EAU

PROJECT ID: 1050-01-74

WITH: N/A

COUNTY: CLARK

JANUARY 2026

ORDER OF SHEETS

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

TOTAL SHEETS = 374



N

41

DESIGN DESIGNATION

A.A.D.T.	2027	=	14,500
A.A.D.T.	2047	=	17,520
D.H.V.	2047	=	1,900
D.D.		=	60/40
T.		=	20.2%
DESIGN SPEED		=	70 M.P.H.
ESALS		=	5,050,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

THORP - ABBOTSFORD

CTH D - STH 13

STH 29

CLARK COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1050-01-74	WISC 2026158	1

STATE PROJECT NUMBER

1050-01-74

BEGIN PROJECT
STA 2161+67.92 EB
Y = 489,750.147
X = 695,102.397

STRUCTURE B-10-0173
STA 2161+69 WB - STA 2163+10 WB

STRUCTURE B-10-0174
STA 2165+29 WB - STA 2167+21 WB

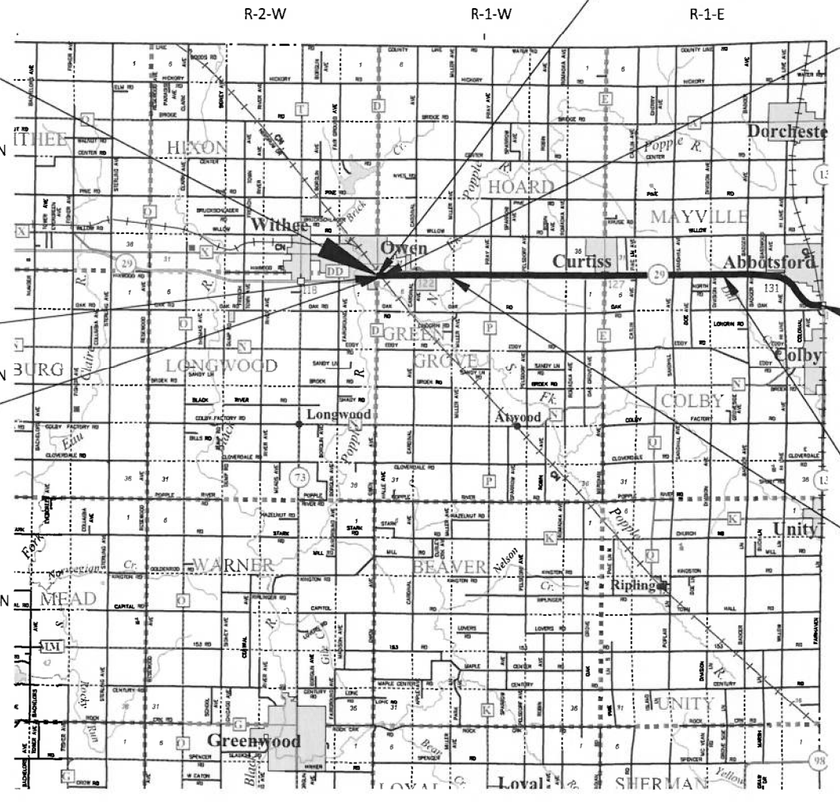
STRUCTURE B-10-0022
STA 2161+68 EB - STA 2163+14 EB

STRUCTURE B-10-0023
STA 2165+51 EB - STA 2167+35 EB

END PROJECT
STA 2800+23.01 EB

NET EXCEPTION TO CENTERLINE LENGTH
STRUCTURE B-10-017
STA 2643+94.36 EB - STA 2644+48.26 EB

NET EXCEPTION TO CENTERLINE LENGTH
STRUCTURE B-10-0149
STA 2262+91.21 EB - STA 2264+09.35 EB



LAYOUT

SCALE 0 4 MI

TOTAL NET LENGTH OF CENTERLINE = 12.061 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), CLARK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ORIGINAL PLANS PREPARED BY

Mead & Hunt

Mead and Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
phone: 608-273-6380
meadhunt.com

WISCONSIN
JASON A. KLEIST
E-46418
HIGHLAND
WIS.
PROFESSIONAL ENGINEER

DATE: 7/25/2025 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SEH, INC./MEAD & HUNT, INC.
Designer	MEAD & HUNT, INC.
Project Manager	NICOLE PASSUELLO, P.E.
Regional Examiner	
Regional Supervisor	NICOLE PASSUELLO, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 7/28/2025 Nicole Passuello (Signature)

Digitally signed by Nicole Passuello
DN: C=US, E=nicole.passuello@dot.wi.gov, O=WisDOT, OU=PDS Supervisor NW Region, CN=Nicole Passuello
Date: 2025.07.28 13:48:39-05'00'

E

GENERAL NOTES

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

THE EXACT LOCATION OF EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

BEARINGS SHOWN ON THE PLANS ARE GRID BEARING TO NEAREST SECOND.

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

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

PAVING LIMITS AT INTERSECTIONS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

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

THE RATE OF APPLICATION FOR TACK COAT IS 0.050 GAL/SY BETWEEN HMA LAYERS AND OVER CONCRETE, 0.070 GAL/SY ON MILLED SURFACES, OR AS DIRECTED BY THE ENGINEER.

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

DISTURBED AREA WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH SALVAGED TOPSOIL, FERTILIZED, SEEDED AND EROSION MAT.

ALL CURB AND GUTTER RADII, PAVEMENT DIMENSIONS AND STATIONS ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS AND PAVEMENTS AT REMOVAL LIMITS.

STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AGG	AGGREGATE
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ASPH	ASPHALTIC
BF	BACK FACE
BM	BENCH MARK
CR	CREEK
CY	CUBIC YARD
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
C&G	CURB AND GUTTER
DHV	DESIGN HOUR VOLUME
DD	DIRECTIONAL DISTRIBUTION
EB	EASTBOUND
EL	ELEVATION
FF	FACE TO FACE
FT	FOOT
CWT	HUNDREDWEIGHT
INL	INLET
LF	LINEAR FOOT
N	NORTH
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
RL OR R/L	REFERENCE LINE
REQ'D	REQUIRED
RT	RIGHT
R/W	RIGHT-OF-WAY
SHLDR	SHOULDER
SF	SQUARE FEET
SI	SLOPE INTERCEPT
SY	SQUARE YARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SE	SUPER ELEVATION
T	TRUCKS (PERCENT OF)
TYP	TYPICAL
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
VC	VERTICAL CURVE
VPC	VERTICAL POINT OF CURVE
VPT	VERTICAL POINT OF TANGENCY
WB	WESTBOUND

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL EXISTING SECTIONS
TYPICAL FINISHED SECTIONS
CONSTRUCTION DETAILS
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 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 468 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 4.09 ACRES

WisDOT CONTACT

WISCONSIN DEPARTMENT OF TRANSPORTATION
NORTHWEST REGION - EAU CLAIRE
ATTN: ZACH VANOSTRAND, P.E.
PHONE: 612-427-2838
EMAIL: zach.vanostrand@peservicesmn.com

WisDNR CONTACT

WISCONSIN DEPARTMENT OF NATURAL RESOUCES
NORTH WEST REGION
ATTN: MR. BRAD BETTHAUSER
BLACK RIVER FALLS DNR SERVICE CENTER
910 HWY 54 E
BLACK RIVER FALLS, WI 54615
PHONE: 715-213-9064
EMAIL: Bradley.Betthauser@Wisconsin.gov

OTHER CONTACTS

VILLAGE OF CURTISS - ELECTRICITY
ATTN: LARRY SWARR
915 MERIDIAN ST.
CURTISS, WI, 54422
PHONE: 715-223-1755
EMAIL: curtissdpw@gmail.com

CONSULTANT CONTACT

MEAD & HUNT, INC.
ATTN: MR. JASON KLEIST, P.E.
2440 DEMING WAY
MIDDLETON, WI 53562
PHONE: 608-443-0437
EMAIL: jason.kleist@meadhunt.com

UTILITIES

ELECTRICITY -TRANSMISSION

ATC MANAGEMENT, INC
DOUG VOSBERG
2489 RINDEN ROAD
COTTAGE GROVE, WI 53527
PHONE: 608-877-7650 (OFFICE)
EMAIL: dvosberg@atcllc.com

XCEL ENERGY
JOSH TOMLINSON
414 NICOLLET MALL
MINNEAPOLIS, MN 55401
PHONE: 715-355-9126 (OFFICE)
EMAIL: joshua.tomlinson@xcelenergy.com

COMMUNICATIONS

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RYAN BIRDSALL
3235 INTERTECH DR, SUITE 600
BROOKFIELD, WI 53045
PHONE: 608-444-2493 (MOBILE)
EMAIL: ryan.birdsall@lumen.com

FRONTIER COMMUNICATIONS OF WI LLC
CHRISTOPHER POLLACK
521 N 4TH ST.
WAUSAU, WI 54403
PHONE: 715-847-1240 (OFFICE), 715-297-4773 (MOBILE)
EMAIL: christopher.pollack@ftr.com

TDS TELECOM
BRETT CONNOR
525 JUNCTION RD
MADISON, WI 53717
PHONE: 608-664-0974 (OFFICE), 608-444-9940 (MOBILE)
EMAIL: Brett.connor@tdstelecom.com

SPECTRUM
CURTIS MOORE
1201 MCCANN DRIVE
ALTOONA, WI 54720
PHONE: 715-214-1172 (OFFICE), 715-492-0353 (MOBILE)
EMAIL: Curtis.moore@charter.com

SEWER

CITY OF ABBOTSFORD
CRAIG STUTTGEN
PO BOX 589
ABBOTSFORD, WI 54405
PHONE: 715-223-3444 (OFFICE), 715-613-9444 (MOBILE)
EMAIL: dpw@ci.abbotsford.wi.us

OWEN WASTEWATER TREATMENT FACILITY
CHAD SMITH
833 W 3RD ST
OWEN, WI 54460
PHONE: 715-229-4612 (OFFICE), 715-965-2673 (MOBILE)
EMAIL: owengarage@cityofowen.com

WATER

CITY OF ABBOTSFORD
CRAIG STUTTGEN
P.O. BOX 589
ABBOTSFORD, WI 54405
PHONE: 715-223-3444 (OFFICE), 715-613-9444 (MOBILE)
EMAIL: dpw@ci.abbotsford.wi.us

VILLAGE OF CURTISS
LARRY SWARR
915 MERIDIAN ST
CURTISS, WI 54422
PHONE: 715-223-1755 (OFFICE), 715-551-9802 (MOBILE)
EMAIL: curtissdpw@gmail.com

OWEN MUN WATER UTILITY
CHAD SMITH
833 W 3RD ST
OWEN, WI 54460
PHONE: 715-229-4612 (OFFICE), 715-965-2673 (MOBILE)
EMAIL: owengarage@cityofowen.com

ELECTRICITY - DISTRIBUTION

CLARK ELECTRIC COOPERATIVE
KENT WEIGEL
1209 DALL-BERG RD
GREENWOOD, WI 54437
PHONE: 715-267-7955 (OFFICE)
EMAIL: kweigel@cecoop.com

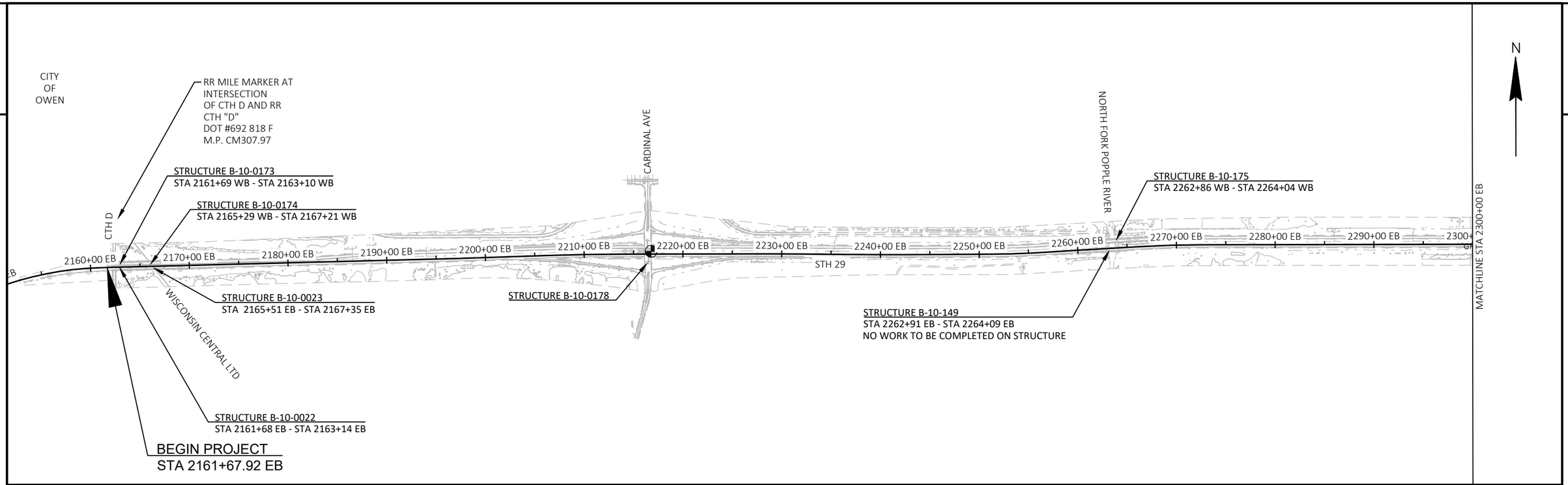
DAIRYLAND POWER COOPERATIVE
MIKE LYDON
3200 EAST AVENUE SOUTH
LA CROSSE, WI 54602-0817
PHONE: 608-787-1381 (OFFICE)
EMAIL: Michael.Lydon@DairylandPower.com

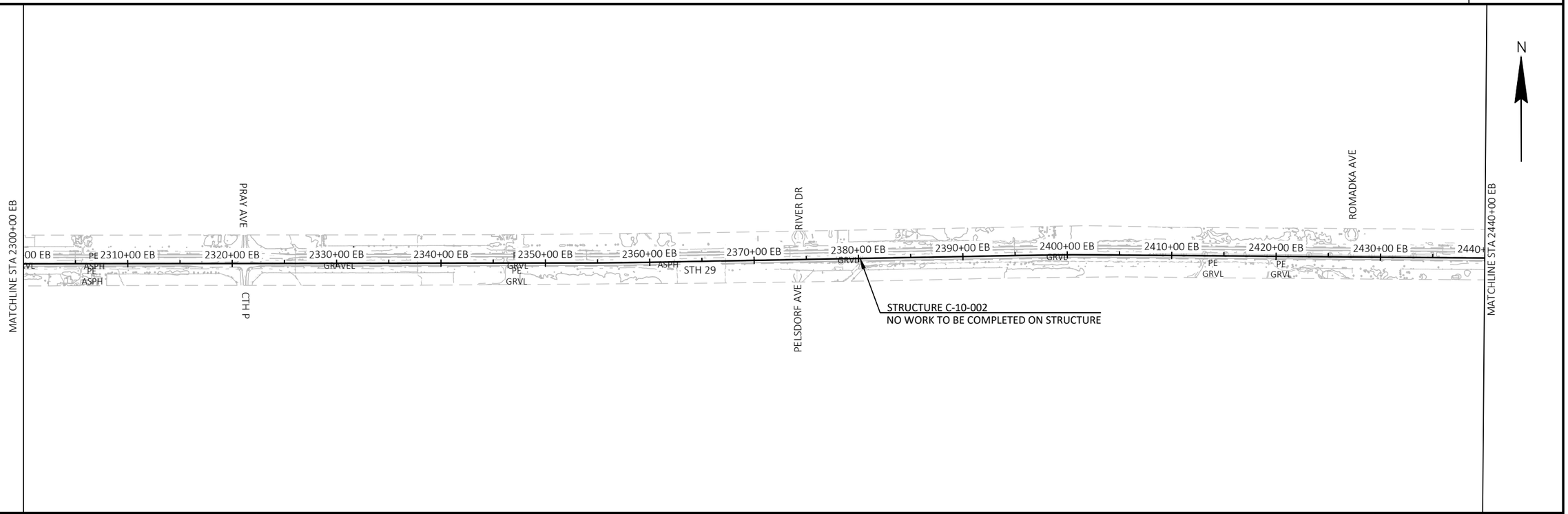
XCEL ENERGY
JOHN KELSER
1400 WESTERN AVE
EAU CLAIRE, WI 54701
PHONE: 715-737-6020 (OFFICE)
EMAIL: john.kelser@xcelenergy.com

GAS/PETROLEUM

WE ENERGIES
DON DIETSCH
104 W SOUTH STREET
RICE LAKE, WI 54868
PHONE: 715-234-9604 (OFFICE), 414-522-0112 (MOBILE)
EMAIL: don.dietsch@we-energies.com

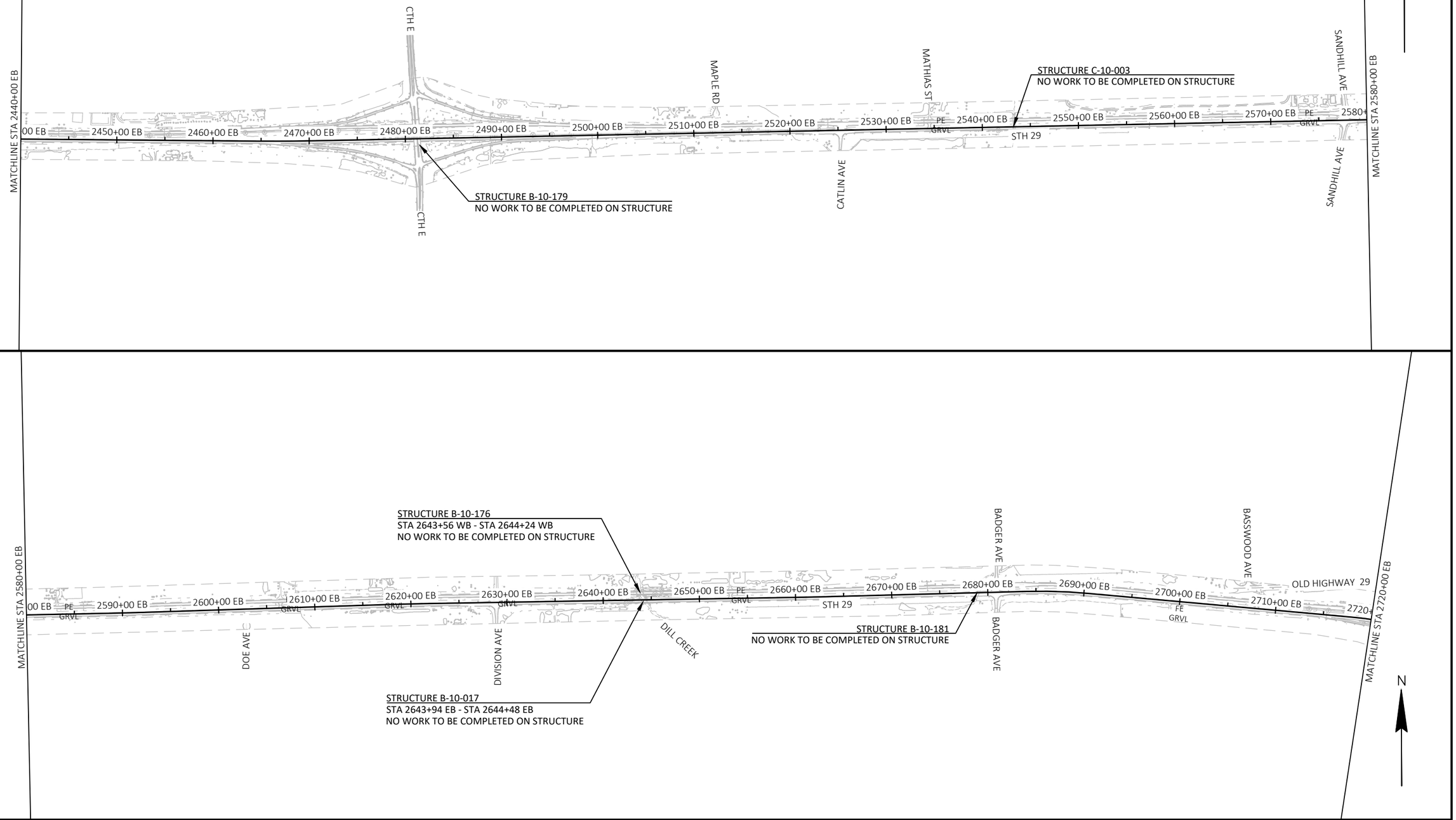
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com





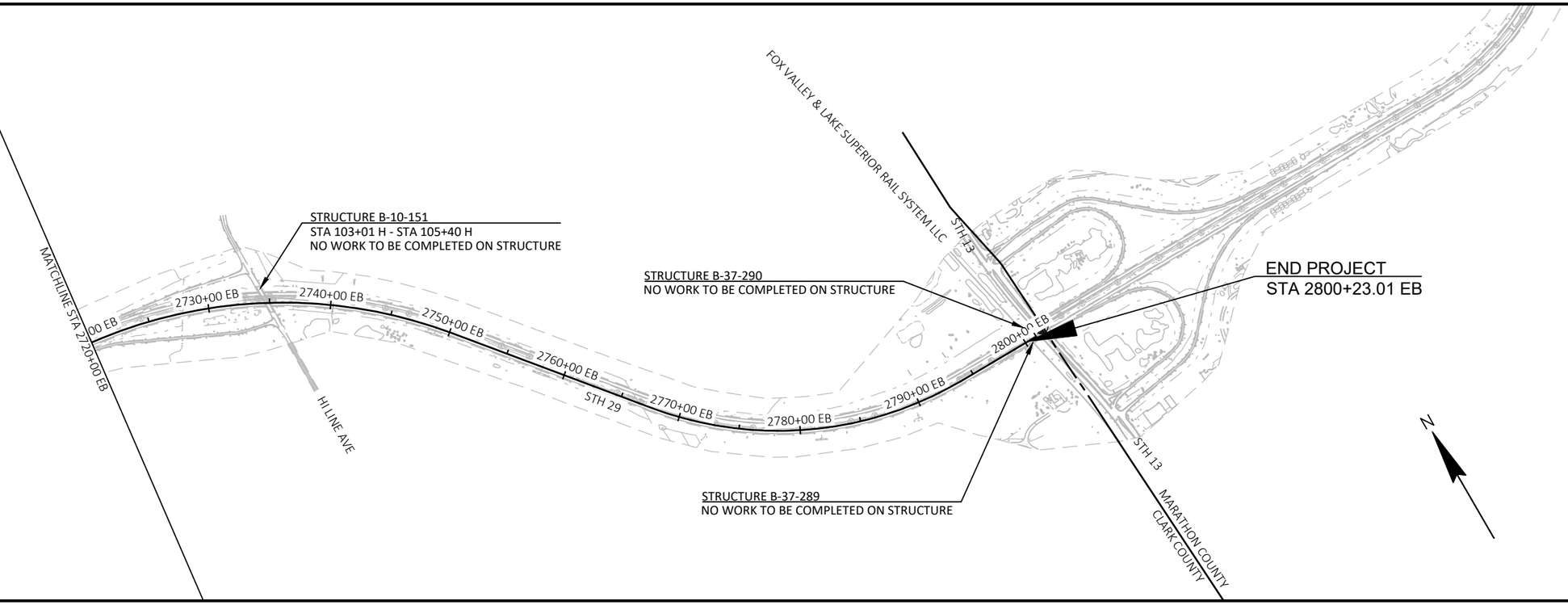
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PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:1000 FT



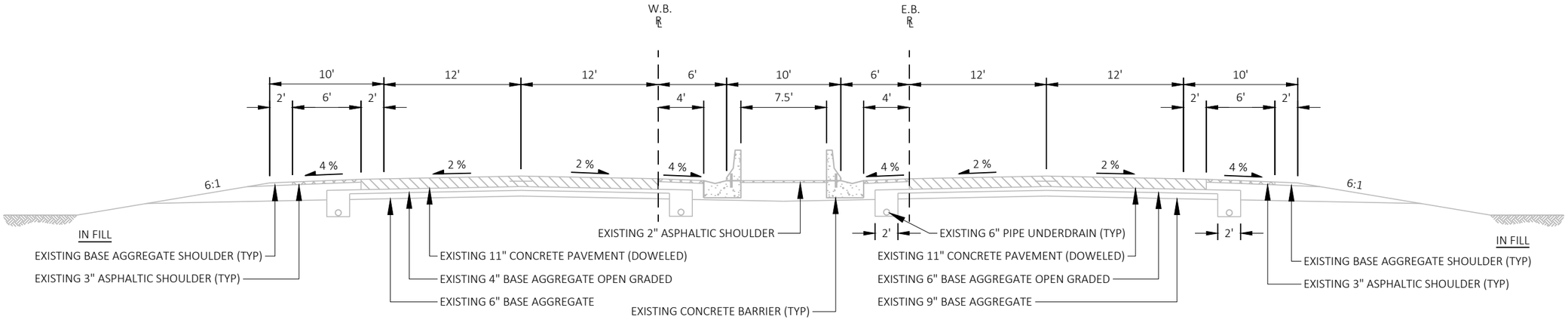
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PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:1000 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PROJECT OVERVIEW	SHEET 6	E

NOTE: ASPHALTIC SHOULDER WIDTHS VARY TO FULL WIDTH AT STRUCTURES.



TYPICAL EXISTING SECTION

STA 2163+10 WB - STA 2165+29 WB
STA 2167+21 WB - STA 2182+56 WB

TYPICAL EXISTING SECTION

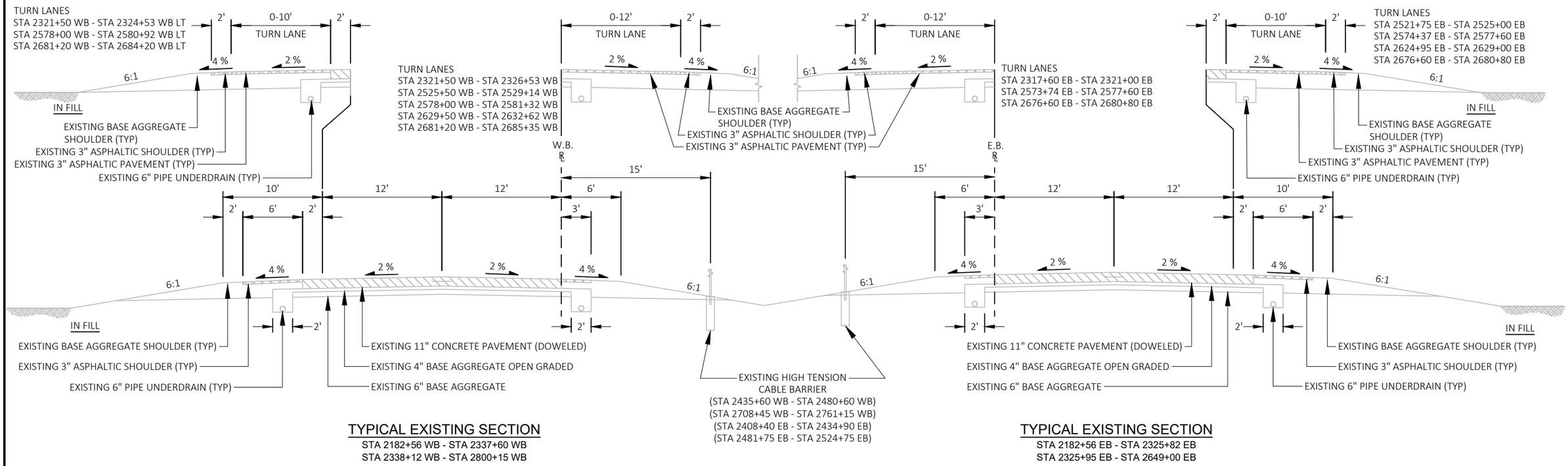
STA 2163+14 EB - STA 2165+51 EB
STA 2167+35 EB - STA 2182+56 EB

TURN LANES
STA 2321+50 WB - STA 2324+53 WB LT
STA 2578+00 WB - STA 2580+92 WB LT
STA 2681+20 WB - STA 2684+20 WB LT

TURN LANES
STA 2321+50 WB - STA 2326+53 WB
STA 2525+50 WB - STA 2529+14 WB
STA 2578+00 WB - STA 2581+32 WB
STA 2629+50 WB - STA 2632+62 WB
STA 2681+20 WB - STA 2685+35 WB

TURN LANES
STA 2317+60 EB - STA 2321+00 EB
STA 2573+74 EB - STA 2577+60 EB
STA 2676+60 EB - STA 2680+80 EB

TURN LANES
STA 2521+75 EB - STA 2525+00 EB
STA 2574+37 EB - STA 2577+60 EB
STA 2624+95 EB - STA 2629+00 EB
STA 2676+60 EB - STA 2680+80 EB



TYPICAL EXISTING SECTION

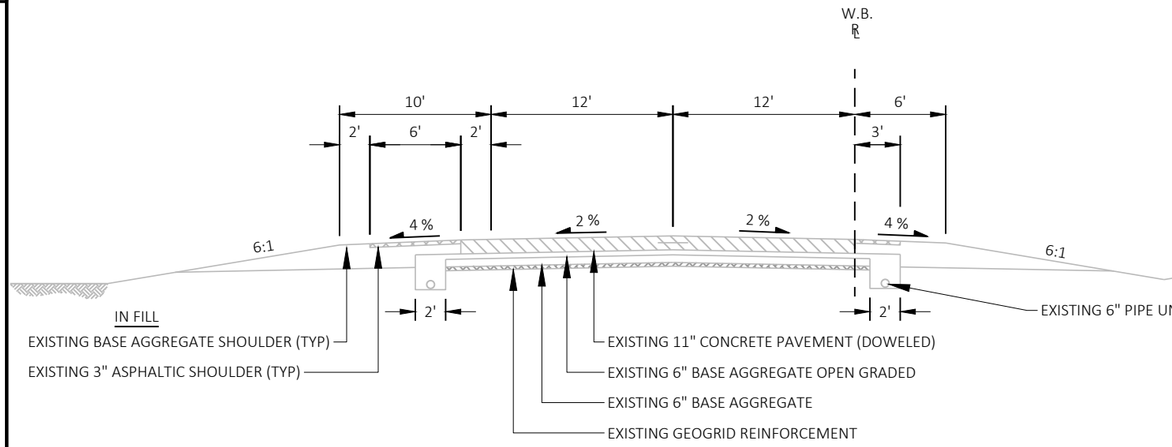
STA 2182+56 WB - STA 2337+60 WB
STA 2338+12 WB - STA 2800+15 WB

TYPICAL EXISTING SECTION

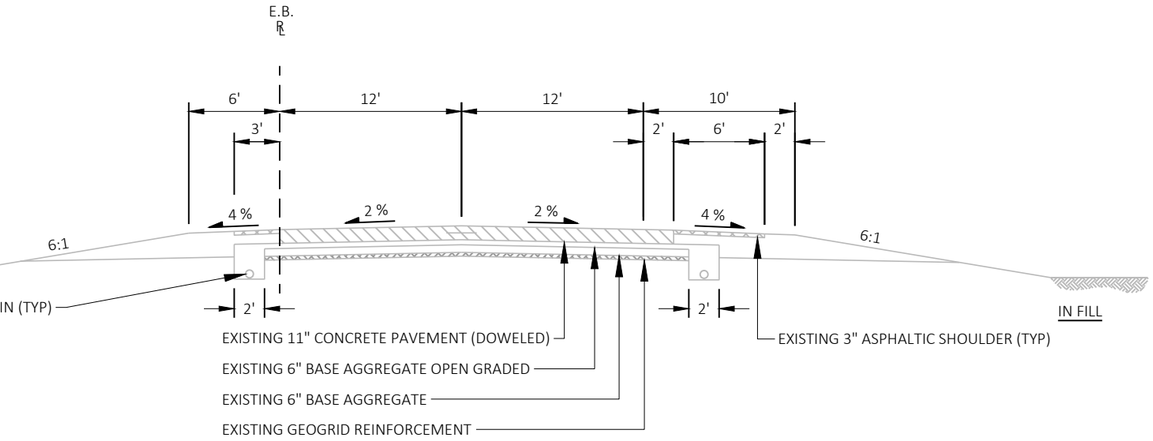
STA 2182+56 EB - STA 2325+82 EB
STA 2325+95 EB - STA 2649+00 EB

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TYPICAL SECTIONS - EXISTING	SHEET 7	E

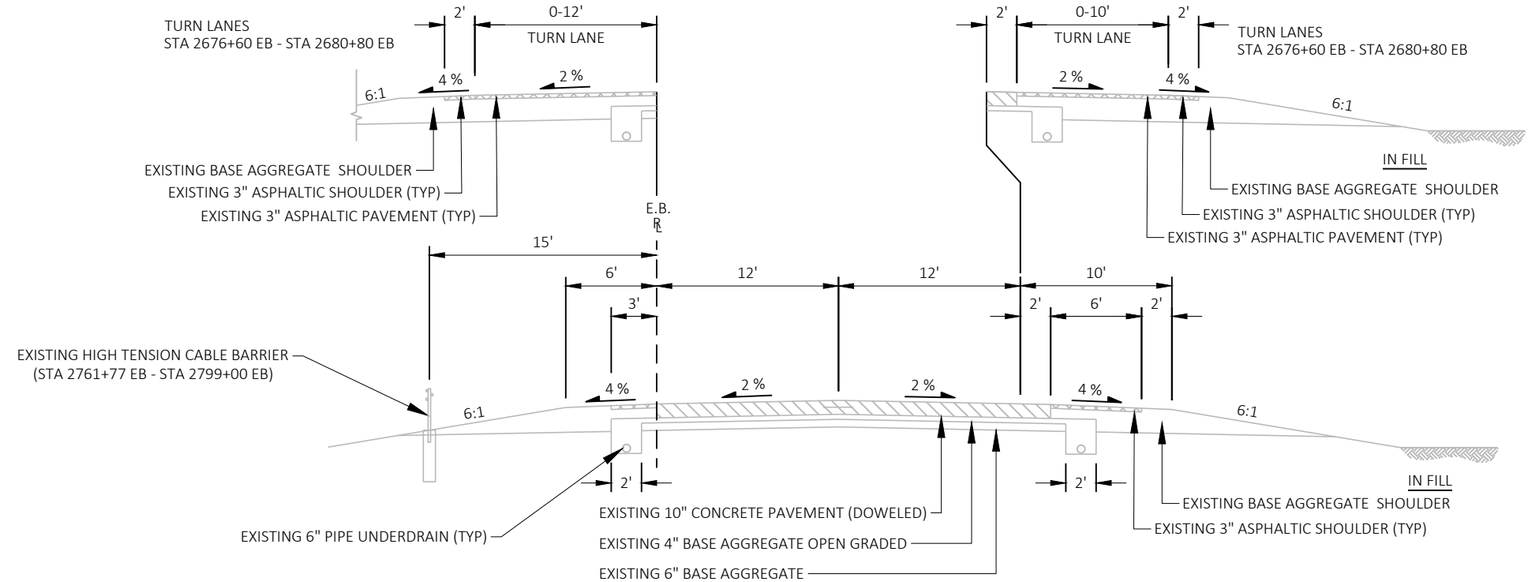
NOTE: ASPHALTIC SHOULDER WIDTHS VARY TO FULL WIDTH AT STRUCTURES.



TYPICAL EXISTING SECTION
STA 2337+60 WB - STA 2338+12 WB



TYPICAL EXISTING SECTION
STA 2325+82 EB - STA 2325+95 EB

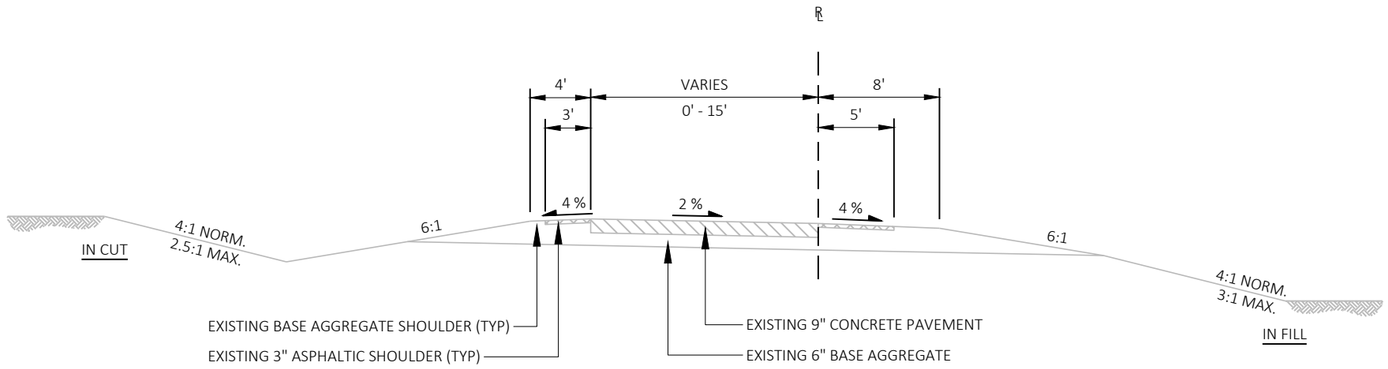


TYPICAL EXISTING SECTION - EB ONLY
STA 2649+00 EB - STA 2800+23 EB

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TYPICAL SECTIONS - EXISTING	SHEET 8	E

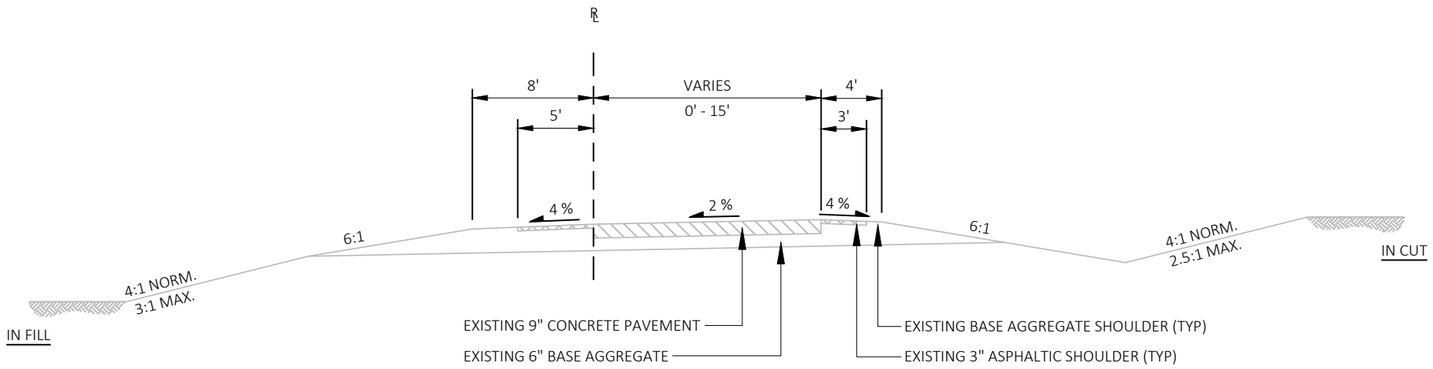
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WISDOT/CADDS SHEET 42

2



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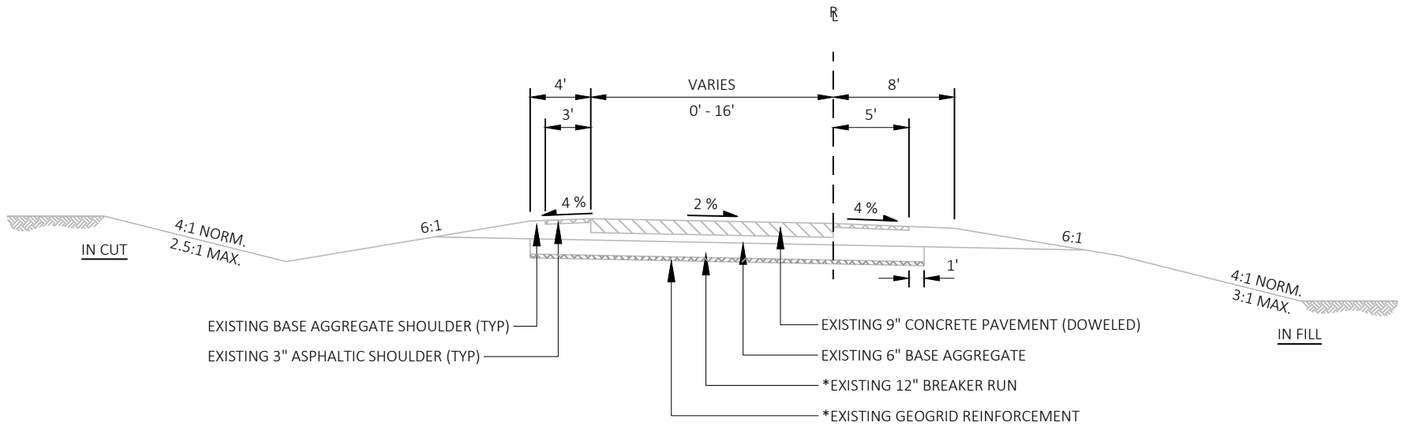
STH 29/CARDINAL AVE INTERCHANGE - EB ON/OFF RAMPS
STA 2202+24 LC - STA 2216+27 LC
STA 2216+67 LD - STA 2237+82 LD



TYPICAL EXISTING SECTION

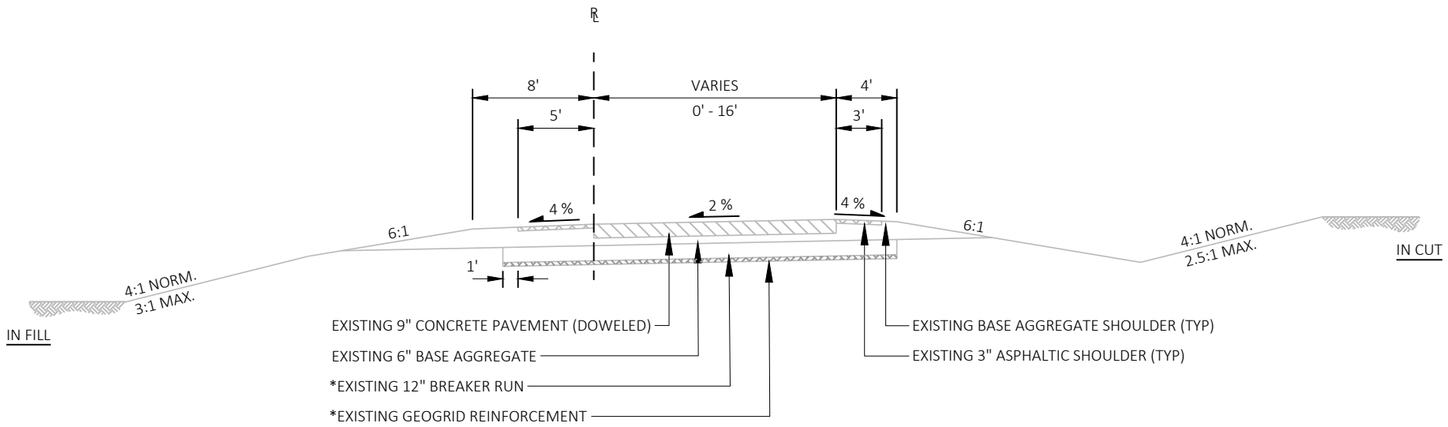
STH 29/CARDINAL AVE INTERCHANGE - WB ON/OFF RAMPS
STA 2195+06 LB - STA 2216+24 LB
STA 2216+67 LA - STA 2230+62 LA

2



TYPICAL EXISTING SECTION

STH 29/CTH E INTERCHANGE - EB ON/OFF RAMPS
*STA 2469+21 EC - STA 2473+25 EC
STA 2465+60 EC - STA 2481+35 EC
STA 2481+50 ED - STA 2502+46 ED

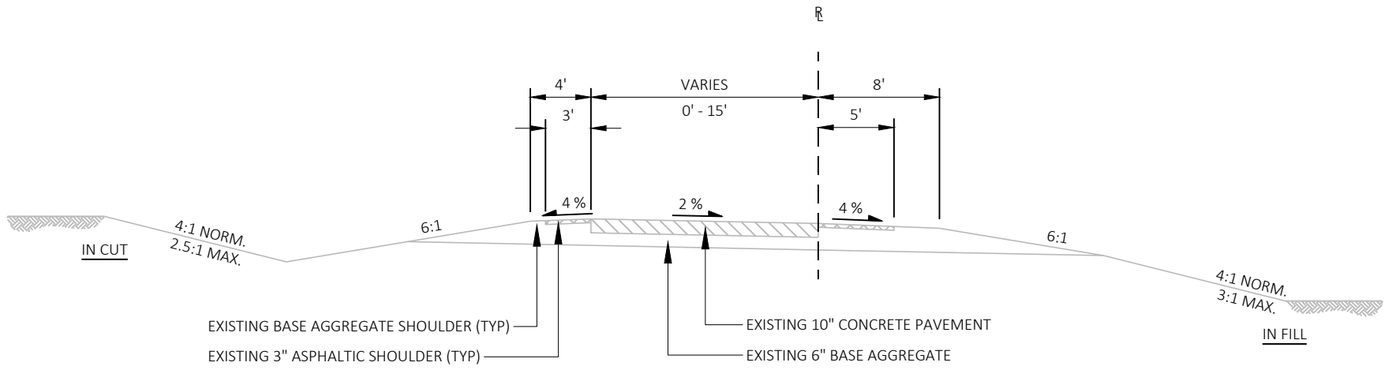


TYPICAL EXISTING SECTION

STH 29/CTH E INTERCHANGE - WB ON/OFF RAMPS
* STA 2472+61 EF - STA 2477+50 EF
STA 2460+21 EF - STA 2481+00 EF
STA 2481+00 EA - STA 2495+99 EA

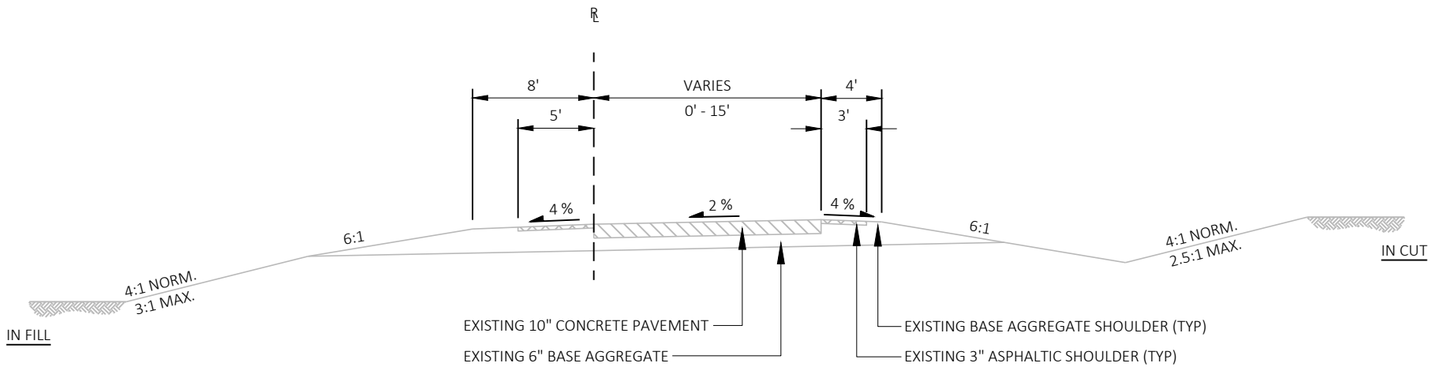
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TYPICAL SECTIONS - EXISTING	SHEET 10	E

2



TYPICAL EXISTING SECTION

STH 29/HI LINE AVE INTERCHANGE - EB OFF RAMP
STA 2714+78 HC - STA 2735+03 HC

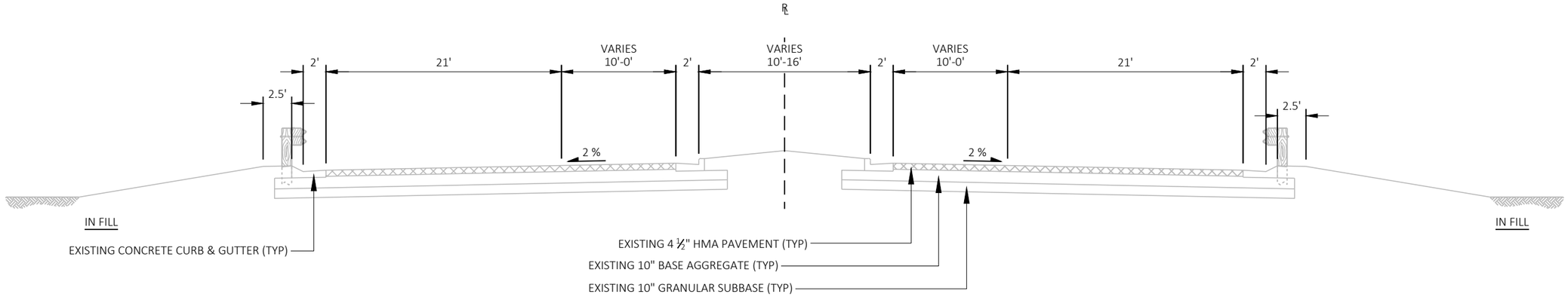


TYPICAL EXISTING SECTION

STH 29/HI LINE AVE INTERCHANGE - WB ON RAMP
STA 2711+61 HB - STA 2734+18 HB

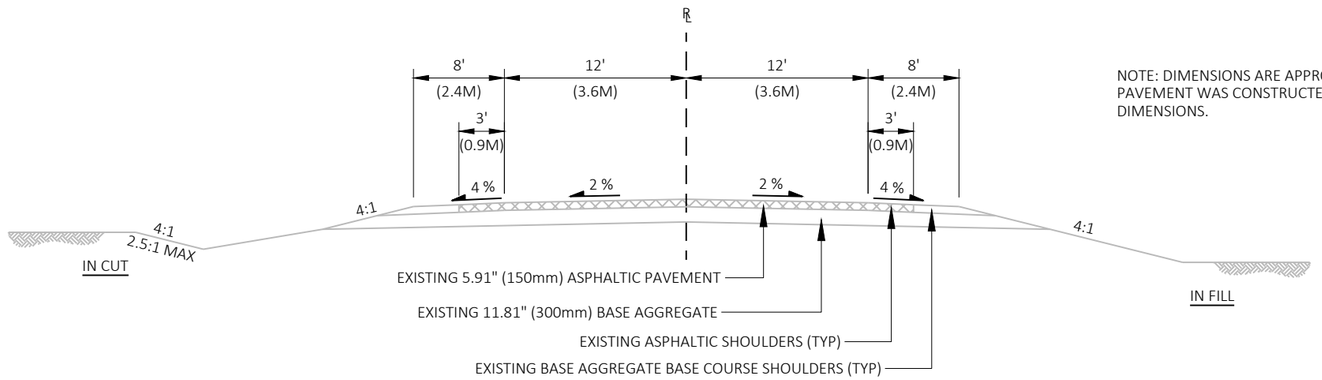
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TYPICAL SECTIONS - EXISTING	SHEET 11	E

2



EXISTING TYPICAL SECTION - CTH X/CARDINAL AVE

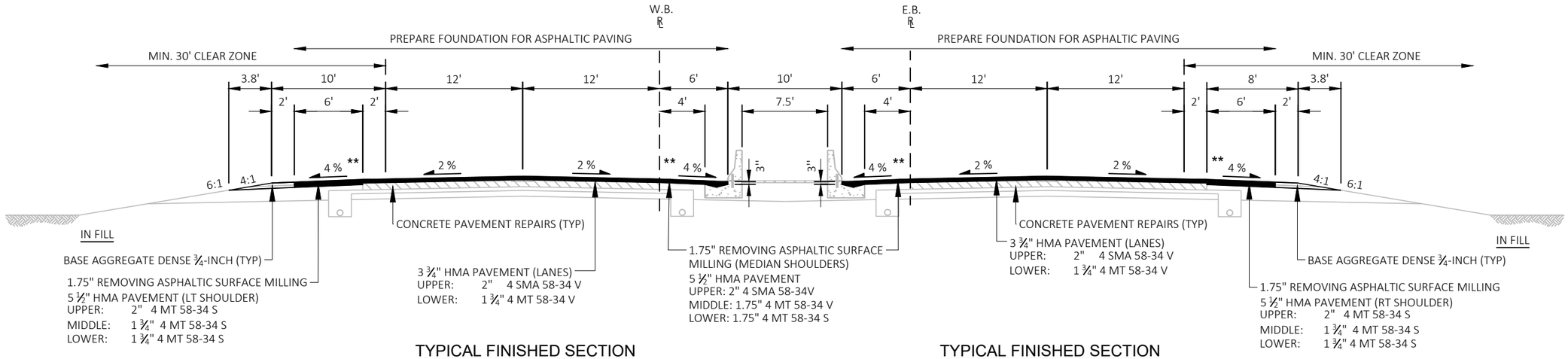
STA 95+79 L - STA 98+80 L
STA 100+93 L - STA 103+43 L



NOTE: DIMENSIONS ARE APPROXIMATE. ORIGINAL PAVEMENT WAS CONSTRUCTED USING METRIC DIMENSIONS.

EXISTING TYPICAL SECTION - HI LINE AVE

STA 100+71 H - STA 103+01 H
STA 105+40 H - STA 109+03 H

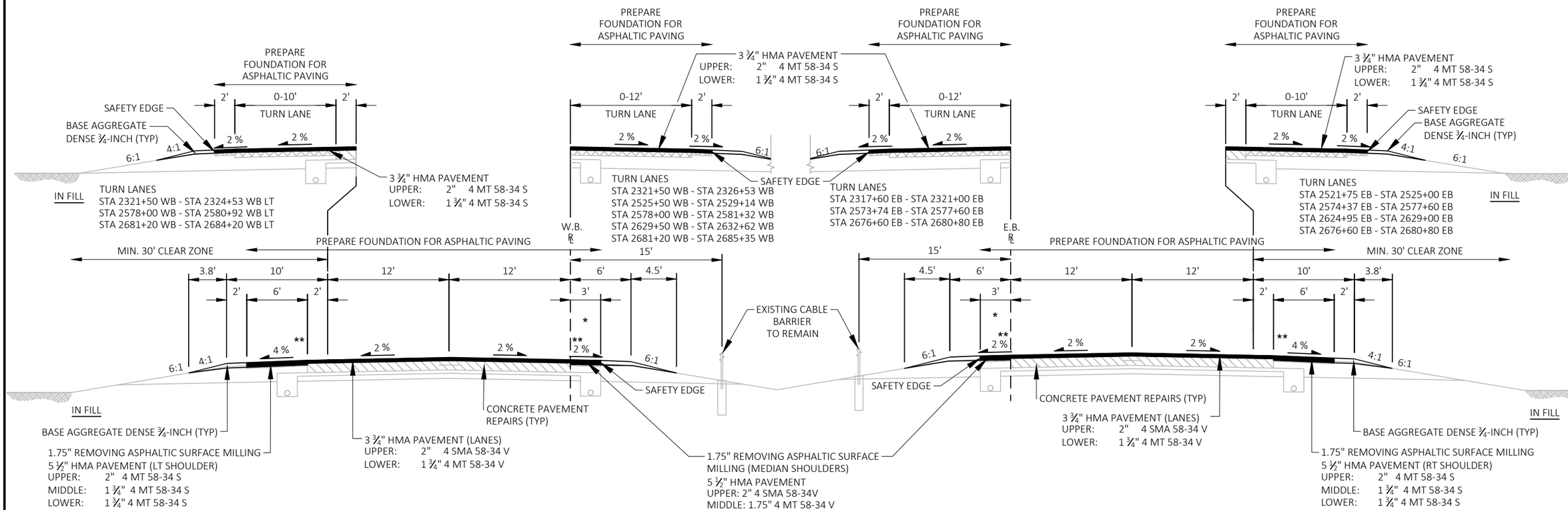


TYPICAL FINISHED SECTION

STA 2163+10 WB - STA 2165+29 WB
STA 2167+21 WB - STA 2182+56 WB

TYPICAL FINISHED SECTION

STA 2163+14 EB - STA 2165+51 EB
STA 2167+35 EB - STA 2182+56 EB



TYPICAL FINISHED SECTION

STA 2182+56 WB - STA 2337+60 WB
STA 2338+12 WB - STA 2800+15 WB

TYPICAL FINISHED SECTION

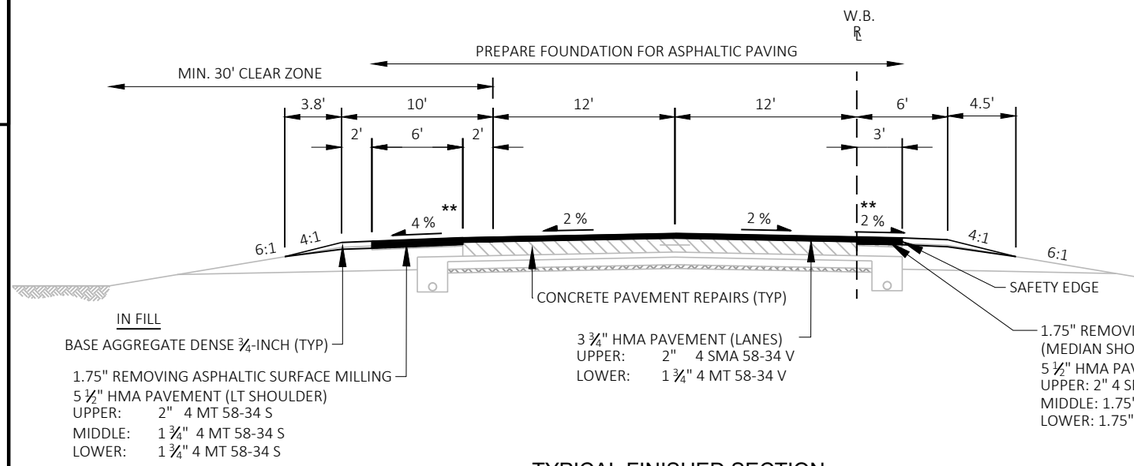
STA 2182+56 EB - STA 2325+82 EB
STA 2325+95 EB - STA 2649+00 EB

*SLOPE MEDIAN SHOULDER TO 6% ALONG CABLE GUARD

**RUMBLE STRIPS

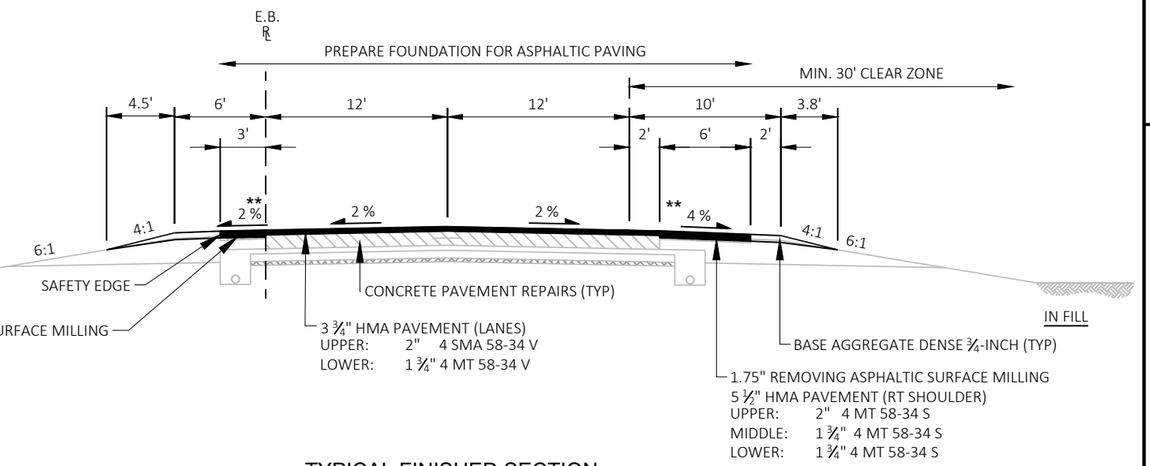
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TYPICAL SECTIONS - FINISHED	SHEET 13	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\020321_TS - PROPOSED.DWG
LAYOUT NAME - 020321_ts
PLOT DATE : 11/18/2025 2:33 PM
PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



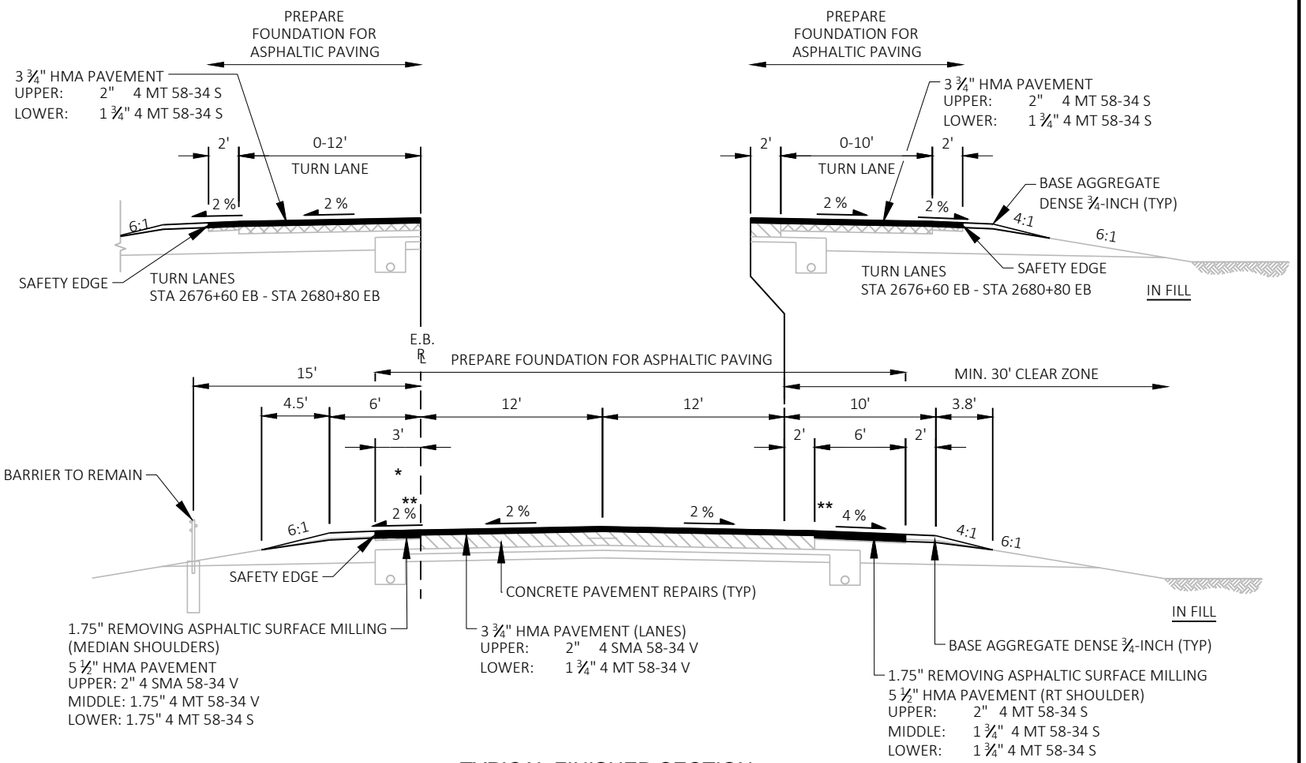
TYPICAL FINISHED SECTION

STA 2337+60 WB - STA 2338+12 WB



TYPICAL FINISHED SECTION

STA 2325+82 EB - STA 2325+95 EB



TYPICAL FINISHED SECTION

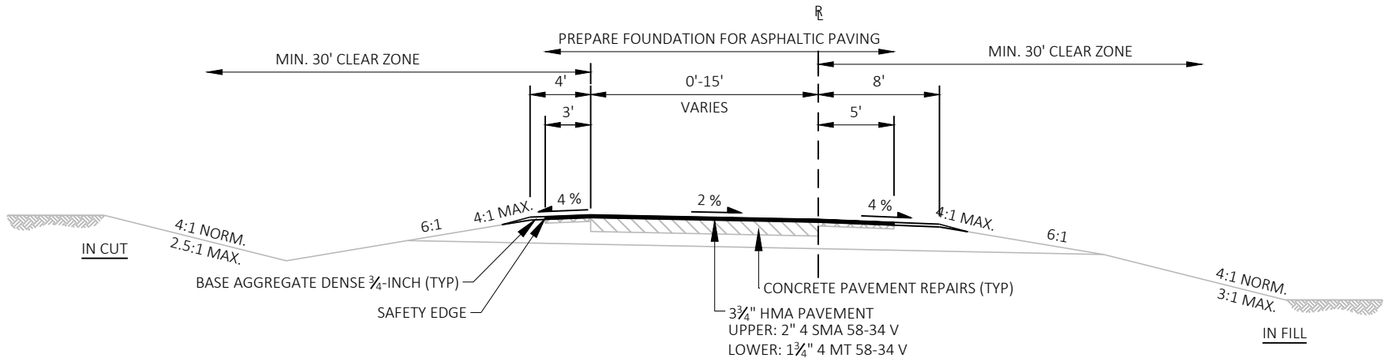
STA 2649+00 EB - STA 2800+23 EB

*SLOPE MEDIAN SHOULDER TO 6% ALONG CABLE GUARD

**RUMBLE STRIPS

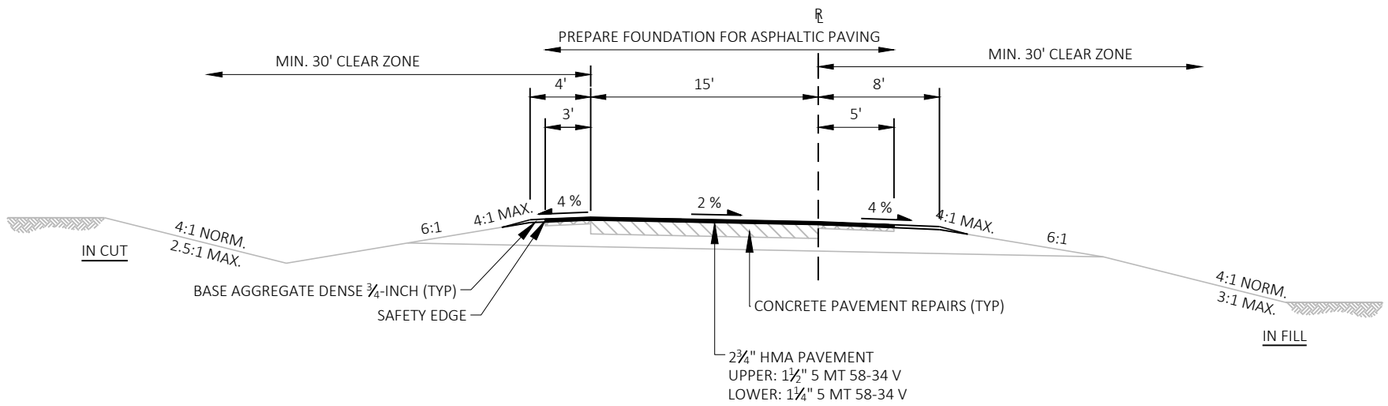
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TYPICAL SECTIONS - FINISHED	SHEET 14	E

2



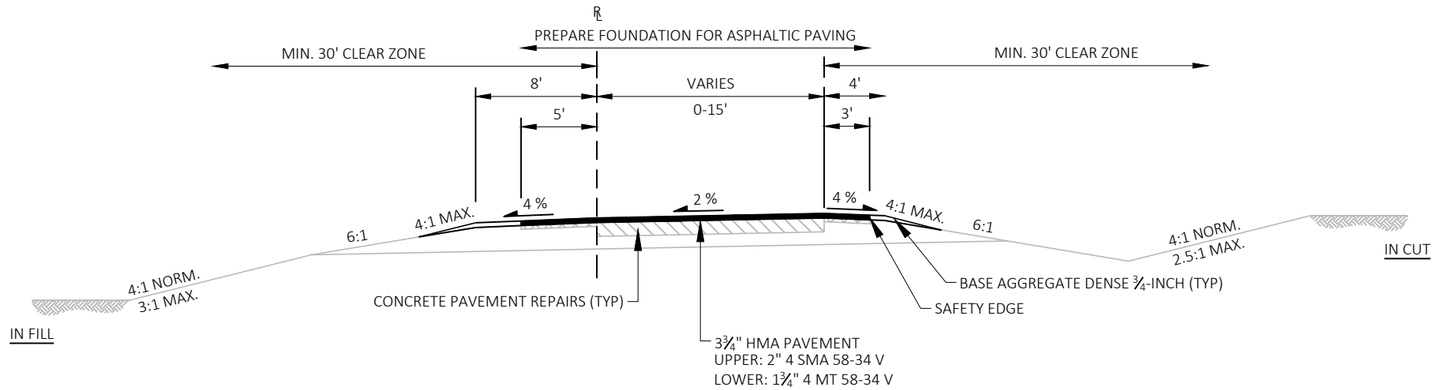
TYPICAL FINISHED SECTION

STH 29/CARDINAL AVE INTERCHANGE - EB ON/OFF RAMPS
STA 2202+24 LC - STA 2206+91 LC
STA 2225+12 LD - STA 2237+82 LD



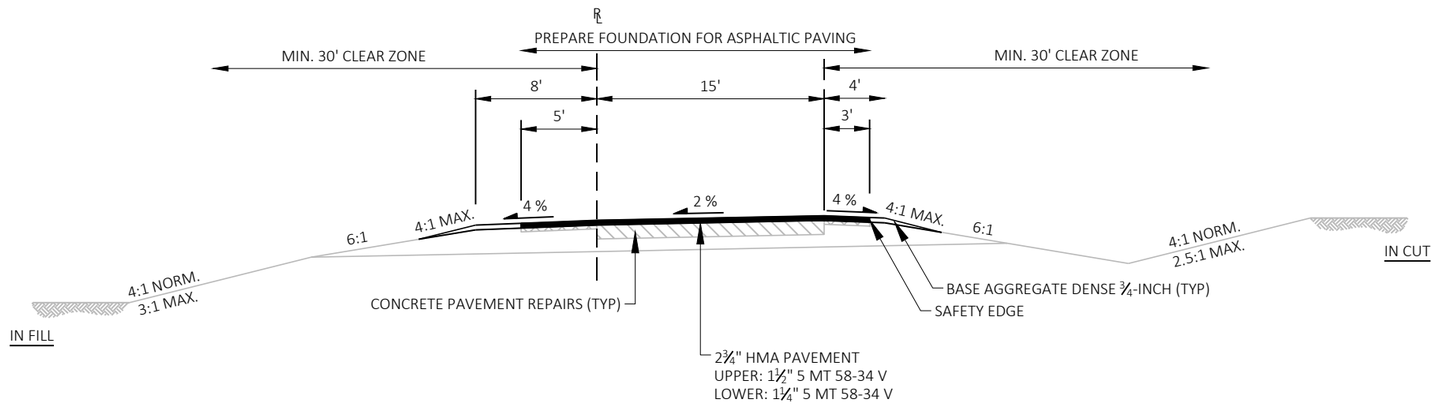
TYPICAL FINISHED SECTION

STH 29/CARDINAL AVE INTERCHANGE - EB ON/OFF RAMPS
STA 2206+91 LC - STA 2216+27 LC
STA 2216+67 LD - STA 2225+12 LD



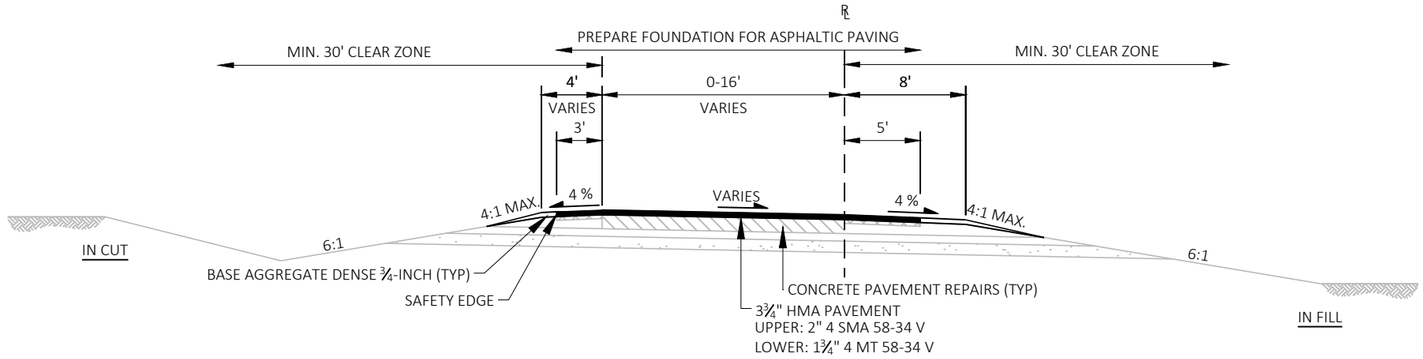
TYPICAL FINISHED SECTION

STH 29/CARDINAL AVE INTERCHANGE - WB ON/OFF RAMPS
STA 2195+06 LB - STA 2208+19 LB
STA 2226+01 LA - STA 2230+62 LA



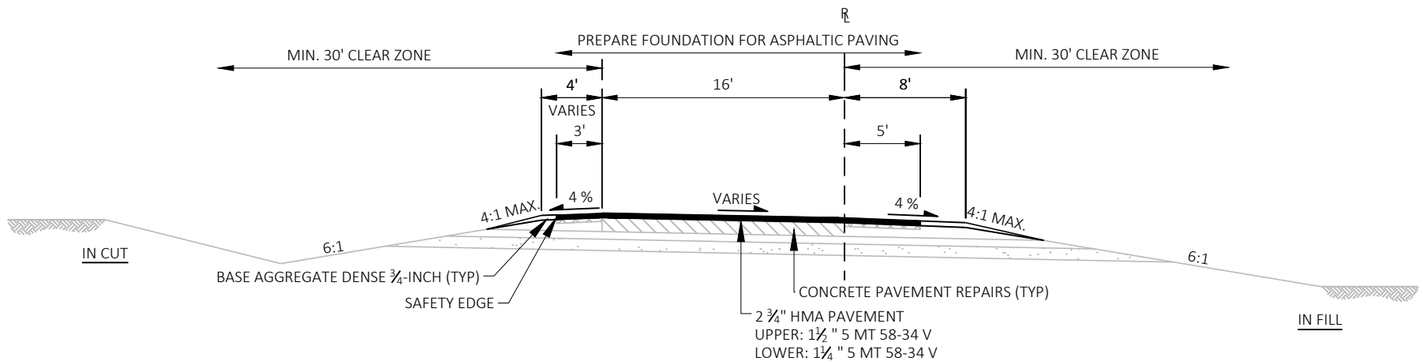
TYPICAL FINISHED SECTION

STH 29/CARDINAL AVE INTERCHANGE - WB ON/OFF RAMPS
STA 2208+19 LB - STA 2216+24 LB
STA 2216+67 LA - STA 2226+01 LA



TYPICAL FINISHED SECTION

STH 29/CTH E INTERCHANGE -EB ON/OFF RAMPS
STA 2465+60 EC - STA 2469+23 EC
STA 2491+03 ED - STA 2502+46 ED

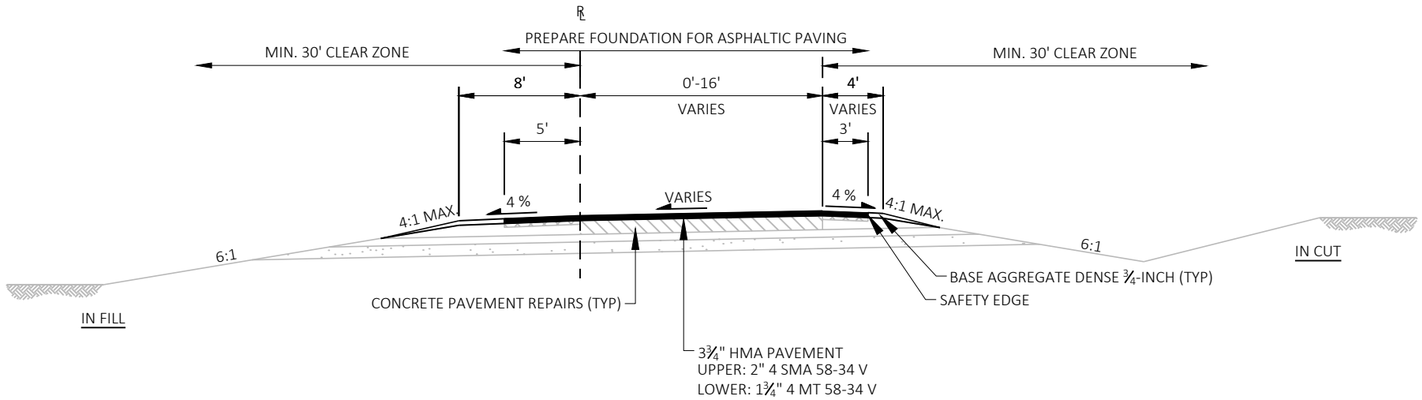


TYPICAL FINISHED SECTION

STH 29/CTH E INTERCHANGE -EB ON/OFF RAMPS
STA 2469+23 EC - STA 2481+35 EC
STA 2481+50 ED - STA 2491+03 ED

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TYPICAL SECTIONS - FINISHED	SHEET 17	E

2



TYPICAL FINISHED SECTION

STH 29/CTH E INTERCHANGE -WB ON/OFF RAMPS

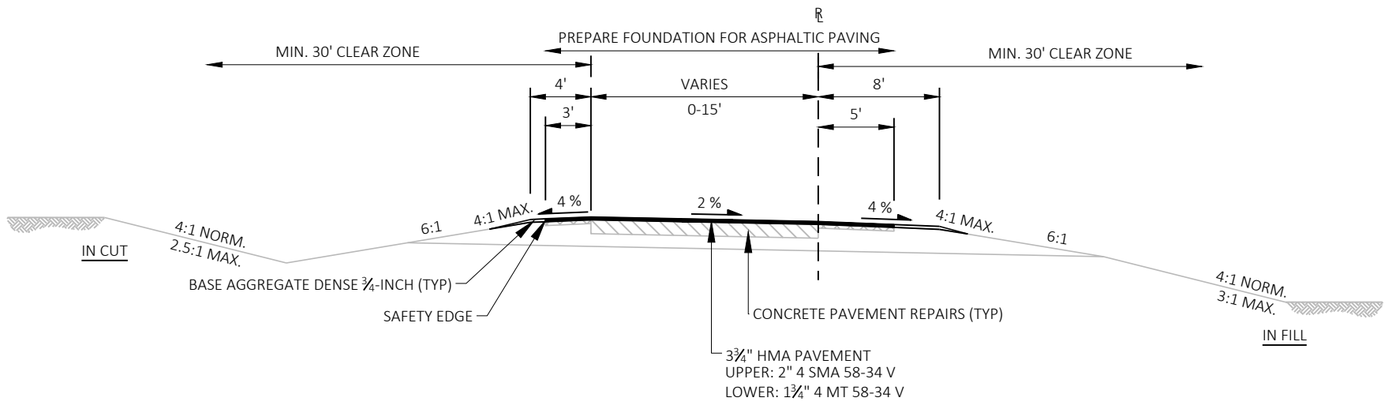
STA 2460+21 EF - STA 2472+64 EF
STA 2491+83 EA - STA 2495+99 EA

TYPICAL FINISHED SECTION

STH 29/CTH E INTERCHANGE -WB ON/OFF RAMPS

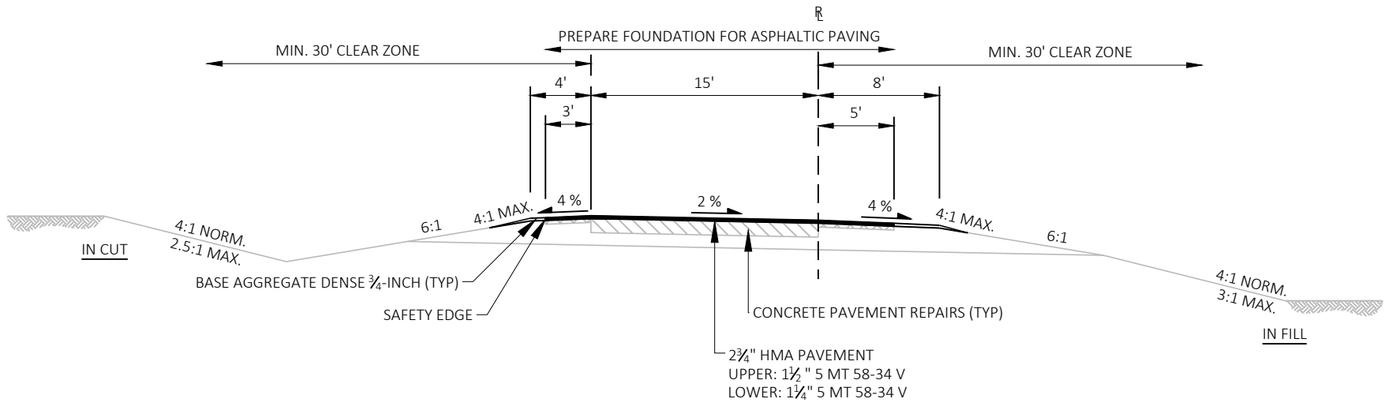
STA 2472+64 EF - STA 2481+00 EF
STA 2481+00 EA - STA 2491+83 EA

2



TYPICAL FINISHED SECTION

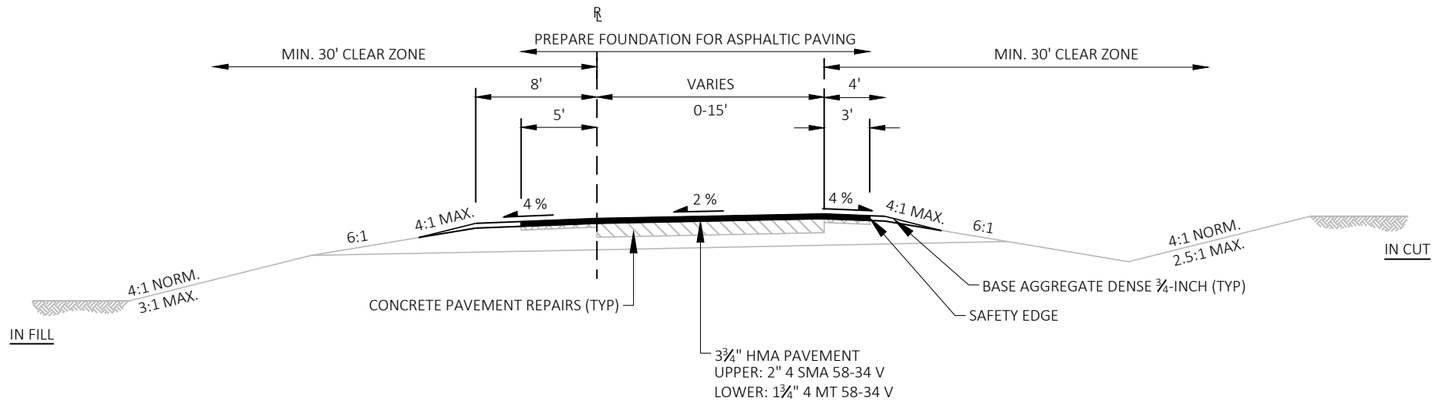
STH 29/HI LINE AVE INTERCHANGE - EB OFF RAMP
STA 2714+78 HC - STA 2718+68 HC



TYPICAL FINISHED SECTION

STH 29/HI LINE AVE INTERCHANGE - EB OFF RAMP
STA 2718+68 HC - STA 2735+03 HC

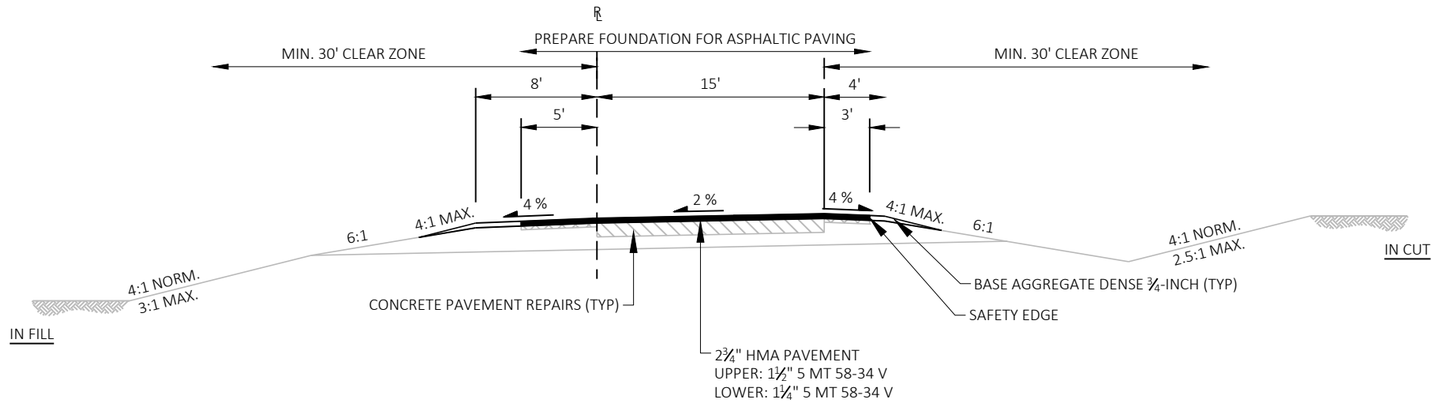
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TYPICAL FINISHED SECTION

STH 29/HI LINE AVE INTERCHANGE - WB ON RAMP

STA 2711+61 HB - STA 2723+19 HB

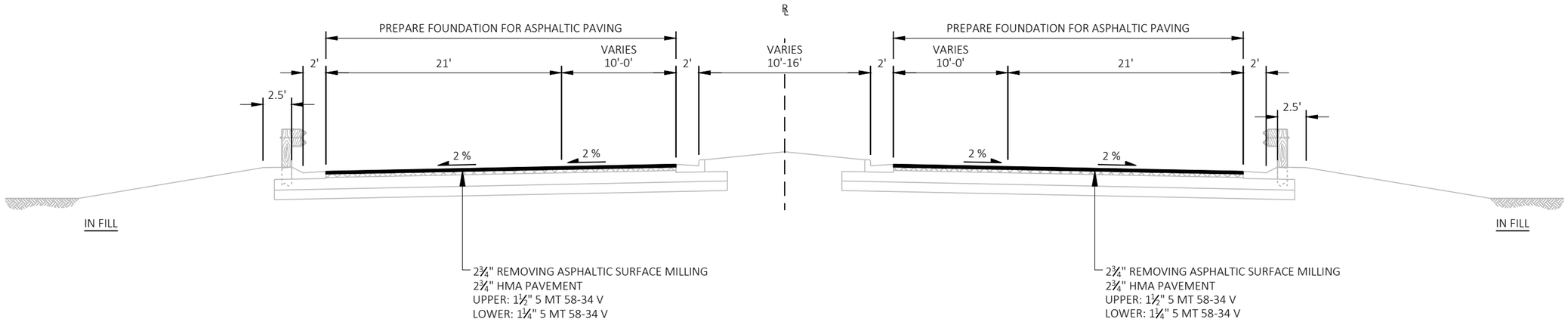


TYPICAL FINISHED SECTION

STH 29/HI LINE AVE INTERCHANGE - WB ON RAMP

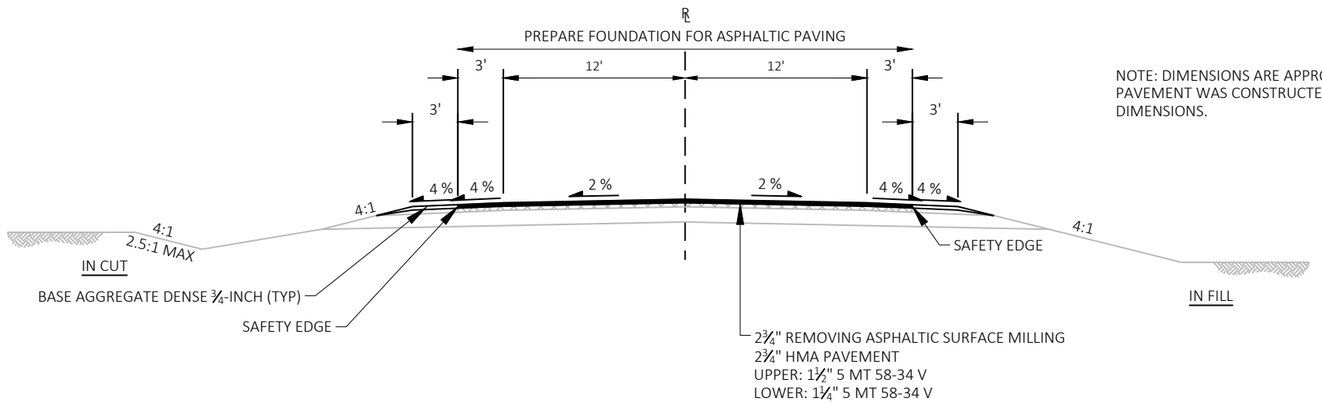
STA 2723+19 HB - STA 2734+18 HB

2



TYPICAL FINISHED SECTION - CTH X/CARDINAL AVE

STA 95+79 L - STA 98+80 L
STA 100+93 L - STA 103+43 L



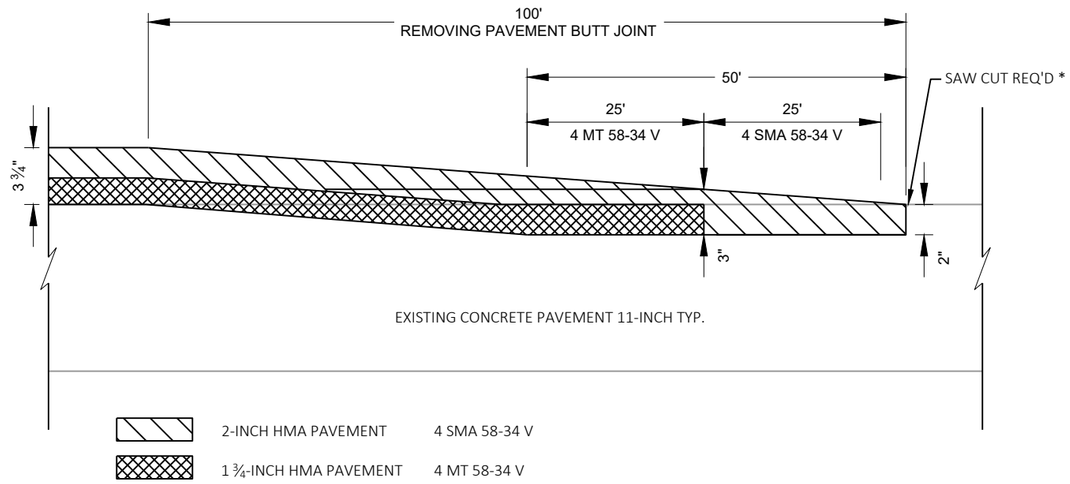
NOTE: DIMENSIONS ARE APPROXIMATE. ORIGINAL PAVEMENT WAS CONSTRUCTED USING METRIC DIMENSIONS.

TYPICAL FINISHED SECTION - HI LINE AVE

STA 100+71 H - STA 103+01 H
STA 105+40 H - STA 109+03 H

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TYPICAL SECTIONS - FINISHED	SHEET 21	E

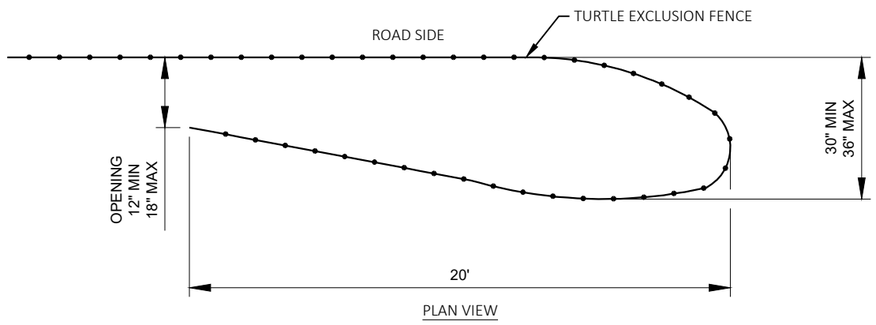
NOT TO SCALE



DETAIL OF BUTT JOINT - MAINLINE

* INCIDENTAL TO REMOVING CONCRETE PAVEMENT BUTT JOINTS AND REMOVING ASPHALTIC SURFACE BUTT JOINTS

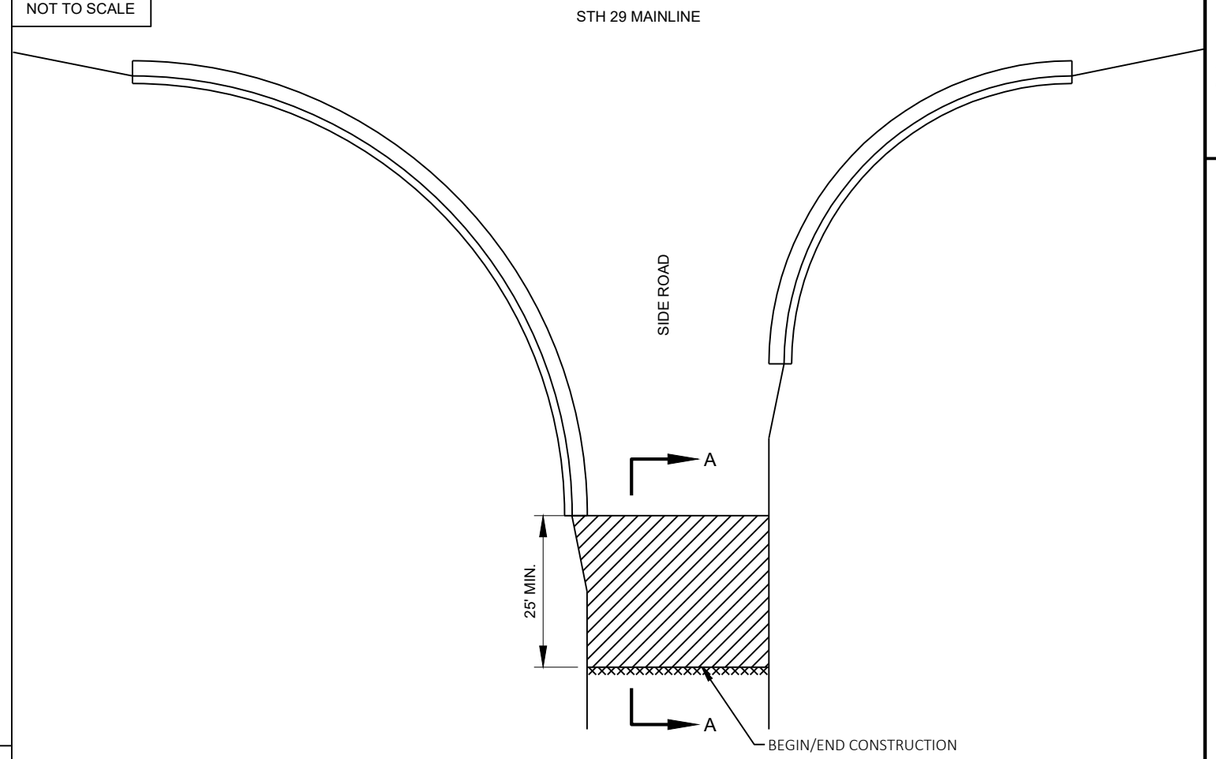
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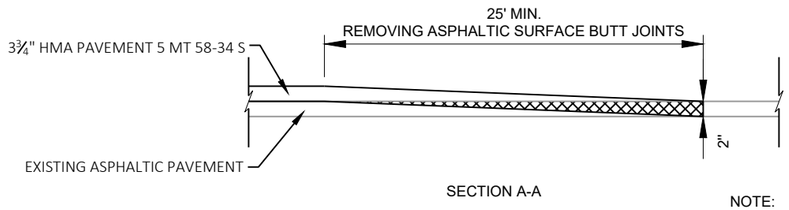


DETAIL OF TEMPORARY TURTLE TURN-AROUND

GENERAL NOTES:
TURTLE TURN-AROUNDS ARE TO REDIRECT THE TURTLES AWAY FROM THE CONSTRUCTION ZONE. TURTLE EXCLUSION FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND. TURN AROUND PAID FOR AS INSTALLING AND MAINTAINING CLIMBING TURTLE EXCLUSION FENCE.

NOT TO SCALE



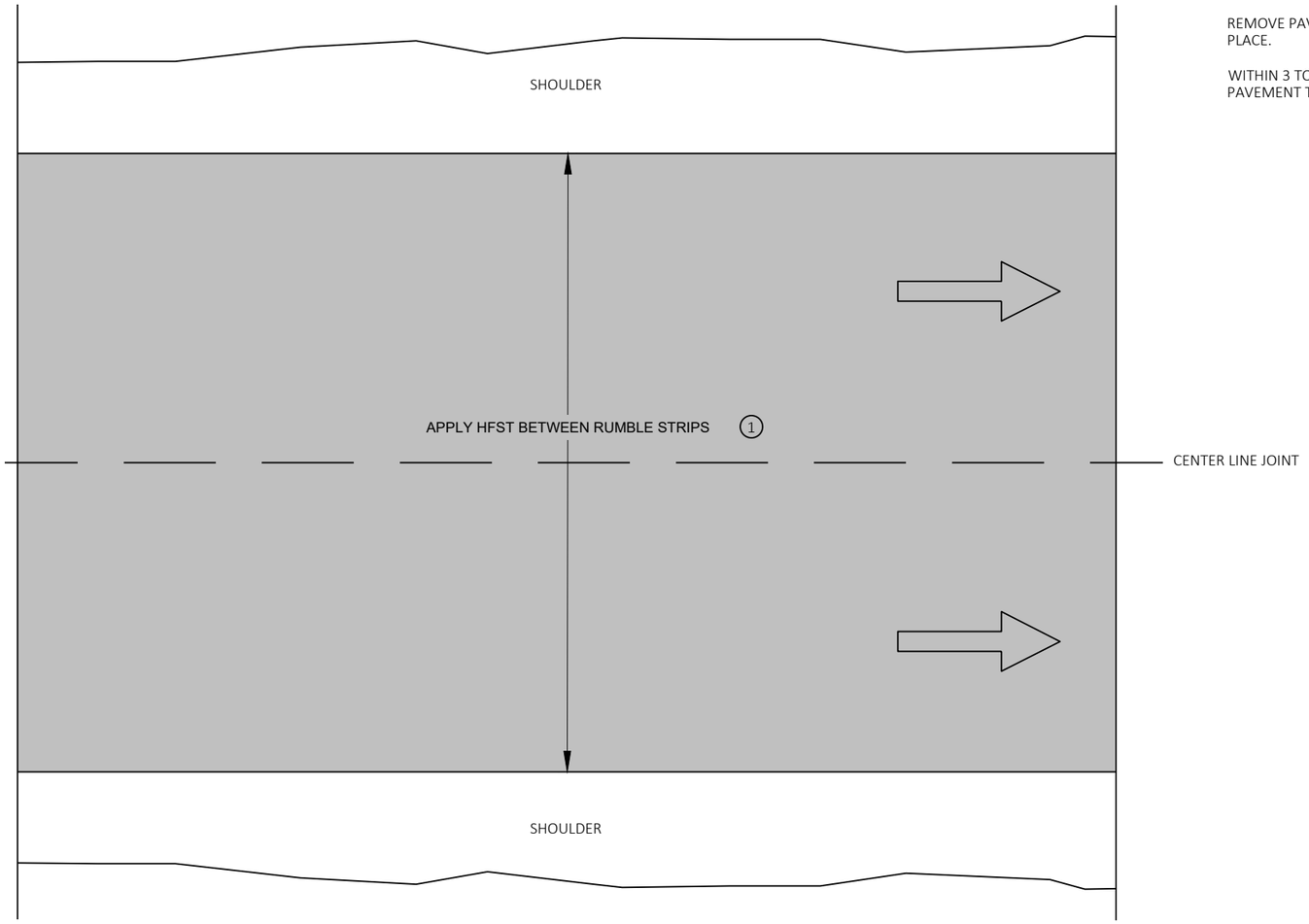


NOTE:
HAND SHAPE TO MATCH EXISTING ASPHALT FLUMES.

DETAIL OF BUTT JOINT - SIDE ROAD

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAILS	SHEET 22	E

NOT TO SCALE



RESIN BINDER HIGH FRICTION SURFACE TREATMENT (HFST)

GENERAL NOTES

(1) EXTEND HFST APPLICATION 2'-3' ONTO THE SHOULDERS IF APPLICATION SITE IS ON A CURVE WHERE NO SHOULDER RUMBLES WILL BE INSTALLED. IF SHOULDER RUMBLE STRIPS WILL BE INSTALLED, ONLY APPLY ON THE MAINLINE.

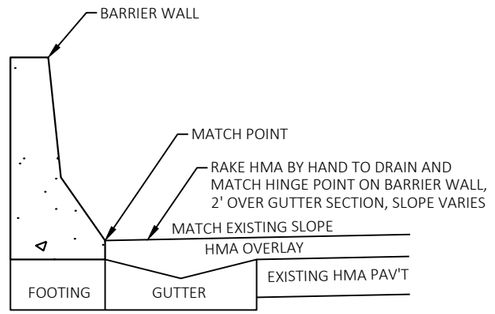
PROVIDE 30-DAY CURE TIME ON NEW HMA PAVEMENT PRIOR TO PLACING HFST.

PLACE WHEN AMBIENT AIR OR PAVEMENT SURFACE TEMPERATURE IS ABOVE 50°F.

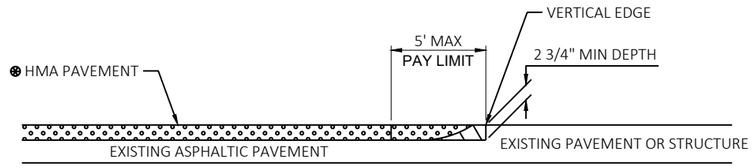
REMOVE PAVEMENT MARKING PRIOR TO PLACING HFST. WATERBORNE PAINT MAY REMAIN IN PLACE.

WITHIN 3 TO 7 DAYS AFTER OPENING TO TRAFFIC, THE CONTRACTOR SHALL VACUUM SWEEP THE PAVEMENT TO REMOVE LOOSENED AGGREGATE.

NOT TO SCALE



DETAIL OF BARRIER WALL PAVING

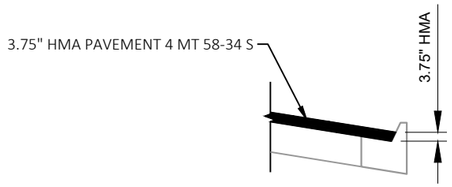


REMOVING ASPHALTIC SURFACE, MILLING

REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

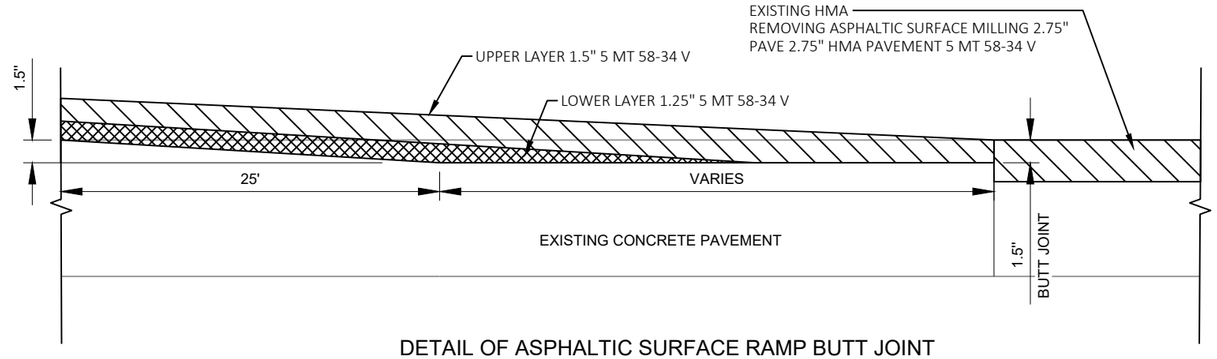
SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

DETAIL OF ASPHALTIC SURFACE BUTT JOINT
(NO PROFILE CHANGE)

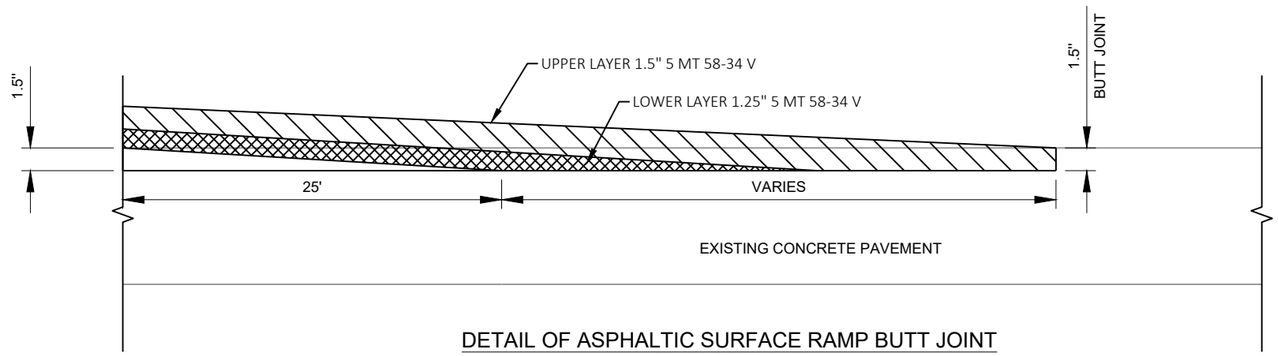


DETAIL OF SIDE ROAD CURB OVERLAY

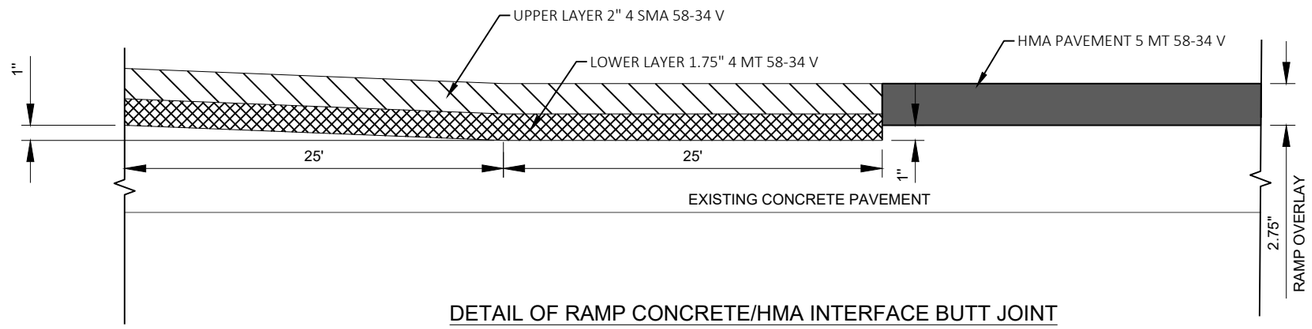
NOT TO SCALE



DETAIL OF ASPHALTIC SURFACE RAMP BUTT JOINT
CARDINAL AVE INTERCHANGE
HI LINE AVE INTERCHANGE



DETAIL OF ASPHALTIC SURFACE RAMP BUTT JOINT
CTH E INTERCHANGE



DETAIL OF RAMP CONCRETE/HMA INTERFACE BUTT JOINT

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAILS	SHEET 24	E

2

2

N

CAUTION

END CONSTRUCTION
STA 103+43 L
MATCH EXISTING

WE ENERGIES GAS

REMOVING ASPHALTIC SURFACE MILLING 2.75"

STA 2216+59.90 LB
STA 101+91.27 L
EP: 2216+59.90 LB

STA 2216+40.04 LA
STA 101+91.27 L
BP: 2216+40.04 LA

CONCRETE CURB & GUTTER 4-INCH
SLOPED 36-INCH TYPE A

OWEN WASTEWATER TREATMENT FACILITY
OWEN MUN WATER UTILITY

2215+00 LB

RAMP LB

BUTT JOINT TRANSITION 0 - 1.5"

REMOVING CONCRETE PAVEMENT BUTT JOINT 1.5"

CARDINAL AVE

BUTT JOINT TRANSITION 0 - 1.5"

REMOVING CONCRETE PAVEMENT BUTT JOINT 1.5"

2220+00 LA

RAMP LA

STRUCTURE B-10-178

STH 29

2215+00 WB

PT: 2213+99.75

2220+00 WB

100+00 L

PT: 2213+76.50

STH 29

2215+00 EB

STH 29

2220+00 EB

STRUCTURE B-10-178

REMOVING CONCRETE PAVEMENT BUTT JOINT 1.5"

BUTT JOINT TRANSITION 0 - 1.5"

RAMP LC

CARDINAL AVE

REMOVING CONCRETE PAVEMENT BUTT JOINT 1.5"

BUTT JOINT TRANSITION 0 - 1.5"

RAMP LD

2220+00 LD

PC: 2223+74.4

APPROXIMATE LOCATION OF LUMEN
(CENTURYLINK) COMMUNICATIONS
(NOT SURVEYED)

2215+00 LC

STA 2216+52.02 LC
STA 97+72.44 L

STA 2216+35.58 LD
STA 97+72.44 L

BP: 2216+35.58 LD

EP: 2216+52.02 LC

REMOVING ASPHALTIC SURFACE MILLING 2.75"

LUMEN (CENTURYLINK)
COMMUNICATIONS

PT: 96+50.67 L

APPROXIMATE LOCATION OF LUMEN
(CENTURYLINK) COMMUNICATIONS
(NOT SURVEYED)

R/W

R/W

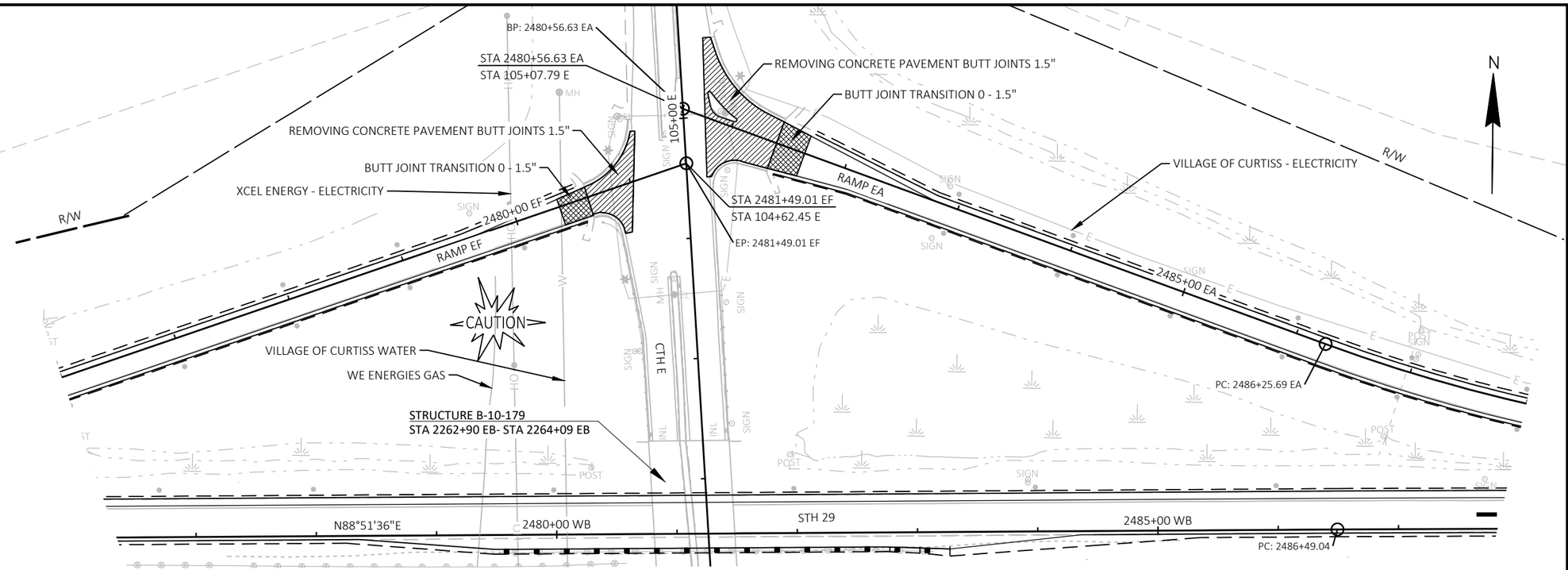
BEGIN CONSTRUCTION
STA 95+79 L
MATCH EXISTING

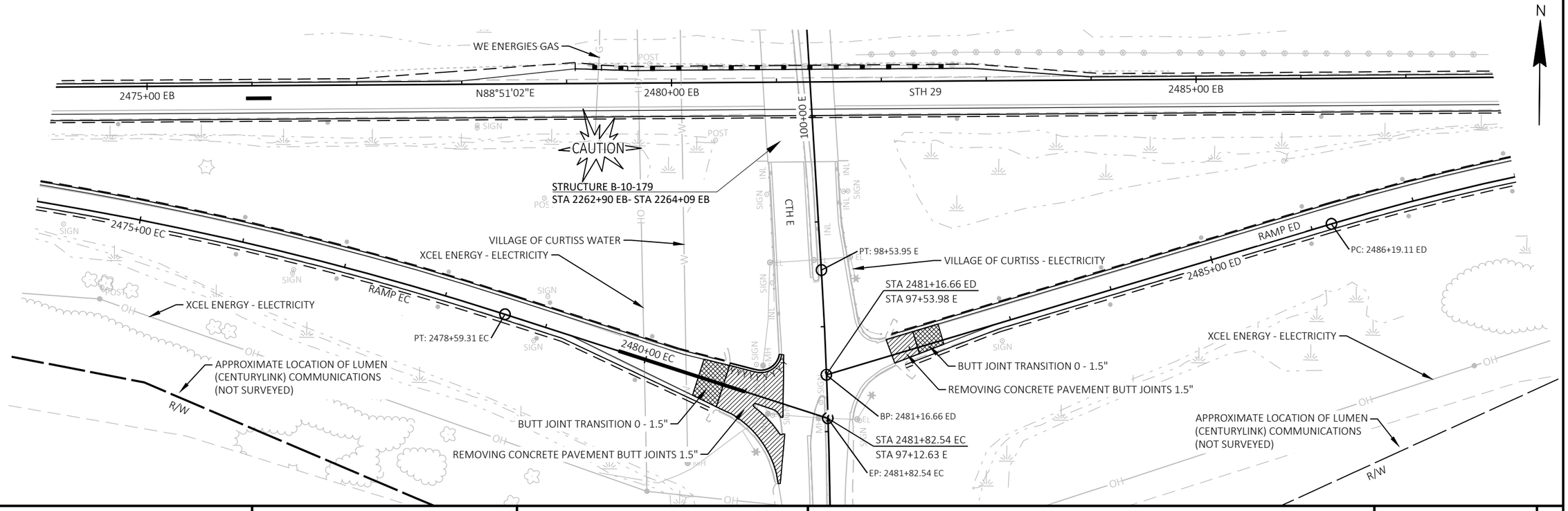
70 L

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - BUTT JOINTS	SHEET 25	E

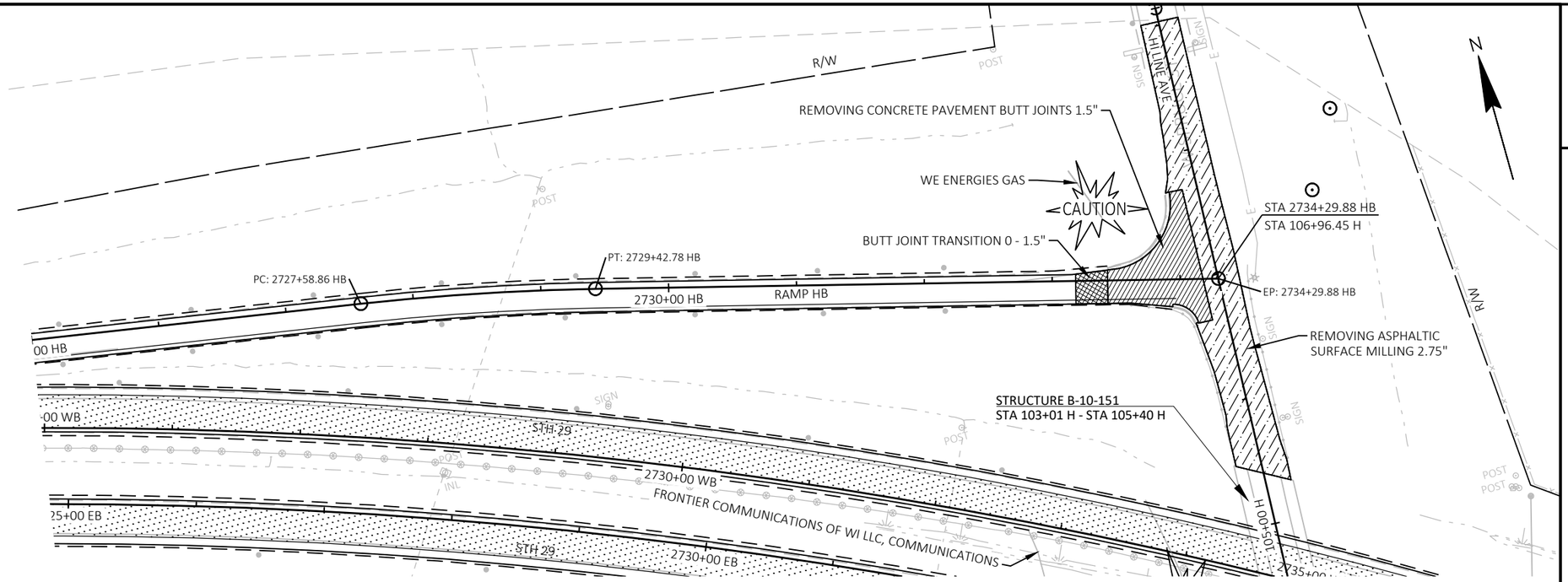
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LAYOUT NAME - 021004-cd ramps

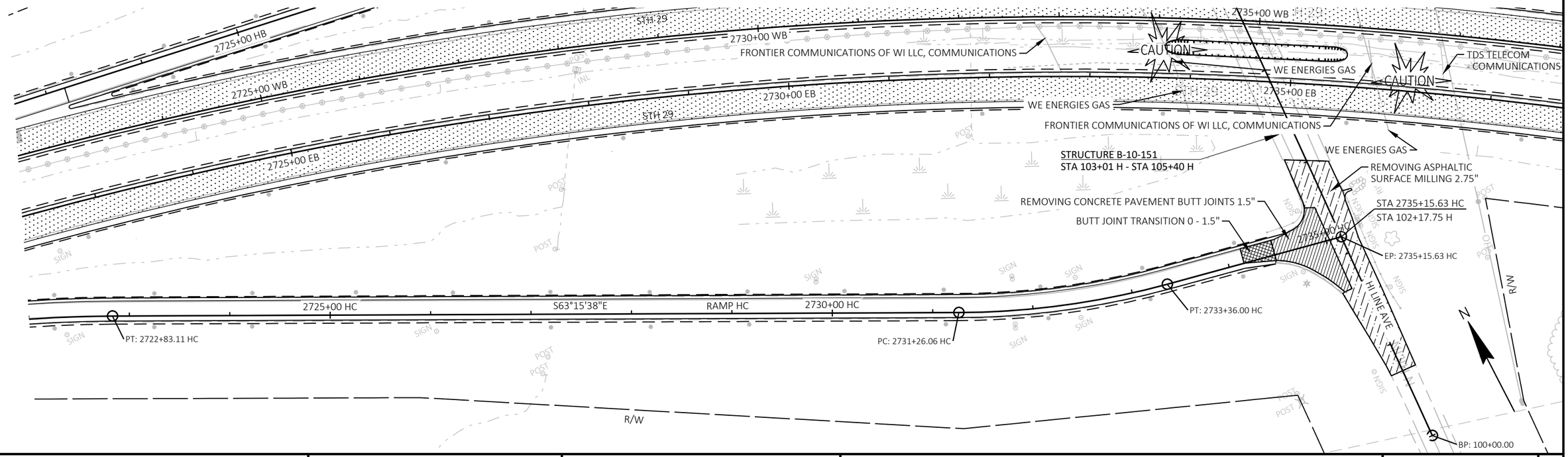
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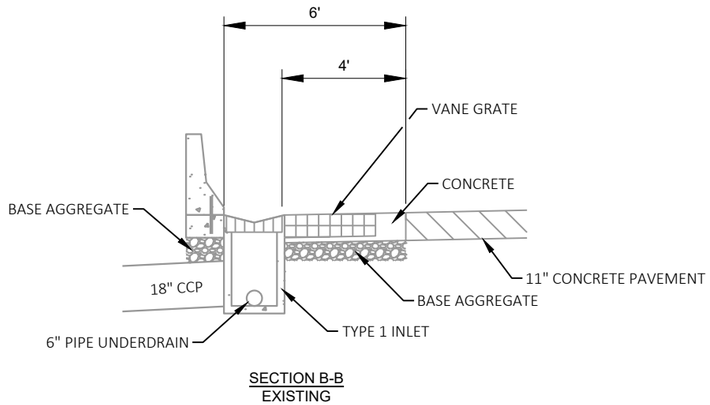
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - BUTT JOINTS	SHEET 26	E



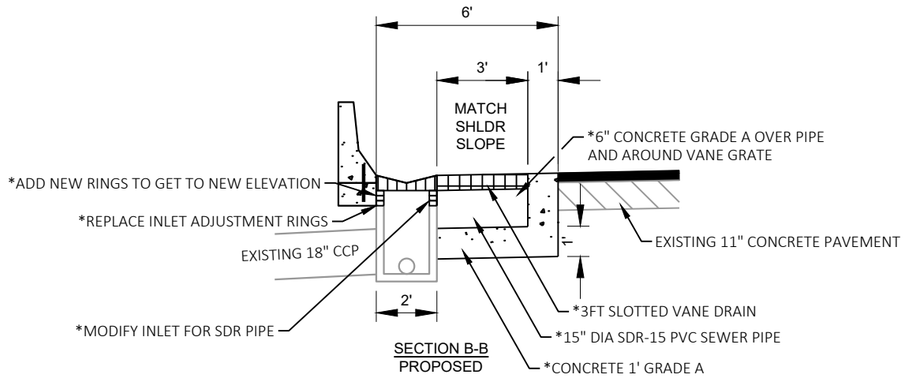


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - BUTT JOINTS	SHEET 27	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\021002_CD.DWG
LAYOUT NAME - 021006-cd ramps
PLOT DATE : 11/18/2025 2:36 PM
PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



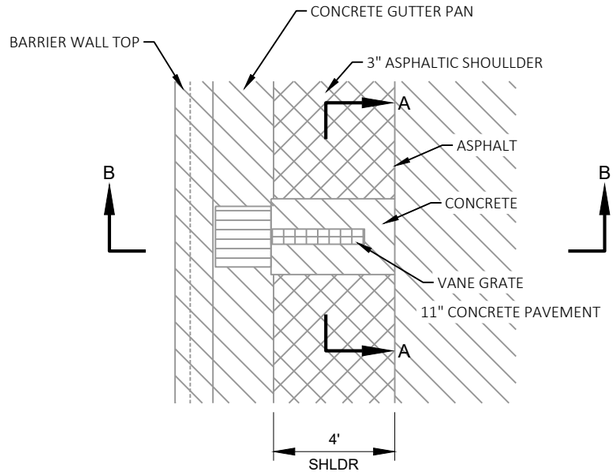
SECTION B-B
EXISTING



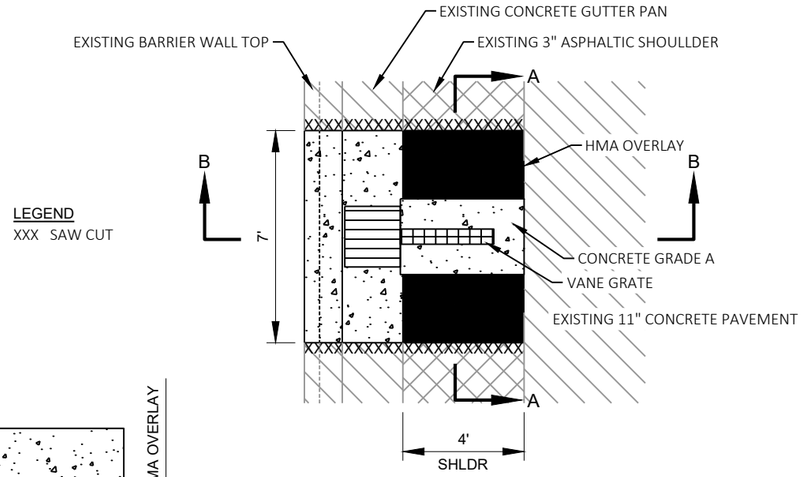
SECTION B-B
PROPOSED

RECONSTRUCTING INLETS WITH VANE DRAINS

*INCIDENTAL TO RECONSTRUCTING INLETS WITH VANE DRAINS

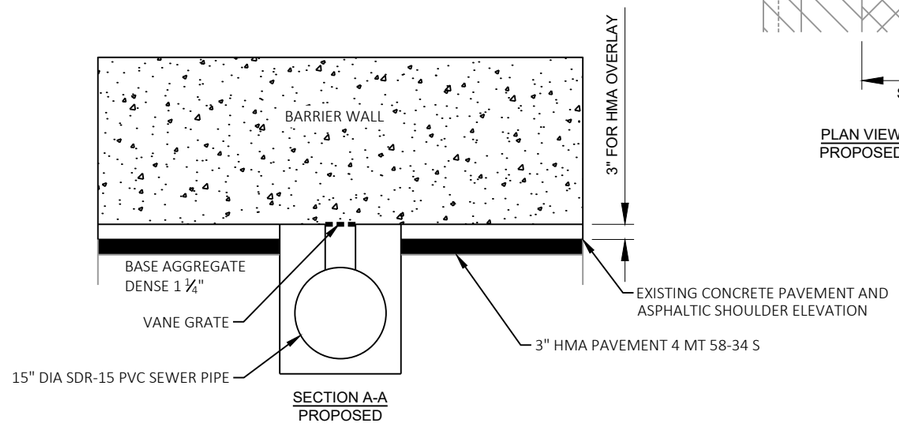


PLAN VIEW
EXISTING



LEGEND
XXX SAW CUT

PLAN VIEW
PROPOSED



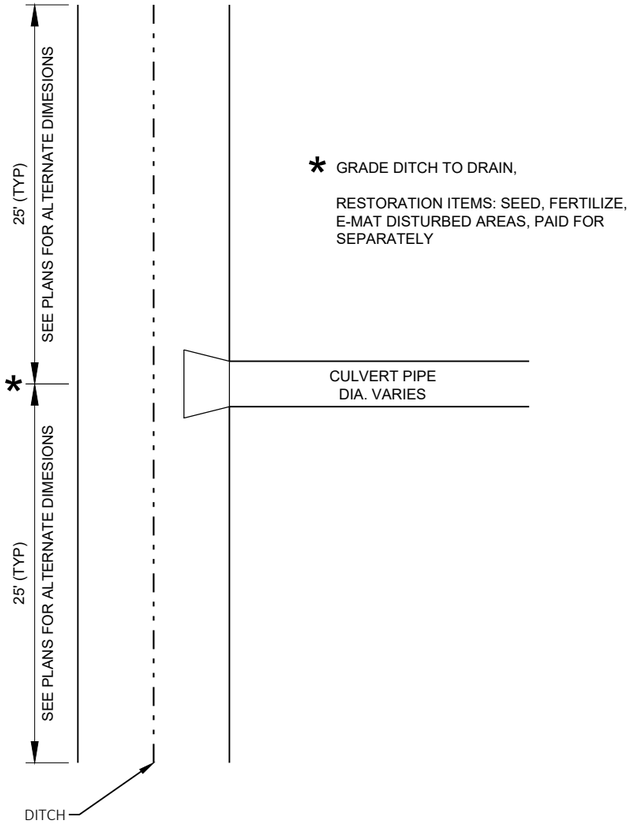
SECTION A-A
PROPOSED

DETAIL OF REMOVE AND REPLACE BARRIER WALL

NOTE:

1. ALL SAWING, BARRIER WALL REMOVAL, CONCRETE FOOTING, CONCRETE BARRIER WALL, CONCRETE GUTTER, REINFORCING STEEL, CONCRETE GUTTER REMOVAL, EXCAVATION, BACKFILL, BASE AGGREGATE DENSE 1¼-INCH, ASPHALTIC SURFACE, AND ANY OTHER WORK NECESSARY SHALL BE INCIDENTAL TO THE BID ITEM REMOVE AND REPLACE CONCRETE BARRIER WALL.
2. DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATION AND SPECIAL PROVISIONS.
3. PRESERVE EXISTING HORIZONTAL REINFORCING STEEL WHERE POSSIBLE. ALTERNATELY, DRILL AND EPOXY IN SAME SIZE EPOXY COATED HORIZONTAL REINFORCING STEEL WITH MINIMUM 2'-7" OVERLAP. PROVIDE NEW VERTICAL REINFORCING STEEL TO MATCH EXISTING. PAID FOR UNDER REMOVE AND REPLACE BARRIER WALL
4. SEE SDD SLOTTED VANE DRAIN

2

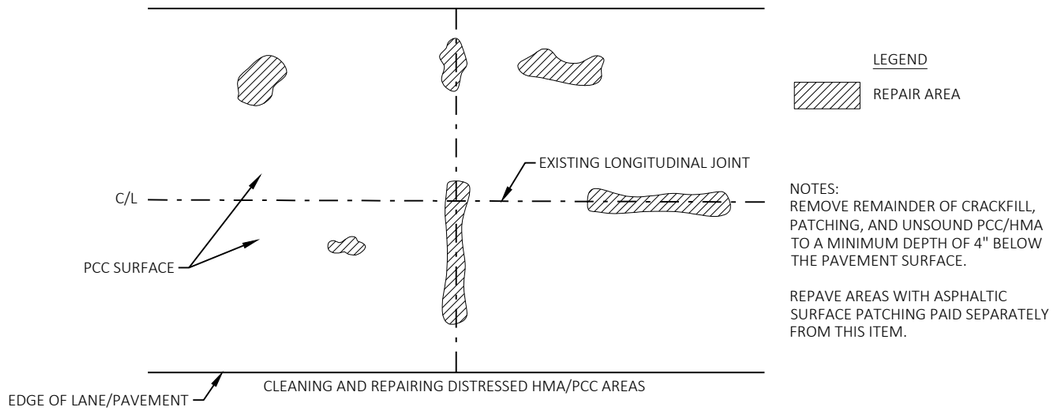


* GRADE DITCH TO DRAIN,

RESTORATION ITEMS: SEED, FERTILIZE, E-MAT DISTURBED AREAS, PAID FOR SEPARATELY

CULVERT PIPE
DIA. VARIES

DETAIL OF CLEANING DITCH



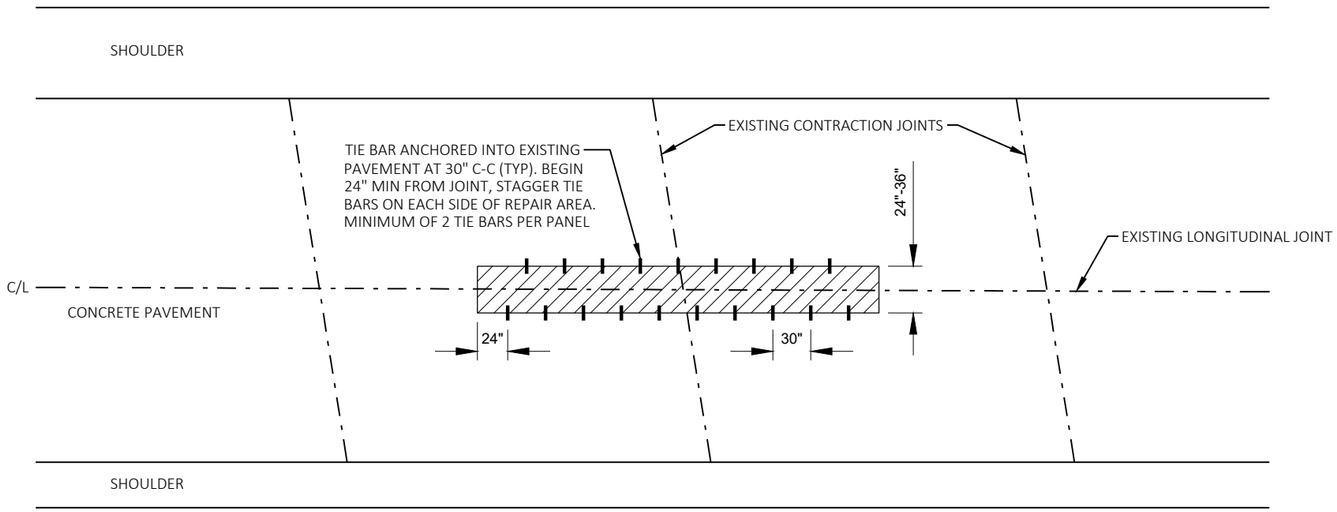
LEGEND

REPAIR AREA

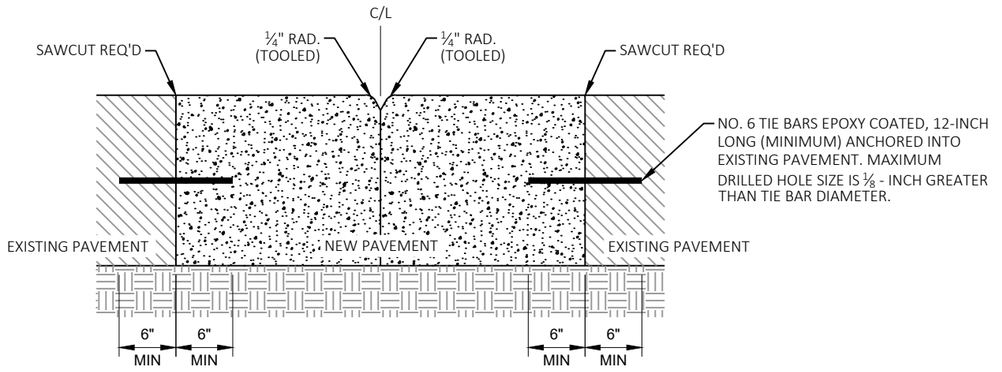
NOTES:
REMOVE REMAINDER OF CRACKFILL, PATCHING, AND UNSOUND PCC/HMA TO A MINIMUM DEPTH OF 4" BELOW THE PAVEMENT SURFACE.

REPAVE AREAS WITH ASPHALTIC SURFACE PATCHING PAID SEPARATELY FROM THIS ITEM.

PREPARE FOUNDATION FOR ASHPHALT PAVING



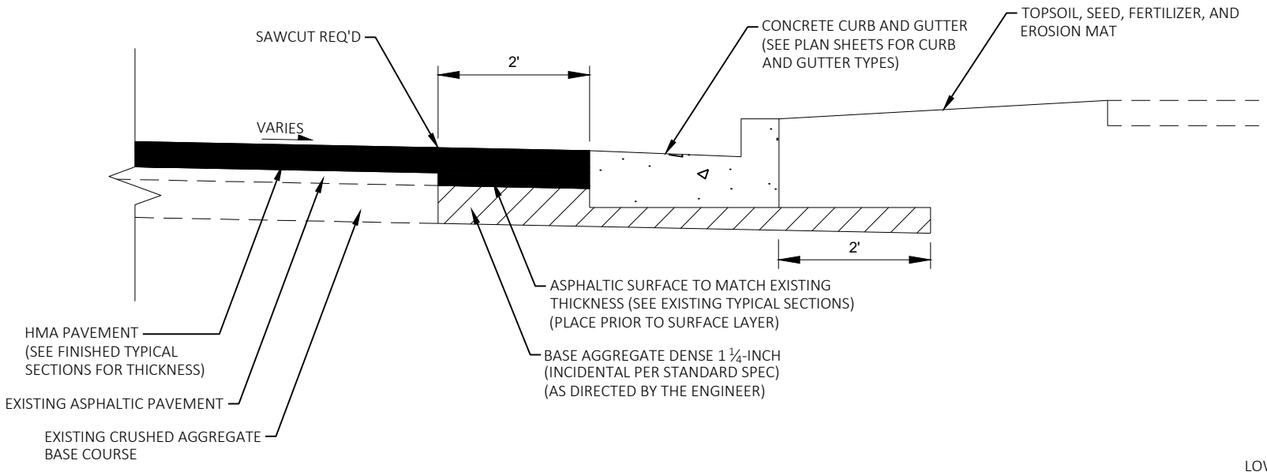
PLAN VIEW



SECTION VIEW

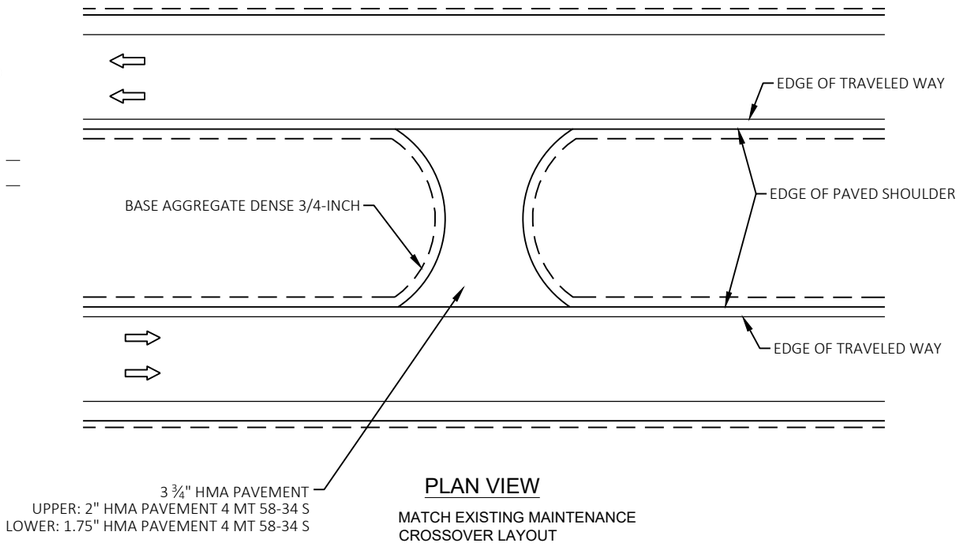
CONCRETE PAVEMENT CENTERLINE JOINT REPAIR

WORK TO BE PAID UNDER SPV ITEM 30-INCH CONCRETE CENTERLINE REPAIR.



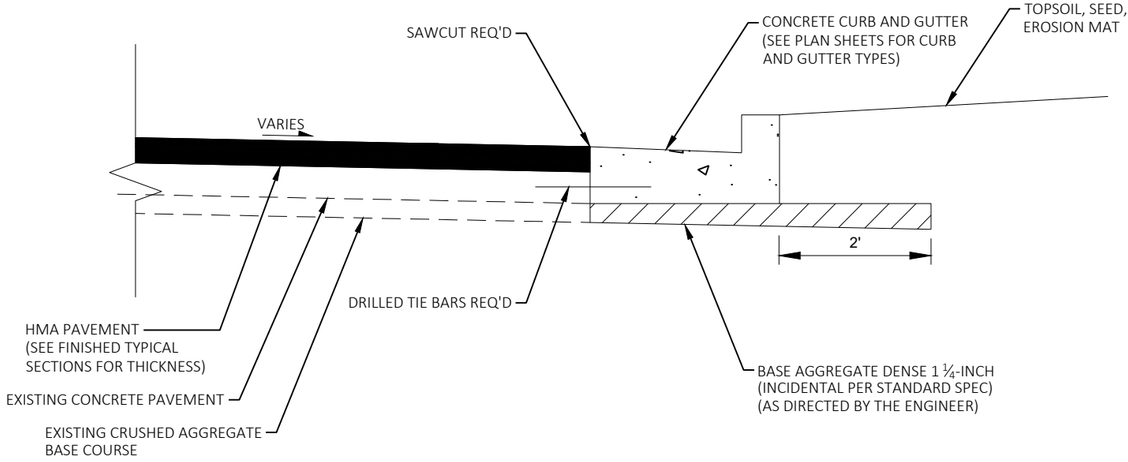
CONCRETE CURB AND GUTTER REPLACEMENT NEXT TO ASPHALTIC PAVEMENT

SEE PLAN SHEETS FOR REPLACEMENT LOCATIONS



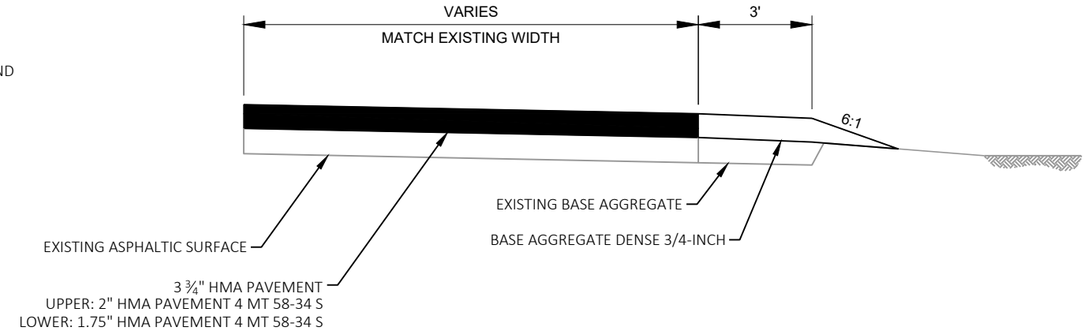
PLAN VIEW

MATCH EXISTING MAINTENANCE
CROSSOVER LAYOUT



CONCRETE CURB AND GUTTER REPLACEMENT NEXT TO CONCRETE PAVEMENT

SEE PLAN SHEETS FOR REPLACEMENT LOCATIONS



HALF SECTION VIEW

MATCH EXISTING MAINTENANCE
CROSSOVER SLOPES

DETAIL OF MAINTENANCE CROSSOVERS

SEE PLAN SHEETS FOR MAINTENANCE CROSSOVER LOCATIONS

2

LEGEND

ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR

NOTE:
FINAL PLACEMENT OF CONCRETE SURFACE DRAIN MUST MAINTAIN THE MINIMUM POST SEPARATION DISTANCE IN SDD CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES.

STRUCTURE B-10-0173
STA 2161+69 WB - STA 2163+10 WB

STRUCTURE B-10-0174
STA 2165+29 WB - STA 2167+21 WB

STRUCTURE B-10-0022
STA 2161+68 EB - STA 2163+14 EB

STRUCTURE B-10-0023
STA 2165+51 EB - STA 2167+35 EB

XCEL ENERGY - TRANSMISSION

REMOVING GUARDRAIL

REMOVING GUARDRAIL

CTH D

WISCONSIN CENTRAL LTD

RIPRAP

STH 29

STH 29

STH 29

POST

SIGN

SIGN

SIGN

WALLS

WALLS

INL

INL

INL

INL

INL

INL

INL

INL

OH

OH

OH

OH

W

W

W

W

SI

SI

CSD

CSD

MGST

MGST

MGST

MGST

MGS

MGS

CG

CG

+07.92
-34.36' LT

+05.92
-34.29' LT

+11.72
29.76' RT

+63.61
29.72' RT

+13.43
34.00' RT

+73.27
34.00' RT

+23.08
29.74' RT

+74.98
29.77' RT

61+00 WB
2162+00 WB
2163+00 WB
2164+00 WB
2165+00 WB
2166+00 WB

PT: 2161+05.31
PT: 2161+05.32

161+00 EB
2162+00 EB
2163+00 EB
2164+00 EB
2165+00 EB
2166+00 EB

MATCHLINE STA 2166+50 EB

N

2

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 31	E

2

2

LEGEND

ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR

NOTE:
FINAL PLACEMENT OF CONCRETE SURFACE DRAIN MUST MAINTAIN THE MINIMUM POST SEPARATION DISTANCE IN SDD CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES.

MATCHLINE STA 2166+50 EB

STRUCTURE B-10-0174
STA 2165+29 WB - STA 2167-21 WB

STRUCTURE B-10-0023
STA 2165+51 EB - STA 2167-35 EB

POST

SIGN

N

SI

MGST

CG

CSD

MGS

REMOVING GUARDRAIL

MGSE

MGS2

ASPH

15:1 TAPER

10:1 TAPER

+92.93
-34.06' LT

+32.32
-34.00' LT

+10.44
-34.12' LT

+35.43
-35.06' LT

+60.41
-36.00' LT

+52.83
29.87' RT

+92.23
29.90' RT

+42.06
34.00' RT

+54.56
34.00' RT

STH 29

WALLS

INL

2167+00 WB
2168+00 WB
2169+00 WB
2170+00 WB
2171+00 WB
2172+00 WB

2167+00 EB
2168+00 EB
2169+00 EB
2170+00 EB
2171+00 EB
2172+00 EB

WISCONSIN CENTRAL LTD

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 32	E

2

LEGEND

ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR

NOTE:
FINAL PLACEMENT OF CONCRETE SURFACE DRAIN MUST MAINTAIN THE MINIMUM POST SEPARATION DISTANCE IN SDD CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES.

N

SI

POST

SI

SI

ASPH

ASPH

REMOVING GUARDRAIL

STEEL THRIE BEAM

2181+00 WB

2182+00 WB

2183+00 WB

2184+00 WB

PT: 2184+89.99

2185+00 WB

2186+00 WB

STH 29

STEEL THRIE BEAM BULLNOSE TERMINAL

SI

CG

CSD

2181+00 EB

2182+00 EB

2183+00 EB

2184+00 EB

2185+00 EB

2186+00 EB

ASPH

+53.80

+91.30

+16.29 EB
POST 12

ASPH

+53.78 EB
POST 5

+65.83 EB
POST 1

STH 29

MODIFIED THRIE BEAM TRANSITION SEE SDD
STEEL THRIE BEAM BULL NOSE TERMINAL,
PAID AS MGS THRIE BEAM TRANSITION

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 33 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\021010_CD - BG DETAILS.DWG
LAYOUT NAME - 021012-cd

PLOT DATE : 11/18/2025 2:37 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR

SIGN SIGN SIGN SIGN SIGN SIGN SIGN SIGN SIGN SIGN SIGN

MH MH

STRUCTURE B-10-0178

N

POST POST POST

ASPH ASPH ASPH ASPH ASPH ASPH ASPH

STH 29 STH 29 STH 29 STH 29

2214+00 WB 2215+00 WB 2216+00 WB 2217+00 WB 2218+00 WB 2219+00 WB

PT: 2213+99.75

REMOVING GUARDRAIL

STEEL THRIE BEAM

STEEL THRIE BEAM BULLNOSE TERMINAL

STEEL THRIE BEAM BULLNOSE TERMINAL

SI SI

+46.08 EB POST 1 | +58.29 EB POST 5 | +95.81 EB POST 12 | +95.81 EB POST 12 | +33.31 EB POST 5 | +45.55 EB POST 1

2214+00 EB 2215+00 EB 2216+00 EB 2217+00 EB 2218+00 EB 2219+00 EB

PT: 2213+76.50

CARDINAL AVE

SIGN SIGN SIGN SIGN SIGN

2

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 34 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\021010_CD - BG DETAILS.DWG
LAYOUT NAME - 021013-cd
PLOT DATE : 11/18/2025 2:37 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR

N

POST
SIGN
SIGN
SIGN
RIPRAP
NORTH FORK POPPLE RIVER
XCEL ENERGY - ELECTRICITY
STRUCTURE B-10-185
STA 2262+86 WB - STA 2264+04 WB
STH 29
2258+00 WB
2259+00 WB
2260+00 WB
2261+00 WB
2262+00 WB
2263+00 WB
SI
+75.88
-8.00' LT
+00.86
-7.06' LT
+25.84
-6.12' LT
MGSE
ASPH
MGS
REMOVING GUARDRAIL
+53.96
-6.00' LT
+93.35
-6.62' LT
MGST
RIPRAP
POST
POST
2258+00 EB
2259+00 EB
2260+00 EB
2261+00 EB
2262+00 EB
2263+00 EB
STH 29
ASPH
MGSE
+26.02
36.00' RT
+51
35.06' RT
+75.98
34.12' RT
ASPH
MGS
REMOVING GUARDRAIL
+29.13
33.96' RT
+41.60
33.08' RT
RIPRAP
MGST
+93.49
33.09' RT
STRUCTURE B-10-149
STA 2262+91 WB - STA 2264+09 WB
SI
FO
POST

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 35	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\021010_CD - BG DETAILS.DWG
LAYOUT NAME - 021014-cd
PLOT DATE : 11/18/2025 2:37 PM
PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR

NOTE:
FINAL PLACEMENT OF CONCRETE SURFACE DRAIN MUST MAINTAIN THE MINIMUM POST SEPARATION DISTANCE IN SDD CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES.

N

XCEL ENERGY - ELECTRICITY

NORTH FORK POPPLE RIVER

RIPRAP

STRUCTURE B-10-185
STA 2262+86 WB - STA 2264+04 WB

MGST
CG
CSD
SI
MGS
ASPH
REMOVING GUARDRAIL
MGSE

+02.03
-34.00' LT

+19.50
-34.12' LT

+44.41
-35.08' LT

+69.31
-36.00' LT

STH 29

2264+00 WB
2265+00 WB
2266+00 WB
2267+00 WB
2268+00 WB
2269+00 WB

PC: 2266+03.92

+01.84
5.71' RT

+41.23
6.00' RT

+69.39
6.12' RT

+94.38
7.18' RT

+19.38
8.00' RT

PC: 2266+06.26

2264+00 EB
2265+00 EB
2266+00 EB
2267+00 EB
2268+00 EB
2269+00 EB

STH 29

STRUCTURE B-10-149
STA 2262+91 WB - STA 2264+09 WB

RIPRAP

SIGN

POST

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 36	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\021010_CD - BG DETAILS.DWG
LAYOUT NAME - 021015-cd
PLOT DATE : 11/18/2025 2:37 PM
PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR

N

STRUCTURE B-10-002

STH 29

2376+00 WB | 2377+00 WB | 2378+00 WB | 2379+00 WB | 2380+00 WB | 2381+00 WB

2376+00 EB | 2377+00 EB | 2378+00 EB | 2379+00 EB | 2380+00 EB | 2381+00 EB

SI

ASPH

MGSE

MGS

REMOVING GUARDRAIL

MGS2

+50.65 36.00' RT

+75.63 34.94' RT

+00.61 34.00' RT

+28.73 34.00' RT

XCEL ENERGY - ELECTRICITY

POST

SIGN

PE GRVL

INL

OH

W

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 37	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\021010_CD - BG DETAILS.DWG
LAYOUT NAME - 021016-cd
PLOT DATE : 11/18/2025 2:37 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR

N

WE ENERGIES GAS

VILLAGE OF CURTISS WATER

CTH E

POST

SIGN

STH 29

2479+00 WB | 2480+00 WB | 2481+00 WB | 2482+00 WB | 2483+00 WB | 2484+00 WB

MGS2 +48.08 12.00' RT

REMOVING GUARDRAIL

MGS

SI

ASPH

+76.87 12.00' RT

+01.85 12.94' RT

+26.83 14.00' RT

MGSE

CAUTION

STRUCTURE B-10-179

+08.33 -14.00' LT

+33.31 -13.06' LT

+58.29 -12.00' LT

+86.42 12.00' LT

2479+00 EB | 2480+00 EB | 2481+00 EB | 2482+00 EB | 2483+00 EB | 2484+00 EB

XCEL ENERGY - ELECTRICITY

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 38 E

2

2

LEGEND

ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR

N

POST

SI

POST

STRUCTURE C-10-003

W

POST

STH 29

2540+00 WB

2541+00 WB

2542+00 WB

2543+00 WB

2544+00 WB

2545+00 WB

POST

INL

ASPH

2540+00 EB

2541+00 EB

2542+00 EB

2543+00 EB

2544+00 EB

2545+00 EB

STH 29

ASPH

MGSE

POST

+69.58
36.00' RT

+94.56
34.94' RT

+19.54
34.00' RT

MGS

SIGN

REMOVING GUARDRAIL

ASPH

W

MGS2

+47.66
34.00' RT

SI

POST

POST

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 39 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\021010_CD - BG DETAILS.DWG
LAYOUT NAME - 021018-cd

PLOT DATE : 11/18/2025 2:38 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR

N

DILL CREEK

STRUCTURE B-10-176
STA 2643+56 WB - STA 2644+24 WB

POST

RIPRAP

STH 29

2639+00 WB | 2640+00 WB | 2641+00 WB | 2642+00 WB | 2643+00 WB | 2644+00 WB

MGST +05.87 -33.50' LT

CG +45.26 -34.00' LT

RIPRAP

CG +25.13 5.75' RT

MGST +64.52 6.00' RT

MGSE +75.46 -8.00' LT

+00.45 -7.18' LT

+25.43 -6.12' LT

SI

REMOVING GUARDRAIL

MGS

ASPH +28.56 -6.00' LT

+41.05 -6.79' LT

MGST +92.84 -6.98' LT

RIPRAP

2639+00 EB | 2640+00 EB | 2641+00 EB | 2642+00 EB | 2643+00 EB | 2644+00 EB

STH 29

ASPH

MGSE +44.58 36.00' RT

+69.56 35.18' RT

+94.55 34.17' RT

REMOVING GUARDRAIL

MGS

ASPH

+35.19 34.00' RT

MGST +12.04 32.91' RT

+60.15 32.59' RT

SI

RIPRAP

STRUCTURE B-10-017
STA 2643+94 EB - STA 2644+48 EB

POST

POST

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 40 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\021010_CD - BG DETAILS.DWG
LAYOUT NAME - 021019-cd

PLOT DATE : 11/18/2025 2:38 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR

N

DILL CREEK

STRUCTURE B-10-176
STA 2643+56 WB - STA 2644+24 WB

+05.87 -33.50' LT
+45.26 -34.00' LT
+23.38 -34.12' LT
+48.37 -35.06' LT
+73.35 -36.00' LT

MGST CG CSD ASPH SI MGS MGSE

POST SIGN

STH 29

2644+00 WB 2645+00 WB 2646+00 WB 2647+00 WB 2648+00 WB 2649+00 WB

RIPRAP

+28.56 -6.00' LT
+41.05 -6.79' LT
+92.84 -6.98' LT
+25.13 5.75' RT
+64.52 6.00' RT
+89.52 6.00' RT
+17.63 7.06' RT
+42.61 8.00' RT

2644+00 EB 2645+00 EB 2646+00 EB 2647+00 EB 2648+00 EB 2649+00 EB

+35.19 34.00' RT
+60.15 32.59' RT
+12.04 32.91' RT

STRUCTURE B-10-017
STA 2643+94 EB - STA 2644+48 EB

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 41 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\021010_CD - BG DETAILS.DWG
LAYOUT NAME - 021020-cd
PLOT DATE : 11/18/2025 2:38 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR

N

STRUCTURE B-10-151
STA 103+01 H - STA 105+40 H

105+00 H

WE ENERGIES GAS

STH 29

FRONTIER COMMUNICATIONS OF WI LLC, COMMUNICATIONS

2732+00 WB
2733+00 WB
2734+00 WB
2735+00 WB
2736+00 WB
2737+00 WB
2738+00 W

CAUTION

REMOVING GUARDRAIL

SI

FRONTIER COMMUNICATIONS
OF WI LLC, COMMUNICATIONS

STEEL THRIE BEAM

STEEL THRIE BEAM BULLNOSE TERMINAL

STEEL THRIE BEAM BULLNOSE TERMINAL

+77.75 EB POST 1
+89.87 EB POST 5
+27.15 EB POST 12
101.71 EB POST 12
+38.98 EB POST 5
+51.08 EB POST 1

104+00 H

TDS TELECOM
- COMMUNICATIONS

SI

2732+00 EB
2733+00 EB
2734+00 EB
2735+00 EB
2736+00 EB
2737+00 EB

STH 29

STH 29

CAUTION

WE ENERGIES GAS

103+00 H

HI LINE AVE

XCEL ENERGY - ELECTRICITY

POST
RIPRAP
SIGN

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 42 E

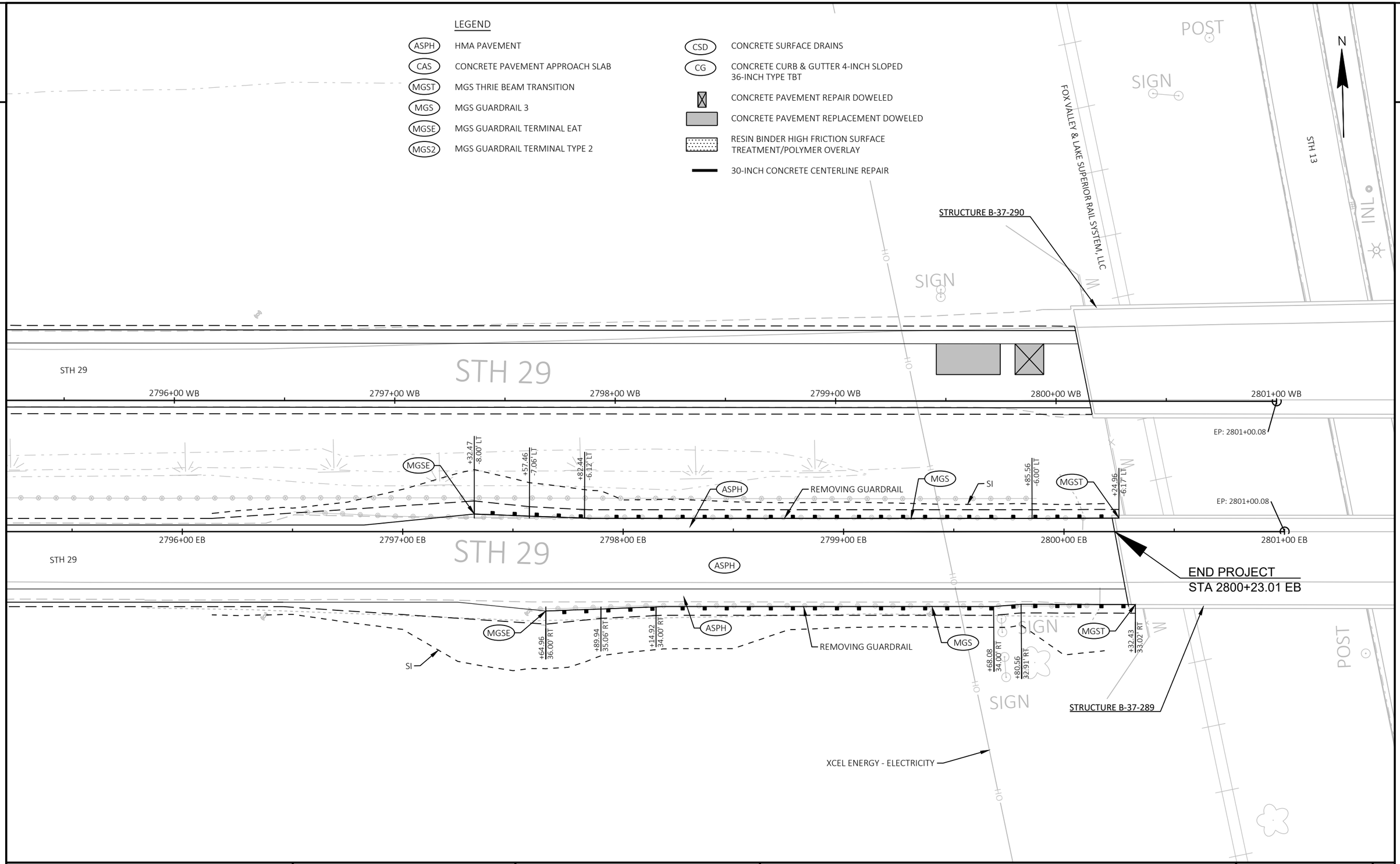
FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\021010_CD - BG DETAILS.DWG
LAYOUT NAME - 021021-cd

PLOT DATE : 11/18/2025 2:38 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

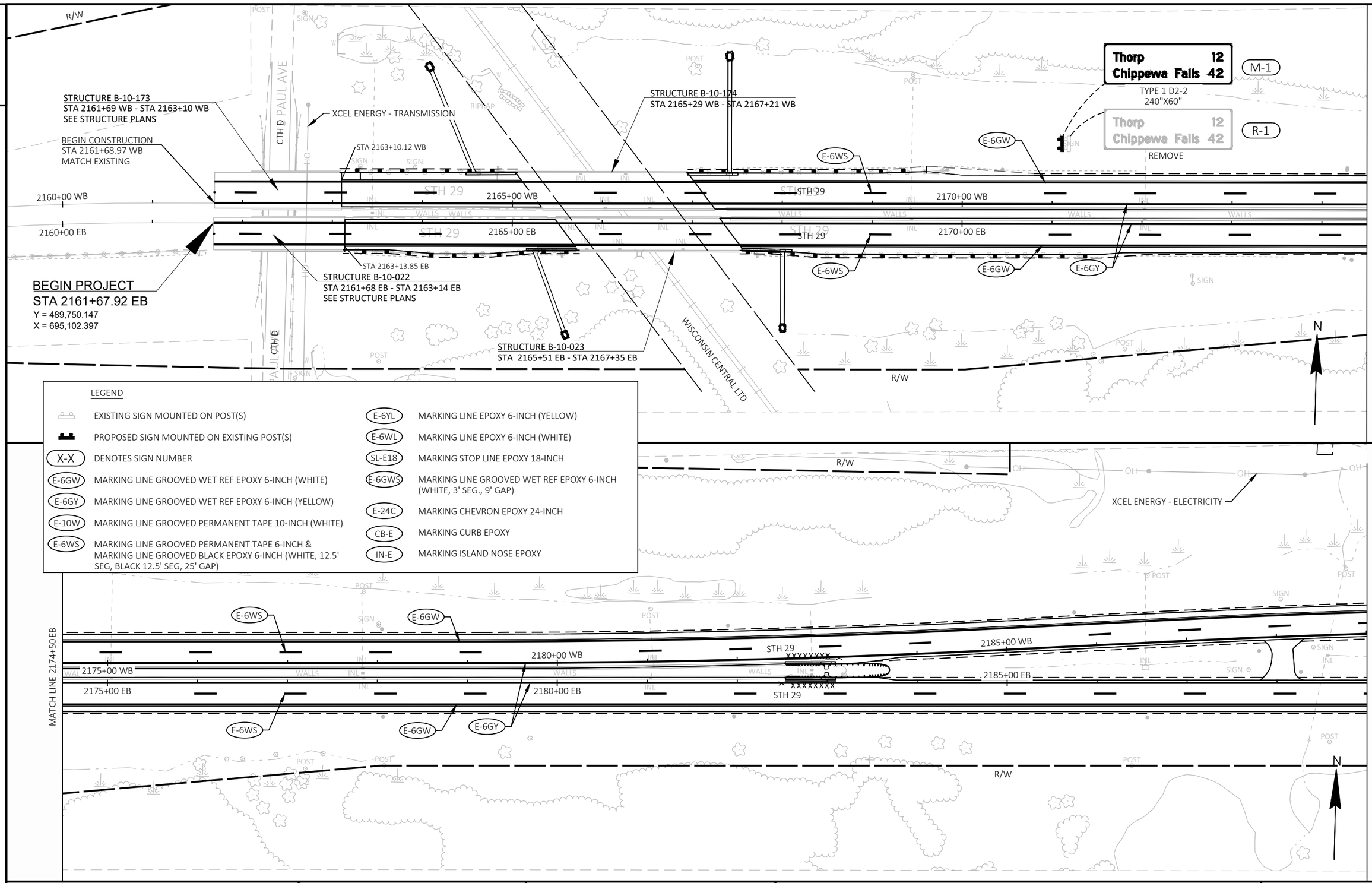
ASPH	HMA PAVEMENT
CAS	CONCRETE PAVEMENT APPROACH SLAB
MGST	MGS THRIE BEAM TRANSITION
MGS	MGS GUARDRAIL 3
MGSE	MGS GUARDRAIL TERMINAL EAT
MGS2	MGS GUARDRAIL TERMINAL TYPE 2
CSD	CONCRETE SURFACE DRAINS
CG	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT
	CONCRETE PAVEMENT REPAIR DOWELED
	CONCRETE PAVEMENT REPLACEMENT DOWELED
	RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
	30-INCH CONCRETE CENTERLINE REPAIR



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CONSTRUCTION DETAIL - GUARDRAIL	SHEET 43	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\021010_CD - BG DETAILS.DWG
LAYOUT NAME - 021022-cd

PLOT DATE : 11/18/2025 2:38 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:40 FT



LEGEND

EXISTING SIGN MOUNTED ON POST(S)	E-6YL — MARKING LINE EPOXY 6-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON EXISTING POST(S)	E-6WL — MARKING LINE EPOXY 6-INCH (WHITE)
X-X — DENOTES SIGN NUMBER	SL-E18 — MARKING STOP LINE EPOXY 18-INCH
E-6GW — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	E-6GWS — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-6GY — MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	E-24C — MARKING CHEVRON EPOXY 24-INCH
E-10W — MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)	CB-E — MARKING CURB EPOXY
E-6WS — MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)	IN-E — MARKING ISLAND NOSE EPOXY

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 44	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS.DWG
LAYOUT NAME - 023201-ps
PLOT DATE : 11/18/2025 2:39 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

MATCH LINE 2189+00 EB

MATCH LINE 2203+50 EB

CH X

CTH X

N

E-6WS

E-6GW

E-6GWS

E-10W

E-6GY

2190+00 WB

2195+00 WB

2200+00 WB

2190+00 EB

2195+00 EB

2200+00 EB

STH 29

R/W

M-3
E4-1A
108"X30"

R-3

EXIT 122

X
Owen

R-4

M-4

REMOVE

TYPE 1 E1-5P
156"X90"

LEGEND

EXISTING SIGN MOUNTED ON POST(S)	E-6YL — MARKING LINE EPOXY 6-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON EXISTING POST(S)	E-6WL — MARKING LINE EPOXY 6-INCH (WHITE)
X-X — DENOTES SIGN NUMBER	SL-E18 — MARKING STOP LINE EPOXY 18-INCH
E-6GW — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	E-6GWS — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-6GY — MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	E-24C — MARKING CHEVRON EPOXY 24-INCH
E-10W — MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)	CB-E — MARKING CURB EPOXY
E-6WS — MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)	IN-E — MARKING ISLAND NOSE EPOXY

MATCHLINE STA 2211+00 LB

MATCHLINE STA 2211+00 LC

RAMP LB

RAMP LC

2205+00 WB

2210+00 WB

2215+00 WB

2205+00 EB

2210+00 EB

2215+00 EB

2205+00 LC

2210+00 LC

STRUCTURE B-10-178

CITY OF OWEN WASTEWATER TREATMENT FACILITY

OWEN MUN WATER UTILITY

XCEL ENERGY - ELECTRICITY

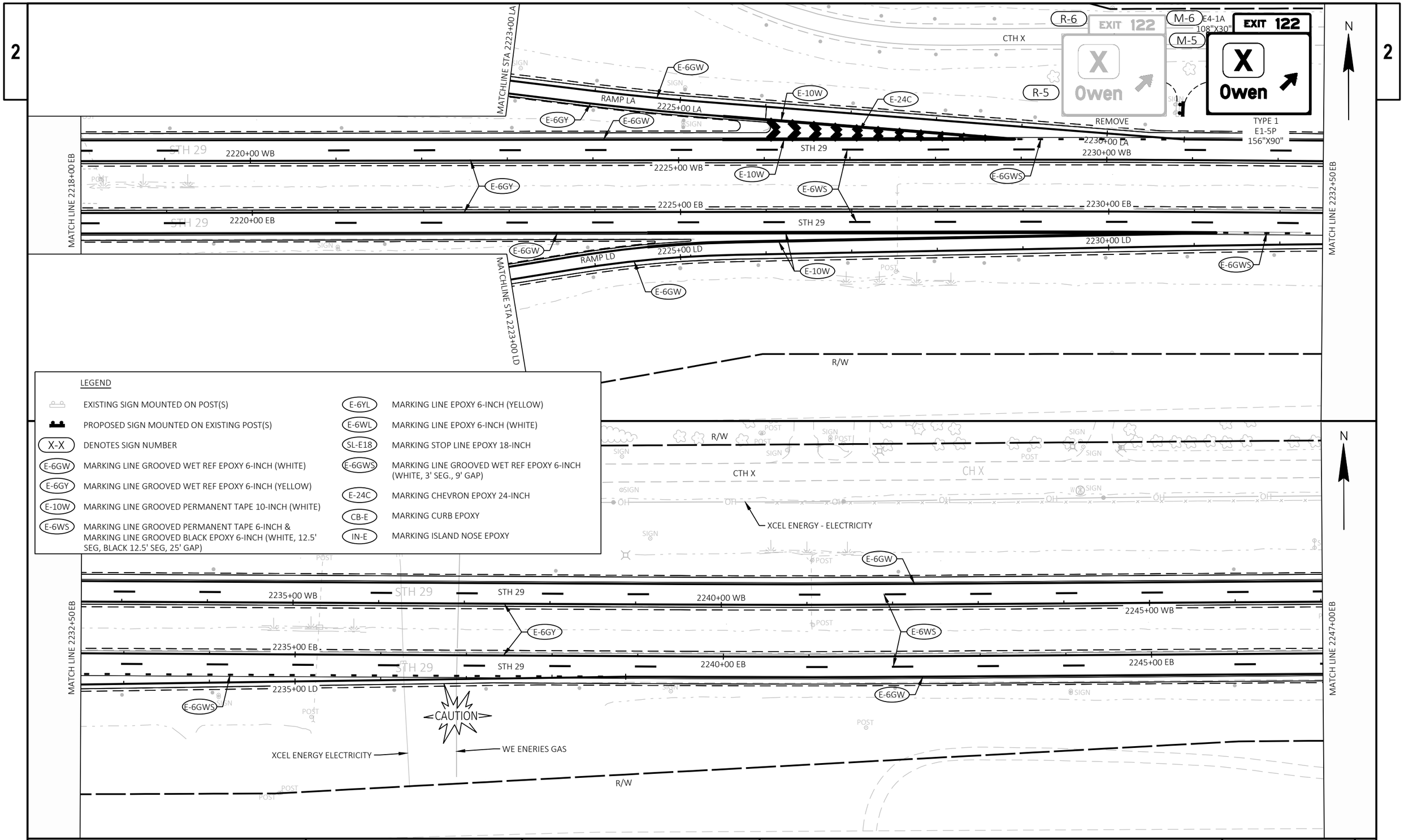
CARDINAL AVE

100+00

MATCH LINE 2218+00 EB

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 45	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS.DWG
LAYOUT NAME - 023202-ps
PLOT DATE : 11/18/2025 2:39 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 46	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS.DWG
LAYOUT NAME - 023203-ps
PLOT DATE : 11/18/2025 2:39 PM
PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

2

2

MATCH LINE 2247+00 EB

MATCH LINE 2261+50 EB

MATCH LINE 2261+50 EB

MATCH LINE 2276+00 EB

CTH X

CH X

R/W

XCEL ENERGY - ELECTRICITY

E-6GW

E-6GY

E-6WS

STH 29

2250+00 WB

2255+00 WB

2260+00 WB

2250+00 EB

2255+00 EB

2260+00 EB

2265+00 WB

2270+00 WB

2275+00 WB

2265+00 EB

2270+00 EB

2275+00 EB

N

LEGEND

EXISTING SIGN MOUNTED ON POST(S)	E-6YL — MARKING LINE EPOXY 6-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON EXISTING POST(S)	E-6WL — MARKING LINE EPOXY 6-INCH (WHITE)
X-X — DENOTES SIGN NUMBER	SL-E18 — MARKING STOP LINE EPOXY 18-INCH
E-6GW — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	E-6GWS — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-6GY — MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	E-24C — MARKING CHEVRON EPOXY 24-INCH
E-10W — MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)	CB-E — MARKING CURB EPOXY
E-6WS — MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)	IN-E — MARKING ISLAND NOSE EPOXY

NORTH FORK POPPLE RIVER

STRUCTURE B-10-175
STA 2262+86 WB - STA 2264+04 WB

STRUCTURE B-10-149
STA 2262+91 EB - STA 2264+09 EB

M-8

Curtiss 4
Wausau 44
Green Bay 137

TYPE 1
D2-3
192"X84"

R-8

Curtiss 4
Wausau 44
Green Bay 137

REMOVE

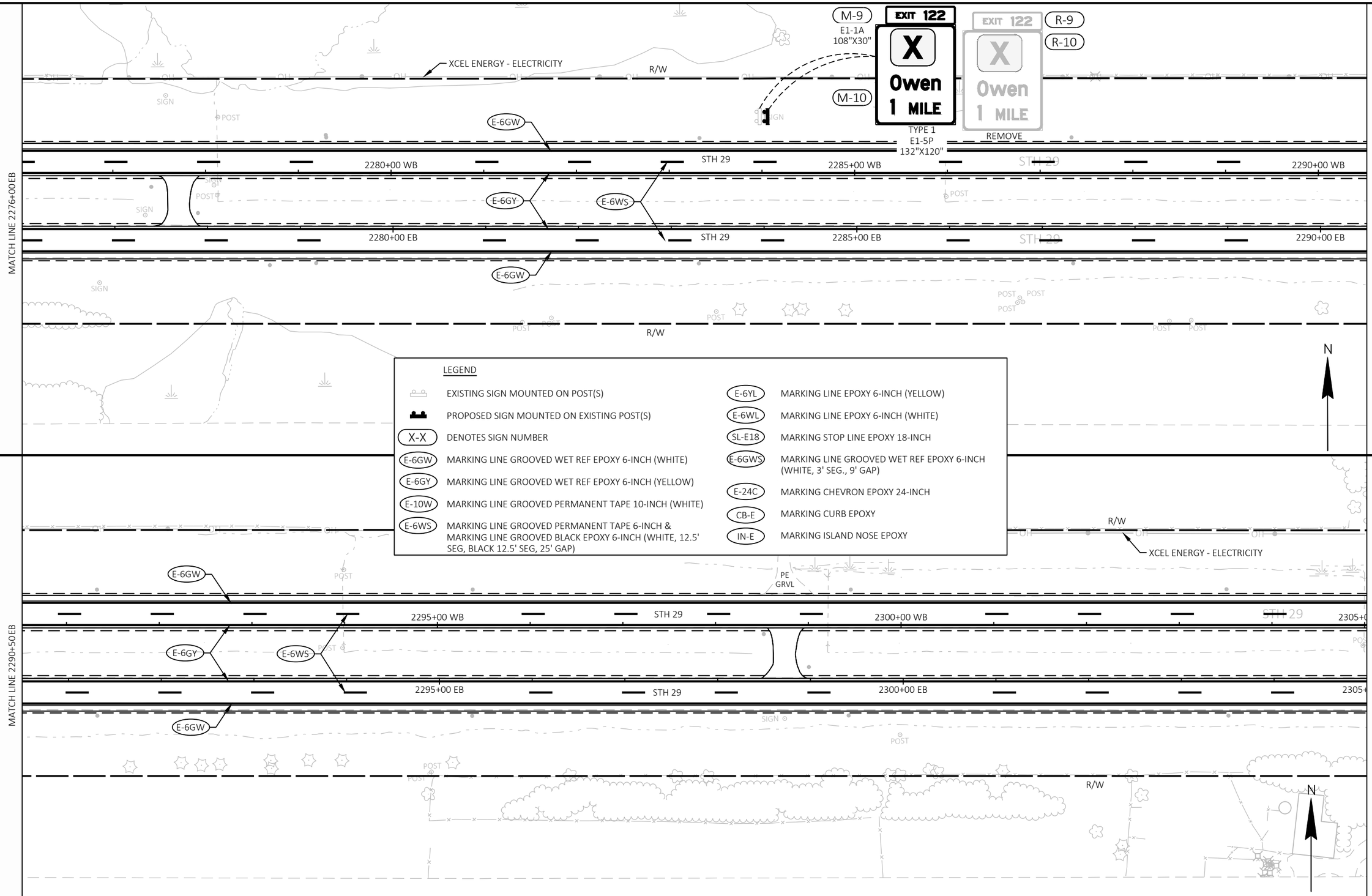
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 47	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS.DWG
LAYOUT NAME - 023204-ps

PLOT DATE : 11/18/2025 2:39 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

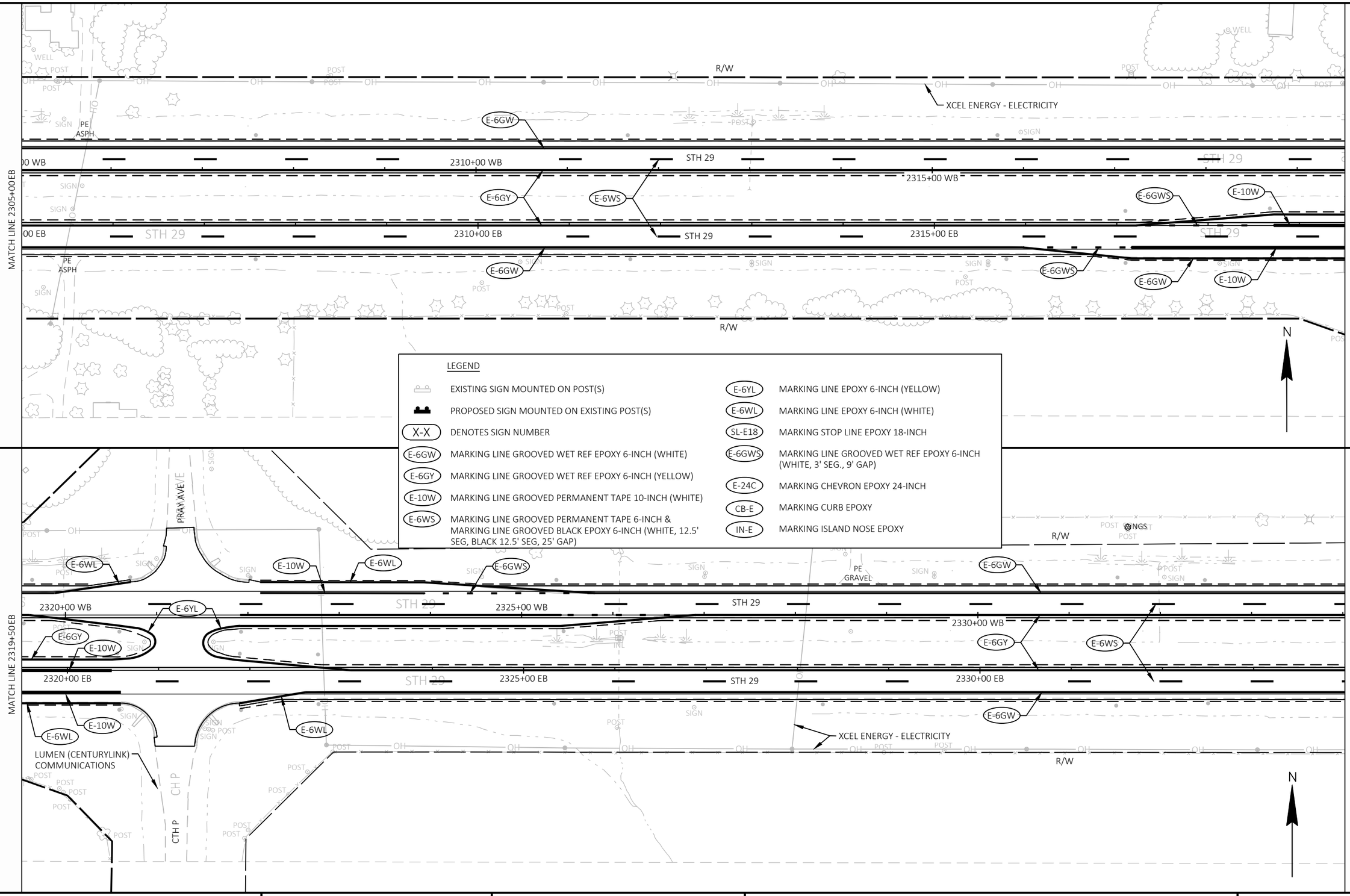
WISDOT/CADDS SHEET 44

2



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 48	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS.DWG
LAYOUT NAME - 023205-ps
PLOT DATE : 11/18/2025 2:40 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



LEGEND

EXISTING SIGN MOUNTED ON POST(S)	
PROPOSED SIGN MOUNTED ON EXISTING POST(S)	
X-X	DENOTES SIGN NUMBER
E-6GW	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
E-6GY	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
E-10W	MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)
E-6WS	MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)
E-6YL	MARKING LINE EPOXY 6-INCH (YELLOW)
E-6WL	MARKING LINE EPOXY 6-INCH (WHITE)
SL-E18	MARKING STOP LINE EPOXY 18-INCH
E-6GWS	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-24C	MARKING CHEVRON EPOXY 24-INCH
CB-E	MARKING CURB EPOXY
IN-E	MARKING ISLAND NOSE EPOXY

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 49	E

2

2

N

MATCH LINE 2334+00 EB

MATCH LINE 2348+50 EB

R/W

XCEL ENERGY - ELECTRICITY

E-6GW

E-6GY

E-6WS

STH 29

2335+00 WB

2340+00 WB

2345+00 WB

2335+00 EB

2340+00 EB

2345+00 EB

PE GRVL

POST

SIGN

OH

INL

LEGEND

	EXISTING SIGN MOUNTED ON POST(S)	E-6YL	MARKING LINE EPOXY 6-INCH (YELLOW)
	PROPOSED SIGN MOUNTED ON EXISTING POST(S)	E-6WL	MARKING LINE EPOXY 6-INCH (WHITE)
X-X	DENOTES SIGN NUMBER	SL-E18	MARKING STOP LINE EPOXY 18-INCH
E-6GW	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	E-6GWS	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-6GY	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	E-24C	MARKING CHEVRON EPOXY 24-INCH
E-10W	MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)	CB-E	MARKING CURB EPOXY
E-6WS	MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)	IN-E	MARKING ISLAND NOSE EPOXY

N

MATCH LINE 2348+50 EB

MATCH LINE 2363+00 EB

R/W

XCEL ENERGY - ELECTRICITY

E-6GW

E-6GY

E-6WS

STH 29

2350+00 WB

2355+00 WB

2360+00 WB

2350+00 EB

2355+00 EB

2360+00 EB

PE ASPH

POST

SIGN

OH

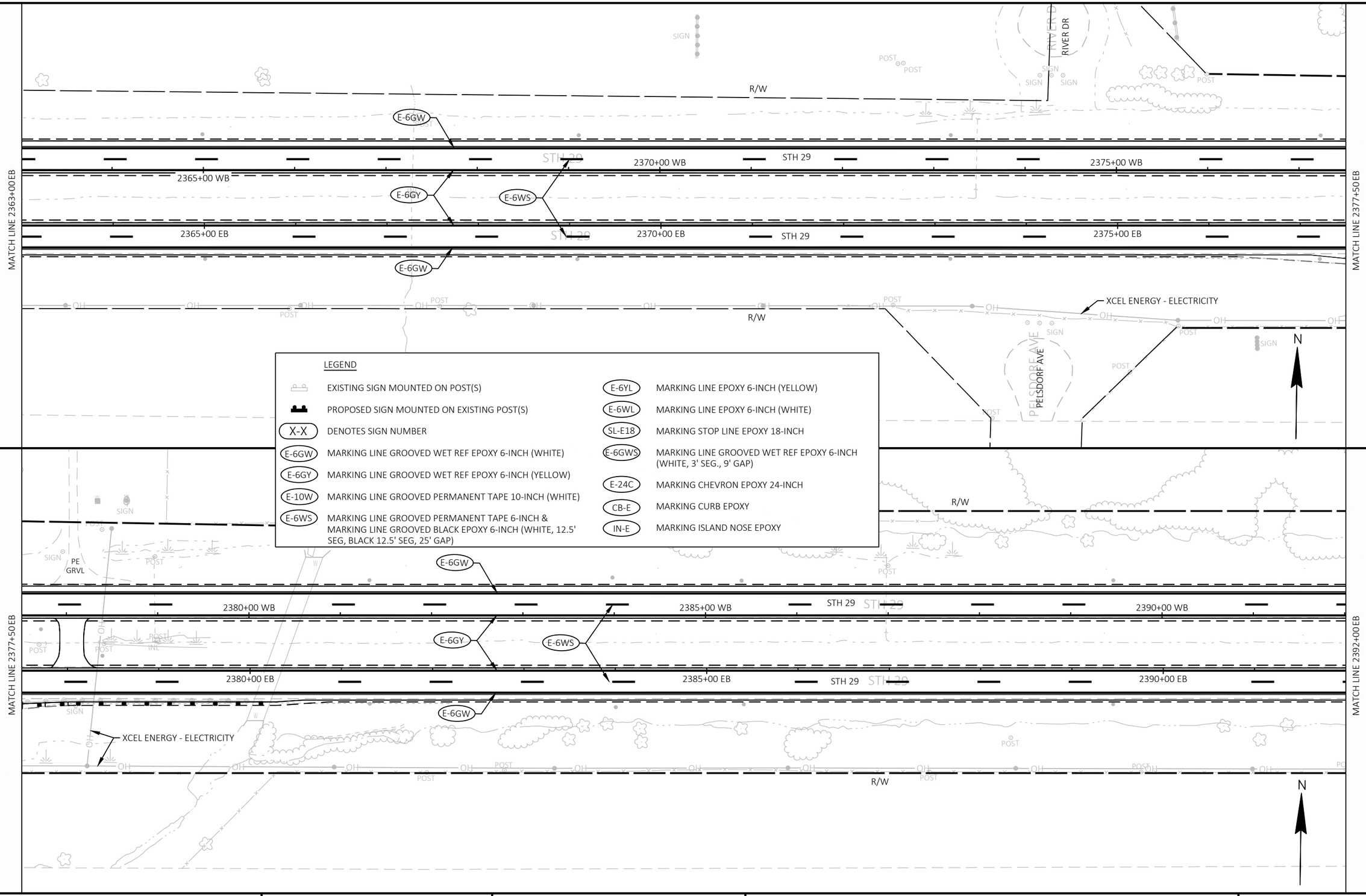
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 50 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS.DWG
LAYOUT NAME - 023207-ps

PLOT DATE : 11/18/2025 2:40 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

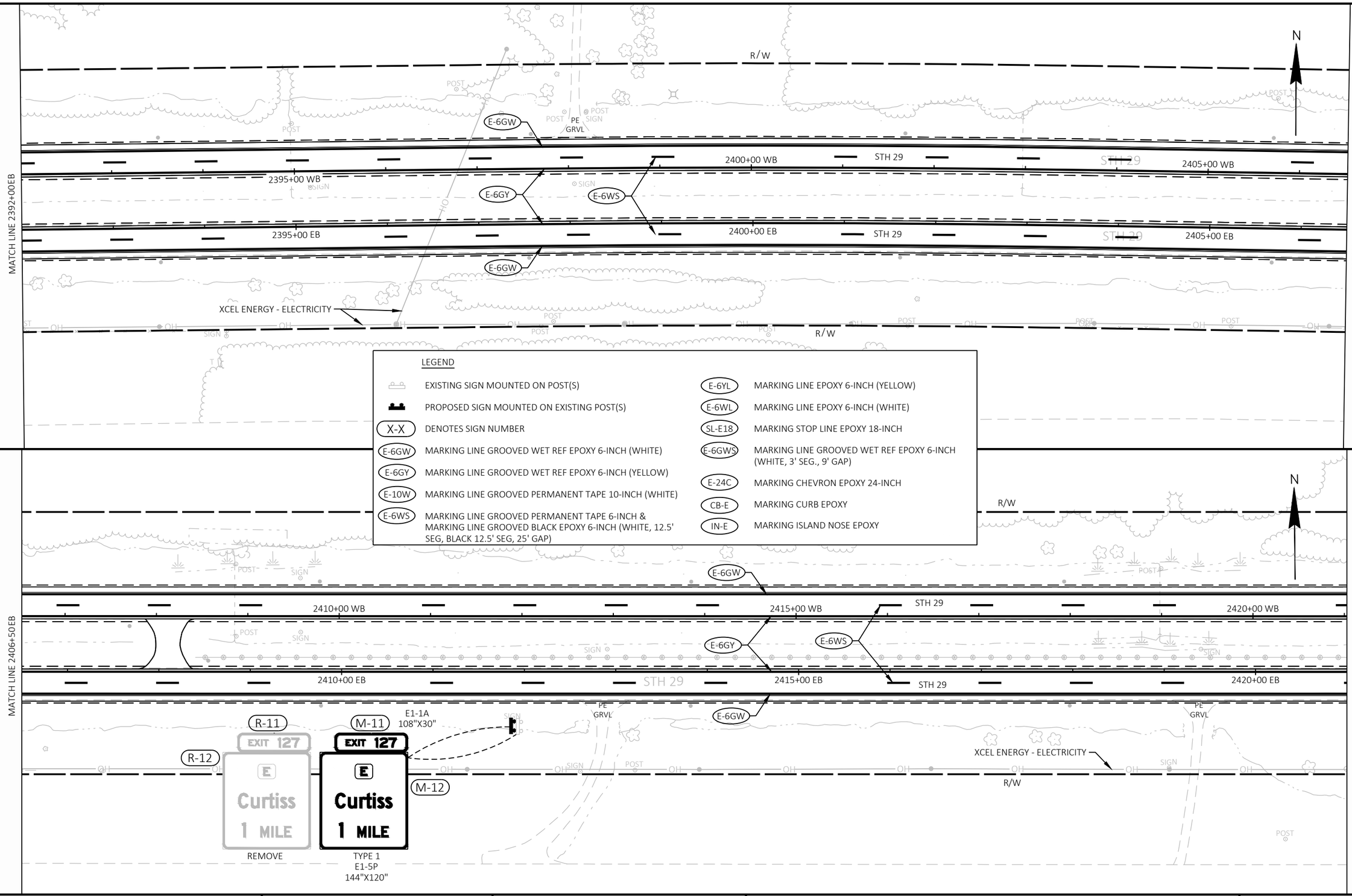


LEGEND

EXISTING SIGN MOUNTED ON POST(S)	E-6YL — MARKING LINE EPOXY 6-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON EXISTING POST(S)	E-6WL — MARKING LINE EPOXY 6-INCH (WHITE)
X-X — DENOTES SIGN NUMBER	SL-E18 — MARKING STOP LINE EPOXY 18-INCH
E-6GW — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	E-6GWS — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-6GY — MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	E-24C — MARKING CHEVRON EPOXY 24-INCH
E-10W — MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)	CB-E — MARKING CURB EPOXY
E-6WS — MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)	IN-E — MARKING ISLAND NOSE EPOXY

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 51	E

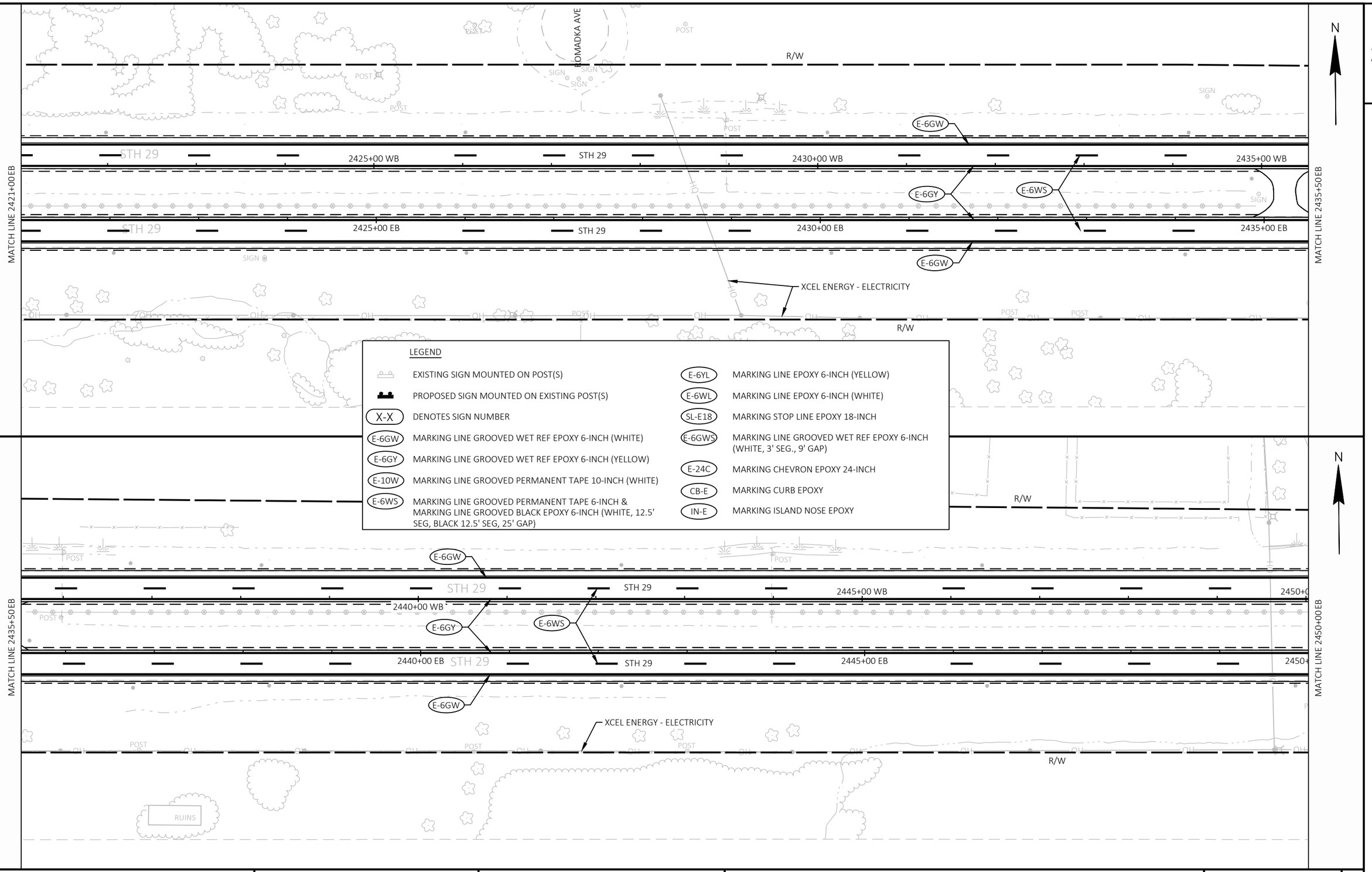
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LAYOUT NAME - 023208-ps
PLOT DATE : 11/18/2025 2:41 PM
PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON EXISTING POST(S)
X-X	DENOTES SIGN NUMBER
E-6GW	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
E-6GY	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
E-10W	MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)
E-6WS	MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)
E-6YL	MARKING LINE EPOXY 6-INCH (YELLOW)
E-6WL	MARKING LINE EPOXY 6-INCH (WHITE)
SL-E18	MARKING STOP LINE EPOXY 18-INCH
E-6GWS	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-24C	MARKING CHEVRON EPOXY 24-INCH
CB-E	MARKING CURB EPOXY
IN-E	MARKING ISLAND NOSE EPOXY

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 52	E



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 53	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS.DWG
LAYOUT NAME - 023210-ps
PLOT DATE : 11/18/2025 2:42 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

MATCH LINE 2450+00 EB

MATCH LINE 2464+50 EB

R/W

POST

SIGN

E-6GWS

E-6GW

2460+00 EF

STH 29

2460+00 WB

2455+00 WB

E-6WS

E-6GY

2460+00 EB

2455+00 EB

XCEL ENERGY - ELECTRICITY

OH

LEGEND

EXISTING SIGN MOUNTED ON POST(S)	E-6YL — MARKING LINE EPOXY 6-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON EXISTING POST(S)	E-6WL — MARKING LINE EPOXY 6-INCH (WHITE)
X-X — DENOTES SIGN NUMBER	SL-E18 — MARKING STOP LINE EPOXY 18-INCH
E-6GW — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	E-6GWS — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-6GY — MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	E-24C — MARKING CHEVRON EPOXY 24-INCH
E-10W — MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)	CB-E — MARKING CURB EPOXY
E-6WS — MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)	IN-E — MARKING ISLAND NOSE EPOXY

E-6GY

MATCHLINE STA 2474+00 B

RAMP EF

2465+00 EF

2470+00 WB

2475+00 WB

2465+00 WB

E-10W

E-6WS

E-6GY

E-6GW

MATCH LINE 2479+00 EB

2465+00 EB

2470+00 EB

2475+00 EB

RAMP EC

2470+00 EC

E-6GWS

M-13

E1-1A
108"X30"

R-13

EXIT 127

M-14

E

Curtiss

TYPE 1
E1-5P
180"X84"

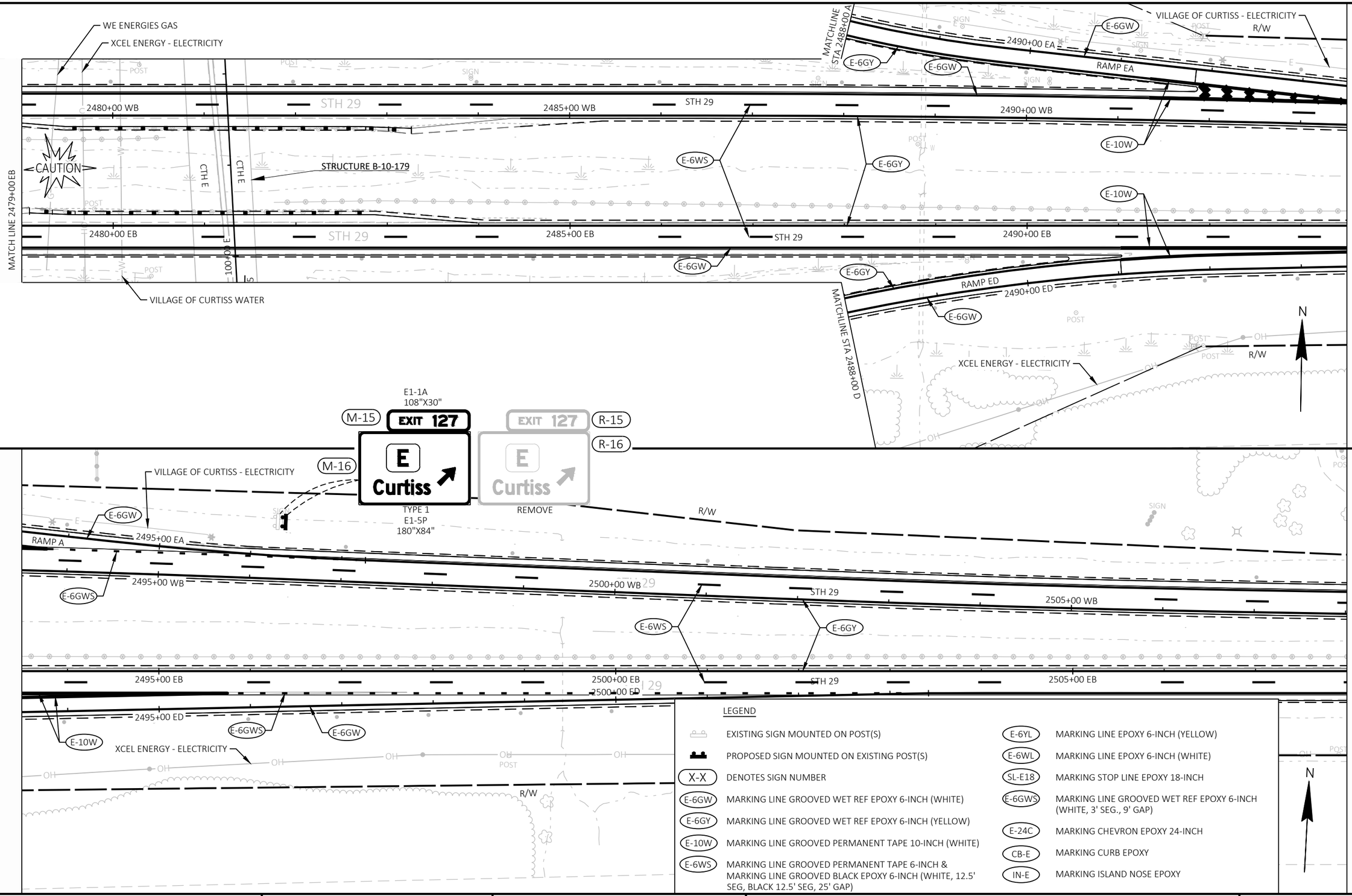
REMOVE

R-14

MATCHLINE STA 2474+00 C

R/W

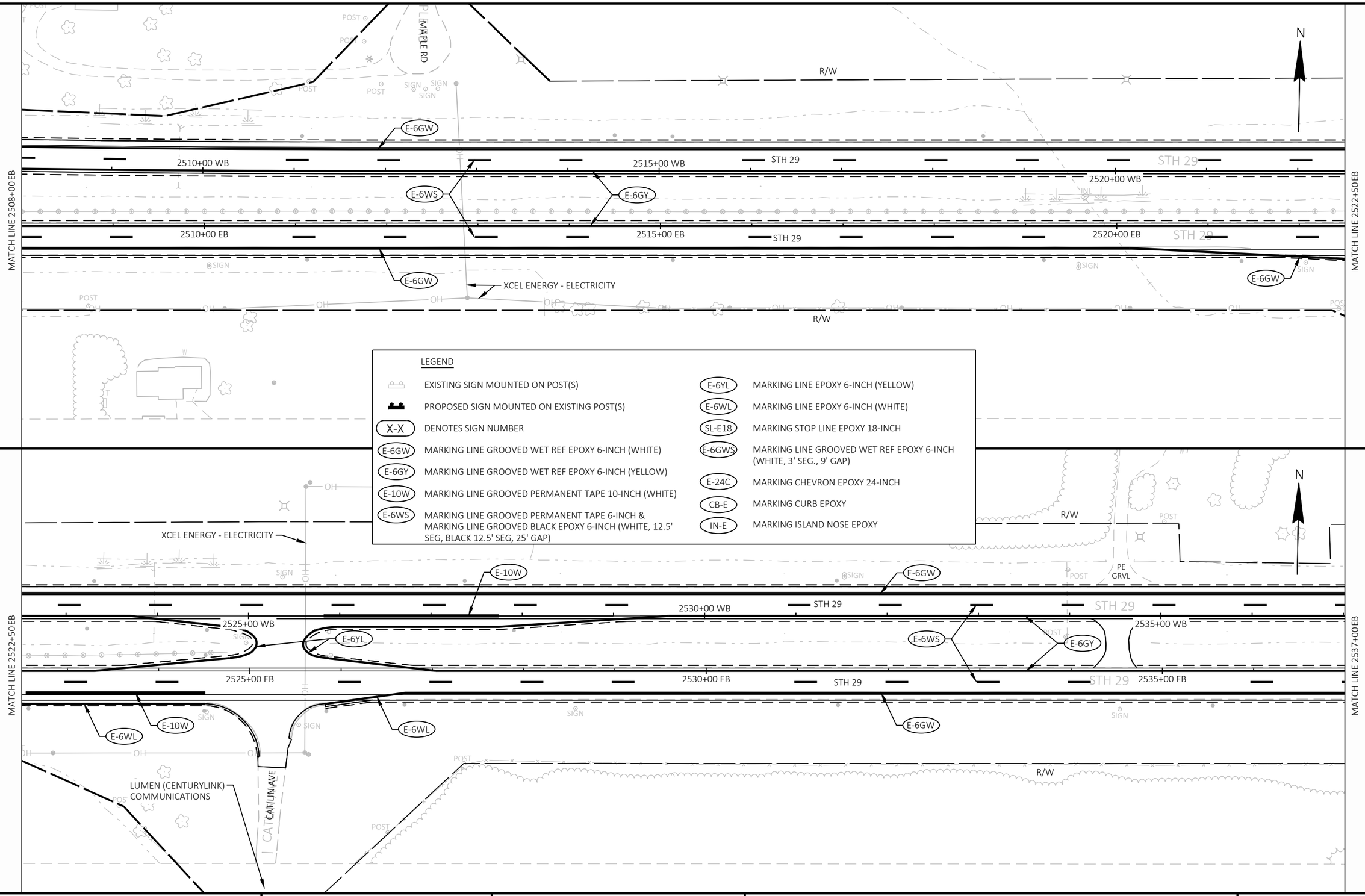
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 54	E



LEGEND

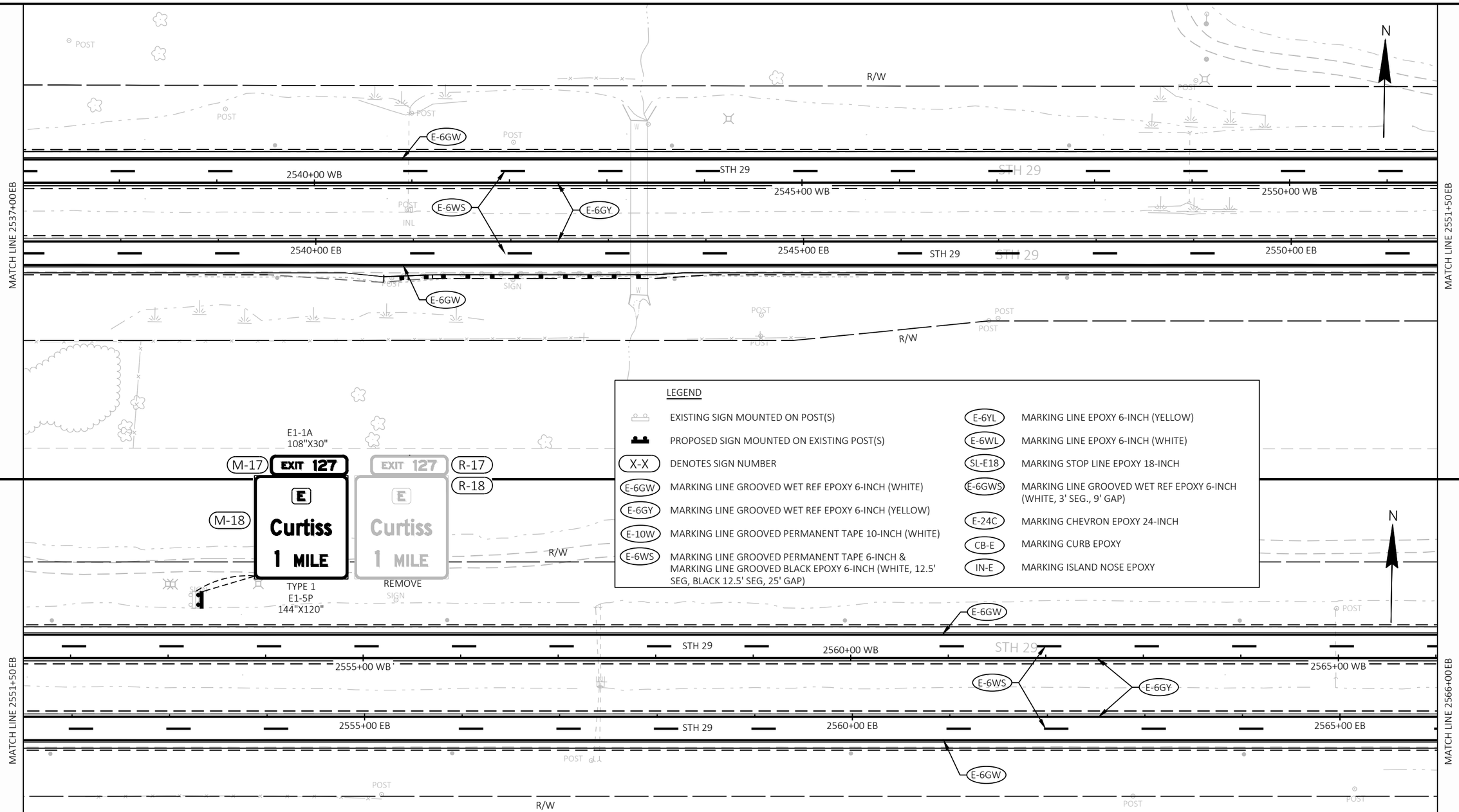
	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON EXISTING POST(S)
X-X	DENOTES SIGN NUMBER
E-6GW	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
E-6GY	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
E-10W	MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)
E-6WS	MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)
E-6YL	MARKING LINE EPOXY 6-INCH (YELLOW)
E-6WL	MARKING LINE EPOXY 6-INCH (WHITE)
SL-E18	MARKING STOP LINE EPOXY 18-INCH
E-6GWS	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-24C	MARKING CHEVRON EPOXY 24-INCH
CB-E	MARKING CURB EPOXY
IN-E	MARKING ISLAND NOSE EPOXY

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 55	E



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 56	E

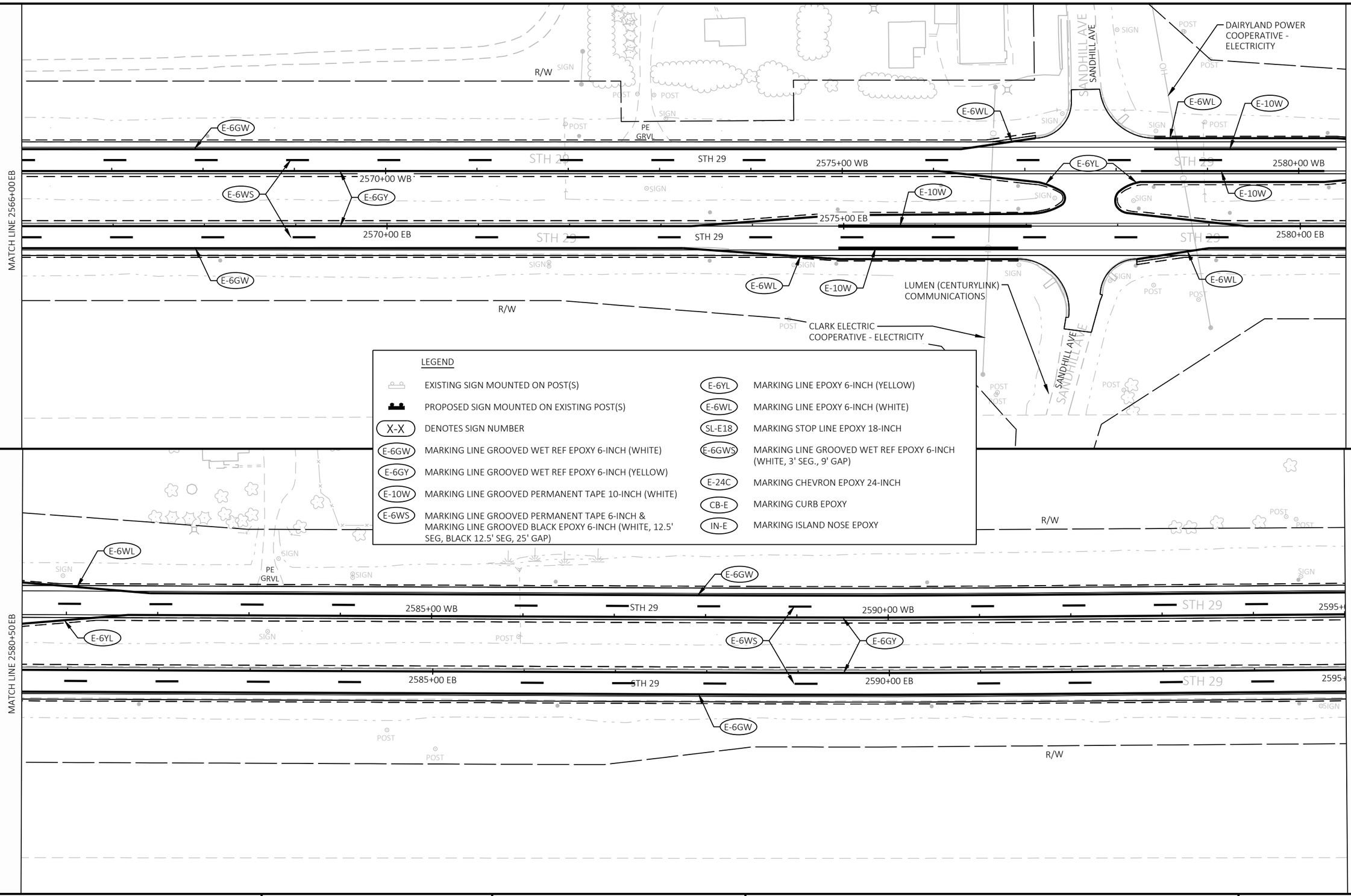
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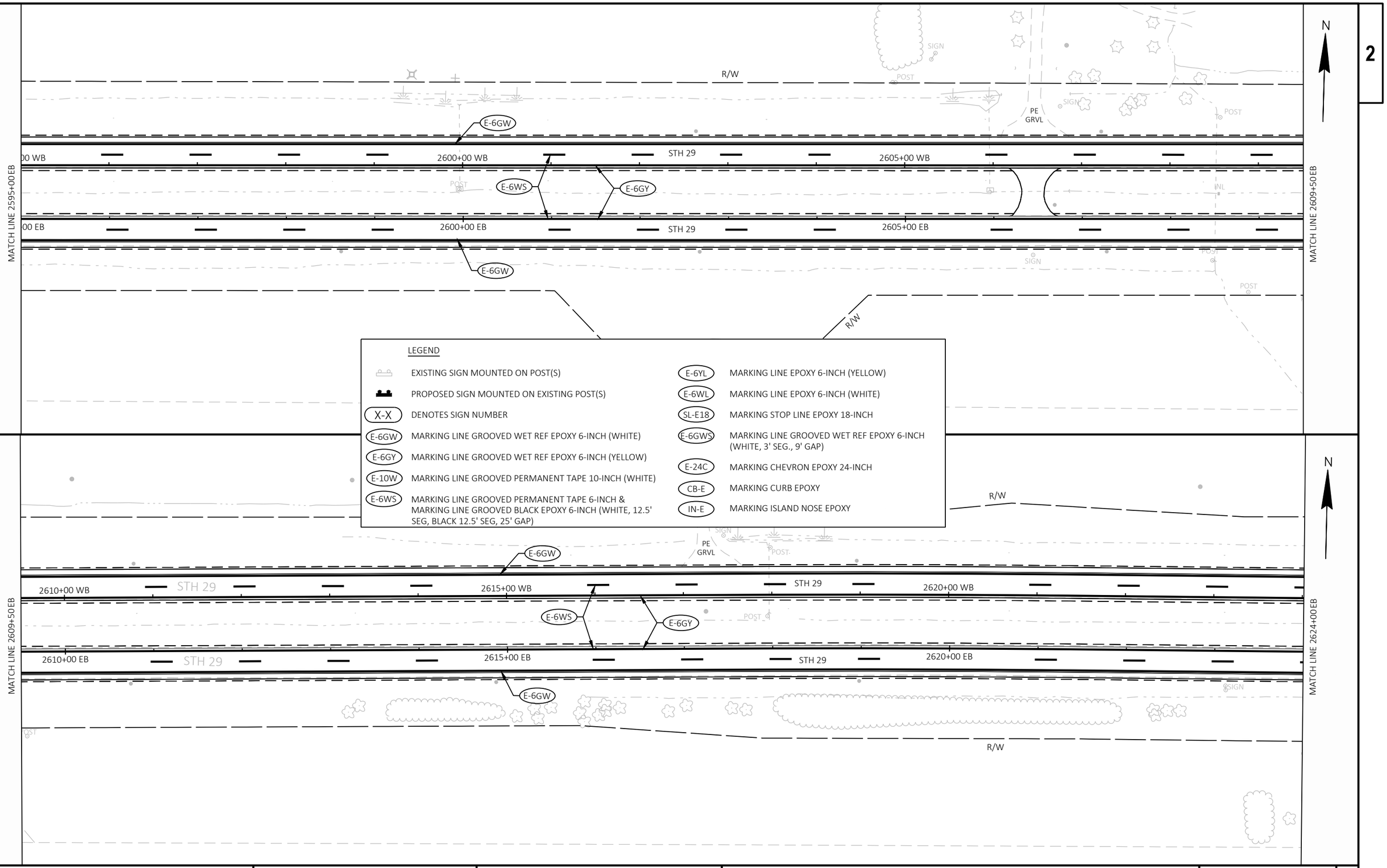
LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON EXISTING POST(S)
X-X	DENOTES SIGN NUMBER
E-6GW	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
E-6GY	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
E-10W	MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)
E-6WS	MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)
E-6YL	MARKING LINE EPOXY 6-INCH (YELLOW)
E-6WL	MARKING LINE EPOXY 6-INCH (WHITE)
SL-E18	MARKING STOP LINE EPOXY 18-INCH
E-6GWS	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-24C	MARKING CHEVRON EPOXY 24-INCH
CB-E	MARKING CURB EPOXY
IN-E	MARKING ISLAND NOSE EPOXY

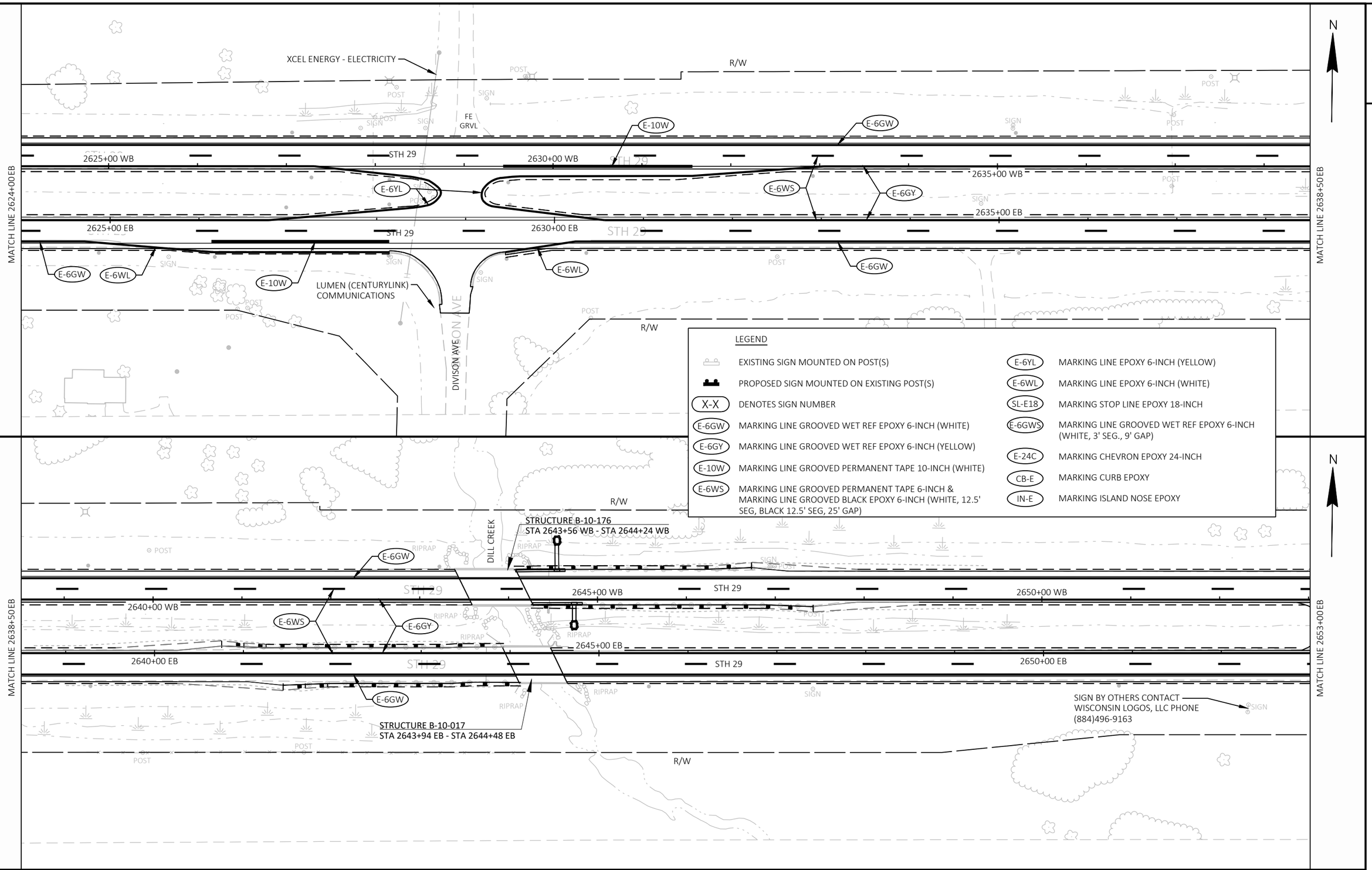
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 57 E



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 58	E



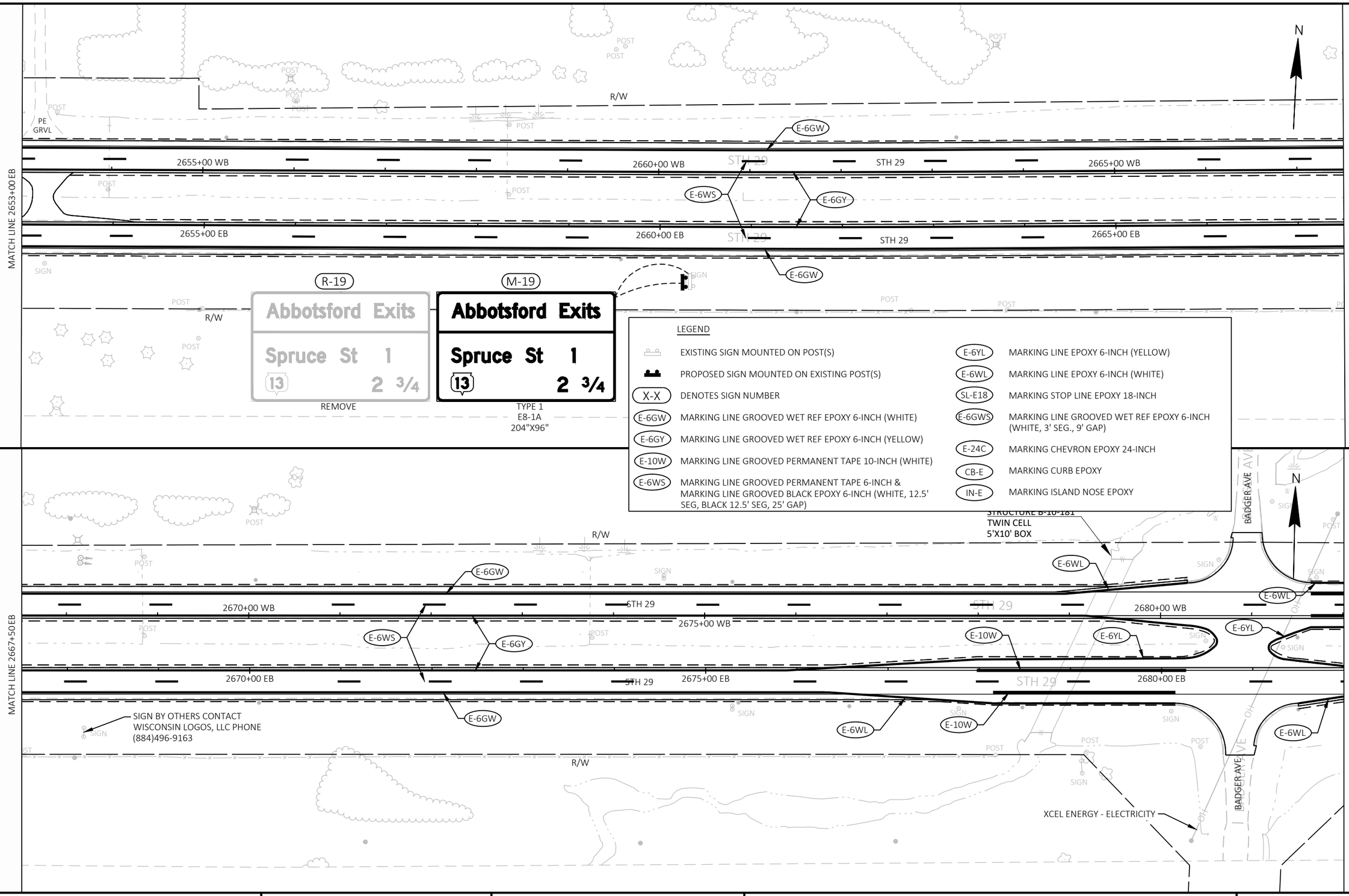
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 59	E



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 60	E

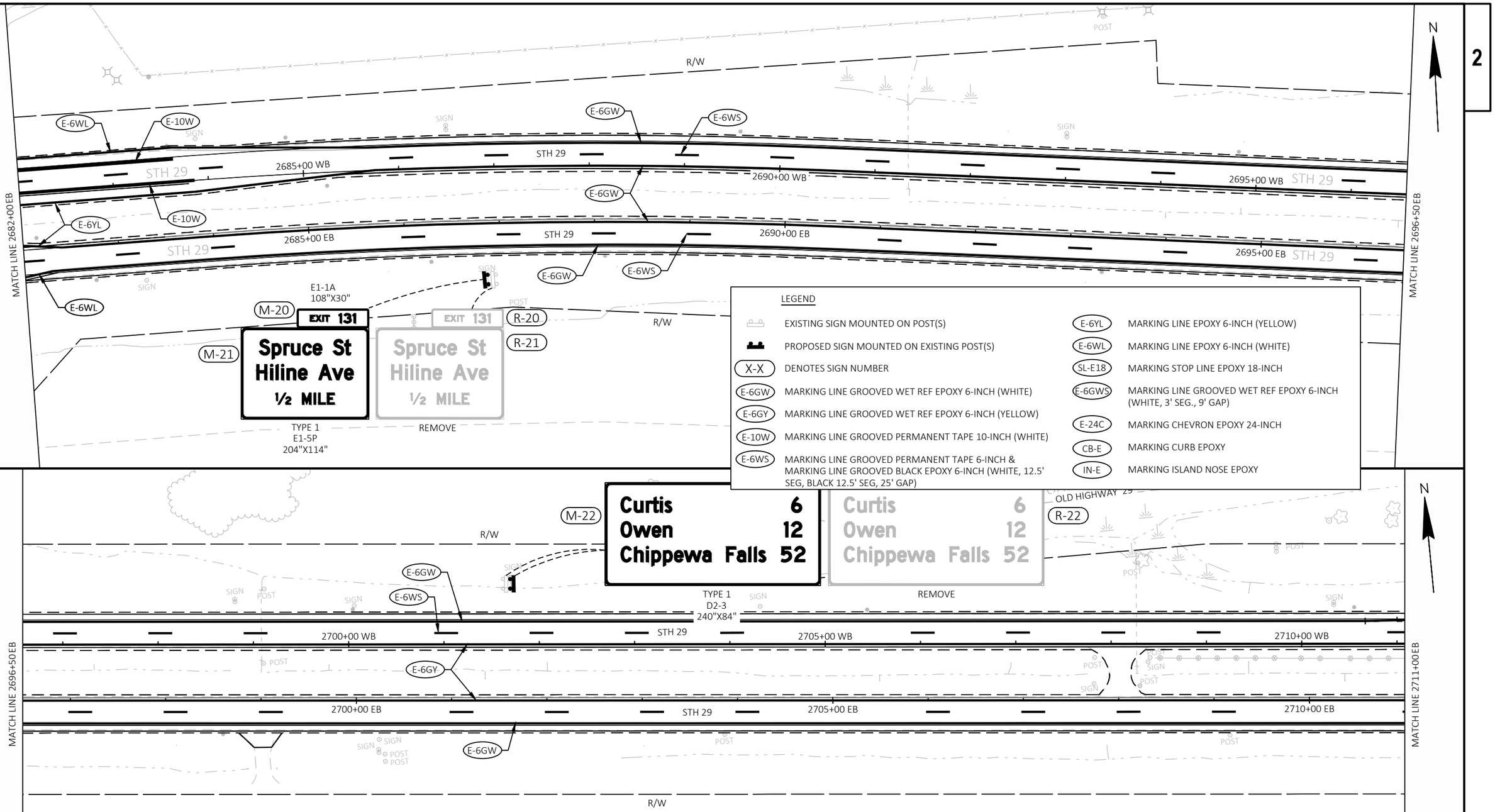
FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS.DWG
LAYOUT NAME - 023217-ps
PLOT DATE : 11/18/2025 2:45 PM
PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



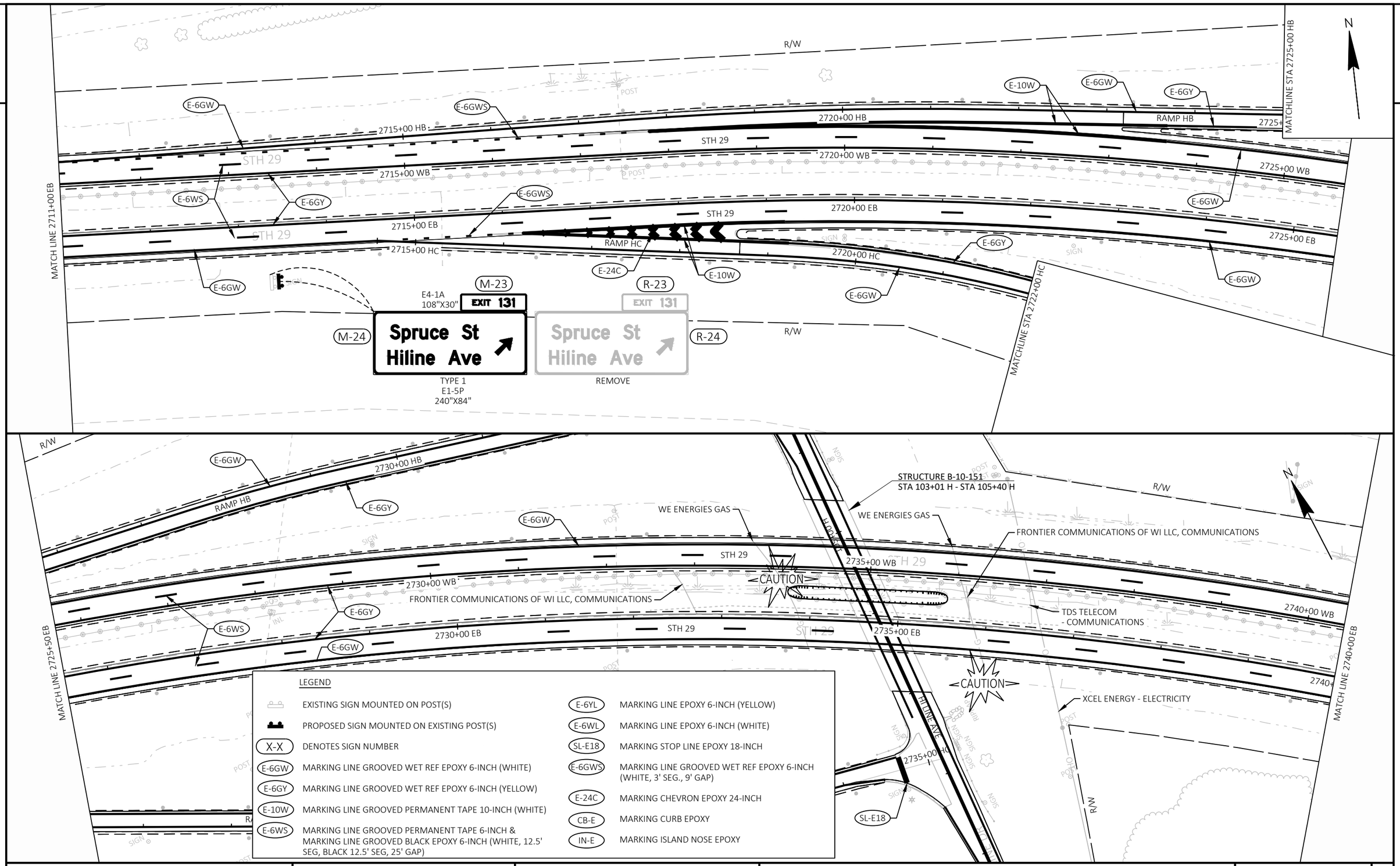
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 61 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS.DWG
LAYOUT NAME - 023218-ps
PLOT DATE : 11/18/2025 2:46 PM
PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 62	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS.DWG
LAYOUT NAME - 023219-ps
PLOT DATE : 11/18/2025 2:46 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44



LEGEND

EXISTING SIGN MOUNTED ON POST(S)	E-6YL — MARKING LINE EPOXY 6-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON EXISTING POST(S)	E-6WL — MARKING LINE EPOXY 6-INCH (WHITE)
X-X — DENOTES SIGN NUMBER	SL-E18 — MARKING STOP LINE EPOXY 18-INCH
E-6GW — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	E-6GWS — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-6GY — MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	E-24C — MARKING CHEVRON EPOXY 24-INCH
E-10W — MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)	CB-E — MARKING CURB EPOXY
E-6WS — MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)	IN-E — MARKING ISLAND NOSE EPOXY

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 63	E

2

R/W

E-6GW

STH 29

2745+00 WB

E-6GY

E-6WS

2750+00 WB

STA 2750+56.80 WB

STH 29

2755+00

STA 2750+00 EB

2745+00 EB

STH 29

2750+00 EB

STH 29

MATCH LINE 2740+00 EB

MATCH LINE 2754+50 EB

R-25

EXIT 132

13

Colby

Abbotsford

1 MILE

REMOVE

EXIT 132

13

Colby

Abbotsford

1 MILE

TYPE 1

E1-5P

204"X162"

M-25

E1-1A

108"X30"

R-26

M-26

R/W

LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON EXISTING POST(S)
X-X	DENOTES SIGN NUMBER
E-6GW	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
E-6GY	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
E-10W	MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)
E-6WS	MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)
E-6YL	MARKING LINE EPOXY 6-INCH (YELLOW)
E-6WL	MARKING LINE EPOXY 6-INCH (WHITE)
SL-E18	MARKING STOP LINE EPOXY 18-INCH
E-6GWS	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-24C	MARKING CHEVRON EPOXY 24-INCH
CB-E	MARKING CURB EPOXY
IN-E	MARKING ISLAND NOSE EPOXY

R/W

E-6GW

2760+00 WB

STH 29

STH 29

2765+00 WB

E-6WS

E-6GY

2755+00 EB

2760+00 EB

STH 29

STH 29

2765+00 EB

E-6GW

MATCH LINE 2769+00 EB

R/W

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 64	E

2

2

R/W

XCEL ENERGY - ELECTRICITY

MATCH LINE 2769+00 EB

2770+00 WB

2770+00 EB

2775+00 WB

2775+00 EB

STH 29

E-6GW

E-6GY

E-6WS

2780+00 WB

2780+00 EB

MATCH LINE 2783+50 EB

N

LEGEND

EXISTING SIGN MOUNTED ON POST(S)	E-6YL — MARKING LINE EPOXY 6-INCH (YELLOW)
PROPOSED SIGN MOUNTED ON EXISTING POST(S)	E-6WL — MARKING LINE EPOXY 6-INCH (WHITE)
X-X — DENOTES SIGN NUMBER	SL-E18 — MARKING STOP LINE EPOXY 18-INCH
E-6GW — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)	E-6GWS — MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-6GY — MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)	E-24C — MARKING CHEVRON EPOXY 24-INCH
E-10W — MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)	CB-E — MARKING CURB EPOXY
E-6WS — MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)	IN-E — MARKING ISLAND NOSE EPOXY

R/W

N

MATCH LINE 2783+50 EB

2785+00 WB

2785+00 EB

2790+00 WB

2790+00 EB

STH 29

E-6GW

E-6GY

E-6WS

2795+00 WB

2795+00 EB

MATCH LINE 2798+00 EB

SIGN BY OTHERS
CONTACT WISCONSIN LOGOS, LLC
PHONE (884)496-9163

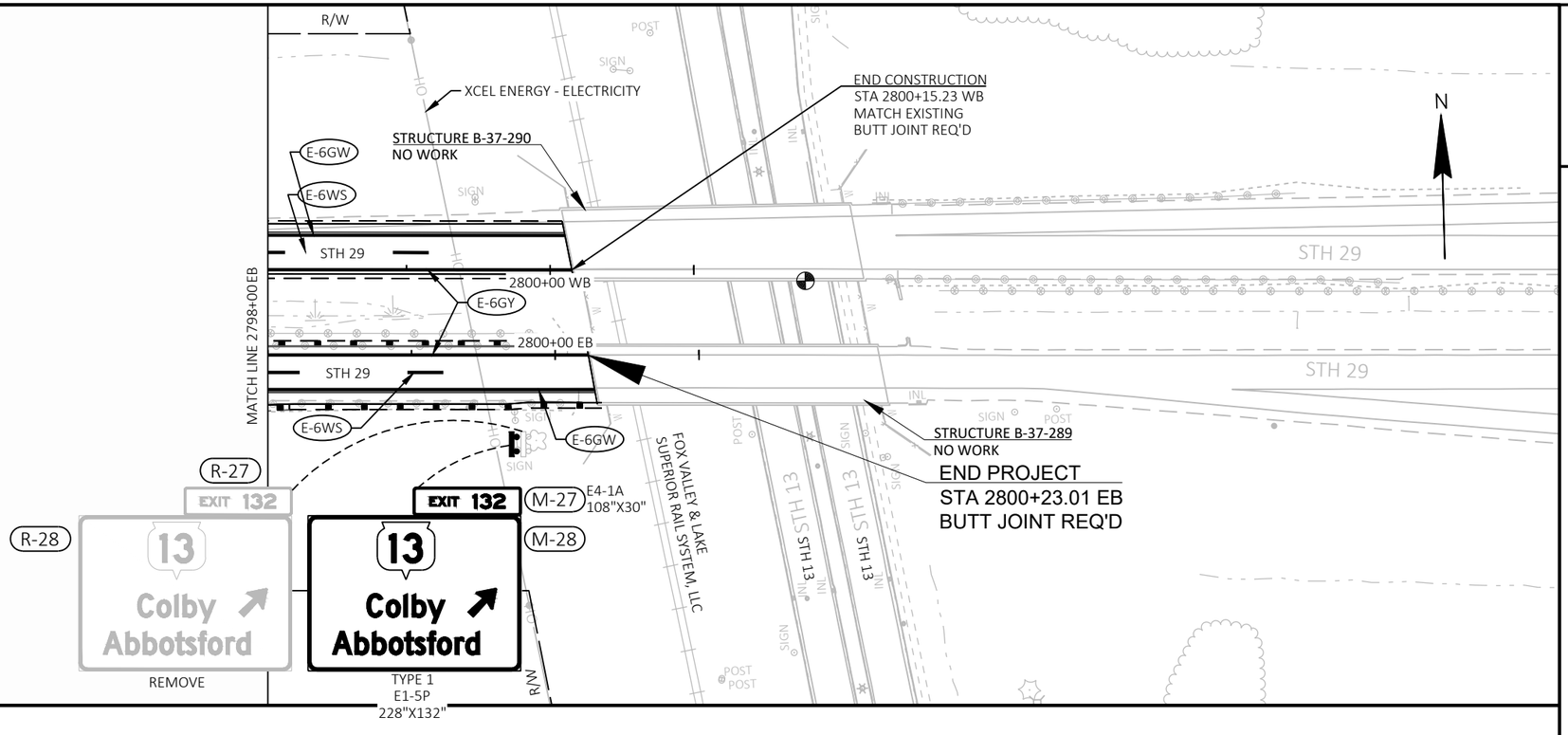
R/W

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 65	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS.DWG
LAYOUT NAME - 023222-ps

PLOT DATE : 11/18/2025 2:48 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON EXISTING POST(S)
X-X	DENOTES SIGN NUMBER
E-6GW	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
E-6GY	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
E-10W	MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)
E-6WS	MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)
E-6YL	MARKING LINE EPOXY 6-INCH (YELLOW)
E-6WL	MARKING LINE EPOXY 6-INCH (WHITE)
SL-E18	MARKING STOP LINE EPOXY 18-INCH
E-6GWS	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-24C	MARKING CHEVRON EPOXY 24-INCH
CB-E	MARKING CURB EPOXY
IN-E	MARKING ISLAND NOSE EPOXY

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

E-6GW MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)

E-6GY MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)

E-10W MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)

E-6WS MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)

E-6YL MARKING LINE EPOXY 6-INCH (YELLOW)

E-6WL MARKING LINE EPOXY 6-INCH (WHITE)

SL-E18 MARKING STOP LINE EPOXY 18-INCH

E-6GWS MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)

E-24C MARKING CHEVRON EPOXY 24-INCH

CB-E MARKING CURB EPOXY

IN-E MARKING ISLAND NOSE EPOXY

E-6DY MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)

CAUTION

END CONSTRUCTION
STA 103+43 L
MATCH EXISTING

WE ENERGIES GAS

E-6GW

E-6GW

CB-E

SL-E18

E-10W

E-6GW

2215+00 LB

E-6GW

E-6YG

RAMP LB

MATCHLINE STA 2211+00 LB

IN-E

STRUCTURE B-10-178

E-10W

2220+00 LA

RAMP LA

E-6YG

MATCHLINE STA 2223+00 LA

2215+00 WB

STH 29

2220+00 WB

100+00 L

2215+00 EB

STH 29

2220+00 EB

E-10W

E-6GW

E-6GY

E-6GW

CARDINAL AVE

IN-E

E-6GY

RAMP LD

2220+00 LD

SL-E18

E-6GW

MATCHLINE STA 2211+00 LC

RAMP LC

E-6GW

2215+00 LC

E-10W

CB-E

R/W

APPROXIMATE LOCATION OF LUMEN (CENTURYLINK) COMMUNICATIONS (NOT SURVEYED)

PT: 96+50.67 L

LUMEN (CENTURYLINK) COMMUNICATIONS

APPROXIMATE LOCATION OF LUMEN (CENTURYLINK) COMMUNICATIONS (NOT SURVEYED)

R/W

E-6GW

E-6GW

BEGIN CONSTRUCTION
STA 95+79 L
MATCH EXISTING

100+56 L

MATCHLINE STA 2223+00 LD

N

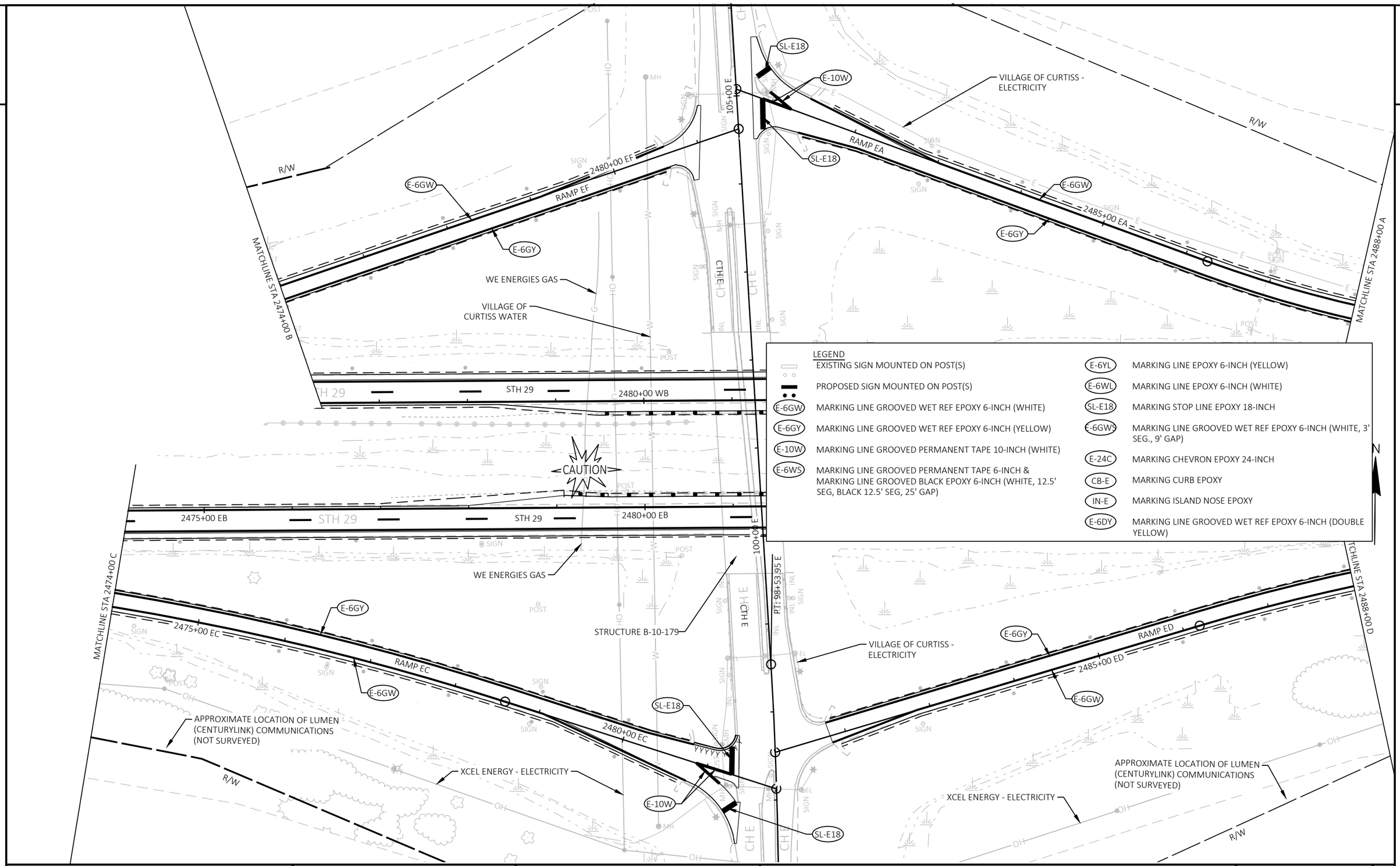
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 67	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS_RAMPS.DWG
LAYOUT NAME - 023224-ps

PLOT DATE : 11/18/2025 2:49 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

2



LEGEND

	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON POST(S)
E-6GW	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
E-6GY	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
E-10W	MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)
E-6WS	MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)
E-6YL	MARKING LINE EPOXY 6-INCH (YELLOW)
E-6WL	MARKING LINE EPOXY 6-INCH (WHITE)
SL-E18	MARKING STOP LINE EPOXY 18-INCH
E-6GWS	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)
E-24C	MARKING CHEVRON EPOXY 24-INCH
CB-E	MARKING CURB EPOXY
IN-E	MARKING ISLAND NOSE EPOXY
E-6DY	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 68	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS_RAMPS.DWG
LAYOUT NAME - 023225-ps
PLOT DATE : 11/18/2025 2:49 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

E-6GW MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)

E-6GY MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)

E-10W MARKING LINE GROOVED PERMANENT TAPE 10-INCH (WHITE)

E-6WS MARKING LINE GROOVED PERMANENT TAPE 6-INCH & MARKING LINE GROOVED BLACK EPOXY 6-INCH (WHITE, 12.5' SEG, BLACK 12.5' SEG, 25' GAP)

E-6YL MARKING LINE EPOXY 6-INCH (YELLOW)

E-6WL MARKING LINE EPOXY 6-INCH (WHITE)

SL-E18 MARKING STOP LINE EPOXY 18-INCH

E-6GWS MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 3' SEG., 9' GAP)

E-24C MARKING CHEVRON EPOXY 24-INCH

CB-E MARKING CURB EPOXY

IN-E MARKING ISLAND NOSE EPOXY

E-6DY MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)

2

2

N

END CONSTRUCTION
STA 109+02.83 H
MATCH EXISTING

HI LINE AVE

E-6GW

WE ENERGIES GAS

CAUTION

R/W

E-6GW

RAMP HB

2730+00 HB

E-6GY

E-6DY

E-6GW

STRUCTURE B-10-151
STA 103+01 H - STA 105+40 H

XCEL ENERGY - ELECTRICITY

WE ENERGIES GAS

WE ENERGIES GAS

MATCHLINE STA 2725+00 HB

HB

WB

STH 29

2730+00 WB

FRONTIER COMMUNICATIONS OF WI LLC, COMMUNICATIONS

CAUTION

2735+00 WB

TDS TELECOM
COMMUNICATIONS

2730+00 EB

2735+00 EB

STH 29

FRONTIER COMMUNICATIONS OF WI LLC, COMMUNICATIONS

CAUTION

2725+00 EB

2735+00 HC

E-6GW

E-6GY

SL-E18

HI LINE AVE

E-6GW

MATCHLINE STA 2722+00 HC

2725+00 HC

RAMP HC

2730+00 HC

E-6GY

E-6GW

R/W

BEGIN CONSTRUCTION
STA 100+70.95 H
MATCH EXISTING

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 69	E

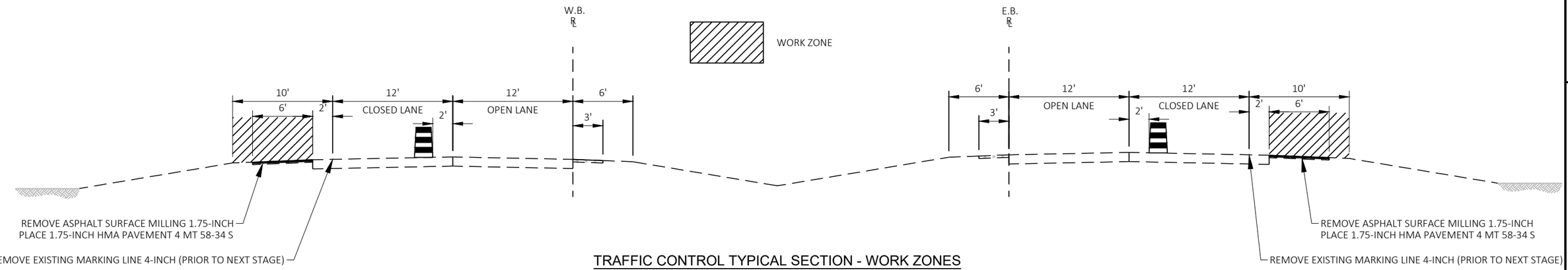
FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\023201-PS_RAMPS.DWG
LAYOUT NAME - 023226-ps

PLOT DATE : 11/18/2025 2:49 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

	ROADWAY CONSTRUCTION	PRE WARN		STAGE 2		STAGE 3		STAGE 4	
		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)
PCMS 1 (WB)	GENERAL	WIS 29 ROADWORK BEGINS	XXXDAY MONTH DAY						
PCMS 2 (EB)	GENERAL	WIS 29 ROADWORK BEGINS	XXXDAY MONTH DAY						
MISC (WB)	AT LANE CLOSURE (TRAFFIC ON OUTSIDE LANE)			STRADDLE RUMBLE STRIP	STRADDLE RUMBLE STRIP	STRADDLE RUMBLE STRIP	STRADDLE RUMBLE STRIP		
MISC (EB)	AT LANE CLOSURE (TRAFFIC ON OUTSIDE LANE)			STRADDLE RUMBLE STRIP	STRADDLE RUMBLE STRIP	STRADDLE RUMBLE STRIP	STRADDLE RUMBLE STRIP		
MISC (WB)	RAMP PAVING 48 HR PRE WARN					RAMP TO CLOSE	MONTH DAY TIME	RAMP TO CLOSE	MONTH DAY TIME
MISC (EB)	RAMP PAVING 48 HR PRE WARN					RAMP TO CLOSE	MONTH DAY TIME	RAMP TO CLOSE	MONTH DAY TIME
MISC (WB)	RAMP PAVING DAY OF PAVING					RAMP CLOSED	FOLLOW DETOUR	RAMP CLOSED	FOLLOW DETOUR
MISC (EB)	RAMP PAVING DAY OF PAVING							RAMP CLOSED	FOLLOW DETOUR

IN THE EVENT OF AN INCIDENT, NOTIFY THE TRAFFIC MANAMGEMENT CENTER AT (800) 375-7302 FOR INCIDENT MANAGEMENT MESSAGING

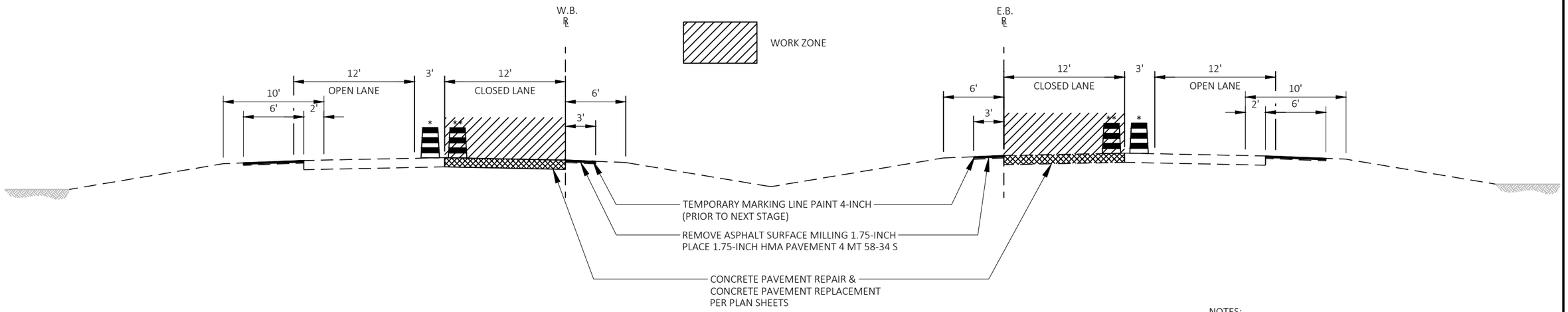


TRAFFIC CONTROL TYPICAL SECTION - WORK ZONES

STAGE 1 (LOOKING EAST)

STAGE 1 CONSTRUCTION
MILL OUTSIDE SHOULDERS AND CONSTRUCT NEW SHOULDER PAVEMENT.

STAGE 1 MAINTENANCE OF TRAFFIC
EB & WB TRAFFIC ON MEDIAN LANES
SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM
SEE S.D.D TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LEFT LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE



TRAFFIC CONTROL TYPICAL SECTION - WORK ZONES

STAGE 2A (LOOKING EAST)

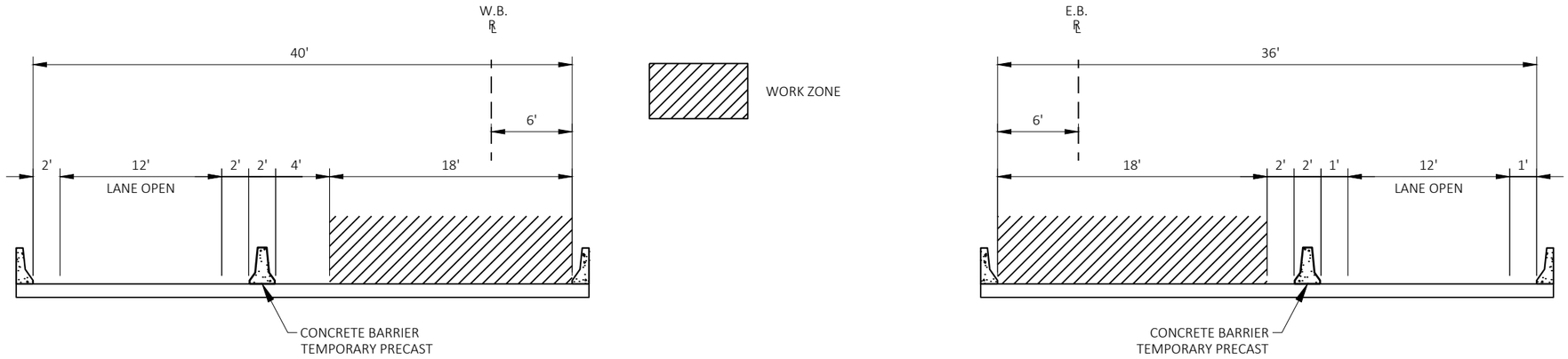
STAGE 2A CONSTRUCTION
CONCRETE PAVEMENT REPAIR AND CONCRETE PAVEMENT REPLACEMENT.

STAGE 2A MAINTENANCE OF TRAFFIC
EB & WB TRAFFIC ON OUTSIDE LANES
SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM
SEE S.D.D TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE
SEE S.D.D TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

NOTES:
TRAFFIC CONTROL DRUMS SHALL BE SHIFTED OVER COMPLETELY ONTO CLOSED LANE WHEN WORK ZONE IS NON ACTIVE.

* ACTIVE WORK ZONE TRAFFIC CONTROL DRUM PLACEMENT

** NON ACTIVE WORK ZONE TRAFFIC CONTROL DRUM PLACEMENT

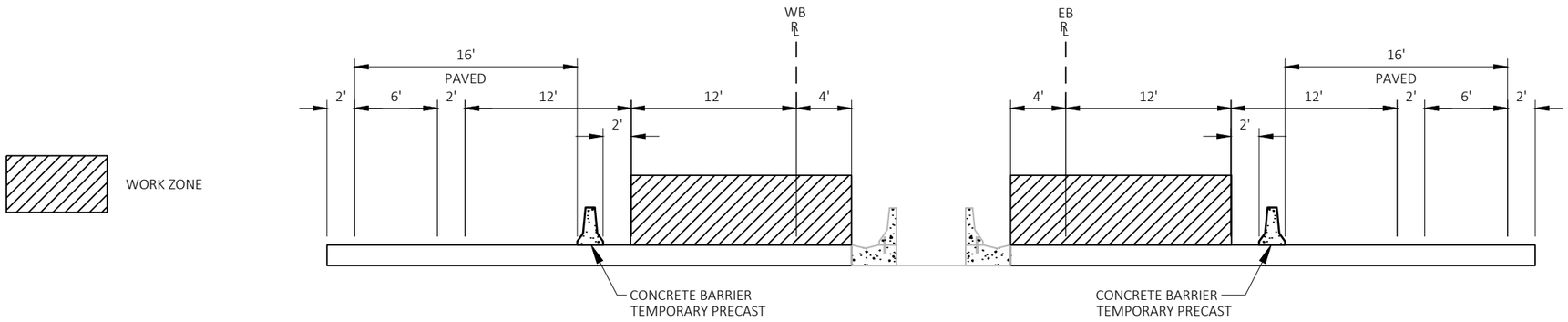


TRAFFIC CONTROL TYPICAL SECTION - AT STRUCTURES WORK ZONES

STAGE 2A (LOOKING EAST)

STAGE 2A CONSTRUCTION
POLYMER OVERLAY WORK ON THE MEDIAN LANES.

STAGE 2A MAINTENANCE OF TRAFFIC
EB & WB TRAFFIC ON OUTSIDE LANES
UTILIZE TEMPORARY PRECAST CONCRETE BARRIER TO
SEPARATE THE WORK ZONE FROM TRAFFIC.

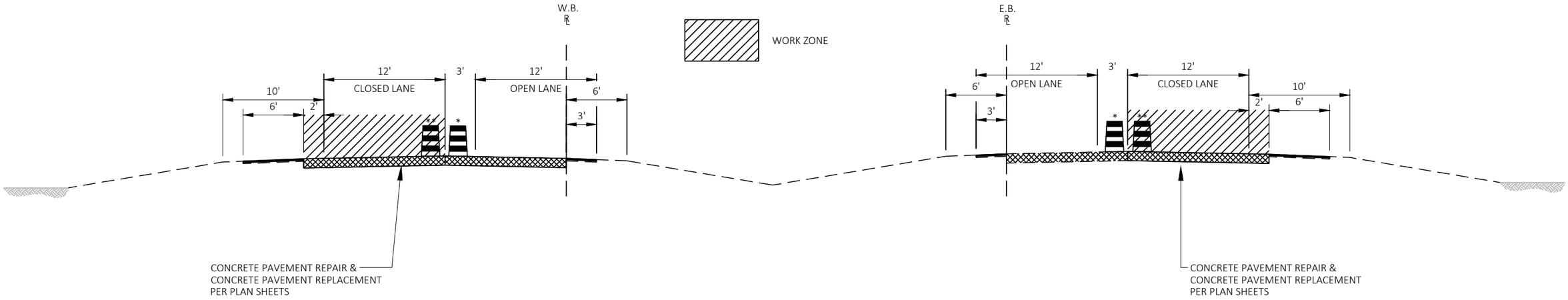


TRAFFIC CONTROL TYPICAL SECTION - REMOVE & REPLACE CONCRETE BARRIER (SECTIONS AT INLETS)

STAGE 2A (LOOKING EAST)

STAGE 2A CONSTRUCTION
CONCRETE PAVEMENT REPAIR AND CONCRETE PAVEMENT REPLACEMENT.
REMOVE & REPLACE CONCRETE BARRIER, RECONSTRUCT INLETS WITH VANE DRAINS

STAGE 2A MAINTENANCE OF TRAFFIC
EB & WB TRAFFIC ON OUTSIDE LANES
SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM
SEE S.D.D TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE
SEE S.D.D TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE



TRAFFIC CONTROL TYPICAL SECTION - WORK ZONES

STAGE 2B (LOOKING EAST)

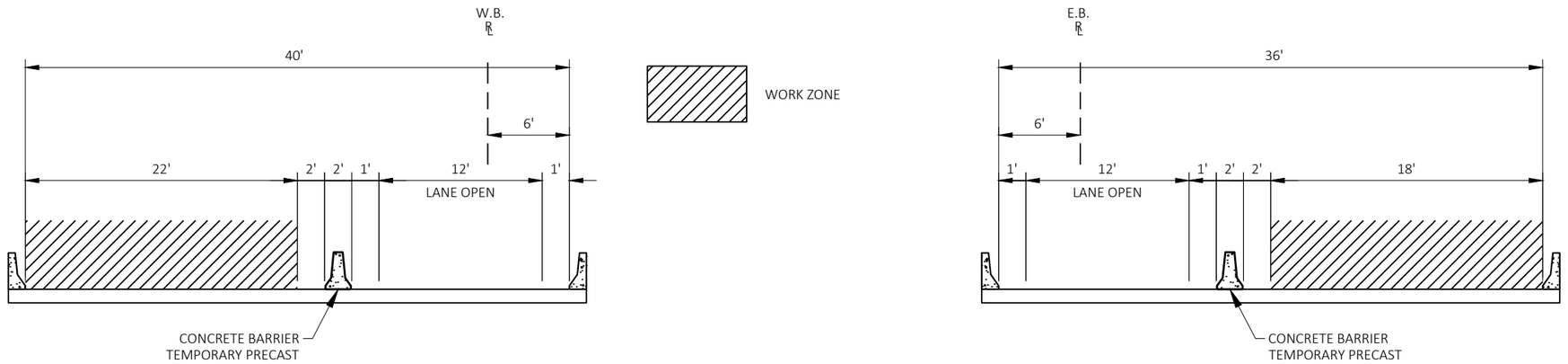
STAGE 2B CONSTRUCTION
CONCRETE PAVEMENT REPAIR AND CONCRETE PAVEMENT REPLACEMENT

STAGE 2B MAINTENANCE OF TRAFFIC
EB & WB TRAFFIC ON MEDIAN LANES
SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM
SEE S.D.D TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LEFT LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

NOTES:
TRAFFIC CONTROL DRUMS SHALL BE SHIFTED OVER COMPLETELY ONTO CLOSED LANE WHEN WORK ZONE IS NON ACTIVE.

* ACTIVE WORK ZONE TRAFFIC CONTROL DRUM PLACEMENT

** NON ACTIVE WORK ZONE TRAFFIC CONTROL DRUM PLACEMENT



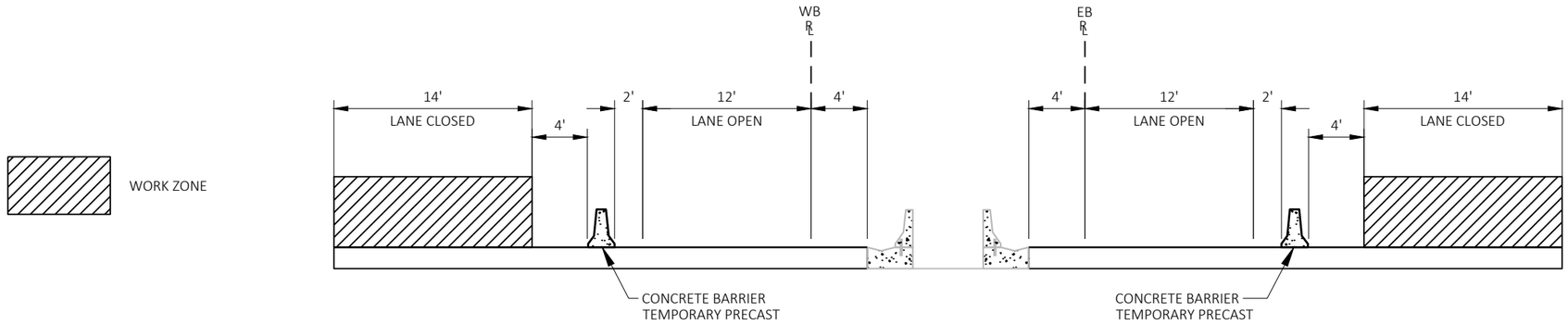
TRAFFIC CONTROL TYPICAL SECTION - AT STRUCTURES WORK ZONES

STAGE 2B (LOOKING EAST)

STAGE 2B CONSTRUCTION
POLYMER OVERLAY WORK ON THE OUTSIDE LANES.

STAGE 2B MAINTENANCE OF TRAFFIC
EB & WB TRAFFIC ON MEDIAN LANES
UTILIZE TEMPORARY PRECAST CONCRETE BARRIER TO
SEPARATE THE WORK ZONE FROM TRAFFIC.

2

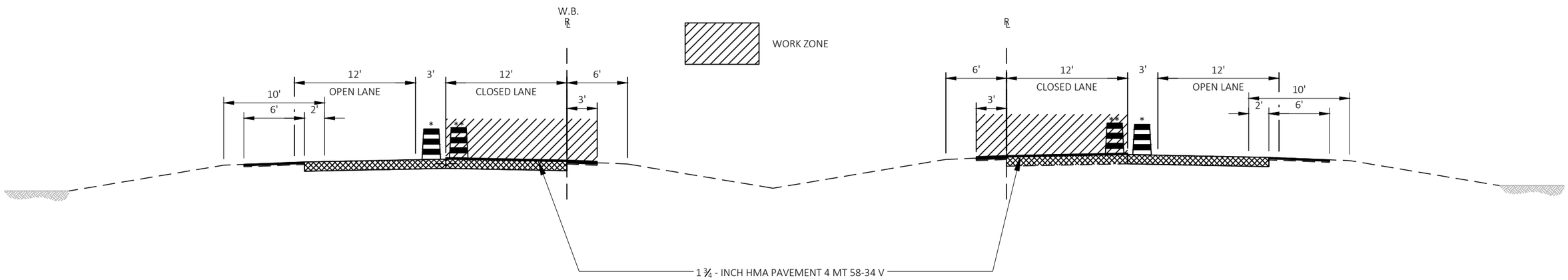


TRAFFIC CONTROL TYPICAL SECTION - BETWEEN STRUCTURE WORK ZONES

STAGE 2B (LOOKING EAST)

STAGE 2B CONSTRUCTION
CONCRETE PAVEMENT REPAIR AND CONCRETE PAVEMENT REPLACEMENT

STAGE 2B MAINTENANCE OF TRAFFIC
EB & WB TRAFFIC ON MEDIAN LANES
SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM
SEE S.D.D TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LEFT LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE



TRAFFIC CONTROL TYPICAL SECTION - WORK ZONES

STAGE 3A (LOOKING EAST)

STAGE 3A CONSTRUCTION
PLACE 1.75-INCH HMA ON MEDIAN LANE AND SHOULDER.

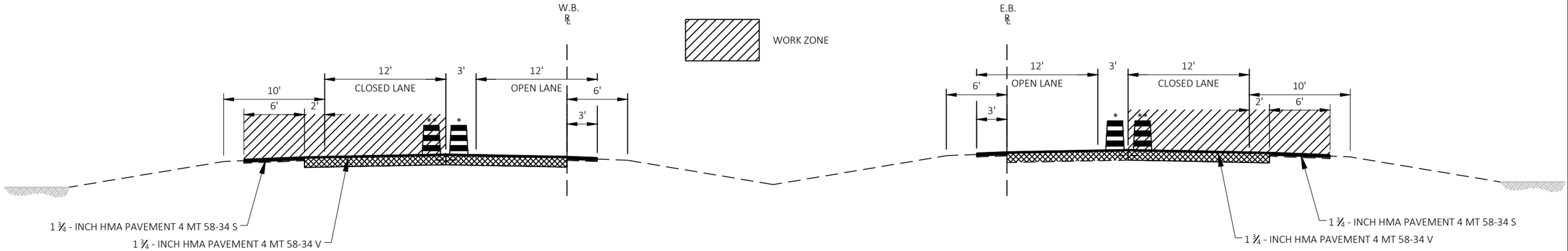
STAGE 3A MAINTENANCE OF TRAFFIC
EB & WB TRAFFIC ON OUTSIDE LANES
SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM
SEE S.D.D TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE
SEE S.D.D TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

NOTES:
TRAFFIC CONTROL DRUMS SHALL BE SHIFTED OVER COMPLETELY ONTO CLOSED LANE WHEN WORK ZONE IS NON ACTIVE.

* ACTIVE WORK ZONE TRAFFIC CONTROL DRUM PLACEMENT

** NON ACTIVE WORK ZONE TRAFFIC CONTROL DRUM PLACEMENT

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TRAFFIC CONTROL	SHEET 74	E



TRAFFIC CONTROL TYPICAL SECTION - WORK ZONES

STAGE 3B (LOOKING EAST)

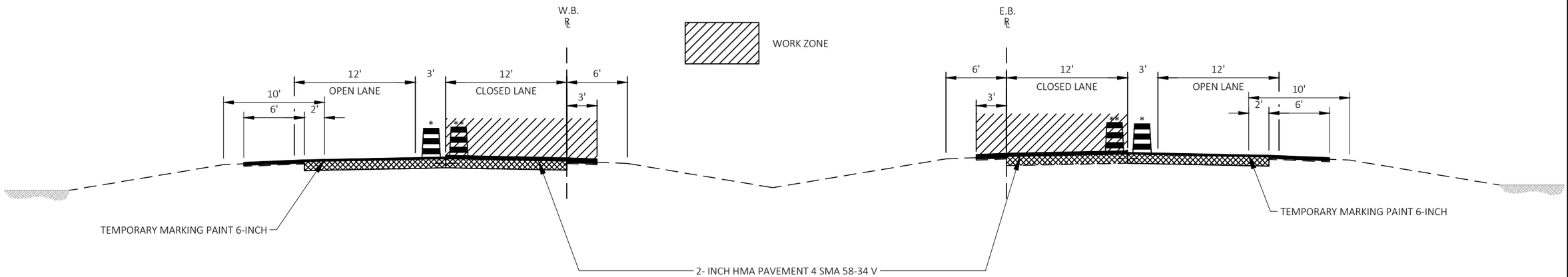
STAGE 3B CONSTRUCTION
PLACE 1.75-INCH HMA ON OUTSIDE LANE AND SHOULDER.

STAGE 3B MAINTENANCE OF TRAFFIC
EB & WB TRAFFIC ON MEDIAN LANES
SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM
SEE S.D.D TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LEFT LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

NOTES:
TRAFFIC CONTROL DRUMS SHALL BE SHIFTED OVER COMPLETELY ONTO CLOSED LANE WHEN WORK ZONE IS NON ACTIVE.

* ACTIVE WORK ZONE TRAFFIC CONTROL DRUM PLACEMENT

** NON ACTIVE WORK ZONE TRAFFIC CONTROL DRUM PLACEMENT



TRAFFIC CONTROL TYPICAL SECTION - WORK ZONES

STAGE 4A (LOOKING EAST)

STAGE 4A CONSTRUCTION
PLACE 2-INCH HMA ON MEDIAN LANE AND SHOULDER.

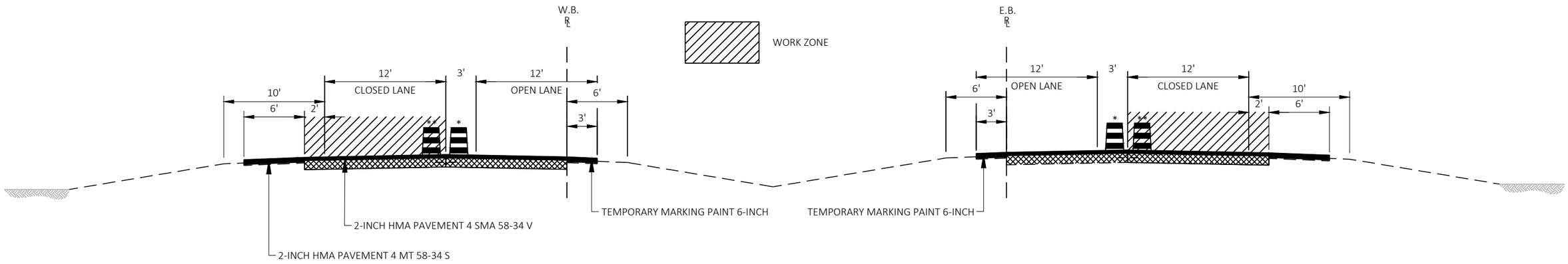
STAGE 4A MAINTENANCE OF TRAFFIC
EB & WB TRAFFIC ON OUTSIDE LANES
SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM
SEE S.D.D TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE
SEE S.D.D TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

NOTES:
TRAFFIC CONTROL DRUMS SHALL BE SHIFTED OVER COMPLETELY ONTO CLOSED LANE WHEN WORK ZONE IS NON ACTIVE.

* ACTIVE WORK ZONE TRAFFIC CONTROL DRUM PLACEMENT

** NON ACTIVE WORK ZONE TRAFFIC CONTROL DRUM PLACEMENT

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TRAFFIC CONTROL	SHEET 75	E



TRAFFIC CONTROL TYPICAL SECTION - WORK ZONES

STAGE 4B (LOOKING EAST)

STAGE 4B CONSTRUCTION
PLACE 2-INCH HMA ON OUTSIDE LANE AND SHOULDER.

STAGE 4B MAINTENANCE OF TRAFFIC
EB & WB TRAFFIC ON MEDIAN LANES
SEE S.D.D. TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM
SEE S.D.D TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LEFT LANE CLOSURE
SEE S.D.D. TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

NOTES:
TRAFFIC CONTROL DRUMS SHALL BE SHIFTED OVER COMPLETELY ONTO CLOSED LANE WHEN WORK ZONE IS NON ACTIVE.

* ACTIVE WORK ZONE TRAFFIC CONTROL DRUM PLACEMENT

** NON ACTIVE WORK ZONE TRAFFIC CONTROL DRUM PLACEMENT

LEGEND

SIGN ON PERMANENT SUPPORT

NOTE:
SEE SDD ADVANCE WIDTH RESTRICTION SIGNING

N

MAX. 12' WIDTH
W12-52
48"X48"

3 MILES AHEAD
WO57-52
48"X36"

EAST
M3-2
36"X18"

29
M1-6
36"X36"

MAX. 12' WIDTH
W12-52
48"X48"

CTH T

200'

5

1990+00 WB
2000+00 WB
2010+00 WB
2020+00 WB
2030+00 WB
2040+00 WB
2050+00 WB
2060+00 WB

1990+00 EB
2000+00 EB
2010+00 EB
STH 29
2020+00 EB
2030+00 EB
2040+00 EB
2050+00 EB
2060+00 EB

5280'

200'

WIDE LOADS EXCEEDING 12 FT
R12-70B
114"X42"

EAST
M3-2
36"X18"

29
M1-6
36"X36"

MAX. 12' WIDTH
W12-52
48"X48"

STH 73

200'

MAX. 12' WIDTH
W12-52
48"X48"

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TRAFFIC CONTROL - WIDTH RESTRICTION	SHEET 77	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\025014-TC - WIDTH RESTRICTIONS.DWG
LAYOUT NAME - 025101-tc-Width Restriction

PLOT DATE : 11/18/2025 2:51 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

LEGEND

SIGN ON PERMANENT SUPPORT

NOTE:
SEE SDD ADVANCE WIDTH RESTRICTION SIGNING

N

MAX. 12' WIDTH
W12-52
48"X48"

WEST
M3-4
36"X18"

29
M1-6
36"X36"

MAX. 12' WIDTH
W12-52
48"X48"

WIDE LOADS EXCEEDING 12 FT
R12-70B
114"X42"

200'

5280'

MAX. 12' WIDTH
W12-52
48"X48"

2 MILES AHEAD
WO57-52
48"X36"

5

RAMP LB
2220+00 LA
RAMP LA
2230+00 LA
2220+00 WB
2230+00 WB
STH 29
2230+00 EB
2220+00 EB
RAMP LD
2230+00 LD
RAMP LC
2220+00 LD
CARDINAL AVE
100+00
200'
CTH X
2240+00 WB
2250+00 WB
2250+00 EB
STH 29
2260+00 WB
2270+00 WB
2270+00 EB
2280+00 WB
2290+00
2240+00 EB
2260+00 EB
2280+00 EB
2290+00
MATCH LINE - 0+50 EB

5

WEST
M3-4
36"X18"

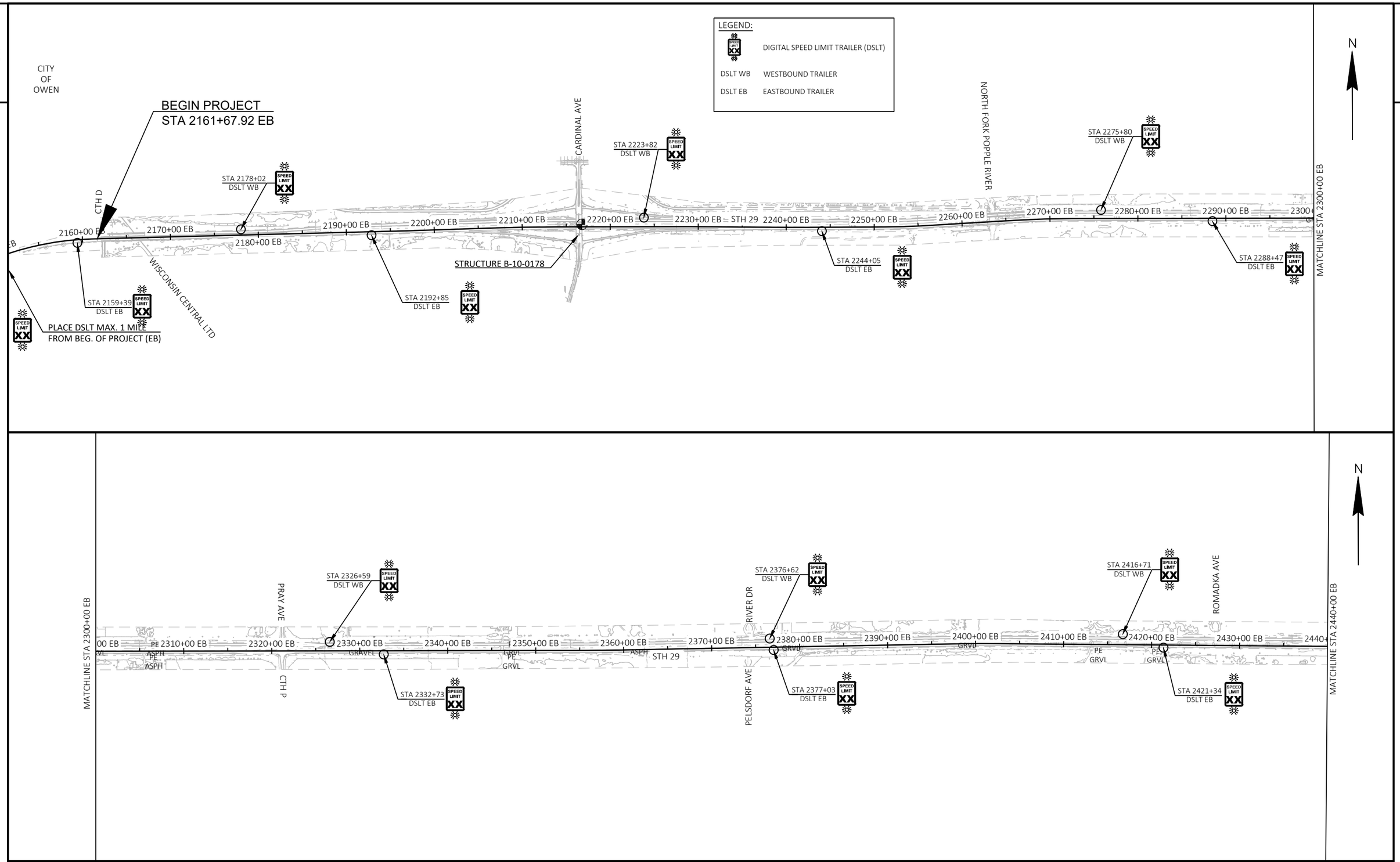
29
M1-6
36"X36"

MAX. 12' WIDTH
W12-52
48"X48"

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TRAFFIC CONTROL - WIDTH RESTRICTION	SHEET 78	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\025014-TC - WIDTH RESTRICTIONS.DWG
LAYOUT NAME - 025102-tc-Width Restriction

PLOT DATE : 11/18/2025 2:52 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

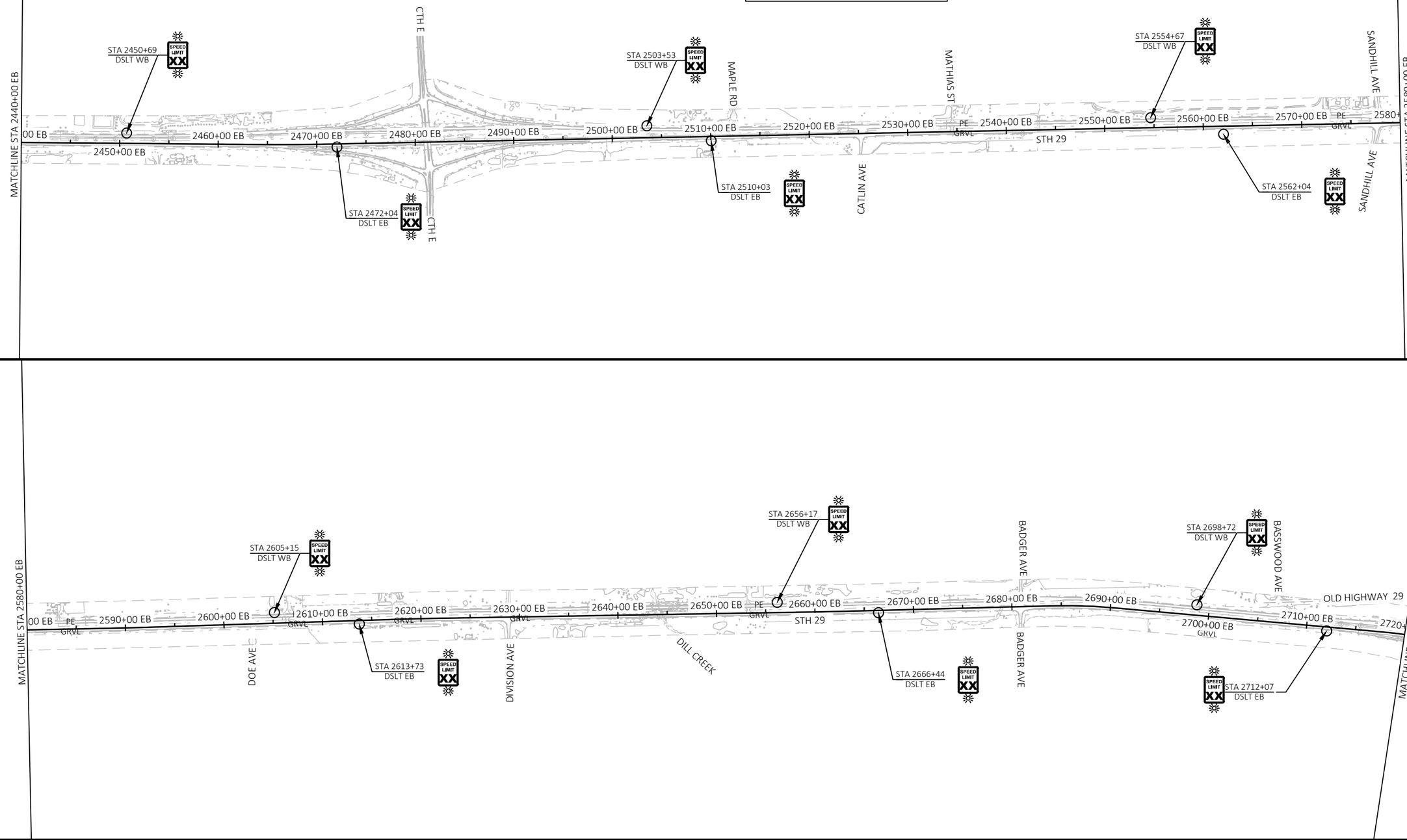


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TRAFFIC CONTROL - DSLT	SHEET 79	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\025001-TC - DSLT.DWG
LAYOUT NAME - 025201-tc

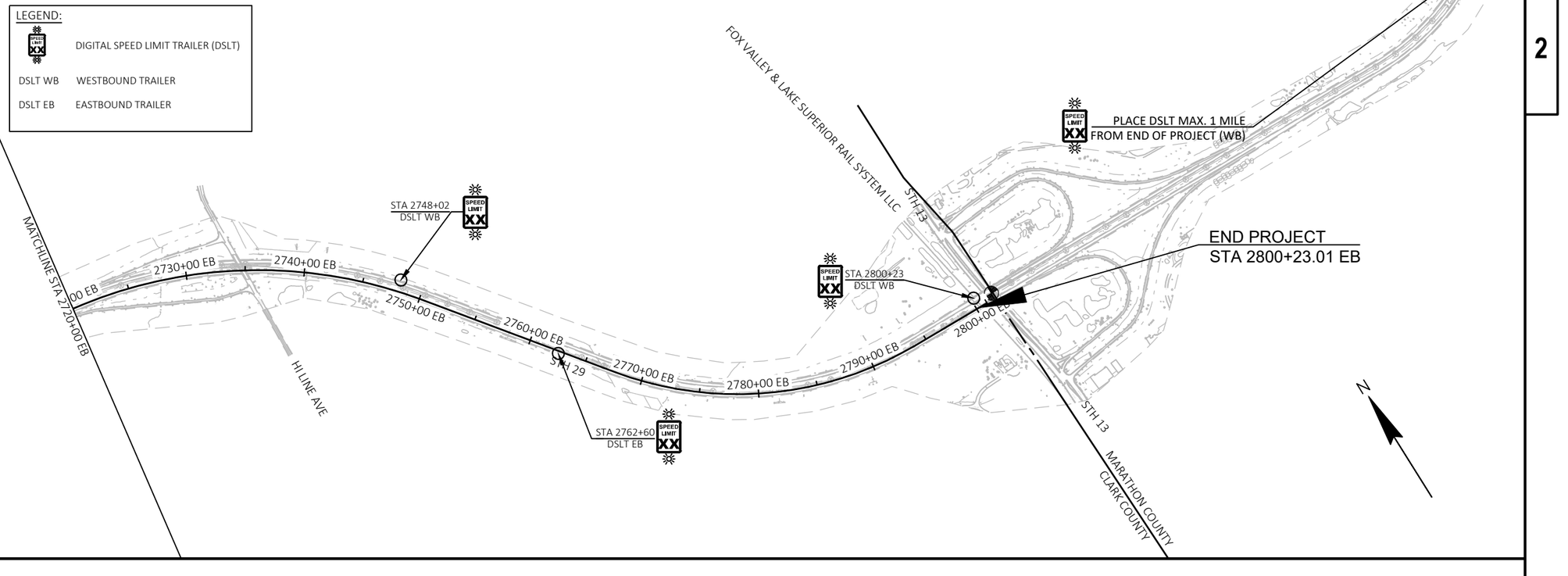
PLOT DATE : 11/18/2025 2:52 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TRAFFIC CONTROL - DSLT	SHEET 80	E

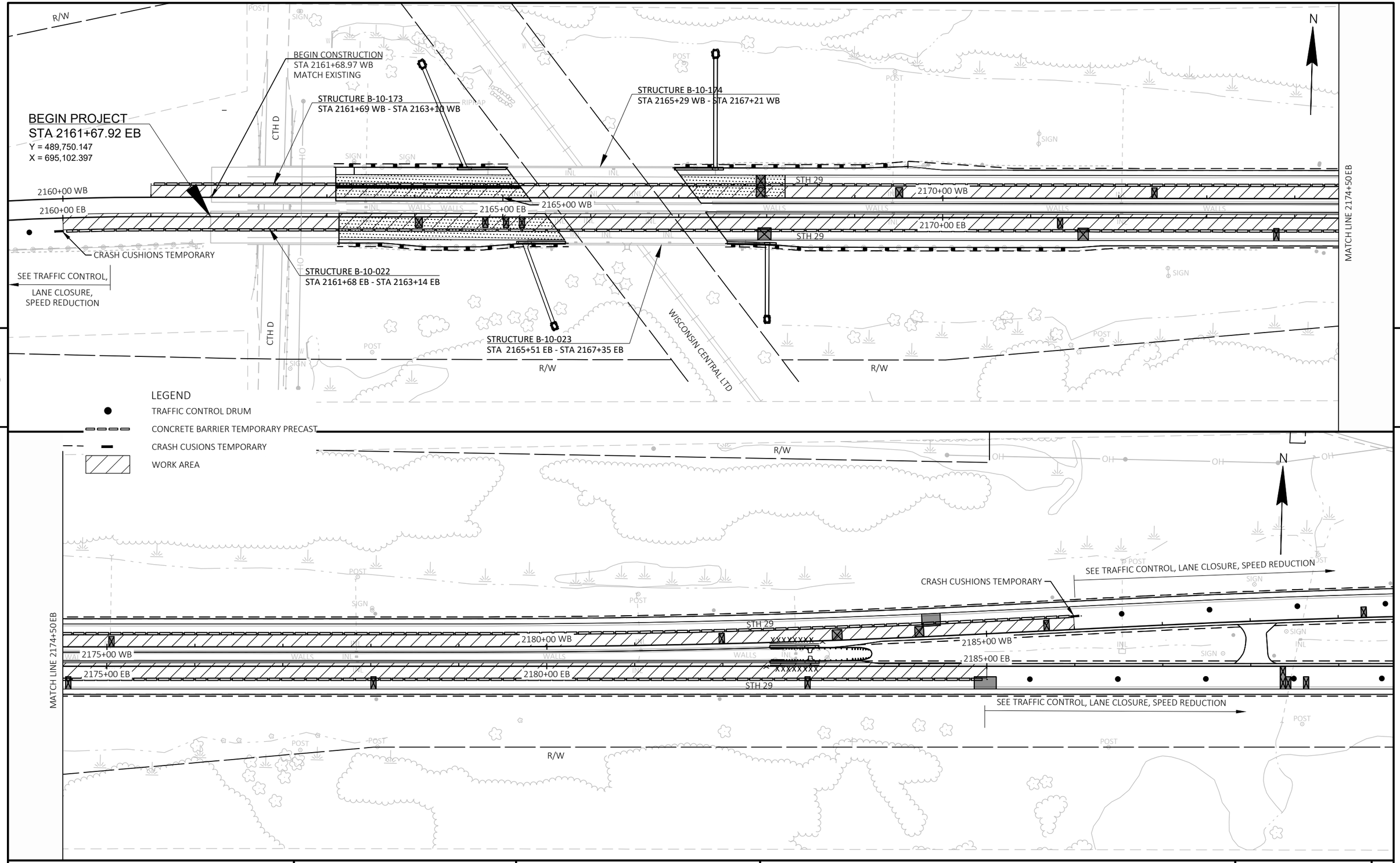
FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\025001-TC - DSLT.DWG
LAYOUT NAME - 025202-tc
PLOT DATE : 11/18/2025 2:52 PM
PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:1000 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TRAFFIC CONTROL - DSLT	SHEET 81	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\025001-TC - DSLT.DWG
LAYOUT NAME - 025203-tc

PLOT DATE : 11/18/2025 2:53 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:1000 FT

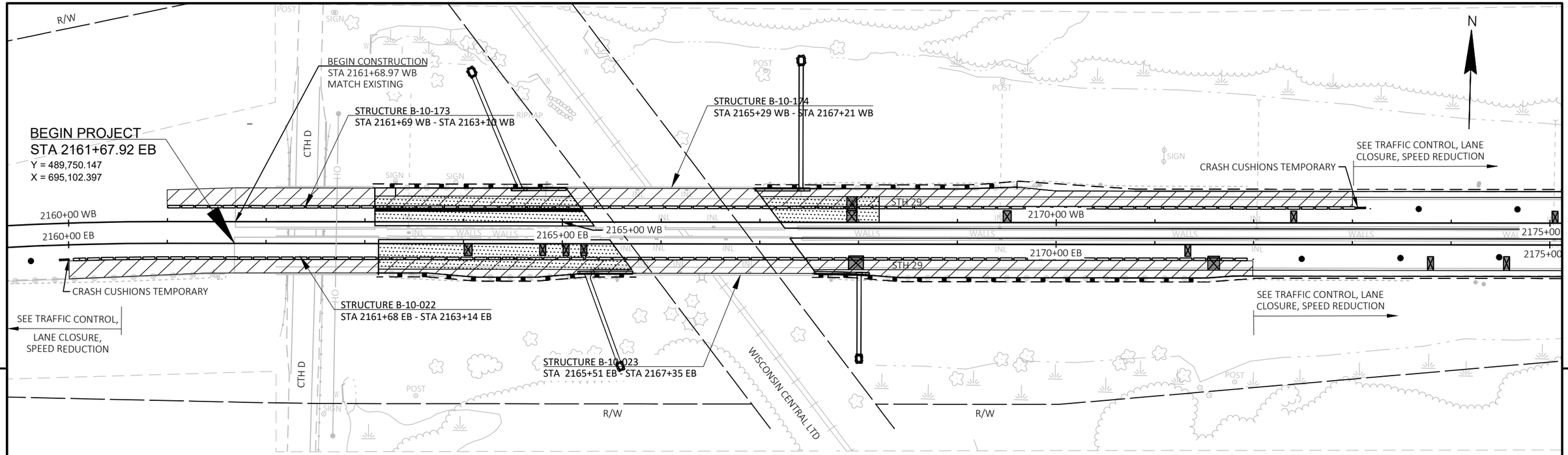


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TRAFFIC CONTROL - MAINLINE STAGE 2A	SHEET 82	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\025101 - TC_MAINLINE.DWG
LAYOUT NAME - 025101-tc

PLOT DATE : 11/18/2025 2:54 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



LEGEND

- TRAFFIC CONTROL DRUM
- CONCRETE BARRIER TEMPORARY PRECAST
- CRASH CUSIONS TEMPORARY
- WORK AREA

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TRAFFIC CONTROL - MAINLINE STAGE 2B	SHEET 83	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\025101 - TC_MAINLINES2B.DWG
LAYOUT NAME - 025102-tc

PLOT DATE : 11/18/2025 2:54 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

2

R/W

N15°06'56"E

SEE SDD TRAFFIC CONTROL FOR
LANE CLOSURE WITH FLAGGING

95+00 L

BEGIN CONSTRUCTION
STA 95+78.78 L
MATCH EXISTING

R/W

2215+00 LC

2215+00 EB

STH 29

STRUCTURE B-10-178

STA 2216+52.02 LC
STA 97+72.44 L

STA 2216+35.58 LD
STA 97+72.44 L

2215+00 WB

STH 29

100+00

2215+00 LB

STA 2216+59.90 LB
STA 101+91.27 L

STA 2216+40.04 LA
STA 101+91.27 L

N

SEE SDD TRAFFIC CONTROL FOR
LANE CLOSURE WITH FLAGGING

CTH X

CARDINAL AVE

105+00 L

END CONSTRUCTION
STA 103+43.10 L
MATCH EXISTING

LEGEND
WORK ZONE
TRAFFIC CONTROL DRUMS

2

R/W

SEE SDD TRAFFIC CONTROL FOR
LANE CLOSURE WITH FLAGGING

HI LINE AVE

BP: 100+00.00 H

BEGIN CONSTRUCTION
STA 100+70.95 H
MATCH EXISTING
BUTT JOINT REQ'D

R/W

2735+00 HC

STA 2735+15.63 HC
STA 102+17.75 H

RIPRAP

MATCH EXISTING
BUTT JOINT REQ'D

2735+00 EB

STH 29

2735+00 WB

STH 29

105+00 H

STRUCTURE B-10-151
STA 103+01 H - STA 105+40 H

MATCH EXISTING
BUTT JOINT REQ'D

STA 2734+29.88 HB
STA 106+96.45 H

N

R/W

SEE SDD TRAFFIC CONTROL FOR
LANE CLOSURE WITH FLAGGING

EP: 109+13.48 H

END CONSTRUCTION
STA 109+02.83 H
MATCH EXISTING
BUTT JOINT REQ'D

LEGEND
WORK ZONE
TRAFFIC CONTROL DRUMS

R/W

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	TRAFFIC CONTROL - CROSS ROADS	SHEET 84	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\025100 - TC_SIDE ROADS.DWG
LAYOUT NAME - 025110-tc_Cross Rds

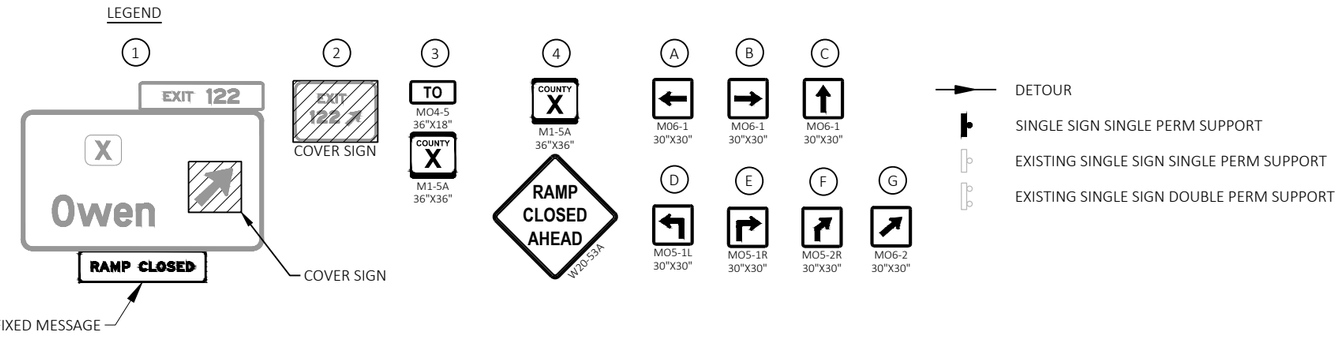
PLOT DATE : 11/18/2025 2:55 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

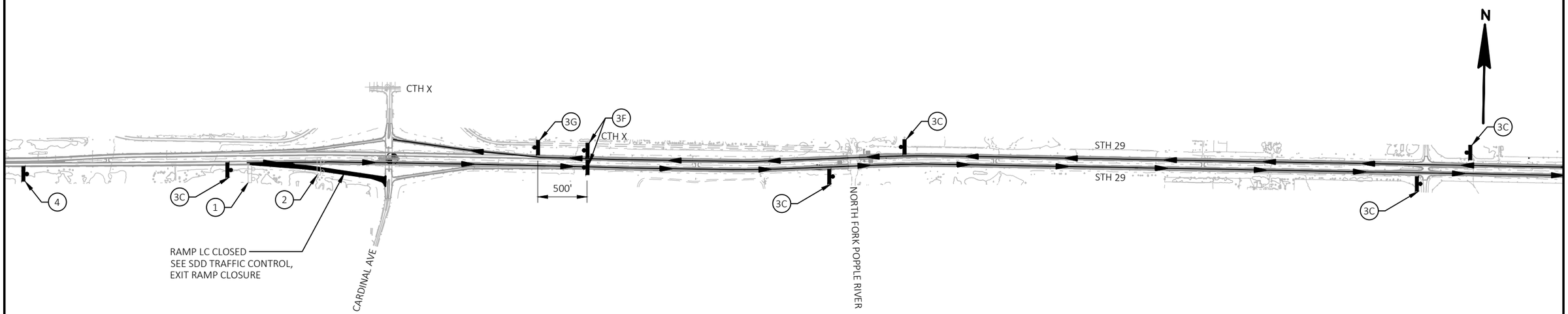
2

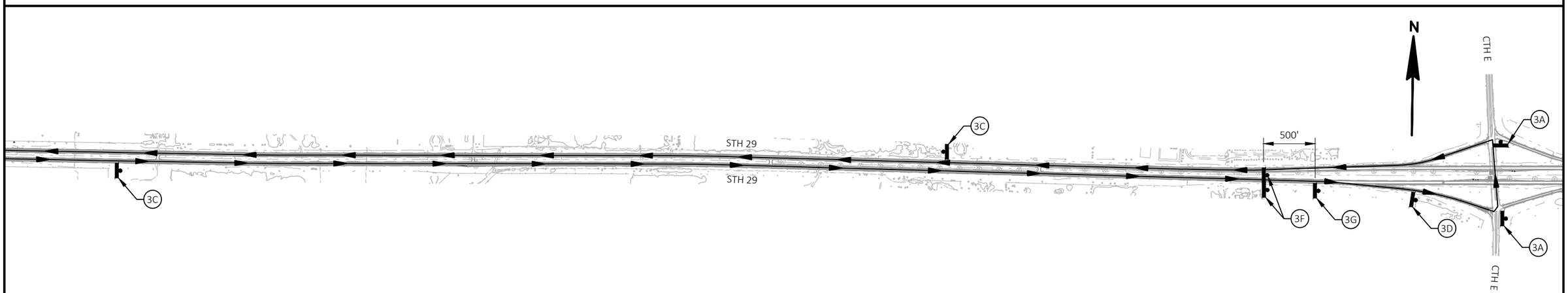
STH 29 EB EXIT RAMP CLOSURE AT CARDINAL AVE

2

LEGEND







PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	DETOUR - CARDINAL AVE EB EXIT RAMP	SHEET 85	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\027001-DT-CARDINAL EB EXIT.DWG
LAYOUT NAME - 027001-dt-Cardinal EB Exit

PLOT DATE : 11/18/2025 2:56 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

STH 29 EB ENTRANCE RAMP CLOSURE AT CARDINAL AVE

2

LEGEND

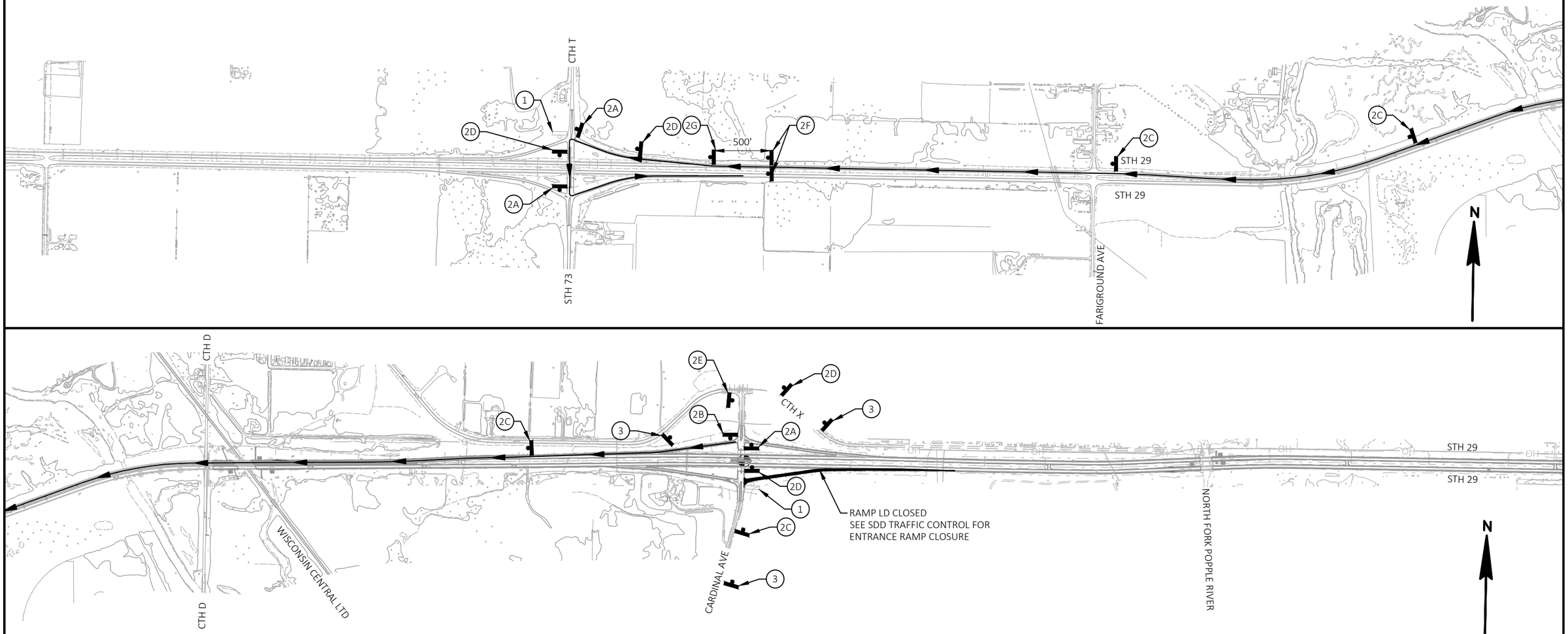
1 COVER SIGN

2 MO4-5 36"X18" TO EAST; M3-2 36"X18" EAST; M1-6 36"X36" 29

3 M3-2 36"X18" EAST; M1-6 36"X36" 29; W20-5SA 36"X36" RAMP CLOSED AHEAD

A M06-1 30"X30"
B M06-1 30"X30"
C M06-1 30"X30"
D MO5-1L 30"X30"
E MO5-1R 30"X30"
F MO5-2R 30"X30"
G MO6-2 30"X30"

DETOUR
SINGLE SIGN SINGLE PERM SUPPORT
EXISTING SINGLE SIGN SINGLE PERM SUPPORT
EXISTING SINGLE SIGN DOUBLE PERM SUPPORT



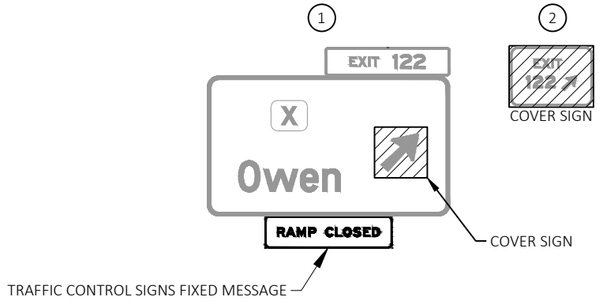
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	DETOUR - CARDINAL AVE EB ENTRANCE RAMP	SHEET 86	E

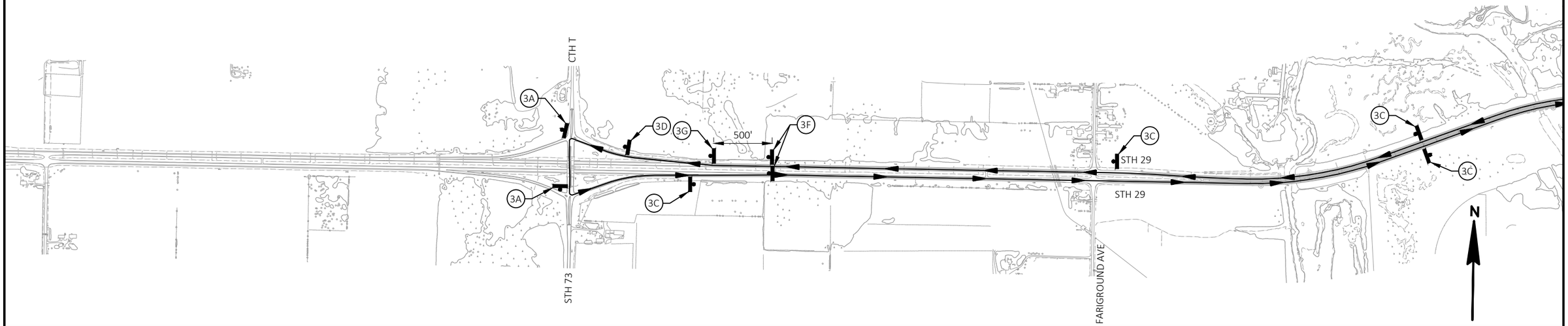
FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\027002-DT-CARDINAL EB ENTRANCE.DWG
LAYOUT NAME - 027002-dt-Cardinal EB Entrance

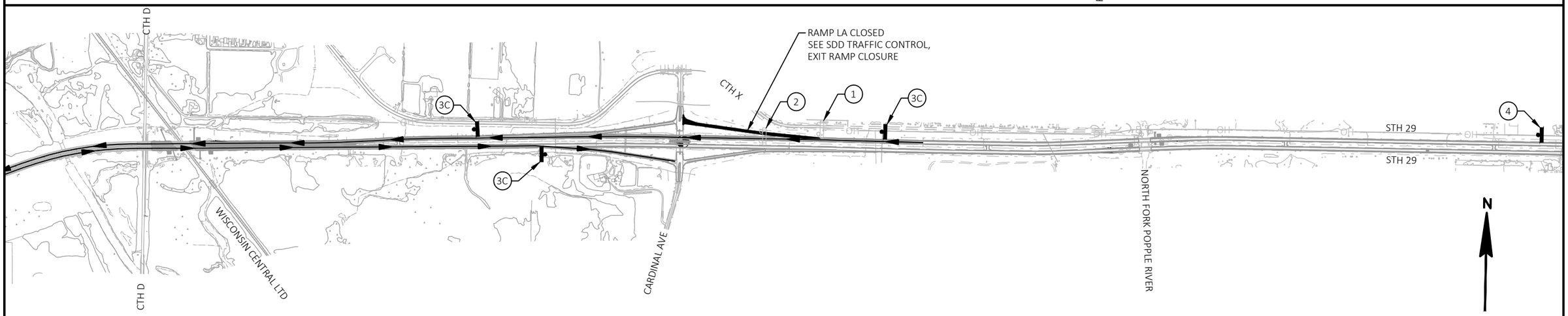
PLOT DATE : 11/18/2025 2:57 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

STH 29 WB EXIT RAMP CLOSURE AT CARDINAL AVE

2







PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	DETOUR - CARDINAL AVE WB EXIT RAMP	SHEET 87	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\027003-DT-CARDINAL WB EXIT.DWG
LAYOUT NAME - 027003-dt-Cardinal WB Exit

PLOT DATE : 11/18/2025 2:59 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

2

STH 29 WB ENTRANCE RAMP CLOSURE AT CARDINAL AVE

2

LEGEND

1 COVER SIGN

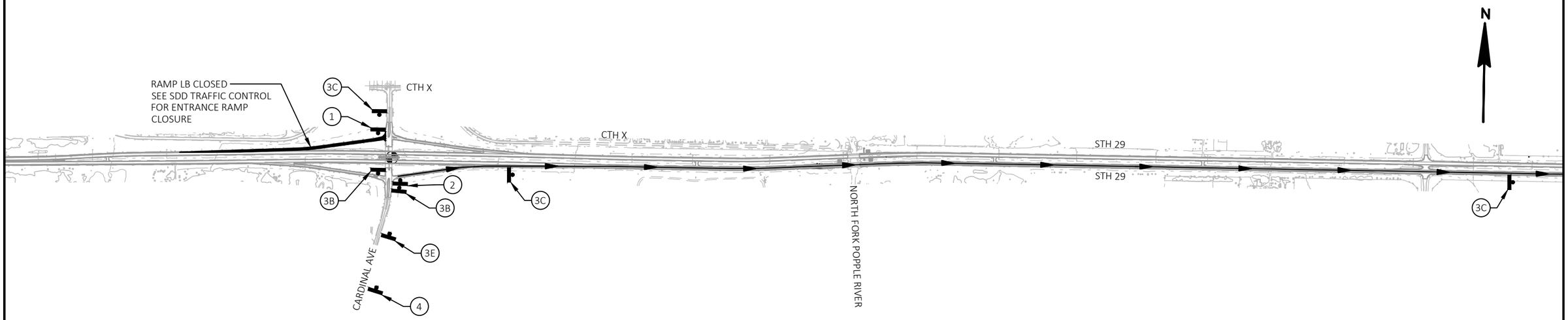
2 COVER SIGN

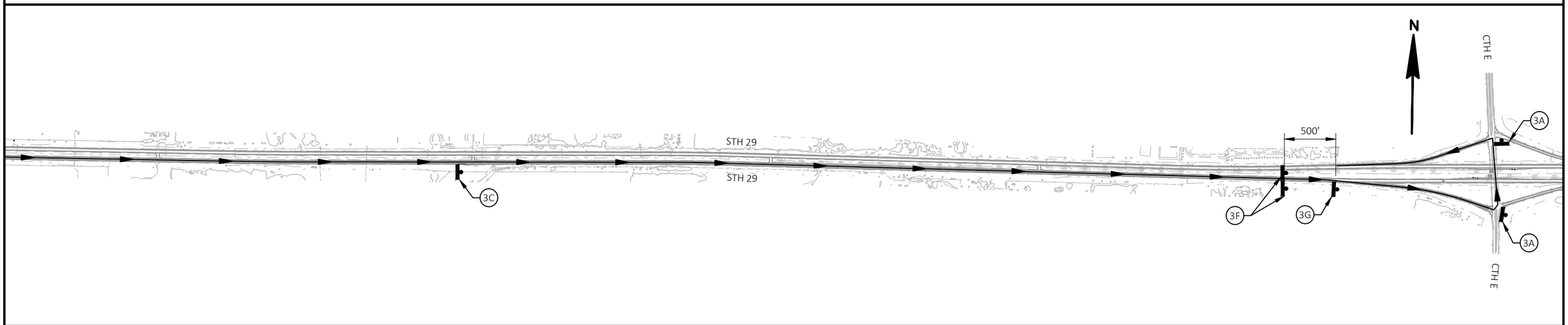
3
TO
M04-5
36"X18"
WEST
M3-4
36"X18"
29
M1-6
36"X36"

4
WEST
M3-4
36"X18"
29
M1-6
36"X36"
RAMP CLOSED AHEAD
W20-53A

A M06-1 30"X30"
B M06-1 30"X30"
C M06-1 30"X30"
D M05-1L 30"X30"
E M05-1R 30"X30"
F M05-2R 30"X30"
G M06-2 30"X30"

DETOUR
SINGLE SIGN SINGLE PERM SUPPORT
EXISTING SINGLE SIGN SINGLE PERM SUPPORT
EXISTING SINGLE SIGN DOUBLE PERM SUPPORT





PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	DETOUR - CARDINAL AVE WB ENTRANCE RAMP	SHEET 88	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\027004-DT-CARDINAL WB ENTRANCE.DWG
LAYOUT NAME - 027004-dt-Cardinal WB Entrance

PLOT DATE : 11/18/2025 3:00 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

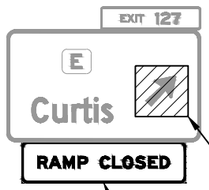
WISDOT/CADDS SHEET 44

STH 29 EB EXIT RAMP CLOSURE AT CTH E

LEGEND

1


TRAFFIC CONTROL SIGNS FIXED MESSAGE

2


COVER SIGN
TRAFFIC CONTROL SIGNS FIXED MESSAGE

3


COVER SIGN

4


MO4-5 36"X18"
M1-5A 36"X36"

5


M1-5A 36"X36"
W20-5aA

A  M06-1 30"X30"

B  M06-1 30"X30"

C  M06-1 30"X30"

D  MO5-1L 30"X30"

E  MO5-1R 30"X30"

F  MO5-2R 30"X30"

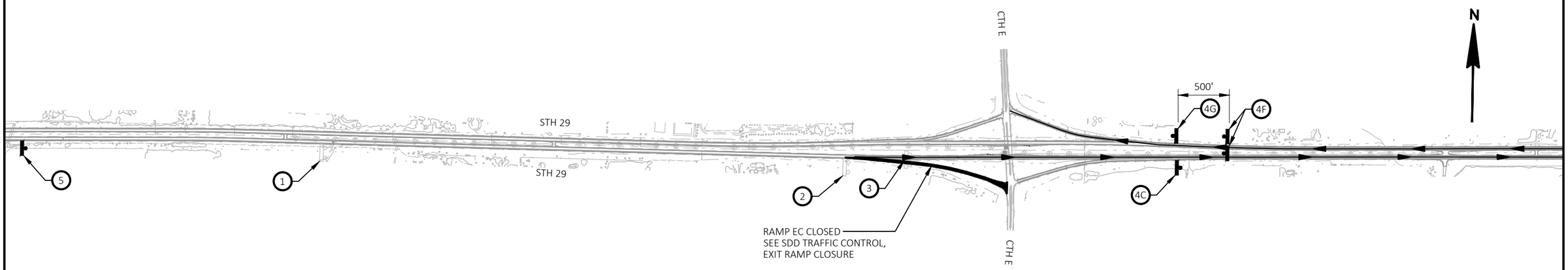
G  MO6-2 30"X30"

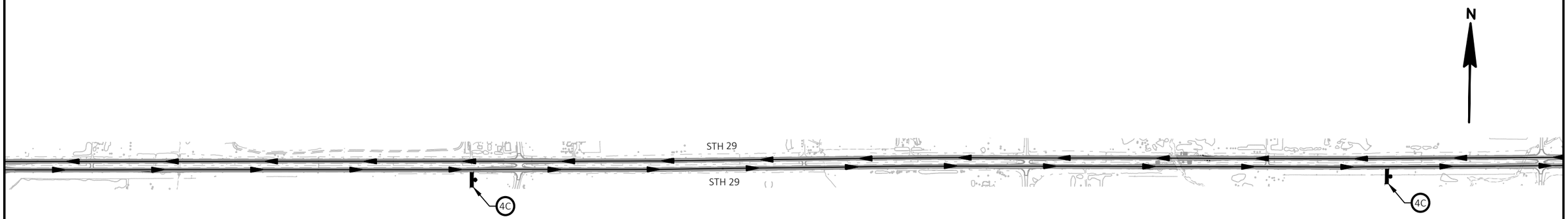
DETOUR

SINGLE SIGN SINGLE PERM SUPPORT

EXISTING SINGLE SIGN SINGLE PERM SUPPORT

EXISTING SINGLE SIGN DOUBLE PERM SUPPORT





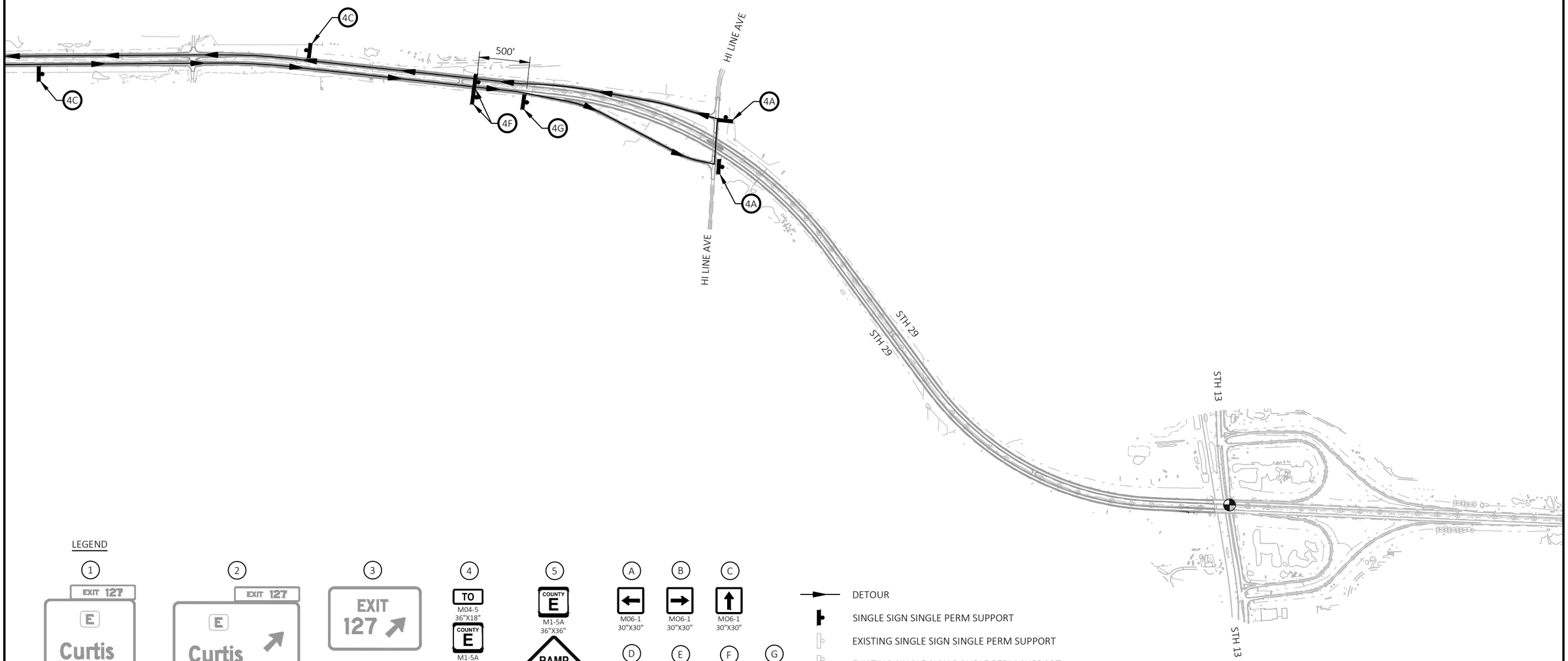
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	DETOUR - CTH E EB EXIT RAMP	SHEET 89	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\027005-DT- CTH E EB EXIT.DWG
LAYOUT NAME - 027005-dt- CTH E EB Exit

PLOT DATE : 11/18/2025 3:00 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

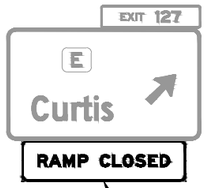
2



LEGEND

1


TRAFFIC CONTROL SIGNS FIXED MESSAGE

2


TRAFFIC CONTROL SIGNS FIXED MESSAGE

3

4


5


A

M06-1
30"X30"

B

M06-1
30"X30"

C

M06-1
30"X30"

D

M05-1L
30"X30"

E

M05-1R
30"X30"

F

M05-2R
30"X30"

G

M06-2
30"X30"

DETOUR

SINGLE SIGN SINGLE PERM SUPPORT

EXISTING SINGLE SIGN SINGLE PERM SUPPORT

EXISTING SINGLE SIGN DOUBLE PERM SUPPORT

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	DETOUR - CTH E EB EXIT RAMP	SHEET 90	E

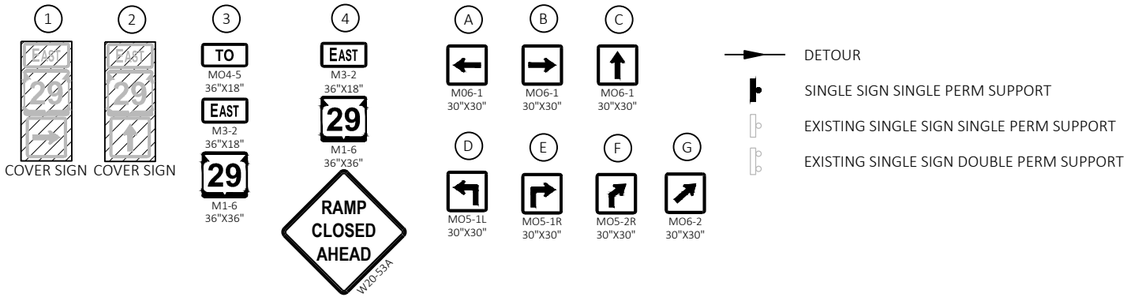
FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\027005-DT- CTH E EB EXIT.DWG
LAYOUT NAME - 027006-dt- CTH E EB Exit

PLOT DATE : 11/18/2025 3:01 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:1000 FT

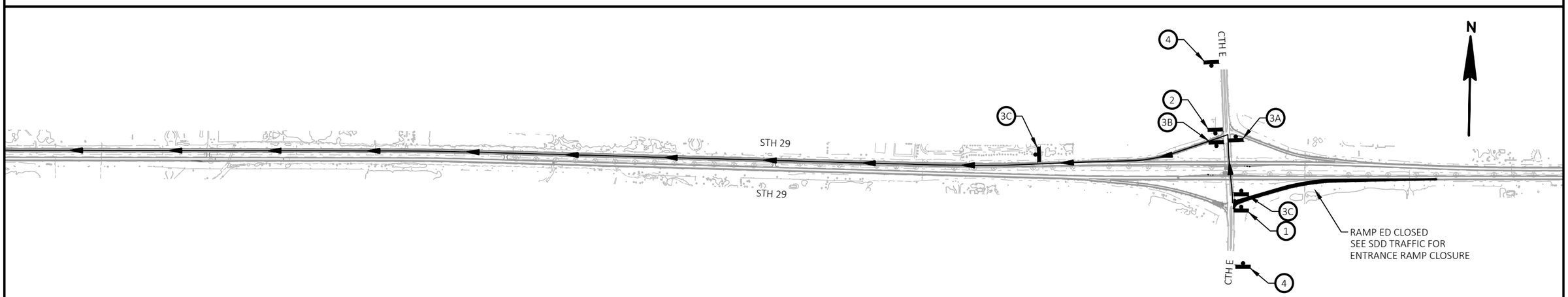
WISDOT/CADDS SHEET 44

STH 29 EB ENTRANCE RAMP CLOSURE AT CTH E

LEGEND







PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	DETOUR - CTH E EB ENTRANCE RAMP	SHEET 91	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\027007-DT- CTH E EB ENTRANCE.DWG
LAYOUT NAME - 027007-dt- CTH E EB Entrance

PLOT DATE : 11/18/2025 3:01 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

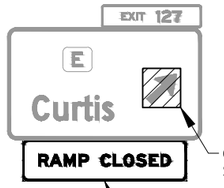
WISDOT/CADDS SHEET 44

STH 29 WB EXIT RAMP CLOSURE AT CTH E

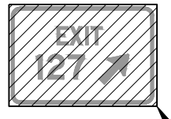
LEGEND

1


TRAFFIC CONTROL SIGNS FIXED MESSAGE

2


COVER SIGN
TRAFFIC CONTROL SIGNS FIXED MESSAGE

3


COVER SIGN

4


MO4-5 36"X18"
M1-5A 36"X36"

5


M1-5A 36"X36"
W20-5A

A  M06-1 30"X30"

B  M06-1 30"X30"

C  M06-1 30"X30"

D  M05-1L 30"X30"

E  M05-1R 30"X30"

F  M05-2R 30"X30"

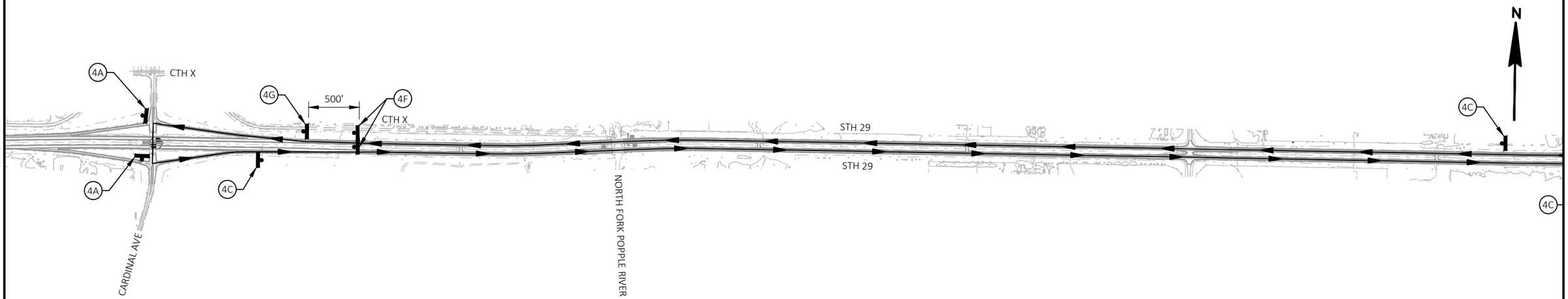
G  M06-2 30"X30"

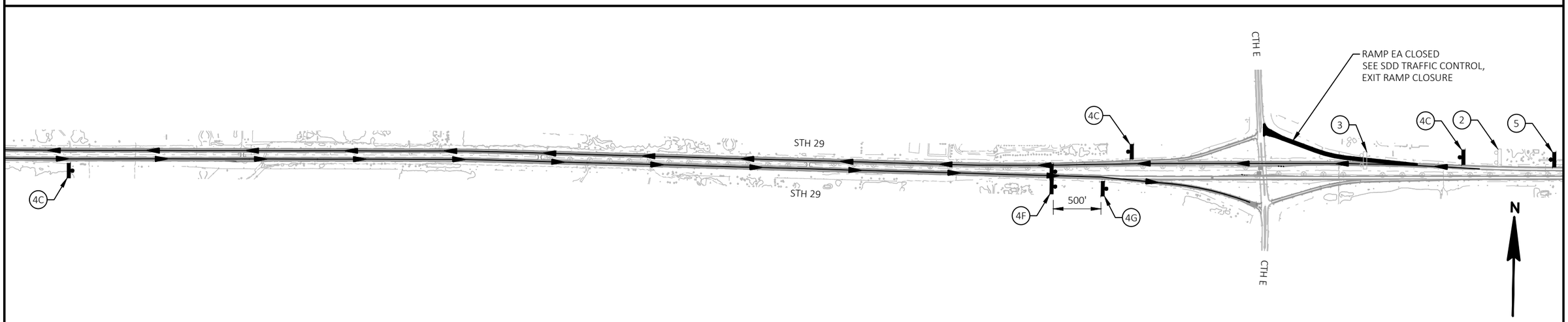
DETOUR

SINGLE SIGN SINGLE PERM SUPPORT

EXISTING SINGLE SIGN SINGLE PERM SUPPORT

EXISTING SINGLE SIGN DOUBLE PERM SUPPORT





PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	DETOUR - CTH E WB EXIT RAMP	SHEET 92	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\027008-DT- CTH E WB EXIT.DWG
LAYOUT NAME - 027008-dt- CTH E WB Exit

PLOT DATE : 11/18/2025 3:02 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

STH 29 WB ENTRANCE RAMP CLOSURE AT CTH E

2

LEGEND

1 — WEST 29 — COVER SIGN

2 — WEST 29 — COVER SIGN

3 — TO MO4-5 36"X18" / WEST M3-4 36"X18" / 29 M1-6 36"X36"

4 — COUNTY E M1-5A 36"X36" / RAMP CLOSED AHEAD W20-5A

A — M06-1 30"X30"

B — M06-1 30"X30"

C — M06-1 30"X30"

D — MO5-1L 30"X30"

E — MO5-1R 30"X30"

F — MO5-2R 30"X30"

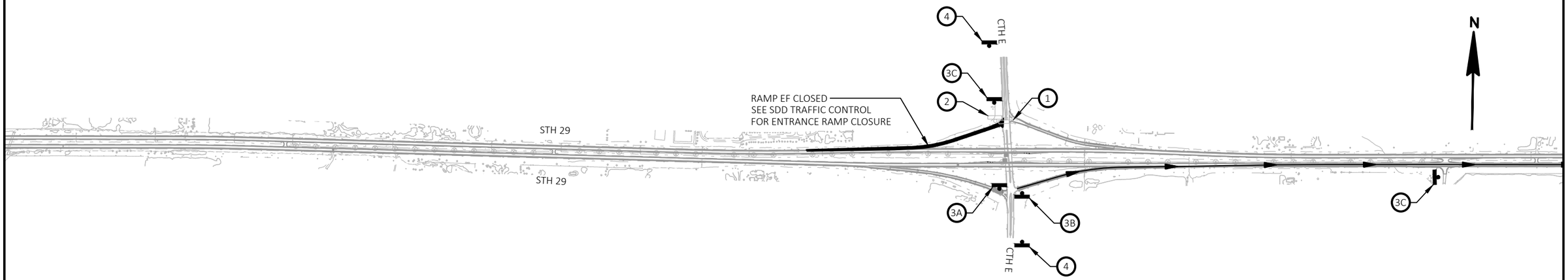
G — MO6-2 30"X30"

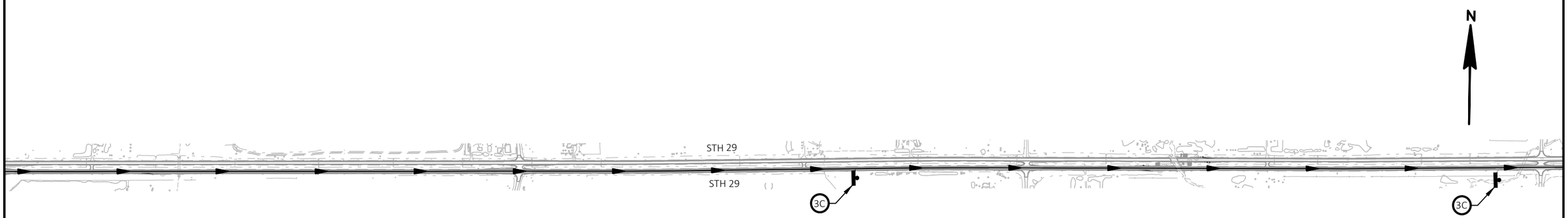
DETOUR

SINGLE SIGN SINGLE PERM SUPPORT

EXISTING SINGLE SIGN SINGLE PERM SUPPORT

EXISTING SINGLE SIGN DOUBLE PERM SUPPORT



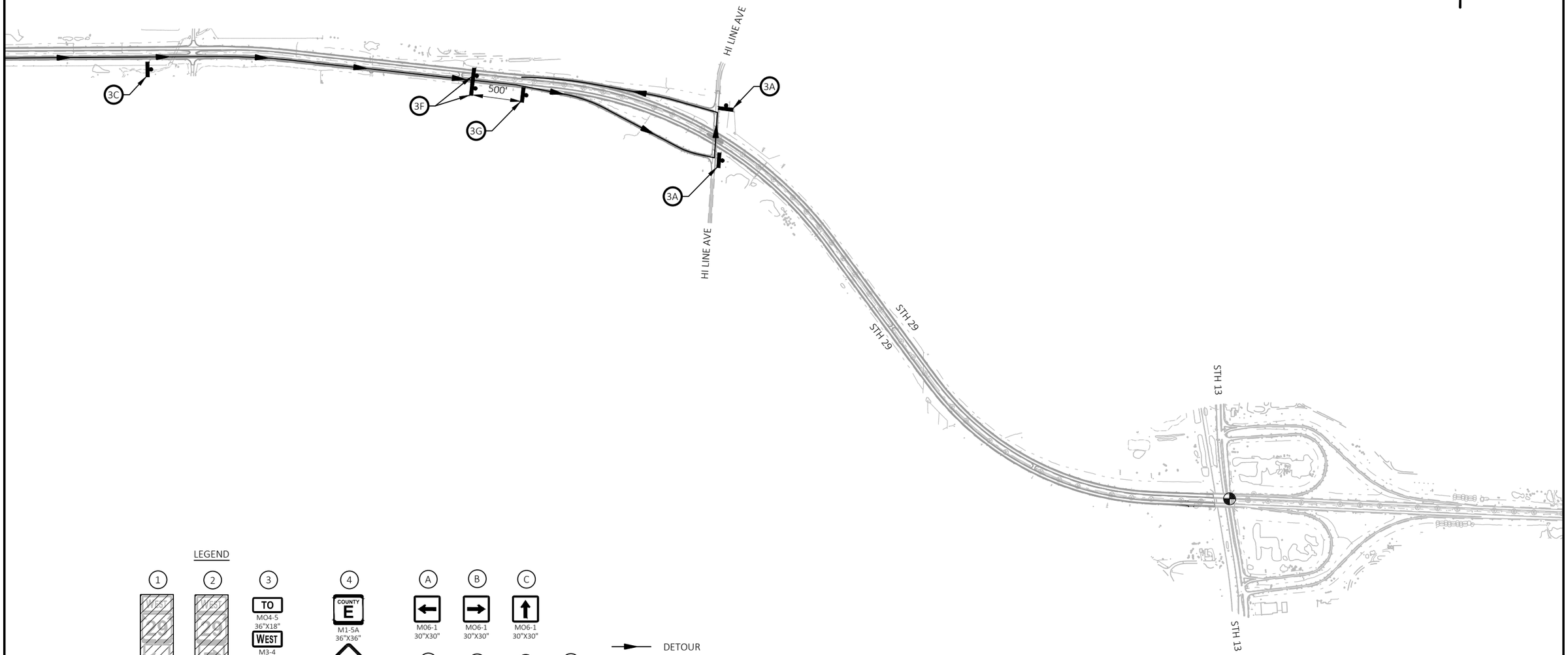


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	DETOUR - CTH E WB ENTRANCE RAMP	SHEET 93	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\027009-DT- CTH E WB ENTRANCE.DWG
LAYOUT NAME - 027009-dt- CTH E WB Entrance

PLOT DATE : 11/18/2025 3:02 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

2



LEGEND

1 COVER SIGN — WEST 29 (OVERLAY)

2 COVER SIGN — WEST 29

3 — TO (MO4-5 36"X18") / WEST (M3-4 36"X18") / 29 (M1-6 36"X36")

4 — COUNTY E (M1-5A 36"X36") / RAMP CLOSED AHEAD (W20-3A)

A — M06-1 30"X30"

B — M06-1 30"X30"

C — M06-1 30"X30"

D — MO5-1L 30"X30"

E — MO5-1R 30"X30"

F — MO5-2R 30"X30"

G — MO6-2 30"X30"

DETOUR

SINGLE SIGN SINGLE PERM SUPPORT

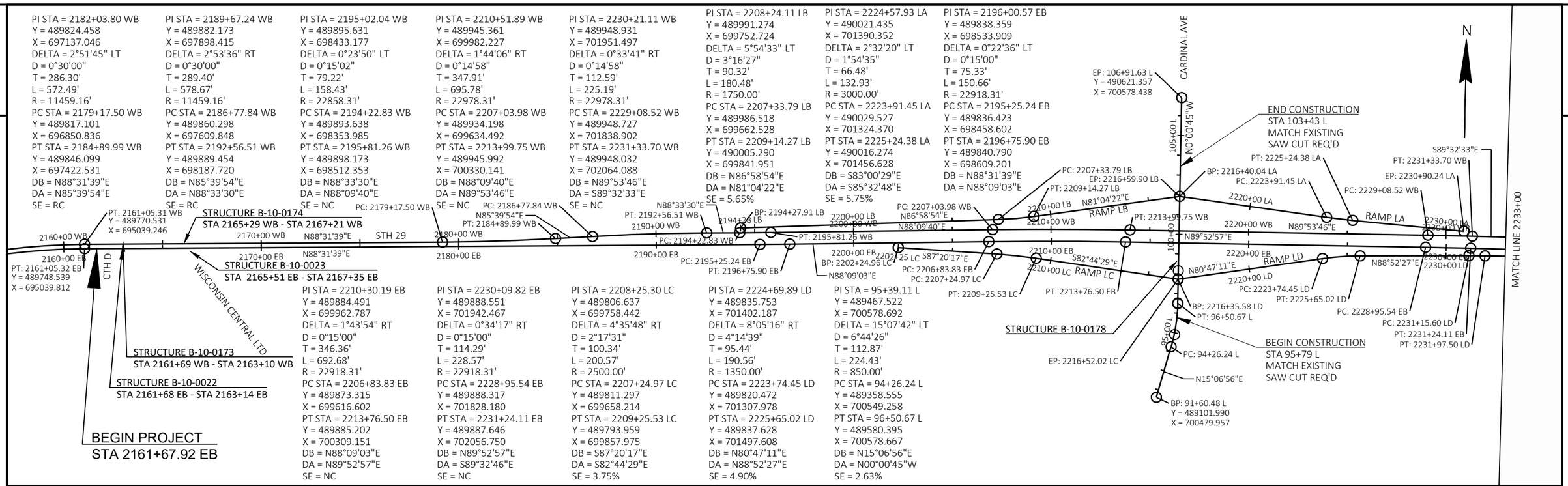
EXISTING SINGLE SIGN SINGLE PERM SUPPORT

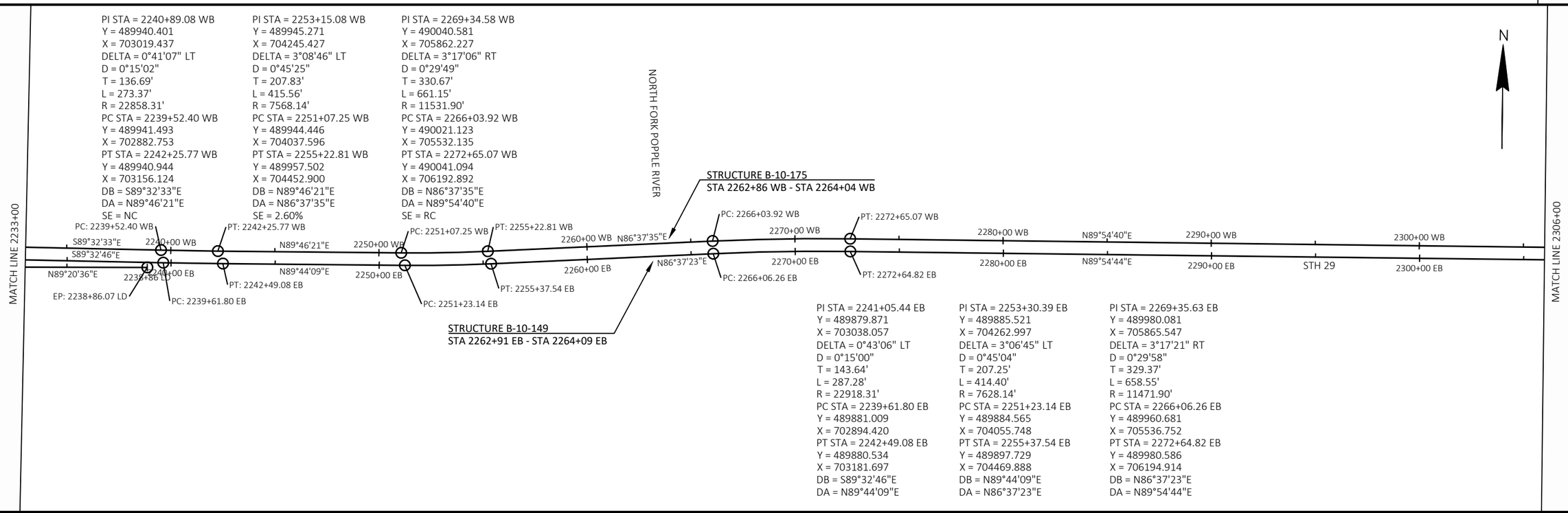
EXISTING SINGLE SIGN DOUBLE PERM SUPPORT

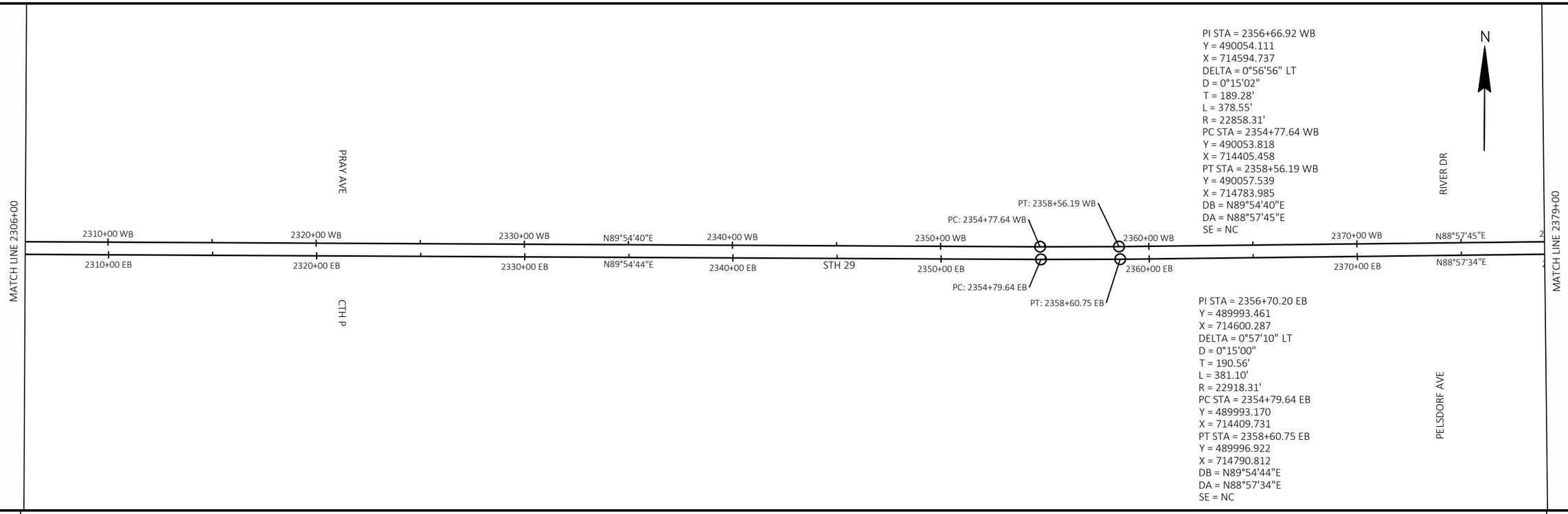
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	DETOUR - CTH E WB ENTRANCE RAMP	SHEET 94	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\027009-DT- CTH E WB ENTRANCE.DWG
LAYOUT NAME - 027010-dt- CTH E WB Entrance

PLOT DATE : 11/18/2025 3:03 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:1000 FT

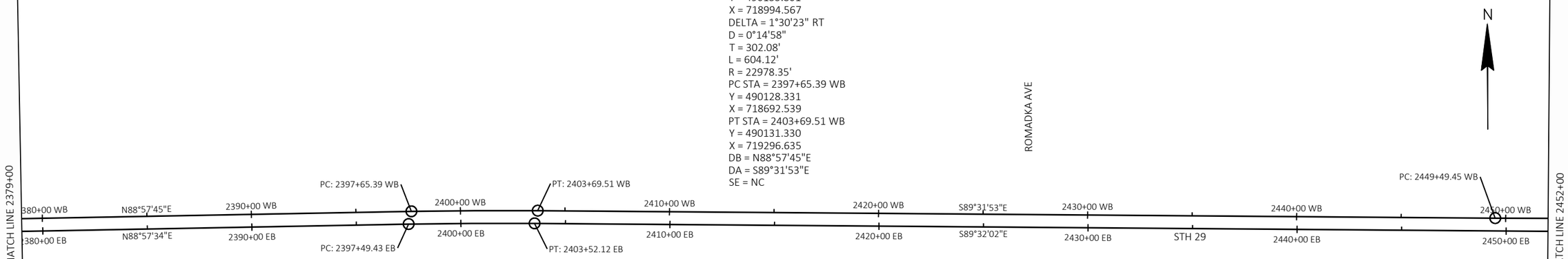

PI STA = 2182+03.80 WB
Y = 489824.458
X = 697137.046
DELTA = 2°51'45" LT
D = 0°30'00"
T = 286.30'
L = 572.49'
R = 11459.16'
PC STA = 2179+17.50 WB
Y = 489817.101
X = 696850.836
PT STA = 2184+89.99 WB
Y = 489846.099
X = 697422.531
DB = N88°31'39"E
DA = N85°39'54"E
SE = RC
PI STA = 2189+67.24 WB
Y = 489882.173
X = 697898.415
DELTA = 2°53'36" RT
D = 0°30'00"
T = 289.40'
L = 578.67'
R = 11459.16'
PC STA = 2186+77.84 WB
Y = 489860.298
X = 697609.848
PT STA = 2192+56.51 WB
Y = 489889.454
X = 698187.720
DB = N85°39'54"E
DA = N88°33'30"E
SE = RC
PI STA = 2195+02.04 WB
Y = 489895.631
X = 698433.177
DELTA = 0°23'50" LT
D = 0°15'02"
T = 79.22'
L = 158.43'
R = 22858.31'
PC STA = 2194+22.83 WB
Y = 489893.638
X = 698353.985
PT STA = 2195+81.26 WB
Y = 489898.173
X = 698512.353
DB = N88°33'30"E
DA = N88°09'40"E
SE = NC
PI STA = 2210+51.89 WB
Y = 489945.361
X = 699982.227
DELTA = 1°44'06" RT
D = 0°14'58"
T = 347.91'
L = 695.78'
R = 22978.31'
PC STA = 2207+03.98 WB
Y = 489934.198
X = 699634.492
PT STA = 2213+99.75 WB
Y = 489945.992
X = 700330.141
DB = N88°09'40"E
DA = N89°53'46"E
SE = NC
PI STA = 2230+21.11 WB
Y = 489948.931
X = 701951.497
DELTA = 0°33'41" RT
D = 0°14'58"
T = 112.59'
L = 225.19'
R = 22978.31'
PC STA = 2229+08.52 WB
Y = 489948.727
X = 701838.902
PT STA = 2231+33.70 WB
Y = 489948.032
X = 702064.088
DB = N89°53'46"E
DA = S89°32'33"E
SE = NC
PI STA = 2208+24.11 LB
Y = 489991.274
X = 699752.724
DELTA = 5°54'33" LT
D = 3°16'27"
T = 90.32'
L = 180.48'
R = 1750.00'
PC STA = 2207+33.79 LB
Y = 489986.518
X = 699662.528
PT STA = 2209+14.27 LB
Y = 490005.290
X = 699841.951
DB = N86°58'54"E
DA = N81°04'22"E
SE = 5.65%
PI STA = 2224+57.93 LA
Y = 490021.435
X = 701390.352
DELTA = 2°32'20" LT
D = 1°54'35"
T = 66.48'
L = 132.93'
R = 3000.00'
PC STA = 2223+91.45 LA
Y = 490029.527
X = 701324.370
PT STA = 2225+24.38 LA
Y = 490016.274
X = 701456.628
DB = S83°00'29"E
DA = S85°32'48"E
SE = 5.75%
PI STA = 2196+00.57 EB
Y = 489838.359
X = 698533.909
DELTA = 0°22'36" LT
D = 0°15'00"
T = 75.33'
L = 150.66'
R = 22918.31'
PC STA = 2195+25.24 EB
Y = 489836.423
X = 698458.602
PT STA = 2196+75.90 EB
Y = 489840.790
X = 698609.201
DB = N88°31'39"E
DA = N88°09'03"E
SE = 5.75%
PI STA = 2210+30.19 EB
Y = 489884.491
X = 699962.787
DELTA = 1°43'54" RT
D = 0°15'00"
T = 346.36'
L = 692.68'
R = 22918.31'
PC STA = 2206+83.83 EB
Y = 489873.315
X = 699616.602
PT STA = 2213+76.50 EB
Y = 489885.202
X = 700309.151
DB = N88°09'03"E
DA = N89°52'57"E
SE = NC
PI STA = 2230+09.82 EB
Y = 489888.551
X = 701942.467
DELTA = 0°34'17" RT
D = 0°15'00"
T = 114.29'
L = 228.57'
R = 22918.31'
PC STA = 2228+95.54 EB
Y = 489888.317
X = 701828.180
PT STA = 2231+24.11 EB
Y = 489887.646
X = 702056.750
DB = N89°52'57"E
DA = S89°32'46"E
SE = NC
PI STA = 2208+25.30 LC
Y = 489806.637
X = 699758.442
DELTA = 4°35'48" RT
D = 2°17'31"
T = 100.34'
L = 200.57'
R = 2500.00'
PC STA = 2207+24.97 LC
Y = 489811.297
X = 699658.214
PT STA = 2209+25.53 LC
Y = 489793.959
X = 699857.975
DB = S87°20'17"E
DA = S82°44'29"E
SE = 3.75%
PI STA = 2224+69.89 LD
Y = 489835.753
X = 701402.187
DELTA = 8°05'16" RT
D = 4°14'39"
T = 95.44'
L = 190.56'
R = 1350.00'
PC STA = 2223+74.45 LD
Y = 489820.472
X = 701307.978
PT STA = 2225+65.02 LD
Y = 489837.628
X = 701497.608
DB = N80°47'11"E
DA = N88°52'27"E
SE = 4.90%
PI STA = 95+39.11 L
Y = 489467.522
X = 700578.692
DELTA = 15°07'42" LT
D = 6°44'26"
T = 112.87'
L = 224.43'
R = 850.00'
PC STA = 94+26.24 L
Y = 489358.555
X = 700549.258
PT STA = 96+50.67 L
Y = 489580.395
X = 700578.667
DB = N15°06'56"E
DA = N00°00'45"W
SE = 2.63%
STRUCTURE B-10-0174
STA 2165+29 WB - STA 2167+21 WB
STRUCTURE B-10-0023
STA 2165+51 EB - STA 2167+35 EB
STRUCTURE B-10-0173
STA 2161+69 WB - STA 2163+10 WB
STRUCTURE B-10-0022
STA 2161+68 EB - STA 2163+14 EB
BEGIN PROJECT
STA 2161+67.92 EB
PT: 2161+05.31 WB
Y = 489770.531
X = 695039.246
PT: 2161+05.32 EB
Y = 489748.539
X = 695039.812
CTH D
STH 29
WISCONSIN CENTRAL LTD
N88°31'39"E
2160+00 WB
2160+00 EB
2170+00 WB
2170+00 EB
2180+00 WB
2180+00 EB
2190+00 WB
2190+00 EB
2200+00 LB
2200+00 WB
2200+00 EB
2210+00 LB
2210+00 WB
2210+00 EB
2220+00 LA
2220+00 WB
2220+00 EB
2230+00 LA
2230+00 WB
2230+00 EB
PC: 2179+17.50 WB
PC: 2186+77.84 WB
N85°39'54"E
PT: 2184+89.99 WB
N88°33'30"E
PT: 2192+56.51 WB
BP: 2194+27.91 LB
2194+28 LB
PC: 2194+22.83 WB
PT: 2195+81.25 WB
PC: 2195+25.24 EB
PT: 2196+75.90 EB
N88°09'03"E
PC: 2207+03.98 WB
N86°58'54"E
PC: 2206+83.83 EB
PC: 2207+24.97 LC
2202+25 LC
S87°20'17"E
BP: 2202+24.96 LC
PT: 2209+25.53 LC
PC: 2207+33.79 LB
EP: 2216+59.90 LB
PT: 2209+14.27 LB
N81°04'22"E
RAMP LB
PT: 2213+99.75 WB
N89°09'40"E
N89°52'57"E
S82°44'29"E
2210+00 LC
RAMP LC
PT: 2213+76.50 EB
N89°53'46"E
RAMP LA
PC: 2223+91.45 LA
BP: 2216+40.04 LA
PT: 2225+24.38 LA
PC: 2229+08.52 WB
EP: 2230+90.24 LA
S89°32'33"E
PT: 2231+33.70 WB
N80°47'11"E
RAMP LD
PT: 2223+74.45 LD
PC: 2223+91.45 LD
PT: 2225+65.02 LD
PC: 2228+95.54 EB
PC: 2231+15.60 LD
PT: 2231+24.11 EB
PT: 2231+97.50 LD
N88°52'27"E
2230+00 LD
2230+00 EB
BP: 2216+35.58 LD
PT: 96+50.67 L
STRUCTURE B-10-0178
EP: 2216+52.02 LC
PC: 94+26.24 L
N15°06'56"E
BP: 91+60.48 L
Y = 489101.990
X = 700479.957
EP: 106+91.63 L
Y = 490621.357
X = 700578.438
CARDINAL AVE
N00°00'45"W
105+00 L
100+00 L
95+00 L
END CONSTRUCTION
STA 103+43 L
MATCH EXISTING
SAW CUT REQ'D
BEGIN CONSTRUCTION
STA 95+79 L
MATCH EXISTING
SAW CUT REQ'D
N
MATCH LINE 2233+00


PI STA = 2240+89.08 WB
Y = 489940.401
X = 703019.437
DELTA = 0°41'07" LT
D = 0°15'02"
T = 136.69'
L = 273.37'
R = 22858.31'
PC STA = 2239+52.40 WB
Y = 489941.493
X = 702882.753
PT STA = 2242+25.77 WB
Y = 489940.944
X = 703156.124
DB = S89°32'33"E
DA = N89°46'21"E
SE = NC
PI STA = 2253+15.08 WB
Y = 489945.271
X = 704245.427
DELTA = 3°08'46" LT
D = 0°45'25"
T = 207.83'
L = 415.56'
R = 7568.14'
PC STA = 2251+07.25 WB
Y = 489944.446
X = 704037.596
PT STA = 2255+22.81 WB
Y = 489957.502
X = 704452.900
DB = N89°46'21"E
DA = N86°37'35"E
SE = 2.60%
PI STA = 2269+34.58 WB
Y = 490040.581
X = 705862.227
DELTA = 3°17'06" RT
D = 0°29'49"
T = 330.67'
L = 661.15'
R = 11531.90'
PC STA = 2266+03.92 WB
Y = 490021.123
X = 705532.135
PT STA = 2272+65.07 WB
Y = 490041.094
X = 706192.892
DB = N86°37'35"E
DA = N89°54'40"E
SE = RC
NORTH FORK POPPLE RIVER
STRUCTURE B-10-175
STA 2262+86 WB - STA 2264+04 WB
STRUCTURE B-10-149
STA 2262+91 EB - STA 2264+09 EB
MATCH LINE 2233+00
MATCH LINE 2306+00
S89°32'33"E
S89°32'46"E
N89°20'36"E
2240+00 WB
2238+86 LD
2240+00 EB
EP: 2238+86.07 LD
PC: 2239+61.80 EB
PT: 2242+25.77 WB
PT: 2242+49.08 EB
N89°46'21"E
N89°44'09"E
2250+00 WB
2250+00 EB
PC: 2251+07.25 WB
PC: 2251+23.14 EB
PT: 2255+22.81 WB
PT: 2255+37.54 EB
2260+00 WB
2260+00 EB
N86°37'35"E
N86°37'23"E
PC: 2266+03.92 WB
PC: 2266+06.26 EB
2270+00 WB
2270+00 EB
PT: 2272+65.07 WB
PT: 2272+64.82 EB
2280+00 WB
2280+00 EB
N89°54'40"E
N89°54'44"E
2290+00 WB
2290+00 EB
STH 29
2300+00 WB
2300+00 EB
N
PI STA = 2241+05.44 EB
Y = 489879.871
X = 703038.057
DELTA = 0°43'06" LT
D = 0°15'00"
T = 143.64'
L = 287.28'
R = 22918.31'
PC STA = 2239+61.80 EB
Y = 489881.009
X = 702894.420
PT STA = 2242+49.08 EB
Y = 489880.534
X = 703181.697
DB = S89°32'46"E
DA = N89°44'09"E
PI STA = 2253+30.39 EB
Y = 489885.521
X = 704262.997
DELTA = 3°06'45" LT
D = 0°45'04"
T = 207.25'
L = 414.40'
R = 7628.14'
PC STA = 2251+23.14 EB
Y = 489884.565
X = 704055.748
PT STA = 2255+37.54 EB
Y = 489897.729
X = 704469.888
DB = N89°44'09"E
DA = N86°37'23"E
PI STA = 2269+35.63 EB
Y = 489980.081
X = 705865.547
DELTA = 3°17'21" RT
D = 0°29'58"
T = 329.37'
L = 658.55'
R = 11471.90'
PC STA = 2266+06.26 EB
Y = 489960.681
X = 705536.752
PT STA = 2272+64.82 EB
Y = 489980.586
X = 706194.914
DB = N86°37'23"E
DA = N89°54'44"E



PI STA = 2356+66.92 WB
Y = 490054.111
X = 714594.737
DELTA = 0°56'56" LT
D = 0°15'02"
T = 189.28'
L = 378.55'
R = 22858.31'
PC STA = 2354+77.64 WB
Y = 490053.818
X = 714405.458
PT STA = 2358+56.19 WB
Y = 490057.539
X = 714783.985
DB = N89°54'40"E
DA = N88°57'45"E
SE = NC

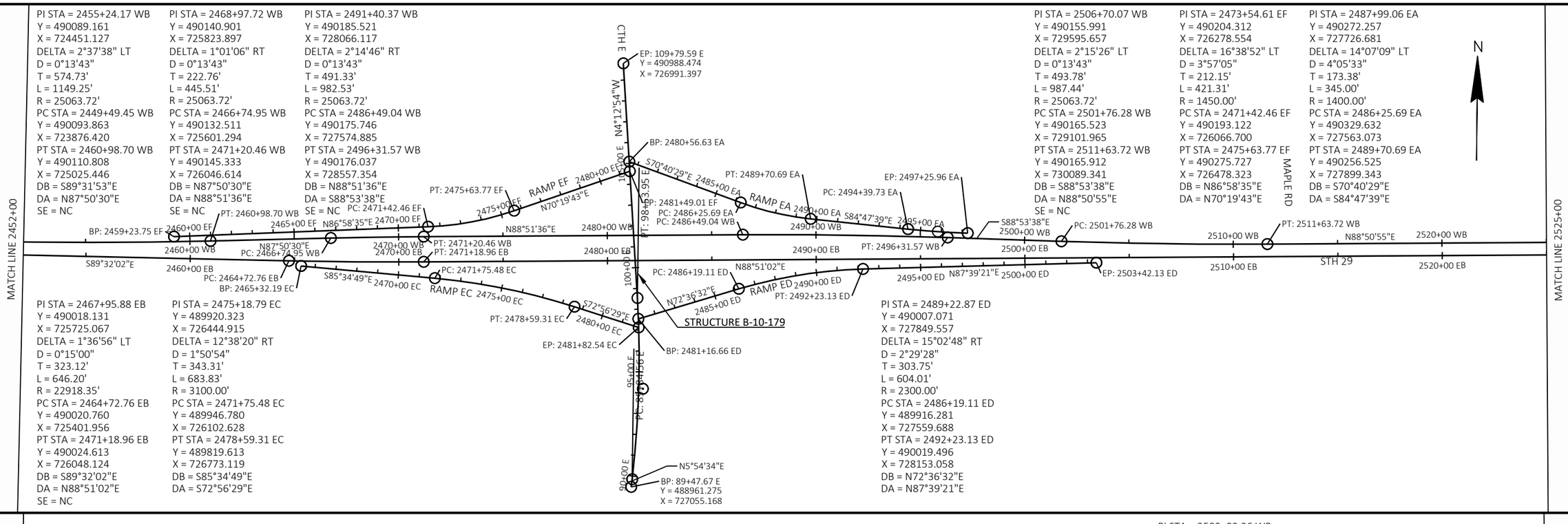
PI STA = 2356+70.20 EB
Y = 489993.461
X = 714600.287
DELTA = 0°57'10" LT
D = 0°15'00"
T = 190.56'
L = 381.10'
R = 22918.31'
PC STA = 2354+79.64 EB
Y = 489993.170
X = 714409.731
PT STA = 2358+60.75 EB
Y = 489996.922
X = 714790.812
DB = N89°54'44"E
DA = N88°57'34"E
SE = NC

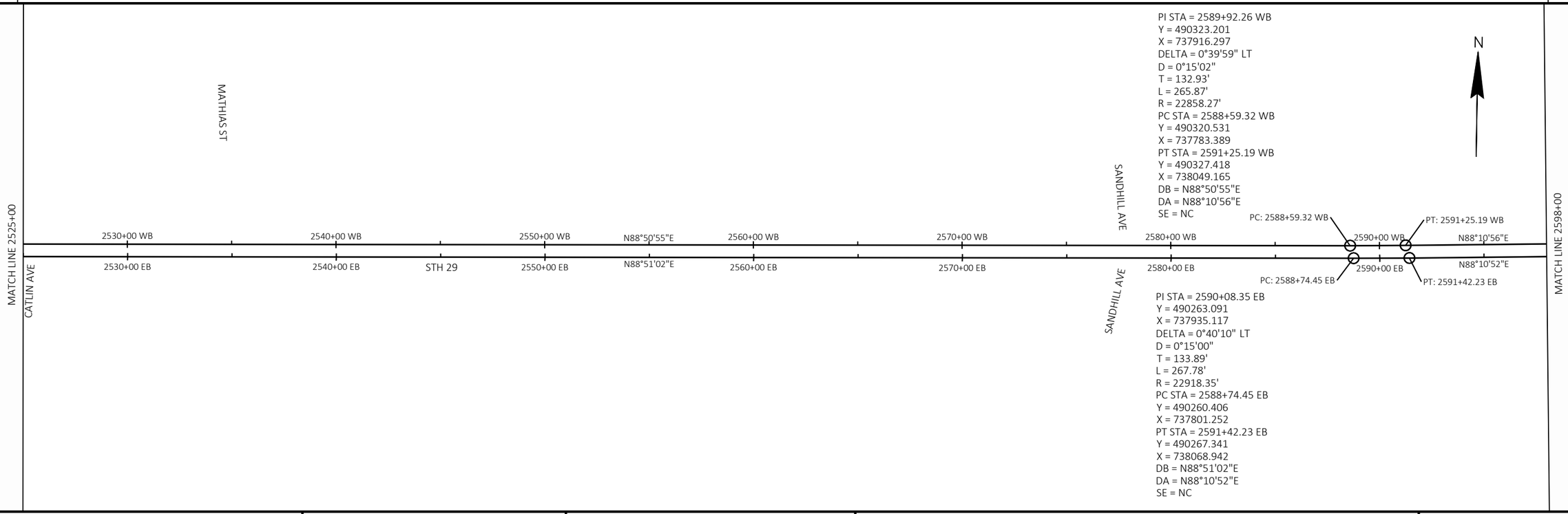


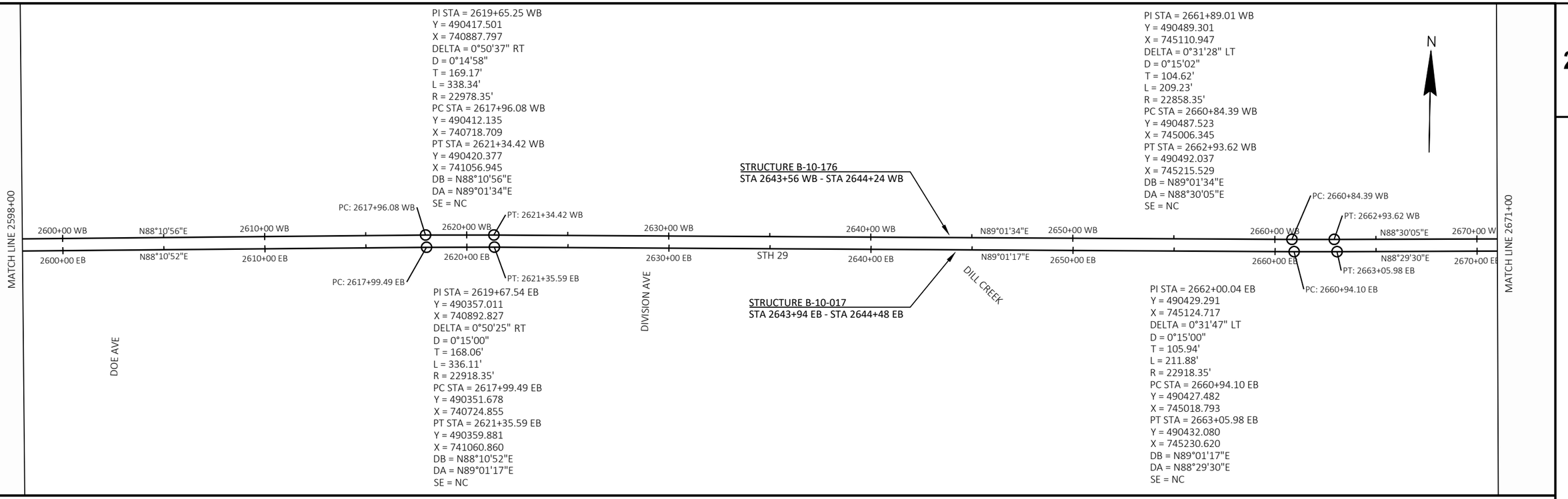
PI STA = 2400+67.46 WB
Y = 490133.801
X = 718994.567
DELTA = 1°30'23" RT
D = 0°14'58"
T = 302.08'
L = 604.12'
R = 22978.35'
PC STA = 2397+65.39 WB
Y = 490128.331
X = 718692.539
PT STA = 2403+69.51 WB
Y = 490131.330
X = 719296.635
DB = N88°57'45"E
DA = S89°31'53"E
SE = NC

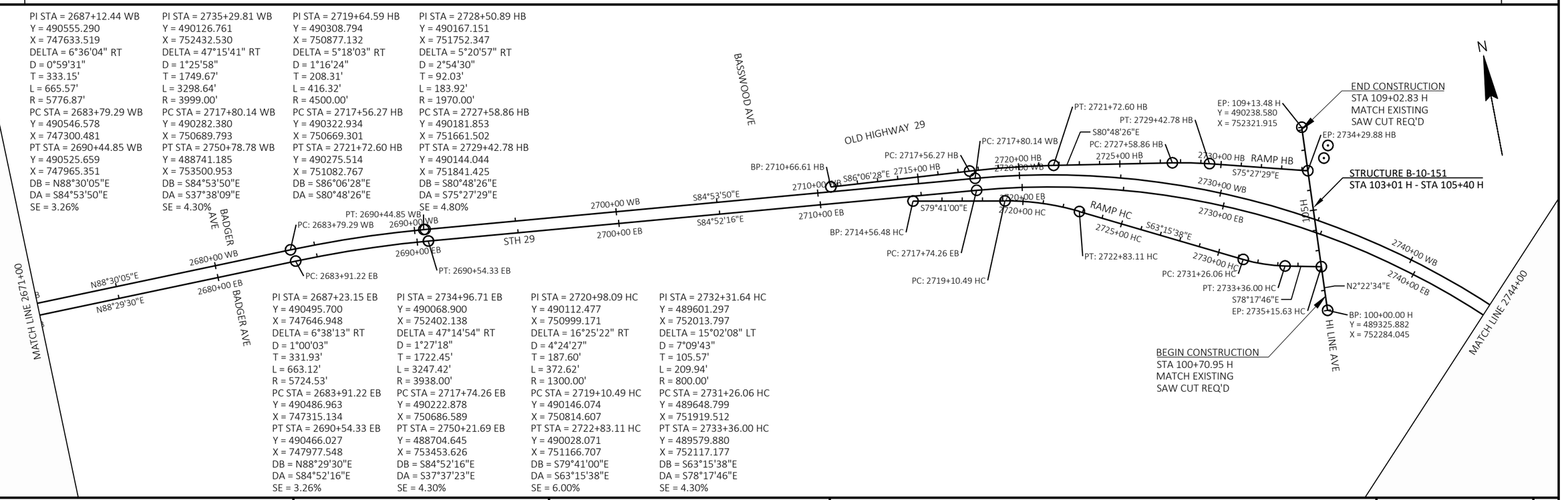
PI STA = 2400+50.79 EB
Y = 490073.011
X = 718980.167
DELTA = 1°30'24" RT
D = 0°15'00"
T = 301.36'
L = 602.68'
R = 22918.35'
PC STA = 2397+49.43 EB
Y = 490067.539
X = 718678.858
PT STA = 2403+52.12 EB
Y = 490070.559
X = 719281.516
DB = N88°57'34"E
DA = S89°32'02"E
SE = NC

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	ALIGNMENT DETAILS	SHEET 96	E

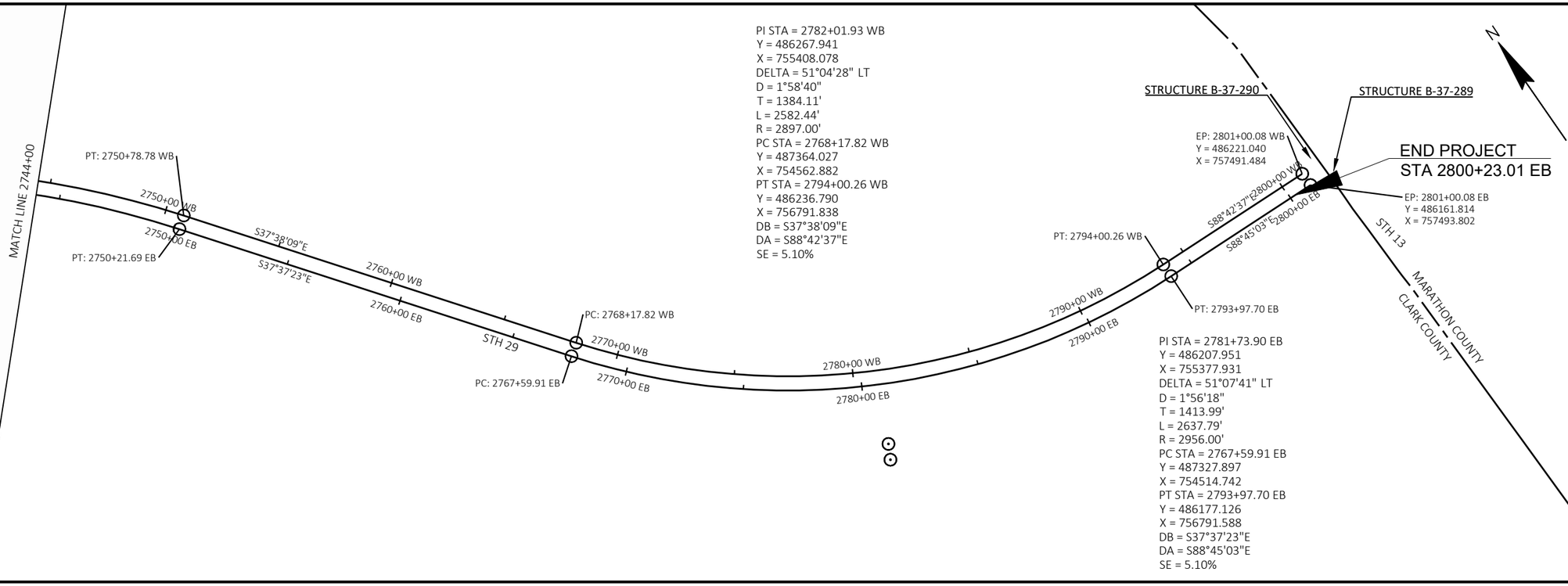

PI STA = 2455+24.17 WB
Y = 490089.161
X = 724451.127
DELTA = 2°37'38" LT
D = 0°13'43"
T = 574.73'
L = 1149.25'
R = 25063.72'
PC STA = 2449+49.45 WB
Y = 490093.863
X = 723876.420
PT STA = 2460+98.70 WB
Y = 490110.808
X = 725025.446
DB = S89°31'53"E
DA = N87°50'30"E
SE = NC
PI STA = 2468+97.72 WB
Y = 490140.901
X = 725823.897
DELTA = 1°01'06" RT
D = 0°13'43"
T = 222.76'
L = 445.51'
R = 25063.72'
PC STA = 2466+74.95 WB
Y = 490132.511
X = 725601.294
PT STA = 2471+20.46 WB
Y = 490145.333
X = 726046.614
DB = N87°50'30"E
DA = N88°51'36"E
SE = NC
PI STA = 2491+40.37 WB
Y = 490185.521
X = 728066.117
DELTA = 2°14'46" RT
D = 0°13'43"
T = 491.33'
L = 982.53'
R = 25063.72'
PC STA = 2486+49.04 WB
Y = 490175.746
X = 727574.885
PT STA = 2496+31.57 WB
Y = 490176.037
X = 728557.354
DB = N88°51'36"E
DA = S88°53'38"E
SE = NC
PI STA = 2506+70.07 WB
Y = 490155.991
X = 729595.657
DELTA = 2°15'26" LT
D = 0°13'43"
T = 493.78'
L = 987.44'
R = 25063.72'
PC STA = 2501+76.28 WB
Y = 490165.523
X = 729101.965
PT STA = 2511+63.72 WB
Y = 490165.912
X = 730089.341
DB = S88°53'38"E
DA = N88°50'55"E
SE = NC
PI STA = 2473+54.61 EF
Y = 490204.312
X = 726278.554
DELTA = 16°38'52" LT
D = 3°57'05"
T = 212.15'
L = 421.31'
R = 1450.00'
PC STA = 2471+42.46 EF
Y = 490193.122
X = 726066.700
PT STA = 2475+63.77 EF
Y = 490275.727
X = 726478.323
DB = N86°58'35"E
DA = N70°19'43"E
PI STA = 2487+99.06 EA
Y = 490272.257
X = 727726.681
DELTA = 14°07'09" LT
D = 4°05'33"
T = 173.38'
L = 345.00'
R = 1400.00'
PC STA = 2486+25.69 EA
Y = 490329.632
X = 727563.073
PT STA = 2489+70.69 EA
Y = 490256.525
X = 727899.343
DB = S70°40'29"E
DA = S84°47'39"E
SE = NC
PI STA = 2467+95.88 EB
Y = 490018.131
X = 725725.067
DELTA = 1°36'56" LT
D = 0°15'00"
T = 323.12'
L = 646.20'
R = 22918.35'
PC STA = 2464+72.76 EB
Y = 490020.760
X = 725401.956
PT STA = 2471+18.96 EB
Y = 490024.613
X = 726048.124
DB = S89°32'02"E
DA = N88°51'02"E
SE = NC
PI STA = 2475+18.79 EC
Y = 489920.323
X = 726444.915
DELTA = 12°38'20" RT
D = 1°50'54"
T = 343.31'
L = 683.83'
R = 3100.00'
PC STA = 2471+75.48 EC
Y = 489946.780
X = 726102.628
PT STA = 2478+59.31 EC
Y = 489819.613
X = 726773.119
DB = S85°34'49"E
DA = S72°56'29"E
PI STA = 2489+22.87 ED
Y = 490007.071
X = 727849.557
DELTA = 15°02'48" RT
D = 2°29'28"
T = 303.75'
L = 604.01'
R = 2300.00'
PC STA = 2486+19.11 ED
Y = 489916.281
X = 727559.688
PT STA = 2492+23.13 ED
Y = 490019.496
X = 728153.058
DB = N72°36'32"E
DA = N87°39'21"E
MATCH LINE 2452+00
MATCH LINE 2525+00
CTH E
N4°12'54"W
EP: 109+79.59 E
Y = 490988.474
X = 726991.397
BP: 2480+56.63 EA
100+00 E
PT: 98+53.95 E
BP: 89+47.67 E
Y = 488961.275
X = 727055.168
EP: 2481+82.54 EC
BP: 2481+16.66 ED
PC: 84+84.56 E
95+00 E
90+00 E
STRUCTURE B-10-179
RAMP EF
RAMP EA
RAMP EC
RAMP ED
PT: 2475+63.77 EF
PC: 2471+42.46 EF
BP: 2459+23.75 EF
PT: 2460+98.70 WB
PC: 2466+74.95 WB
PC: 2464+72.76 EB
BP: 2465+32.19 EC
PT: 2471+20.46 WB
PT: 2471+18.96 EB
PC: 2471+75.48 EC
PT: 2478+59.31 EC
PC: 2486+19.11 ED
PT: 2492+23.13 ED
PT: 2489+70.69 EA
PC: 2494+39.73 EA
EP: 2497+25.96 EA
PC: 2501+76.28 WB
PT: 2511+63.72 WB
PC: 2486+25.69 EA
PC: 2486+49.04 WB
PT: 2496+31.57 WB
EP: 2503+42.13 ED
N70°19'43"E
N86°58'35"E
N87°50'30"E
S89°32'02"E
S85°34'49"E
S72°56'29"E
N72°36'32"E
S84°47'39"E
N87°39'21"E
S88°53'38"E
N88°50'55"E
N88°51'36"E
N88°51'02"E
S70°40'29"E
MAPLE RD
STH 29
2460+00 EF
2465+00 EF
2470+00 EF
2475+00 EF
2480+00 EF
2485+00 EA
2490+00 EA
2495+00 EA
2500+00 EB
2510+00 WB
2520+00 WB
2460+00 WB
2470+00 WB
2480+00 WB
2490+00 WB
2500+00 WB
2510+00 EB
2520+00 EB
2460+00 EB
2470+00 EB
2480+00 EB
2490+00 EB
2495+00 ED
2500+00 ED
N


PI STA = 2589+92.26 WB
Y = 490323.201
X = 737916.297
DELTA = 0°39'59" LT
D = 0°15'02"
T = 132.93'
L = 265.87'
R = 22858.27'
PC STA = 2588+59.32 WB
Y = 490320.531
X = 737783.389
PT STA = 2591+25.19 WB
Y = 490327.418
X = 738049.165
DB = N88°50'55"E
DA = N88°10'56"E
SE = NC
PI STA = 2590+08.35 EB
Y = 490263.091
X = 737935.117
DELTA = 0°40'10" LT
D = 0°15'00"
T = 133.89'
L = 267.78'
R = 22918.35'
PC STA = 2588+74.45 EB
Y = 490260.406
X = 737801.252
PT STA = 2591+42.23 EB
Y = 490267.341
X = 738068.942
DB = N88°51'02"E
DA = N88°10'52"E
SE = NC
MATCH LINE 2525+00
MATCH LINE 2598+00
MATHIAS ST
CATLIN AVE
SANDHILL AVE
SANDHILL AVE
PC: 2588+59.32 WB
PT: 2591+25.19 WB
PC: 2588+74.45 EB
PT: 2591+42.23 EB
N88°50'55"E
N88°51'02"E
N88°10'56"E
N88°10'52"E
STH 29
2530+00 WB
2540+00 WB
2550+00 WB
2560+00 WB
2570+00 WB
2580+00 WB
2590+00 WB
2530+00 EB
2540+00 EB
2550+00 EB
2560+00 EB
2570+00 EB
2580+00 EB
2590+00 EB
N





PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	ALIGNMENT DETAILS	SHEET 98	E



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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	ALIGNMENT DETAILS	SHEET 99	E

Estimate Of Quantities

1050-01-74

Line	Item	Item Description	Unit	Total	Qty
0002	204.0105	Removing Concrete Pavement Butt Joints	SY	8,465.000	8,465.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	3,076.000	3,076.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	134,420.000	134,420.000
0008	204.0150	Removing Curb & Gutter	LF	208.000	208.000
0010	204.0165	Removing Guardrail	LF	6,244.000	6,244.000
0012	204.0190	Removing Surface Drains	EACH	10.000	10.000
0014	204.0245	Removing Storm Sewer (size) 01. 24-Inch	LF	75.000	75.000
0016	204.9060.S	Removing (item description) 01. Apron Endwalls 18-Inch	EACH	1.000	1.000
0018	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1050-01-74	EACH	1.000	1.000
0020	213.0100	Finishing Roadway (project) 01. 1050-01-74	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	29,185.000	29,185.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	500.000	500.000
0026	416.0610	Drilled Tie Bars	EACH	1,600.000	1,600.000
0028	416.0620	Drilled Dowel Bars	EACH	9,225.000	9,225.000
0030	450.4000	HMA Cold Weather Paving	TON	5,000.000	5,000.000
0032	455.0605	Tack Coat	GAL	64,445.000	64,445.000
0034	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0036	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0038	460.0115.S	HMA Pavement Test Strip Volumetrics	EACH	1.000	1.000
0040	460.0120.S	HMA Pavement Test Strip Density	EACH	1.000	1.000
0042	460.2000	Incentive Density HMA Pavement	DOL	37,330.000	37,330.000
0044	460.2005	Incentive Density PWL HMA Pavement	DOL	33,180.000	33,180.000
0046	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	25,250.000	25,250.000
0048	460.2010	Incentive Air Voids HMA Pavement	DOL	46,390.000	46,390.000
0050	460.6244	HMA Pavement 4 MT 58-34 S	TON	31,734.000	31,734.000
0052	460.6644	HMA Pavement 4 MT 58-34 V	TON	41,982.000	41,982.000
0054	460.6645	HMA Pavement 5 MT 58-34 V	TON	5,280.000	5,280.000
0056	460.8644	HMA Pavement 4 SMA 58-34 V	TON	47,979.000	47,979.000
0058	460.9000.S	Material Transfer Vehicle	EACH	1.000	1.000
0060	465.0105	Asphaltic Surface	TON	1,000.000	1,000.000
0062	465.0110	Asphaltic Surface Patching	TON	300.000	300.000
0064	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	30.000	30.000
0066	465.0510	Asphaltic Rumble Strips, Shoulder Divided Roadway	LF	237,980.000	237,980.000
0068	490.0100.S	Resin Binder High Friction Surface Treatment	SY	22,245.000	22,245.000
0070	509.0301	Preparation Decks Type 1	SY	99.000	99.000
0072	509.0302	Preparation Decks Type 2	SY	39.000	39.000
0074	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	990.000	990.000
0076	509.1500	Concrete Surface Repair	SF	4.000	4.000
0078	509.2100.S	Concrete Masonry Deck Repair	CY	8.000	8.000
0080	509.5100.S	Polymer Overlay	SY	2,813.000	2,813.000
0082	520.8000	Concrete Collars for Pipe	EACH	8.000	8.000
0084	520.8700	Cleaning Culvert Pipes	EACH	32.000	32.000
0086	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	1.000	1.000
0088	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000
0090	524.0118	Culvert Pipe Salvaged 18-Inch	LF	88.000	88.000
0092	524.0618	Apron Endwalls for Culvert Pipe Salvaged 18-Inch	EACH	6.000	6.000
0094	530.0124	Culvert Pipe Corrugated Polyethylene 24-Inch	LF	75.000	75.000
0096	601.0555	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A	LF	148.000	148.000
0098	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	560.000	560.000

Estimate Of Quantities

1050-01-74

Line	Item	Item Description	Unit	Total	Qty
0100	602.3010	Concrete Surface Drains	CY	33.800	33.800
0102	603.8000	Concrete Barrier Temporary Precast Delivered	LF	5,000.000	5,000.000
0104	603.8125	Concrete Barrier Temporary Precast Installed	LF	7,400.000	7,400.000
0106	606.0200	Riprap Medium	CY	32.000	32.000
0108	614.0010	Barrier System Grading Shaping Finishing	EACH	21.000	21.000
0110	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	5.000	5.000
0112	614.0230	Steel Thrie Beam	LF	400.000	400.000
0114	614.0905	Crash Cushions Temporary	EACH	4.000	4.000
0116	614.2300	MGS Guardrail 3	LF	3,967.000	3,967.000
0118	614.2500	MGS Thrie Beam Transition	LF	709.200	709.200
0120	614.2610	MGS Guardrail Terminal EAT	EACH	15.000	15.000
0122	614.2620	MGS Guardrail Terminal Type 2	EACH	5.000	5.000
0124	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1050-01-74	EACH	1.000	1.000
0126	619.1000	Mobilization	EACH	1.000	1.000
0128	624.0100	Water	MGAL	457.000	457.000
0130	625.0100	Topsoil	SY	100.000	100.000
0132	628.1504	Silt Fence	LF	8,060.000	8,060.000
0134	628.1520	Silt Fence Maintenance	LF	8,060.000	8,060.000
0136	628.1905	Mobilizations Erosion Control	EACH	12.000	12.000
0138	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0140	628.2008	Erosion Mat Urban Class I Type B	SY	6,050.000	6,050.000
0142	628.7005	Inlet Protection Type A	EACH	5.000	5.000
0144	628.7504	Temporary Ditch Checks	LF	250.000	250.000
0146	628.7555	Culvert Pipe Checks	EACH	27.000	27.000
0148	629.0210	Fertilizer Type B	CWT	4.280	4.280
0150	630.0120	Seeding Mixture No. 20	LB	276.200	276.200
0152	630.0500	Seed Water	MGAL	142.000	142.000
0154	635.0300	Sign Supports Replacing Base Connection Bolts	EACH	16.000	16.000
0156	637.1220	Signs Type I Reflective SH	SF	2,230.500	2,230.500
0158	638.2601	Removing Signs Type I	EACH	26.000	26.000
0160	642.5401	Field Office Type D	EACH	1.000	1.000
0162	643.0300	Traffic Control Drums	DAY	58,040.000	58,040.000
0164	643.0370.S	Digital Speed Reduction System (DSRS)	DAY	582.000	582.000
0166	643.0420	Traffic Control Barricades Type III	DAY	14,070.000	14,070.000
0168	643.0705	Traffic Control Warning Lights Type A	DAY	27,880.000	27,880.000
0170	643.0715	Traffic Control Warning Lights Type C	DAY	5,920.000	5,920.000
0172	643.0810	Traffic Control Connected Arrow Boards	DAY	1,214.000	1,214.000
0174	643.0900	Traffic Control Signs	DAY	30,240.000	30,240.000
0176	643.0910	Traffic Control Covering Signs Type I	EACH	25.000	25.000
0178	643.0920	Traffic Control Covering Signs Type II	EACH	45.000	45.000
0180	643.1000	Traffic Control Signs Fixed Message	SF	180.000	180.000
0182	643.1050	Traffic Control Signs PCMS	DAY	306.000	306.000
0184	643.1220	Traffic Control Connected Work Zone Start and End Location Markers	DAY	582.000	582.000
0186	643.3170	Temporary Marking Line Epoxy 6-Inch	LF	554,626.000	554,626.000
0188	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	33,120.000	33,120.000
0190	643.3280	Temporary Marking Line Removable Tape 10-Inch	LF	3,600.000	3,600.000
0192	643.3960	Temporary Marking Removable Mask Out Tape 6-Inch	LF	3,140.000	3,140.000
0194	643.5000	Traffic Control	EACH	1.000	1.000
0196	645.0120	Geotextile Type HR	SY	88.000	88.000

Estimate Of Quantities

1050-01-74

Line	Item	Item Description	Unit	Total	Qty
0198	645.0130	Geotextile Type R	SY	259.000	259.000
0200	646.2020	Marking Line Epoxy 6-Inch	LF	9,171.000	9,171.000
0202	646.2025	Marking Line Grooved Black Epoxy 6-Inch	LF	31,928.000	31,928.000
0204	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	269,590.000	269,590.000
0206	646.2050	Marking Line Grooved Permanent Tape 6-Inch	LF	31,928.000	31,928.000
0208	646.4050	Marking Line Grooved Permanent Tape 10-Inch	LF	12,658.000	12,658.000
0210	646.5420	Marking Aerial Enforcement Bar Epoxy	EACH	30.000	30.000
0212	646.6120	Marking Stop Line Epoxy 18-Inch	LF	205.000	205.000
0214	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	66,500.000	66,500.000
0216	646.7220	Marking Chevron Epoxy 24-Inch	LF	702.000	702.000
0218	646.8120	Marking Curb Epoxy	LF	100.000	100.000
0220	646.8220	Marking Island Nose Epoxy	EACH	8.000	8.000
0222	646.9002	Marking Removal Line 6-Inch	LF	1,320.000	1,320.000
0224	646.9400	Marking Removal Plowable Raised Pavement Markers	EACH	1,274.000	1,274.000
0226	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	560.000	560.000
0228	650.8000	Construction Staking Resurfacing Reference	LF	127,710.000	127,710.000
0230	650.9911	Construction Staking Supplemental Control (project) 01. 1050-01-74	EACH	1.000	1.000
0232	680.0100	Public Land Reference Monument Verify and Reset	EACH	7.000	7.000
0234	690.0150	Sawing Asphalt	LF	68.000	68.000
0236	690.0250	Sawing Concrete	LF	25,439.000	25,439.000
0238	740.0440	Incentive IRI Ride	DOL	47,995.000	47,995.000
0240	999.2100.S	Installing and Maintaining Climbing Turtle Exclusion Fence	LF	2,210.000	2,210.000
0242	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,100.000	2,100.000
0244	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,400.000	2,400.000
0246	SPV.0060	Special 01. Foam Void Filling	EACH	1.000	1.000
0248	SPV.0060	Special 02. Reconstruct Inlets With Vane Drains	EACH	12.000	12.000
0250	SPV.0090	Special 01. Remove and Reinstall Four Strand HT Cable Barrier	LF	1,000.000	1,000.000
0252	SPV.0090	Special 02. Ditch Cleaning	LF	3,025.000	3,025.000
0254	SPV.0090	Special 03. Remove and Replace Concrete Barrier Wall	LF	84.000	84.000
0256	SPV.0180	Special 01. Concrete Pavement Repair Doweled	SY	5,302.000	5,302.000
0258	SPV.0180	Special 02. Concrete Pavement Replacement Doweled	SY	3,414.000	3,414.000
0260	SPV.0180	Special 03. 30-Inch Concrete Centerline Repair	SY	159.000	159.000

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REMOVING CURB & GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF	690.0150 SAWING ASPHALT LF	* 690.0250 SAWING CONCRETE LF
0010	EB	-	EB	LT	30	34	
0010	WB	-	WB	RT	30	34	
0010	LB	-	LB	LT	82		82
0010	LC	-	LC	RT	10		10
0010	EC	-	EC	LT	56		56
				TOTAL	208	68	148

REMOVING ASPHALTIC SURFACE

CATEGORY	STATION	TO	STATION	LOCATION	..... REMOVING ASPHALTIC SURFACE MILLING SY
0010	WB	-	WB	SHLDR	22,420
0010	WB	-	WB	SHLDR	40,880
0010	EB	-	EB	SHLDR	22,915
0010	EB	-	EB	SHLDR	42,960
0010	L	-	L	MAINLINE	1,650
0010	L	-	L	MAINLINE	1,450
0010	H	-	H	MAINLINE	825
0010	H	-	H	MAINLINE	1,320
				TOTAL	134,420

REMOVING BUTT JOINTS

CATEGORY	STATION	TO	STATION	LOCATION	204.0105 REMOVING CONCRETE PAVEMENT BUTT JOINTS SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY
0010	WB	-	WB	MAINLINE	605	245
0010	EB	-	EB	MAINLINE	720	255
0010	WB	-	WB	MAINLINE	320	160
0010	EB	-	EB	MAINLINE	265	100
0010	WB	-	WB	MAINLINE	290	155
0010	EB	-	EB	MAINLINE	290	155
0010	WB	-	WB	MAINLINE	290	130
0010	EB	-	EB	MAINLINE	290	100
0010	WB	-	WB	MAINLINE	310	105
0010	EB	-	EB	MAINLINE	310	165
0010	WB	-	WB	MAINLINE	310	135
0010	EB	-	EB	MAINLINE	310	105
0010	WB	-	WB	MAINLINE	300	105
0010	EB	-	EB	MAINLINE	300	155
0010	EF	-	EF	RAMP	255	
0010	EA	-	EA	RAMP	545	
0010	EC	-	EC	RAMP	495	
0010	ED	-	ED	RAMP	125	
0010	HB	-	HB	RAMP	500	
0010	HC	-	HC	RAMP	380	
0010	LB	-	LB	RAMP	285	
0010	LC	-	LC	RAMP	380	
0010	LA	-	LA	RAMP	320	
0010	LD	-	LD	RAMP	270	
0010	L	-	L	CARDINAL AVE		20
0010	L	-	L	CARDINAL AVE		31
0010	L	-	L	CARDINAL AVE		30
0010	L	-	L	CARDINAL AVE		21
0010	H	-	H	HI LINE AVE		15
0010	H	-	H	HI LINE AVE		25
0010	H	-	H	HI LINE AVE		25
0010	H	-	H	HI LINE AVE		17
0010	PRAY AVE			SIDEROAD		85
0010	CTH P			SIDEROAD		120
0010	CATILIN AVE			SIDEROAD		85
0010	SANDHILL AVE N			SIDEROAD		86
0010	SANDHILL AVE S			SIDEROAD		84
0010	DIVISION AVE			SIDEROAD		90
0010	BADGER AVE N			SIDEROAD		90
0010	BADGER AVE S			SIDEROAD		87
0010	EB			PE		35
0010	WB			PE		30
0010	WB			PE		30
				TOTAL	8,465	3,076

REMOVING GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
0010	WB	-	WB	LT	172
0010	EB	-	EB	RT	243
0010	WB	-	WB	LT	286
0010	EB	-	EB	RT	385
0010	WB	-	WB	MEDIAN	141
0010	WB	-	WB	MEDIAN	423
0010	EB	-	EB	LT	311
0010	EB	-	EB	RT	260
0010	WB	-	WB	LT	273
0010	WB	-	WB	RT	311
0010	EB	-	EB	RT	267
0010	EB	-	EB	LT	366
0010	WB	-	WB	RT	366
0010	EB	-	EB	RT	279
0010	EB	-	EB	LT	311
0010	EB	-	EB	RT	248
0010	WB	-	WB	LT	286
0010	WB	-	WB	RT	311
0010	WB	-	WB	MEDIAN	376
0010	EB	-	EB	LT	371
0010	EB	-	EB	RT	258
				TOTAL	6,244

REMOVING SURFACE DRAINS

CATEGORY	STATION	LOCATION	204.0190 REMOVING SURFACE DRAINS EACH
0010	WB	LT	1
0010	EB	RT	1
0010	WB	LT	1
0010	EB	RT	1
0010	EB	LT	1
0010	WB	RT	1
0010	WB	LT	1
0010	WB	RT	1
0010	WB	LT	1
0010	WB	RT	1
		TOTAL	10

* ADDITIONAL UANTITIES SHOWN ELSEWHERE

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REMOVING STORM SEWER

CATEGORY	STATION	LOCATION	204.0245.01 REMOVING STORM SEWER SIZE INCH LF
0010	EB	RT	75
		TOTAL	75

CULVERT PIPE

CATEGORY	STATION	LOCATION	S REMOVING ITEM DESCRIPTION APRON ENDWALLS INCH EACH	520.8000 CONCRETE COLLARS FOR PIPE EACH	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL INCH EACH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE INCH EACH	524.0118 CULVERT PIPE SALVAGED INCH LF	524.0618 APRON ENDWALLS FOR CULVERT PIPE SALVAGED INCH EACH	530.0124 CULVERT PIPE CORRUGATED POLYETHYLENE INCH LF
0010	WB	LT		1			16	1	
0010	WB	LT		1			16	1	
0010	WB	LT	1	1		1			
0010	WB	LT		1			16	1	
0010	WB	LT		1			8	1	
0010	WB	LT		1			8	1	
0010	WB	LT		1			24	1	
0010	EB	RT		1	1				75
		TOTAL	1	8	1	1	88	6	75

BASE AGGREGATE DENSE

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE INCH TON	305.0120 BASE AGGREGATE DENSE INCH TON	624.0100 WATER MGAL
0010	WB	-	WB	LT & RT	12,550		189
0010	EB	-	EB	LT & RT	12,700		191
0010	LB	-	LB	LT & RT	330		5
0010	LC	-	LC	LT & RT	200		3
0010	LD	-	LD	LT & RT	280		5
0010	LA	-	LA	LT & RT	310		5
0010	EF	-	EF	LT & RT	330		5
0010	EC	-	EC	LT & RT	330		5
0010	EA	-	EA	LT & RT	330		5
0010	ED	-	ED	LT & RT	430		7
0010	HB	-	HB	LT & RT	380		6
0010	HC	-	HC	LT & RT	430		7
0010	H	-	H	LT & RT	30		1
0010	H	-	H	LT & RT	50		1
0010	PRAY AVE CTH P			LT & RT	15		1
0010	CATILIN AVE			LT & RT	15		1
0010	SANDHILL AVE			LT & RT	15		1
0010	DIVISION AVE			LT & RT	15		1
0010	BADGER AVE			LT & RT	15		1
0010	MAINTENANCE	-	CROSS OVERS	LT & RT	40		1
0010	EB			DRIVEWAY	10		1
0010	WB			DRIVEWAY	30		1
0010	WB			DRIVEWAY	20		1
0010	EB			DRIVEWAY	25		1
0010	WB			DRIVEWAY	15		1
0010	WB			DRIVEWAY	35		1
0010	WB			DRIVEWAY	20		1
0010	EB			DRIVEWAY	15		1
0010	EB			DRIVEWAY	20		1
0010	WB			DRIVEWAY	30		1
0010	WB			DRIVEWAY	25		1
0010	WB			DRIVEWAY	15		1
0010	WB			DRIVEWAY	40		1
0010	WB			DRIVEWAY	35		1
0010	WB			DRIVEWAY	25		1
0010	WB			DRIVEWAY	30		1
0010				CONCRETE REPAIRS		500	
				TOTAL	29,185	500	457

* ADDITIONAL UANTITIES SHOWN ELSEWHERE

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3

					HMA PAVEMENT					
					450.4000 HMA COLD WEATHER PAVING	455.0605 TACK COAT	460.6244 HMA PAVEMENT MT S	460.6644 HMA PAVEMENT MT V	460.6645 HMA PAVEMENT MT V	460.8644 HMA PAVEMENT SMA V
CATEGORY	STATION	TO	STATION	LOCATION	TON	GAL	TON	TON	TON	TON
0010	WB	-	WB	MAINLINE		105	61	69		79
0010	EB	-	EB	MAINLINE		114	56	80		92
0010	WB	-	WB	MAINLINE		4,301	1,995	3,077		3,517
0010	EB	-	EB	MAINLINE		4,323	2,025	3,081		3,522
0010	WB	-	WB	MAINLINE		17,399	8,874	12,044		13,764
0010	EB	-	EB	MAINLINE		17,540	9,100	12,059		13,782
0010	WB	-	WB	MAINLINE		7,160	3,561	5,007		5,722
0010	EB	-	EB	MAINLINE		7,188	3,746	4,929		5,633
0010	LB	-	LB	RAMP		274		268		306
0010	LB	-	LB	RAMP		218			335	
0010	LC	-	LC	RAMP		110		108		123
0010	LC	-	LC	RAMP		261			403	
0010	LD	-	LD	RAMP		214			330	
0010	LD	-	LD	RAMP		250		245		280
0010	LA	-	LA	RAMP		257			396	
0010	LA	-	LA	RAMP		118		115		130
0010	EF	-	EF	RAMP		218		214		244
0010	EF	-	EF	RAMP		236			363	
0010	EC	-	EC	RAMP		78		76		87
0010	EC	-	EC	RAMP		366			564	
0010	EA	-	EA	RAMP		335			515	
0010	EA	-	EA	RAMP		86		84		97
0010	ED	-	ED	RAMP		251			386	
0010	ED	-	ED	RAMP		216		213		243
0010	HC	-	HC	RAMP		98		96		110
0010	HC	-	HC	RAMP		428			660	
0010	HB	-	HB	RAMP		222		217		248
0010	HB	-	HB	RAMP		292			450	
0010	L	-	L	CARDINAL AVE		223			286	
0010	L	-	L	CARDINAL AVE		178			229	
0010	H	-	H	HI LINE AVE		109			140	
0010	H	-	H	HI LINE AVE		174			223	
0010	MEDIAN CROSSOVERS					283	595			
0010	PRAY AVE CTH P			SIDE ROAD		189	398			
0010	CATILIN AVE			SIDE ROAD		129	271			
0010	SANDHILL AVE			SIDE ROAD		187	392			
0010	DIVISION AVE			SIDE ROAD		124	259			
0010	BADGER AVE			SIDE ROAD		191	401			
0010	UNDISTRIBUTED				5,000					
				TOTAL	5,000	64,445	31,734	41,982	5,280	47,979

* ADDITIONAL UANTITIES SHOWN ELSEWHERE

HMA ACCEPTANCE TABLE

LOCATION	STA TO STA	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	UALITY MANAGEMENT PROGRAM TO BE USED FOR MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
FOOT DRIVING LANE	EB EB EB EB EB	LOWER LAYER	EXISTING CONCRETE SURFACE	MT V		1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	INCENTIVE DENSITY PWL HMA 460.2005
FOOT DRIVING LANE	EB EB EB EB EB	UPPER LAYER	MT V	SMA V		2"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
SHOULDERS MEDIAN	EB EB EB EB EB	LOWER LAYER	EXISTING MILLED SURFACE	MT S		1.75"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
SHOULDERS MEDIAN	EB EB EB EB EB	SECOND LAYER	MT S	MT V		1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
SHOULDERS MEDIAN	EB EB EB EB EB	UPPER LAYER	MT V	SMA V		2"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
SHOULDERS DRIVING LANE	EB EB EB EB EB	LOWER LAYER	EXISTING CONCRETE SURFACE	MT V		1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
SHOULDERS DRIVING LANE	EB EB EB EB EB	UPPER LAYER	MT V	SMA V		2"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
SHOULDERS OUTSIDE	EB EB EB EB EB	LOWER LAYER	EXISTING MILLED SURFACE	MT S		1.75"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
SHOULDERS OUTSIDE	EB EB EB EB EB EB EB EB EB	SECOND LAYER	MT S	MT S		1.75"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
SHOULDERS OUTSIDE	EB EB EB EB EB EB EB EB EB	UPPER LAYER	MT S	MT S		2"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
FOOT DRIVING LANE	WB WB WB WB WB WB	LOWER LAYER	EXISTING CONCRETE SURFACE	MT V		1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	INCENTIVE DENSITY PWL HMA 460.2005
FOOT DRIVING LANE	WB WB WB WB WB WB	UPPER LAYER	MT V	SMA V		2"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
SHOULDERS MEDIAN	WB WB WB WB WB WB	LOWER LAYER	EXISTING MILLED SURFACE	MT S		1.75"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
SHOULDERS MEDIAN	WB WB WB WB WB WB	SECOND LAYER	MT S	MT V		1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
SHOULDERS MEDIAN	WB WB WB WB WB WB	UPPER LAYER	MT V	SMA V		2"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
SHOULDERS DRIVING LANE	WB WB WB WB WB WB	LOWER LAYER	EXISTING CONCRETE SURFACE	MT V		1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
SHOULDERS DRIVING LANE	WB WB WB WB WB WB	UPPER LAYER	MT V	SMA V		2"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
SHOULDERS OUTSIDE	WB WB WB WB WB WB WB WB WB	LOWER LAYER	EXISTING MILLED SURFACE	MT S		1.75"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
SHOULDERS OUTSIDE	WB WB WB WB WB WB WB WB WB WB	SECOND LAYER	MT S	MT S		1.75"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
SHOULDERS OUTSIDE	WB WB WB WB WB WB WB WB WB WB	UPPER LAYER	MT S	MT S		2"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
RAMP	LC LD LB LA	LOWER LAYER	EXISTING CONCRETE SURFACE	MT V		1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP	LC LD LB LA	UPPER LAYER	MT V	SMA V		2.0"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
RAMP SHOULDERS	LC LD LB LA	LOWER LAYER	EXISTING ASPHALT SURFACE	MT V		1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE

HMA ACCEPTANCE TABLE								
							UALITY MANAGEMENT PROGRAM TO BE USED FOR	
LOCATION	STA TO STA	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
RAMP SHOULDERS	LC LD LB LA	UPPER LAYER	MT V	SMA V		2.0"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
RAMP	LC LD LB LB LA	LOWER LAYER	EXISTING ASPHALT SURFACE	MT V		1.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP	LC LD LB LB LA	UPPER LAYER	MT V	MT V		1.5"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP SHOULDERS	LC LD LB LB LA	LOWER LAYER	EXISTING ASPHALT SURFACE	MT V		1.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP SHOULDERS	LC LD LB LB LA	UPPER LAYER	MT V	MT V		1.5"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
CTH XCARDINAL AVE	MAINLINE	LOWER LAYER	EXISTING MILLED SURFACE	MT V		1.25"	MP SS	ACCEPTANCE TESTING BY DEPARTMENT NOT ELIGIBLE FOR INCENTIVE
CTH XCARDINAL AVE	MAINLINE	UPPER LAYER	MT V	MT V		1.5"	MP SS	ACCEPTANCE TESTING BY DEPARTMENT NOT ELIGIBLE FOR INCENTIVE
RAMP	EC ED EF EA	LOWER LAYER	EXISTING CONCRETE SURFACE	MT V		1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP	LC LD LB LA	UPPER LAYER	MT V	SMA V		2.0"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
RAMP SHOULDERS	EC ED EF EA	LOWER LAYER	EXISTING SURFACE	MT V		1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP SHOULDERS	EC ED EF EA	UPPER LAYER	MT V	SMA V		2.0"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
RAMP	EC ED EF EA	LOWER LAYER	EXISTING ASPHALT SURFACE	MT V		1.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP	EC ED EF EA	UPPER LAYER	MT V	MT V		1.5"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP SHOULDERS	EC ED EF EA	LOWER LAYER	EXISTING ASPHALT SURFACE	MT V		1.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP SHOULDERS	EC ED EF EA	UPPER LAYER	MT V	MT V		1.5"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP	HC HB	LOWER LAYER	EXISTING CONCRETE SURFACE	MT V		1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP	HC HB	UPPER LAYER	MT V	SMA V		2.0"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
RAMP SHOULDERS	HC HB	LOWER LAYER	EXISTING CONCRETE SURFACE	MT V		1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP SHOULDERS	HC HB	UPPER LAYER	MT V	SMA V		2.0"	MP SS	INCENTIVE DENSITY HMA PAVEMENT
RAMP	HC HB	LOWER LAYER	EXISTING ASPHALT SURFACE	MT V		1.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP	HC HB	UPPER LAYER	MT V	MT V		1.5"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP SHOULDERS	HC HB	LOWER LAYER	EXISTING ASPHALT SURFACE	MT V		1.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
RAMP SHOULDERS	HC HB	UPPER LAYER	MT V	MT V		1.5"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
HI LINE AVE	MAINLINE	LOWER LAYER	EXISTING MILLED SURFACE	MT V		1.25"	MP SS	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
HI LINE AVE	MAINLINE	UPPER LAYER	MT V	MT V		1.5"	MP SS	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE
DRIVEWAYS		UPPER LAYER	EXISTING ASPHALT SURFACE	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES		3.75"	SS	ORDINARY COMPACTION SS 450.3.2.6.2)
SIDE ROADS CROSSOVERS TURN LANES		LOWER & UPPER LAYER	EXISTING ASPHALT SURFACE	MT S		&	MP SS	DEPARTMENT ACCEPTANCE SS NOT ELIGIBLE FOR INCENTIVE

3

ASPHALTIC SURFACE

CATEGORY	STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	REMARKS
0010	EB	PE			10	
0010	WB	PE			10	
0010	WB	PE			10	
0010	UNDISTRIBUTED		1,000			FOR PREPARING FOUNDATION FOR ASPHALTIC PAVING
0010	UNDISTRIBUTED			300		FOR PREPARING FOUNDATION FOR ASPHALTIC PAVING
		TOTAL	1,000	300	30	

RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	465.0510 ASPHALTIC RUMBLE STRIPS SHOULDER DIVIDED ROADWAY LF
0010	WB	-	WB	LT	58790
0010	WB	-	WB	RT	60550
0010	EB	-	EB	LT	60,630
0010	EB	-	EB	RT	58,010
				TOTAL	237,980

RESIN BINDER HIGH FRICTION SURFACE TREATMENT

CATEGORY	STATION	TO	STATION	S RESIN BINDER HIGH FRICTION SURFACE TREATMENT SY
0060	WB	-	WB	605
0060	EB	-	EB	715
0060	WB	-	WB	320
0060	EB	-	EB	10,030
0060	WB	-	WB	10,575
			TOTAL	22,245

CLEANING CULVERT PIPES

CATEGORY	STATION	LOCATION	520.8700 CLEANING CULVERT PIPES EACH
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	EB	RT	1
0010	WB	LT	1
0010	EB	RT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	L

BARRIER SYSTEM GRADING

			614.0010	FOR INFORMTION ONLY							
STATION STATION	LOCATION	ROADWAY	BARRIER SYSTEM GRADING SHAPING FINISHING EA	CONSTRUCTION STAKING SLOPE STAKES LF	EXCAVATION COMMON CY	BORROW CY	SEED WATER MGAL	TOPSOIL SY	EROSION MAT URBAN CLASS I TYPE B SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE LBS
PROJECT CATERGORY											
WB WB	LT		1	198	15	175	3.8	165	165	0.12	7.5
EB EB	RT		1	264		SCRATCH GRADING	4.4	190	190	0.13	8.6
WB WB	LT		1	267	5	20	7	310	310	0.20	13.9
EB EB	RT		1	402	---	490	36.8	1635	1635	1.04	73.7
EB EB	MEDIAN		1	37	15	---	2.7	120	120	0.08	5.4
EB EB	MEDIAN		1	196	30	90	49.9	2220	2220	1.40	99.9
EB EB	LT		1	267	15	30	9.7	430	430	0.28	19.4
EB EB	RT		1	267	10	535	42	1870	1870	1.18	84.2
WB WB	LT		1	267	---	70	8.2	360	360	0.24	16.3
WB WB	RT		1	317	---	90	8.3	365	365	0.24	16.5
EB EB	RT		1	278	---	240	20.3	900	900	0.57	40.5
EB EB	LT		1	378	35	5	8.1	360	360	0.23	16.2
WB WB	RT		1	349	---	110	9.8	435	435	0.28	19.6
EB EB	RT		1	278	---	180	19.6	870	870	0.55	39.2
EB EB	LT		1	318	---	90	8.6	380	380	0.24	17.1
EB EB	RT		1	267	---	475	27	1200	1200	0.76	54
WB WB	LT		1	248		SCRATCH GRADING	4.7	205	205	0.14	9.3
WB WB	RT		1	337	5	25	4.5	195	195	0.13	8.9
EB EB	MEDIAN		1	196	15	175	47.4	2110	2110	1.33	95
EB EB	LT		1	293	---	45	4.9	215	215	0.14	9.7
EB EB	RT		1	265	---	180	11.1	490	490	0.31	22.1
TOTAL			21	5689	145	3025	338.8	15025	15025	9.59	677

CRASH CUSHIONS TEMPORARY

CATEGORY	STATION	TO	STATION	LOCATION	614.0905 CRASH CUSHIONS TEMPORARY EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
0010	EB	-	EB	CL	1	2	OMC WM	TL	UNIDIRECTIONAL	L	TEMPORARY CONCRETE BARRIER CL
0010	WB	-	WB	CL	1	2	OMC WM	TL	UNIDIRECTIONAL	R	TEMPORARY CONCRETE BARRIER CL
0010	EB	-	EB	CL	1	2	OMC WM	TL	UNIDIRECTIONAL	R	TEMPORARY CONCRETE BARRIER CL
0010	WB	-	WB	CL	1	2	OMC WM	TL	UNIDIRECTIONAL	L	TEMPORARY CONCRETE BARRIER CL
				TOTAL	4						

CONCRETE BARRIER TEMPORARY PRECAST

CATEGORY	STATION	TO	STATION	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	REMARKS
0010	EB	-	EB	RT	2,500	2,500	STAGE A
0010	WB	-	WB	LT	2,500	2,500	STAGE A
0010	EB	-	EB	RT		1,200	STAGE B
0010	WB	-	WB	LT		1200	STAGE B
				TOTAL	5,000	7,400	

RIPRAP

CATEGORY	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
0010	WB	LT	4	11
0010	EB	RT	4	11
0010	WB	LT	4	11
0010	EB	RT	4	11
0010	WB	LT	4	11
0010	WB	RT	4	11
0010	WB	LT	4	11
0010	WB	RT	4	11
		TOTAL	32	88

* ADDITIONAL UANTITIES SHOWN ELSEWHERE

GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL EACH	614.0230 STEEL THRIE BEAM LF	614.2300 MGS GUARDRAIL LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE EACH
0010	WB	-	WB	LT			119.7	78.8		
0010	EB	-	EB	RT			184.8	78.8		
0010	WB	-	WB	LT			175.0	39.4	1	
0010	EB	-	EB	RT			362.5	39.4		1
0010	EB	-	EB	MEDIAN	1	50		78.8		
0010	EB	-	EB	MEDIAN	2	200				
0010	EB	-	EB	LT			225.0	39.4	1	
0010	EB	-	EB	RT			200.0	39.4	1	
0010	WB	-	WB	LT			175.0	39.4	1	
0010	WB	-	WB	RT			225.0	39.4	1	
0010	EB	-	EB	RT			225.0		1	1
0010	EB	-	EB	LT			325.0		1	1
0010	WB	-	WB	RT			325.0		1	1
0010	EB	-	EB	RT			225.0		1	1
0010	EB	-	EB	LT			225.0	39.4	1	
0010	EB	-	EB	RT			200.0	39.4	1	
0010	WB	-	WB	LT			175.0	39.4	1	
0010	WB	-	WB	RT			225.0	39.4	1	
0010	EB	-	EB	MEDIAN	2	150				
0010	EB	-	EB	LT			200.0	39.4	1	
0010	EB	-	EB	RT			175.0	39.4	1	
				TOTAL	5	400	3,967.0	709.2	15	5

SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
0010	WB	-	WB	LT	220	220
0010	EB	-	EB	RT	280	280
0010	WB	-	WB	LT	425	425
0010	EB	-	EB	RT	560	560
0010	WB	-	WB	MEDIAN	200	200
0010	WB	-	WB	MEDIAN	255	255
0010	WB	-	WB	MEDIAN	255	255
0010	EB	-	EB	RT	500	500
0010	EB	-	EB	MEDIAN	770	770
0010	WB	-	WB	MEDIAN	770	770
0010	EB	-	EB	RT	495	495
0010	EB	-	EB	RT	530	530
0010	EB	-	EB	LT	480	480
0010	WB	-	WB	LT	480	480
0010	WB	-	WB	RT	460	460
0010	WB	-	WB	MEDIAN	255	255
0010	EB	-	EB	MEDIAN	250	250
0010	EB	-	EB	RT	455	455
0010	EB	-	EB	LT	420	420
				TOTAL	8,060	8,060

MOBILIZATIONS EROSION CONTROL

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	PROJECT	12	6
	TOTAL	12	6

INLET PROTECTION

CATEGORY	STATION	LOCATION	628.7005 INLET PROTECTION TYPE A EACH
0010	2182+83	LT	1
0010	2235+28	LT	1
0010	2326+04	LT	1
0010	2337+79	LT	1
0010	2367+28	LT	1
		TOTAL	5

* ADDITIONAL UANTITIES SHOWN ELSEWHERE

TEMPORARY DITCH CHECKS

CATEGORY	STATION	LOCATION	628.7504 TEMPORARY DITCH CHECKS LF
0010	EB	LT	40
0010	EB	LT	40
0010	EB	LT	40
0010	EB	LT	40
0010	EB	LT	40
0010	UNDISTRIBUTED		50
		TOTAL	250

CULVERT PIPE CHECKS

CATEGORY	STATION	LOCATION	628.7555 CULVERT PIPE CHECKS EACH	PIPE SIZE INCH
0010	WB	RT	5	36"
0010	WB	LT	3	18"
0010	WB	LT	3	18"
0010	WB	LT	3	18"
0010	WB	RT	3	18"
0010	WB	LT	10	
		TOTAL	27	

RESTORATION

CATEGORY	STATION	-	STATION	LOCATION	625.0100 TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO LB	630.0500 SEED WATER MGAL
0010	WB			LT		107	0.07	4.8	2.4
0010	WB			LT		82	0.06	3.7	1.9
0010	WB			LT		95	0.06	4.3	2.2
0010	WB			LT		81	0.06	3.7	1.9
0010	WB			LT		81	0.06	3.7	1.9
0010	WB			LT		81	0.06	3.7	1.9
0010	WB			LT		81	0.06	3.7	1.9
0010	WB			LT		79	0.05	3.6	1.8
0010	EB			RT		60	0.04	2.5	1.3
0010	EB			RT		75	0.05	3.4	1.7
0010	WB			MEDIAN		67	0.05	3.0	1.6
0010	WB			LT		80	0.06	3.6	1.8
0010	WB			LT		81	0.06	3.7	1.9
0010	WB			LT		68	0.05	3.1	1.6
0010	WB			LT		20	0.02	0.1	0.5
0010	WB			LT		72	0.05	3.3	1.7
0010	WB			MEDIAN		73	0.05	3.3	1.7
0010	WB			MEDIAN		73	0.05	3.3	1.7
0010	WB			LT		73	0.05	3.3	1.7
0010	WB			LT		70	0.05	3.2	1.6
0010	WB			MEDIAN		56	0.04	2.6	1.3
0010	WB			LT		100	0.07	4.5	2.3
0010	WB			LT & MEDIAN		134	0.09	6.1	3.1
0010	WB			LT		45	0.03	2.1	1.1
0010	WB			LT & MEDIAN		166	0.11	7.5	3.8
0010	WB			LT		67	0.05	3.1	1.6
0010	WB			LT		68	0.05	3.1	1.6
0010	WB			LT		76	0.05	3.5	1.8
0010	WB			LT		72	0.05	3.3	1.7
0010	WB			LT		76	0.05	3.5	1.8
0010	WB			LT		67	0.05	3.1	1.6
0010	WB			LT		89	0.06	4.1	2.0
0010	EB			RT		90	0.06	4.1	2.1
0010	WB			LT		166	0.11	7.5	3.8
0010	WB			MEDIAN		85	0.06	3.9	2.0
0010	WB			LT		306	0.20	13.8	6.9
0010	WB			LT		93	0.06	4.2	2.1
0010	WB			LT & MEDIAN		147	0.10	6.7	3.4
0010	WB			LT		72	0.05	3.3	1.7
0010	WB			LT		73	0.05	3.3	1.7
0010	WB			LT		53	0.04	2.4	1.2
0010	WB			LT		15	0.01	0.1	0.4
0010	WB			LT		64	0.05	2.9	1.5
0010	WB			LT		104	0.07	4.7	2.4
0010	WB			LT		72	0.05	3.3	1.7
0010	WB			LT		74	0.05	3.4	1.7
0010	WB			LT		98	0.07	4.5	2.3
0010	WB			LT		135	0.09	6.1	3.1
0010	WB			LT		67	0.05	3.1	1.6
0010	EB			RT		210	0.14	9.5	4.8
0010	WB			MEDIAN		76	0.05	3.3	1.7
0010	EB			RT		72	0.05	3.5	1.8
0010	EB			RT		113	0.08	5.1	2.6
0010	LB	-	LB	LT	55	55	0.06	3.6	1.8
0010	LC	-	LC	RT	7	7	0.03	1.5	0.8
0010	EC	-	EC	LT	38	38	0.04	2.9	1.5
0010	UNDISTRIBUTED					1,250	0.90	56.0	29.0
				TOTAL	100	6,050	4.28	276.2	142.0

* ADDITIONAL UANTITIES SHOWN ELSEWHERE

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3

PERMANENT SIGNING TYPE I

CATEGORY	SIGN NO	LOCATION	SIGN CODE	W X H	635.0300 SIGN SUPPORTS REPLACING BASE CONNECTION BOLTS EACH	637.1220 SIGNS TYPE I REFLECTIVE SH SF	638.2601 REMOVING SIGNS TYPE I EACH	NOTES
0010	M	WB	D	X	1	100.0	1	REMOVE R AND REUSE POSTS & BASES
0010	M	EB	EA	X		22.5	1	MOUNTED ON SAME POSTS AS M
0010	M	EB	EP	X	1	97.5	1	REMOVE R AND REUSE POSTS & BASES
0010	M	WB	EP	X	1	97.5	1	REMOVE R AND REUSE POSTS & BASES
0010	M	WB	EA	X	1	22.5	1	MOUNTED ON SAME POSTS AS M
0010	M	EB	D	X	1	112.0	1	REMOVE R AND REUSE POSTS & BASES
0010	M	WB	EA	X		22.5	1	MOUNTED ON SAME POSTS AS M
0010	M	WB	EP	X	1	110.0	1	REMOVE R AND REUSE POSTS & BASES
0010	M	EB	EA	X		22.5	1	MOUNTED ON SAME POSTS AS M
0010	M	EB	EP	X	1	120.0	1	REMOVE R AND REUSE POSTS & BASES
0010	M	EB	EA	X		22.5	1	MOUNTED ON SAME POSTS AS M
0010	M	EB	EP	X	1	105.0	1	REMOVE R AND REUSE POSTS & BASES
0010	M	WB	EA	X		22.5	1	MOUNTED ON SAME POSTS AS M
0010	M	WB	EP	X	1	105.0	1	REMOVE R AND REUSE POSTS & BASES
0010	M	WB	EA	X		22.5	1	MOUNTED ON SAME POSTS AS M
0010	M	WB	EP	X	1	120.0	1	REMOVE R AND REUSE POSTS & BASES
0010	M	EB	EA	X	1	136.0	1	REMOVE R AND REUSE POSTS & BASES
0010	M	EB	EA	X		22.5	1	MOUNTED ON SAME POSTS AS M
0010	M	EB	EP	X	1	161.5	1	REMOVE R AND REUSE POSTS & BASES
0010	M	WB	D	X	1	140.0	1	REMOVE R AND REUSE POSTS & BASES
0010	M	EB	EA	X		22.5	1	MOUNTED ON SAME POSTS AS M
0010	M	EB	EP	X	1	140.0	1	REMOVE R AND REUSE POSTS & BASES
0010	M	EB	EA	X		22.5	1	MOUNTED ON SAME POSTS AS M
0010	M	EB	EP	X	1	229.5	1	REMOVE R AND REUSE POSTS & BASES
0010	M	EB	EA	X		22.5	1	MOUNTED ON SAME POSTS AS M
0010	M	EB	EP	X	1	209.0	1	REMOVE R AND REUSE POSTS & BASES
				TOTAL	16	2,230.5	26	

TRAFFIC CONTROL

CATEGORY	STAGE	LOCATION	DURATION DAY	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0810 TRAFFIC CONTROL CONNECTED ARROW BOARDS DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	643.1220 TRAFFIC CONTROL CONNECTED WORK ZONE START AND END LOCATION MARKERS DAY
0010	PRE WARN	EB & WB	204						8,160				14	
0010	1	EB & WB	16	3,140	770	1,280	320	64	960				30	32
0010	2	EB & WB	90	17,640	4,320	8,640	1,800	360	5,400				94	180
0010	3	EB & WB	65	12,740	3,120	6,240	1,300	260	3,900				74	130
0010	4	EB & WB	120	23,520	5,760	11,520	2,400	480	7,200				40	240
0010	DETOURS	RAMPS	14						3,700	20	40	180	40	
0010	WIDTH RESTRICTION		21						420					
0010	UNDISTRIBUTED			1,000	100	200	100	50	500	5	5		14	
		TOTAL		58,040	14,070	27,880	5,920	1,214	30,240	25	45	180	306	582

REMOVE PLOWABLE RAISED MARKERS

CATEGORY	STATION	TO	STATION	LOCATION	646.9400 MARKING REMOVAL PLOWABLE RAISED PAVEMENT MARKERS EACH
0010	WB	-	WB	WB	637
0010	EB	-	EB	EB	637
				TOTAL	1,274

PROJECT STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL PROJECT EACH
0010	EB	-	EB	EB	63,855	
0010	WB	-	WB	WB	63,855	
				PROJECT		1
				TOTAL	127,710	1

* ADDITIONAL UANTITIES SHOWN ELSEWHERE

3

TEMPORARY PAVEMENT MARKINGS

CATEGORY	STATION	TO	STATION	LOCATION	643.3170 TEMPORARY MARKING LINE EPOXY INCH LF	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE INCH LF	643.3280 TEMPORARY MARKING LINE REMOVABLE TAPE INCH LF	643.3960 TEMPORARY MARKING REMOVABLE MASK OUT TAPE INCH LF	646.9002 MARKING REMOVAL LINE INCH LF
0010	EB	-	EB	CL BINDER	15,980				
0010	EB	-	EB	CL SURFACE	15,980				
0010	WB	-	WB	CL BINDER	15,980				
0010	WB	-	WB	CL SURFACE	15,980				
0010	EB	-	EB	WHITE BINDER & SURFACE	510				
0010	EB	-	EB	YELLOW BINDER & SURFACE	474				
0010	EB	-	EB	YELLOW BINDER & SURFACE	19,112				
0010	EB	-	EB	WHITE BINDER & SURFACE	6,946				
0010	EB	-	EB	WHITE BINDER & SURFACE	5,214				
0010	EB	-	EB	WHITE BINDER & SURFACE	4,810				
0010	EB	-	EB	WHITE BINDER & SURFACE	11,298				
0010	EB	-	EB	YELLOW BINDER & SURFACE	11,278				
0010	EB	-	EB	WHITE BINDER & SURFACE	28,604				
0010	EB	-	EB	YELLOW BINDER & SURFACE	40,336				
0010	EB	-	EB	WHITE BINDER & SURFACE	5,426				
0010	EB	-	EB	WHITE BINDER & SURFACE	4,218				
0010	EB	-	EB	WHITE BINDER & SURFACE	10,218				
0010	EB	-	EB	YELLOW BINDER & SURFACE	10,238				
0010	EB	-	EB	YELLOW BINDER & SURFACE	10,048				
0010	EB	-	EB	WHITE BINDER & SURFACE	9,984				
0010	EB	-	EB	YELLOW BINDER & SURFACE	2,928				
0010	EB	-	EB	WHITE BINDER & SURFACE	2,922				
0010	EB	-	EB	YELLOW BINDER & SURFACE	7,158				
0010	EB	-	EB	WHITE BINDER & SURFACE	7,112				
0010	EB	-	EB	WHITE BINDER & SURFACE	6,612				
0010	EB	-	EB	YELLOW BINDER & SURFACE	23,746				
0010	EB	-	EB	WHITE BINDER & SURFACE	16,766				
0010	WB	-	WB	WHITE BINDER & SURFACE	402				
0010	WB	-	WB	YELLOW BINDER & SURFACE	438				
0010	WB	-	WB	WHITE BINDER & SURFACE	5,450				
0010	WB	-	WB	YELLOW BINDER & SURFACE	19,130				
0010	WB	-	WB	WHITE BINDER & SURFACE	5,276				
0010	WB	-	WB	WHITE BINDER & SURFACE	6,390				
0010	WB	-	WB	WHITE BINDER & SURFACE	11,336				
0010	WB	-	WB	YELLOW BINDER & SURFACE	11,328				
0010	WB	-	WB	YELLOW BINDER & SURFACE	40,576				
0010	WB	-	WB	WHITE BINDER & SURFACE	27,444				
0010	WB	-	WB	WHITE BINDER & SURFACE	4,780				
0010	WB	-	WB	WHITE BINDER & SURFACE	15,972				
0010	WB	-	WB	YELLOW BINDER & SURFACE	10,234				
0010	WB	-	WB	YELLOW BINDER & SURFACE	10,020				
0010	WB	-	WB	WHITE BINDER & SURFACE	13,006				
0010	WB	-	WB	YELLOW BINDER & SURFACE	2,786				
0010	WB	-	WB	WHITE BINDER & SURFACE	7,234				
0010	WB	-	WB	YELLOW BINDER & SURFACE	7,210				
0010	WB	-	WB	WHITE BINDER & SURFACE	5,804				
0010	WB	-	WB	WHITE BINDER & SURFACE	16,232				
0010	WB	-	WB	YELLOW BINDER & SURFACE	23,700				
0010			STAGE	TAPERS & RAMPS		11,040	1,200	1,340	440
0010			STAGE	TAPERS & RAMPS		11,040	1,200	900	440
0010			STAGE	TAPERS & RAMPS		11,040	1,200	900	440
				TOTAL	554,626	33,120	3,600	3,140	1,320

AERIAL ENFORCEMENT BARS

CATEGORY	LOCATION	646.5420 MARKING AERIAL ENFORCEMENT BAR EPOXY EACH
0010	EASTBOUND	15
0010	WESTBOUND	15
	TOTAL	30

3

* ADDITIONAL UANTITIES SHOWN ELSEWHERE

PROJECT NO 1050-01-74	HWY STH	COUNTY CLARK	MISCELLANEOUS UANTITIES	SHEET 113	E

FILE NAME XTECHCADSHEETSMDWG
LAYOUT NAME 11
PLOT DATE AM
PLOT BY JASON KLEIST
PLOT NAME
PLOT SCALE
WISDOTCADDS SHEET

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	646.2020 MARKING LINE EPOXY INCH LF	646.2025 MARKING LINE GROOVED BLACK EPOXY INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY INCH LF	646.2050 MARKING LINE GROOVED PERMANENT TAPE INCH LF	646.4050 MARKING LINE GROOVED PERMANENT TAPE INCH LF	646.6120 MARKING STOP LINE EPOXY INCH LF	646.6466 COLD WEATHER MARKING EPOXY INCH LF	646.7220 MARKING CHEVRON EPOXY INCH LF	646.8120 MARKING CURB EPOXY LF	646.8220 MARKING ISLAND NOSE EPOXY EACH	REMARKS
0010	EB	-	EB	LANE LINE		15,964		15,964							WHITE SEG BLACK SEG GAP
0010	EB	-	EB	EDGELINE			15,553								YELLOW
0010	EB	-	EB	EDGELINE			4,057								WHITE
0010	EB	-	EB	EXIT RAMP			48								WHITE SEG GAP
0010	EB	-	EB	EDGELINE			1,718								WHITE
0010	EB	-	EB	ENTRANCE RAMP			192								WHITE SEG GAP
0010	EB	-	EB	EDGELINE			7,711								WHITE
0010	EB	-	EB	RT TURN LANE			30								WHITE SEG GAP
0010	EB	-	EB	RT TURN LANE					342						WHITE
0010	EB	-	EB	LT TURN LANE			39								WHITE SEG GAP
0010	EB	-	EB	LT TURN LANE					180						WHITE
0010	EB	-	EB	EDGELINE			14,271								WHITE
0010	EB	-	EB	EDGELINE			20,020								YELLOW
0010	EB	-	EB	EXIT RAMP			54								WHITE SEG GAP
0010	EB	-	EB	EDGELINE			2,129								WHITE
0010	EB	-	EB	ENTRANCE RAMP			192								WHITE SEG GAP
0010	EB	-	EB	EDGELINE			1,672								WHITE
0010	EB	-	EB	RT TURN LANE					200						WHITE
0010	EB	-	EB	EDGELINE			4,654								WHITE
0010	EB	-	EB	EDGELINE			4,630								YELLOW
0010	EB	-	EB	RT TURN LANE					196						WHITE
0010	EB	-	EB	LT TURN LANE					211						WHITE
0010	EB	-	EB	EDGELINE			4,738								YELLOW
0010	EB	-	EB	EDGELINE			4,571								WHITE
0010	EB	-	EB	RT TURN LANE					200						WHITE
0010	EB	-	EB	EDGELINE			4,612								WHITE
0010	EB	-	EB	EDGELINE			4,632								YELLOW
0010	EB	-	EB	LT TURN LANE					230						WHITE
0010	EB	-	EB	RT TURN LANE					200						WHITE
0010	EB	-	EB	EDGELINE			3,225								WHITE
0010	EB	-	EB	EDGELINE			11,782								YELLOW
0010	EB	-	EB	EXIT RAMP			42								WHITE SEG GAP
0010	EB	-	EB	EDGELINE			8,109								WHITE
0010	WB	-	WB	LANE LINE		15,964		15,964							WHITE SEG BLACK SEG GAP
0010	WB	-	WB	EDGELINE			3,259								WHITE
0010	WB	-	WB	EDGELINE			15,792								YELLOW
0010	WB	-	WB	ENTRANCE RAMP			177								WHITE SEG GAP
0010	WB	-	WB	EDGELINE			1,681								WHITE
0010	WB	-	WB	EXIT RAMP			51								WHITE SEG GAP
0010	WB	-	WB	EDGELINE			8,897								WHITE
0010	WB	-	WB	LT TURN LANE					351						WHITE
0010	WB	-	WB	RT TURN LANE					180						WHITE
0010	WB	-	WB	RT TURN LANE			48								WHITE SEG GAP
0010	WB	-	WB	LT TURN LANE			36								WHITE SEG GAP
0010	WB	-	WB	EDGELINE			13,345								WHITE
0010	WB	-	WB	EDGELINE			19,681								YELLOW
0010	WB	-	WB	ENTRANCE RAMP			240								WHITE SEG GAP
0010	WB	-	WB	EDGELINE			1,819								WHITE
0010	WB	-	WB	EXIT RAMP			84								WHITE SEG GAP
0010	WB	-	WB	EDGELINE			7,903								WHITE
0010	WB	-	WB	LT TURN LANE					192						WHITE
0010	WB	-	WB	EDGELINE			4,644								YELLOW
0010	WB	-	WB	LT TURN LANE					200						WHITE
0010	WB	-	WB	RT TURN LANE					203						WHITE
0010	WB	-	WB	EDGELINE			4,563								YELLOW
0010	WB	-	WB	EDGELINE			9,703								WHITE
0010	WB	-	WB	LT TURN LANE					213						WHITE
0010	WB	-	WB	EDGELINE			4,613								YELLOW
0010	WB	-	WB	RT TURN LANE					200						WHITE
0010	WB	-	WB	LT TURN LANE					220						WHITE
				SUB TOTAL	0	31,928	215,217	31,928	3,518	0	0	0	0	0	

* ADDITIONAL UANTITIES SHOWN ELSEWHERE

PROJECT NO 1050-01-74	HWY STH	COUNTY CLARK	MISCELLANEOUS UANTITIES	SHEET 114	E

FILE NAME XTECHCADSHEETSMDWG
LAYOUT NAME 12
PLOT DATE AM
PLOT BY JASON KLEIST
PLOT NAME
PLOT SCALE
WISDOTCADDS SHEET

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	646.2020 MARKING LINE EPOXY INCH LF	646.2025 MARKING LINE GROOVED BLACK EPOXY INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY INCH LF	646.2050 MARKING LINE GROOVED PERMANENT TAPE INCH LF	646.4050 MARKING LINE GROOVED PERMANENT TAPE INCH LF	646.6120 MARKING STOP LINE EPOXY INCH LF	646.6466 COLD WEATHER MARKING EPOXY INCH LF	646.7220 MARKING CHEVRON EPOXY INCH LF	646.8120 MARKING CURB EPOXY LF	646.8220 MARKING ISLAND NOSE EPOXY EACH	REMARKS
0010	WB	-	WB	EDGELINE			2,500								WHITE
0010	WB	-	WB	EDGELINE			11,439								YELLOW
0010	WB	-	WB	ENTRANCE RAMP			180								WHITE
0010	WB	-	WB	EDGELINE			7,641								WHITE
0010	LB	-	LB	EDGELINE			2,145								WHITE
0010	LB	-	LB	GORE					1,478						WHITE
0010	LB	-	LB	EDGELINE			734								YELLOW
0010	LC	-	LC	EDGELINE			1,351								WHITE
0010	LC	-	LC	GORE					653			172			WHITE
0010	LC	-	LC	EDGELINE			866								YELLOW
0010	LC	-	LC	ISLAND					78					2	
0010			LC	STOP LINE						32					WHITE
0010	LD	-	LD	EDGELINE			767								YELLOW
0010	LD	-	LD	EDGELINE			2,177								WHITE
0010	LD	-	LD	GORE					1,328						WHITE
0010			LA	STOP LINE						40					WHITE
0010	LA	-	LA	EDGELINE			868								YELLOW
0010	LA	-	LA	EDGELINE			1,384								WHITE
0010	LA	-	LA	GORE					682			202			WHITE
0010	LA	-	LA	ISLAND					54					2	
0010	EC	-	EC	EDGELINE			1,551								WHITE
0010	EC	-	EC	GORE					463			90			WHITE
0010	EC	-	EC	EDGELINE			1,108								YELLOW
0010	EC	-	EC	ISLAND					76						WHITE
0010			EC	STOP LINE						50					WHITE
0010	EF	-	EF	EDGELINE			2,139								WHITE
0010	EF	-	EF	GORE					864						WHITE
0010	EF	-	EF	EDGELINE			751								YELLOW
0010	ED	-	ED	EDGELINE			926								YELLOW
0010	ED	-	ED	ELW			2,160								WHITE
0010	ED	-	ED	GORE					945						WHITE
0010			EA	STOP LINE						53					WHITE
0010	EA	-	EA	ISLAND					65						WHITE
0010	EA	-	EA	EDGELINE			998								YELLOW
0010	EA	-	EA	EDGELINE			1,587								WHITE
0010	EA	-	EA	GORE					488			93			WHITE
0010	HC	-	HC	EDGELINE			1,991								WHITE
0010	HC	-	HC	GORE					600			145			WHITE
0010	HC	-	HC	EDGELINE			1,547								YELLOW
0010			HC	STOP LINE						30					WHITE
0010	HB	-	HB	EDGELINE			2,278								WHITE
0010	HB	-	HB	GORE					1,176						WHITE
0010	HB	-	HB	EDGELINE			1,025								YELLOW
0010	L	-	L				1,141		190				100	4	
0010	H	-	H	EDGELINES			1,455								WHITE
0010	H	-	H	CENTERLINE			1,664								DOUBLE YELLOW
0010			CTH PPRAY AVE	EDGELINE	1,248										YELLOW
0010			CTH PPRAY AVE	EDGELINE	987										WHITE
0010			CATALIN AVE	EDGELINE	894										YELLOW
0010			CATALIN AVE	EDGELINE	527										WHITE
0010			SANDHILL AVE	EDGELINE	1,094										YELLOW
0010			SANDHILL AVE	EDGELINE	880										WHITE
0010			DIVISION AVE	ELY	892										YELLOW
0010			DIVISION AVE	ELW	423										WHITE
0010			BADGER AVE	ELY	1,226										YELLOW
0010			BADGER AVE	ELW	1,000										WHITE
0010			PROJECT								66,500				
				SUBTOTAL	9,171	0	54,373	0	9,140	205	66,500	702	100	8	
				TOTAL	9,171	31,928	269,590	31,928	12,658	205	66,500	702	100	8	

* ADDITIONAL UANTITIES SHOWN ELSEWHERE

PROJECT NO 1050-01-74	HWY STH	COUNTY CLARK	MISCELLANEOUS UANTITIES	SHEET 115	E

FILE NAME XTECHCADSHEETSMDWG
LAYOUT NAME 13
PLOT DATE AM
PLOT BY JASON KLEIST
PLOT NAME
PLOT SCALE
WISDOTCADDS SHEET

3

DIGITAL SPEED REDUCTION SYSTEM

CATEGORY	LOCATION	STAGE	DIGITAL SPEED LIMIT TRAILERS DSLT	S DIGITAL SPEED REDUCTION SYSTEM DSRS
				DAY
0010	STH EB	1	15	16
0010	STH WB	1	15	16
0010	STH EB	2	15	90
0010	STH WB	2	15	90
0010	STH EB	3	15	65
0010	STH WB	3	15	65
0010	STH EB	4	15	120
0010	STH WB	4	15	120
		TOTAL	120	582

PUBLIC LAND REFERENCE MONUMENTS

CATEGORY	STATION	LOCATION	680.0100 PUBLIC LAND REFERENCE MONUMENT VERIFY AND RESET
			EACH
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	WB	LT	1
0010	LB	RT	1
		TOTAL	7

TURTLE EXCLUSION FENCE

CATEGORY	STATION	TO	STATION	LOCATION	S INSTALLING AND MAINTAINING TURTLE EXCLUSION FENCE LF
0010	EB	-	EB	RT	605
0010	EB	-	EB	LT	525
0010	WB	-	WB	RT	540
0010	WB	-	WB	LT	540
				TOTAL	2,210

CONCRETE PAVEMENT REPAIR

CATEGORY	STATION	TO	STATION	* 416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	* 690.0250 SAWING CONCRETE LF	SPV SPECIAL CONCRETE PAVEMENT REPAIR DOWELED SY	SPV SPECIAL CONCRETE PAVEMENT REPLACEMENT DOWELED SY	SPV SPECIAL INCH CONCRETE CENTERLINE REPAIR SY
0010	WB	-	WB	165		424			47
0010	EB	-	EB		80	164	44		
0010	WB	-	WB	192	577	1,415	275	58	51
0010	EB	-	EB	69	848	2,108	489	239	
0010	WB	-	WB	331	3,584	8,708	2,141	364	70
0010	EB	-	EB	109	1,008	2,633	618	84	28
0010	WB	-	WB	110	1,136	2,908	590	382	
0010	EB	-	EB	25	384	912	217	85	
0010	LB	-	LB		112	190	66		
0010	LC	-	LC		32	65	40		
0010	LD	-	LD		192	291	216		
0010	LA	-	LA	110	128	298	35	147	
0010	EF	-	EF	110	128	567	21	375	
0010	EC	-	EC	64	464	1,421	231	306	
0010	EA	-	EA	150	176	952	14	640	
0010	ED	-	ED	154	144	781	55	520	
0010	HB	-	HB	10	16	30		34	
0010	HC	-	HC	8	16	48		30	
0010	UNDISTRIBUTED			100	200	1,800	250	150	10
			TOTAL	1,542	9,225	25,291	5,302	3,414	159

MEDIAN BARRIER WALL INLETS

CATEGORY	STATION	LOCATION	SPV SPECIAL RECONSTRUCT INLETS WITH VANE DRAINS EACH	SPV SPECIAL REMOVE AND REPLACE CONCRETE BARRIER WALL LF
0010	WB	RT	1	7
0010	EB	LT	1	7
0010	WB	RT	1	7
0010	EB	LT	1	7
0010	WB	RT	1	7
0010	EB	LT	1	7
0010	WB	RT	1	7
0010	EB	LT	1	7
0010	WB	RT	1	7
0010	EB	LT	1	7
0010	EB	LT	1	7
0010	WB	RT	1	7
		TOTAL	12	84

REMOVE AND REINSTALL CABLE BARRIER

CATEGORY	STATION	TO	STATION	LOCATION	SPV SPECIAL REMOVE AND REINSTALL FOUR STRAND HT CABLE BARRIER LF
0010	EB	-	EB	LT	800
0010	EB	-	EB	LT	200
				TOTAL	1,000

DITCH CLEANING

CATEGORY	STATION	LOCATION	SPV SPECIAL DITCH CLEANING LF
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	EB	RT	50
0010	EB	RT	50
0010	WB	MEDIAN	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	MEDIAN	50
0010	WB	MEDIAN	50
0010	WB	LT	50
0010	WB	LT	100
0010	WB	MEDIAN	50
0010	WB	LT	75
0010	WB	LT & MEDIAN	100
0010	WB	LT & MEDIAN	125
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	EB	RT	50
0010	WB	LT	125
0010	WB	MEDIAN	50
0010	WB	LT	225
0010	WB	LT	50
0010	WB	LT & MEDIAN	100
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	WB	LT	50
0010	EB	RT	125
0010	WB	MEDIAN	50
0010	EB	RT	50
		TOTAL	3,025

* ADDITIONAL UANTITIES SHOWN ELSEWHERE

3

STA 2163+40
EXISTING 18" CPRC
SALVAGE 16 LF OF 18" PIPE & APRON ENDWALL
JOINT TIES & CONCRETE COLLAR REQ'D
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH CENTERED ON PIPE LT

STRUCTURE B-10-173
STA 2161+69 WB - STA 2163+10 WB
SEE STRUCTURE PLANS

BEGIN CONSTRUCTION
STA 2161+68.97 WB
MATCH EXISTING

BEGIN PROJECT
STA 2161+67.92 EB
Y = 489,750.147
X = 695,102.397

GAP OVERLAY AT STRUCTURES
BUTT JOINT UP TO BRIDGE
STRUCTURE B-10-022
STA 2161+68 EB - STA 2163+14 EB
SEE STRUCTURE PLANS

RR MILE MARKER AT
INTERSECTION
OF CTH D AND RR
CTH "D"
DOT #692 818 F
M.P. CM307.97

GAP OVERLAY AT
STRUCTURES
BUTT JOINT UP
TO BRIDGE

STRUCTURE B-10-174
STA 2165+29 WB - STA 2167+21 WB
SEE STRUCTURE PLANS

STA 2169+40
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH
CENTERED ON PIPE LT

NOTE: GRADING AND RESTORATION AROUND
CONCRETE SURFACE DRAINS IS INCIDENTAL TO BARRIER
SYSTEM GRADING SHAPING FINISHING

STA 2172+00
EXISTING 18" CPRC
SALVAGE 16 LF OF 18" PIPE & APRON ENDWALL
JOINT TIES & CONCRETE COLLAR REQ'D
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH CENTERED ON PIPE LT

MATCH LINE 2174+50 EB

XCEL ENERGY - TRANSMISSION

STRUCTURE B-10-023
STA 2165+51 EB - STA 2167+35 EB
SEE STRUCTURE PLANS

WISCONSIN CENTRAL LTD

STA 2175+00
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH
CENTERED ON PIPE LT

STA 2177+80
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH
CENTERED ON PIPE LT

STA 2181+00
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH
CENTERED ON PIPE LT

STA 2182+75
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH
CENTERED ON PIPE LT

STA 2186+50
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH
CENTERED ON PIPE LT

STA 2188+50
EXISTING 48" CPRC

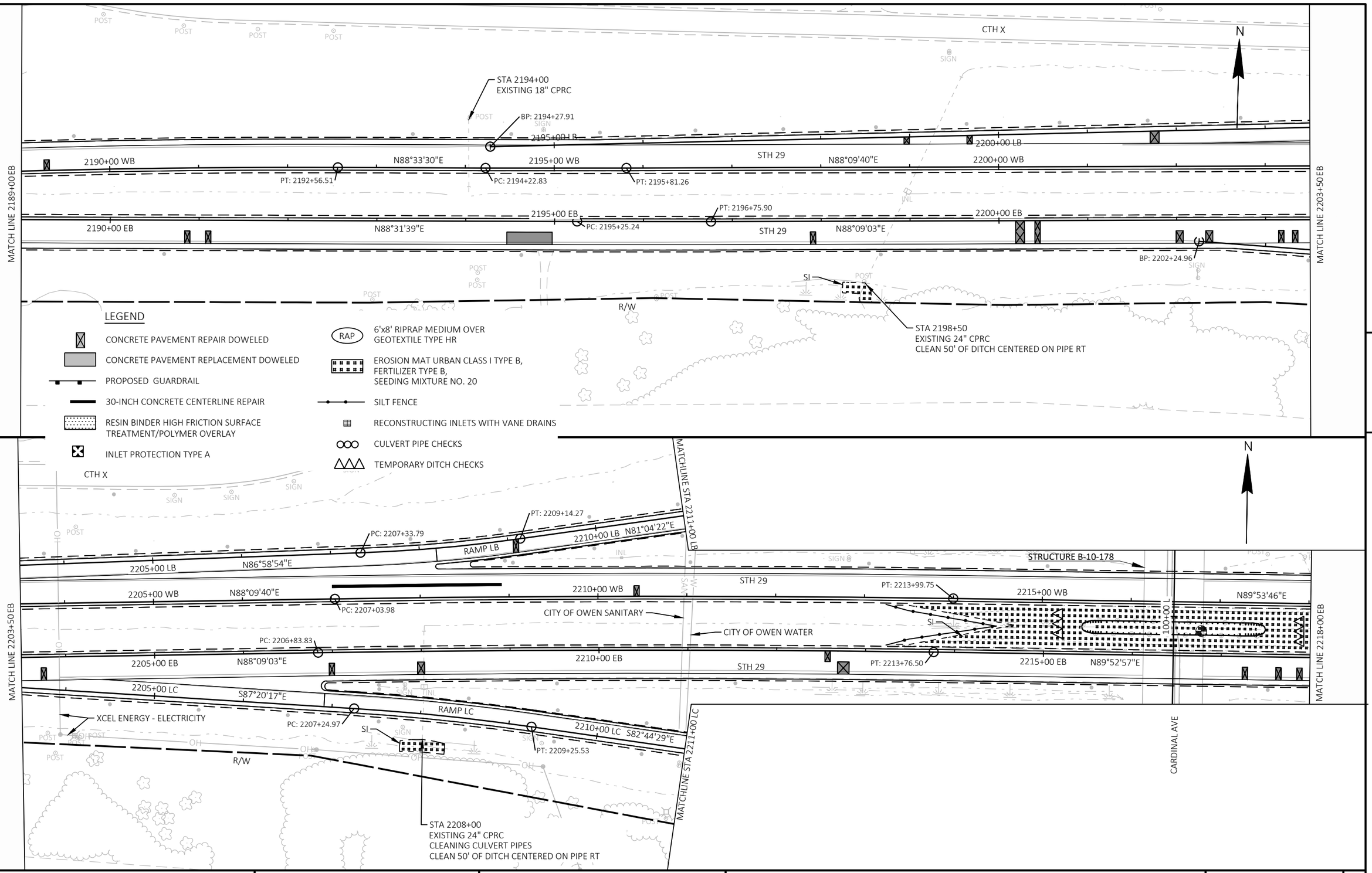
MATCH LINE 2189+00 EB

LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 117	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050201-pn
PLOT DATE : 11/24/2025 6:38 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

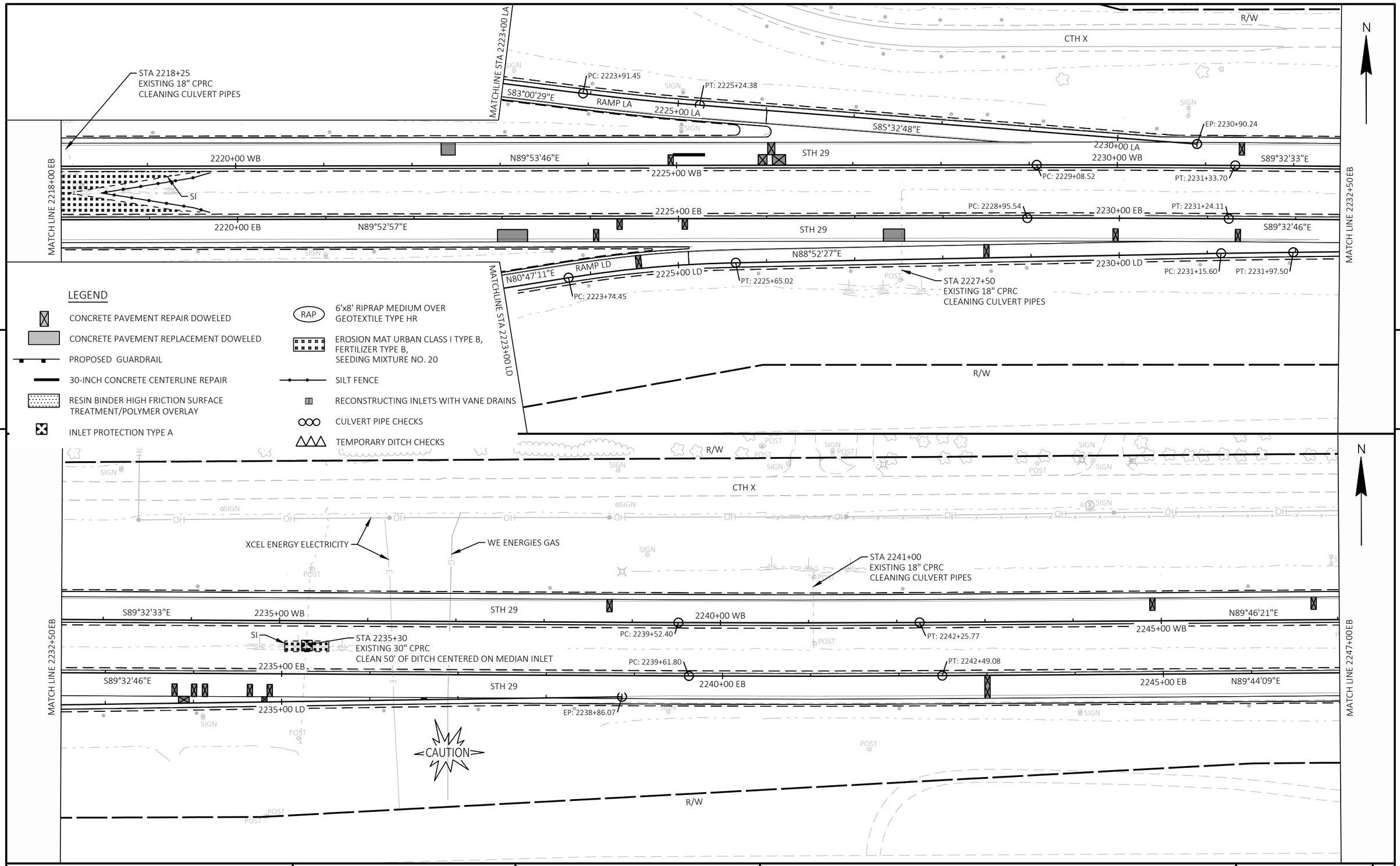


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 118 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050202-pn

PLOT DATE : 11/24/2025 6:39 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

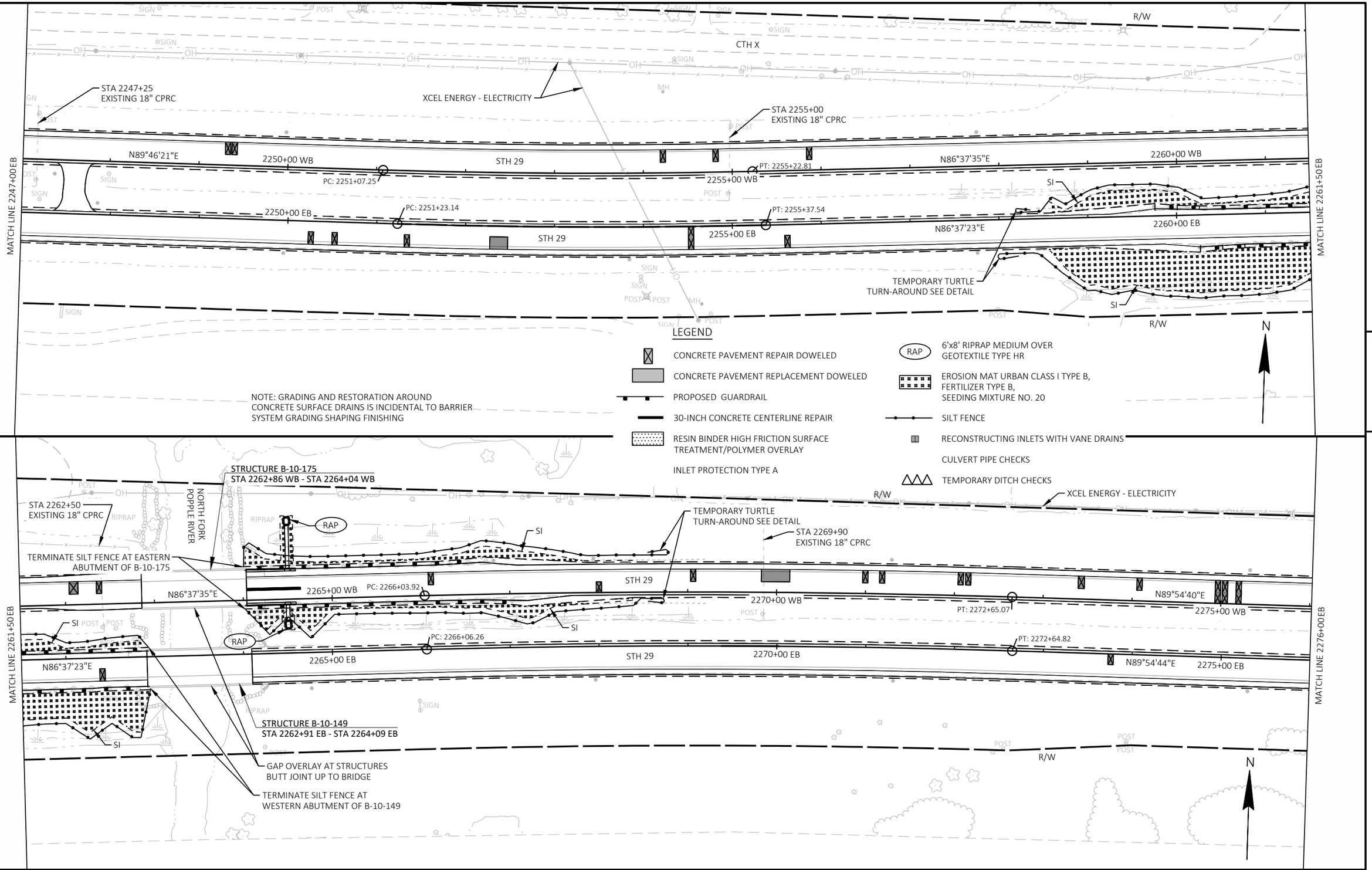


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 119 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050203-pn

PLOT DATE : 11/24/2025 6:39 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



5

5

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 120	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050204-pn

PLOT DATE : 11/24/2025 6:39 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

MATCH LINE 2276+00 EB

MATCH LINE 2290+50 EB

STA 2286+00
EXISTING 18" CPRC
CLEAN 50' OF DITCH CENTERED ON PIPE LT

R/W

SI

STA 2278+10
EXISTING 18" CPRC

2280+00 WB

N89°50'02"E

STH 29

2285+00 WB

2290+00 WB

2280+00 EB

N89°54'44"E

STH 29

2285+00 EB

2290+00 EB

R/W

MATCH LINE 2290+50 EB

MATCH LINE 2305+00 EB

LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS

N

STA 2305+00
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH
CENTERED ON PIPE LT

STA 2299+25
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH
CENTERED ON PIPE LT

XCEL ENERGY - ELECTRICITY

STA 2294+00
EXISTING 18" CPRC

R/W

SI

PE GRVL

2295+00 WB

N89°54'40"E

STH 29

2300+00 WB

2295+00 EB

N89°54'44"E

STH 29

2300+00 EB

R/W

N

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 121	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050205-pn

PLOT DATE : 11/24/2025 6:39 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STA 2313+00
EXISTING 18" CPRC
REMOVING APRON ENDWALL
APRON ENDWALLS FOR CULVERT PIPE REINFORCED
CONCRETE 18-INCH
CONCRETE COLLAR REQUIRED
CLEANING CULVERT PIPES

SI

XCEL ENERGY - ELECTRICITY

R/W

PE
ASPH

00 WB

2310+00 WB

STH 29

N89°57'44"E

2315+00 WB

00 EB

2310+00 EB

STH 29

N89°54'44"E

2315+00 EB

MATCH LINE 2305+00EB

MATCH LINE 2319+50EB

LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS

N

5

5

R/W

STA 2320+00
EXISTING 18" CPRC
CLEAN 50' OF
DITCH CENTERED
ON PIPE LT

SI

PRAY AVE

PUBLIC LAND SURVEY
MONUMENT VERIFY
AND RESET REQ'D

R/W

R/W

NGS

STA 2332+00
EXISTING 18" CPRC

PE
GRAVEL

2320+00 WB

2325+00 WB

STH 29

N89°53'24"E

2330+00 WB

STA 2326+05
EXISTING 36" CPRC
CLEAN 50' OF DITCH CENTERED ON MEDIAN INLET

SI

2320+00 EB

2325+00 EB

STH 29

N89°54'44"E

2330+00 EB

MATCH LINE 2319+50EB

MATCH LINE 2334+00EB

EXISTING CURB & GUTTER TO REMAIN (TYP)

XCEL ENERGY - ELECTRICITY

R/W

CTH P

R/W

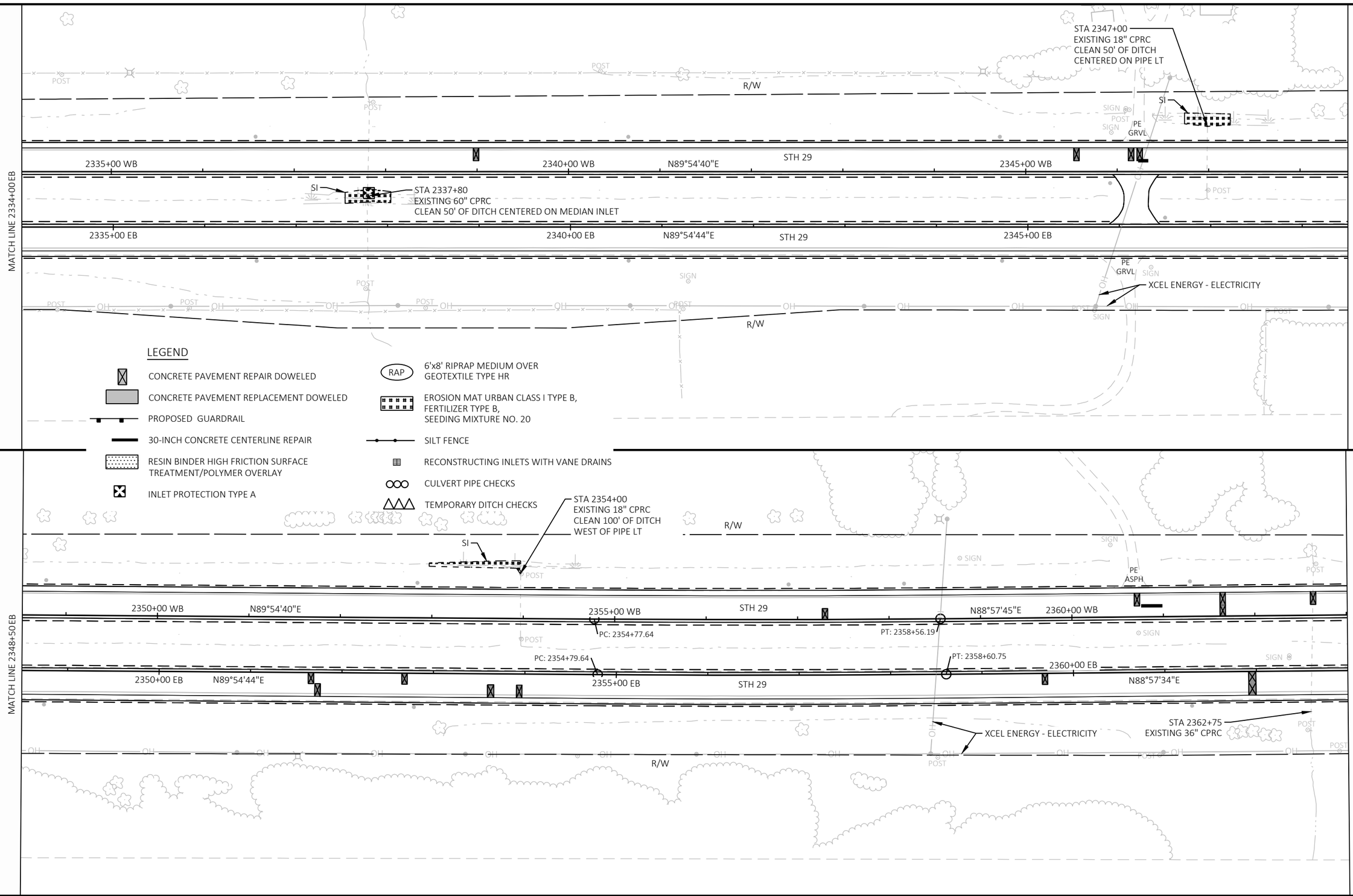
R/W

N

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 122	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050206-pn

PLOT DATE : 11/24/2025 6:39 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

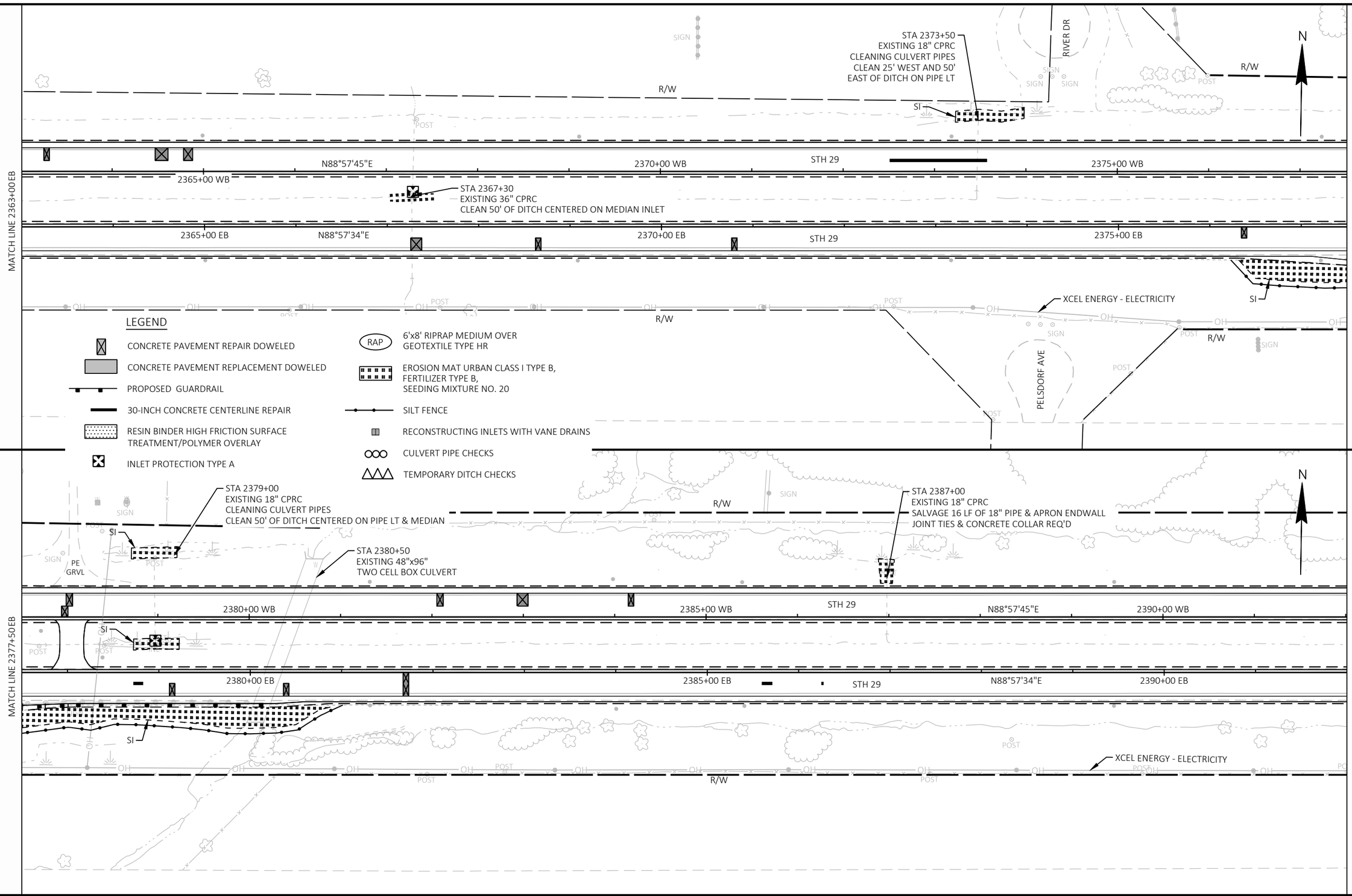


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 123 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050207-pn

PLOT DATE : 11/24/2025 6:40 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

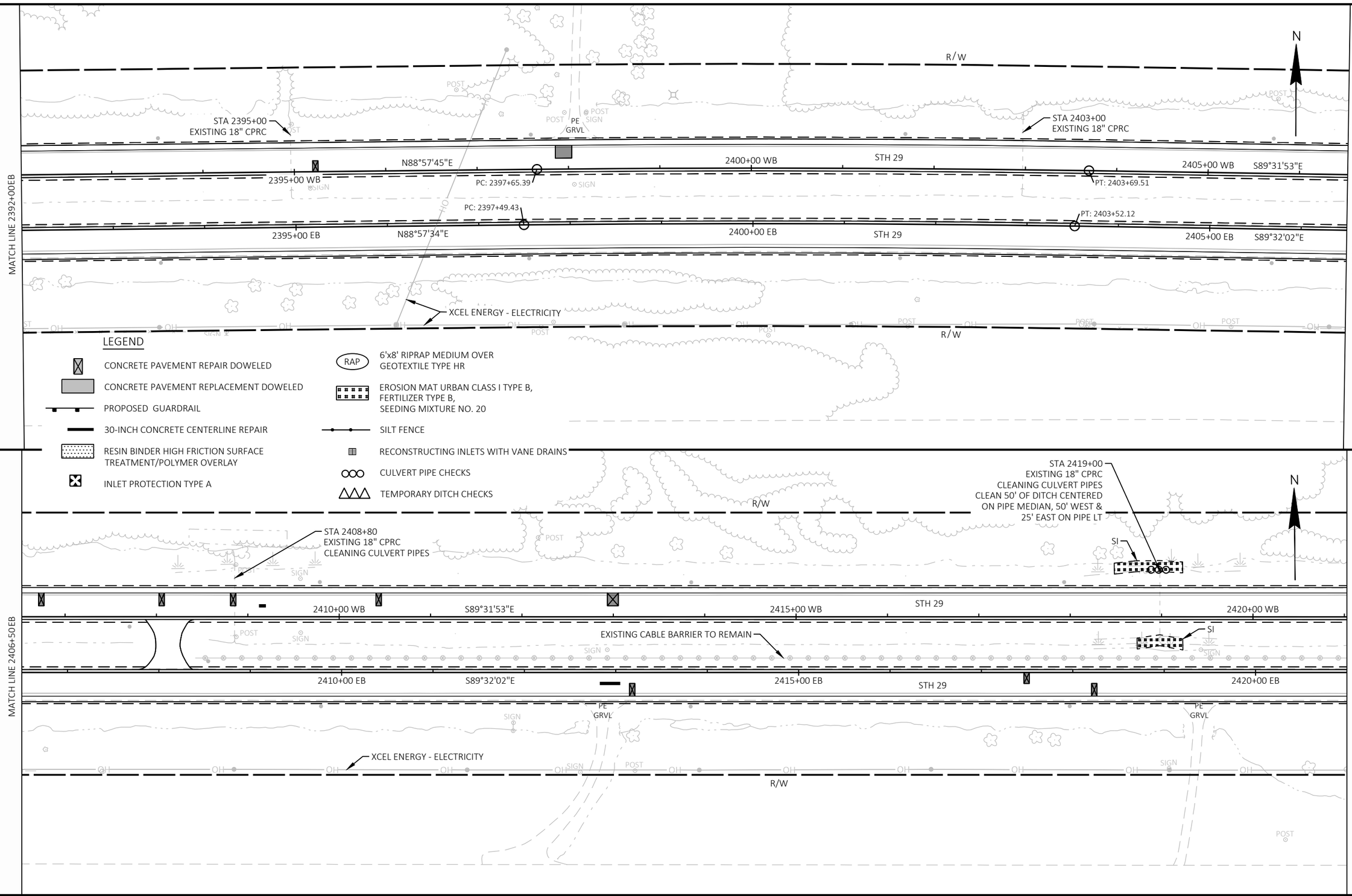


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 124	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050208-pn

PLOT DATE : 11/24/2025 6:40 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



5

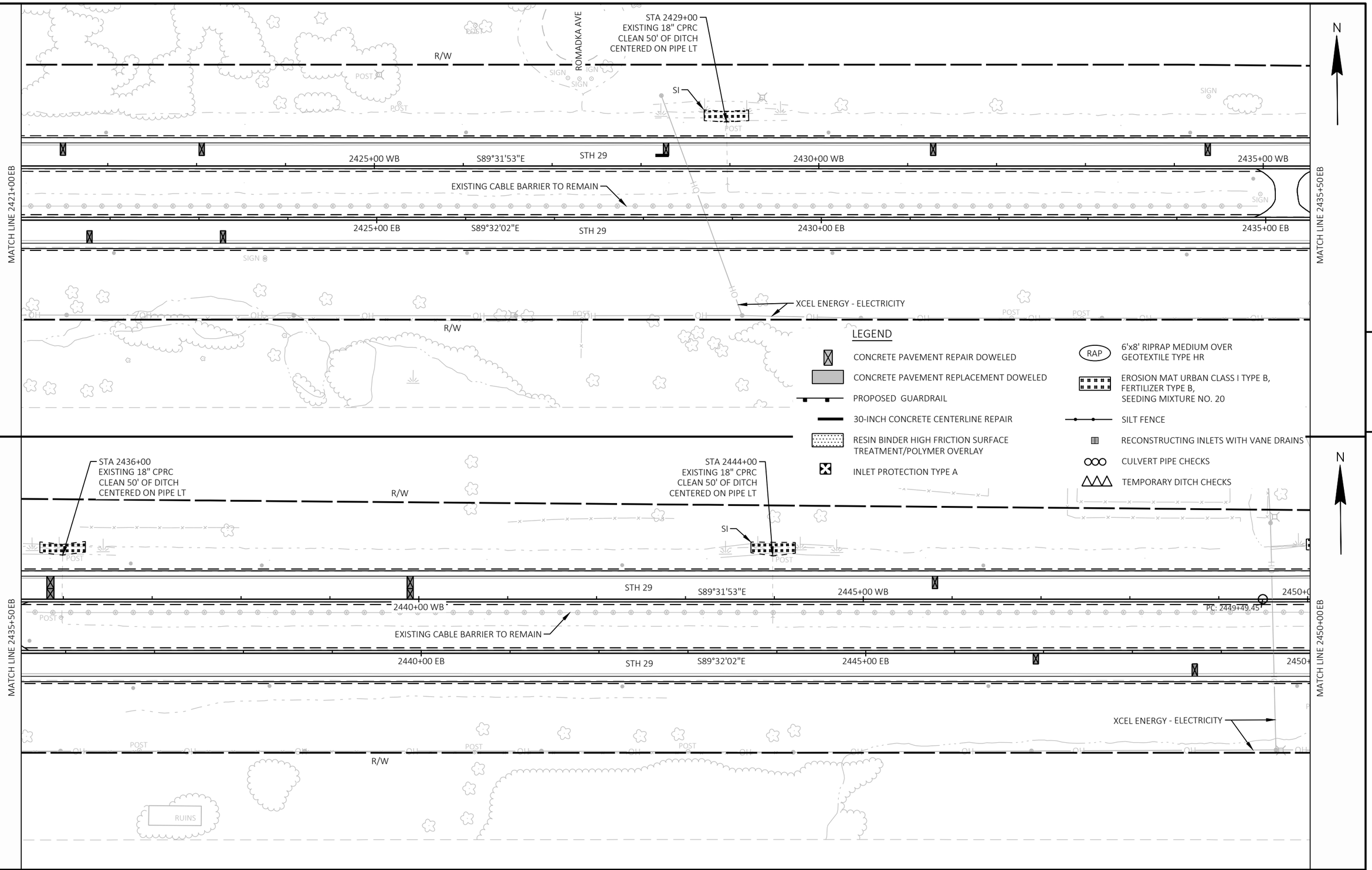
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 125	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050209-pn

PLOT DATE : 11/24/2025 6:40 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 126	E

STA 2450+25
EXISTING 48" CPRC
CLEAN 50' OF DITCH
CENTERED ON PIPE LT

STA 2455+00
EXISTING 18" CPRC
CLEAN 50' OF DITCH
CENTERED ON PIPE LT

STA 2462+35
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH
CENTERED ON PIPE LT

R/W

SI

BP: 2459+23.75

2460+00 EF

PT: 2460+98.70

N86°58'35"E

N87°50'30"E

STH 29

2460+00 WB

2455+00 WB

EXISTING CABLE BARRIER TO REMAIN

2460+00 EB

S89°32'02"E

2455+00 EB

STH 29

MATCH LINE 2450+00 EB

MATCH LINE 2464+50 EB

CLARK ELECTRIC COOPERATIVE - ELECTRICITY

XCEL ENERGY - ELECTRICITY

XCEL ENERGY - ELECTRICITY

R/W

R/W

N

LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS

R/W

PC: 2471+42.46

MATCHLINE STA 2474+00 B

2470+00 EF

RAMP EF

2465+00 EF

N86°58'35"E

2470+00 WB

STH 29

N88°51'36"E

N87°50'30"E

PC: 2466+74.95

2465+00 WB

PT: 2471+20.46

2475+00 WB

EXISTING CABLE BARRIER TO REMAIN

SI

SI

MATCH LINE 2464+50 EB

MATCH LINE 2479+00 EB

PC: 2464+72.76

PT: 2471+18.96

2465+00 EB

2470+00 EB

STH 29

N88°51'02"E

2475+00 EB

S85°34'49"E

RAMP EC

BP: 2465+32.19

2470+00 EC

PC: 2471+75.48

MATCHLINE STA 2474+00 C

XCEL ENERGY - ELECTRICITY

R/W

N

5

5

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 127	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050211-pn
PLOT DATE : 11/24/2025 6:41 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

WE ENERGIES GAS
XCEL ENERGY - ELECTRICITY
PUBLIC LAND SURVEY MONUMENT
VERIFY AND RESET REQ'D
2480+00 WB
N88°51'36"E
2485+00 WB
STH 29
PC: 2486+49.04
MATCHLINE STA 2488+00 A
PT: 2489+70.69
VILLAGE OF CURTISS
- ELECTRICITY
2490+00 EA
R/W
RAMP EA
S84°47'39"E
2490+00 WB
STA 2488+90
TWO EXISTING 30" CPRC
CLEAN 50' OF DITCH CENTERED ON PIPE LT
SI
CAUTION
CTH E
CTH E
STRUCTURE B-10-179
EXISTING CABLE BARRIER TO REMAIN
MATCH LINE 2479+00EB
2480+00 EB
N88°51'02"E
2485+00 EB
STH 29
2490+00 EB
MATCH LINE 2493+50EB
100+00 E
VILLAGE OF CURTISS WATER
RAMP ED
2490+00 ED
MATCHLINE STA 2488+00 D
STA 2488+90
TWO EXISTING 30" CPRC
CLEAN 50' OF DITCH CENTERED ON PIPE RT
SI
XCEL ENERGY - ELECTRICITY
R/W
N

5

5

LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS

VILLAGE OF CURTISS - ELECTRICITY
PC: 2494+39.73
2495+00 EA
RAMP A
EP: 2497+25.96
PUBLIC LAND SURVEY MONUMENT
VERIFY AND RESET REQ'D
STA 2499+50
EXISTING 48" CPRC
R/W
2495+00 WB
PT: 2496+31.57
S88°53'38"E
2500+00 WB
STH 29
PC: 2501+76.28
2505+00 WB
EXISTING CABLE BARRIER TO REMAIN
MATCH LINE 2493+50EB
2495+00 EB
N88°51'02"E
2500+00 EB
2500+00 ED
STH 29
2505+00 EB
MATCH LINE 2508+00EB
N87°39'21"E
2495+00 ED
STA 2499+50
EXISTING 48" CPRC
XCEL ENERGY - ELECTRICITY
R/W
N

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 128	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050212-pn
PLOT DATE : 11/24/2025 6:41 AM
PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

STA 2509+80
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 25' WEST & 100' EAST
OF DITCH ON PIPE LT

MAPLE RD

R/W

SI

2510+00 WB

PT: 2511+63.72

N88°52'24"E

2515+00 WB

STH 29

EXISTING CABLE BARRIER TO REMAIN

2520+00 WB

SI

STA 2519+50
EXISTING 60" CPRC
CLEAN 50' OF DITCH CENTERED ON MEDIAN INLET

MATCH LINE 2508+00EB

2510+00 EB

N88°51'02"E

2515+00 EB

STH 29

2520+00 EB

MATCH LINE 2522+50EB

XCEL ENERGY - ELECTRICITY

R/W

N

LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS

STA 2524+00
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 25' OF DITCH WEST &
200' EAST ON PIPE LT

R/W

SI

STA 2534+00
EXISTING 18" CPRC

PE
GRVL

2530+00 WB

STH 29

N88°50'55"E

2525+00 WB

EXISTING CABLE BARRIER TO REMAIN

2535+00 WB

MATCH LINE 2522+50EB

2525+00 EB

2530+00 EB

STH 29

N88°51'02"E

2535+00 EB

MATCH LINE 2537+00EB

EXISTING CURB & GUTTER TO REMAIN (TYP)

XCEL ENERGY - ELECTRICITY

CATILIN AVE

LUMEN (CENTURYLINK)
COMMUNICATIONS

R/W

R/W

N

5

5

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 129	E

STA 2541+00
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH CENTERED ON PIPE LT

STA 2543+25
EXISTING 72"X96"
TWO CELL BOX CULVERT

STA 2549+00
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH CENTERED ON PIPE LT & RT

PUBLIC LAND SURVEY MONUMENT
VERIFY AND RESET REQ'D

SI

R/W

2540+00 WB

STH 29

N88°50'55"E

2545+00 WB

2550+00 WB

2540+00 EB

2545+00 EB

STH 29

N88°51'02"E

2550+00 EB

MATCH LINE 2537+00 EB

MATCH LINE 2551+50 EB

POST

INL

N

LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS

STA 2557+50
TWO EXISTING 30" CPRC

STA 2565+00
EXISTING 18" CPRC

SIGN

2555+00 WB

2560+00 WB

2565+00 WB

2555+00 EB

2560+00 EB

2565+00 EB

MATCH LINE 2551+50 EB

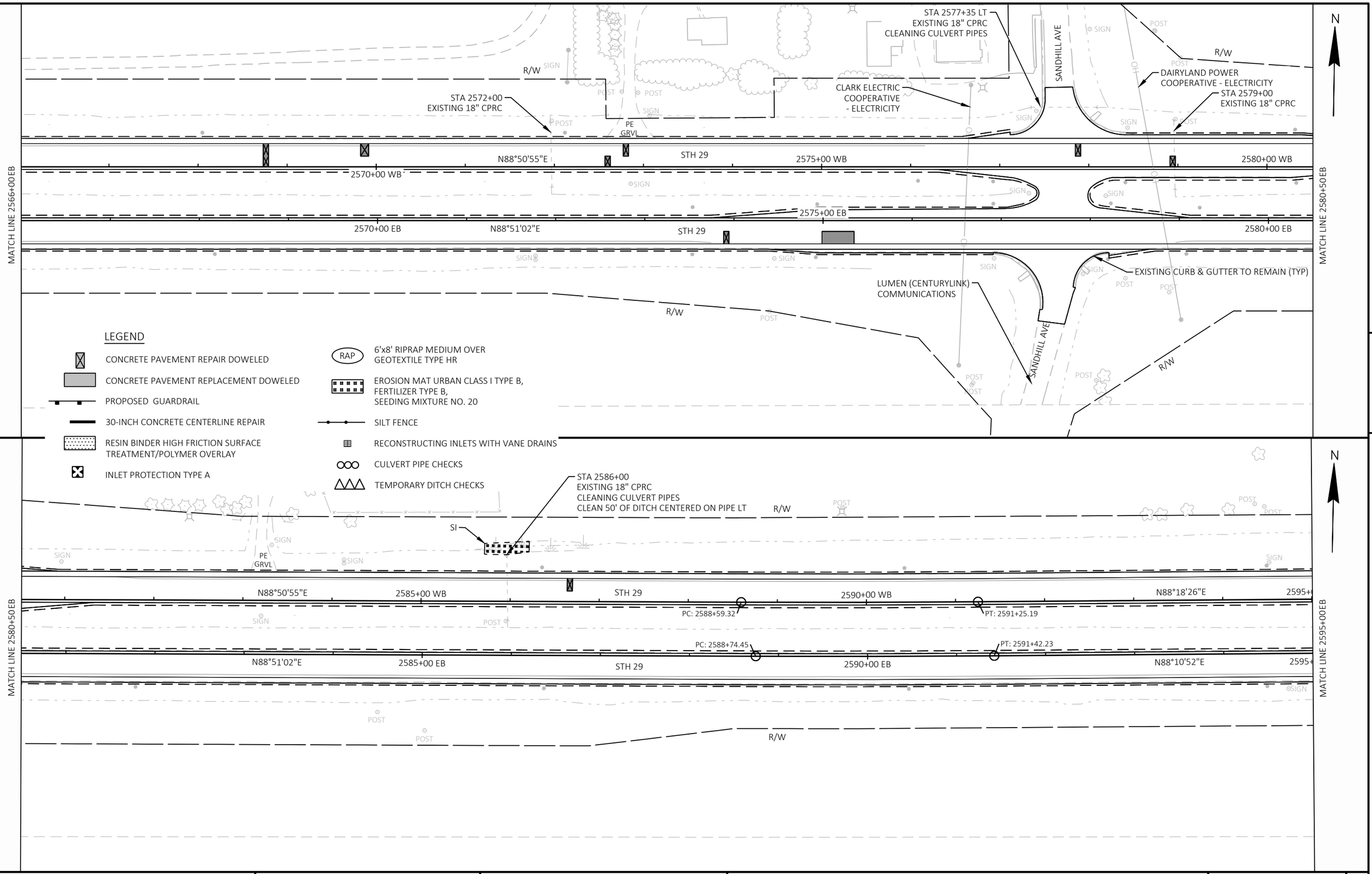
MATCH LINE 2566+00 EB

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 130 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050214-pn

PLOT DATE : 11/24/2025 6:42 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 131	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050215-pn

PLOT DATE : 11/24/2025 6:43 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STA 2600+00
EXISTING 18" CPRC
CLEANING CULVERT PIPES
CLEAN 50' OF DITCH CENTERED ON PIPE LT

STA 2606+00
EXISTING 18" CPRC
CLEAN 50' OF DITCH CENTERED ON PIPE LT

STA 2608+50
EXISTING 60" CPRC

SI

R/W

PE
GRVL

POST

SIGN

INL

MATCH LINE 2595+00 EB

00 WB

2600+00 WB

STH 29

N88°10'56"E

2605+00 WB

00 EB

2600+00 EB

STH 29

N88°10'52"E

2605+00 EB

MATCH LINE 2609+50 EB

N

5

LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS

R/W

DOE AVE

R/W

R/W

POST

SIGN

STA 2618+00
EXISTING 18" CPRC
SALVAGE 8 LF OF 18" PIPE AND APRON ENDWALL
JOINT TIES & CONCRETE COLLAR REQ'D

PE
GRVL

POST

2610+00 WB

N88°10'56"E

2615+00 WB

STH 29

2620+00 WB

N89°01'34"E

PC: 2617+96.08

PT: 2621+34.42

POST

PC: 2617+99.49

PT: 2621+35.59

2610+00 EB

N88°10'52"E

2615+00 EB

STH 29

2620+00 EB

N89°01'17"E

SIGN

POST

R/W

MATCH LINE 2609+50 EB

MATCH LINE 2624+00 EB

N

5

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 132 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050216-pn

PLOT DATE : 11/24/2025 6:44 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

CLARK ELECTRIC COOPERATIVE - ELECTRICITY

STA 2628+00
EXISTING 18" CPRC
CLEAN 50' OF DITCH CENTERED ON PIPE LT

SI

PUBLIC LAND SURVEY MONUMENT
VERIFY AND RESET REQ'D

FE
GRVL

STA 2637+00
EXISTING 18" CPRC
SALVAGE 8 LF OF 18" PIPE & APRON ENDWALL
JOINT TIES & CONCRETE COLLAR REQ'D
CLEAN 50' OF DITCH CENTERED ON PIPE LT

R/W

MATCH LINE 2624+00 EB

2625+00 WB

STH 29

2630+00 WB

2635+00 WB

N89°01'34"E

2625+00 EB

2630+00 EB

2635+00 EB

N89°01'17"E

MATCH LINE 2638+50 EB

EXISTING CURB & GUTTER TO REMAIN (TYP)

DIVISON AVE

5

N

NOTE: GRADING AND RESTORATION AROUND CONCRETE SURFACE DRAINS IS INCIDENTAL TO BARRIER SYSTEM GRADING SHAPING FINISHING

LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS

GAP OVERLAY AT STRUCTURES
BUTT JOINT UP TO BRIDGE

DILL CREEK

STRUCTURE B-10-176
STA 2643+56 WB - STA 2644+24 WB

RAP

SI

2645+00 WB

STH 29

N89°01'34"E

2650+00 WB

2640+00 WB

2645+00 EB

2640+00 EB

STH 29

N89°01'17"E

2650+00 EB

STRUCTURE B-10-017
STA 2643+94 EB - STA 2644+48 EB

MATCH LINE 2638+50 EB

MATCH LINE 2653+00 EB

5

N

R/W

RIPRAP

POST

SIGN

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 133 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050217-pn

PLOT DATE : 11/24/2025 6:44 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STA 2654+00
EXISTING 18" CPRC
CLEANING CULVERT PIPES

STA 2658+30
EXISTING 18" CPRC
CLEAN 50' OF DITCH CENTERED ON PIPE LT

N

R/W

PE
GRVL

SI

2655+00 WB

N89°01'34"E

2660+00 WB

STH 29

2665+00 WB

N88°30'05"E

PC: 2660+84.39

PT: 2662+93.62

PC: 2660+94.10

PT: 2663+05.98

2655+00 EB

N89°01'17"E

2660+00 EB

STH 29

2665+00 EB

N88°29'30"E

MATCH LINE 2653+00 EB

MATCH LINE 2667+50 EB

SIGN

POST

R/W

5

5

LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS

STA 2668+80
EXISTING 24" CPRC

STA 2673+80
EXISTING 24" CPRC
CLEAN 50' OF DITCH CENTERED ON PIPE LT

PUBLIC LAND SURVEY MONUMENT
VERIFY AND RESET REQ'D

STRUCTURE B-10-181
TWIN CELL
5'X10' BOX

BADGER AVE

2670+00 WB

STH 29

N88°30'05"E

2675+00 WB

2680+00 WB

2670+00 EB

STH 29

2675+00 EB

N88°29'30"E

2680+00 EB

MATCH LINE 2667+50 EB

MATCH LINE 2682+00 EB

EXISTING CURB
& GUTTER TO
REMAIN (TYP)

CLARK ELECTRIC COOPERATIVE - ELECTRICITY

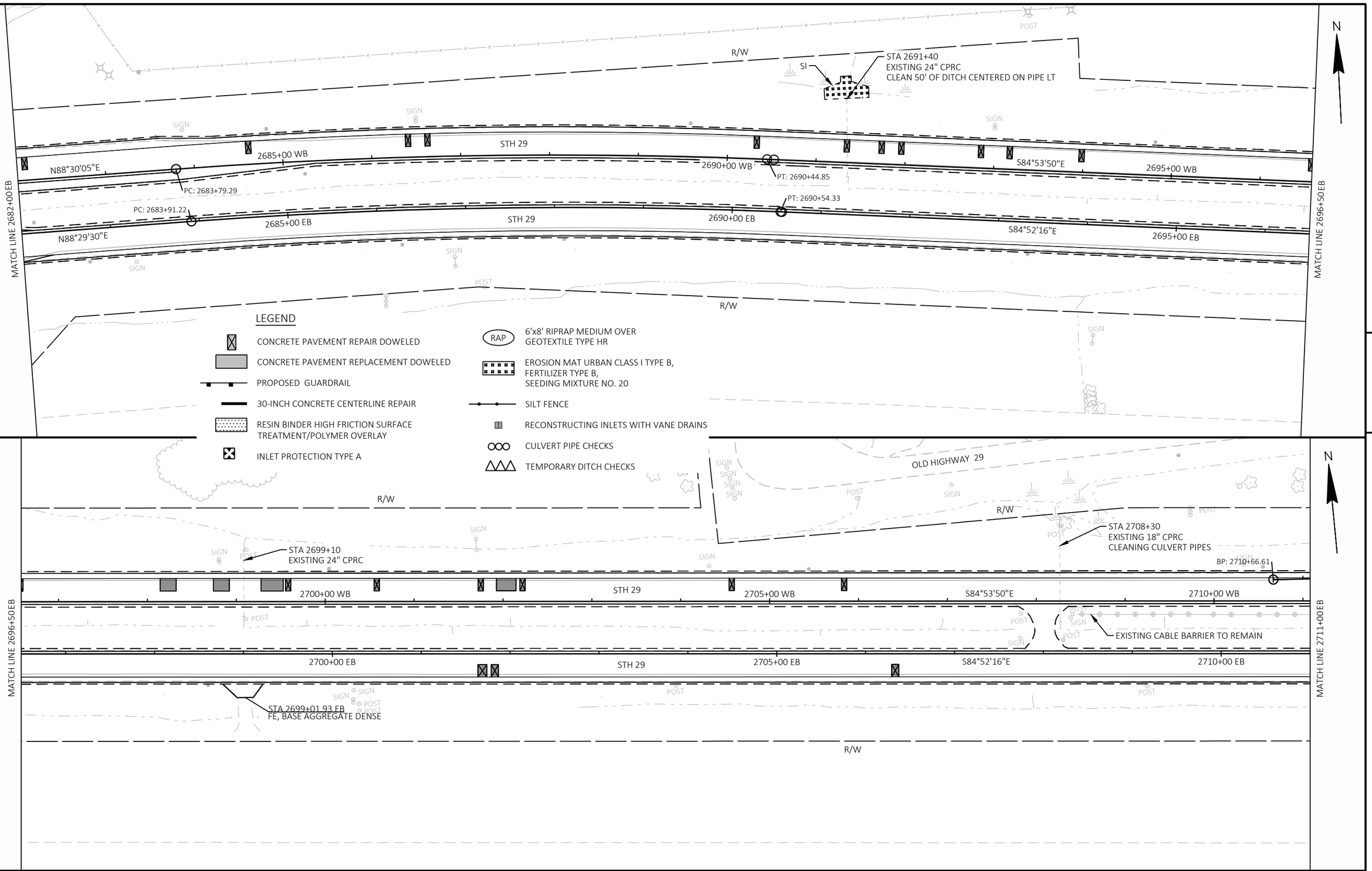
OH

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 134	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050218-pn

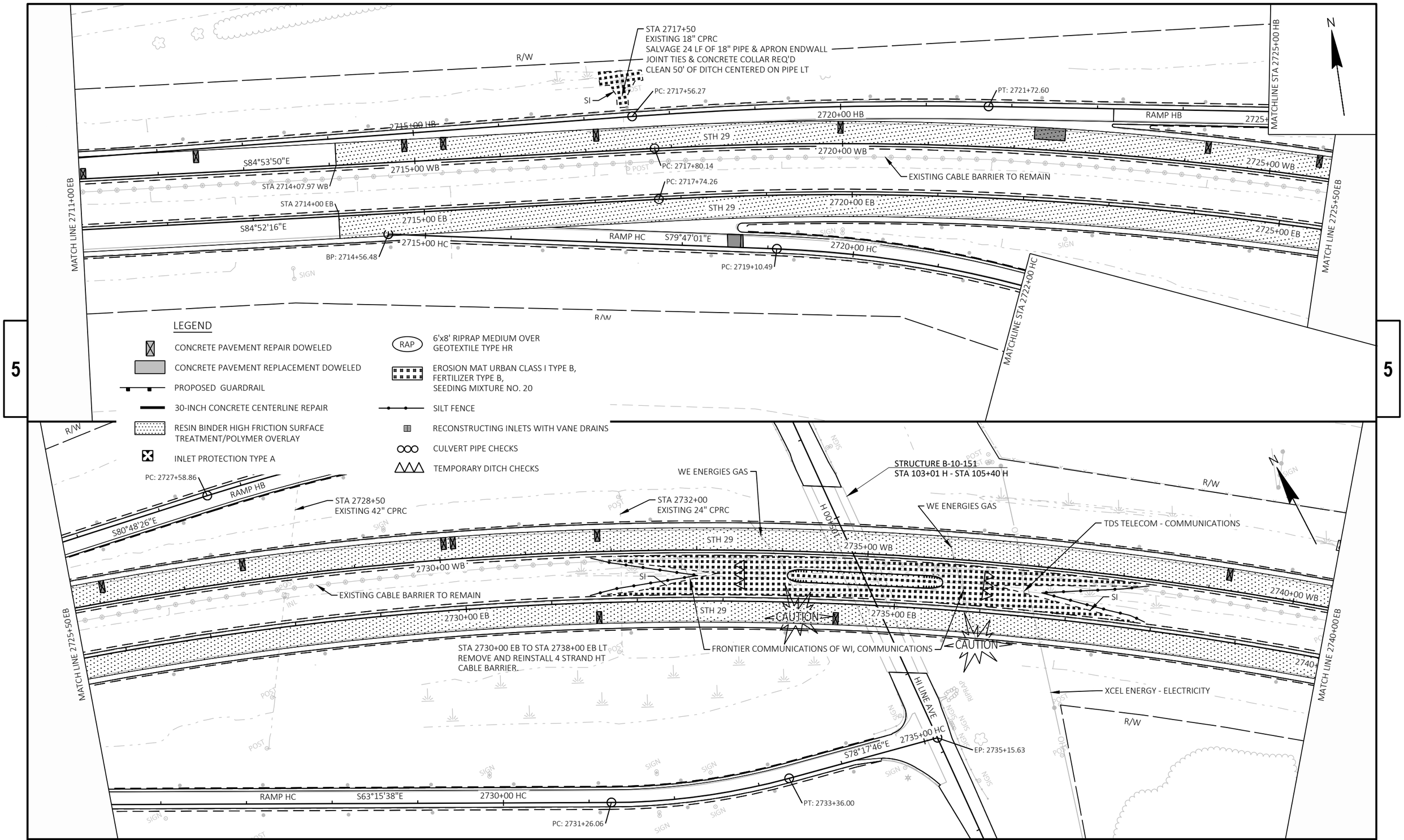
PLOT DATE : 11/24/2025 6:45 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 135 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050219-pn
PLOT DATE : 11/24/2025 6:45 AM
PLOT BY : JASON KLEIST
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

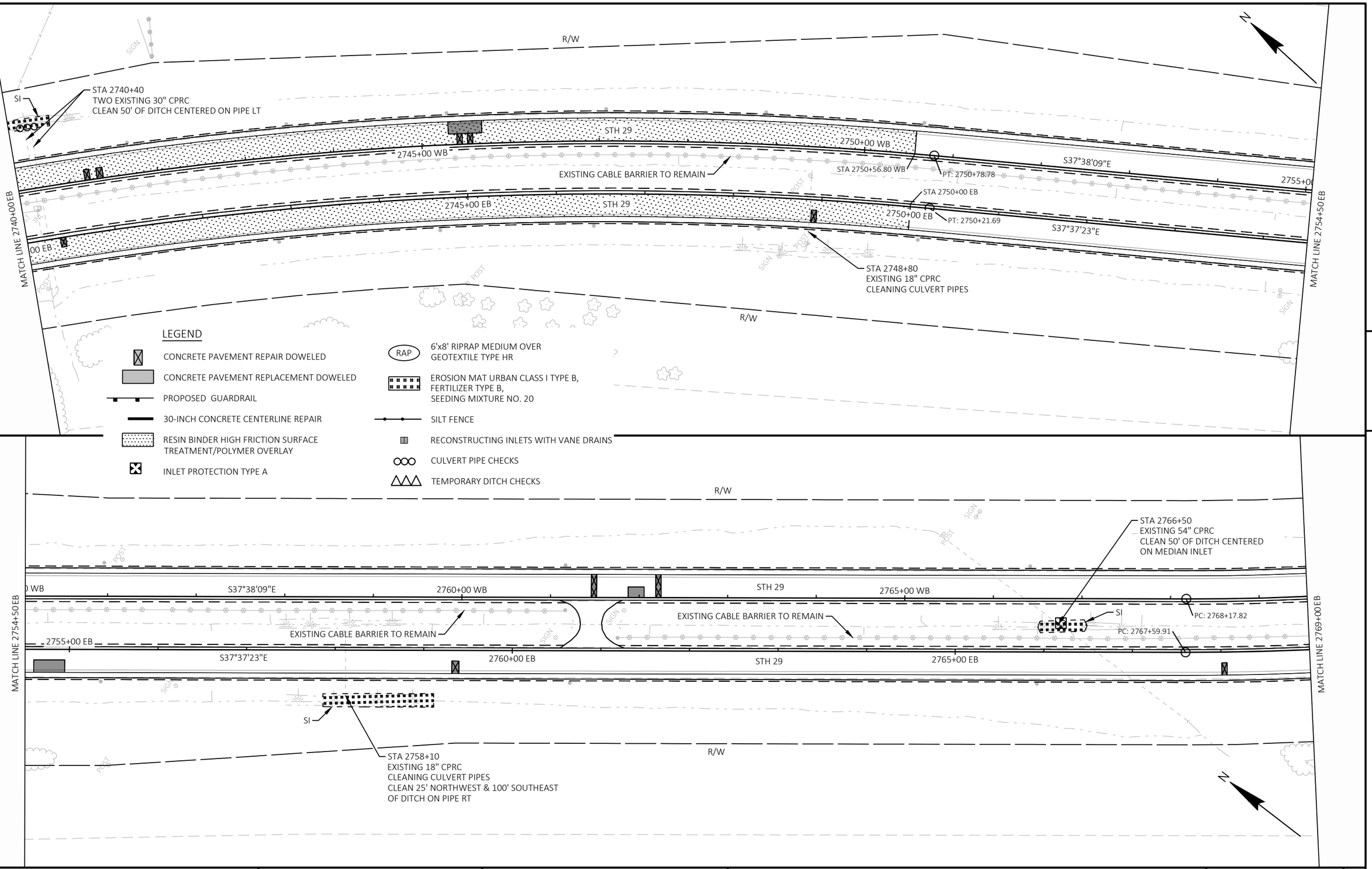


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 136	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050220-pn

PLOT DATE : 11/24/2025 6:46 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 137	E

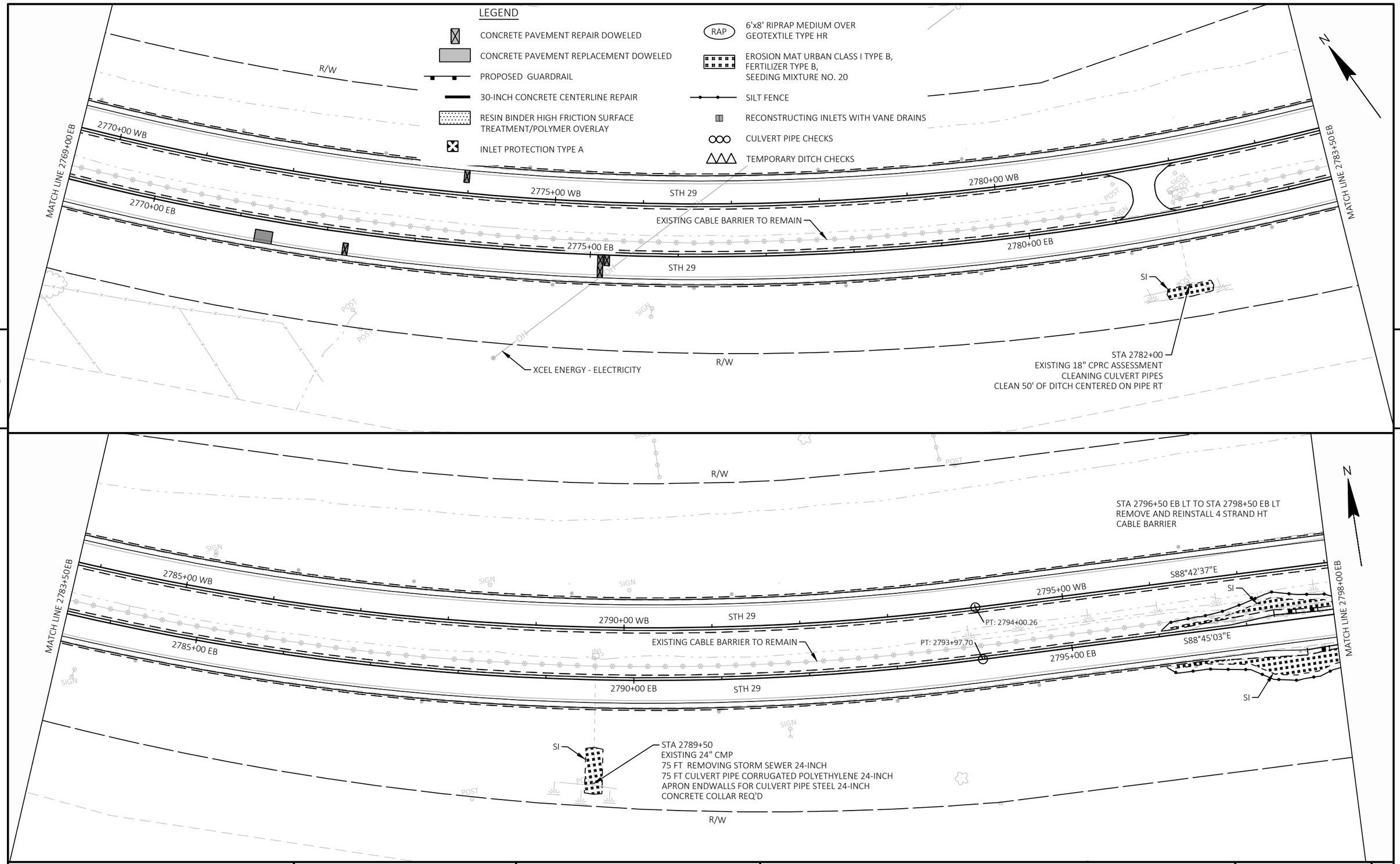
FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050221-pn

PLOT DATE : 11/24/2025 6:47 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS



PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 138 E

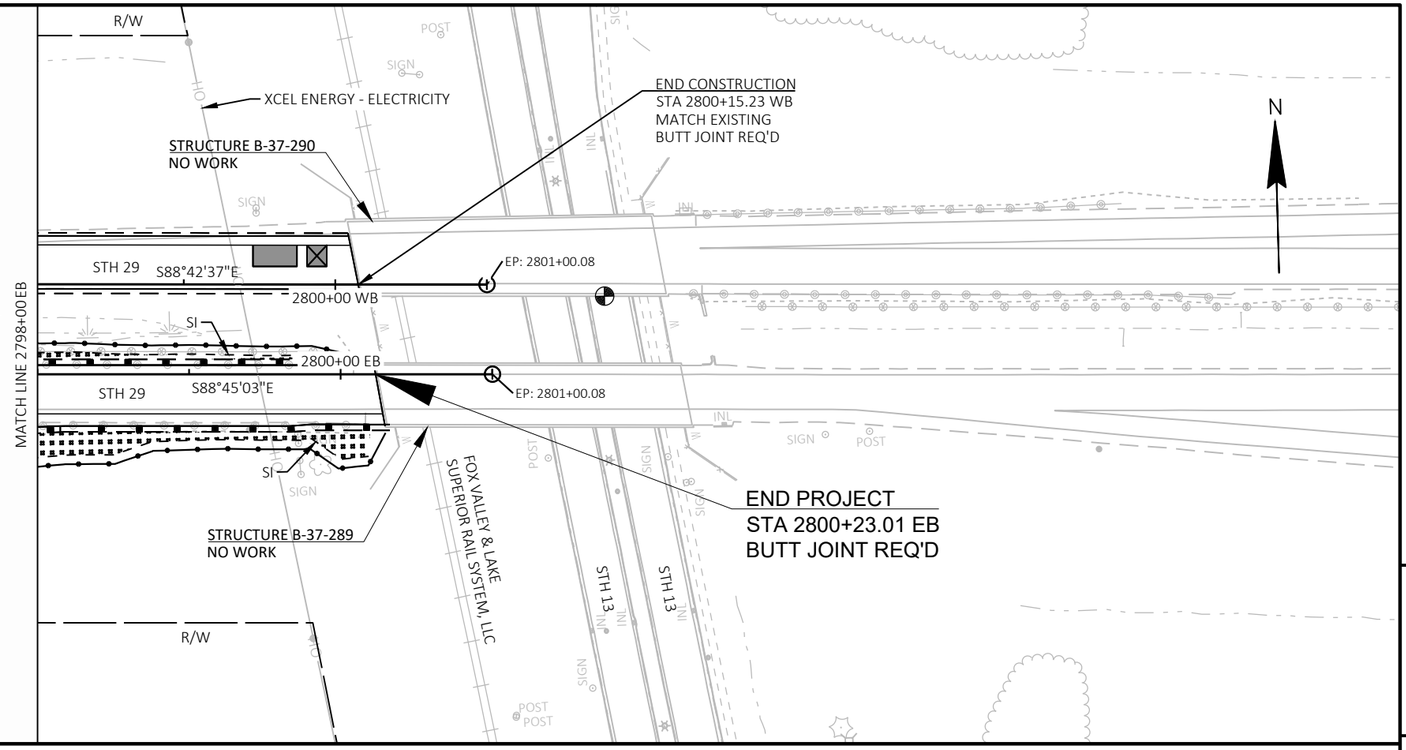
FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050222-pn

PLOT DATE : 11/24/2025 6:47 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

- CONCRETE PAVEMENT REPAIR DOWELED
- CONCRETE PAVEMENT REPLACEMENT DOWELED
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE CENTERLINE REPAIR
- RESIN BINDER HIGH FRICTION SURFACE TREATMENT/POLYMER OVERLAY
- INLET PROTECTION TYPE A
- RAP — 6'x8' RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
- EROSION MAT URBAN CLASS I TYPE B, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20
- SILT FENCE
- RECONSTRUCTING INLETS WITH VANE DRAINS
- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECKS



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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 139	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN.DWG
LAYOUT NAME - 050223-pn

PLOT DATE : 11/24/2025 6:47 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

CONCRETE PAVEMENT REPAIR

CONCRETE PAVEMENT REPLACEMENT

PROPOSED GUARDRAIL

30-INCH CONCRETE LONGITUDINAL JOINT REPAIR

SAWING CONCRETE

CAUTION

END CONSTRUCTION
STA 103+43 L
MATCH EXISTING

WE ENERGIES GAS

N

STA 2216+59.90 LB
STA 101+91.27 L

EP: 2216+59.90 LB

STA 2216+40.04 LA
STA 101+91.27 L

BP: 2216+40.04 LA

CONCRETE CURB & GUTTER 4-INCH
SLOPED 36-INCH TYPE A

MATCHLINE STA 2211+00 LB

RAMP LB

N81°04'22"E

2215+00 LB

PUBLIC LAND SURVEY
MONUMENT VERIFY
AND RESET REQ'D

CARDINAL AVE

N0°00'45"W

S83°00'29"E

2220+00 LA

RAMP LA

MATCHLINE STA 2223+00 LA

STRUCTURE B-10-178

STH 29

2215+00 WB

PT: 2213+99.75

100+00

STH 29

N89°53'46"E

2220+00 WB

PT: 2213+76.50

STH 29

2215+00 EB

STH 29

2220+00 EB

N89°52'57"E

MATCHLINE STA 2211+00 LC

STRUCTURE B-10-178

S82°44'29"E

RAMP LC

2215+00 LC

CONCRETE CURB & GUTTER 4-INCH
SLOPED 36-INCH TYPE A

STA 2216+52.02 LC
STA 97+72.44 L

EP: 2216+52.02 LC

PT: 96+50.67 L

BEGIN CONSTRUCTION
STA 95+79 L
MATCH EXISTING

R/W

CARDINAL AVE

STA 2216+35.58 LD
STA 97+72.44 L

BP: 2216+35.58 LD

LUMEN (CENTURYLINK)
COMMUNICATIONS

N80°47'11"E

2220+00 LD

RAMP LD

MATCHLINE STA 2223+00 LD

R/W

N

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 140	E

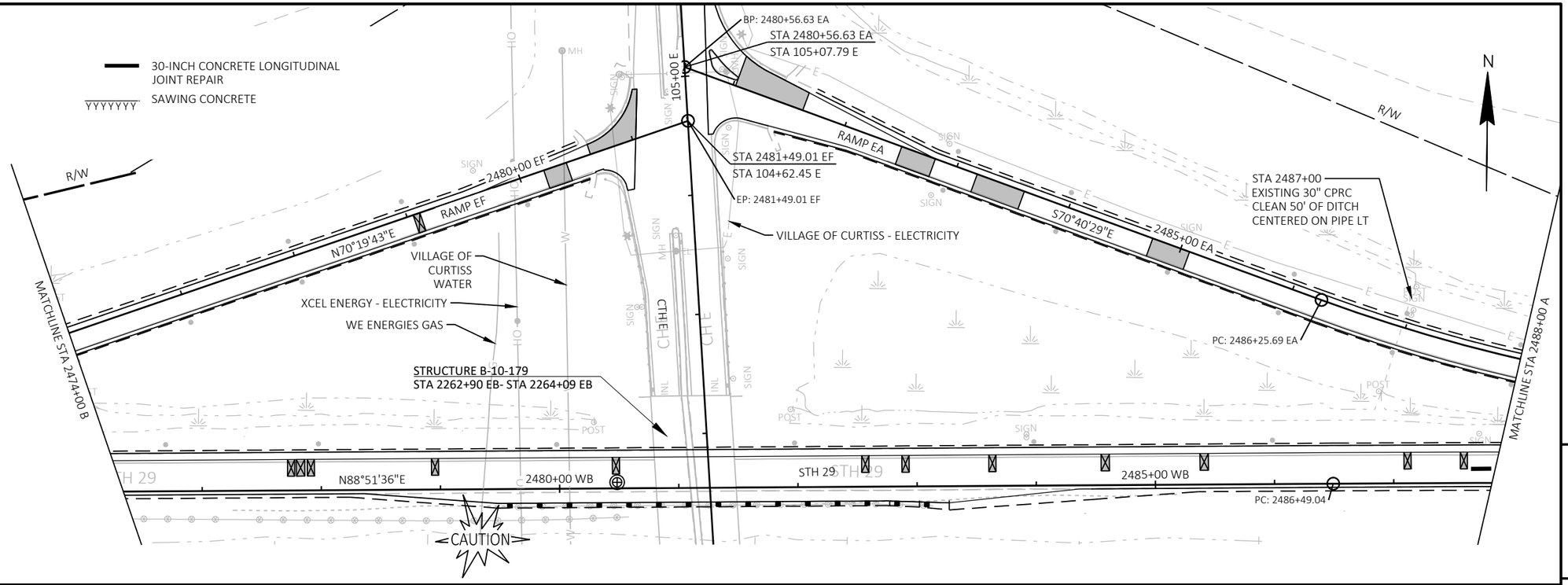
FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN_RAMPS.DWG
LAYOUT NAME - 050224-pn_Ramps

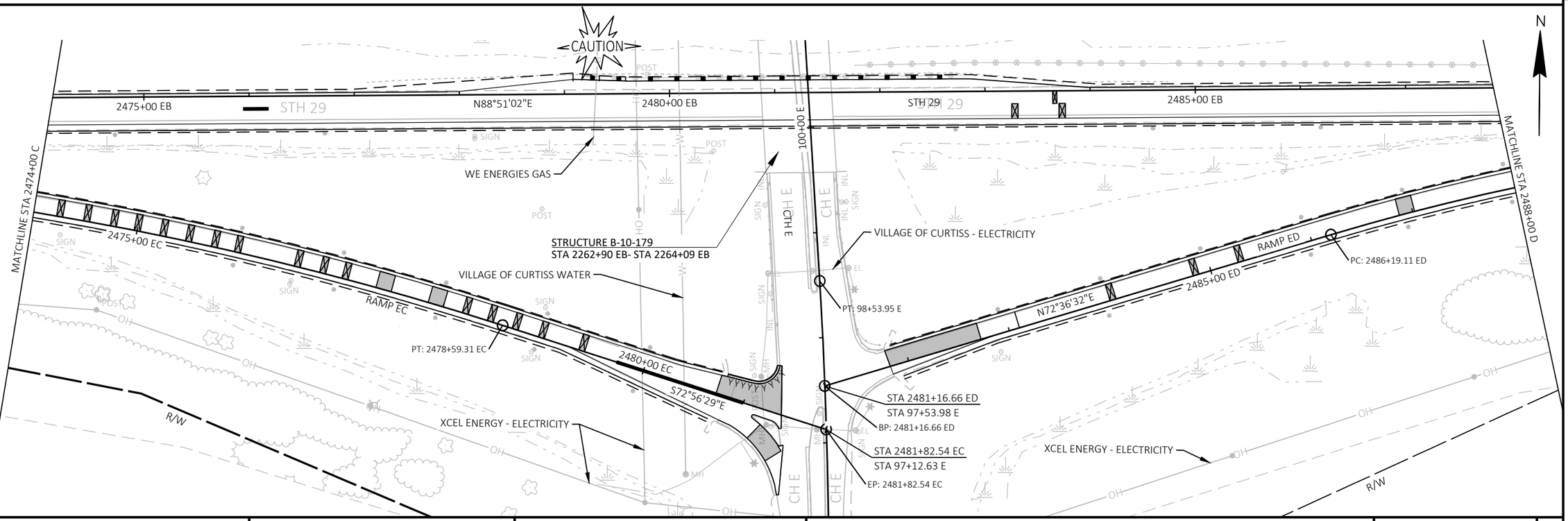
PLOT DATE : 11/24/2025 6:48 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

- CONCRETE PAVEMENT REPAIR
- CONCRETE PAVEMENT REPLACEMENT
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE LONGITUDINAL JOINT REPAIR
- SAWING CONCRETE





PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 141	E

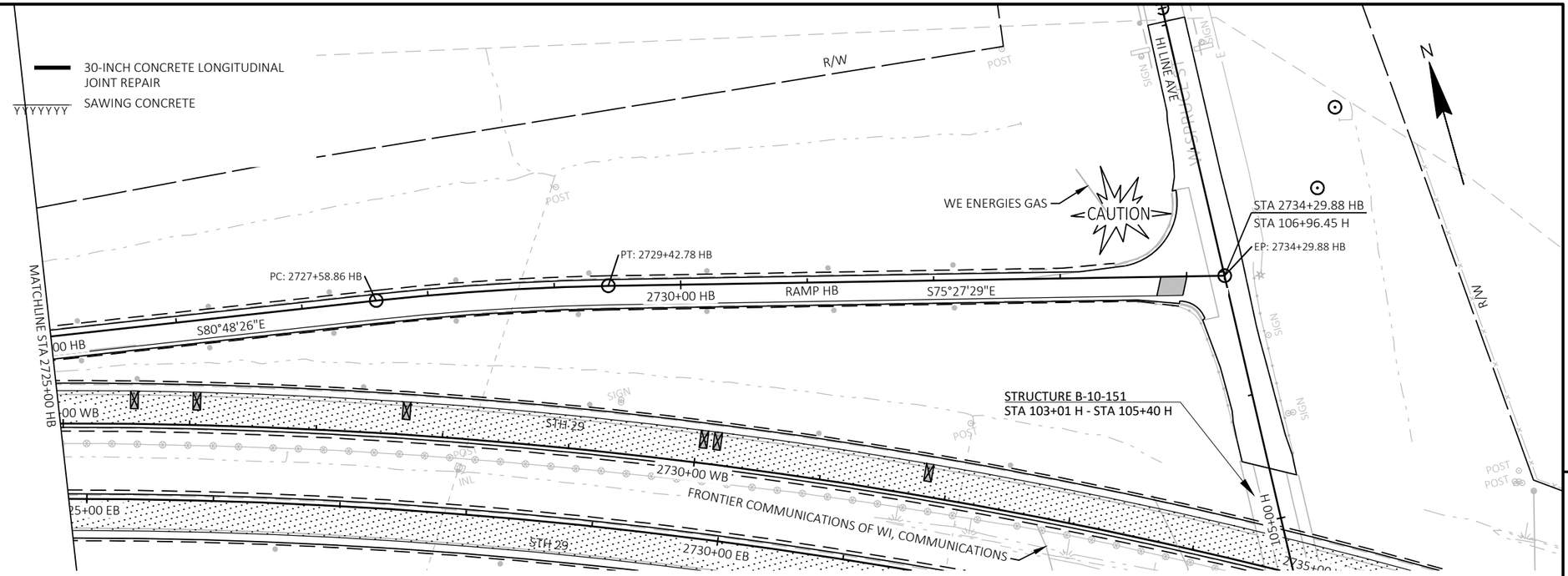
FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN_RAMPS.DWG
LAYOUT NAME - 050225-pn_Ramps

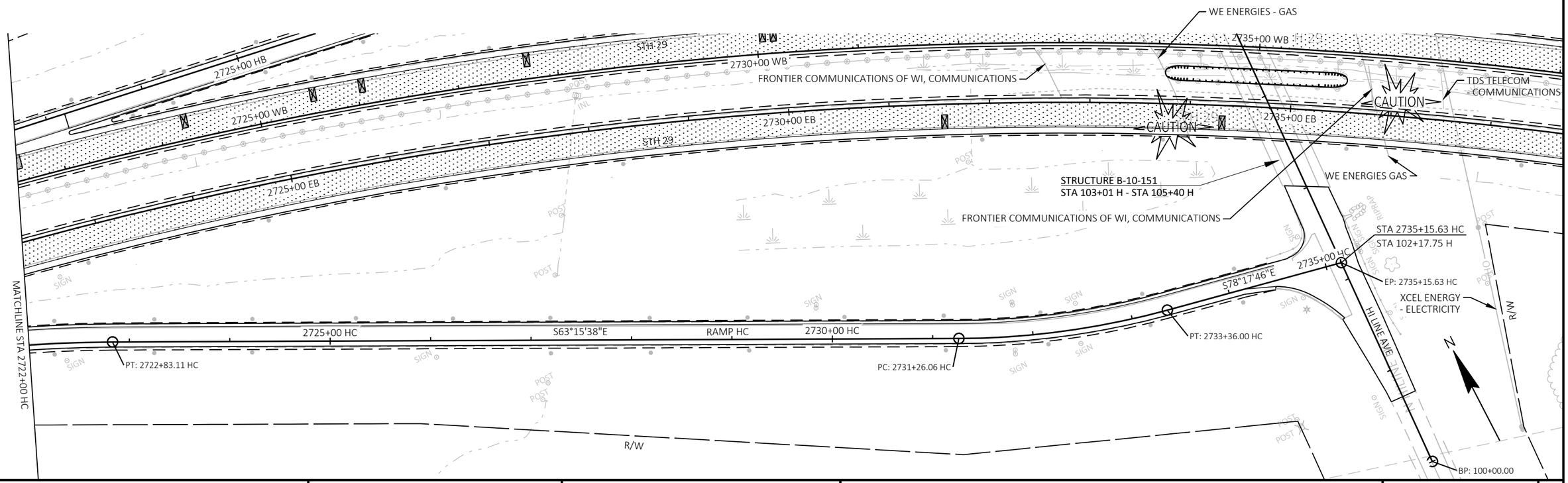
PLOT DATE : 11/24/2025 6:49 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

- CONCRETE PAVEMENT REPAIR
- CONCRETE PAVEMENT REPLACEMENT
- PROPOSED GUARDRAIL
- 30-INCH CONCRETE LONGITUDINAL JOINT REPAIR
- SAWING CONCRETE





PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 142	E

LEGEND

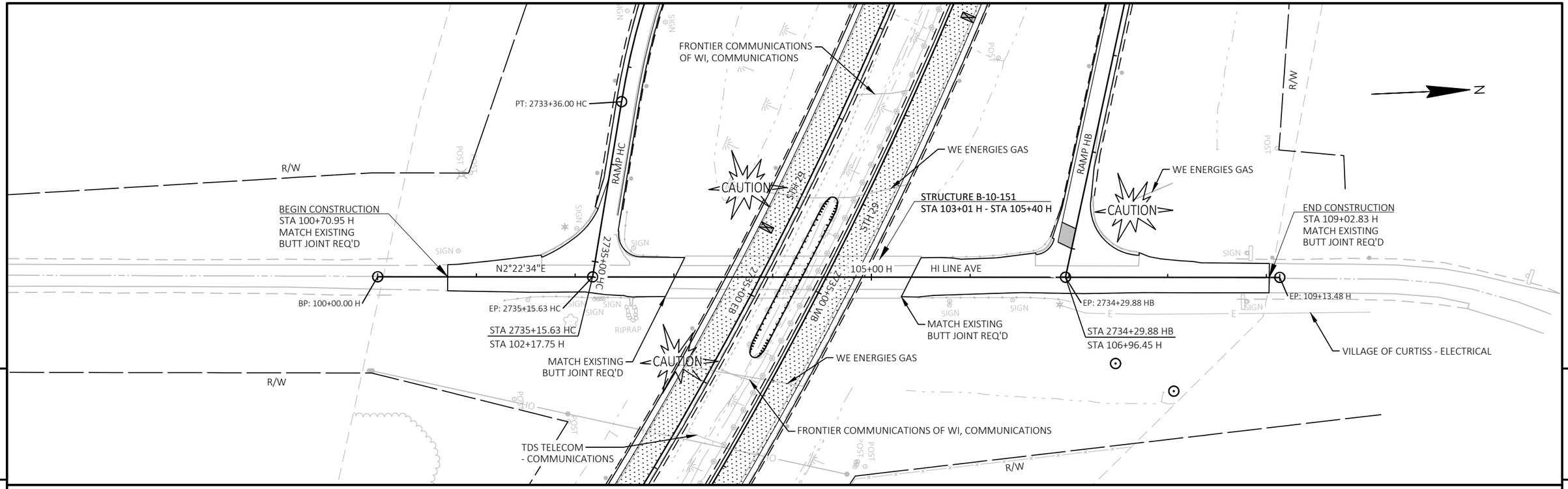
- CONCRETE PAVEMENT REPAIR
- CONCRETE PAVEMENT REPLACEMENT
- PROPOSED GUARDRAIL
- CONCRETE PAVEMENT 11-INCH
- 30-INCH CONCRETE LONGITUDINAL JOINT REPAIR
- SAWING CONCRETE

BP: 91+60.48 L
N15°06'56"E
95+00 L
PC: 94+26.24 L
R/W
BEGIN CONSTRUCTION
STA 95+78.78 L
MATCH EXISTING
BUTT JOINT REQ'D
REMOVING CURB & GUTTER
10 LF CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE A
PT: 96+50.67 L
EP: 2216+52.02 LC
STRUCTURE B-10-178
STA 2216+52.02 LC
STA 97+72.44 L
N0°00'45"W
100+00
BP: 2216+35.58 LD
LUMEN (CENTURYLINK)
COMMUNICATIONS
STA 2216+35.58 LD
STA 97+72.44 L
MATCH EXISTING
BUTT JOINT REQ'D
RAMP LC
2215+00 LC
2215+00 EB
STH 29
2215+00 WB
STH 29
RAMP LB
2215+00 LB
RAMP LD
RAMP LA
STA 2216+59.90 LB
STA 101+91.27 L
REMOVING CURB & GUTTER
82 LF CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE A
WE ENERGIES GAS
EP: 2216+59.90 LB
CARDINAL AVE
105+00 L
BP: 2216+40.04 LA
STA 2216+40.04 LA
STA 101+91.27 L
CAUTION
END CONSTRUCTION
STA 103+43.10 L
MATCH EXISTING
BUTT JOINT REQ'D
CTH X
N

R/W
RAMP EC
2480+00 EC
REMOVING CURB & GUTTER
56 LF CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE A
STRUCTURE B-10-179
VILLAGE OF CURTISS - ELECTRICITY
STA 2481+82.54 EC
STA 97+12.63 E
95+00 E
EP: 2481+82.54 EC
BP: 2481+16.66 ED
PT: 98+53.95 E
CTH E
100+00 E
STA 2481+16.66 ED
STA 97+53.98 E
XCEL ENERGY - ELECTRICITY
RAMP ED
2480+00 EB
STH 29
2480+00 WB
STH 29
CAUTION
WE ENERGIES GAS
VILLAGE OF CURTISS WATER
RAMP EF
2480+00 EF
XCEL ENERGY - ELECTRICITY
STA 2480+56.63 EA
STA 105+07.79 E
N4°12'54"W
EP: 2481+49.01 EF
BP: 2480+56.63 EA
STA 2481+49.01 EF
STA 104+62.45 E
RAMP EA
VILLAGE OF CURTISS - ELECTRICITY
N
R/W

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 143	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN_CROSS ROADS.DWG
LAYOUT NAME - 050227-pn_Cross Rds
PLOT DATE : 11/24/2025 6:50 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 44



5

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LEGEND

- CONCRETE PAVEMENT REPAIR
- CONCRETE PAVEMENT REPLACEMENT
- PROPOSED GUARDRAIL
- CONCRETE PAVEMENT 11-INCH
- 30-INCH CONCRETE LONGITUDINAL JOINT REPAIR
- SAWING CONCRETE

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PLAN	SHEET 144	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\050201-PN_CROSS ROADS.DWG
LAYOUT NAME - 050228-pn_Cross Rds

PLOT DATE : 11/24/2025 6:50 AM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

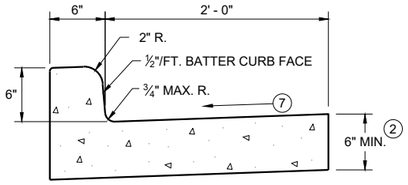
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D14-02	SLOTTED VANE DRAIN
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13C09-17A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C19-03	HMA LONGITUDINAL JOINTS
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B26-05A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05F	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05G	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05H	STEEL THRIE BEAM BULLNOSE TERMINAL
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

6

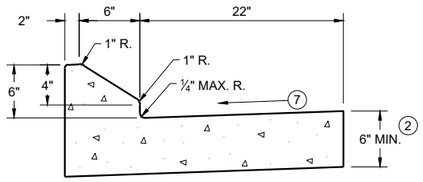
Standard Detail Drawing List

14B47-06A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06D	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06E	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06F	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-06G	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09D	ON RAMP LANE CLOSURE
15C02-09E	OFF RAMP LANE CLOSURE
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C02-09G	TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23C	PAVEMENT MARKING (TURN LANES)
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C14-05	AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS
15C31-08A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-08C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-15G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D15-08C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-08D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-08E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D16-06	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-04	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D39-03	TRAFFIC CONTROL, DROP-OFF SIGNING
15D47-03A	TRAFFIC CONTROL, INGRESS/EGRESS WITH BARRIER
15D47-03B	TRAFFIC CONTROL, INGRESS/EGRESS WITHOUT BARRIER

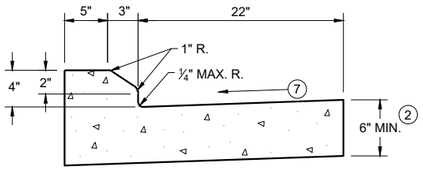
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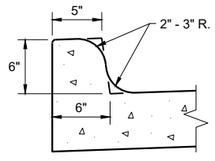
TYPES A (1) & D



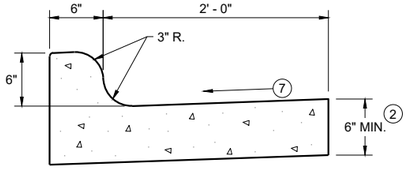
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

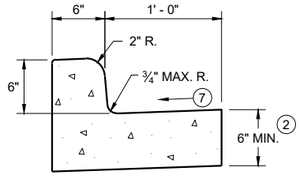


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



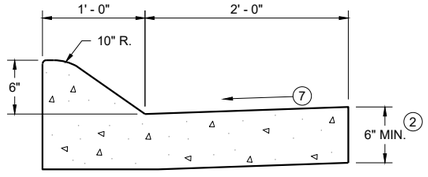
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

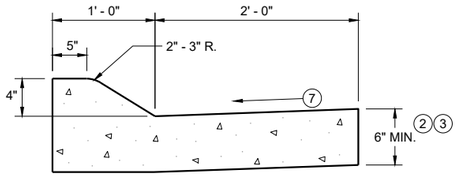


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

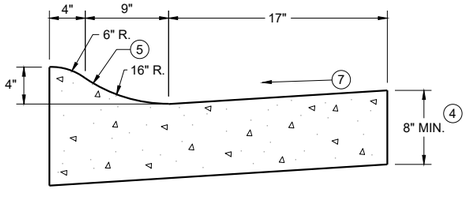


6" SLOPED CURB TYPES A (1) & D



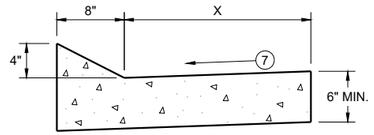
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T
CONCRETE CURB AND GUTTER 30"

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

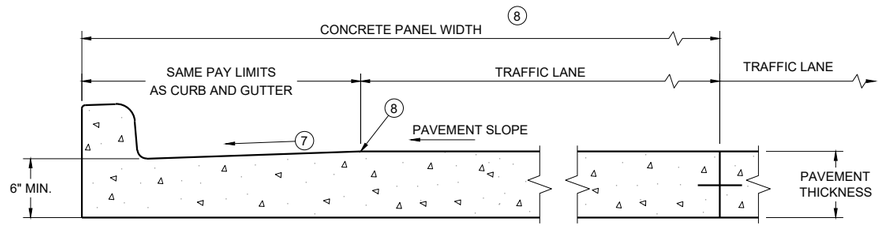


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

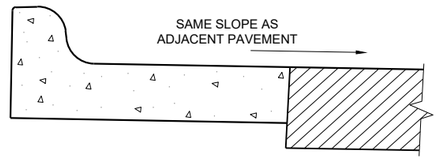
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

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

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

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

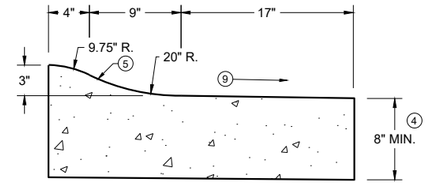
(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

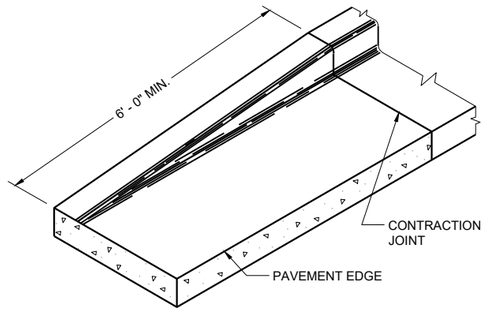
(9) SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY



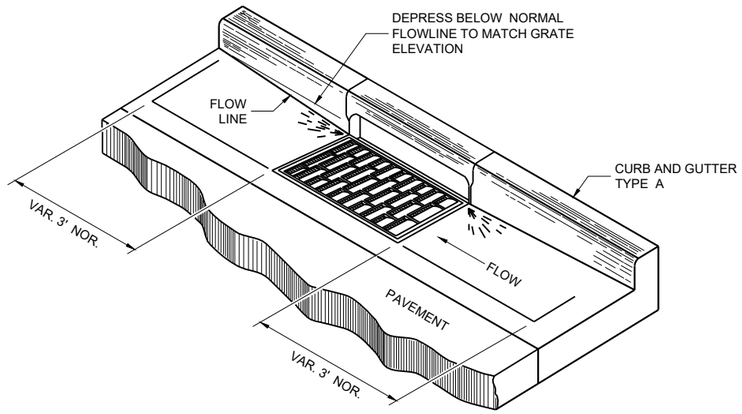
3" SLOPED CURB TYPES R (1) & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

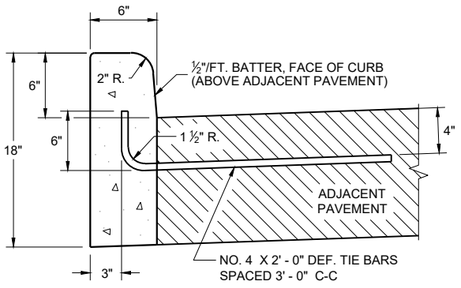
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

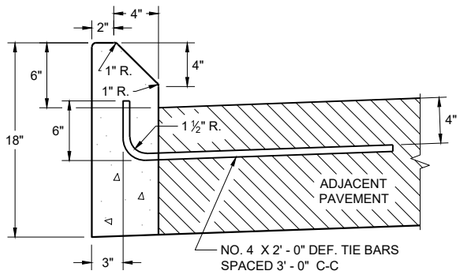
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

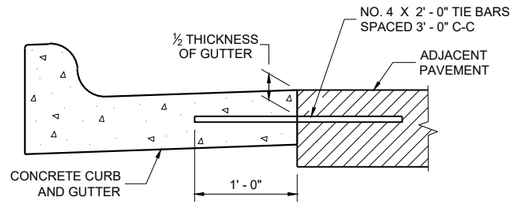


TYPES A (1) & D

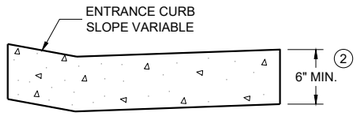


TYPES G (1) & J

CONCRETE CURB

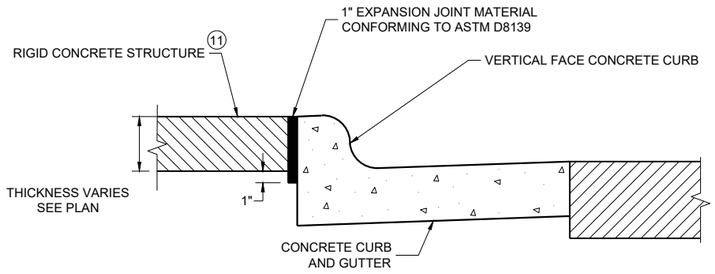


TYPICAL TIE BAR LOCATION (1)

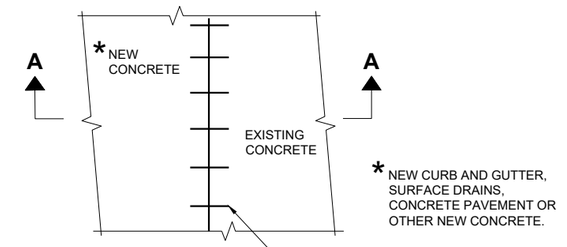


DRIVEWAY ENTRANCE CURB (10)

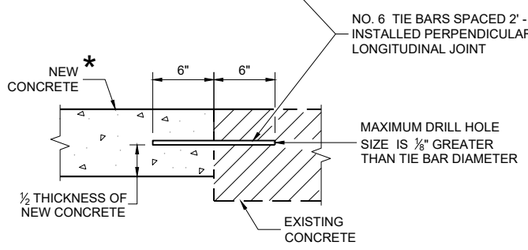
(WHEN DIRECTED BY THE ENGINEER)



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)



PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6
SDD 08D01-24b

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.

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

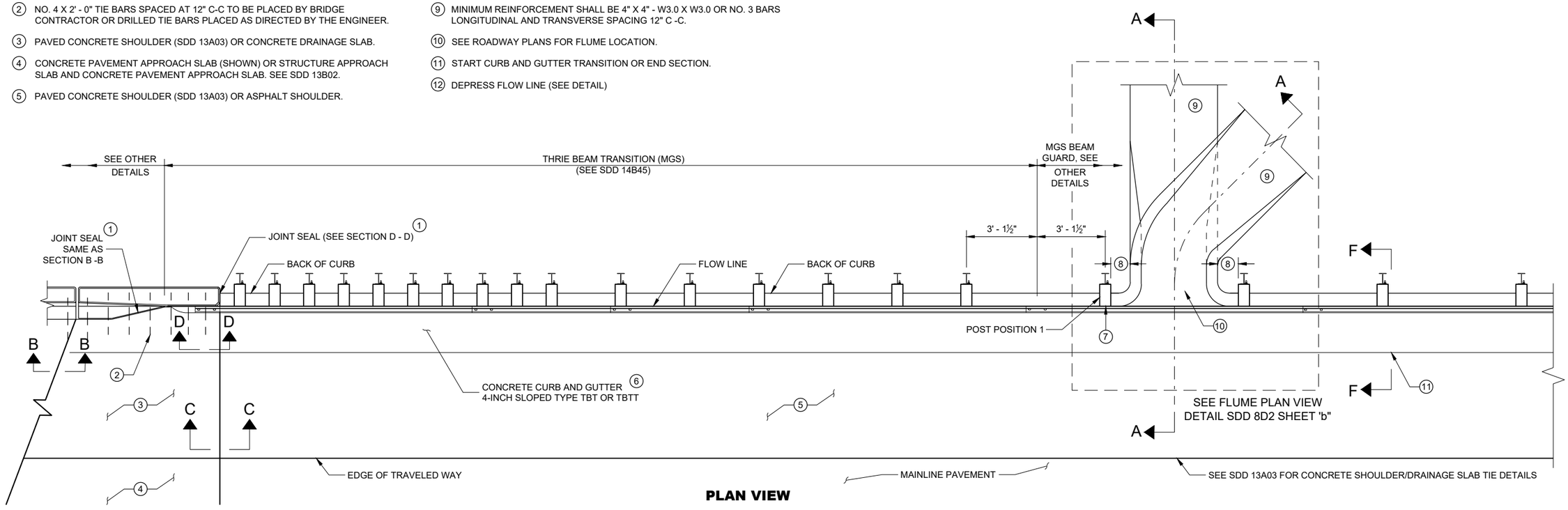
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

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

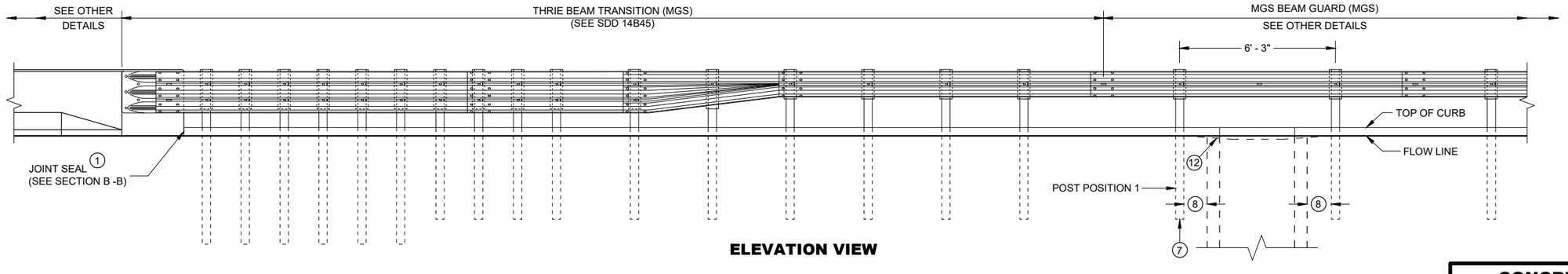
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



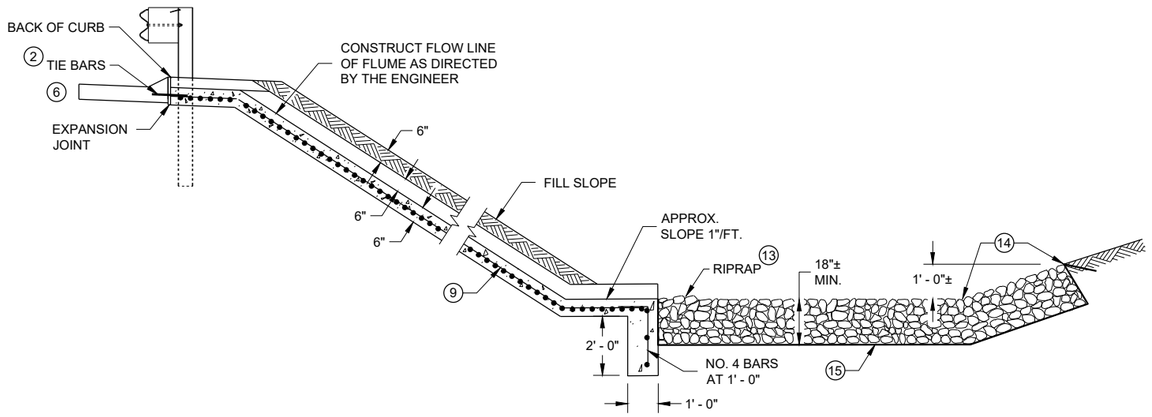
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

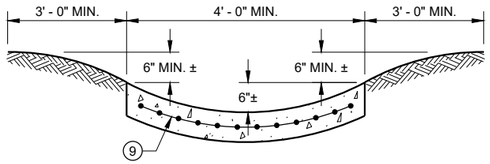
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

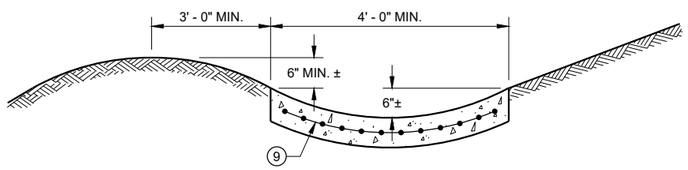
SDD 08D02 - 08a



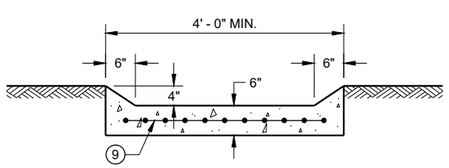
SECTION A - A



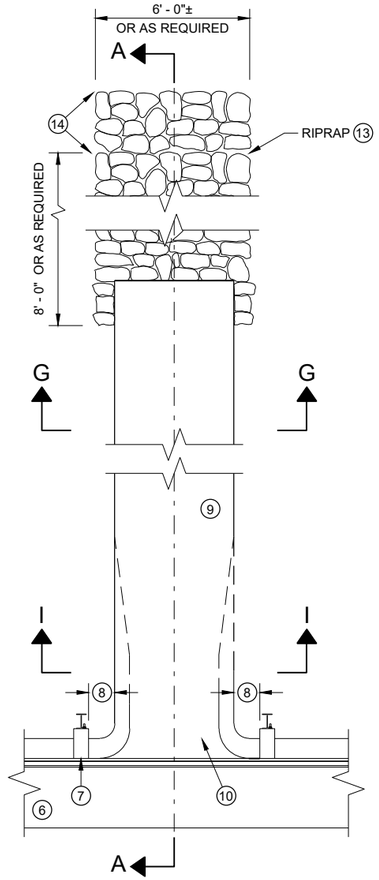
SECTION G - G



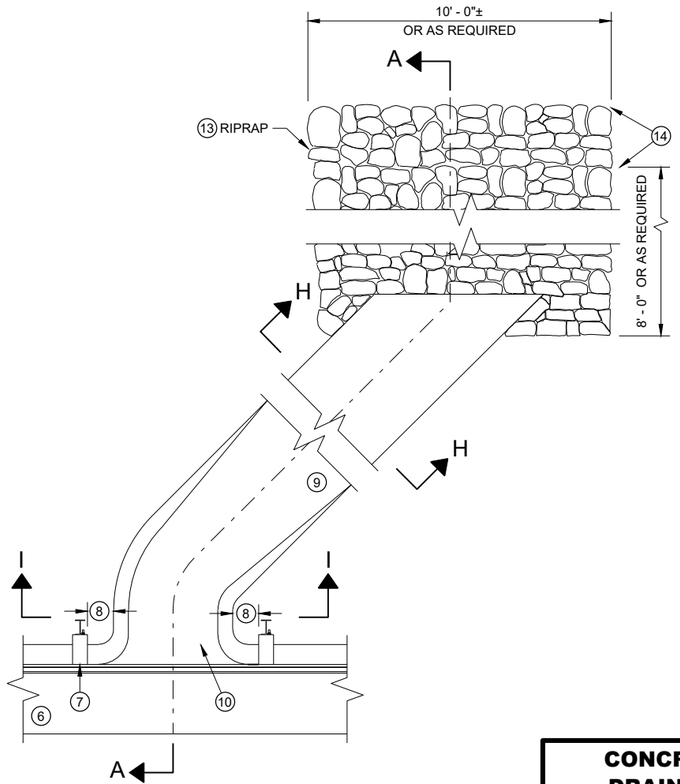
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

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.

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

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

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

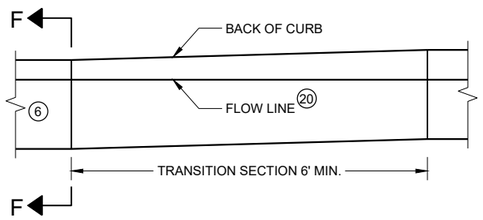
(14) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.

(15) GEOTEXTILE TYPE HR.

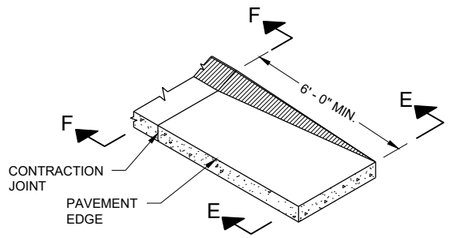
CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

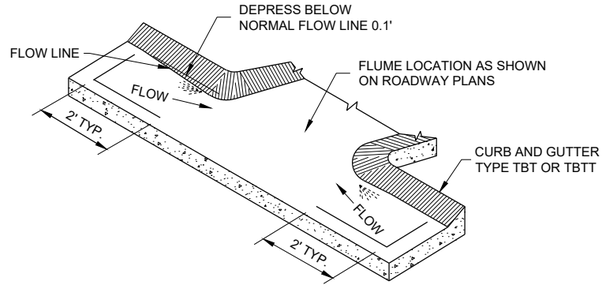
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SDD 08D02 - 08b



CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT



CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT



CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT

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.

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

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

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(14) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(15) GEOTEXTILE TYPE HR.

(16) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.

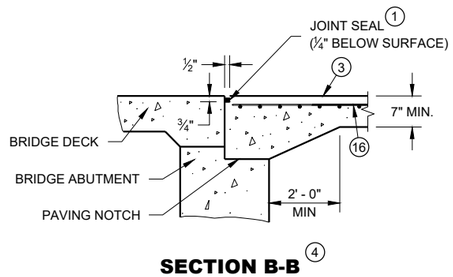
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

(18) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.

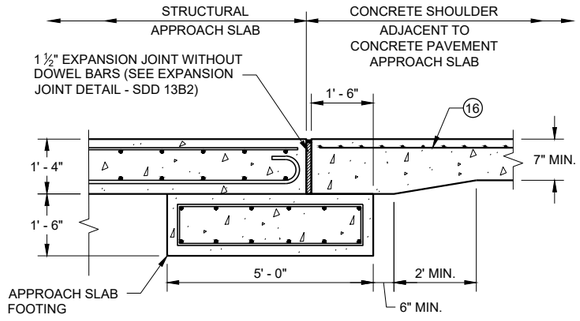
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

(20) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

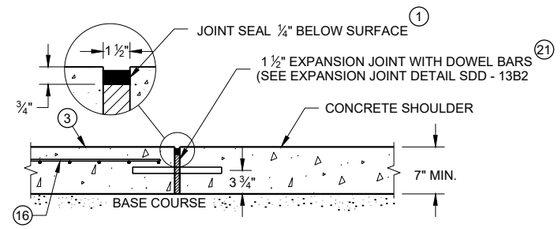
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



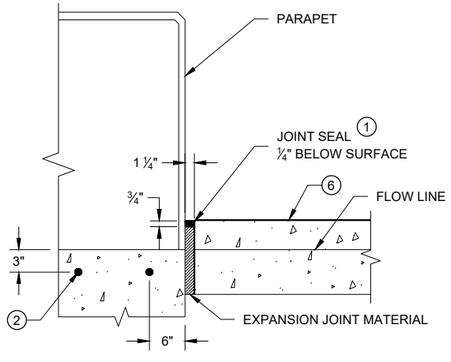
SECTION B-B



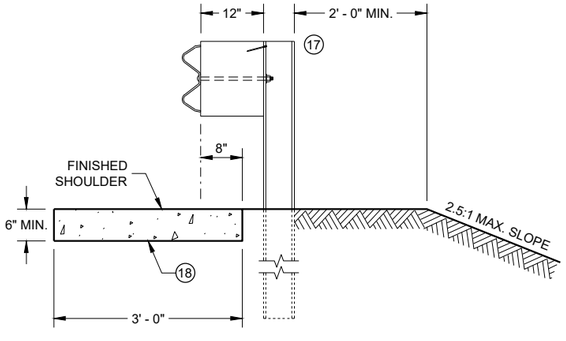
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



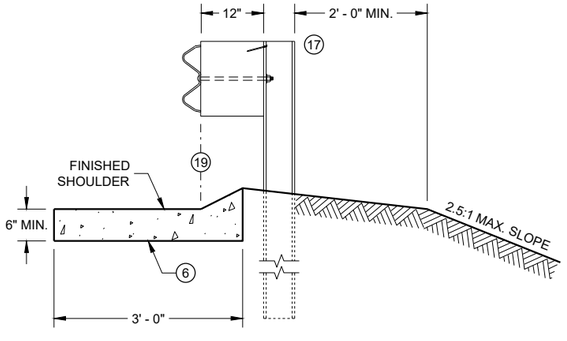
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

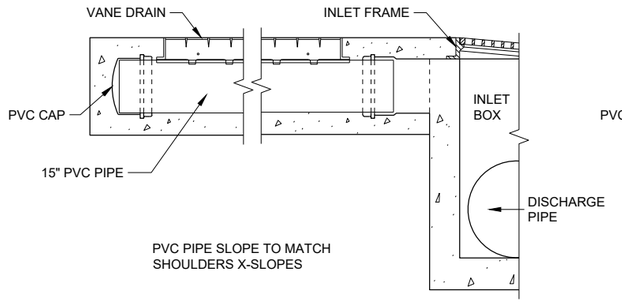
FHWA

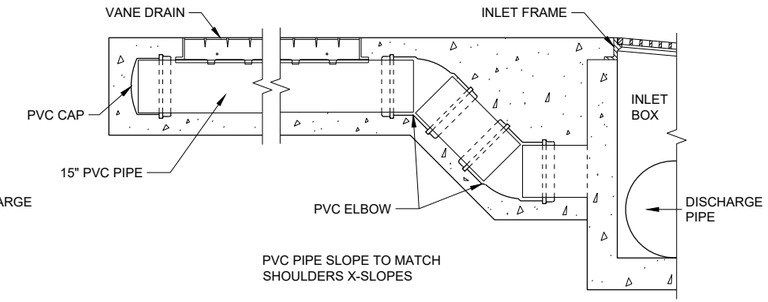
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SDD 08D02 - 08c

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SDD 08D02 - 08c





TYPICAL SLOTTED VANE DRAIN CONFIGURATIONS

GENERAL NOTES

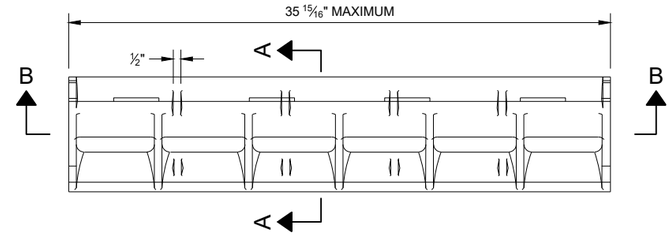
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ENCASEMENT: FURNISH GRADE A CONCRETE CONFORMING TO STANDARD SPECIFICATION 501 AS MODIFIED IN STANDARD SPECIFICATION 716. PROVIDE QMP FOR CLASS III ANCILLARY CONCRETE PER STANDARD SPECIFICATION 716. ULITLIZING HIGH EARLY STRENGTH (HES) CONCRETE CONFORMING TO STANDARD SPECIFICATION 710.4(5) IS ALLOWED AND MAY BE REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE PIPE USED SHALL BE A 15" DIAMETER SDR-35 POLYVINYL CHLORIDE SEWER PIPE. THE PIPE SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN STANDARD SPECIFICATION 612.2.6

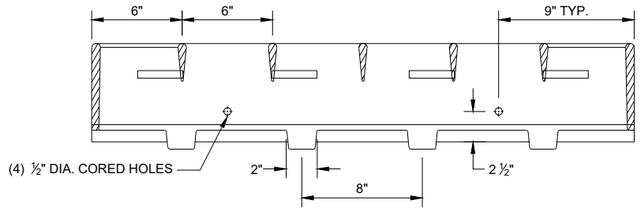
SURFACE DRAIN: BEFORE PAVING OVER THE DRAIN, COVER THE TOP OF THE DRAIN TO KEEP MATERIAL OUT OF THE PIPE. THE FINISHED GRADE SHOULD BE FLUSH WITH THE TOP OF THE DRAIN.

THE ANGLE OF THE DRAIN TO THE FLOW OF WATER SHOULD BE AS CLOSE TO 90° AS POSSIBLE.

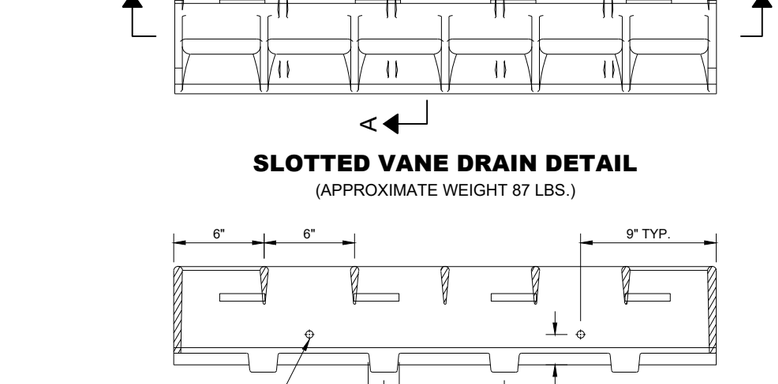


SLOTTED VANE DRAIN DETAIL

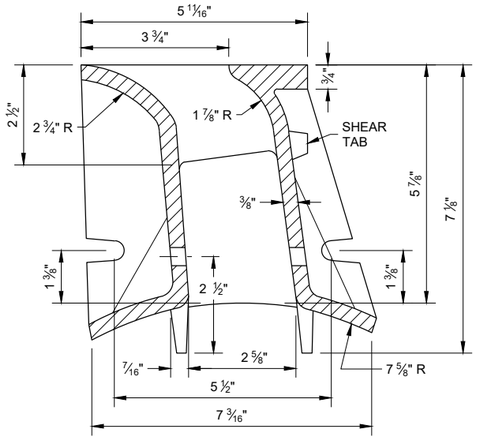
(APPROXIMATE WEIGHT 87 LBS.)



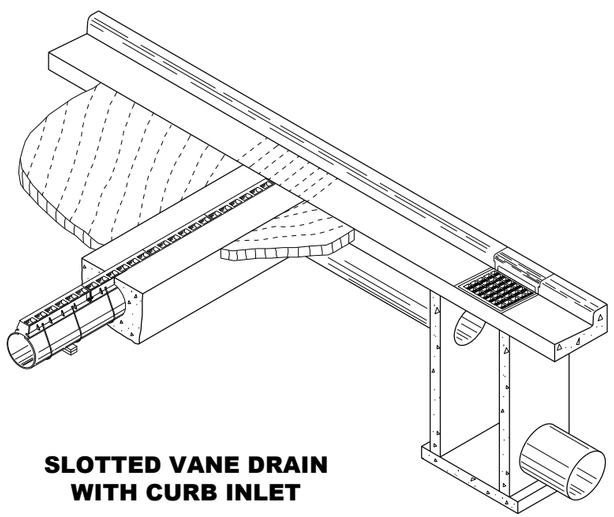
SECTION B - B



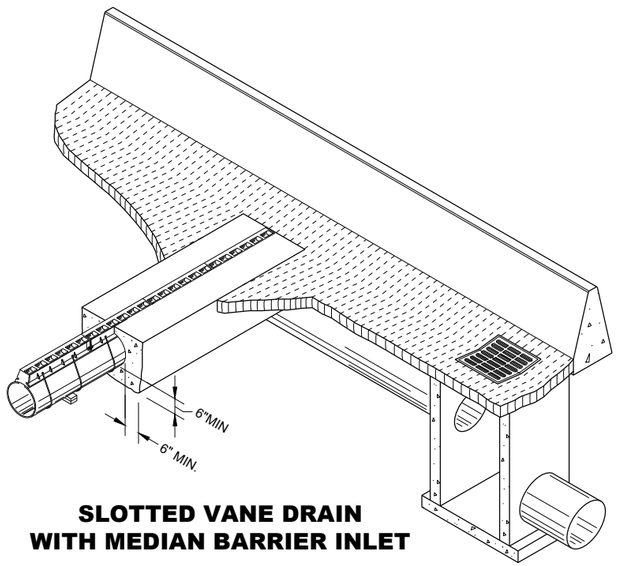
INSTALLATION OF SLOTTED VANE DRAIN



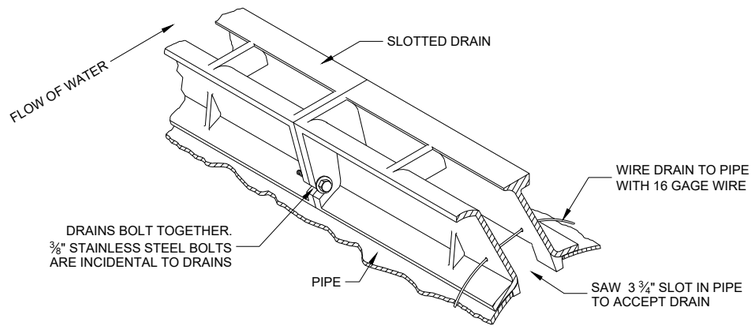
SECTION A - A



SLOTTED VANE DRAIN WITH CURB INLET



SLOTTED VANE DRAIN WITH MEDIAN BARRIER INLET



ISOMETRIC VIEW

SLOTTED VANE DRAIN DETAIL

SLOTTED VANE DRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

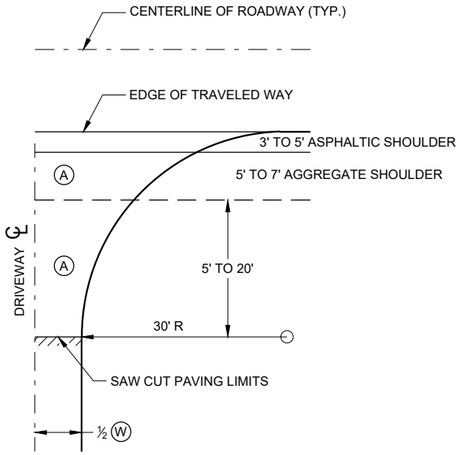
FHWA

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SDD 08D14 - 02

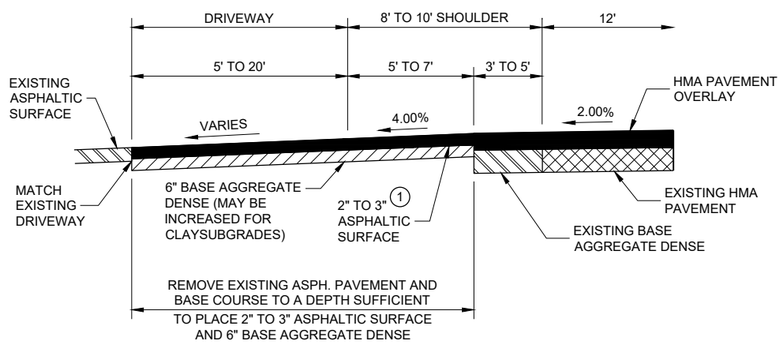
GENERAL NOTES

(1) DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PLAN VIEW

HALF SECTION



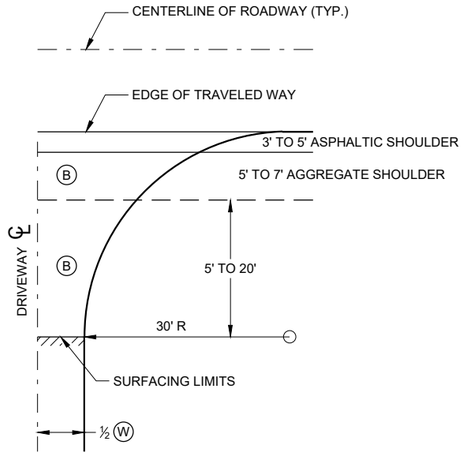
PROFILE VIEW

RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS

(A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)

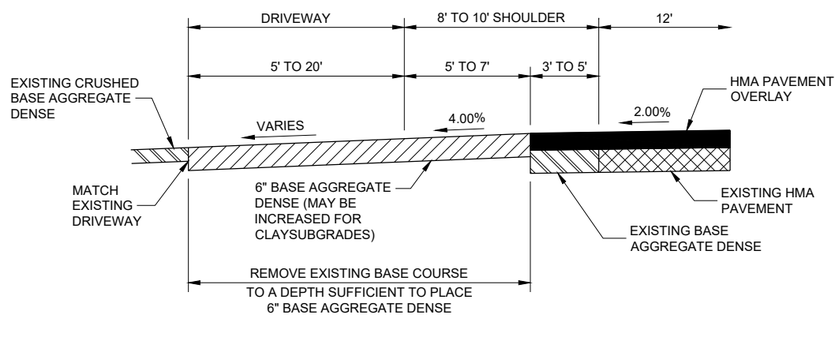
(B) : PAID FOR AS BASE AGGREGATE DENSE 1 ¼" (TON)

(W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.



PLAN VIEW

HALF SECTION



PROFILE VIEW

RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

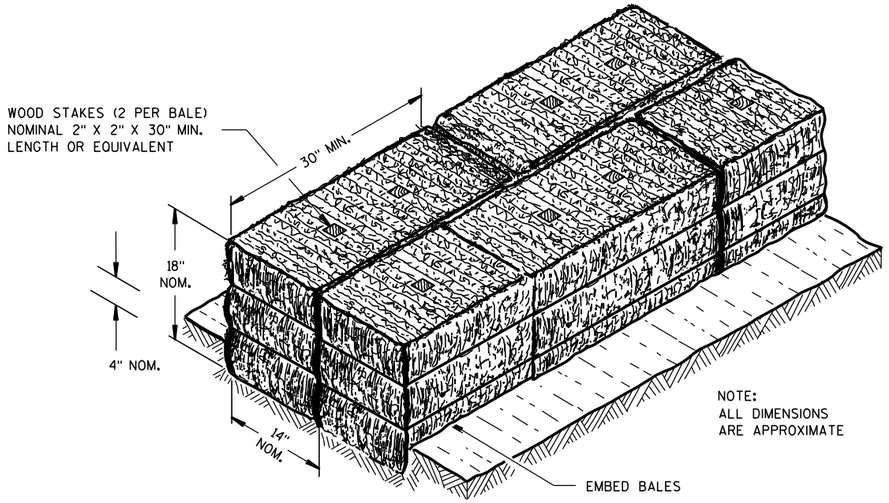
DRIVEWAYS WITHOUT CURB AND GUTTER RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

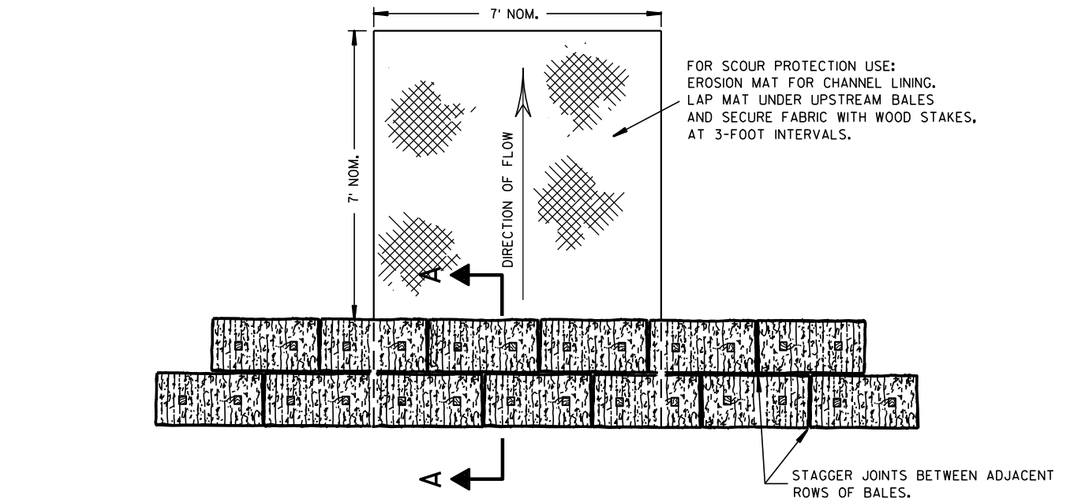
APPROVED
December 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

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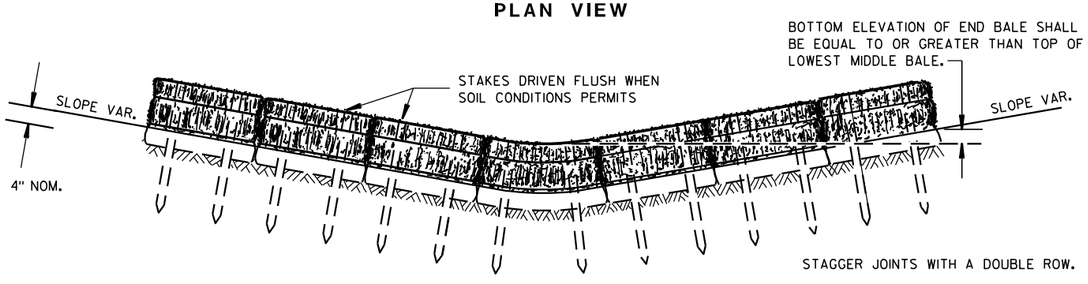
SDD 08D22 - 01



SECTION A-A



PLAN VIEW



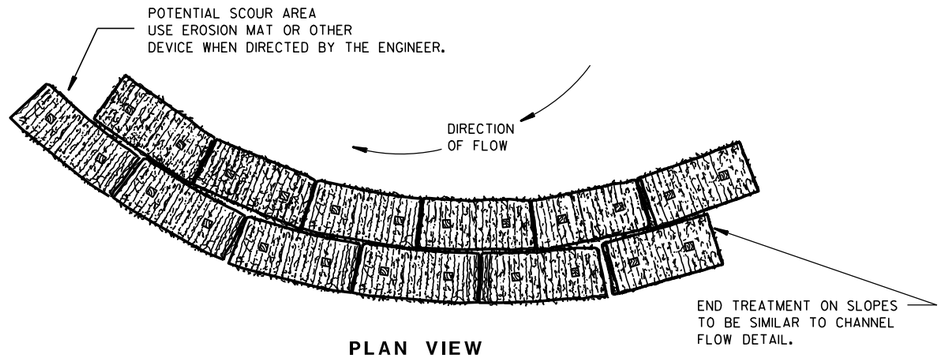
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

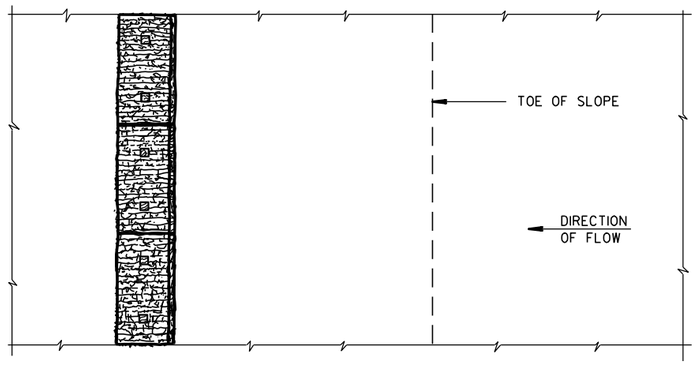
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

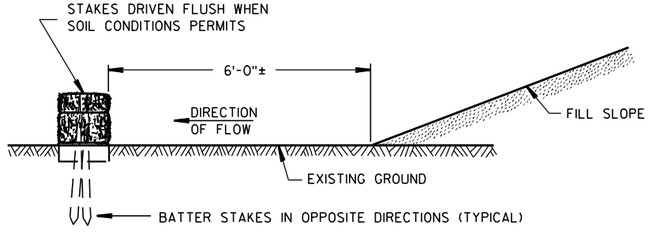


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

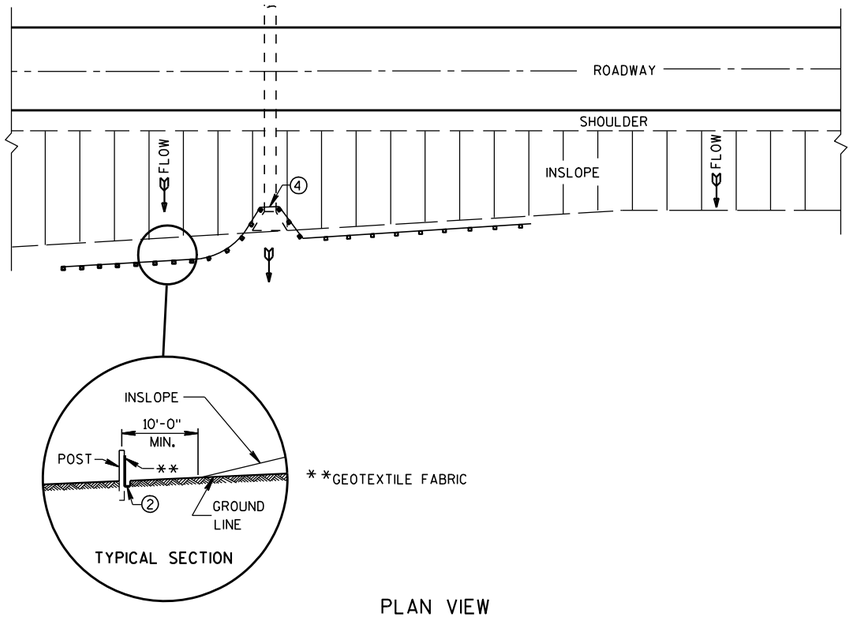
FHWA

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S.D.D. 8 E 8-3

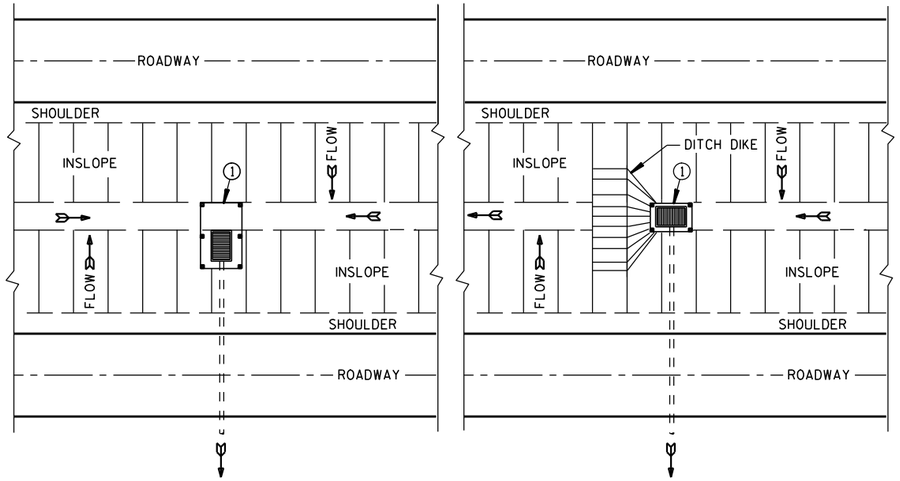
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



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.

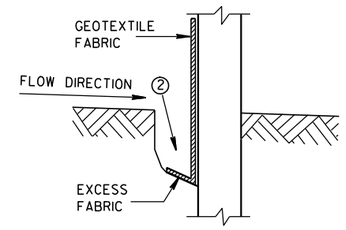
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

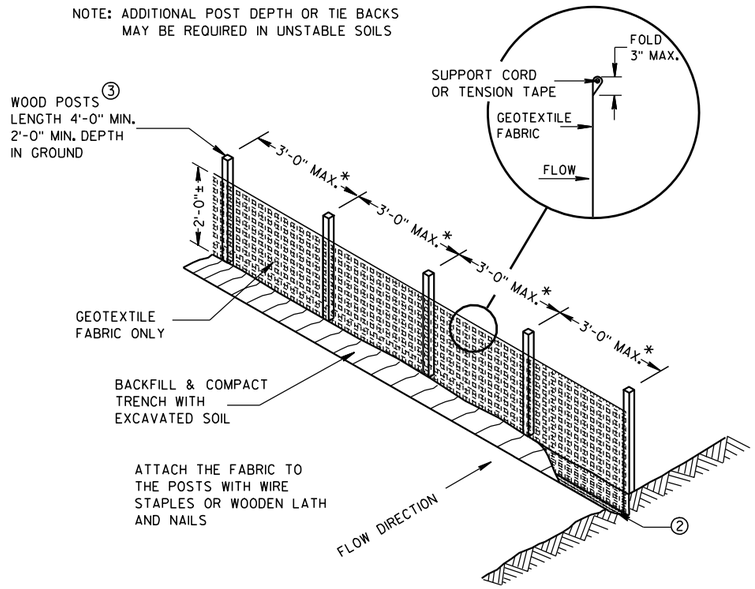
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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.

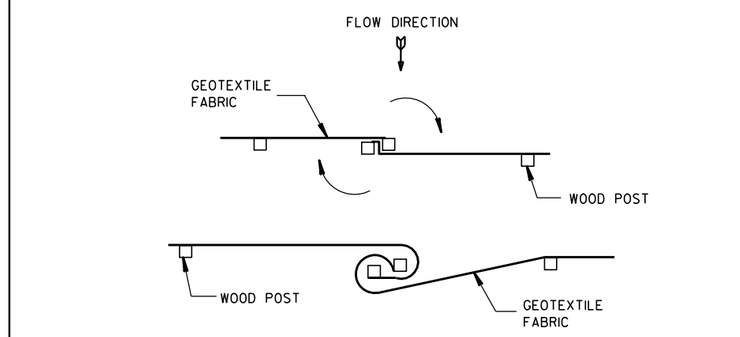


TRENCH DETAIL

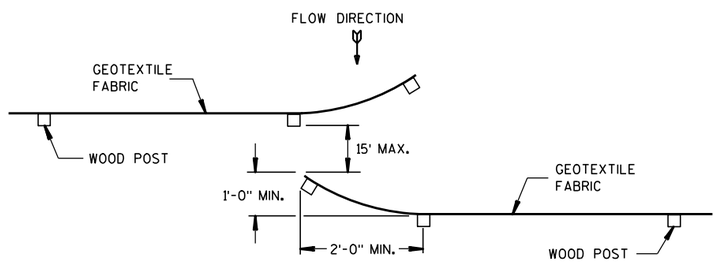


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

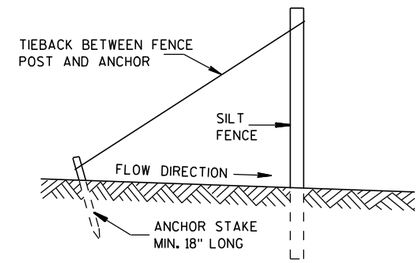


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

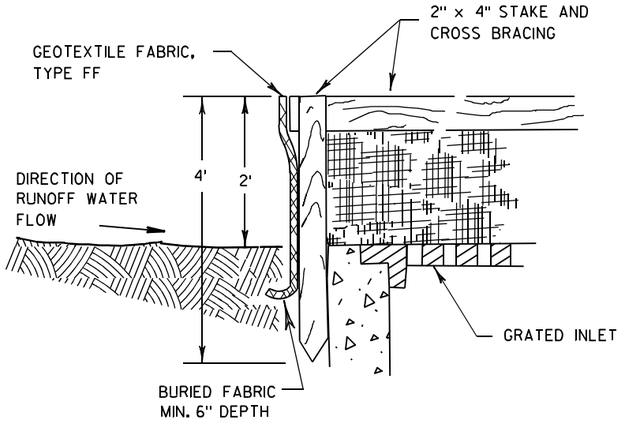
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

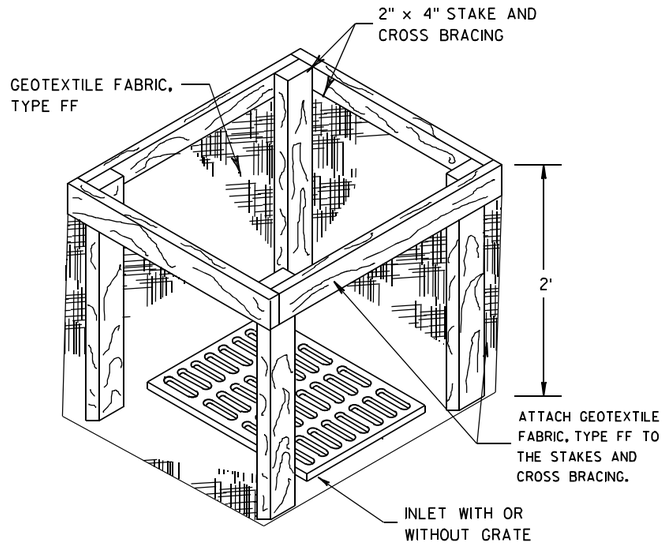
6

S.D.D. 8 E 9-6

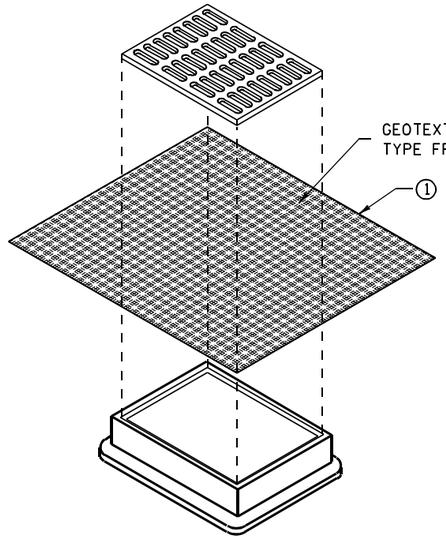
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S.D.D. 8 E 9-6



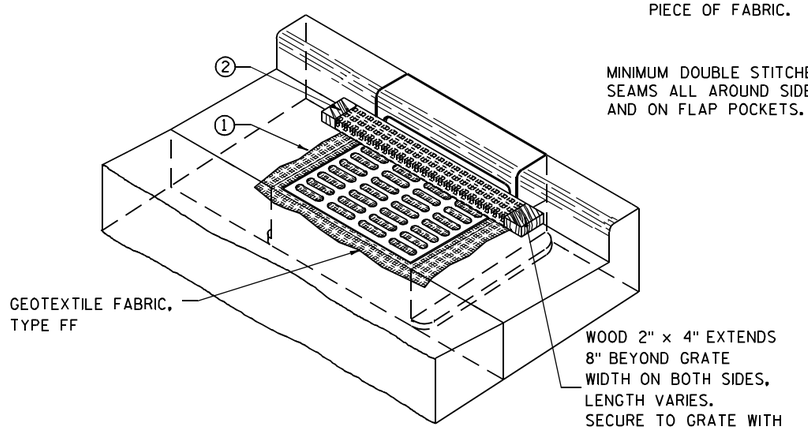


INLET PROTECTION, TYPE A

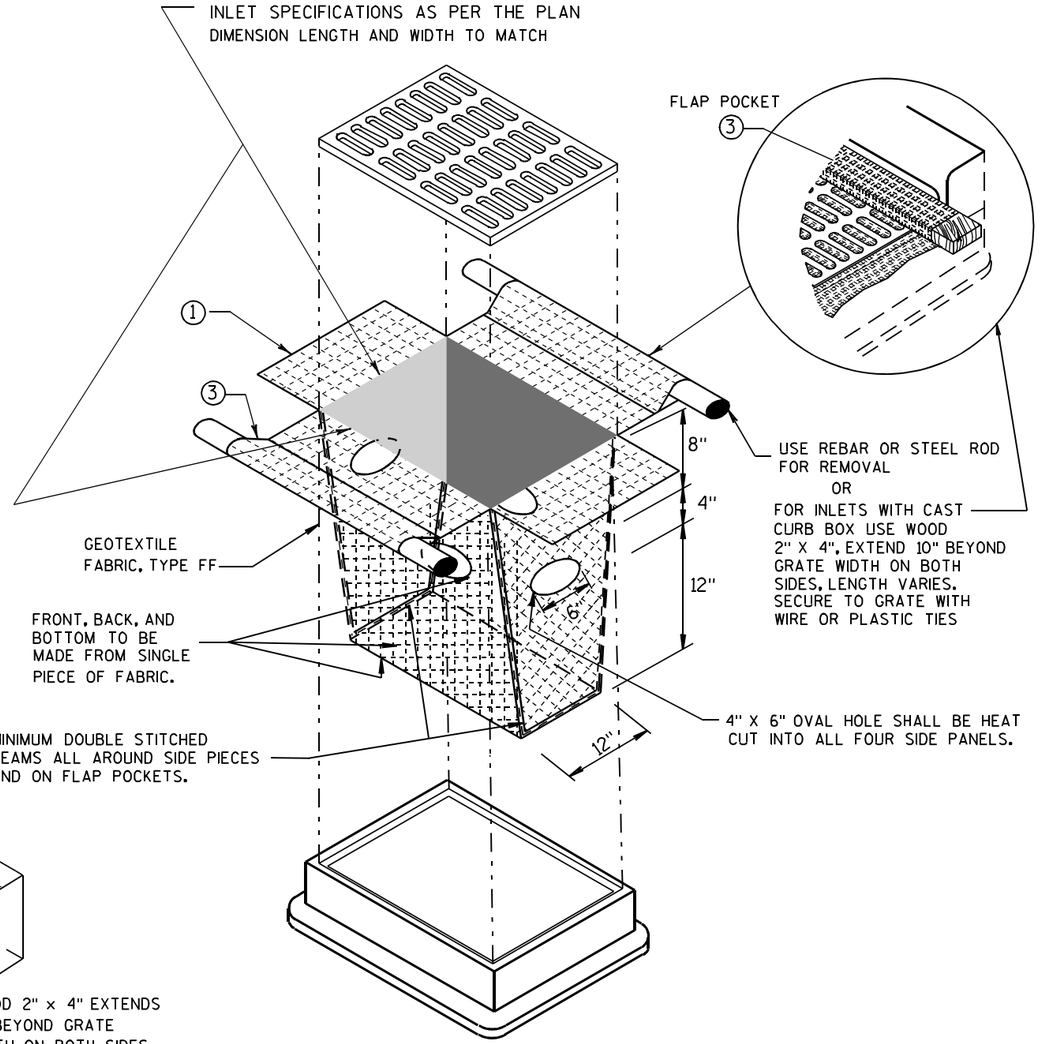


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

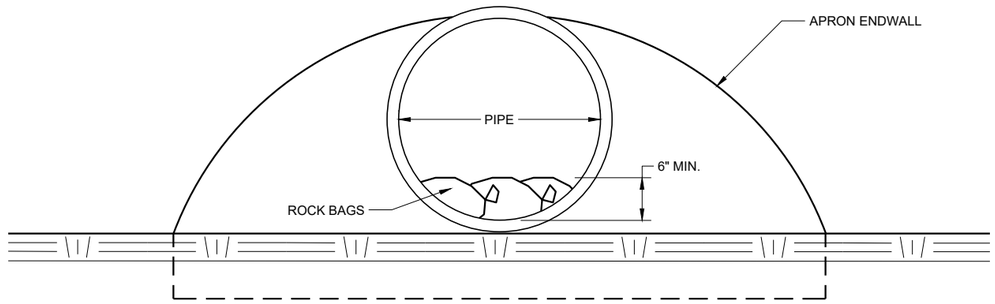
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

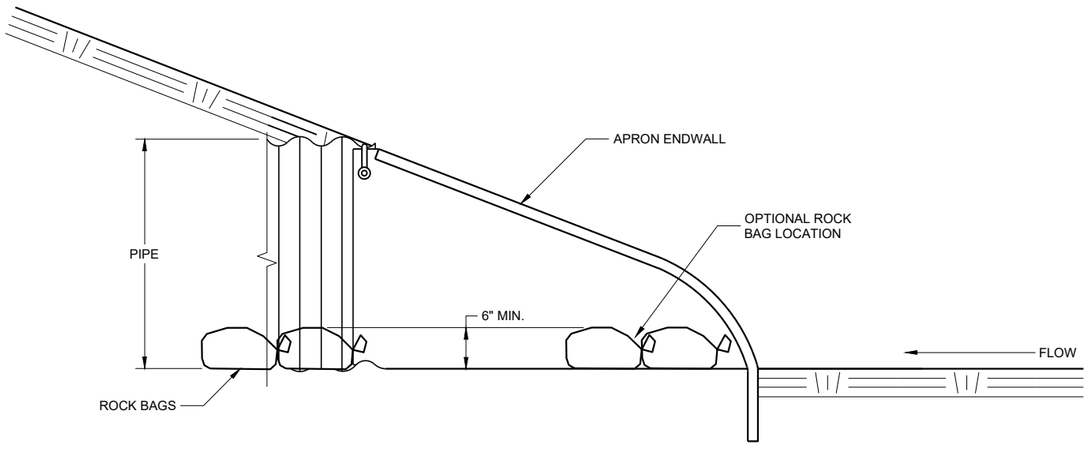
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI
FHWA	

6

SDD 08E15 - 01

METAL APRON ENDWALLS

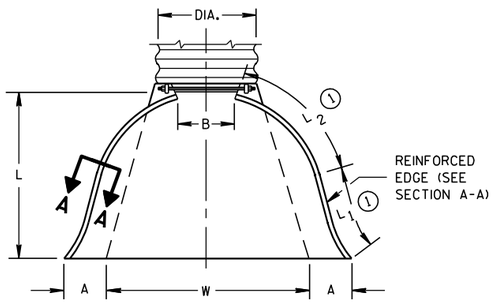
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

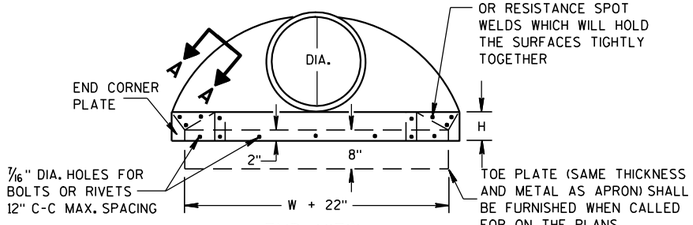
REINFORCED CONCRETE APRON ENDWALLS

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

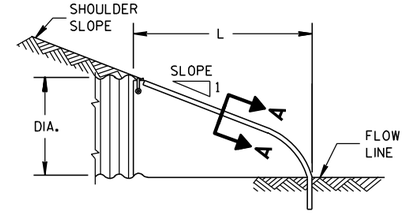
*MINIMUM
**MAXIMUM



PLAN VIEW

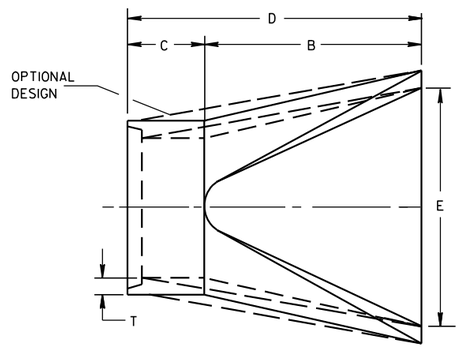


END VIEW

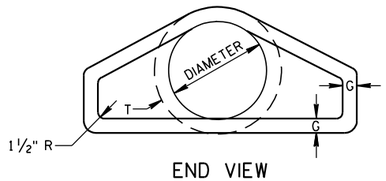


SIDE ELEVATION

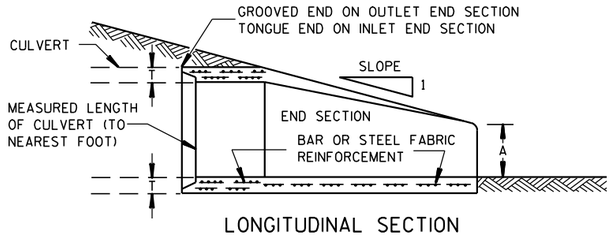
METAL ENDWALLS



PLAN

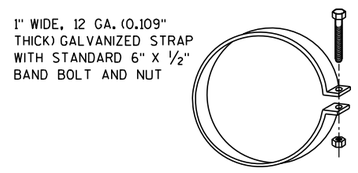


END VIEW



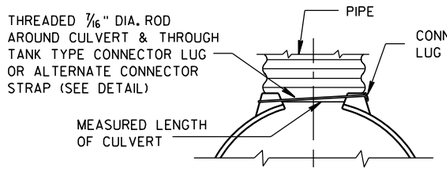
LONGITUDINAL SECTION

CONCRETE ENDWALLS

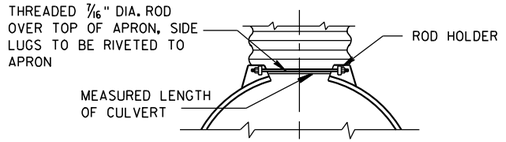


ALTERNATE FOR TYPE 1 CONNECTION

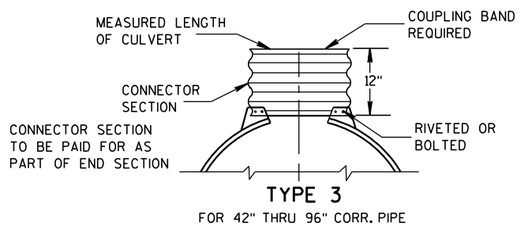
END SECTION CONNECTOR STRAP



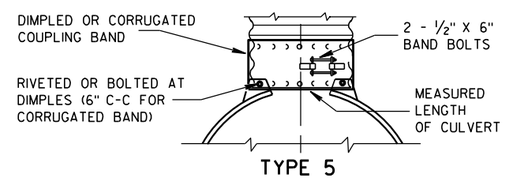
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

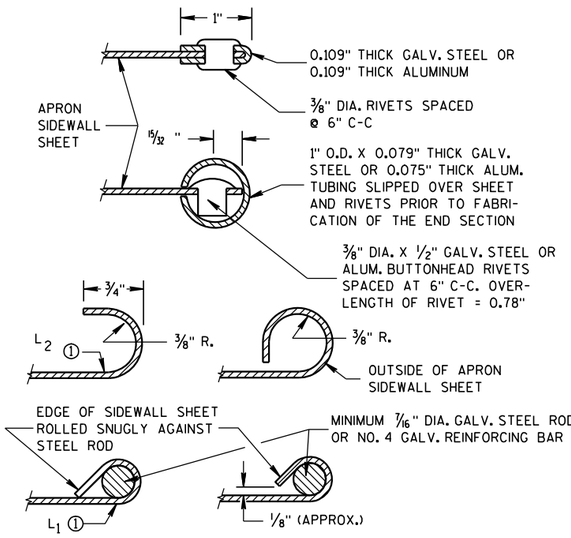
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

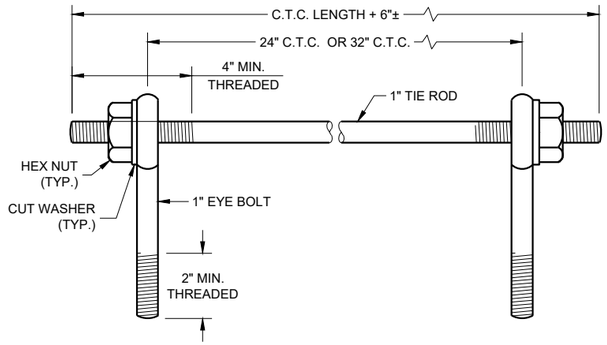
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

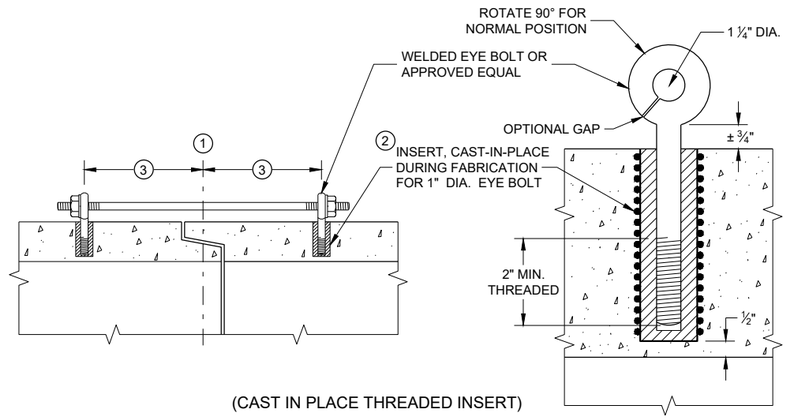
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

(1) CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

(2) THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

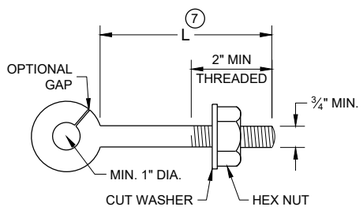
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

(4) BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

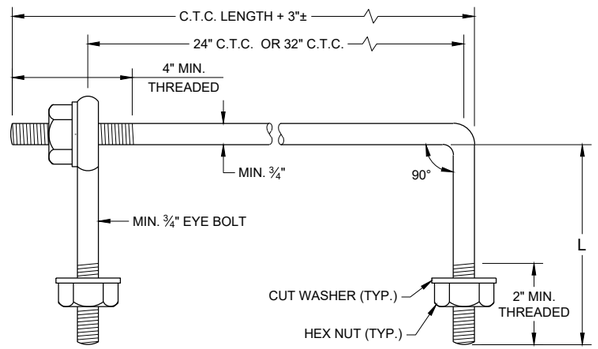
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

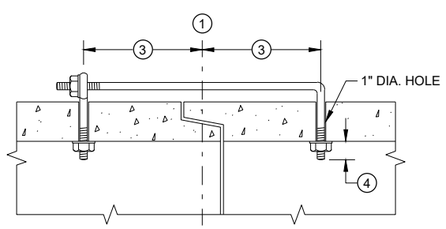


EYE BOLT (7)

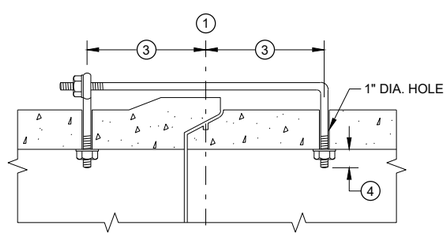
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

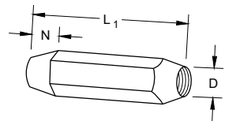
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

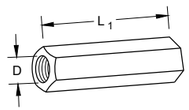
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



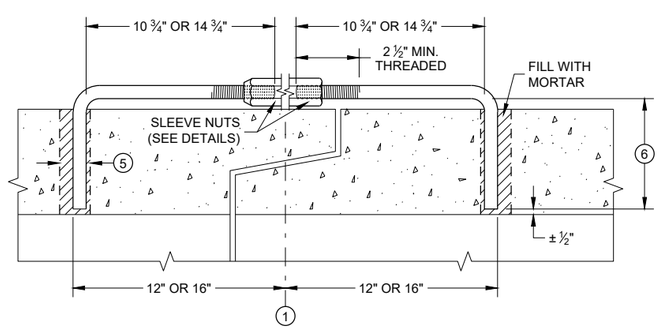
TAPERED



PLAIN

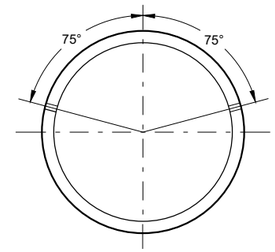
RIGHT AND LEFT THREADS

SLEEVE NUTS



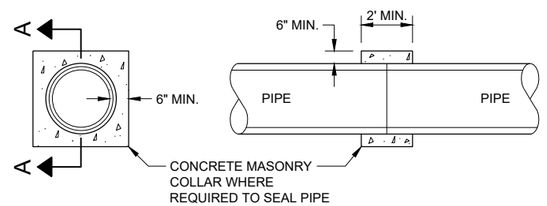
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

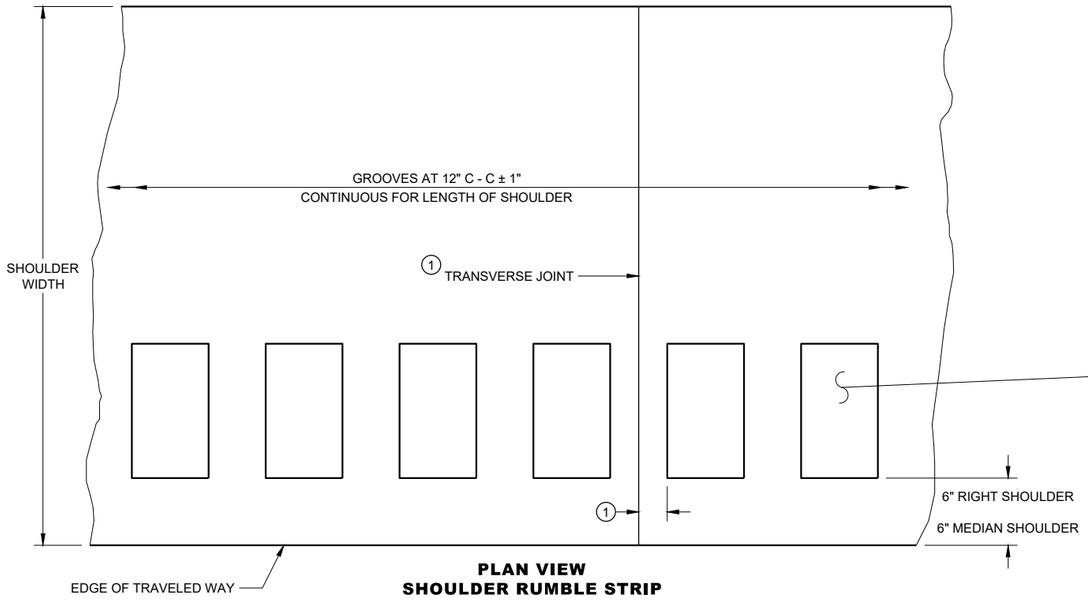
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

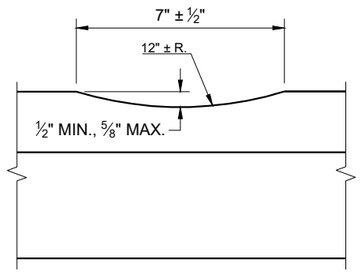
FHWA

SDD 08F04 - 08

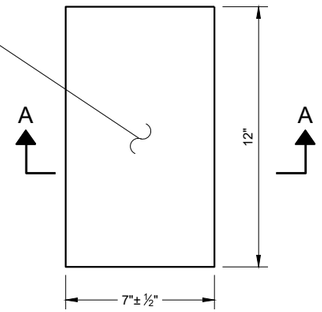
SDD 08F04 - 08



PLAN VIEW
SHOULDER RUMBLE STRIP



SECTION A - A



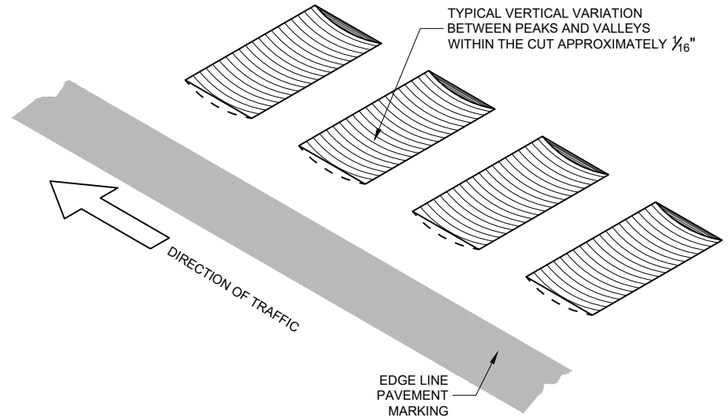
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

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

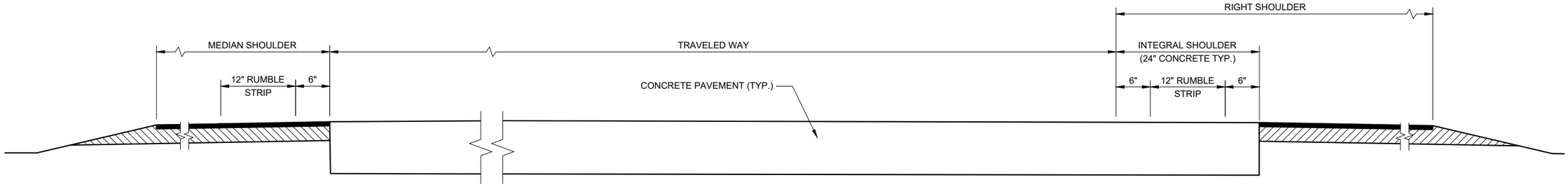
RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD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

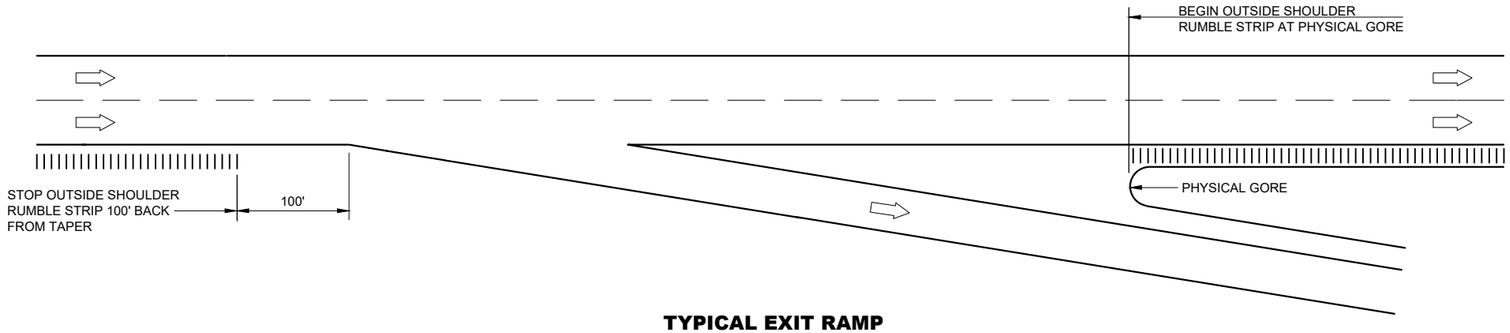
TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

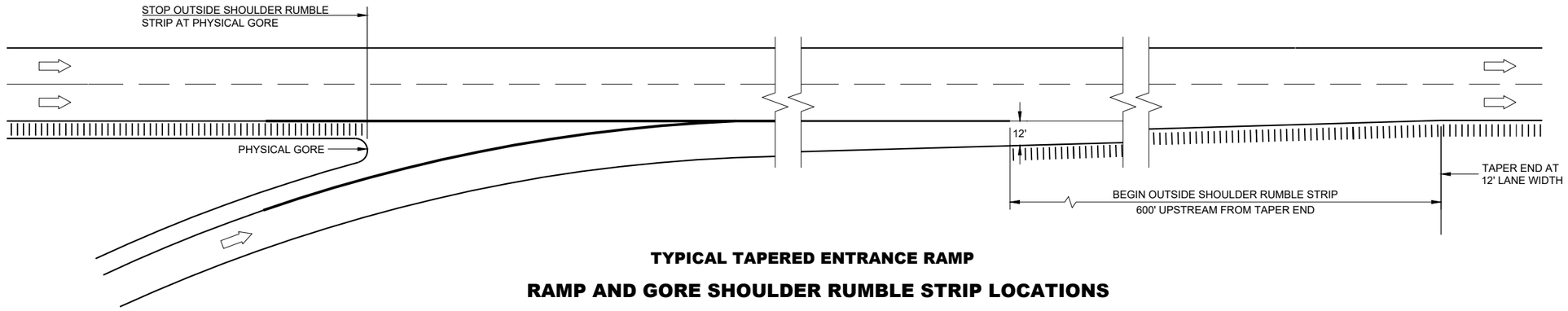
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13A05-06a

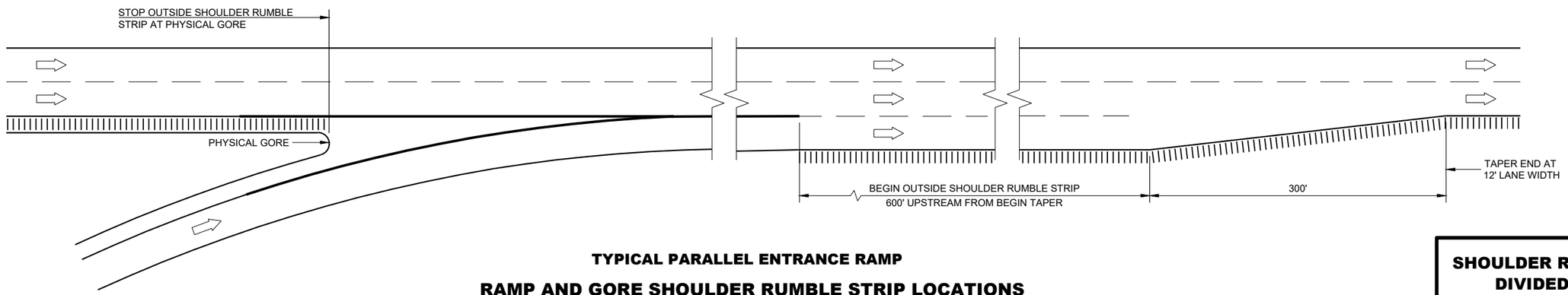


TYPICAL EXIT RAMP



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

GENERAL NOTES

NO RUMBLE STRIP ON EXIT, DIRECTIONAL OR ENTRANCE RAMPS, 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, COMMERCIALAND 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

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

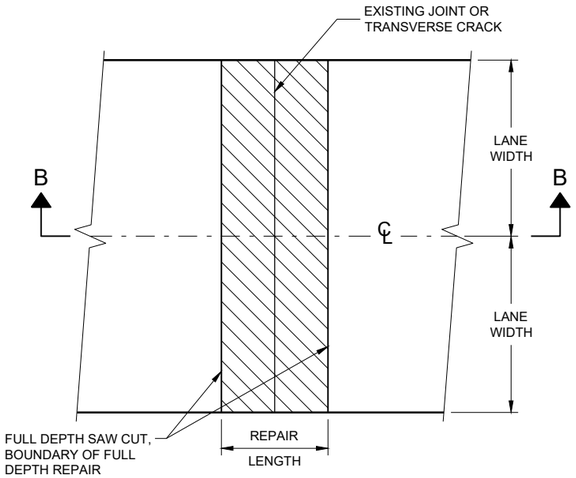
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

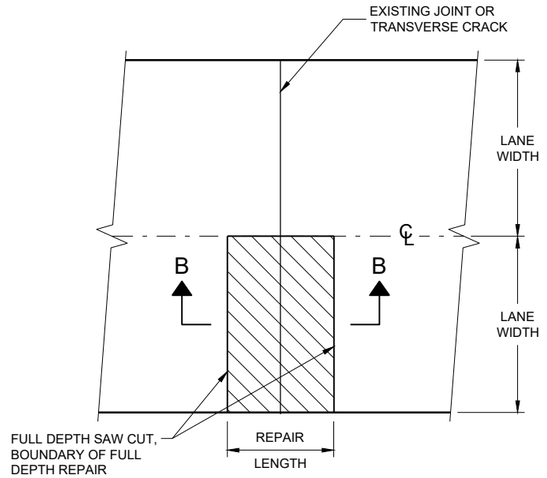
FHWA

6

SDD 13A05-06b



PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

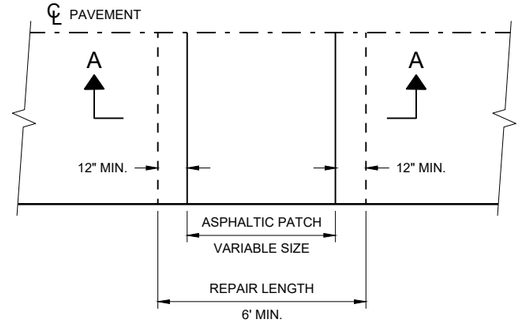
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

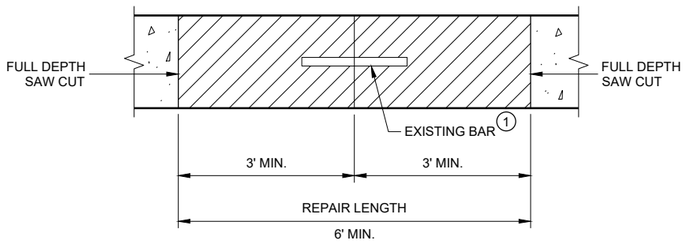
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

(1) DOWEL BARS MAY NOT BE PRESENT.



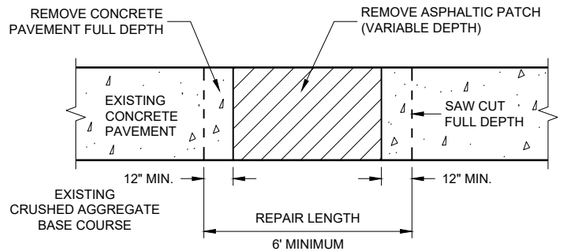
PLAN VIEW

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B - B

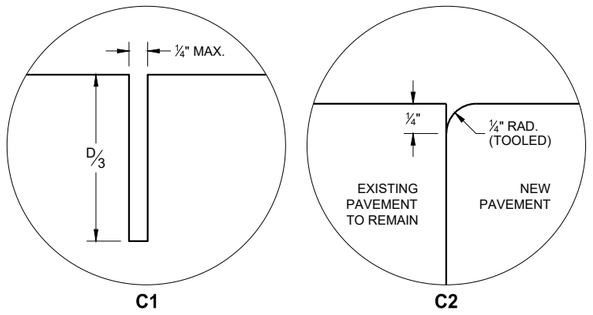
CONCRETE REMOVAL



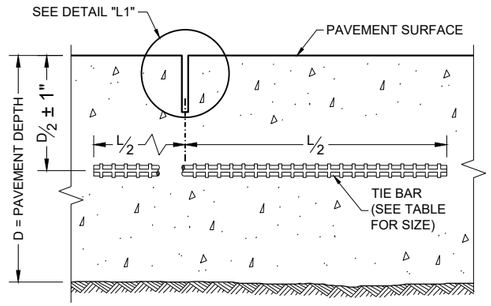
SECTION A - A

HMA PATCH REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

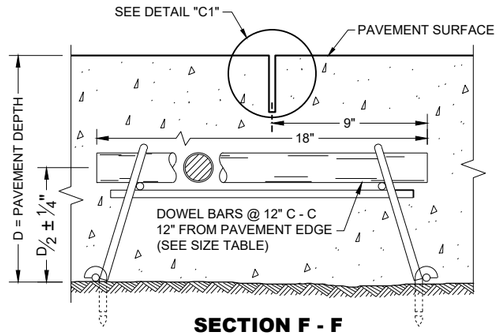


TRANSVERSE JOINTS



SECTION C - C

SAWED LONGITUDINAL JOINT



SECTION F - F

DOWELED CONTRACTION JOINT

GENERAL NOTES

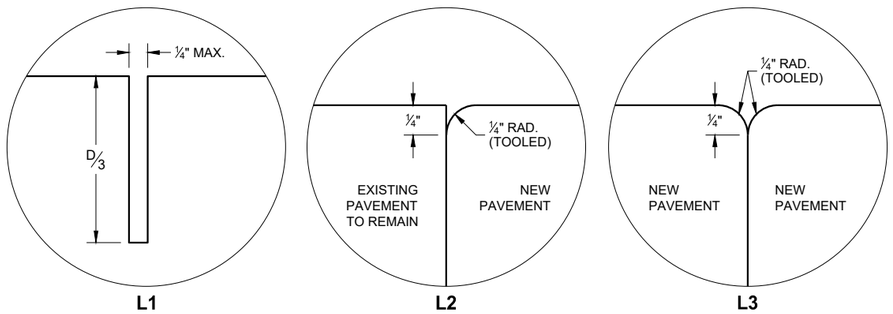
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

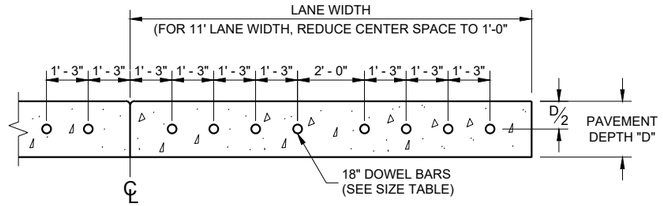
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

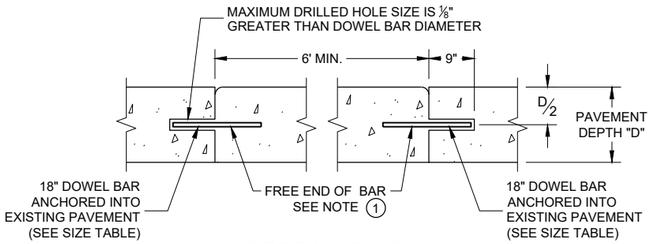


LONGITUDINAL JOINTS



SECTION E - E

DRILLED DOWEL BAR CONSTRUCTION JOINT



SECTION D - D

TIE BAR TABLE

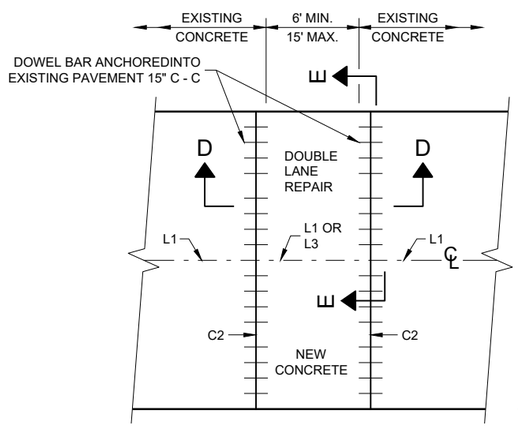
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

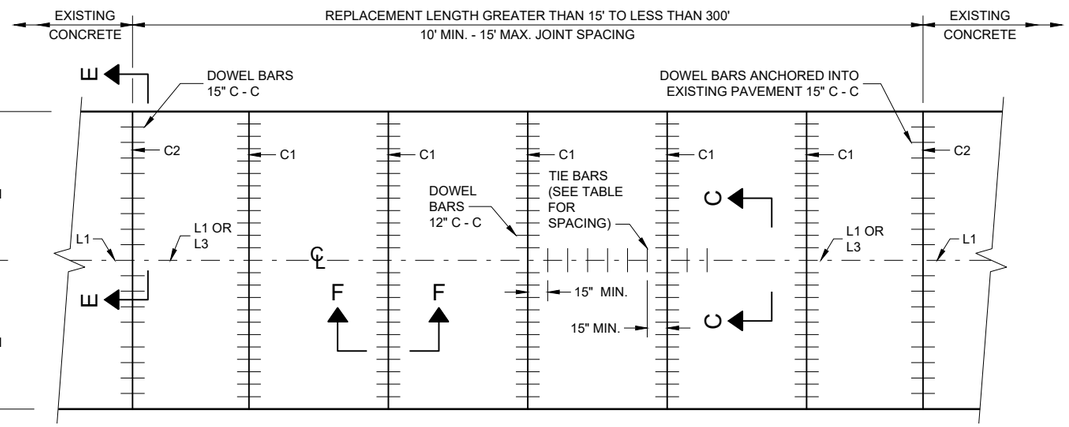
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	NONE	12'
7", 7 ½"	1"	1"	14'
8" & ABOVE	1 ¼"	1 ¼"	15'



PLAN VIEW

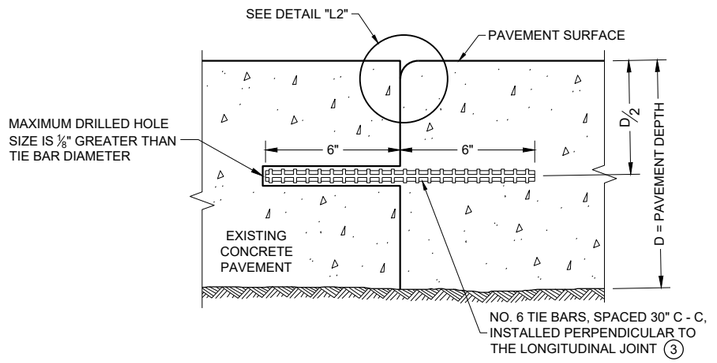
MULTILANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

MULTILANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

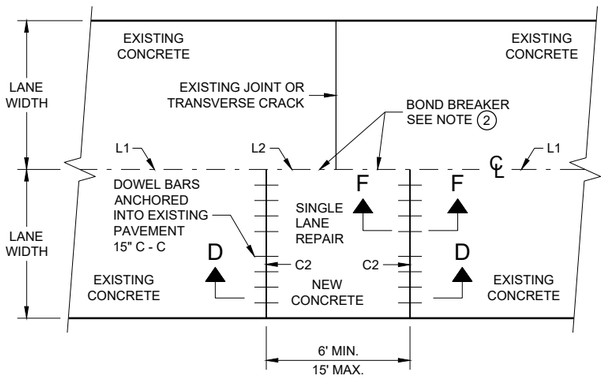


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

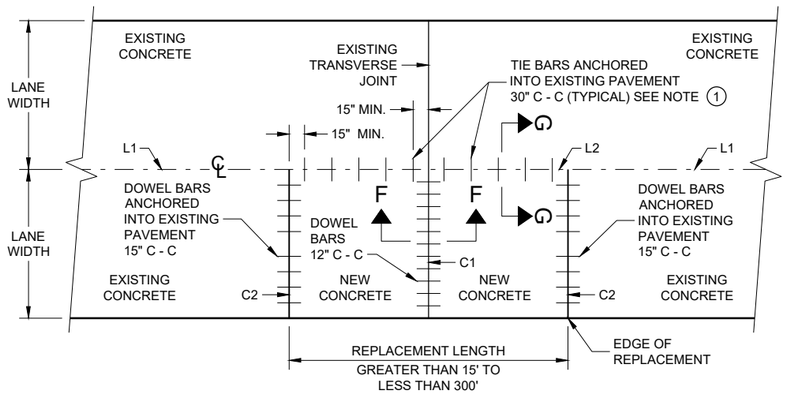
GENERAL NOTES

1. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
2. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
3. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE REPAIR AND REPLACEMENT

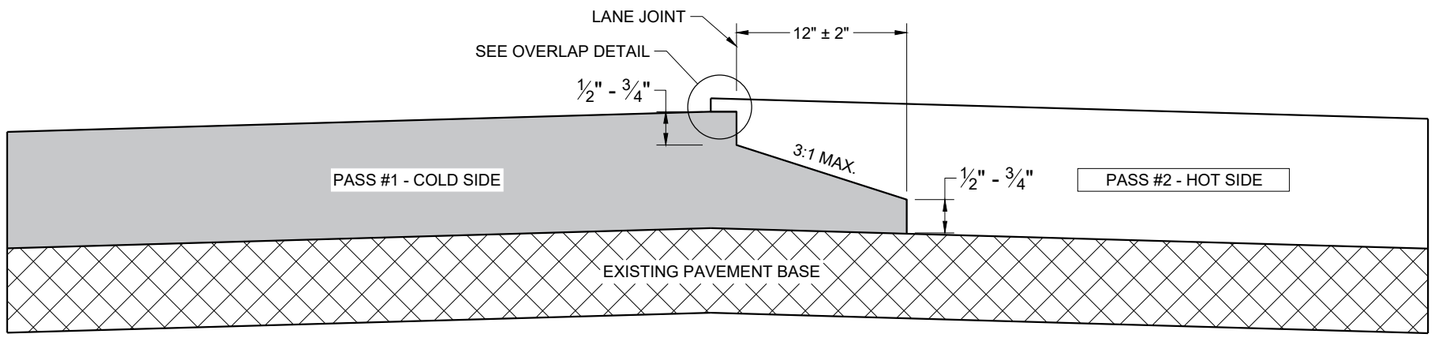
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

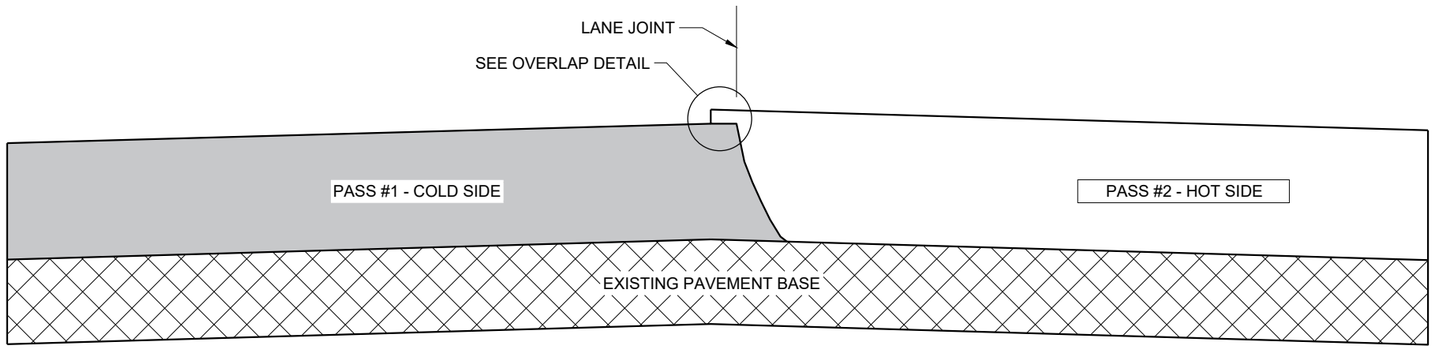
FHWA

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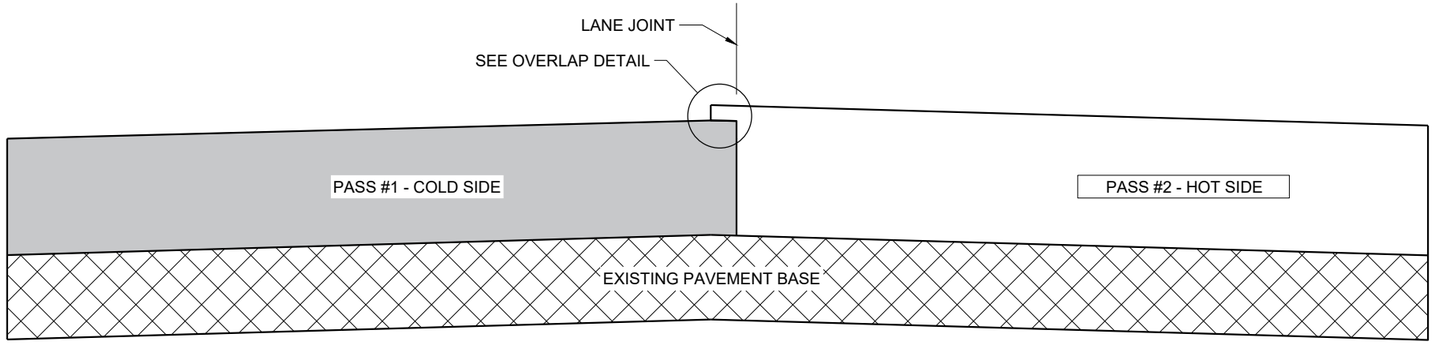
SDD 13C09 - 17c



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

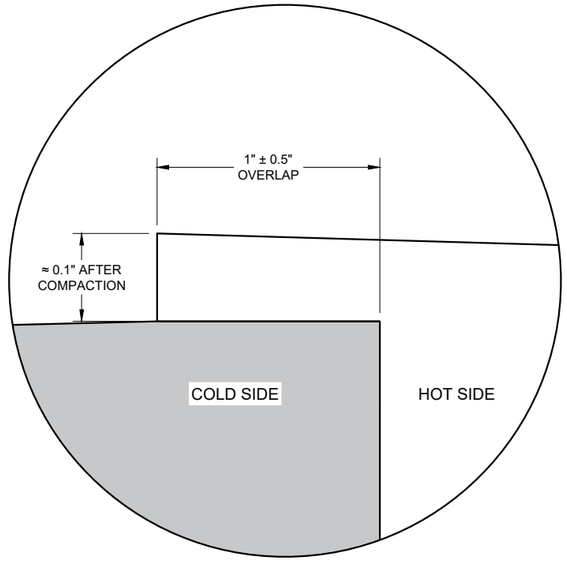
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

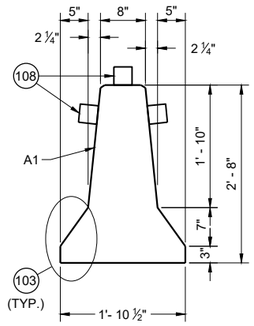
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

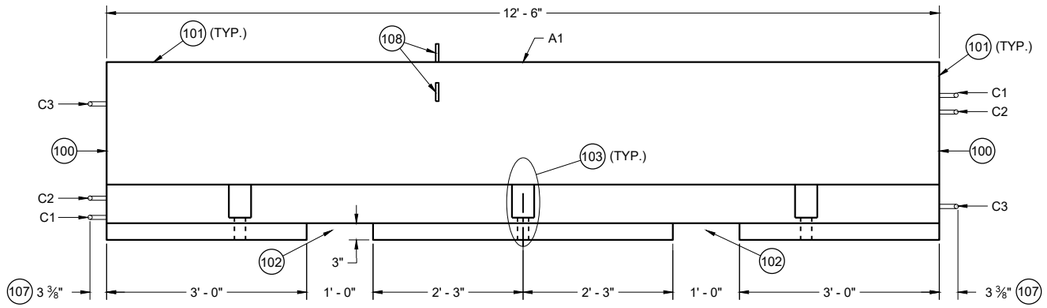
APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



CROSS SECTION



PROFILE VIEW

GENERAL NOTES

PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

(100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
- A. TYPE OF BARRIER: WI-CBTP
- B. MANUFACTURER
- C. DATE OF MANUFACTURE (MONTH AND YEAR)

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

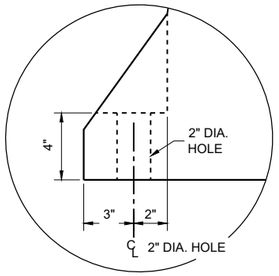
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

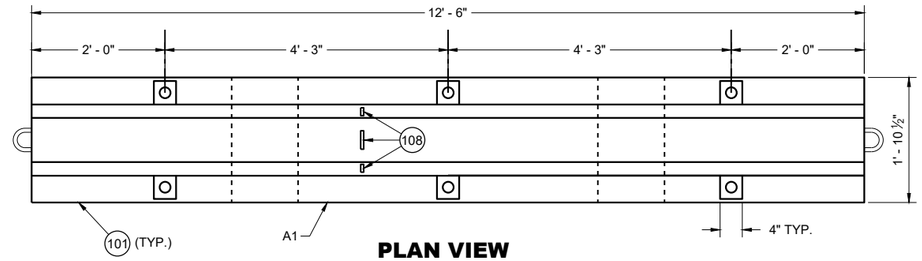
(106) 1" MIN. CLEAR COVER

(107) ± ⅛" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)

(108) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART, PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

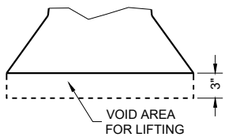


ANCHOR BLOCK DETAIL

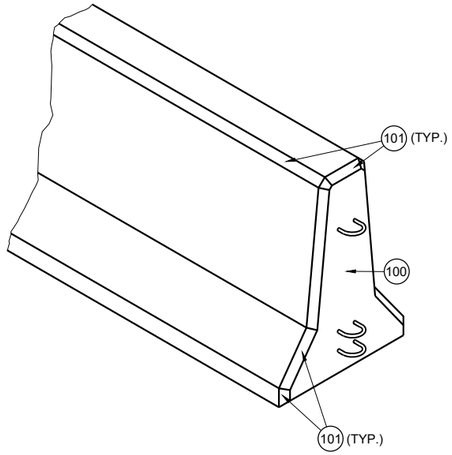


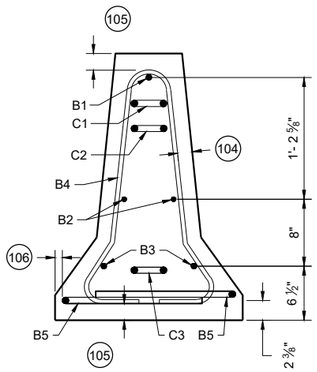
PLAN VIEW

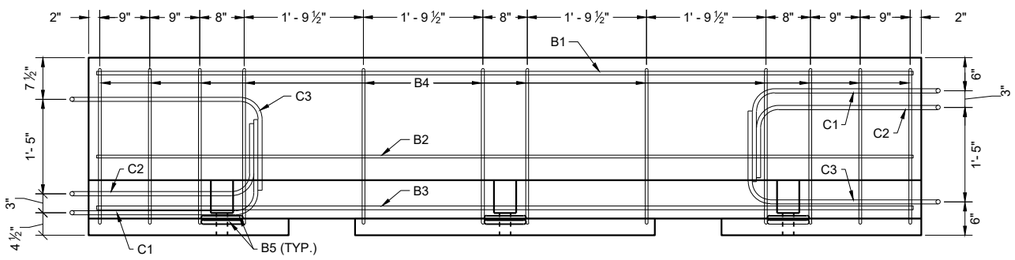
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)







PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

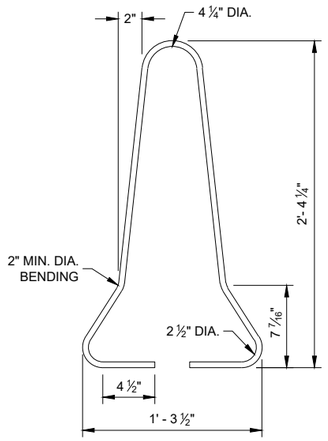
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

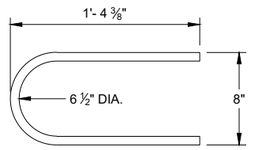
SDD 14B07-16a

6

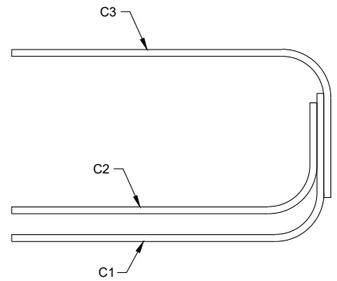
SDD 14B07-16a



B4 BAR DETAIL

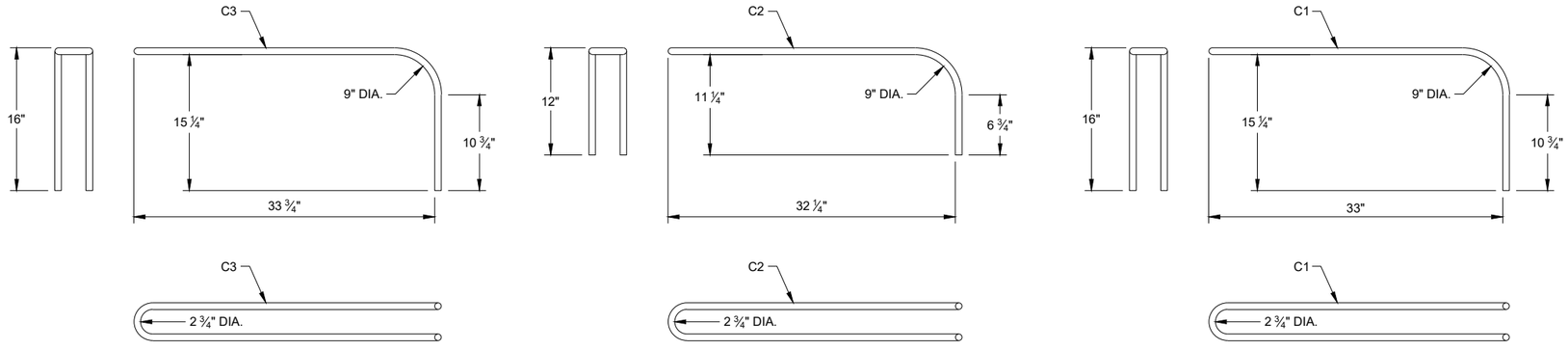


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



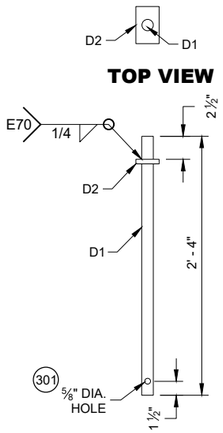
C BAR DETAILS

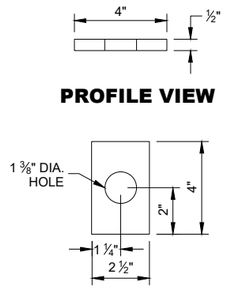
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

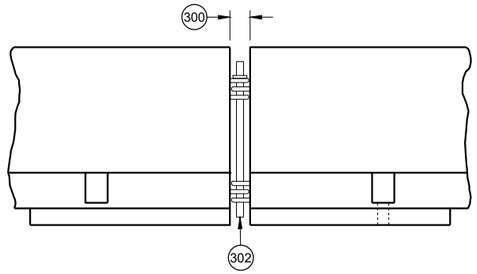
6

SDD 14B07-16b





CONNECTOR PIN ASSEMBLY



CONNECTING TEMPORARY BARRIER SECTIONS

GENERAL NOTES

(300) SET WITH 3 ⅝" WOOD BLOCK.

(301) HOLE IS OPTIONAL.

(302) CONNECTOR PIN ASSEMBLY.

(303) CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

(304) CONCRETE DECK.

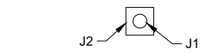
(305) DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

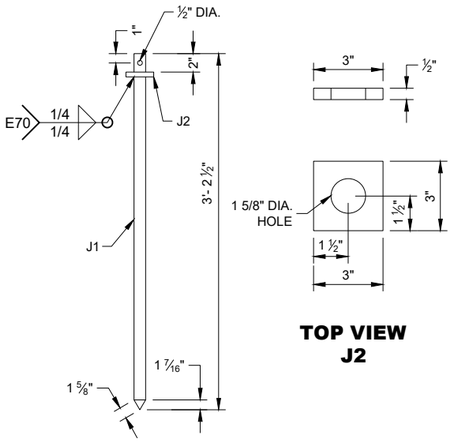
(306) MINIMUM OF 2" OF ASPHALT.

(307) ASPHALT ANCHOR PIN ASSEMBLY

(308) IF DRILLING A PILOT HOLE, THE MAX, DIA. OF THE HOLE IS 3/4"

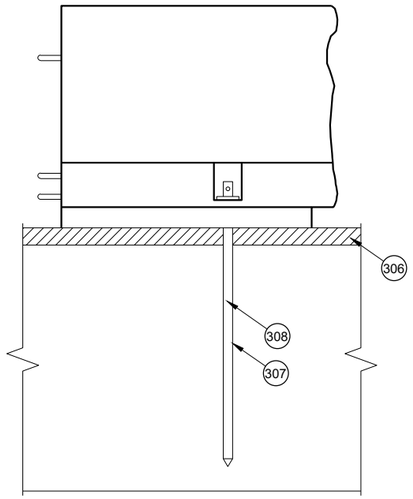
(309) WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.





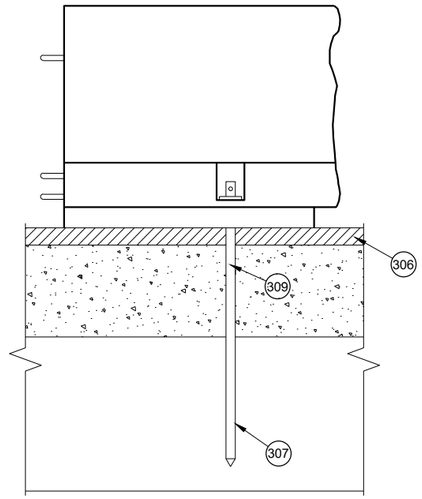
PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY



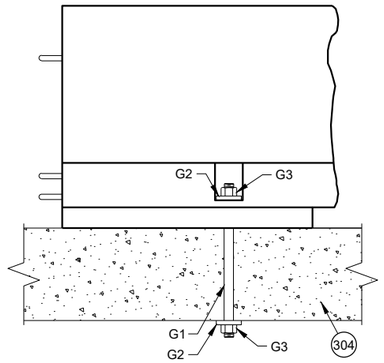
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



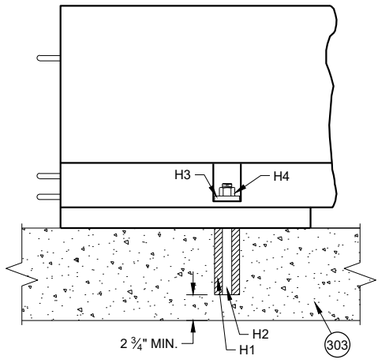
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION (305)

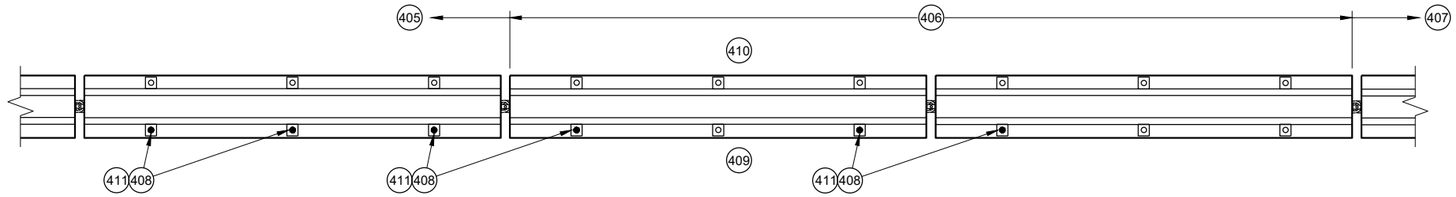


SIDE VIEW

ADHESIVE ANCHOR INSTALLATION (305)

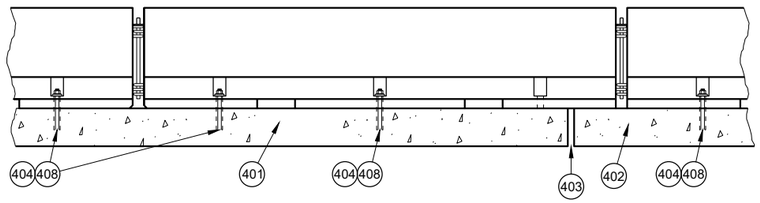
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

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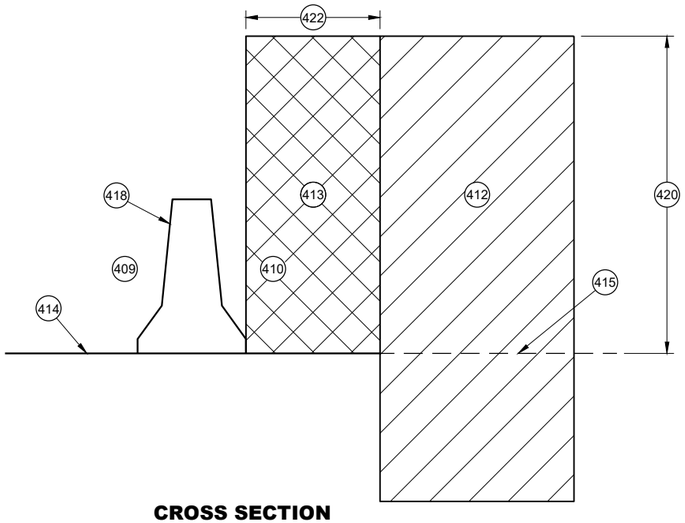
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



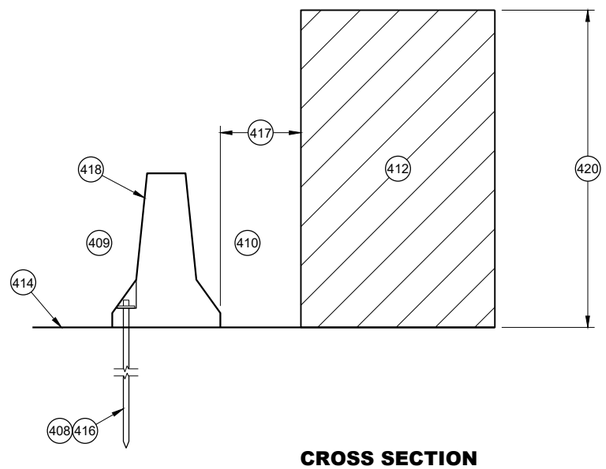
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



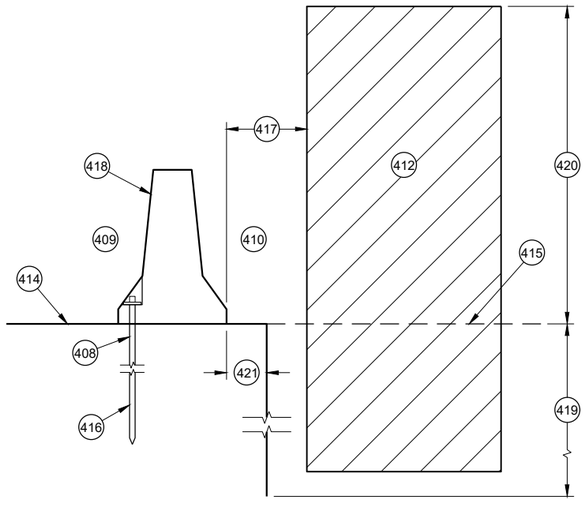
CROSS SECTION

FREE STANDING BARRIER



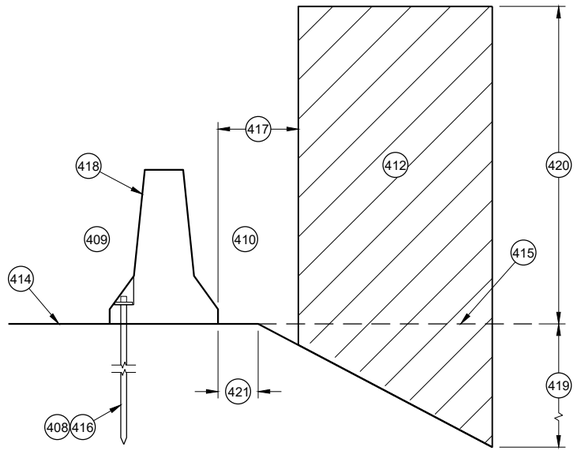
CROSS SECTION

ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION

ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION

ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

(400) NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.

(401) CONCRETE DECK

(402) CONCRETE DECK OR APPROACH SLAB.

(403) EXPANSION JOINT

(404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

(405) ANCHORED TEMPORARY BARRIER

(406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

(407) FREE STANDING BARRIER

(408) REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(409) TRAFFIC SIDE

(410) NON-TRAFFIC SIDE

(411) ANCHOR LOCATION. SEE ANCHORING DETAILS.

(412) WORK AREA

(413) AREA FREE OF OBJECTS AND WORKERS

(414) GRADE LINE

(415) EXTENDED GRADE LINE

(416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.

(417) WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.

(418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.

(419) DEPTHS OF 3 FEET OR MORE.

(420) Y = 6.5'

(421) OFFSET FROM BACK OF BARRIER EDGE:

CONCRETE PAVEMENT	0.5'
ASPHALT	0.5'

(422) POSTED SPEED (MPH):

45 OR GREATER	4.0'
40 OR LOWER	2.0'

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

GENERAL NOTES

500 EXISTING RIGID BARRIERS (VARIES)

501 TEMPORARY BARRIER

502 SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).

503 ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.

504 NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

505 TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.

506 TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

507 VERTICAL BARRIER

508 SAFETY SHAPE BARRIER

509 SINGLE SLOPE BARRIER

510 CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.

511 BENT THRIE BEAM TO FIT.

512 THRIE BEAM PIECES ARE OFFSET 15 ¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.

513 TWO (2) P1, P2 AND P3 ARE REQUIRED

514 FIVE (5) N1, N2 AND N3 ARE REQUIRED

515 TWO (2) R1, R2 AND R3 ARE REQUIRED

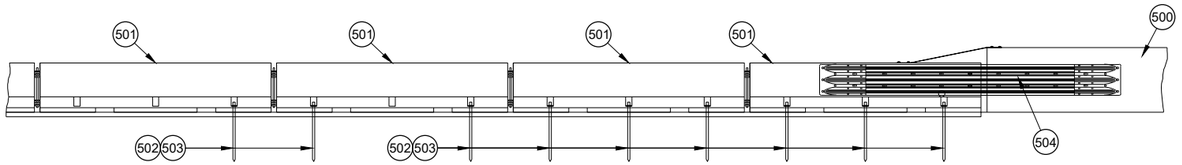
516 CUT WOOD BLOCK TO FIT.

517 SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

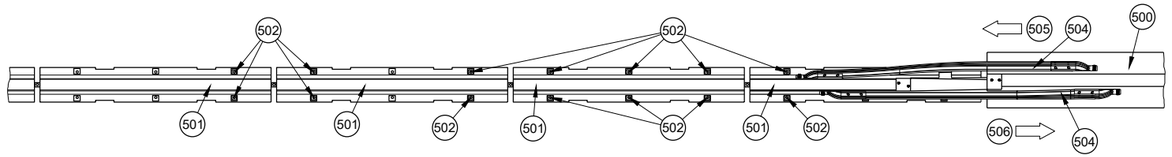
518 CAP ASSEMBLY

519 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

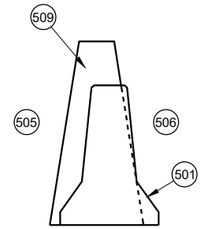
520 ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



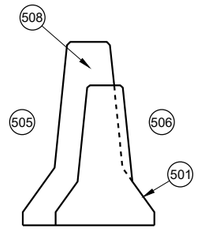
PROFILE VIEW



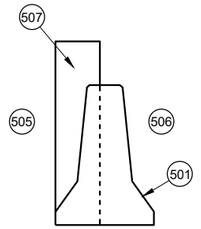
PLAN VIEW



CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE

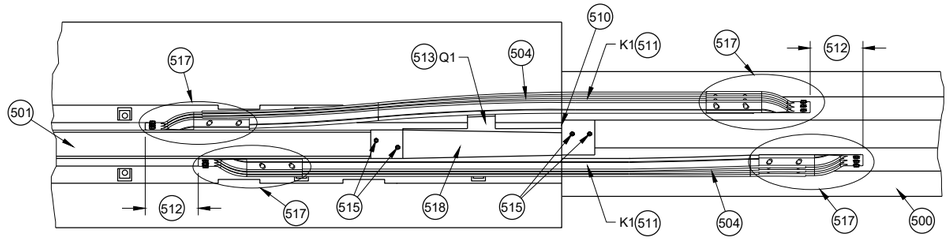


CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE

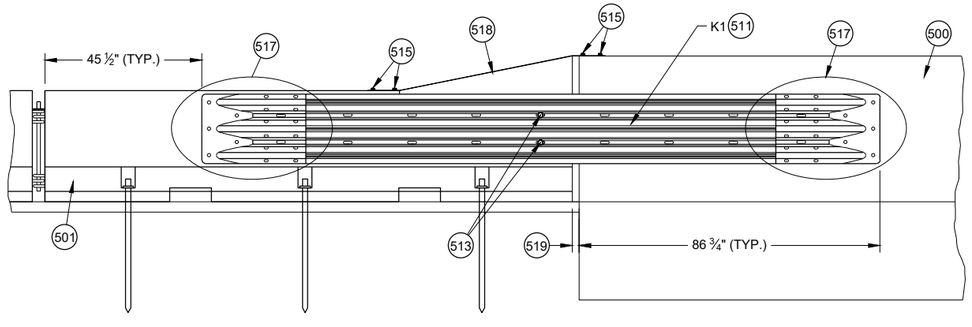


CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL

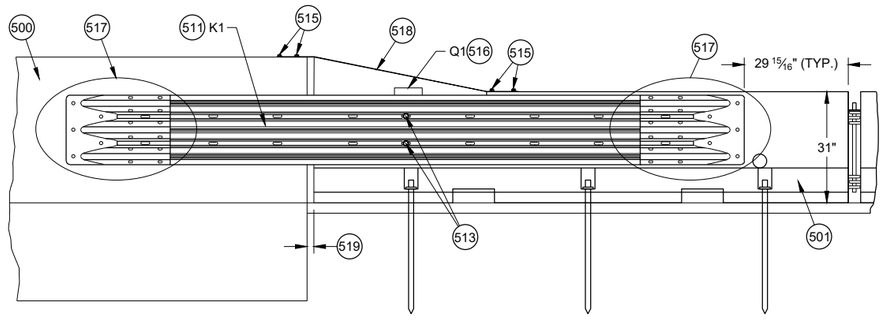
PLAN VIEW
TRANSITION TO RIGID BARRIER



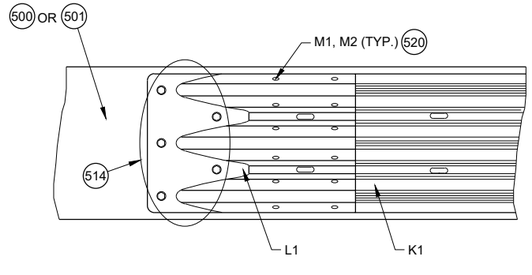
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER

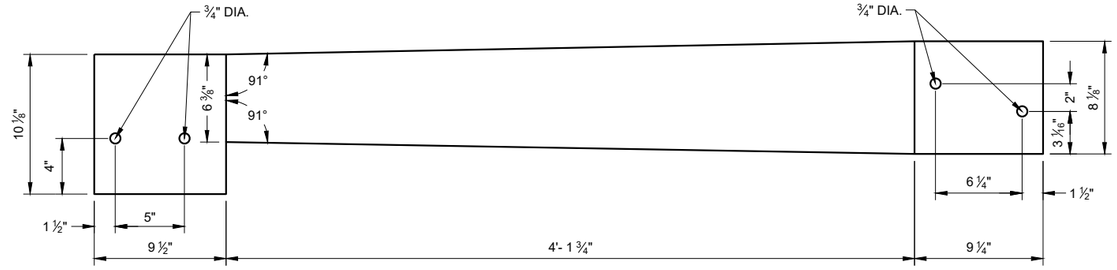


517 DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

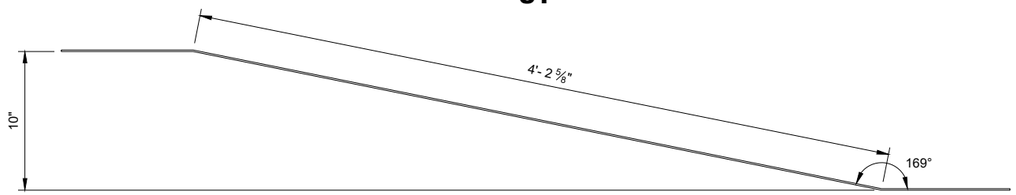
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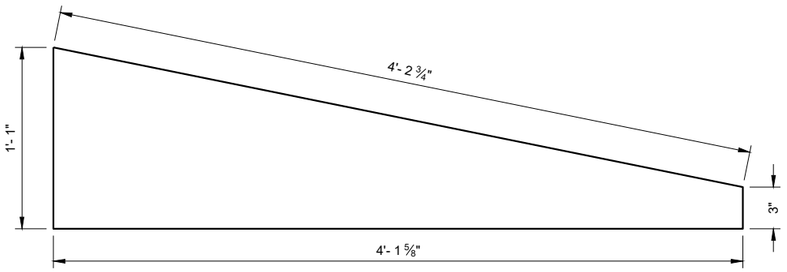
TOP VIEW

S1



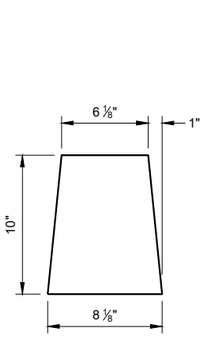
ELEVATION VIEW

S1

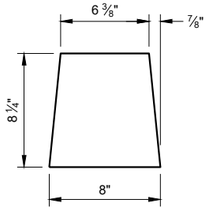


SIDE VIEW

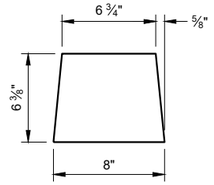
S3



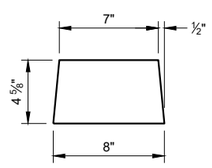
S2



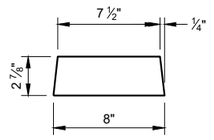
S4



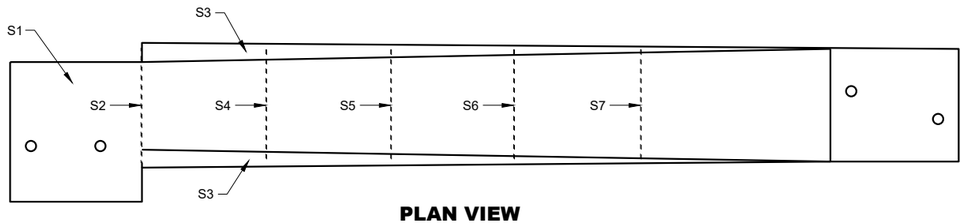
S5



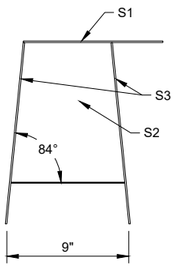
S6



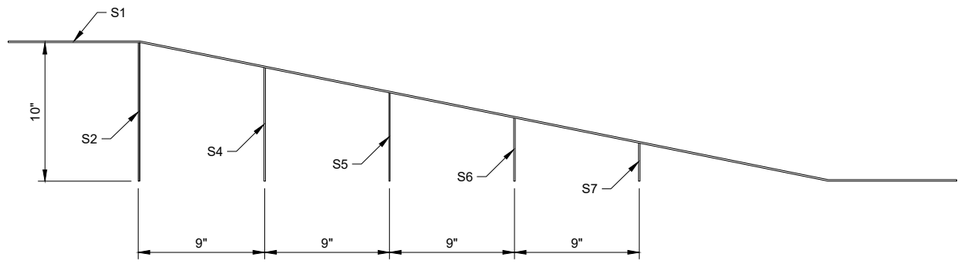
S7



PLAN VIEW



BACK VIEW



SIDE VIEW (600)

42" TOP CAP ASSEMBLY

GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

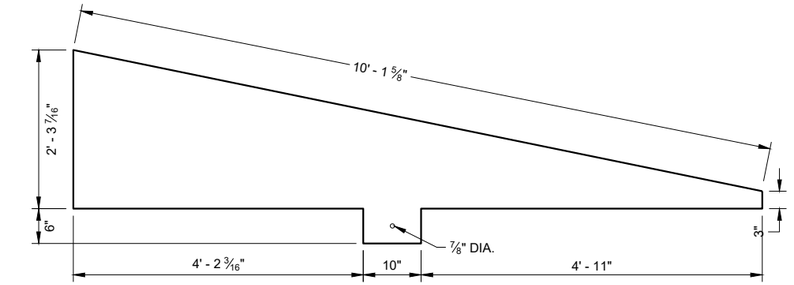
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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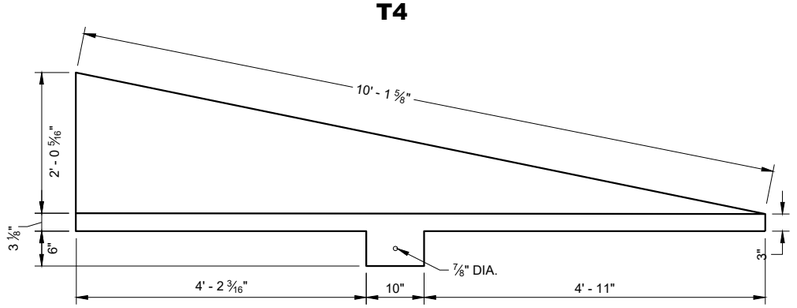
SDD 14B07-16f



SIDE VIEW
T4



END VIEW



SIDE VIEW
T3

END VIEW

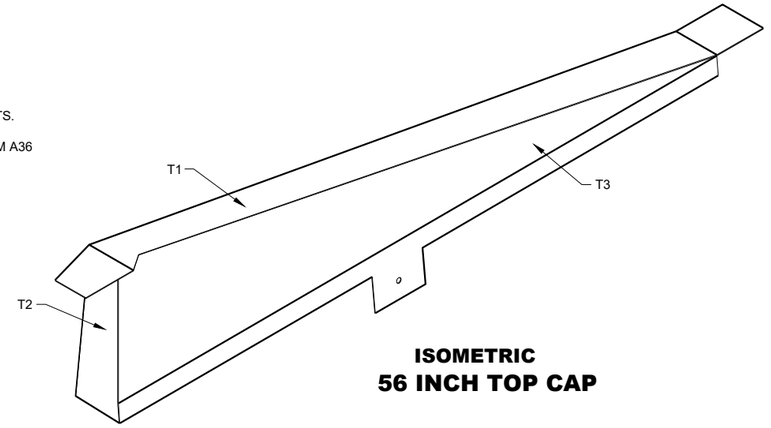
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

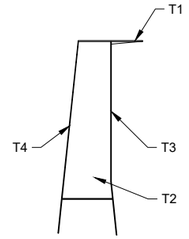
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

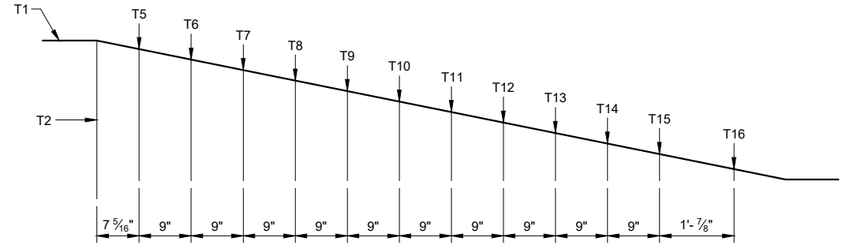
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



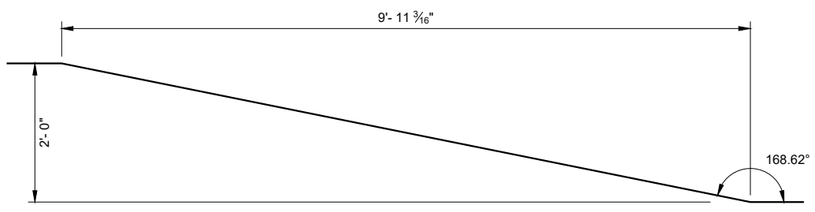
ISOMETRIC
56 INCH TOP CAP



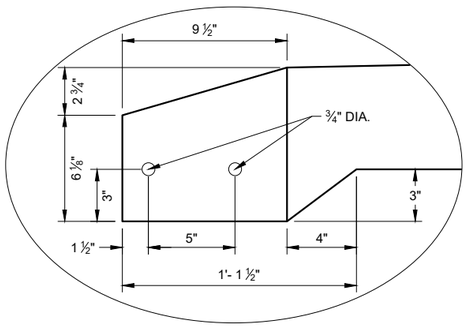
END VIEW
56 INCH TOP CAP



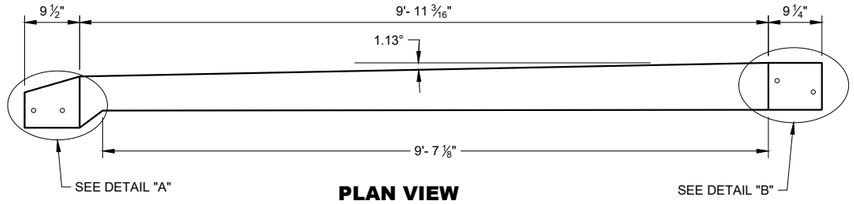
SIDE VIEW (700)
56 INCH TOP CAP



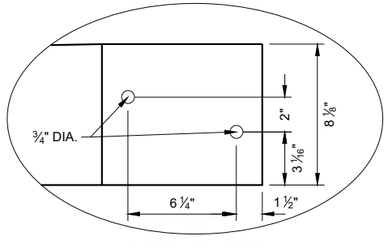
SIDE VIEW
TOP PLATE T1



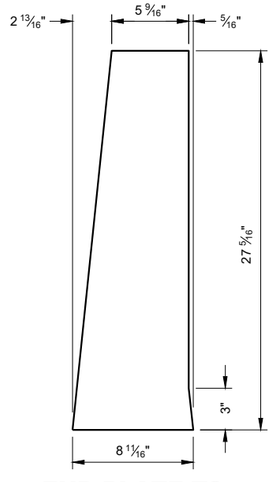
DETAIL "A"



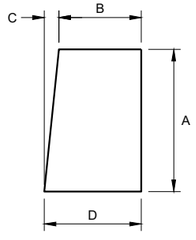
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



GUSSET PLATES
T5 - T16

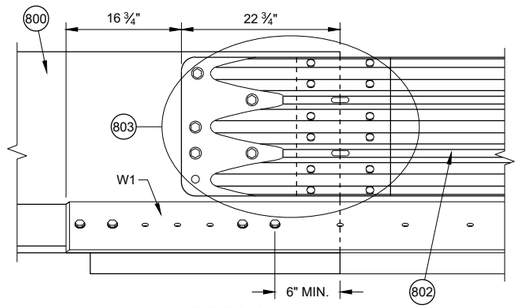
GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	1 1/16"	8 1/16"
T15	4 11/16"	7 9/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

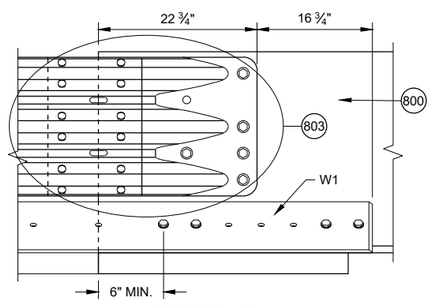
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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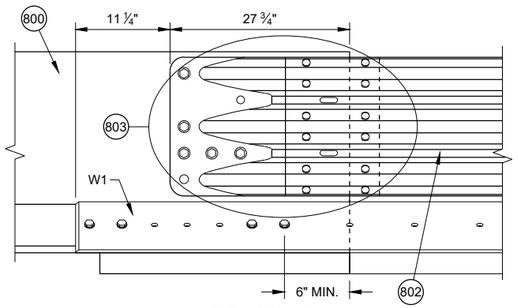
SDD 14B07-16g



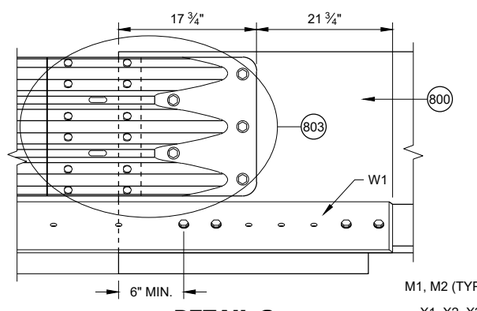
DETAIL D



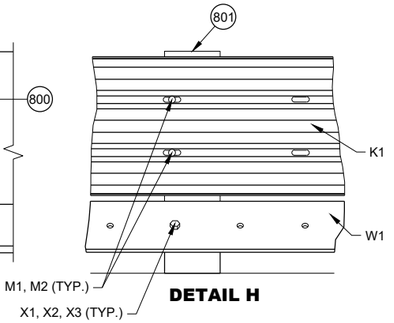
DETAIL E



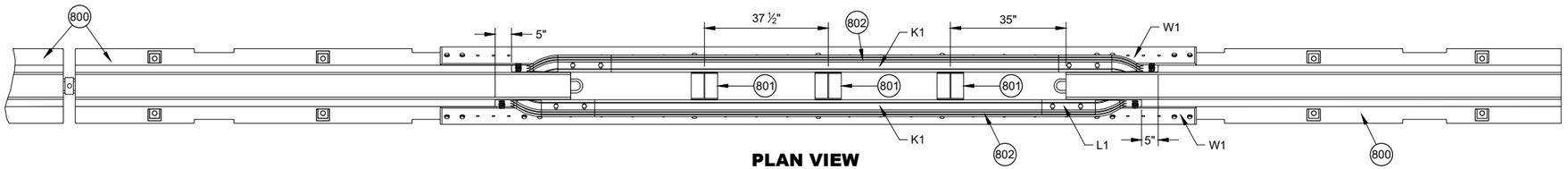
DETAIL F



DETAIL G



DETAIL H



PLAN VIEW

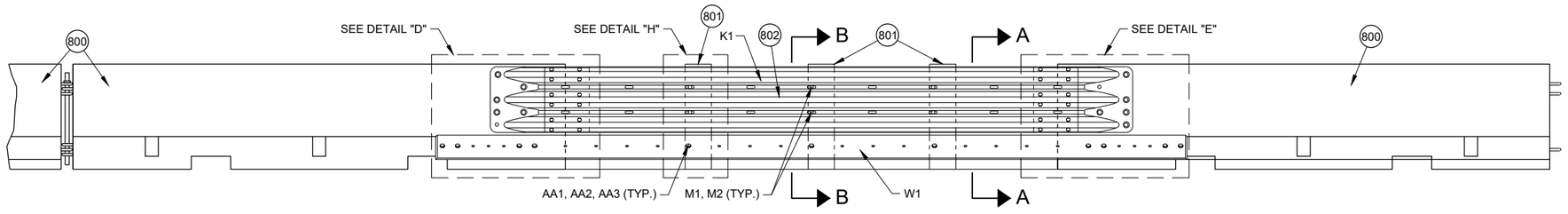
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

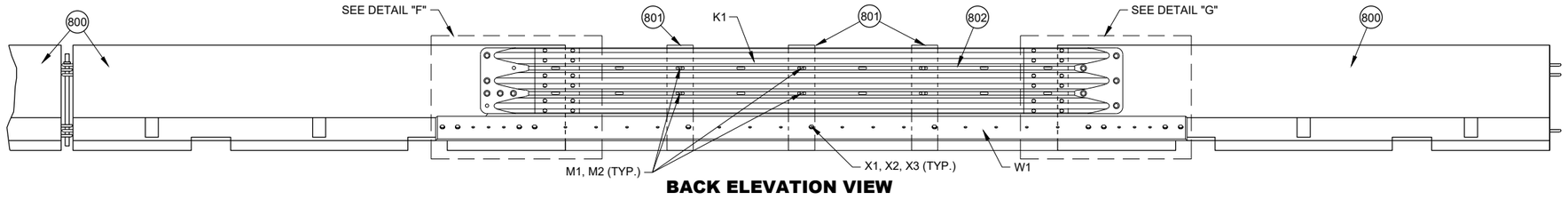
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



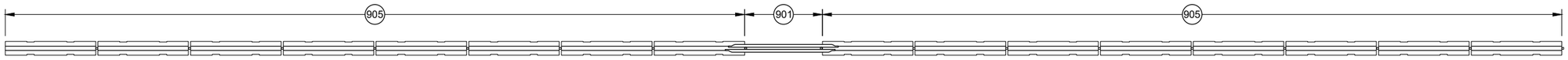
BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

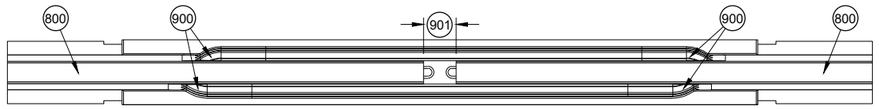
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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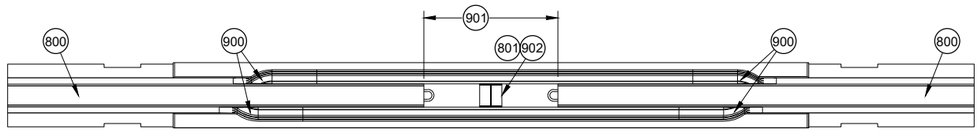
PLAN VIEW
GAP WITHIN SPACING



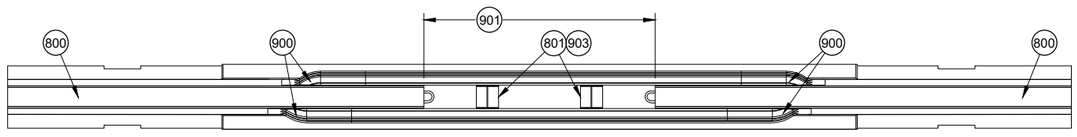
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

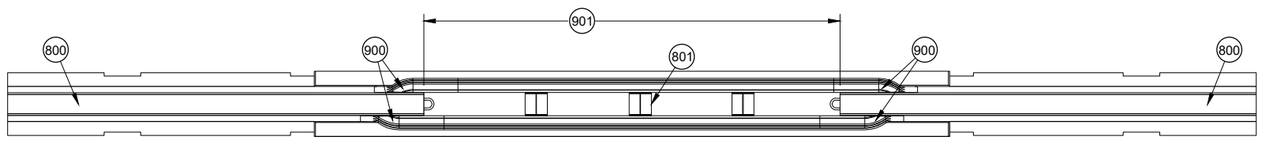
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)

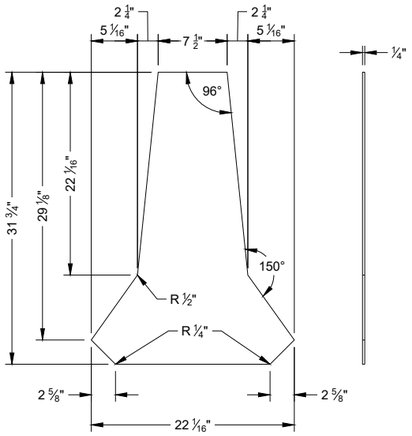


PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)



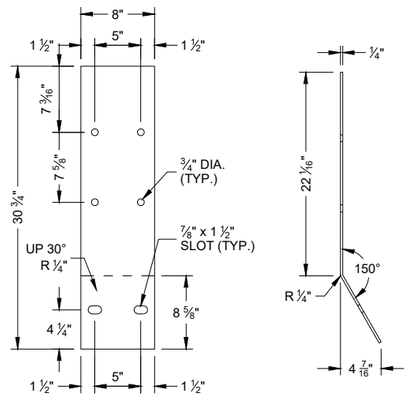
PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"



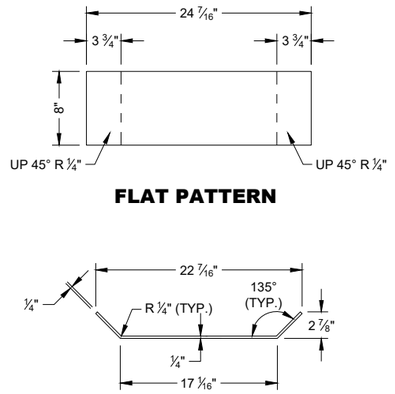
PROFILE VIEW SIDE VIEW

STIFFENER ASSEMBLY CENTER PANEL U1



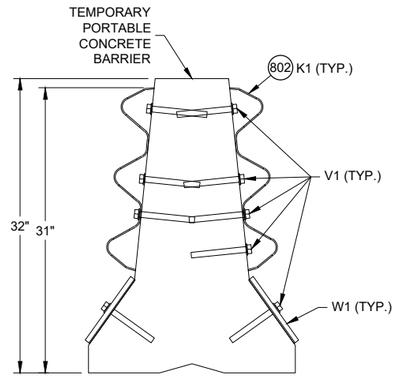
FLAT PATTERN SIDE VIEW

STIFFENER ASSEMBLY SIDE PANEL U2

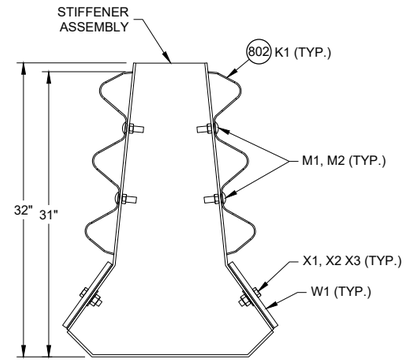


PROFILE VIEW

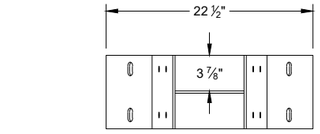
STIFFENER ASSEMBLY BOTTOM PANEL U3



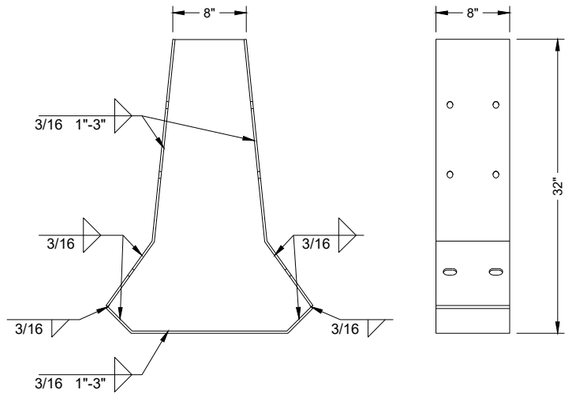
SECTION A - A



SECTION B - B

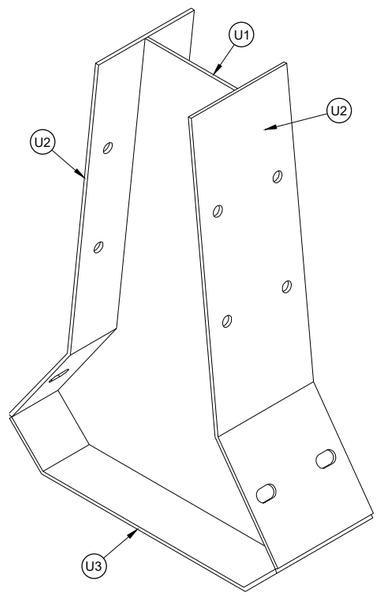


PLAN VIEW



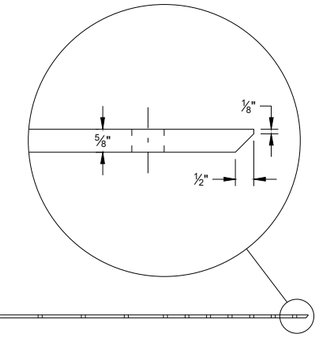
PROFILE VIEW

SIDE VIEW

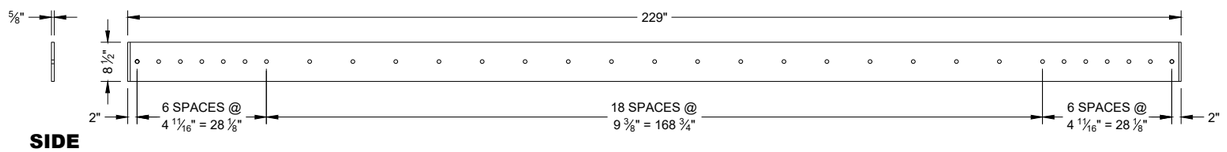


ISOMETRIC

GAP STIFFENER ASSEMBLY



PLAN VIEW



SIDE VIEW

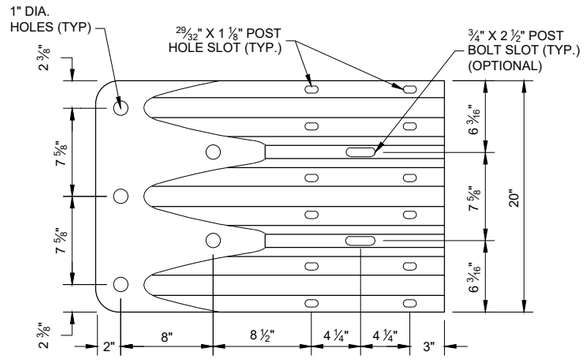
ELEVATION VIEW

W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

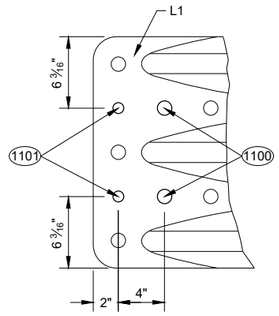
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

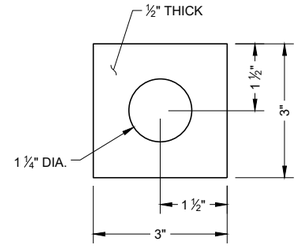


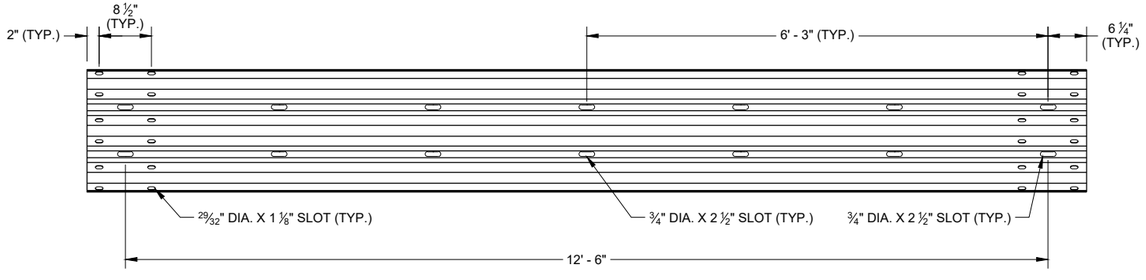
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

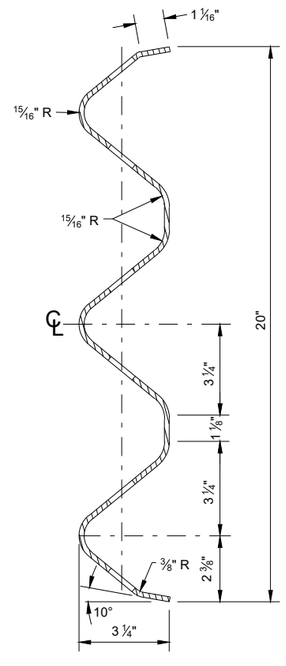
(1100) 1" DIA. HOLE

(1101) 3/4" DIA. HOLE

(1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



SLOTTED THRIE BEAM RAIL K1



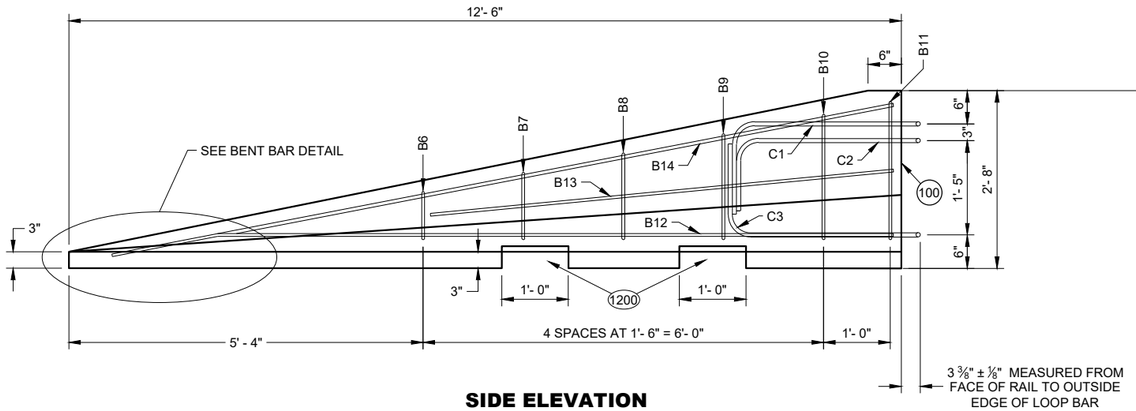
SECTION THROUGH BEAM K1

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

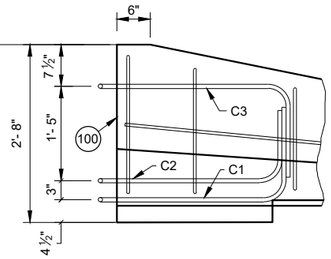
STATE OF WISCONSIN
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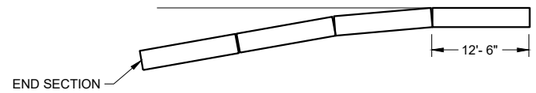
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

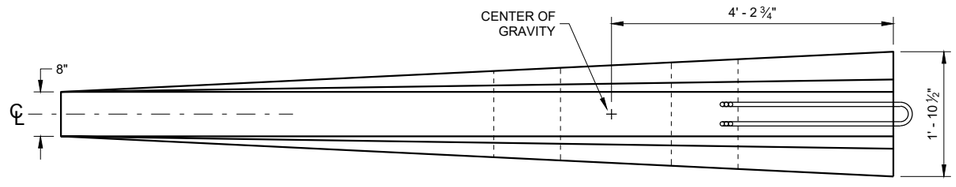
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

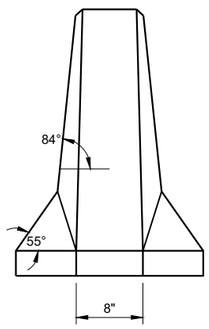


FLARE AT BARRIER END

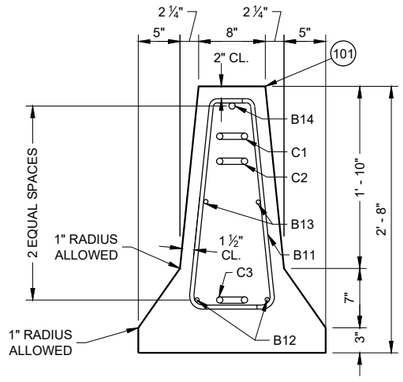
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



PLAN VIEW

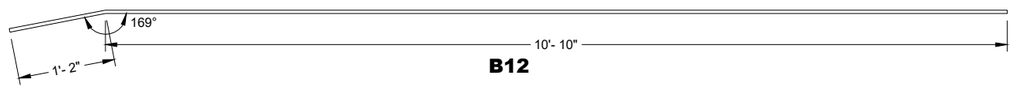


FRONT ELEVATION

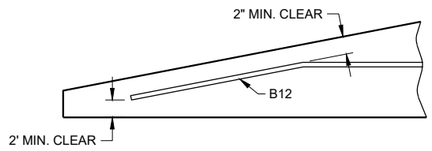


END SECTION

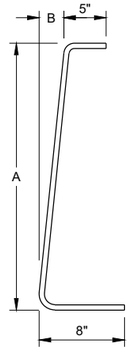
DETAILS OF BARRIER TAPER SECTION



B12



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 ¼"
B8	1'- 5"	1 ⅝"
B9	1'- 8"	1 ⅞"
B10	2'- 0 ½"	2 ⅜"
B11	2'- 3"	2 ¾"

B BARS

2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f'c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ¼" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ⅛" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ⅛" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	⅝" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	⅝" DIA.
R2	CAP- BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

6

SDD 14B07-16m

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T2	CAP 56-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T3	CAP 56-INCH SIDE PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T4	CAP 56-INCH SIDE PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T5	CAP 56-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T6	CAP 56-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T7	CAP 56-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T8	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T9	CAP 42-INCH GUSSET 5	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T10	CAP 42-INCH GUSSET 6	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T11	CAP 42-INCH GUSSET 7	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T12	CAP 42-INCH GUSSET 8	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T13	CAP 42-INCH GUSSET 9	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T14	CAP 42-INCH GUSSET 10	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T15	CAP 42-INCH GUSSET 11	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T16	CAP 42-INCH GUSSET 12	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
U1	GAP STIFFENER	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U2	GAP STIFFENER - CONNECTOR PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U3	GAP STIFFENER - CONNECTOR PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

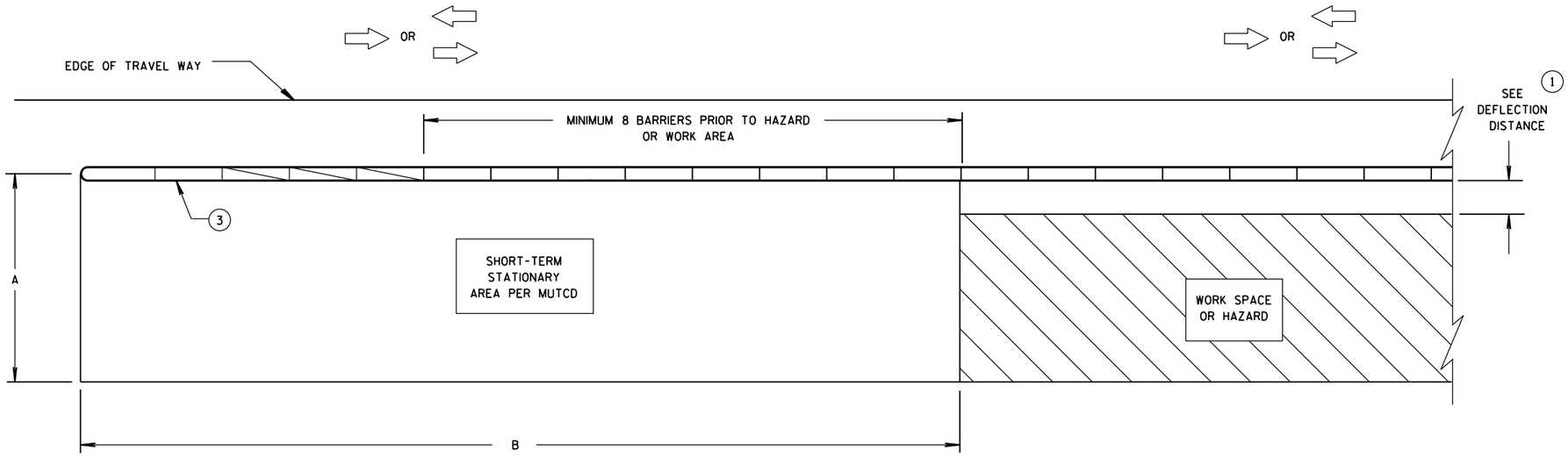
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

SDD 14B07-16n



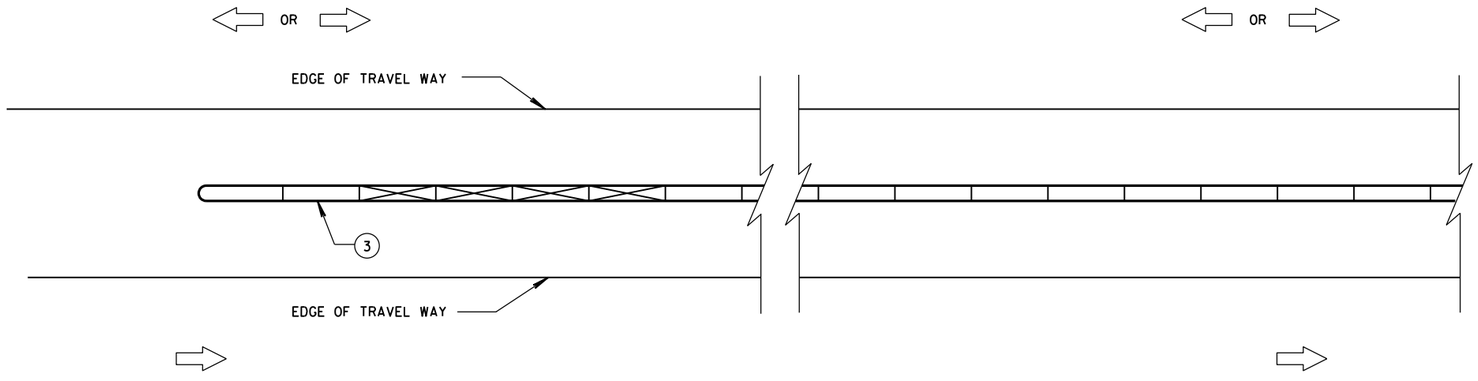
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

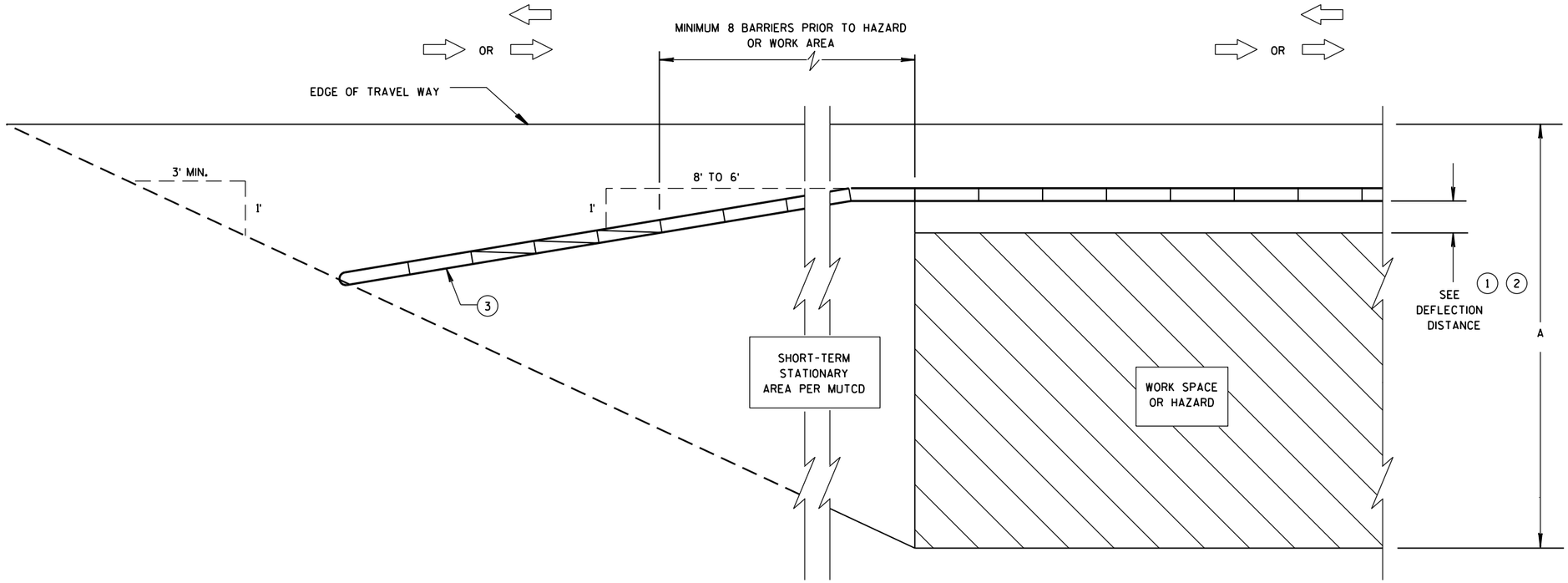
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

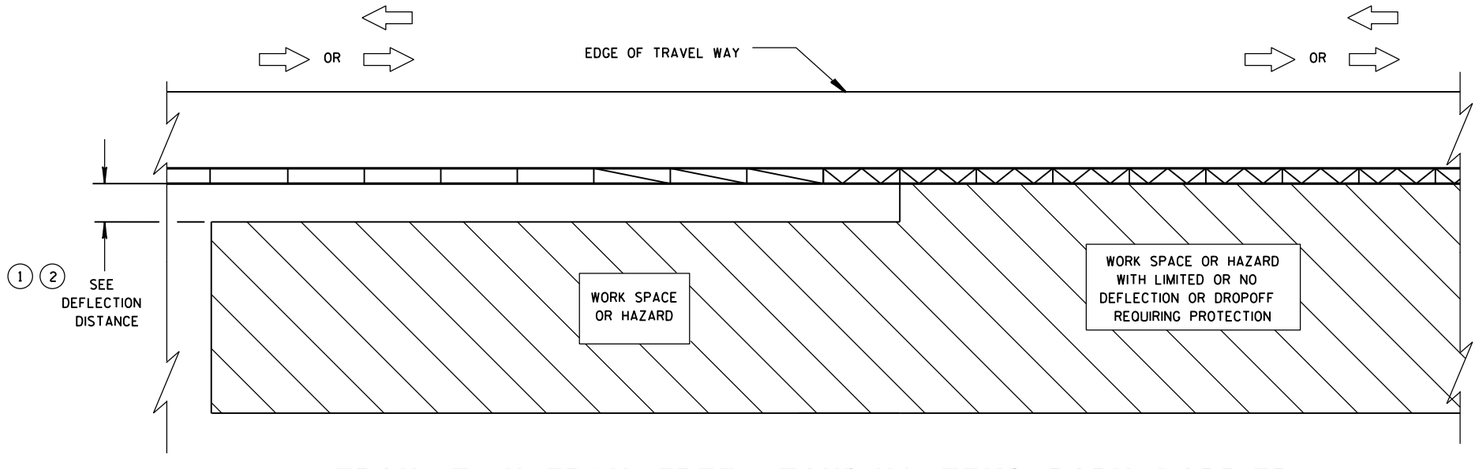
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

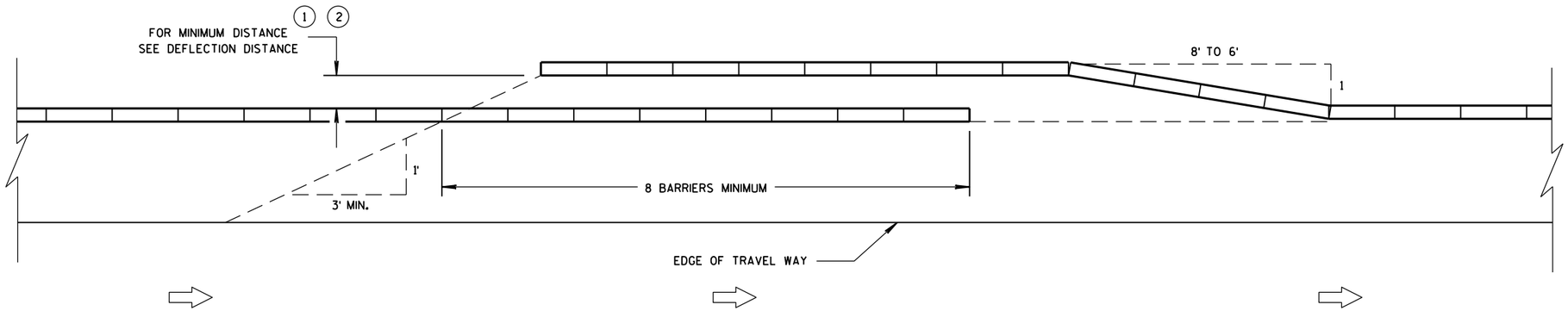
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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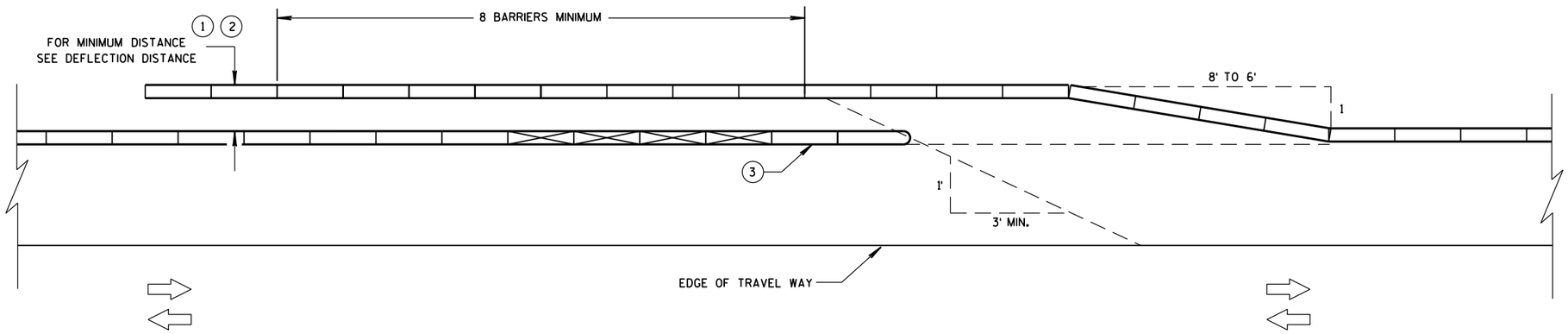
S.D.D. 14 B 8-2b

6

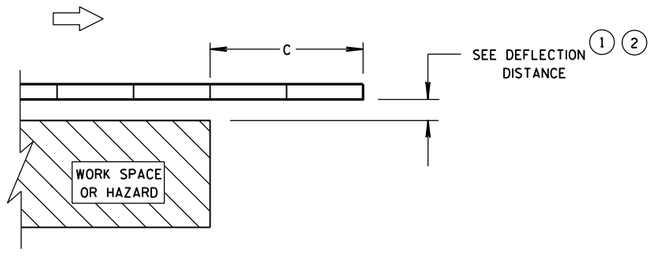
S.D.D. 14 B 8-2b



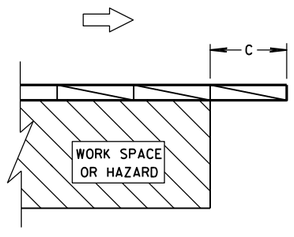
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

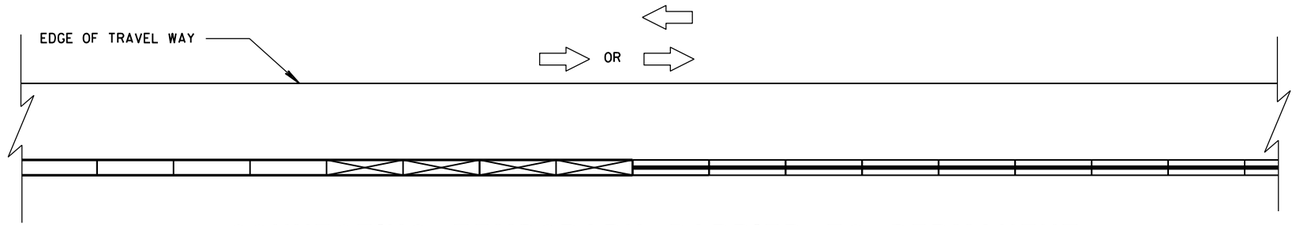
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

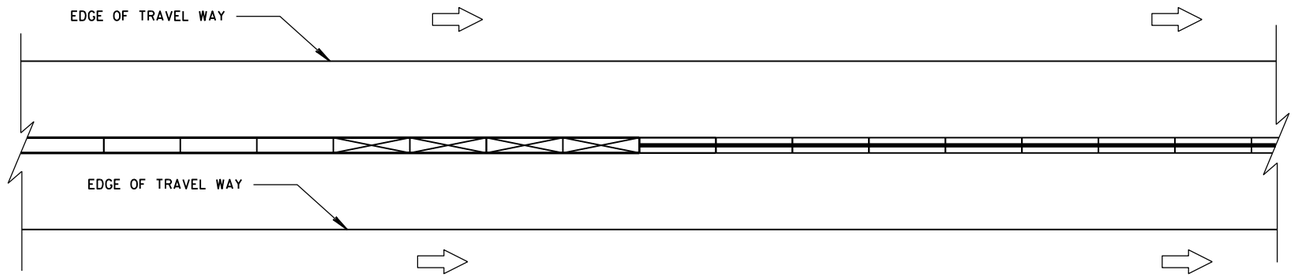
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

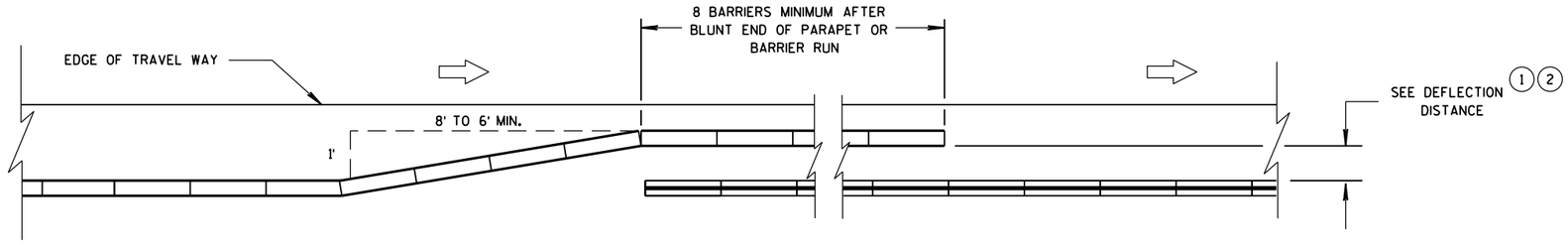
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

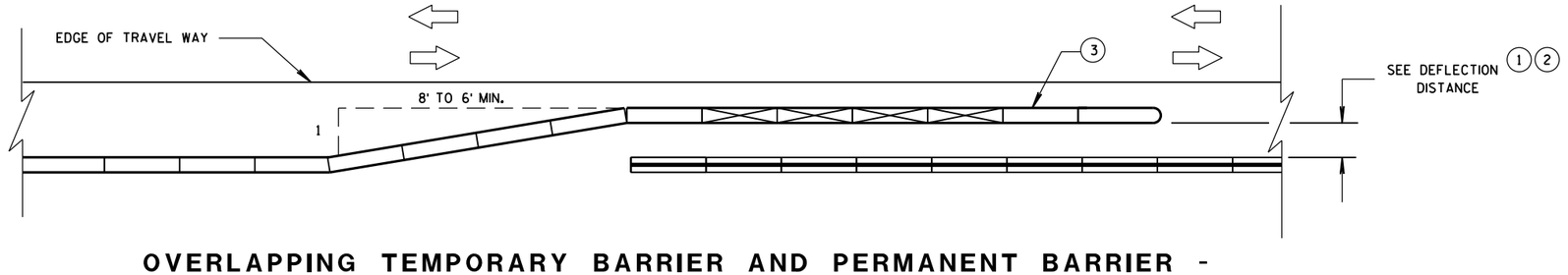
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

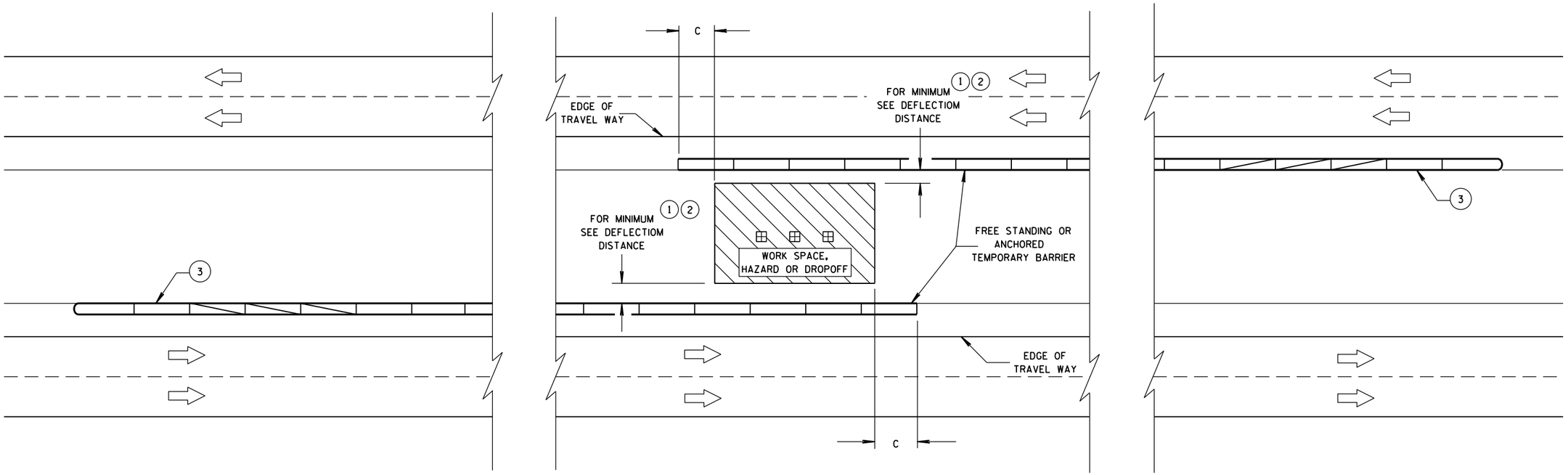
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



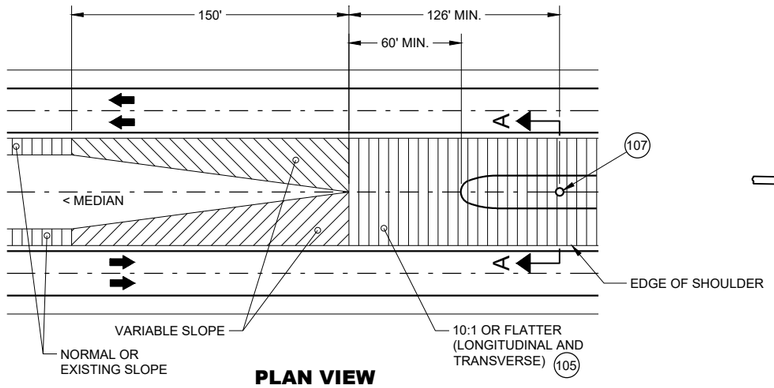
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

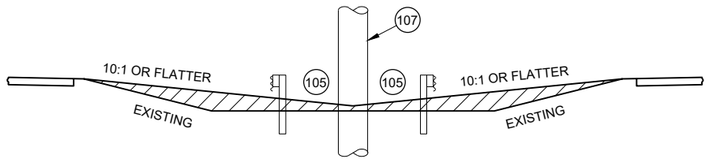
APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
FHWA

6

S.D.D. 14 B 8-2e



PLAN VIEW
GRADING AT BULLNOSE
(ALL INSTALLATIONS)



SECTION A -A
MEDIAN GRADING
(ALL INSTALLATIONS)

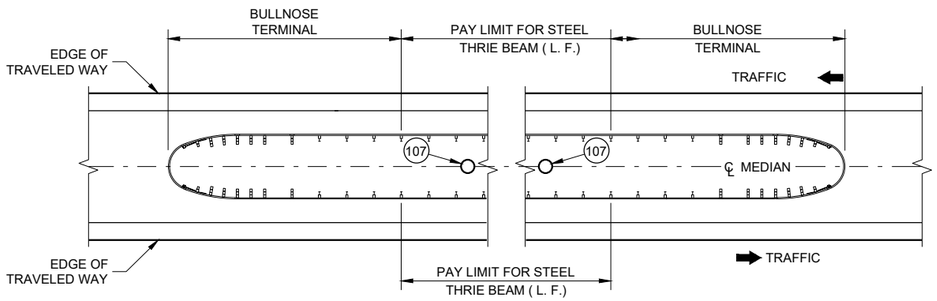
GENERAL NOTES

THRIE BEAM RAILS MAY NEED TO BE FIELD BENT TO FIT THE LOCATION.

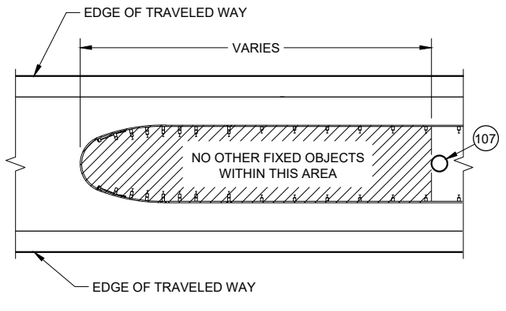
SEE STANDARD DETAIL DRAWINGS 14B26 SHEETS a-h.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 ½". MINIMUM DIAMETER OF THE ROCK REMOVAL IS 12" DIAMETER

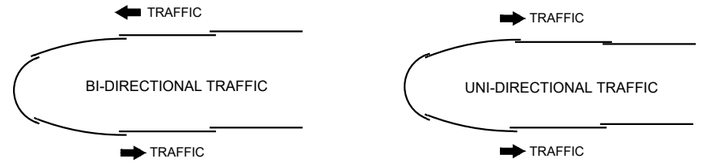
- E1 UNBENT STANDARD THRIE BEAM RAIL B1 (POST 8 TO POST 10 AND POST 10 TO POST 12)
- E2 SLOTTED THRIE BEAM RAIL E1 (POST 1 TO POST 1)
- E3 SLOTTED THRIE BEAM RAIL B3 (POST 5 TO POST 8)
- E4 SLOTTED THRIE BEAM RAIL E4 (POST 1 TO POST 5)
- 5 BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.
- (100) DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.
- (101) U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.
- (102) NOSE CABLE WITH SWAGGED END BUTTONS.
- (103) NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).
- (104) THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.
- (105) MINIMUM WORKING WIDTH 4' - 2".
- (106) MAX. WIDTH OF SYSTEM IS 14' - 2 ½" MEASURED FROM THE BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.
- (107) FIXED OBJECT OR OTHER HAZARD.
- (108) PLAN IS TO PROVIDE STATION OFFSET TO CENTER OF POST 5 IN PLANS.



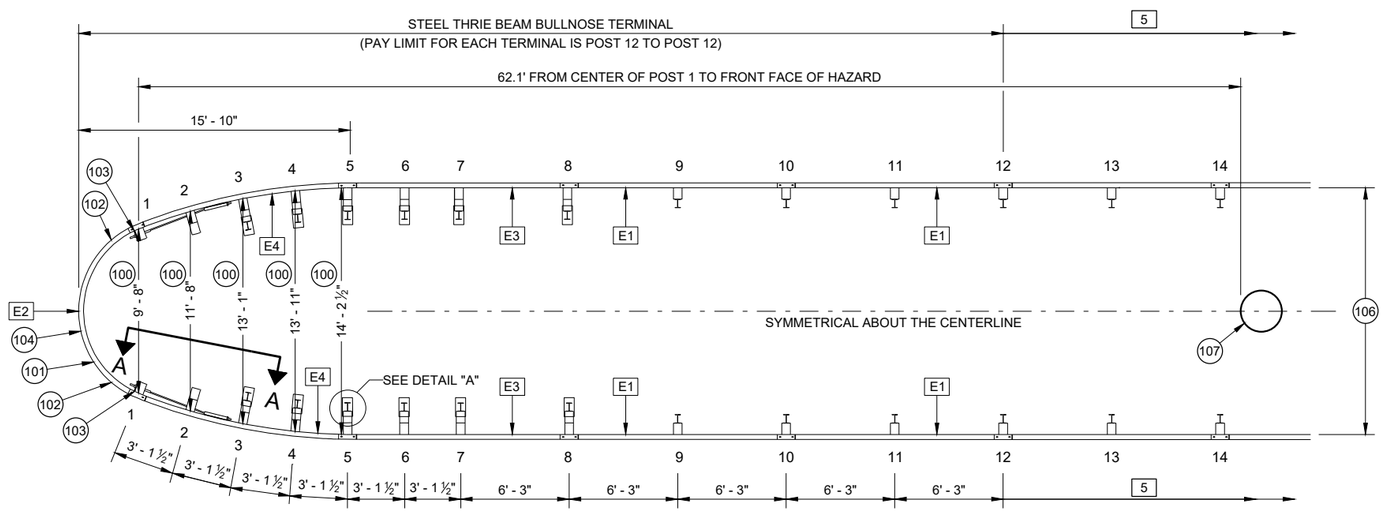
MEDIAN HAZARD PROTECTION PAY LIMITS



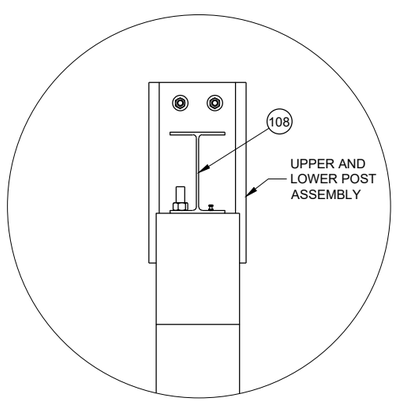
HAZARD FREE AREA
INSIDE BULLNOSE



LAPPING DETAIL



PLAN VIEW
TYPICAL BULLNOSE LAYOUT



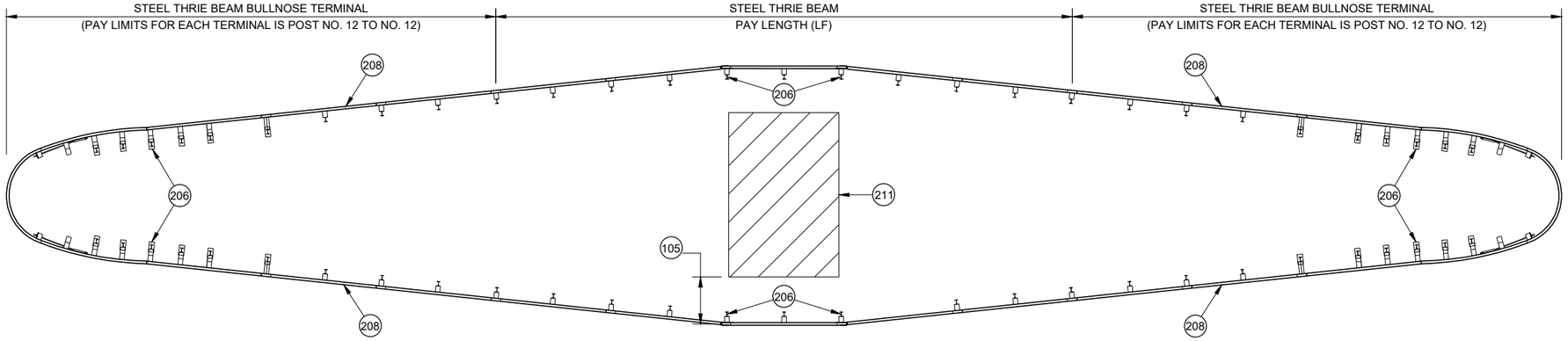
DETAIL "A"

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B26 - 05a

SDD 14B26 - 05a



VARIABLE WIDTH BULLNOSE

GENERAL NOTES

200 6' - 3" ASYMMETRICAL 10-GAUGE W-BEAM TO THRIE BEAM GUARD TRANSITION. SEE SDD 14B45 FOR MORE INFORMATION.

201 W-BEAM RAIL. SEE SDD 14B42 FOR MORE INFORMATION.

202 SEE POST NO. 9 AND ALL STEEL THRIE BEAM POST BEYOND DETAIL.

203 SEE SDD 14B42 FOR INSTALLATION INFORMATION.

204 SEE SDD 14B45 FOR INSTALLATION DETAILS. REPLACE ASYMMETRICAL W-BEAM TO THRIE BEAM TRANSITION AND W-BEAM RAIL WITH E1. PAY FOR MODIFIED THRIE BEAM TRANSITION.

205 CONCRETE BARRIER OR BRIDGE RAIL.

206 SEE PLAN FOR STATION AND OFFSET TO CENTER OF POST.

207 SEE PLAN FOR STATION AND OFFSET TO CENTER OF SPLICE.

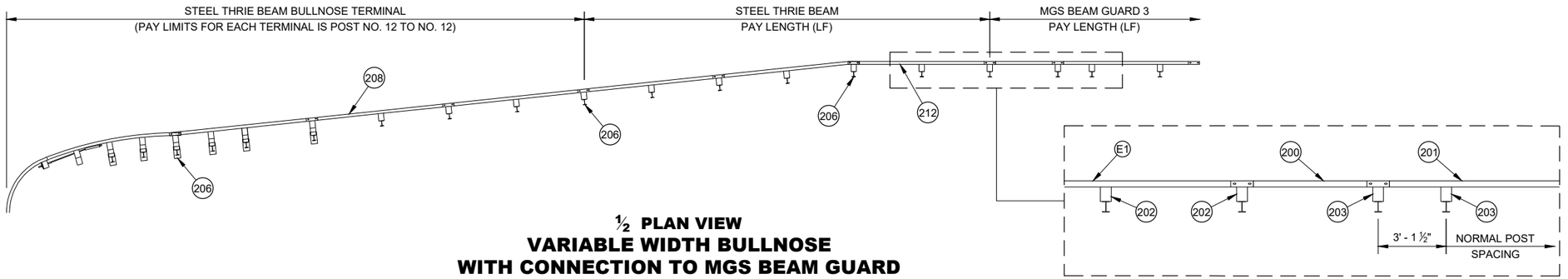
208 SEE PLAN FOR FLARE RATE.

209 A MINIMUM OF 25 FT OF THRIE BEAM TANGENT BEFORE TRANSITIONING TO BEAM GUARD OR THRIE BEAM TRANSITION.

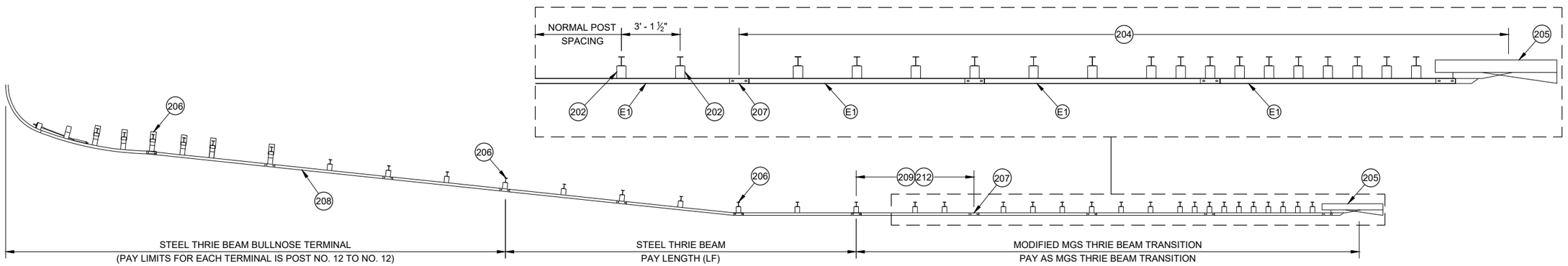
210 NOT ALL BULLNOSE HARDWARE SHOWN. SEE OTHER SHEETS IN 14B26.

211 WIDER HAZARD TO BE SHIELDED.

212 TRANSITION RAIL HEIGHT TO 31" OVER THE LENGTH OF A 12' - 6" BEAM SECTION.



½ PLAN VIEW
VARIABLE WIDTH BULLNOSE
WITH CONNECTION TO MGS BEAM GUARD



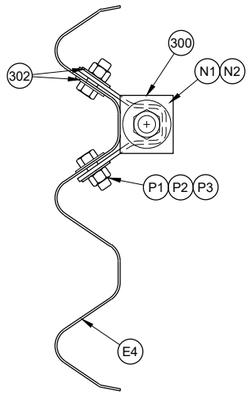
½ PLAN VIEW
VARIABLE WIDTH BULLNOSE
WITH CONNECTION TO RIGID BARRIER

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

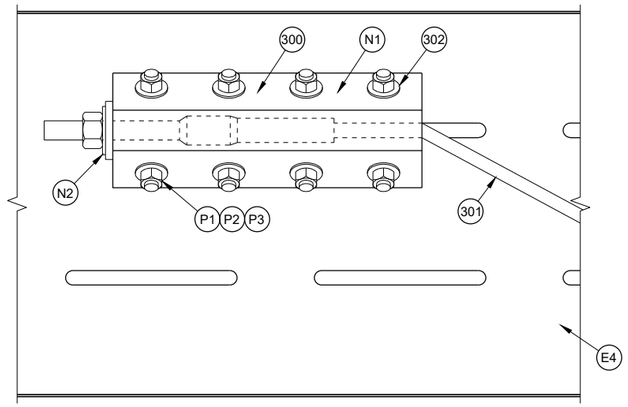
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SDD 14B26 - 05b

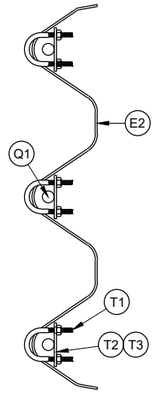


PROFILE VIEW

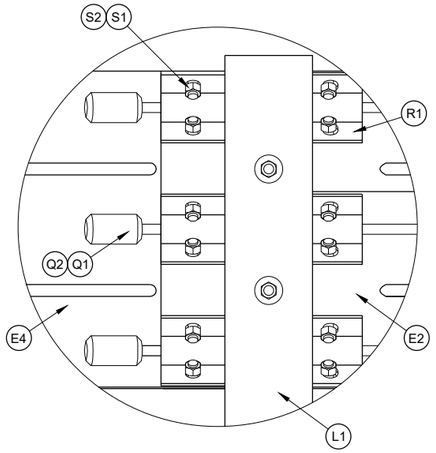
CABLE ANCHOR ASSEMBLY CONNECTION



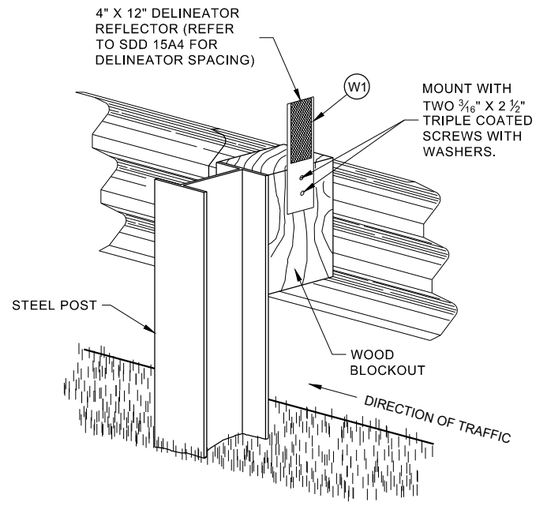
CABLE ANCHOR ASSEMBLY



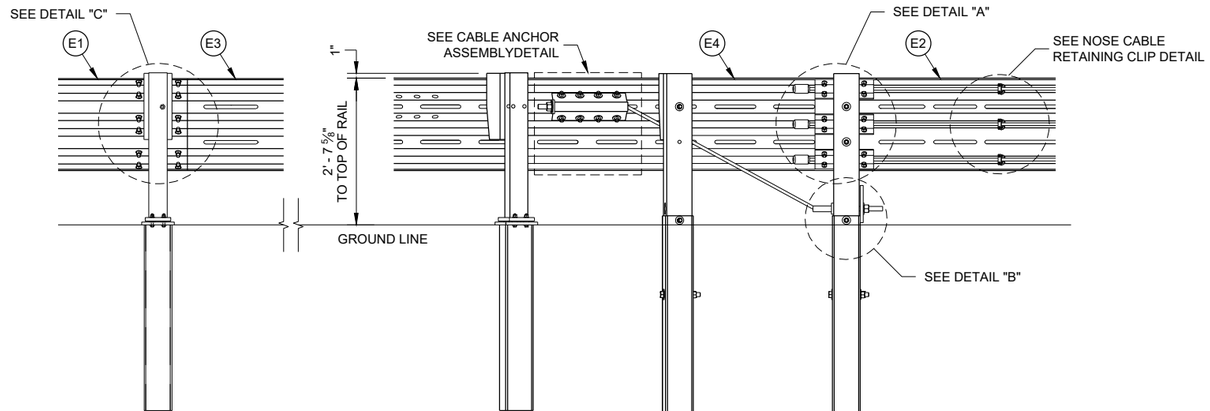
NOSE CABLE RETAINING CLIP



DETAIL "A"



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION



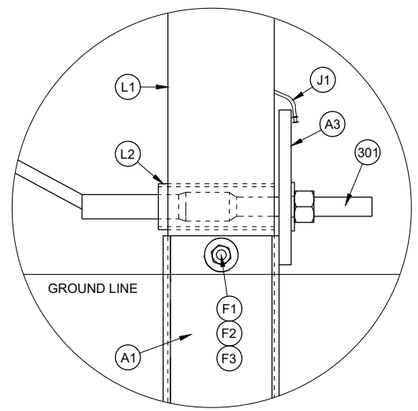
POST 8

POST 3

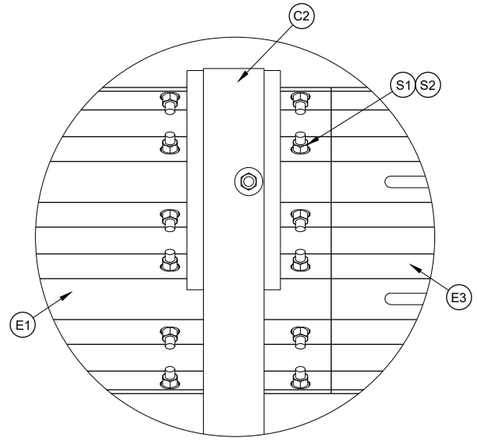
POST 2

POST 1

CROSS SECTION A - A



DETAIL "B"



DETAIL "C" THRIE BEAM SPLICE

GENERAL NOTES

(300) SEE ANCHOR BRACKET ASSEMBLY DETAIL.

(301) SEE ANCHOR CABLE ASSEMBLY DETAIL

(302) ONE WASHER BETWEEN BOLT HEAD AND RAIL AND BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

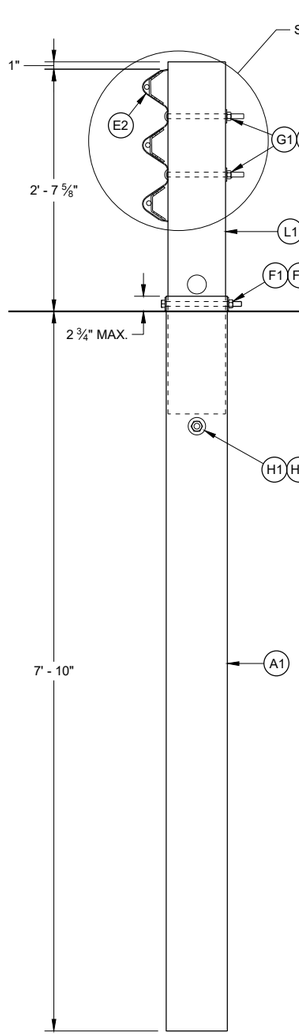
(303) ONE WASHER BETWEEN BOLD HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

STEEL THRIE BEAM BULLNOSE TERMINAL

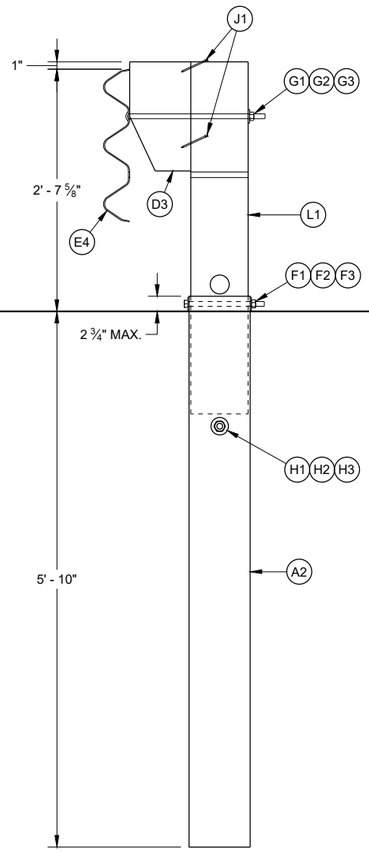
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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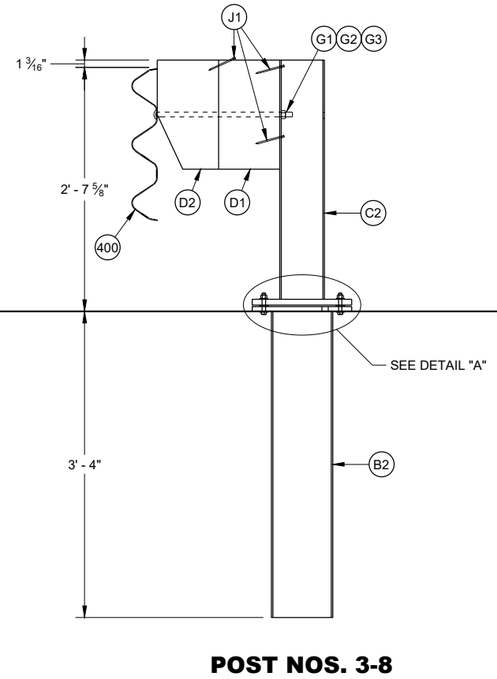
SDD 14B26 - 05c



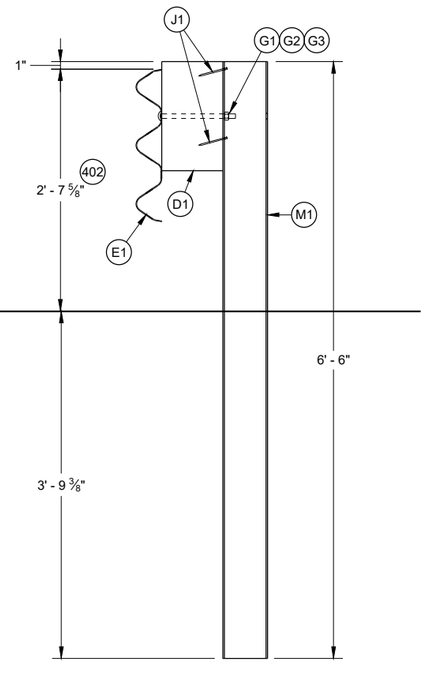
POST NO. 1



POST NO. 2



POST NOS. 3-8



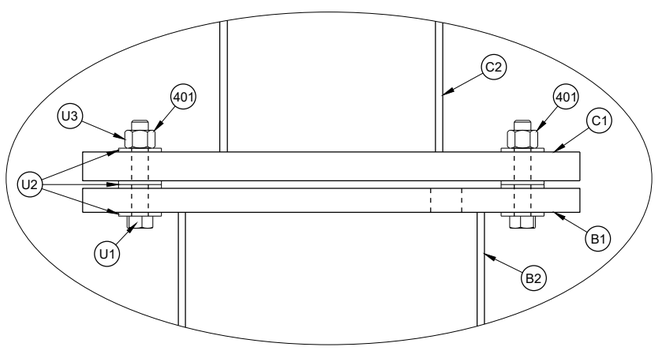
POST NOS. 9 AND ALL STEEL THRIE BEAM POSTS BEYOND

GENERAL NOTES

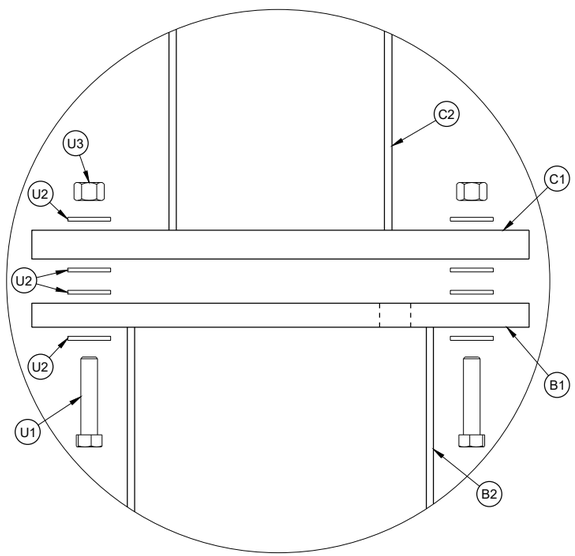
(400) RAIL CAN BE E3 OR E4 DEPENDING ON POST LOCATION.

(401) TORQUE BOLD BETWEEN 60-75 FT-LB

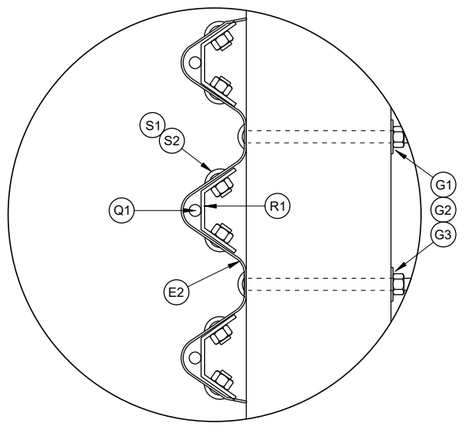
(402) HEIGHT WILL VARY WITHIN HEIGHT TRANSITION TO OTHER HARDWARE. SEE NOTE 213, SHEET "b".



DETAIL "A"



EXPLODED VIEW
DETAIL "A"



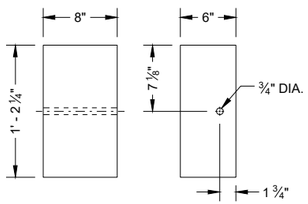
DETAIL "B"

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

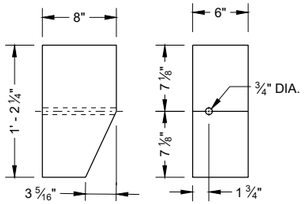
6

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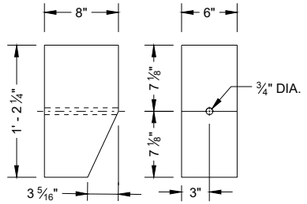
ELEVATION PROFILE

BLOCKOUT (D1)



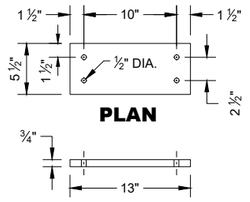
ELEVATION PROFILE

BLOCKOUT (D2)



ELEVATION PROFILE

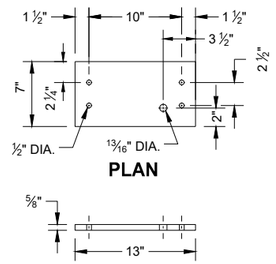
BLOCKOUT (D3)



PLAN

PROFILE

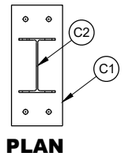
UPPER SHEAR PLATE (C1)



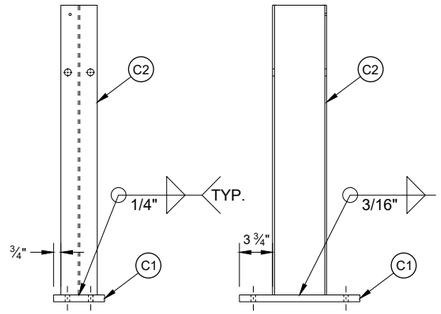
PLAN

PROFILE

LOWER SHEAR PLATE (B1)

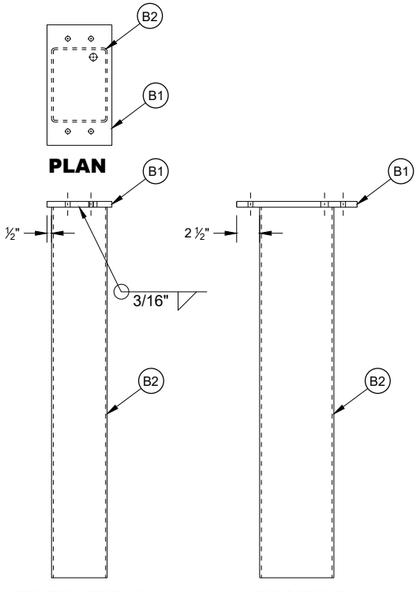


PLAN



ELEVATION PROFILE

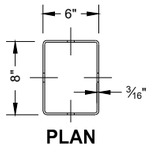
UPPER POST ASSEMBLY



PLAN

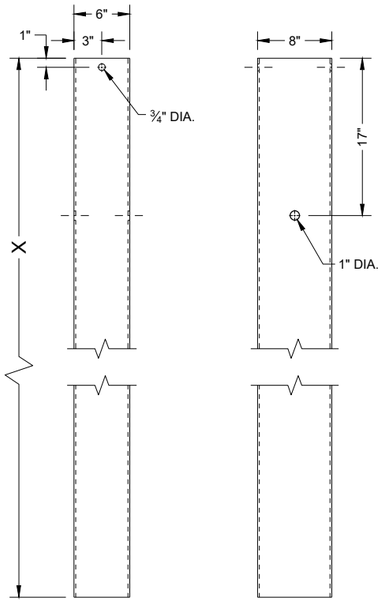
ELEVATION PROFILE

LOWER POST ASSEMBLY



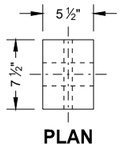
PLAN

PART	LENGTH "X"
A1	8' - 0"
A2	6' - 0"
B2	3' - 4"

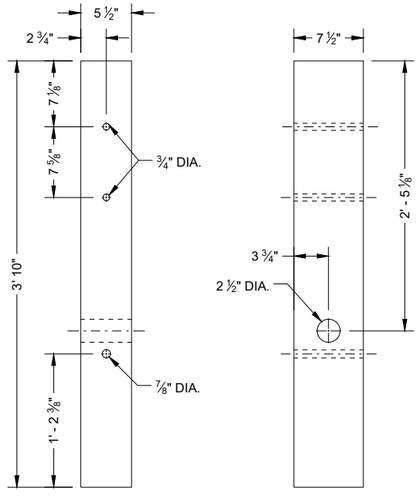


ELEVATION PROFILE

FOUNDATION TUBE

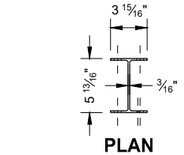


PLAN

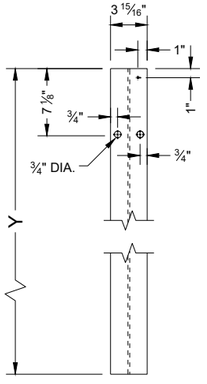


ELEVATION PROFILE

BCT POST (L1)



PLAN



ELEVATION

POST

PART	LENGTH "Y"
M1	6' - 6"
M2	5' - 8 5/8"
C2	2' - 7 5/8"

STEEL THRIE BEAM BULLNOSE TERMINAL

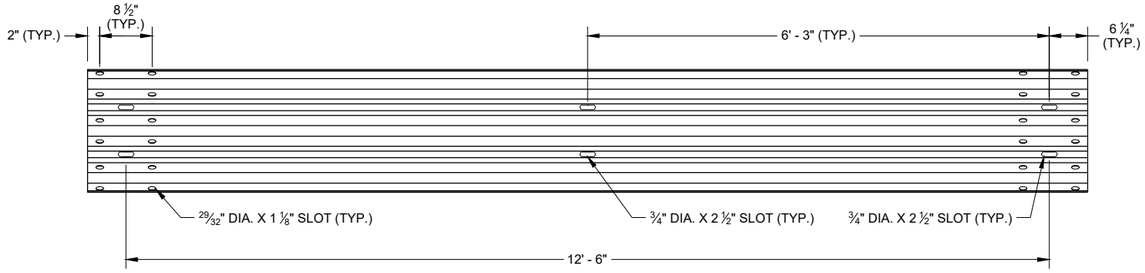
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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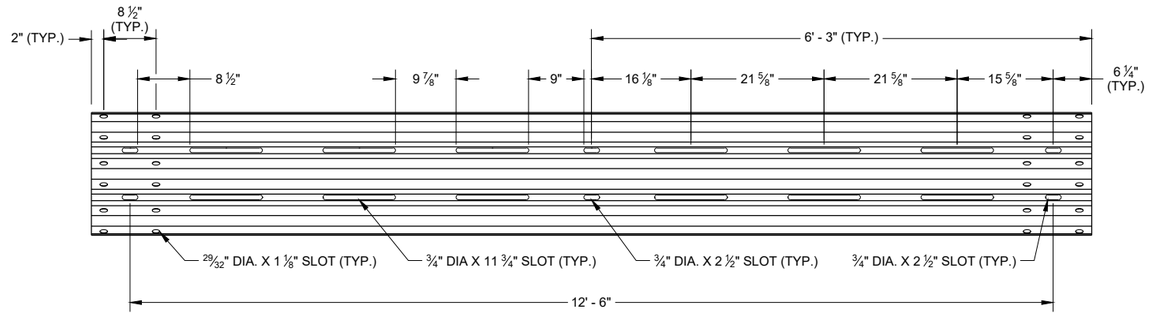
SDD 14B26 - 05e

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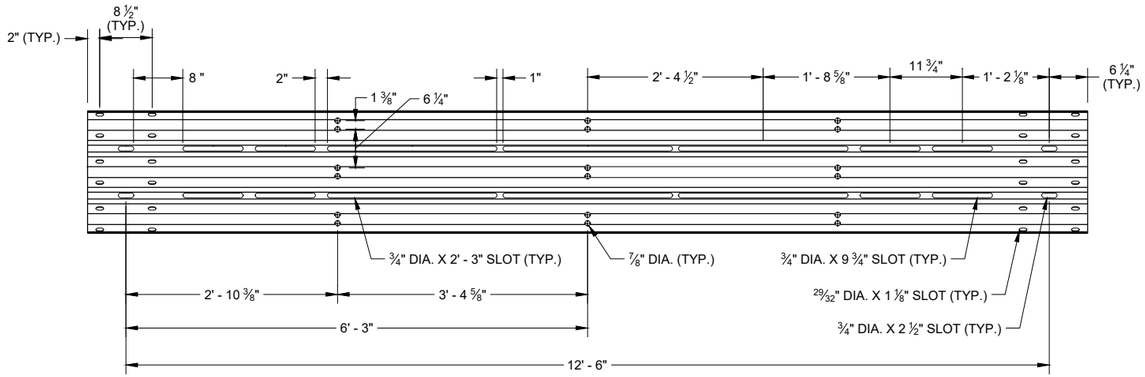
SDD 14B26 - 05e



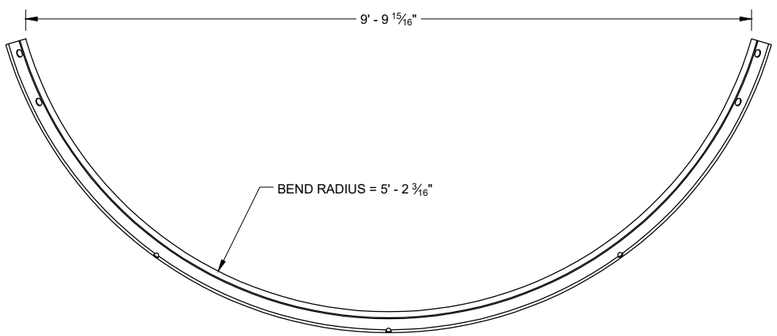
SLOTTED THRIE BEAM RAIL E1



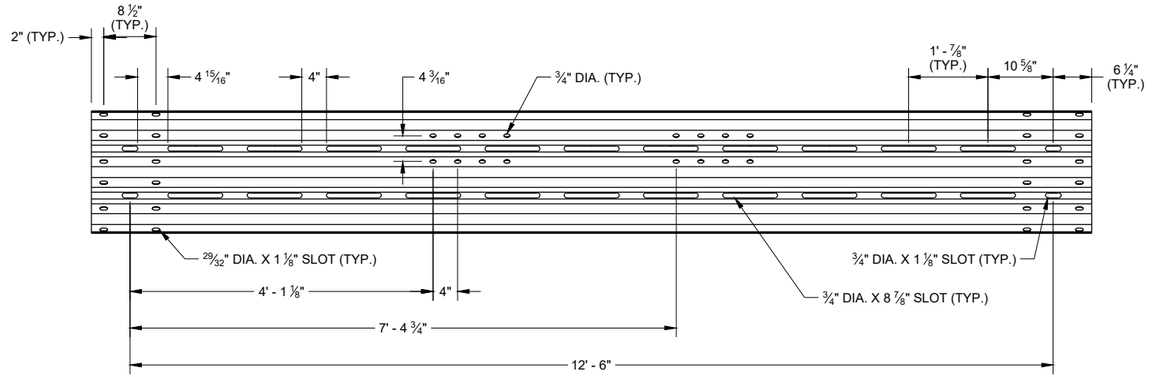
SLOTTED THRIE BEAM RAIL E3



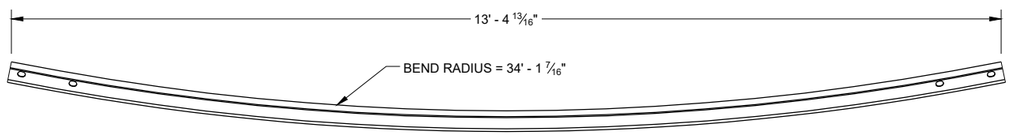
ELEVATION VIEW NON - RADIUSED
SLOTTED THRIE BEAM RAIL E2



PLAN VIEW
SLOTTED THRIE BEAM RAIL E2



ELEVATION VIEW NON - RADIUSED
SLOTTED THRIE BEAM RAIL E4



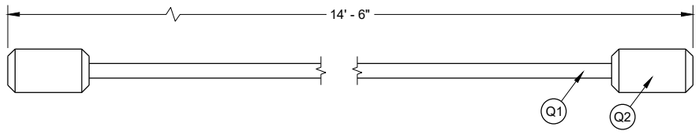
PLAN VIEW
SLOTTED THRIE BEAM RAIL E4

STEEL THRIE BEAM BULLNOSE TERMINAL

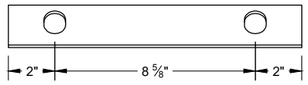
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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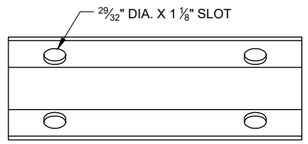
SDD 14B26 - 05f



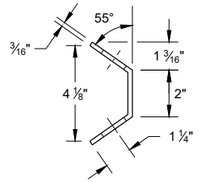
NOSE CABLE AND SWAGE BUTTON



PLAN VIEW

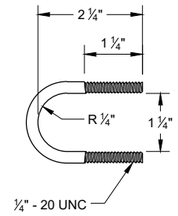


ELEVATION VIEW

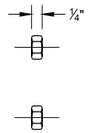


PROFILE VIEW

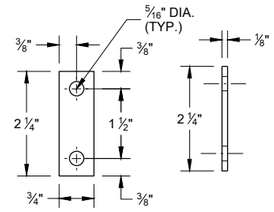
NOSE CABLE ANCHOR (R1)



U - BOLT (T1)

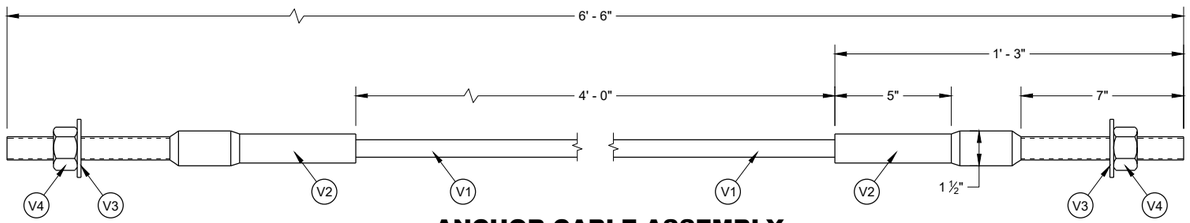


U - BOLT NUT (T3)

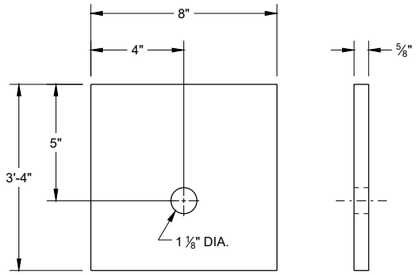


ELEVATION VIEW **PROFILE VIEW**

U - BOLT PLATE WASHER (T2)

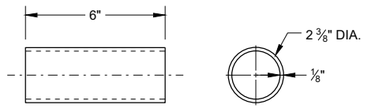


ANCHOR CABLE ASSEMBLY



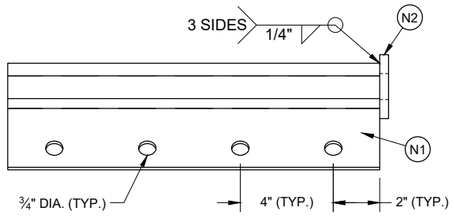
ELEVATION VIEW **PROFILE VIEW**

BCT BEARING PLATE (A3)

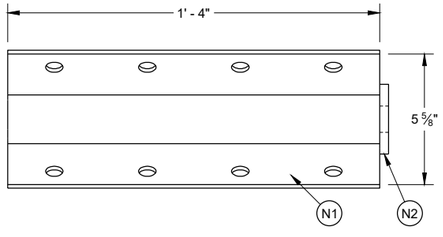


ELEVATION VIEW **PROFILE VIEW**

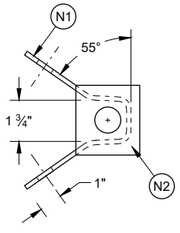
BCT POST SLEEVE (L2)



PLAN VIEW

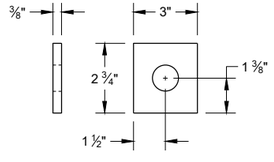


ELEVATION VIEW



PROFILE VIEW

ANCHOR BRACKET ASSEMBLY (N1)



ANCHOR BRACKET END PLATE (N2)

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B26 - 05g

SDD 14B26 - 05g

BILL OF MATERIALS LIST

PART NUMBER	DESCRIPTION	MATERIAL SPECIFICATION
A1	LONG FOUNDATION TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
A2	FOUNDATION TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
A3	BEARING PLATE AT POST	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
B1	LOWER SLIP POST ASSEMBLY - PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
B2	LOWER SLIP POST ASSEMBLY - TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
C1	UPPER SLIP POST ASSEMBLY - PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
C2	UPPER SLIP POST ASSEMBLY - POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
D1	BLOCK FOR STEEL POST - WOOD	WISDOT SPEC. 614
D2	TAPERED BLOCK FOR STEEL POST - WOOD	WISDOT SPEC. 614
D3	TAPERED BLOCK FOR BCT POST - WOOD	WISDOT SPEC. 614
E1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER
E2	THRIE BEAM RAIL - SHOP BENT AND PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS.
E3	THRIE BEAM RAIL - PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER
E4	THRIE BEAM RAIL - SHOP BENT AND PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS.
F1	5/8" DIA. HEX HEAD GROUND STRUT AND YOKE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
F2	5/8" DIA. GROUND STRUT AND YOKE BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
F3	GROUND STRUT AND YOKE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
G1	5/8 " DIA. POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD)
G2	POST BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD)
G3	POST BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
H1	7/8" DIA. SOIL TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD 7/8" ASTM A563DH OR SAE J995 GRADE 5
H2	SOIL TUBE BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 7/8" ASTM F844 TYPE 1 (HARDEN WASHER ONLY)
H3	SOIL TUBE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD 7/8" ASTM A563DH OR SAE J995 GRADE 5
J1	16D DOUBLE HEAD NAIL	ASTM A153 HOT DIPPED CLASS D DOUBLE HEAD ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)
L1	BCT TIMBER POST	WISDOT SPEC. 614 S4S FINISH ON 4 SIDE
L2	BCT POST SLEEVE	AASHTO M111/ASTM A123 2 3/8" OD ASTM 53 GRADE B
M1	W6X8.5 OR W6X9 STEEL POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
M2	W6X8.5 OR W6X9 STEEL POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
N1	ANCHOR BRACKET	AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
N2	ANCHOR BRACKET - BEARING PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI

PART NUMBER	DESCRIPTION	MATERIAL SPECIFICATION
P1	5/8" DIA. ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
P2	ANCHOR BRACKET BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
P3	SOIL TUBE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
Q1	5/8" DIA. NOSE CABLE	6X19 AASTHO M30 / ASTM A741 XIPS INDEPENDENT WIRE CORE (IWRC) PR 6X25 XIPS, IWRC NOMINAL BREAKING STRENGTH OF 41.2 KIPS.
Q2	NOSE CABLE-SWAGE BUTTON	COLD TUFF BUTTON, S-409 SIZE NO. 12 STOCK NUMBER 1040395 OR ANY OTHER SIMILAR SIZED WAGED-GRIP-BUTTON FERRULES. ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FIELD SWAGED PER MANUFACTURERS RECOMMENDATION. NOMINAL BREAKING STRENGTH OF 41.2 KIPS.
R1	NOSE CABLE ANCHOR BRACKET	AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
S1	5/8" DIA. SPLICE BOLT - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
S2	SPLICE - BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD 5/8" ASTM A563DH OR SAE J995 GRADE 5
T1	1/4" DIA. NOSE CABLE - U BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
T2	U-BOLT - PLATE WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
T3	U-BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
U1	7/16" DIA. SLIP POST ASSEMBLY - BREAKAWAY BOLT	ASTM A153 OR B695 CLASS 55 OR F2329 UNC FULLY THREADED HEX HEAD TAP BOLT ASTM A449 OR SAE J429 GRADE 5
U2	7/16" DIA. SLIP POST ASSEBLY - BREAKAWAY BOLT - WASHER	ASTM F436 TYPE I (HARDEN TYPICALLY USED WITH STEEL) GALV. AASHTO M111/ASTM A 123 OR GALV. HOT DIP. TO POST BOLT CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 55, F2329
U3	SLIP POST ASSEBLY - BREAKAWAY BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / STM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
V1	¾" DIA. BCT CABLE	AASHTO M30 / ASTM A741 6X19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6X19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN BREAKING STRENGTH OF 42.7 KIPS
V2	ANCHOR CABLE-SWAGE FITTING	UNC ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FACTORY SWAGED. MIN. BREAKING STRENGTH OF 42.7 KIPS. ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."
V3	1" DIA. ANCHOR CABLE-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
V4	1" DIA. ANCHOR CABLE-NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
W1	REFLECTOR	SEE SDD 15A4

6

SDD 14B26 - 05h

6

SDD 14B26 - 05h

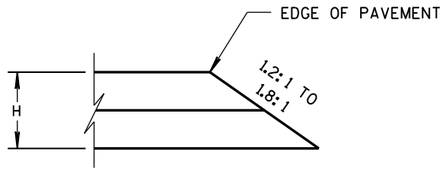
STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

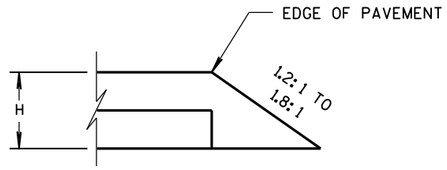
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA



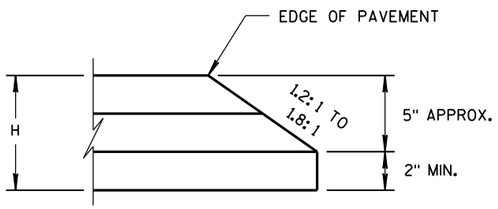
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



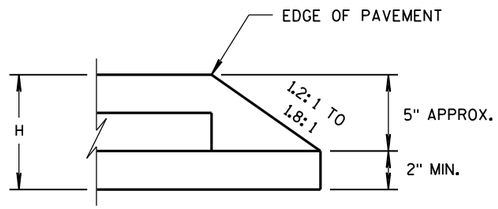
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

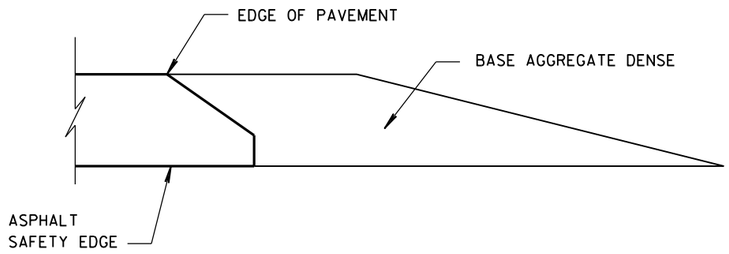
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

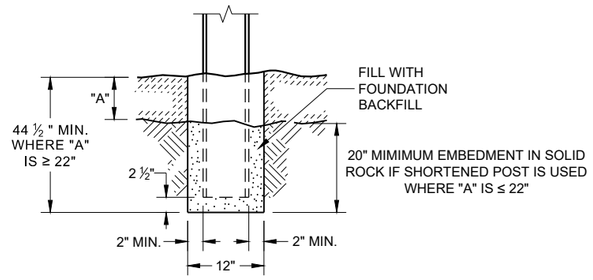
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

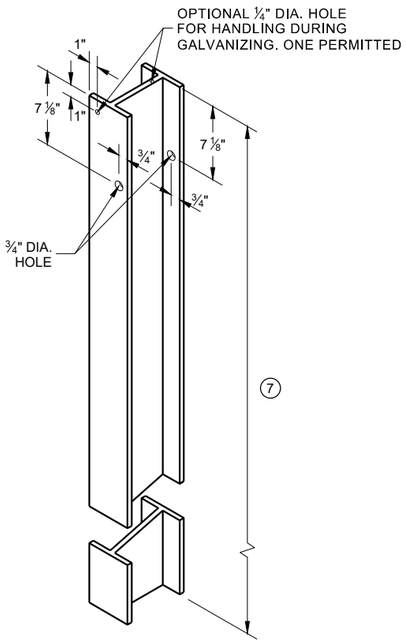
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(6) WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

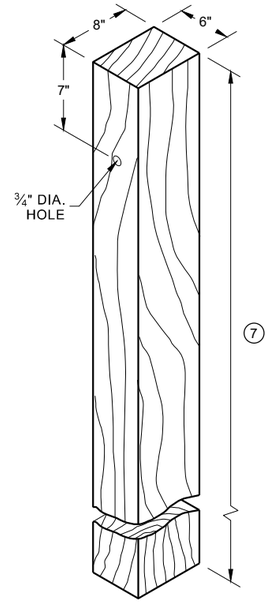
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



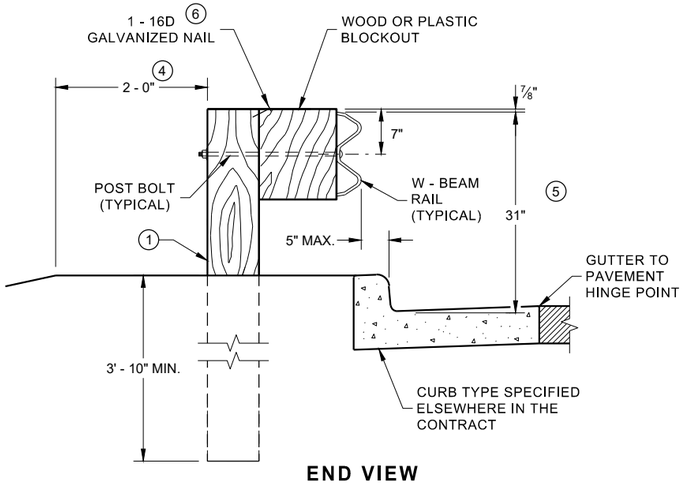
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



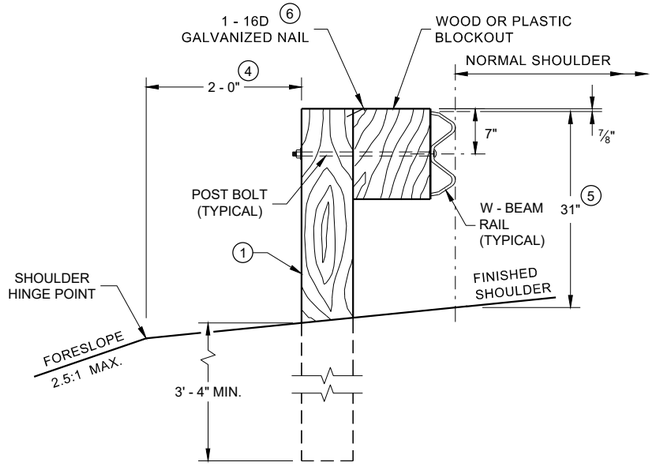
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



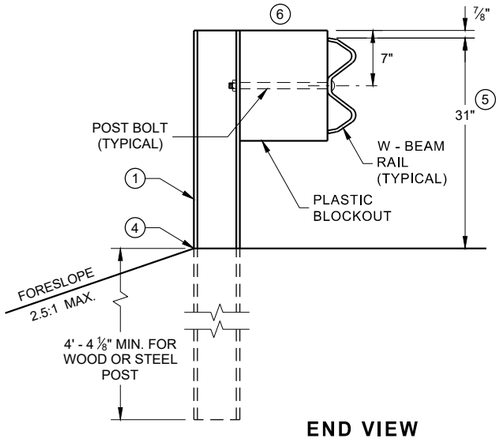
WOOD POST (6" X 8") NOMINAL (1)



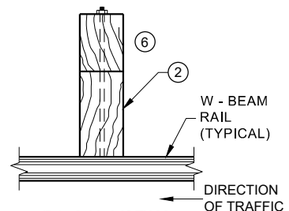
END VIEW
LOCATED ALONG A CURBED ROADWAY



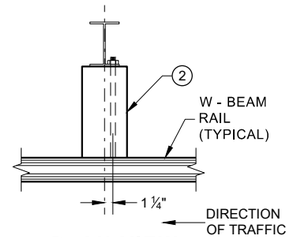
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



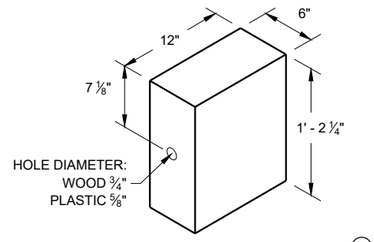
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



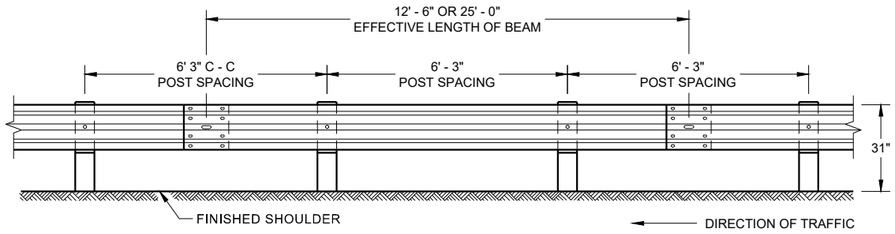
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

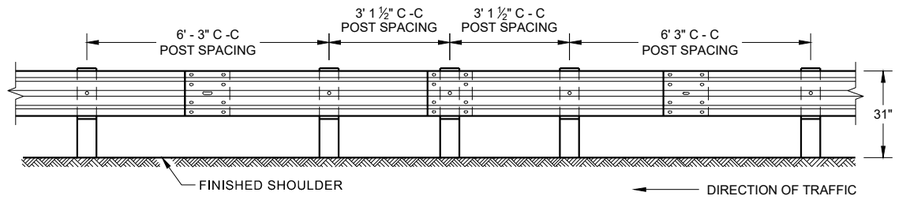
STATE OF WISCONSIN
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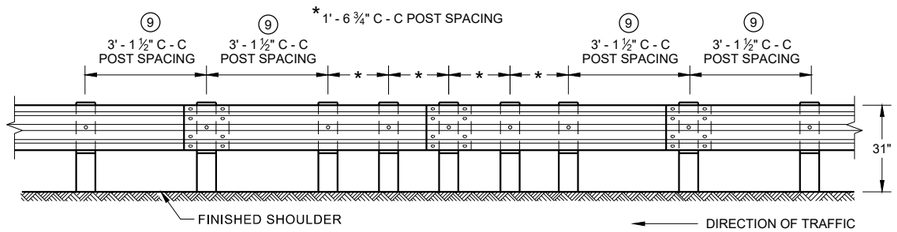
SDD 14B42 - 07a



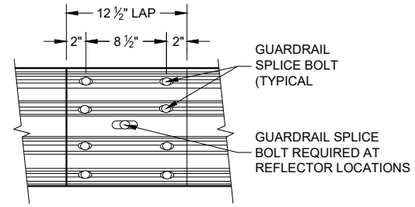
FRONT VIEW
POST SPACING STANDARD INSTALLATION



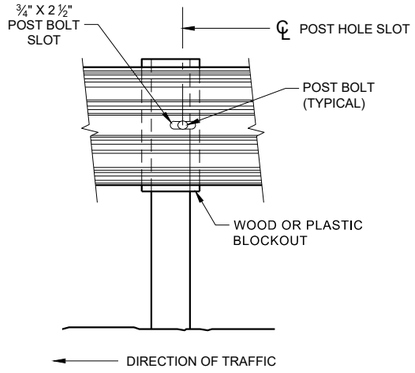
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



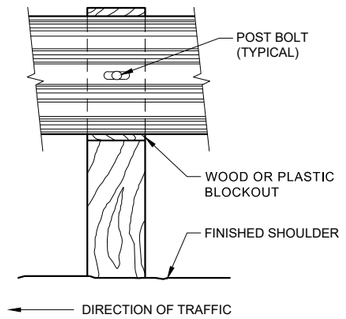
FRONT VIEW
QUARTER POST SPACING (QS)



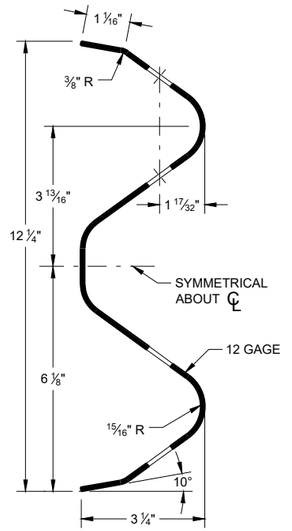
FRONT VIEW
MID-SPAN BEAM SPLICE



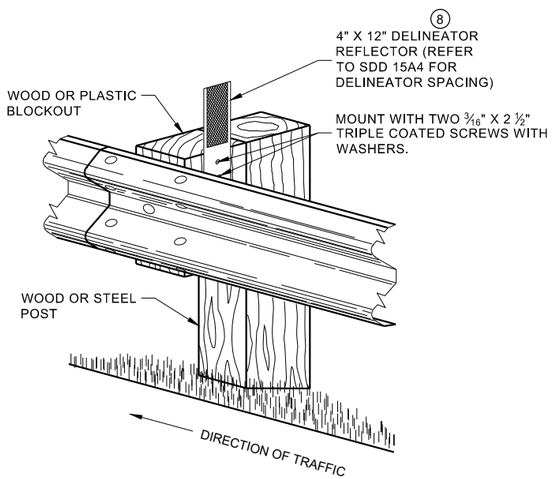
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

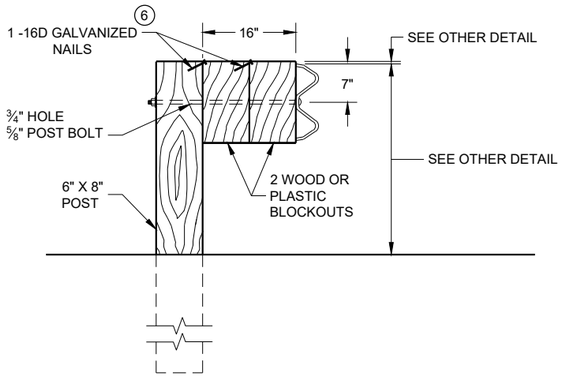
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

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SDD 14B42 - 07b

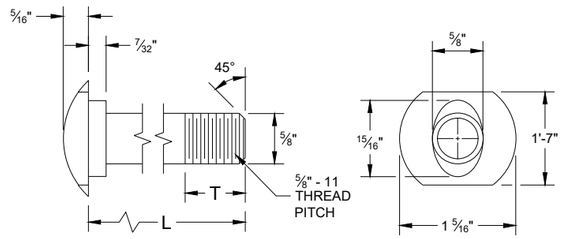


DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

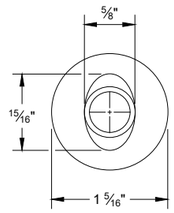
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

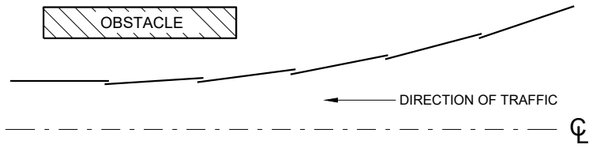


POST BOLT TABLE

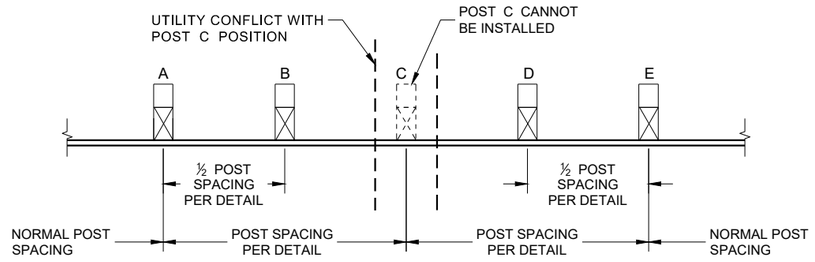
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



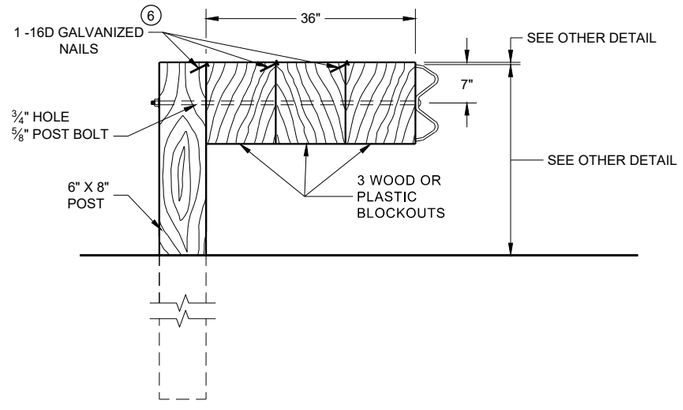
ALTERNATE BOLT HEAD



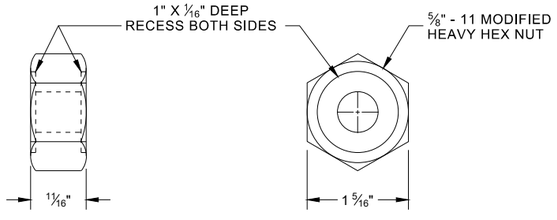
PLAN VIEW
BEAM LAPPING DETAIL



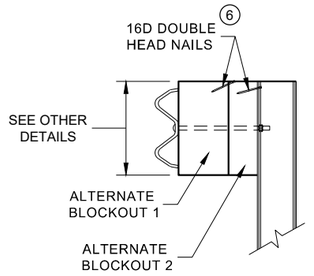
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



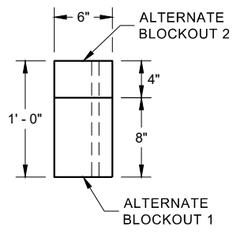
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

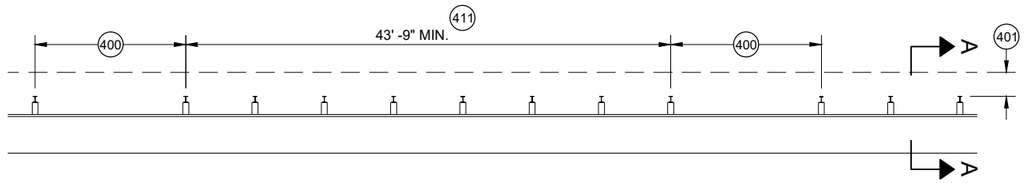
ALTERNATE WOOD BLOCKOUT DETAIL

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

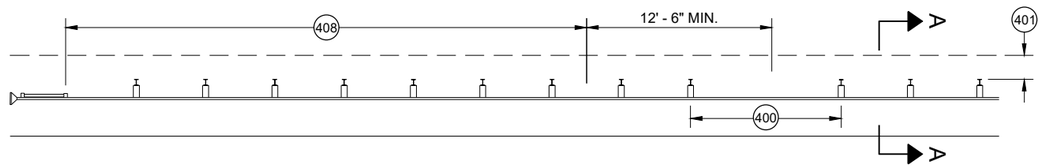
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

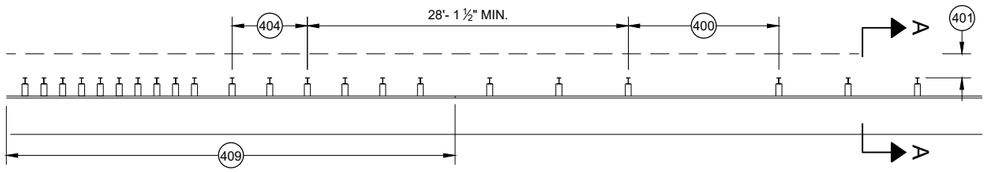
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



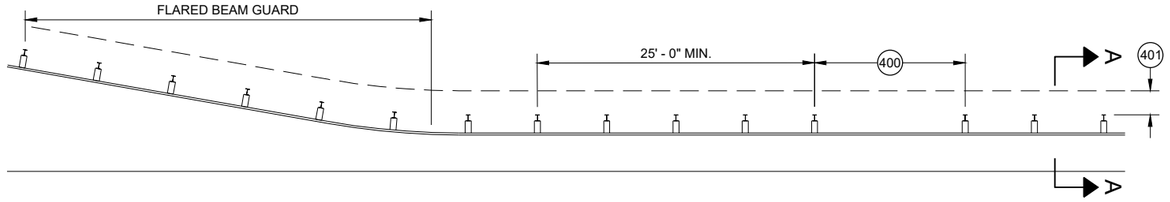
MISSING POST IN MGS GUARDRAIL



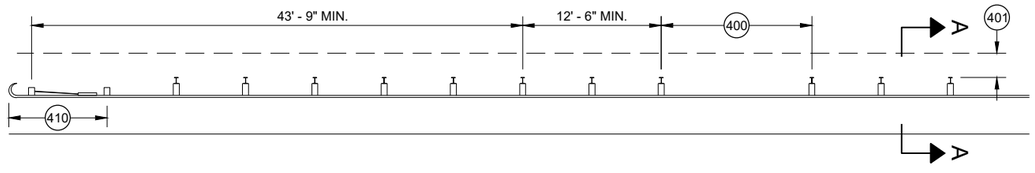
MISSING POST IN MGS GUARDRAIL NEAR EAT



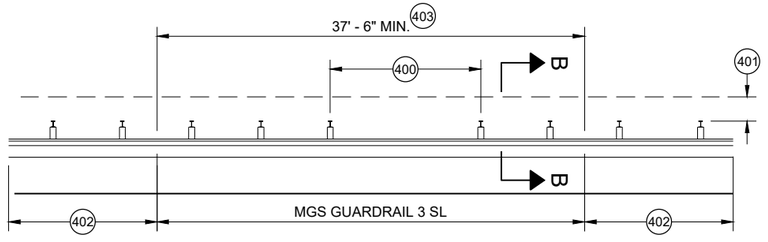
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

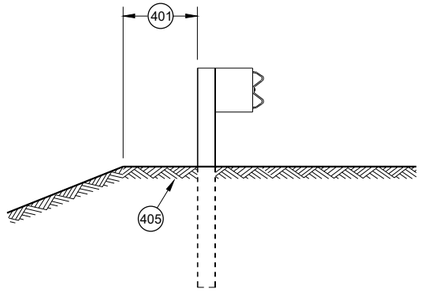


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

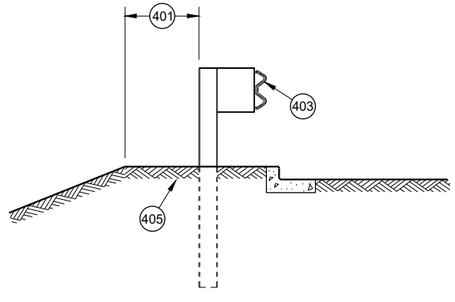


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

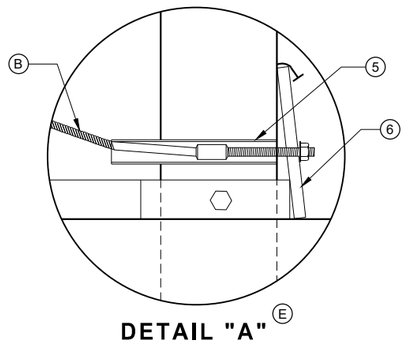
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

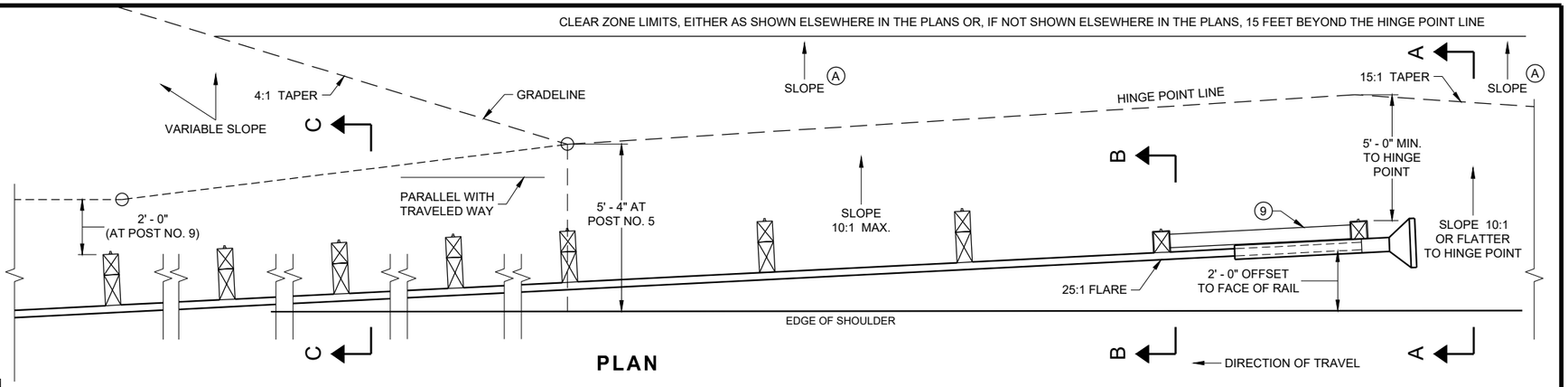
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

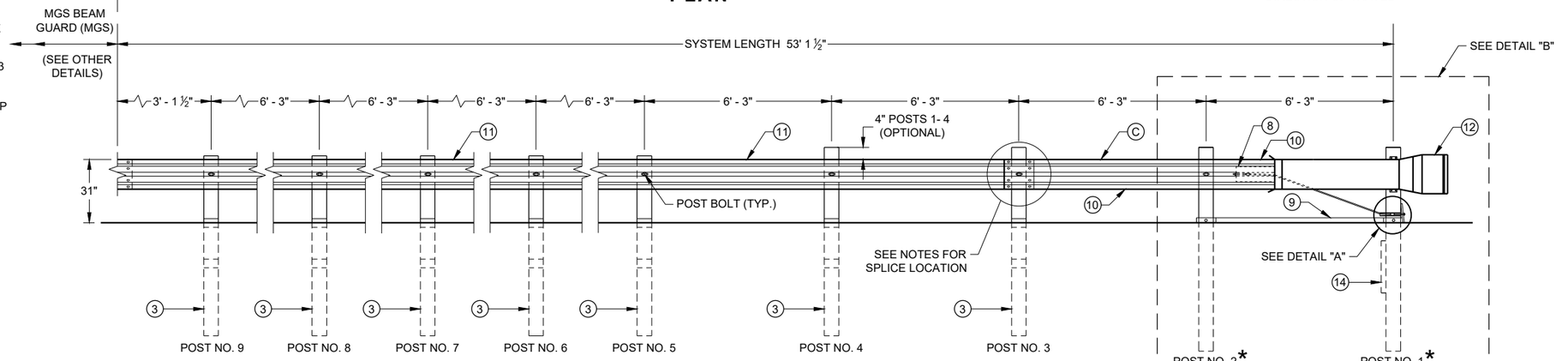
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



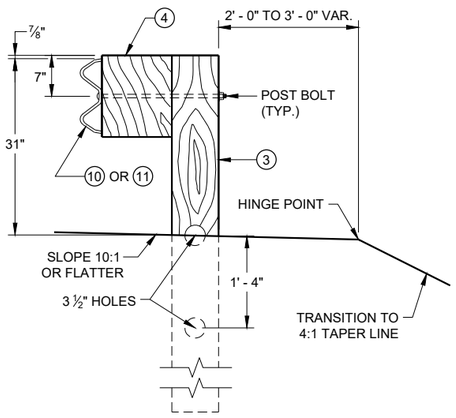
DETAIL "A" (E)



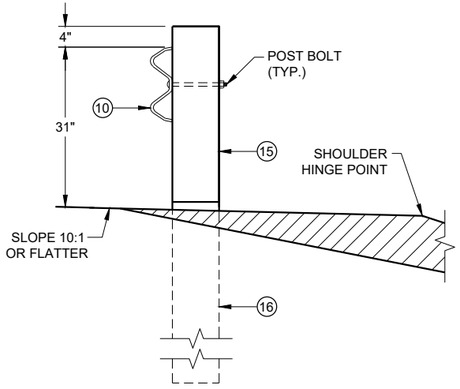
PLAN



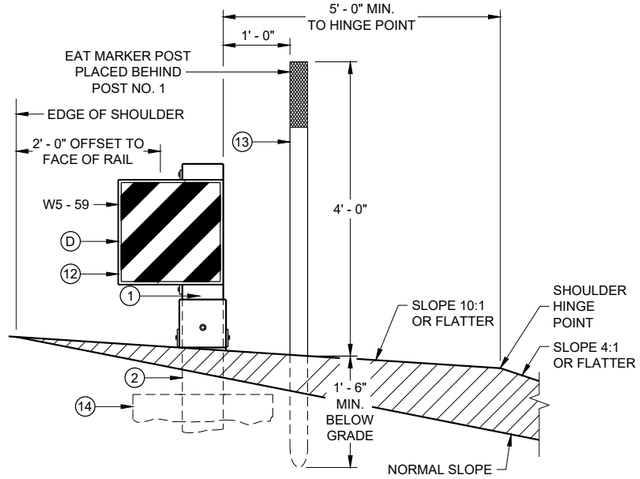
ELEVATION



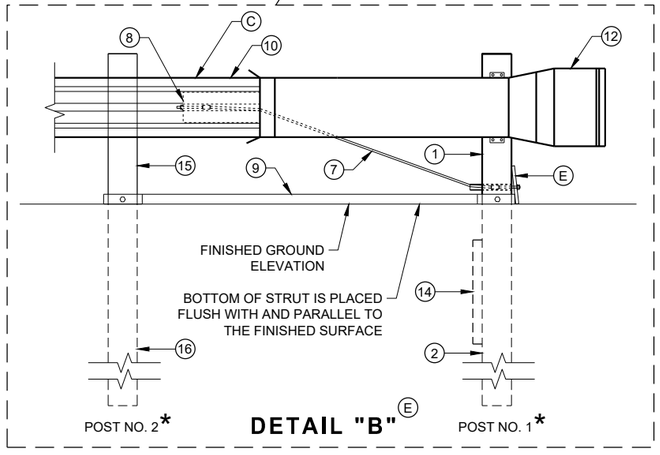
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



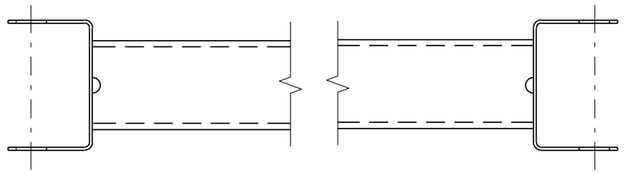
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

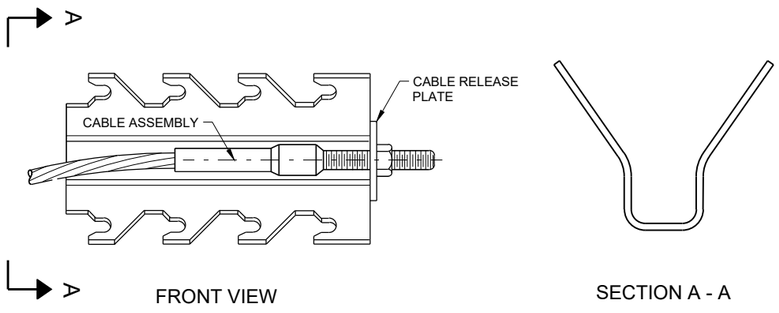
SDD 14B44 - 04a



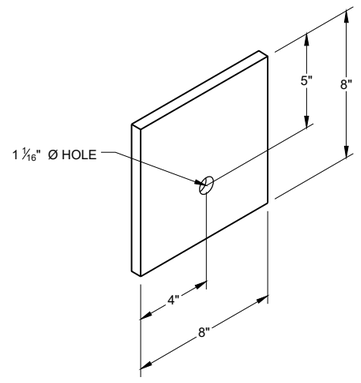
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

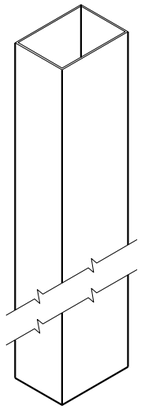
6

SDD 14B44 - 04b

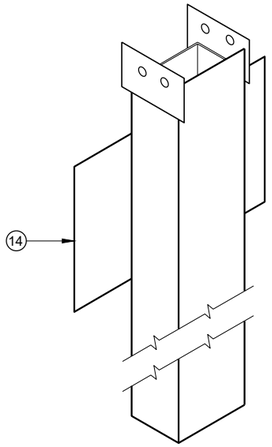
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

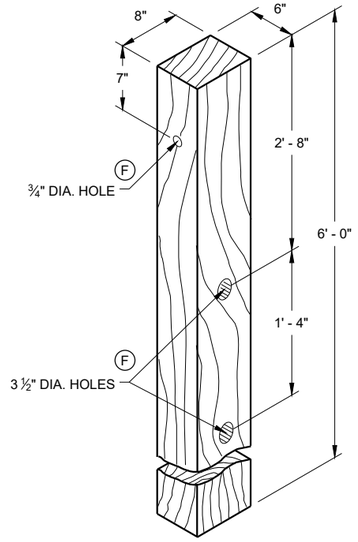
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



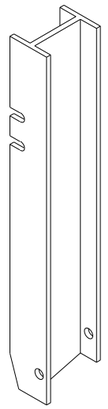
UPPER POST NO. 1 (1) (E)



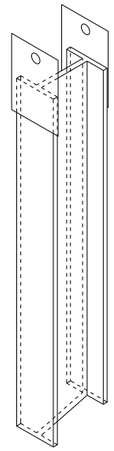
LOWER POST NO. 1 (2) (E)



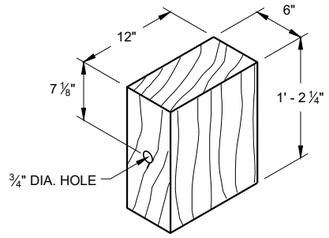
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



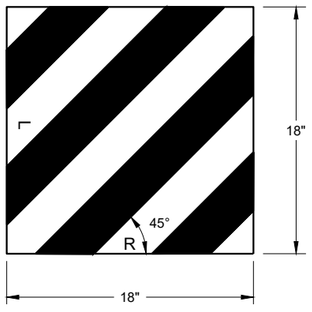
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

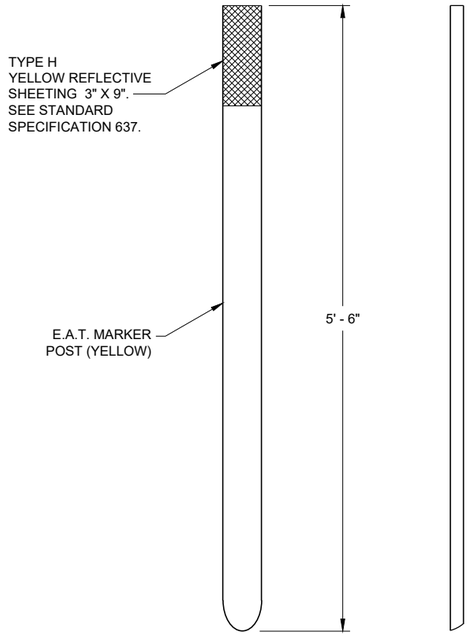


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



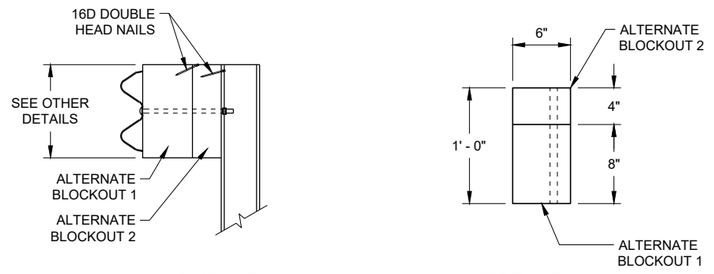
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

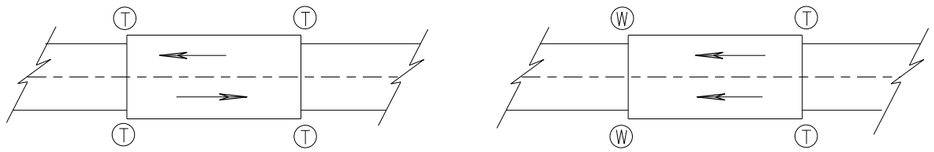
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

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SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

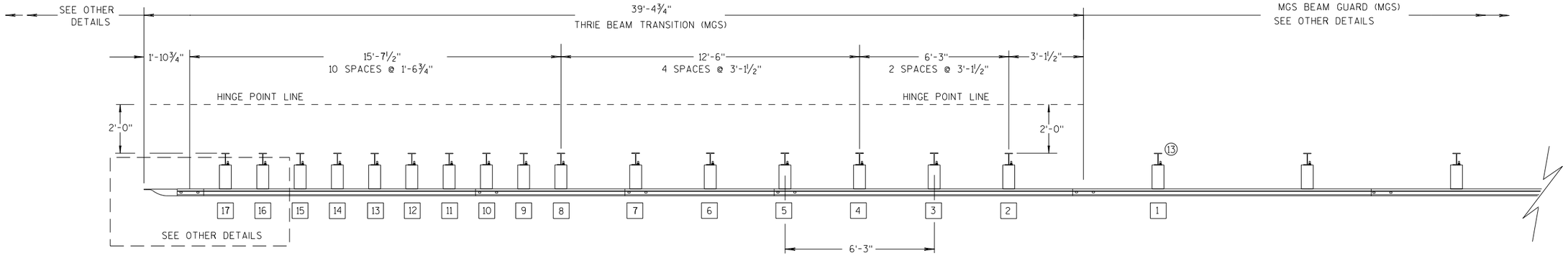
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

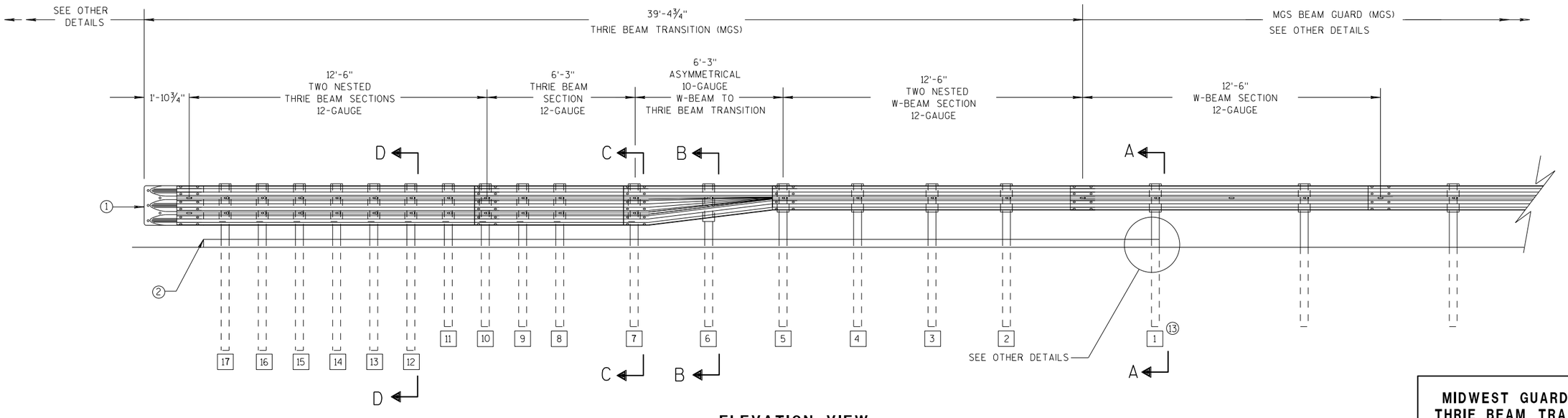
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 201

6

S.D.D. 14 B 45-5a

6

S.D.D. 14 B 45-5a

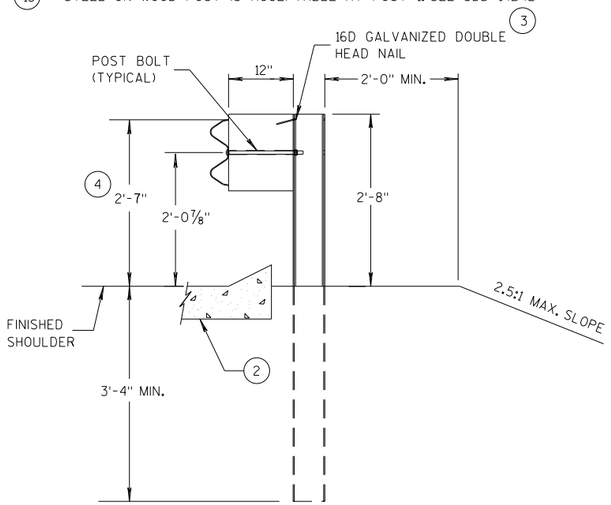
GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

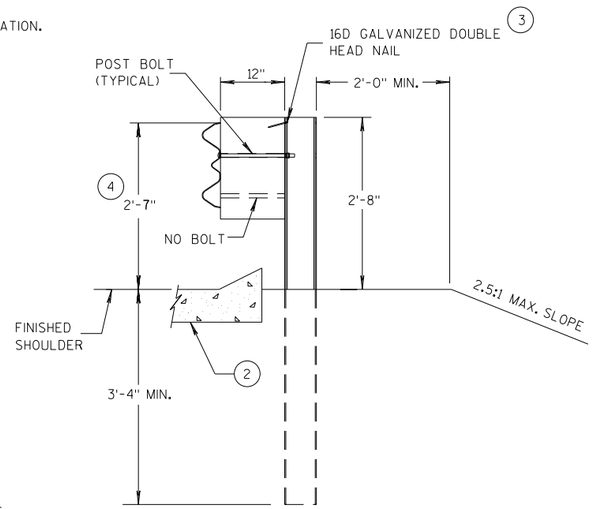
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



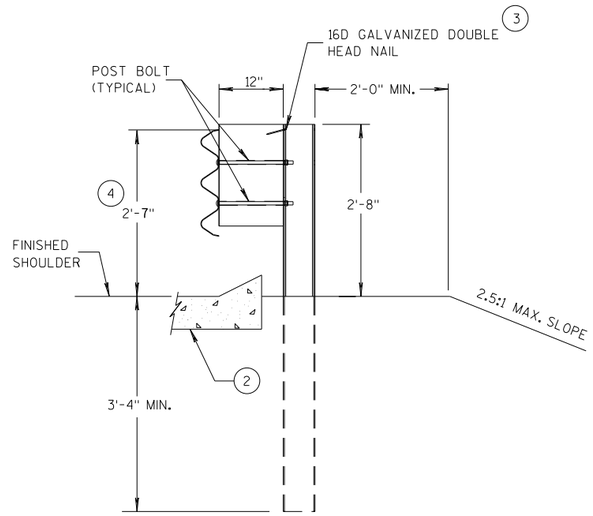
SECTION A-A (13)

POSTS 1-5



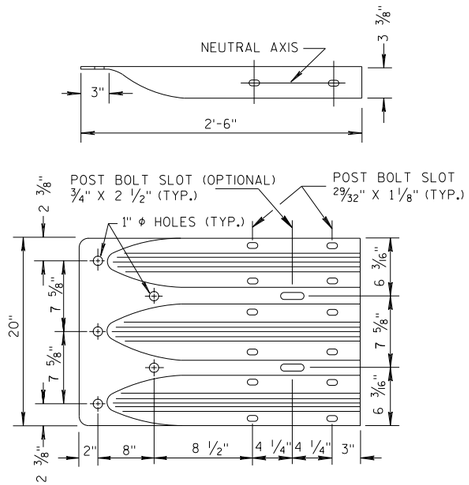
SECTION B-B

POST 6

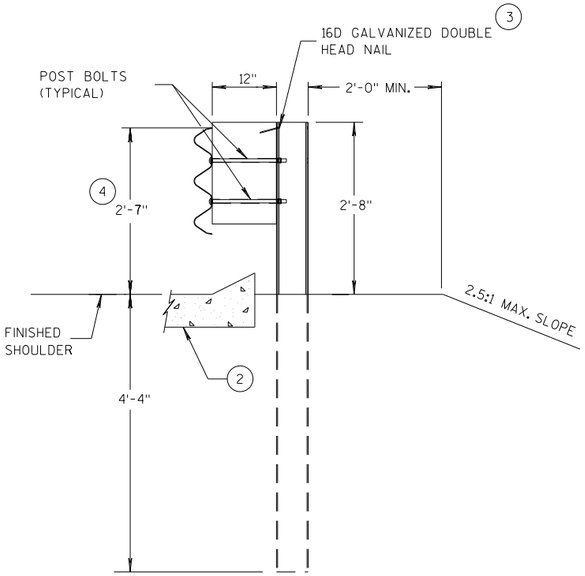


SECTION C-C

POSTS 7-11

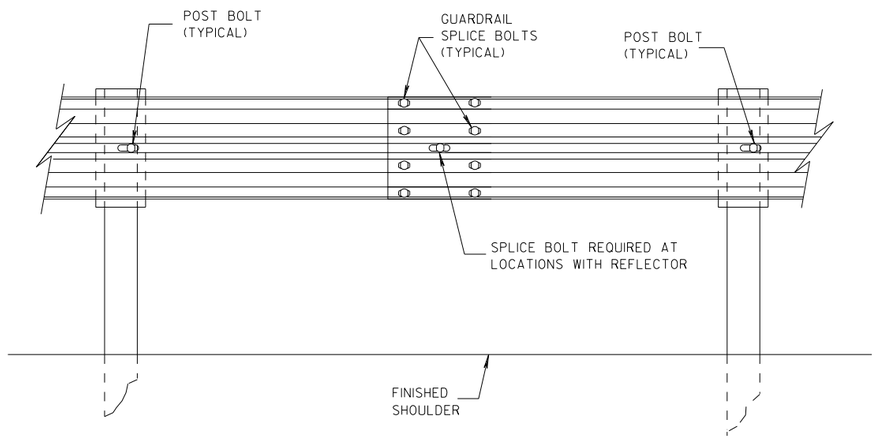


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

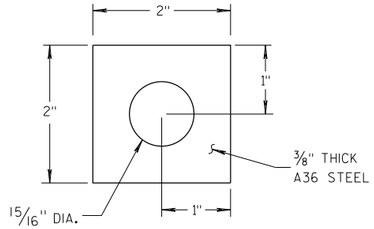
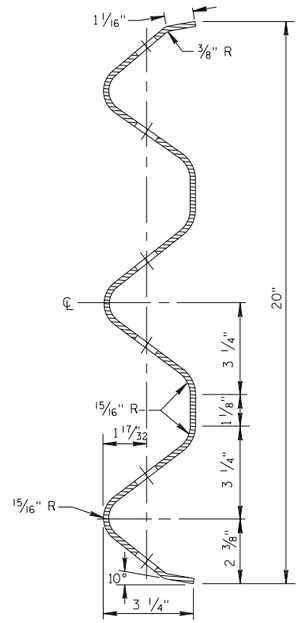


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

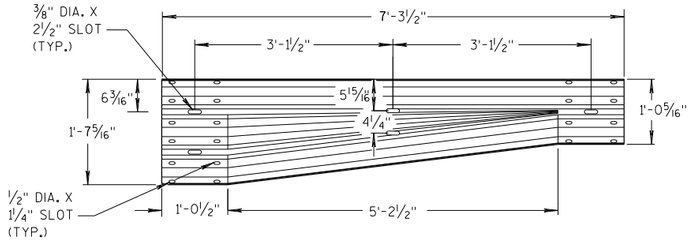
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 202

6

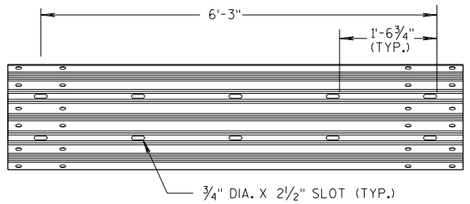
S.D.D. 14 B 45-5b

6

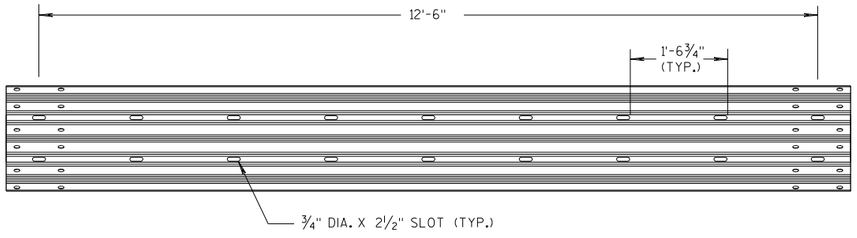
S.D.D. 14 B 45-5b



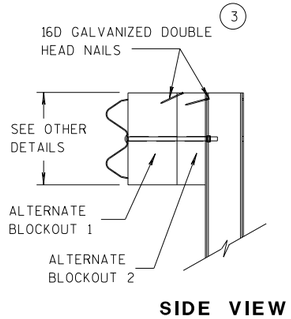
W-BEAM TO THRIE BEAM TRANSITION SECTION



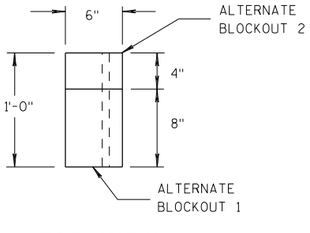
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

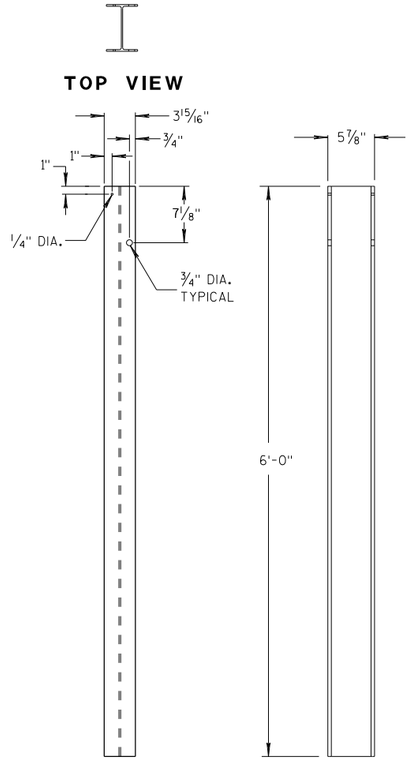


SIDE VIEW



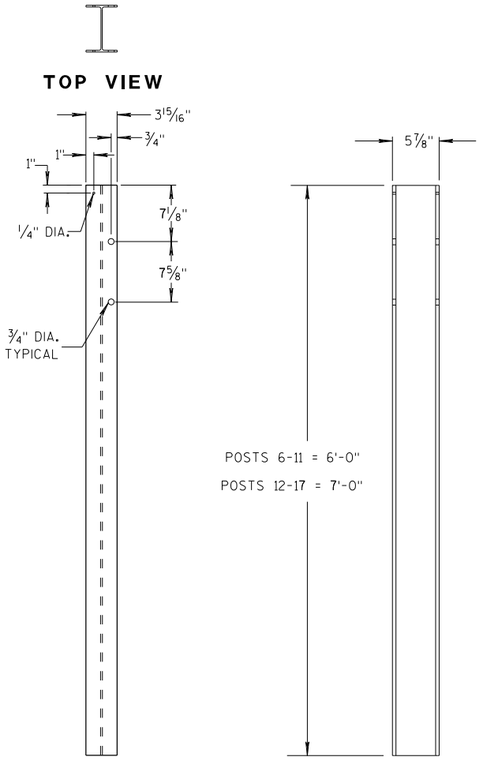
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



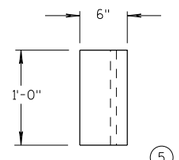
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

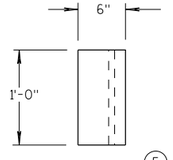


FRONT VIEW SIDE VIEW

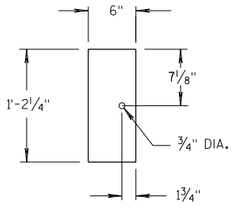
STEEL POSTS 6-17



TOP VIEW (5)

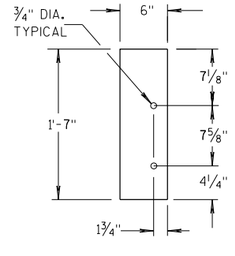


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

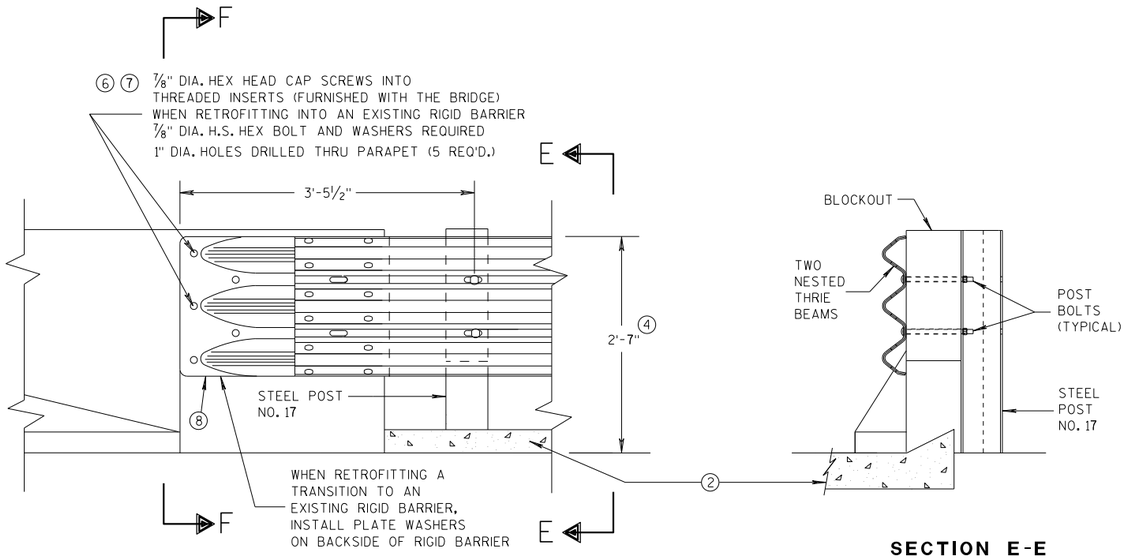
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

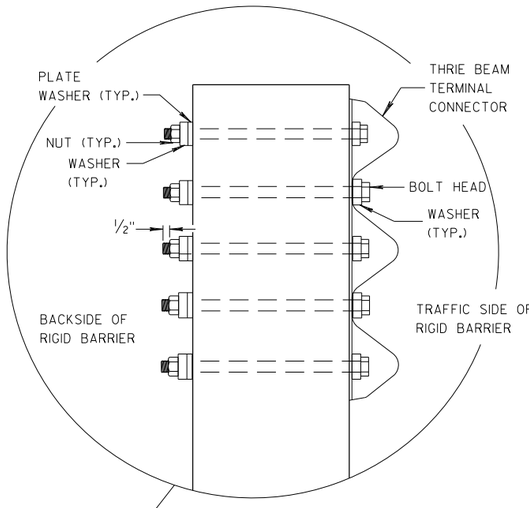
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

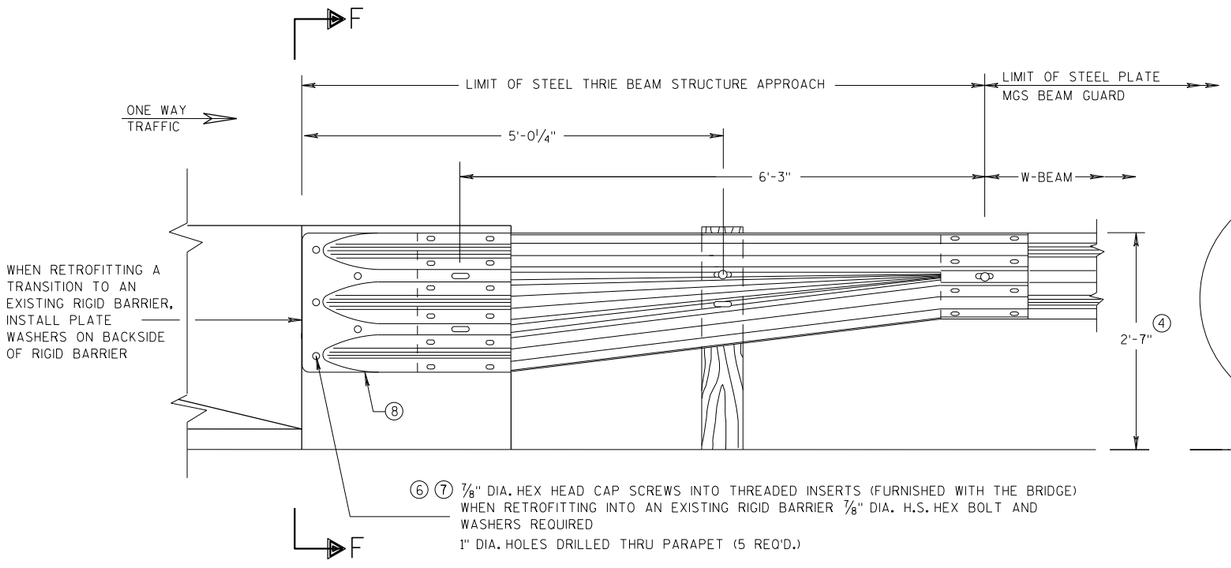
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

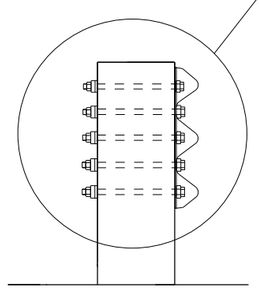
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

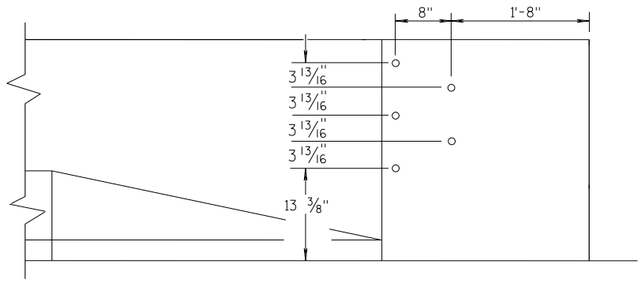




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 DATE
/S/ Rodney Taylor
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FHWA

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S.D.D. 14 B 45-5d

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

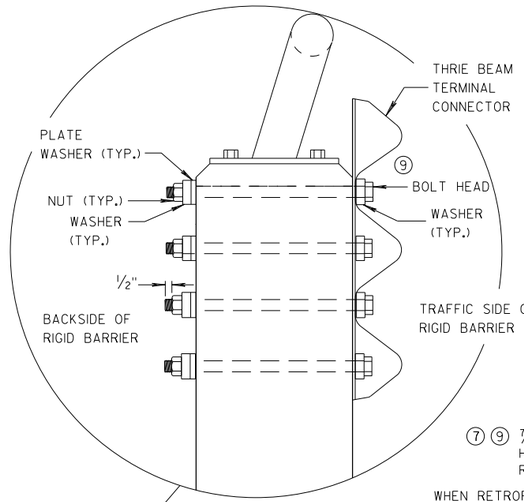
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

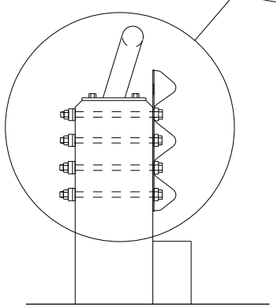
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

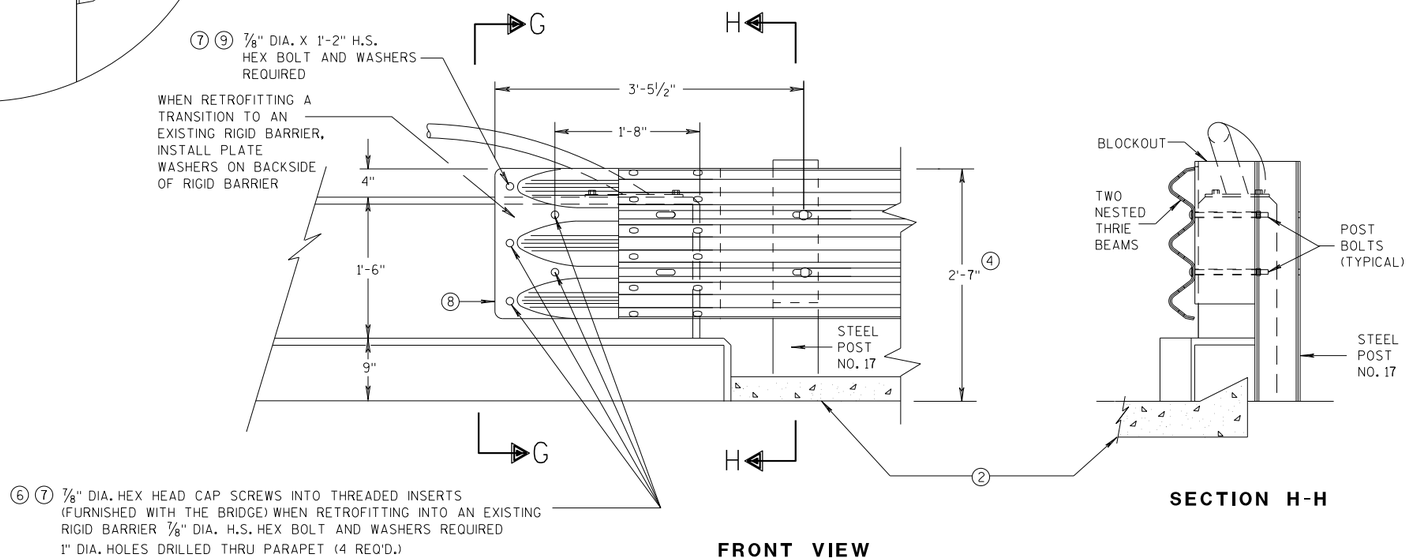
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





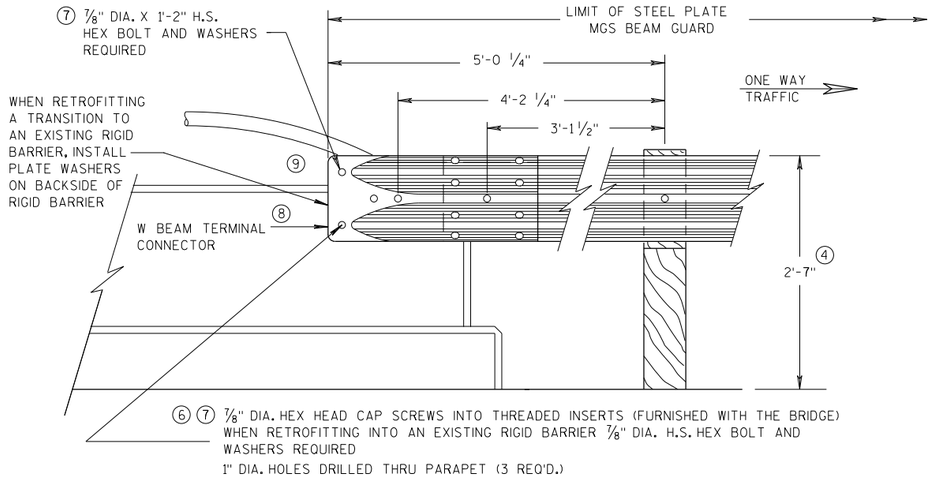
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

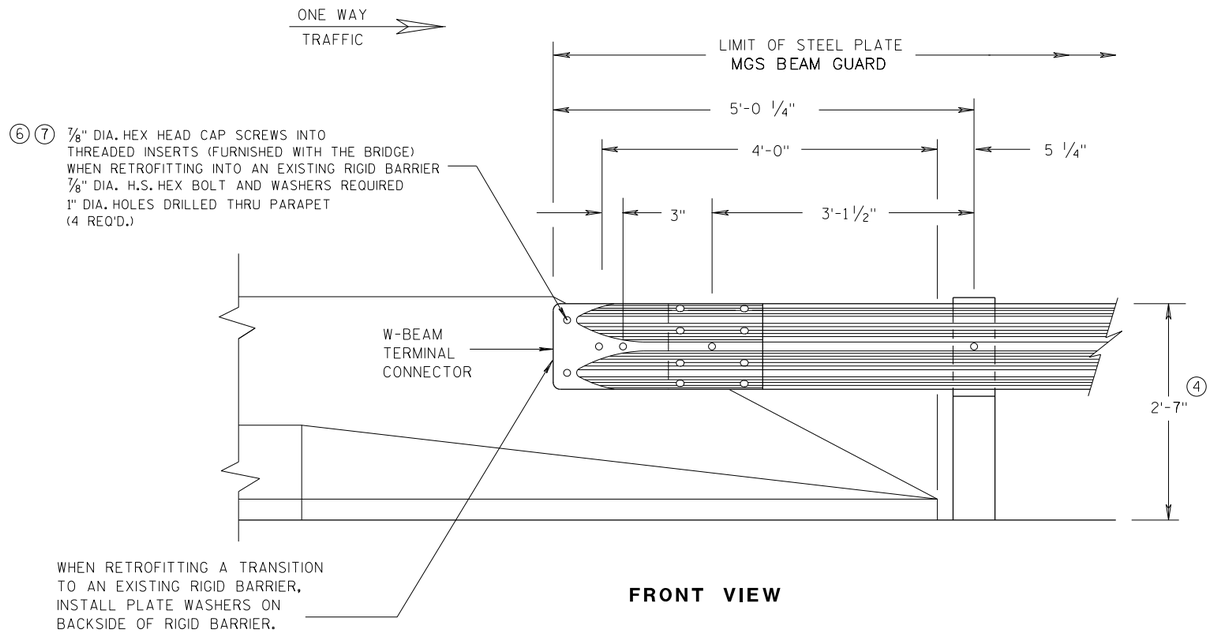
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S.D.D. 14 B 45-5e

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S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

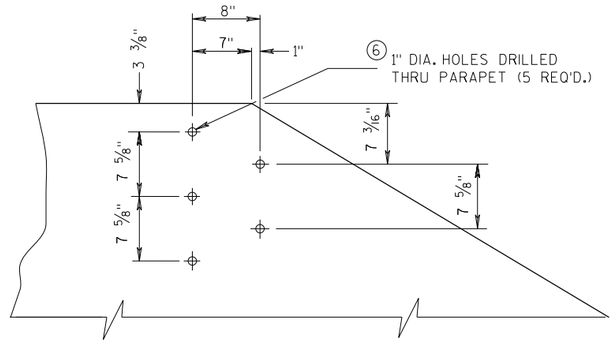
GENERAL NOTES

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

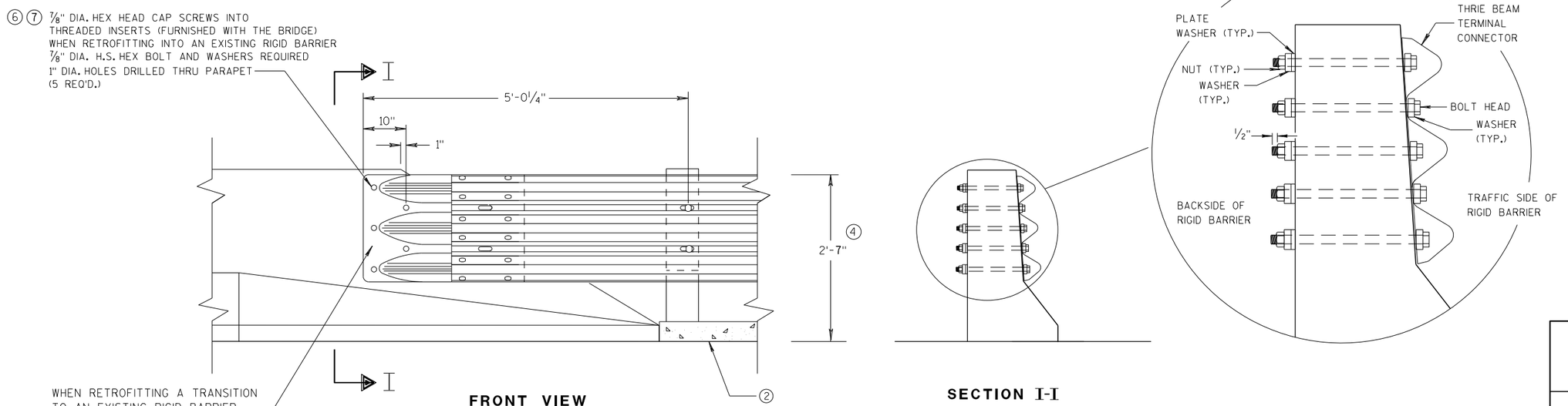
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW

SECTION I-I

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

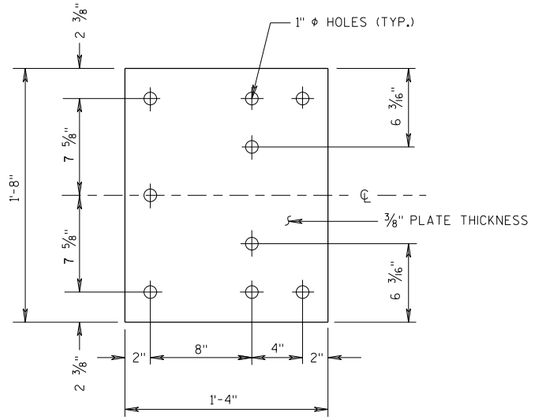
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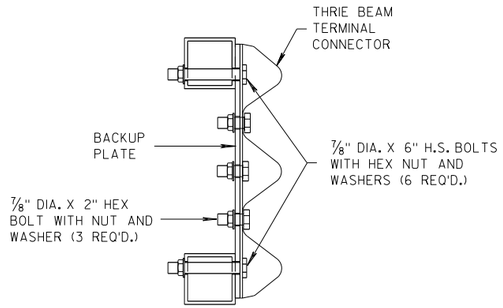
S.D.D. 14 B 45-5f

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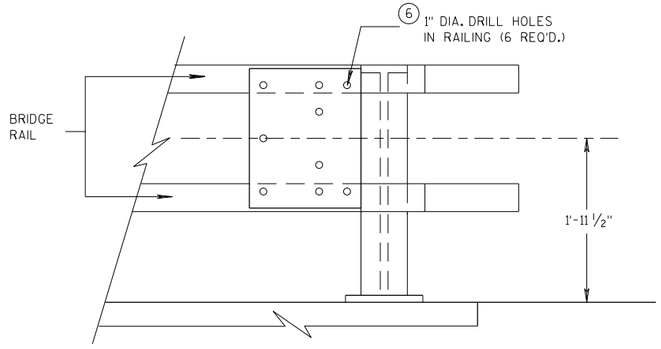
S.D.D. 14 B 45-5f



BACK-UP PLATE DETAIL



SECTION J-J

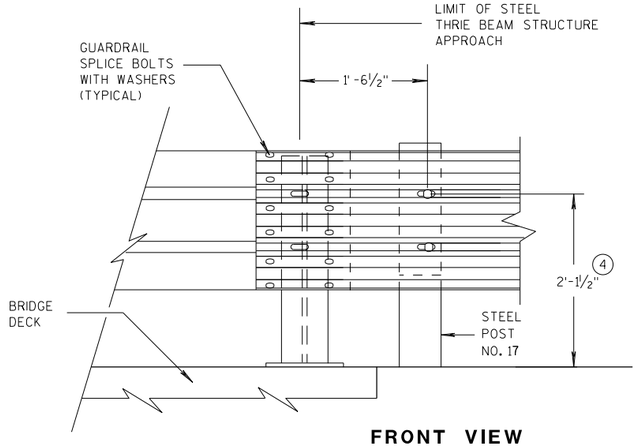


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

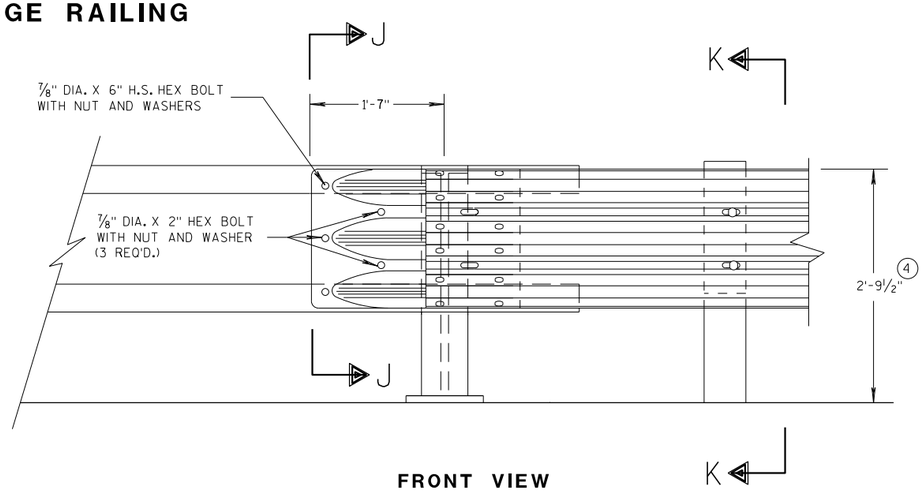
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

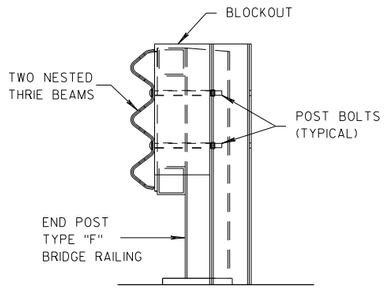


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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/S/ Rodney Taylor 207 — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
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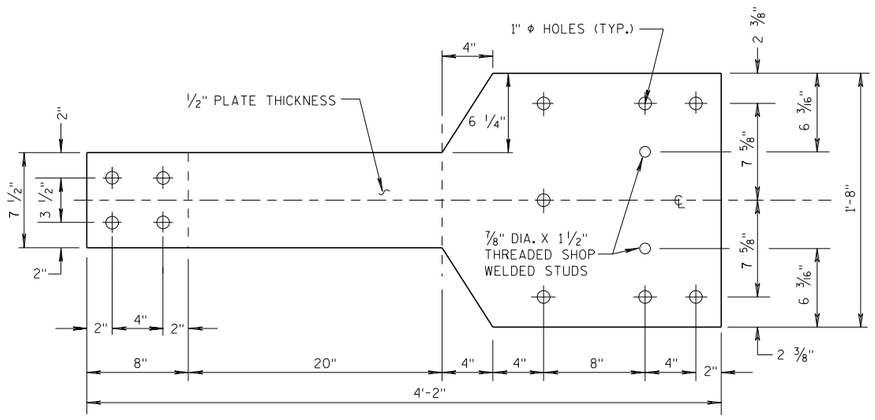
S.D.D. 14 B 45-5g

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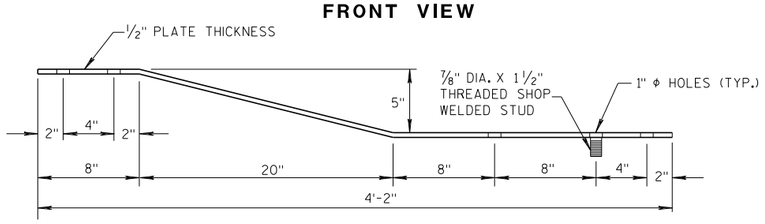
S.D.D. 14 B 45-5g

GENERAL NOTES

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

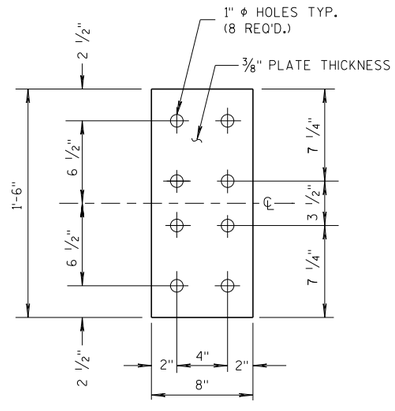


FRONT VIEW



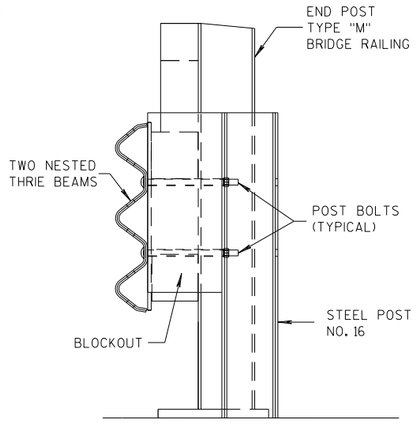
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

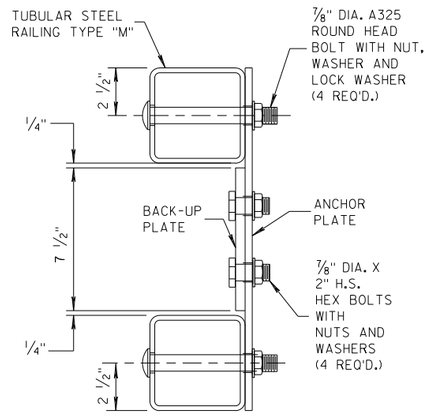


FRONT VIEW

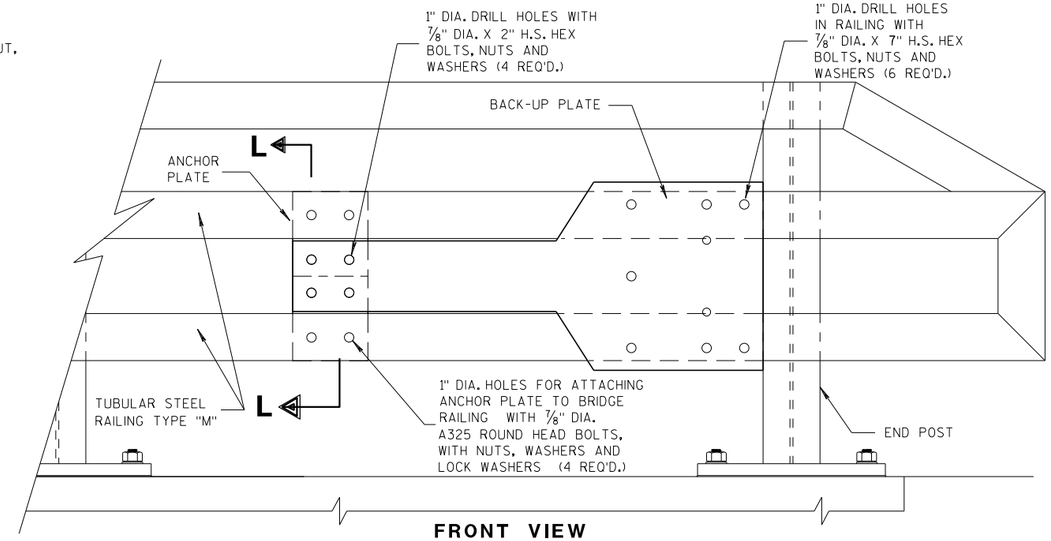
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

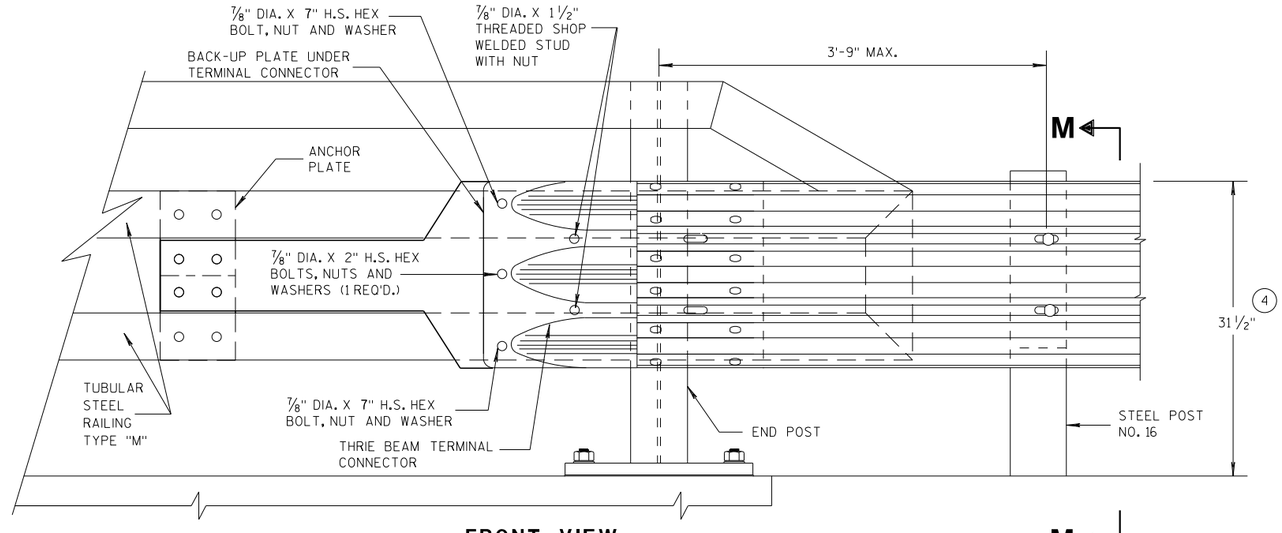


SECTION L-L

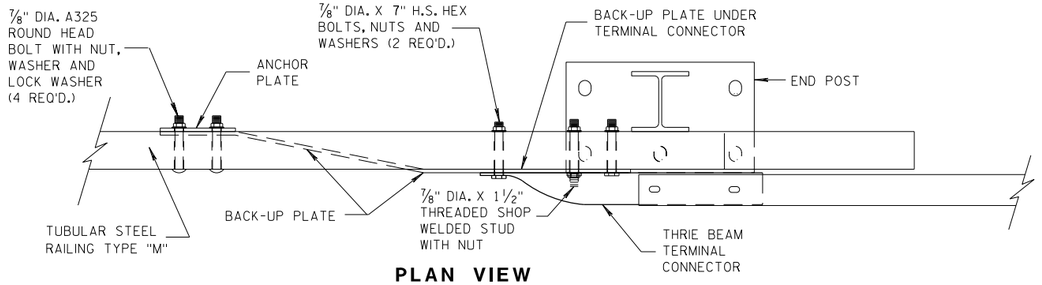


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

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S.D.D. 14 B 45-5h

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S.D.D. 14 B 45-5h

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

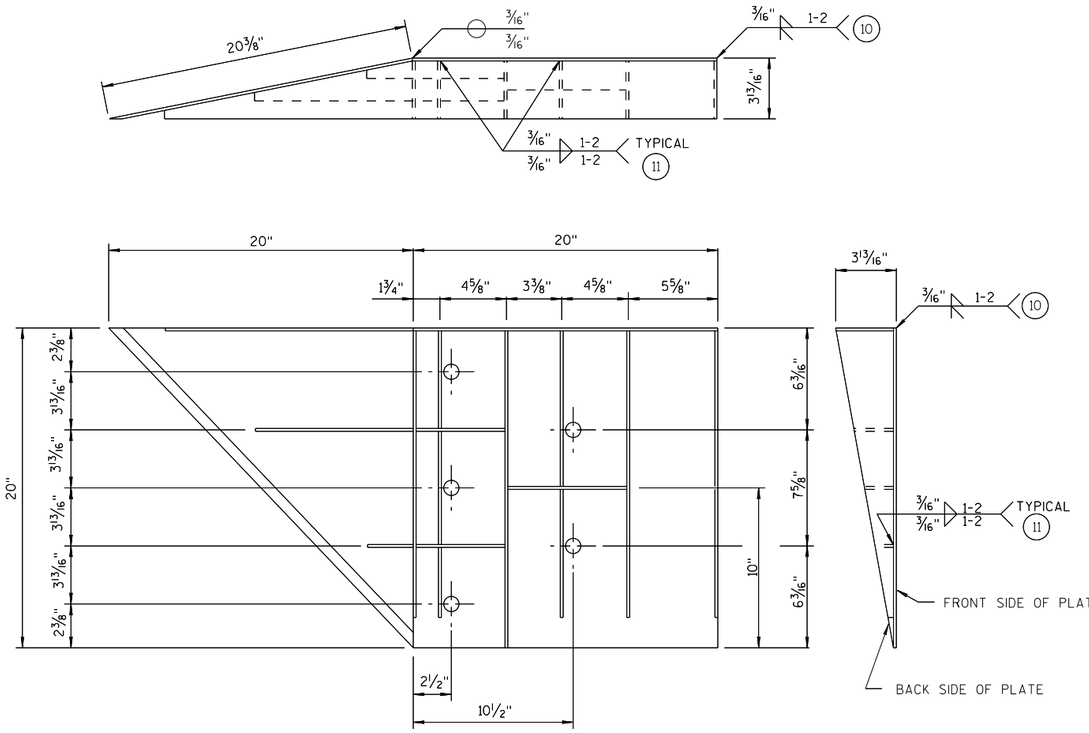
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

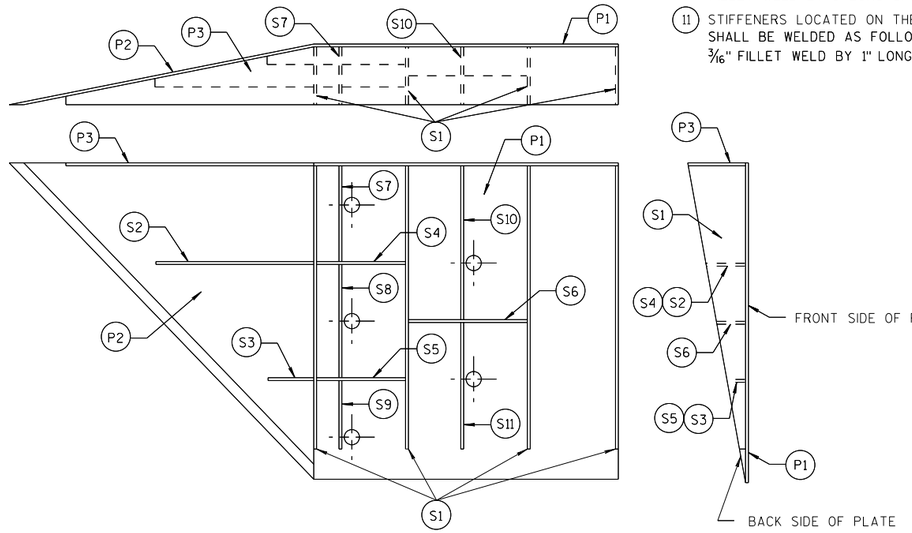


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

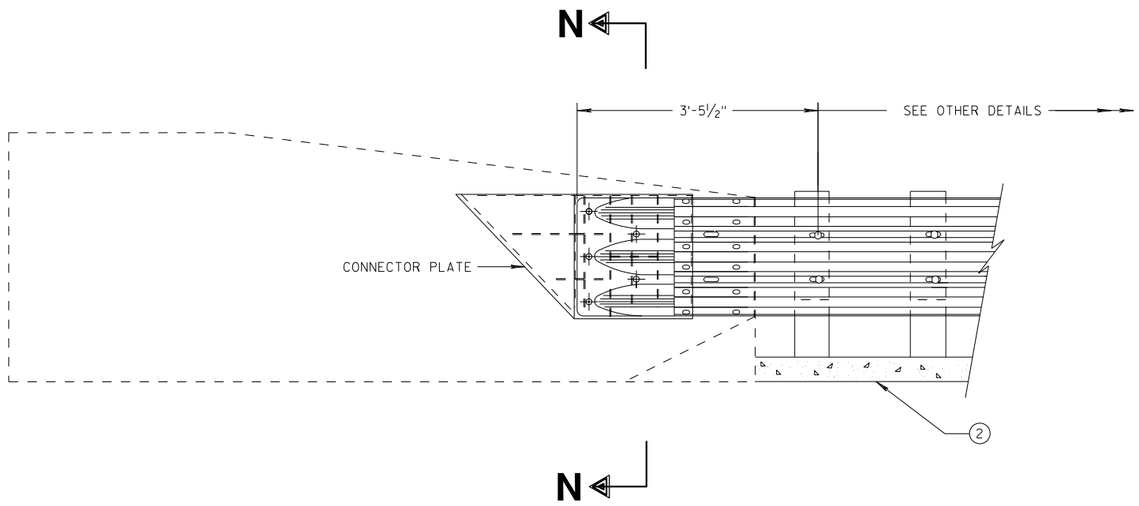
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

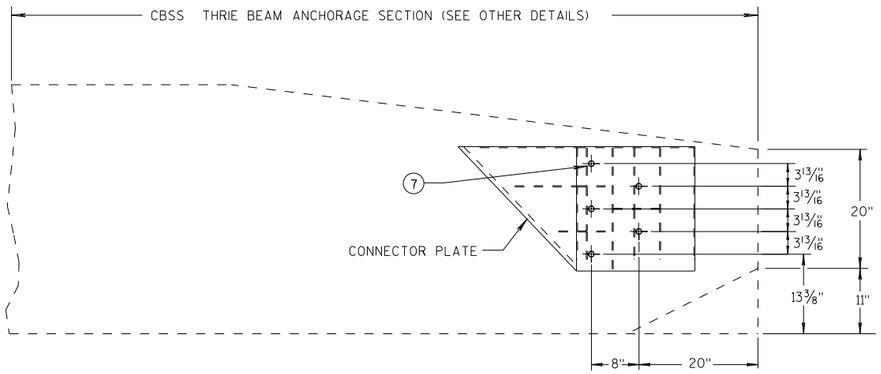
/S/ Rodney Taylor
ROADWAY STANDARDS I
UNIT SUPERVI

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S.D.D. 14 B 45-5i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



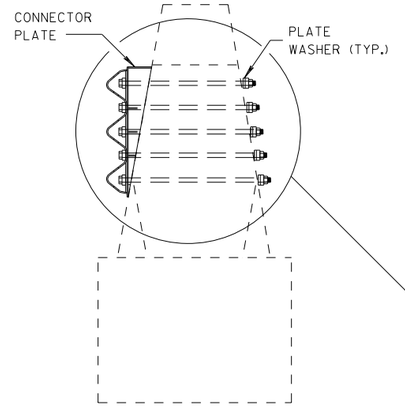
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

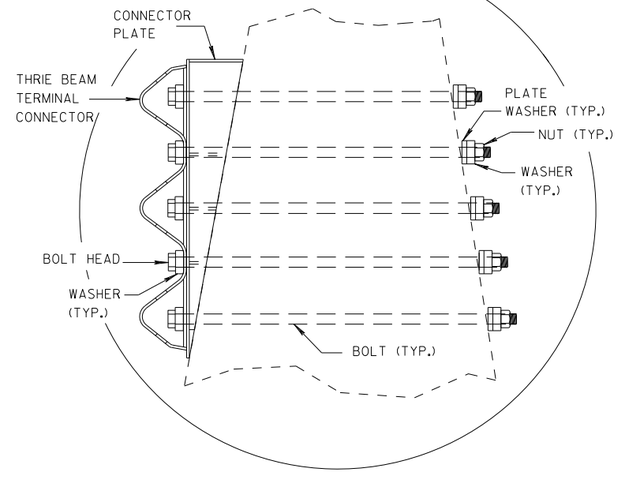
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



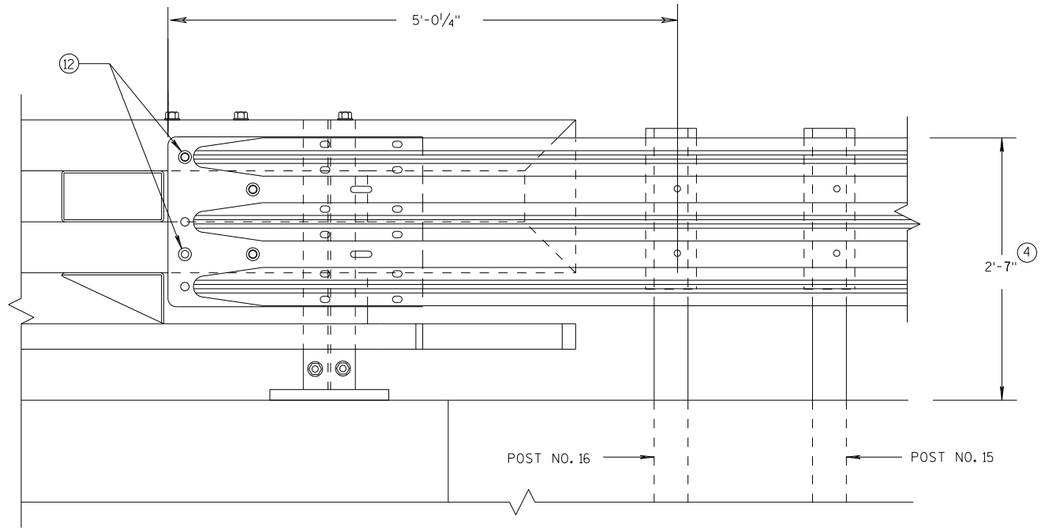
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

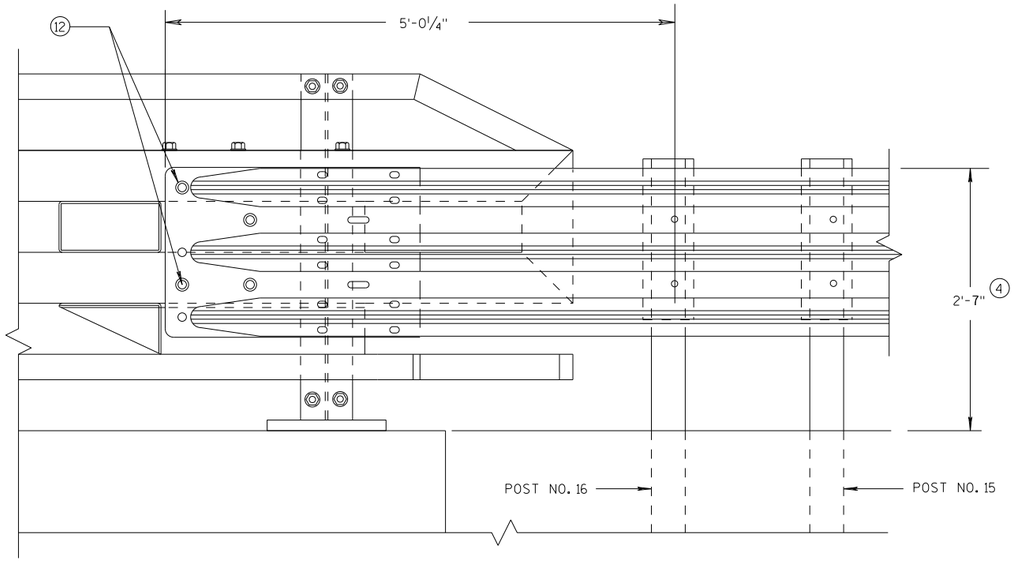
/S/ Rodney Taylor
ROADWAY STANDARDS DI UNIT SUPERVIS NT

6
S.D.D. 14 B 45-5j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

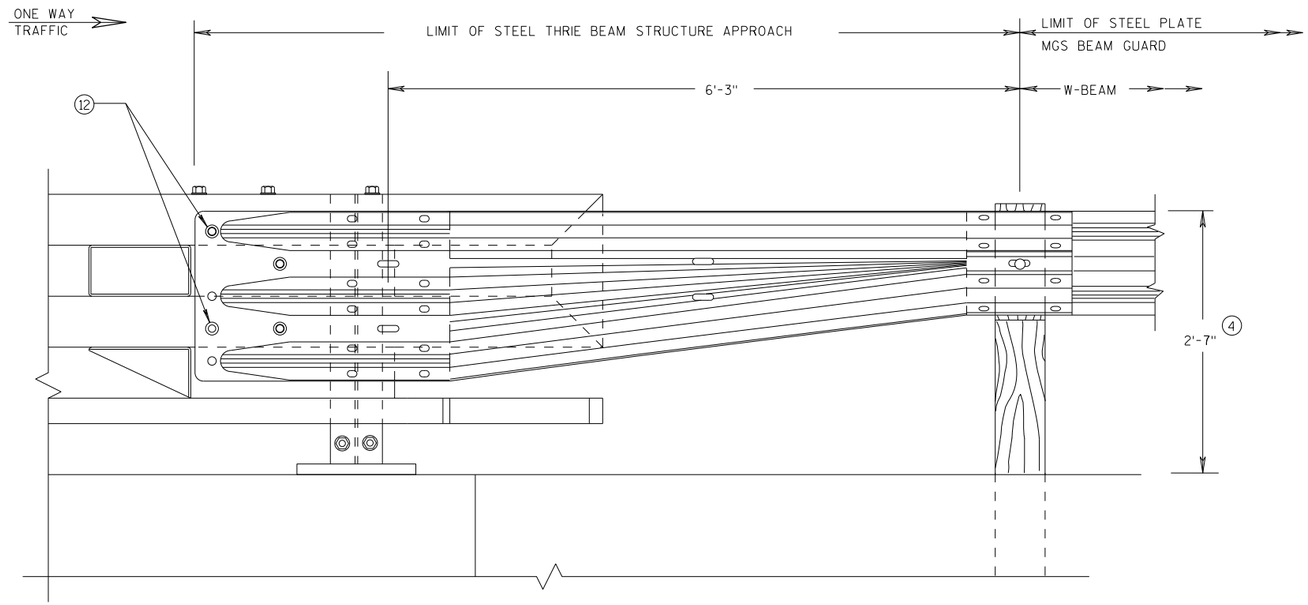
/S/ Rodney Taylor
ROADWAY STANDARDS D 211 NT
UNIT SUPERVIS

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S.D.D. 14 B 45-5k

6

S.D.D. 14 B 45-5k



FRONT VIEW

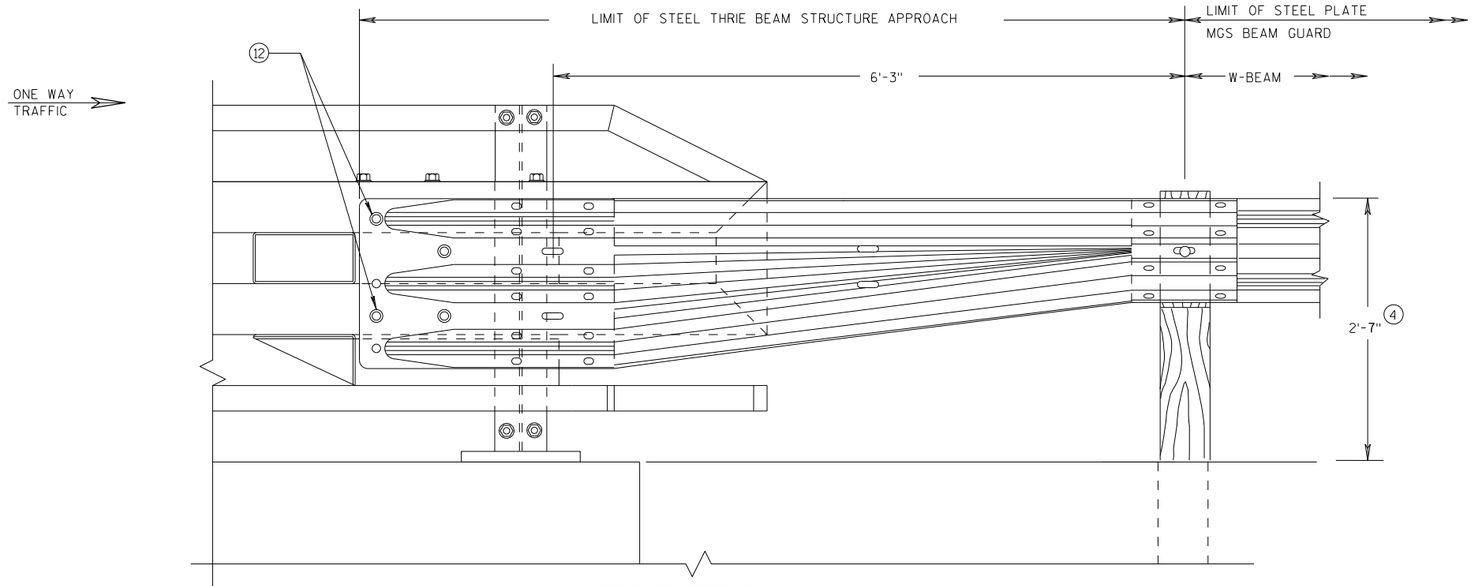
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

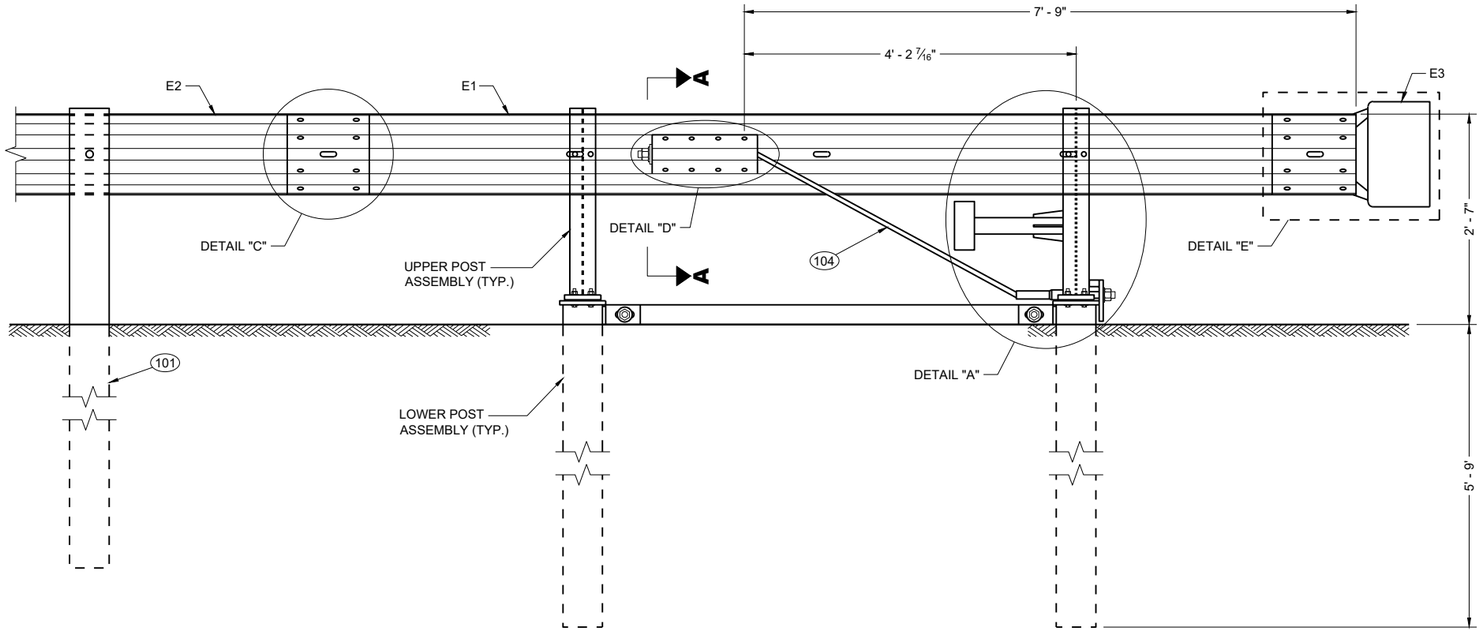
NT

6

S.D.D. 14 B 45-5L

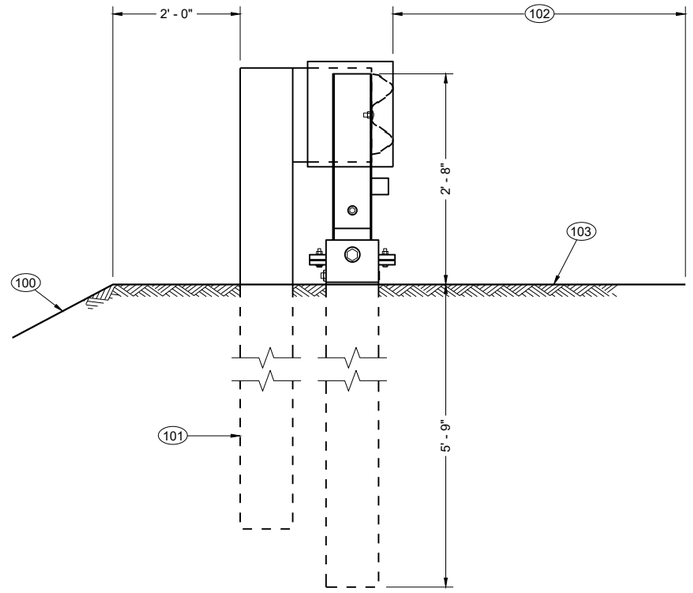
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S.D.D. 14 B 45-5L



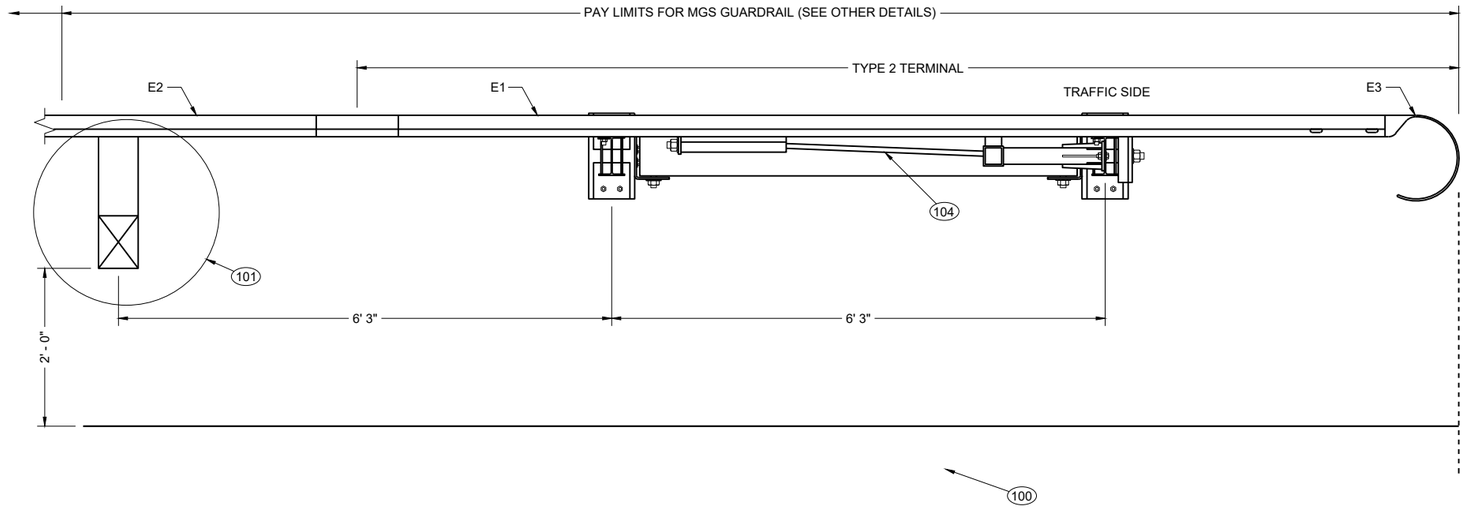
BACK VIEW

TYPE 2 TERMINAL



SIDE VIEW

TYPE 2 TERMINAL



TOP VIEW

TYPE 2 TERMINAL

GENERAL NOTES

SEE SDD 14B42 FOR MORE INFORMATION

(100) MAXIMUM SLOPE IS 2.5:1.

(101) SEE SDD 14B42 FOR MORE INFORMATION.

(102) SHOULDER

(103) MAXIMUM SLOPE IS 10:1.

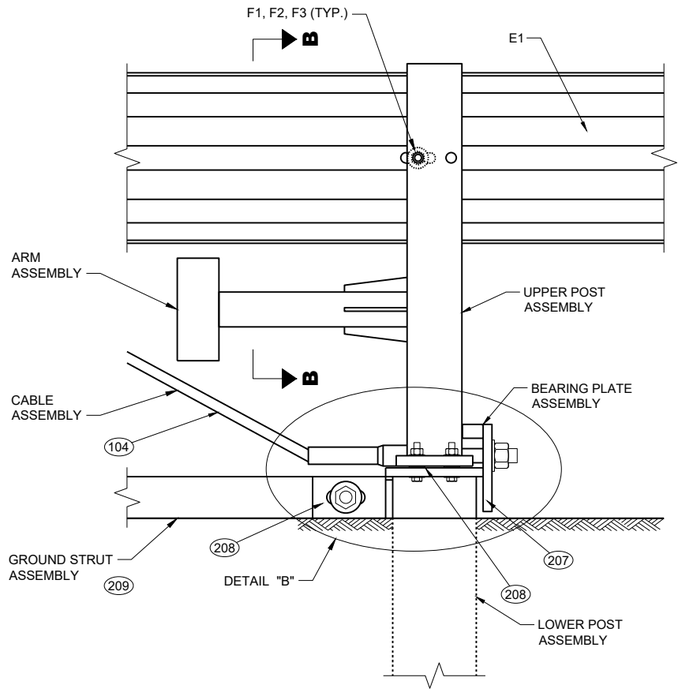
(104) AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

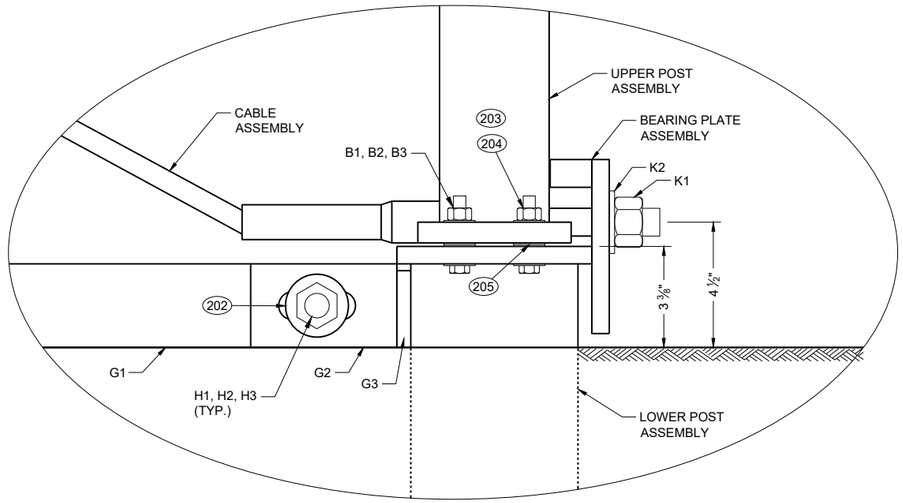
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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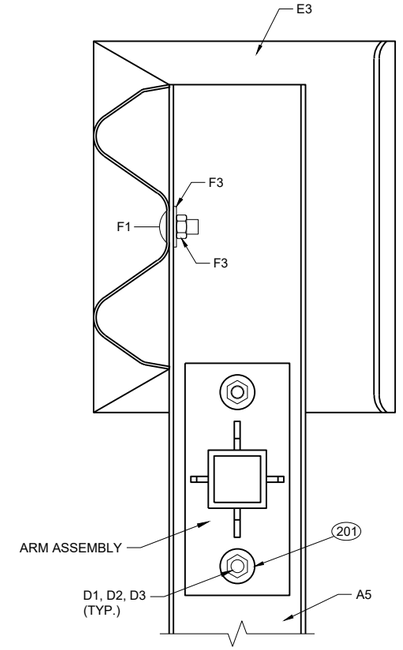
SDD 14B47-07a



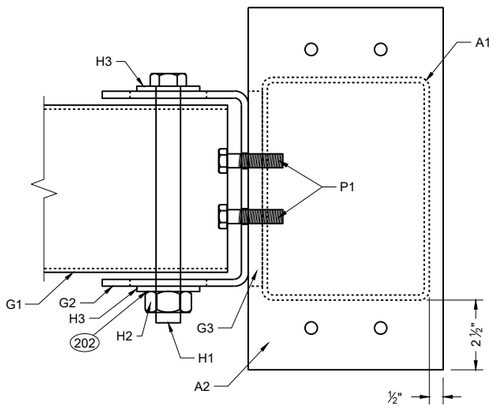
DETAIL "A"



DETAIL "B"

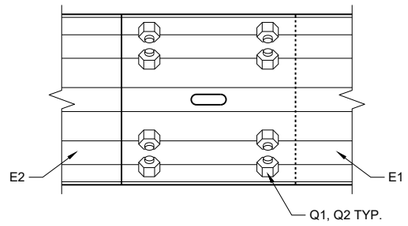


SECTION B - B

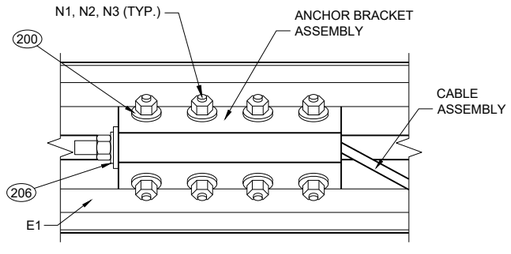


TOP VIEW

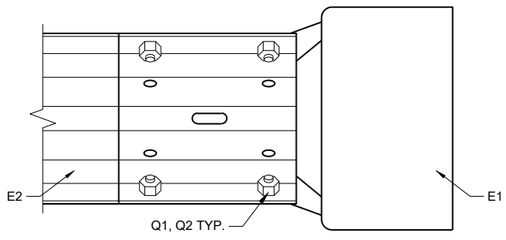
GROUND STRUT CONNECTION DETAIL



DETAIL "C"



DETAIL "D"



DETAIL "E"

GENERAL NOTES

200 INSTALL ONE WASHER UNDER BOLT HEAD AND RAIL AND ON WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

201 INSTALL ONE WASHER UNDER BOLT HEAD AND UPPER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND ARM PLATE.

202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.

203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.

204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.

205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.

206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

207 NO MATERIAL IS TO BE PLACED AGAINST THE VERTICAL FACES OF BEARING PLATE.

208 PREVENT OR REMOVE MATERIALS THAT BLOCK ACCESS TO BOLTS FOR POST ASSEMBLIES AND GROUND STRUT.

209 PREVENT OR REMOVE MATERIALS THAT IMPEDE REMOVAL OF GROUND STRUT.

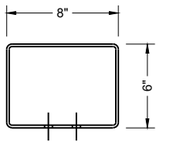
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

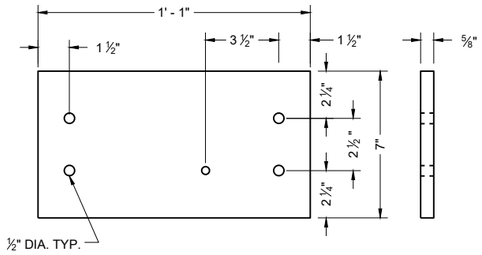
6
SDD 14B47-07b

GENERAL NOTES

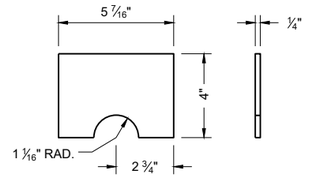
(300) TAP FOR 1/2" AFTER GALVANIZATION



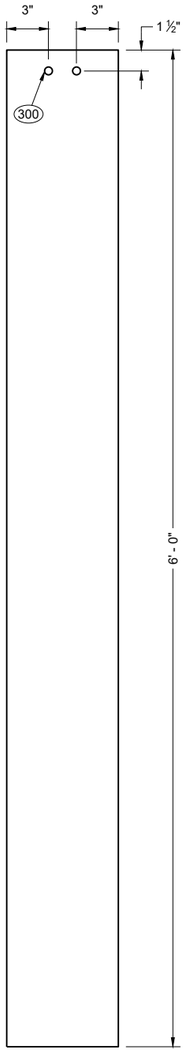
TOP VIEW



LOWER PLATE (A2)

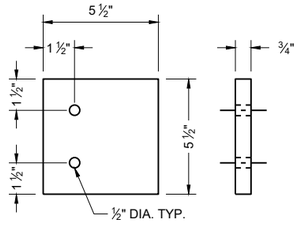


POST GUSSET (A3)

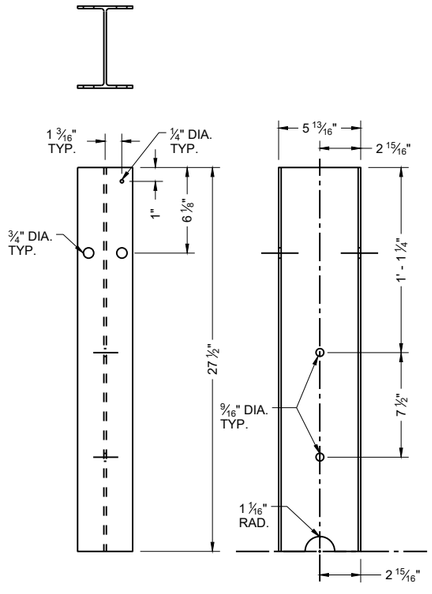


SIDE VIEW

FOUNDATION TUBE (A1)

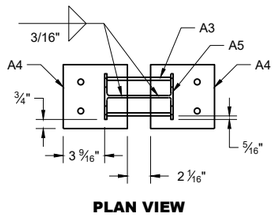


UPPER PLATE (A4)

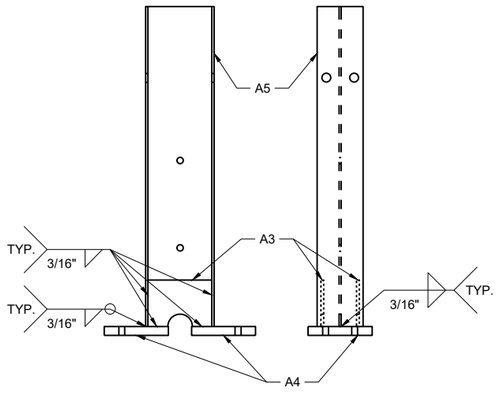


FRONT VIEW SIDE VIEW

TYPE 2 POST (A5)

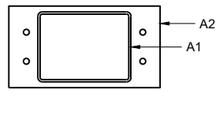


PLAN VIEW

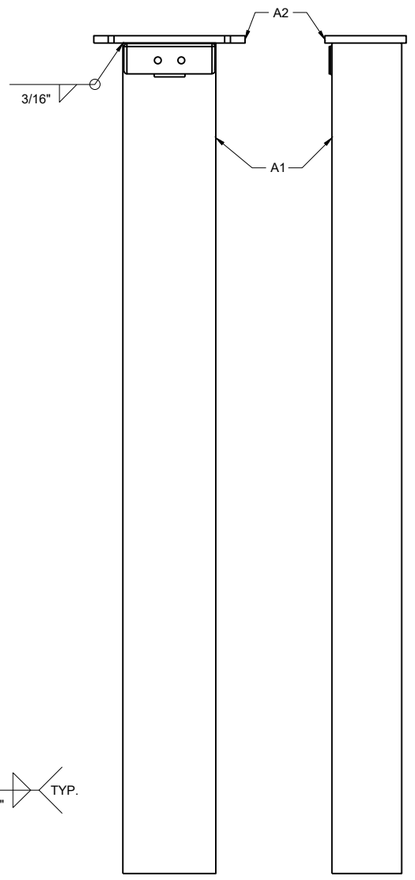


SIDE VIEW FRONT VIEW

UPPER POST ASSEMBLY

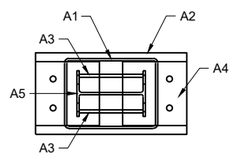


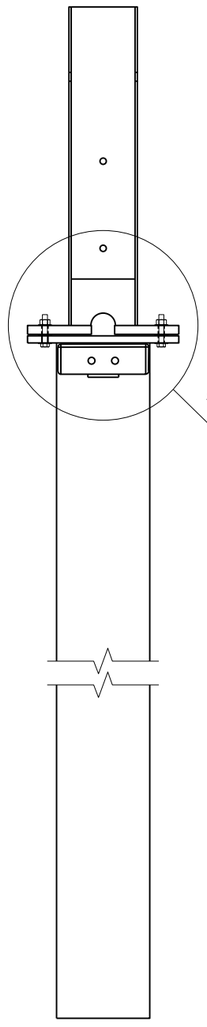
PLAN VIEW



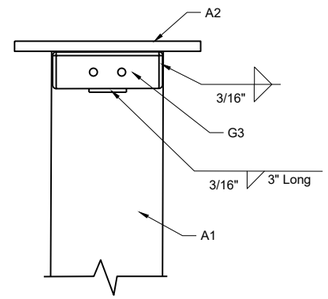
FRONT VIEW SIDE VIEW

LOWER POST ASSEMBLY

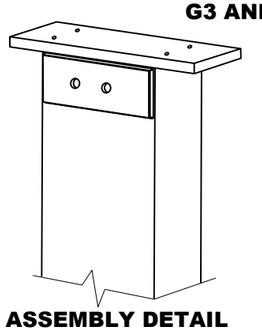




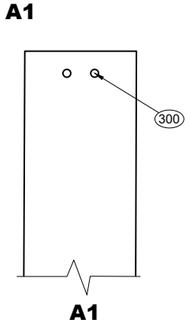
ASSEMBLED POST



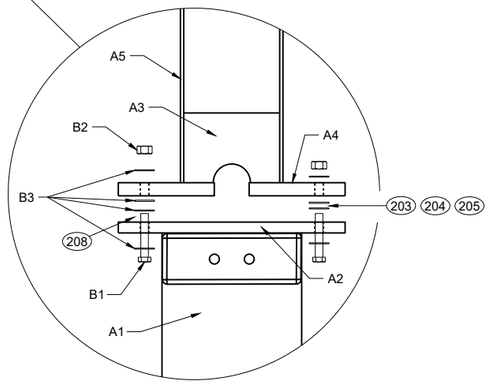
WELDING DETAIL G3 AND A1



ASSEMBLY DETAIL ISOMETRIC



A1

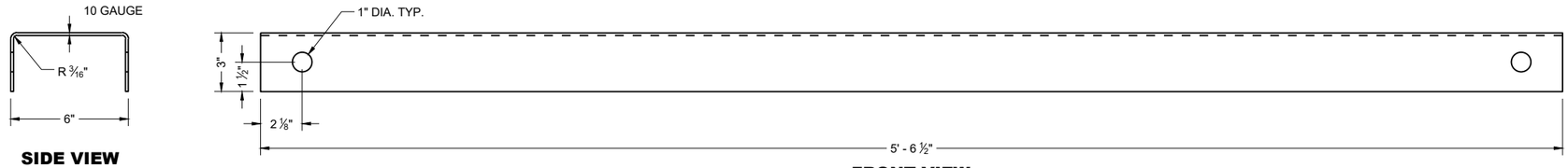


POST CONNECTION DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

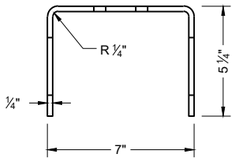
SDD 14B47-07c



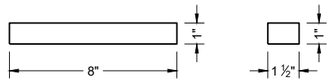
SIDE VIEW

FRONT VIEW

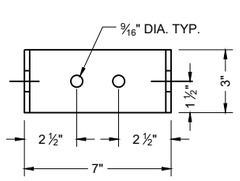
GROUND STRUT CHANNEL (G1)



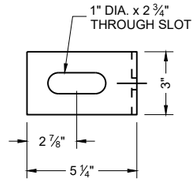
TOP VIEW



BEARING PLATE FLANGE (L2)

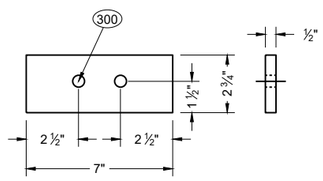


FRONT VIEW

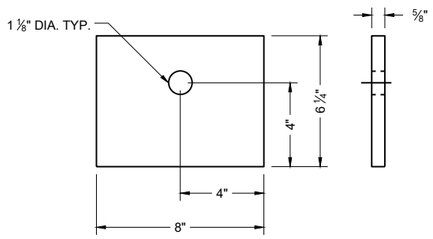


SIDE VIEW

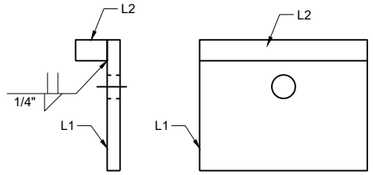
GROUND STRUT CONNECTOR (G2)



GROUND STRUT PLATE (G3)

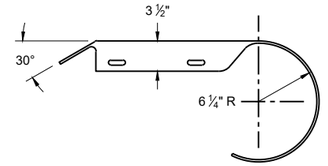


BEARING PLATE (L1)

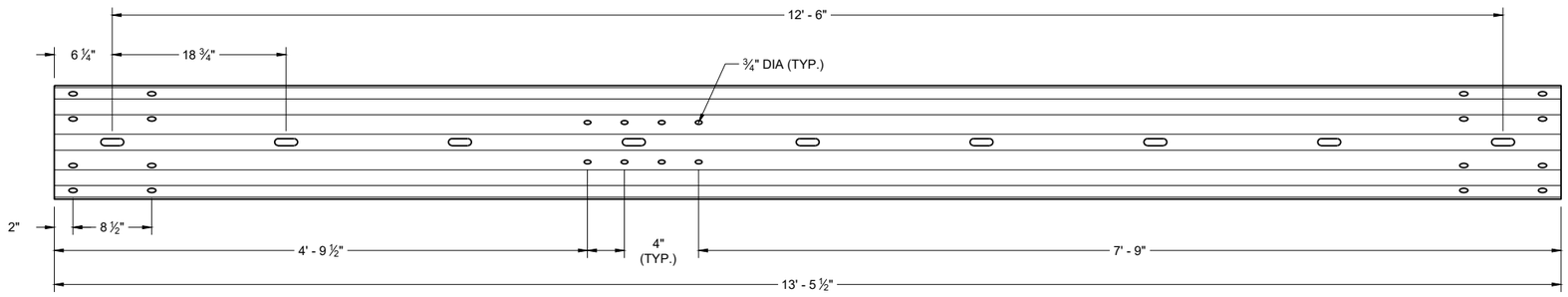


SIDE VIEW FRONT VIEW

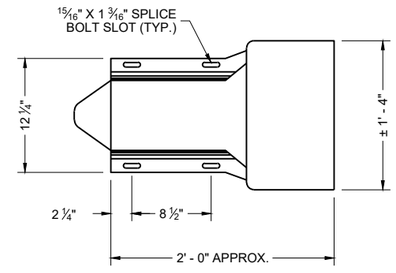
BEARING PLATE ASSEMBLY



PLAN VIEW

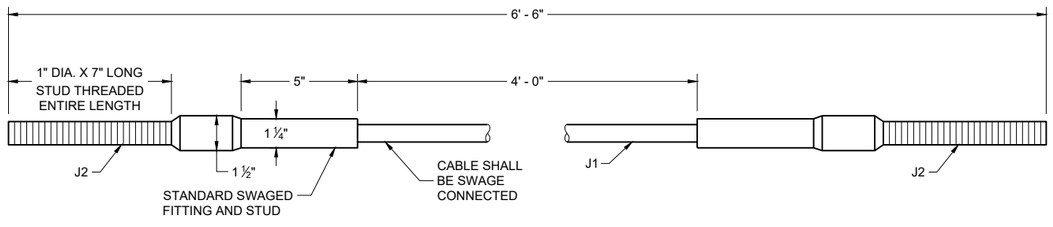


TYPE 2 GUARDRAIL (E1)



ELEVATION VIEW

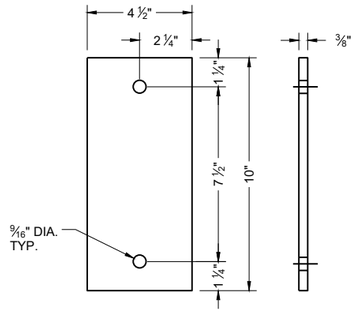
ROUNDED BUFFER END (E3)



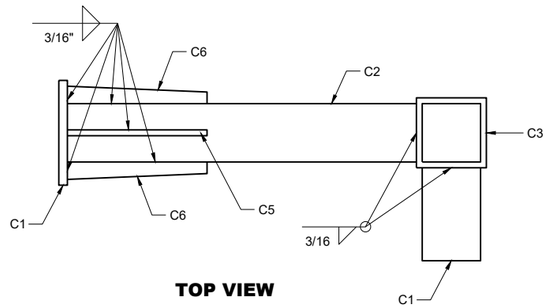
CABLE ASSEMBLY

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

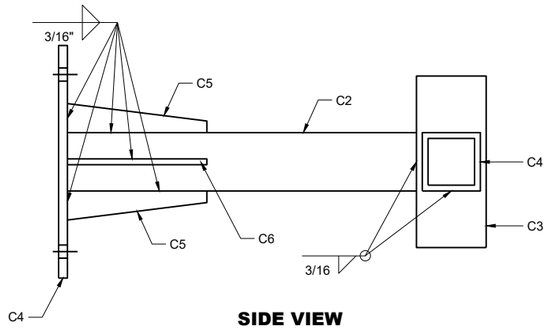
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



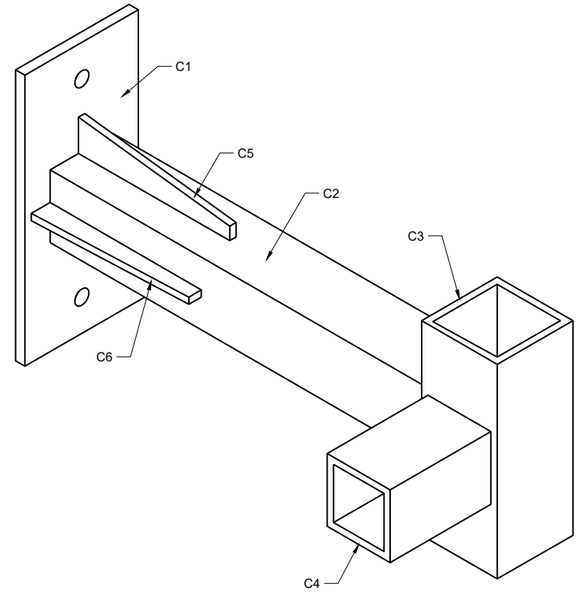
ARM PLATE (C1)



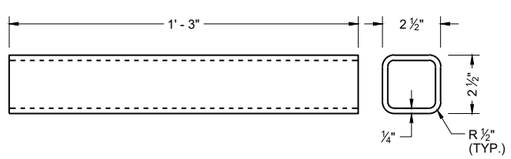
TOP VIEW
ARM ASSEMBLY



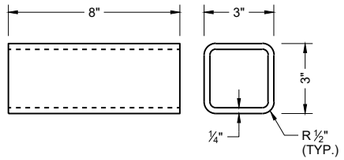
SIDE VIEW
ARM ASSEMBLY



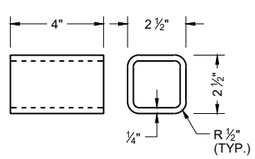
ISOMETRIC VIEW
ARM ASSEMBLY



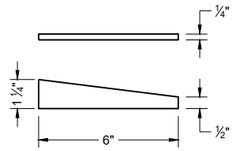
ARM TUBE 1 (C2)



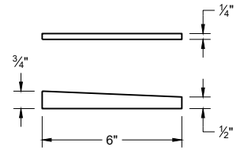
ARM TUBE 2 (C3)



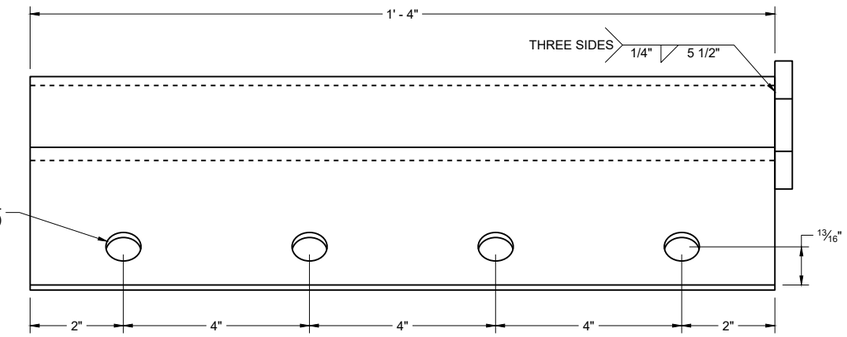
ARM TUBE 3 (C4)

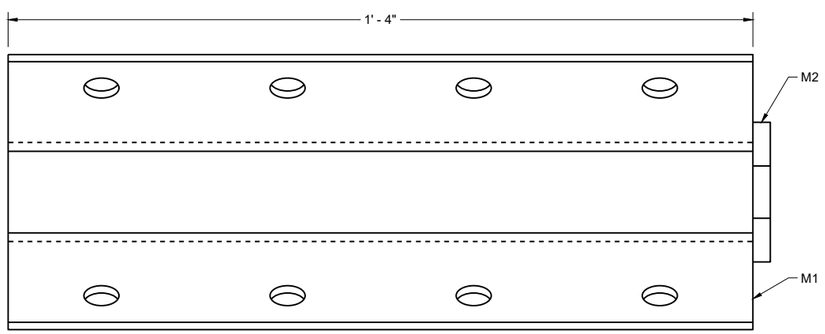


ARM GUSSET PLATE 1 (C5)

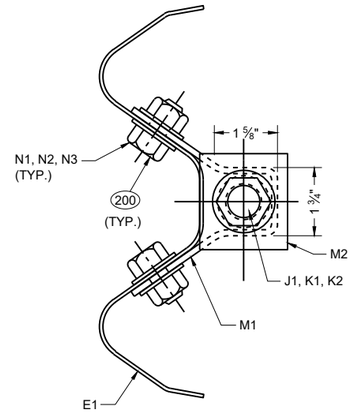


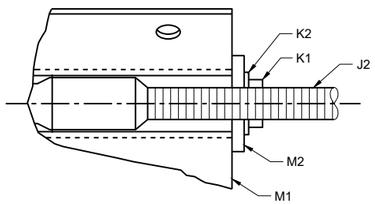
ARM GUSSET PLATE 2 (C6)



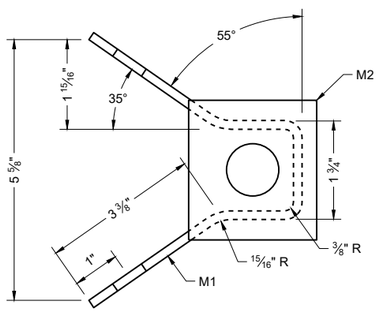


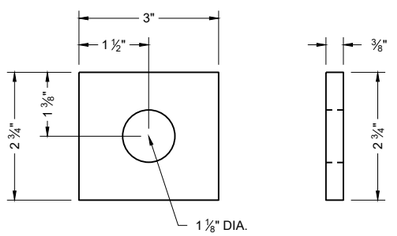
ANCHOR BRACKET (M1, M2)





SECTION A - A





ANCHOR BRACKET BEARING PLATE (M2)

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	TYPE 2 FOUNDATION TUBE	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
A2	LOWER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
A3	POST GUSSET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
A4	UPPER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/4" THICKNESS
A5	TYPE 2 POST	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI, w6x9 or w6x8.5	
B1	BREAKAWAY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED . PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	7/16" DIA.
B2	BREAKAWAY BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/16" DIA.
B3	BREAKAWAY BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
C1	ARM ASSEMBLY PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
C2	ARM ASSEMBLY TUBE 1	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
C3	ARM ASSEMBLY TUBE 2	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 3" x 3" x 1/4"
C4	ARM ASSEMBLY TUBE 3	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 2 1/2" x 2 1/2" X 1/4"
C5	ARM ASSEMBLY GUSSET PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
C6	ARM ASSEMBLY GUSSET PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
D1	ARM ASSEMBLY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	1/2" DIA.
D2	ARM ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	1/2" DIA.
D3	ARM ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
E1	TYPE 2 GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E2	BEAM GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E3	BEAM GUARD ROUNDED BUFFER END	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
F1	POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
F2	POST BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
F3	POST BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
G1	GROUND STRUT CHANNEL	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" x 11 3/4" x 10 GAUGE
G2	GROUND STRUT CONNECTOR	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
G3	GROUND STRUT PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" THICKNESS

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B47-07f

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
H1	GROUND STRUT BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	7/8" DIA.
H2	GROUND STRUT BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/8" DIA.
H3	GROUND STRUT BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
J1	BCT CABLE	AASHTO M30 / ASTM A741 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN. BREAKING STRENGTH OF 42.7 KIPS	3/4" DIA.
J2	BCT CABLE	UNC 1" ASTM A576 GRADE 1035 SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. MIN BREAKING STRENGTH OF 42.7 KIPS ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."	
K1	CABLE ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1" DIA.
K2	CABLE ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1	1" DIA.
L1	BEARING PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
L2	BEARING PLATE FLANGE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1" THICKNESS
M1	BEAM GUARD ANCHOR BRACKET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	
M2	BEAM GUARD ANCHOR END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
N1	ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
N2	ANCHOR BRACKET BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
N3	ANCHOR BRACKET BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 /ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
P1	FOUNDATION TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
Q1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
Q2	SPLICE NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	5/8" DIA.

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

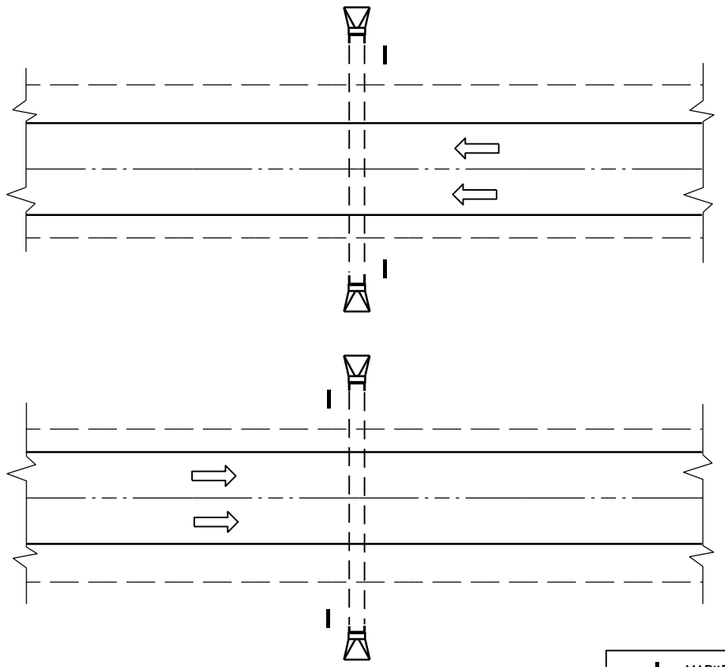
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2025 — DATE
/S/ Rodney Taylor — <position>

FHWA

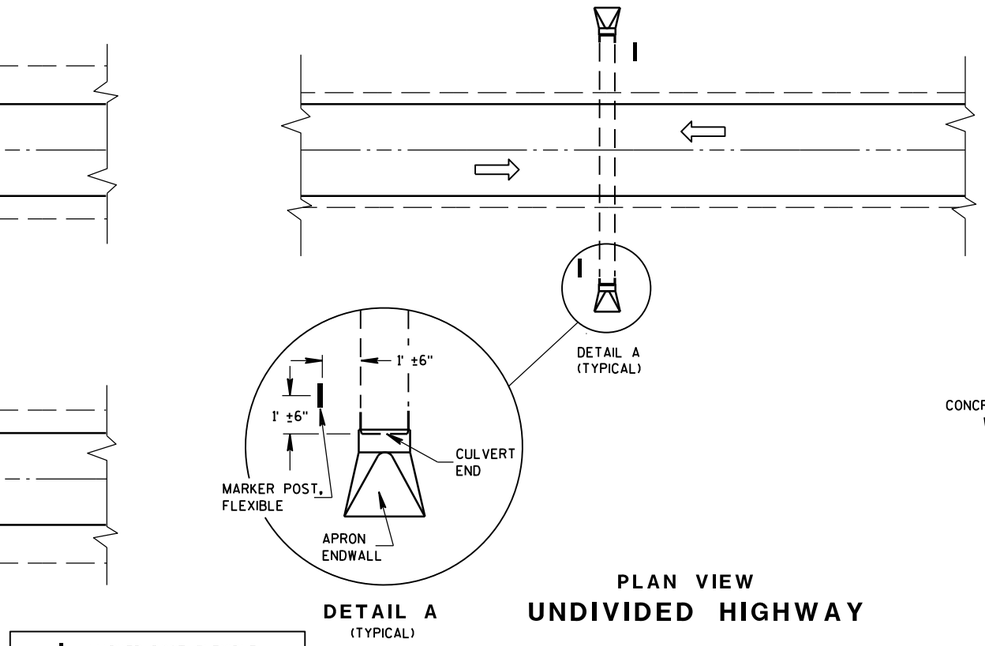
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SDD 14B47-07g



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

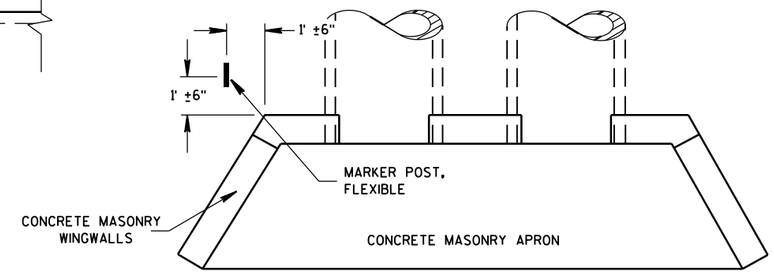
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

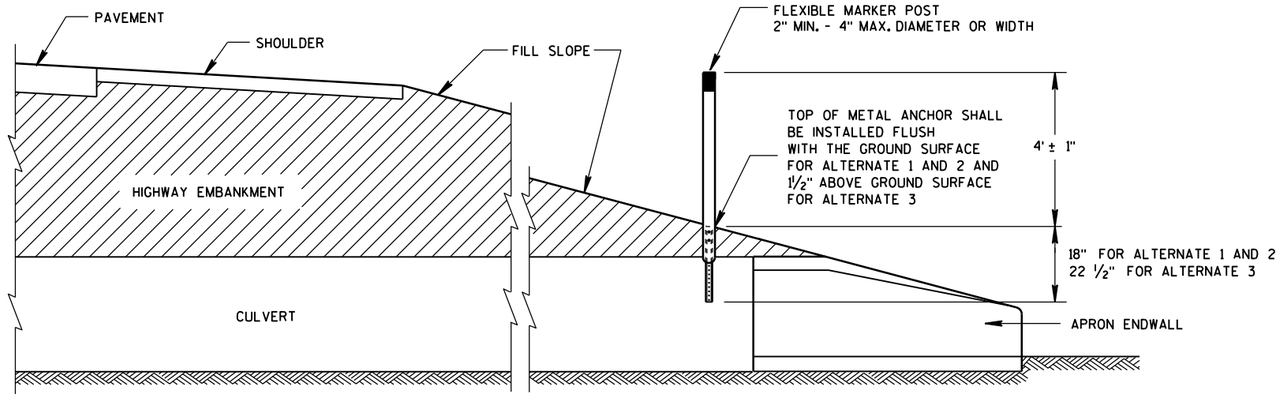
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

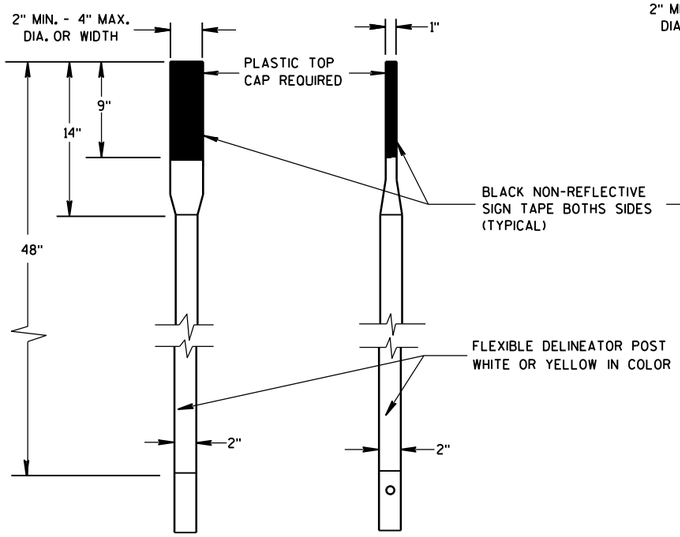
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

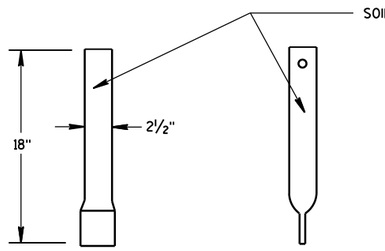
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S.D.D. 15 A 3-2a

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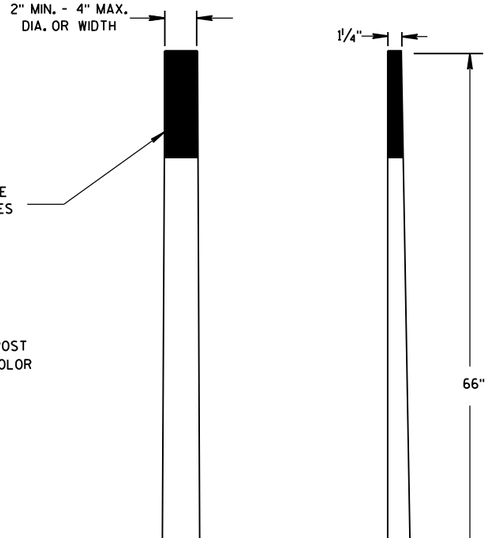
S.D.D. 15 A 3-2a





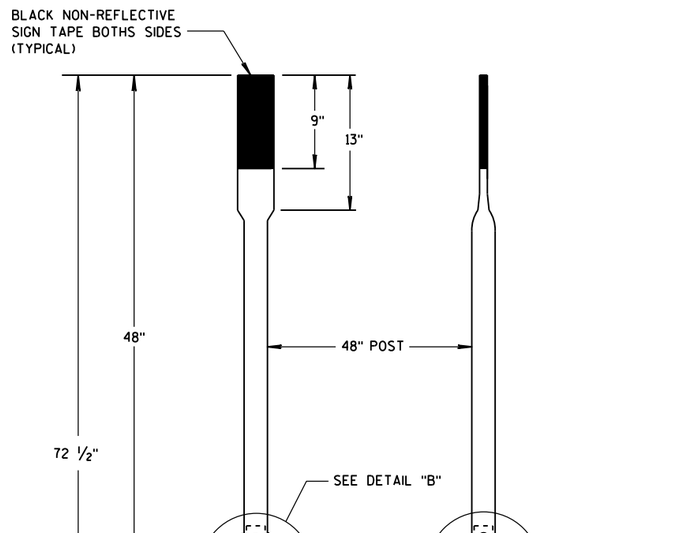
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

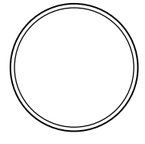
ALTERNATE 2



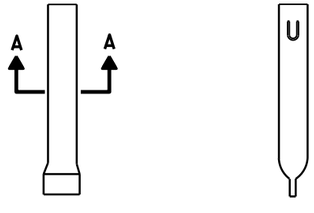
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

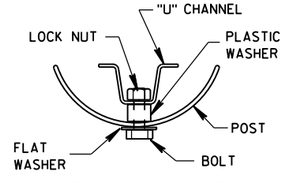


SECTION A-A

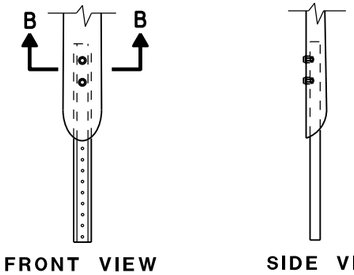


FRONT VIEW SIDE VIEW

ALTERNATE 1

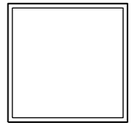


SECTION B-B

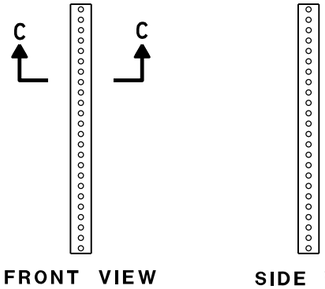


FRONT VIEW SIDE VIEW

ALTERNATE 2



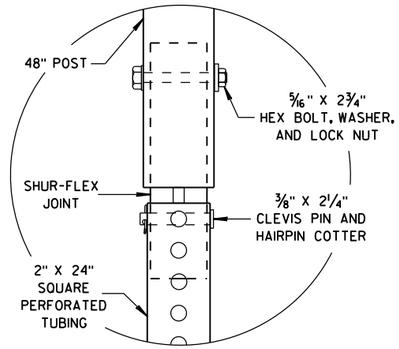
SECTION C-C



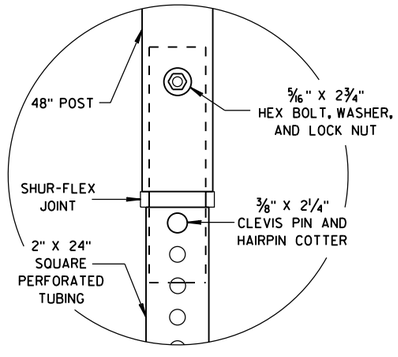
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

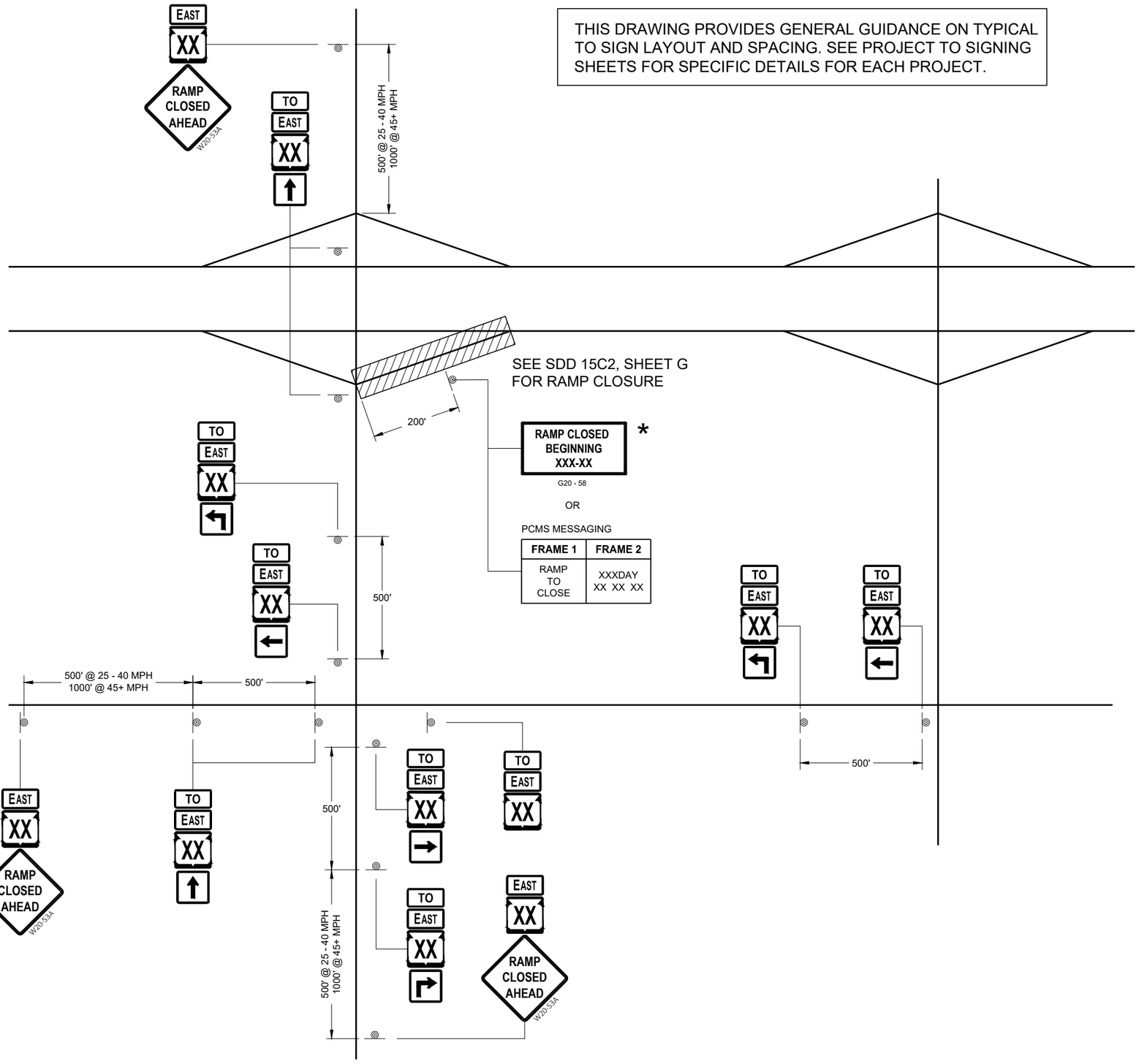
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 15 A 3-2b

6

S.D.D. 15 A 3-2b



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL TO SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

SIGN ON PERMANENT SUPPORT

TO EAST — MO4 - 5, M3 - X

XX M1 - 6 OR XX M1 - 4 OR INTERSTATE XX M1 - 1

M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE TO ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOW:
- M3 - X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- M1 - 1, M1 - 4, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
- MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).
- W20 - 53A SHALL BE 48" X 48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

ON RAMP LANE CLOSURE

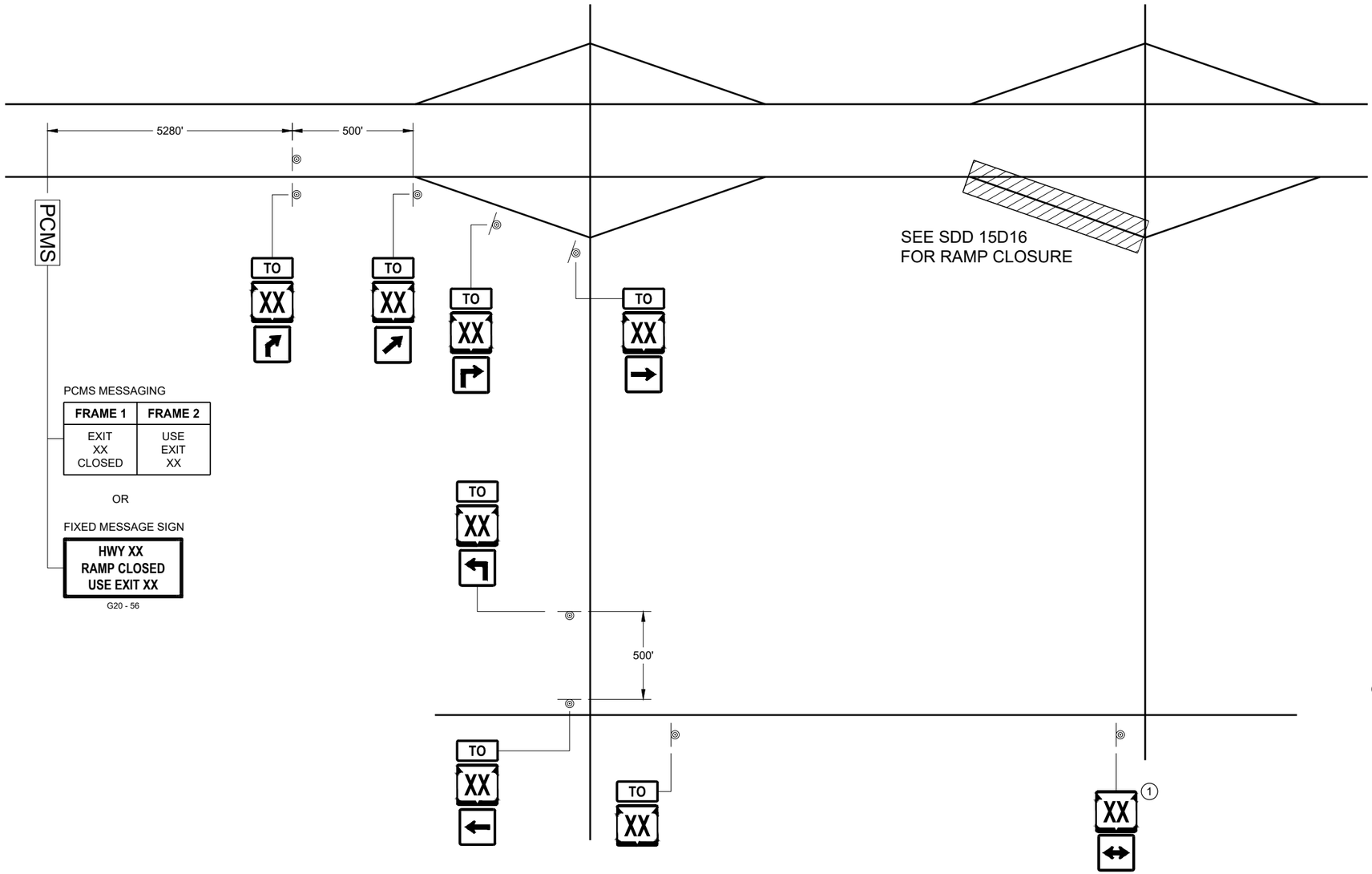
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 15C02 - 09d

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL "TO" MO-4 SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.



PCMS MESSAGING

FRAME 1	FRAME 2
EXIT XX CLOSED	USE EXIT XX

OR

FIXED MESSAGE SIGN

HWY XX
RAMP CLOSED
USE EXIT XX

G20 - 56

LEGEND

SIGN ON PERMANENT SUPPORT

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

TO MO4 - 5

XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A

M05 - 1 OR M05 - 2 OR M06 - 1 OR M06 - 2 OR M06 - 4

GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE "TO" MO-4 ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND "TO" MO-4 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOW:
- MO4 - 5 SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS).
- M1 - 4, M1 - 5A, AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS).
- MO5 - 1, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

(1) ONLY ADD IF THERE ARE NO EXISTING ROUTE MARKERS FOR THE INTERSECTING ROADWAY.

OFF RAMP
LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

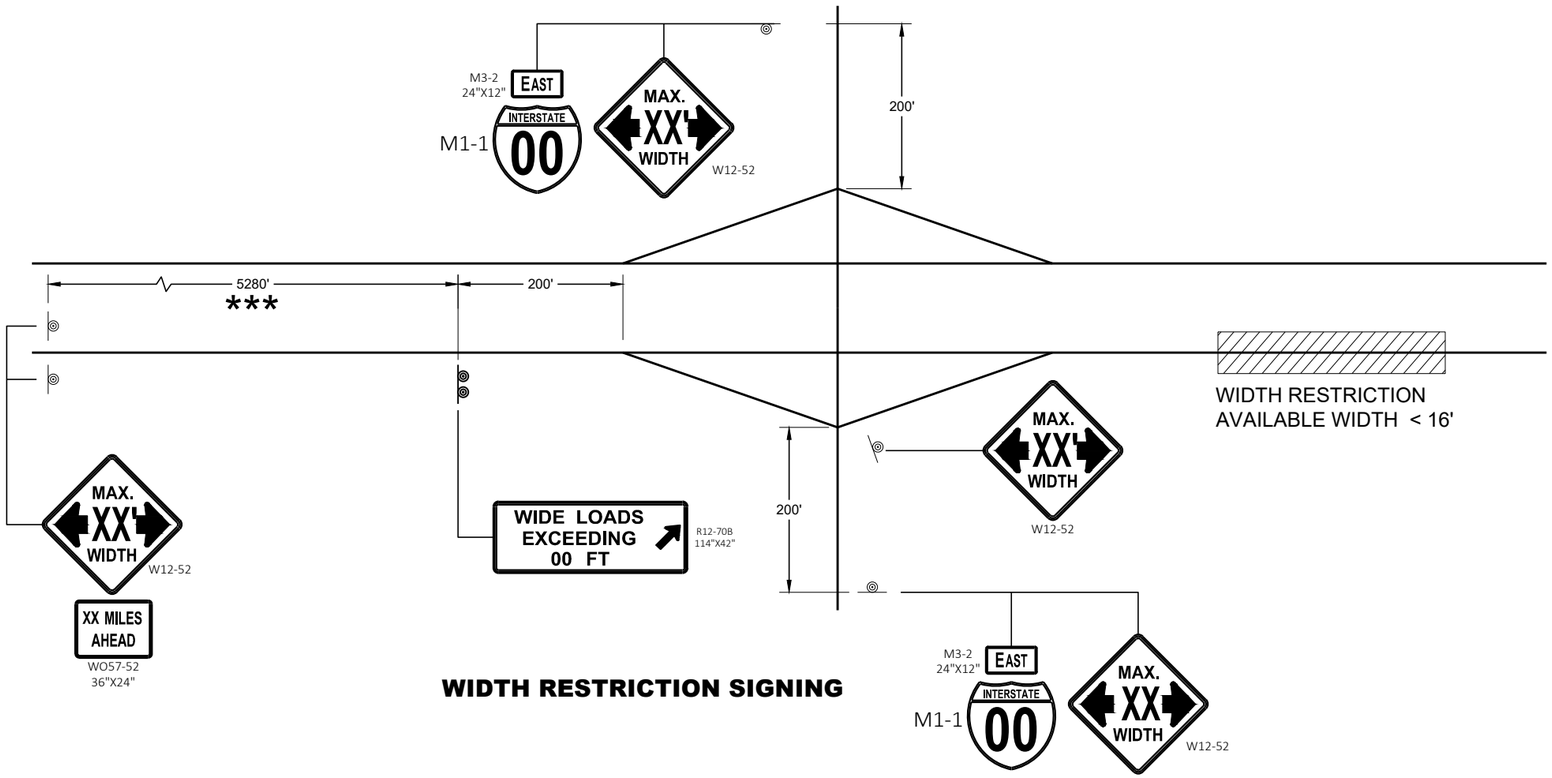
APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

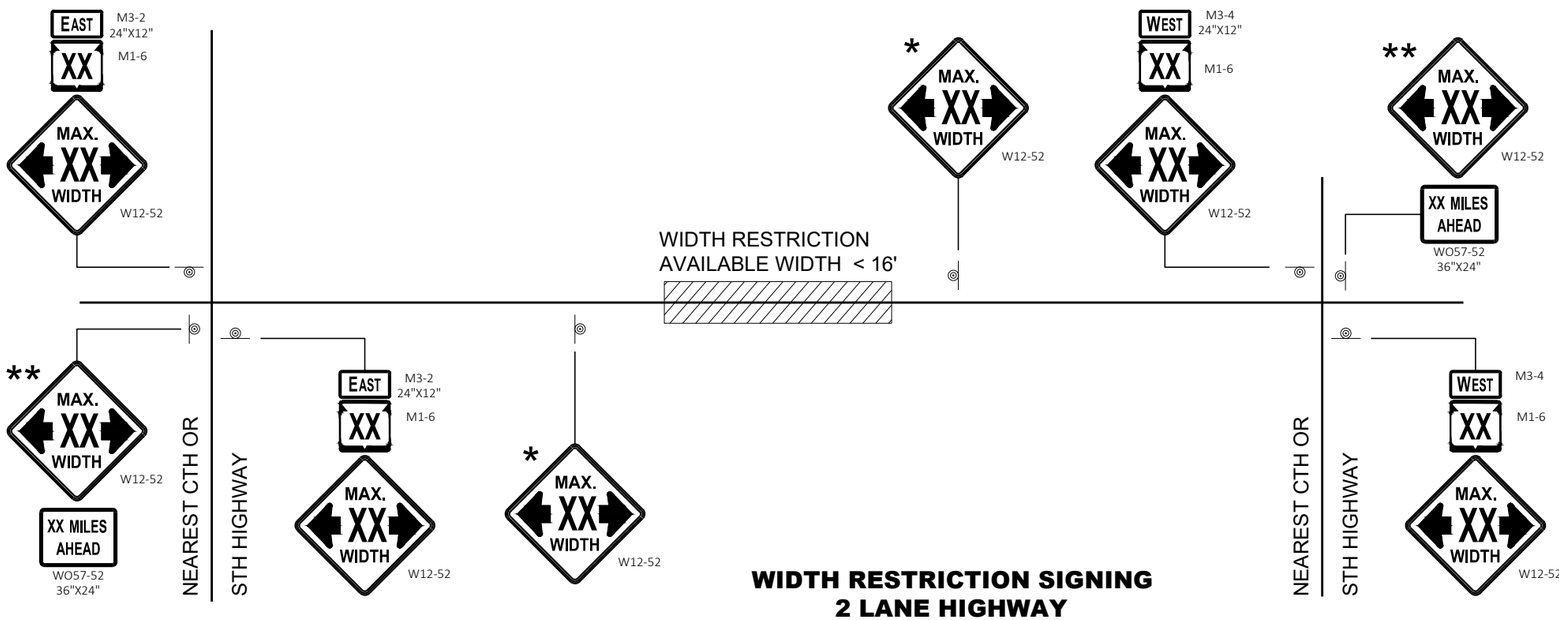
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SDD 15C02 - 09e
SDD 15C02 - 09e



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

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May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

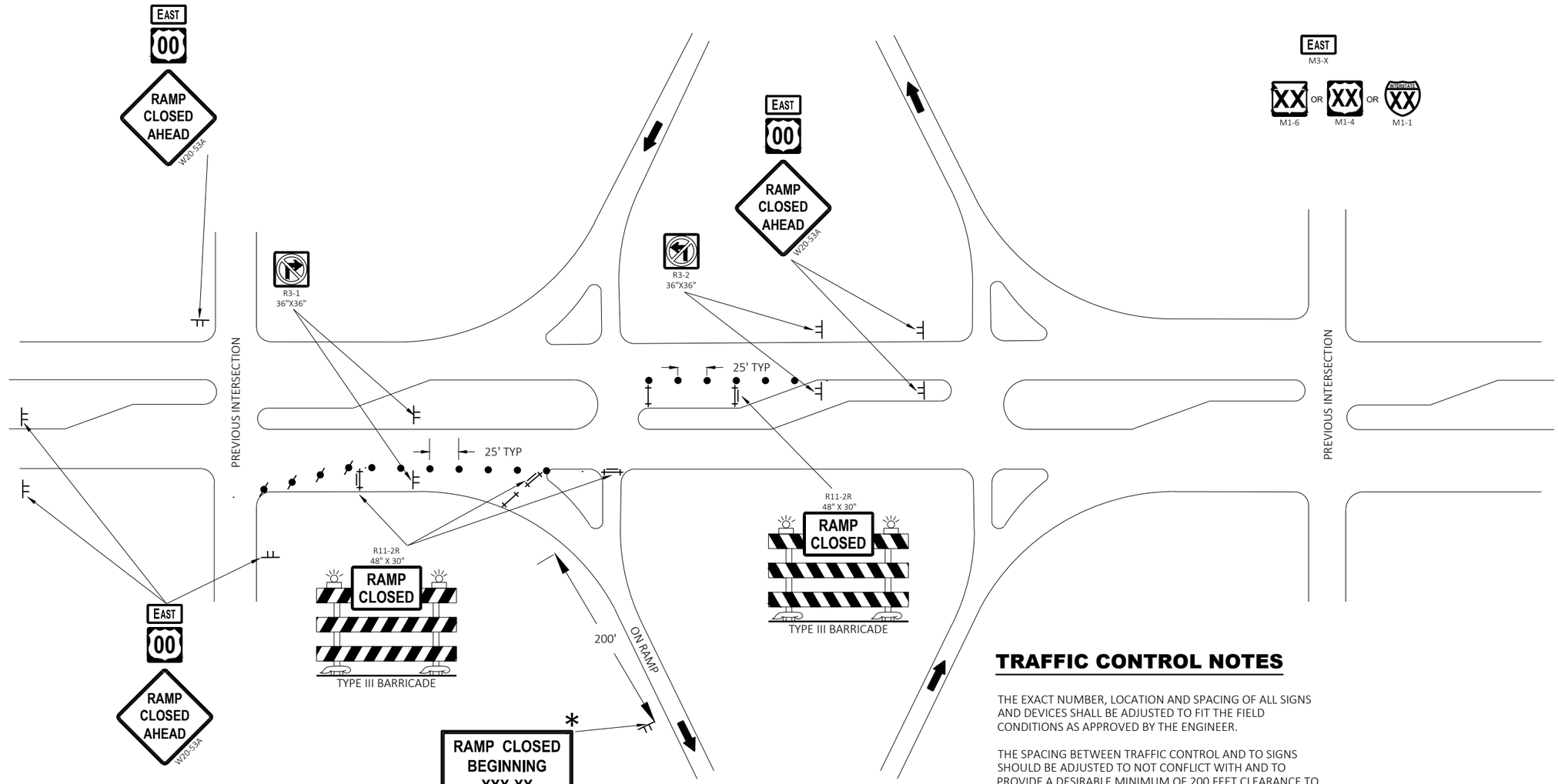
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SDD 15C02 - 09f

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SDD 15C02 - 09f



LEGEND

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

TRAFFIC CONTROL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL AND TO 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 THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24"x24" (36" x18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-1, M1-4, AND M1-6 SHALL BE 24"x24" (36"x36" IF NEEDED TO MATCH EXISTING SIGNS)
- W20-53A SHALL BE 48"X48"

* PLACE "RAMP CLOSED BEGINNING" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR LAYOUT.

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

TRAFFIC CONTROL FOR ENTRANCE RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEE

FHWA

6

SDD 15C02-09g

6

SDD 15C02-09g

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.

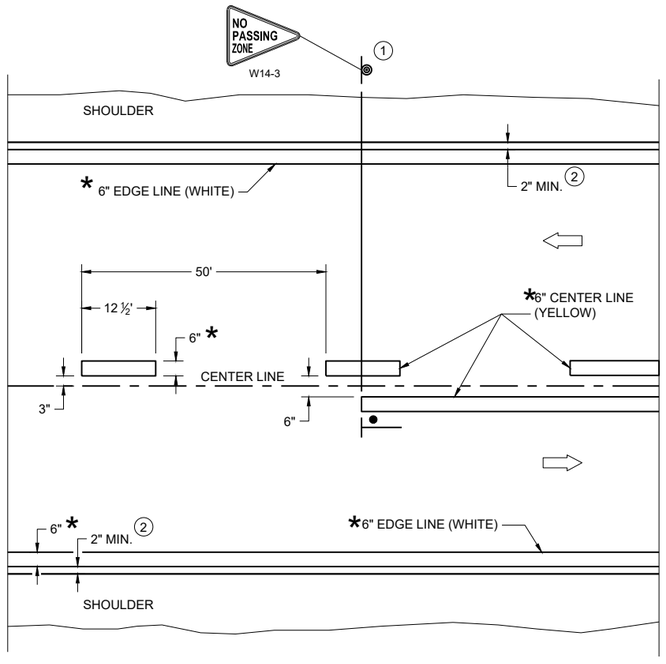
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

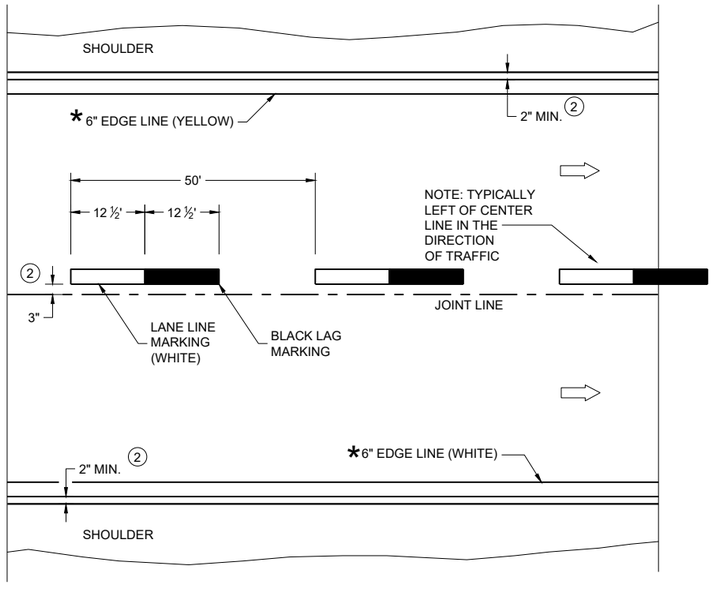
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

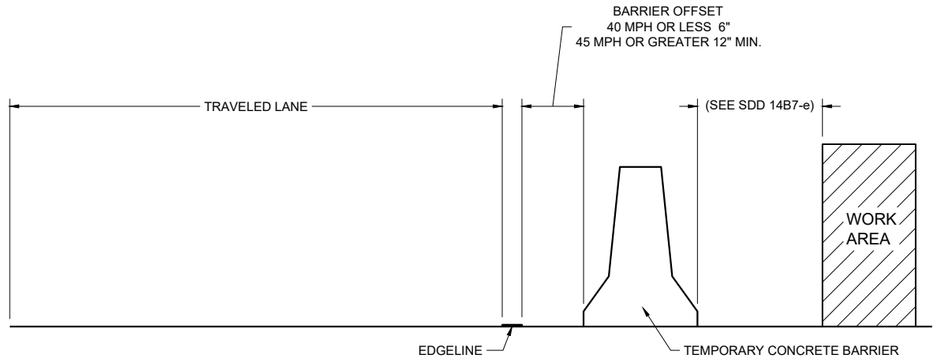
APPROVED

May 2023
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

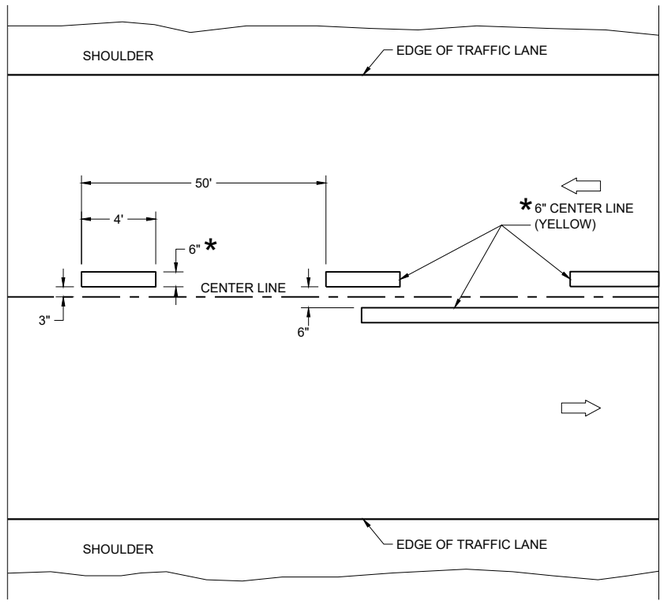
GENERAL NOTES

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

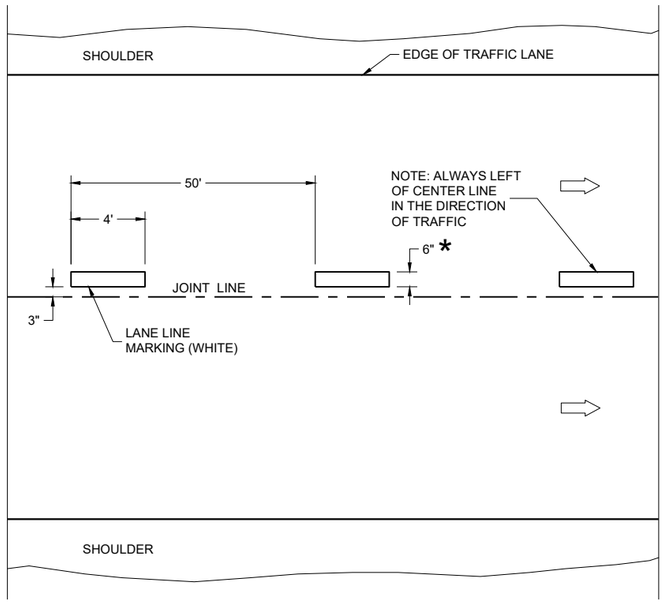
LEGEND

DIRECTION OF TRAFFIC

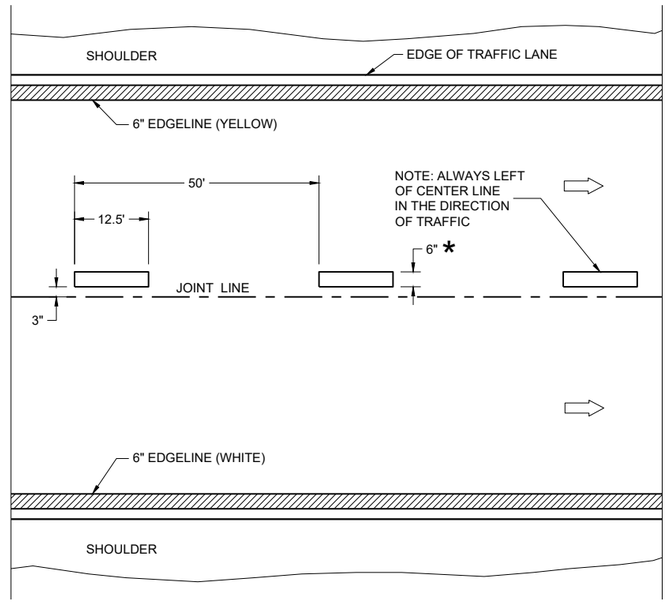
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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May 2023
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

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SDD 15C08-23b

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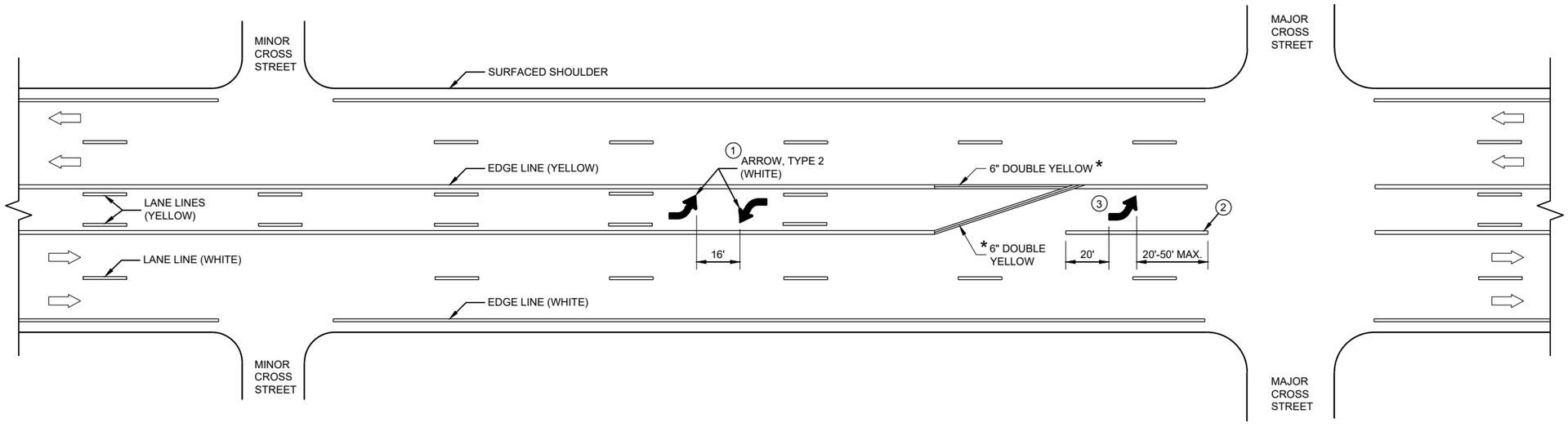
SDD 15C08-23b

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 10" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY LEFT TURN LANE

6

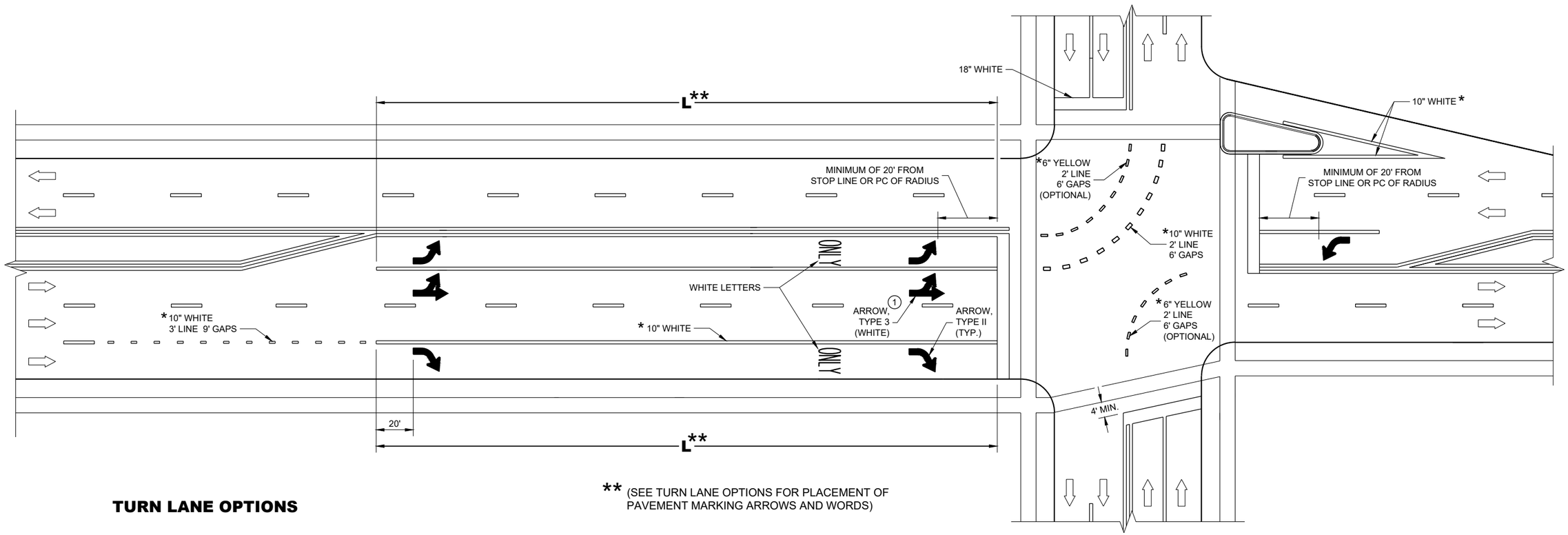
SDD 15C08-23c

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA· 228

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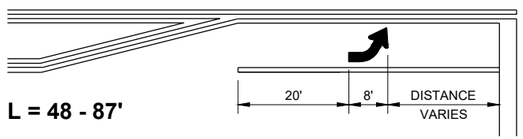
SDD 15C08-23c



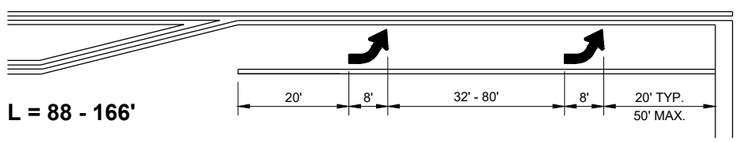
** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

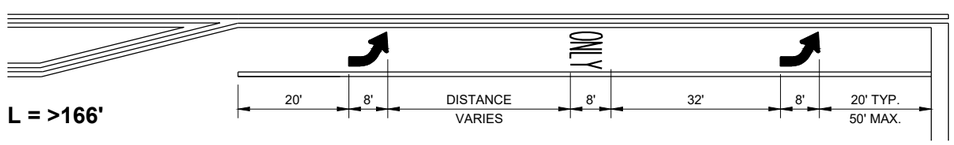
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

(1) QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

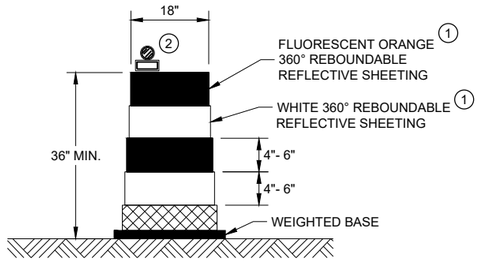
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SDD 15C08-23d

SDD 15C08-23d

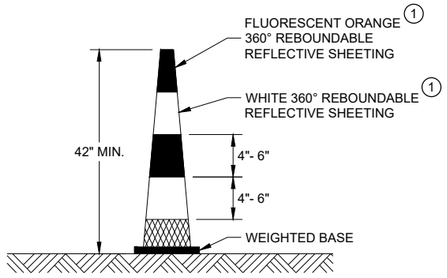
GENERAL NOTES

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.



DRUM

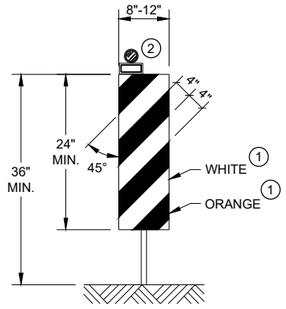
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

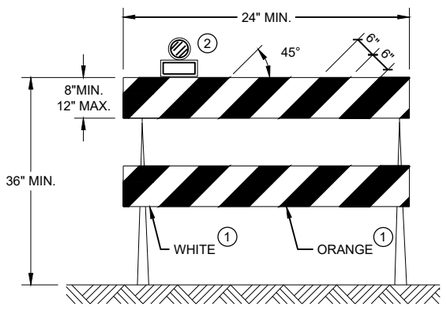
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



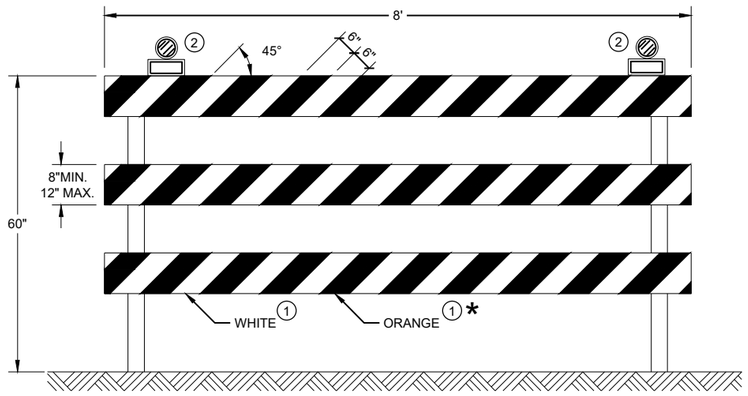
VERTICAL PANEL

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



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
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 10b
SDD 15C11 - 10b

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.

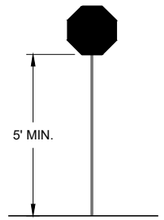
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

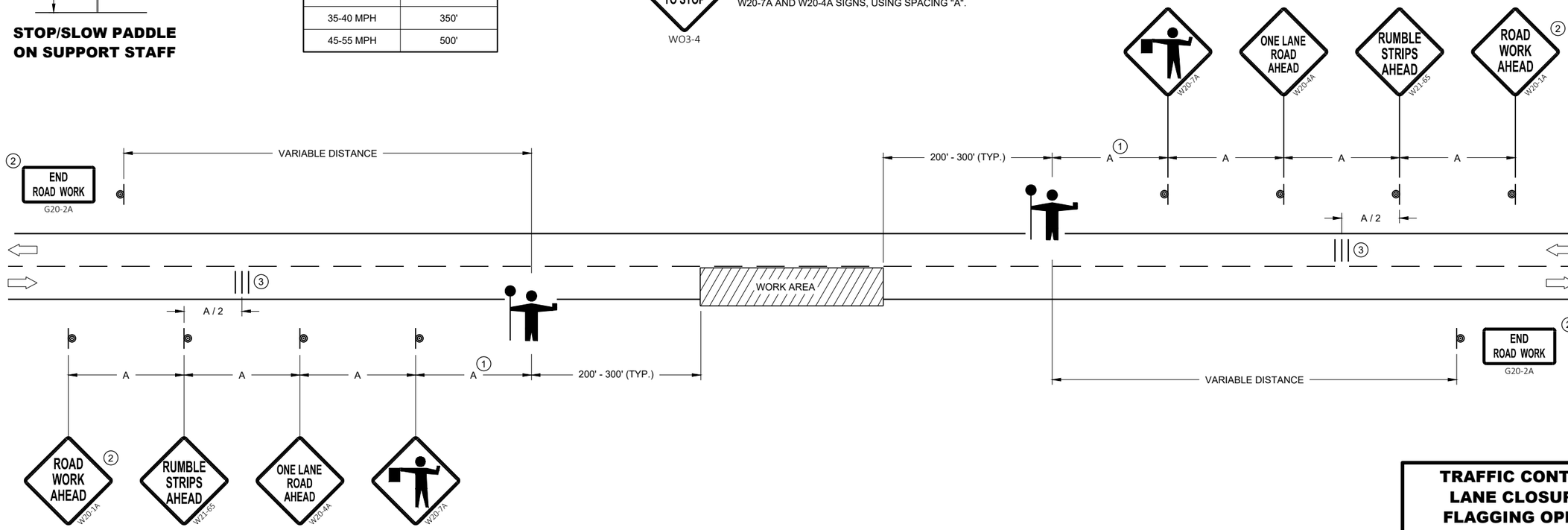
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15C12 - 09a

SDD 15C12 - 09a

GENERAL NOTES

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL CONE 42-INCH

TRAFFIC CONTROL DRUM

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

AFAD — AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

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

IF THE AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) STOPS WORKING, 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.

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.

(1) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(2) IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS

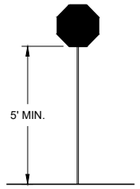
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

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.

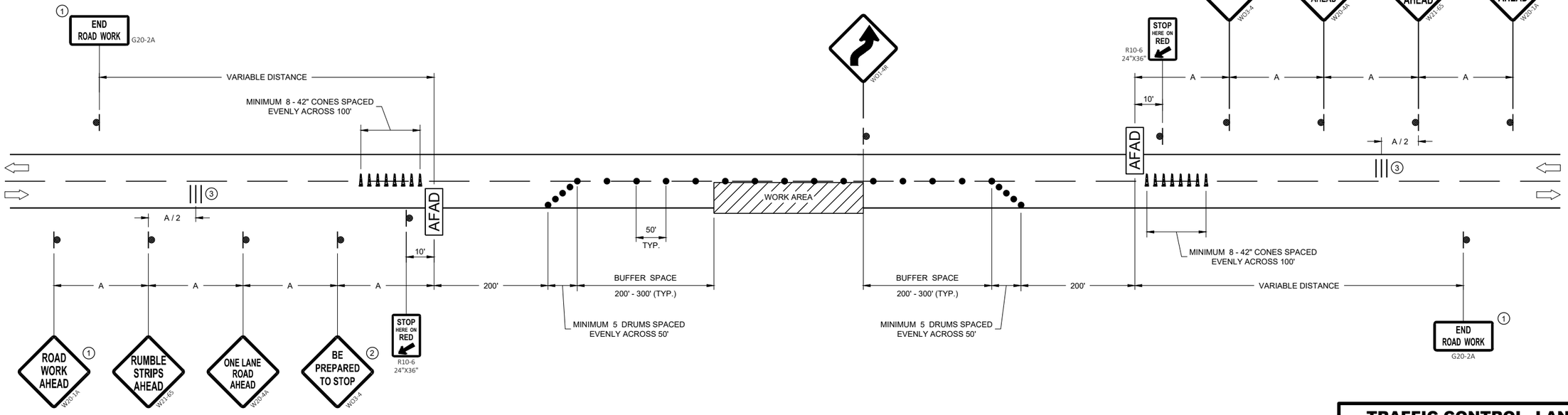
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSELY AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER.



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'



6

TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

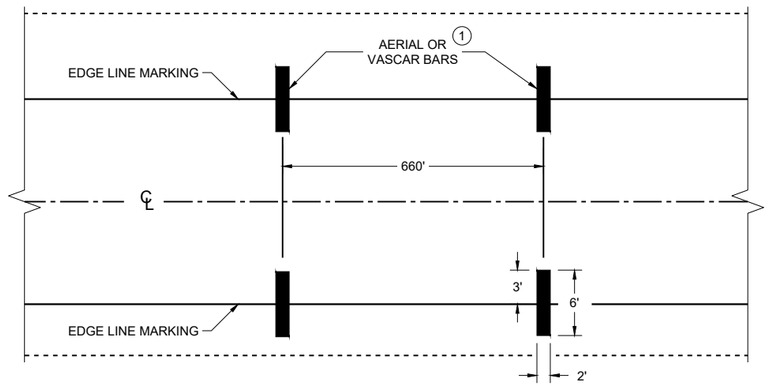
FHWA

SDD 15C12 - 09b

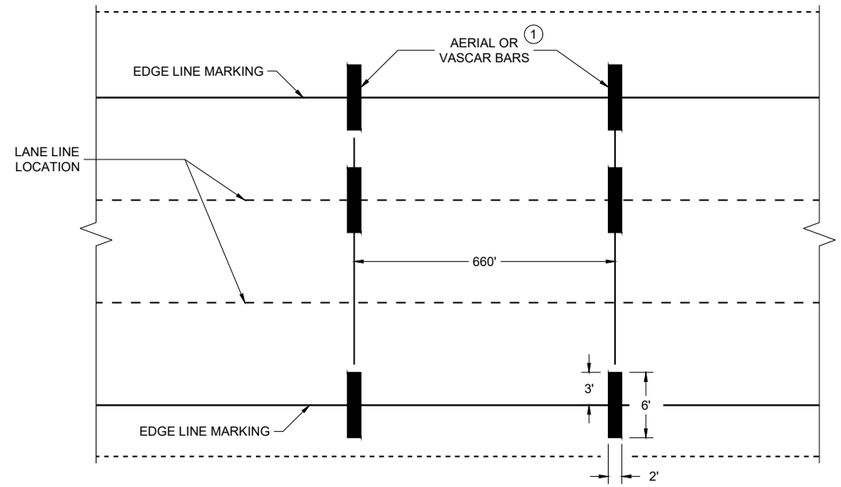
SDD 15C12 - 09b

GENERAL NOTES

(1) PLACE TWO TO FIVE AERIAL OR VASCAR BARS AT 660 FOOT SPACING.



TYPICAL FOR TWO WAY OR ONE WAY TRAFFIC



TYPICAL FOR MULTILANE TRAFFIC

SPEED ENFORCEMENT ZONE WITH AERIAL OR VASCAR BARS

AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER

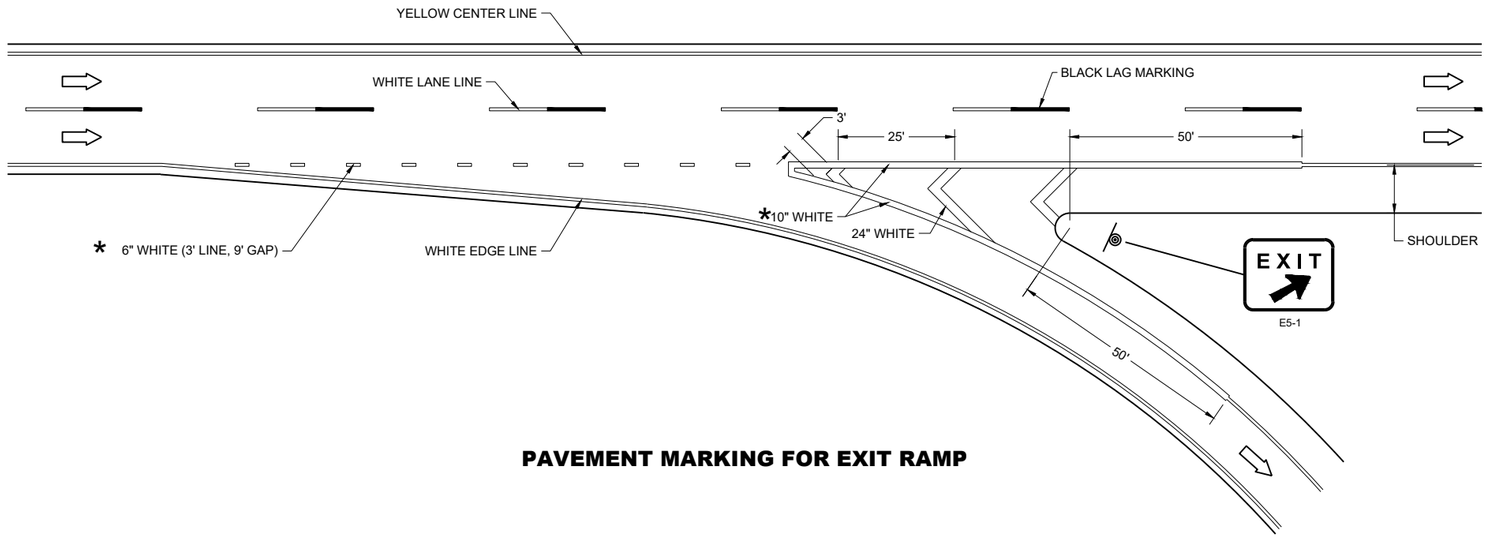
FHWA

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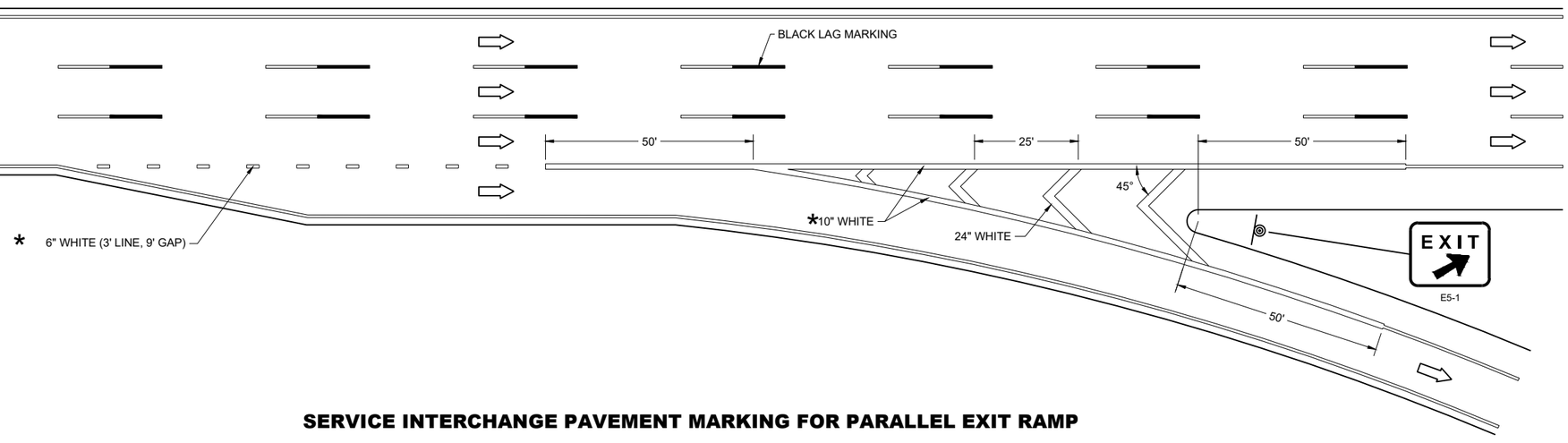
SDD 15C14-05

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SDD 15C14-05



PAVEMENT MARKING FOR EXIT RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT RAMP

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, EXIT RAMP AND PARALLEL EXIT RAMP

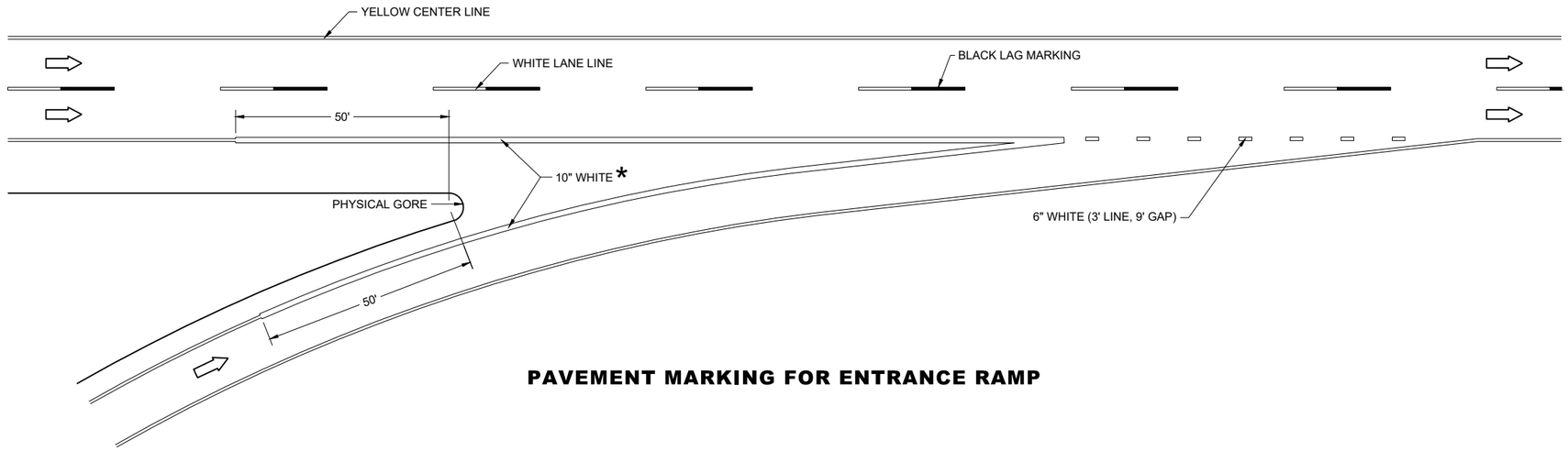
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C31-08a

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

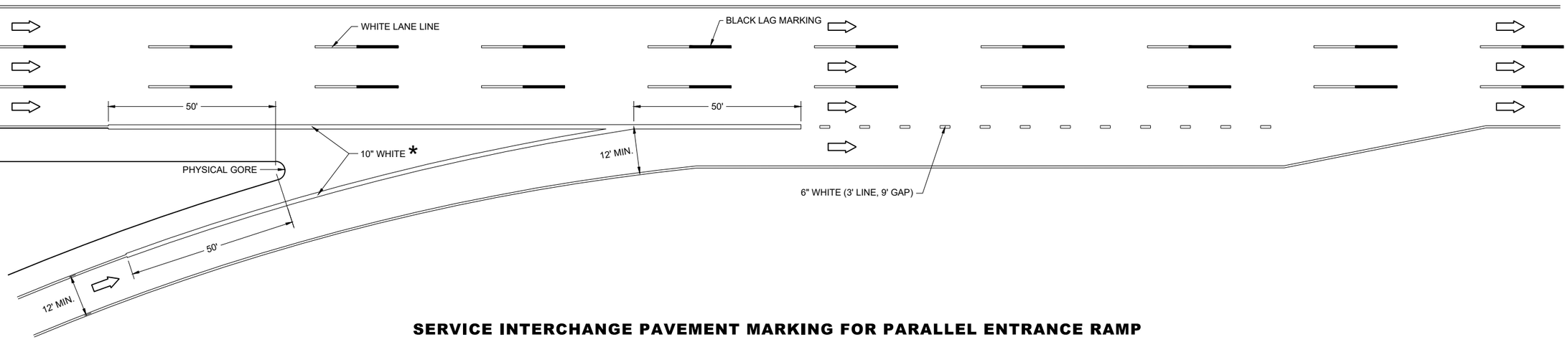


PAVEMENT MARKING FOR ENTRANCE RAMP

LEGEND

DIRECTION OF TRAVEL

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

6

6

SDD 15C31-08c

SDD 15C31-08c

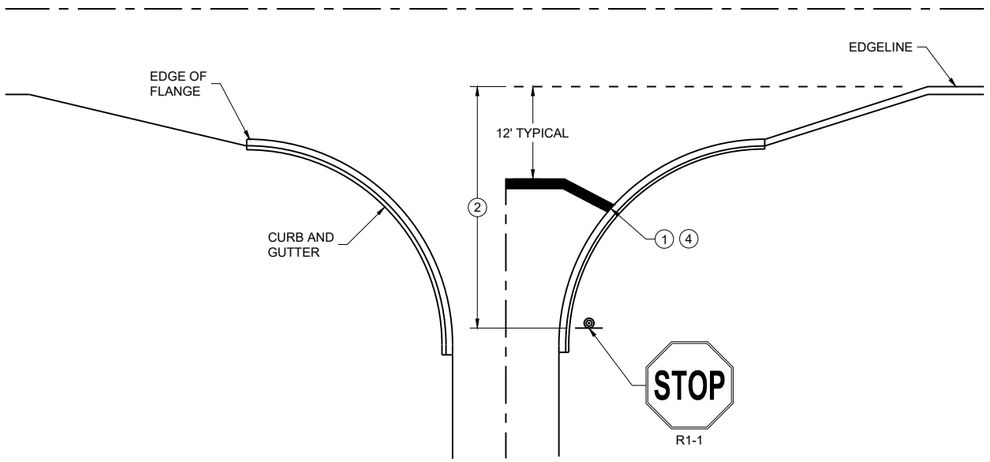
PAVEMENT MARKING, ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

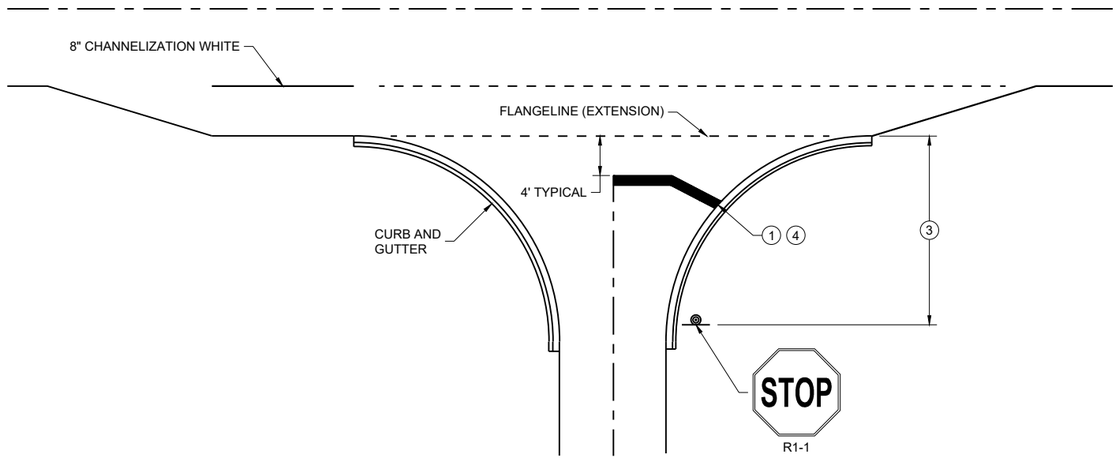
GENERAL NOTES

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

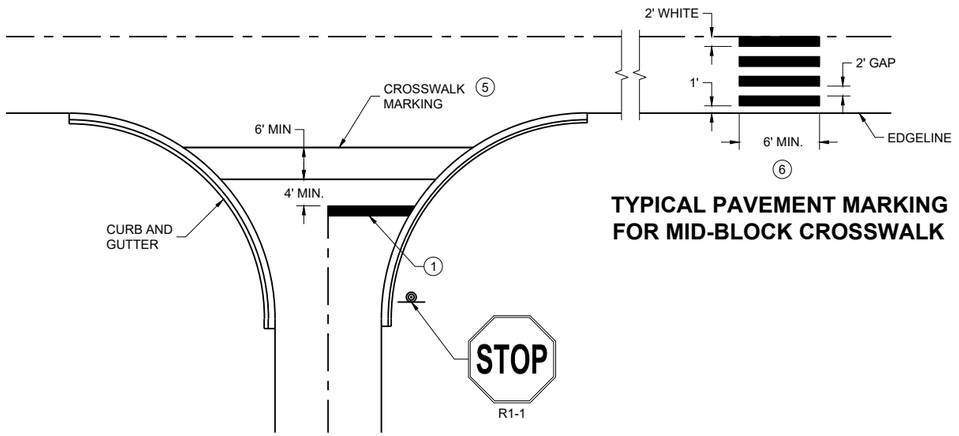
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE 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.
6. POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

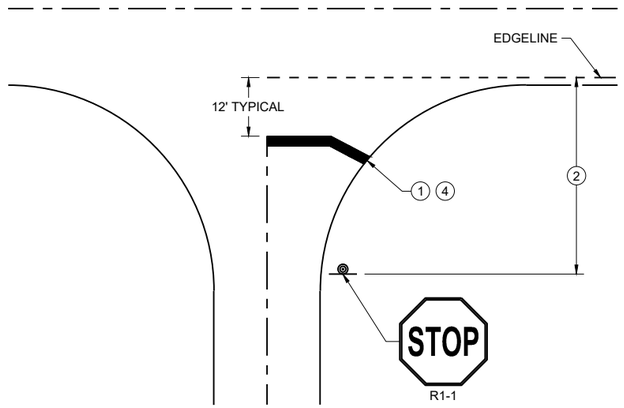


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK (5)

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA

6

SDD 15C33-05

6

SDD 15C33-05

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.

IF THE SPEED LIMIT WILL CHANGE BASED ON THE PRESENCE OF WORKERS, USE THE TAPER LENGTH THAT MATCHES THE HIGHER OF THE TWO SPEEDS FOR A CONTINUOUS LANE CLOSURE.

EXISTING POST MOUNTED SPEED LIMIT SIGNS SHOULD BE COVERED OR REMOVED.

(1) POST NON-CONSTRUCTION SPEED LIMIT.

(2) IF THE LANE CLOSURE MOVES DOWNSTREAM, LEAVE DSLT IN PLACE.

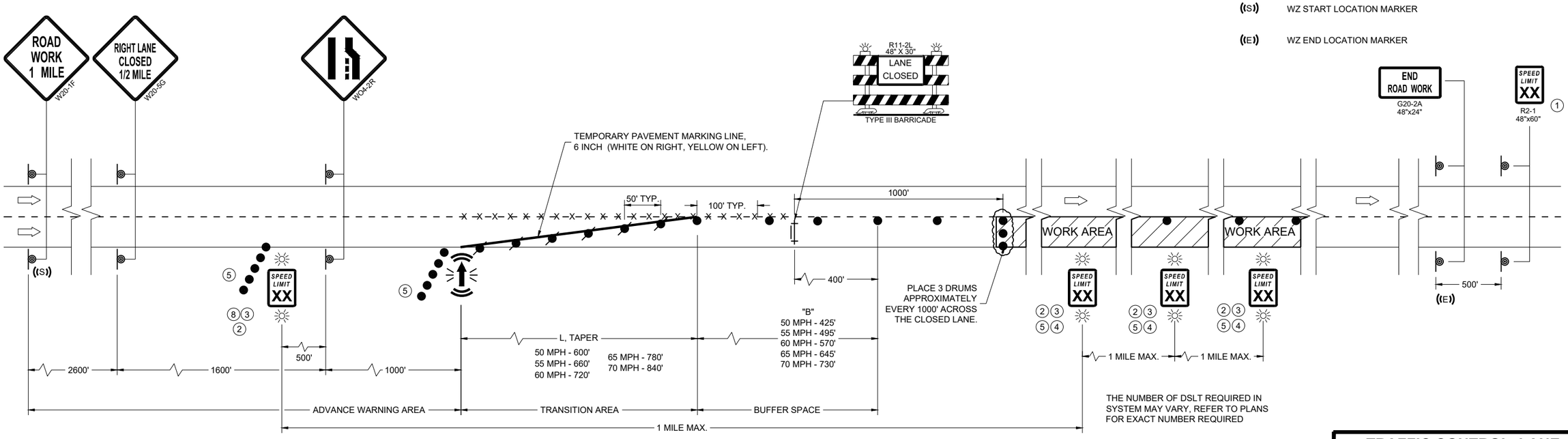
(3) PLACE DSLT AT EXISTING POST MOUNTED SPEED LIMIT SIGN AFTER THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. IF THERE IS NOT AN EXISTING SIGN, PLACE 1,500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP

(4) FOR LEFT LANE CLOSURES, DSLT REMAINS ON RIGHT SHOULDER.

(5) 5 DRUMS SPACED @ 10' INTERVALS AS NEEDED.

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
- CONNECTED ARROW BOARD
- DIGITAL SPEED LIMIT TRAILER (DSLT)
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER



TRAFFIC CONTROL, LANE CLOSURE, DIGITAL SPEED REDUCTION SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6 SDD 15D12-16g

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.

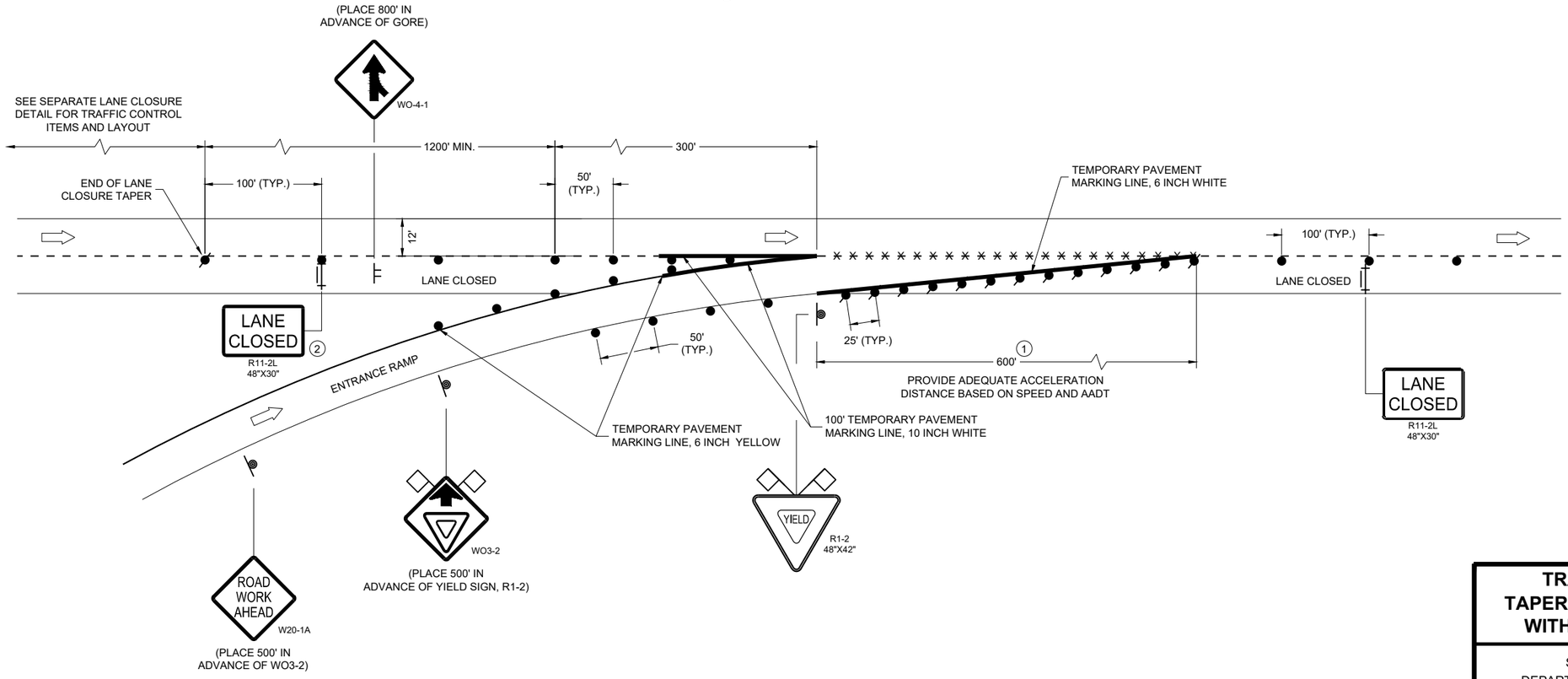
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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.

(2) IF LOCATED AFTER INITIAL LANE CLOSURE BARRICADE AND "LANE CLOSED" SIGN, USE 3 DRUMS IN PLACE OF BARRICADE AND SIGN.



TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — <position>
FHWA

6

SDD 15D15-08c

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.

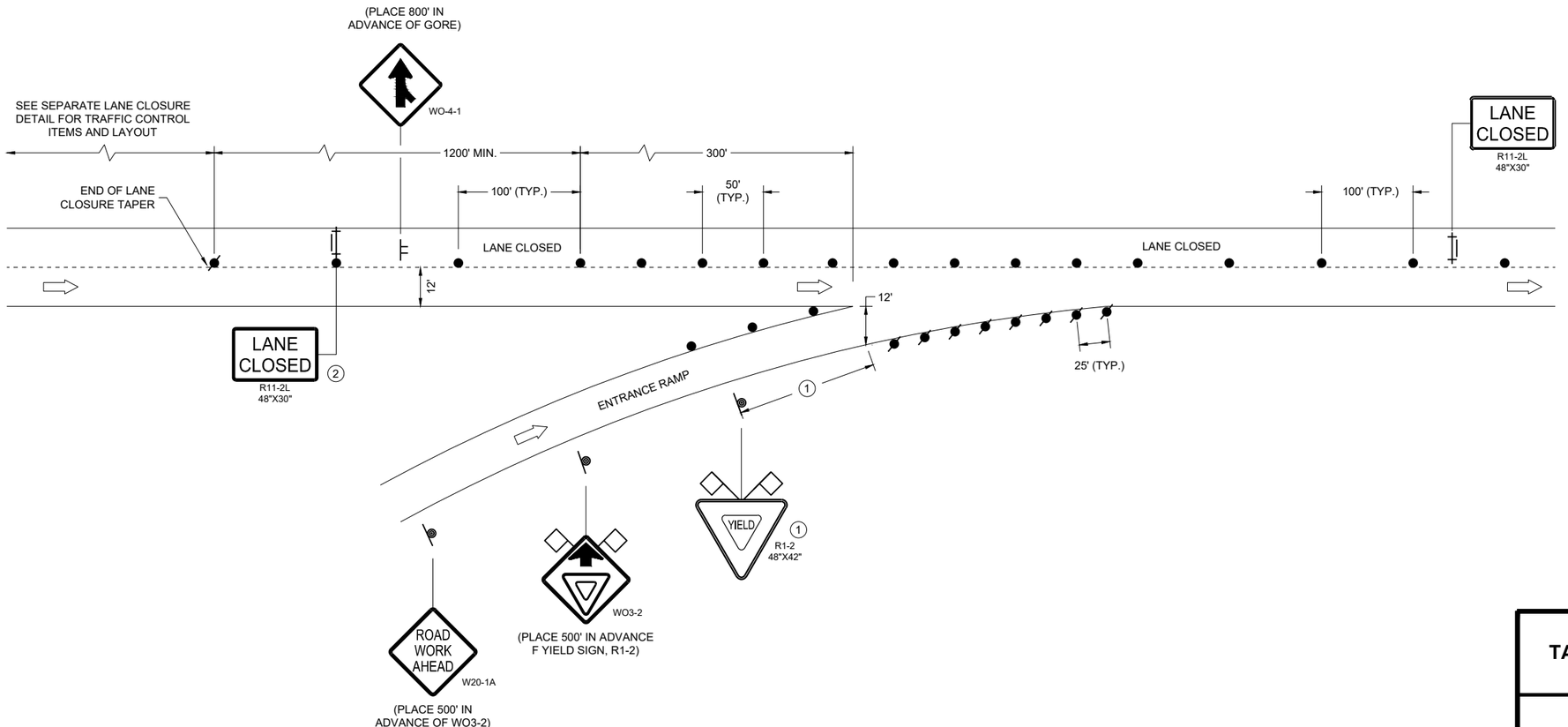
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

(2) IF LOCATED AFTER INITIAL LANE CLOSURE BARRICADE AND "LANE CLOSED" SIGN, USE 3 DRUMS IN PLACE OF BARRICADE AND SIGN.



TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6

SDD 15D15-08d

6

SDD 15D15-08d

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.

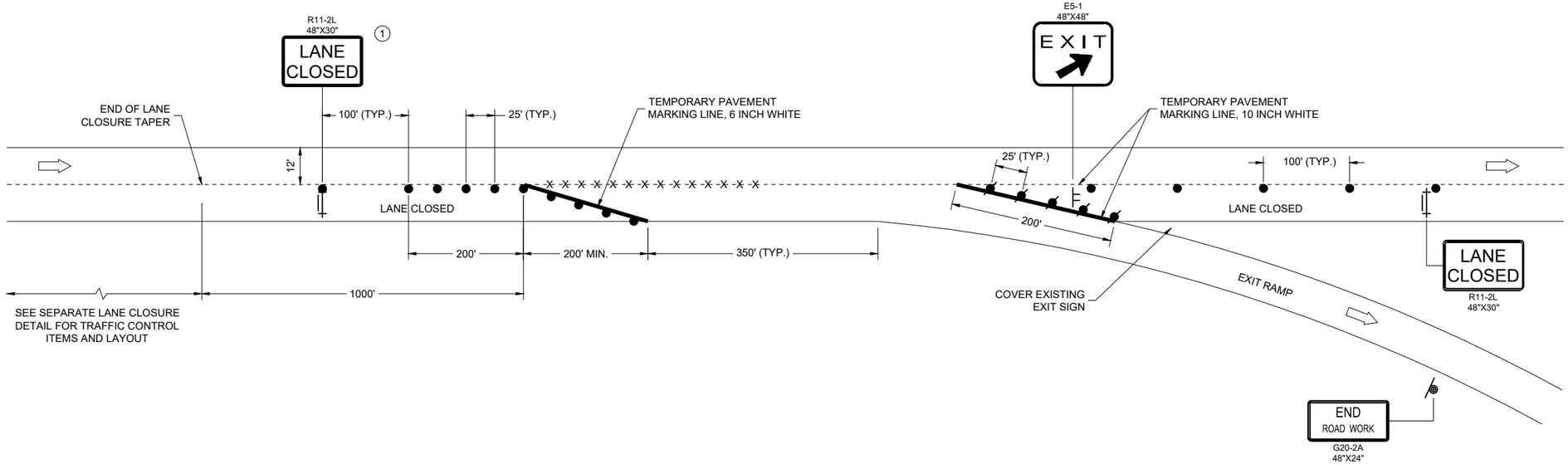
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

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.

(1) IF LOCATED AFTER INITIAL LANE CLOSURE BARRICADE AND "LANE CLOSED" SIGN, USE 3 DRUMS IN PLACE OF BARRICADE AND SIGN.



TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

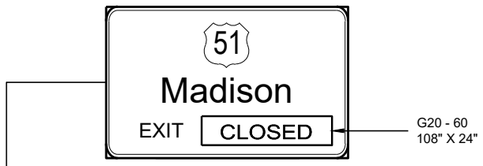
February 2025 — DATE

/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

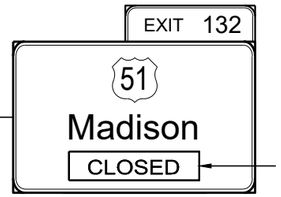
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SDD 15D15-08e



G20 - 60
108" X 24"

OR



G20 - 60
108" X 24"

PLACE SIGN G20 - 60 OVER MILEAGE
ON EXISTING E1 - 1A SIGN

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

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

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.

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.

PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

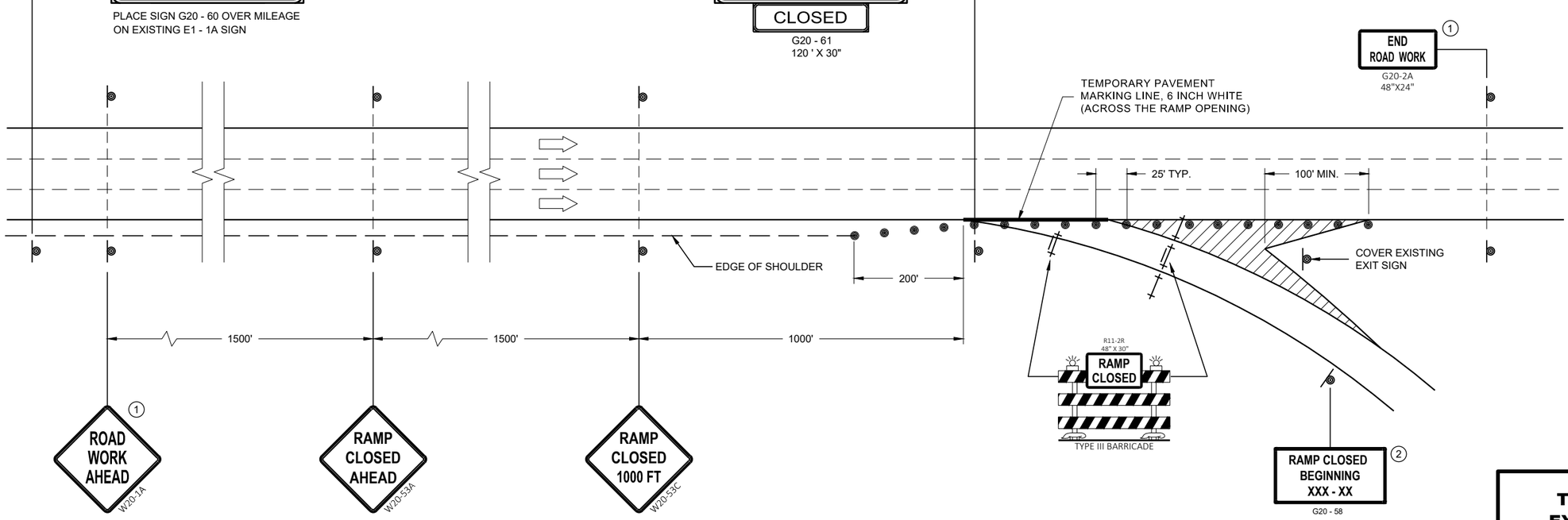
(1) W20 - 1A AND G20 - 2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

(2) PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



COVER ARROW ON EXISTING
E4 - 1 SIGN (COVERING SIGNS
TYPE I)

G20 - 61
120 ' X 30"



OR

PCMS MESSAGING

FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

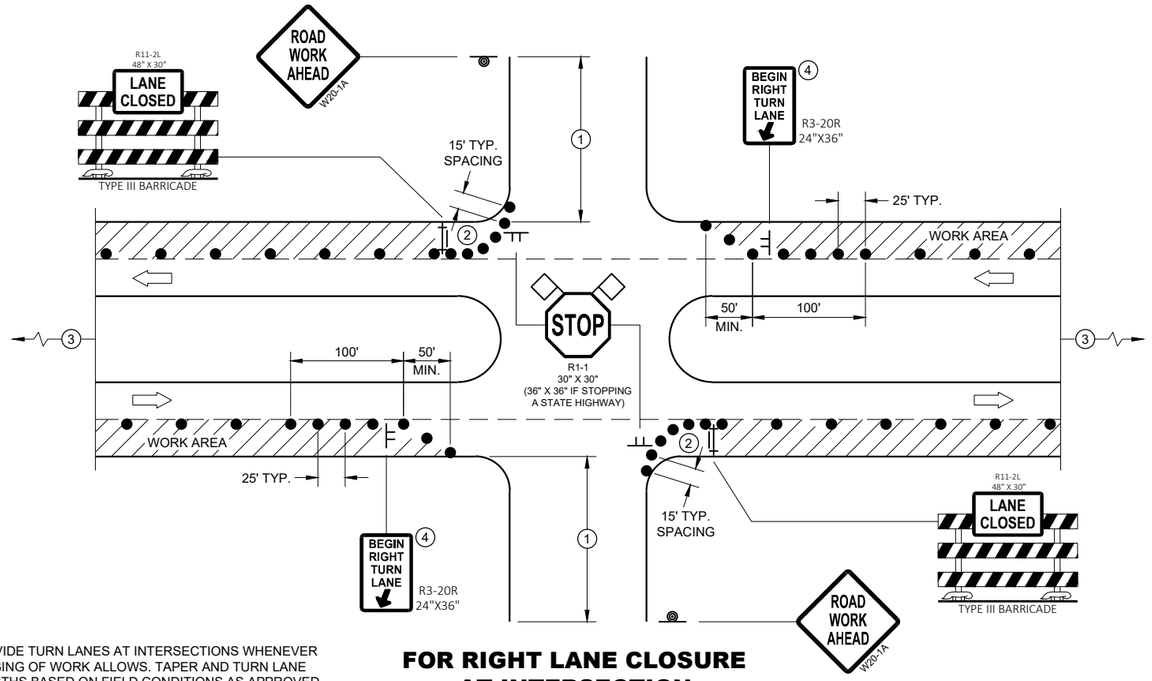
APPROVED
May 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 15D16-06



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

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT 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. 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 TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

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

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

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

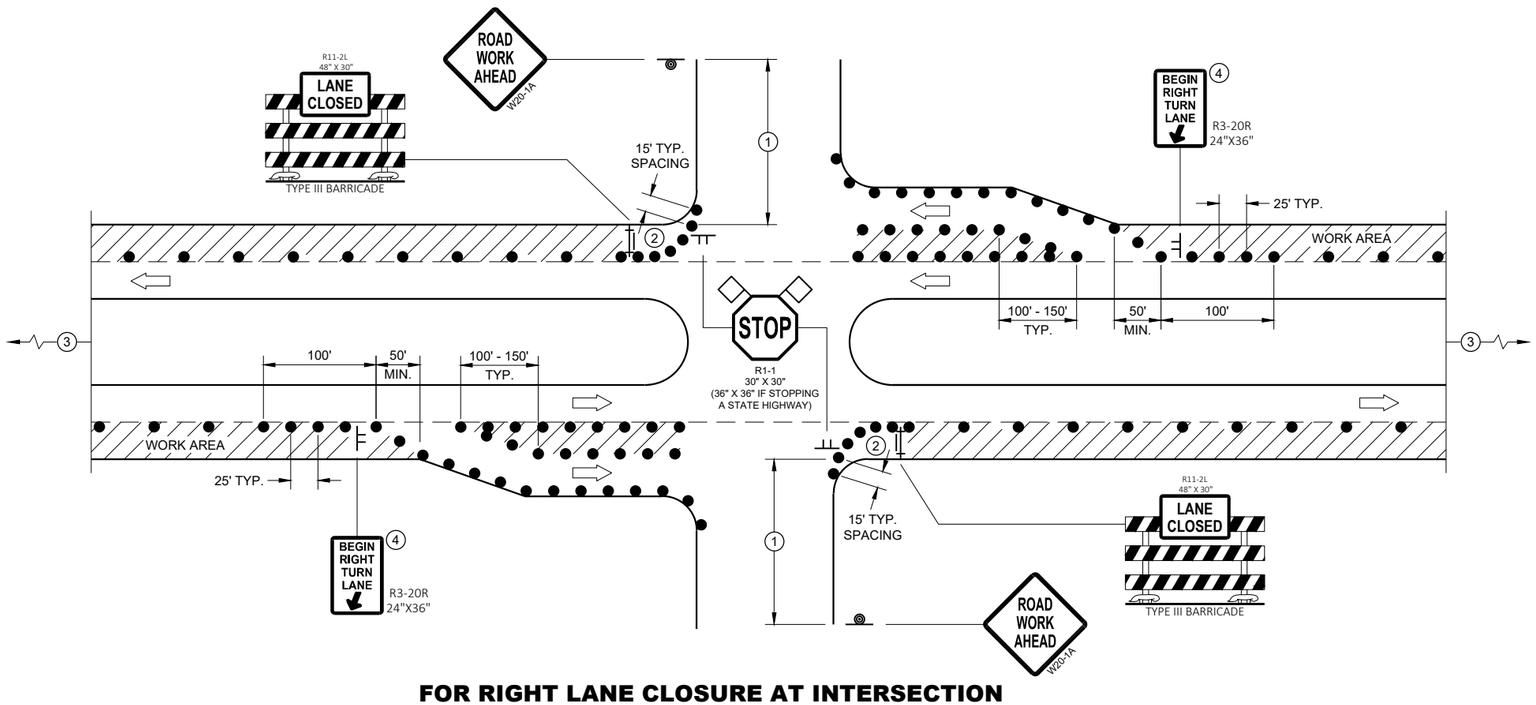
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



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

LEGEND

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

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

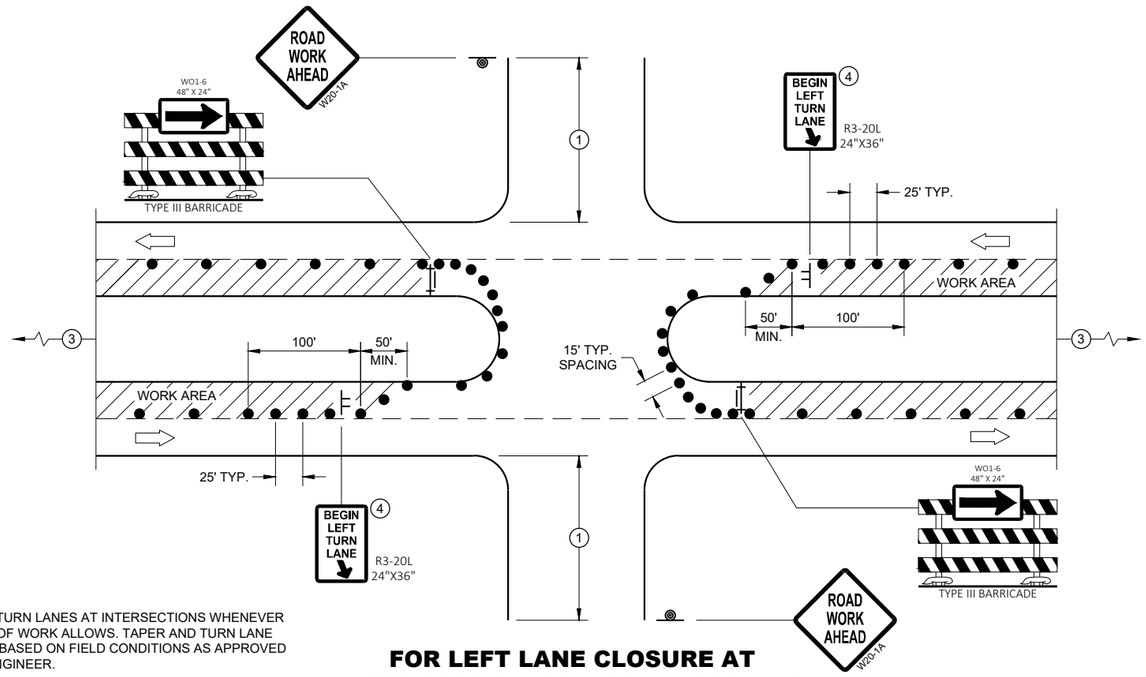
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D21 - 07a

6

SDD 15D21 - 07a



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

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT 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. 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 TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

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

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

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

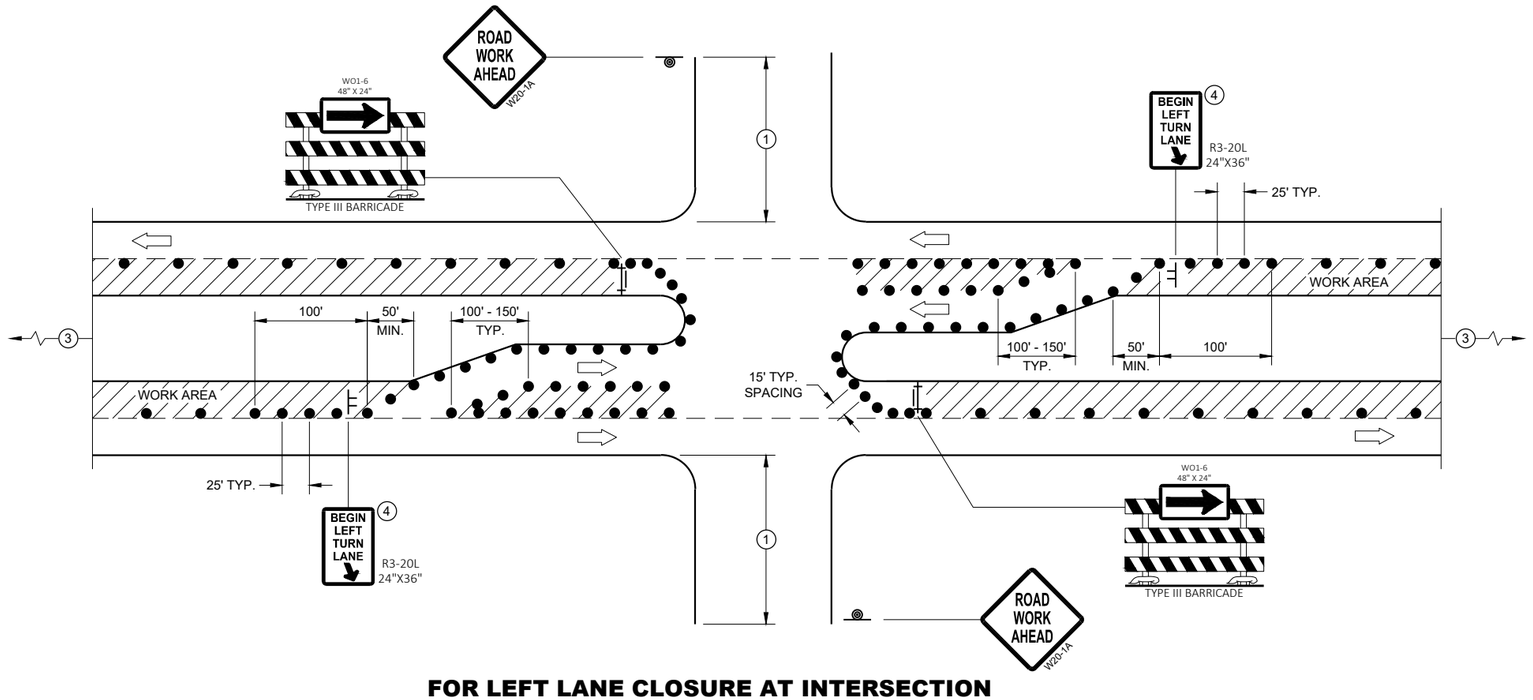
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



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

LEGEND

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

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D21 - 07b

6

SDD 15D21 - 07b

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- CONNECTED ARROW BOARD
- WORK AREA
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER

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.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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.

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

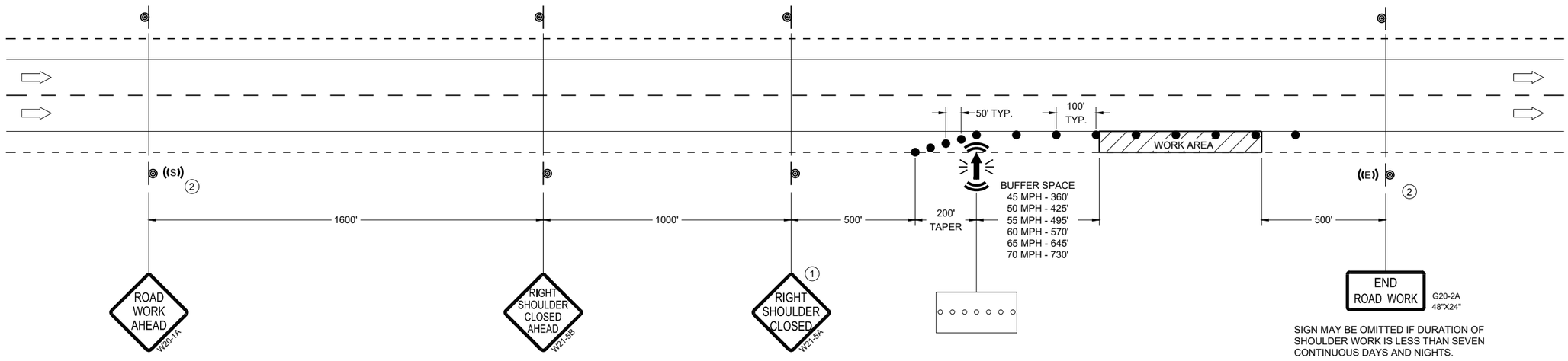
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

(1) FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR THE W21-5A SIGN MAY BE OMITTED.

(2) IF ALREADY PRESENT WITHIN PROJECT , DO NOT INCLUDE ADDITIONAL DEVICE.



SIGN MAY BE OMITTED IF DURATION OF SHOULDER WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.

TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

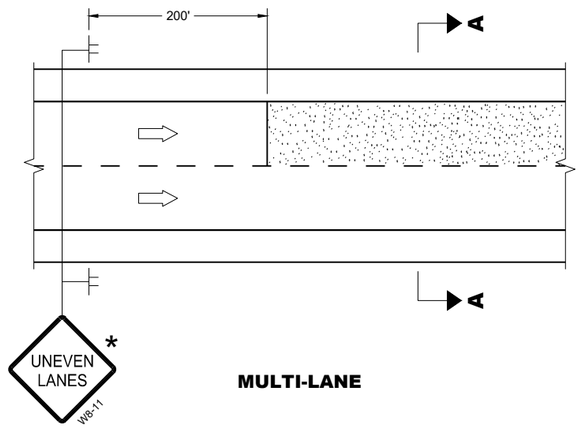
APPROVED

Noveber 2025
DATE

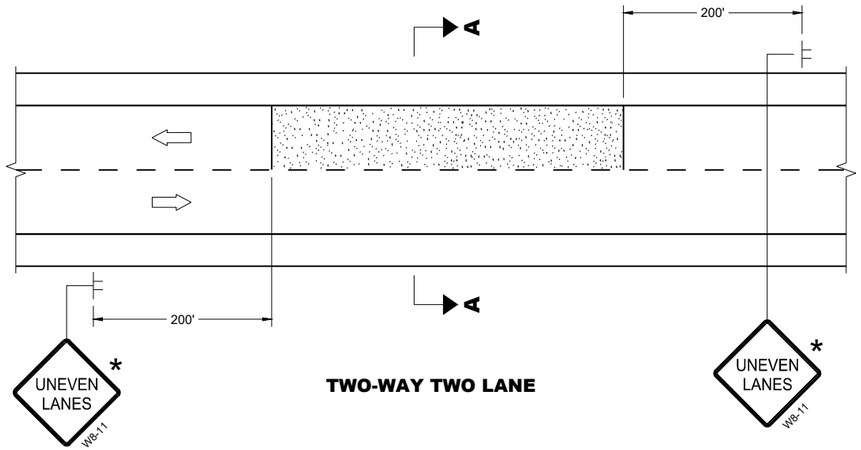
/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

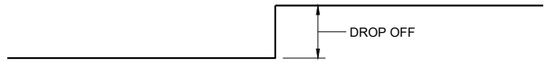
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SDD 15D27-05



MULTI-LANE

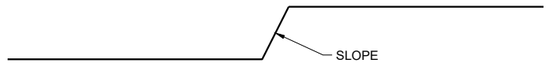


TWO-WAY TWO LANE

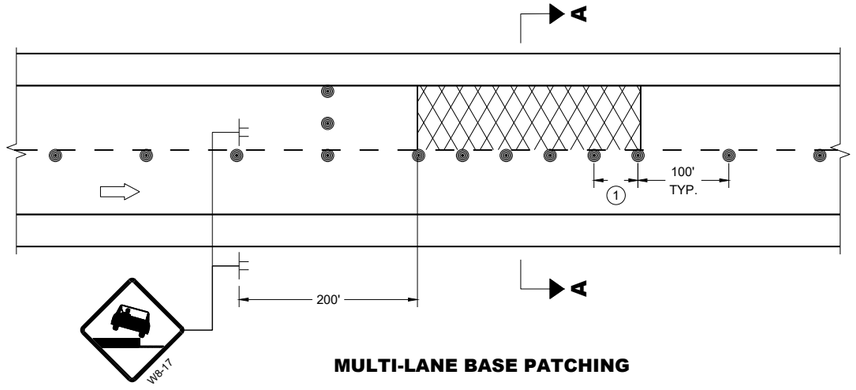


SECTION A - A

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.

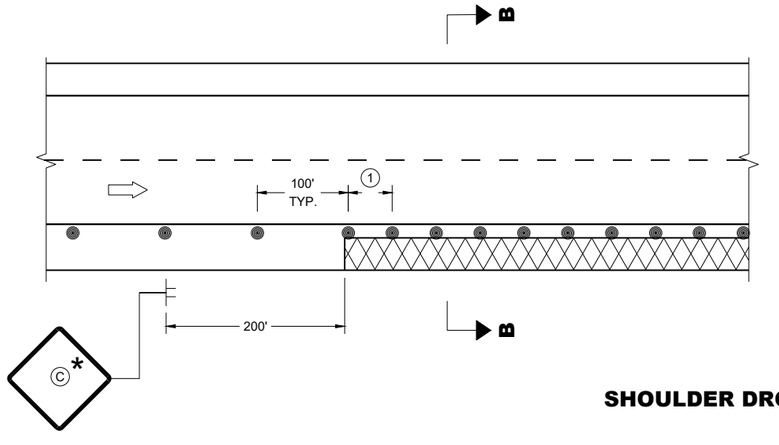
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

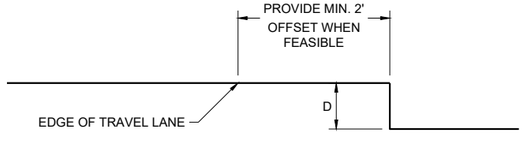
(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

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



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

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

6
SDD 15D39-03

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR, FLEXIBLE TUBULAR MARKER
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONSTRUCTION TRAFFIC
- WORK AREA
- CC — CRASH CUSHION TEMPORARY
- EXISTING CONCRETE BARRIER TEMPORARY PRECAST

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.

WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.

THIS ACCESS DETAIL IS TYPICAL FOR LEFT LANE ACCESS, FOR RIGHT LANE ACCESS, REVERSE THE TRAFFIC CONTROL

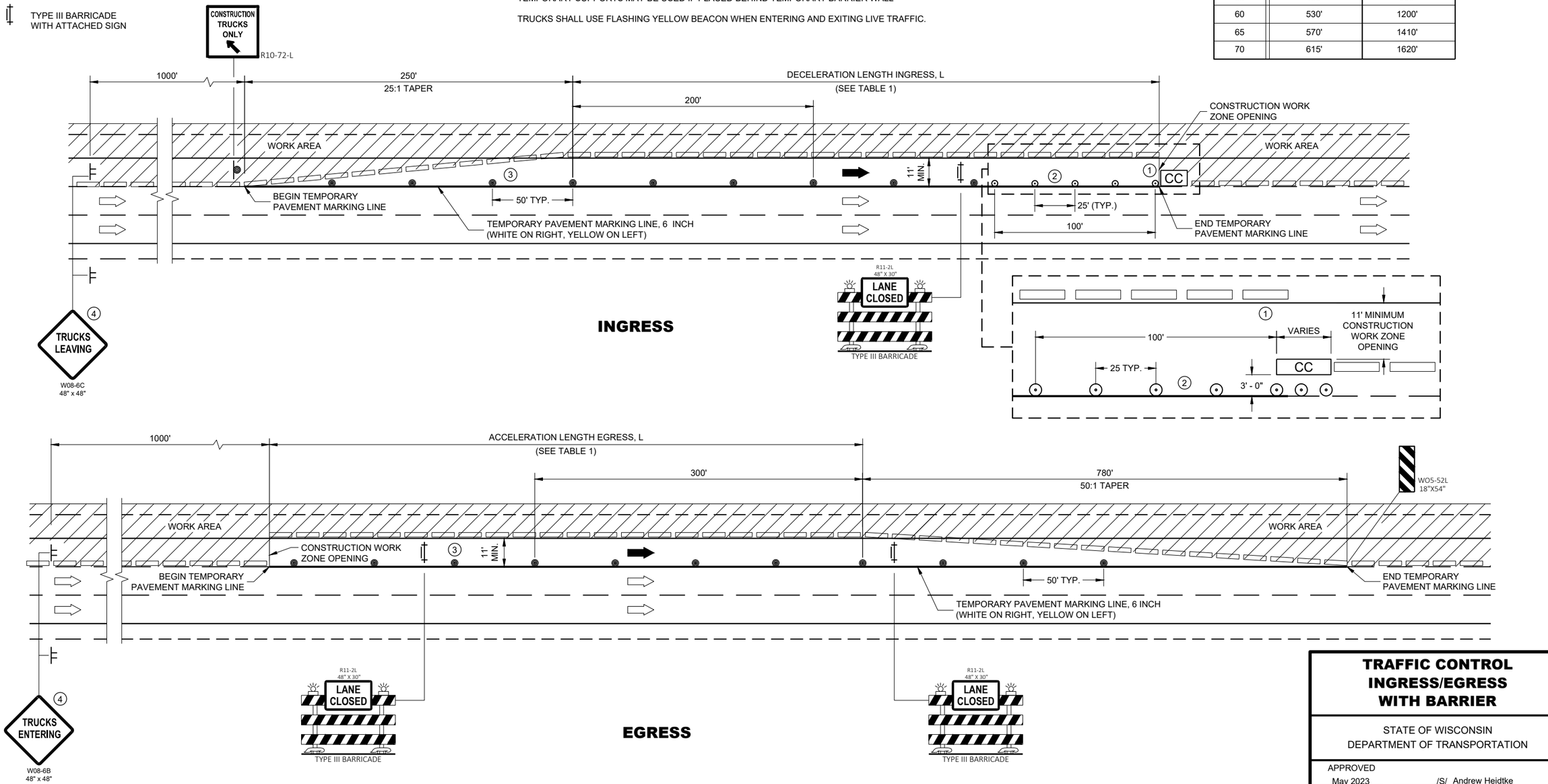
TEMPORARY SUPPORTS MAY BE USED IF PLACED BEHIND TEMPORARY BARRIER WALL

TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING AND EXITING LIVE TRAFFIC.

1. WIDEN BARRIER AS NECESSARY TO ACCOMMODATE CRASH CUSHION WIDTH.
2. USE TUBULAR MARKERS TO HELP DELINEATE TEMPORARY CRASH CUSHION.
3. REMOVE DRUMS / BARRICADES WHEN INGRESS / EGRESS ARE IN USE.
4. REMOVE OR COVER WHEN ACCESS IS NOT NEEDED.

TABLE 1

S (MPH)	INGRESS, L	EGRESS, L
50	435'	720'
55	480'	960'
60	530'	1200'
65	570'	1410'
70	615'	1620'



TRAFFIC CONTROL INGRESS/EGRESS WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D47-03a

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONSTRUCTION TRAFFIC
- WORK AREA

TABLE 1

S (MPH)	INGRESS, L	EGRESS, L
50	435'	720'
55	480'	960'
60	530'	1200'
65	570'	1410'
70	615'	1620'

LEGEND

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.

WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.

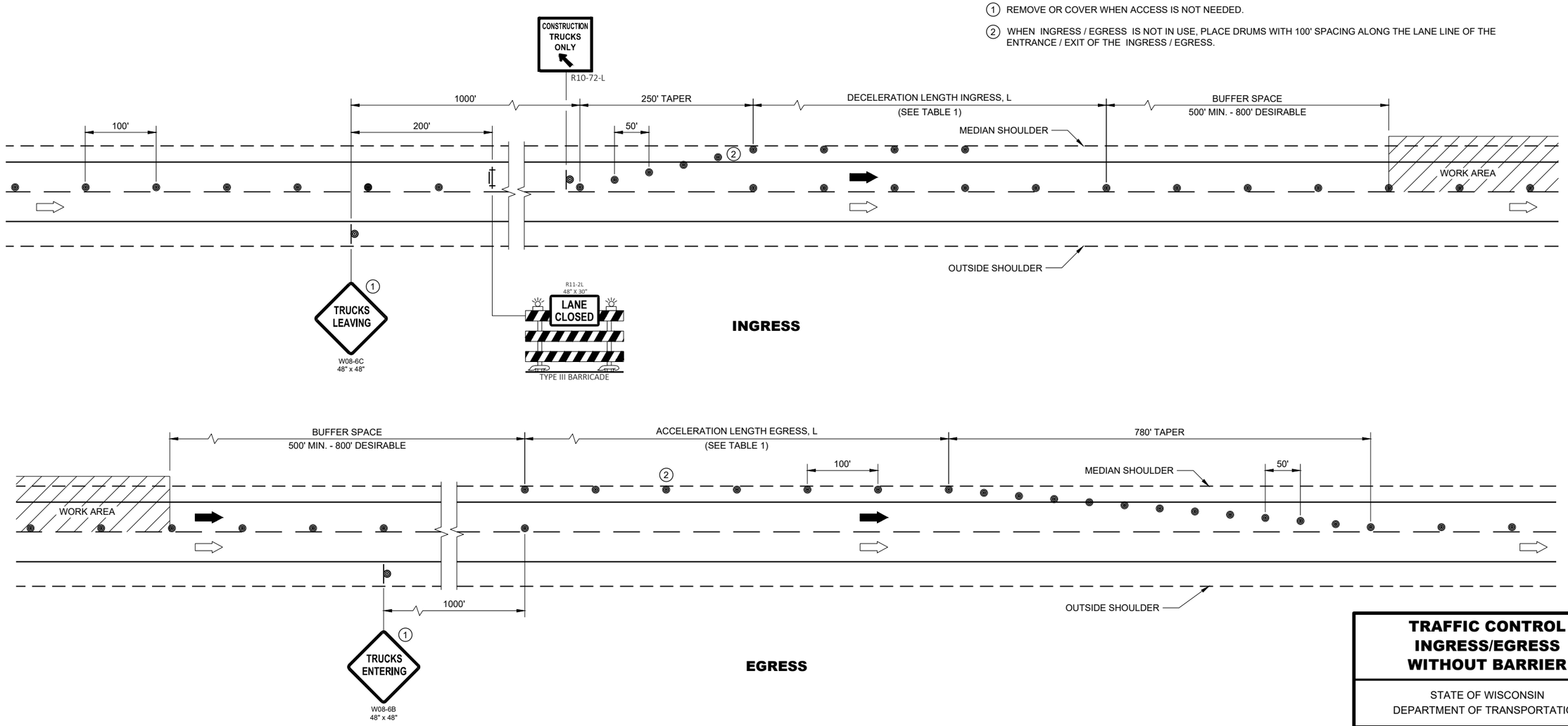
THIS ACCESS DETAIL IS TYPICAL FOR LEFT LANE ACCESS, FOR RIGHT LANE ACCESS, REVERSE THE TRAFFIC CONTROL

TEMPORARY SUPPORTS MAY BE USED IF PLACED BEHIND TEMPORARY BARRIER WALL

TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING AND EXITING LIVE TRAFFIC.

(1) REMOVE OR COVER WHEN ACCESS IS NOT NEEDED.

(2) WHEN INGRESS / EGRESS IS NOT IN USE, PLACE DRUMS WITH 100' SPACING ALONG THE LANE LINE OF THE ENTRANCE / EXIT OF THE INGRESS / EGRESS.



TRAFFIC CONTROL INGRESS/EGRESS WITHOUT BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

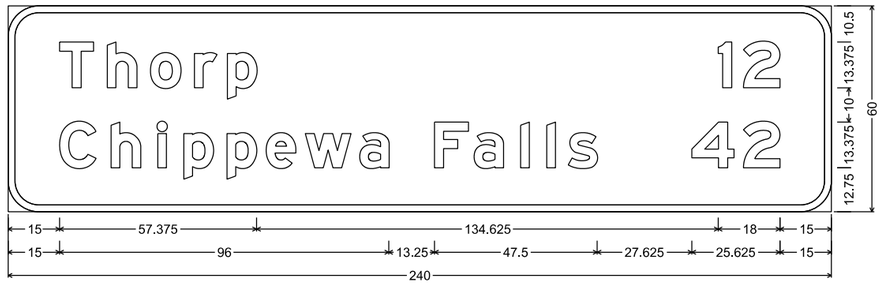
FHWA

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SDD 15D47-03b

6

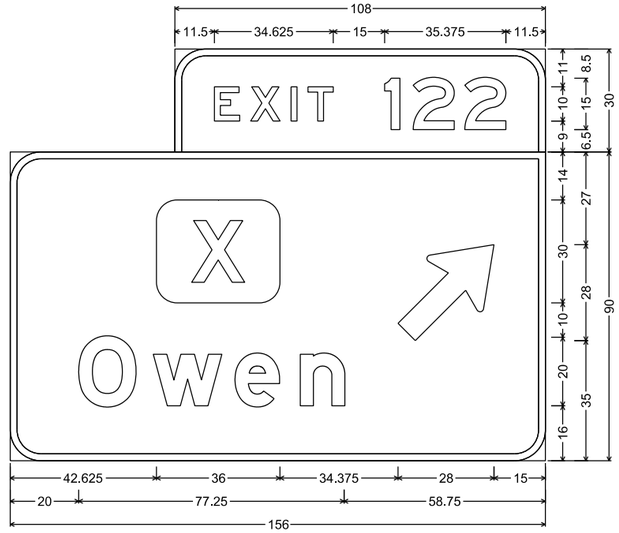
SDD 15D47-03b



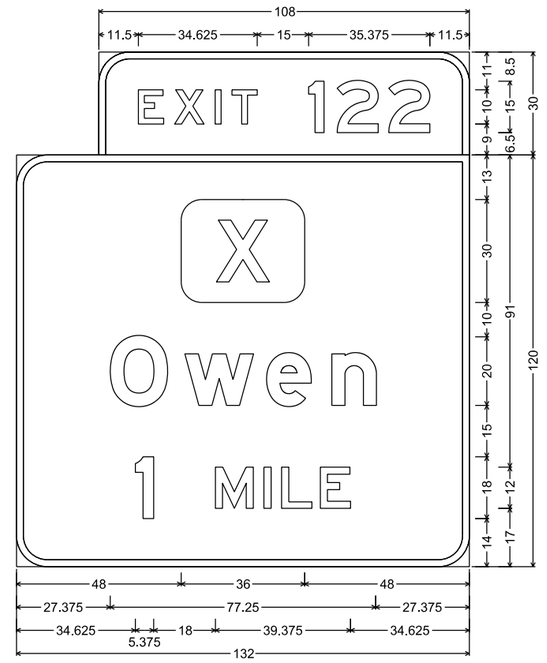
D2-2; 9.000" Radius, 2.000" Border

NOTES

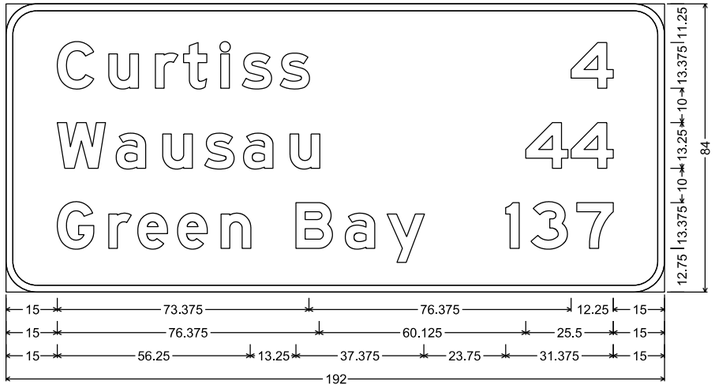
1. Signs are Type I - Type SH Reflective
2. Color:
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   Message - White
3. Message Series - E Modified except all CAP words Series E



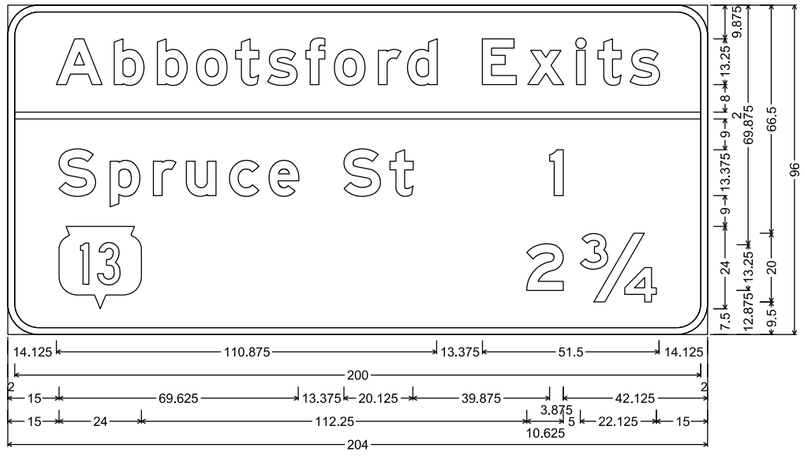
E1-5P; 9.000" Radius, 2.000" Border
E4-1A; 9.000" Radius, 2.000" Border



E1-5P; 9.000" Radius, 2.000" Border
E1-1A; 9.000" Radius, 2.000" Border



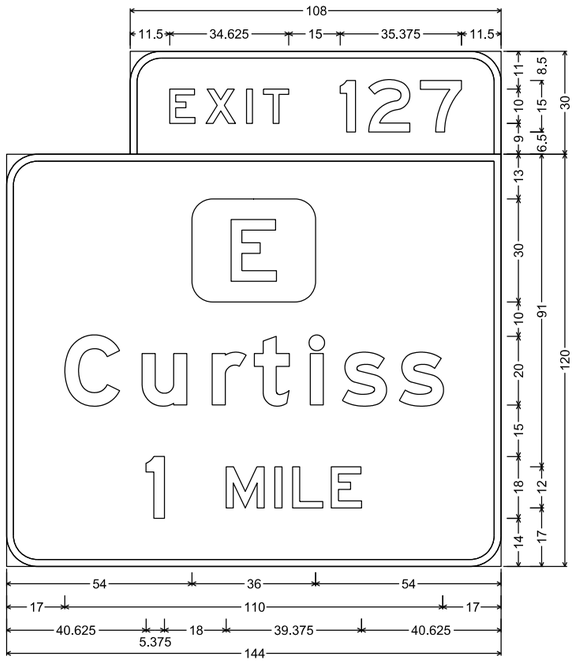
D2-3; 9.000" Radius, 2.000" Border



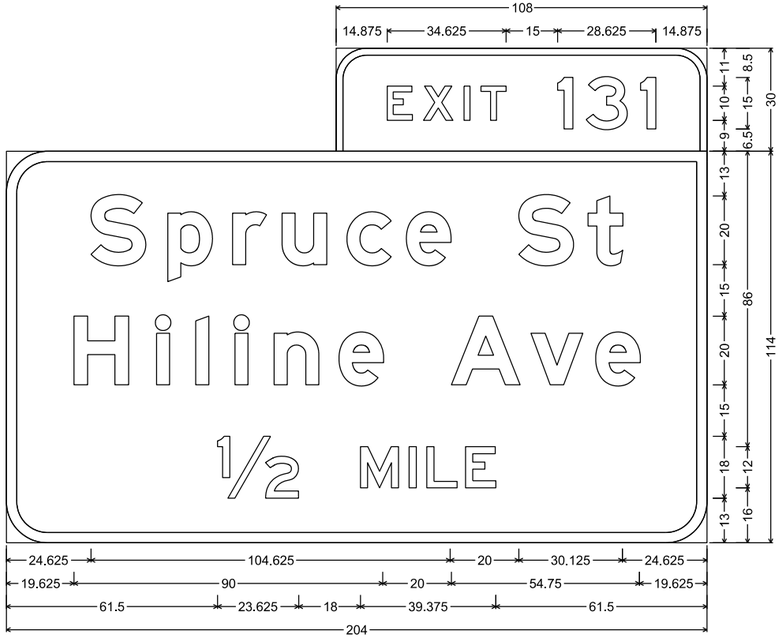
E8-1A; 9.000" Radius, 2.000" Border

NOTES

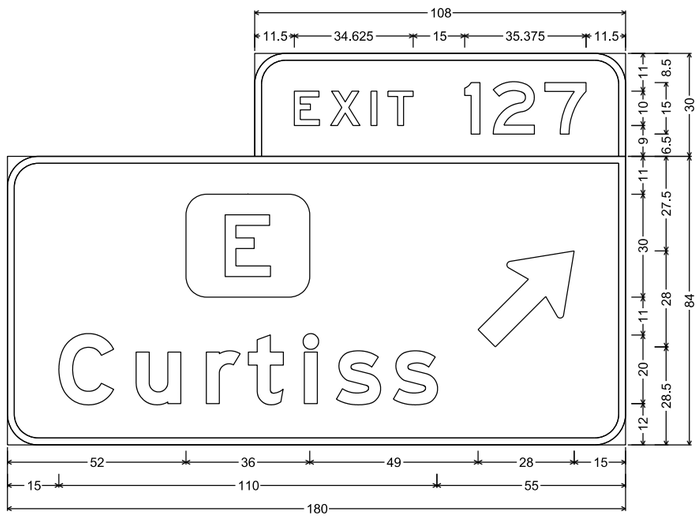
1. Signs are Type I - Type SH Reflective
2. Color:
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   Message - White
3. Message Series - E Modified except all CAP words Series E



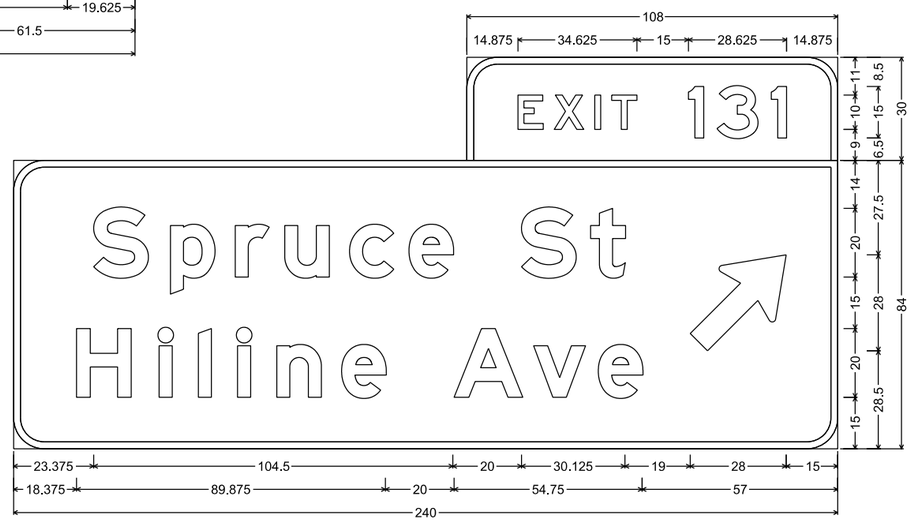
E1-5P; 9.000" Radius, 2.000" Border
E1-1A; 9.000" Radius, 2.000" Border



E1-5P; 9.000" Radius, 2.000" Border
E1-1A; 12.000" Radius, 3.000" Border



E1-5P; 9.000" Radius, 2.000" Border
E4-1A; 9.000" Radius, 2.000" Border

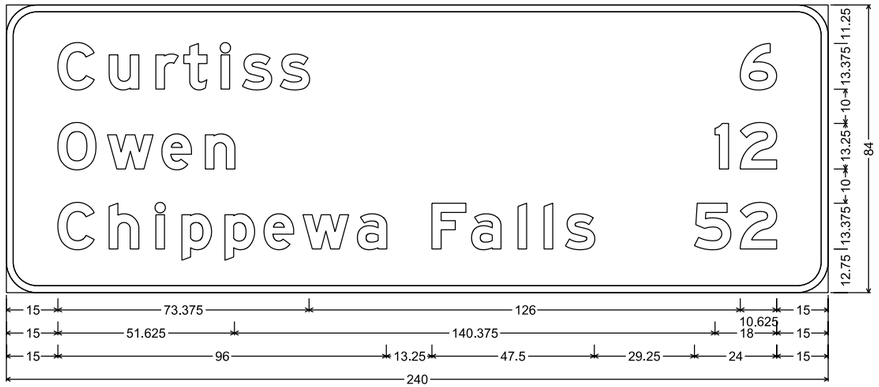


E1-5P; 9.000" Radius, 2.000" Border
E4-1A; 9.000" Radius, 2.000" Border

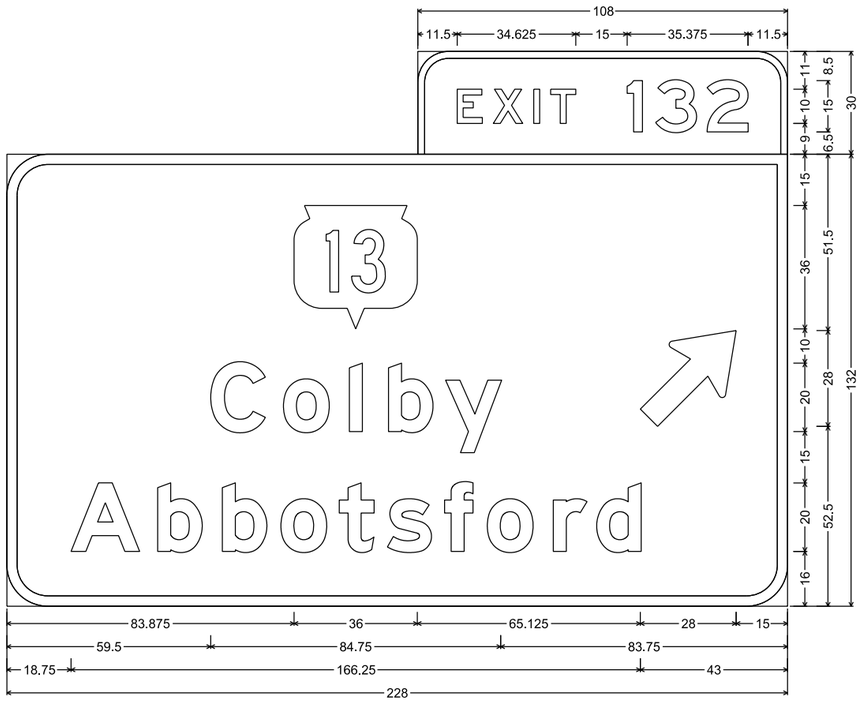
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7

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	PERMANENT SIGNING	SHEET NO: 249	E



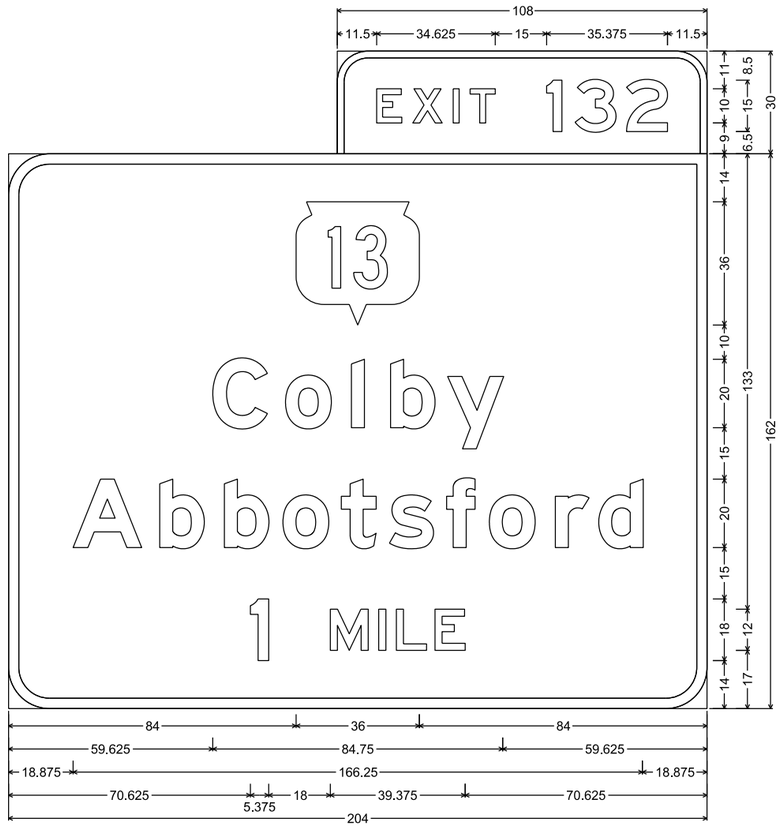
D2-3; 9.000" Radius, 2.000" Border



E1-5P; 9.000" Radius, 2.000" Border
E4-1A; 12.000" Radius, 3.000" Border

NOTES

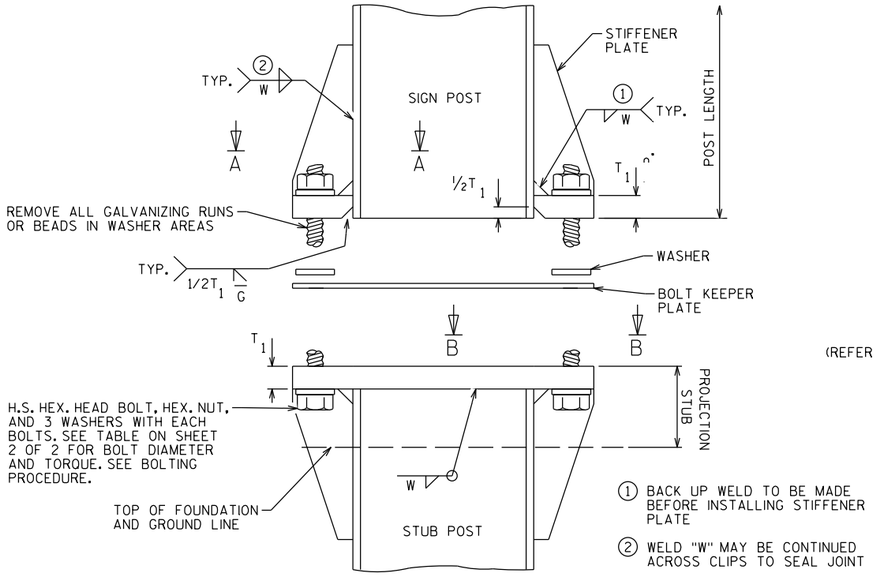
1. Signs are Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all CAP words Series E



E1-5P; 9.000" Radius, 2.000" Border
E1-1A; 12.000" Radius, 3.000" Border

7

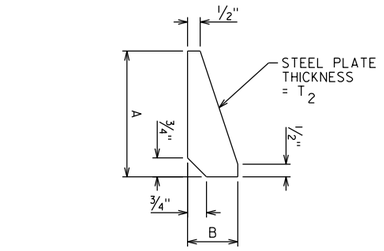
7



① BACK UP WELD TO BE MADE BEFORE INSTALLING STIFFENER PLATE

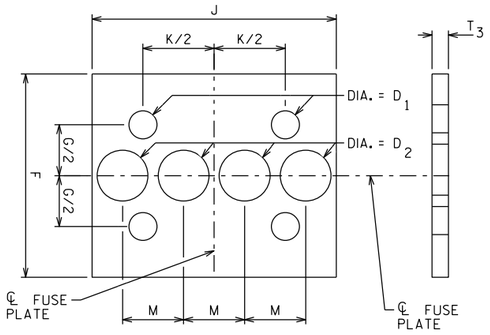
② WELD "W" MAY BE CONTINUED ACROSS CLIPS TO SEAL JOINT

SIGN POST & STUB POST ELEVATION



STIFFENER PLATE DETAIL

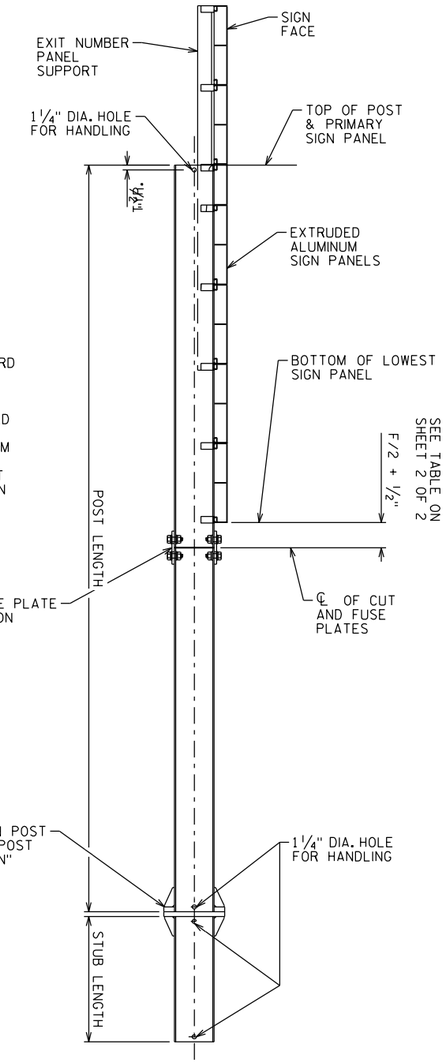
(REFER TO TABLE ON SHEET 2 OF 2 FOR DIMENSIONS)



PERFORATED FUSE PLATE DETAIL

USE H.S. HEX HEAD BOLTS, HEX HEAD NUT AND FLAT WASHER UNDER NUT. INSTALL BOLTS PER THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION SECTION 506.3.12.3.

ALL HOLES SHALL BE DRILLED, SUB-PUNCHED AND REAMED. ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS. HOWEVER, FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE PERMITTED. STEEL FUSE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36. ASTM A572 GRADE 50 OR ASTM A588 MAY BE SUBSTITUTED FOR A36 AT THE OPTION OF THE FABRICATOR. MILL TEST REPORTS SHALL BE SUBMITTED FOR FUSE PLATES. STEEL USED SHALL HAVE AN ULTIMATE TENSILE STRENGTH NOT TO EXCEED 80 KSI.



POST DETAIL

☆ WELD THICKNESS = FLANGE THICKNESS - 1/16"

SECTION A-A

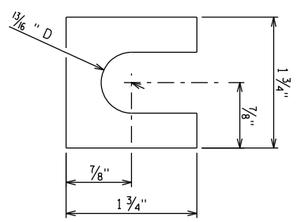
SECTION B-B

FUSE PLATE CONNECTION DETAIL

H = BOLT DIA. + 1/8"

BOLT KEEPER PLATE DETAIL

30 GA GALVANIZED SHEET STEEL



SHIM DETAIL

FURNISH TWO .012"± THICK AND TWO .032"± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO ASTM B36.

BOLTING PROCEDURE FOR BASE CONNECTION

1. ASSEMBLE SIGN POST, BOLT KEEPER PLATE, AND STUB POST WITH BOLTS AND THREE FLAT WASHERS PER BOLT AS SHOWN.
2. SHIM AS REQUIRED TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING, LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH A 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS.
5. LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PERSCRIBED TORQUE. (SEE TABLE FOR PERSCRIBED TORQUE). DO NOT OVER-TIGHTEN.
6. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

DRAWN BY	PLANS CK'D.

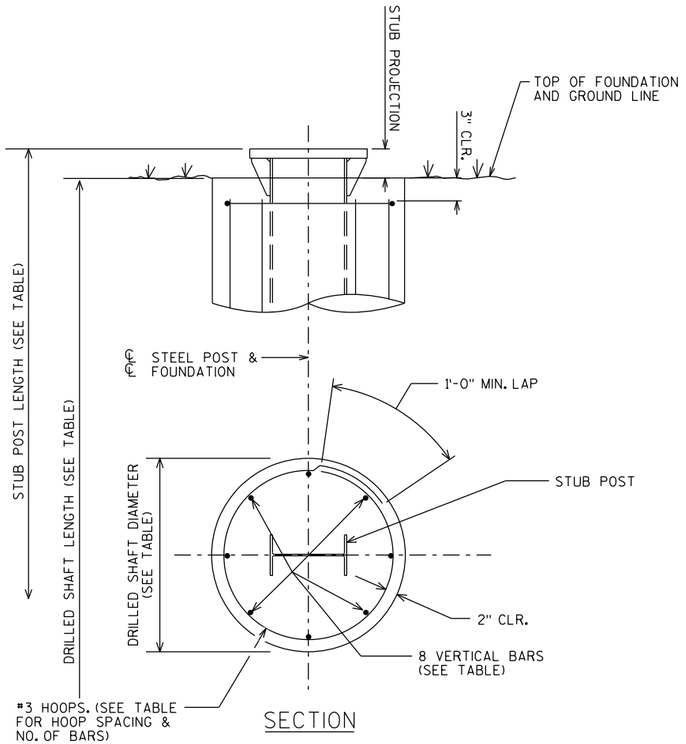
CONNECTION & FOUNDATION DETAILS 1 OF 2

SHEET A3-1.20

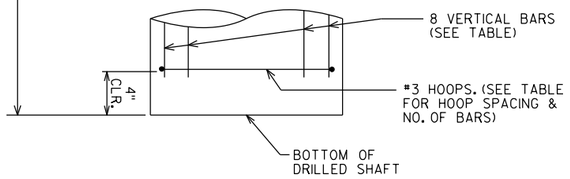
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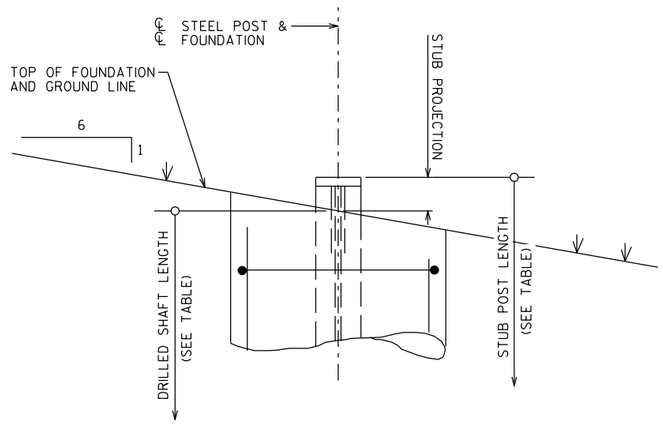
7



SECTION



FOUNDATION DETAIL



SHAFT PLACEMENT

FOUNDATION DATA TABLE

POST SHAPE	STUB LENGTH	STUB PROJECTION	DRILLED SHAFT DIAMETER	DRILLED SHAFT LENGTH	VERTICAL BARS		HOOPS		CONCRETE VOLUME ◆	TOTAL REINF. WEIGHT ◆
					SIZE	LENGTH	MAX SPA.	NO.		
W6X15	2'-6"	3"	24"	6'-6"	#5	5'-11"	10"	9	0.8 CY	71 LB
W8X18	2'-6"	3"	24"	7'-6"	#6	6'-11"	12"	8	0.9 CY	102 LB
W8X21	3'-0"	2½"	24"	8'-0"	#6	7'-5"	12"	9	1.0 CY	110 LB
W10X22	3'-0"	2½"	24"	8'-6"	#7	7'-11"	12"	9	1.0 CY	151 LB
W12X26	3'-0"	2½"	24"	10'-0"	#7	9'-5"	12"	11	1.2 CY	180 LB

◆ QUANTITIES SHOWN ARE FOR ONE DRILLED SHAFT

BASE CONNECTION & FUSE PLATE DATA TABLE

POST SHAPE	WEIGHT PER FOOT	BASE CONNECTION DATA: BOLT SIZE & TORQUE	A	B	C	D	E	T1	T2	W	R	BOLT KEEPER PLATE DATA: P	U	PERFORATED FUSE PLATE DATA: F	G	J	K	M	D1	D2	T3	BOLT DIA.	WGT. EA. LBS	BOLT LENGTH	V ◪
W6X15	15 LB	⅝" DIA. X 4" 36 TO 38 FT-LB	5"	2"	1¼"	2¾"	1⅛"	1¼"	½"	¼"	11/32"	8½"	10"	5"	2½"	6"	3½"	1½"	11/16"	1¼"	⅜"	⅝"	2.4	2	73.0 LB
W8X18	18 LB											10⅝"	12⅛"	5"	2½"	5¼"	2¾"	1¼"	11/16"	1 1/16"	⅜"	⅝"	2.0	2	83.0 LB
W8X21	21 LB	¾" DIA. X 4¾" 62 TO 63 FT-LB	6"	2¼"	1⅜"	3½"	1¼"	1½"	¾"	5/16"	13/32"	11"	12¾"	5½"	2½"	5¼"	2¾"	1¼"	13/16"	1"	½"	¾"	3.1	2¼"	124.0 LB
W10X22	22 LB											12⅞"	14⅝"	6"	3"	5¾"	2¾"	1⅜"	13/16"	1⅛"	½"	¾"	3.9	2¼"	134.0 LB
W12X26	26 LB											15"	16¾"	6"	3"	6½"	3½"	1⅝"	13/16"	1 5/16"	½"	¾"	4.5	2¼"	152.0 LB

◪ TOTAL STRUCTURAL CARBON STEEL WEIGHT FOR ONE POST = V + (POST LENGTH X POST WEIGHT PER FOOT)

"V" INCLUDES STUB POST, BASE PLATES, STIFFENER PLATES, PERFORATED FUSE PLATES, BOLTS, NUTS, AND WASHERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

MATERIALS SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 506, UNLESS NOTED OTHERWISE.

FABRICATION SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 506.

ALL POST, POST STUBS & ATTACHMENTS SHALL BE ASTM A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123.

THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST, FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.

H.S. BOLTS, WASHERS, & NUTS SHALL BE A325 GALVANIZED.

FOUNDATION MATERIAL PROPERTIES

CONCRETE MASONRY	F'C = 3,500 P.S.I.
BAR STEEL REINFORCEMENT (UNCOATED), GRADE 60	FY = 60,000 P.S.I.

DESIGN DATA

DESIGN CONFORMS TO AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS 1ST EDITION 2015 (WITH 2017 & 2018 INTERIM REVISIONS).

DEAD LOADS (DL):

- STEEL POST SELF WEIGHT
- SIGN PANEL WEIGHT = 3 PSF

WIND LOADS (WL):

WIND LOADS WERE APPLIED TO THE PROJECTED AREAS OF THE SIGN PANELS AND THE STEEL SIGN POSTS.

- BASIC WIND SPEED = 76 MPH
- MEAN RECURRANCE INTERVAL (MRI) = 10 YEARS
- HEIGHT & EXPOSURE FACTOR = 1.00
- DIRECTIONALITY FACTOR = 0.85
- GUST EFFECT FACTOR = 1.14

WIND LOAD CASES:

- WL CASE 1: 1.0 X NORMAL WIND
- WL CASE 2: 1.0 X TRANSVERSE WIND
- WL CASE 3: 0.75 X NORMAL WIND + 0.75 X TRANSVERSE WIND

LOAD COMBINATIONS:

LOAD COMBINATION	TYPE	DL FACTOR	WL FACTOR
STRENGTH I	GRAVITY	1.25	-
EXTREME I	WIND	1.10	1.0
		0.9	1.0
SERVICE I	DEFLECTION	1.0	1.0

FOUNDATION DESIGN DATA

THE FOUNDATION DESIGN ASSUMED COHESIONLESS SOILS (LOOSE SAND) ABOVE THE WATER TABLE WITH THE FOLLOWING PROPERTIES:

- SOIL UNIT WEIGHT = 115 PCF
- ANGLE OF INTERNAL FRICTION = 24 DEGREES
- SOIL MODULUS PARAMETER = 25 LB/IN3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

DRAWN BY | PLANS CK'D.

CONNECTION & FOUNDATION DETAILS 2 OF 2

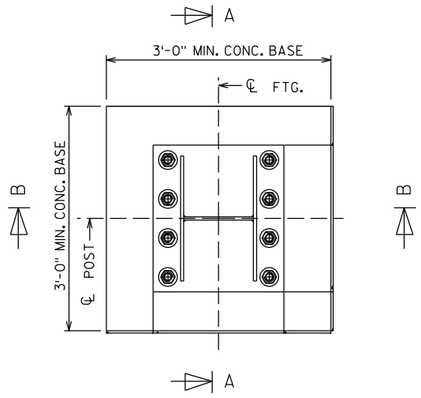
SHEET A3-1.20

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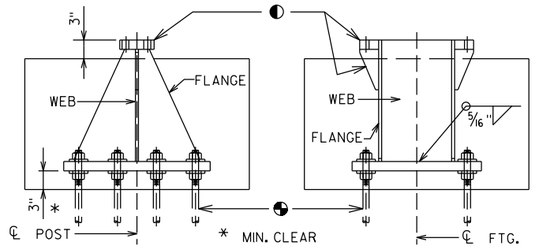
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PLOT DATE : 3-MAR-2020
PLOT BY : dotc4c

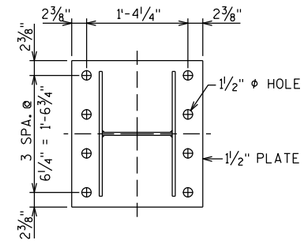
STUB AND ADHESIVE ANCHOR DETAILS



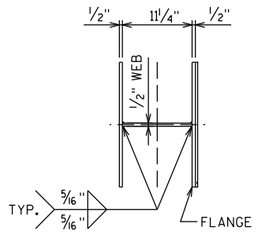
STUB SECTION



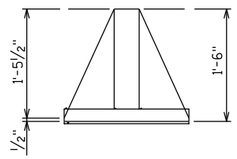
SECTION A-A SECTION B-B



BASE PLATE



STUB



FLANGE

◐ SEE BASE CONNECTION DETAILS ON "CONNECTIONS & FOUNDATION DETAILS" SHEETS.

◔ ADHESIVE ANCHORS 1¼-INCHES. ALLOWABLE PULL OUT CAPACITY = 15 KIPS. EMBED 1'-3" INTO ROCK.

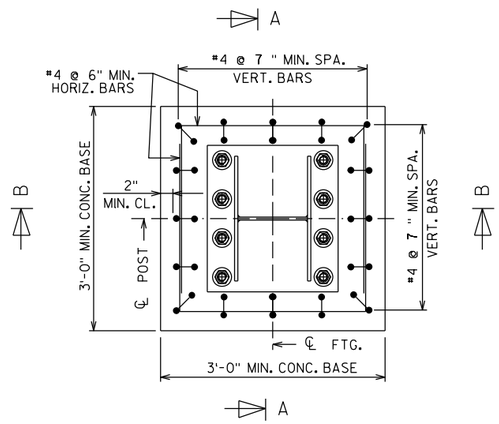
GENERAL NOTES:

QUANTITIES PER BASE:
REINFORCING STEEL = 62 LB
CONCRETE = 0.6 CY
STRUCTURAL STEEL = 335 LB

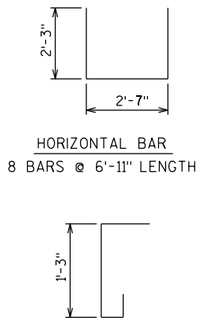
ALL MATERIALS, EXCEPT FOR ANCHOR ROD, NUTS, AND WASHERS, SHALL BE ASTM A709 GRADE 50. ALL MATERIALS TO BE GALVANIZED AFTER FABRICATION.

IF ROCK IS ENCOUNTERED PRIOR TO REACHING THE MINIMUM DRILLED SHAFT EMBEDMENT DEPTH DEFINED ON THE FOUNDATION DATA TABLE OF THE "CONNECTIONS & FOUNDATION DETAILS 2 OF 2" SHEET, THE CONTRACTOR SHALL INSTALL A TEST ADHESIVE ANCHOR AND DETERMINE THE PULL-OUT CAPACITY. IF THE FIELD TEST RESULTS IN A PULL-OUT CAPACITY GREATER THAN OR EQUAL TO 15 KIPS, THE CONTRACTOR MAY INSTALL THE ALTERNATE CONCRETE BASE AND BREAK-WAY STUB PER THE DETAILS ON THIS SHEET.

CONCRETE BASE DETAILS

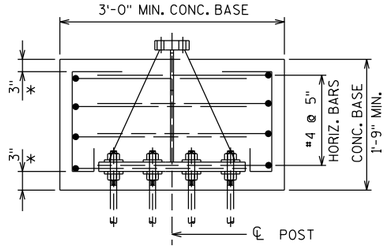


CONCRETE BASE PLAN

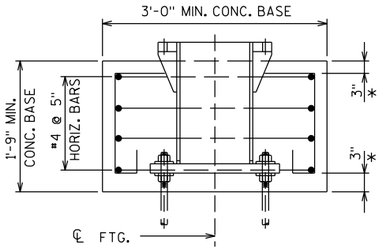


HORIZONTAL BAR
8 BARS @ 6'-11" LENGTH

VERTICAL BARS
16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A-A



SECTION B-B

* MIN. CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

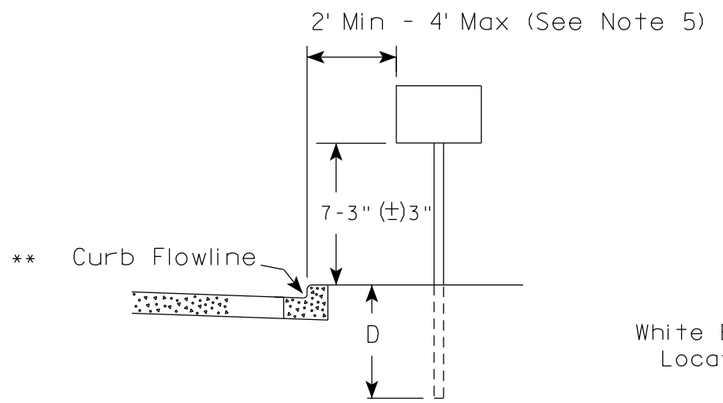
DRAWN BY | PLANS CK'D.

ALTERNATE BREAK-AWAY BASE ON ROCK

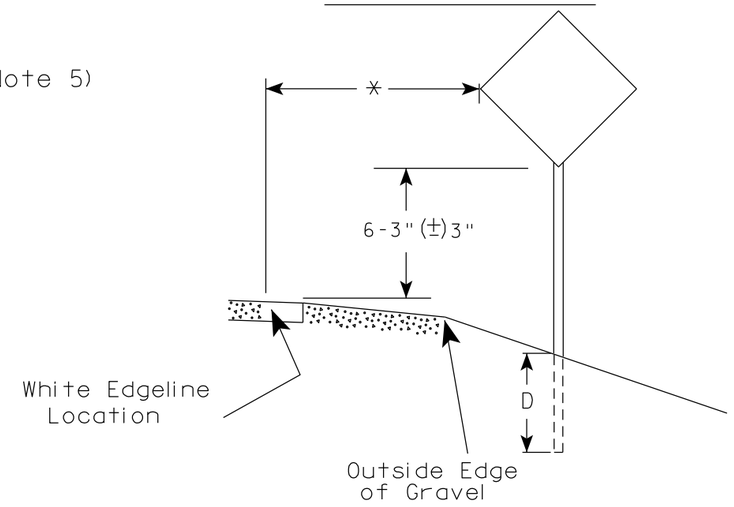
SHEET A3-1M.2

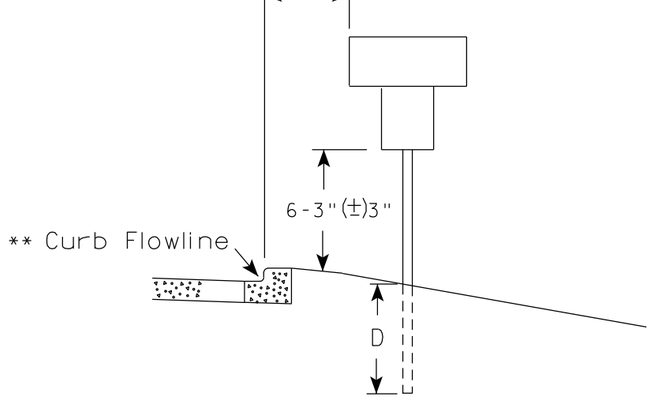
253

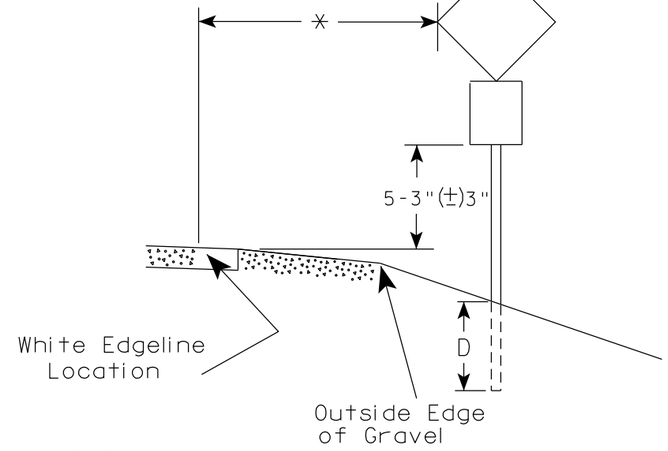
URBAN AREA



RURAL AREA (See Note 2)







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

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" (±) 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".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directd by the Engineer.

POST EMBEDMENT DEPTH

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

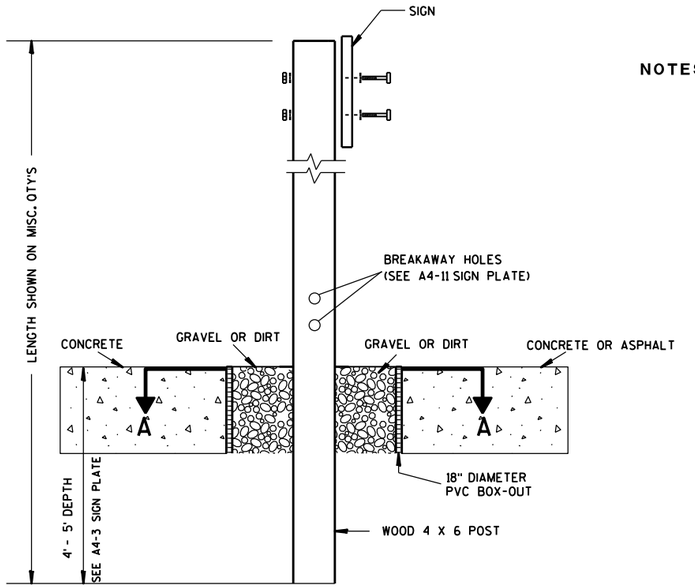
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

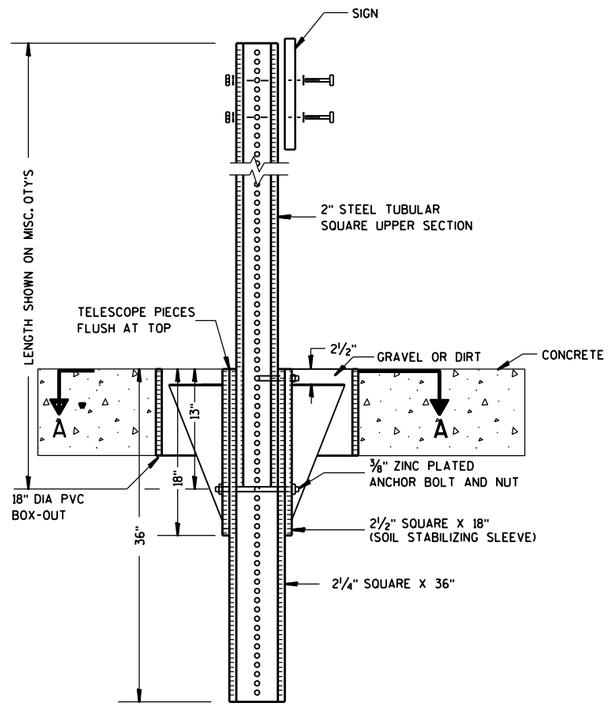
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 254	E



ELEVATION VIEW

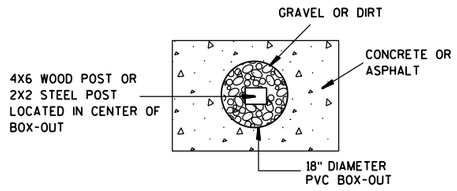
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

WISCONSIN DEPT OF TRANSPORTATION

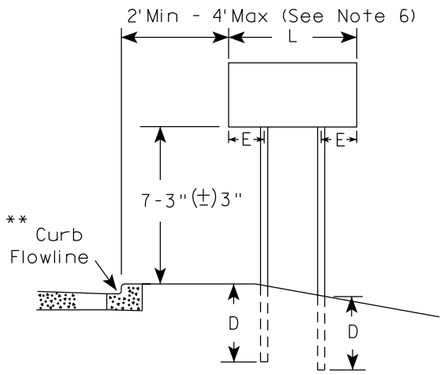
APPROVED Matthew R Rauch
for State Traffic Engineer

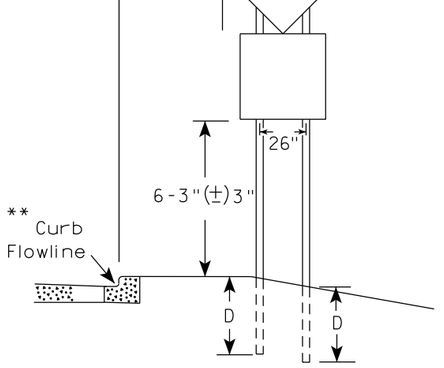
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

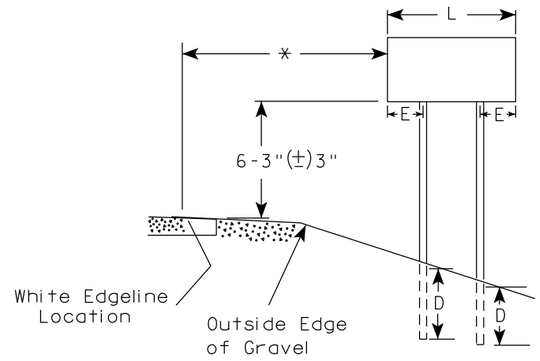
URBAN AREA

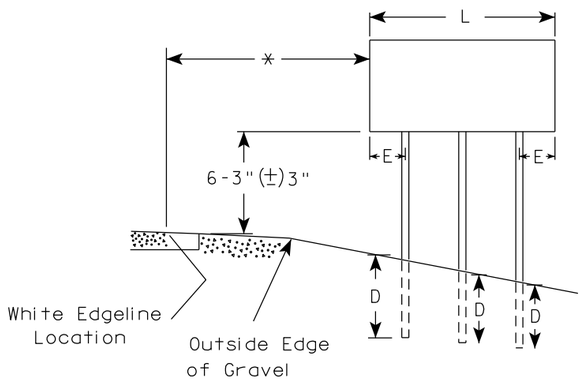


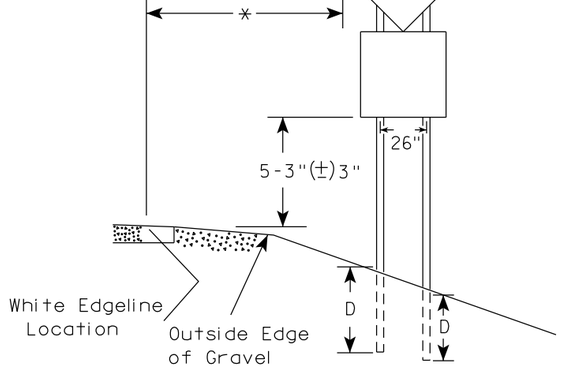


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

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"

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" (±) 3" or 6'-3" (±) 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" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 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" (±) 3".

* 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.

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

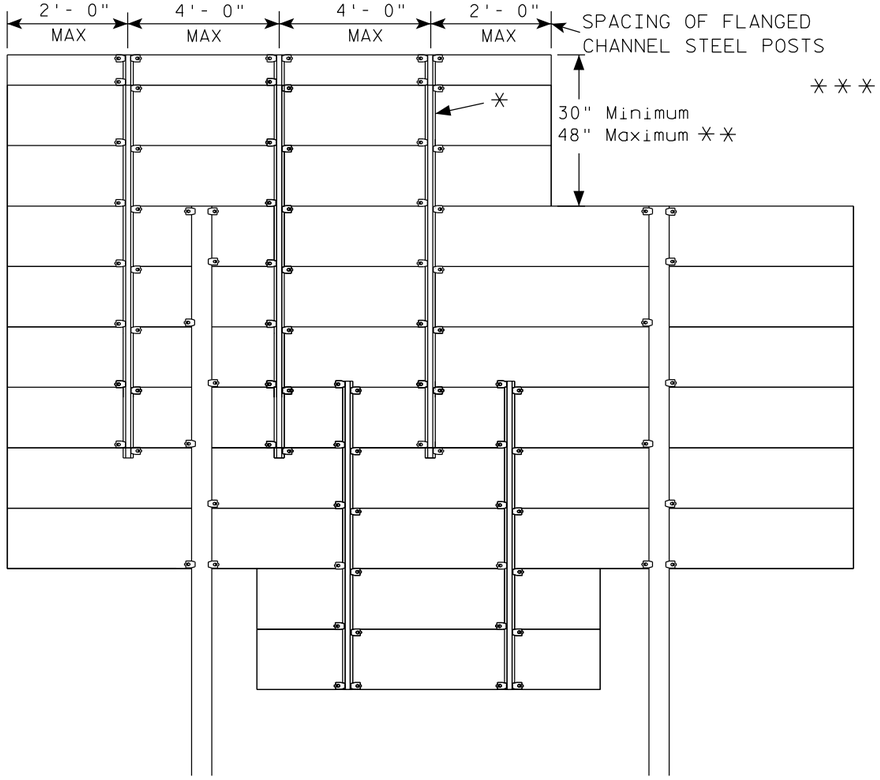
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 256	E

GROUND MOUNTED SIGN



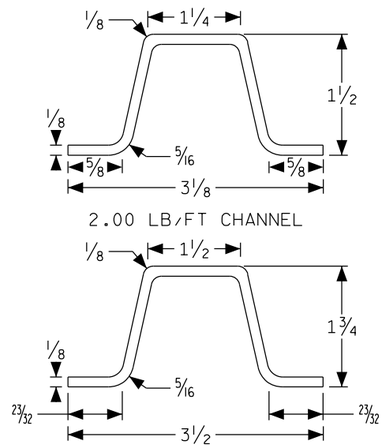
✳=2.00 lb/ft AND 4.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

✳✳=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

✳✳✳ THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 15 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 15 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAILS

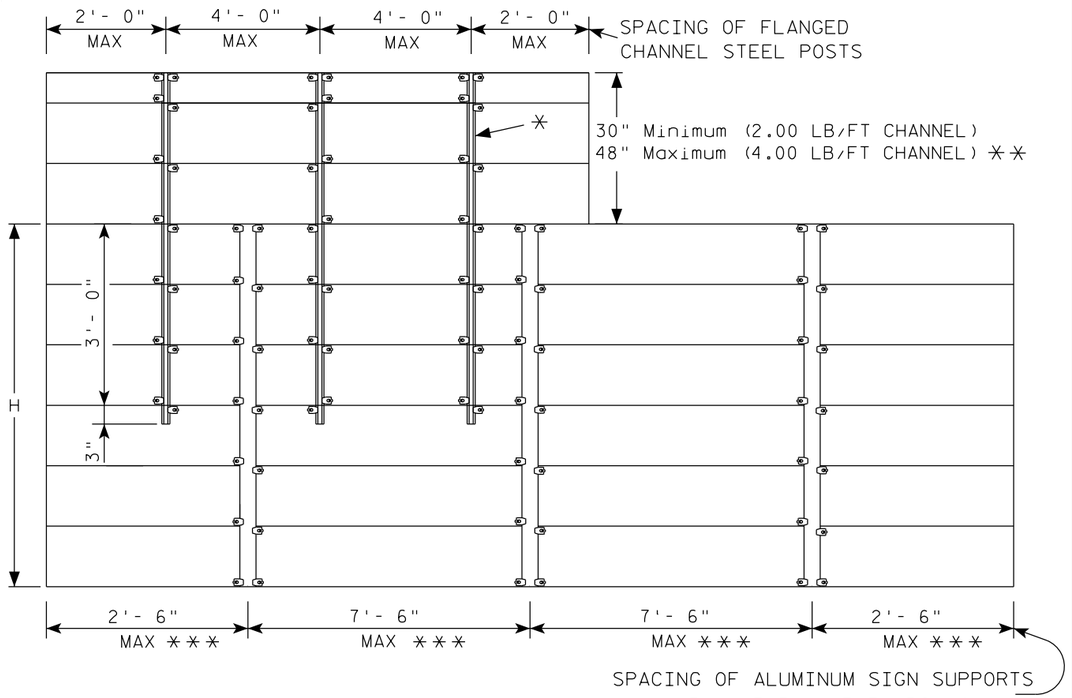
NOT TO SCALE



2.00 LB/FT CHANNEL

4.00 LB/FT CHANNEL

SIGN BRIDGE MOUNTED SIGN



SPACING OF ALUMINUM SIGN SUPPORTS
5" X 3.5" X 3.7 LBS./ft.

GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

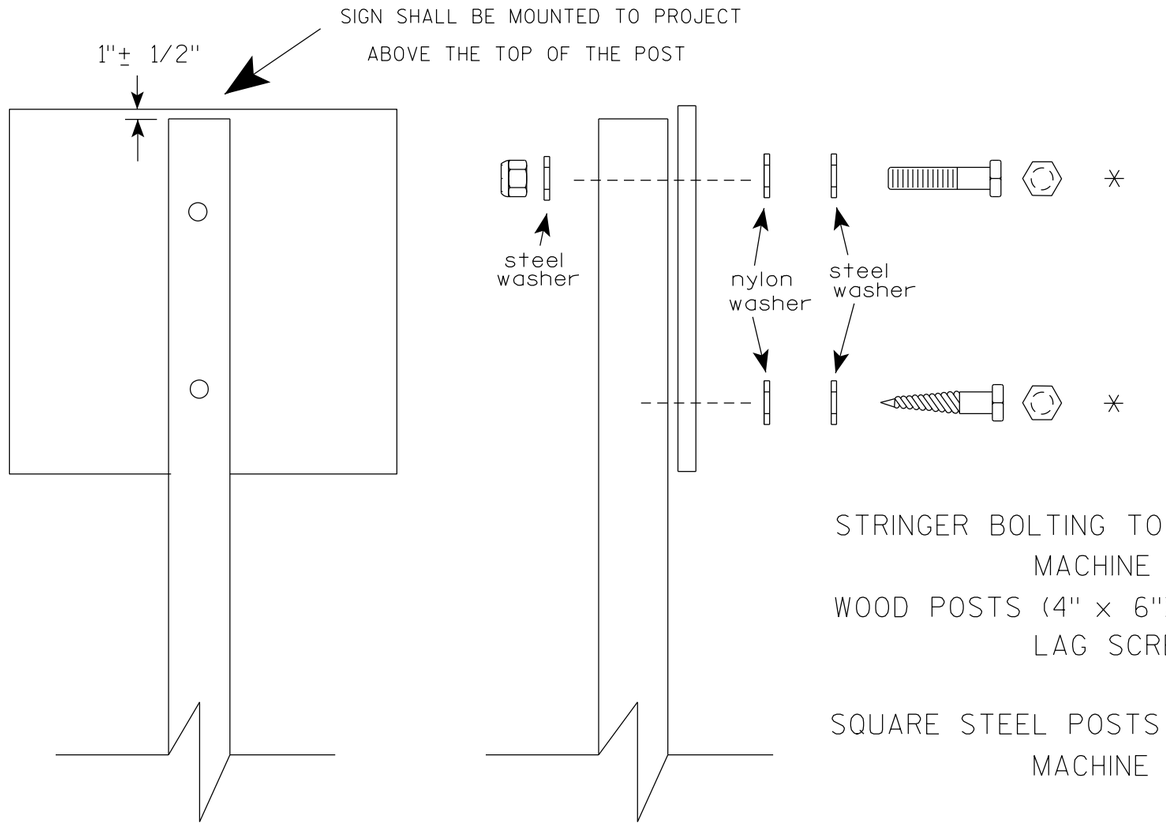
   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/07/20 PLATE NO. A4-6.12



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

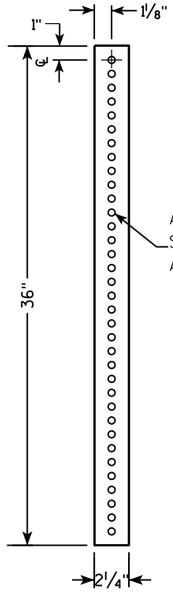
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

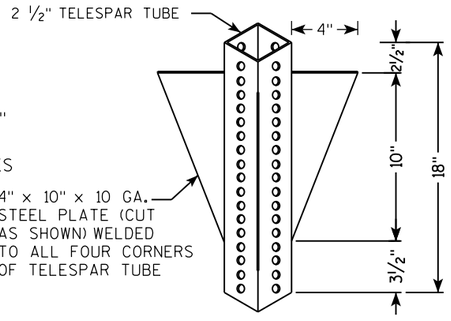
SHEET NO: 258 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

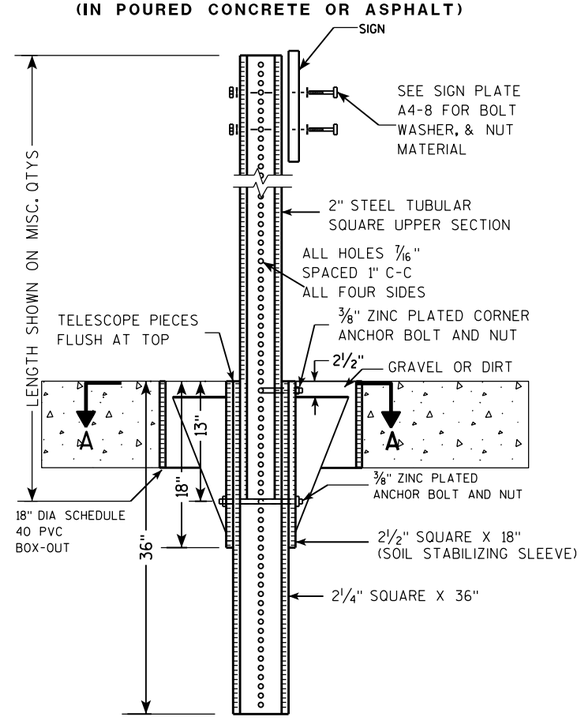
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



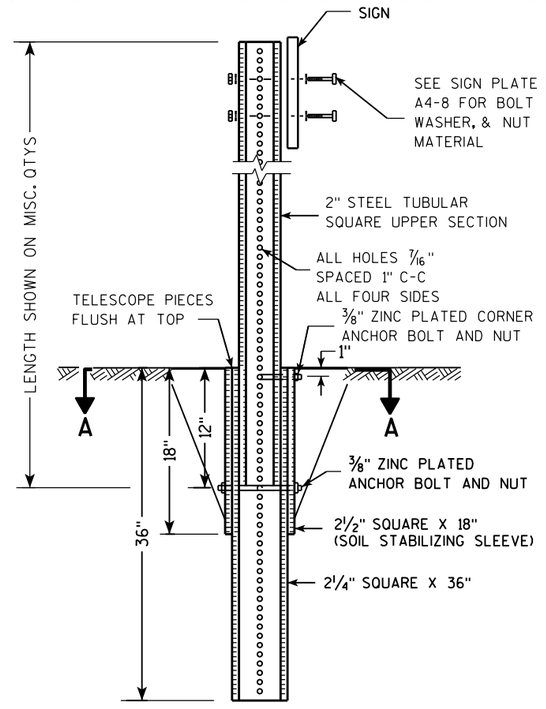
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

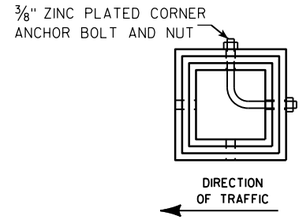


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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).

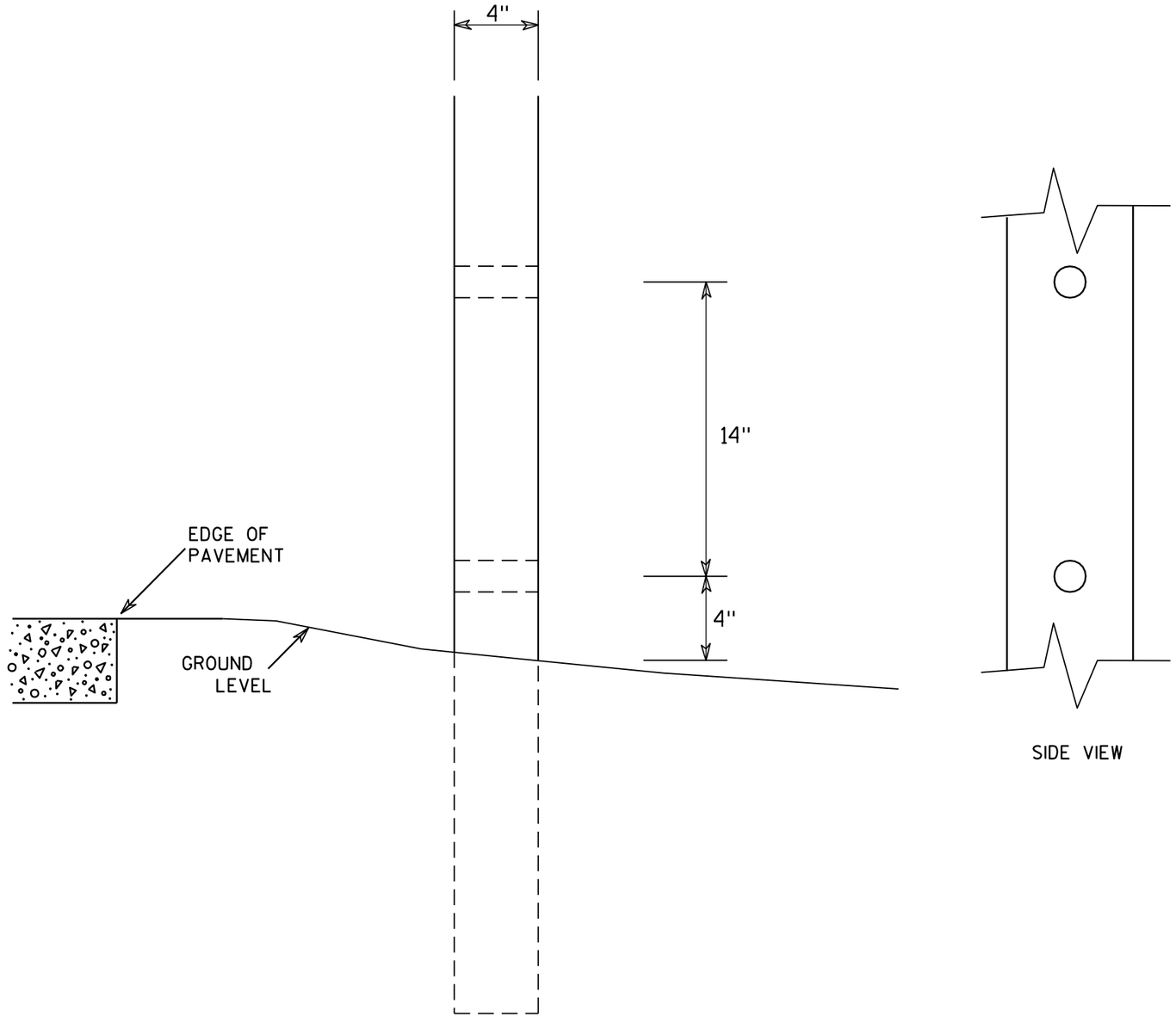
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 259 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

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

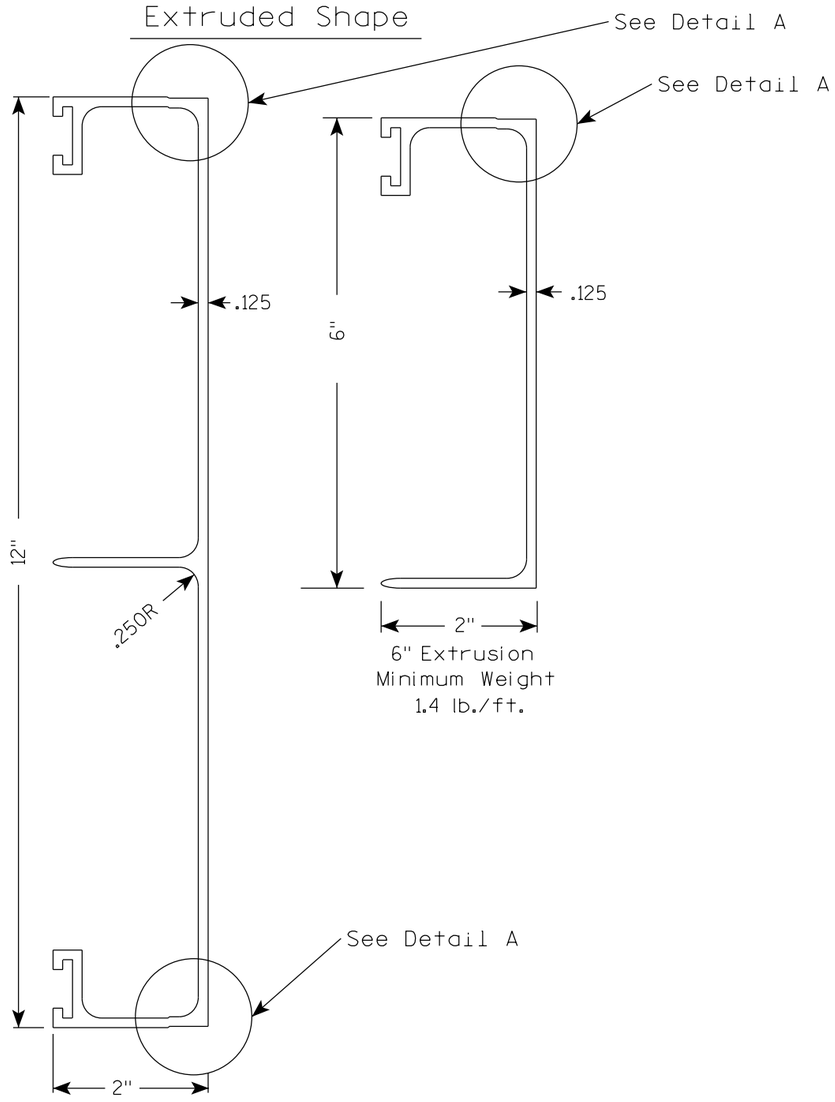
WISCONSIN DEPT OF TRANSPORTATION

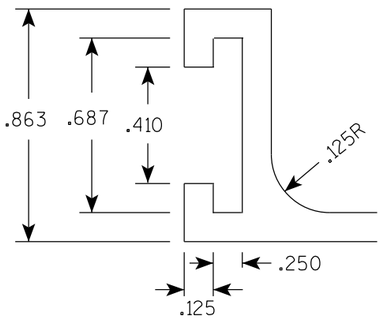
APPROVED Chester J Spang for State Traffic Engineer

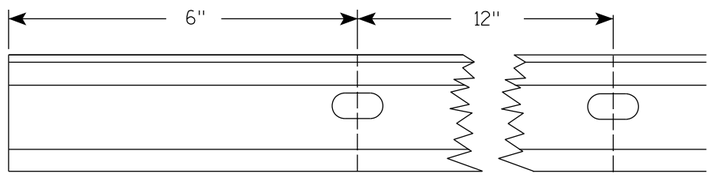
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 260	E

Extruded Shape







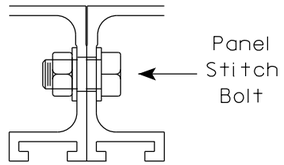
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

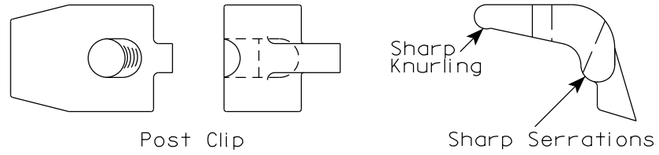
The hardware includes:

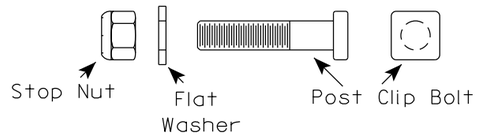
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

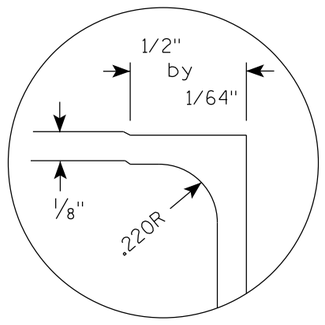
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.



DETAIL A (EDGE WRAP JOINT)

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

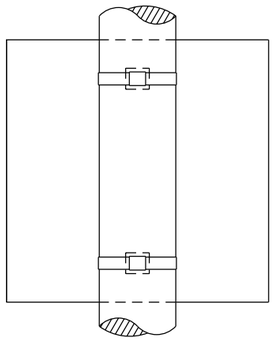
DATE 1/07/20 PLATE NO. A5-2.10

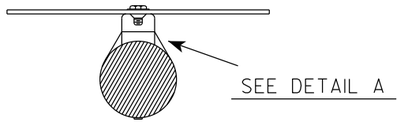
PROJECT NO:

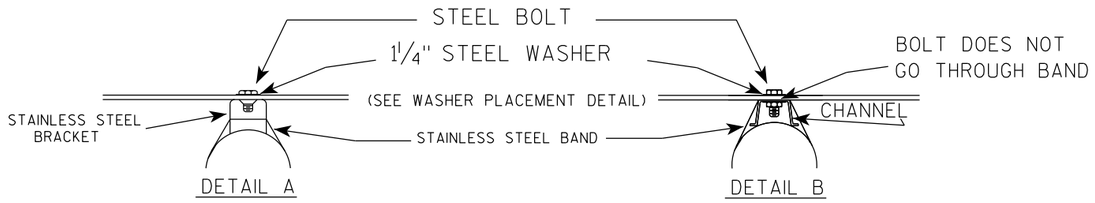
SHEET NO: 261 E

BANDING

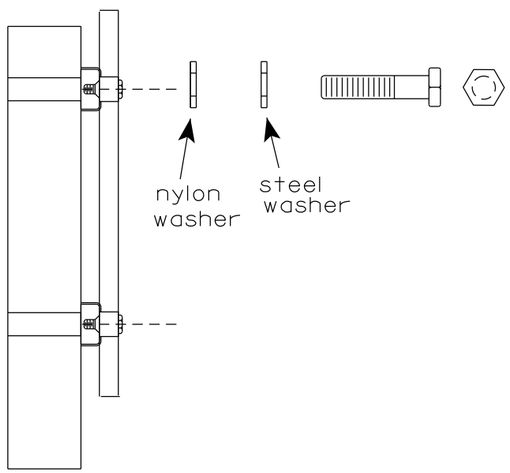
SINGLE SIGN







WASHER PLACEMENT

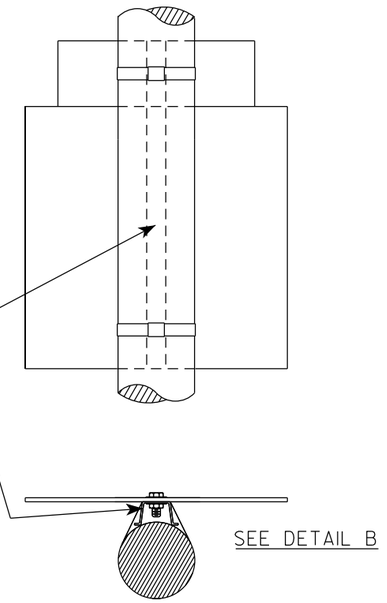


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

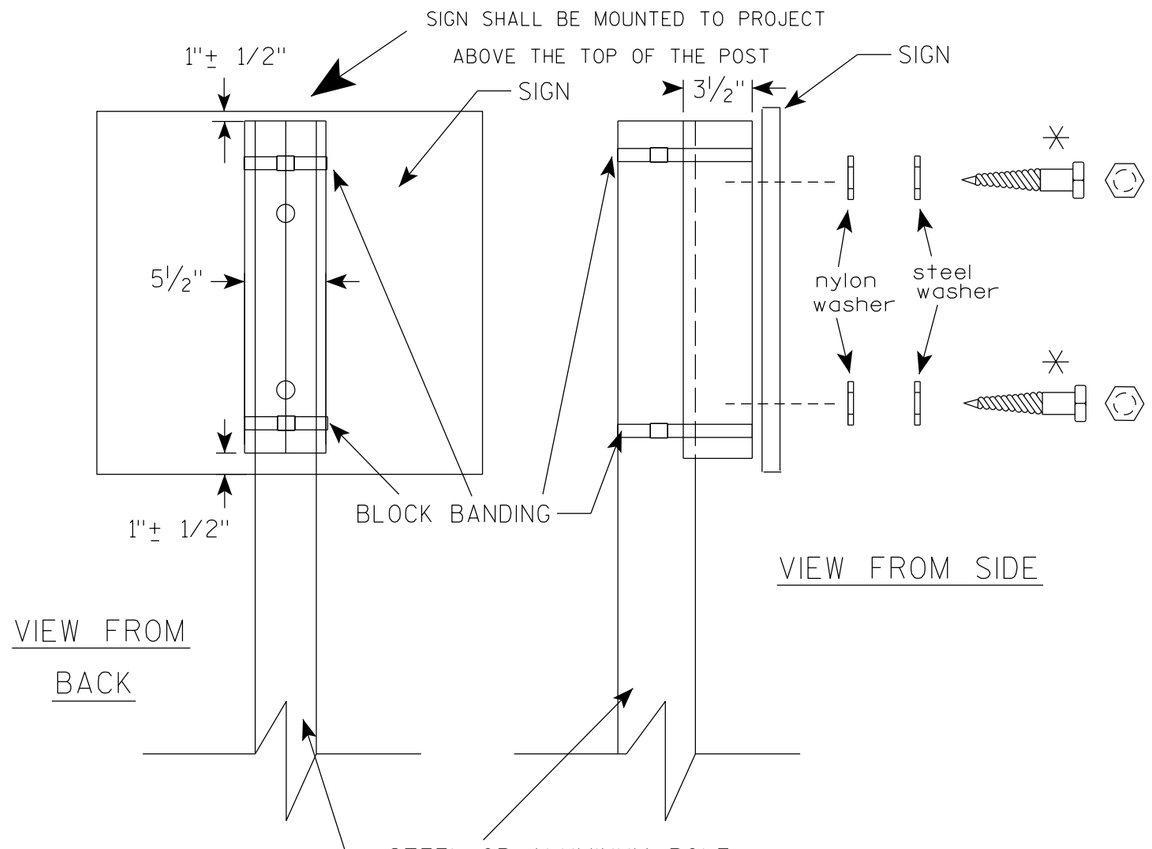
DATE 6/10/19 PLATE NO. A5-9.4

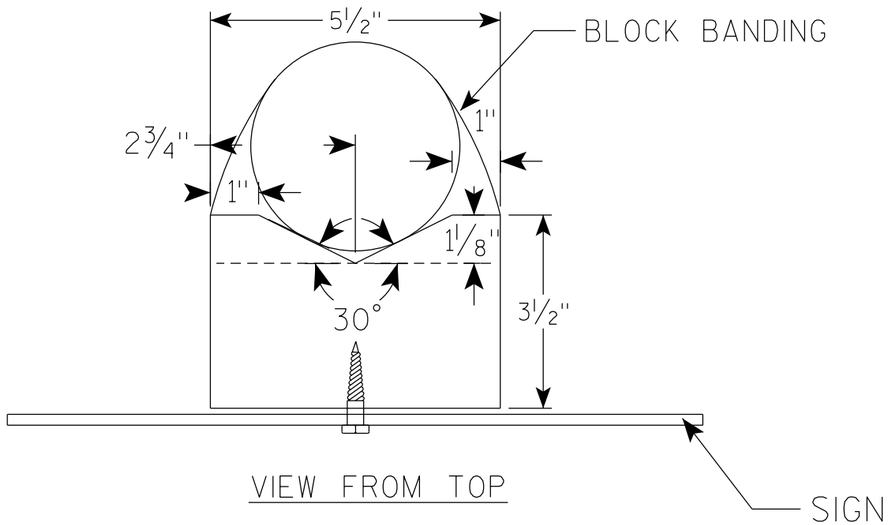
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 262	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

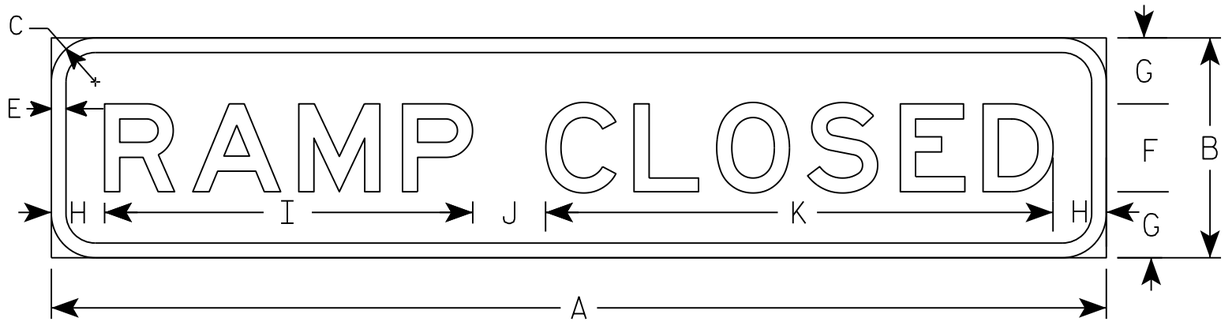
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 263 E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - E



G20-64

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																											
4	144	30	6		2	12	9	7 1/4	50 1/4	10	69 1/4																30.0
5																											

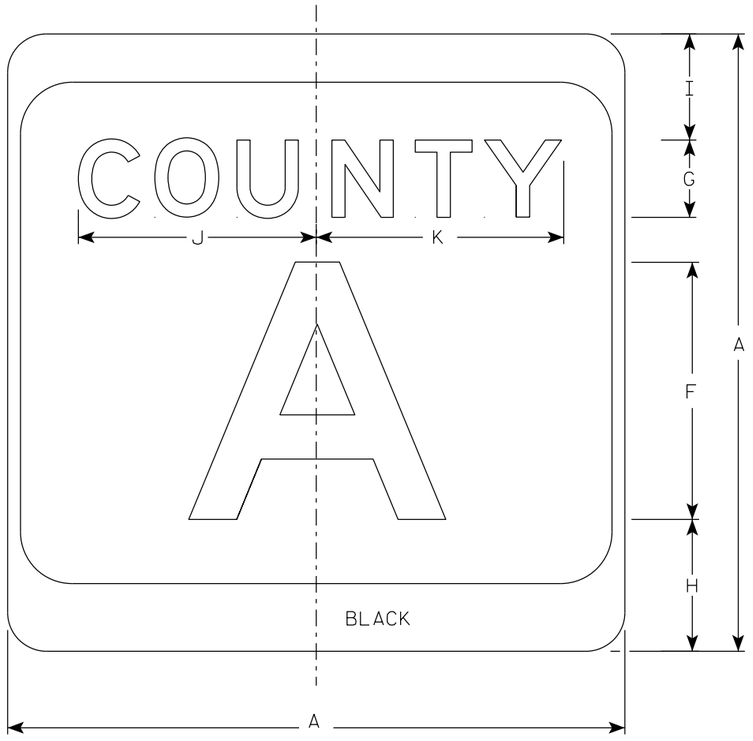
STANDARD SIGN
G20-64

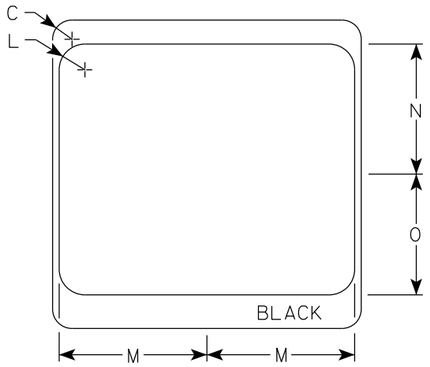
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/18 PLATE NO. G20-64.1

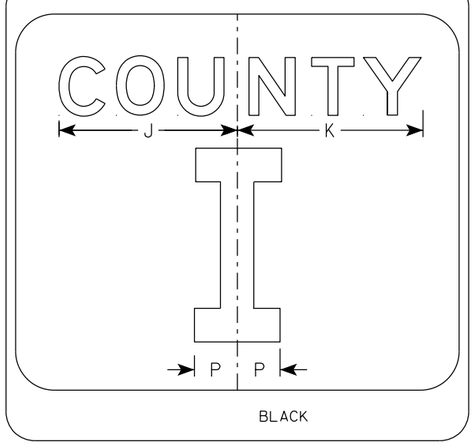
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 264 | E

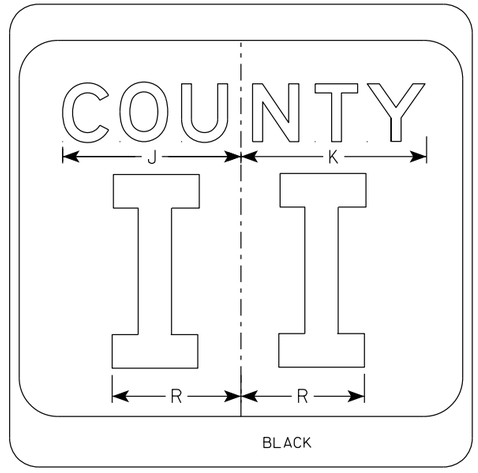




NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White & Black
   Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
5. Substitute appropriate letters & optically center to achieve proper balance.





SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
2M	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

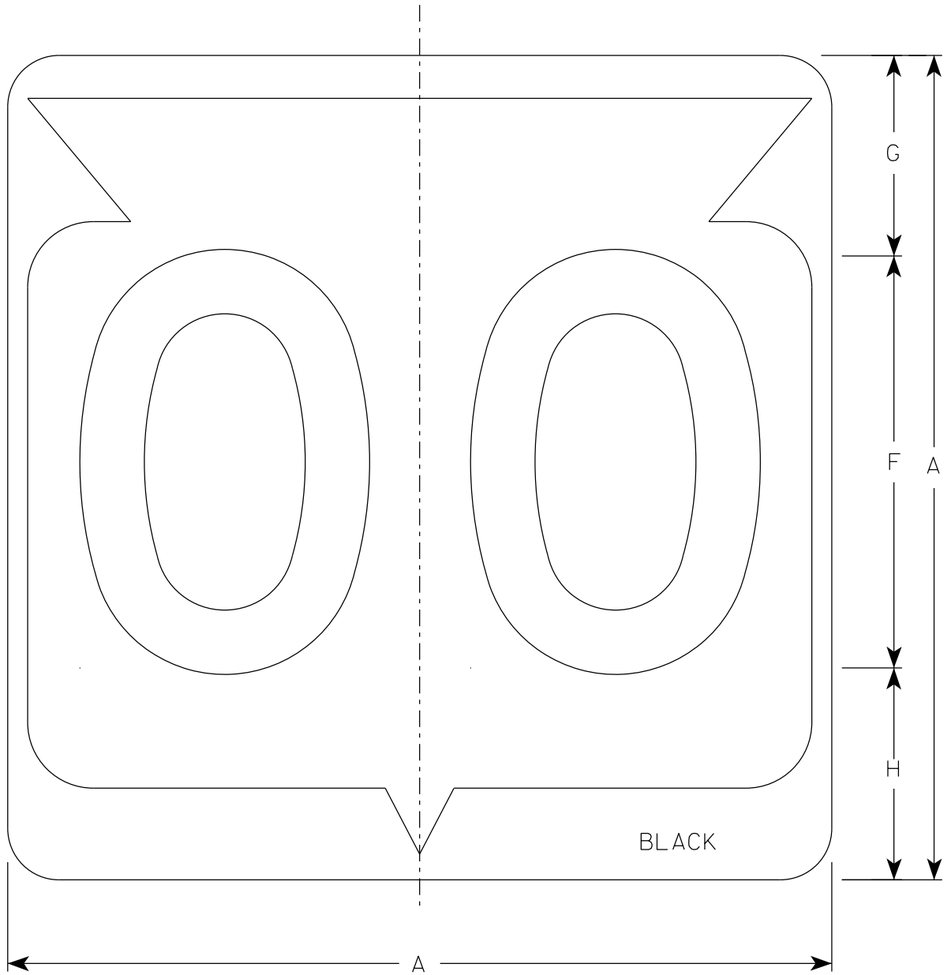
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-5A.9

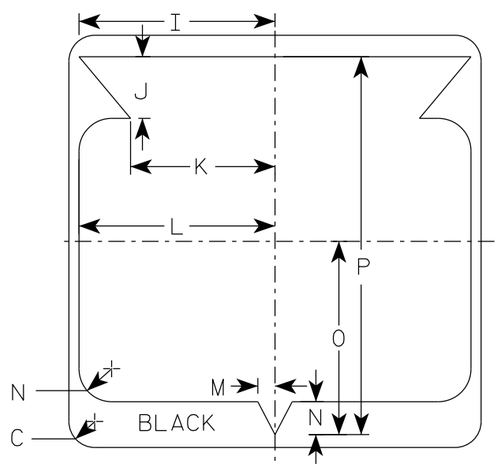
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M15A.dgn PLOT DATE : 8-NOV 2022 8:26 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7



M1-6



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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
2M	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

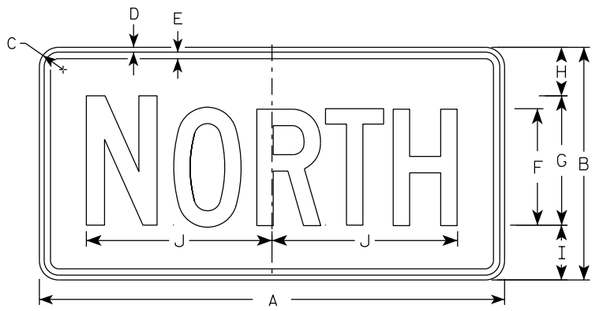
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

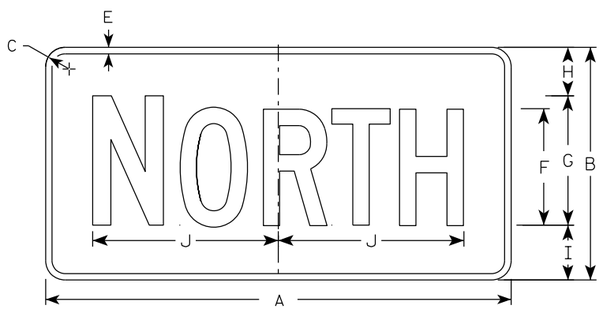
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-6.11

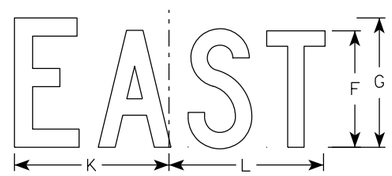
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 266	E



M3-1
MM3-1
MP3-1



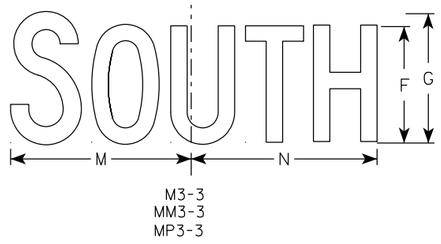
MB3-1
MK3-1
MN3-1



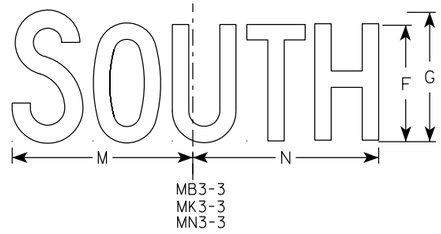
M3-2
MM3-2
MP3-2



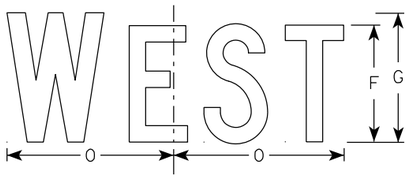
MB3-2
MK3-2
MN3-2



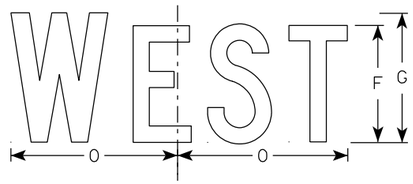
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. 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
6. Note the first letter of each direction is larger than the remainder of the message.

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	24	12	1 1/2	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												2.00
2M	24	12	1 1/2	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												2.00
3	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
4	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
5	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5

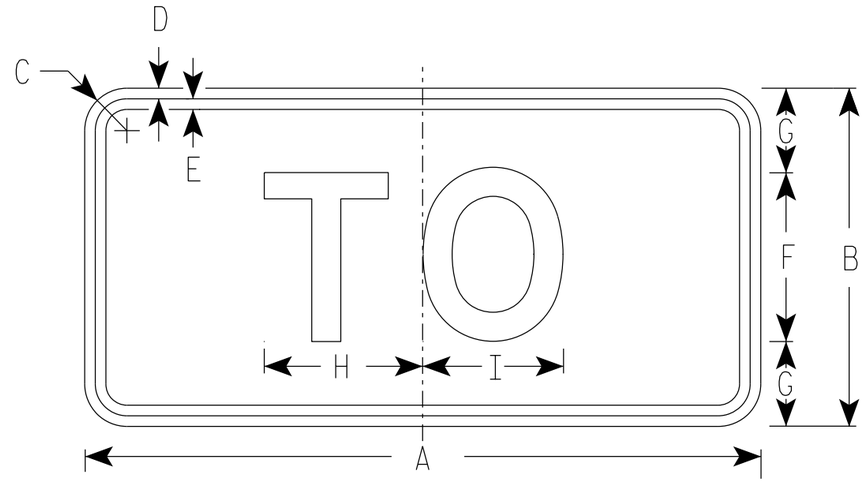
STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

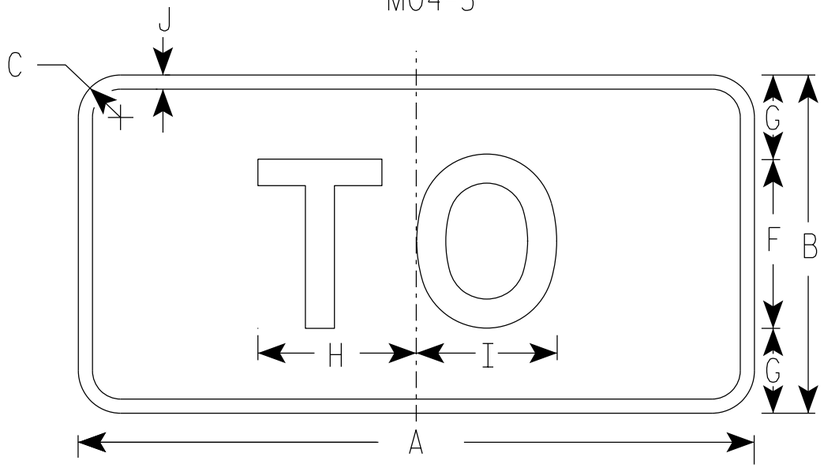
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 267 | E



M4-5
MM4-5
MP4-5
M04-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

   M04-5 Background - Orange Type F Reflective
   Message - Black

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	24	12	1 ½	⅜	⅜	6	3	5 ⅜	5 ¼	½																	2.00
2M	24	12	1 ½	⅜	⅜	6	3	5 ⅜	5 ¼	½																	2.00
3	36	18	1 ½	⅜	½	9	4 ½	8 ¼	8 ⅜	½																	4.5
4	36	18	1 ½	⅜	½	9	4 ½	8 ¼	8 ⅜	½																	4.5
5	36	18	1 ½	⅜	½	9	4 ½	8 ¼	8 ⅜	½																	4.5

STANDARD SIGN
M4-5

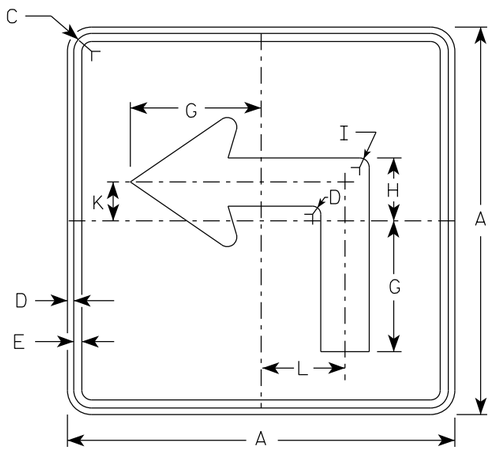
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

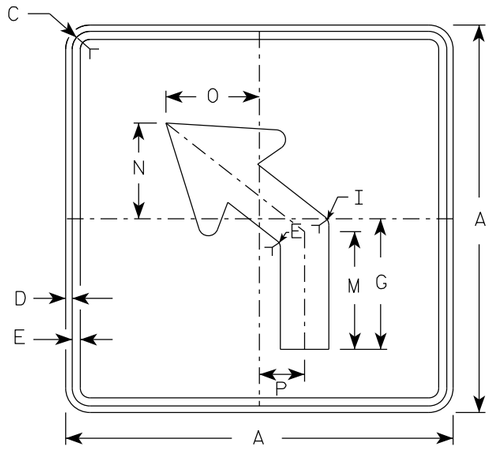
DATE 2/8/2023 PLATE NO. M4-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 268 E

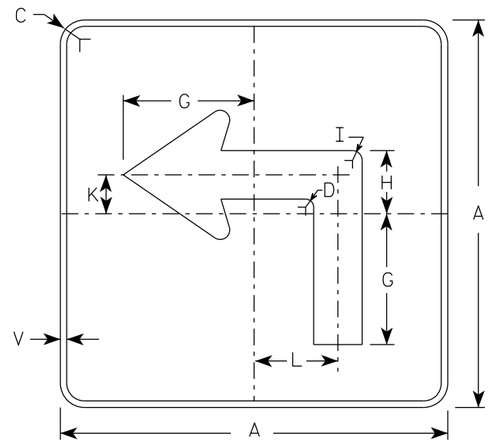
7



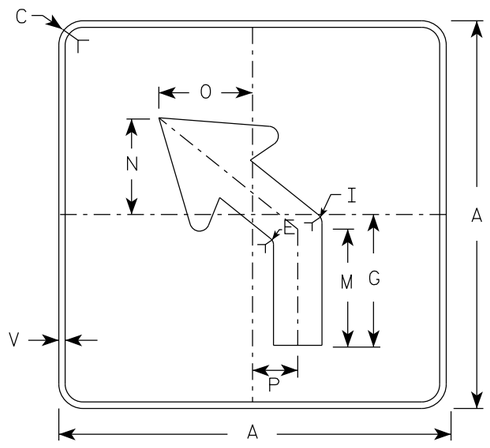
M5-1L
MM5-1L
MO5-1L
MP5-1L



M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L

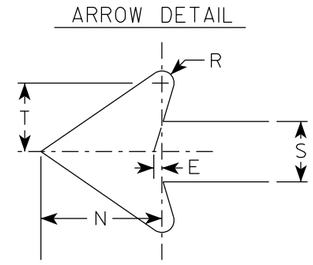


MB5-2L
MK5-2L
MN5-2L
MR5-2L

NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
4	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
5	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25

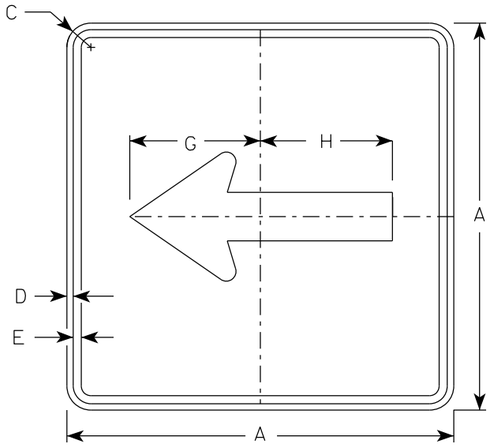
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

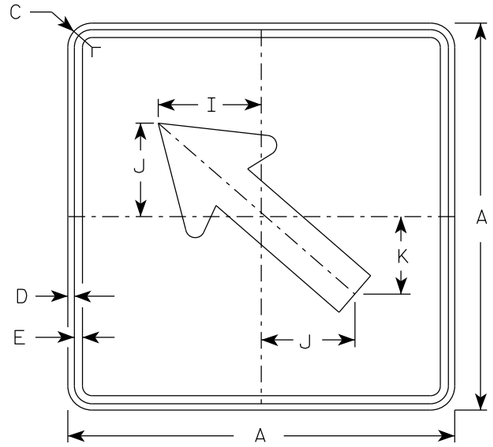
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M5-1.15

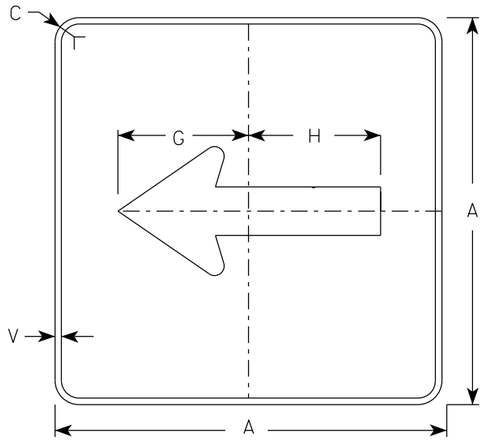
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 269 | E



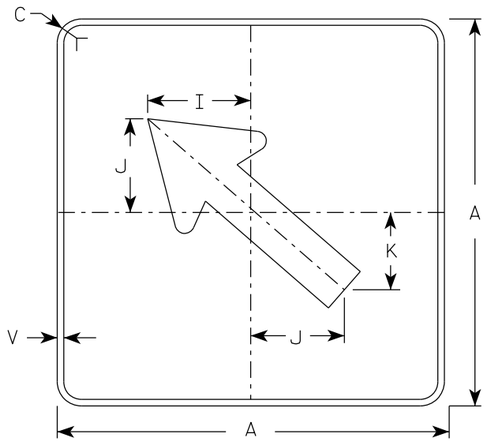
M6-1
MM6-1
MO6-1
MP6-1



M6-2
MM6-2
MO6-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1

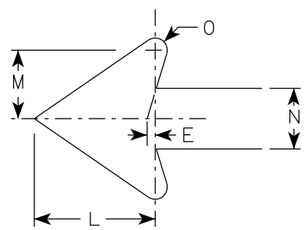


MB6-2
MK6-2
MN6-2
MR6-2

NOTES

1. Signs are Type II - Type H Reflective except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow

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	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
4	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
5	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

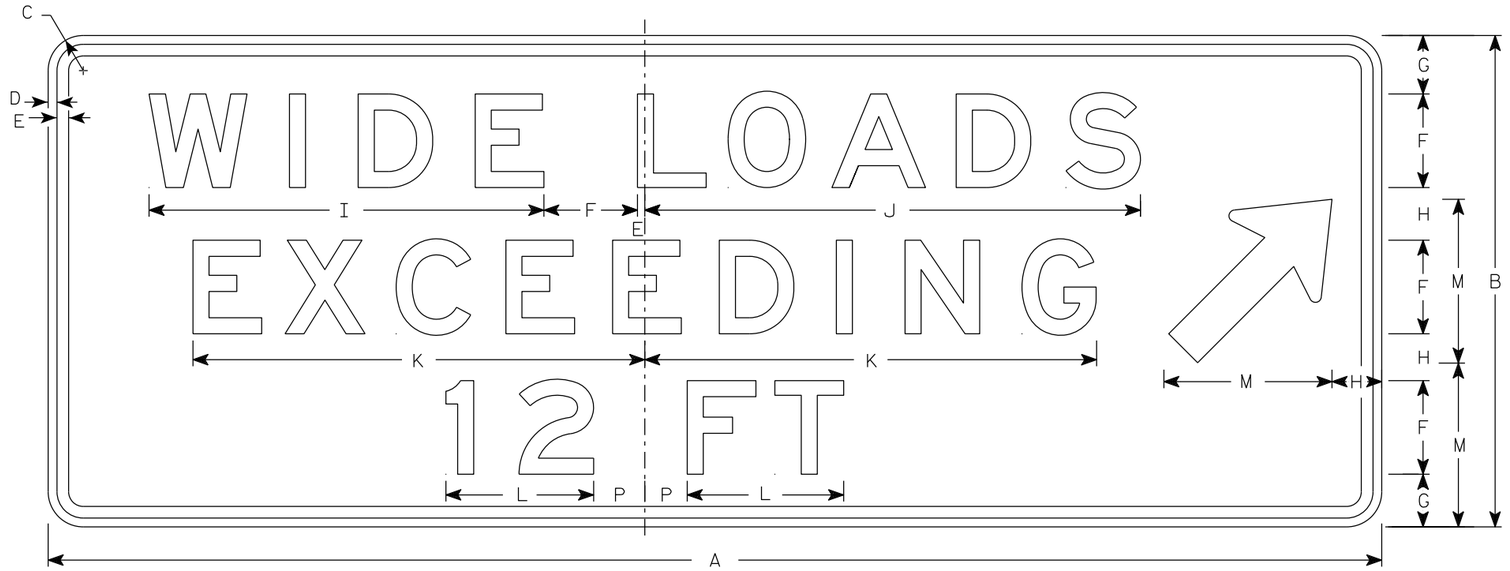
DATE 2/13/2023 PLATE NO. M6-1.16

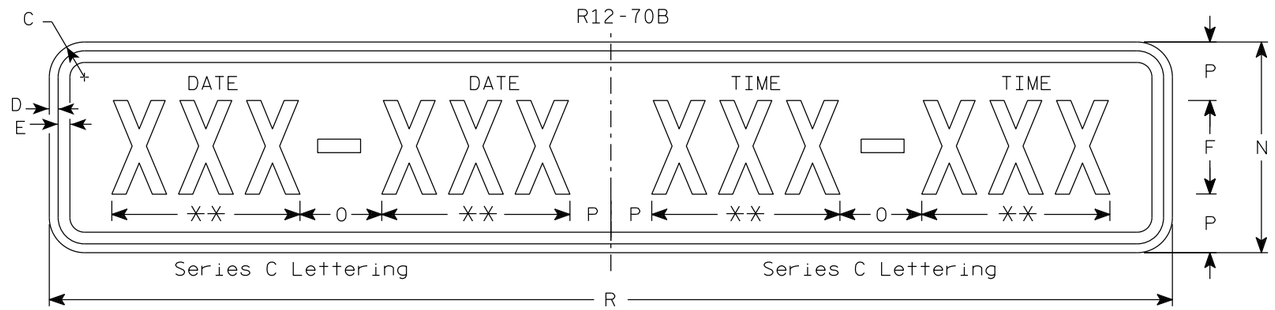
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 270 | E

NOTES

1. Sign is Type II - Type H Reflective
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 Area sq. ft.	R12-70C Area sq. ft.
1																												
2S	90	36	3	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	3	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	90	36	3	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
4	114	42	3	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0
5	114	42	3	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0

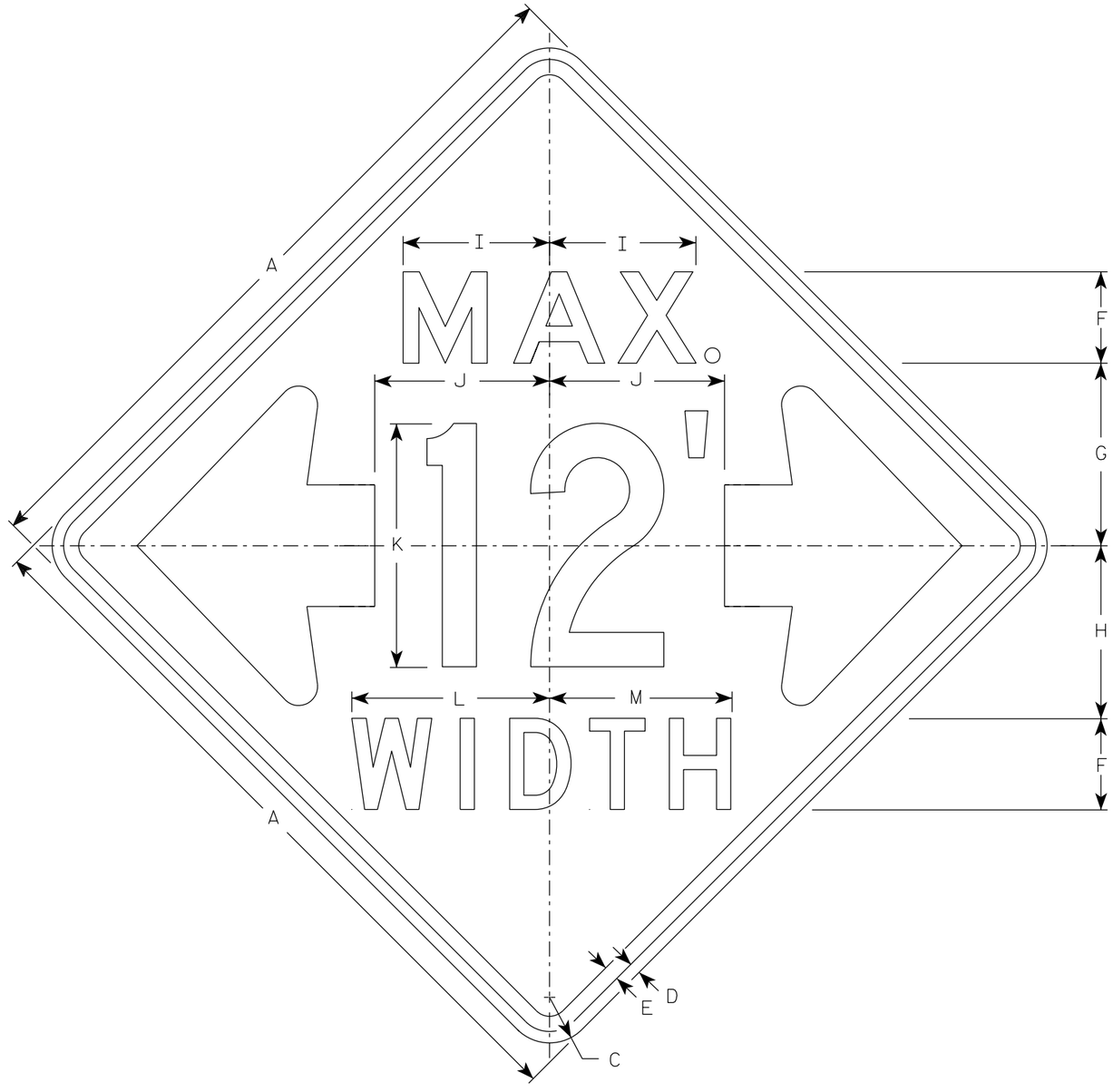
TYPICAL SIGN
R12-70B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/24 PLATE NO. R12-70B.4

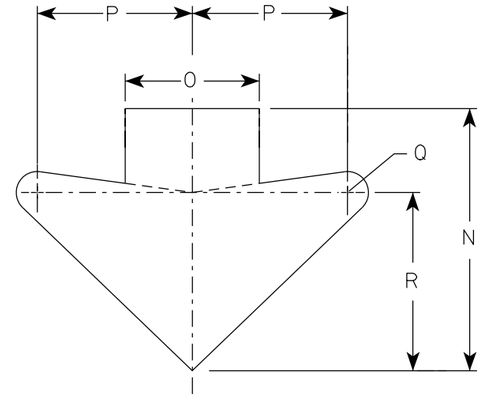
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 271	E



W12-52

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. The top line is series E, the numerals are series C, and the bottom line is series D.
5. 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		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
2M	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
3																											
4																											
5																											

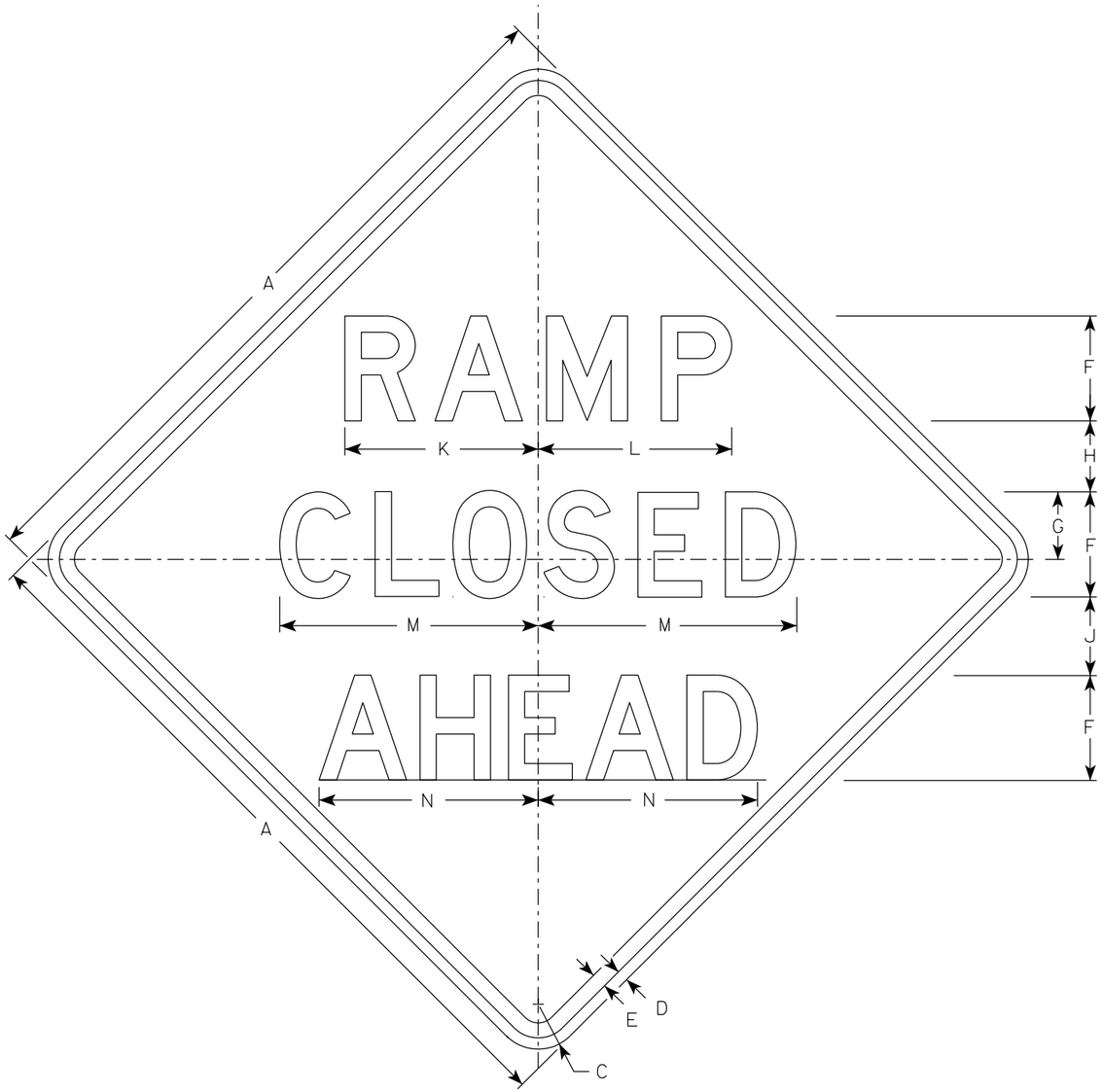
STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

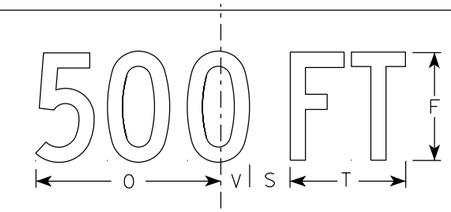
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/10/2024 PLATE NO. W12-52.8

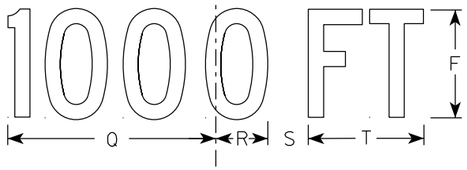
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 272 | E



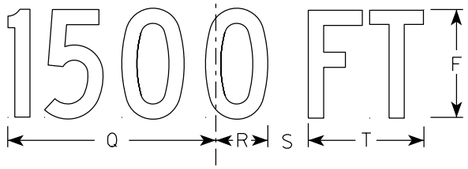
W20-53A



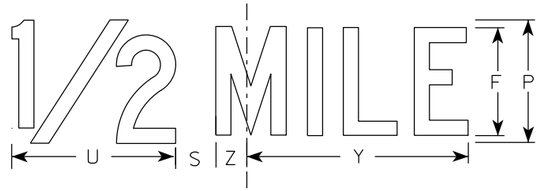
W20-53D



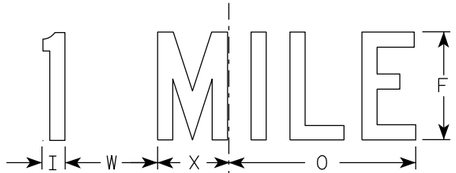
W20-53C



W20-53B



W20-53G



W20-53F

NOTES

1. Sign is Type II - Type F Reflective
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. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

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		2 1/4	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	9 1/4	9 1/4	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-53A,B,C,D,F,G

WISCONSIN DEPT OF TRANSPORTATION

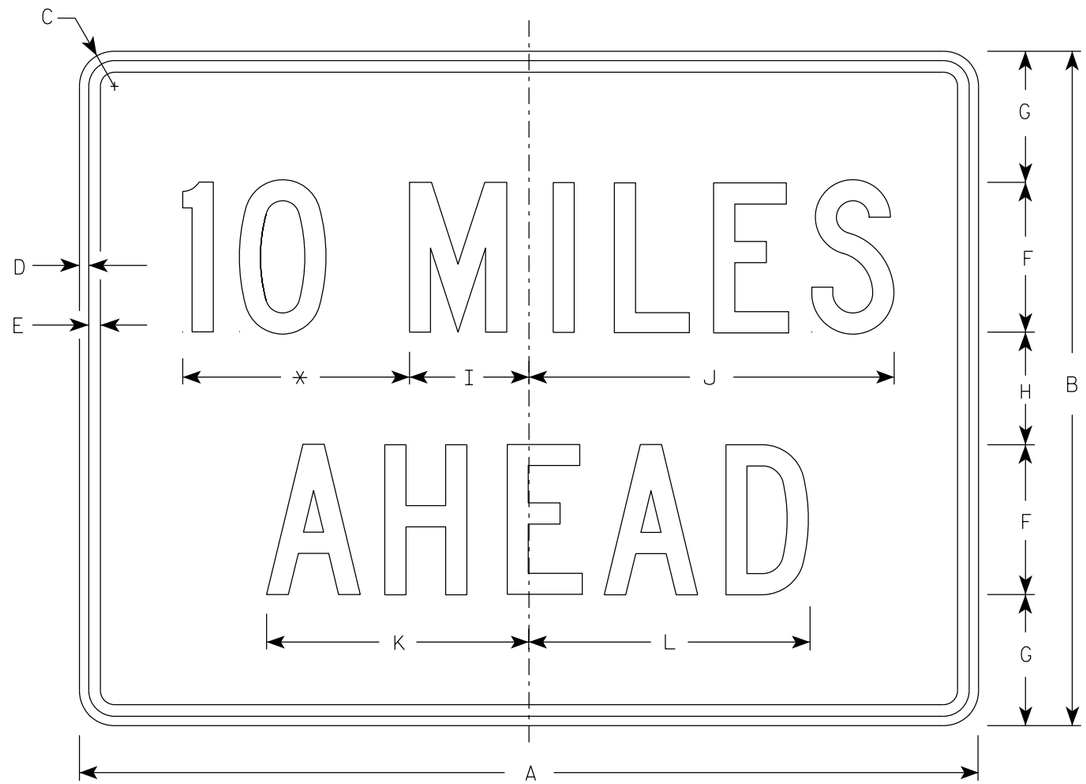
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-53.2

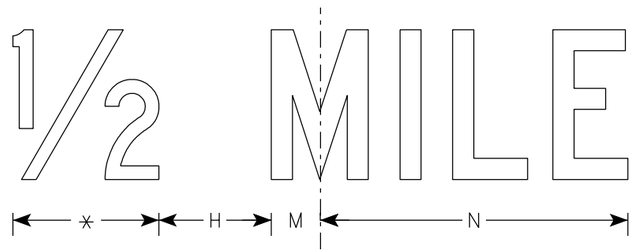
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W2053.DGN PLOT DATE : 10-JAN 2024 2:38 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

7



W057-52



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.

* 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 1/2	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	2 1/4	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	2 1/4	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	2 1/4	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	2 1/4	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	2 1/4	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

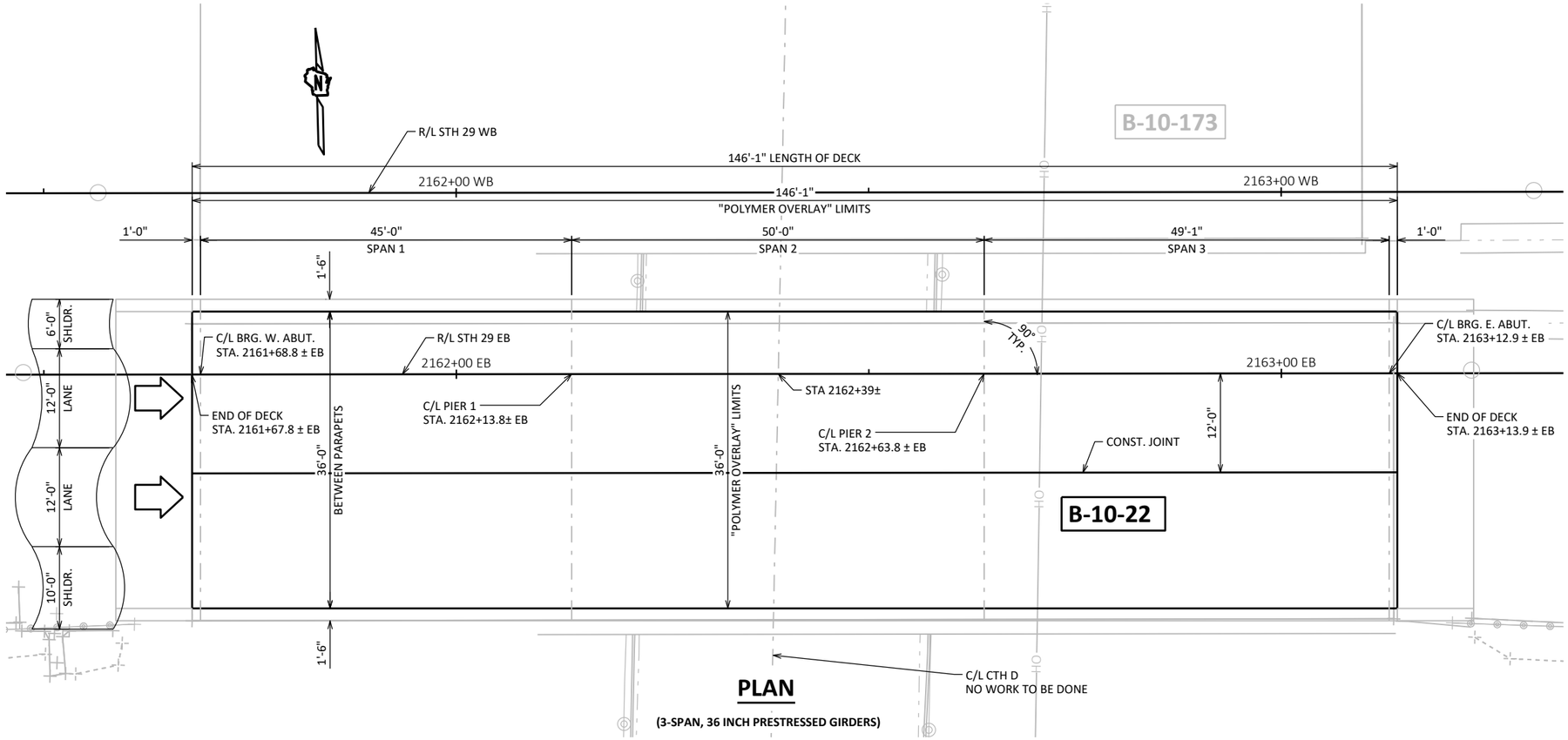
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/2024 PLATE NO. W057-52.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 274 E

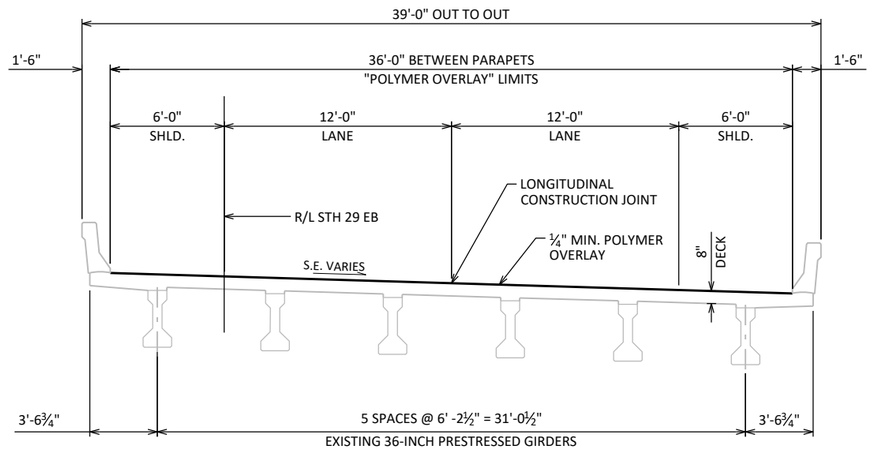
STATE PROJECT NUMBER

1050-01-74



PLAN

(3-SPAN, 36 INCH PRESTRESSED GIRDERS)

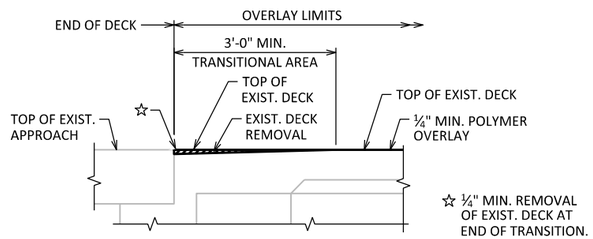


CROSS SECTION THRU BRIDGE

LOOKING UPSTATION

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
509.0301	PREPARATION DECKS TYPE 1	SY	27
509.0302	PREPARATION DECKS TYPE 2	SY	11
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	270
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	2
509.5100.S	POLYMER OVERLAY	SY	584



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK AT SEMI-EXPANSION OR FIXED JOINT

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)
NOTE: TRANSITIONAL AREA REQUIRED WHEN APPROACH PAVEMENT HAS BEEN PLACED PRIOR TO OVERLAY PLACEMENT.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS = 20
INVENTORY RATING: HS = 15
OPERATING RATING: HS = 26
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 200 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
DECK REPAIR ——— f'_c = 4,000 PSI

TRAFFIC DATA

STH 29 EB:
ADT (2027) = 14,500
ADT (2047) = 17,520
DESIGN SPEED = 70 MPH
CTH D:
ADT (2019) = 500
DESIGN SPEED = 55 MPH

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

AREAS OF "PREPARATION DECKS TYPE 1" SHALL BE DEFINED BY A SAW CUT.

PREPARATION DECKS TYPE 1 AND PREPARATION DECKS TYPE 2 AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AREAS TO BE DELINEATED BY "SAWING PAVEMENT DECK PREPARATION AREAS" AND SHALL BE FILLED WITH "CONCRETE MASONRY DECK REPAIR".

DECK REPAIRS SHALL BE FILLED PRIOR TO OVERLAY PLACEMENT. DECK REPAIRS USING A PORTLAND CEMENT BASED CONCRETE REQUIRES A MINIMUM CURE TIME OF 28 DAYS PRIOR TO OVERLAY PLACEMENT.

SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

LIST OF DRAWINGS:

1. GENERAL PLAN
2. STAGING DETAILS
3. DECK CONDITION SURVEY

STRUCTURE DESIGN CONTACTS:
BUREAU OF STRUCTURES: AARON BONK 608-261-0261
CONSULTANT: MATT BUCKLI 608-443-0441

NO.	DATE	REVISION	BY

Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
608.273.6380
www.meadhunt.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 08/14/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

WISCONSIN MATTHEW J. BUCKLI E-39849 MADISON WI PROFESSIONAL ENGINEER 4/11/25

STRUCTURE B-10-22

STH 29 EB OVER CTH D

COUNTY	TOWN
CLARK	LONGWOOD

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	JLA	DESIGNED CK'D	MJB	DRAWN BY	JLA	PLANS CK'D	RCP

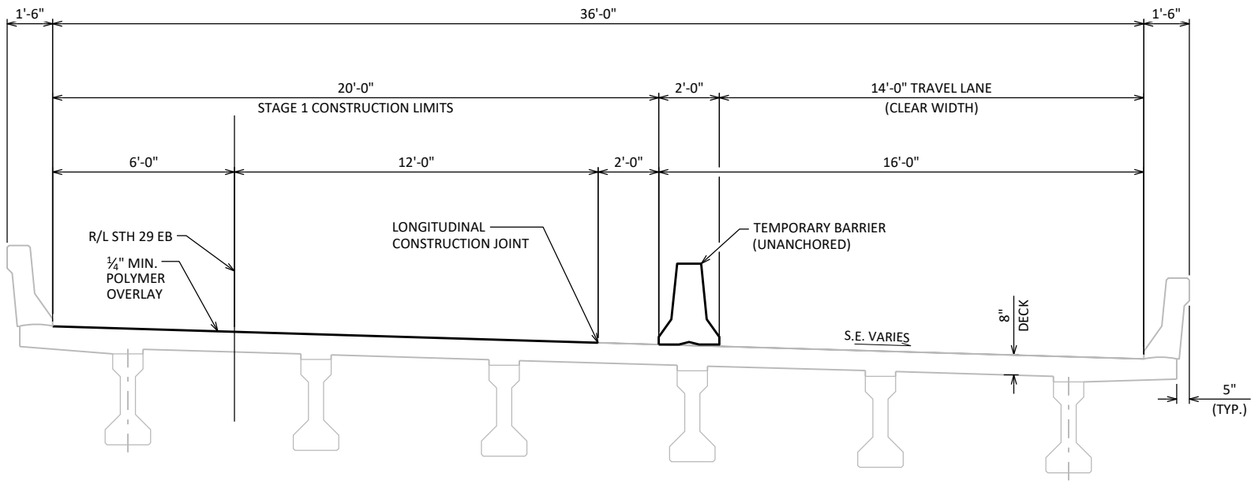
GENERAL PLAN

SHEET 1 OF 3
275

I.D. DATE:

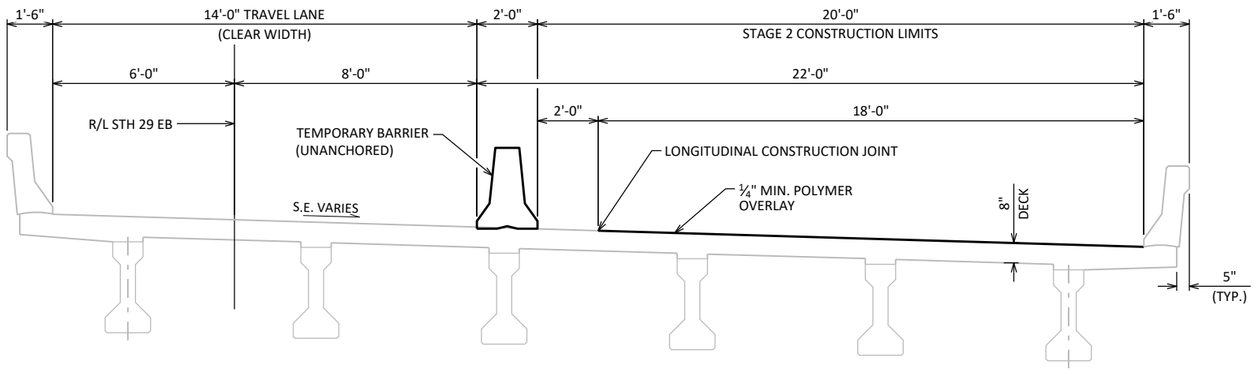
STATE PROJECT NUMBER

1050-01-74



STAGE 1 CONSTRUCTION

LOOKING UPSTATION



STAGE 2 CONSTRUCTION

LOOKING UPSTATION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-22

DRAWN BY JLA | PLANS CK'D RCP

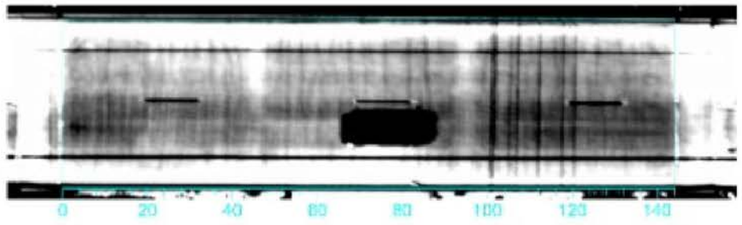
STAGING DETAILS

SHEET 2
276

STATE PROJECT NUMBER

1050-01-74





Orientation	Quantity Summary		General Information
N Direction of traffic 1 in = 35 ft 0 35	Delamination Quantity (%)	5	Bridge ID: B100022 STH 29 EB over CTH D
	Delamination Quantity (ft²)	242	
			Analyzed by: JB/SB Reviewed by: EG Completed: 09/11/20

INFRASENSE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-22

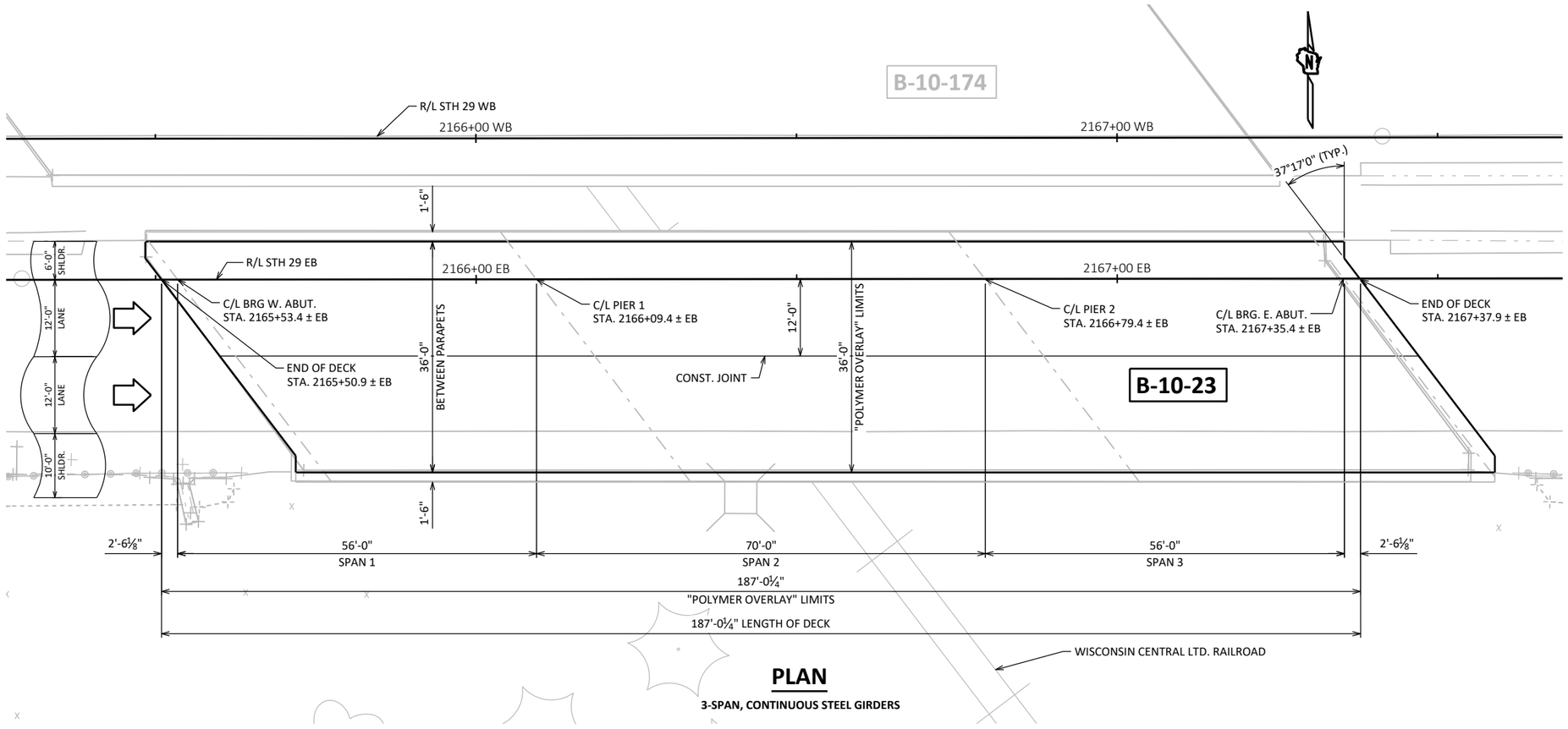
DRAWN BY JLA | PLANS CK'D MJB

DECK CONDITION SURVEY

SHEET 3
277

STATE PROJECT NUMBER

1050-01-74



PLAN

3-SPAN, CONTINUOUS STEEL GIRDERS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS = 20
INVENTORY RATING: HS = 19
OPERATING RATING: HS = 33
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
DECK REPAIR ——— f'_c = 4,000 PSI

TRAFFIC DATA

STH 29 EB:

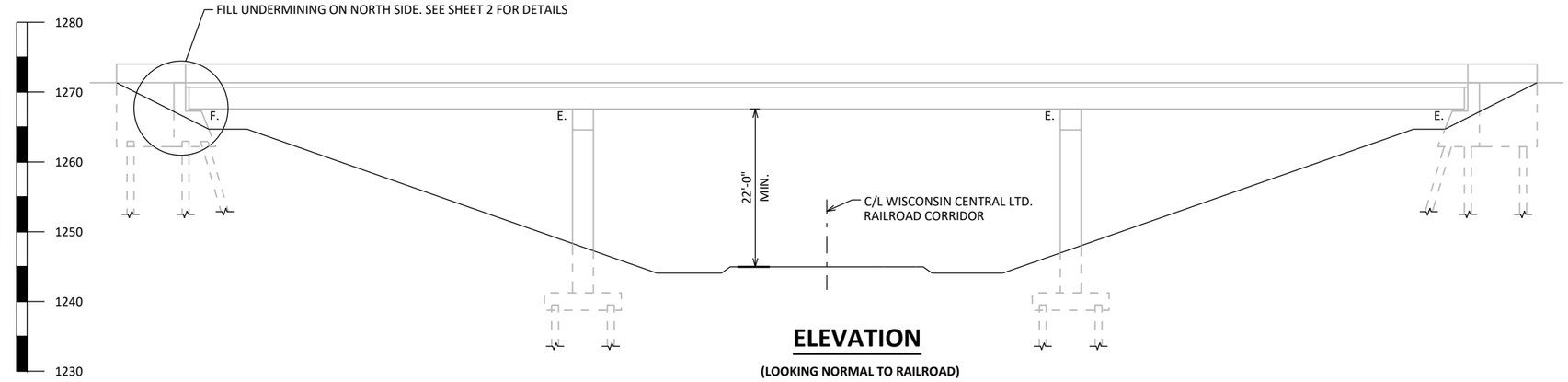
ADT (2027) = 14,500
ADT (2047) = 17,520
DESIGN SPEED = 70 MPH

WISCONSIN CENTRAL LTD R.R.:

1 RAILROAD LINE

LIST OF DRAWINGS:

1. GENERAL PLAN
2. TYPICAL SECTION, QUANTITIES, AND NOTES
3. STAGING DETAILS
4. DECK CONDITION SURVEY



ELEVATION

(LOOKING NORMAL TO RAILROAD)

STRUCTURE DESIGN CONTACTS:

BUREAU OF STRUCTURES: AARON BONK 608-261-0261
CONSULTANT: MATT BUCKLI 608-443-0441

NO.	DATE	REVISION	BY

Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
608.273.6380
www.meadhunt.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 08/14/25
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-10-23

STH 29 EB OVER WISCONSIN CENTRAL LTD. R.R.

COUNTY	TOWN
CLARK	GREEN GROVE

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
JLA	MJB	JLA	RCP

WISCONSIN MATTHEW J. BUCKLI E-39849 MADISON WI PROFESSIONAL ENGINEER 11/ed 25

GENERAL PLAN

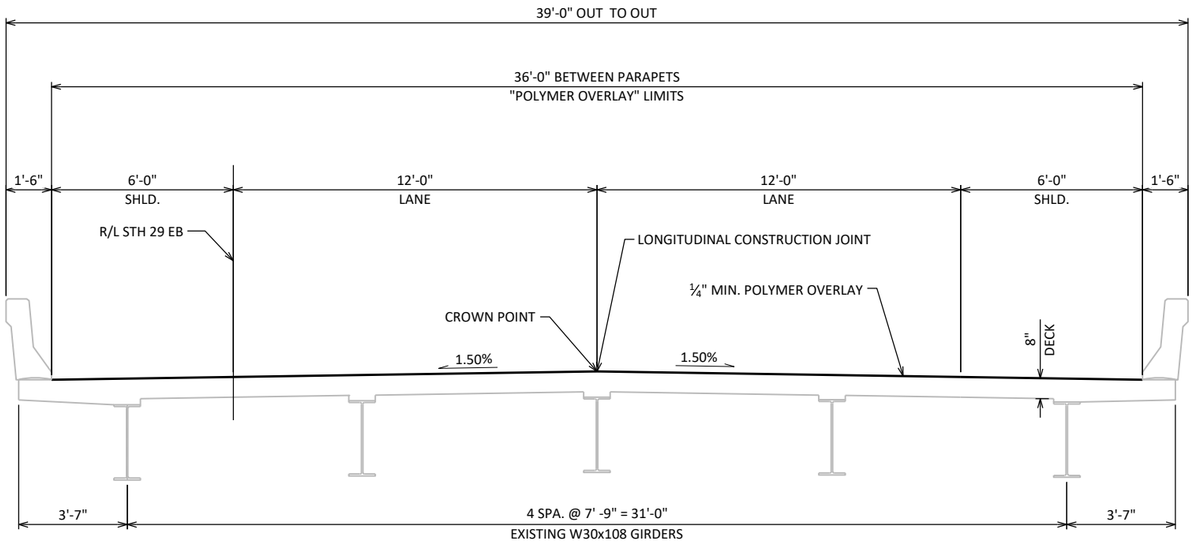
SHEET 1 OF 4
278

I.D.

DATE:

STATE PROJECT NUMBER

1050-01-74



CROSS SECTION THRU BRIDGE

LOOKING UPSTATION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

AREAS OF "PREPARATION DECKS TYPE 1" SHALL BE DEFINED BY A SAW CUT.

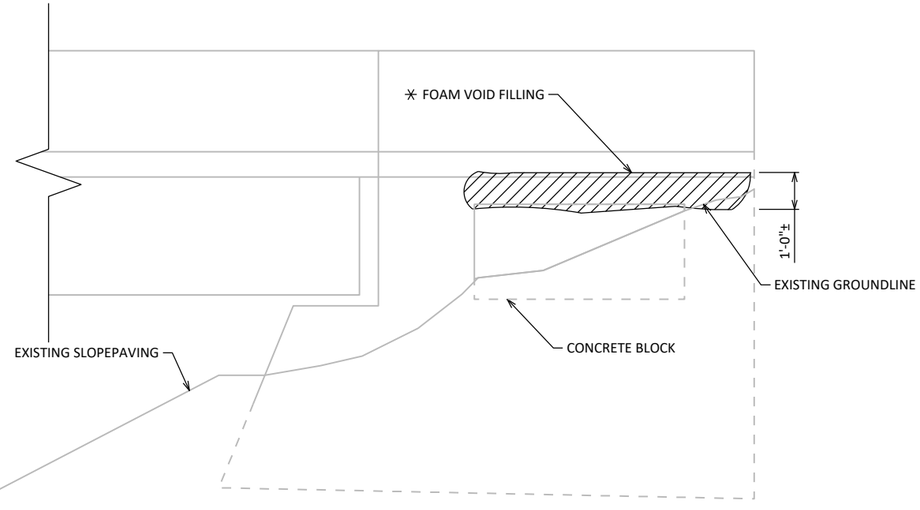
PREPARATION DECKS TYPE 1 AND PREPARATION DECKS TYPE 2 AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AREAS TO BE DELINEATED BY "SAWING PAVEMENT DECK PREPARATION AREAS" AND SHALL BE FILLED WITH "CONCRETE MASONRY DECK REPAIR".

DECK REPAIRS SHALL BE FILLED PRIOR TO OVERLAY PLACEMENT. DECK REPAIRS USING A PORTLAND CEMENT BASED CONCRETE REQUIRES A MINIMUM CURE TIME OF 28 DAYS PRIOR TO OVERLAY PLACEMENT.

SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
509.0301	PREPARATION DECKS TYPE 1	SY	35
509.0302	PREPARATION DECKS TYPE 2	SY	14
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	350
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	3
509.5100.S	POLYMER OVERLAY	SY	748
SPV.0060.01	FOAM VOID FILLING	EA	1



UNDERMINING REPAIR LIMITS

NORTH CORNER OF WEST ABUTMENT
LOOKING SOUTH

⁎ SHOWN AREA IS ESTIMATED FROM INSPECTION REPORTS AND PHOTOS. ACTUAL AREA TO BE DETERMINED IN FIELD

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-23

DRAWN BY JLA | PLANS CK'D RCP

TYPICAL SECTION, QUANTITIES, AND NOTES

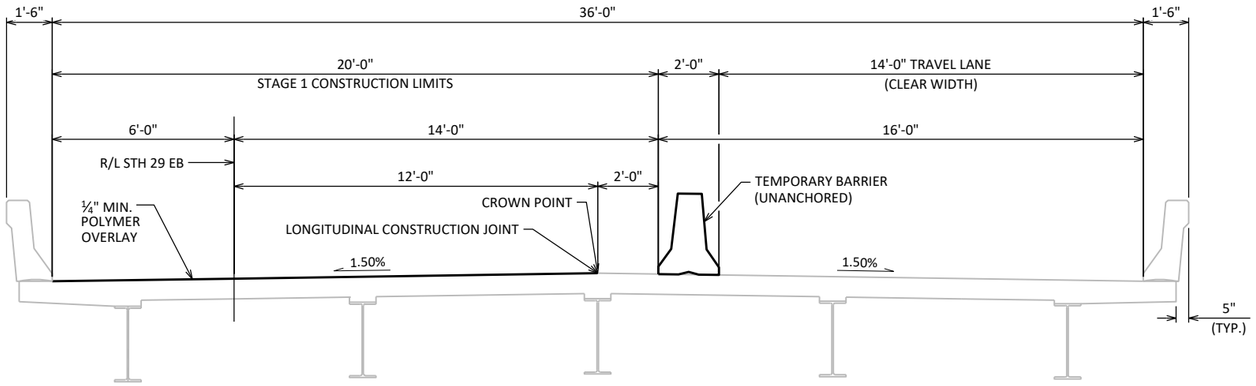
SHEET 2

8

8

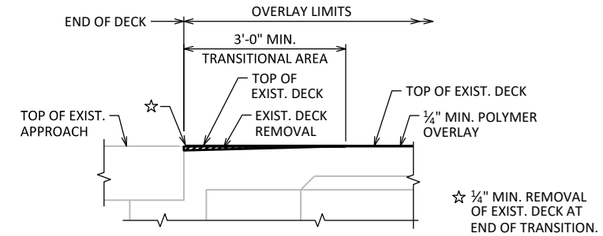
STATE PROJECT NUMBER

1050-01-74



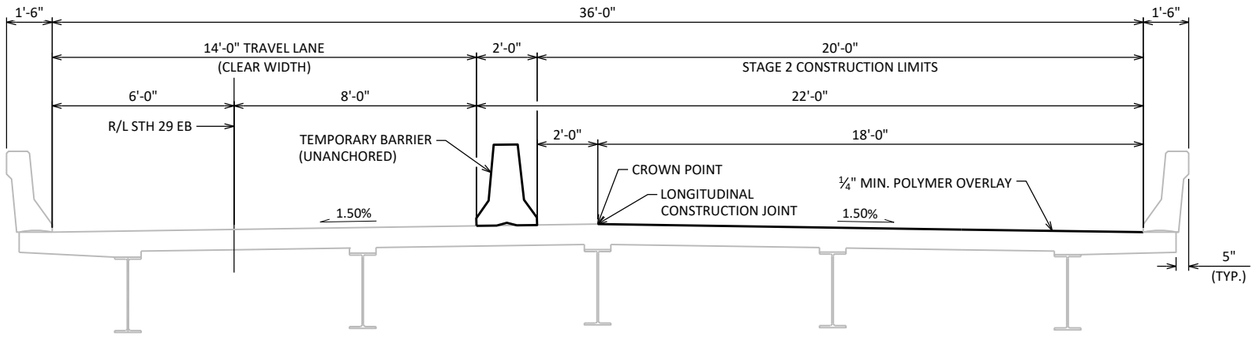
STAGE 1 CONSTRUCTION

LOOKING UPSTATION



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK AT SEMI-EXPANSION OR FIXED JOINT

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)
NOTE: TRANSITIONAL AREA REQUIRED WHEN APPROACH PAVEMENT HAS BEEN PLACED PRIOR TO OVERLAY PLACEMENT.



STAGE 2 CONSTRUCTION

LOOKING UPSTATION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-23

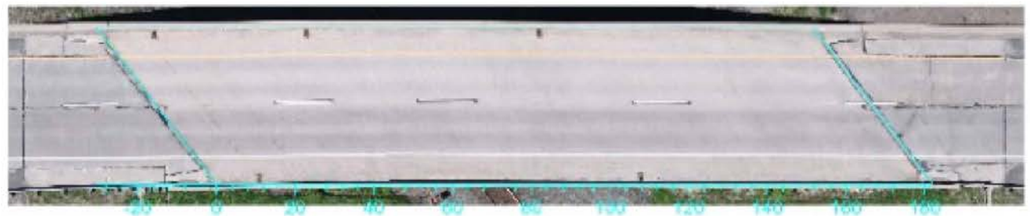
DRAWN BY JLA | PLANS CK'D RCP

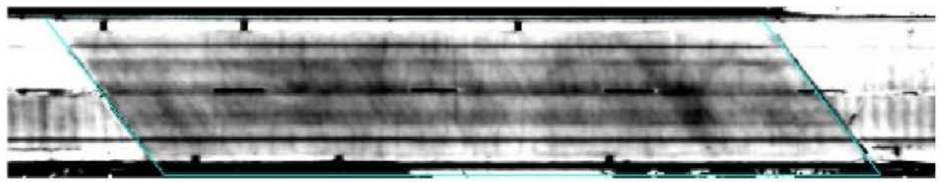
STAGING DETAILS

SHEET 3
280

STATE PROJECT NUMBER

1050-01-74





Orientation	Quantity Summary		General Information
N Direction of traffic 1 in = 35 ft 0 35	Delamination Quantity (%)	5	Bridge ID: B100023 STH 29 EB over Railroad
	Delamination Quantity (ft²)	312	
			Analyzed by: JB/SB Reviewed by: EG Completed: 09/11/20

INFRASENSE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-23

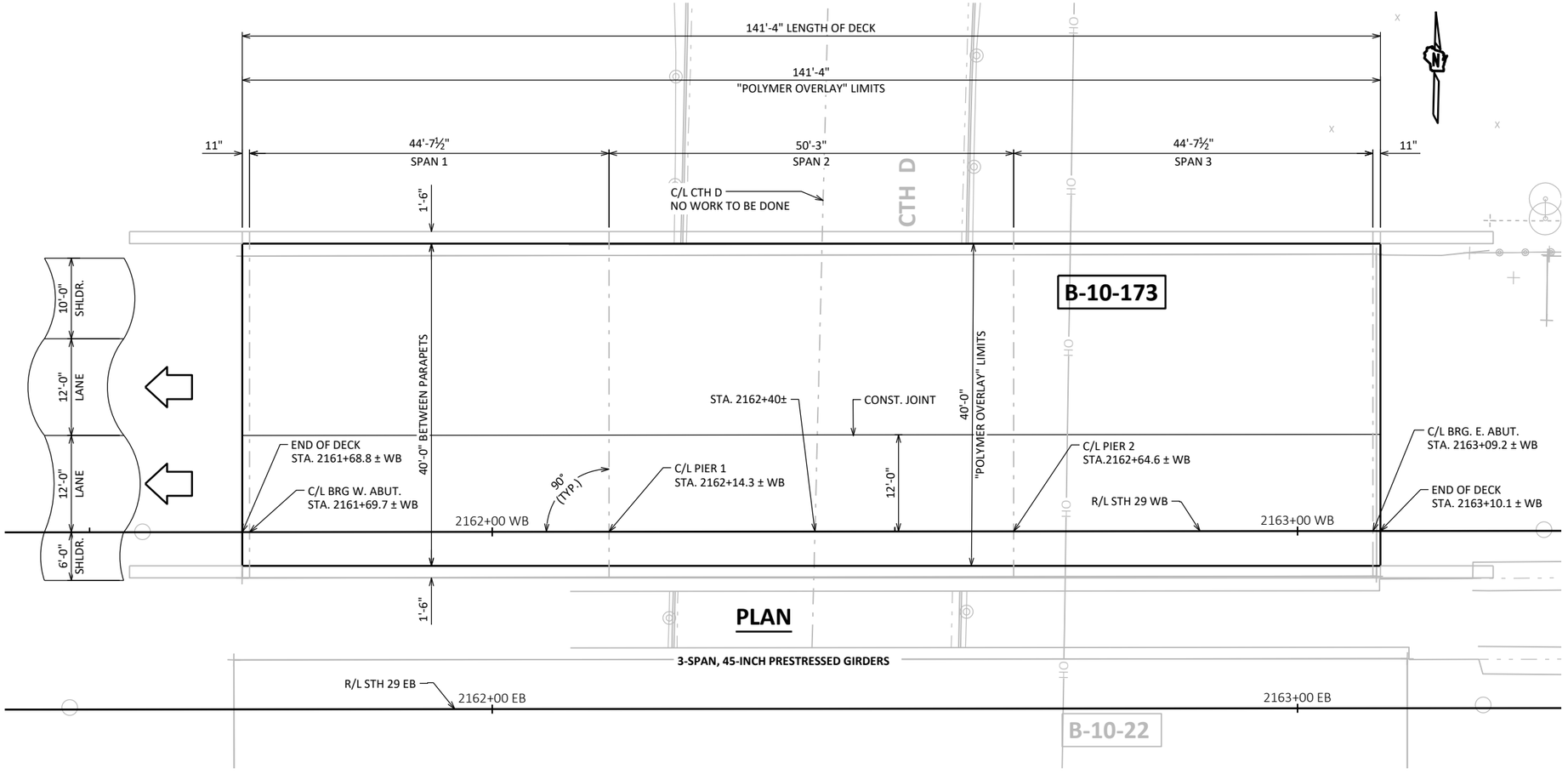
DRAWN BY JLA | PLANS CK'D MJB

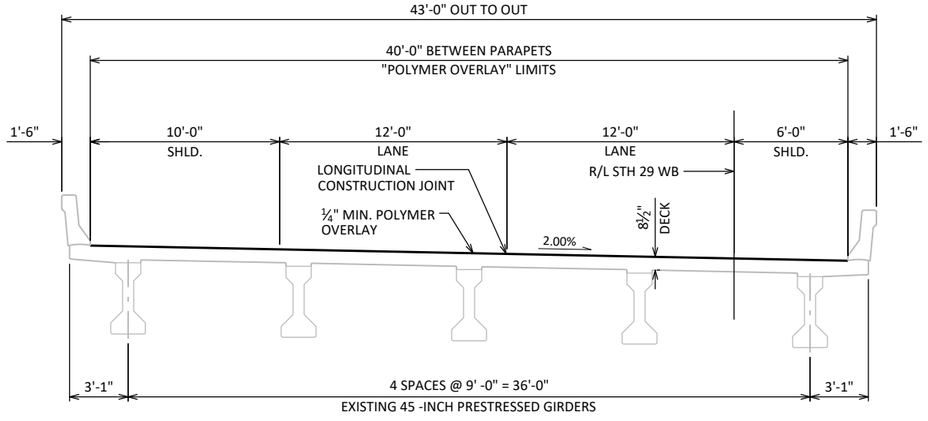
DECK CONDITION SURVEY

SHEET 4

STATE PROJECT NUMBER

1050-01-74





CROSS SECTION THRU BRIDGE

LOOKING UPSTATION

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS = 20
INVENTORY RATING: HS = 17
OPERATING RATING: HS = 30
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
DECK REPAIR ——— f'_c = 4,000 PSI

TRAFFIC DATA

STH 29 WB:

ADT (2027) = 14,500
ADT (2047) = 17,520
DESIGN SPEED = 70 MPH

CTH D:

ADT (2019) = 500
R.D.S. = 55 MPH

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

AREAS OF "PREPARATION DECKS TYPE 1" SHALL BE DEFINED BY A SAW CUT.

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SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

LIST OF DRAWINGS:

1. GENERAL PLAN
2. STAGING DETAILS
3. DECK CONDITION SURVEY

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
509.0301	PREPARATION DECKS TYPE 1	SY	21
509.0302	PREPARATION DECKS TYPE 2	SY	8
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	210
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	2
509.5100.S	POLYMER OVERLAY	SY	628

STRUCTURE DESIGN CONTACTS:

BUREAU OF STRUCTURES: AARON BONK 608-261-0261
CONSULTANT: MATT BUCKLI 608-443-0441

NO.	DATE	REVISION	BY

Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
608.273.6380
www.meadhunt.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 08/14/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

WISCONSIN MATTHEW J. BUCKLI E-39849 MADISON WI PROFESSIONAL ENGINEER 11/14/25

STRUCTURE B-10-173

STH 29 WB OVER CTH D

COUNTY	TOWN
CLARK	GREEN GROVE

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
JLA	MJB	JLA	RCP

GENERAL PLAN

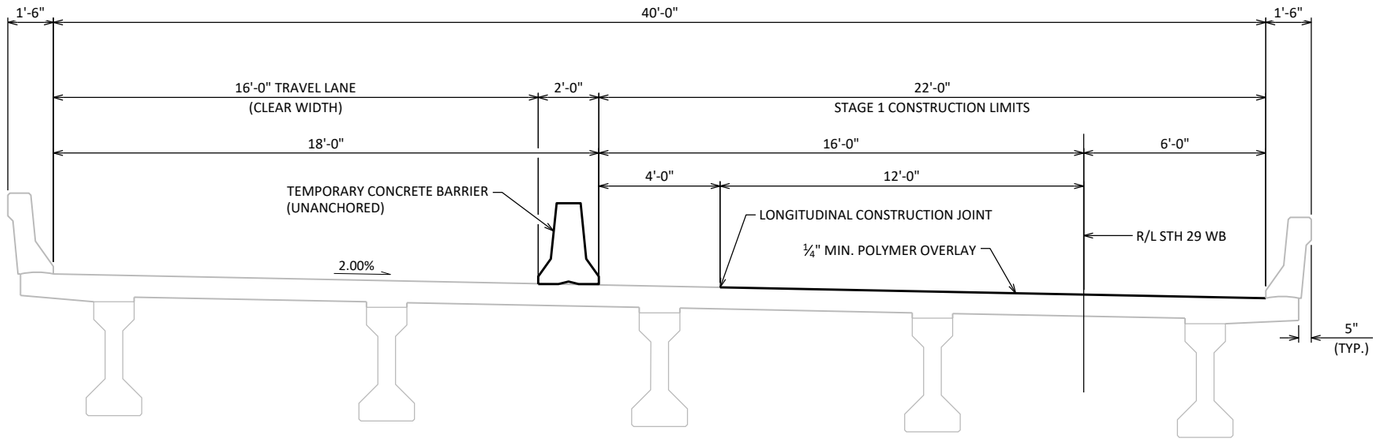
SHEET 1 OF 3
282

I.D.

DATE:

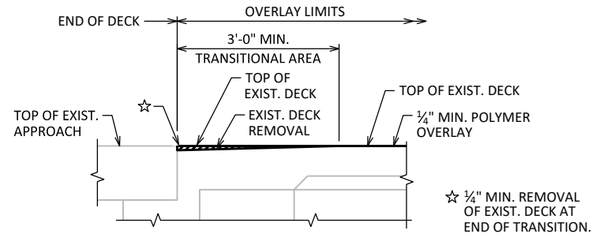
STATE PROJECT NUMBER

1050-01-74



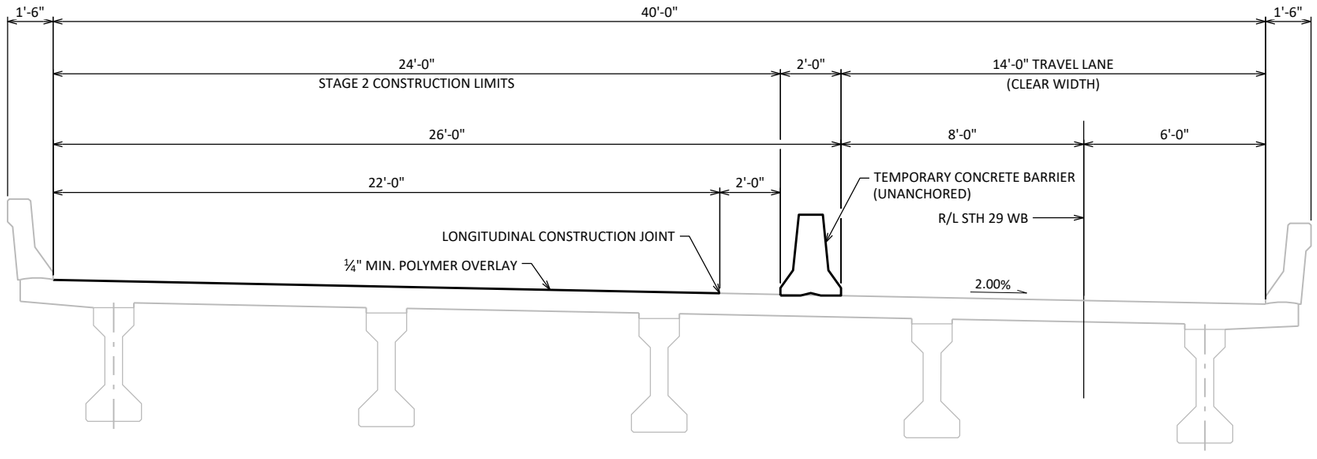
STAGE 1 CONSTRUCTION

LOOKING UPSTATION



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK AT SEMI-EXPANSION OR FIXED JOINT

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)
NOTE: TRANSITIONAL AREA REQUIRED WHEN APPROACH PAVEMENT HAS BEEN PLACED PRIOR TO OVERLAY PLACEMENT.



STAGE 2 CONSTRUCTION

LOOKING UPSTATION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-173

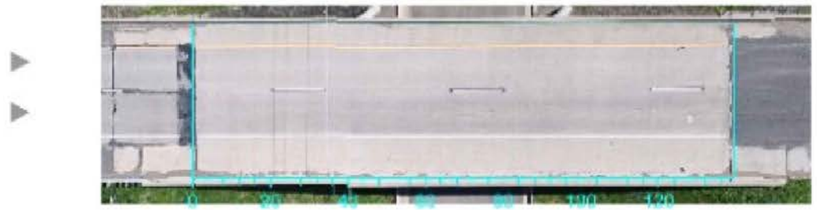
DRAWN BY JLA | PLANS CK'D RCP

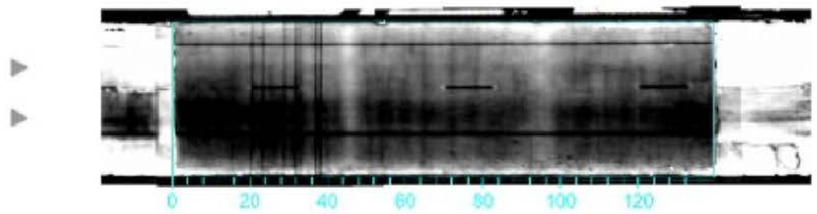
STAGING DETAILS

SHEET 2
283

STATE PROJECT NUMBER

1050-01-74





Orientation	Quantity Summary		General Information
N Direction of traffic 1-in 35-ft 0 35	Delamination Quantity (%)	3	Bridge ID: B100173 STH 29 WB over CTH D
	Delamination Quantity (ft²)	189	
			Analyzed by: JB/SB Reviewed by: EG Completed: 09/22/20

INFRASENSE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-173

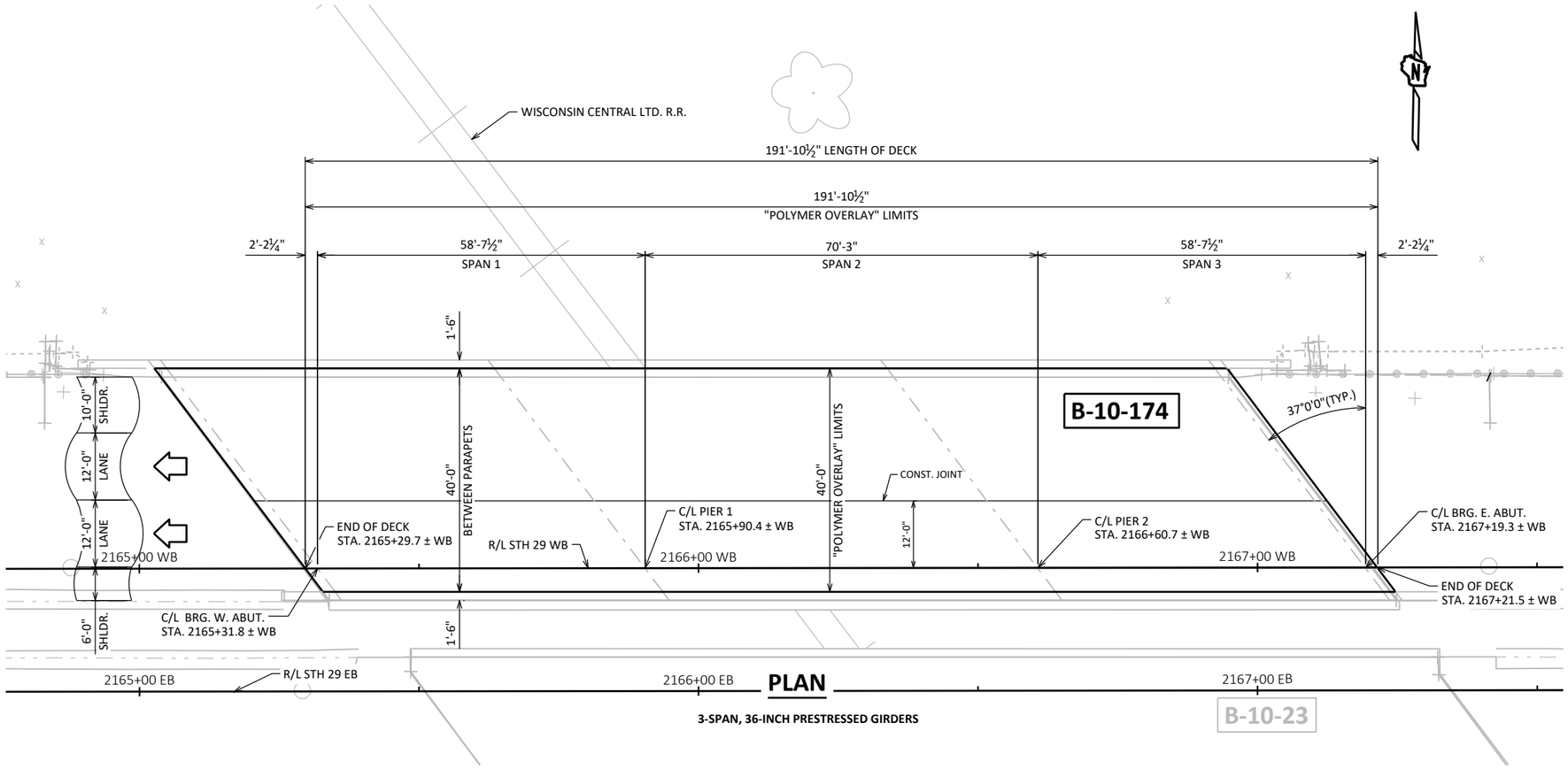
DRAWN BY JLA | PLANS CK'D MJB

DECK CONDITION SURVEY

SHEET 3
284

STATE PROJECT NUMBER

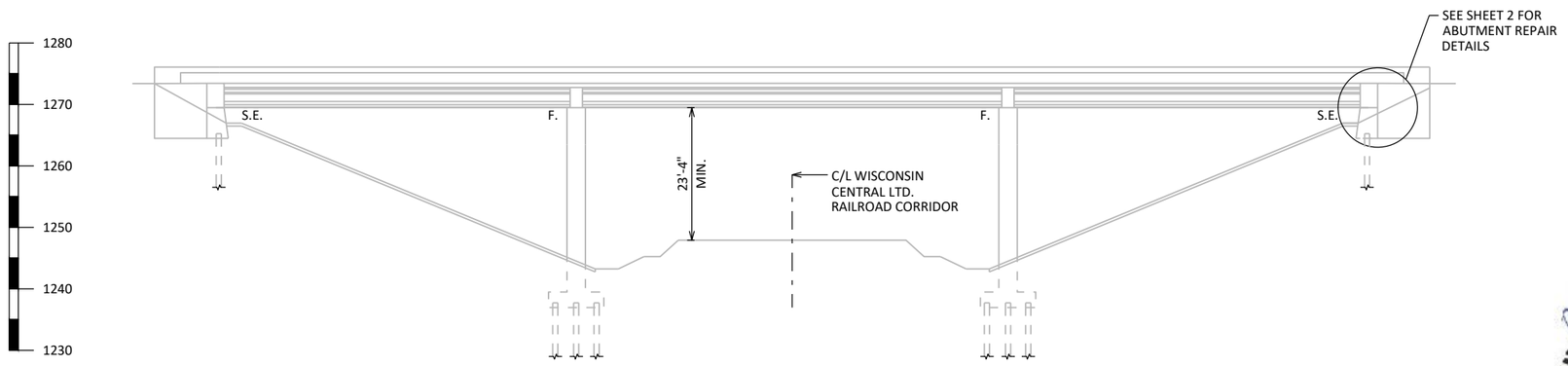
1050-01-74



PLAN

3-SPAN, 36-INCH PRESTRESSED GIRDERS

B-10-23



ELEVATION

(LOOKING NORMAL TO RAILROAD)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS = 20
INVENTORY RATING: HS = 16
OPERATING RATING: HS = 33
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
DECK REPAIR ——— f'_c = 4,000 PSI

TRAFFIC DATA

STH 29 WB:
ADT (2027) = 14,500
ADT (2047) = 17,520
DESIGN SPEED = 70 MPH
WISCONSIN CENTRAL LTD. R.R.:
1 RAILROAD LINE

LIST OF DRAWINGS:

1. GENERAL PLAN
2. TYPICAL SECTION, NOTES, AND QUANTITES
3. STAGING DETAILS
4. DECK CONDITION SURVEY

STRUCTURE DESIGN CONTACTS:
BUREAU OF STRUCTURES: AARON BONK 608-261-0261
CONSULTANT: MATT BUCKLI 608-443-0441

NO.	DATE	REVISION	BY

Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
608.273.6380
www.meadhunt.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 08/14/25
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-10-174

STH 29 WB OVER WISCONSIN CENTRAL LTD. R.R.

COUNTY	TOWN
CLARK	GREEN GROVE

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
JLA	MJB	JLA	RCP

GENERAL PLAN

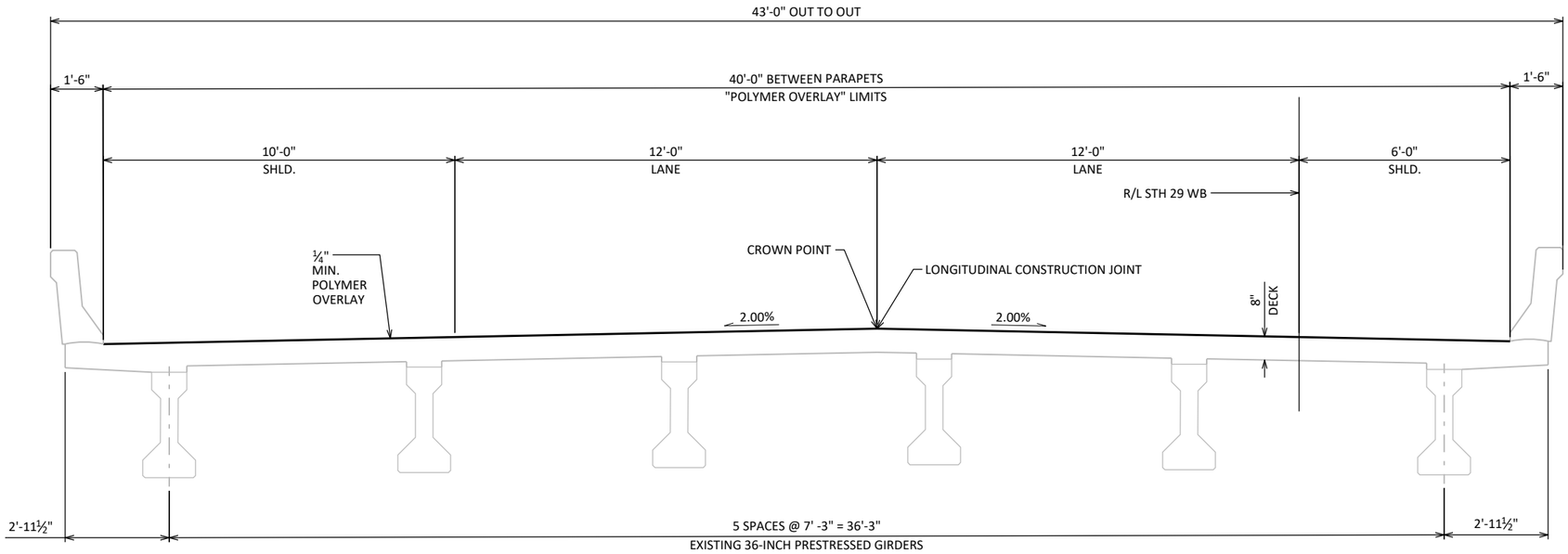
SHEET 1 OF 4
285

I.D. DATE:

WISCONSIN
MATTHEW J. BUCKLI
E-39849
MADISON
WI
PROFESSIONAL ENGINEER

STATE PROJECT NUMBER

1050-01-74



CROSS SECTION THRU BRIDGE

LOOKING UPSTATION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

AREAS OF "PREPARATION DECKS TYPE 1" SHALL BE DEFINED BY A SAW CUT.

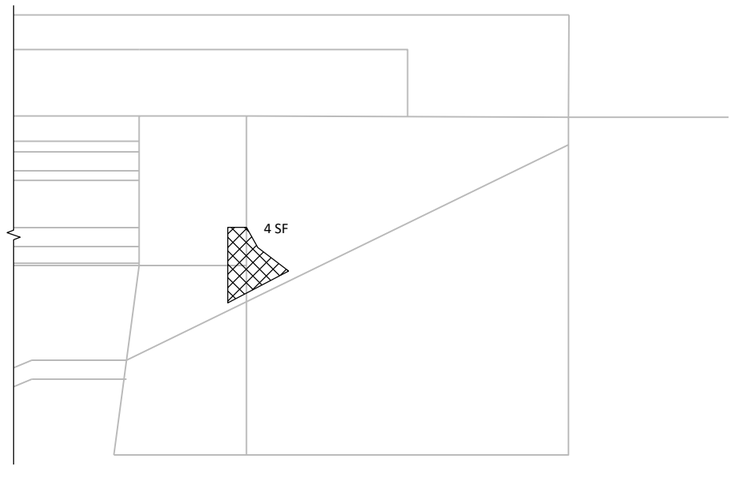
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DECK REPAIRS SHALL BE FILLED PRIOR TO OVERLAY PLACEMENT. DECK REPAIRS USING A PORTLAND CEMENT BASED CONCRETE REQUIRES A MINIMUM CURE TIME OF 28 DAYS PRIOR TO OVERLAY PLACEMENT.

SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
509.0301	PREPARATION DECKS TYPE 1	SY	16
509.0302	PREPARATION DECKS TYPE 2	SY	6
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	160
509.1500	CONCRETE SURFACE REPAIR	SF	4
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	1
509.5100.S	POLYMER OVERLAY	SY	853



ABUTMENT REPAIR

SOUTH CORNER OF EAST ABUTMENT LOOKING NORTH

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-174

DRAWN BY JLA | PLANS CK'D RCP

TYPICAL SECTION, NOTES, AND QUANTITIES

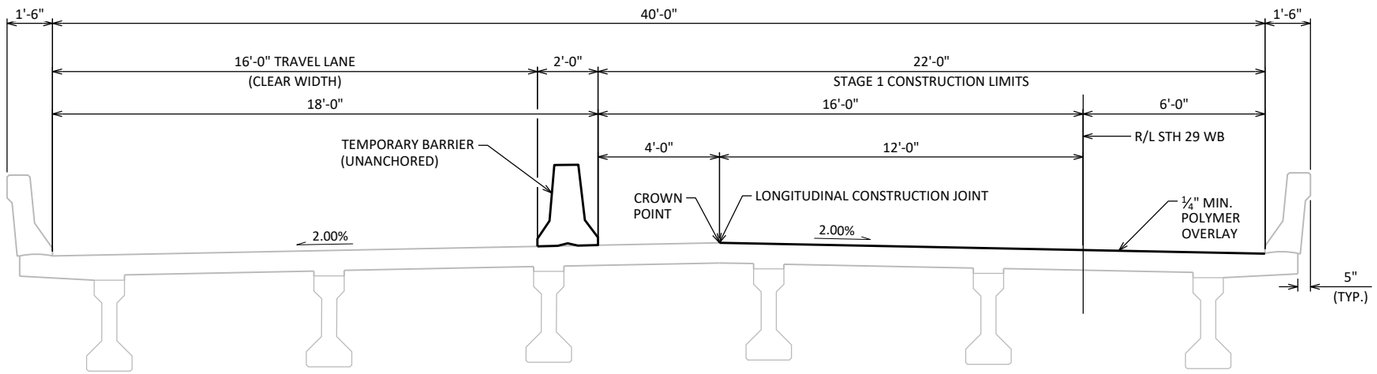
SHEET 2
286

8

8

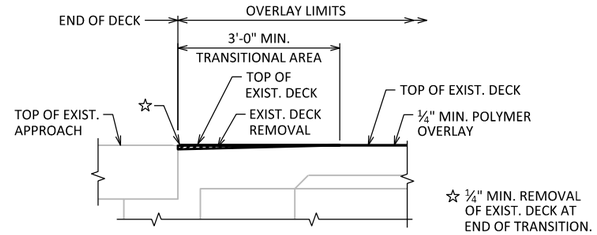
STATE PROJECT NUMBER

1050-01-74



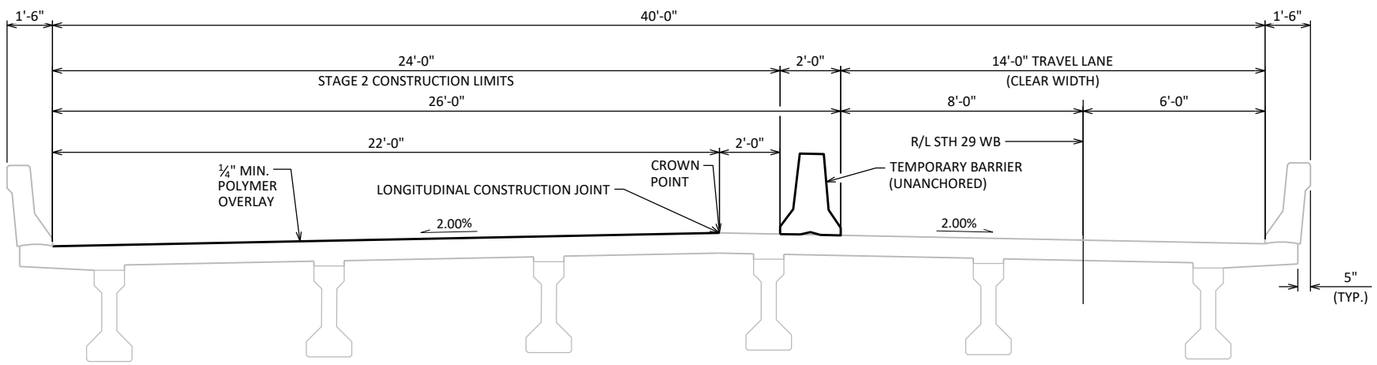
STAGE 1 CONSTRUCTION

LOOKING UPSTATION



SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK AT SEMI-EXPANSION OR FIXED JOINT

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)
NOTE: TRANSITIONAL AREA REQUIRED WHEN APPROACH PAVEMENT HAS BEEN PLACED PRIOR TO OVERLAY PLACEMENT.



STAGE 2 CONSTRUCTION

LOOKING UPSTATION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-174

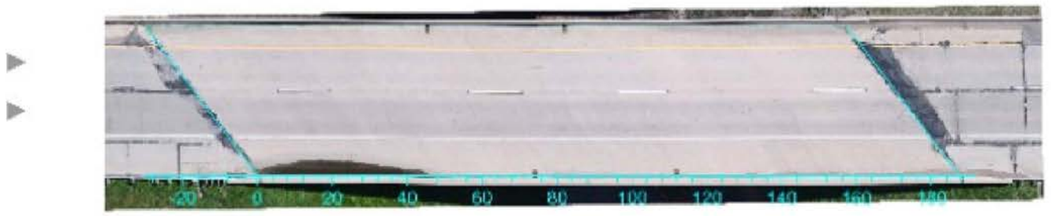
DRAWN BY JLA | PLANS CK'D RCP

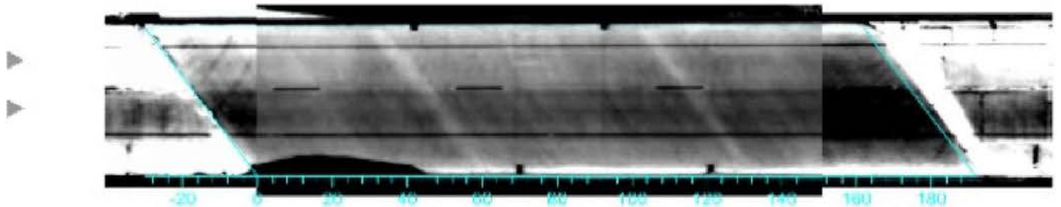
STAGING DETAILS

SHEET 3
287

STATE PROJECT NUMBER

1050-01-74





Orientation	Quantity Summary		General Information
N Direction of traffic 1-in = 35-ft 0 35	Delamination Quantity (%)	2	Bridge ID: B100174 STH 29 WB over Railroad
	Delamination Quantity (ft²)	139	
			Analyzed by: JB/SB Reviewed by: EG Completed: 09/22/20

INFRASENSE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-174

DRAWN BY JLA | PLANS CK'D RCP

DECK CONDITION SURVEY

SHEET 4



9

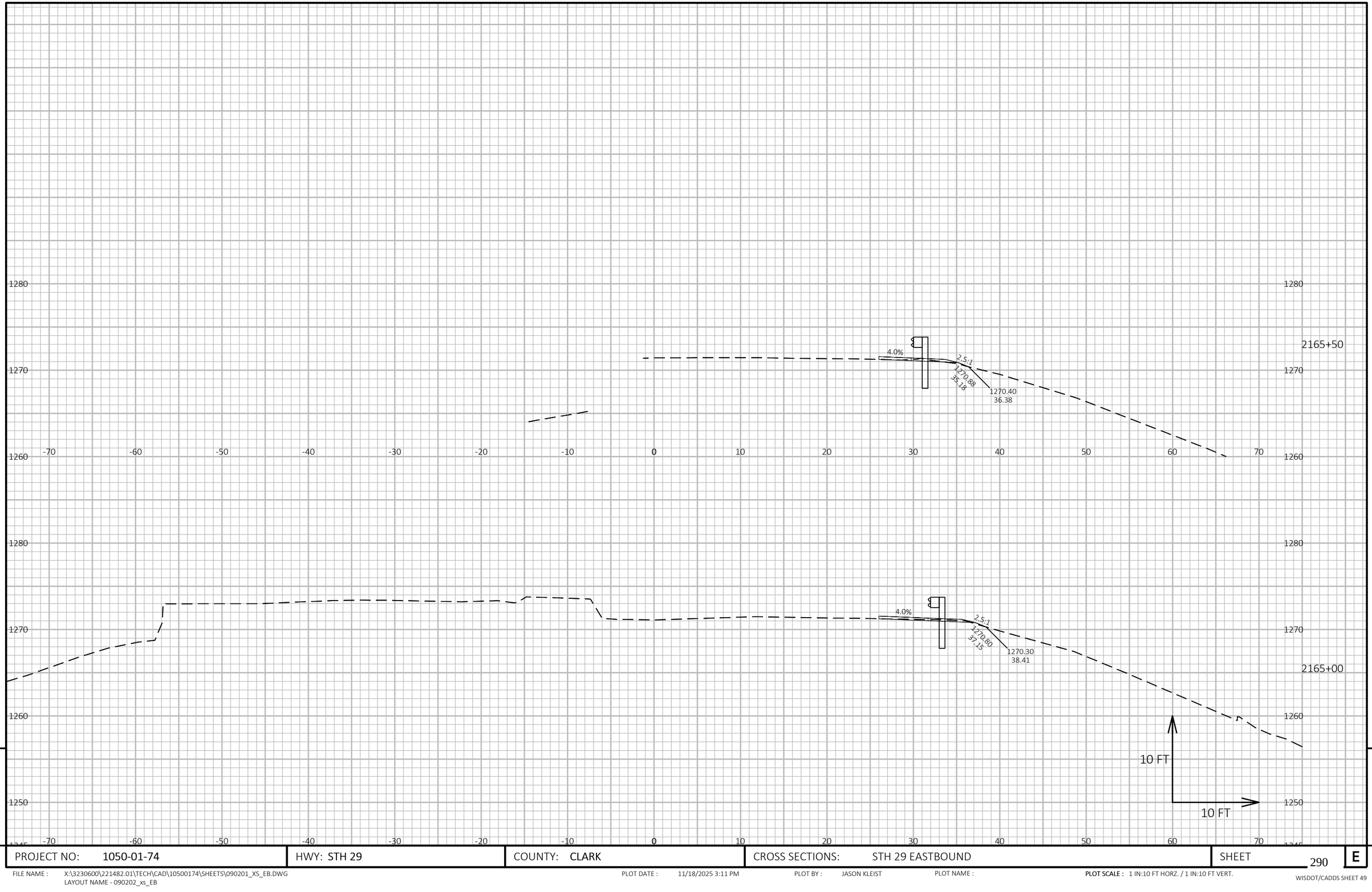
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 289	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090201_xs_EB

PLOT DATE : 11/18/2025 3:11 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 290	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090202_xs_EB

PLOT DATE : 11/18/2025 3:11 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 291	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090203_xs_EB

PLOT DATE : 11/18/2025 3:11 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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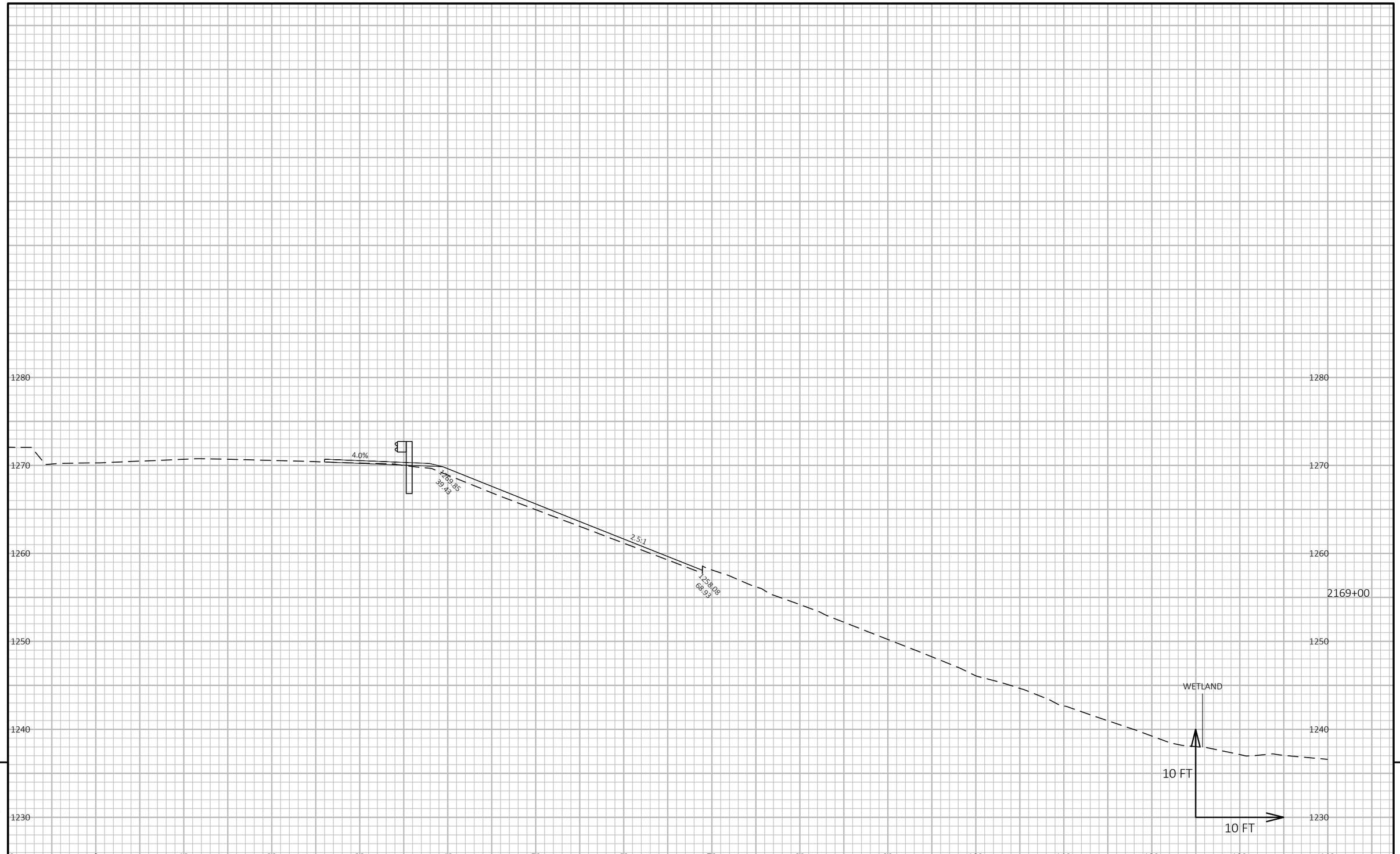
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FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090204_xs_EB

PLOT DATE : 11/18/2025 3:11 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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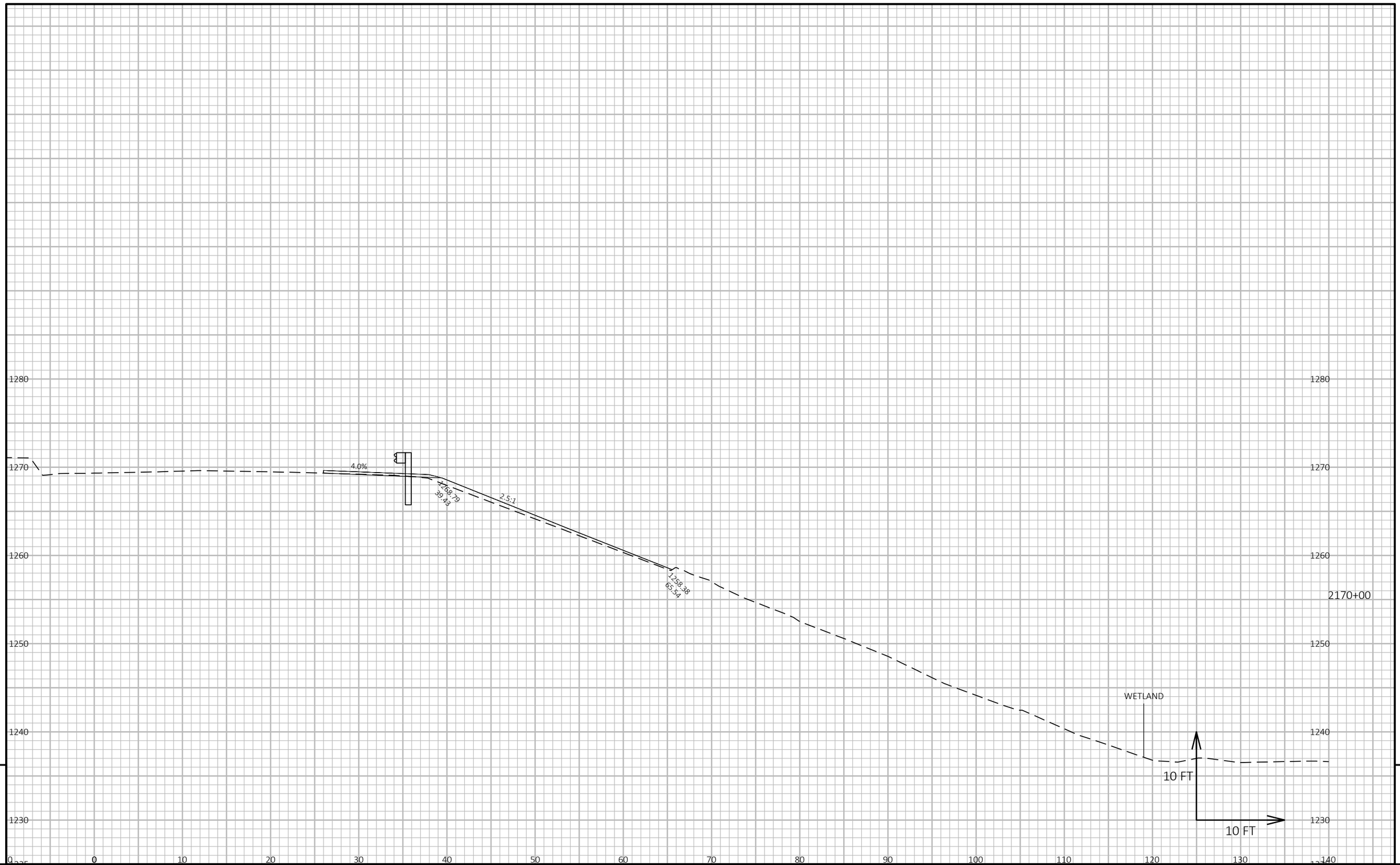
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 293	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090205_xs_EB

PLOT DATE : 11/18/2025 3:11 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



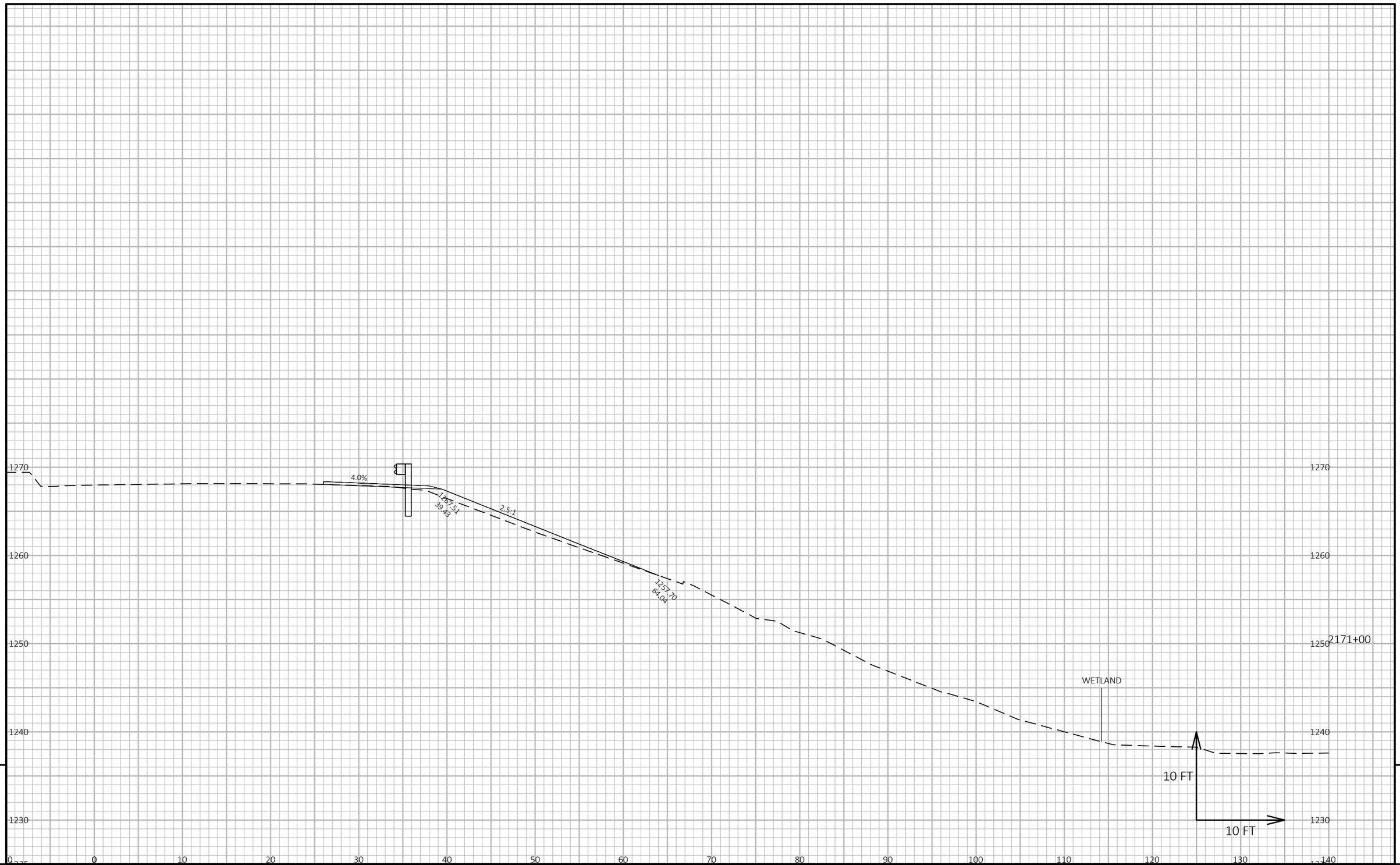
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 294	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090206_xs_EB

PLOT DATE : 11/18/2025 3:11 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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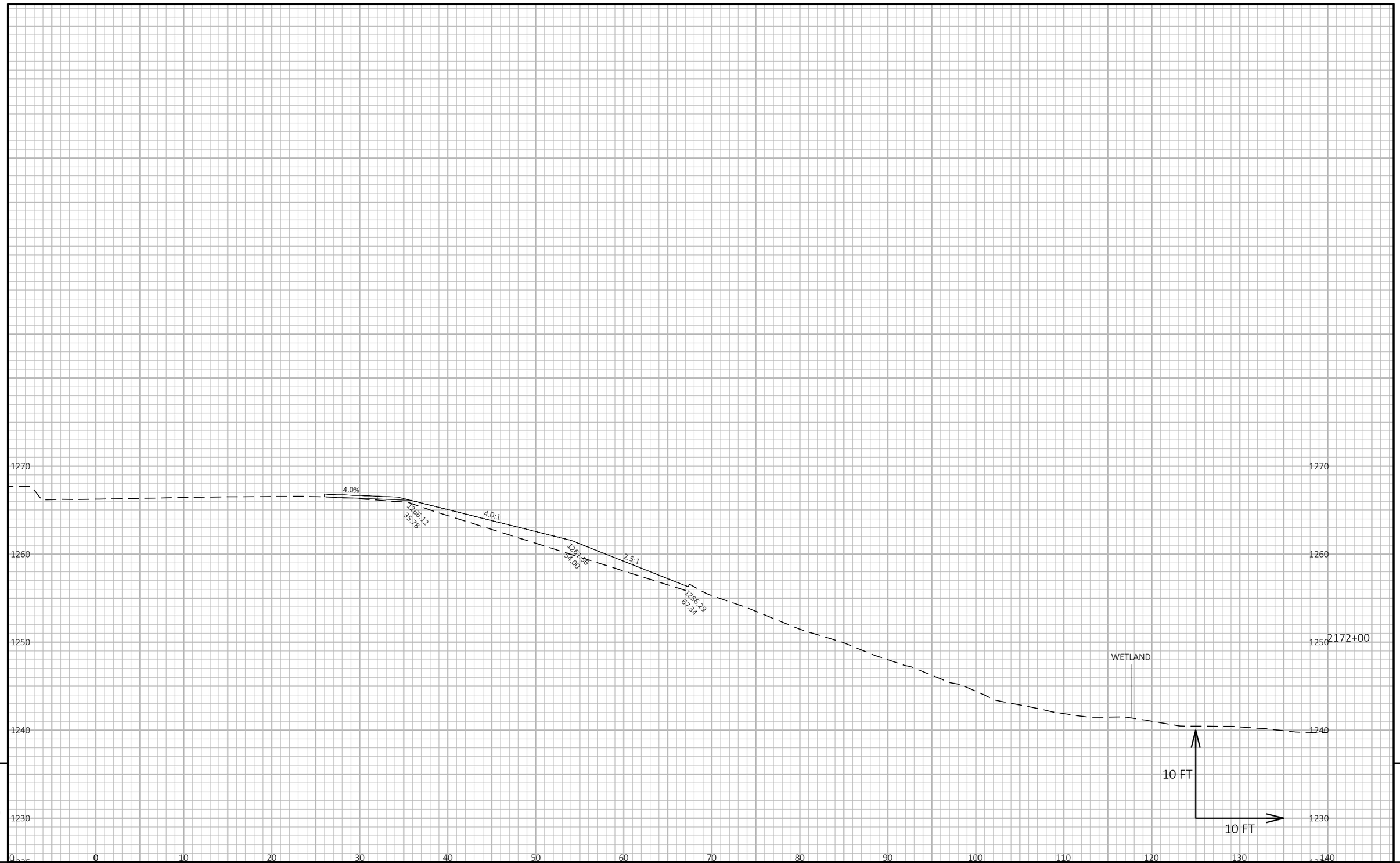
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 295	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090207_xs_EB

PLOT DATE : 11/18/2025 3:11 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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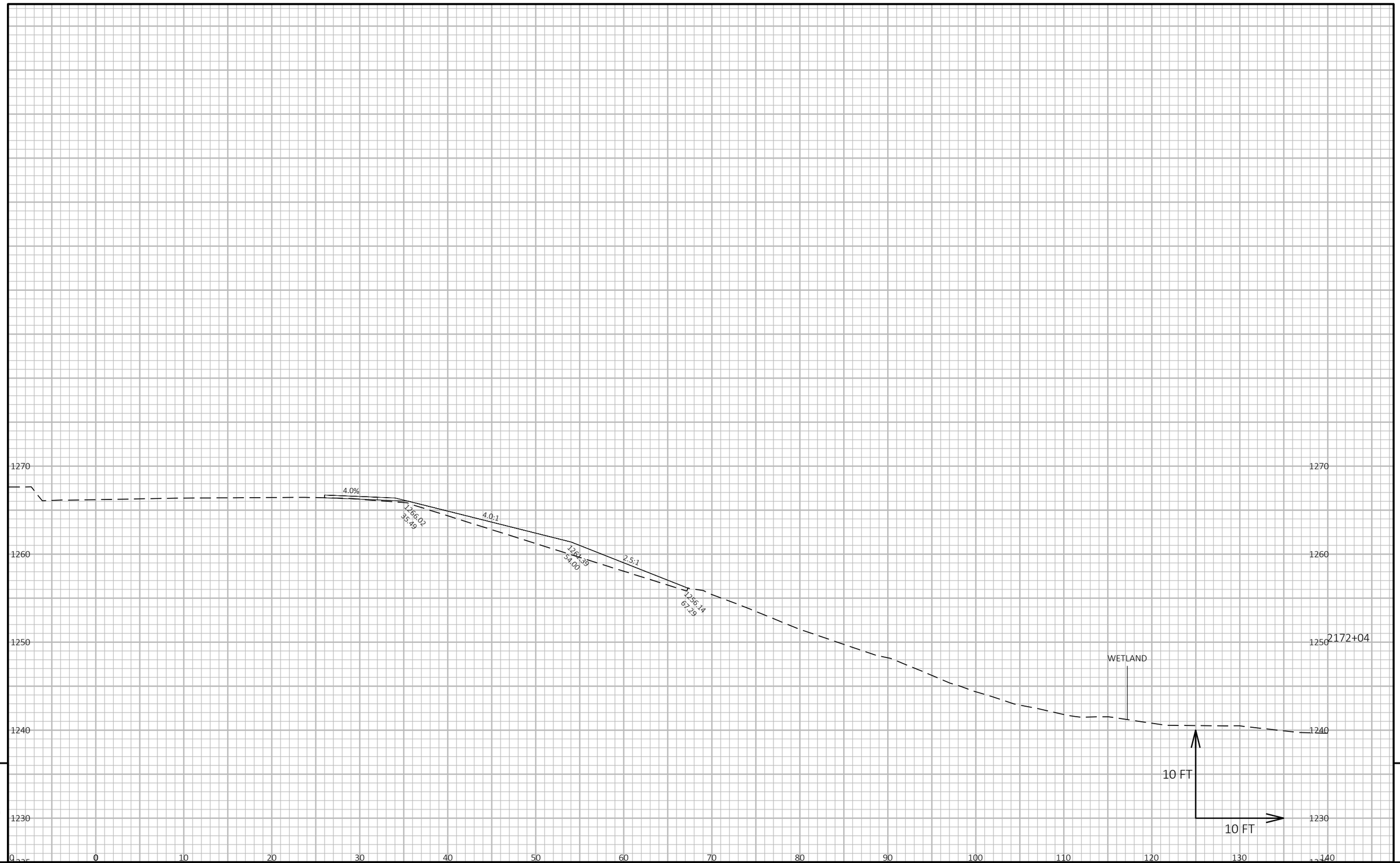
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 296	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090208_xs_EB

PLOT DATE : 11/18/2025 3:12 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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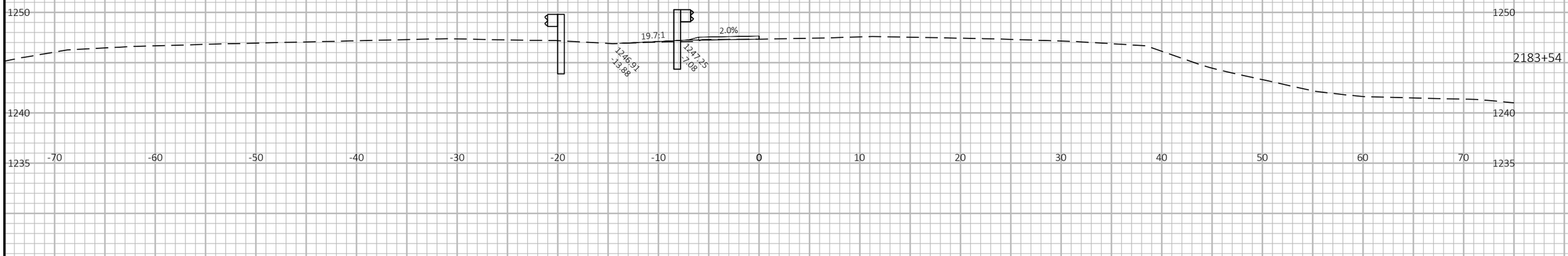
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 297	E

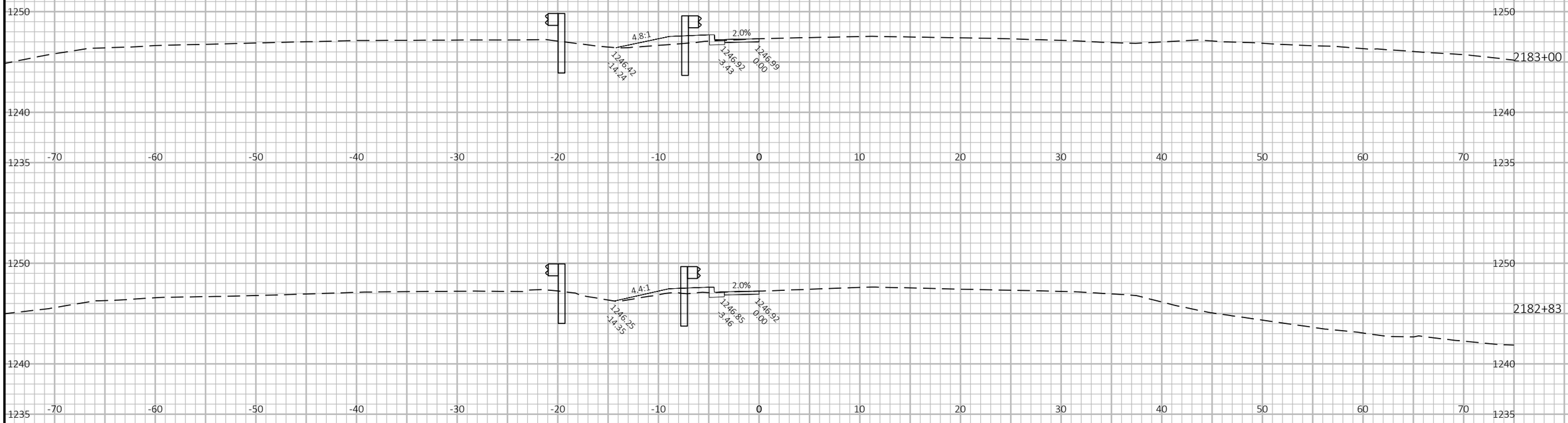
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LAYOUT NAME - 090209_xs_EB

PLOT DATE : 11/18/2025 3:12 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

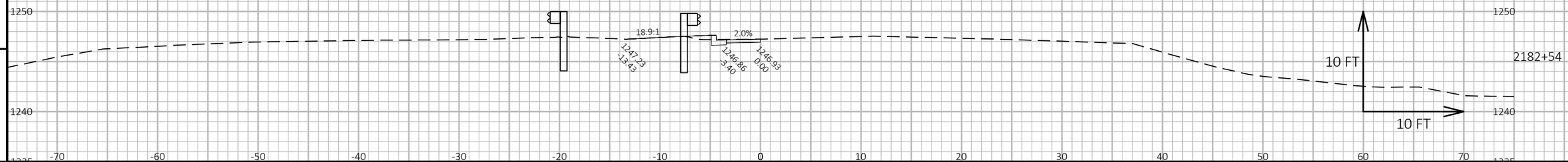
WISDOT/CADDS SHEET 49

BULLNOSE POST 5





BULLNOSE FIXED OBJECT



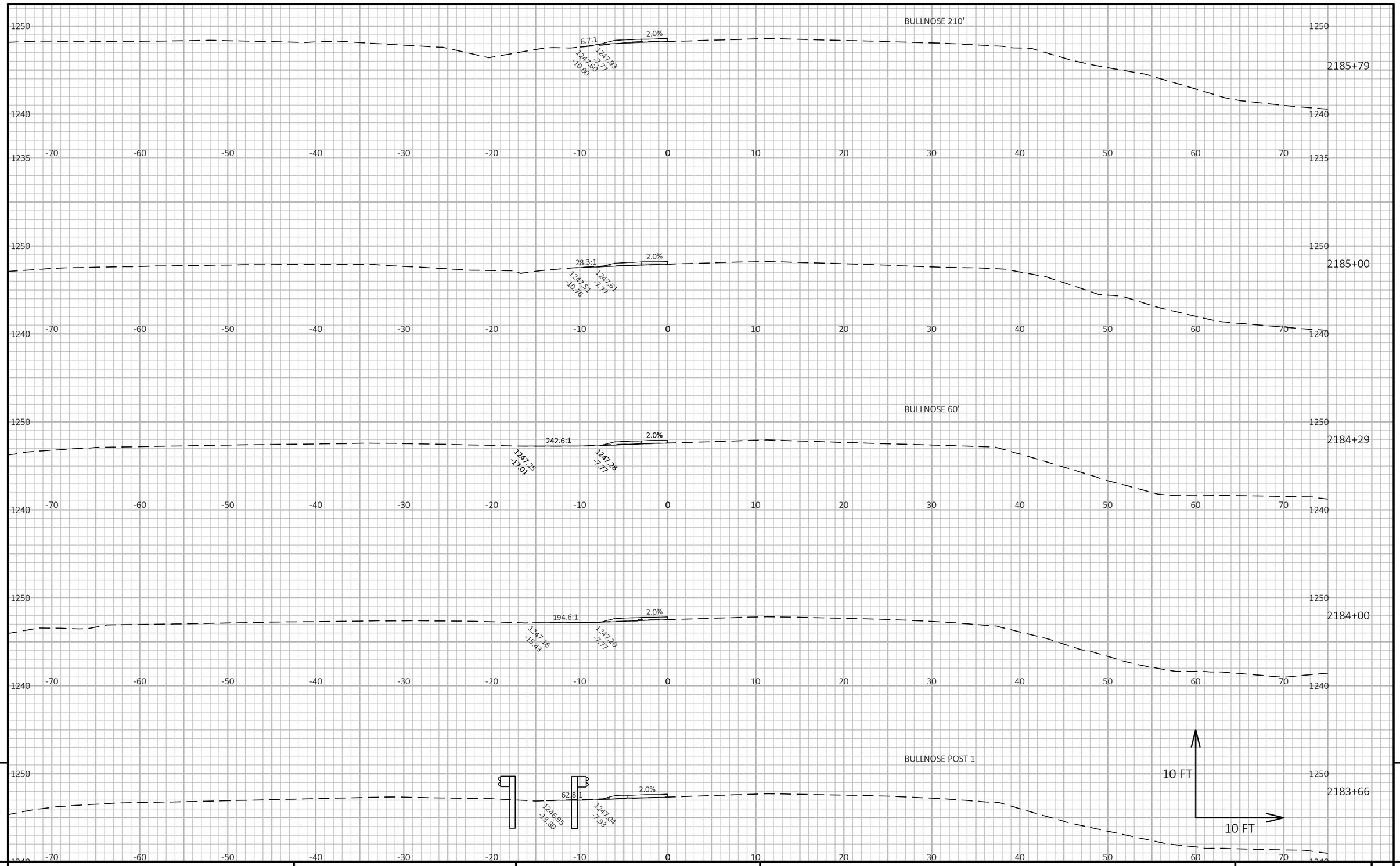
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 298	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090210_xs_EB

PLOT DATE : 11/18/2025 3:12 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

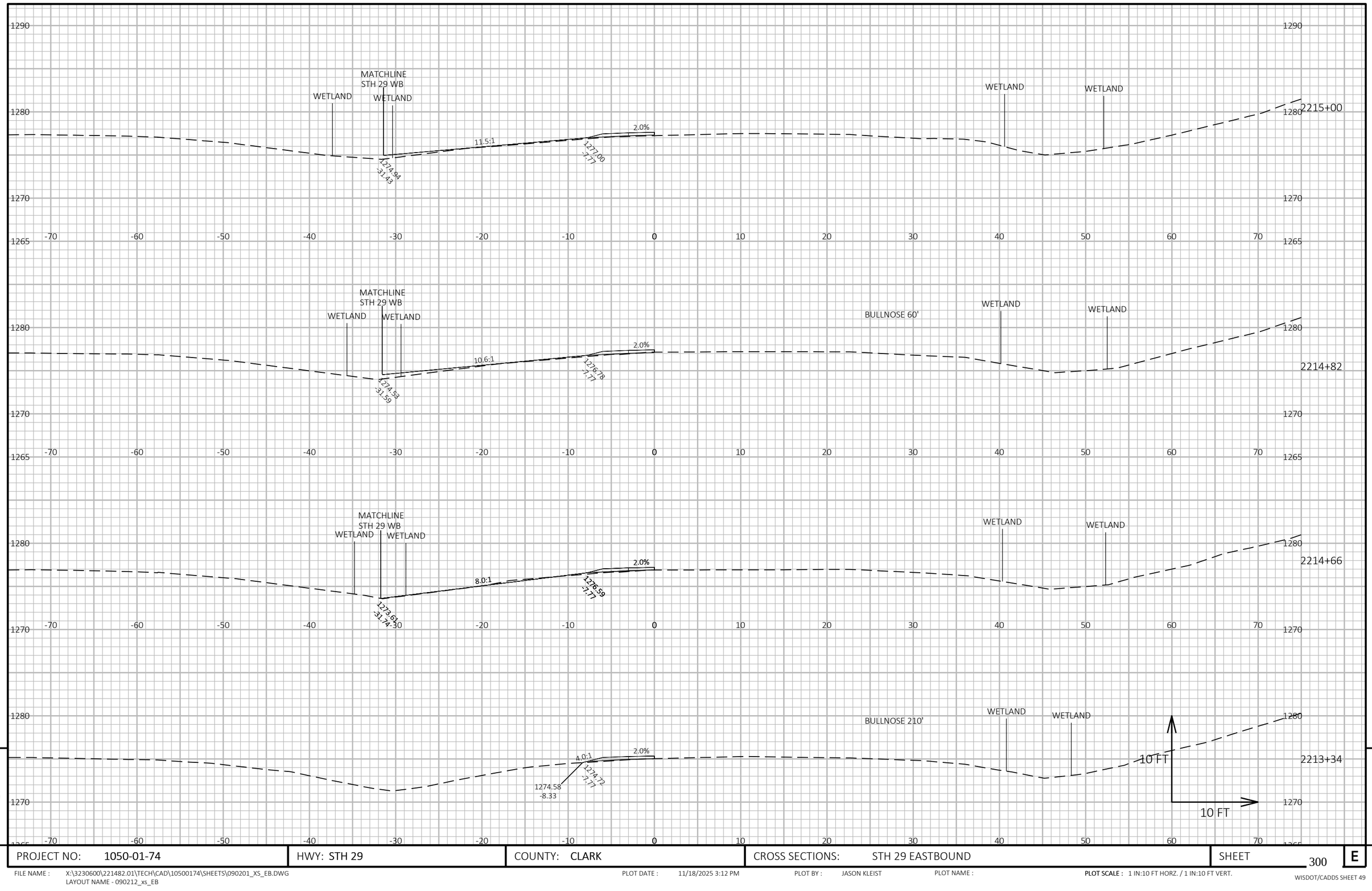
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 299	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090211_xs_EB

PLOT DATE : 11/18/2025 3:12 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

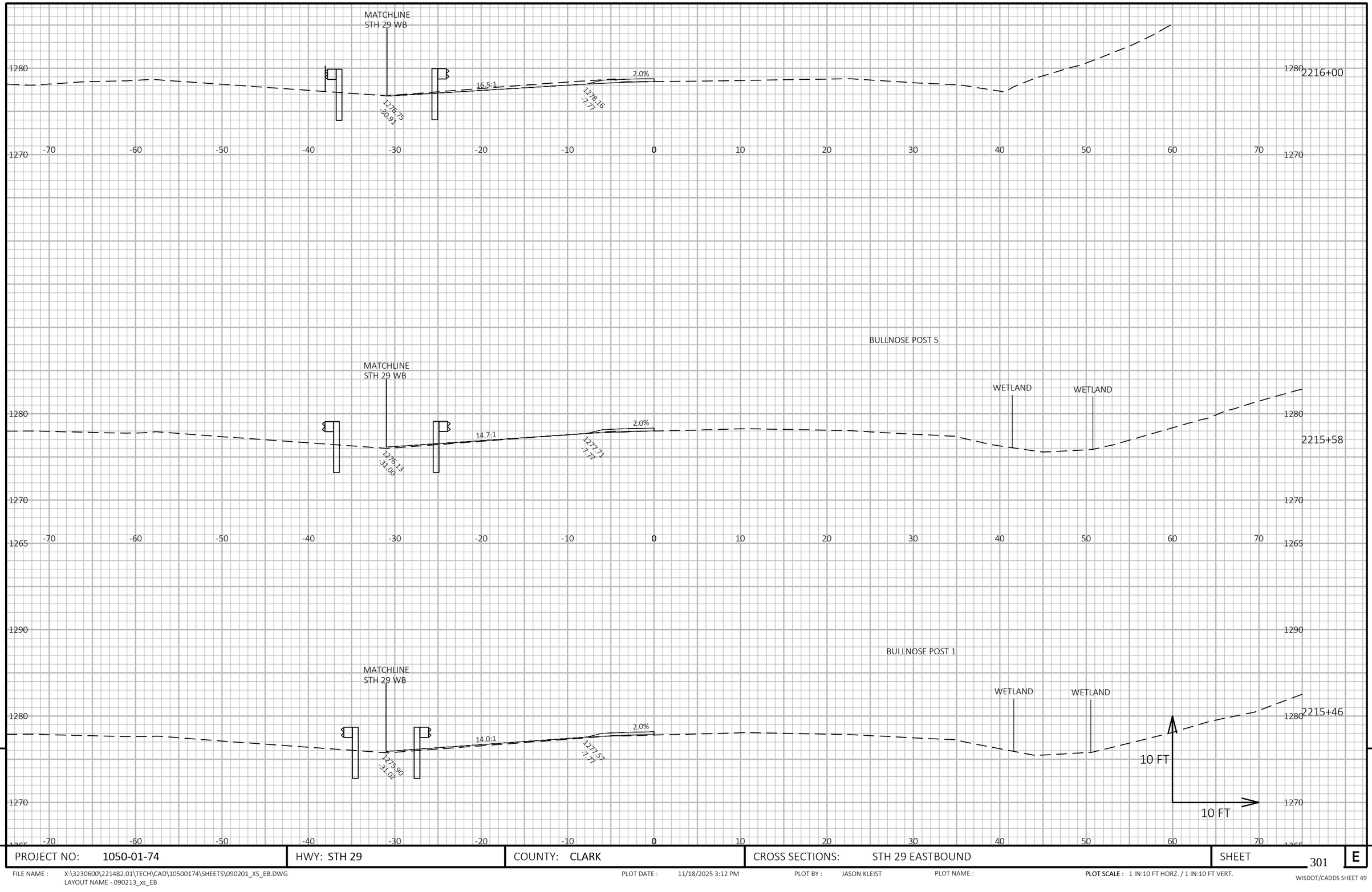
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 300	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090212_xs_EB

PLOT DATE : 11/18/2025 3:12 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

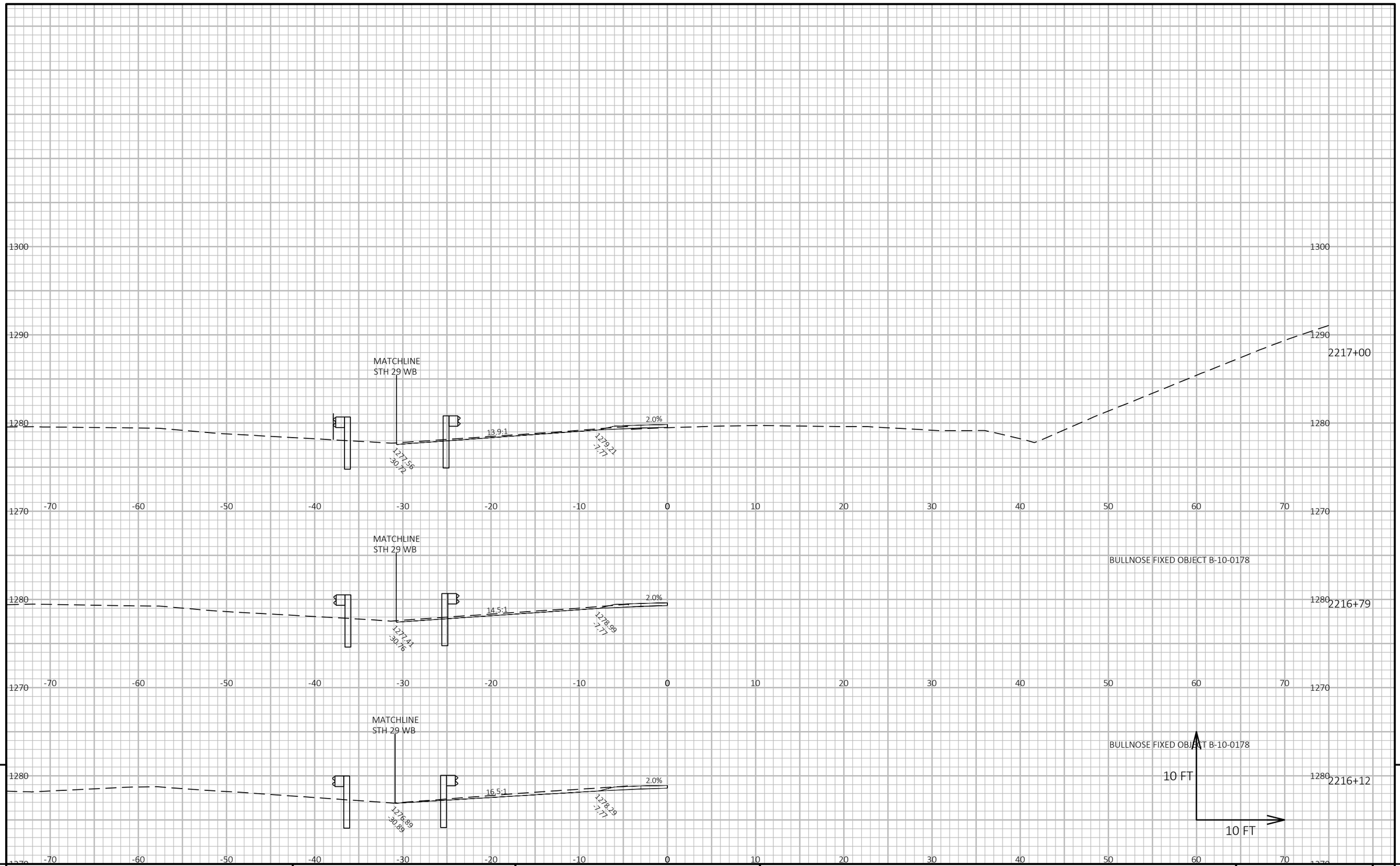
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 301	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090213_xs_EB

PLOT DATE : 11/18/2025 3:12 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

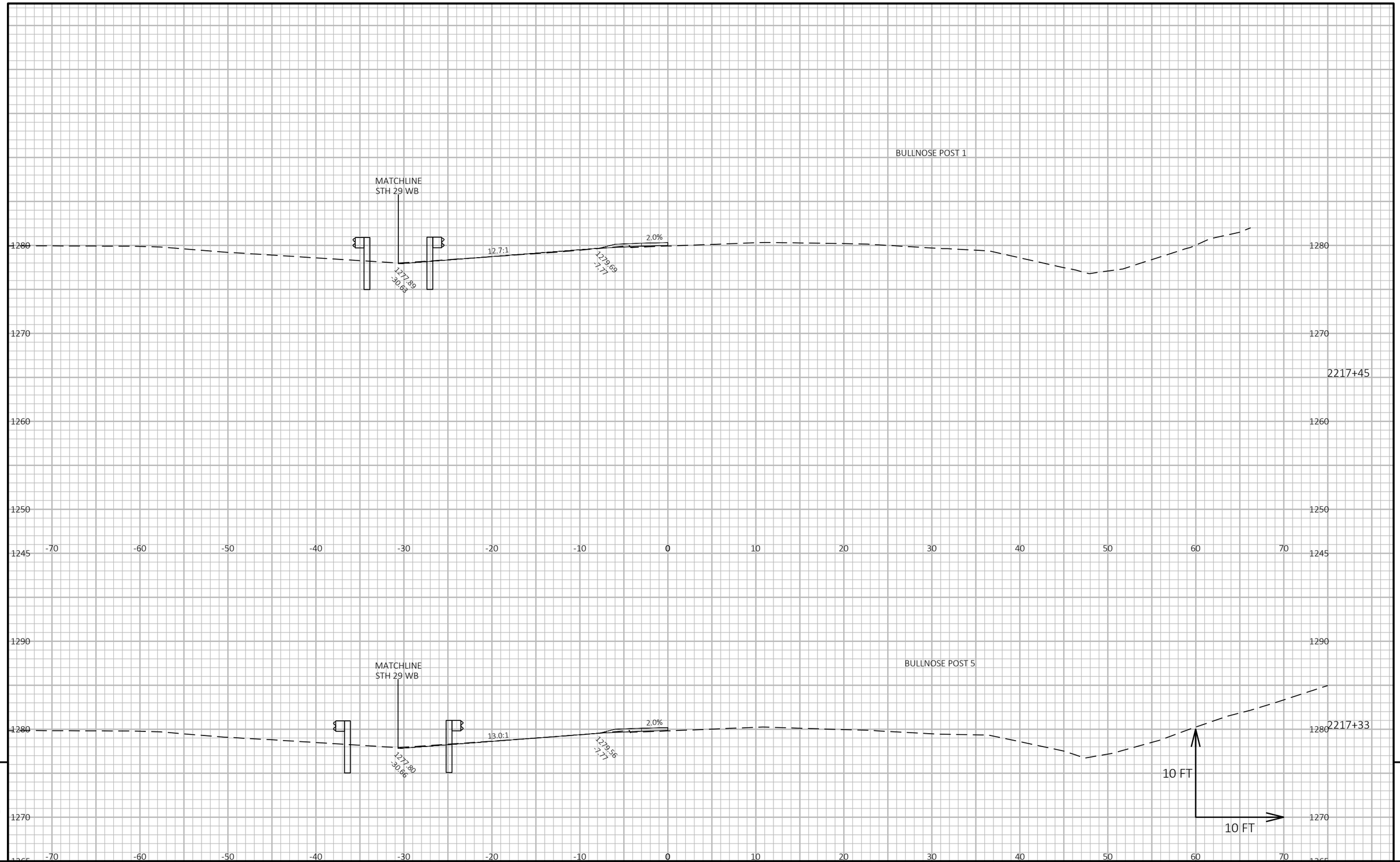
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 302	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090214_xs_EB

PLOT DATE : 11/18/2025 3:12 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

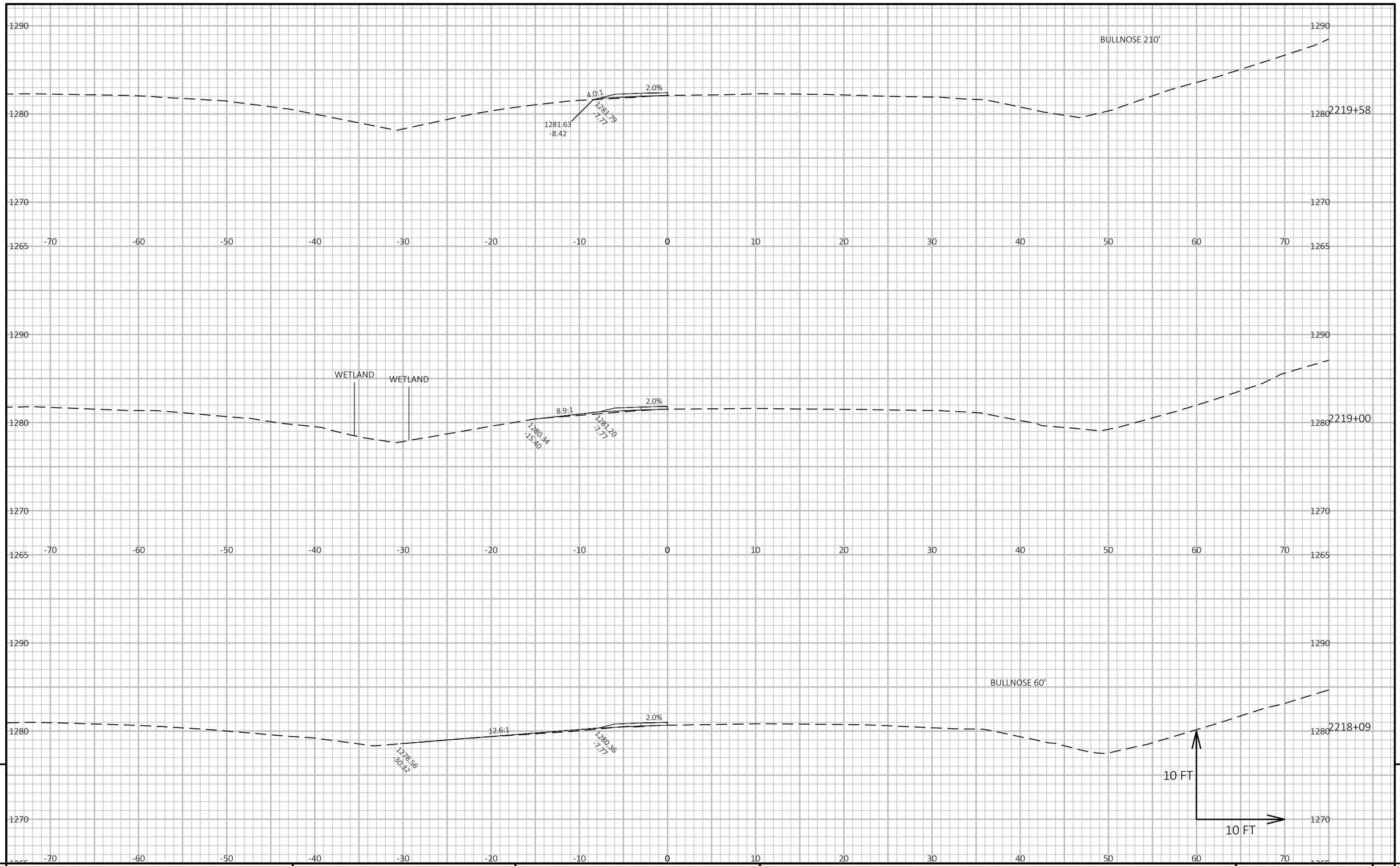
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 303	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090214_xs_EB_1

PLOT DATE : 11/18/2025 3:12 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

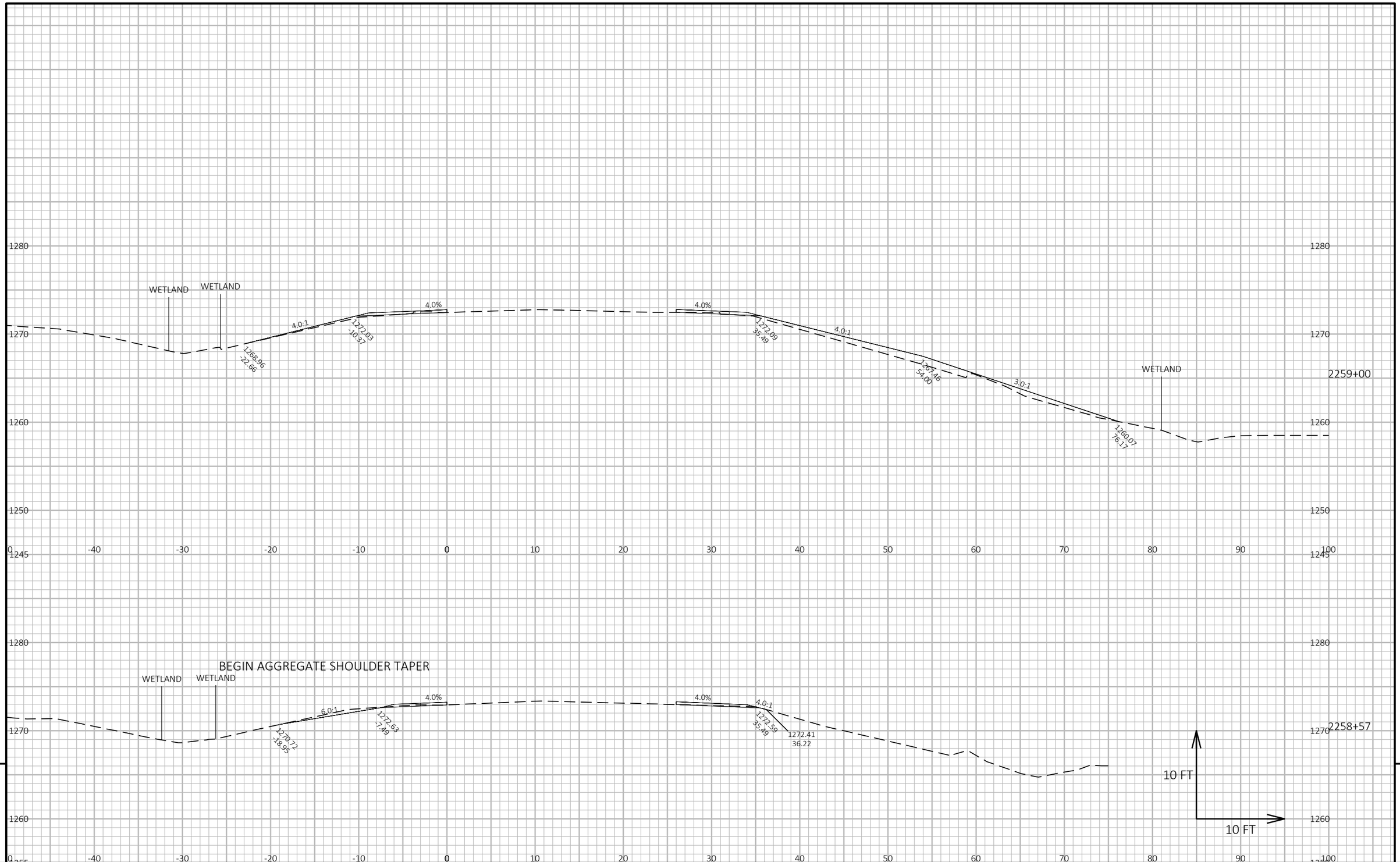
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 304	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090214_xs_EB_2

PLOT DATE : 11/18/2025 3:12 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9

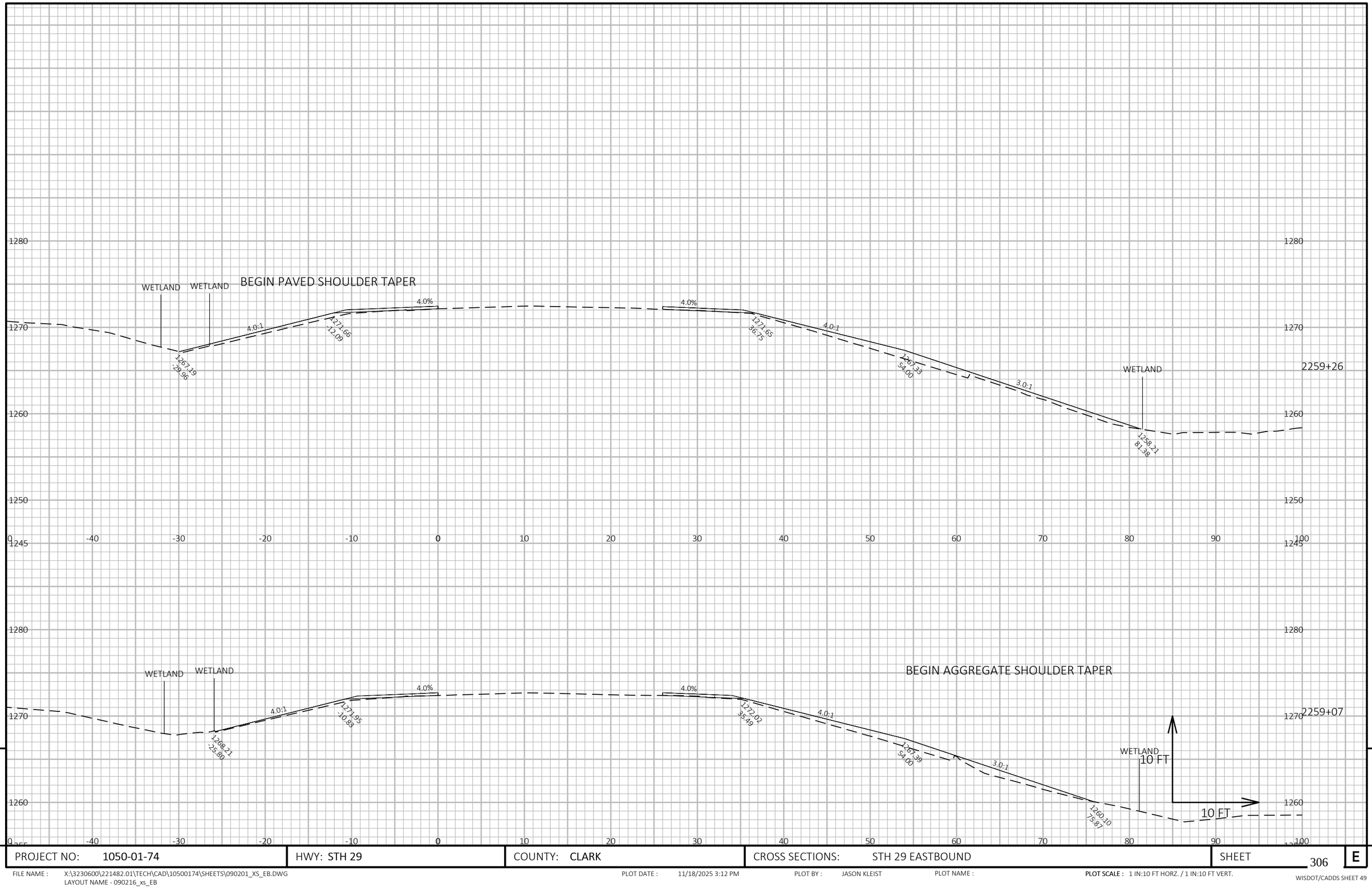


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 305	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090215_xs_EB

PLOT DATE : 11/18/2025 3:12 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 306	E

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LAYOUT NAME - 090216_xs_EB

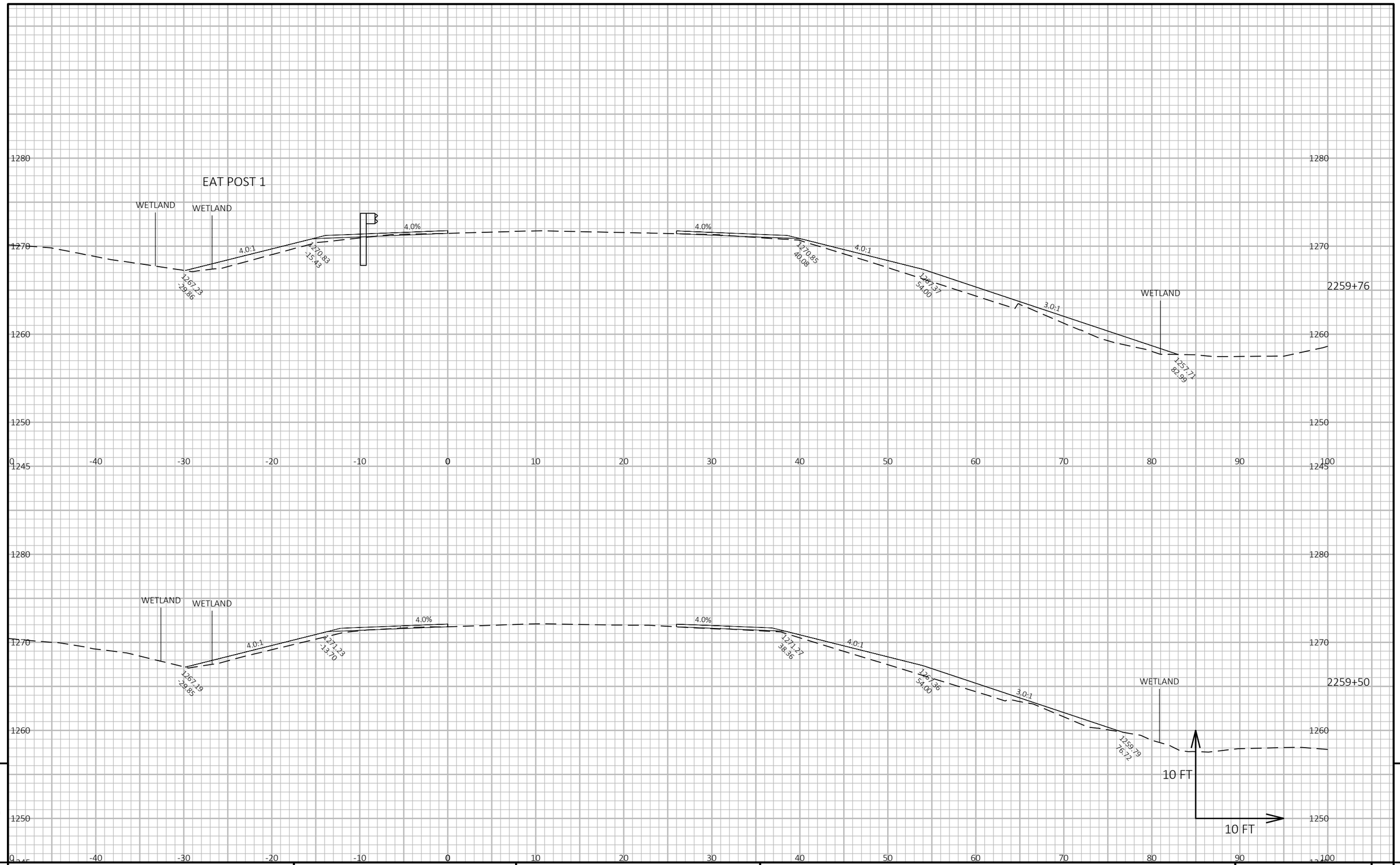
PLOT DATE : 11/18/2025 3:12 PM

PLOT BY : JASON KLEIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



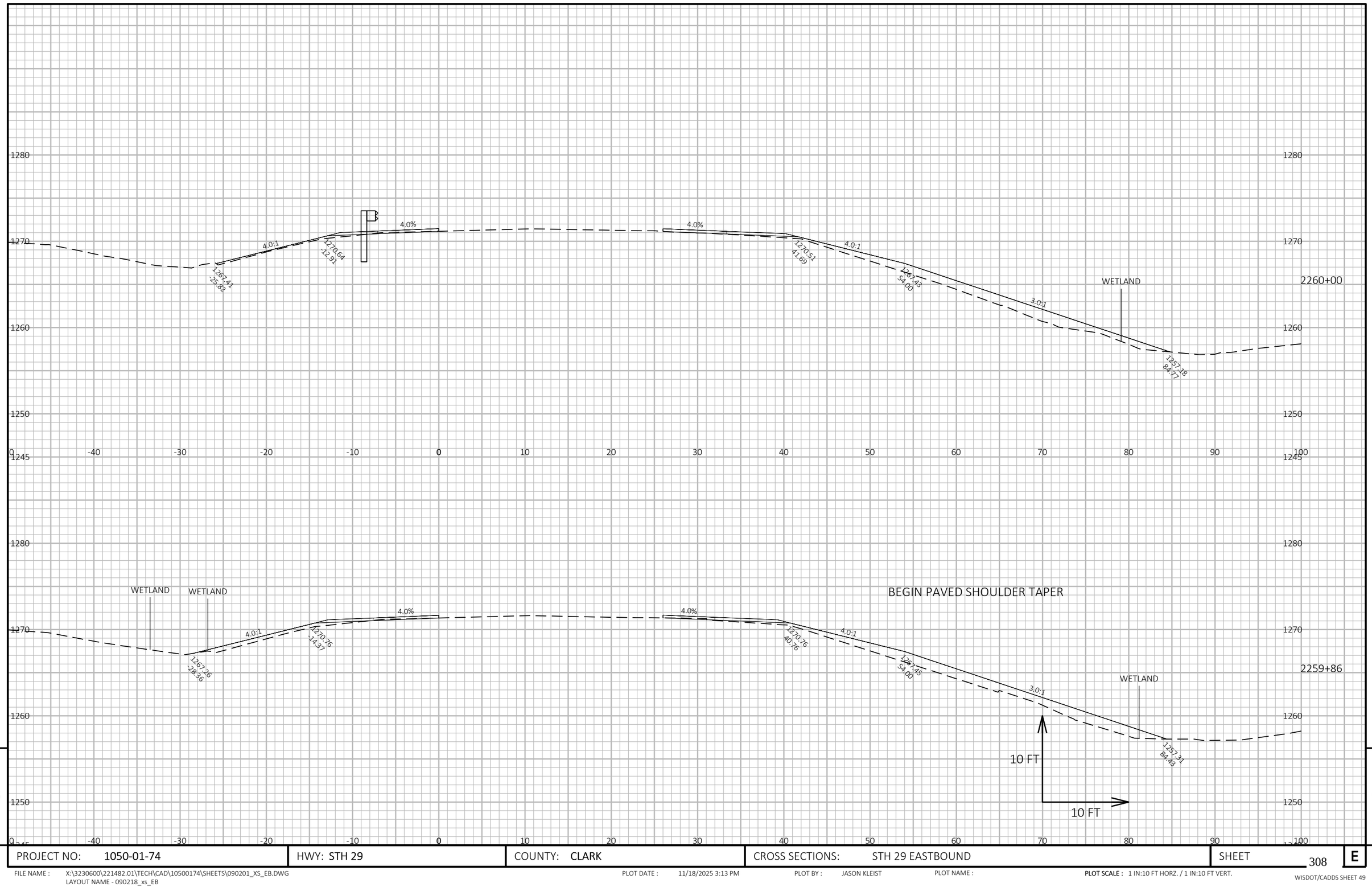
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 307	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090217_xs_EB

PLOT DATE : 11/18/2025 3:13 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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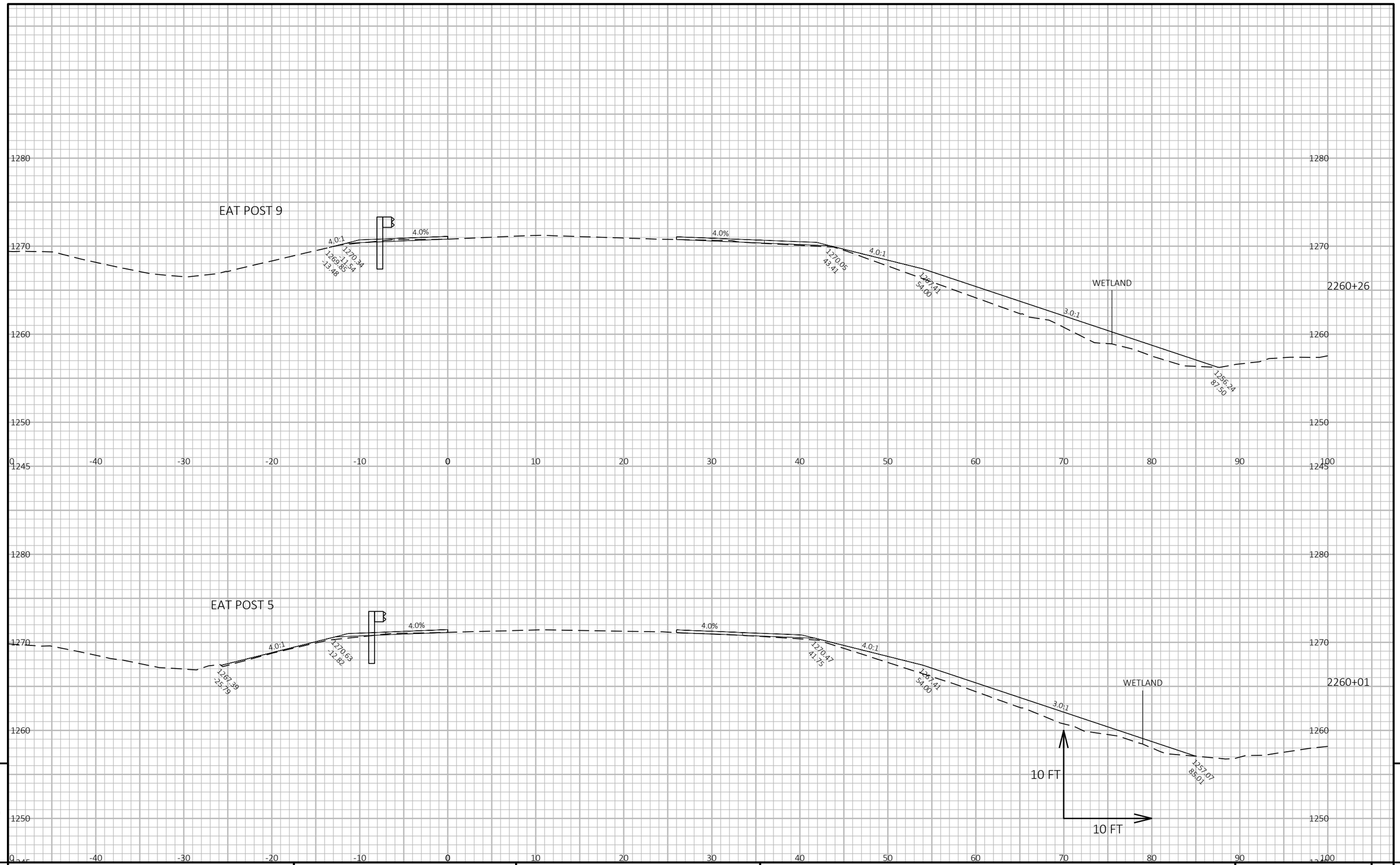
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 308	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090218_xs_EB

PLOT DATE : 11/18/2025 3:13 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9	PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 309 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090219_xs_EB

PLOT DATE : 11/18/2025 3:13 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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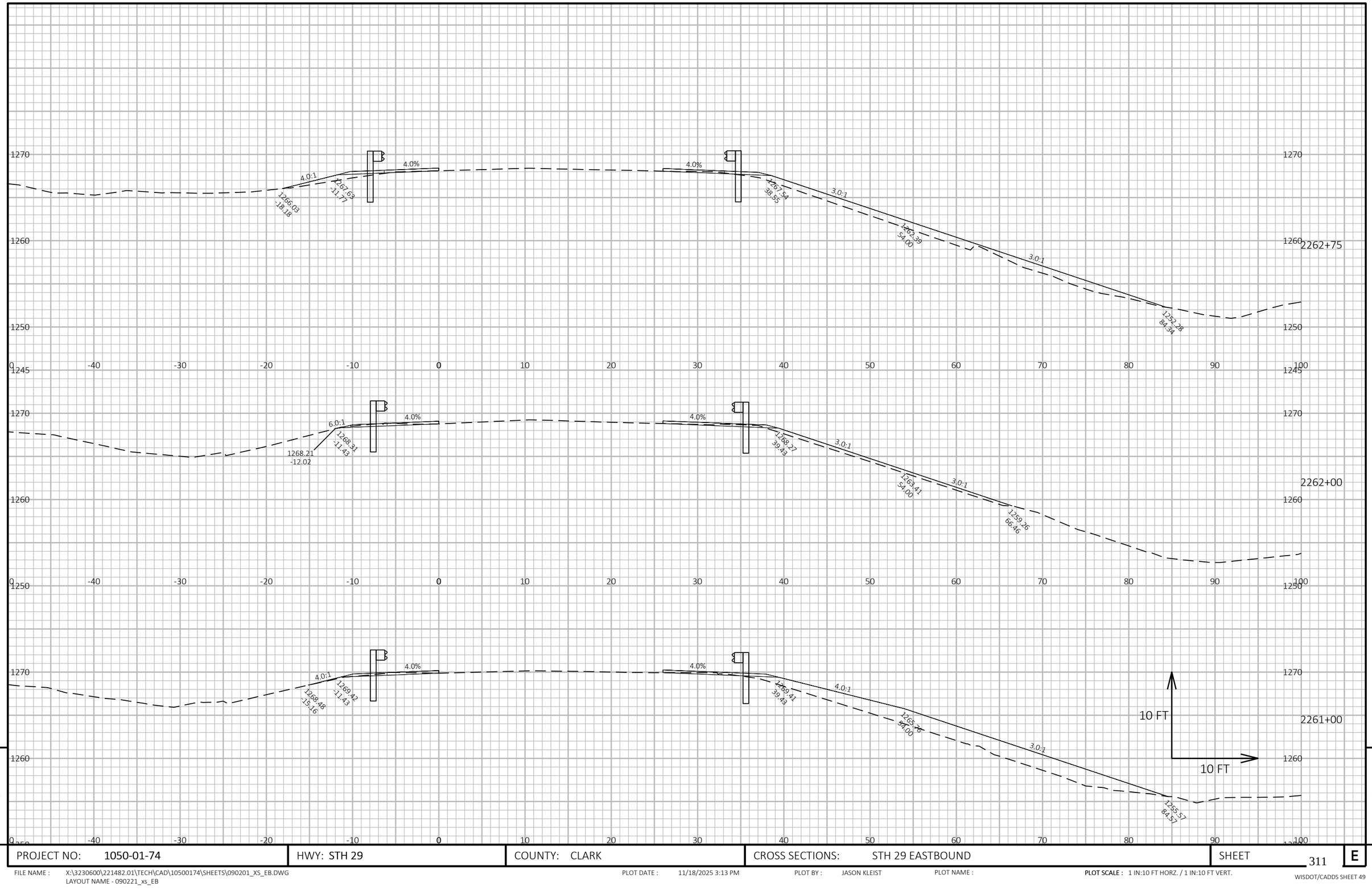
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 310	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090220_xs_EB

PLOT DATE : 11/18/2025 3:13 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

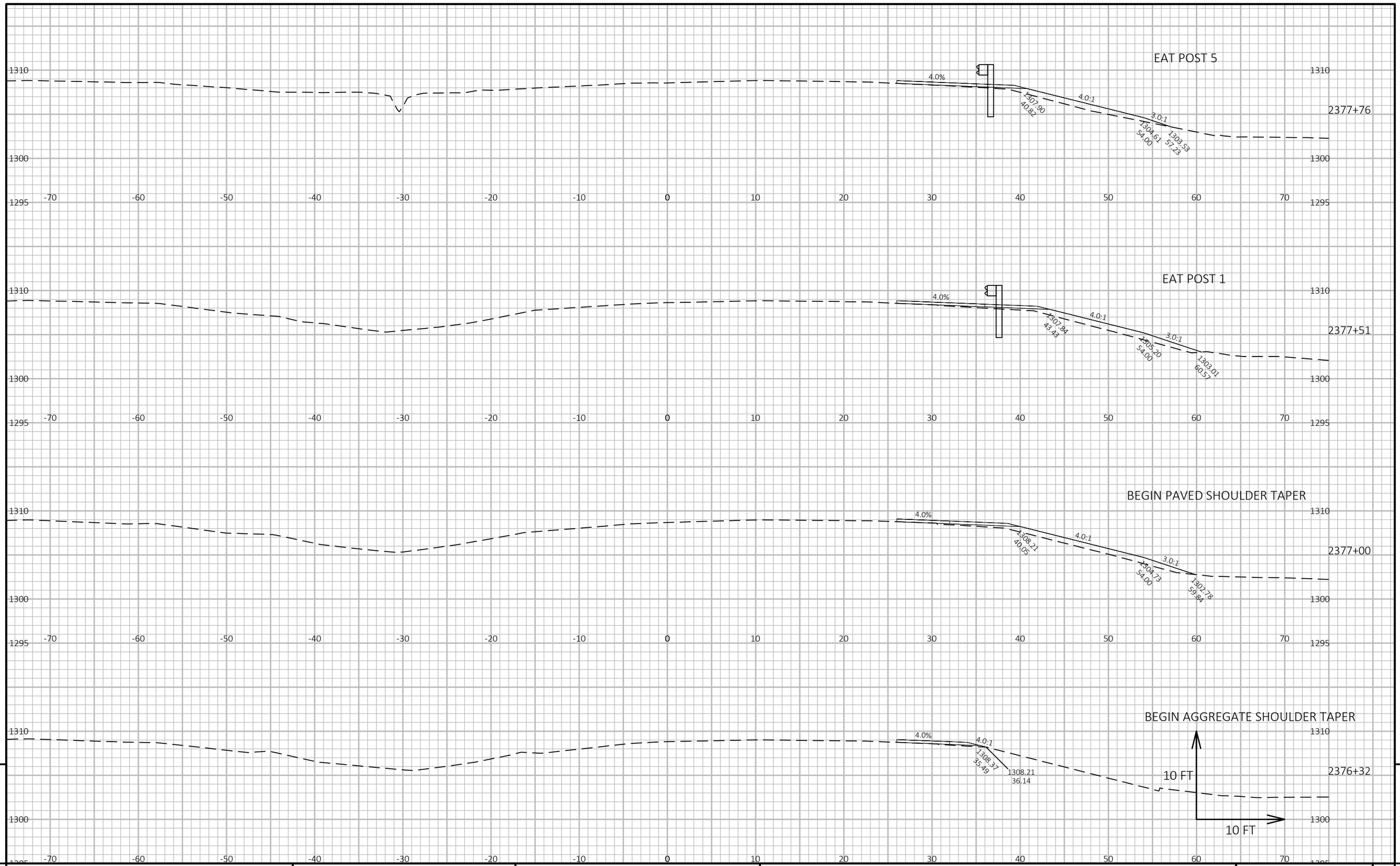


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 311 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090221_xs_EB

PLOT DATE : 11/18/2025 3:13 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



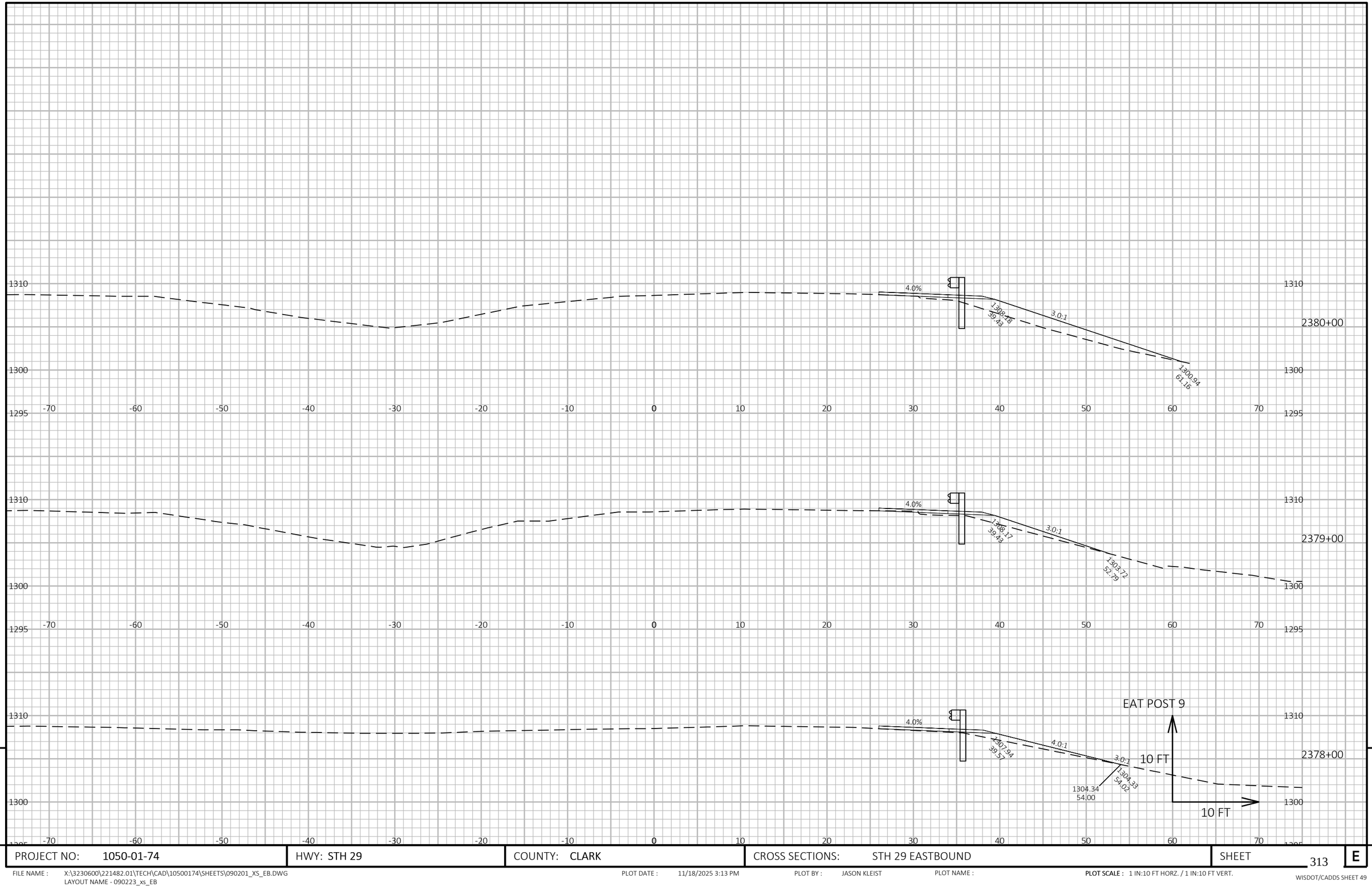
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 312	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090222_xs_EB

PLOT DATE : 11/18/2025 3:13 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 313	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090223_xs_EB

PLOT DATE : 11/18/2025 3:13 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

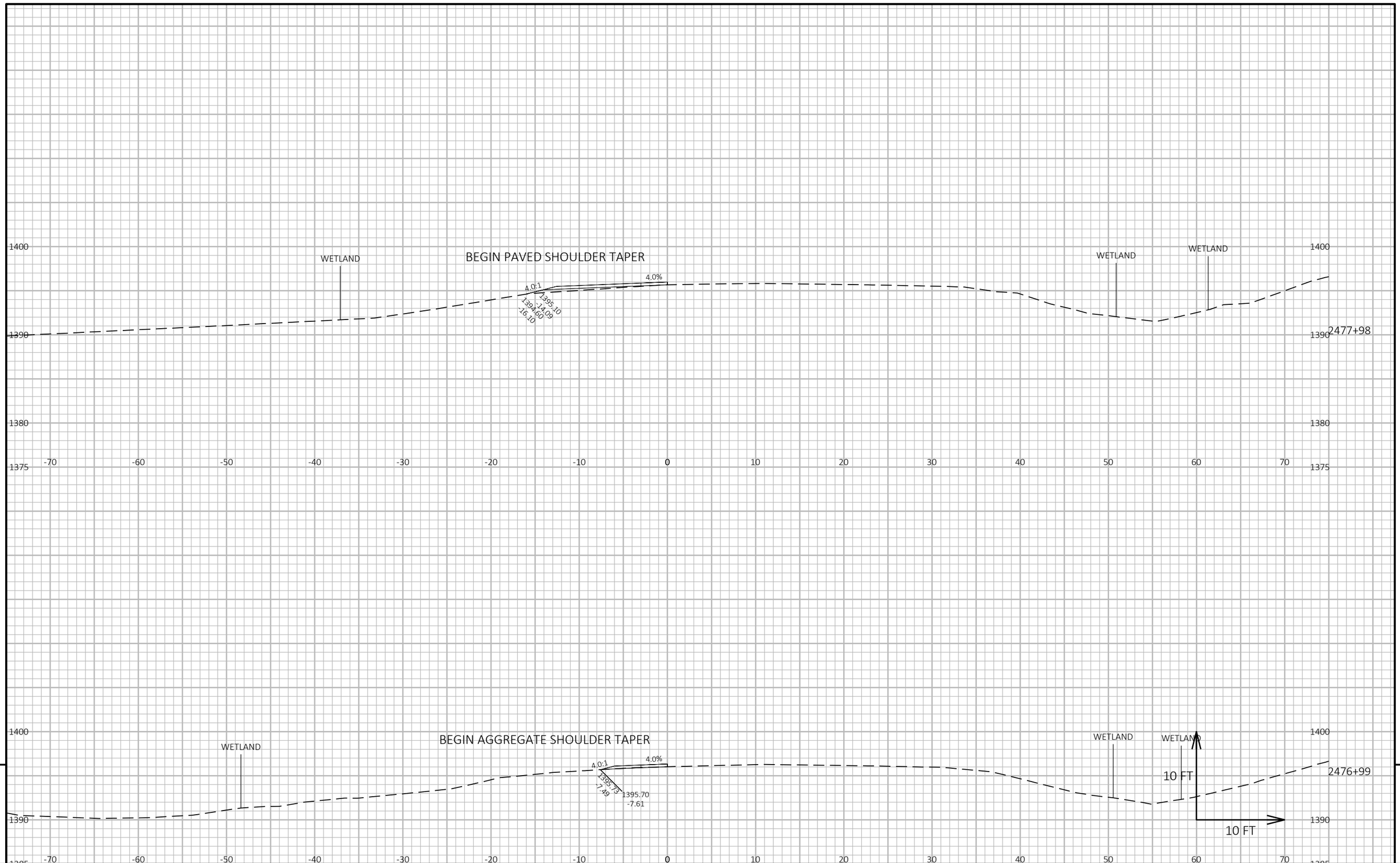
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 314	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090224_xs_EB

PLOT DATE : 11/18/2025 3:13 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

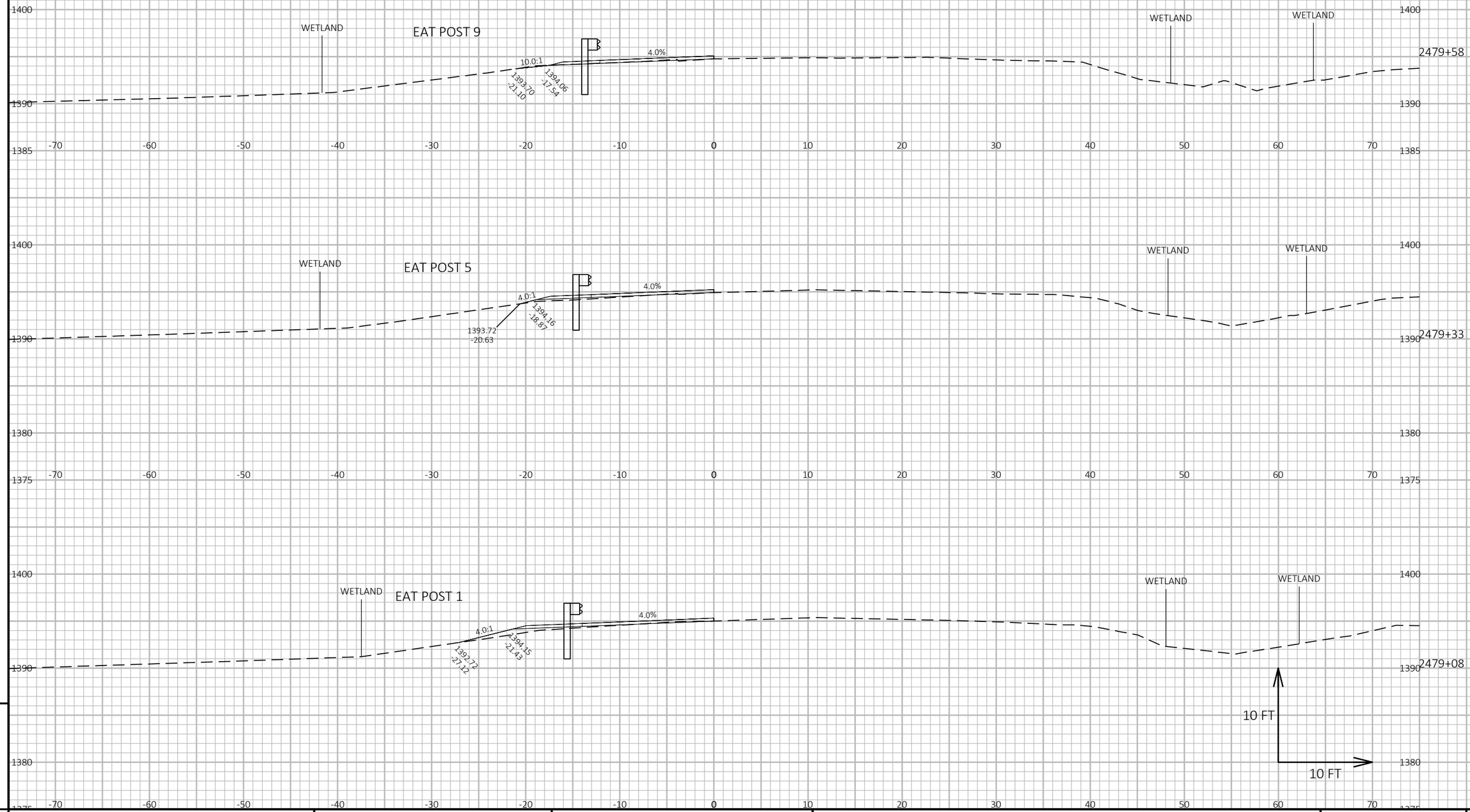


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 315	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090225_xs_EB

PLOT DATE : 11/18/2025 3:13 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

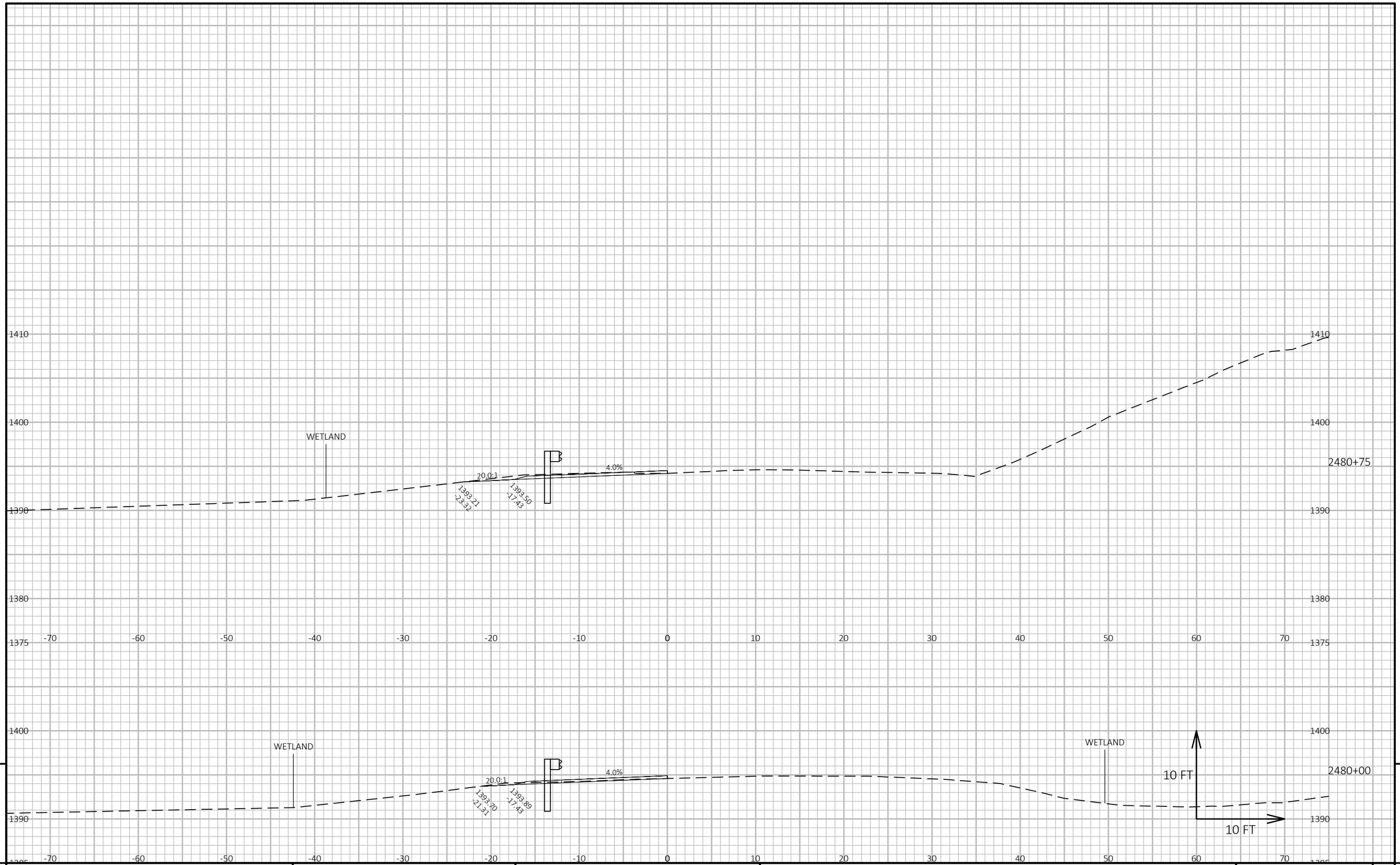
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 316	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090226_xs_EB

PLOT DATE : 11/18/2025 3:13 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



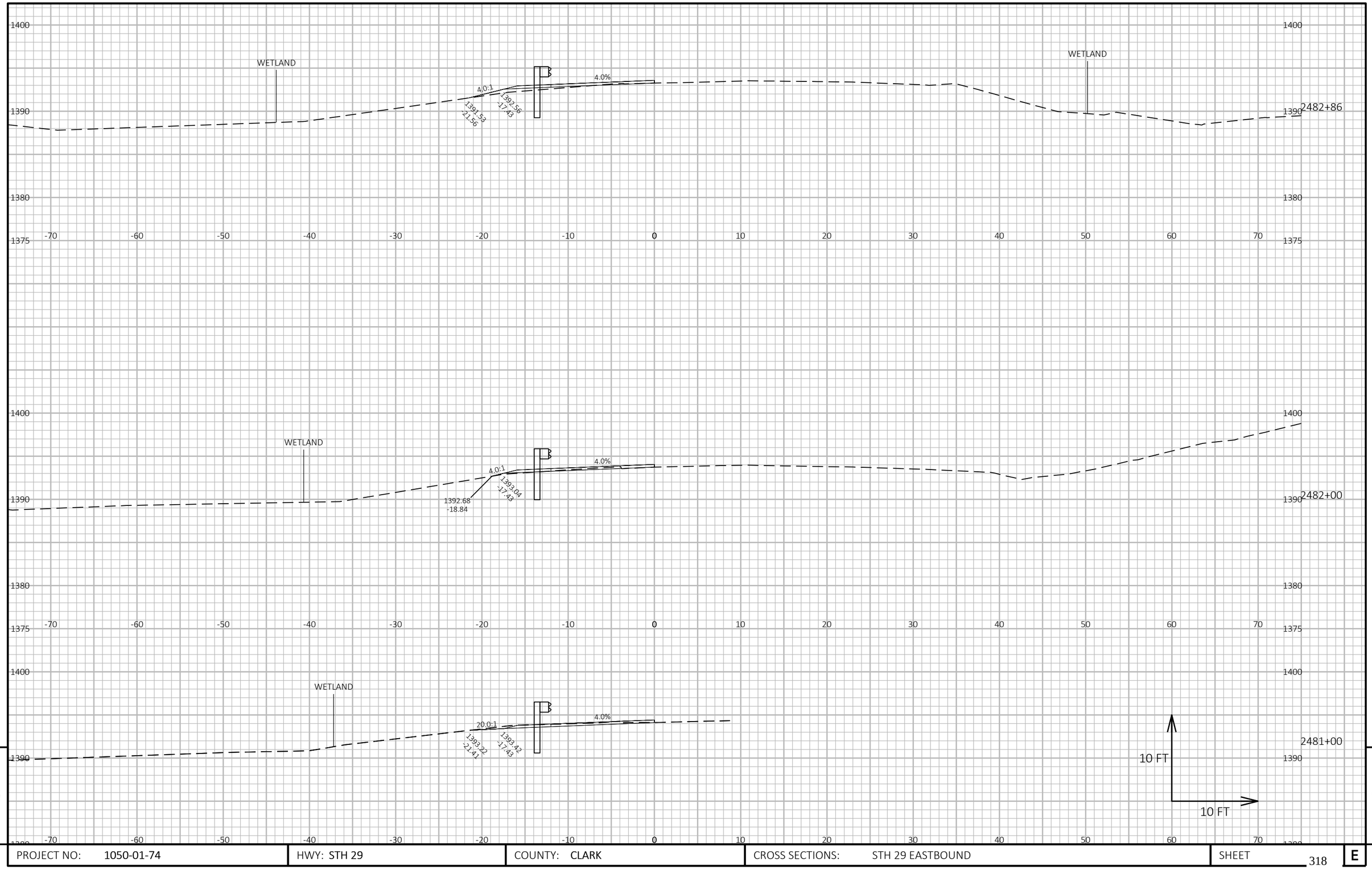
9 9

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 317	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090227_xs_EB

PLOT DATE : 11/18/2025 3:13 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

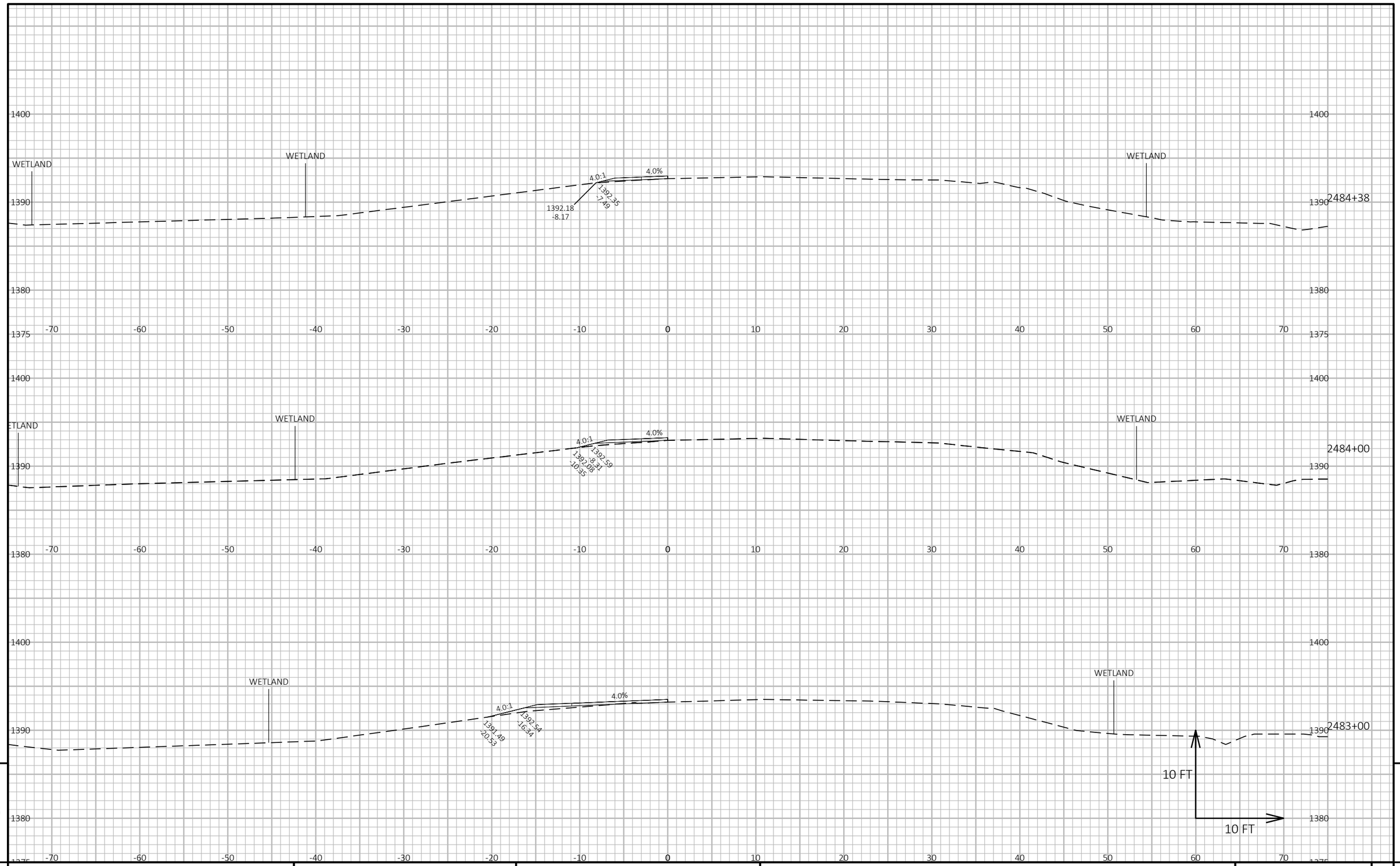


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 318	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090228_xs_EB

PLOT DATE : 11/18/2025 3:13 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

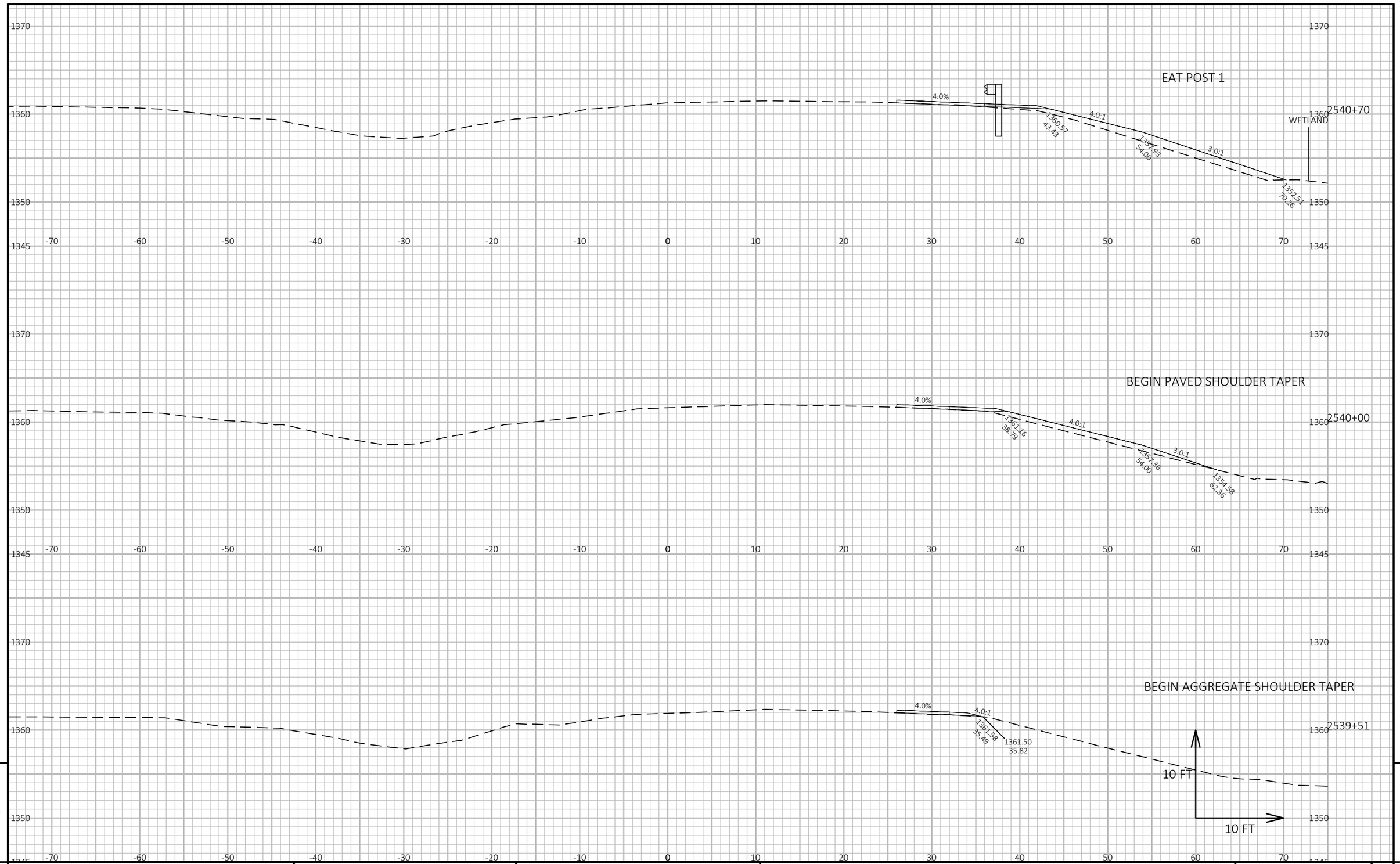
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 319	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090229_xs_EB

PLOT DATE : 11/18/2025 3:14 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

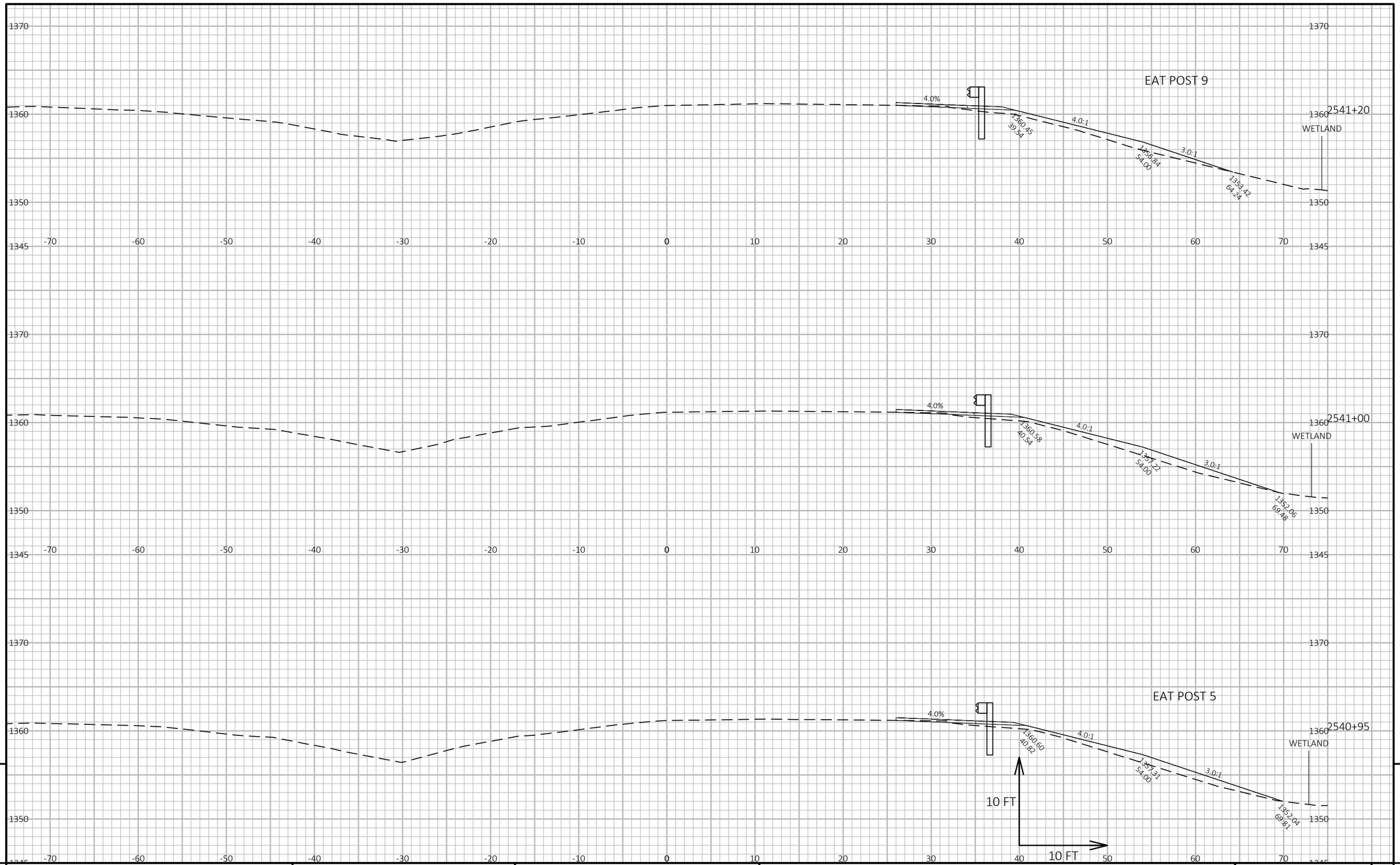


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 320	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090230_xs_EB

PLOT DATE : 11/18/2025 3:14 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

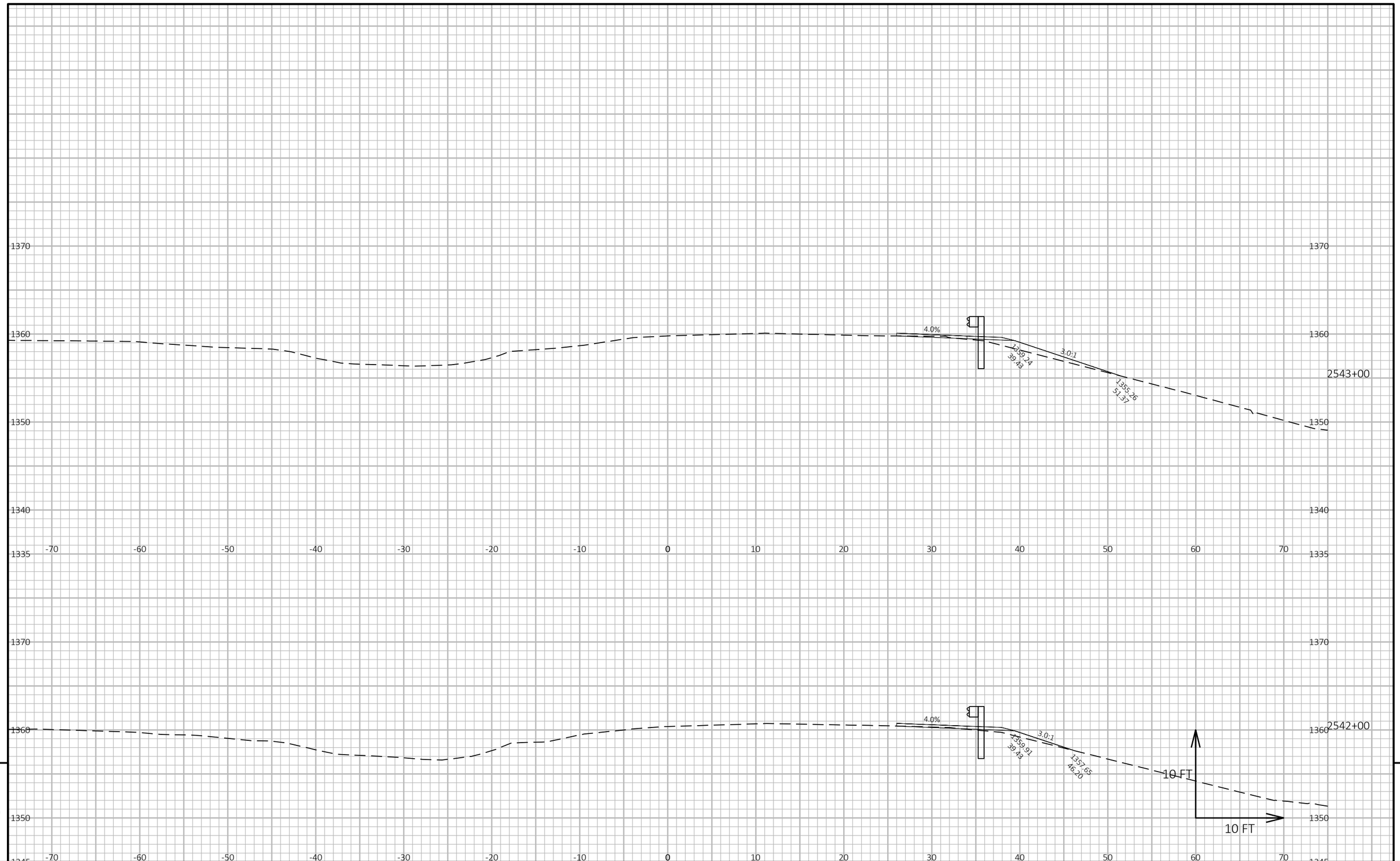


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 321	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090231_xs_EB

PLOT DATE : 11/18/2025 3:14 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

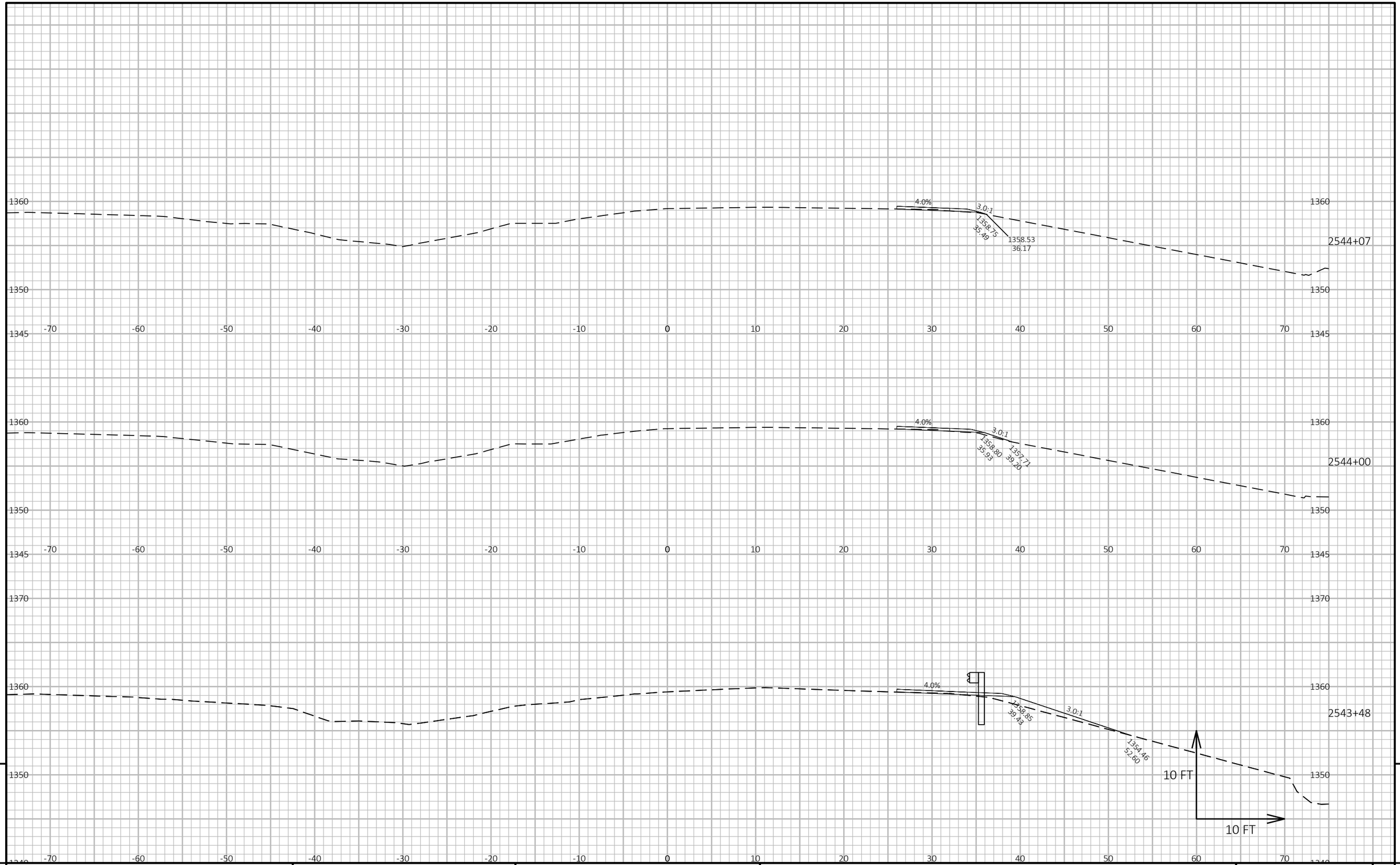
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 322	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090232_xs_EB

PLOT DATE : 11/18/2025 3:14 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

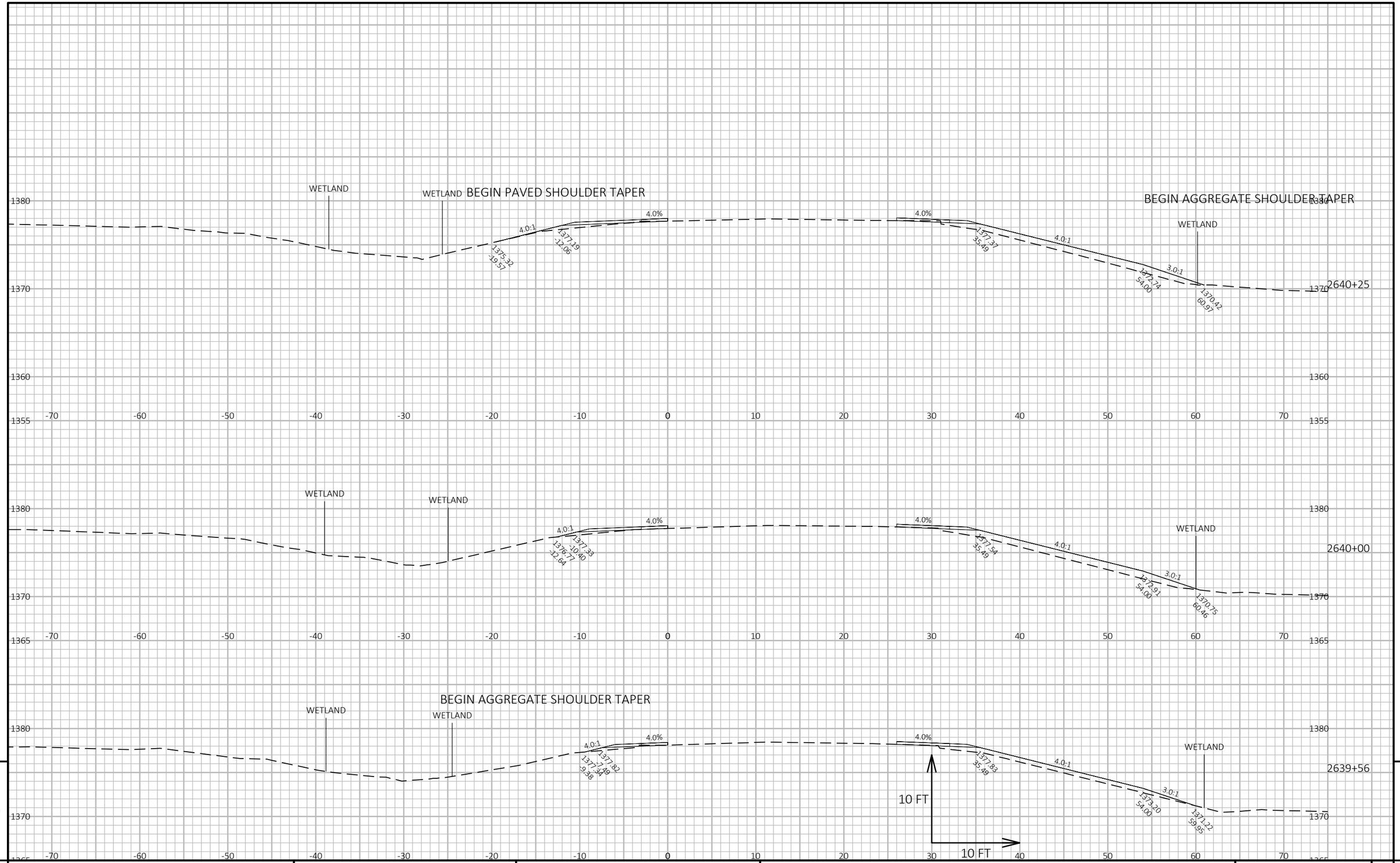
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 323	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090233_xs_EB

PLOT DATE : 11/18/2025 3:14 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



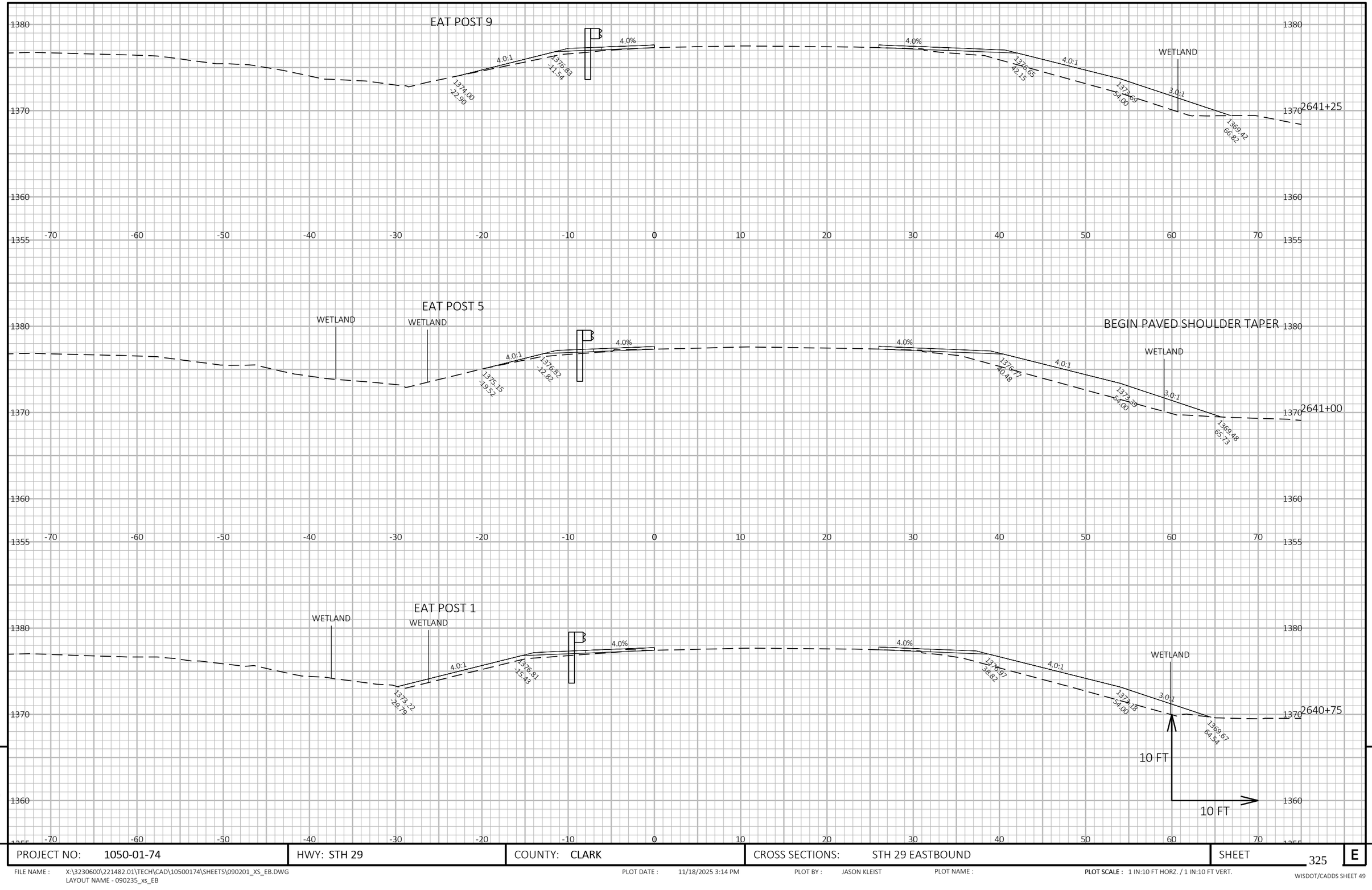
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9

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 324	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090234_xs_EB

PLOT DATE : 11/18/2025 3:14 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

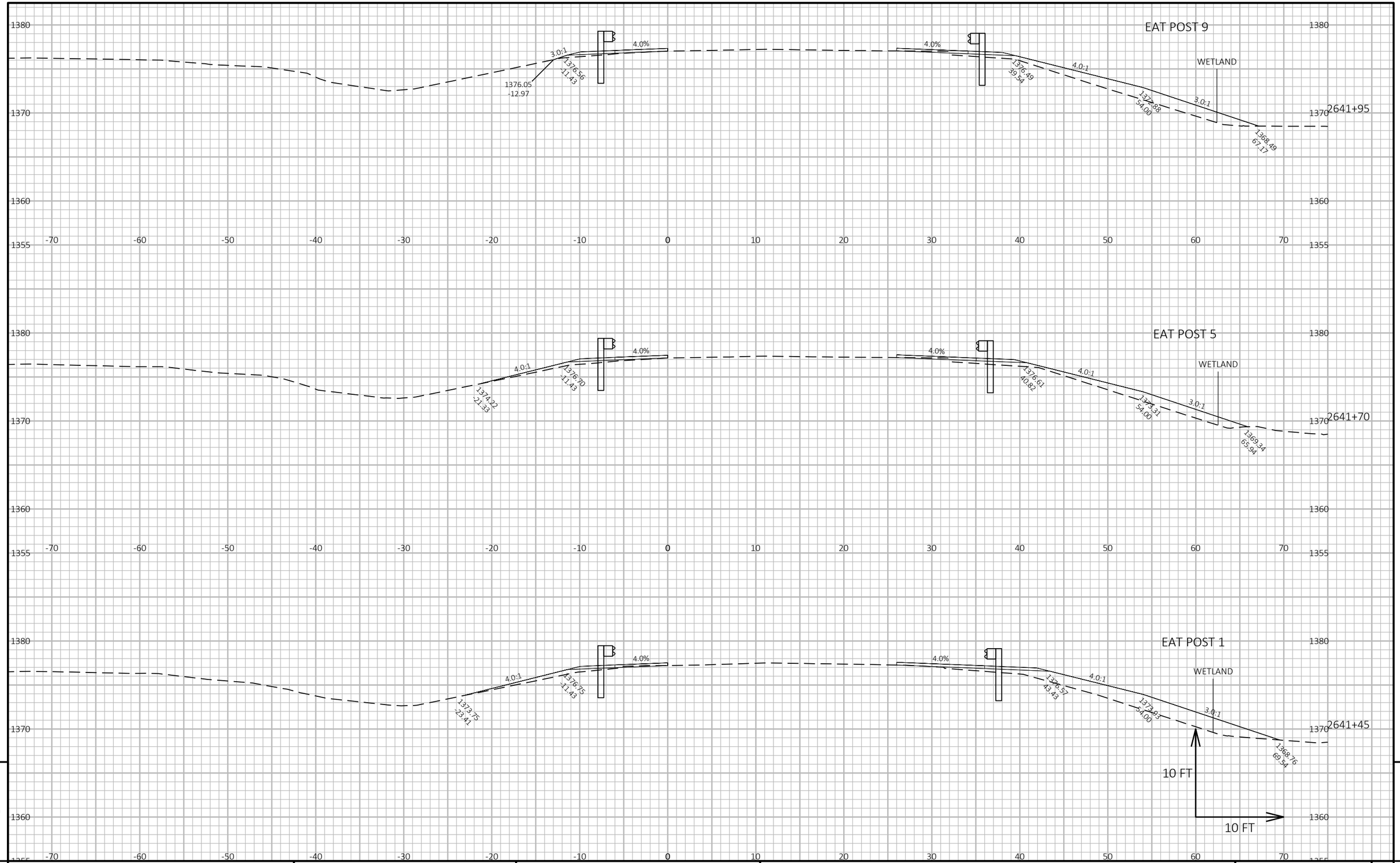
9

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 325	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090235_xs_EB

PLOT DATE : 11/18/2025 3:14 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

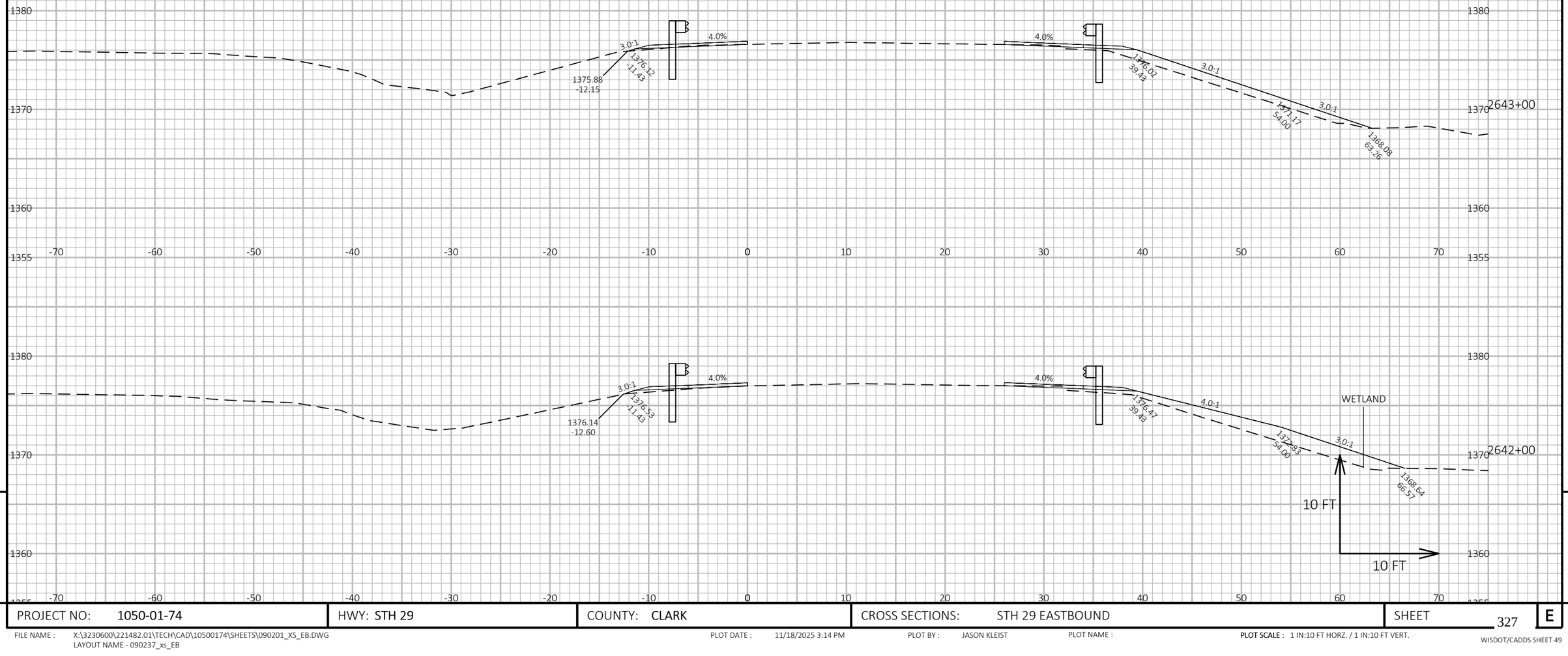
9

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 326	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090236_xs_EB

PLOT DATE : 11/18/2025 3:14 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

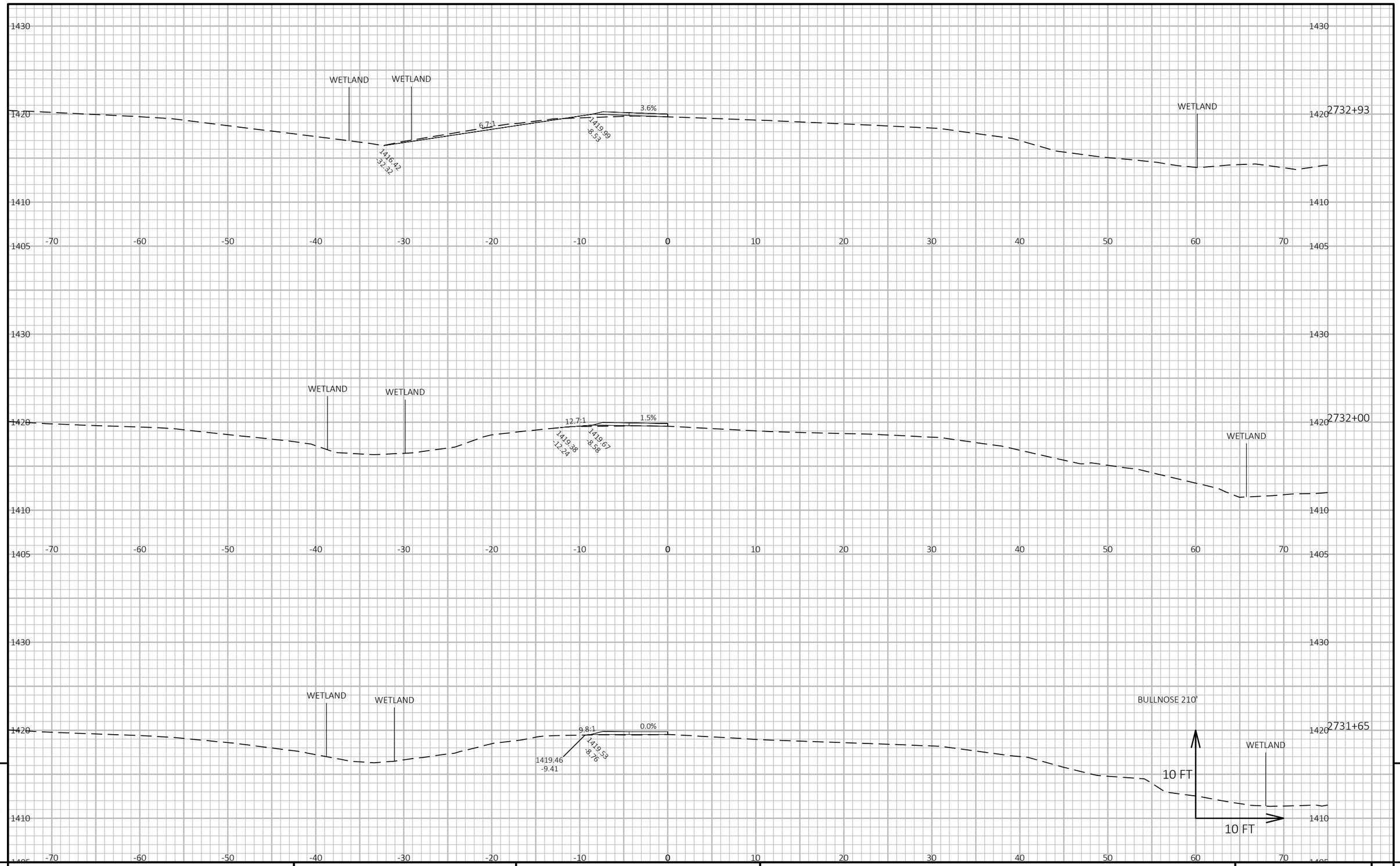
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 327	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090237_xs_EB

PLOT DATE : 11/18/2025 3:14 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

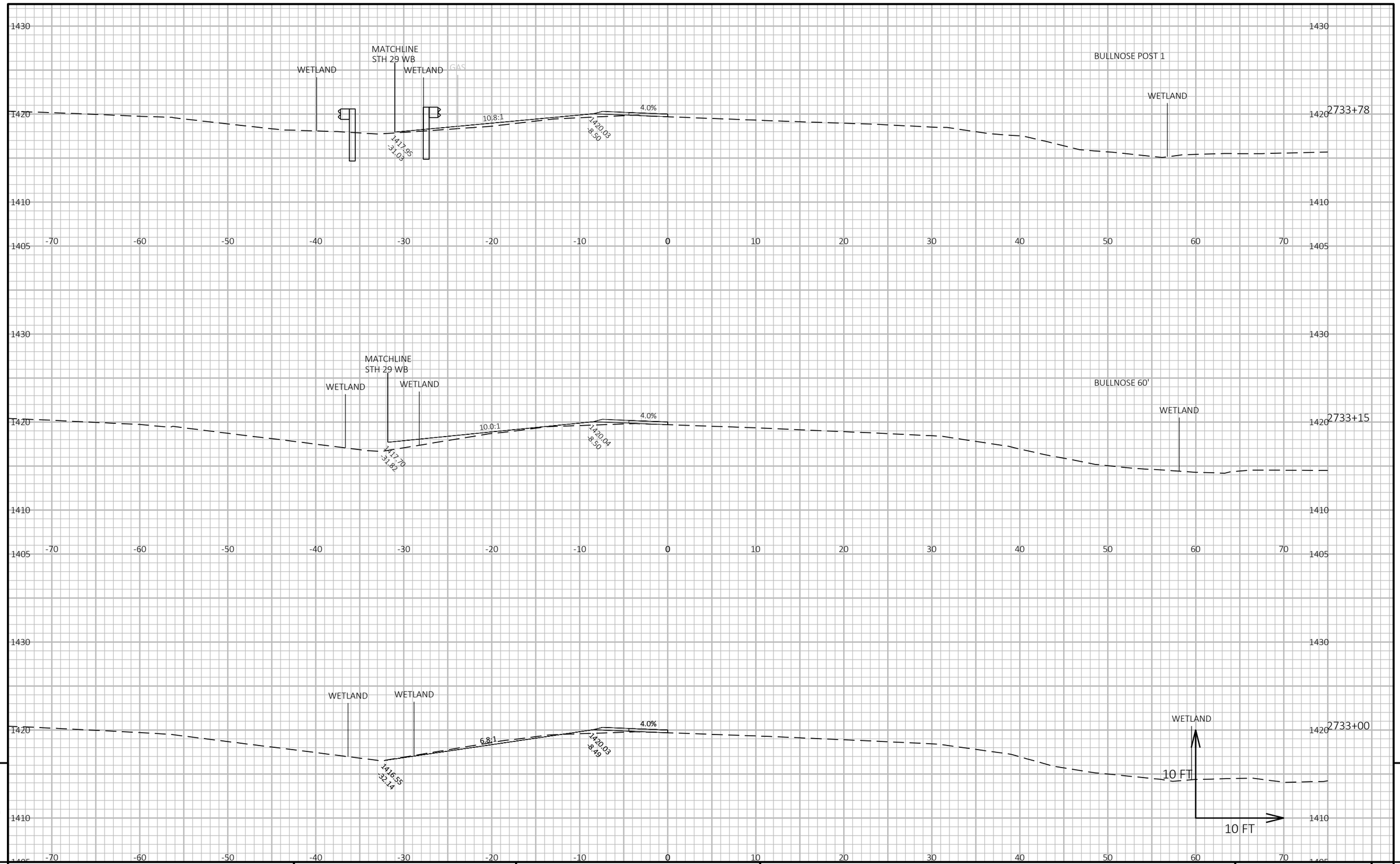
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 328	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090238_xs_EB

PLOT DATE : 11/18/2025 3:14 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

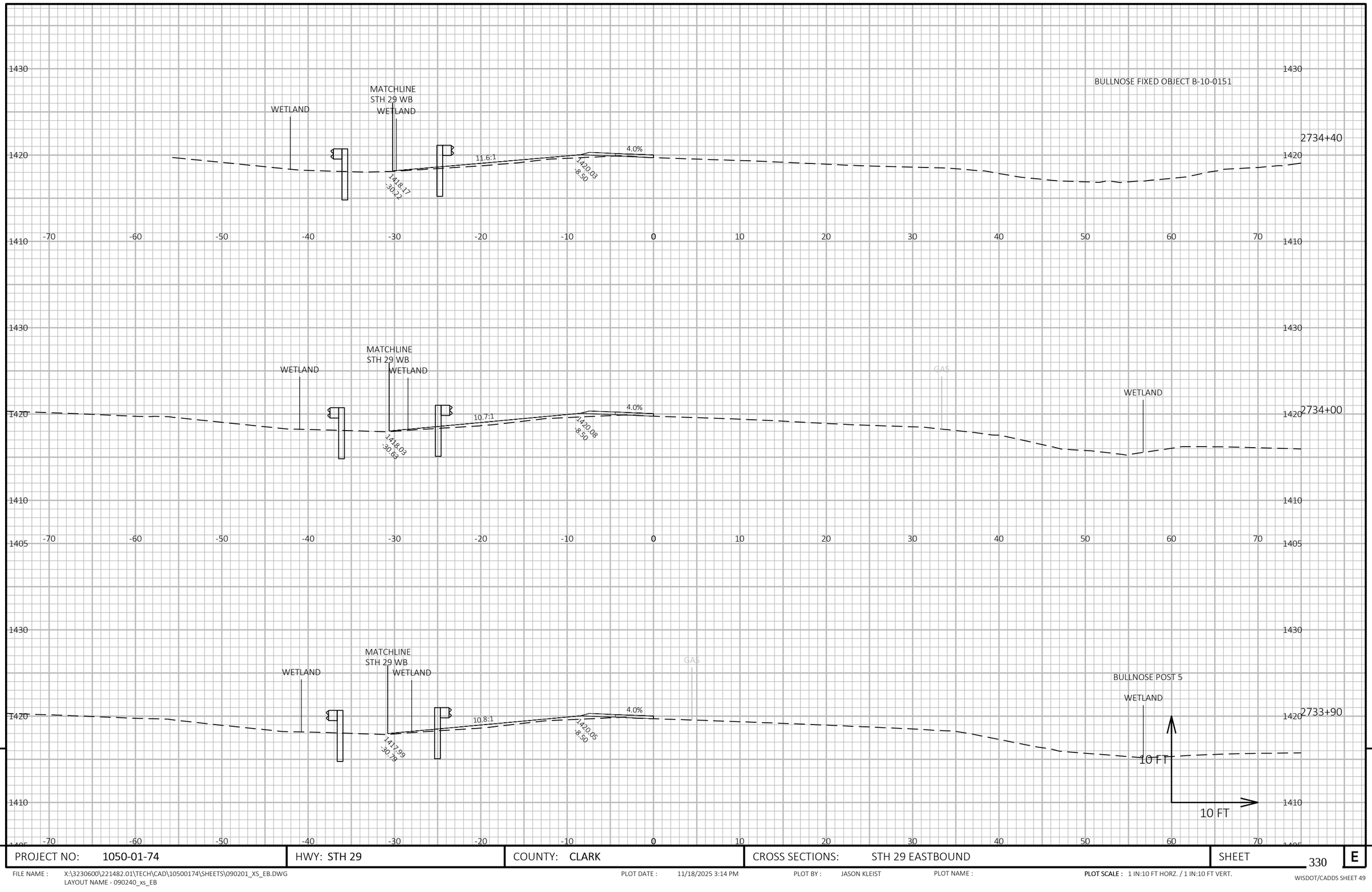


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 329	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090239_xs_EB

PLOT DATE : 11/18/2025 3:14 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

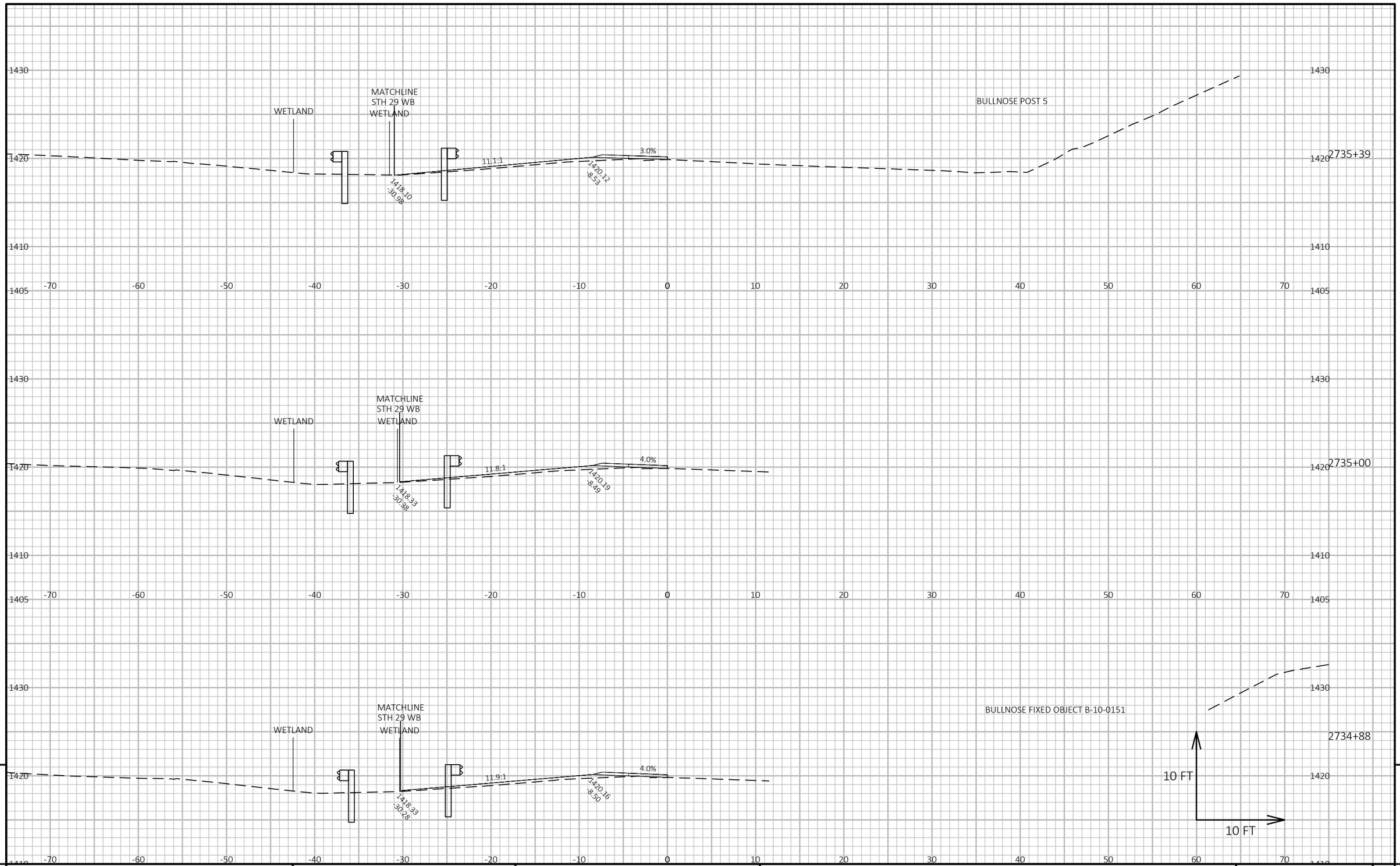


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 330	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090240_xs_EB

PLOT DATE : 11/18/2025 3:14 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

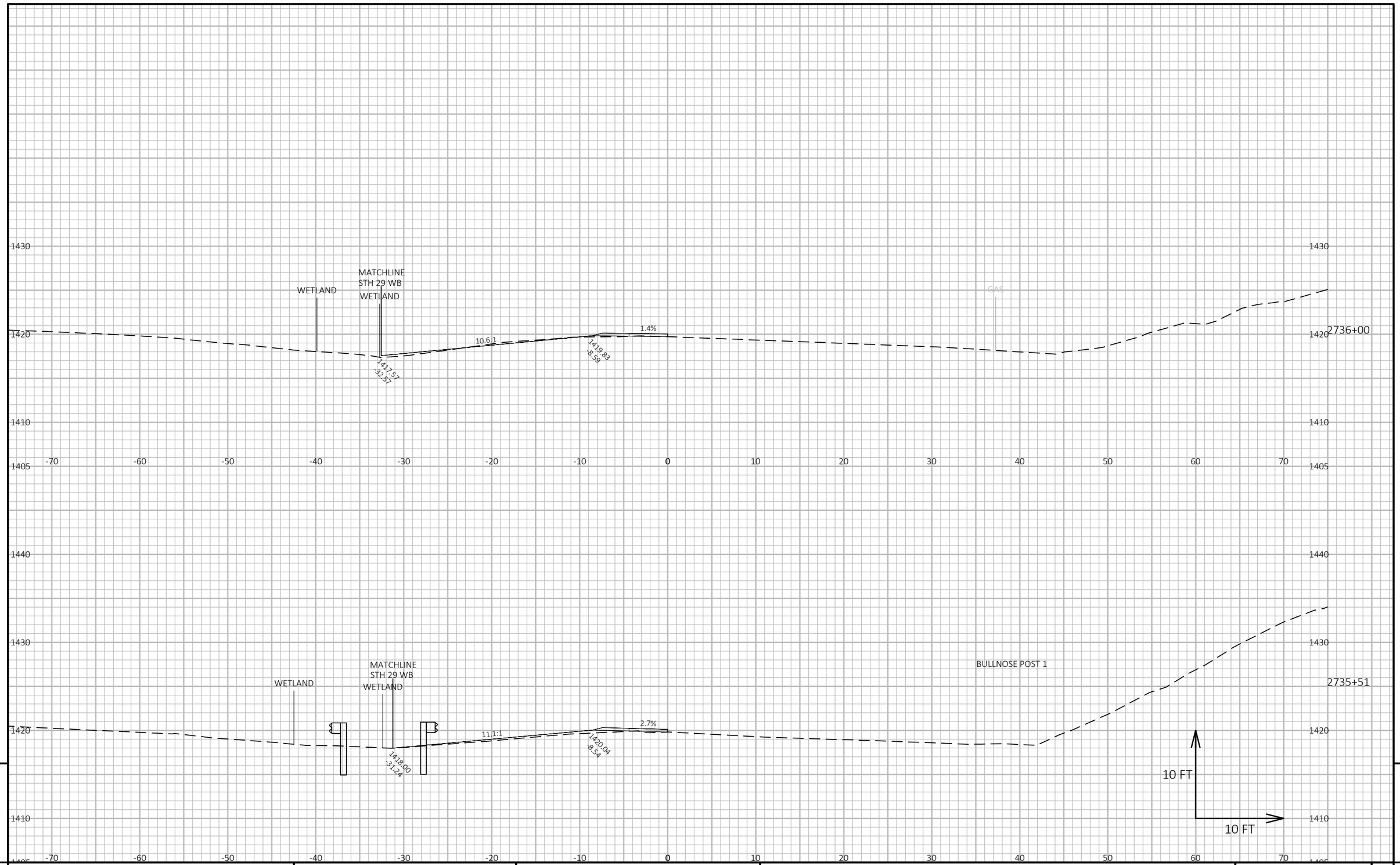
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 331	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090241_xs_EB

PLOT DATE : 11/18/2025 3:15 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

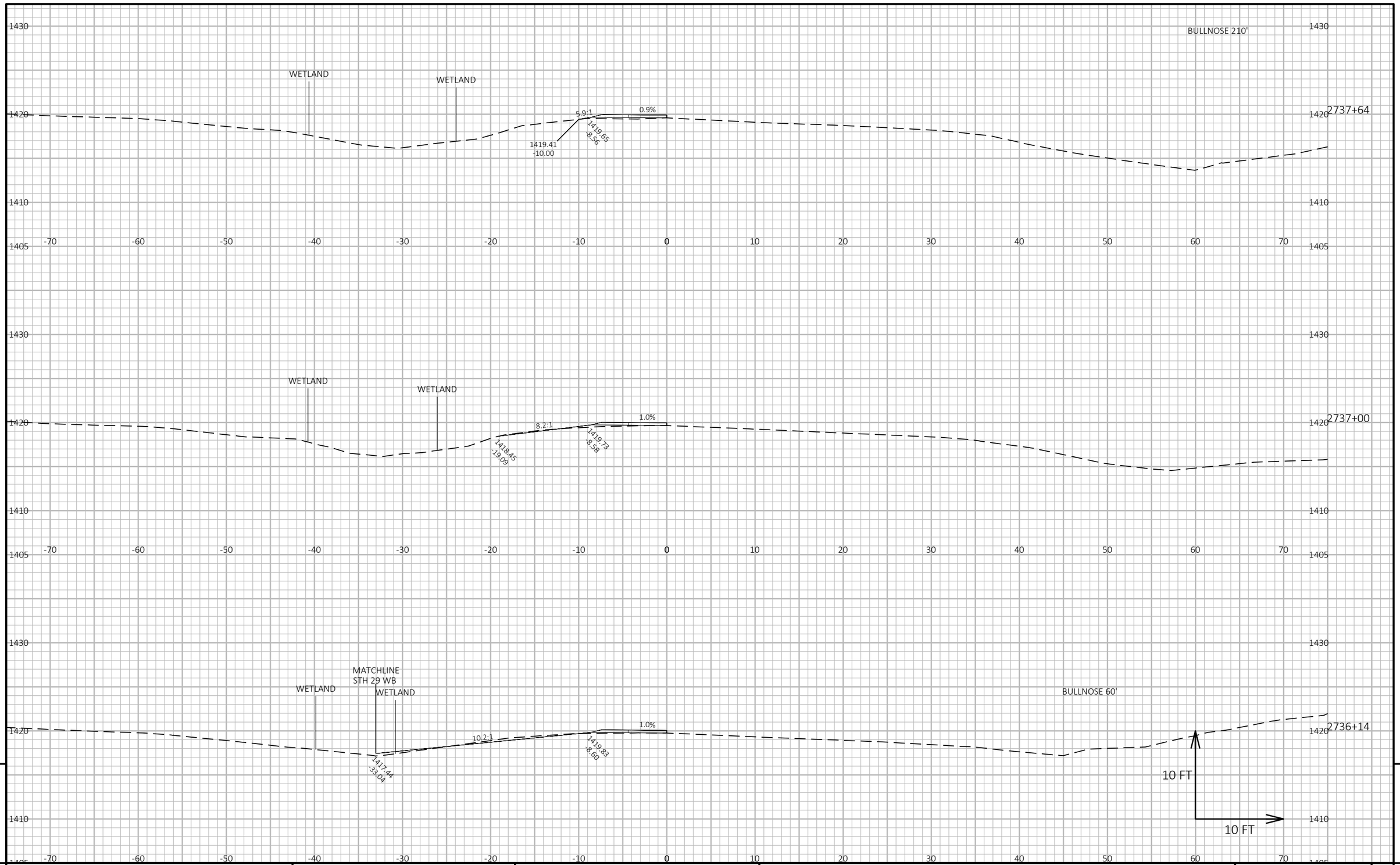
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 332	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090242_xs_EB

PLOT DATE : 11/18/2025 3:15 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 333	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090243_xs_EB

PLOT DATE : 11/18/2025 3:15 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

BEGIN PAVED SHOULDER TAPER

WETLAND

WETLAND

4.0%

4.0:1

1429.06
-12.09

1428.45
-14.52

4.0%

4.0:1

1429.05
37.93

1427.99
42.17

2796+82

1430
1420
1410
1405

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

WETLAND

WETLAND

BEGIN AGGREGATE SHOULDER TAPER

4.0%

4.0:1

1429.04
-9.65

1428.70
-11.01

4.0%

4.0:1

1428.96
35.49

1428.59
37.00

2796+46

1430
1420
1410
1405

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

WETLAND

WETLAND

BEGIN AGGREGATE SHOULDER TAPER

4.0%

4.0:1

1428.99
-7.49

1428.79
-8.30

4.0%

4.0:1

1428.88
35.49

1428.33
37.72

2796+13

10 FT

10 FT

1430
1420
1410
1405

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

9

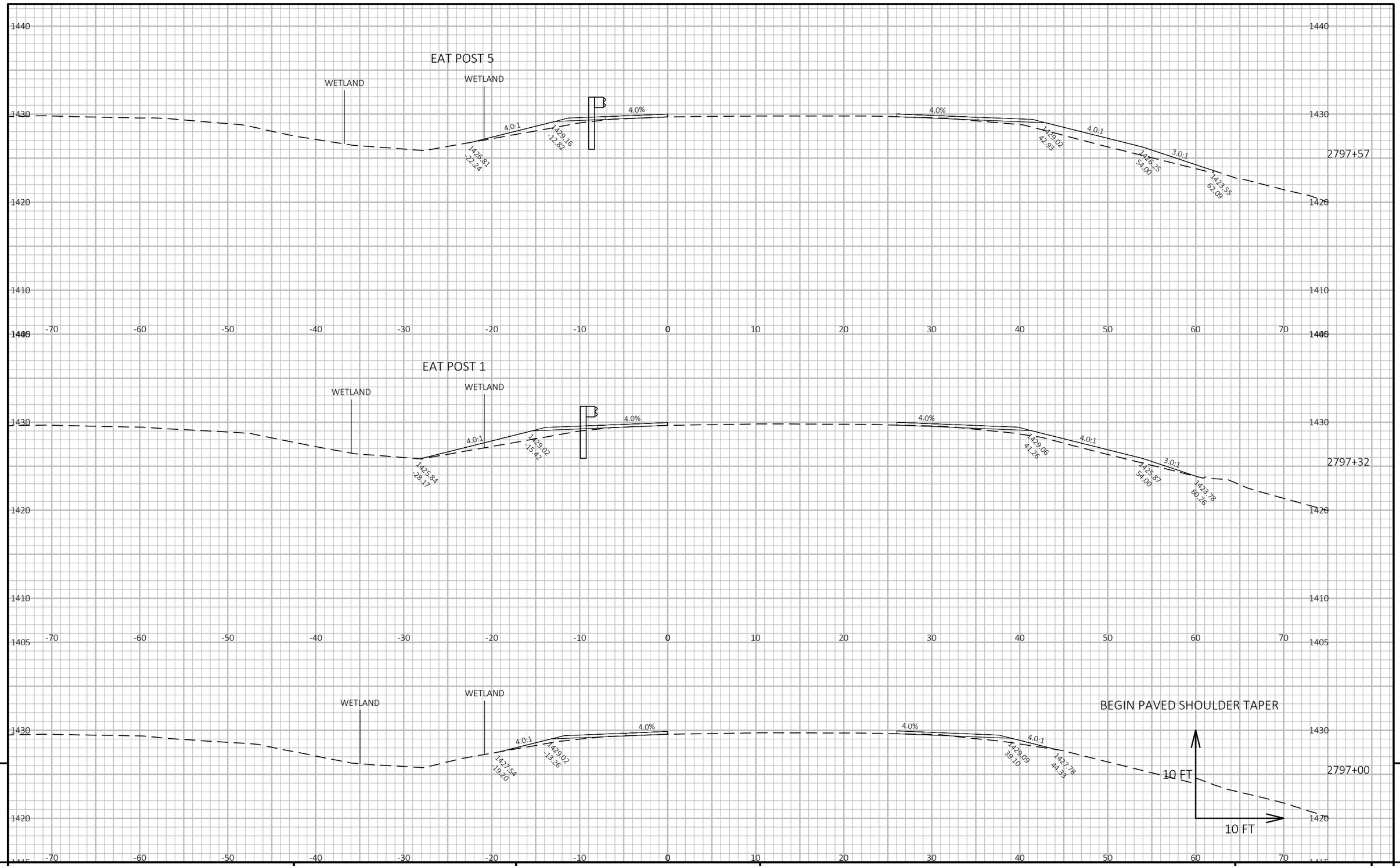
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 334	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090245_xs_EB

PLOT DATE : 11/18/2025 3:15 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

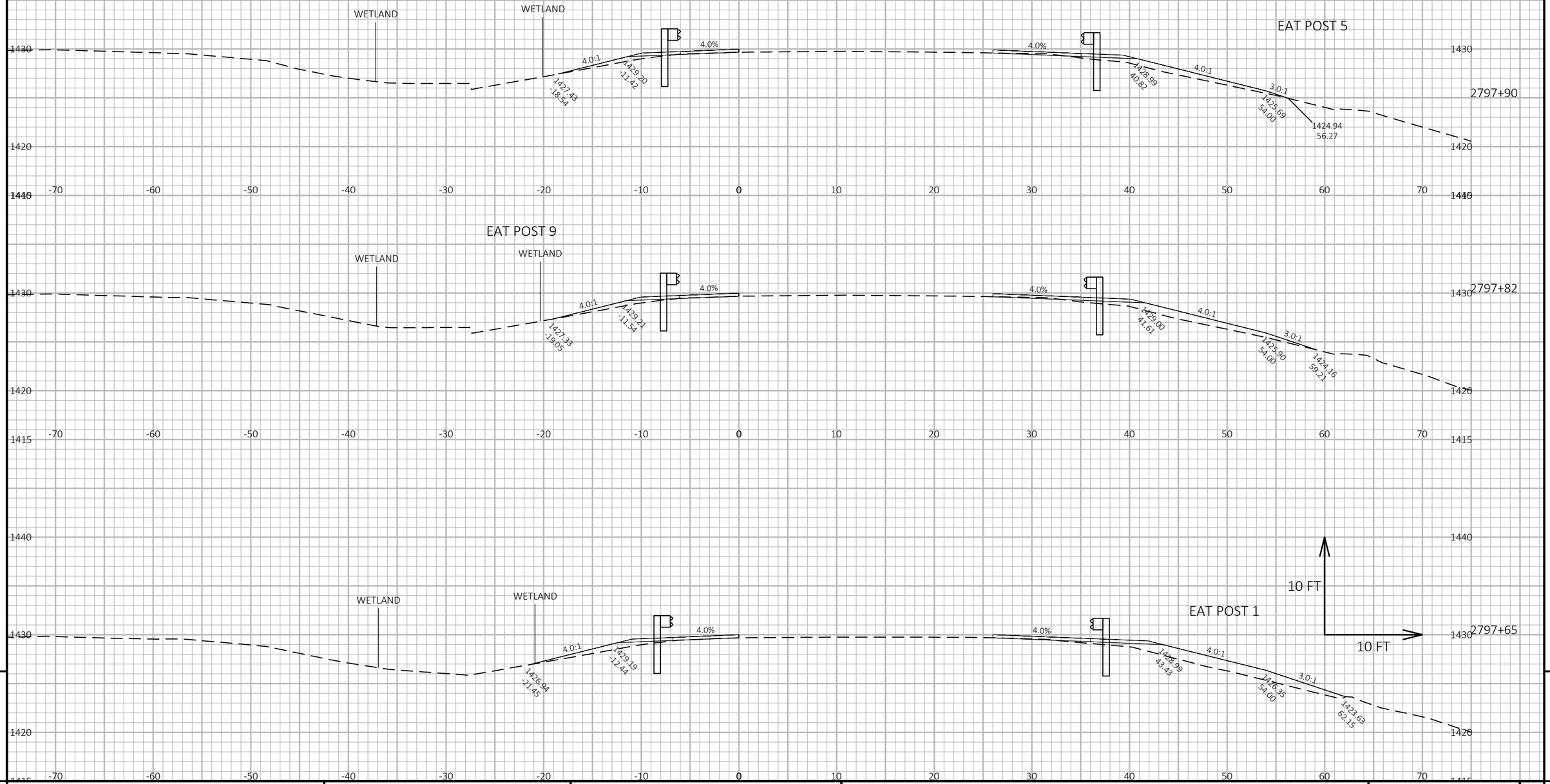
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 335	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090246_xs_EB

PLOT DATE : 11/18/2025 3:15 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

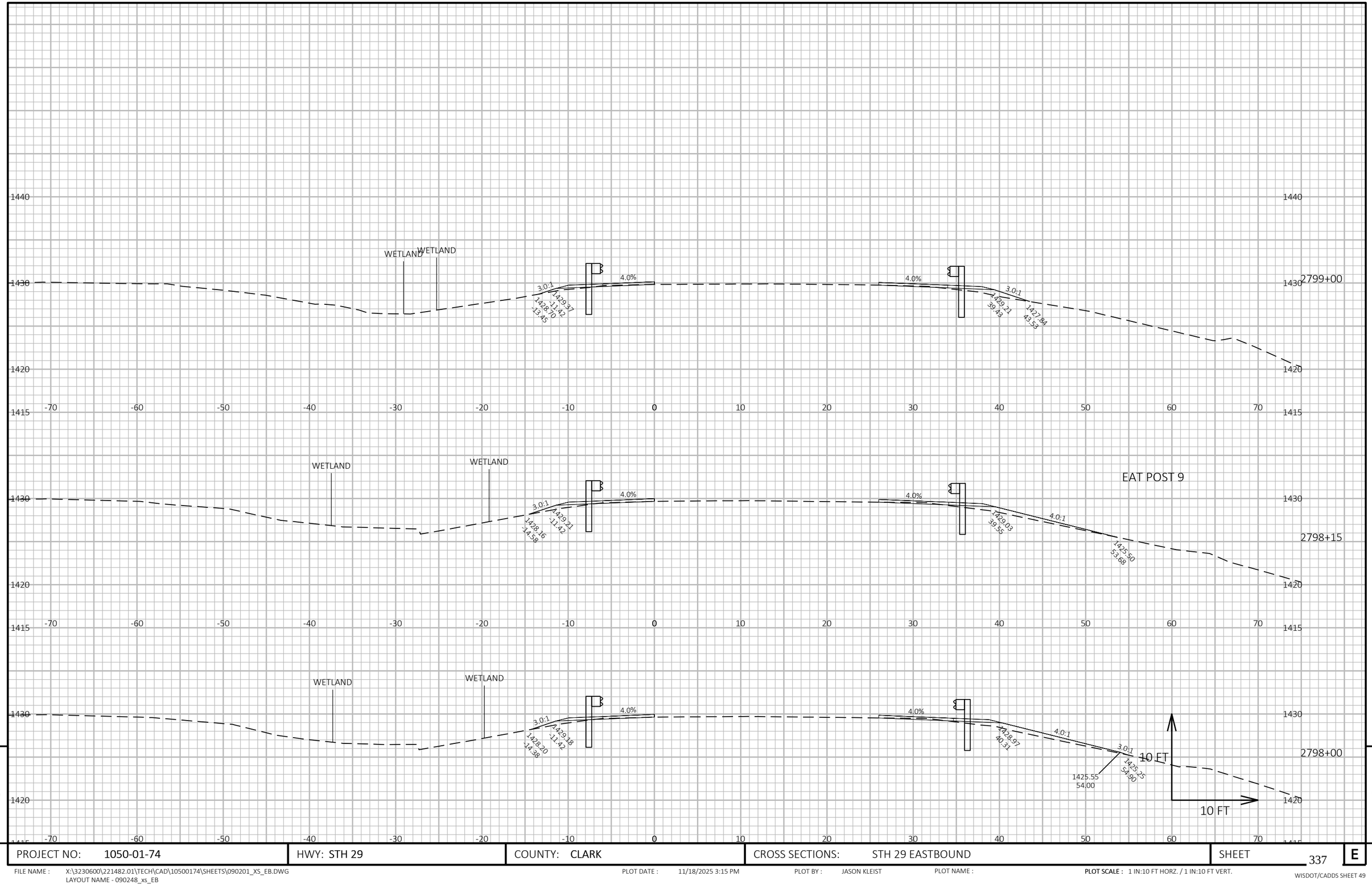
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 336	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090247_xs_EB

PLOT DATE : 11/18/2025 3:15 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

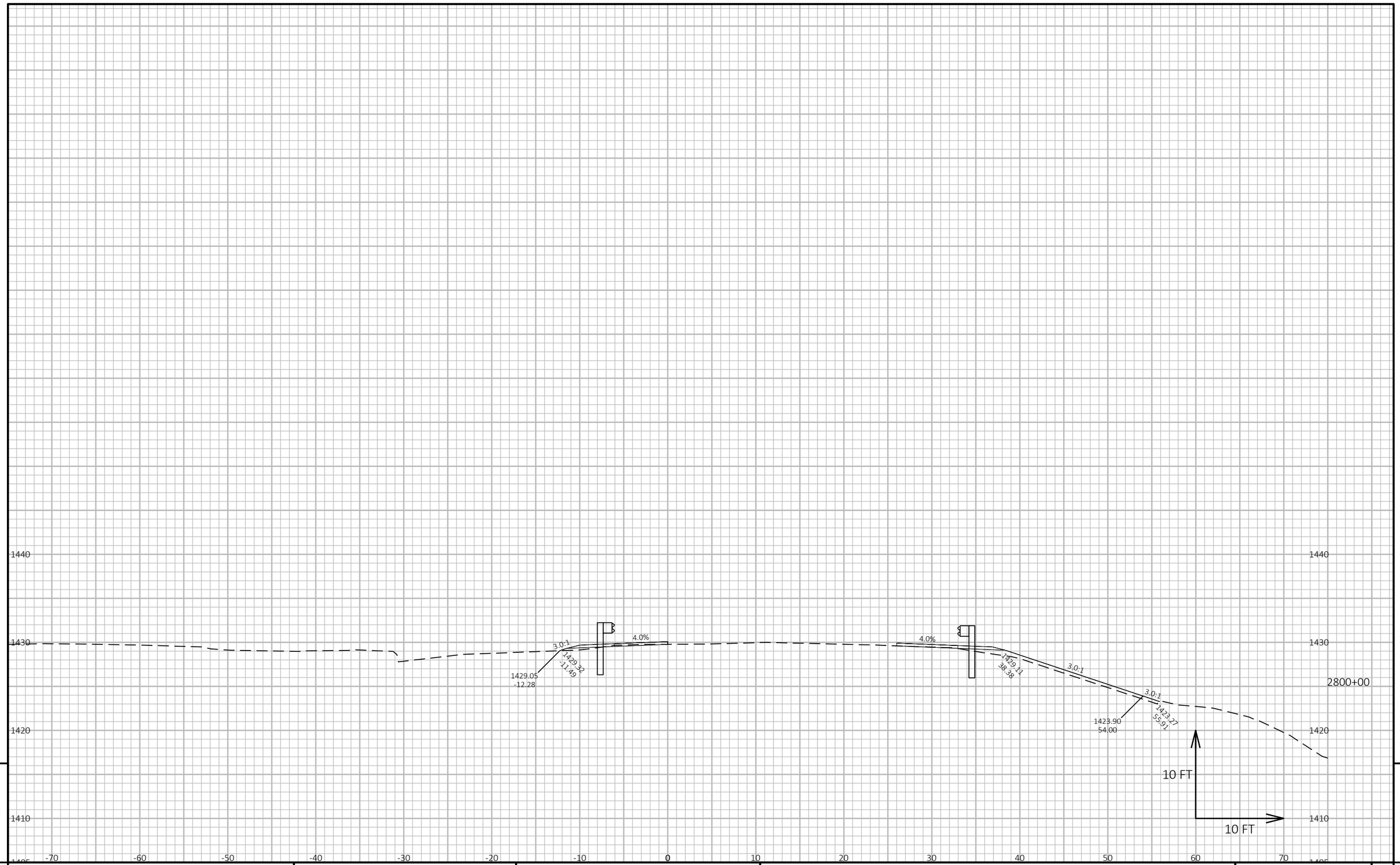
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 337	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090248_xs_EB

PLOT DATE : 11/18/2025 3:15 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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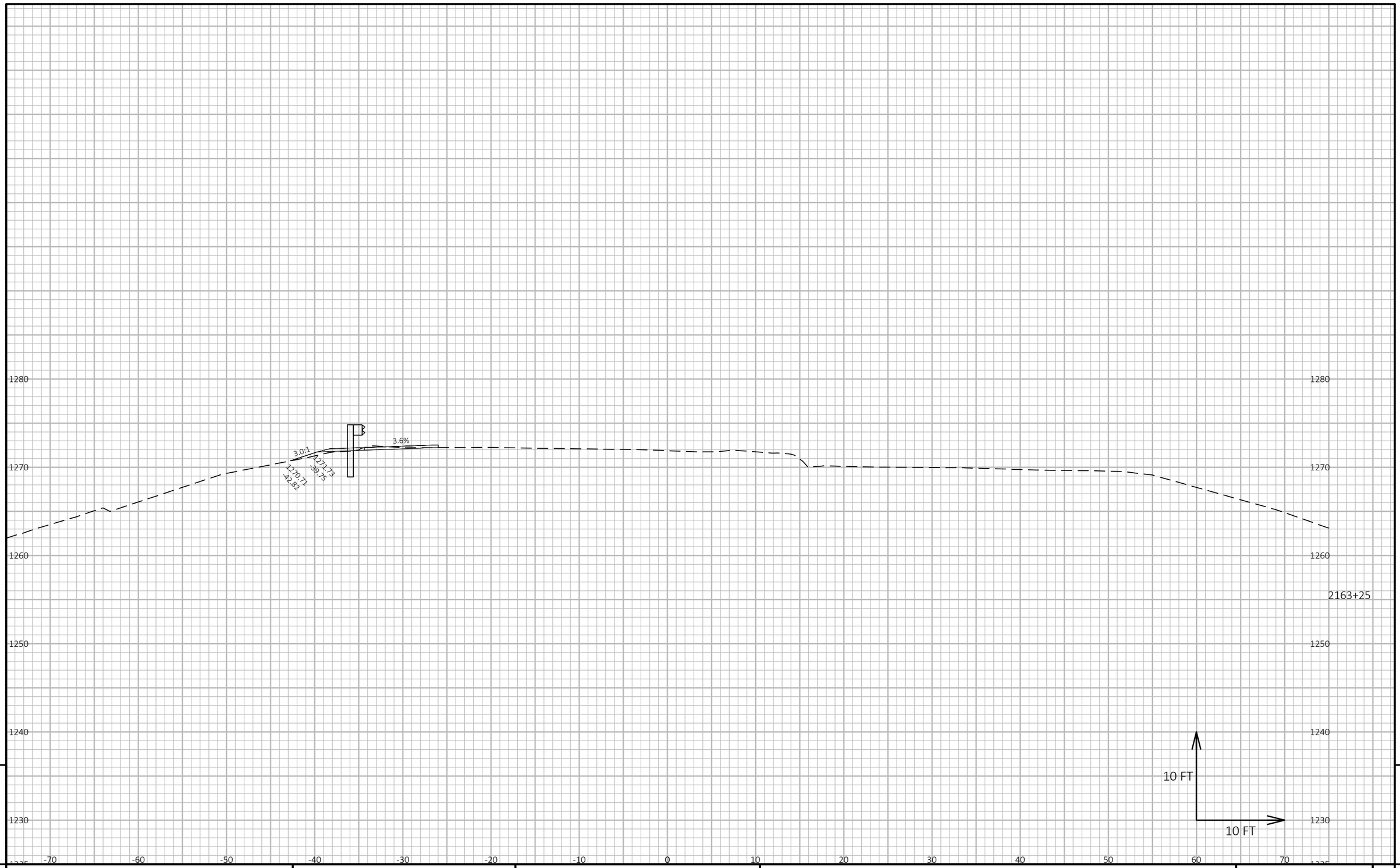
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 EASTBOUND	SHEET 338	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090201_XS_EB.DWG
LAYOUT NAME - 090249_xs_EB

PLOT DATE : 11/18/2025 3:15 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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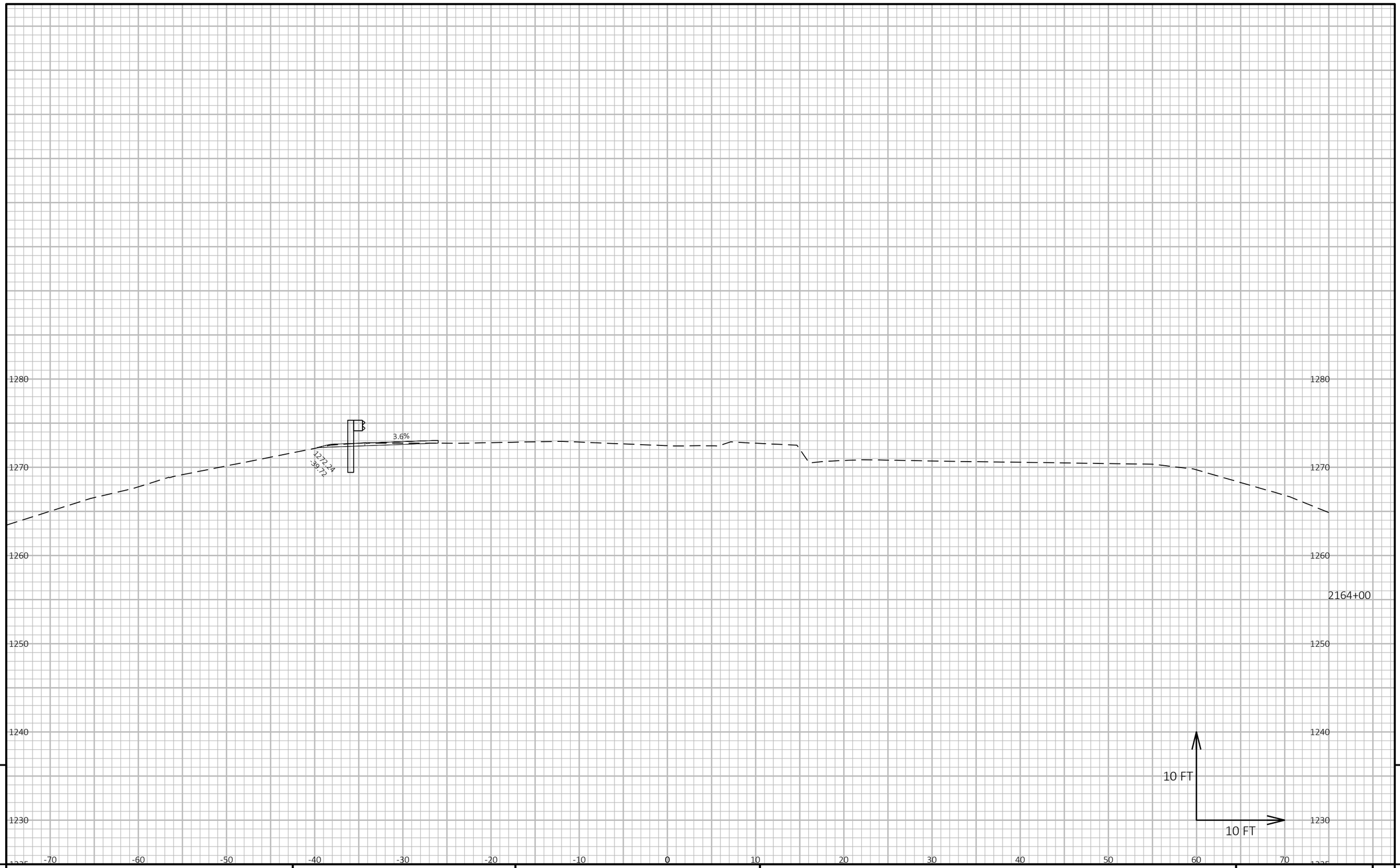
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 339	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090250_xs_WB

PLOT DATE : 11/18/2025 3:16 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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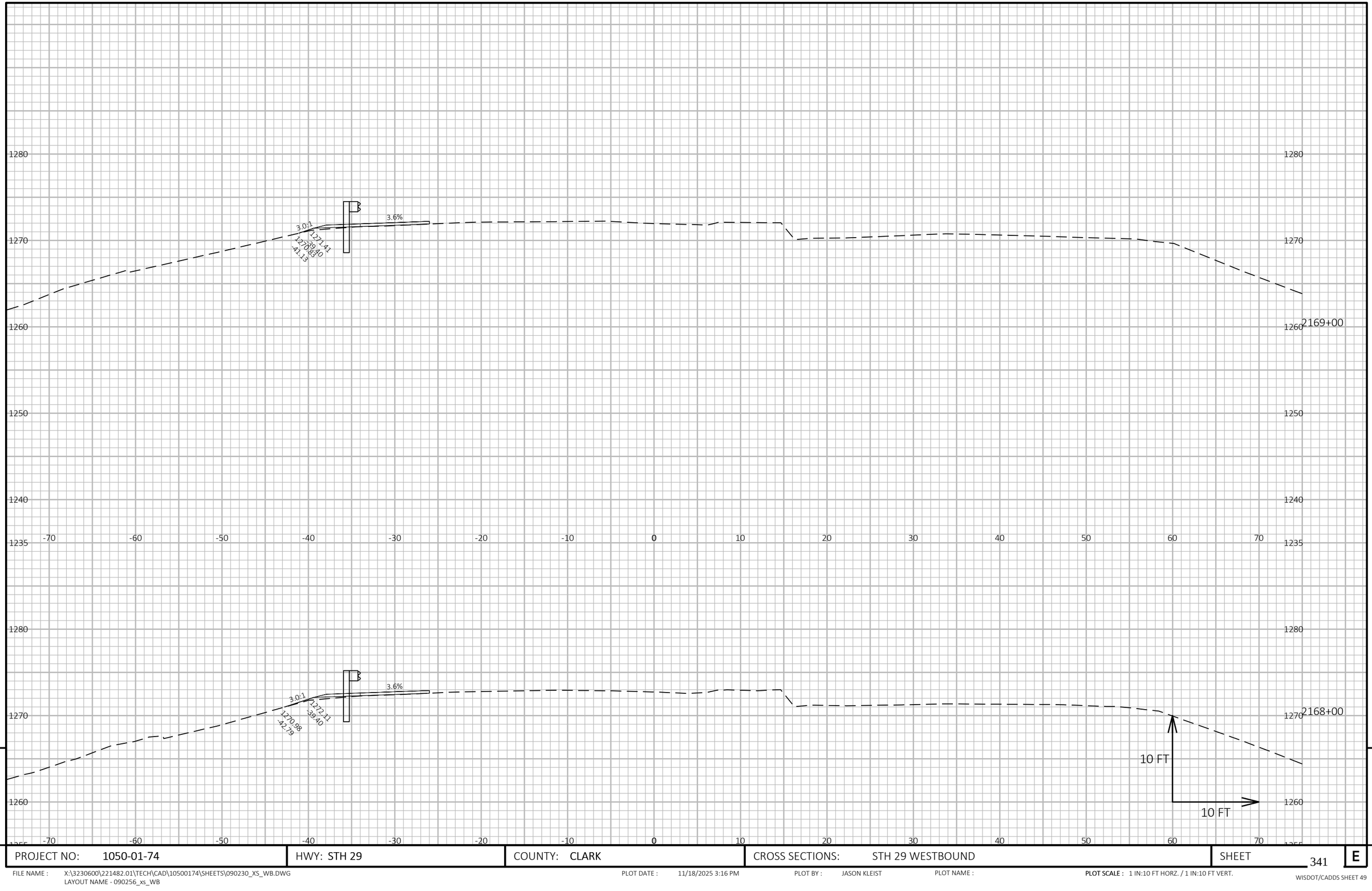
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 340	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090251_xs_WB

PLOT DATE : 11/18/2025 3:16 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



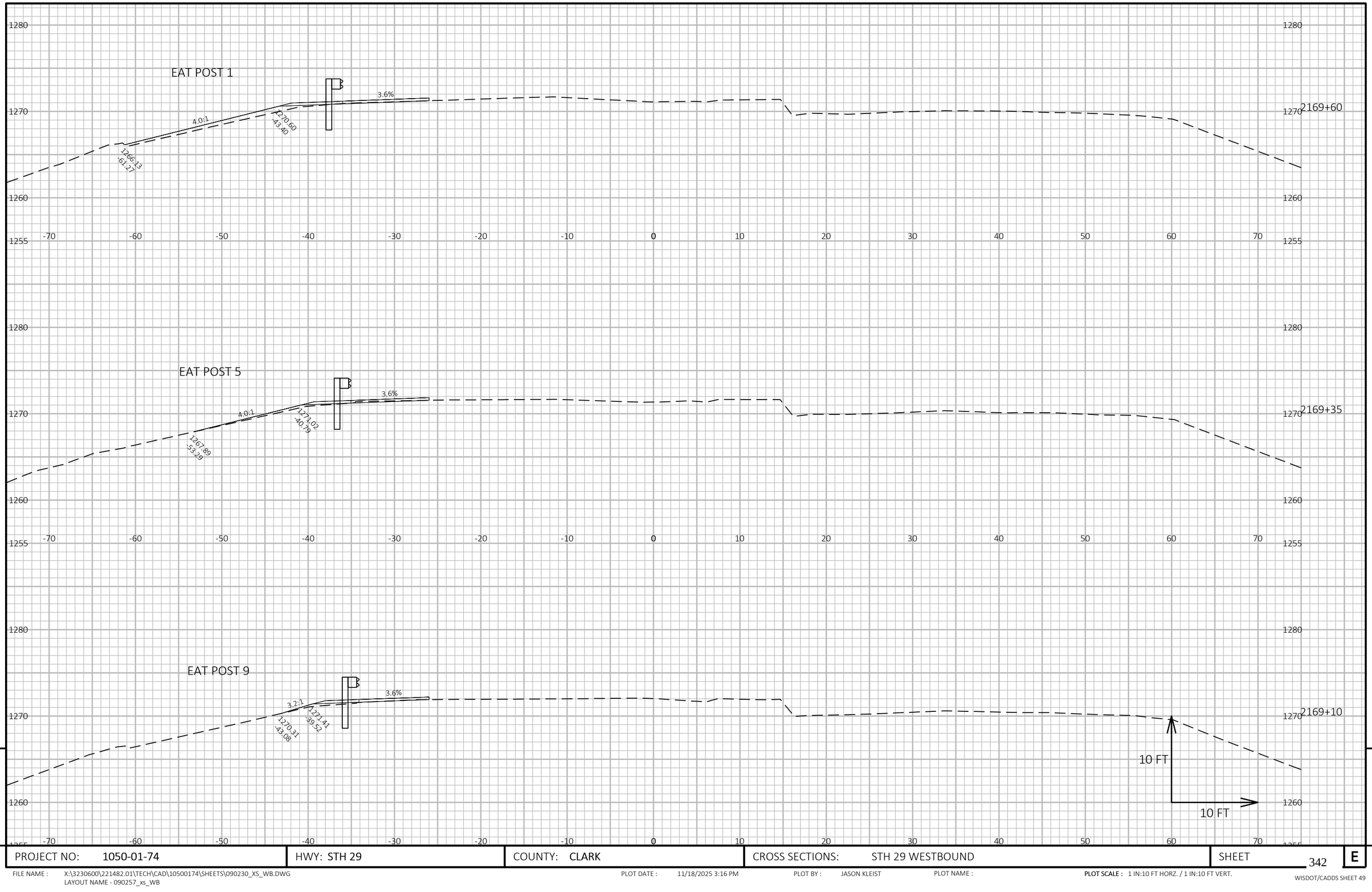
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 341	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090256_xs_WB

PLOT DATE : 11/18/2025 3:16 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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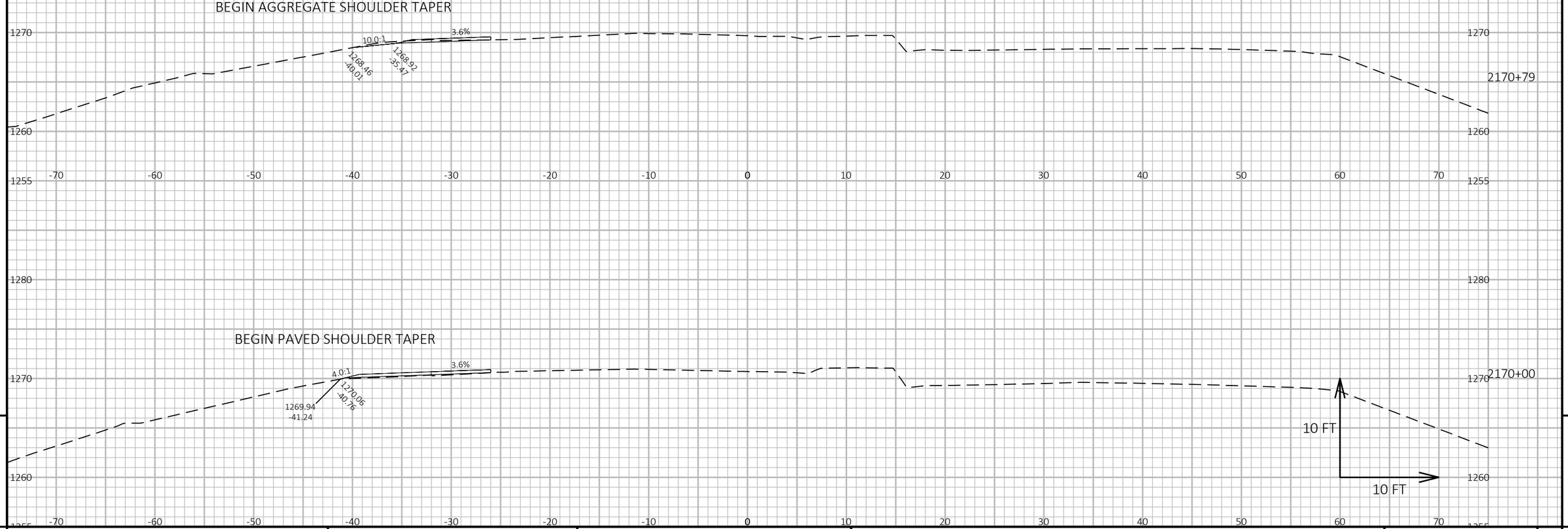
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 342	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090257_xs_WB

PLOT DATE : 11/18/2025 3:16 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

BEGIN AGGREGATE SHOULDER TAPER



BEGIN PAVED SHOULDER TAPER

9

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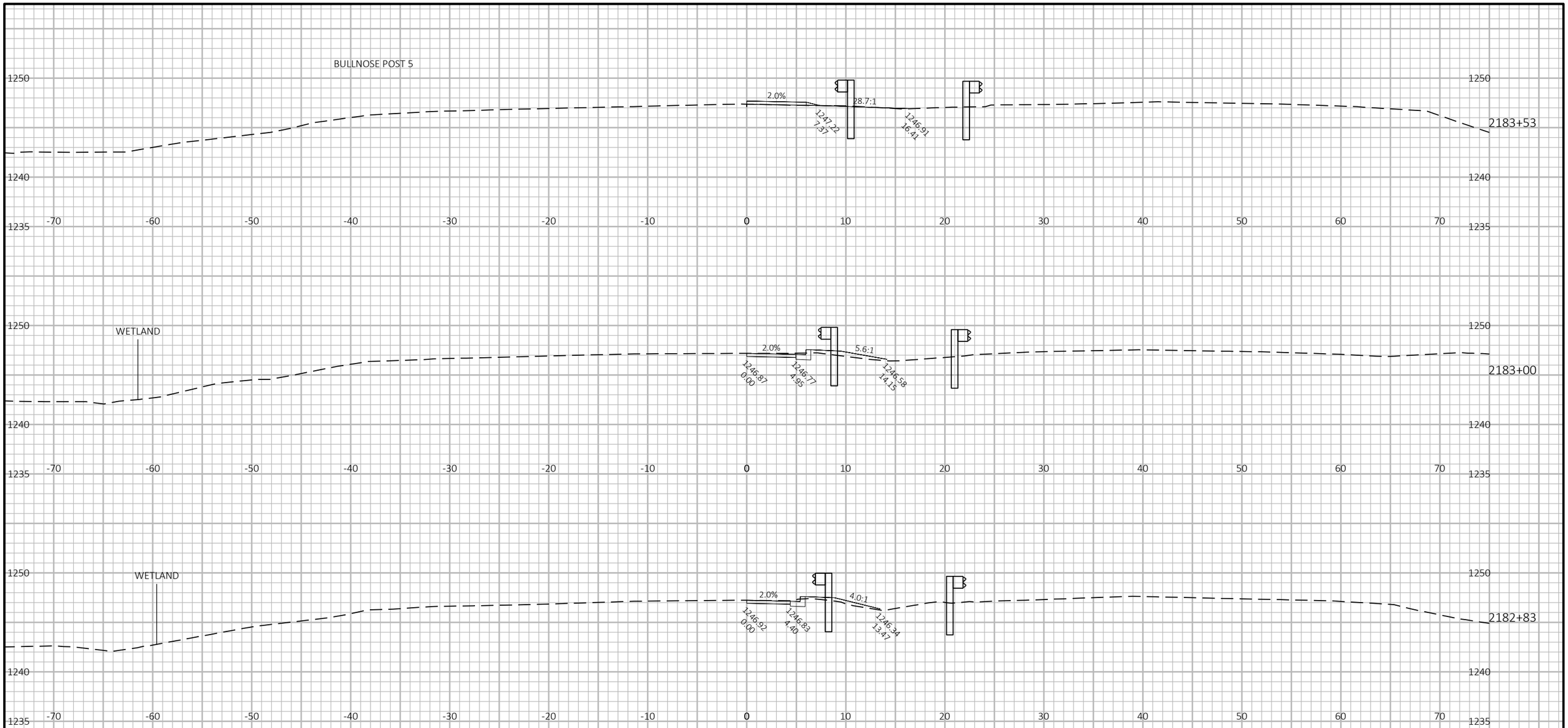
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FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090258_xs_WB

PLOT DATE : 11/18/2025 3:16 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



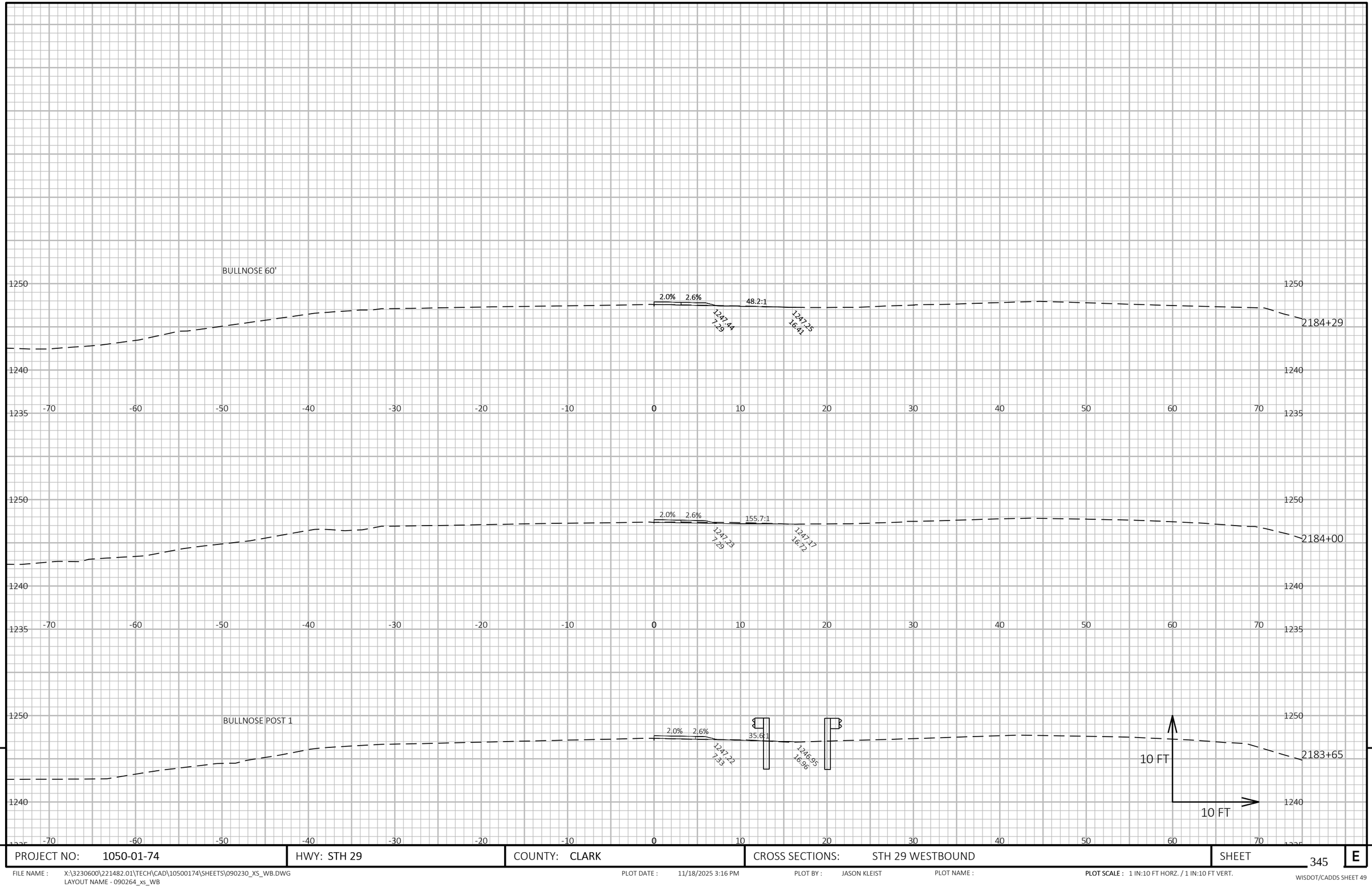
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 344	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090263_xs_WB

PLOT DATE : 11/18/2025 3:16 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 345	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090264_xs_WB

PLOT DATE : 11/18/2025 3:16 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

1300
1290
1280
1270
1265

WETLAND
WETLAND
WETLAND
WETLAND

2.0%
2.7%
8.2:1
1275.67
7.27
1274.47
17.08

2214+00

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

BULLNOSE 210'

2.0%
2.7%
4.0:1
1274.80
7.27
1274.56
8.22

2213+36

10 FT
10 FT

9

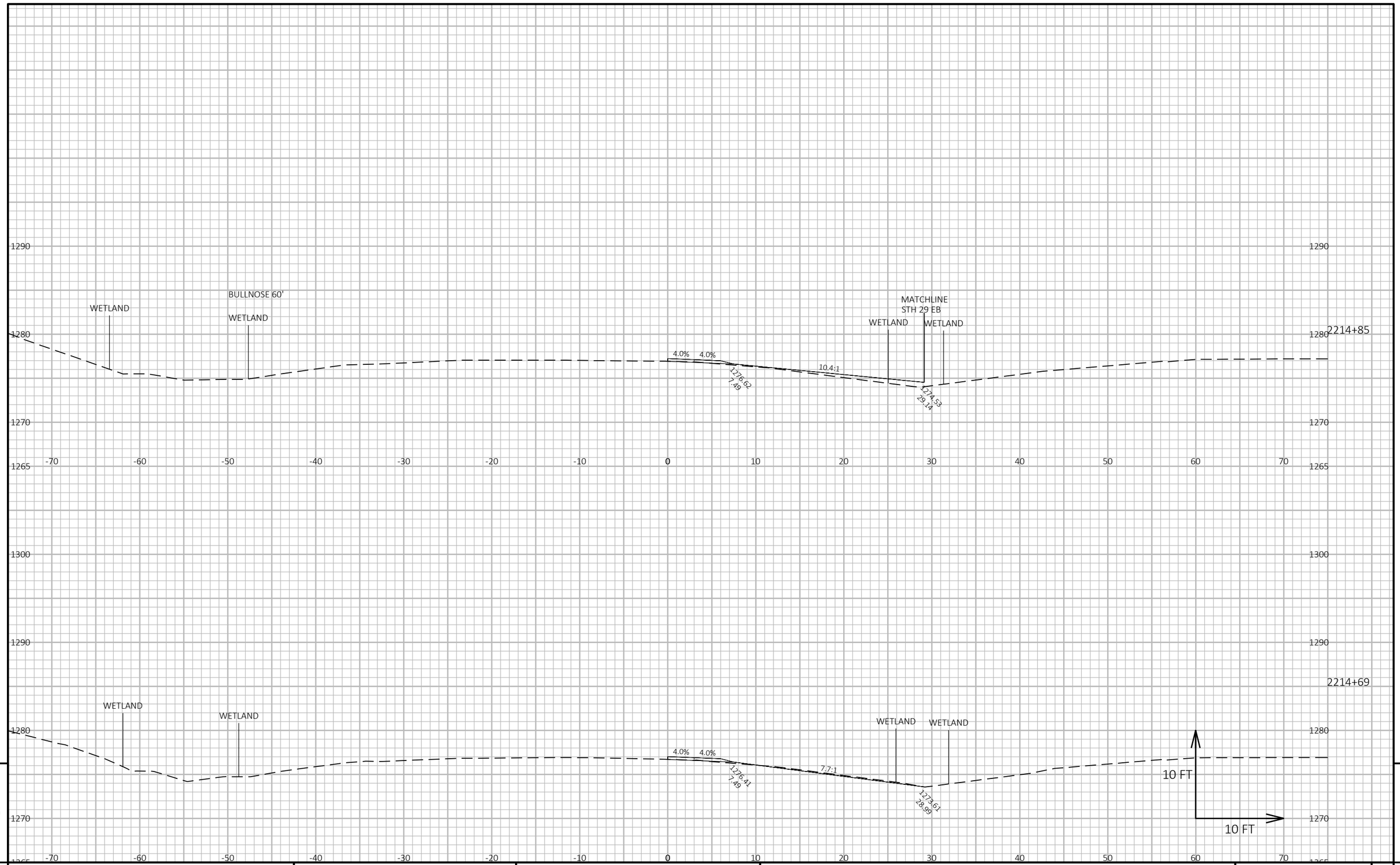
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 346	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090265_xs_WB

PLOT DATE : 11/18/2025 3:16 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

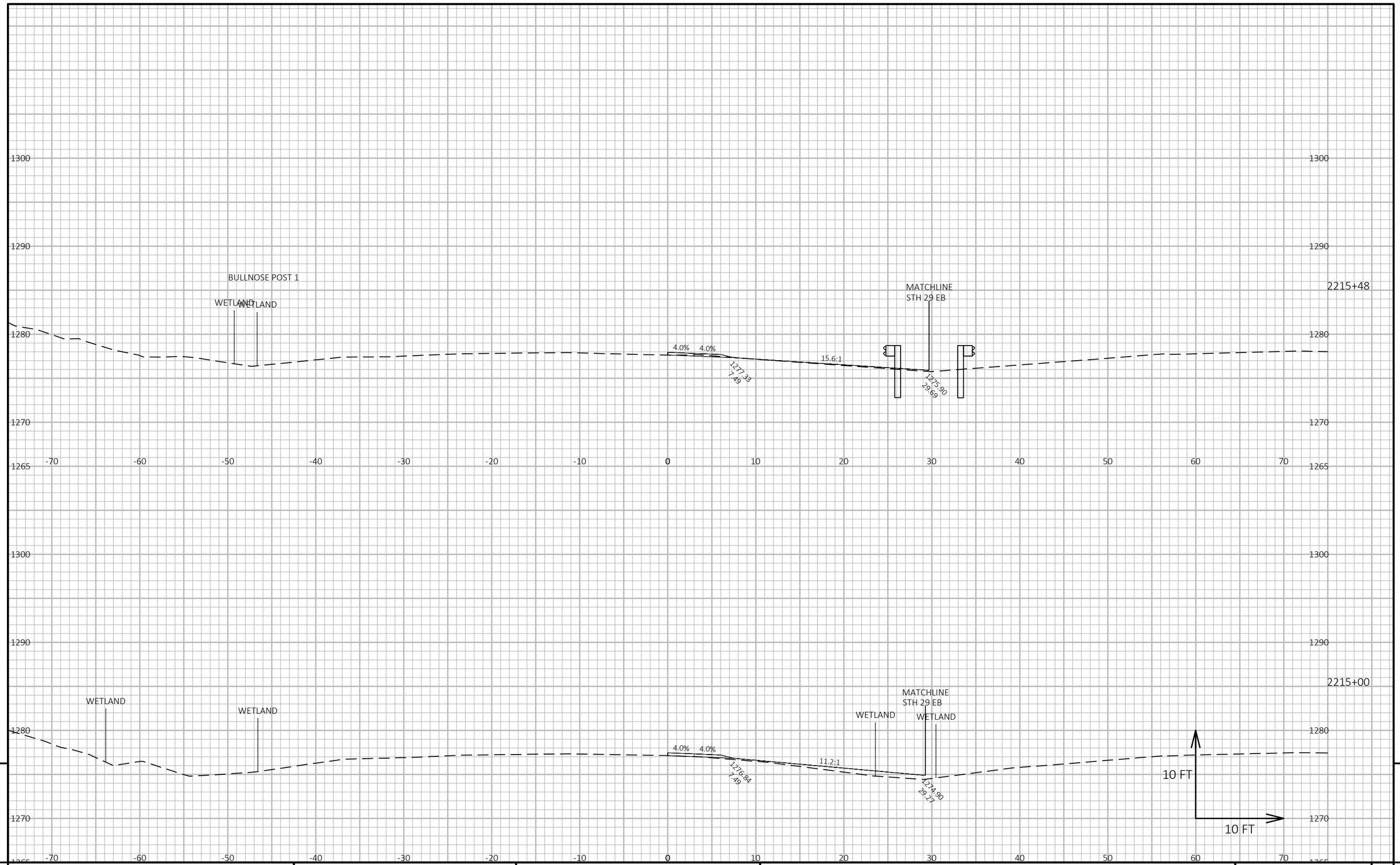
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 347	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090266_xs_WB

PLOT DATE : 11/18/2025 3:16 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

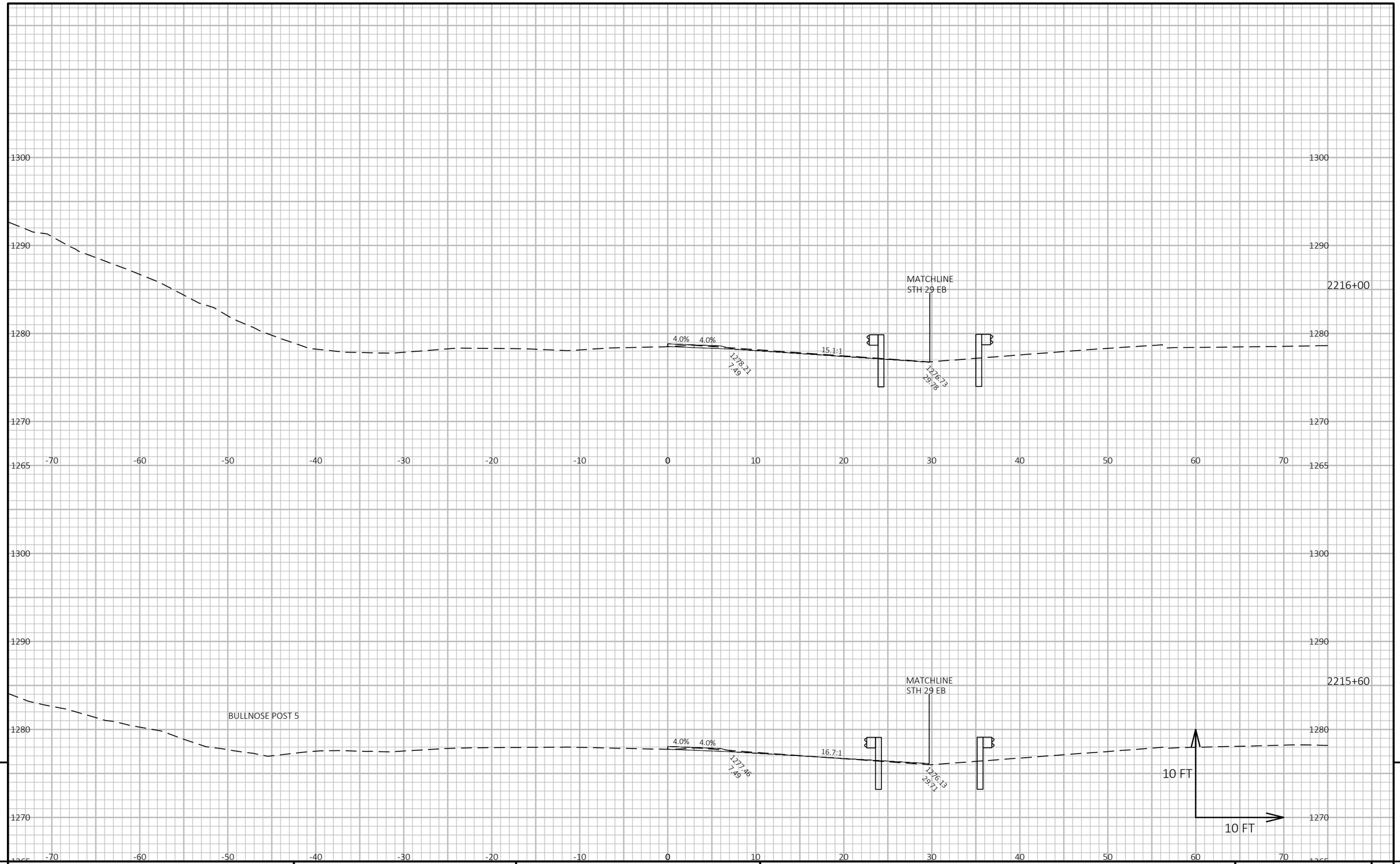
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 348	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090267_xs_WB

PLOT DATE : 11/18/2025 3:16 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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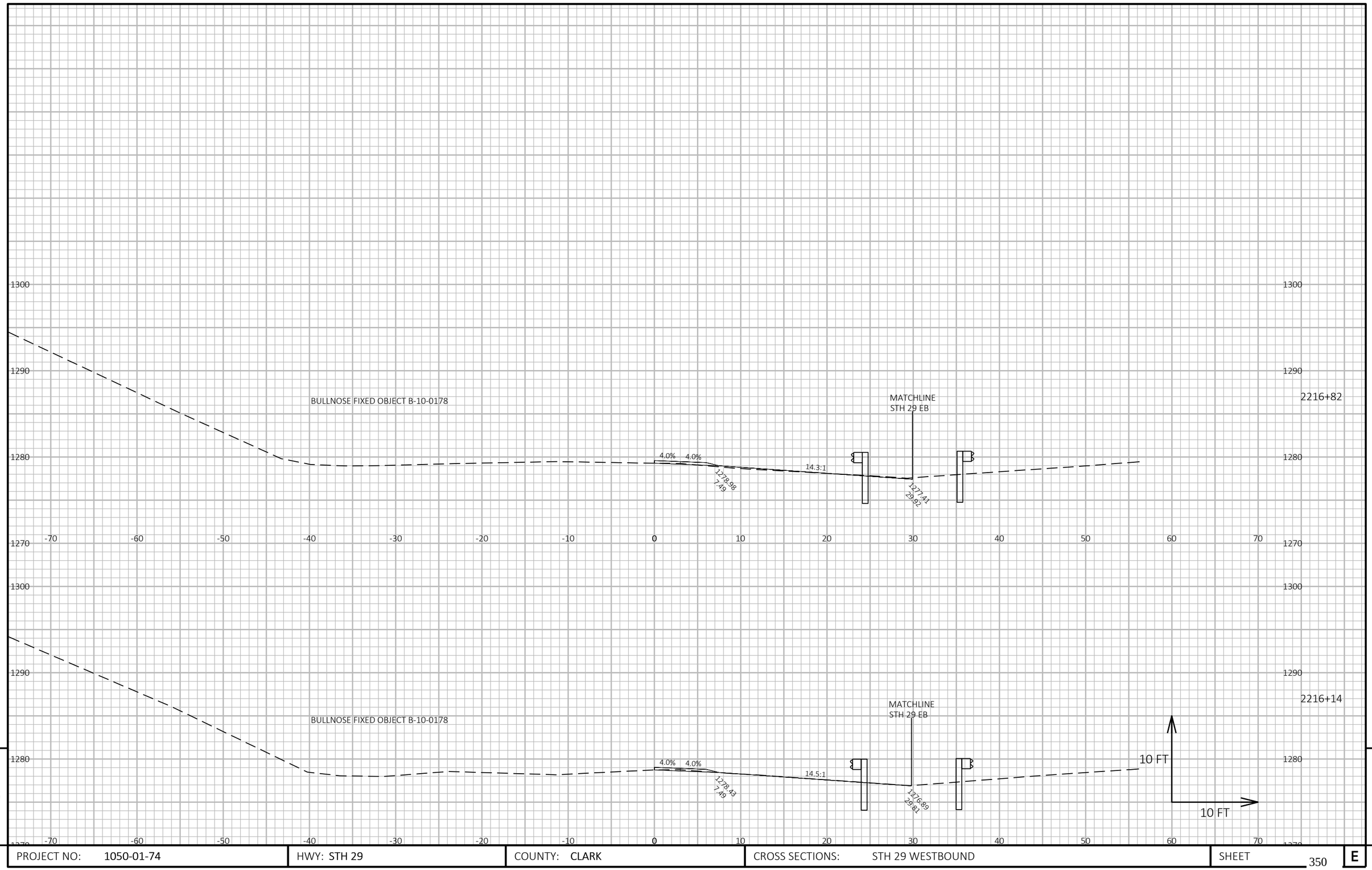
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 349	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090268_xs_WB

PLOT DATE : 11/18/2025 3:16 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

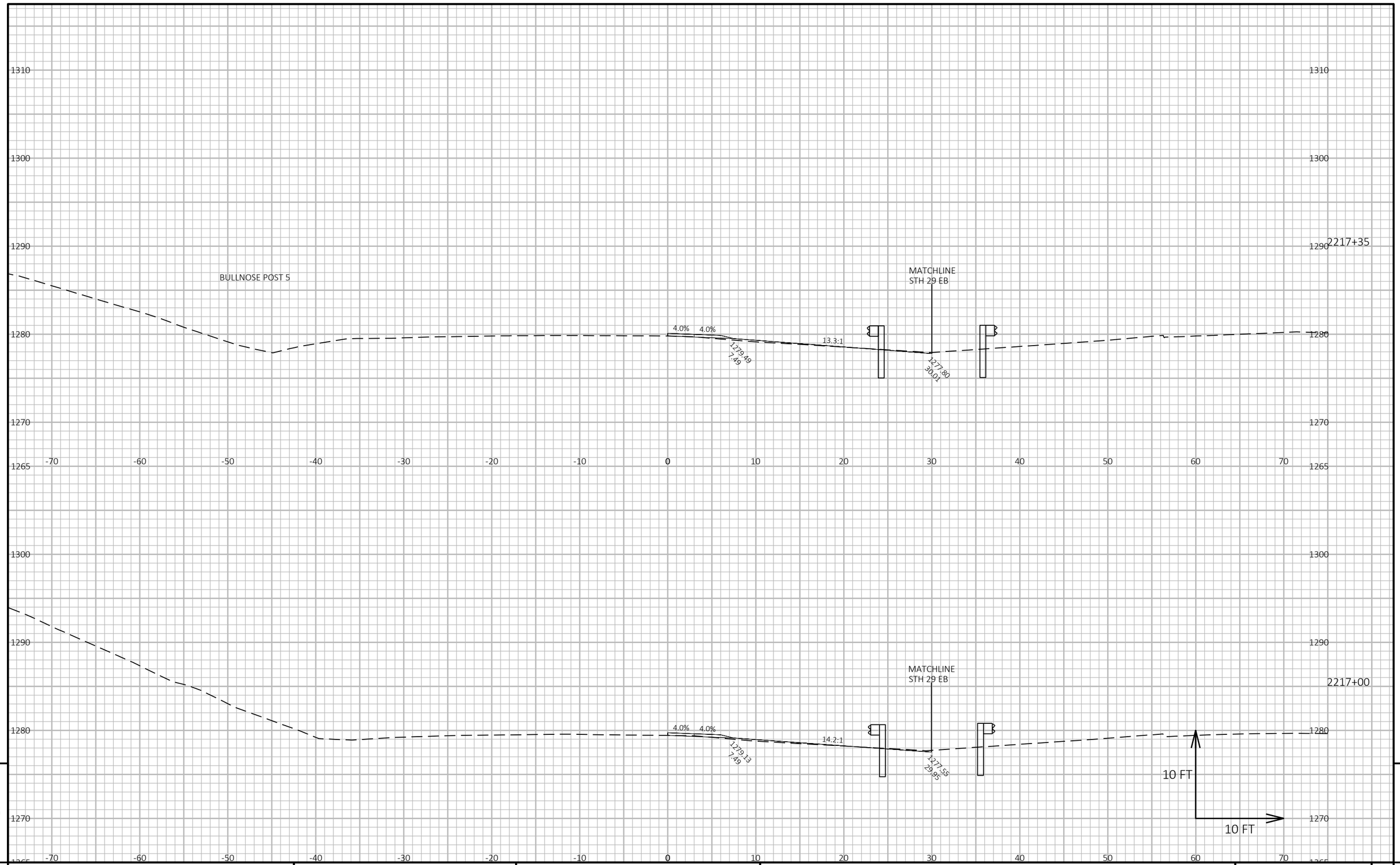
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 350	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090269_xs_WB

PLOT DATE : 11/18/2025 3:16 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 351	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090270_xs_WB

PLOT DATE : 11/18/2025 3:17 PM

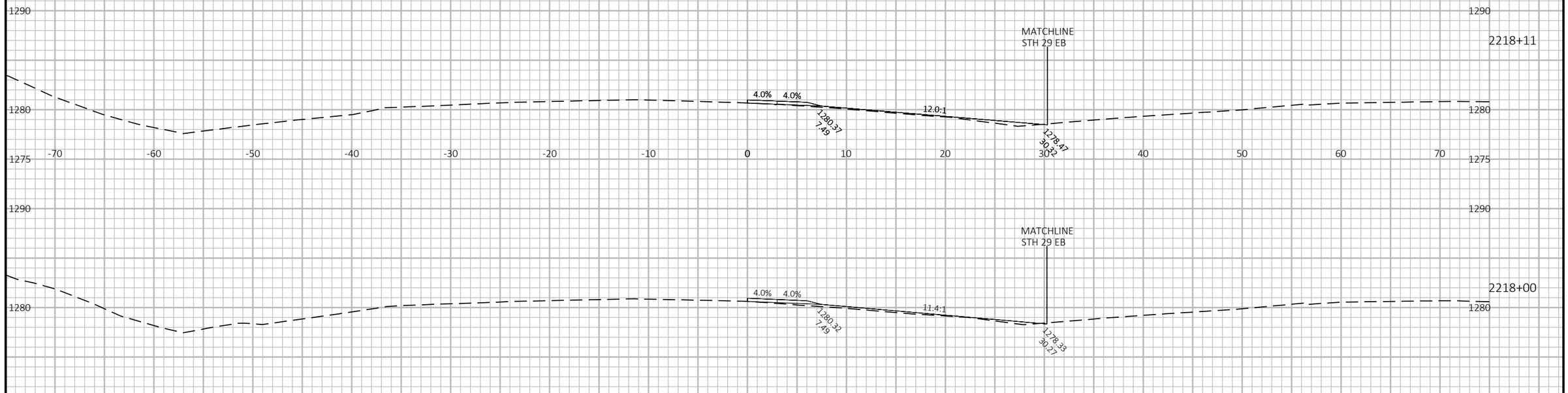
PLOT BY : JASON KLEIST

PLOT NAME :

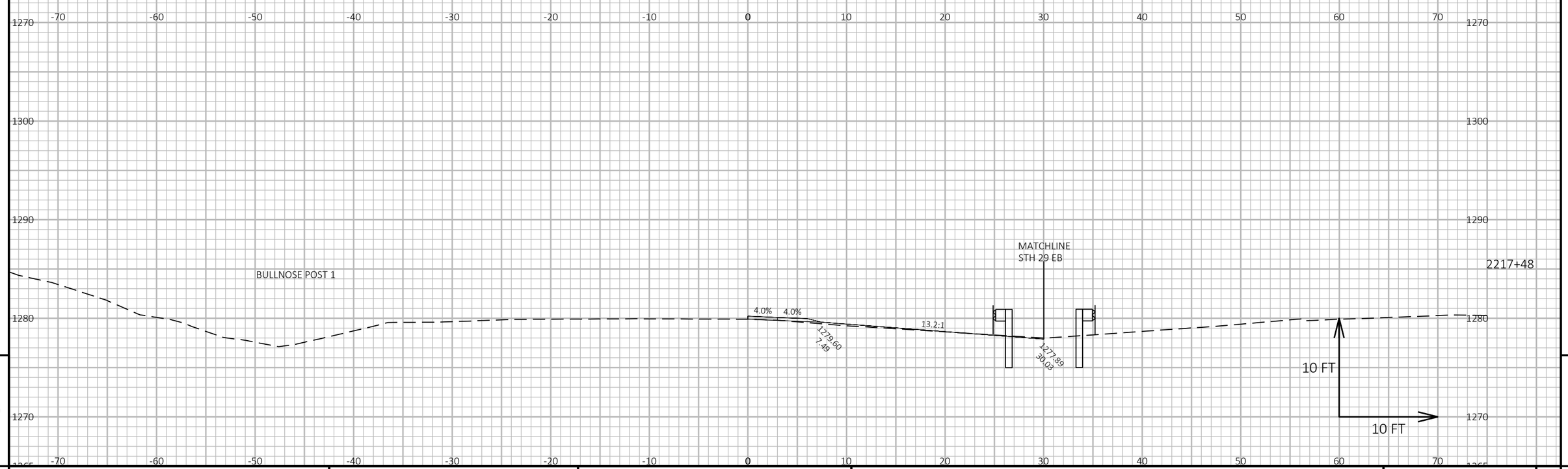
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

BULLNOSE 60'



BULLNOSE POST 1



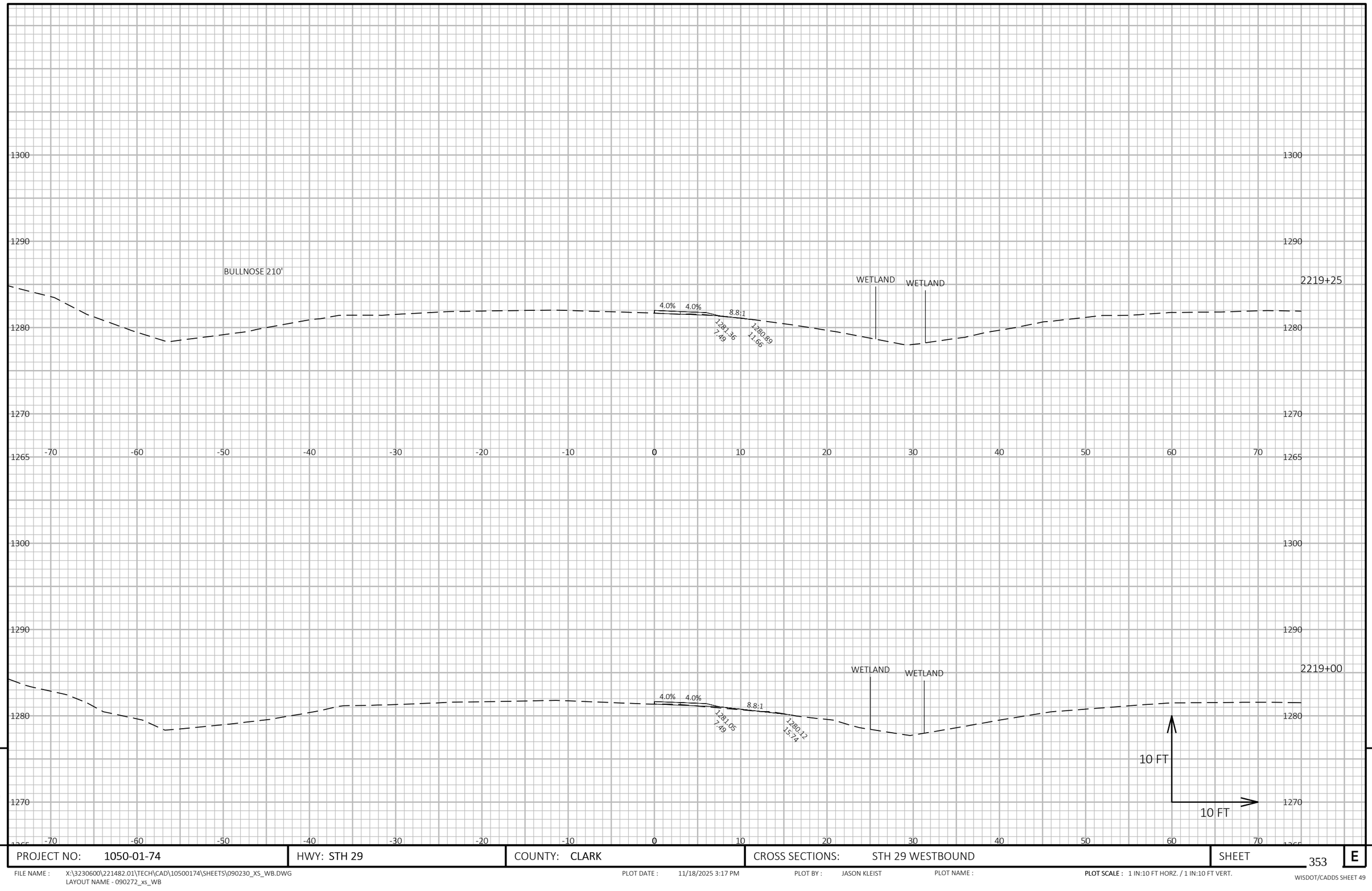
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 352	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090271_xs_WB

PLOT DATE : 11/18/2025 3:17 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

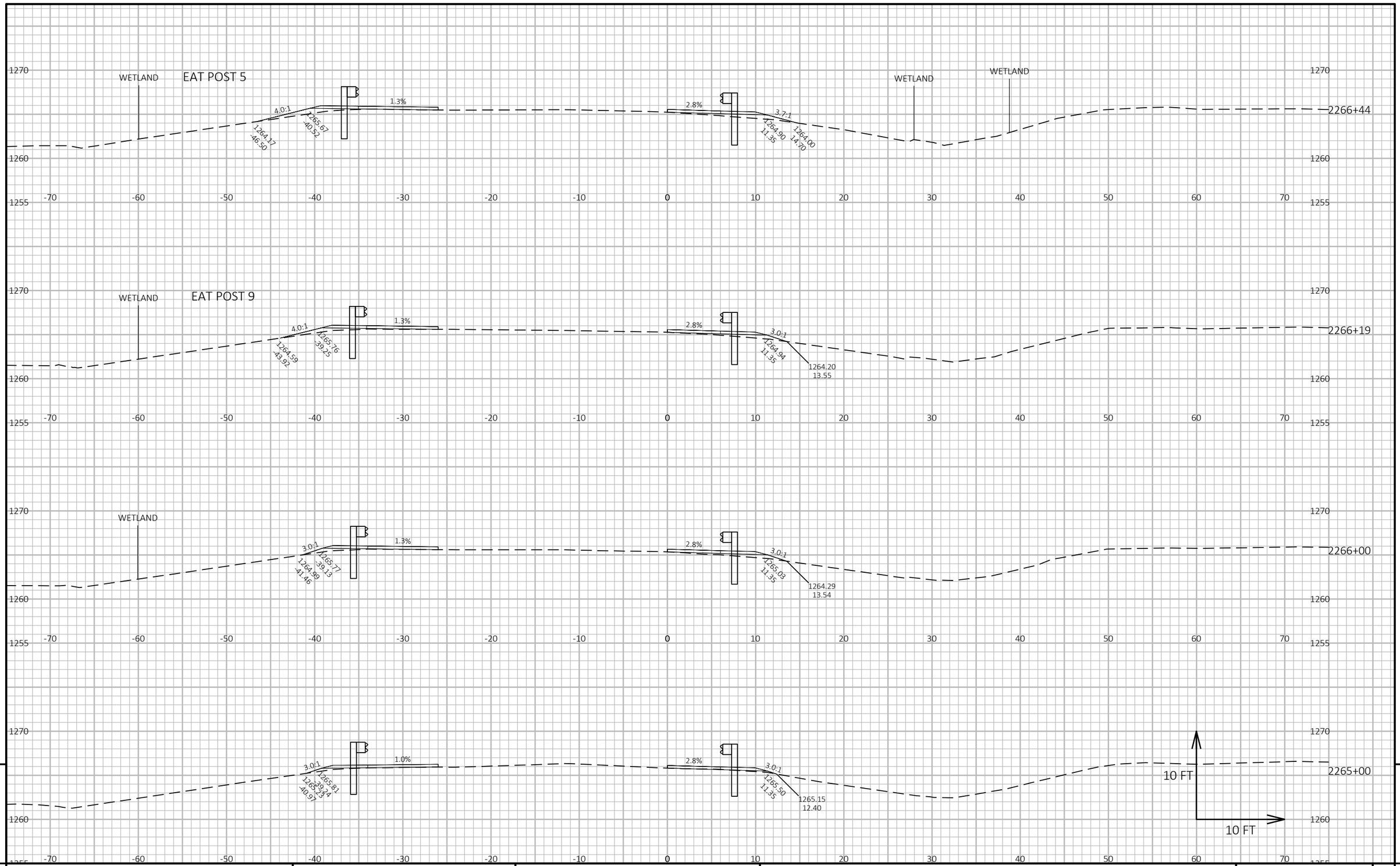
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 353	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090272_xs_WB

PLOT DATE : 11/18/2025 3:17 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



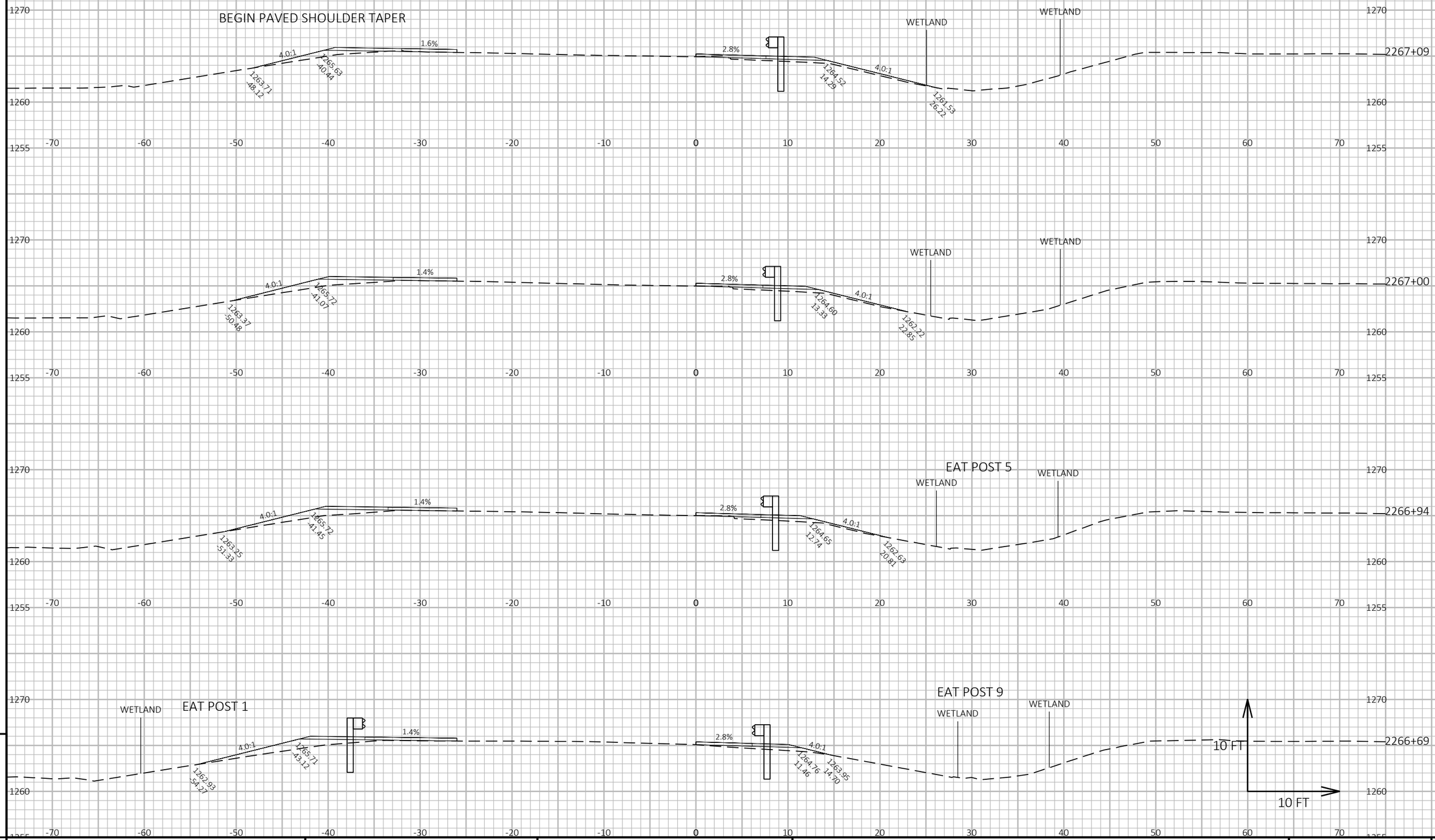
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 354	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090273_xs_WB

PLOT DATE : 11/18/2025 3:17 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

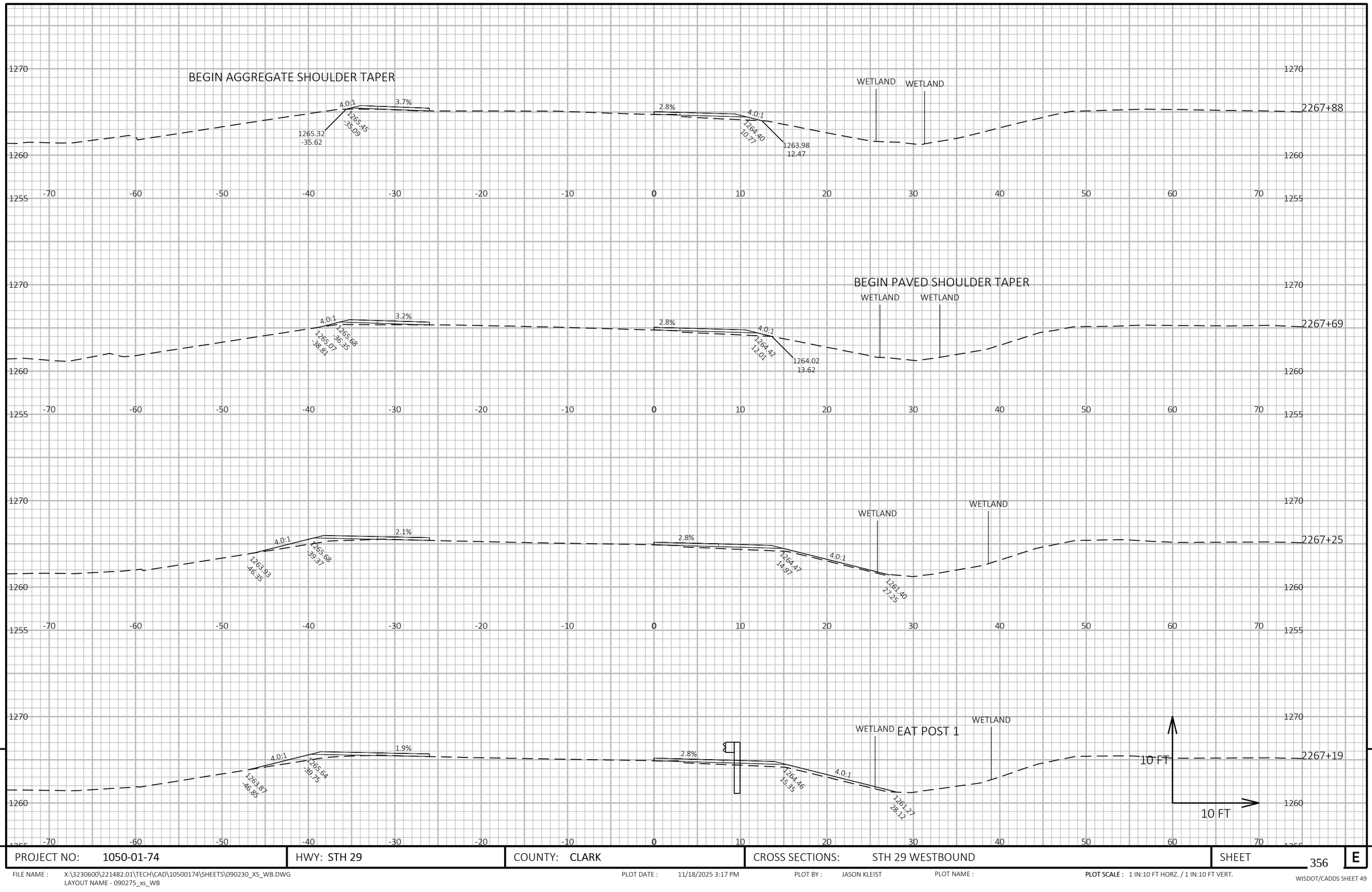
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 355	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090274_xs_WB

PLOT DATE : 11/18/2025 3:17 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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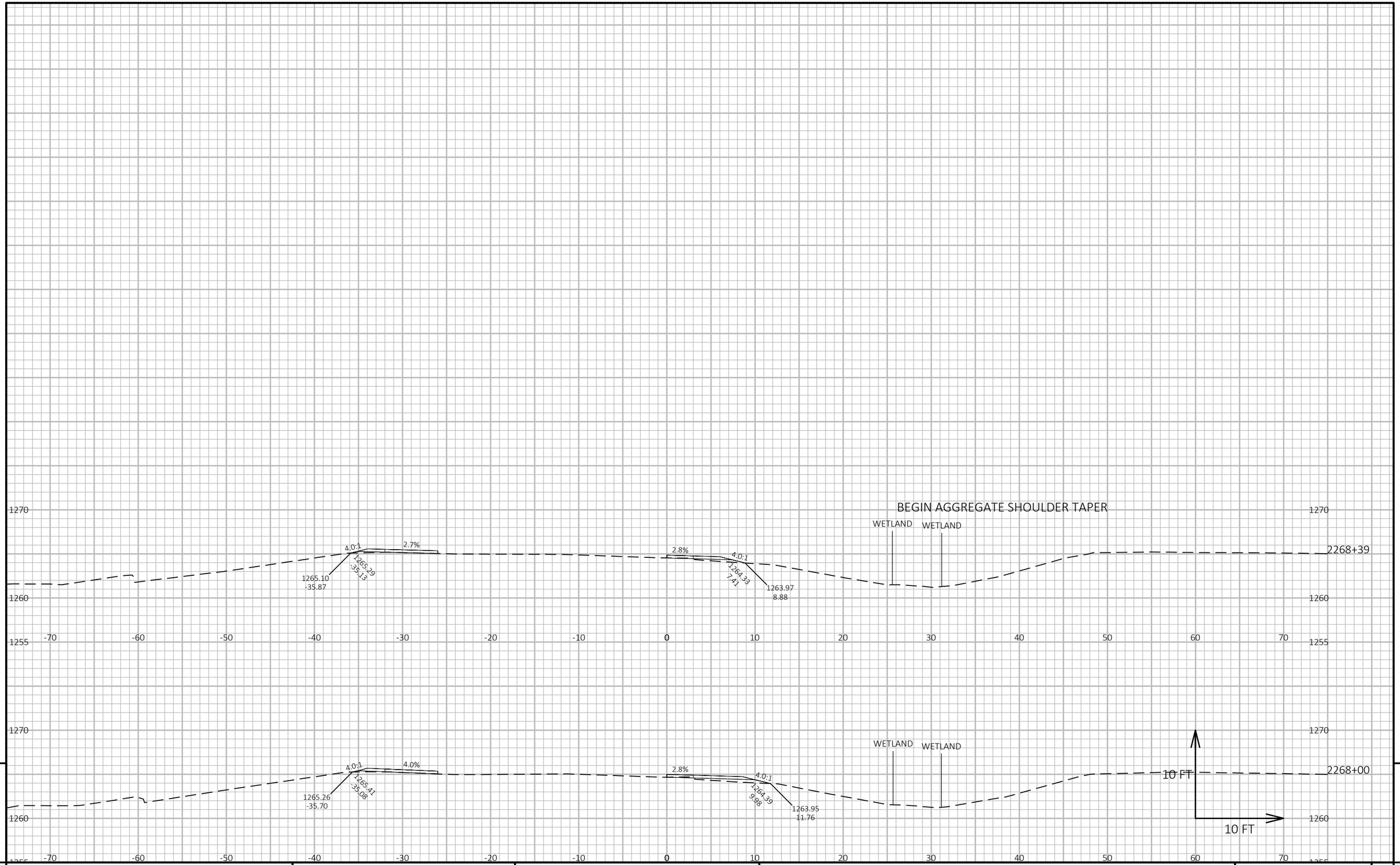
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 356	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090275_xs_WB

PLOT DATE : 11/18/2025 3:17 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

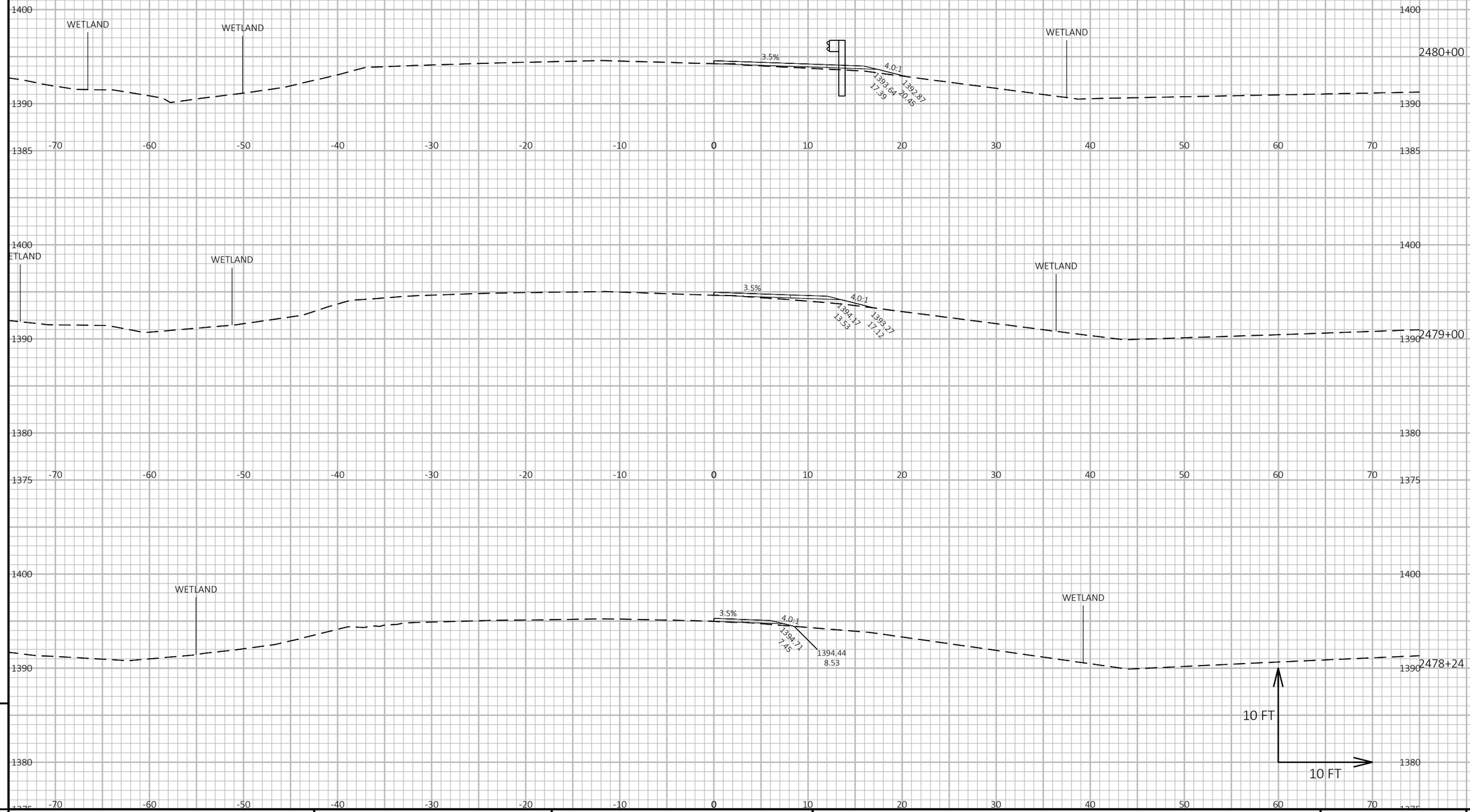
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 357	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090276_xs_WB

PLOT DATE : 11/18/2025 3:17 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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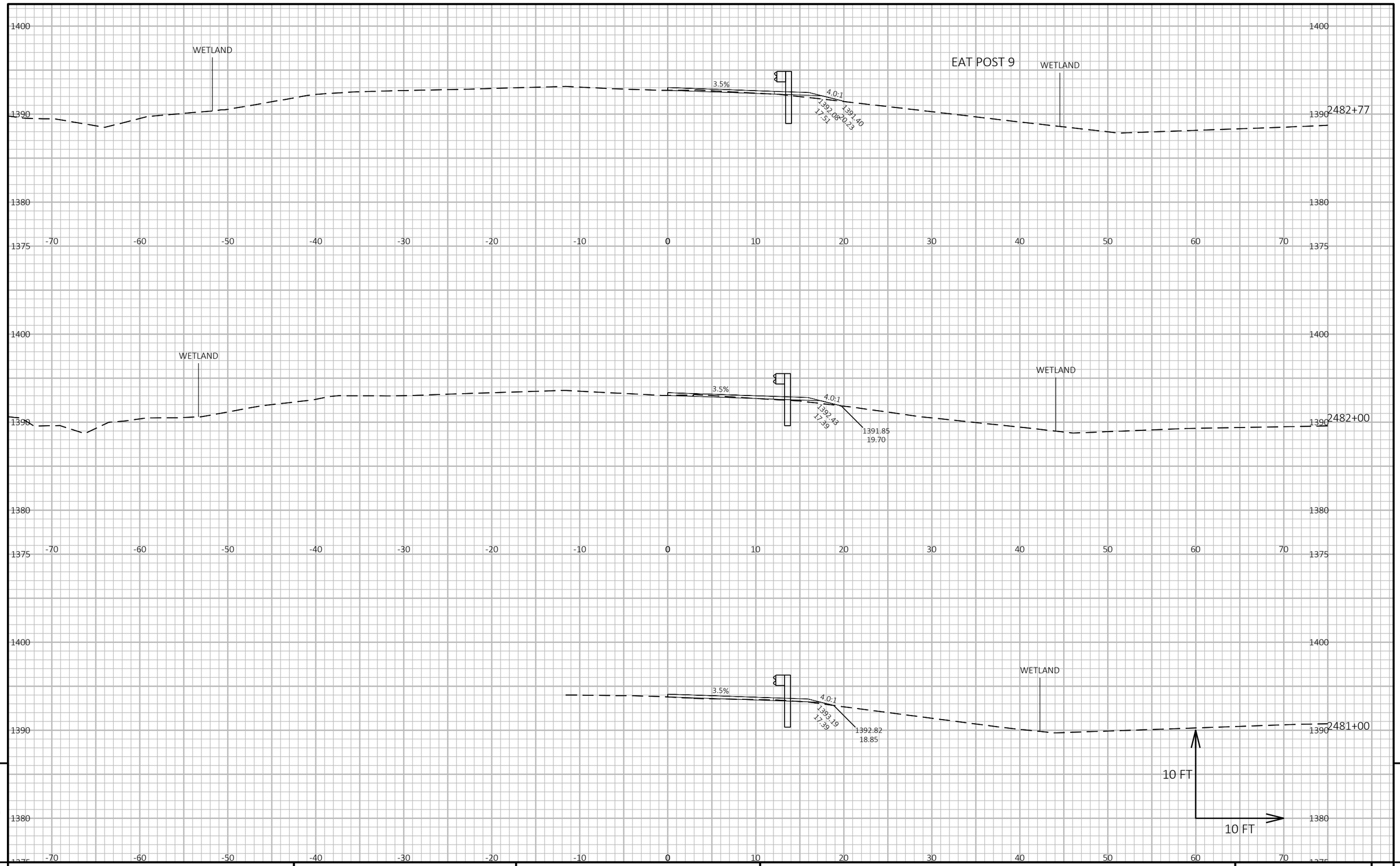
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 358	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090292_xs_WB

PLOT DATE : 11/18/2025 3:17 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



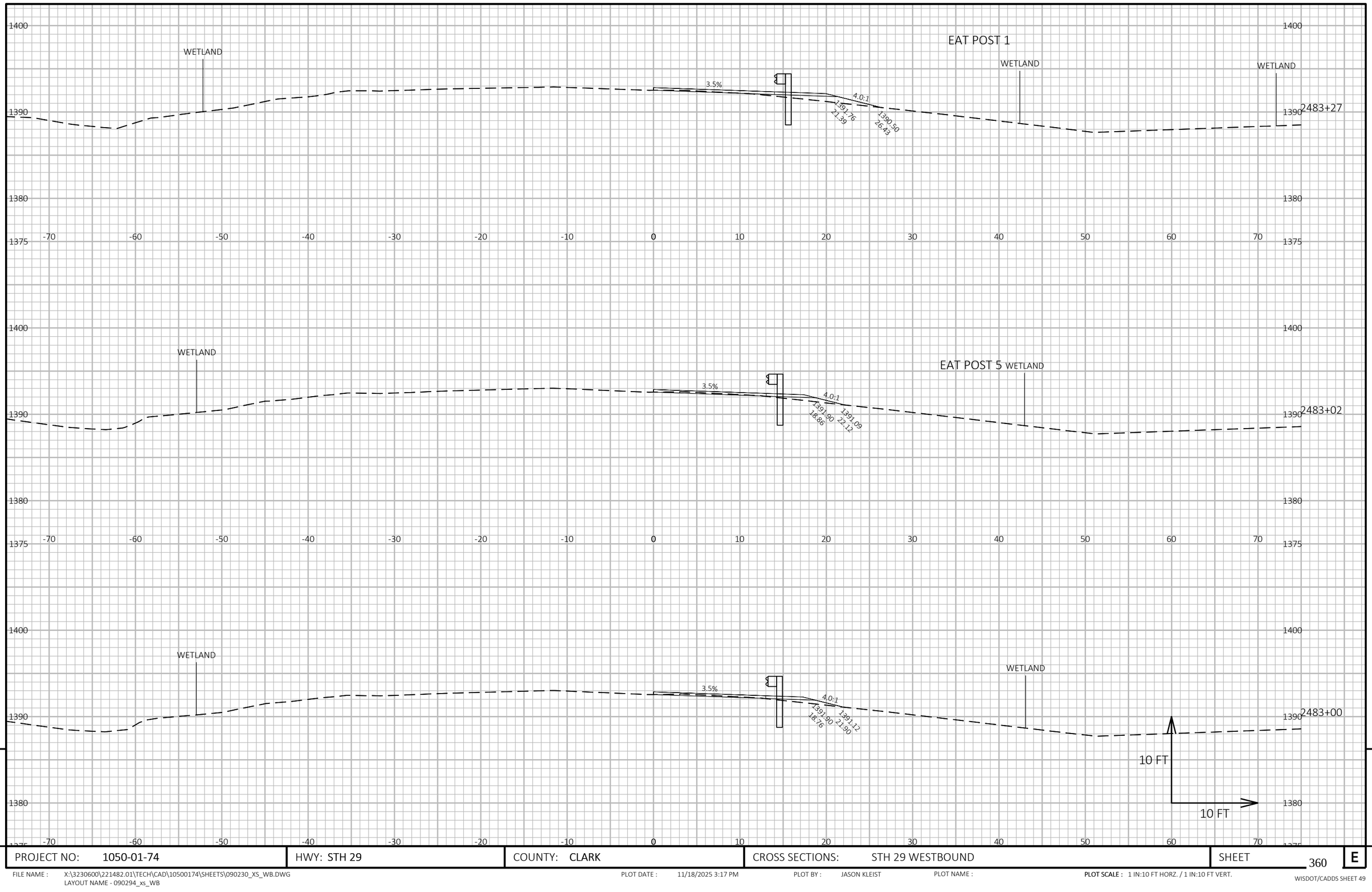
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 359	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090293_xs_WB

PLOT DATE : 11/18/2025 3:17 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

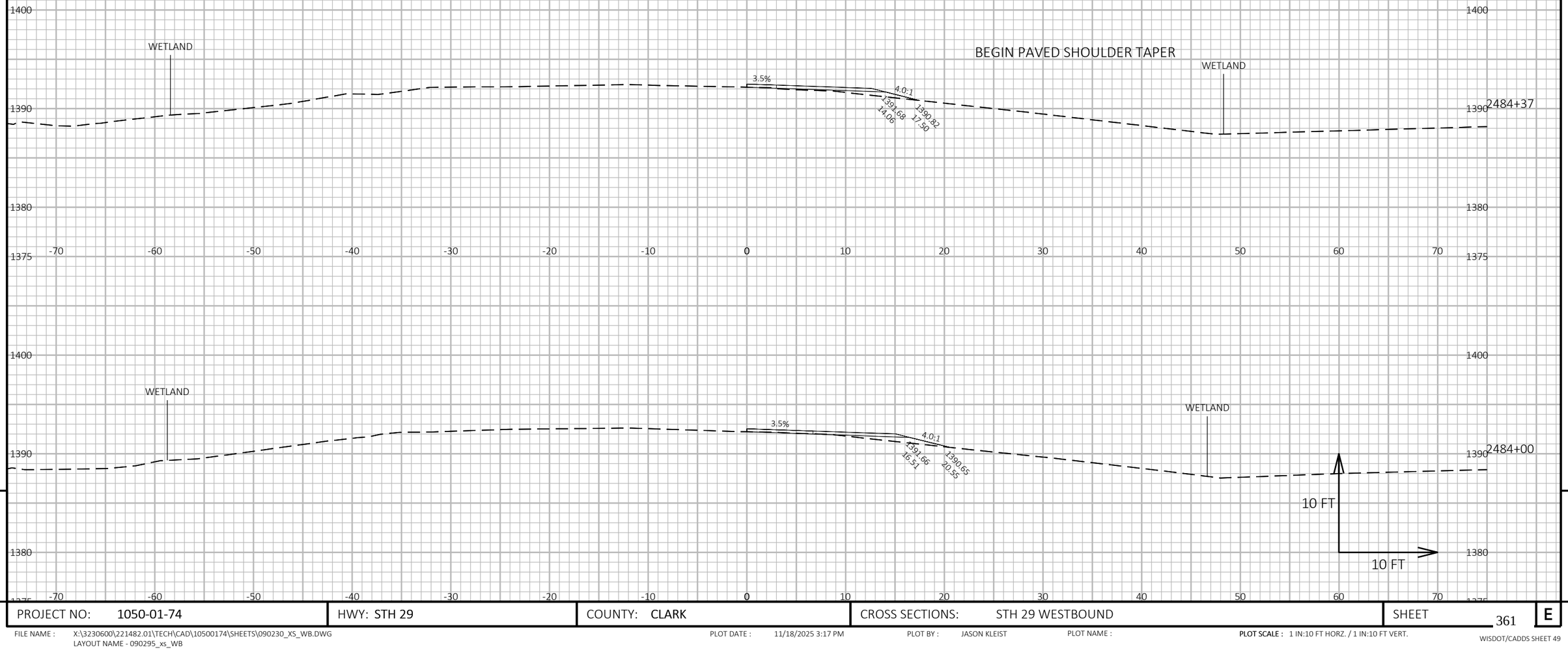


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 360	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090294_xs_WB

PLOT DATE : 11/18/2025 3:17 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

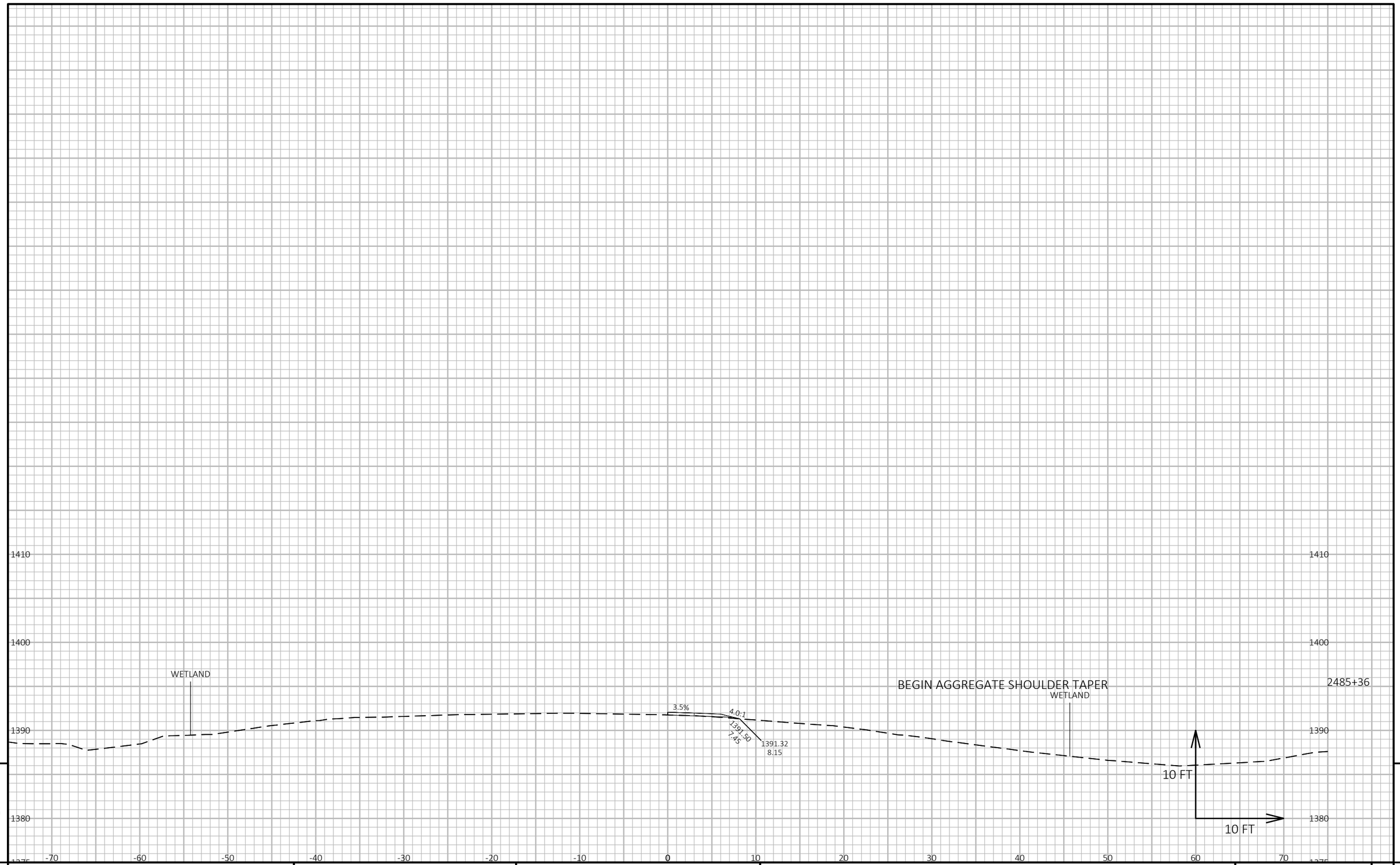


PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 361 E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090295_xs_WB

PLOT DATE : 11/18/2025 3:17 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



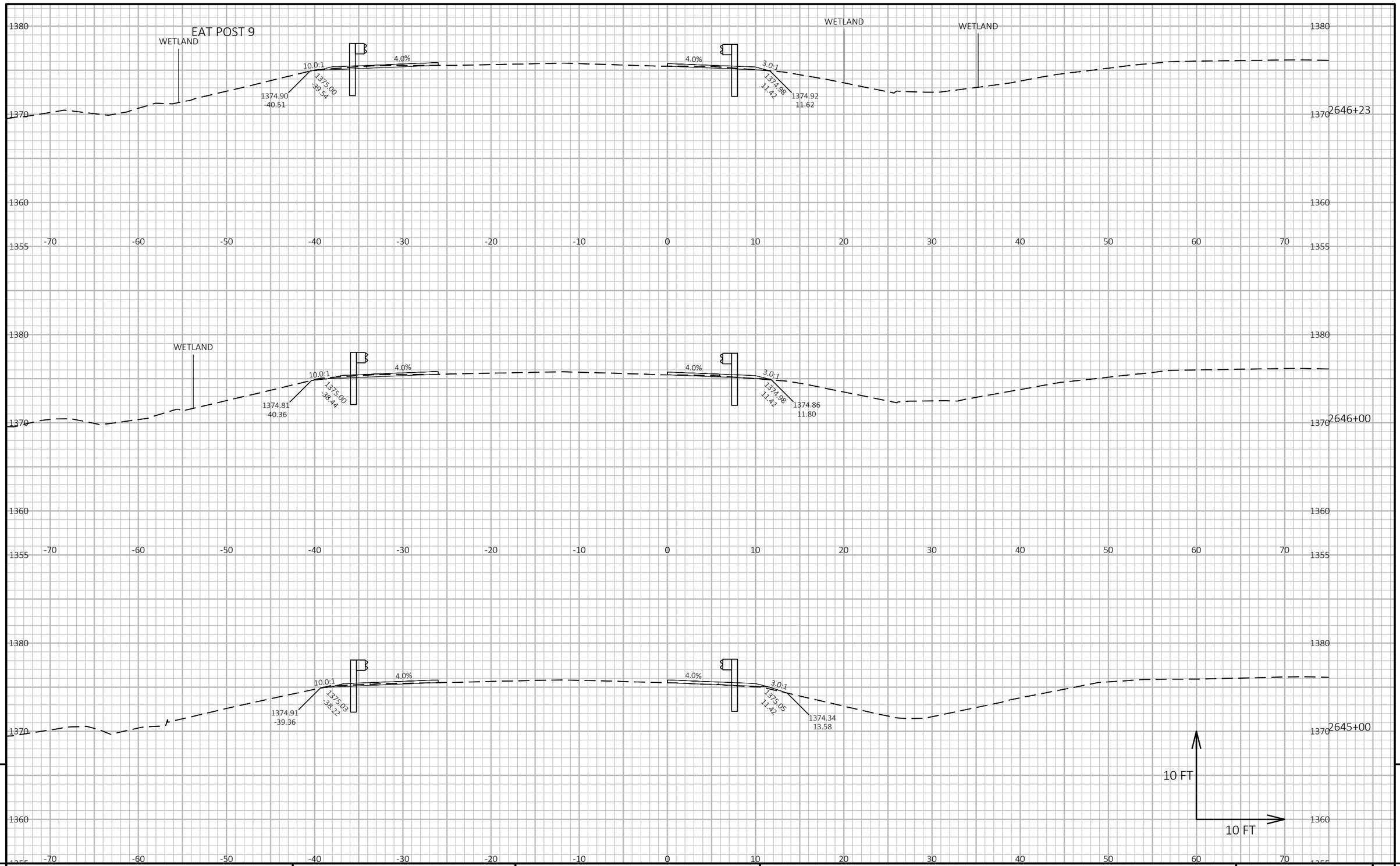
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 362	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090296_xs_WB

PLOT DATE : 11/18/2025 3:17 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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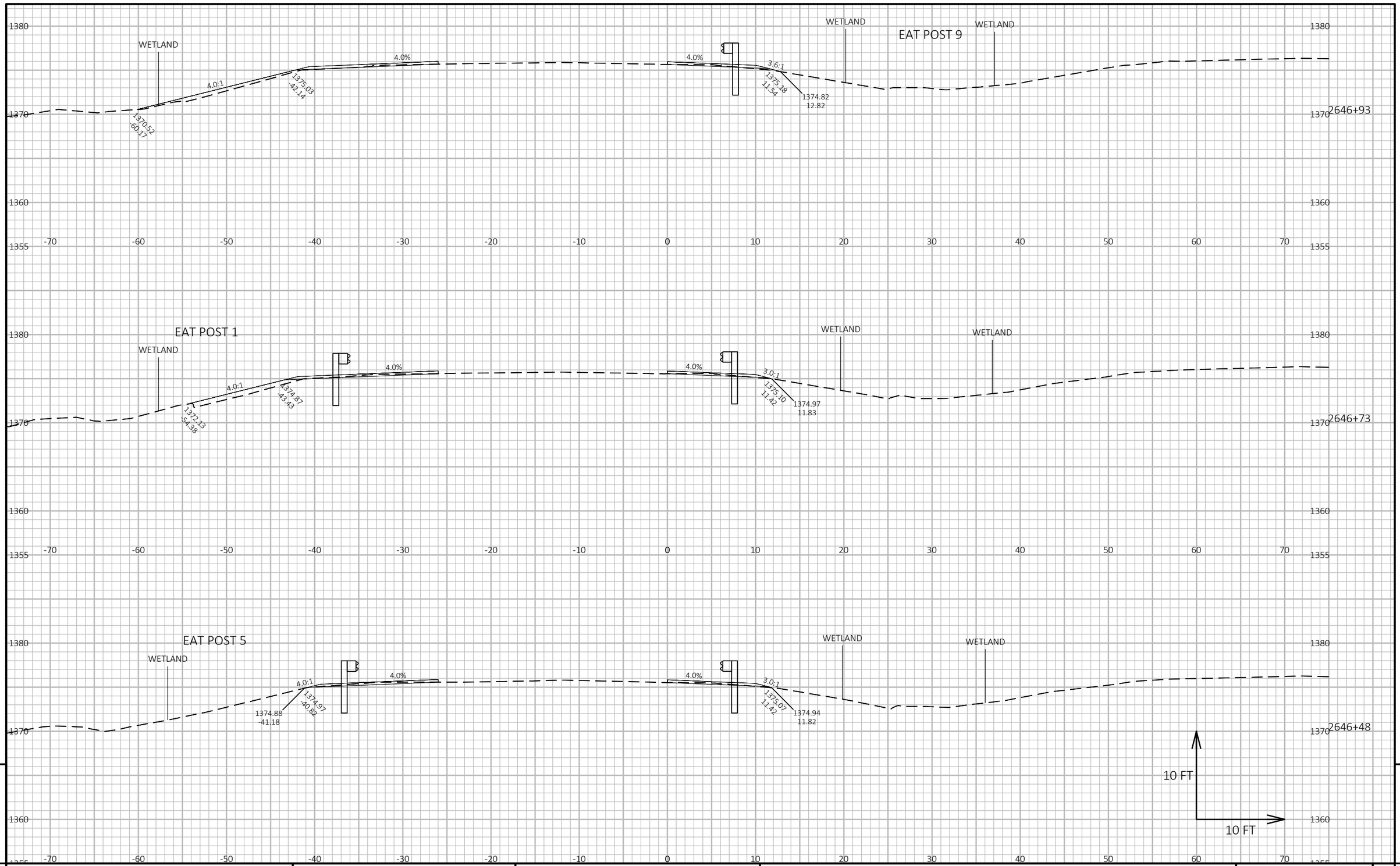
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 363	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090280_xs_WB

PLOT DATE : 11/18/2025 3:18 PM PLOT BY : JASON KLEIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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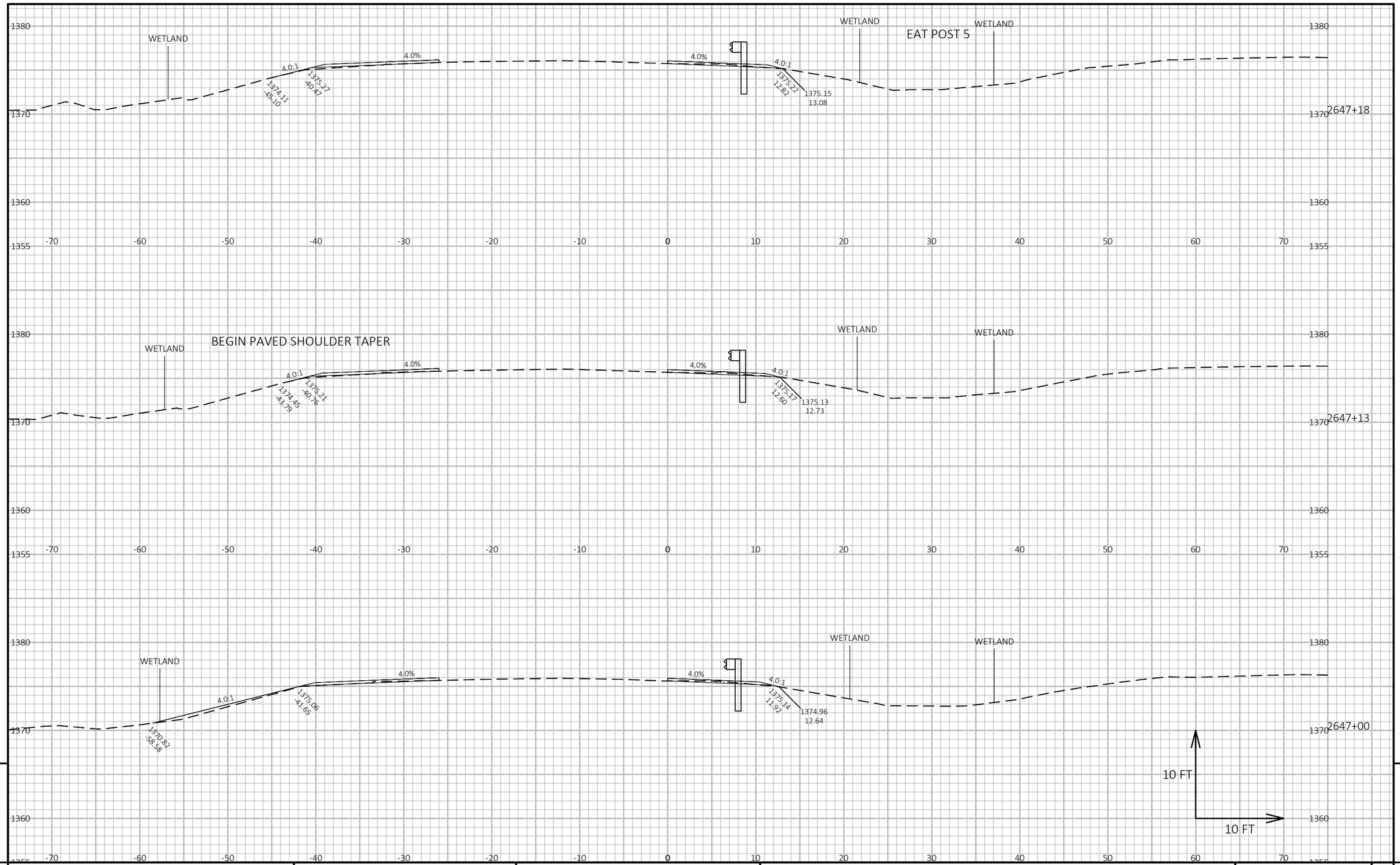
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 364	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090281_xs_WB

PLOT DATE : 11/18/2025 3:18 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



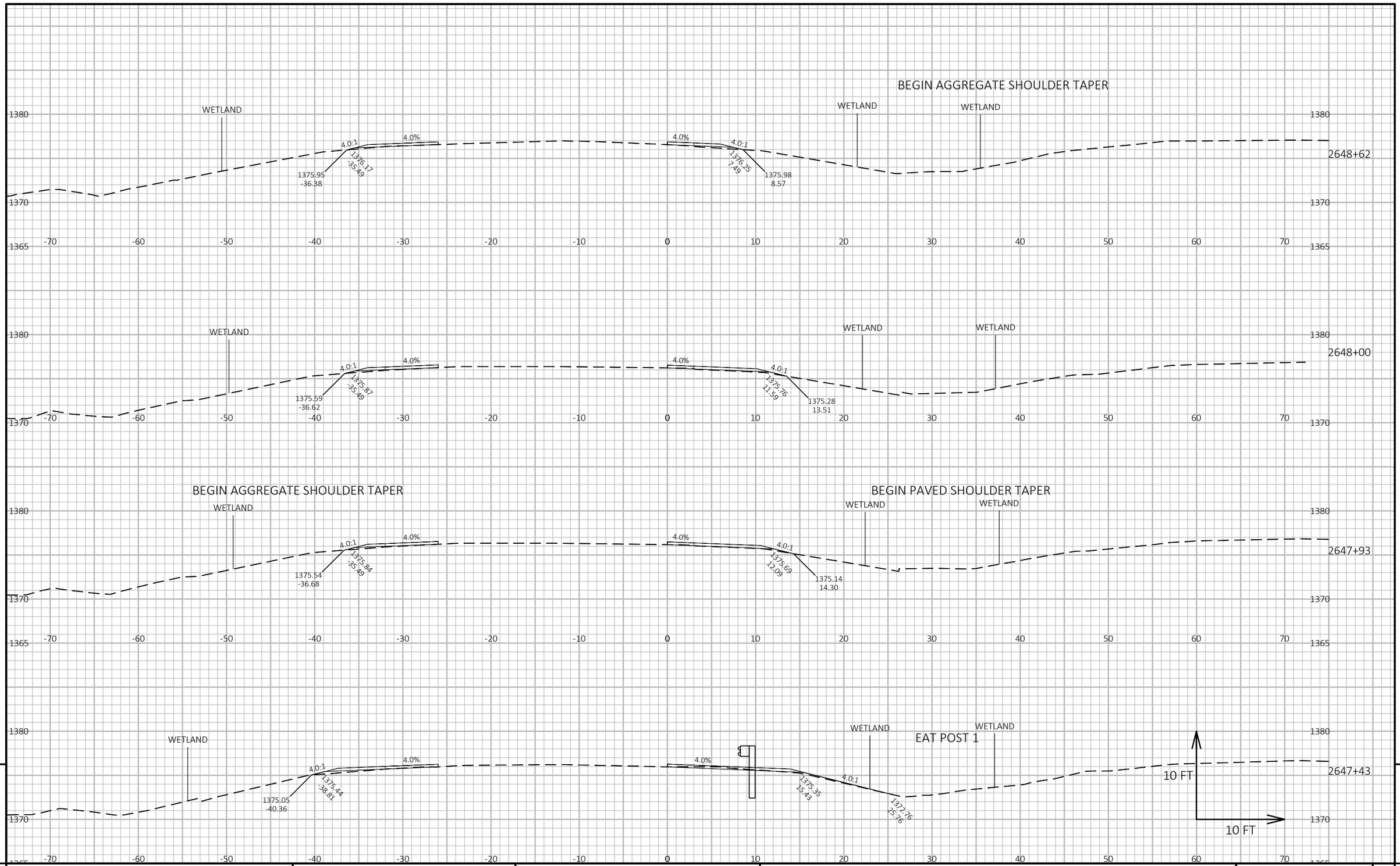
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 365	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090282_xs_WB

PLOT DATE : 11/18/2025 3:18 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

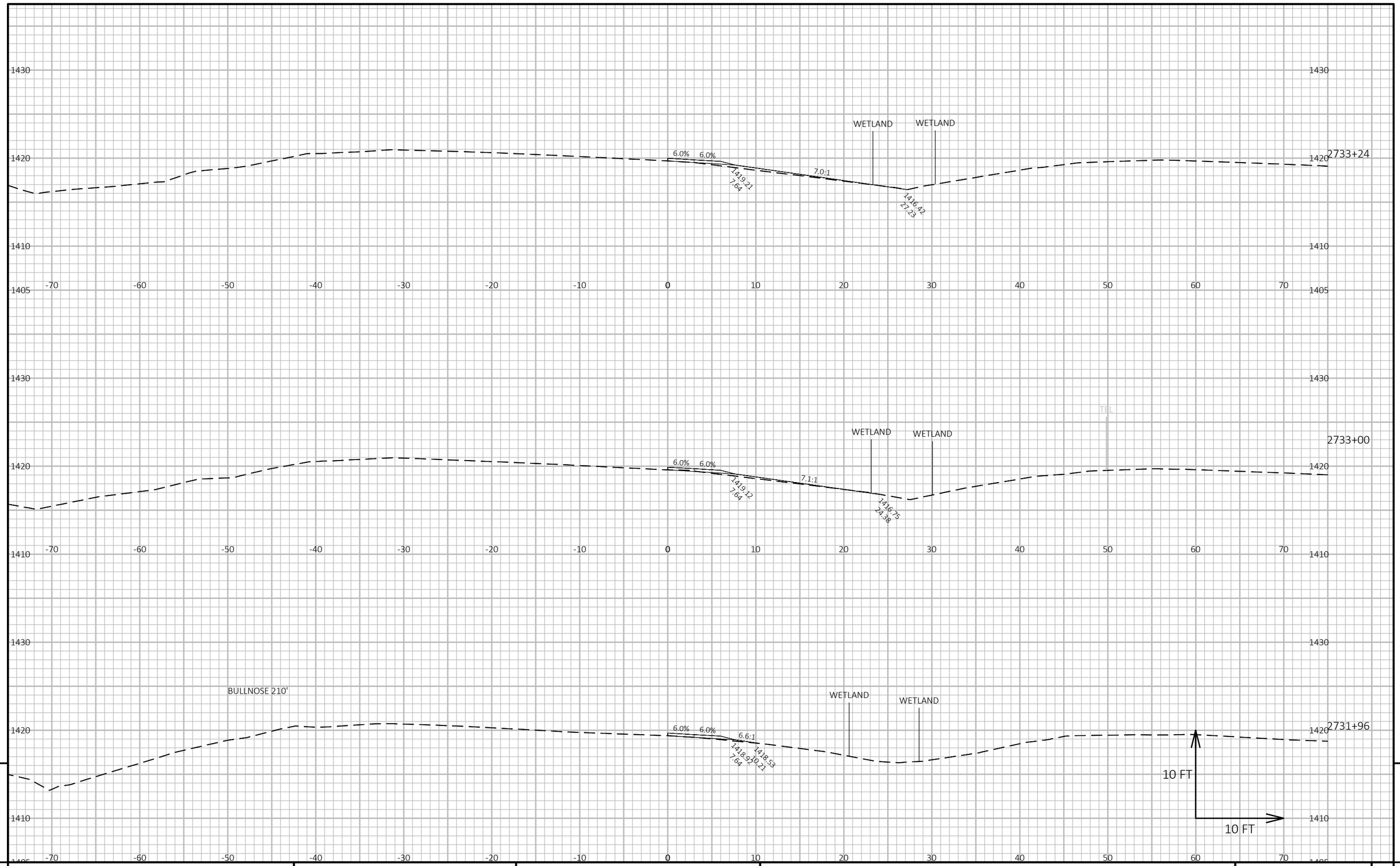
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 366	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090283_xs_WB

PLOT DATE : 11/18/2025 3:18 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 367	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090284_xs_WB

PLOT DATE : 11/18/2025 3:18 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

1450
1440
1430
1420
1410
1405

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

2734+00

6.0% 6.0%
1419.27
7.64
15.2:1
GAS
WETLAND
MATCHLINE
STH 29 EB
WETLAND
1417.91
28.41

BULLNOSE 60'

2733+46

6.0% 6.0%
1419.23
7.64
13.2:1
WETLAND
MATCHLINE
STH 29 EB
WETLAND
1417.70
27.72

10 FT
10 FT

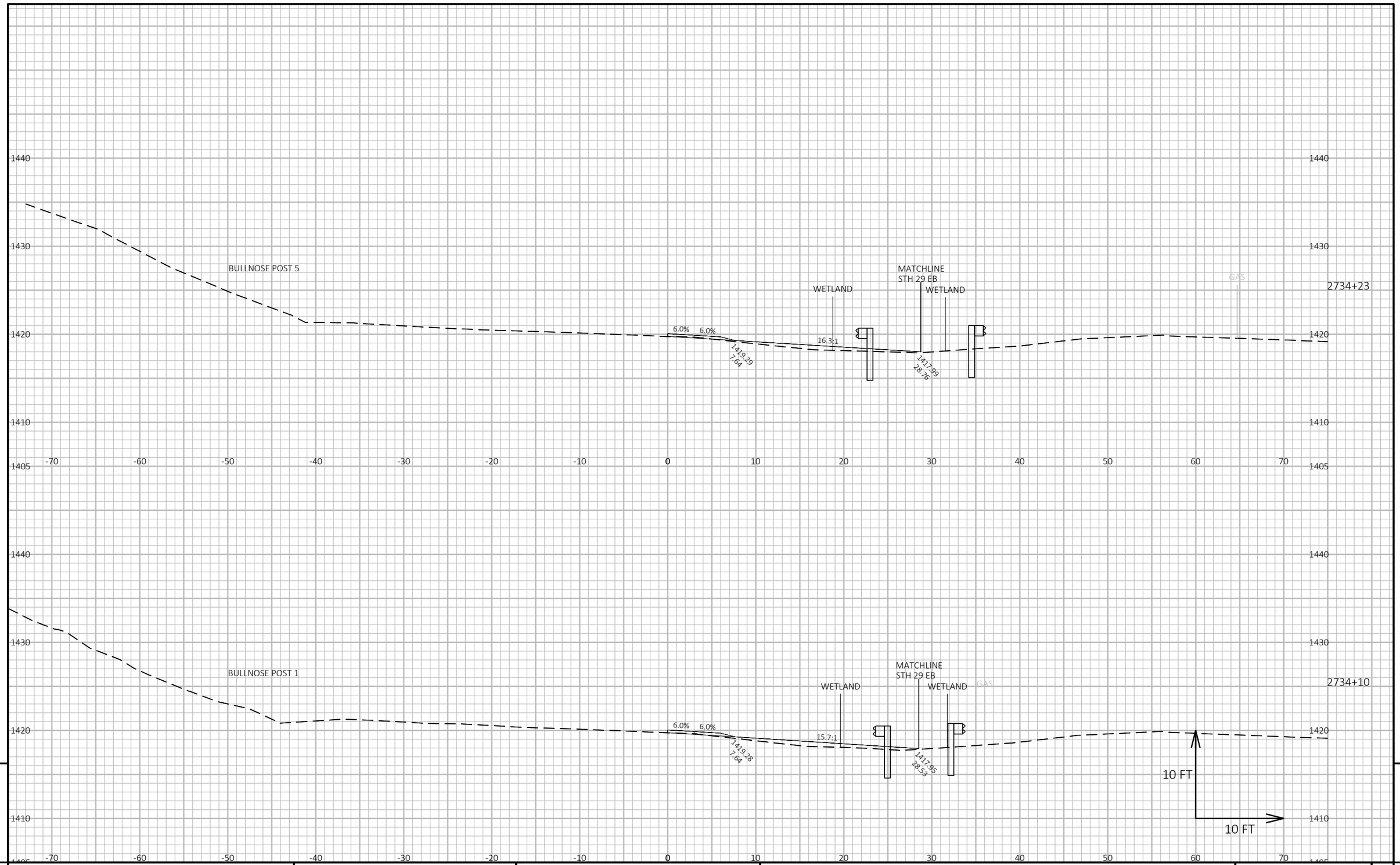
9 9

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 368	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090285_xs_WB

PLOT DATE : 11/18/2025 3:18 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 369	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090286_xs_WB

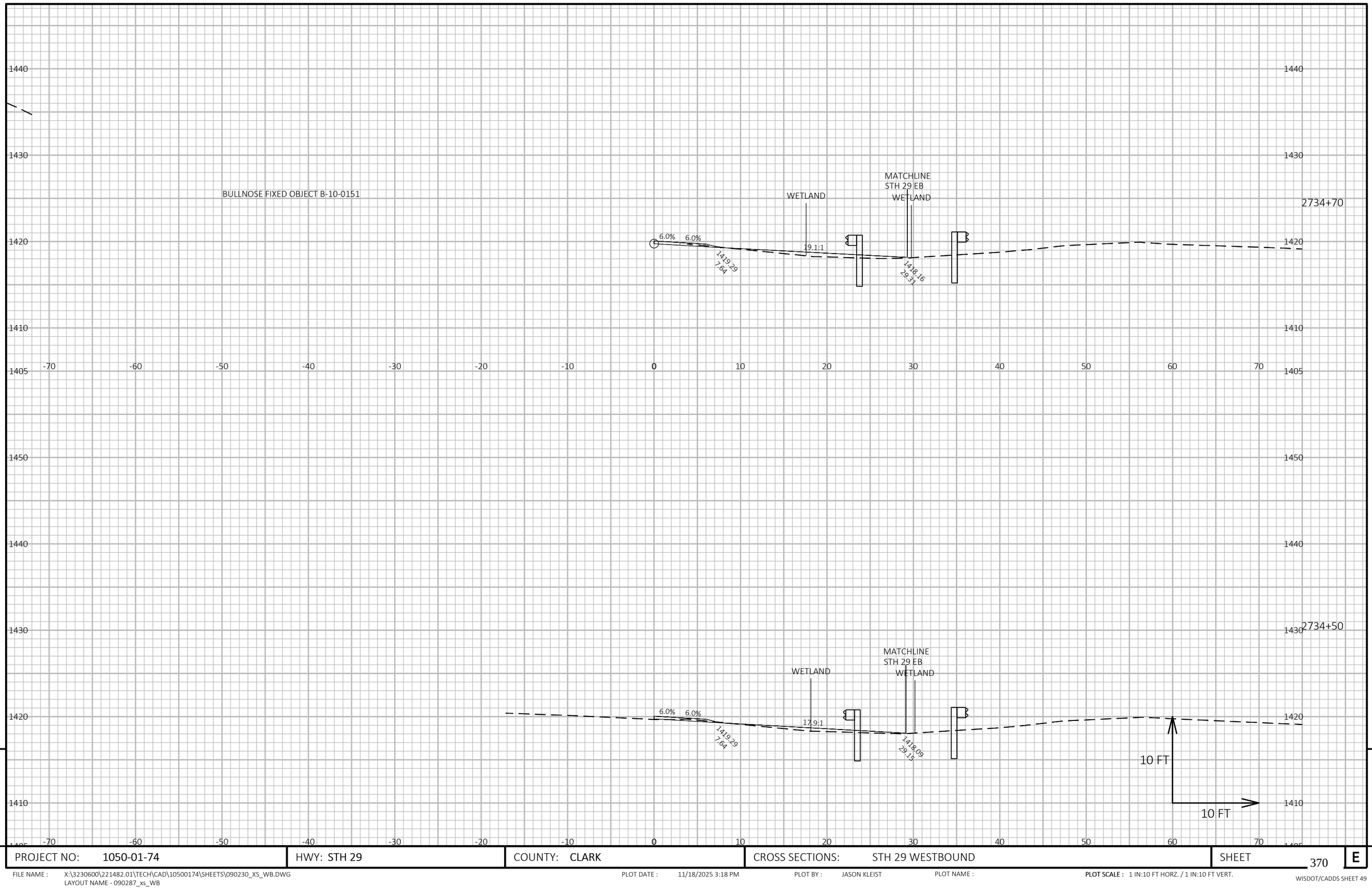
PLOT DATE : 11/18/2025 3:18 PM

PLOT BY : JASON KLEIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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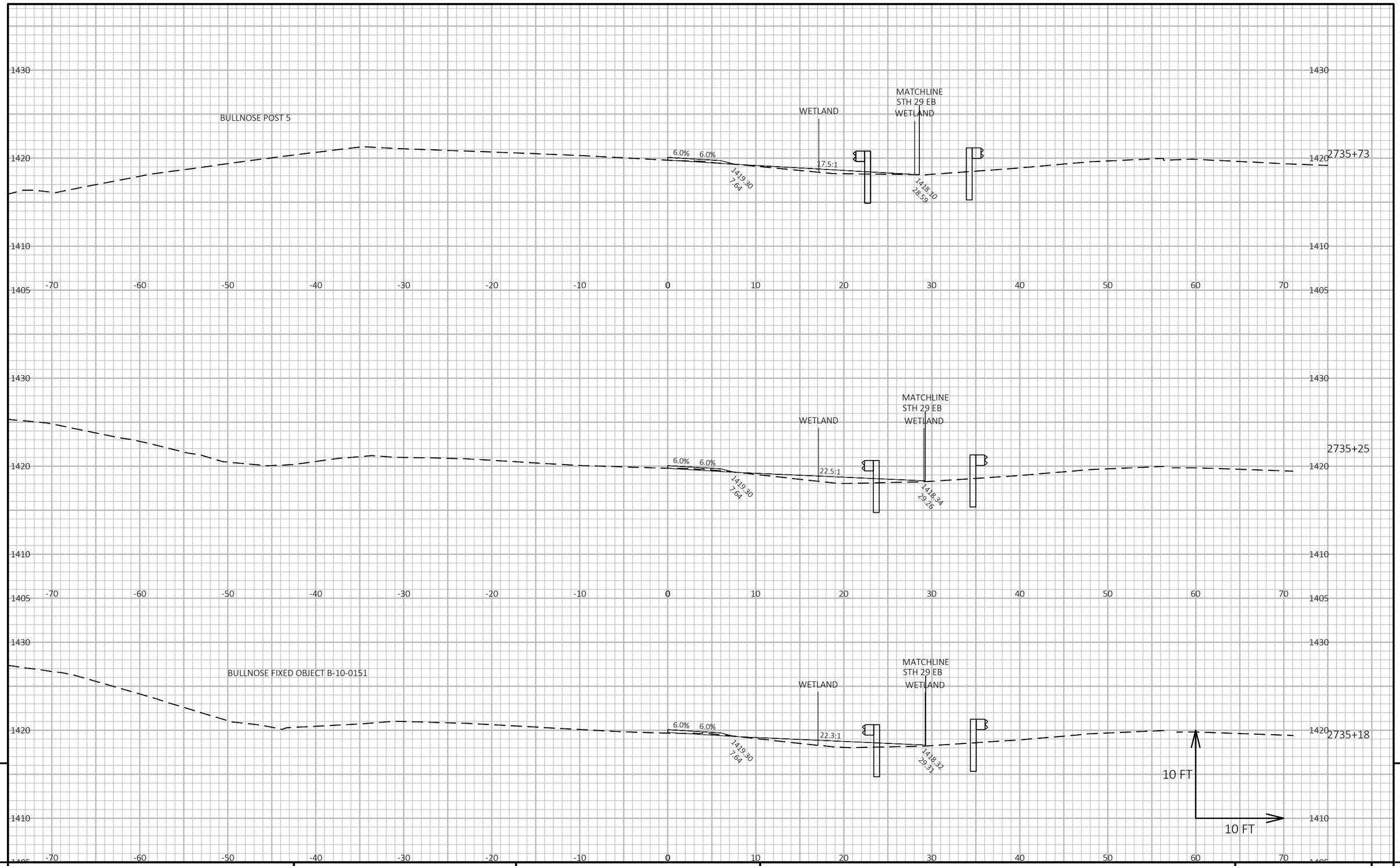
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 370	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090287_xs_WB

PLOT DATE : 11/18/2025 3:18 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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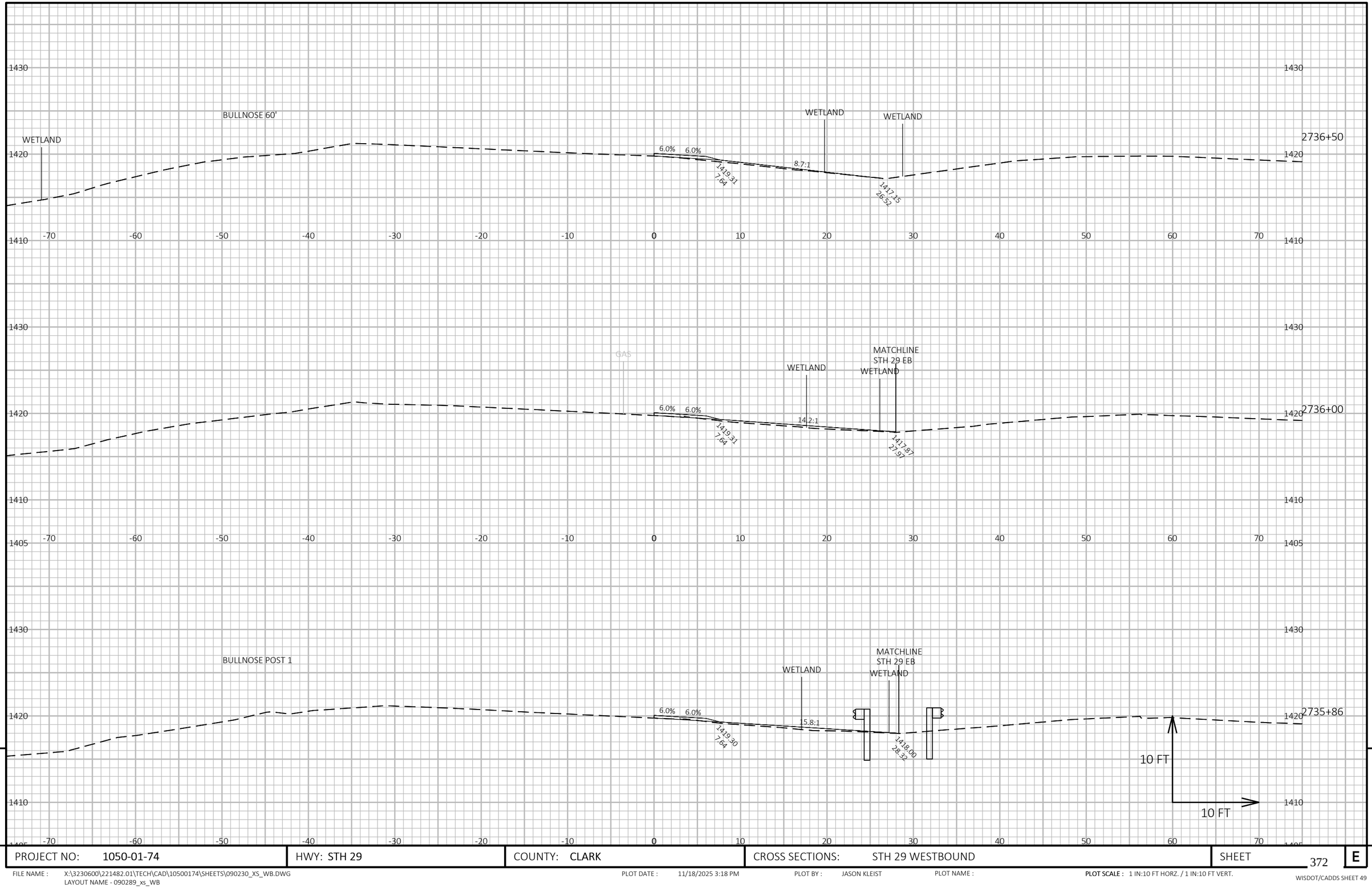
PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 371	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090288_xs_WB

PLOT DATE : 11/18/2025 3:18 PM PLOT BY : JASON KLEIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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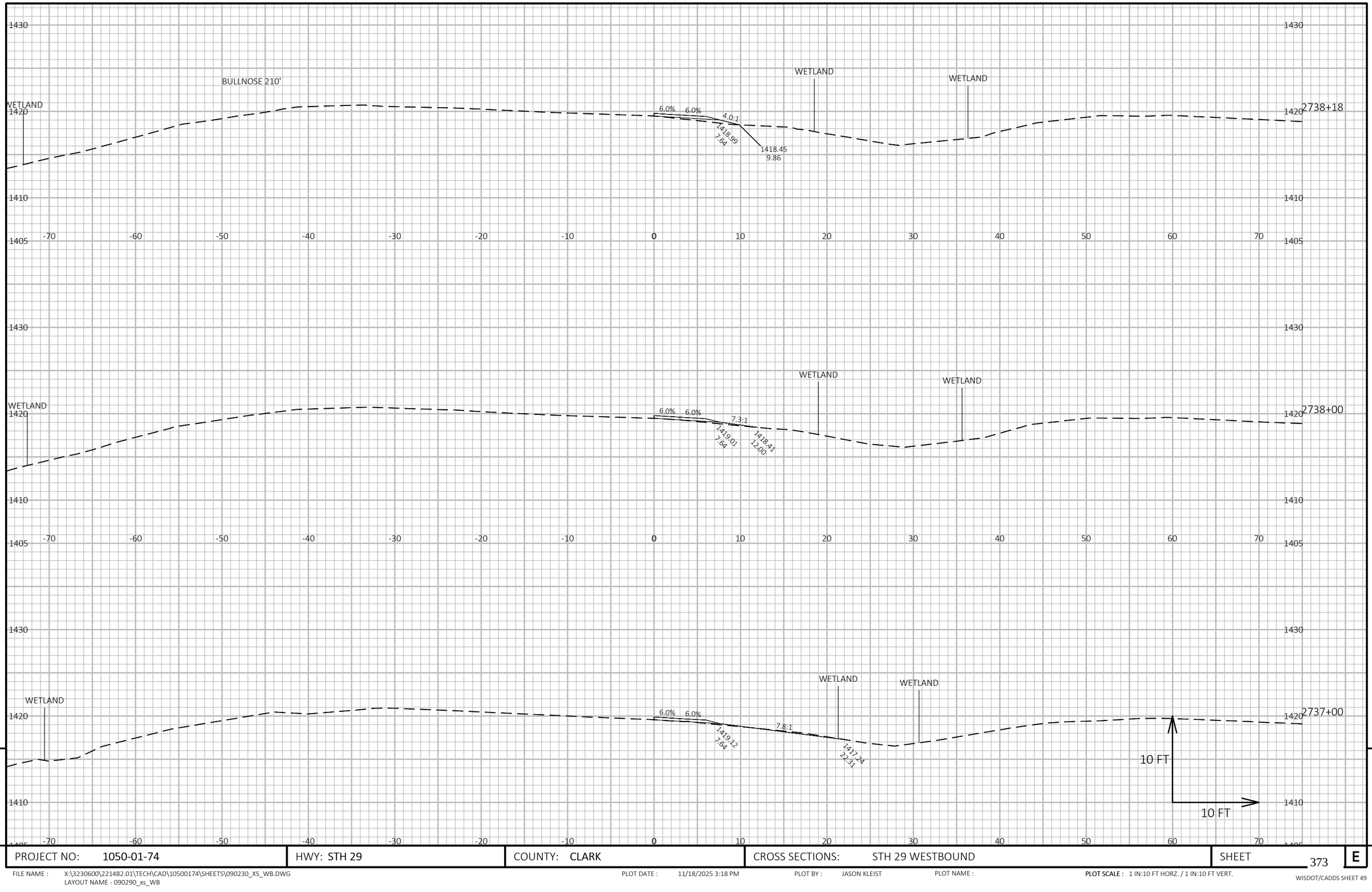
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PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 372	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090289_xs_WB

PLOT DATE : 11/18/2025 3:18 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1050-01-74	HWY: STH 29	COUNTY: CLARK	CROSS SECTIONS: STH 29 WESTBOUND	SHEET 373	E

FILE NAME : X:\3230600\221482.01\TECH\CAD\10500174\SHEETS\090230_XS_WB.DWG
LAYOUT NAME - 090290_xs_WB

PLOT DATE : 11/18/2025 3:18 PM PLOT BY : JASON KLEIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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