

WIS

MARCH 2020

PROJECT ID: 1053-02-82

WITH: 1053-02-82

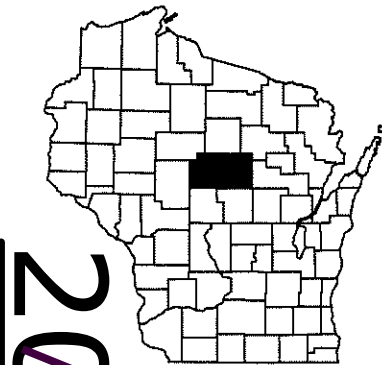
COUNTY: MARATHON

MARATHON

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
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 = 76



DESIGN DESIGNATION 1053-02-82

A.A.D.T.	2016	=	5400
A.A.D.T.	2045	=	7150
D.H.V.		=	14.2
D.D.		=	60/40
T.		=	16.9%
DESIGN SPEED		=	70 MPH
ESALS		=	5,000,000

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	



20

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

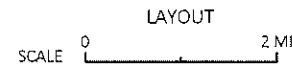
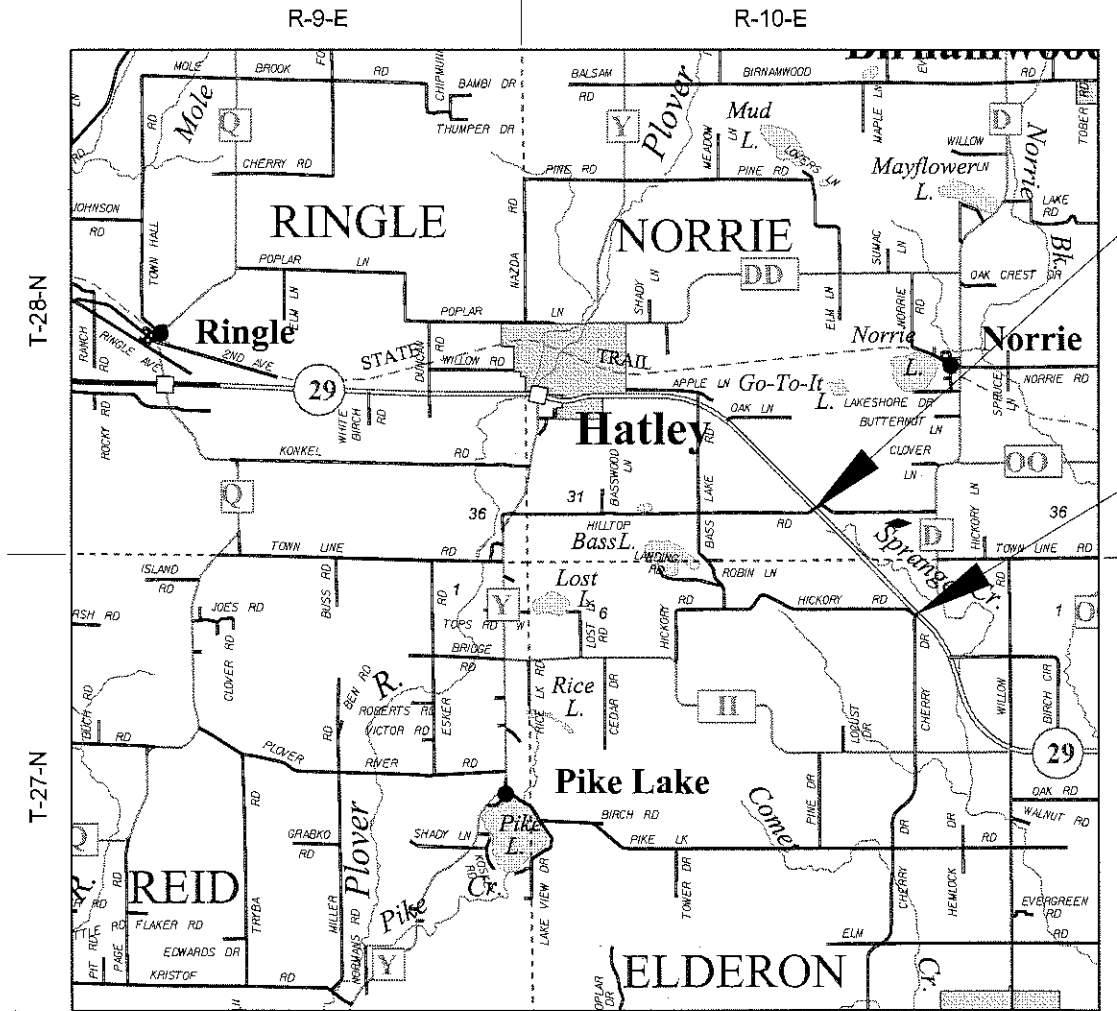
WAUSAU - WITTENBERG

HILLTOP ROAD TO CTH D, EB

STH 29

MARATHON

STATE PROJECT NUMBER
1053-02-82



TOTAL NET LENGTH OF CENTERLINE = 1.420

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 NAVD 88 (2012).

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1053-02-82	WISC 2020077	1

BEGIN PROJECT
STA 2784+95EB

END PROJECT
STA 2859+95EB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	NC REGION
Designer	ERIN CHRISTIANSON
Project Manager	MARK STEIDL
Regional Examiner	CHERYL SIMON
Regional Supervisor	NICHOLE LYSNE

APPROVED FOR THE DEPARTMENT
DATE: 10/31/19

E

GENERAL NOTES

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF A LANDMARK IN ALL AREAS WHERE SUCH A LANDMARK MAY EXIST.

WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS.
REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.

DNR CONTACT**CASEY JONES**

473 GRIFFITH AVENUE
WISCONSIN RAPIDS, WI 54494
PHONE: (715) 421-7867 WORK
PHONE: (715) 213-6571 CELL
E-MAIL: casey.jones@wisconsin.gov

**UTILITIES****CENTURYLINK COMMUNICATIONS LLC - COMMUNICATION LINE**

SHAD GARCIA
3235 INTERTECH DRIVE, SUITE 600
BROOKFIELD, WI 53045
PHONE: (414) 908-1009 WORK
PHONE: (262) 606-0896 MOBILE
E-MAIL: Shad.Garcia@centurylink.com

CENTRAL WISCONSIN ELECTRIC COOPERATIVE - ELECTRICITY

DENNIS MAGEE
10401 LYSTUL ROAD
ROSHOLT, WI 54473
PHONE: (715) 677-2243 WORK
PHONE: (715) 701-2047 MOBILE
E-MAIL: dennis.magee@cwecoop.com

ASTREA (FKA PACKERLAND BROADBAND) - COMMUNICATION LINE

ANDY HEIGL
105 KENT STREET
IRON MOUNTAIN, MI 49801
PHONE: (906) 776-2609 WORK
PHONE: (906) 221-7536 MOBILE
E-MAIL: Andy.heigl@packerlandbroadband.com

WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRICITY

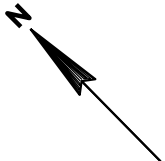
JESSE PATTEN
PO BOX 1166
WAUSAU, WI 54402
PHONE: (715) 848-7405 WORK
PHONE: (715) 573-0349 MOBILE
E-MAIL: Jesse.Patten@wisconsinpublicservice.com

WITTENBERG CABLE TV INC - COMMUNICATION LINE

SCOTT SICKLER
104 WEST WALKER STREET
PO BOX 160
WITTENBERG, WI 54499-0160
PHONE: (715) 253-2111 WORK
E-MAIL: SCOTT@WITTELCO.COM

WITTENBERG TELEPHONE COMPANY - COMMUNICATION LINE

SCOTT SICKLER
104 WEST WALKER STREET
PO BOX 160
WITTENBERG, WI 54499-0160
PHONE: (715) 253-2111 WORK
E-MAIL: SCOTT@WITTELCO.COM



TOWN OF NORRIE

TOWN OF ELDERON

END PROJECT
STA 2859+95EB

FALSTAD ROAD

HILLY ACRES ROAD

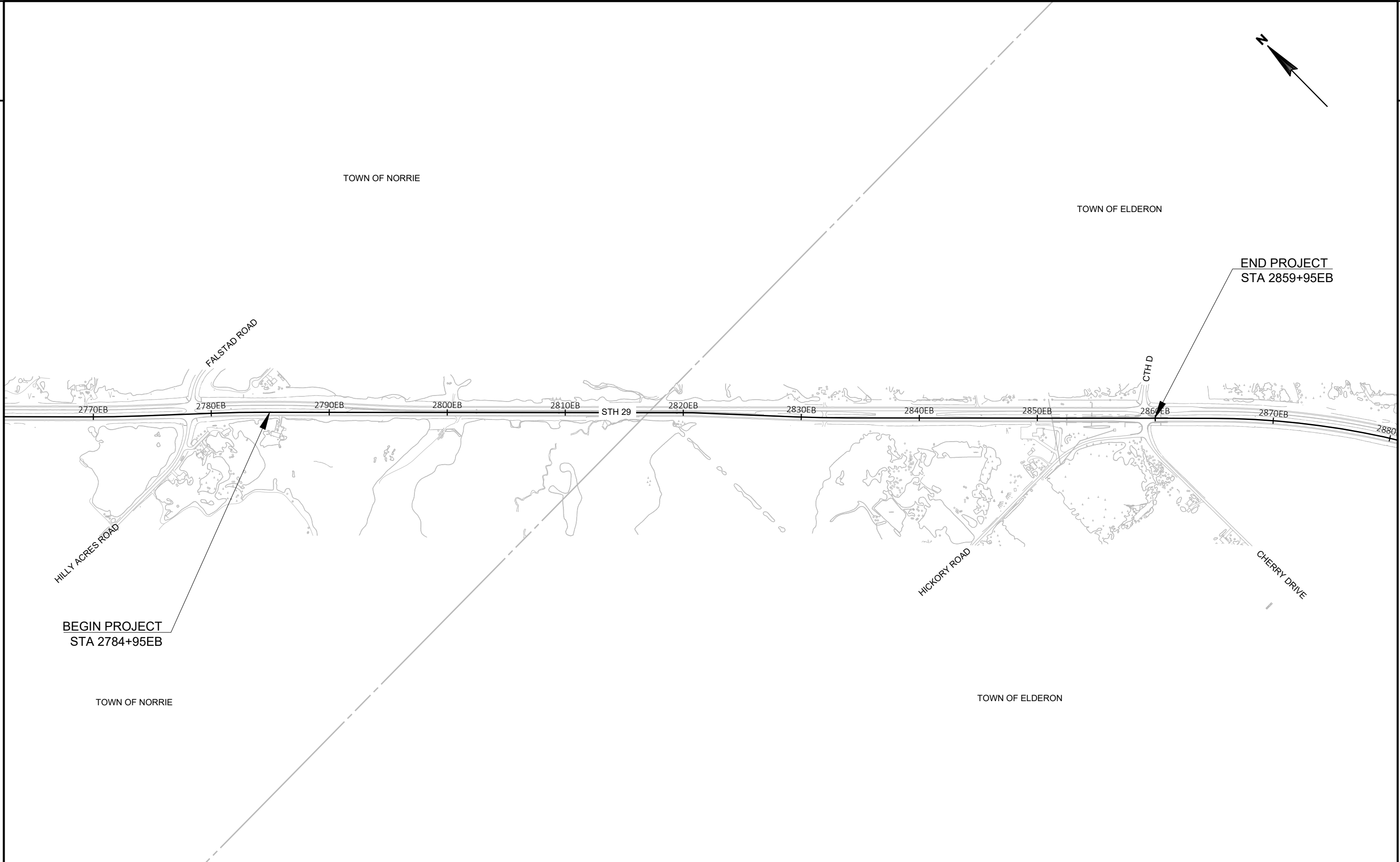
BEGIN PROJECT
STA 2784+95EB

TOWN OF NORRIE

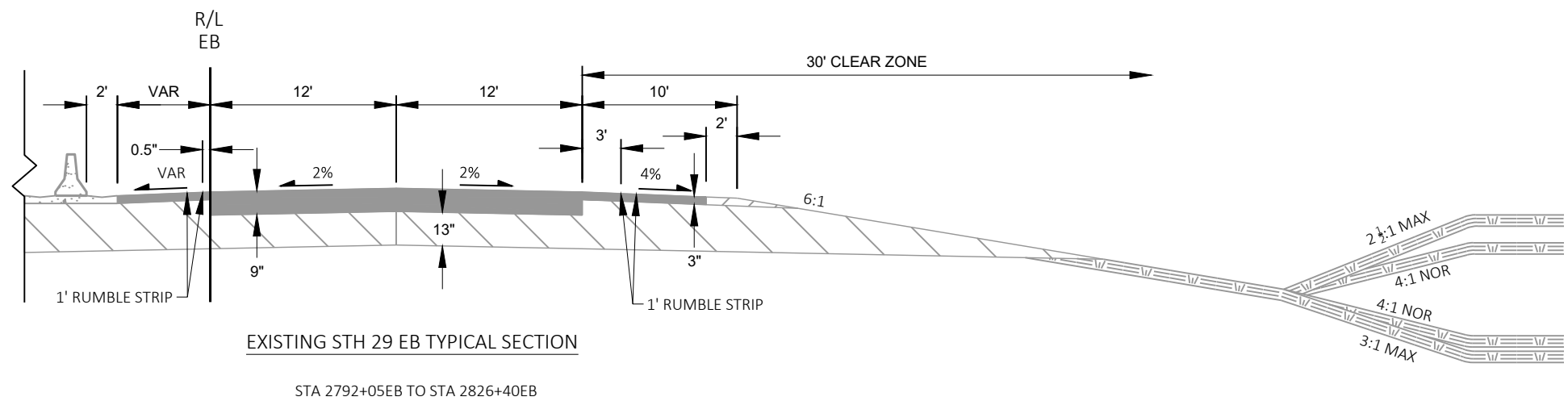
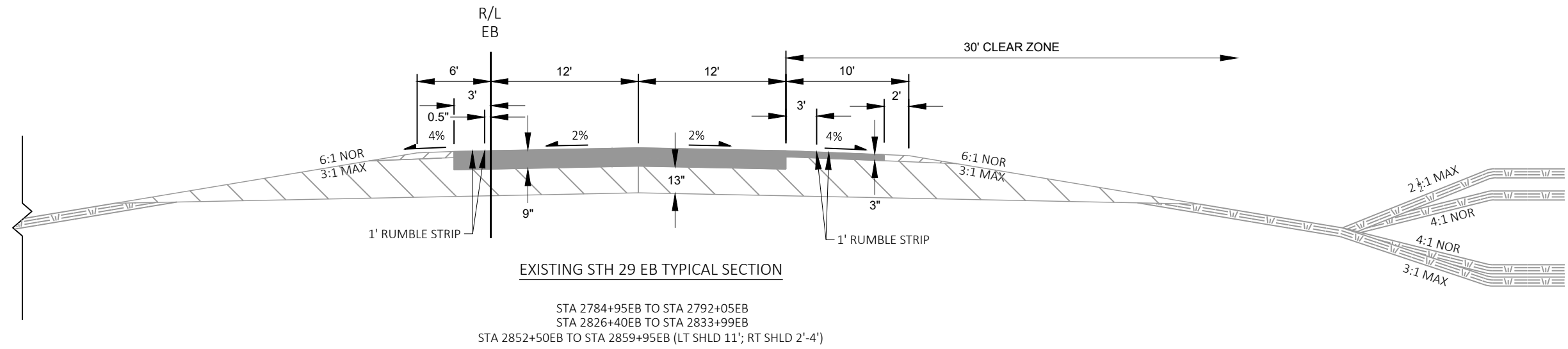
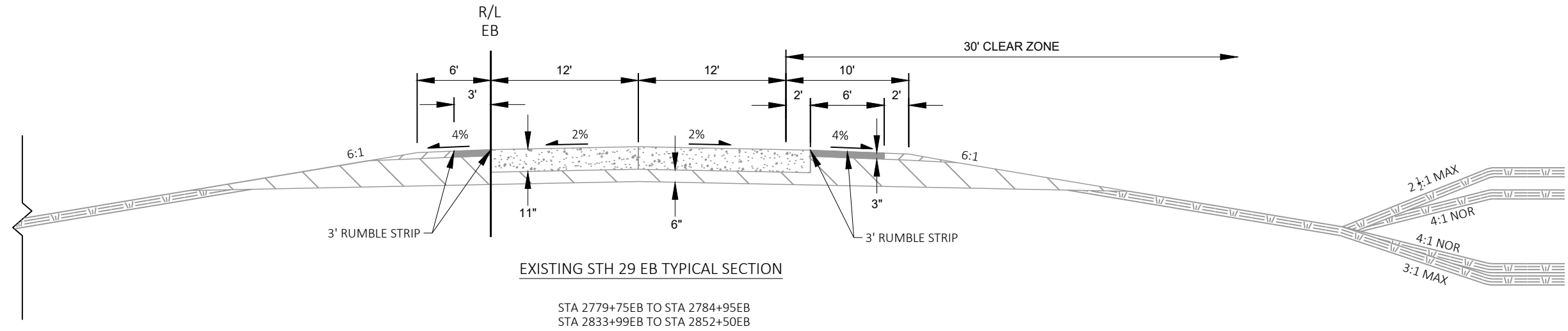
HICKORY ROAD

TOWN OF ELDERON

CHERRY DRIVE

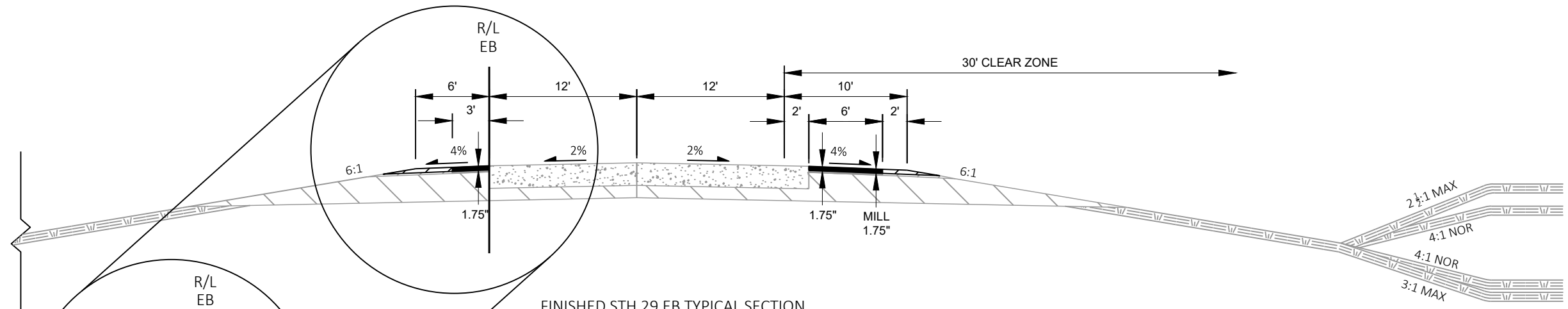


PROJECT NO: 1053-02-82	HWY: STH 29	COUNTY: MARATHON	PROJECT OVERVIEW	SHEET E
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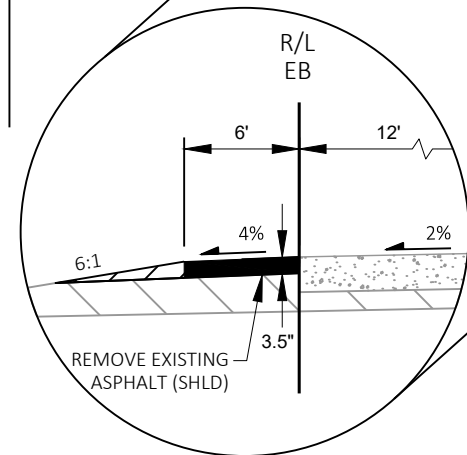
LEGEND

- EXISTING ASPHALTIC CONCRETE PAVEMENT
- EXISTING CONCRETE PAVEMENT (DOWELED & TINED)
- EXISTING CRUSHED AGGREGATE BASE COURSE
- EXISTING CRUSHED AGGREGATE BASE COURSE (SHOULDER)
- EXISTING GROUND

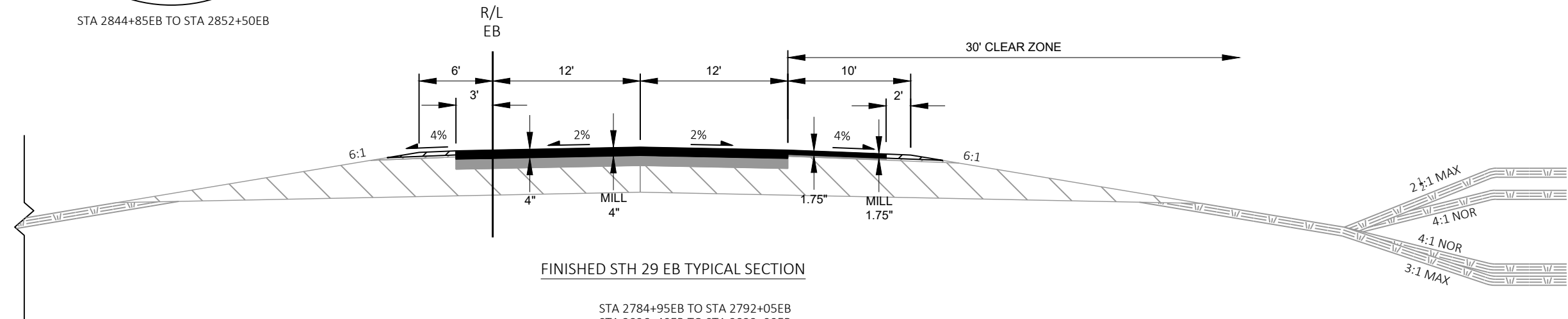


FINISHED STH 29 EB TYPICAL SECTION

STA 2779+75EB TO STA 2784+95EB (MILL & OVERLAY LEFT SHLD ONLY)
STA 2833+99EB TO STA 2852+50EB



STA 2844+85EB TO STA 2852+50EB

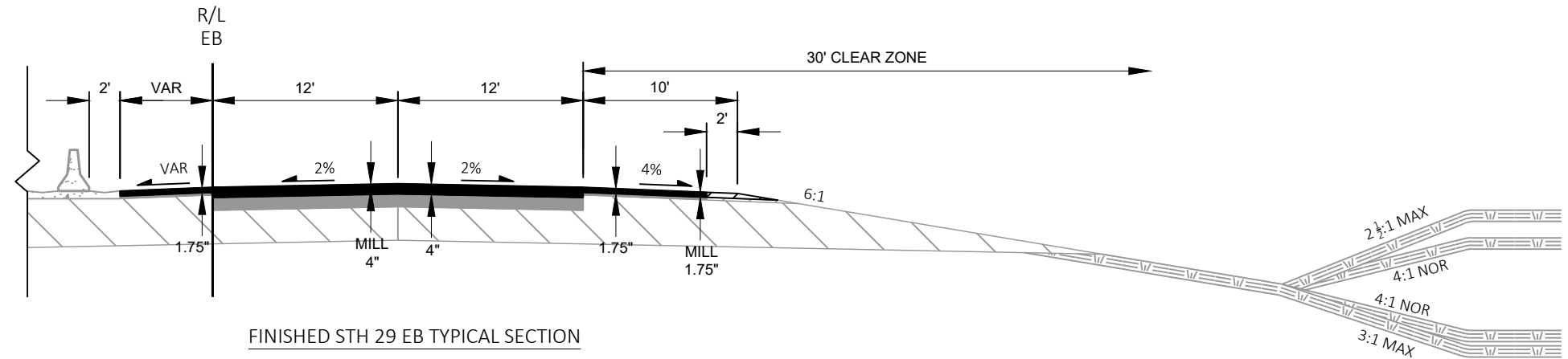


FINISHED STH 29 EB TYPICAL SECTION

STA 2784+95EB TO STA 2792+05EB
STA 2826+40EB TO STA 2833+99EB
STA 2856+50EB TO STA 2859+95EB (PAVED LT SHLD 11')

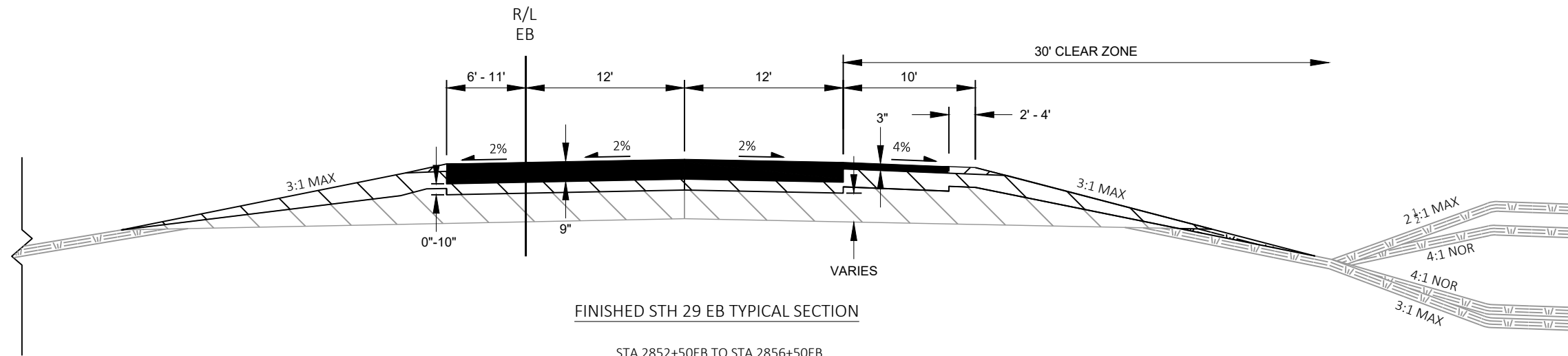
LEGEND

- HMA PAVEMENT
- 4 MT 58-28 H (1.75-INCHES UPPER LAYER & SHOULDERS)
3 MT 58-25 S (2.25-INCHES LOWER LAYER)
- BASE AGGREGATE DENSE 3/4-INCH (SHOULDER)
- EXISTING ASPHALTIC CONCRETE PAVEMENT
- EXISTING CONCRETE PAVEMENT (DOWELED & TINED)
- EXISTING CRUSHED AGGREGATE BASE COURSE
- EXISTING CRUSHED AGGREGATE BASE COURSE (SHOULDER)
- EXISTING GROUND



FINISHED STH 29 EB TYPICAL SECTION









STA 2792+05EB TO STA 2826+40EB



FINISHED STH 29 EB TYPICAL SECTION

STA 2852+50EB TO STA 2856+50EB

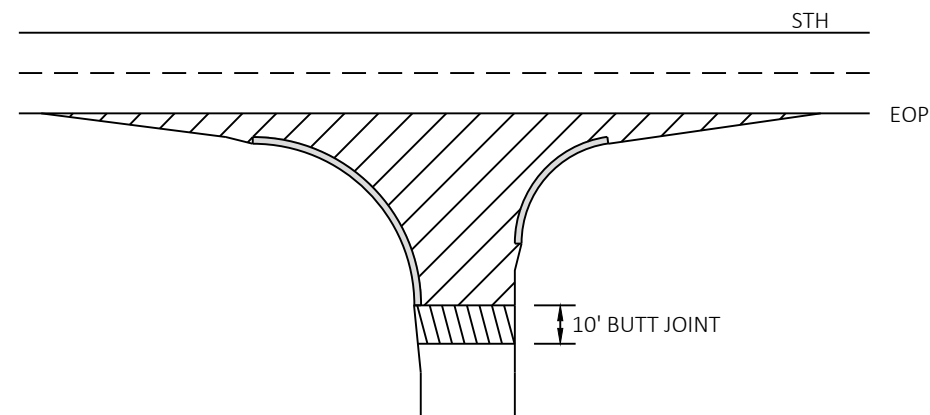
LEGEND

-  HMA PAVEMENT
4 MT 58-28 H (1.75-INCHES UPPER LAYER & SHOULDERS)
3 MT 58-25 S (2.25-INCHES LOWER LAYER)
-  BASE AGGREGATE DENSE 1 1/4-INCH
-  BASE AGGREGATE DENSE 3/4-INCH (SHOULDER)
-  EXISTING ASPHALTIC CONCRETE PAVEMENT
-  EXISTING CONCRETE PAVEMENT (DOWELED & TINED)
-  EXISTING CRUSHED AGGREGATE BASE COURSE
-  EXISTING CRUSHED AGGREGATE BASE COURSE (SHOULDER)
-  EXISTING GROUND

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	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 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

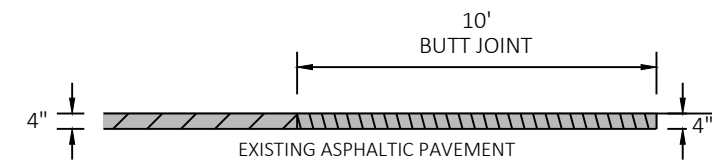
TOTAL PROJECT AREA = 6.050 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.758 ACRES



- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE
BUTT JOINT IS NOT REQUIRED

**SIDE ROADS
WITH CURB AND GUTTER**
CHERRY DRIVE












- HMA PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS

MAINLINE AND SIDE ROADS

BUTT JOINT DETAIL

LEGEND

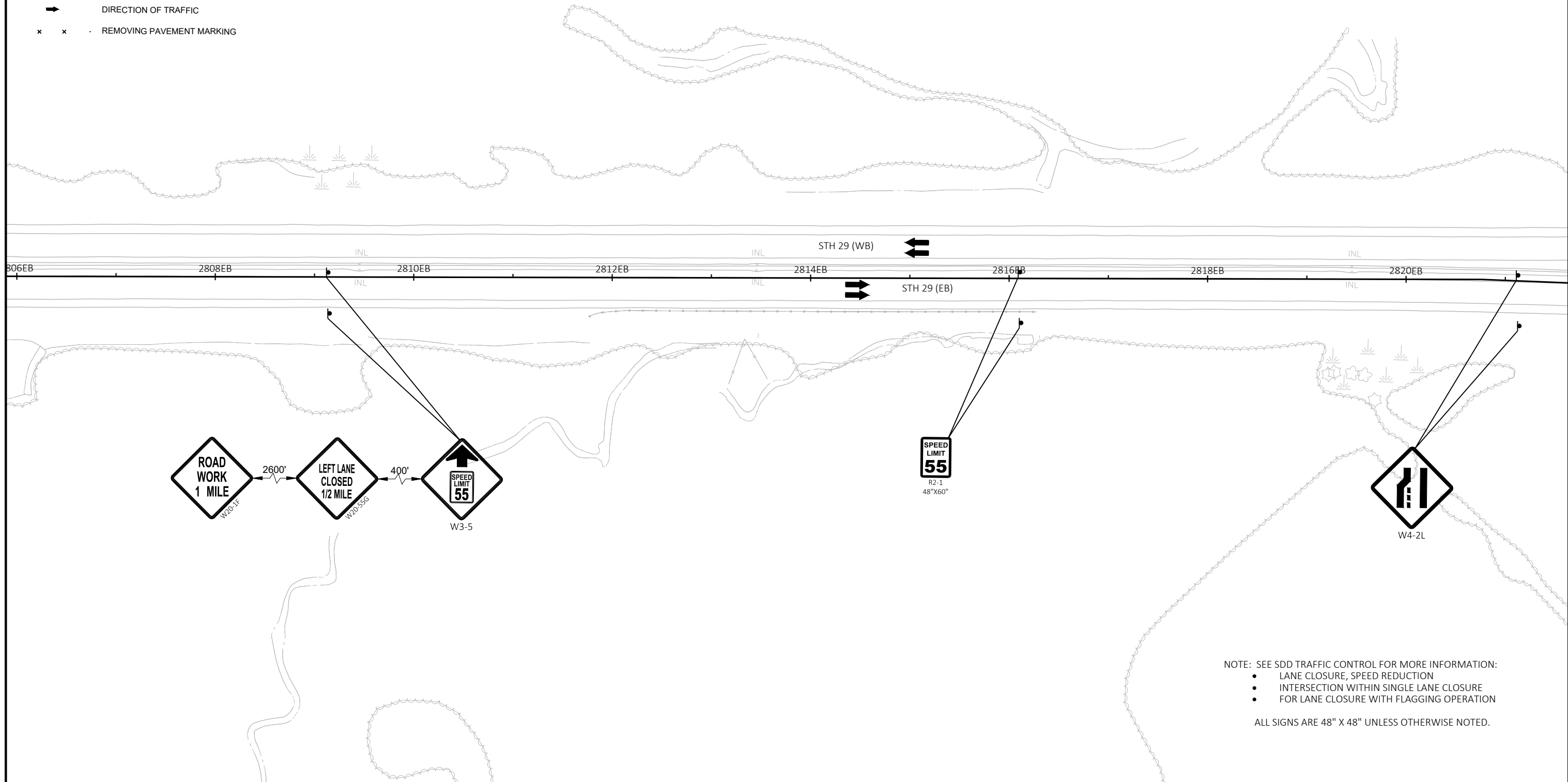
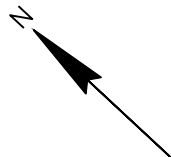
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  FLASHING ARROW BOARD
-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  REMOVING PAVEMENT MARKING

PCMS INSTALLED 7 DAYS PRIOR TO CLOSURE

PHASE 1	PHASE 2
ROADWORK BEGINS XX/XX	EXPECT DELAYS

PORTABLE CHANGEABLE MESSAGE SIGN LOCATION DETAILS

STATION 2792+00EB












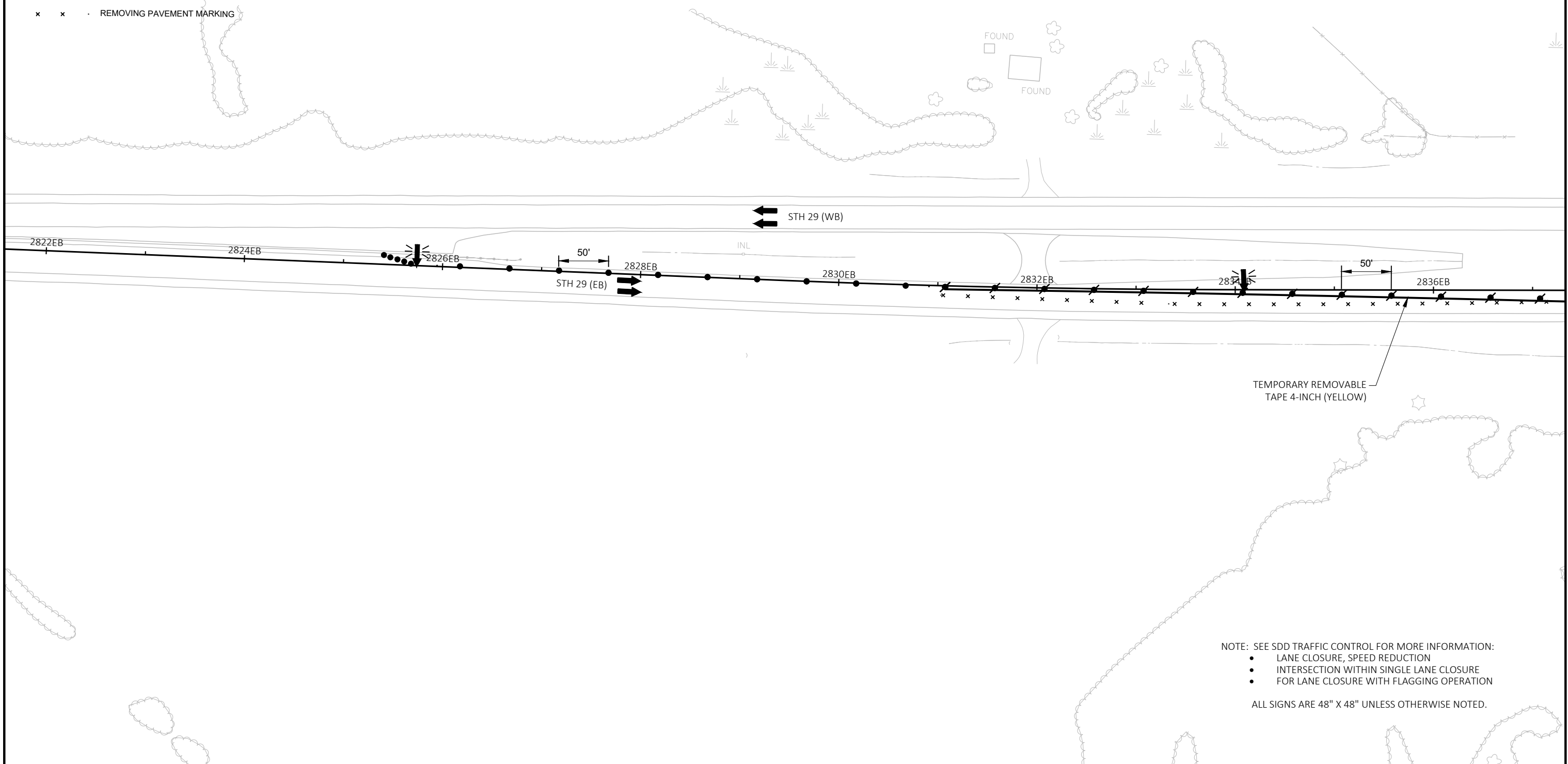
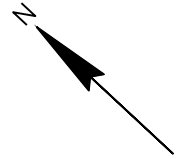
NOTE: SEE SDD TRAFFIC CONTROL FOR MORE INFORMATION:

- LANE CLOSURE, SPEED REDUCTION
- INTERSECTION WITHIN SINGLE LANE CLOSURE
- FOR LANE CLOSURE WITH FLAGGING OPERATION

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
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-  WORK AREA
-  DIRECTION OF TRAFFIC
-  REMOVING PAVEMENT MARKING












NOTE: SEE SDD TRAFFIC CONTROL FOR MORE INFORMATION:

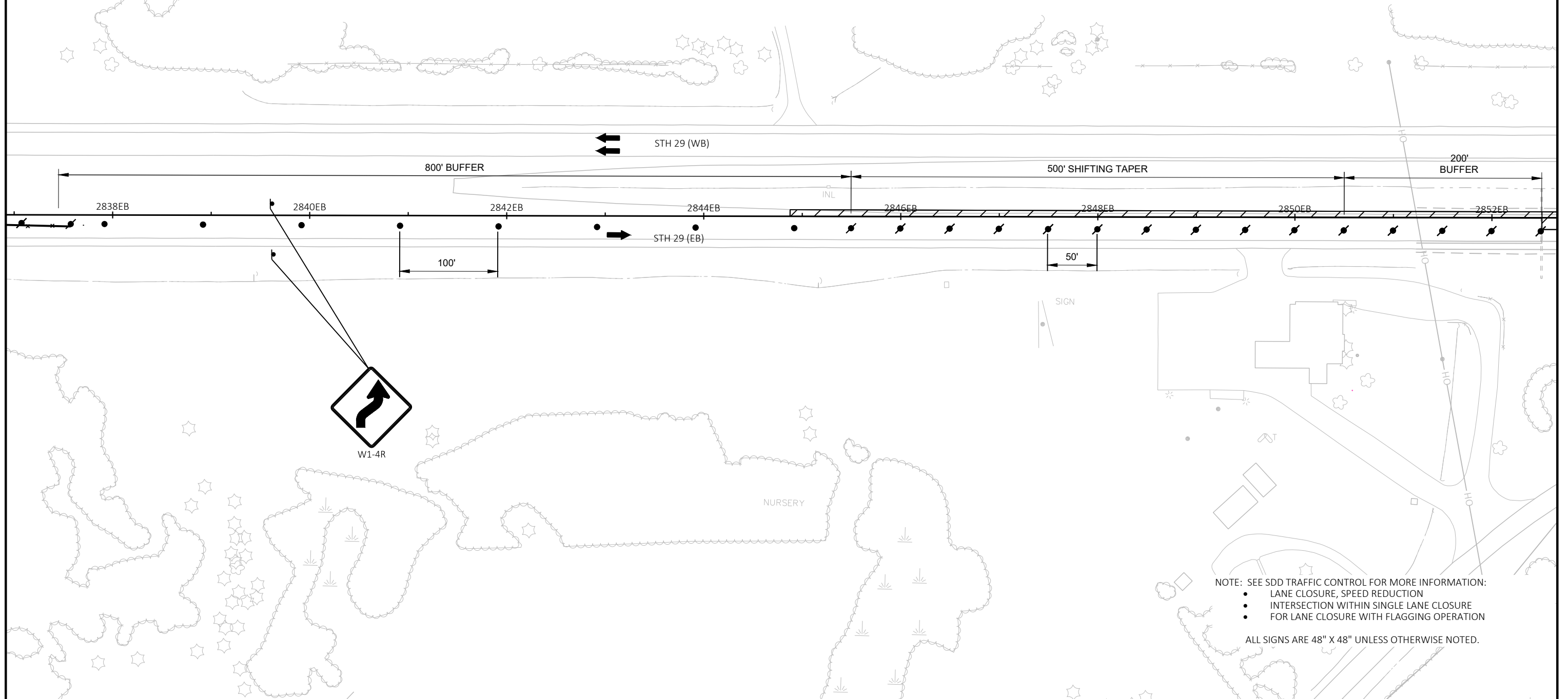
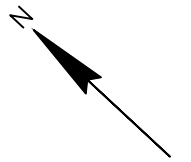
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ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

PROJECT NO: 1053-02-82	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL - STAGE 1	SHEET	E
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LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
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-  WORK AREA
-  DIRECTION OF TRAFFIC
-  REMOVING PAVEMENT MARKING












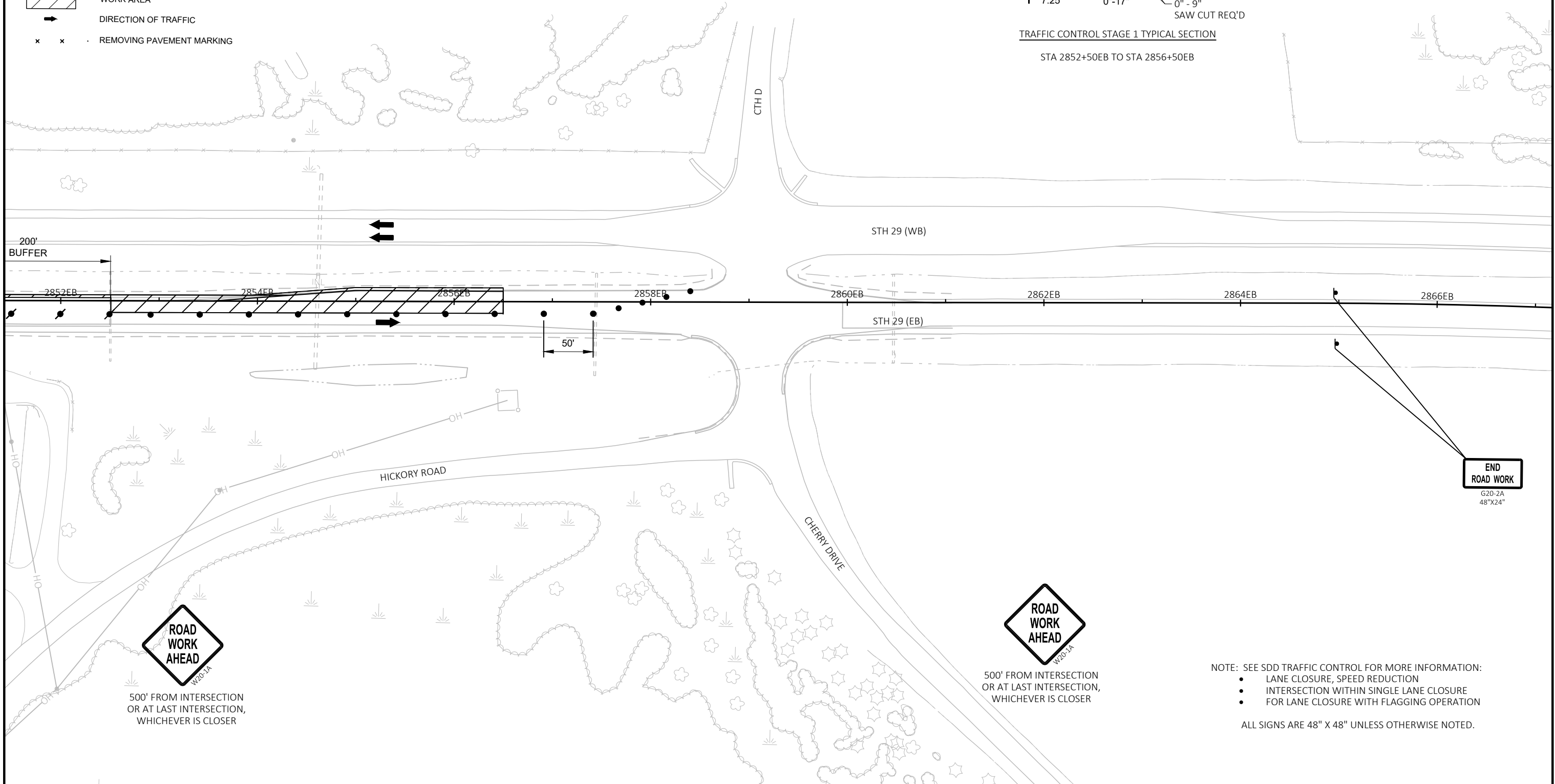
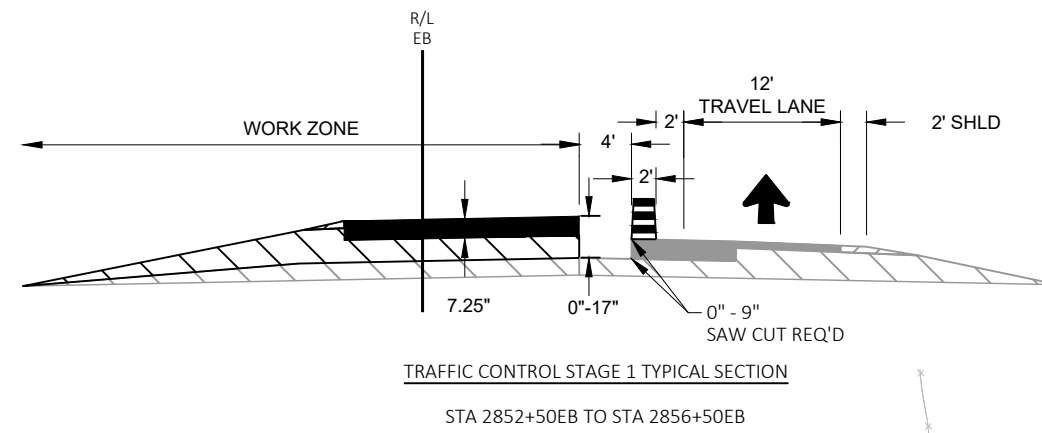
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- INTERSECTION WITHIN SINGLE LANE CLOSURE
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-  WORK AREA
-  DIRECTION OF TRAFFIC
-  REMOVING PAVEMENT MARKING



END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A







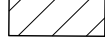

500' FROM INTERSECTION OR AT LAST INTERSECTION, WHICHEVER IS CLOSER

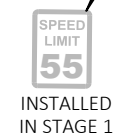
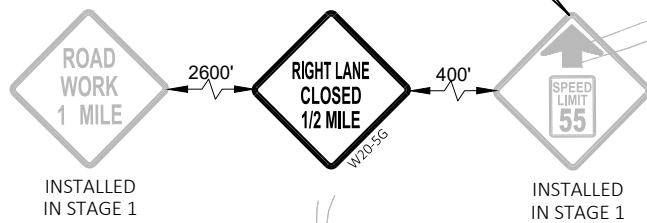
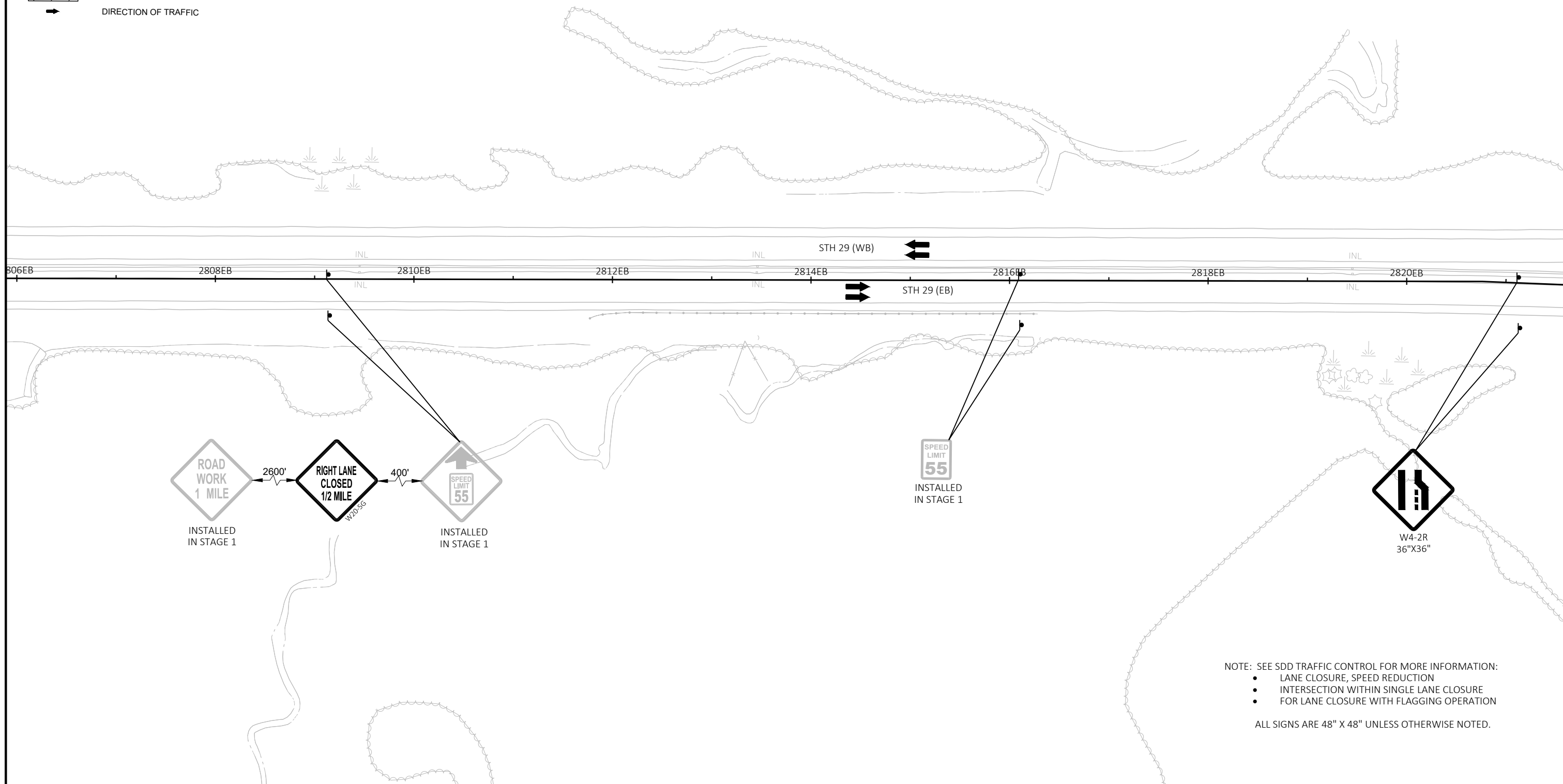
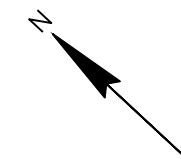
ROAD WORK AHEAD
W20-1A

500' FROM INTERSECTION OR AT LAST INTERSECTION, WHICHEVER IS CLOSER

NOTE: SEE SDD TRAFFIC CONTROL FOR MORE INFORMATION:
 • LANE CLOSURE, SPEED REDUCTION
 • INTERSECTION WITHIN SINGLE LANE CLOSURE
 • FOR LANE CLOSURE WITH FLAGGING OPERATION
 ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

LEGEND

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



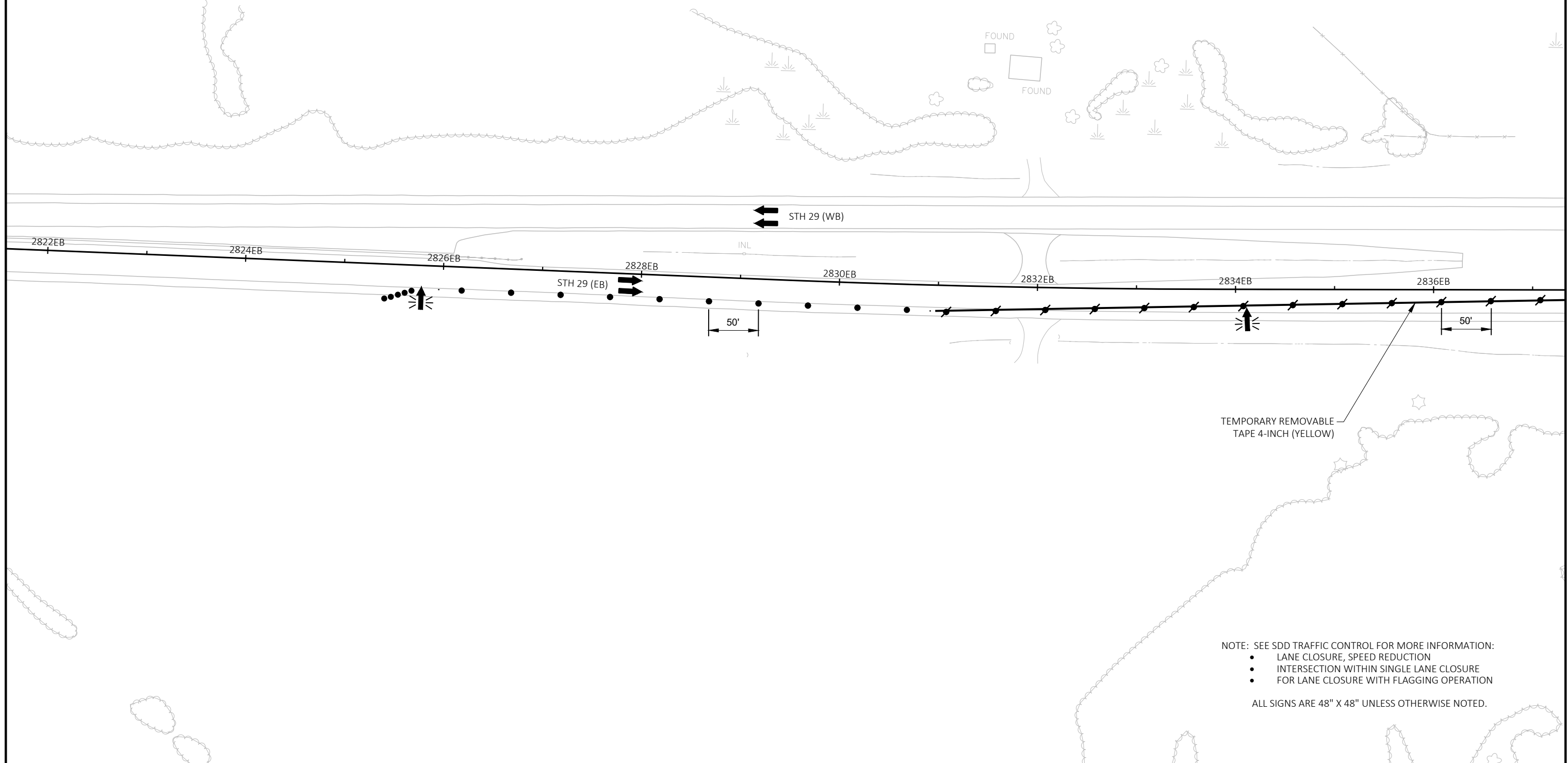
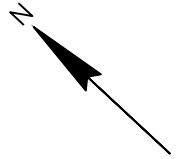
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LEGEND

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-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
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-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC











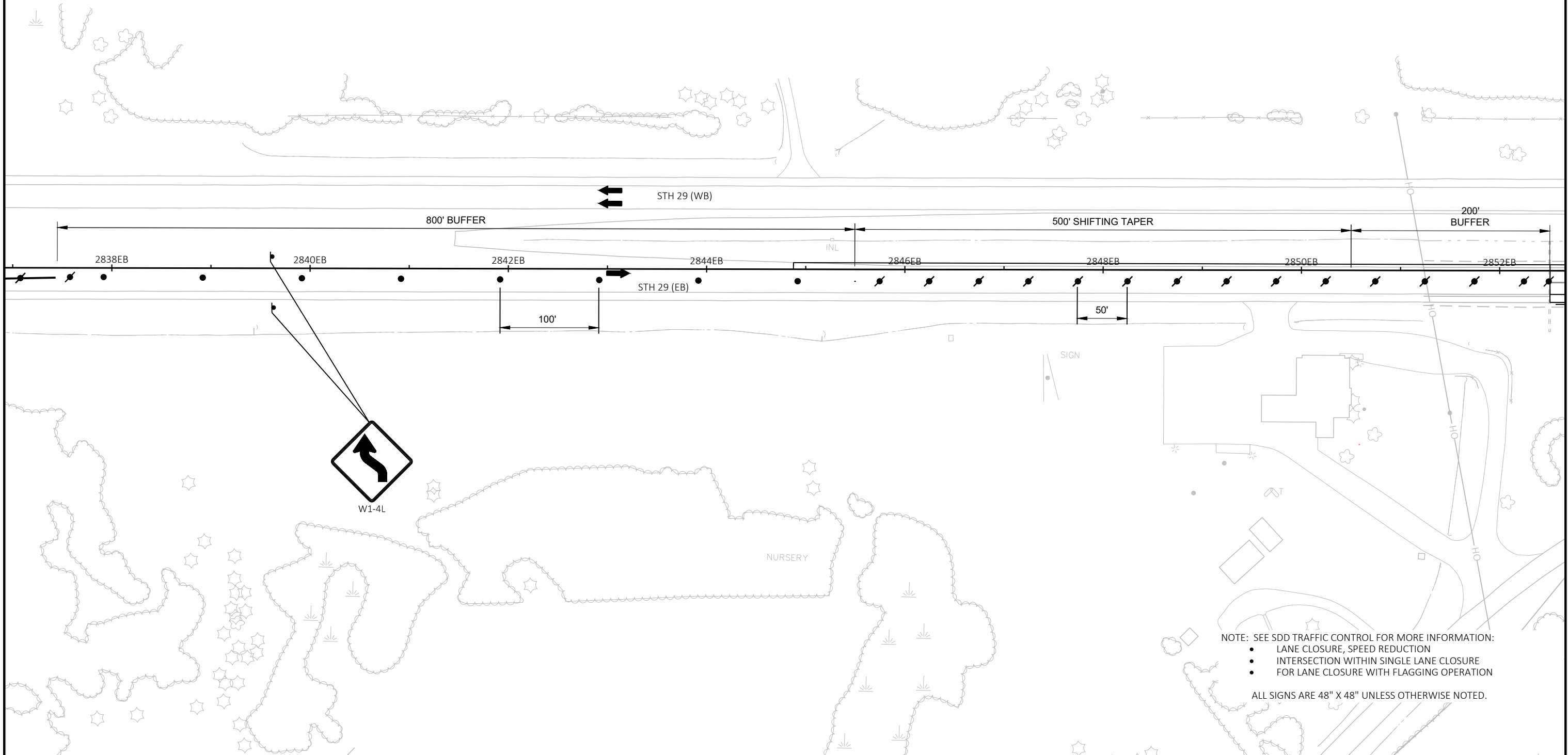
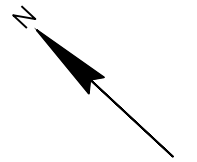
NOTE: SEE SDD TRAFFIC CONTROL FOR MORE INFORMATION:

- LANE CLOSURE, SPEED REDUCTION
- INTERSECTION WITHIN SINGLE LANE CLOSURE
- FOR LANE CLOSURE WITH FLAGGING OPERATION

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  FLASHING ARROW BOARD
-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC











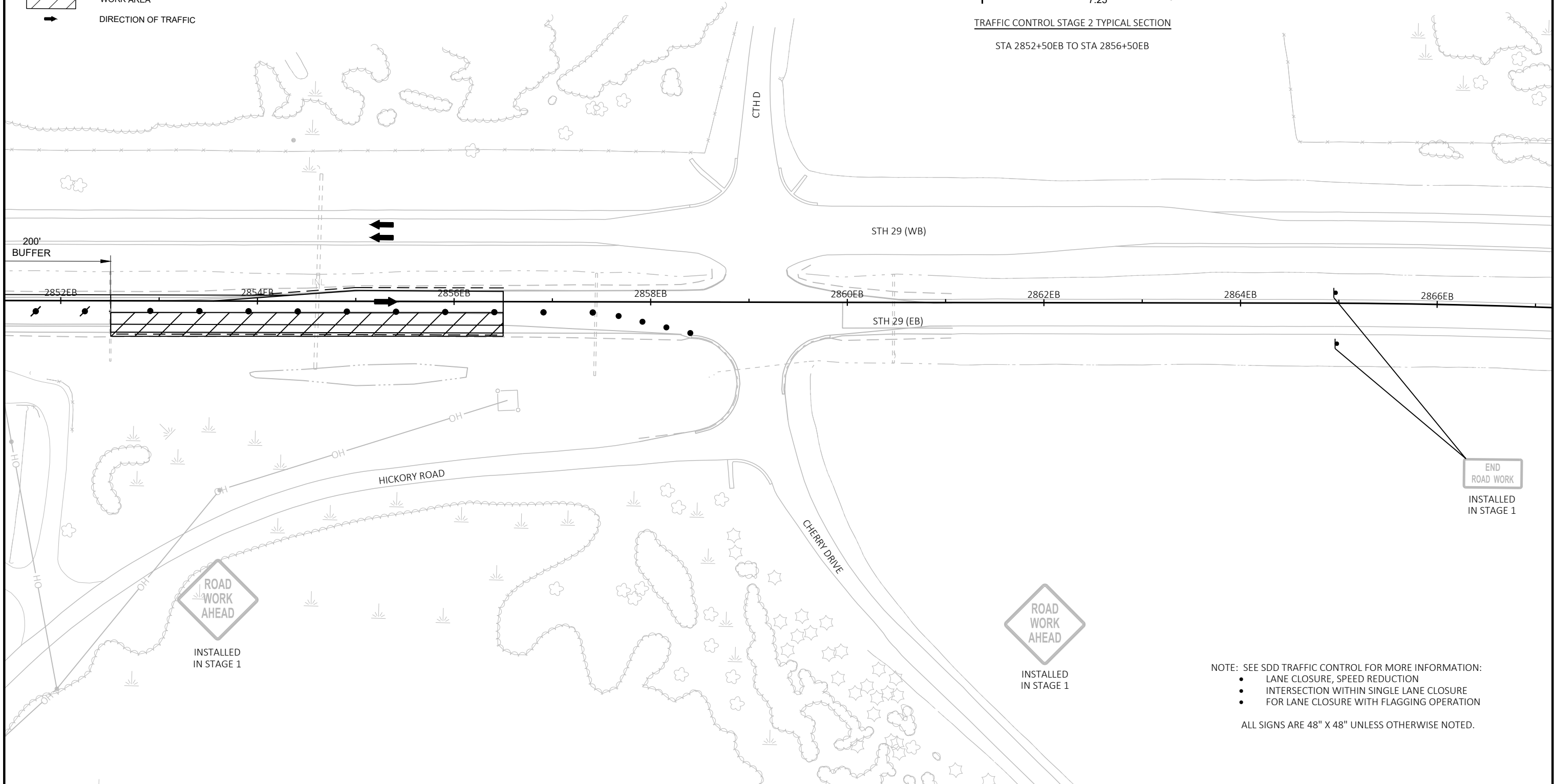
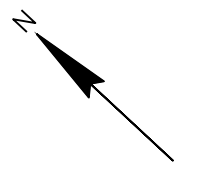
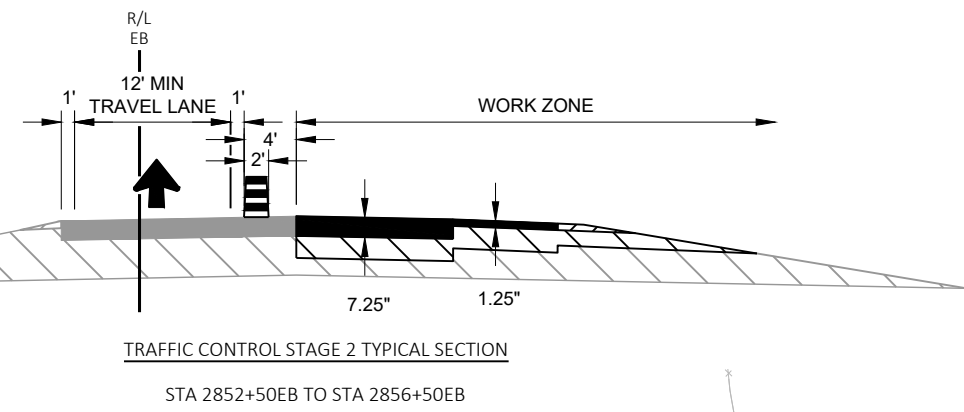
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-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC












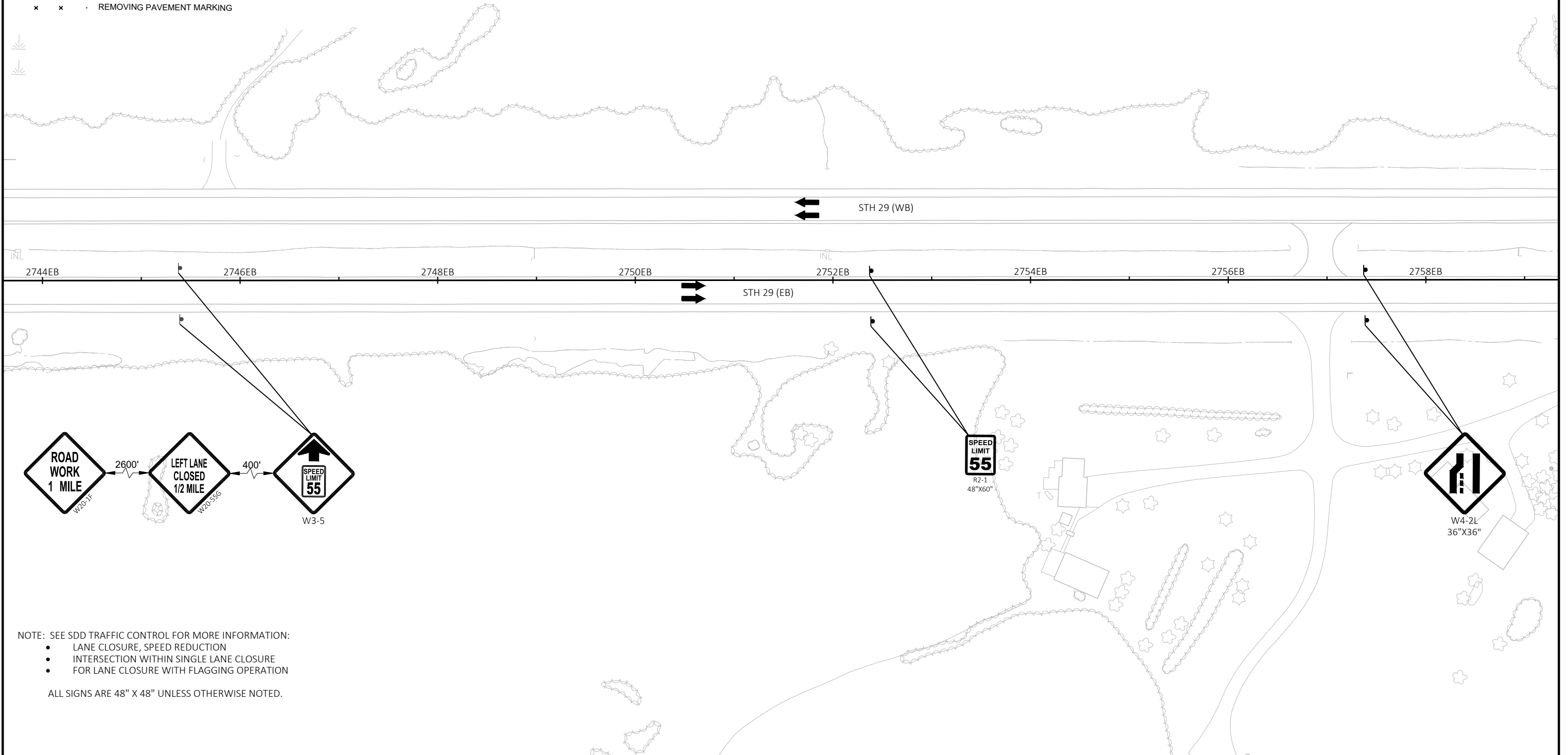
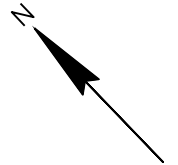
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-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  REMOVING PAVEMENT MARKING












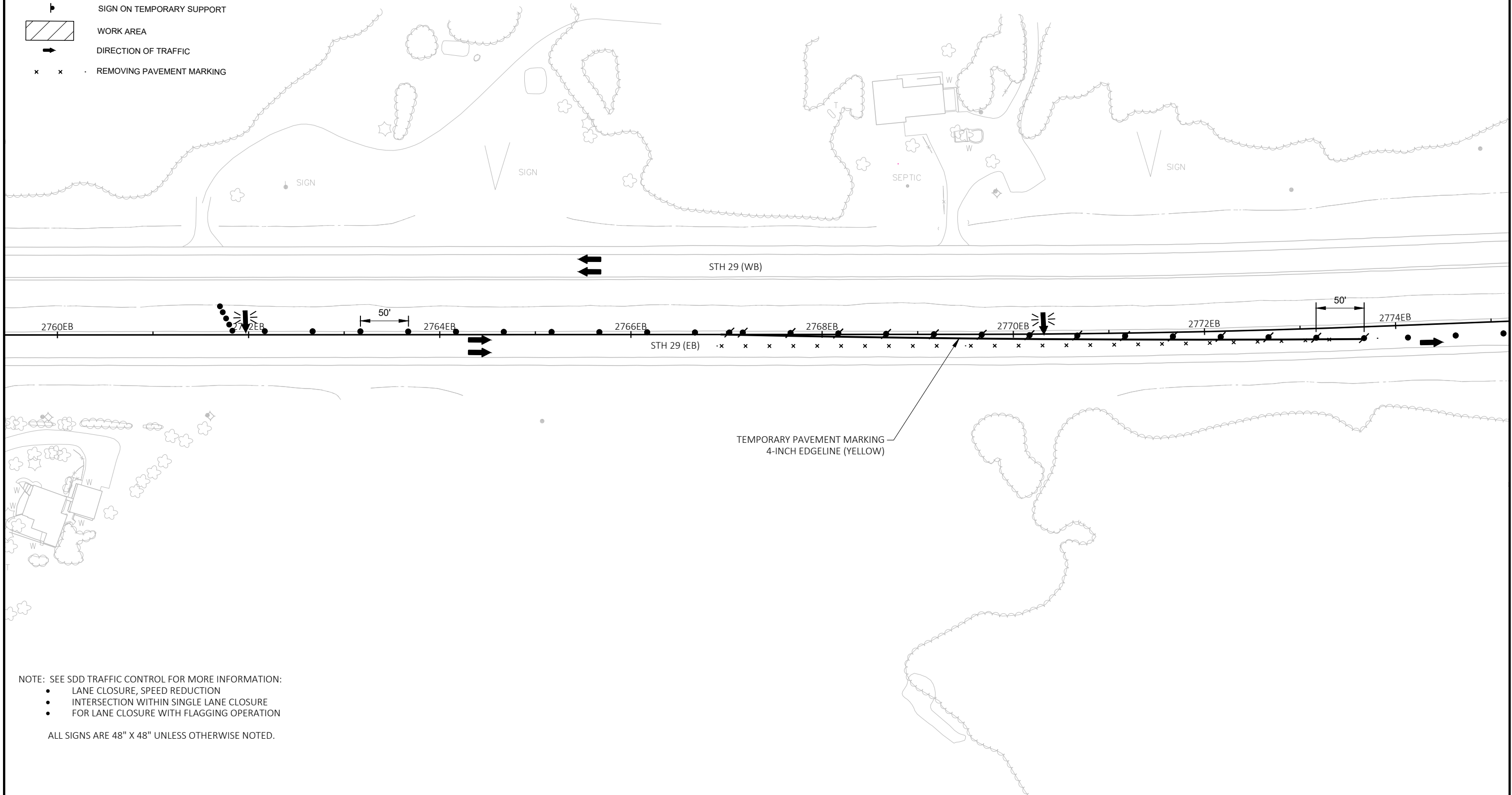
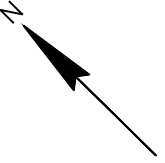
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-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  REMOVING PAVEMENT MARKING







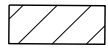




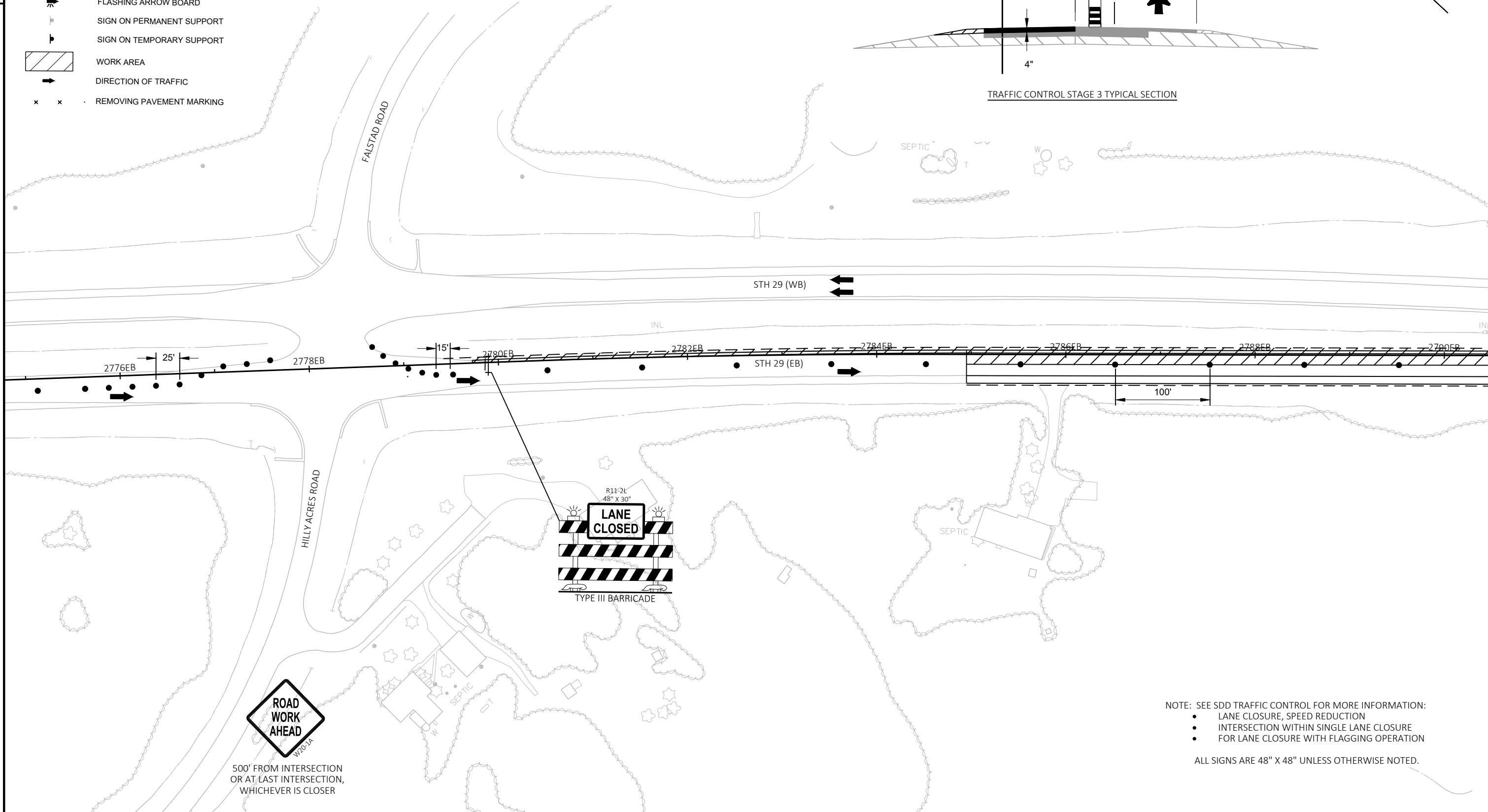
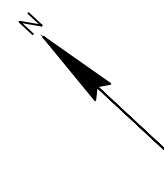
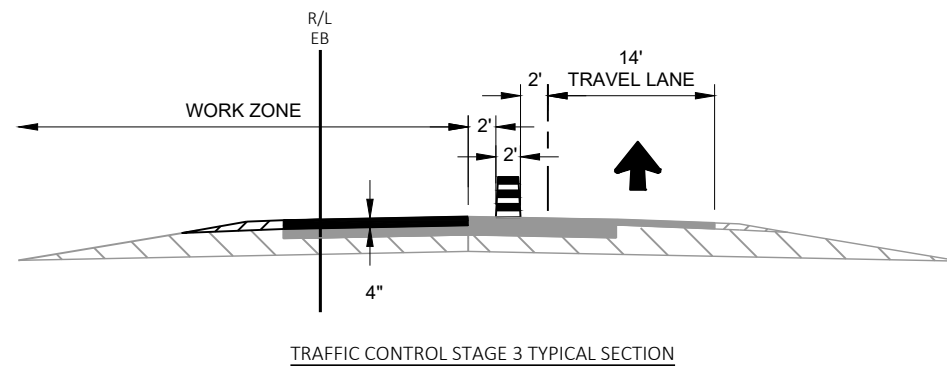
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-  WORK AREA
-  DIRECTION OF TRAFFIC
-  REMOVING PAVEMENT MARKING












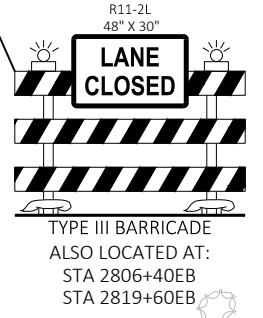
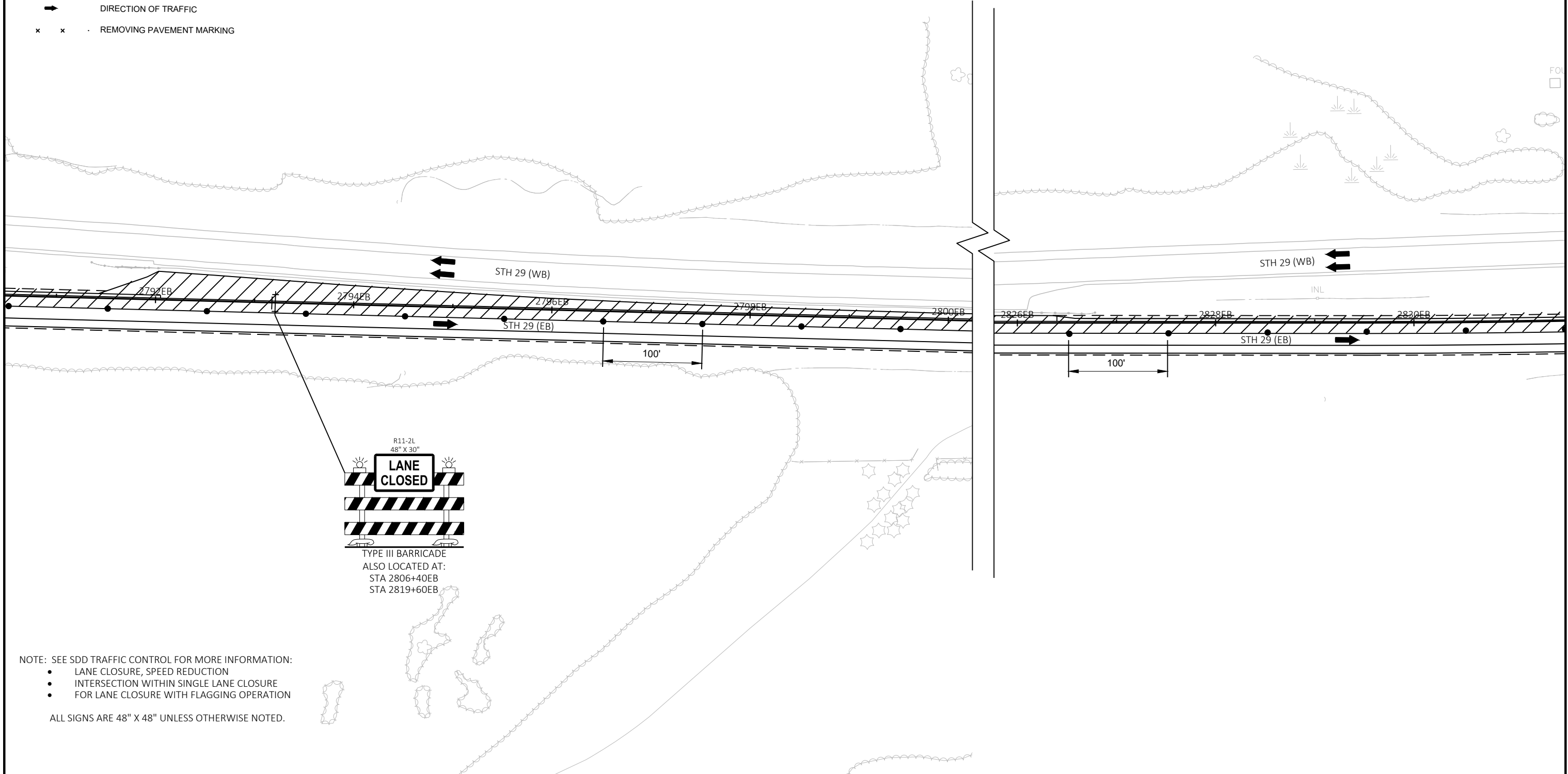
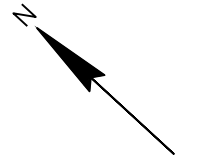
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-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  REMOVING PAVEMENT MARKING












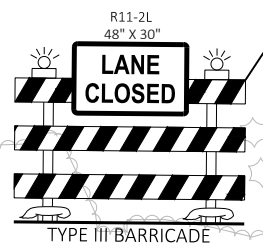
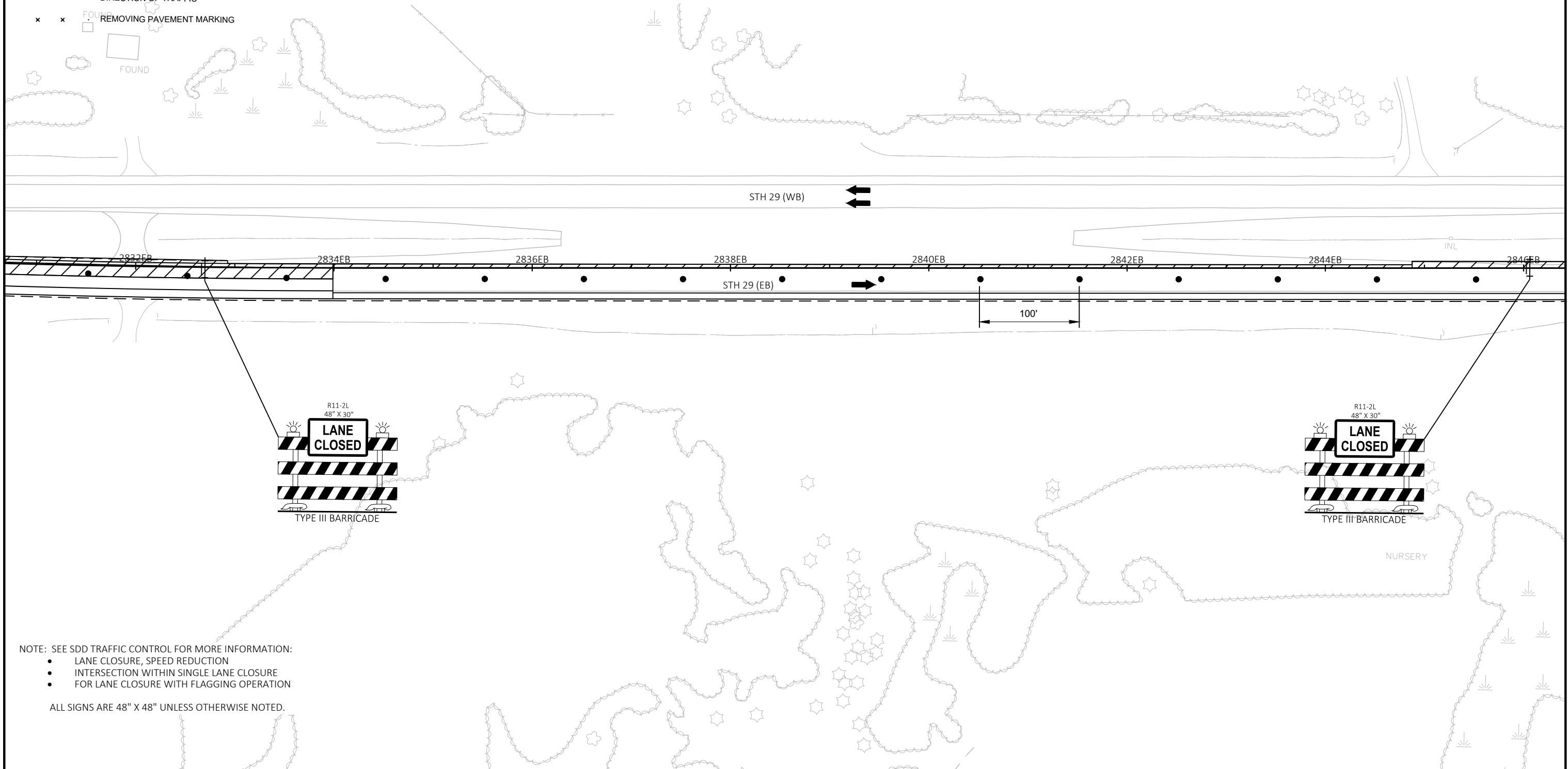
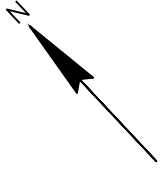
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-  DIRECTION OF TRAFFIC
-  REMOVING PAVEMENT MARKING












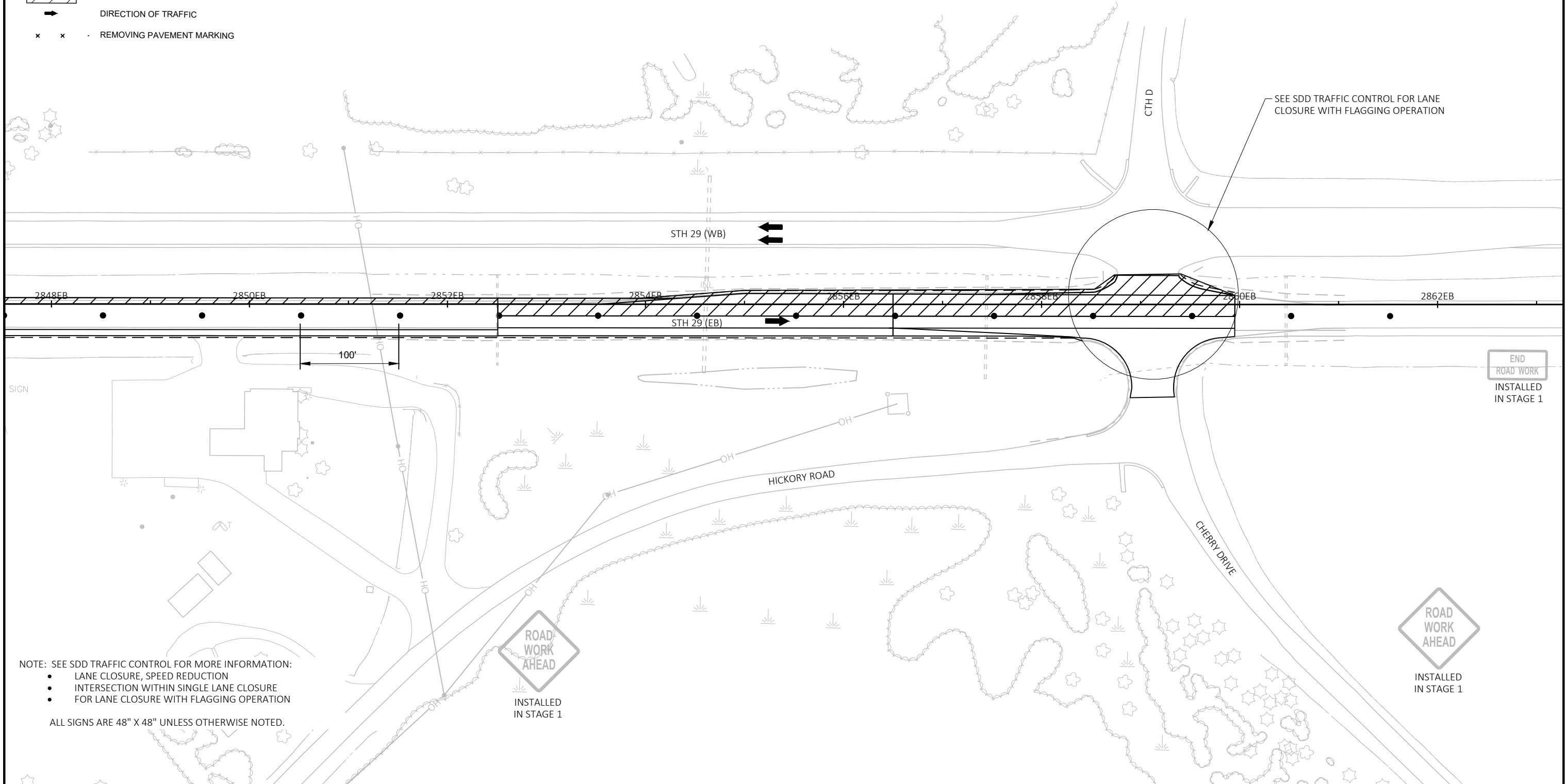
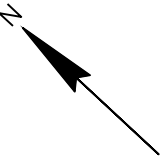
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
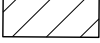

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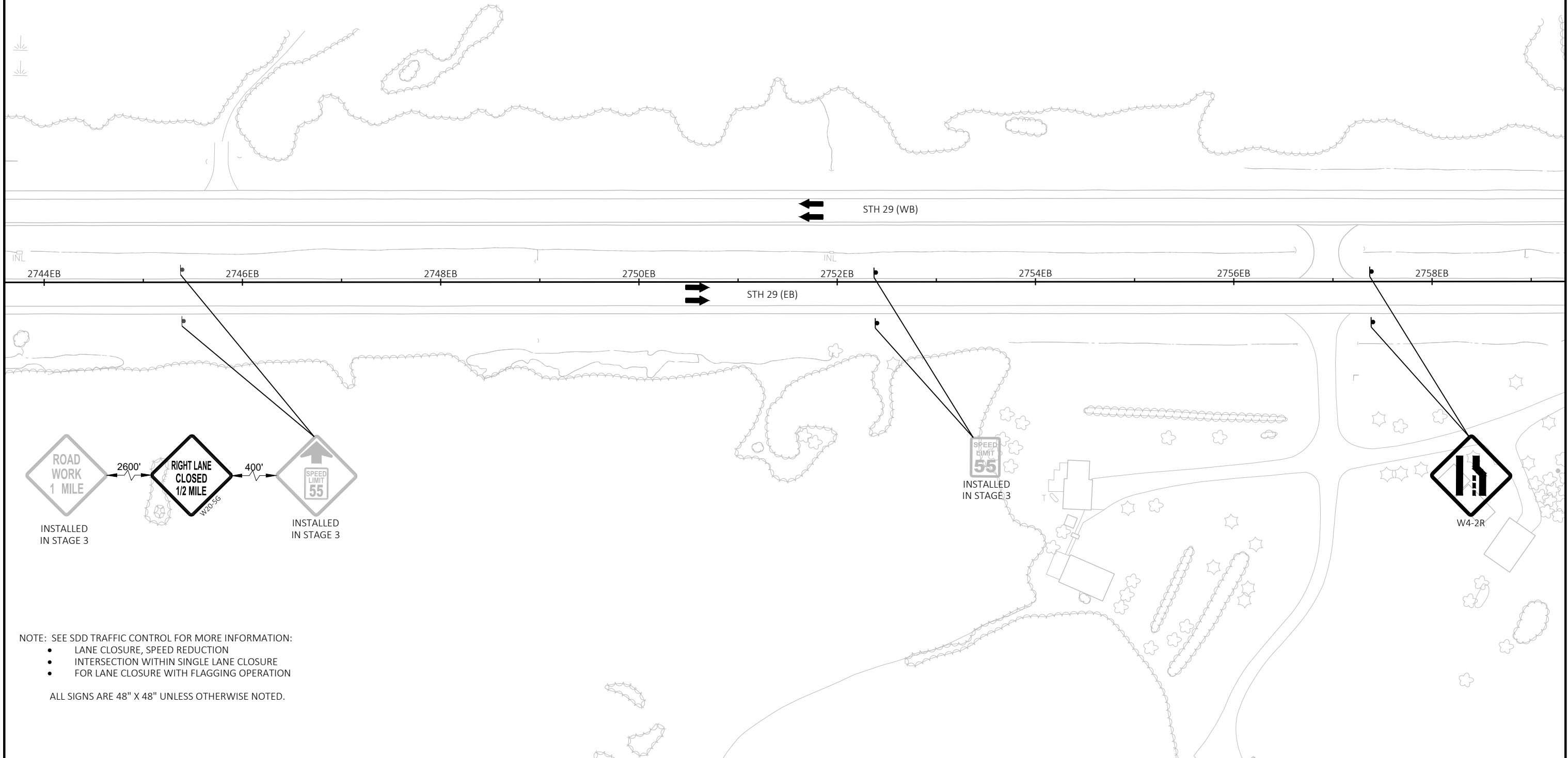
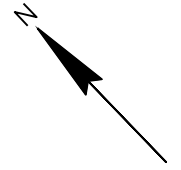
END
ROAD WORK
INSTALLED
IN STAGE 1

ROAD
WORK
AHEAD
INSTALLED
IN STAGE 1

ROAD
WORK
AHEAD
INSTALLED
IN STAGE 1

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  FLASHING ARROW BOARD
-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC









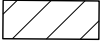

NOTE: SEE SDD TRAFFIC CONTROL FOR MORE INFORMATION:

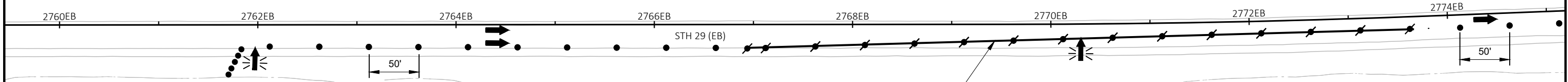
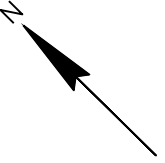
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PROJECT NO: 1053-02-82	HWY: STH 29	COUNTY: MARATHON	TRAFFIC CONTROL - STAGE 4
SHEET			E

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  FLASHING ARROW BOARD
-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
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-  DIRECTION OF TRAFFIC









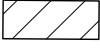

TEMPORARY PAVEMENT MARKING
4-INCH EDGELINE (YELLOW)

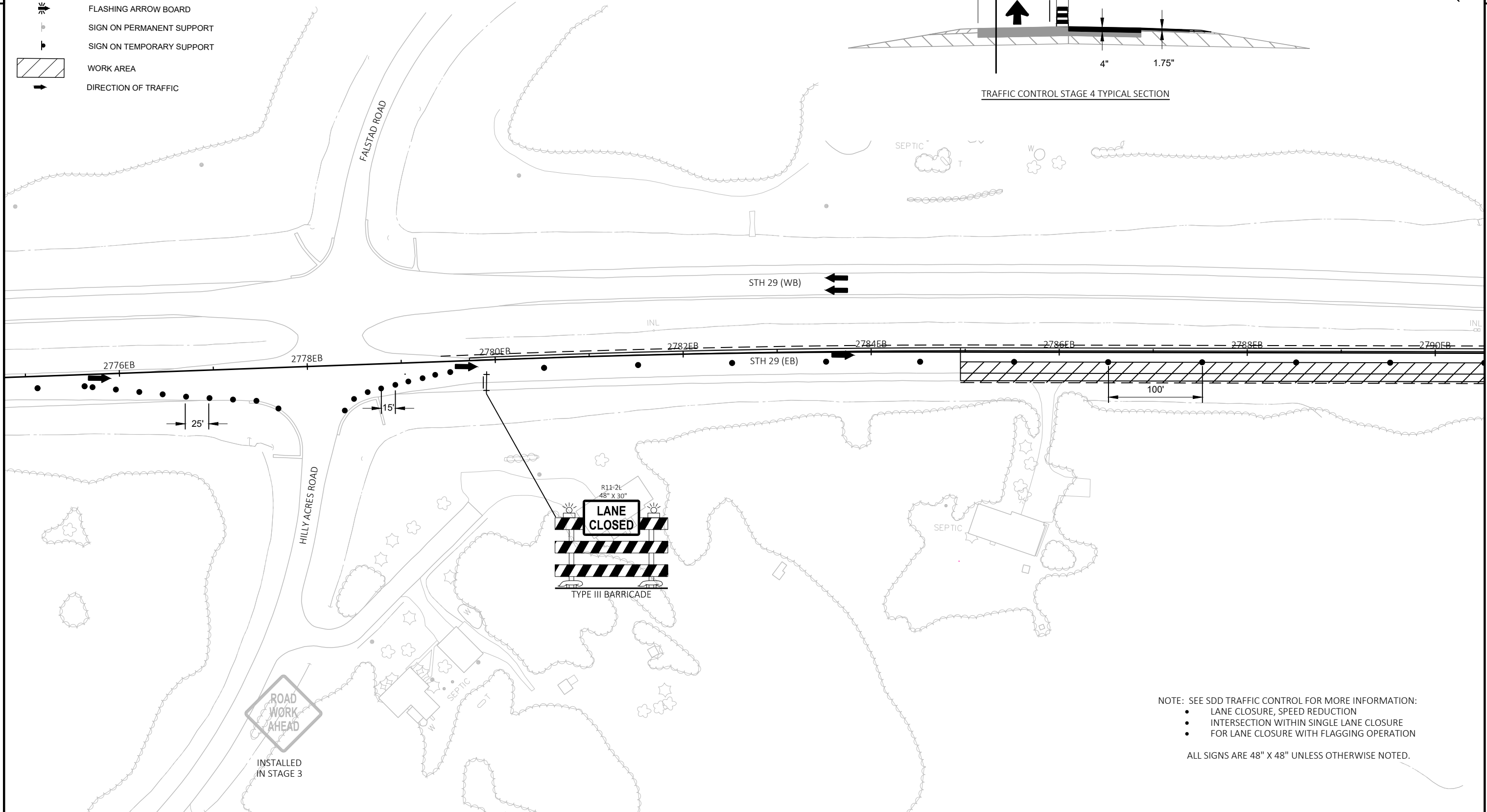
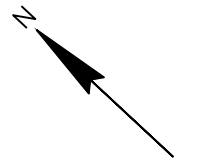
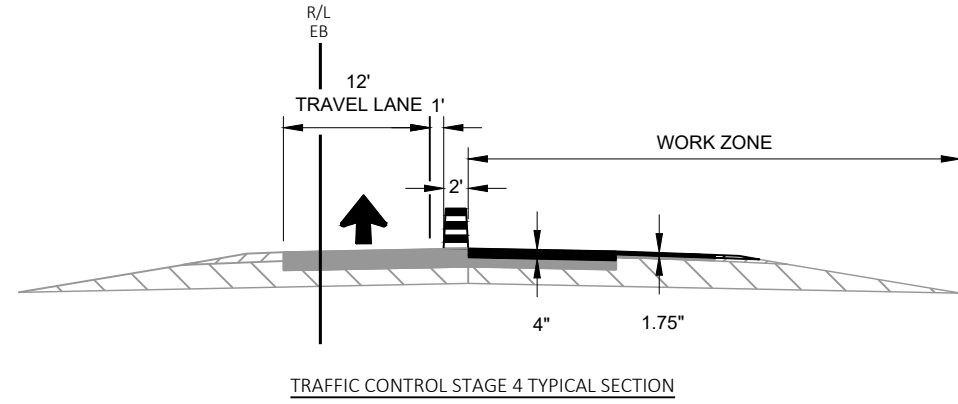
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- INTERSECTION WITHIN SINGLE LANE CLOSURE
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-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
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
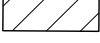



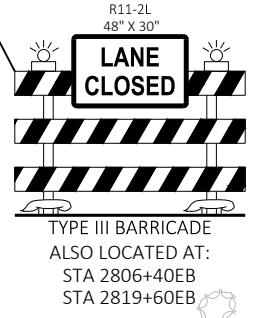
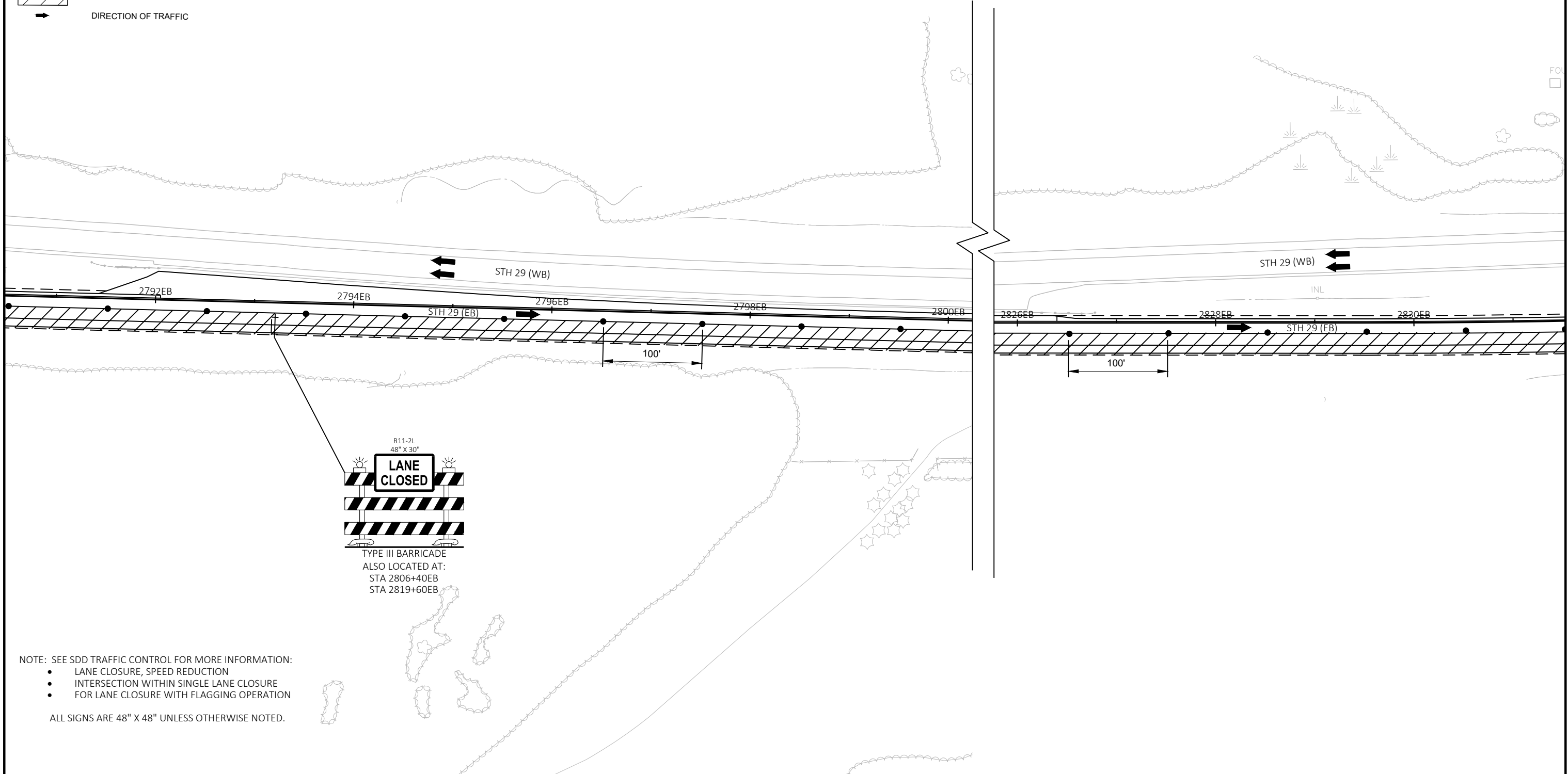
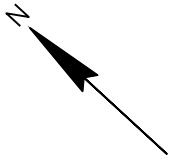
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-  SIGN ON TEMPORARY SUPPORT
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-  DIRECTION OF TRAFFIC







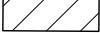


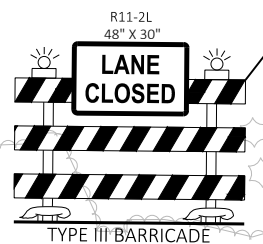
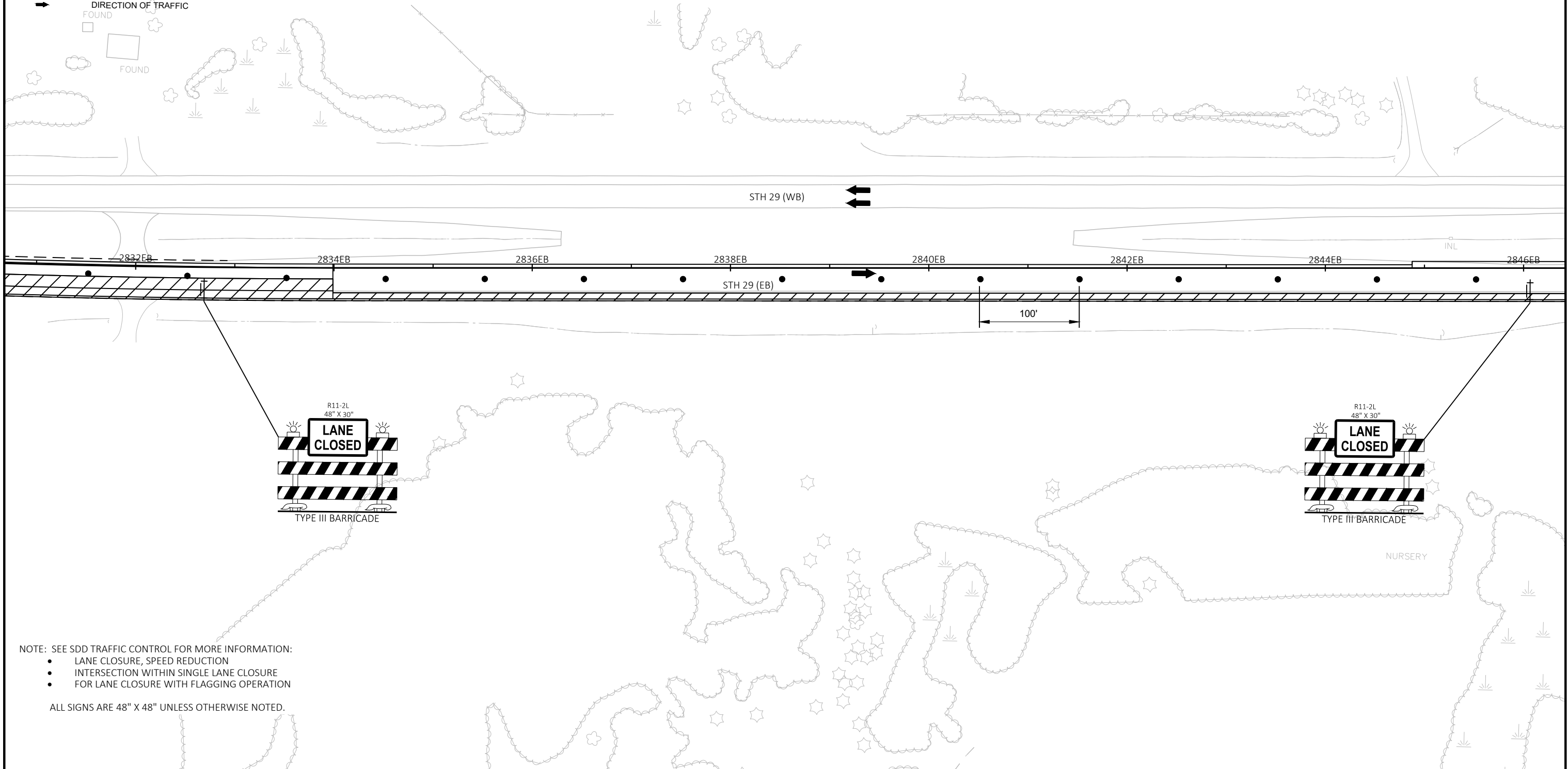
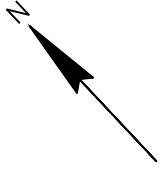
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
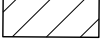



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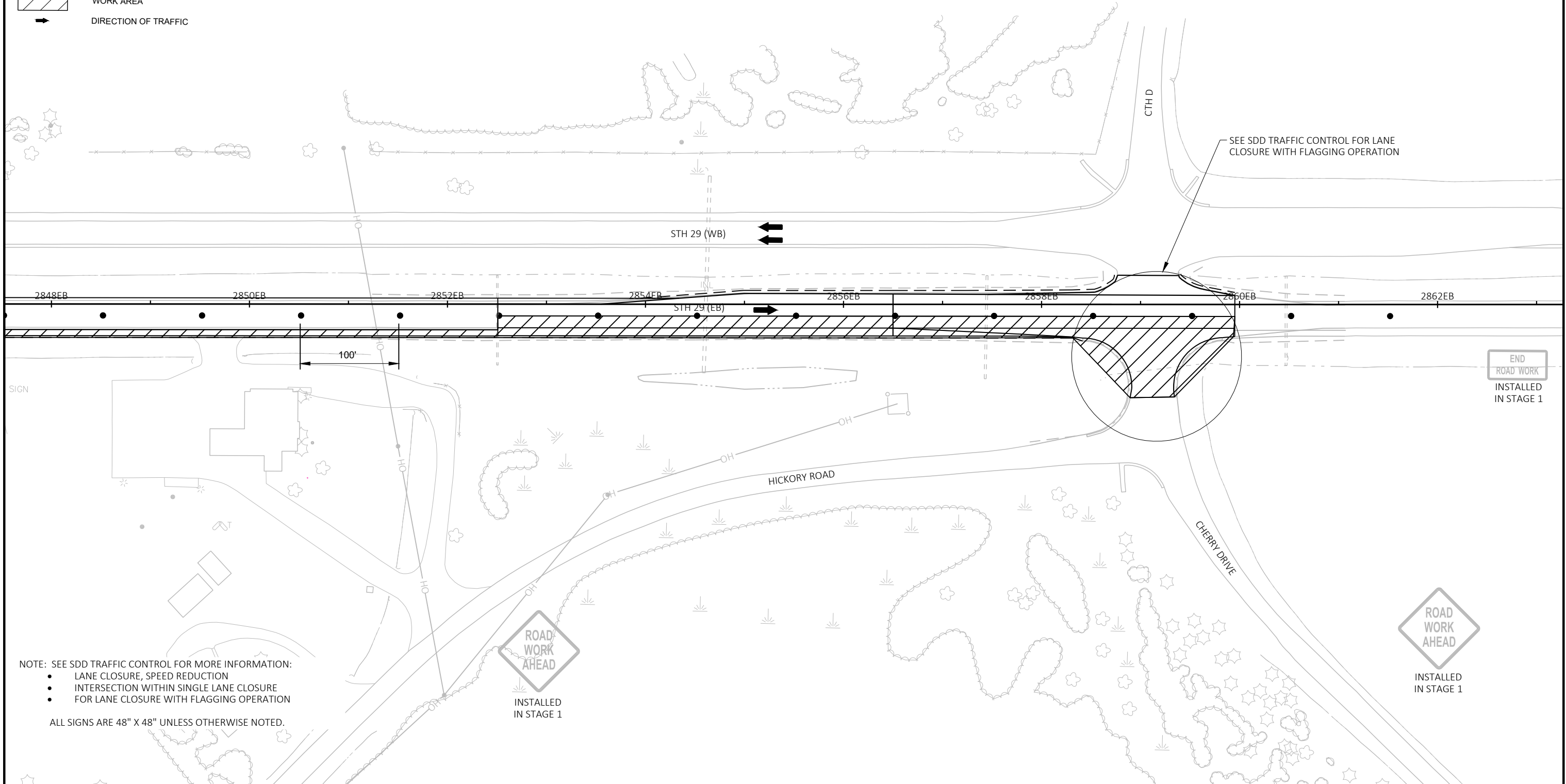
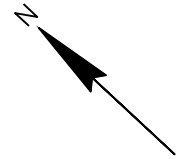
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-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC

STAGE 5
 PAVEMENT MARKING AND RUMBLE STRIP INSTALLATION
 UTILIZING SDD TRAFFIC CONTROL, LANE CLOSURE,
 SPEED REDUCTION.



NOTE: SEE SDD TRAFFIC CONTROL FOR MORE INFORMATION:
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 • INTERSECTION WITHIN SINGLE LANE CLOSURE
 • FOR LANE CLOSURE WITH FLAGGING OPERATION
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END
 ROAD WORK
 INSTALLED
 IN STAGE 1

ROAD
 WORK
 AHEAD
 INSTALLED
 IN STAGE 1

ROAD
 WORK
 AHEAD
 INSTALLED
 IN STAGE 1

Estimate Of Quantities

1053-02-82

Line	Item	Item Description	Unit	Total	Qty
0002	204.0110	Removing Asphaltic Surface	SY	510.000	510.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	198.000	198.000
0006	204.0125	Removing Asphaltic Surface Milling	TON	4,292.000	4,292.000
0008	205.0100	Excavation Common	CY	1,153.000	1,153.000
0010	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	8.000	8.000
0012	213.0100	Finishing Roadway (project) 01. 1053-02-82	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	232.000	232.000
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	753.000	753.000
0018	455.0605	Tack Coat	GAL	3,191.000	3,191.000
0020	460.2000	Incentive Density HMA Pavement	DOL	3,320.000	3,320.000
0022	460.6223	HMA Pavement 3 MT 58-28 S	TON	2,465.000	2,465.000
0024	460.6424	HMA Pavement 4 MT 58-28 H	TON	2,719.000	2,719.000
0026	465.0110	Asphaltic Surface Patching	TON	245.000	245.000
0028	465.0400	Asphaltic Shoulder Rumble Strips	LF	13,379.000	13,379.000
0030	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1053-02-82	EACH	1.000	1.000
0032	619.1000	Mobilization	EACH	1.000	1.000
0034	624.0100	Water	MGAL	10.000	10.000
0036	625.0100	Topsoil	SY	535.000	535.000
0038	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0040	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0042	628.7010	Inlet Protection Type B	EACH	9.000	9.000
0044	628.7555	Culvert Pipe Checks	EACH	10.000	10.000
0046	629.0210	Fertilizer Type B	CWT	0.340	0.340
0048	630.0130	Seeding Mixture No. 30	LB	9.600	9.600
0050	630.0500	Seed Water	MGAL	3.000	3.000
0052	642.5001	Field Office Type B	EACH	1.000	1.000
0054	643.0300	Traffic Control Drums	DAY	2,358.000	2,358.000
0056	643.0420	Traffic Control Barricades Type III	DAY	132.000	132.000
0058	643.0705	Traffic Control Warning Lights Type A	DAY	264.000	264.000
0060	643.0715	Traffic Control Warning Lights Type C	DAY	648.000	648.000
0062	643.0800	Traffic Control Arrow Boards	DAY	85.000	85.000
0064	643.0900	Traffic Control Signs	DAY	825.000	825.000
0066	643.1050	Traffic Control Signs PCMS	DAY	7.000	7.000
0068	643.5000	Traffic Control	EACH	1.000	1.000
0070	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	14,814.000	14,814.000
0072	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	2,212.500	2,212.500
0074	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	360.000	360.000
0076	646.9000	Marking Removal Line 4-Inch	LF	1,320.000	1,320.000
0078	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	2,640.000	2,640.000

Estimate Of Quantities

1053-02-82

Line	Item	Item Description	Unit	Total	Qty
0080	650.5000	Construction Staking Base	LF	400.000	400.000
0082	650.8000	Construction Staking Resurfacing Reference	LF	7,500.000	7,500.000
0084	650.9910	Construction Staking Supplemental Control (project) 01. 1053-02-82	LS	1.000	1.000
0086	690.0150	Sawing Asphalt	LF	478.000	478.000
0088	740.0440	Incentive IRI Ride	DOL	4,000.000	4,000.000
0090	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0092	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000

REMOVING ASPHALTIC SURFACE

STATION - STATION	LOCATION	204.0110 SY	REMARKS
2844+85EB - 2852+50EB	STH 29 (EB) LT SHLD	510	
TOTAL		510	

REMOVING ASPHALTIC SURFACE MILLING

STATION - STATION	LOCATION	204.0125 TON	REMARKS
2779+75EB - 2784+95EB	STH 29 (EB) LT SHLD	17	
2784+95EB - 2792+05EB	STH 29 (EB)	469	
2784+95EB - 2792+05EB	STH 29 (EB) RT SHLD	61	
2792+05EB - 2826+40EB	STH 29 (EB)	2015	
2792+05EB - 2826+40EB	STH 29 (EB) RT SHLD	294	
2792+05EB - 2826+40EB	STH 29 (EB) LT SHLD	309	
2826+40EB - 2833+99EB	STH 29 (EB)	501	
2826+40EB - 2833+99EB	STH 29 (EB) RT SHLD	65	
2833+99EB - 2852+50EB	STH 29 (EB) LT & RT SHLD	154	
2856+50EB - 2859+95EB	STH 29 (EB)	295	
2856+50EB - 2859+95EB	STH 29 (EB) LT & RT SHLD	30	
CTH D	STH 29 MEDIAN	47	
CTH D	SIDEROAD	35	
TOTAL		4292	

EXCAVATION COMMON

DIVISION	STATION - STATION	LOCATION	205.0100 CUT (2) CY	UNEXPANDED FILL CY	EXPANDED FILL (13) CY	MASS ORDINATE +/- (14) CY	WASTE CY
DIVISION 1	2852+50EB - 2856+50EB	STH 29 (EB)	1,153	7	9	1,144	1,144
DIVISION 1 SUBTOTAL			1,153	7	9	1,144	1,144
GRAND TOTAL			1,153	7	9	1,144	1,144
TOTAL			1,153				

NOTES:

- (2) Salvaged/Unusable Pavement Material is included in Cut.
- (13) Expanded Fill Factor = 1.25
- (14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

REMOVING ASPHALTIC SURFACE BUTT JOINTS

STATION - STATION	LOCATION	204.0115 SY	REMARKS
2784+95EB - 2785+05EB	STH 29 (EB)	27	
2833+90EB - 2834+00EB	STH 29 (EB)	27	
2858+77EB - 2859+38EB	STH 29 (EB) - MEDIAN	68	
2859+85EB - 2859+95EB	STH 29 (EB)	27	
2858+90EB - 2859+34EB	CHERRY ST	49	
TOTAL			198

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

STATION - STATION	LOCATION	211.0400 STA
2844+85EB - 2852+50EB	STH 29 (EB) LT SHLD	8
TOTAL		8

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	REMARKS
2779+75EB - 2784+95EB	STH 29 (EB) - LT SHLD	11		
2784+95EB - 2792+05EB	STH 29 (EB) - LT SHLD	15		
2784+95EB - 2852+50EB	STH 29 (EB) - RT SHLD	94		
2826+40EB - 2844+85EB	STH 29 (EB) - LT SHLD	38		
2844+85EB - 2852+50EB	STH 29 (EB) - LT SHLD	37		
2852+50EB - 2856+50EB	STH 29 (EB) - DRIVING LANES		383	
2852+50EB - 2856+50EB	STH 29 (EB) - LT & RT SHLD	25	370	
2856+50EB - 2859+95EB	STH 29 (EB) - LT & RT SHLD	12		
TOTAL		232	753	

HMA PAVEMENT

STATION - STATION	LOCATION	460.6223 3 MT 58-28 S TON	460.6424 4 MT 58-28 H TON	465.0110 SURFACE PATCHING TON	REMARKS
2779+75EB - 2784+95EB	STH 29 (EB) LT SHLD		17		
2784+95EB - 2792+05EB	STH 29 (EB)	269	271		
2792+05EB - 2826+40EB	STH 29 (EB)	1154	1472		
2826+40EB - 2833+99EB	STH 29 (EB)	287	289		
2833+99EB - 2852+50EB	STH 29 (EB) LT & RT SHLD		181		
2844+85EB - 2852+50EB	STH 29 (EB) LT SHLD		100		
2852+50EB - 2856+50EB	STH 29 (EB)	559	170		
2856+50EB - 2859+95EB	STH 29 (EB)	169	162		
CTH D	STH 29 MEDIAN	27	21		
CTH D	SIDEROAD		36		
PROJECT LIMITS	SHOULDERS			245	MILLING
TOTALS		2465	2719	245	

TACK COAT

STATION - STATION	LOCATION	455.0605 GAL	REMARKS
2779+75EB - 2784+95EB	STH 29 (EB) LT SHLD	12	
2784+95EB - 2792+05EB	STH 29 (EB)	342	
2792+05EB - 2826+40EB	STH 29 (EB)	1692	
2826+40EB - 2833+99EB	STH 29 (EB)	366	
2833+99EB - 2852+50EB	STH 29 (EB) LT & RT SHLD	130	
2844+85EB - 2852+50EB	STH 29 (EB) LT SHLD	71	
2852+50EB - 2856+50EB	STH 29 (EB)	314	
2856+50EB - 2859+95EB	STH 29 (EB)	209	
CTH D	STH 29 MEDIAN	30	
CTH D	SIDEROAD	25	
TOTAL		3191	

ASPHALTIC SHOULDER RUMBLE STRIPS

STATION - STATION	LOCATION	465.0400 LF	REMARKS
2779+75EB - 2784+95EB	STH 29 (EB)	520	LT SHLD
2784+95EB - 2858+50EB	STH 29 (EB)	12859	LT & RT SHLD
TOTAL		13379	

WATER

STATION - STATION	LOCATION	624.0100 MGAL	630.0500 SEED MGAL	REMARKS
2852+50EB - 2856+50EB	STH 29 (EB)	8	2	
UNDISTRIBUTED	PROJECT LIMITS	2	1	
TOTALS		10	3	

INLET PROTECTION

STATION	LOCATION	628.7010 TYPE B EACH	REMARKS
2781+75EB	STH 29 (EB) MEDIAN	1	
2790+45EB	STH 29 (EB) MEDIAN	1	
2802+45EB	STH 29 (EB) MEDIAN	1	
2809+45EB	STH 29 (EB) MEDIAN	1	
2813+45EB	STH 29 (EB) MEDIAN	1	
2819+45EB	STH 29 (EB) MEDIAN	1	
2829+00EB	STH 29 (EB) MEDIAN	1	
2845+25EB	STH 29 (EB) MEDIAN	1	
2854+65EB	STH 29 (EB) MEDIAN	1	
TOTALS		9	

EROSION CONTROL

STATION	LOCATION	628.7555 625.0100 TOPSOIL SY	628.7555 CULVERT PIPE CHECK EACH	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
2852+50EB - 2856+50EB	STH 29 (EB) LT	110	---	0.07	2.0	---	---
2852+50EB - 2856+50EB	STH 29 (EB) RT	375	---	0.24	6.8	---	---
2852+50EB	STH 29 (EB) LT	---	3	---	---	---	---
2857+50EB	STH 29 (EB) LT	---	4	---	---	---	---
UNDISTRIBUTED	PROJECT LIMITS	50	3	0.03	0.9	2	2
TOTALS		535	10	0.34	9.6	2	2

TRAFFIC CONTROL BARRICADE & WARNING LIGHTS TYPE A

STATION	LOCATION	643.0420 BARRICADE TYPE III			643.0705 LIGHTS TYPE A			REMARKS
		NO	DAYS	DAY	NO	DAYS	DAY	
STAGE 3								
2780+00EB	STH 29 (EB) PASSING LANE	1	9	9	2	9	18	SEE TRAFFIC CONTROL - STAGE 3
2793+20EB	STH 29 (EB) PASSING LANE	1	9	9	2	9	18	SEE TRAFFIC CONTROL - STAGE 3
2806+40EB	STH 29 (EB) PASSING LANE	1	9	9	2	9	18	SEE TRAFFIC CONTROL - STAGE 3
2819+60EB	STH 29 (EB) PASSING LANE	1	9	9	2	9	18	SEE TRAFFIC CONTROL - STAGE 3
2832+80EB	STH 29 (EB) PASSING LANE	1	9	9	2	9	18	SEE TRAFFIC CONTROL - STAGE 3
2846+00EB	STH 29 (EB) PASSING LANE	1	9	9	2	9	18	SEE TRAFFIC CONTROL - STAGE 3
STAGE 3 SUB-TOTALS		54			108			
STAGE 4								
2780+00EB	STH 29 (EB) DRIVING LANE	1	13	13	2	13	26	SEE TRAFFIC CONTROL - STAGE 4
2793+20EB	STH 29 (EB) DRIVING LANE	1	13	13	2	13	26	SEE TRAFFIC CONTROL - STAGE 4
2806+40EB	STH 29 (EB) DRIVING LANE	1	13	13	2	13	26	SEE TRAFFIC CONTROL - STAGE 4
2819+60EB	STH 29 (EB) DRIVING LANE	1	13	13	2	13	26	SEE TRAFFIC CONTROL - STAGE 4
2832+80EB	STH 29 (EB) DRIVING LANE	1	13	13	2	13	26	SEE TRAFFIC CONTROL - STAGE 4
2846+00EB	STH 29 (EB) DRIVING LANE	1	13	13	2	13	26	SEE TRAFFIC CONTROL - STAGE 4
STAGE 4 SUB-TOTALS		78			156			
GRAND TOTALS		132			264			

TRAFFIC CONTROL DRUMS & WARNING LIGHTS

STATION - STATION	LOCATION	643.0300 DRUMS			643.0715 LIGHTS TYPE C			REMARKS
		NO	DAYS	DAY	NO	DAYS	DAY	
STAGE 1								
2825+40EB - 2858+50EB	STH 29 (EB)	66	10	660	29	10	290	SEE TRAFFIC CONTROL - STAGE 1
STAGE 1 SUB-TOTALS				660				290
STAGE 2								
2825+40EB - 2858+50EB	STH 29 (EB)	66	8	528	29	8	232	SEE TRAFFIC CONTROL - STAGE 2
STAGE 2 SUB-TOTALS				528				232
STAGE 3								
2761+75EB - 2862+00EB	STH 29 (EB)	130	9	1170	14	9	126	SEE TRAFFIC CONTROL - STAGE 3
STAGE 3 SUB-TOTALS				1170				126
STAGE 4								
2761+75EB - 2862+00EB	STH 29 (EB)	130	13	1690	14	13	182	SEE TRAFFIC CONTROL - STAGE 4
STAGE 4 SUB-TOTALS				1690				182
STAGE 5								
2777+95EB - 2862+00EB	STH 29 (EB)	87	5	435	0	5	0	SEE NOTE BELOW
STAGE 5 SUB-TOTALS				435				0
GRAND TOTALS				2358				648

NOTE: STAGE 5 MILL IN THE RUMBLE STRIPS ON MEDIAN SHOULDER, UTILIZE SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEED GREATER THAN 40 M.P.H.

TRAFFIC CONTROL ARROW BOARDS

STATION	LOCATION	NO	DAY	643.0800		REMARKS
				DAY	DAY	
STAGE 1						
2825+75EB	STH 29 (EB) LT	1	10	10		SEE TRAFFIC CONTROL - STAGE 1
2834+00EB	STH 29 (EB) LT	1	10	10		SEE TRAFFIC CONTROL - STAGE 1
STAGE 1 SUB-TOTAL				20		
STAGE 2						
2825+75EB	STH 29 (EB) RT	1	8	8		SEE TRAFFIC CONTROL - STAGE 2
2834+00EB	STH 29 (EB) RT	1	8	8		SEE TRAFFIC CONTROL - STAGE 2
STAGE 2 SUB-TOTAL				16		
STAGE 3						
2762+00EB	STH 29 (EB) RT	1	9	9		SEE TRAFFIC CONTROL - STAGE 3
2770+25EB	STH 29 (EB) RT	1	9	9		SEE TRAFFIC CONTROL - STAGE 3
STAGE 3 SUB-TOTAL				18		
STAGE 4						
2762+00EB	STH 29 (EB) RT	1	13	13		SEE TRAFFIC CONTROL - STAGE 4
2770+25EB	STH 29 (EB) RT	1	13	13		SEE TRAFFIC CONTROL - STAGE 4
STAGE 4 SUB-TOTAL				26		
STAGE 5						
2779+95EB	STH 29 (EB) RT & LT	1	5	5		SEE NOTE BELOW
STAGE 5 SUB-TOTAL				5		
GRAND TOTAL				85		

NOTE: STAGE 5 MILL IN THE RUMBLE STRIPS ON MEDIAN SHOULDER, UTILIZE SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEED GREATER THAN 40 M.P.H.

TRAFFIC CONTROL SIGNS PCMS

STATION	LOCATION	DESCRIPTION		643.1050 DAY
		PHASE 1	PHASE 2	
PRIOR TO STAGE 1				
2792+00EB	STH 29 (EB)	ROADWORK BEGINS XX/XX	EXPECT DELAYS	7
TOTAL				7

TRAFFIC CONTROL SIGNS

LOCATION	MESSAGE	SIGN CODE	NO	DAYS	643.0900 DAY	REMARKS
STAGE 1						
STH 29 (EB) PASSING LANE	ROAD WORK 1 MILE	W20-1F	2	10	20	SEE TC - STAGE 1
	LEFT LANE CLOSED 1/2 MILE	W20-55G	2	10	20	SEE TC - STAGE 1
	SPEED REDUCTION	W3-5	2	10	20	SEE TC - STAGE 1
	SPEED LIMIT 55	R2-1	2	10	20	SEE TC - STAGE 1
	LEFT LANE ENDS SYMBOL	W4-2L	2	10	20	SEE TC - STAGE 1
	ROAD CURVES AHEAD	W1-4R	2	10	20	SEE TC - STAGE 1
	END ROAD WORK	G20-2A	2	10	20	SEE TC - STAGE 1

SIDEROADS	ROAD WORK AHEAD	W20-1A	2	10	20	SEE TC - STAGE 1
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STAGE 1 SUB-TOTAL 160

LOCATION	MESSAGE	SIGN CODE	NO	DAYS	643.0900 DAY	REMARKS
STAGE 2						
STH 29 (EB) DRIVING LANE	ROAD WORK 1 MILE	W20-1F	2	8	16	SEE TC - STAGE 2
	RIGHT LANE CLOSED 1/2 MILE	W20-5G	2	8	16	SEE TC - STAGE 2
	SPEED REDUCTION	W3-5	2	8	16	SEE TC - STAGE 2
	SPEED LIMIT 55	R2-1	2	8	16	SEE TC - STAGE 2
	RIGHT LANE ENDS SYMBOL	W4-2R	2	8	16	SEE TC - STAGE 2
	ROAD CURVES AHEAD	W1-4L	2	8	16	SEE TC - STAGE 2
	END ROAD WORK	G20-2A	2	8	16	SEE TC - STAGE 2

SIDEROADS	ROAD WORK AHEAD	W20-1A	2	8	16	SEE TC - STAGE 2
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STAGE 2 SUB-TOTAL 128

LOCATION	MESSAGE	SIGN CODE	NO	DAYS	643.0900 DAY	REMARKS
STAGE 3						
STH 29 (EB) PASSING LANE	ROAD WORK 1 MILE	W20-1F	2	9	18	SEE TC - STAGE 3
	LEFT LANE CLOSED 1/2 MILE	W20-55G	2	9	18	SEE TC - STAGE 3
	SPEED REDUCTION	W3-5	2	9	18	SEE TC - STAGE 3
	SPEED LIMIT 55	R2-1	2	9	18	SEE TC - STAGE 3
	LEFT LANE ENDS SYMBOL	W4-2L	2	9	18	SEE TC - STAGE 3
	LANE CLOSED	R11-2L	6	9	54	SEE TC - STAGE 3
	END ROAD WORK	G20-2A	2	9	18	SEE TC - STAGE 3

SIDEROADS	ROAD WORK AHEAD	W20-1A	3	9	27	SEE TC - STAGE 3
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STAGE 3 SUB-TOTAL 189

LOCATION	MESSAGE	SIGN CODE	NO	DAYS	643.0900 DAY	REMARKS
STAGE 4						
STH 29 (EB) DRIVING LANE	ROAD WORK 1 MILE	W20-1F	2	13	26	SEE TC - STAGE 4
	RIGHT LANE CLOSED 1/2 MILE	W20-5G	2	13	26	SEE TC - STAGE 4
	SPEED REDUCTION	W3-5	2	13	26	SEE TC - STAGE 4
	SPEED LIMIT 55	R2-1	2	13	26	SEE TC - STAGE 4
	RIGHT LANE ENDS SYMBOL	W4-2R	2	13	26	SEE TC - STAGE 4
	LANE CLOSED	R11-2L	6	13	78	SEE TC - STAGE 4
	END ROAD WORK	G20-2A	2	13	26	SEE TC - STAGE 4

SIDEROADS	ROAD WORK AHEAD	W20-1A	3	13	39	SEE TC - STAGE 4
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STAGE 4 SUB-TOTAL 273

LOCATION	MESSAGE	SIGN CODE	NO	DAYS	643.0900 DAY	REMARKS
STAGE 5						
STH 29 (EB) LT & RT SHLD	ROAD WORK AHEAD	W20-1F	2	5	10	SEE NOTE BELOW
	SPEED REDUCTION	W3-5	2	5	10	SEE NOTE BELOW
	LT/RT SHOULDER CLOSED AHEAD	W21-5B	2	5	10	SEE NOTE BELOW
	SPEED LIMIT 55	R2-1	2	5	10	SEE NOTE BELOW
	LT/RT SHOULDER CLOSED	W21-5A	2	5	10	SEE NOTE BELOW
	END ROAD WORK	G20-2A	2	5	10	SEE NOTE BELOW

SIDEROADS	ROAD WORK AHEAD	W20-1A	3	5	15	SEE NOTE BELOW
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STAGE 5 SUB-TOTAL 75

GRAND TOTAL 825

NOTE: STAGE 5 MILL IN THE RUMBLE STRIPS ON MEDIAN SHOULDER, UTILIZE SDD TC, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEED GREATER THAN 40 M.P.H.

MARKING LINE

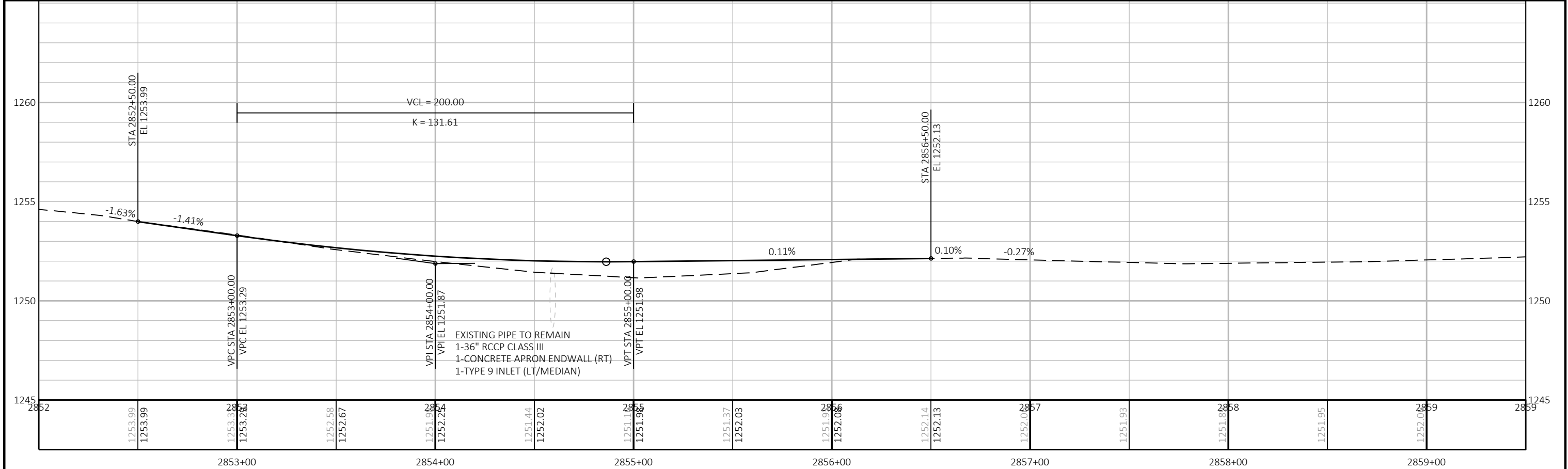
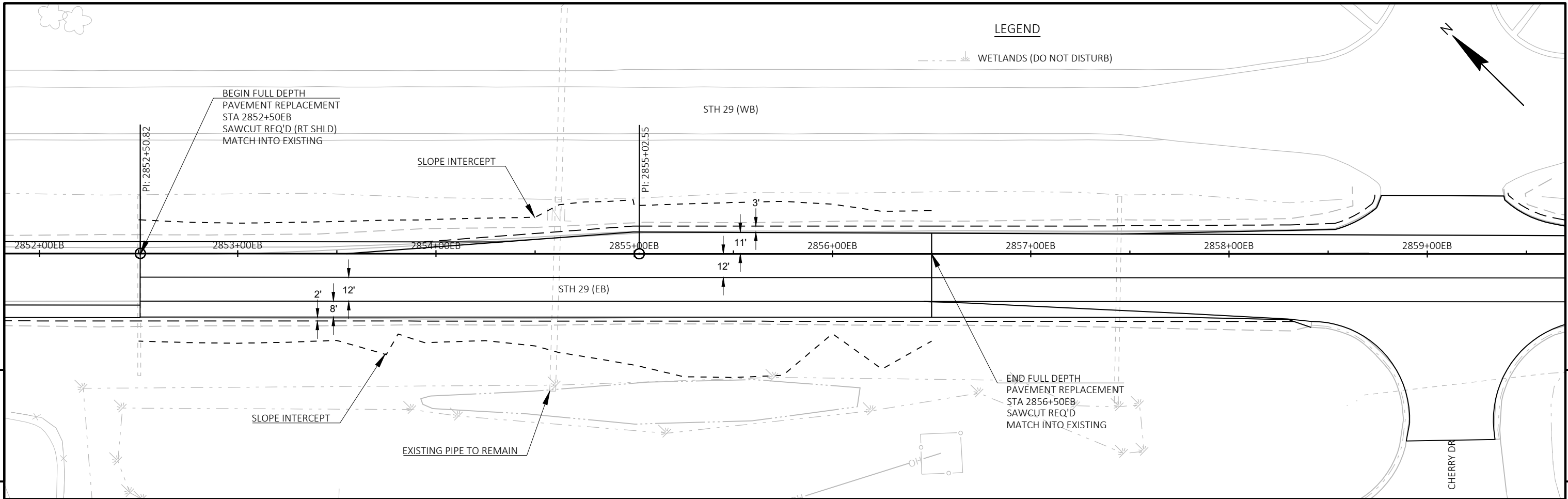
STATION - STATION	LOCATION	GROOVED WET REFLECTIVE EPOXY		646.1555 GROOVED CONTRAST PERMANENT TAPE 4-INCH		646.9000 REMOVAL LINE 4-INCH	649.0150 TEMPORARY REMOVABLE TAPE 4-INCH	REMARKS
		YELLOW 4-INCH LF	WHITE 8-INCH LF	WHITE 8-INCH LF	TAPE 4-INCH LF	LINE 4-INCH LF	TAPE 4-INCH LF	
2766+90EB - 2773+70EB	STH 29 (EB)	---	---	---	175.0	660	1320	C/L - STAGE 3 & 4
2778+70EB - 2859+95EB	STH 29 (EB)	---	---	---	2037.5	---	---	C/L
2830+75EB - 2837+50EB	STH 29 (EB)	---	---	---	---	660	1320	C/L - STAGE 1 & 2
2784+95EB - 2859+95EB	STH 29 (EB)	7454	7360	---	---	---	---	EDGELINE
2855+00EB - 2858+65EB	STH 29 (EB)	---	---	360	---	---	---	TURN LANE
SUB-TOTALS		7454	7360	360	2212.5	1320	2640	
TOTALS		14814.0	360	360	2212.5	1320	2640	

SAWING ASPHALT

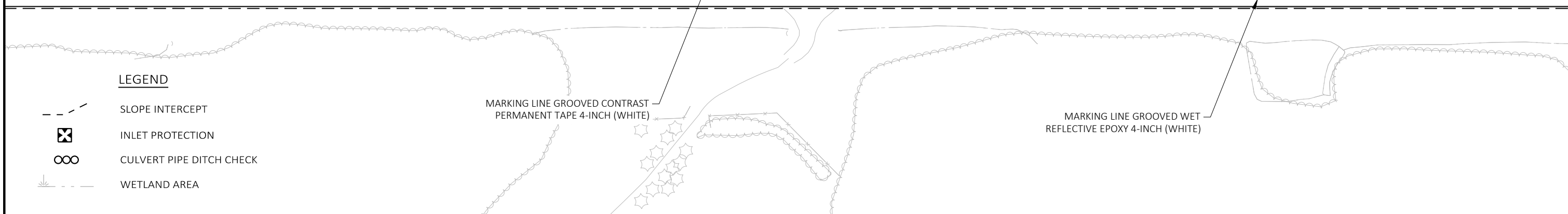
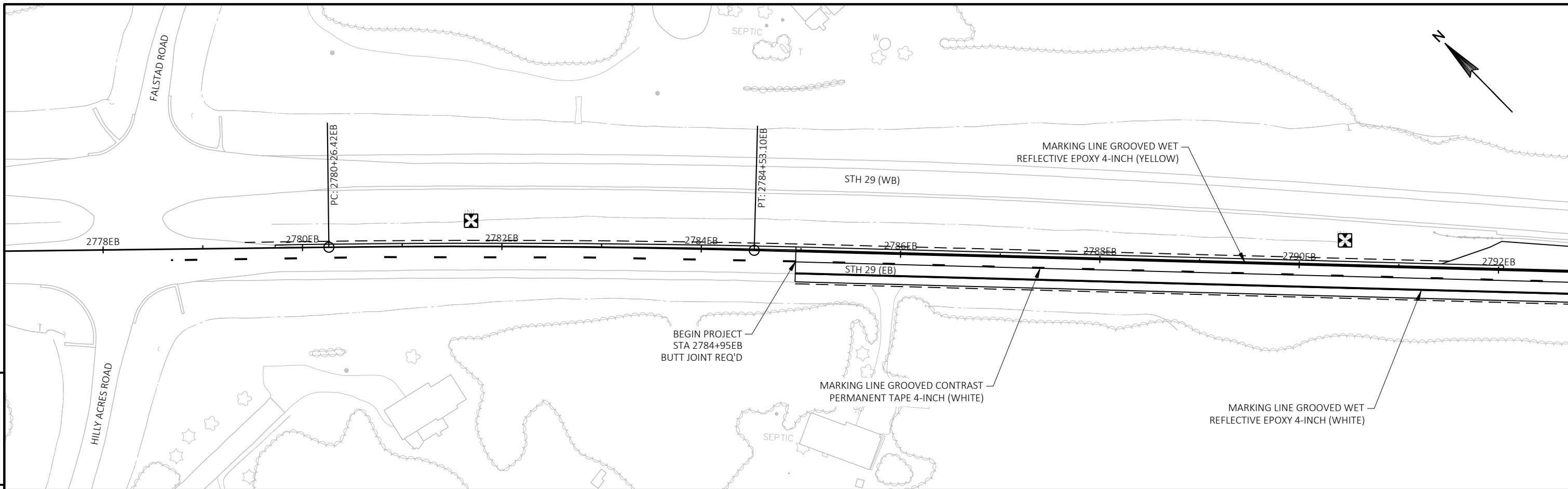
STATION - STATION	LOCATION	690.0150 LF	REMARKS
2779+75EB	STH 29 (EB) LT SHLD	3	
2784+95EB	STH 29 (EB) RT SHLD	6	
2844+85EB	STH 29 (EB) LT SHLD	3	
2852+50EB	STH 29 (EB) RT SHLD	6	
2856+50EB	STH 29 (EB)	43	
2852+50EB - 2856+50EB	STH 29 (EB)	400	
2859+95EB	STH (EB) LT & RT SHLD	17	
TOTAL		478	

CONSTRUCTION STAKING





STATION - STATION	LOCATION	650.5000 BASE LF	650.8000 RESURFACING REFERENCES LF	650.9910 SUPPLEMENTAL CONTROL (6280-00-70) LS
2784+95EB - 2859+95EB	STH 29 (EB)	---	7500	1
2852+50EB - 2856+50EB	STH 29 (EB)	400	---	---
TOTALS		400	7500	1



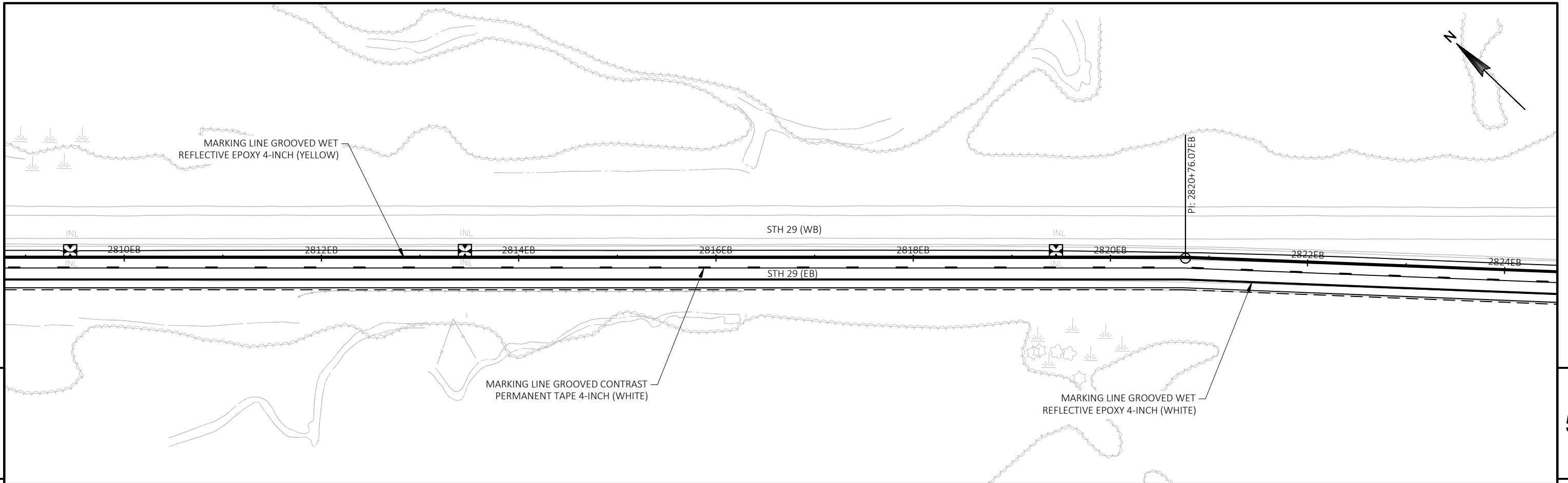
PROJECT NO: 1053-02-82	HWY: STH 29	COUNTY: MARATHON	PLAN AND PROFILE: STH 29 EB	SHEET	E
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LEGEND

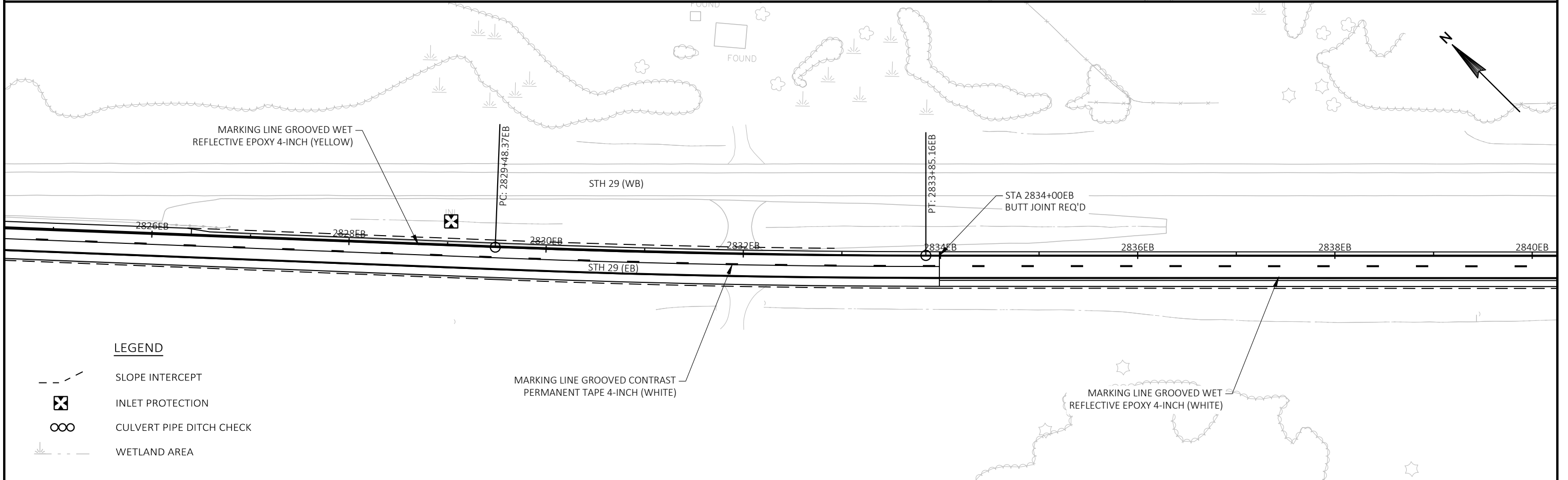
-  SLOPE INTERCEPT
-  INLET PROTECTION
-  CULVERT PIPE DITCH CHECK
-  WETLAND AREA

PROJECT NO: 1053-02-82	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET	E
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5

5



LEGEND

-  SLOPE INTERCEPT
-  INLET PROTECTION
-  CULVERT PIPE DITCH CHECK
-  WETLAND AREA

MARKING LINE GROOVED CONTRAST
PERMANENT TAPE 4-INCH (WHITE)

MARKING LINE GROOVED WET
REFLECTIVE EPOXY 4-INCH (WHITE)

PROJECT NO: 1053-02-82

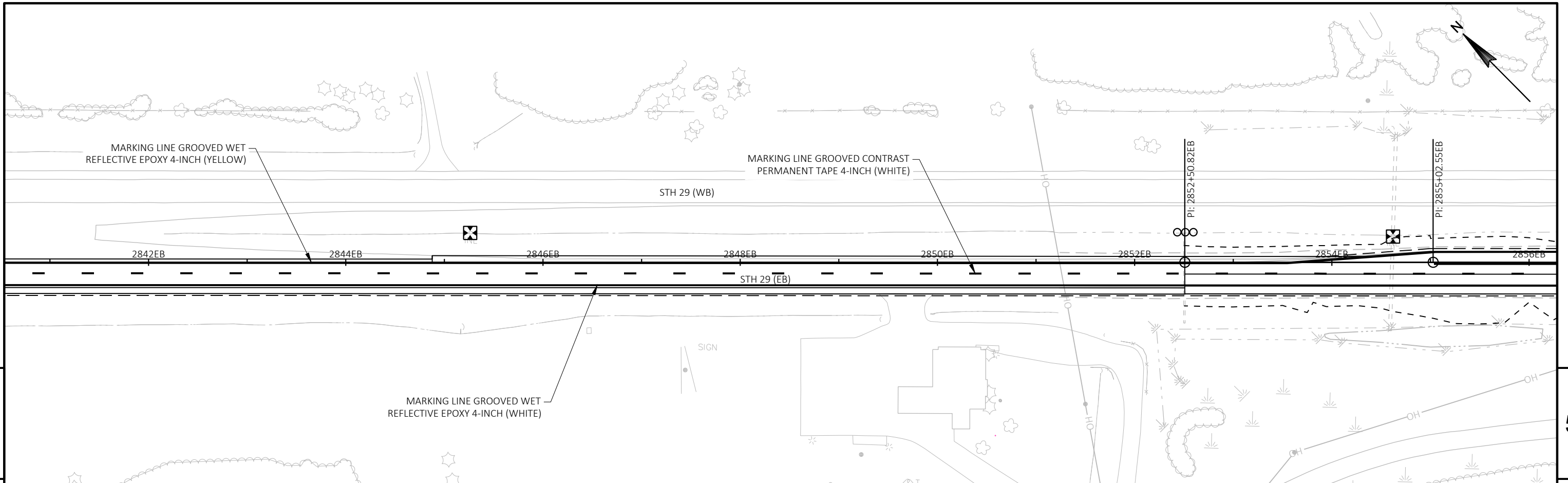
HWY: STH 29

COUNTY: MARATHON

PLAN SHEETS

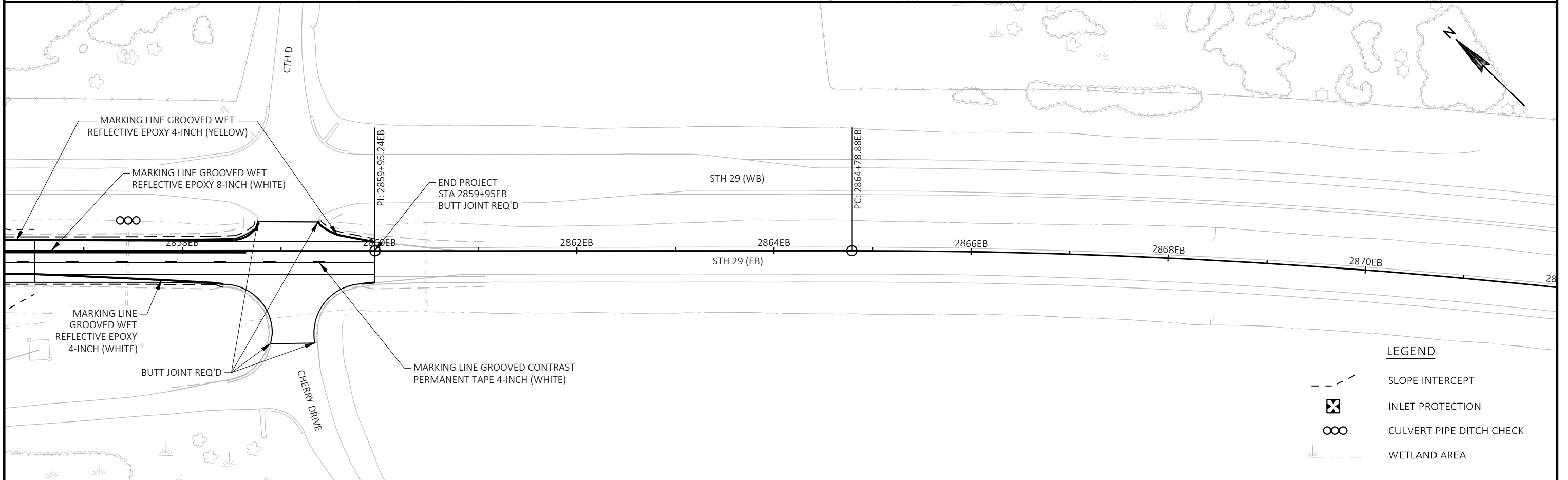
SHEET

E



5

5



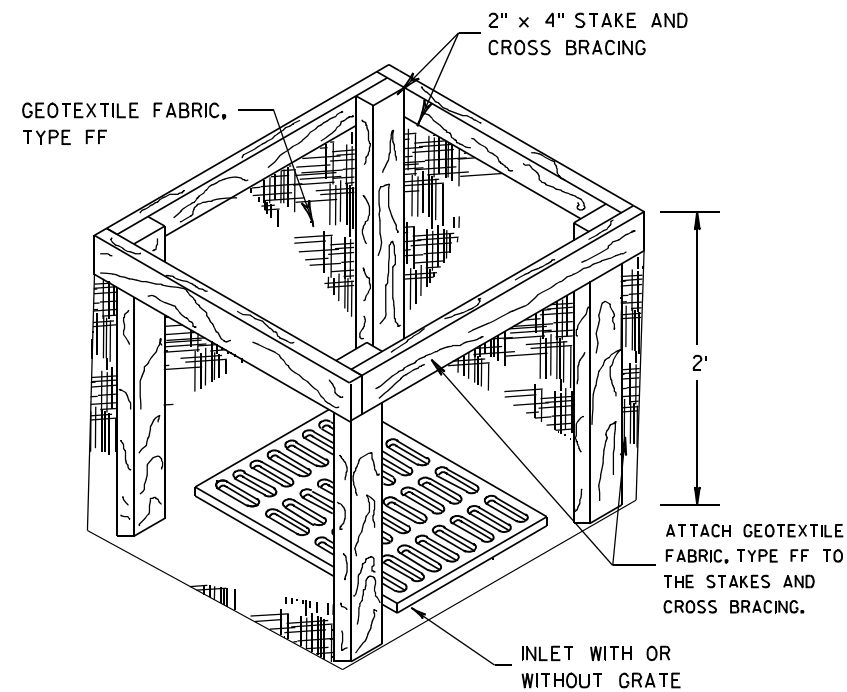
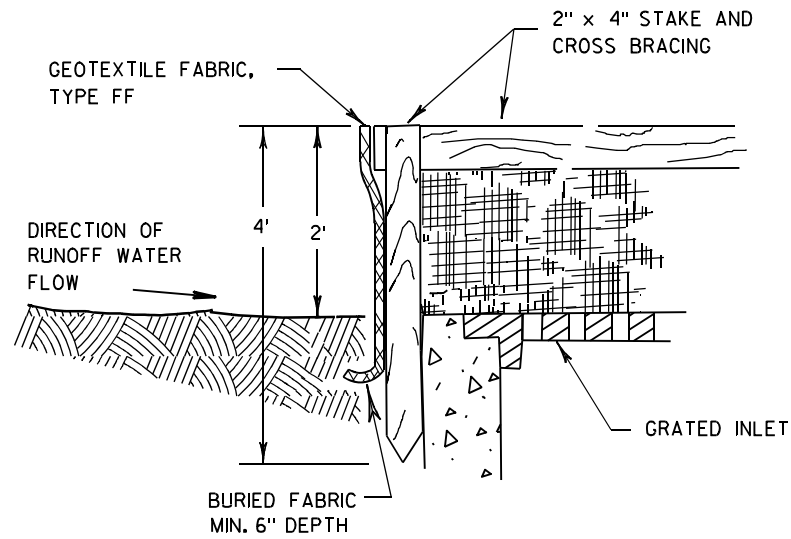
LEGEND

	SLOPE INTERCEPT
	INLET PROTECTION
	CULVERT PIPE DITCH CHECK
	WETLAND AREA

PROJECT NO: 1053-02-82	HWY: STH 29	COUNTY: MARATHON	PLAN SHEETS	SHEET	E
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Standard Detail Drawing List

08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13C19-01	HMA LONGITUDINAL JOINTS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D12-07B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D21-06	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



INLET PROTECTION, TYPE A

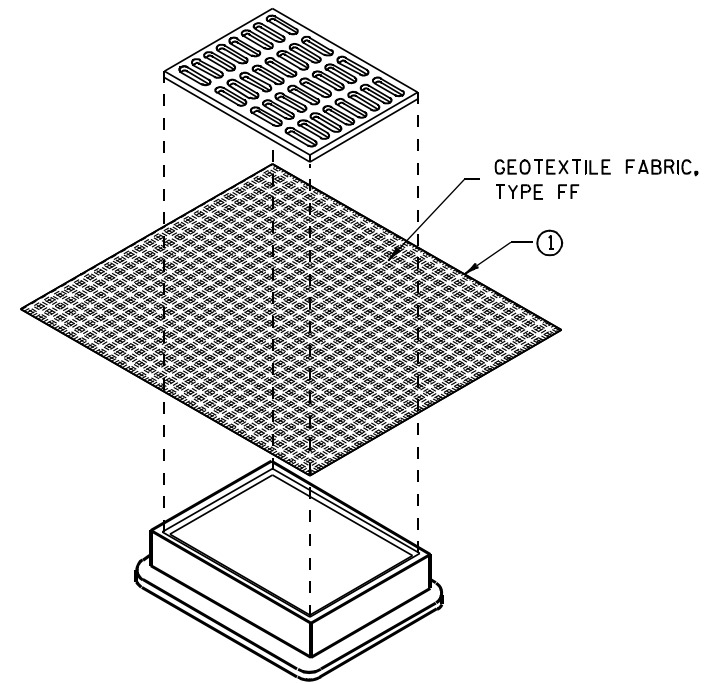
GENERAL NOTES

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.

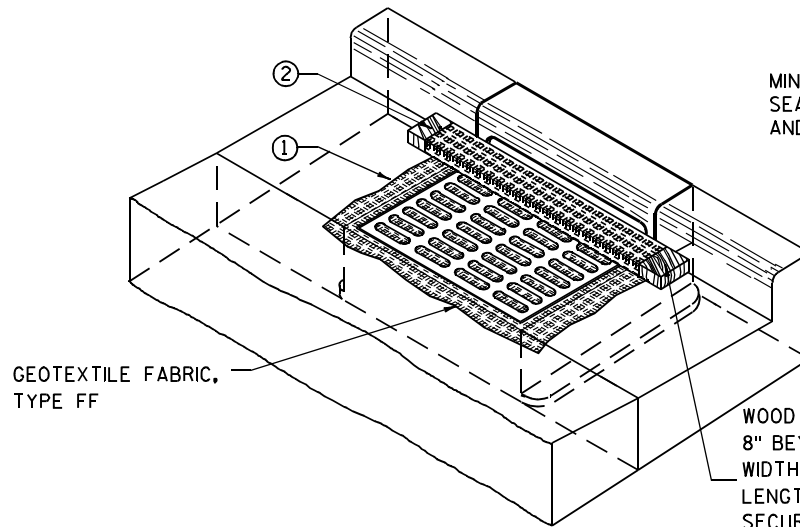
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

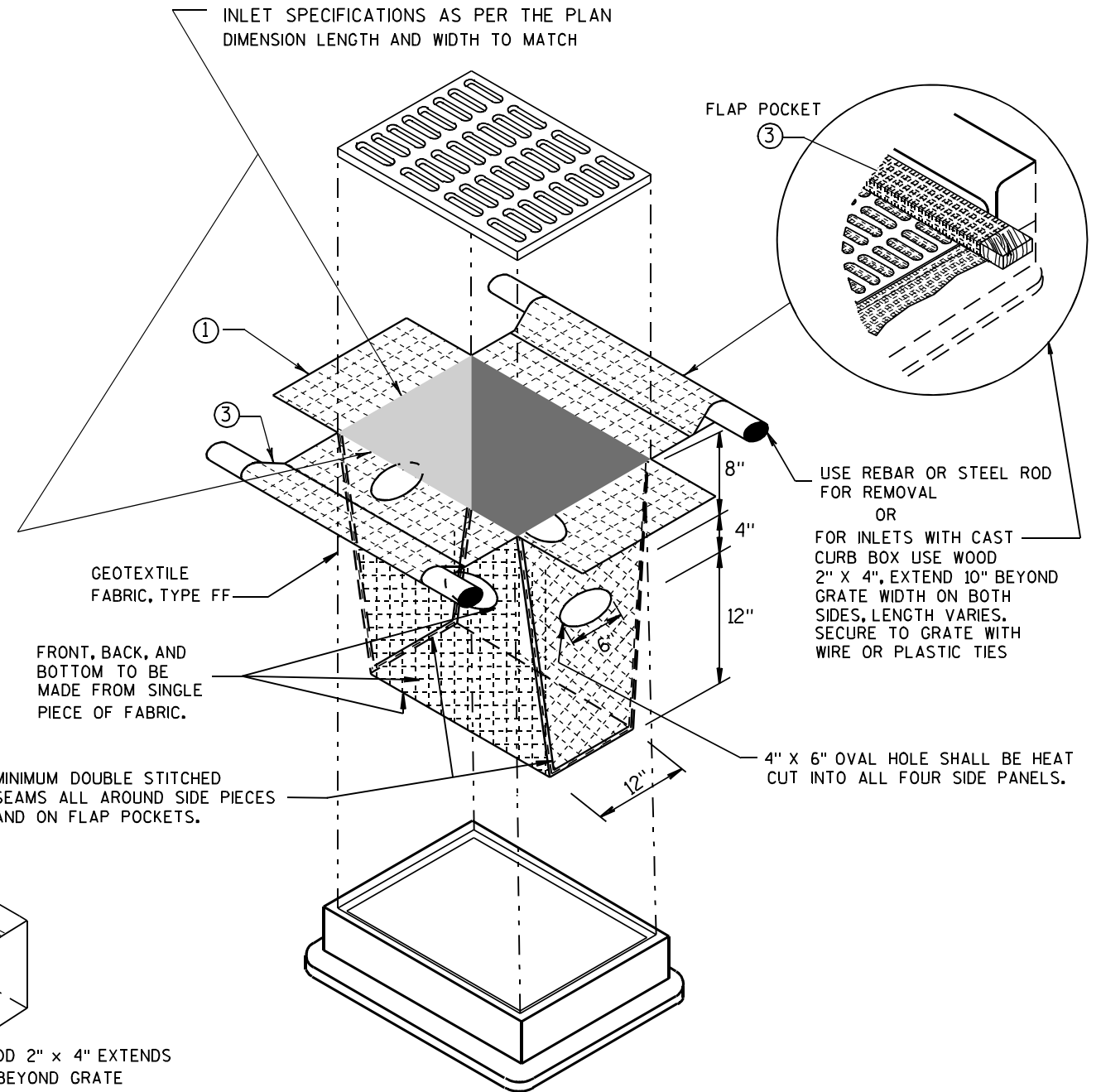
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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.

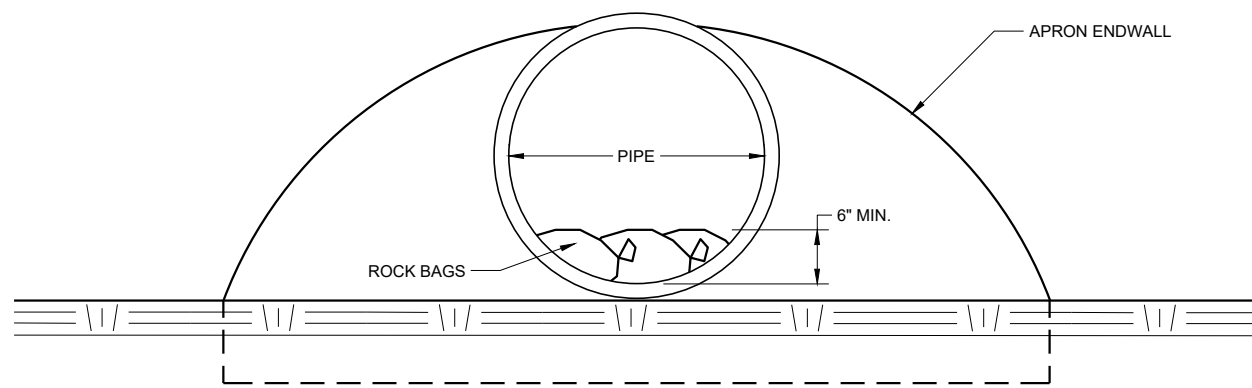
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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



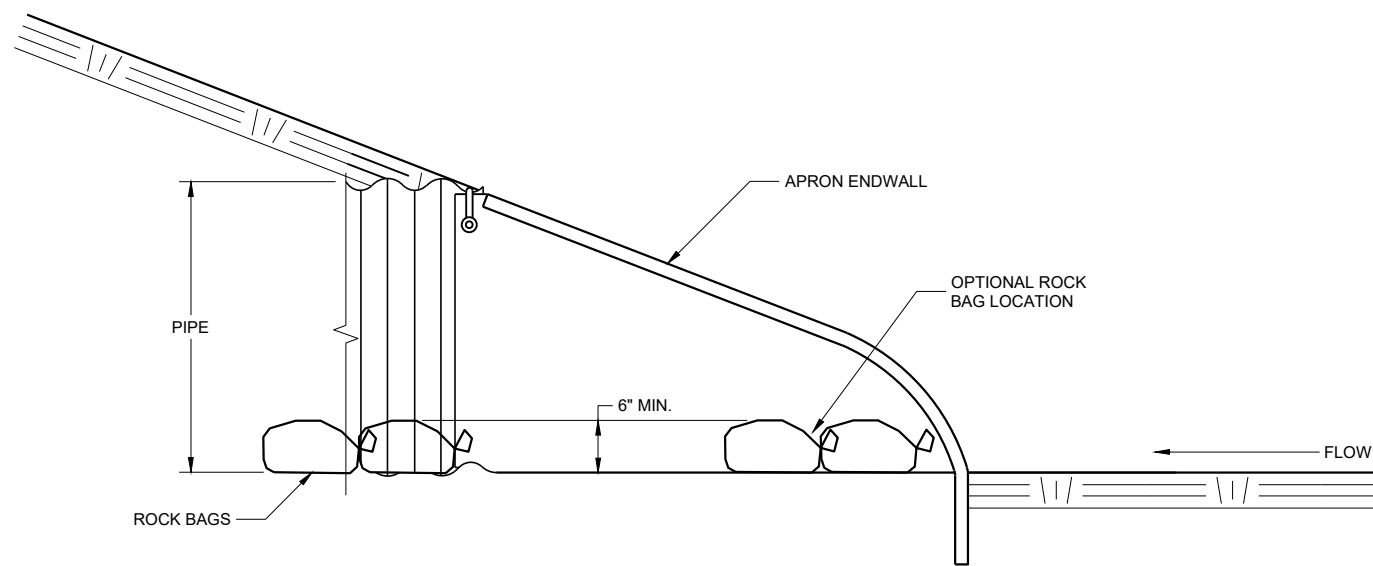
INLET PROTECTION, TYPE D

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

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



END VIEW



SIDE VIEW

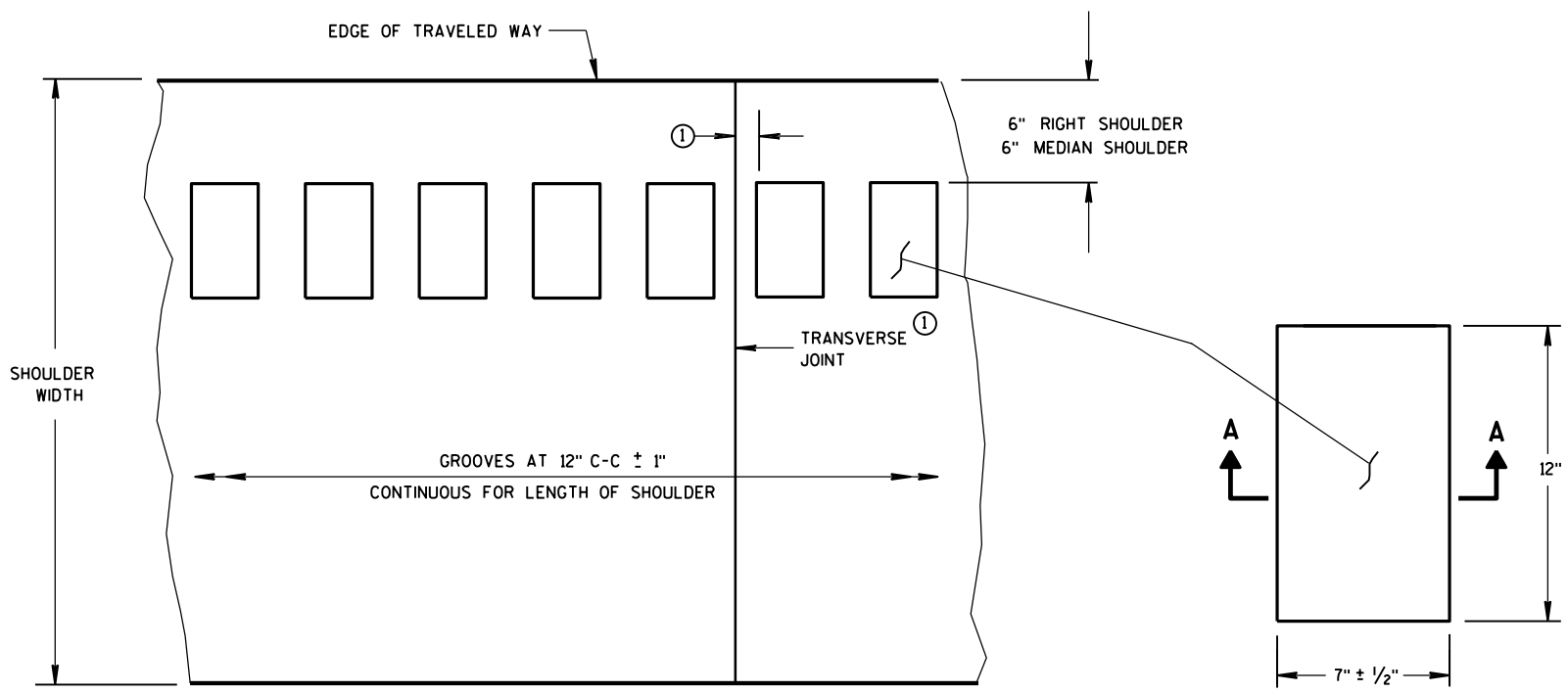
CULVERT PIPE CHECK
 (INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

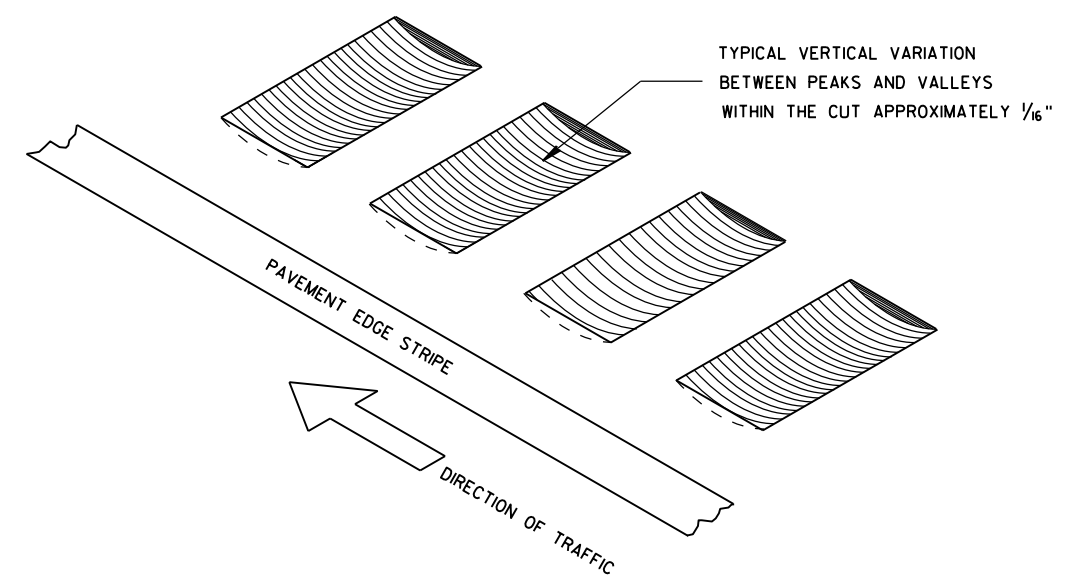
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

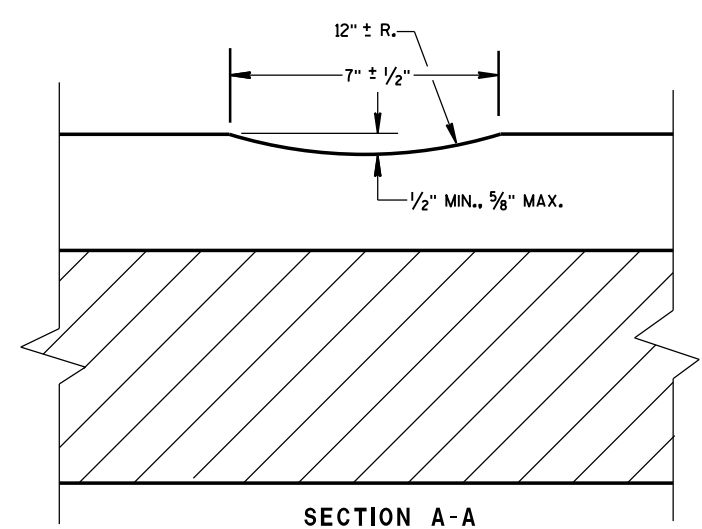
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

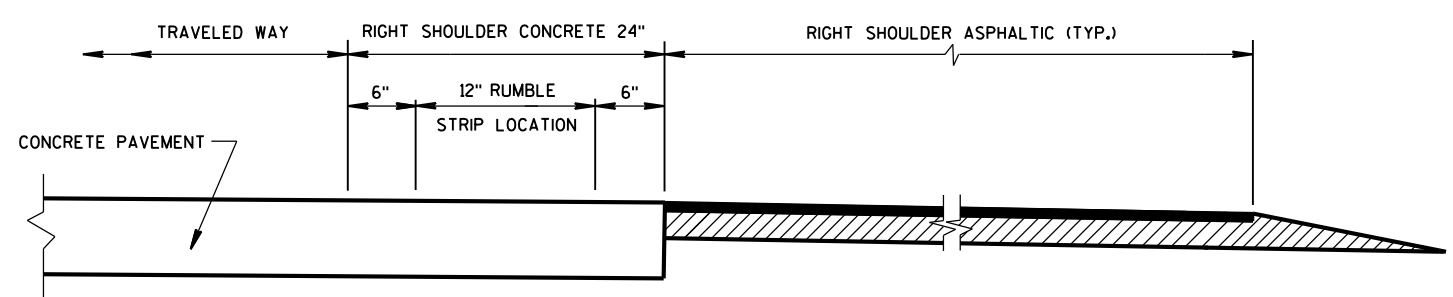
① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



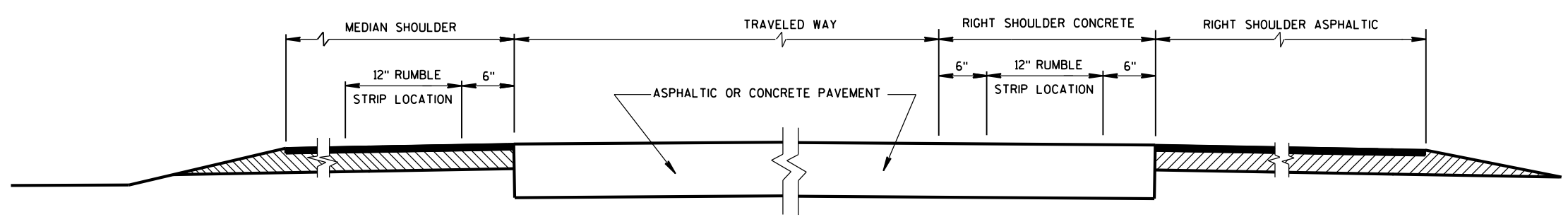
ISOMETRIC



SECTION A-A



SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW
TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS
IN RURAL DIVIDED HIGHWAYS
(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIP,
MILLING

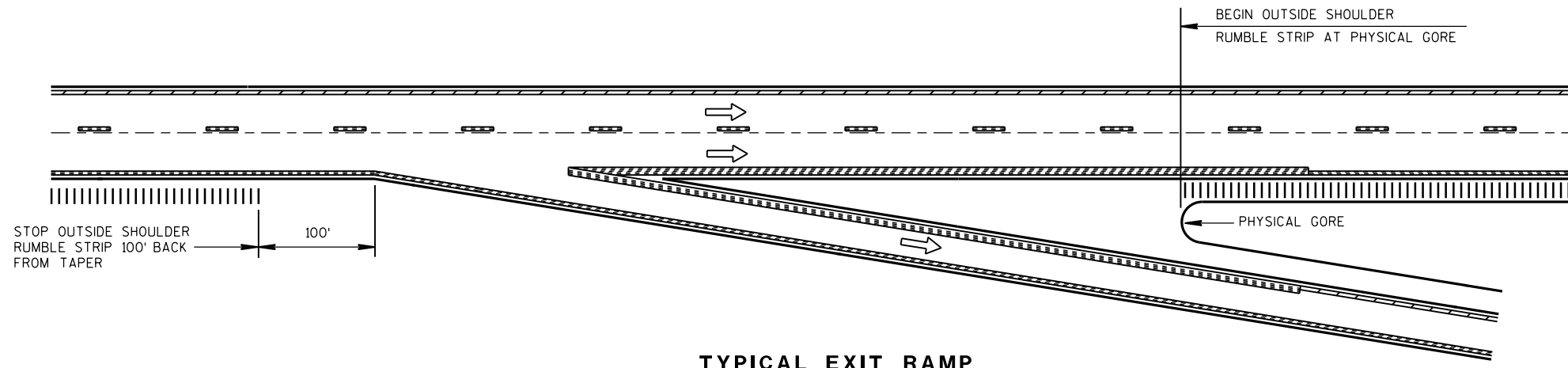
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

S.D.D. 13 A 5-5a

S.D.D. 13 A 5-5a

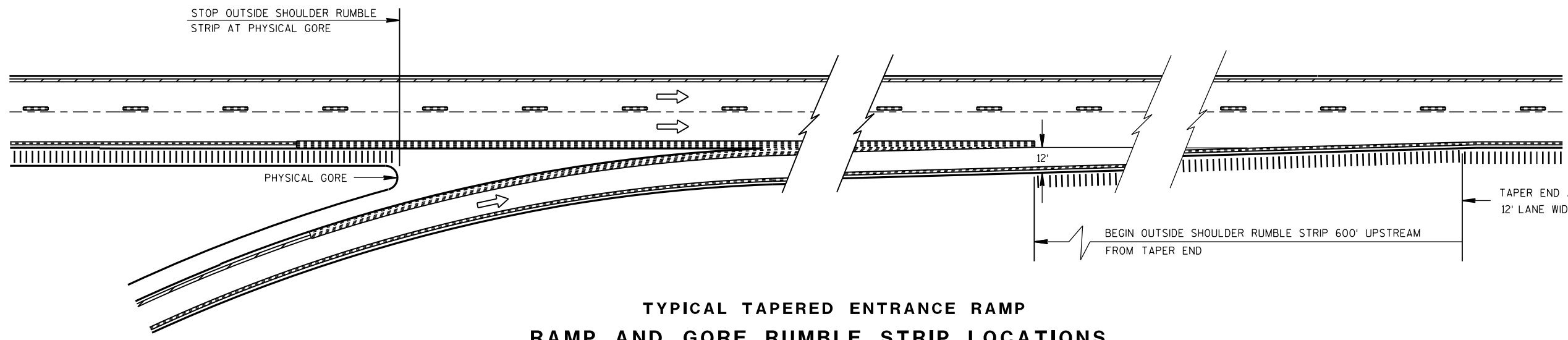


TYPICAL EXIT RAMP

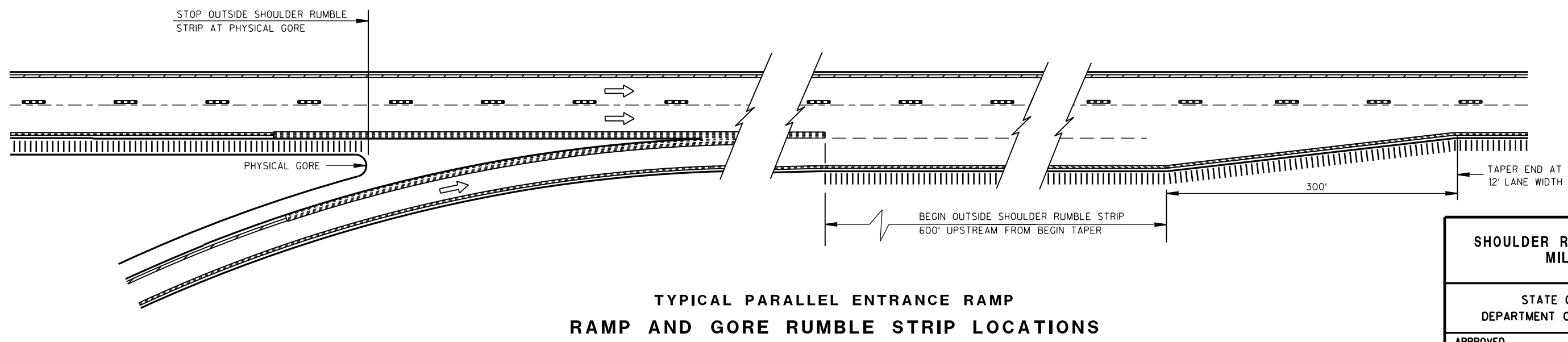
NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMP, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.
 PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
 ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP
 RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP
 RAMP AND GORE RUMBLE STRIP LOCATIONS

6

6

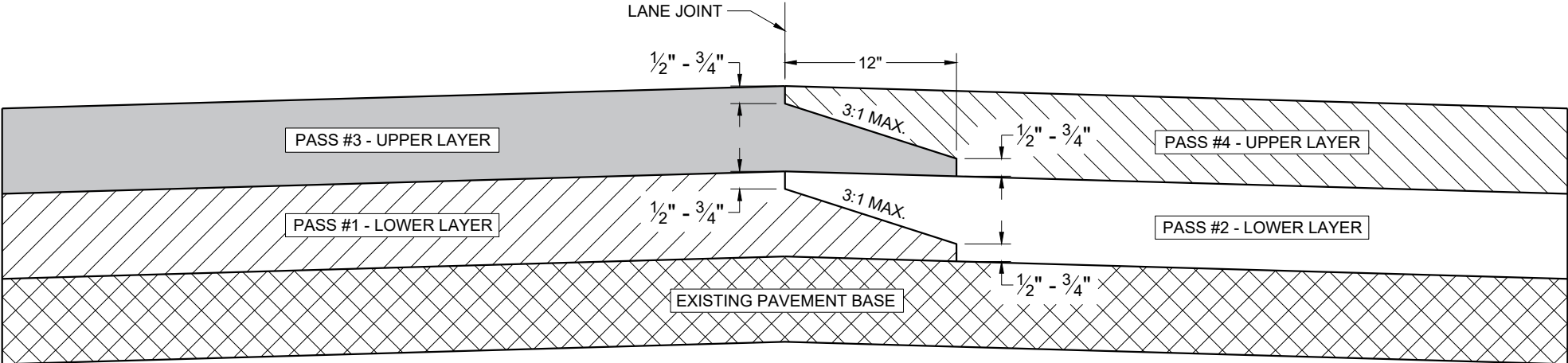
S.D.D. 13 A 5-5b

S.D.D. 13 A 5-5b

SHOULDER RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 12/17/2012	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

GENERAL NOTES

CONFORM TO STANDARD SPECIFICATION 450.3.2.8



**TYPICAL PAVEMENT CROSS SECTION
OF NOTCHED WEDGE LONGITUDINAL JOINTS**

6

6

SDD 13C19 - 01

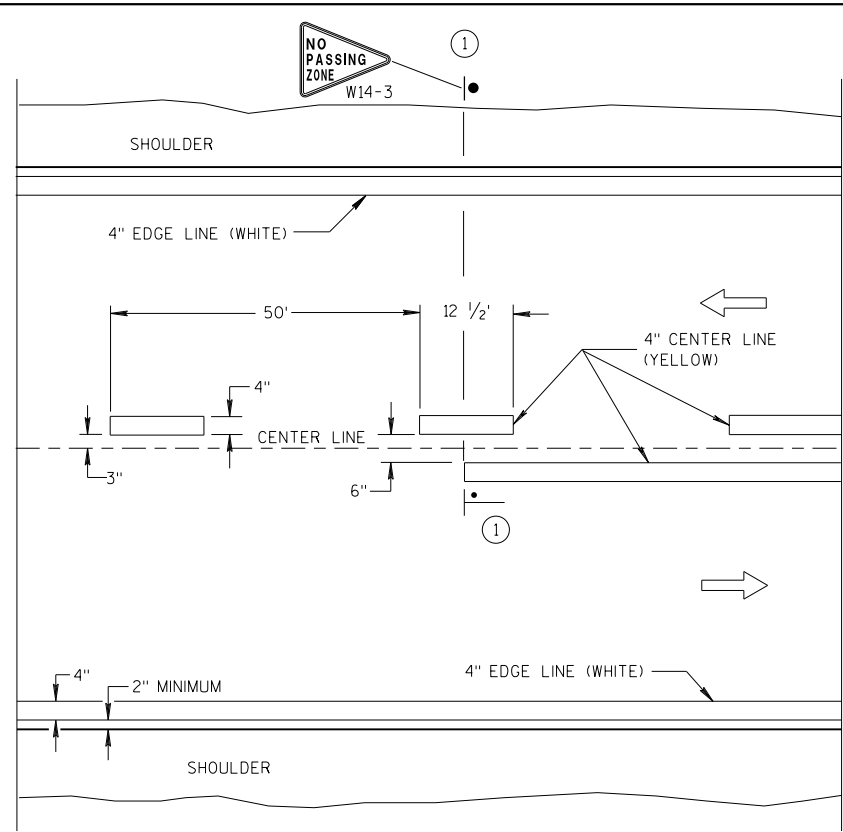
SDD 13C19 - 01

HMA LONGITUDINAL JOINTS

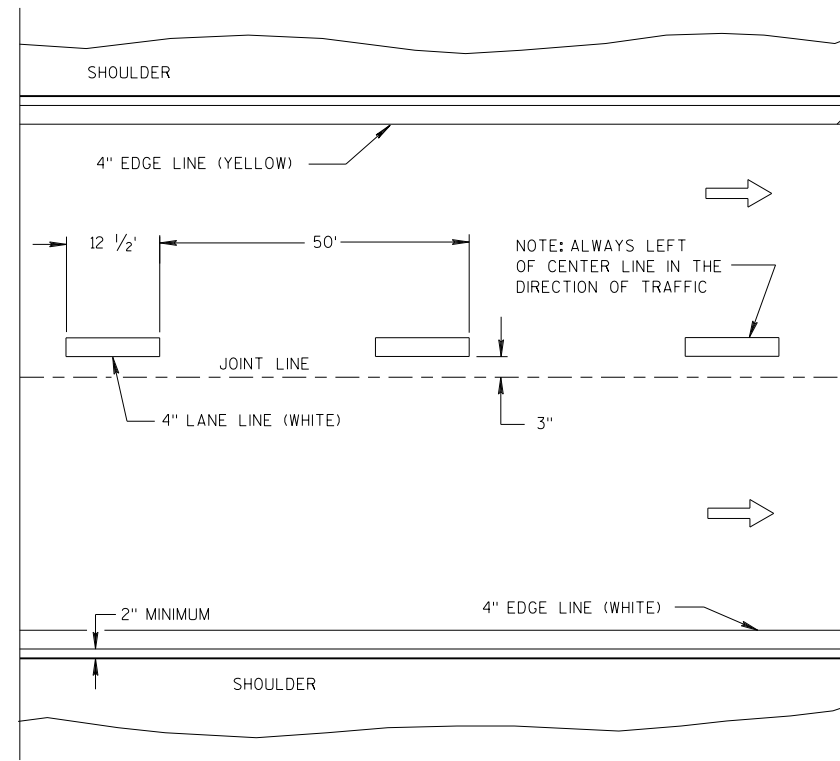
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER

FHWA

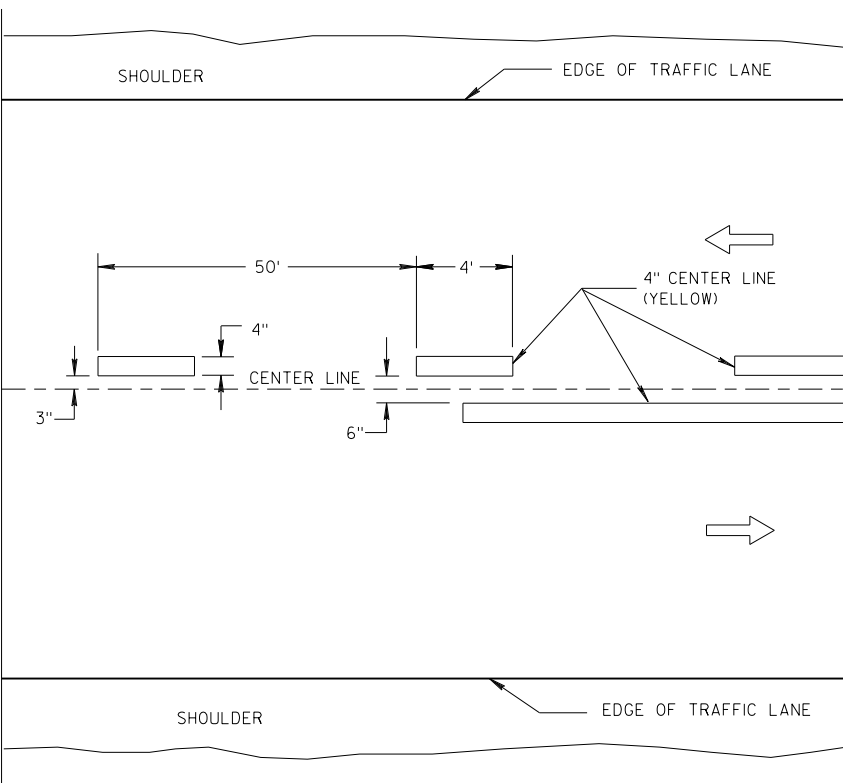


TWO WAY TRAFFIC

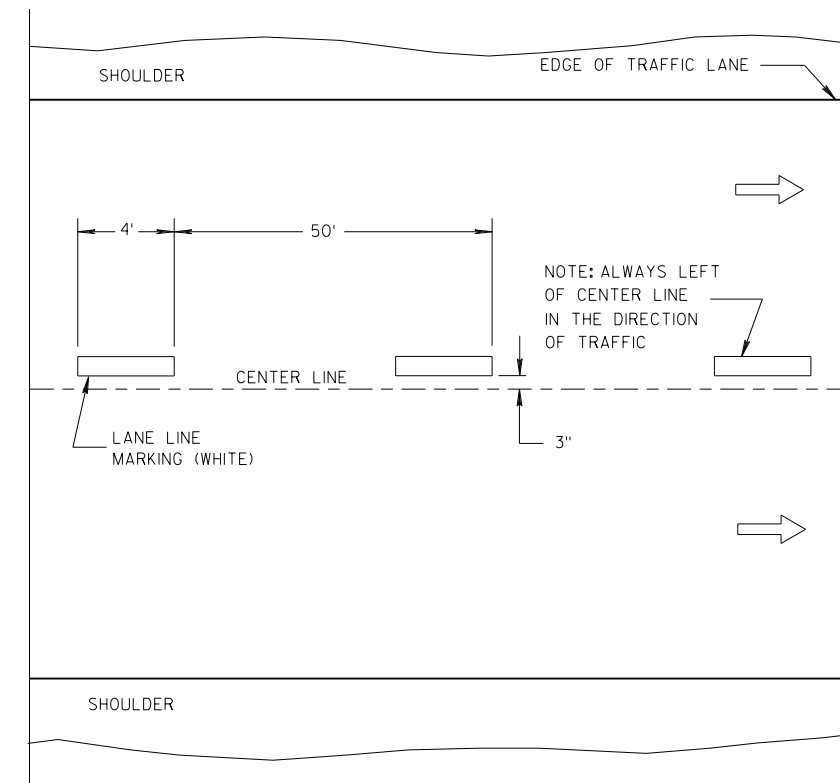


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

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.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

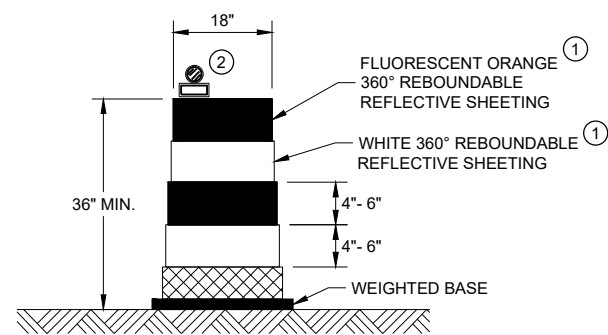
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

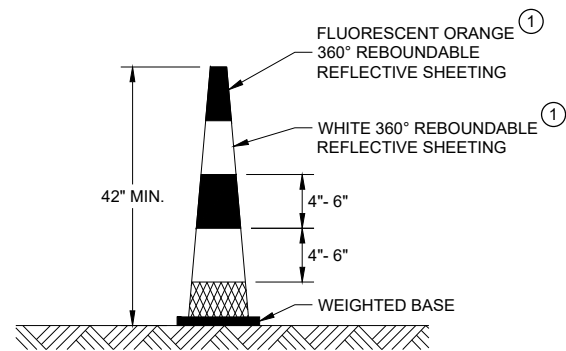
LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

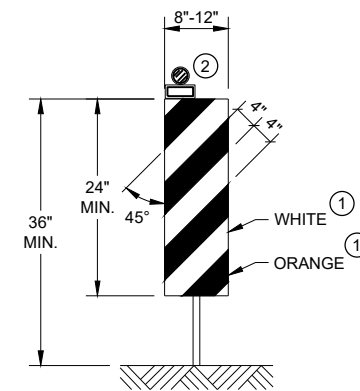


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS

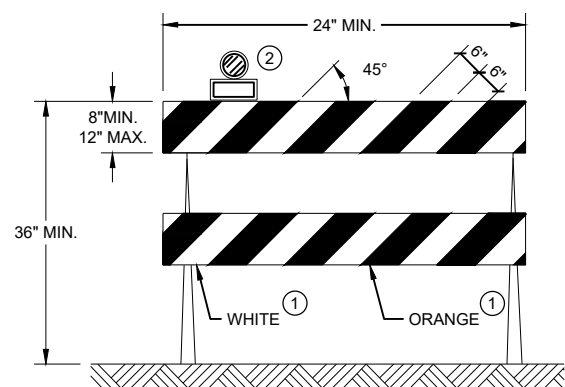


VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.

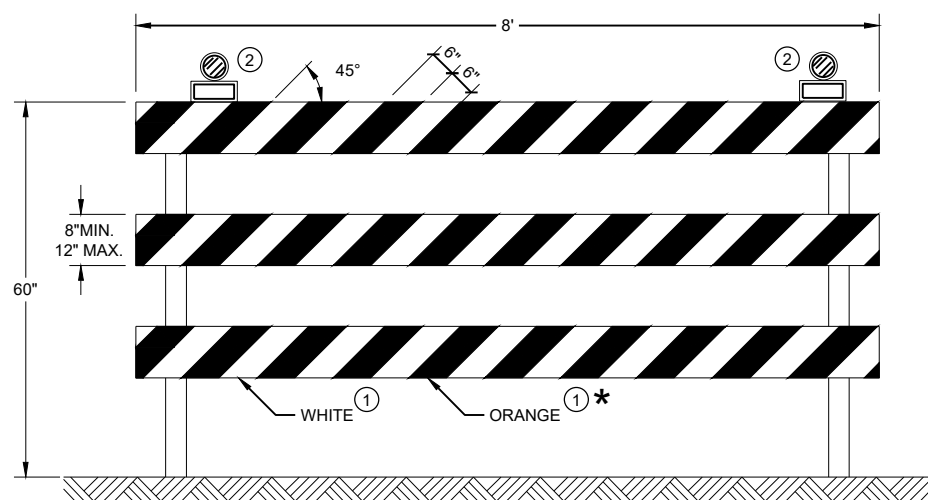
GENERAL NOTES

- 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.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

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.

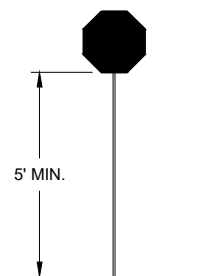
WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

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 SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR 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.



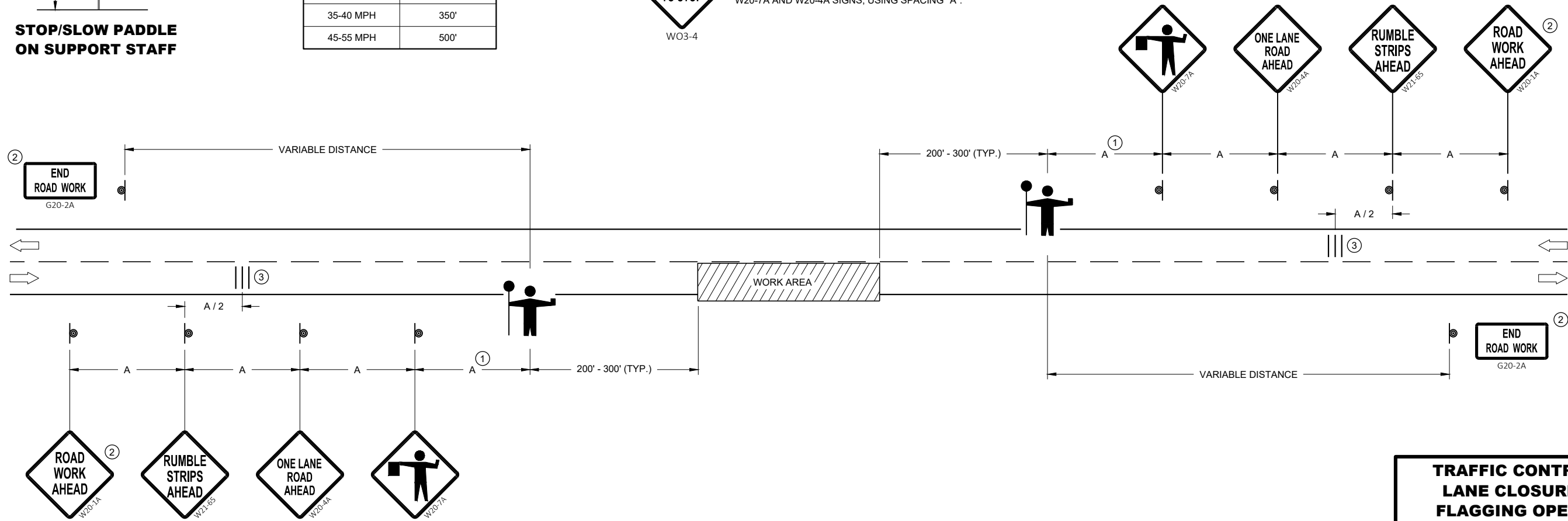
STOP/SLOW PADDLE ON SUPPORT STAFF

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

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2019 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.










WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

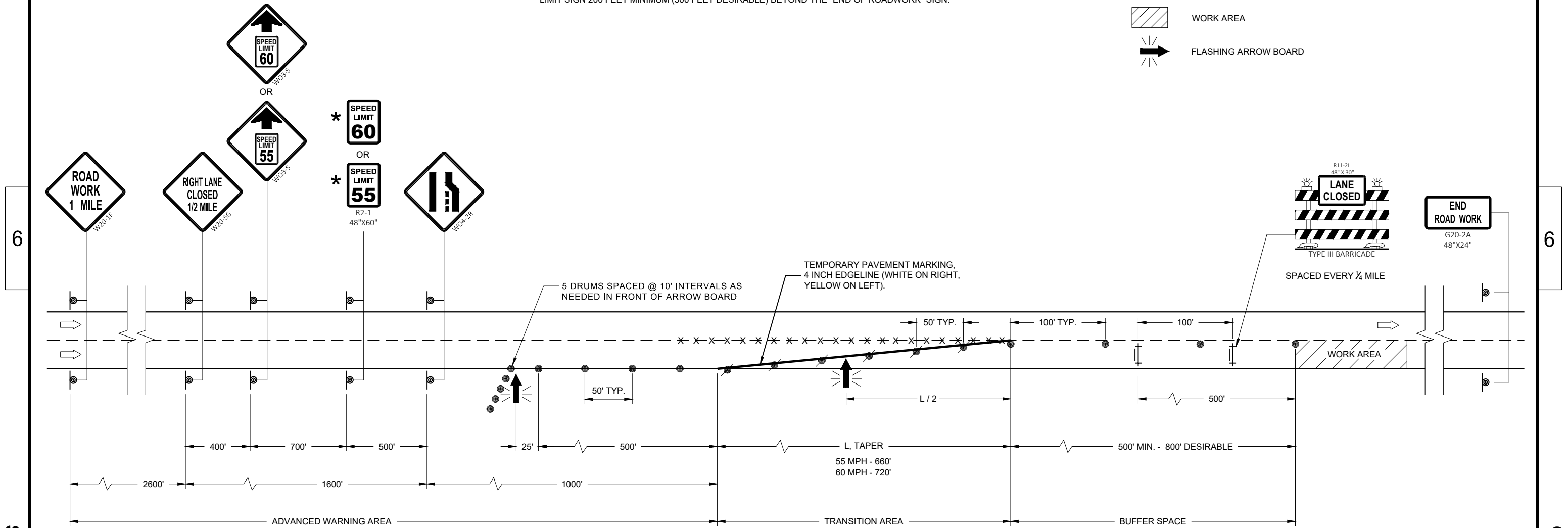
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

LEGEND

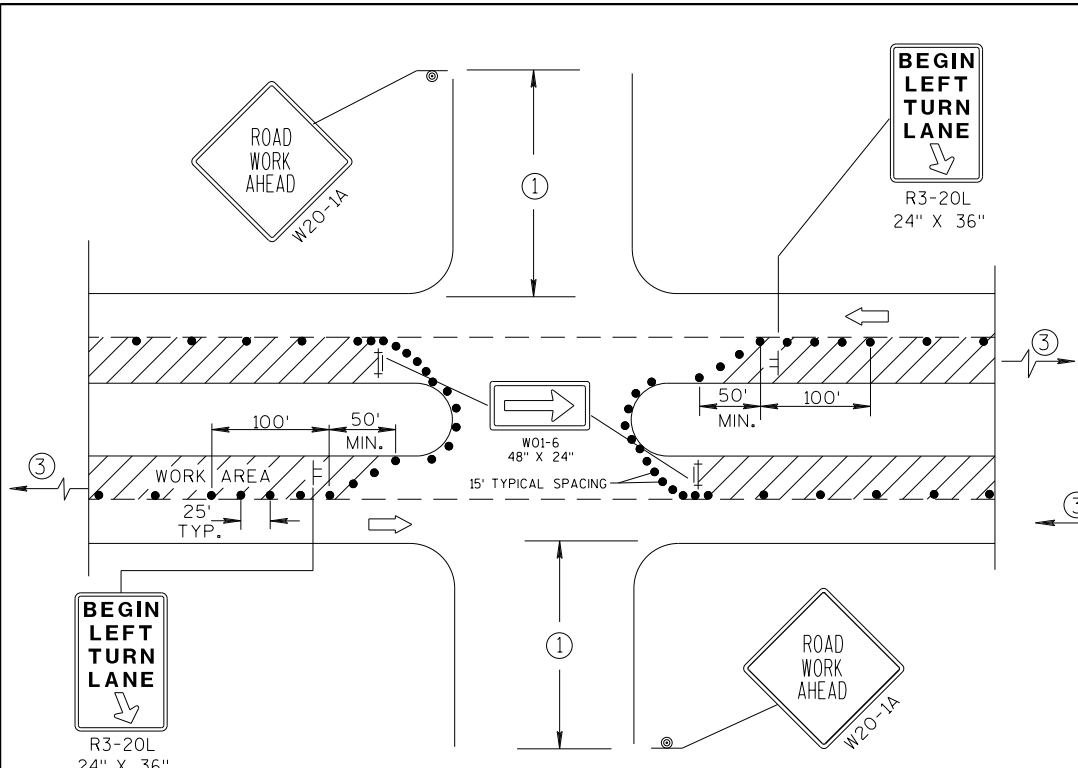
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TRAFFIC CONTROL DRUM
-  TYPE "A" WARNING LIGHT (FLASHING)
-  REMOVING PAVEMENT MARKING
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLASHING ARROW BOARD



SDD 15D12 - 07b

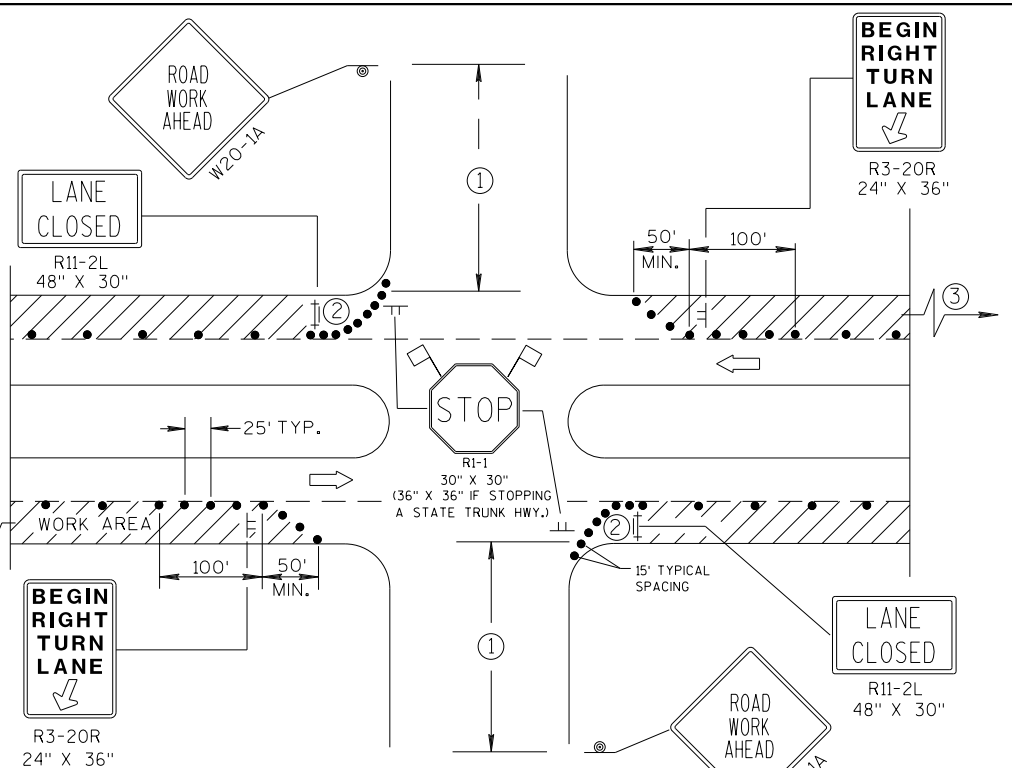
SDD 15D12 - 07b

TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2018 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



DETAIL A
FOR LEFT LANE CLOSURE AT
INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B
FOR RIGHT LANE CLOSURE
AT INTERSECTION

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 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.

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 DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

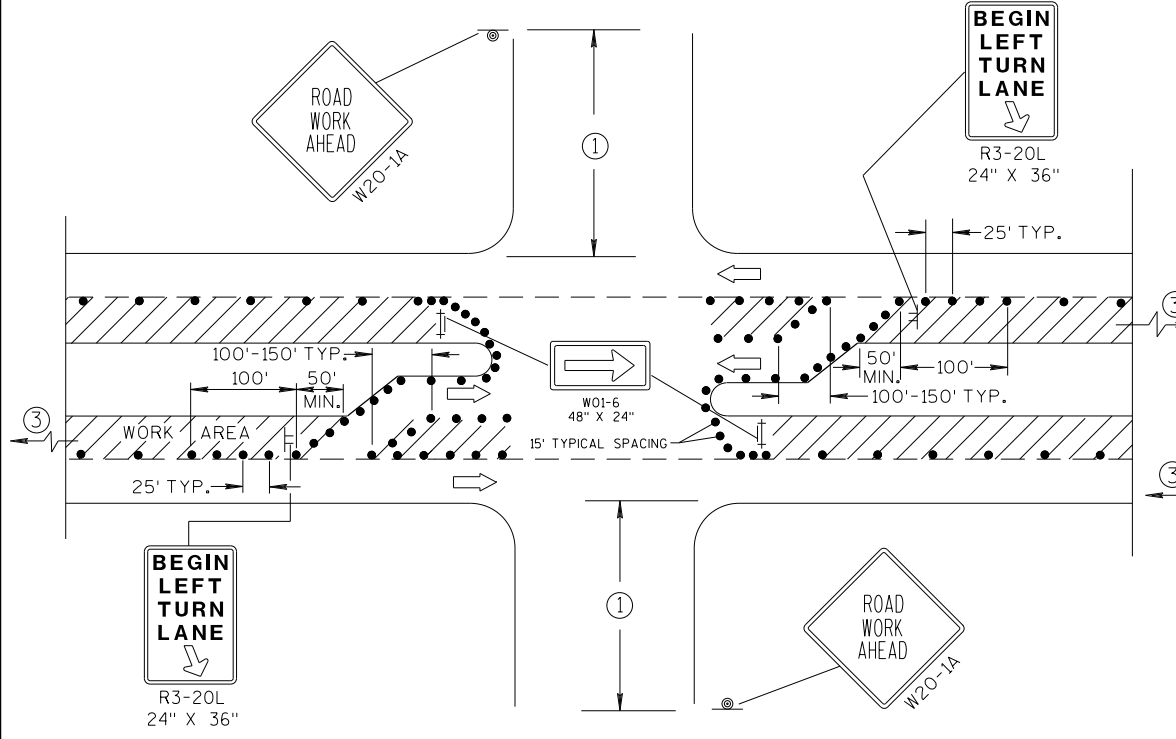
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

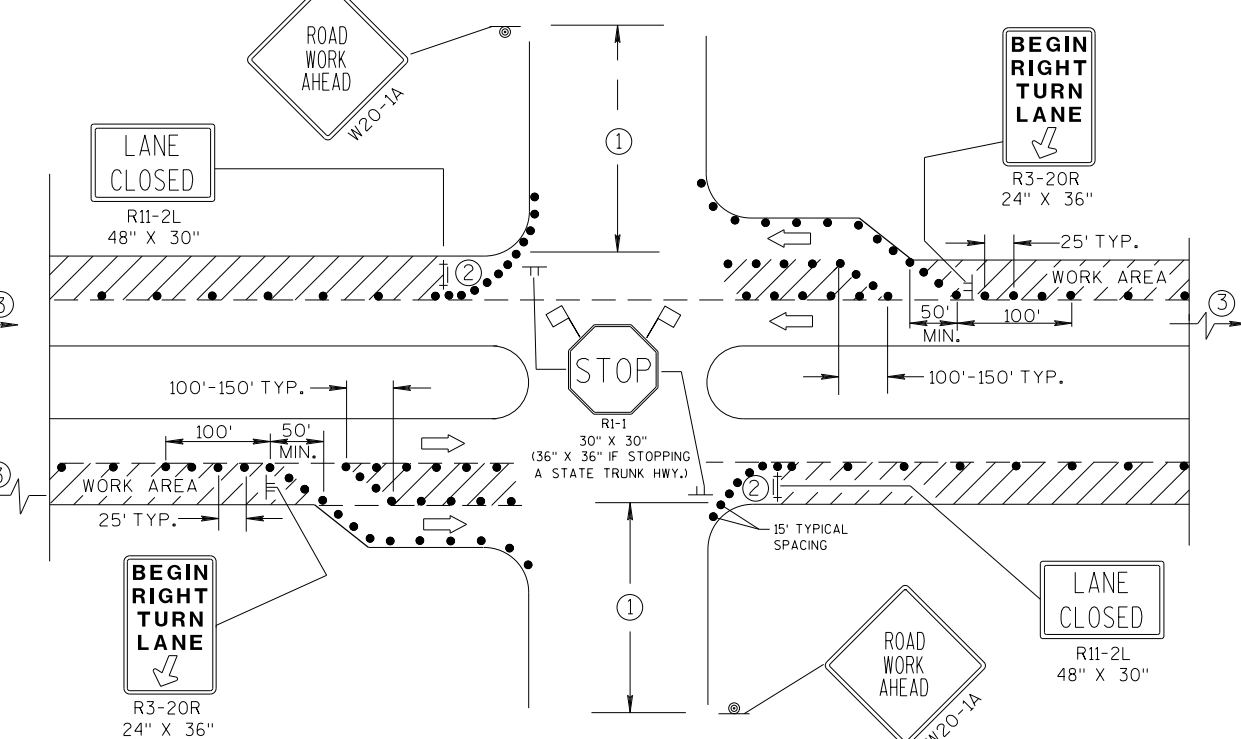
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE 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.

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER. 350' IF 35-40 MPH. 200' IF 25-30 MPH.
- ② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C
FOR LEFT LANE CLOSURE AT INTERSECTION OR
MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D
FOR RIGHT LANE CLOSURE AT INTERSECTION
(WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ⊞ SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- ⊞ TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- ➔ DIRECTION OF TRAFFIC
- 🚩 FLAGS, 16" X 16" MIN., (ORANGE)
- ▨ WORK AREA

TRAFFIC CONTROL,
INTERSECTION WITHIN
SINGLE LANE CLOSURE

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED _____
 DATE 7/2018 /S/ Andrew Heidtke
 FHWA WORK ZONE ENGINEER

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

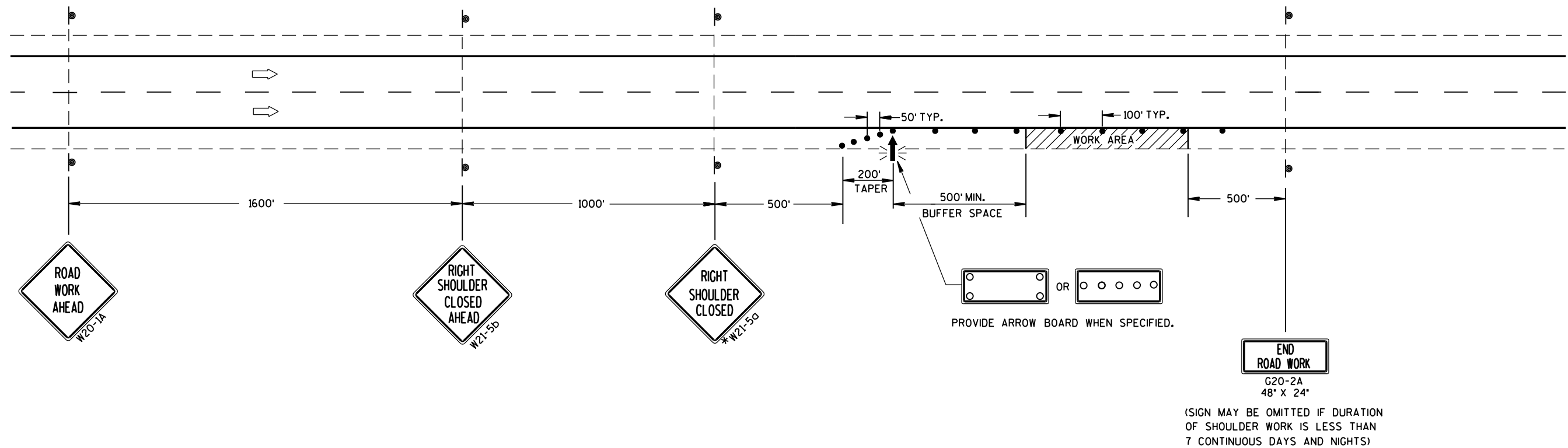
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-50 SIGN MAY BE OMITTED.

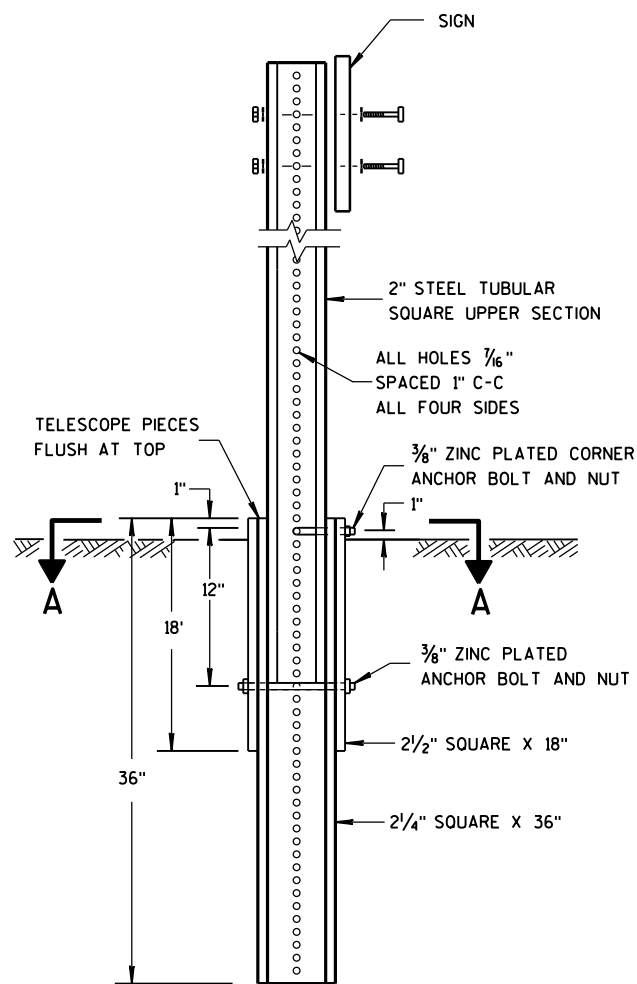
LEGEND

- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA



(SIGN MAY BE OMITTED IF DURATION OF SHOULDER WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS)

TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/s/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



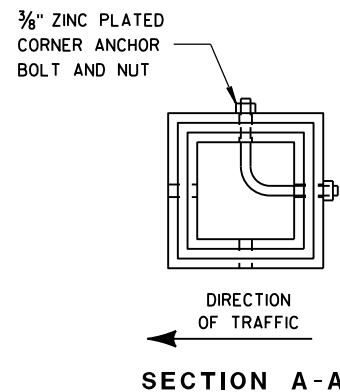
DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

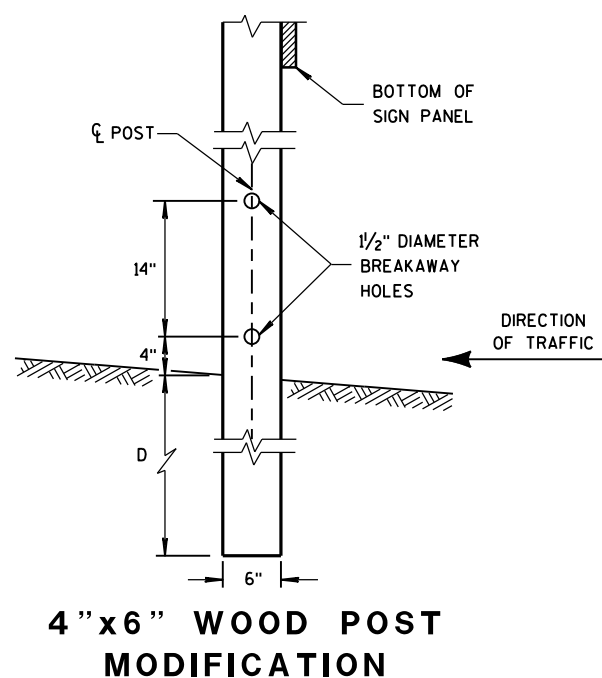
AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

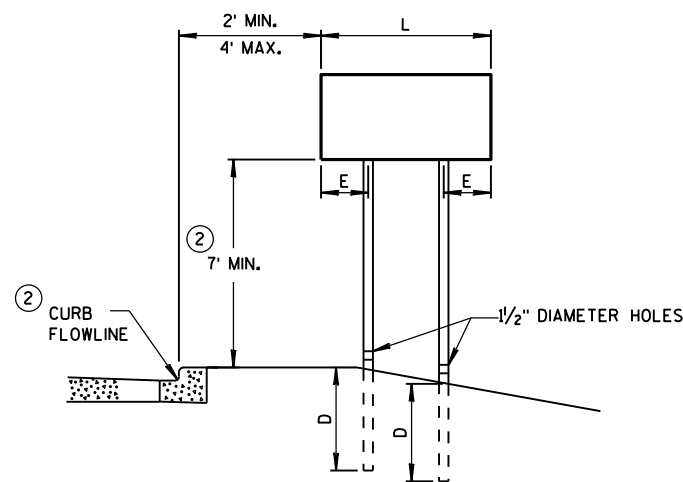
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.



SECTION A-A



4" X 6" WOOD POST MODIFICATION

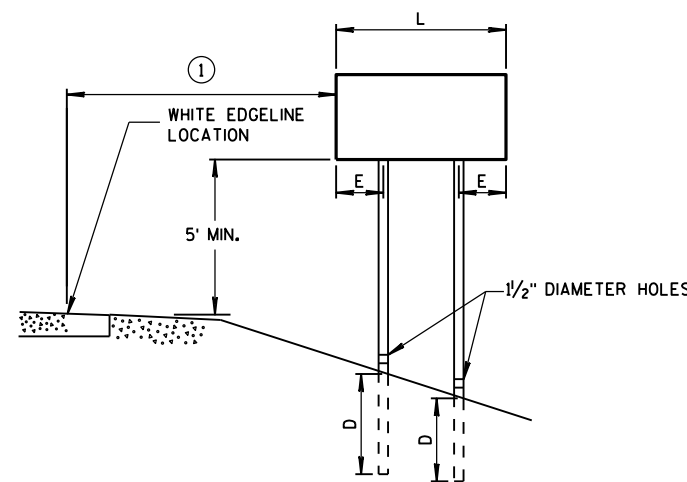


URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



RURAL AREA

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

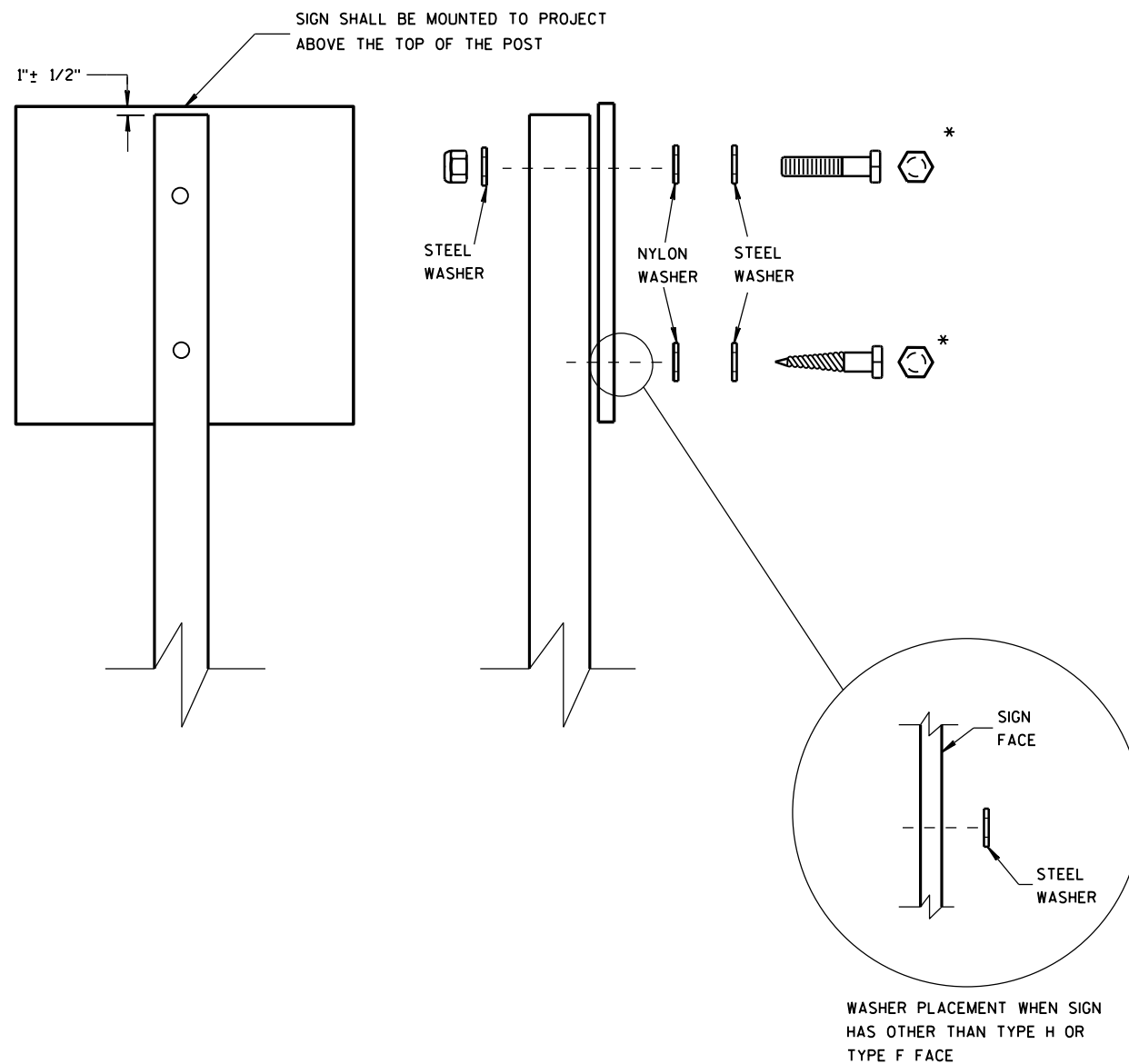
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② 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. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. 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.

WOOD POSTS (4" x 4" or 4" x 6")
 LAG SCREWS - 3/8" X 3"
 MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")
 MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

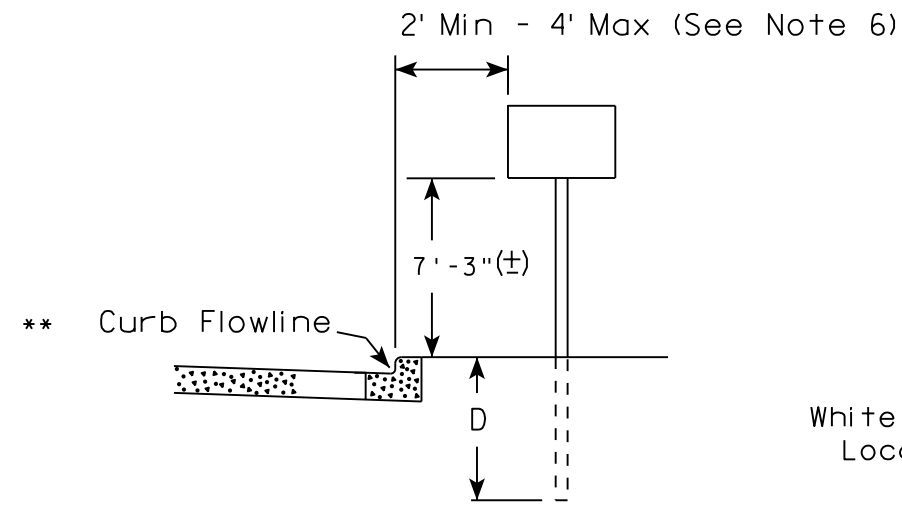
RIVETS - 5/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
 O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
 1-1/4" O.D. X 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

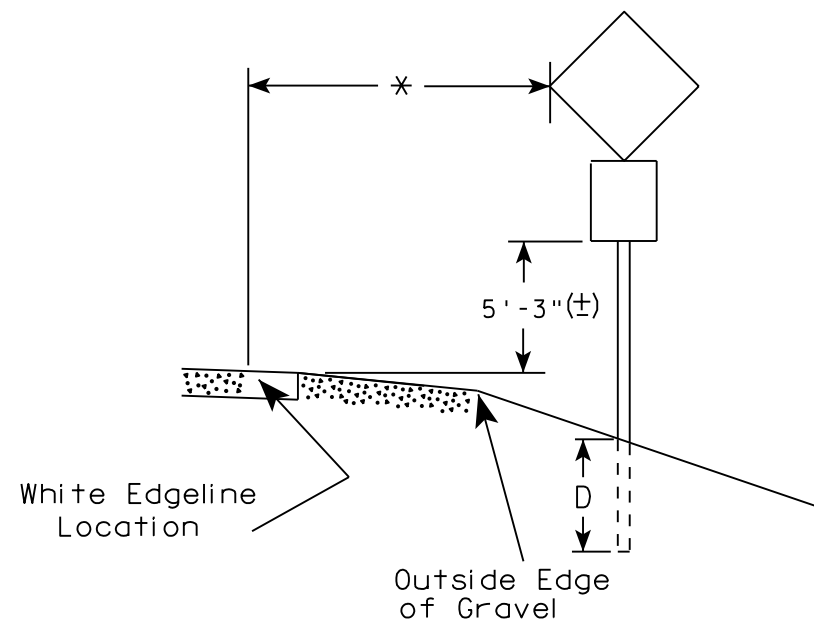
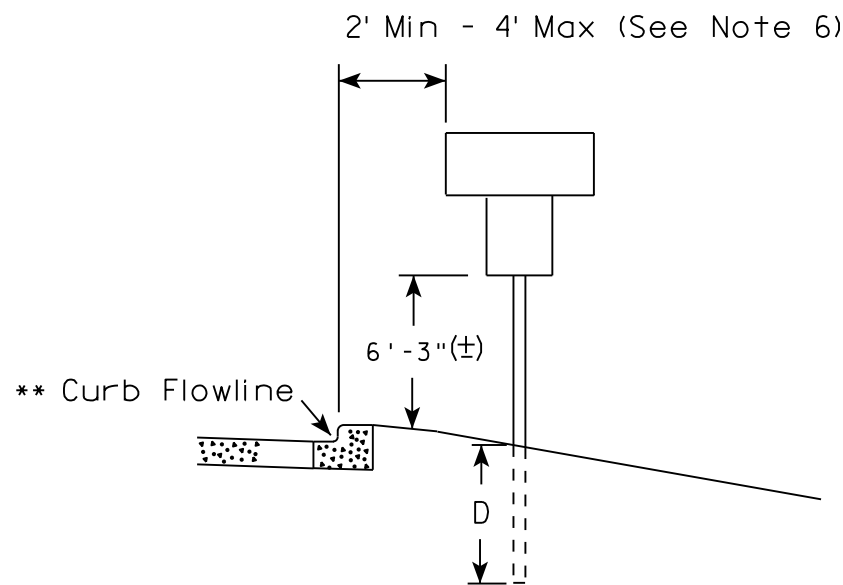
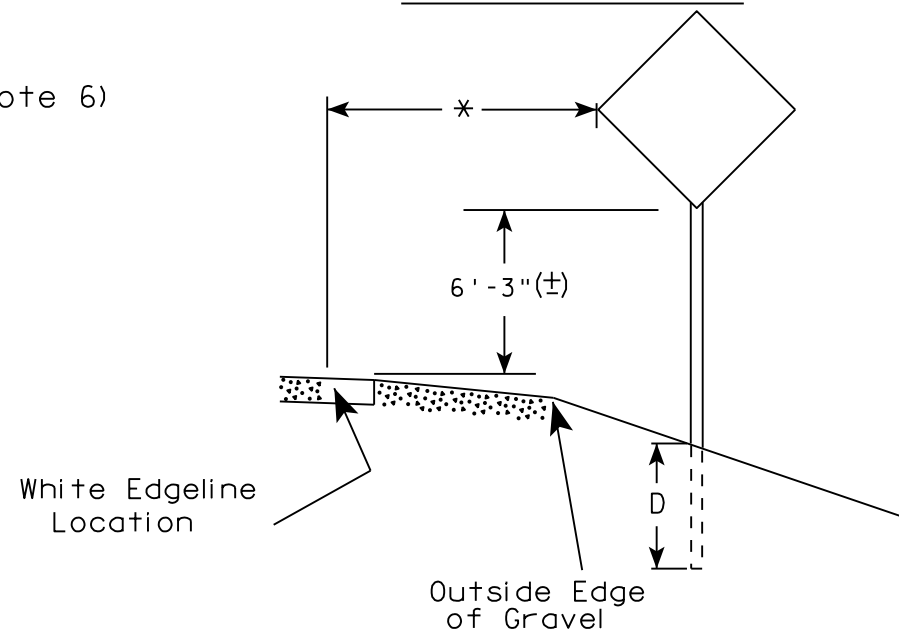
* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/s/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

URBAN AREA



RURAL AREA (See Note 2)



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 barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. 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), 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" (±).

* * 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 8/21/17 PLATE NO. A4-3.21



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

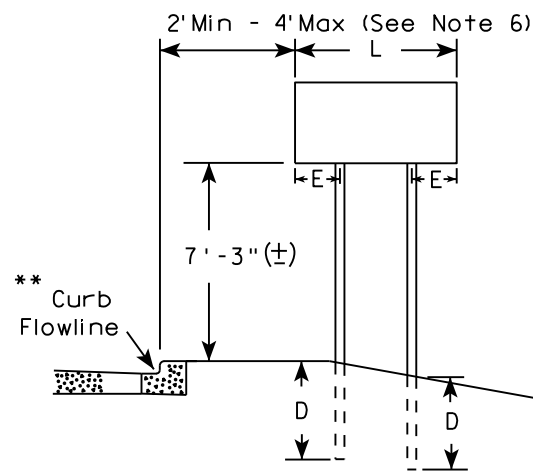
FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
DATE <u>1/27/14</u>	PLATE NO. <u>A4-3B.1</u>

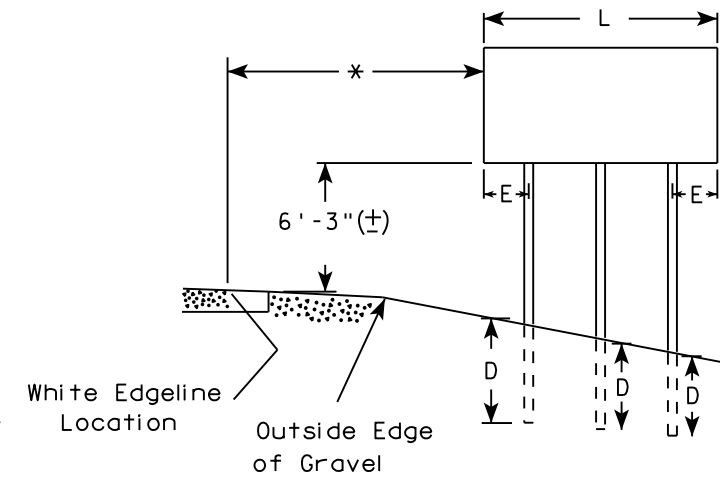
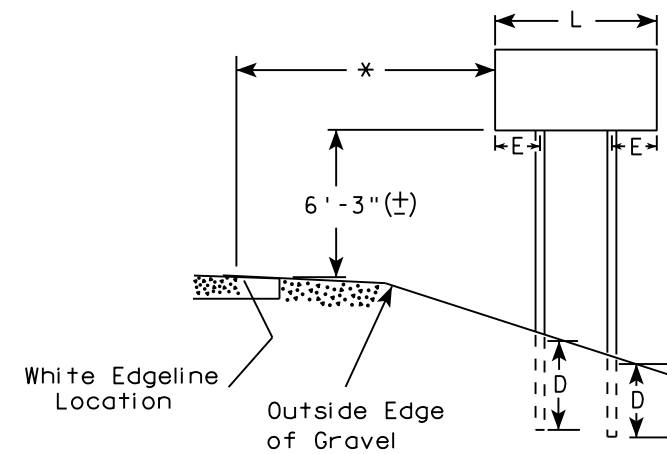
GENERAL NOTES

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" (±).

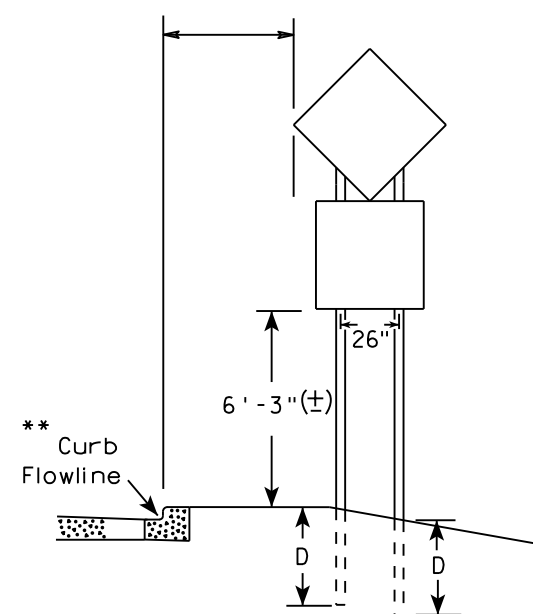
URBAN AREA



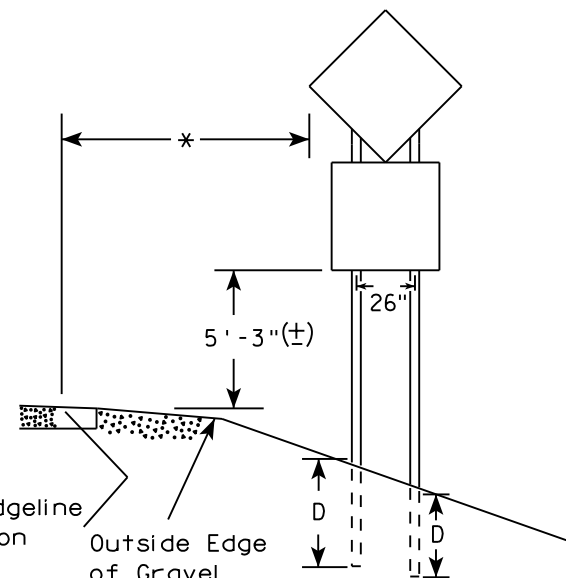
RURAL AREA (See Note 3)



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

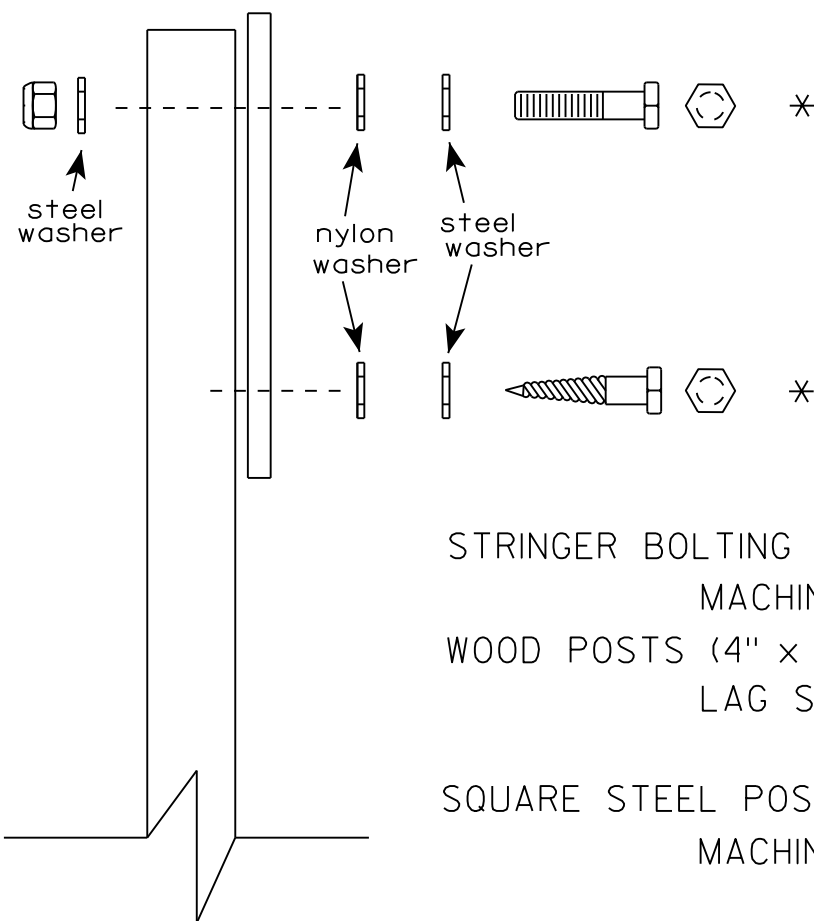
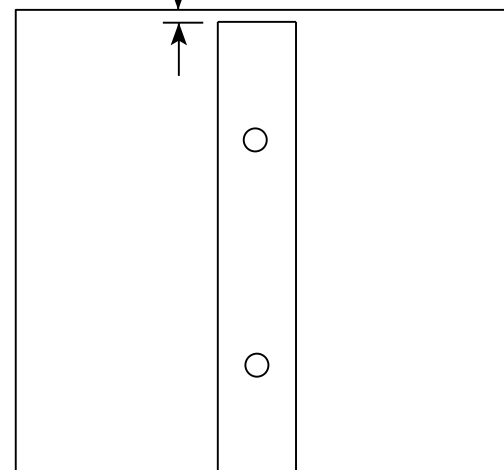
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

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

1"± 1/2"

SIGN SHALL BE MOUNTED TO PROJECT ABOVE THE TOP OF THE POST



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. 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 - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 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 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 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

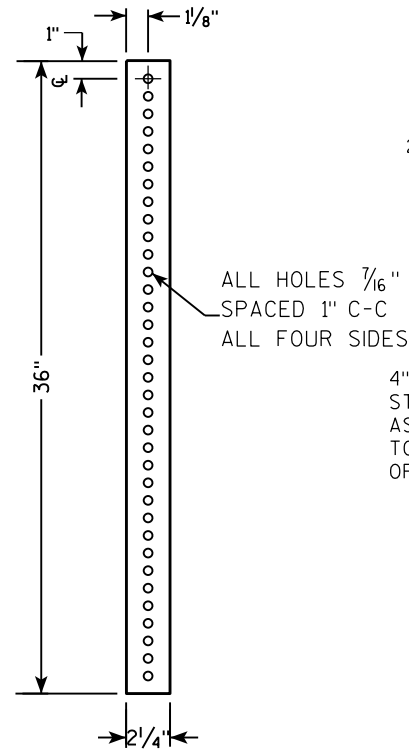
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

7

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

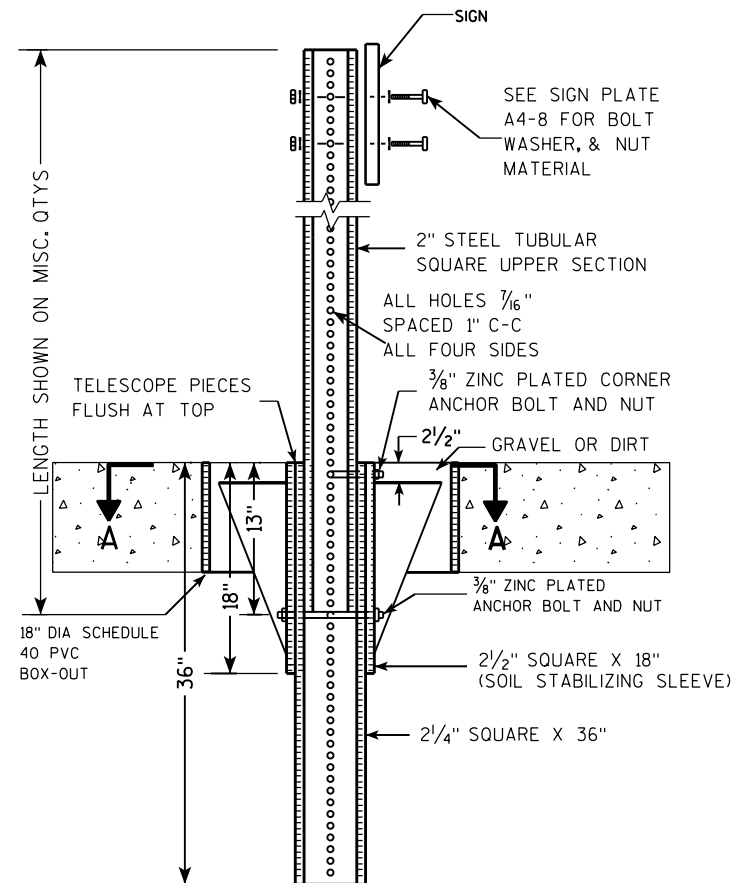
**2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



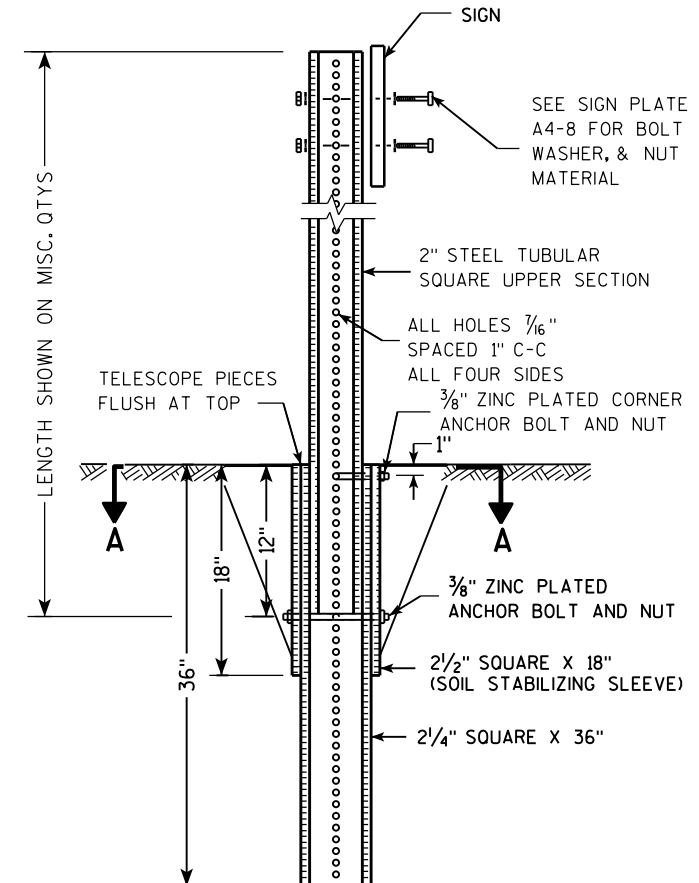
**2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH**



**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

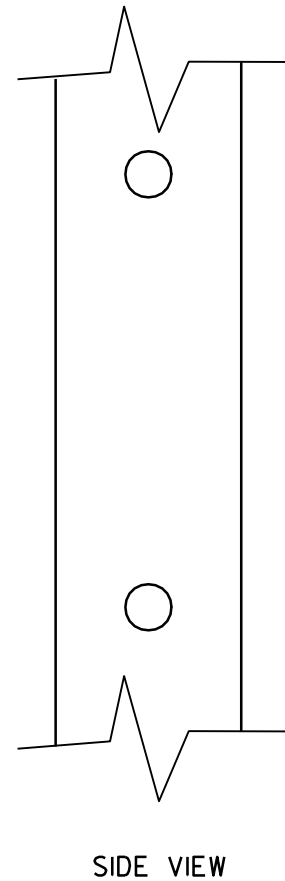
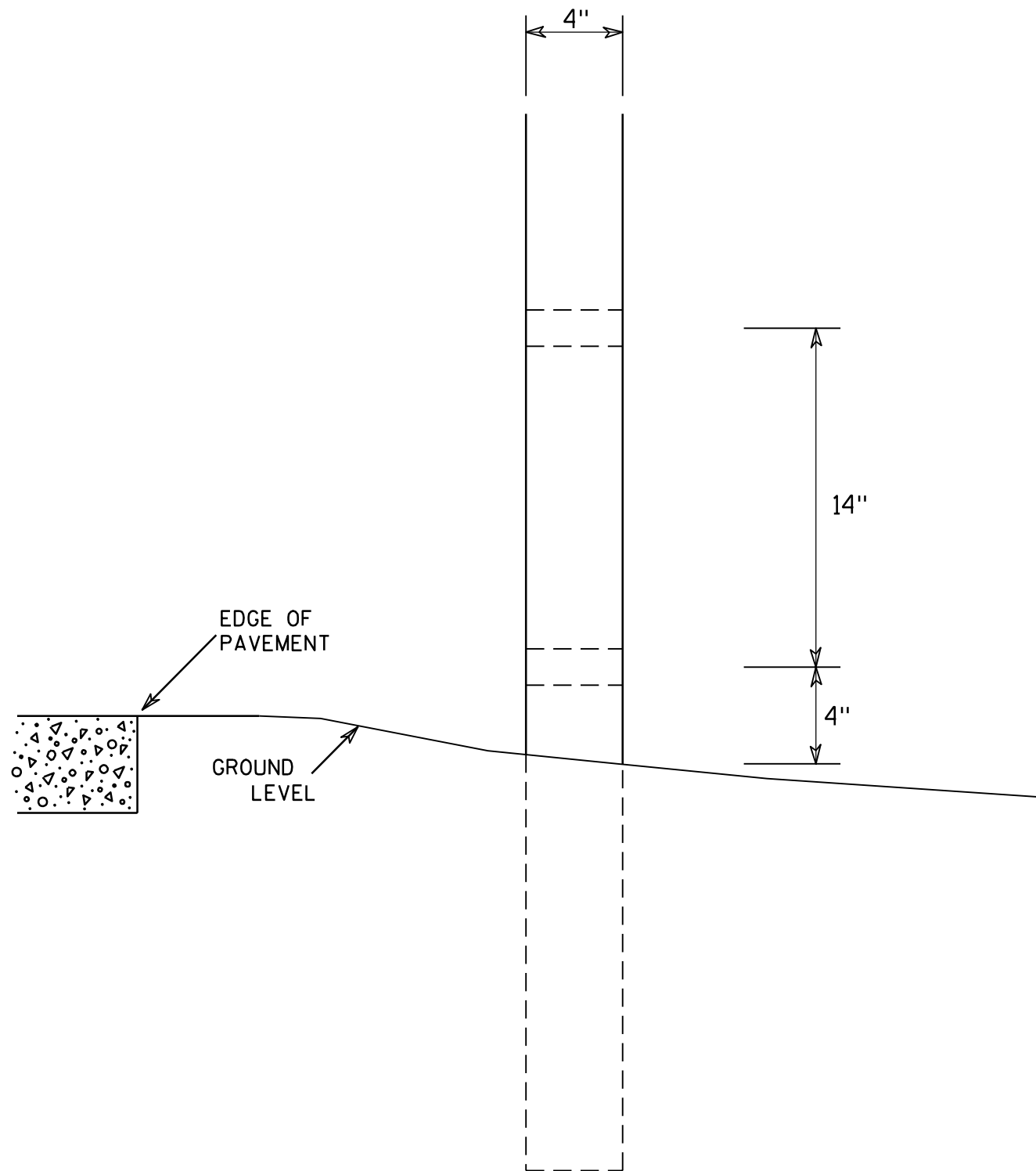
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**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.

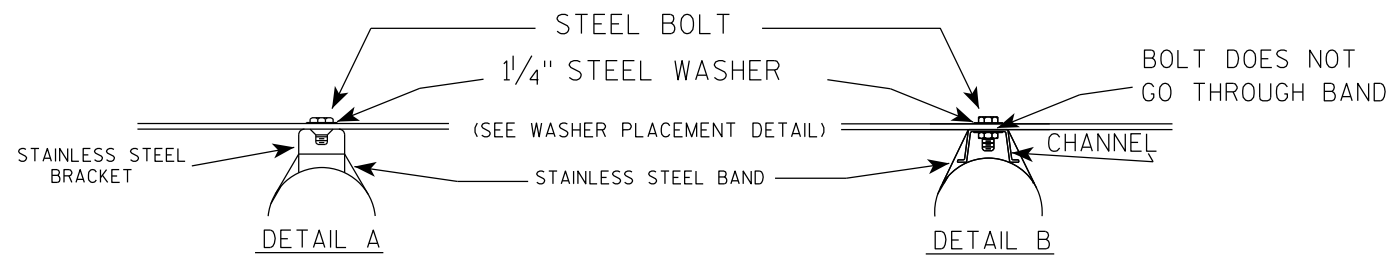
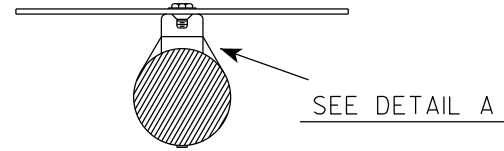
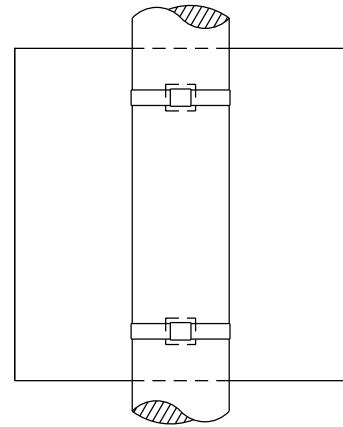
7

7

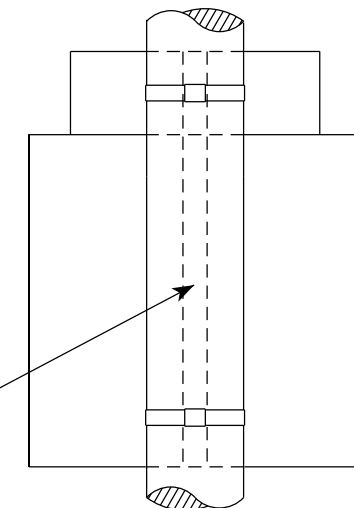
4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	 <small>for State Traffic Engineer</small>
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

BANDING

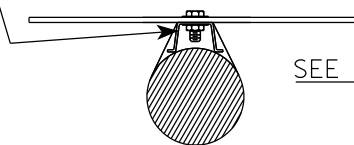
SINGLE SIGN



"J" ASSEMBLY

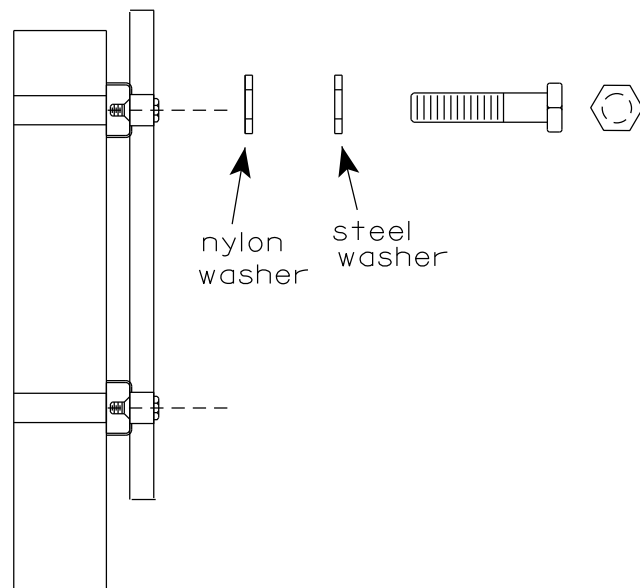


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



- 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

WASHER PLACEMENT



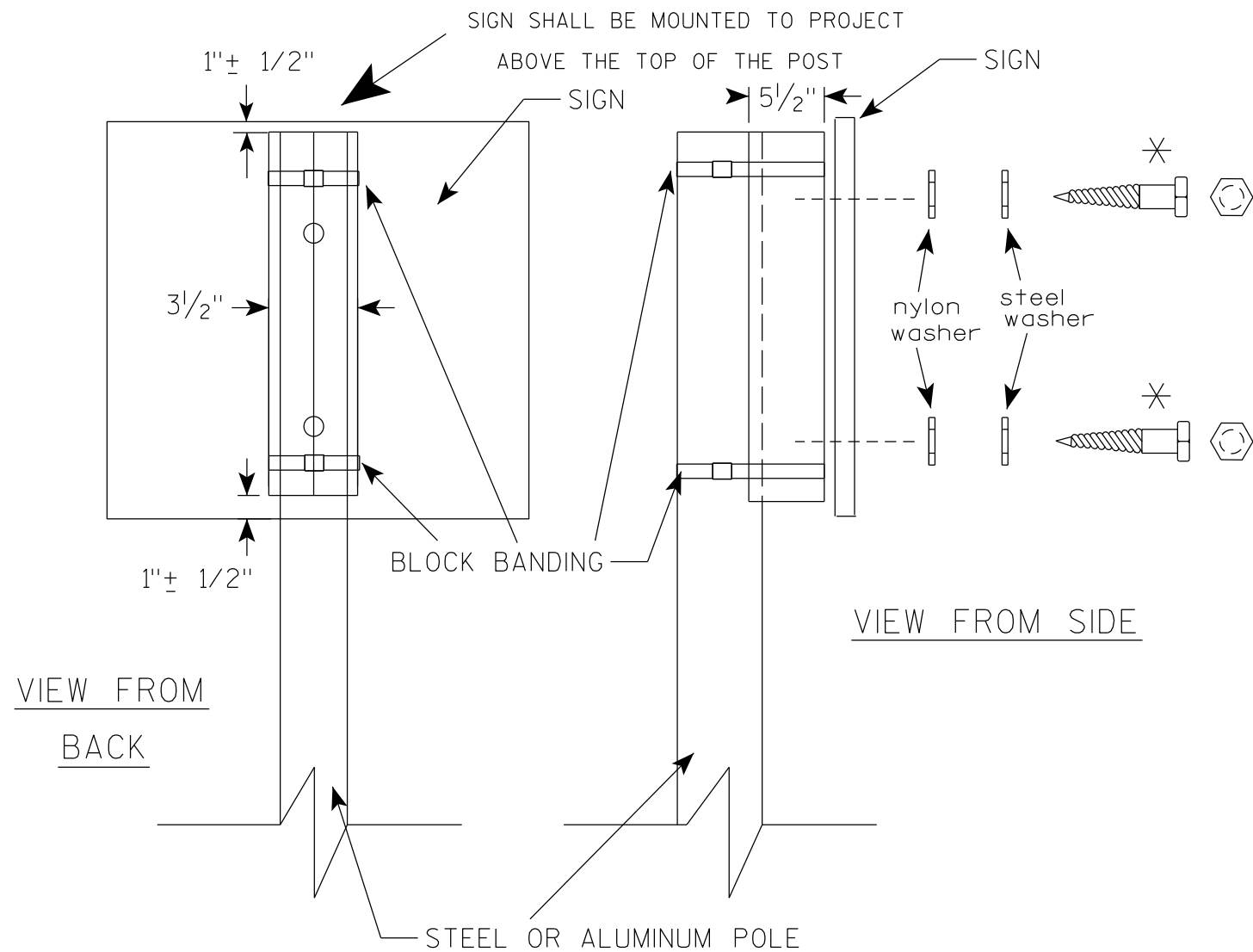
WASHERS (ALL POSTS) -
 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON
 FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

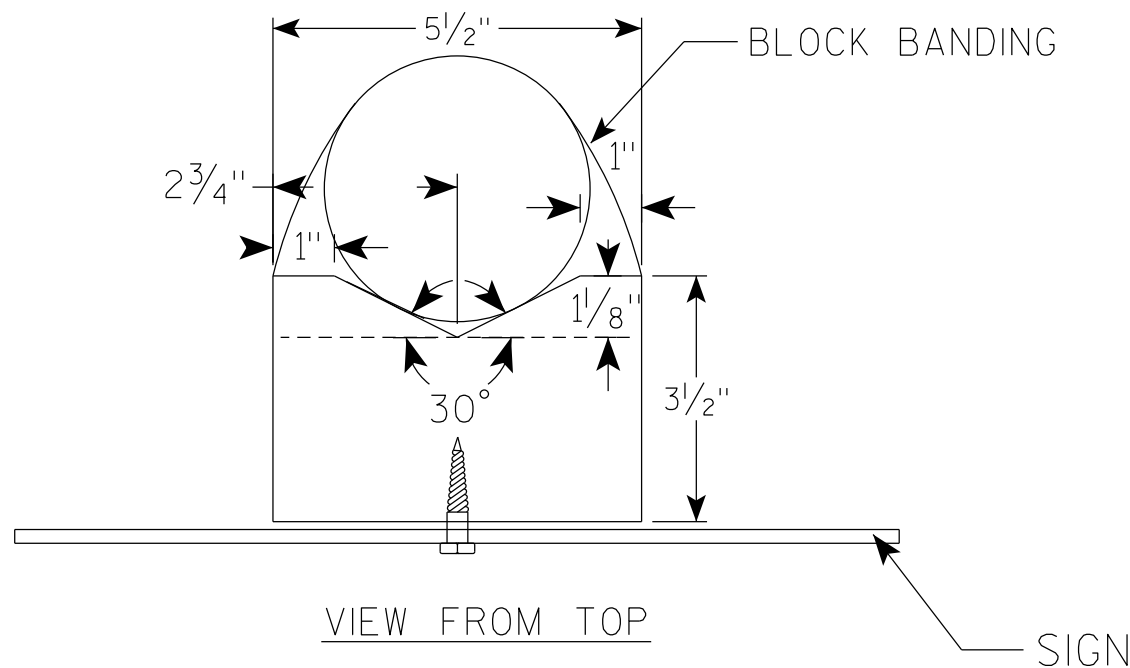
DATE 6/10/19 PLATE NO. A5-9.4



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

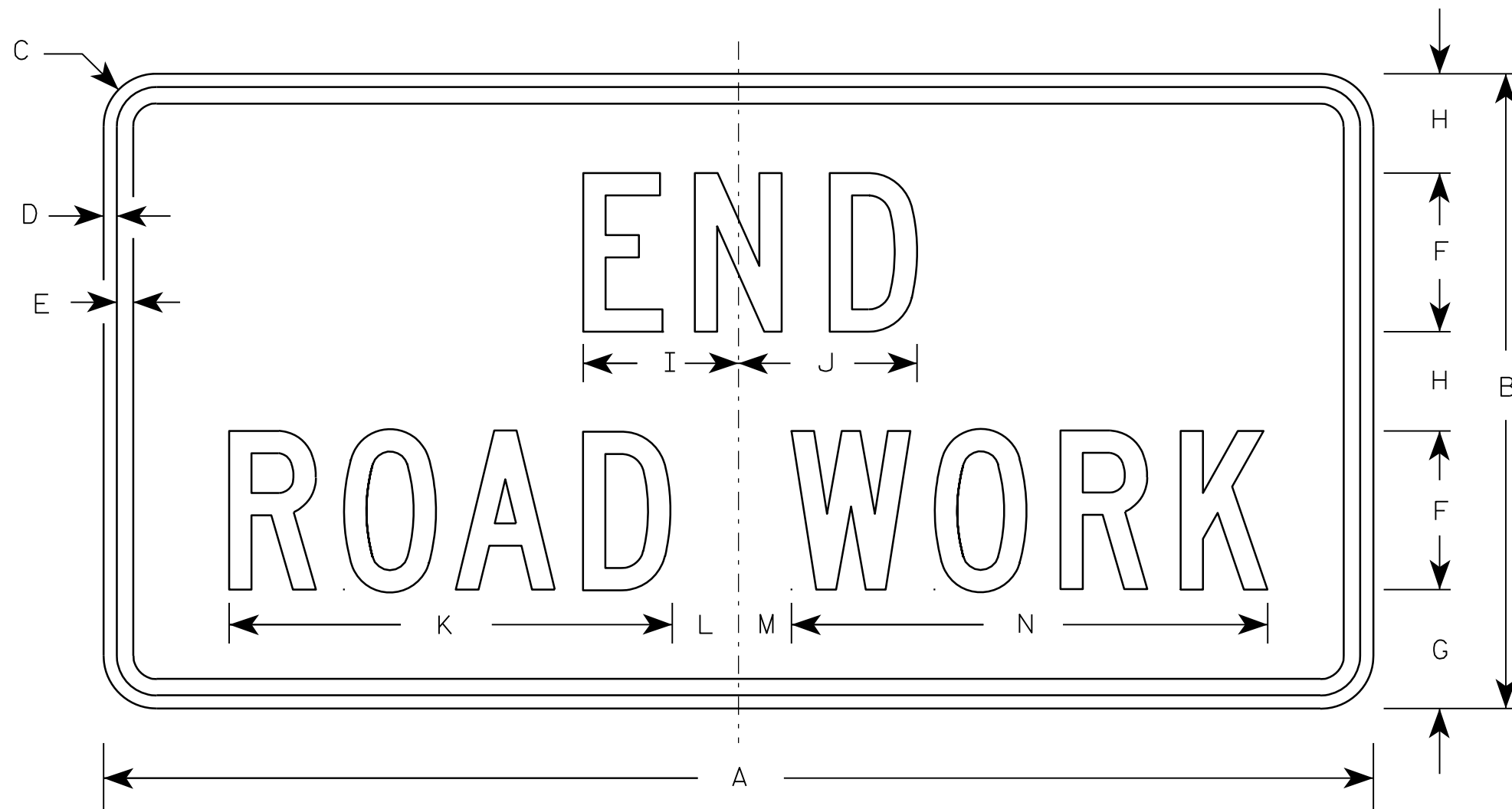
✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL (V-BLOCK OPTION)	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-10.2

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

7

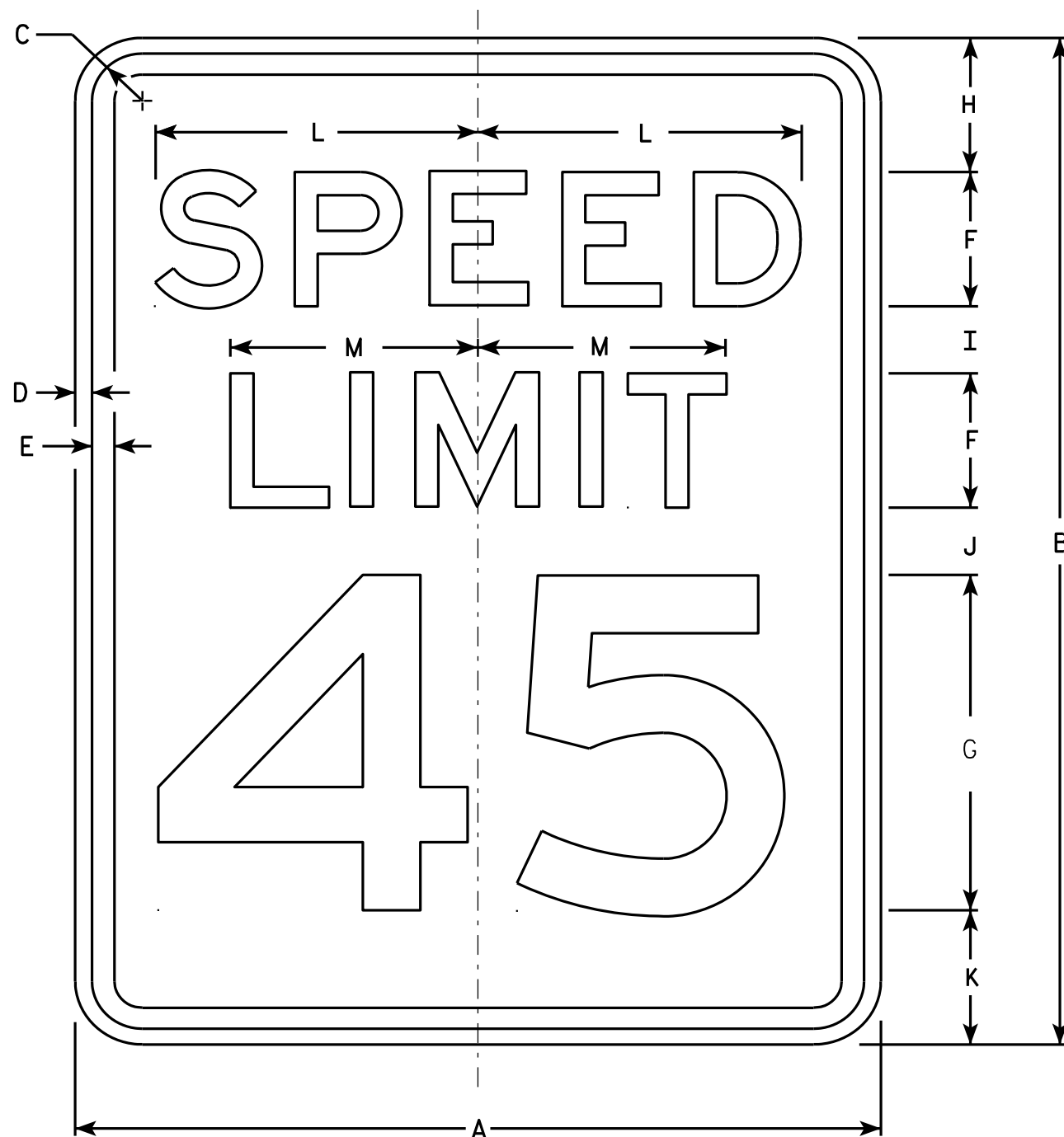
7

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



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

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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	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

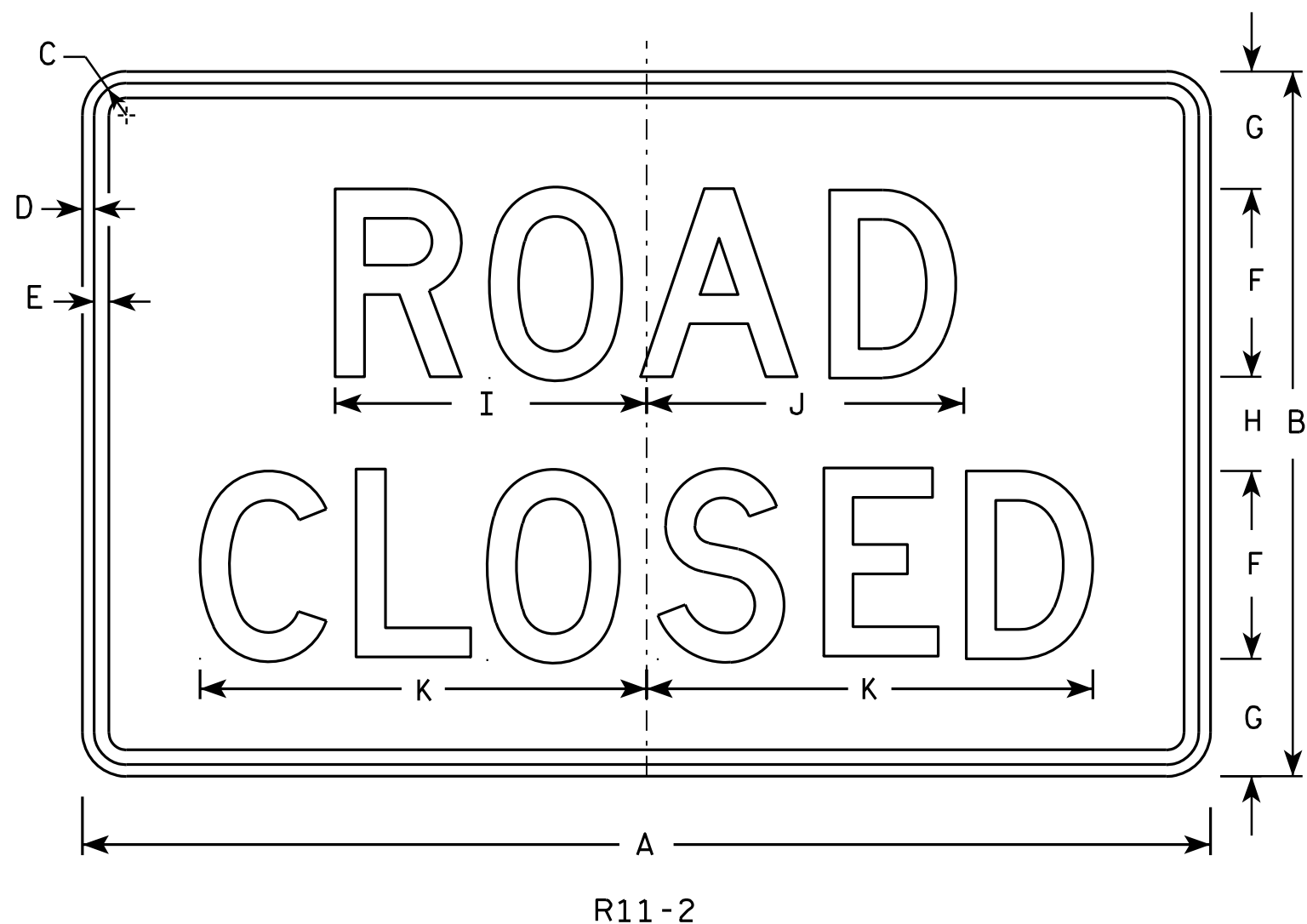
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

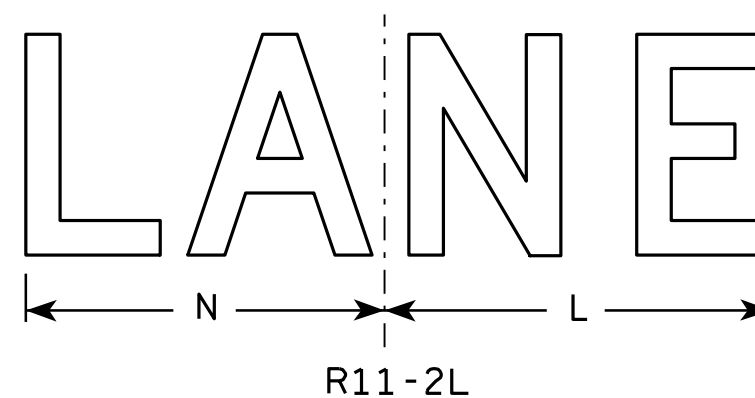
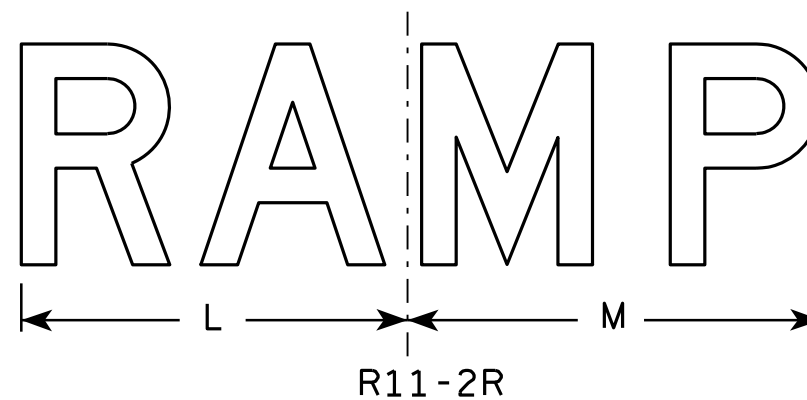
DATE 5/26/10 PLATE NO. R2-1.13

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.
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.



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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	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													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													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													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													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													10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

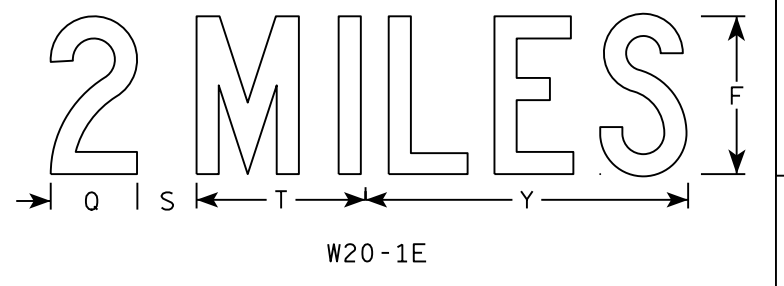
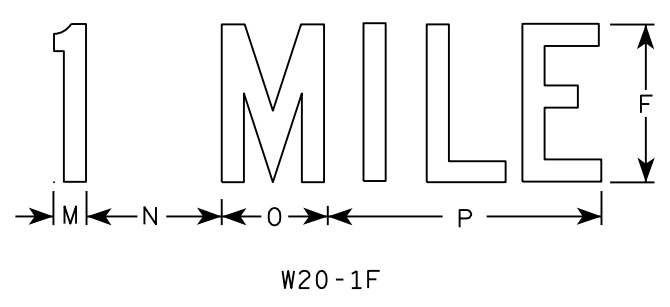
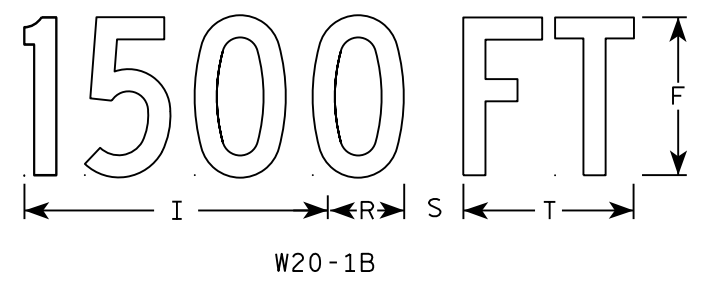
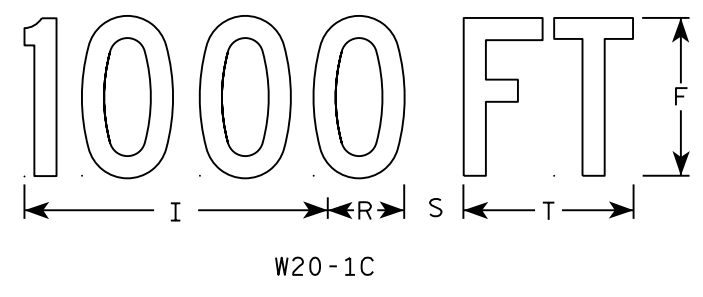
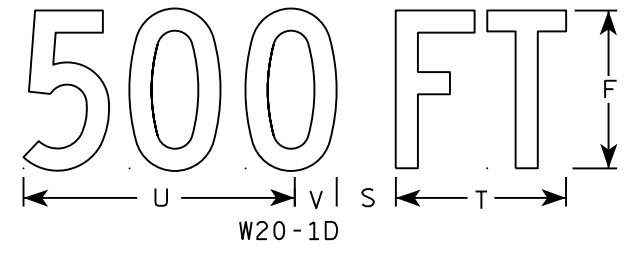
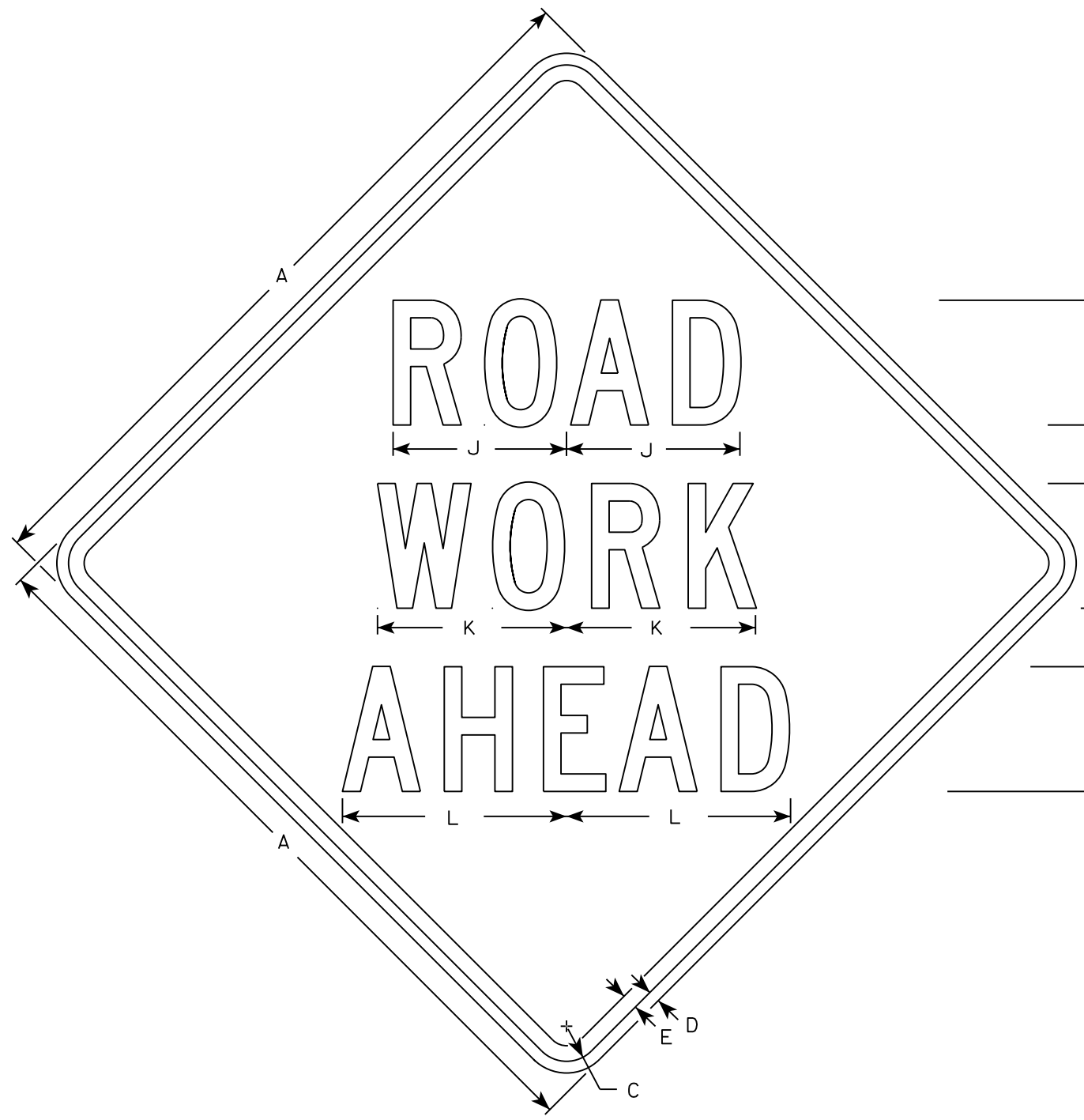
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

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.



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	1/2	5/8	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		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, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

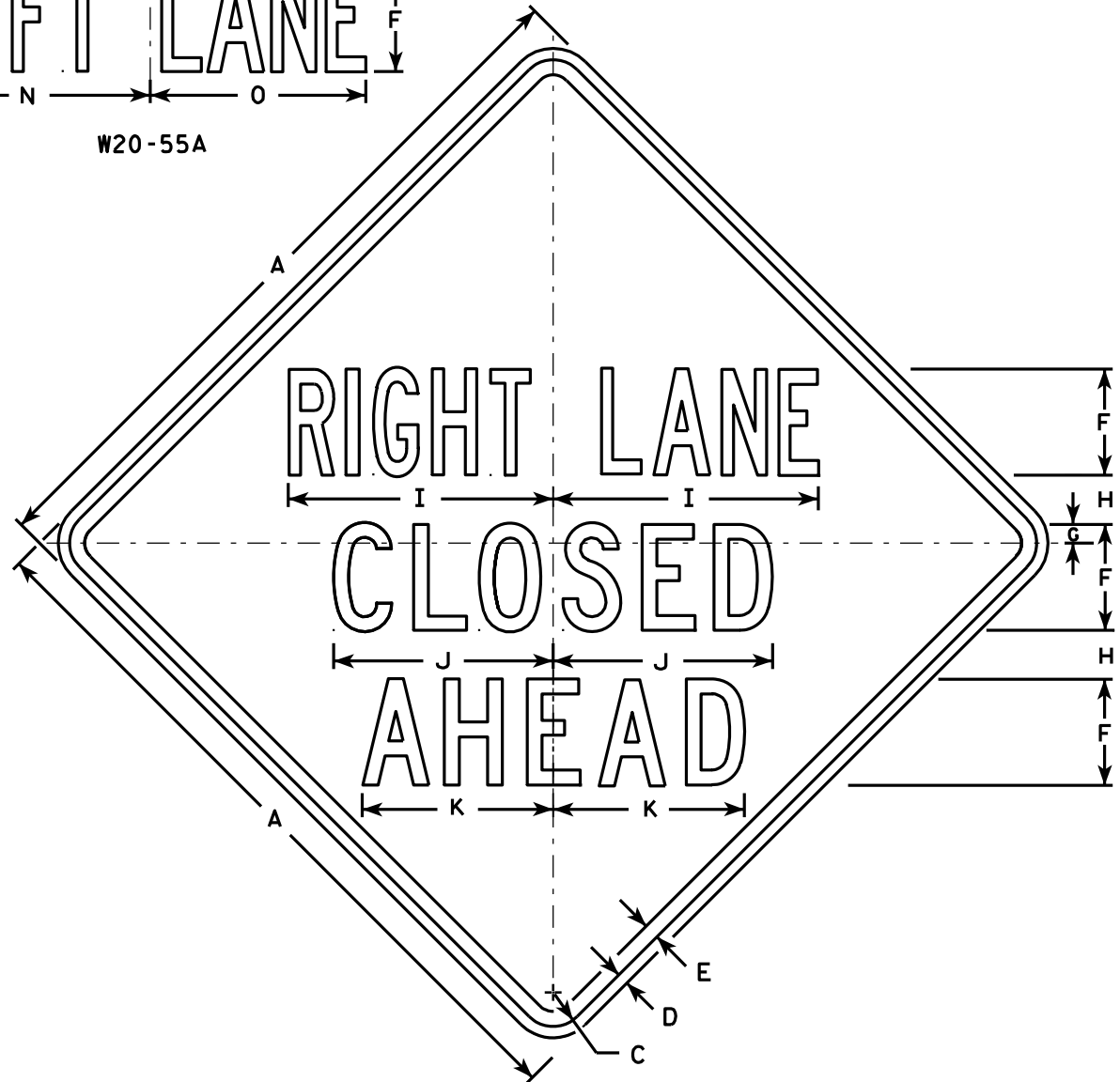
DATE 5/07/15 PLATE NO. W20-1.10

CENTER LANE

W20-56A

LEFT LANE

W20-55A



W20-5A

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. "-----LANE" is Series B.
All other copy is Series C.

500 FT

W20-5D

1000 FT

W20-5C

1500 FT

W20-5B

1/2 MILE

W20-5G

1 MILE

W20-5F

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	6	1 5/8	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

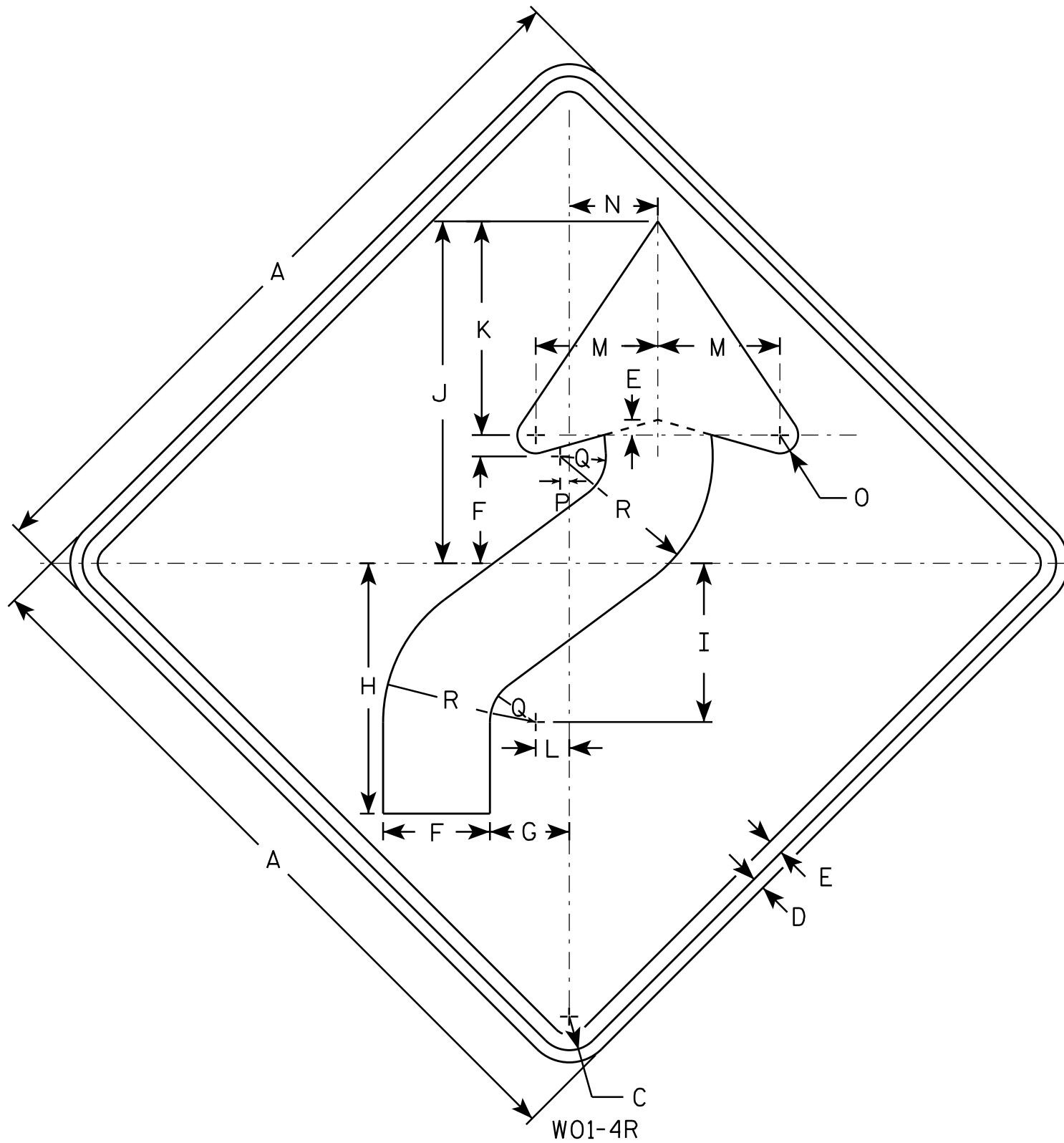
STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

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.

7

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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

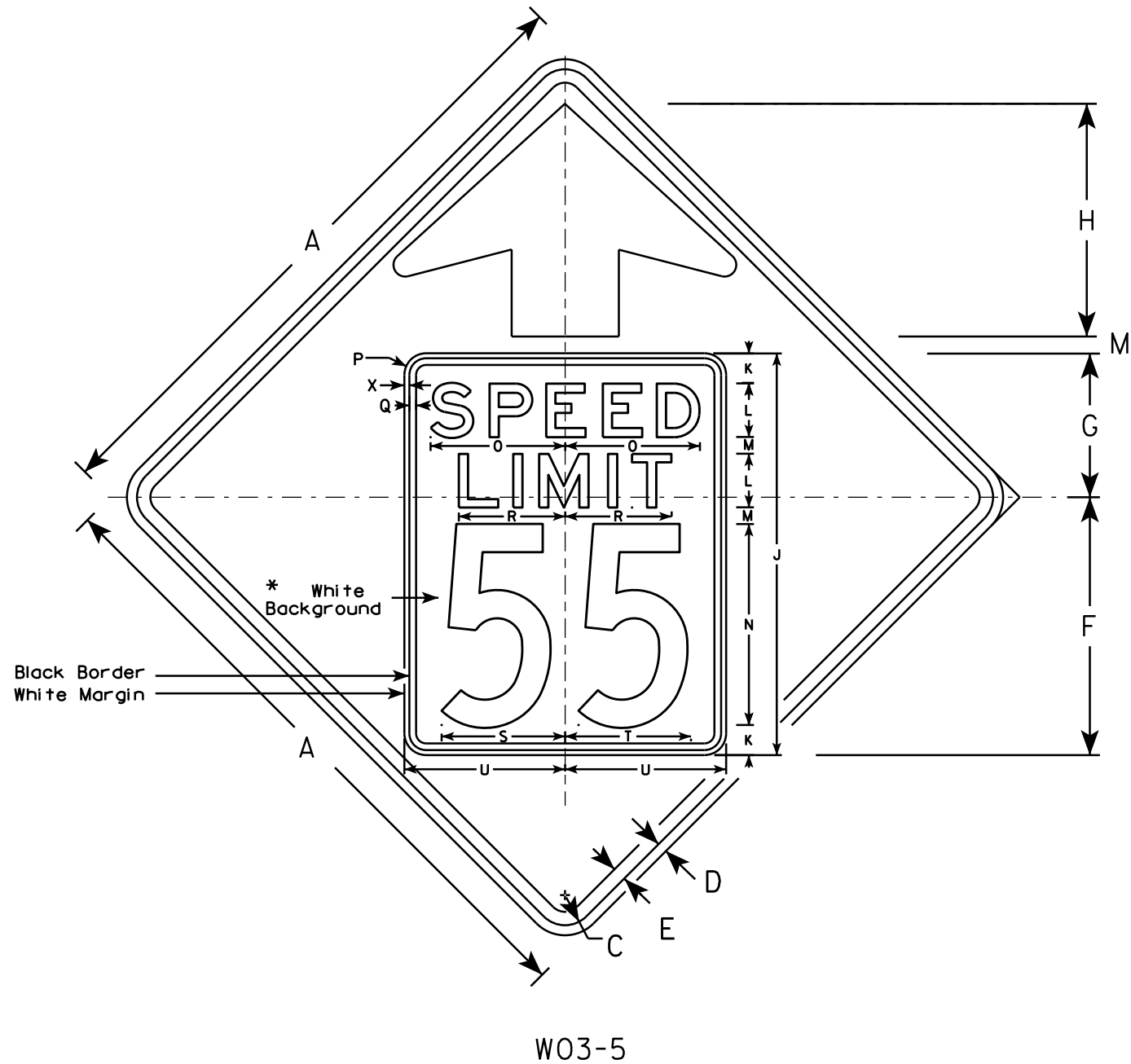
STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4.1

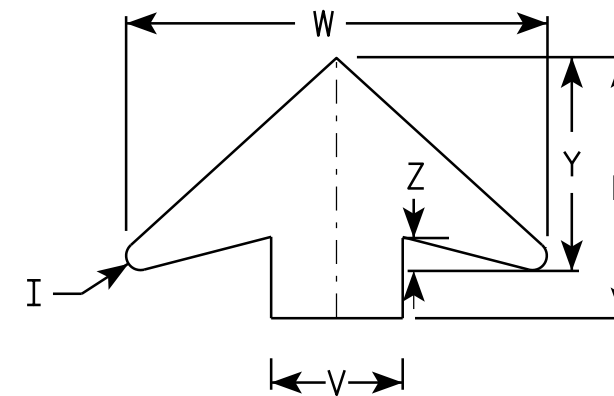
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



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. 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



ARROW DETAIL

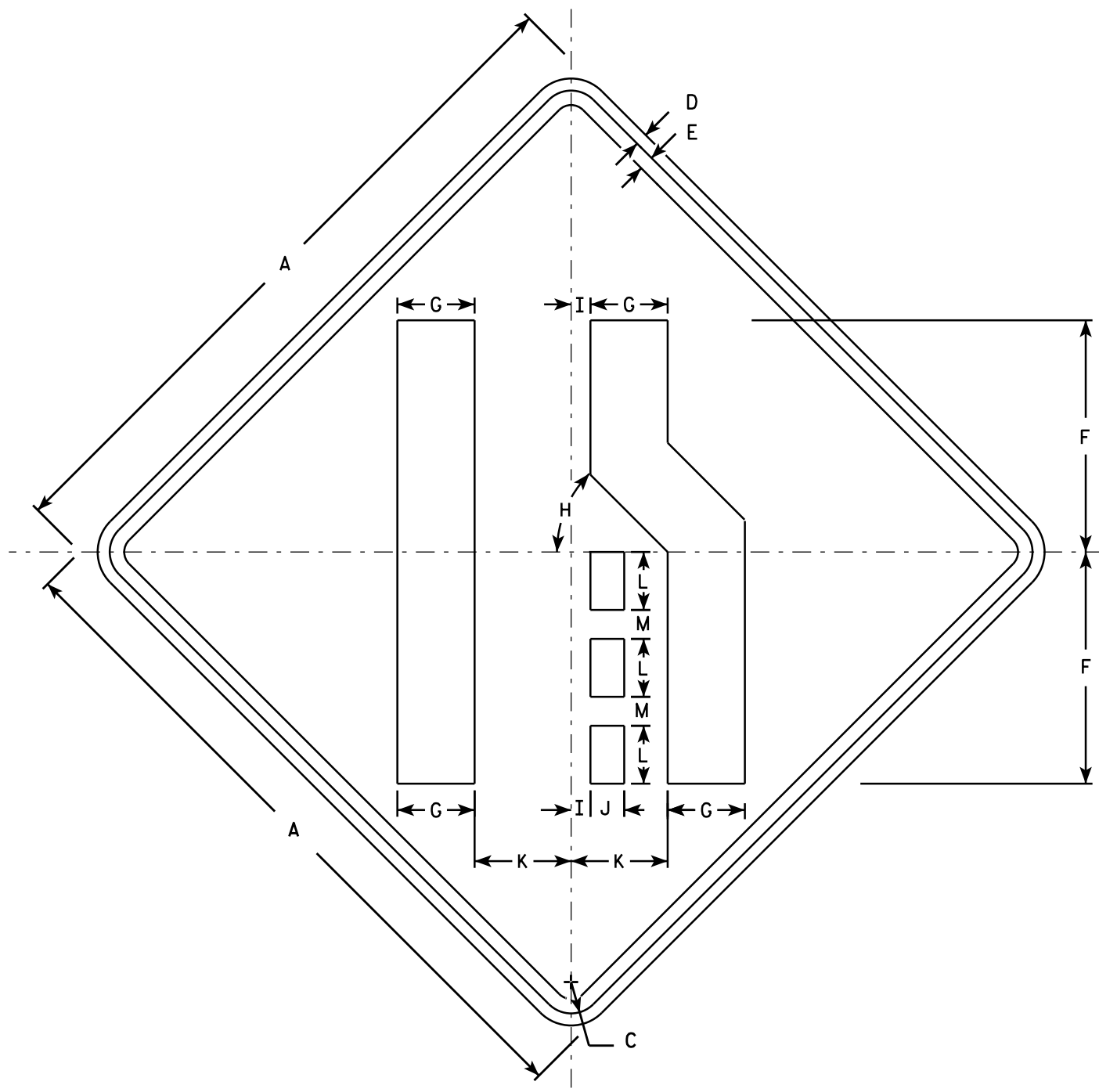
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2S	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
2M	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
3	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
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
W03-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 11/20/13 PLATE NO. W03-5.1



W04-2R

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. W04-2L is the same as W04-2R except the symbols is 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 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W04-2

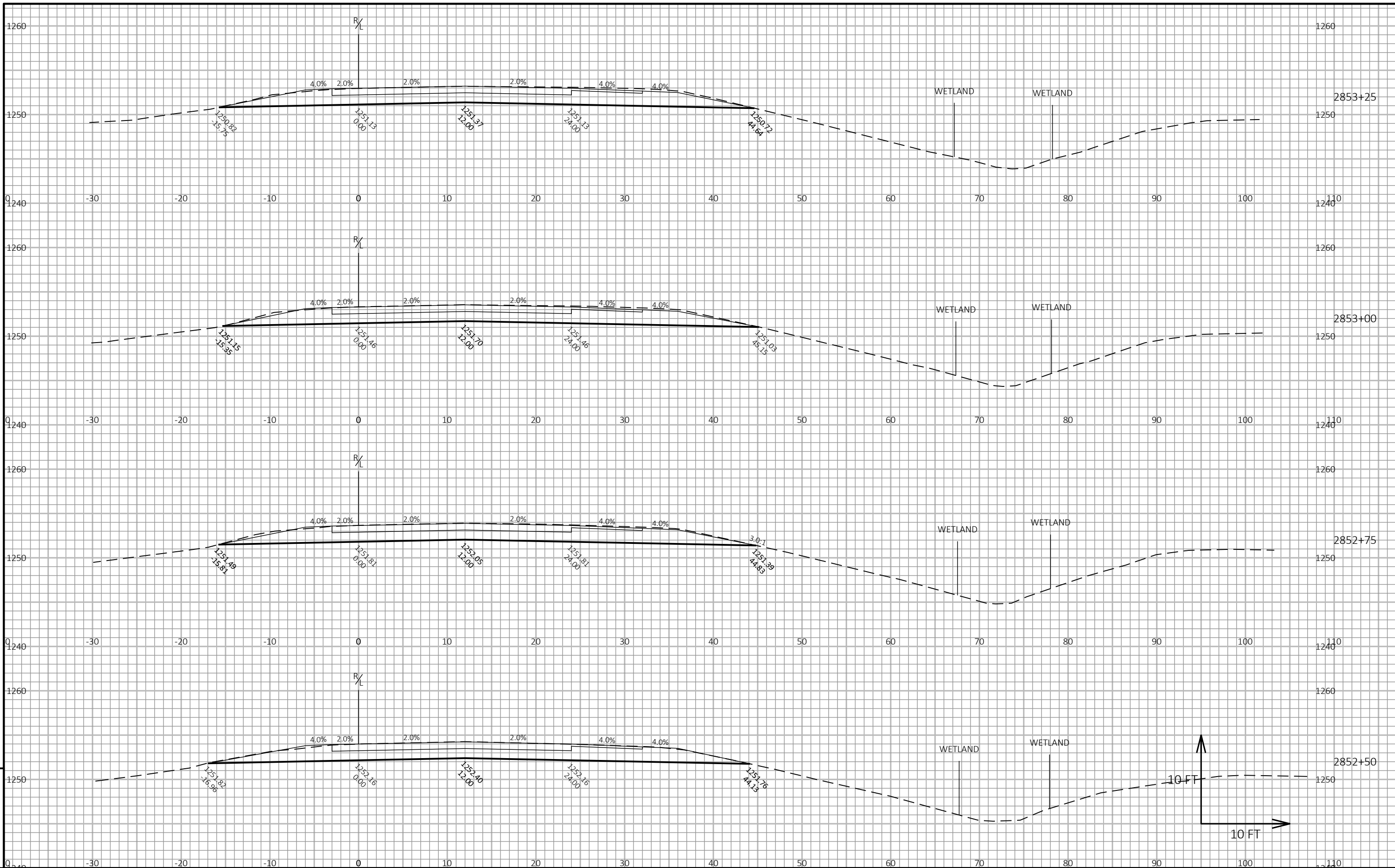
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 11/20/13 PLATE NO. W04-2.1

STH 29 EB EARTHWORK

STATION	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
					1.00	1.25	
	Cut	Fill	Cut	Fill	Cut	Expanded Fill	
2852+50EB	91	0	0	0	0	0	0
2852+75EB	95	0	86	0	86	0	86
2853+00EB	96	0	89	0	175	0	175
2853+25EB	95	0	89	0	264	0	264
2853+50EB	90	0	86	0	349	0	349
2853+75EB	83	0	80	0	430	0	430
2854+00EB	75	2	73	1	503	1	502
2854+25EB	70	0	67	1	570	2	568
2854+50EB	62	0	61	0	631	2	629
2854+75EB	58	1	55	0	687	3	684
2855+00EB	52	1	51	1	738	4	734
2855+25EB	53	1	49	1	787	5	782
2855+50EB	57	2	51	1	838	7	831
2855+75EB	70	1	59	1	896	8	888
2856+00EB	89	0	74	1	970	9	961
2856+25EB	101	0	88	0	1058	9	1049
2856+50EB	104	0	95	0	1153	9	1144
			1153	7			



PROJECT NO: 1053-02-82

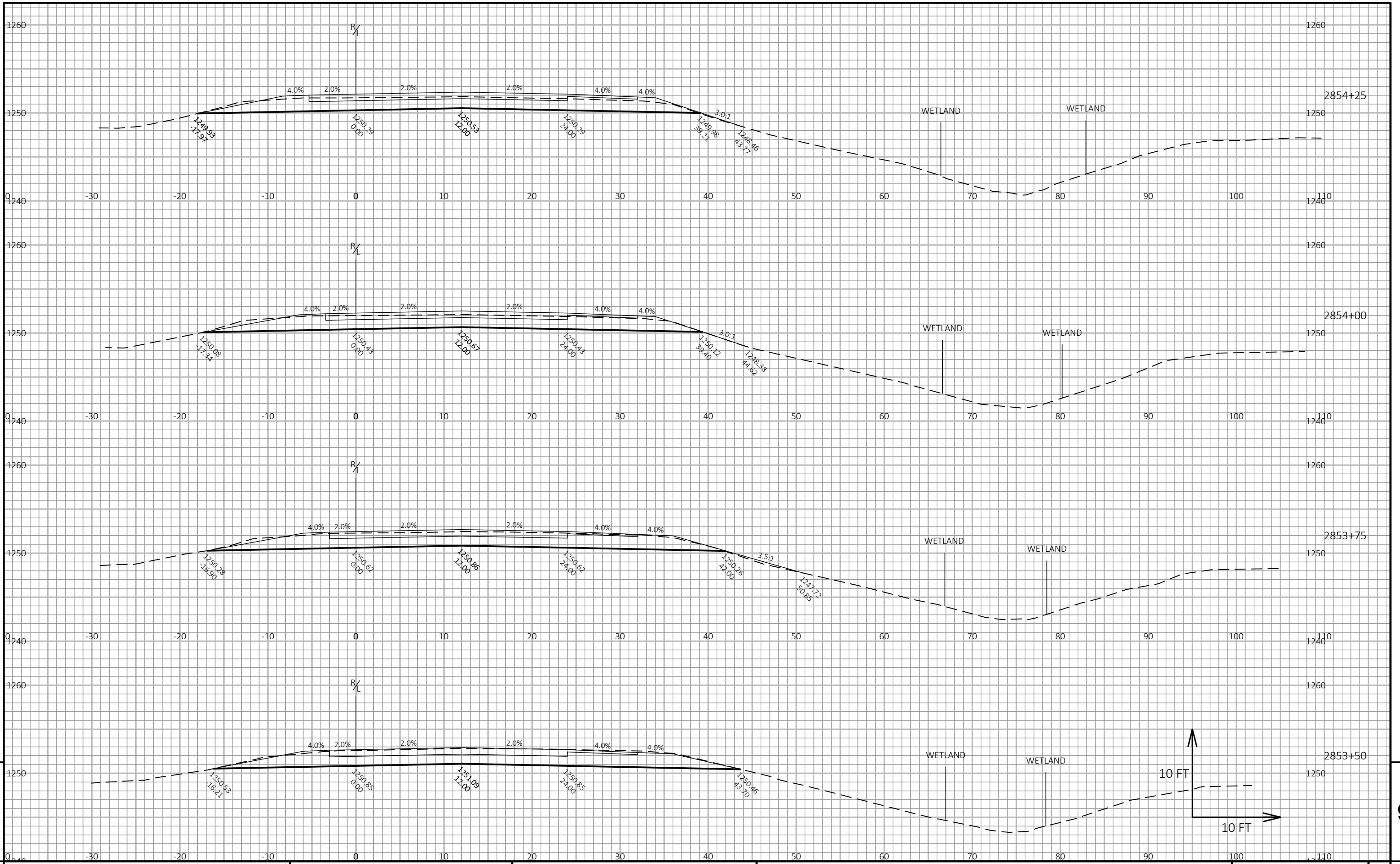
HWY: STH 29

COUNTY: MARATHON

CROSS SECTIONS: STH 29 EB

SHEET

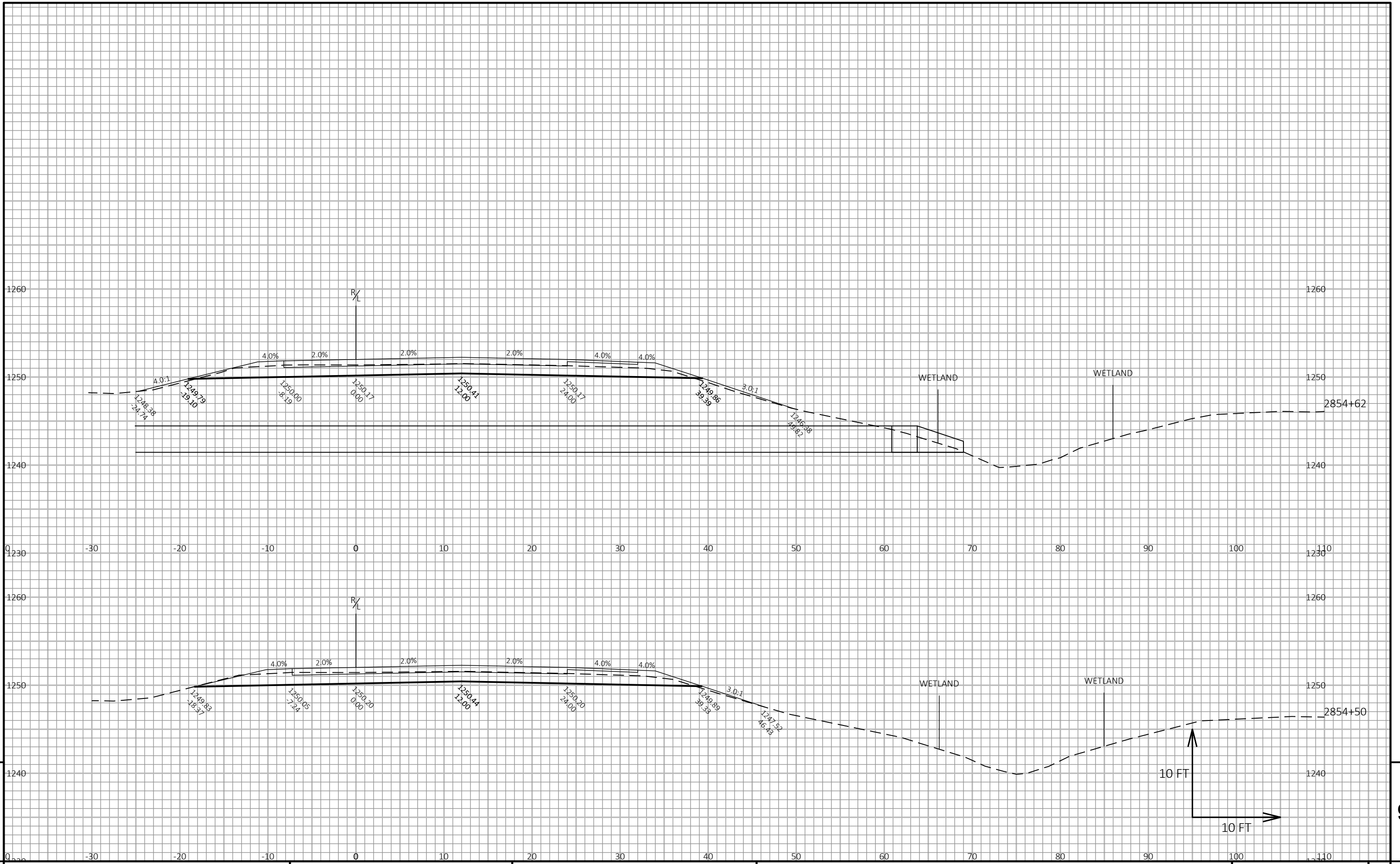
E



9

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PROJECT NO: 1053-02-82	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB	SHEET	E
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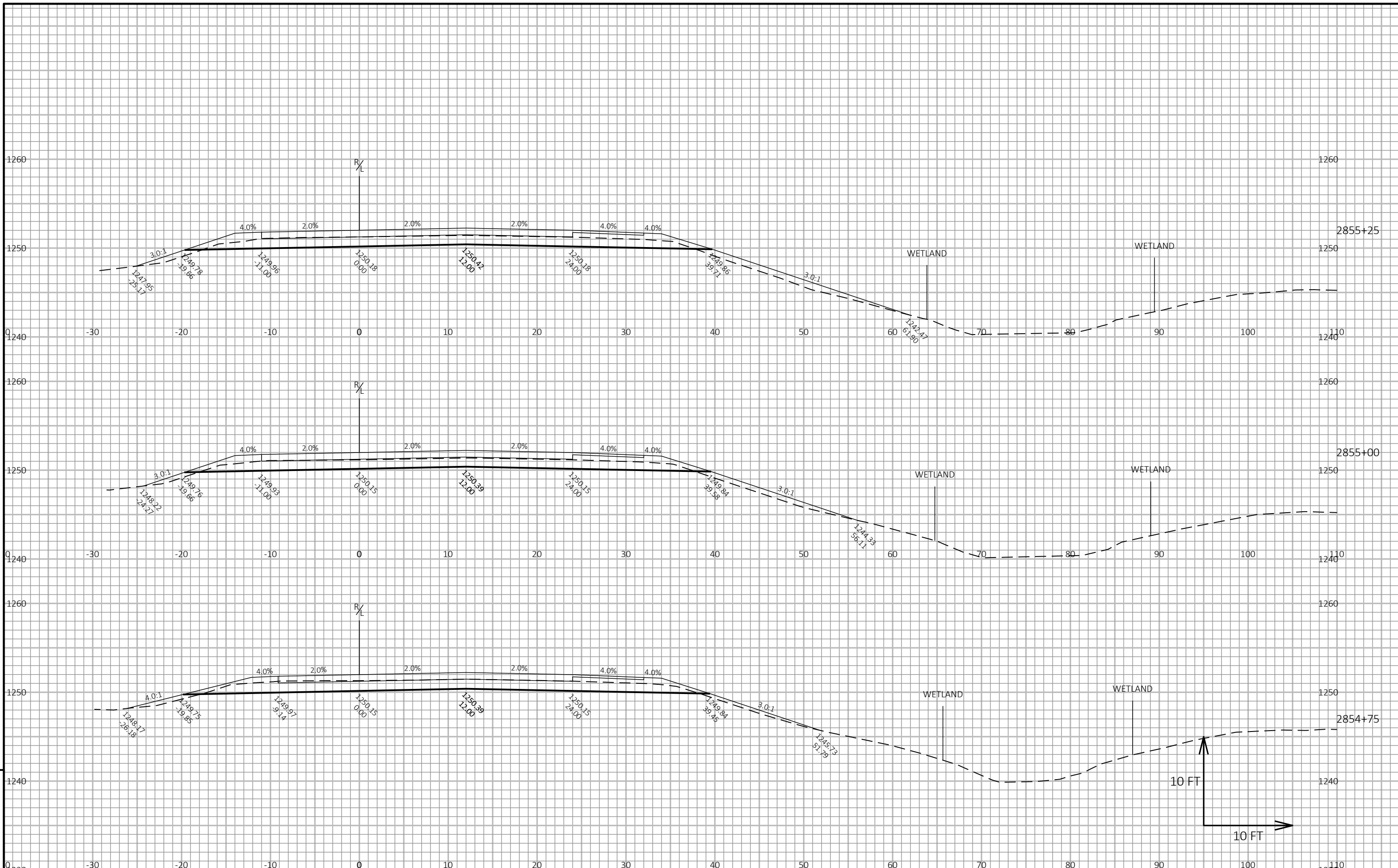
9

9

PROJECT NO: 1053-02-82	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB	SHEET	E
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FILE NAME : N:\PDS\C3D\10530212\SHEETSPLAN\090201_XS.DWG PLOT DATE : 10/29/2019 10:47 AM PLOT BY : CHRISTIANSON, ERIN M PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

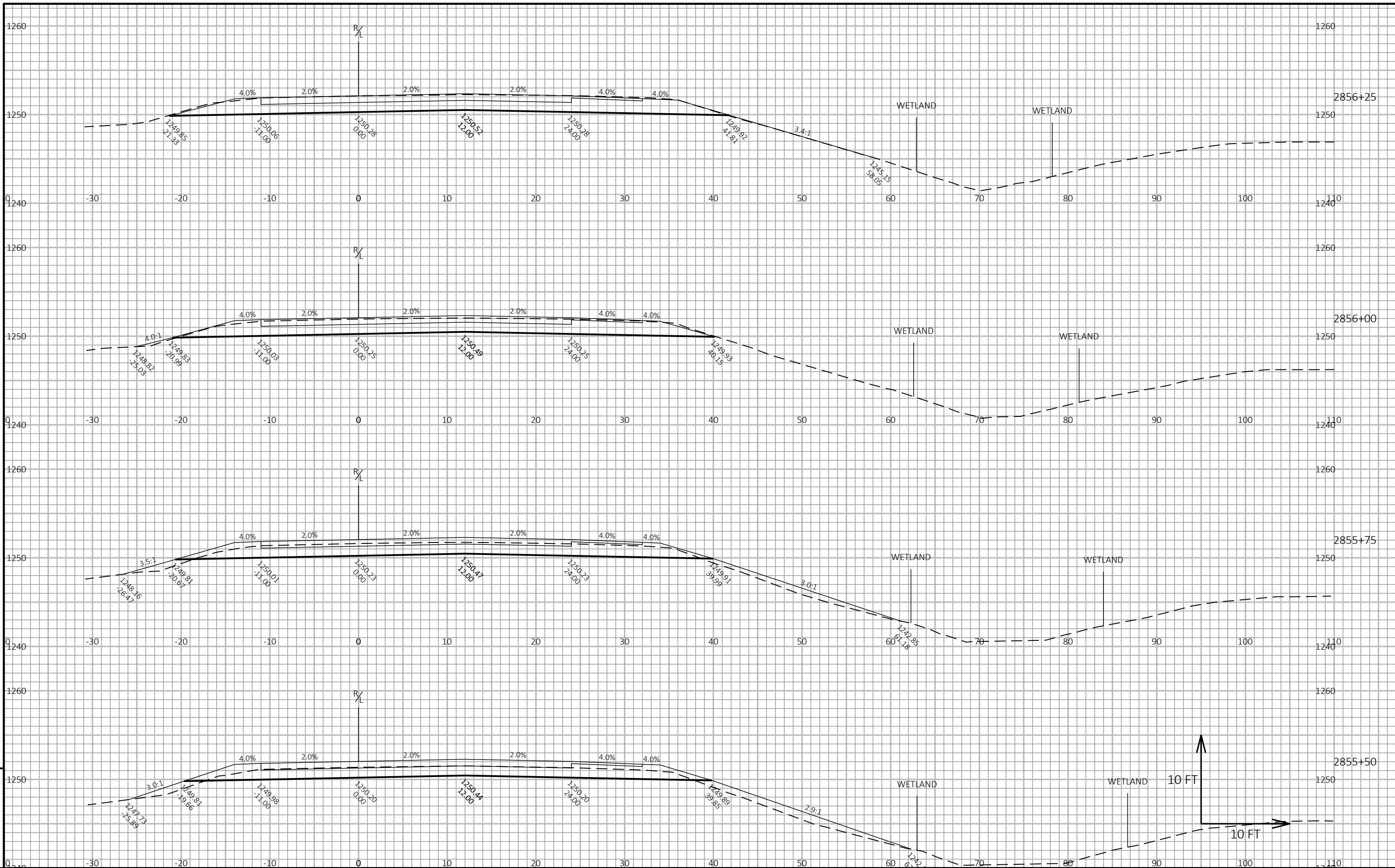
LAYOUT NAME - 3



9

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PROJECT NO: 1053-02-82	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: STH 29 EB	SHEET	E
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PROJECT NO: 1053-02-82

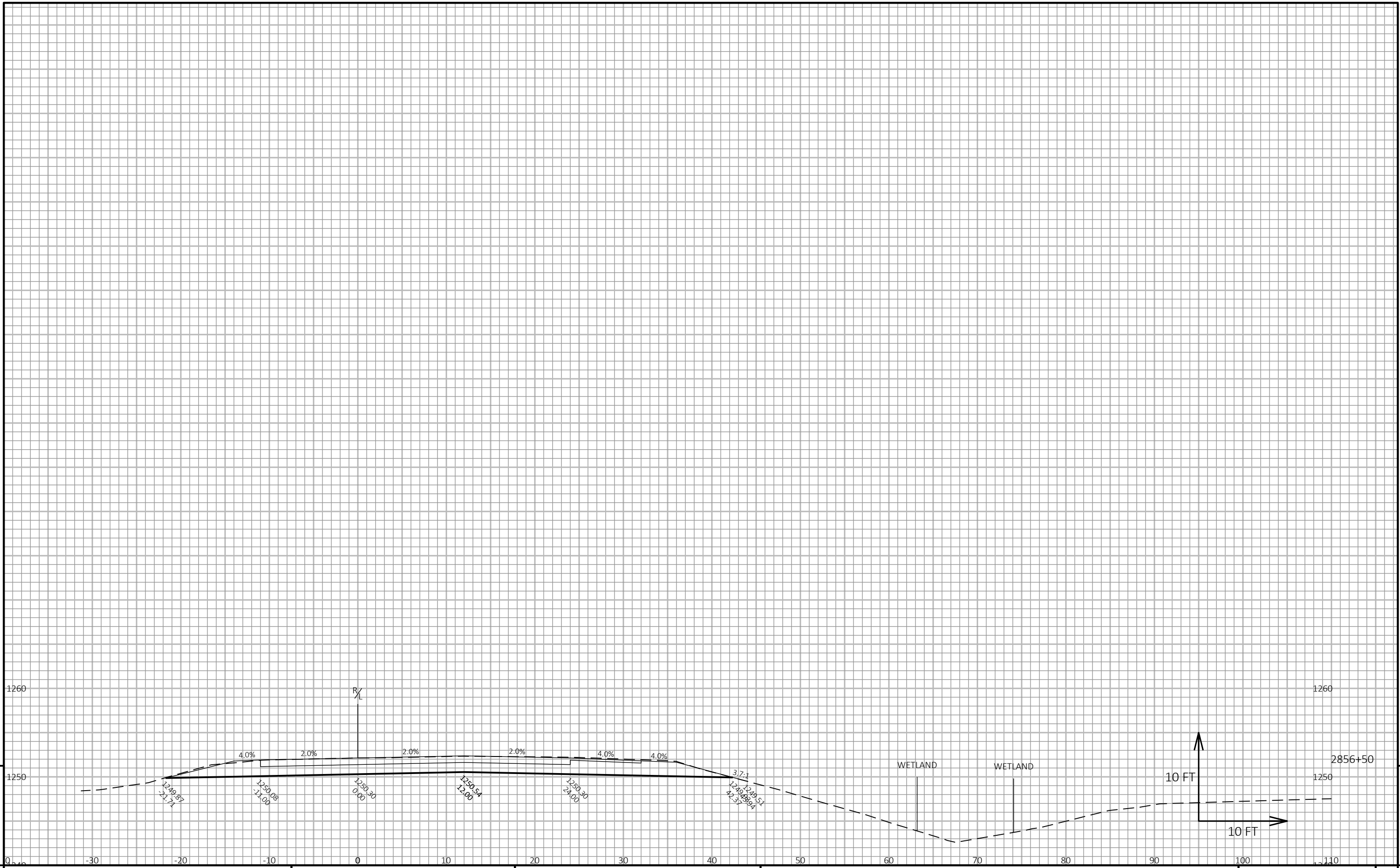
HWY: STH 29

COUNTY: MARATHON

CROSS SECTIONS: STH 29 EB

SHEET

E



9

9

PROJECT NO: 1053-02-82	HWY: STH 29	COUNTY: MARATHON	CROSS SECTIONS: SECTION VIEW GROUP - 1	SHEET	E
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