

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C MARSHFIELD, VETERANS PARKWAY

MCMILLAN STREET TO MANN STREET
STH 13
MARATHON COUNTY

MARSHFIELD - ABBOTSFORD

MANN STREET TO 26TH ROAD
STH 13
MARATHON COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1620-03-70	WISC 2016104	1
1620-03-71	WISC 2016015	1

ORDER OF SHEETS

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

TOTAL SHEETS = 80

STATE PROJECT NUMBER
1620-03-70

STATE PROJECT NUMBER
1620-03-71

APPROVED FOR
CITY OF MARSHFIELD
PROJECT ID: 1620-03-70
10/21/15 Daniel A. Knech
DATE

ORIGINAL PLANS PREPARED BY

G GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac
120 Wilshire Boulevard North • Stevens Point, WI 54481
(715) 341-4363 • fax (715) 341-1866

WISCONSIN
★ **DAVID L. GLODOWSKI** ★
E31571
STEVENS POINT, WI
PROFESSIONAL ENGINEER

10/15/2015 David L. Glodowski
(Date) **DAVID L. GLODOWSKI, PE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GREMMER/WISDOT
Designer	GREMMER & ASSOCIATES, INC.
Project Manager	WENDY ARNESON
Regional Examiner	CHERYL SIMON
Regional Supervisor	SHANNON RILEY
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 10/23/15 *Wendy Arneson*
(Signature)

E

PROJECT ID: 1620-03-70, 1620-03-71

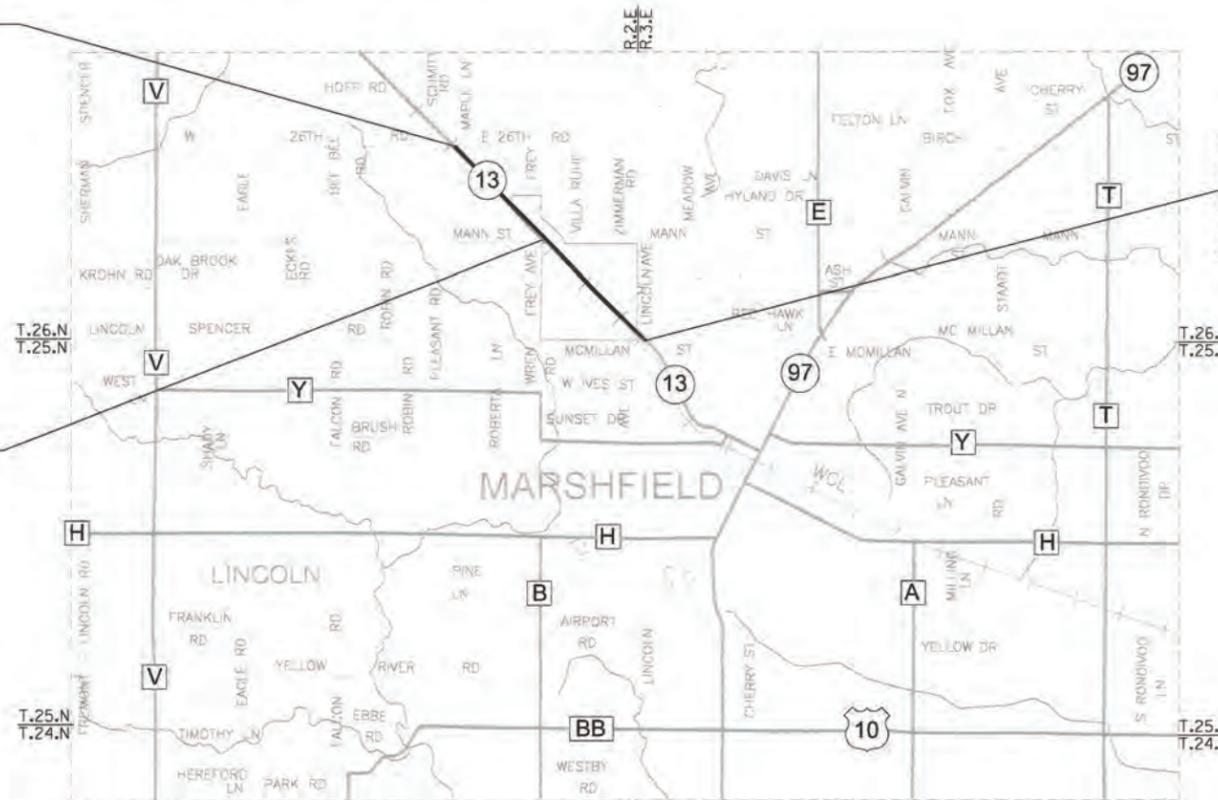
21

COUNTY: MARATHON



END PROJECT 1620-03-71
STA. 143+93.00

END PROJECT 1620-03-70
BEGIN PROJECT 1620-03-71
STA. 83+60.00



BEGIN PROJECT
1620-03-70
STA. 15+95.00
Y=102736.9180
X=133450.1380

DESIGN DESIGNATION

A.A.D.T. 2016	=	11,700
A.A.D.T. 2036	=	13,800
D.H.V. 2036	=	10.7%
D.D.	=	58/42
T. %	=	16.7%
DESIGN SPEED	=	50 MPH
ESALS	=	4,200,000

CONVENTIONAL SYMBOLS

PLAN

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

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	

LAYOUT
SCALE 0 1 MI. 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 1.281 MI. (70)
= 1.143 MI. (71)
= 2.424 MI. (TOTAL)

-Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), Marathon County.

GENERAL NOTES

ALL DISTANCES AND STATIONING SHOWN ON THIS PLAN ARE GROUND VALUES.

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

ASPHALTIC MATERIAL FOR TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION RATE OF 0.05 GALLONS PER SQUARE YARDS ON THE NEW PAVEMENT SURFACE AND 0.07 GALLONS PER SQUARE YARDS ON THE MILLED SURFACE AND SHALL BE PLACED BETWEEN LAYERS OF ASPHALTIC SURFACE AND BETWEEN THE EXISTING PAVEMENT AND NEW ASPHALTIC PAVEMENT.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, AND PASSING LANE.

ORDER OF SECTION 2 SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PAVEMENT MARKING
- TRAFFIC CONTROL

EROSION CONTROL

INLET PROTECTION TYPE B OR C SHALL BE INSTALLED AT ALL INLETS LOCATED WITHIN THE PROJECT LIMITS.

AGENCIES

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
 473 GRIFFITH DRIVE
 WISCONSIN RAPIDS, WI 54494
 CONTACT: MARC HERSHFELD
 (715) 421-7867
 EMAIL MARC.HERSHFELD@WISCONSIN.GOV

UTILITIES

ATC MANAGEMENT, INC.
 801 O'KEEFE ROAD
 P.O. BOX 6113
 DE PERE, WI 54115-6113
 CONTACT: MIKE OLSEN
 (920) 338-6582
 EMAIL MOLSEN@ATCLLC.COM

CHARTER COMMUNICATIONS
 508 NORTH CENTRAL AVENUE
 SUITE 103
 MARSHFIELD, WI 54449
 CONTACT: JESSE GRUNY
 (715) 370-4171 OFFICE
 (715) 651-5605 CELL
 EMAIL JESSE.GRUNY@CHARTER.COM

CITY OF MARSHFIELD - WATER
 2000 SOUTH CENTRAL
 MARSHFIELD, WI 54449
 CONTACT: JOHN RICHMOND
 (715) 387-1195 EXT 360 OFFICE
 (715) 937-8302 CELL
 EMAIL JOHN.RICHMOND@MARSHFIELDUTILITIES.ORG

CITY OF MARSHFIELD - ELECTRICITY
 2000 SOUTH CENTRAL
 P.O BOX 670
 MARSHFIELD, WI 54449
 CONTACT: NICK KUMM
 (715) 387-1195 OFFICE
 (715) 305-3810 CELL
 EMAIL NICOLAS.KUMM@MARSHFIELDUTILITIES.ORG

CITY OF MARSHFIELD - SEWER
 630 SOUTH CENTRAL AVENUE
 SUITE 622
 MARSHFIELD, WI 54449
 CONTACT: TIM CASSIDY
 (715) 486-2034 OFFICE
 (715) 305-1851 CELL
 EMAIL TIM.CASSIDY@CI.MARSHFIELD.WI.US

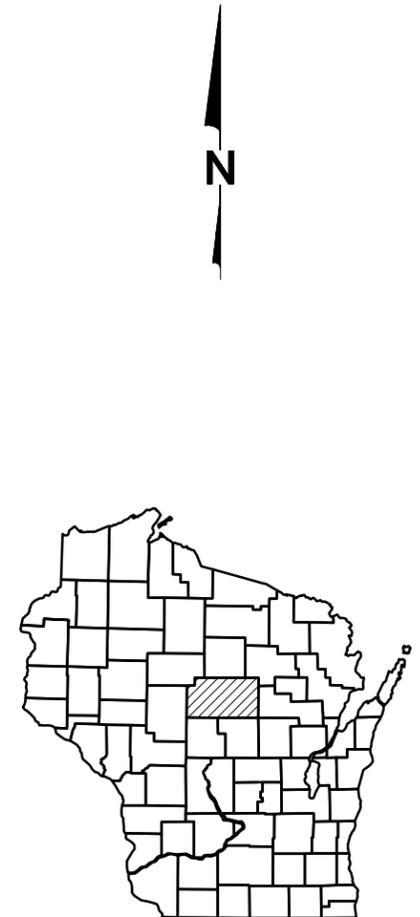
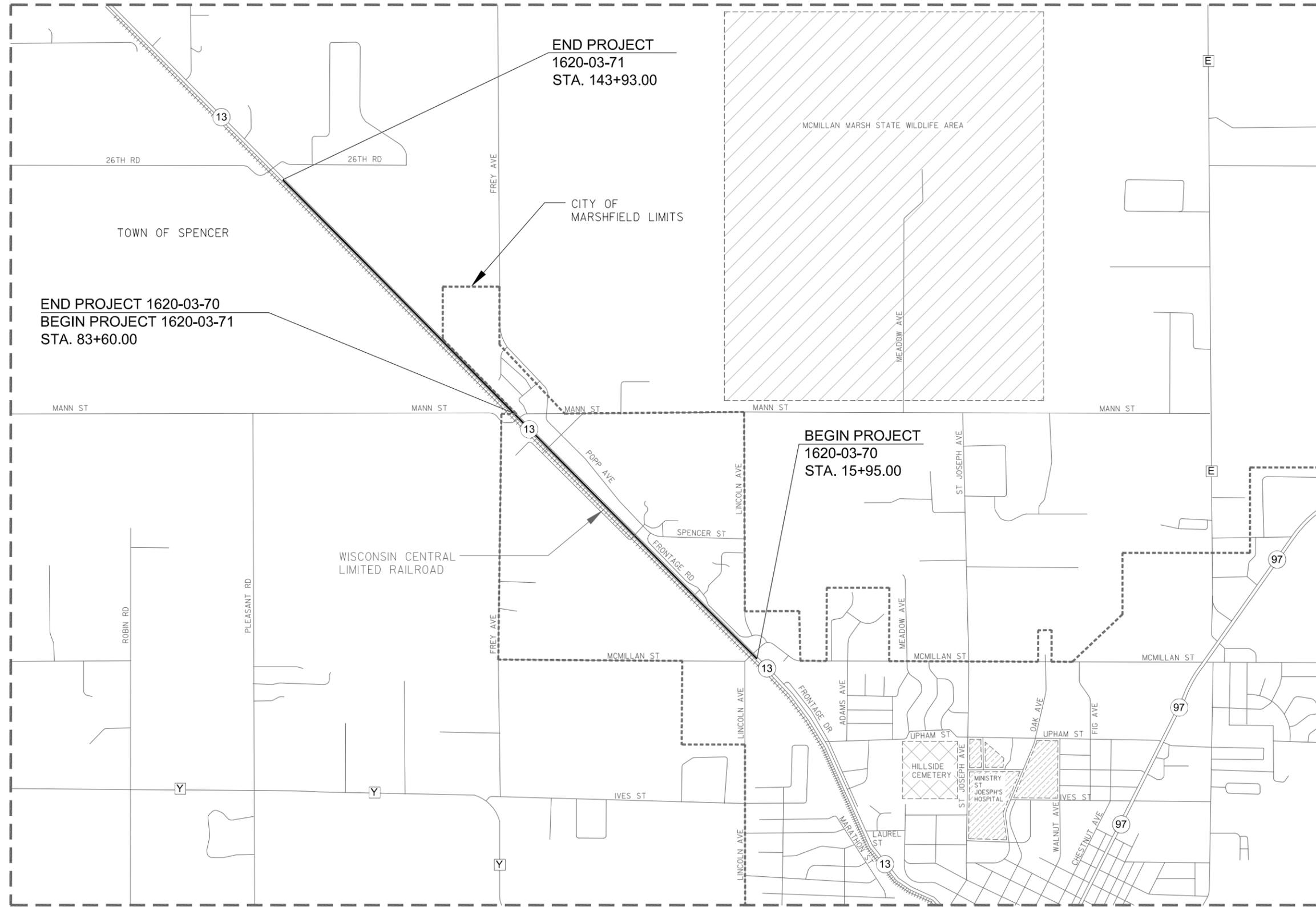
WE ENERGIES - GAS/PETROLEUM (SEND WE ENERGIES CORRESPONDENCE TO)
 333 WEST EVERETT STREET, ROOM A299
 MILWAUKEE, WI 53203
 CONTACT: LATROY BRUMFIELD
 (414) 221-5617
 EMAIL LATROY.BRUMFIELD@WE-ENERGIES.COM

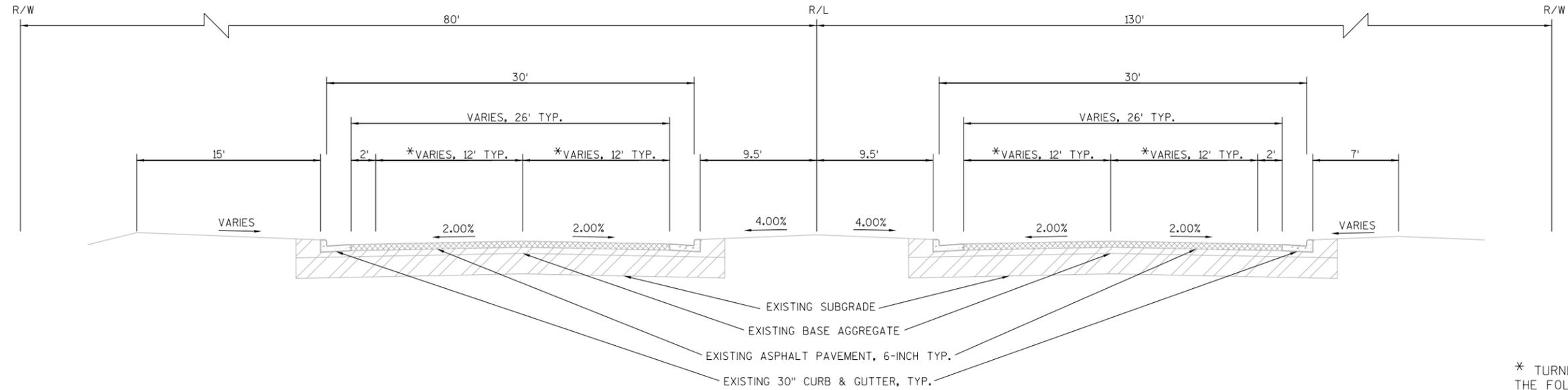
WE ENERGIES - GAS/PETROLEUM (CONSTRUCTION FIELD CONTACT)
 1921 8TH STREET SOUTH
 WISCONSIN RAPIDS, WI 54494
 CONTACT: RYAN MIENTKE
 (715) 421-7249 OFFICE
 (715) 421-9293 CELL
 EMAIL RYAN.MIENTKE@WE-ENERGIES.COM



Dial  or (800)242-8511

www.DiggersHotline.com

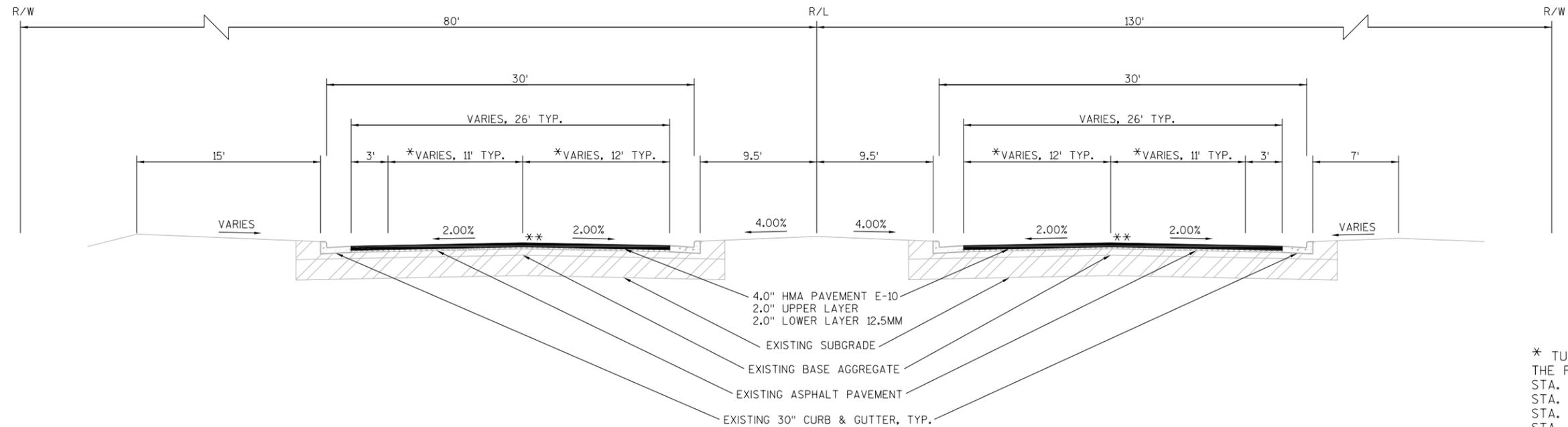




TYPICAL EXISTING SECTION

STH 13
 15+95 TO 83+60 (1620-03-70)
 83+60 TO 89+00 LT (1620-03-71)
 83+60 TO 90+00 RT (1620-03-71)

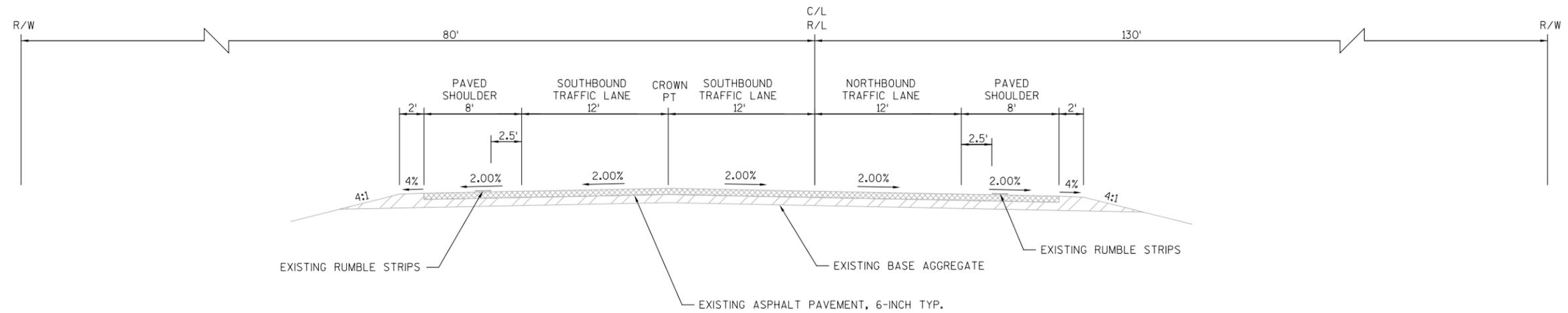
* TURNING LANES LOCATED AT THE FOLLOWING LOCATIONS:
 STA. 25+24 - STA. 28+07 NB
 STA. 29+63 - STA. 33+14.50 SB
 STA. 43+12 - STA. 46+40 NB
 STA. 45+38 - STA. 51+45 SB
 STA. 71+95 - STA. 74+45 NB
 STA. 73+24 - STA. 77+93 SB
 STA. 77+84 - STA. 81+48 NB
 STA. 82+70 - STA. 86+51 SB



TYPICAL FINISHED SECTION

STH 13
 15+95 TO 83+60 (1620-03-70)
 83+60 TO 89+00 LT (1620-03-71)
 83+60 TO 90+00 RT (1620-03-71)

* TURNING LANES LOCATED AT THE FOLLOWING LOCATIONS:
 STA. 25+24 - STA. 28+07 NB
 STA. 29+63 - STA. 33+14.50 SB
 STA. 43+12 - STA. 46+40 NB
 STA. 45+38 - STA. 51+45 SB
 STA. 71+95 - STA. 74+45 NB
 STA. 73+24 - STA. 77+93 SB
 STA. 77+84 - STA. 81+48 NB
 STA. 82+70 - STA. 86+51 SB
 ** REHEATING HMA PAVEMENT LONGITUDINAL JOINTS

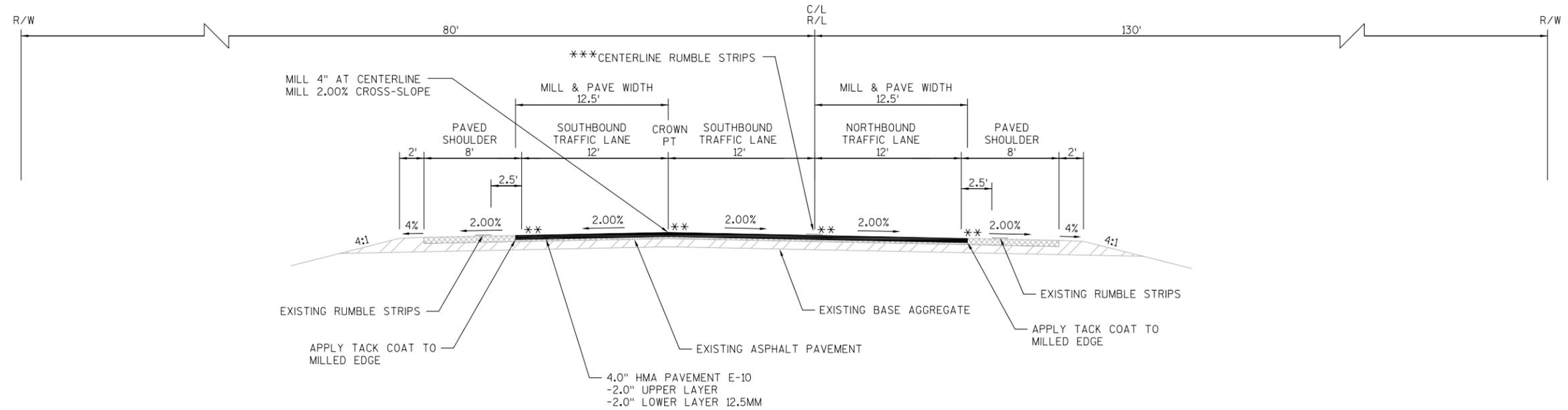


TYPICAL SECTION NOTES:

- EXISTING CENTER MEDIAN FROM 89+00 TO 93+25

TYPICAL EXISTING SECTION

STH 13
 89+00 TO 143+93 LT
 90+00 TO 143+93 RT

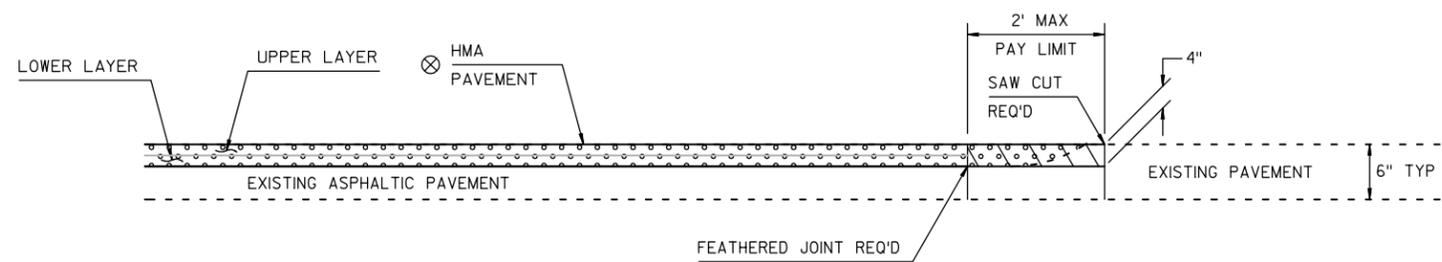


TYPICAL SECTION NOTES:

- EXISTING CENTER MEDIAN FROM 89+00 TO 93+25
- ** REHEATING HMA PAVEMENT LONGITUDINAL JOINTS
- *** STATION 95+07 TO 138+50

TYPICAL FINISHED SECTION

STH 13
 89+00 TO 143+93 LT
 90+00 TO 143+93 RT



- ⊗ SEE TYPICAL SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS
- ◻ REMOVING ASPHALTIC SURFACE, MILLING
- ◻ REMOVING ASPHALTIC SURFACE, BUTT JOINTS

BUTT JOINT DETAIL FOR MILLED ASPHALTIC PAVEMENTS

LEGEND

- Ⓐ PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)
- Ⓑ PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)
- Ⓒ PAVEMENT MARKING EPOXY 4-INCH (WHITE DASHED LINE) (12.5' SEGMENTS, 37.5' GAP)
- Ⓓ PAVEMENT MARKING EPOXY 4-INCH (YELLOW DASHED LINE) (12.5' SEGMENTS, 37.5' GAP)
- Ⓔ PAVEMENT MARKING EPOXY 4-INCH (YELLOW SOLID DOUBLE LINE)
- Ⓕ PAVEMENT MARKING EPOXY 4-INCH (YELLOW DASHED LINE) (2' SEGMENTS, 6' GAP)
- Ⓖ PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- Ⓗ PAVEMENT MARKING EPOXY STOP LINE 18-INCH (WHITE)
- Ⓘ PAVEMENT MARKING EPOXY DIAGONAL 8-INCH (WHITE)



BEGIN PROJECT (1620-03-70)
STA. 15+95
(MATCH EXISTING MARKING)

TAPER PAVEMENT MARKING FROM 2' TO 3' OFFSET FROM FLANGE TO MATCH EXISTING.
50'

TAPER PAVEMENT MARKING FROM 2' TO 3' OFFSET FROM FLANGE TO MATCH EXISTING.
50'

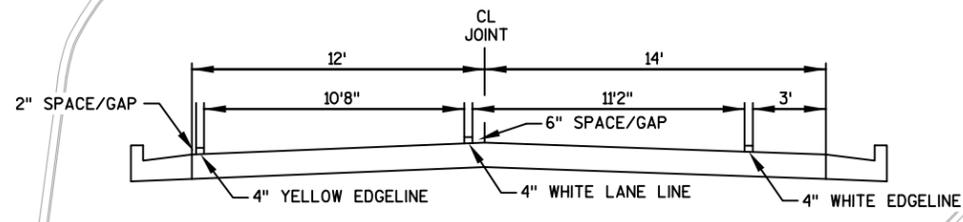


STH 13

BP: 10+00.00

PAVEMENT MARKING 4-INCH WHITE TO BE PLACED FROM STA 5+00 - STA 9+50 (REMOVAL LOCATION FOR TRAFFIC CONTROL)

TYPICAL PAVEMENT MARKING LANE WIDTH(S)



WISCONSIN CENTRAL LTD. RAILROAD

WISCONSIN

STH 13

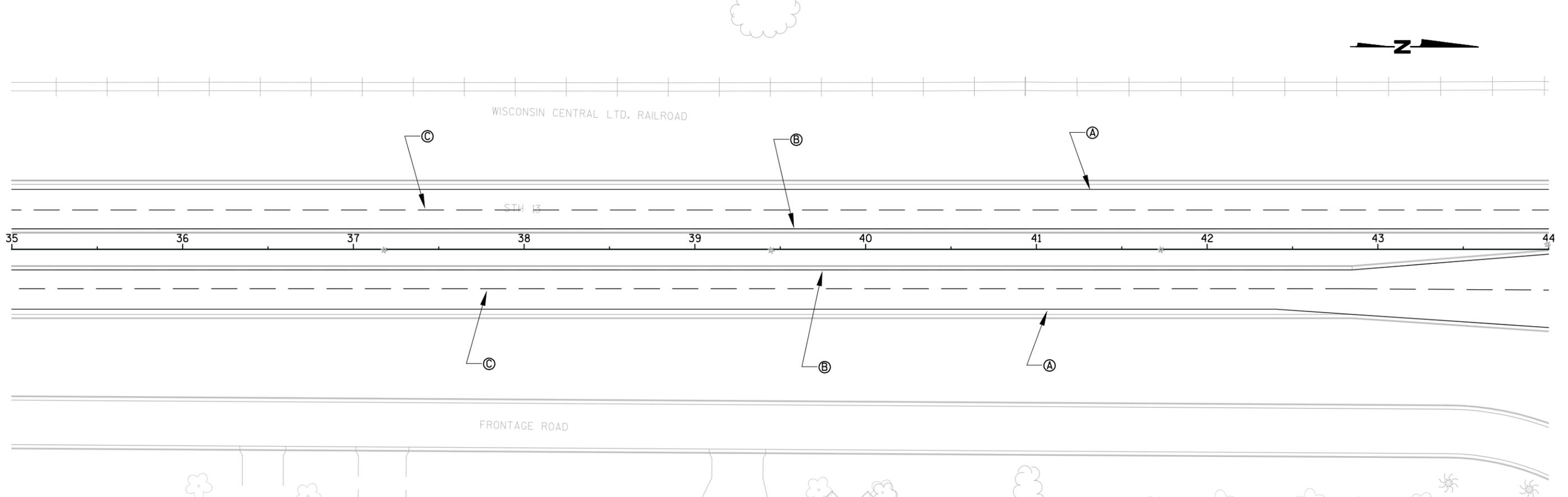
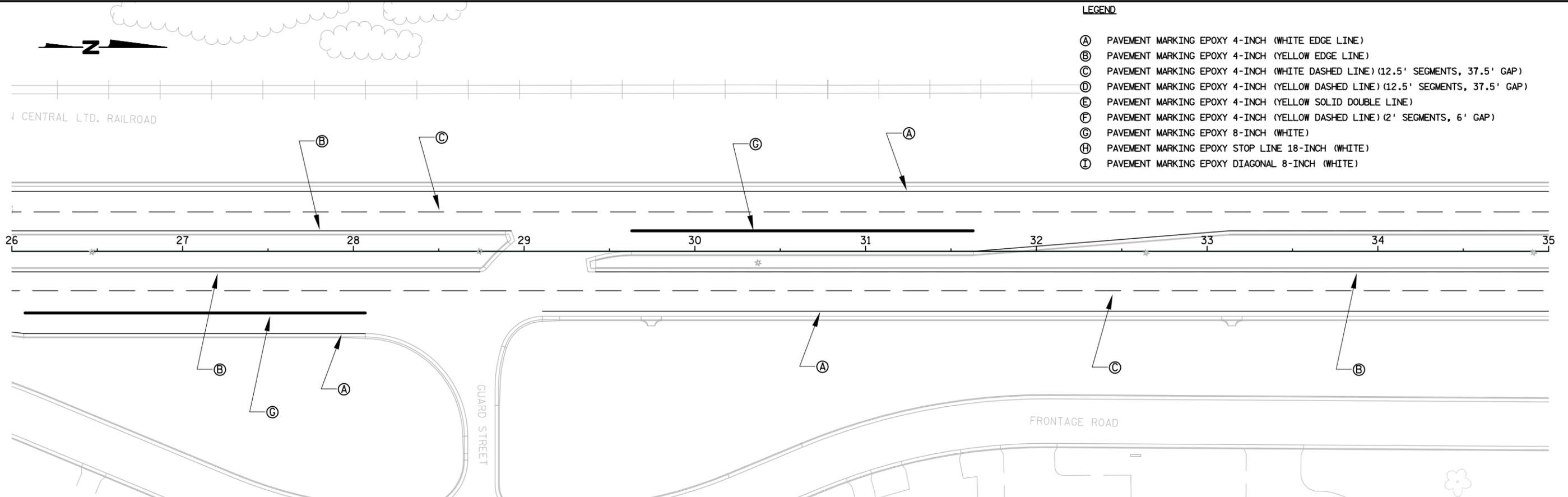
STH 13

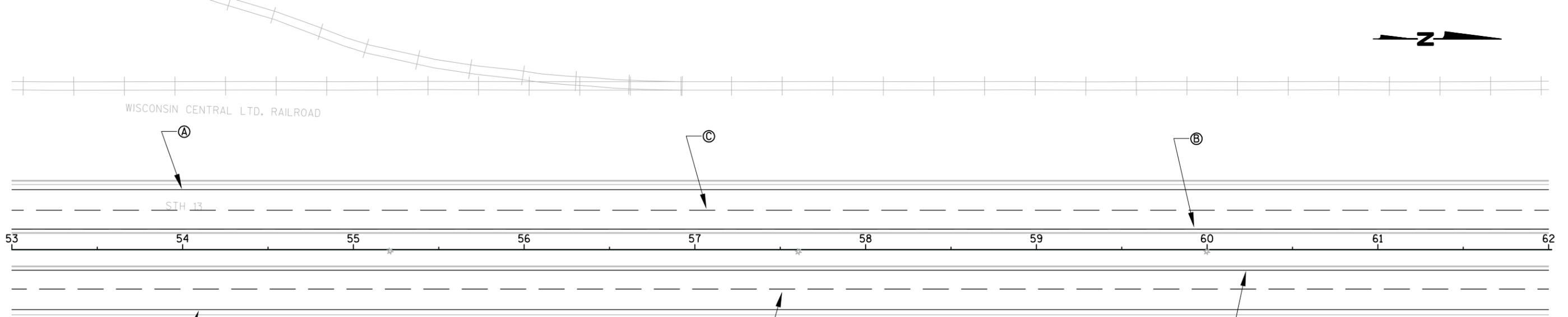
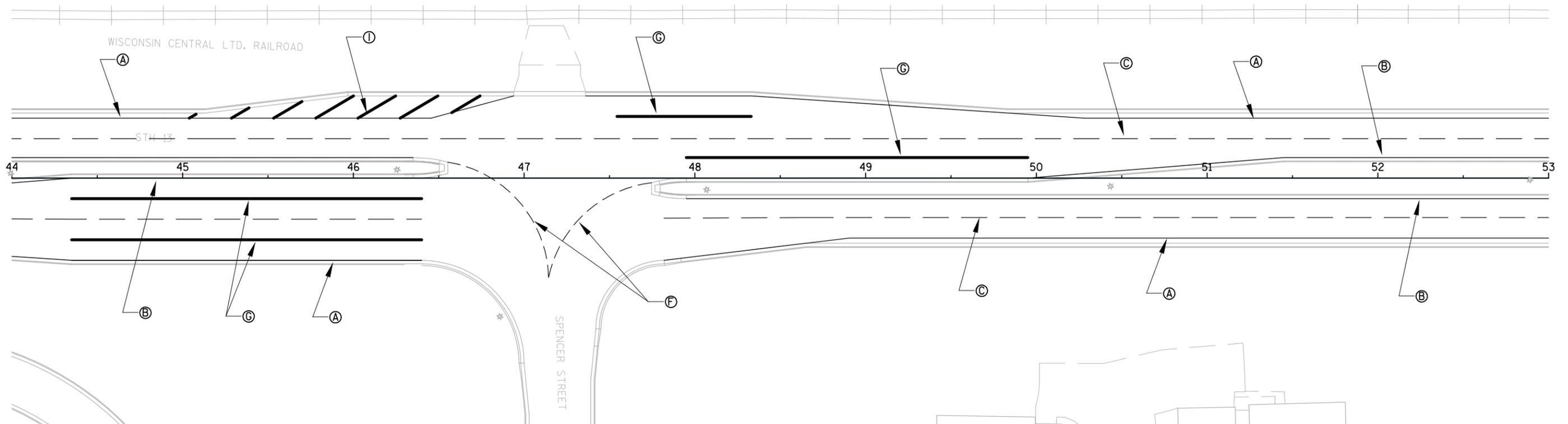
FRONTAGE ROAD

FRONTAGE ROAD

LEGEND

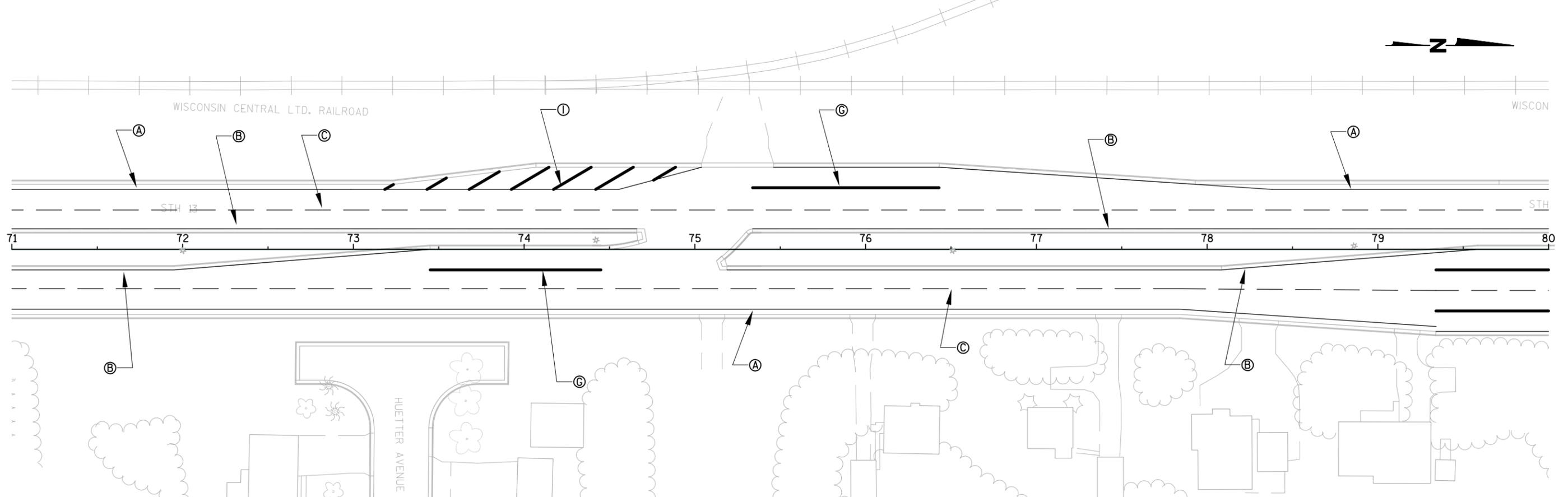
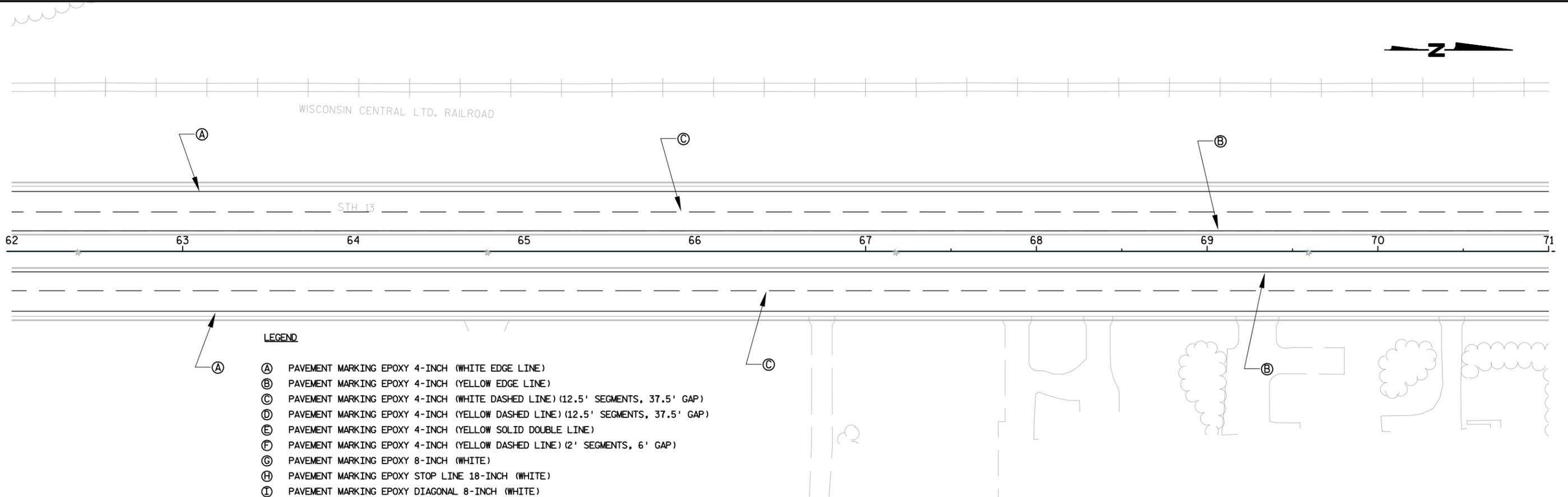
- (A) PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)
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- (E) PAVEMENT MARKING EPOXY 4-INCH (YELLOW SOLID DOUBLE LINE)
- (F) PAVEMENT MARKING EPOXY 4-INCH (YELLOW DASHED LINE) (2' SEGMENTS, 6' GAP)
- (G) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (H) PAVEMENT MARKING EPOXY STOP LINE 18-INCH (WHITE)
- (I) PAVEMENT MARKING EPOXY DIAGONAL 8-INCH (WHITE)

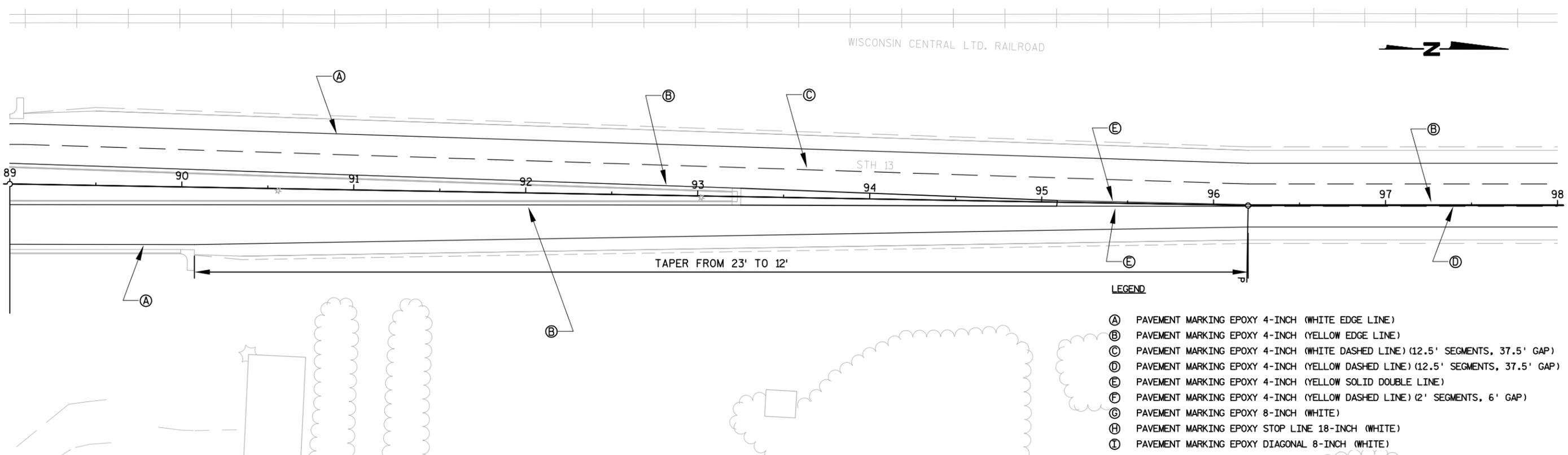
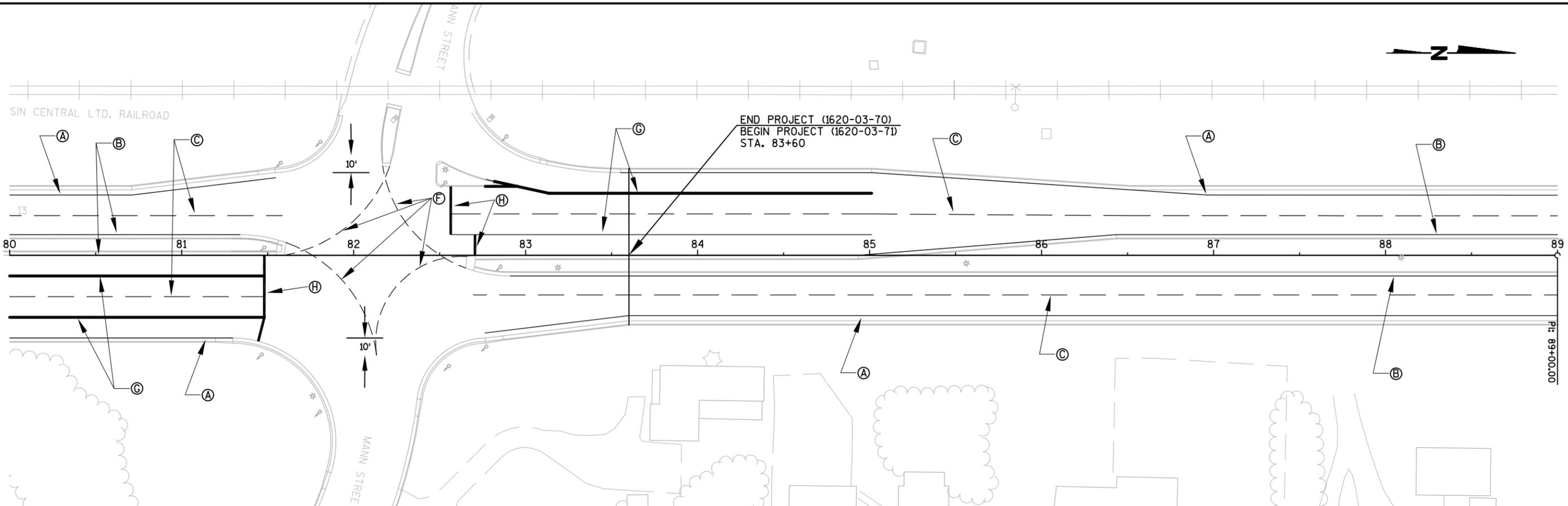




LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)
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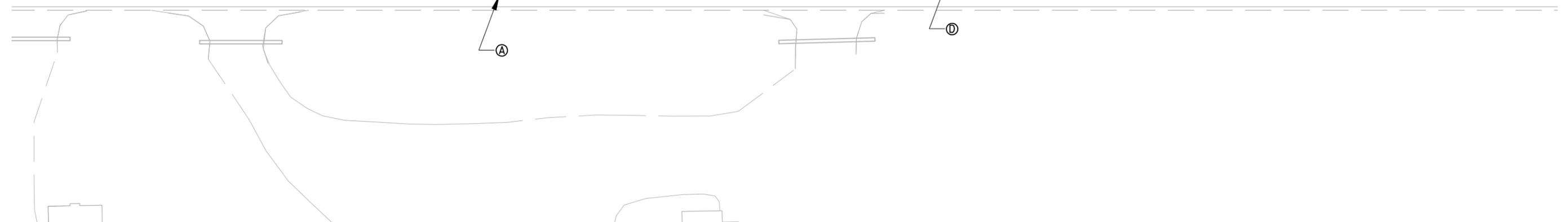
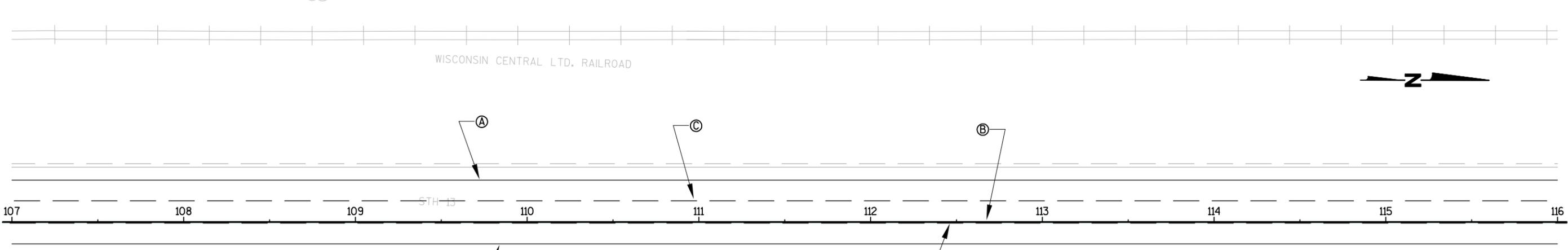
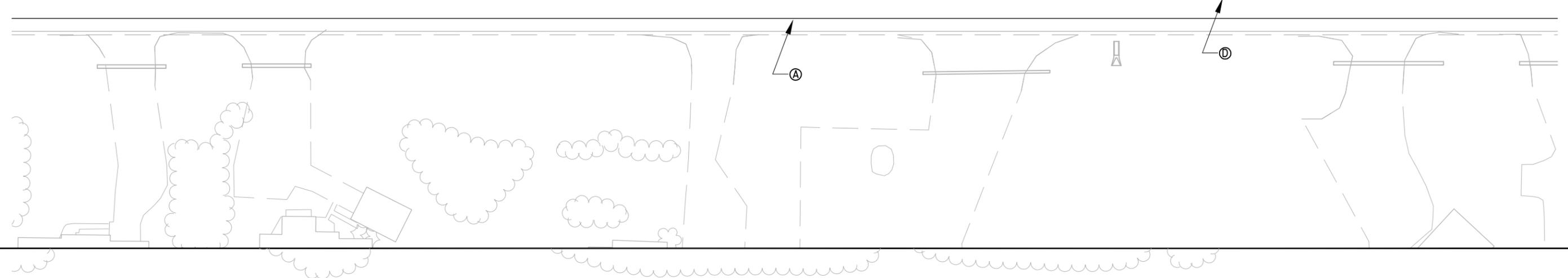
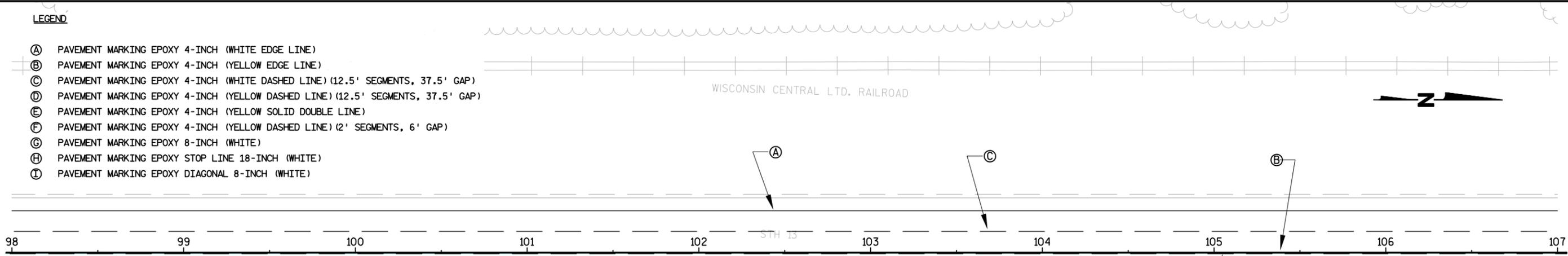


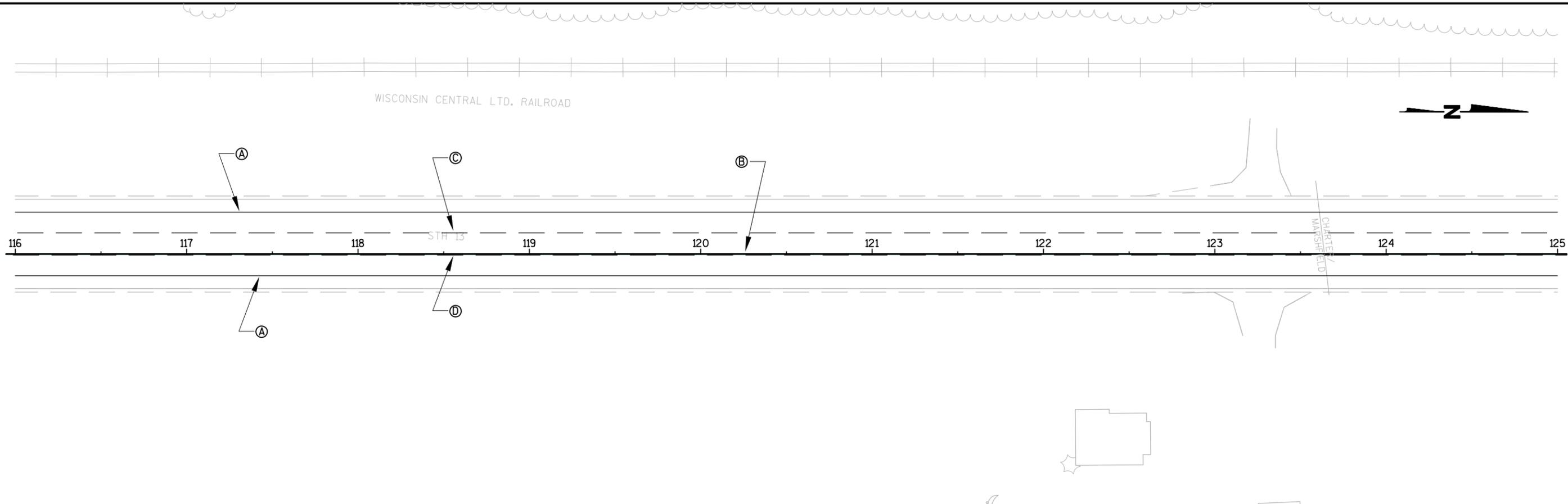


- LEGEND**
- (A) PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)
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LEGEND

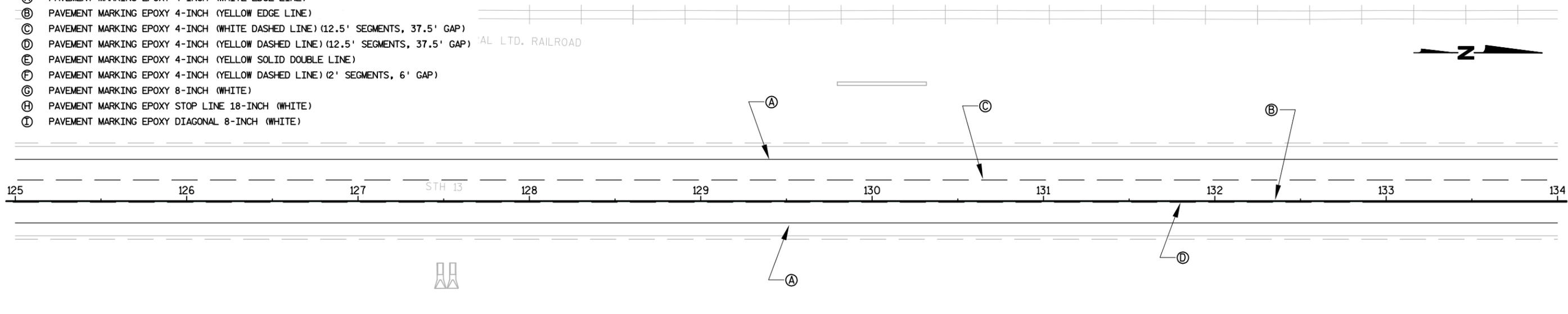
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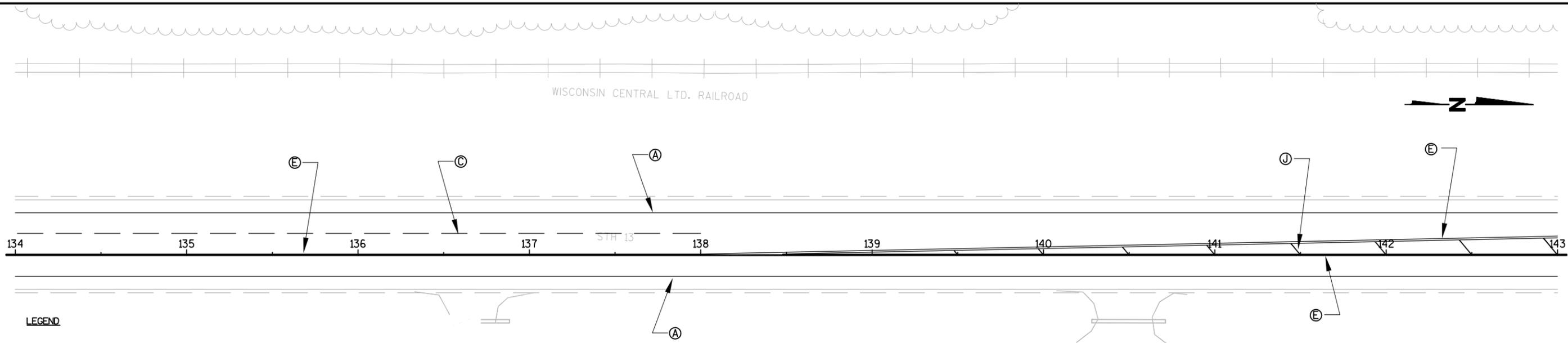




LEGEND

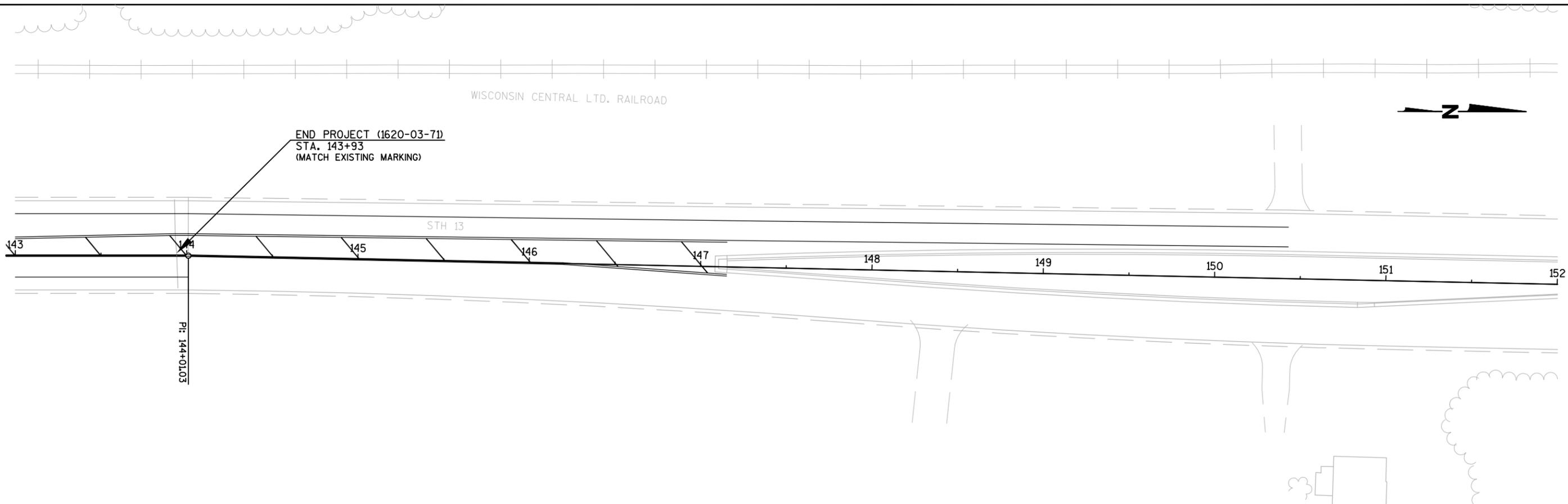
- (A) PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)
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- (I) PAVEMENT MARKING EPOXY DIAGONAL 8-INCH (WHITE)





LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)
- (B) PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)
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- (G) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (H) PAVEMENT MARKING EPOXY STOP LINE 18-INCH (WHITE)
- (I) PAVEMENT MARKING EPOXY DIAGONAL 8-INCH (WHITE)
- (J) PAVEMENT MARKING EPOXY DIAGONAL 12-INCH (YELLOW)



GENERAL TRAFFIC CONTROL NOTES:

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS ARE APPROXIMATE AND SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

DURING HOURS OF DARKNESS ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH WARNING LIGHTS, TYPE A.

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

ALL SIGNS OR PAVEMENT MARKING, TEMPORARY OR EXISTING, WHICH MAY CONFLICT WITH THE CONSTRUCTION TRAFFIC PATTERN SHALL BE REMOVED OR COVERED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE "WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (WMUTCD), A SUPPLEMENT TO THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

PROJECT SHALL HAVE A REGULATORY SPEED OF 35 M.P.H. FOR THE 1620-03-70 ID AND 45 M.P.H FOR THE 1620-03-71 ID.

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

SPACE DRUMS AT 50' UNLESS OTHERWISE NOTED OR IN TAPER.

PCMS SHALL BE EQUIPPED WITH "MAX 10 FT / WIDTH / WIS 13" "STARTING / XX/XX/XX" 2 WEEKS BEFORE THE WIDTH RESTRICTION.



W12-52

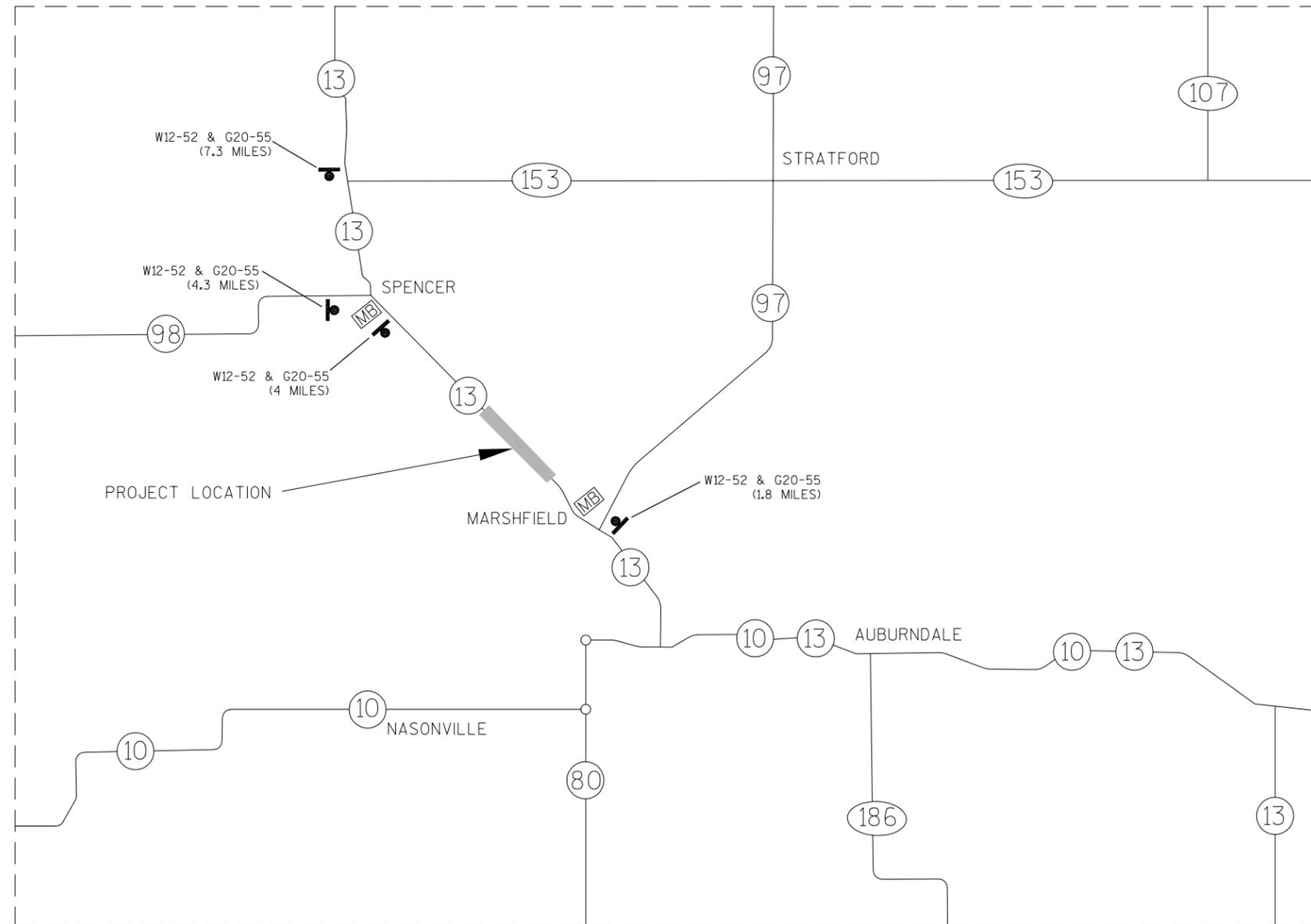


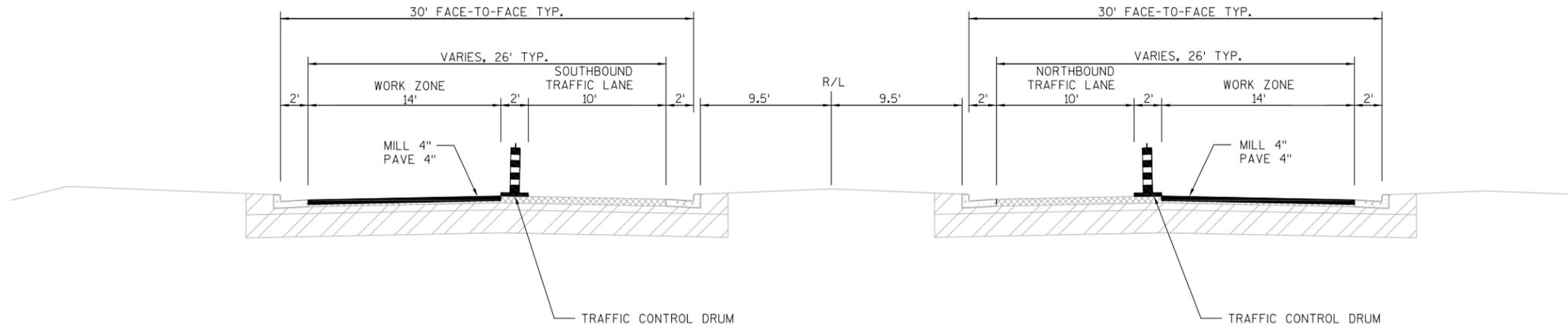
G20-55
84"X24"

LEGEND (ALL TRAFFIC CONTROL SHEETS)

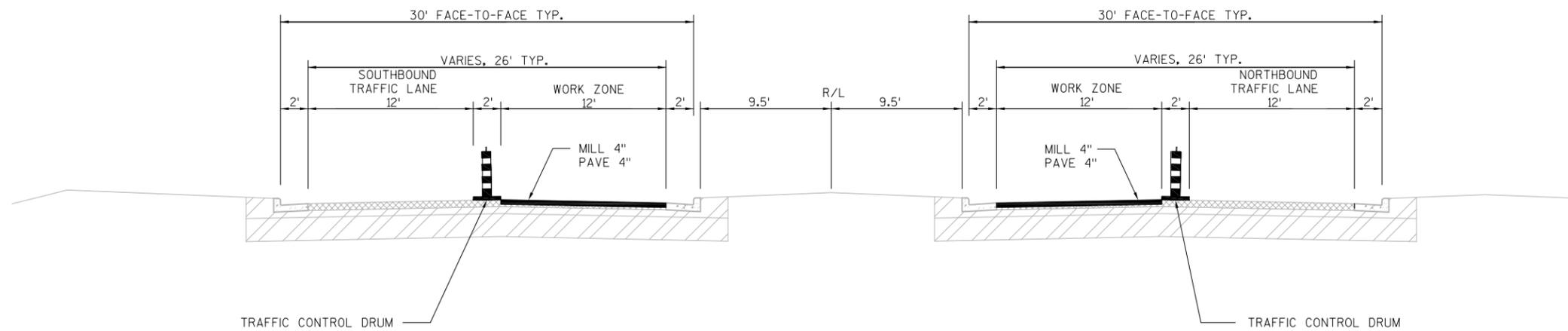
-  TRAFFIC CONTROL SIGN
-  TRAFFIC CONTROL SIGNS PCMS
-  TRAFFIC CONTROL DRUM (STANDARD & STANDARD W/TYPE C)
-  TRAFFIC CONTROL DRUM (SLIMLINE)
-  TYPE III BARRICADE
-  WORK ZONE
-  TRAFFIC FLOW DIRECTION

LOCATIONS FOR PCMS AND W12-52 SIGNS

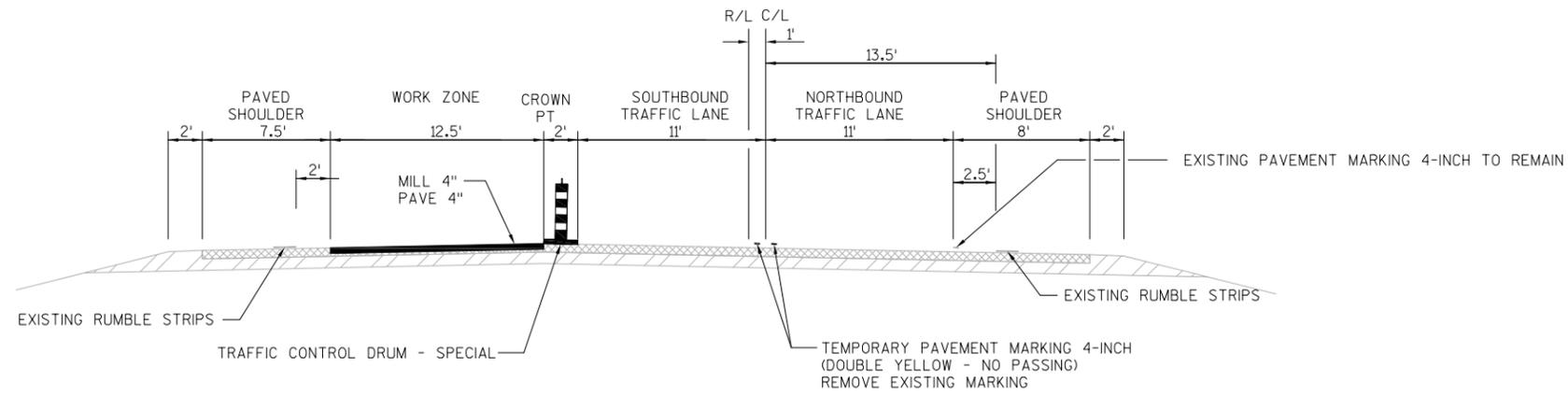




TYPICAL SECTION
 TRAFFIC CONTROL STAGE 1
 STH 13
 14+40 TO 83+60 (1620-03-70)
 83+60 TO 89+00 LT (1620-03-71)
 83+60 TO 90+00 RT (1620-03-71)

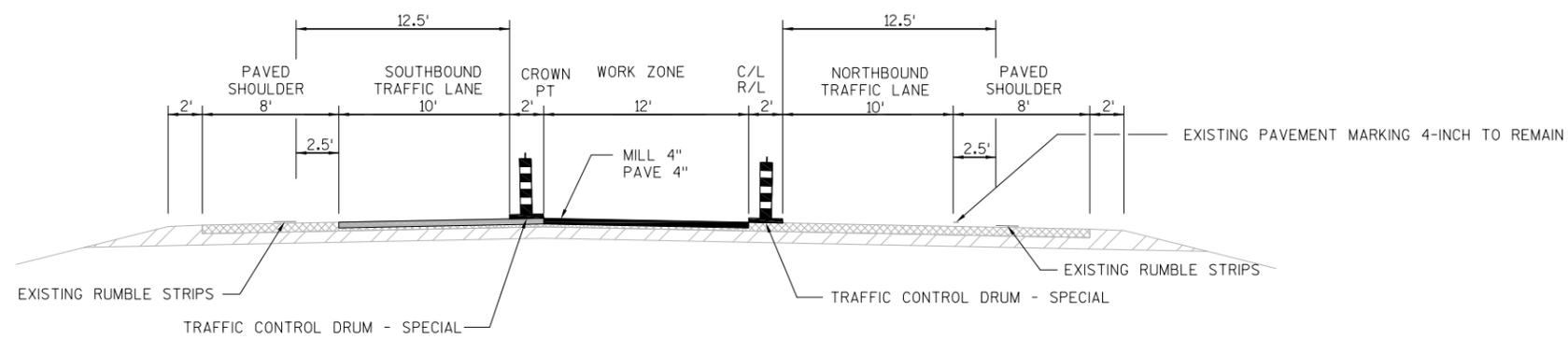


TYPICAL SECTION
 TRAFFIC CONTROL STAGE 2
 STH 13
 14+40 TO 83+60 (1620-03-70)
 83+60 TO 89+00 LT (1620-03-71)
 83+60 TO 90+00 RT (1620-03-71)



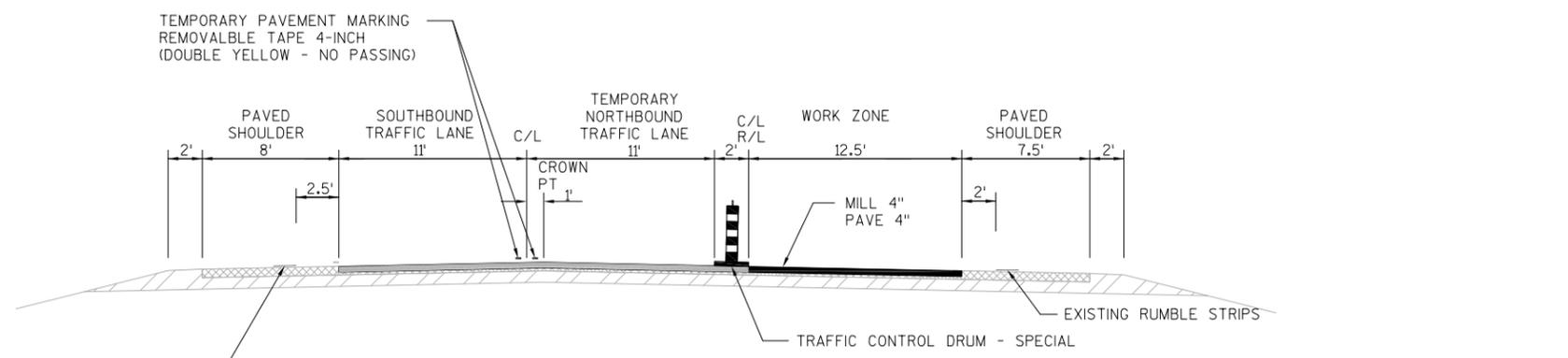
TYPICAL SECTION
 TRAFFIC CONTROL STAGE 1
 STH 13
 89+00 TO 143+93 LT
 90+00 TO 143+93 RT

- TYPICAL SECTION NOTES:**
- EXISTING CENTER MEDIAN FROM 89+00 TO 95+10
 - STAGE 1A WORK CONSISTS OF 4" MILL & RESURFACE OF NORTHBOUND TRAFFIC LANE FROM 92+00 TO 100+00.



TYPICAL SECTION
 TRAFFIC CONTROL STAGE 2
 STH 13
 89+00 TO 143+93 LT
 90+00 TO 143+93 RT

- TYPICAL SECTION NOTES:**
- EXISTING CENTER MEDIAN FROM 89+00 TO 95+10

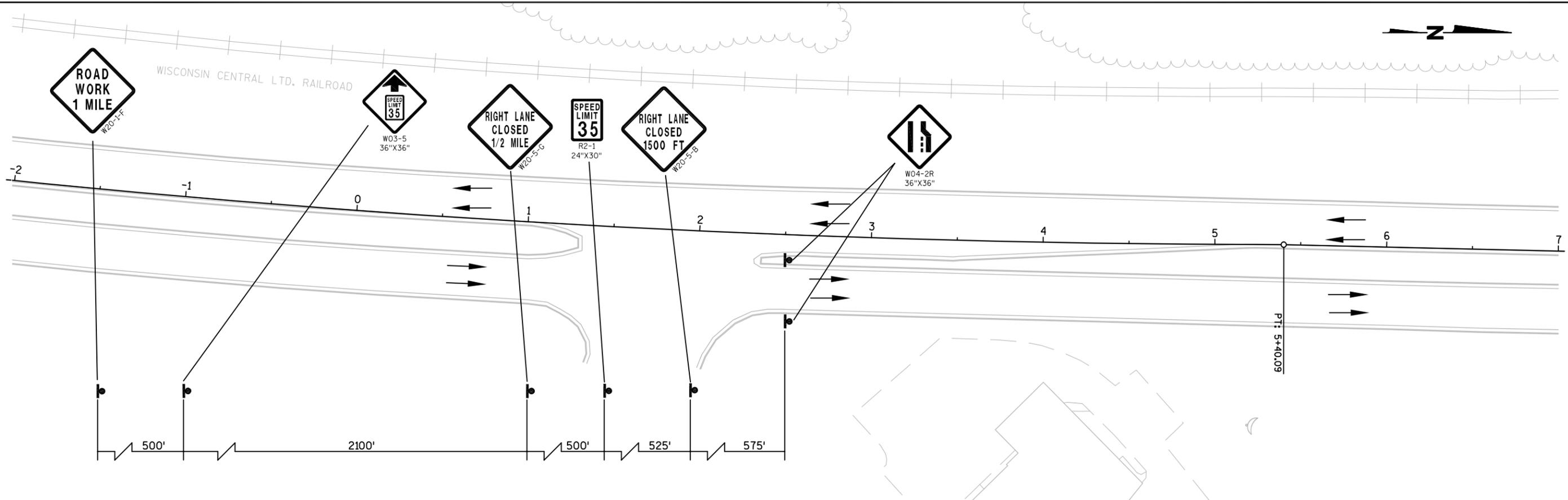


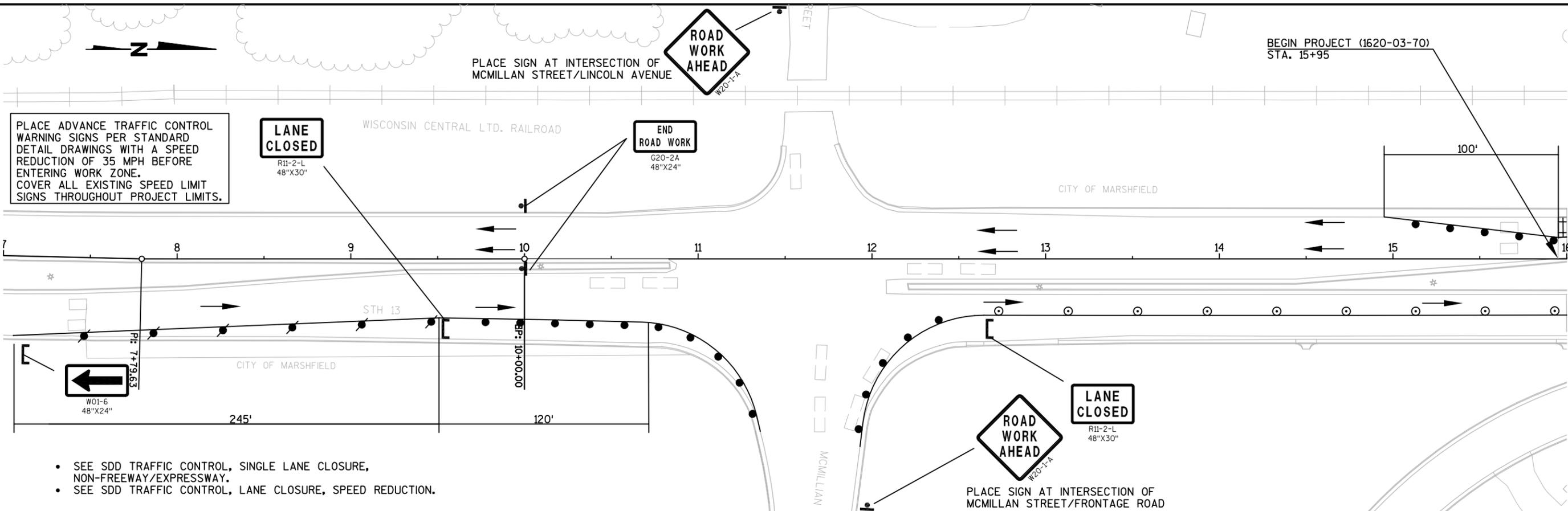
TYPICAL SECTION
 TRAFFIC CONTROL STAGE 3
 STH 13
 89+00 TO 143+93 LT
 90+00 TO 143+93 RT

- TYPICAL SECTION NOTES:**
- EXISTING CENTER MEDIAN FROM 89+00 TO 95+10
 - STAGE 3 WORK STARTS AT 100+00 RT (END OF STAGE 1A WORK).

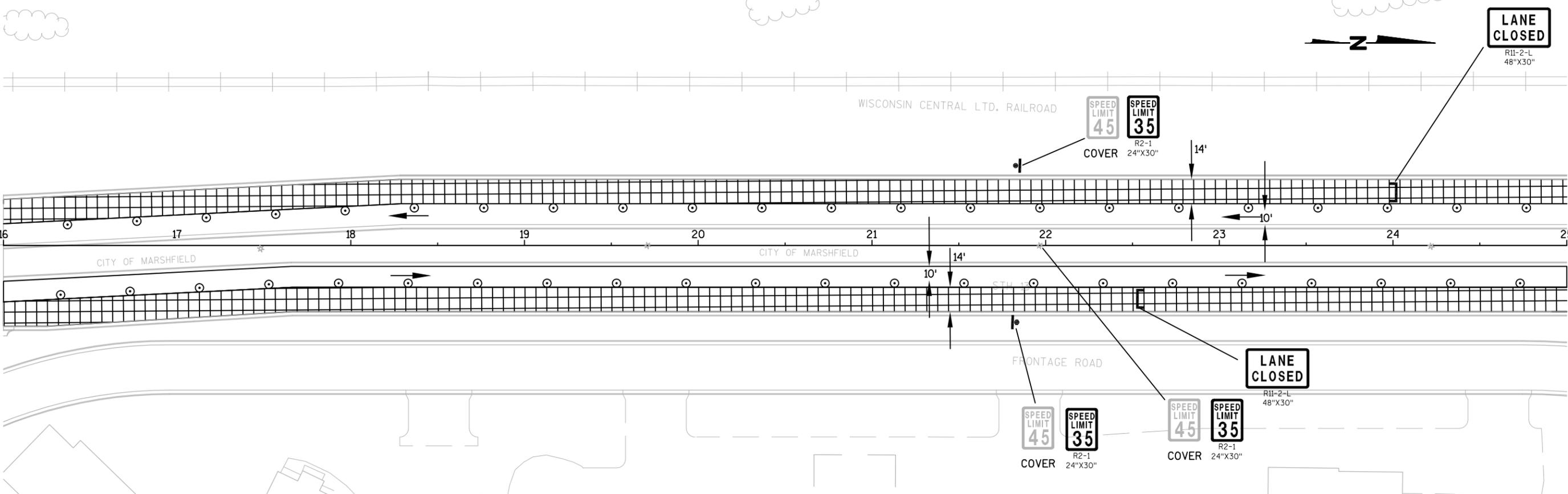
- SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY.
- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION.

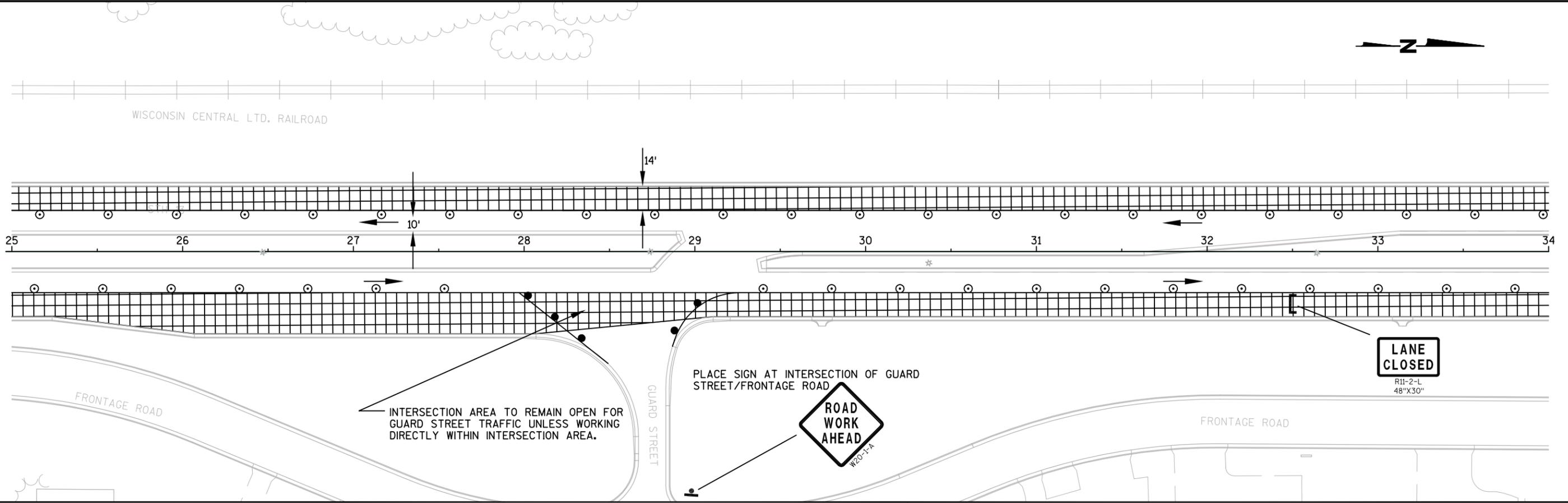
PLACE ADVANCE TRAFFIC CONTROL WARNING SIGNS PER STANDARD DETAIL DRAWINGS WITH A SPEED REDUCTION OF 10 MPH THROUGHOUT THE WORK ZONE.
COVER ALL EXISTING SPEED LIMIT SIGNS THROUGHOUT PROJECT LIMITS.



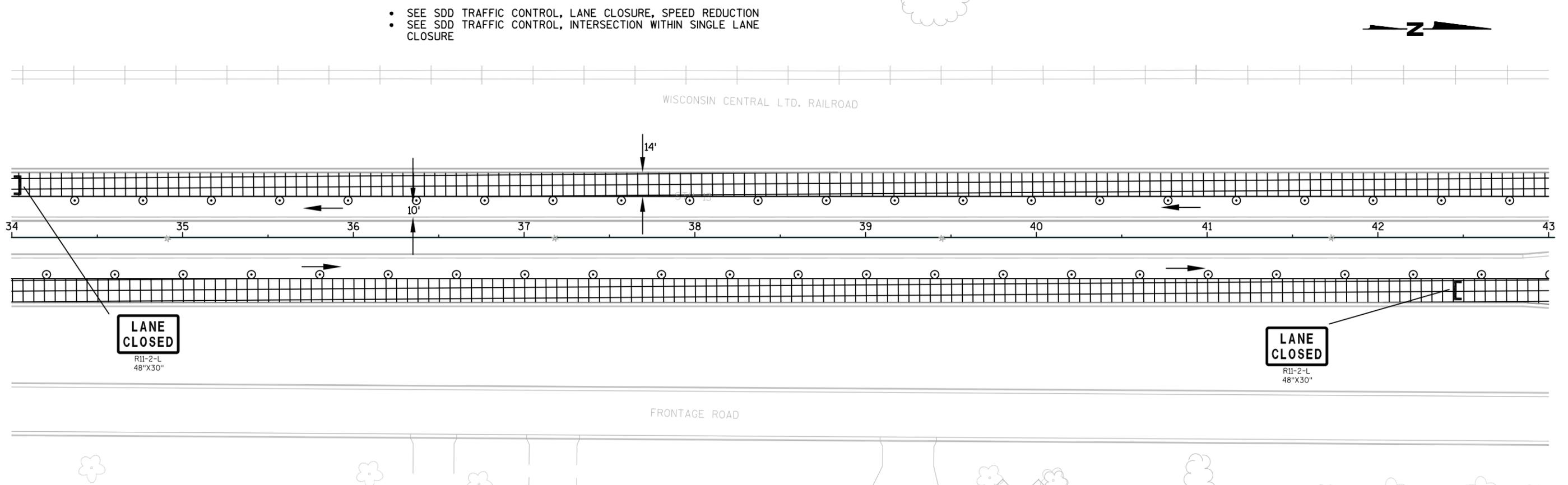


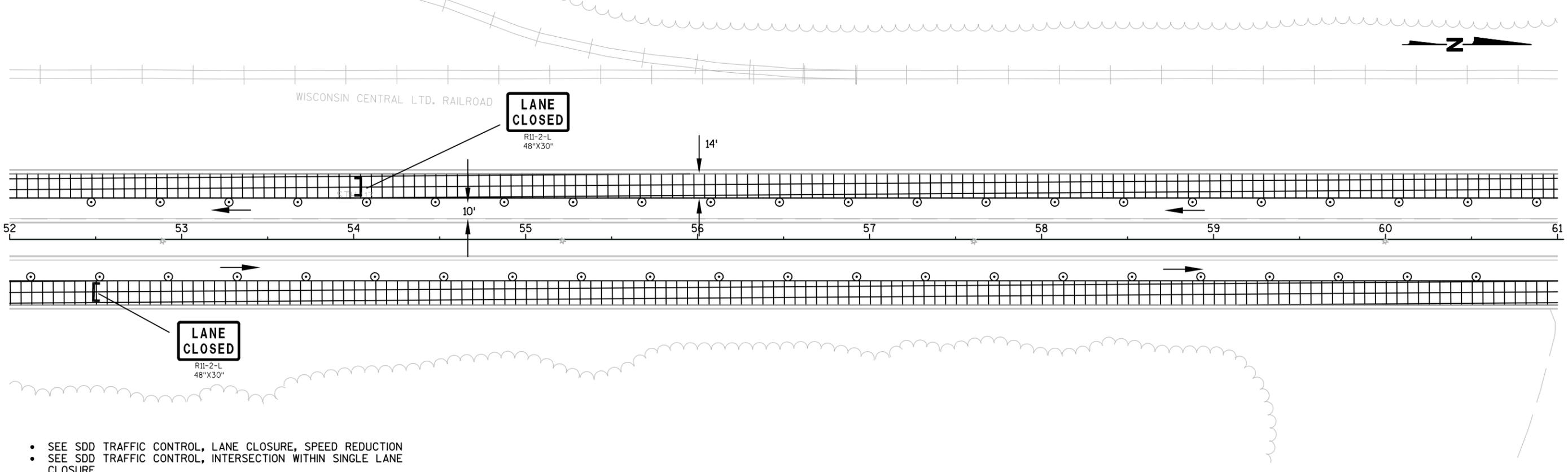
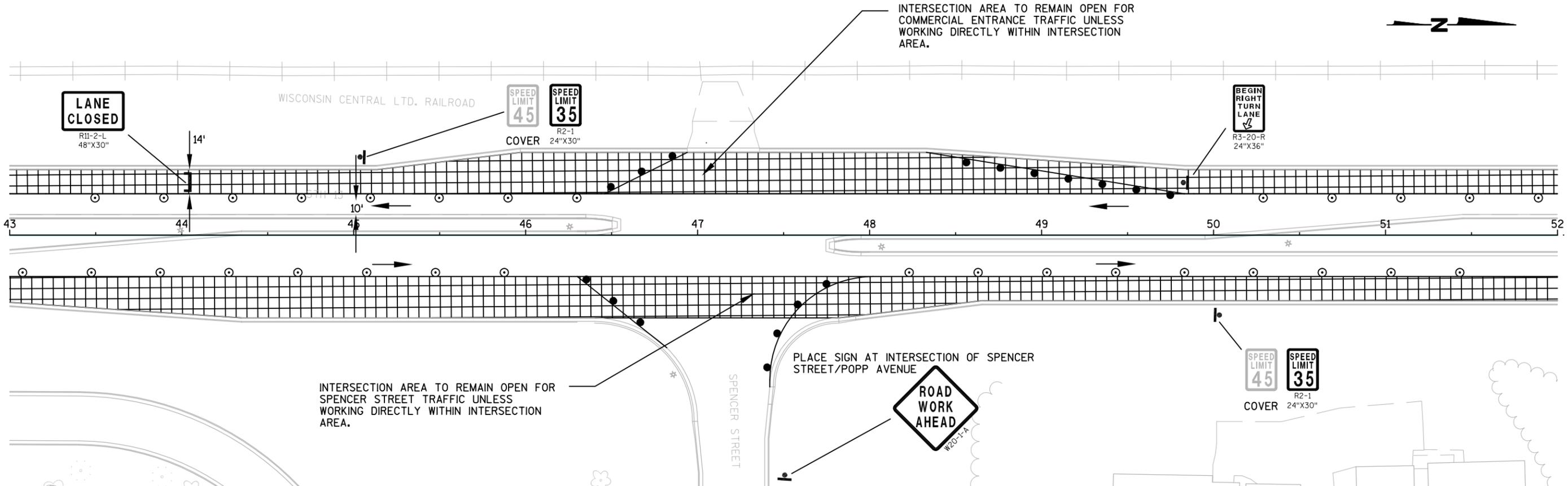
- SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY.
- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION.



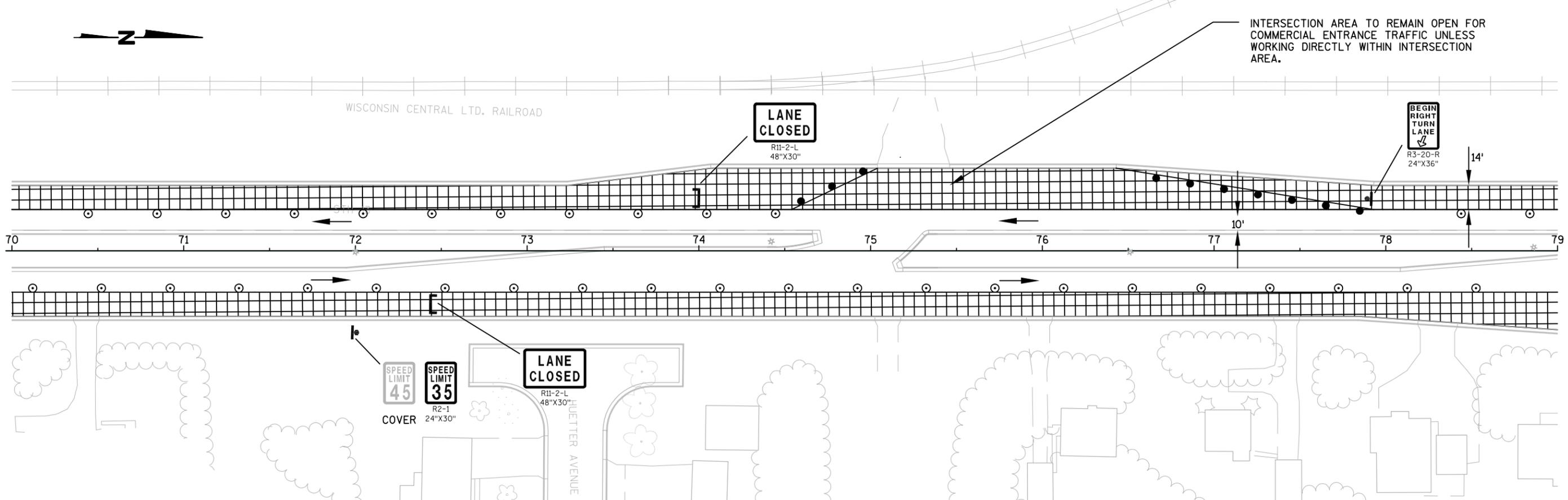
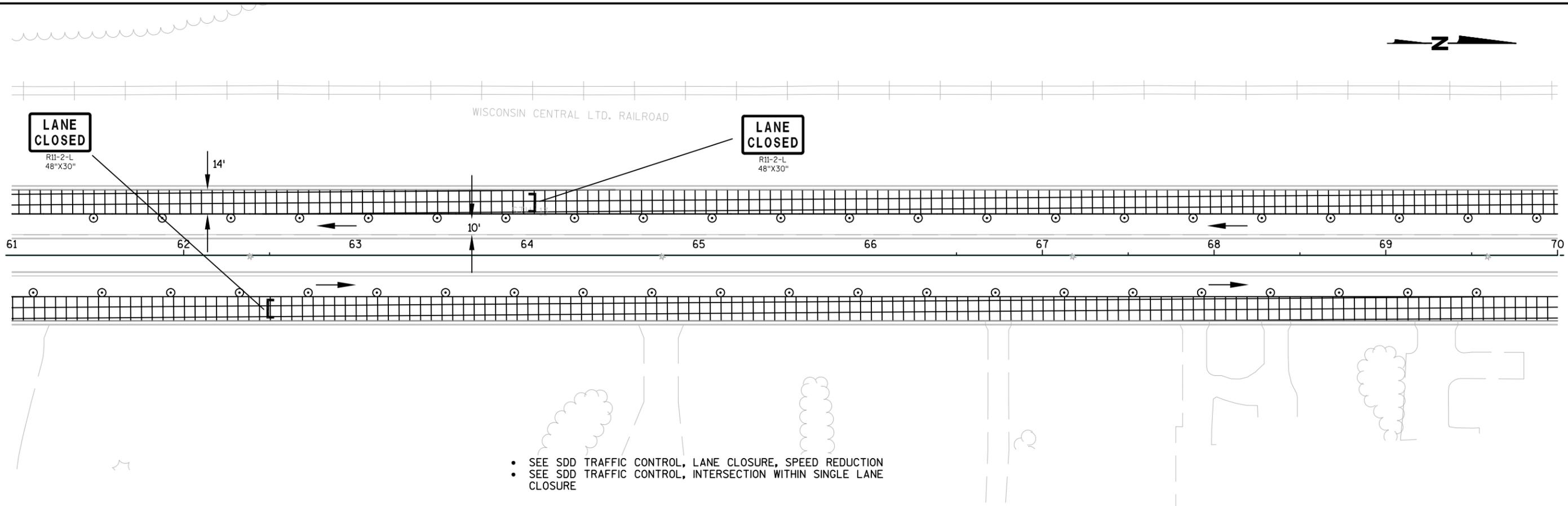


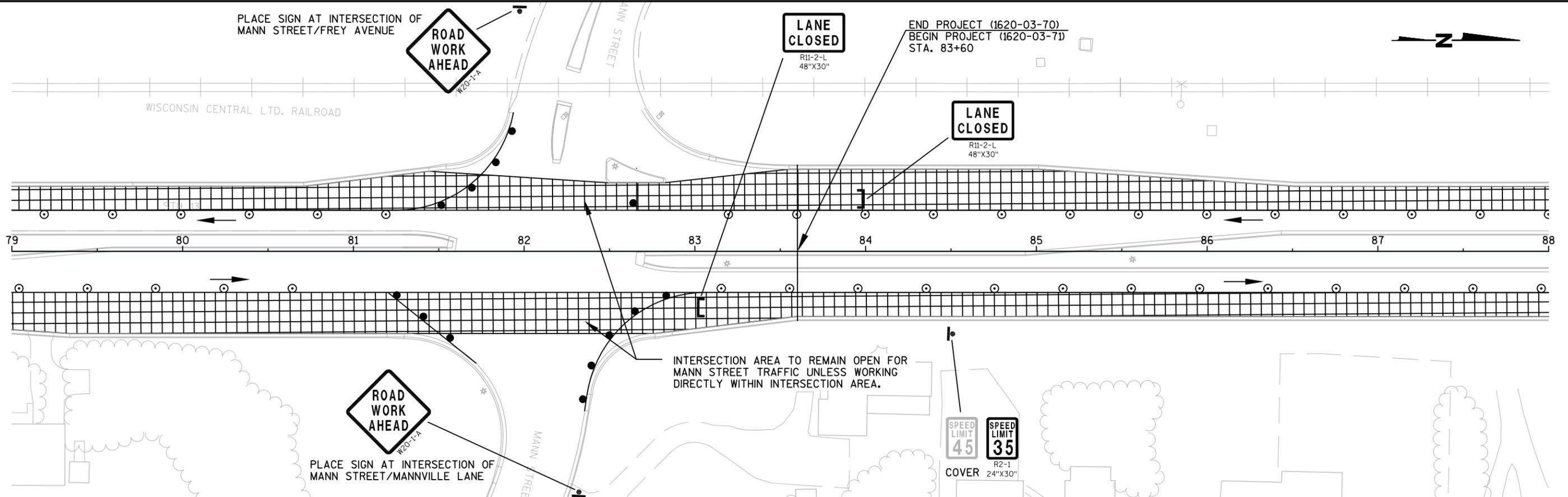
- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE



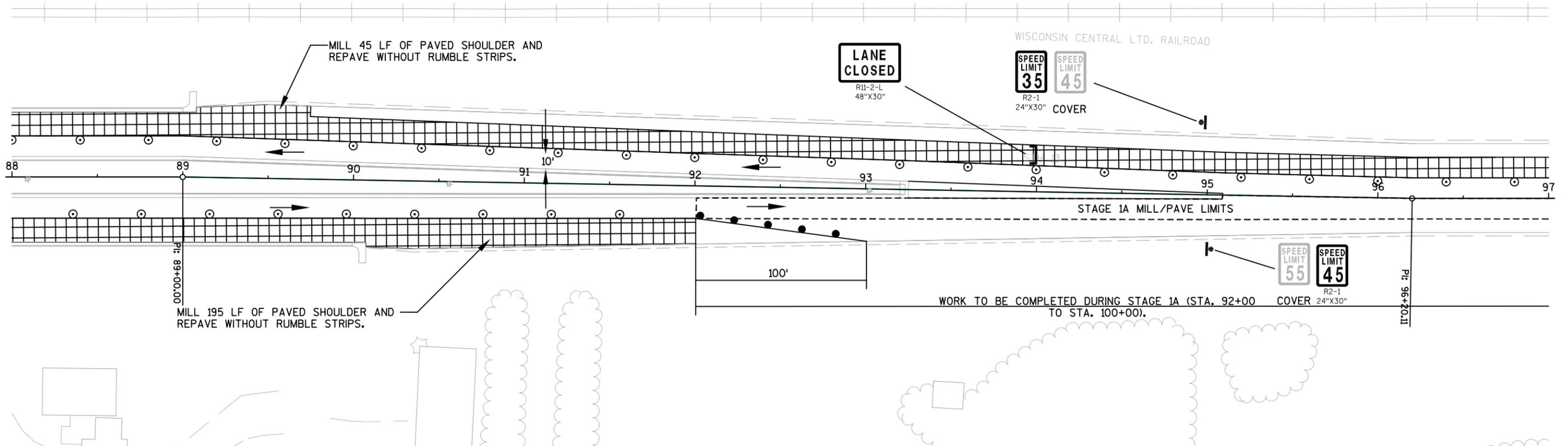


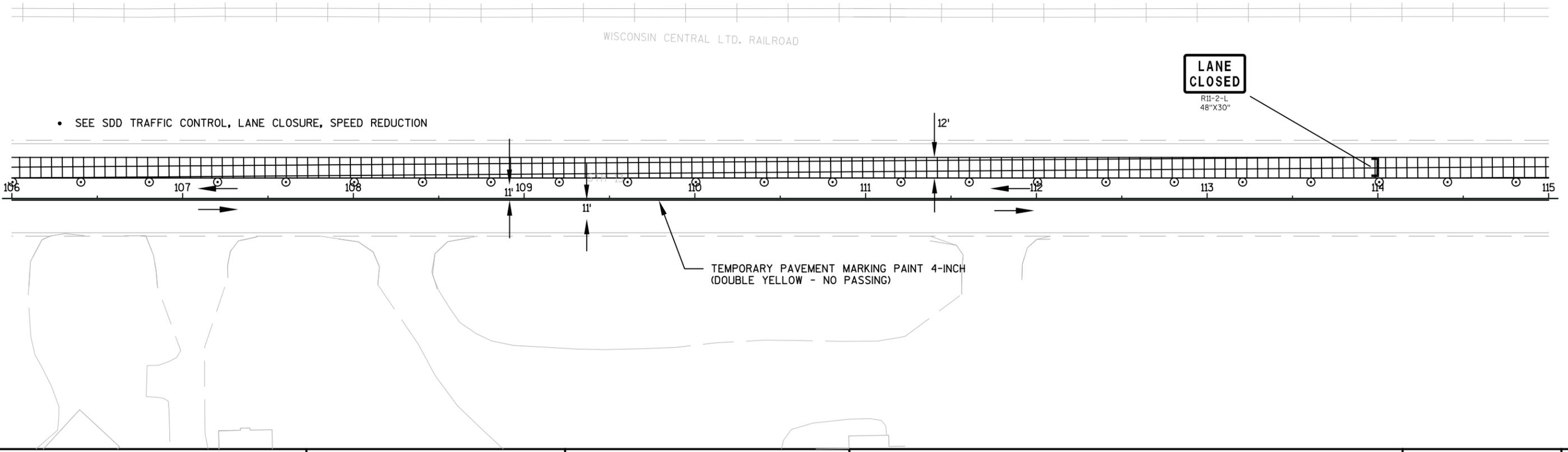
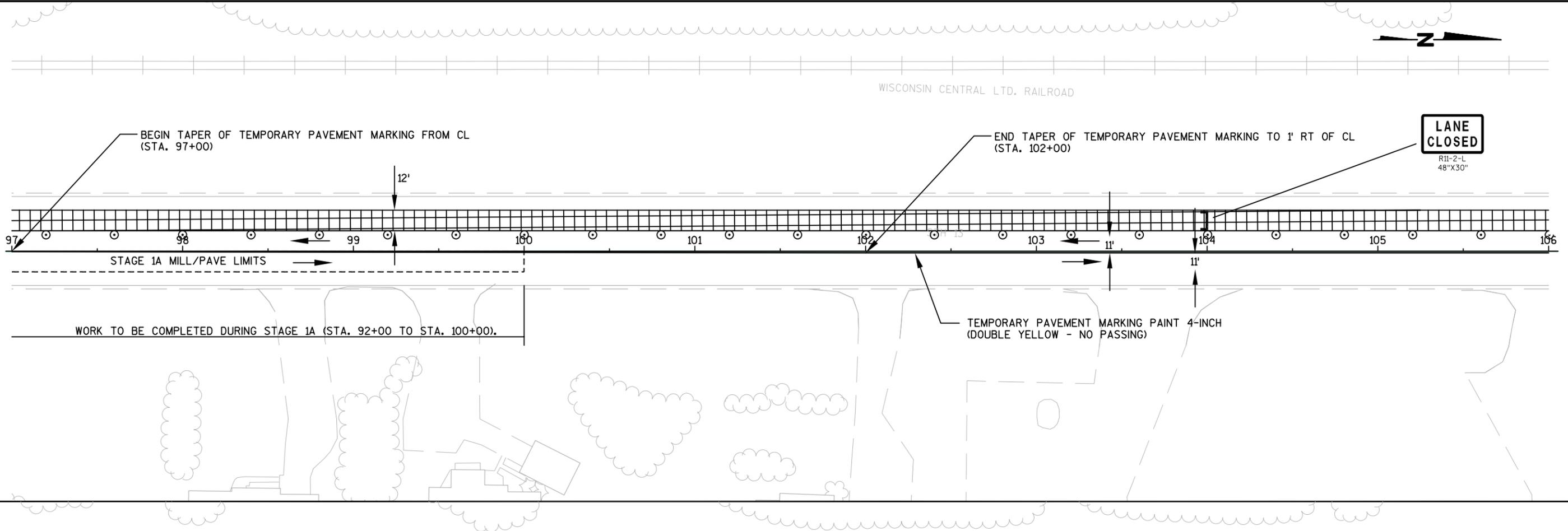
- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

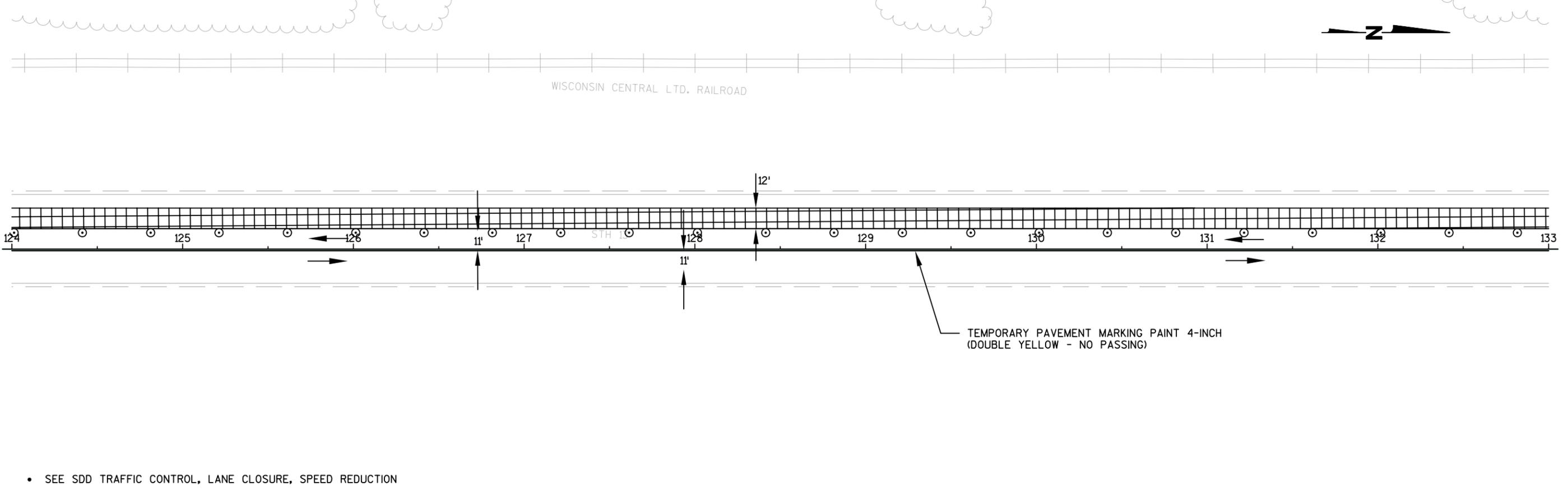
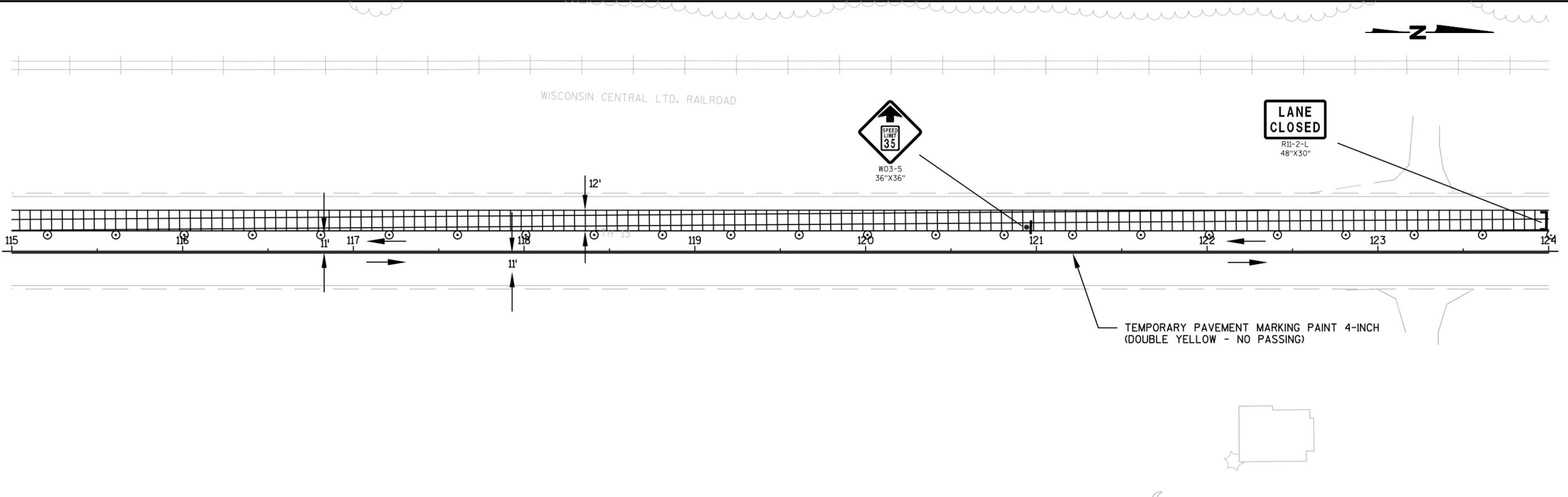




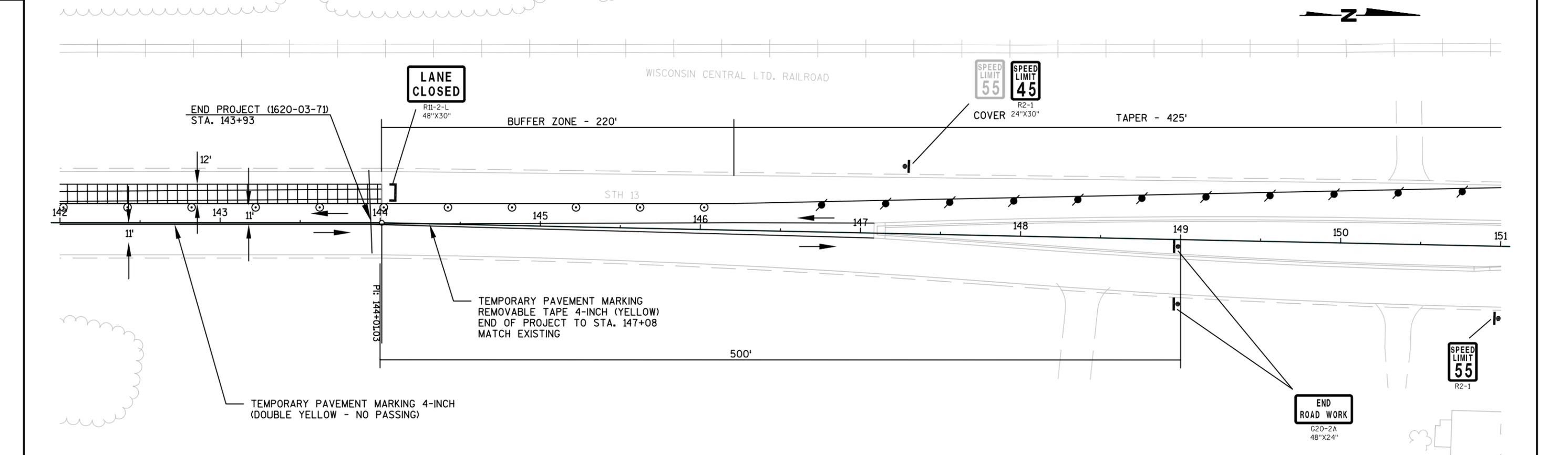
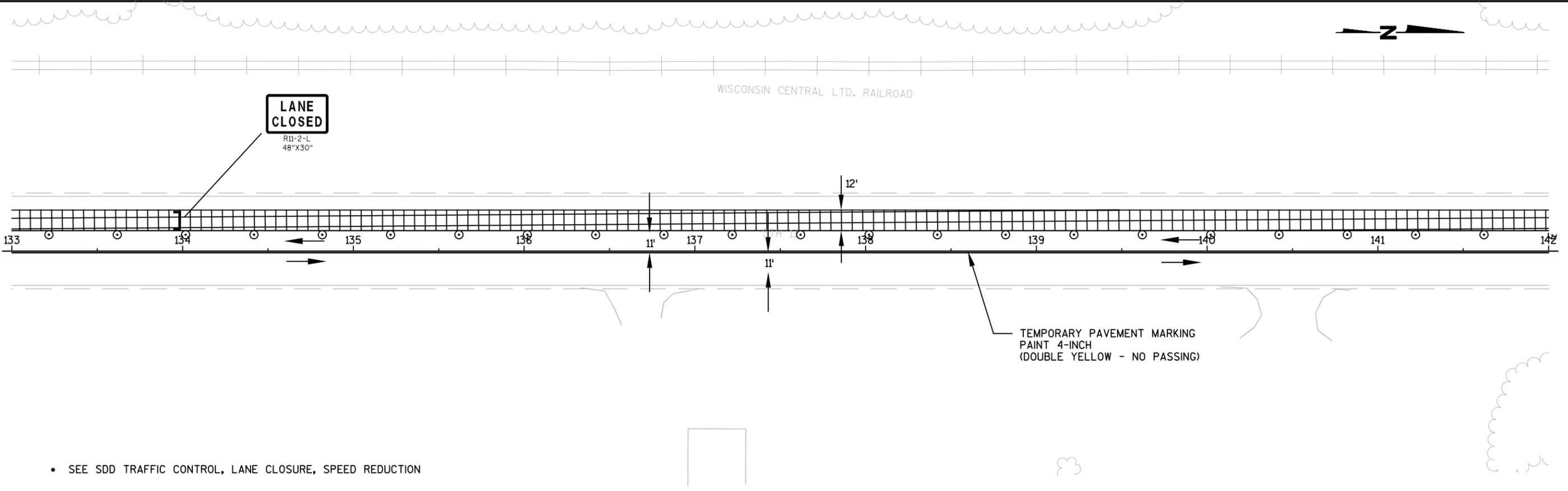
- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

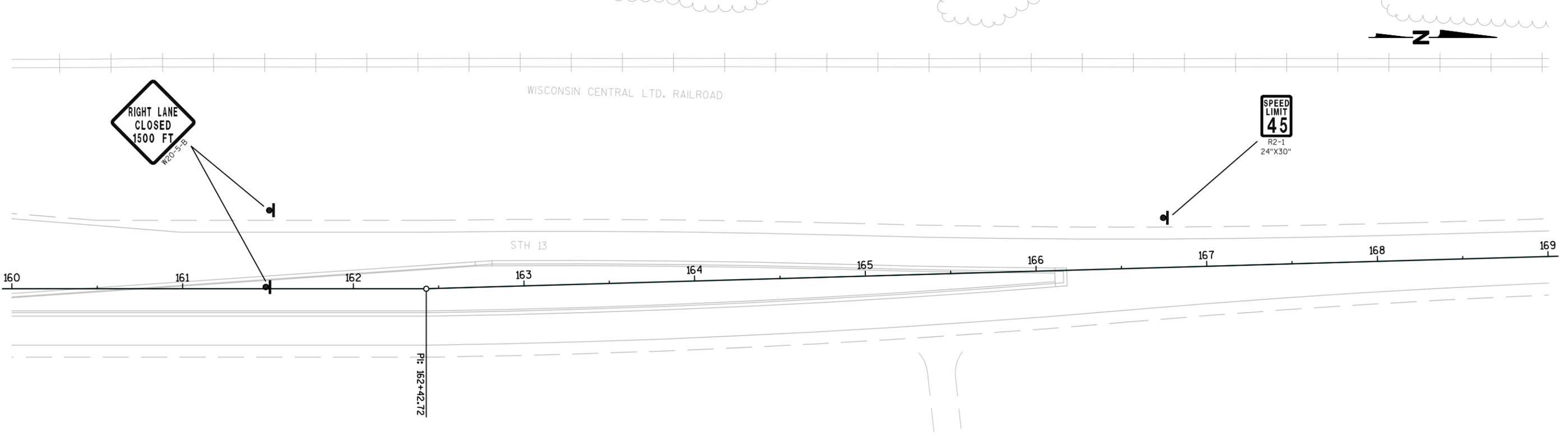
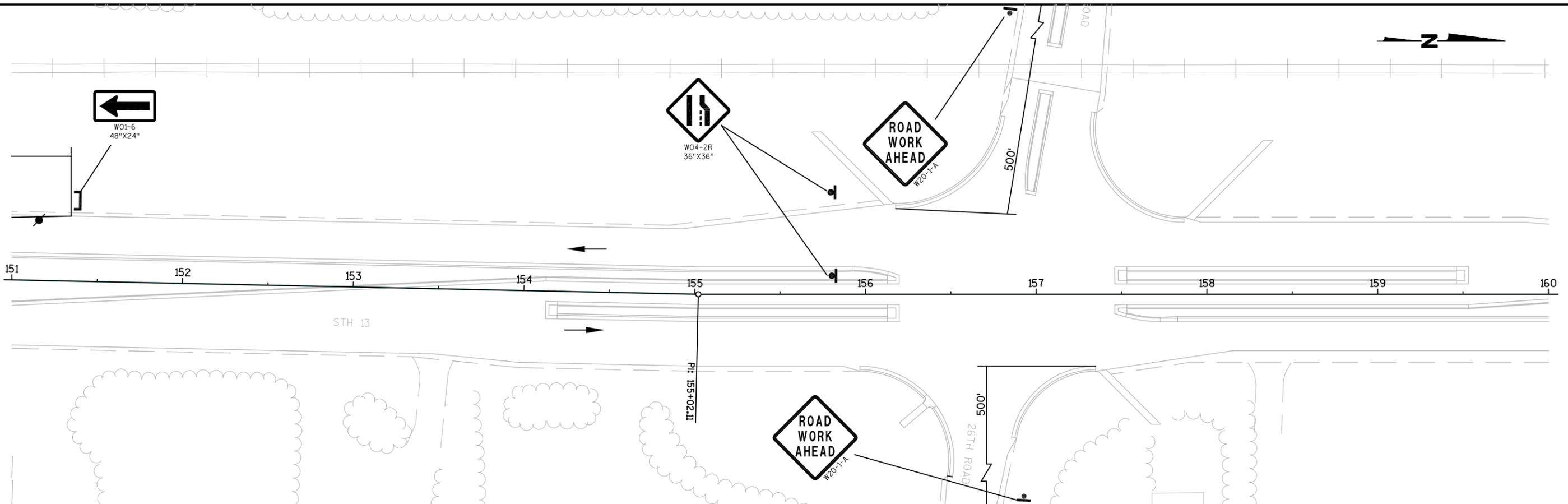




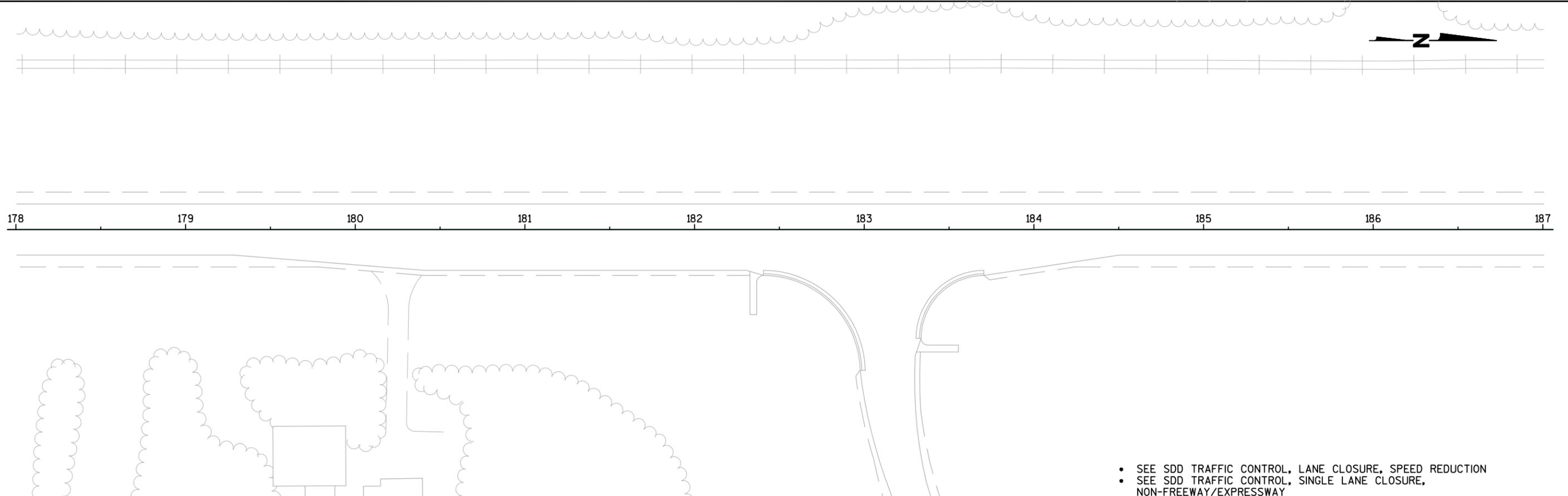
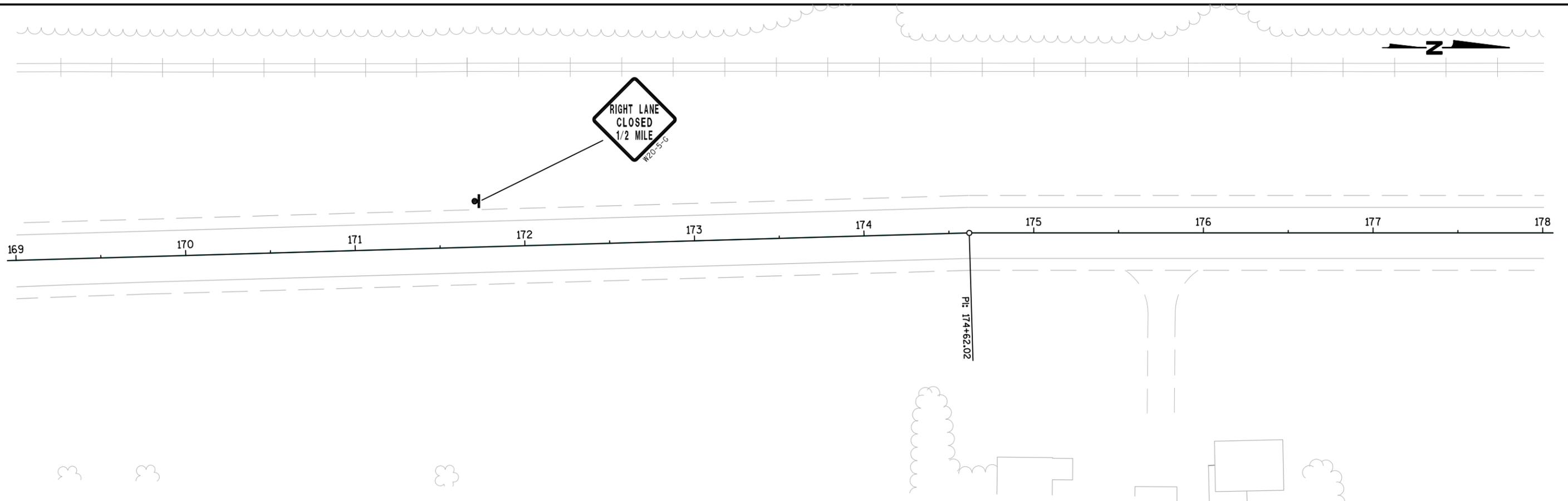


• SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

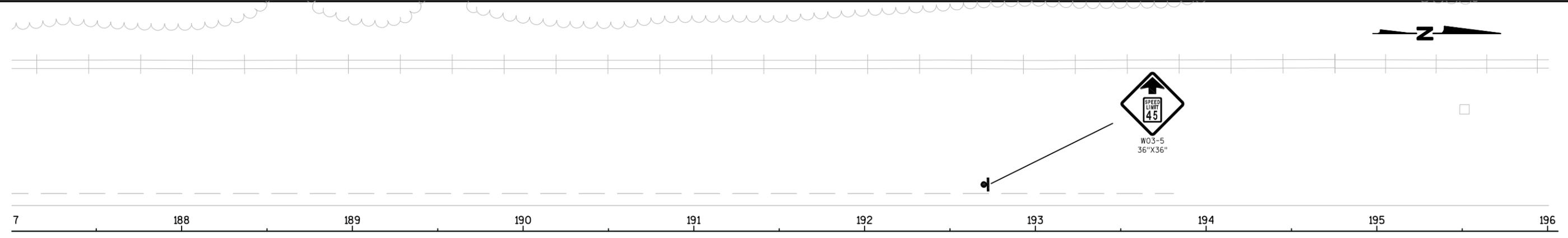




- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

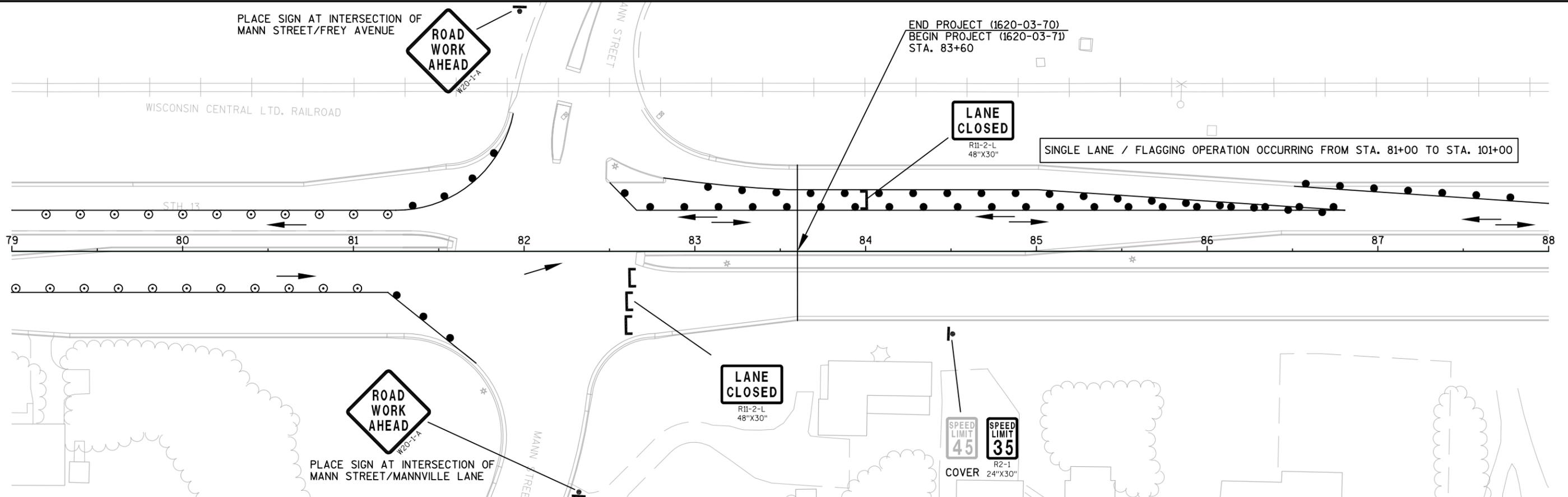


- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

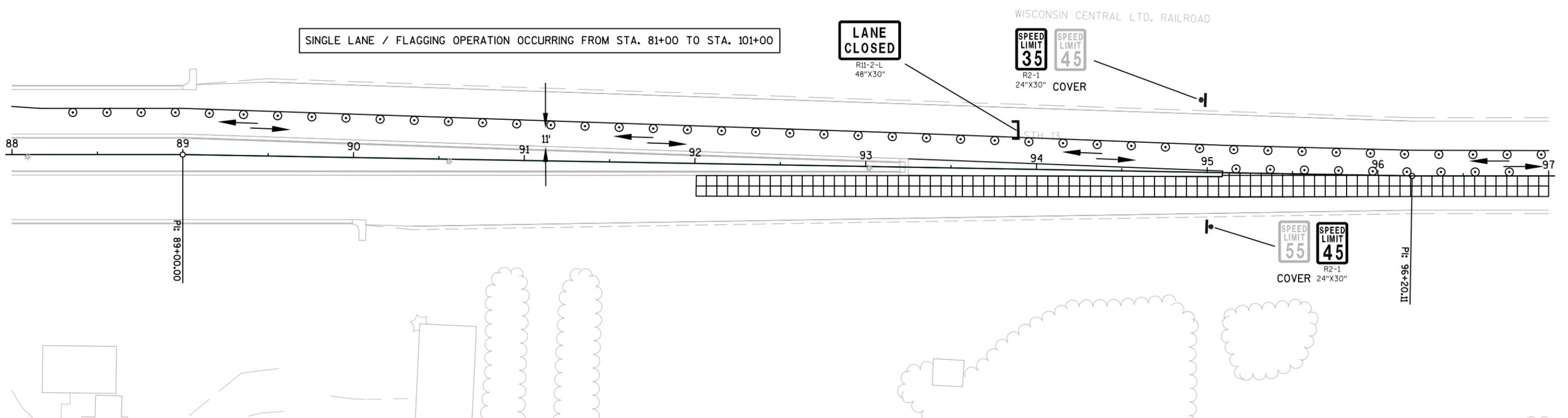


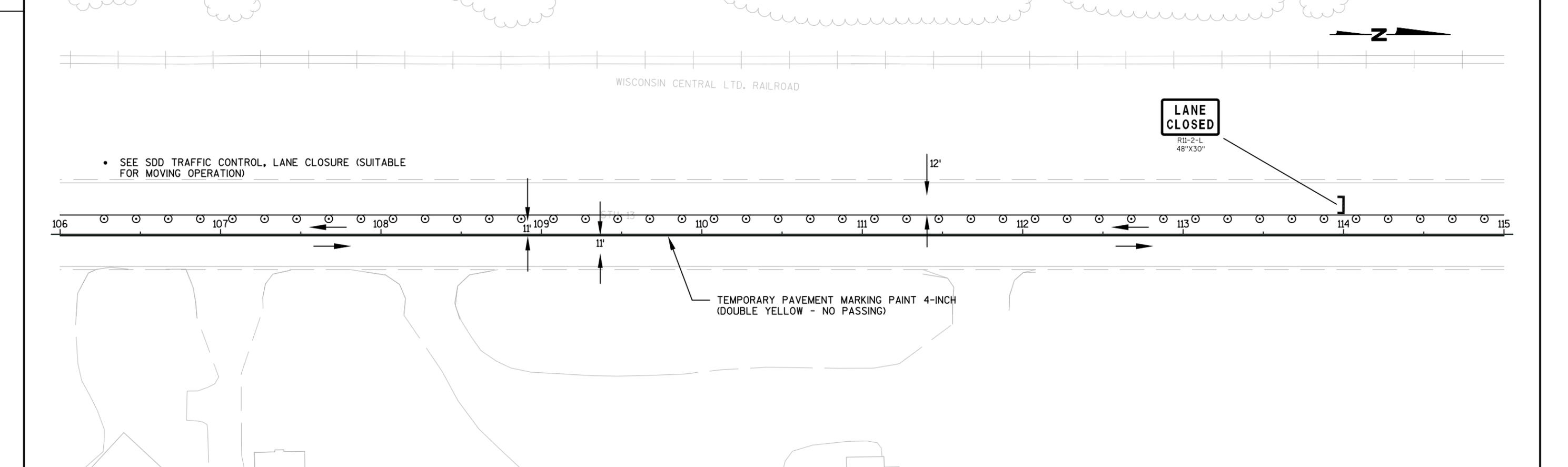
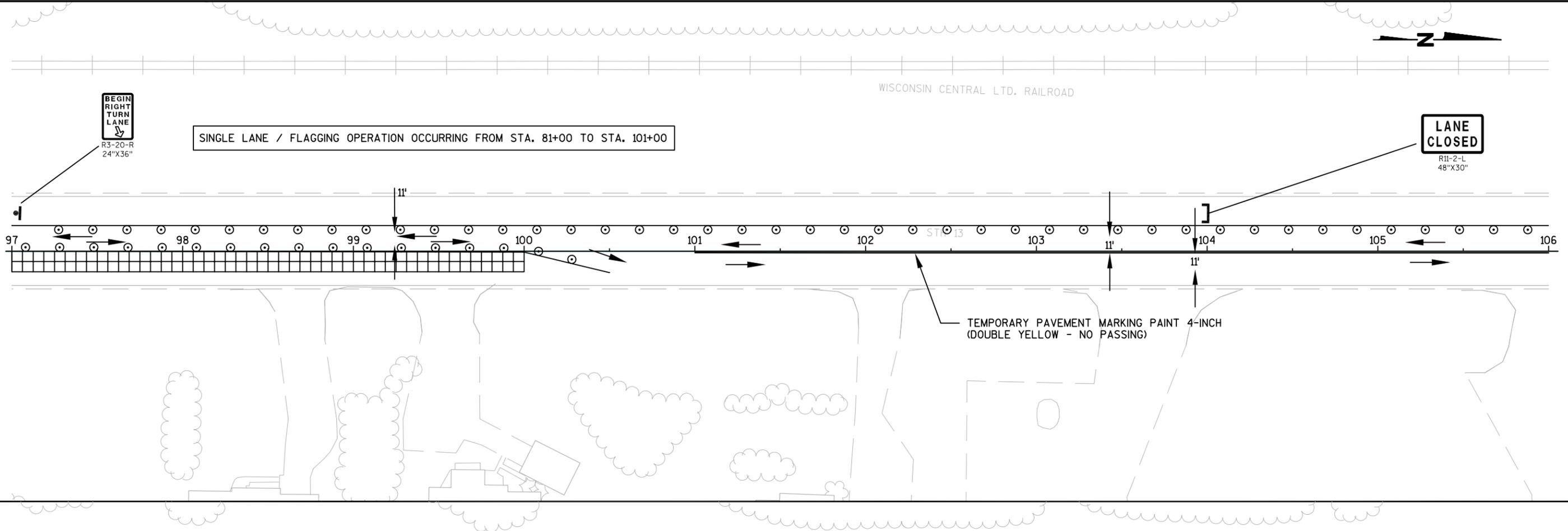
PLACE ADVANCE TRAFFIC CONTROL WARNING SIGNS PER STANDARD DETAIL DRAWINGS WITH A SPEED REDUCTION OF 10 MPH THROUGHOUT THE WORK ZONE. COVER ALL EXISTING SPEED LIMIT SIGNS THROUGHOUT PROJECT LIMITS.

- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY



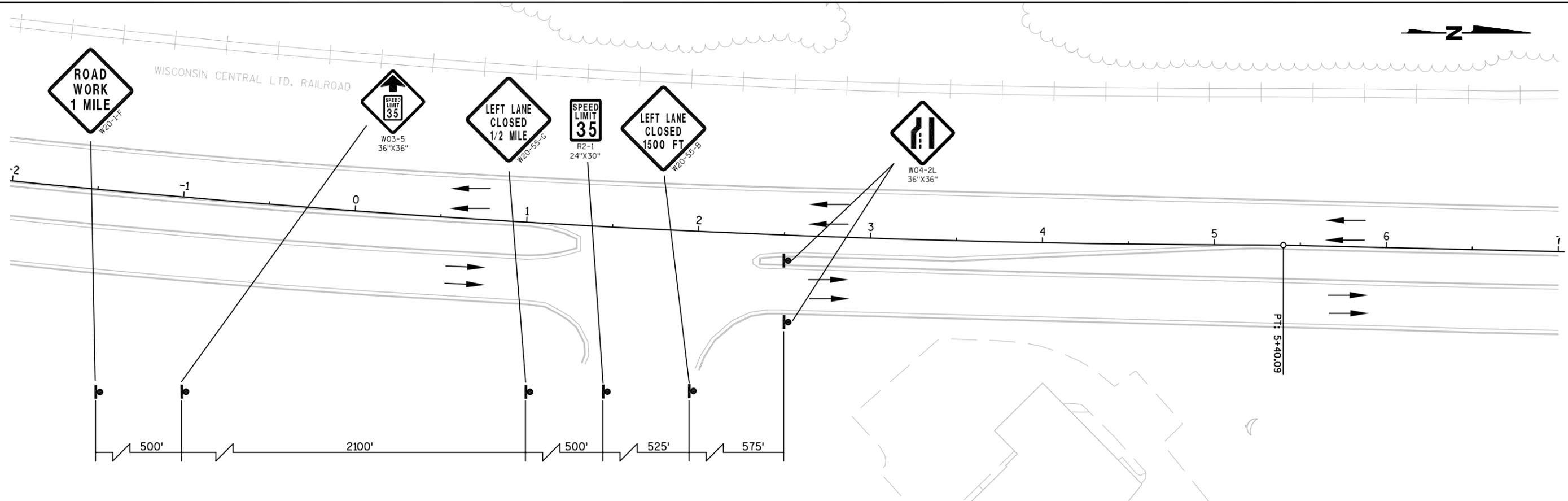
- SEE SDD TRAFFIC CONTROL, LANE CLOSURE (SUITABLE FOR MOVING OPERATION)
- SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

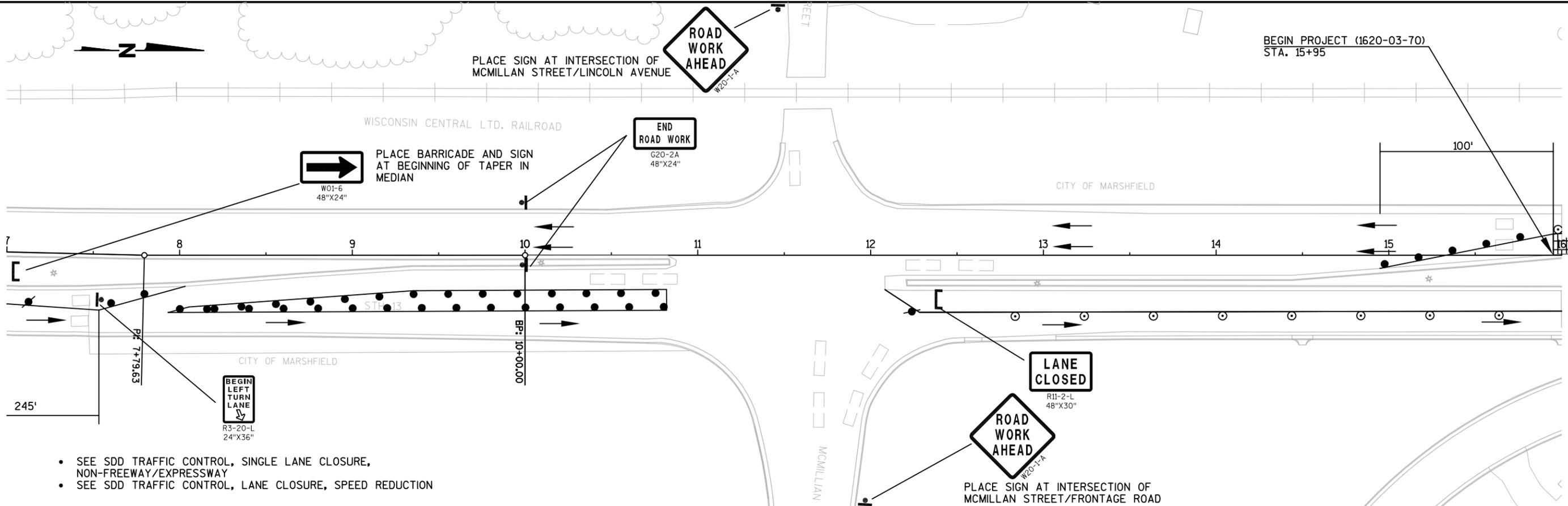




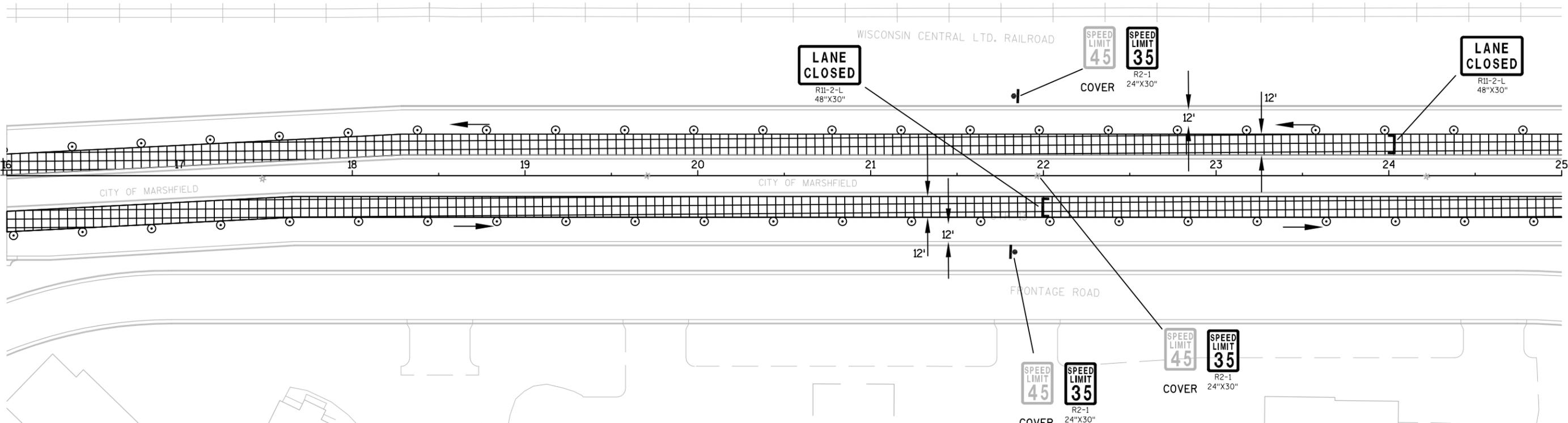
- SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY.
- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION.

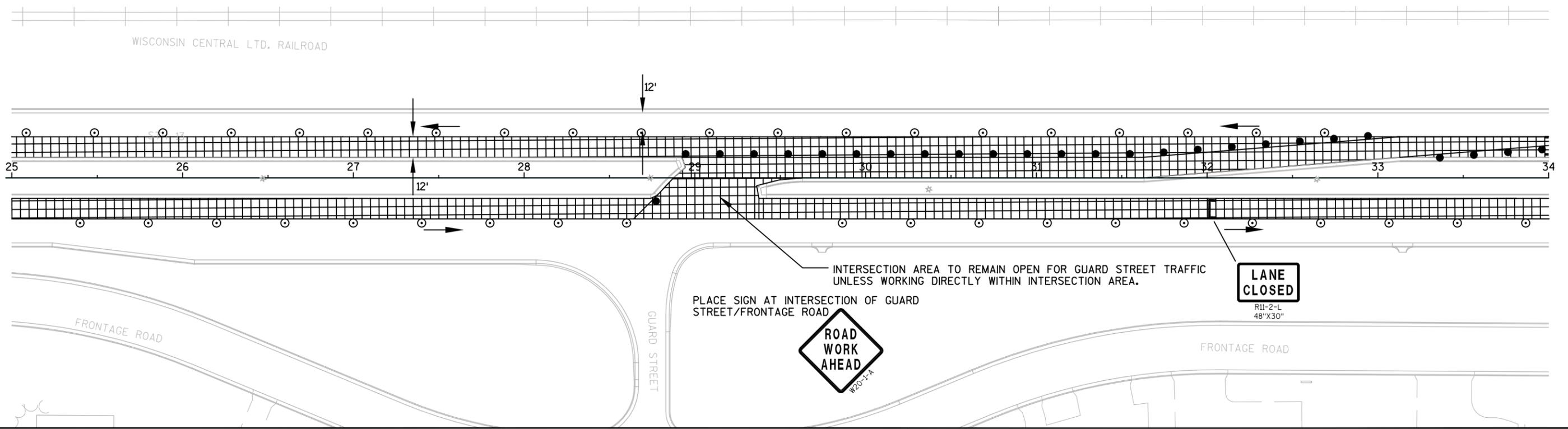
PLACE ADVANCE TRAFFIC CONTROL WARNING SIGNS PER STANDARD DETAIL DRAWINGS WITH A SPEED REDUCTION OF 10 MPH THROUGHOUT THE WORK ZONE.
COVER ALL EXISTING SPEED LIMIT SIGNS THROUGHOUT PROJECT LIMITS.



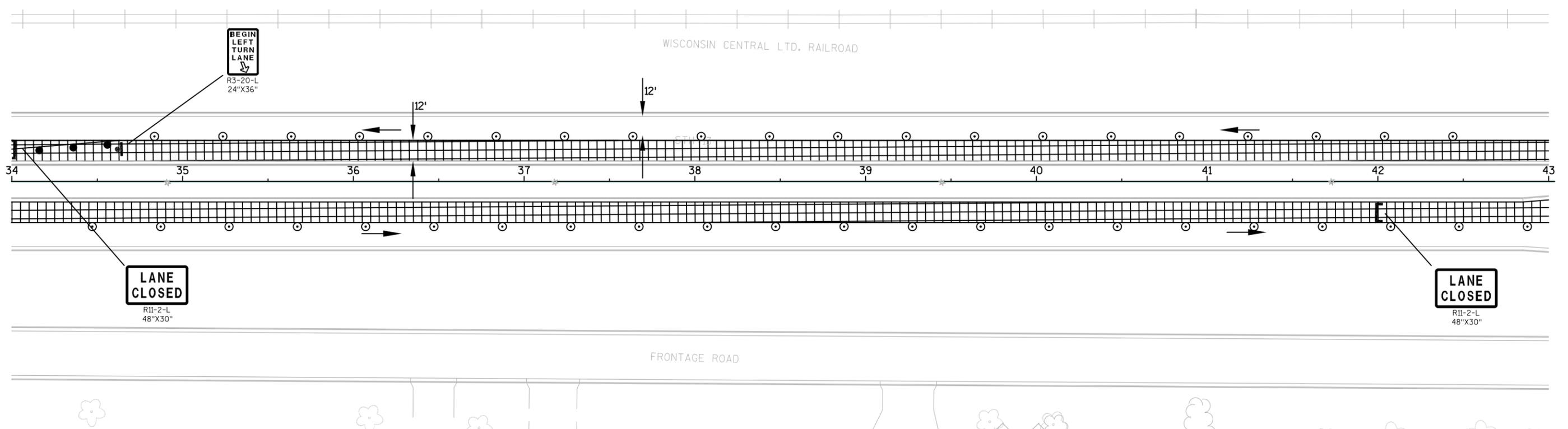


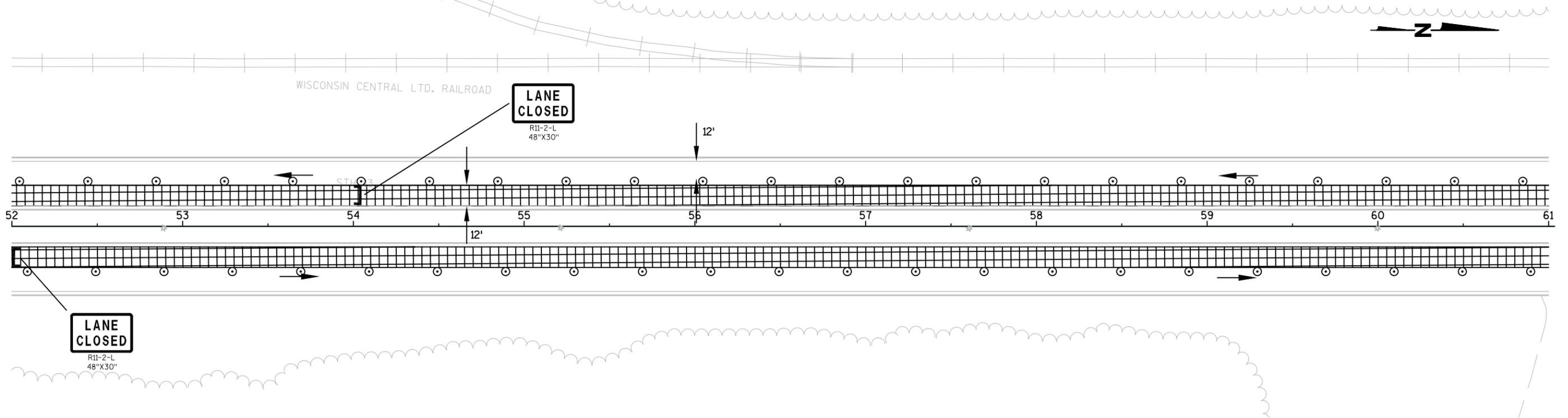
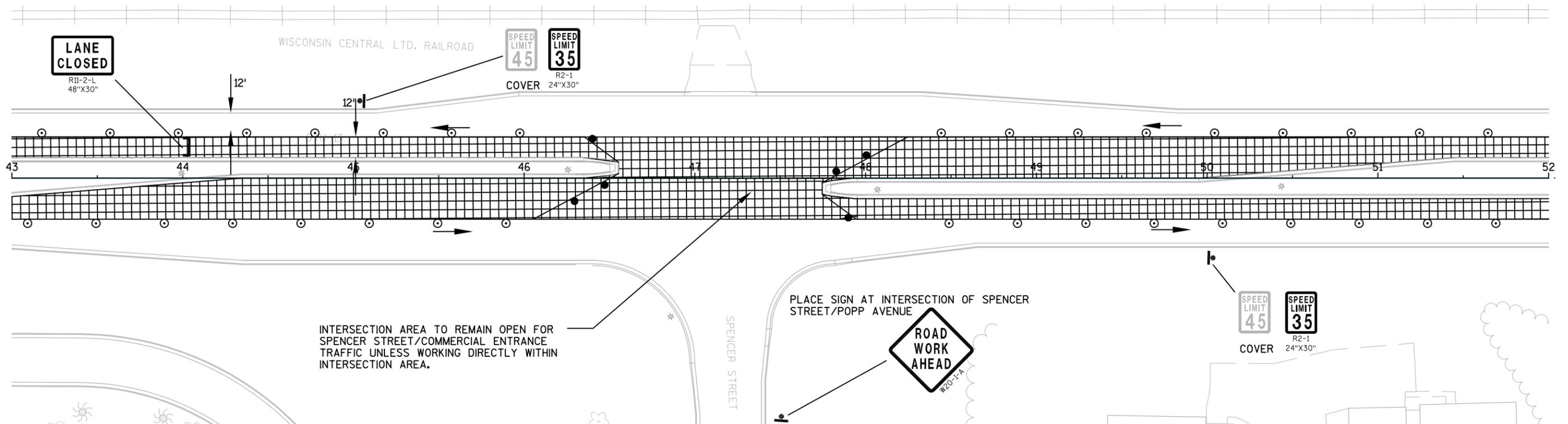
- SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION



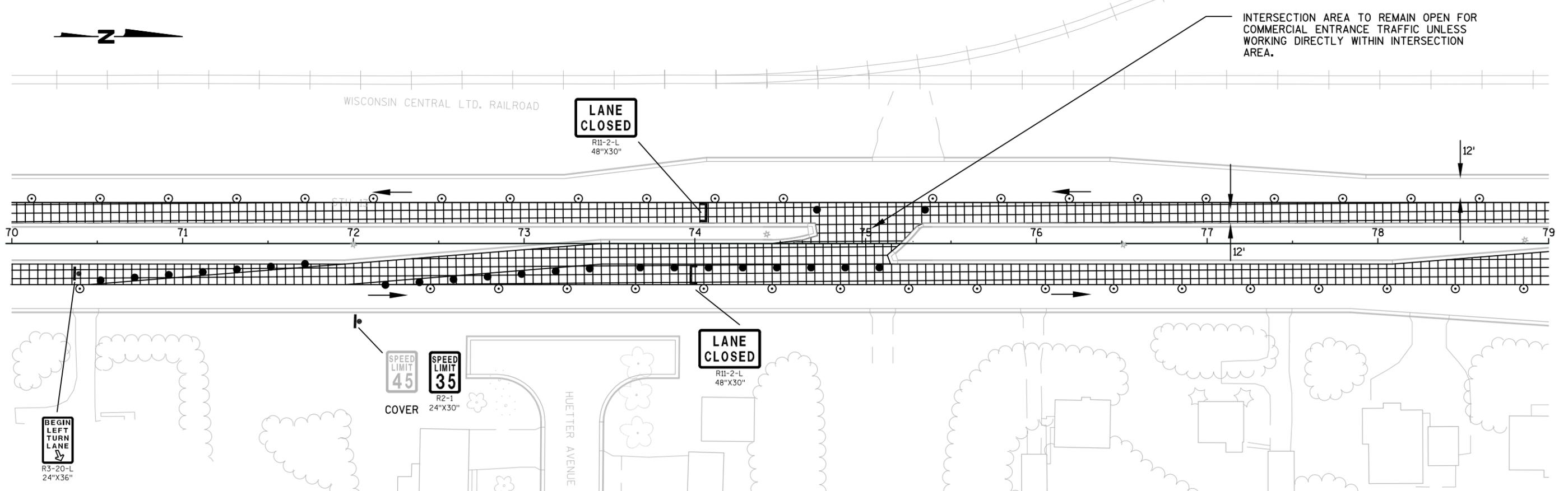
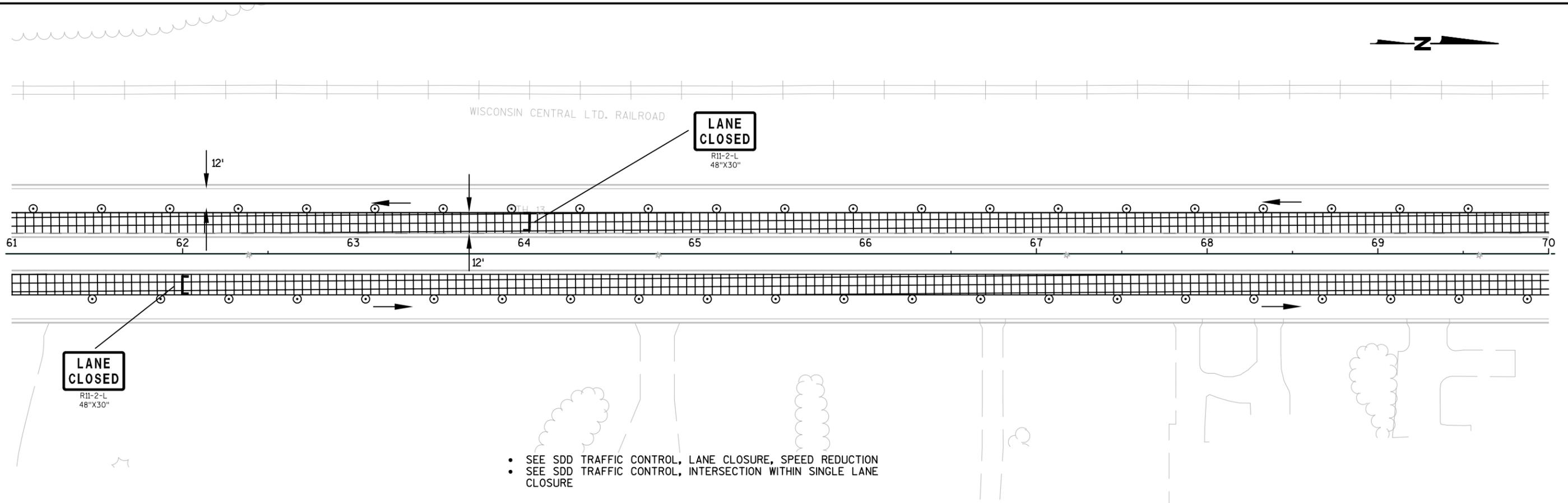


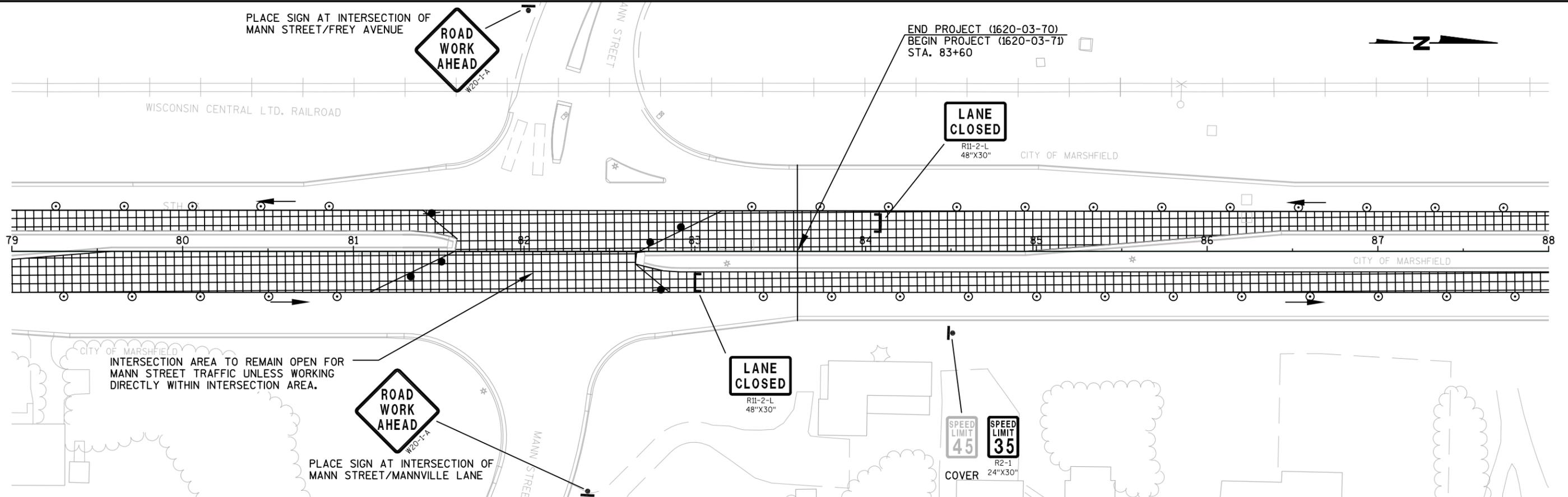
- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE



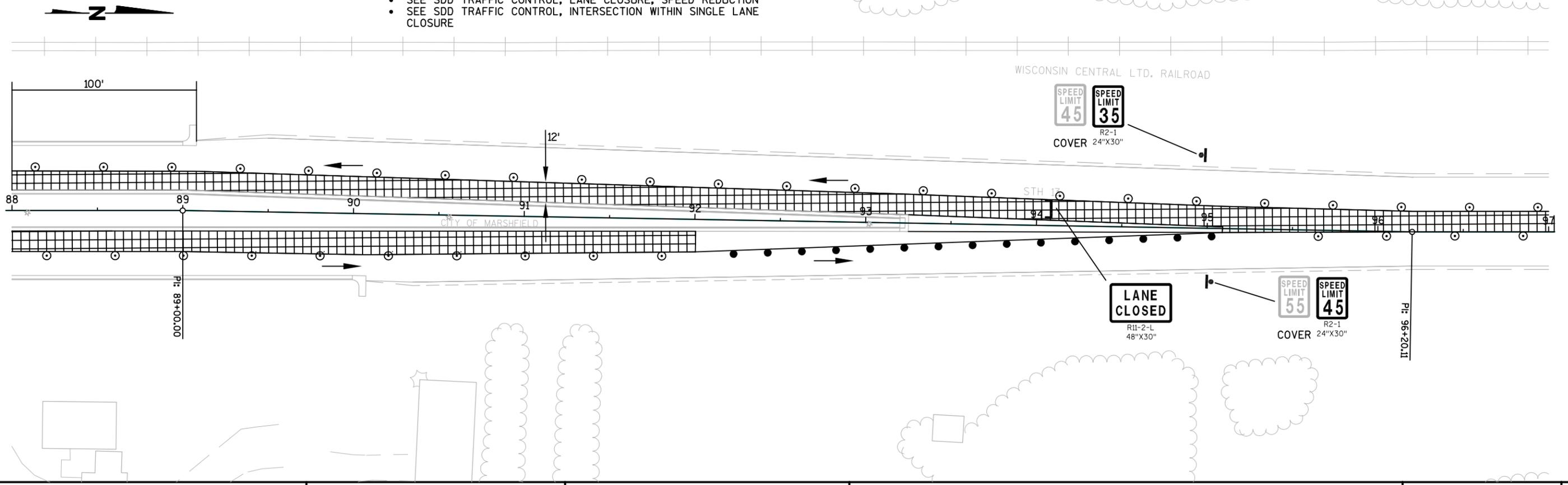


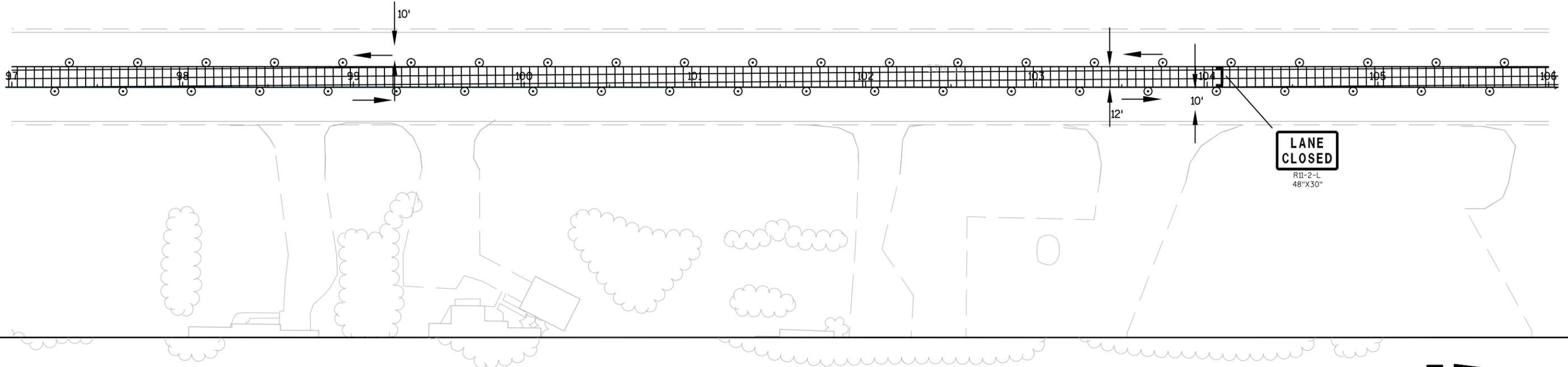
- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE



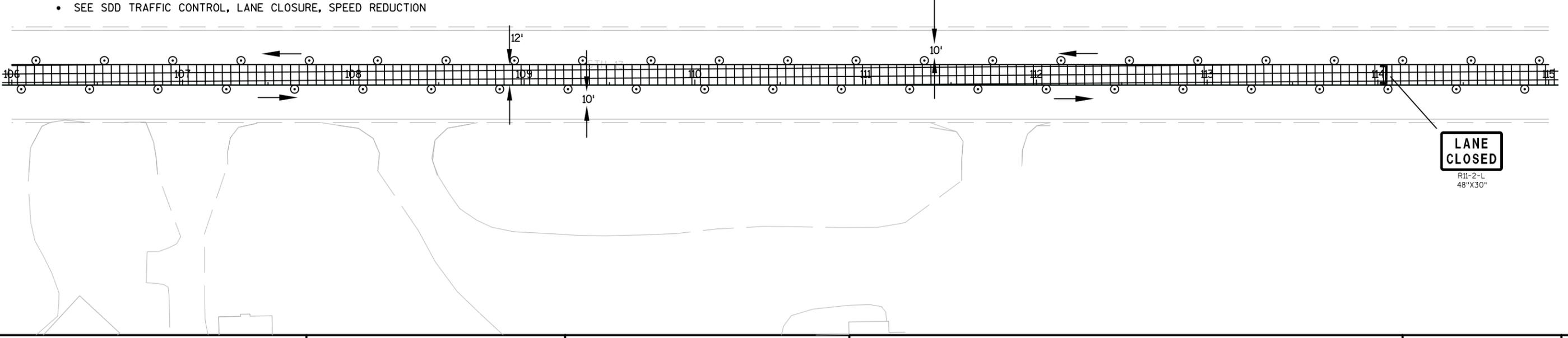


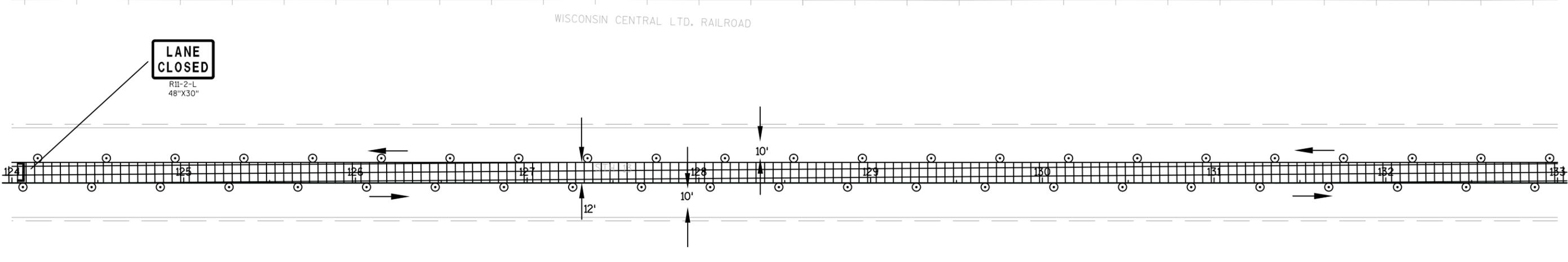
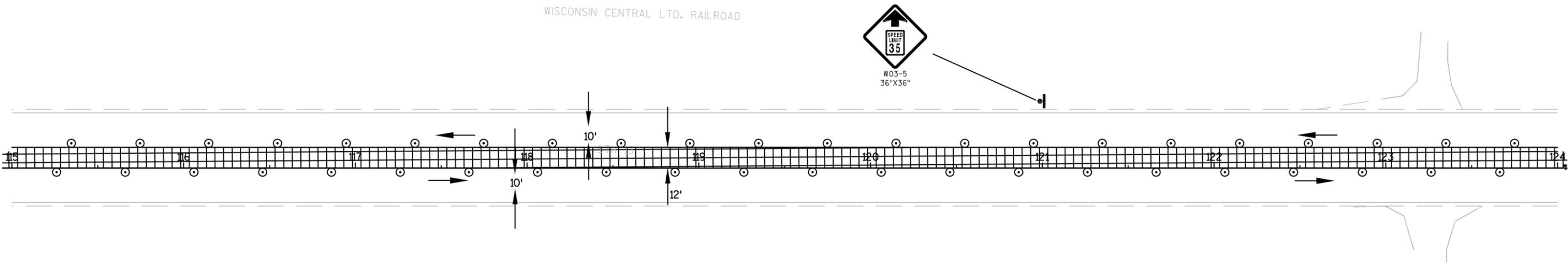
- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE





• SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION



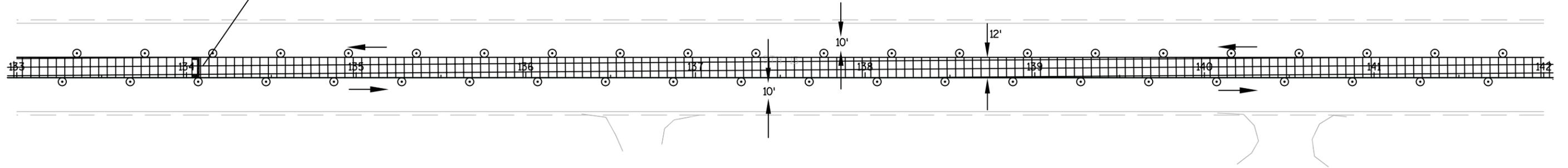


• SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

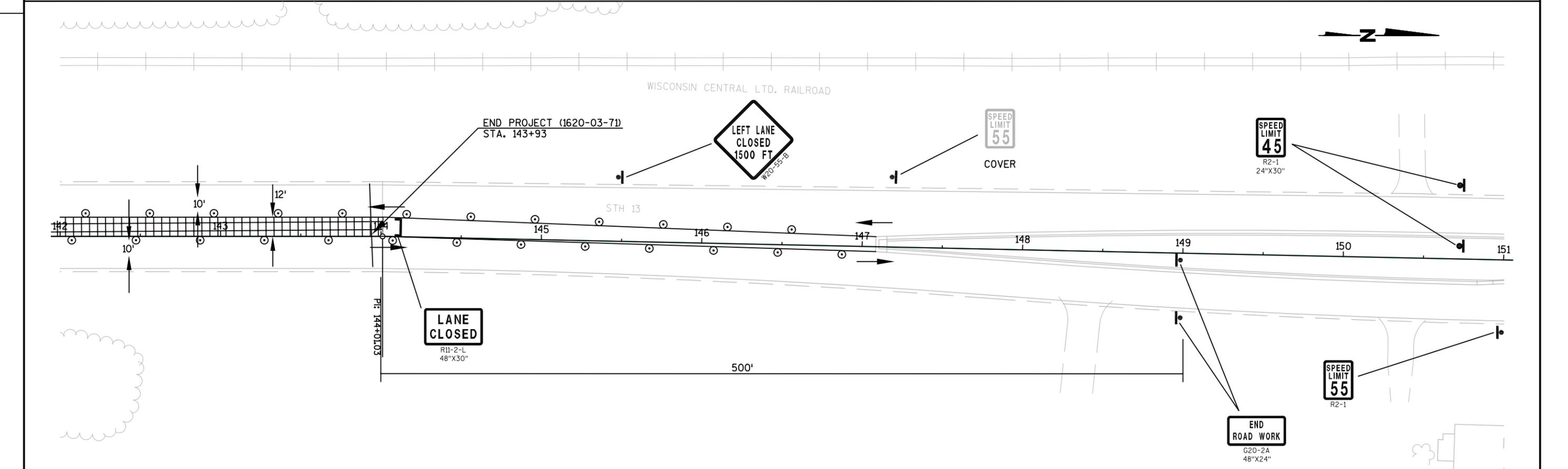
WISCONSIN CENTRAL LTD. RAILROAD

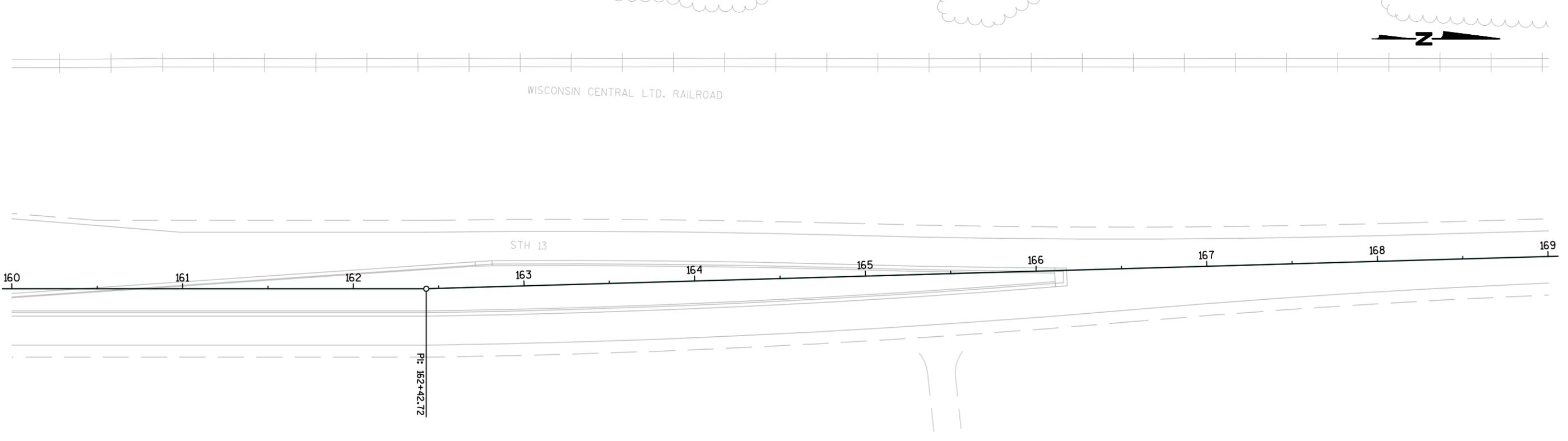
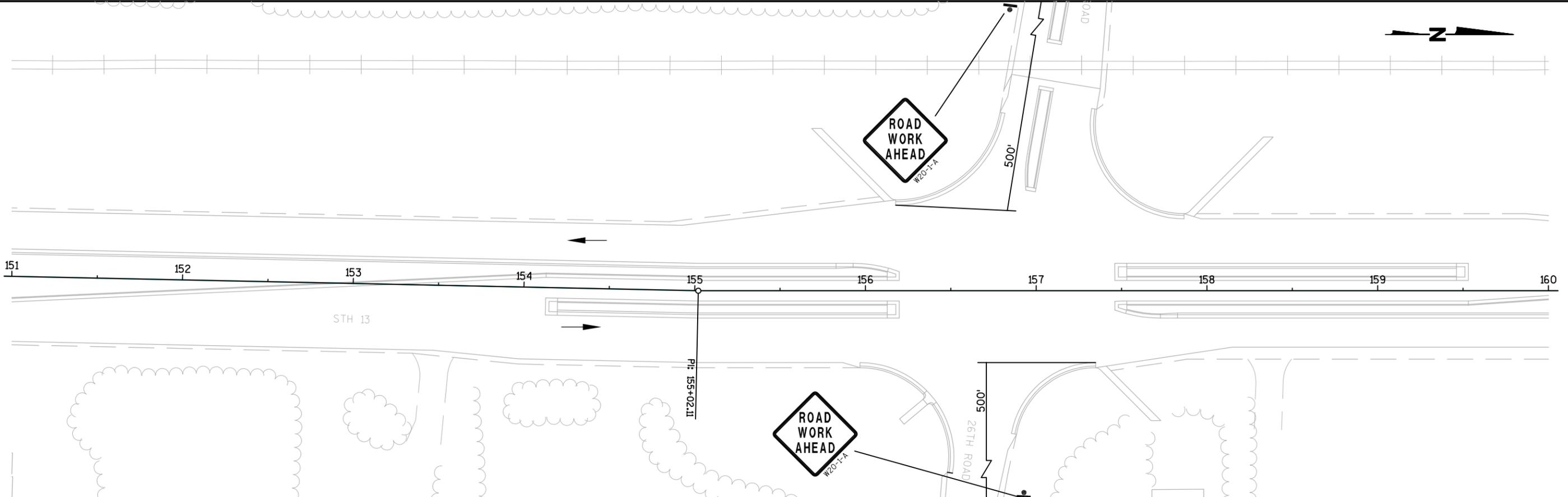


LANE CLOSED
R11-2-L
48"X30"

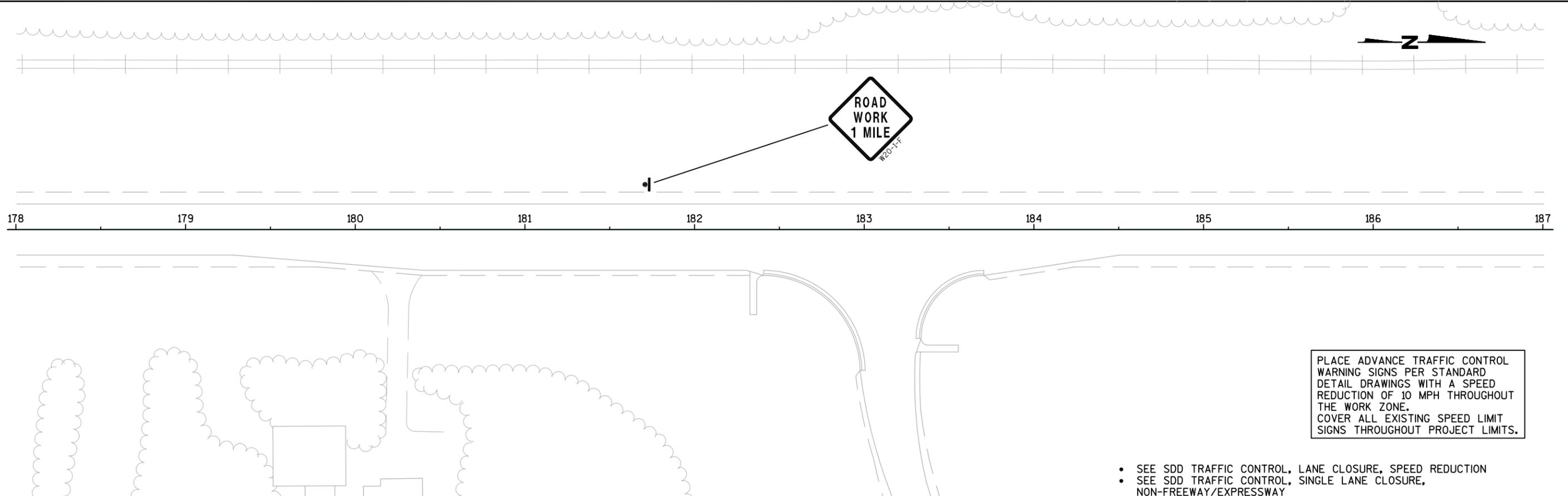
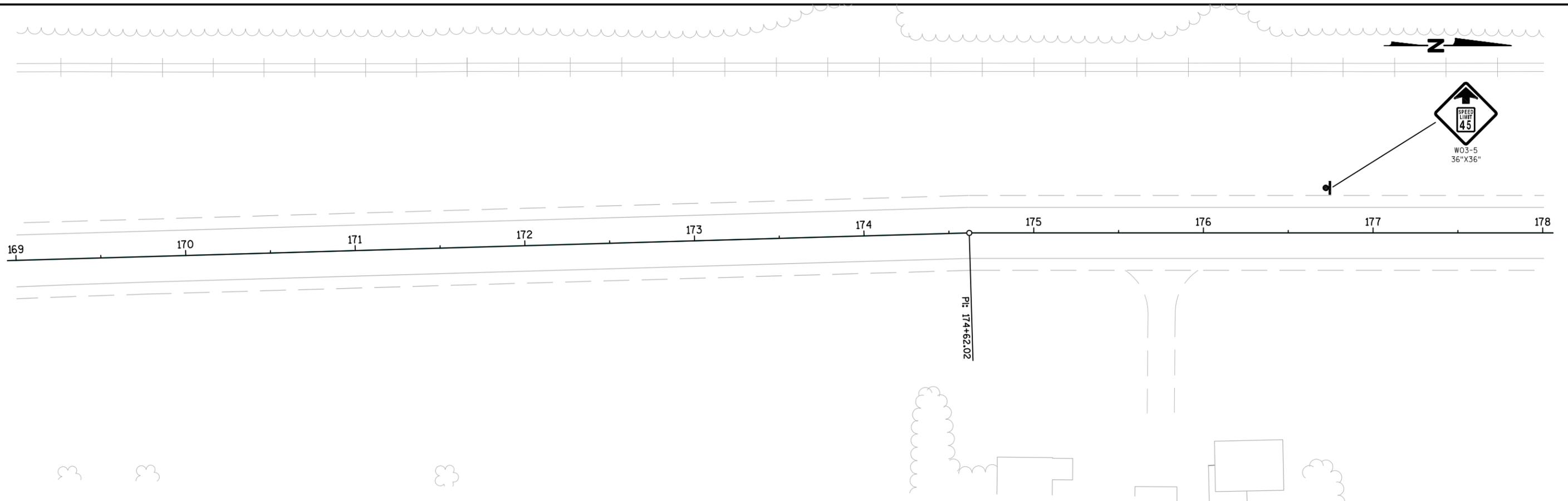


- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY



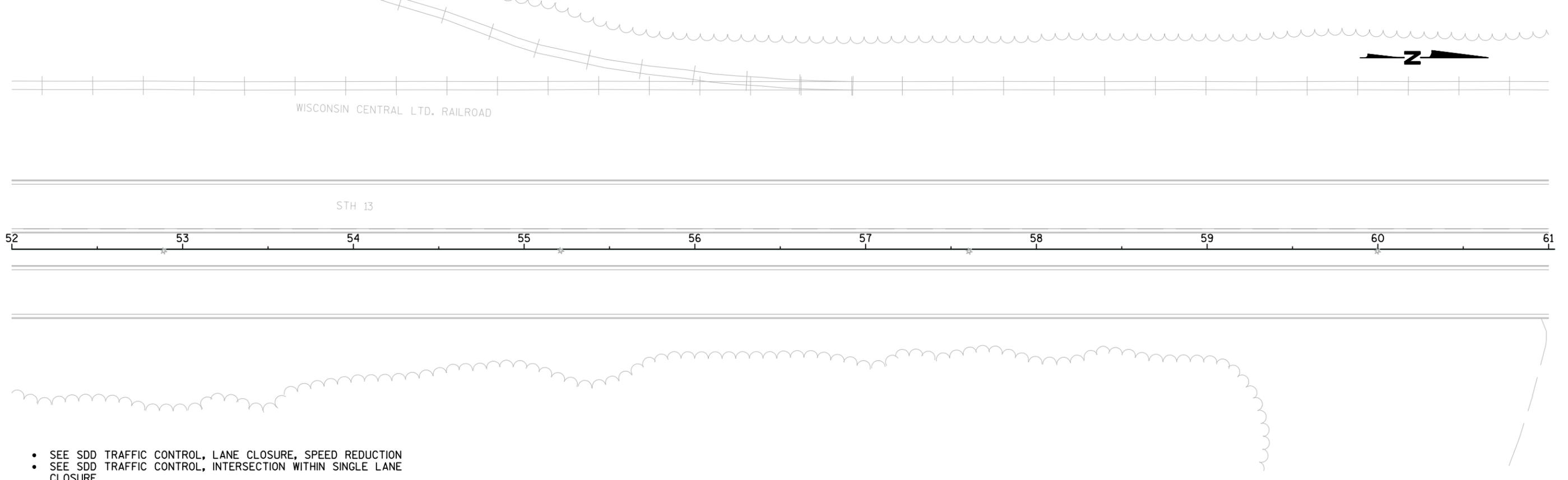
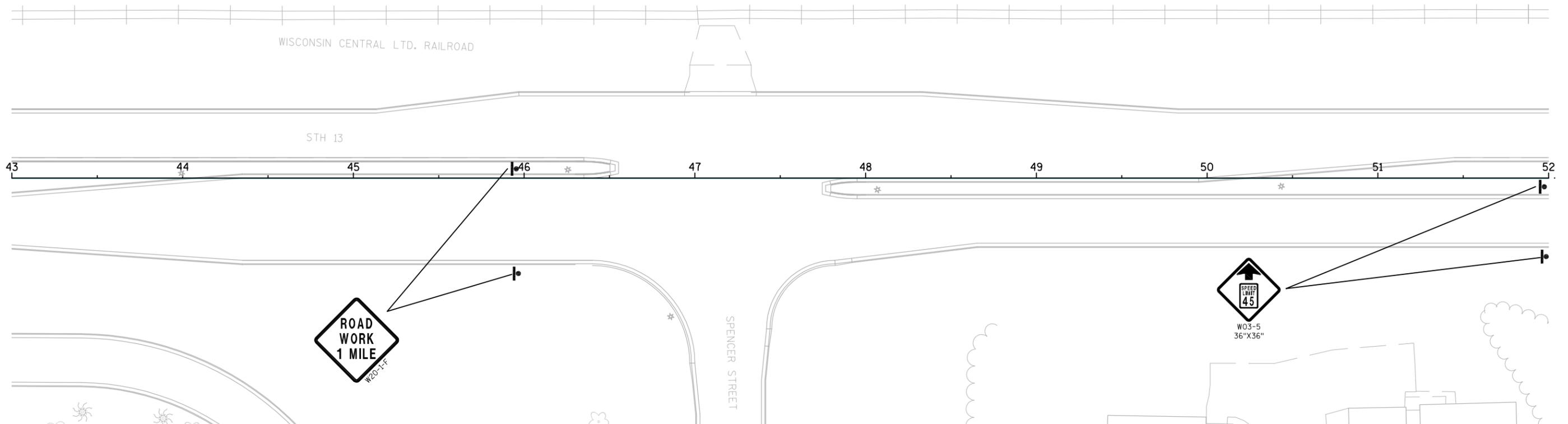


- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

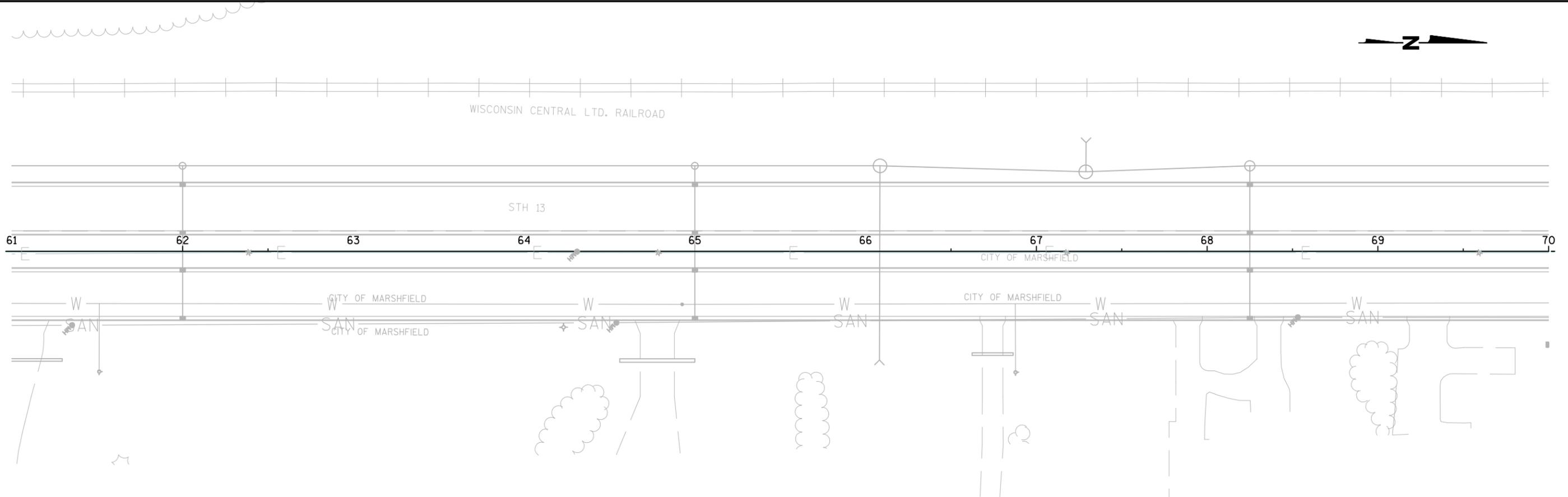


PLACE ADVANCE TRAFFIC CONTROL WARNING SIGNS PER STANDARD DETAIL DRAWINGS WITH A SPEED REDUCTION OF 10 MPH THROUGHOUT THE WORK ZONE. COVER ALL EXISTING SPEED LIMIT SIGNS THROUGHOUT PROJECT LIMITS.

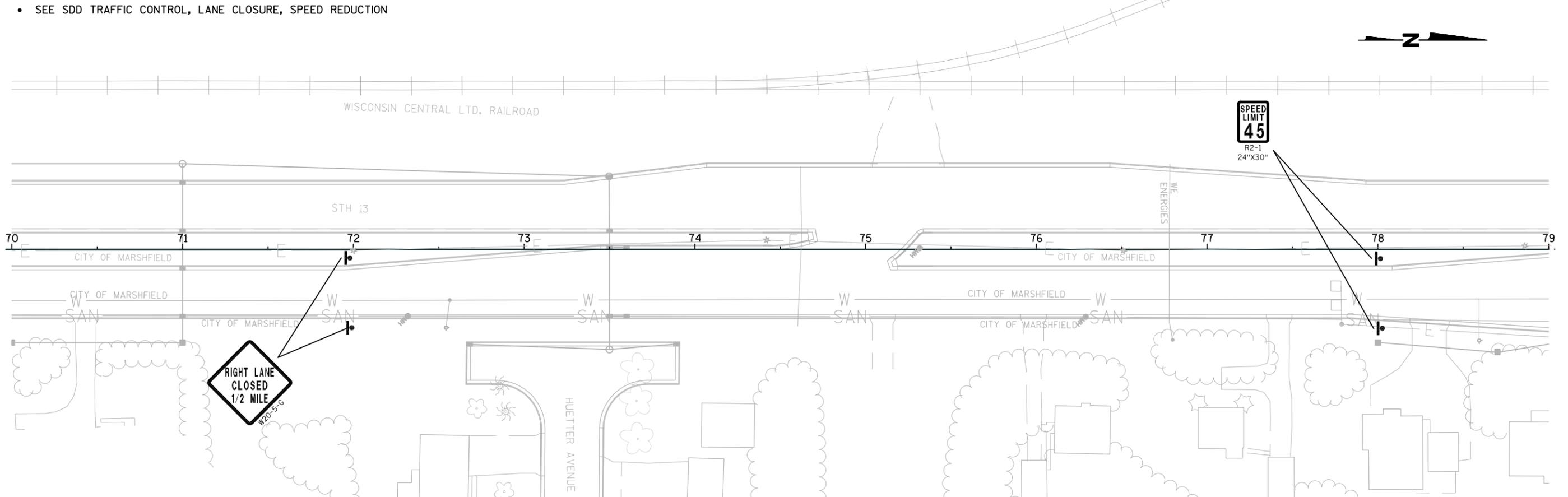
- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

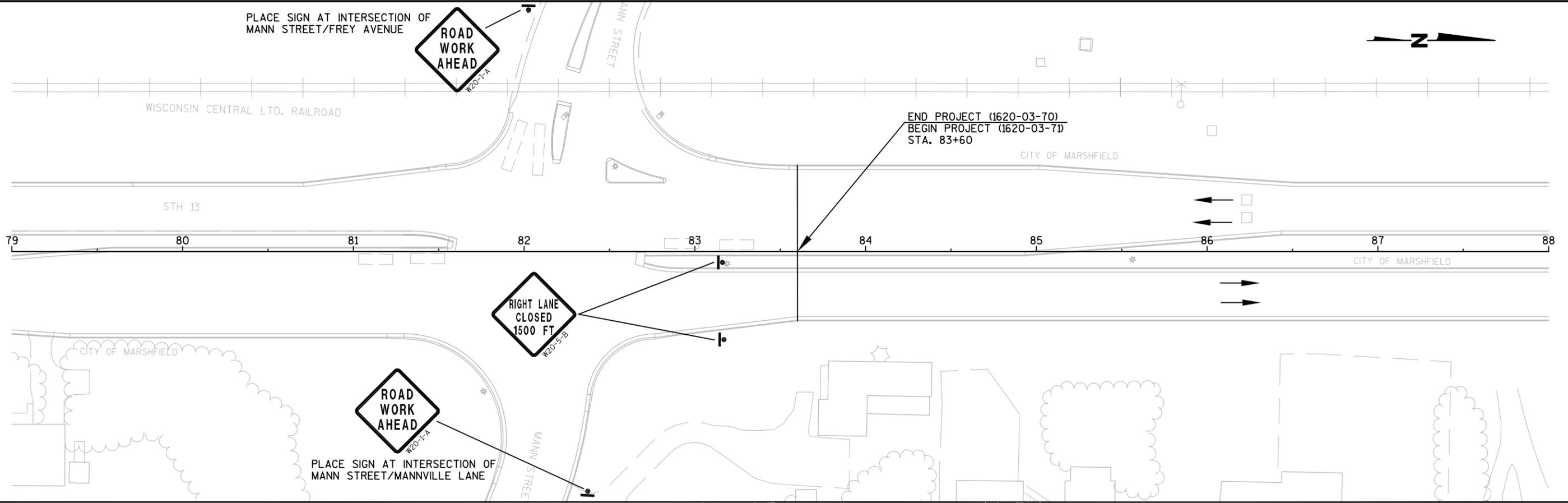


- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

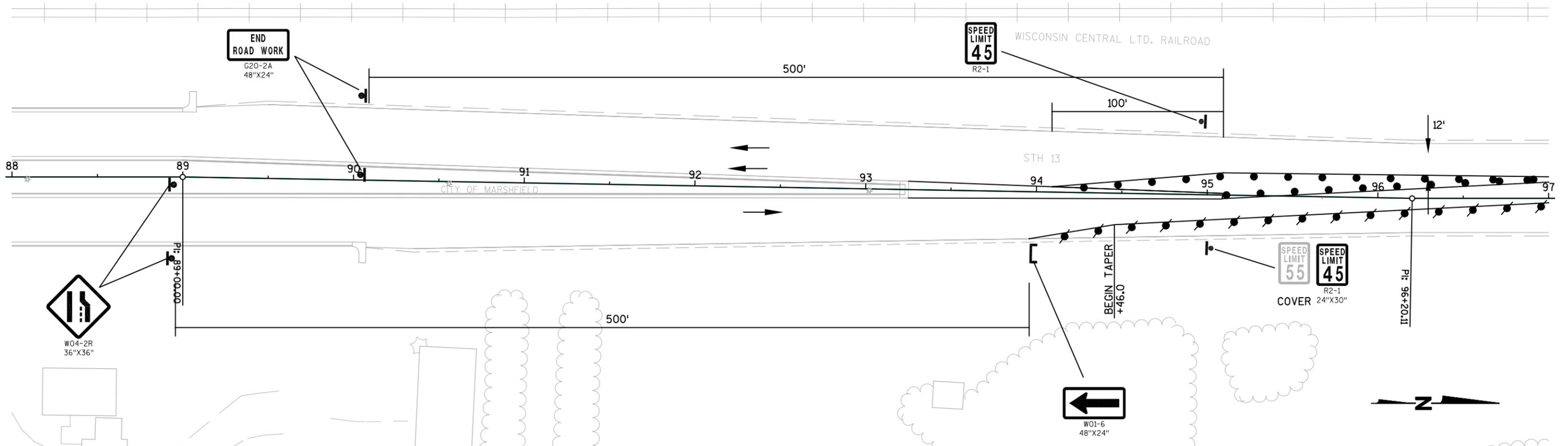


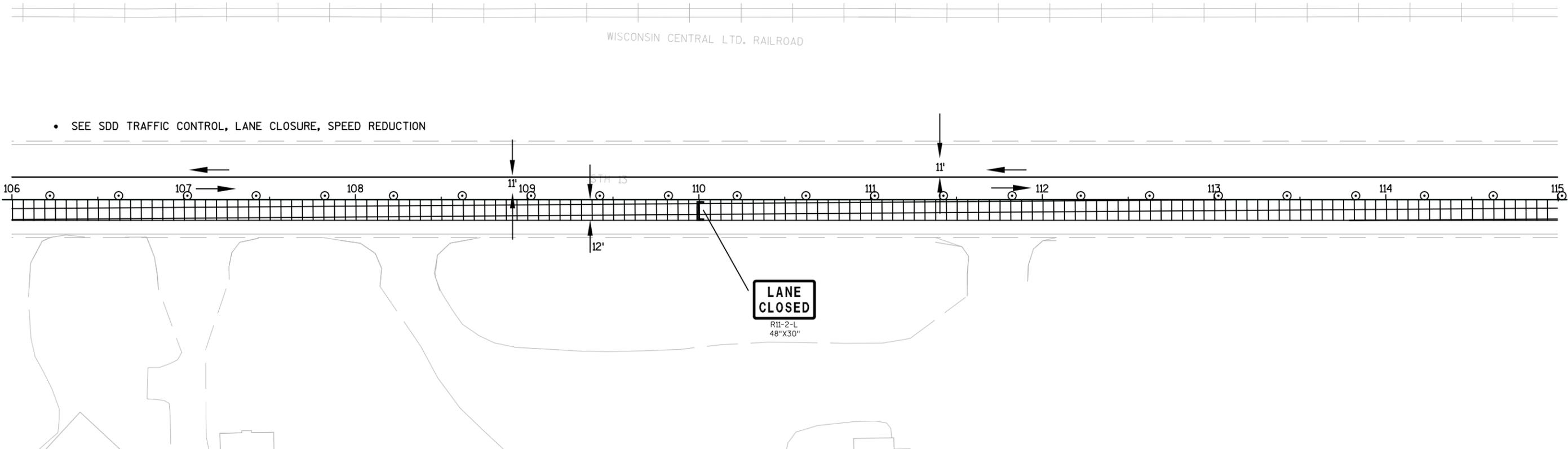
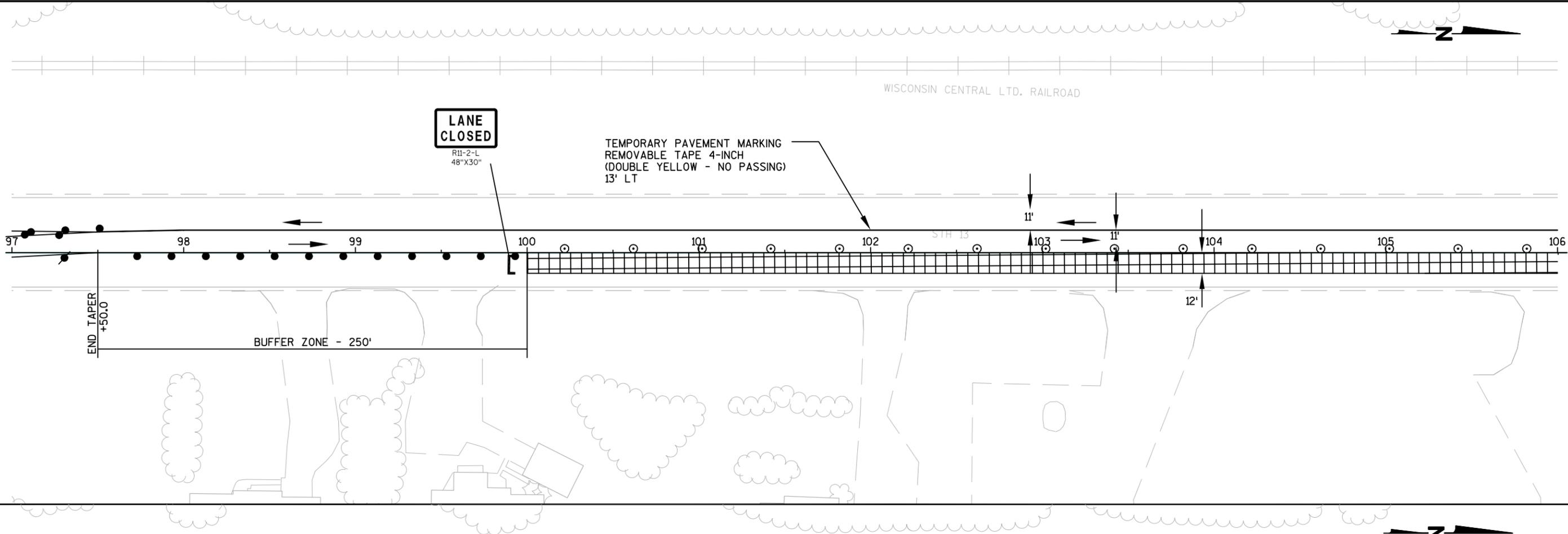
• SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

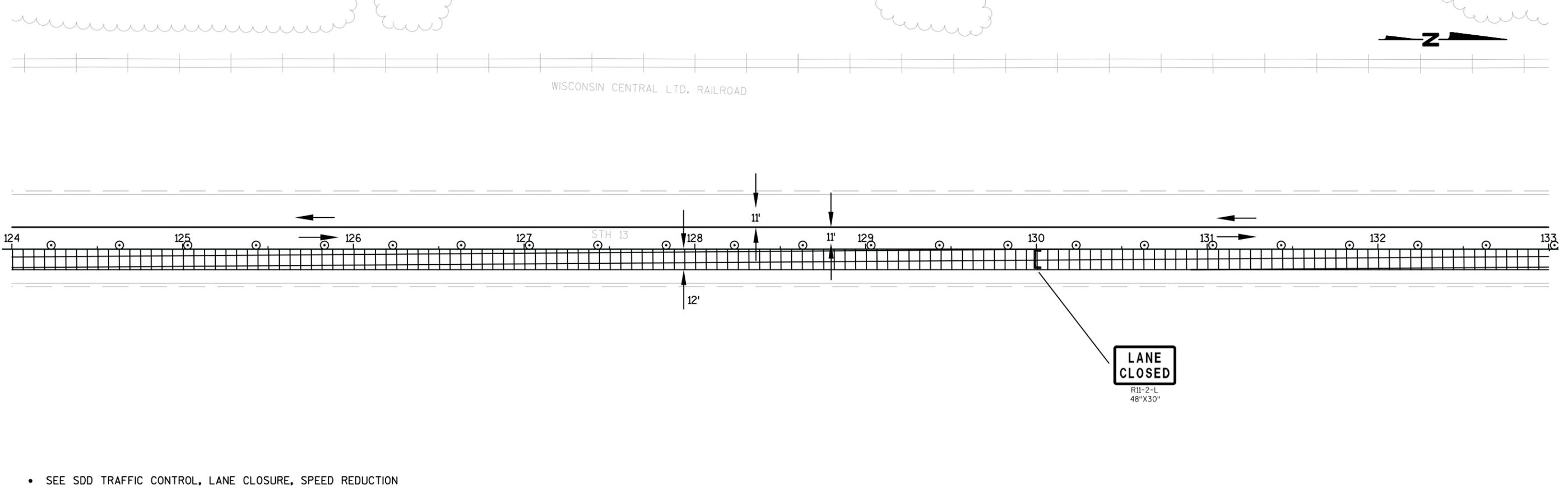
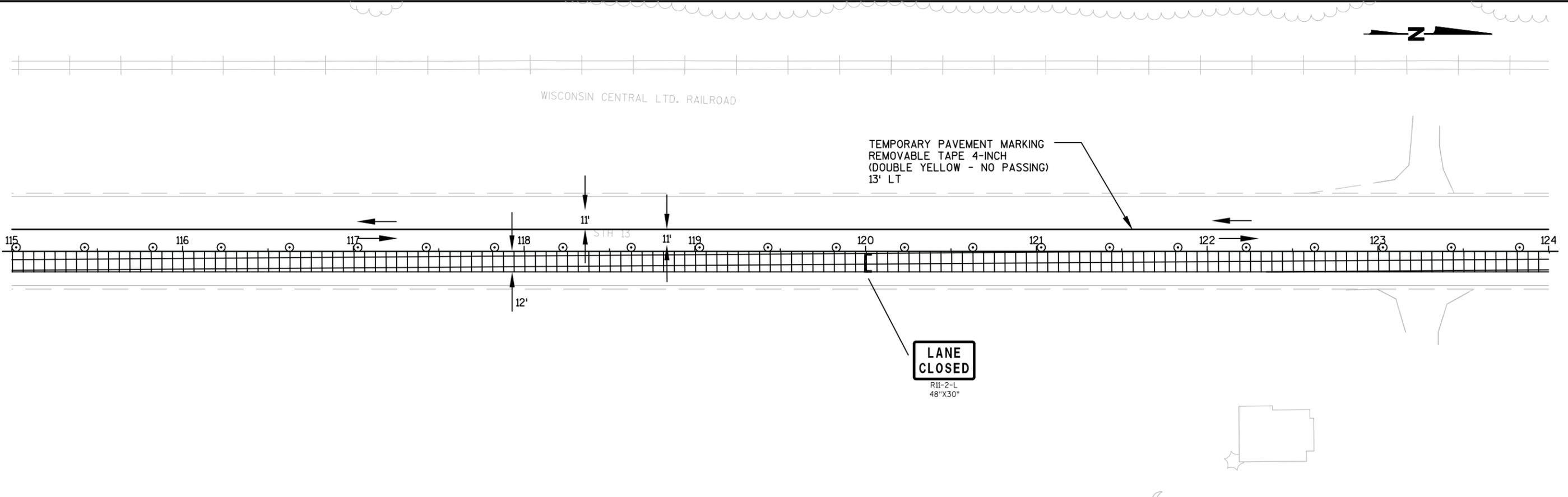




• SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION



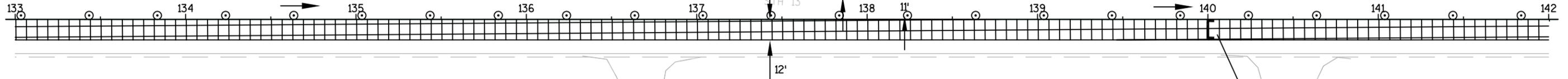




• SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

WISCONSIN CENTRAL LTD. RAILROAD

TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH
(DOUBLE YELLOW - NO PASSING)
13' LT



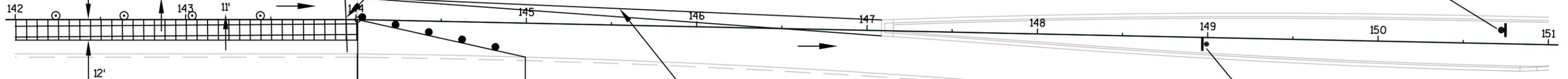
• SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION



WISCONSIN CENTRAL LTD. RAILROAD

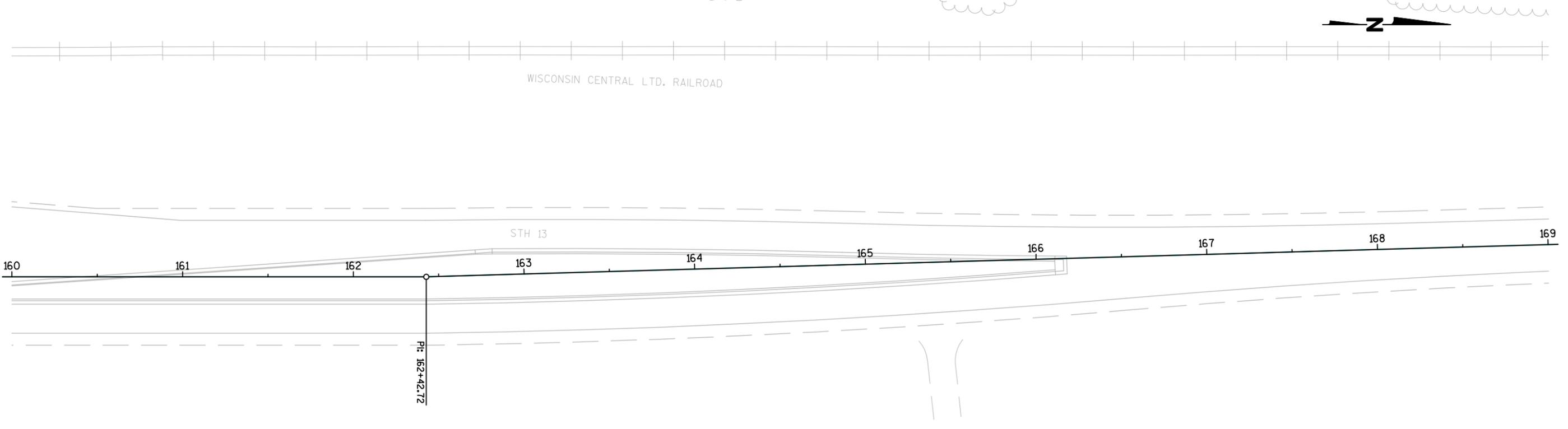
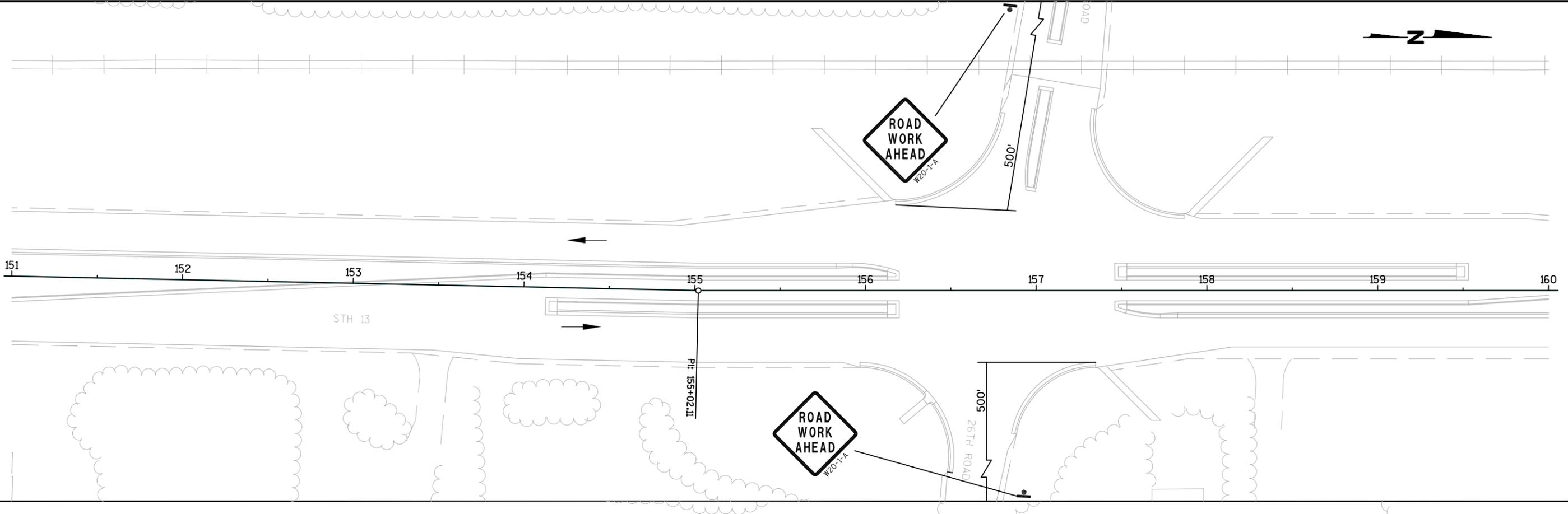
TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH
(DOUBLE YELLOW - NO PASSING)
13' LT

END PROJECT (1620-03-71)
STA. 143+93

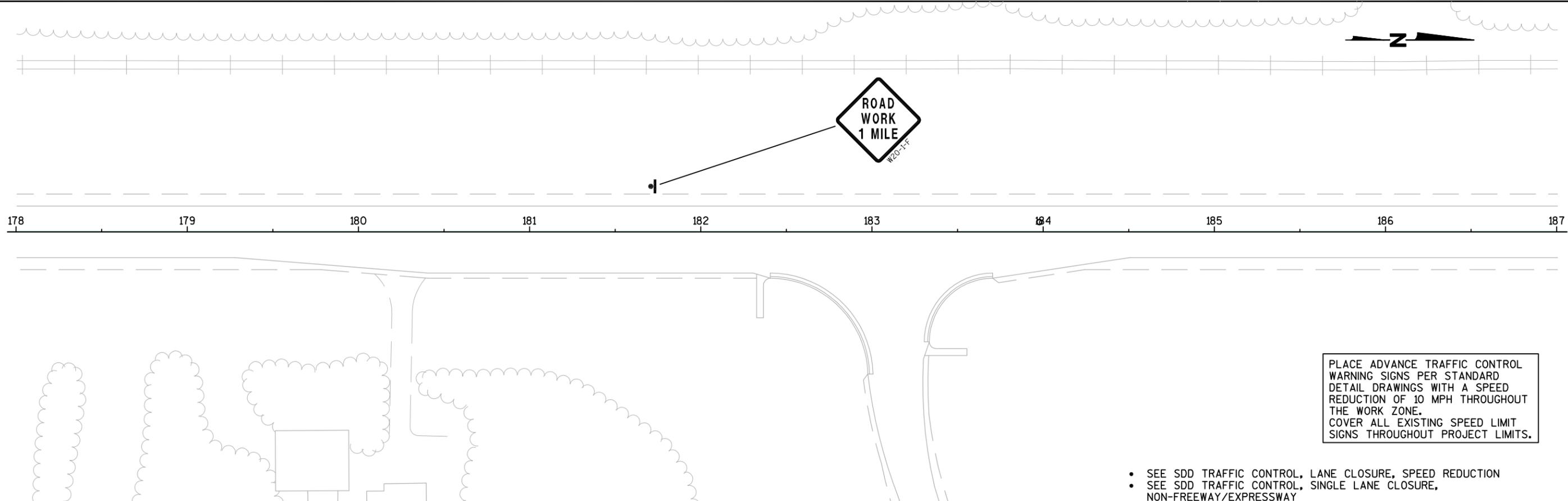
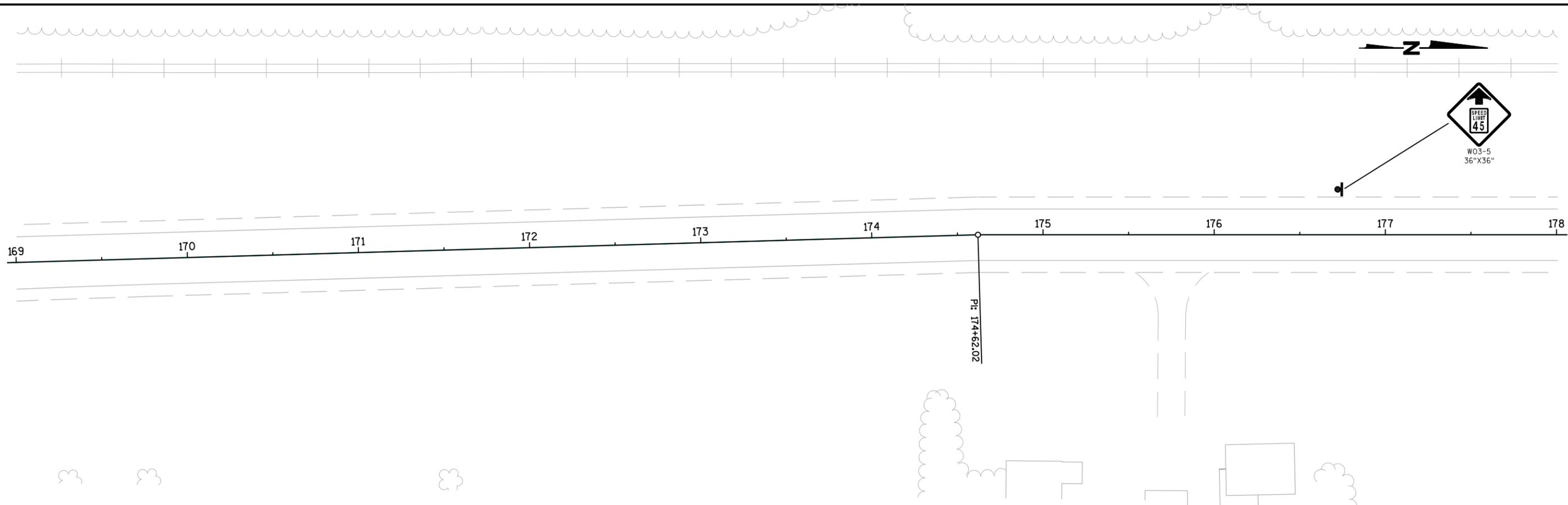


TEMPORARY PAVEMENT MARKING
REMOVABLE TAPE 4-INCH
(YELLOW)





- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY



PLACE ADVANCE TRAFFIC CONTROL WARNING SIGNS PER STANDARD DETAIL DRAWINGS WITH A SPEED REDUCTION OF 10 MPH THROUGHOUT THE WORK ZONE. COVER ALL EXISTING SPEED LIMIT SIGNS THROUGHOUT PROJECT LIMITS.

- SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
- SEE SDD TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

3

DATE 27JAN16		ESTIMATE OF QUANTITIES				
LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1620-03-70 QUANTITY	1620-03-71 QUANTITY
0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	20.000	12.000	8.000
0020	204.0120	Removing Asphaltic Surface Milling	SY	71,100.000	44,300.000	26,800.000
0030	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1620-03-70	LS	1.000	1.000	
0040	211.0100	Prepare Foundation for Asphaltic Paving (project) 02. 1620-03-71	LS	1.000		1.000
0050	213.0100	Finishing Roadway (project) 01. 1620-03-70	EACH	1.000	1.000	
0060	213.0100	Finishing Roadway (project) 02. 1620-03-71	EACH	1.000		1.000
0070	440.4410	Incentive IRI Ride	DOL	17,346.000	10,248.000	7,098.000
0080	455.0145	Asphaltic Material PG64-34P	TON	920.000	575.000	345.000
0090	455.0605	Tack Coat	GAL	8,950.000	5,575.000	3,375.000
0100	460.1110	HMA Pavement Type E-10	TON	16,700.000	10,405.000	6,295.000
0110	460.2000	Incentive Density HMA Pavement	DOL	10,690.000	6,660.000	4,030.000
0120	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	75,350.000	27,070.000	48,280.000
0130	465.0110	Asphaltic Surface Patching	TON	15.000	10.000	5.000
0140	465.0475	Asphalt Center Line Rumble Strips 2-Lane Rural	LF	4,350.000		4,350.000
0150	619.1000	Mobilization	EACH	1.000	0.650	0.350
0160	628.1905	Mobilizations Erosion Control	EACH	2.000	1.000	1.000
0170	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	1.000	1.000
0180	628.7010	Inlet Protection Type B	EACH	1.000	1.000	
0190	628.7015	Inlet Protection Type C	EACH	100.000	93.000	7.000
0200	642.5201	Field Office Type C	EACH	1.000	0.500	0.500
0210	643.0200	Traffic Control Surveillance and Maintenance (project) 01. 1620-03-70	DAY	35.000	35.000	
0220	643.0200	Traffic Control Surveillance and Maintenance (project) 02. 1620-03-71	DAY	46.000		46.000
0230	643.0300	Traffic Control Drums	DAY	19,991.000	11,328.000	8,663.000
0240	643.0420	Traffic Control Barricades Type III	DAY	944.000	649.000	295.000
0250	643.0705	Traffic Control Warning Lights Type A	DAY	1,888.000	1,298.000	590.000
0260	643.0715	Traffic Control Warning Lights Type C	DAY	1,013.000	385.000	628.000
0270	643.0900	Traffic Control Signs	DAY	2,895.000	1,645.000	1,250.000
0280	643.1050	Traffic Control Signs PCMS	DAY	56.000	28.000	28.000
0290	646.0106	Pavement Marking Epoxy 4-Inch	LF	55,200.000	29,568.000	25,632.000
0300	646.0126	Pavement Marking Epoxy 8-Inch	LF	2,220.000	1,938.000	282.000
0310	646.0600	Removing Pavement Markings	LF	6,830.000	115.000	6,715.000
0320	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	90.000	90.000	
0330	647.0716	Pavement Marking Diagonal Epoxy 8-Inch	LF	235.000	235.000	
0340	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	480.000		480.000
0350	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	9,910.000		9,910.000
0360	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	10,400.000		10,400.000
0370	649.0403	Temporary Pavement Marking Epoxy 4-Inch	LF	8,700.000		8,700.000
0380	650.8000	Construction Staking Resurfacing Reference	LF	12,798.000	6,765.000	6,033.000
0390	650.9910	Construction Staking Supplemental Control (project) 01. 1620-03-70	LS	1.000	1.000	
0400	650.9910	Construction Staking Supplemental Control (project) 02. 1620-03-71	LS	1.000		1.000
0410	690.0150	Sawing Asphalt	LF	112.000	53.000	59.000
0420	ASP.1TOA	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	600.000	600.000
0430	ASP.1TOG	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	150.000	150.000

3

REMOVING ASPHALTIC SURFACE ITEMS

STATION - STATION	LOCATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
PROJECT 1620-03-70			
15+95	LT	6	--
16+00	RT	6	--
15+95 - 83+60	LT & RT	--	44,300
PROJECT 1620-03-70 SUBTOTALS		12	44,300
PROJECT 1620-03-71			
83+60 - 143+93	LT & RT	--	26,800
143+93	LT & RT	8	--
PROJECT 1620-03-71 SUBTOTALS		8	26,800
TOTALS		20	71,100

ASPHALTIC ITEMS

STATION - STATION	LOCATION	455.0145 ASPHALTIC MATERIAL PG64-34P TON	455.0605 TACK COAT GAL	460.1110 HMA PAVEMENT TYPE E-10 TON	465.0110 ASPHALTIC SURFACE PATCHING TON
PROJECT 1620-03-70					
14+95 - 83+60	LT & RT	575	5,575	10,405	--
UNDISTRIBUTED	--	--	--	--	10
PROJECT 1620-03-70 SUBTOTALS		575	5,575	10,405	10
PROJECT 1620-03-71					
83+60 - 143+93	LT & RT	345	3,375	6,295	--
UNDISTRIBUTED	--	--	--	--	5
PROJECT 1620-03-71 SUBTOTALS		345	3,375	6,295	5
TOTALS		920	8,950	16,700	15

**REHEATING HMA PAVEMENT
LONGITUDINAL JOINTS**

STATION - STATION	LOCATION	460.4110.S STA
PROJECT 1620-03-70		
15+95 - 83+60	SB C/L	13,535
15+95 - 83+60	NB C/L	13,535
PROJECT 1620-03-70 SUBTOTAL		27,070
PROJECT 1620-03-71		
83+60 - 143+93	C/L	12,070
83+60 - 143+93	LANE LINE	12,070
83+60 - 143+93	SB EDGELINE	12,070
83+60 - 143+93	NB EDGELINE	12,070
PROJECT 1620-03-71 SUBTOTAL		48,280

TOTALS 75,350

SAWING PAVEMENT ITEMS

STATION - STATION	LOCATION	690.0150 ASPHALT LF
PROJECT 1620-03-70		
15+95	LT & RT	53
PROJECT 1620-03-70 SUBTOTALS		53
PROJECT 1620-03-71		
89+49	LT	8
92+01	RT	15
143+93	LT & RT	36
PROJECT 1620-03-71 SUBTOTALS		59
TOTALS		112

RUMBLE STRIP ITEMS

PROJECT ID	STATION - STATION	LOCATION	465.0475.S ASPHALTIC CENTER LINE RUMBLE STRIP 2-LANE RURAL LF
CATEGORY CODE 0010			
1620-03-71	95+09 - 138+50	C/L	4,350
TOTAL			4,350

EROSION CONTROL MOBILIZATIONS ITEMS

LOCATION	628.1905 EROSION CONTROL EACH	628.1910 EMERGENCY EROSION CONTROL EACH
1620-03-70	1	1
1620-03-71	1	1
TOTALS		2

INLET PROTECTION ITEMS

LOCATION	628.7010 TYPE B EACH	628.7015 TYPE C EACH
PROJECT 1620-03-70		
EXISTING STRUCTURES	1	86
UNDISTRIBUTED	--	7
PROJECT 1620-03-70 SUBTOTALS		93
PROJECT 1620-03-71		
EXISTING STRUCTURES	--	6
UNDISTRIBUTED	--	1
PROJECT 1620-03-71 SUBTOTALS		7
TOTALS		100

CONSTRUCTION STAKING ITEMS

STATION - STATION	LOCATION	650.8000 RESURFACING REFERENCE LF	650.9910 SUPPLEMENTAL CONTROL LS
PROJECT 1620-03-70			
15+95 - 83+60	LT & RT	6,765	1
PROJECT 1620-03-70 SUBTOTALS		6,765	1
PROJECT 1620-03-71			
83+60 - 143+93	LT & RT	6,033	1
PROJECT 1620-03-71 SUBTOTALS		6,033	1
TOTALS		12,798	2

ALL CATEGORIES ARE 0010 UNLESS NOTED OTHERWISE

TRAFFIC CONTROL ITEMS

	NUMBER OF DAYS IN SERVICE	643.0200 SURVEILLANCE AND MAINTENANCE		643.0300 DRUMS		643.0420 BARRICADES TYPE III		643.0705 WARNING LIGHTS TYPE A		643.0715 WARNING LIGHTS TYPE C		643.0900 SIGNS	
		NO. REQ'D	TOTAL DAY	NO. REQ'D	TOTAL DAY	NO. REQ'D	TOTAL DAY	NO. REQ'D	TOTAL DAY	NO. REQ'D	TOTAL DAY	NO. REQ'D	TOTAL DAY
PROJECT 1620-03-70													
SOUTH OF WORK AREA PRIOR TO LANE CLOSURE (STAGE 1)	19	1	19	--	--	--	--	--	--	--	--	14	266
7+00 - 83+60 (NORTHBOUND LANES) (STAGE 1)	19	--	--	177	3,363	11	209	22	418	11	209	19	361
10+00 - 83+60 (SOUTHBOUND LANES) (STAGE 1)	19	--	--	143	2,717	8	152	16	304	--	--	14	266
SOUTH OF WORK AREA PRIOR TO LANE CLOSURE (STAGE 2)	16	1	16	--	--	--	--	--	--	--	--	14	224
5+00 - 83+60 (NORTHBOUND LANES) (STAGE 2)	16	--	--	186	2,976	10	160	20	320	11	176	19	304
10+00 - 83+60 (SOUTHBOUND LANES) (STAGE 2)	16	--	--	142	2,272	8	128	16	256	--	--	14	224
PROJECT 1620-03-70 SUBTOTALS		2	35	648	11,328	37	649	74	1,298	22	385	94	1,645
PROJECT 1620-03-71													
83+60 - 149+00 (NORTHBOUND LANES) (STAGE 1)	19	1	19	20	380	--	--	--	--	--	--	4	76
83+60 - 151+50 (SOUTHBOUND LANES) (STAGE 1)	19	--	--	143	2,717	7	133	14	266	18	342	10	190
NORTH OF WORK AREA PRIOR TO LANE CLOSURE (STAGE 1)	19	--	--	--	--	--	--	--	--	--	--	13	247
83+60 - 149+00 (NORTHBOUND LANES) (STAGE 2)	16	1	16	126	2,016	--	--	--	--	--	--	4	64
83+60 - 147+00 (SOUTHBOUND LANES) (STAGE 2)	16	--	--	127	2,032	6	96	12	192	--	--	8	128
NORTH OF WORK AREA PRIOR TO LANE CLOSURE (STAGE 2)	16	--	--	--	--	--	--	--	--	--	--	10	160
SOUTH OF WORK AREA PRIOR TO LANE CLOSURE (STAGE 3)	11	1	11	--	--	--	--	--	--	--	--	15	165
94+00 - 149+00 (NORTHBOUND LANES) (STAGE 3)	11	--	--	124	1,364	6	66	12	132	26	286	8	88
90+00 - 97+50 (SOUTHBOUND LANES) (STAGE 3)	11	--	--	14	154	--	--	--	--	--	--	2	22
NORTH OF WORK AREA PRIOR TO LANE CLOSURE (STAGE 3)	11	--	--	--	--	--	--	--	--	--	--	10	110
PROJECT 1620-03-71 SUBTOTALS		3	46	554	8,663	19	295	38	590	44	628	84	1,250
TOTALS		5	81	1,202	19,991	56	944	112	1,888	66	1,013	178	2,895

TRAFFIC CONTROL ITEMS

	NUMBER OF DAYS IN SERVICE	643.1050 SIGNS PCMS	
		NO. REQ'D	TOTAL DAY
PROJECT 1620-03-70			
14+40 - 89+00 (STAGE 1)	14	2	28
PROJECT 1620-03-70 SUBTOTALS		2	28
PROJECT 1620-03-71			
89+00 - 143+93 (STAGE 2)	14	2	28
PROJECT 1620-03-71 SUBTOTALS		2	28
TOTALS		4	56

PAVEMENT MARKING ITEMS

STATION - STATION	LOCATION	646.0106 EPOXY 4-INCH		646.0126 EPOXY 8-INCH	647.0566 STOP LINE EPOXY 18-INCH	647.0716 DIAGONAL EPOXY 8-INCH	647.0726 DIAGONAL EPOXY 12-INCH
		WHITE LF	YELLOW LF	WHITE LF	WHITE LF	WHITE LF	YELLOW LF
PROJECT 1620-03-70							
5+00 - 9+50	RT	114	--	--	--	--	--
15+95 - 83+60	LT	8,667	6,405	798	40	235	--
16+00 - 83+60	RT	8,013	6,369	1,140	50	--	--
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--
PROJECT 1620-03-70 SUBTOTALS		16,794	12,774	1,938	90	235	--
PROJECT 1620-03-71							
83+60 - 150+45	LT	7,413	7,692	282	--	--	480
83+60 - 146+20	RT	6,183	4,344	--	--	--	--
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--
PROJECT 1620-03-71 SUBTOTALS		13,596	12,036	282	--	--	480
		30,390	24,810				
TOTALS		55,200	2,220	90	235	480	

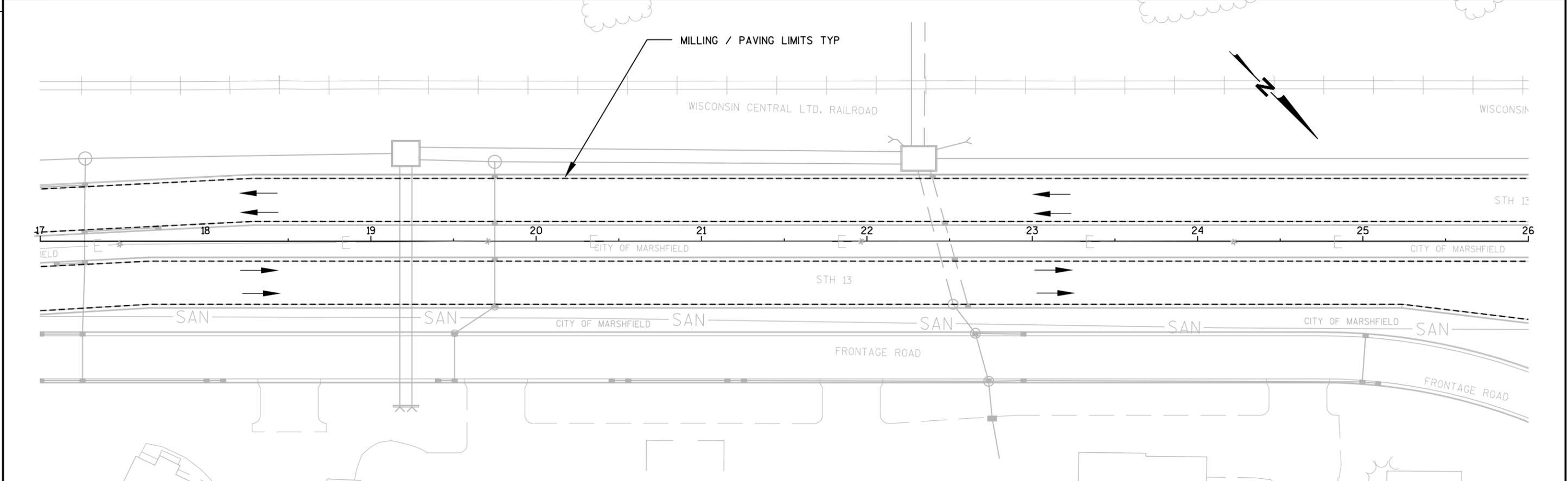
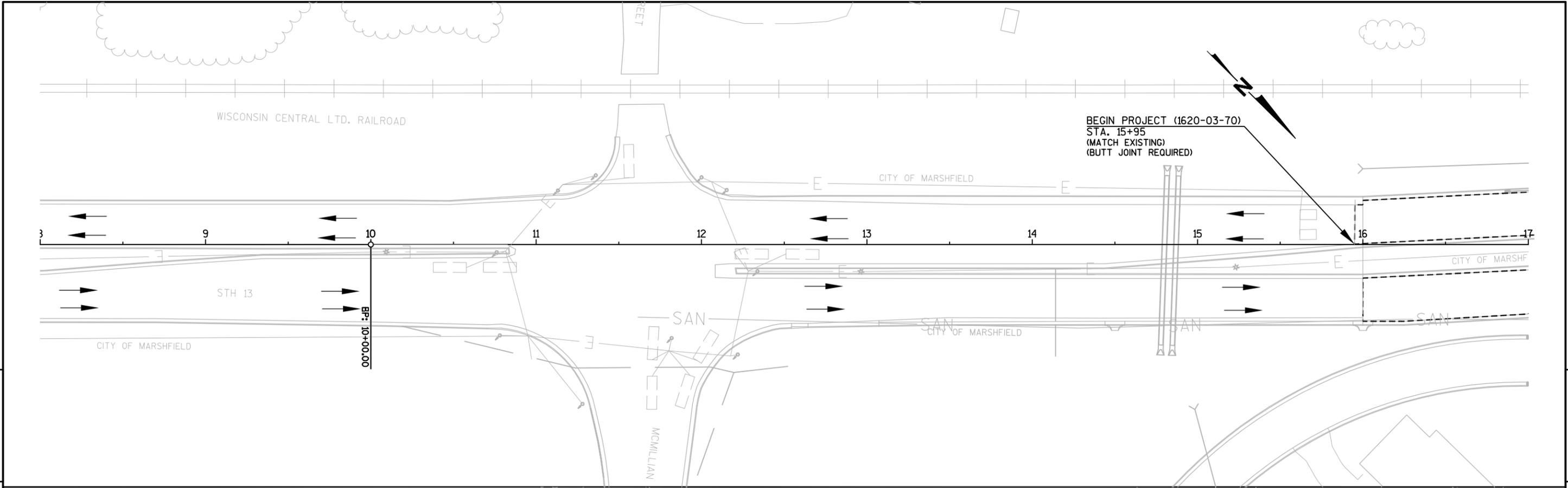
REMOVING PAVEMENT MARKING ITEMS

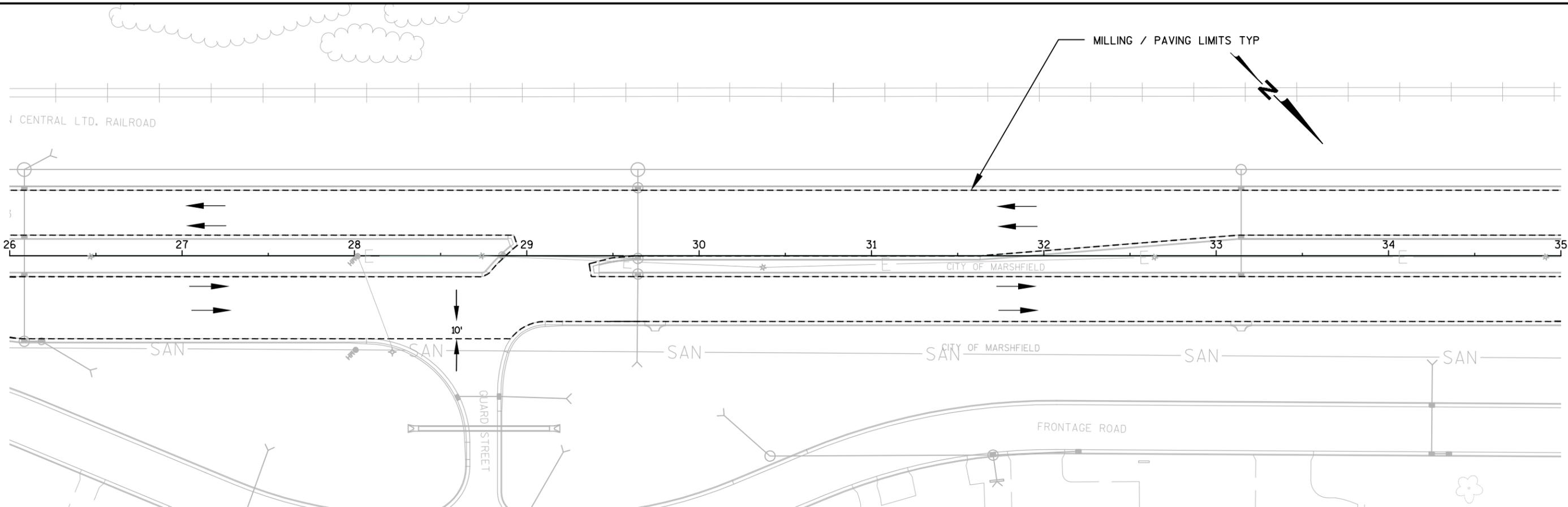
		646.0600		
STATION - STATION	LOCATION	LF	COMMENTS	
PROJECT 1620-03-70				
7+00 - 9+50	RT	65	LANE CLOSURE	
5+00 - 7+00	RT	50	LANE CLOSURE	
PROJECT 1620-03-70 SUBTOTALS		115		
PROJECT 1620-03-71				
95+00 - 146+25	RT	5,115	SHIFTED C/L	
138+25 - 150+50	LT	1,225	SHIFTED LANE	
140+50 - 147+75	LT	375	SHIFTED LANE	
PROJECT 1620-03-71 SUBTOTALS		6,715		
TOTALS		6,830		

TEMPORARY PAVEMENT MARKING ITEMS

		649.0400	649.0402	649.0403	
		REMOVABLE	PAINT	EPOXY	
		TAPE	4-INCH	4-INCH	
		4-INCH			
STATION - STATION	LOCATION	YELLOW	YELLOW	YELLOW	COMMENTS
		LF	LF	LF	
PROJECT 1620-03-71					
95+00 - 147+75	LT & RT	--	10,400	--	STAGE 1
97+50 - 147+75	LT & RT	9,910	--	--	STAGE 3
95+07 - 138+50	CL	--	--	8,700	SAME-DAY TEMP CL PRIOR TO RUMBLE STRIP INSTALLATION
TOTALS		9,910	10,400	8,700	

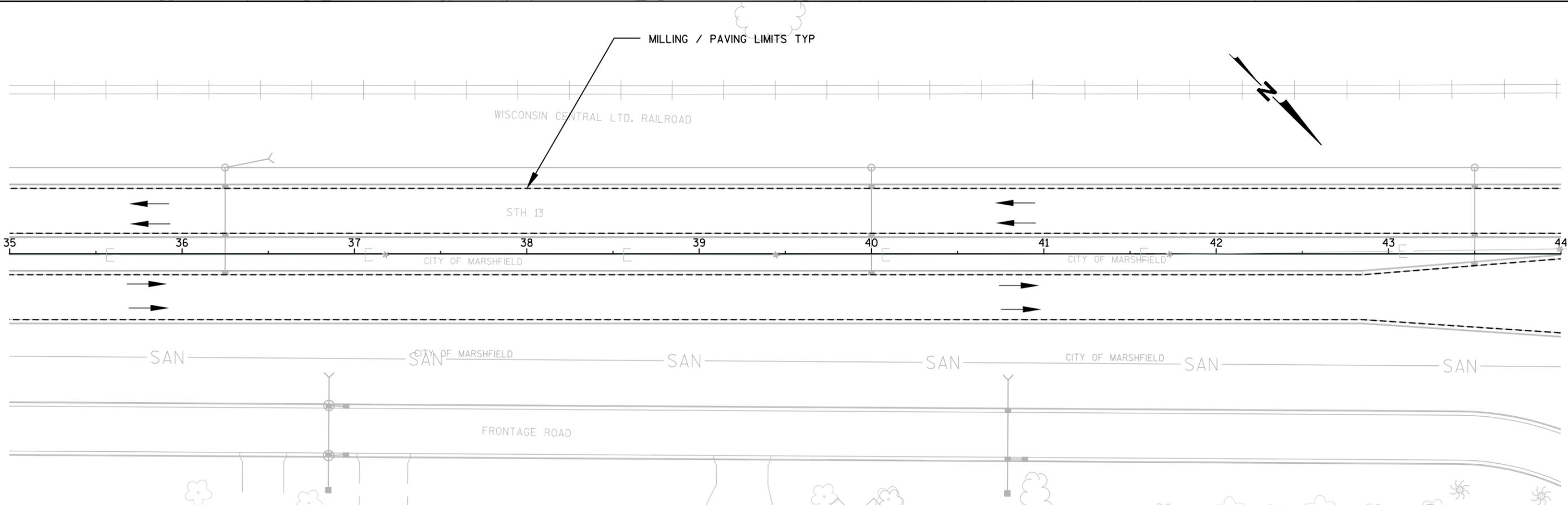
ALL CATEGORIES ARE 0010 UNLESS NOTED OTHERWISE

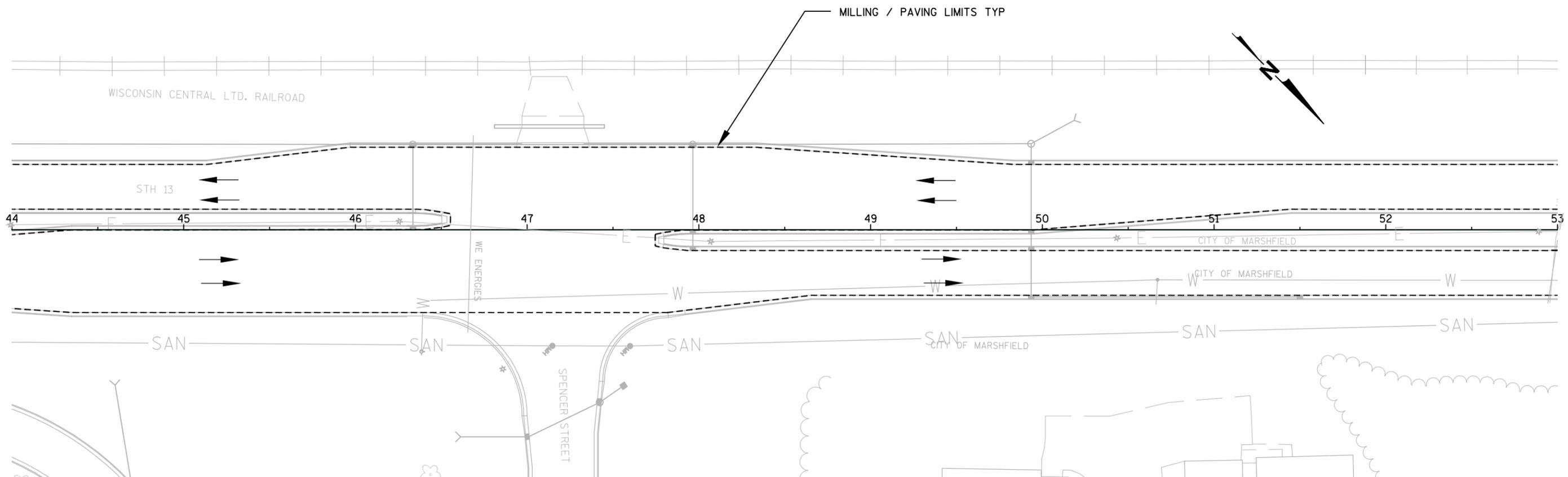




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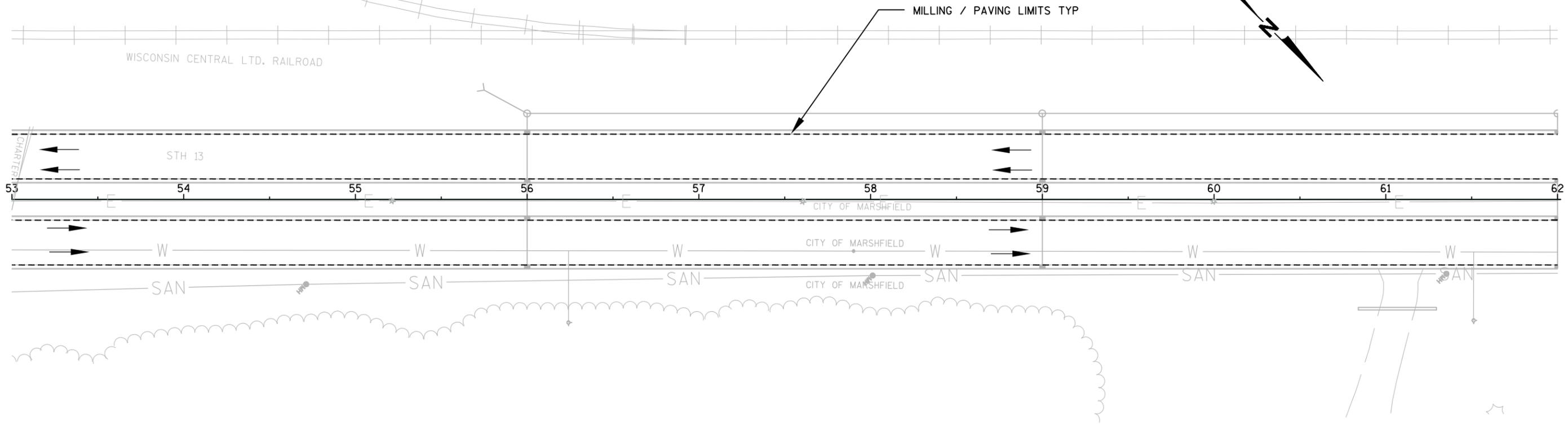
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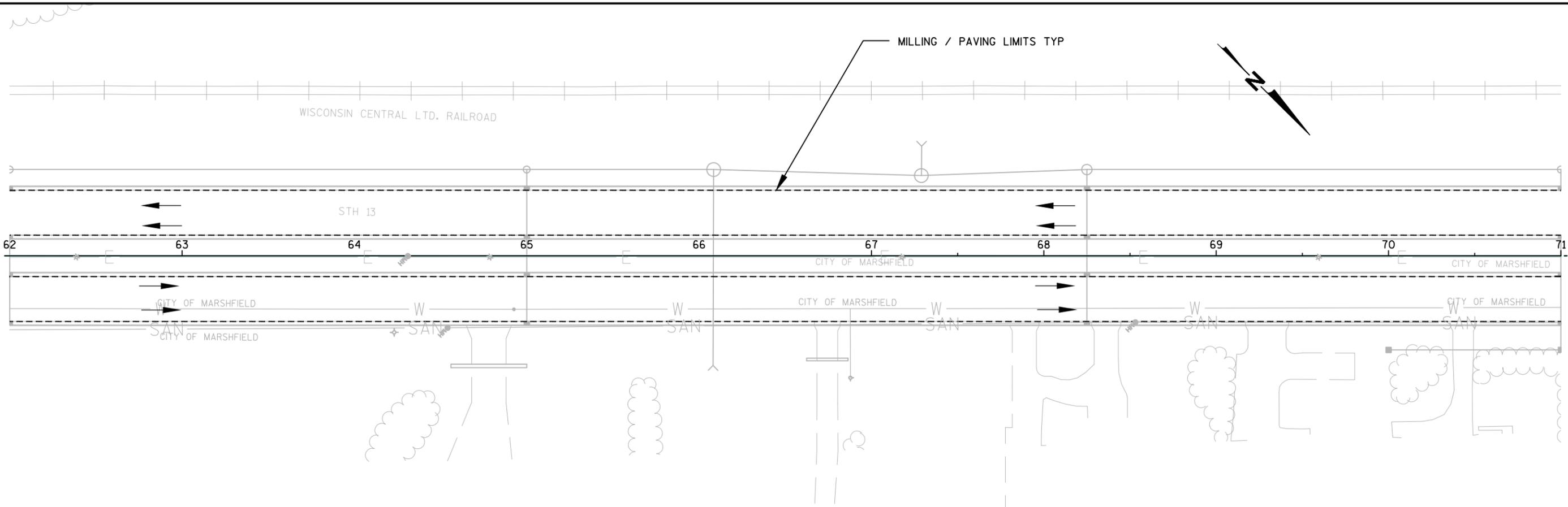




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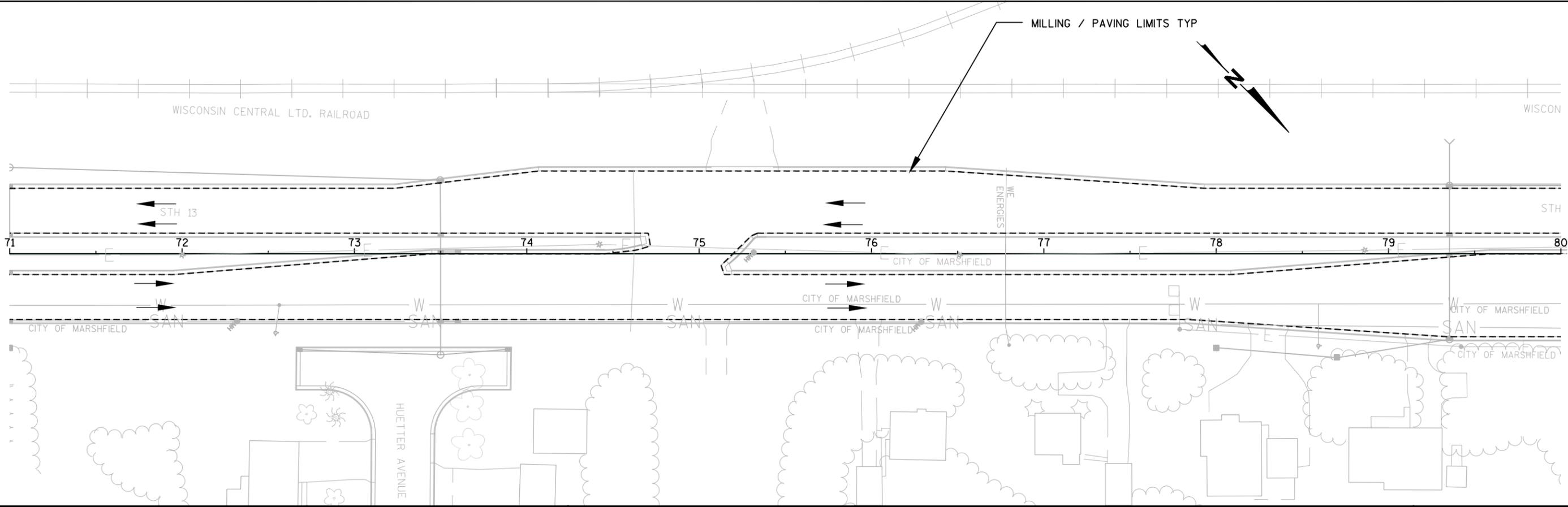
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PROJECT NO: 1620-03-70

HWY: STH 13

COUNTY: MARATHON

ROADWAY PLAN

SHEET

E

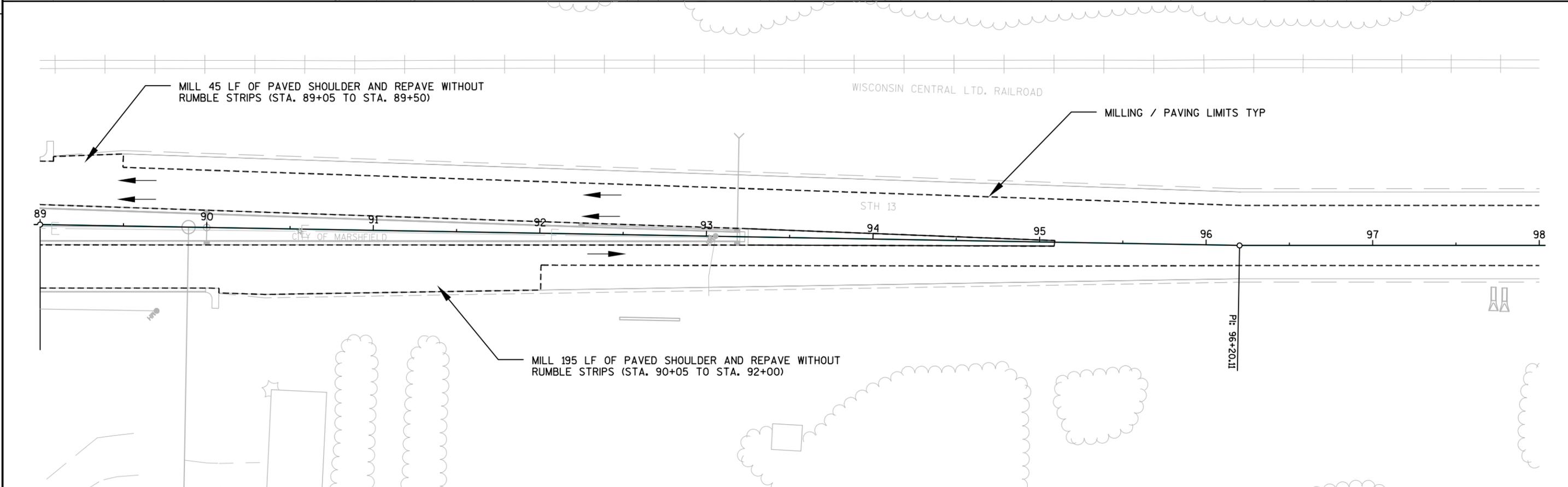
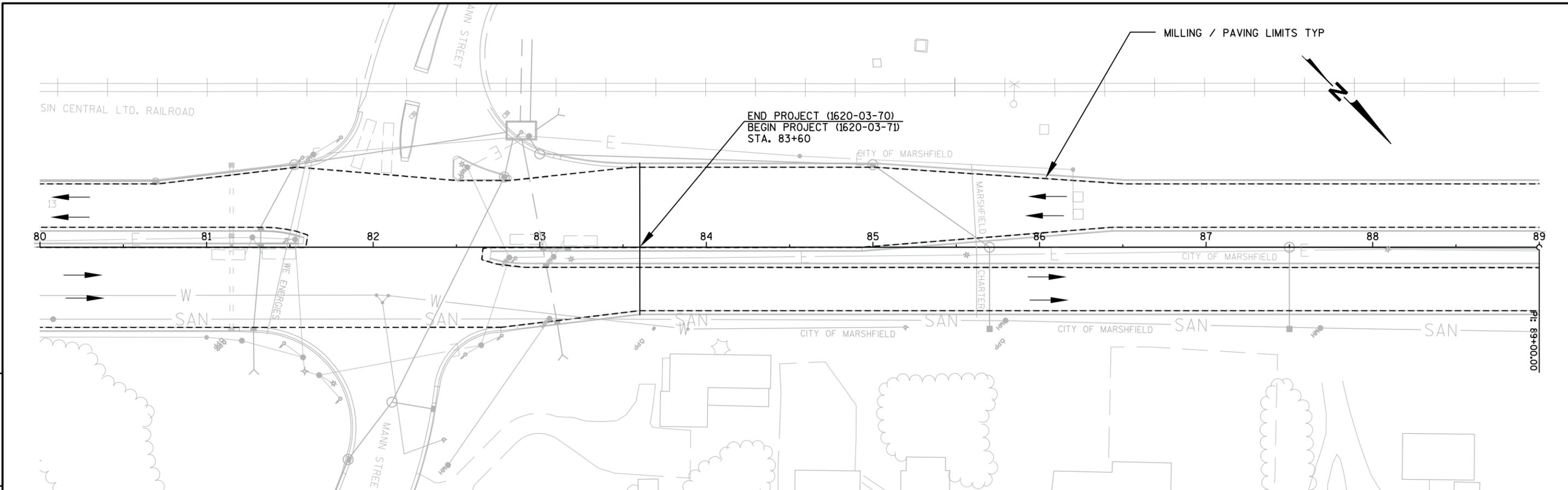
FILE NAME : 050204_PN

PLOT DATE : 02 JUL 2015 08:00:11

PLOT BY : GADDK

PLOT NAME :

PLOT SCALE : 1:1



WISCONSIN CENTRAL LTD. RAILROAD

MILLING / PAVING LIMITS TYP

98 99 100 101 102 STH 13 103 104 105 106 107

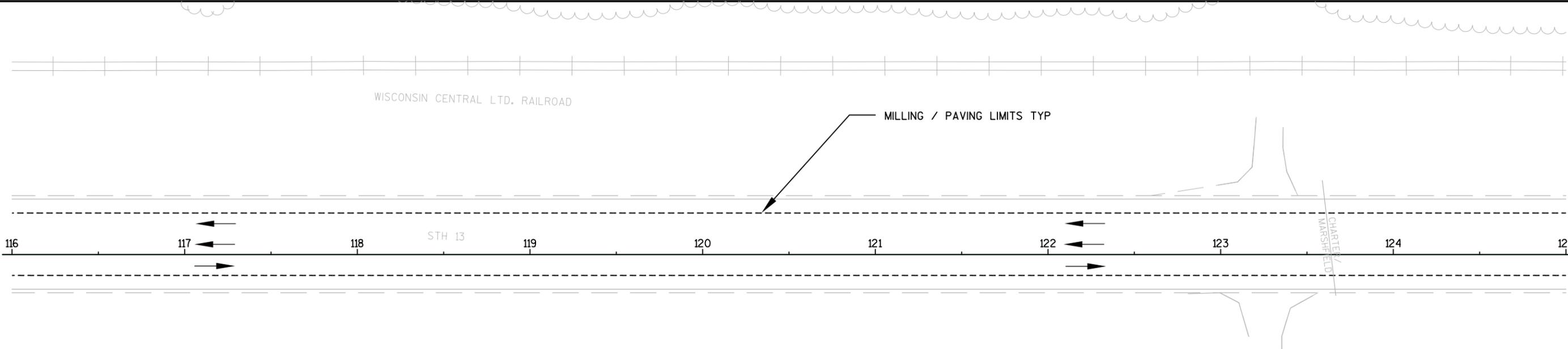
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WISCONSIN CENTRAL LTD. RAILROAD

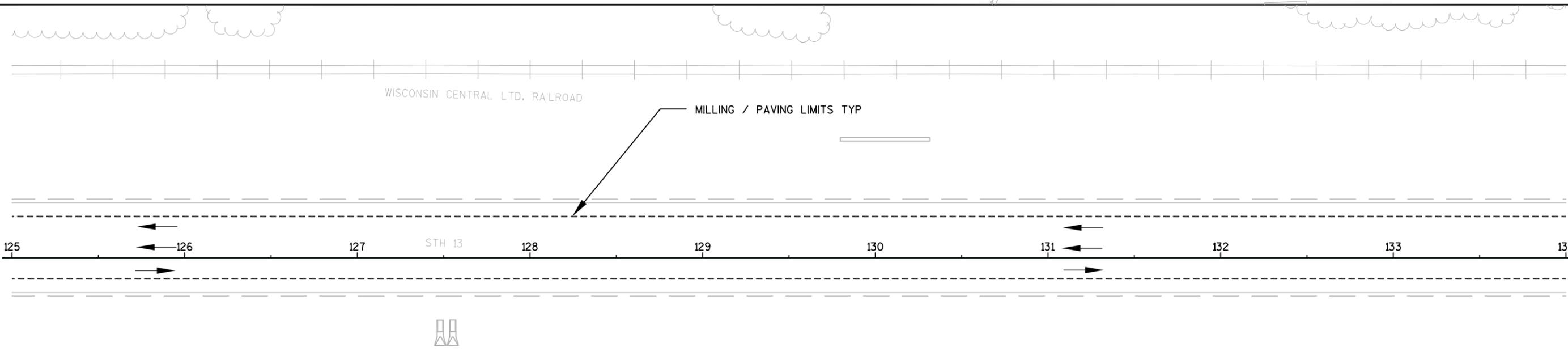
MILLING / PAVING LIMITS TYP

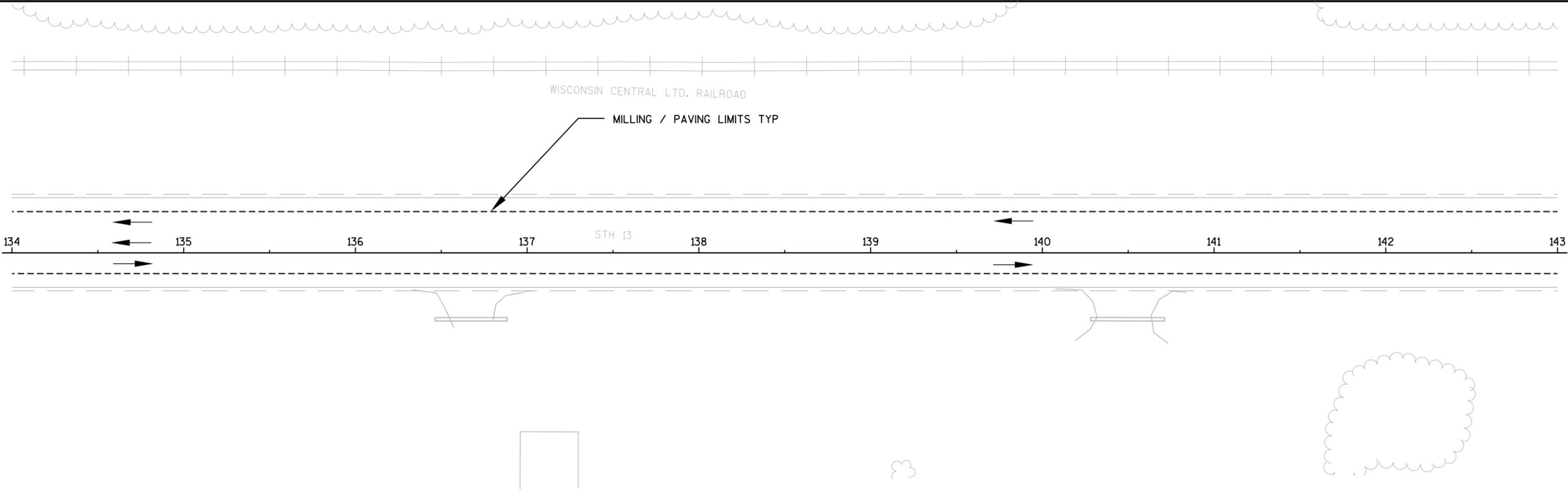
107 108 109 STH 13 110 111 112 113 114 115 116



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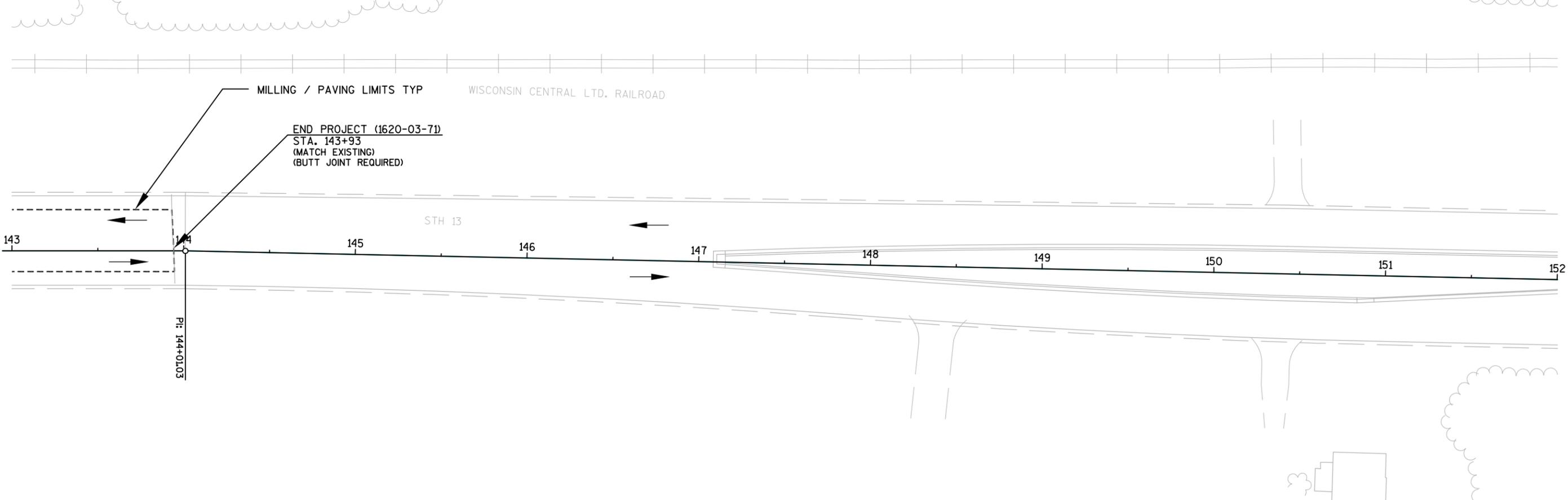
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PROJECT NO: 1620-03-71

HWY: STH 13

COUNTY: MARATHON

ROADWAY PLAN

SHEET

E

FILE NAME : 050208_PN

PLOT DATE : 15 JUL 2015 15:00:09

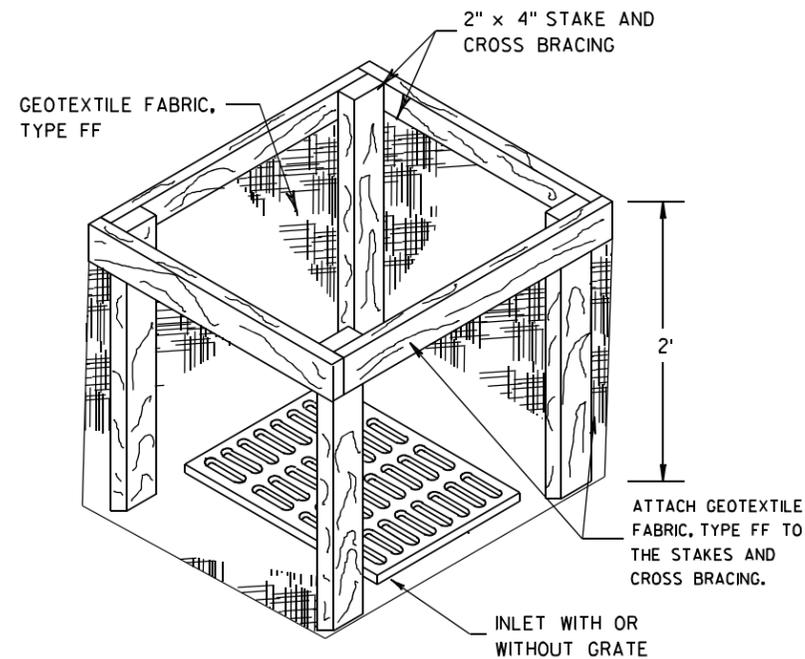
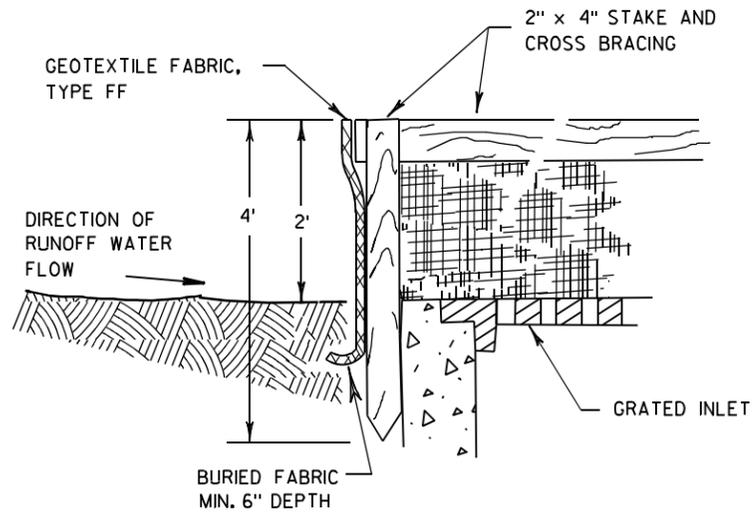
PLOT BY : GADDK

PLOT NAME :

PLOT SCALE : 1:1

Standard Detail Drawing List

08E10-02	INLET PROTECTION TYPE A, B, C AND D
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16C	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C08-16D	PAVEMENT MARKING (CLIMBING LANE & PASSING LANE)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C18-03	MEDIAN ISLAND MARKING
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-05B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D20-03	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-03	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE



INLET PROTECTION, TYPE A

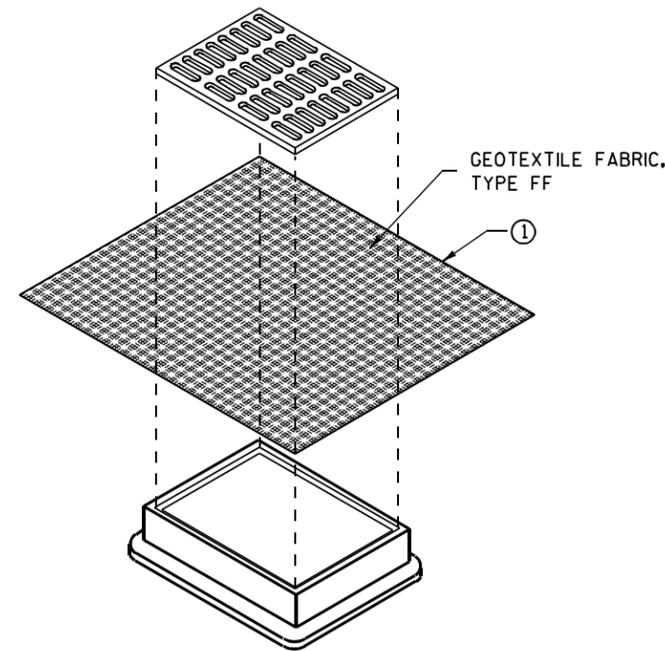
GENERAL NOTES

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.

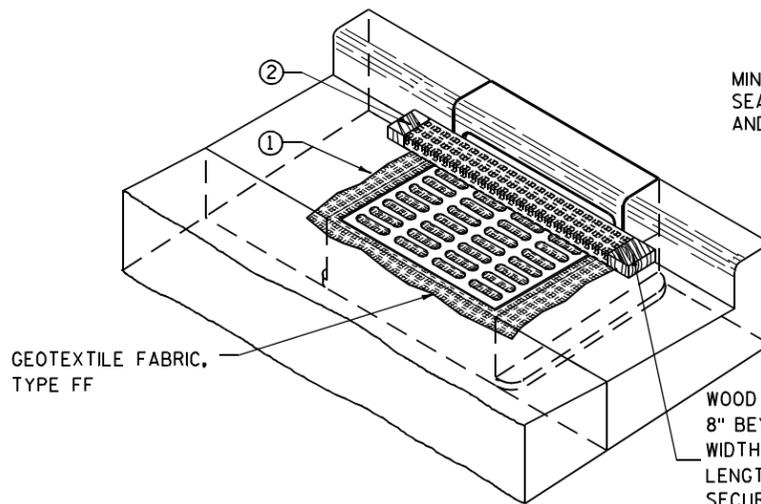
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

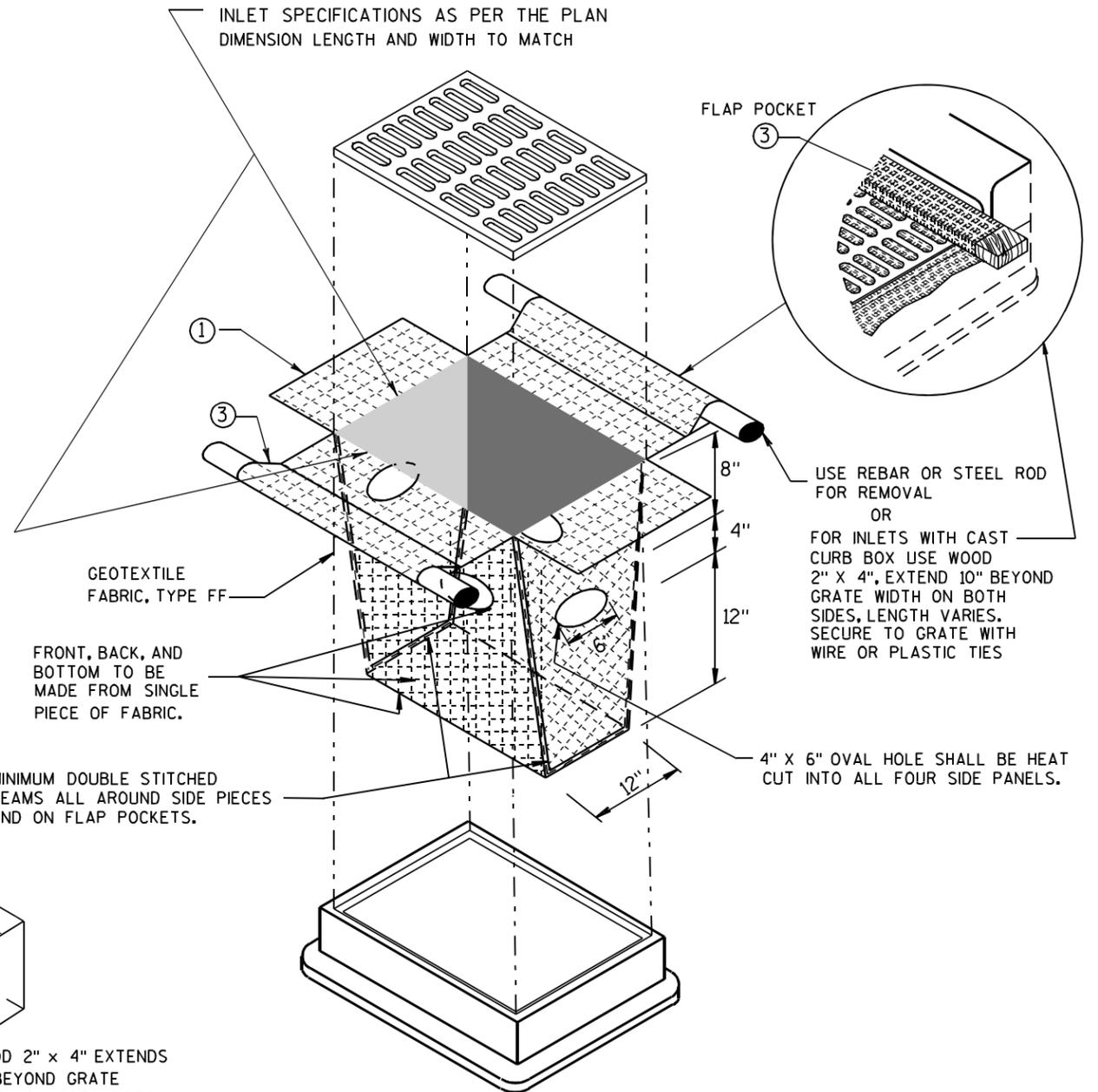
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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

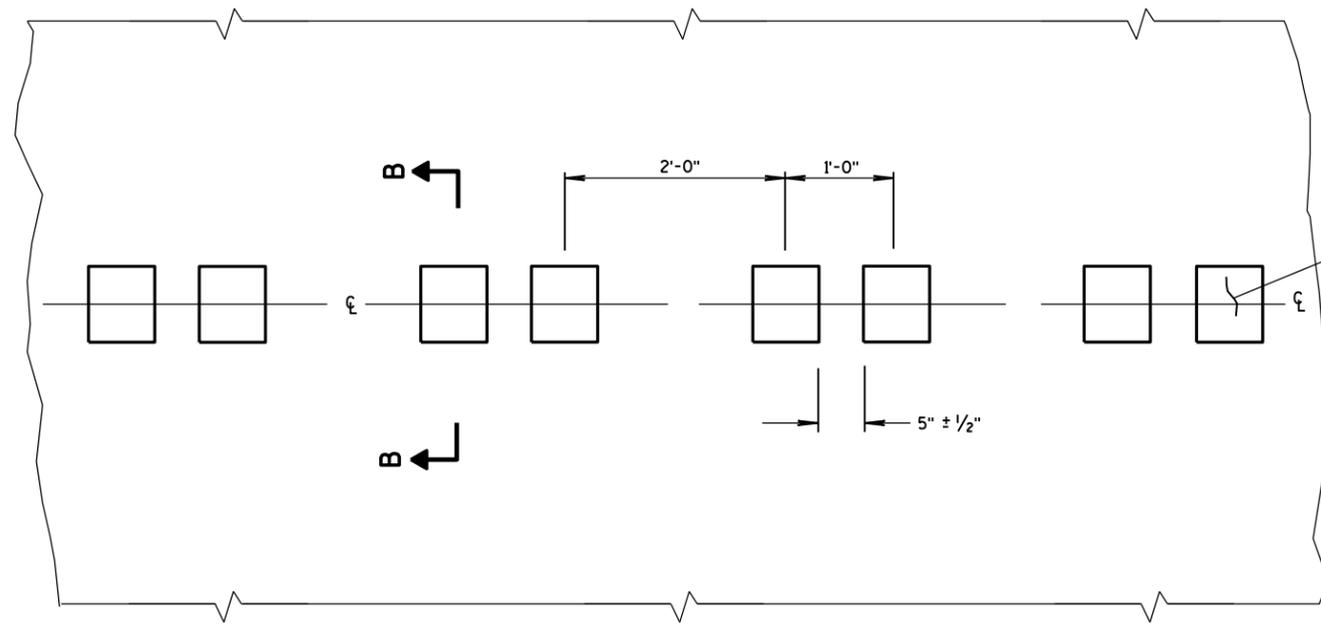
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

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

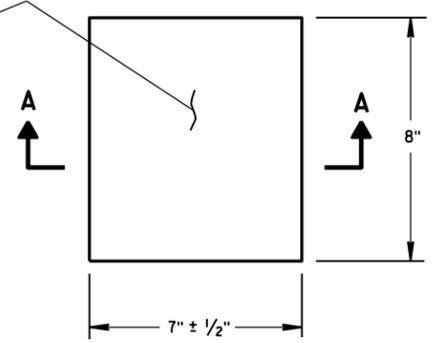
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
 DO NOT MILL CENTER LINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.
 INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.
 SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

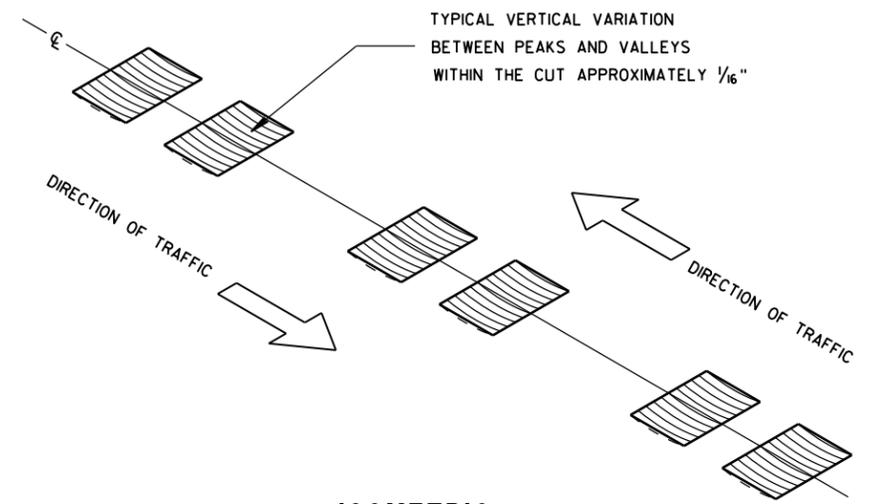
① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



PLAN VIEW
CENTER LINE WITH GROOVES

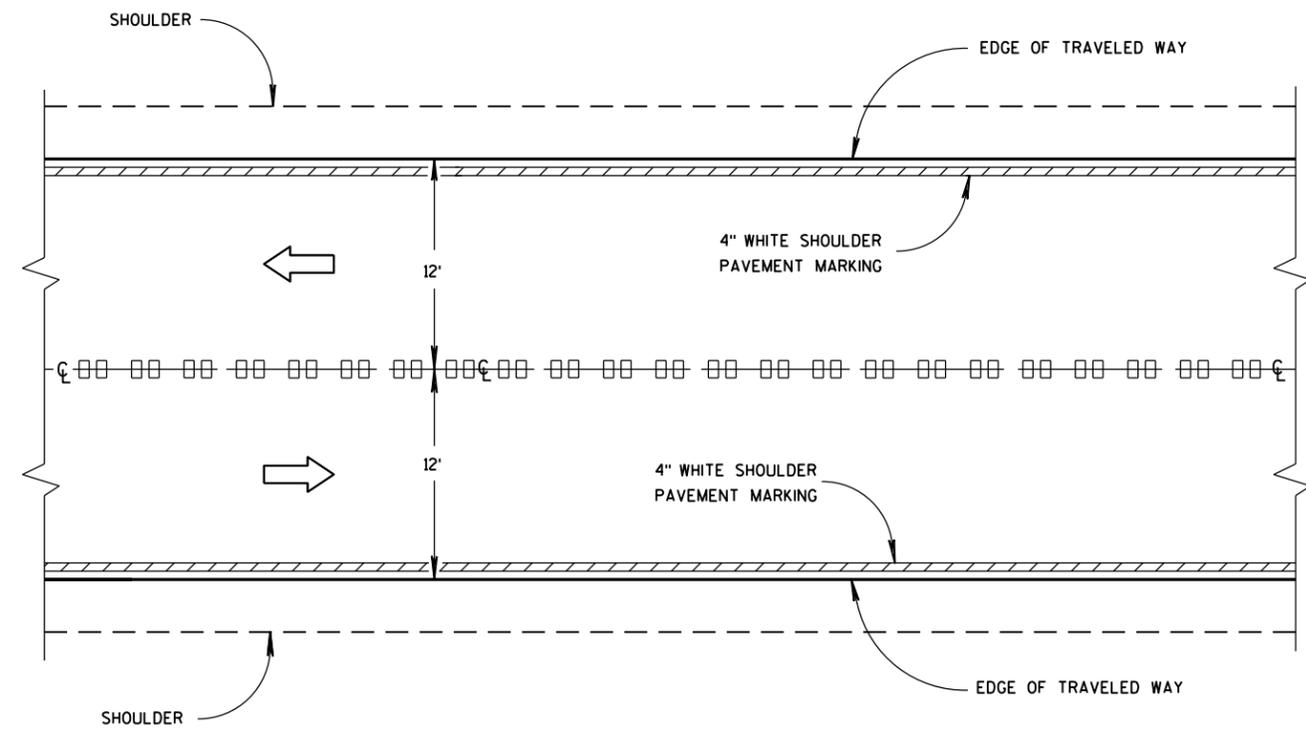


PLAN VIEW
(SINGLE GROOVE)

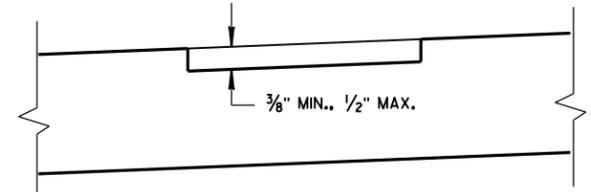


ISOMETRIC

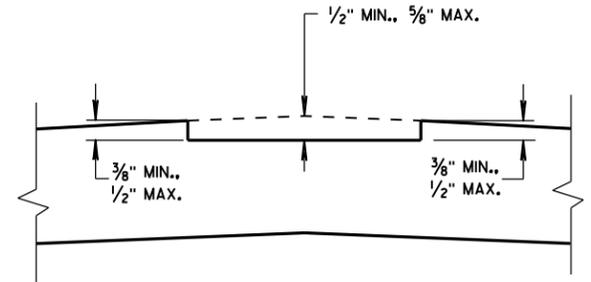
PLACEMENT DETAIL FOR MILLED RUMBLE STRIP



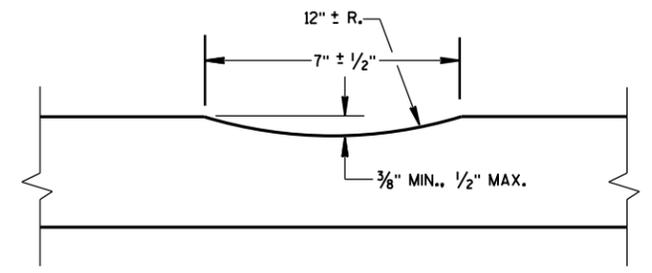
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



SECTION B-B
CROWNED ROADWAY

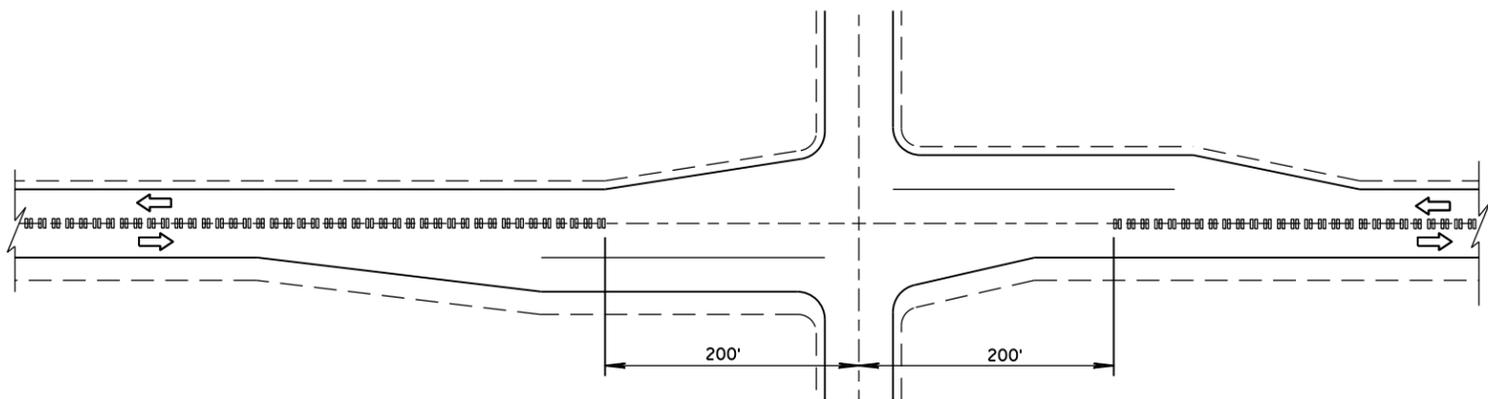


SECTION A-A

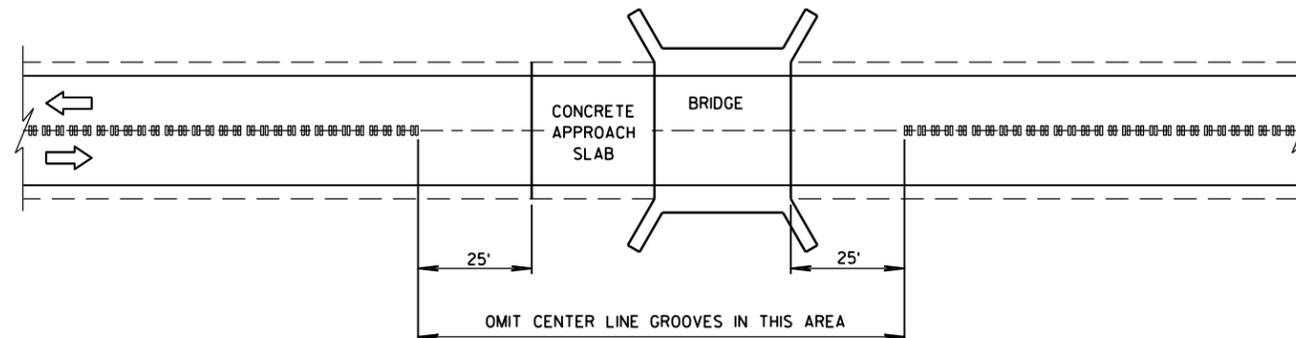
2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

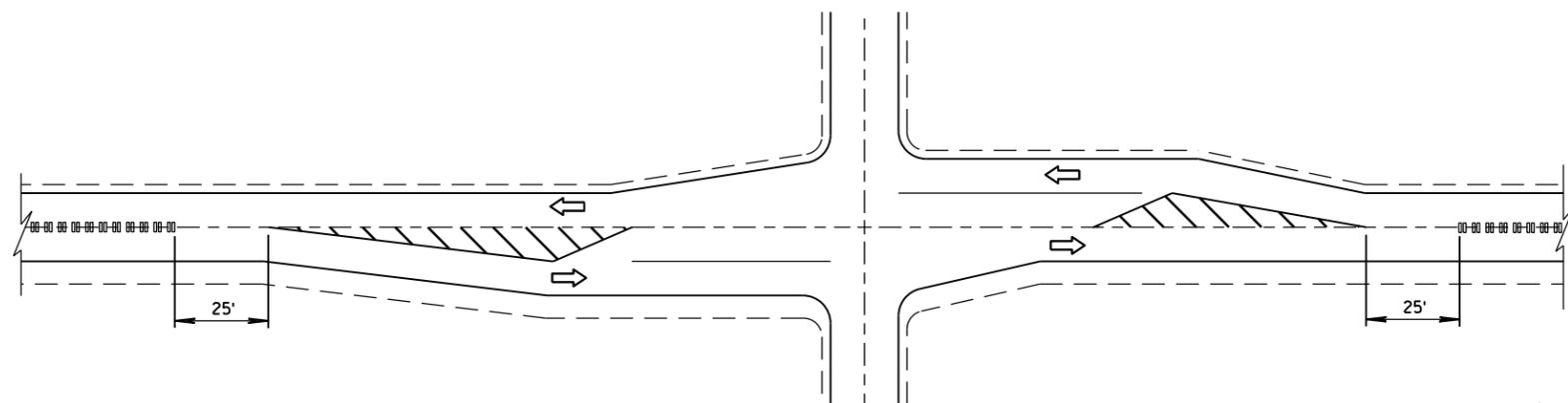
① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



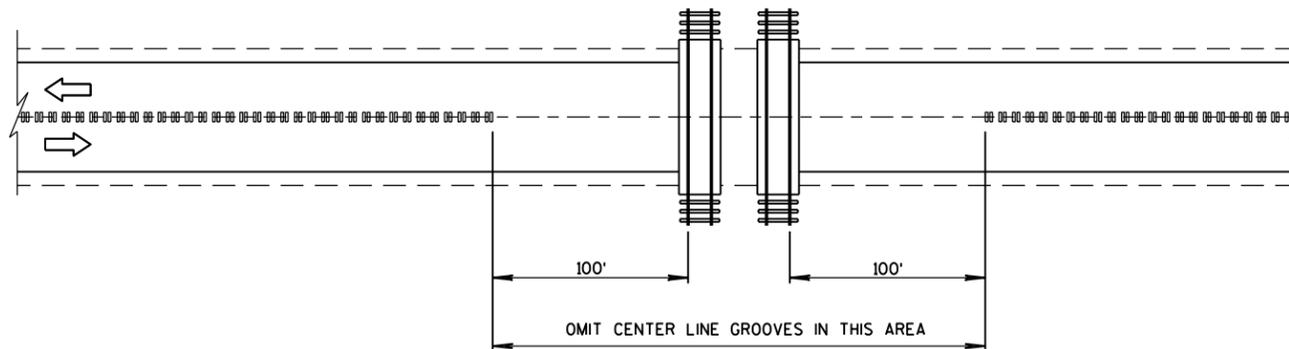
CENTER LINE GROOVES AT INTERSECTIONS



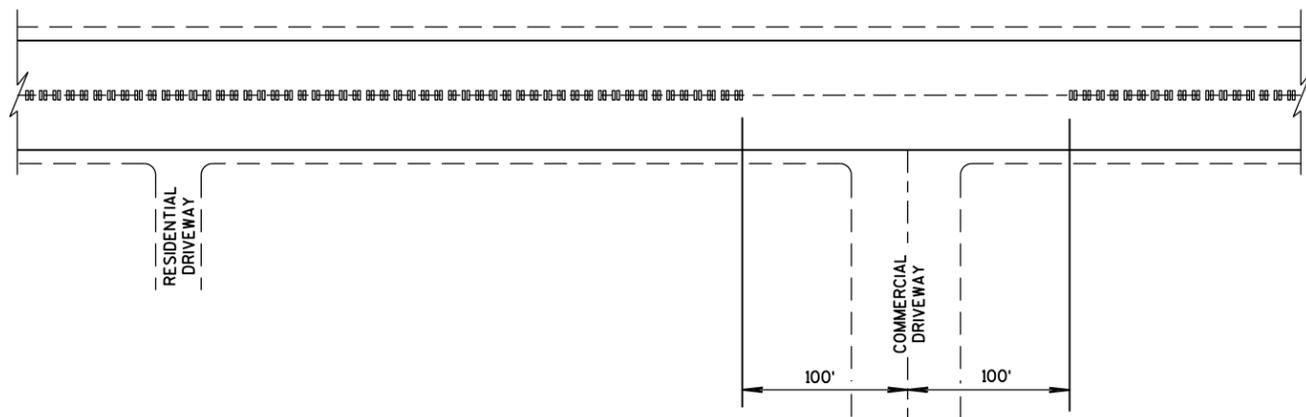
CENTER LINE GROOVES AT BRIDGES



CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)



CENTER LINE GROOVES AT RAILROADS



CENTER LINE GROOVES AT DRIVEWAYS ①

6

6

S.D.D. 13 A 11-2b

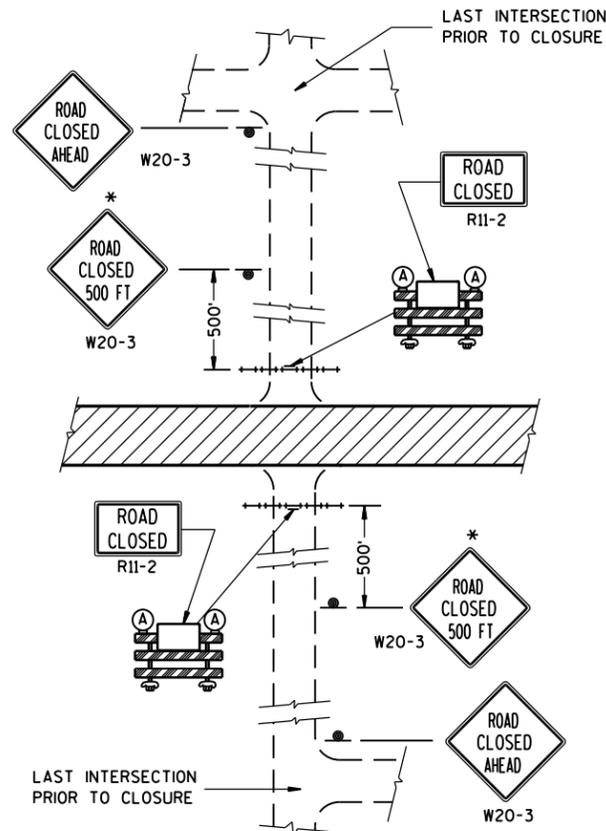
S.D.D. 13 A 11-2b

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

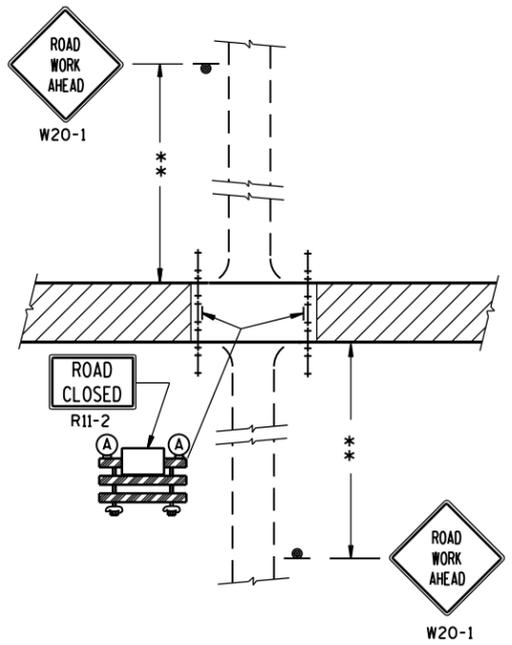
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/15/2013
DATE
FHWA

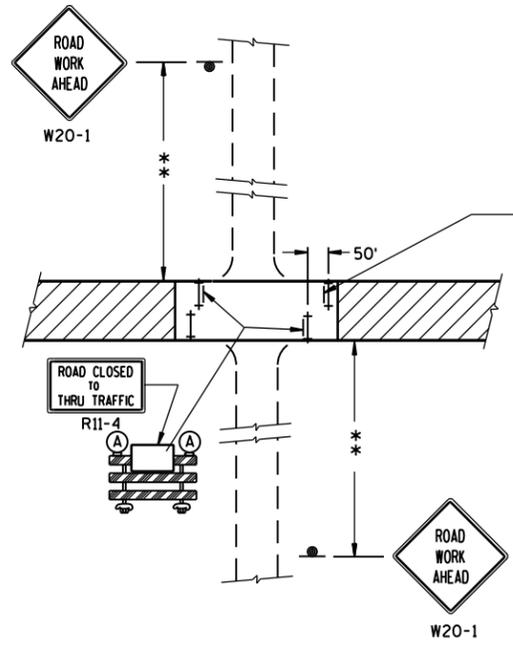
/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



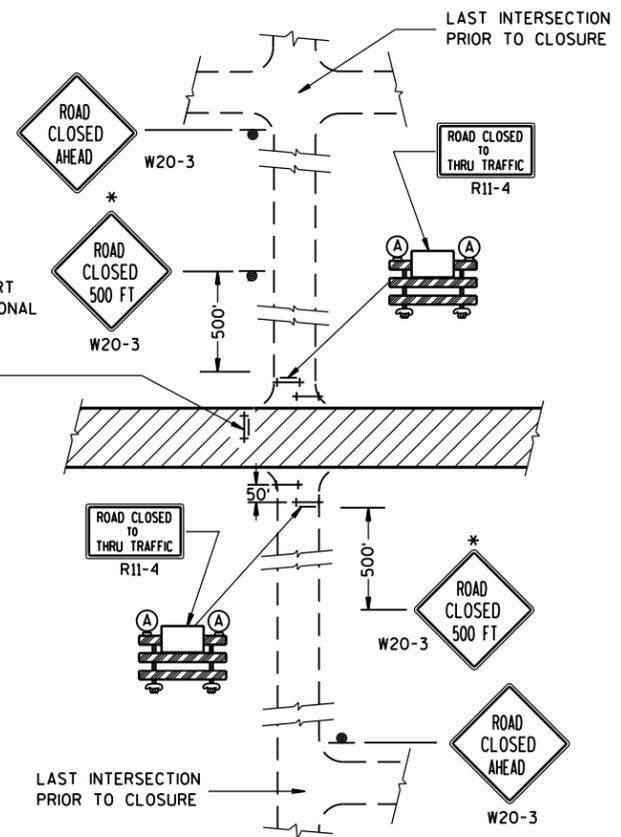
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR,
LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

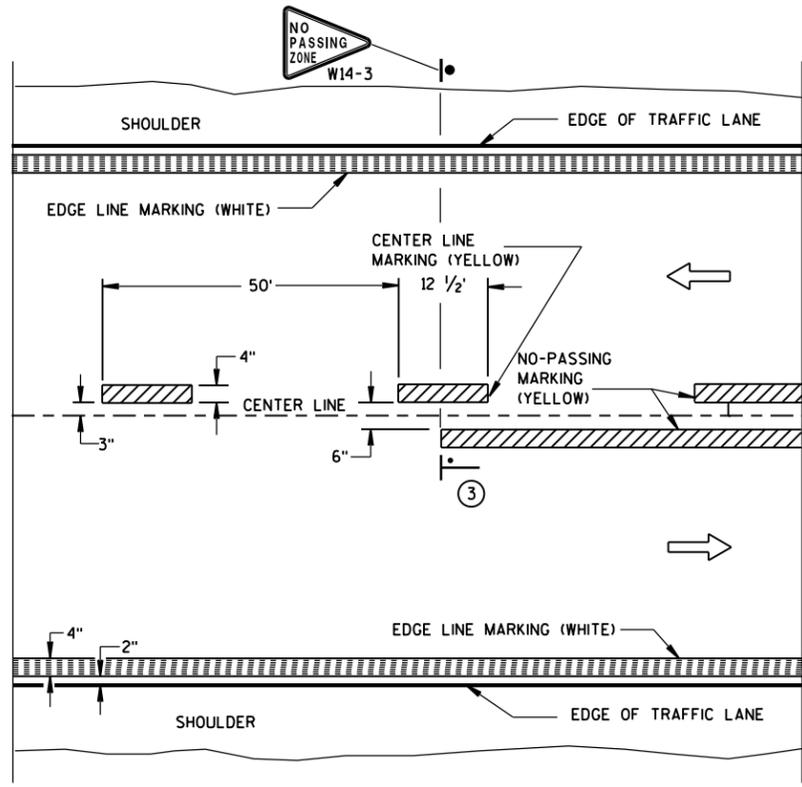
LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

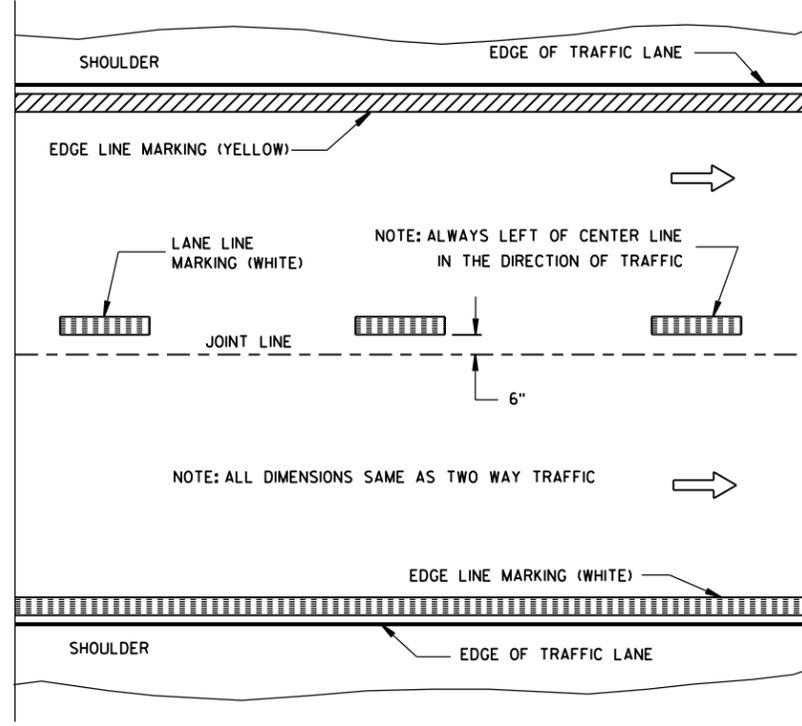
**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

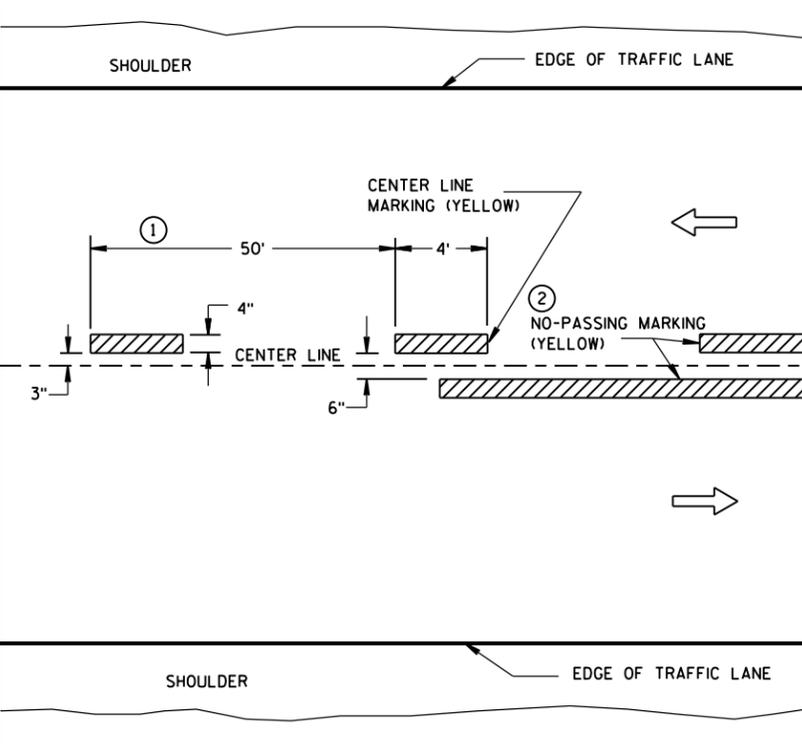


TWO WAY TRAFFIC

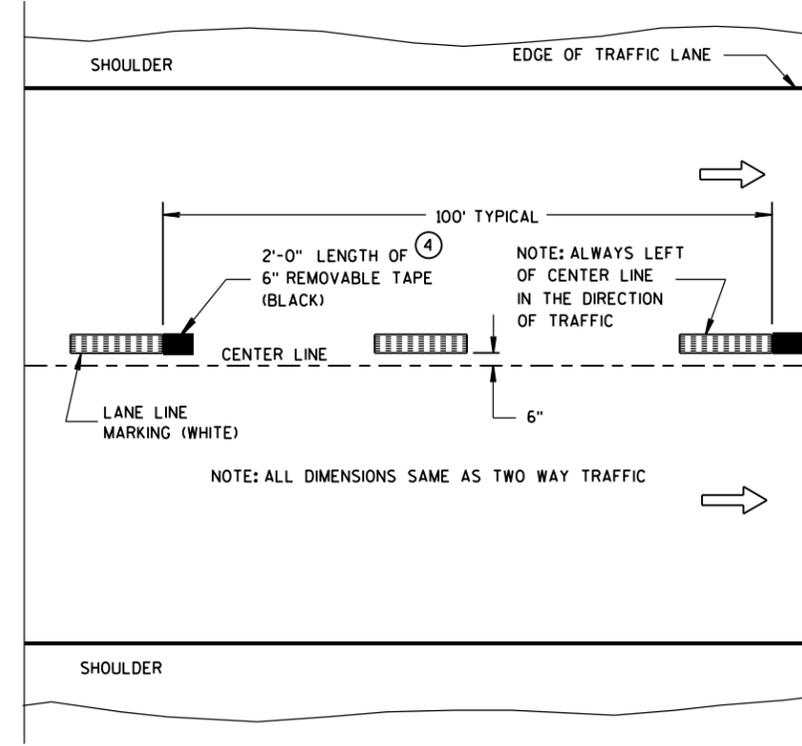


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

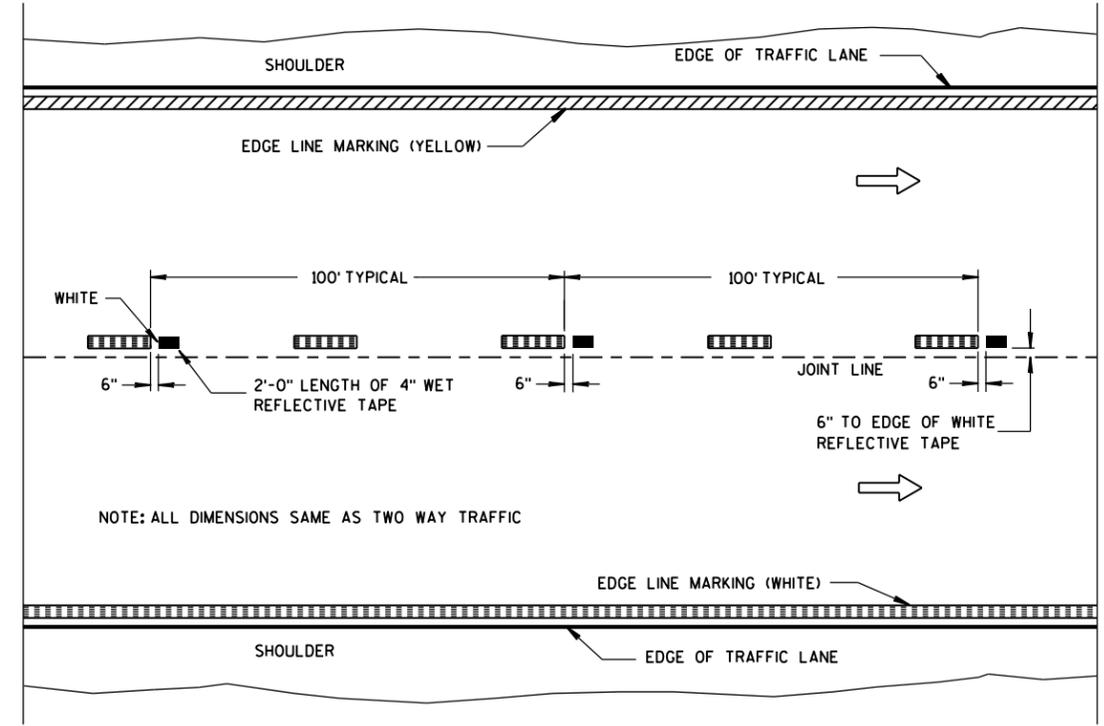
GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



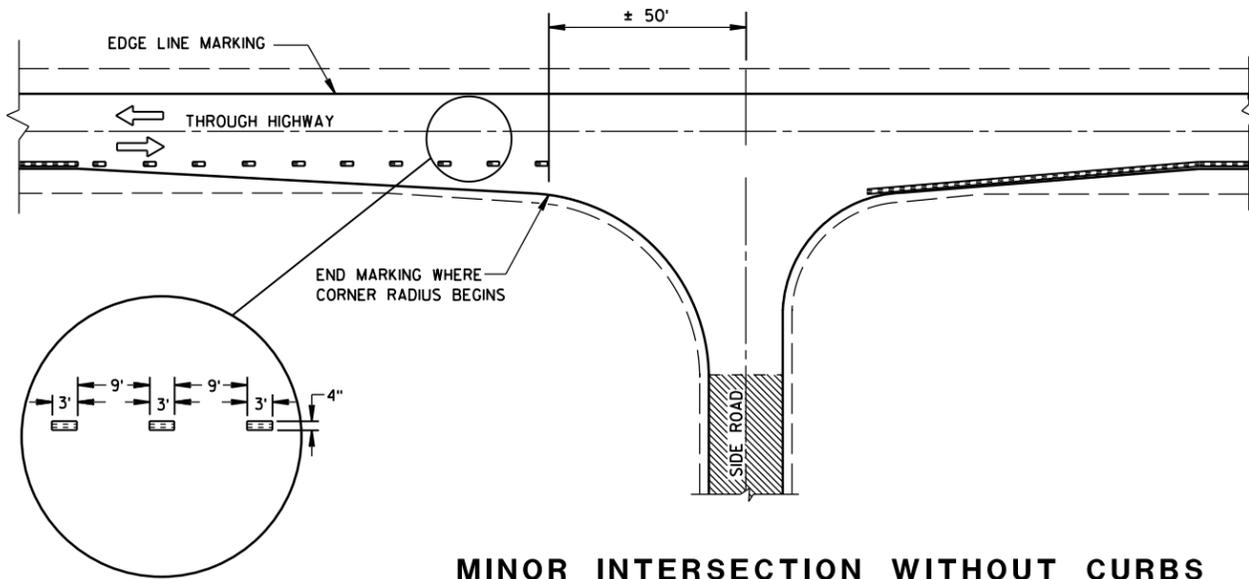
**WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE**

LEGEND

● "T" MARKING

● POST MOUNTED SIGN

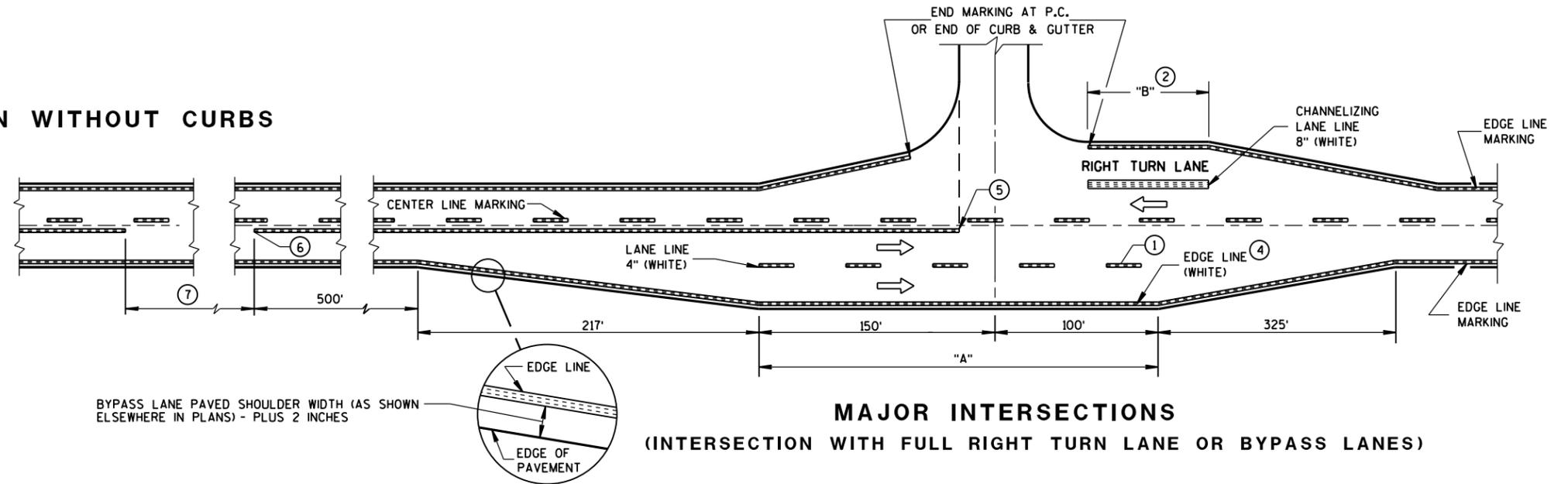
PAVEMENT MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5-13-2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER
FHWA	



MINOR INTERSECTION WITHOUT CURBS

⑦

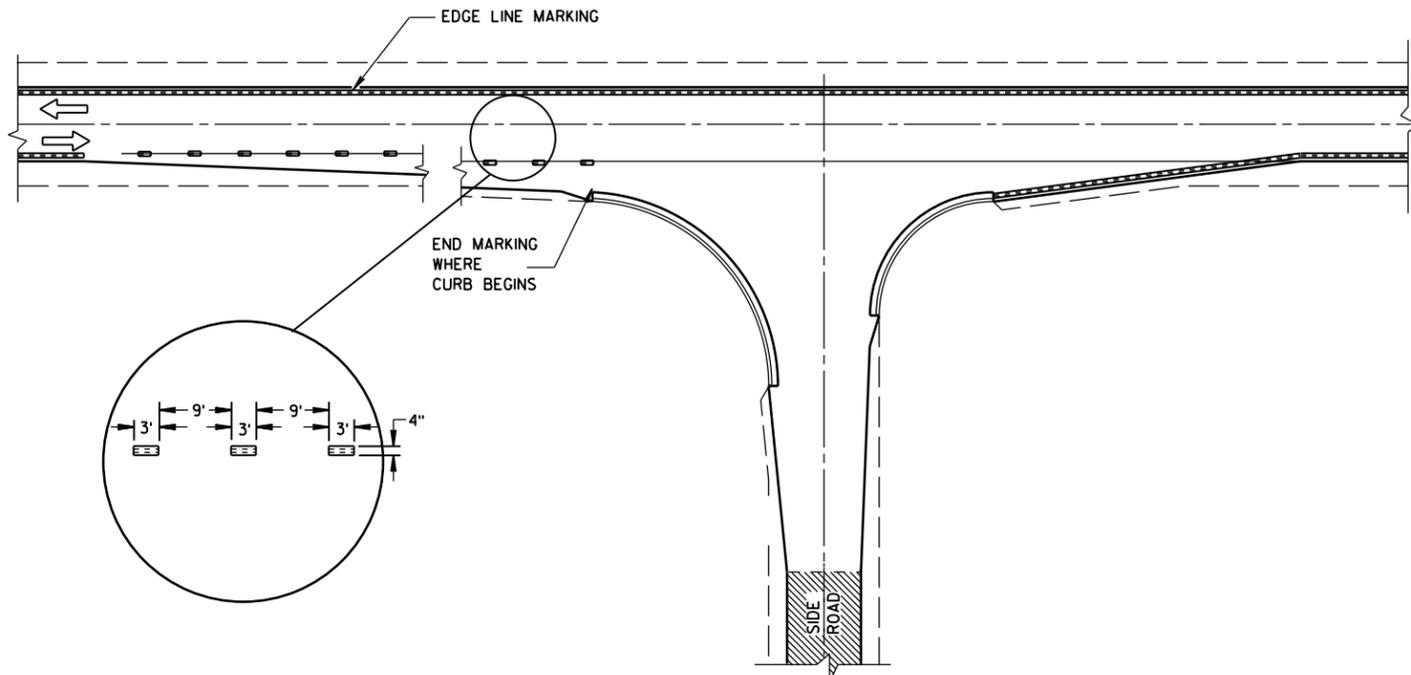
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



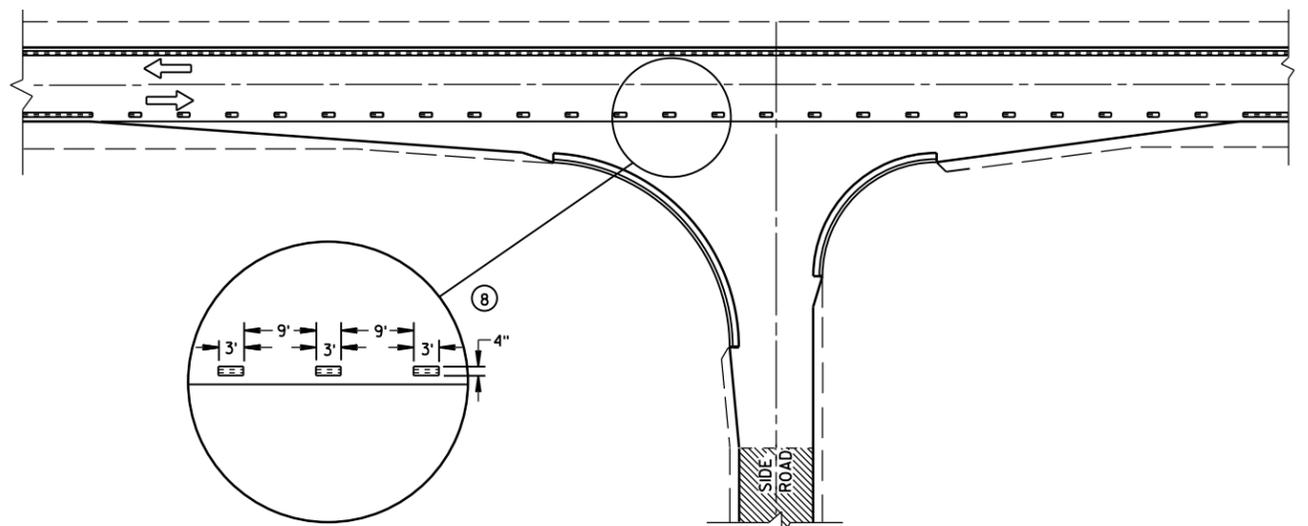
**MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)**

GENERAL NOTES

- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
 - ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
 - ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



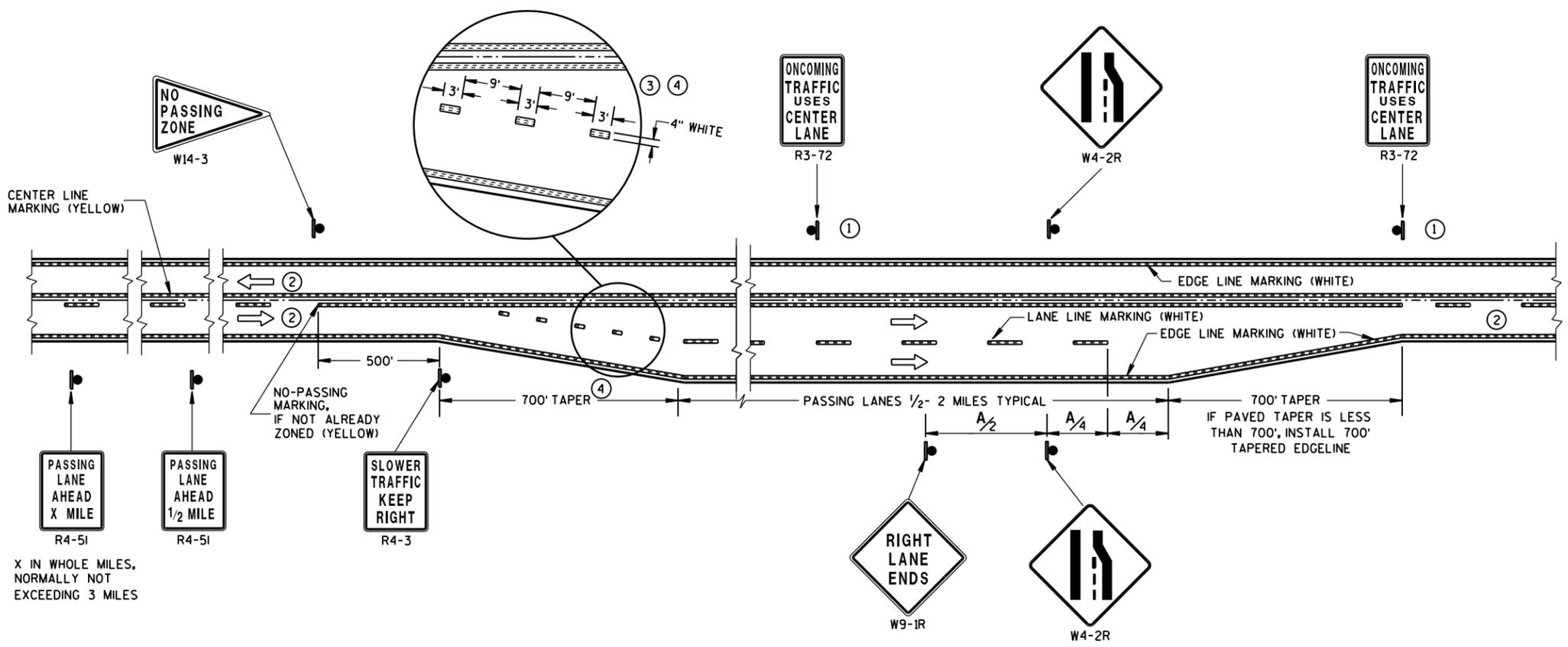
**MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)**



**MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)**

**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE-YELLOW LINE
(THROUGHOUT ENTIRE PASSING/CLIMBING LANE)**

GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

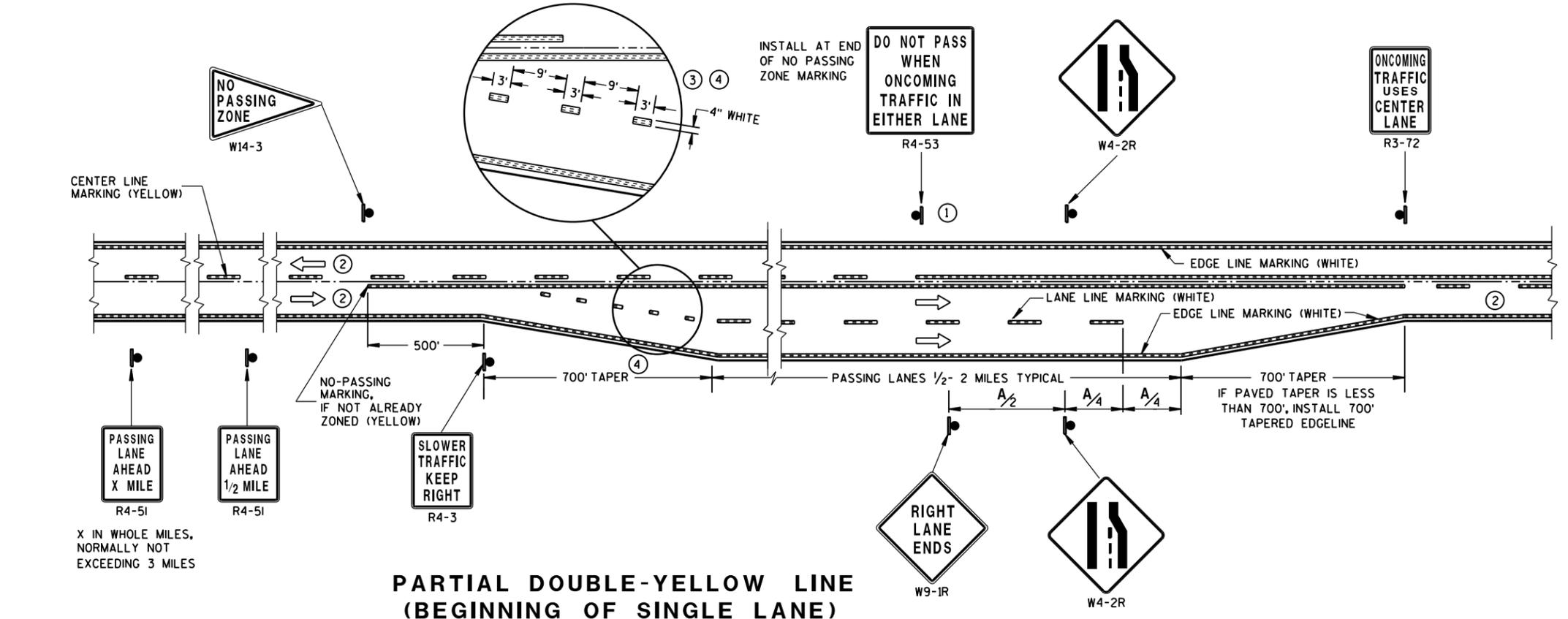
ARROW SYMBOL (\Rightarrow) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950

6

6



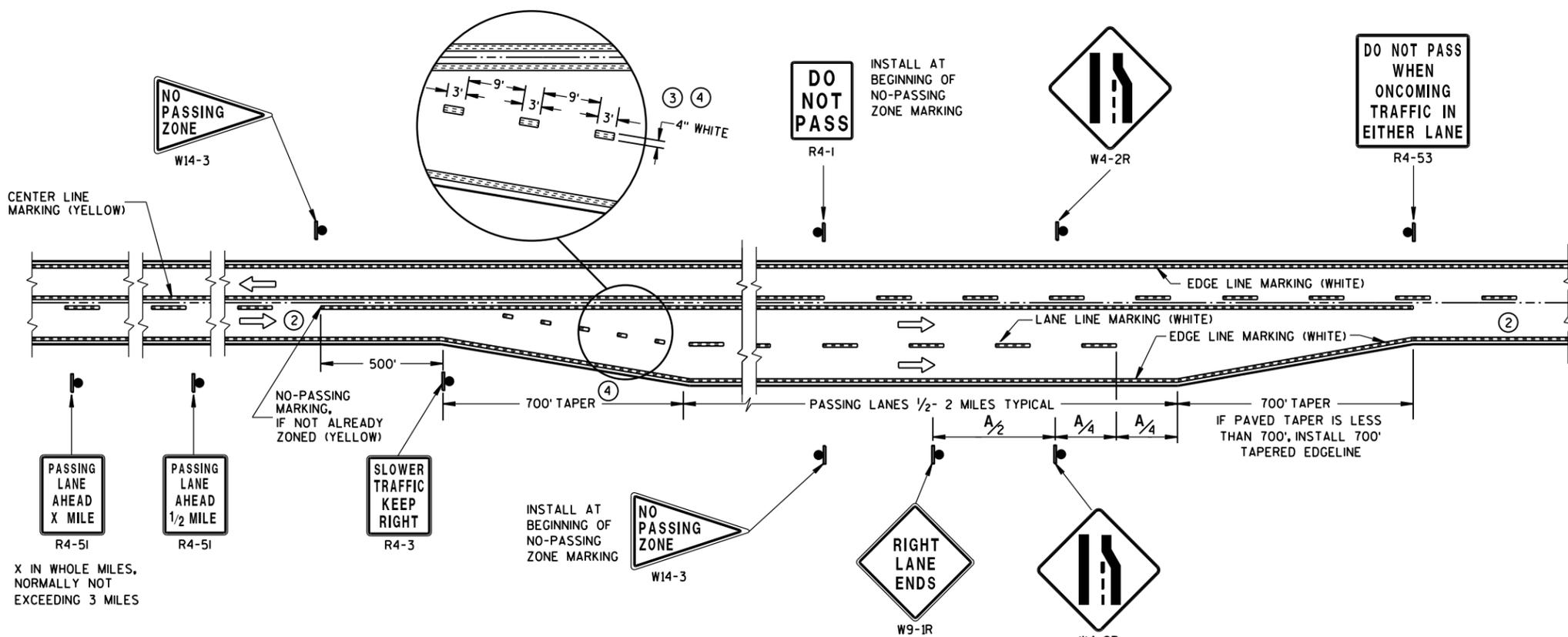
**PARTIAL DOUBLE-YELLOW LINE
(BEGINNING OF SINGLE LANE)**

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

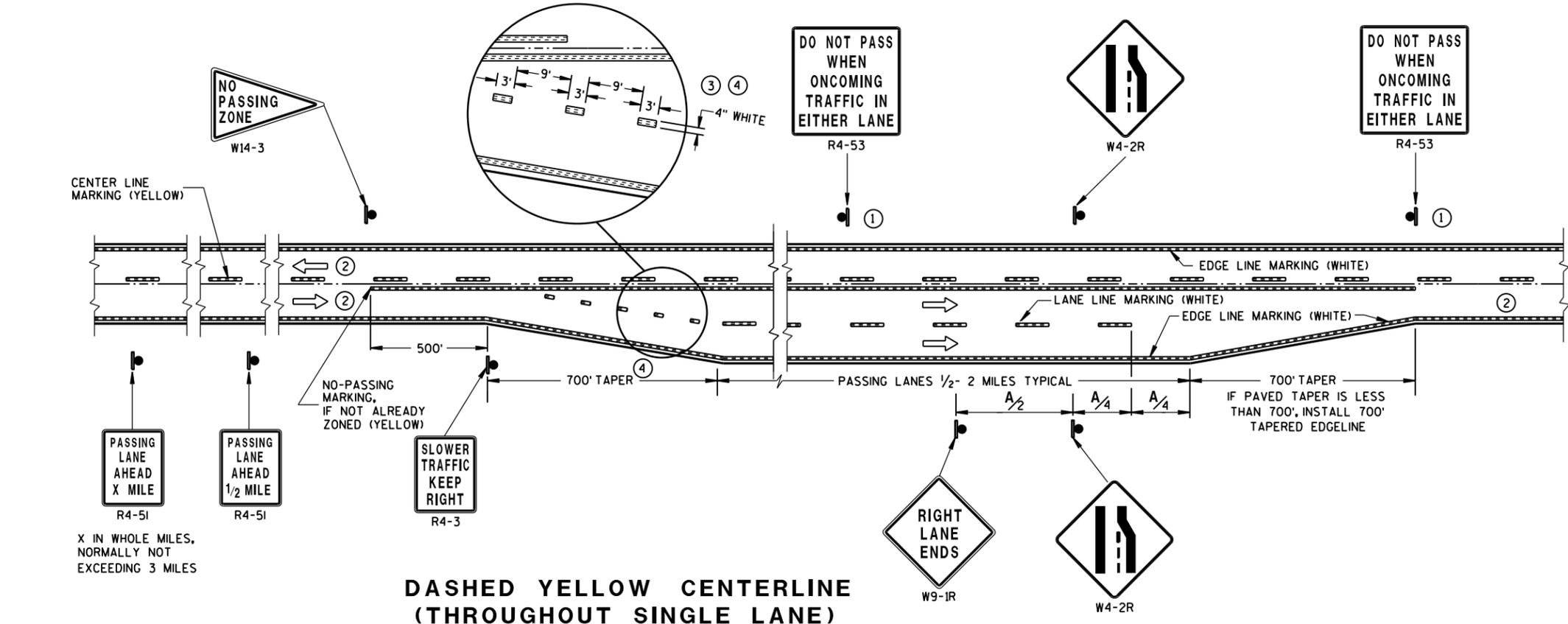
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 15 C 8-16c

S.D.D. 15 C 8-16c



**SOLID DOUBLE-YELLOW LINE
(END OF SINGLE LANE)**



**DASHED YELLOW CENTERLINE
(THROUGHOUT SINGLE LANE)**

- GENERAL NOTES**
- ① SIGN SHALL BE REPEATED AT 1/2 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
 - ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
 - ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3" LINE 9" GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
 - ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

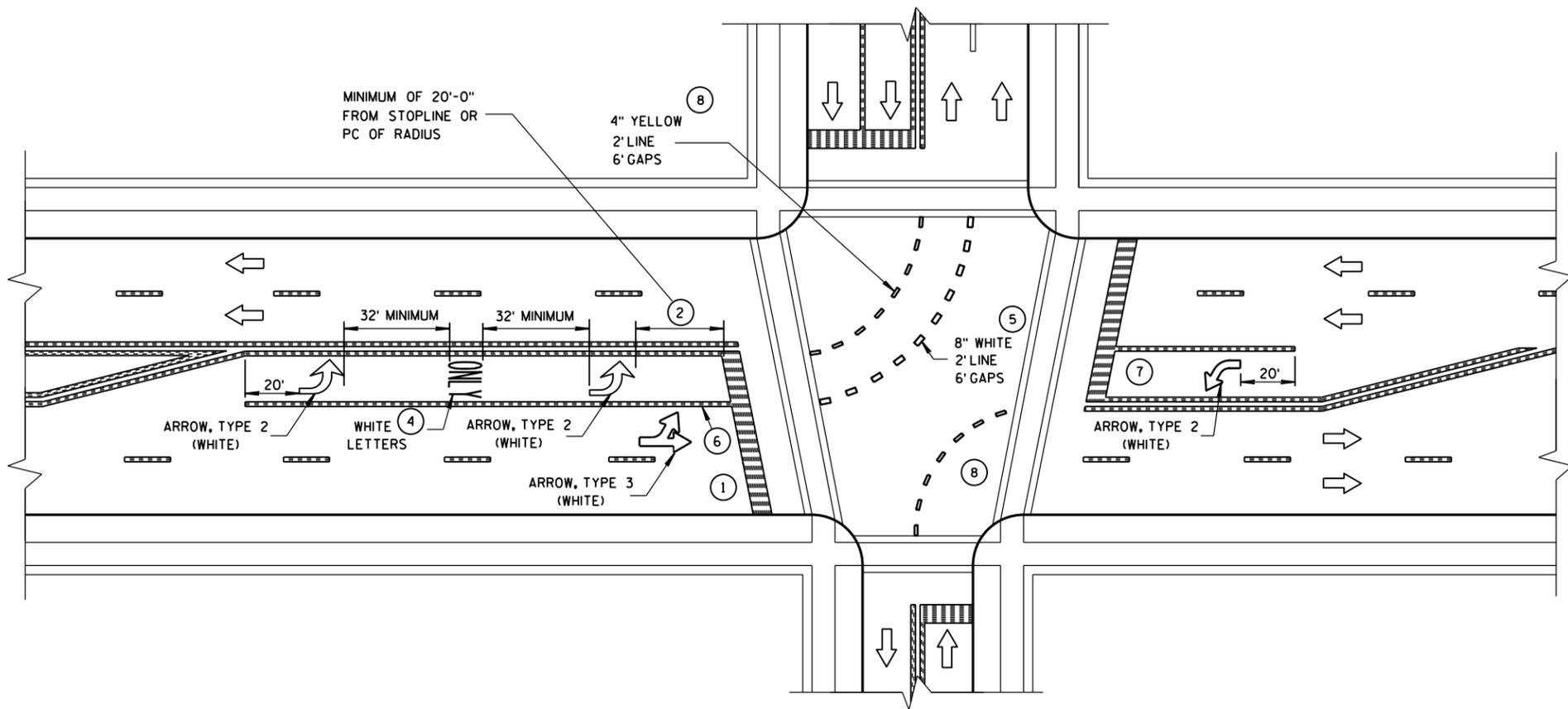
ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950

6

6



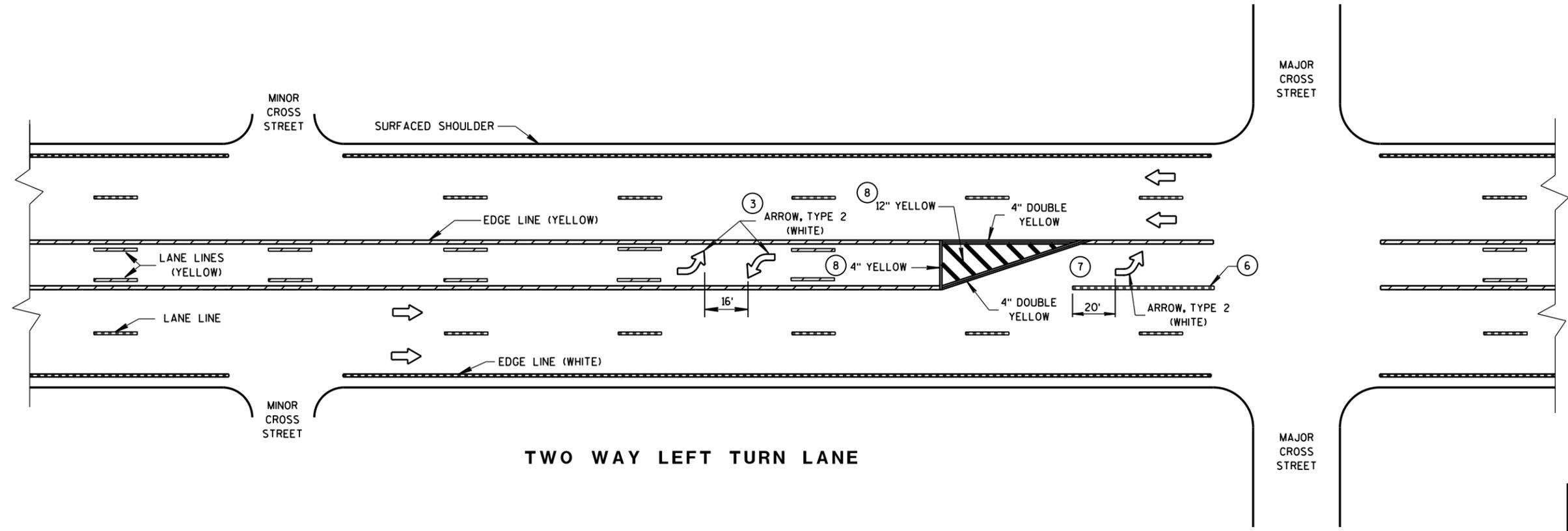
GENERAL NOTES

- ① STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ② DISTANCE MAY BE ADJUSTED TO ACCOMMODATE SHORT LEFT TURN LANES, AS APPROVED BY THE ENGINEER.
- ③ A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ④ ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
- ⑤ 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
- ⑥ 8" WHITE
- ⑦ ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
- ⑧ REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL

6

6



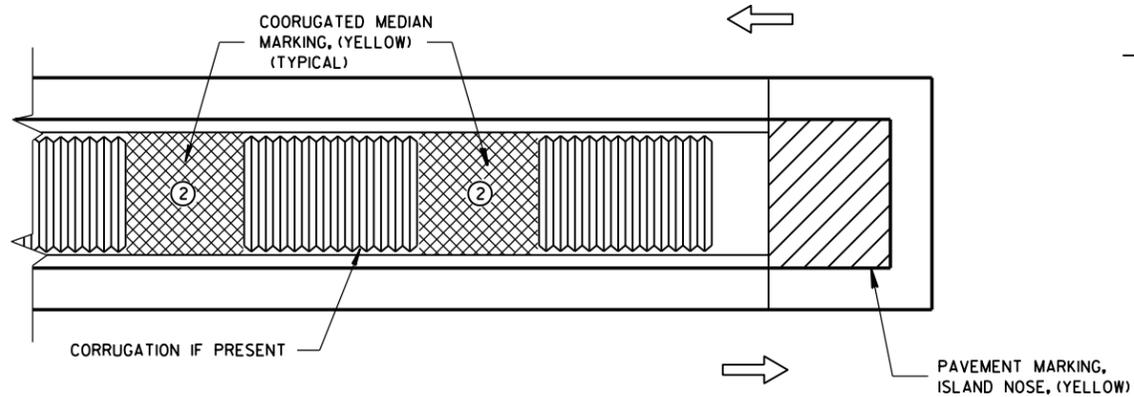
TWO WAY LEFT TURN LANE

**PAVEMENT MARKING
(LEFT TURN LANE)**

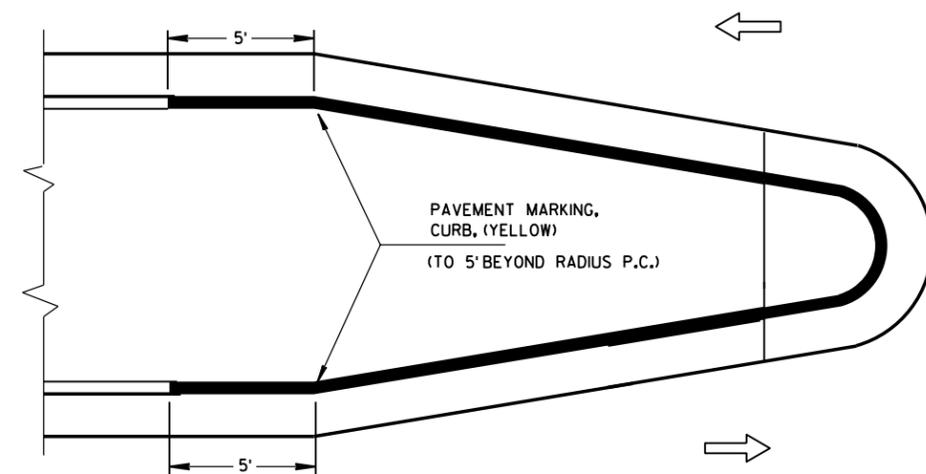
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 15 C 8-16e

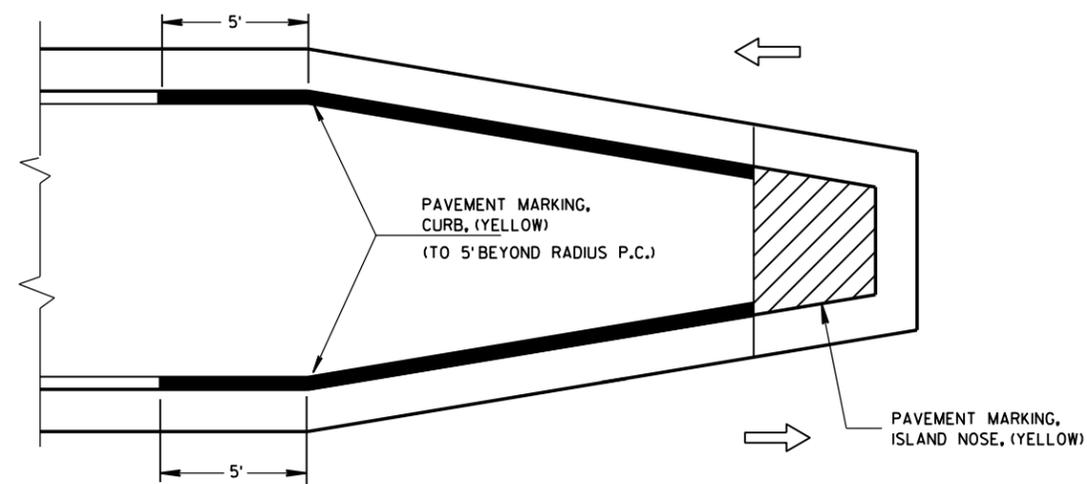
S.D.D. 15 C 8-16e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

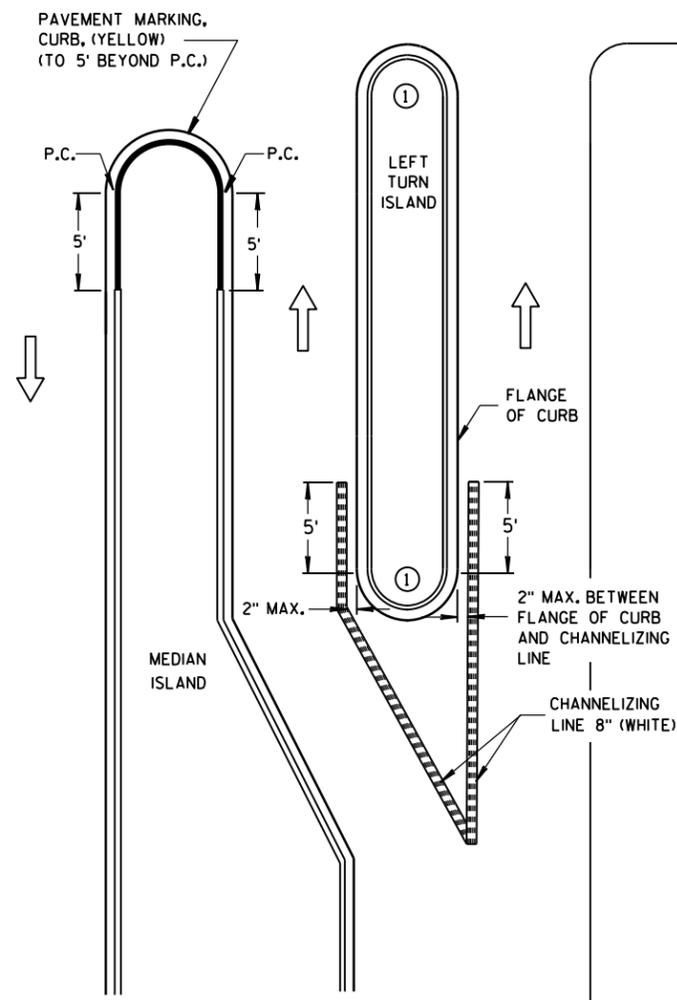


MEDIAN ISLAND WITH ROUND BLUNT NOSE



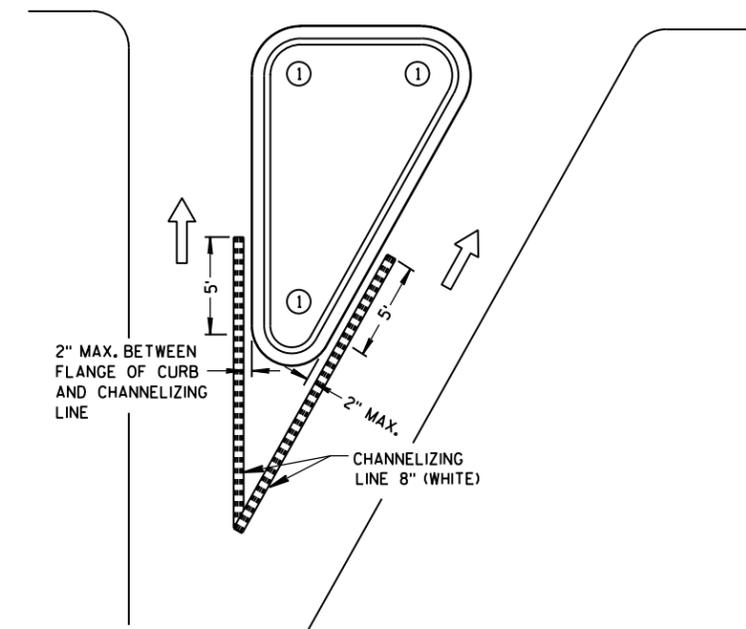
MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



LEFT TURN & MEDIAN ISLAND

- GENERAL NOTES**
- ① DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
 - ② WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

-  ISLAND NOSE MARKING
-  CURB MARKING
-  CORRUGATED MEDIAN MARKING
-  DIRECTION OF TRAVEL

PAVEMENT MARKING (ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

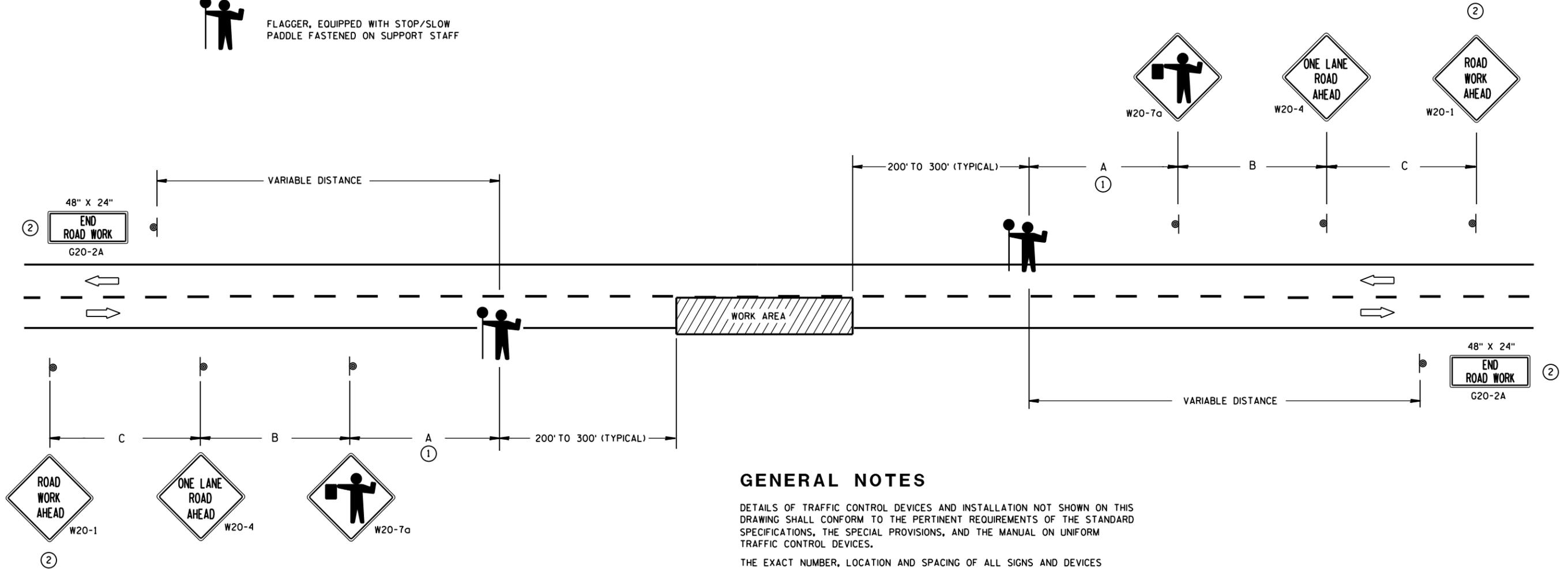
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



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.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE 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.

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, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

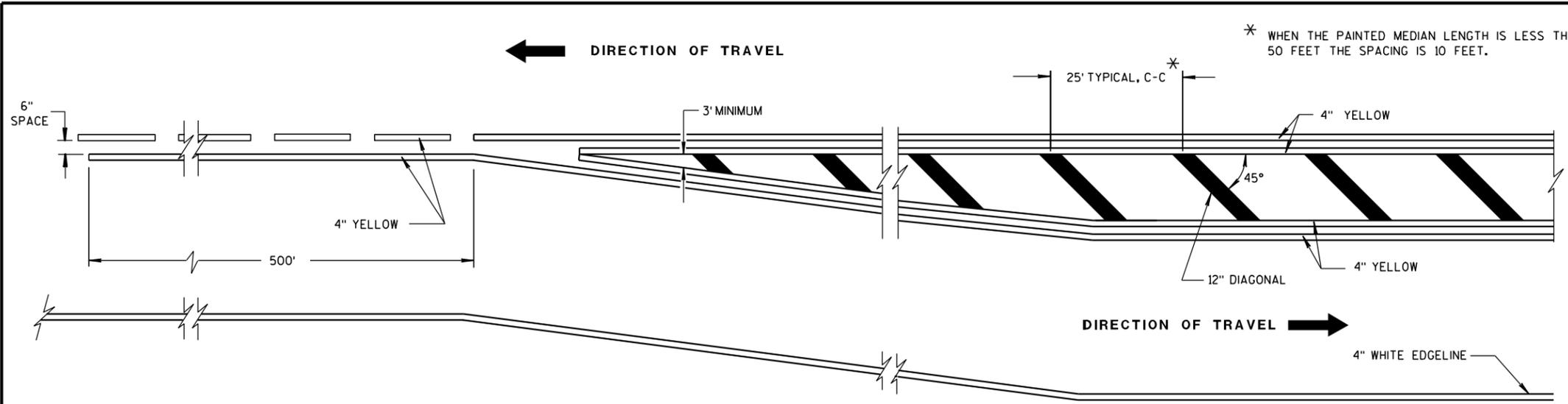
- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: 8/2013 /S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN

FHWA

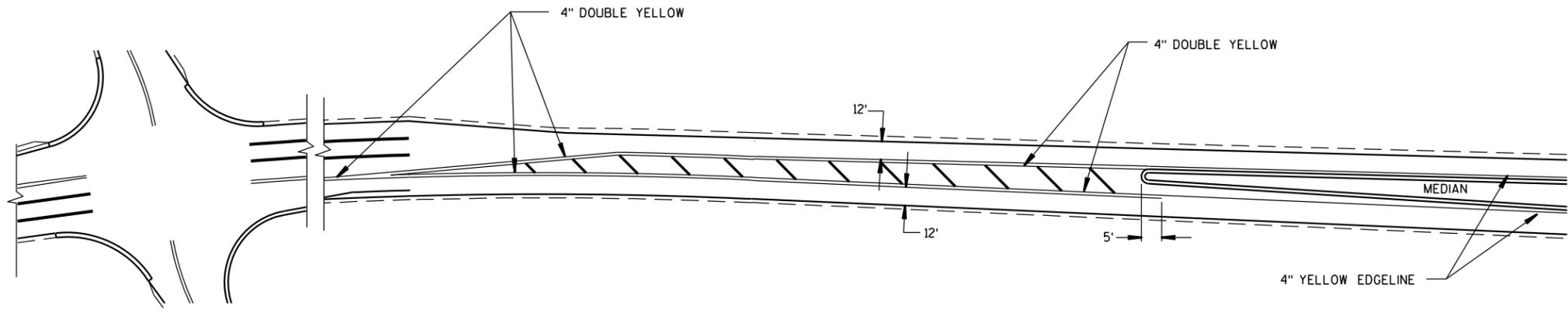


* WHEN THE PAINTED MEDIAN LENGTH IS LESS THAN 50 FEET THE SPACING IS 10 FEET.

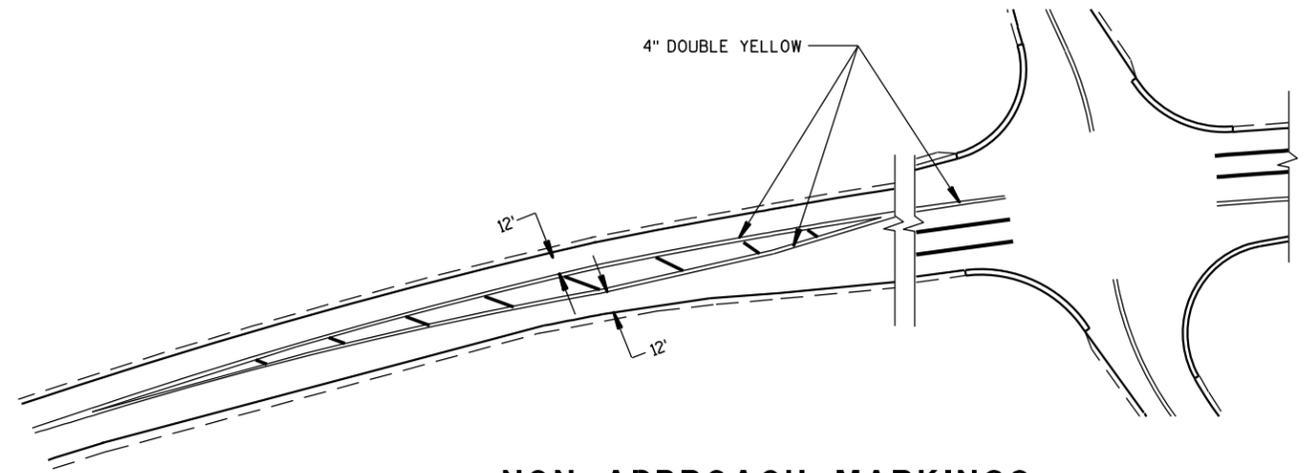
GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.

MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

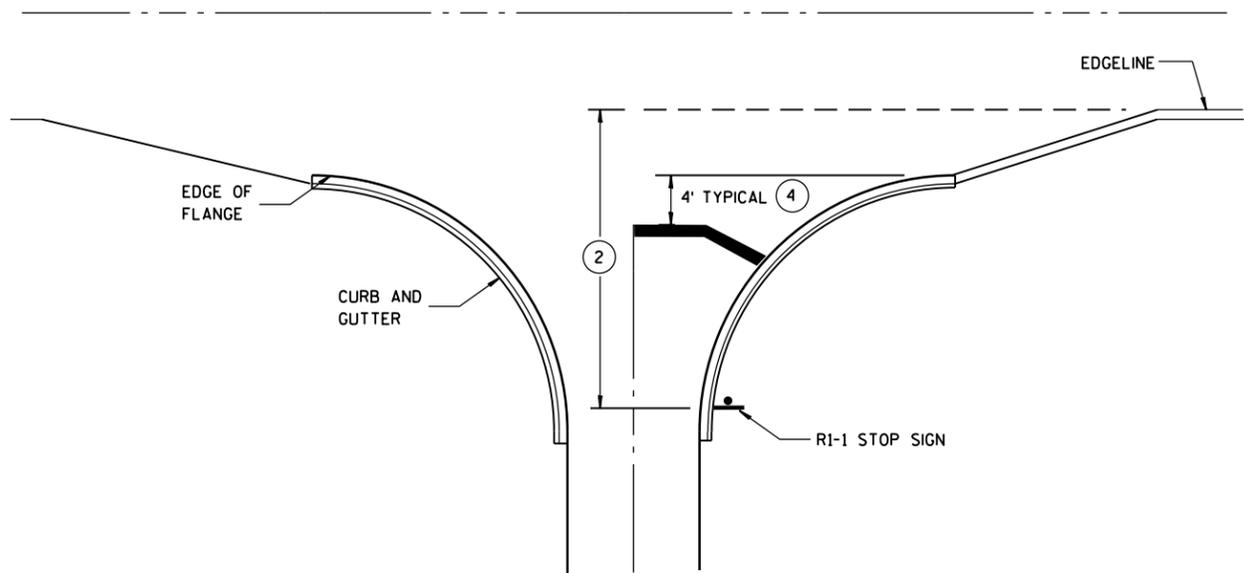
6

6

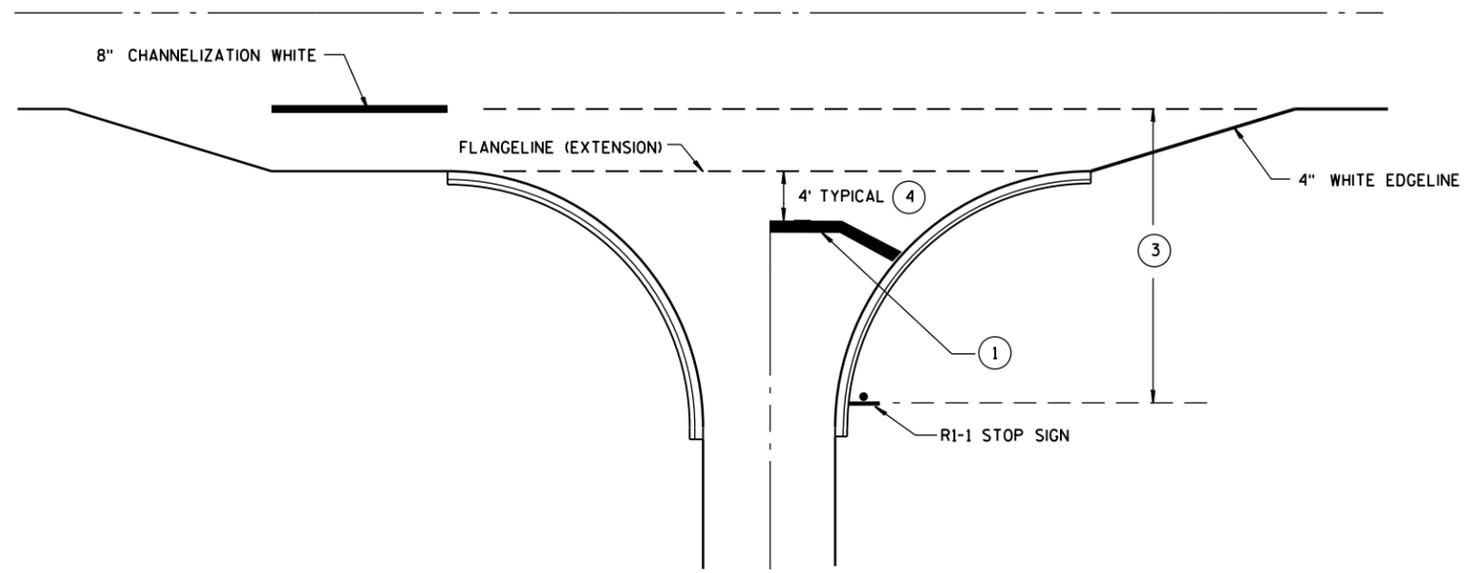
S.D.D. 15 C 18-3

S.D.D. 15 C 18-3

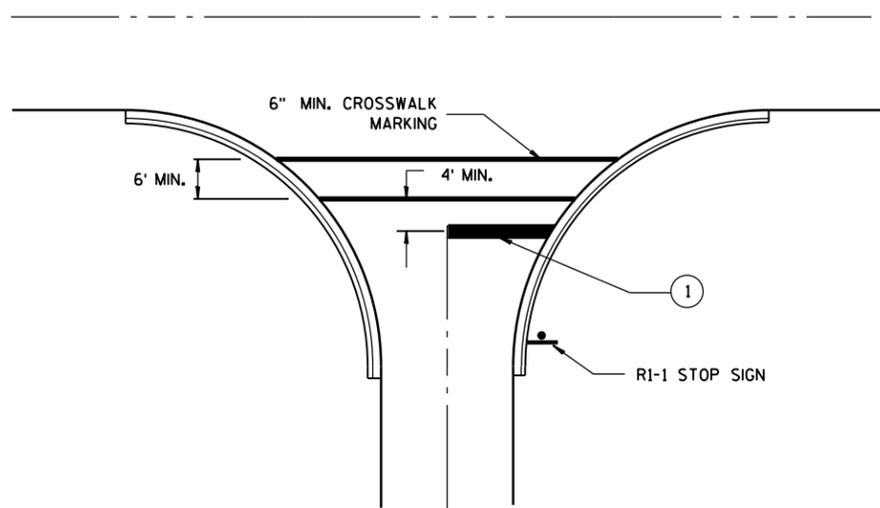
MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



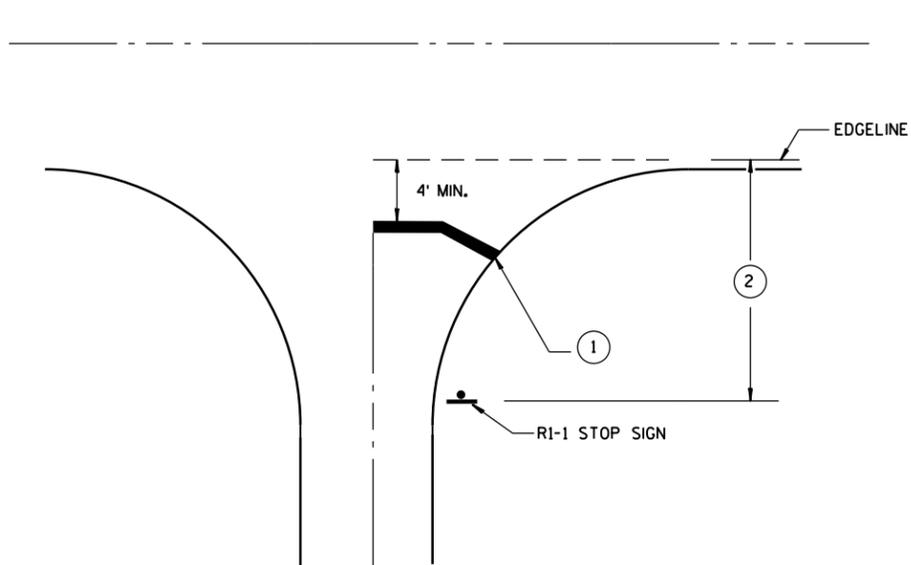
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
- ③ IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- ④ MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 4/30/2013 /S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

LEGEND

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

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 DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"W0" 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 AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF 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 FOR LONGER THAN 4 OR MORE 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.

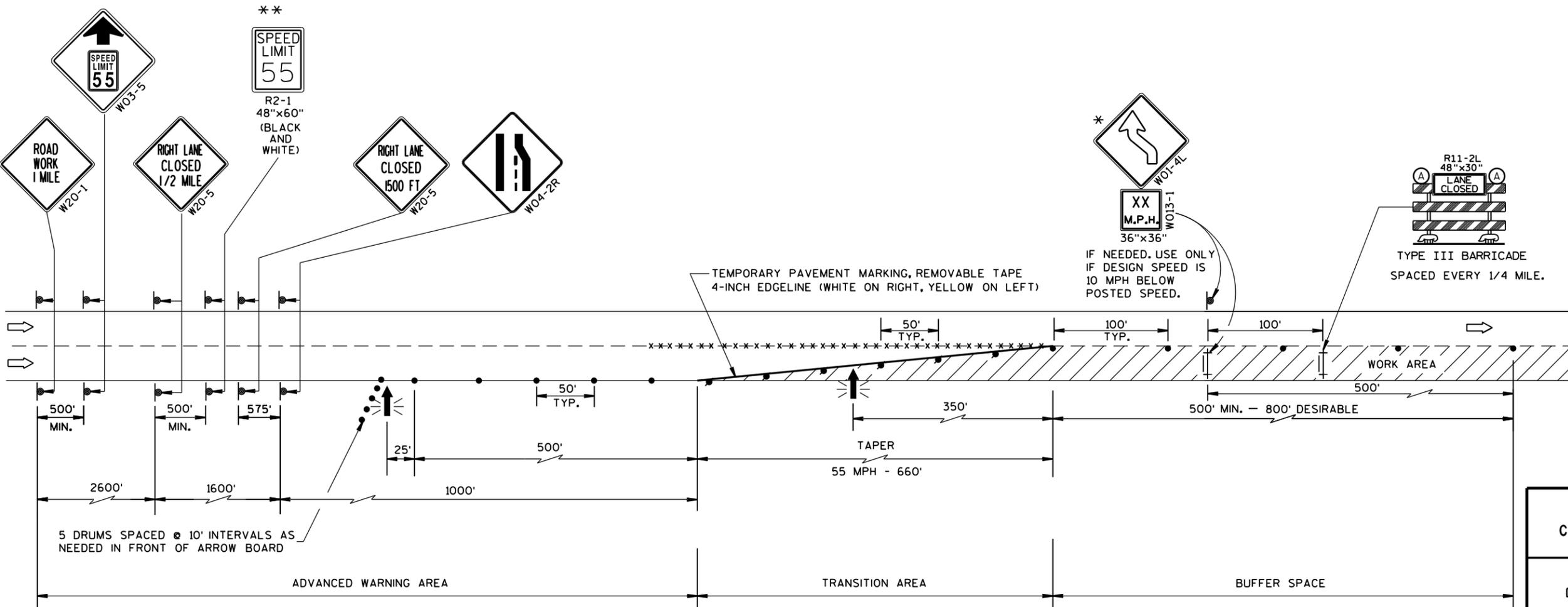
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 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.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A 65 MPH RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.

6

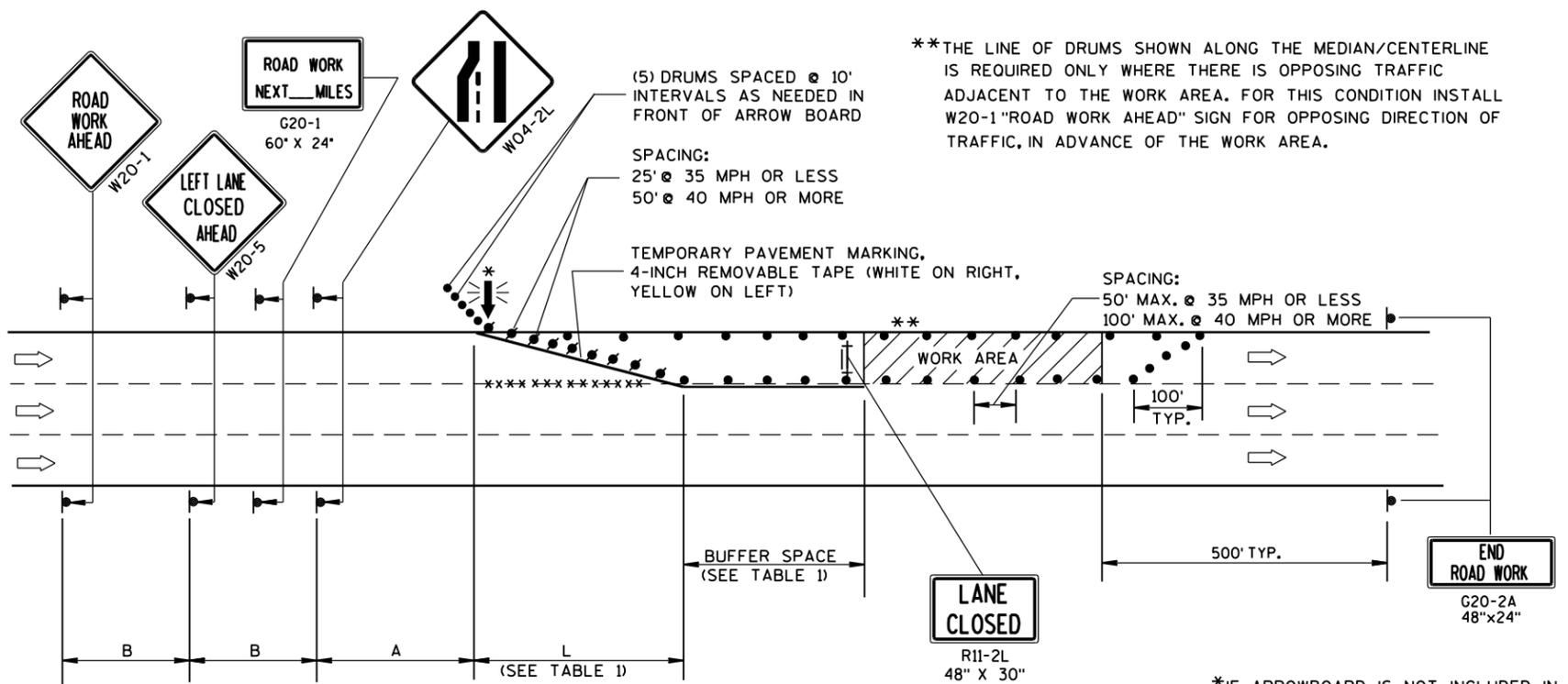
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6

S.D.D. 15 D 12-5b

TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Feb. 2015 DATE	/s/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND 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.

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.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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.

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

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

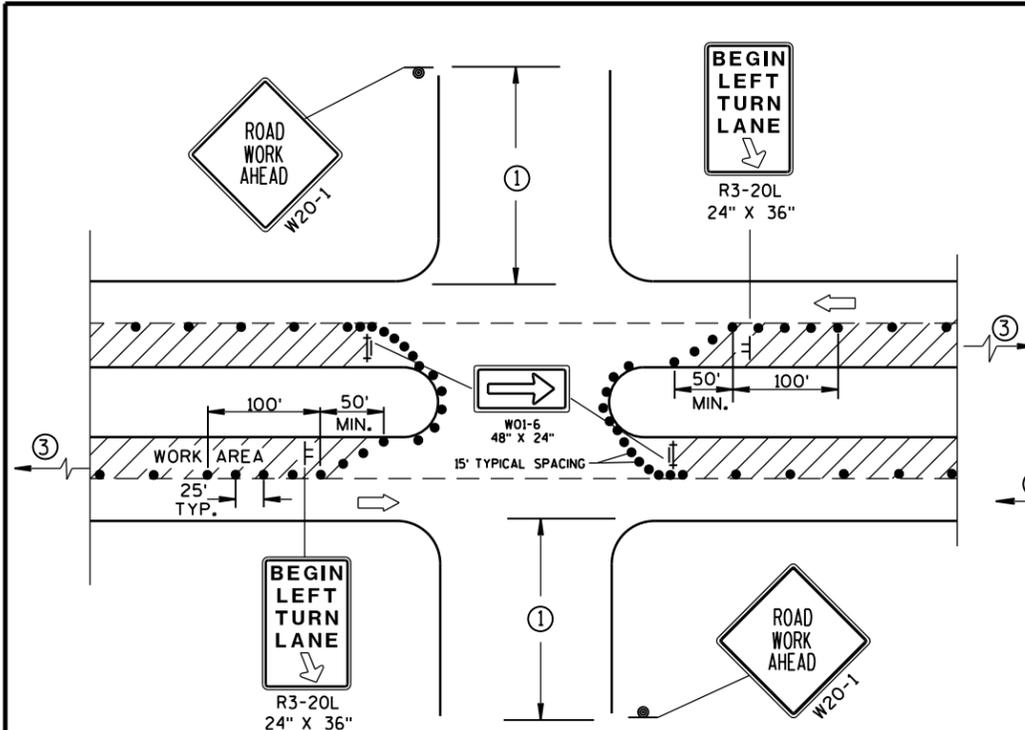
LEGEND

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

**TRAFFIC CONTROL,
SINGLE LANE CLOSURE,
NON-FREEWAY/EXPRESSWAY**

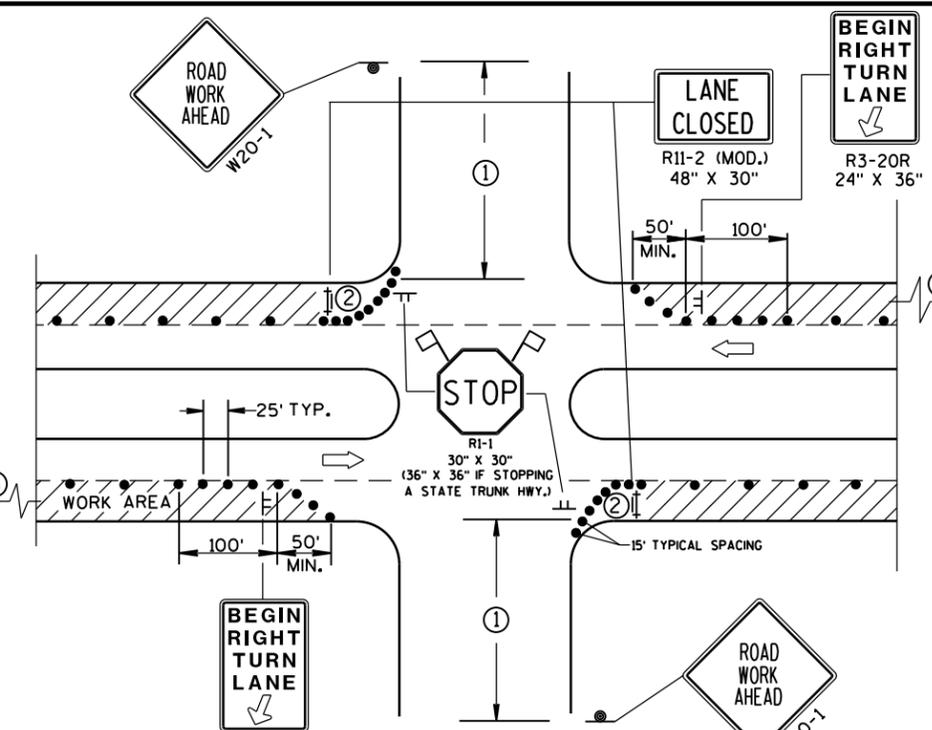
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
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.

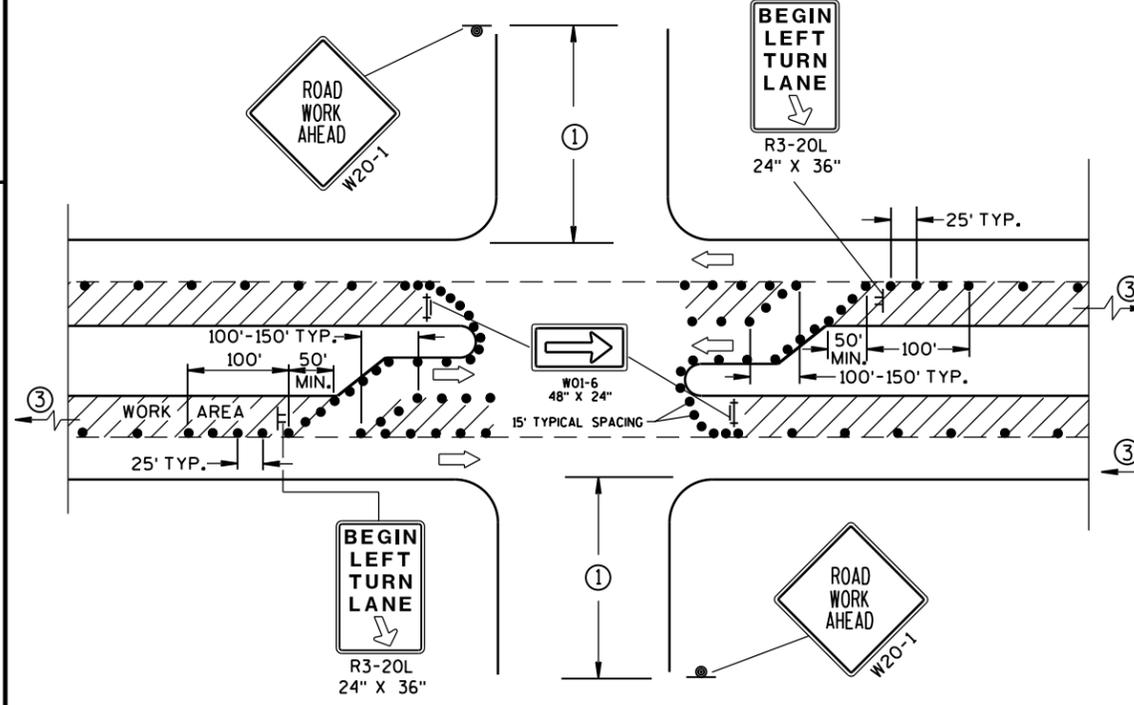
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

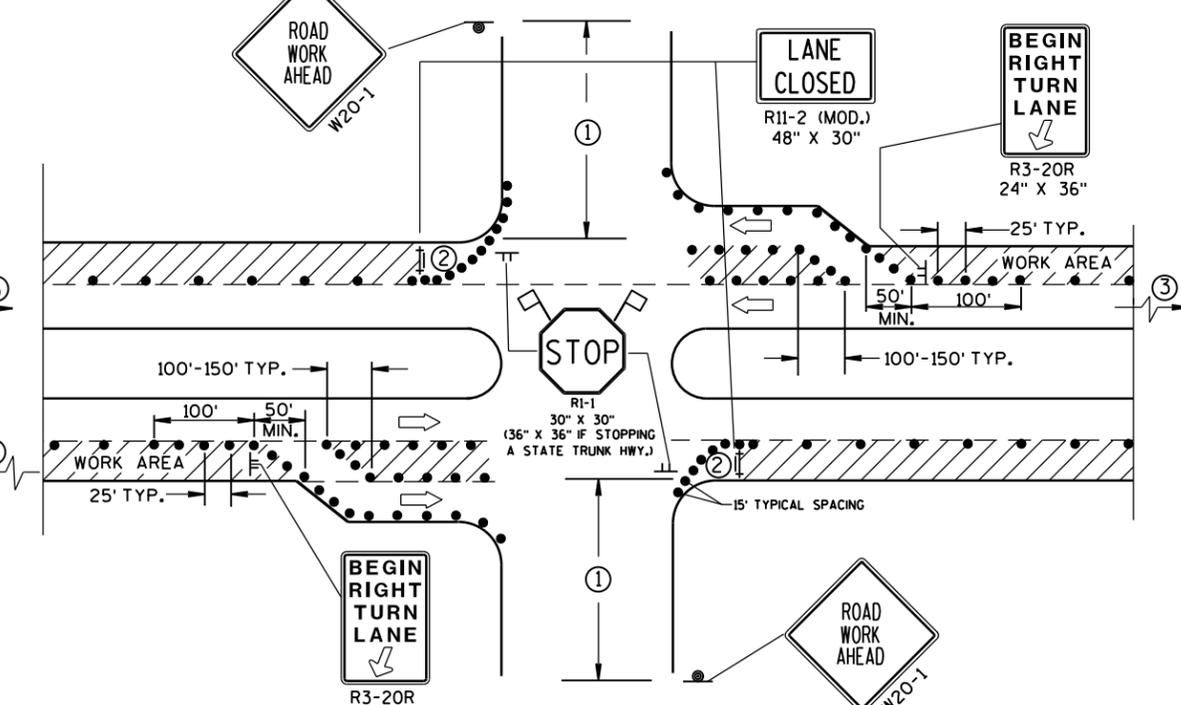
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

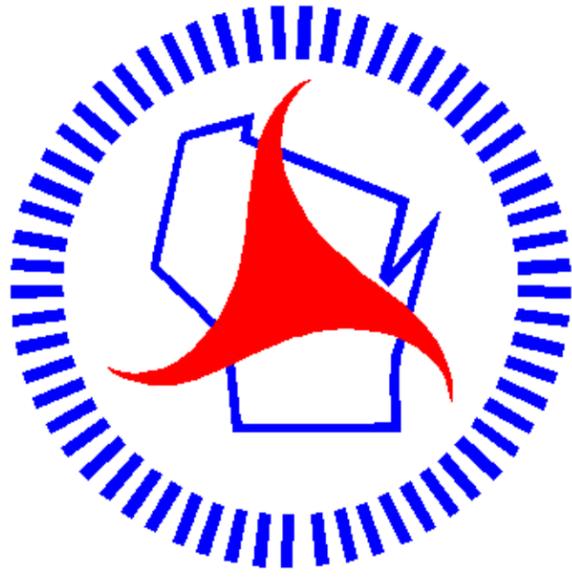
- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ⊞ SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- ⊞ TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- ➡ DIRECTION OF TRAFFIC
- 🚩 FLAGS, 16" X 16" MIN., (ORANGE)
- ▨ WORK AREA

TRAFFIC CONTROL,
INTERSECTION WITHIN
SINGLE LANE CLOSURE

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 Nov. 2014 /S/ Travis Feltes
 DATE STATE TRAFFIC ENGINEER OF DESIGN

FHWA



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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