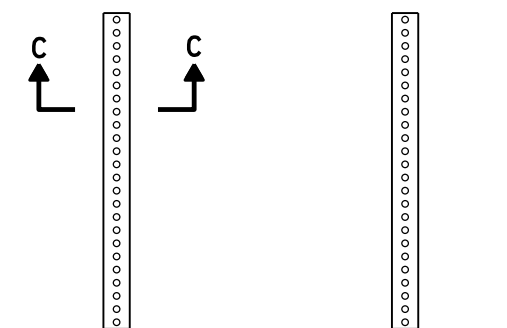
SECTION C-C



FRONT VIEW SIDE VIEW  
ALTERNATE 1



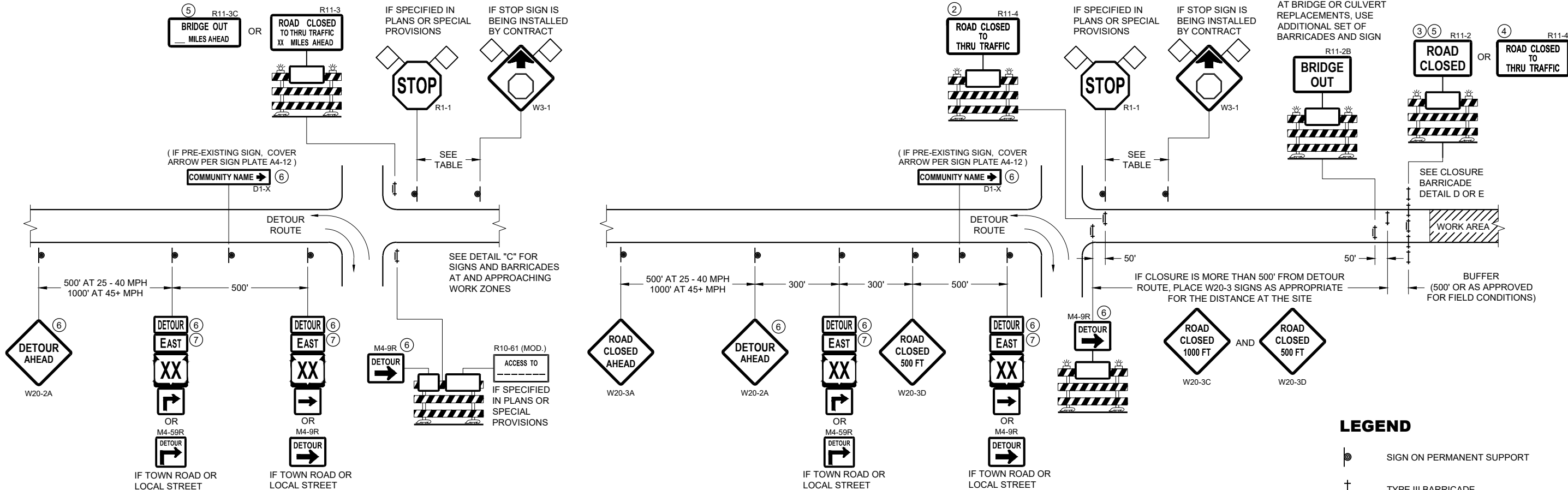
FRONT VIEW SIDE VIEW  
ALTERNATE 2



FRONT VIEW SIDE VIEW  
ALTERNATE 3

**FLEXIBLE MARKER POST ANCHORS**

<b>FLEXIBLE MARKER POST FOR CULVERT END</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



**DETAIL A  
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**DETAIL B  
MAINLINE CLOSURE WITH POSTED DETOUR**

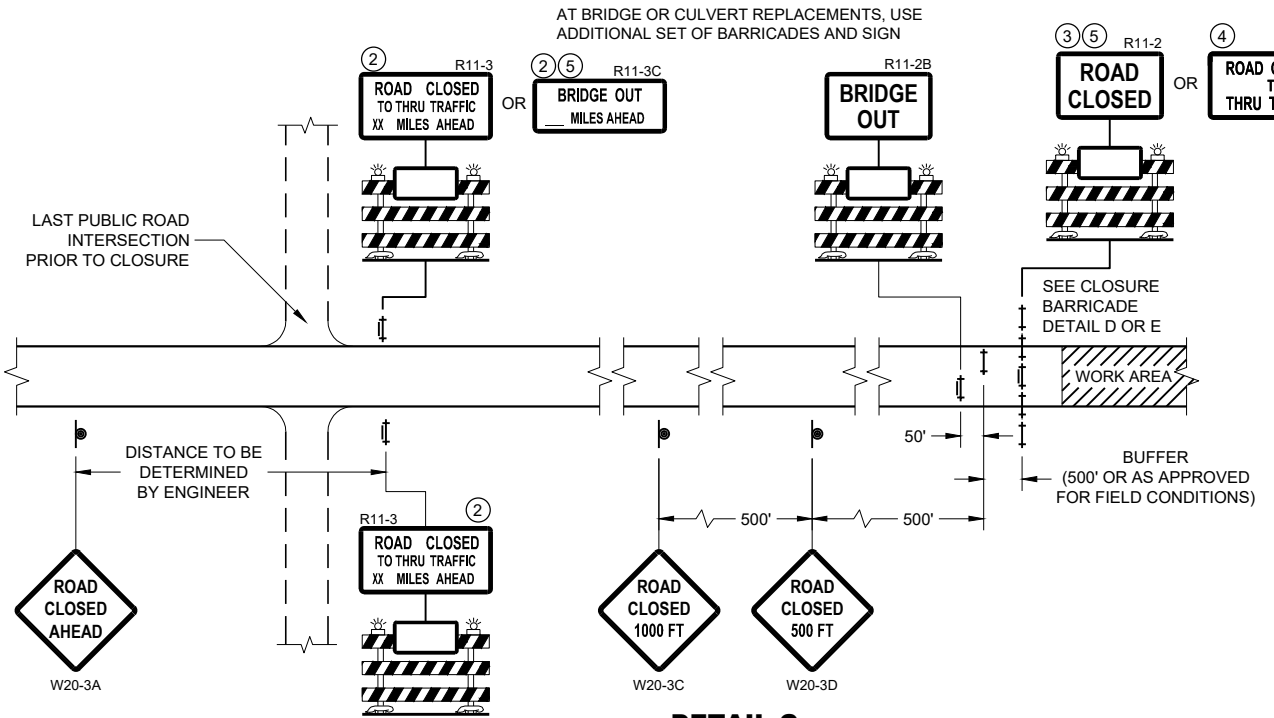
WORK ZONE LESS THAN 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



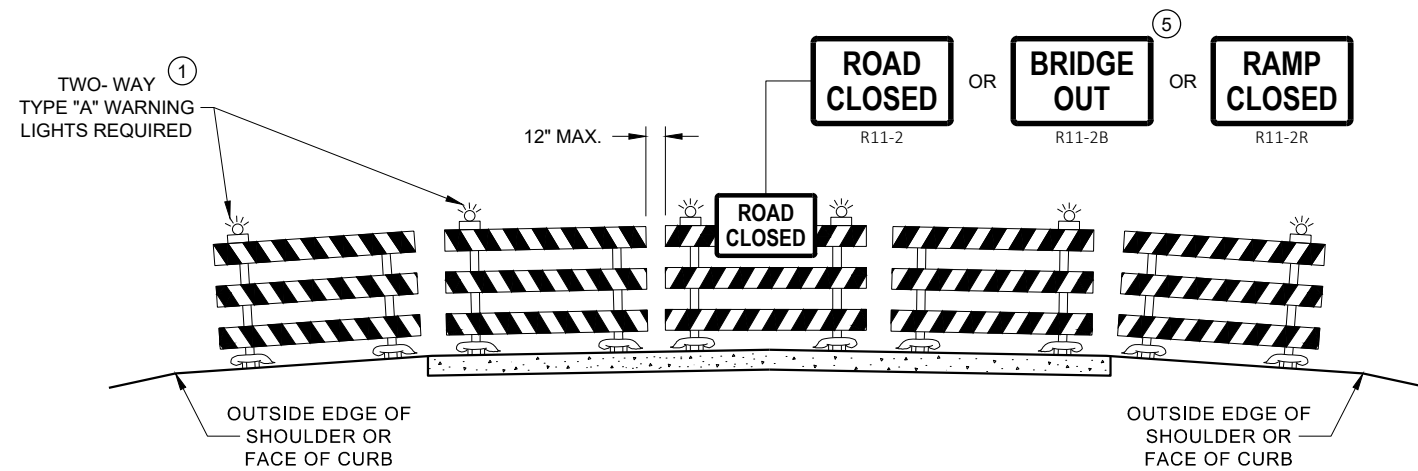
**DETAIL C  
MAINLINE CLOSURE, NO POSTED DETOUR**

SEE SDD 15C2-SHEET "b"  
FOR GENERAL NOTES  
AND FOOTNOTES ① THROUGH ⑦

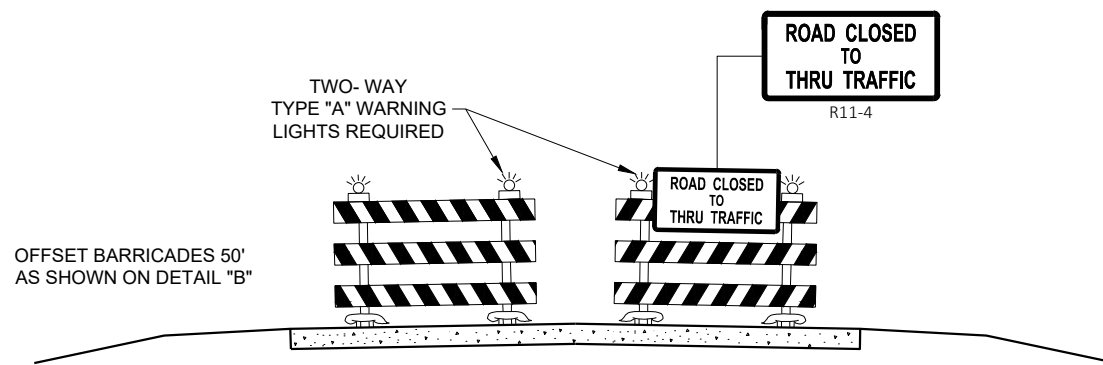
**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE DATE WORK ZONE ENGINEER  
FHWA



**DETAIL D  
ROAD CLOSURE BARRICADE DETAIL  
APPROACH VIEW**



**DETAIL E  
LANE CLOSURE BARRICADE DETAIL  
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS  
FOR  
VARIOUS CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

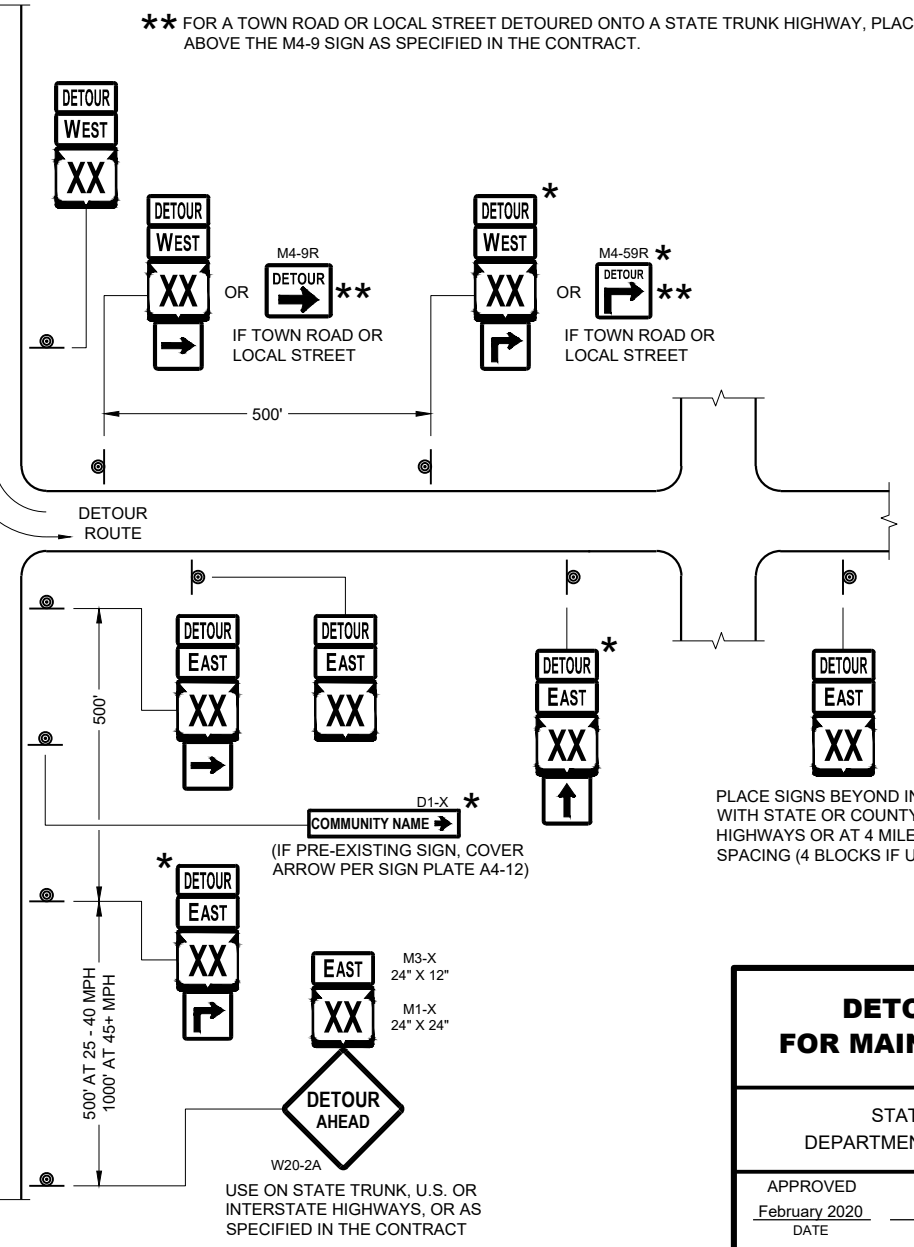
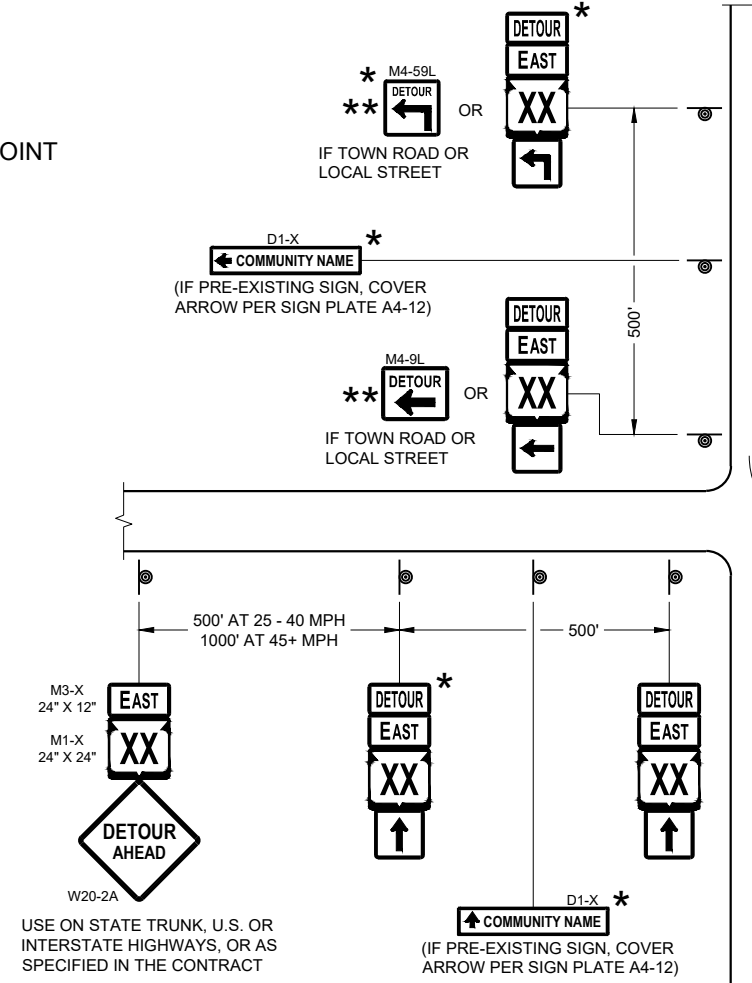
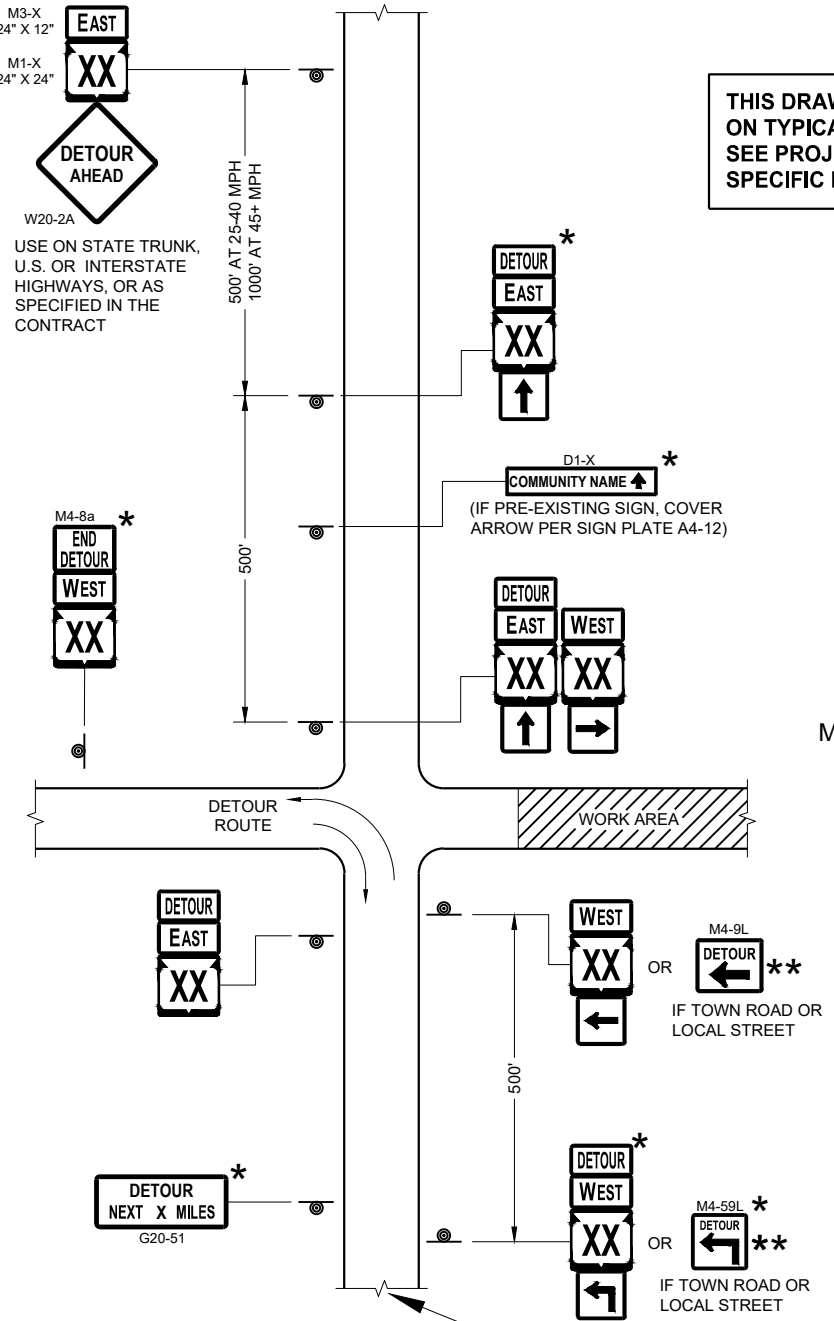
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-9R SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- \* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- \*\* FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT

**DETAIL F  
DETOUR SIGNING**



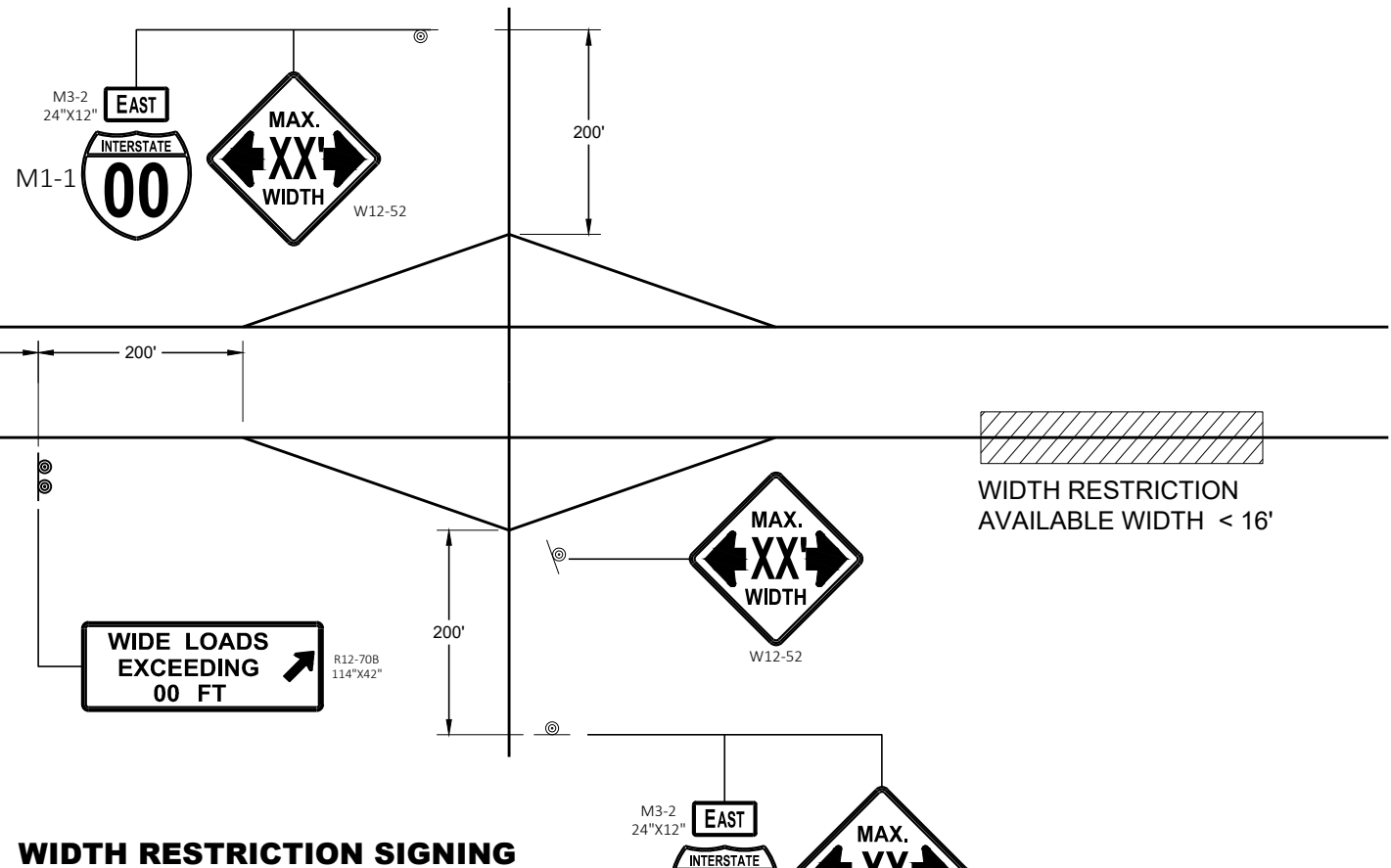
SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

**DETOUR SIGNING  
FOR MAINLINE CLOSURES**

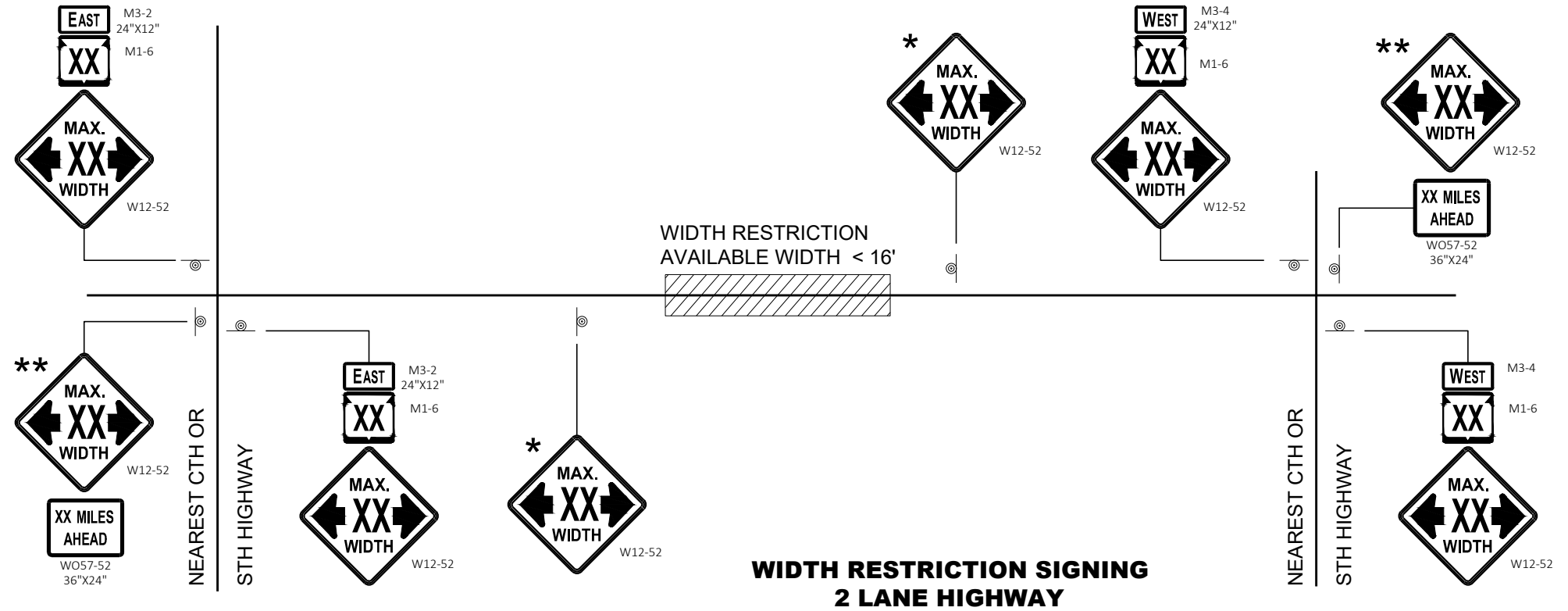
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA



**WIDTH RESTRICTION SIGNING**



**WIDTH RESTRICTION SIGNING  
2 LANE HIGHWAY**

**LEGEND**

⊙ SIGN ON PERMANENT SUPPORT

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

\* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

\*\* SIGN SHALL BE VISIBLE FROM ROADWAY.

\*\*\* ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.

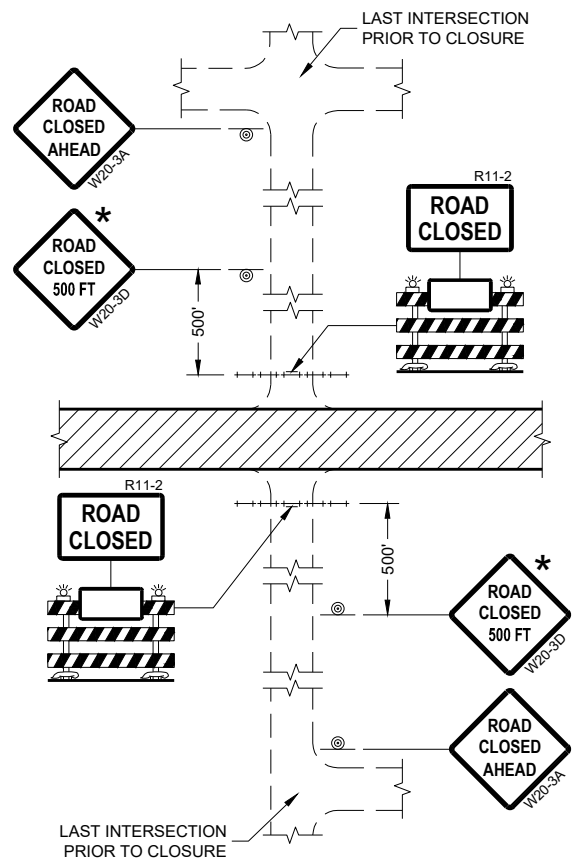


WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

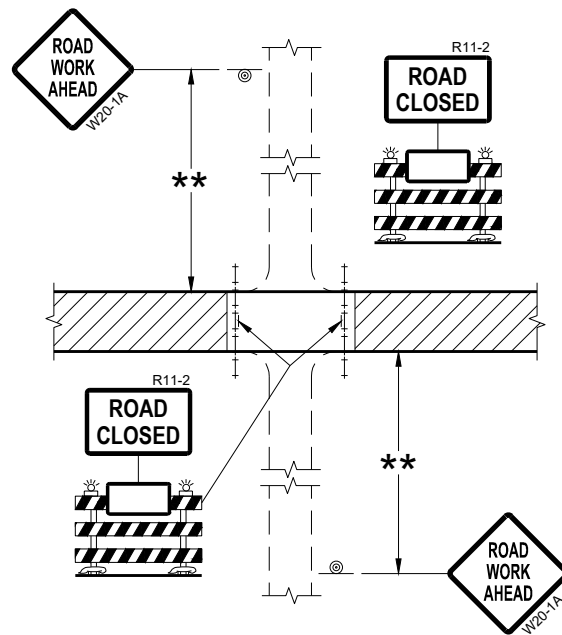
**ADVANCED WIDTH  
RESTRICTION SIGNING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

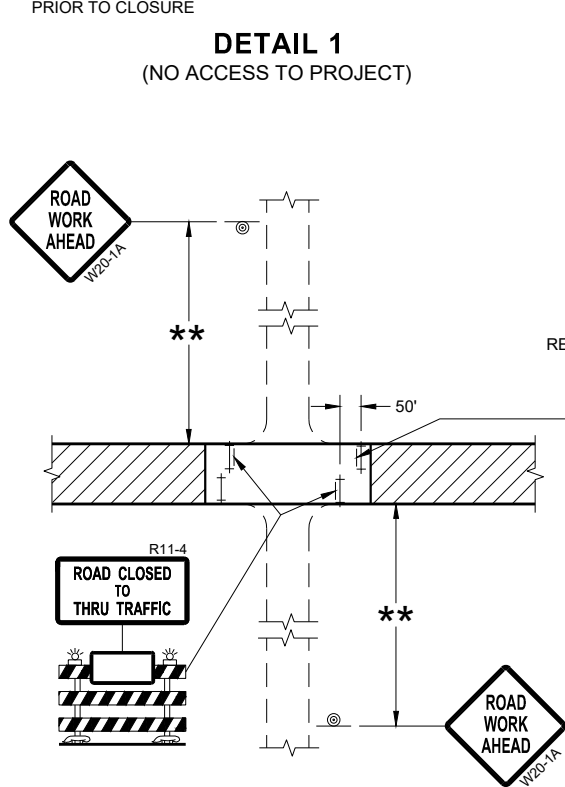
APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA



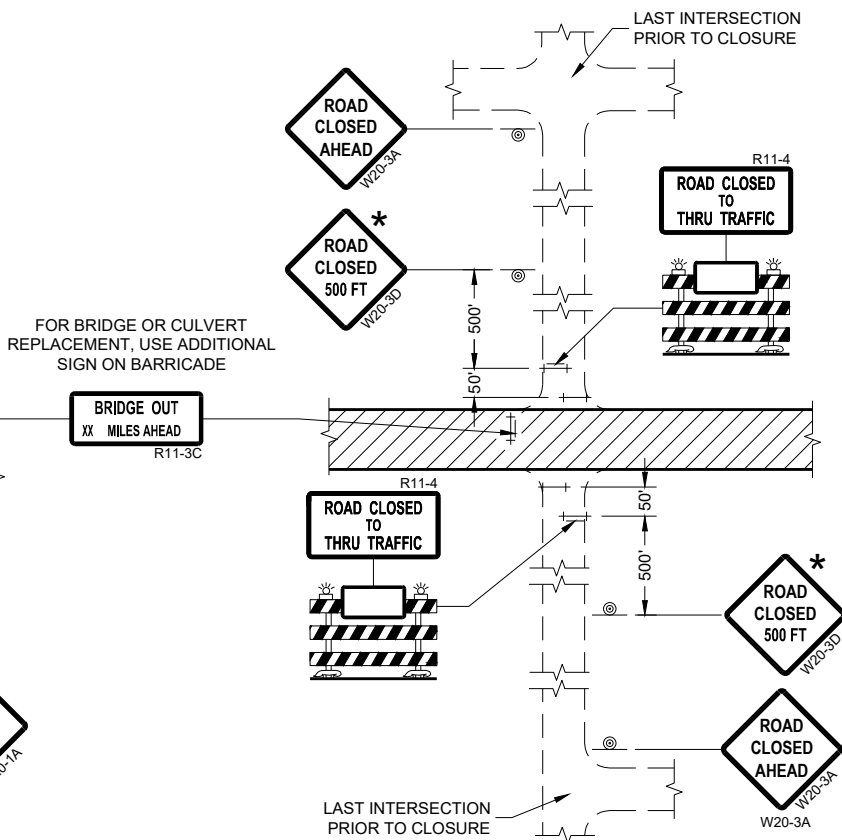
**DETAIL 1**  
(NO ACCESS TO PROJECT)



**DETAIL 2**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
NO ACCESS TO PROJECT)



**DETAIL 3**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)



**DETAIL 4**  
(CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:  
R11-2 SHALL BE 48" X 30".  
R11-4 AND R11-3 SHALL BE 60" X 30".

- \* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- \*\* 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

**LEGEND**

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- ⚡ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

**BARRICADES AND SIGNS  
FOR  
SIDEROAD CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER



**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.




ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

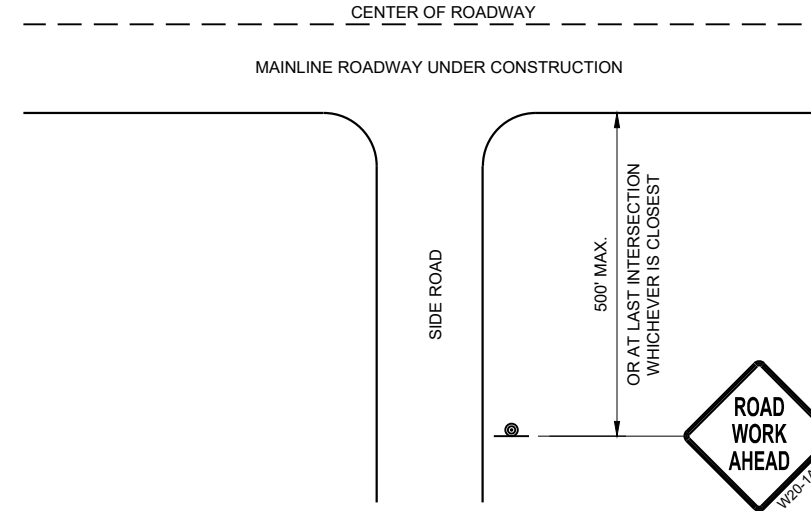
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

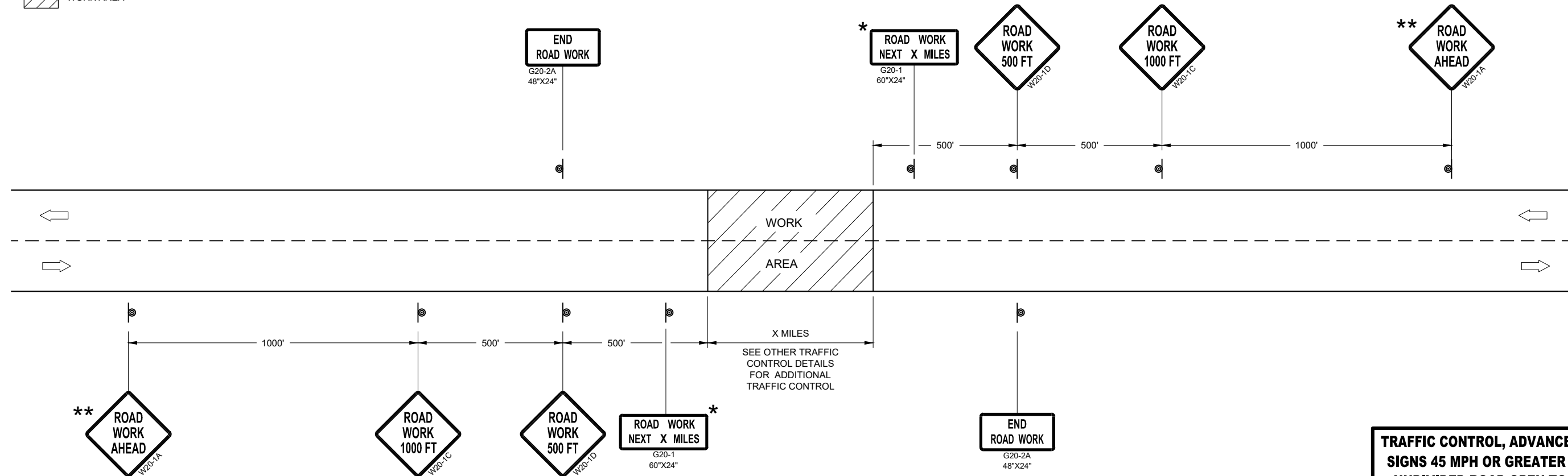
- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- \*\* PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



**TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL**



**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER**

**TRAFFIC CONTROL, ADVANCE WARNING  
SIGNS 45 MPH OR GREATER TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE July 2018 /S/ Andrew Heidtke  
WORK ZONE ENGINEER




FHWA

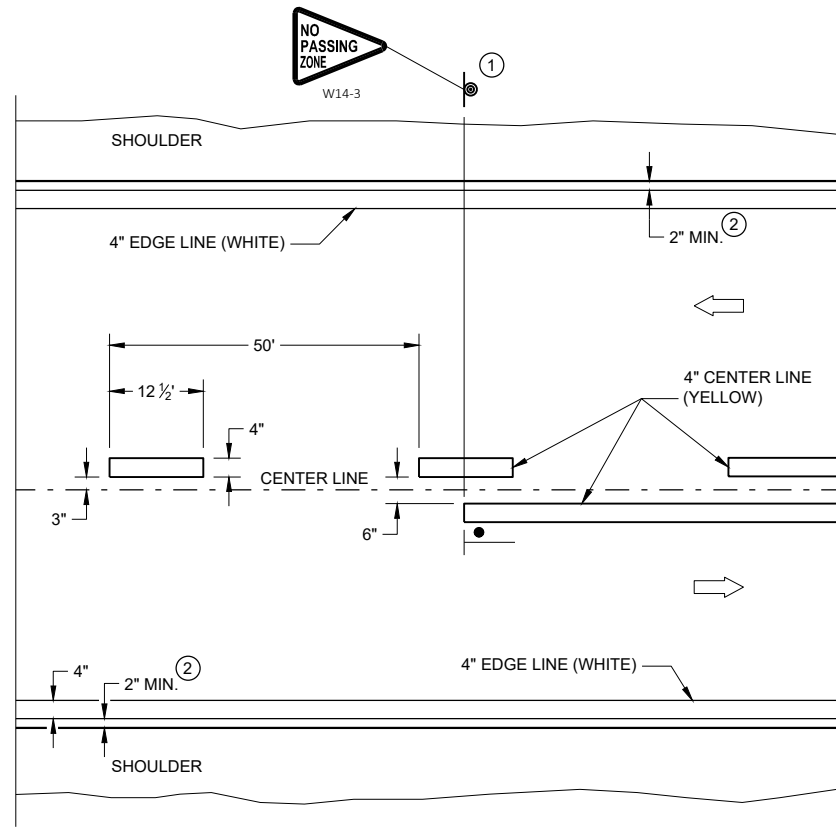
**GENERAL NOTES**

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

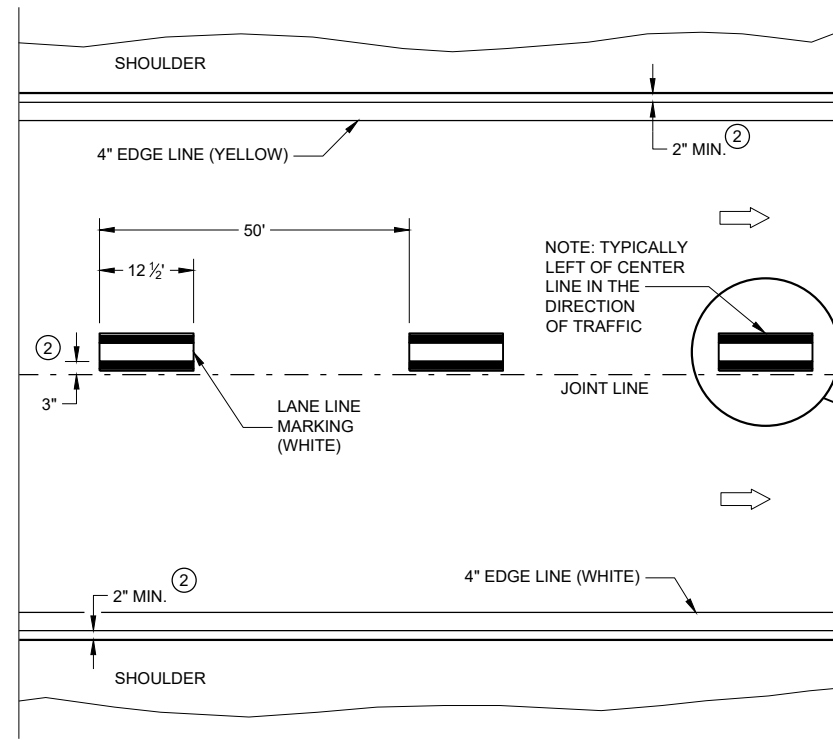
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

**LEGEND**

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

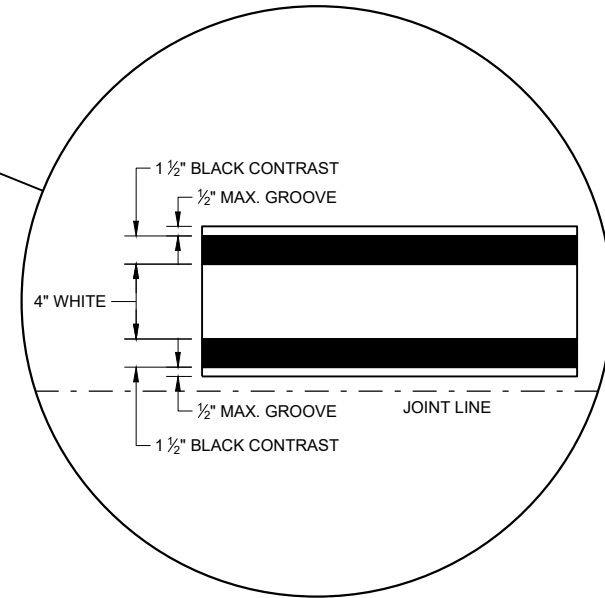


**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**

**PERMANENT PAVEMENT MARKING**



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SDD 15C08 - 22a

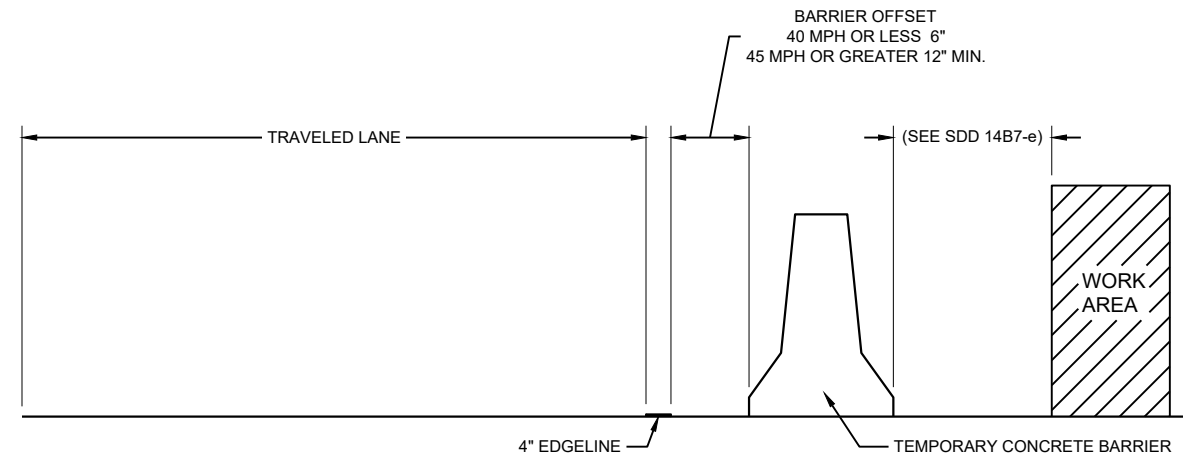
SDD 15C08 - 22a

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2022 /S/ Jeannie Silver  
STATEWIDE SIGNING AND MARKING ENGINEER

FHWA



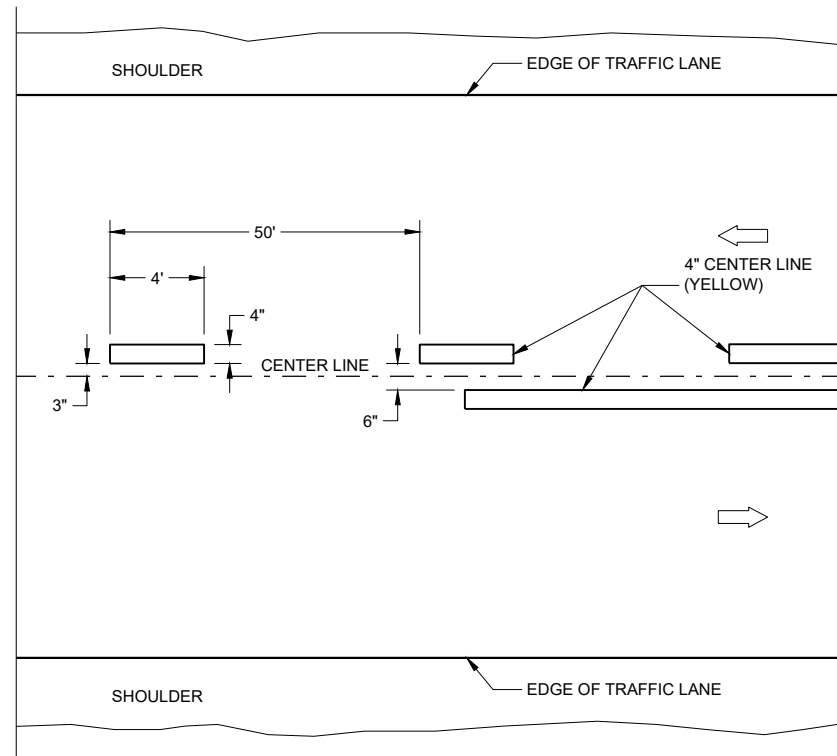
**TEMPORARY BARRIER OFFSET FROM EDGELINE**

**GENERAL NOTES**

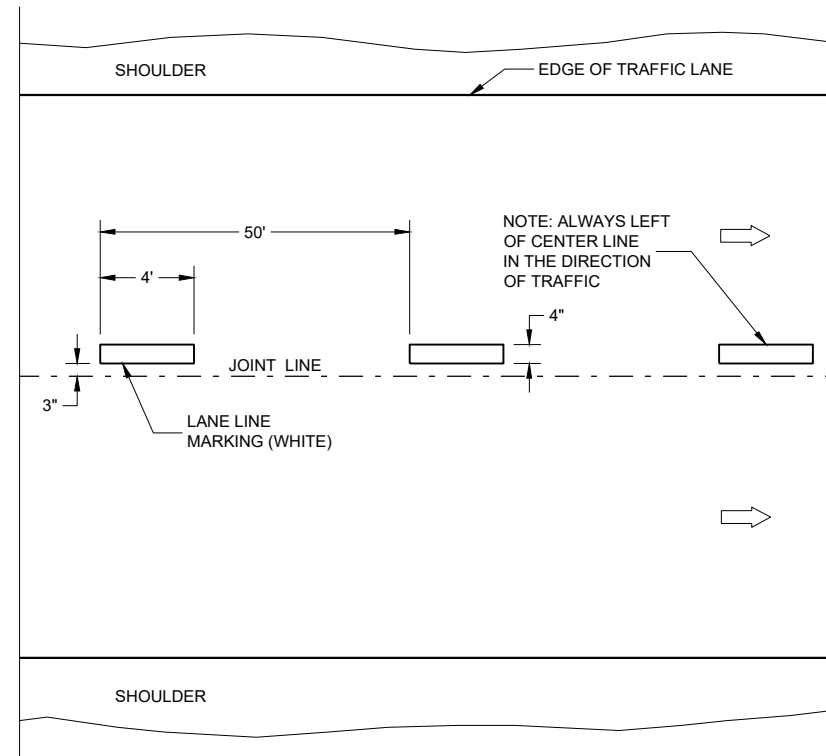
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

**LEGEND**

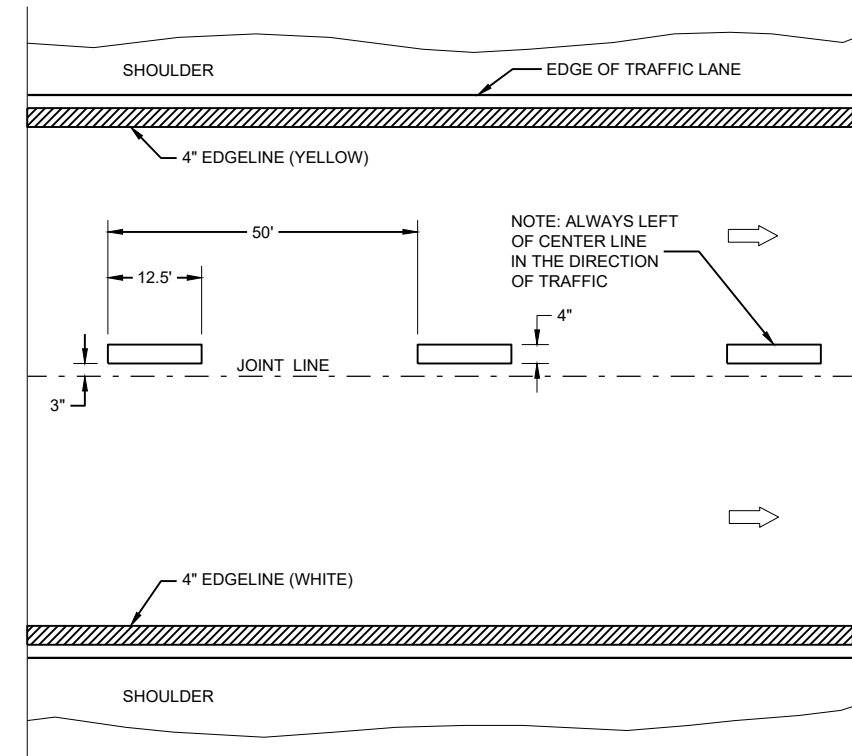
➡ DIRECTION OF TRAFFIC



**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**



**FREEWAYS AND EXPRESSWAYS**

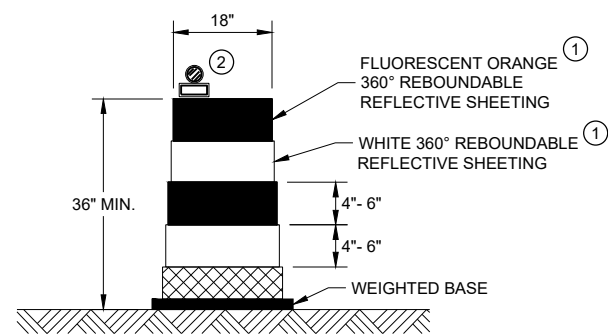
**TEMPORARY PAVEMENT MARKING**

**TEMPORARY LONGITUDINAL PAVEMENT MARKING**

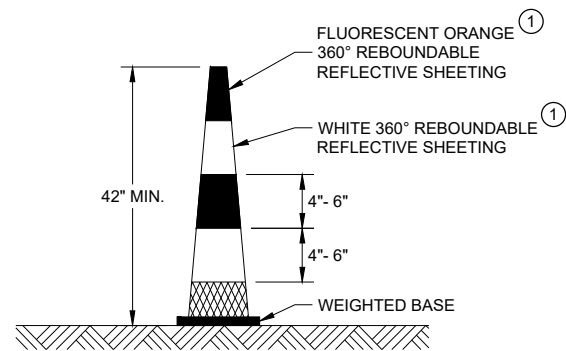
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2022 /S/ Jeannie Silver  
DATE STATEWIDE SIGNING AND MARKING ENGINEER

FHWA

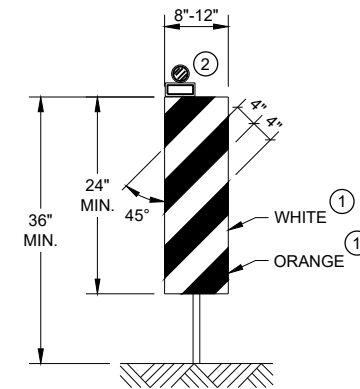


**DRUM**



**42" CONE**

DO NOT USE IN TAPERS  
 1/2 SPACING OF DRUMS

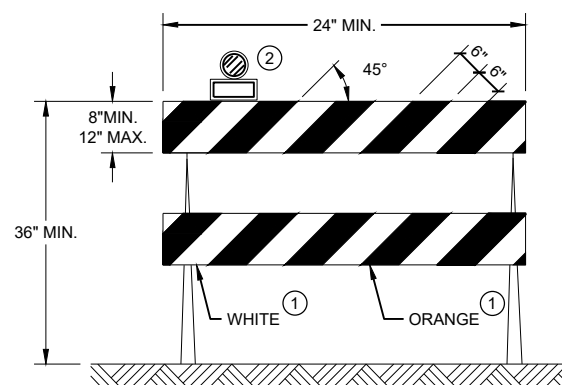


**VERTICAL PANEL**

THE STRIPES SHALL SLOPE DOWNWARD TO  
 THE TRAFFIC SIDE FOR CHANNELIZATION.

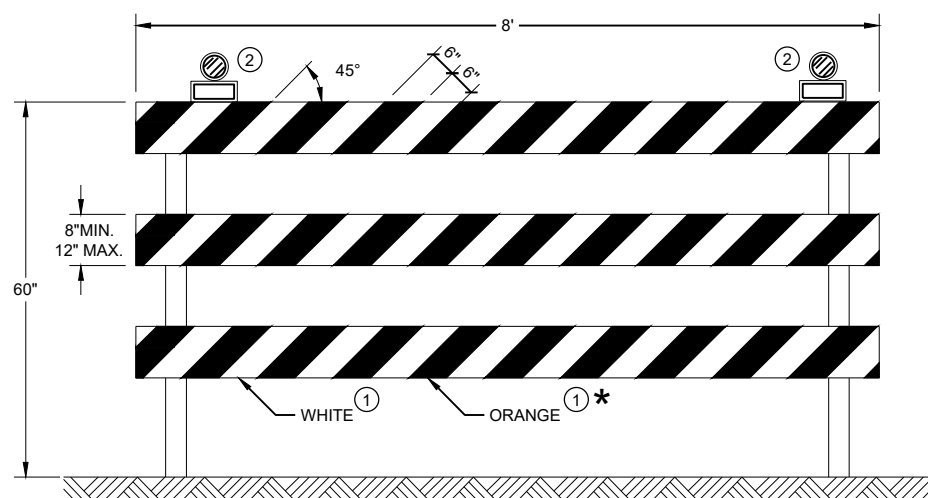
**GENERAL NOTES**

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



**TYPE II BARRICADE**

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES  
 MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD  
 TO THE TRAFFIC SIDE FOR CHANNELIZATION.








**TYPE III BARRICADE**

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP  
 TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

<b>CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

**LEGEND**

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

**GENERAL NOTES**

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

**FLAGGING**

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

**TEMPORARY PORTABLE RUMBLE STRIPS**

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

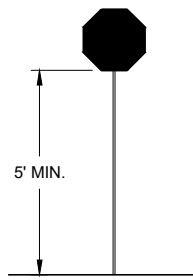
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



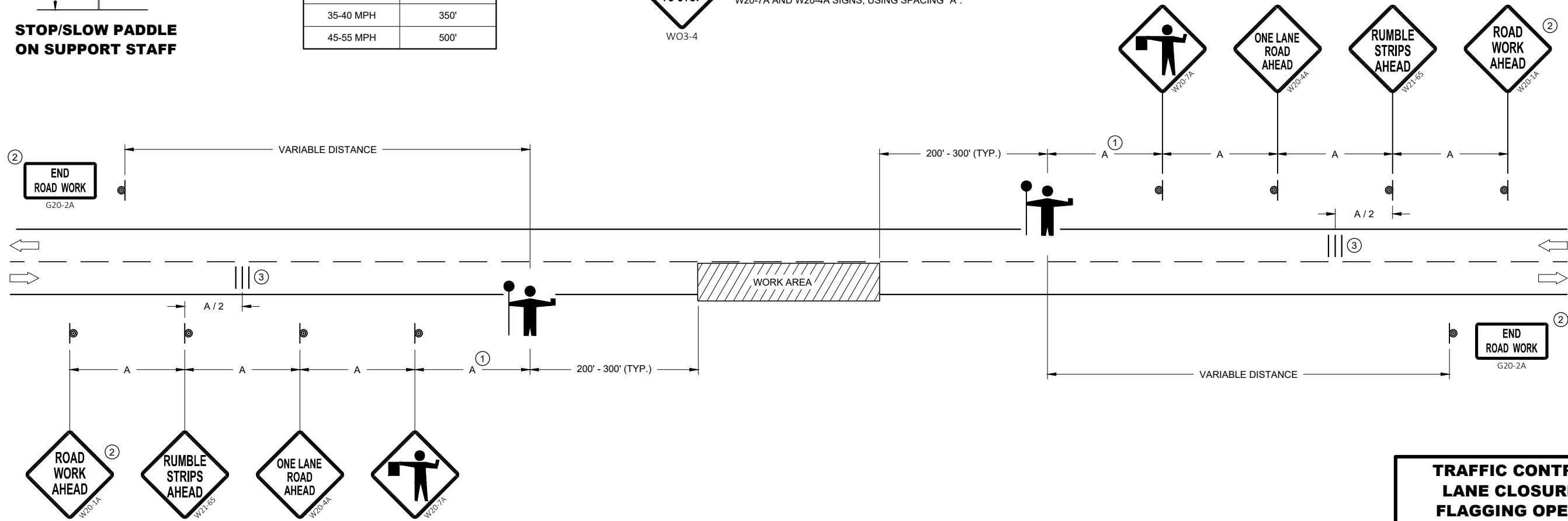
**STOP/SLOW PADDLE ON SUPPORT STAFF**

**SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE**

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



**TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: May 2022 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

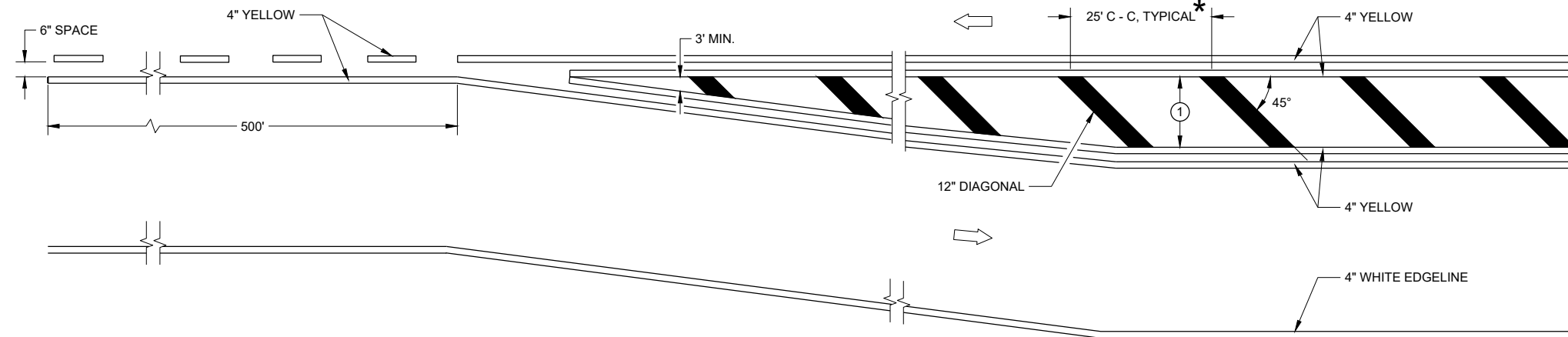
FHWA

**GENERAL NOTES**

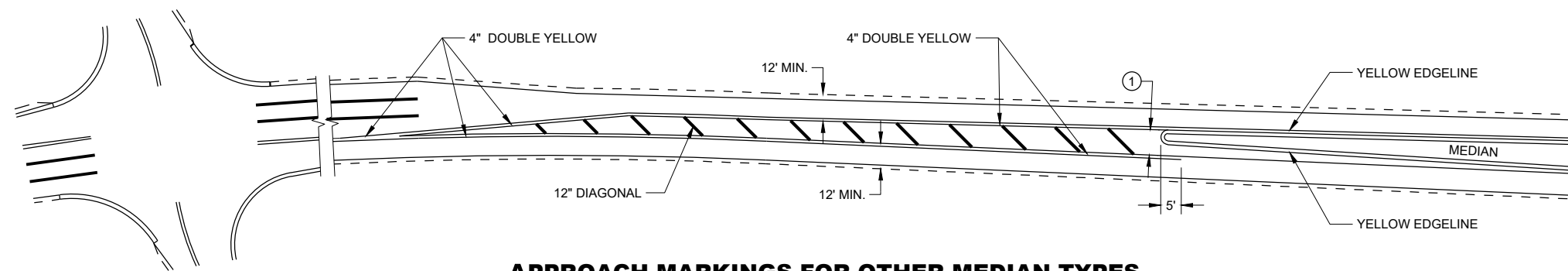
- ① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

➔ DIRECTION OF TRAVEL

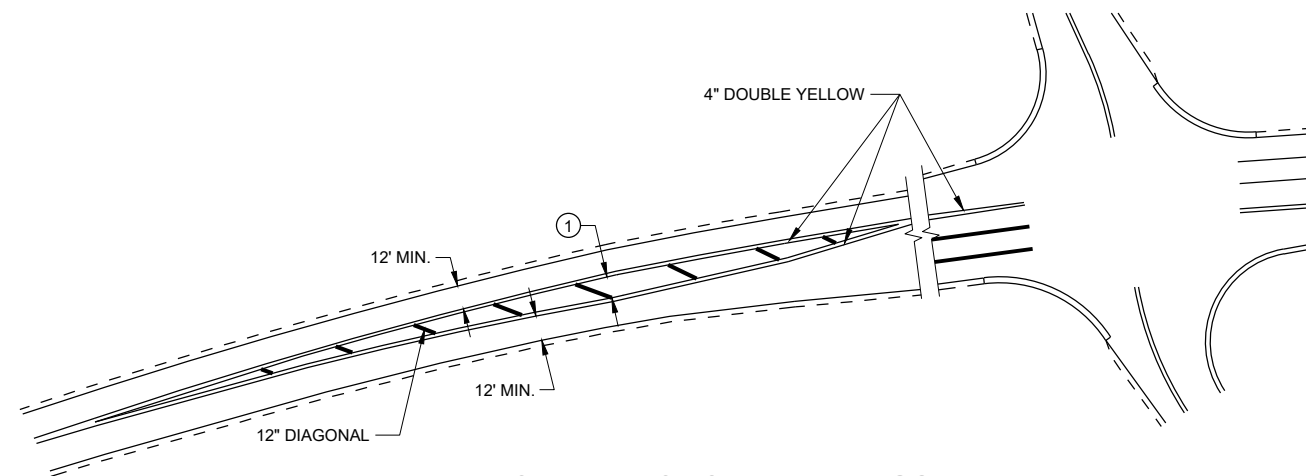
\* WHEN THE PAINTED MEDIAN LENGTH IS LESS THAN 50 FEET THE SPACING IS 10'.



**MEDIAN ISLAND DETAIL**



**APPROACH MARKINGS FOR OTHER MEDIAN TYPES**



**NON-APPROACH MARKINGS**

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SDD 15C18 - 06a

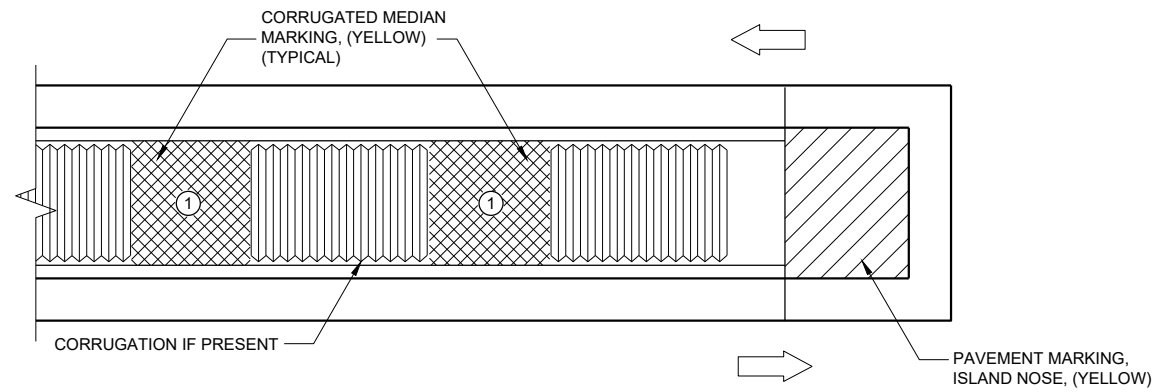
SDD 15C18 - 06a

**MEDIAN ISLAND  
PAVEMENT MARKINGS**

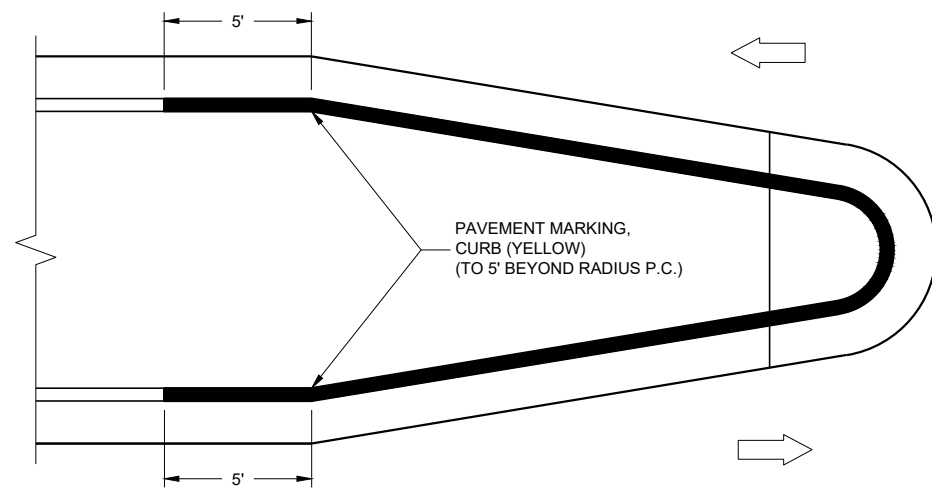
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2022 DATE /S/ Jeannie Silver  
STATE SIGNING AND MARKING ENGINEER

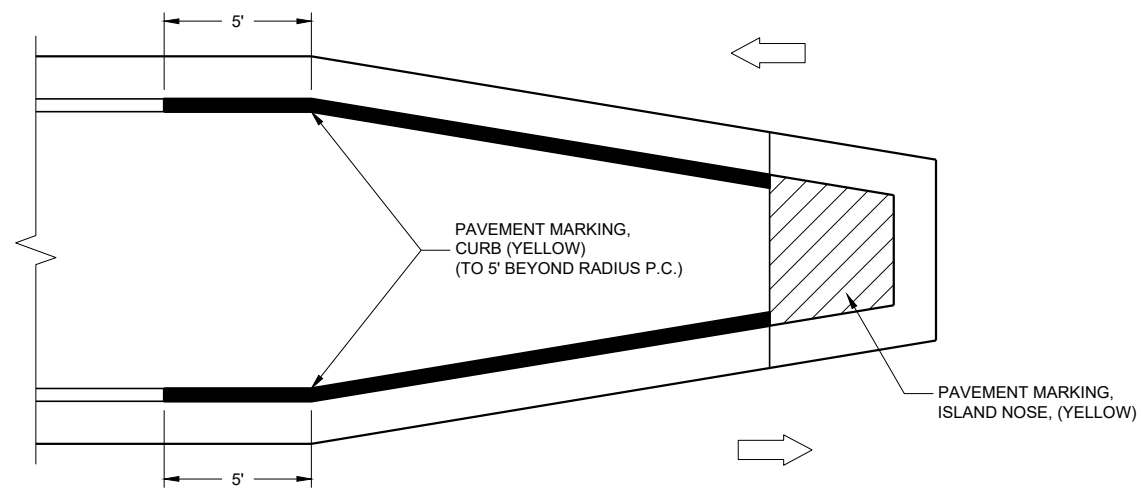
FHWA



**MEDIAN ISLAND WITH SQUARE BLUNT NOSE**



**MEDIAN ISLAND WITH ROUND BLUNT NOSE**



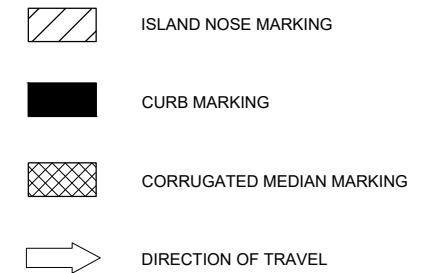
**MEDIAN ISLAND WITH SLOPED NOSE**

**TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS**

**GENERAL NOTES**





WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

- ① APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.



<b>PAVEMENT MARKINGS, MEDIAN ISLAND NOSE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2022 DATE	/S/ Jeannie Silver STATE SIGNING AND MARKING ENGINEER
<small>FHWA</small>	

**LEGEND**

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

**GENERAL NOTES**

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

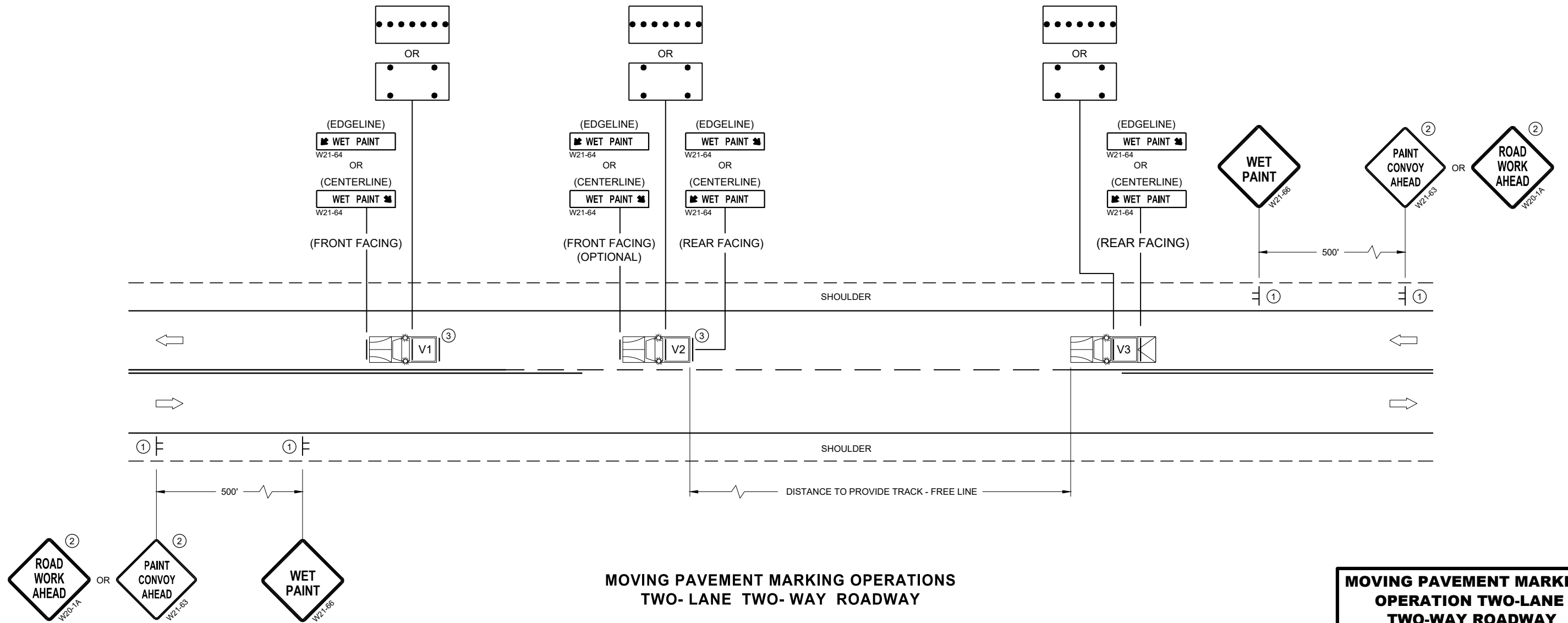
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING.

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.

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**MOVING PAVEMENT MARKING OPERATIONS  
TWO-LANE TWO-WAY ROADWAY**

**SDD 15C19 - 07a**

**SDD 15C19 - 07a**

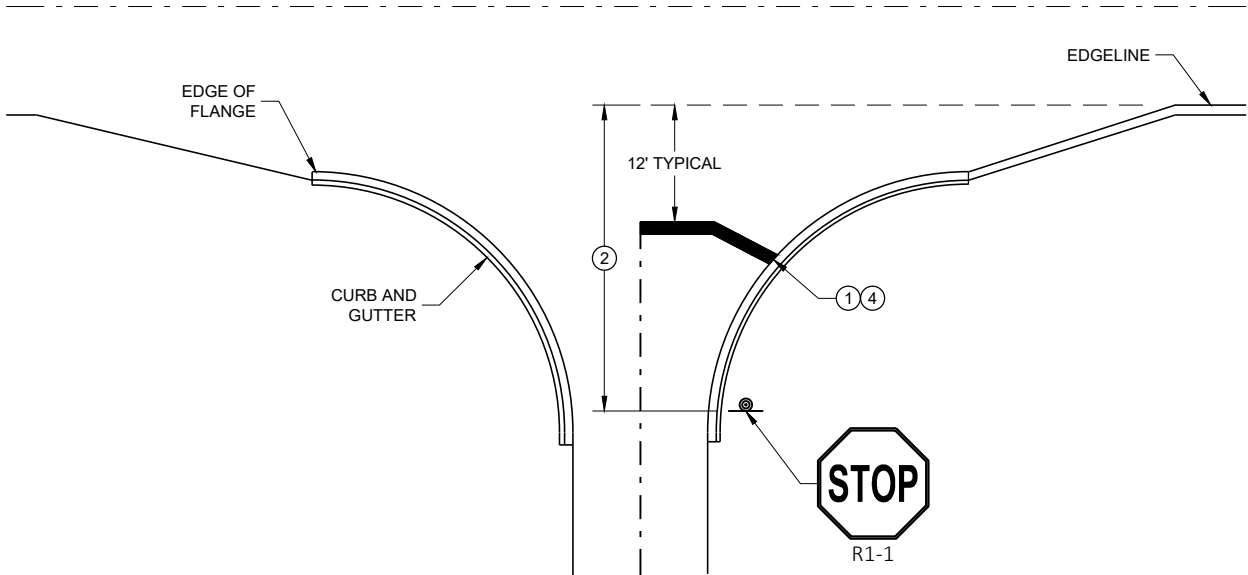
<b>MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



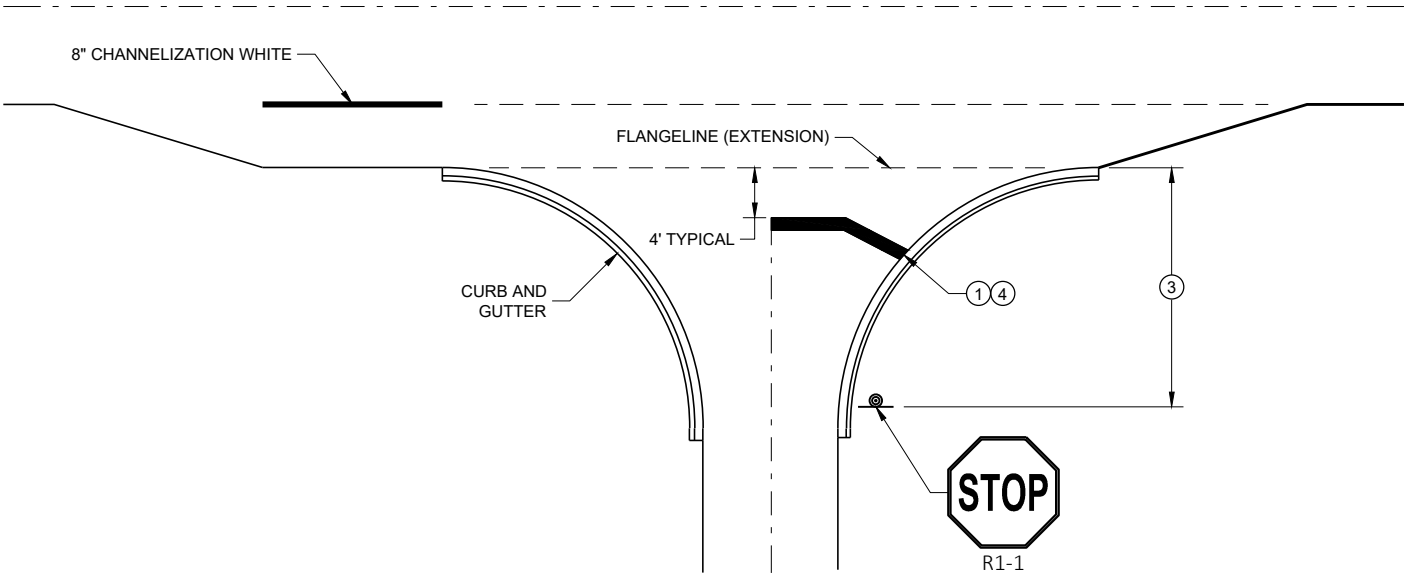
**GENERAL NOTES**

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

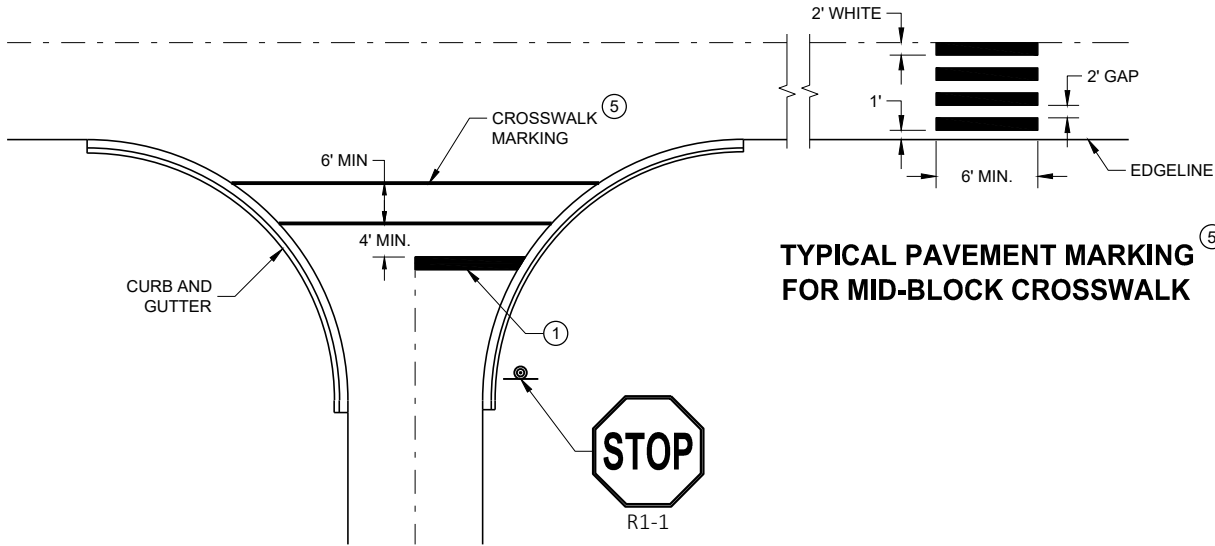
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



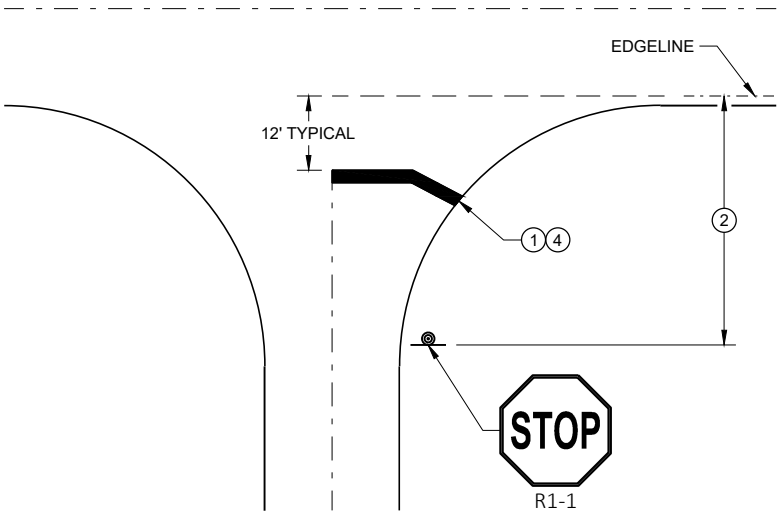
**TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER**



**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING**



**TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER**

**TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK**





**STOP LINE AND CROSSWALK PAVEMENT MARKING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

**GENERAL NOTES**

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

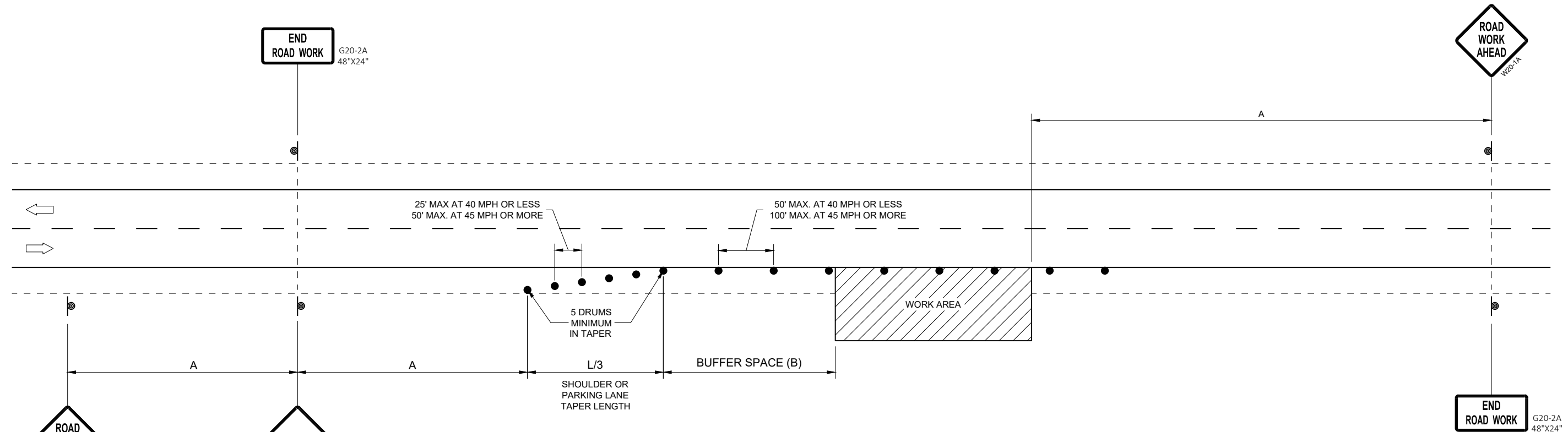
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

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POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

SDD 15D28 - 04

SDD 15D28 - 04








**TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2020 /S/ Andrew Heidtke  
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

**LEGEND**

-  SIGN ON TEMPORARY SUPPORT
-  SIGN ON PERMANENT SUPPORT
-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

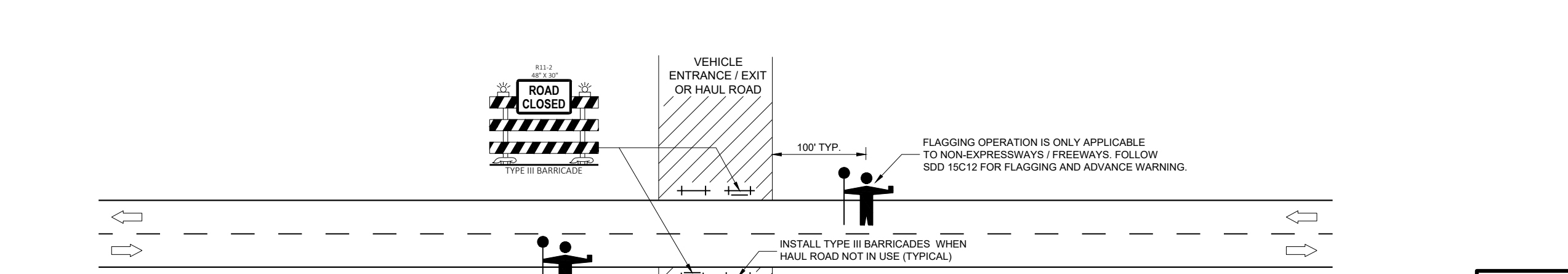
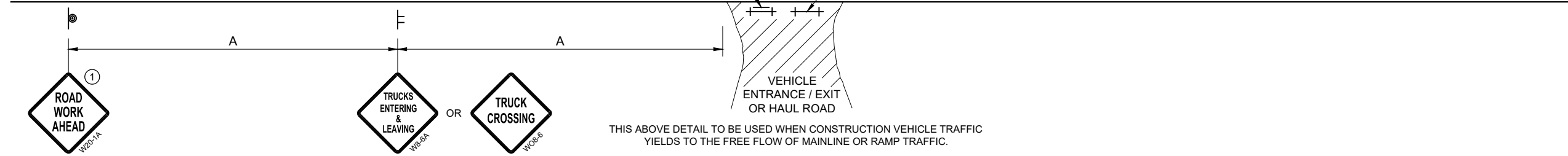
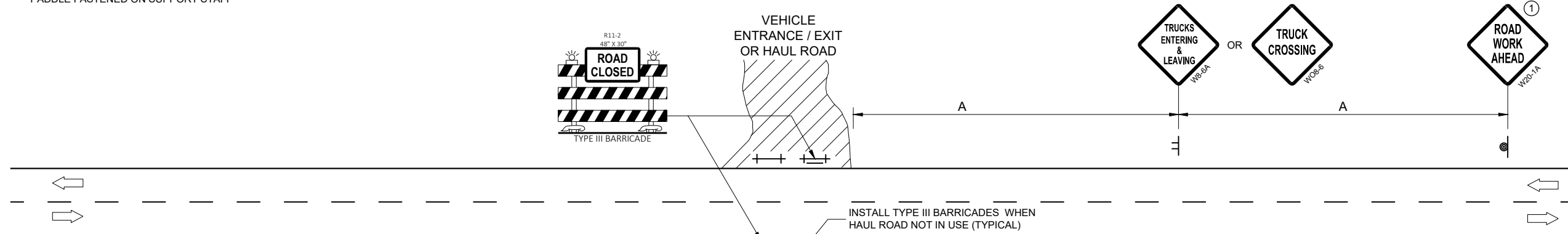
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET
0-30	200'
35-40	350'
45-55	500'

**GENERAL NOTES**

- ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
- "WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.
- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.
- WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.
- PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.
- ① THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE / EXIT CONDITIONS ARE SEPARATED BY MORE THAN TWO MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.

6

6



THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

**TRAFFIC CONTROL,  
VEHICLE ENTRANCE/EXIT  
OR HAUL ROAD**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED \_\_\_\_\_  
DATE May 2020 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

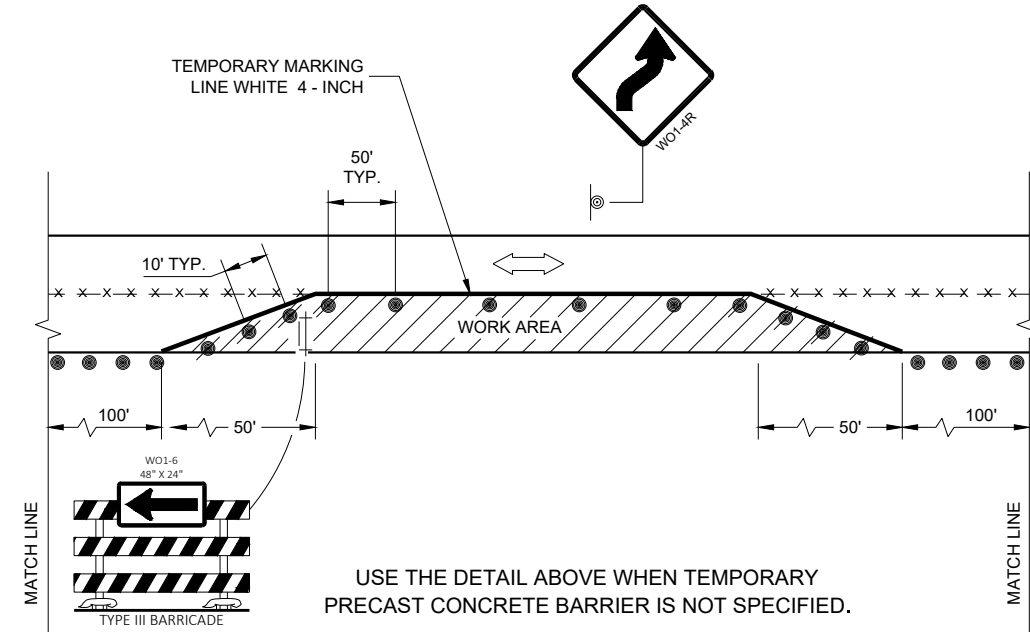
SDD 15D29 - 06

SDD 15D29 - 06

**LEGEND**

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT

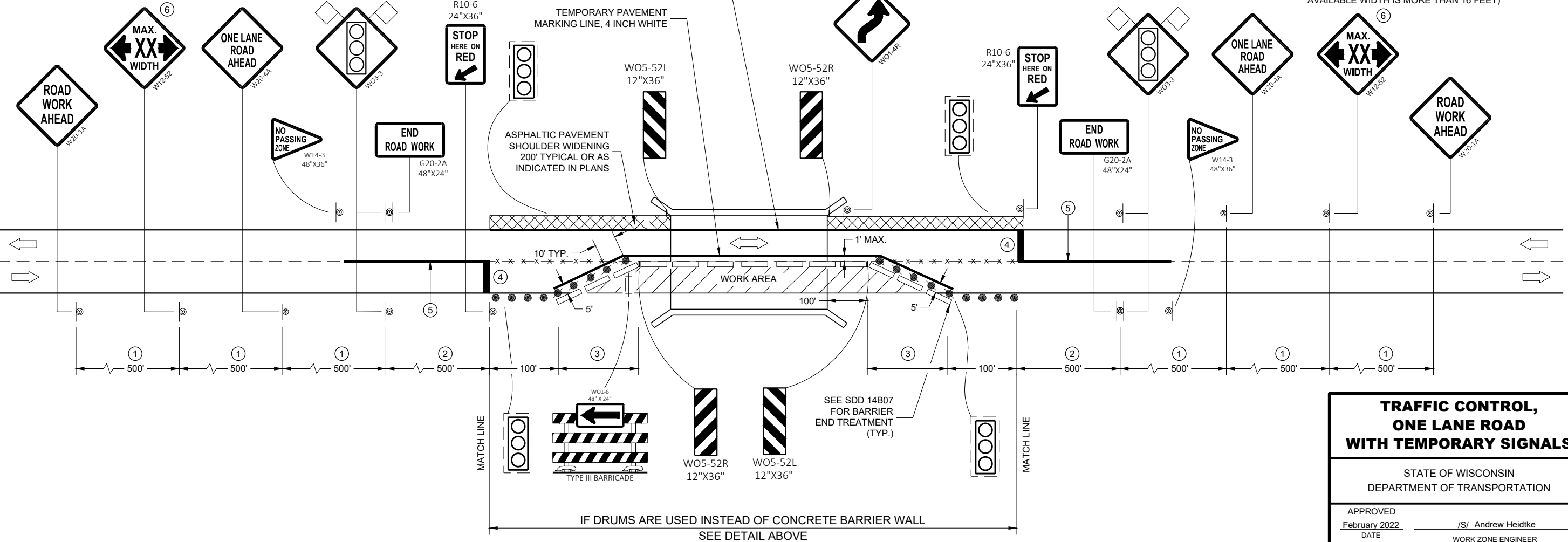
WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET)



TEMPORARY PAVEMENT MARKING LINE, 4 INCH WHITE (STOPLINE TO STOPLINE). REMOVE EXISTING EDGELINE AND OFFSET THE TEMPORARY EDGELINE IF THE DISTANCE FROM THE EDGELINE TO CONCRETE BARRIER WALL IS LESS THAN 9 FEET.

**GENERAL NOTES**

- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE..
- THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.
- ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.
- "WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
- ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.
- REMOVE PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT MARKING LINES IF THE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.
- ① 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.
  - ② USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
  - ③ DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
  - ④ TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.
  - ⑤ 700 FOOT TEMPORARY PAVEMENT MARKING LINE, 4 INCH DOUBLE YELLOW . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
  - ⑥ SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.









**TRAFFIC CONTROL,  
ONE LANE ROAD  
WITH TEMPORARY SIGNALS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

**GENERAL NOTES**

ALL SIGNS ARE 48"X48" BLACK ON ORANGE UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ONLY ONE QUADRANT OF TRAFFIC SHALL BE RELEASED AT A TIME.

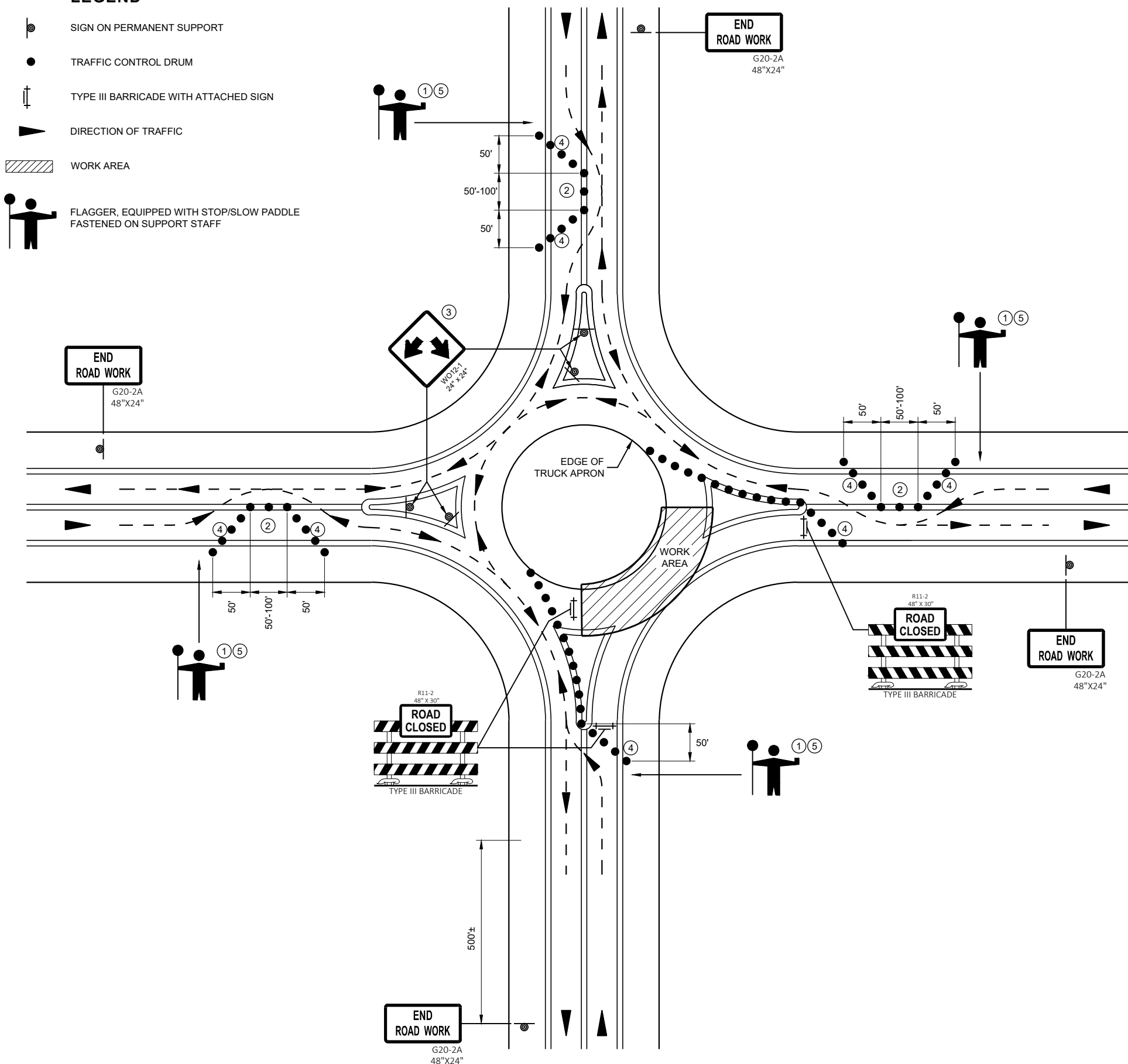
FLAGGERS SHALL CONTROL TRAFFIC ON ALL APPROACHES OF THE ONE-LANE ROUNDABOUT. ONE FLAGGER SHALL BE DESIGNATED LEAD FLAGGER.

NIGHT TIME WORK REQUIRES ADDITIONAL LIGHTING AT FLAGGER STATION(S).

- ① FLAGGERS SHALL BE IN DIRECT RADIO CONTACT AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.
- ② ADJUST CHANNELIZING DEVICES TO ACCOMMODATE FOR TURNING RADIUS OF LARGE VEHICLES AS DIRECTED BY THE ENGINEER.
- ③ GUIDE SIGN WITH ROAD NAMES MAY BE USED IN LIEU OF THE DOUBLE ARROW (WO12-1) SIGN.
- ④ THE TWO- WAY TAPER SHOULD BE 50 FEET USING 5 EQUALLY SPACED DRUMS.
- ⑤ FOLLOW SDD 15C12 FOR FLAGGING AND ADVANCE WARNING.

**RECOMMENDED REDUCED DRUM SPACING WITHIN ROUNDABOUT**

MPH	DRUM SPACING (FT)
0-40	25
45-55	50



6

6

SDD 15D37 - 03

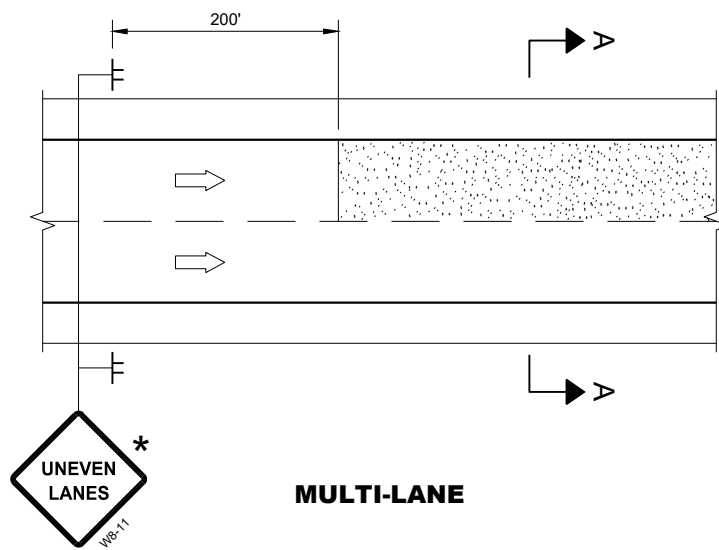
SDD 15D37 - 03

**TRAFFIC CONTROL, FLAGGING OPERATION, ROUNDABOUT**

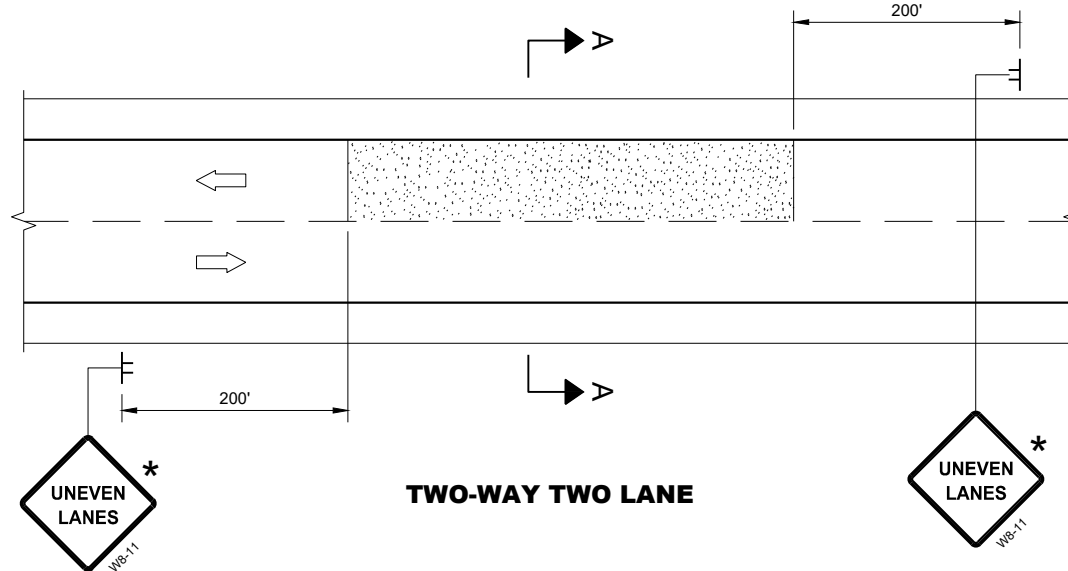
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2020 /S/ Andrew Heidtke  
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

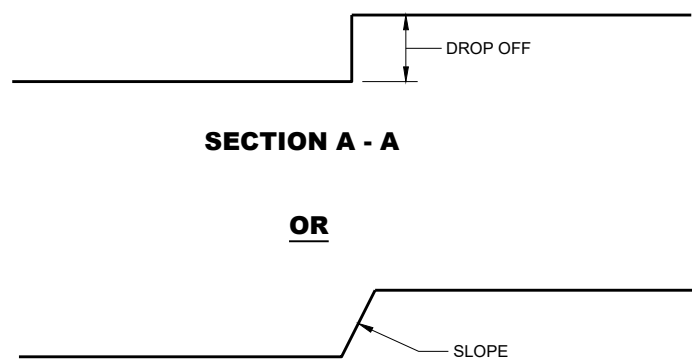
FHWA



**MULTI-LANE**



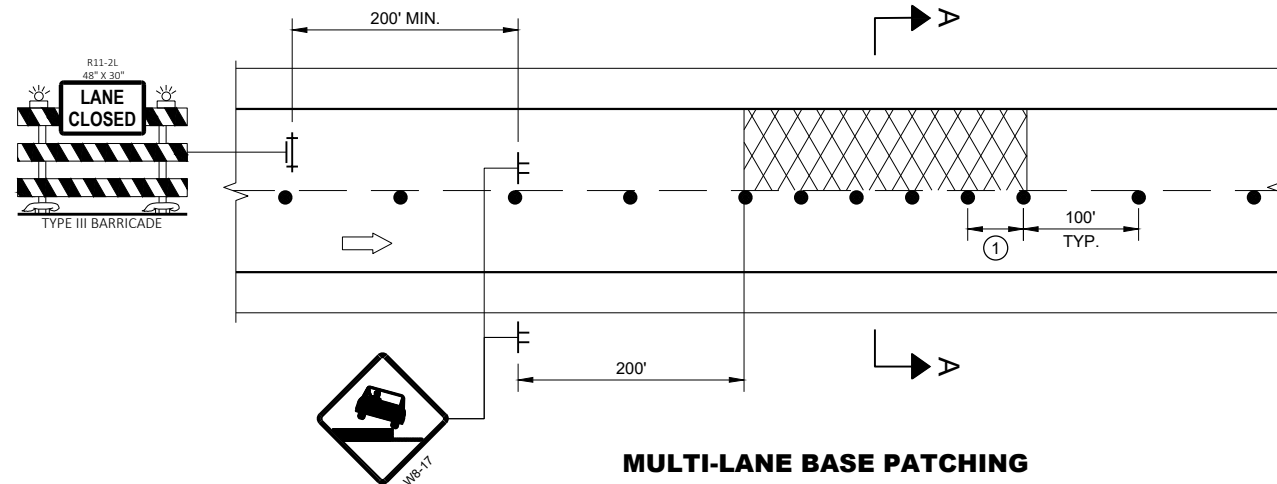
**TWO-WAY TWO LANE**



**SECTION A - A**

**OR**

**SECTION A - A**



**MULTI-LANE BASE PATCHING**

**ADJACENT LANE DROP-OFFS**

**GENERAL NOTES**

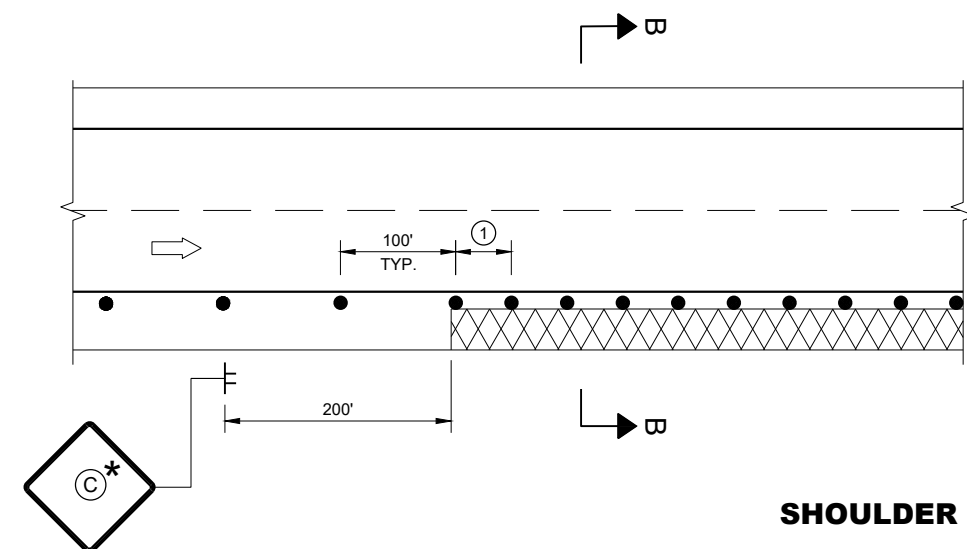
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- \* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

**LEGEND**

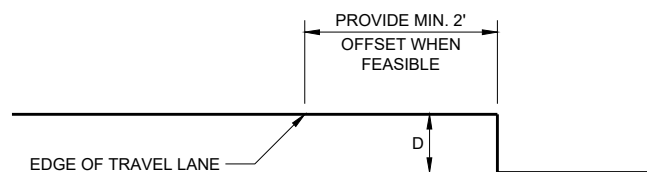
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



**SHOULDER DROP-OFFS**



**SECTION B - B**

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	 LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	 SHOULDER DROP-OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

SDD 15D39 - 02

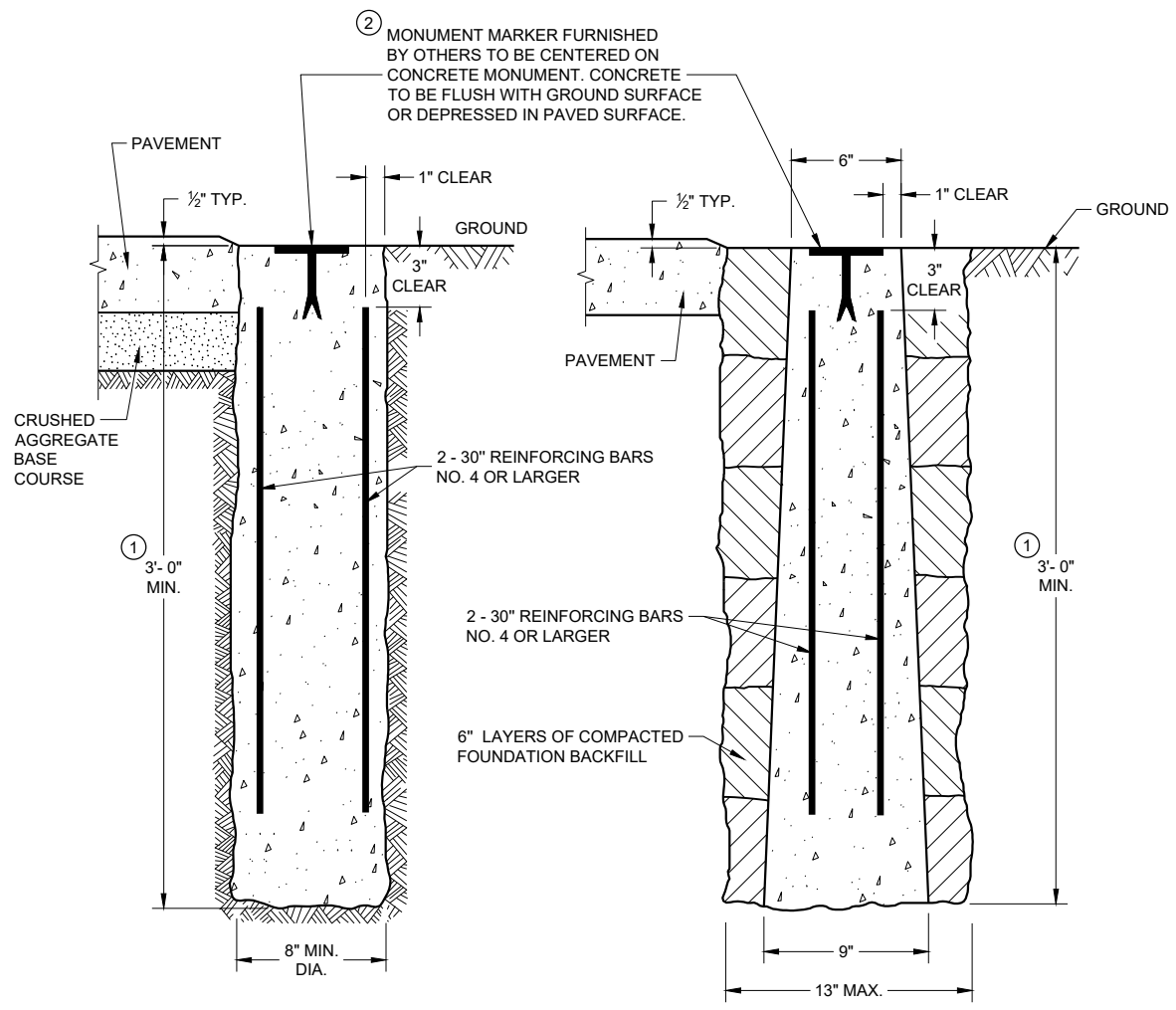
SDD 15D39 - 02

**TRAFFIC CONTROL,  
DROP-OFF SIGNING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Andrew Heidtke  
DATE DATE WORK ZONE ENGINEER

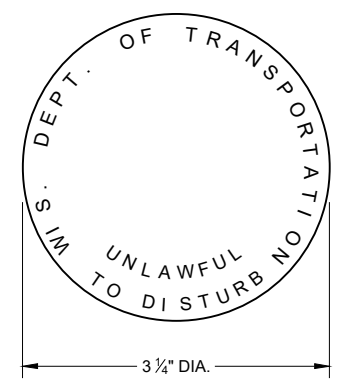
FHWA



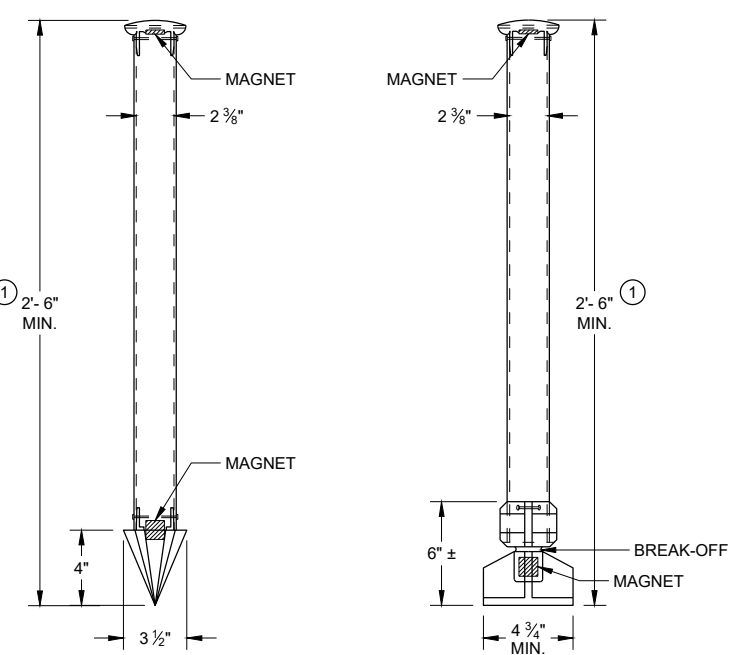
CAST-IN-PLACE

PRECAST

**CONCRETE MONUMENTS  
TYPE A**



**WIS DOT MONUMENT MARKER LOGO**  
FOR TYPES "A", "C" & "D"



**TYPE C  
DRIVEN MONUMENT**

**TYPE D  
NON-DRIVEN  
BREAK-OFF MONUMENT**

**ALUMINUM MONUMENTS  
(INCLUDES MARKER)**

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

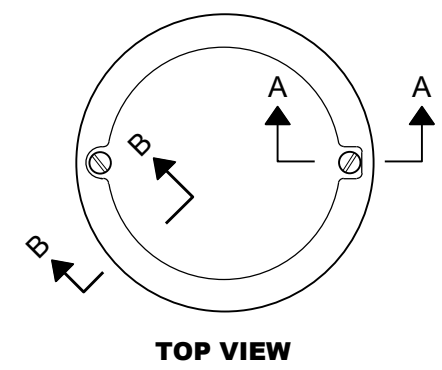
MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

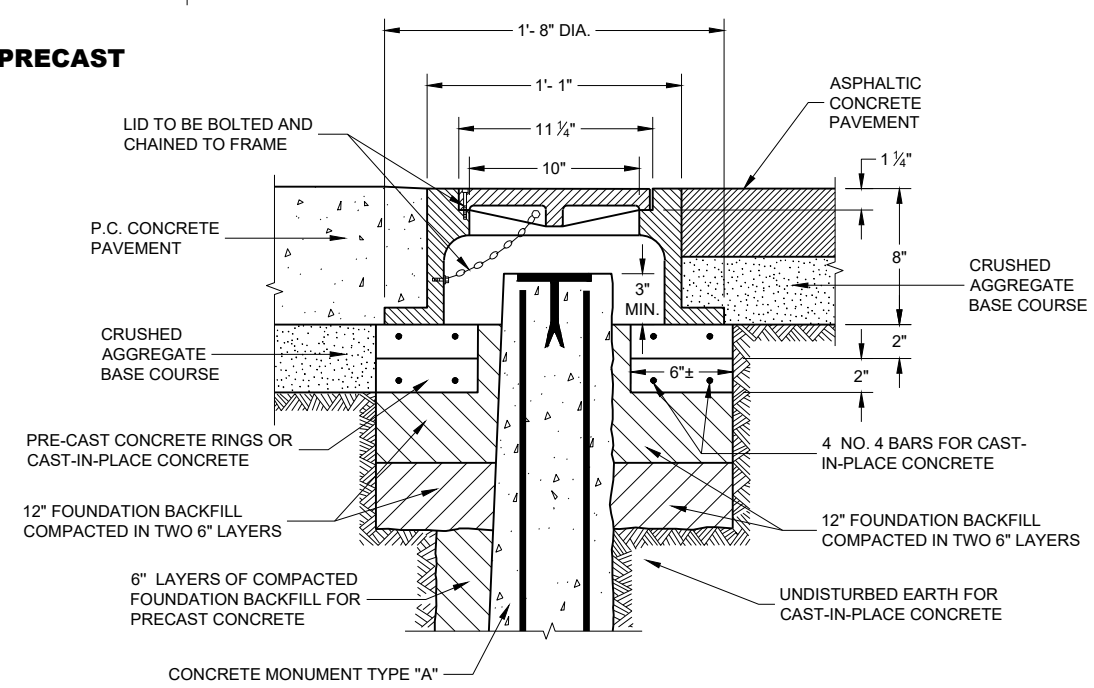
THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

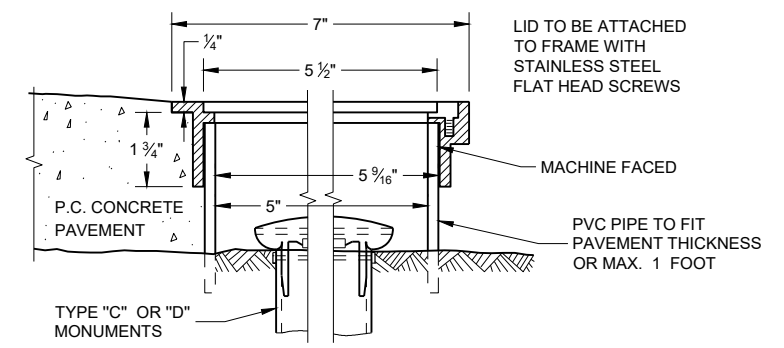
- ① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.
- ② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WISDOT MARKER.



**TOP VIEW**



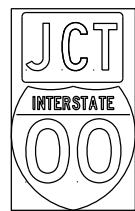
**CAST IRON MONUMENT COVER**  
(APPROXIMATE WEIGHT 95 LBS)



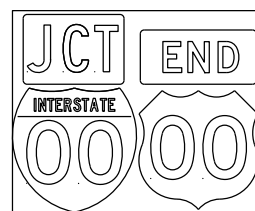
**SECTION B-B SECTION A-A  
ALUMINUM MONUMENT COVER**  
(APPROXIMATE WEIGHT 2 LBS)  
(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MONUMENTS AND COVERS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2018 DATE	/s/ Raymond A. Kumapayii CHIEF SURVEYING AND MAPPING ENGINEER
FHWA	

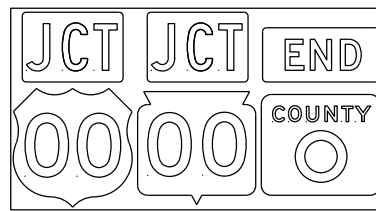
# TYPICAL ASSEMBLIES



J1-1



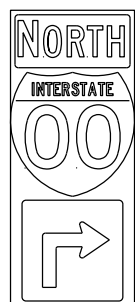
J1-2



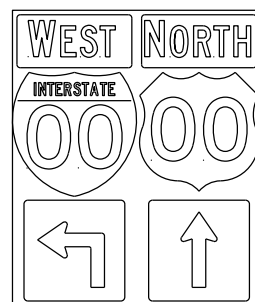
J1-3



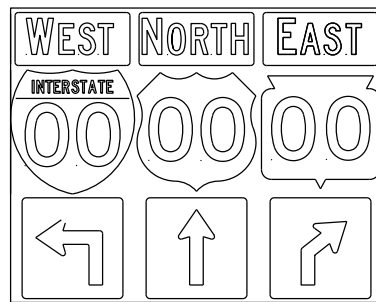
JR1-1



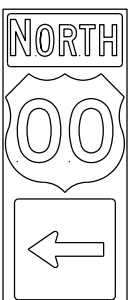
J2-1



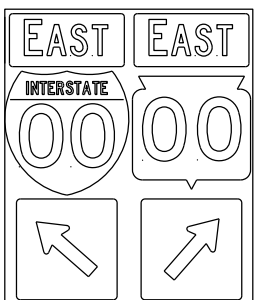
J2-2



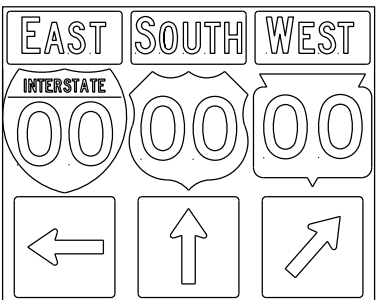
J2-3



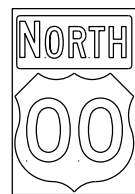
J3-1



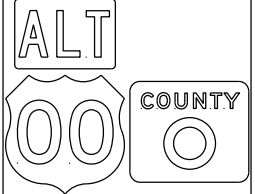
J3-2



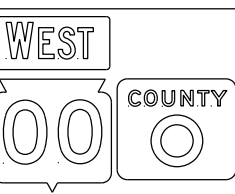
J3-3



J4-1



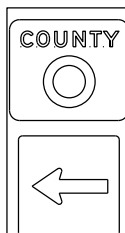
J4-2



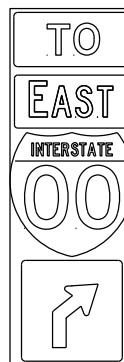
J4-2



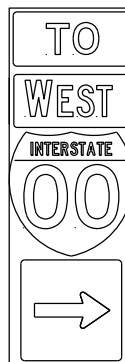
J12-1



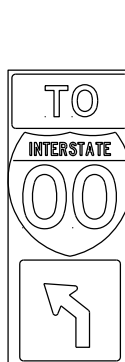
J13-1



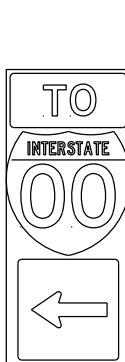
J32-1



J33-1



J22-1



J23-1



JR13-1



JR23-1

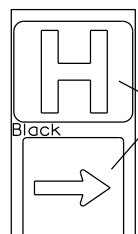


JR99-1



JV

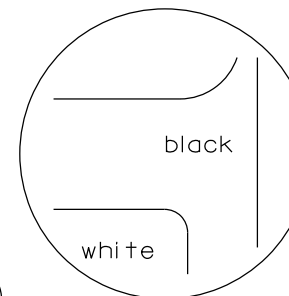
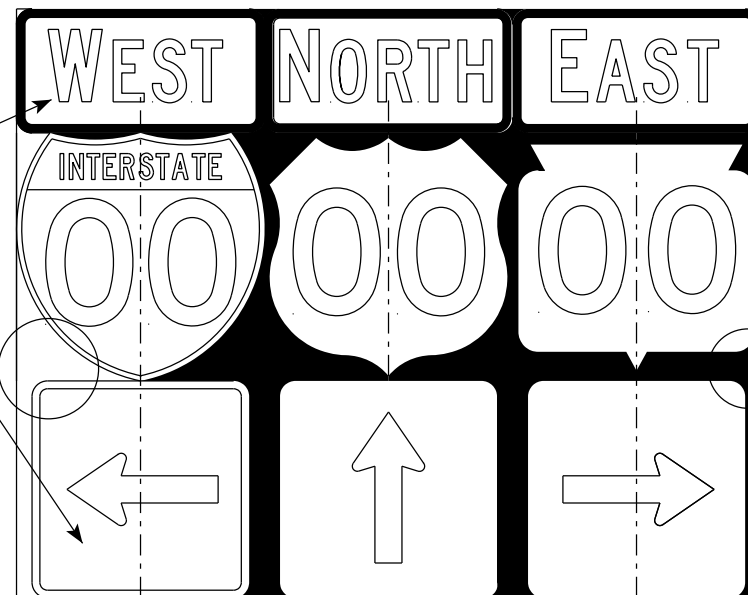
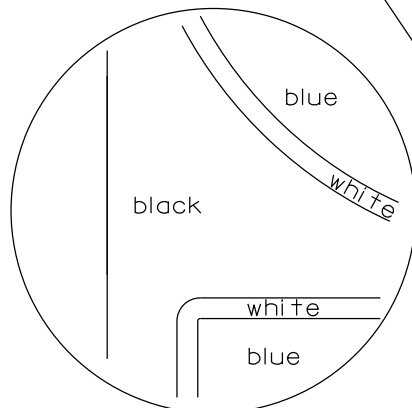
(Typical Vertical J-Assembly See Note 10 and 11)



JH-1

Blue Background

blue background with interstate



black background

## NOTES

- Signs are Type II - Type H Reflective
- Color:
  - Background - Black Non-reflective
  - Message - see Note 5
- Message Series - See Note 5
- Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- Certain marker heads require the component pieces to be the same color. As an example, all the components used with an MI-1 Interstate marker shall be blue.
- Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
- Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- All Vertical J Assemblies are given a Sign Code of JV
- For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

### ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/18/21

PLATE NO. A2-1S.9

PROJECT NO:

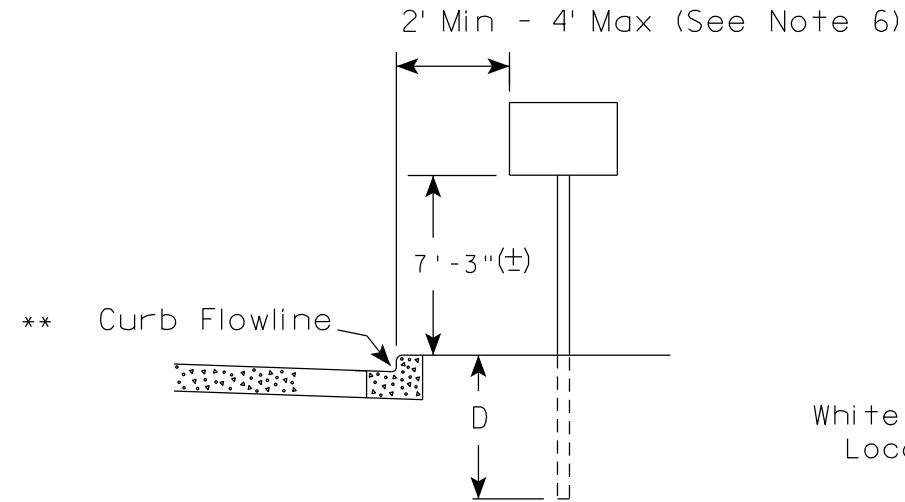
SHEET NO:

E

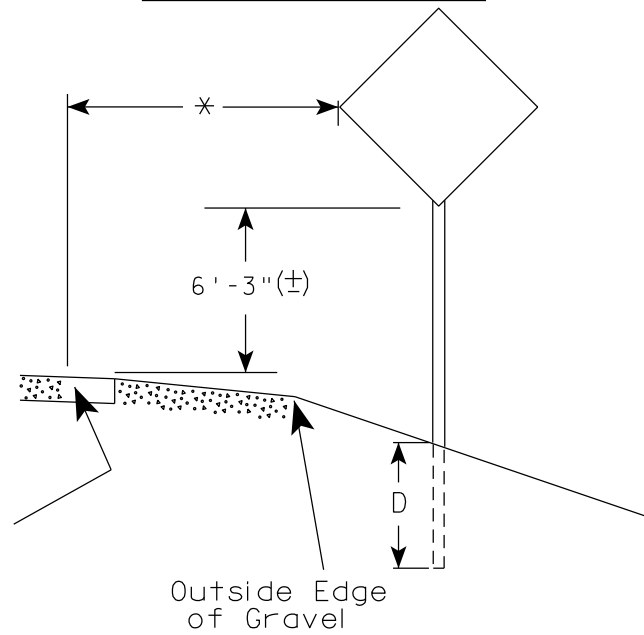


URBAN AREA

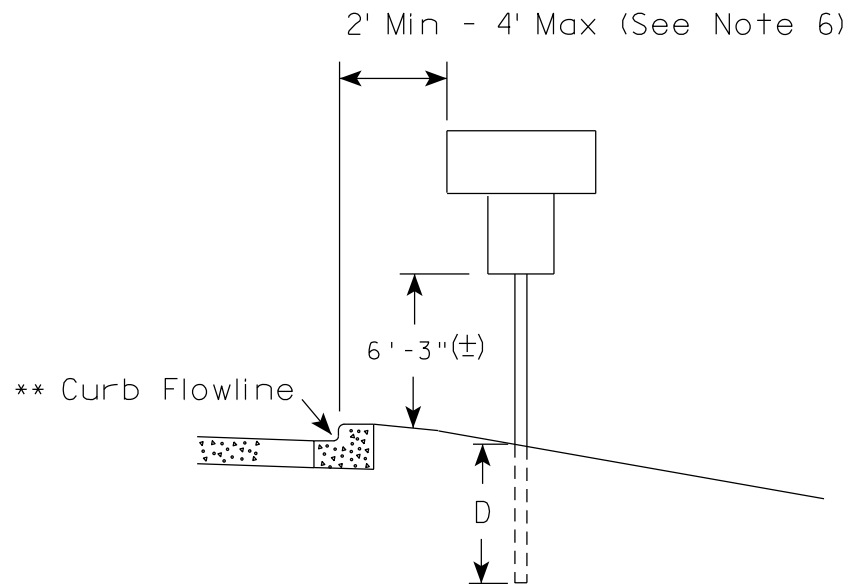
RURAL AREA (See Note 2)



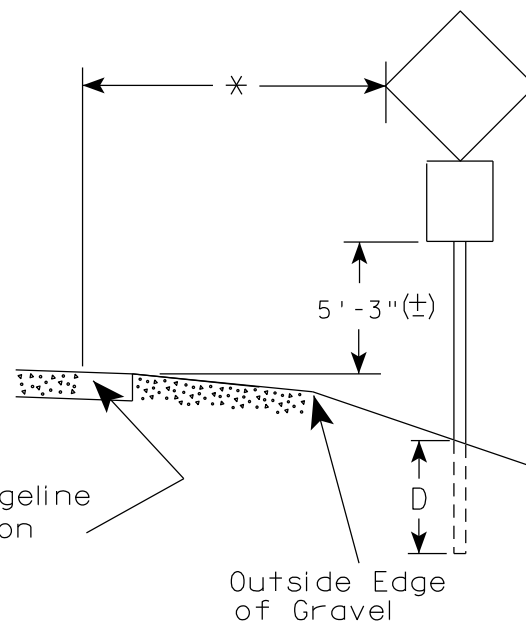
White Edgeline Location



Outside Edge of Gravel



White Edgeline Location



Outside Edge of Gravel

POST EMBEDMENT DEPTH

Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.  
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

7

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\* \* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22



**ELEVATION VIEW**

**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
  2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
  3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



**ELEVATION VIEW**

**DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT**



**PLAN VIEW**

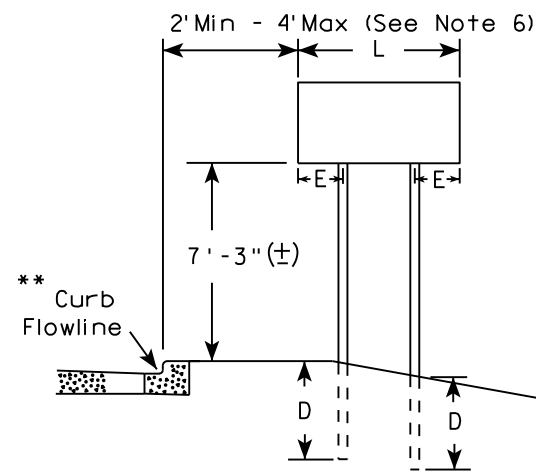
**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

<b>SIGN POST BOX-OUTS A4-3B</b>	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

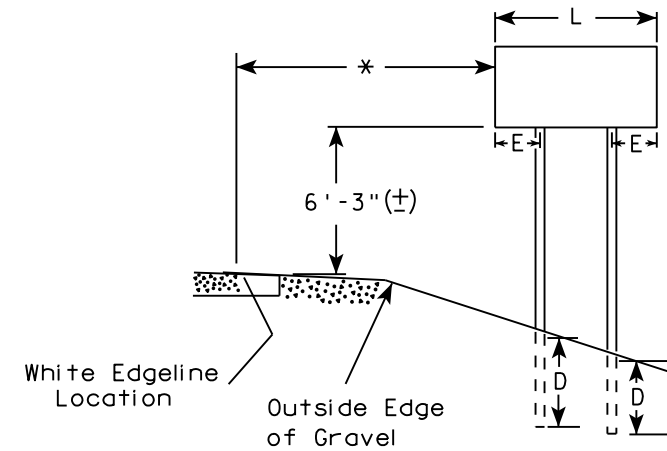
GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

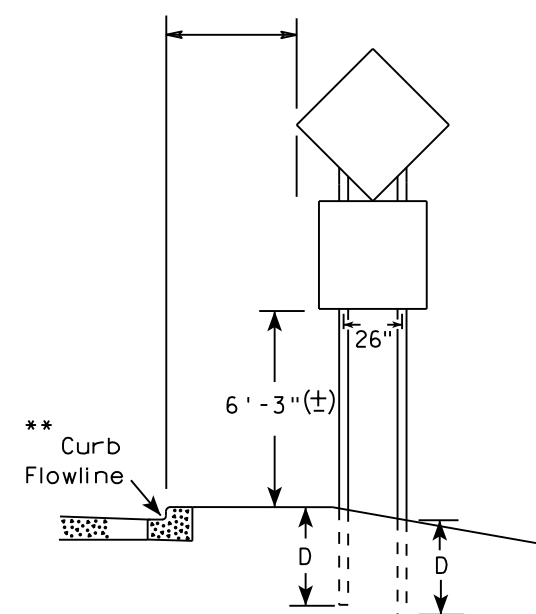
URBAN AREA



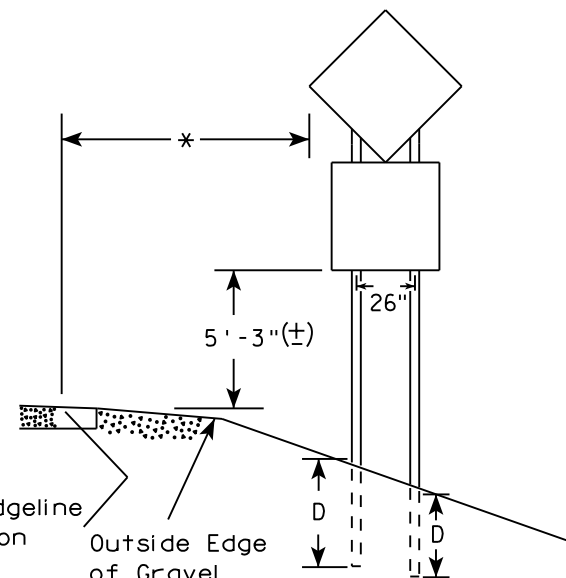
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

\*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

\*\*\* See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

\*\*\*

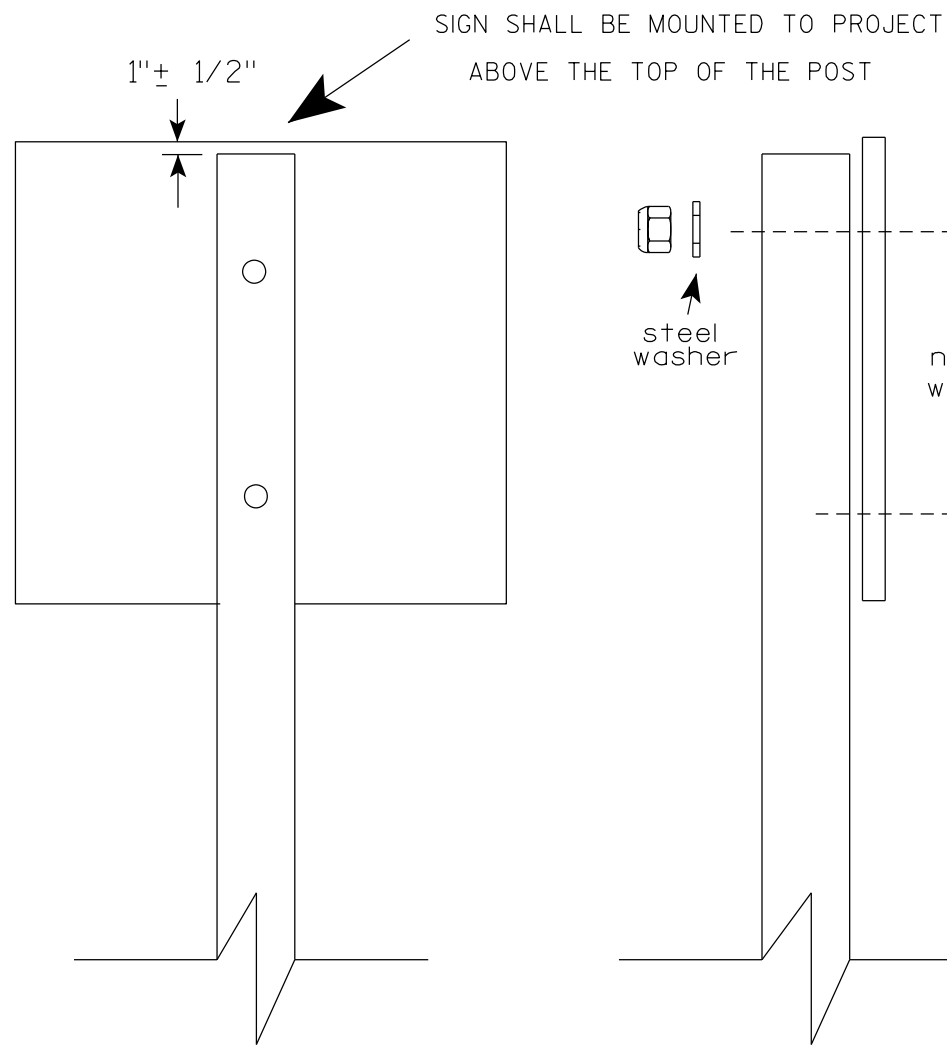
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION  
 APPROVED *Matthew R. Rauch*  
 For State Traffic Engineer  
 DATE 8/21/17 PLATE NO. A4-4.15



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

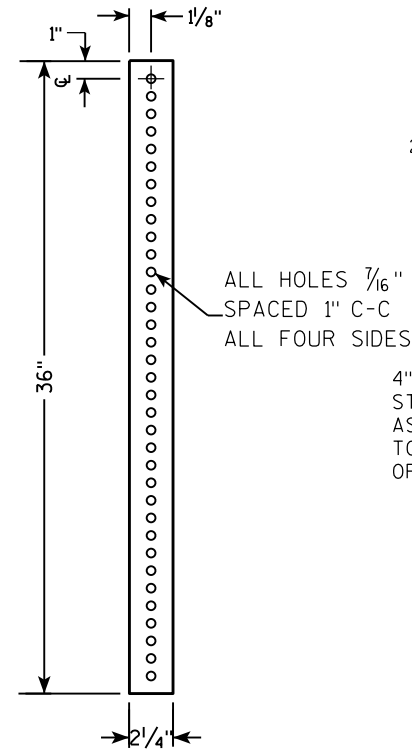
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS -  $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS -  $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
  - $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS -  $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
  - $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS -  $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ " STEEL
  - 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X .080 NYLON

\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

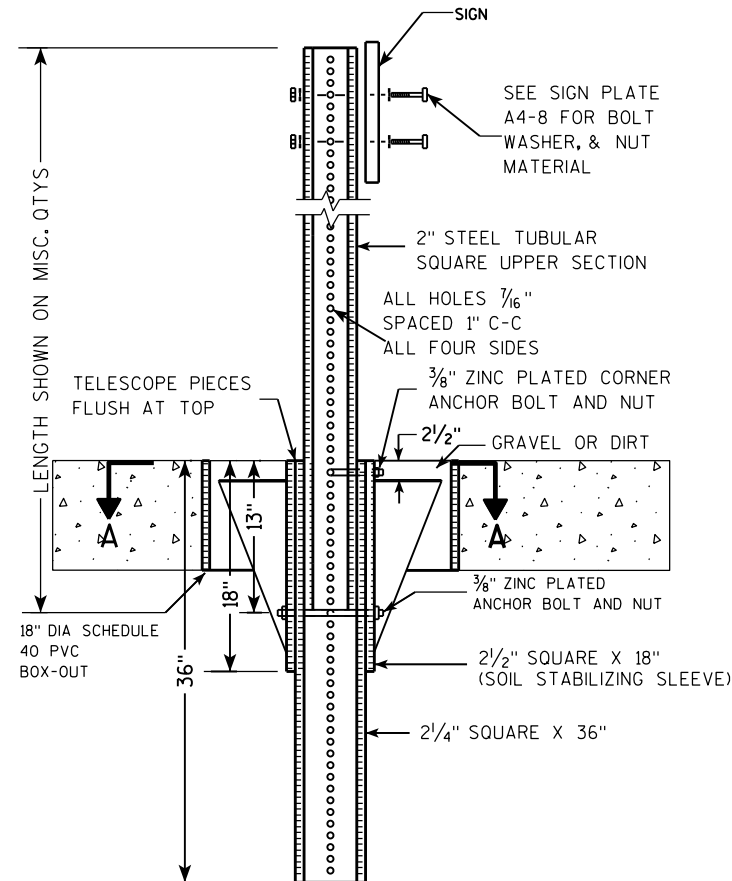
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



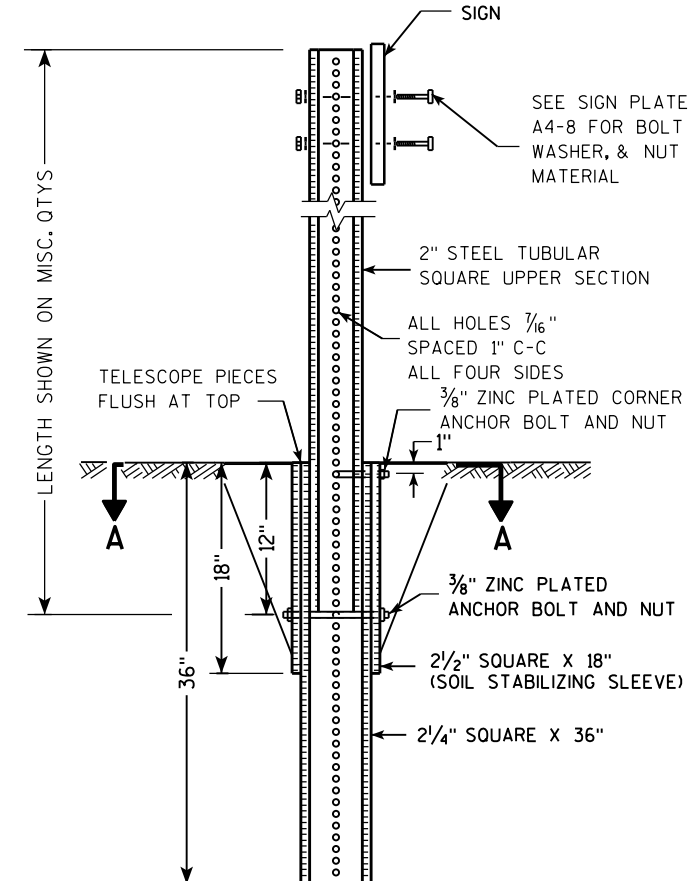
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

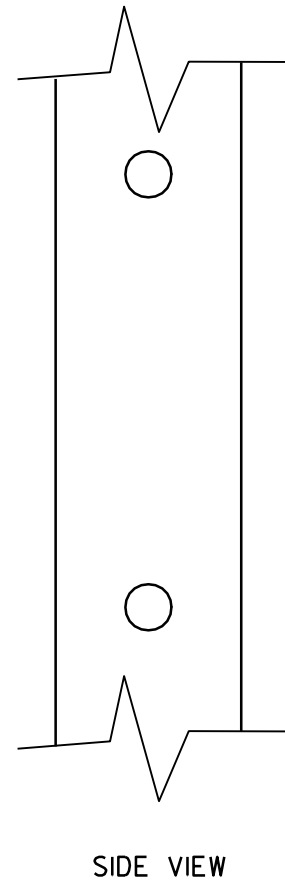
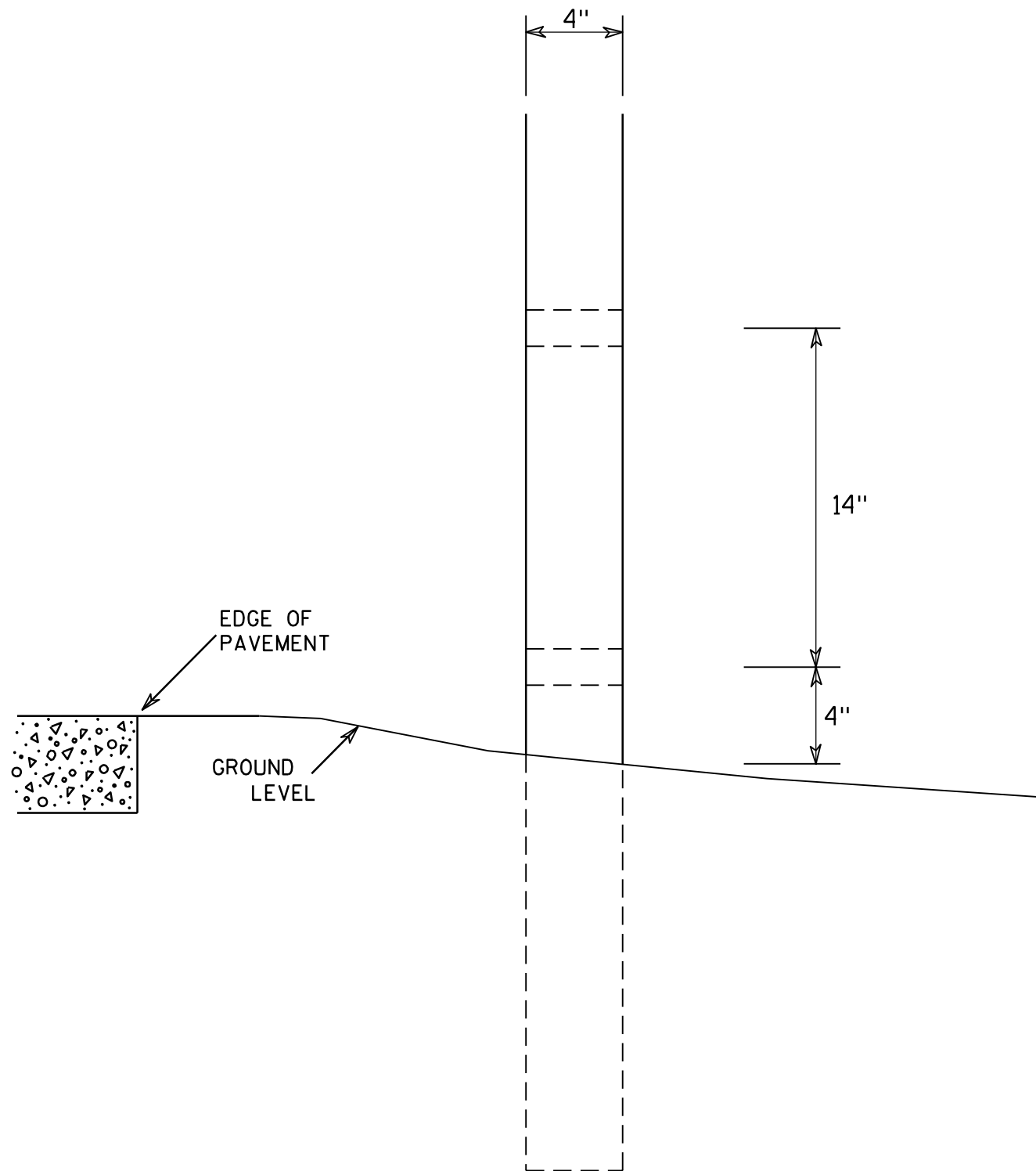
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL  
SIGN POST  
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



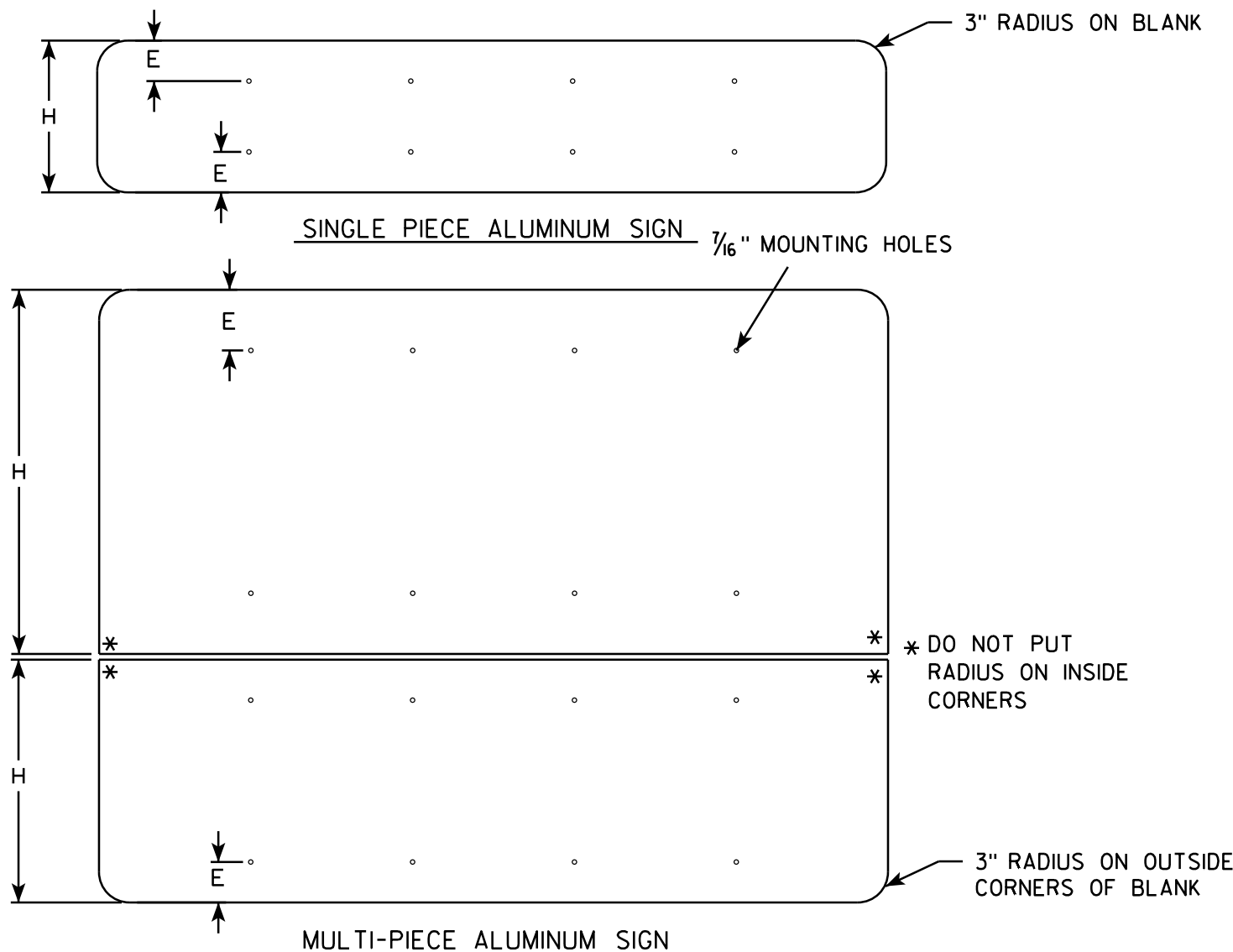
GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

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<b>4 X 6 WOOD POST MODIFICATIONS</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

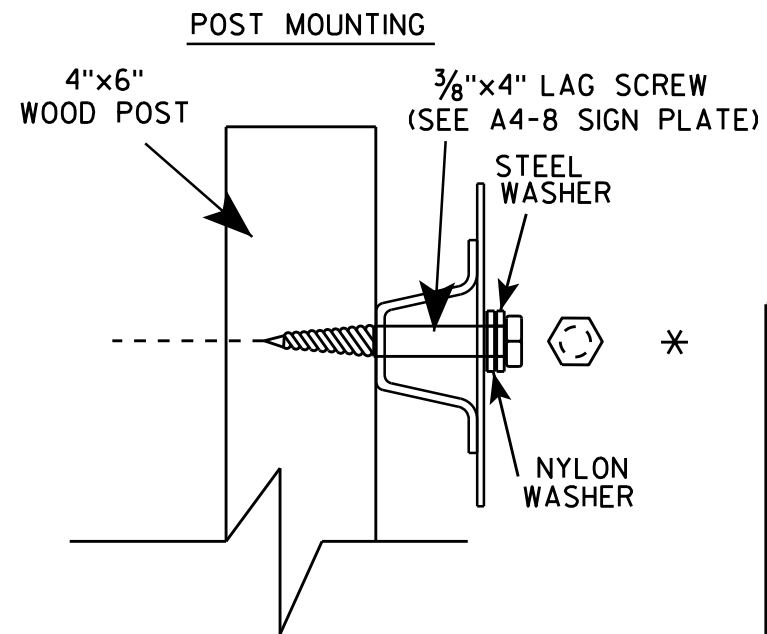
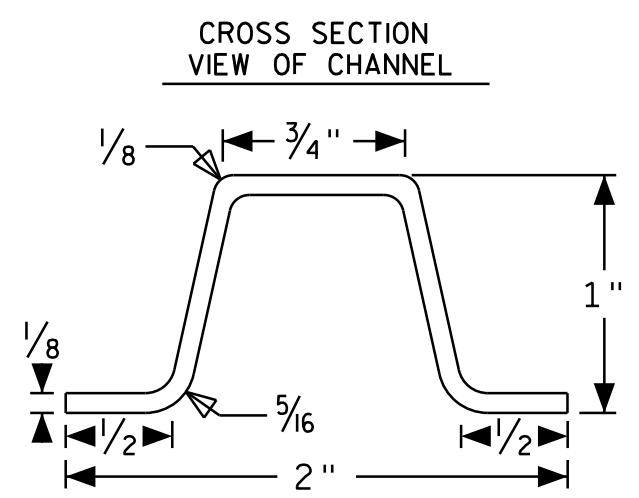
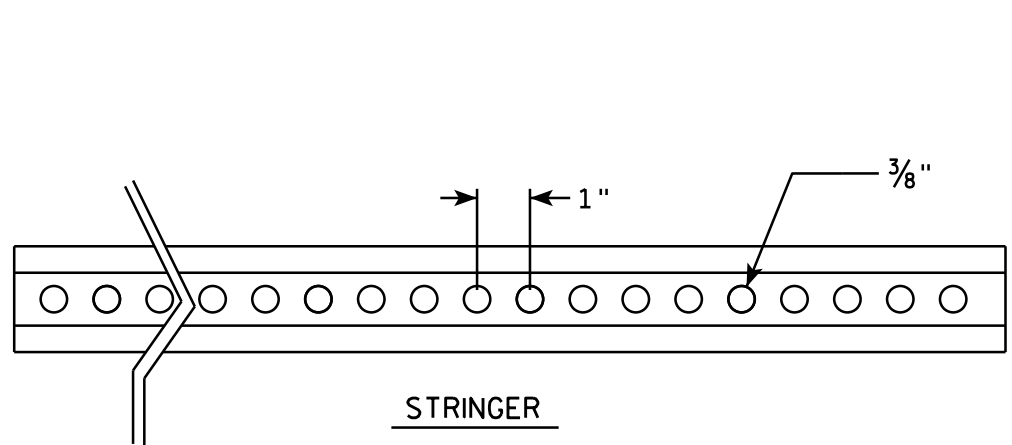


### GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16 1/2" 33 1/2" 50 1/2" 67 1/2"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19 1/2" 38 1/2" 57 1/2" 76 1/2"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22 1/2" 43 1/2" 64 1/2" 85 1/2"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

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**SIGN STRINGER MOUNTING REQUIREMENTS**

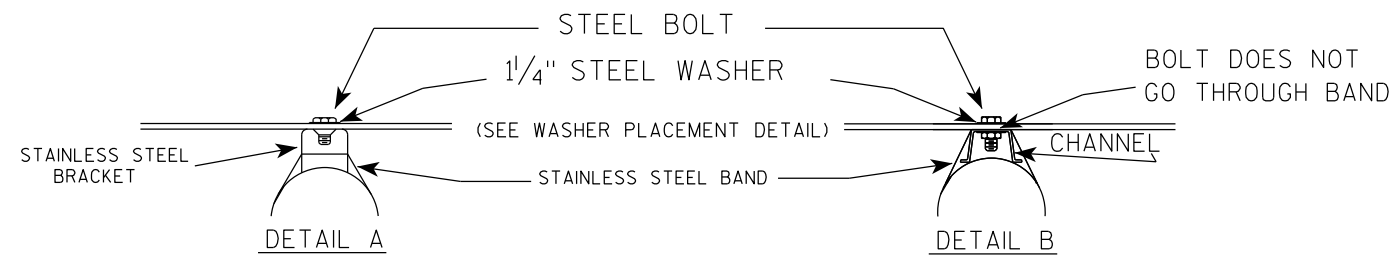
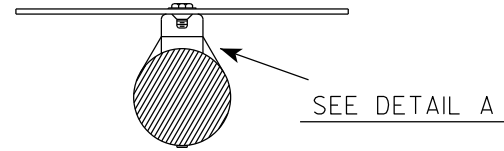
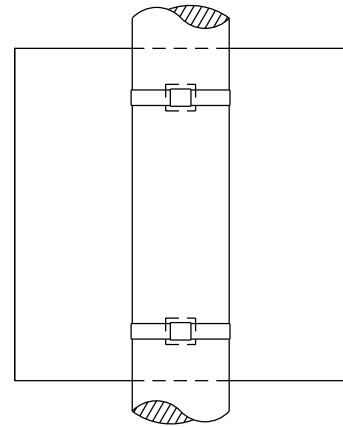
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/26/16 PLATE NO. A4-18.1

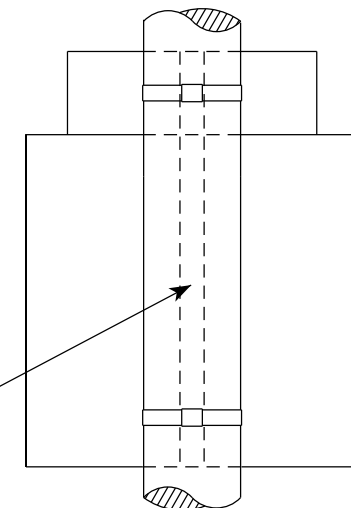
# BANDING

SINGLE SIGN

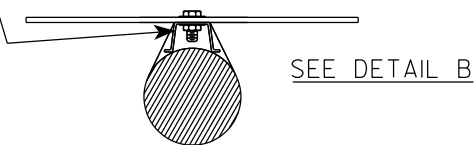


- GENERAL NOTES
1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
  2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
  3. Banding and assembly bracket shall be stainless steel. All bands shall be  $\frac{3}{4}$ " in width and 0.025" thickness.
  4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
    - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
    - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

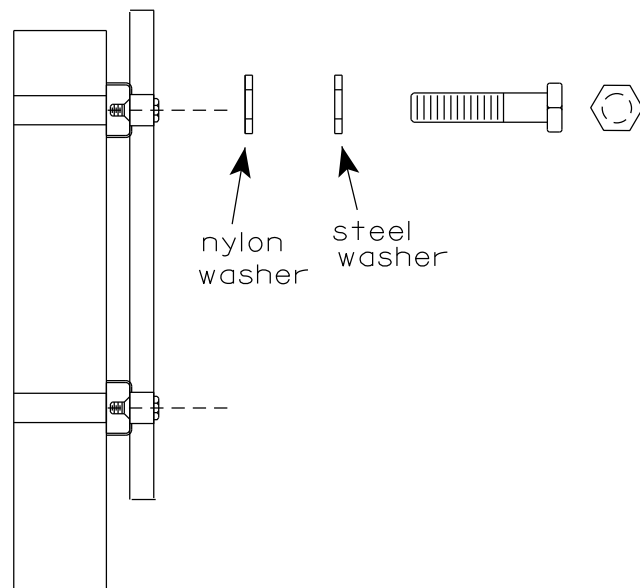
"J" ASSEMBLY



CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



WASHER PLACEMENT



WASHERS (ALL POSTS) -  
 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
 FOR ALL TYPE H SIGNS

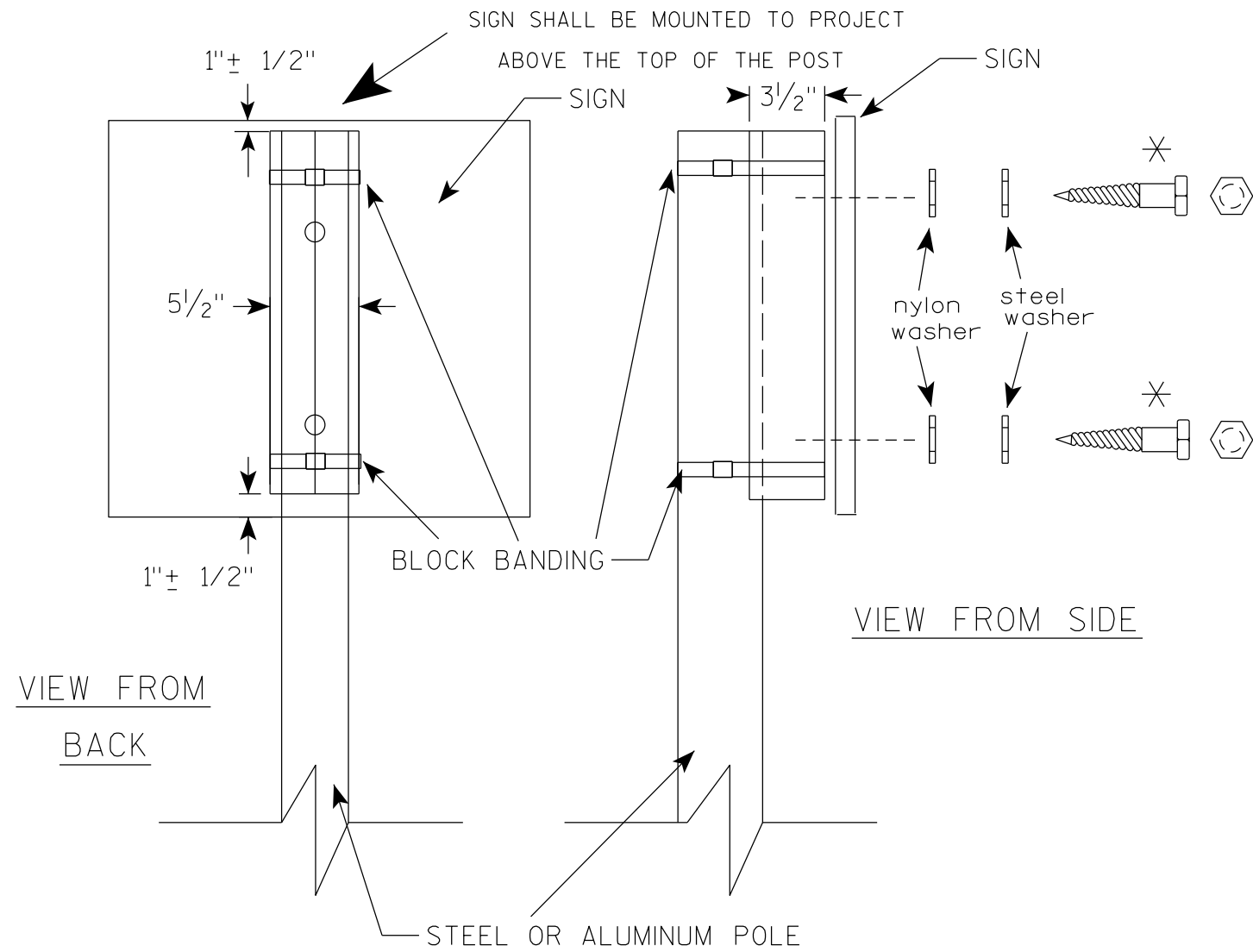
STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4





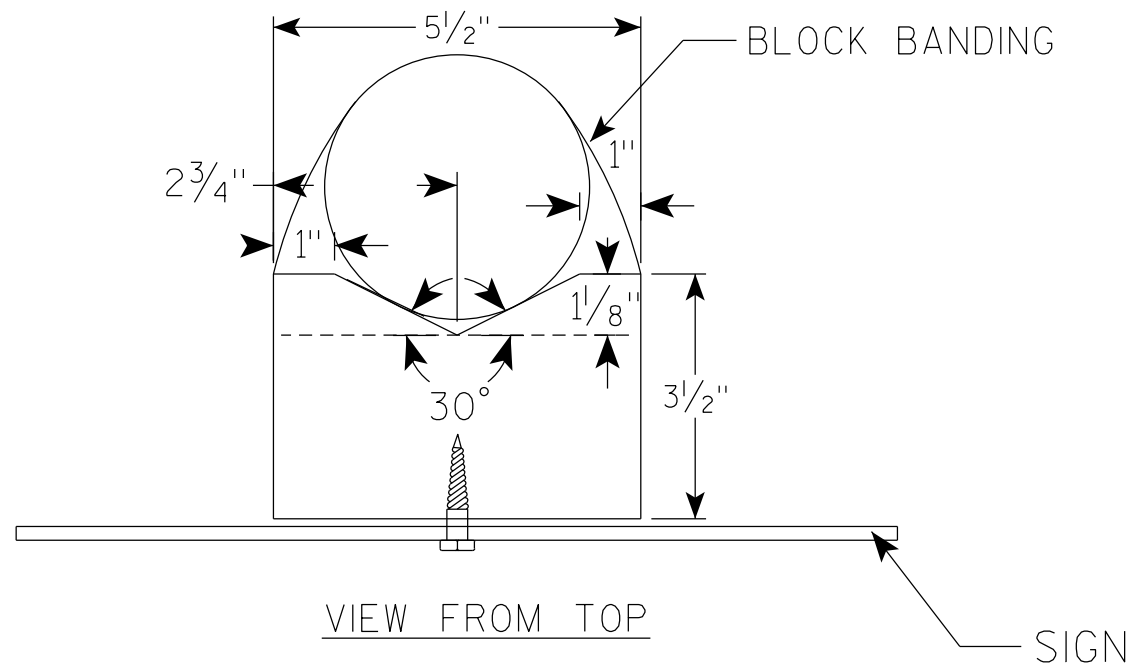
VIEW FROM  
BACK

VIEW FROM SIDE

STEEL OR ALUMINUM POLE

7

7



VIEW FROM TOP

SIGN

GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"

BLOCK BANDING DETAIL  
( V-BLOCK OPTION )

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

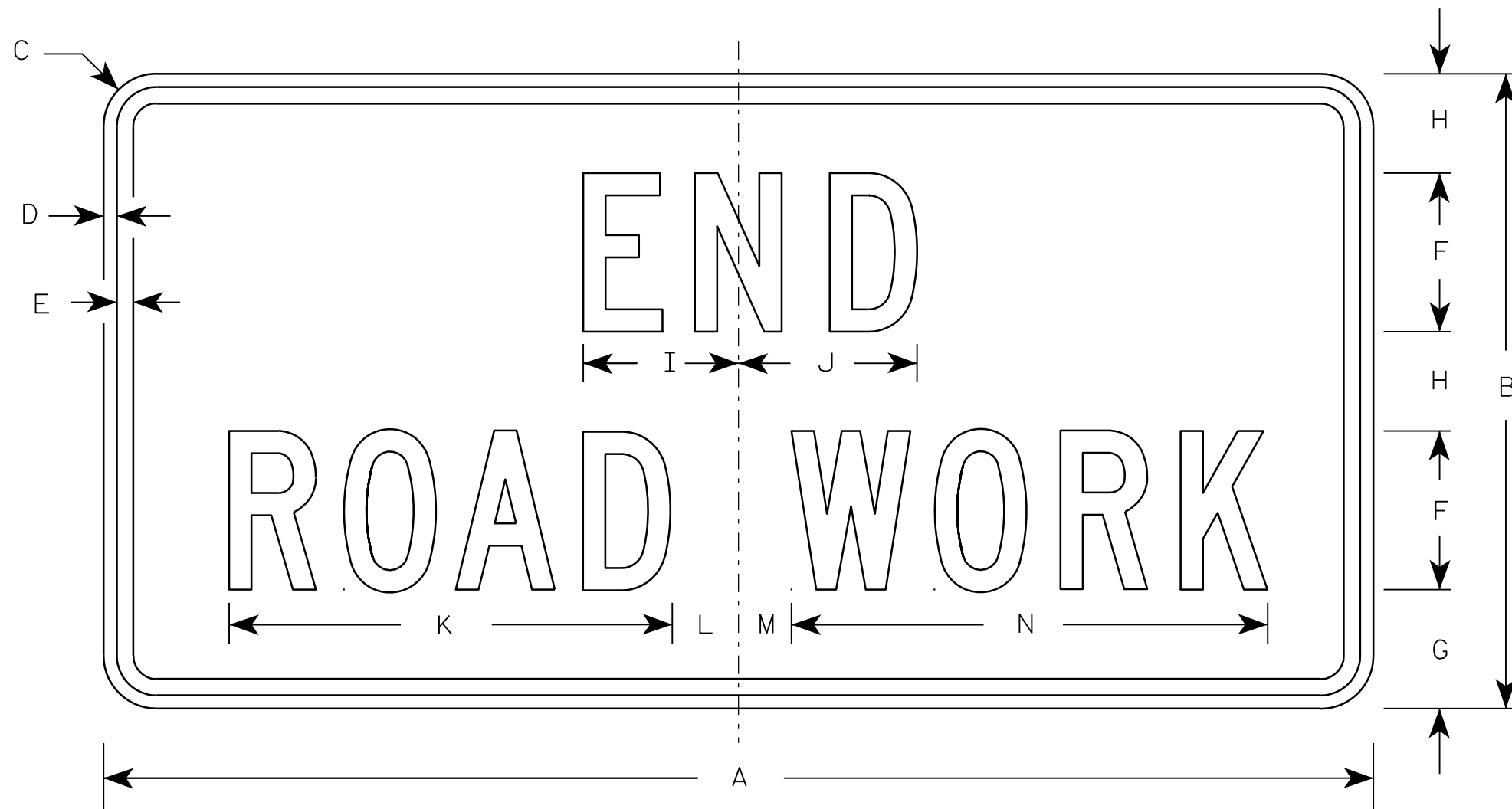
PROJECT NO:

SHEET NO:

E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



G20-2A

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Metric equivalent for this sign is:

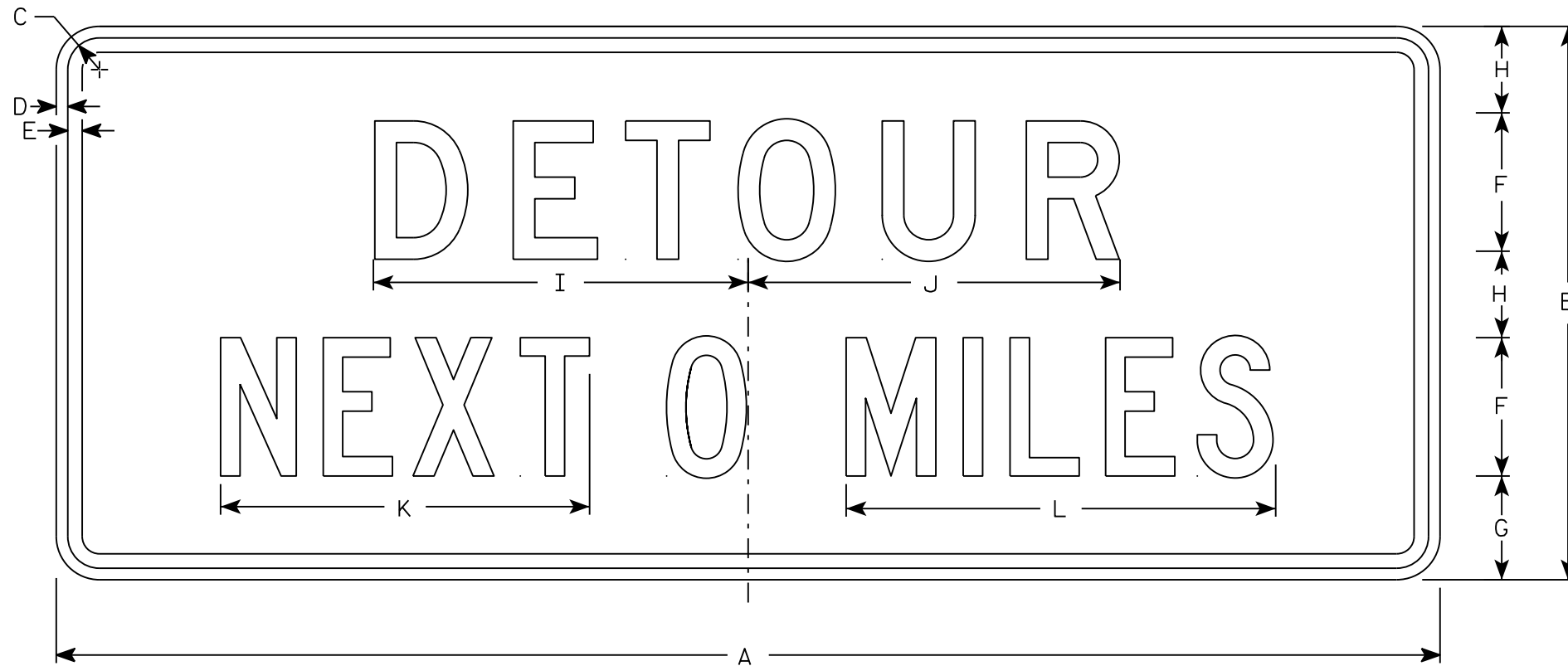
SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. m.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN G20-2A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/30/09	PLATE NO. G20-2A.8

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - Line 1 is D and Line 2 is C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance



G20-51

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SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4	16 1/4	16 1/8	16	18 5/8															10
3																											
4	60	24	1 3/8	1/2	5/8	6	4 1/2	3 3/4	16 1/4	16 1/8	16	18 5/8															10
5																											

STANDARD SIGN  
G20-51

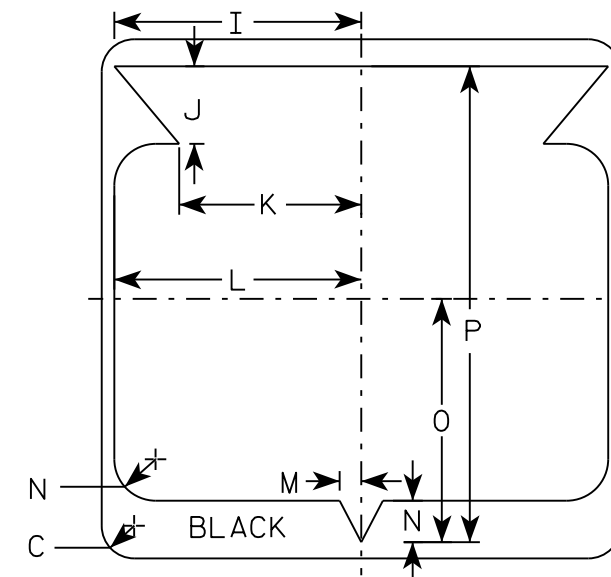
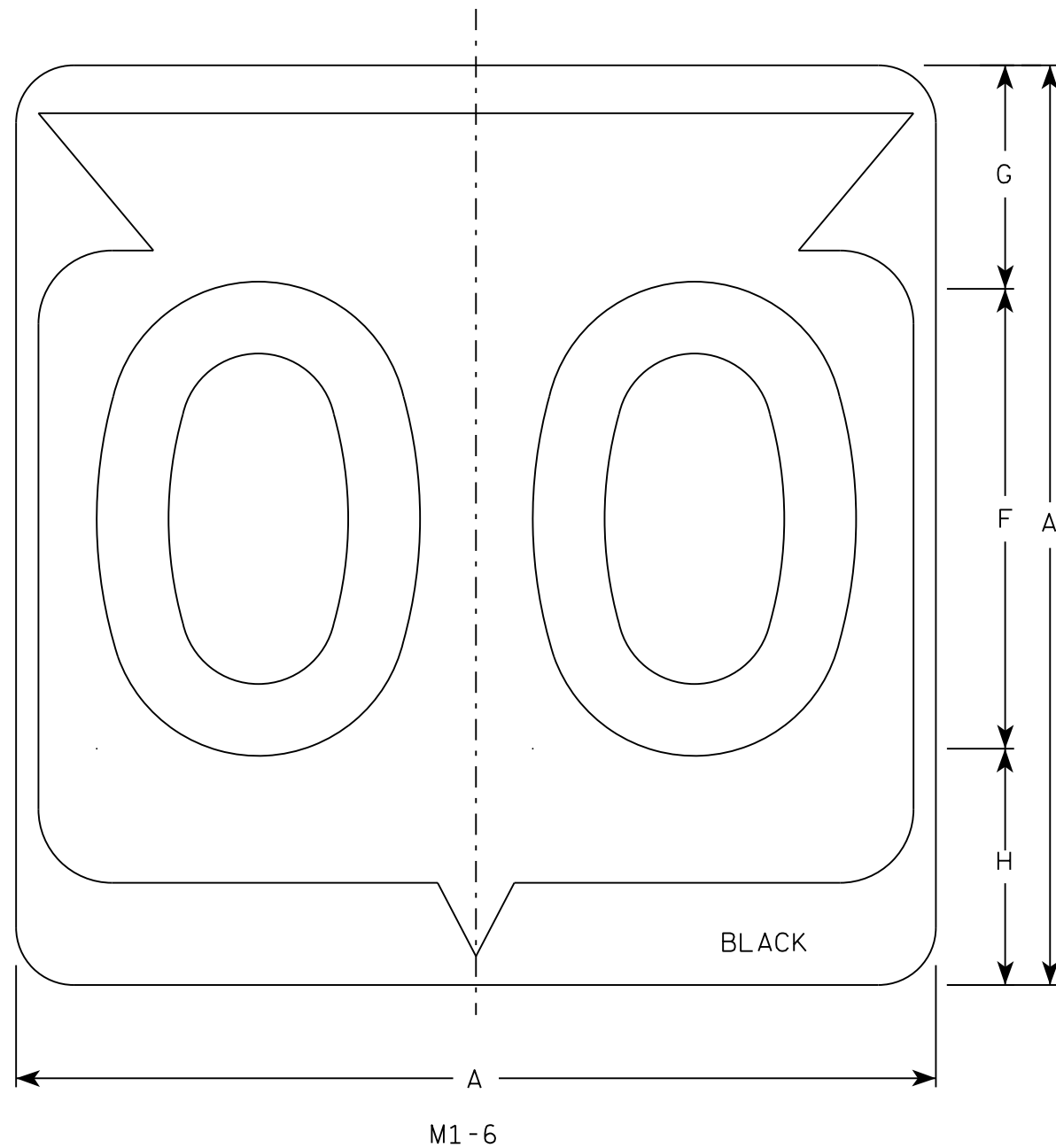
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-51.2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - D except 3 number signs Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

STATE ROUTE MARKER  
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

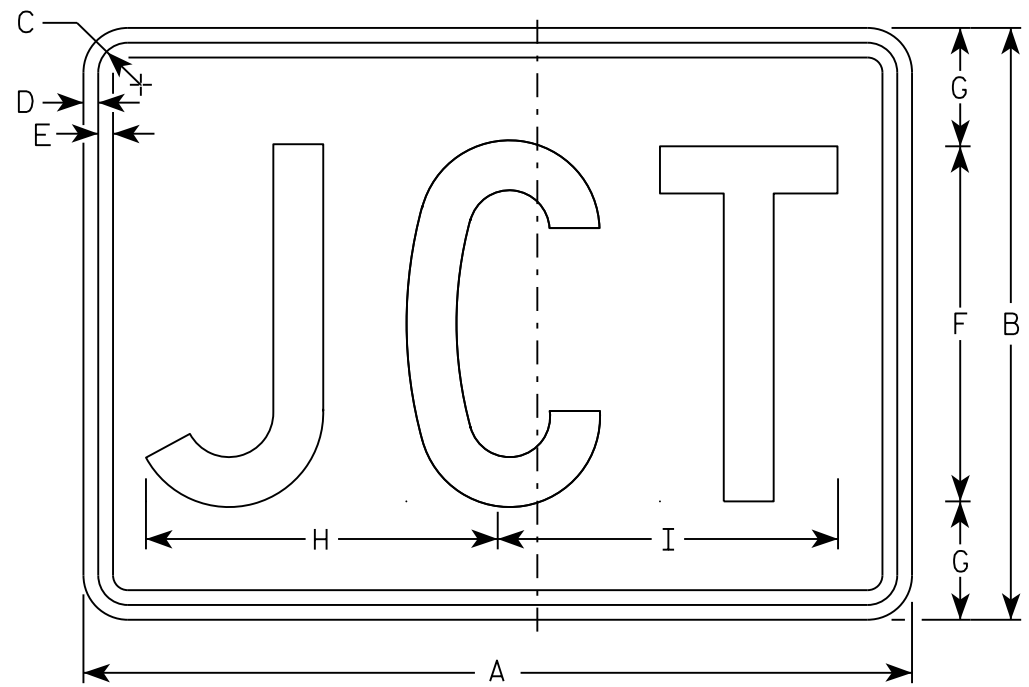
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

7

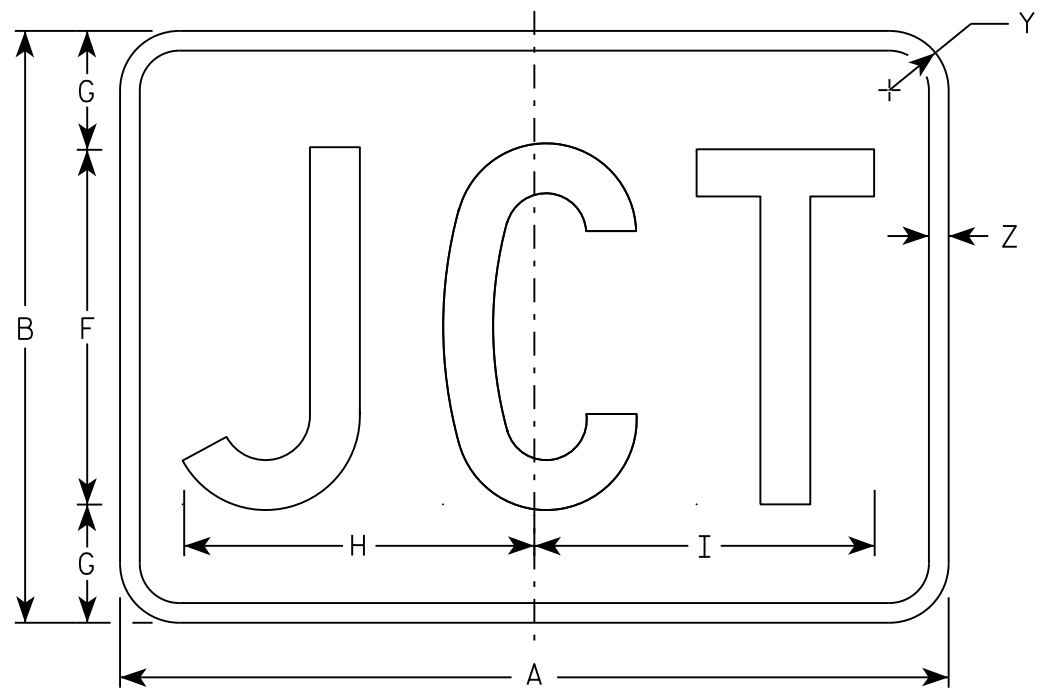
7

NOTES

1. Sign is Type II - Type H
2. Color:
  - Background - See note 5
  - Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White  
 Message - Black  
 MB2-1 Background - Blue  
 Message - White  
 MK2-1 Background - Green  
 Message - White  
 MM2-1 Background - White  
 Message - Green  
 MN2-1 Background - Brown  
 Message - White  
 MP2-1 Background - White  
 Message - Blue  
 MR2-1 Background - Brown  
 Message - Yellow



M2-1  
MM2-1  
MP2-1



MB2-1  
MK2-1  
MN2-1  
MR2-1

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN  
M2-1

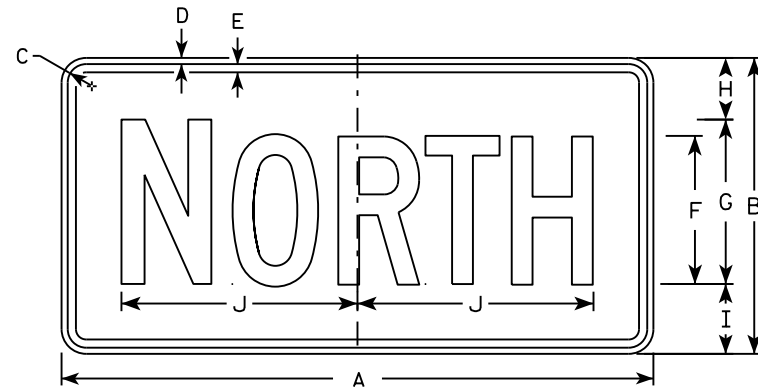
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

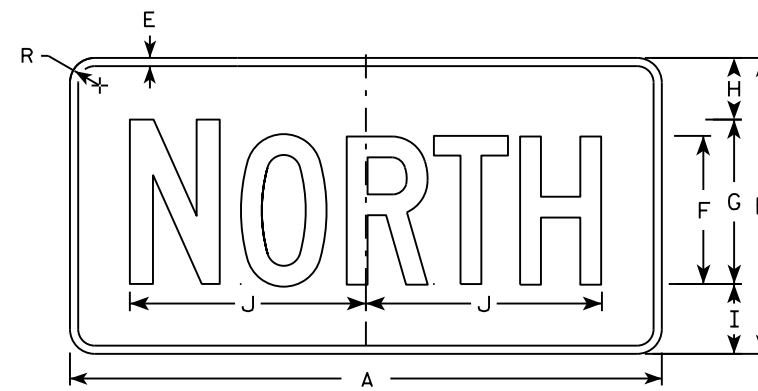
DATE 10/15/15 PLATE NO. M2-1.12

NOTES

- All Signs Type II - Type H
- Color:
  - Background - See note 5
  - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White  
 Message - Black  
 MB3-1 thru MB3-4 Background - Blue  
 Message - White  
 MK3-1 thru MK3-4 Background - Green  
 Message - White  
 MM3-1 thru MM3-4 Background - White  
 Message - Green  
 MN3-1 thru MN3-4 Background - Brown  
 Message - White  
 MP3-1 thru MP3-4 Background - White  
 Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.



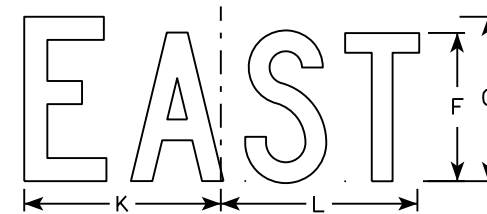
M3-1  
MM3-1  
MP3-1



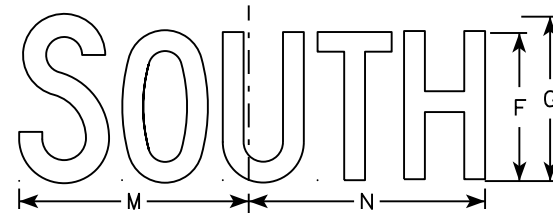
MB3-1  
MK3-1  
MN3-1



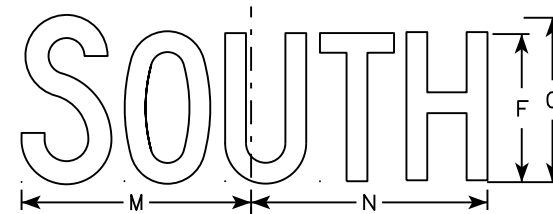
M3-2  
MM3-2  
MP3-2



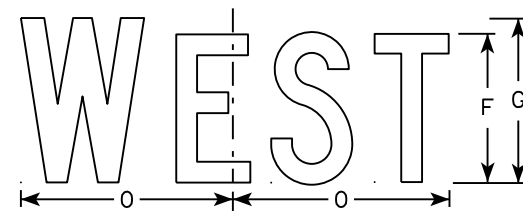
MB3-2  
MK3-2  
MN3-2



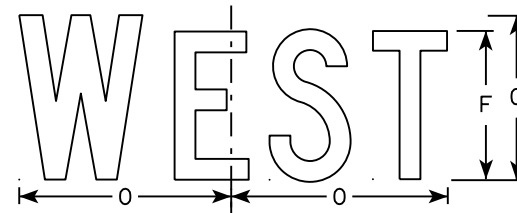
M3-3  
MM3-3  
MP3-3



MB3-3  
MK3-3  
MN3-3



M3-4  
MM3-4  
MP3-4



MB3-4  
MK3-4  
MN3-4

7

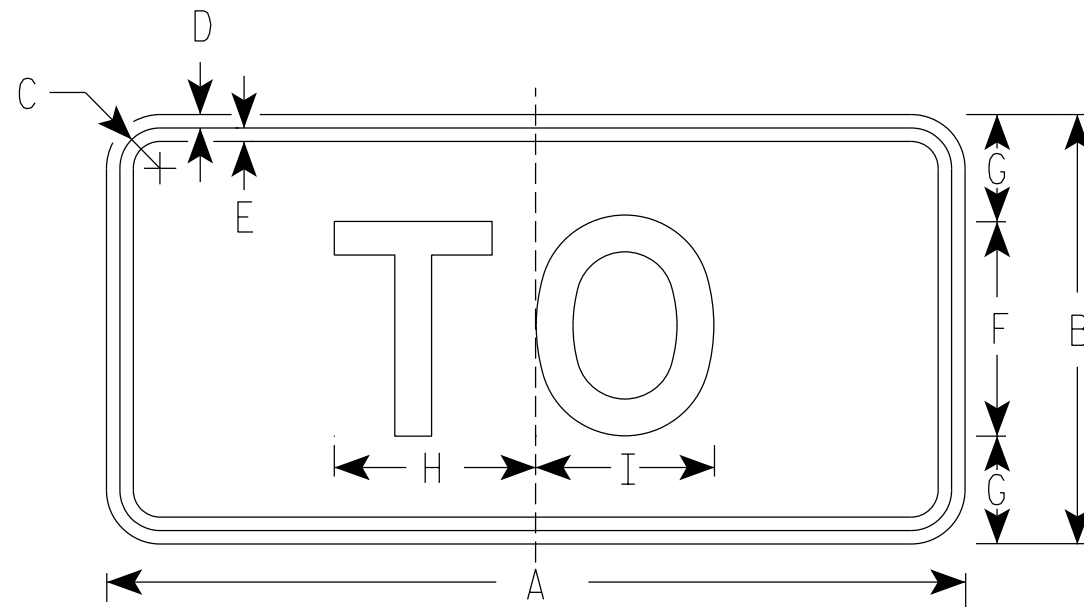
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS  
M3-1 thru M3-4  
SERIES

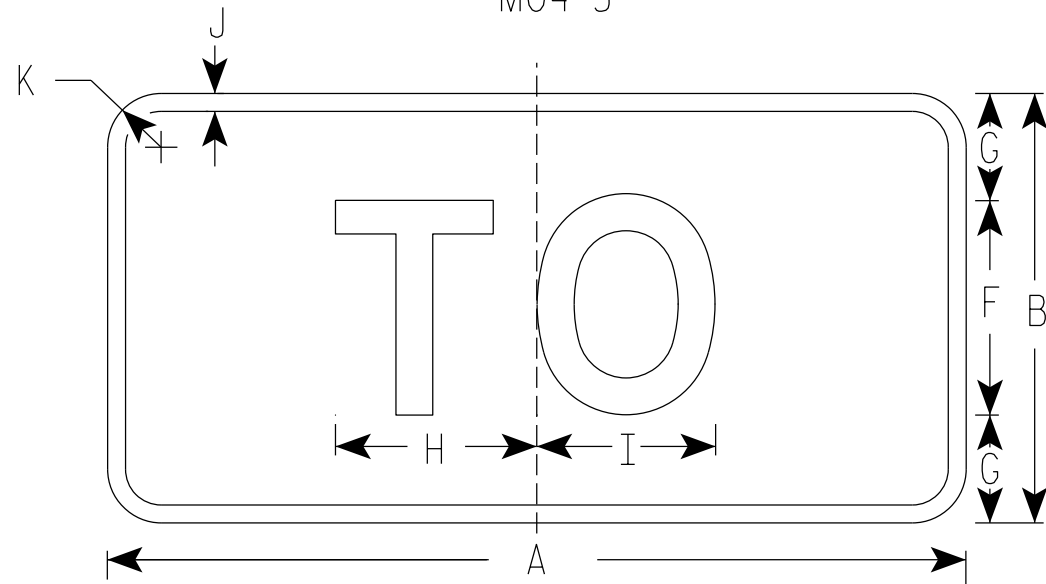
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14



M4-5  
MM4-5  
MP4-5  
M04-5



MB4-5  
MK4-5  
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - See note 5  
Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White  
Message - Black  
MB4-5 Background - Blue  
Message - White  
MK4-5 Background - Green  
Message - White  
MM4-5 Background - White  
Message - Green  
MN4-5 Background - Brown  
Message - White  
MP4-5 Background - White  
Message - Blue  
M04-5 Background - Orange Type F Reflective  
Message - Black

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN  
M4-5

WISCONSIN DEPT OF TRANSPORTATION

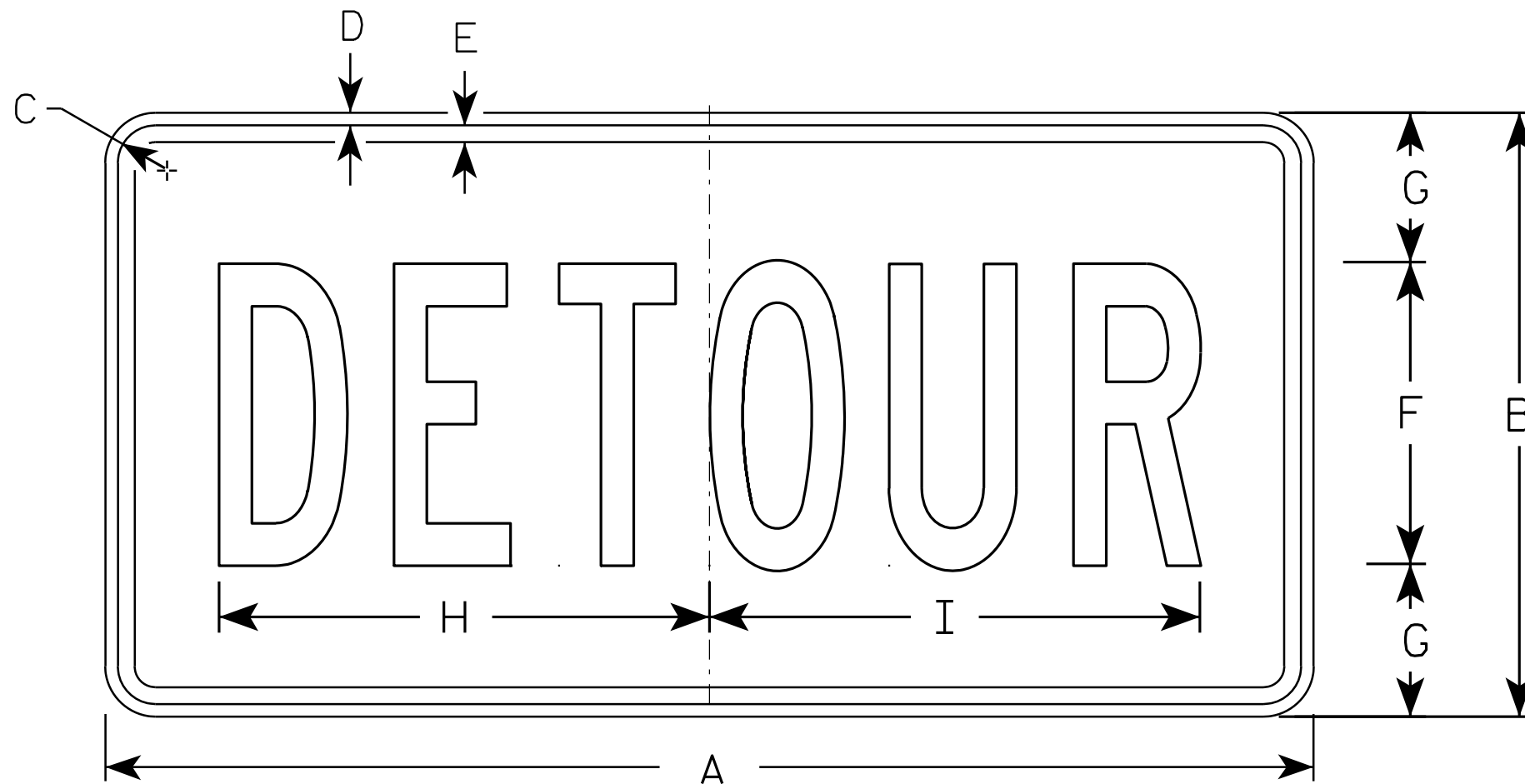
APPROVED *Matthew R. Rauch*  
State Traffic Engineer

DATE 03/7/19 PLATE NO. M4-5.9

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



M4-8

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

**STANDARD SIGN**  
**M4-8**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

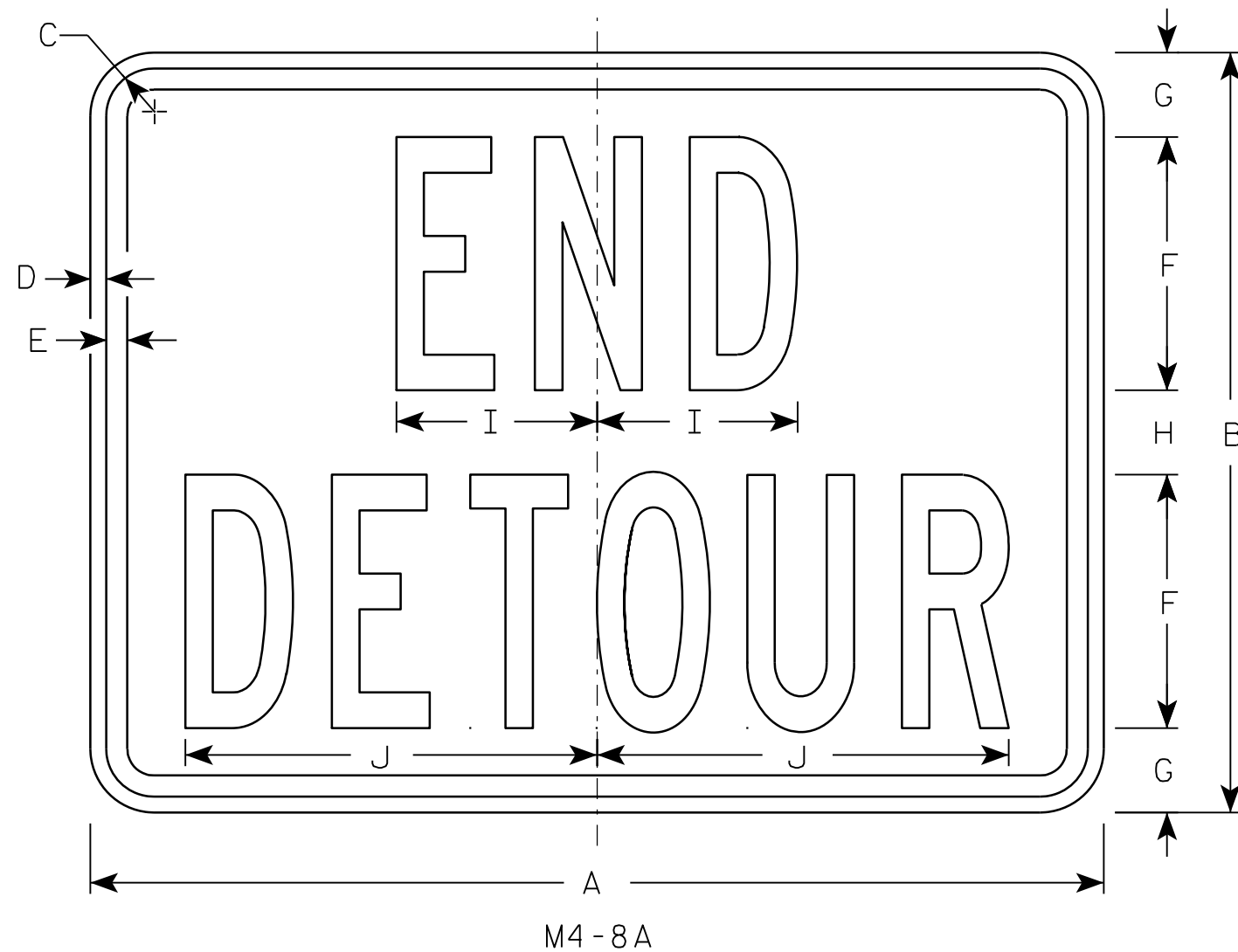
DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

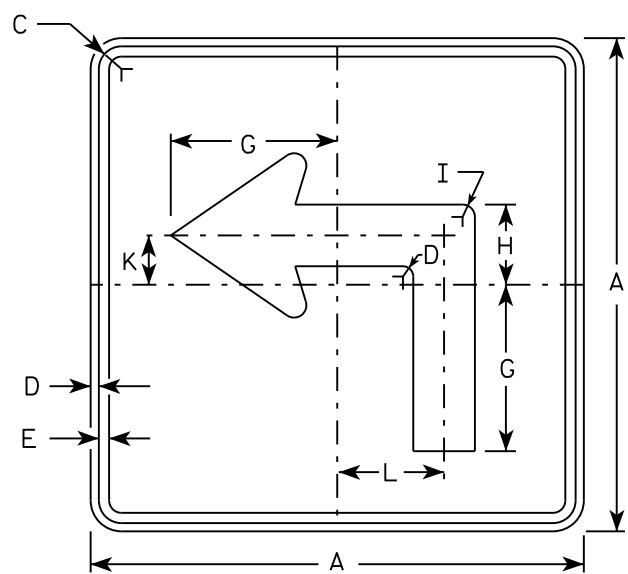
STANDARD SIGN  
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

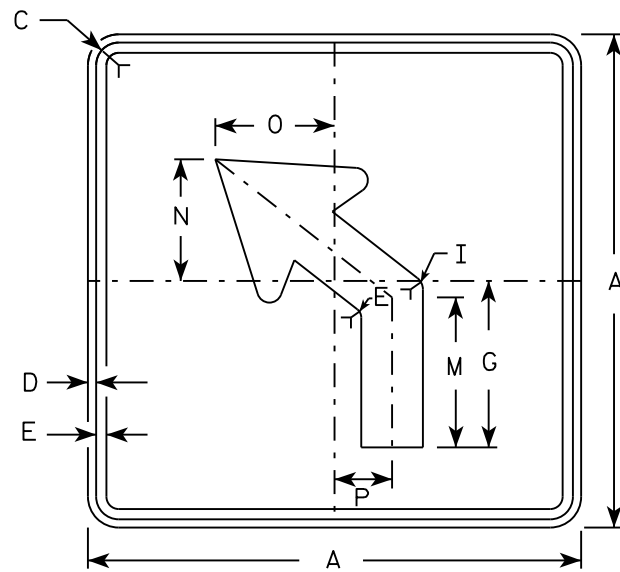
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

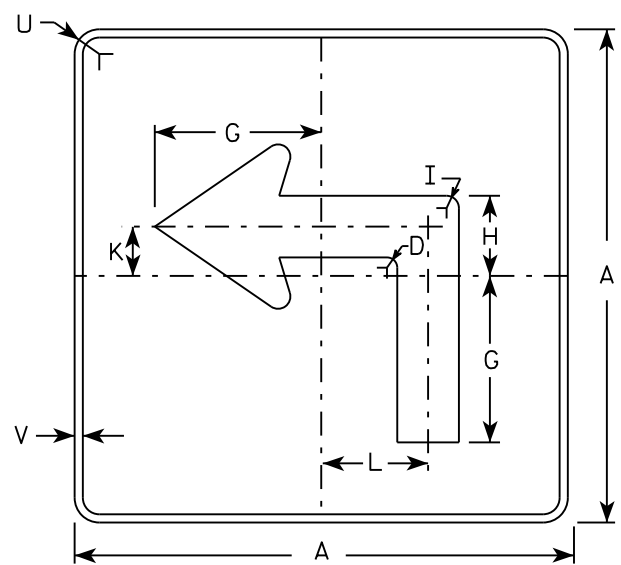
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



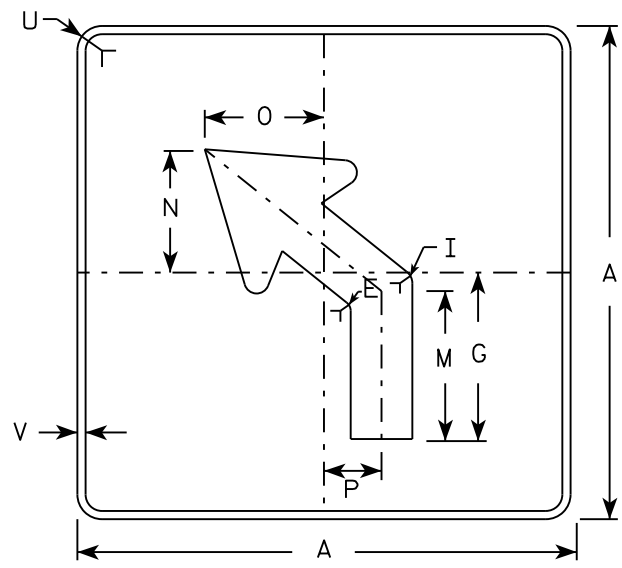
M5-1L  
MM5-1L  
M05-1L  
MP5-1L



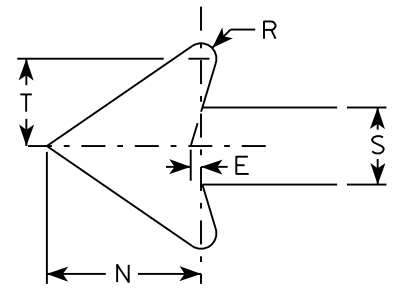
M5-2L  
MM5-2L  
M05-2L  
MP5-2L



MB5-1L  
MK5-1L  
MN5-1L  
MR5-1L



MB5-2L  
MK5-2L  
MN5-2L  
MR5-2L



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:  
Background - See note 4  
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- |                 |   |
|-----------------|---|
| M5-1 and M5-2   | Background - White                      |
|                 | Message - Black                         |
| MB5-1 and MB5-2 | Background - Blue                       |
|                 | Message - White                         |
| MK5-1 and MK5-2 | Background - Green                      |
|                 | Message - White                         |
| MM5-1 and MM5-2 | Background - White                      |
|                 | Message - Green                         |
| MN5-1 and MN5-2 | Background - Brown                      |
|                 | Message - White                         |
| M05-1 and M05-2 | Background - Orange - Type F Reflective |
|                 | Message - Black                         |
| MP5-1 and MP5-2 | Background - White - Type H Reflective  |
|                 | Message - Blue                          |
| MR5-1 and MR5-2 | Background - Brown                      |
|                 | Message - Yellow                        |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

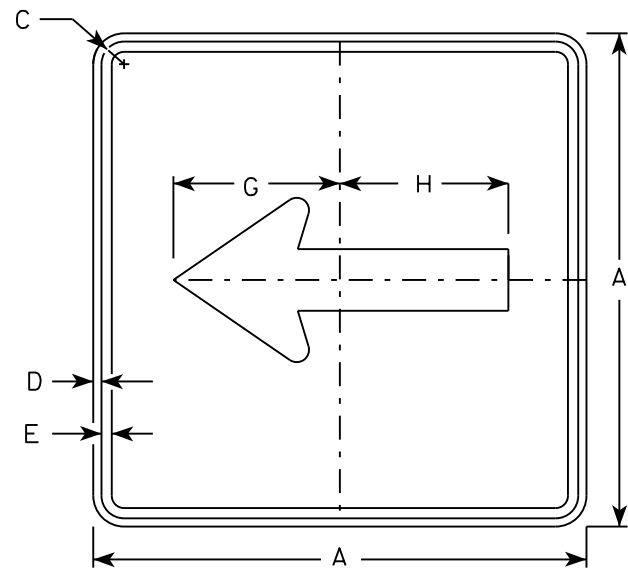
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN  
M5-1 & M5-2

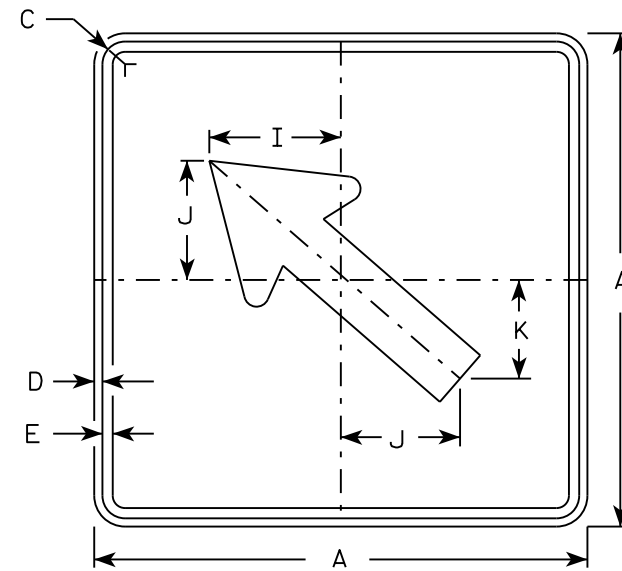
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

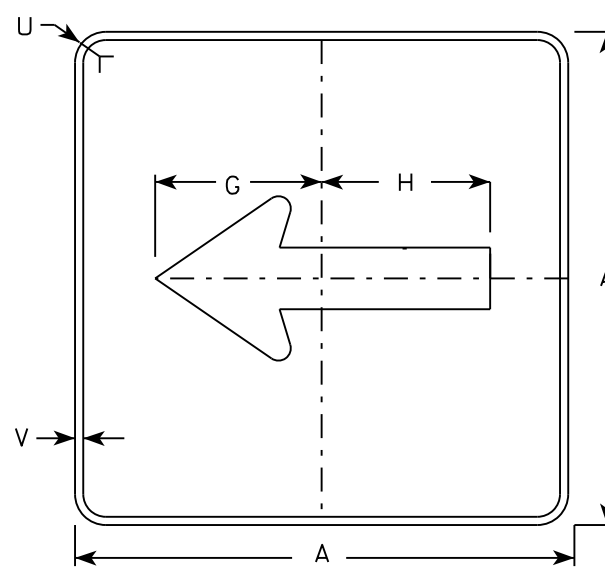
DATE 10/15/15 PLATE NO. M5-1.13



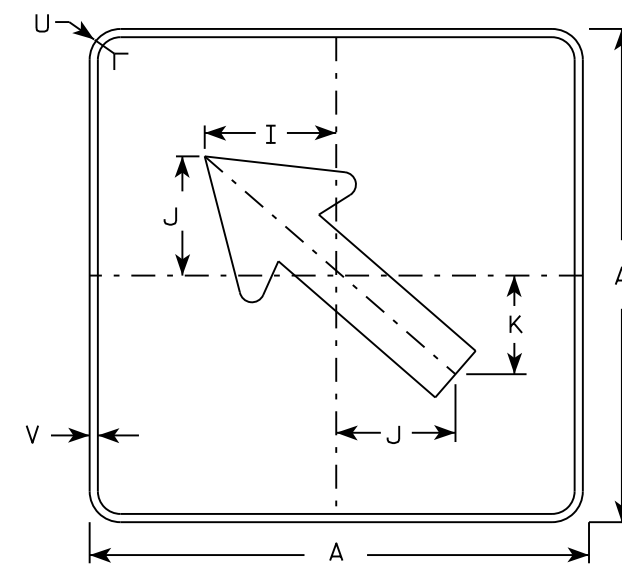
M6-1  
MM6-1  
M06-1  
MP6-1



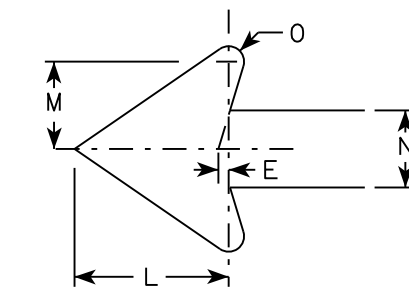
M6-2  
MM6-2  
M06-2  
MP6-2



MB6-1  
MK6-1  
MN6-1  
MR6-1



MB6-2  
MK6-2  
MN6-2  
MR6-2



NOTES

- Signs are Type II - Type H except as Shown
- Color:  
Background - See note 4  
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White  
Message - Black  
MB6-1 and MB6-2 Background - Blue  
Message - White  
MK6-1 and MK6-2 Background - Green  
Message - White  
MM6-1 and MM6-2 Background - White  
Message - Green  
MN6-1 and MN6-2 Background - Brown  
Message - White  
M06-1 and M06-2 Background - Orange - Type F Reflective  
Message - Black  
MP6-1 and MP6-2 Background - White  
Message - Blue  
MR6-1 and MR6-2 Background - Brown  
Message - Yellow

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN  
M6-1 & M6-2  
SERIES

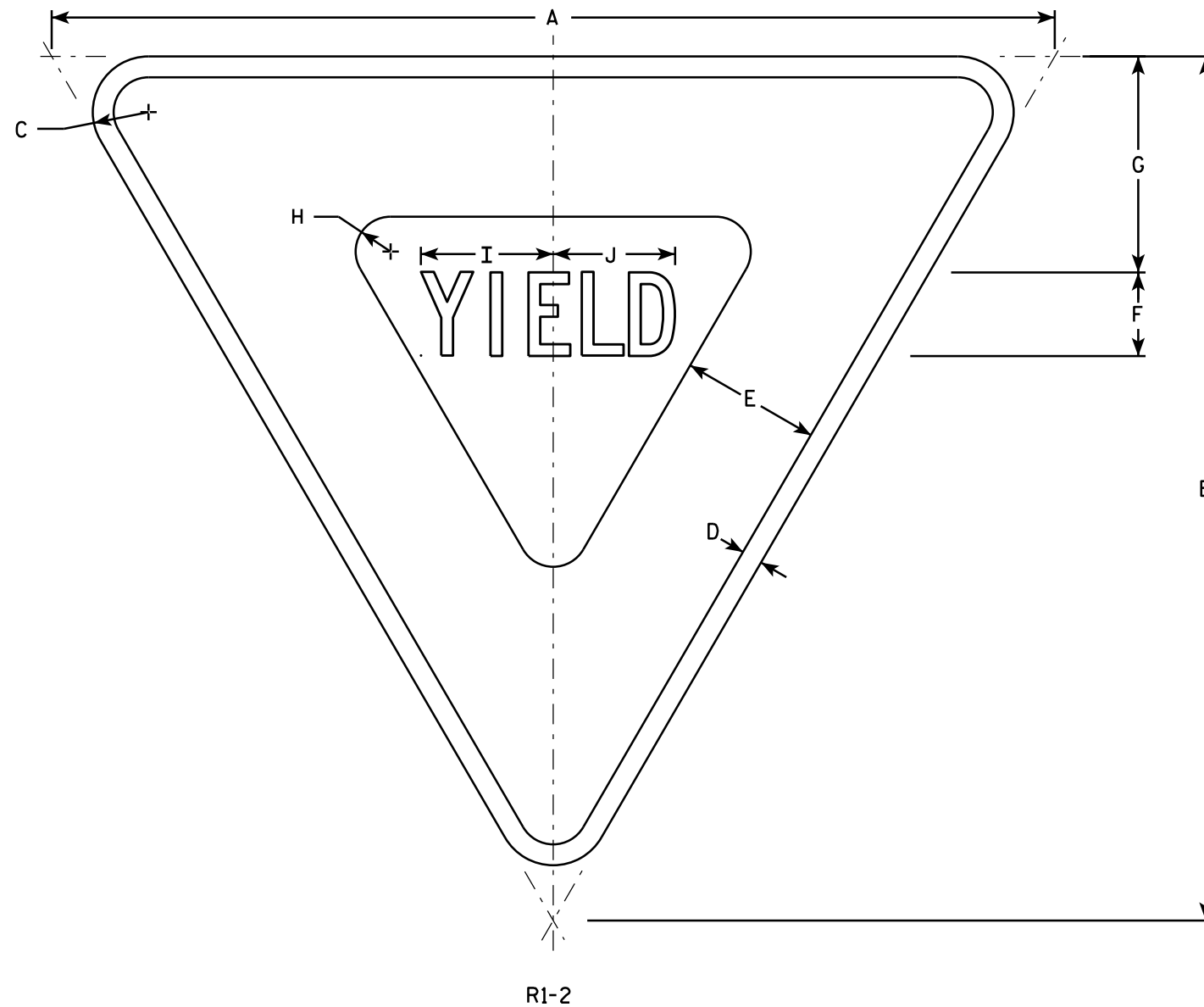
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

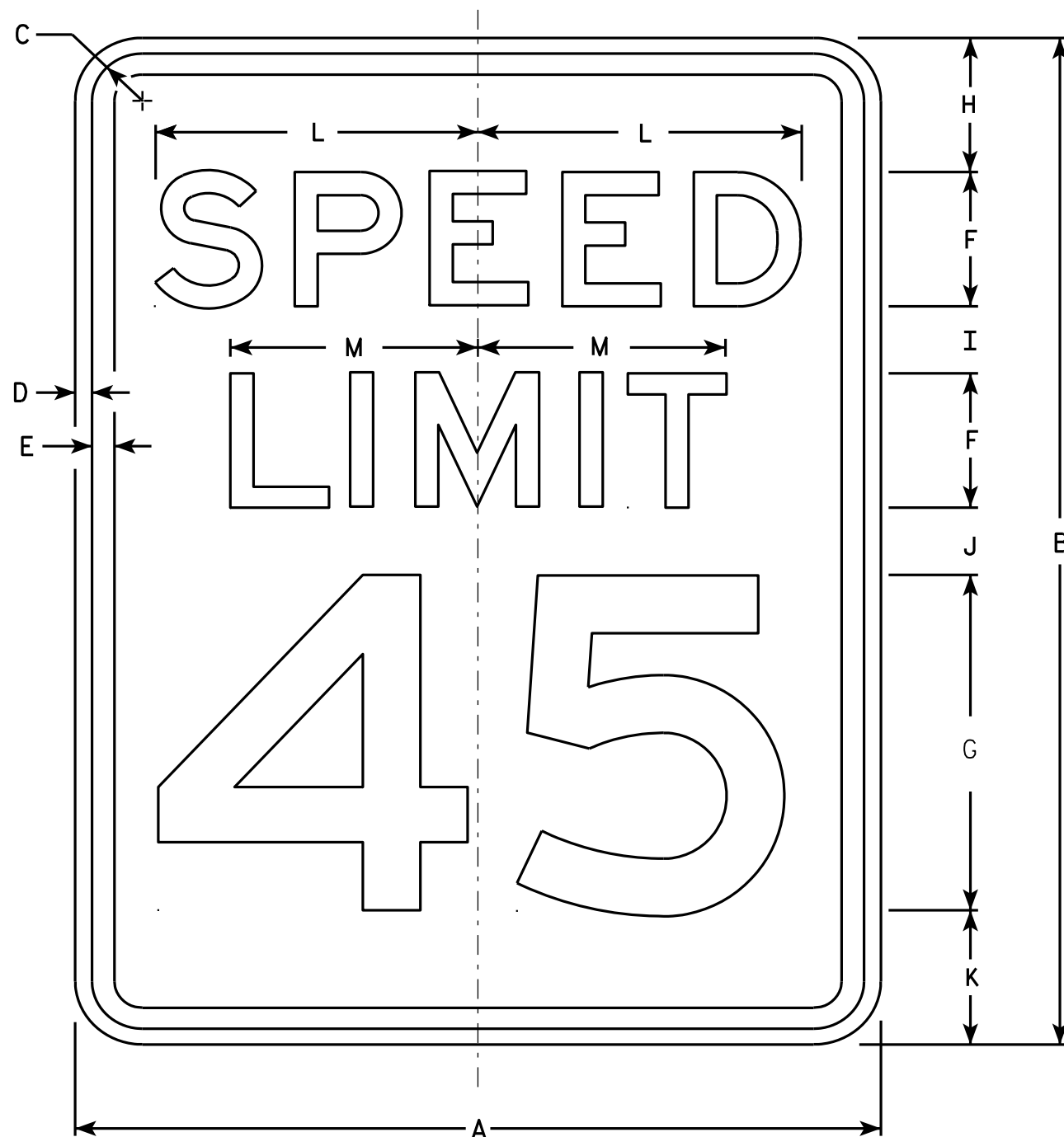
**STANDARD SIGN**  
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/13/14 PLATE NO. R1-2.12

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ **E**



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN  
R2-1

WISCONSIN DEPT OF TRANSPORTATION

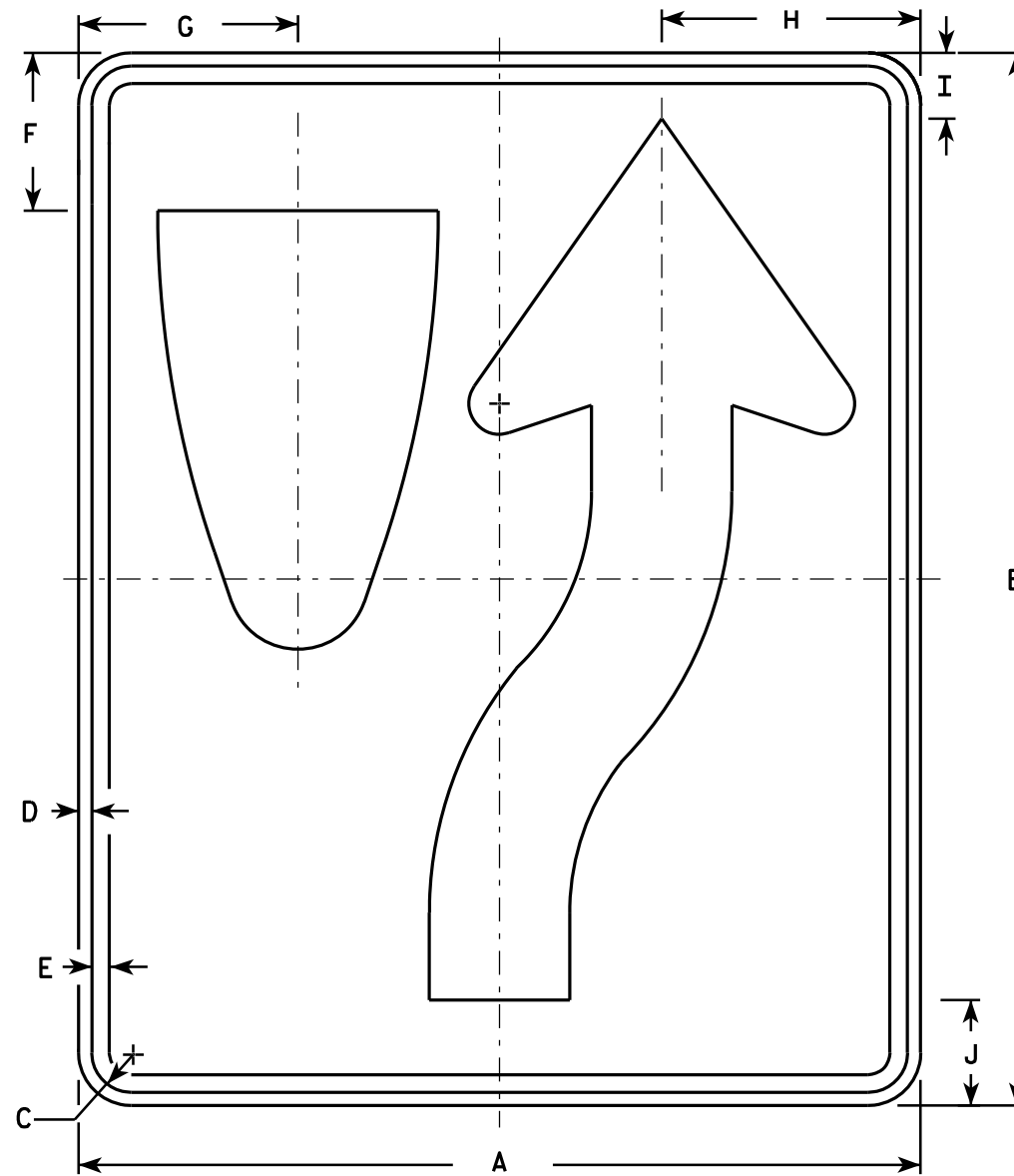
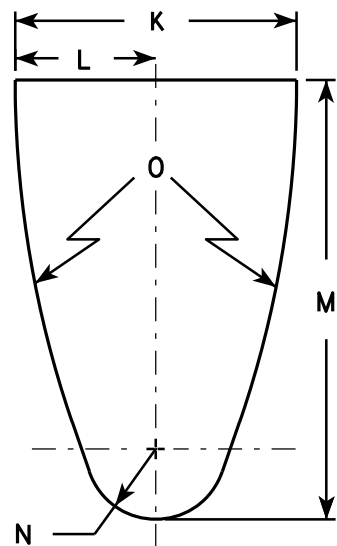
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

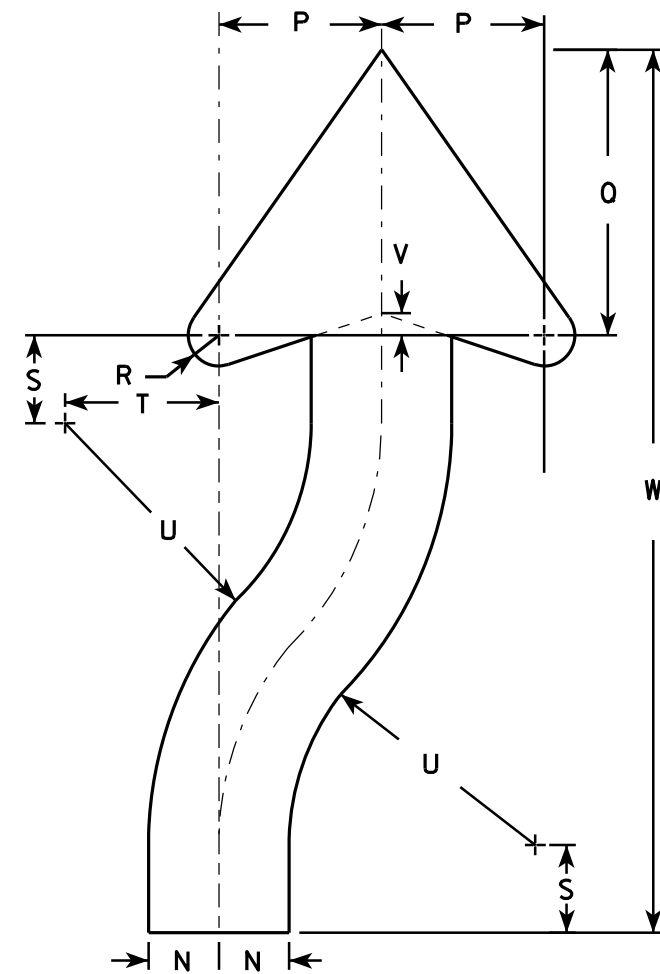
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

**NOTES**

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:  
Background - White  
Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



R4-7



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

**STANDARD SIGN**  
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

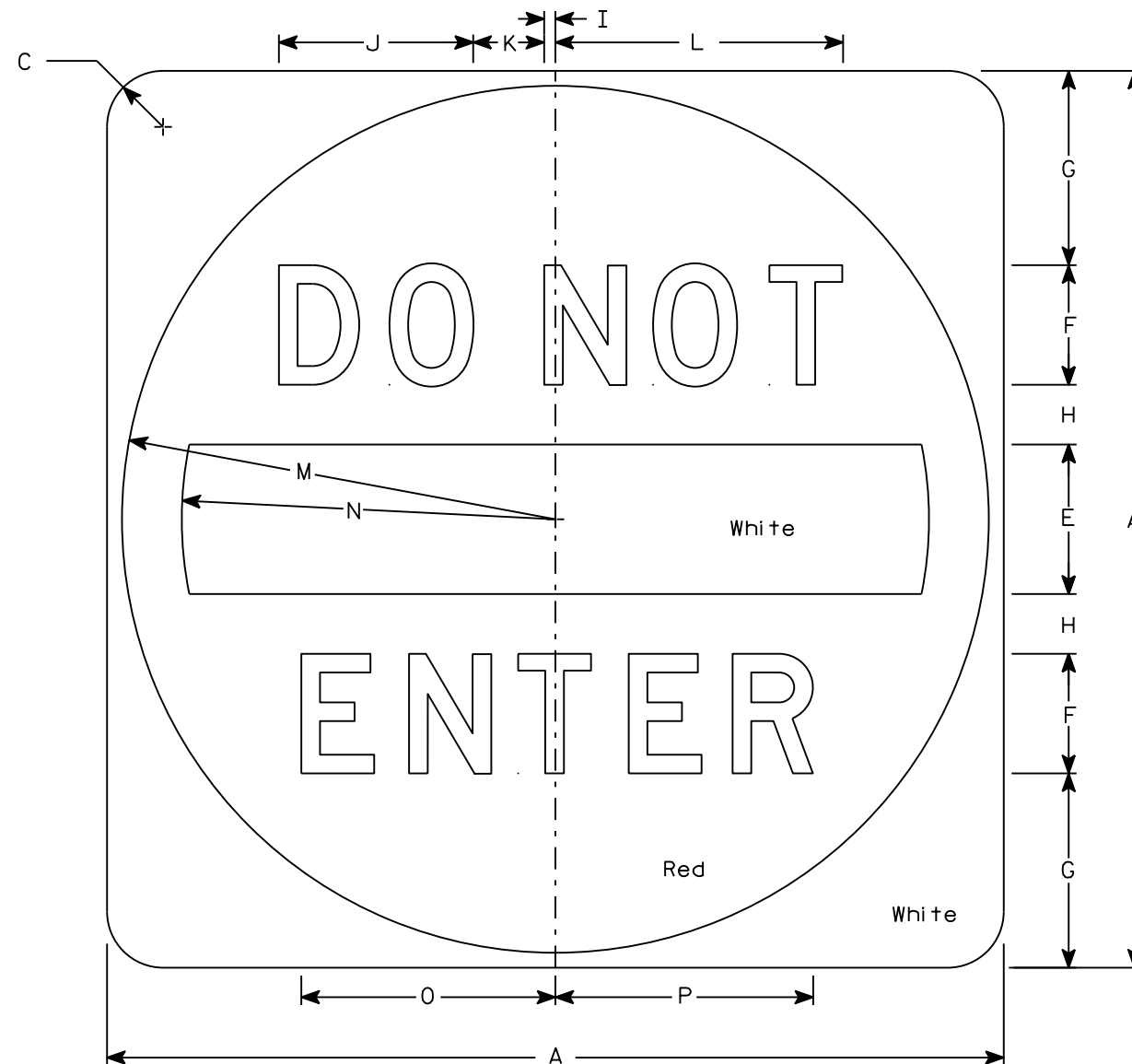
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - See detail  
Message - White
3. Message Series - D



R5-1

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

STANDARD SIGN  
R5-1

WISCONSIN DEPT OF TRANSPORTATION

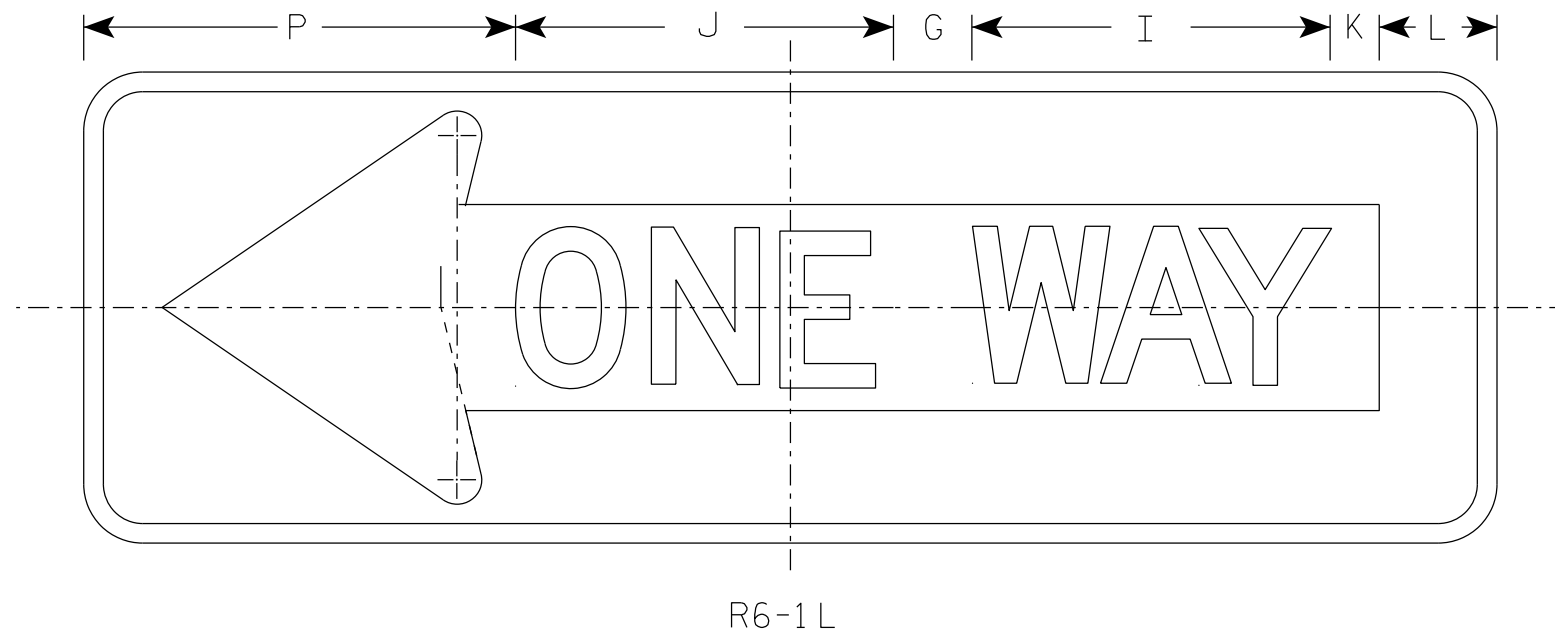
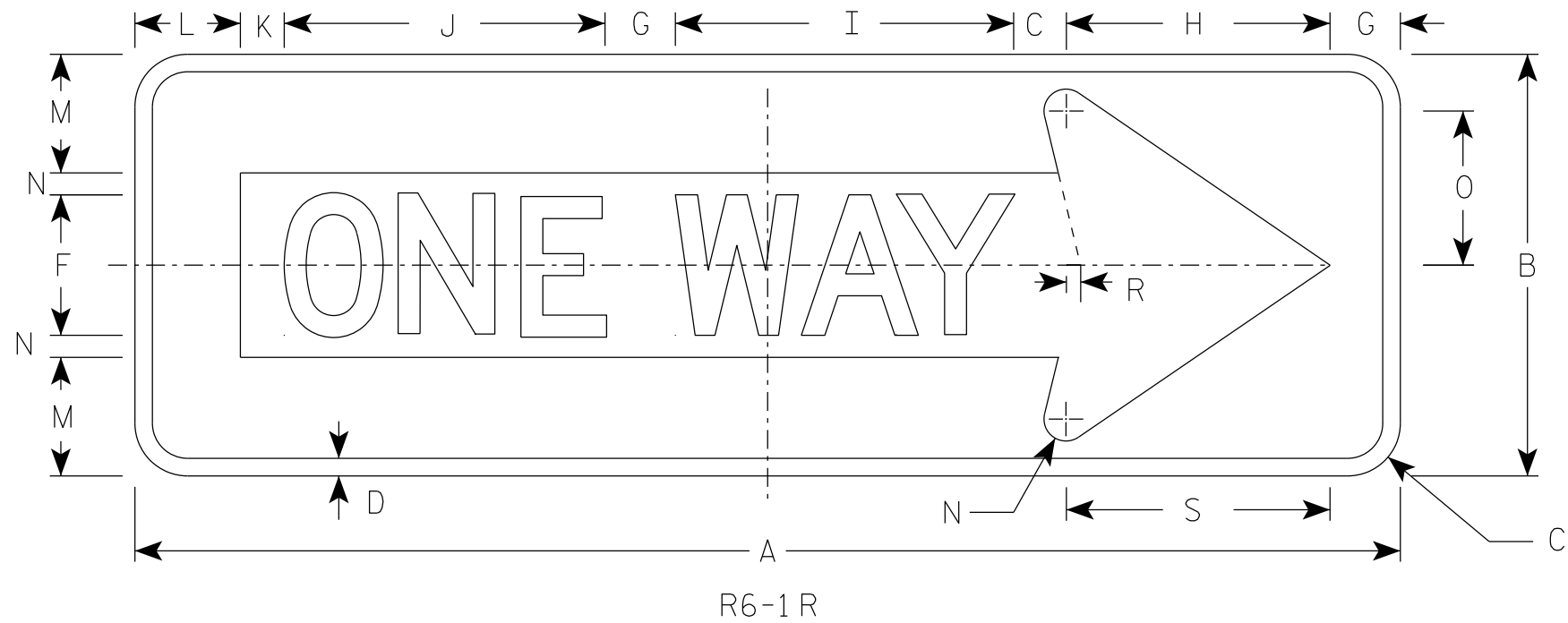
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - BLACK  
Message - BLACK LEGEND & WHITE ARROW & BORDER
3. Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	12	1 1/2	1/2		4	2	7 1/2	9 5/8	9 1/8	1 1/4	3	3 3/8	5/8	4 3/8	11		3/8	7 1/2								3.0
2M	54	18	2 1/4	3/4		6	3	11 1/4	13 5/8	14 1/2	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
3	54	18	2 1/4	3/4		6	3	11 1/4	13 5/8	14 1/2	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
4	54	18	2 1/4	3/4		6	3	11 1/4	13 5/8	14 1/2	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
5																											

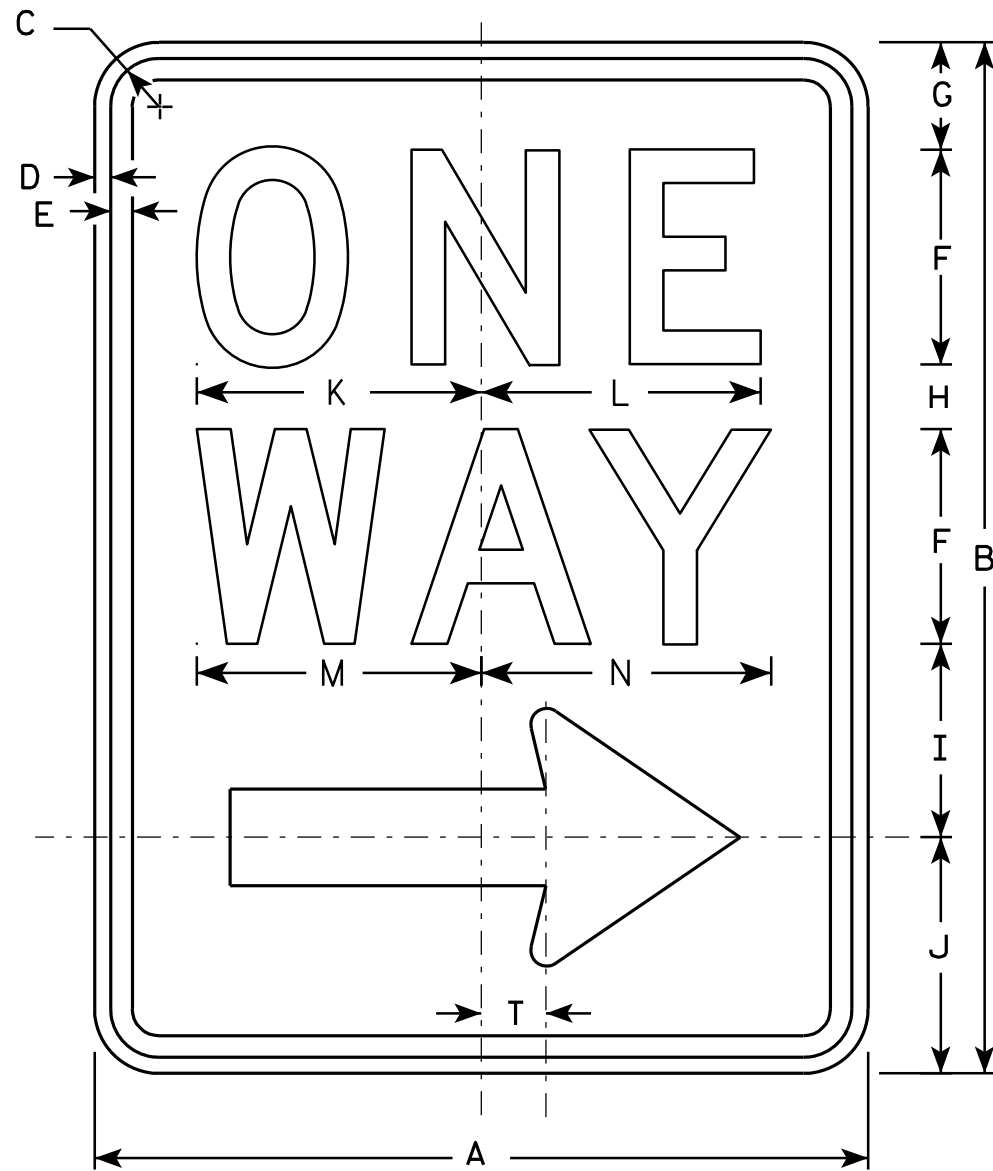
STANDARD SIGN  
R6-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 07/11/18 PLATE NO. R6-1.3

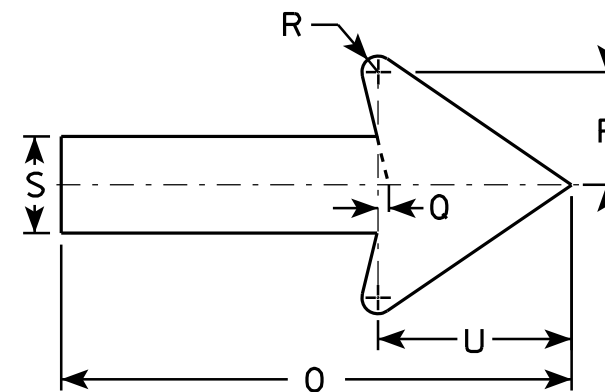




R6-2R

**NOTES**

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

**STANDARD SIGN**  
**R6-2 R&L**

*WISCONSIN DEPT OF TRANSPORTATION*

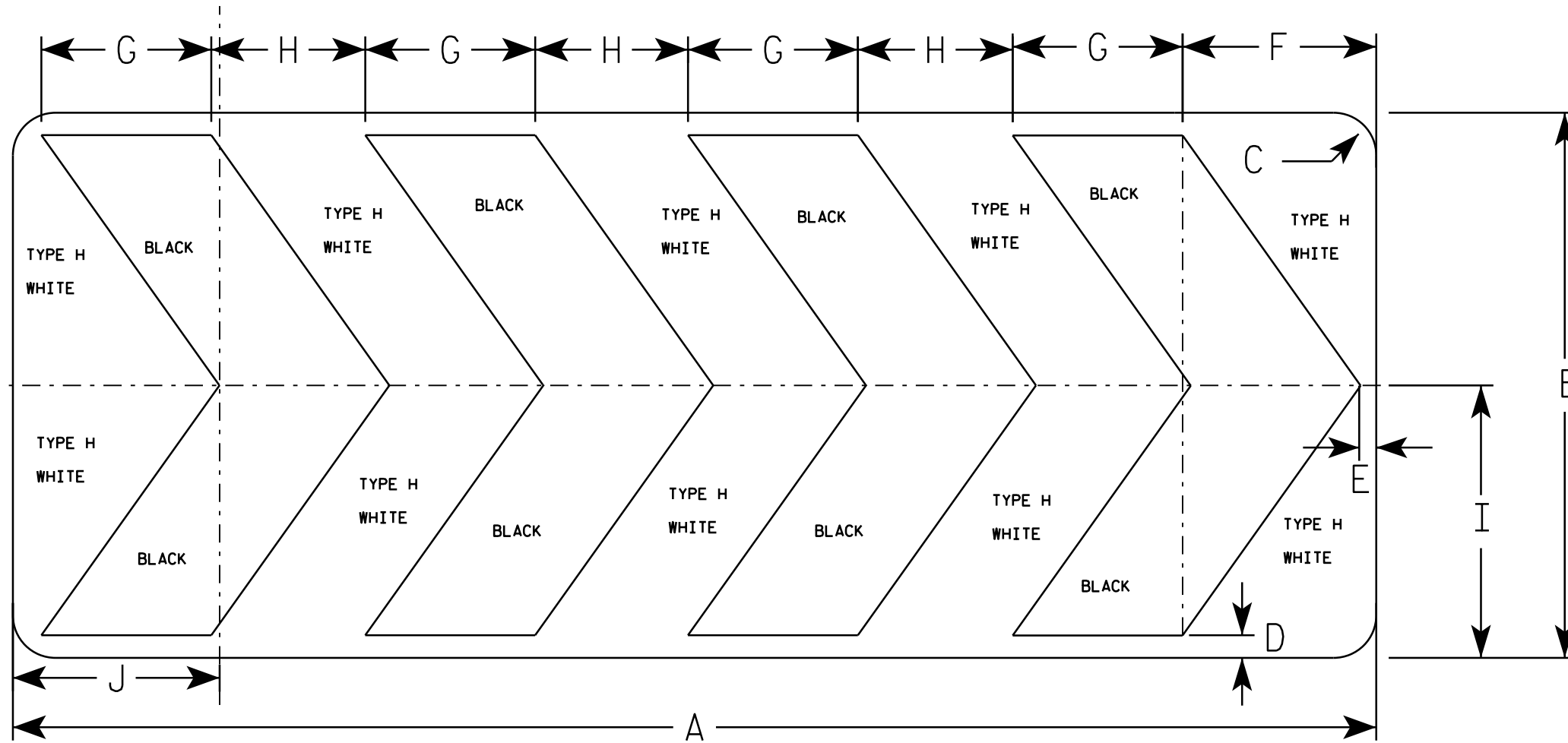
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ **E**

**NOTES**

1. Sign is Type II - Type H Reflective
2. Color:  
Background - WHITE  
Message - BLACK
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R6-4B

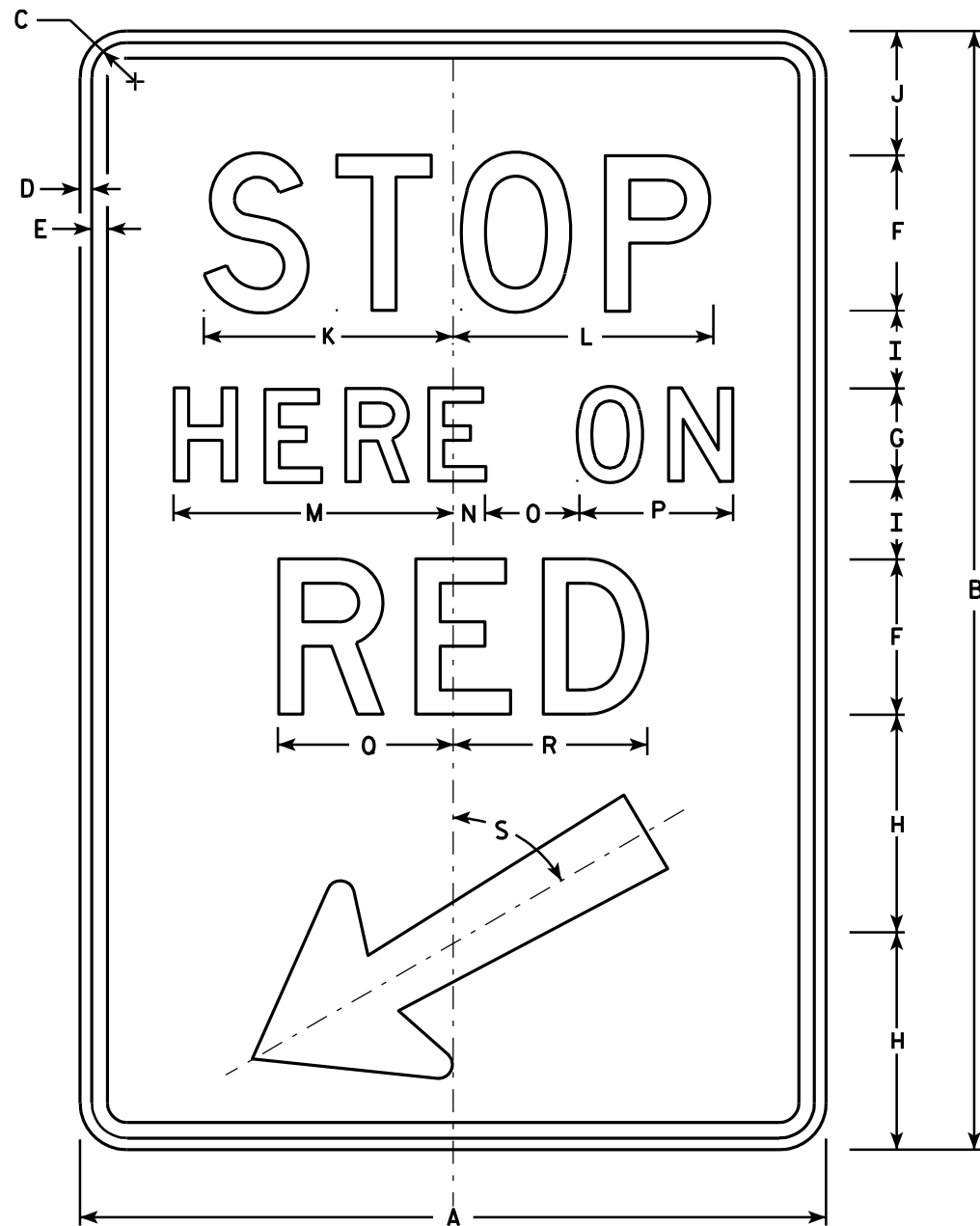
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
2M	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
3																											
4																											
5																											

**STANDARD SIGN**  
**R6-4B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

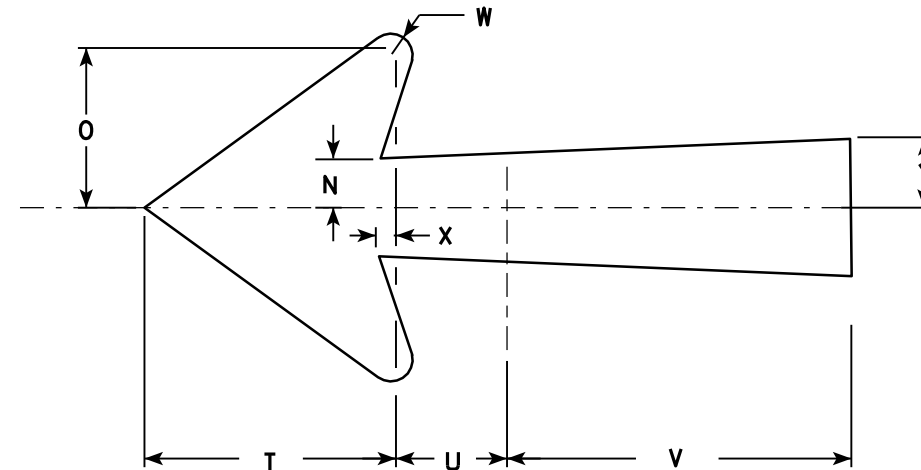
DATE 8/21/14 PLATE NO. R6-4.3



R10-6

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8	6.0	
2M	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8	6.0	
3																											
4																											
5																											

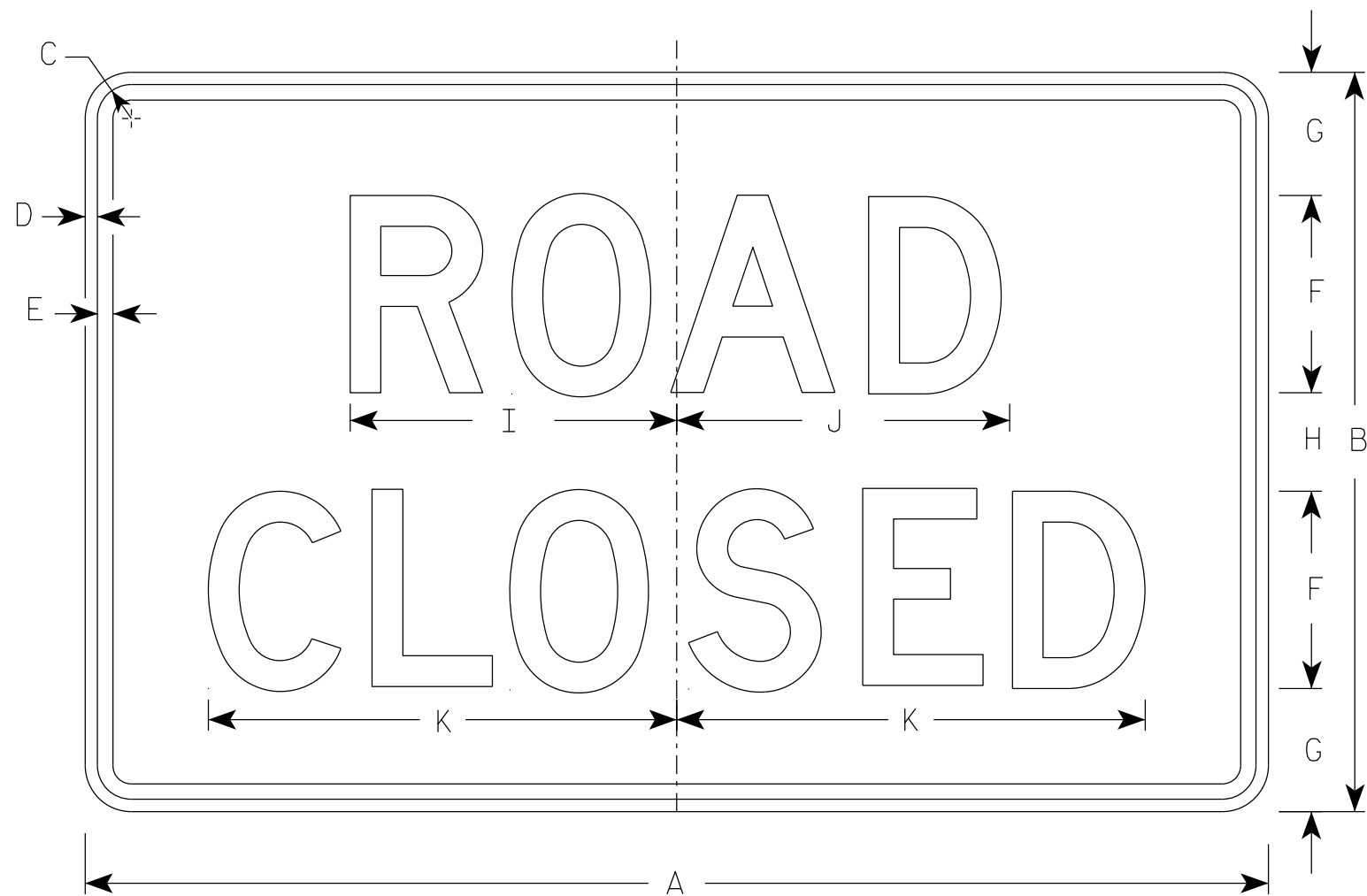
**STANDARD SIGN**  
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

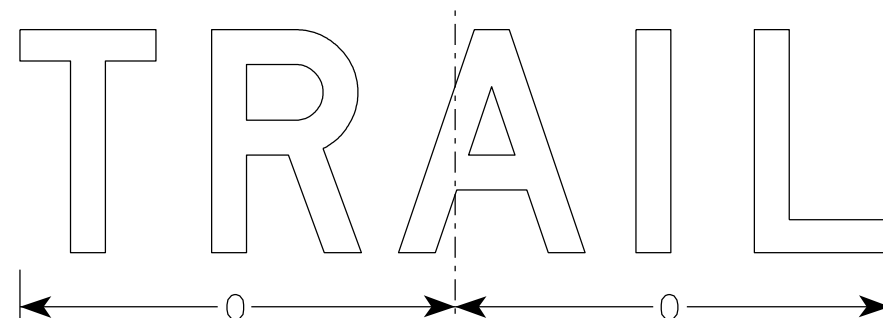
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E



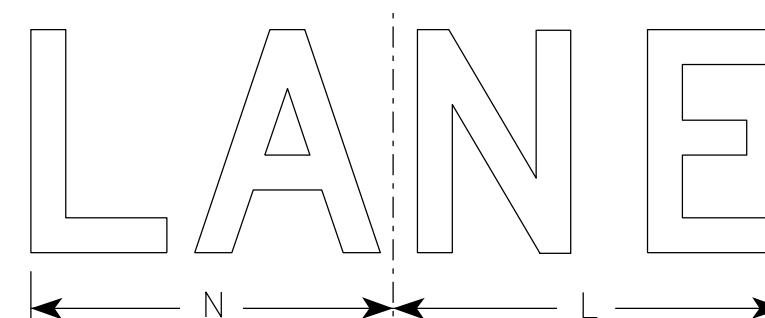
R11-2



R11-2R



R11-2T



R11-2L

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN  
R11-2

WISCONSIN DEPT OF TRANSPORTATION

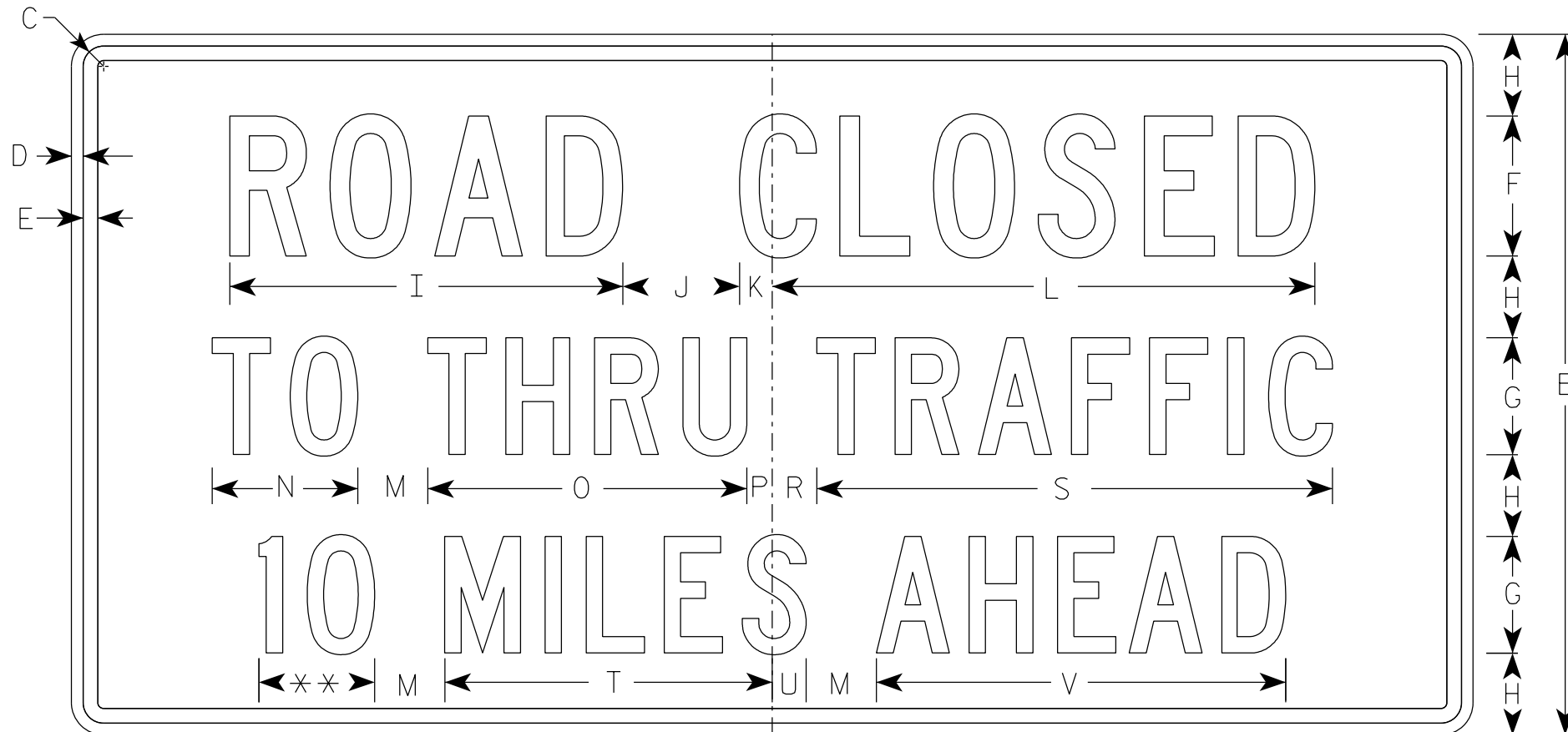
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ **E**

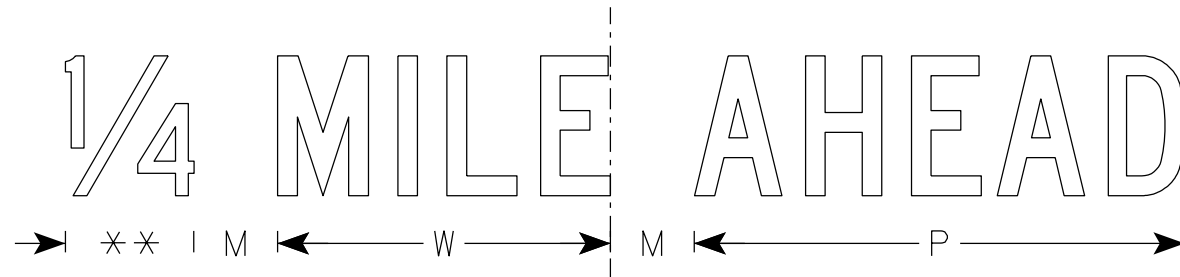
NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

\*\* See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/4	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8			4.5	
2S	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8			12.5	
2M	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8			12.5	
3																											
4																											
5																											

STANDARD SIGN  
R11-3

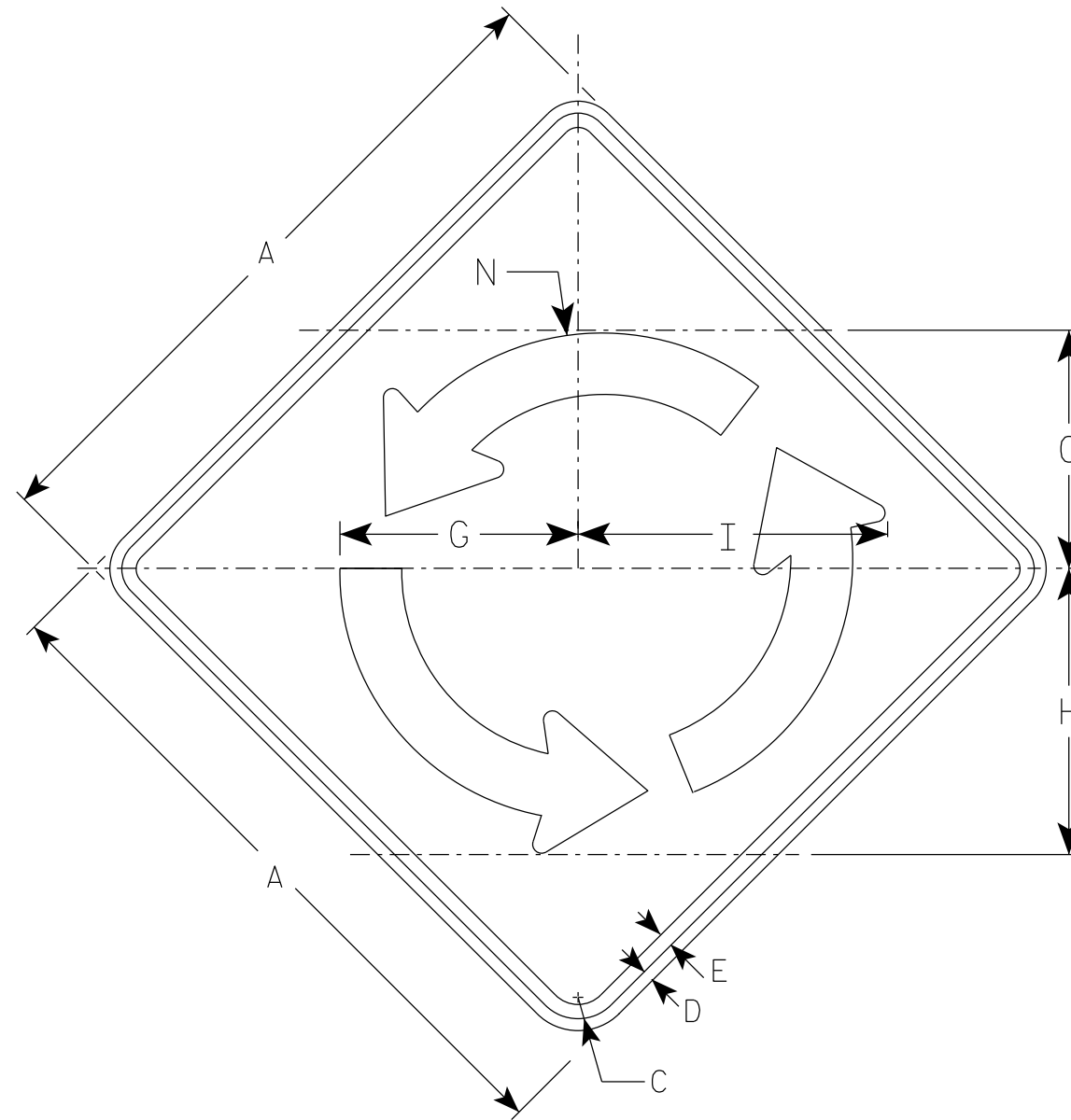
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 6/14/2021 PLATE NO. R11-3.9

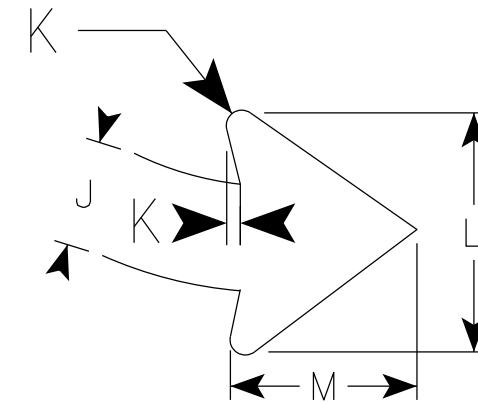
NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black



W2-6

Arrow Detail



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Area sq. ft.
1																									
2S	30		1 3/8	1/2	5/8		10 3/8	12 1/2	13 1/2	2 3/4	3/8	6	4 3/4	11 1/8											6.25
2M	30		1 3/8	1/2	5/8		10 3/8	12 1/2	13 1/2	2 3/4	3/8	6	4 3/4	11 1/8											6.25
3	36		1 5/8	5/8	3/4		12 1/2	15	16 1/4	3 1/4	1/2	7 3/8	5 3/4	13 3/8											9.00
4	48		2 1/4	3/4	1		16 5/8	20	16 1/4	4 3/8	5/8	9 3/4	7 5/8	17 7/8											16.0
5																									

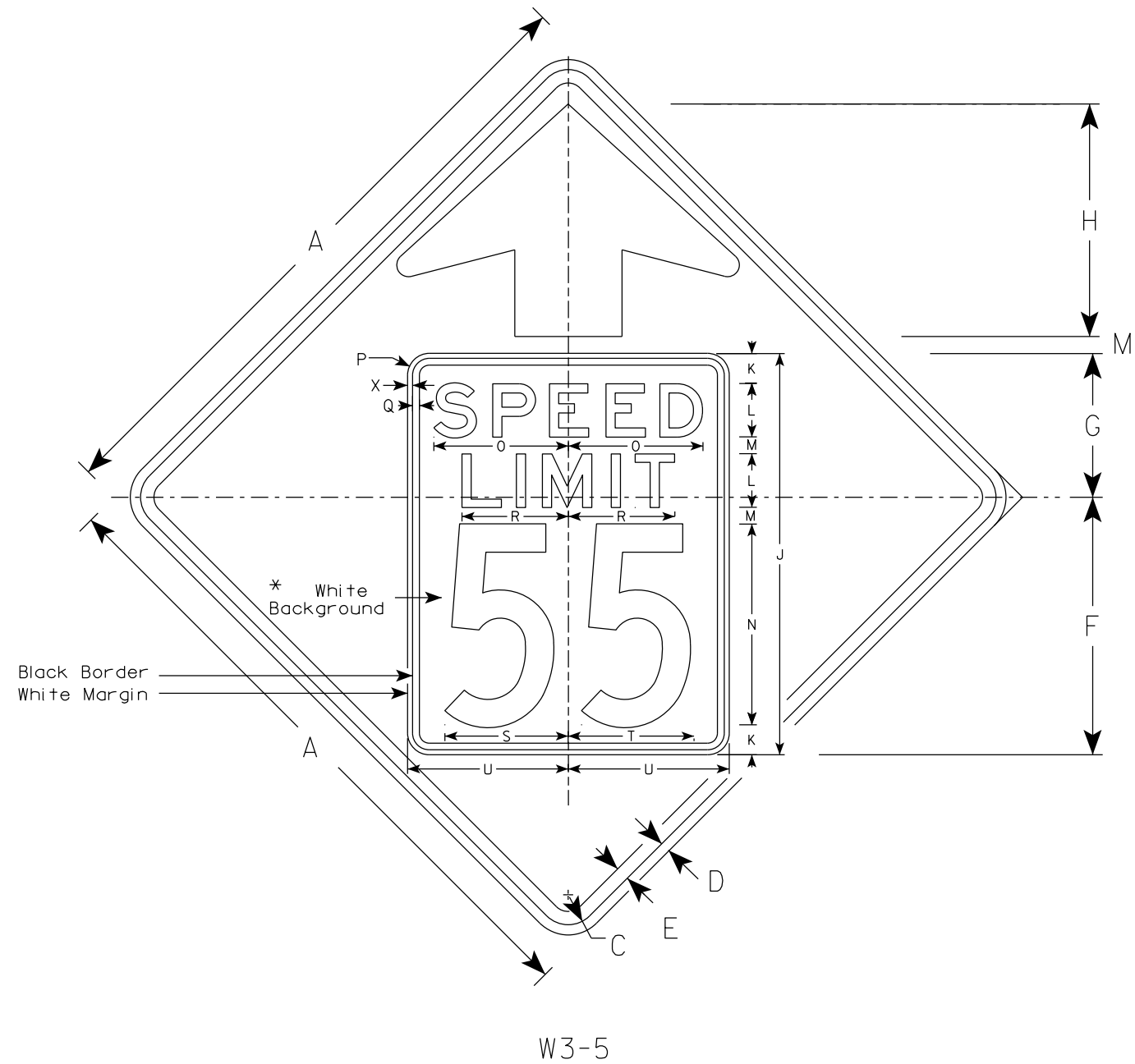
STANDARD SIGN  
W2-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/24/21 PLATE NO. W2-6.7

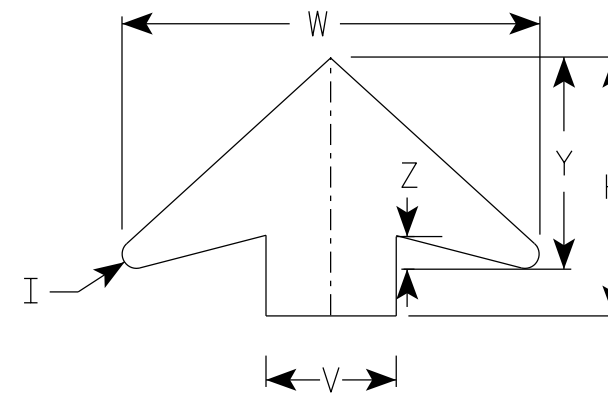
PROJECT NO: SHEET NO: **E**



NOTES

1. Sign is Type II - See Note 2 for Sheeting Type
2. Color: \*  
Background - Yellow\* (Type F Reflective)  
Message - Black
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

\*Speed Limit Sign shall have a White Background with black message (Type SH Reflective)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN  
W3-5

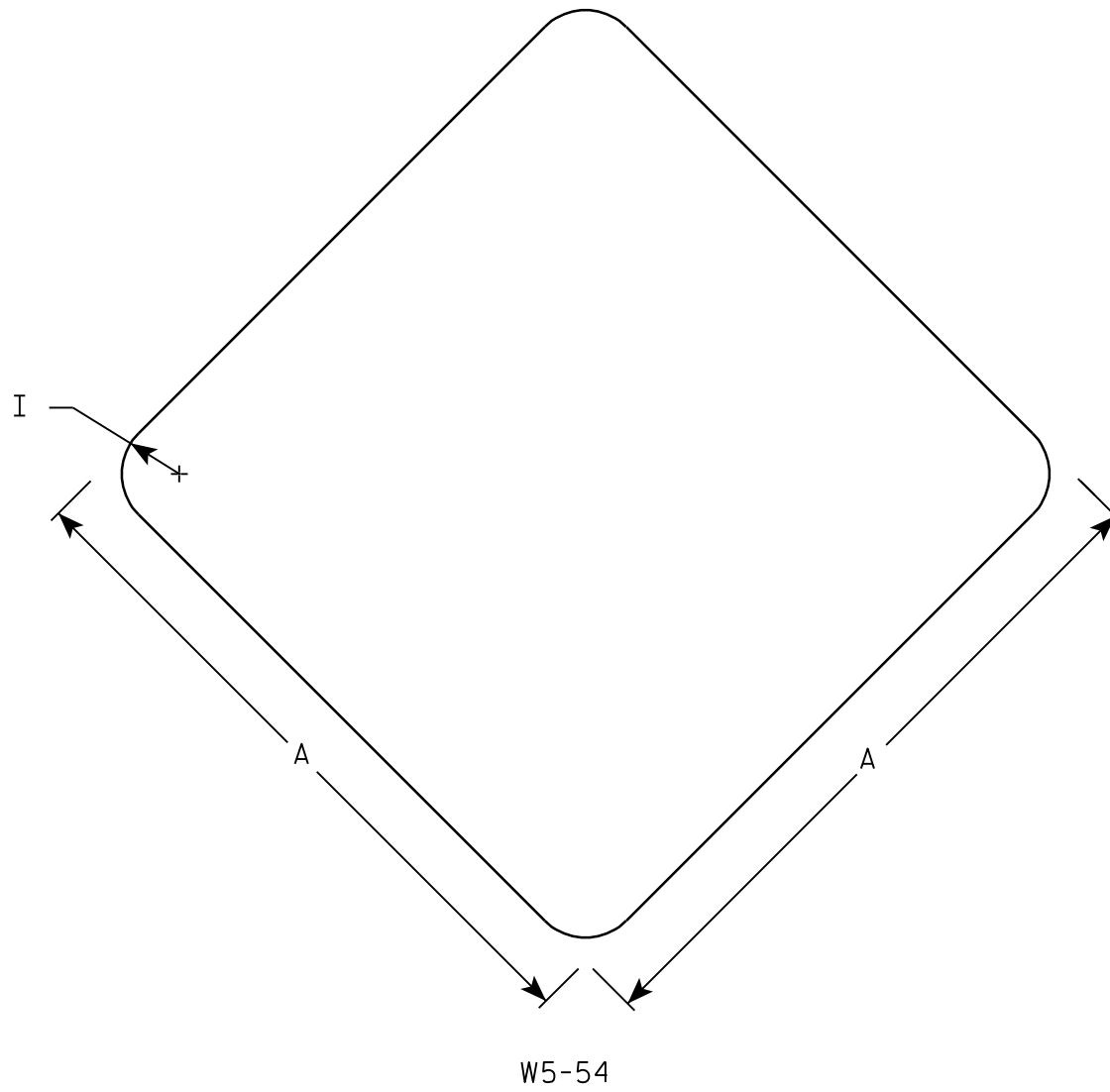
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 7/27/2020 PLATE NO. W3-5.6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.



7

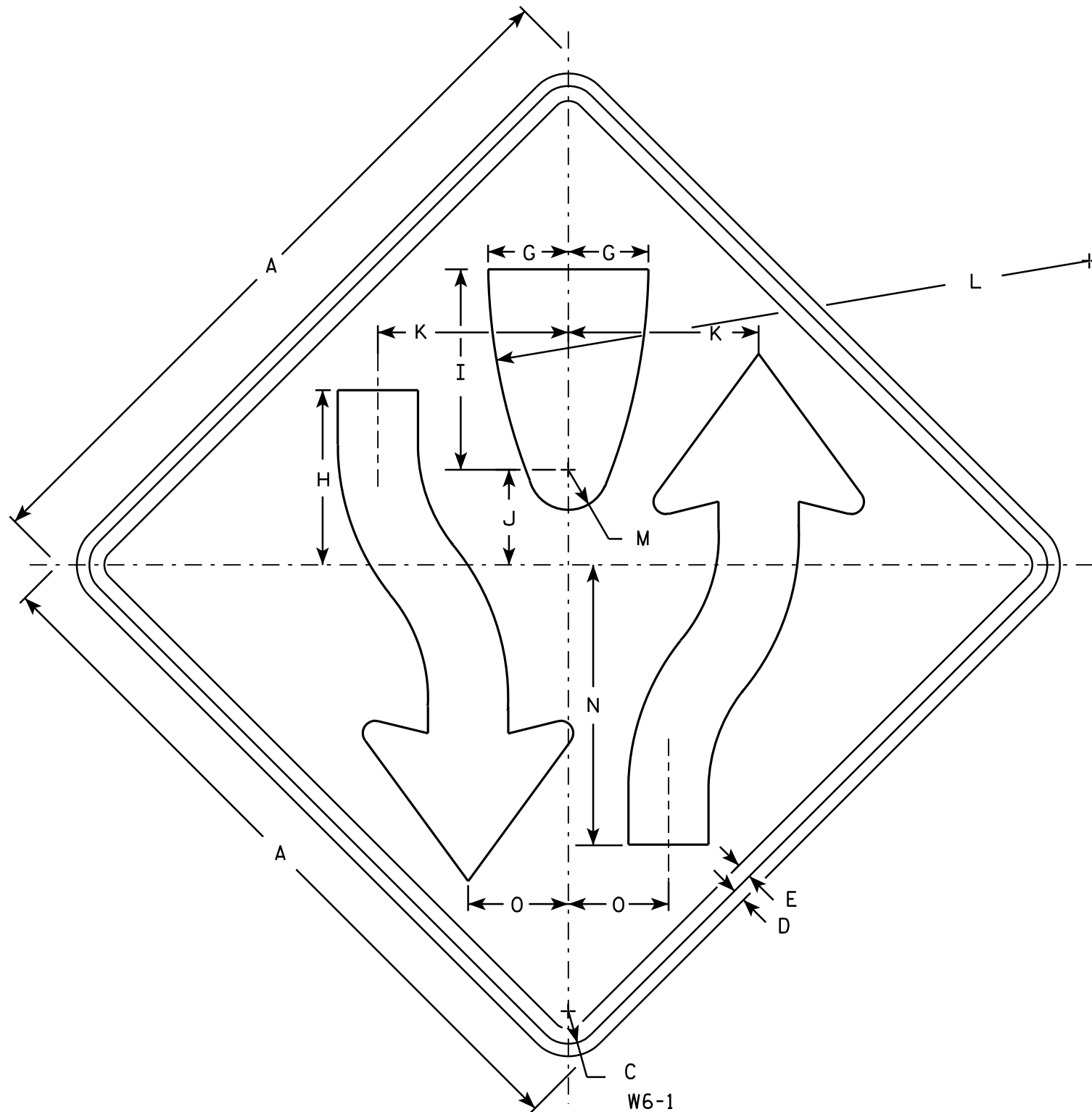
7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 1/2																		2.25
2M	18								1 1/2																		2.25
3																											
4																											
5																											

<b>STANDARD SIGN</b>	
W5-54	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	 For State Traffic Engineer
DATE <u>11/3/10</u>	PLATE NO. <u>W5-54.8</u>

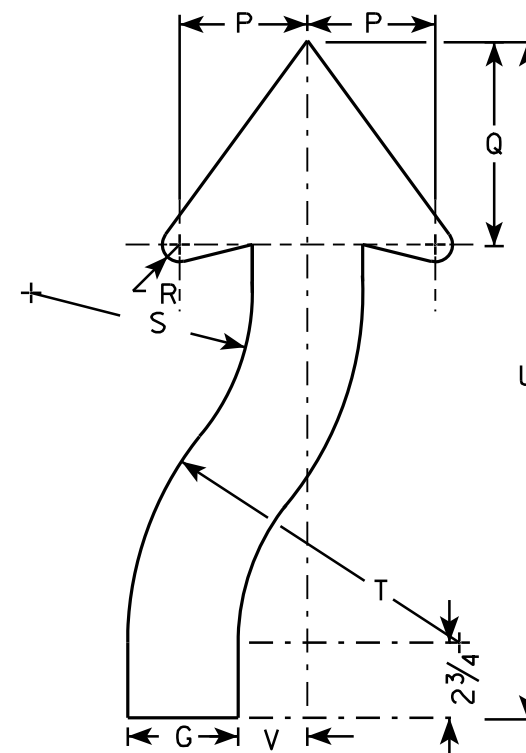
PROJECT NO:	HWY:	COUNTY:	SHEET NO: <b>E</b>
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**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W6-2 same as W6-1 but is rotated 180° when mounted.



**ARROW DETAIL**

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		3 1/4	8	8 1/4	4 1/8	7 7/8	25	1 3/4	11 5/8	4 1/8	3 7/8	6 3/4	5/8	6 5/8	9 7/8	21 5/8	2				6.25	
2S	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2				9.0	
2M	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2				9.0	
3																											
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8				16.0	
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8				16.0	

**STANDARD SIGN**  
**W6-1 & W6-2**

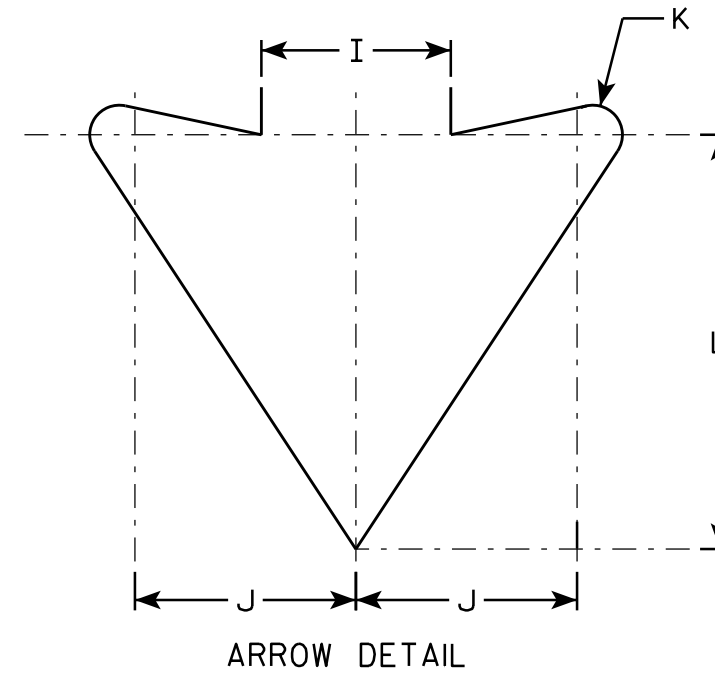
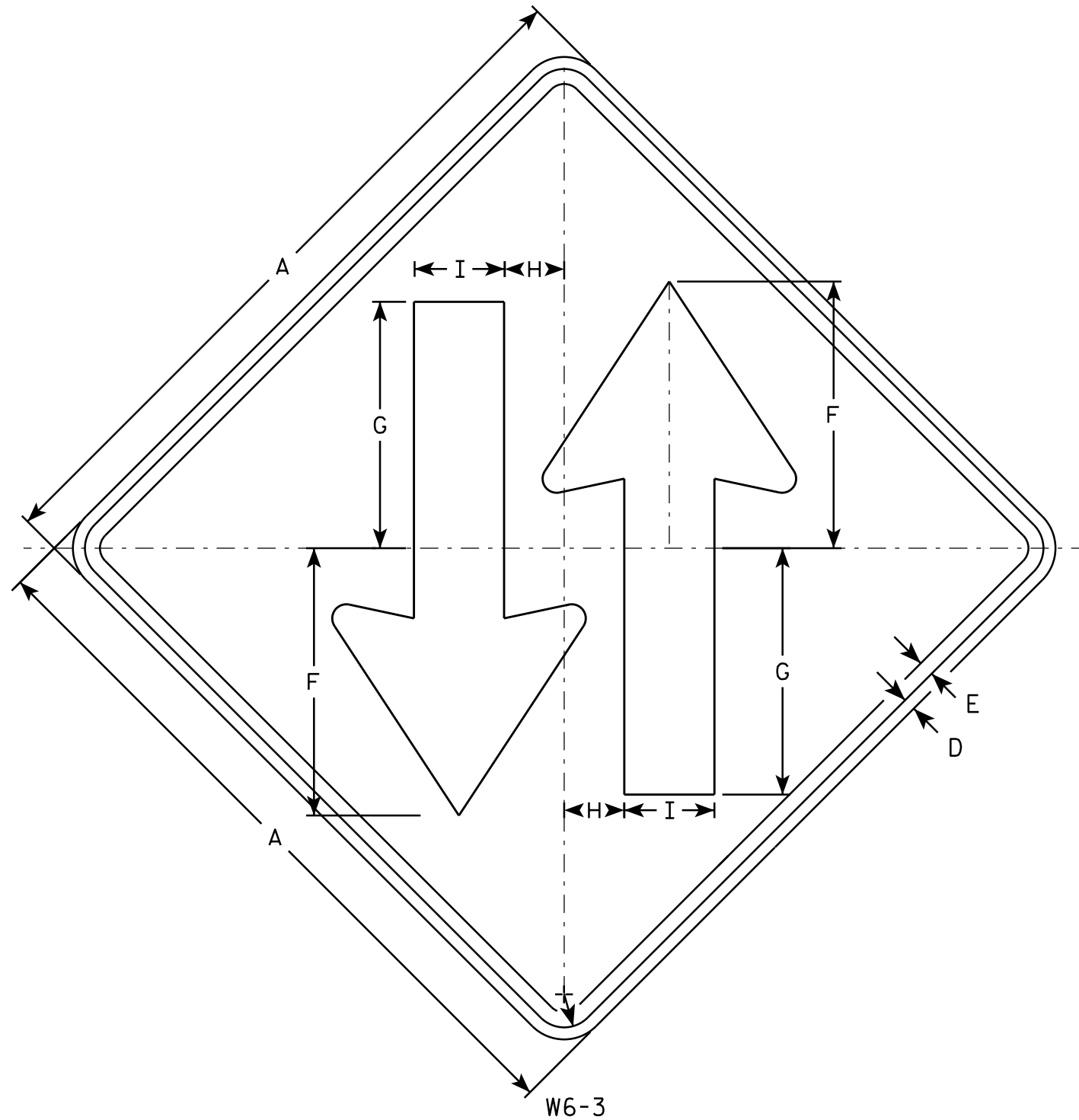
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-1.14

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



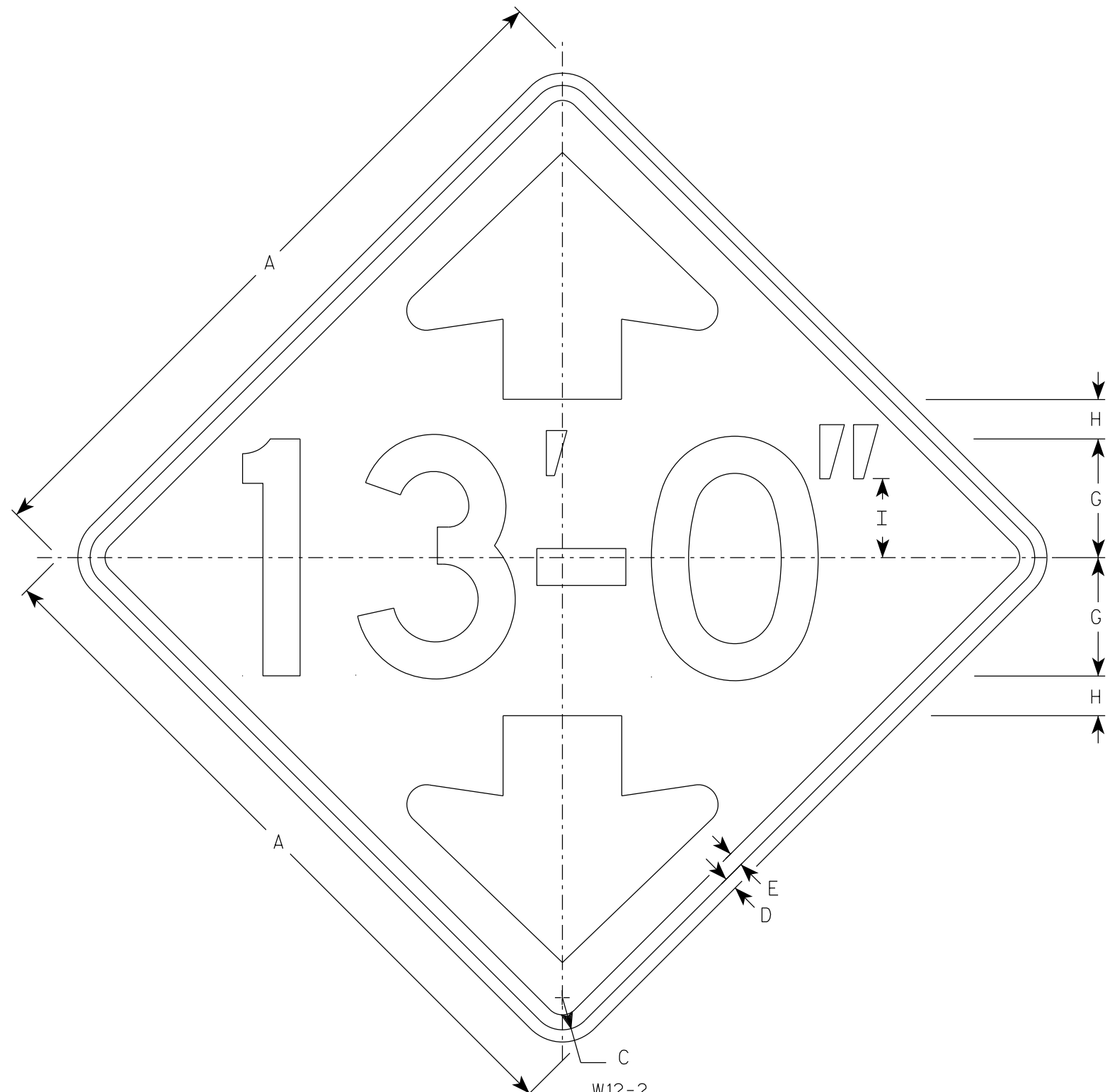
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 1/8	10 1/4	2 1/2	3 3/4	4 3/8	5/8	8 1/4															6.25
2S	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
2M	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
3																											
4	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0
5	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0

STANDARD SIGN  
W6-3

WISCONSIN DEPT OF TRANSPORTATION

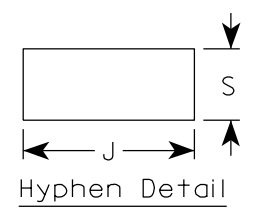
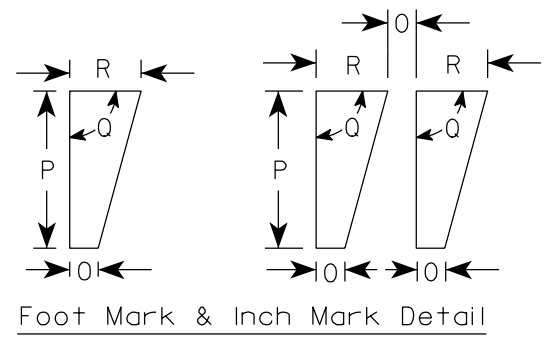
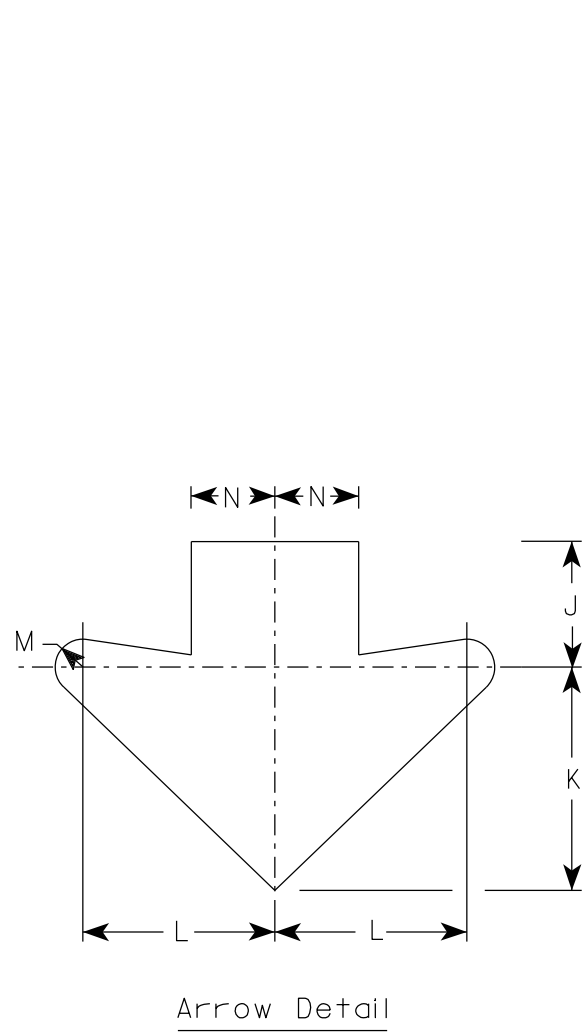
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/10/16 PLATE NO. W6-3.11



NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black
3. Message Series - D
4. Substitute appropriate numerals and optically adjust spacing of numerals, hyphen, foot & inch marks to achieve proper balance.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		5	1 5/8	3 3/8	3 3/4	6 5/8	5 3/4	3/4	2 1/2	1/2	2 1/4	90°	1	1 5/8								6.25
2S	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
2M	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
3	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
4	36		1 5/8	5/8	3/4		6	2	4	4 1/2	8	6 7/8	1	3	1/2	2 3/4	90°	1 1/4	1 7/8								9.00
5	48		2 1/4	3/4	1		8	2 5/8	5 1/2	5 7/8	10 5/8	9 1/4	1 3/8	4	5/8	3 5/8	90°	1 5/8	2 1/2								16.00

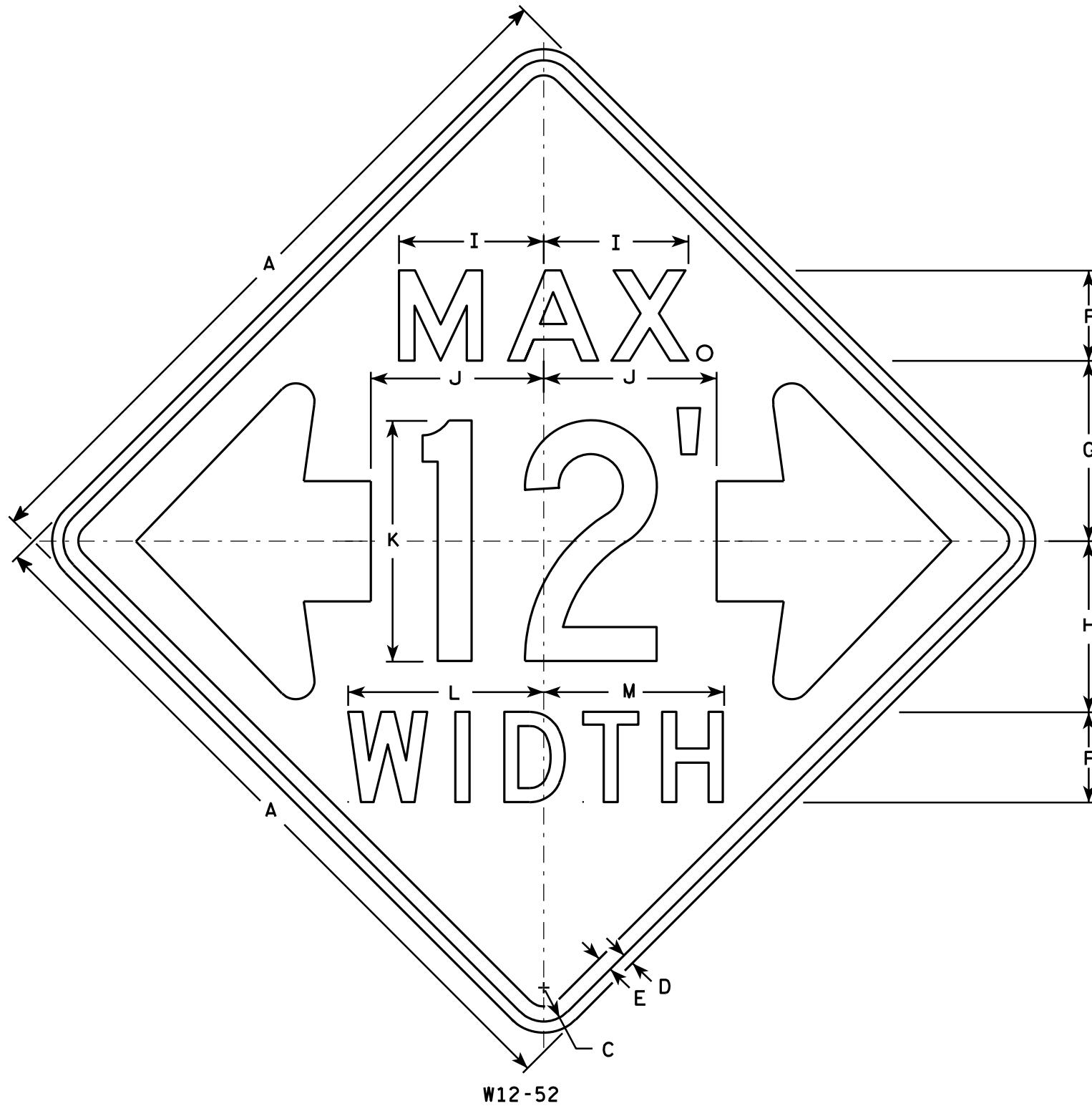
STANDARD SIGN  
W12-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 12/06/2021 PLATE NO. W12-2.10

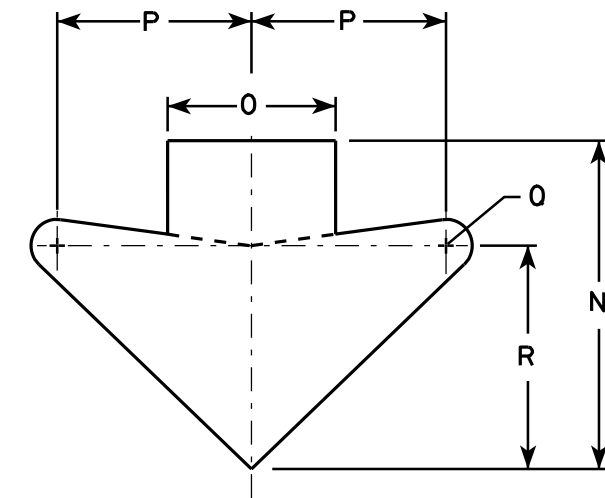
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ **E**



W12-52

**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



**ARROW DETAIL**

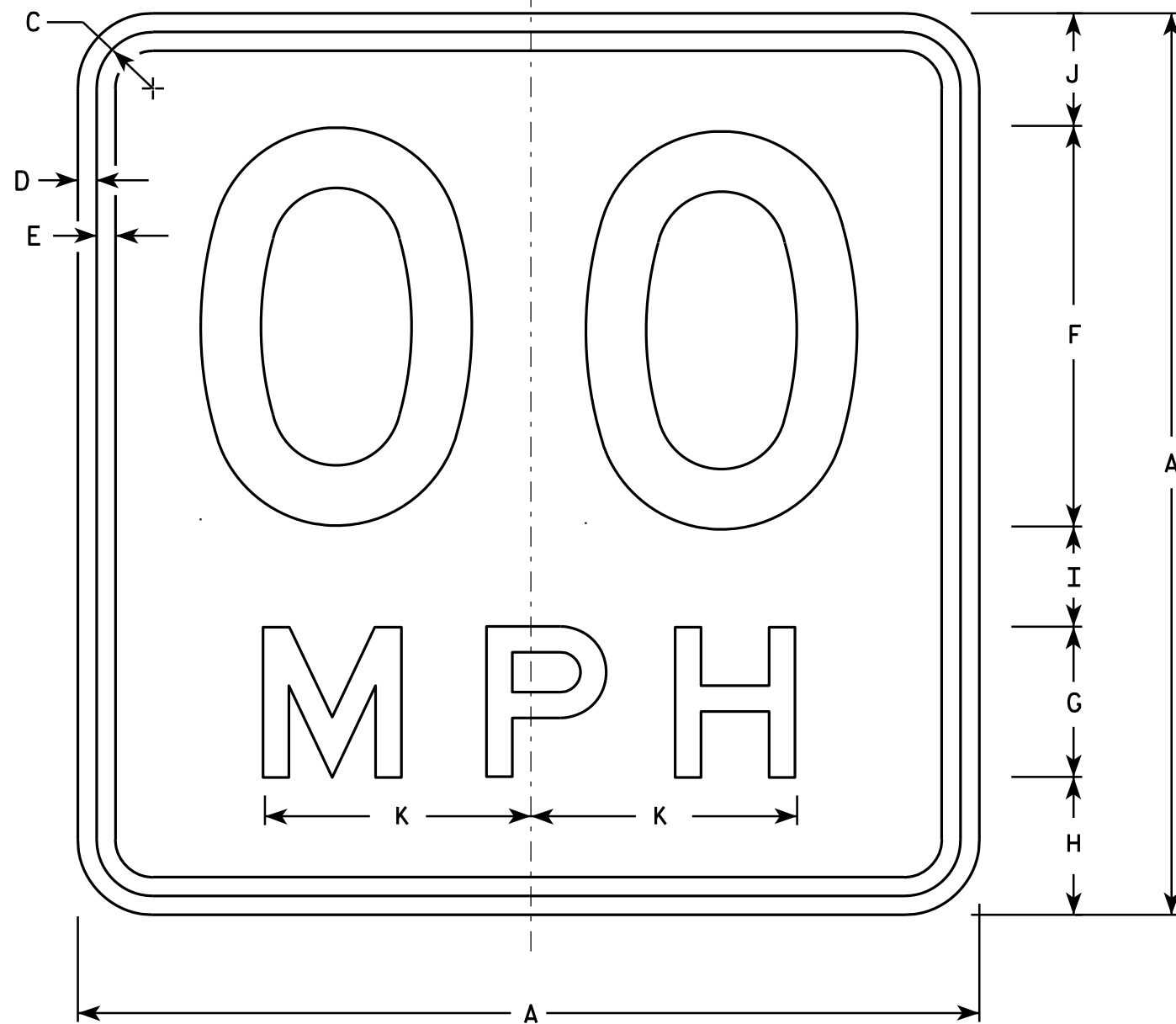
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

**STANDARD SIGN**  
W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7



**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow  
Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D  
Line 2 is Series E

W13-1

\* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.  
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

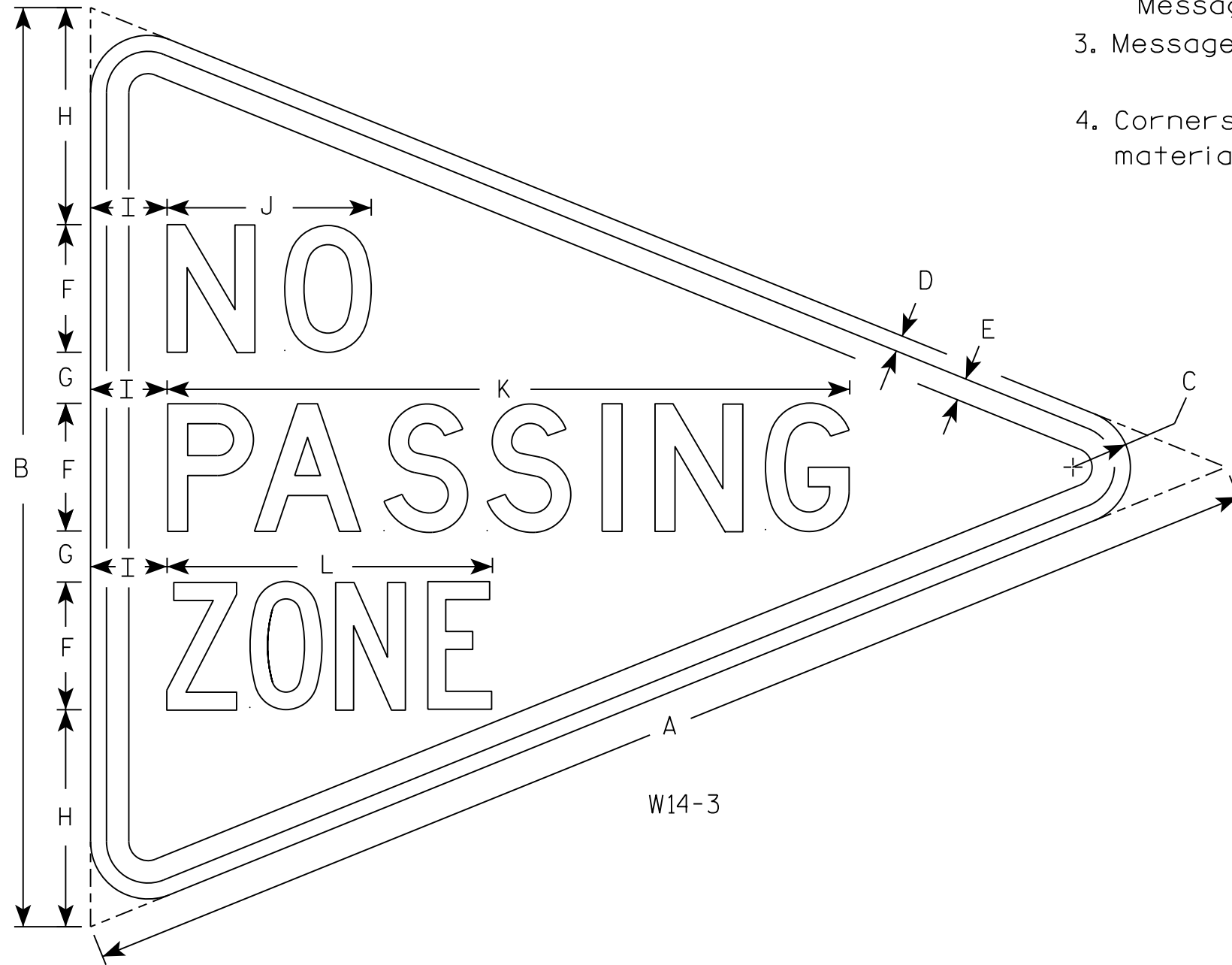
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN  
W13-1

WISCONSIN DEPT OF TRANSPORTATION  
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer  
DATE 5/31/12 PLATE NO. W13-1.16

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black
3. Message Series - Lines 1 and 2 are Series D.  
Line 3 is series C.
4. Corners and borders shall be rounded on all base materials for this sign.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN  
W14-3

WISCONSIN DEPT OF TRANSPORTATION

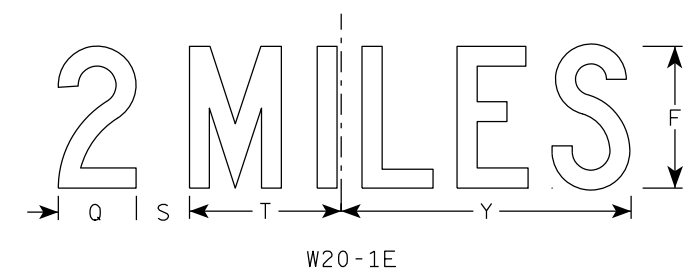
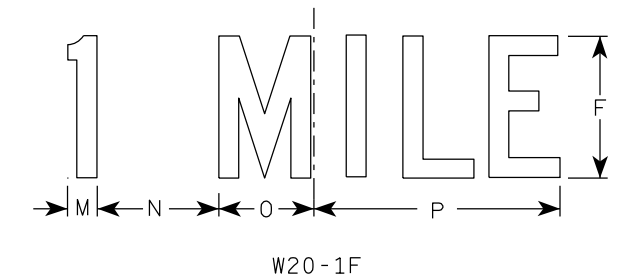
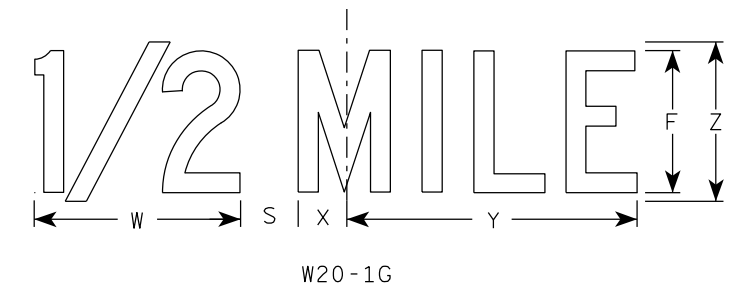
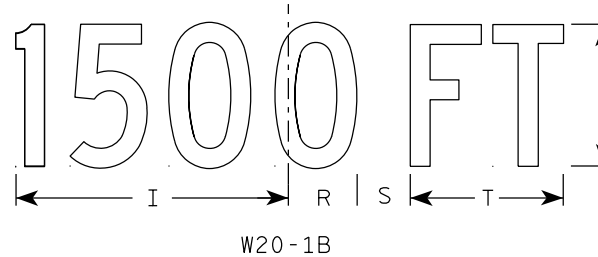
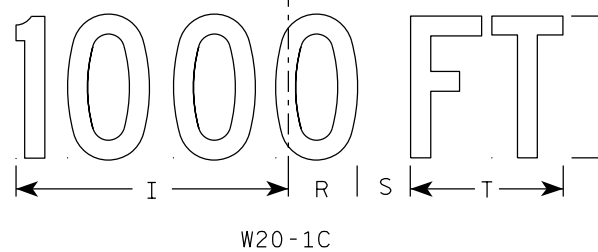
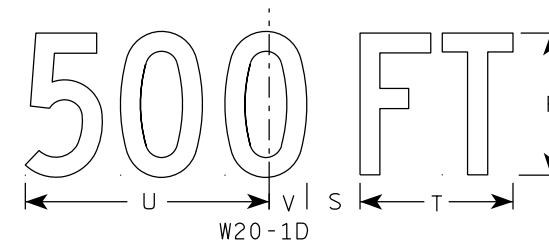
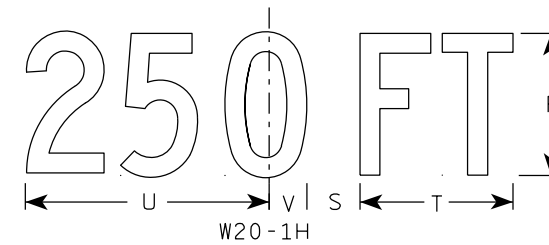
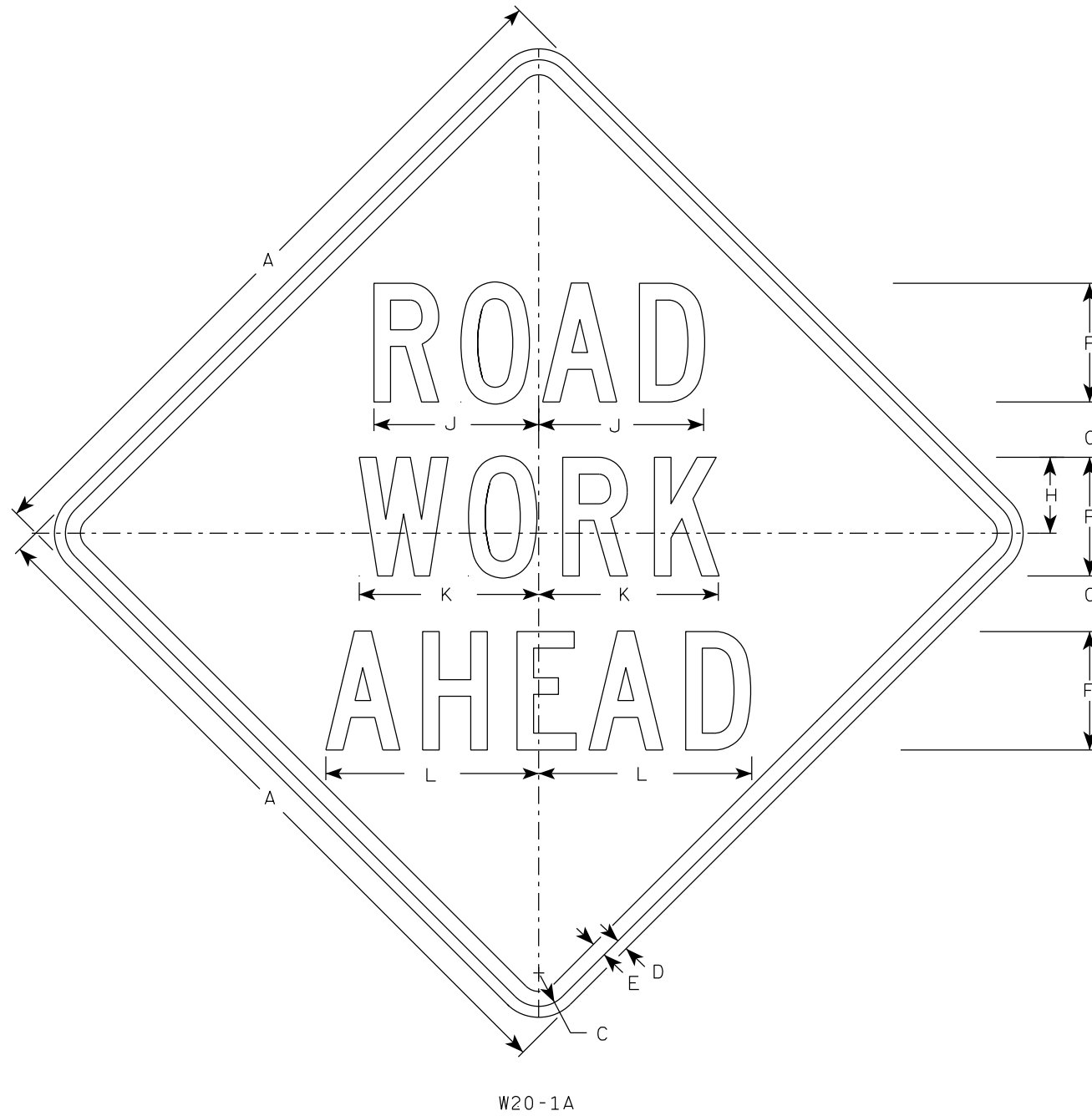
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

**NOTES**

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A

W20-1C

W20-1B

W20-1G

W20-1F

W20-1E

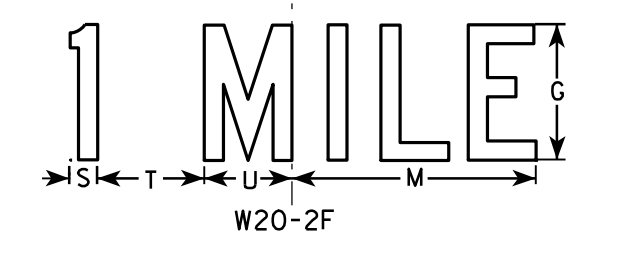
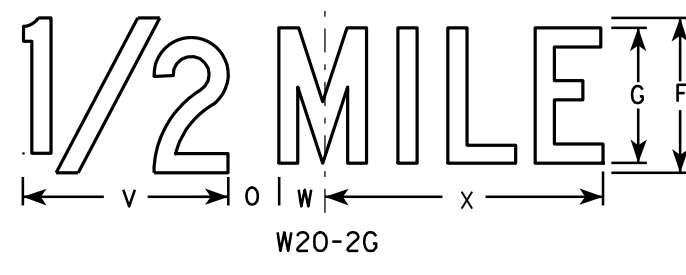
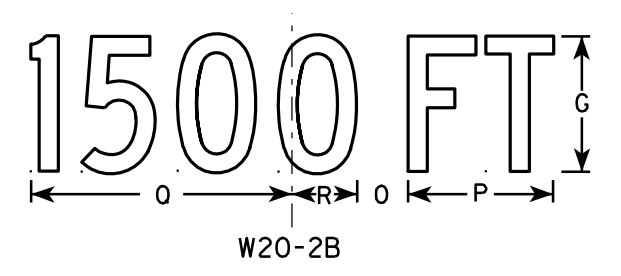
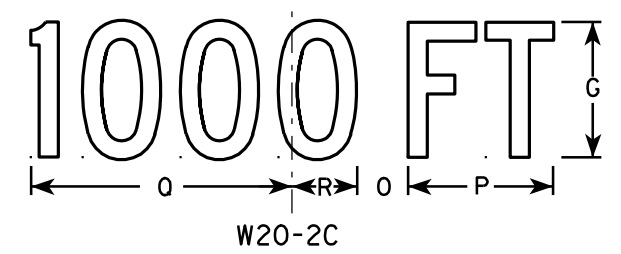
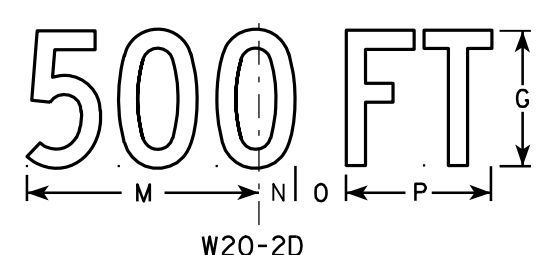
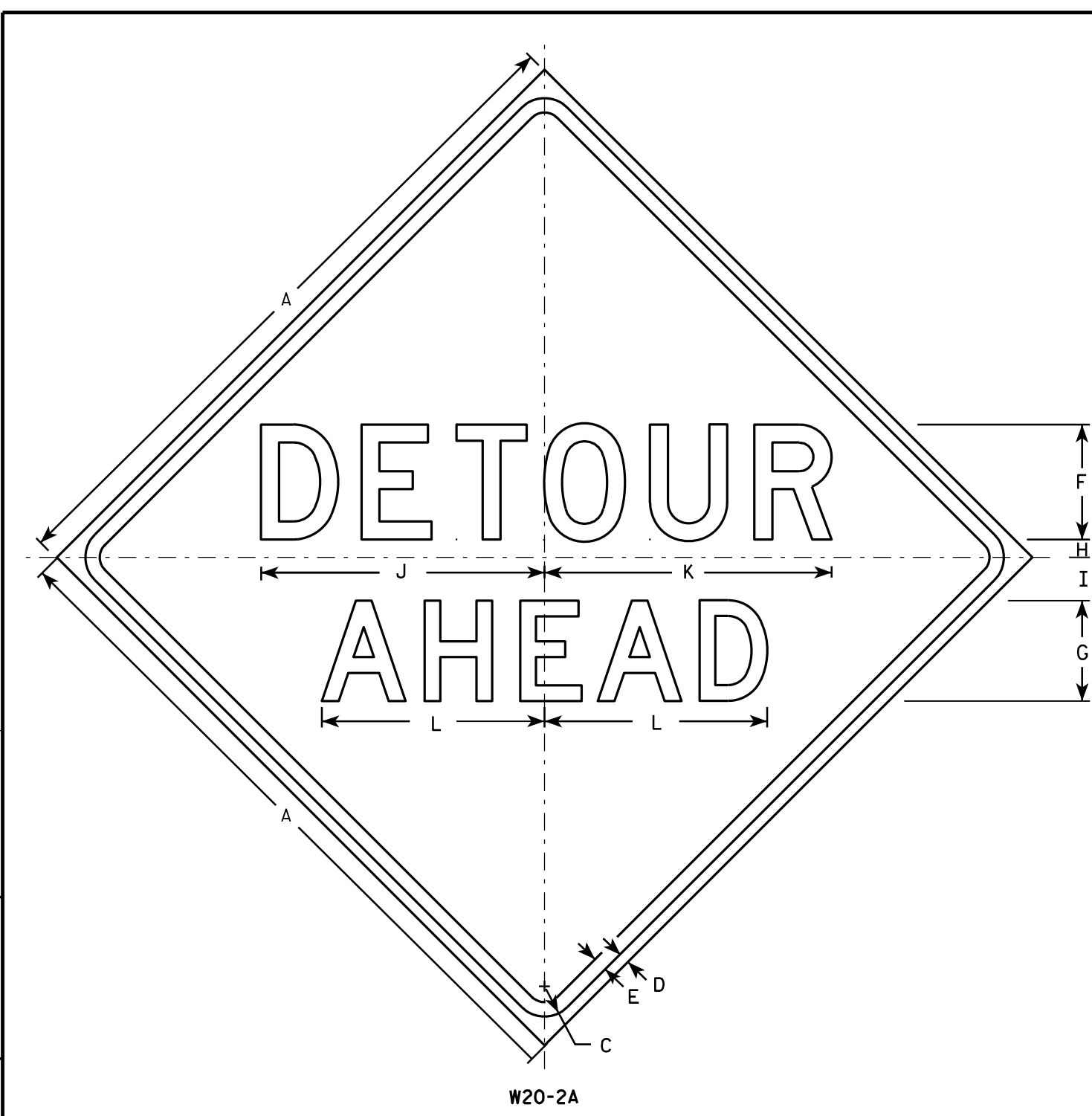
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN  
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11



**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.  
Line 2 is Series D for AHEAD and Series C for all other distances.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN  
W20-2A, B, C, D, F & G

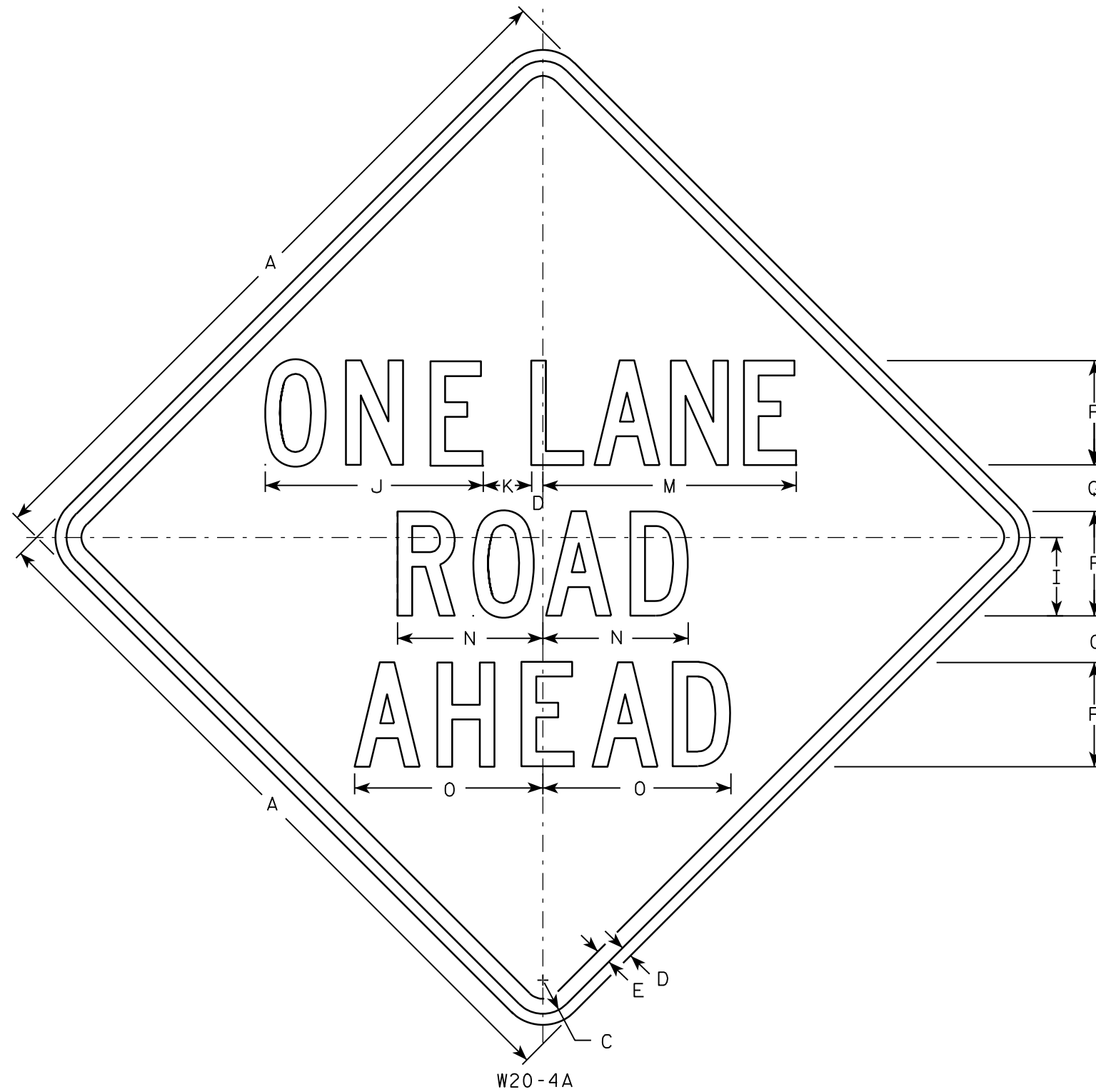
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*  
for State Traffic Engineer

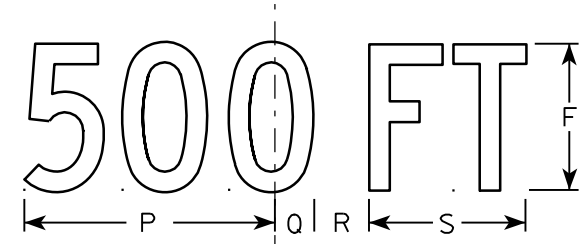
DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

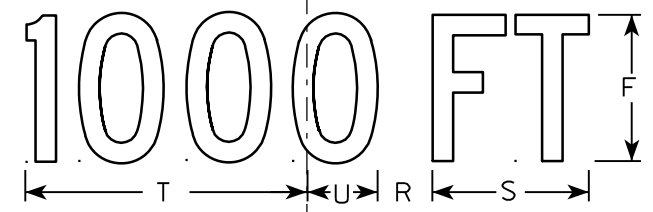




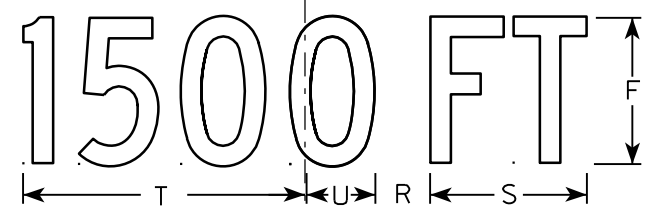
W20-4A



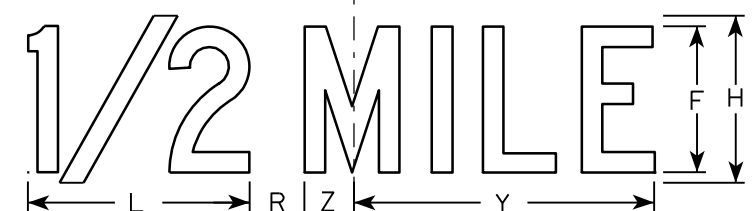
W20-4D



W20-4C



W20-4B



W20-4G



W20-4F

**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

7

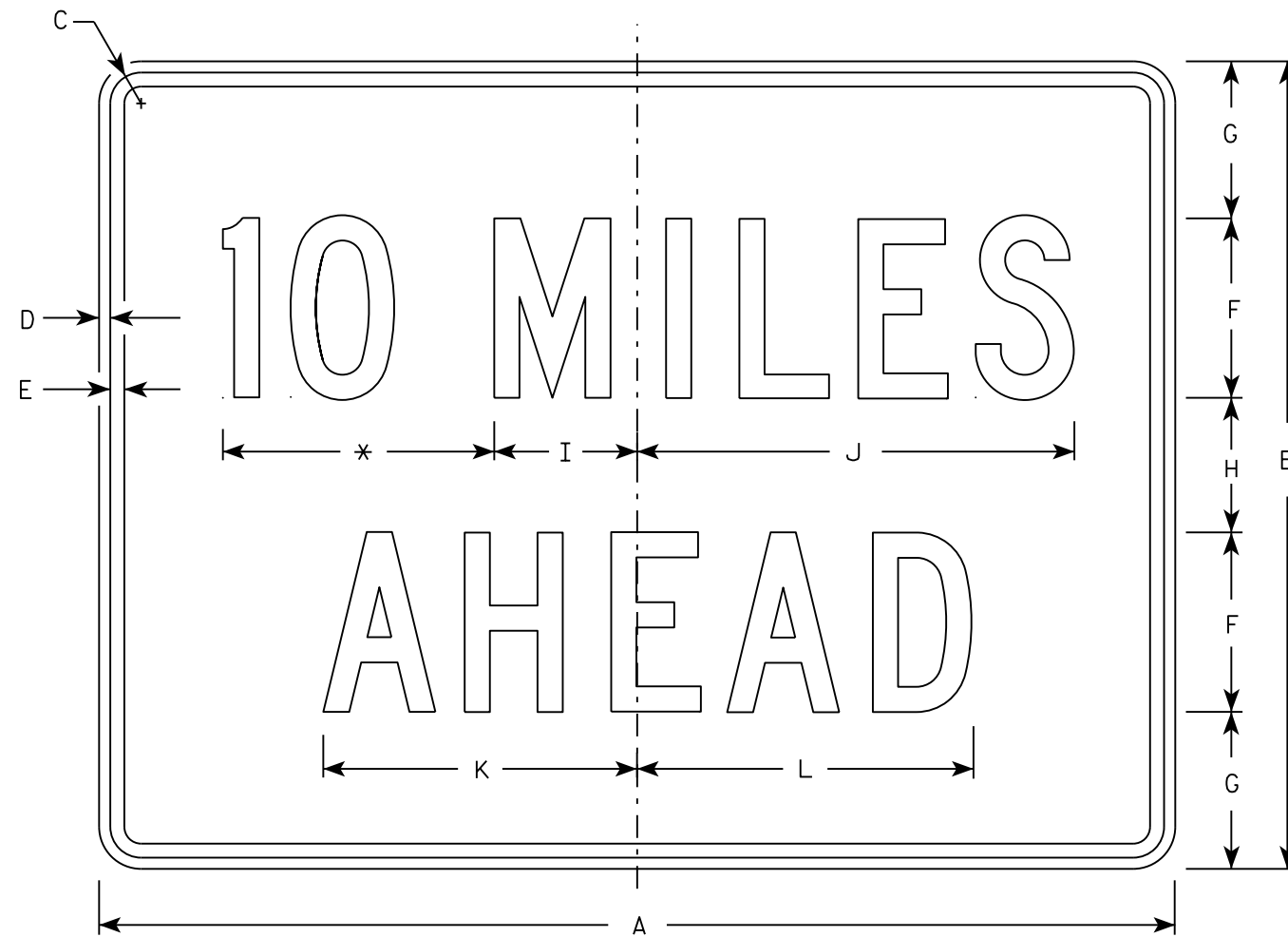
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 3/8	6	3 3/4	10 3/8	2 3/8	8	13 1/2	7	8 7/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN  
W20-4A, B, C, D, F & G

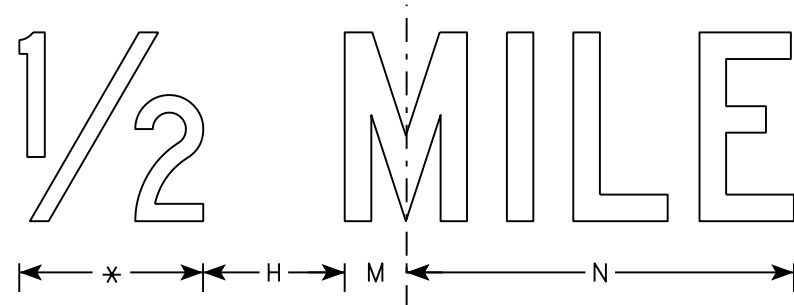
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-4.9



W57-52



\* See note 5

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black
3. Message Series - C
4. Corners and borders shall be rounded.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.

7

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SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	1/2	4	3 1/2	3	3 1/8	9 3/4	7	7 1/2	1 3/8	8 1/4													3.0
2S	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2M	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
3	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

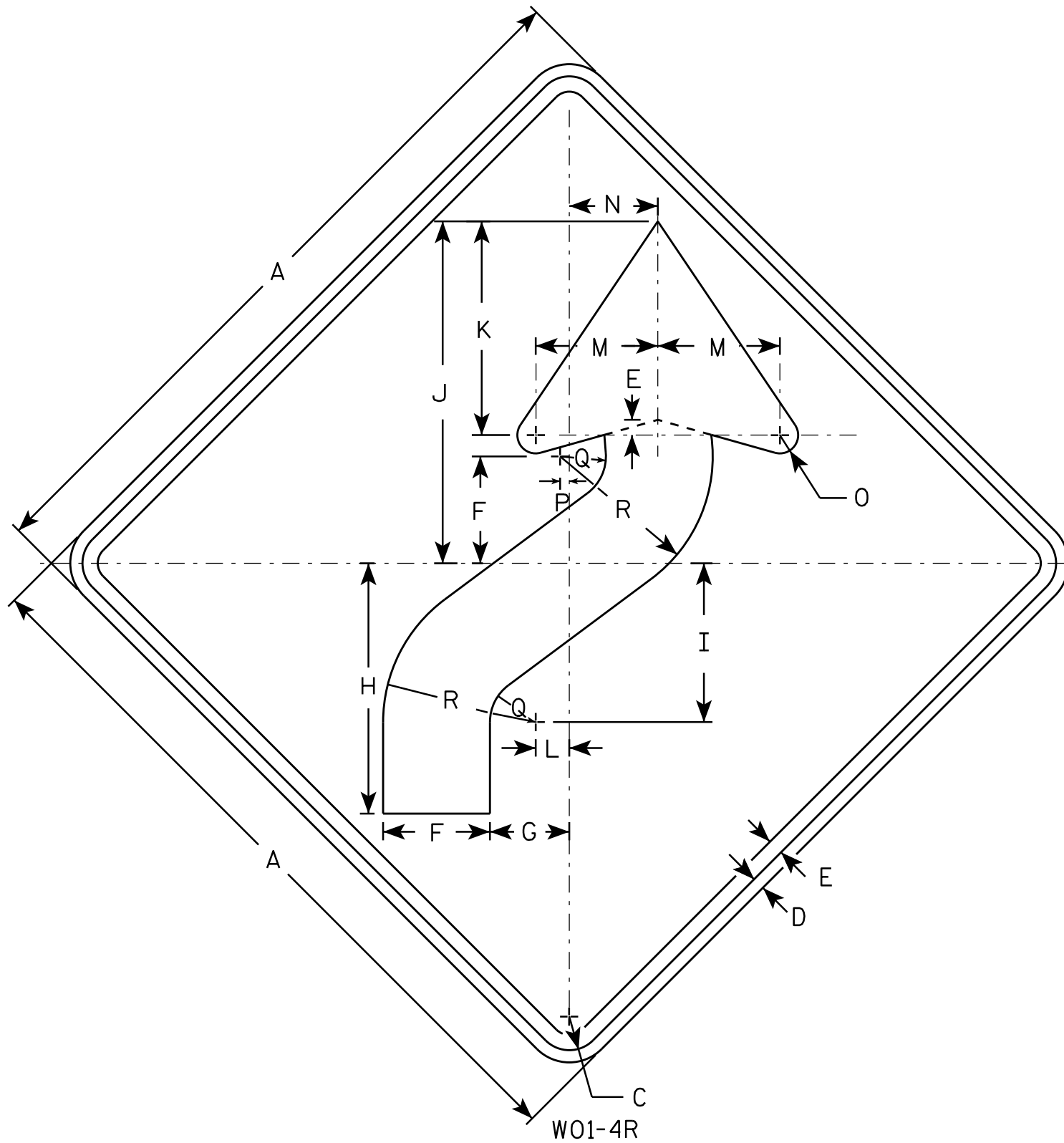
STANDARD SIGN  
W57-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
State Traffic Engineer

DATE 3/21/17 PLATE NO. W57-52.8

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ **E**



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

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W01-4R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN  
W01-4

WISCONSIN DEPT OF TRANSPORTATION

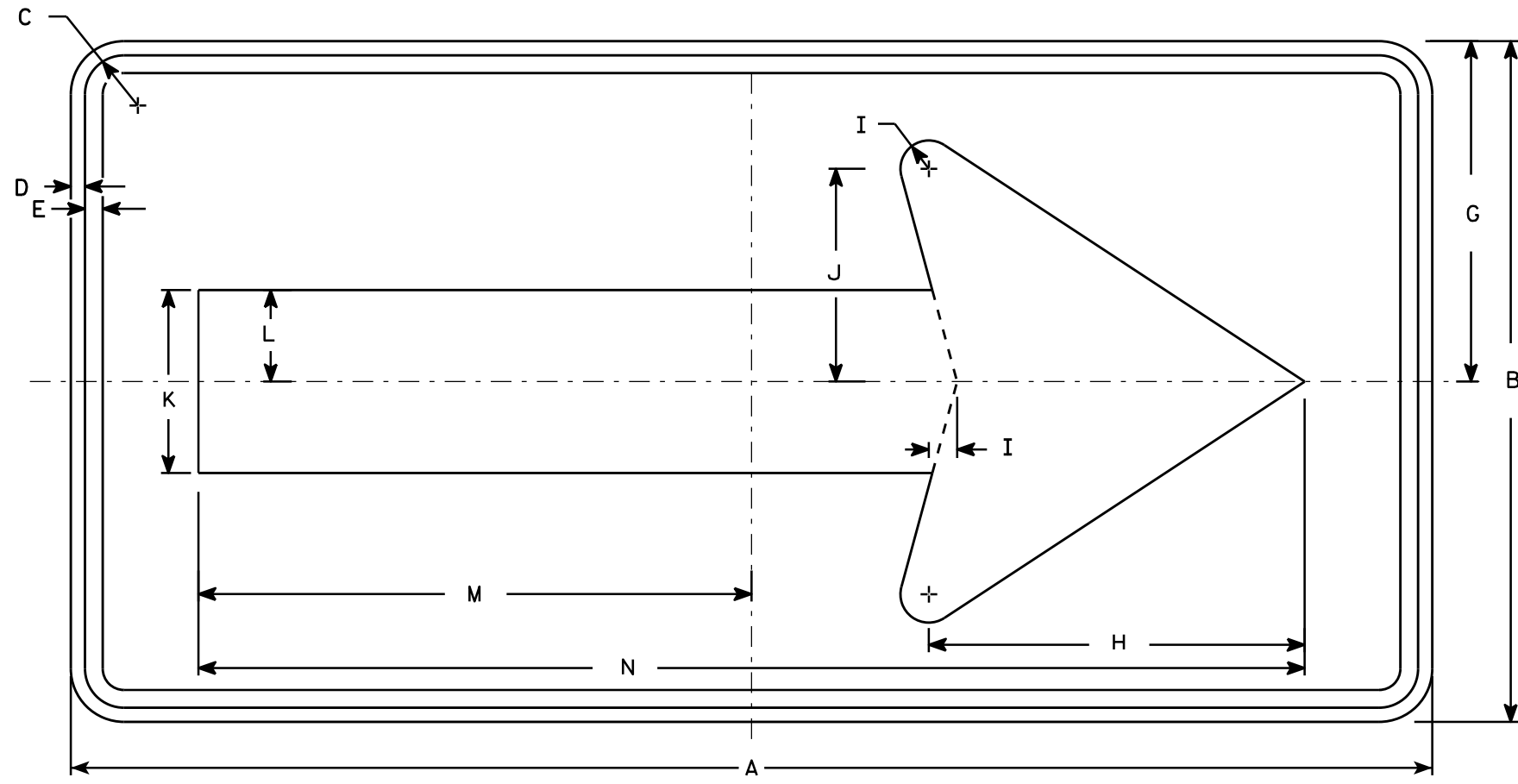
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W01-6

7

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SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

**STANDARD SIGN**  
**W01-6**

*WISCONSIN DEPT OF TRANSPORTATION*

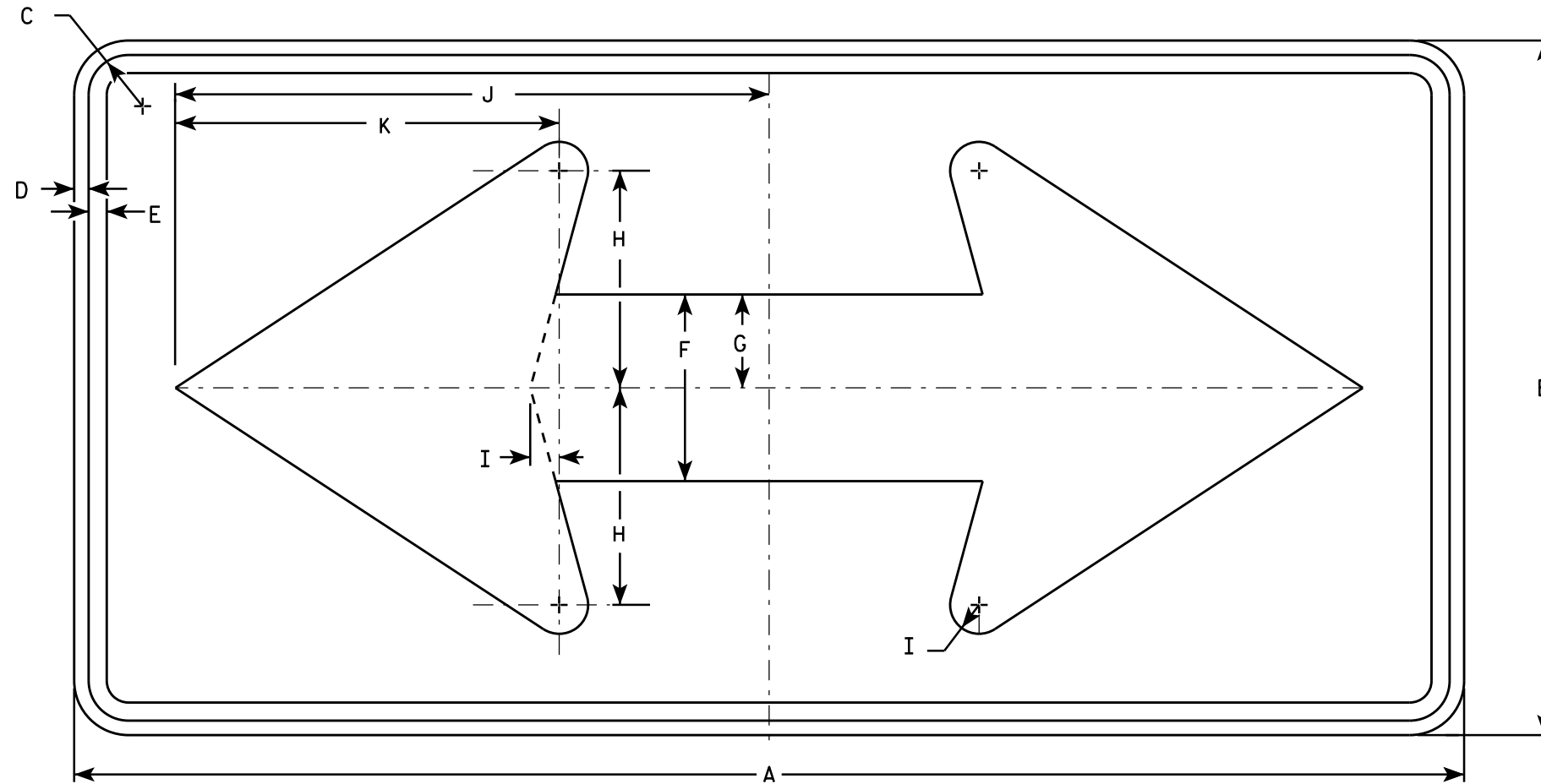
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W01-7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5

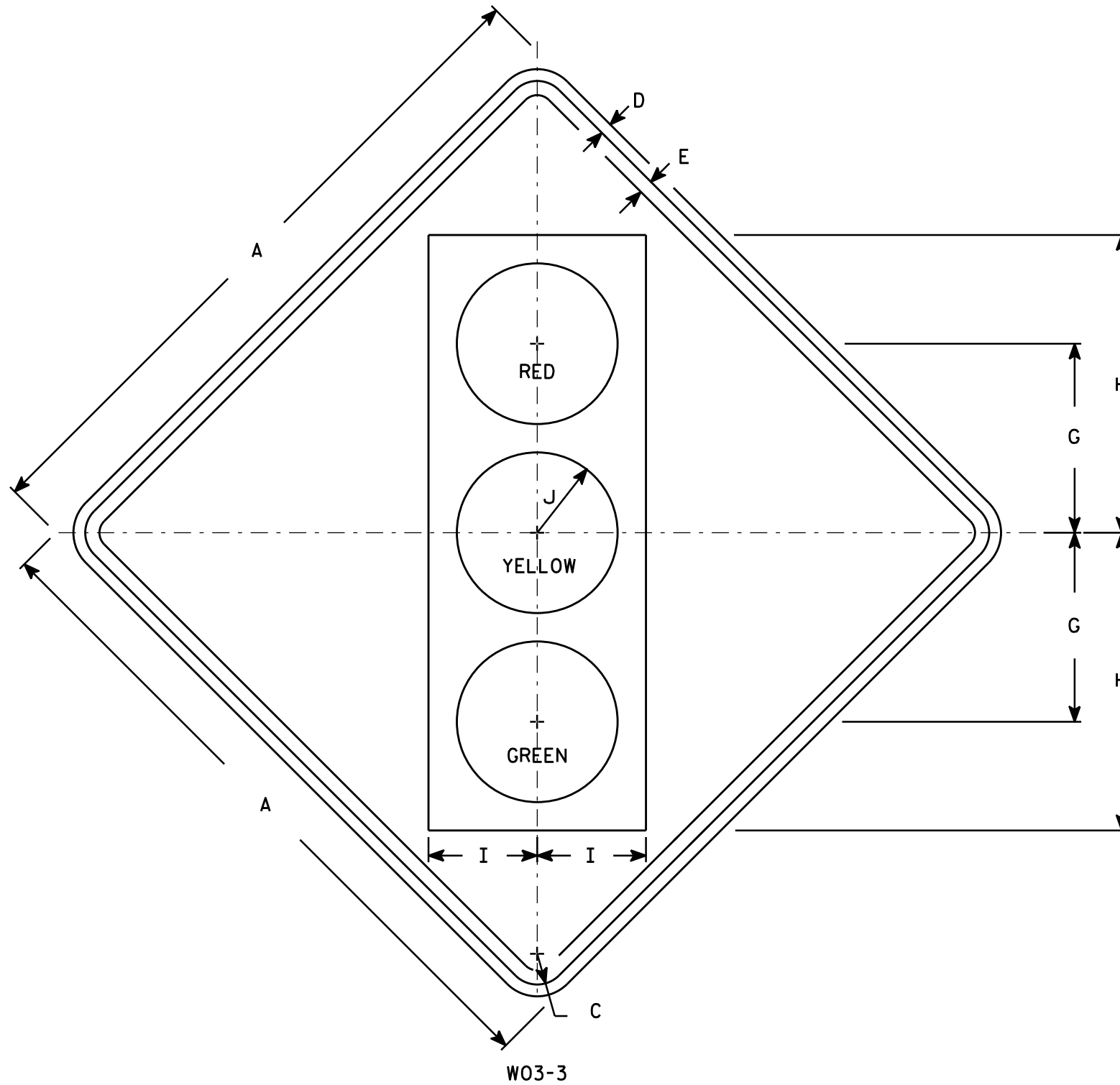
**STANDARD SIGN**  
**W01-7**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-7.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Symbol and border are non-reflective black.  
Top circle - Type H ReflectORIZED Red  
Center circle - Same as background  
Bottom circle - Type H ReflectORIZED Green

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2S	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
2M	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
3	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

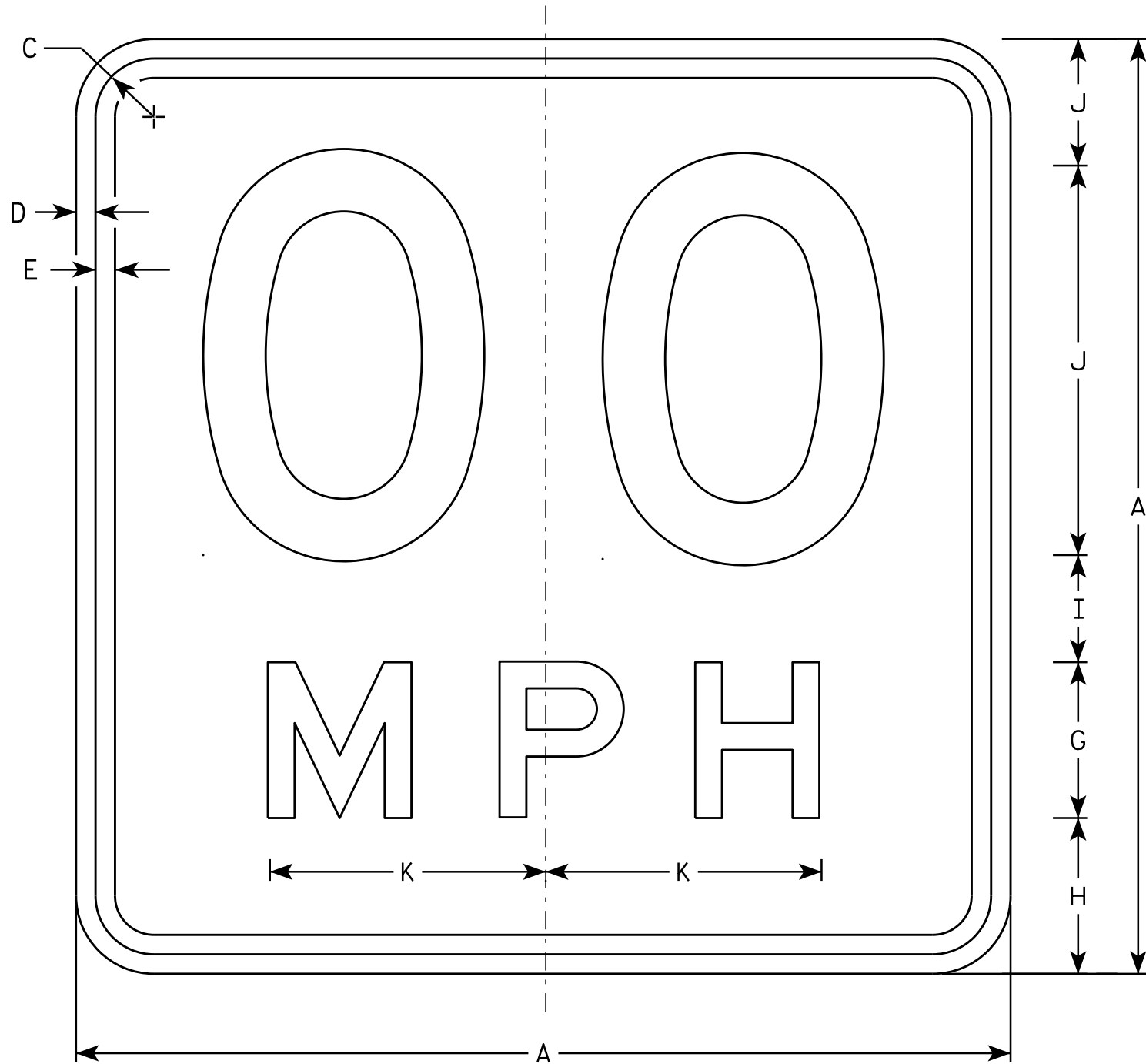
**STANDARD SIGN**  
**W03-3**

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W03-3.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D  
Line 2 is Series E

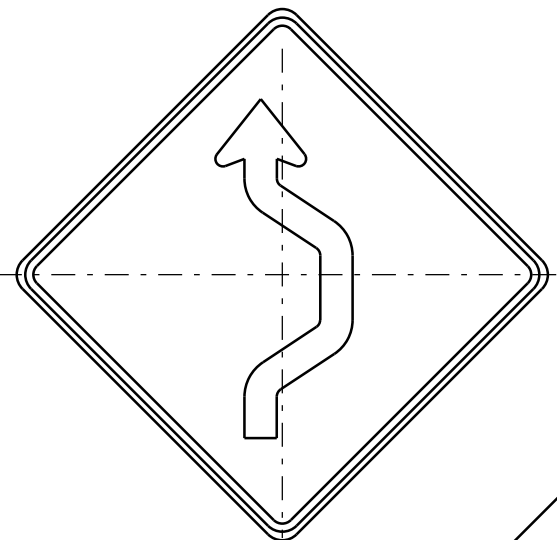
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN  
W013-1

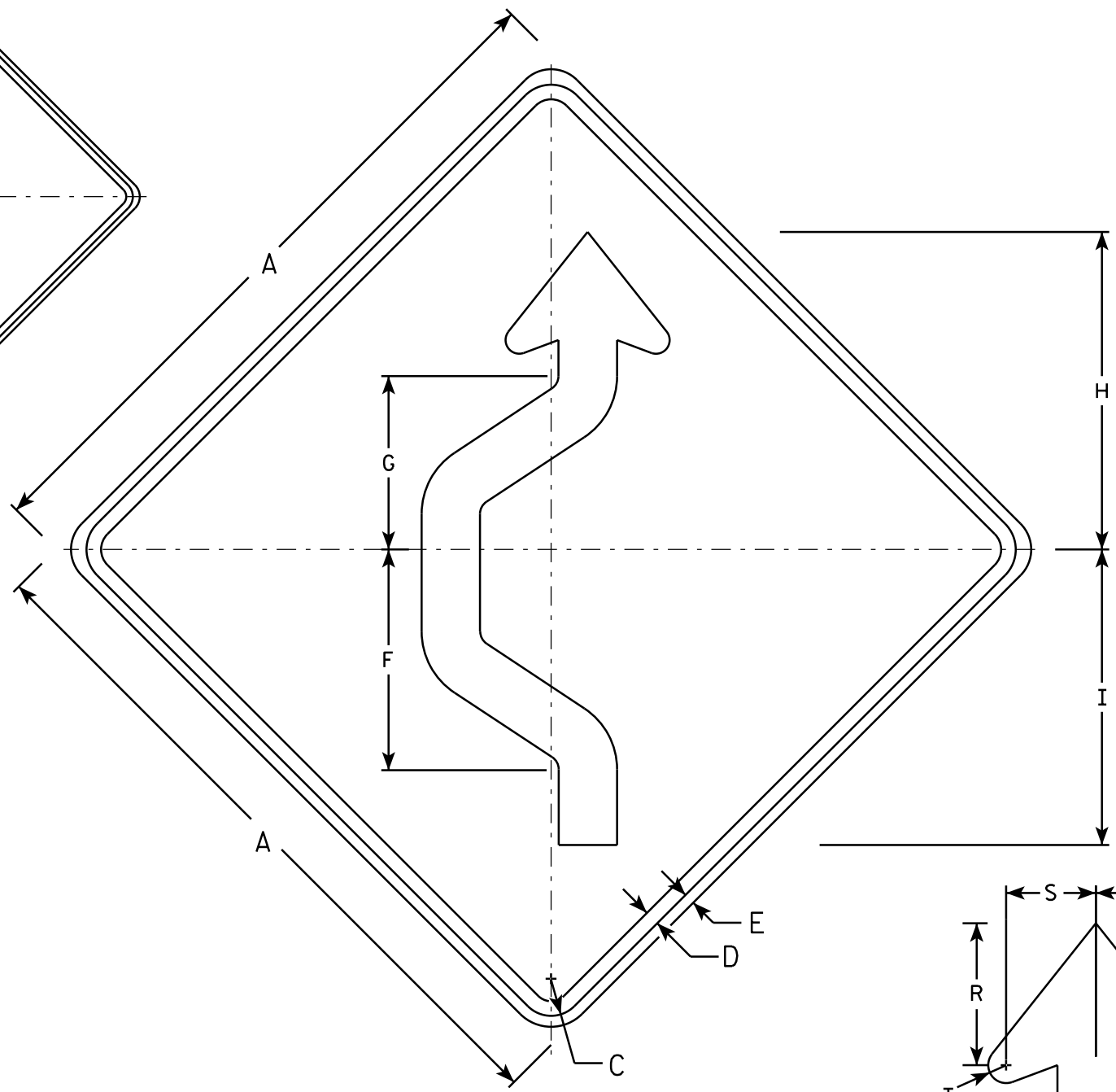
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
For State Traffic Engineer

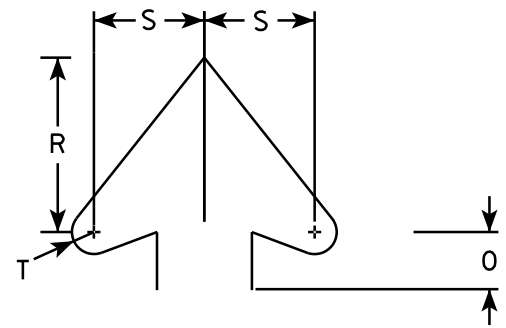
DATE 11/21/13 PLATE NO. W013-1.1



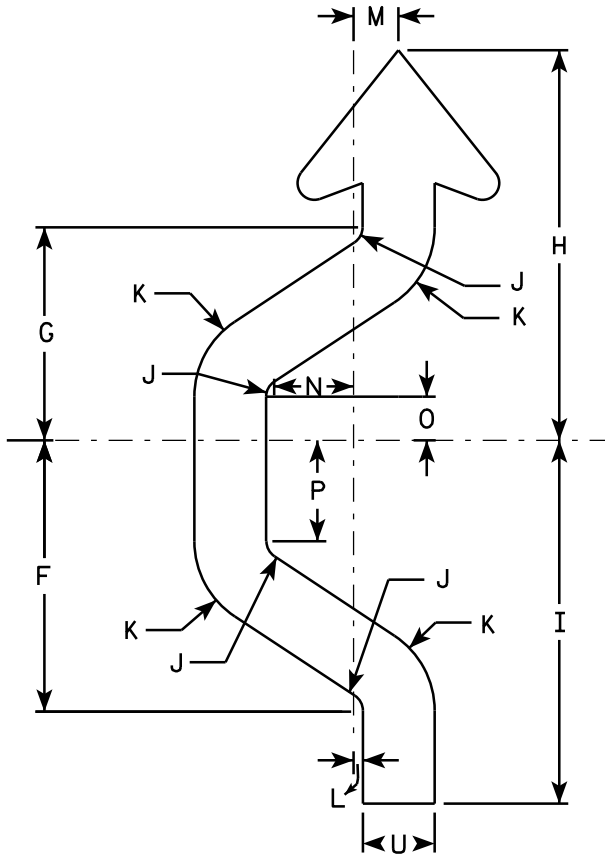
W024-1R



W024-1L



Arrowhead Detail



Arrow Detail

**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W024-1R is the same as W024-1L except reversed along the vertical centerline.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	5/8	1/2	11 3/8	8 7/8	16 3/8	15 1/4	3/4	3 3/4	3/8	2	3 3/8	1 7/8	4 1/4		5 1/2	3 1/2	5/8	3						9
2S	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
2M	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
3	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
4	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16
5	48		2 1/4	1	3/4	15 1/8	11 7/8	21 3/4	20 1/4	1	5	1/2	2 1/2	4 3/8	2 3/8	5 5/8		7 3/8	4 3/4	7/8	4						16

**STANDARD SIGN**  
**W024-1 L & R**

WISCONSIN DEPT OF TRANSPORTATION

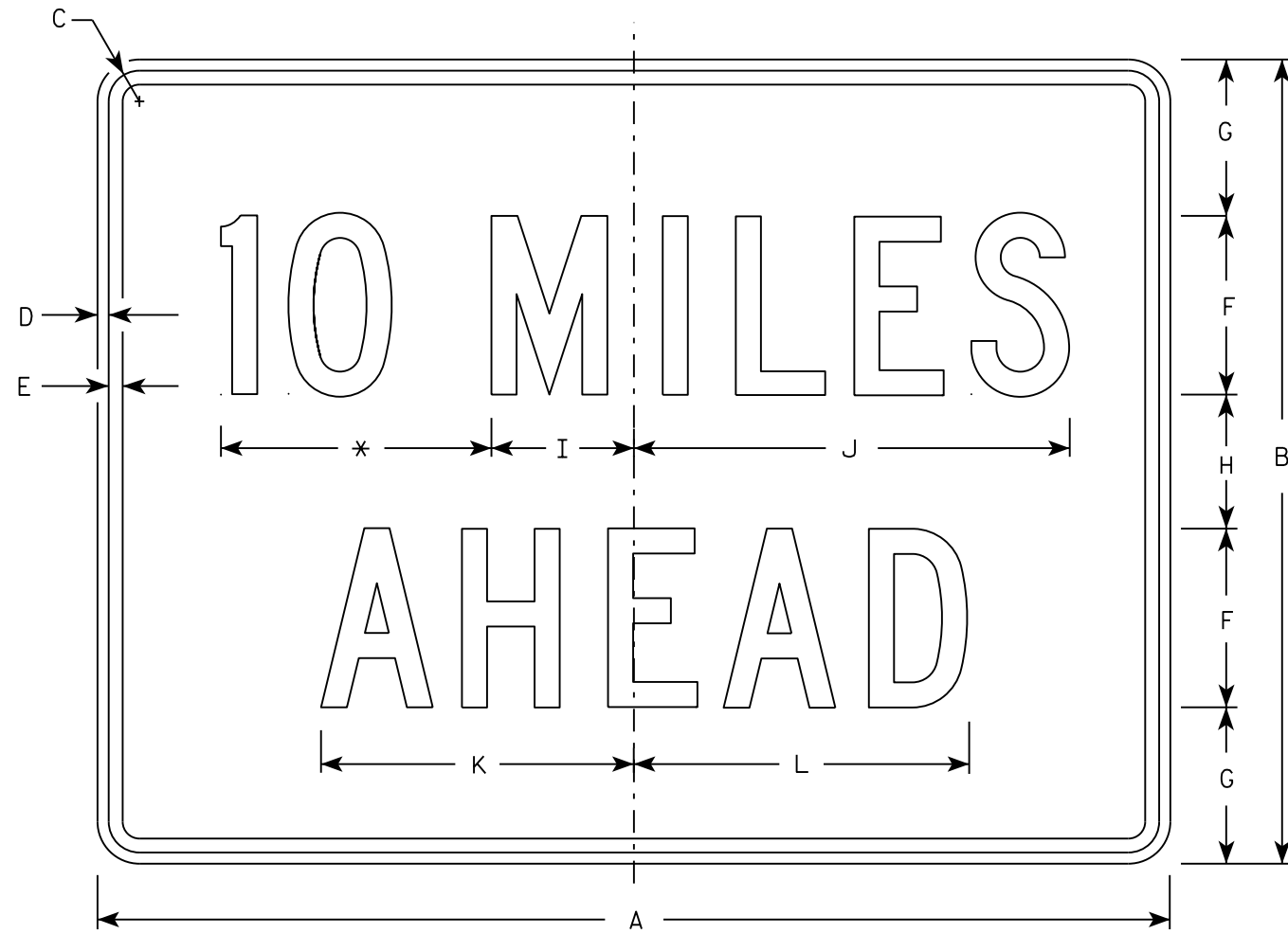
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 9/25/2013 PLATE NO. W024-1.1

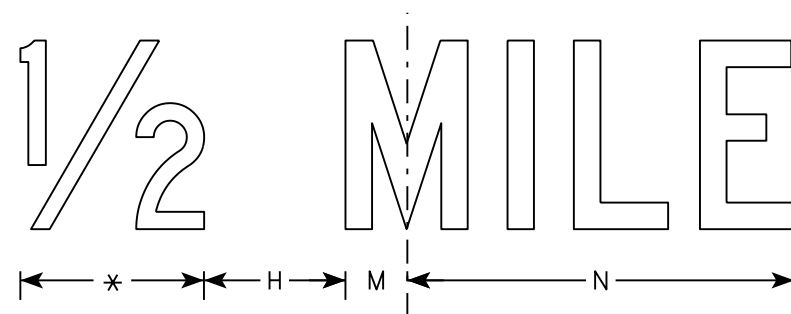


NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.



W057-52



\* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN  
W057-52

WISCONSIN DEPT OF TRANSPORTATION

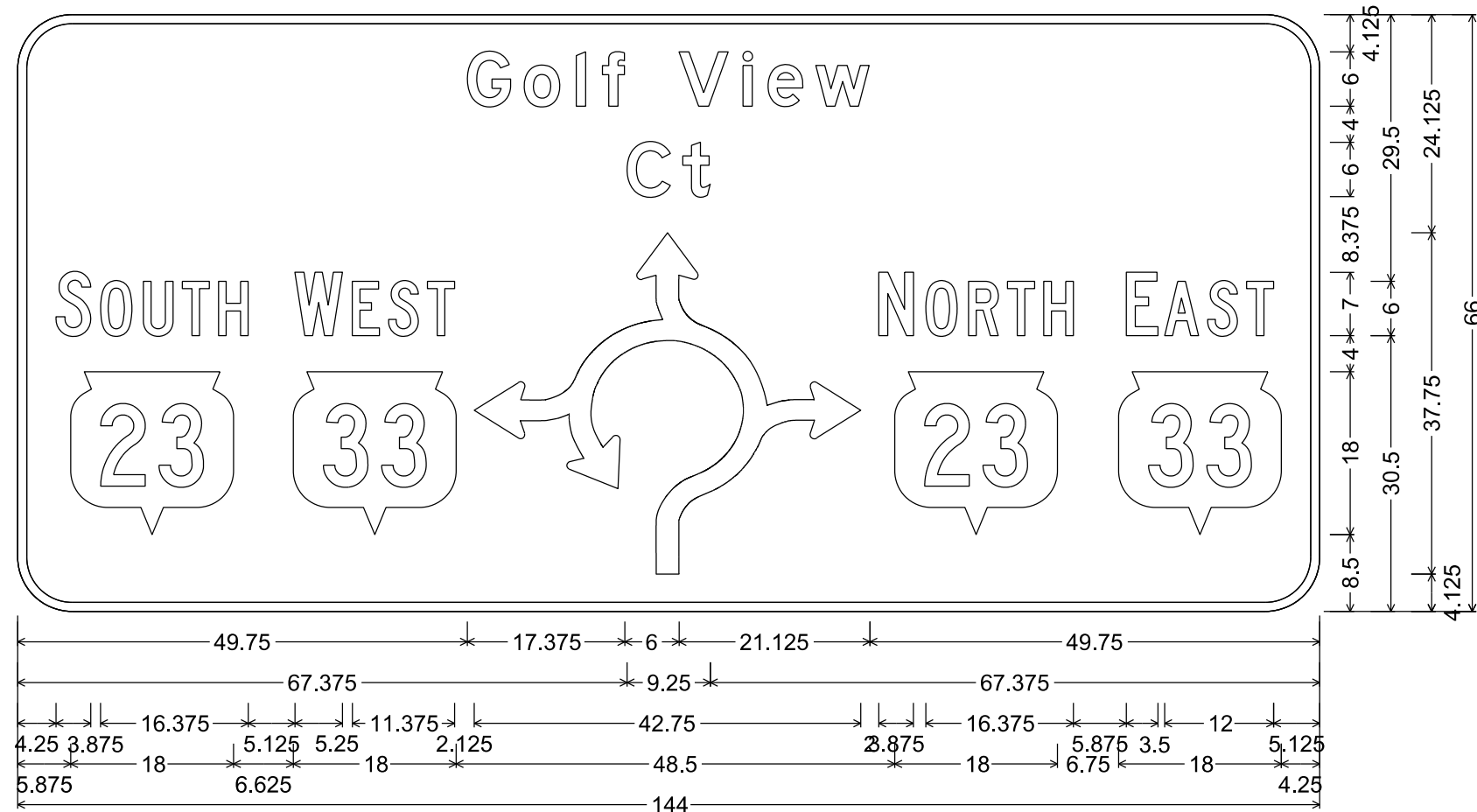
APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W057-52.2

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - C



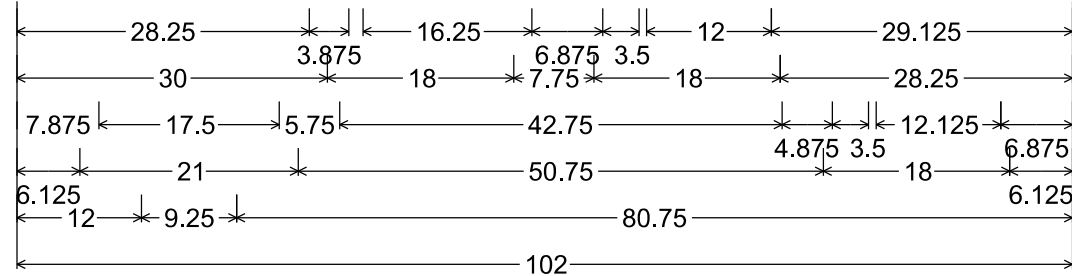
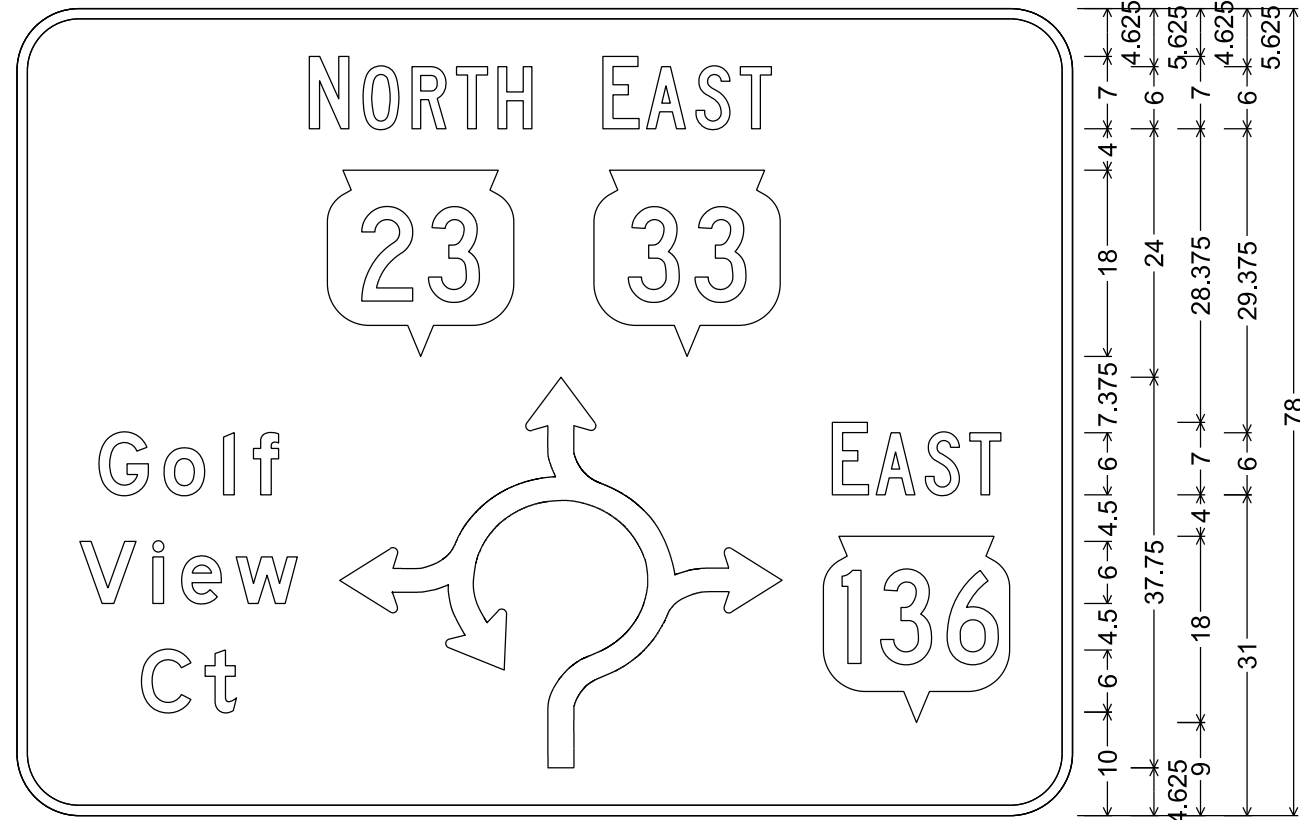
D1-62; 6.000" Radius, 1.000" Border,  
 "Golf", E; "View", E; "Ct", E; "SOUTH", C; "WEST", C; "NORTH", C; "EAST", C

7

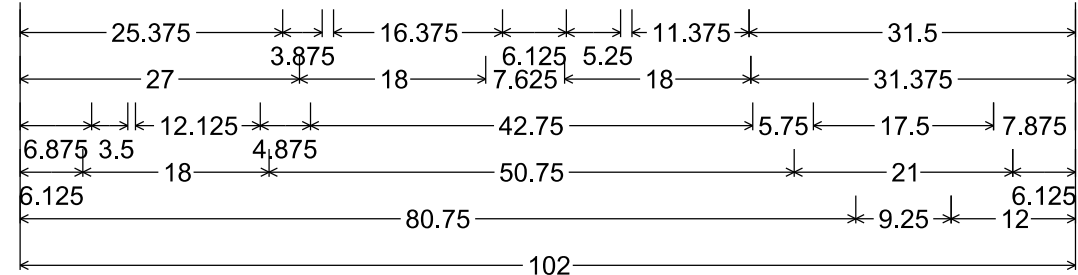
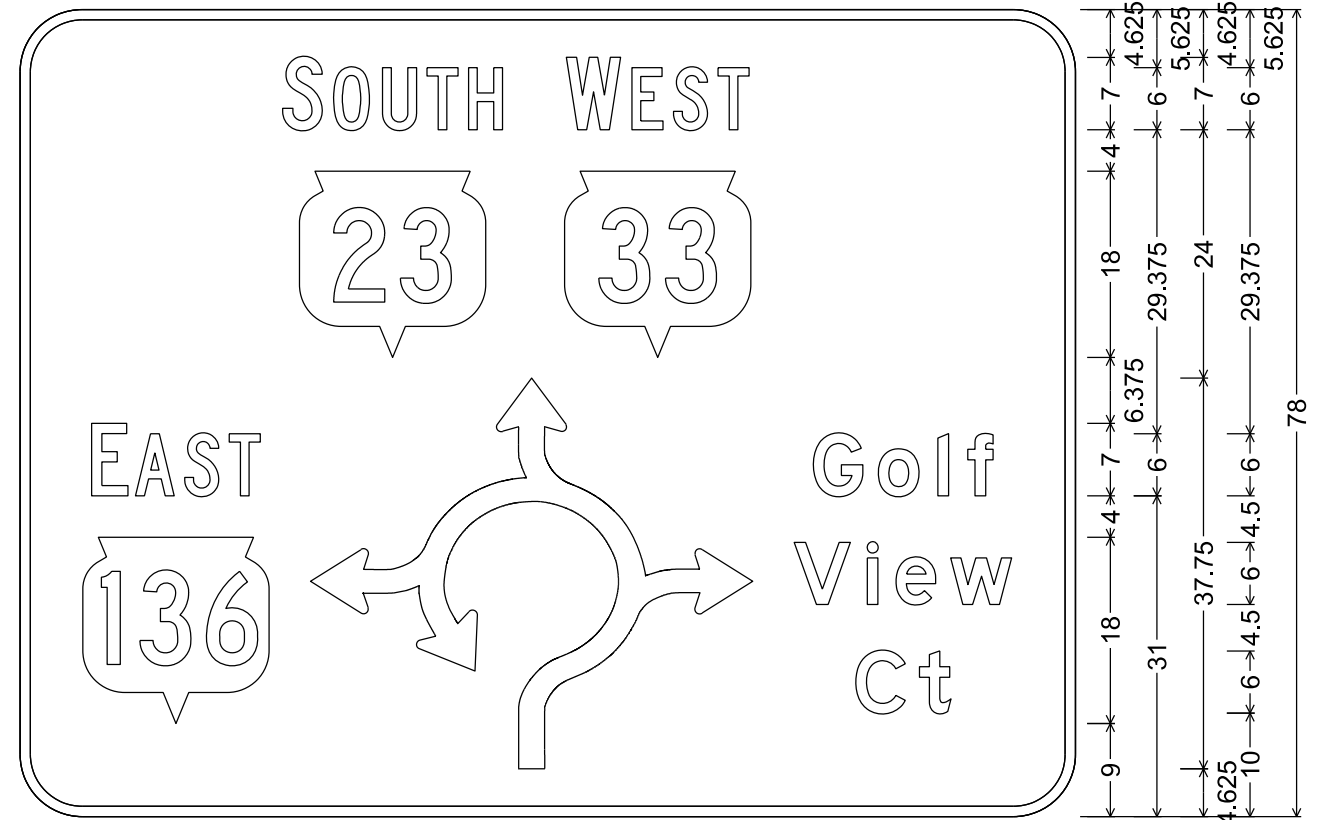
7

NOTES

1. Signs are Type II - Type H Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - C



D1-62; 6.000" Radius, 1.000" Border,  
"NORTH", C; "EAST", C; "Golf", E; "View", E; "Ct", E; "EAST", C



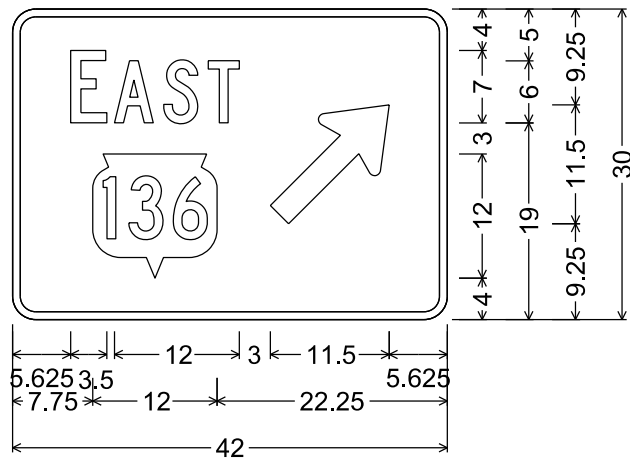
D1-62; 6.000" Radius, 1.000" Border,  
"SOUTH", C; "WEST", C; "EAST", C; "Golf", E; "View", E; "Ct", E

7

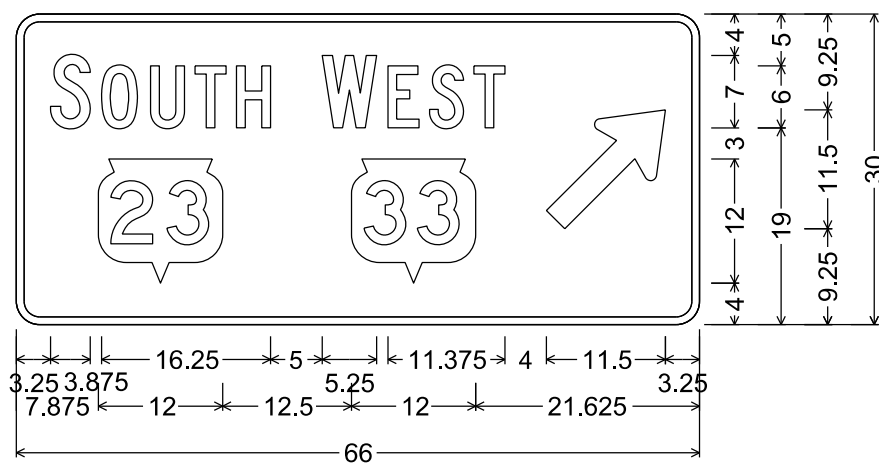
7

NOTES

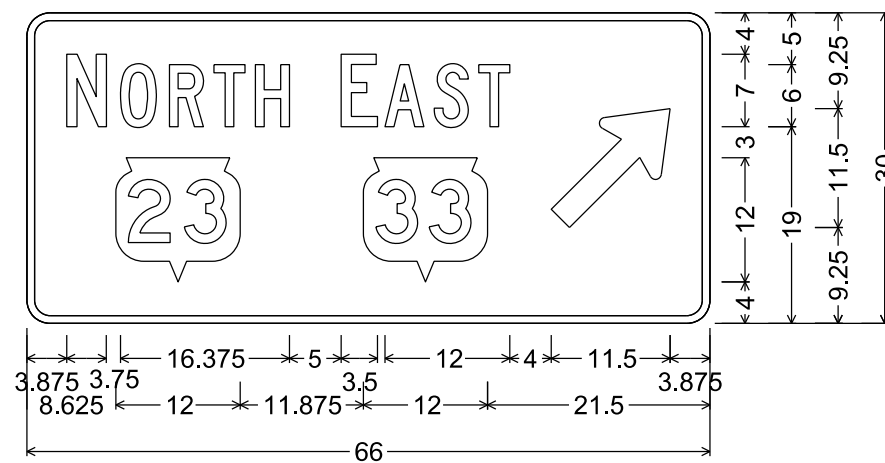
1. Signs are Type II - Type H Reflective
2. Color:  
Background - Green  
Message - White
3. Message Series - C



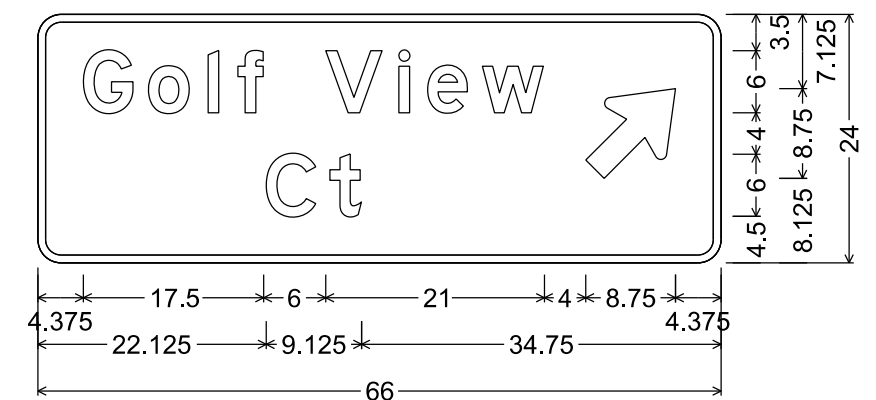
D1-1; 2.250" Radius, 0.750" Border,  
"EAST", C



D1-2; 2.250" Radius, 0.750" Border,  
"SOUTH", C; "WEST", C



D1-2; 2.250" Radius, 0.750" Border,  
"NORTH", C; "EAST", C



D1-2; 2.250" Radius, 0.750" Border,

STH 23 EXISTING (STAGE 1)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT	EXPANDED
				(5% OF CUT)				1.0 NOTE 1	FILL 1.25
105+00 STH 23 EX	---	9	---	---	---	---	---	---	---
105+50 STH 23 EX	50	10	12	1	18	11	1	18	14
106+00 STH 23 EX	50	12	33	1	20	41	1	38	66
106+50 STH 23 EX	50	9	54	---	19	81	1	57	166
107+00 STH 23 EX	50	9	45	---	17	93	1	74	282
107+50 STH 23 EX	50	10	38	---	18	78	1	92	379
108+00 STH 23 EX	50	10	31	---	18	64	1	110	459
108+50 STH 23 EX	50	12	28	1	20	55	1	130	528
109+00 STH 23 EX	50	15	26	1	25	50	1	155	590
109+50 STH 23 EX	50	34	---	2	46	24	2	202	620
110+00 STH 23 EX	50	23	15	1	53	14	3	255	638
110+50 STH 23 EX	50	46	---	2	64	14	3	319	655
111+00 STH 23 EX	50	33	---	2	73	---	4	392	655
COLUMN TOTALS					392	524	20		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 4) EBS CALCULATED AT 5 PERCENT OF CUT.

A CHAIN (STAGE 2 AND STAGE 3)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
10+00 A	---	---	187	---	---	---	---	---	---
10+25 A	25	84	105	4	39	135	2	39	169
10+50 A	25	276	96	14	167	93	8	205	285
10+75 A	25	242	78	12	240	81	12	446	386
11+00 A	25	81	37	4	150	53	7	595	452
11+25 A	25	105	28	5	86	30	4	681	489
11+50 A	25	140	21	7	114	23	6	795	518
11+75 A	25	78	19	4	101	19	5	896	541
12+00 A	25	88	20	4	77	18	4	973	564
12+25 A	25	91	85	5	83	48	4	1,055	624
12+50 A	25	98	16	5	88	47	4	1,143	682
12+75 A	25	74	23	4	79	18	4	1,222	705
13+00 A	25	7	142	0	37	77	2	1,260	801
13+17 A	17	---	182	---	2	104	0	1,262	930
COLUMN TOTALS					1,262	744	63		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 4) EBS CALCULATED AT 5 PERCENT OF CUT.

C CHAIN (STAGE 2)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
11+00 C	---	55	---	3	---	---	---	---	---
11+50 C	50	38	---	2	86	---	4	86	---
12+00 C	50	37	---	2	70	---	3	156	---
12+50 C	50	42	---	2	73	---	4	229	---
COLUMN TOTALS					229	---	11		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 4) EBS CALCULATED AT 5 PERCENT OF CUT.

STH 23 (STAGE 2)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
104+50 STH 23	---	---	---	---	---	---	---	---	---
105+00 STH 23	50	17	---	1	16	---	1	16	---
105+50 STH 23	50	16	---	1	31	---	2	47	---
106+00 STH 23	50	12	16	1	26	14	1	72	18
106+50 STH 23	50	46	16	2	54	29	3	126	54
107+00 STH 23	50	53	13	3	92	26	5	218	87
107+50 STH 23	50	62	8	3	107	20	5	324	112
108+00 STH 23	50	78	4	4	130	12	7	454	127
108+50 STH 23	50	100	1	5	165	5	8	620	133
109+00 STH 23	50	96	---	5	182	1	9	801	133
109+50 STH 23	50	93	---	5	175	---	9	976	133
110+00 STH 23	50	90	---	5	169	---	8	1,146	133
110+50 STH 23	50	77	---	4	155	---	8	1,301	133
111+00 STH 23	50	62	---	3	129	---	6	1,430	133
COLUMN TOTALS					1,430	107	72		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 4) EBS CALCULATED AT 5 PERCENT OF CUT.

I CHAIN (STAGE 2)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
12+50 I	---	215	---	11	---	---	---	---	---
13+00 I	50	542	---	27	701	---	35	701	---
13+50 I	50	727	---	36	1,175	---	59	1,875	---
13+67 I	17	796	---	40	479	---	24	2,355	---
COLUMN TOTALS					2,355	---	118		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL

STH 136 (STAGE 2)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
19+00 STH 136	---	74	14	4	---	---	---	---	---
19+50 STH 136	50	76	7	4	139	20	7	139	24
20+00 STH 136	50	66	7	3	132	13	7	272	40
20+50 STH 136	50	114	5	6	167	11	8	439	54
21+00 STH 136	50	91	13	5	189	17	9	628	75
21+50 STH 136	50	64	24	3	144	34	7	772	117
22+00 STH 136	50	60	35	3	115	54	6	887	185
22+19 STH 136	19	61	48	3	43	30	2	930	222
22+42 STH 136	23	53	48	3	48	40	2	977	272
22+50 STH 136	8	55	44	3	16	14	1	993	289
22+52 STH 136	2	55	43	3	5	4	---	998	294
22+72 STH 136	20	110	13	6	60	21	3	1,058	320
22+84 STH 136	12	111	6	6	49	4	2	1,107	325
23+00 STH 136	16	81	10	4	57	5	3	1,164	331
23+50 STH 136	50	178	7	9	240	16	12	1,405	352
24+00 STH 136	50	141	14	7	295	20	15	1,700	376
24+50 STH 136	50	161	59	8	279	68	14	1,979	461
25+00 STH 136	50	121	87	6	260	135	13	2,239	629
COLUMN TOTALS					2,239	504	112		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS



STH 23 (STAGE 2)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
98+50 STH 23	---	4	---	---	---	---	---	---	---
99+00 STH 23	50	4	---	---	7	---	0	7	---
99+50 STH 23	50	4	---	---	7	---	0	15	---
100+00 STH 23	50	4	---	---	7	---	0	22	---
100+50 STH 23	50	4	---	---	7	---	0	29	---
101+00 STH 23	50	4	---	---	7	---	0	37	---
101+50 STH 23	50	4	---	---	7	---	0	44	---
102+00 STH 23	50	4	---	---	7	---	0	52	---
102+50 STH 23	50	4	---	---	7	---	0	59	---
103+00 STH 23	50	4	---	---	7	---	0	66	---
103+50 STH 23	50	4	---	---	7	---	0	73	---
104+00 STH 23	50	4	---	---	7	---	0	81	---
COLUMN TOTALS					81	---	4		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 4) EBS CALCULATED AT 5 PERCENT OF CUT.

STH 23 (STAGE 2)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
112+58 STH 23	---	101	12	5	---	---	---	---	---
113+00 STH 23	42	159	11	8	202	18	10	202	23
113+50 STH 23	50	53	54	3	195	60	10	397	97
114+00 STH 23	50	36	18	2	82	67	4	479	180
114+50 STH 23	50	44	10	2	74	26	4	553	213
114+78 STH 23	28	54	10	3	51	10	3	603	227
115+00 STH 23	22	54	7	3	44	7	2	647	235
115+03 STH 23	3	55	6	3	6	1	---	654	236
115+28 STH 23	25	116	5	6	79	5	4	733	243
115+50 STH 23	22	114	11	6	94	7	5	826	251
115+55 STH 23	5	114	11	6	20	2	1	846	253
115+80 STH 23	25	111	3	6	104	7	5	950	262
116+00 STH 23	20	108	2	5	83	2	4	1,033	264
116+05 STH 23	5	108	3	5	19	1	1	1,051	265
116+44 STH 23	39	116	125	6	161	93	8	1,213	381
COLUMN TOTALS					1,213	305	61		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS

C CHAIN (STAGE 3)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
10+00 C	---	38	45	2	---	---	---	---	---
10+50 C	50	39	5	2	71	47	4	71	60
11+00 C	50	43	---	2	76	5	4	148	66
COLUMN TOTALS					148	52	7		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL

G CHAIN (STAGE 3)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
10+00 G	---	130	---	6	---	---	---	---	---
10+50 G	50	146	2	7	256	2	13	256	3
11+00 G	50	161	1	8	285	3	14	540	7
11+50 G	50	172	---	9	308	1	15	849	8
12+00 G	50	116	1	6	267	1	13	1,116	10
12+50 G	50	133	14	7	231	15	12	1,347	---
12+65 G	15	115	5	6	68	5	3	1,415	17
COLUMN TOTALS					1,415	28	71		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL

GOLF VIEW COURT (STAGE 3)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
26+50 STH 136	---	86	1	4	---	---	---	---	---
27+00 STH 136	50	55	---	3	131	1	7	131	1
27+50 STH 136	50	97	---	5	141	---	7	271	1
28+00 STH 136	50	41	8	2	128	7	6	400	10
28+50 STH 136	50	59	6	3	93	13	5	493	26
29+00 STH 136	50	49	3	2	100	8	5	592	36
COLUMN TOTALS					592	29	30		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 4) EBS CALCULATED AT 5 PERCENT OF CUT.

E CHAIN (STAGE 3)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
10+00 E	---	40	---	2	---	---	---	---	---
10+50 E	50	119	---	6	147	---	7	147	---
11+00 E	50	153	---	8	251	---	13	398	---
COLUMN TOTALS					398	---	20		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 4) EBS CALCULATED AT 5 PERCENT OF CUT.

STH 23 (STAGE 3)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
106+50 STH 23	---	107	1	5	---	---	---	---	---
107+00 STH 23	50	111	---	6	202	1	10	202	1
107+50 STH 23	50	121	---	6	215	---	11	417	1
108+00 STH 23	50	125	---	6	228	---	11	645	1
108+50 STH 23	50	128	---	6	234	---	12	879	1
COLUMN TOTALS					879	1	44		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 4) EBS CALCULATED AT 5 PERCENT OF CUT.

STH 23 (STAGE 3)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
97+50 STH 23	---	4	---	---	---	---	---	---	---
98+00 STH 23	50	4	---	---	7	---	---	7	---
98+50 STH 23	50	4	---	---	7	---	---	15	---
99+00 STH 23	50	4	---	---	7	---	---	22	---
99+50 STH 23	50	4	---	---	7	---	---	29	---
100+00 STH 23	50	4	---	---	7	---	---	37	---
100+50 STH 23	50	4	---	---	7	---	---	44	1
101+00 STH 23	50	4	---	---	7	---	---	51	1
101+50 STH 23	50	4	---	---	7	---	---	59	1
102+00 STH 23	50	4	---	---	7	---	---	66	1
102+50 STH 23	50	4	---	---	7	---	---	73	1
103+00 STH 23	50	4	---	---	7	---	---	81	1
103+50 STH 23	50	4	---	---	7	---	---	88	1
104+00 STH 23	50	4	---	---	7	---	---	95	1
104+50 STH 23	50	2	2	---	6	2	---	101	4
105+00 STH 23	50	4	---	---	6	2	---	107	6
105+50 STH 23	50	4	---	---	8	---	---	114	6
106+00 STH 23	50	60	---	3	60	---	3	174	6
COLUMN TOTALS					174	5	9		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 4) EBS CALCULATED AT 5 PERCENT OF CUT.

STH 23 (STAGE 4)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
104+50 STH 23	---	4	---	---	---	---	---	---	---
105+00 STH 23	50	3	1	---	7	1	0	7	1
105+50 STH 23	50	6	---	---	8	1	0	15	2
106+00 STH 23	50	9	---	---	13	---	1	28	3
106+50 STH 23	50	14	1	1	20	1	1	49	4
107+00 STH 23	50	13	1	1	25	2	1	73	7
107+50 STH 23	50	12	1	1	24	2	1	97	9
108+00 STH 23	50	11	1	1	22	2	1	119	12
108+50 STH 23	50	11	3	1	21	4	1	139	16
109+00 STH 23	50	31	7	2	39	9	2	179	28
109+50 STH 23	50	33	7	2	60	13	3	239	44
110+00 STH 23	50	35	9	2	63	14	3	302	61
110+50 STH 23	50	131	2	7	153	10	8	455	74
111+00 STH 23	50	183	31	9	290	31	15	745	112
111+19 STH 23	19	183	31	9	128	22	6	874	101
COLUMN TOTALS					874	111	44		

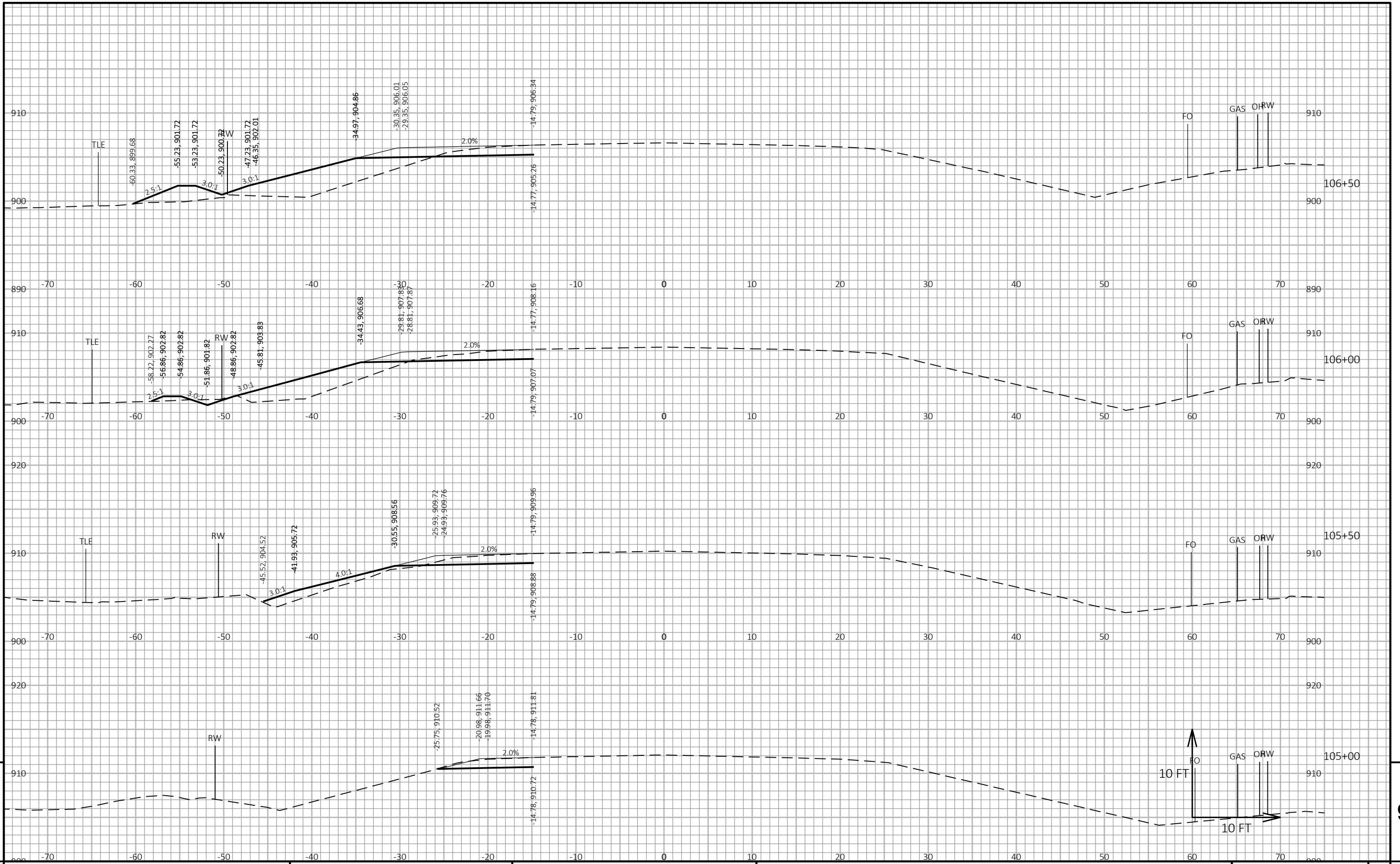
NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL

STH 23 (STAGE 4)		AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)	
STATION	DISTANCE	CUT NOTE 1	FILL NOTE 3	EBS	CUT NOTE 1	FILL NOTE 3	EBS	CUT 1.0 NOTE 1	EXPANDED FILL 1.25
				(5% OF CUT)					
112+58 STH 23	---	---	---	---	---	---	---	---	---
113+00 STH 23	42	21	4	1	16	3	1	16	4
113+50 STH 23	50	21	3	1	39	6	2	55	12
114+00 STH 23	50	21	4	1	39	7	2	94	20
114+50 STH 23	50	21	4	1	39	8	2	133	30
115+00 STH 23	50	21	2	1	8	6	2	141	37
COLUMN TOTALS					141	30	9		

NOTES:

- 1) CUT: CUT INCLUDES SALVAGED PAVEMENT MATERIAL
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL: NOT SHOWN IN CROSS SECTIONS
- 3) FILL: FILL DOES NOT INCLUDE SALVAGED/UNUSABLE PAVEMENT MATERIAL



PROJECT NO: 5050-01-76

HWY: STH 23

COUNTY: SAUK

CROSS SECTIONS: STAGE 1 TEMPORARY WIDENING

SHEET

E



9

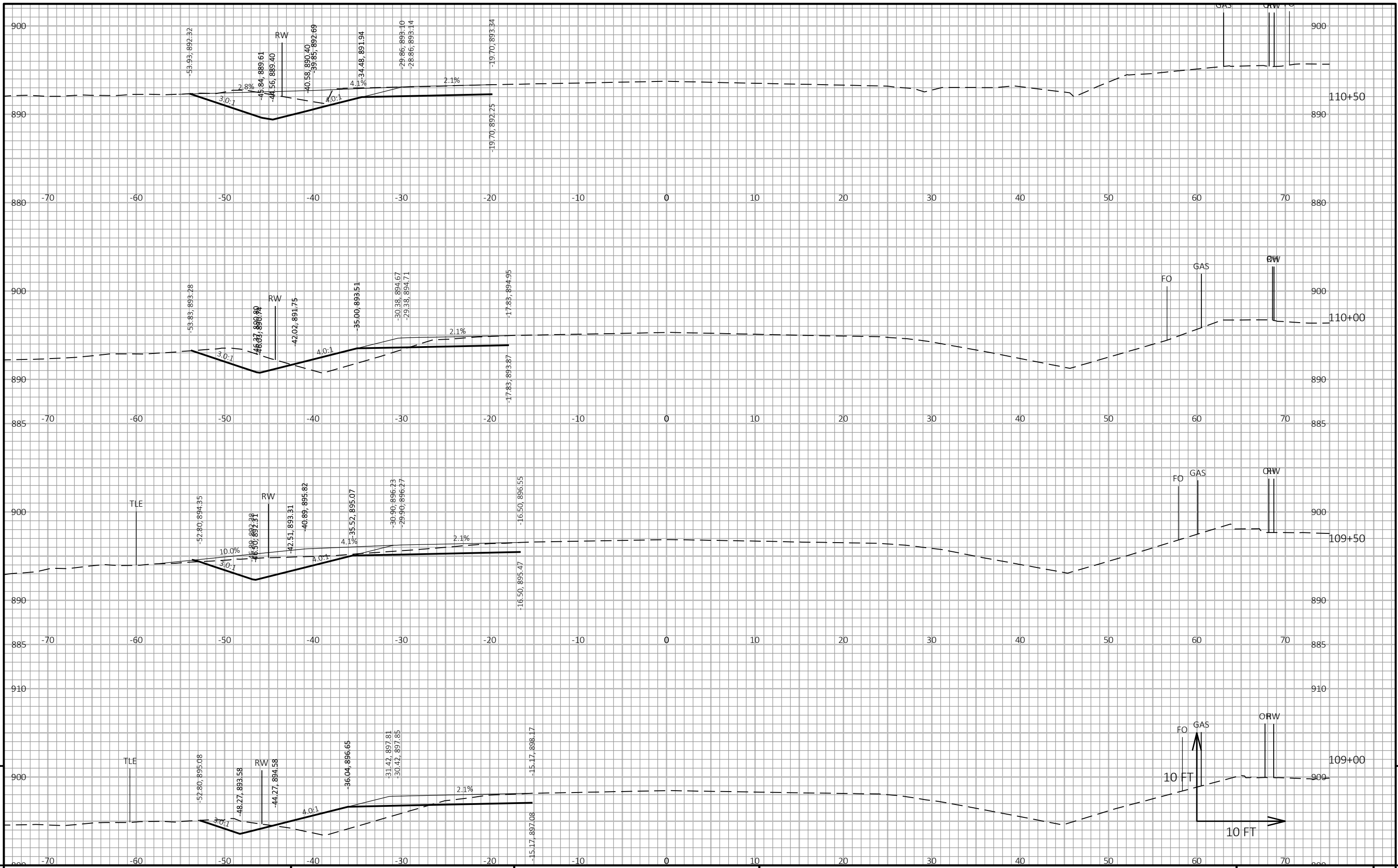
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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STAGE 1 TEMPORARY WIDENING      SHEET      E

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LAYOUT NAME - 02





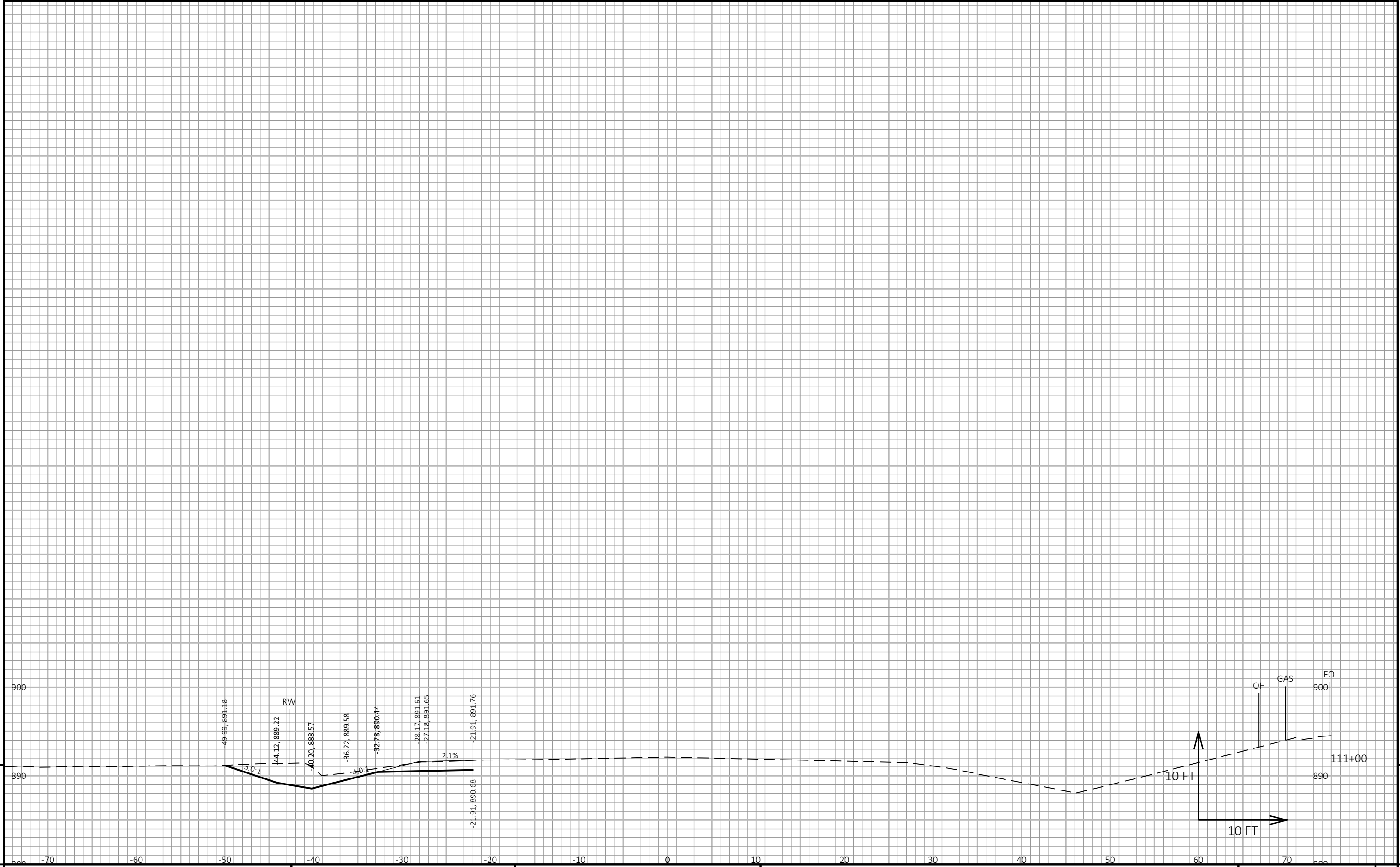
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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STAGE 1 TEMPORARY WIDENING      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090204\_XS.DWG      PLOT DATE : 10/19/2022 10:40 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 03



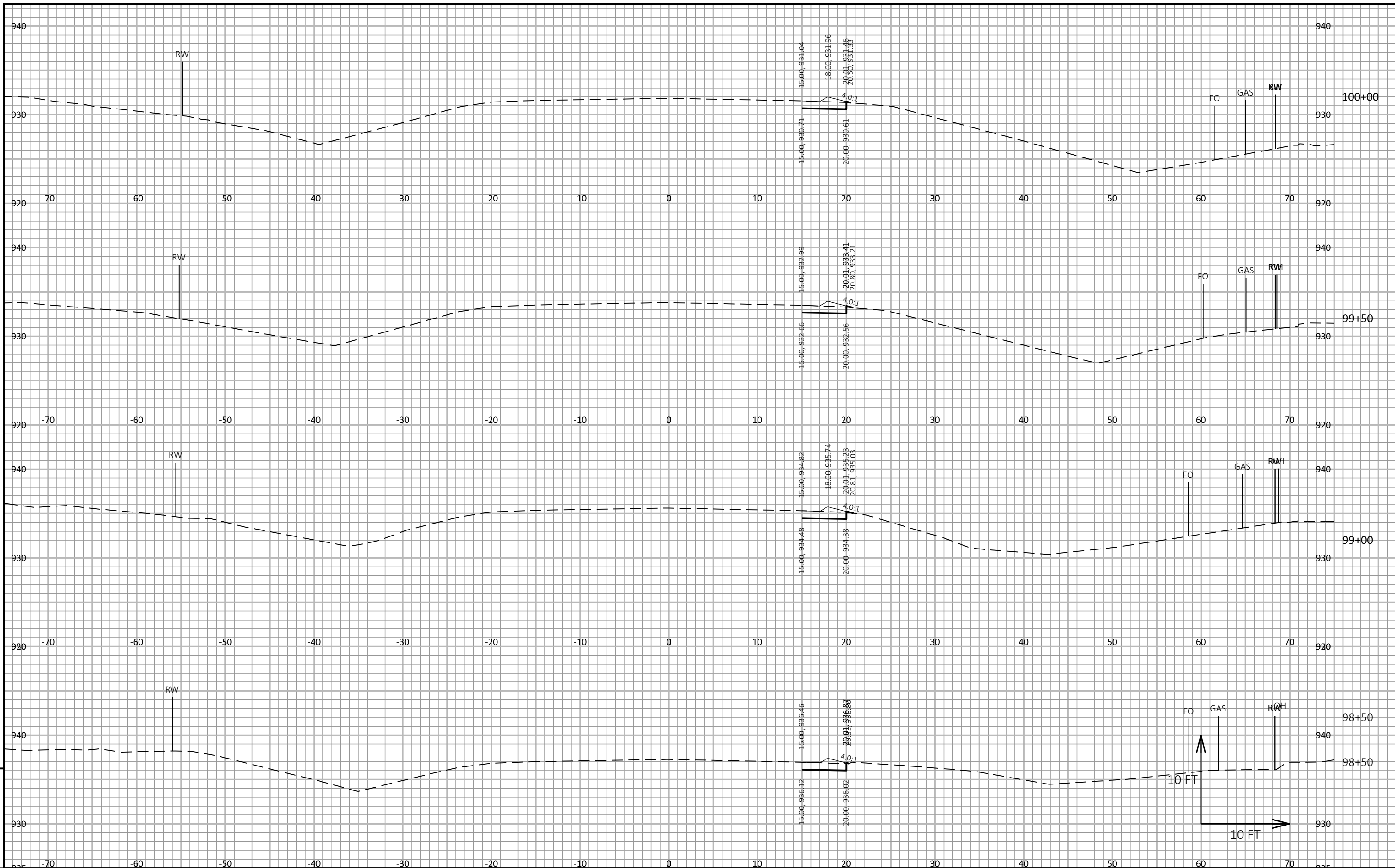
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9

PROJECT NO: 5050-01-76 HWY: STH 23 COUNTY: SAUK CROSS SECTIONS: STAGE 1 TEMPORARY WIDENING SHEET E

FILE NAME: S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090204\_XS.DWG PLOT DATE: 10/19/2022 10:40 AM PLOT BY: JACK, ROBERT A. PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 04



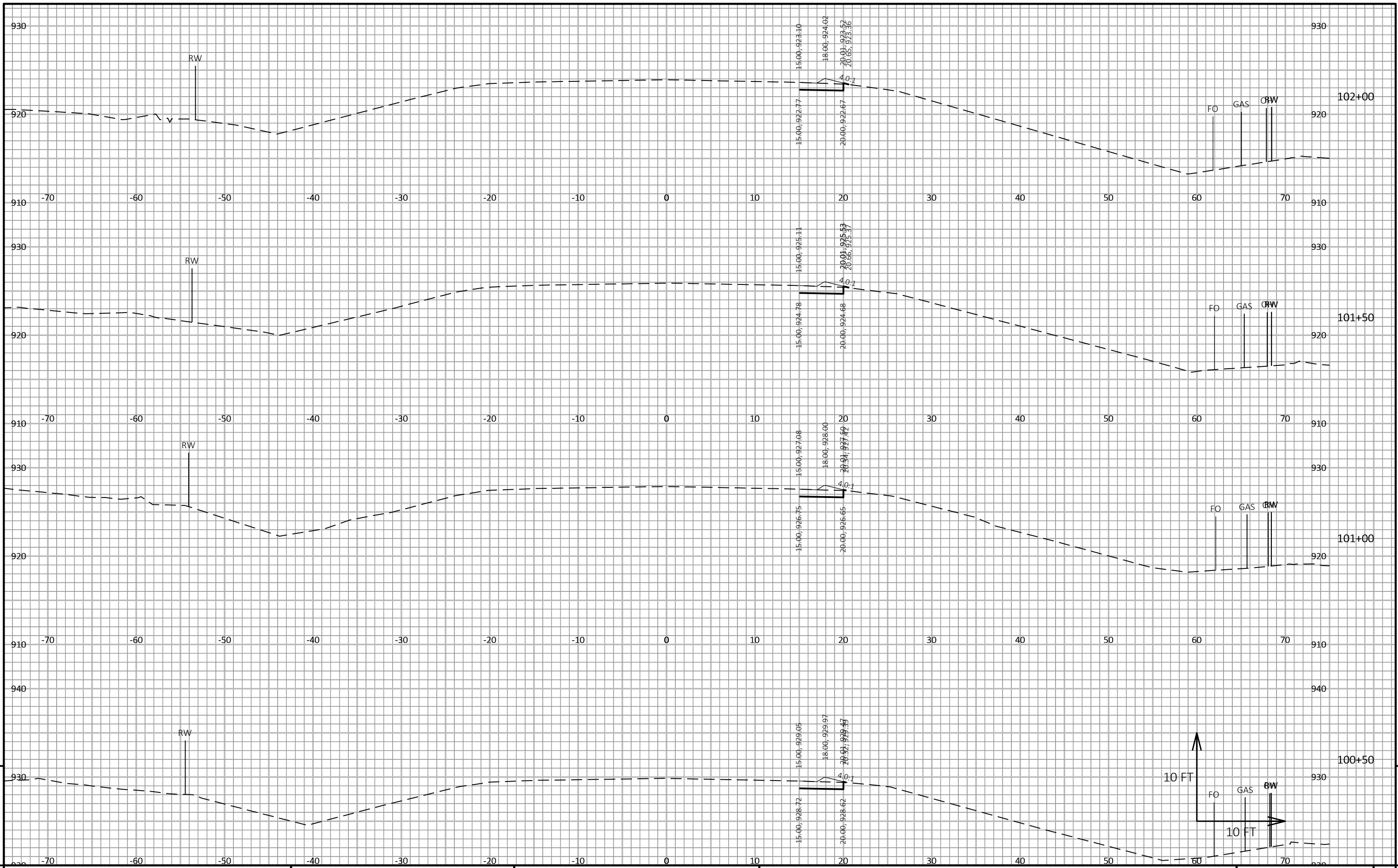
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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 2      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG      PLOT DATE : 10/19/2022 10:40 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090201\_xs-13

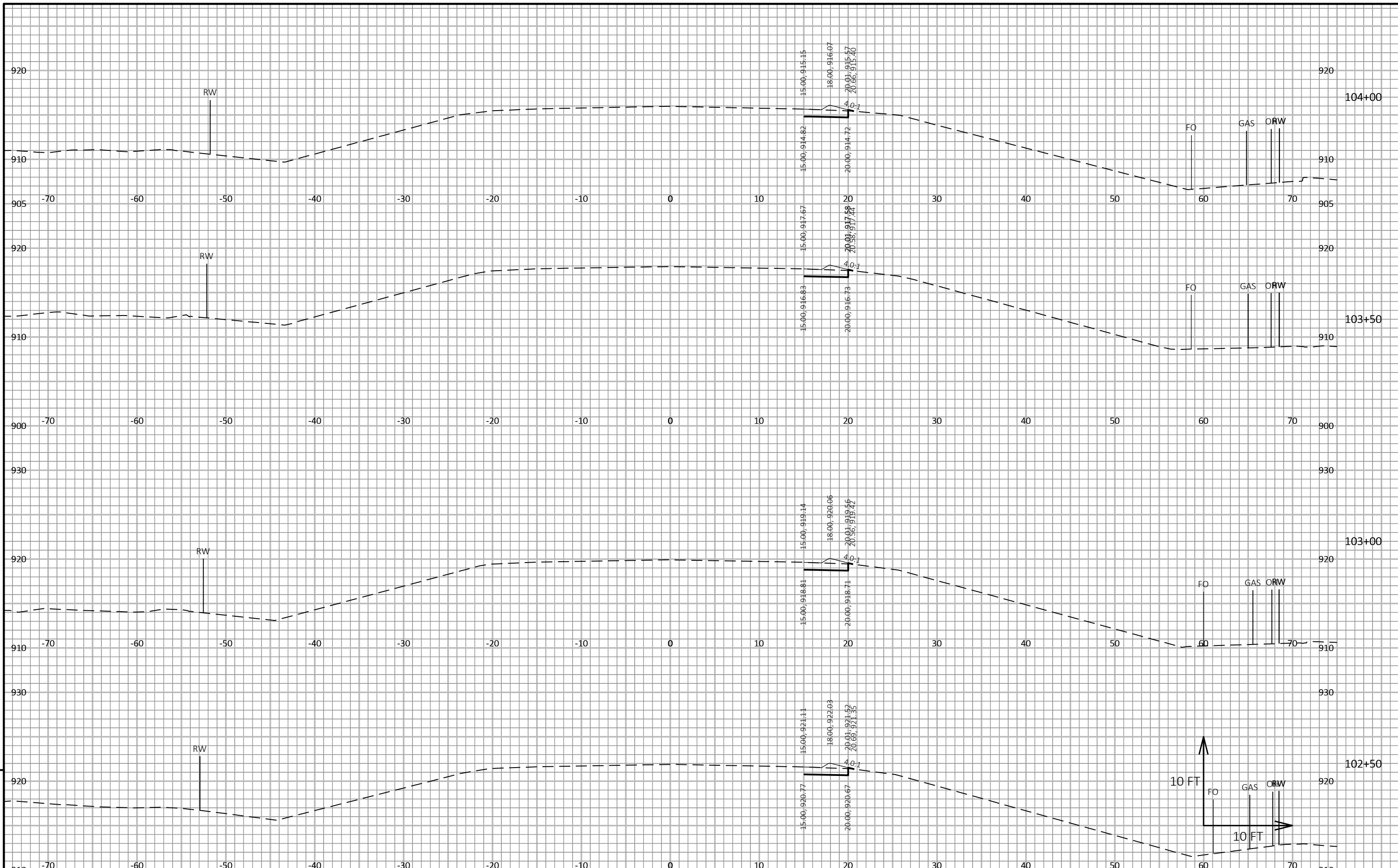


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PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	CROSS SECTIONS: STH 23 - STAGE 2	SHEET	E
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FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG  
 LAYOUT NAME - 090201\_xs-14  
 PLOT DATE : 10/19/2022 10:40 AM  
 PLOT BY : JACK, ROBERT A.  
 PLOT NAME :  
 PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.  
 WISDOT/CADD SHEET 49



PROJECT NO: 5050-01-76

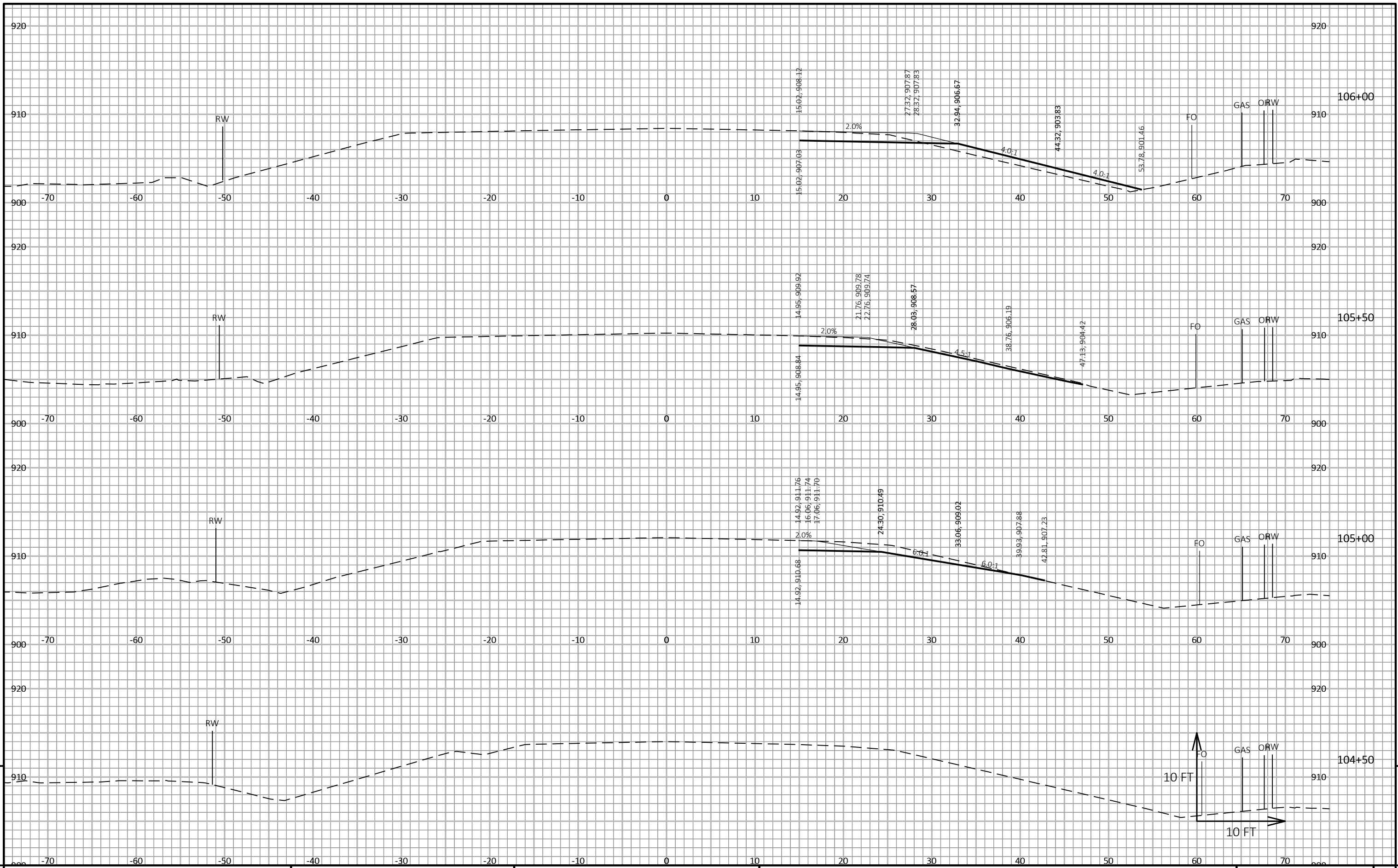
HWY: STH 23

COUNTY: SAUK

CROSS SECTIONS: STH 23 - STAGE 2

SHEET

E



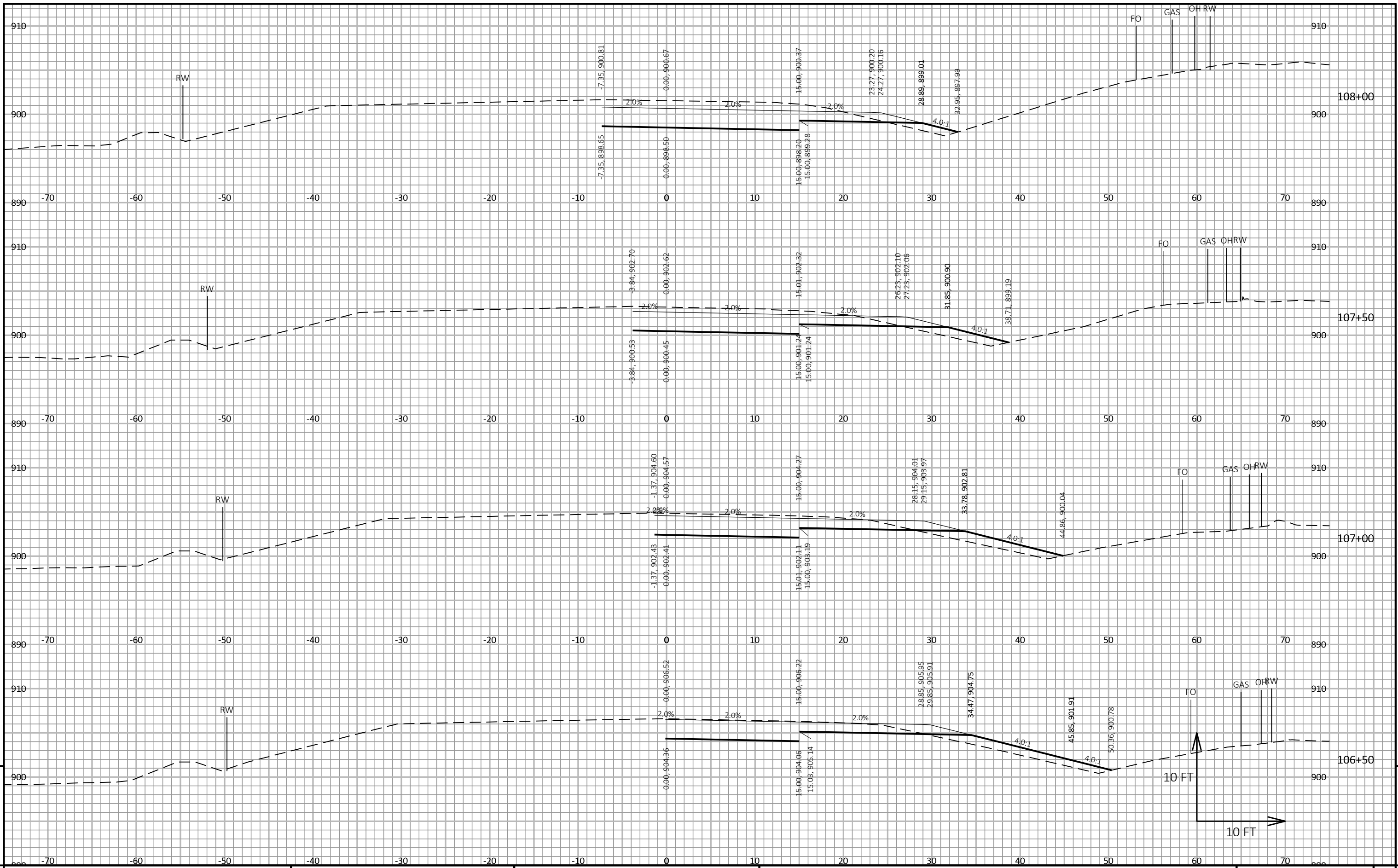
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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 2      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG      PLOT DATE : 10/19/2022 10:41 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090201\_xs-16



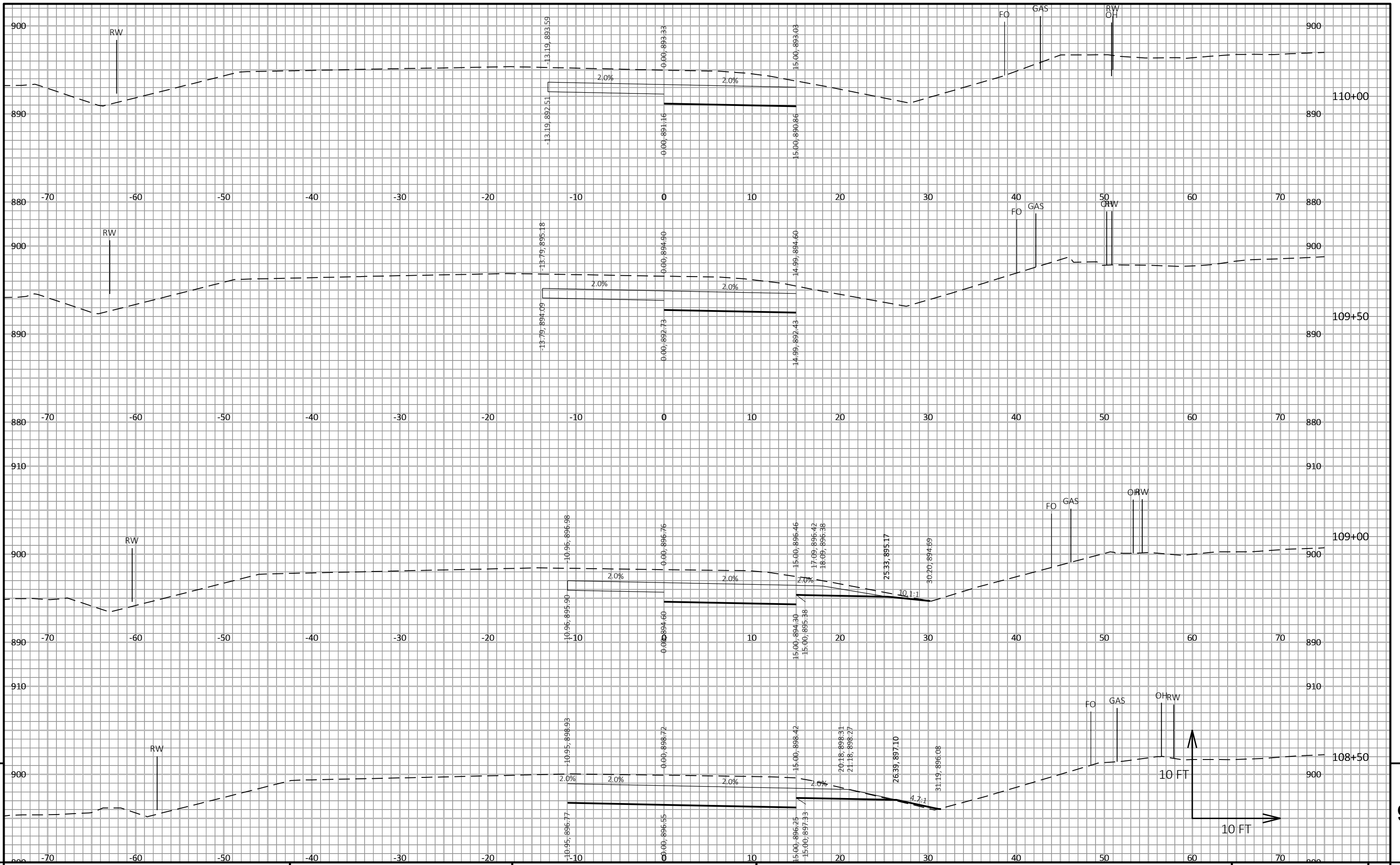
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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 2      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG      PLOT DATE : 10/19/2022 10:41 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090201\_xs-17



PROJECT NO: 5050-01-76

HWY: STH 23

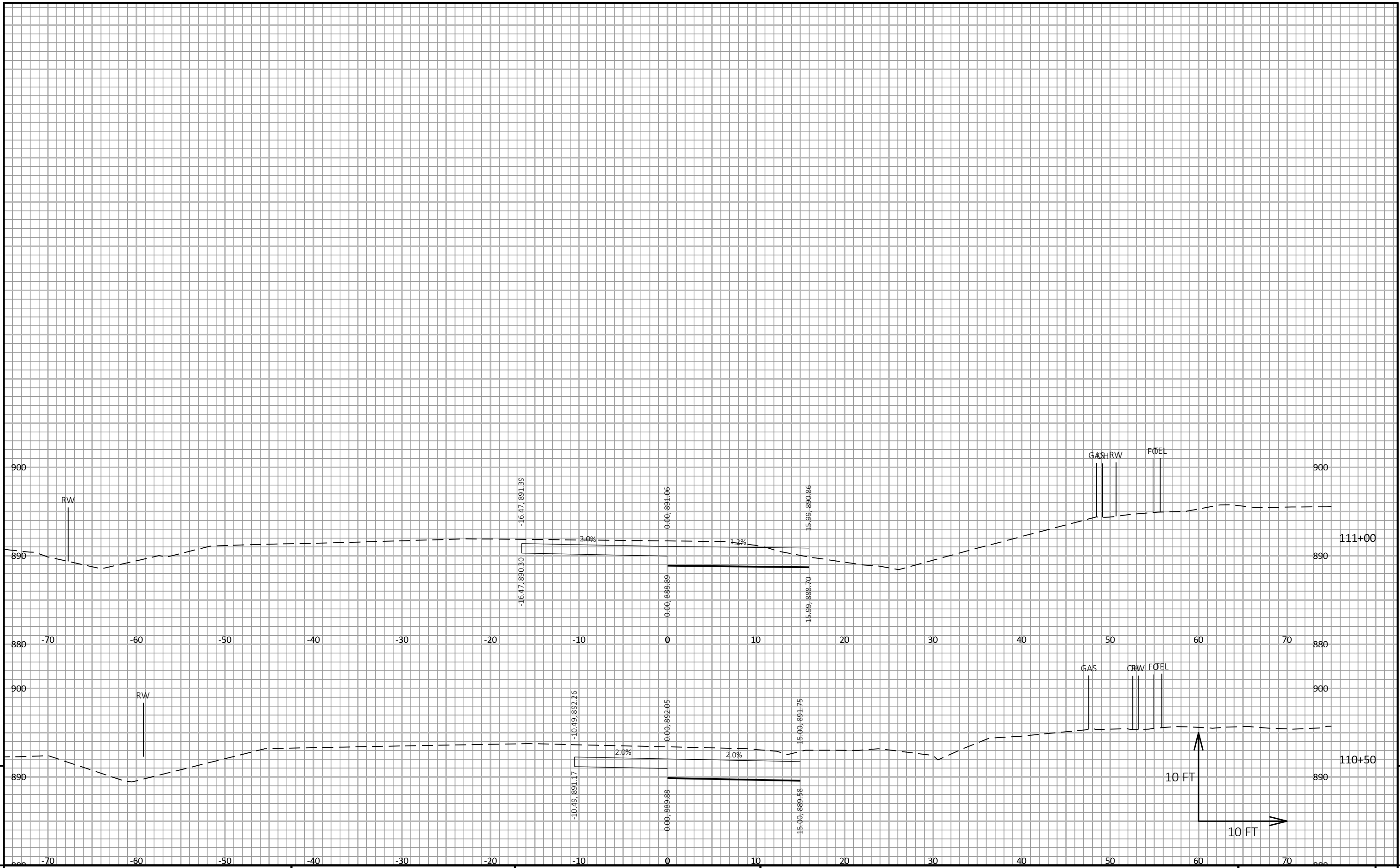
COUNTY: SAUK

CROSS SECTIONS: STH 23 - STAGE 2

SHEET

E





PROJECT NO: 5050-01-76

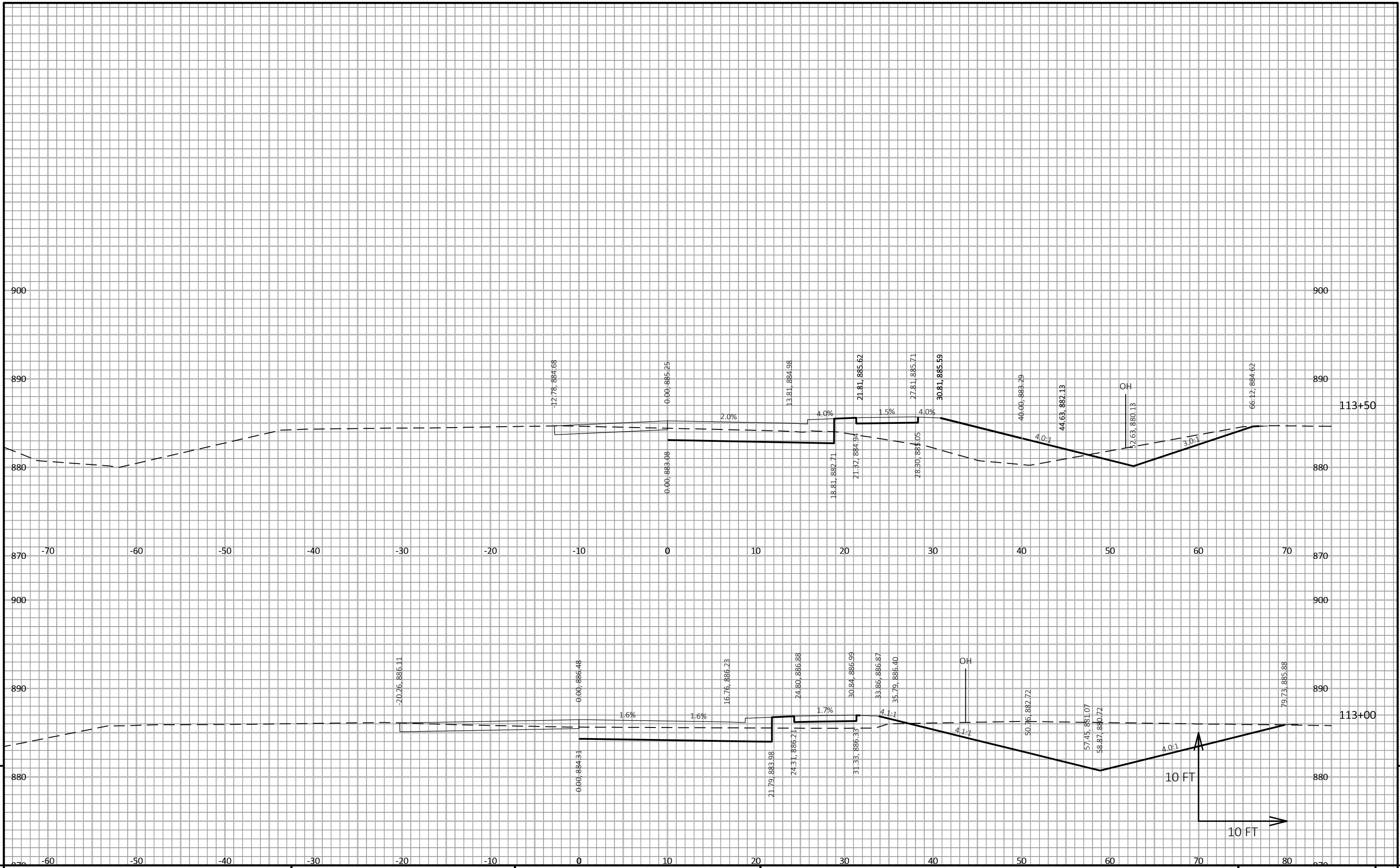
HWY: STH 23

COUNTY: SAUK

CROSS SECTIONS: STH 23 - STAGE 2

SHEET

E



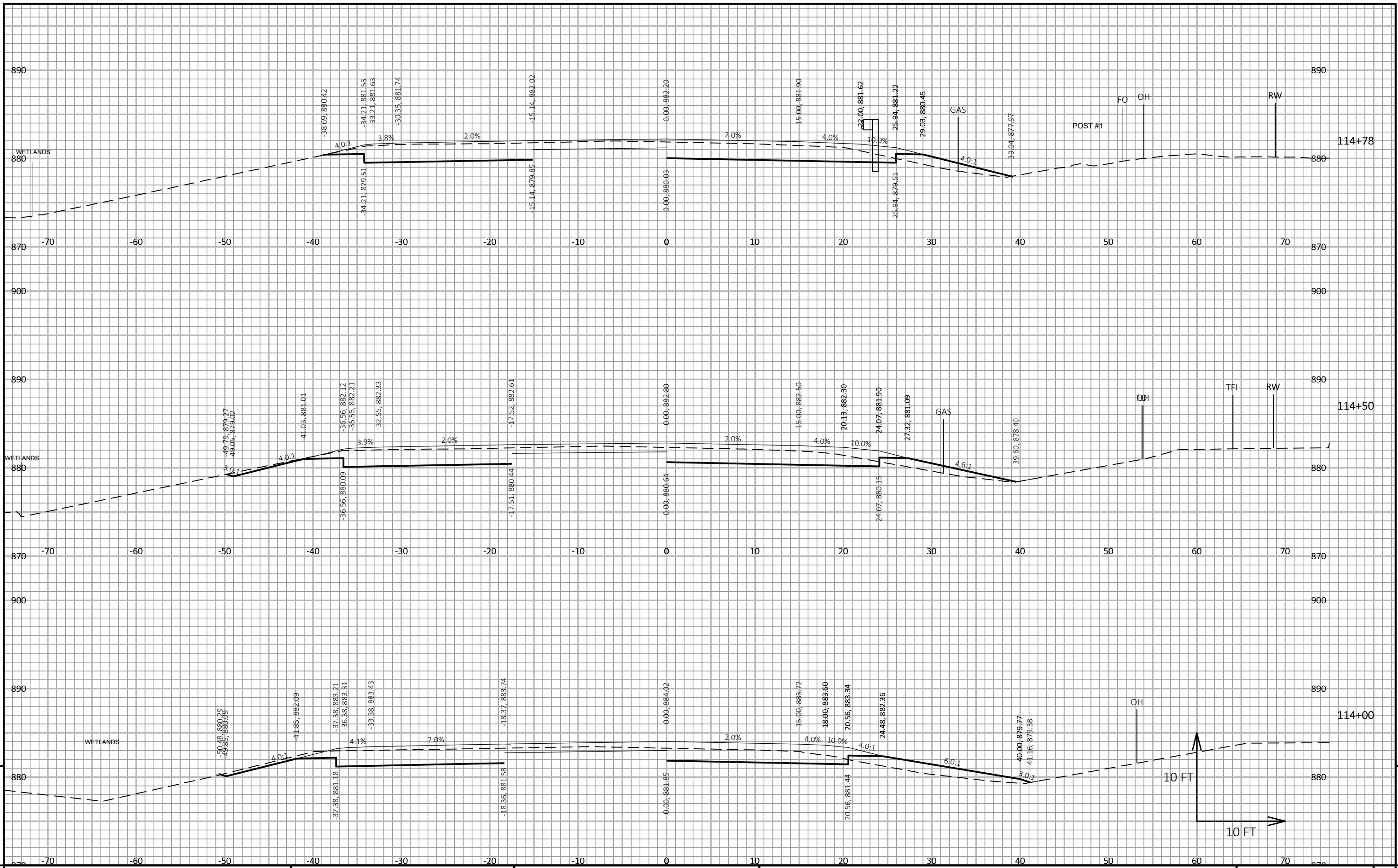
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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 2      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG      PLOT DATE : 10/19/2022 10:42 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

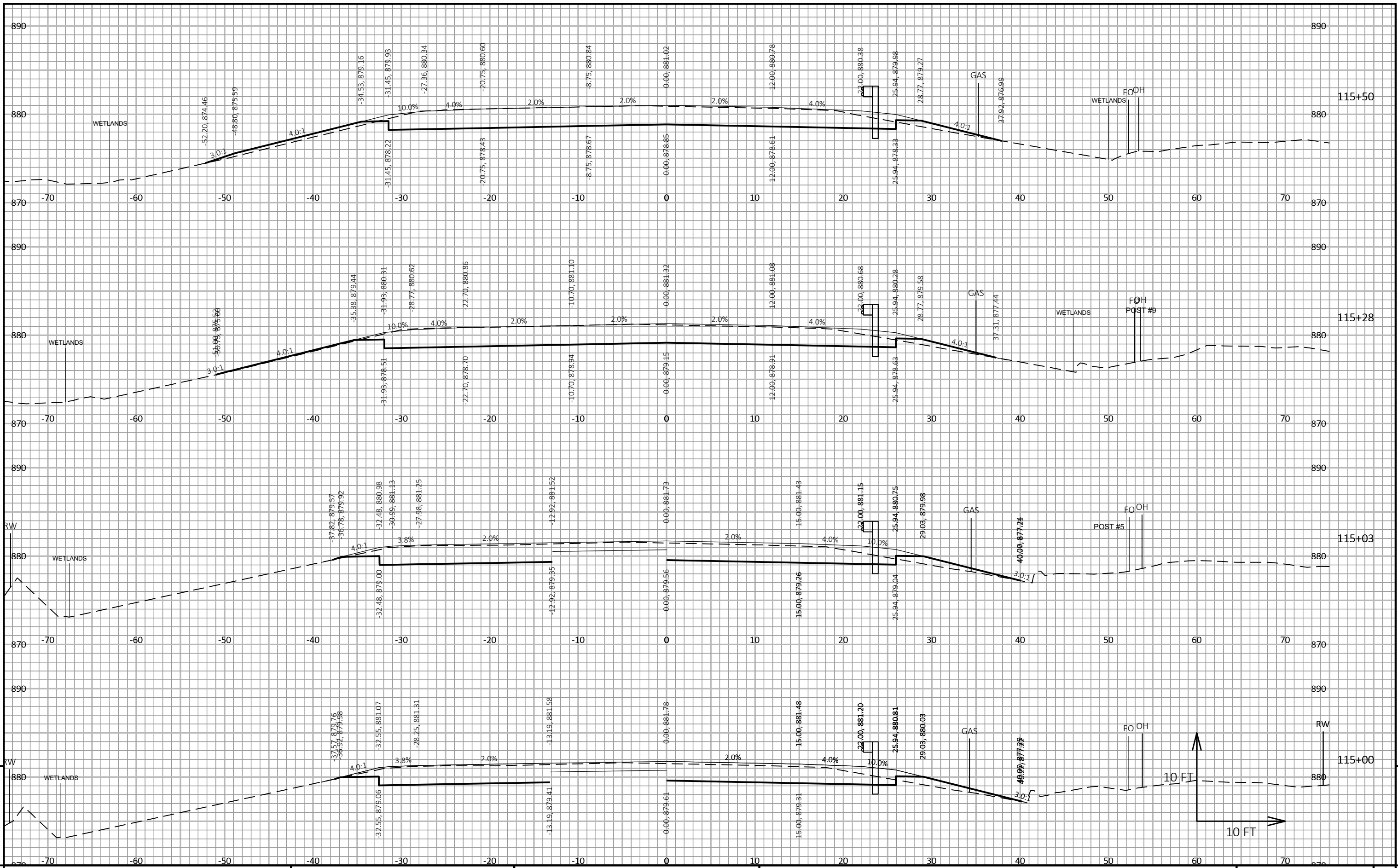
LAYOUT NAME - 090201\_xs-07



PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 2      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG      PLOT DATE : 10/19/2022 10:42 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADDs SHEET 49

LAYOUT NAME - 090201\_xs-08



PROJECT NO: 5050-01-76

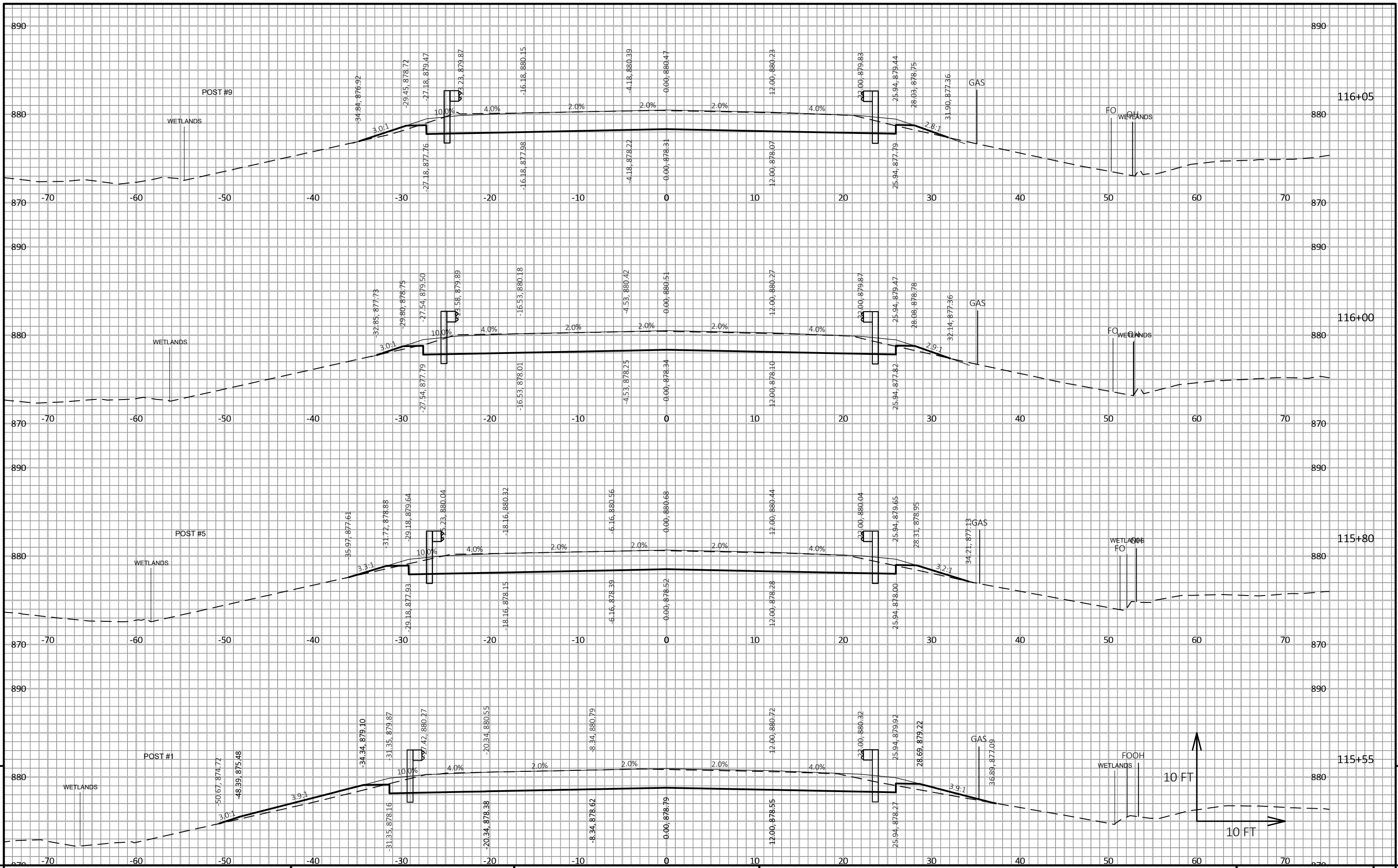
HWY: STH 23

COUNTY: SAUK

CROSS SECTIONS: STH 23 - STAGE 2

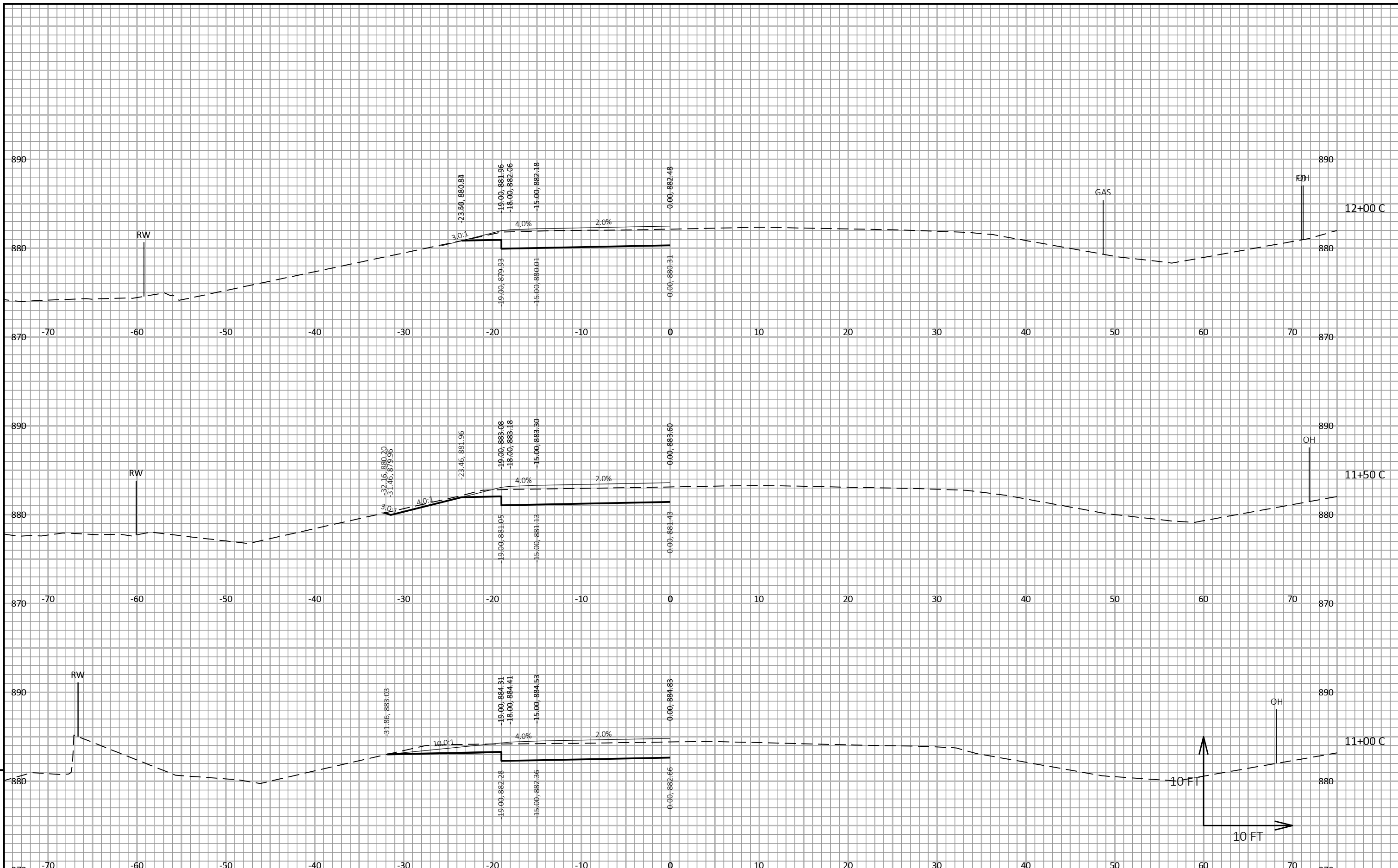
SHEET

E



PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 2      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG      PLOT DATE : 10/19/2022 10:42 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49



PROJECT NO: 5050-01-76

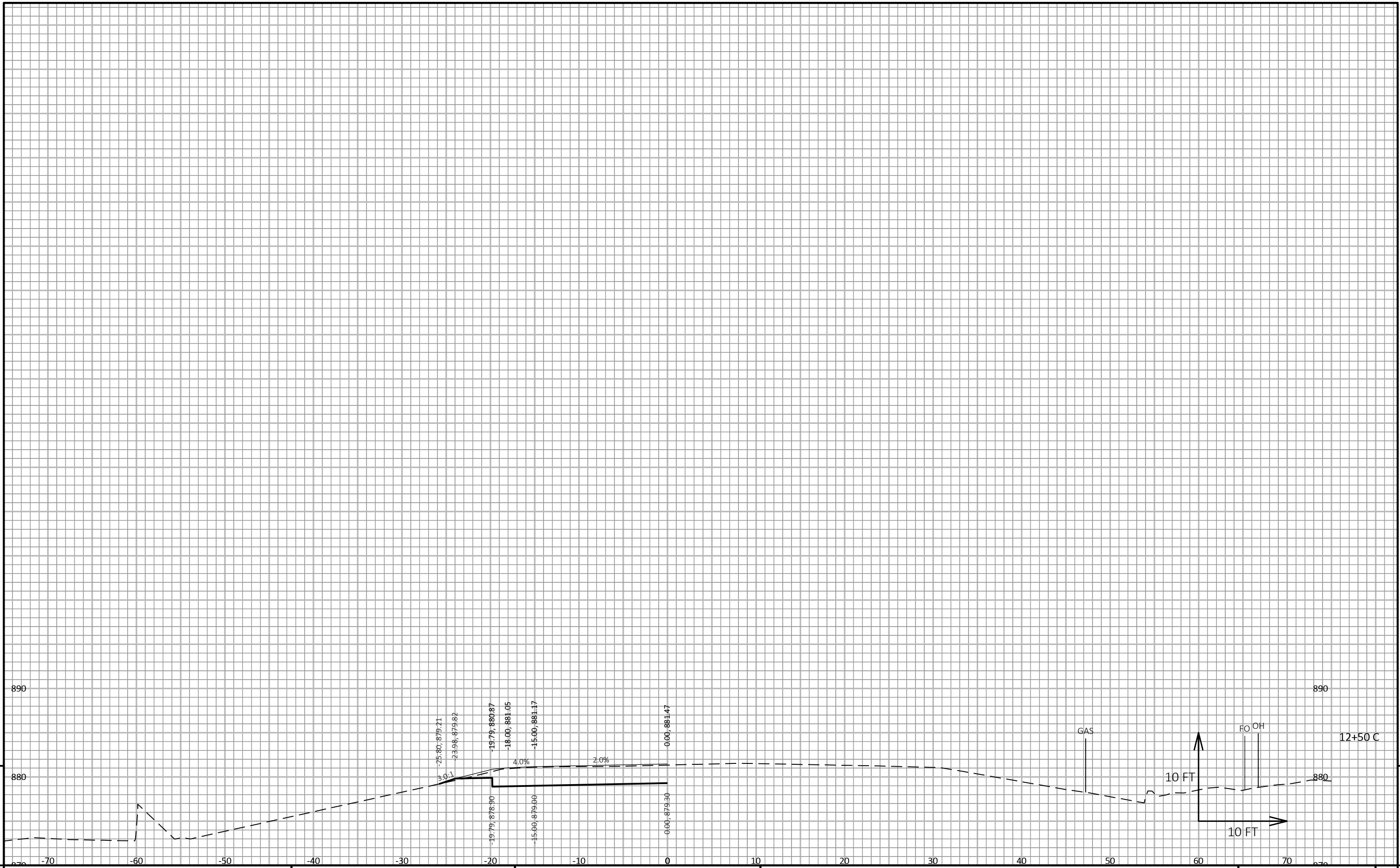
HWY: STH 23

COUNTY: SAUK

CROSS SECTIONS: STH 23 - STAGE 2 (C ALIGNMENT)

SHEET

E



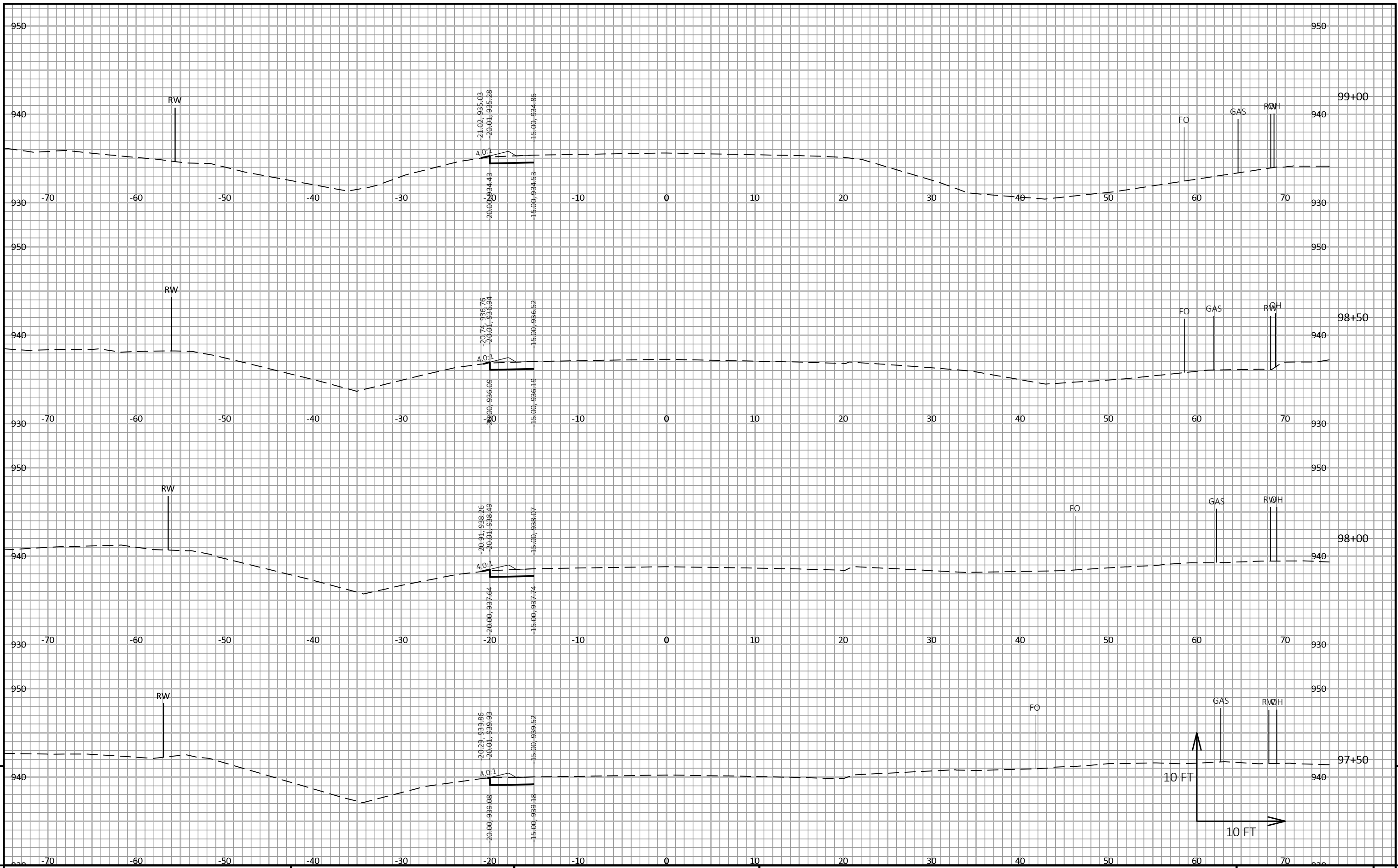
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PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	CROSS SECTIONS: STH 23 - STAGE 2 (C ALIGNMENT)	SHEET	E
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FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG PLOT DATE : 10/19/2022 10:43 AM PLOT BY : JACK, ROBERT A. PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 090201\_xs-02



PROJECT NO: 5050-01-76

HWY: STH 23

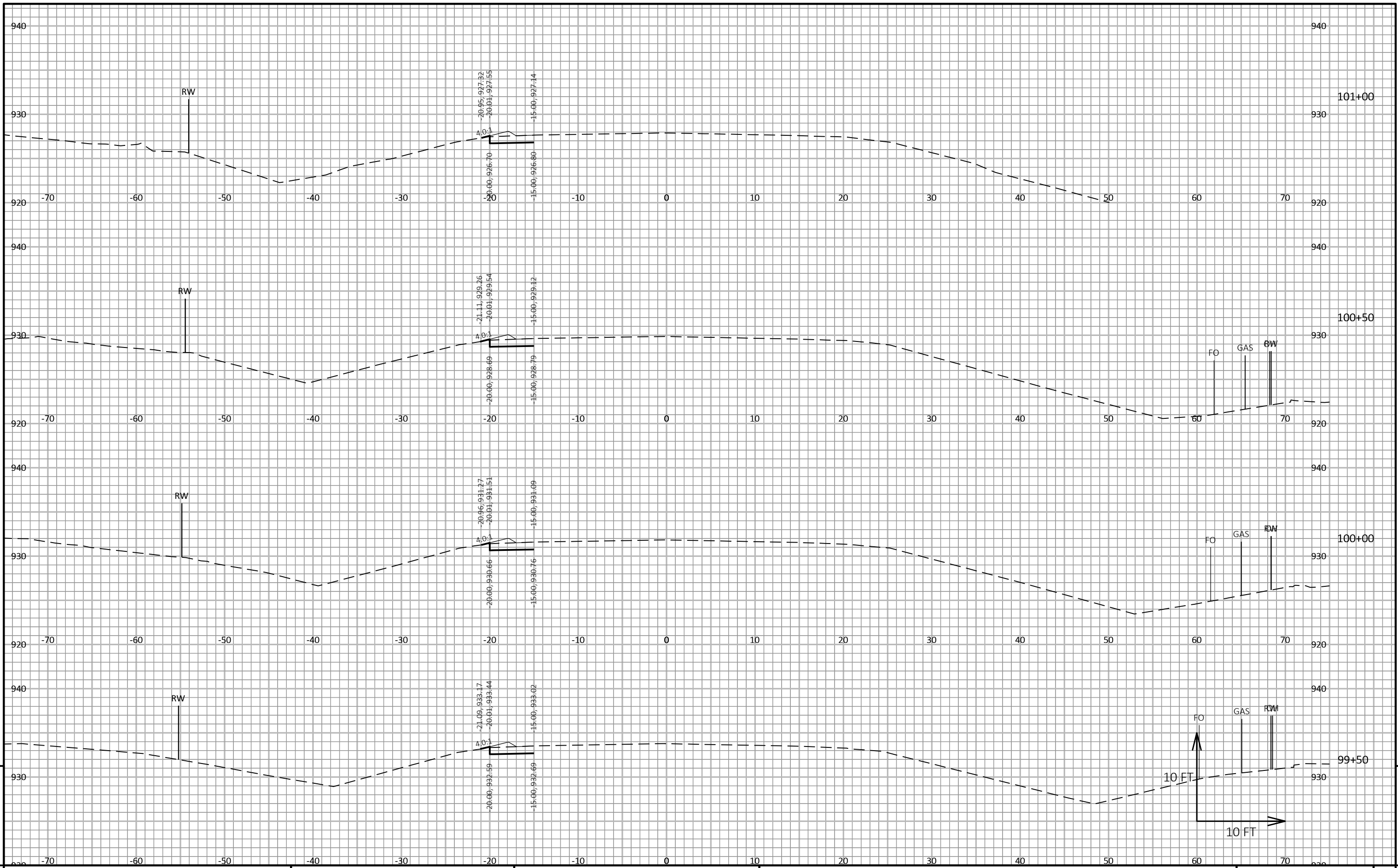
COUNTY: SAUK

CROSS SECTIONS: STH 23 - STAGE 3

SHEET

E





PROJECT NO: 5050-01-76

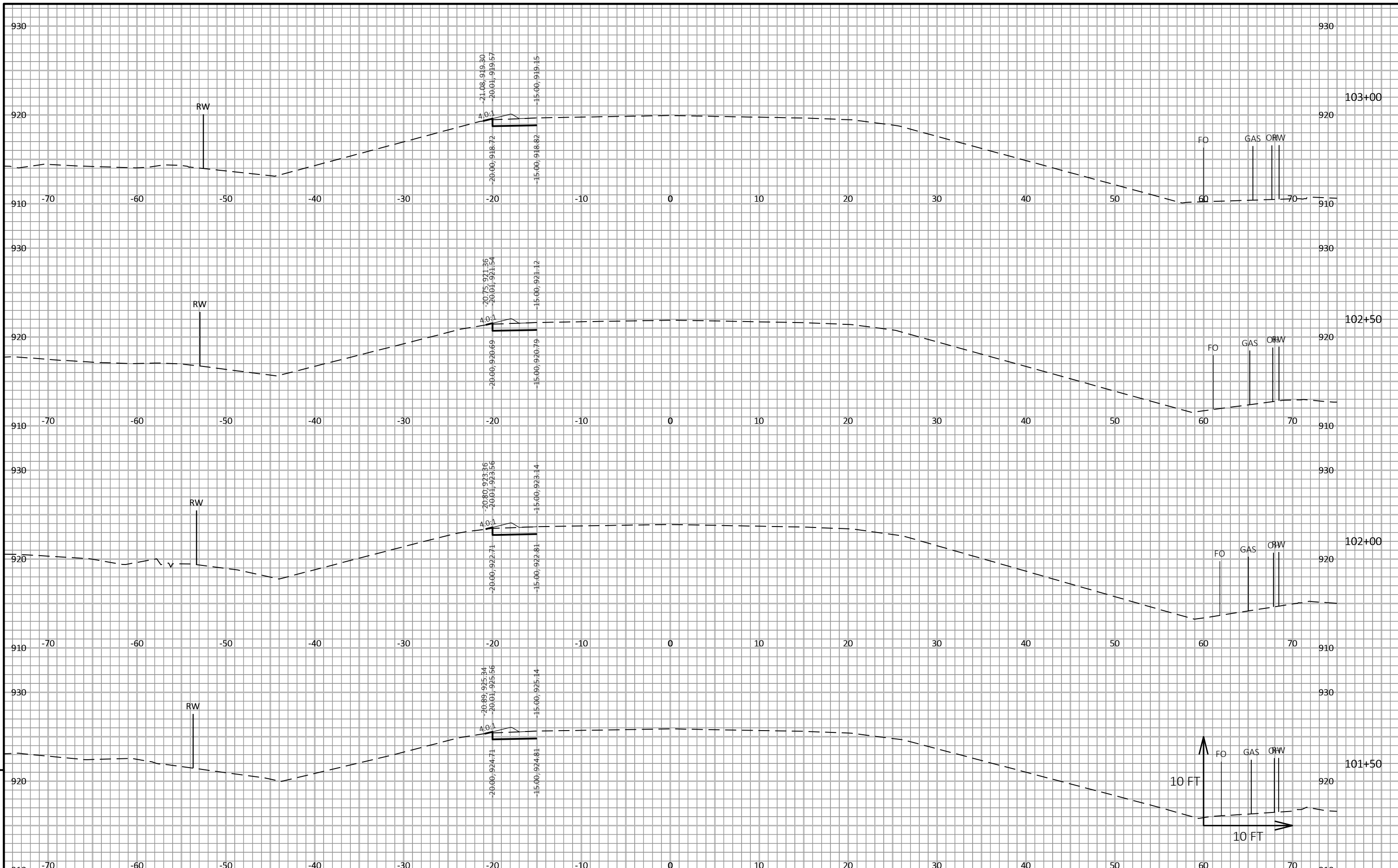
HWY: STH 23

COUNTY: SAUK

CROSS SECTIONS: STH 23 - STAGE 3

SHEET

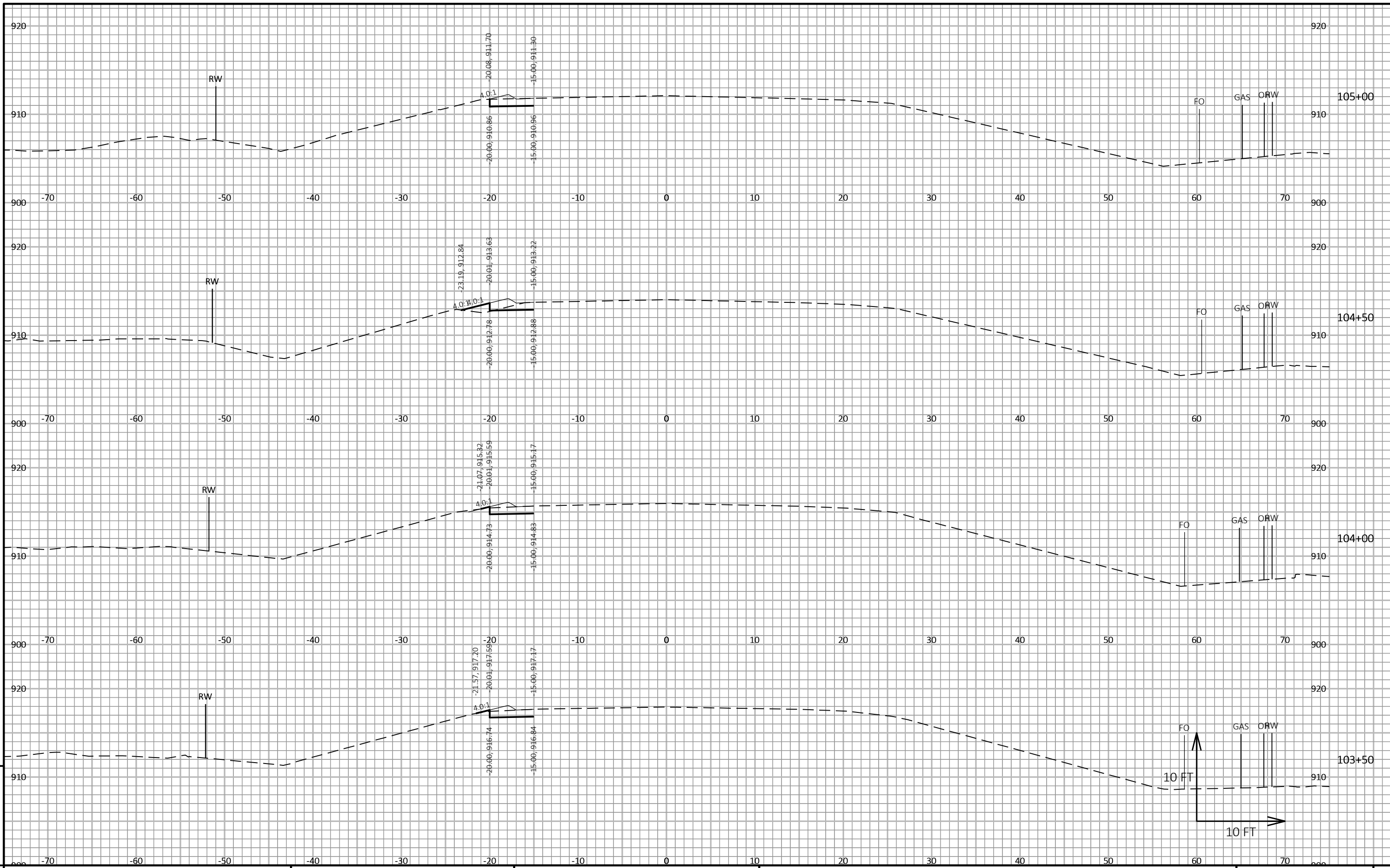
E



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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 3      SHEET      E

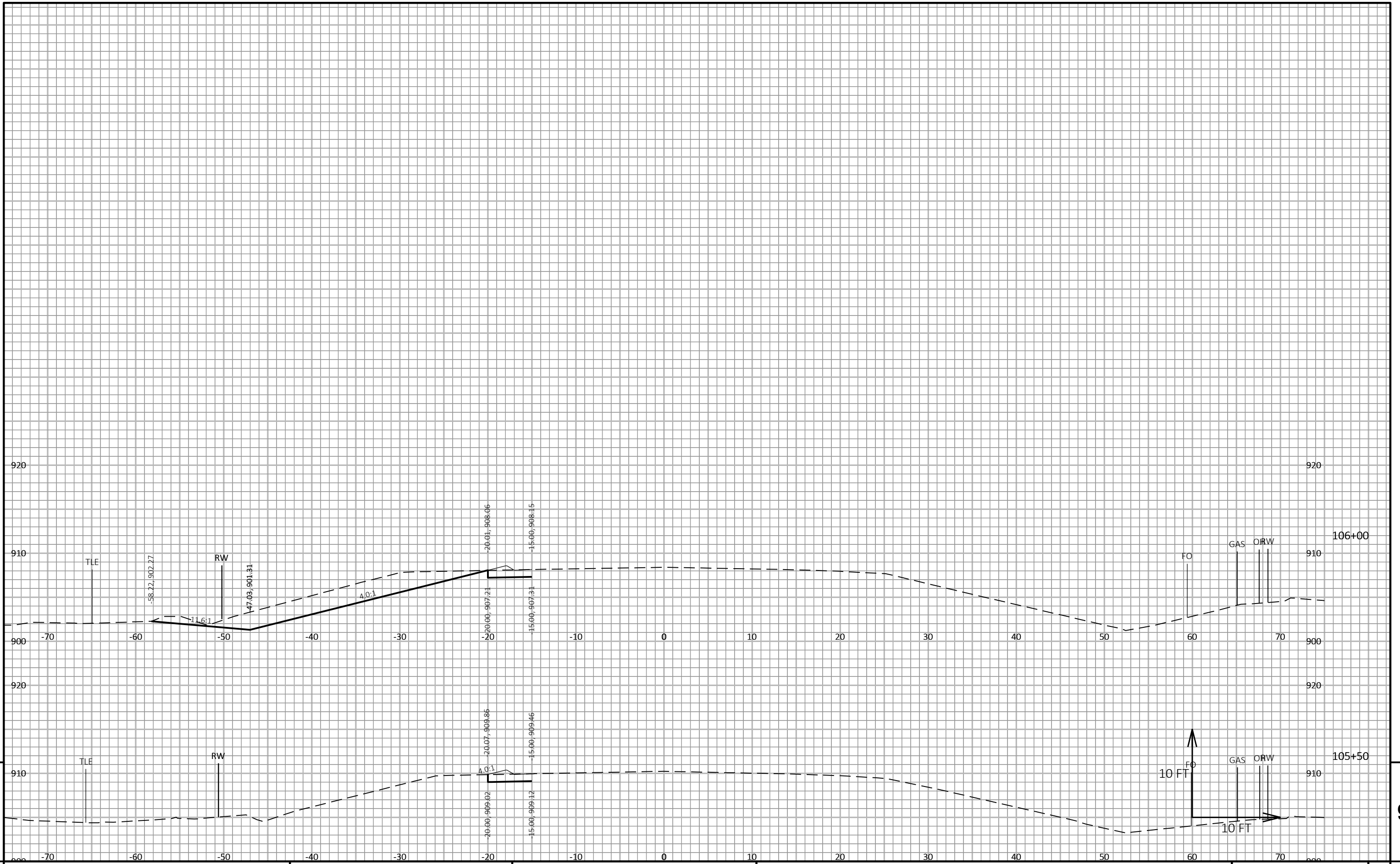


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PROJECT NO: 5050-01-76 HWY: STH 23 COUNTY: SAUK CROSS SECTIONS: STH 23 - STAGE 3 SHEET E

FILE NAME: S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG PLOT DATE: 10/19/2022 10:44 AM PLOT BY: JACK, ROBERT A. PLOT NAME: LAYOUT NAME - 090201\_xs-23 PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

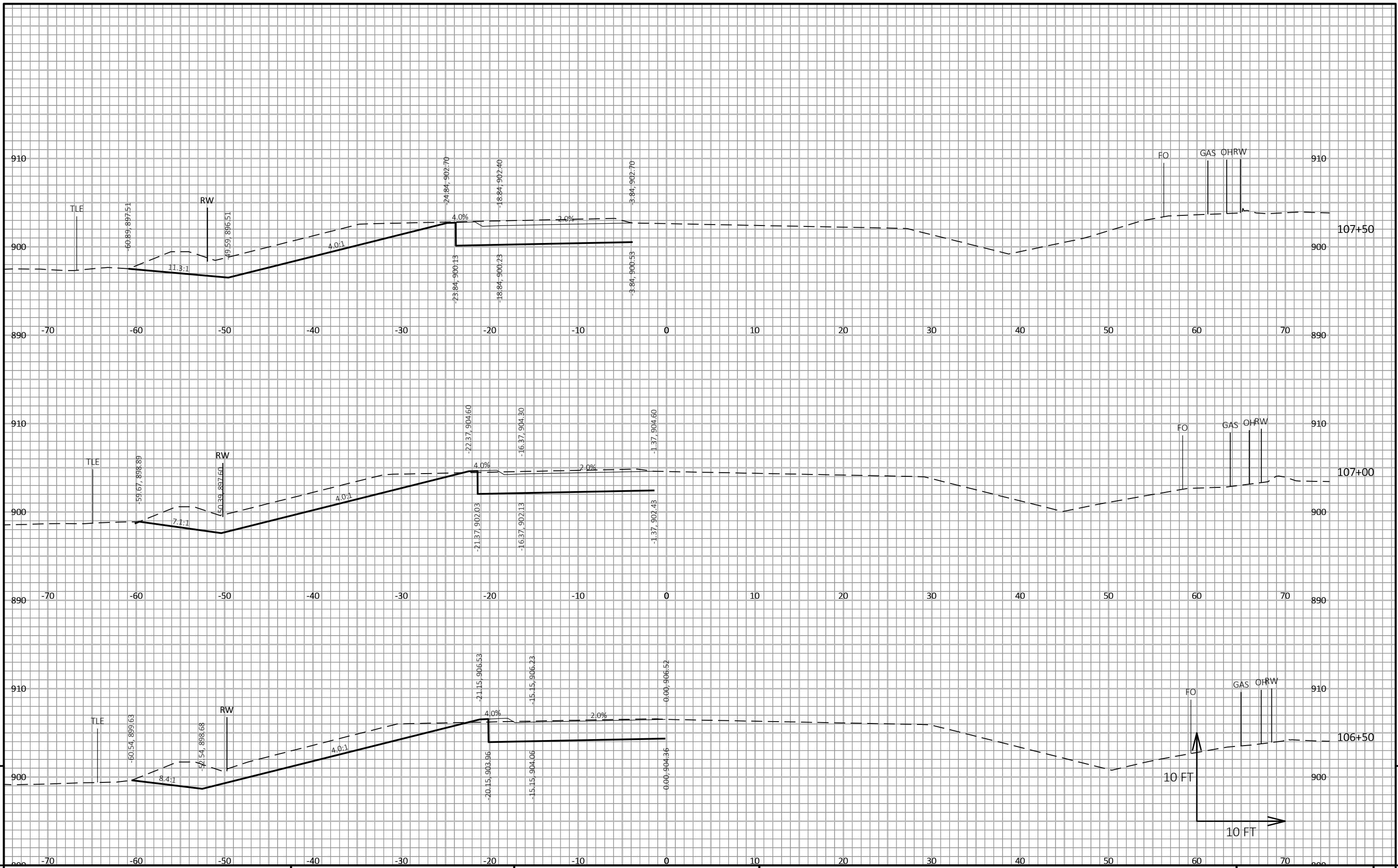


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PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	CROSS SECTIONS: STH 23 - STAGE 3	SHEET	E
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FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090201\_XS.DWG  
 LAYOUT NAME - 090201\_xs-24  
 PLOT DATE : 10/19/2022 10:44 AM  
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 PLOT NAME :  
 PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.  
 WISDOT/CADD SHEET 49



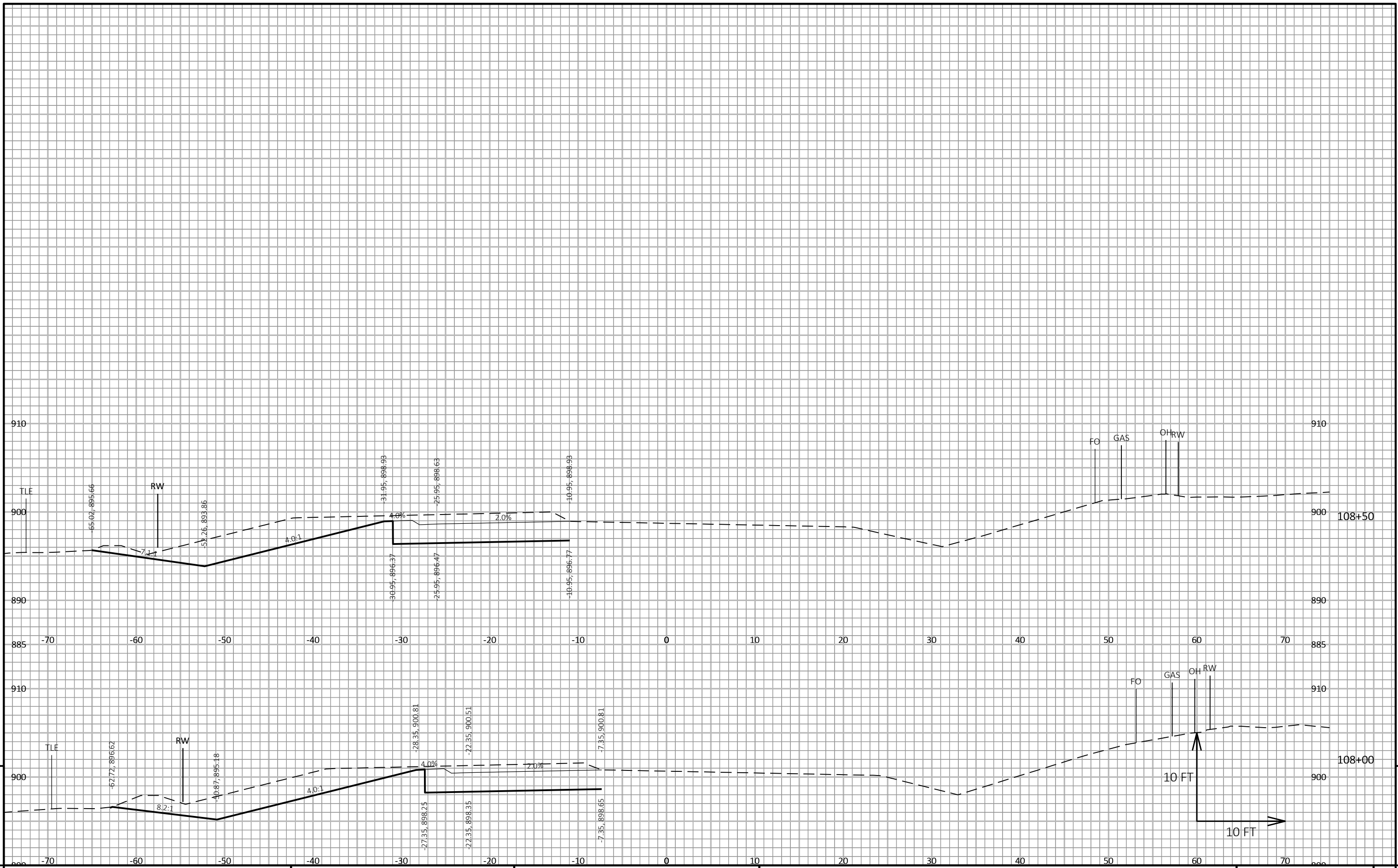
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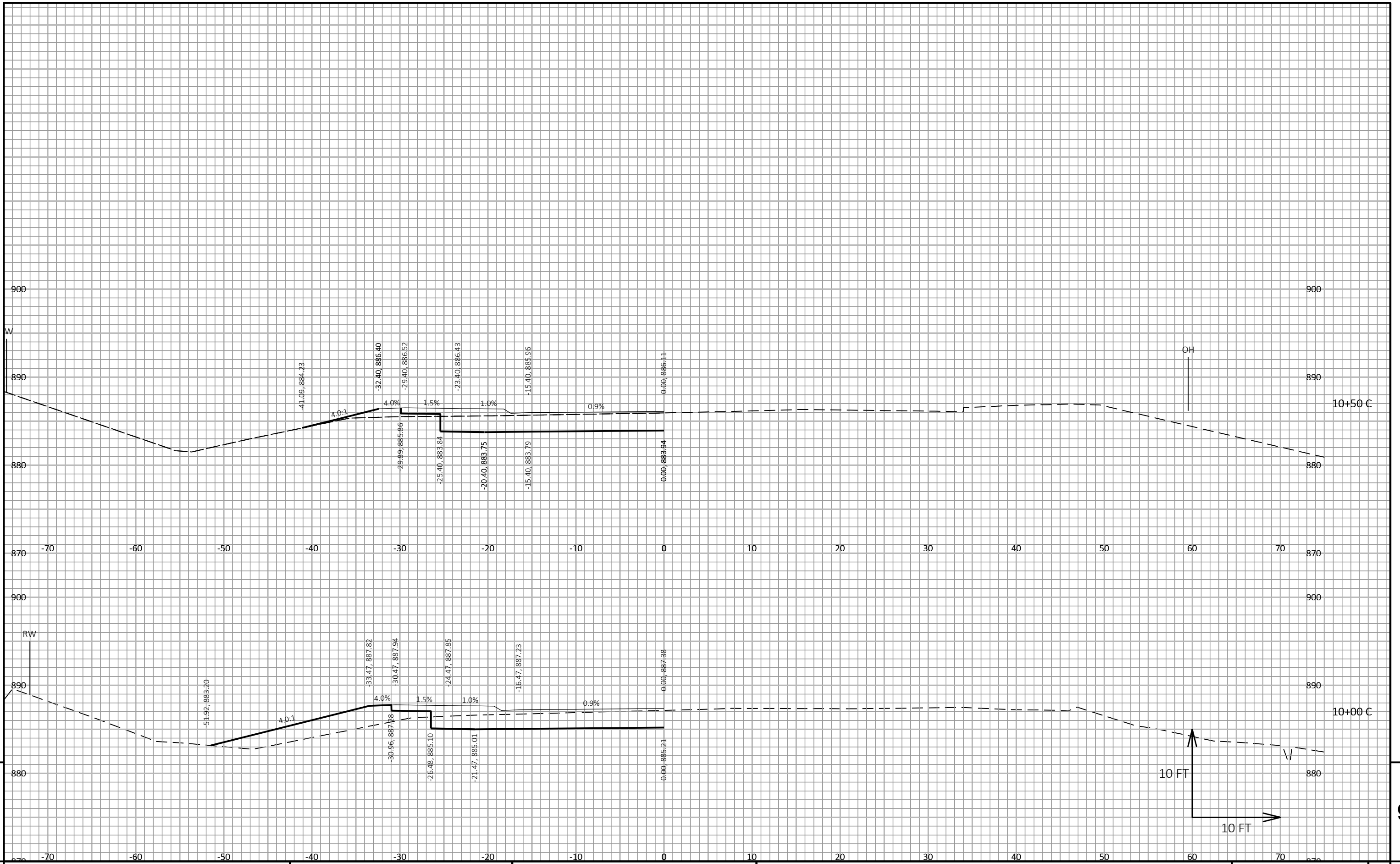
PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 3      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG      PLOT DATE : 10/19/2022 10:44 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADDs SHEET 49

LAYOUT NAME - 090201\_xs-25



PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 3      SHEET      E



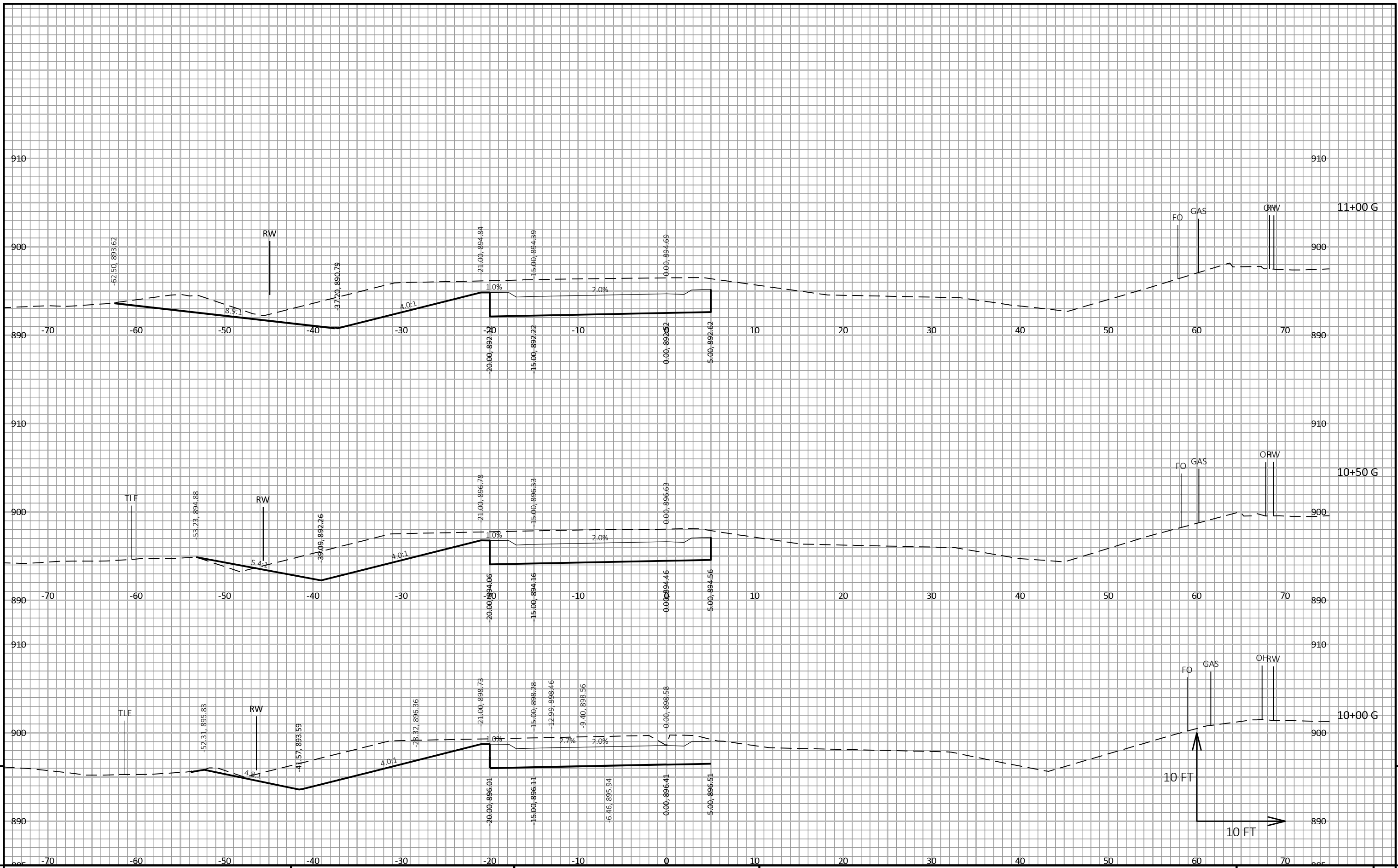
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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 3 (C ALIGNMENT)      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG      PLOT DATE : 10/19/2022 10:45 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090201\_xs-03



PROJECT NO: 5050-01-76

HWY: STH 23

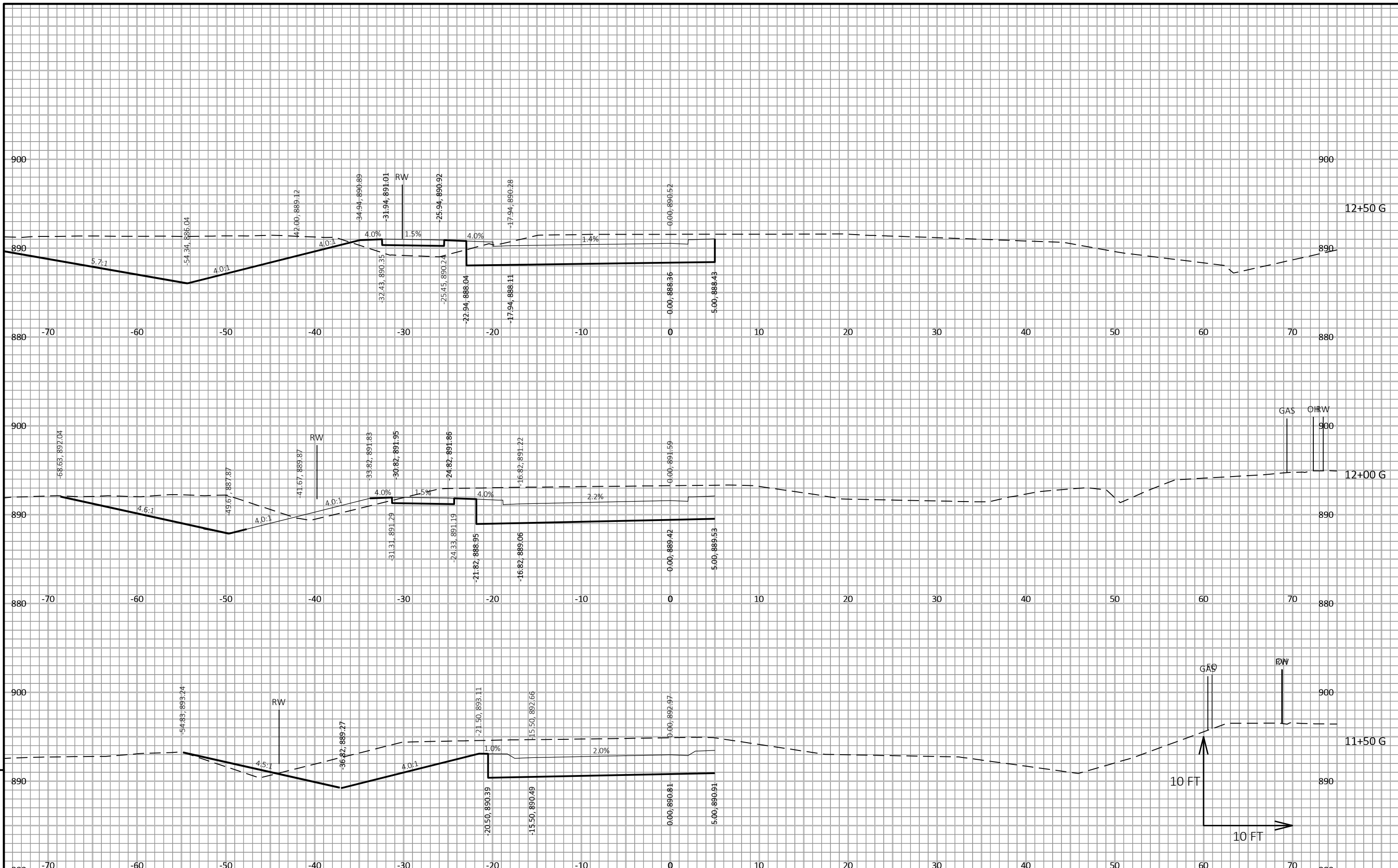
COUNTY: SAUK

CROSS SECTIONS: STH 23 - STAGE 3 (G ALIGNMENT)

SHEET

E





PROJECT NO: 5050-01-76

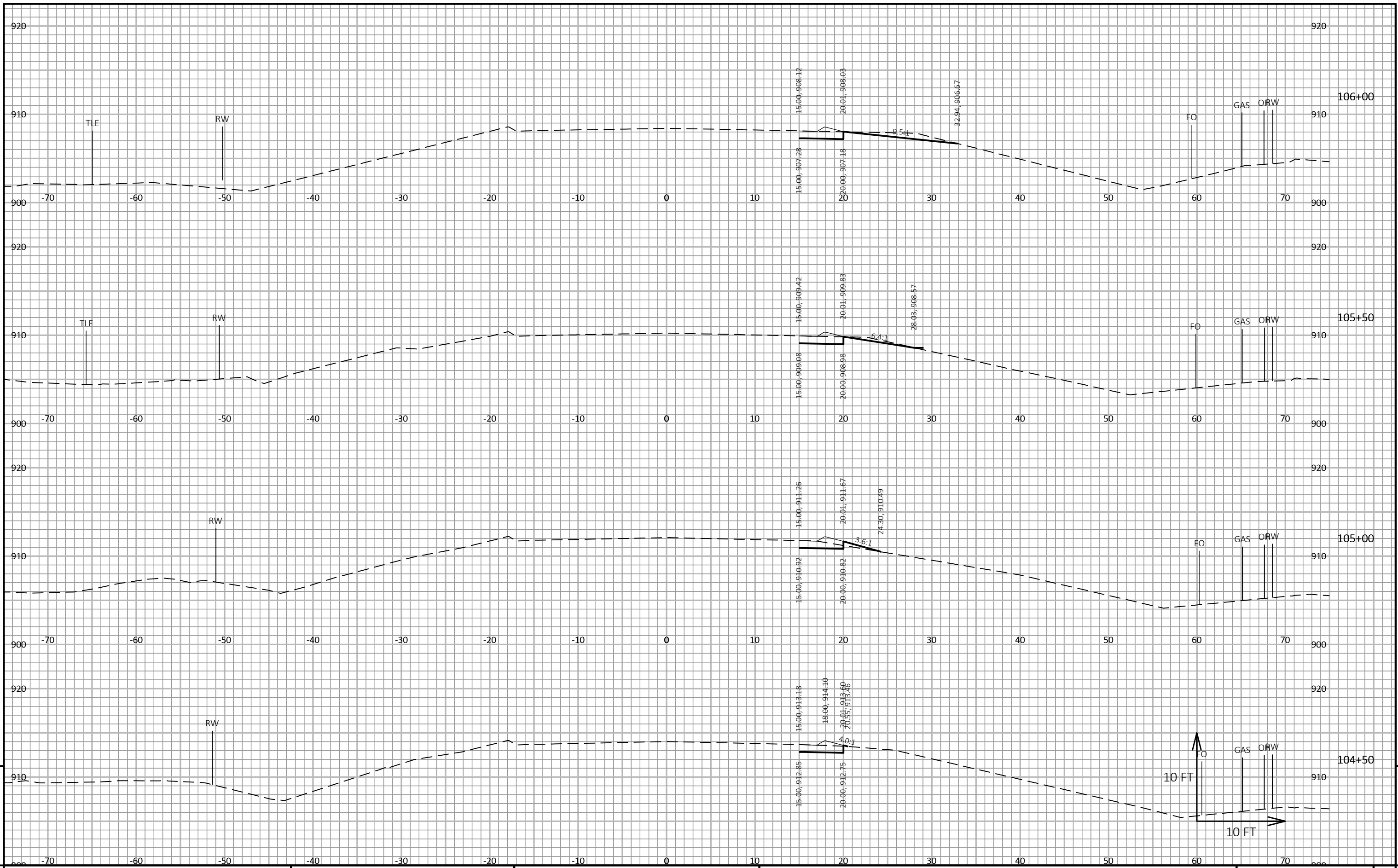
HWY: STH 23

COUNTY: SAUK

CROSS SECTIONS: STH 23 - STAGE 3 (G ALIGNMENT)

SHEET

E



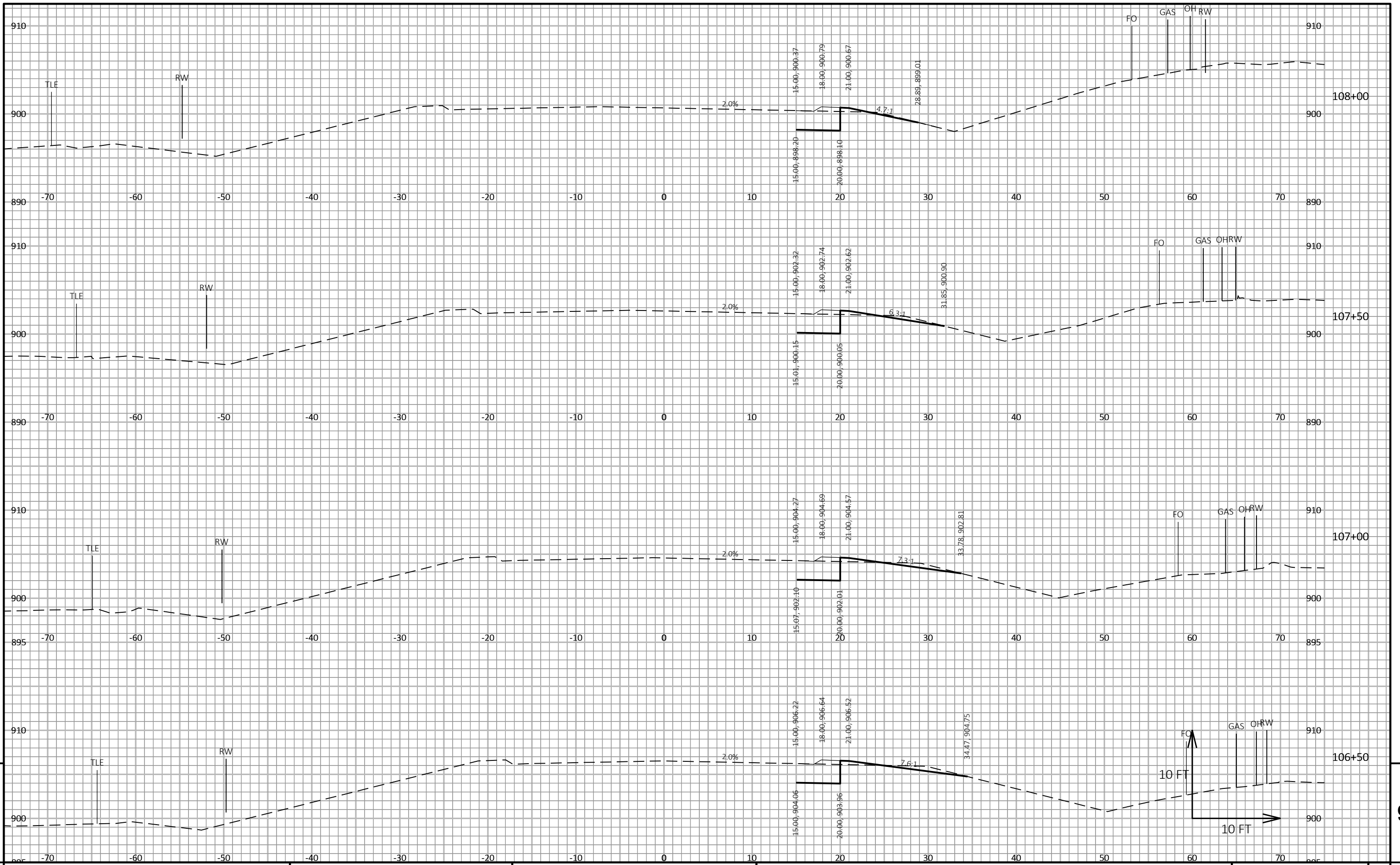
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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 4      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG      PLOT DATE : 10/19/2022 10:45 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090201\_xs-27



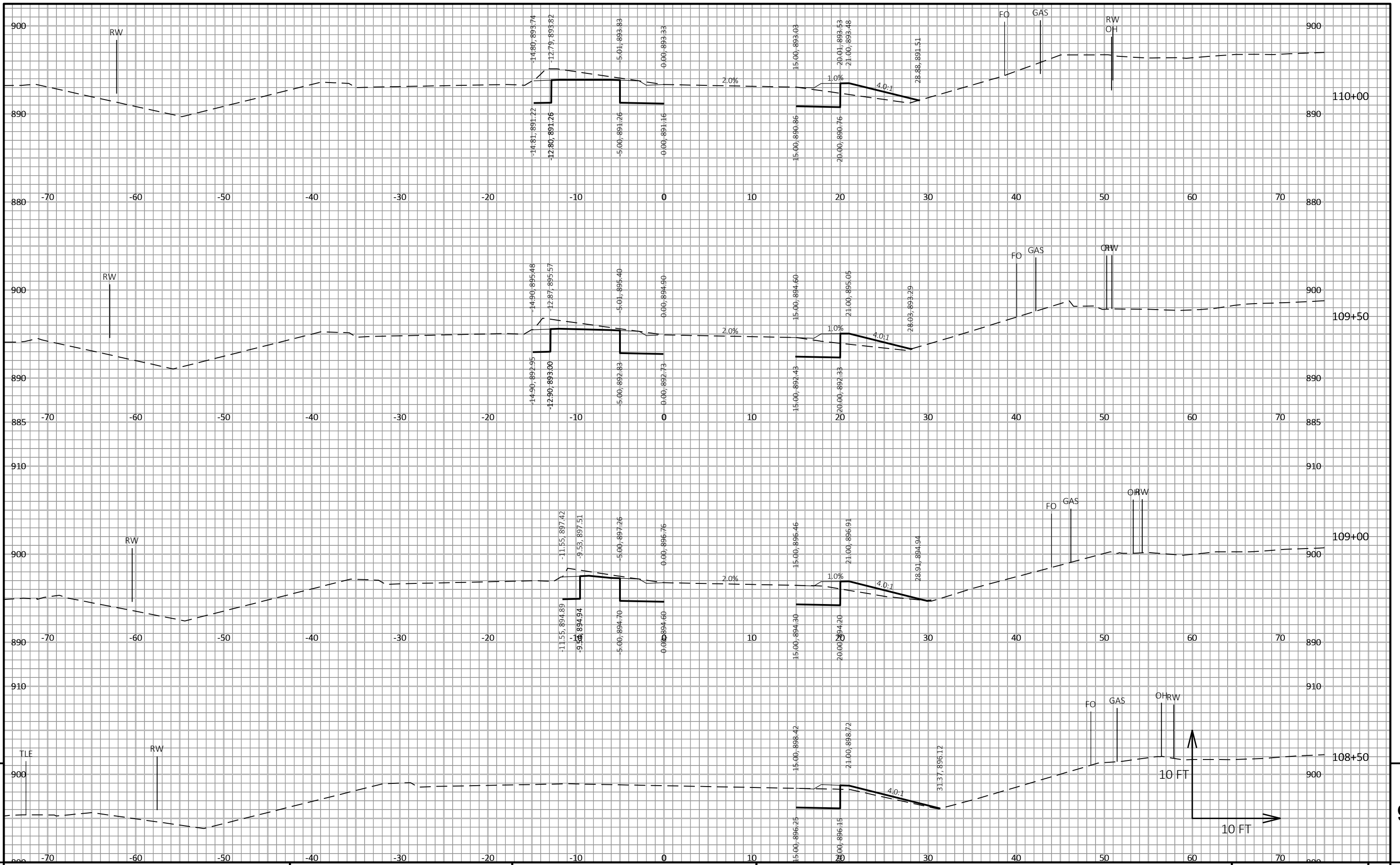
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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 4      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG      PLOT DATE : 10/19/2022 10:46 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090201\_xs-28



PROJECT NO: 5050-01-76

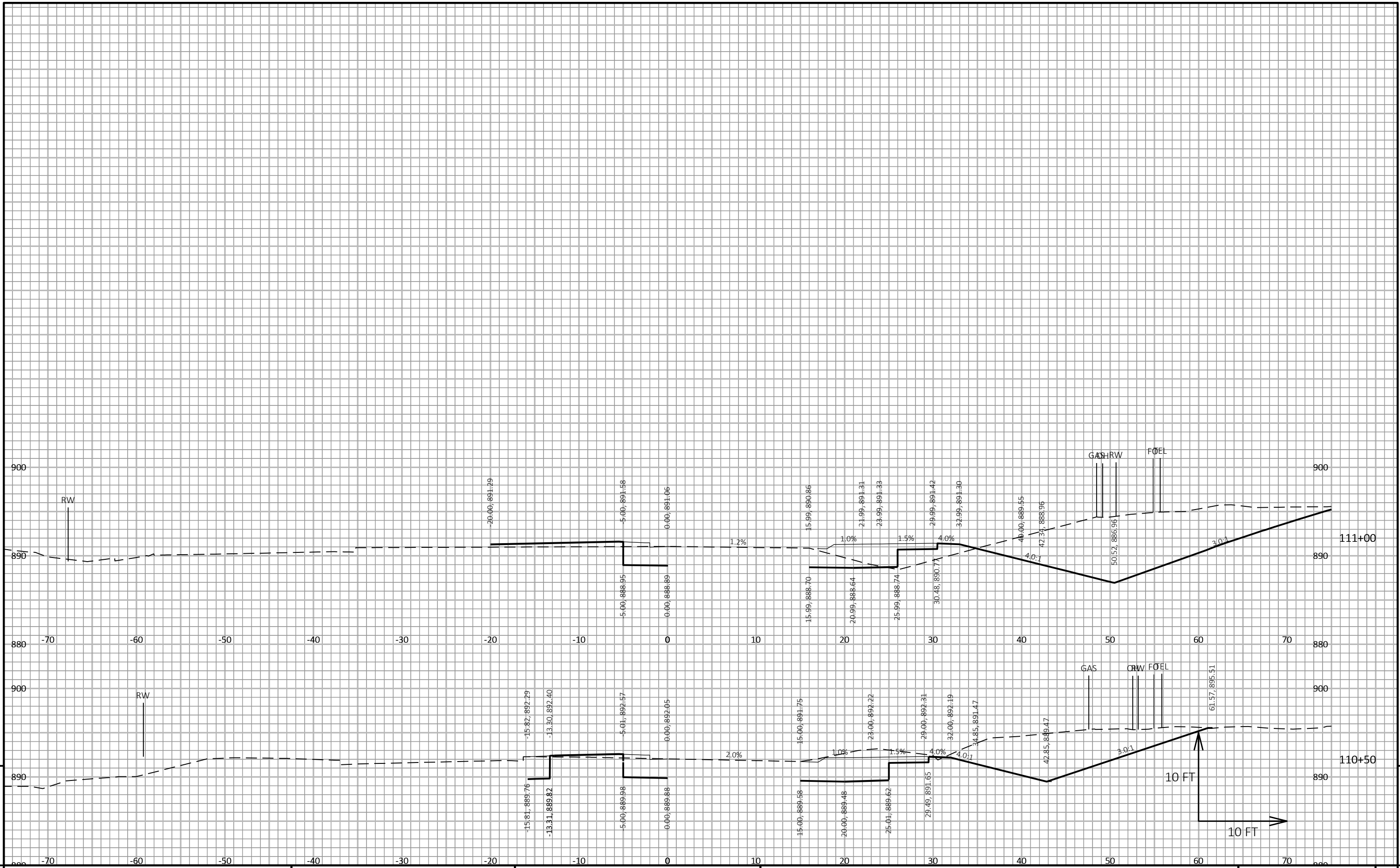
HWY: STH 23

COUNTY: SAUK

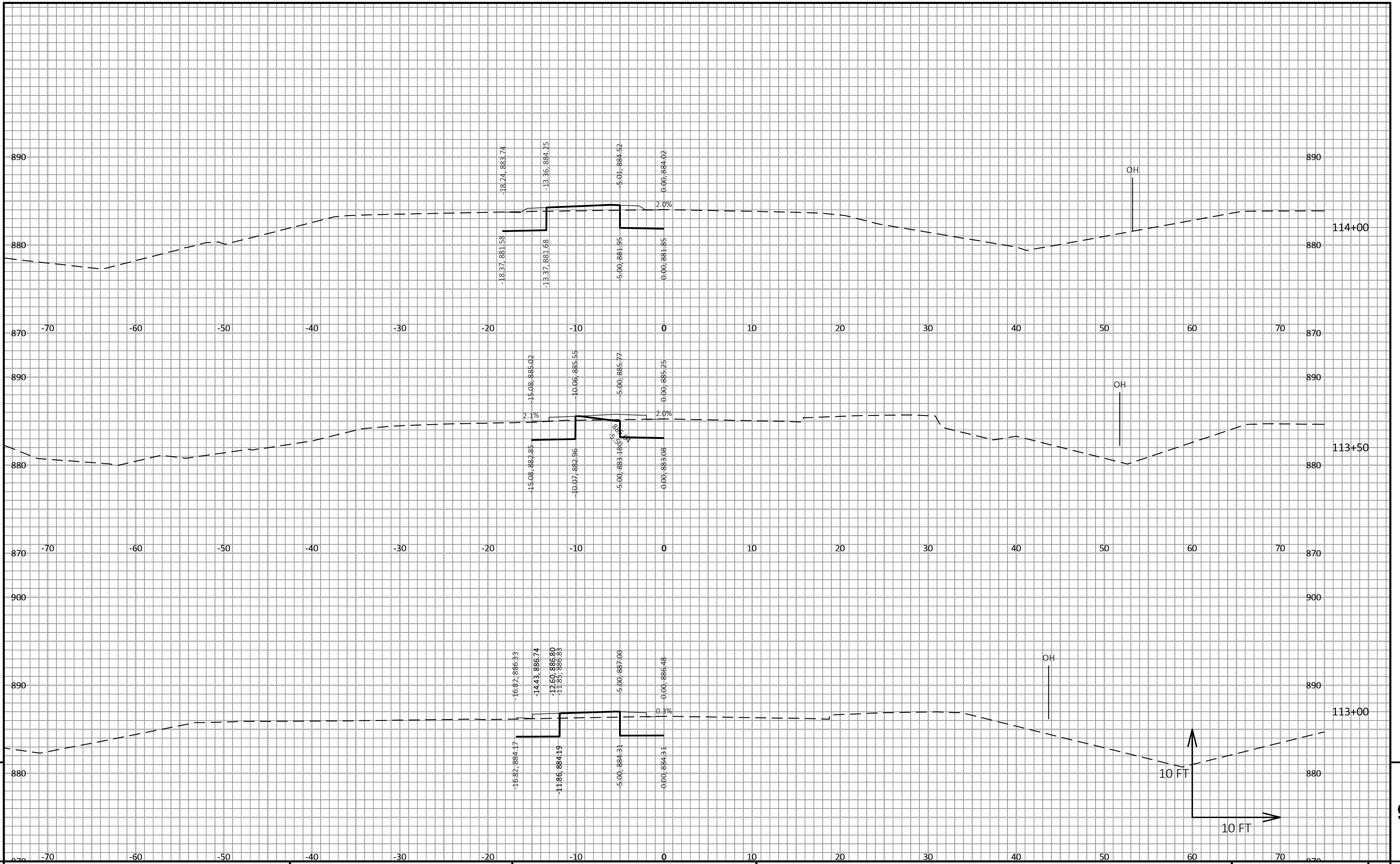
CROSS SECTIONS: STH 23 - STAGE 4

SHEET

E



PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 4      SHEET      E



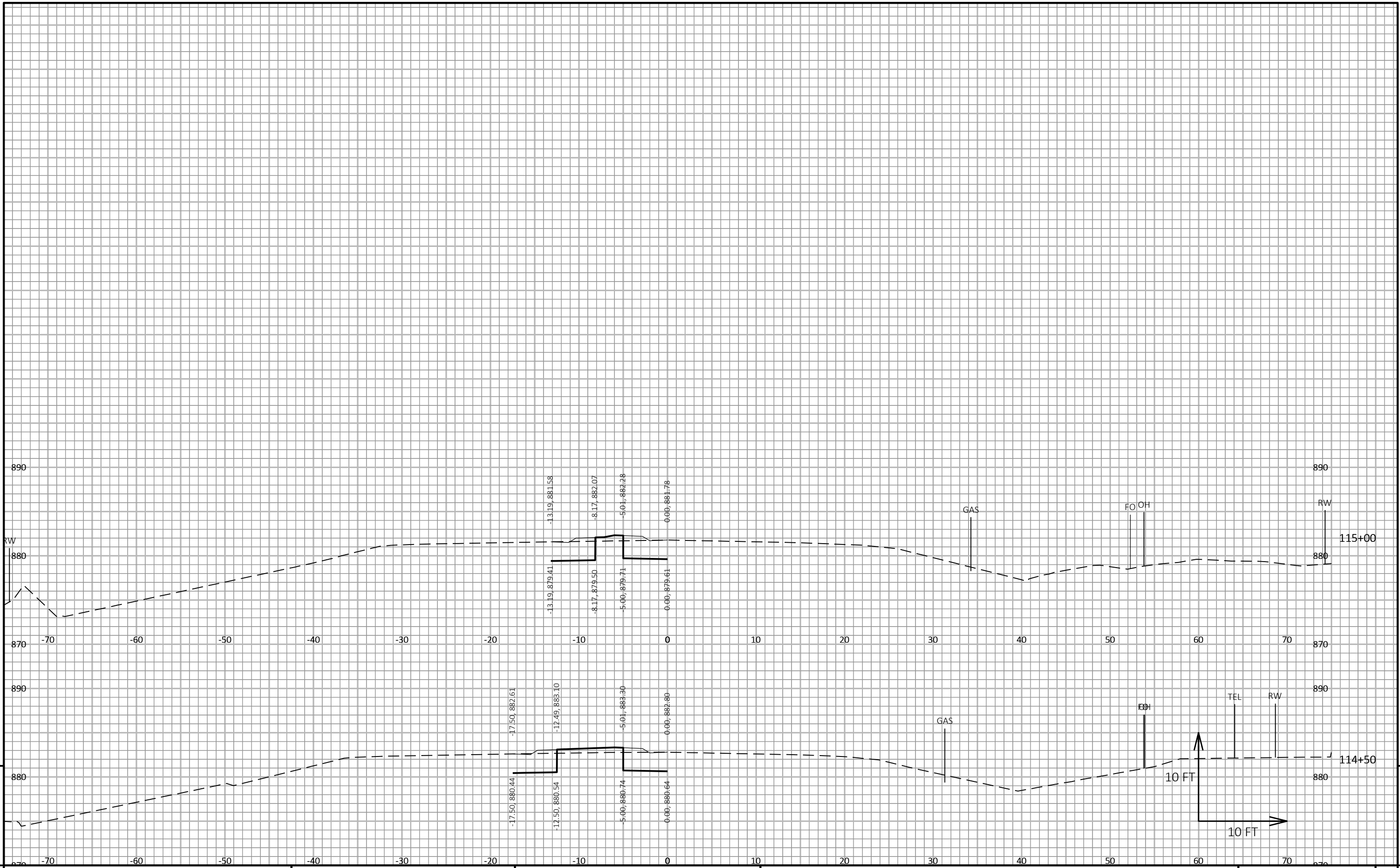
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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 23 - STAGE 4      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090201\_XS.DWG      PLOT DATE : 10/19/2022 10:46 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090201\_xs-11



PROJECT NO: 5050-01-76

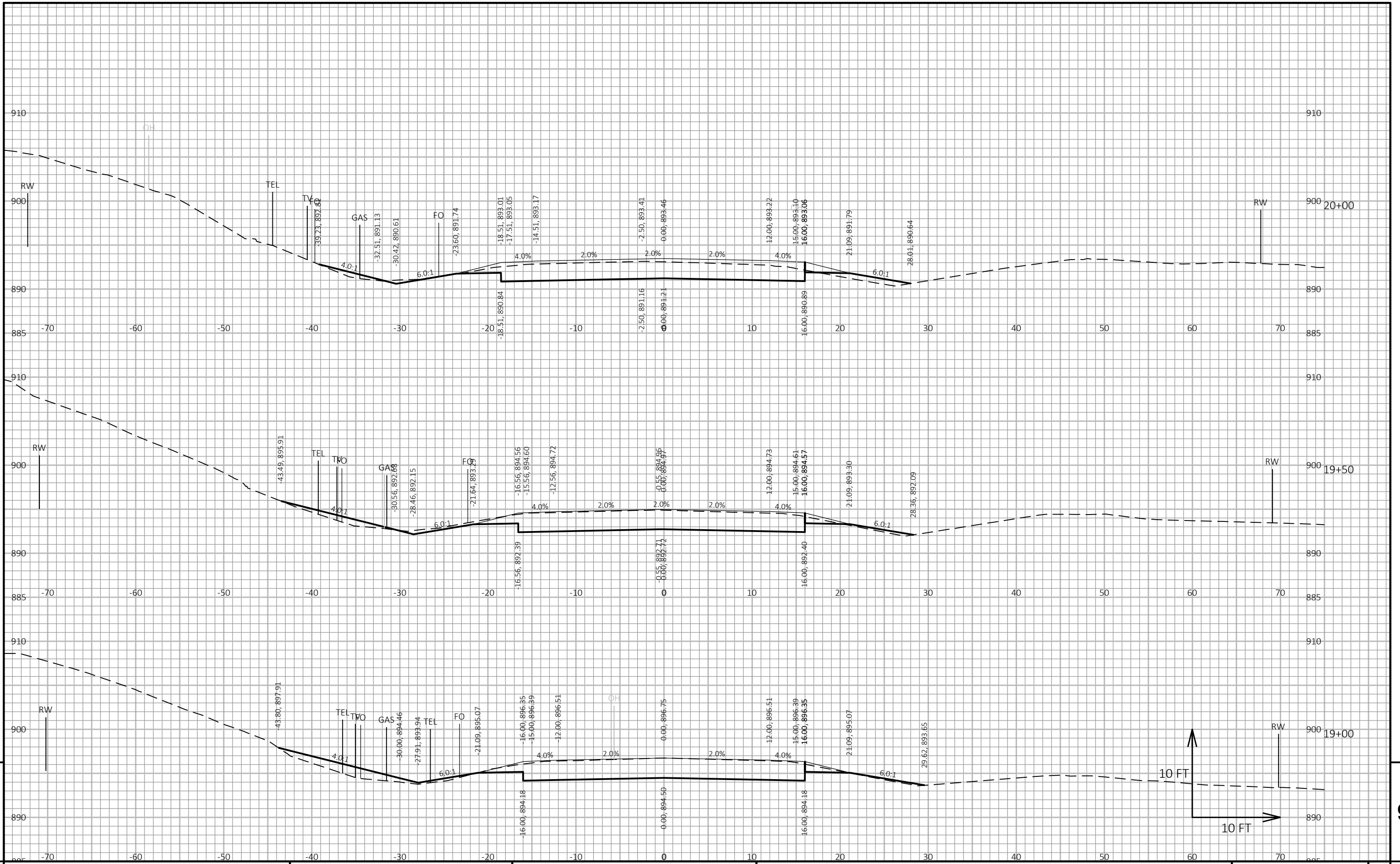
HWY: STH 23

COUNTY: SAUK

CROSS SECTIONS: STH 23 - STAGE 4

SHEET

E



PROJECT NO: 5050-01-76

HWY: STH 23

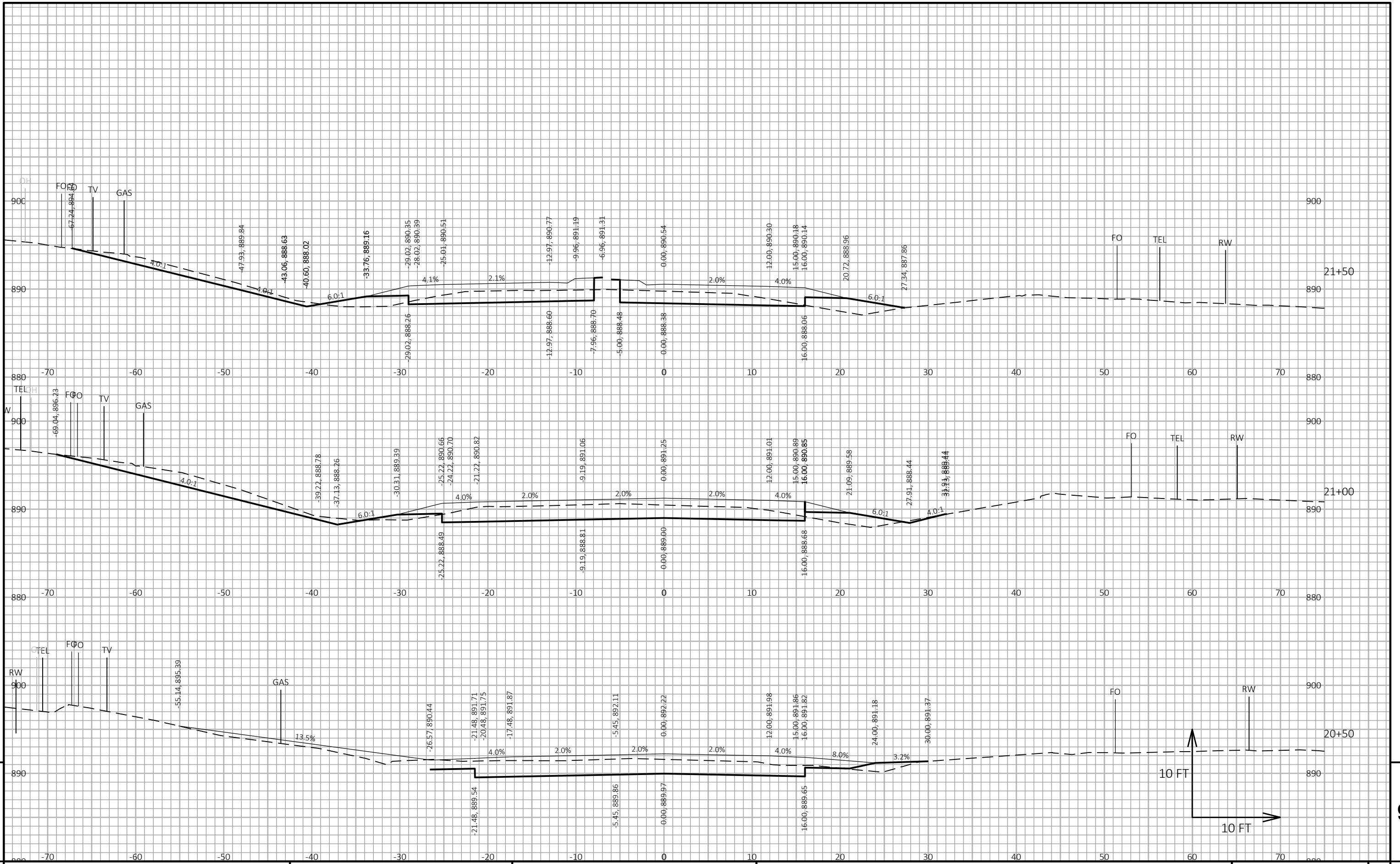
COUNTY: SAUK

CROSS SECTIONS: STH 136

SHEET

E





PROJECT NO: 5050-01-76

HWY: STH 23

COUNTY: SAUK

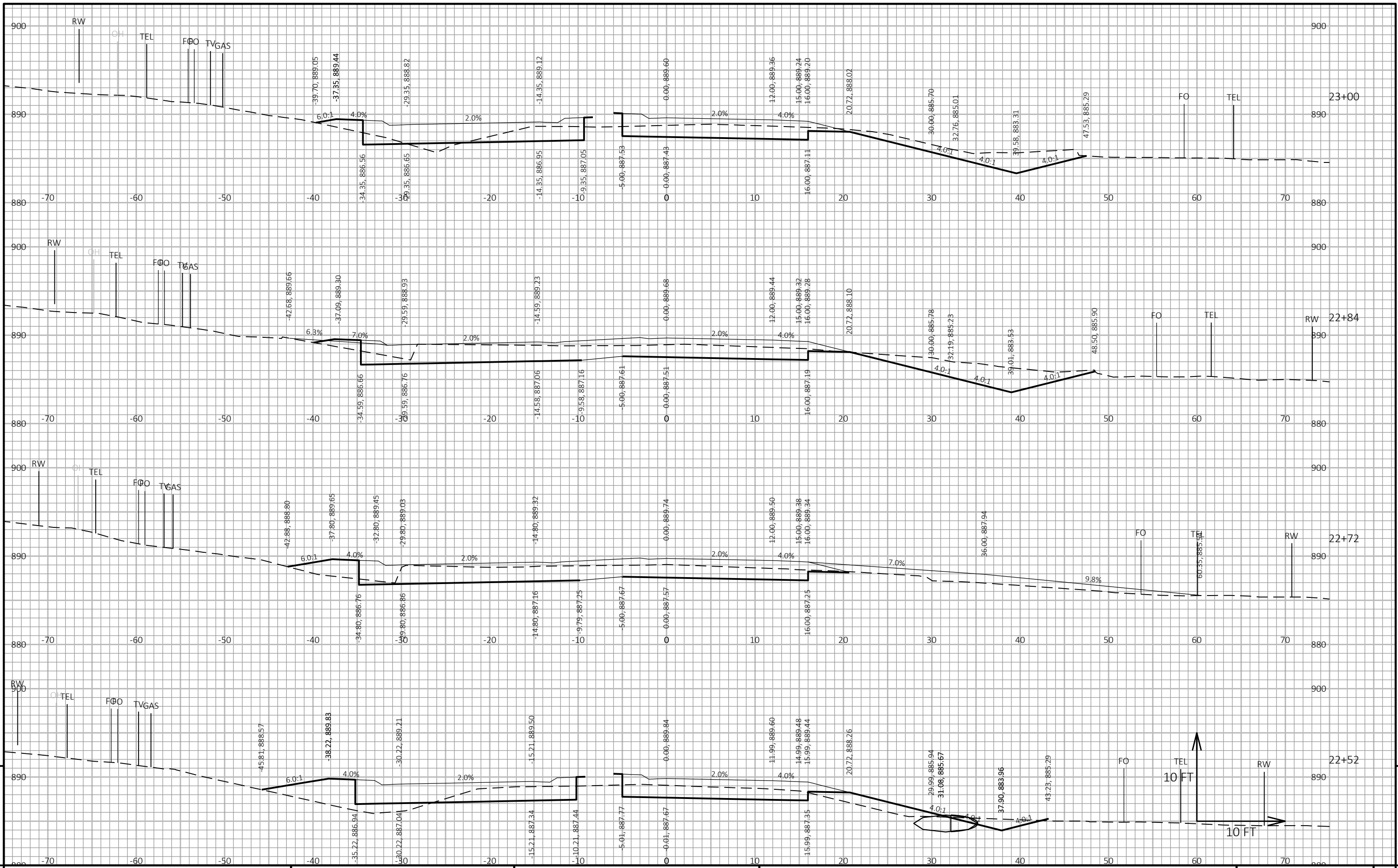
CROSS SECTIONS: STH 136

SHEET

E



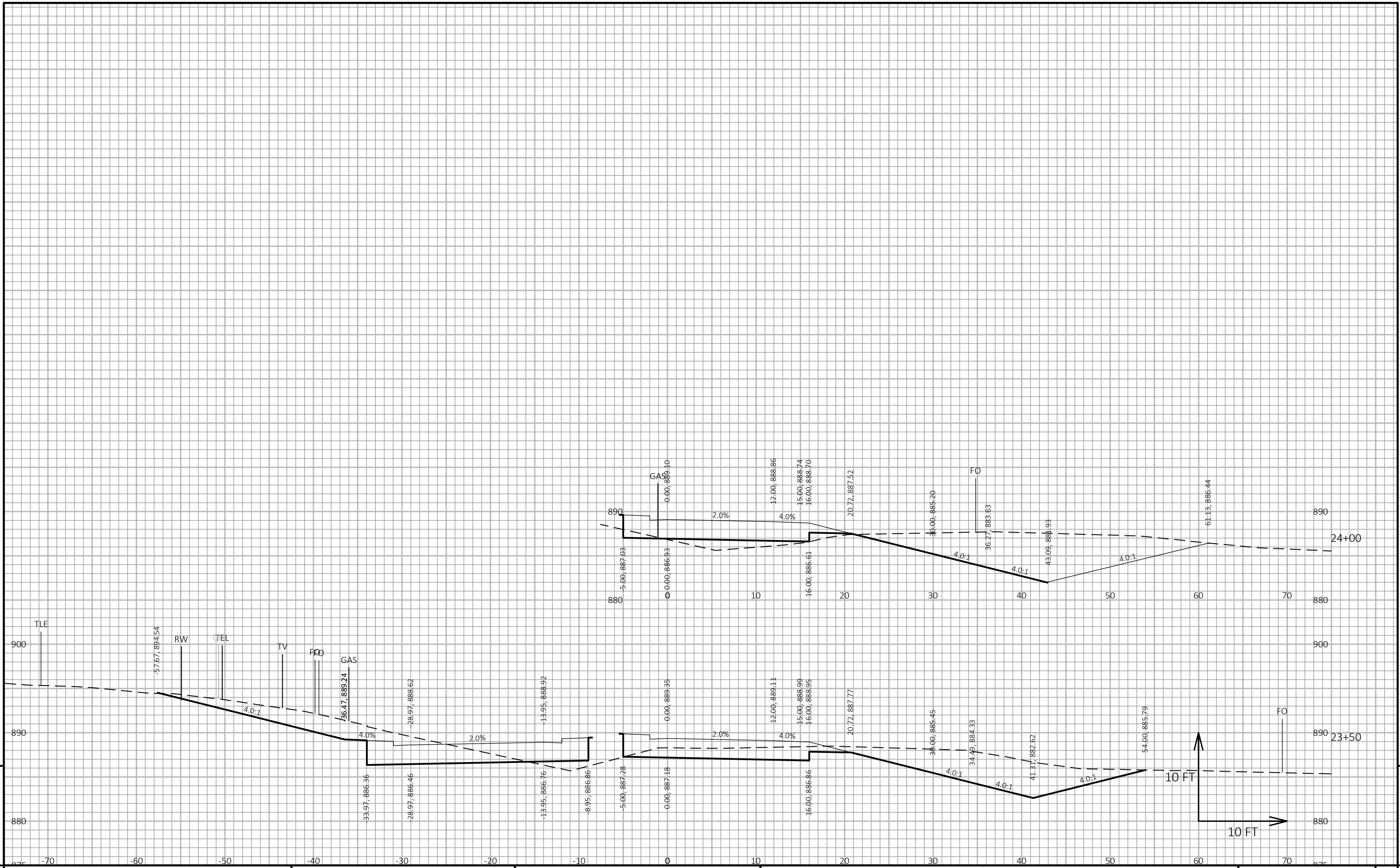
PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 136      SHEET      E



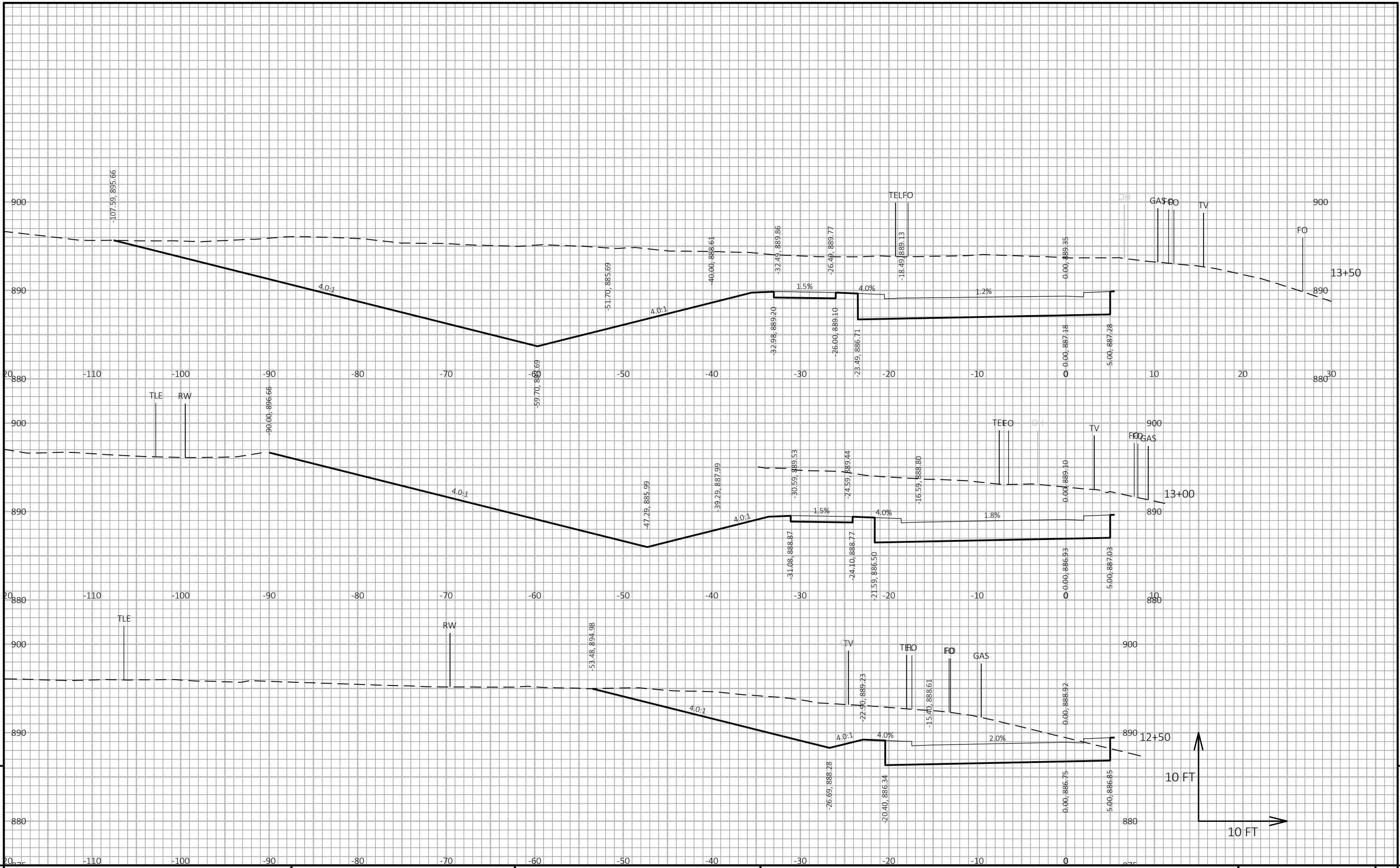
PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: STH 136      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090202\_XS.DWG      PLOT DATE : 10/19/2022 10:48 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090202\_xs - 4



PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	CROSS SECTIONS: STH 136	SHEET E
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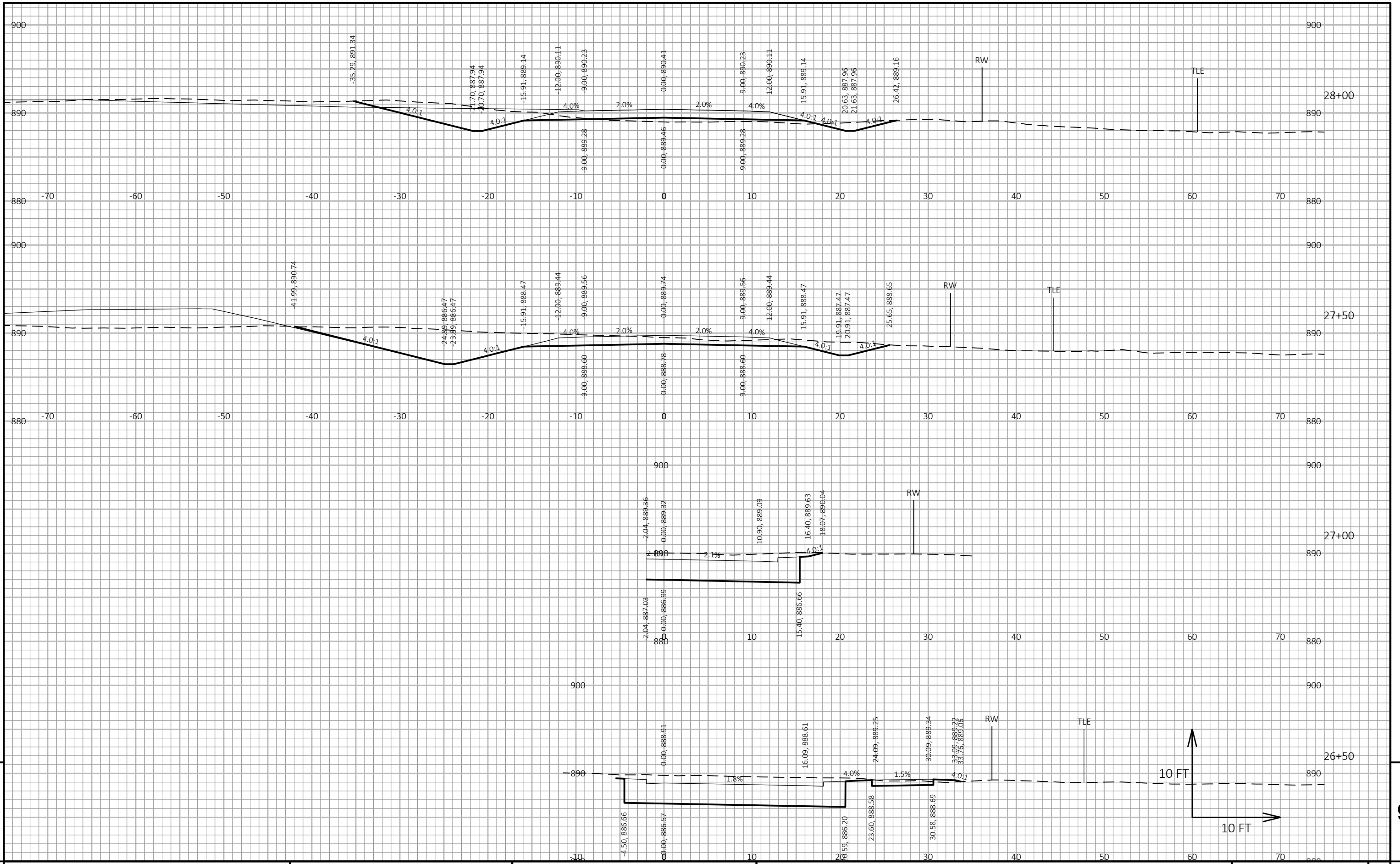
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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: I CHAIN      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090202\_XS.DWG      PLOT DATE : 10/19/2022 10:48 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 090202\_xs-61 Chain



PROJECT NO: 5050-01-76

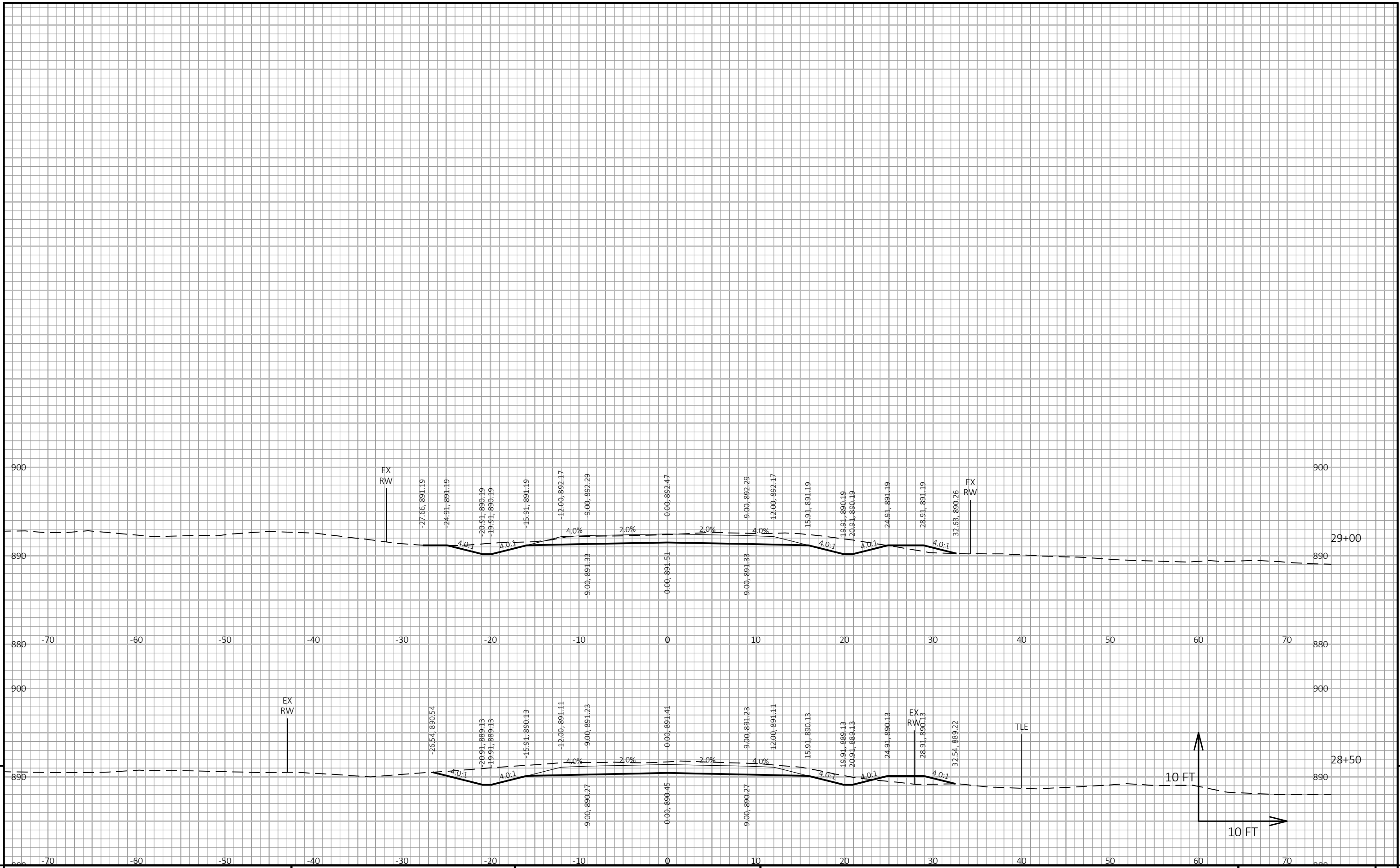
HWY: STH 23

COUNTY: SAUK

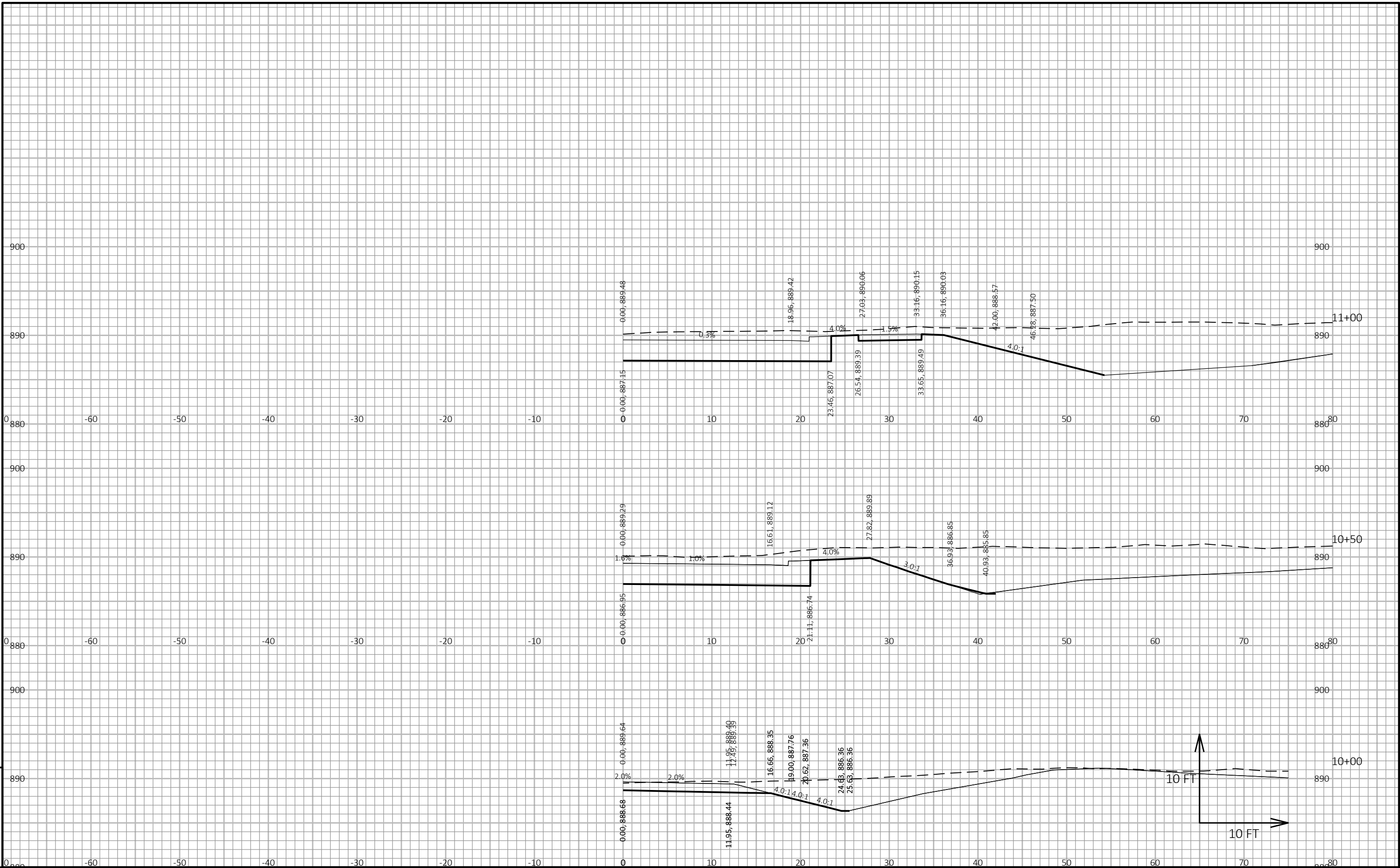
CROSS SECTIONS: GOLF VIEW COURT

SHEET

E



PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: GOLF VIEW COURT      SHEET      E



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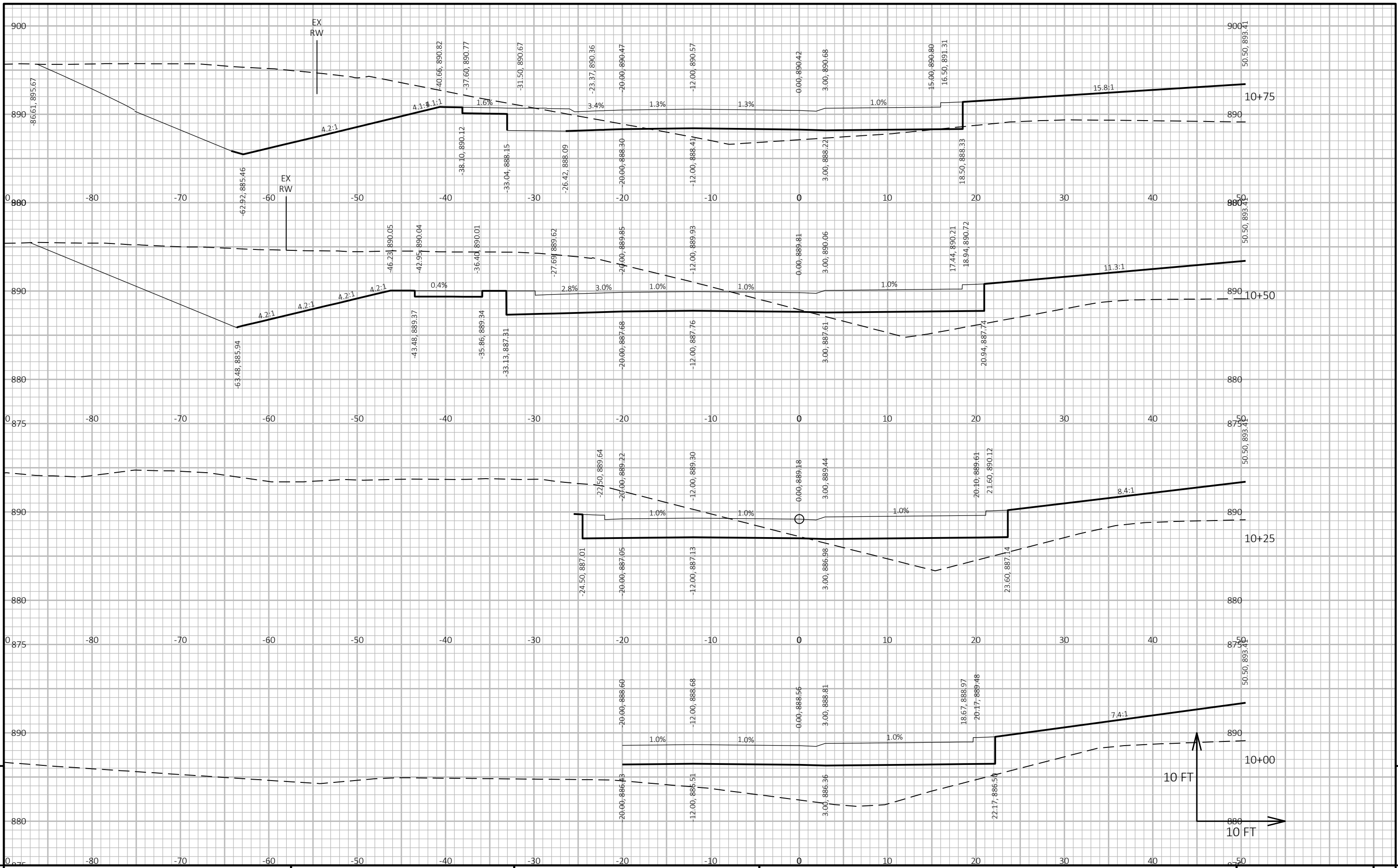
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PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: GOLF VIEW CT (E ALIGNMENT)      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090203\_XS.DWG      PLOT DATE : 10/19/2022 10:48 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 3





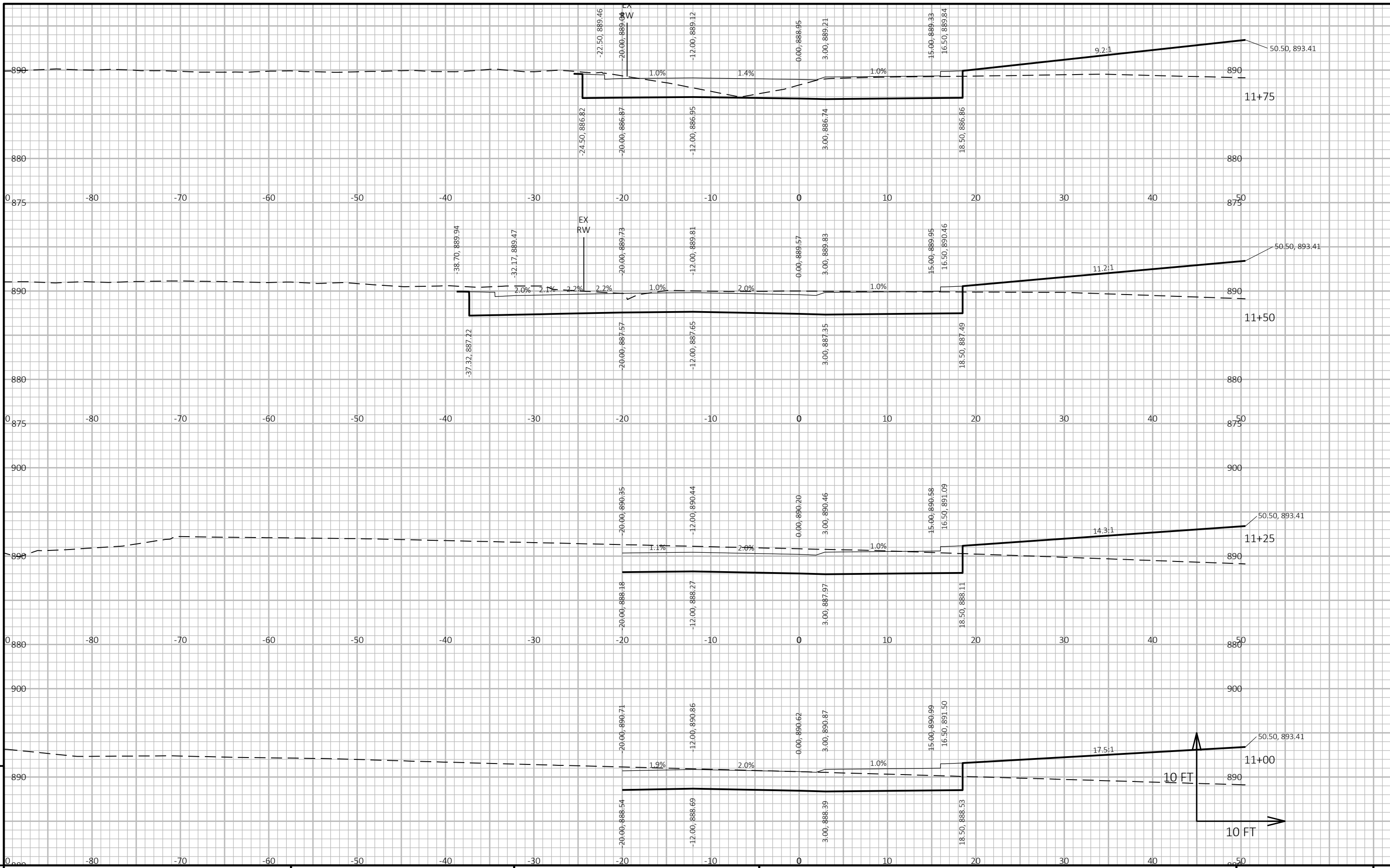
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9

PROJECT NO: 5050-01-76      HWY: STH 23      COUNTY: SAUK      CROSS SECTIONS: ROUNDABOUT (A ALIGNMENT)      SHEET      E

FILE NAME : S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETSPLAN\090205\_XS.DWG      PLOT DATE : 10/19/2022 11:14 AM      PLOT BY : JACK, ROBERT A.      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - 01



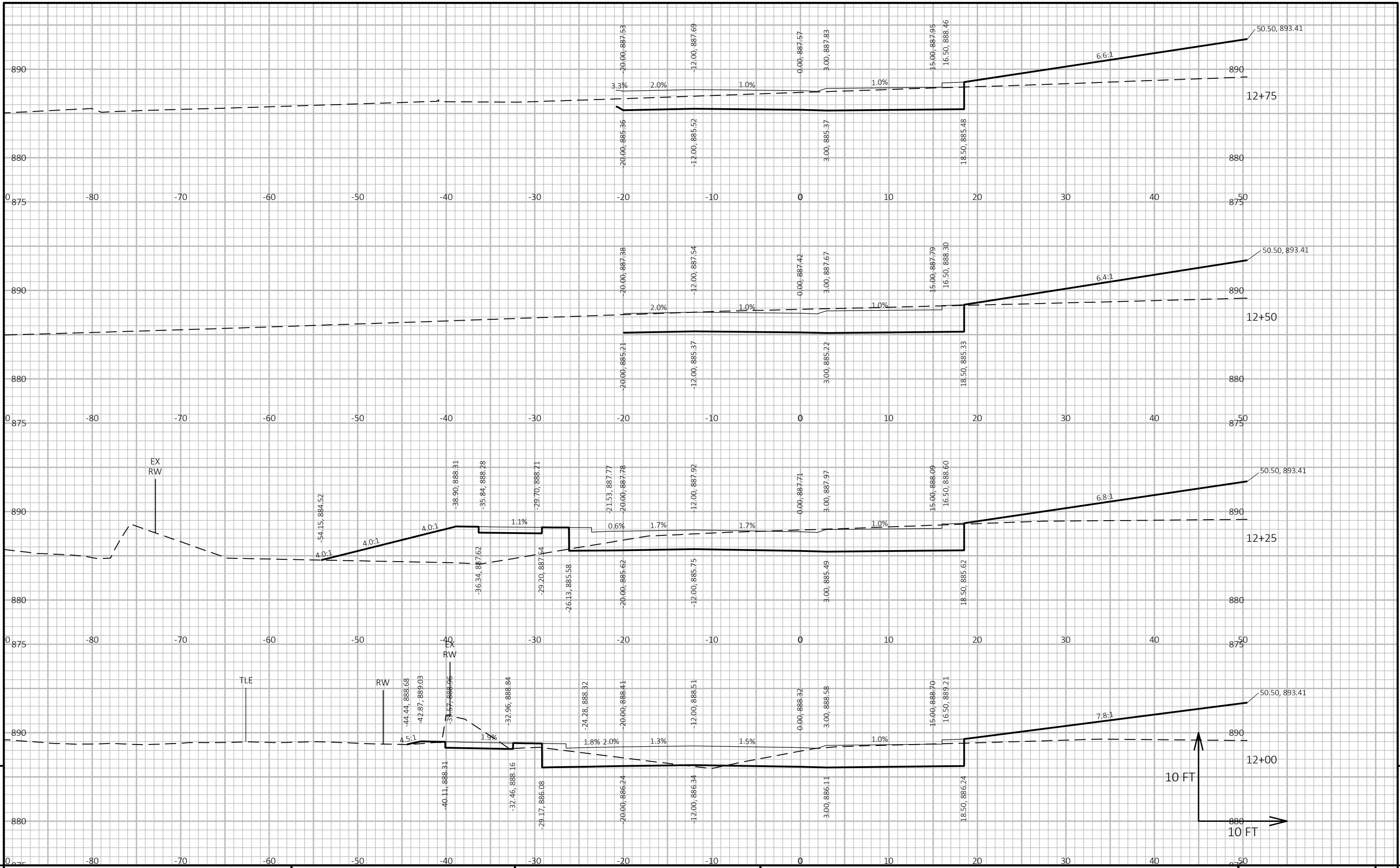
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PROJECT NO: 5050-01-76 HWY: STH 23 COUNTY: SAUK CROSS SECTIONS: ROUNDABOUT (A ALIGNMENT) SHEET E

FILE NAME: S:\MAD\1000-1099\1089\408\DRAWINGS\CAD\CIVIL 3D\SHEETS\PLAN\090205\_XS.DWG PLOT DATE: 10/19/2022 11:14 AM PLOT BY: JACK, ROBERT A. PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

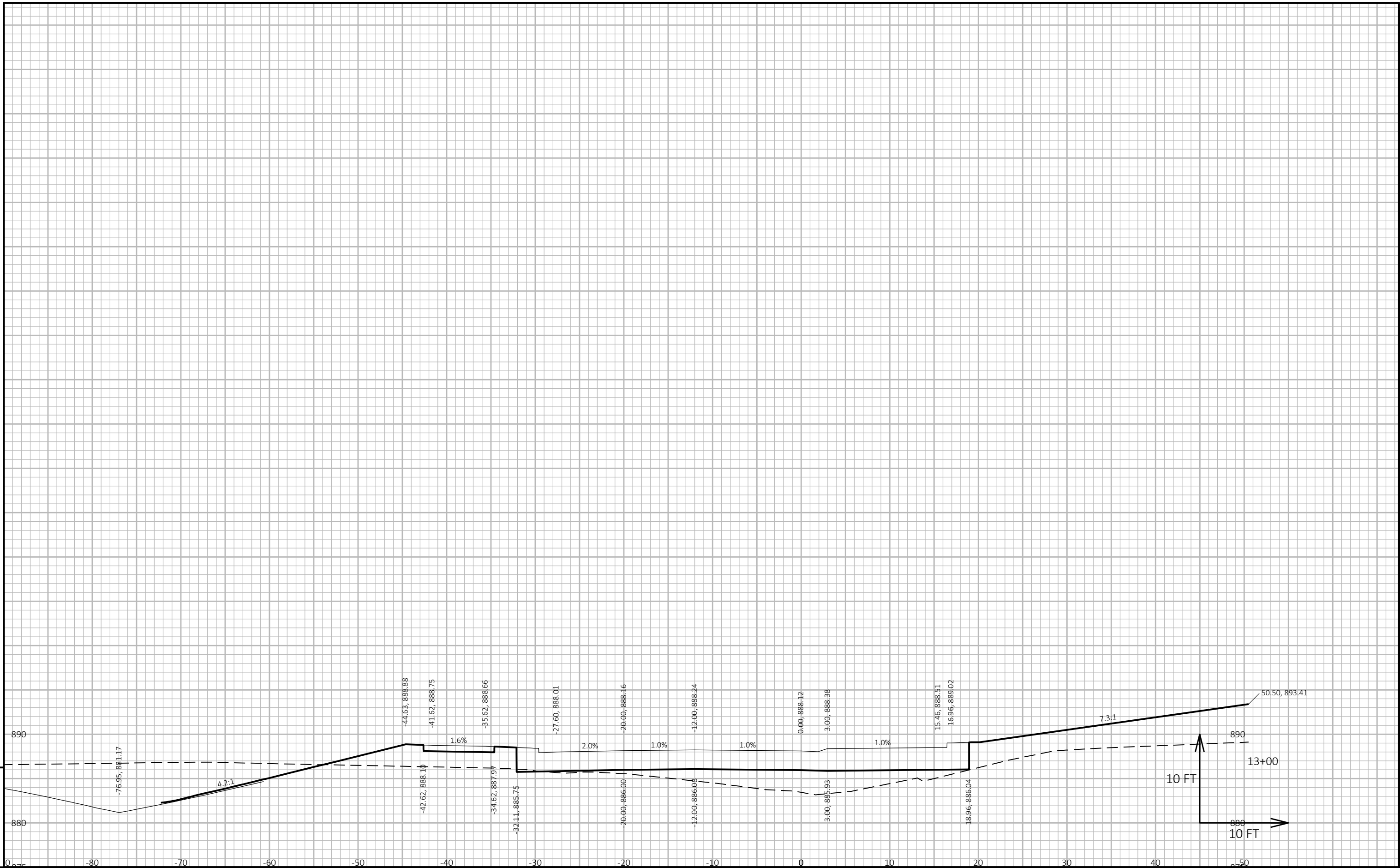
LAYOUT NAME - 02



PROJECT NO: 5050-01-76	HWY: STH 23	COUNTY: SAUK	CROSS SECTIONS: ROUNDABOUT (A ALIGNMENT)	SHEET
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PROJECT NO: 5050-01-76

HWY: STH 23

COUNTY: SAUK

CROSS SECTIONS: ROUNDABOUT (A ALIGNMENT)

SHEET

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Notes



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