

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WAUSAU-MERRILL

DECATOR DRIVE TO LINCOLN CO LINE

USH 51

MARATHON COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1170-01-76	WISC 2024355	1

ORDER OF SHEETS

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

TOTAL SHEETS = 166

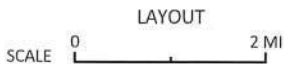
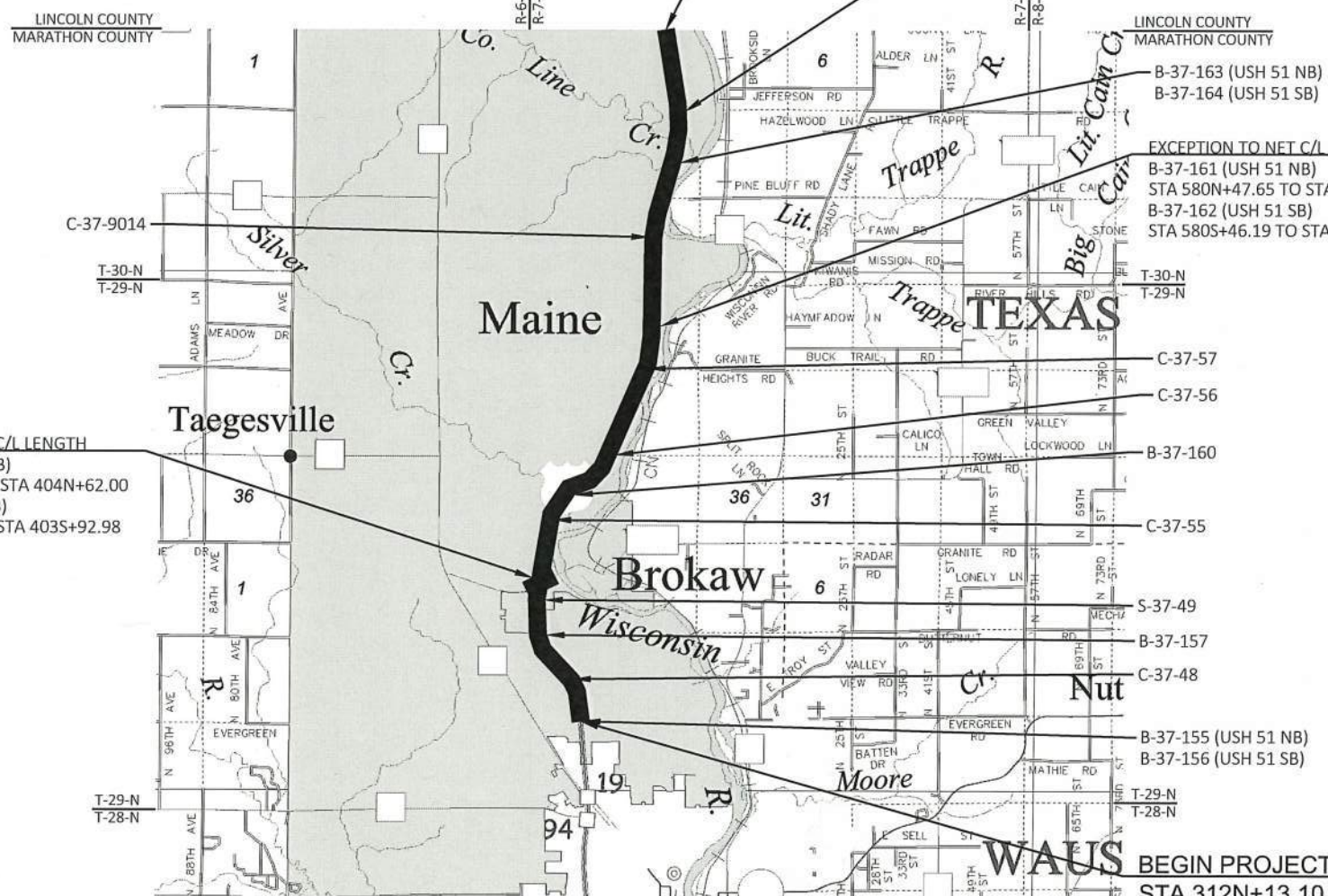
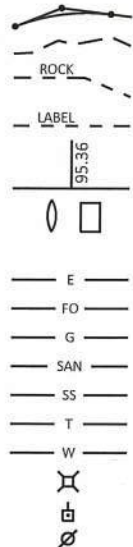


DESIGN DESIGNATION USH 51

A.A.D.T.	2020	=	20,606
A.A.D.T.	2043	=	21,420
D.H.V.		=	2760
D.D.		=	60/40
T.		=	12.9
DESIGN SPEED		=	65 MPH
ESALS		=	5,330,000

CONVENTIONAL SYMBOLS

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

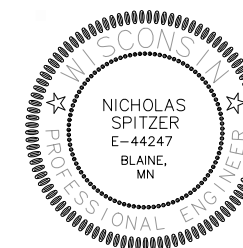


TOTAL NET LENGTH OF CENTERLINE = 8.596 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATES, MARATHON COUNTY, NAD83 (2007), U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (1991).

ORIGINAL PLANS PREPARED BY

HNTB 250 E. WISCONSIN AVE
MILWAUKEE, WI 53202
(414) 359-2300



02/12/24 (Date) *Nicholas Spitzer* (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	EMCS, INC.
Designer	HNTB, CORP.
Project Manager	KOREY BOEHM, PE
Regional Examiner	FRED SCHUNKE, PE
Regional Supervisor	ELIZABETH NEMEC, PE

APPROVED FOR THE DEPARTMENT
DATE: 2-12-24 *Thuy Bol* (Signature)

E

GENERAL NOTES

1. THE LOCATIONS OF EXISTING UTILITY INSTALLATION AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. NO SHRUBS OR TREES ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

ORDER OF SECTION 2 SHEETS

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

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	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE-TURF			.25			.27			.28			.30
			.32			.34			.36			.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 = 257 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.02 ACRE

OTHER AGENCIES

WISCONSIN DNR
 CASEY JONES
 WDNR EA LIAISON
 473 GRIFFITH AVENUE
 WISCONSIN RAPIDS, WI 54494
 PHONE: (715) 213-6571
 EMAIL: CASEY.JONES@WISCONSIN.GOV

UTILITY CONTACTS

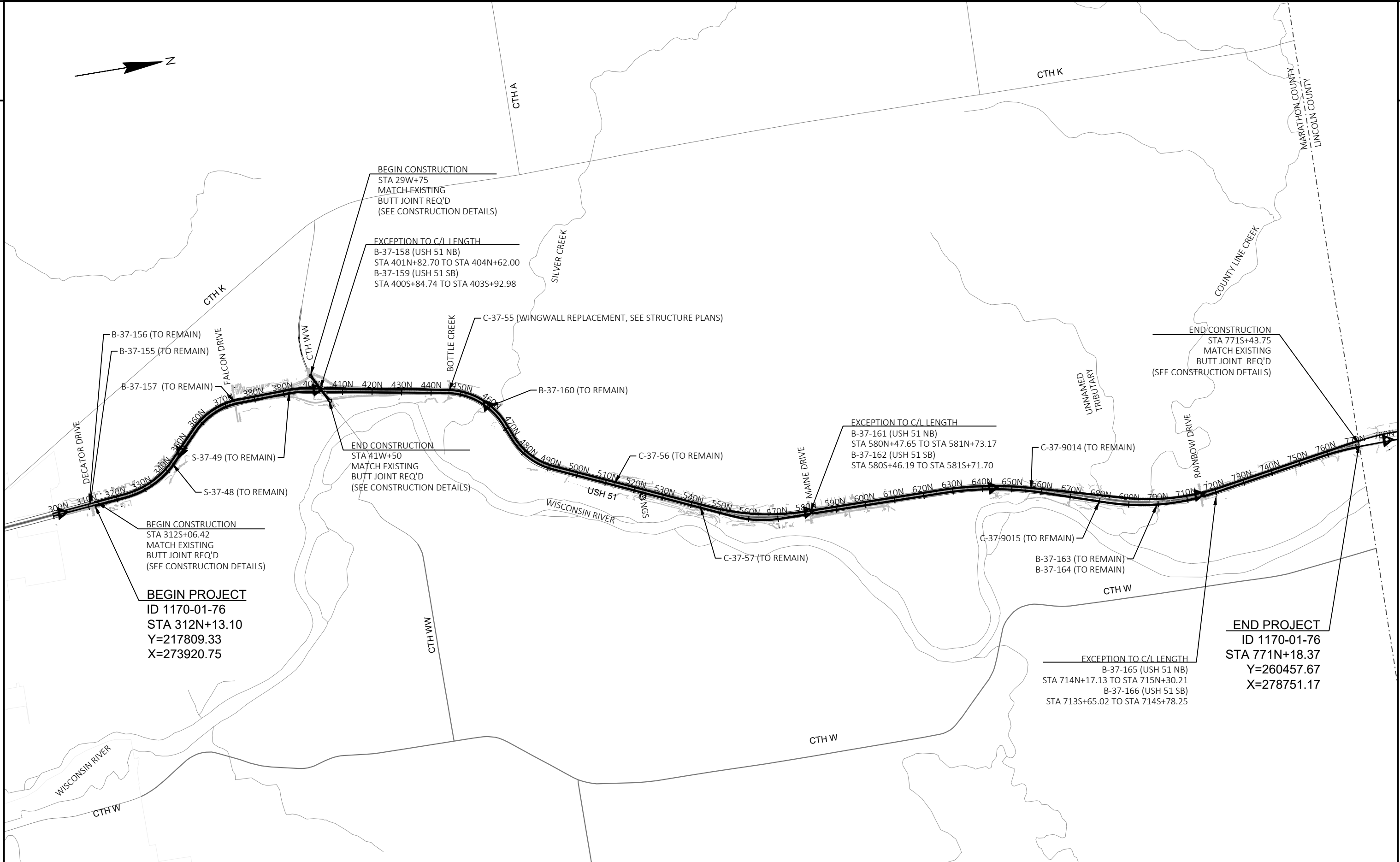
COMMUNICATIONS
 FRONTIER COMMUNICATIONS OF WI LLC
 COMMUNICATION LINE
 DAVID KAMKE
 WAUSAU, WI 54402
 715-393-7028
 DKAMKE@MSCON.COM

ELECTRICITY
 WISCONSIN PUBLIC SERVICE CORP
 ELECTRICITY
 JESSE PATTEN
 1700 SHERMAN STREET P.O. BOX 1166
 WAUSAU, WI 54402
 715-848-7405
 JESSE.PATTEN@WISCONSINPUBLICSERVICE.COM

SEWER
 VILLAGE OF MAINE
 SEWER
 KEITH RUSCH
 6111 NORTH 44TH AVENUE
 WAUSAU, WI 54401
 715-675-8712
 ADMINISTRATOR@VILLAGEOFMAINE.ORG

WATER
 VILLAGE OF MAINE
 WATER
 KEITH RUSCH
 6111 NORTH 44TH AVENUE
 WAUSAU, WI 54401
 715-675-8712
 ADMINISTRATOR@VILLAGEOFMAINE.ORG





BEGIN CONSTRUCTION
 STA 29W+75
 MATCH EXISTING
 BUTT JOINT REQ'D
 (SEE CONSTRUCTION DETAILS)

EXCEPTION TO C/L LENGTH
 B-37-158 (USH 51 NB)
 STA 401N+82.70 TO STA 404N+62.00
 B-37-159 (USH 51 SB)
 STA 400S+84.74 TO STA 403S+92.98

END CONSTRUCTION
 STA 771S+43.75
 MATCH EXISTING
 BUTT JOINT REQ'D
 (SEE CONSTRUCTION DETAILS)

END CONSTRUCTION
 STA 41W+50
 MATCH EXISTING
 BUTT JOINT REQ'D
 (SEE CONSTRUCTION DETAILS)

EXCEPTION TO C/L LENGTH
 B-37-161 (USH 51 NB)
 STA 580N+47.65 TO STA 581N+73.17
 B-37-162 (USH 51 SB)
 STA 580S+46.19 TO STA 581S+71.70

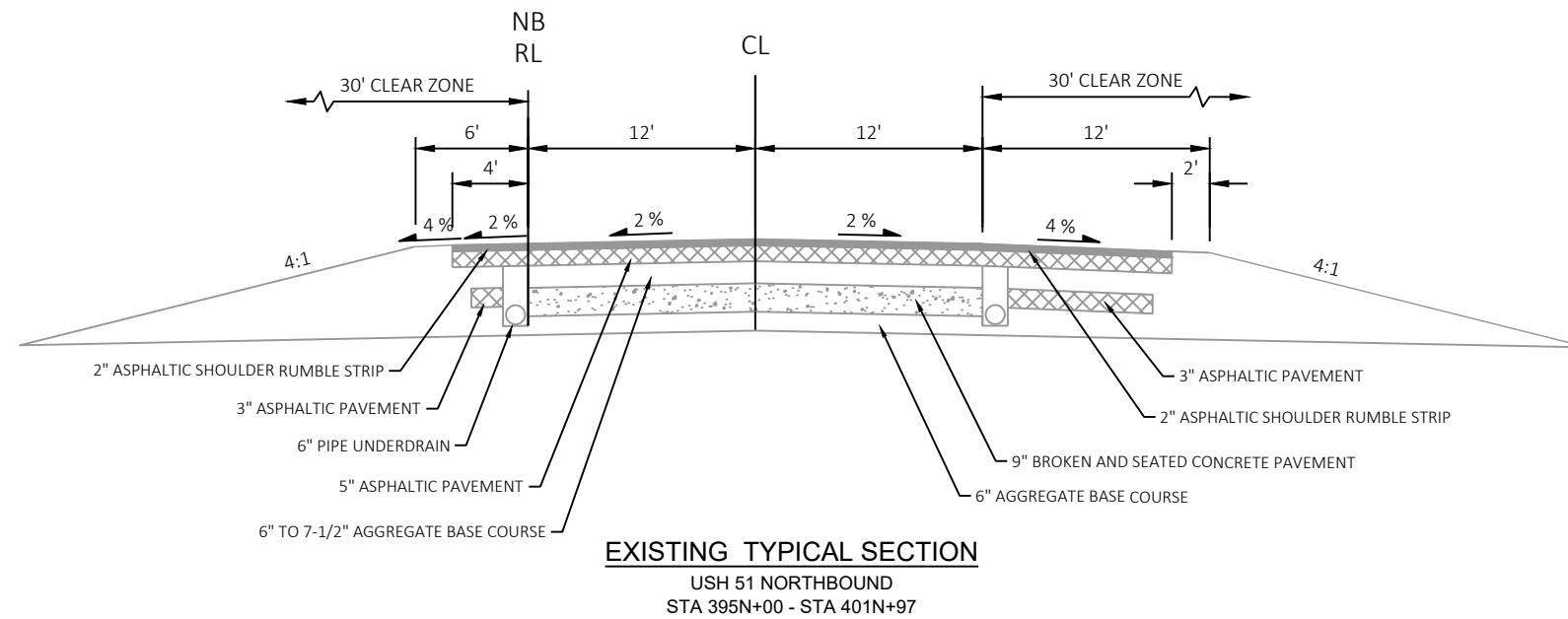
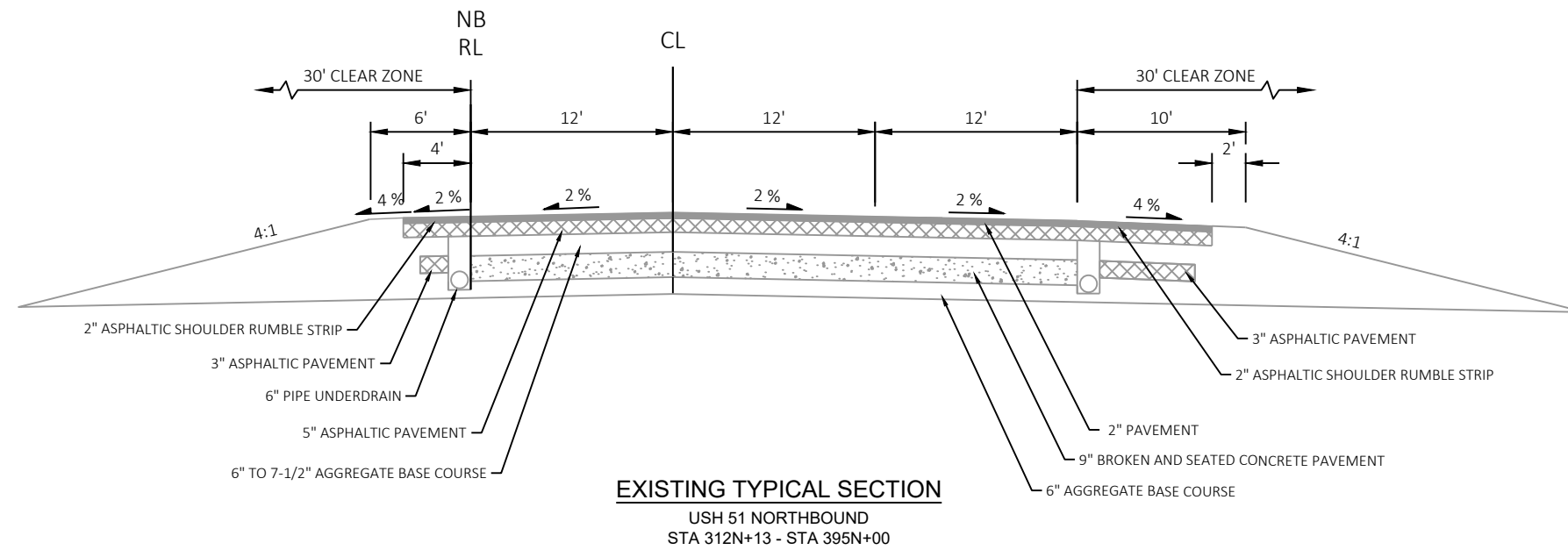
BEGIN CONSTRUCTION
 STA 312S+06.42
 MATCH EXISTING
 BUTT JOINT REQ'D
 (SEE CONSTRUCTION DETAILS)

BEGIN PROJECT
 ID 1170-01-76
 STA 312N+13.10
 Y=217809.33
 X=273920.75

EXCEPTION TO C/L LENGTH
 B-37-165 (USH 51 NB)
 STA 714N+17.13 TO STA 715N+30.21
 B-37-166 (USH 51 SB)
 STA 713S+65.02 TO STA 714S+78.25

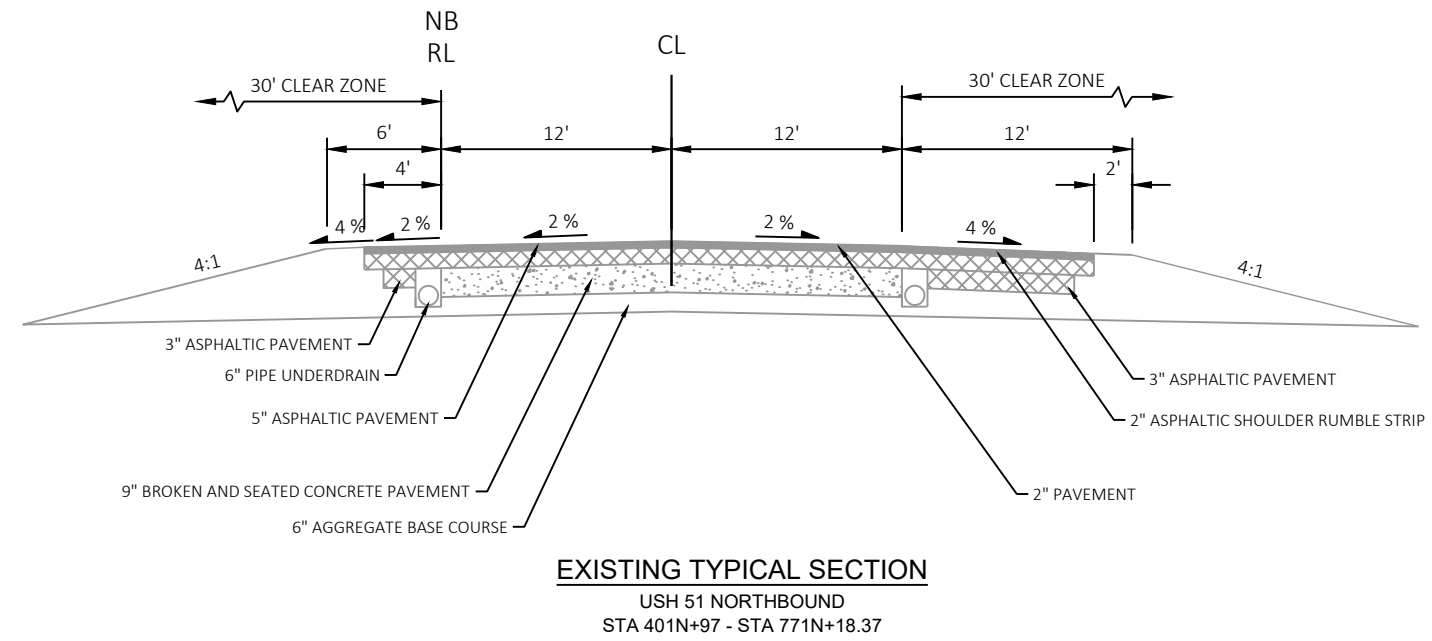
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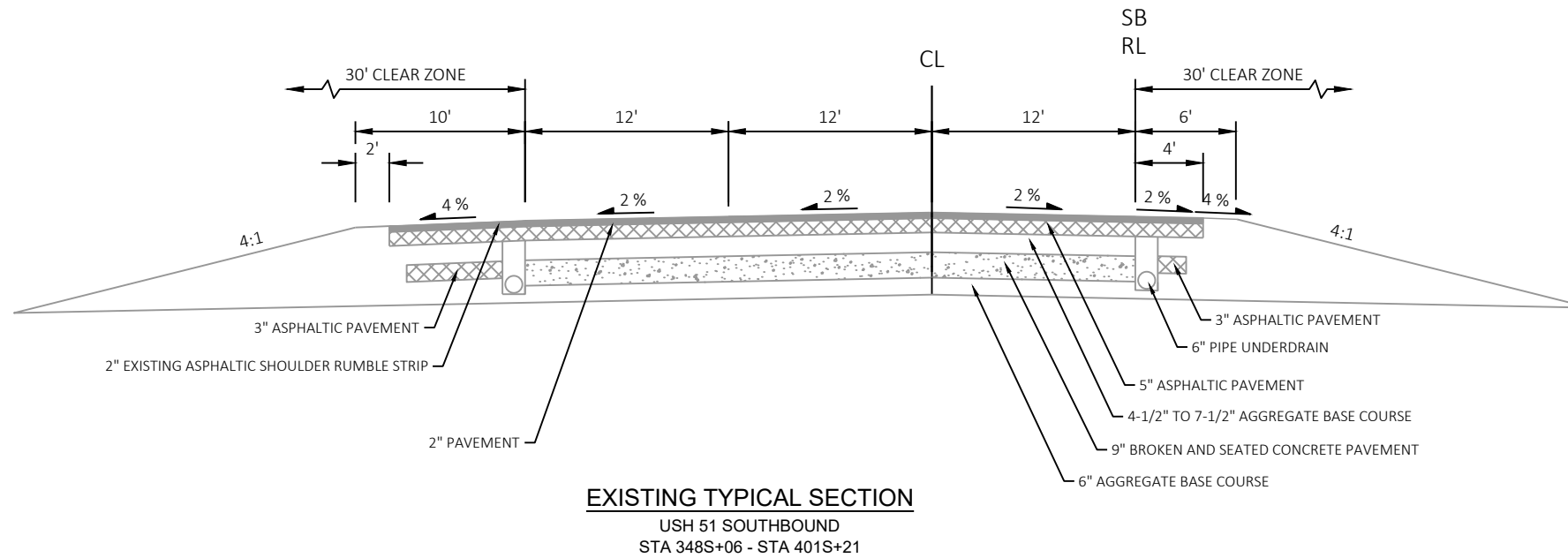
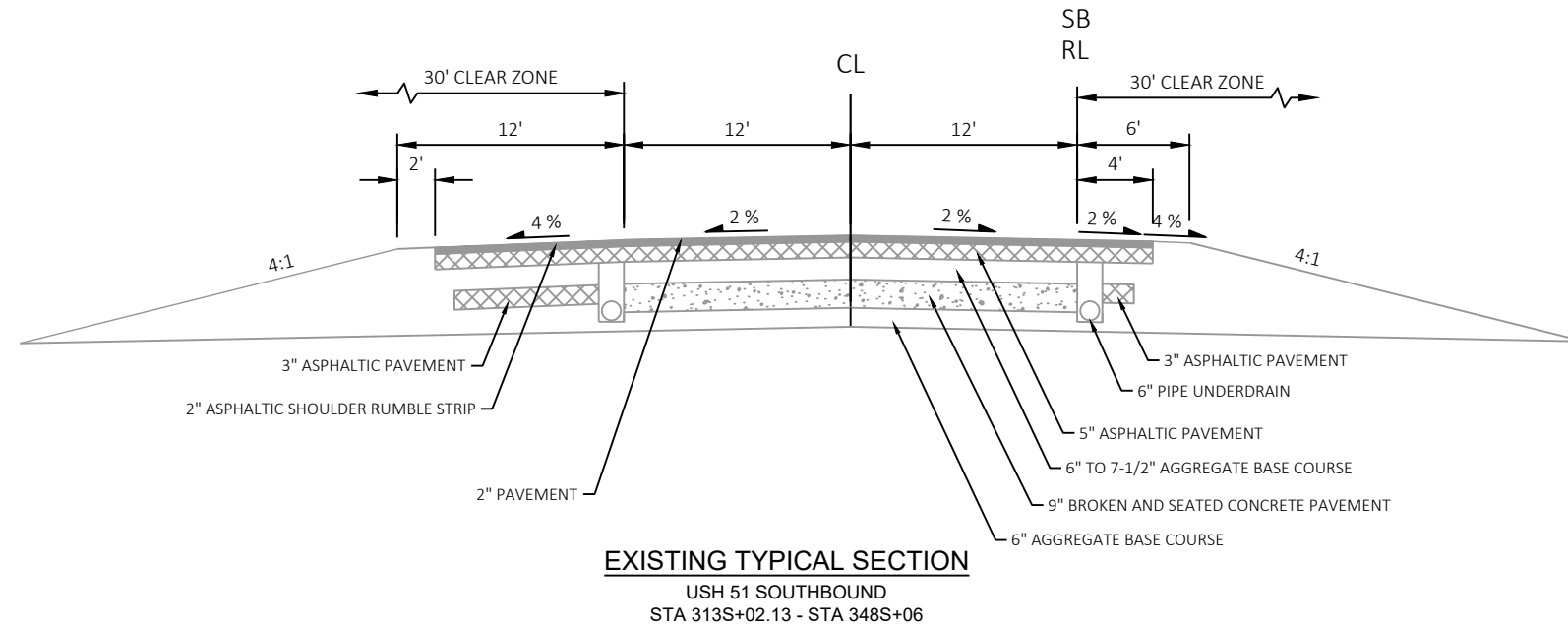
PROJECT NO: 1170-01-76	HWY: USH 51	COUNTY: MARATHON	PROJECT OVERVIEW	SHEET	E
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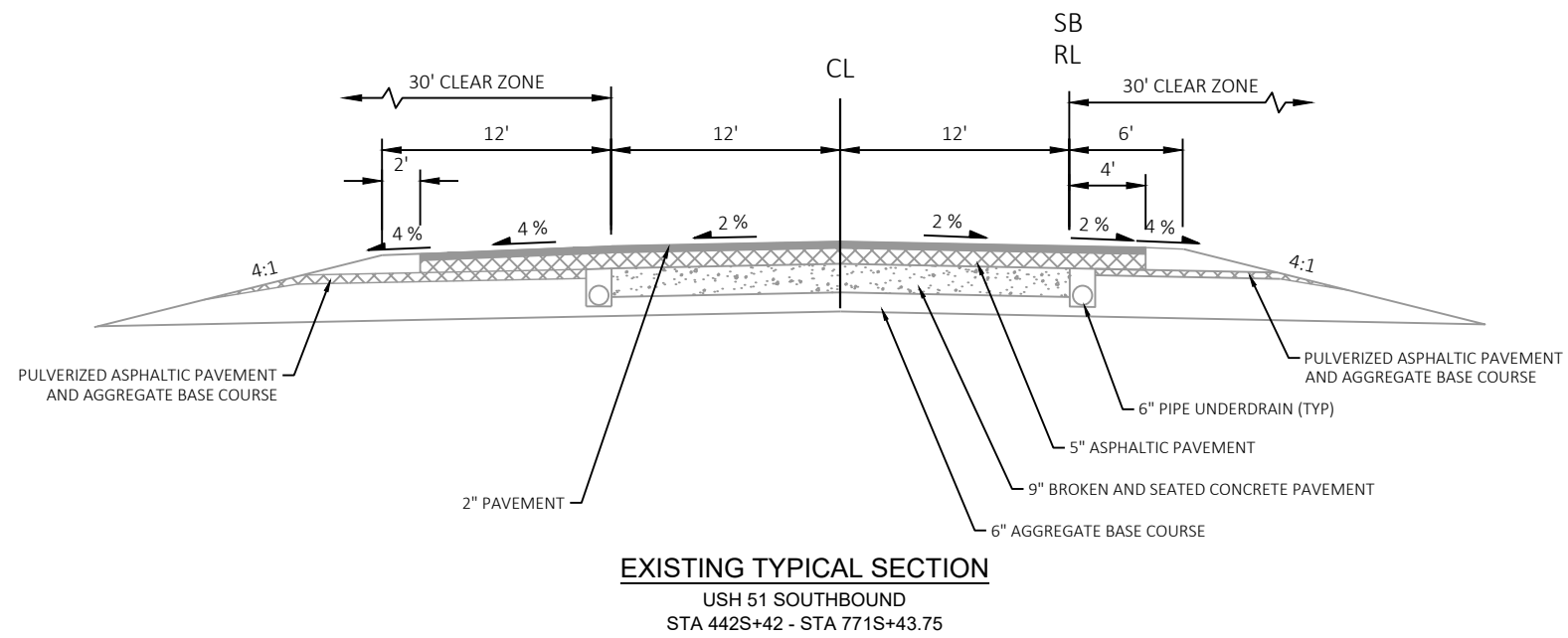
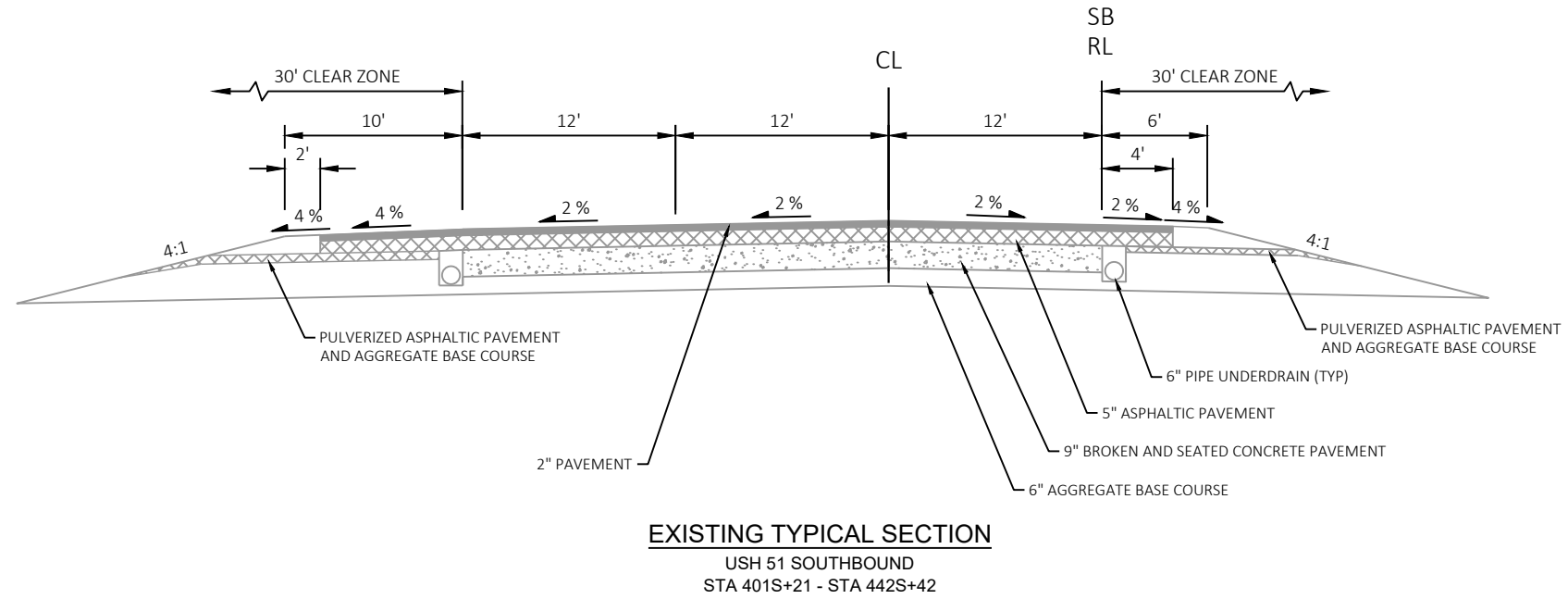


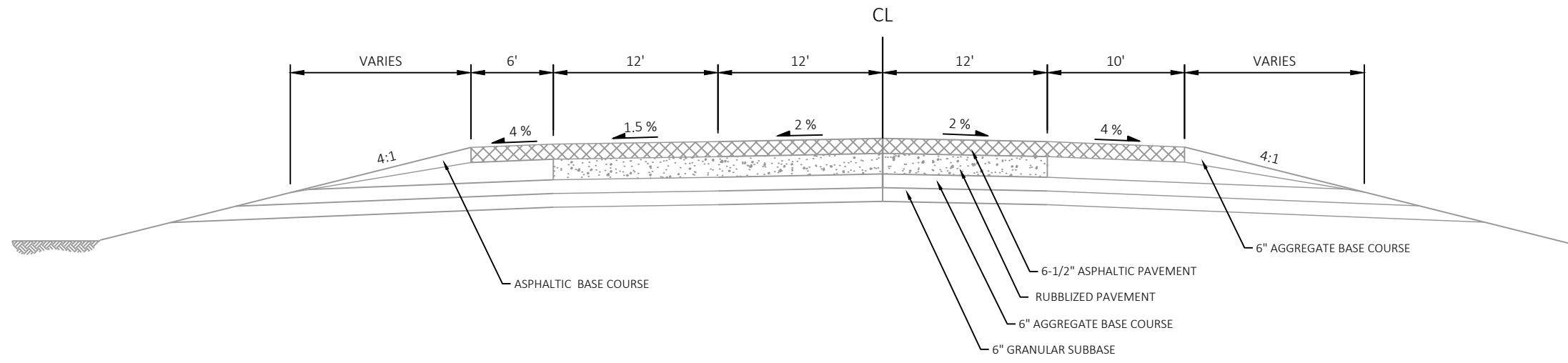
NOTES

CROSS SLOPE MAY VARY DUE TO SUPERELEVATION, SEE SECTION 5 PLANS
GUARDRAIL LOCATIONS SHOWN ON SECTION 5 PLANS

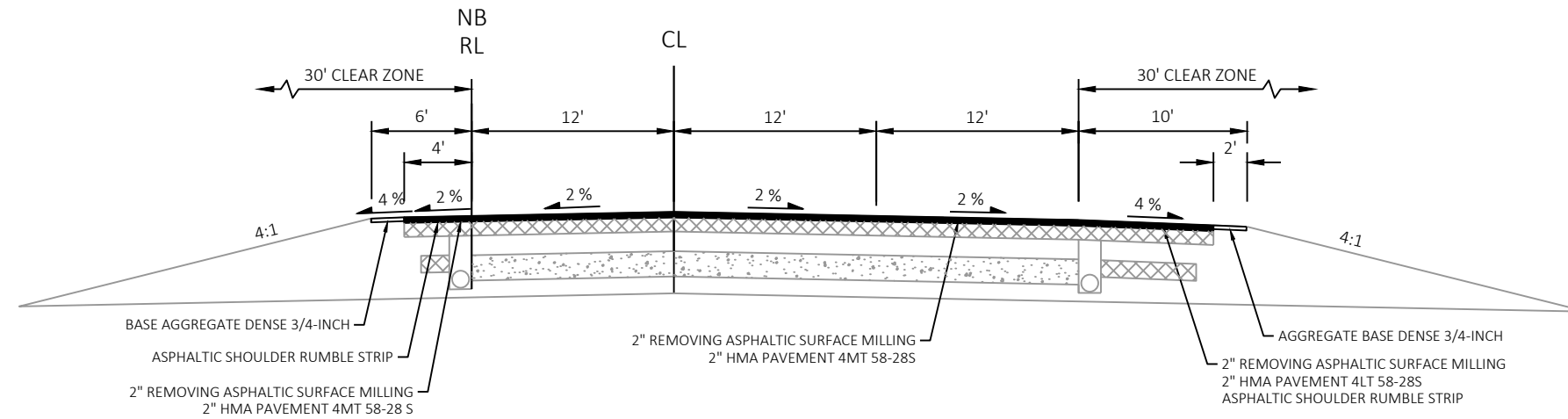






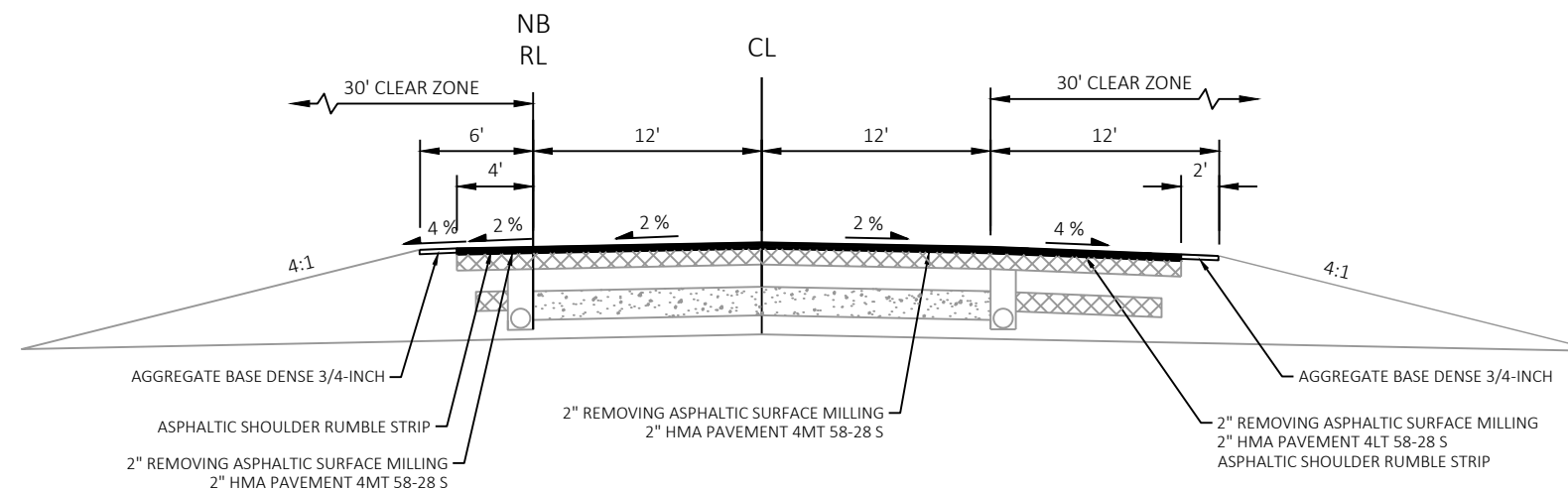


EXISTING TYPICAL SECTION
 CTH WW
 STA 29W+75 - STA 41W+50



FINISHED TYPICAL SECTION

USH 51 NORTHBOUND
STA 312N+13 - STA 395N+00

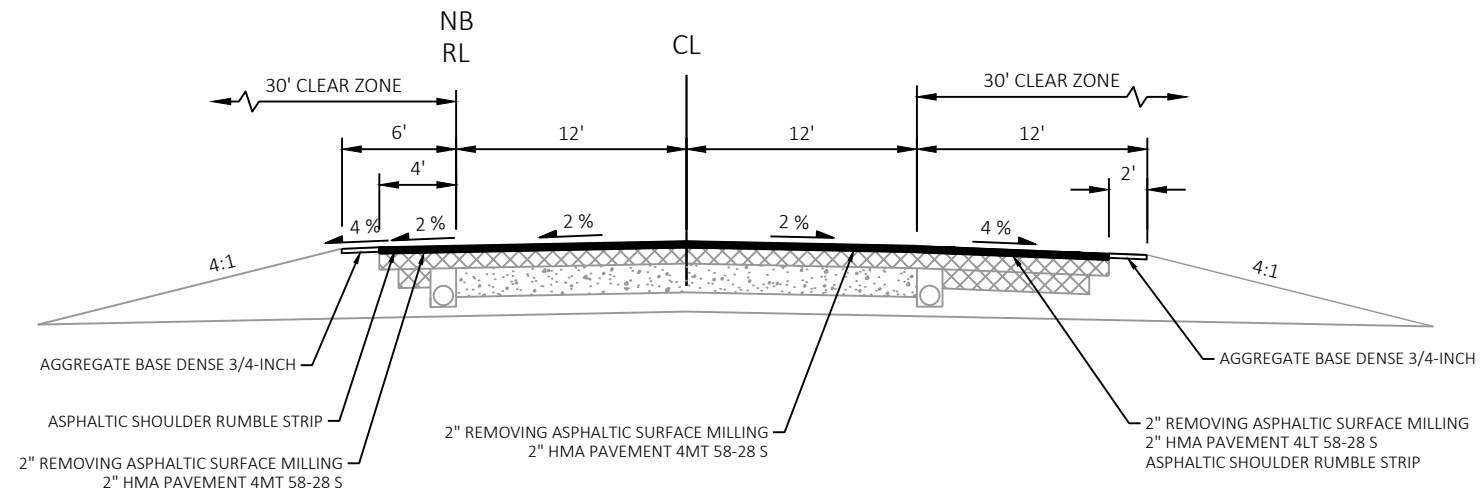


FINISHED TYPICAL SECTION

USH 51 NORTHBOUND
STA 395N+00 - STA 401N+97

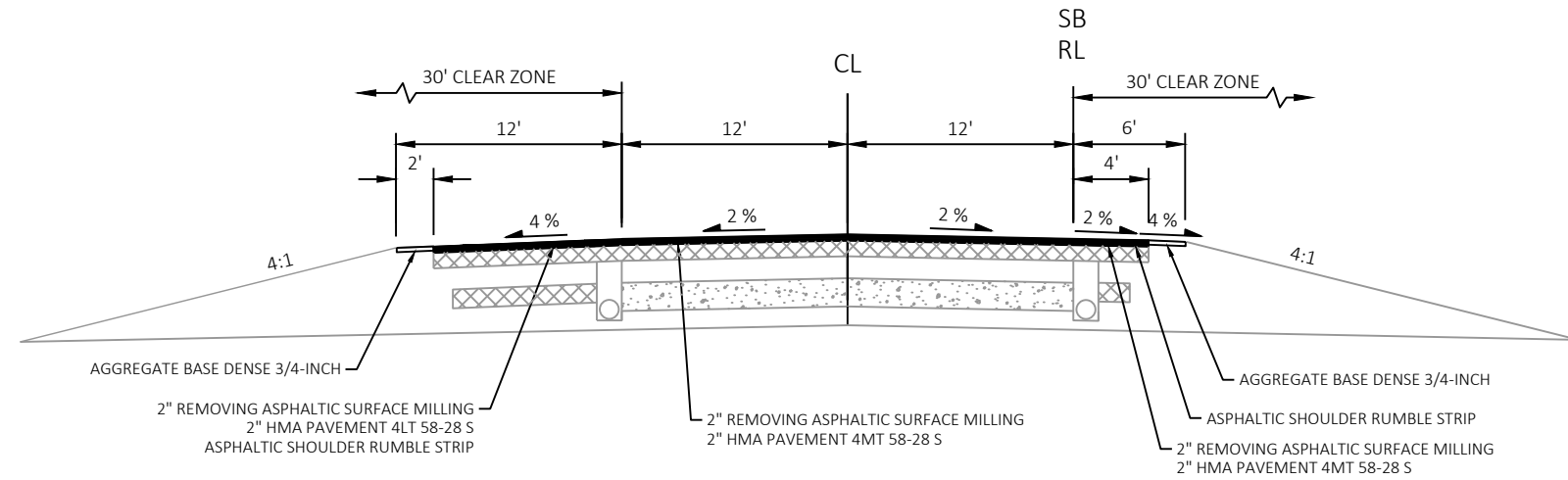
NOTES

CROSS SLOPE MAY VARY DUE TO SUPERELEVATION, SEE SECTION 5 PLANS
GUARDRAIL LOCATIONS SHOWN ON SECTION 5 PLANS

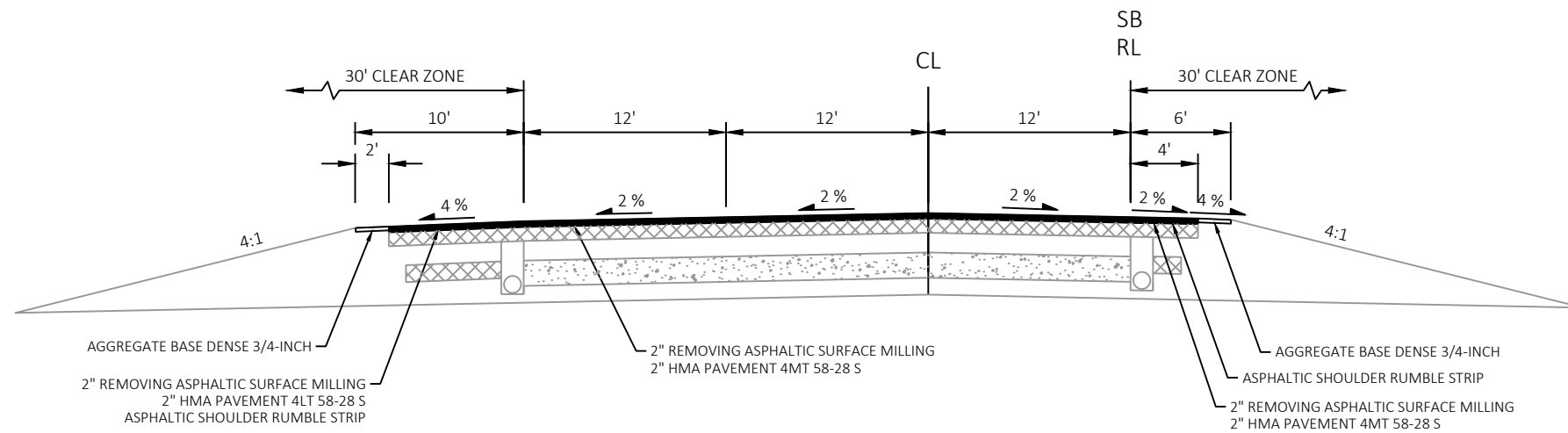


FINISHED TYPICAL SECTION

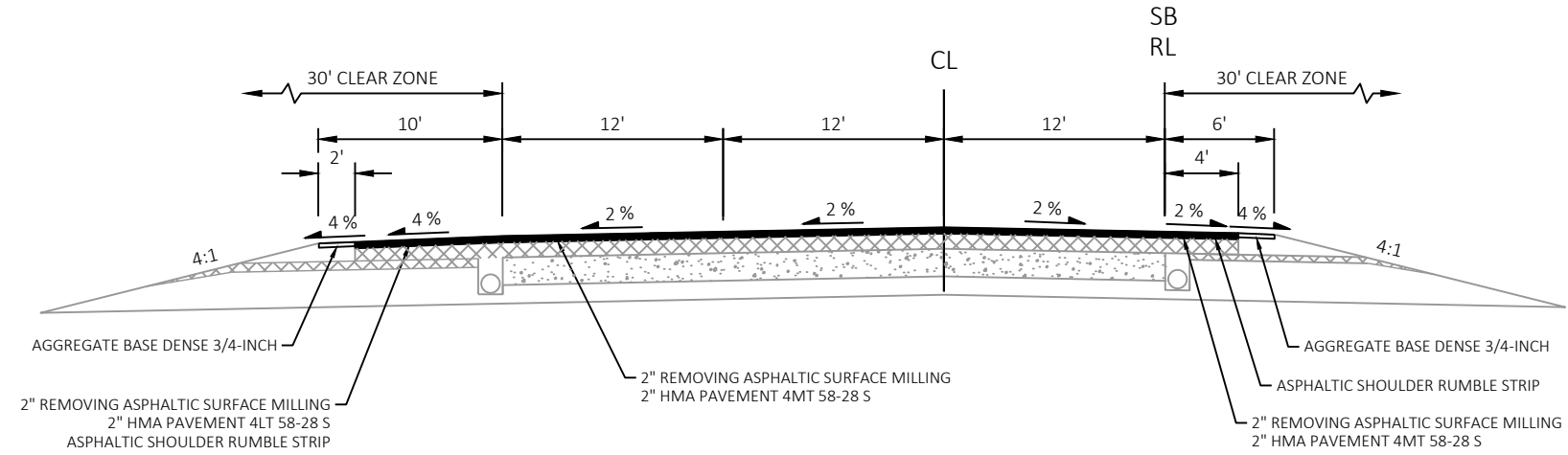
USH 51 NORTHBOUND
STA 401N+97 - STA 771N+18.37



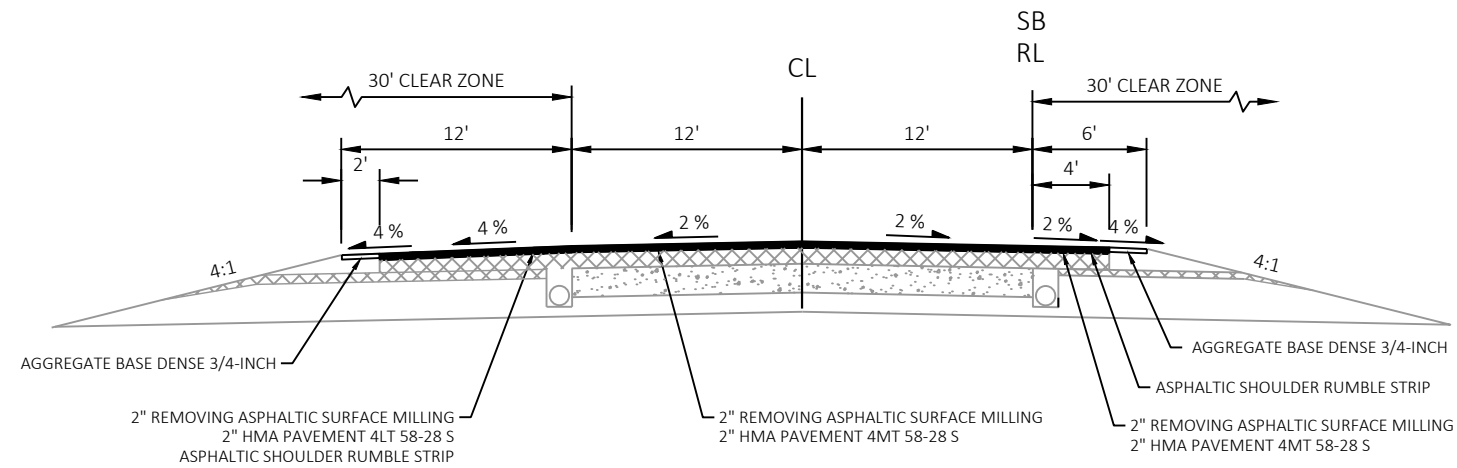
FINISHED TYPICAL SECTION
 USH 51 SOUTHBOUND
 STA 313S+02.13 - STA 348S+06



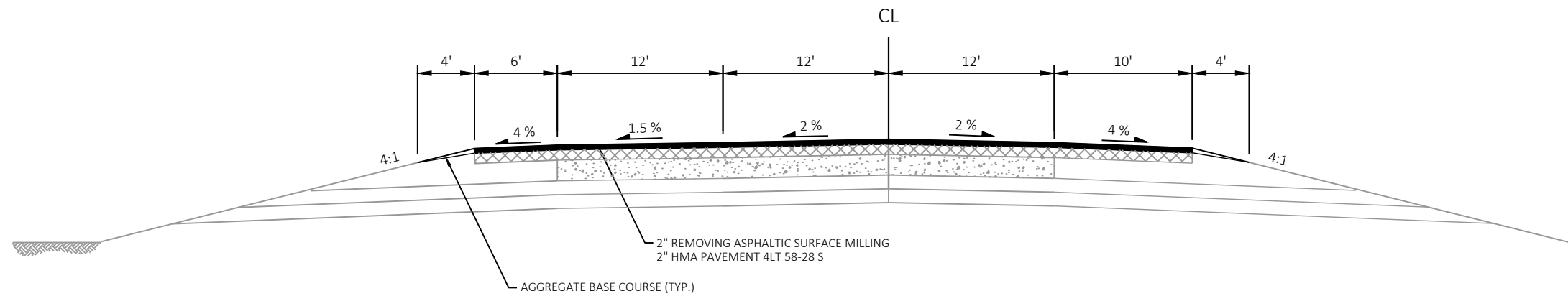
FINISHED TYPICAL SECTION
 USH 51 SOUTHBOUND
 STA 348S+06 - STA 401S+21



FINISHED TYPICAL SECTION
 USH 51 SOUTHBOUND
 STA 401S+21 - STA 442S+42

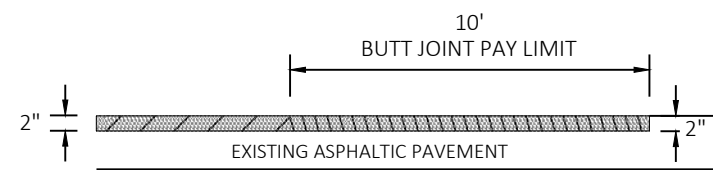





FINISHED TYPICAL SECTION
 USH 51 SOUTHBOUND
 STA 442S+42 - STA 771S+43.75



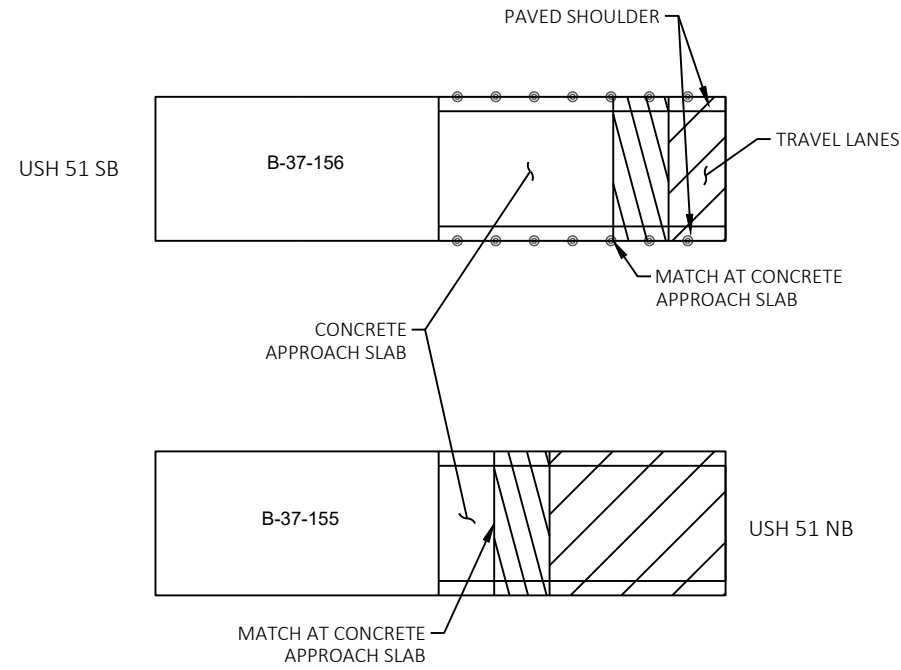
FINISHED TYPICAL SECTION

CTH WW
STA 29W+75 - STA 41W+50

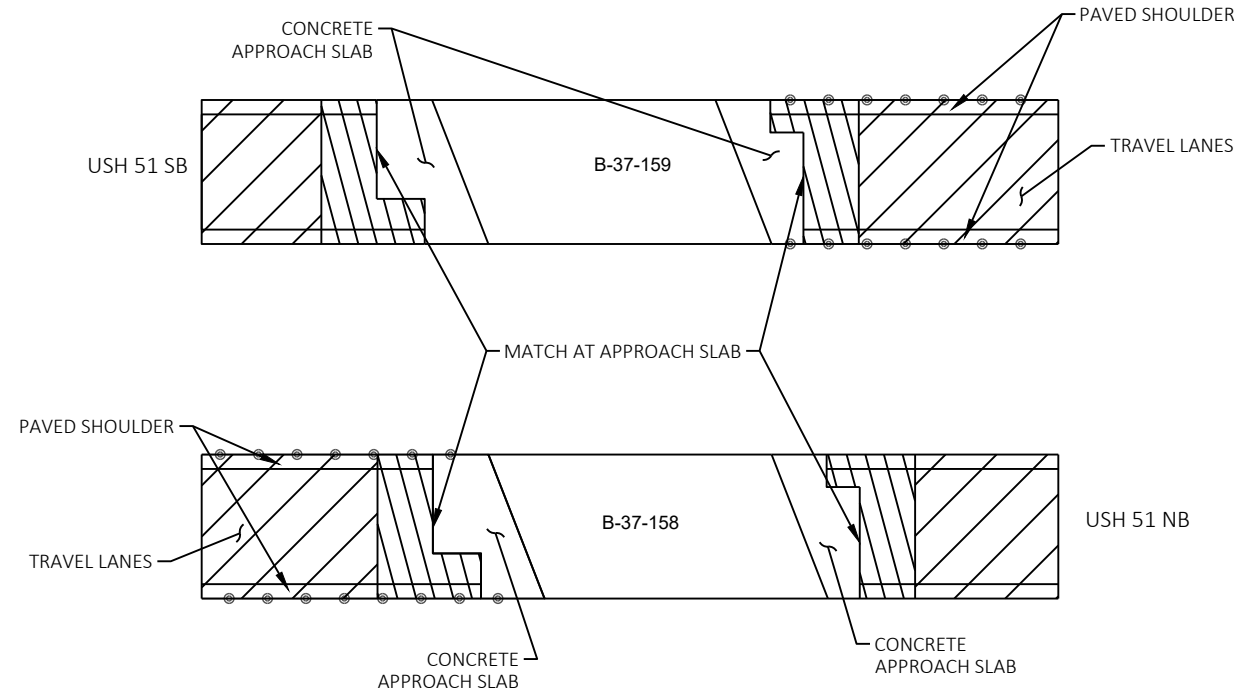


-  HMA PAVEMENT
 -  REMOVING ASPHALTIC SURFACE MILLING
 -  REMOVING ASPHALTIC SURFACE BUTT JOINTS
- NOTE: WHEN MATCHING TO AN UNPAVED SURFACE BUTT JOINT IS NOT REQUIRED

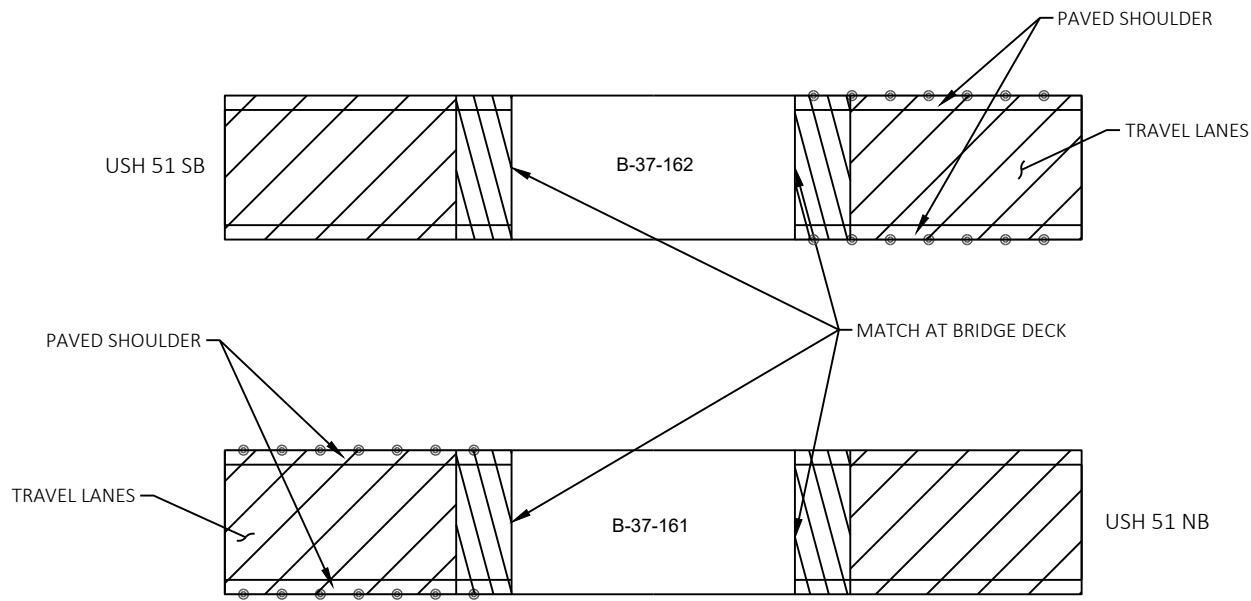
MAINLINE BUTT JOINT DETAIL



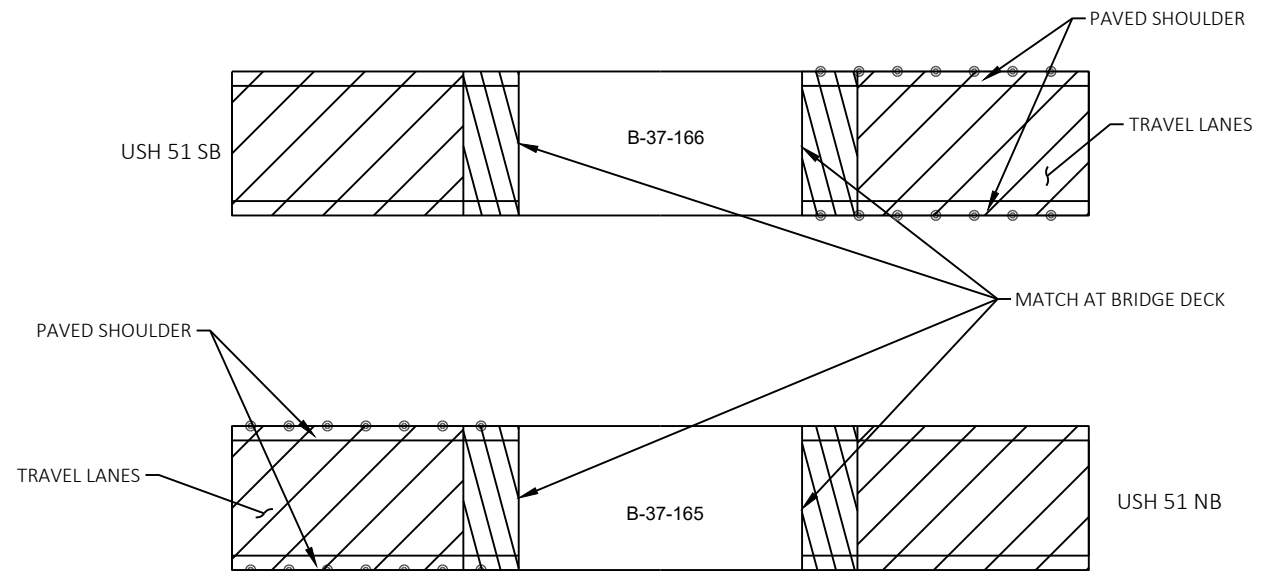
B-37-155 & B-37-156 OVER DECATOR DR.



B-37-158 & B-37-159 OVER CTH WW





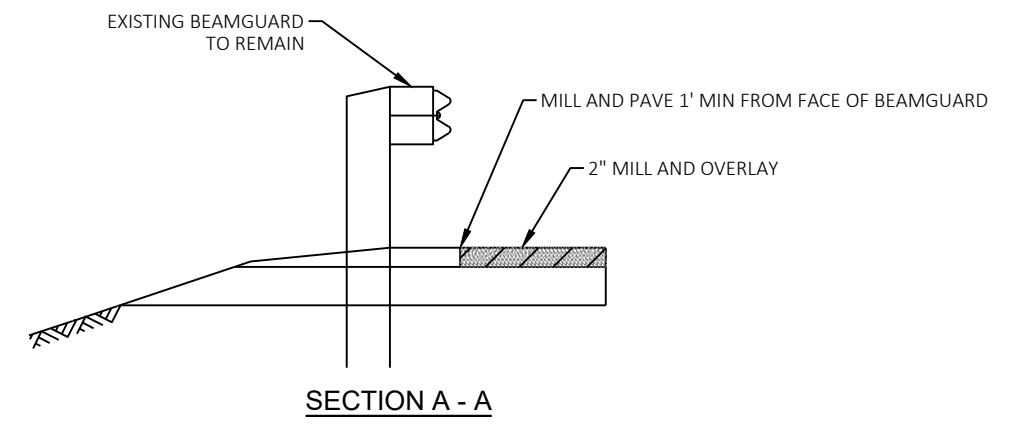
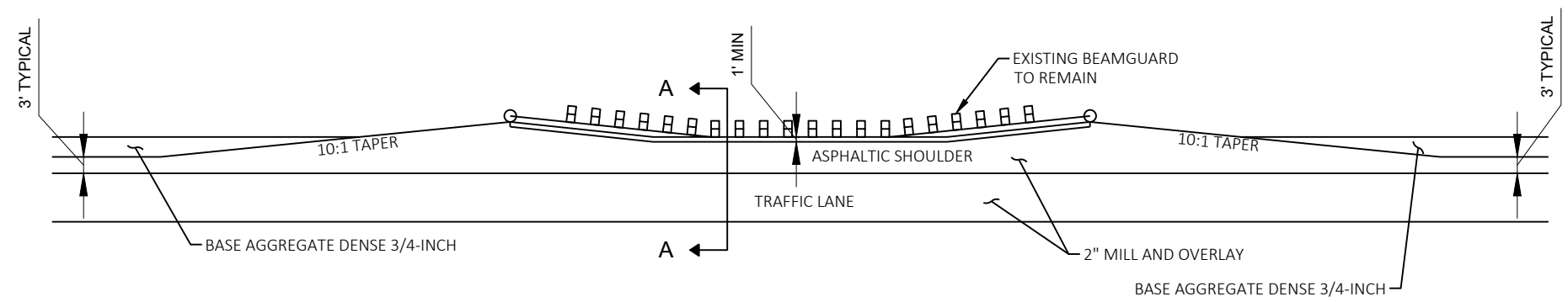
B-37-161 & B-37-162 OVER MAINE DR.



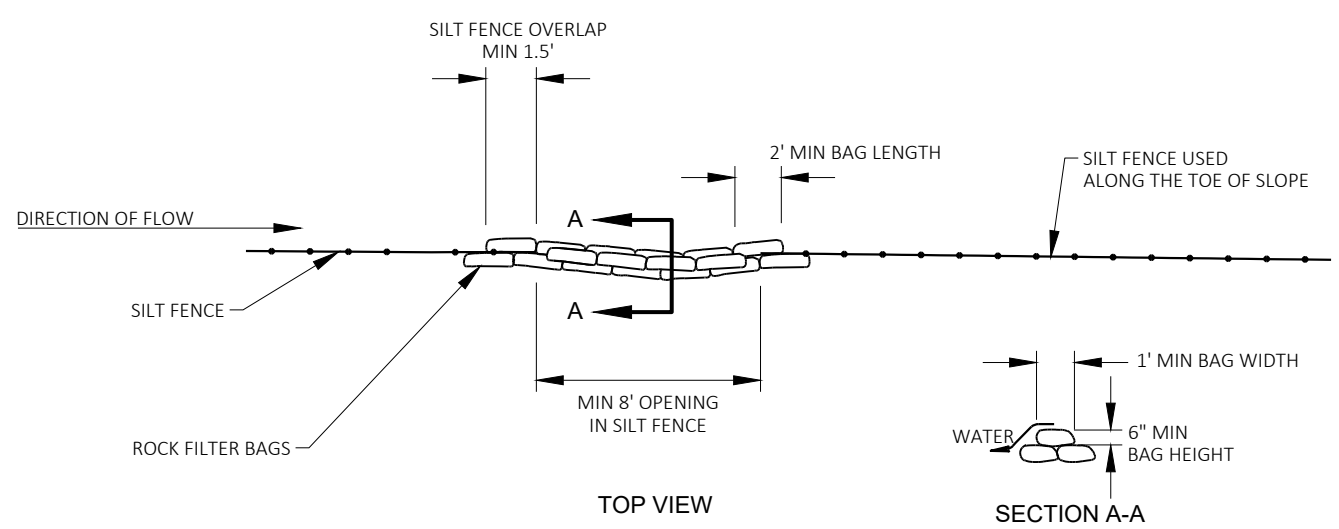
B-37-165 & B-37-166 OVER RAINBOW DR.

**STRUCTURE APPROACH
BUTT JOINT DETAILS**

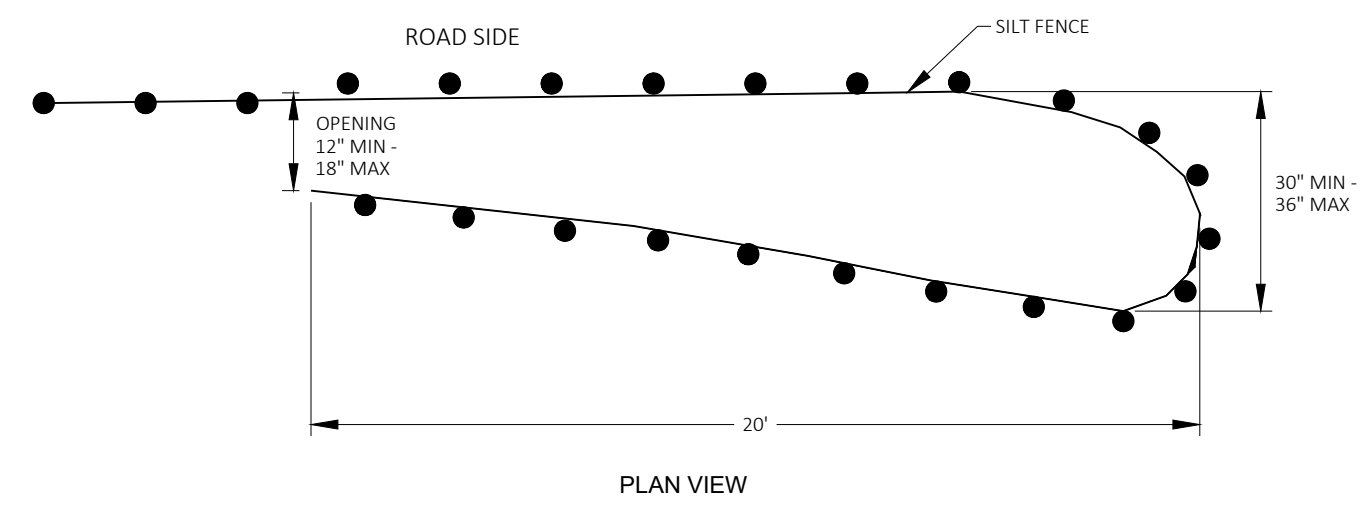
-  REMOVING ASPHALTIC SURFACE MILLING
-  REMOVING ASPHALTIC SURFACE BUTT JOINTS



DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

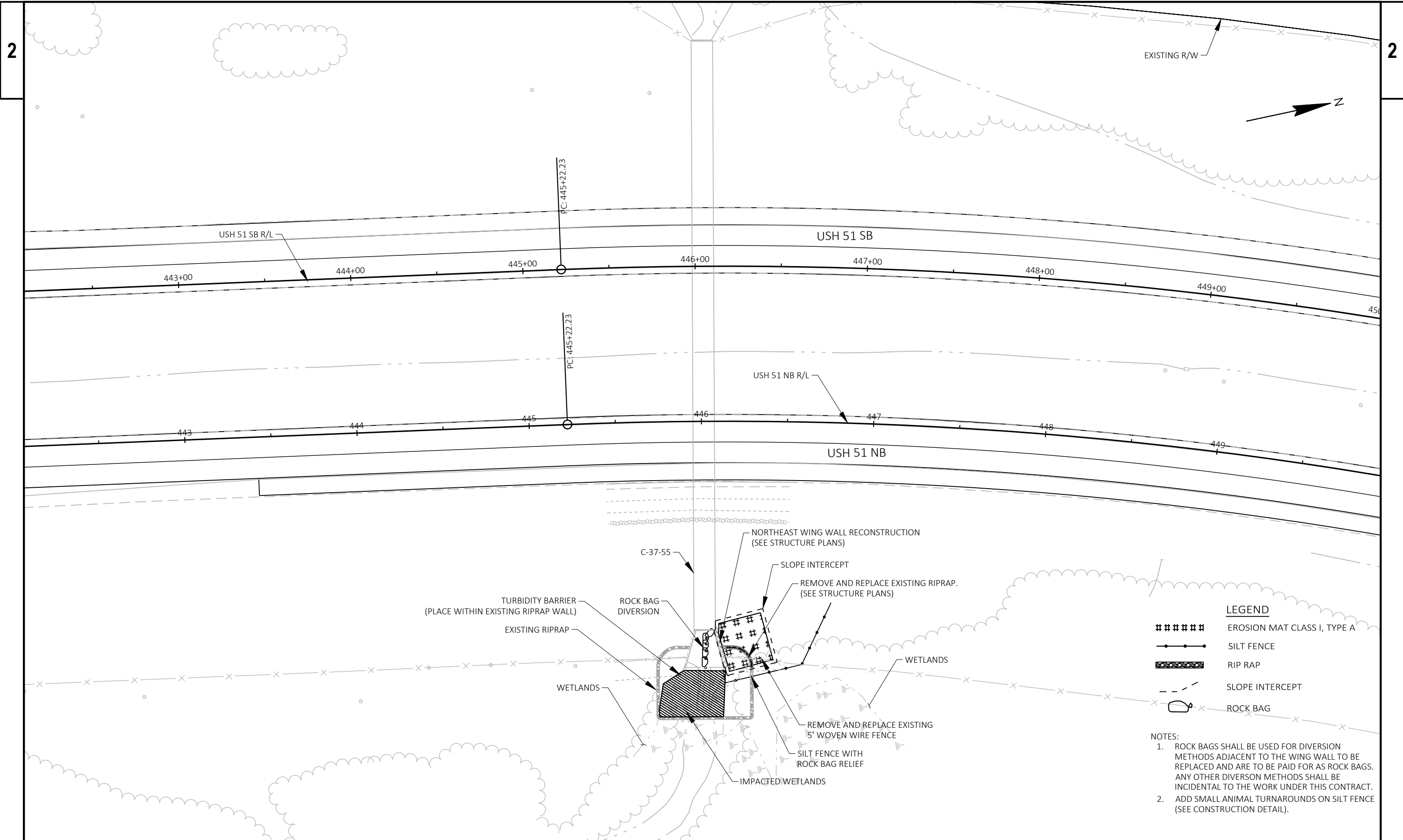


ROCK BAGS USED FOR SILT FENCE RELIEF



TEMPORARY SMALL ANIMAL TURN-AROUND
STRUCTURE C-37-55

GENERAL NOTES:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND. AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.



PROJECT NO: 1170-01-76

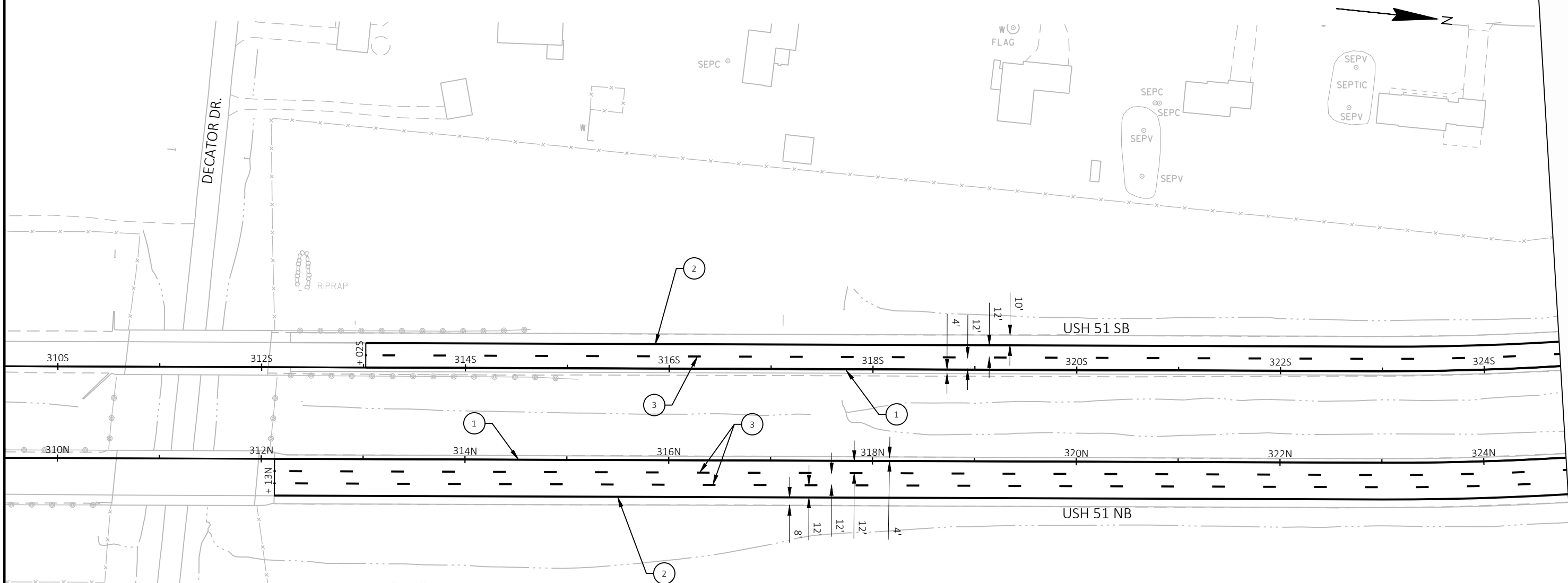
HWY: USH 51

COUNTY: MARATHON

EROSION CONTROL

SHEET

E



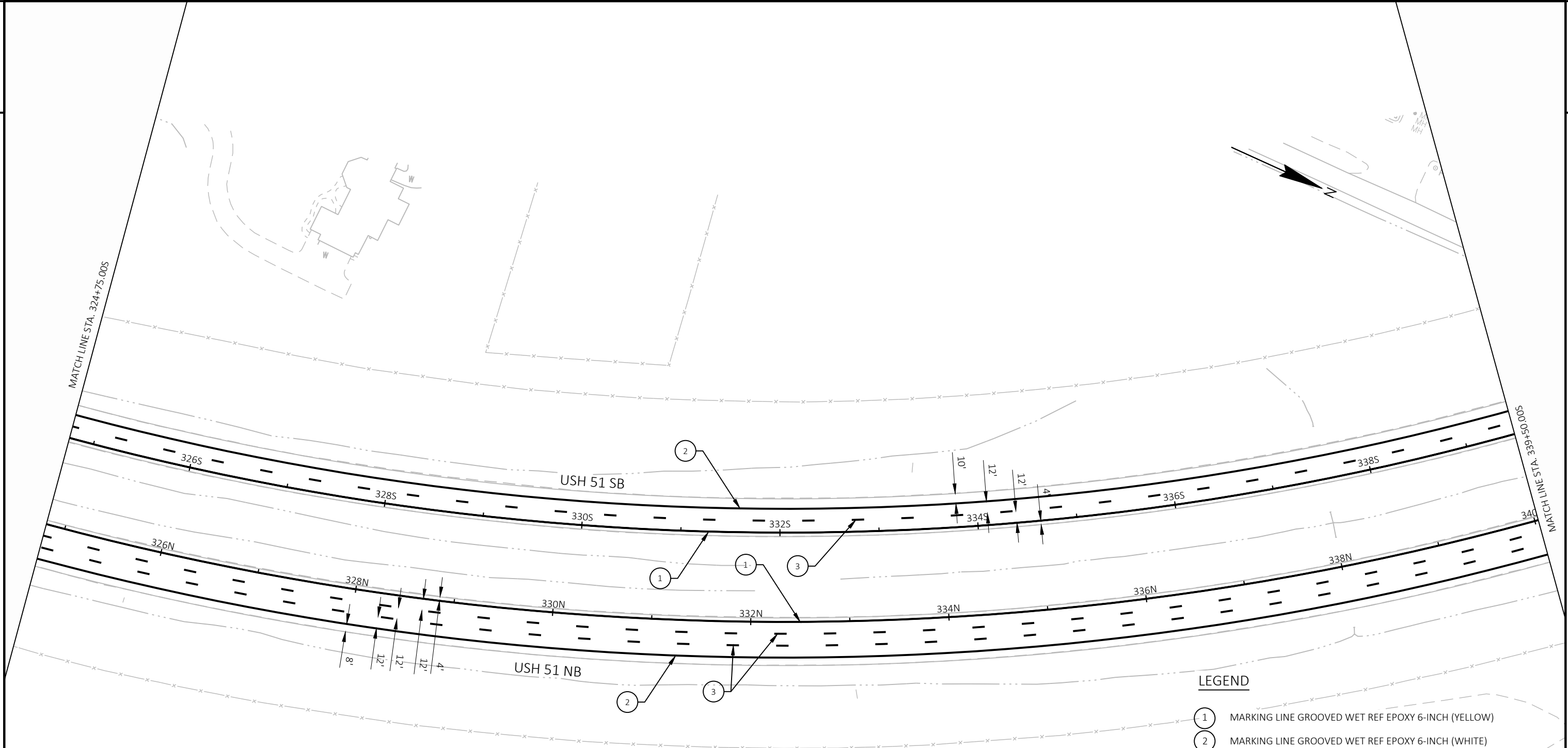
MATCH LINE STA. 324+75.005

LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24-INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)

NOTE

1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

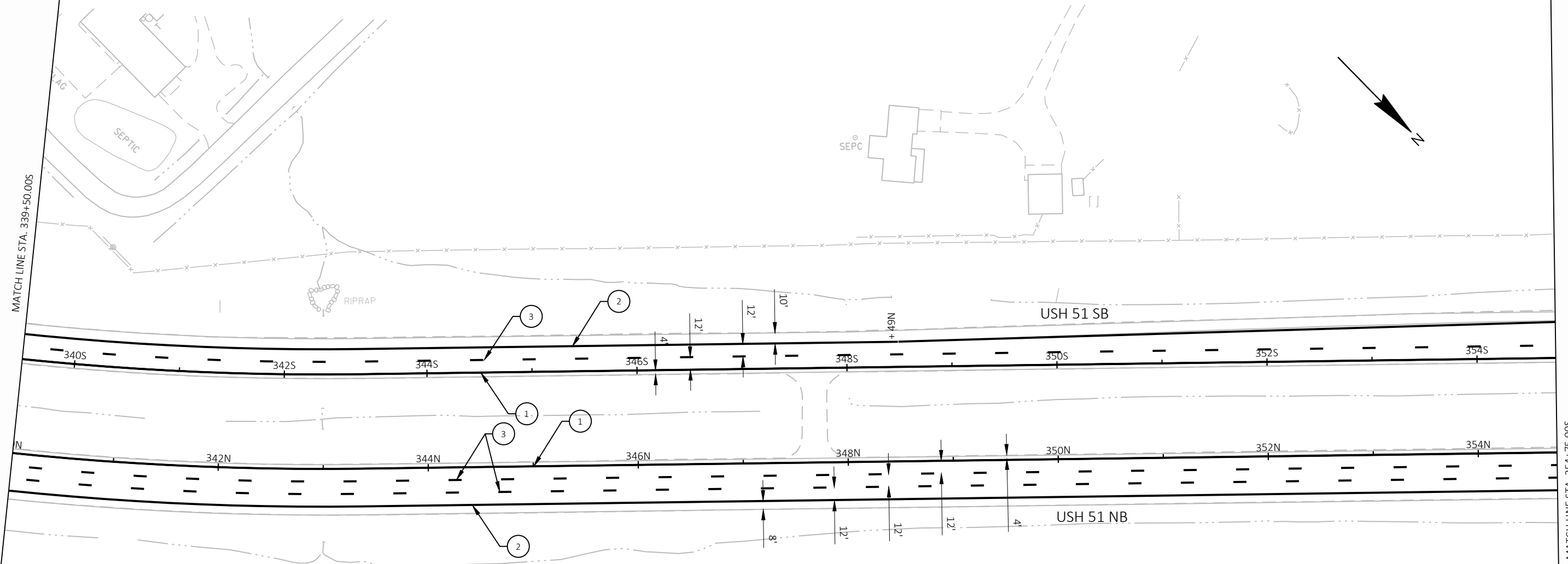


LEGEND

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NOTE

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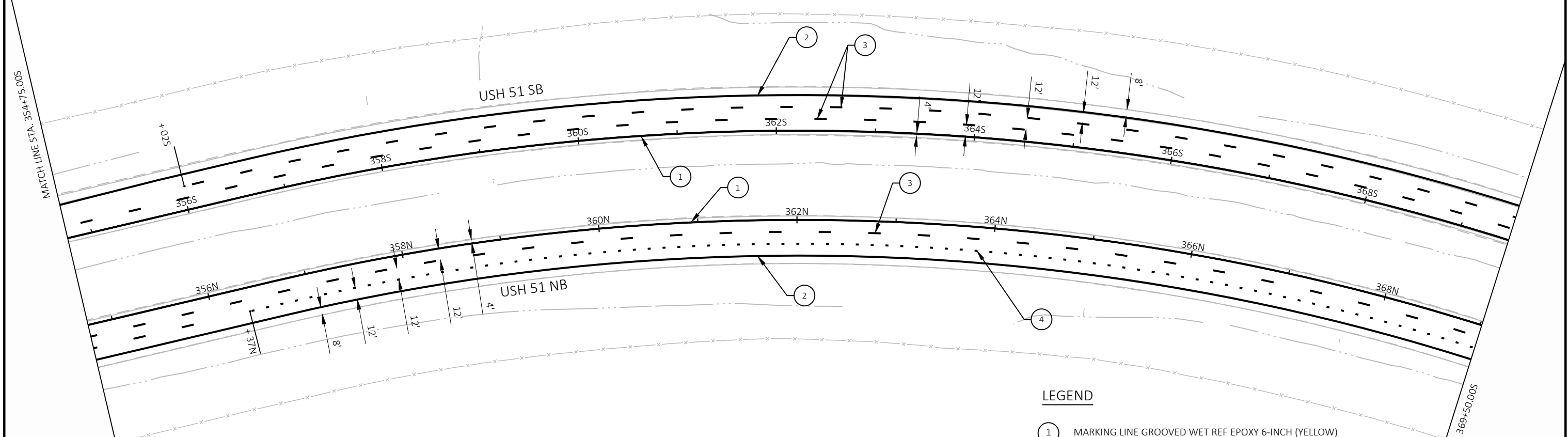
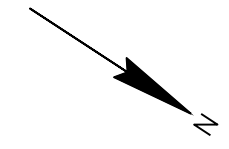


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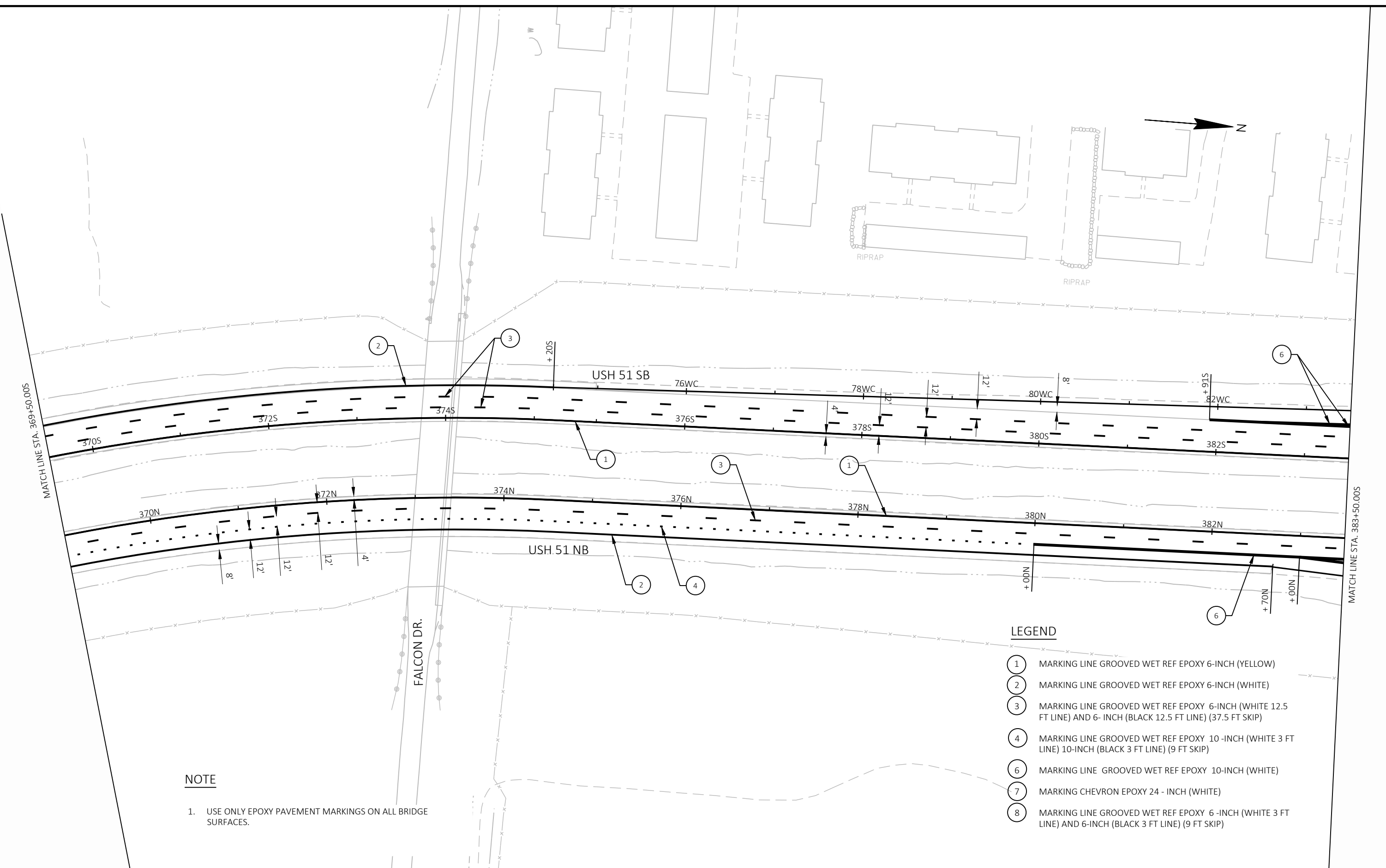


NOTE

1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
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- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6- INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
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NOTE

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LEGEND

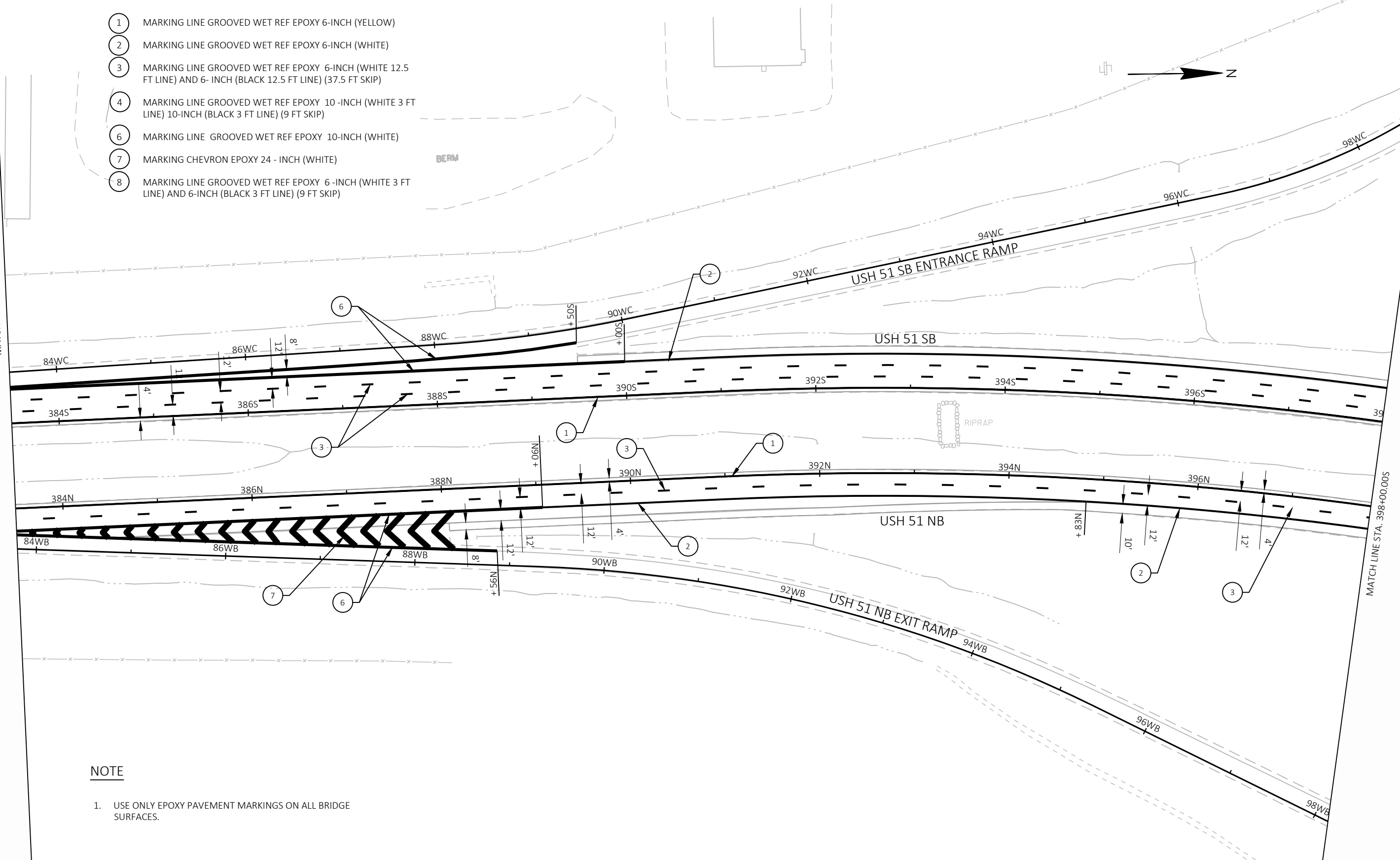
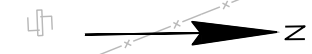
- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
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- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6- INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
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- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 8 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)

MATCH LINE STA. 383+50.005

MATCH LINE STA. 398+00.005

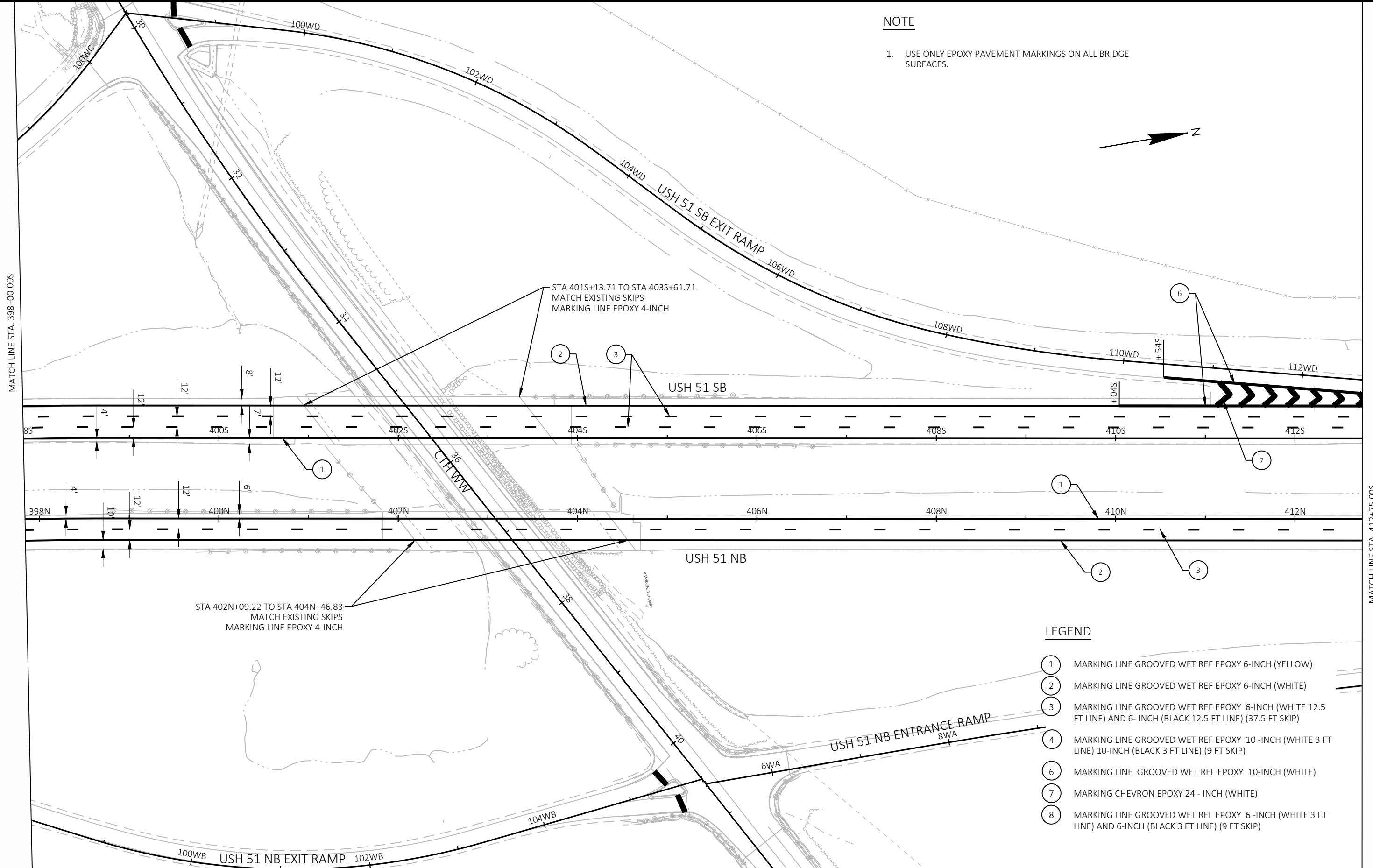


NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.



STA 401S+13.71 TO STA 403S+61.71
MATCH EXISTING SKIPS
MARKING LINE EPOXY 4-INCH

STA 402N+09.22 TO STA 404N+46.83
MATCH EXISTING SKIPS
MARKING LINE EPOXY 4-INCH

LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24-INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)

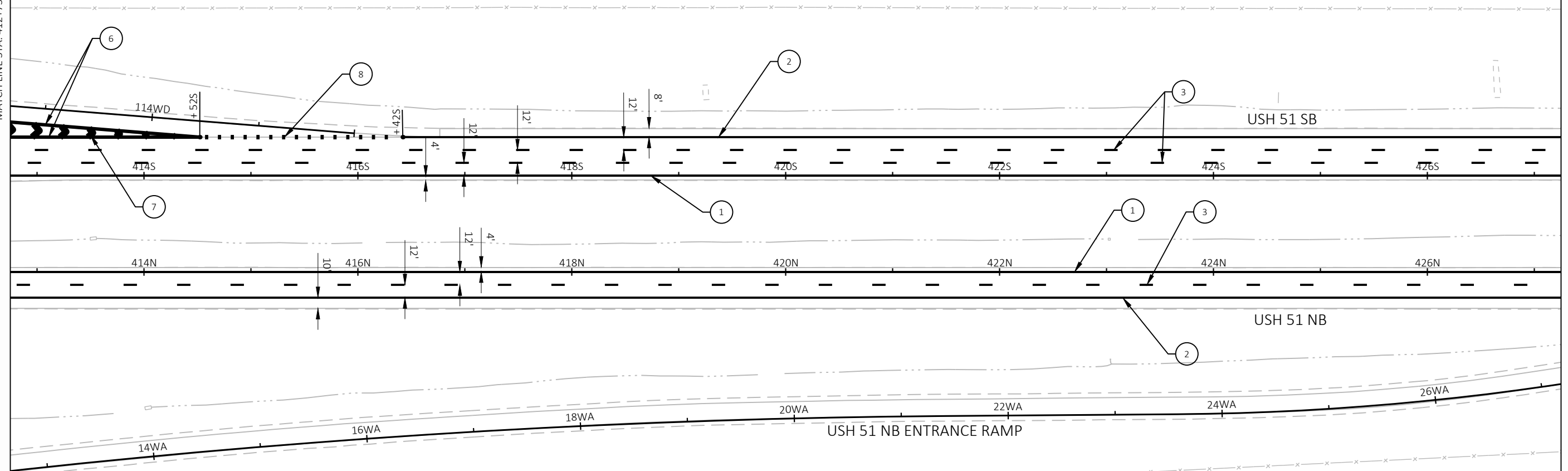
LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- 4 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING CHEVRON EPOXY 24 - INCH (WHITE)
- 8 MARKING LINE GROOVED WET REF EPOXY 6 -INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 412+75.00S

MATCH LINE STA. 427+25.00S



NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

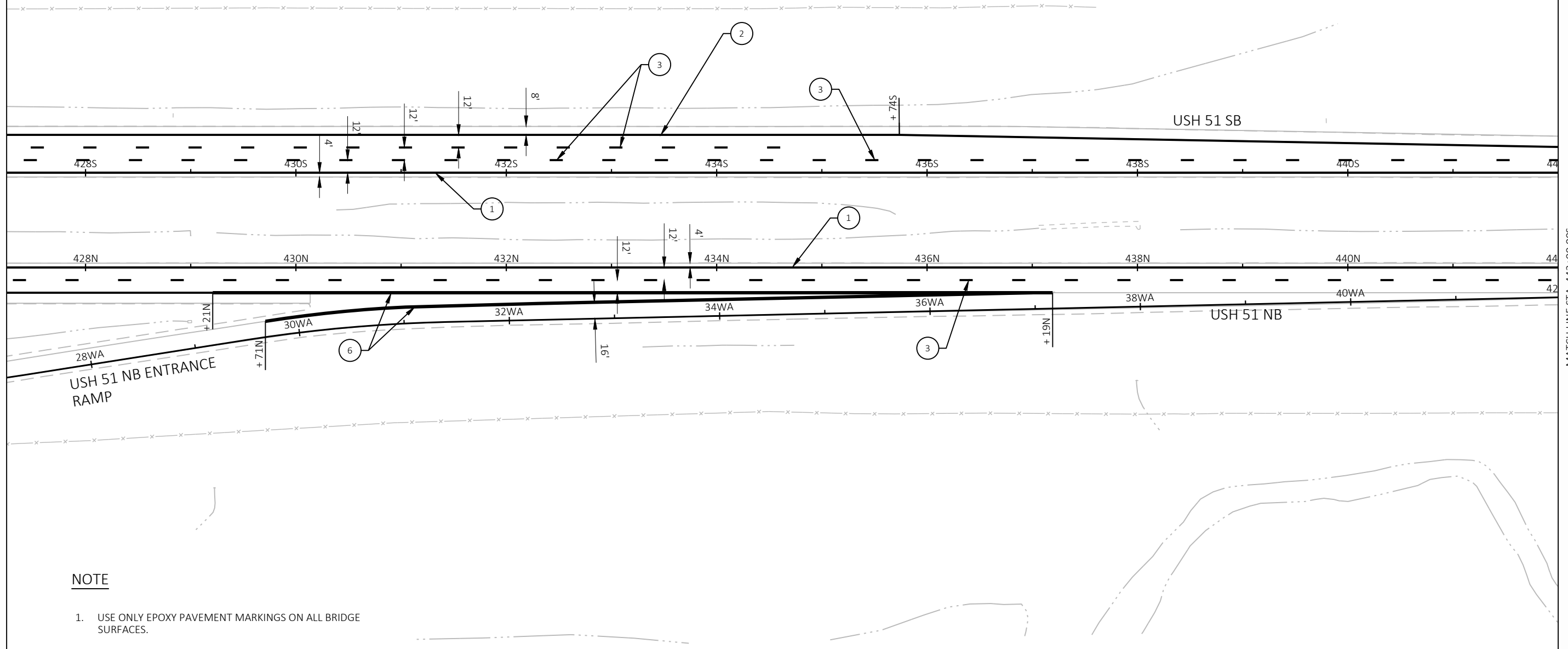
LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24 - INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 427+25.005

MATCH LINE STA. 442+00.005

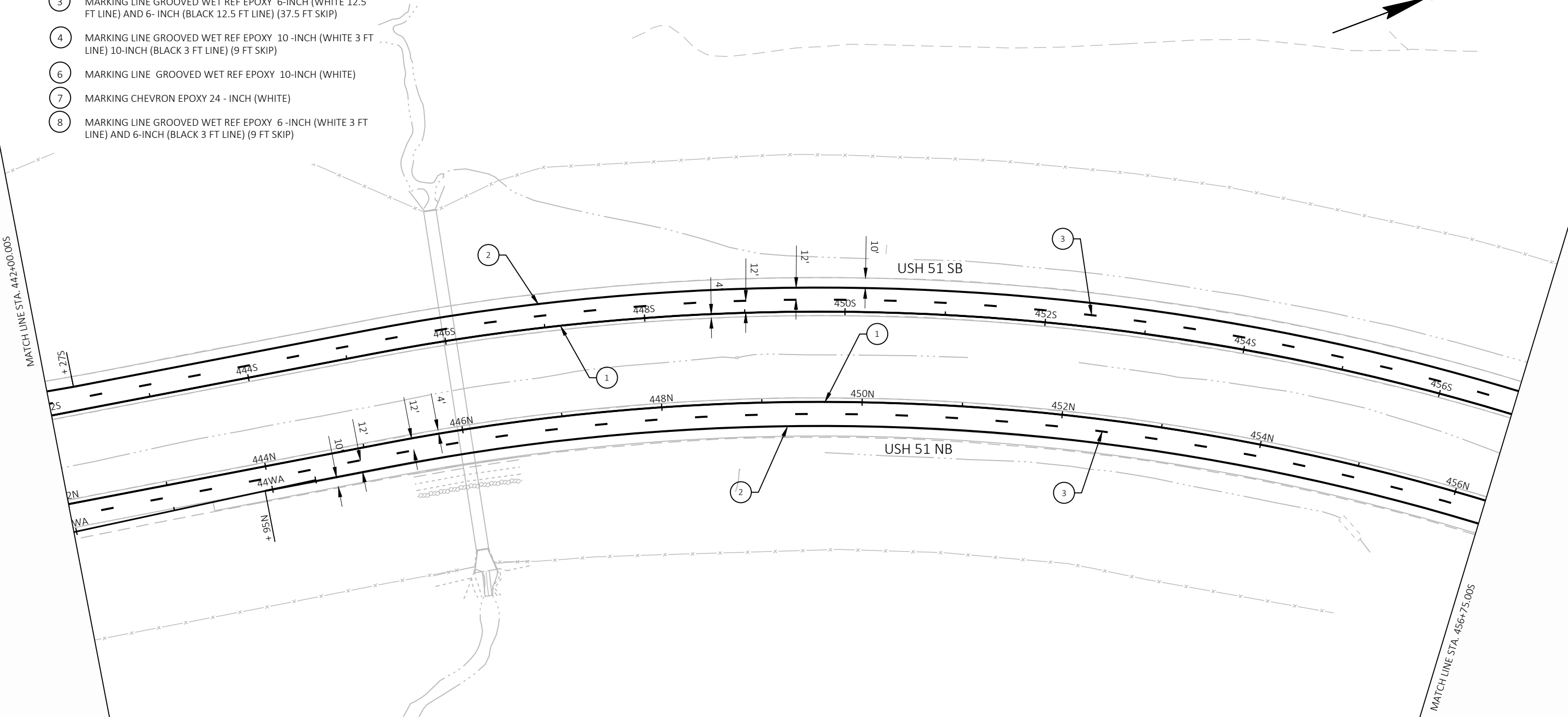


NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- 4 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 8 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)

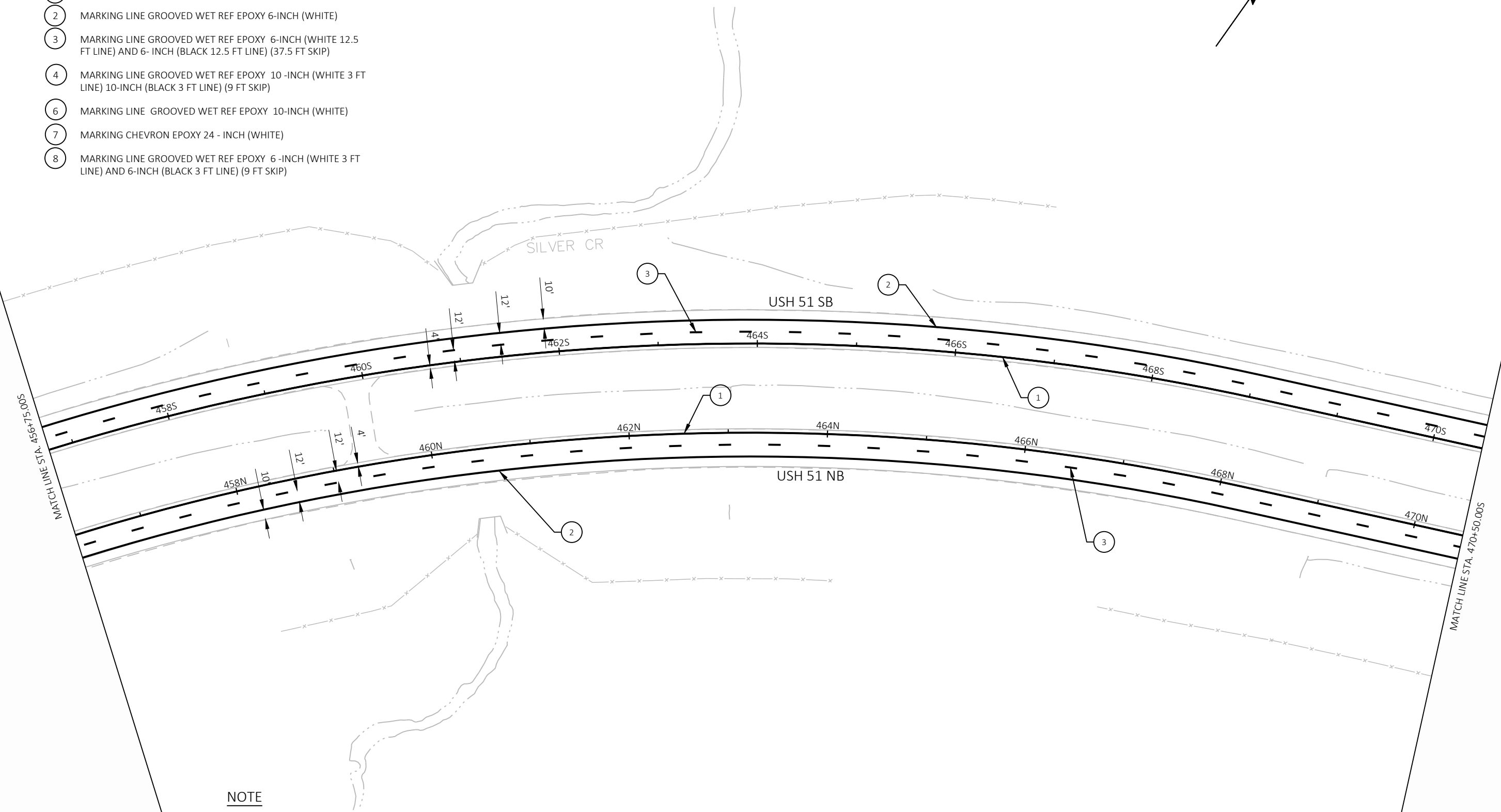
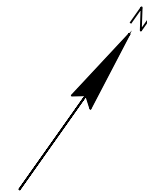


NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
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- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING CHEVRON EPOXY 24 - INCH (WHITE)
- 8 MARKING LINE GROOVED WET REF EPOXY 6 -INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)

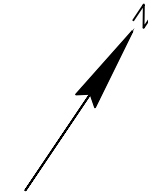


NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

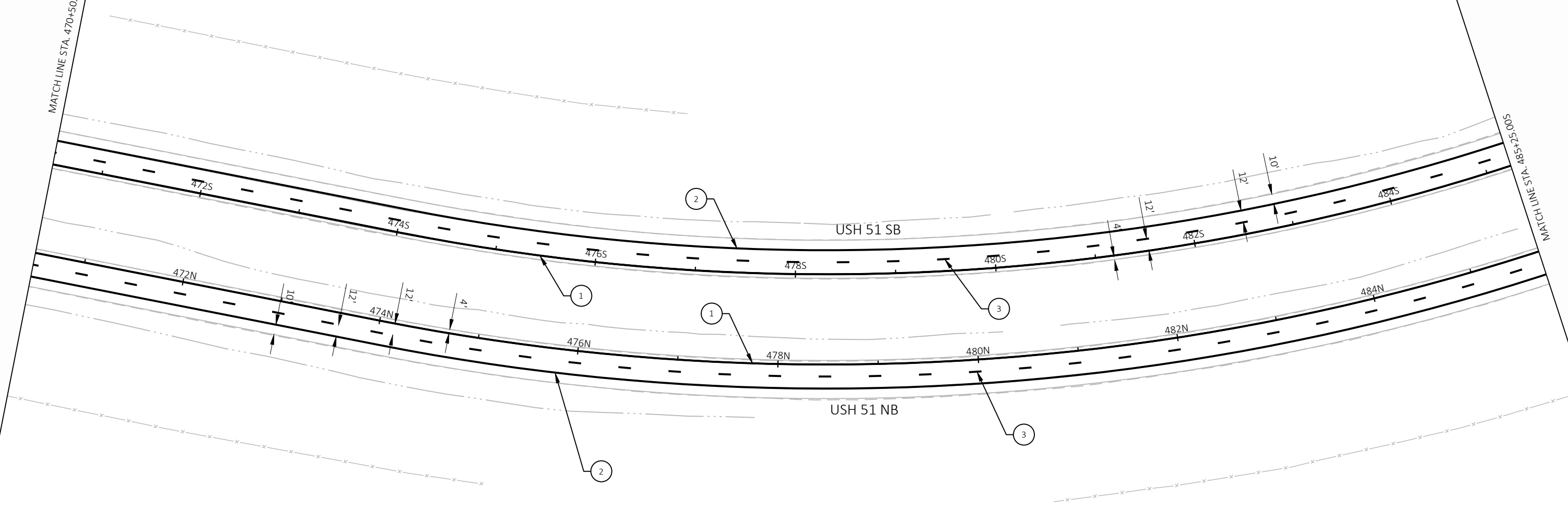
LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- 4 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 8 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 470+50.00S

MATCH LINE STA. 485+25.00S

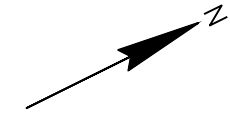


NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

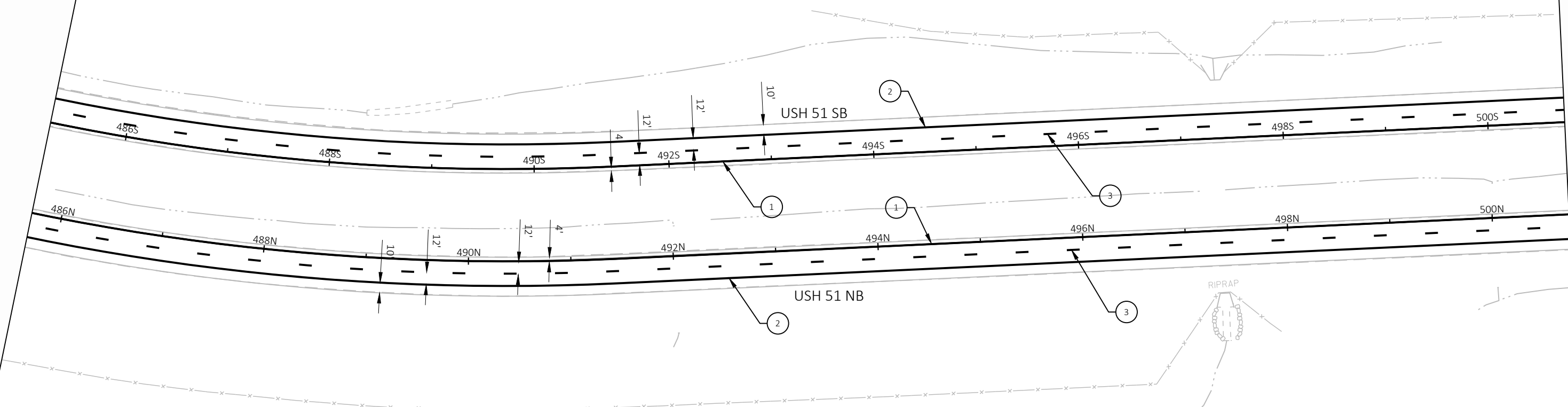
LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24-INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 485+25.005

MATCH LINE STA. 500+75.005



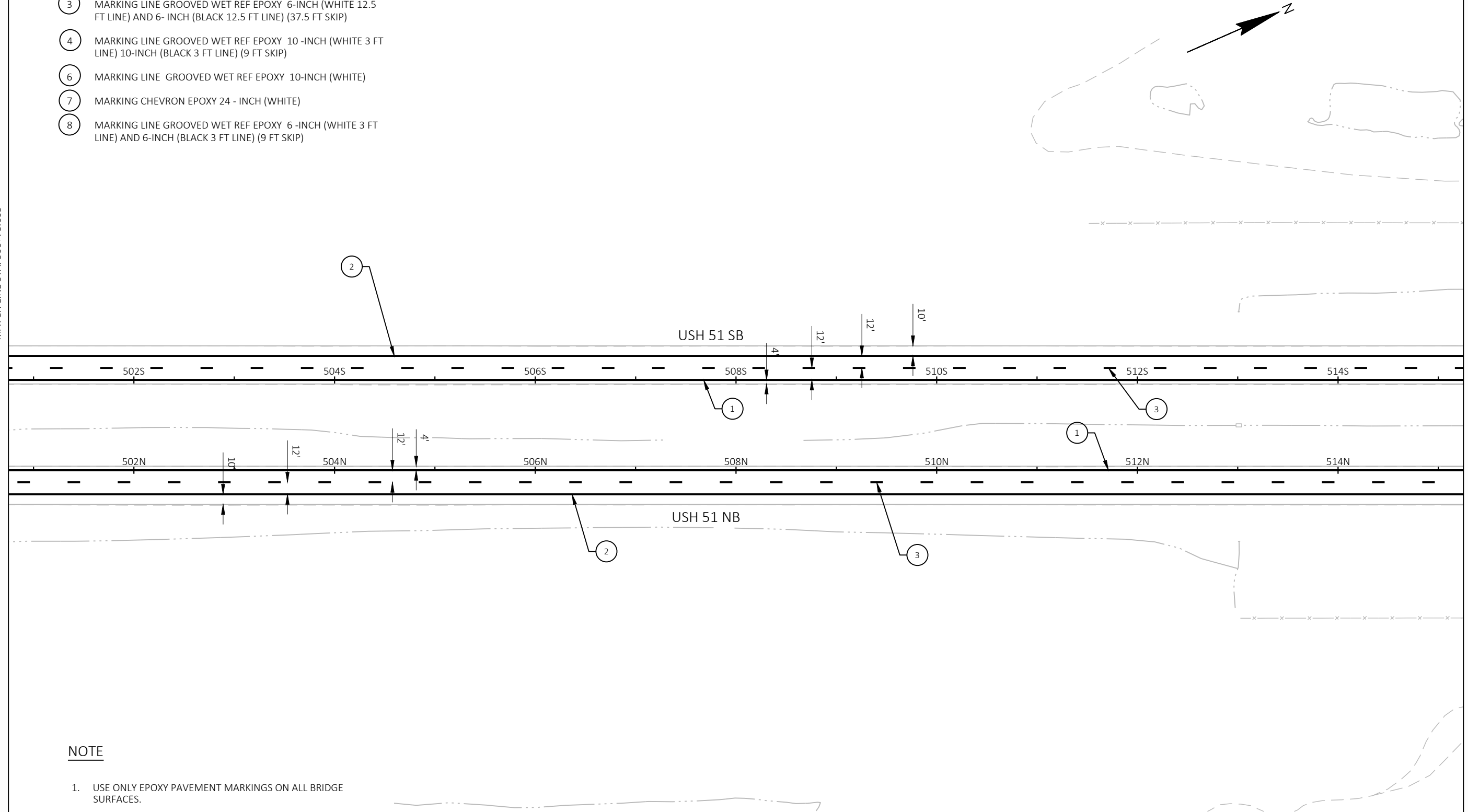
NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24-INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)

MATCH LINE STA. 500+75.00S



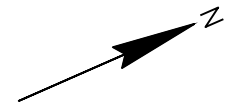
MATCH LINE STA. 515+25.00S

NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

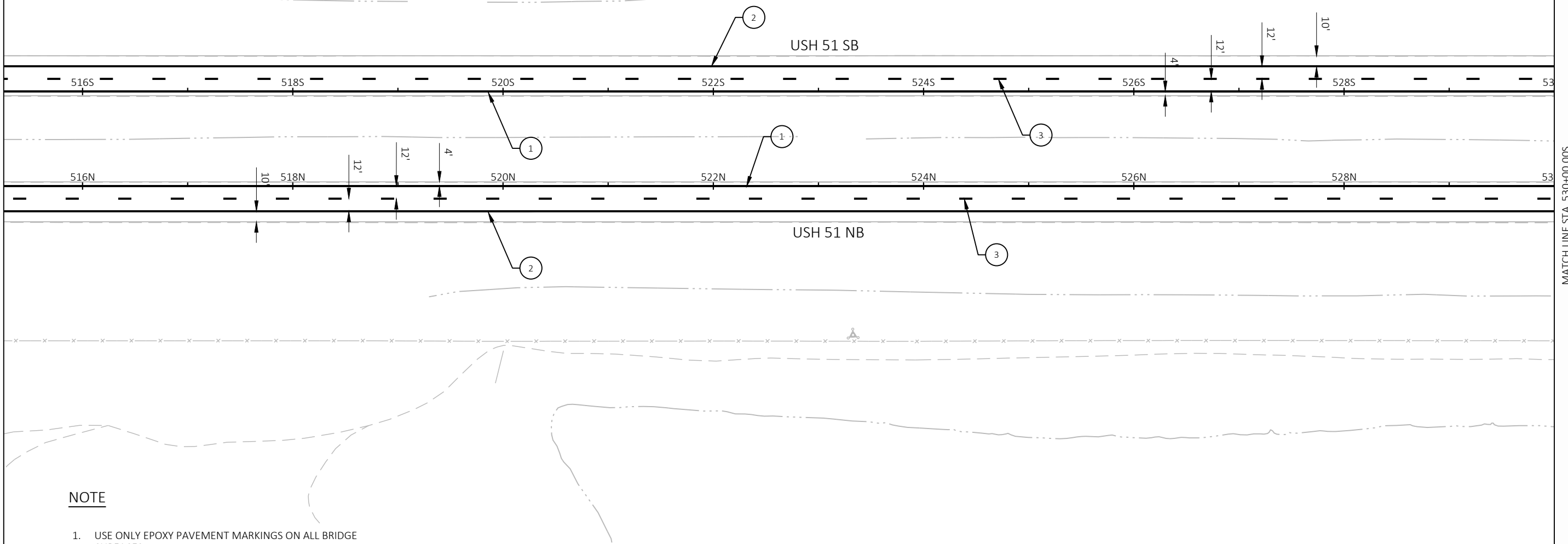
LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24-INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 515+25.005

MATCH LINE STA. 530+00.005



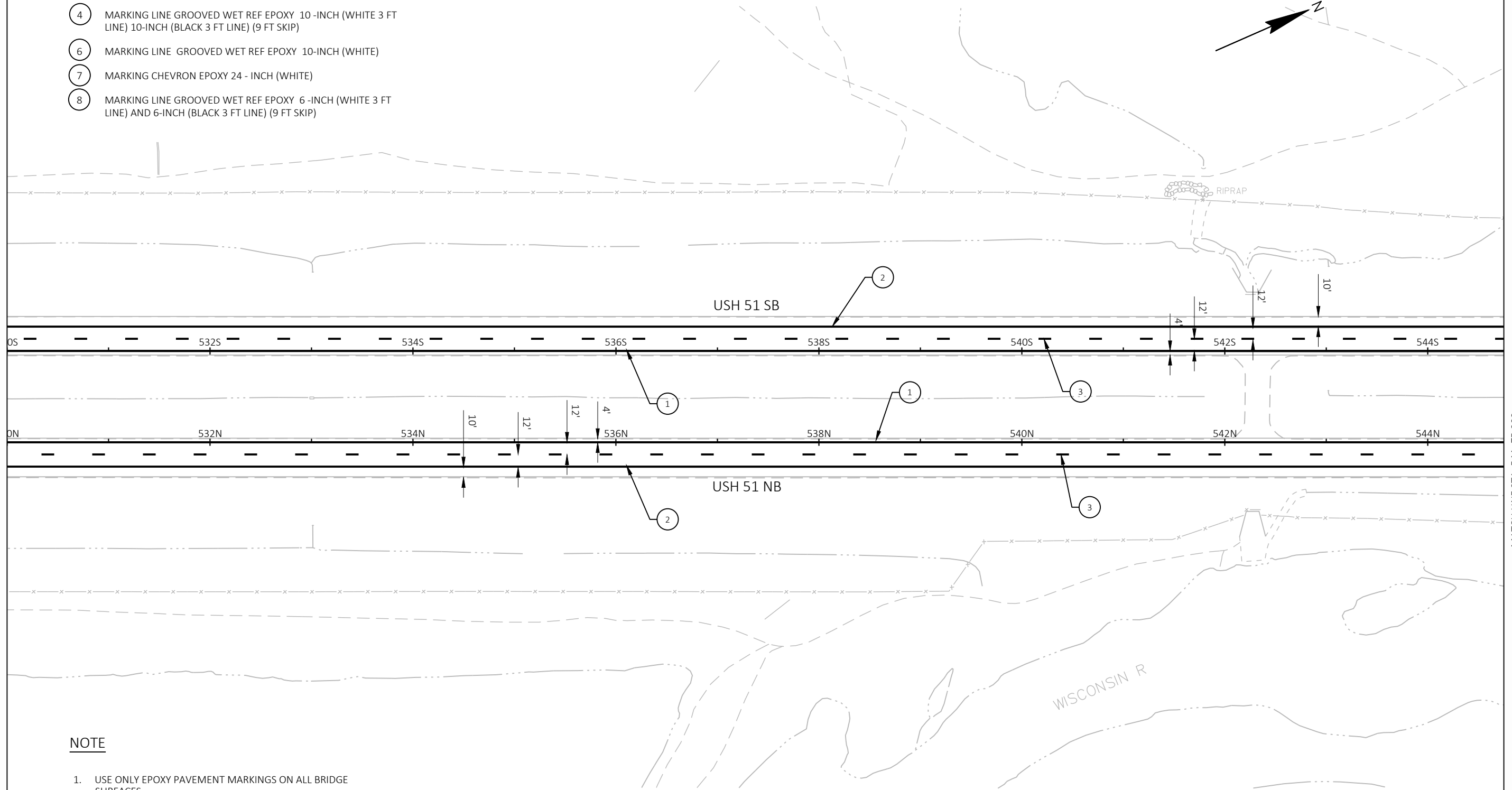
NOTE

1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24 - INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)

MATCH LINE STA. 530+00.00S



MATCH LINE STA. 544+75.00S

NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24 - INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 544+75.005

MATCH LINE STA. 559+50.005

USH 51 SB

USH 51 NB

WISCONSIN R

NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

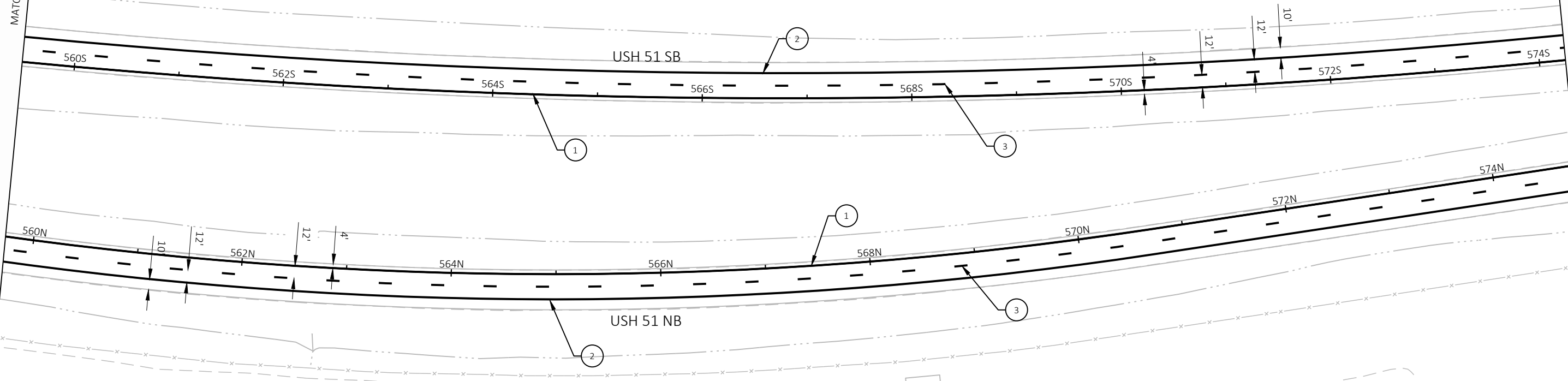
LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24-INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 559+50.005

MATCH LINE STA. 574+25.005



NOTE

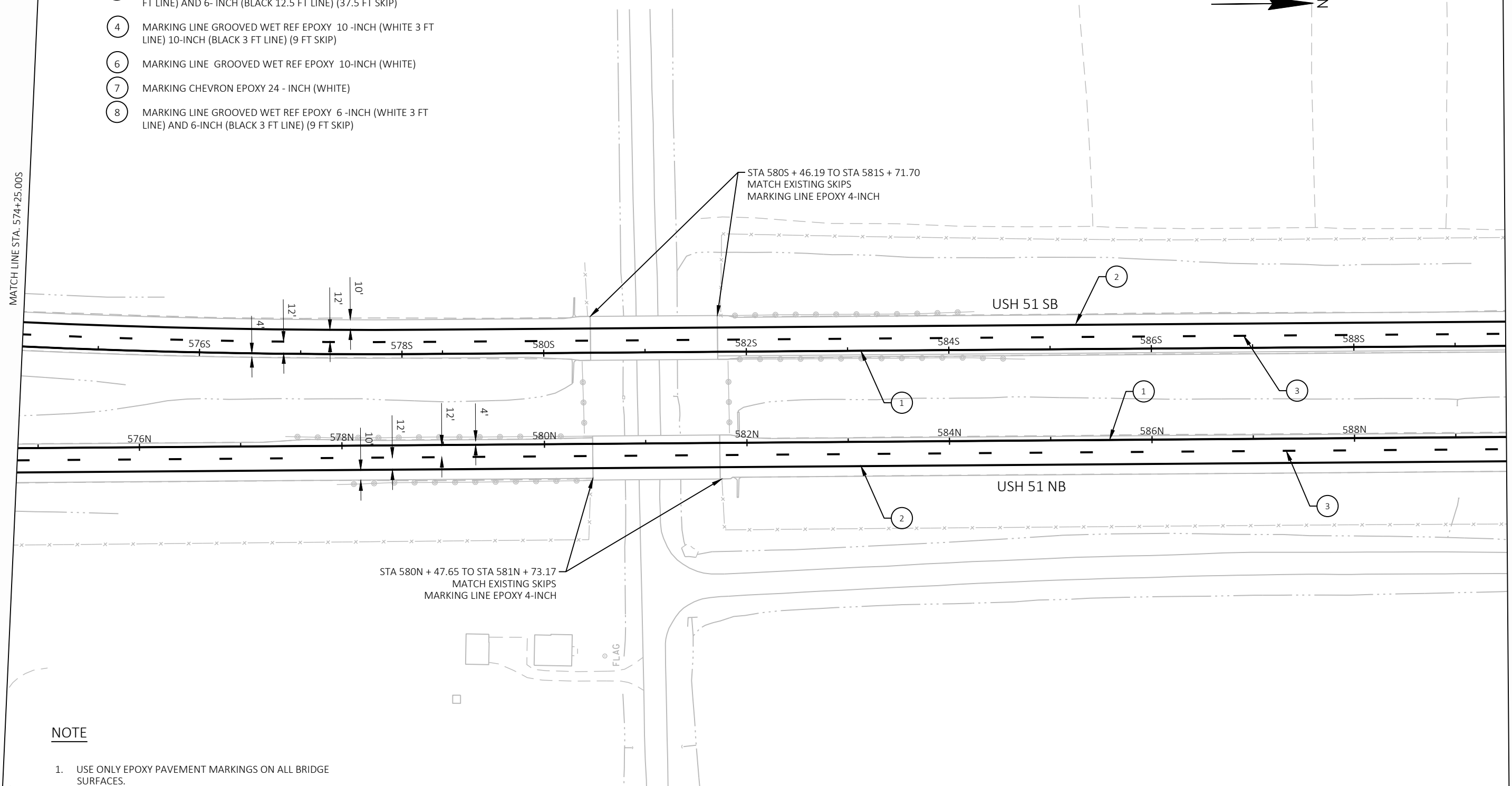
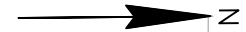
1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
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- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 8 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)

MATCH LINE STA. 574+25.00S

MATCH LINE STA. 589+50.00S



NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

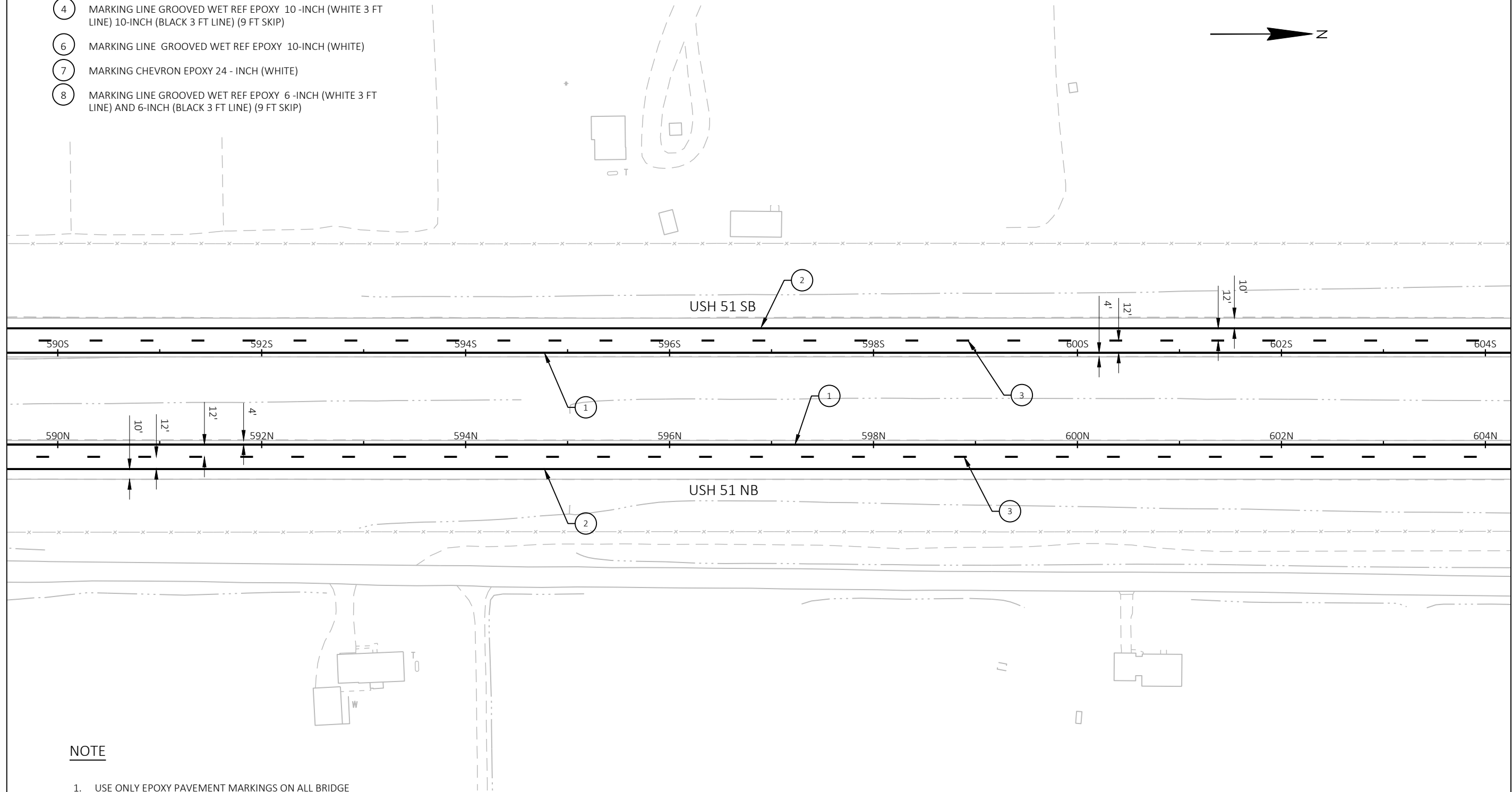
LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6- INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- 4 MARKING LINE GROOVED WET REF EPOXY 10- INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING CHEVRON EPOXY 24- INCH (WHITE)
- 8 MARKING LINE GROOVED WET REF EPOXY 6- INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 589+50.005

MATCH LINE STA. 604+25.005

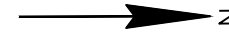


NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

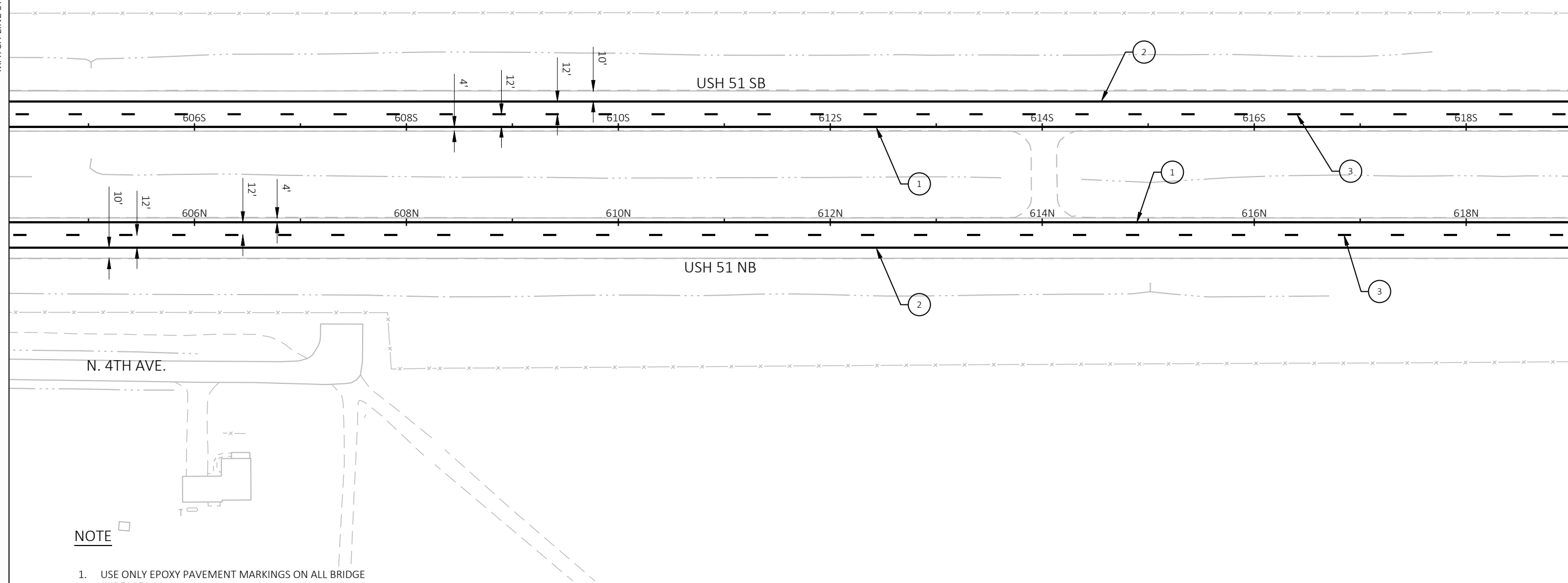
LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- 4 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 8 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 604+25.005

MATCH LINE STA. 619+00.005



NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

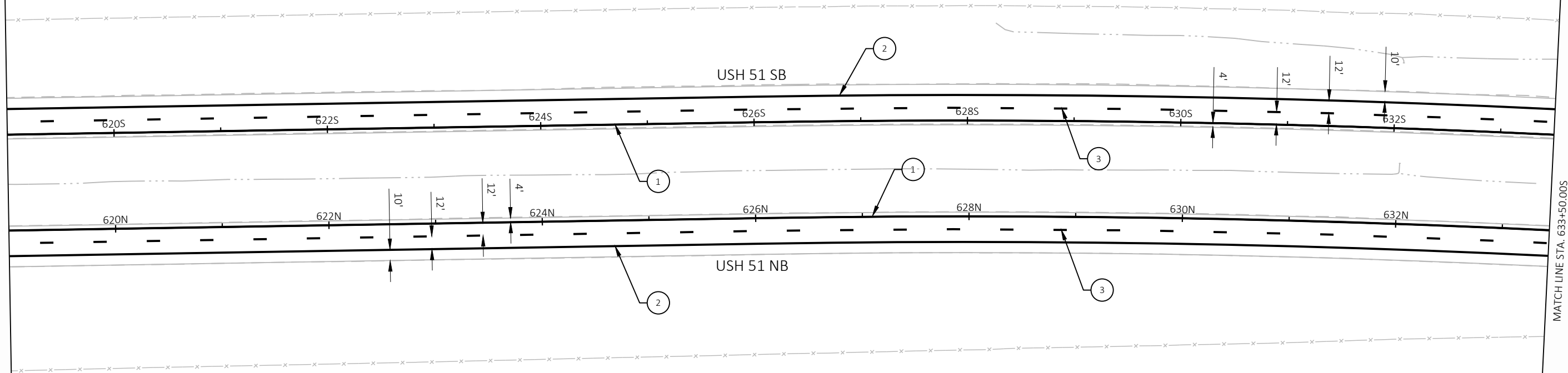
LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6- INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
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- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24 - INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6 -INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 619+00.005

MATCH LINE STA. 633+50.005



NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

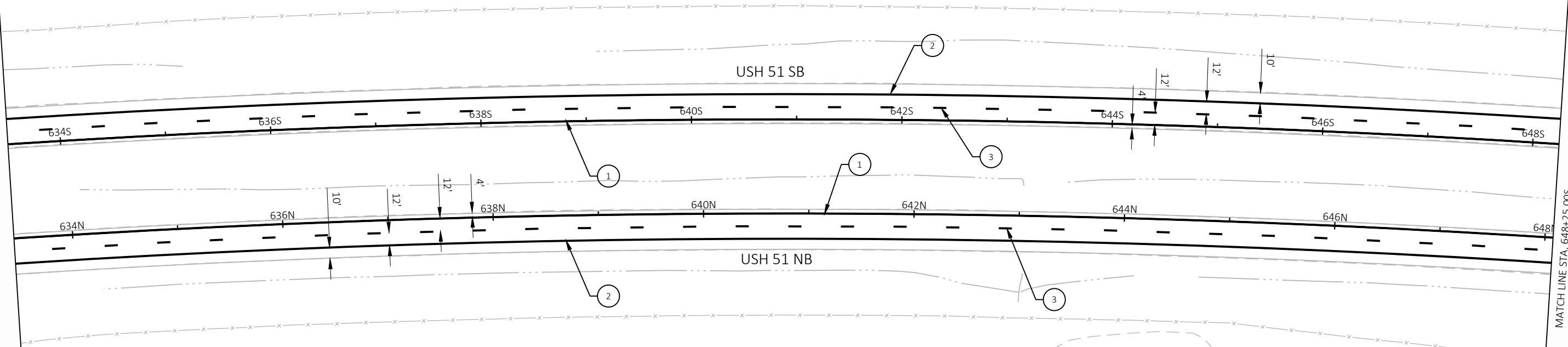
LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24 - INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 633+50.00S

MATCH LINE STA. 648+25.00S



NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

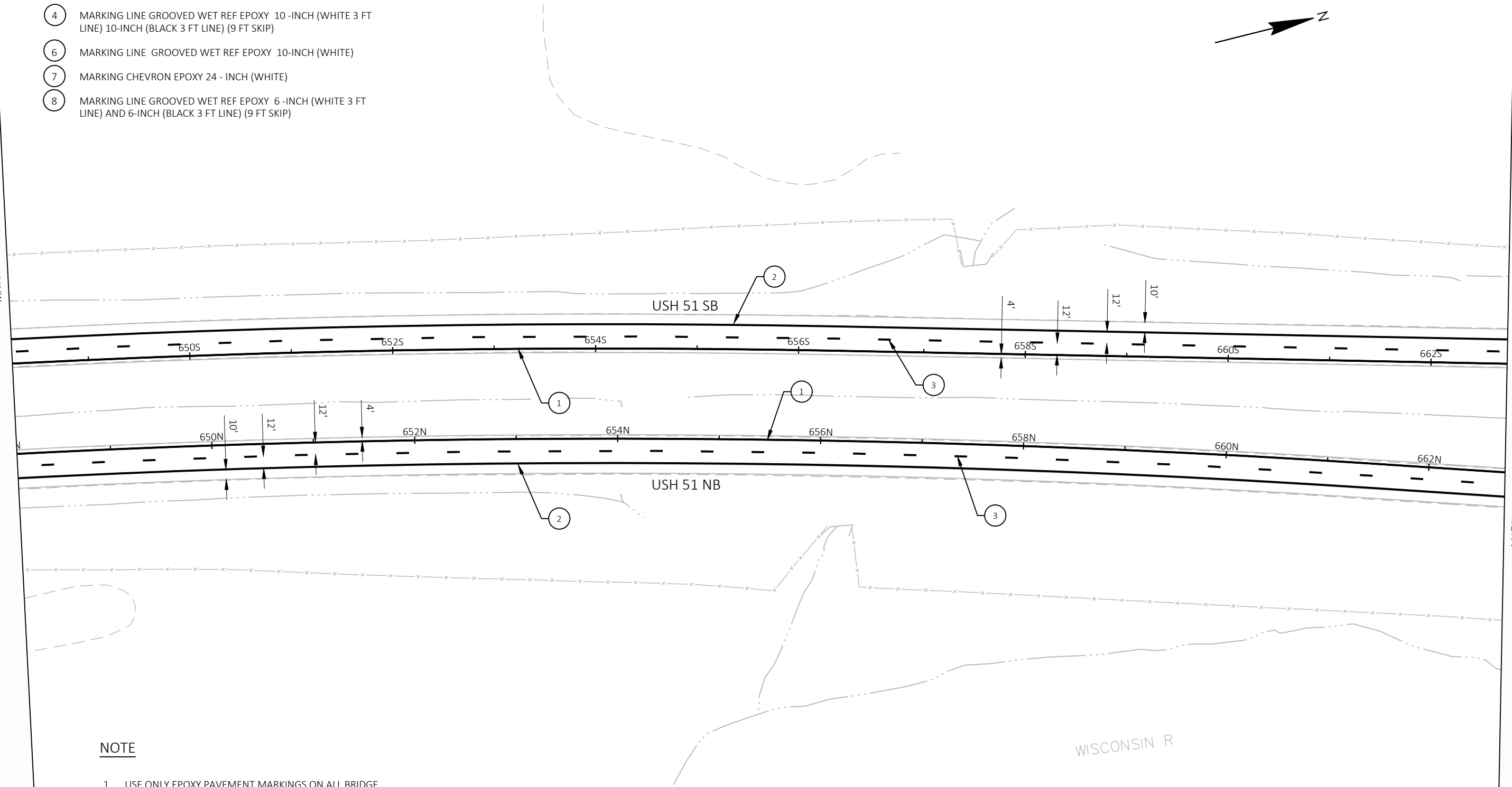
LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- 4 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 8 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 648+25.00S

MATCH LINE STA. 662+75.00S



NOTE

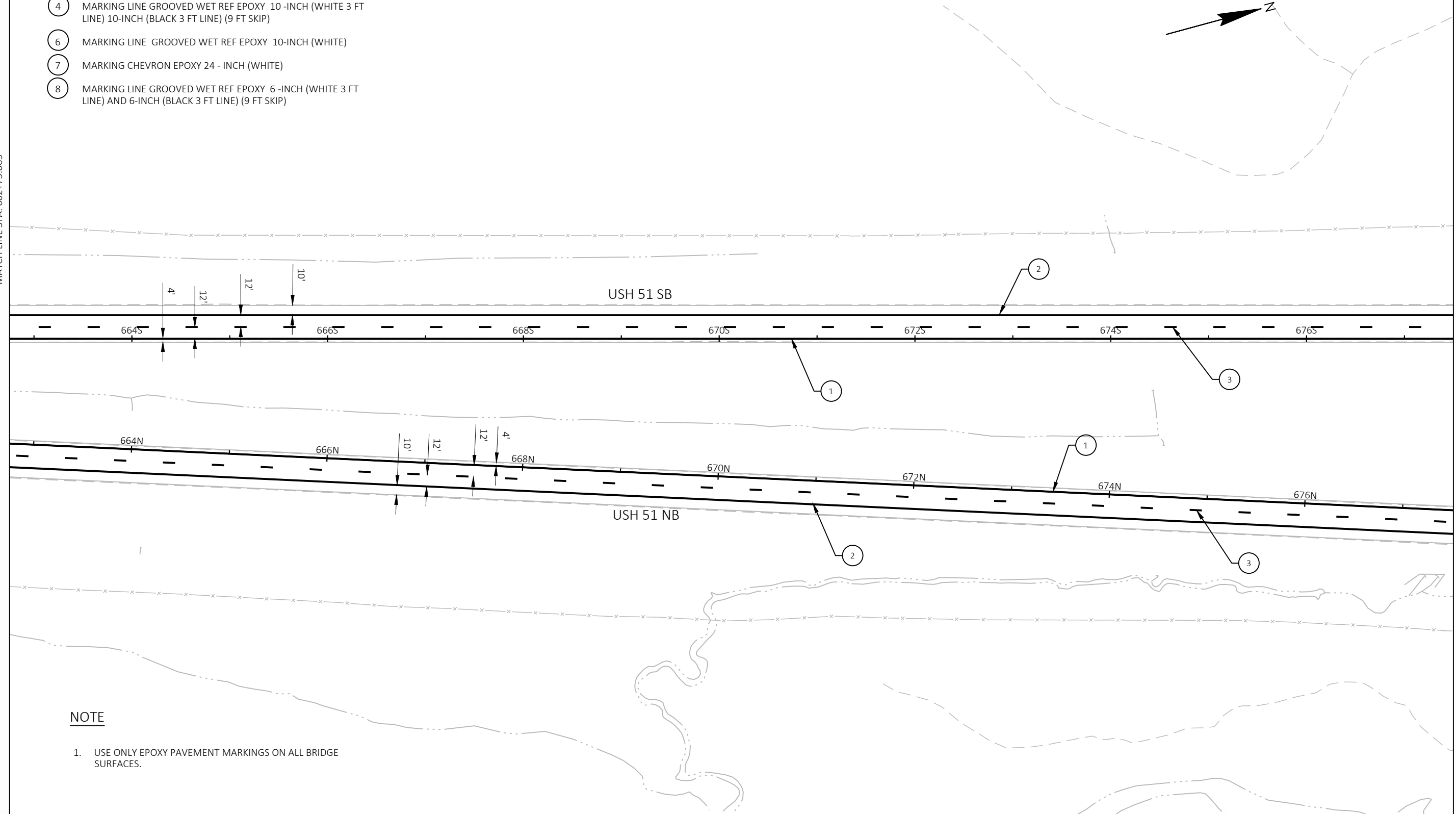
1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24 - INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)

MATCH LINE STA. 662+75.005

MATCH LINE STA. 677+50.005



NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

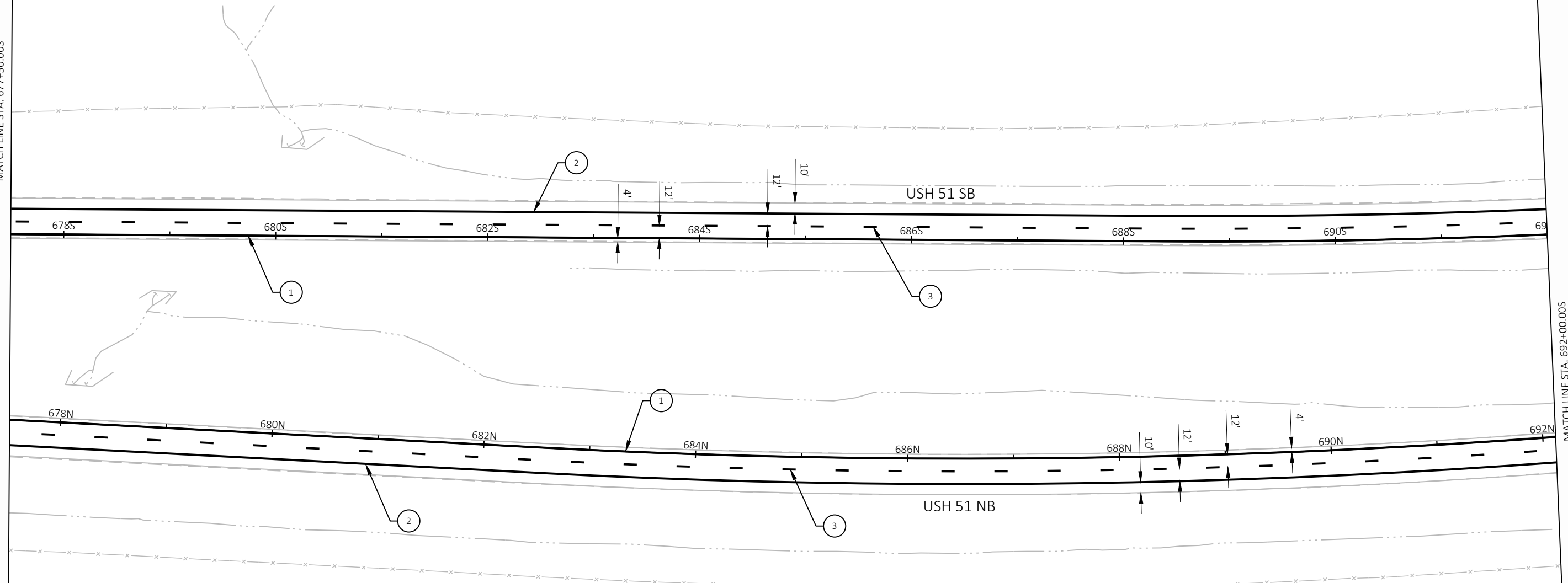
LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- 4 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 8 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 677+50.005

MATCH LINE STA. 692+00.005



NOTE

1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

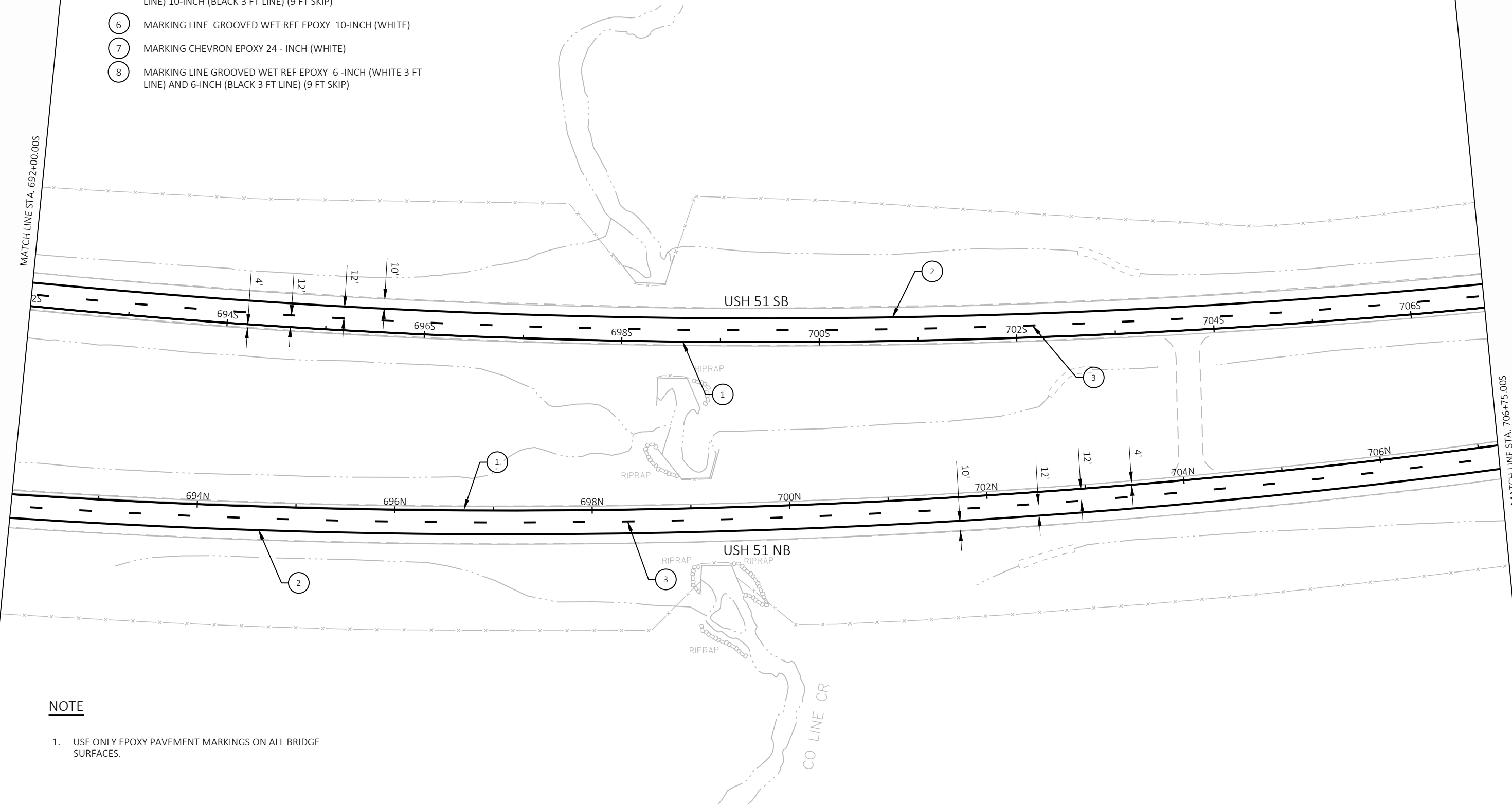
LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24-INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 692+00.00S

MATCH LINE STA. 706+75.00S



NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

PROJECT NO: 1170-01-76

HWY: USH 51

COUNTY: MARATHON

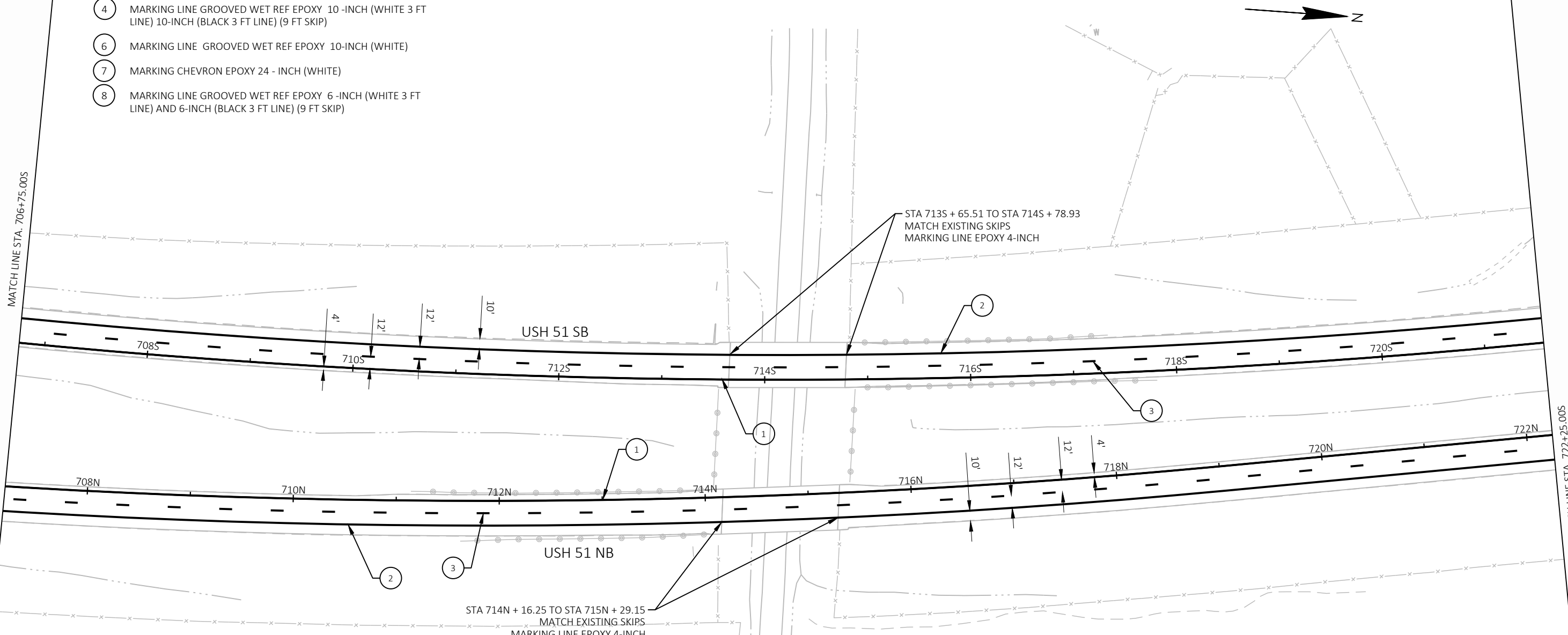
PAVEMENT MARKING

SHEET

E

LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- 4 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 8 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

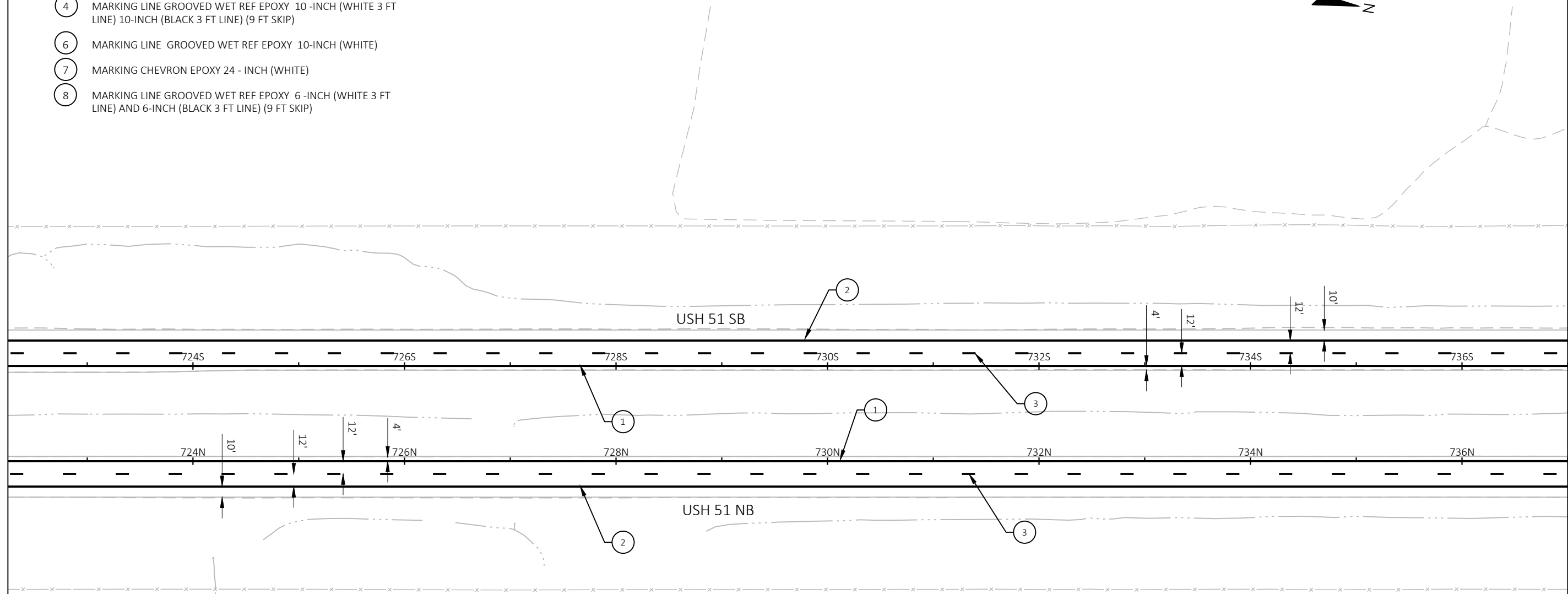
LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24-INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 722+25.005

MATCH LINE STA. 737+00.005



NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

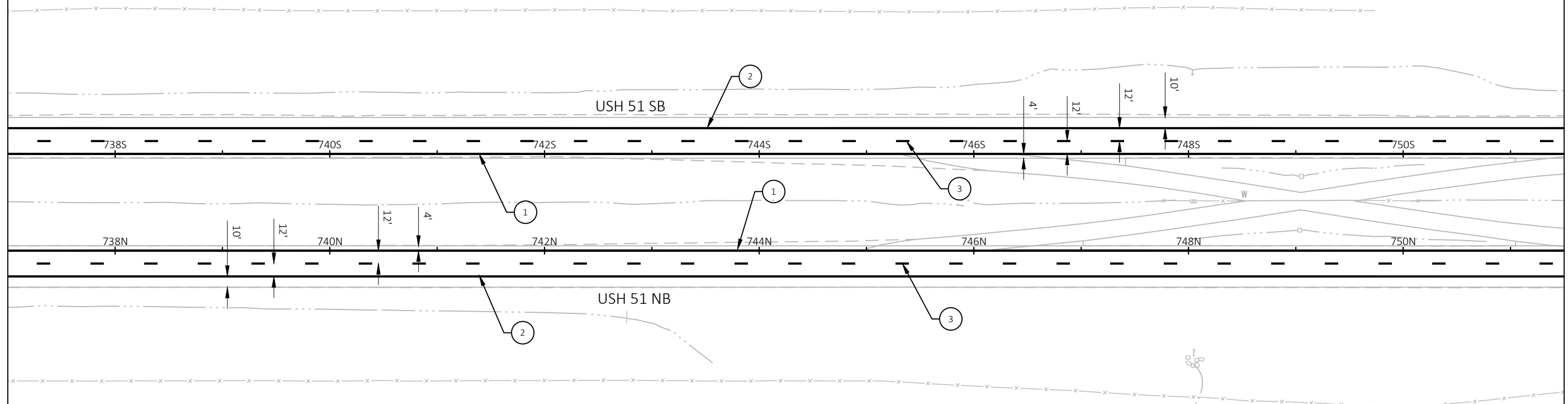
LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24-INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 737+00.00S

MATCH LINE STA. 751+50.00S



NOTE

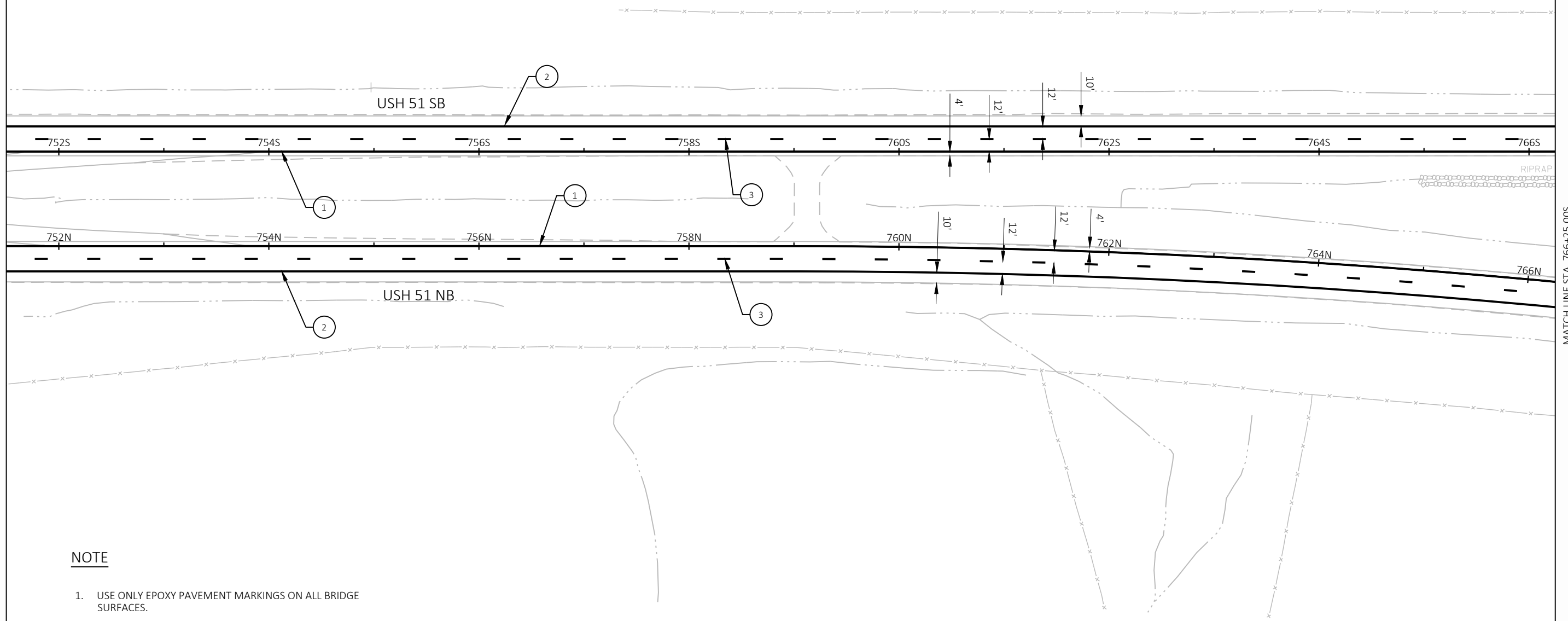
- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

LEGEND

- 1 MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- 2 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- 4 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- 6 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- 7 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 8 MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 751+50.005



MATCH LINE STA. 766+25.005

NOTE

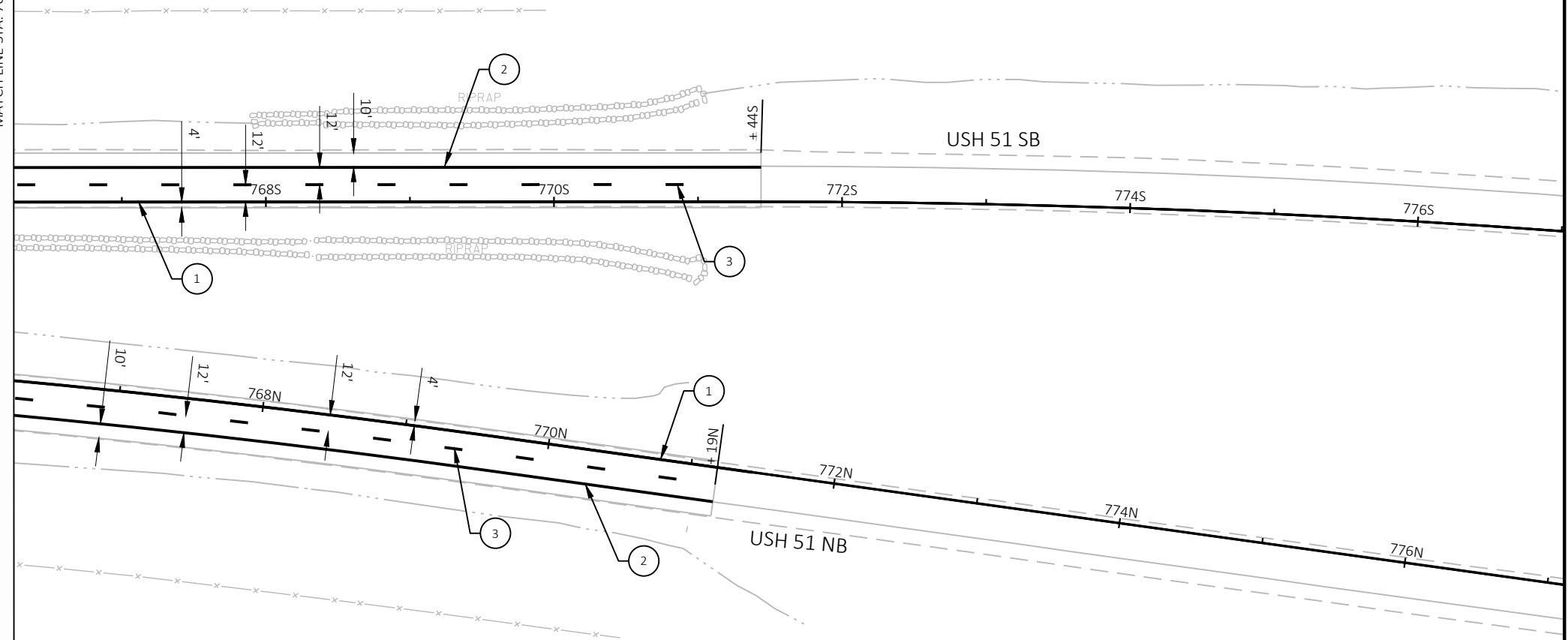
- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24 - INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



MATCH LINE STA. 766+25.005

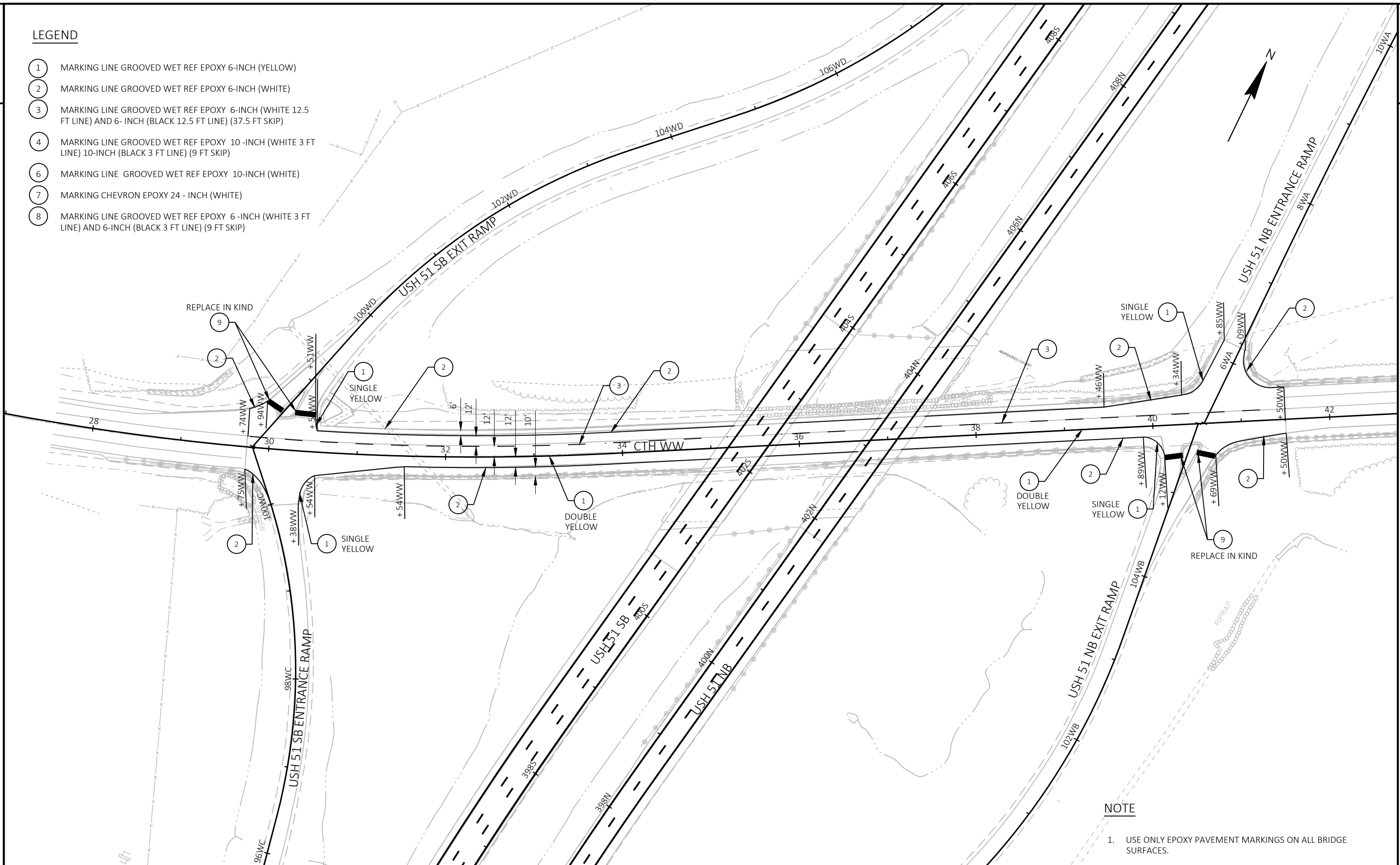


NOTE

- 1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

LEGEND

- ① MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
- ② MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
- ③ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 12.5 FT LINE) AND 6-INCH (BLACK 12.5 FT LINE) (37.5 FT SKIP)
- ④ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE 3 FT LINE) 10-INCH (BLACK 3 FT LINE) (9 FT SKIP)
- ⑥ MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
- ⑦ MARKING CHEVRON EPOXY 24-INCH (WHITE)
- ⑧ MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE 3 FT LINE) AND 6-INCH (BLACK 3 FT LINE) (9 FT SKIP)



NOTE

1. USE ONLY EPOXY PAVEMENT MARKINGS ON ALL BRIDGE SURFACES.

TRAFFIC CONTROL GENERAL NOTES

- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- ALL TYPE III BARRICADES SHALL BE EQUIPPED WITH TYPE "A" (LOW INTENSITY FLASHING) LIGHTS PER SDDS.
- FOR USH 51 LANE CLOSURES SEE SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION".
- FOR USH 51 NB LANE CLOSURES OCCURRING AT THE BEGIN PROJECT LIMIT IN STAGE 1, STAGE 2 AND STAGE 3 CLOSE THE PASSING LANE PRIOR TO THE USH 51 NB ENTRANCE RAMP FROM CTH K. AFTER THE CTH K ENTRANCE RAMP SHIFT TRAFFIC TO THE PASSING LANE OR AUXILIARY LANE USING SDD "TRAFFIC CONTROL, FULL LANE SHIFT MULTILANE DIVIDED 50 MPH AND OVER" AND "TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER". FOR STAGE 3 PLACE ONE CONTINUOUS 520 FEET SHIFT FROM THE DRIVING LANE TO TRAVEL LANE LOCATION SHOWN IN THE TRAFFIC CONTROL TYPICAL SECTION.
- FOR USH 51 NEAR EXIT AND ENTRANCE RAMP SEE SDD "TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE", SDD "TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE", AND SDD "TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE".
- FOR USH 51 SHOULDER CLOSURES SEE SDD "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH".
- FOR CTH WW ADVANCED WARNING SEE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC".
- FOR CTH WW LANE CLOSURES SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION".
- FOR SHIFTING USH 51 NB TRAFFIC FROM THE AUXILIARY LANE TO THE THROUGH DRIVING LANE (PRIOR TO CTH WW EXIT RAMP) IN STAGE 2 SEE THE TRAFFIC CONTROL MARKING SHEET AND SDD "TRAFFIC CONTROL, FULL LANE SHIFT, MULTILANE DIVIDED 50 MPH AND OVER".
- PLACE G20-57 SIGN 7 DAYS PRIOR TO THE EXPECTED START OF THE CTH WW ROAD WORK. ADJUST THE DATE ACCORDINGLY.
- SHIFT TRAFFIC PARTIALLY ONTO PAVED SHOULDERS TO STRADDLE EDGE LINE MARKING AS SHOWN IN THE TRAFFIC CONTROL TYPICAL SECTIONS PER SDD "TRAFFIC CONTROL, PARTIAL LANE SHIFT, MULTILANE DIVIDED 50 MPH AND GREATER". ONLY REMOVE EXISTING MARKING AND PLACE TEMPORARY MARKING WITHIN THE LANE SHIFT TAPERS.
- TRAFFIC CONTROL PLANS FOR USH 51 PROVIDED SUGGESTED STAGING WITH TRAFFIC CONTROL DEVICE LOCATIONS. STAGING MAY BE ALTERED WITH APPROVAL OF THE ENGINEER BASED ON OPERATIONS PROPOSED BY THE CONTRACTOR.

PCMS GENERAL NOTES

- ADJUST TRAFFIC CONTROL PCMS MESSAGES AS NEEDED BASED ON CONSTRUCTION SCHEDULE.
- CONSIDER GEOMETRICS WHEN LOCATING MESSAGE BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1,000 FEET IN FRONT OF THE MESSAGE BOARD. PLACE MESSAGE BOARDS AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY.
- PLACE TRAFFIC CONTROL SIGNS PCMS AND DISPLAY THE MESSAGES 7 DAYS PRIOR TO THE EXPECTED START OF THE PROPOSED WORK. ADJUST THE MESSAGE DATES ACCORDINGLY.

ADVANCED WARNING FOR WIDTH RESTRICTIONS

- DISPLAY THE TRAFFIC CONTROL SIGNS PCMS PRIOR TO WIDTH RESTRICTION MESSAGES 7 DAYS PRIOR TO THE EXPECTED WIDTH RESTRICTION. ADJUST THE MESSAGE DATES ACCORDINGLY.
- IN ADDITION TO THE PCMS MESSAGES FOR WIDTH RESTRICTIONS, PLACE THE FOLLOWING ADVANCED WARNING SIGNS DURING STAGE 3.
- * INCLUDE THE WO57-52 SIGN AT LOCATIONS THAT HAVE ACCESS POINTS BETWEEN THE SIGN LOCATION AND WIDTH RESTRICTION AREA.
 - ** PLACE SIGN M1-4 AND M3-1/M3-3 WHEN ASSEMBLY IS MOUNTED ON ALL ROADWAYS OTHER THAN USH 51.
- SEE SDD "ADVANCED WIDTH RESTRICTION SIGNING" FOR ADDITIONAL INFORMATION.

<p>** SOUTH OR NORTH M3-3 36"x18" M3-1 36"x18"</p> <p>1 USH 51 NB - 8 1/2 MILES</p> <p>2 STH 29 WB - 8 1/2 MILES</p> <p>3 USH 51 NB - 4 1/2 MILES</p> <p>4 STH 29 EB - 4 1/4 MILES</p> <p>5 CTH K NB - 1 MILE</p> <p>6 CTH K SB - 1 1/4 MILES</p> <p>7 USH 51 NB (NO WO57-52)</p> <p>10 USH 51 SB (NO WO57-52)</p> <p>13 STH 64 EB - 4 MILES</p> <p>14 STH 64 WB - 4 1/4 MILES</p> <p>15 USH 51 SB - 4 1/2 MILES</p> <p>16 USH 8 EB - 30 3/4 MILES</p> <p>17 USH 8 WB - 31 MILES</p> <p>18 USH 51 SB - 31 MILES</p>	<p>** SOUTH OR NORTH M3-3 24"x12" M3-1 24"x12"</p> <p>8 CTH WW EB</p> <p>9 CTH WW WB</p> <p>11 CTH Q EB</p> <p>12 CTH Q WB</p>
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<p>M1-4 36"x36"</p> <p>MAX. 13 WIDTH</p> <p>W12-52 48"x48"</p>	<p>M1-4 24"x24"</p> <p>MAX. 13 WIDTH</p> <p>W12-52 48"x48"</p>
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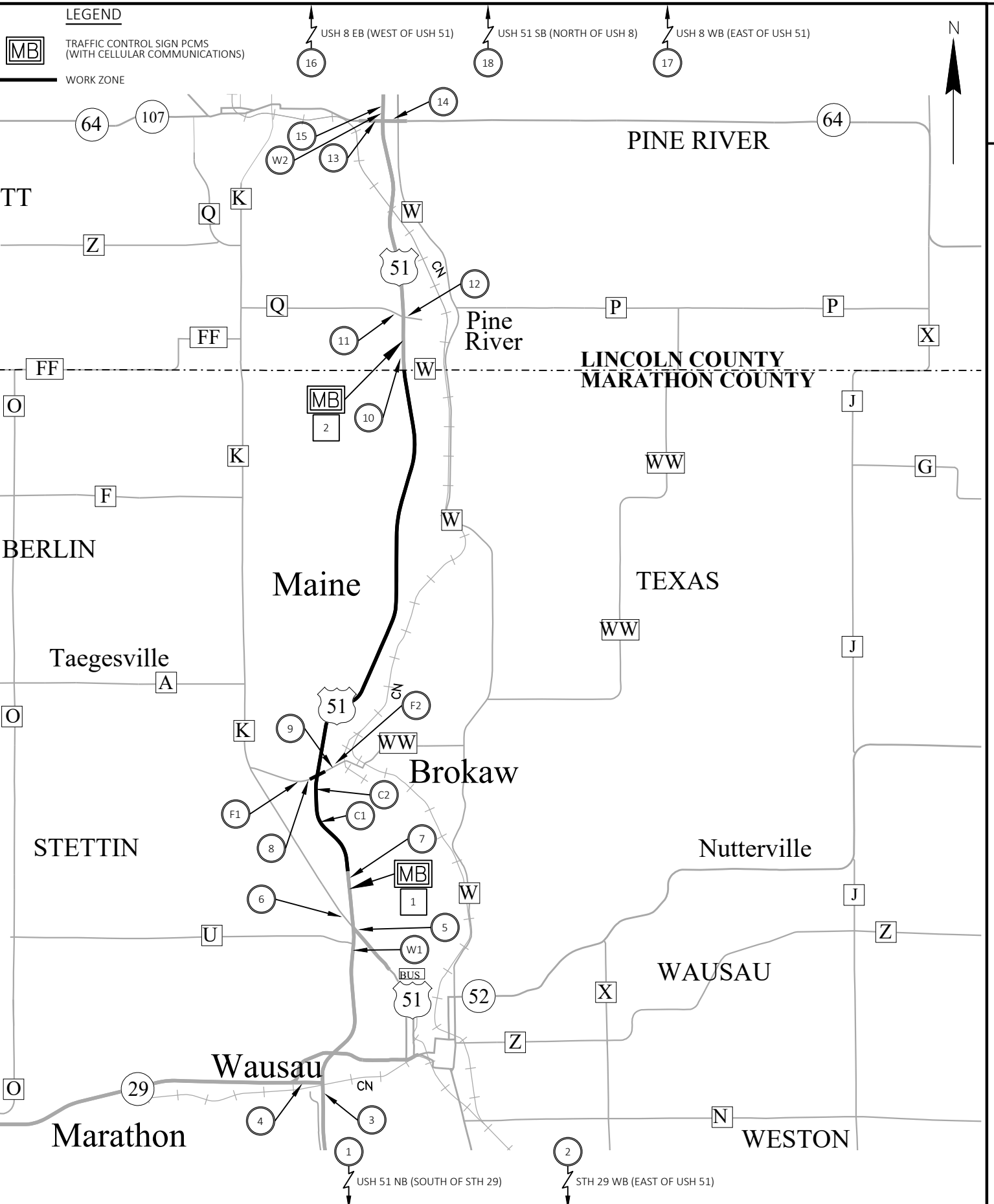
<p>** XX MILES AHEAD</p> <p>WO57-52 48"x36"</p>	<p>WIDE LOADS EXCEEDING 13 FT</p> <p>R12-70B 114"x42"</p>	<p>W1 USH 51 NB</p> <p>W2 USH 51 SB</p>
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<p>G20-57 72"x36"</p> <p>HWY WW ROAD WORK BEGINS XXX-XX</p> <p>F1</p> <p>F2</p>	<p>EXIT 197</p> <p>WW</p> <p>Maine</p> <p>1/2 MILE</p> <p>EXIT ONLY</p> <p>C1</p> <p>(OVERHEAD SIGN)</p> <p>COVERING SIGNS TYPE I (STAGE 1, STAGE 2 AND STAGE 3)</p>	<p>EXIT 197</p> <p>WW</p> <p>Brokaw</p> <p>EXIT ONLY</p> <p>C2</p> <p>(OVERHEAD SIGN)</p> <p>COVERING SIGNS TYPE I (STAGE 2)</p>
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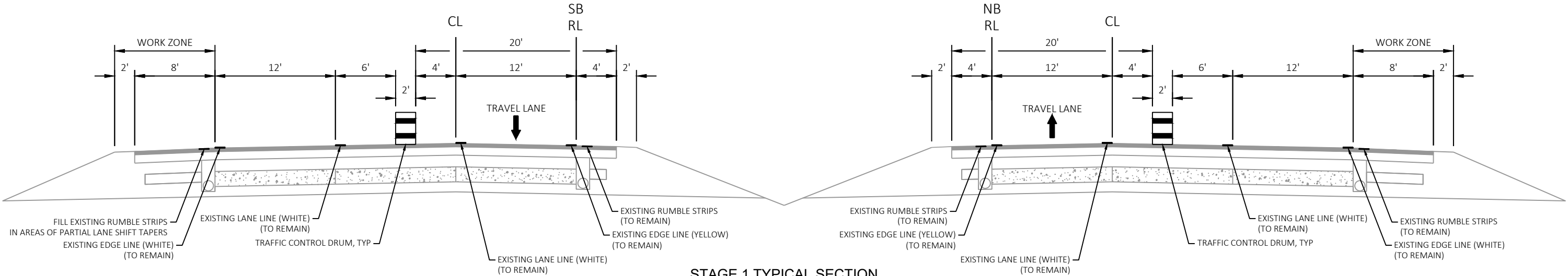
NOTES

- COMPLETE USH 51 WORK WHILE MAINTAINING A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION. SEE TRAFFIC CONTROL TYPICAL SECTIONS.
- COMPLETE CTH WW WORK HALF AT A TIME UNDER FLAGGING OPERATIONS.
- DO NOT PLACE ANY ITEMS INCLUDING TRAFFIC CONTROL SIGNING WITHIN 50-FOET OF RAILROAD RIGHT-OF-WAY.

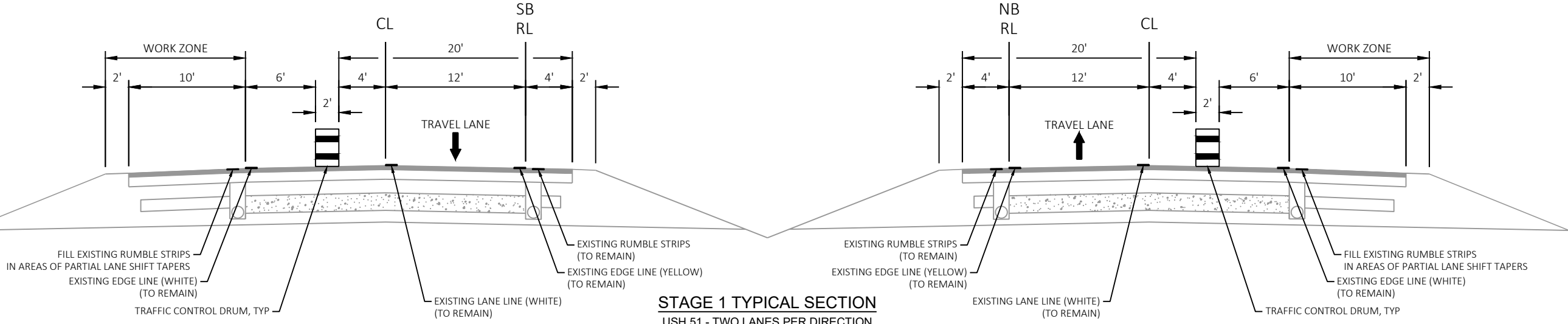
TRAFFIC CONTROL SIGNS PCMS MESSAGES								
PCMS SIGN LOCATION	PRIOR TO CONSTRUCTION		PRIOR TO WIDTH RESTRICTION		DURING WIDTH RESTRICTION OR PARTIAL LANE SHIFT		INCIDENT MANAGEMENT	
	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)
1 USH 51 NB 0.7 MILES NORTH OF BUS 51 BRIDGE	HWY 51 WORK STARTS	STARTING DATE	MAX 13' WIDTH	STARTING DATE	MAX 13' WIDTH	--	VARIES	VARIES
2 USH 51 SB 0.4 MILES SOUTH CTH Q BRIDGE	HWY 51 WORK STARTS	STARTING DATE	MAX 13' WIDTH	STARTING DATE	MAX 13' WIDTH	--	VARIES	VARIES
USH 51 NB 500' IN ADVANCE OF PARTIAL LANE SHIFT ONTO PAVED SHOULDER	--	--	--	--	STRADDLE WHITE/YELLOW LINE	--	VARIES	VARIES
USH 51 SB 500' IN ADVANCE OF PARTIAL LANE SHIFT ONTO PAVED SHOULDER	--	--	--	--	STRADDLE WHITE/YELLOW LINE	--	VARIES	VARIES



PROPOSED WORK STAGE 1
 WORK ON USH 51 DRIVING LANE SHOULDERS:
 FILL EXISTING SHOULDER RUMBLE STRIPS IN AREAS OF
 PARTIAL LANE SHIFT TAPERS AND REMOVE EXISTING GORE
 MARKING AT THE USH 51 NB EXIT RAMP TO CTH WW PER
 THE TRAFFIC CONTROL MARKING SHEET

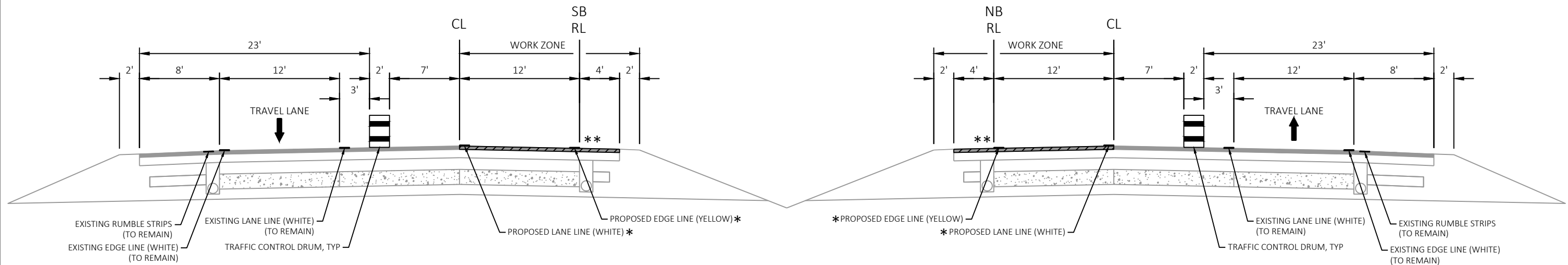


STAGE 1 TYPICAL SECTION
 USH 51 - THREE LANES PER DIRECTION

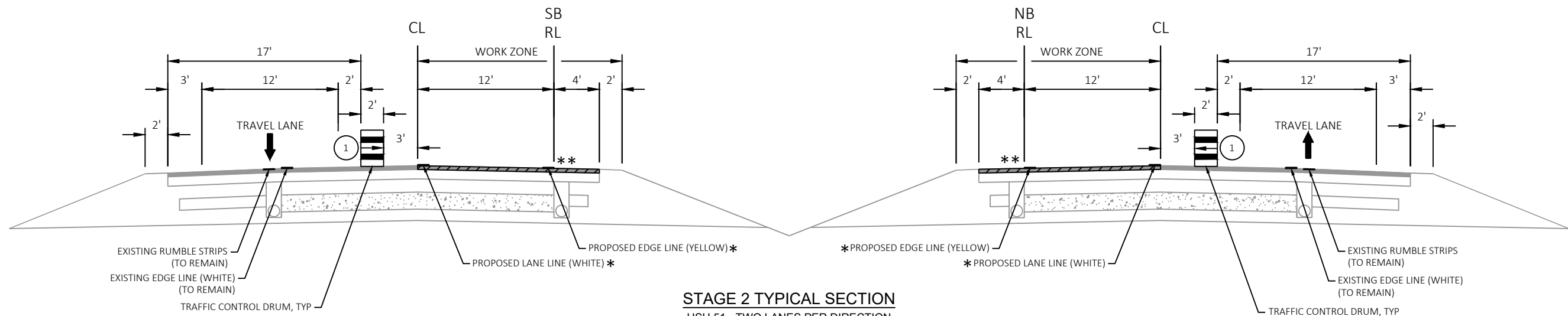


STAGE 1 TYPICAL SECTION
 USH 51 - TWO LANES PER DIRECTION

PROPOSED WORK STAGE 2
 WORK ON USH 51 PASSING LANES AND PASSING LANE SHOULDERS:
 REMOVING ASPHALTIC SURFACE MILLING, HMA PAVEMENT,
 AGGREGATE SHOULDERING AND INSTALL MARKING



STAGE 2 TYPICAL SECTION
 USH 51 - THREE LANES PER DIRECTION



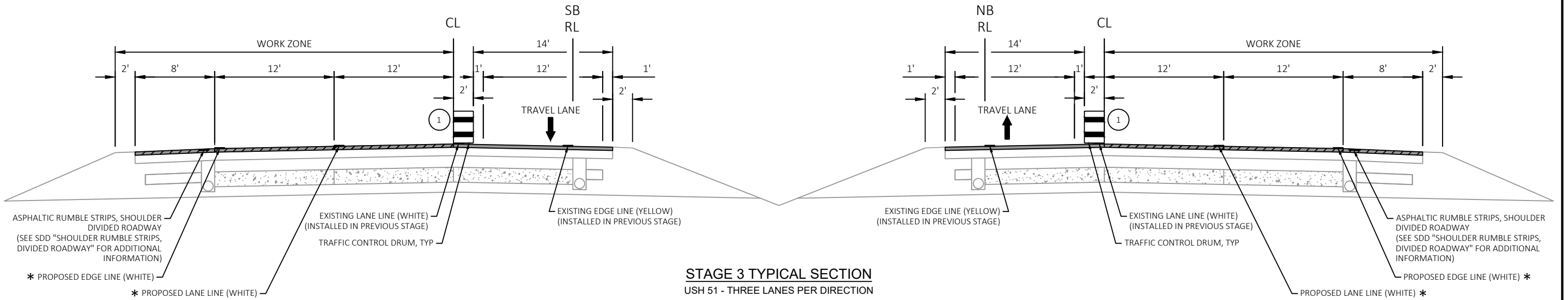
STAGE 2 TYPICAL SECTION
 USH 51 - TWO LANES PER DIRECTION

NOTES
 1 DRUM LOCATION SHOWN FOR AREAS IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, SHIFT DRUMS PAST LANE LINE IN AREAS WITH NO CONSTRUCTION ACTIVITIES UNLESS A VERTICAL DROP IS PRESENT.

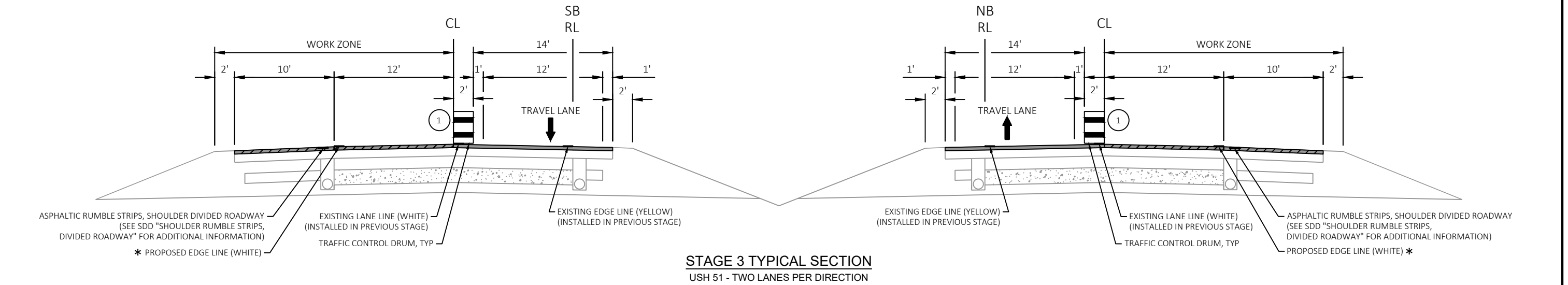
* SEE MISCELLANEOUS QUANTITIES FOR PAVEMENT MARKING TYPES.

** FILL EXISTING RUMBLE STRIPS IN AREAS OF PARTIAL LANE SHIFT TAPERS BEYOND THE PROJECT LIMITS.

PROPOSED WORK STAGE 3
 WORK ON USH 51 DRIVING LANES, DRIVING LANE SHOULDERS, AND AUXILIARY LANES:
 REMOVING ASPHALTIC SURFACE MILLING, HMA PAVEMENT, AGGREGATE SHOULDERING, INSTALL RUMBLE STRIPS AND MARKING



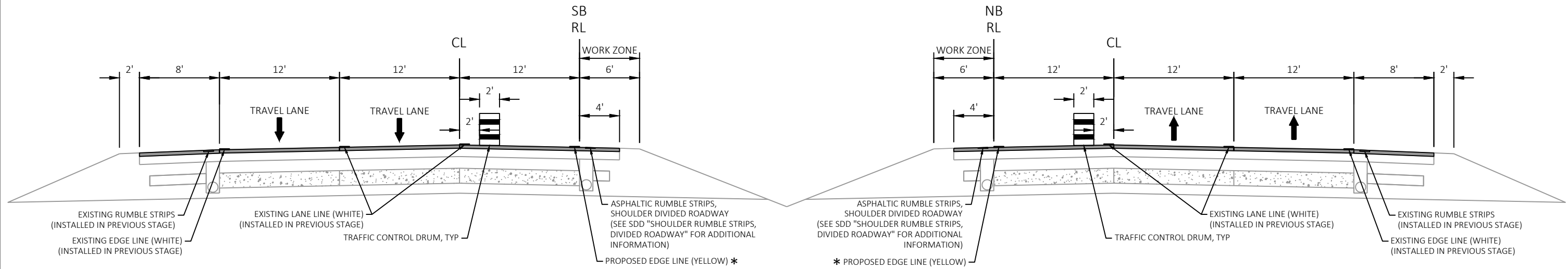
STAGE 3 TYPICAL SECTION
 USH 51 - THREE LANES PER DIRECTION



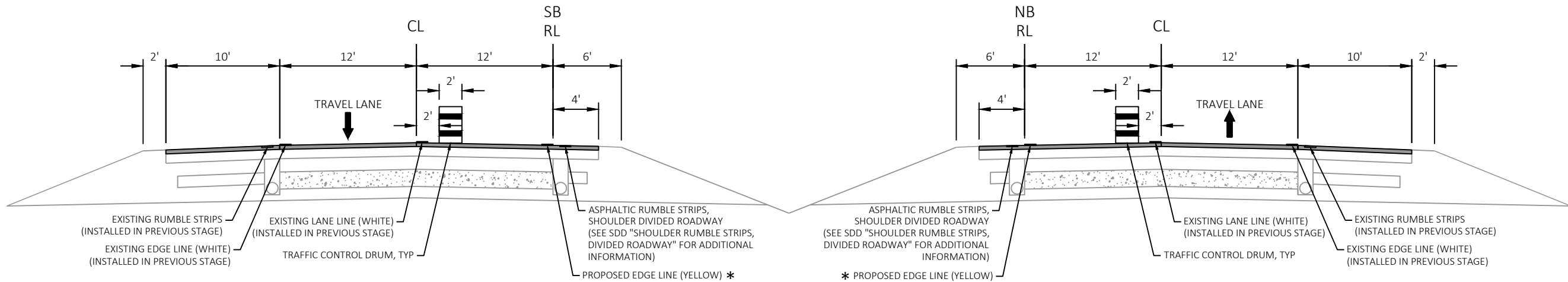
STAGE 3 TYPICAL SECTION
 USH 51 - TWO LANES PER DIRECTION

NOTES
 DRUM LOCATION SHOWN FOR AREAS IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, SHIFT DRUMS PAST LANE LINE IN AREAS WITH NO CONSTRUCTION ACTIVITIES UNLESS A VERTICAL DROP IS PRESENT.
 * SEE MISCELLANEOUS QUANTITIES FOR PAVEMENT MARKING TYPES.

PROPOSED WORK STAGE 4
 WORK ON USH 51 PASSING LANE SHOULDERS:
 INSTALL RUMBLE STRIPS AND MARKING








STAGE 4 TYPICAL SECTION
 USH 51 - THREE LANES PER DIRECTION



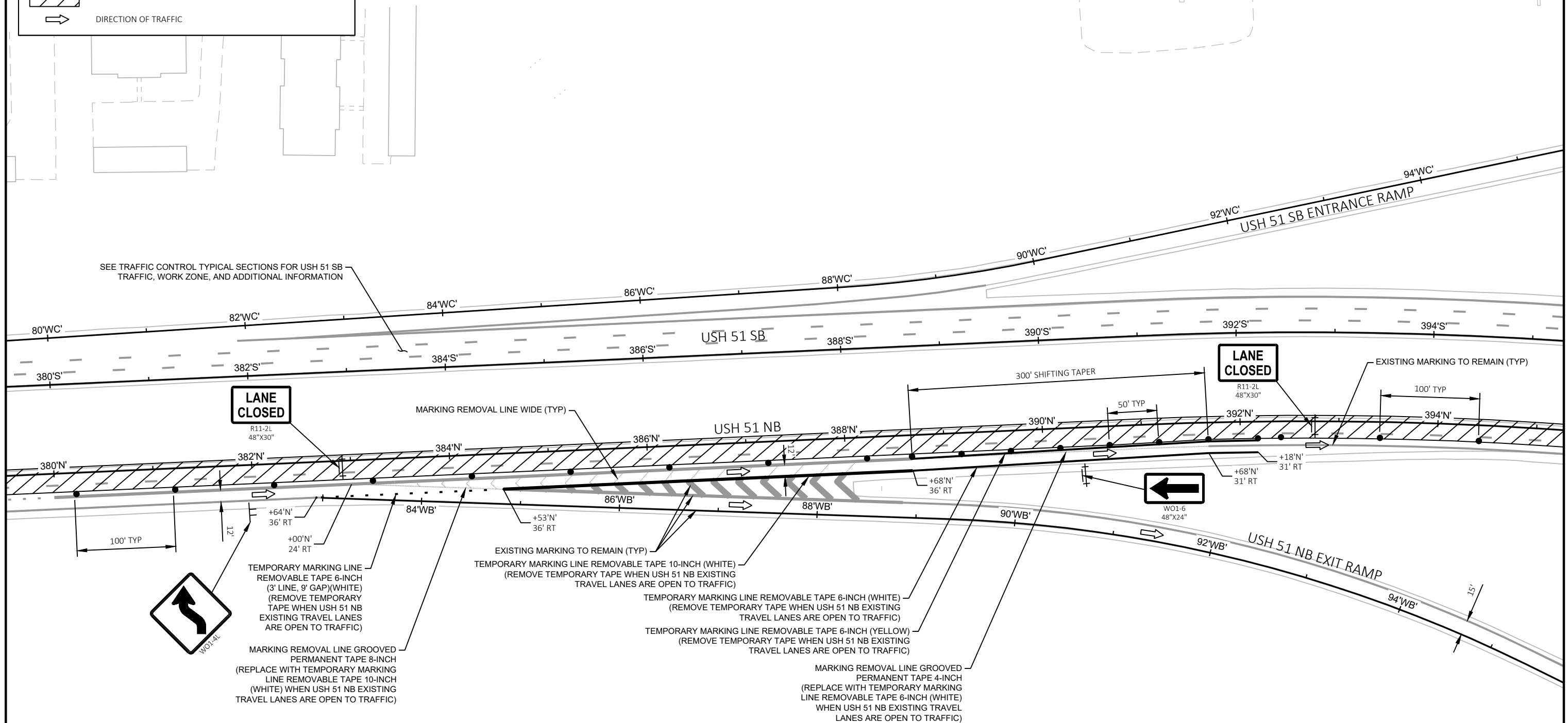
STAGE 4 TYPICAL SECTION
 USH 51 - TWO LANES PER DIRECTION

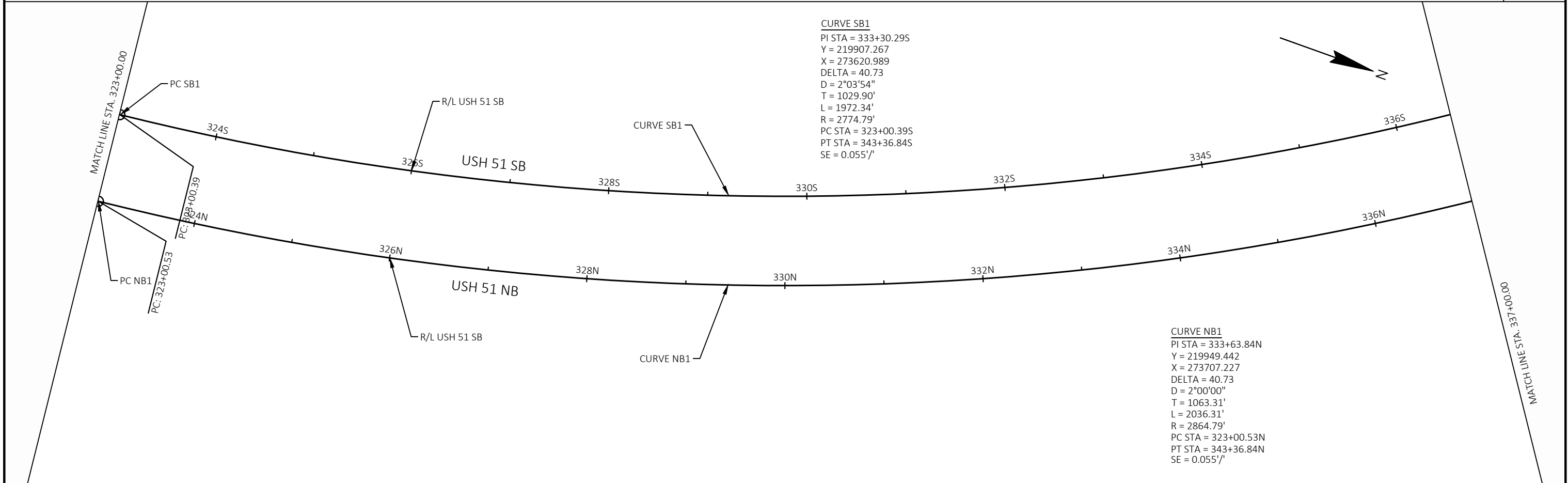
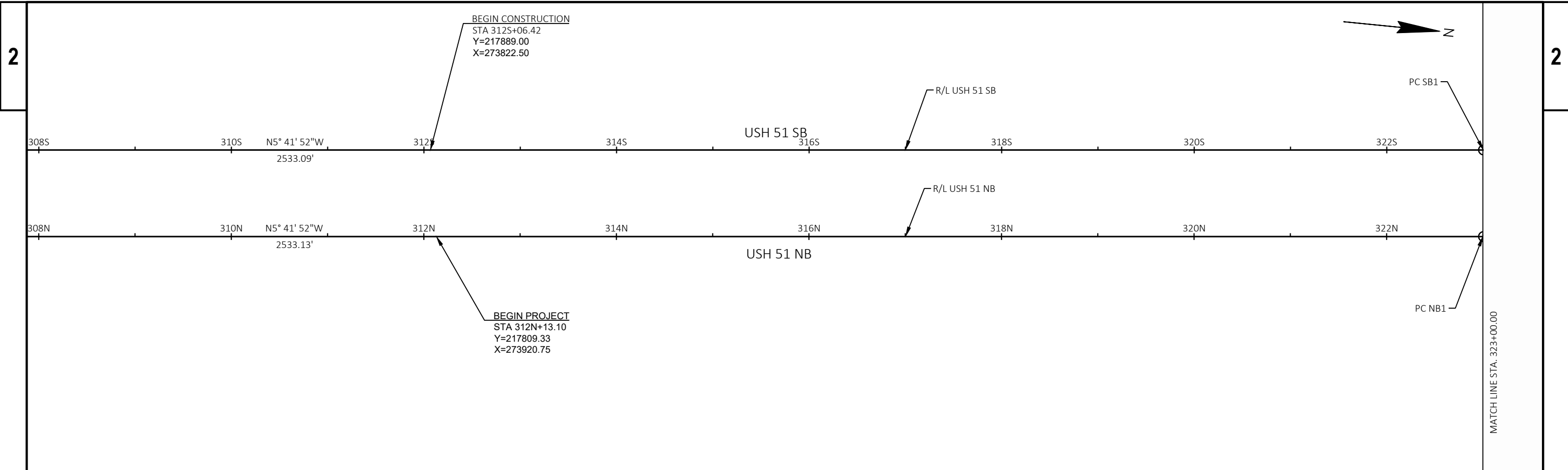
NOTE
 * SEE MISCELLANEOUS QUANTITIES FOR PAVEMENT MARKING TYPES.

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL SIGN SUPPORT
-  TRAFFIC CONTROL DRUM (WITHOUT TYPE C STEADY BURN LIGHT)
-  WORK AREA
-  DIRECTION OF TRAFFIC

NOTES
 COMPLETE MARKING AND MARKING REMOVALS SHOWN ON THIS SHEET IN STAGE 1. TRAFFIC SHOWN DURING STAGE 2.
 SEE TRAFFIC CONTROL TYPICAL SECTIONS FOR ADDITIONAL INFORMATION AND ADDITIONAL PROPOSED WORK.





PROJECT NO: 1170-01-76	HWY: USH 51	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET	E
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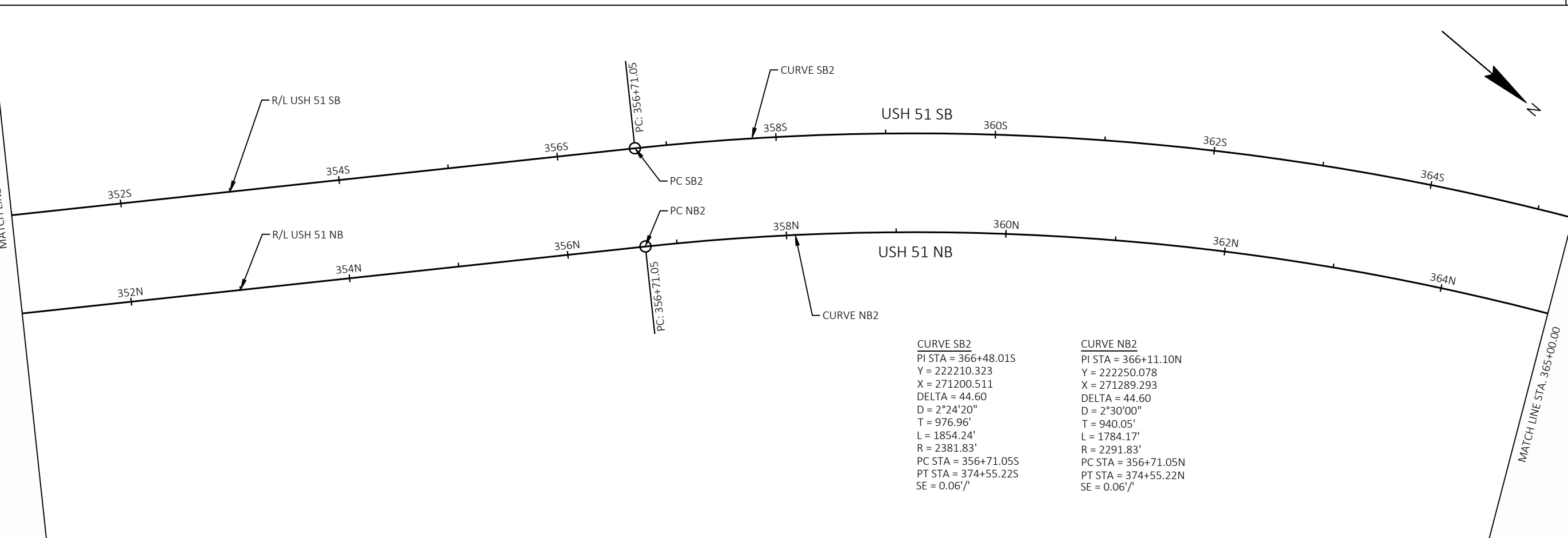
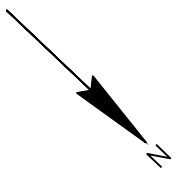
CURVE SB1
 PI STA = 333+30.29S
 Y = 219907.267
 X = 273620.989
 DELTA = 40.73
 D = 2°03'54"
 T = 1029.90'
 L = 1972.34'
 R = 2774.79'
 PC STA = 323+00.39S
 PT STA = 343+36.84S
 SE = 0.055'/'

CURVE NB1
 PI STA = 333+63.84N
 Y = 219949.442
 X = 273707.227
 DELTA = 40.73
 D = 2°00'00"
 T = 1063.31'
 L = 2036.31'
 R = 2864.79'
 PC STA = 323+00.53N
 PT STA = 343+36.84N
 SE = 0.055'/'

CONTROL POINT 507
 Y=220980.84
 X=272589.16
 CP FENO SET

MATCH LINE STA. 337+00.00

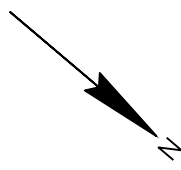
MATCH LINE STA. 351+00.00

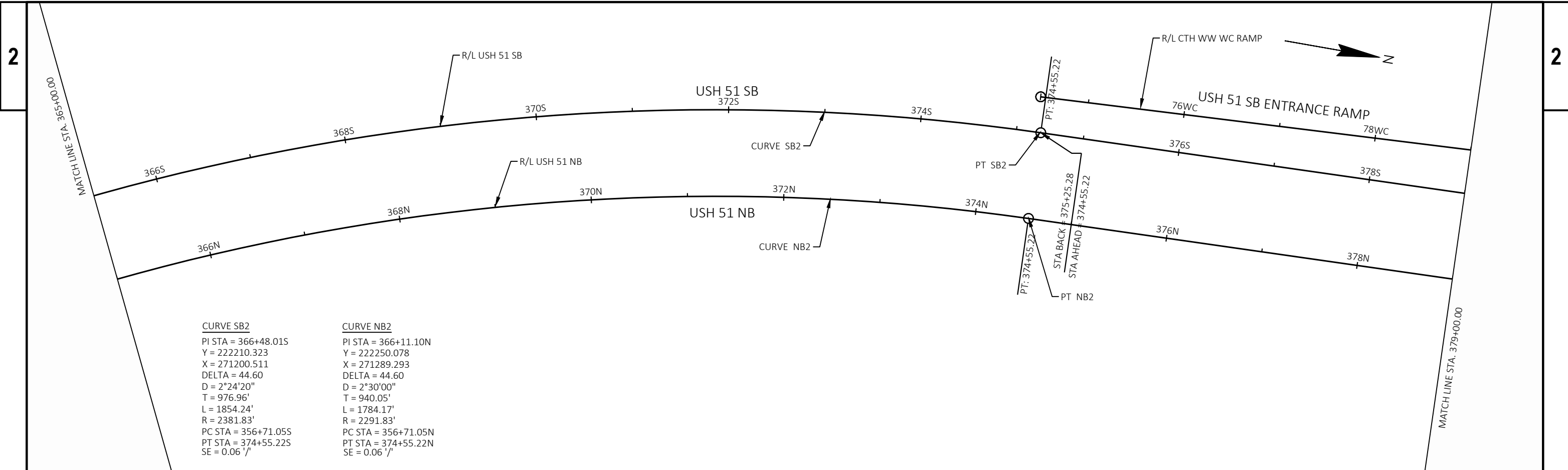


CURVE SB2
 PI STA = 366+48.01S
 Y = 222210.323
 X = 271200.511
 DELTA = 44.60
 D = 2°24'20"
 T = 976.96'
 L = 1854.24'
 R = 2381.83'
 PC STA = 356+71.05S
 PT STA = 374+55.22S
 SE = 0.06'/'

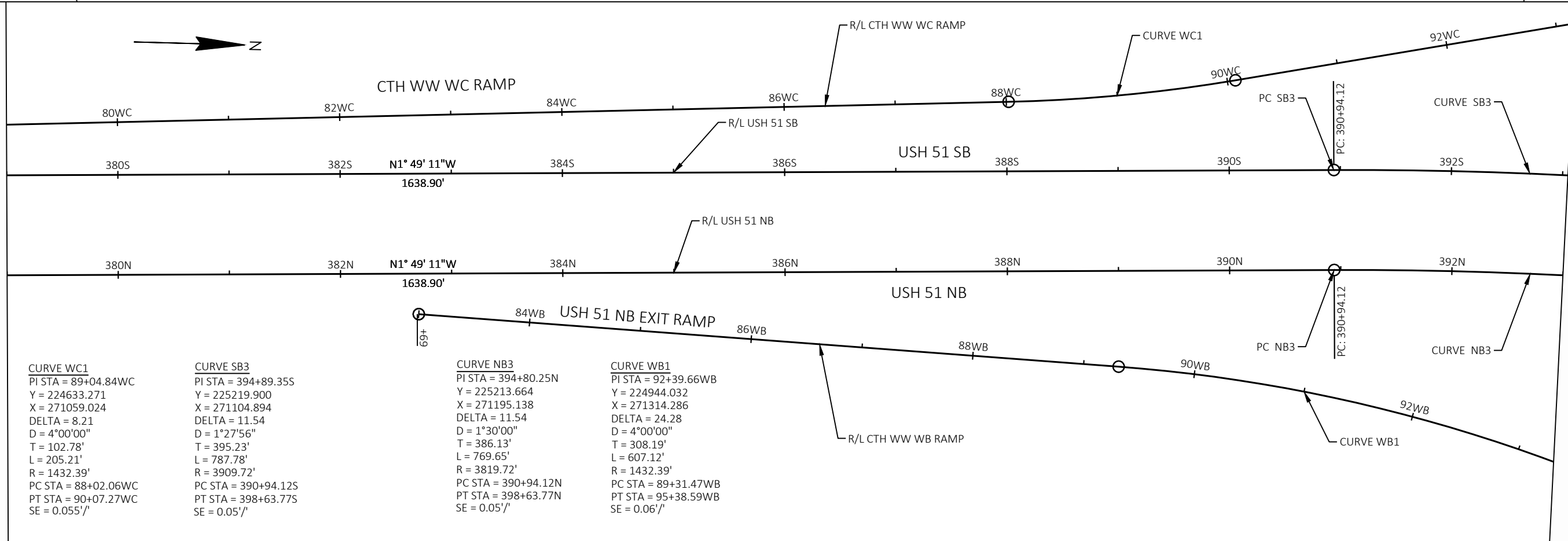
CURVE NB2
 PI STA = 366+11.10N
 Y = 222250.078
 X = 271289.293
 DELTA = 44.60
 D = 2°30'00"
 T = 940.05'
 L = 1784.17'
 R = 2291.83'
 PC STA = 356+71.05N
 PT STA = 374+55.22N
 SE = 0.06'/'

MATCH LINE STA. 365+00.00

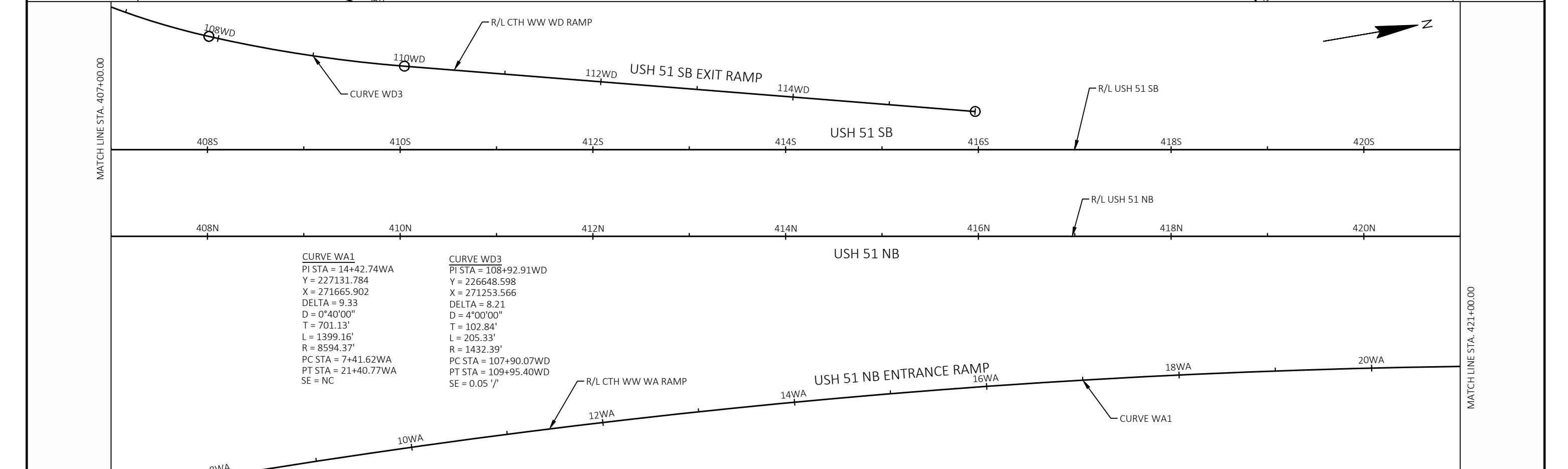
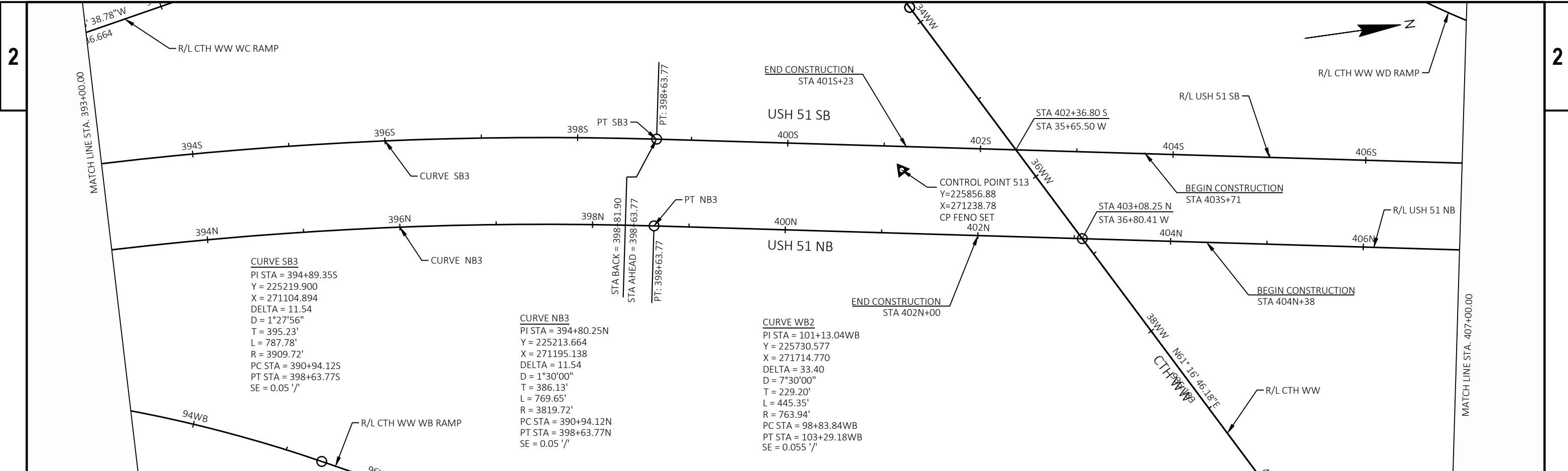




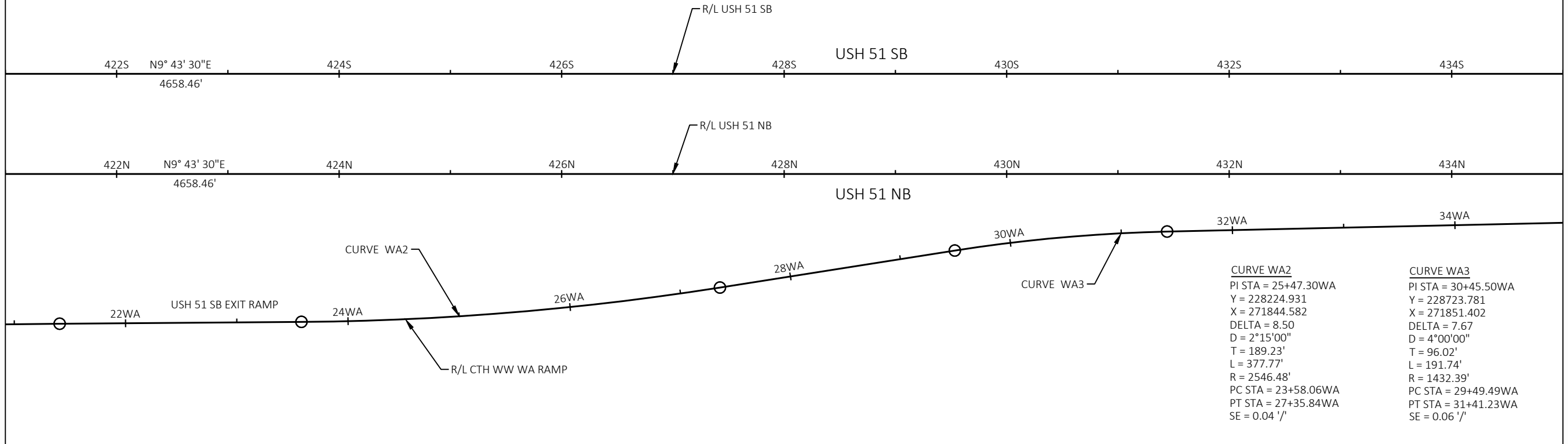
CURVE SB2	CURVE NB2
PI STA = 366+48.01S	PI STA = 366+11.10N
Y = 222210.323	Y = 222250.078
X = 271200.511	X = 271289.293
DELTA = 44.60	DELTA = 44.60
D = 2°24'20"	D = 2°30'00"
T = 976.96'	T = 940.05'
L = 1854.24'	L = 1784.17'
R = 2381.83'	R = 2291.83'
PC STA = 356+71.05S	PC STA = 356+71.05N
PT STA = 374+55.22S	PT STA = 374+55.22N
SE = 0.06'/'	SE = 0.06'/'



CURVE WC1	CURVE SB3	CURVE NB3	CURVE WB1
PI STA = 89+04.84WC	PI STA = 394+89.35S	PI STA = 394+80.25N	PI STA = 92+39.66WB
Y = 224633.271	Y = 225219.900	Y = 225213.664	Y = 224944.032
X = 271059.024	X = 271104.894	X = 271195.138	X = 271314.286
DELTA = 8.21	DELTA = 11.54	DELTA = 11.54	DELTA = 24.28
D = 4°00'00"	D = 1°27'56"	D = 1°30'00"	D = 4°00'00"
T = 102.78'	T = 395.23'	T = 386.13'	T = 308.19'
L = 205.21'	L = 787.78'	L = 769.65'	L = 607.12'
R = 1432.39'	R = 3909.72'	R = 3819.72'	R = 1432.39'
PC STA = 88+02.06WC	PC STA = 390+94.12S	PC STA = 390+94.12N	PC STA = 89+31.47WB
PT STA = 90+07.27WC	PT STA = 398+63.77S	PT STA = 398+63.77N	PT STA = 95+38.59WB
SE = 0.055'/'	SE = 0.05'/'	SE = 0.05'/'	SE = 0.06'/'

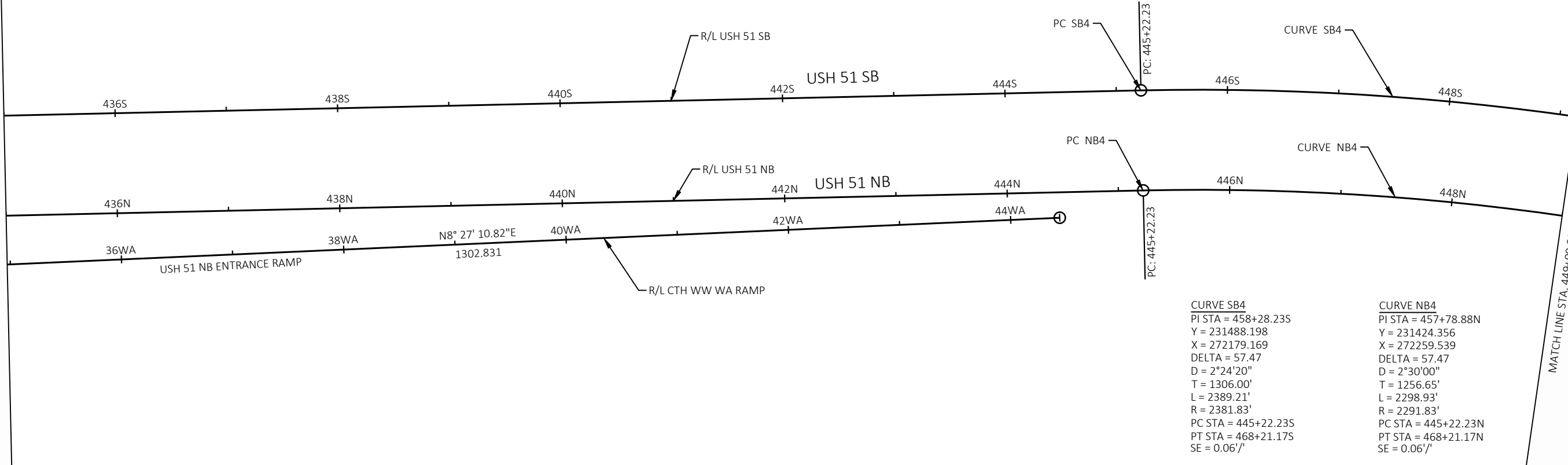


MATCH LINE STA. 421+00.00

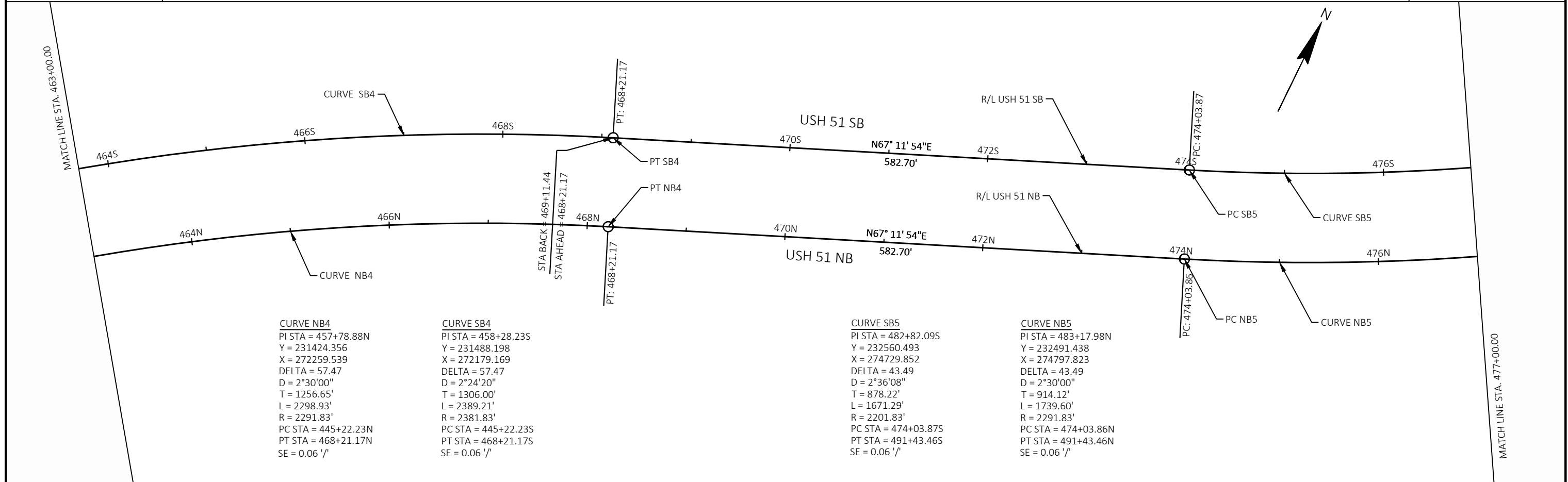
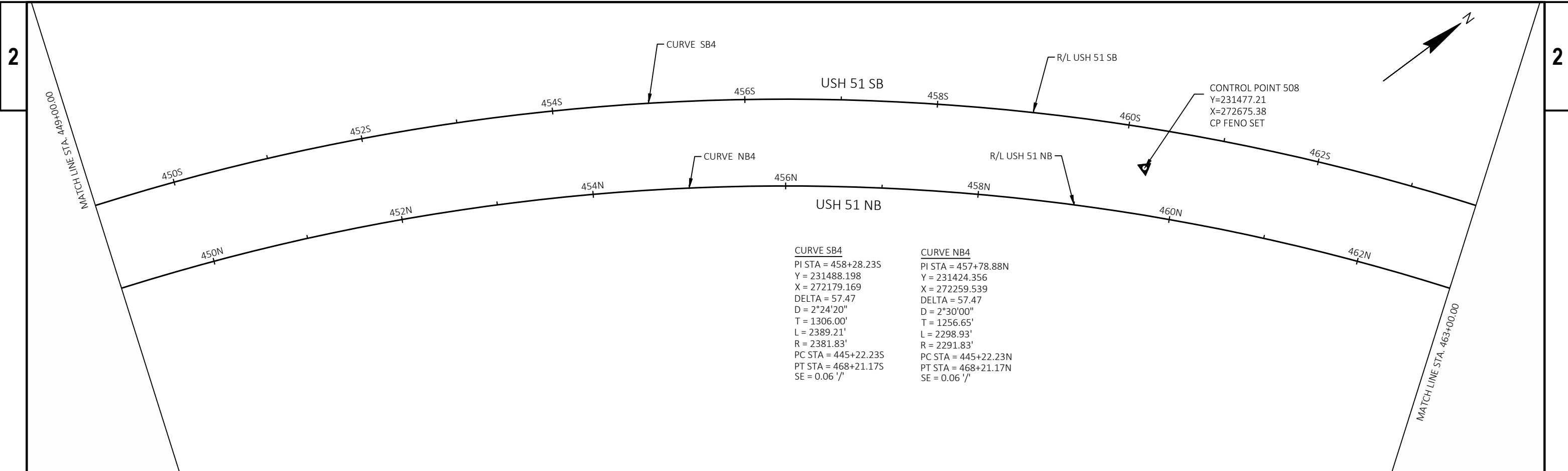


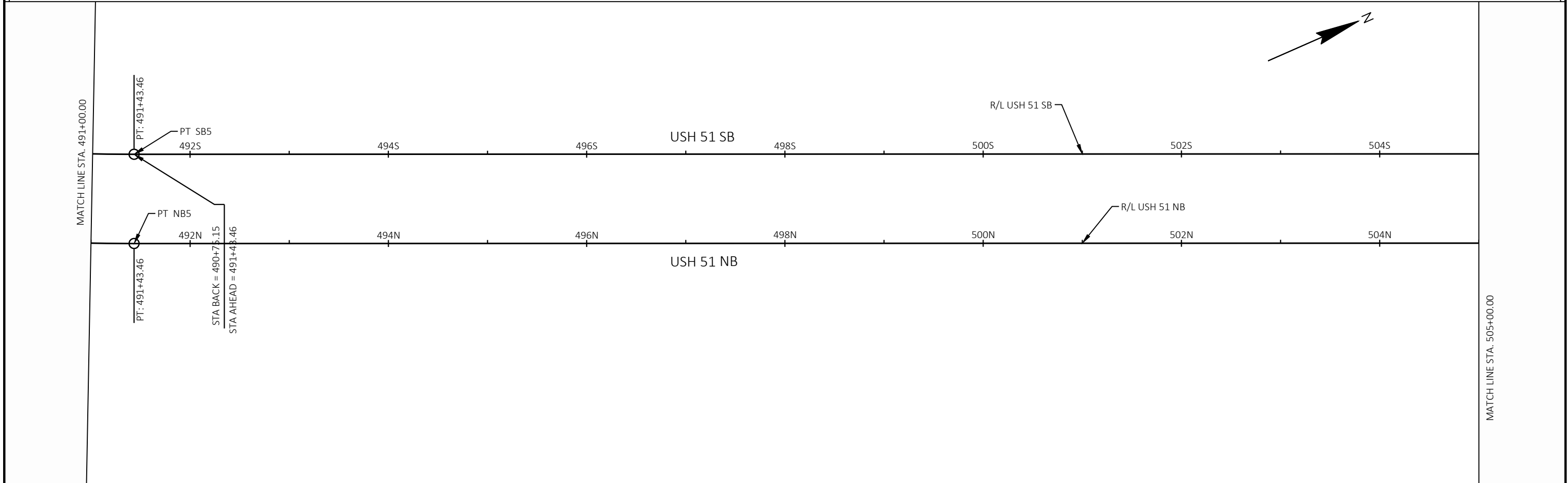
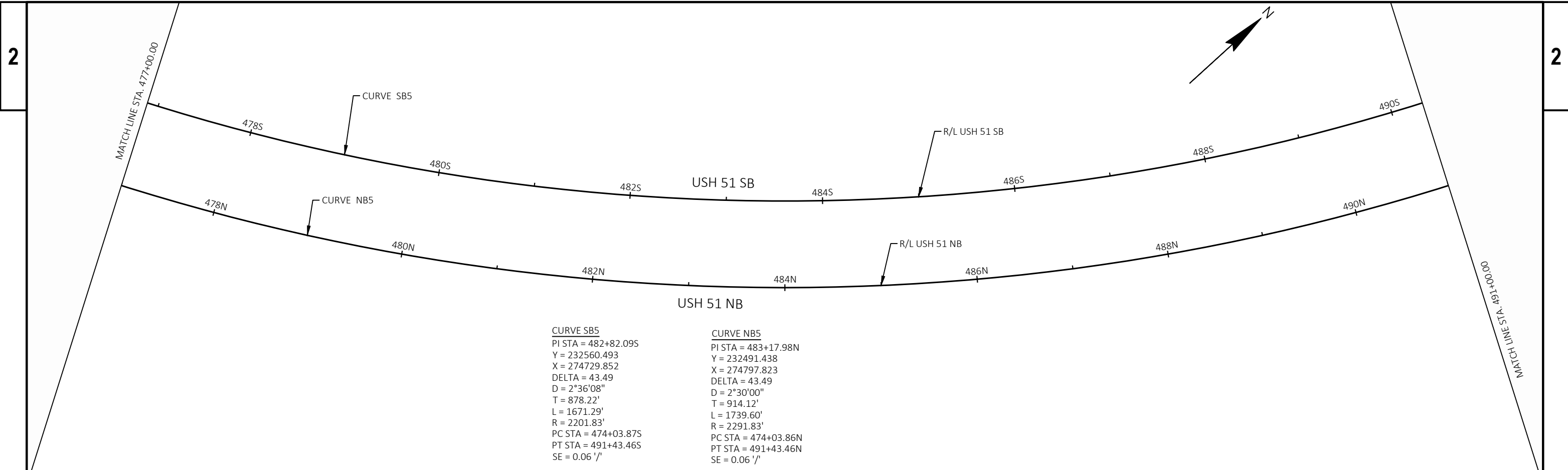
MATCH LINE STA. 435+00.00

MATCH LINE STA. 435+00.00

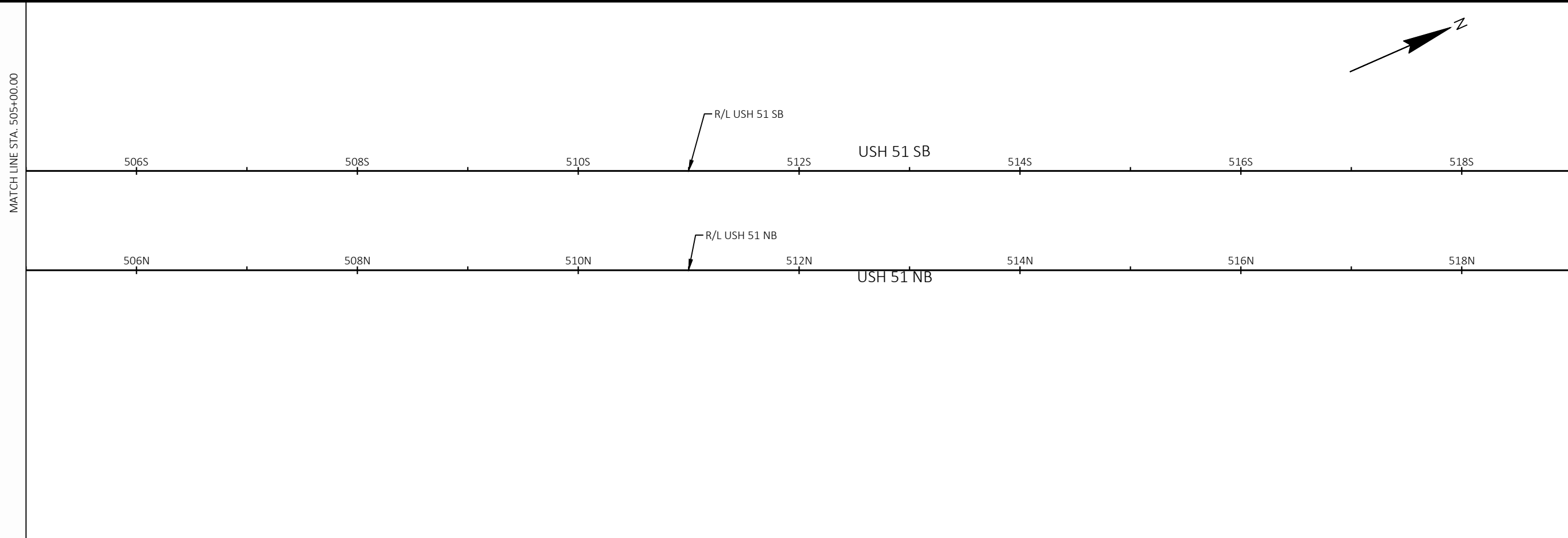


MATCH LINE STA. 449+00.00

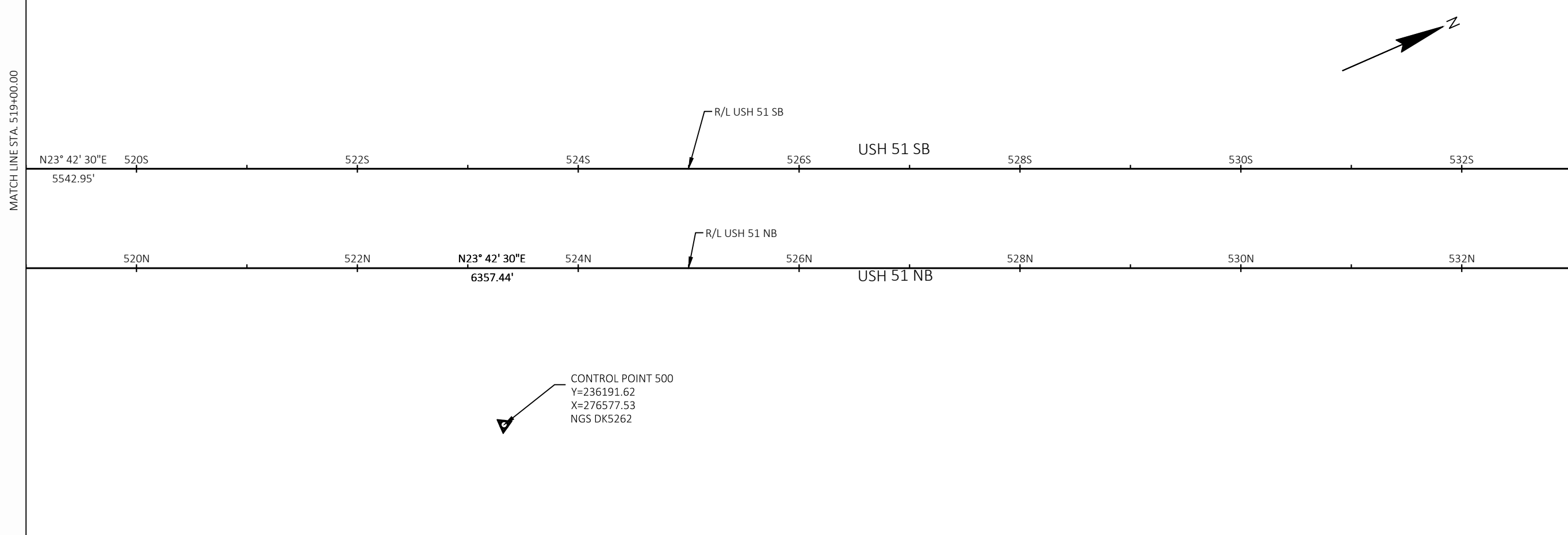




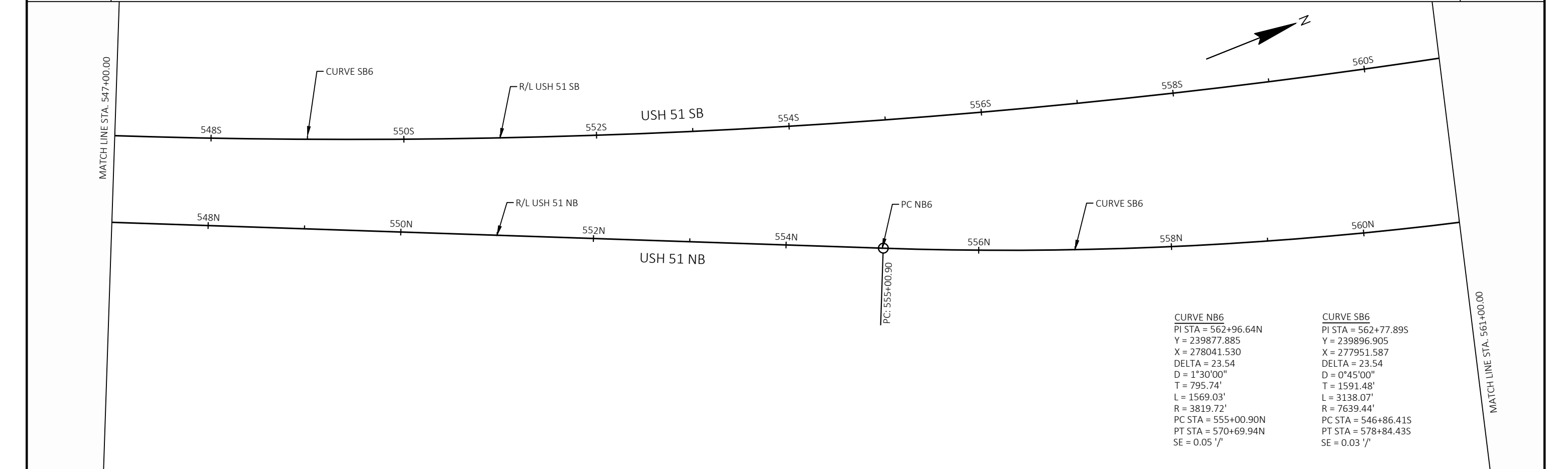
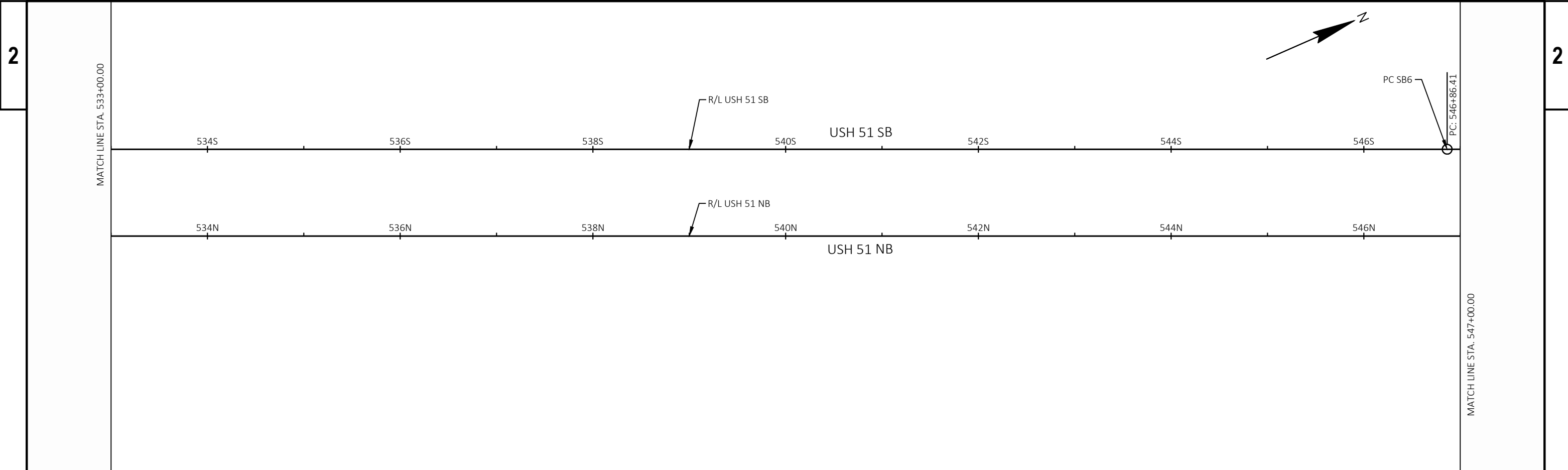
2



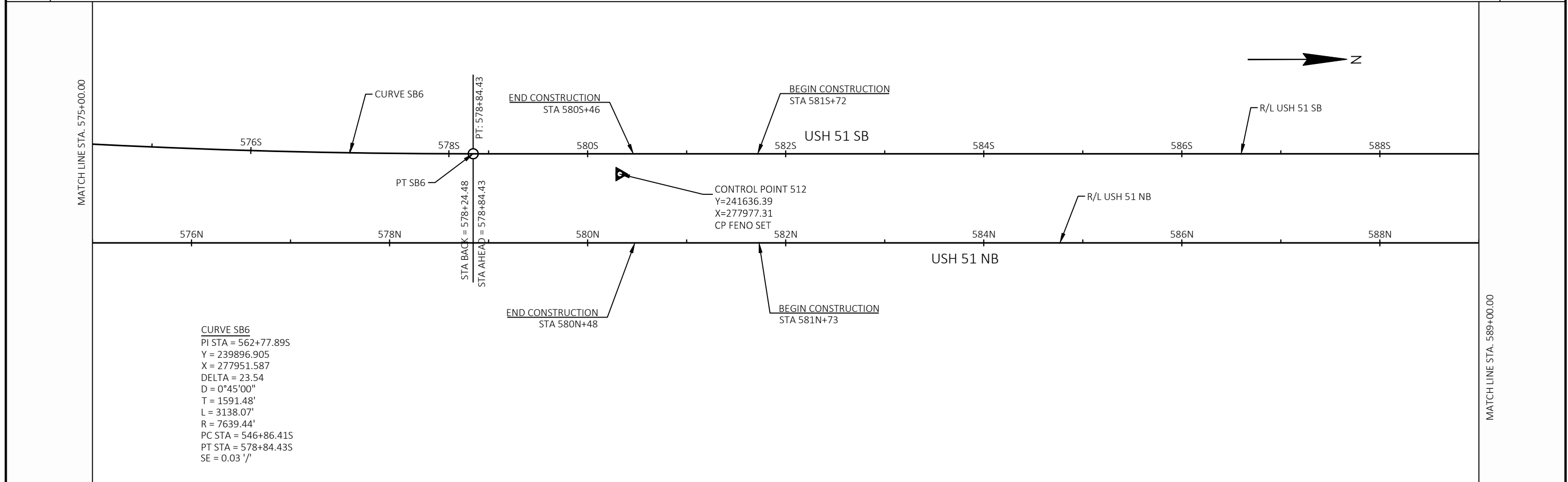
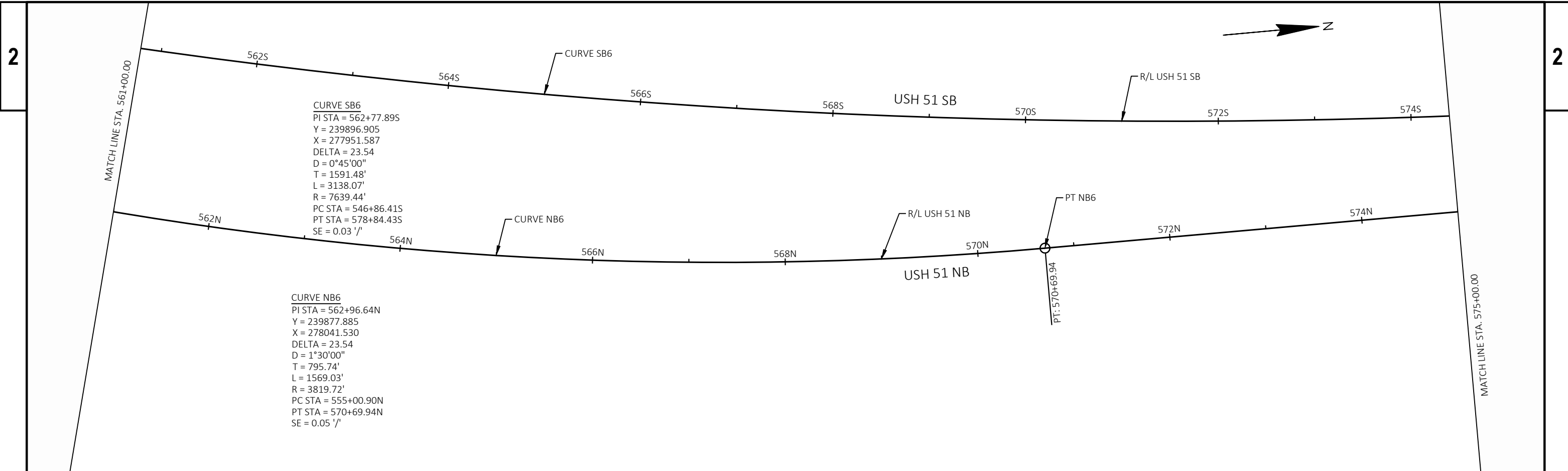
2



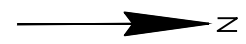
PROJECT NO: 1170-01-76	HWY: USH 51	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET	E
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CURVE NB6	CURVE SB6
PI STA = 562+96.64N	PI STA = 562+77.89S
Y = 239877.885	Y = 239896.905
X = 278041.530	X = 277951.587
DELTA = 23.54	DELTA = 23.54
D = 1°30'00"	D = 0°45'00"
T = 795.74'	T = 1591.48'
L = 1569.03'	L = 3138.07'
R = 3819.72'	R = 7639.44'
PC STA = 555+00.90N	PC STA = 546+86.41S
PT STA = 570+69.94N	PT STA = 578+84.43S
SE = 0.05 '/'	SE = 0.03 '/'

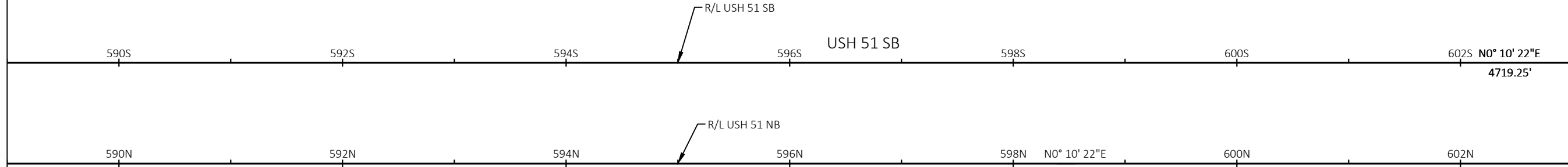


PROJECT NO: 1170-01-76	HWY: USH 51	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET	E
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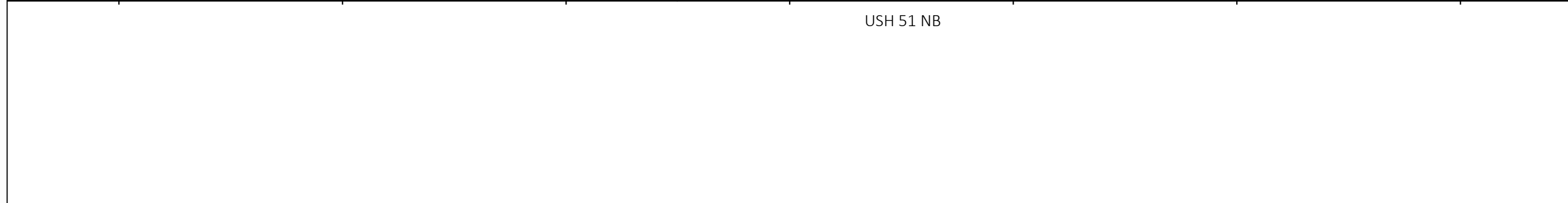
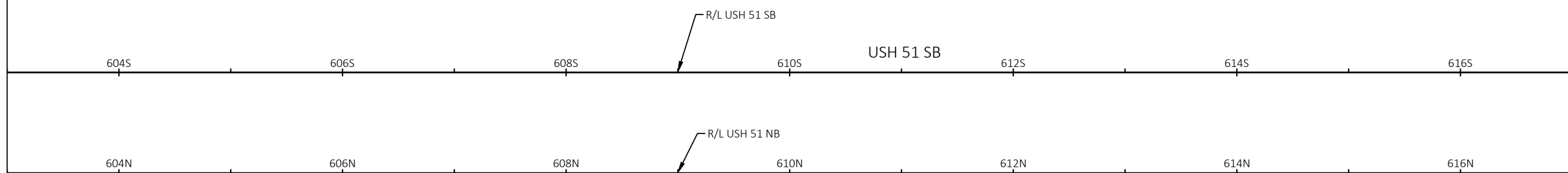
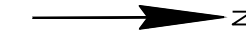
MATCH LINE STA. 589+00.00

MATCH LINE STA. 603+00.00



MATCH LINE STA. 603+00.00

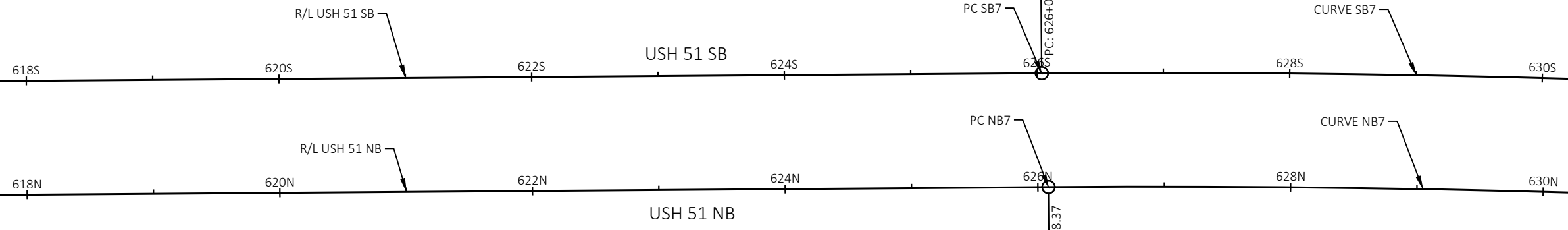
MATCH LINE STA. 617+00.00



PROJECT NO: 1170-01-76	HWY: USH 51	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET	E
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MATCH LINE STA. 617+00.00

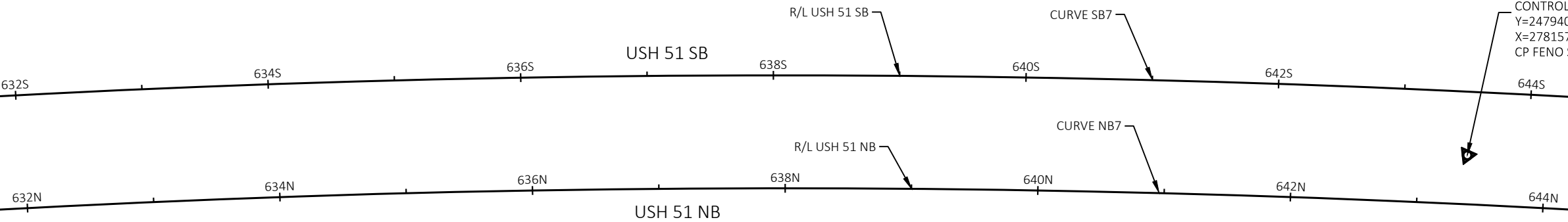
MATCH LINE STA. 631+00.00



CURVE SB7	CURVE NB7
PI STA = 641+27.37S	PI STA = 643+90.09N
Y = 247731.285	Y = 247993.738
X = 277975.219	X = 278066.011
DELTA = 15.03	DELTA = 17.68
D = 0°29'46"	D = 0°30'00"
T = 1523.69'	T = 1781.72'
L = 3029.87'	L = 3535.14'
R = 11549.16'	R = 11459.16'
PC STA = 626+03.68S	PC STA = 626+08.37N
PT STA = 656+10.14S	PT STA = 661+43.51N
SE = 0.02 '/'	SE = 0.02 '/'

MATCH LINE STA. 631+00.00

MATCH LINE STA. 645+00.00

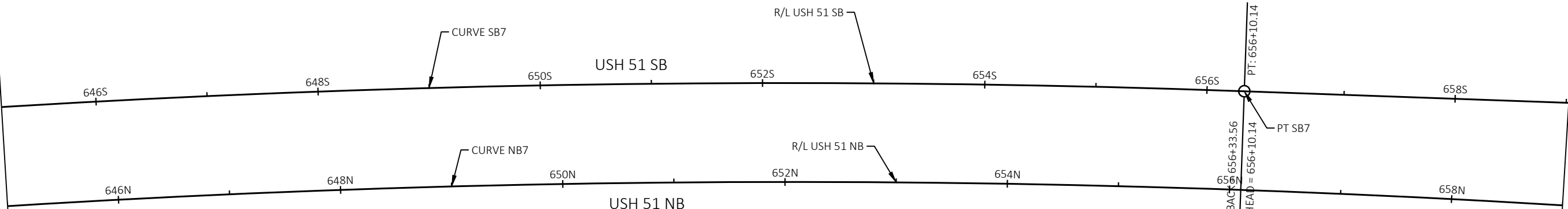


CURVE SB7	CURVE NB7
PI STA = 641+27.37S	PI STA = 643+90.09N
Y = 247731.285	Y = 247993.738
X = 277975.219	X = 278066.011
DELTA = 15.03	DELTA = 17.68
D = 0°29'46"	D = 0°30'00"
T = 1523.69'	T = 1781.72'
L = 3029.87'	L = 3535.14'
R = 11549.16'	R = 11459.16'
PC STA = 626+03.68S	PC STA = 626+08.37N
PT STA = 656+10.14S	PT STA = 661+43.51N
SE = 0.02 '/'	SE = 0.02 '/'



MATCH LINE STA. 645+00.00

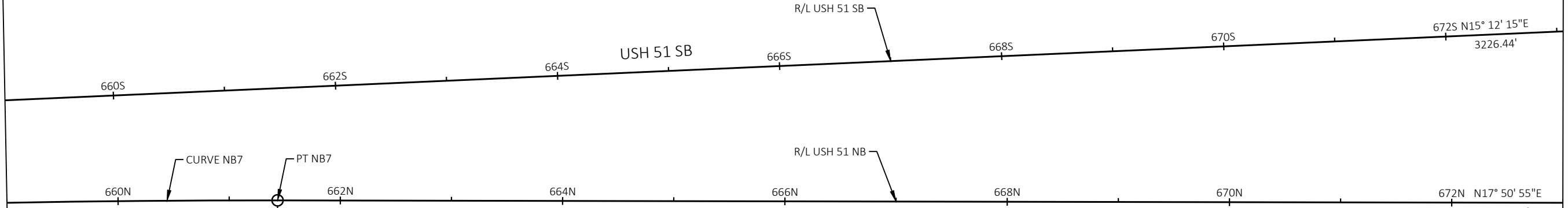
MATCH LINE STA. 659+00.00



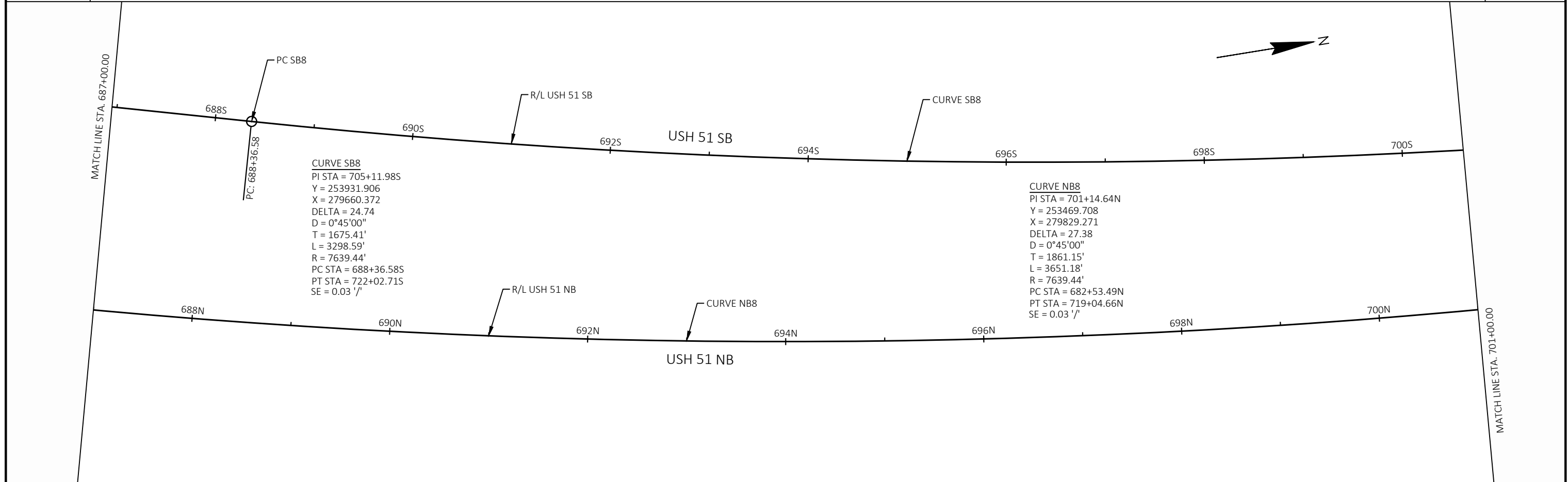
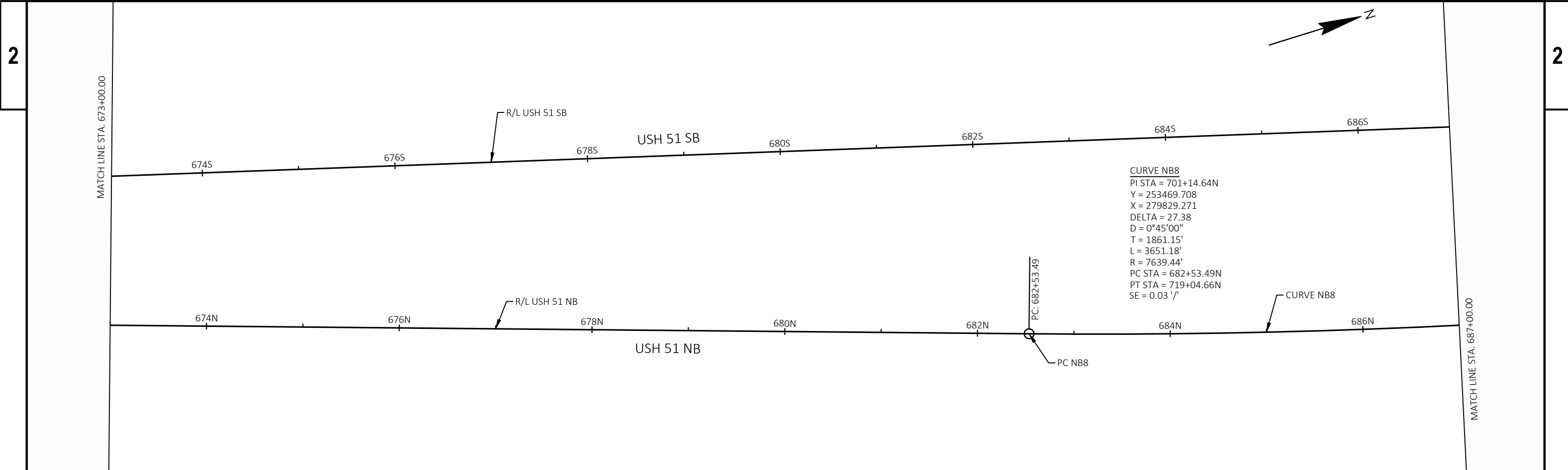
CURVE SB7	CURVE NB7
PI STA = 641+27.37S	PI STA = 643+90.09N
Y = 247731.285	Y = 247993.738
X = 277975.219	X = 278066.011
DELTA = 15.03	DELTA = 17.68
D = 0°29'46"	D = 0°30'00"
T = 1523.69'	T = 1781.72'
L = 3029.87'	L = 3535.14'
R = 11549.16'	R = 11459.16'
PC STA = 626+03.68S	PC STA = 626+08.37N
PT STA = 656+10.14S	PT STA = 661+43.51N
SE = 0.02 '/'	SE = 0.02 '/'

MATCH LINE STA. 659+00.00

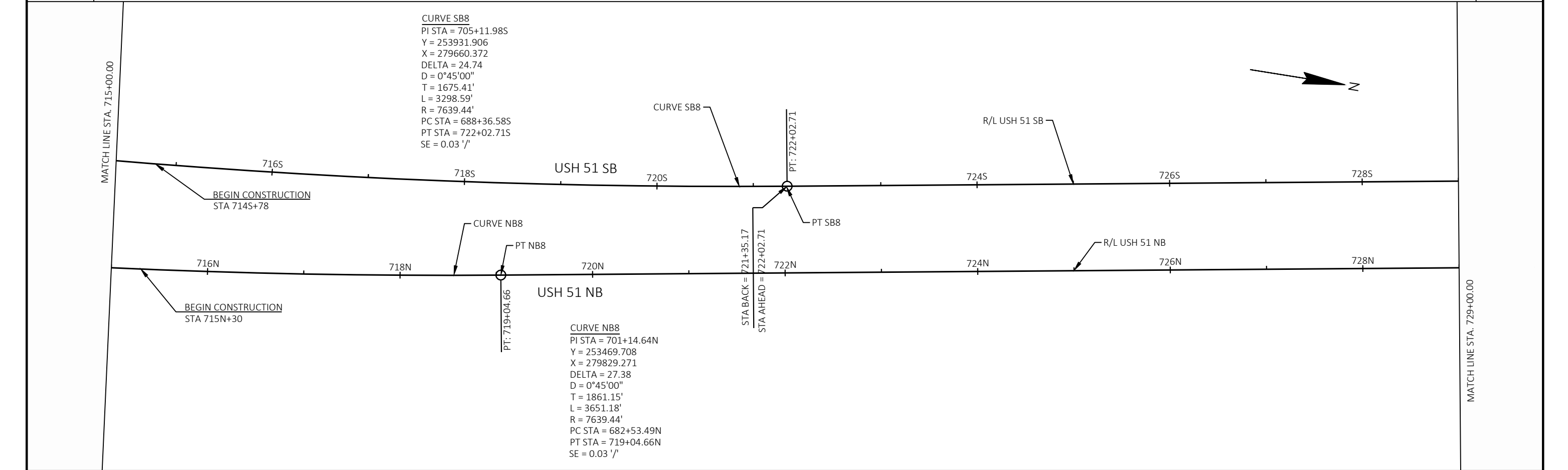
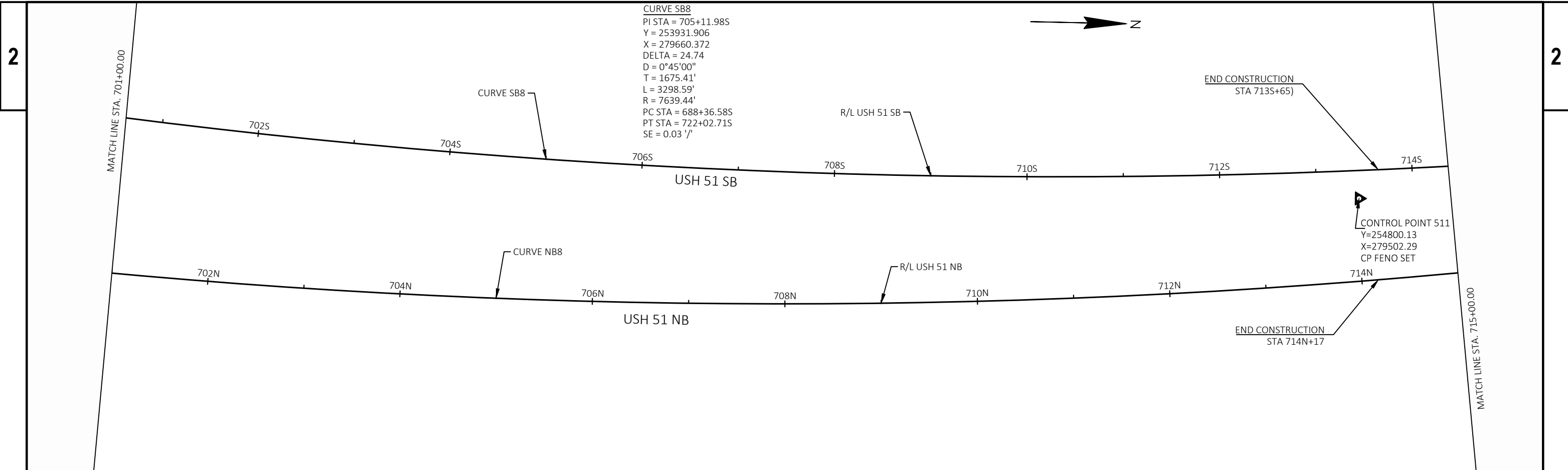
MATCH LINE STA. 673+00.00



CURVE NB7
PI STA = 643+90.09N
Y = 247993.738
X = 278066.011
DELTA = 17.68
D = 0°30'00"
T = 1781.72'
L = 3535.14'
R = 11459.16'
PC STA = 626+08.37N
PT STA = 661+43.51N
SE = 0.02 '/'



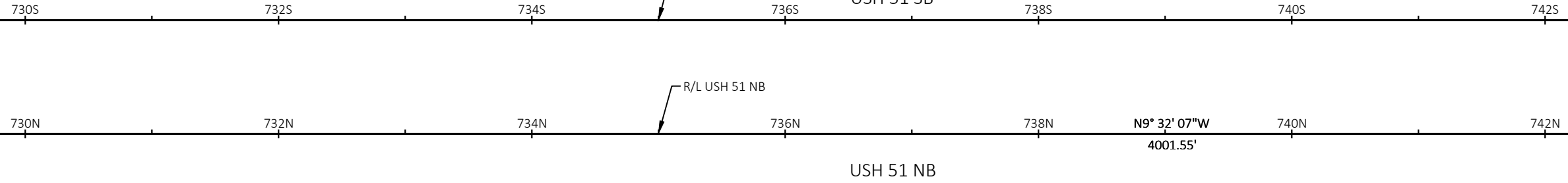
PROJECT NO: 1170-01-76 HWY: USH 51 COUNTY: MARATHON ALIGNMENT DETAILS SHEET E



PROJECT NO: 1170-01-76 HWY: USH 51 COUNTY: MARATHON ALIGNMENT DETAILS SHEET **E**

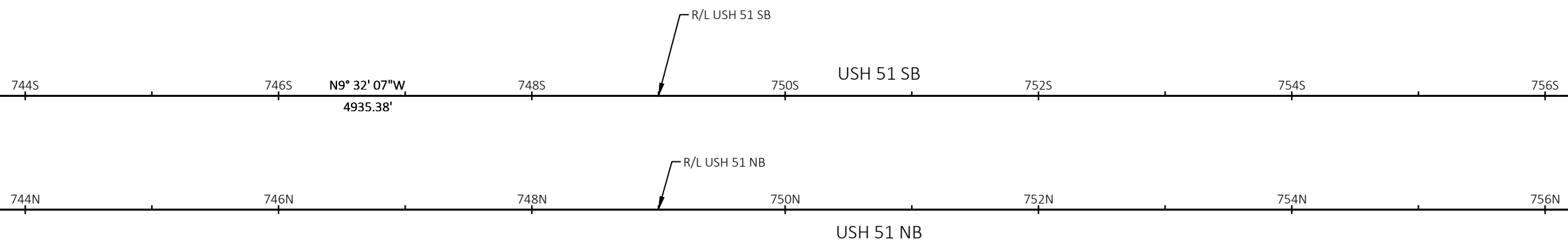
MATCH LINE STA. 729+00.00

MATCH LINE STA. 743+00.00



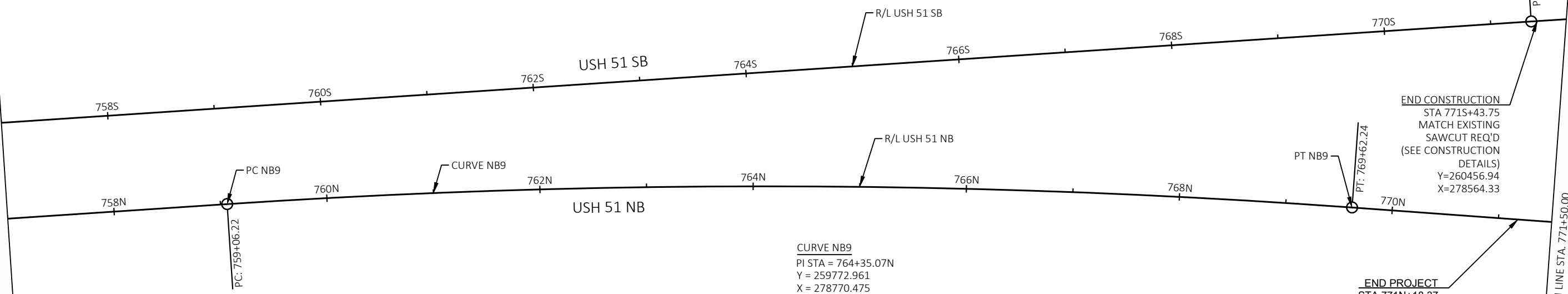
MATCH LINE STA. 743+00.00

MATCH LINE STA. 757+00.00



MATCH LINE STA. 757+00.00

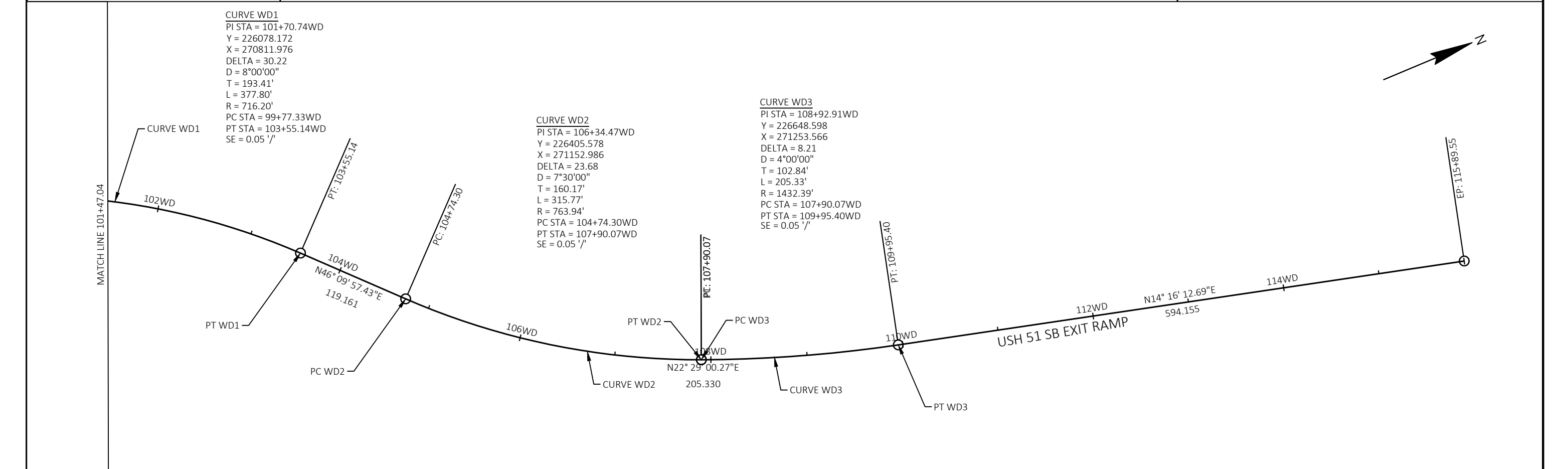
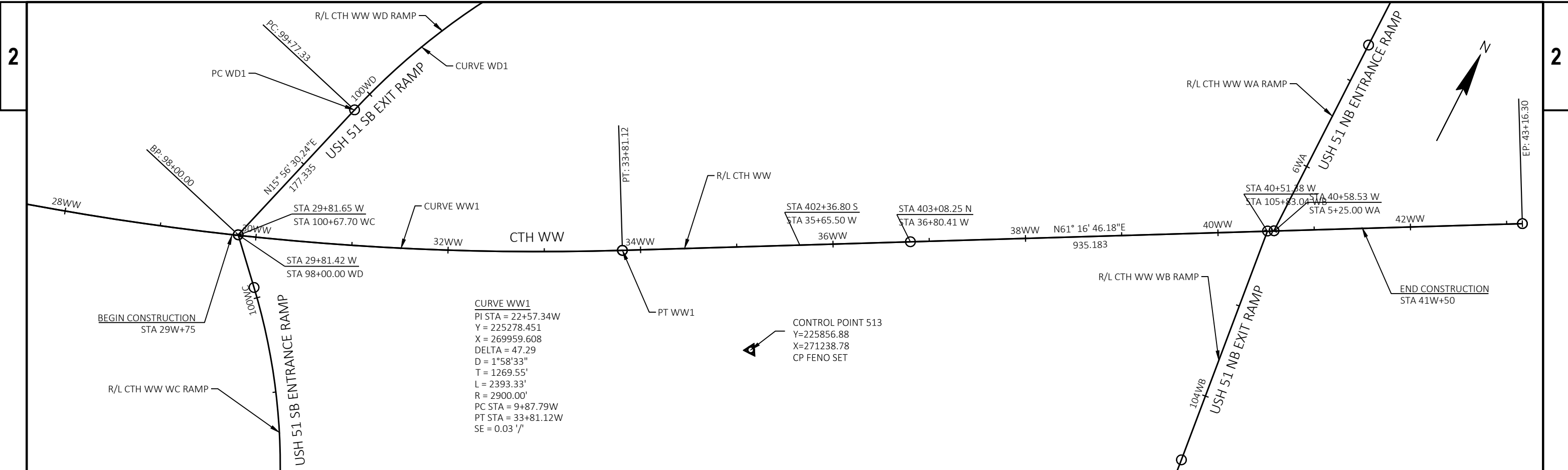
MATCH LINE STA. 771+50.00

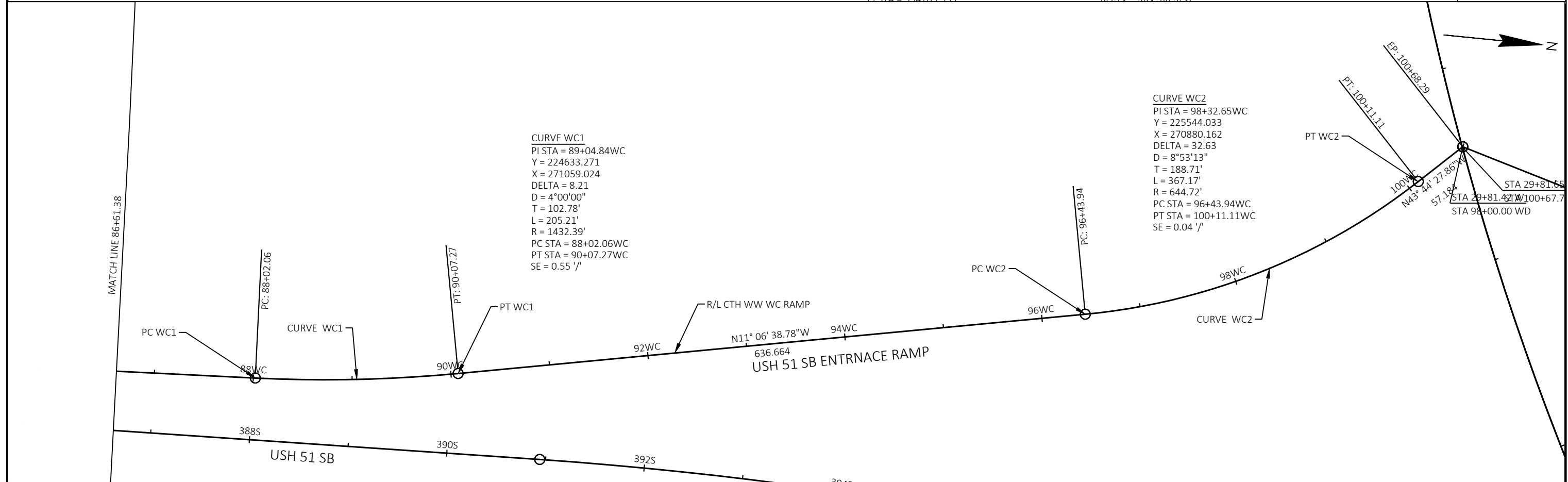
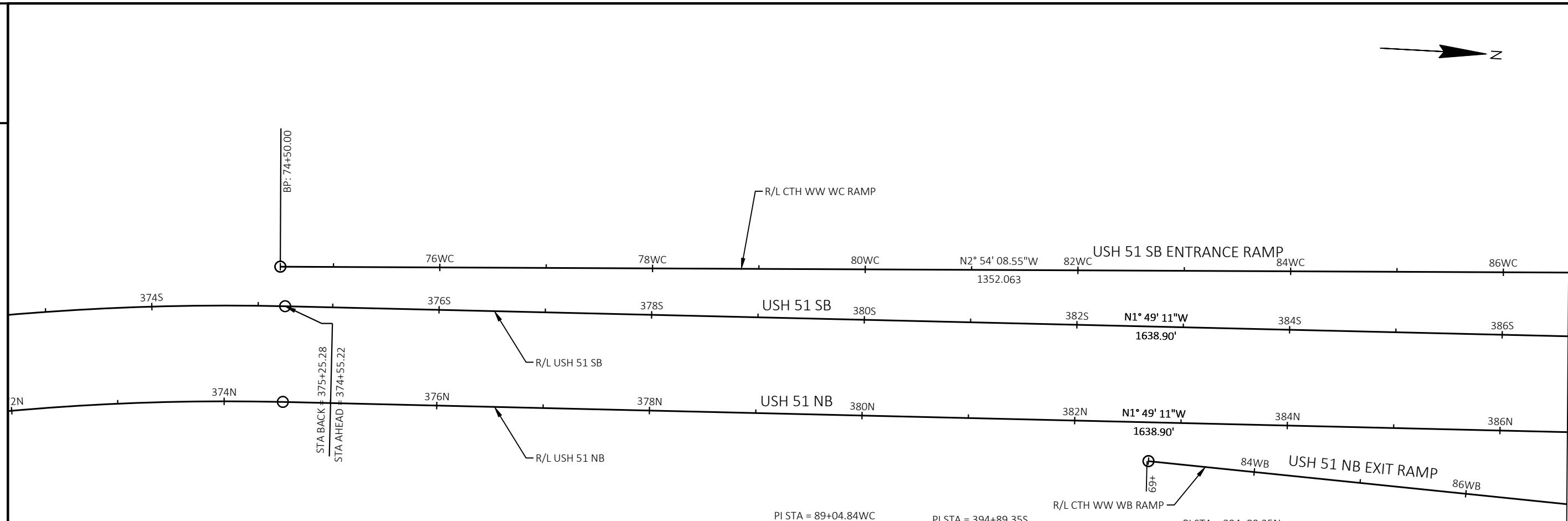


CURVE NB9
 PI STA = 764+35.07N
 Y = 259772.961
 X = 278770.475
 DELTA = 7.92
 D = 0°45'00"
 T = 528.86'
 L = 1056.03'
 R = 7639.44'
 PC STA = 759+06.22N
 PT STA = 769+62.24N
 SE = 0.03 '/'

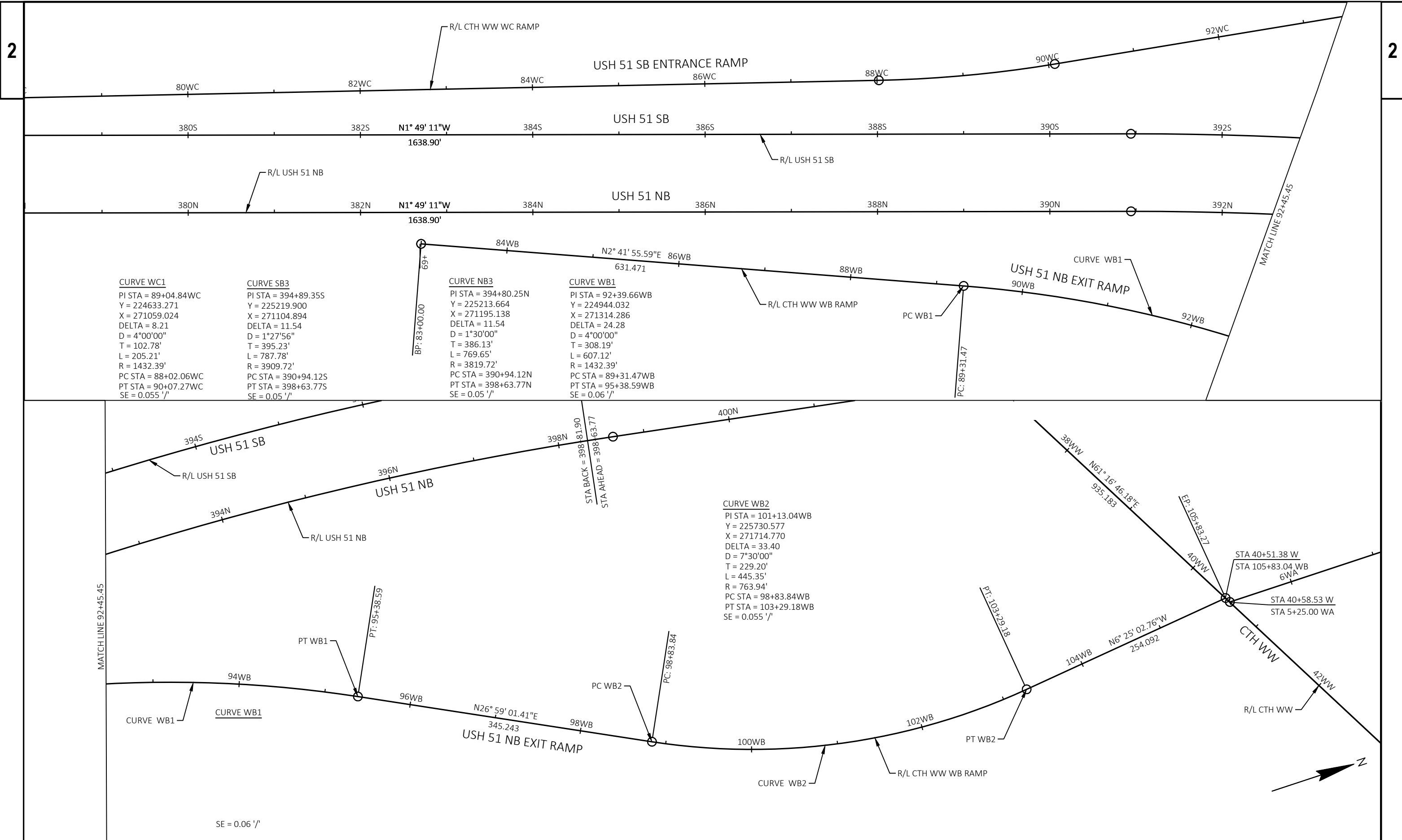
END CONSTRUCTION
 STA 771S+43.75
 MATCH EXISTING
 SAWCUT REQ'D
 (SEE CONSTRUCTION
 DETAILS)
 Y=260456.94
 X=278564.33

END PROJECT
 STA 771N+18.37
 Y=260457.6745
 X=278751.1690





PROJECT NO: 1170-01-76	HWY: USH 51	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET	E
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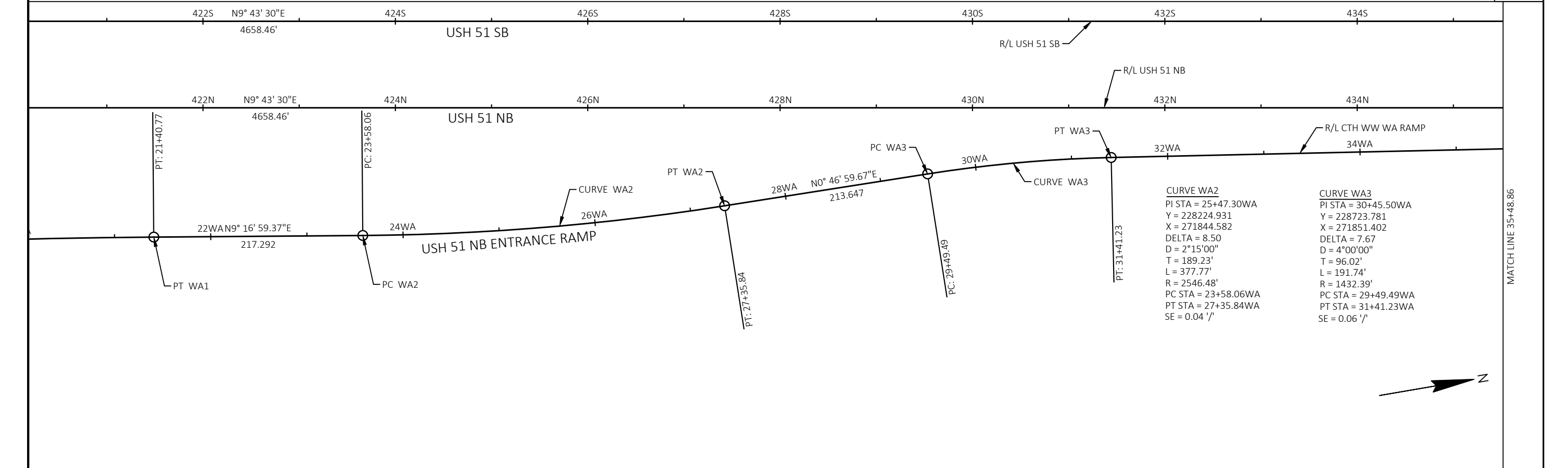
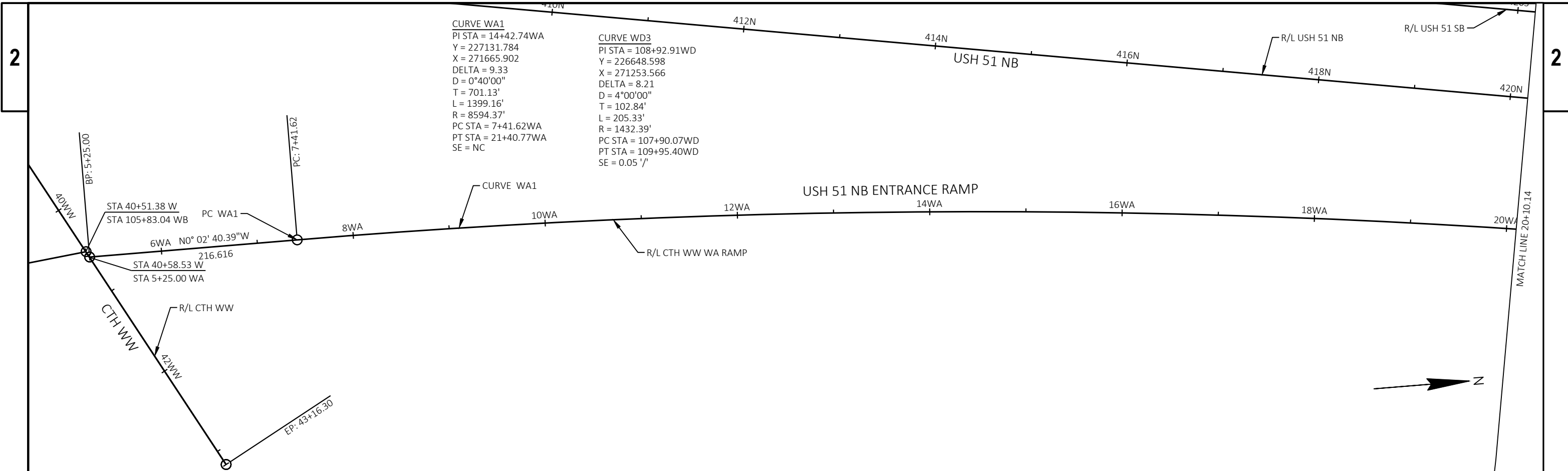
CURVE WC1
 PI STA = 89+04.84WC
 Y = 224633.271
 X = 271059.024
 DELTA = 8.21
 D = 4°00'00"
 T = 102.78'
 L = 205.21'
 R = 1432.39'
 PC STA = 88+02.06WC
 PT STA = 90+07.27WC
 SE = 0.055 '/'

CURVE SB3
 PI STA = 394+89.35S
 Y = 225219.900
 X = 271104.894
 DELTA = 11.54
 D = 1°27'56"
 T = 395.23'
 L = 787.78'
 R = 3909.72'
 PC STA = 390+94.12S
 PT STA = 398+63.77S
 SE = 0.05 '/'

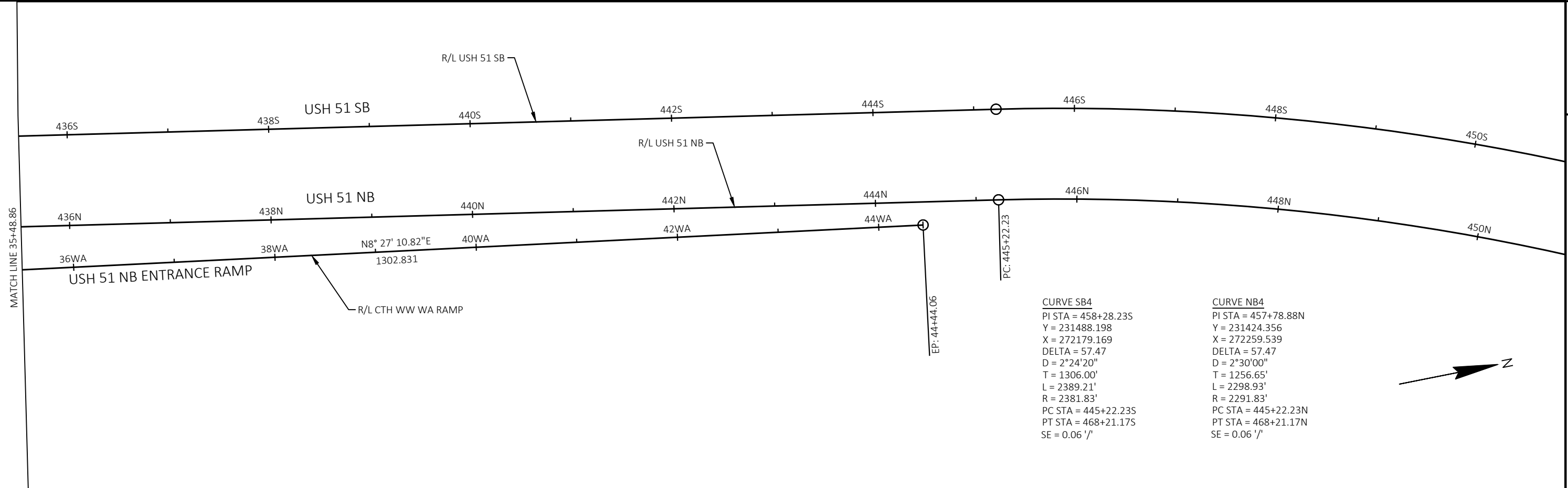
CURVE NB3
 PI STA = 394+80.25N
 Y = 225213.664
 X = 271195.138
 DELTA = 11.54
 D = 1°30'00"
 T = 386.13'
 L = 769.65'
 R = 3819.72'
 PC STA = 390+94.12N
 PT STA = 398+63.77N
 SE = 0.05 '/'

CURVE WB1
 PI STA = 92+39.66WB
 Y = 224944.032
 X = 271314.286
 DELTA = 24.28
 D = 4°00'00"
 T = 308.19'
 L = 607.12'
 R = 1432.39'
 PC STA = 89+31.47WB
 PT STA = 95+38.59WB
 SE = 0.06 '/'

CURVE WB2
 PI STA = 101+13.04WB
 Y = 225730.577
 X = 271714.770
 DELTA = 33.40
 D = 7°30'00"
 T = 229.20'
 L = 445.35'
 R = 763.94'
 PC STA = 98+83.84WB
 PT STA = 103+29.18WB
 SE = 0.055 '/'



PROJECT NO: 1170-01-76	HWY: USH 51	COUNTY: MARATHON	ALIGNMENT DETAILS	SHEET	E
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Estimate Of Quantities

1170-01-76

Line	Item	Item Description	Unit	Total	Qty
0002	203.0220	Removing Structure (structure) 01. C-37-55	EACH	1.000	1.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,210.000	1,210.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	405,385.000	405,385.000
0008	204.0170	Removing Fence	LF	50.000	50.000
0010	204.0180	Removing Delineators and Markers	EACH	226.000	226.000
0012	206.2001	Excavation for Structures Culverts (structure) 01. C-37-55	EACH	1.000	1.000
0014	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1170-01-76	EACH	1.000	1.000
0016	213.0100	Finishing Roadway (project) 01. 1170-01-76	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	4,599.000	4,599.000
0020	415.6000.S	Rout and Seal	LF	509.000	509.000
0022	455.0605	Tack Coat	GAL	24,323.000	24,323.000
0024	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0026	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0028	460.2005	Incentive Density PWL HMA Pavement	DOL	29,375.000	29,375.000
0030	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	36,600.000	36,600.000
0032	460.2010	Incentive Air Voids HMA Pavement	DOL	45,403.000	45,403.000
0034	460.5224	HMA Pavement 4 LT 58-28 S	TON	11,350.000	11,350.000
0036	460.6224	HMA Pavement 4 MT 58-28 S	TON	34,054.000	34,054.000
0038	465.0110	Asphaltic Surface Patching	TON	100.000	100.000
0040	465.0510	Asphaltic Rumble Strips, Shoulder Divided Roadway	LF	177,938.000	177,938.000
0042	504.0100	Concrete Masonry Culverts	CY	11.000	11.000
0044	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	180.000	180.000
0046	506.3008	Welded Stud Shear Connectors 5/8x5-Inch	EACH	32.000	32.000
0048	512.0500	Piling Steel Sheet Permanent Delivered	SF	445.000	445.000
0050	512.0600	Piling Steel Sheet Permanent Driven	SF	435.000	435.000
0052	606.0300	Riprap Heavy	CY	3.000	3.000
0054	616.0100	Fence Woven Wire (height) 01. 5-FT	LF	50.000	50.000
0056	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1170-01-76	EACH	1.000	1.000
0058	619.1000	Mobilization	EACH	1.000	1.000
0060	624.0100	Water	MGAL	74.000	74.000
0062	625.0100	Topsoil	SY	468.000	468.000
0064	628.1504	Silt Fence	LF	110.000	110.000
0066	628.1520	Silt Fence Maintenance	LF	110.000	110.000
0068	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0070	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0072	628.2006	Erosion Mat Urban Class I Type A	SY	468.000	468.000
0074	628.6005	Turbidity Barriers	SY	104.000	104.000
0076	628.7570	Rock Bags	EACH	100.000	100.000
0078	629.0210	Fertilizer Type B	CWT	0.100	0.100
0080	630.0120	Seeding Mixture No. 20	LB	3.000	3.000
0082	630.0500	Seed Water	MGAL	2.000	2.000
0084	633.0100	Delineator Posts Steel	EACH	226.000	226.000
0086	633.0500	Delineator Reflectors	EACH	226.000	226.000
0088	642.5201	Field Office Type C	EACH	1.000	1.000
0090	643.0300	Traffic Control Drums	DAY	40,885.000	40,885.000
0092	643.0420	Traffic Control Barricades Type III	DAY	3,305.000	3,305.000
0094	643.0705	Traffic Control Warning Lights Type A	DAY	6,610.000	6,610.000
0096	643.0715	Traffic Control Warning Lights Type C	DAY	4,830.000	4,830.000
0098	643.0800	Traffic Control Arrow Boards	DAY	210.000	210.000
0100	643.0900	Traffic Control Signs	DAY	7,790.000	7,790.000

Estimate Of Quantities

1170-01-76

Line	Item	Item Description	Unit	Total	Qty
0102	643.0910	Traffic Control Covering Signs Type I	EACH	21.000	21.000
0104	643.0920	Traffic Control Covering Signs Type II	EACH	30.000	30.000
0106	643.1000	Traffic Control Signs Fixed Message	SF	102.500	102.500
0108	643.1051	Traffic Control Signs PCMS with Cellular Communications	DAY	428.000	428.000
0110	643.3165	Temporary Marking Line Paint 6-Inch	LF	201,751.000	201,751.000
0112	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	110,415.000	110,415.000
0114	643.3265	Temporary Marking Line Paint 10-Inch	LF	8,110.000	8,110.000
0116	643.3280	Temporary Marking Line Removable Tape 10-Inch	LF	13,080.000	13,080.000
0118	643.5000	Traffic Control	EACH	1.000	1.000
0120	645.0120	Geotextile Type HR	SY	83.000	83.000
0122	646.2020	Marking Line Epoxy 6-Inch	LF	2,980.000	2,980.000
0124	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	235,978.000	235,978.000
0126	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	6,241.000	6,241.000
0128	646.6105	Marking Stop Line Paint 18-Inch	LF	86.000	86.000
0130	646.7220	Marking Chevron Epoxy 24-Inch	LF	836.000	836.000
0132	646.9000	Marking Removal Line 4-Inch	LF	2,720.000	2,720.000
0134	646.9050	Marking Removal Line Grooved Permanent Tape 4-Inch	LF	1,475.000	1,475.000
0136	646.9065	Marking Removal Line Grooved Contrast Permanent Tape 6-Inch	LF	387.000	387.000
0138	646.9150	Marking Removal Line Grooved Permanent Tape 8-Inch	LF	155.000	155.000
0140	646.9200	Marking Removal Line Wide	LF	285.000	285.000
0142	650.6501	Construction Staking Structure Layout (structure) 01. C-37-55	EACH	1.000	1.000
0144	650.8000	Construction Staking Resurfacing Reference	LF	91,789.000	91,789.000
0146	650.9911	Construction Staking Supplemental Control (project) 01. 1170-01-76	EACH	1.000	1.000
0148	715.0502	Incentive Strength Concrete Structures	DOL	500.000	500.000
0150	740.0440	Incentive IRI Ride	DOL	66,520.000	66,520.000
0152	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,400.000	2,400.000
0154	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	2,760.000	2,760.000
0156	SPV.0060	Special 01. Temporary Shoring Special C-37-55	EACH	2.000	2.000
0158	SPV.0090	Special 02. Fill Existing Rumble Strip	LF	1,600.000	1,600.000

PREPARE FOUNDATION FOR ASPHALTIC PAVING

REMOVING ASPHALTIC SURFACE BUTT JOINTS

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CATEGORY	ROADWAY	STATION	-	STATION	LOCATION	211.0101.01
						PREPARE FOUNDATION FOR ASPHALTIC PAVING (1170-01-76) EACH
0010	PROJECT	313+89		771+44	RT/LT	1
TOTAL						1

CATEGORY	LOCATION	STATION	STATION	204.0115 SY
0010	B-37-155	312N+13.10	323N+89.02	41
	B-37-156	313S+02.13	313S+12.13	42
	NB CTH WW OFFRAMP	382N+89.09	382N+99.05	16
	B-37-158	401N+72.86	402N+27.74	96
	B-37-159	400S+50.91	400S+84.62	74
	B-37-158	404N+73.86	404N+80.49	52
	B-37-159	403S+73.86	404S+03.04	75
	B-37-161	580N+37.61	580N+47.61	48
	B-37-162	580S+36.25	580S+46.25	48
	B-37-161	581N+73.15	581N+83.15	48
	B-37-162	581S+71.69	581S+81.69	48
	B-37-165	714N+06.55	714N+16.55	49
	B-37-166	714S+81.31	714S+91.31	49
	B-37-165	715N+29.15	714N+39.15	49
	B-37-166	714S+79.05	714S+89.05	49
	PROJECT LIMIT NB	771N+08.37	771N+18.37	44
	PROJECT LIMIT SB	771S+33.75	771S+43.75	44
	CTH WW PROJECT LIMIT	29W+75.00	29W+85.00	81
	CTH WW ONRAMP SB	29W+98.71	30W+42.34	46
	CTH WW OFFRAMP SB	29W+85.76	30W+52.11	56
	CTH WW ONRAMP NB	40W+76.60	41W+11.56	42
	CTH WW OFFRAMP NB	39W+95.43	40W+80.72	54
	CTH WW PROJECT LIMIT	41W+40.00	41W+50.00	59
TOTALS				1,210

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REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	ROADWAY	STATION	-	STATION	LOCATION	204.0120 SY
0010	USH 51 NB	312+13		771+18		198,442
	USH 51 SB	312+06		771+43		199,137
	CTH WW	29+75		41+50		7,806
TOTALS						405,385

ROUT AND SEAL

CATEGORY	ROADWAY	LOCATION	415.6000.S LF
0010	USH 51 NB	B-37-158 SOUTH	63
		B-37-158 NORTH	64
		B-37-161 SOUTH	64
		B-37-161 NORTH	64
	USH 51 SB	B-37-159 SOUTH	63
		B-37-159 NORTH	63
		B-37-162 SOUTH	64
		B-37-162 NORTH	64
TOTALS			509

REMOVING FENCE

CATEGORY	ROADWAY	STATION	-	STATION	LOCATION	204.0170 LF
0010	USH 51 NB	446N+08		446N+58	RT	50
TOTAL						50

BASE AGGREGATE ITEMS

CATEGORY	ROADWAY	STATION	-	STATION	LOCATION	305.0110	624.0100
						BASE AGGREGATE DENSE 3/4-INCH TON	WATER MGAL
0010	USH 51 NB	312+13		402+10	RT/LT	444	7
		404+47		580+48	RT/LT	869	14
		581+74		714+17	RT/LT	654	10
		715+30		771+18	RT/LT	276	4
	USH 51 SB	313+02		401+23	RT/LT	436	7
		403+71		580+47	RT/LT	873	14
		581+91		713+65	RT/LT	651	10
		714+79		771+44	RT/LT	280	4
	CTH WW	29+75		41+50	LT	58	1
		29+75		41+50	RT	58	1
TOTAL						4,599	74

ASPHALTIC PAVEMENT ITEMS

CATEGORY	ROADWAY	STATION	-	STATION	455.0605	460.5224	460.6224	465.0110	465.0510
					TACK COAT GAL	HMA PAVEMENT 4 LT 58-28 S TON	HMA PAVEMENT 4 MT 58-28 S TON	ASPHALTIC SURFACE PATCHING TON	ASPHALTIC RUMBLE STRIPS SHOULDER DIV RDWY LF
0010	USH 51 NB	312+13		402+10	2,768	860	4,308	--	17,573
		404+47		580+48	4,371	2,021	6,139	--	34,017
		581+74		714+17	3,331	1,650	4,569	--	26,326
		715+30		771+18	1,435	696	1,984	--	10,697
	USH 51 SB	313+02		401+23	2,501	852	3,817	--	16,773
		403+71		580+47	4,649	2,055	6,624	--	34,602
		581+91		713+65	3,367	1,645	4,640	--	26,188
		714+79		771+44	1,431	698	1,973	--	10,850
	CTH WW	29+75		41+50	468	874	--	--	--
	USH 51 NB - S OF PROJ LIMITS	--	--	--	--	--	--	--	228
	USH 51 NB - N OF PROJ LIMITS	--	--	--	--	--	--	--	228
	USH 51 SB - S OF PROJ LIMITS	--	--	--	--	--	--	--	228
	USH 51 SB - N OF PROJ LIMITS	--	--	--	--	--	--	--	228
	UNDISTRIBUTED	--	--	--	--	--	--	100	--
	TOTALS					24,323	11,350	34,054	100

PWL MIXTURE USE TABLE

THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE TO THIS PROJECT

LOCATION	NB / SB	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR	
								MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12 FOOT DRIVING LANE	NB	312+13 - 402+10	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	3856	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
4 FOOT INSIDE SHOULDER	NB	312+13 - 402+10	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	452	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
10 FOOT OUTSIDE SHOULDER	NB	312+13 - 402+10	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 LT 58-28 S	860	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
12 FOOT DRIVING LANE	NB	404+47 - 580+48	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	5250	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
4 FOOT INSIDE SHOULDER	NB	404+47 - 580+48	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	889	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
10 FOOT OUTSIDE SHOULDER	NB	404+47 - 580+48	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 LT 58-28 S	2021	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
12 FOOT DRIVING LANE	NB	581+74 - 714+17	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	3899	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
4 FOOT INSIDE SHOULDER	NB	581+74 - 714+17	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	670	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
10 FOOT OUTSIDE SHOULDER	NB	581+74 - 714+17	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 LT 58-28 S	1650	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
12 FOOT DRIVING LANE	NB	715+30 - 771+18	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	1670	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
4 FOOT INSIDE SHOULDER	NB	715+30 - 771+18	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	314	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
10 FOOT OUTSIDE SHOULDER	NB	715+30 - 771+18	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 LT 58-28 S	696	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE

PWL MIXTURE USE TABLE CONT'D

THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE TO THIS PROJECT

LOCATION	NB / SB	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR	
								MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12 FOOT DRIVING LANE	SB	313+02 - 401+23	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	3370	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
4 FOOT INSIDE SHOULDER	SB	313+02 - 401+23	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	447	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
10 FOOT OUTSIDE SHOULDER	SB	313+02 - 401+23	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 LT 58-28 S	852	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
12 FOOT DRIVING LANE	SB	403+71 - 580+47	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	5702	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
4 FOOT INSIDE SHOULDER	SB	403+71 - 580+47	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	921	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
10 FOOT OUTSIDE SHOULDER	SB	403+71 - 580+47	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 LT 58-28 S	2055	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
12 FOOT DRIVING LANE	SB	581+91 - 713+65	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	3957	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
4 FOOT INSIDE SHOULDER	SB	581+91 - 713+65	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	683	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
10 FOOT OUTSIDE SHOULDER	SB	581+91 - 713+65	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 LT 58-28 S	1645	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
12 FOOT DRIVING LANE	SB	714+79 - 771+44	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	1670	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
4 FOOT INSIDE SHOULDER	SB	714+79 - 771+44	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-28 S	303	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
10 FOOT OUTSIDE SHOULDER	SB	714+79 - 771+44	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 LT 58-28 S	698	2 "	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE

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HMA PERCENT WITHIN LIMITS (PWL)

CATEGORY	LOCATION	460.0105.S	460.0110.S
		HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS EACH	HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY EACH
0010	PROJECT	1	1
<u>TOTALS</u>		1	1

FINISHING ROADWAY

CATEGORY	LOCATION	213.0100
		FINISHING ROADWAY (1170-01-76) EACH
0010	PROJECT	1
<u>TOTALS</u>		1

TRAFFIC CONTROL

CATEGORY	STAGE	LOCATION	643.5000
			TRAFFIC CONTROL EACH
0010	ALL	PROJECT	1
<u>TOTAL</u>			1

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	LOCATION	618.0100
		MAINTENANCE AND REPAIR OF HAUL ROADS (1170-01-76) EACH
0010	PROJECT	1
<u>TOTAL</u>		1

MOBILIZATION

CATEGORY	LOCATION	619.1000
		MOBILIZATION EACH
0010	PROJECT	1
<u>TOTAL</u>		1

FIELD OFFICE

CATEGORY	LOCATION	642.5201
		FIELD OFFICE TYPE C EACH
0010	PROJECT	1
<u>TOTAL</u>		1

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EROSION CONTROL ITEMS

CATEGORY	LOCATION	STATION -	STATION	628.1504	628.1520	628.1905	628.1910	628.6005	628.7570
				<u>SILT FENCE</u> LF	<u>SILT FENCE</u> <u>MAINTENANCE</u> LF	<u>MOBILIZATIONS</u> <u>EROSION</u> <u>CONTROL</u> EACH	<u>MOBILIZATIONS</u> <u>EMERGENCY</u> <u>EROSION CONTROL</u> EACH	<u>TURBIDITY</u> <u>BARRIERS</u> SY	<u>ROCK</u> <u>BAGS</u> EACH
0010	USH 51 NB	446N+08	446N+58	94	94	--	--	104	--
	UNDISTRIBUTED			16	16	2	2		100
TOTALS				110	110	2	2	104	100

RESTORATION ITEMS

CATEGORY	LOCATION	STATION -	STATION	625.0100	628.2006	629.0210	630.0120	630.0500
				<u>TOPSOIL</u> SY	<u>EROSION</u> <u>MAT URBAN</u> <u>CLASS I TYPE A</u> SY	<u>FERTILIZER</u> <u>TYPE B</u> CWT	<u>SEEDING</u> <u>MIXTURE</u> <u>NO. 20</u> LB	<u>SEED WATER</u> MGAL
0010	USH 51 NB	446N+08	446N+58	83	83	0.1	2	2
	UNDISTRIBUTED			385	385	.02	1	0
TOTALS				468	468	0.1	3	2

FENCE WOVEN WIRE

CATEGORY	ROADWAY	STATION -	STATION	LOCATION	616.0100
					<u>FENCE WOVEN</u> <u>WIRE 5-FT</u> LF
0010	USH 51 NB	446N+08	446N+58	RT	50
TOTALS					50

DELINEATORS

CATEGORY	ROADWAY	STATION -	STATION	204.0180	633.0100	633.0500	
				<u>REMOVING</u> <u>DELINEATORS</u> <u>AND MARKERS</u> EACH	<u>DELINEATOR</u> <u>POSTS STEEL</u> EACH	<u>DELINEATOR</u> <u>REFLECTORS</u> EACH	
0010	PROJECT USH 51 NB	313+89	402+10	22	22	22	
		404+47	580+48	44	44	44	
		581+74	714+17	33	33	33	
		715+30	771+18	14	14	14	
	USH 51 SB	313+02	401+23	22	22	22	
		403+71	580+47	44	44	44	
		581+91	713+65	33	33	33	
		714+79	771+44	14	14	14	
		TOTALS			226	226	226

TRAFFIC CONTROL ITEMS

CATEGORY	STAGE	STAGE DURATION	ROADWAY	643.0300		643.0420		643.0705		643.0715		643.0800		643.0900		COMMENT	
				TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL WARNING LIGHTS TYPE C		TRAFFIC CONTROL ARROW BOARDS		TRAFFIC CONTROL SIGNS			
				EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS		
0010	STAGE 1	5	USH 51 NB	602	3,010	47	235	94	470	48	240	2	10	68	340		
		5	USH 51 SB	565	2,825	46	230	92	460	34	170	2	10	63	315		
	SUBTOTALS				5,835		465		930		410		20		655		
	STAGE 2	20	USH 51 NB	365	7,300	30	600	60	1,200	64	1,280	2	40	51	1,020		
		20	USH 51 SB	303	6,060	27	540	54	1,080	42	840	2	40	43	860		
	SUBTOTALS				13,360		1,140		2,280		2,120		80		1,880		
	STAGE 3	25	USH 51 NB	377	9,425	30	750	60	1,500	48	1,200	2	50	51	1,275		
		25	USH 51 NB	--	--	--	--	--	--	--	--	--	--	54	1,350	WIDTH RESTRICTION	
		20	USH 51 SB	340	6,800	29	580	58	1,160	34	680	2	40	46	920		
		20	USH 51 SB	--	--	--	--	--	--	--	--	--	--	54	1,080	WIDTH RESTRICTION	
		10	CTH WW	--	--	--	--	--	--	--	--	--	--	10	100		
	SUBTOTALS				16,225		1,330		2,660		1,880		90		4,725		
	STAGE 4	5	USH 51 NB	565	2,825	37	185	74	370	42	210	2	10	53	265		
		5	USH 51 SB	528	2,640	37	185	74	370	42	210	2	10	53	265		
SUBTOTALS				5,465		370		740		420		20		530			
TOTALS				40,885		3,305		6,610		4,830		210		7,790			

** FOR INFORMATION ONLY

TRAFFIC CONTROL COVERING SIGNS

CATEGORY	STAGE	STATION	LOCATION	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I			643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II			SIGN MESSAGE
				# SIGNS	# CYCLES	EACH	# SIGNS	# CYCLES	EACH	
0010	STAGE 1	357+00	RT	1	1	1	--	--	--	EXIT (DOWN ARROW) ONLY
		388+30	RT	--	--	--	1	1	1	EXIT 197
		410+80	LT	--	--	--	1	1	1	EXIT 197
	SUBTOTALS						1		2	
	STAGE 2	357+00	RT	1	6	6	--	--	--	EXIT (DOWN ARROW) ONLY
		382+70	RT	1	6	6	--	--	--	ONLY
		388+30	RT	--	--	--	1	6	6	EXIT 197
		410+80	LT	--	--	--	1	6	6	EXIT 197
	SUBTOTALS						12		12	
	STAGE 3	357+00	RT	1	8	8	--	--	--	EXIT (DOWN ARROW) ONLY
388+30		RT	--	--	--	1	8	8	EXIT 197	
410+80		LT	--	--	--	1	8	8	EXIT 197	
SUBTOTALS						8		16		
TOTALS						21		30		

TRAFFIC CONTROL SIGNS FIXED MESSAGE

CATEGORY	STAGE	SIGN NO.	SIGN SIZE			NUMBER OF SIGNS	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE		SIGN MESSAGE
			W	X	H		EACH	TOTAL	
			FT	X	FT		SF	SF	
0010	STAGE 1	F1	6.00	X	3.00	1	18.00	18.00	HWY WW / ROAD WORK / BEGINS XXX-XX
		F2	6.00	X	3.00	1	18.00	18.00	HWY WW / ROAD WORK / BEGINS XXX-XX
	STAGE 2	W1	9.50	X	3.50	1	33.25	33.25	WIDE LOADS EXCEEDING 13 FT (ARROW)
		W2	9.50	X	3.50	1	33.25	33.25	WIDE LOADS EXCEEDING 13 FT (ARROW)
TOTAL							102.50		

TRAFFIC CONTROL SIGNS PCMS

CATEGORY	STAGE	643.1051 TRAFFIC CONTROL SIGNS PCMS WITH CELLULAR COMMUNICATIONS			
		DAYS	EACH	TOTAL	
0010	PRIOR TO STAGE 1	7	2	14	
	STAGE 1	5	2	10	
	STAGE 2	40	4	160	
	PRIOR TO STAGE 3	7	2	14	
	STAGE 3	55	4	220	
	STAGE 4	5	2	10	
	TOTAL				428

MARKING LINE ITEMS

646.2040
MARKING LINE
GROOVED
WET REFLECTIVE
EPOXY 6-INCH

646.4040
MARKING LINE
GROOVED
WET REFLECTIVE
EPOXY 10-INCH

CATEGORY	LOCATION	STATION	- STATION	646.2040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 6-INCH				SOLID		646.4040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 10-INCH		
				12.5' LINE 37.5' SKIP	12.5' LINE 37.5' SKIP	3' LINE 9' SKIP	3' LINE 9' SKIP	WHITE	YELLOW	3' LINE 9' SKIP	3' LINE 9' SKIP	SOLID
				WHITE LF	BLACK LF	WHITE LF	BLACK LF	WHITE LF	YELLOW LF	WHITE LF	BLACK LF	WHITE LF
0010	USH 51 NB	312+13	356+71	2,324	2,324	--	--	4,660	4,458	--	1	--
	USH 51 NB	356+71	383+00	647	647	--	--	2,571	2,631	653	653	--
	USH 51 NB	383+00	402+10	476	476	--	--	1,346	1,896	--	--	--
	CTH WW NB OFFRAMP	383+00	388+58	--	--	--	--	--	--	--	--	1,119
	B-37-158	402+10	404+47	--	--	--	--	--	--	--	--	--
	USH 51 NB	404+47	429+71	631	631	--	--	2,514	2,533	--	--	--
	CTH WW NB ONRAMP	429+71	436+22	--	--	--	--	--	--	--	--	1,497
	USH 51 NB	429+71	580+48	3,770	3,770	--	--	13,656	15,076	--	--	--
	B-37-161	580+48	581+74	--	--	--	--	--	--	--	--	--
	USH 51 NB	581+74	714+17	3,311	3,311	--	--	13,244	13,244	--	--	--
	B-37-165	714+17	715+30	--	--	--	--	--	--	--	--	--
	USH 51 NB	715+30	771+18	1,397	1,397	--	--	5,588	5,588	--	--	--
	USH 51 SB	313+02	356+01	1,057	1,057	--	--	4,218	4,235	--	--	--
	USH 51 SB	356+01	389+50	1,718	1,718	--	--	1,946	3,418	--	--	--
	CTH WW SB ONRAMP	381+91	389+50	--	--	--	--	--	--	--	--	1,518
	USH 51 SB	389+50	401+23	590	590	--	--	1,168	1,191	--	--	--
	B-37-159	401+23	403+71	--	--	--	--	--	--	--	--	--
	USH 51 SB	403+71	410+54	349	349	--	--	711	683	--	--	--
	CTH WW SB OFFRAMP	410+54	416+42	--	--	--	--	--	--	--	--	800
	USH 51 SB	410+54	435+06	1,225	1,225	48	48	1,864	2,451	--	--	--
	USH 51 SB	435+06	580+47	3,625	3,625	--	--	14,498	14,502	--	--	--
	B-37-162	580+47	581+91	--	--	--	--	--	--	--	--	--
	USH 51 SB	581+91	713+65	3,304	3,304	--	--	13,216	13,216	--	--	--
	B-37-166	713+65	714+79	--	--	--	--	--	--	--	--	--
	USH 51 SB	714+79	771+44	1,400	1,400	--	--	5,594	5,597	--	--	--
	CTH WW	29+75	41+50	293	293	--	--	1,920	2,204	--	--	--
	CTH WW SB OFFRAMP	29+75	30+52	--	--	--	--	22	13	--	--	--
	CTH WW SB ONRAMP	29+75	30+53	--	--	--	--	52	38	--	--	--
	CTH WW NB OFFRAMP	39+88	41+50	--	--	--	--	87	35	--	--	--
	CTH WW NB ONRAMP	40+36	41+50	--	--	--	--	75	80	--	--	--
	USH 51 NB - S OF PROJ LIMITS	--	--	190	190	99	99	--	--	--	--	--
	USH 51 NB - N OF PROJ LIMITS	--	--	--	--	--	--	228	98	--	--	--
	USH 51 SB - S OF PROJ LIMITS	--	--	--	--	--	--	--	--	--	--	--
	USH 51 SB - N OF PROJ LIMITS	--	--	190	190	--	--	228	98	--	--	--
			SUBTOTALS	26,496	26,496	147	147	89,406	93,285	653	654	4,934
			TOTALS									6,241

MARKING LINE ITEMS (CONTINUED)

CATEGORY	LOCATION	STATION -	STATION	646.2020				646.6105	646.7220
				MARKING LINE				MARKING STOP	MARKING
				EPOXY					
				12.5' LINE 37.5 SKIP		12.5' LINE 37.5 SKIP		18-INCH	24-INCH
				WHITE	BLACK	WHITE	YELLOW		
				LF	LF	LF	LF	LF	LF
0010	USH 51 NB	312+13	356+71	--	--	--	--	--	--
	USH 51 NB	356+71	383+00	--	--	--	--	--	--
	USH 51 NB	383+00	402+10	--	--	--	--	--	--
	CTH WW NB OFFRAMP	383+00	388+58	--	--	--	--	--	570
	B-37-158	402+10	404+47	59	59	238	238	--	--
	USH 51 NB	404+47	429+71	--	--	--	--	--	--
	CTH WW NB ONRAMP	429+71	436+22	--	--	--	--	--	--
	USH 51 NB	429+71	580+48	--	--	--	--	--	--
	B-37-161	580+48	581+74	31	31	125	125	--	--
	USH 51 NB	581+74	714+17	--	--	--	--	--	--
	B-37-165	714+17	715+30	28	28	113	113	--	--
	USH 51 NB	715+30	771+18	--	--	--	--	--	--
	USH 51 SB	313+02	356+01	--	--	--	--	--	--
	USH 51 SB	356+01	389+50	--	--	--	--	--	--
	CTH WW SB ONRAMP	381+91	389+50	--	--	--	--	--	--
	USH 51 SB	389+50	401+23	--	--	--	--	--	--
	B-37-159	401+23	403+71	124	124	247	247	--	--
	USH 51 SB	403+71	410+54	--	--	--	--	--	--
	CTH WW SB OFFRAMP	410+54	416+42	--	--	--	--	--	266
	USH 51 SB	410+54	435+06	--	--	--	--	--	--
	USH 51 SB	435+06	580+47	--	--	--	--	--	--
	B-37-162	580+47	581+91	31	31	125	125	--	--
	USH 51 SB	581+91	713+65	--	--	--	--	--	--
	B-37-166	713+65	714+79	28	28	113	113	--	--
	USH 51 SB	714+79	771+44	--	--	--	--	--	--
	CTH WW	29+75	41+50	--	--	--	--	--	--
	CTH WW SB OFFRAMP	29+75	30+52	--	--	--	--	44	--
	CTH WW SB ONRAMP	29+75	30+53	--	--	--	--	--	--
	CTH WW NB OFFRAMP	39+88	41+50	--	--	--	--	42	--
	CTH WW NB ONRAMP	40+36	41+50	--	--	--	--	--	--
	USH 51 NB - S OF PROJ LIMITS	--	--	--	--	--	130	--	--
	USH 51 NB - N OF PROJ LIMITS	--	--	--	--	--	--	--	--
	USH 51 SB - S OF PROJ LIMITS	--	--	--	--	228	98	--	--
	USH 51 SB - N OF PROJ LIMITS	--	--	--	--	--	--	--	--
			SUBTOTALS	301	301	1,189	1,189	86	836
			TOTALS		2,980			86	836

TEMPORARY MARKING

CATEGORY	STAGE	ROADWAY	LOCATION	643.3165			643.3265		NUMBER OF REMOVABLE TAPE INSTALL CYCLES	643.3180			
				TEMPORARY MARKING LINE PAINT 6-INCH			TEMPORARY MARKING LINE PAINT 10-INCH			TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH			
				SOLID WHITE	12.5' LINE 37.5' SKIP	SOLID YELLOW	SOLID WHITE	3' LINE 9' SKIP		SOLID WHITE	3' LINE 9' SKIP	12.5' LINE 37.5' SKIP	SOLID YELLOW
				LF	LF	LF	LF	LF		LF	LF	LF	LF
0010	STAGE 1	USH 51 NB	BEGIN PROJECT LANE CLOSURE AND SHIFT	--	--	--	--	--	1	390	--	288	1,050
		USH 51 NB	MID PROJECT LANE CLOSURE	--	--	--	--	--	1	660	--	200	--
		USH 51 NB	EXIT RAMP WITHIN DRIVING LANE CLOSURE	--	--	--	--	--	1	590	--	88	390
		USH 51 NB	ENTRANCE RAMP WITHIN DRIVING LANE CLOSURE	--	--	--	--	--	1	690	--	150	690
		USH 51 SB	END PROJECT LANE CLOSURE	--	--	--	--	--	1	660	--	200	--
		USH 51 SB	MID PROJECT LANE CLOSURE	--	--	--	--	--	1	660	--	200	--
		USH 51 SB	EXIT RAMP WITHIN DRIVING LANE CLOSURE	--	--	--	--	--	1	590	--	88	390
		USH 51 SB	ENTRANCE RAMP WITHIN DRIVING LANE CLOSURE	--	--	--	--	--	1	690	--	150	690
		SUBTOTALS		--	--	--	--	--		4,930	--	1,363	3,210
					--		--					9,503	
	STAGE 2	USH 51 NB	PROJECT	--	11,426	45,729	--	--	--	--	--	--	--
		USH 51 NB	BEGIN PROJECT LANE CLOSURE AND SHIFTS	--	--	--	--	--	4	3,384	396	800	5,112
		USH 51 NB	LANE SHIFT NEAR CTH WW	--	--	--	--	--	4	1,400	204	--	1,400
		USH 51 NB	MID PROJECT LANE CLOSURE AND SHIFTS	--	--	--	--	--	4	3,648	--	800	4,464
		USH 51 SB	PROJECT	--	11,470	45,879	--	--	--	--	--	--	--
		USH 51 SB	END PROJECT LANE CLOSURE AND SHIFTS	--	--	--	--	--	4	3,648	--	800	4,464
		USH 51 SB	MID PROJECT LANE CLOSURE AND SHIFT	--	--	--	--	--	4	1,824	--	800	3,552
		SUBTOTALS		--	22,896	91,608	--	--		13,904	600	3,200	18,992
					114,504		--					36,696	(CONTINUED)

TEMPORARY MARKING (CONTINUED)

CATEGORY	STAGE	ROADWAY	LOCATION	643.3165			643.3265			NUMBER OF REMOVABLE TAPE INSTALL CYCLES	643.3180			
				TEMPORARY MARKING LINE PAINT 6-INCH			TEMPORARY MARKING LINE PAINT 10-INCH				TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH			
				SOLID	12.5' LINE	SOLID	SOLID	3' LINE	SOLID		3' LINE	12.5' LINE	SOLID	
				WHITE	37.5' SKIP	YELLOW	WHITE	9' SKIP	WHITE		9' SKIP	37.5' SKIP	YELLOW	
LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF				
0010	STAGE 3	USH 51 NB	PROJECT	39,607	1,075	--	6,562	708	--	--	--	--	--	
		USH 51 NB	BEGIN PROJECT LANE CLOSURE AND SHIFTS	--	--	--	--	--	5	3,090	--	1,438	7,530	
		USH 51 NB	MID PROJECT LANE CLOSURE AND SHIFTS	--	--	--	--	--	4	3,424	--	800	1,568	
		USH 51 NB	EXIT RAMP WITHIN DRIVING LANE CLOSURE	--	--	--	--	--	5	3,440	--	438	2,440	
		USH 51 NB	ENTRANCE RAMP WITHIN DRIVING LANE CLOSURE	--	--	--	--	--	5	3,940	--	750	3,940	
		USH 51 SB	PROJECT	44,561	2,004	--	792	48	--	--	--	--	--	
		USH 51 SB	END PROJECT LANE CLOSURE AND SHIFTS	--	--	--	--	--	4	3,424	--	800	1,568	
		USH 51 SB	MID PROJECT LANE CLOSURE AND SHIFTS	--	--	--	--	--	5	4,280	--	1,000	1,960	
		USH 51 SB	EXIT RAMP WITHIN DRIVING LANE CLOSURE	--	--	--	--	--	5	3,440	--	438	2,440	
		USH 51 SB	ENTRANCE RAMP WITHIN DRIVING LANE CLOSURE	--	--	--	--	--	5	3,940	--	750	3,940	
		SUBTOTALS		84,168	3,079	--	7,354	756		28,978	--	6,413	25,386	
					87,247			8,110				60,777		
	STAGE 4	USH 51 NB	BEGIN PROJECT LANE CLOSURE	--	--	--	--	--	1	--	--	200	660	
		USH 51 NB	MID PROJECT LANE CLOSURE	--	--	--	--	--	1	--	--	200	660	
		USH 51 SB	END PROJECT LANE CLOSURE	--	--	--	--	--	1	--	--	200	660	
		USH 51 SB	MID PROJECT LANE CLOSURE	--	--	--	--	--	1	--	--	200	660	
		SUBTOTALS		--	--	--	--	--		--	--	800	2,640	
					--			--				3,440		
TOTALS					201,751			8,110				110,415		

NOTES:

TEMPORARY MARKING REMOVABLE TAPE INCLUDES REINSTALLATION OF LANE CLOSURES AFTER THE END OF EACH LANE CLOSURE RESTRICTION PERIOD
 TEMPORARY MARKING LINE REMOVABLE TAPE LINES AND SKIPS ARE INLCUDED TO REPLACE EXISTING EDGE LINE AND LANE LINE WHEN ALL LANES ARE OPEN DURING LANE CLOSURE RESTRICTION PERIODS
 PLACE TEMPORARY MARKING PAINT IN SAME LOCATION AS ULTIMATE MARKING TO BE REMOVED BY GROOVING OF ULTIMATE MARKINGS

TEMPORARY MARKING (CONTINUED)

CATEGORY	STAGE	ROADWAY	LOCATION	643.3280	646.9000	646.9050	646.9065	646.9150	646.9200
				TEMPORARY MARKING LINE REMOVABLE TAPE 10-INCH	MARKING REMOVAL LINE 4-INCH	MARKING REMOVAL LINE GROOVED PERMANENT TAPE 4-INCH	MARKING REMOVAL LINE GROOVED CONTRAST PERMANENT TAPE 6-INCH	MARKING REMOVAL LINE GROOVED PERMANENT TAPE 8-INCH	MARKIN REMOVAL LINE WIDE
				WHITE LF	LF	LF	LF	LF	LF
0010	STAGE 1	USH 51 NB	BEGIN PROJECT LANE CLOSURE AND SHIFT	--	--	--	288	--	--
		USH 51 NB	MID PROJECT LANE CLOSURE	--	--	200	--	--	--
		USH 51 NB	EXT RAMP WITHIN DRIVING LANE CLOSURE	400	--	88	--	--	--
		USH 51 NB	ENTRANCE RAMP WITHIN DRIVING LANE CLOSURE	500	--	150	--	--	--
		USH 51 SB	END PROJECT LANE CLOSURE	--	200	--	--	--	--
		USH 51 SB	MID PROJECT LANE CLOSURE	--	200	--	--	--	--
		USH 51 SB	EXT RAMP WITHIN DRIVING LANE CLOSURE	400	--	88	--	--	--
		USH 51 SB	ENTRANCE RAMP WITHIN DRIVING LANE CLOSURE	500	--	150	--	--	--
SUBTOTALS				1,800	400	675	288	--	--
	STAGE 2	USH 51 NB	PROJECT	--	--	--	--	--	--
		USH 51 NB	BEGIN PROJECT LANE CLOSURE AND SHIFTS	--	228	--	99	--	--
		USH 51 NB	LANE SHIFT NEAR CTH WW	2,280	300	--	--	155	285
		USH 51 NB	MID PROJECT LANE CLOSURE AND SHIFTS	--	456	--	--	--	--
		USH 51 SB	PROJECT	--	--	--	--	--	--
		USH 51 SB	END PROJECT LANE CLOSURE AND SHIFTS	--	456	--	--	--	--
		USH 51 SB	MID PROJECT LANE CLOSURE AND SHIFT	--	456	--	--	--	--
SUBTOTALS				2,280	1,896	--	99	155	285

(CONTINUED)

TEMPORARY MARKING (CONTINUED)

CATEGORY	STAGE	ROADWAY	LOCATION	643.3280	646.9000	646.9050	646.9065	646.9150	646.9200
				TEMPORARY MARKING	MARKING REMOVAL	MARKING REMOVAL LINE	MARKING REMOVAL LINE	MARKING REMOVAL LINE	MARKIN
				LINE REMOVABLE	LINE 4-INCH	GROOVED PERMANENT	GROOVED CONTRAST	GROOVED PERMANENT	REMOVAL
				TAPE 10-INCH	LINE 4-INCH	TAPE 4-INCH	PERMANENT TAPE 6-INCH	TAPE 8-INCH	LINE WIDE
				WHITE					
				LF	LF	LF	LF	LF	LF
0010	<u>STAGE 3</u>	USH 51 NB	PROJECT				--	--	--
		USH 51 NB	BEGIN PROJECT LANE CLOSURE AND SHIFTS	--	130	--	--	--	--
		USH 51 NB	MID PROJECT LANE CLOSURE AND SHIFTS	--	98	--	--	--	--
		USH 51 NB	EXIT RAMP WITHIN DRIVING LANE CLOSURE	2,000	--	--	--	--	--
		USH 51 NB	ENTRANCE RAMP WITHIN DRIVING LANE CLOSURE	2,500	--	--	--	--	--
		USH 51 SB	PROJECT	--	--	--	--	--	--
		USH 51 SB	END PROJECT LANE CLOSURE AND SHIFTS	--	98	--	--	--	--
		USH 51 SB	MID PROJECT LANE CLOSURE AND SHIFTS	--	98	--	--	--	--
		USH 51 SB	EXIT RAMP WITHIN DRIVING LANE CLOSURE	2,000	--	--	--	--	--
		USH 51 SB	ENTRANCE RAMP WITHIN DRIVING LANE CLOSURE	2,500	--	--	--	--	--
		SUBTOTALS		9,000	424	--	--	--	--
	<u>STAGE 4</u>	USH 51 NB	BEGIN PROJECT LANE CLOSURE	--	--	200	--	--	--
		USH 51 NB	MID PROJECT LANE CLOSURE	--	--	200	--	--	--
		USH 51 SB	END PROJECT LANE CLOSURE	--	--	200	--	--	--
		USH 51 SB	MID PROJECT LANE CLOSURE	--	--	200	--	--	--
		SUBTOTALS		--	--	800	--	--	--
TOTALS				13,080	2,720	1,475	387	155	285

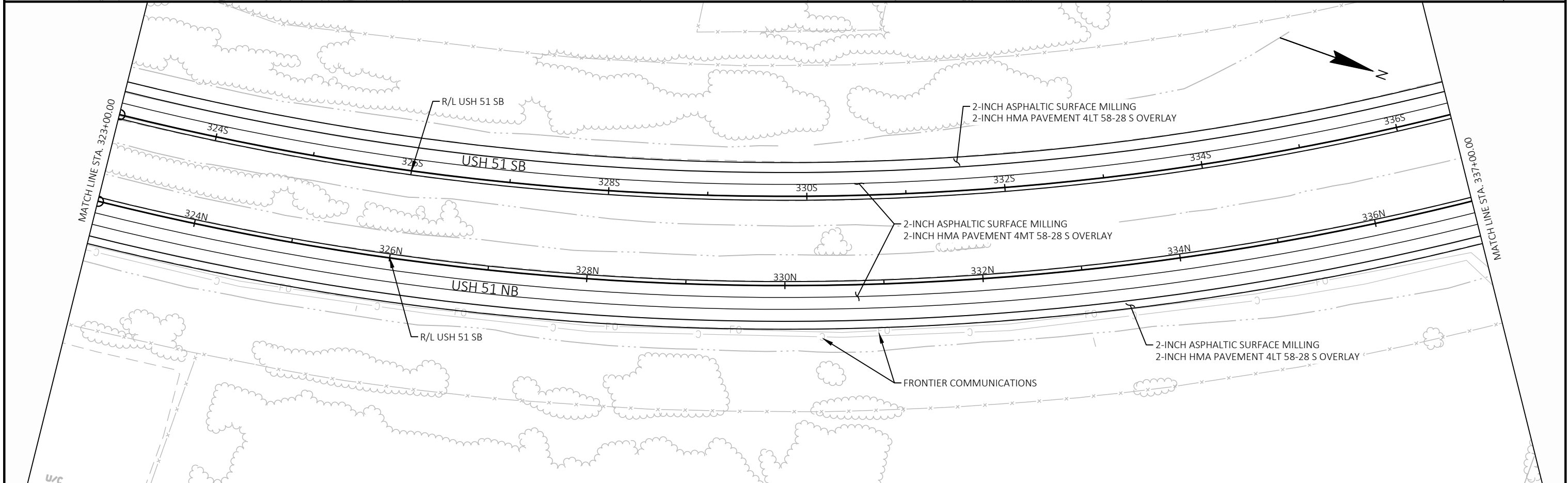
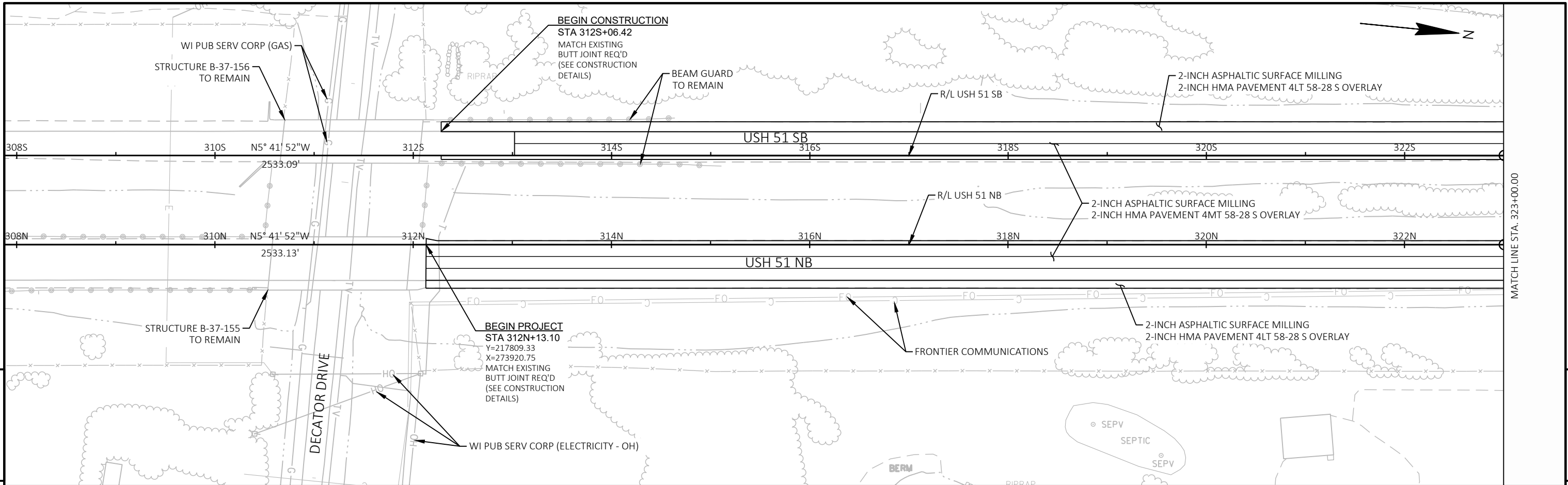
NOTES:
 TEMPORARY MARKING REMOVABLE TAPE INCLUDES REINSTALLATION OF LANE CLOSURES AFTER THE END OF EACH LANE CLOSURE RESTRICTION PERIOD
 TEMPORARY MARKING LINE REMOVABLE TAPE LINES AND SKIPS ARE INLCUDED TO REPLACE EXISTING EDGE LINE AND LANE LINE WHEN ALL LANES ARE OPEN DURING LANE CLOSURE RESTRICTION PERIODS
 PLACE TEMPORARY MARKING PAINT IN SAME LOCATION AS ULTIMATE MARKING TO BE REMOVED BY GROOVING OF ULTIMATE MARKINGS

CONSTRUCTION STAKING ITEMS

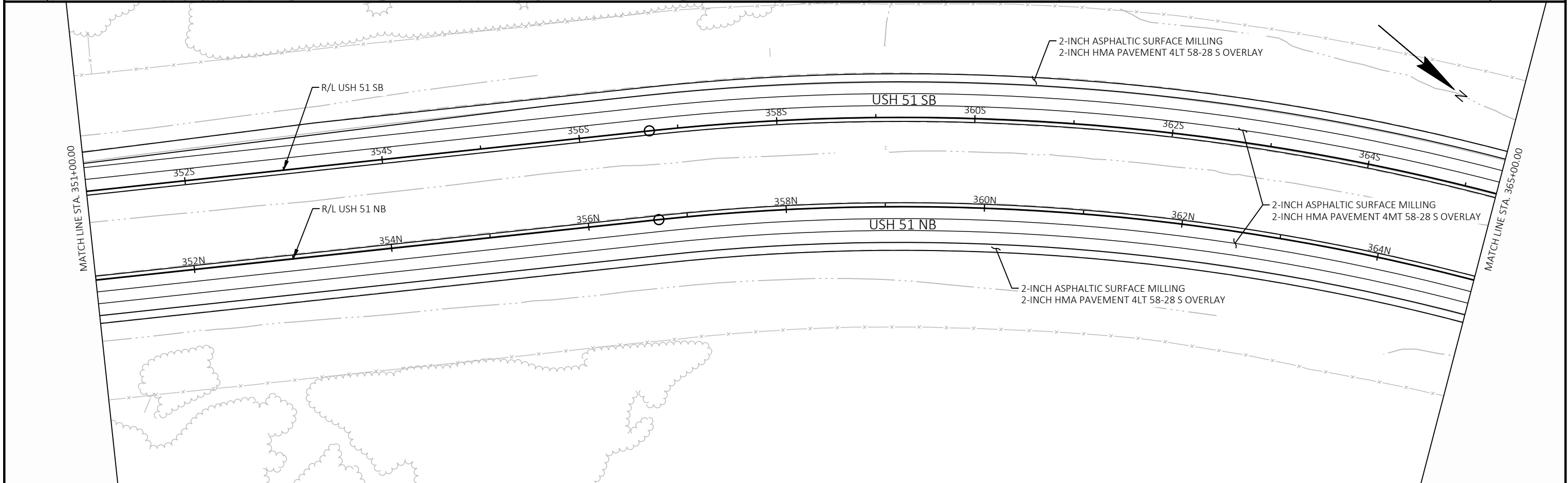
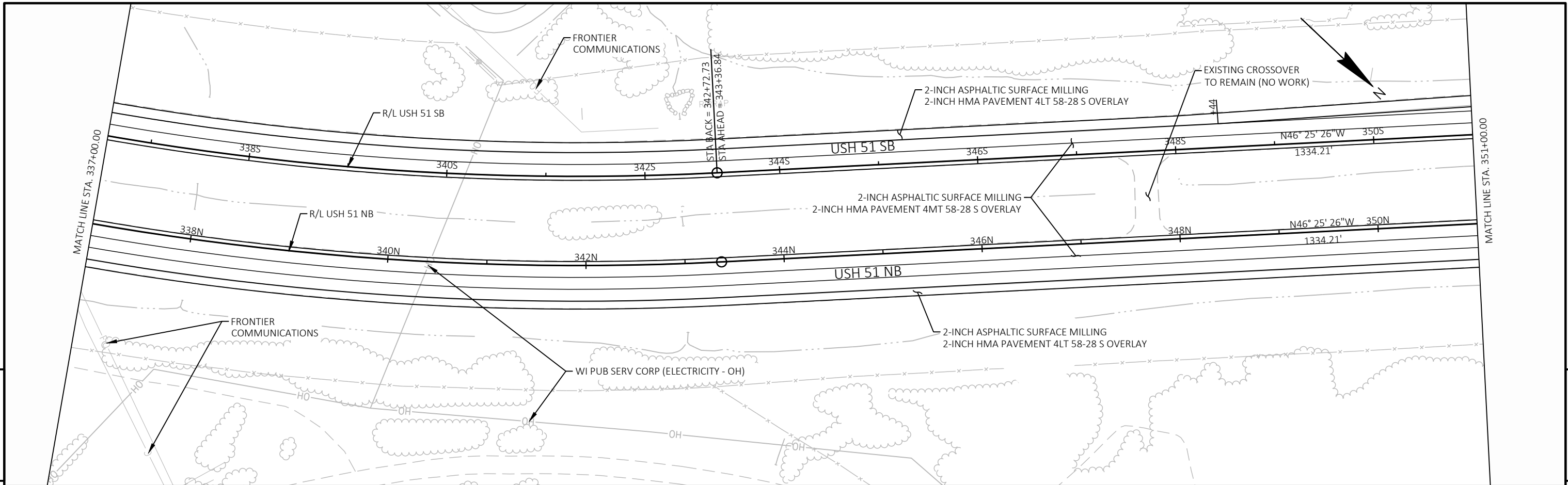
CATEGORY	ROADWAY	STATION	-	STATION	650.6501.01	650.8000	650.9911.01
					CONSTRUCTION STAKING STRUCTURE LAYOUT (C-37-55) EACH	CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (1170-01-76) EACH
0010	USH 51 NB	312+13		401+83	--	8,970	--
		404+62		580+48	--	17,586	--
		581+74		714+17	--	13,243	--
		715+30		771+18	--	5,588	--
USH 51 SB	USH 51 SB	313+02		400+85	--	8,783	--
		404+62		580+47	--	17,585	--
		581+71		713+65	--	13,194	--
		714+79		771+44	--	5,665	--
CTH WW PROJECT		29+75		41+50	--	1,175	--
					1	--	1
TOTALS					1	91,789	1

FILL EXISTING RUMBLE STRIPS

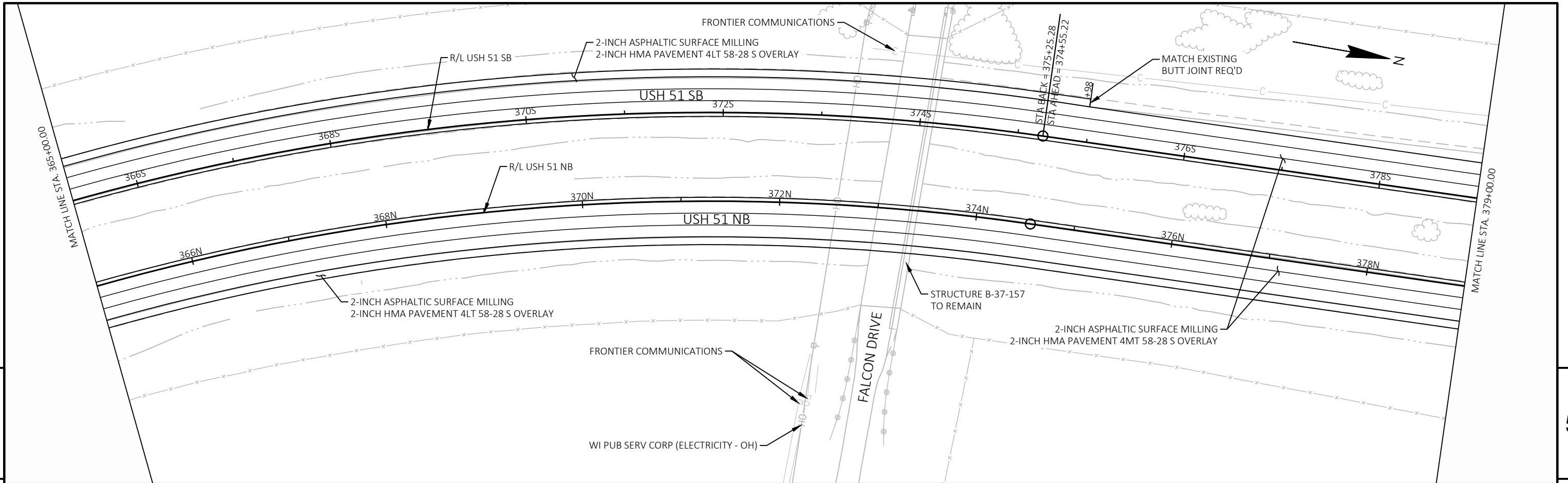
CATEGORY	STAGE	ROADWAY	SPV.0090.02
			FILL EXISTING RUMBLE STRIPS LF
0010	STAGE 1	USH 51 NB	685
		USH 51 SB	915
TOTAL			1,600



PROJECT NO: 1170-01-76	HWY: USH 51	COUNTY: MARATHON	PLAN - USH 51	SHEET	E
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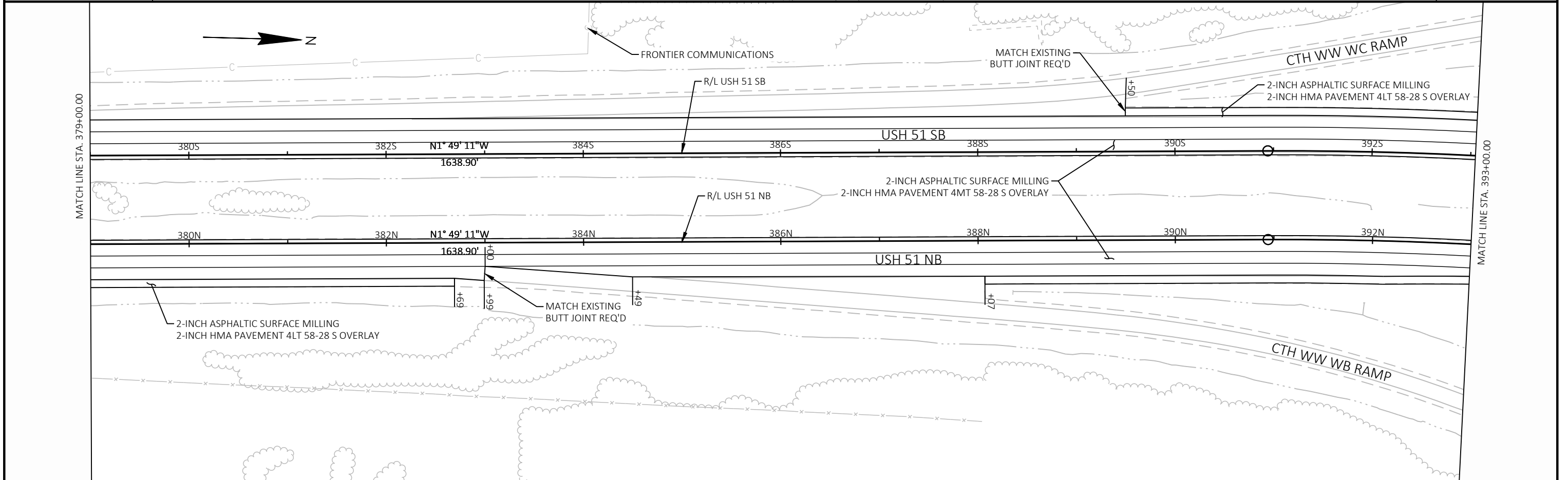


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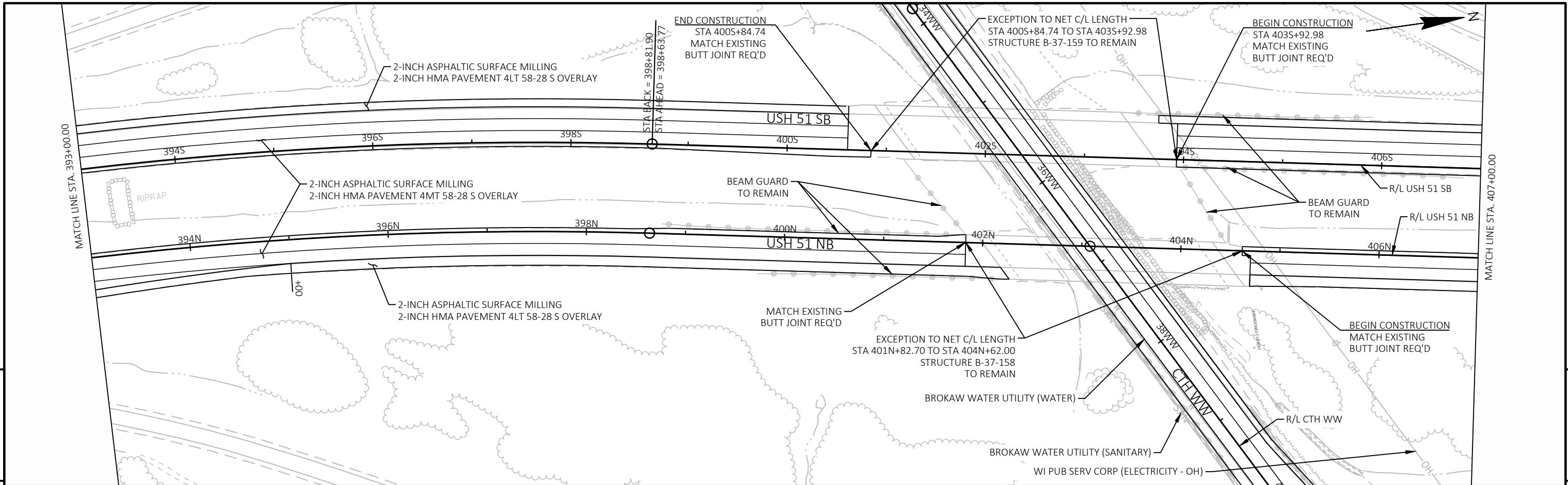


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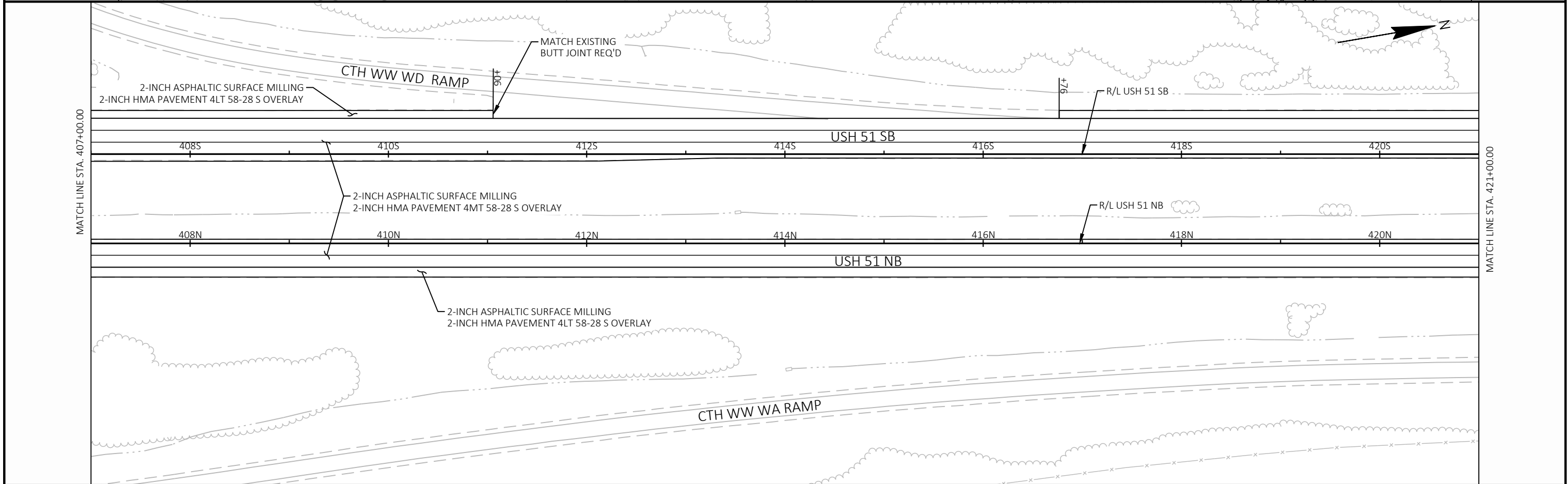


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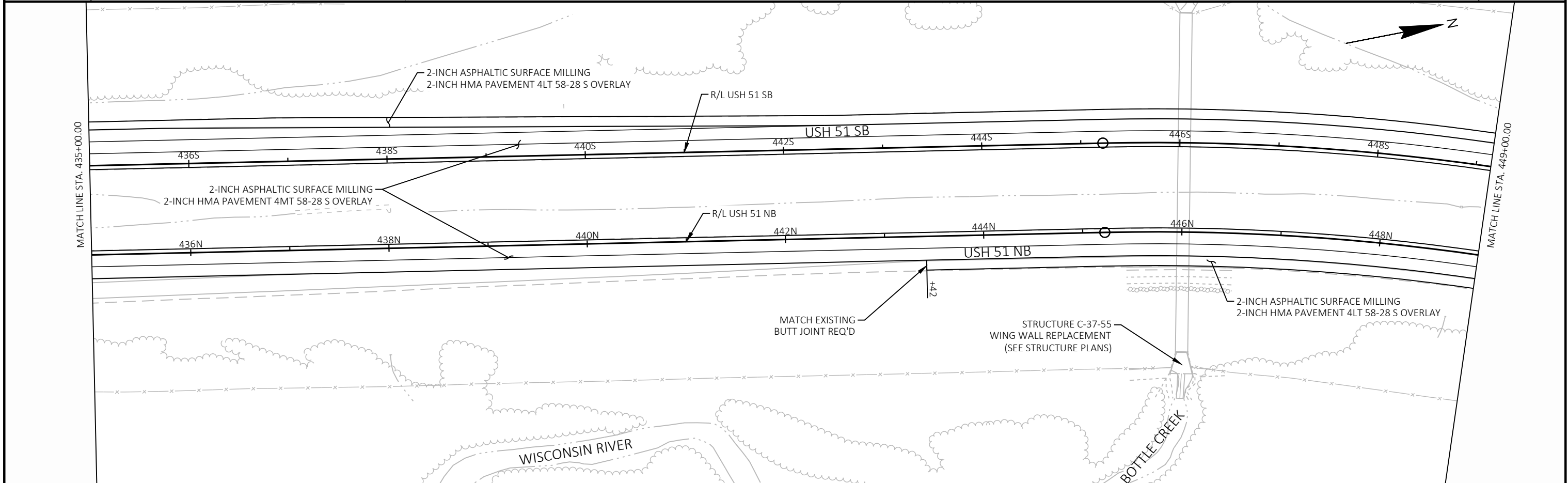
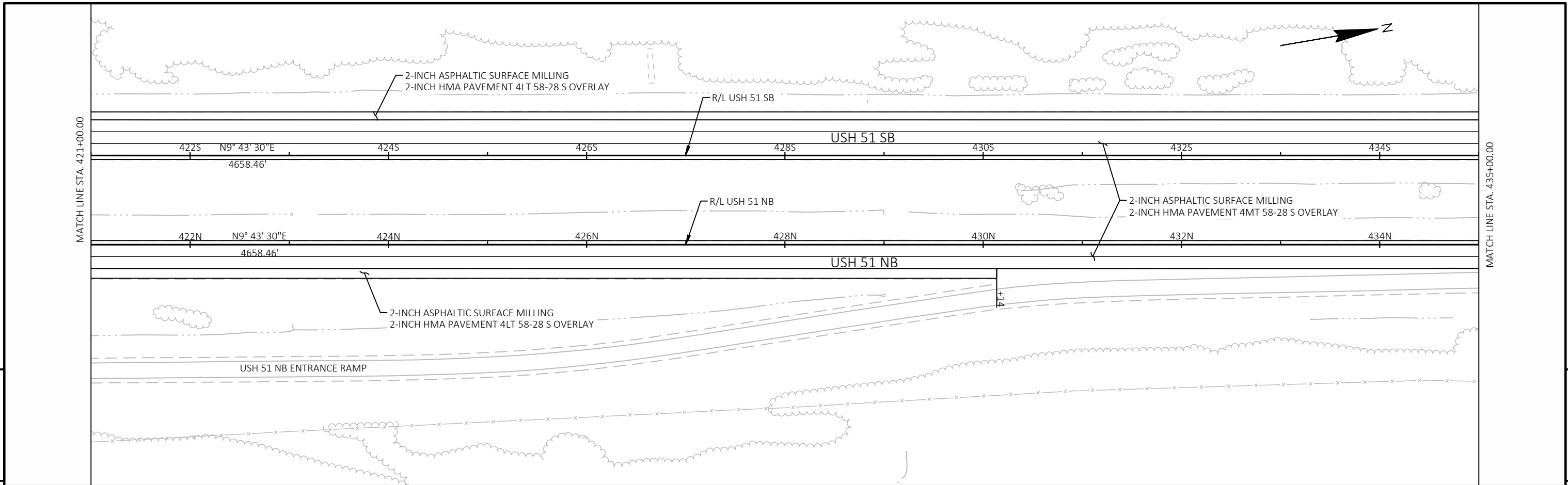


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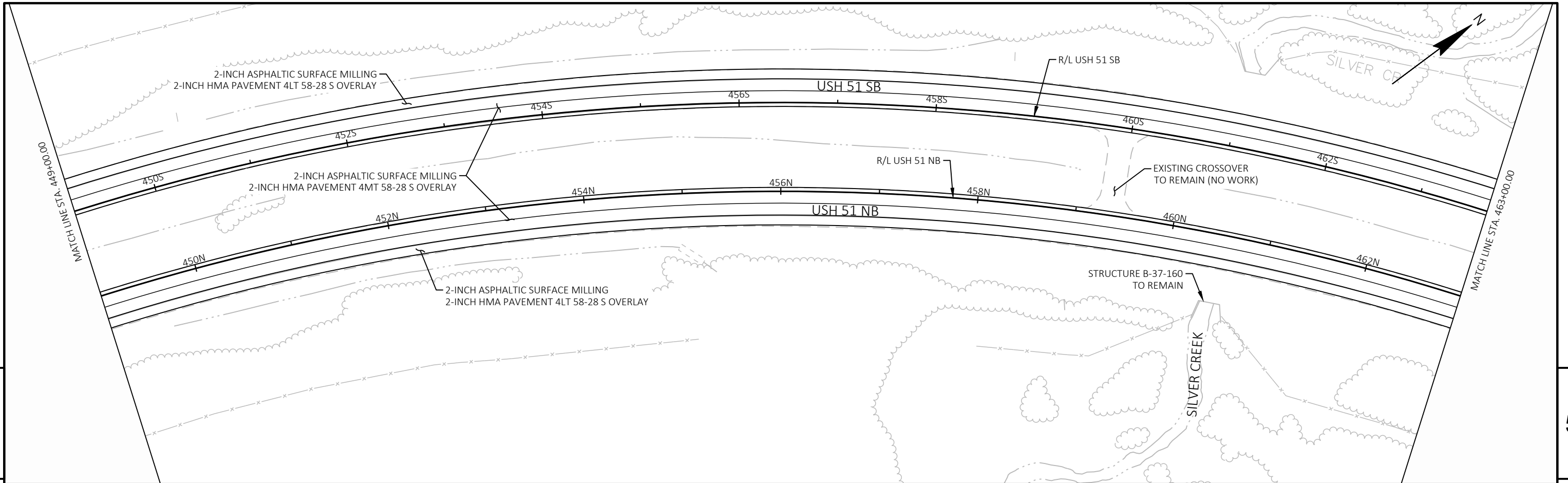
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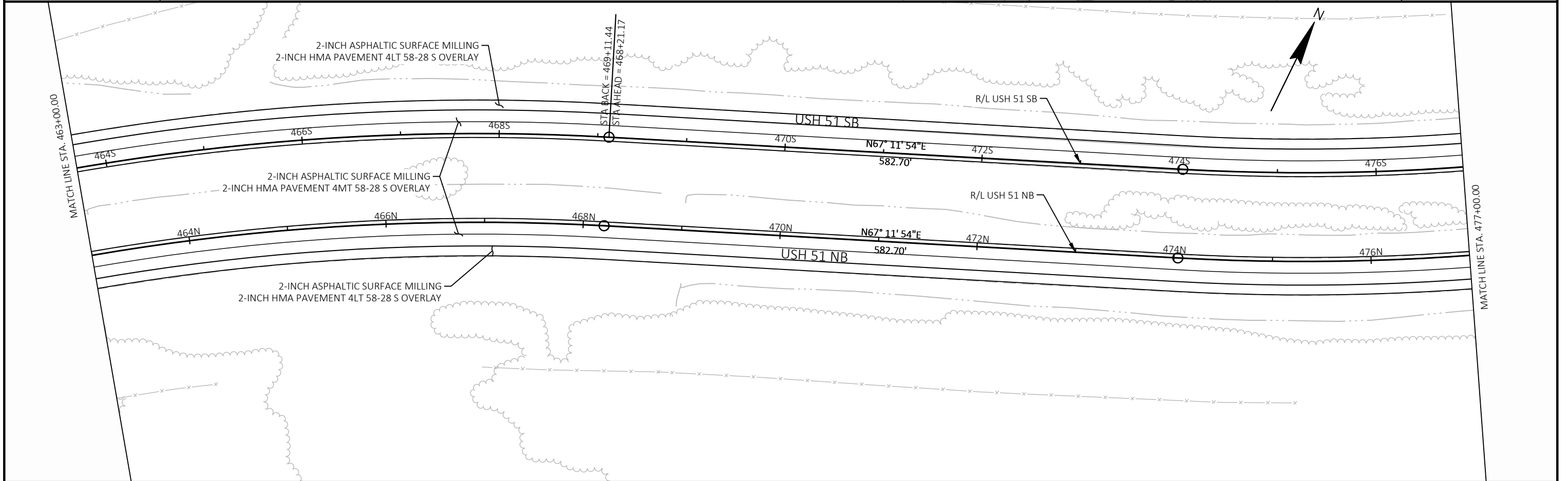


PROJECT NO: 1170-01-76	HWY: USH 51	COUNTY: MARATHON	PLAN - USH 51	SHEET	E
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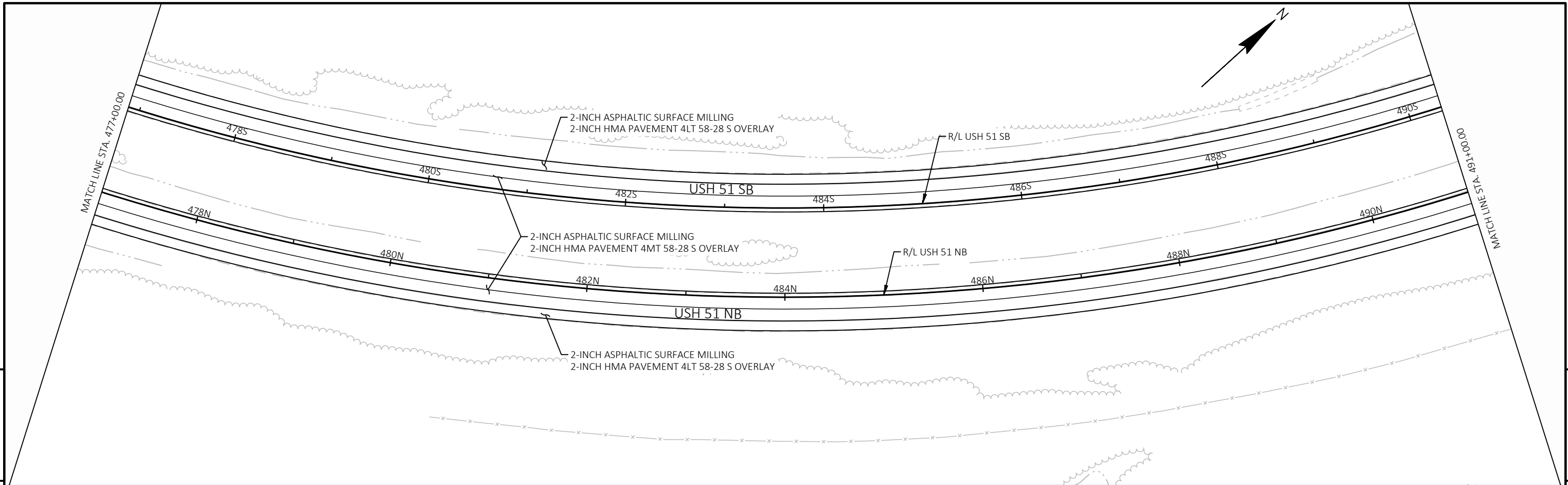


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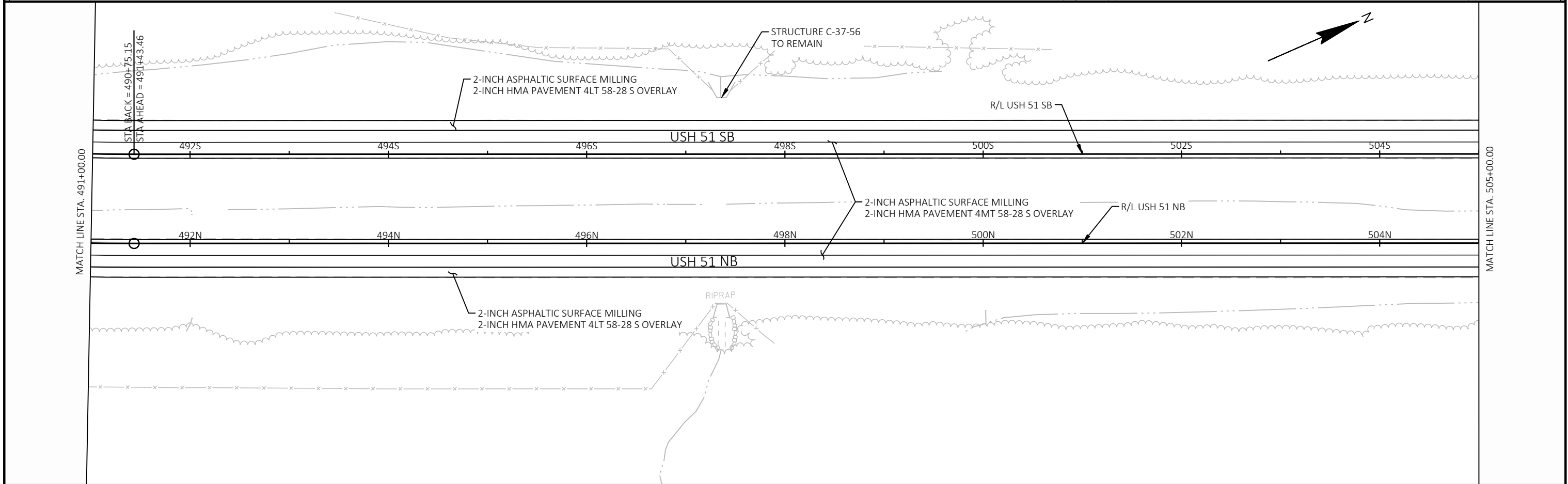


PROJECT NO: 1170-01-76	HWY: USH 51	COUNTY: MARATHON	PLAN - USH 51	SHEET	E
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PROJECT NO: 1170-01-76

HWY: USH 51

COUNTY: MARATHON

PLAN - USH 51

SHEET

E

FILE NAME : C:\CADD\LIB\PW\HNTB_C\STRAIT\GREATLAKES\DO247194\050101-PN.DWG
LAYOUT NAME - 050107-PN

PLOT DATE : 2/5/2024 3:32 PM

PLOT BY : CRYSTAL STRAIT

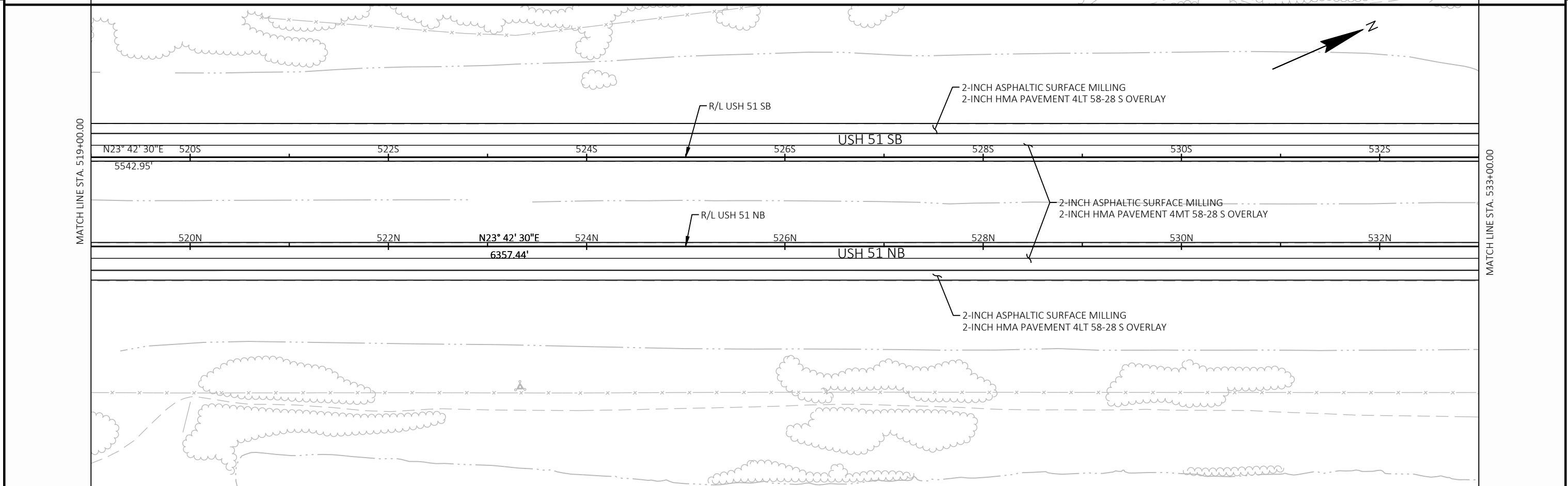
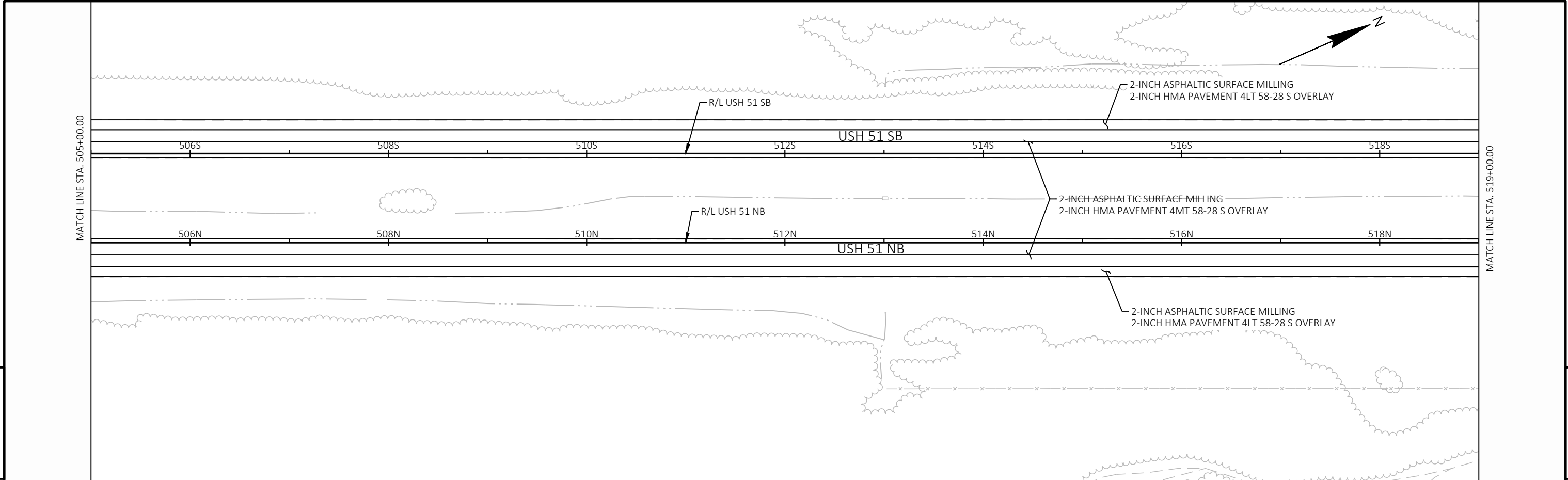
PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADD SHEET 44

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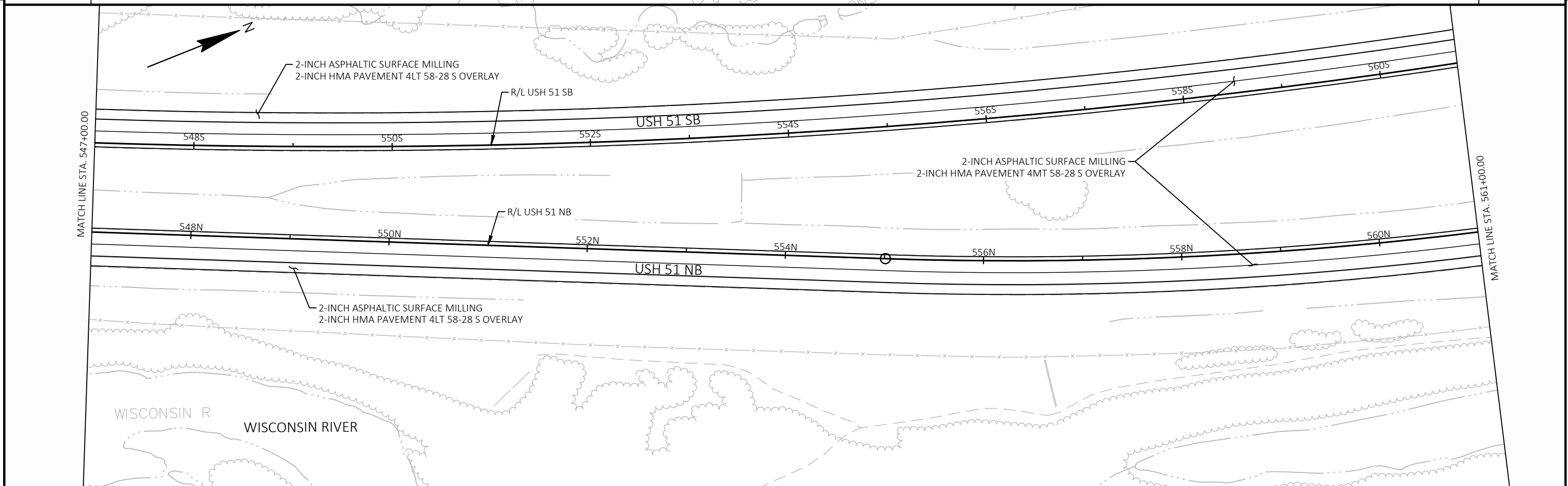
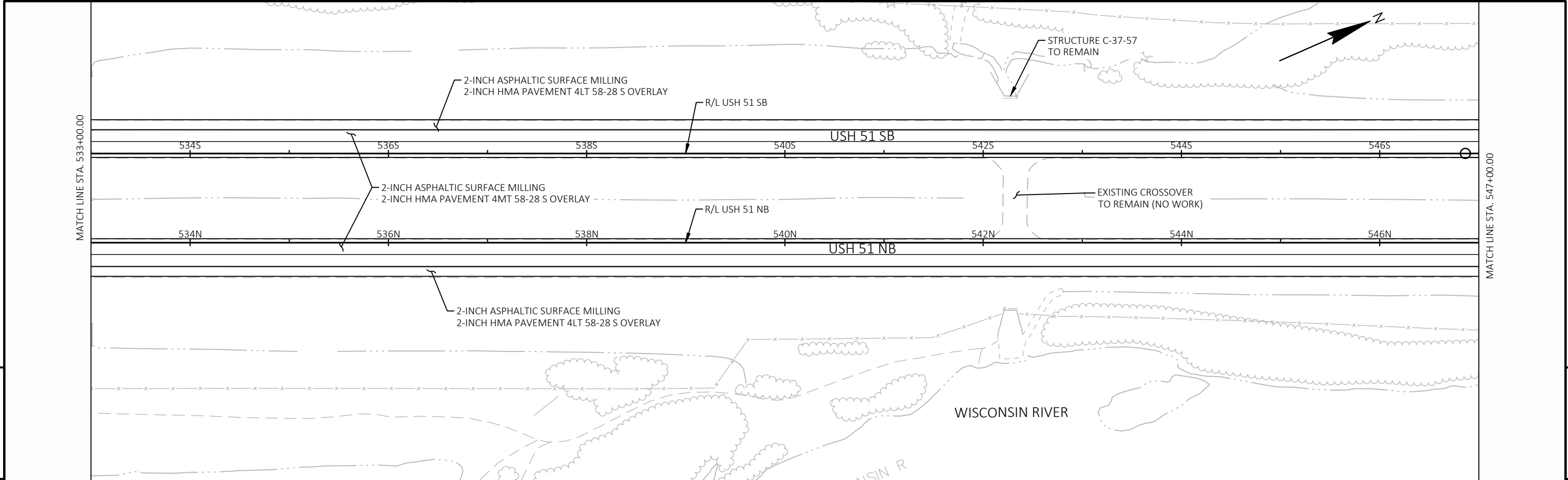
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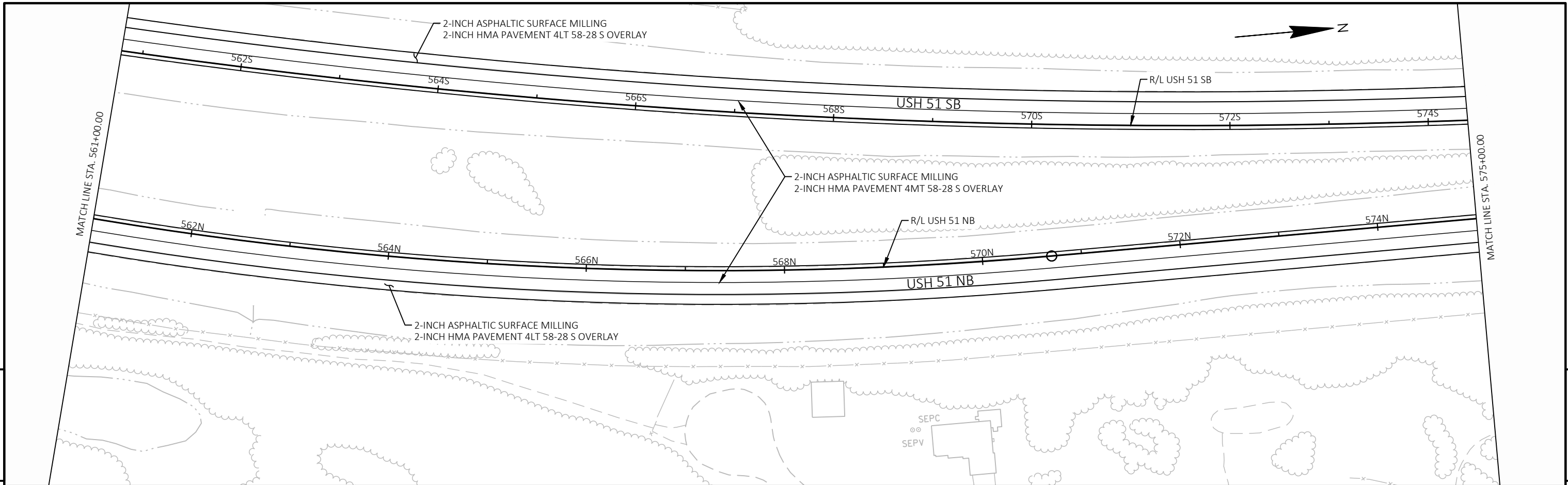
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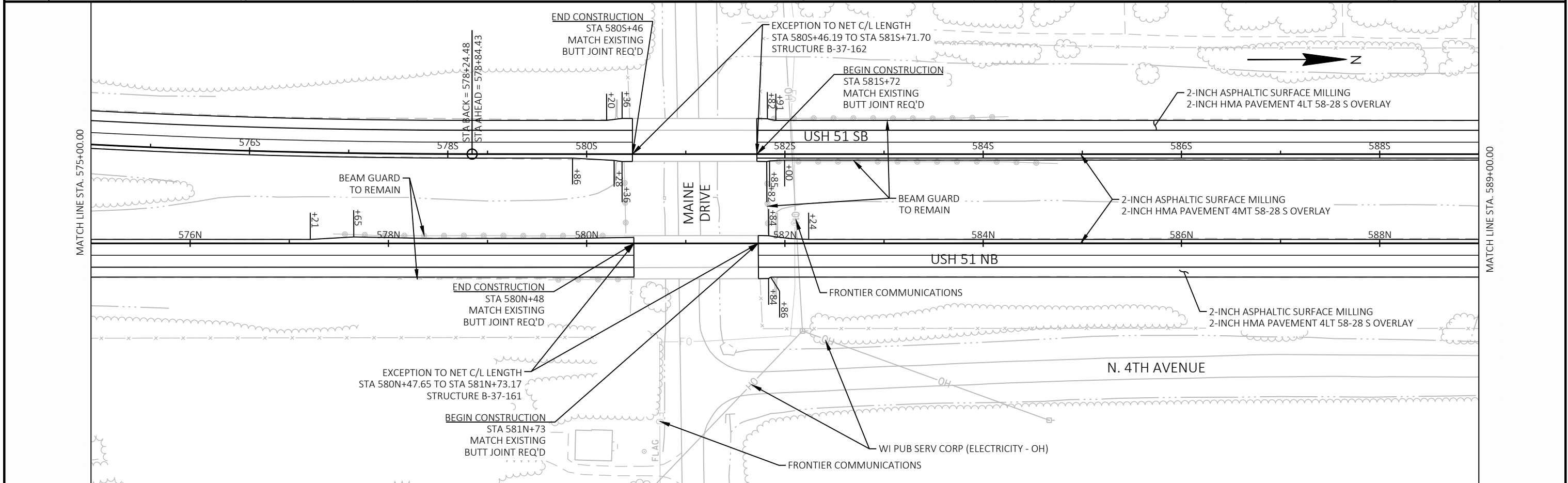


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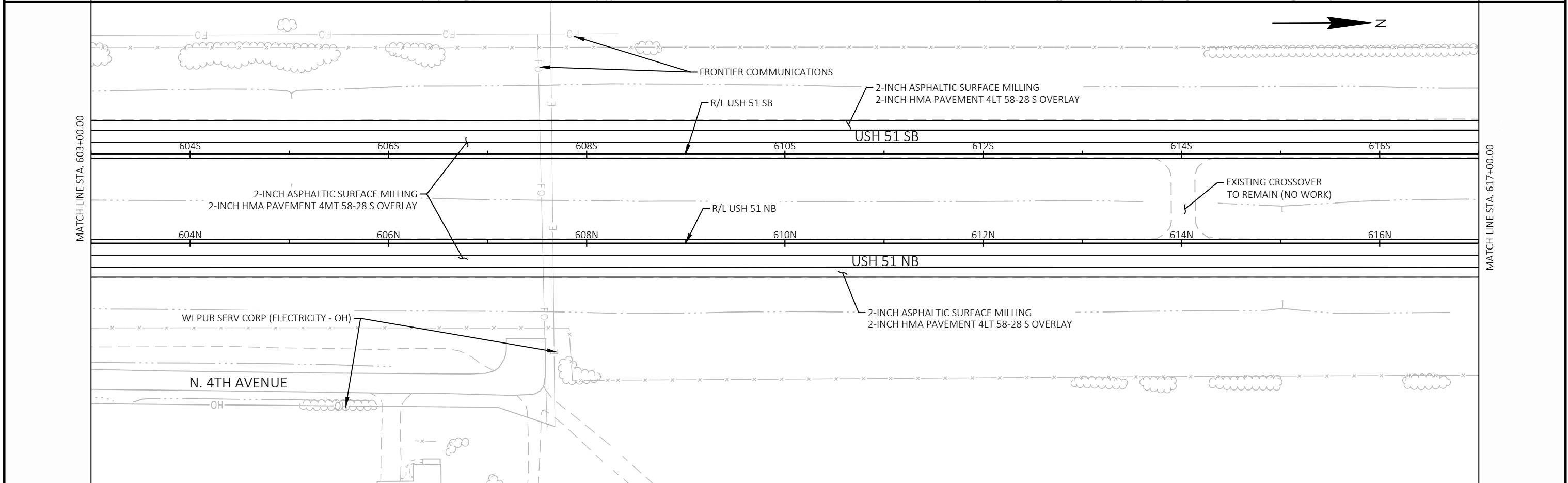
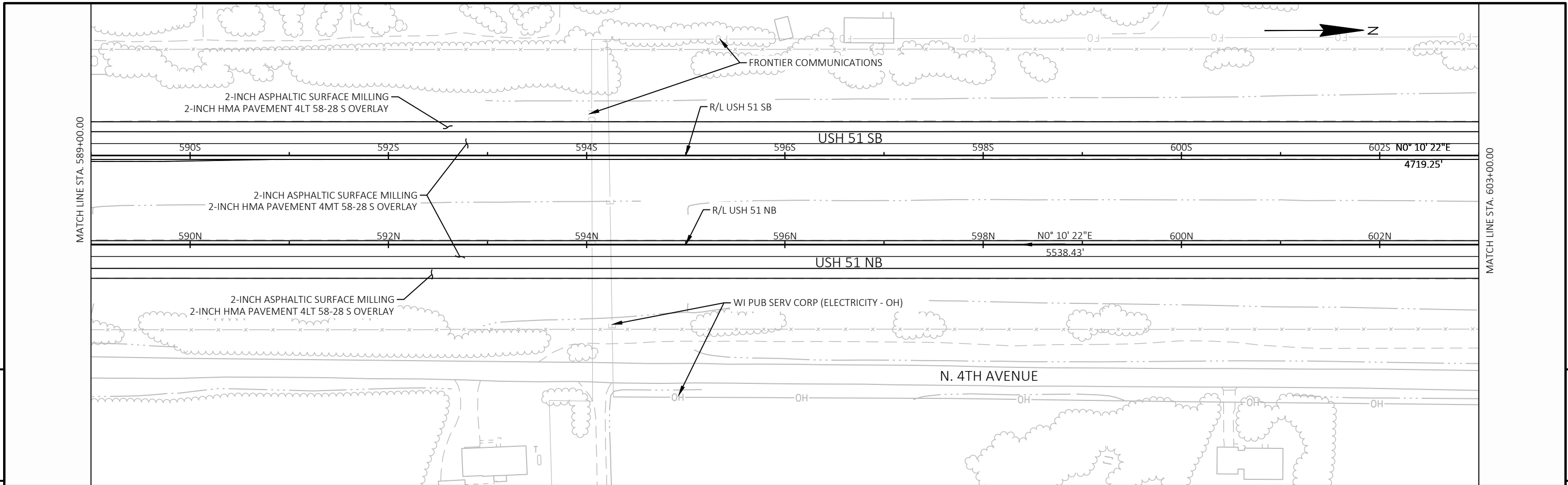


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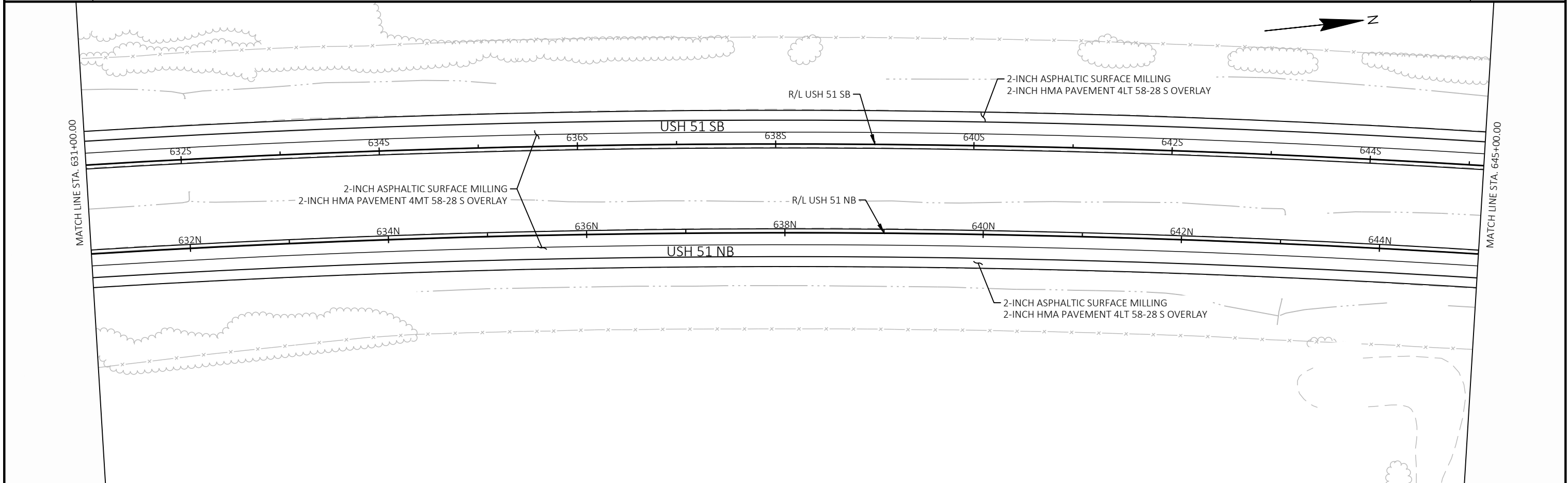
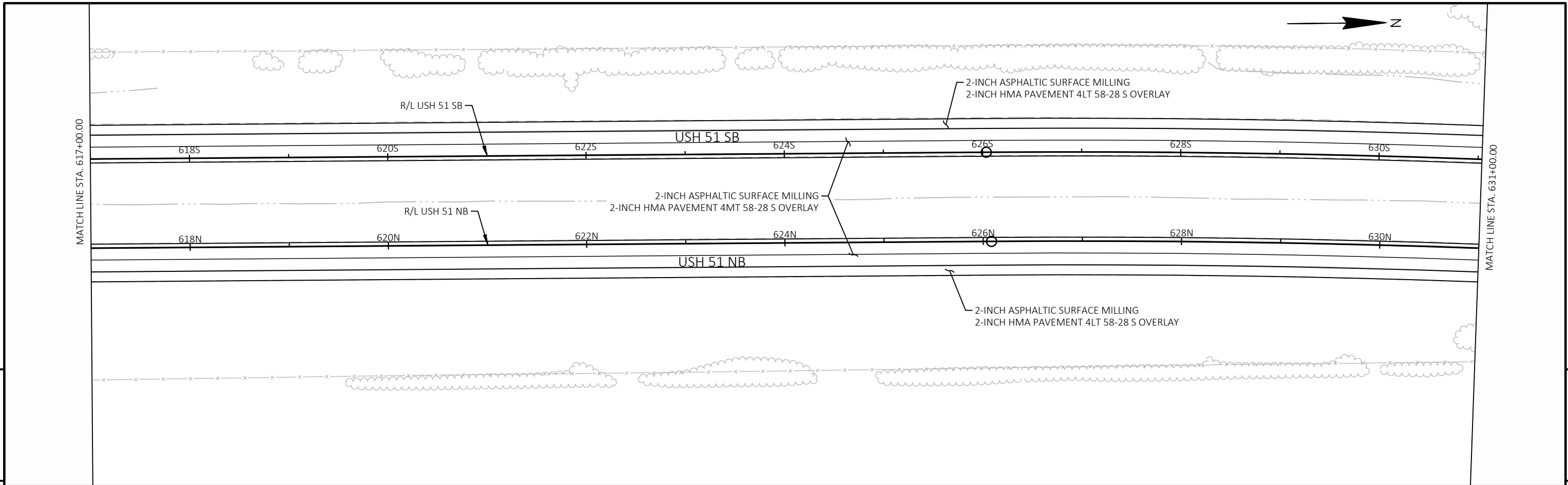
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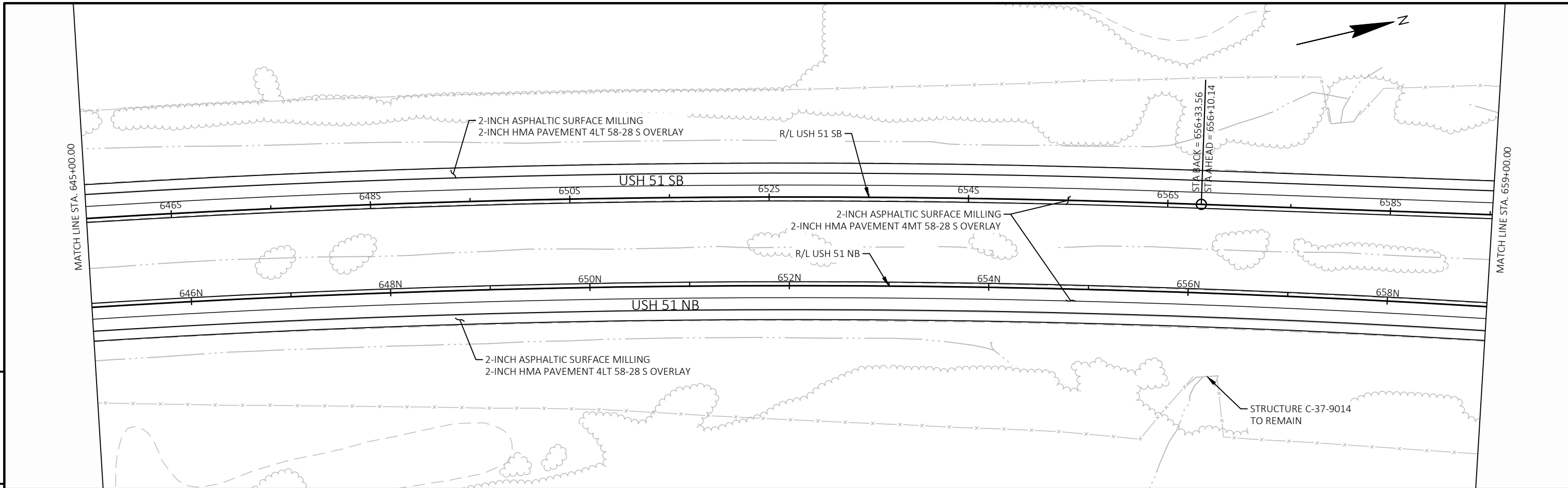
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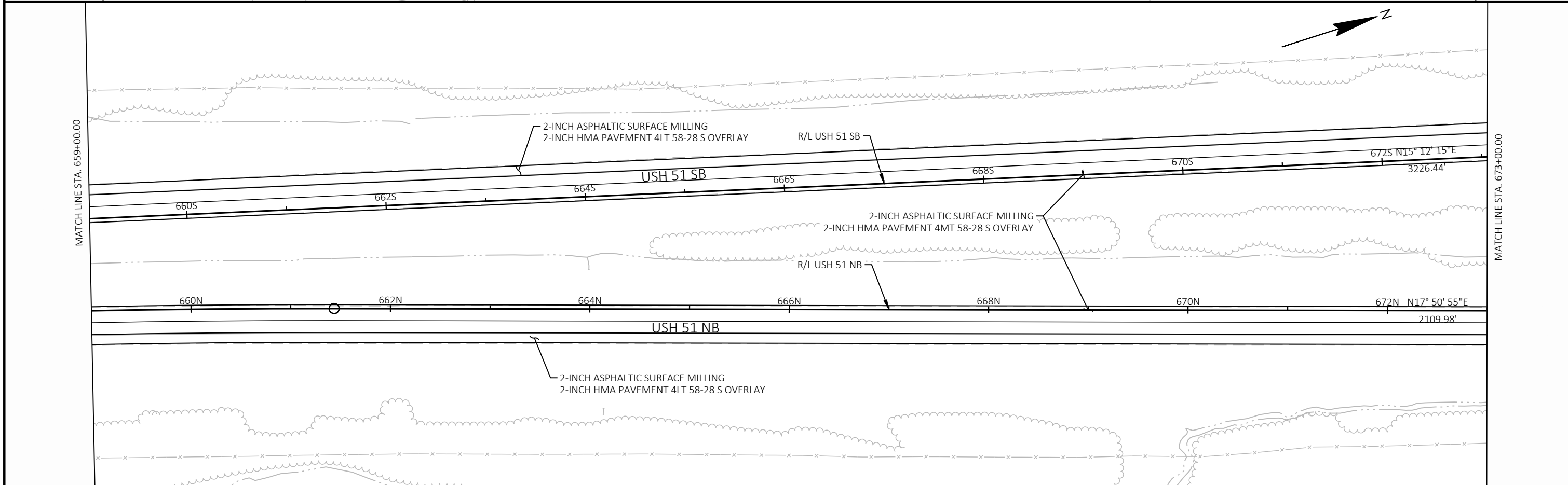


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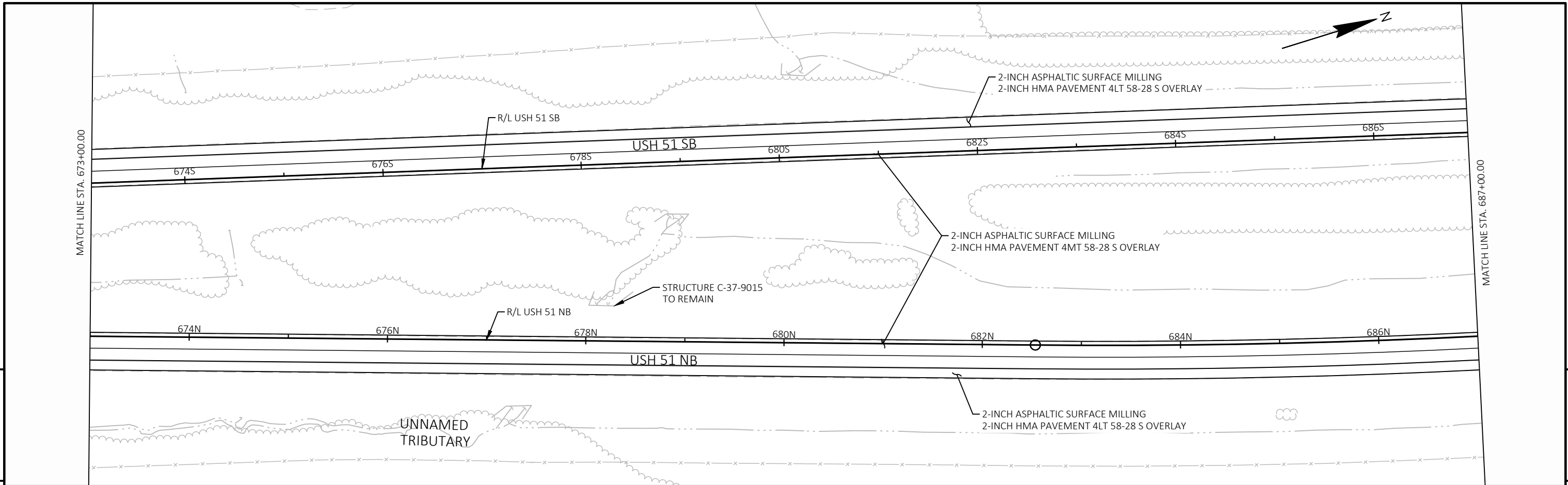


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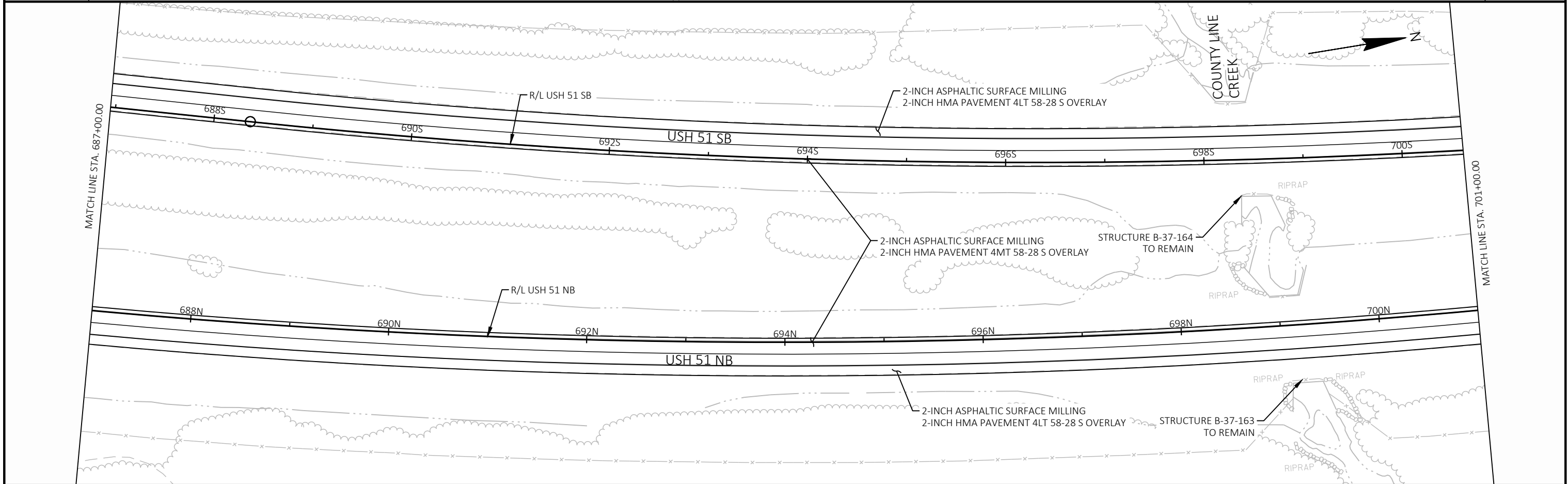


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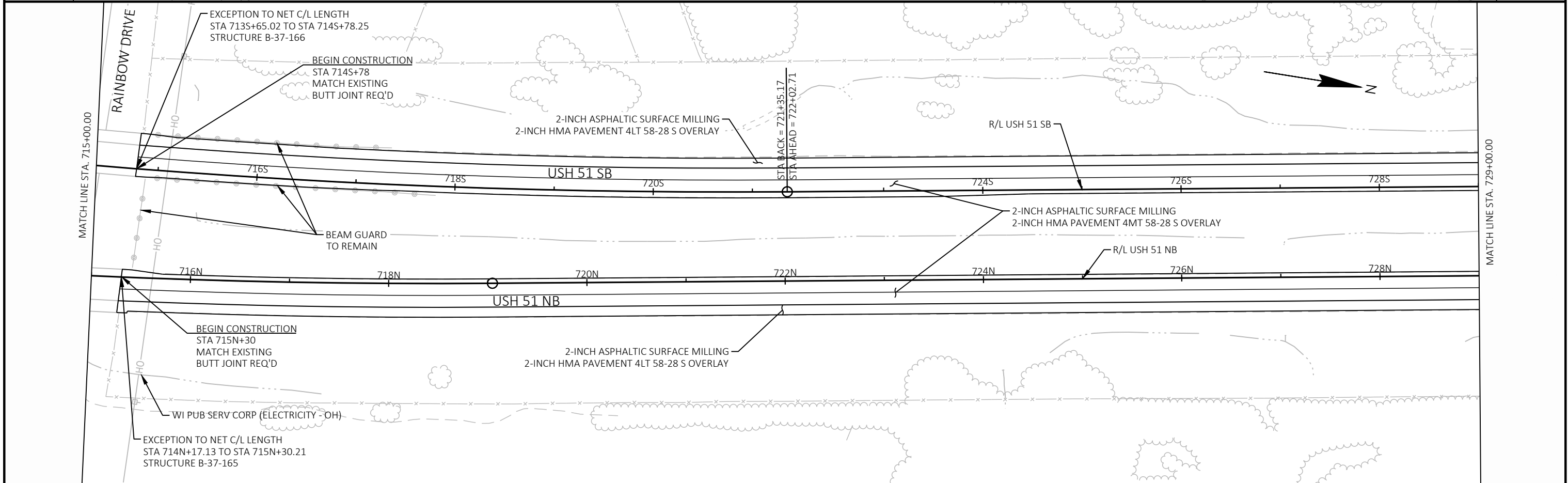
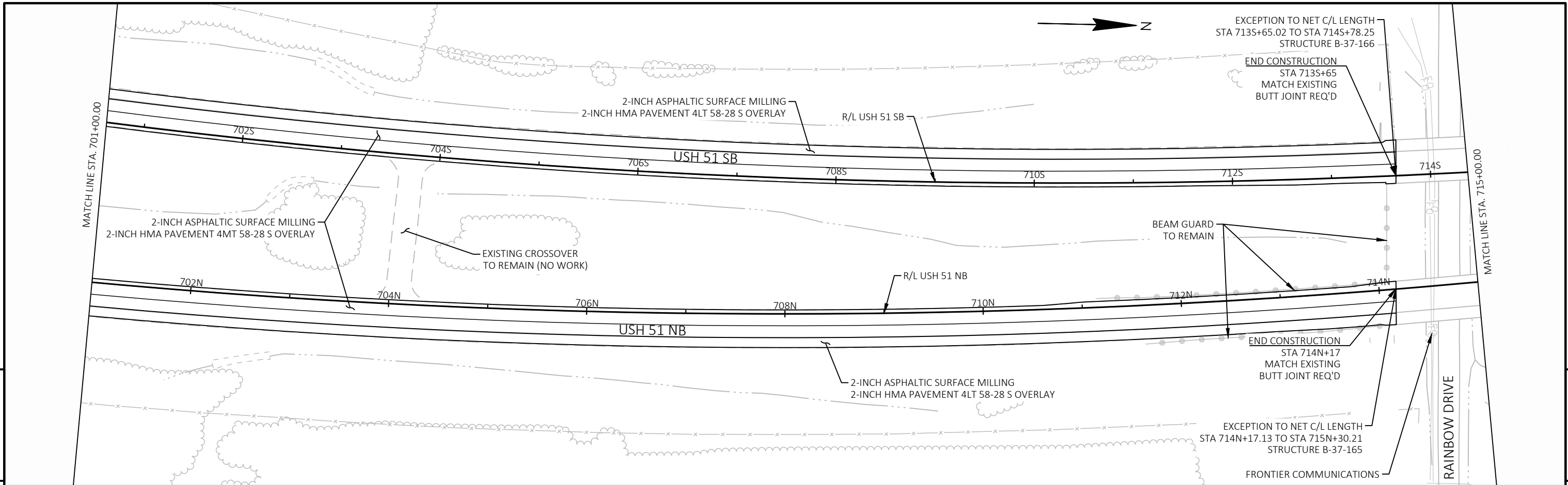


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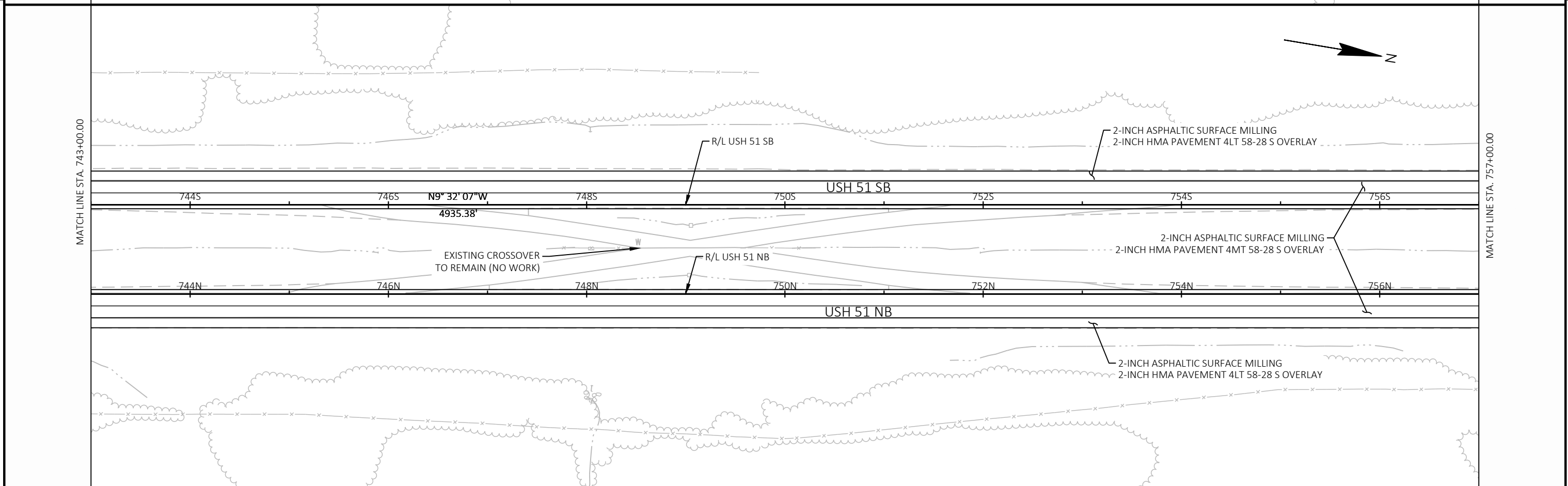
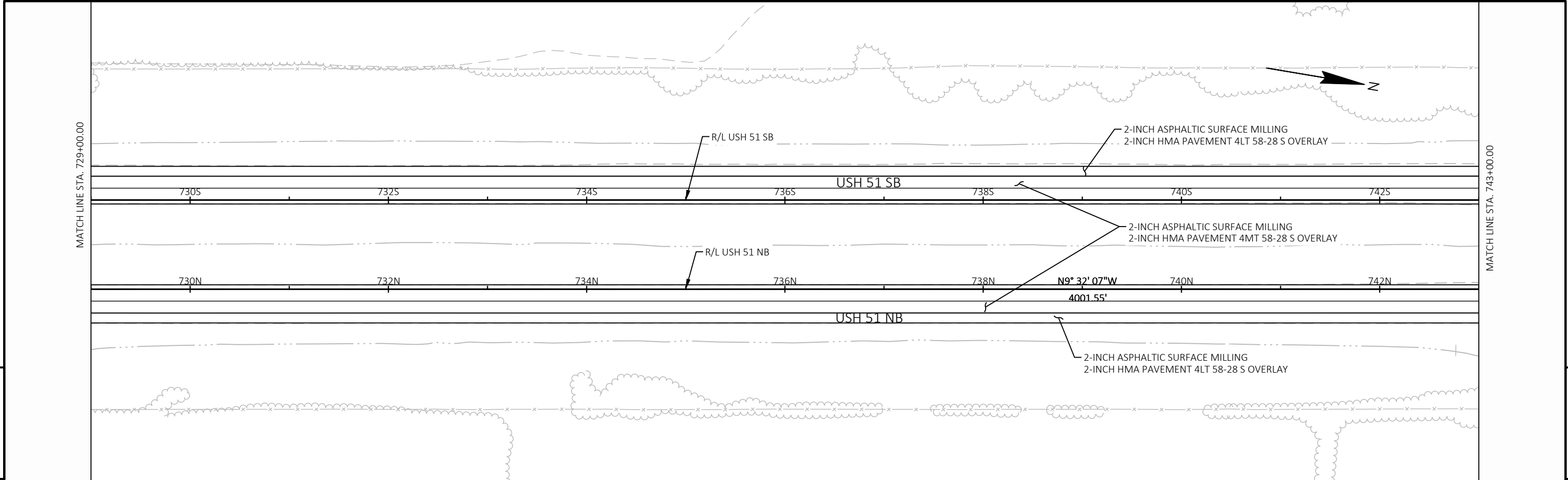
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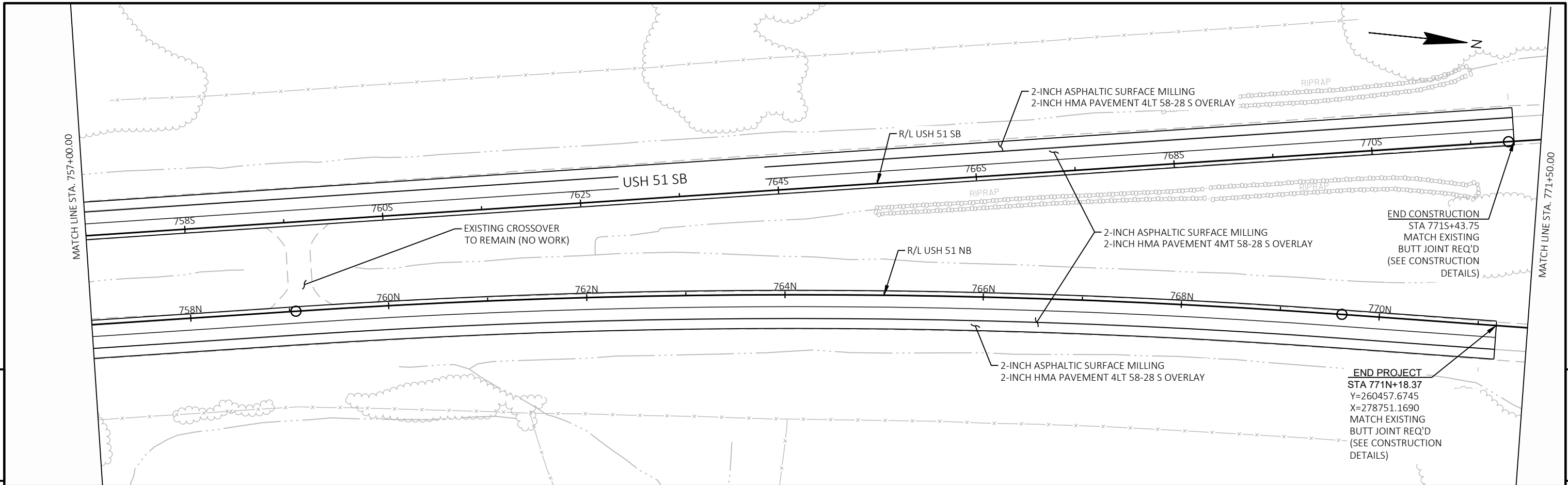
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PROJECT NO: 1170-01-76	HWY: USH 51	COUNTY: MARATHON	PLAN - USH 51	SHEET	E
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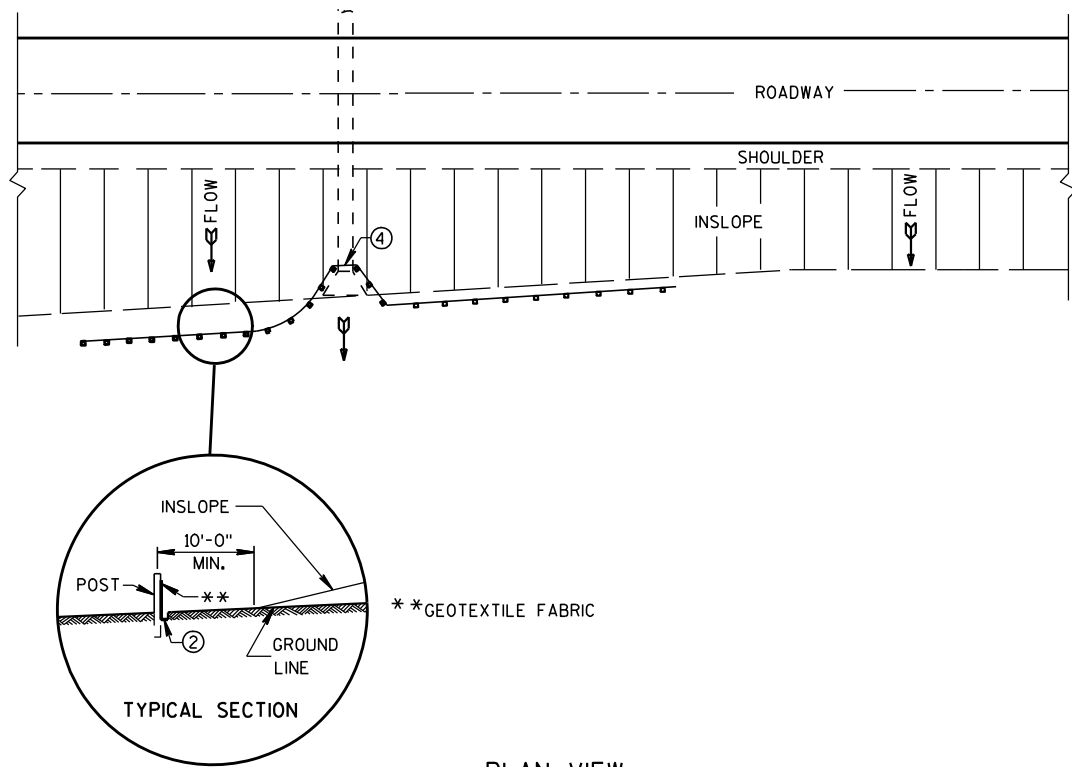
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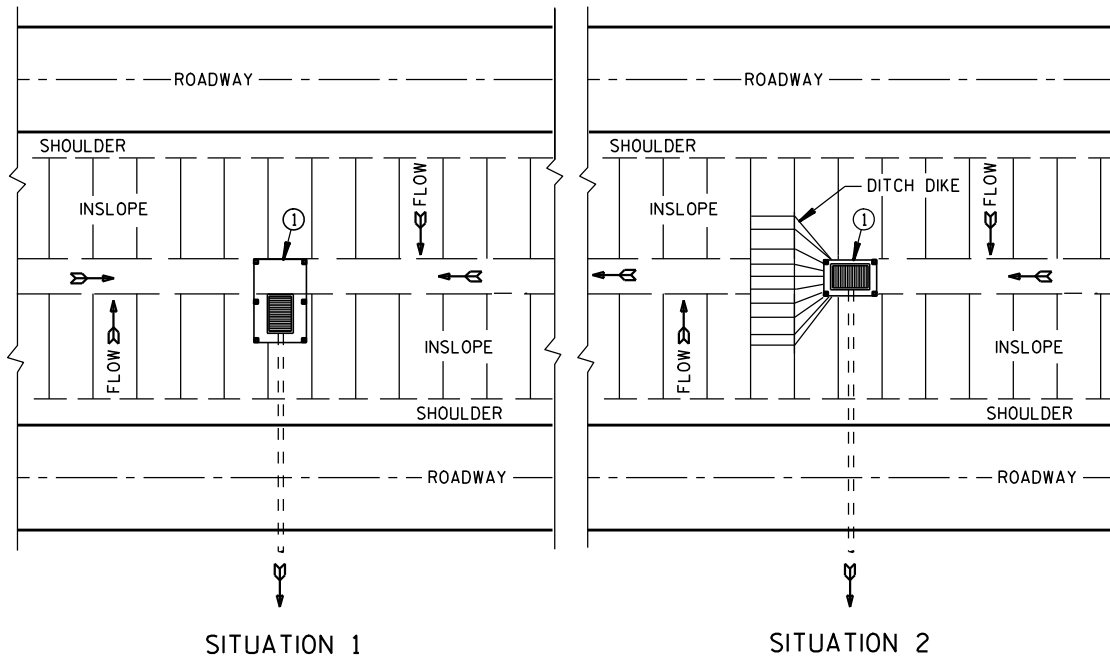
THIS FRAME IS INTENTIONALLY LEFT BLANK

Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13C19-03	HMA LONGITUDINAL JOINTS
15A04-07C	DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-08C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-06A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-06B	PAVEMENT MARKING MAJOR SPLIT FREEWAY TO FREEWAY
15C31-06C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15C31-06D	PAVEMENT MARKING LANE DROP AND LANE REDUCTION
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D07-06	TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER
15D08-09	TRAFFIC CONTROL, TEMPORARY ENTRANCE RAMP CROSSOVER
15D12-12B	TEMPORARY EMERGENCY PULLOUTS
15D15-07A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-07E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D40-05B	TRAFFIC CONTROL, FULL LANE SHIFT MULTILANE DIVIDED 50 MPH AND OVER
15D40-05D	TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

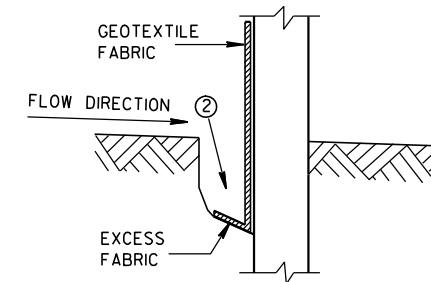


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

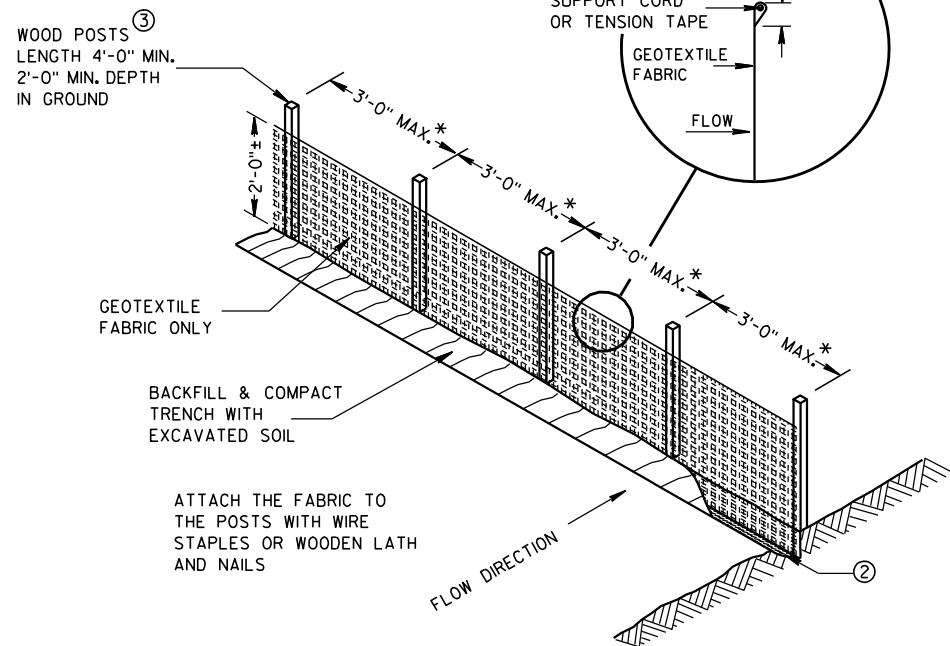
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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



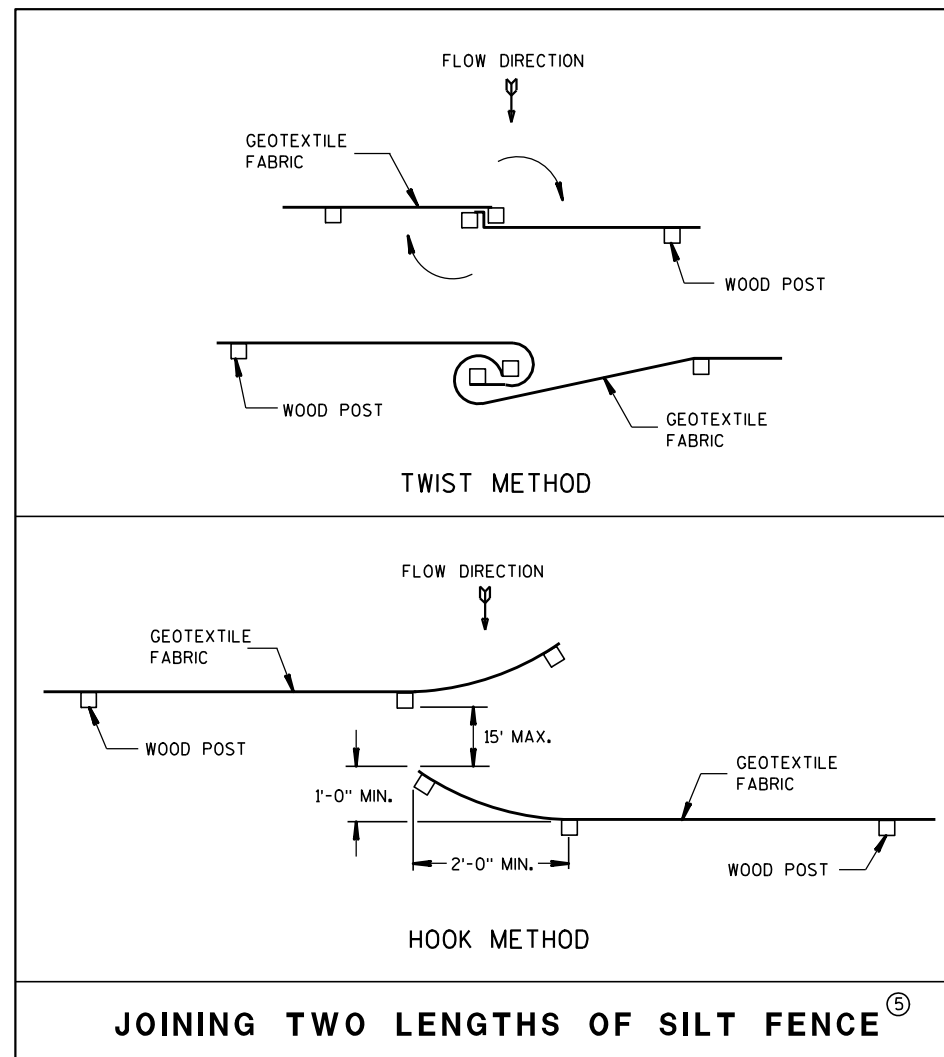
TRENCH DETAIL

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

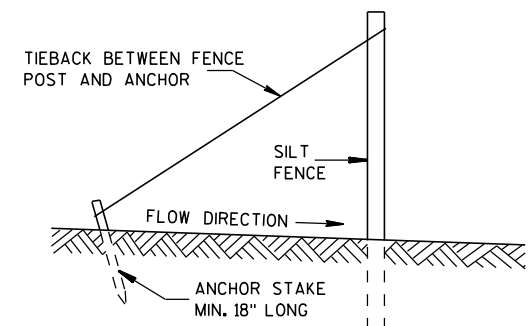


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

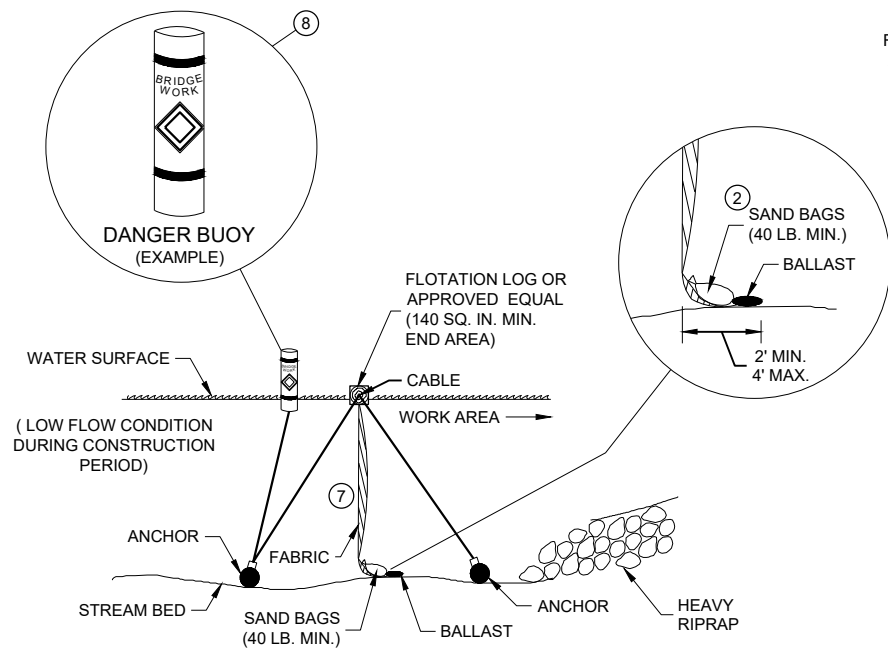
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05
DATE

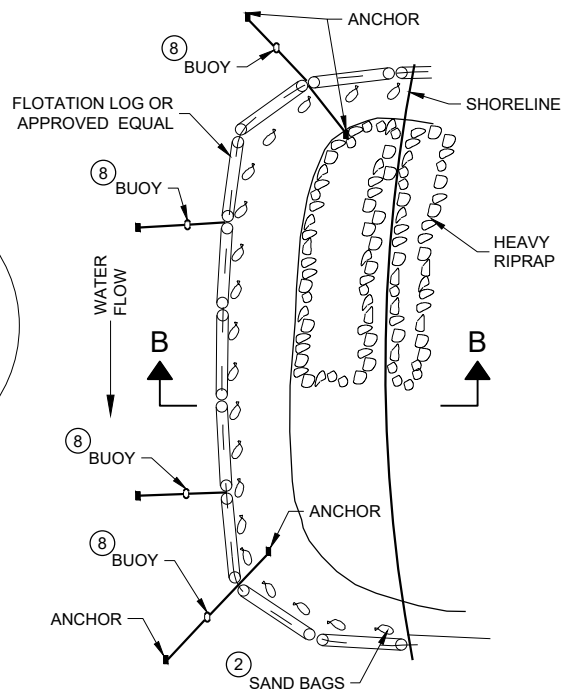
FHWA

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

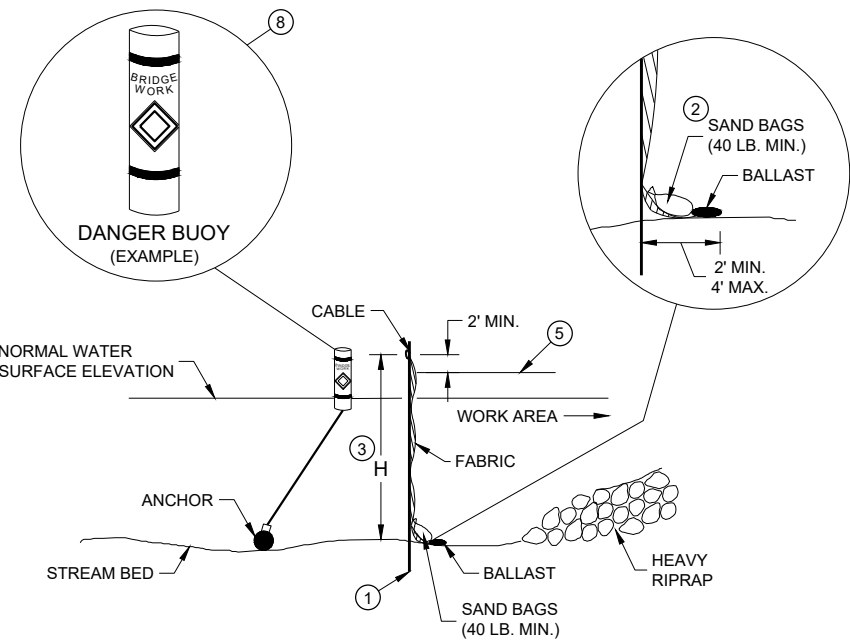


SECTION B - B

**TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6**

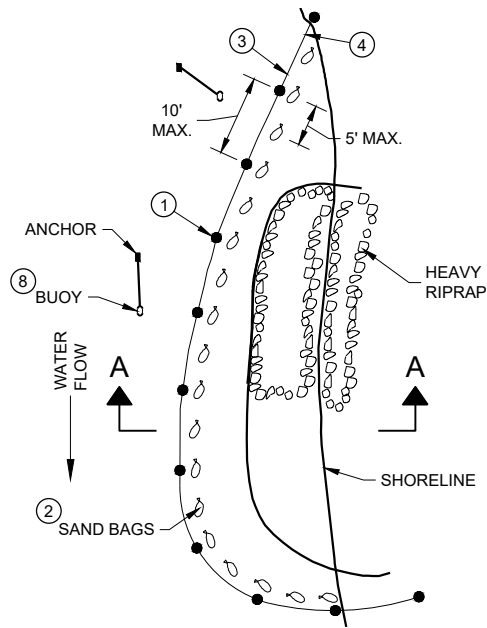


PLAN VIEW



SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION



PLAN VIEW

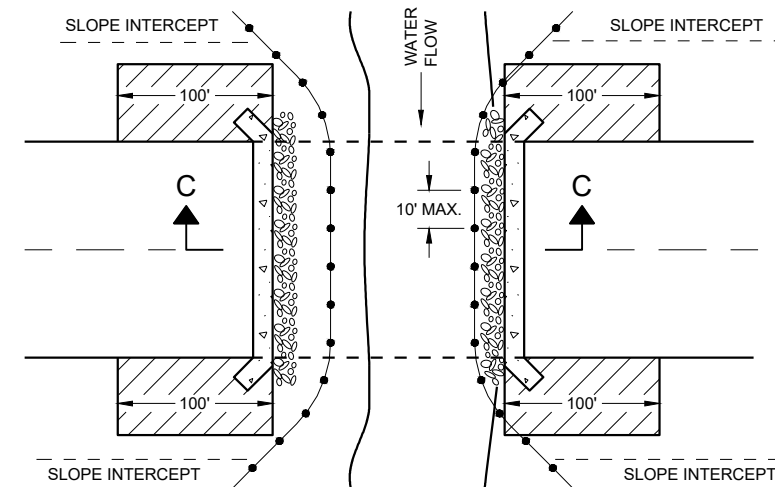
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

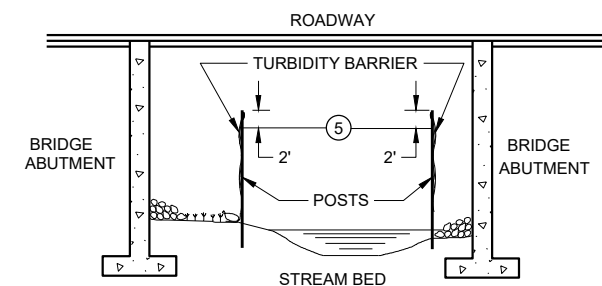
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- ② SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- ③ WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.
- ④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- ⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- ⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.
- ⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- ⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

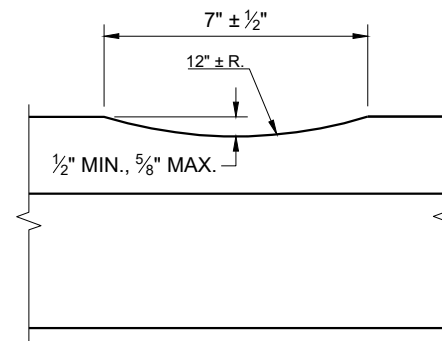
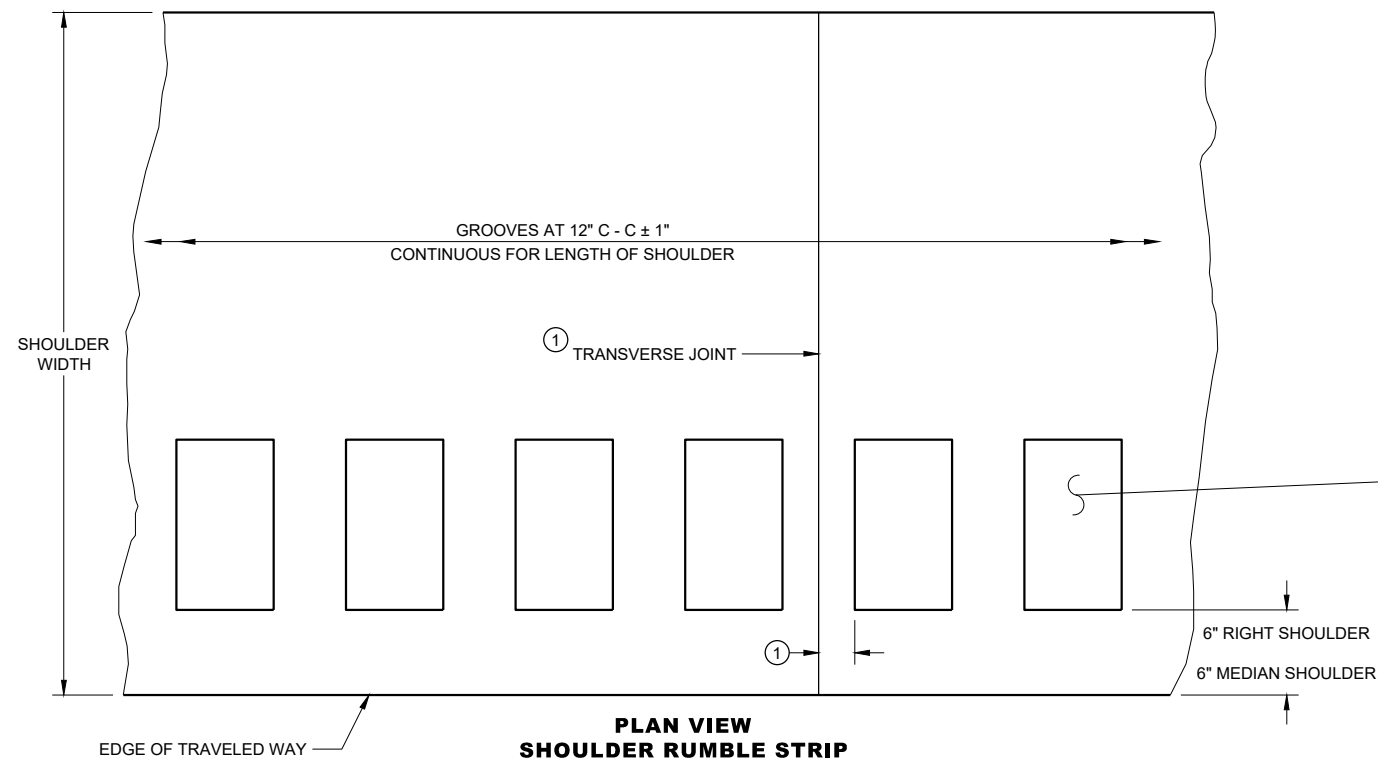
**TURBIDITY BARRIER DETAIL SHOWING
TYPICAL PLACEMENT AT STRUCTURES**

TURBIDITY BARRIER

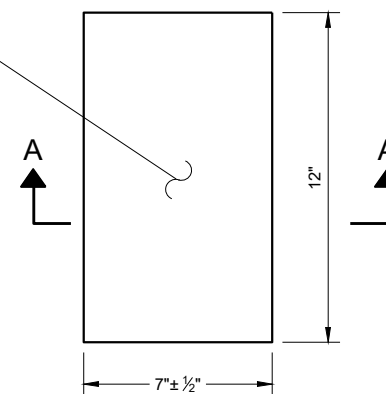
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/4/02 DATE /S/ Beth Cannestra
DATE CHIEF ROADWAY DEVELOPMENT
ENGINEER

FHWA



SECTION A - A

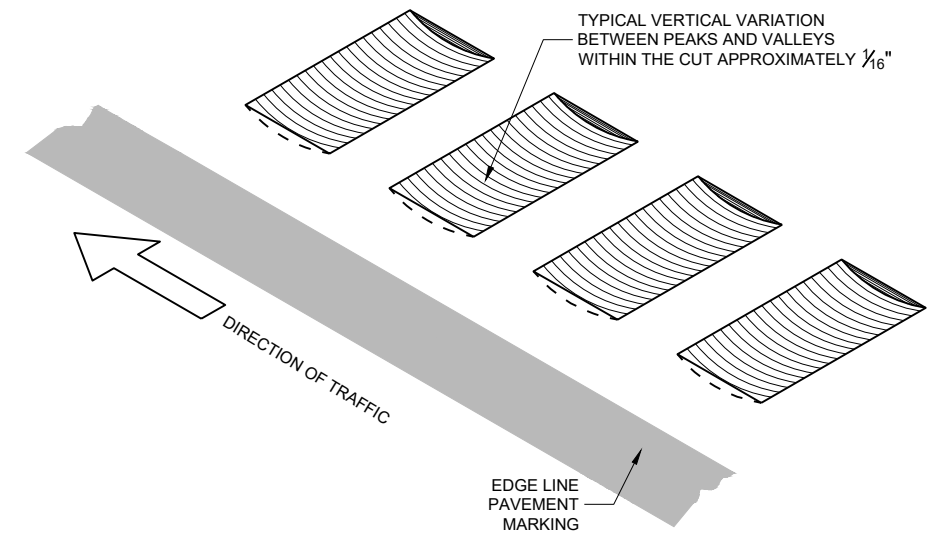


GENERAL NOTES

SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

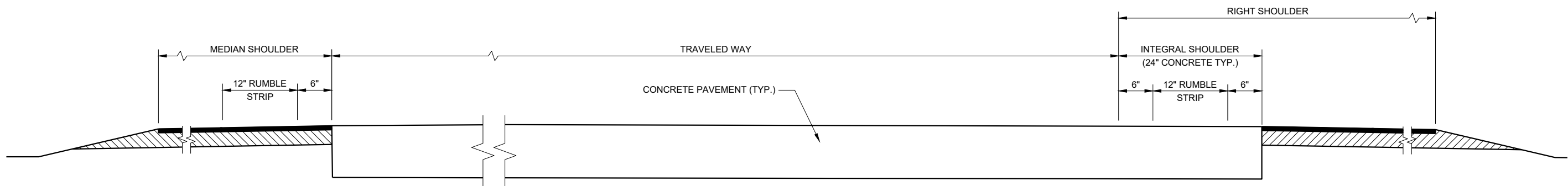
RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

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



ISOMETRIC

PLACEMENT DETAIL FOR RUMBLE STRIP

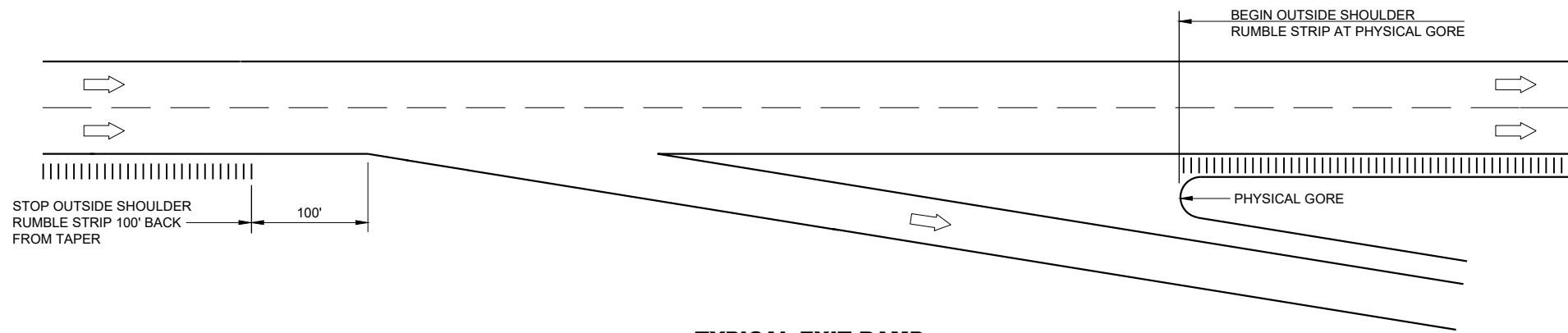


SECTION VIEW

**TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)**

**SHOULDER RUMBLE STRIPS,
DIVIDED ROADWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TYPICAL EXIT RAMP

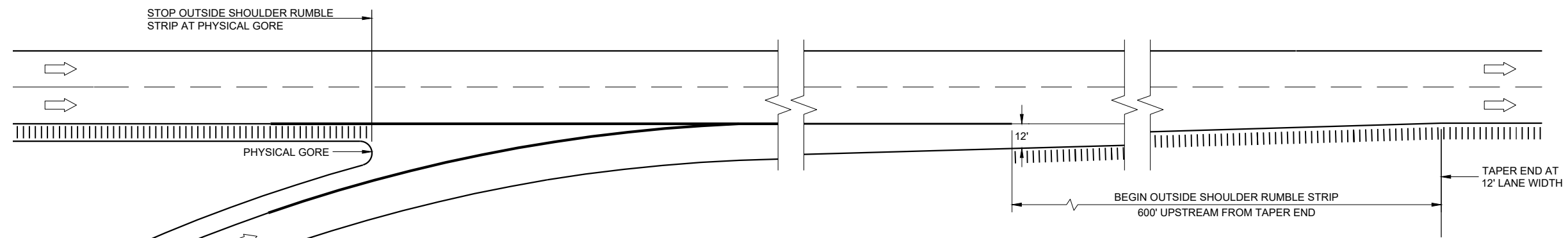
GENERAL NOTES

NO RUMBLE STRIP ON EXIT, DIRECTIONAL OR ENTRANCE RAMP, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

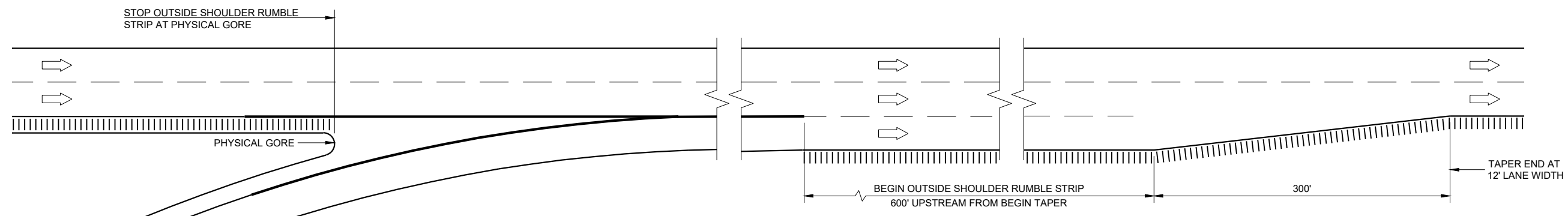
RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

LEGEND

➡ DIRECTION OF TRAFFIC



**TYPICAL TAPERED ENTRANCE RAMP
RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS**



**TYPICAL PARALLEL ENTRANCE RAMP
RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS**

6

6

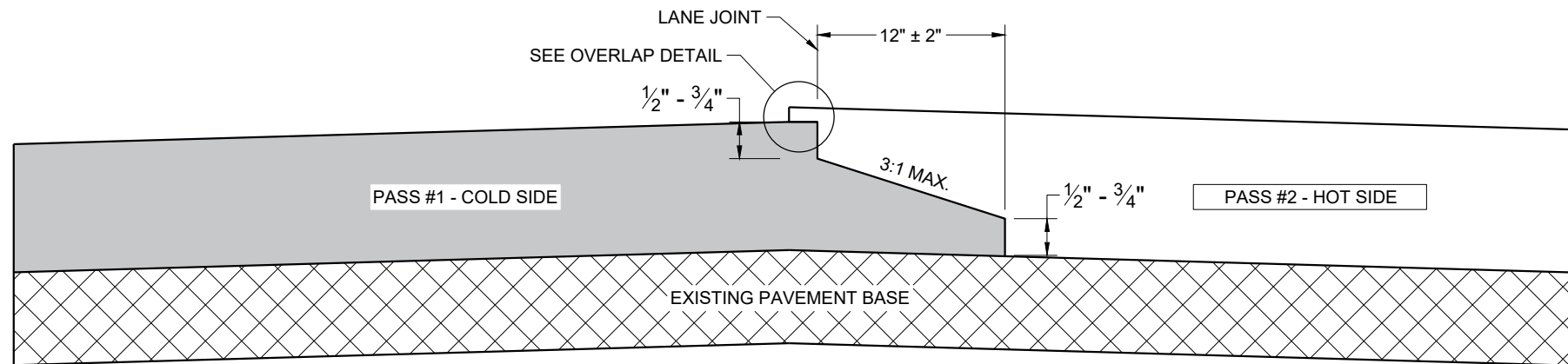
SDD 13A05-06b

SDD 13A05-06b

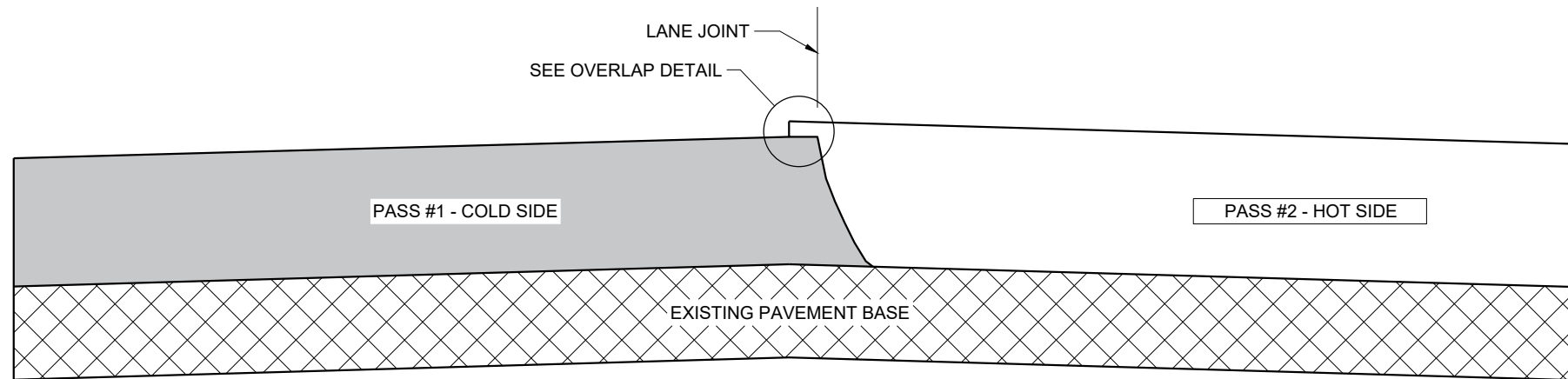
**SHOULDER RUMBLE STRIPS,
DIVIDED ROADWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

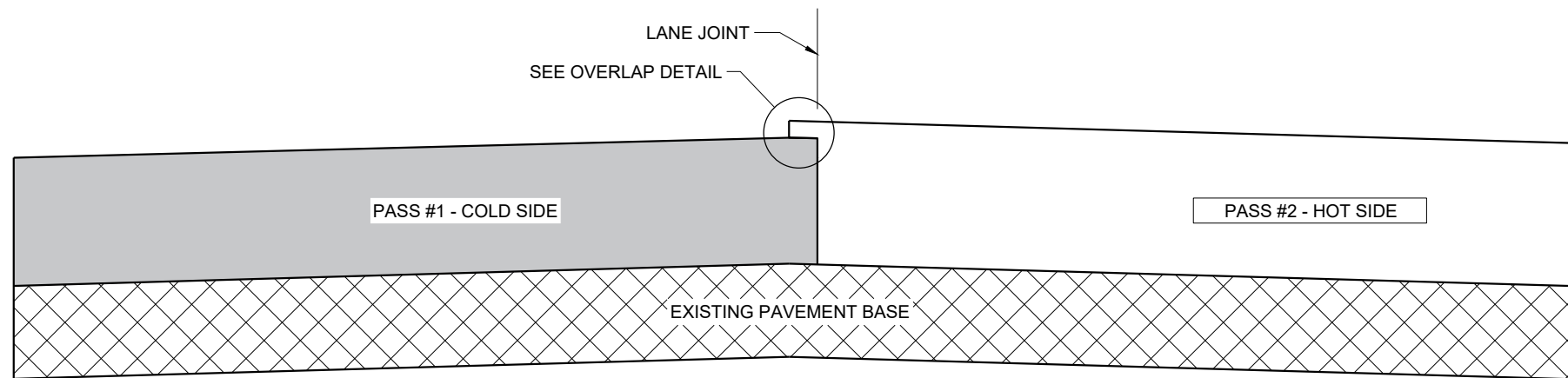
APPROVED
DATE: May 2023 /S/ Rodney Taylor
ROADWAY DESIGN STANDARDS
UNIT SUPERVISOR
FHWA



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

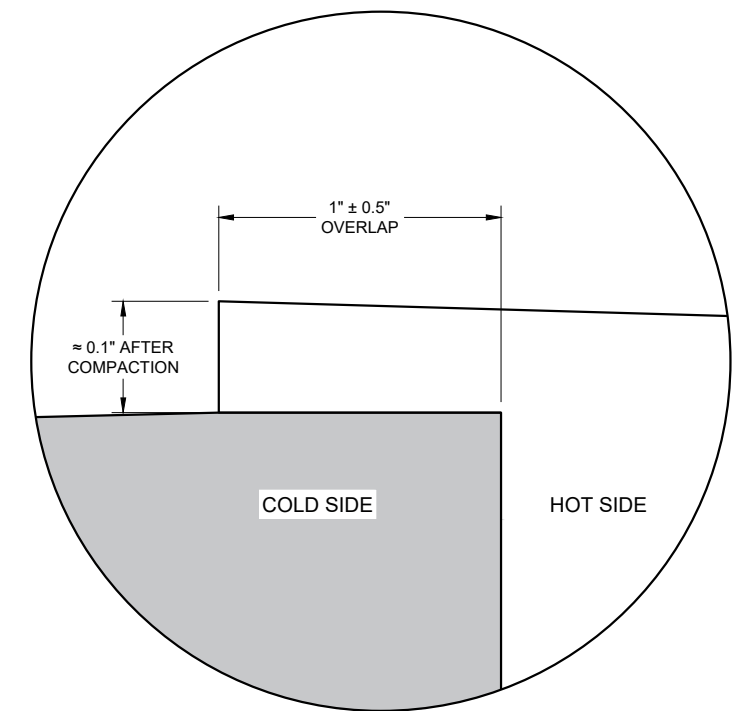
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

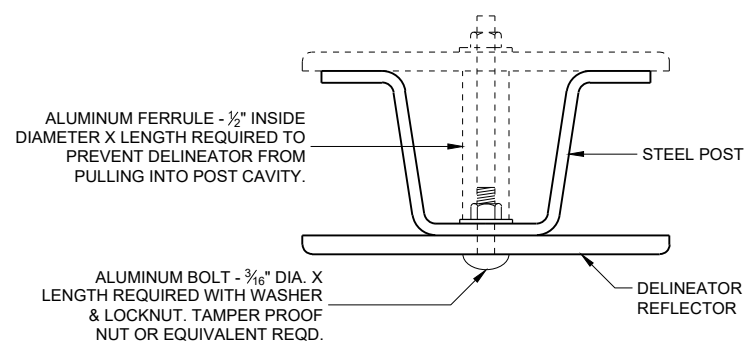
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6

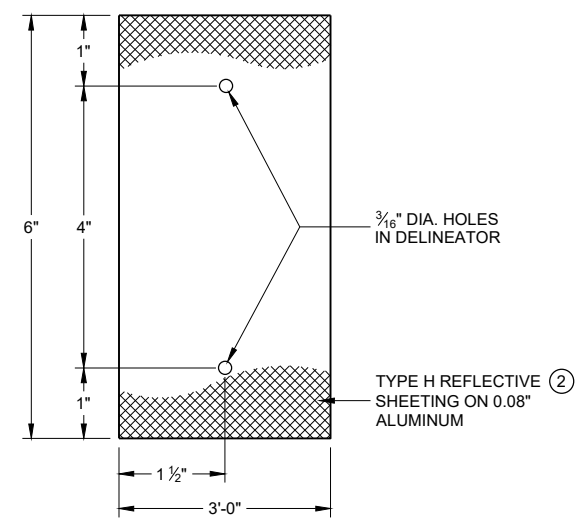
SDD 13C19 - 03

SDD 13C19 - 03

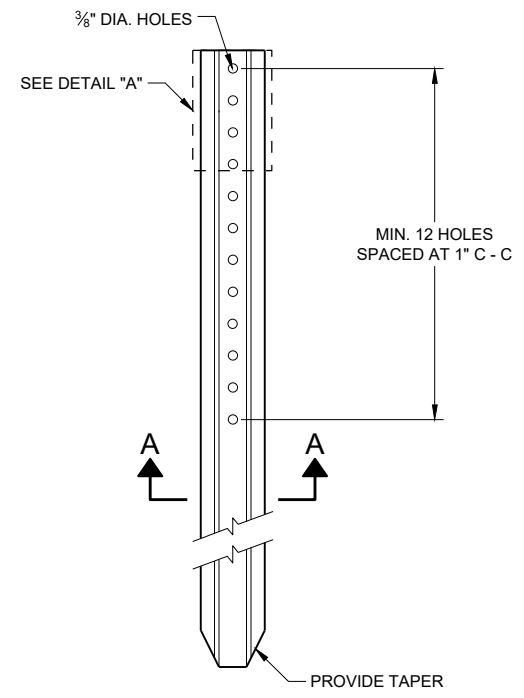
HMA LONGITUDINAL JOINTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	



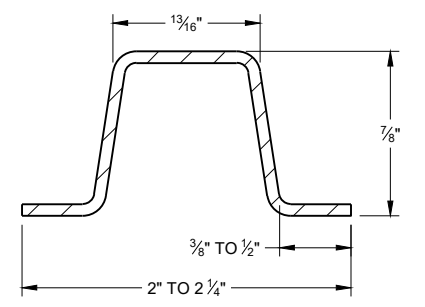
MOUNTING DETAIL FOR DELINEATOR REFLECTOR



DETAIL "A" 3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



SECTION A - A
WEIGHT 1.12 LBS PER FT. \ 0.1 LB.

REFLECTOR SPACING TABLE

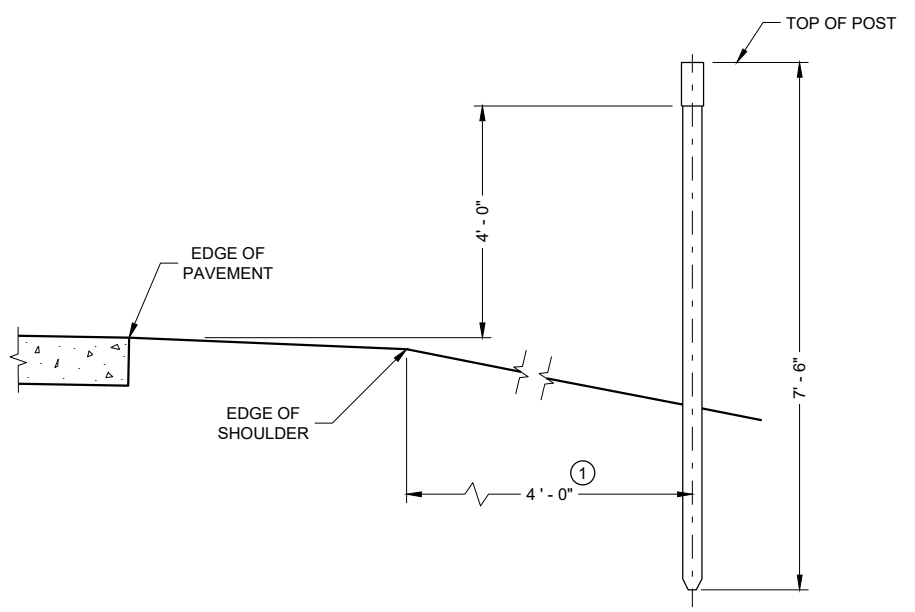
REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER

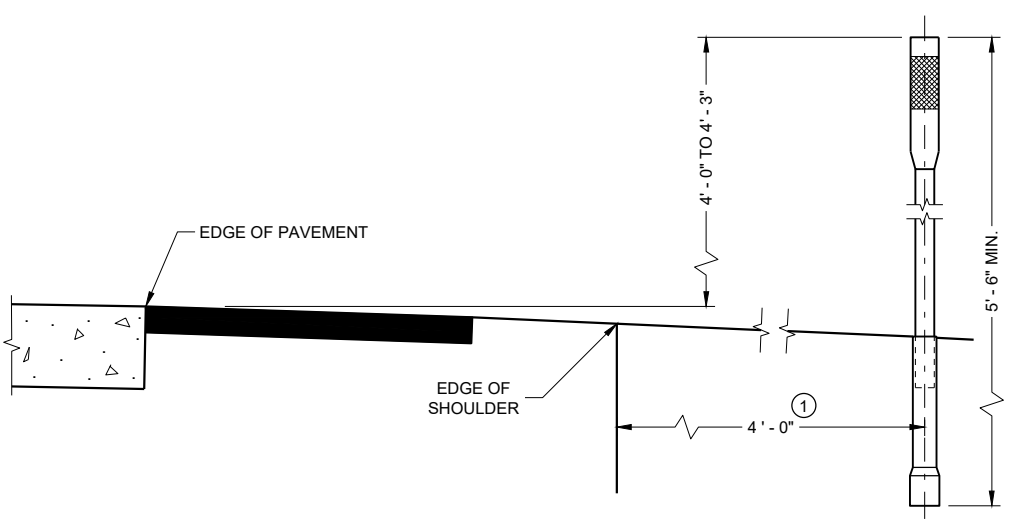
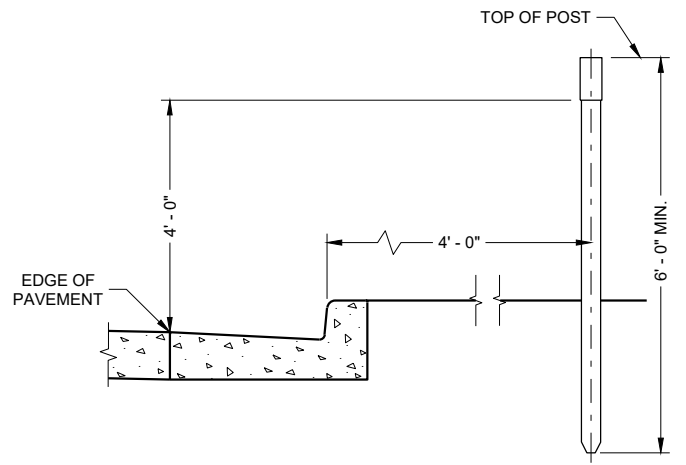
GENERAL NOTES

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

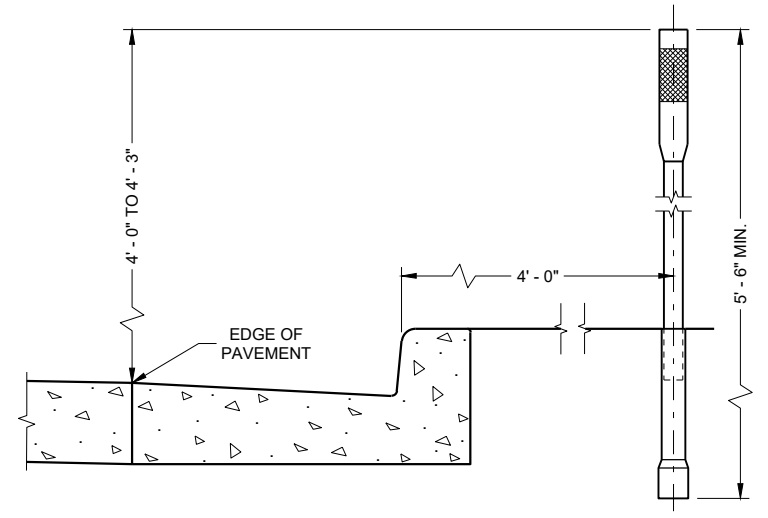
- ① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.
- ② FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.



TYPICAL INSTALLATIONS OF DELINEATOR POSTS



TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS



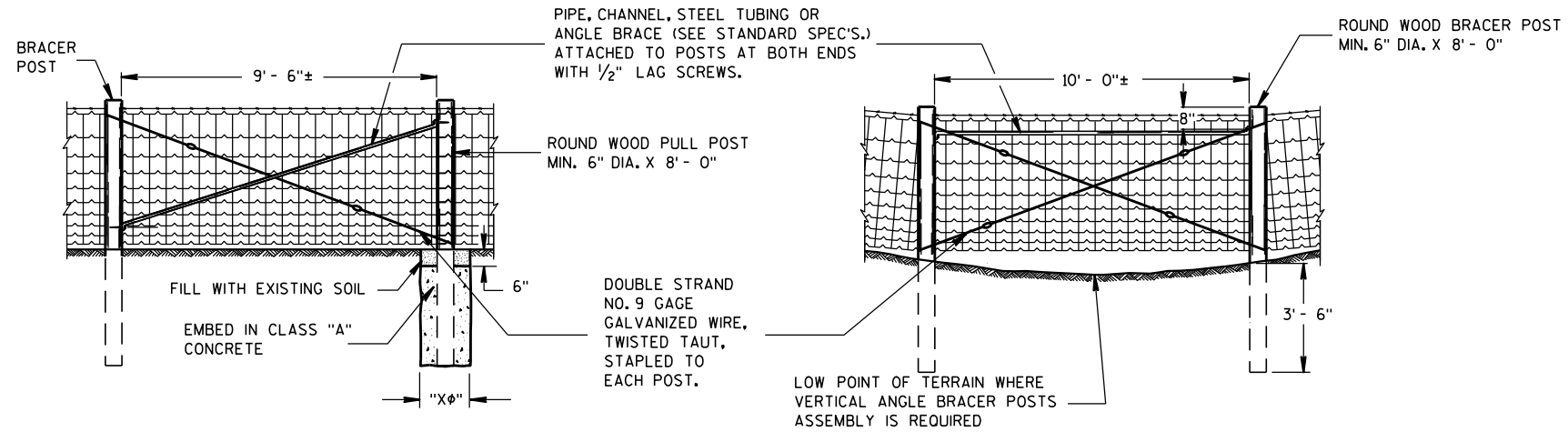
DELINEATOR POST WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY

VERTICAL ANGLE BRACER POSTS ASSEMBLY

GENERAL NOTES

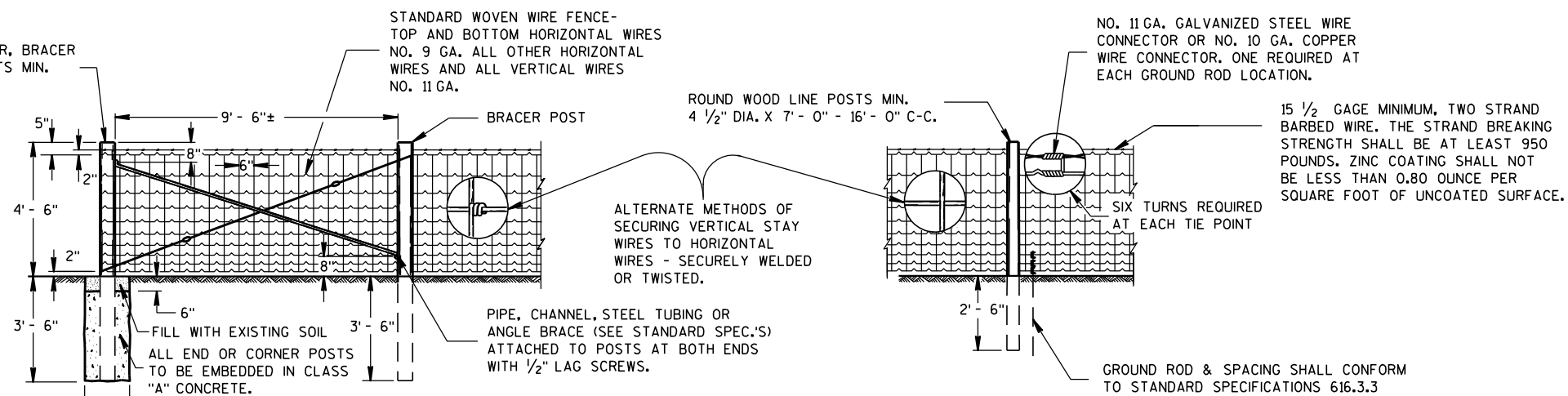
"Xφ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.

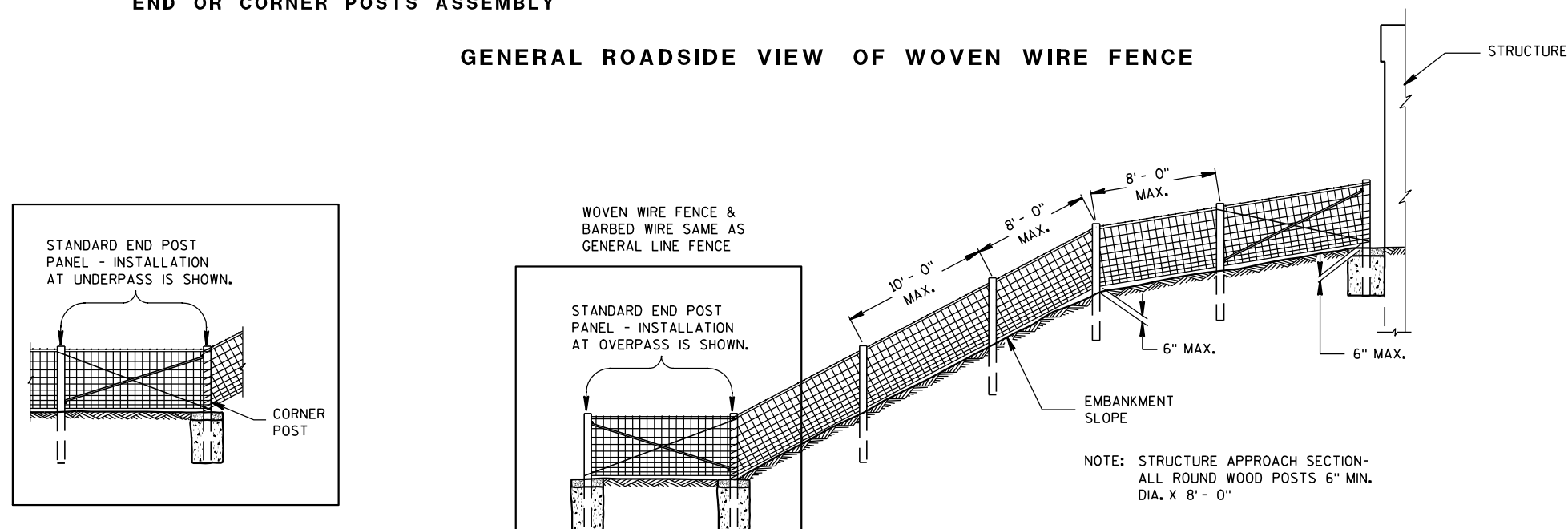
ROUND WOOD END, CORNER, BRACER OR VERTICAL ANGLE POSTS MIN. 6" DIA. X 8' - 0"



END OR CORNER POSTS ASSEMBLY

LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE

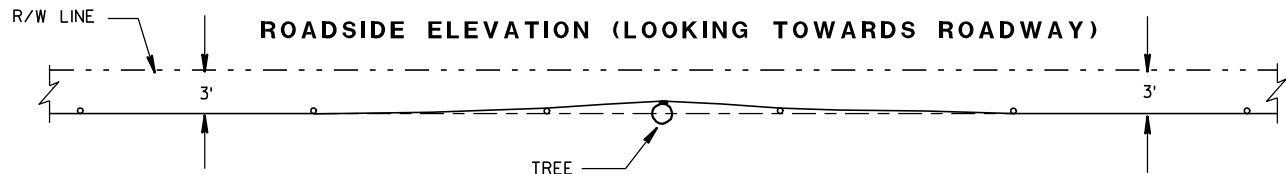
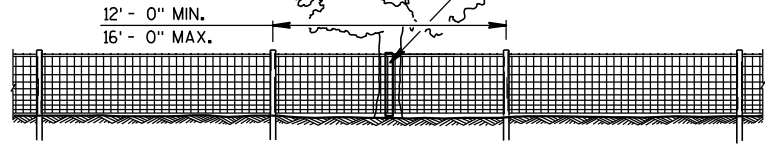
FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

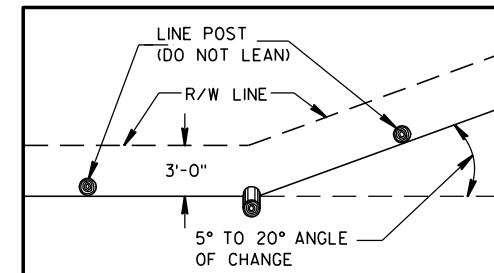
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

NOTE: TREE IN NORMAL FENCE LINE SPECIFICALLY ORDERED BY ENGINEER TO REMAIN IN PLACE.

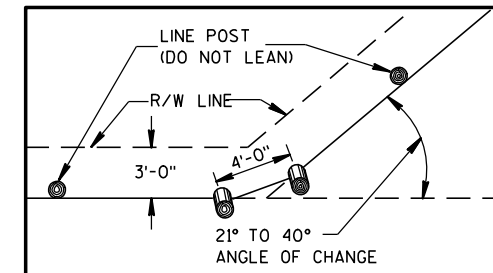
2" X 6" DOUGLAS FIR OR SO. YELLOW PINE PLACED BETWEEN TREE AND WOVEN WIRE FENCE. WOVEN WIRE FENCE AND BARBED WIRE TO BE STAPLED TO 2" X 6" LIKE AS TO LINE POST. 2" X 6" NOT FASTENED TO TREE.



PLAN VIEW
FENCE DESIGN AT TREES REMAINING
IN NORMAL FENCE LINE



PLAN VIEW
SINGLE POST CORNER

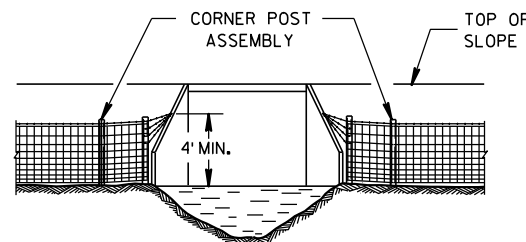


PLAN VIEW
DOUBLE POST CORNER

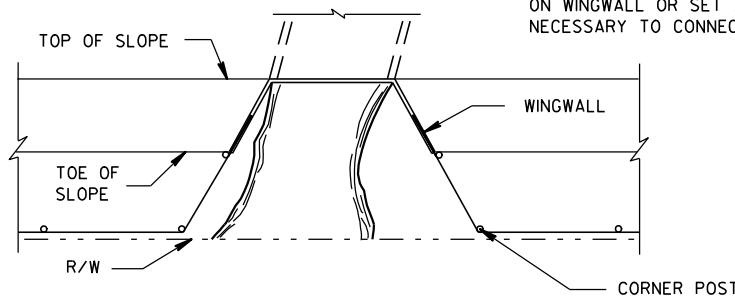
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

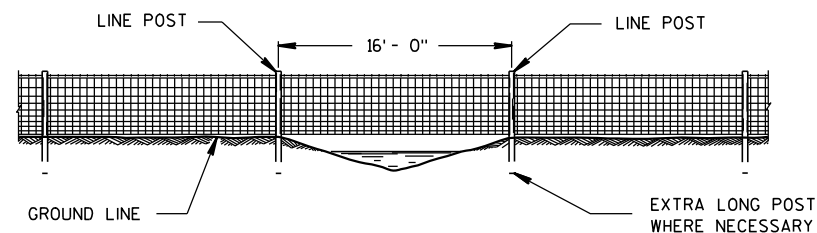
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



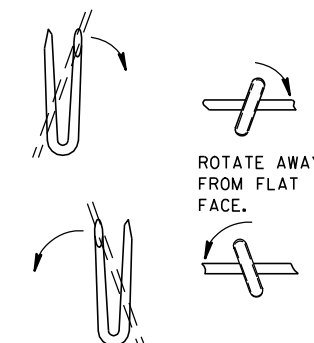
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS



FENCE CONSTRUCTION OVER STREAM
COURSES OF 15 FT. OR LESS IN WIDTH



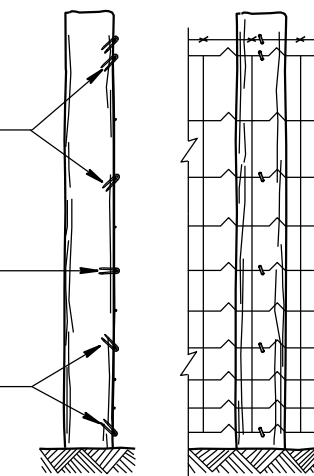
LINE POST

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.

STAPLES SLOPED DOWNWARD FOR SUSTAINED GRADES AND OVER KNOLLS.

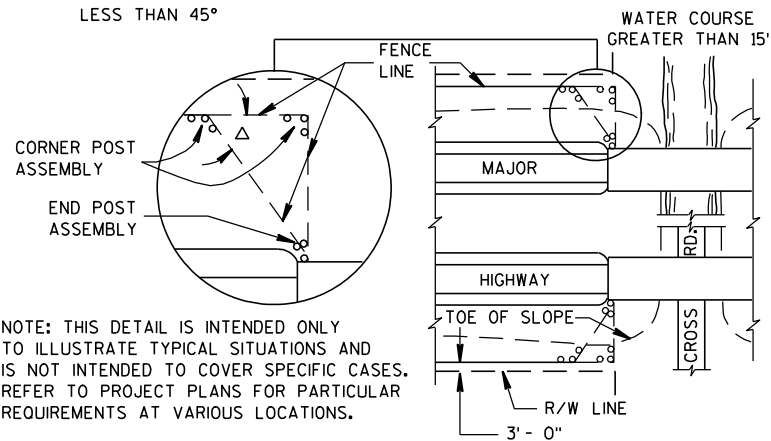
STAPLES LEVEL FOR LEVEL GROUND.

SLOPE UPWARDS WHEN FENCE TENDS TO LIFT.

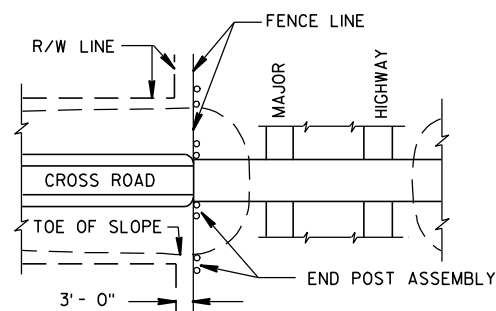


END ELEVATION FARM SIDE ELEVATION
FENCE MOUNTING DETAIL

NOTE: Δ NOT LESS THAN 45°



PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE
CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

FENCE LOCATION AT STRUCTURES

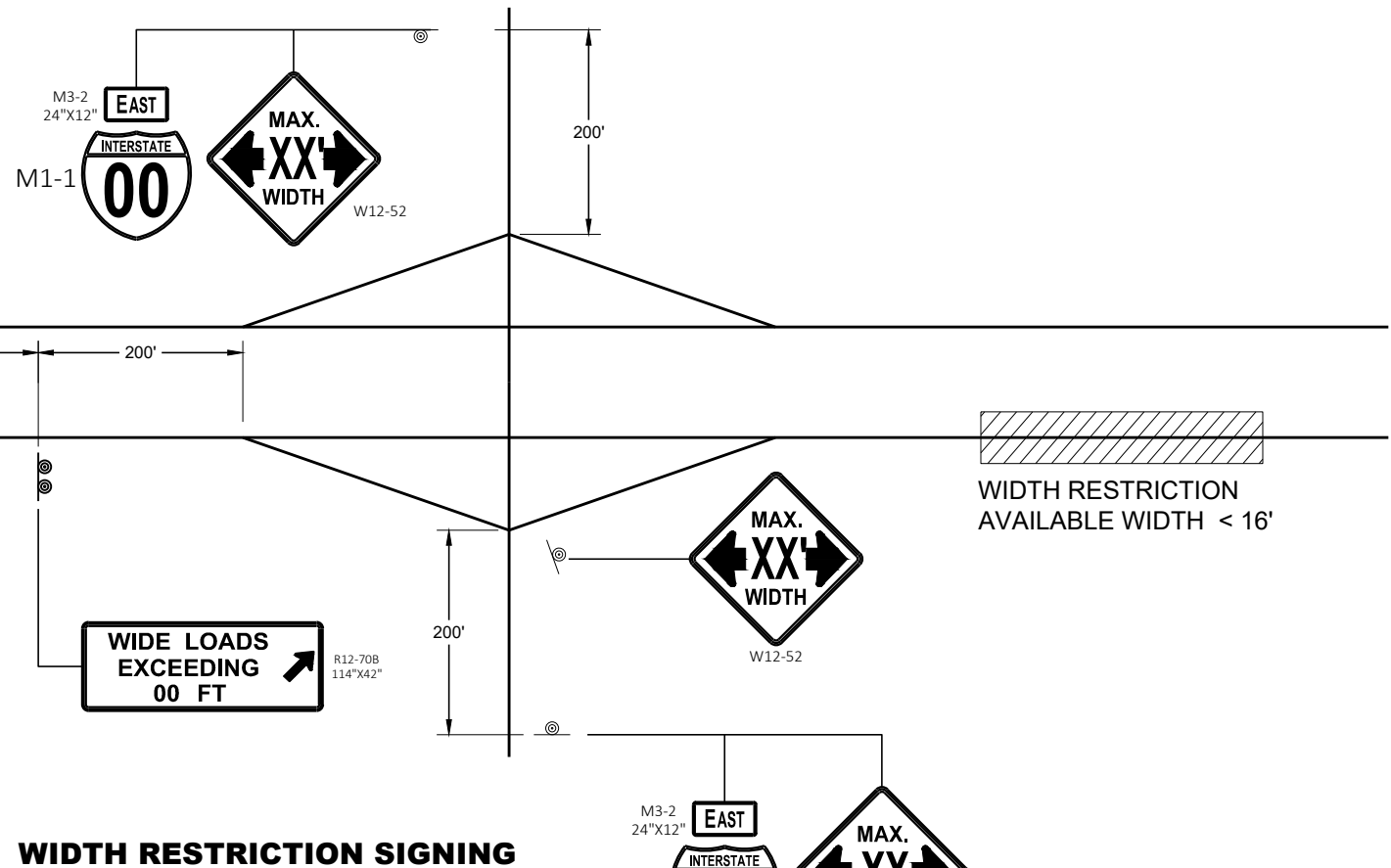
FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

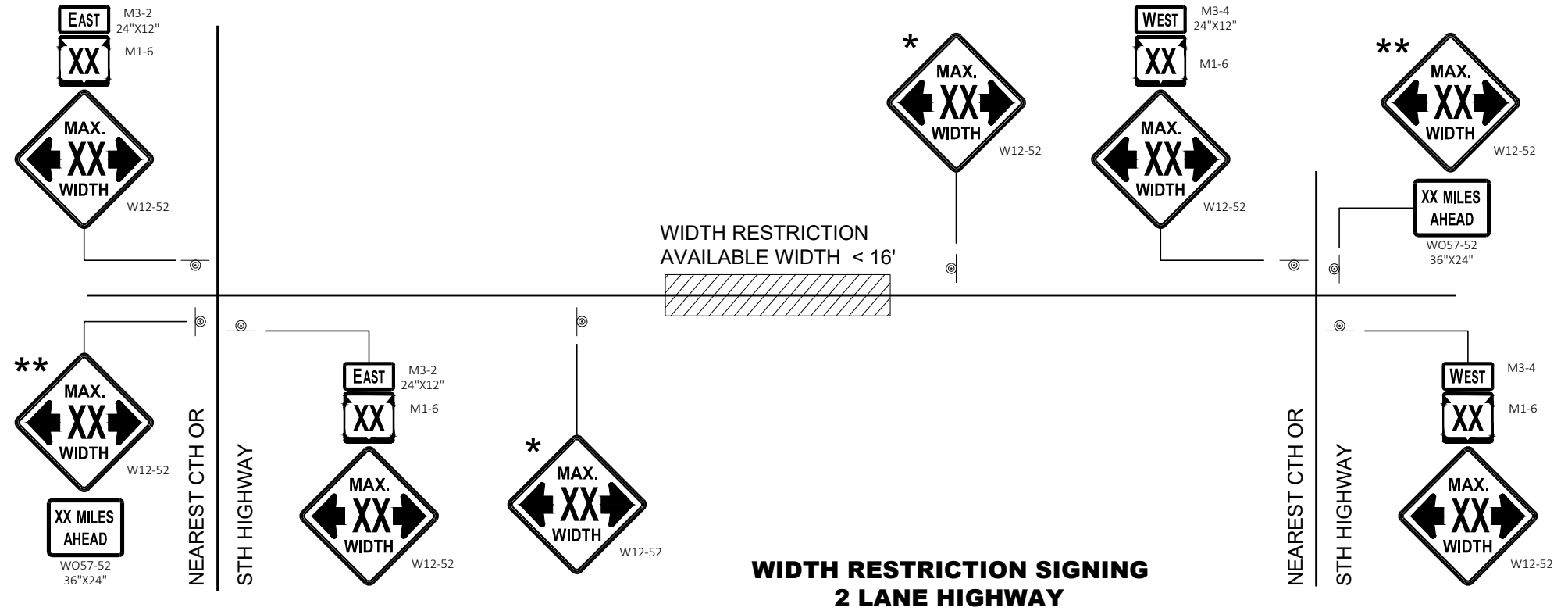
APPROVED
4/4/2008
DATE

/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA



WIDTH RESTRICTION SIGNING



**WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY**

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

* PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

** SIGN SHALL BE VISIBLE FROM ROADWAY.

*** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.



WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

**ADVANCED WIDTH
RESTRICTION SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.




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

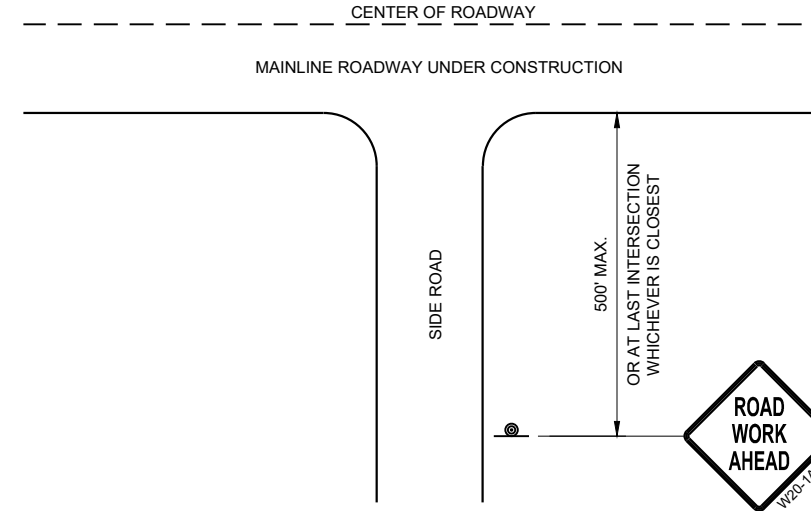
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

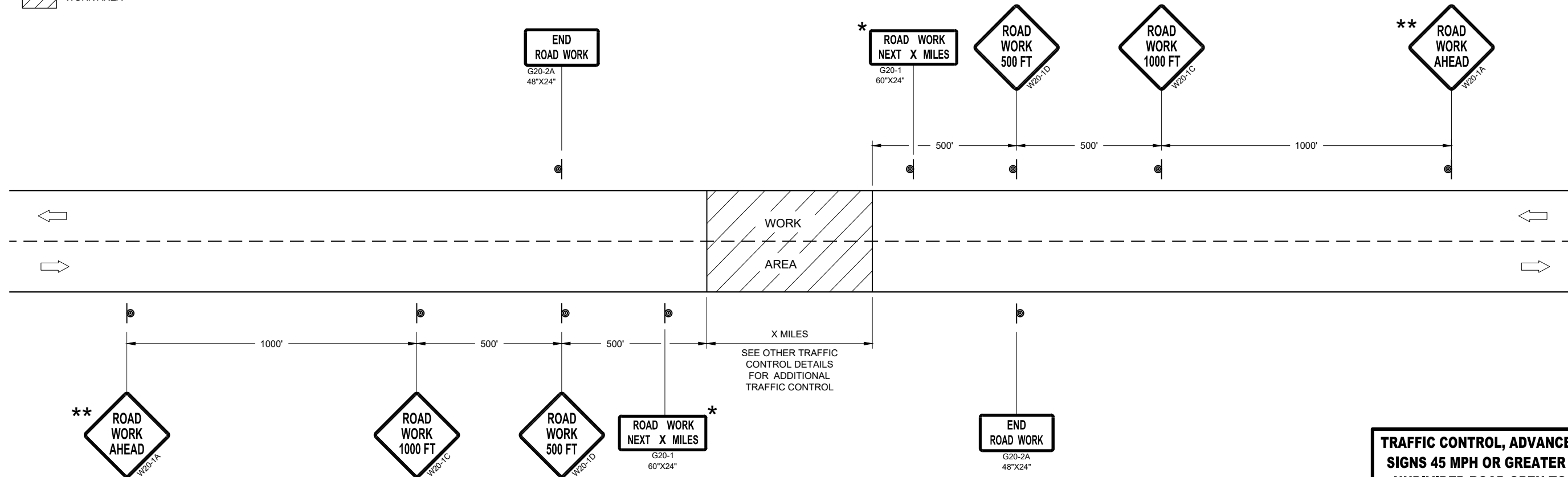
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

**TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE July 2018 /S/ Andrew Heidtke
WORK ZONE ENGINEER




FHWA

GENERAL NOTES

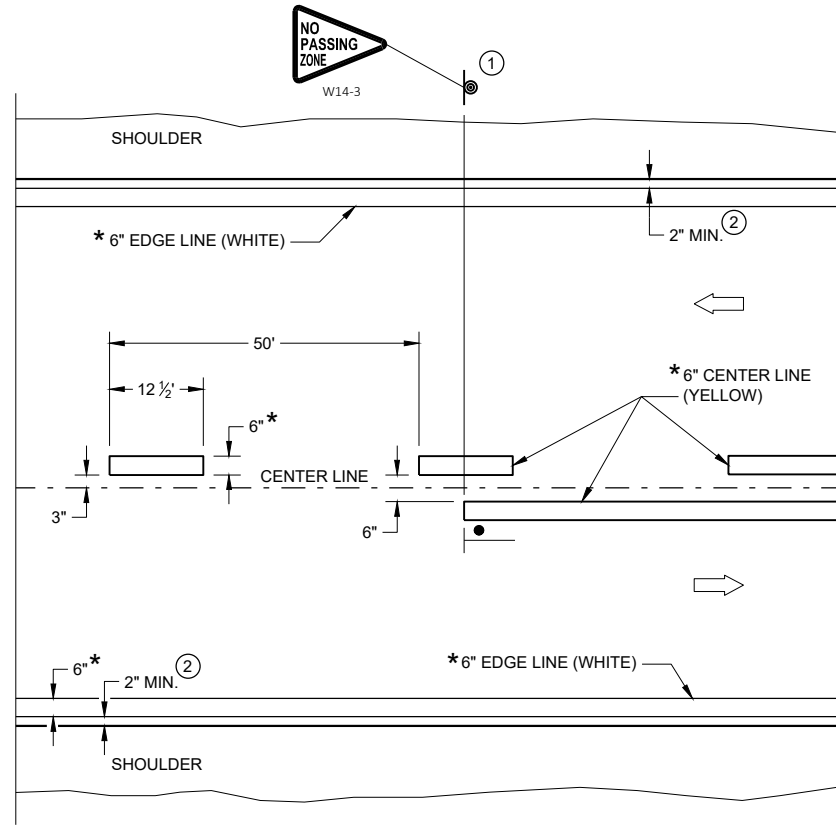
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

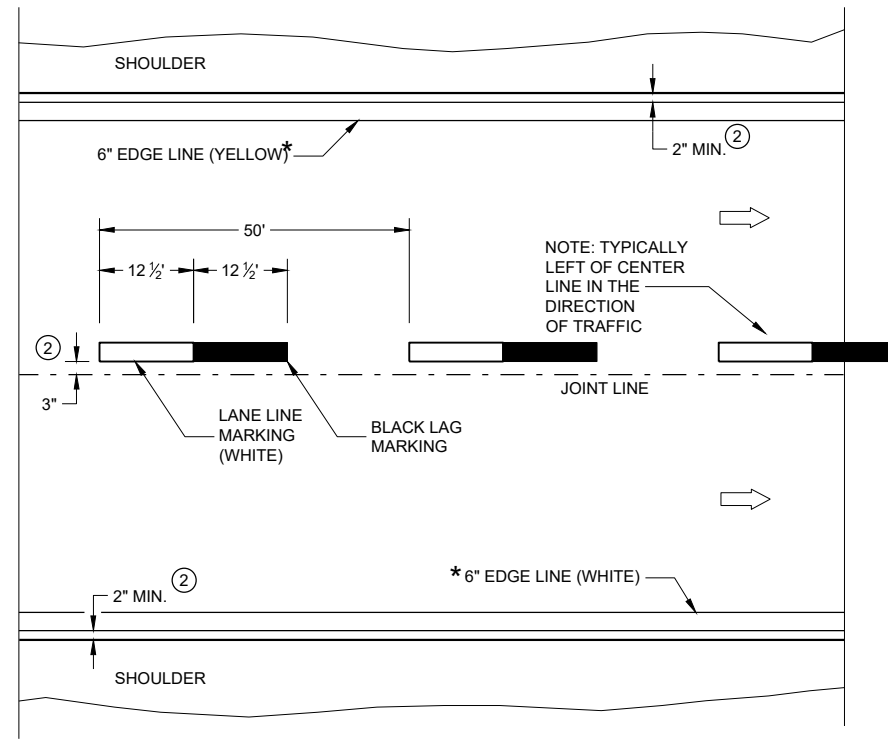
LEGEND

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

6

SDD 15C08-23a

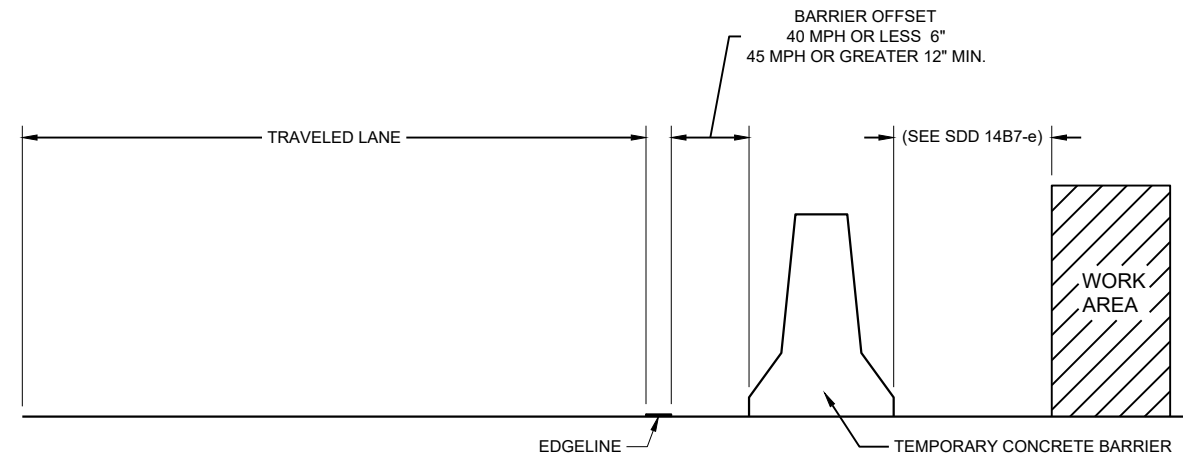
SDD 15C08-23a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE STATEWIDE SIGNING AND MARKING ENGINEER

FHWA



TEMPORARY BARRIER OFFSET FROM EDGELINE

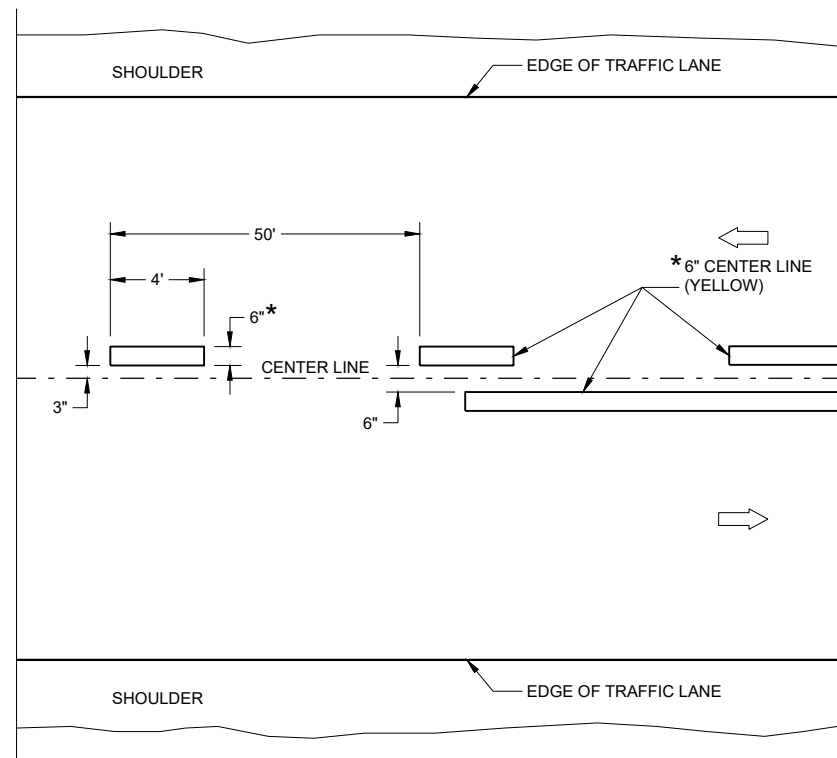
GENERAL NOTES

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

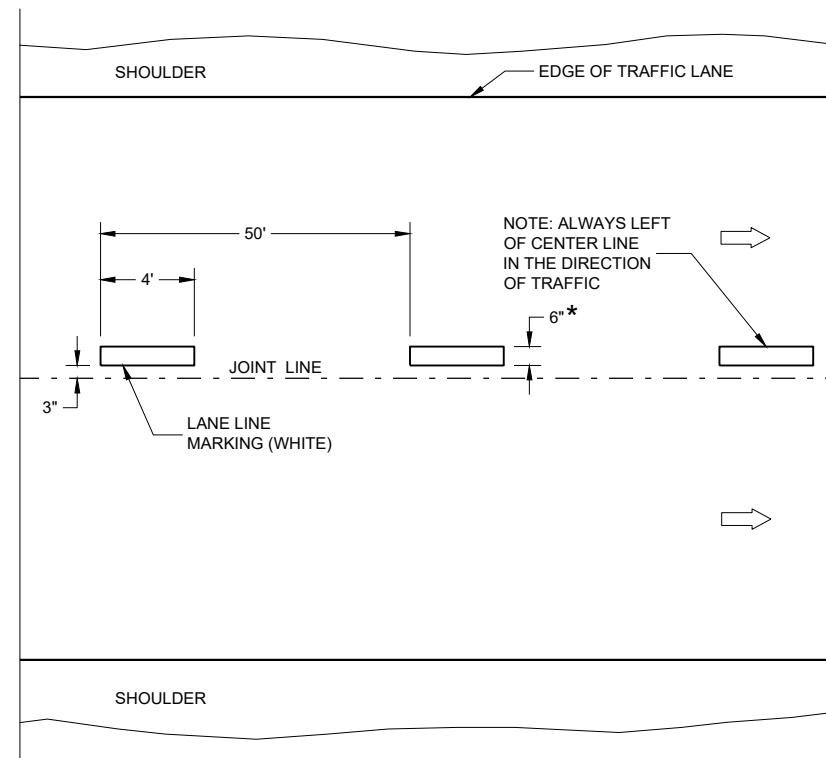
LEGEND

➔ DIRECTION OF TRAFFIC

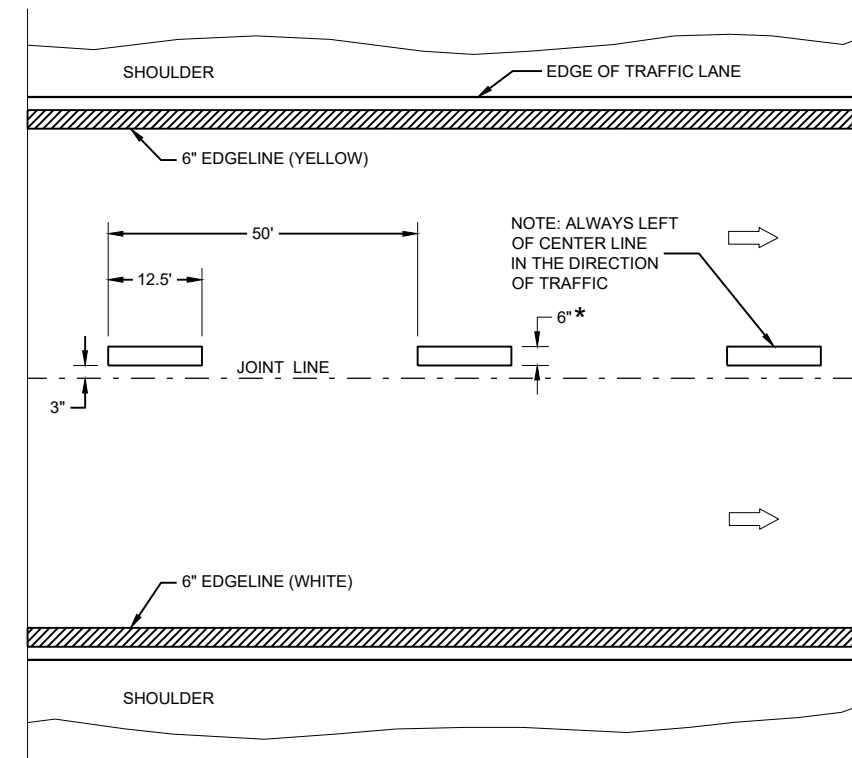
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREWAYS AND EXPRESSWAYS

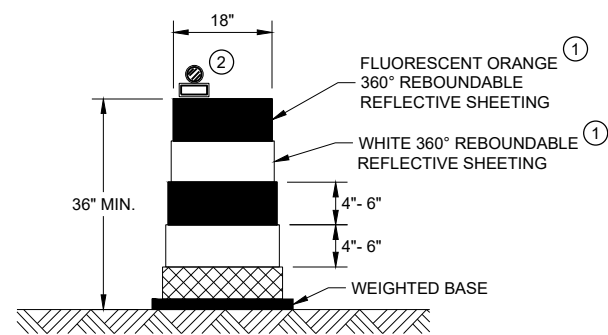
TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

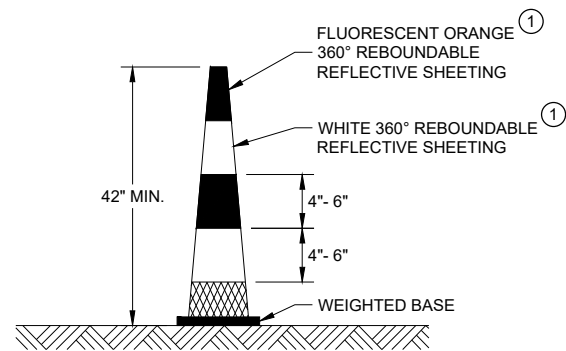
APPROVED
May 2023 /S/ Jeannie Silver
DATE STATEWIDE SIGNING AND MARKING ENGINEER

FHWA



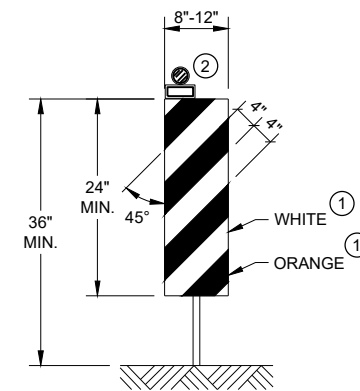
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"

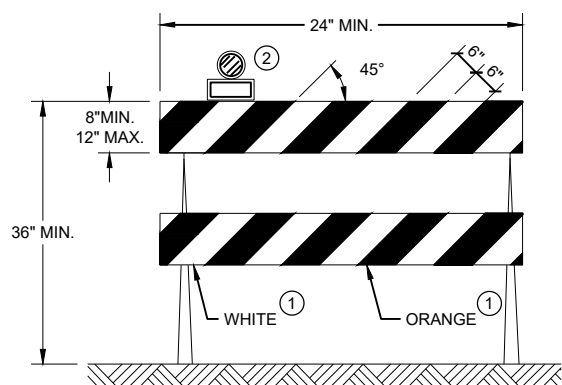


VERTICAL PANEL

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

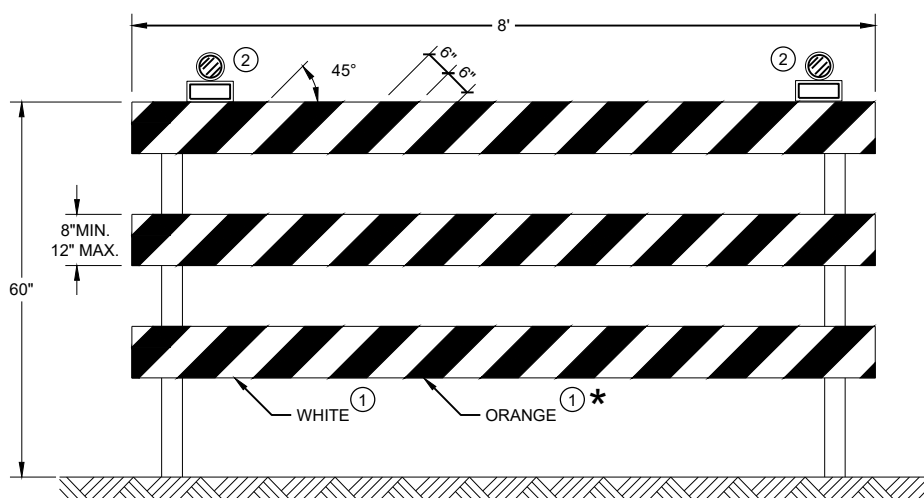
GENERAL NOTES

- 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
 November 2022 /S/ Andrew Heidtke
 DATE WORK ZONE ENGINEER
 FHWA

LEGEND

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

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

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

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

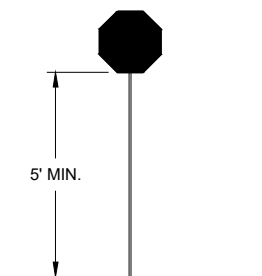
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



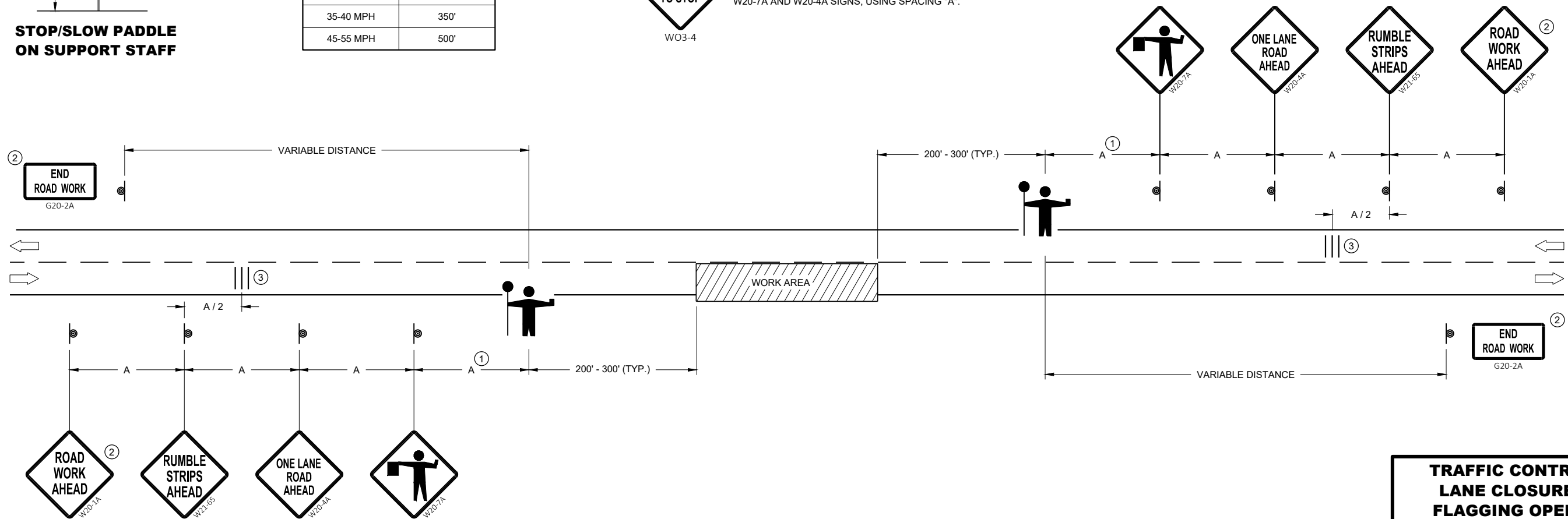
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



6

6

SDD 15C12 - 09a

SDD 15C12 - 09a






TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

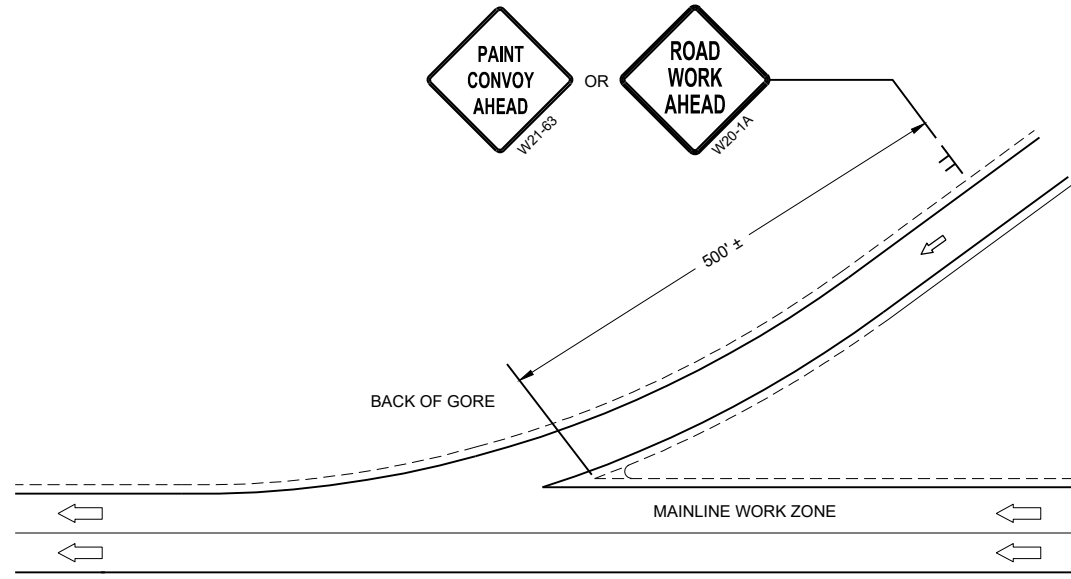
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE May 2022 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

LEGEND

- V1 MARKING VEHICLE
- V2 SHADOW VEHICLE
- V3 TRAIL VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (MERGE)
-  FLASHING ARROW PANEL (CAUTION)



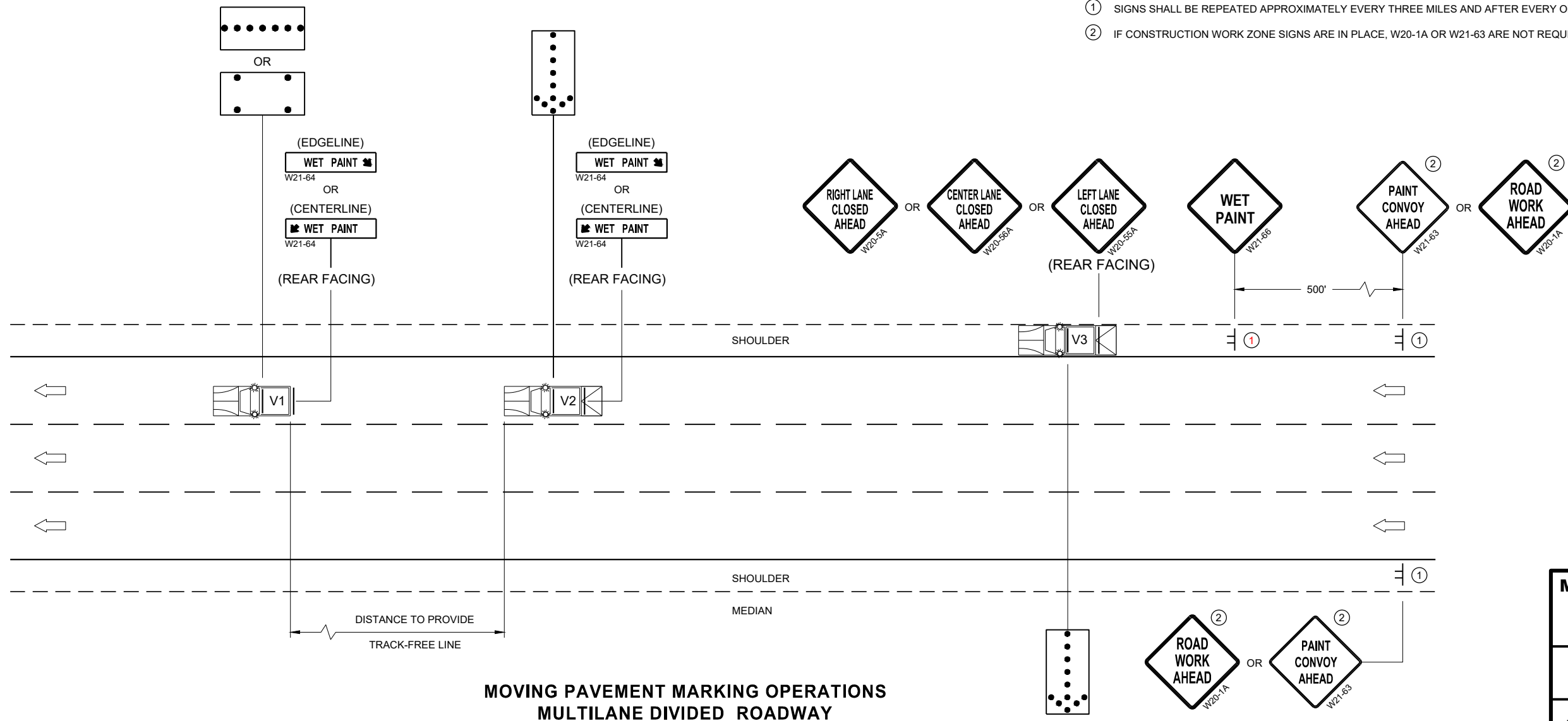
GENERAL NOTES

- ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.
- ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.
- DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.
- WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.
- USE AN ATTENUATOR ON THE REAR MOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.
- IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.
- WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC
- CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- CONES SHALL BE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY ON RAMP.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

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SDD 15C19-08c

SDD 15C19-08c



**MOVING PAVEMENT MARKING OPERATIONS
MULTILANE DIVIDED ROADWAY**

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

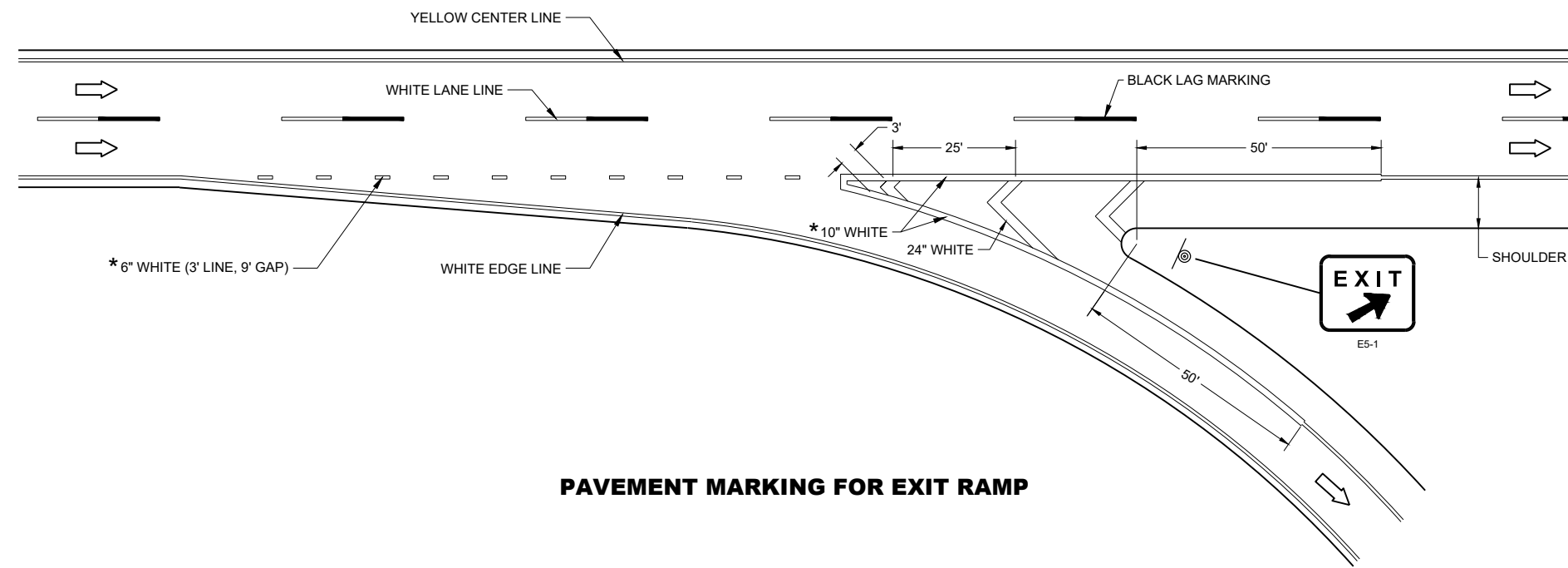
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

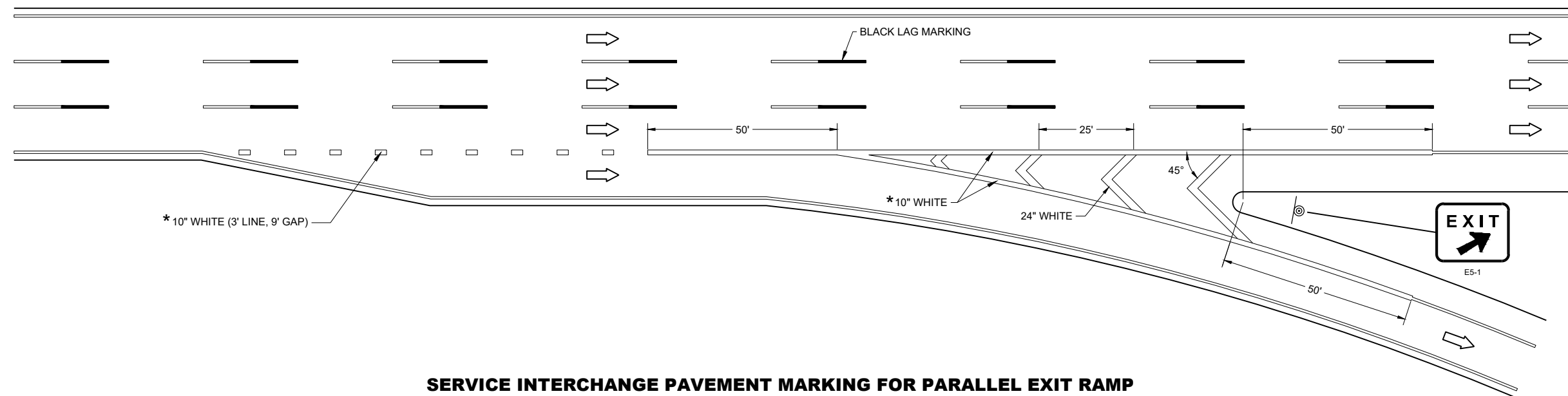
LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



PAVEMENT MARKING FOR EXIT RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT RAMP



**PAVEMENT MARKING,
EXIT RAMP AND
PARALLEL EXIT RAMP**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

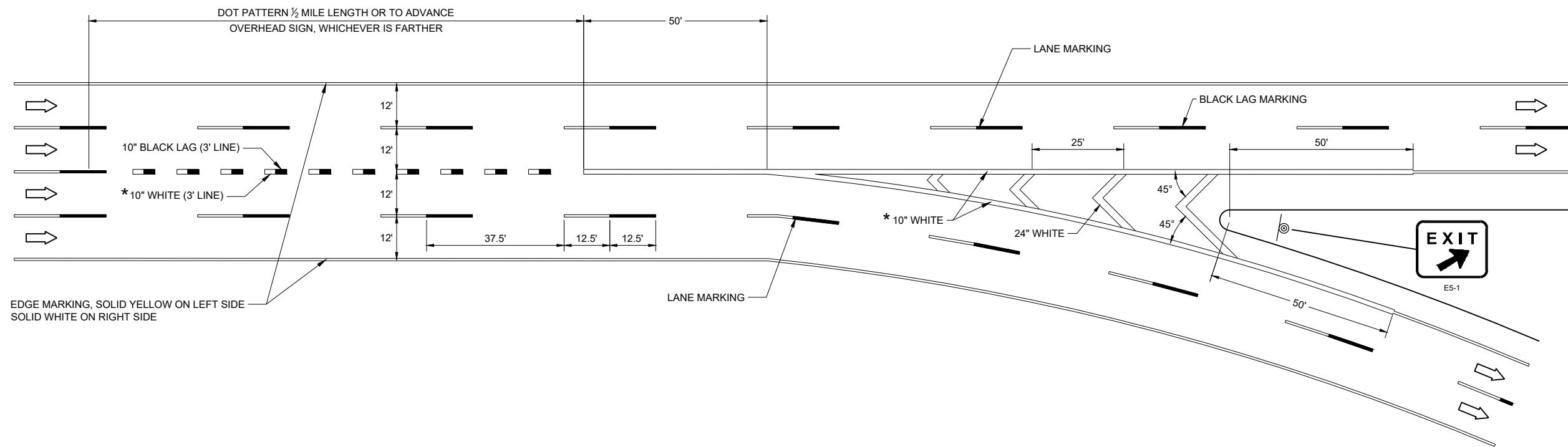
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



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SDD 15C31-06b

SDD 15C31-06b

PAVEMENT MARKING, MAJOR SPLIT FREEWAY TO FREEWAY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

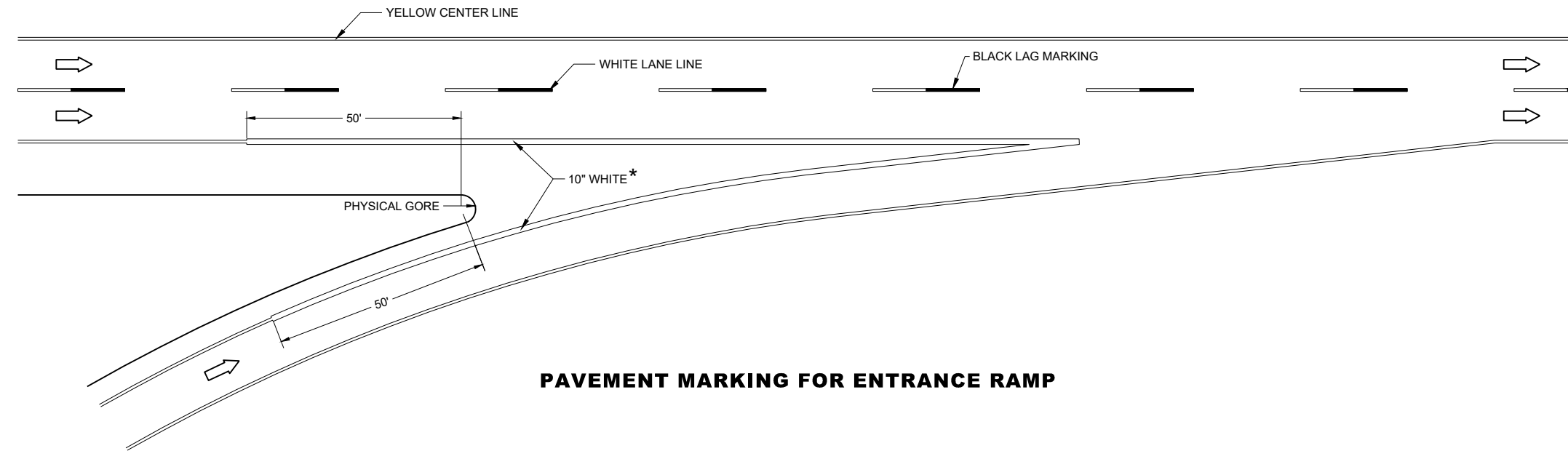
PLACE GROOVE 3 INCHES LEFT OF JOINT.

① ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

LEGEND

➡ DIRECTION OF TRAVEL

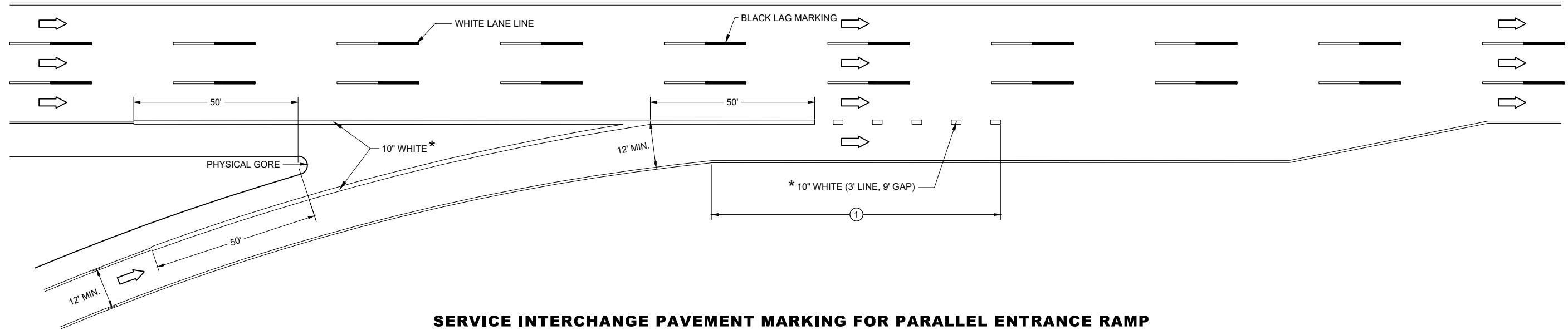
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



PAVEMENT MARKING FOR ENTRANCE RAMP

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SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

SDD 15C31-06c

SDD 15C31-06c

**PAVEMENT MARKING,
ENTRANCE RAMP AND
PARALLEL ENTRANCE RAMP**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

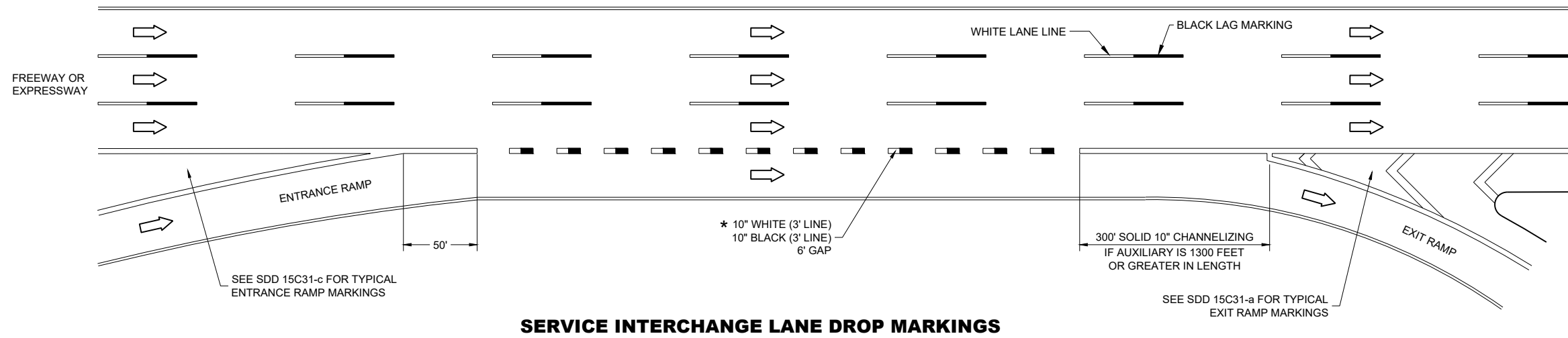
LEGEND

➔ DIRECTION OF TRAVEL

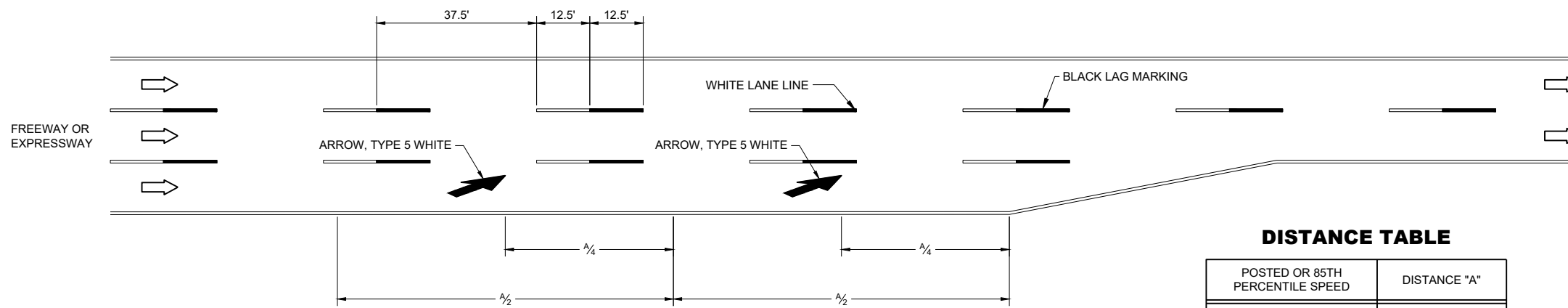
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.



SERVICE INTERCHANGE LANE DROP MARKINGS



LANE REDUCTION MARKINGS

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
40	670'
45	775'
50	885'
55	990'
60	1100'
65	1200'
70	1250'

**PAVEMENT MARKING,
LANE DROP AND
LANE REDUCTION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

September 2023
DATE

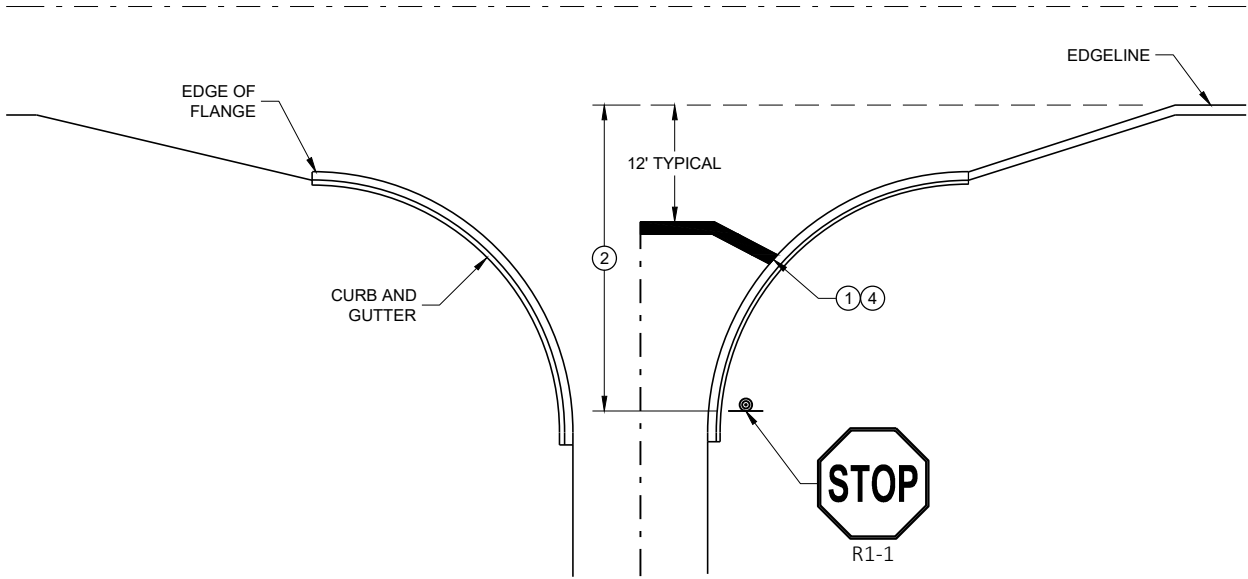
/s/ Matthew Rauch
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

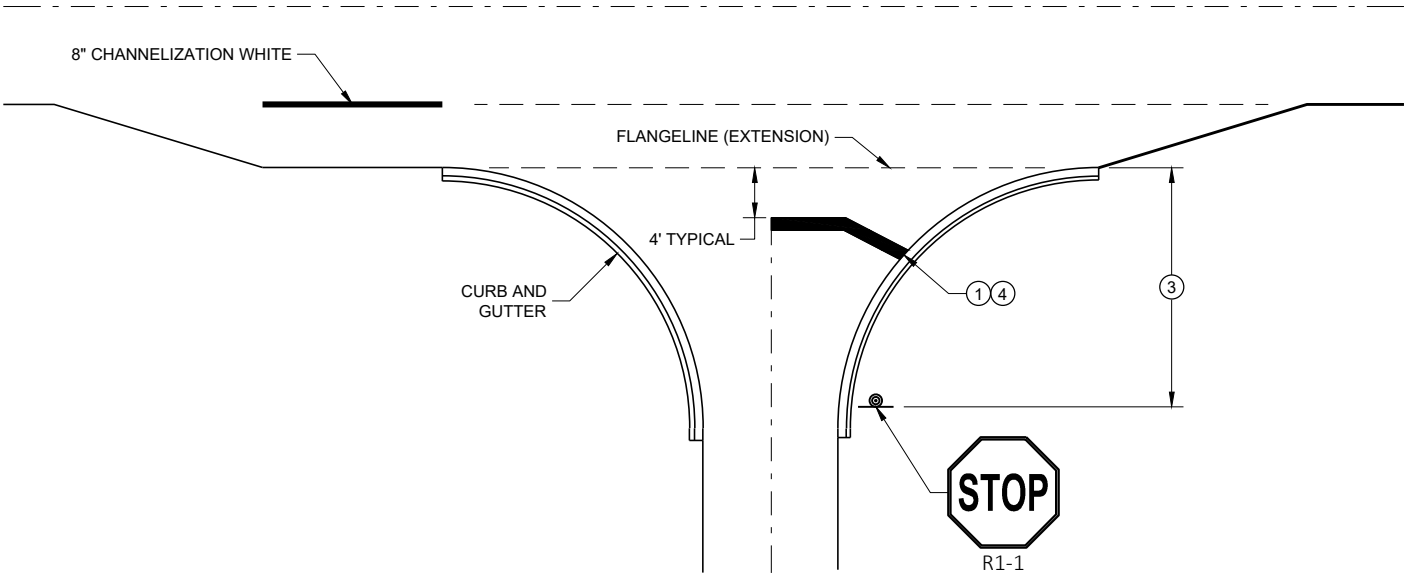
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

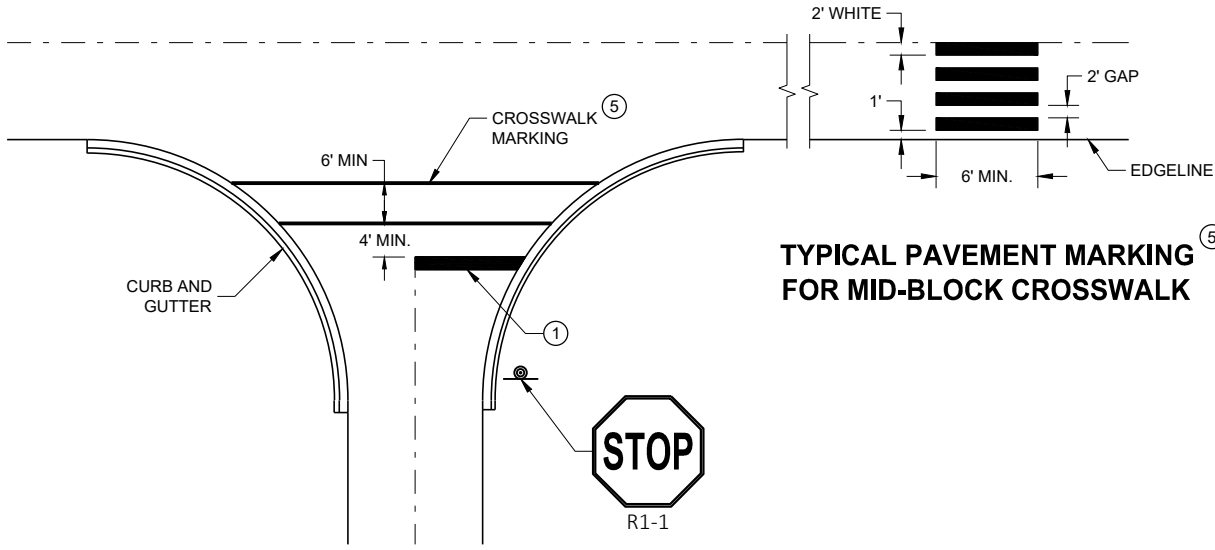
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

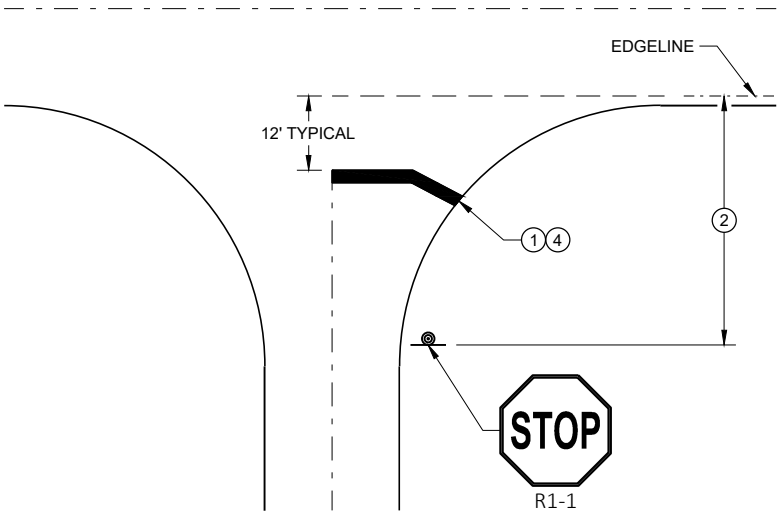


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER












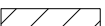

STOP LINE AND CROSSWALK PAVEMENT MARKING

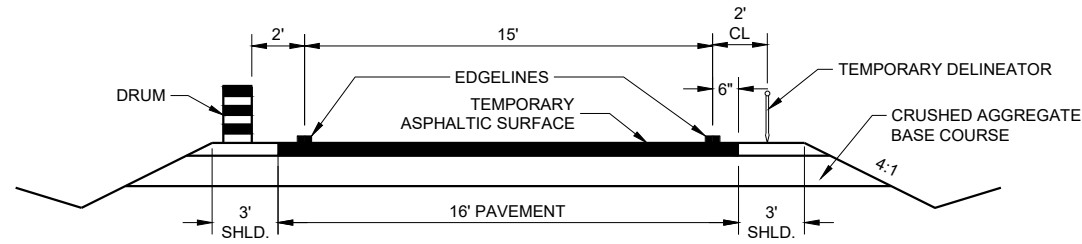
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  DELINEATOR FLEXIBLE / TUBULAR MARKER
-  TEMPORARY DELINEATOR - WHITE (STEEL POST WITH SINGLE DELINEATOR)
-  TYPE "A" WARNING LIGHT (FLASHING)
-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  FLAGS, 16" X 16" MIN., ORANGE
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKINGS
-  WORK AREA
-  TEMPORARY CROSSOVER ASPHALTIC PAVEMENT



TYPICAL RAMP CROSSOVER ROADWAY DIMENSIONS

** ADJUST RAMP SPEED AS NEEDED IN THE FIELD. DISTANCE TO SIGN LOCATION SHALL ALSO BE PLACED ACCORDING TO TABLE.

** TABLE FOR ADVANCE WARNING SIGN DISTANCE (FT)

POSTED SPEED LIMIT (MPH)	DESIRED EXIT RAMP SPEED (MPH)					
	10	20	30	40	50	60
45	350	300	250			
50	425	400	325	225		
55	500	475	400	300		
60	575	550	500	400	300	
65	650	625	575	500	375	100
70	650	625	575	500	375	375

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

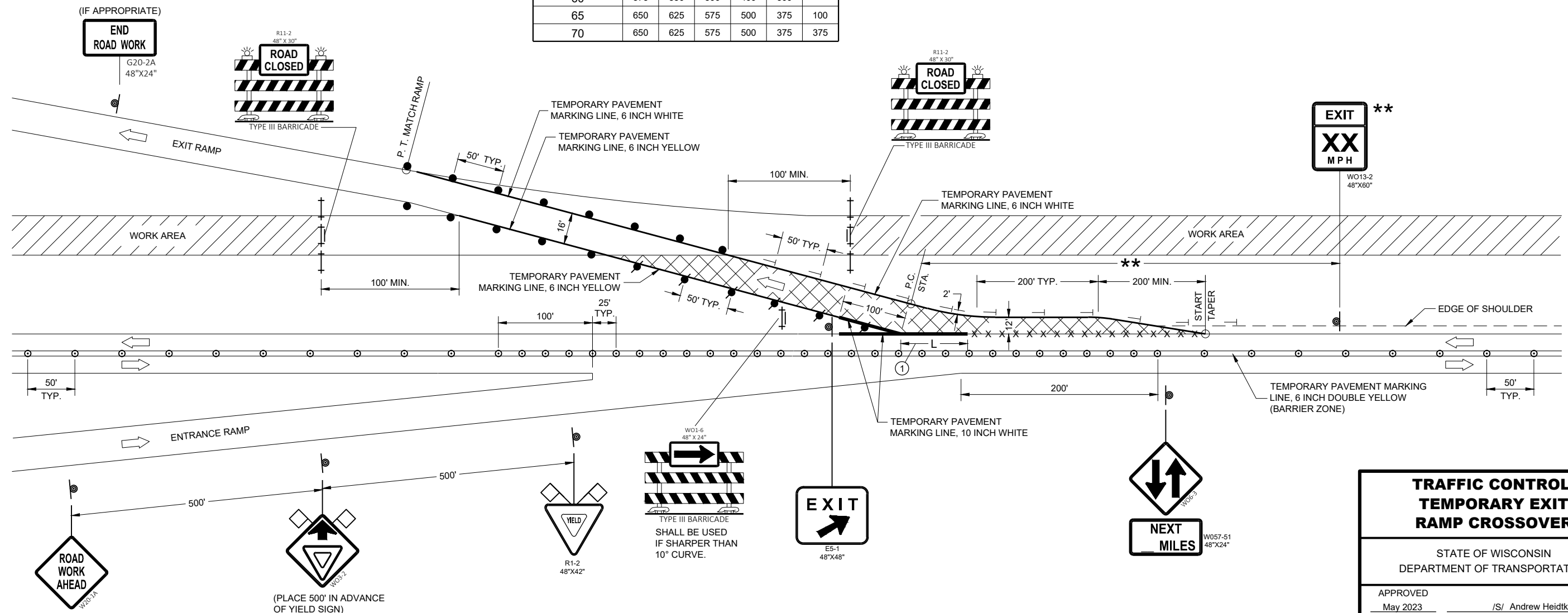
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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

WORK ALONG EDGES OF RAMP SHALL MAINTAIN A 10 FOOT AREA CLEAR OF PHYSICAL OBSTRUCTIONS SUCH AS DROP OFFS FROM PAVEMENT REMOVAL OR BROKEN CONCRETE CHUNKS DURING PAVEMENT REMOVAL. THESE AREAS SHALL BE LEVELED WITH TEMPORARY FILL TO PROTECT THE TRAVELING PUBLIC WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE CROSSOVER.

TRAFFIC CONTROL FOR RAMP CROSSOVERS ARE TYPICAL FOR ALL CONSTRUCTION PHASES.

① LENGTH "L" SHALL BE REQUIRED WHEN TANGENT LENGTH OF EXIT RAMP PARALLEL TO MAINLINE EXCEEDS 300 FEET. LENGTH SHALL BE EQUAL TO THE EXIT RAMP TANGENT LENGTH MINUS 300 FEET OR AS APPROVED BY THE ENGINEER AND SHALL CHANGE TO ACCOMMODATE PAVING GAPS.



(PLACE 500' IN ADVANCE OF YIELD SIGN)

TYPE III BARRICADE SHALL BE USED IF SHARPER THAN 10° CURVE.

**TRAFFIC CONTROL,
TEMPORARY EXIT
RAMP CROSSOVER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED _____ /S/ Andrew Heidtke
DATE _____ WORK ZONE ENGINEER

FHWA

6

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SDD 15D07-06

SDD 15D07-06

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- DELINEATOR FLEXIBLE / TUBULAR MARKER
- TEMPORARY DELINEATOR - WHITE (STEEL POST WITH SINGLE DELINEATOR)
- TYPE "A" WARNING LIGHT (FLASHING)
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGS, 16" X 16" MIN., ORANGE
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKINGS
- WORK AREA
- TEMPORARY CROSSOVER ASPHALTIC PAVEMENT

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

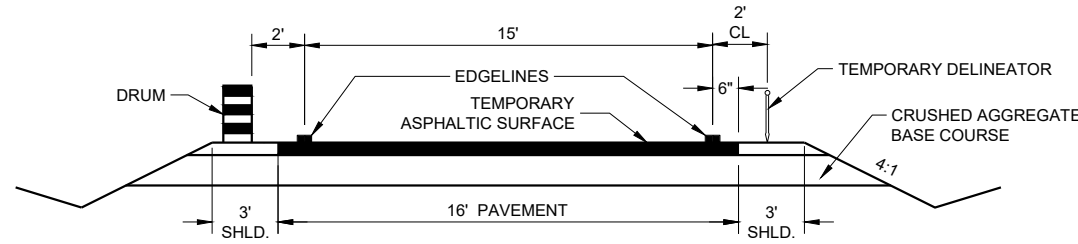
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS.

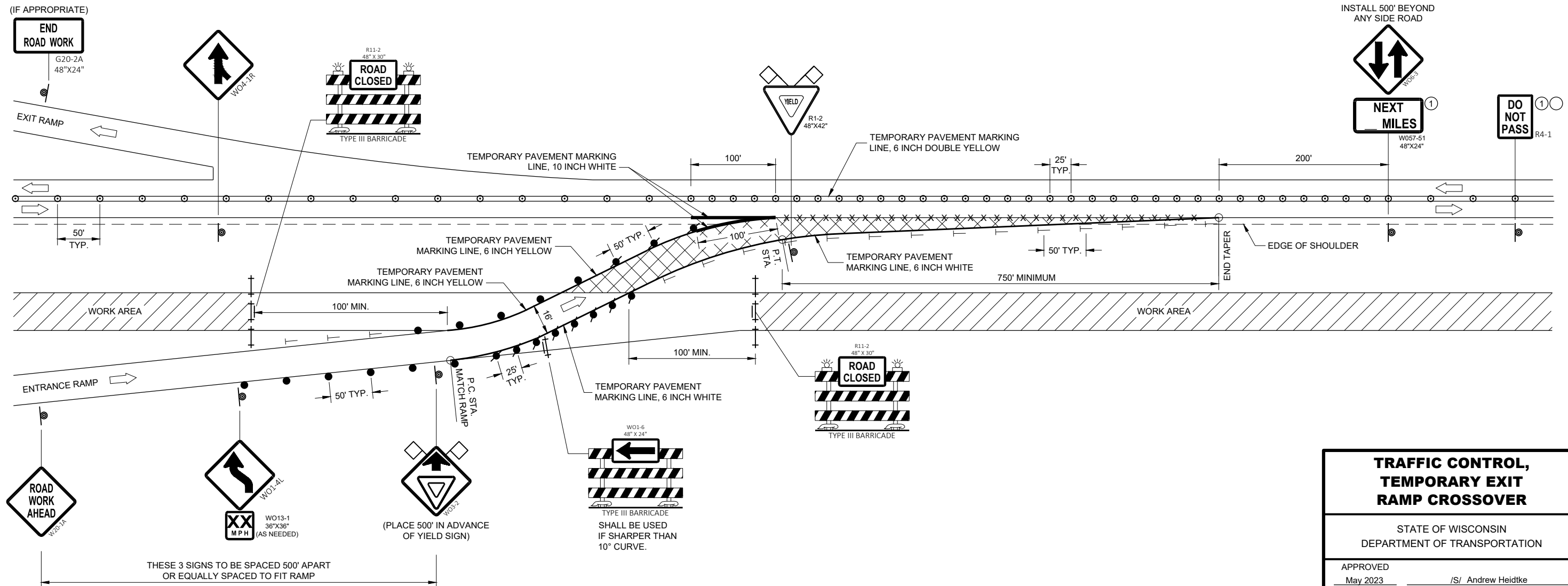
WORK ALONG EDGES OF RAMP SHALL MAINTAIN A 10 FOOT AREA CLEAR OF PHYSICAL OBSTRUCTIONS SUCH AS DROP OFFS FROM PAVEMENT REMOVAL OR BROKEN CONCRETE CHUNKS DURING PAVEMENT REMOVAL. THESE AREAS SHALL BE LEVELED WITH TEMPORARY FILL TO PROTECT THE TRAVELING PUBLIC WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE CROSSOVER.

TRAFFIC CONTROL FOR RAMP CROSSOVERS ARE TYPICAL FOR ALL CONSTRUCTION PHASES.

- ① INSTALL THE WO6-3 SIGN WITH THE R4-1 SIGN 1000 FEET BEYOND THE WO6-3 SIGN WITH THE WO57-51 AND ALTERNATE THE SEQUENCE OF THESE SIGNS EVERY 1 MILE.
- ② CONVENTIONAL: 24" X 30"
FREEWAY AND EXPRESSWAY: 36" X 48"



TYPICAL RAMP CROSSOVER ROADWAY DIMENSIONS



TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

SDD 15D08-09

SDD 15D08-09

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" SIGNS ARE THE SAME AS "W" SIGNS 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 AND PLACE TEMPORARY PAVEMENT MARKING LINE 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.

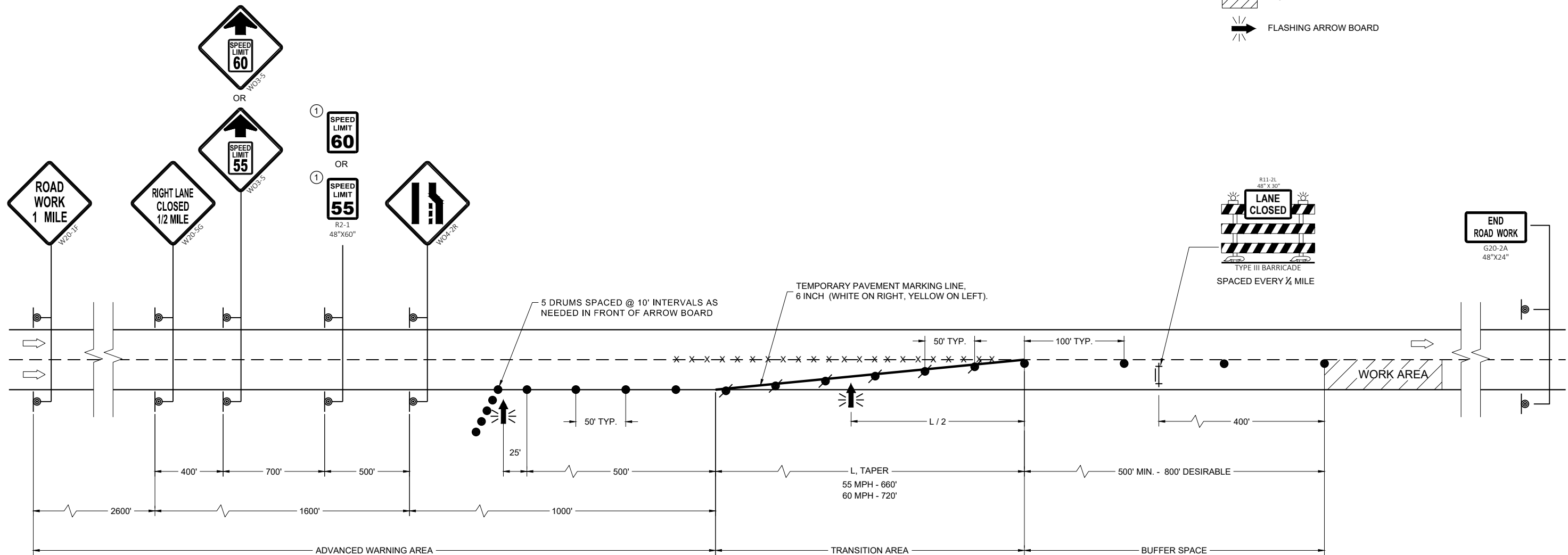
① A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

LEGEND

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

6

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






SDD 15D12-12b

SDD 15D12-12b

TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED September 2023 DATE	/s/ Andrew Heidtke ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  FLAGS, 16" X 16" MIN., ORANGE
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

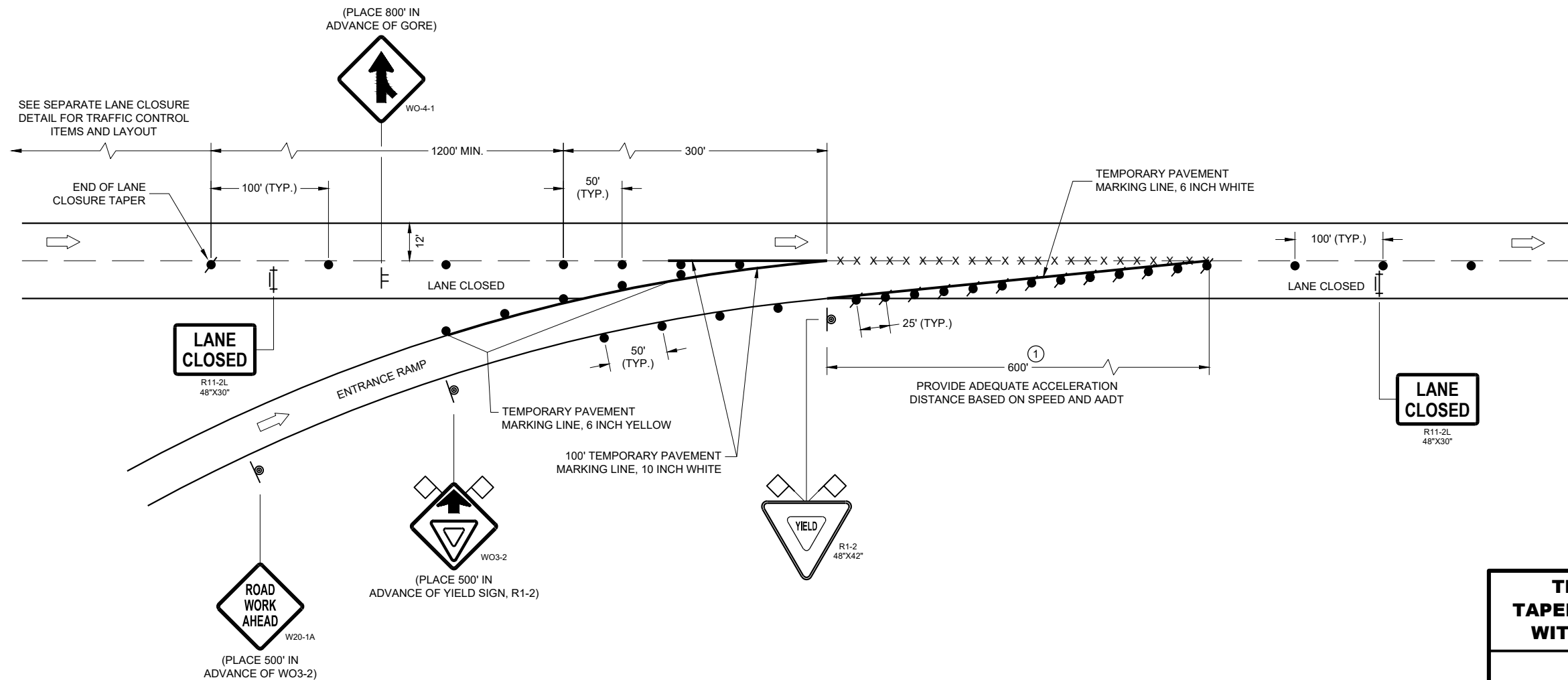
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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 LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

① CONSULT WITH REGIONAL WORK ZONE ENGINEER IF NEED TO REDUCE LENGTH EXISTS.



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SDD 15D15-07C

SDD 15D15-07C








**TRAFFIC CONTROL,
TAPERED ENTRANCE RAMP
WITHIN LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2023 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  FLAGS, 16" X 16" MIN., ORANGE
-  DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

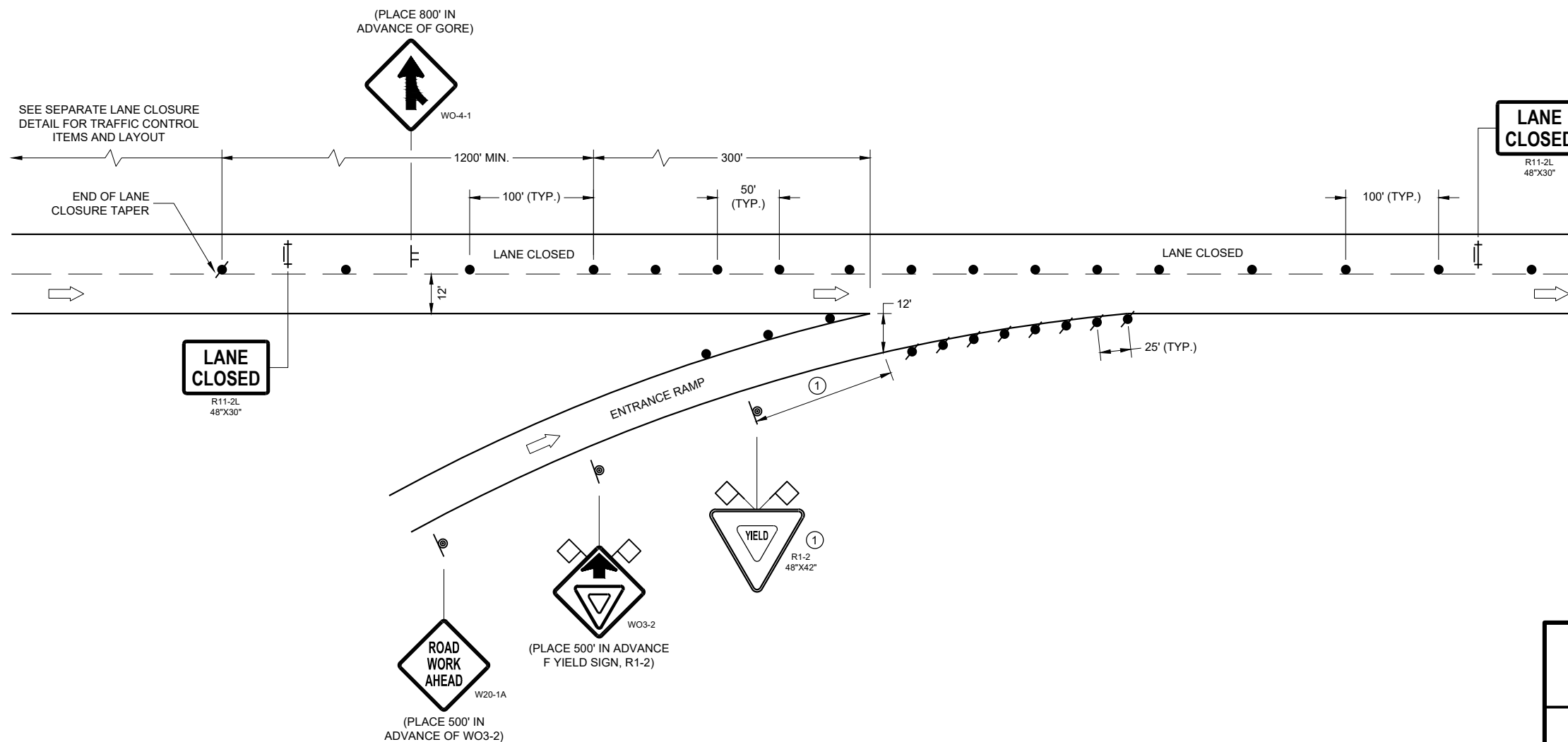
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

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

① PLACE YIELD SIGN TO PROVIDE ADEQUATE SIGHT DISTANCE AND ACCELERATION DISTANCE.



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SDD 15D15-07d

SDD 15D15-07d

TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊞ SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- ⦿ TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ×-×-× REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- ⊞ TYPE III BARRICADE WITH ATTACHED SIGN
- ➡ DIRECTION OF TRAFFIC

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

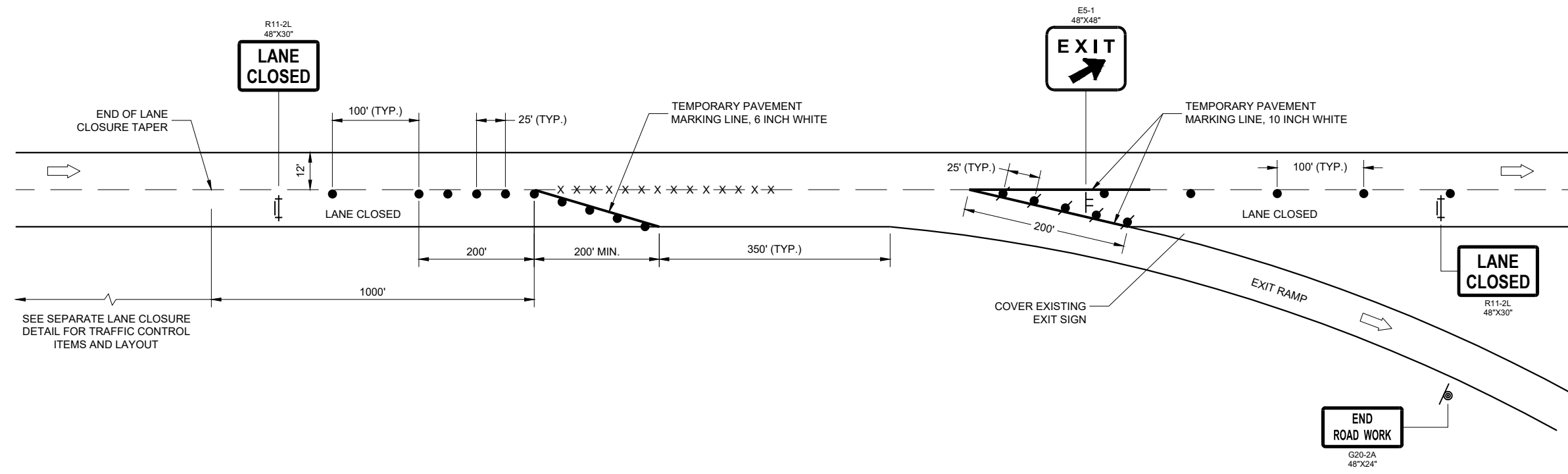
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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 LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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



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SDD 15D15-07e

SDD 15D15-07e

TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

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.

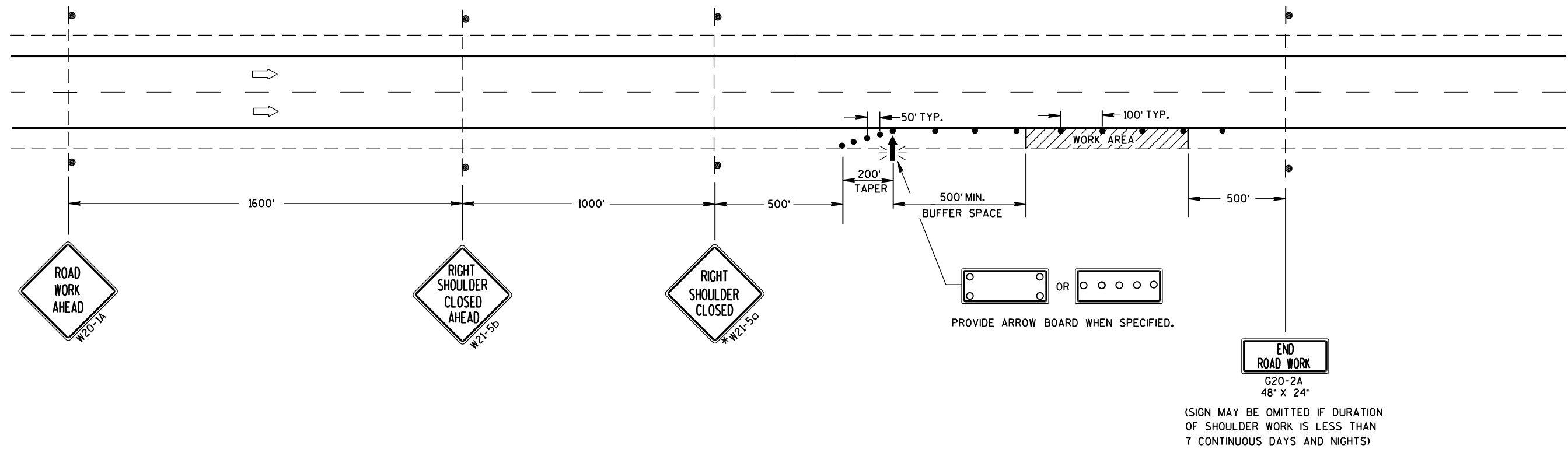
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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



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	

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

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

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

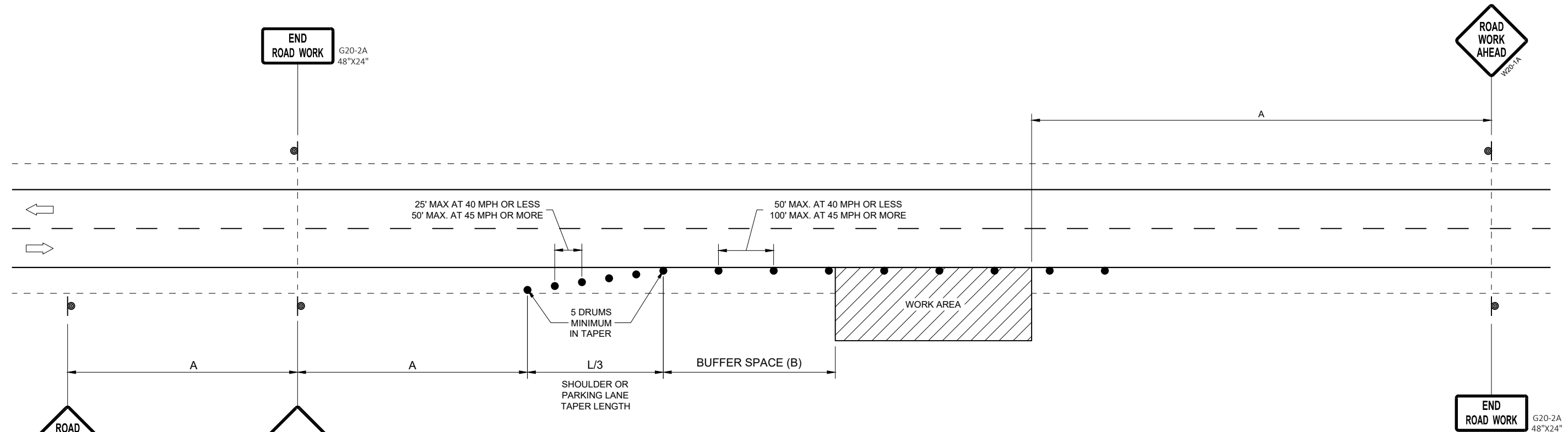
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

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OR
IF TRAFFIC CONTROL DEVICES
ENCROACH ONTO TRAVELED WAY, USE



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

**TRAFFIC CONTROL, WORK ON
SHOULDER OR PARKING LANE,
UNDIVIDED ROADWAY**

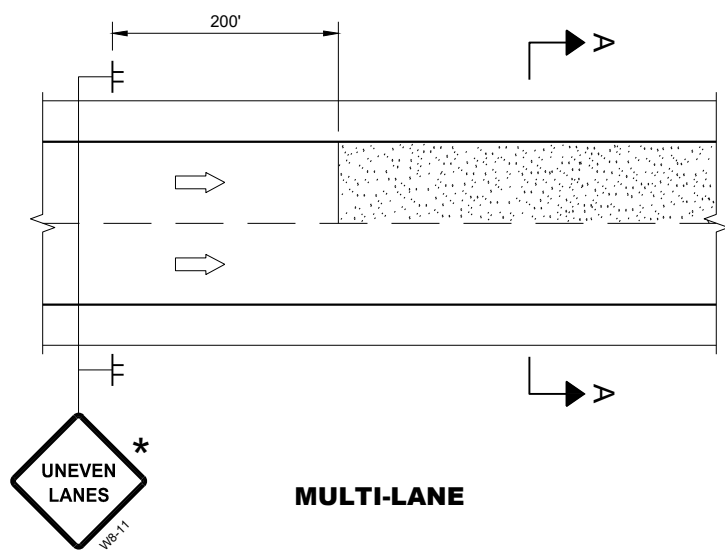
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

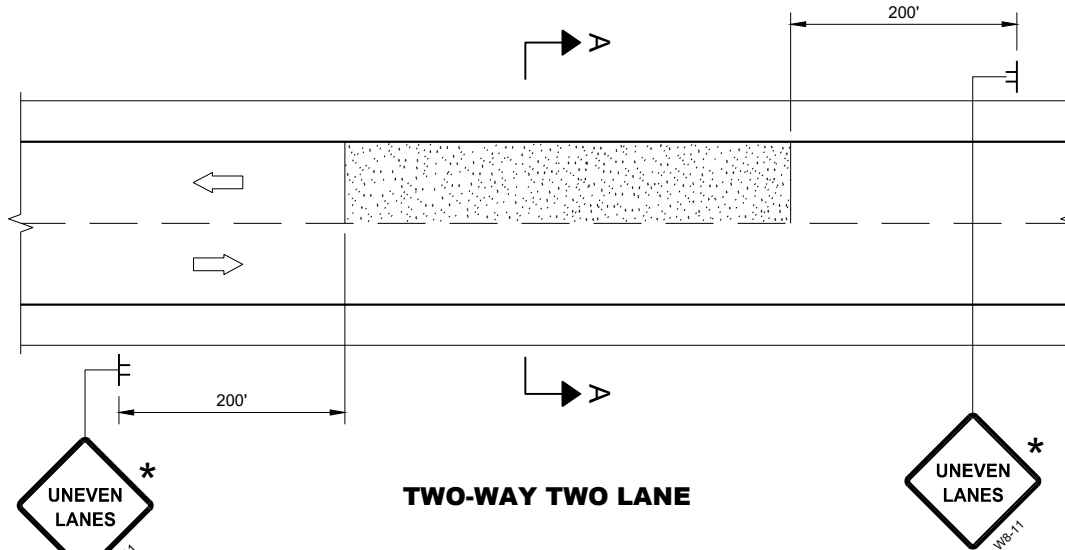
FHWA

SDD 15D28 - 04

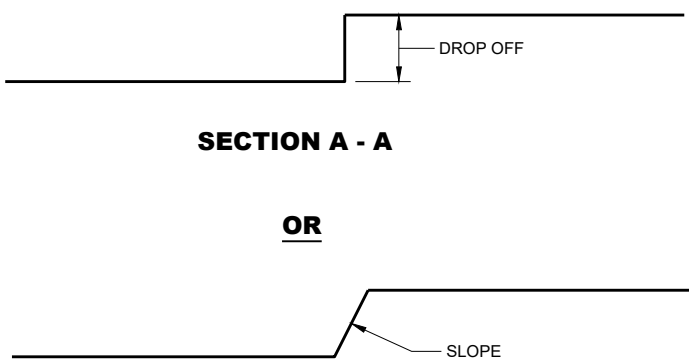
SDD 15D28 - 04



MULTI-LANE



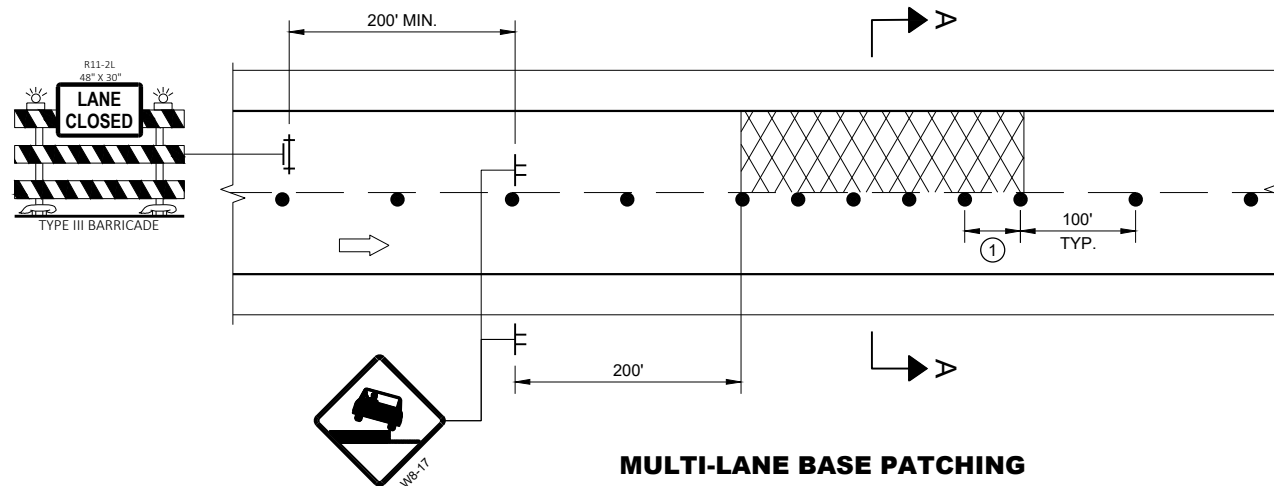
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

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

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

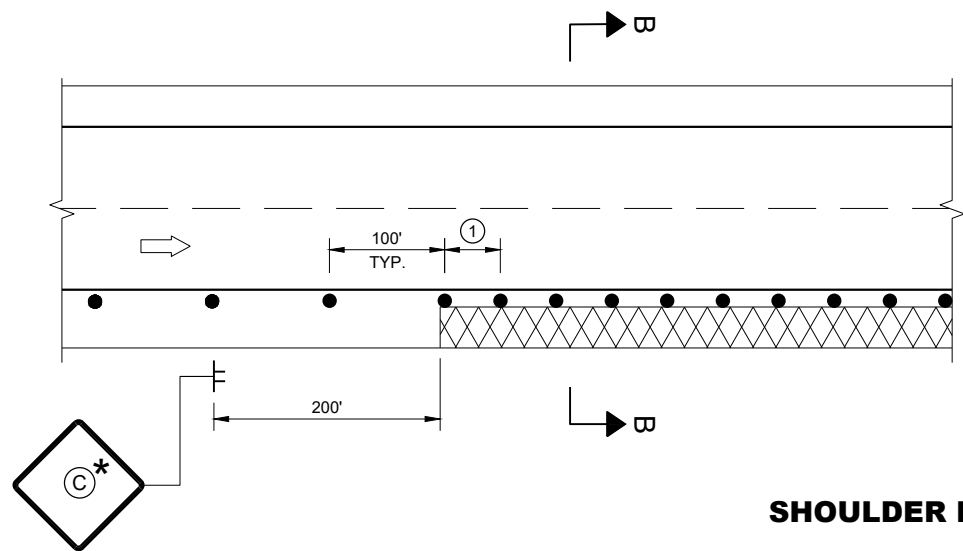
① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

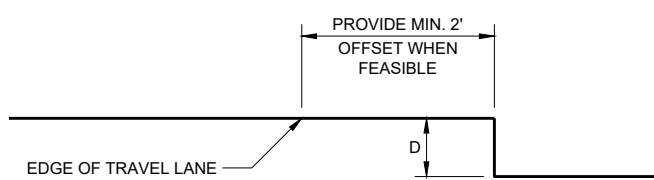
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

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SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

SDD 15D39 - 02

SDD 15D39 - 02







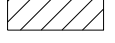


**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER

FHWA

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  CONCRETE BARRIER TEMPORARY PRECAST

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) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT RIGHT - REVERSE FOR SHIFTING LEFT.

ALL SIGNS ARE 48"x48" 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 AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS 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 AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

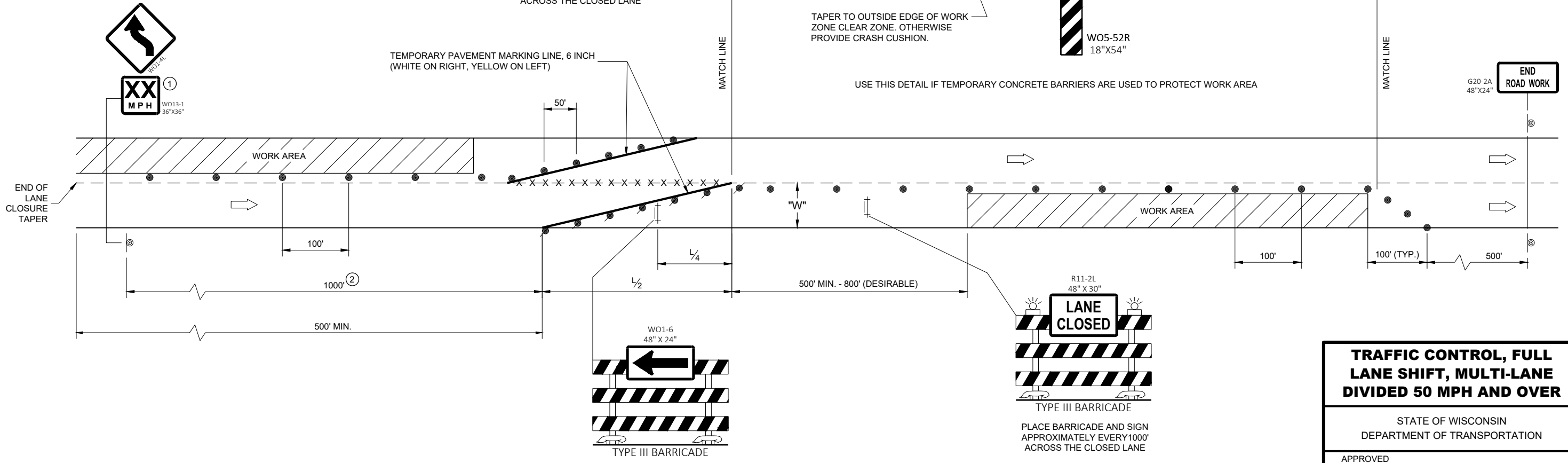
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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 SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT 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.

- ① USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
- ② IF BEGINNING OF LANE SHIFT IS 1200' OF LESS FROM THE END OF THE LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER 1/2				
	W, LATERAL OFFSET (FT)				
	10	11	12	13	14
50	250	275	300	325	350
55	275	303	330	358	385
60	300	330	360	390	420
65	325	358	390	423	455
70	350	385	420	455	490



TRAFFIC CONTROL, FULL LANE SHIFT, MULTI-LANE DIVIDED 50 MPH AND OVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED _____
DATE May 2023 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA










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SDD 15D40-05b

SDD 15D40-05b

LEGEND

-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
-  CONCRETE BARRIER TEMPORARY PRECAST

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) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT LEFT - REVERSE FOR SHIFTING RIGHT.

ALL SIGNS ARE 48"x48" 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 AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON ANY "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS 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 AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

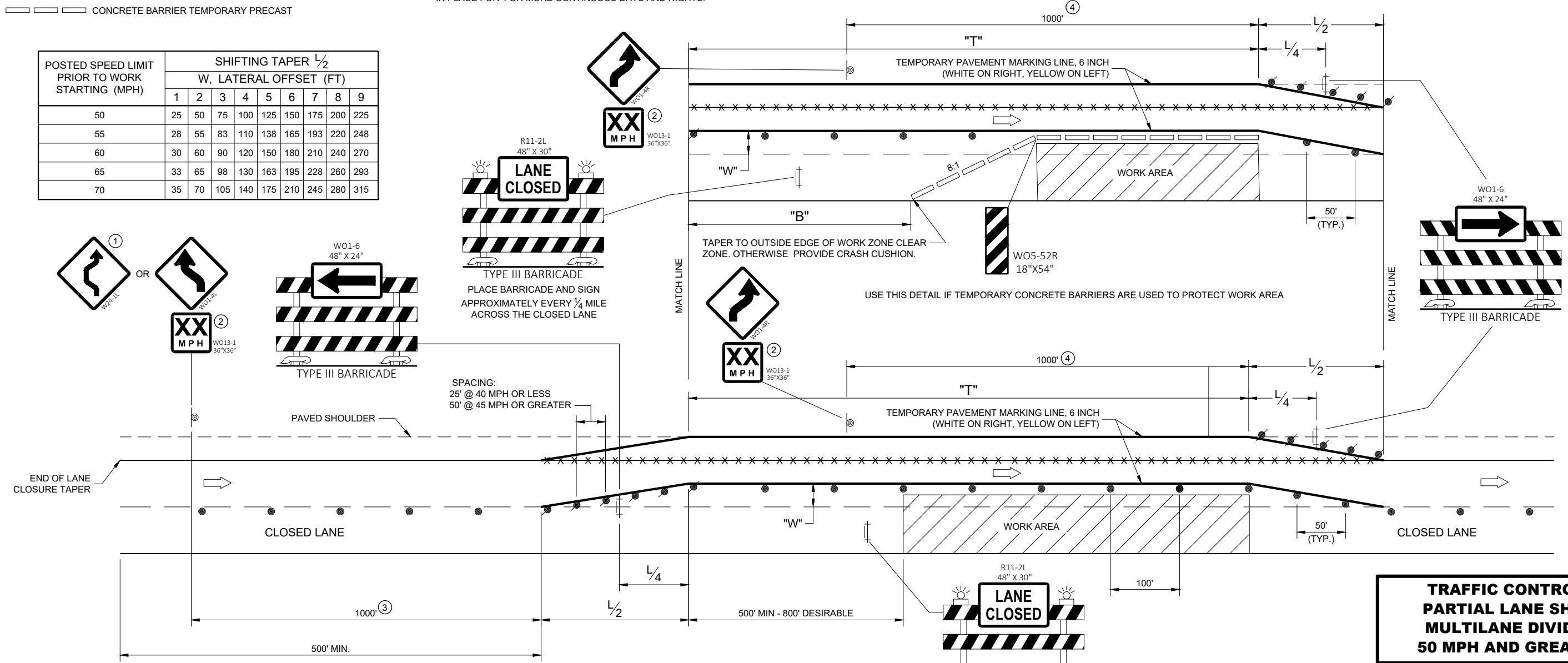
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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 SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT 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.

- ① USE ONLY WHEN T<600', OMIT WO1-4R.
- ② IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.
- ③ IF THE BEGINNING OF LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE LANE CLOSURE TAPER.
- ④ IF THE BEGINNING OF THE SECOND LANE SHIFT TAPER IS 1200 FEET OR LESS FROM END OF THE FIRST LANE CLOSURE TAPER, PLACE THE WO1-4L SIGN 200 FEET AFTER THE END OF THE FIRST LANE CLOSURE TAPER.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER 1/2 W, LATERAL OFFSET (FT)								
	1	2	3	4	5	6	7	8	9
50	25	50	75	100	125	150	175	200	225
55	28	55	83	110	138	165	193	220	248
60	30	60	90	120	150	180	210	240	270
65	33	65	98	130	163	195	228	260	293
70	35	70	105	140	175	210	245	280	315



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SDD 15D40-05d

SDD 15D40-05d

**TRAFFIC CONTROL,
PARTIAL LANE SHIFT
MULTILANE DIVIDED
50 MPH AND GREATER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED _____ /S/ Andrew Heidtke
DATE May 2023 WORK ZONE ENGINEER

FHWA

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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



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

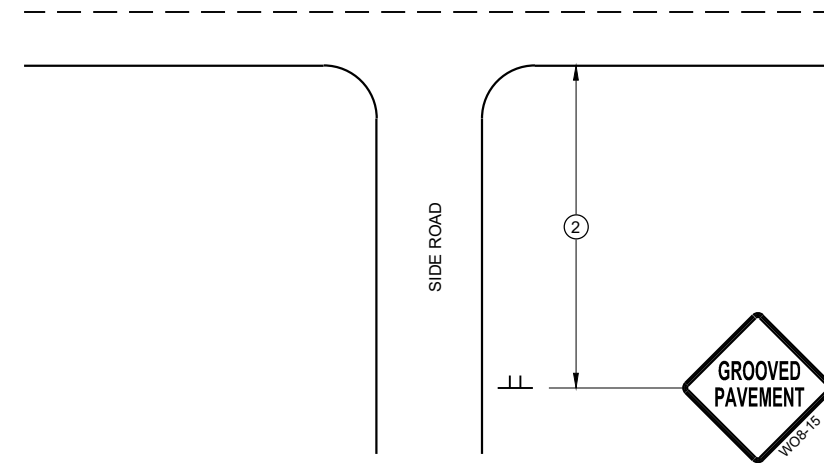
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

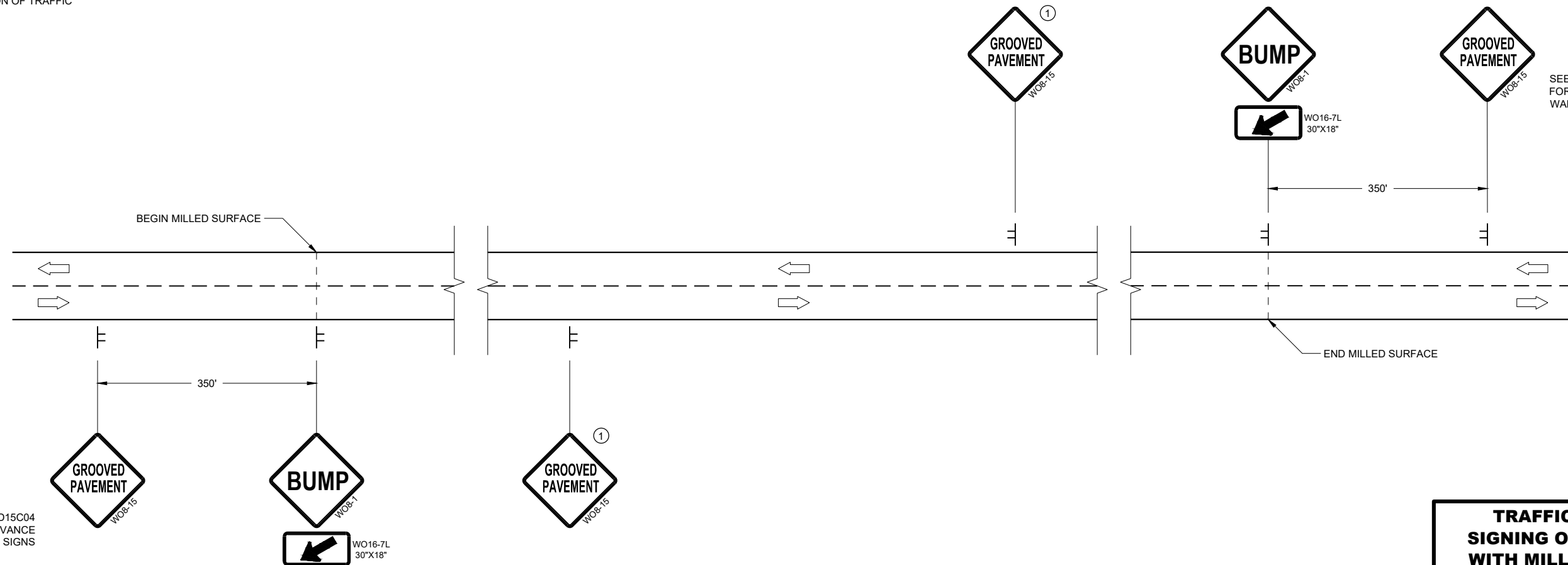
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

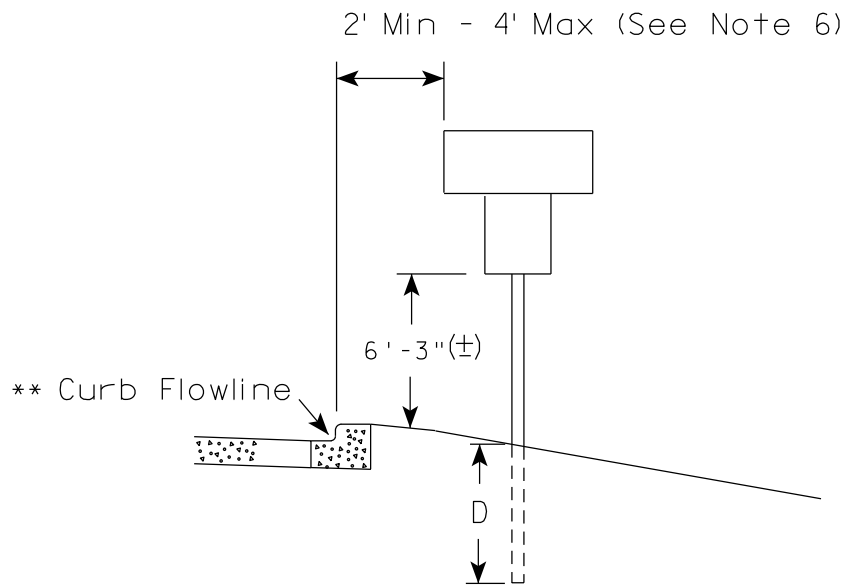
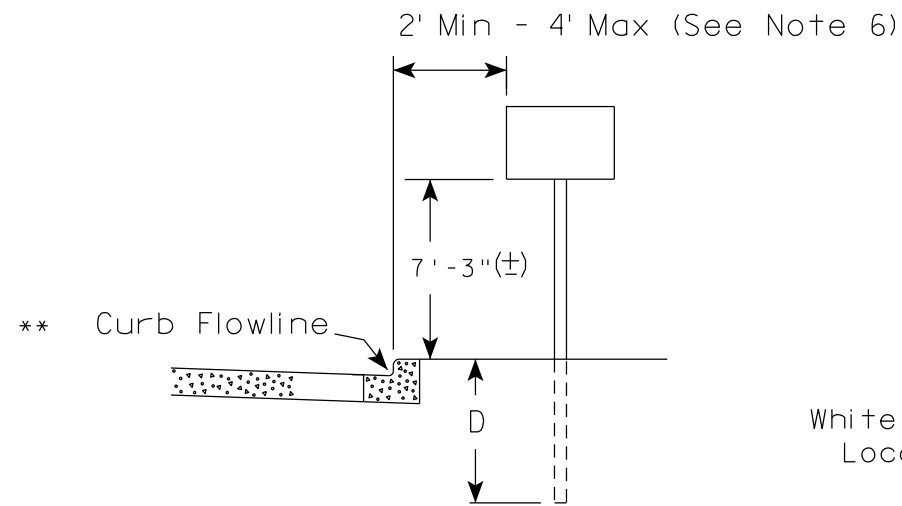
TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

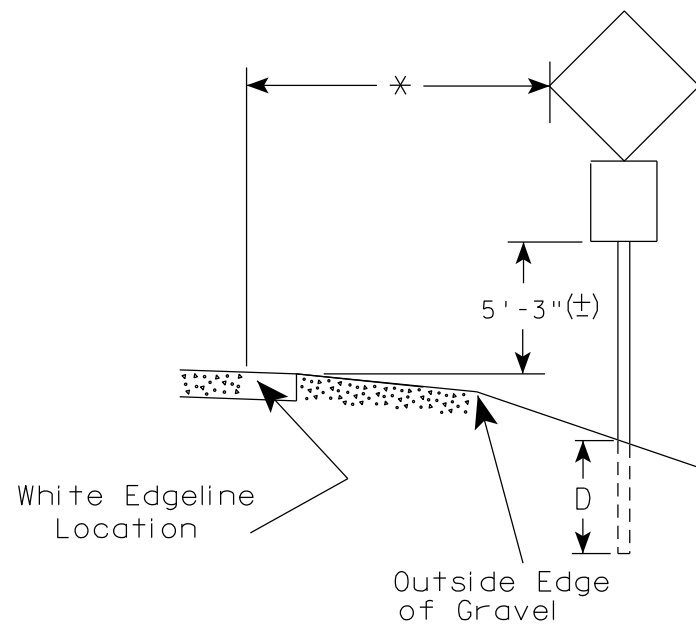
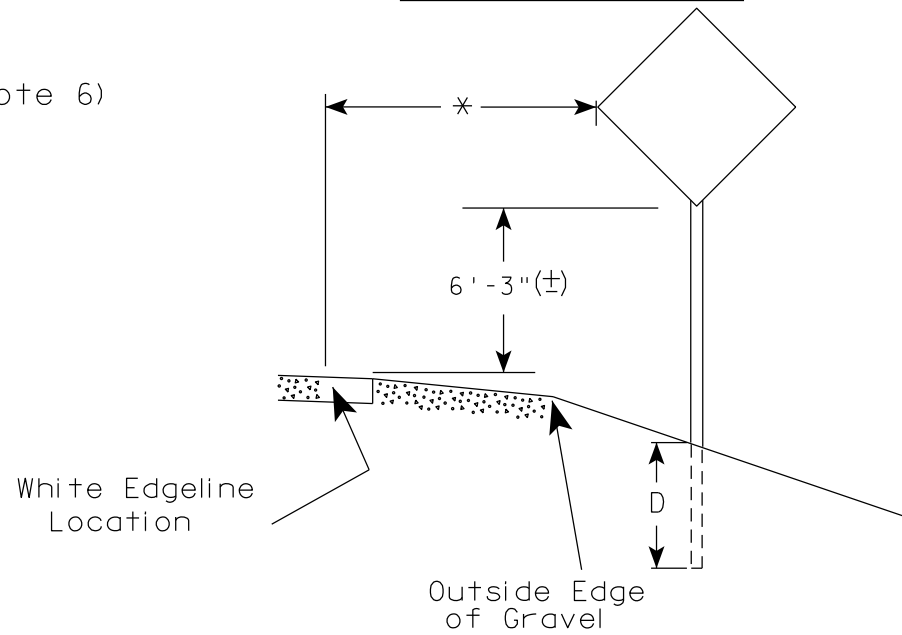
APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

POST EMBEDMENT DEPTH

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

* * The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

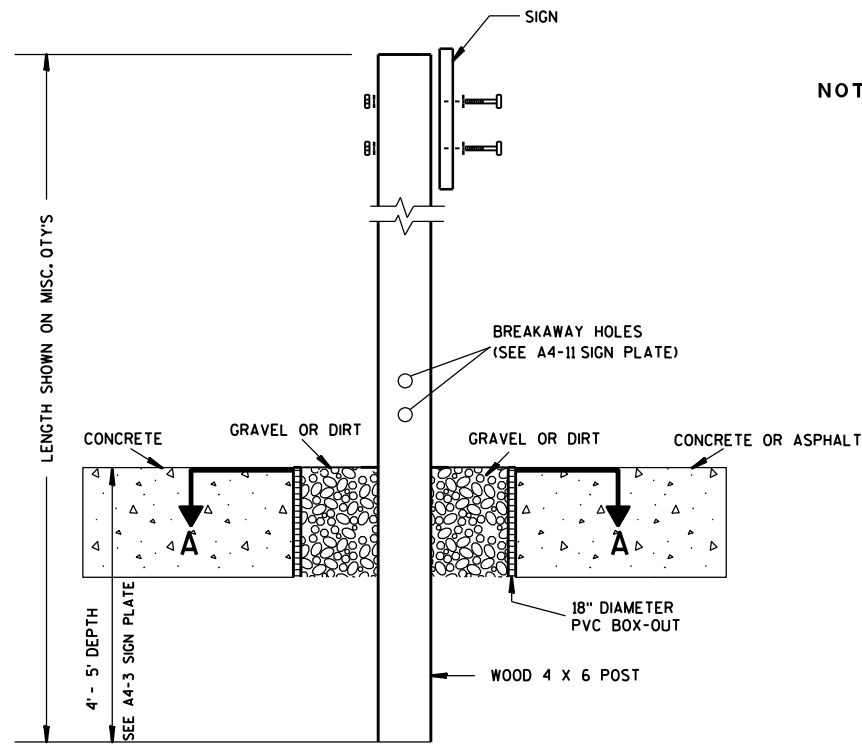
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

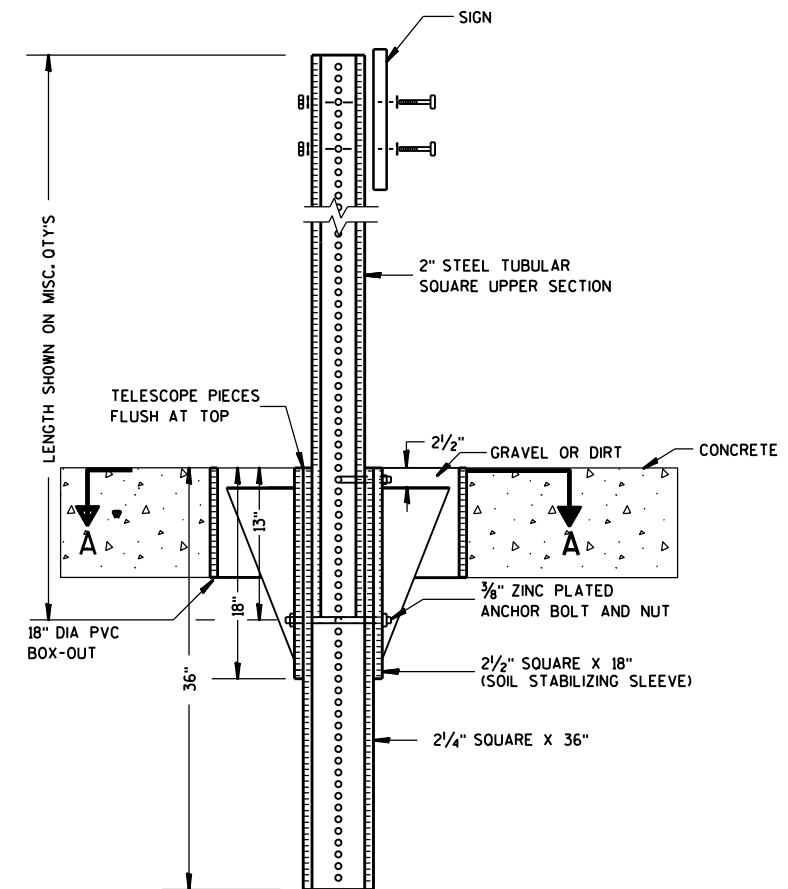
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

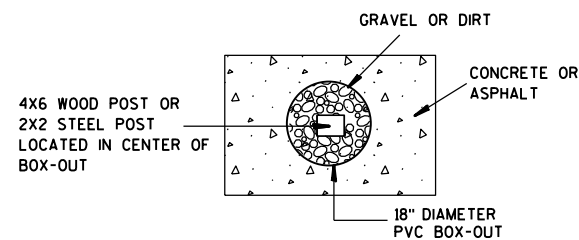
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

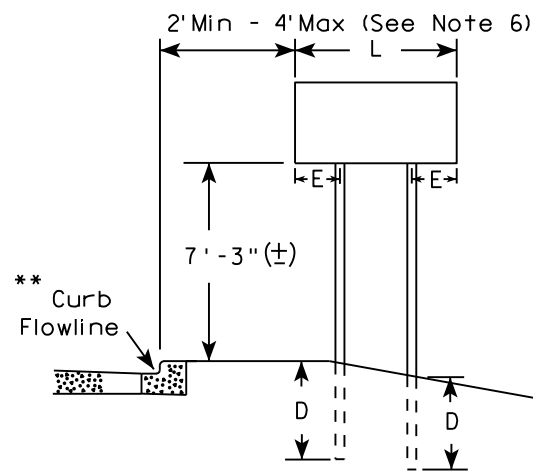
FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

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

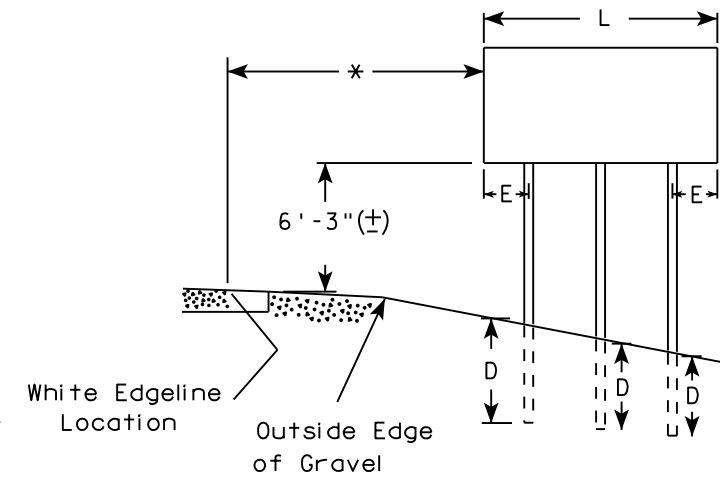
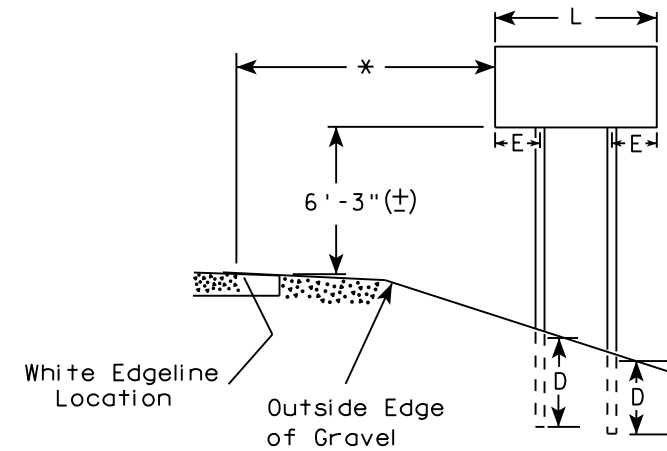
GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

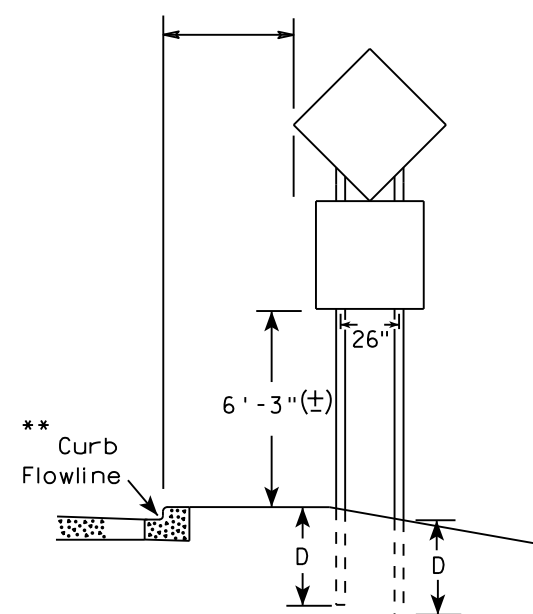
URBAN AREA



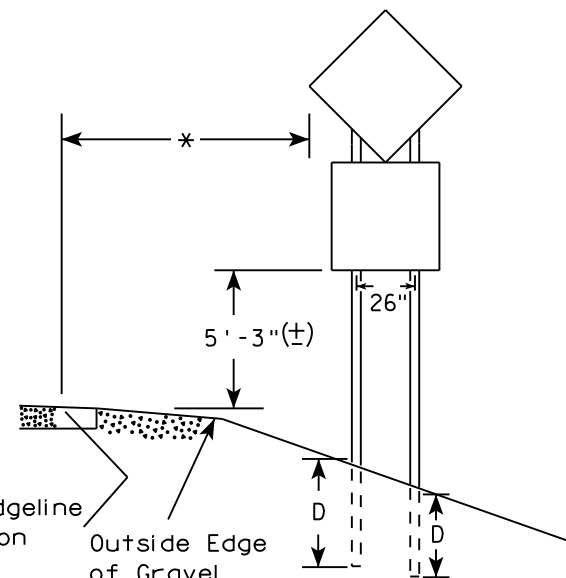
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

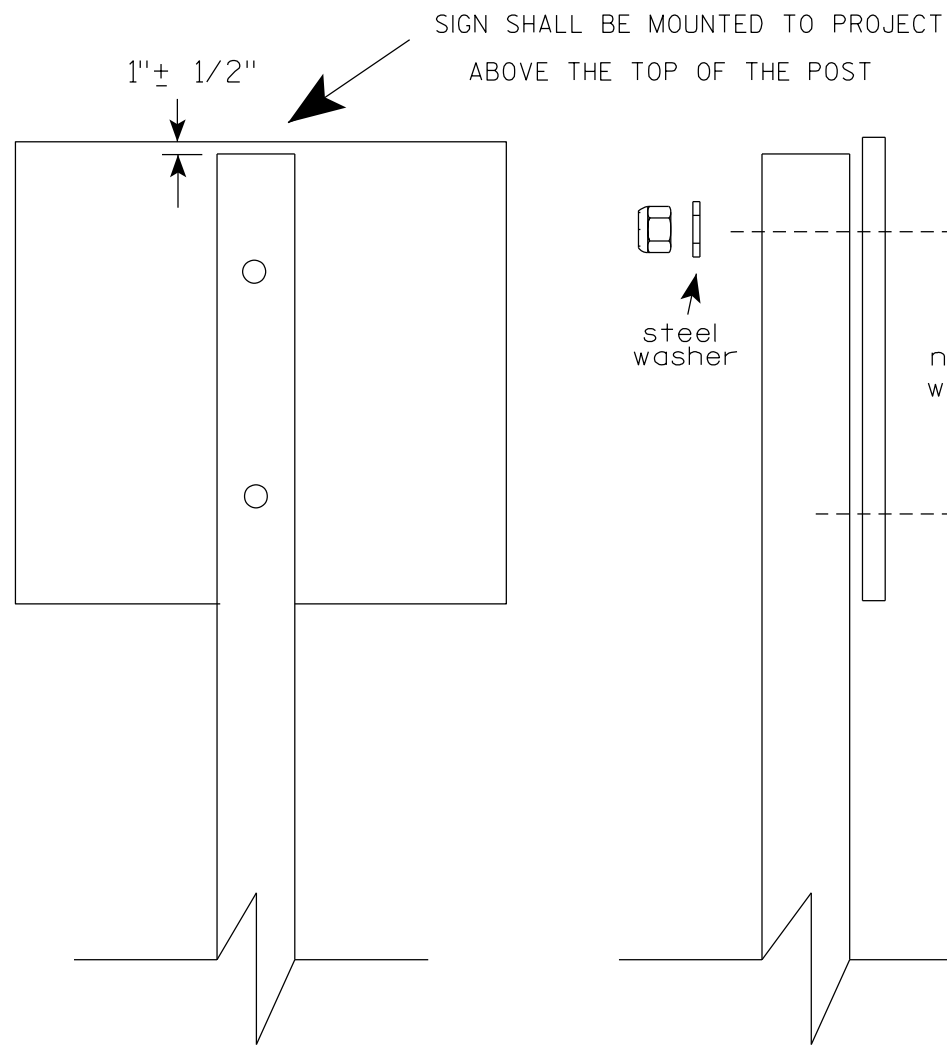
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION
 APPROVED *Matthew R. Rauch*
 For State Traffic Engineer
 DATE 8/21/17 PLATE NO. A4-4.15



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

- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

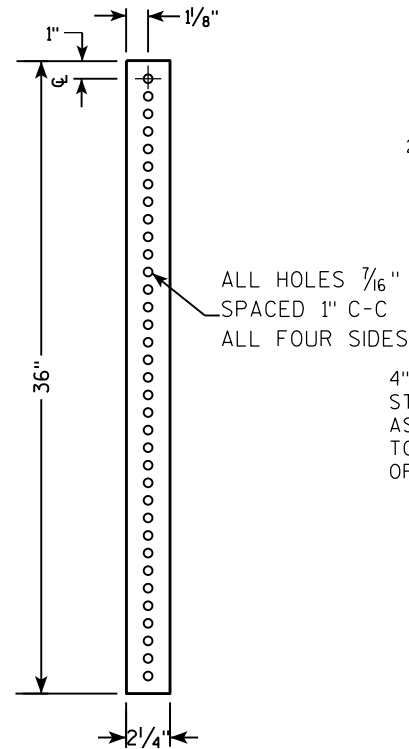
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 - $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 - $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

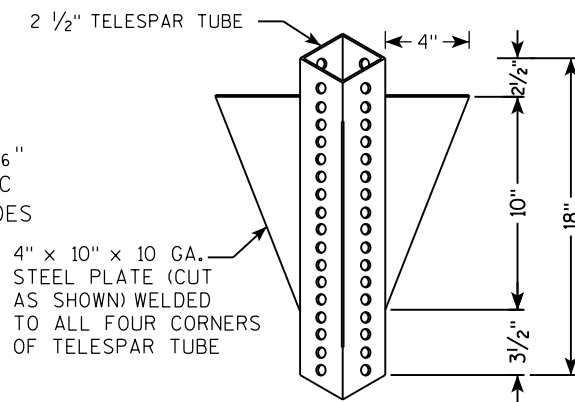
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

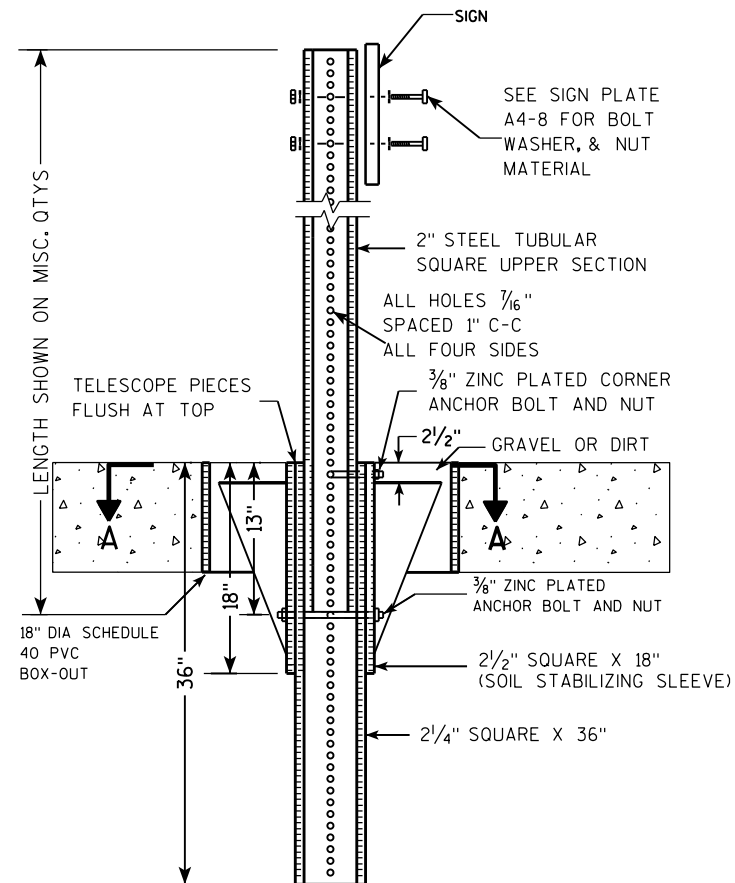
**2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



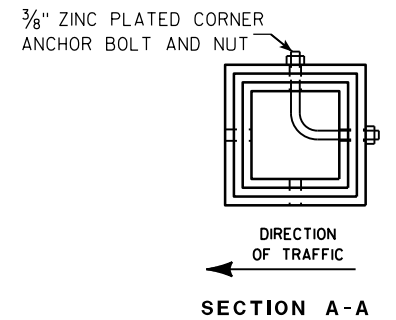
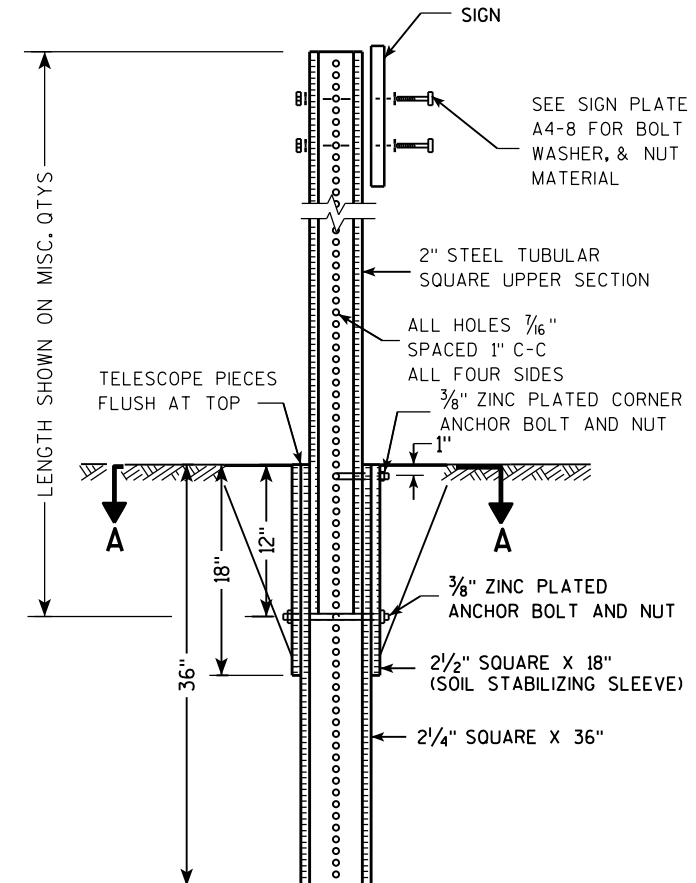
**2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH**



**DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

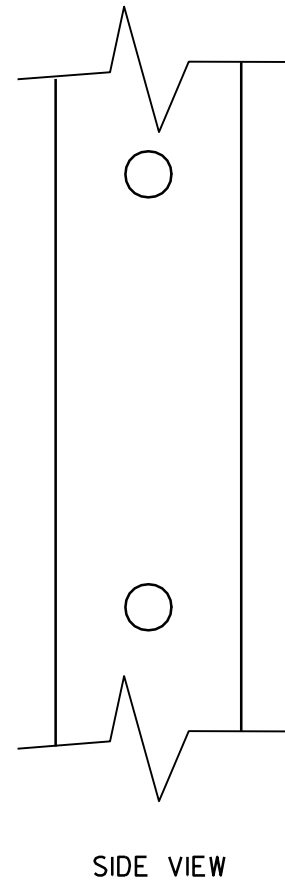
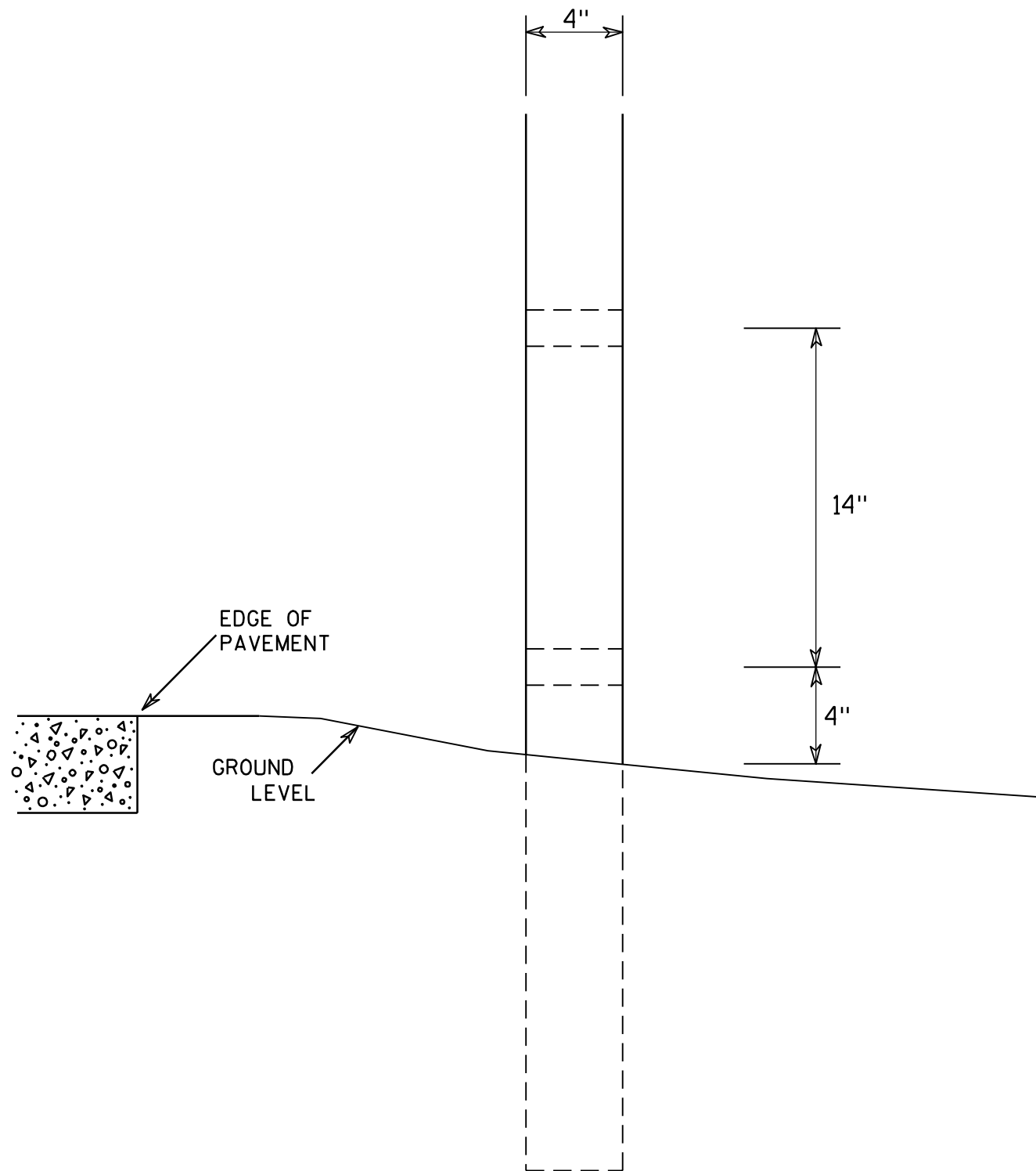
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

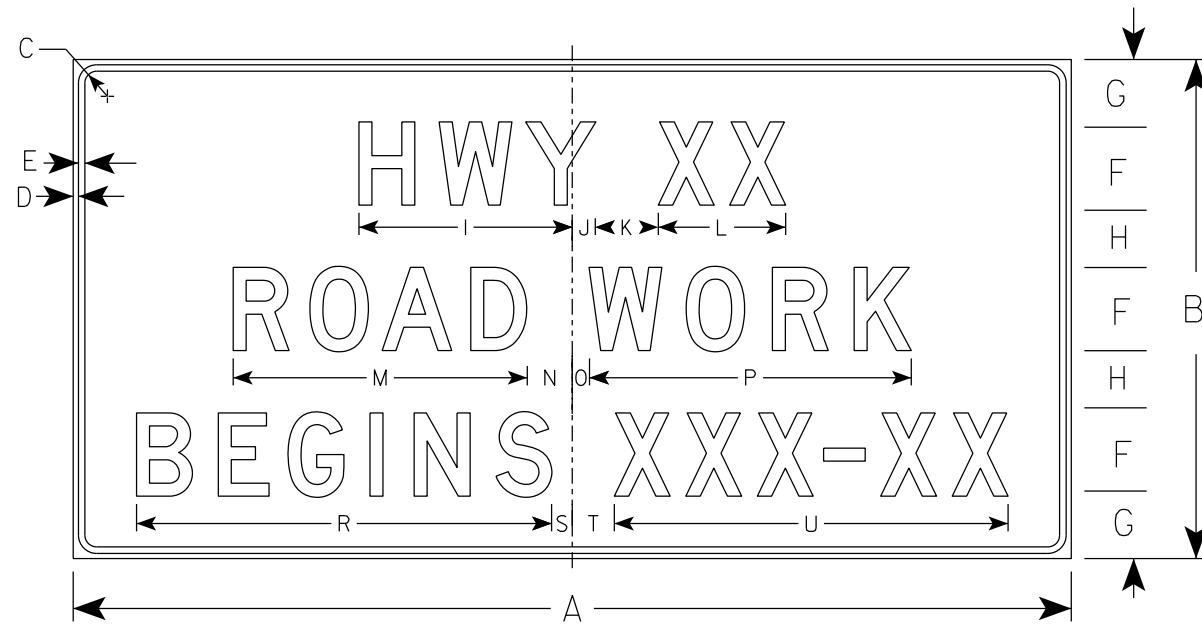
7

7

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

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.



G20-57

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/4	3 1/2	1 1/2	23 1/4		29 7/8	1 3/4	3 1/4	28 1/2						18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	4 3/8	1 5/8	31		39 1/4	2	4	37 7/8						32.0
5																											

STANDARD SIGN
G20-57

WISCONSIN DEPT OF TRANSPORTATION

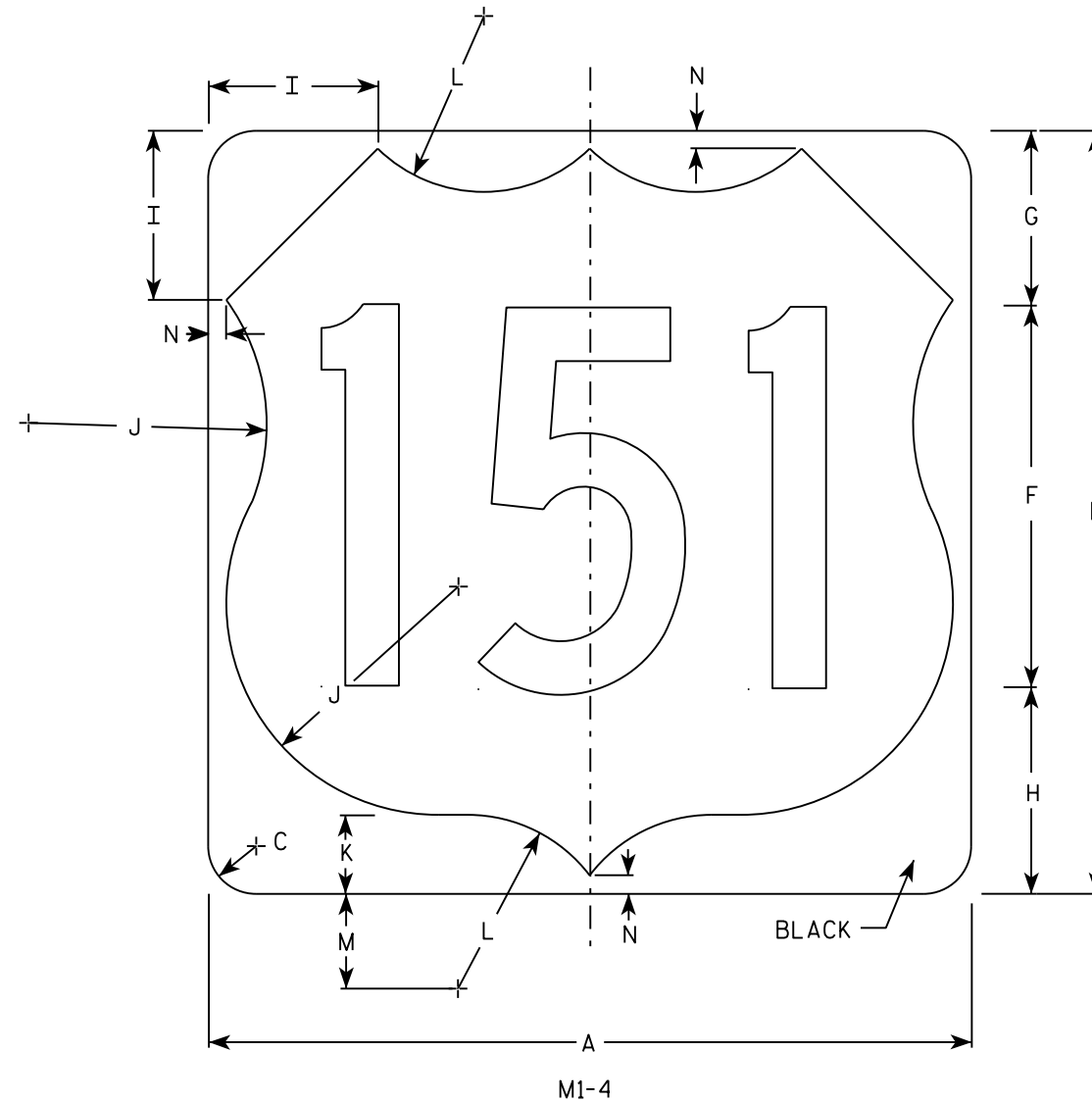
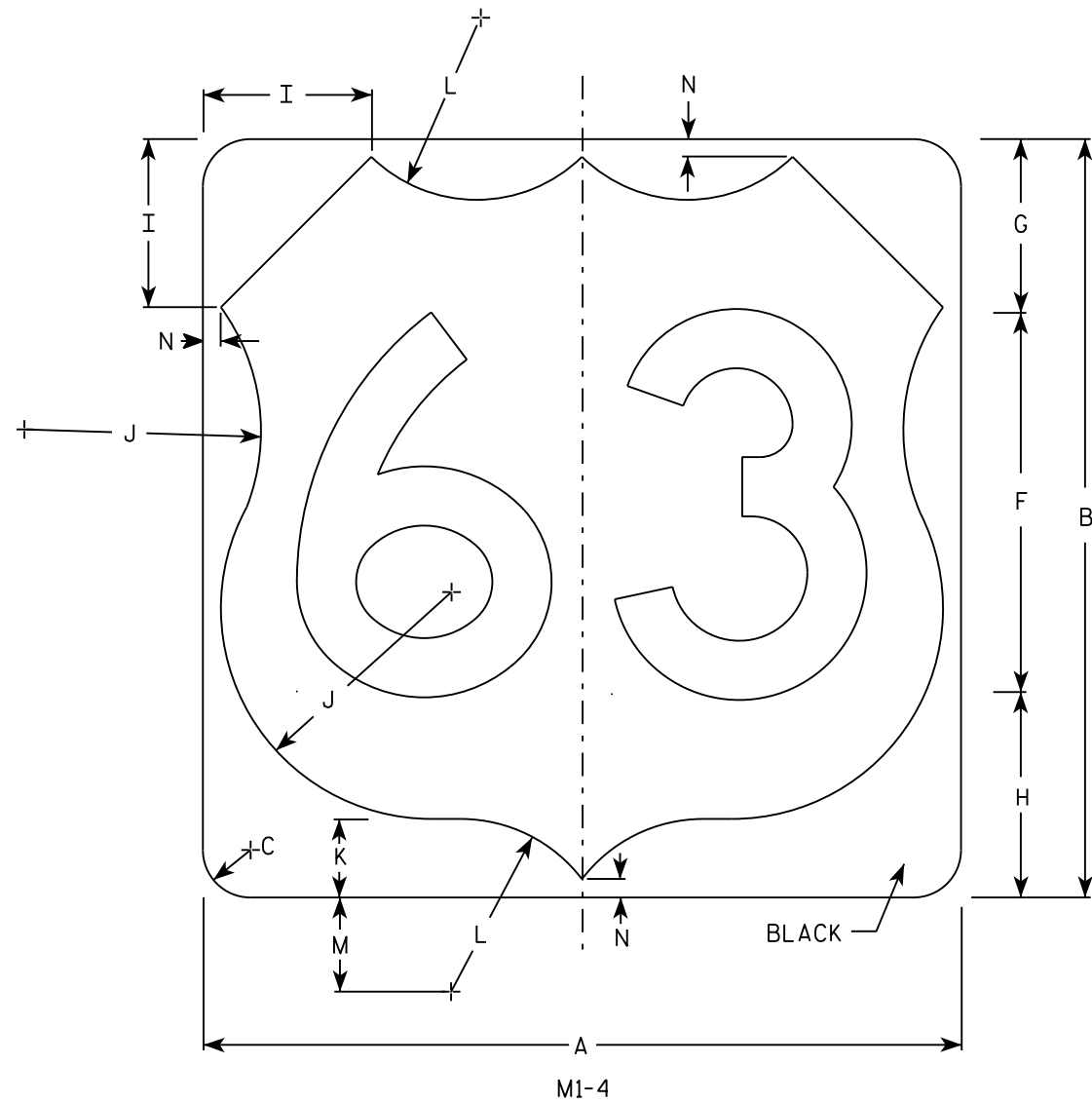
APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57.3

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

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0

USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

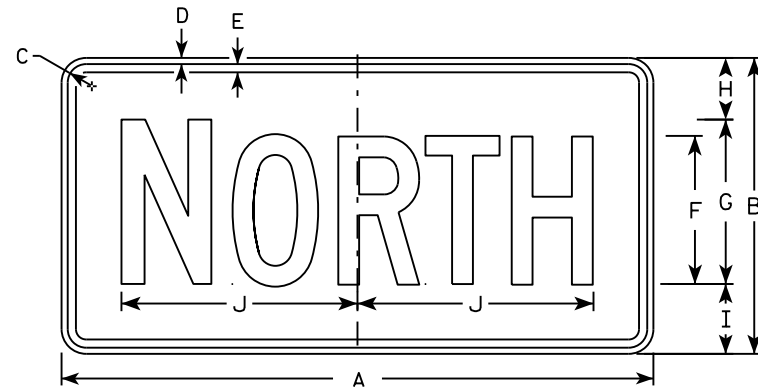
APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-4.10

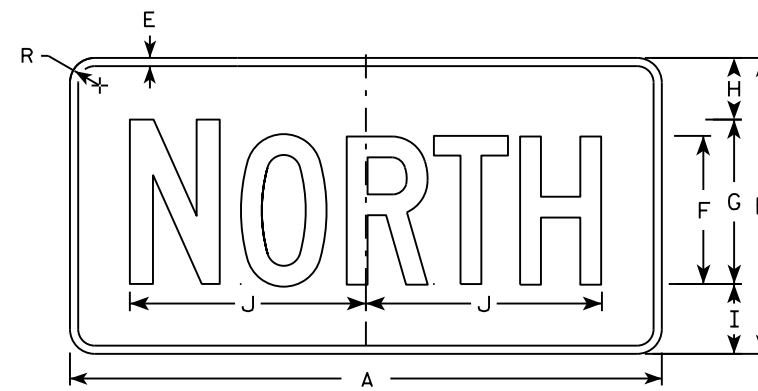
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**

NOTES

- All Signs Type II - Type H
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White
 Message - Black
 MB3-1 thru MB3-4 Background - Blue
 Message - White
 MK3-1 thru MK3-4 Background - Green
 Message - White
 MM3-1 thru MM3-4 Background - White
 Message - Green
 MN3-1 thru MN3-4 Background - Brown
 Message - White
 MP3-1 thru MP3-4 Background - White
 Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.



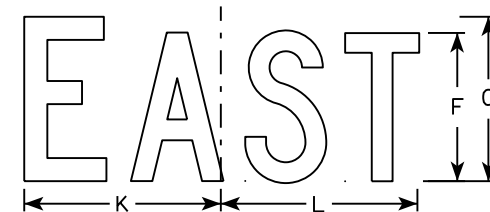
M3-1
MM3-1
MP3-1



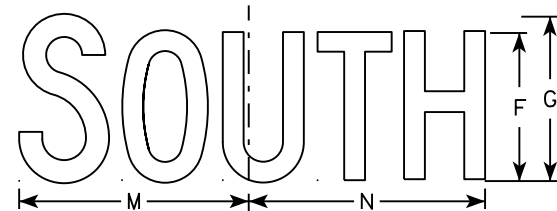
MB3-1
MK3-1
MN3-1



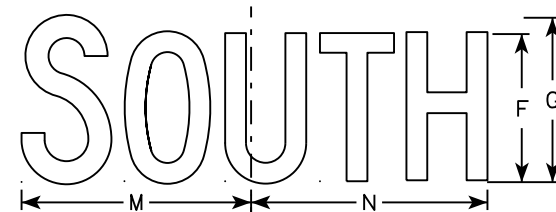
M3-2
MM3-2
MP3-2



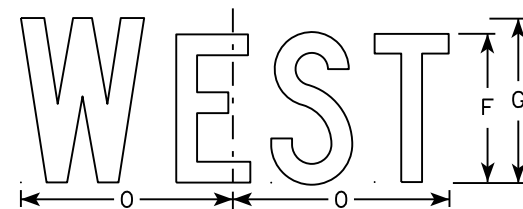
MB3-2
MK3-2
MN3-2



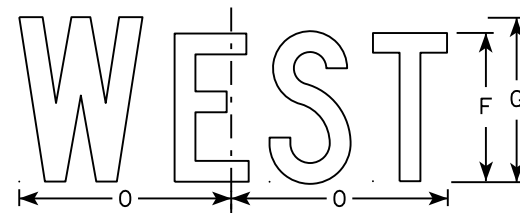
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

7

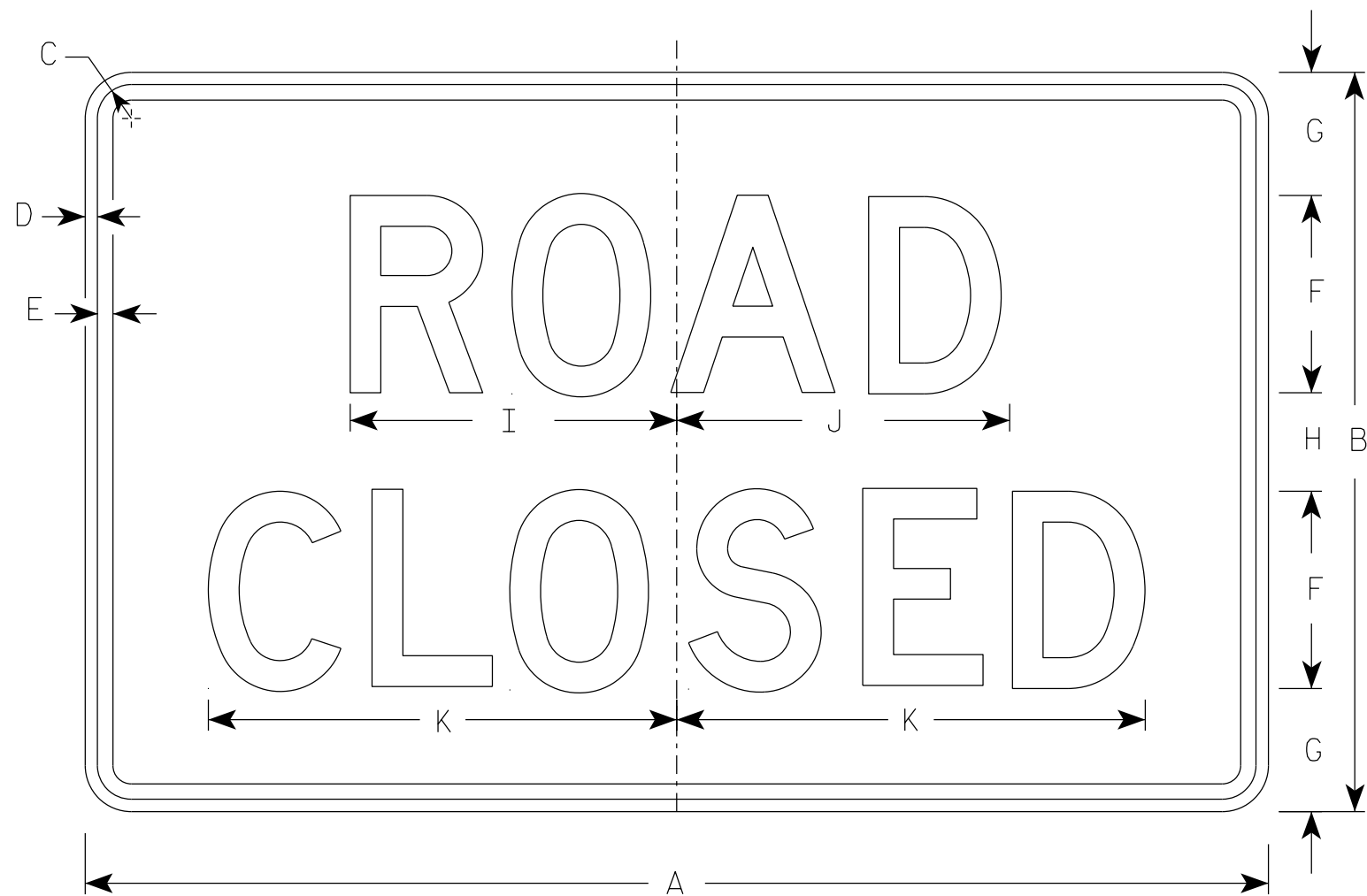
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thru M3-4
SERIES

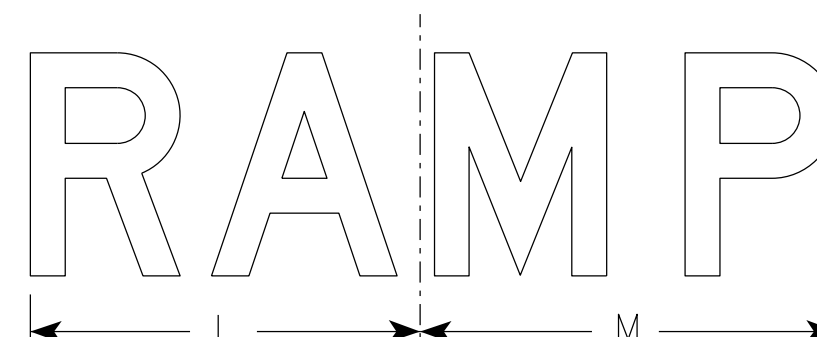
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

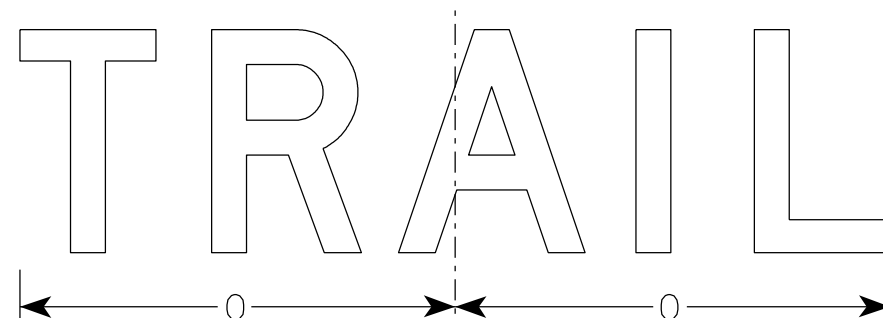
DATE 10/15/15 PLATE NO. M3-1.14



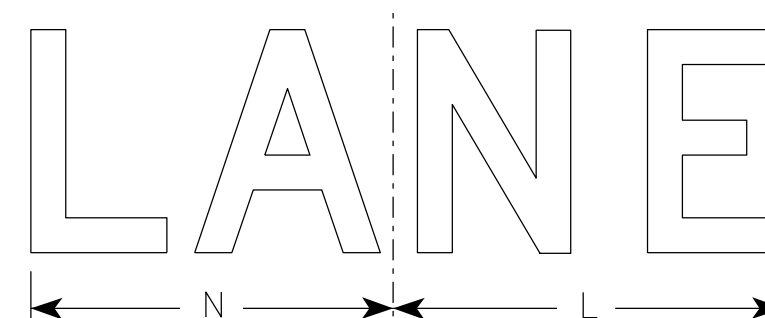
R11-2



R11-2R



R11-2T



R11-2L

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

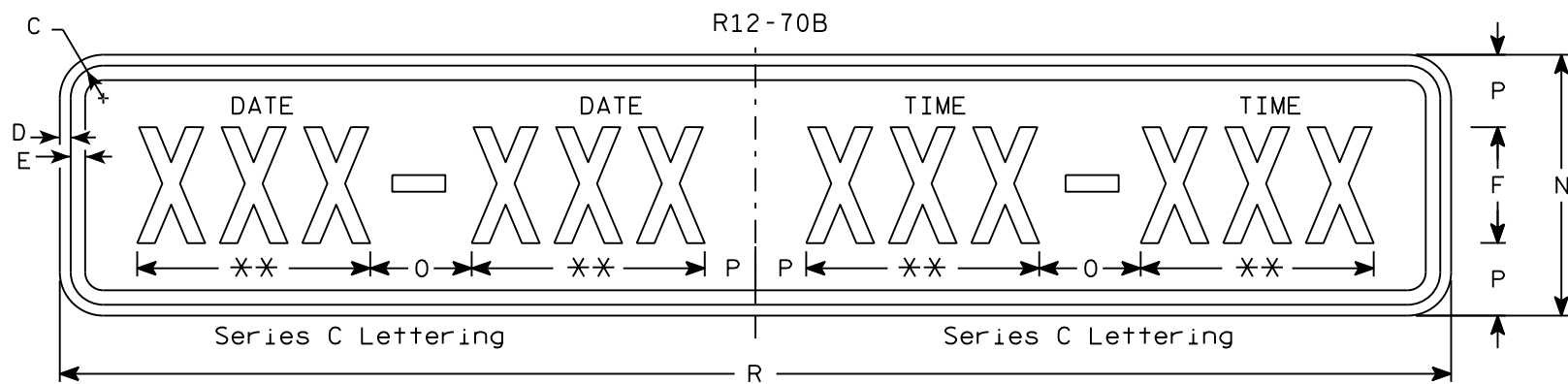
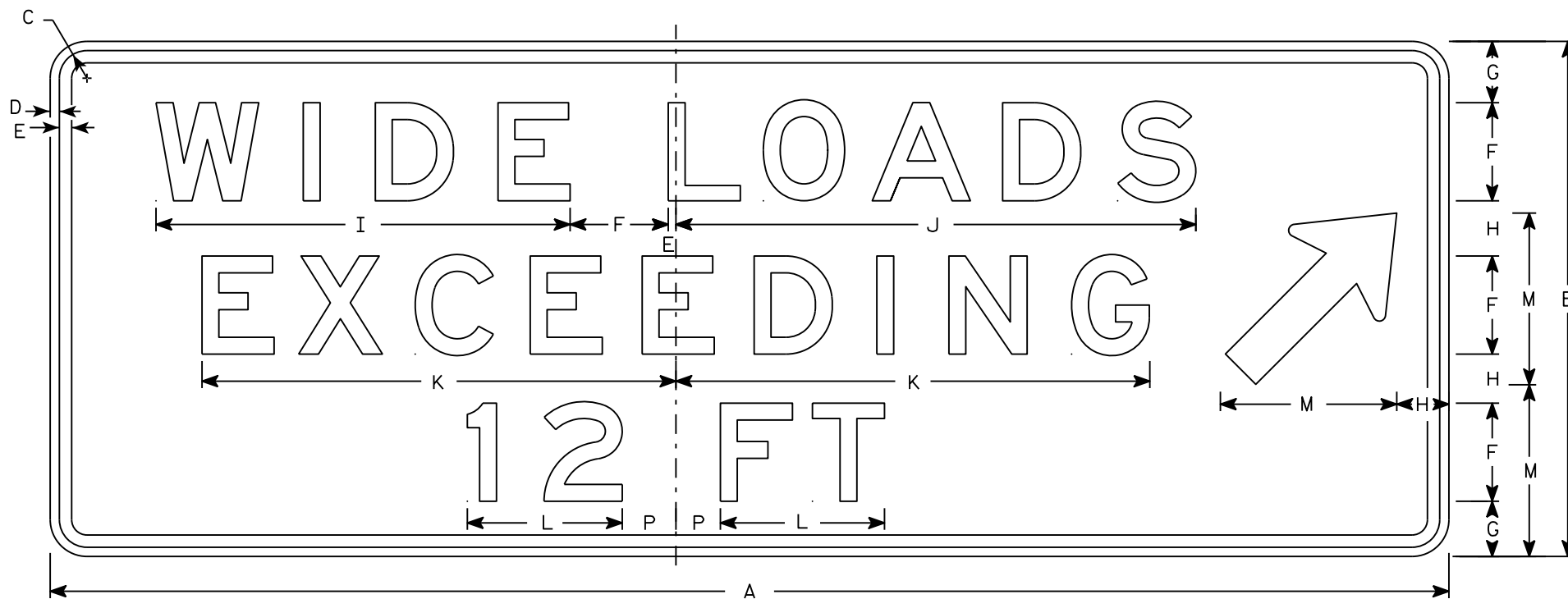
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

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

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - White
Message - Black
 3. Message Series - E except as noted
 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.
- ** Substitute appropriate message, optically center message



R12-70C

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	R12-70	R12-70C
																											Area sq. ft.	Area sq. ft.
1																												
2S	90	36	2 1/4	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
2M	90	36	2 1/4	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
3																												
4	114	42	2 1/4	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0
5	114	42	2 1/4	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0

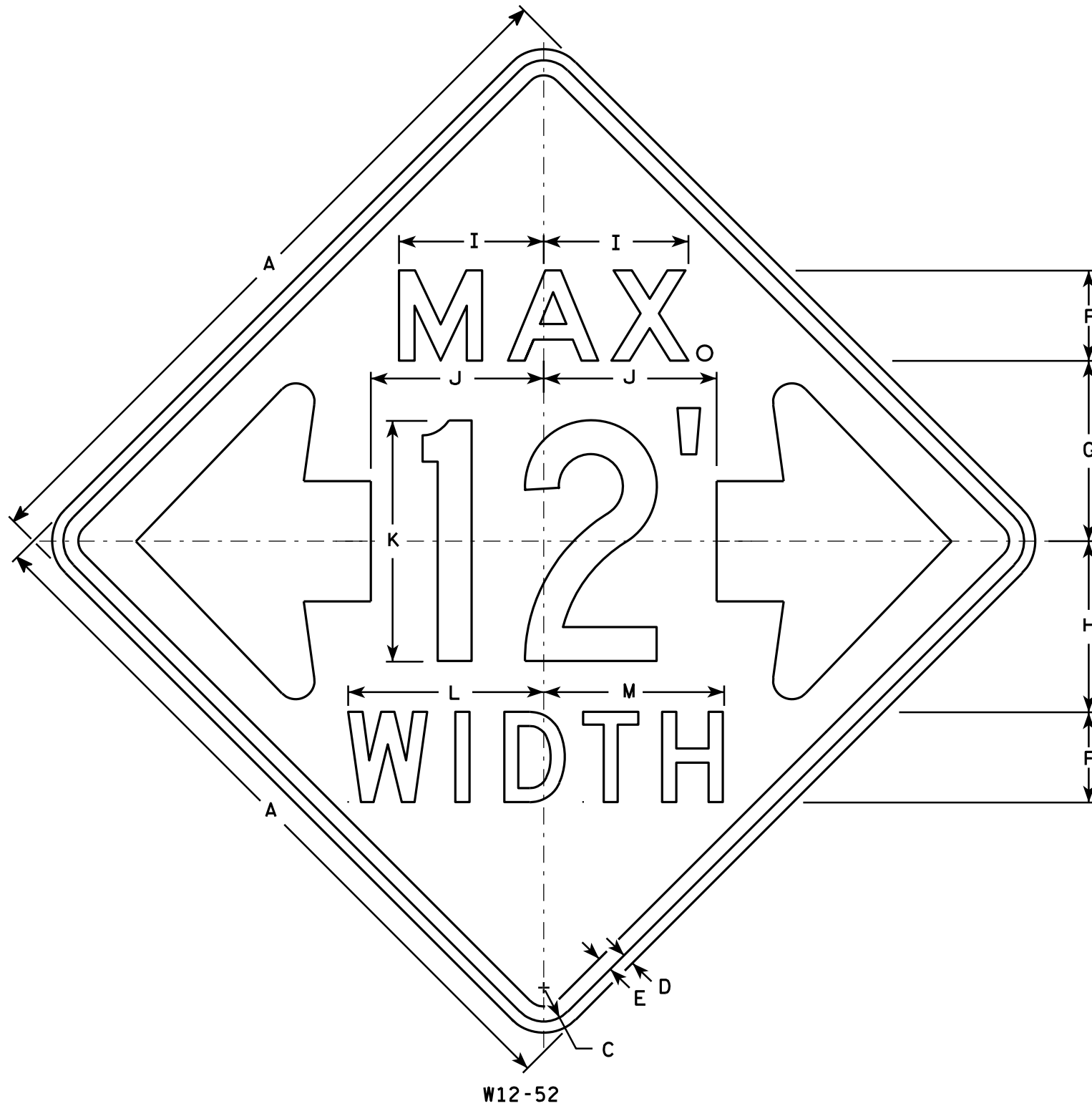
TYPICAL SIGN
R12-70B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/10/15 PLATE NO. R12-70B.3

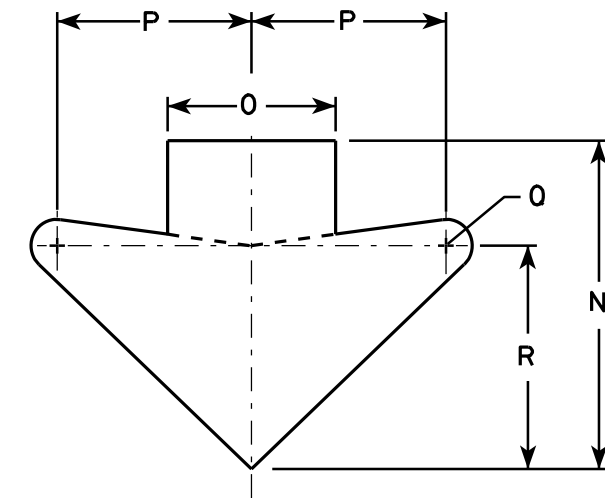
7



W12-52

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

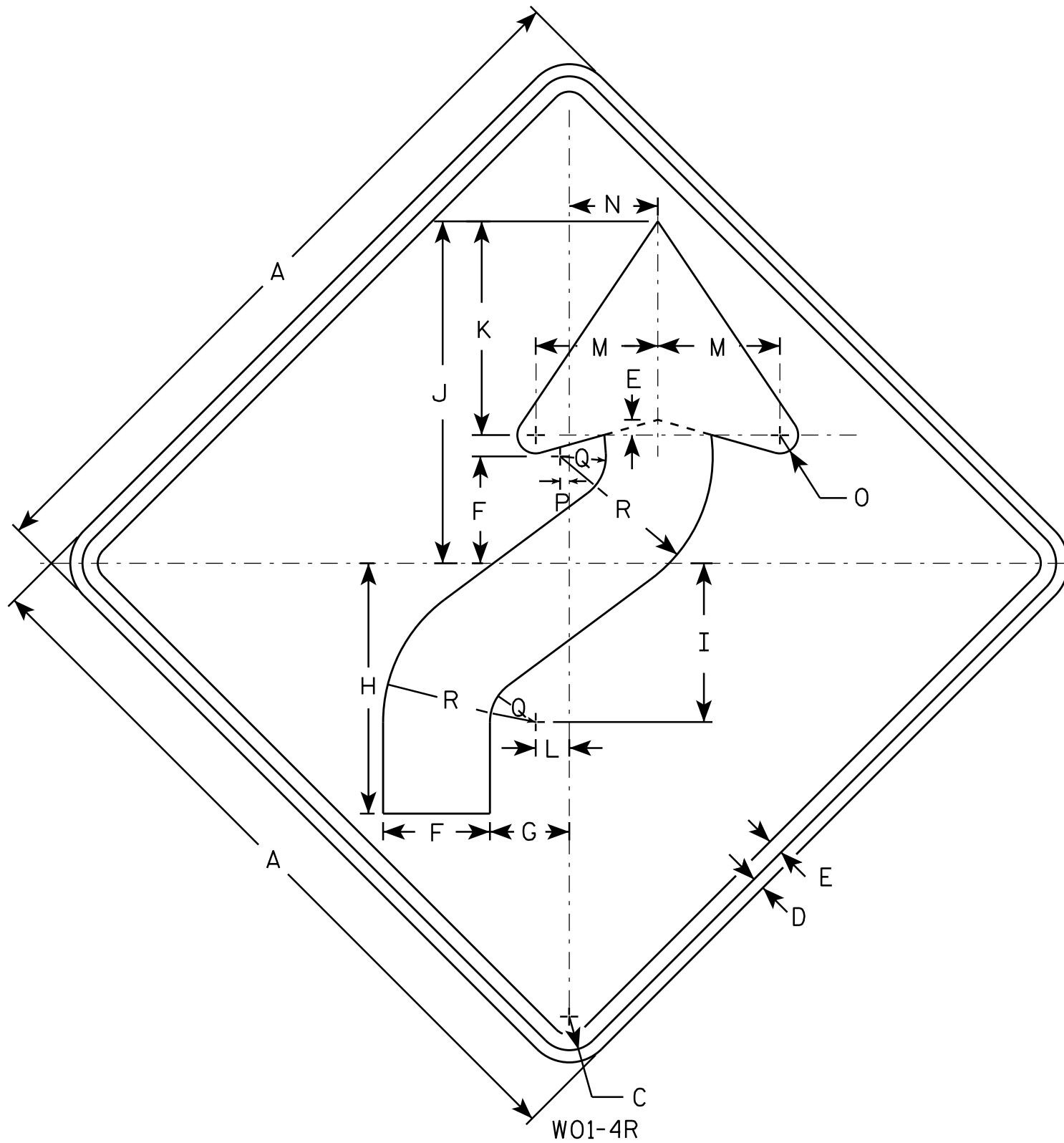
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - 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

7

W01-4R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

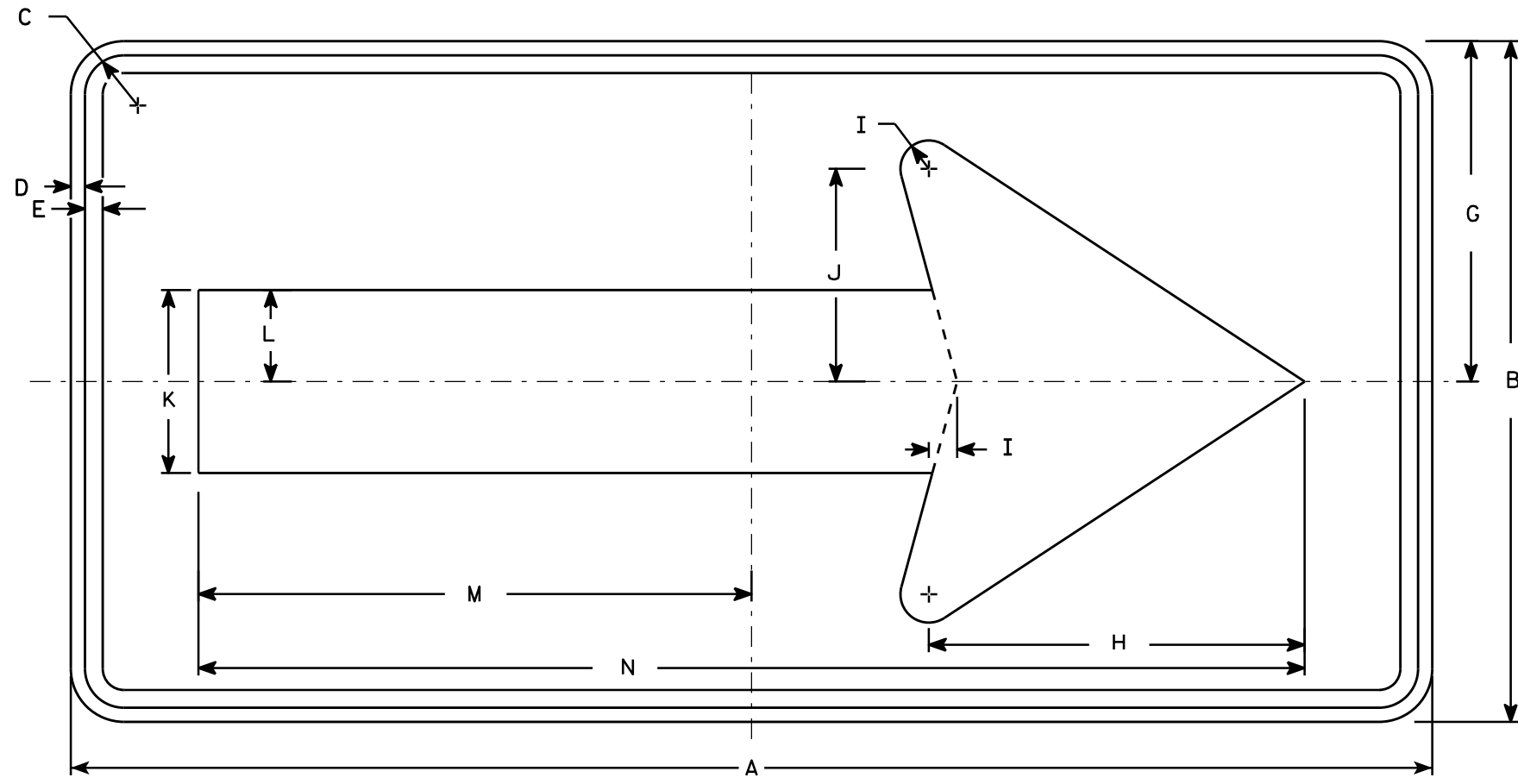
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

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

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W01-6

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

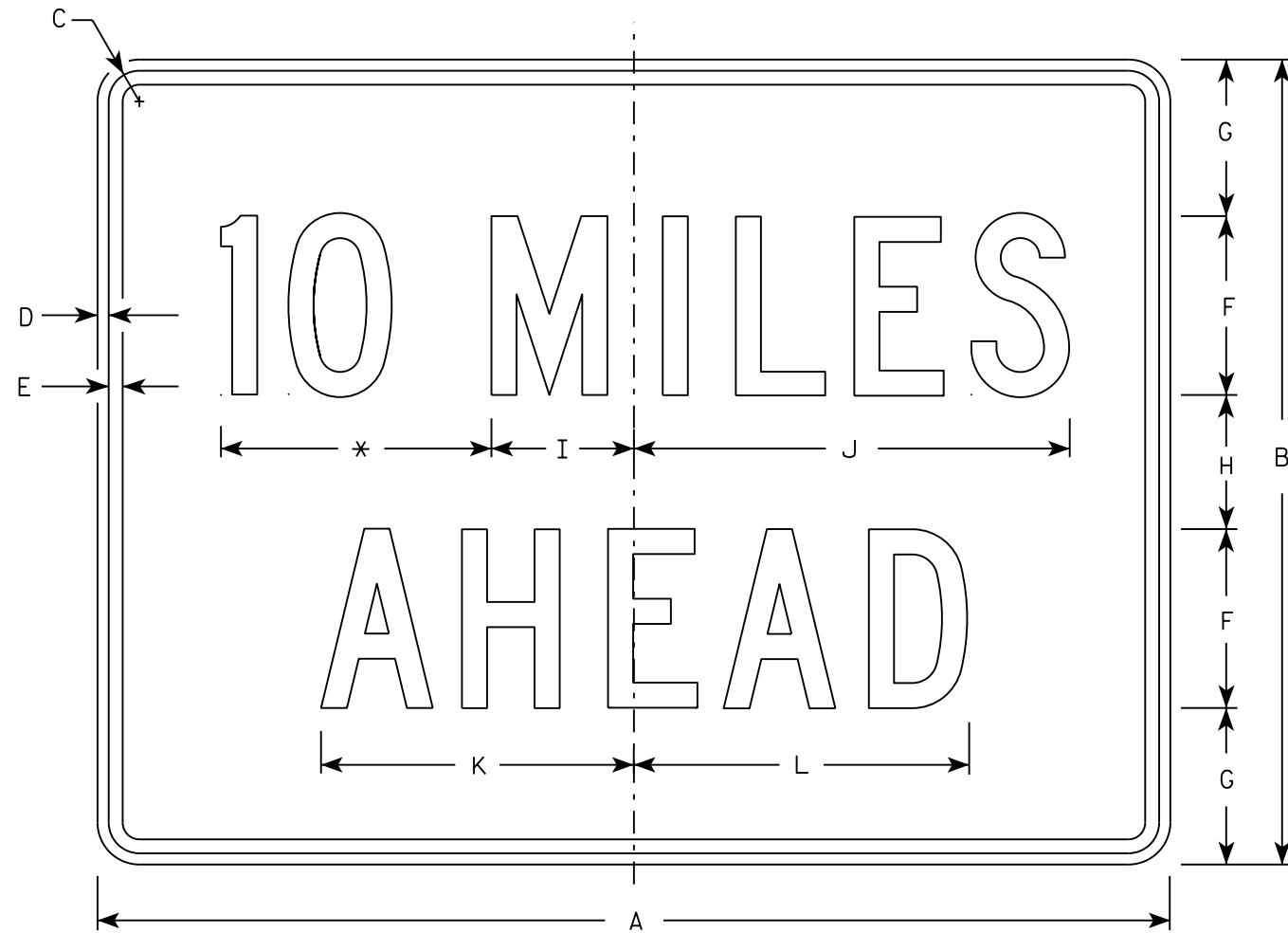
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

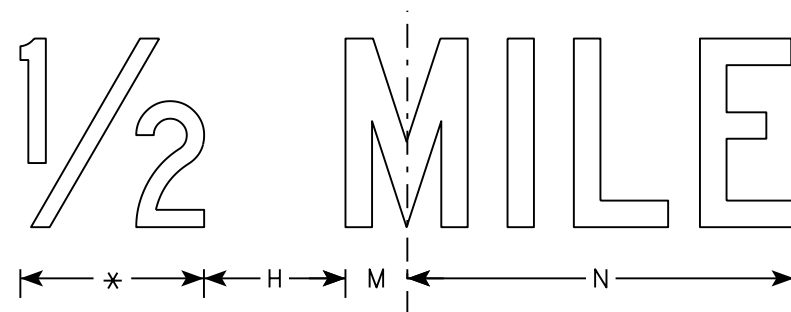
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.



W057-52



* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W057-52.2

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

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

ALL BAR STEEL REINFORCEMENT WITHIN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFY THE BAR SIZE. ALL BAR STEEL REINFORCEMENT ARE ENGLISH DESIGNATION.

THESE PLANS ARE FOR A SHEET PILE WINGWALL WITH CAST-IN-PLACE CONCRETE FACING.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MARATHON COUNTY, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (1991)

THE PROPOSED WINGWALL WILL REPLACE EXISTING STRUCTURE C-37-55 NORTHEAST WINGWALL. EXISTING STRUCTURE C-37-55 IS A TWO CELL BOX CULVERT STRUCTURE 12'-6" WIDE x 342'-0" LONG.

MINOR GRADING WILL BE INCLUDED WITH SHEET PILE DRIVING.

EXISTING STRUCTURE DIMENSIONS SHOWN ARE BASED UPON EXISTING 1973 STRUCTURE PLANS.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERT C-37-55" SHALL BE THE EXISTING GROUNDLINE.

CONCRETE REMOVAL SHALL BE DEFINED BY A SAWCUT.

EXISTING BORINGS FROM 1973 STRUCTURE PLANS INDICATE COBBLES AND BOULDERS. THEREFORE ANTICIPATE THE POSSIBILITY OF DIFFICULT SHEET PILING INSTALLATION.

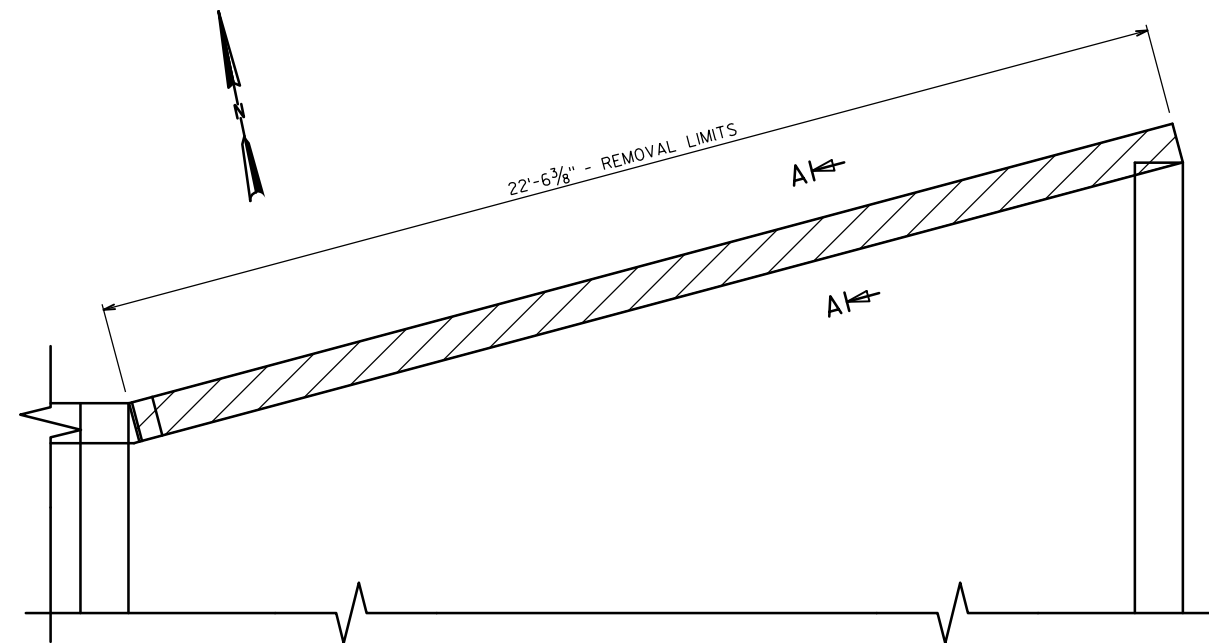
TEMPORARY RESTRAINT OF THE TOP EDGE OF THE PERMANENT SHEET PILING IS REQUIRED UNTIL THE C.I.P. FACING BETWEEN THE EDGE OF THE APRON AND THE FRONT FACE OF THE STEEL SHEET PILING HAS CURED. PROVIDE TEMPORARY RESTRAINTS CAPABLE OF RESISTING A FACTORED LOAD OF 53 KIPS AT THE 1/8 POINT AND 23 KIPS AT THE 3/8 POINT OF THE WINGWALL AS SHOWN ON THE ELEVATION VIEW OF "SHEET PILING & CONCRETE FACING DETAILS" SHEET, AS WELL AS MEANS OF SPREADING THE RESTRAINT LOAD ALONG ITS TRIBUTARY WIDTH. DESIGN AND INSTALLATION OF TEMPORARY RESTRAINTS, INCLUDING ADDITIONAL SHEET PILING LENGTH IF NECESSARY, IS INCLUDED IN THE ITEM "TEMPORARY SHORING SPECIAL C-37-55".

"RIPRAP HEAVY" AND "GEOTEXTILE TYPE HR" QUANTITIES SHOWN IN THE TOTAL ESTIMATED QUANTITIES TABLE ARE APPROXIMATE. EXACT LIMITS OF GEOTEXTILE AND RIPRAP PLACEMENT SHALL BE DETERMINED IN THE FIELD BY THE FIELD ENGINEER.

TOTAL ESTIMATED QUANTITIES

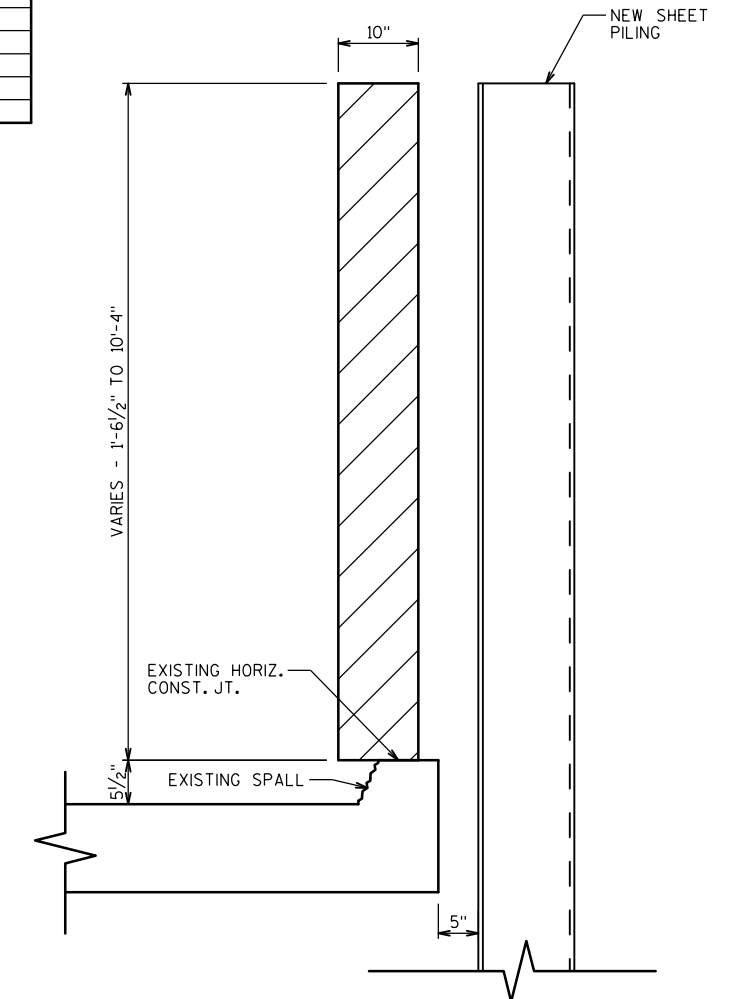
ITEM NO.	BID ITEMS	UNIT	TOTAL
203.0220	REMOVING STRUCTURE C-37-55	EACH	1
206.2001	EXCAVATION FOR STRUCTURES CULVERTS C-37-55	EACH	1
504.0100	CONCRETE MASONRY CULVERTS	CY	11
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	180
506.3008	WELDED STUD SHEAR CONNECTOR 5/8 X 5-INCH	EACH	32
512.0500	PILING STEEL SHEET PERMANENT DELIVERED	SF	445
512.0600	PILING STEEL SHEET PERMANENT DRIVEN	SF	435
606.0300	RIPRAP HEAVY	CY	3
645.0120	GEOTEXTILE TYPE HR	SY	83
SPV.0060.01	TEMPORARY SHORING SPECIAL C-37-55	EACH	2
NON-BID ITEMS			
	PREFORMED FILLER	SIZE	3/4", 1"

ALL ITEMS ARE CATEGORY 0020



EXISTING PLAN NORTHEAST WINGWALL

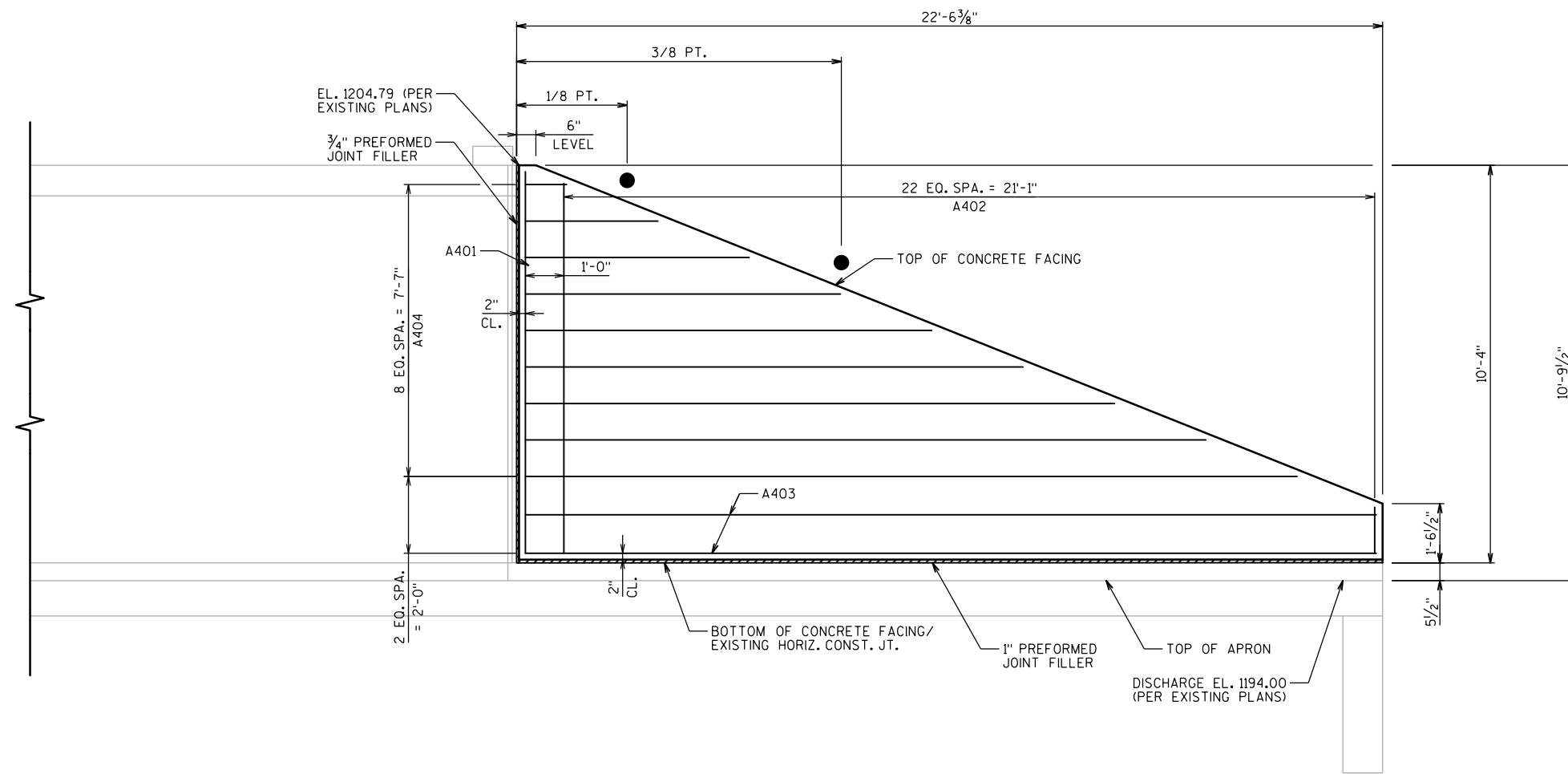
(LOOKING NORTH)
 REMOVAL



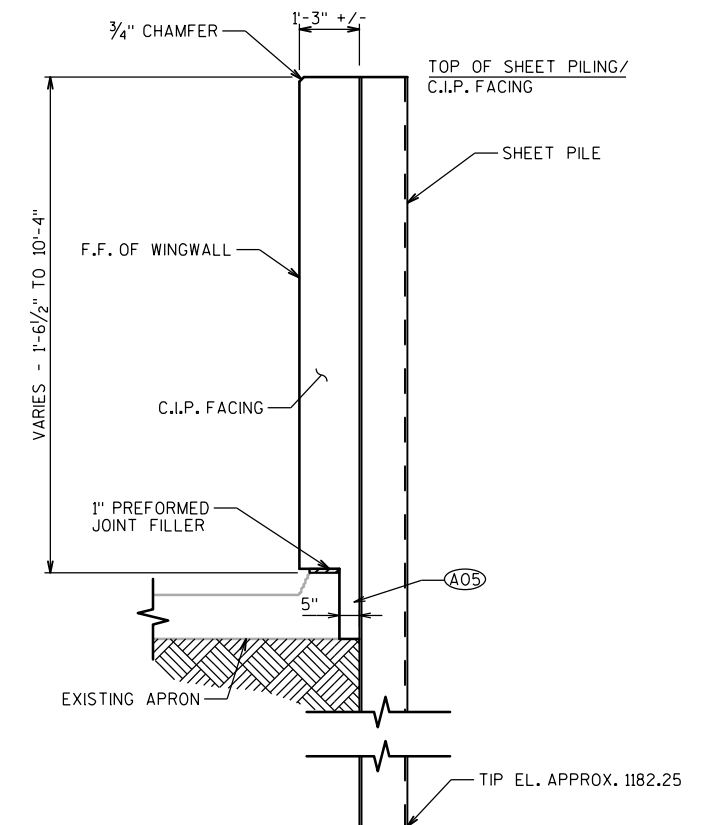
SECTION A-A
 THRU NORTHEAST WINGWALL

REMOVAL

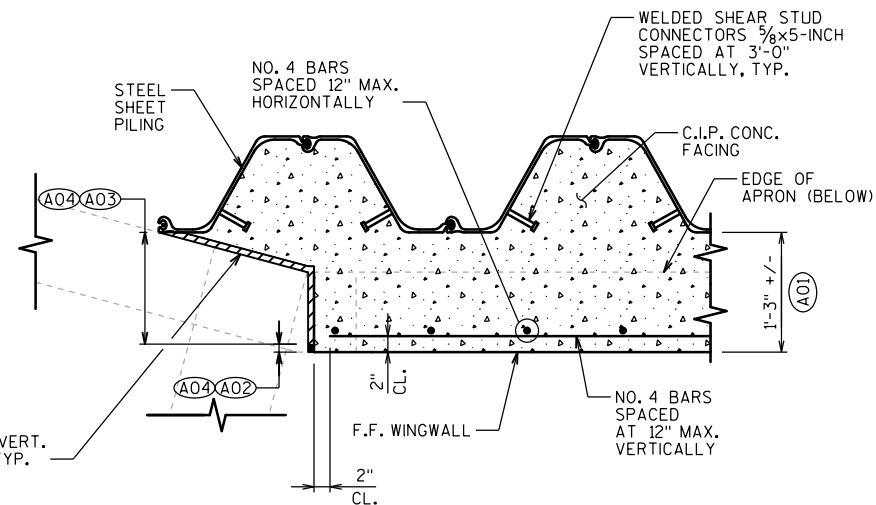
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE C-37-55			
DRAWN BY		NNM	PLANS CK'D. EAJ
GENERAL NOTES & QUANTITIES			SHEET 2 OF 3



CONCRETE FACING REINFORCEMENT DETAILS
NORMAL TO WINGWALL



TYPICAL SECTION FOR C.I.P. WALL PANEL



CONCRETE FACING DETAILS

LEGEND

- (A01) VARY THICKNESS OF CONCRETE FACING AS NECESSARY TO CONSTRUCT FACING PLUMB.
- (A02) SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1\"/>

F.F. FRONT FACE

C.I.P. CAST IN PLACE

- TEMPORARY RESTRAINT OF THE PERMANENT SHEET PILING, WORK PREFORMED UNDER "TEMPORARY SHORING SPECIAL C-37-55". SEE "GENERAL NOTES & QUANTITIES" SHEET GENERAL NOTES FOR ADDITIONAL INFORMATION.

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	SERIES	LOCATION
A401	X	1	9'-11"			WING - VERT.
A402	X	23	5'-5"		▲	WING - VERT.
A403	X	2	22'-1"			WING - HORIZ.
A404	X	9	10'-6"		▲	WING - HORIZ.

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTH

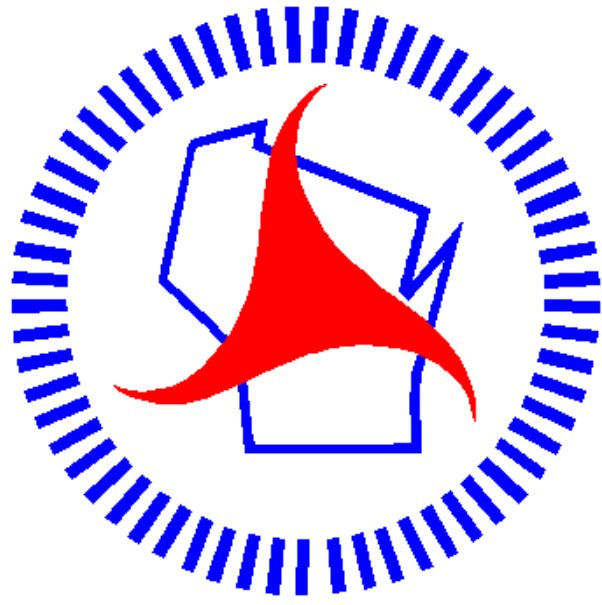
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A402	1 SERIES OF 23	1'-2" TO 9'-7"
A404	1 SERIES OF 9	1'-0" TO 20'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE C-37-55			
DRAWN BY		PLANS CK'D.	EAJ
NNM			
SHEET PILING & CONCRETE FACING DETAILS			SHEET 3 OF 3

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

<http://www.dot.wisconsin.gov>