GRE

JUNE 2022

PROJECT ID: 1150-78-71

WITH: N/A

COUNTY: BROWN & OCONTO

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 = 332



08

DESIGN DESIGNATION 1150-78-00

A.A.D.T.	(2022)	=	31,630
A.A.D.T.	(2042)	=	37,200
D.H.V.		=	4,300 (2042)
D.D.		=	60/40
T.		=	15.70
DESIGN SPEED		=	70 MPH
ESALS		=	10,600,000

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'ER)
- 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

GREEN BAY - ABRAMS

NORFIELD ROAD - USH 141

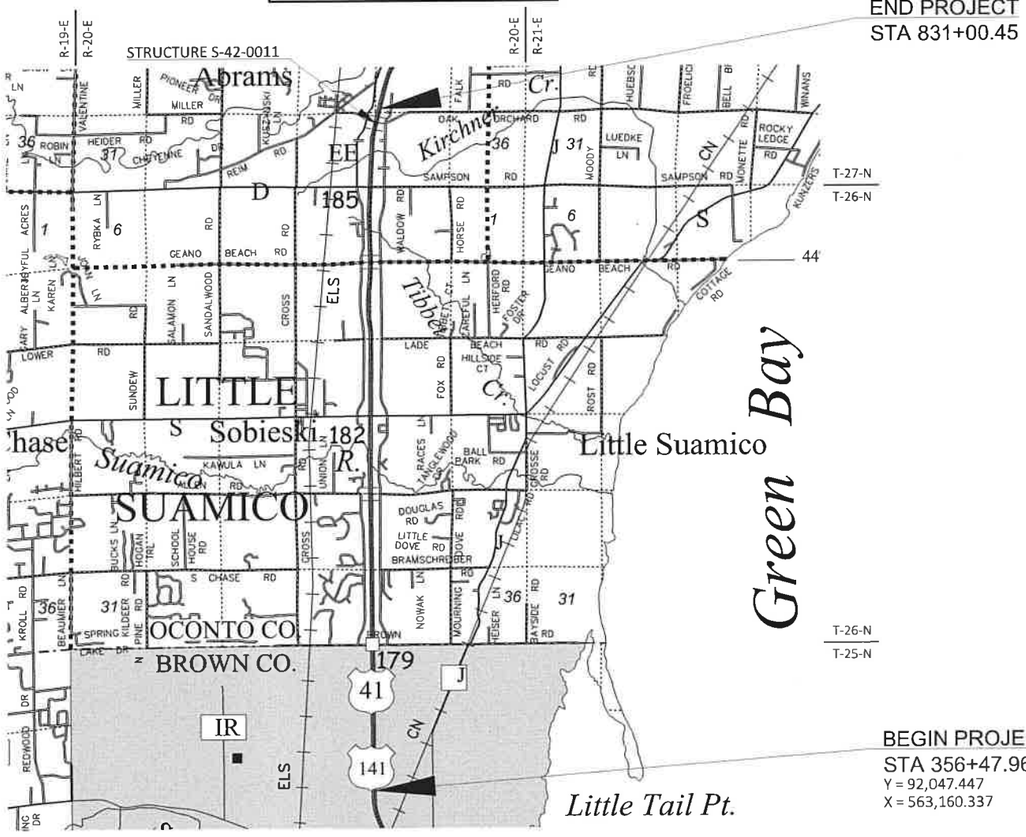
USH 41

BROWN AND OCONTO COUNTIES

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1150-78-71	WISC 2022462	1

STATE PROJECT NUMBER

1150-78-71



LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 8.987 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), OCONTO 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.

ENGINEERING, INC
Consultant Services

WISCONSIN
ANDREW W. BLOCK
E-41224-6
APPLETON
WI.
PROFESSIONAL ENGINEER

DATE: 1/26/2022 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JT ENGINEERING, INC.
Designer	JT ENGINEERING, INC.
Project Manager	KURT VOGEL, P.E.
Regional Examiner	NORTHEAST REGION
Regional Supervisor	BRIAN EDWARDS, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 1/26/2022 (Signature)

E

UTILITY CONTACTS

ABRAMS SANITARY DISTRICT #1
SEWER
MR. CURT HAFFMAN
P.O. BOX 198
ABRAMS, WI 54101
TELEPHONE: (920) 826-7674
MOBILE: (920) 621-0094
EMAIL: HAFKING@BAYLAND.NET

ASTREA
COMMUNICATION LINE
MR. ANDY HEIGL
105 KENT STREET
IRON MOUNTAIN, MI 49801
TELEPHONE: (906) 776-2609
MOBILE: (906) 221-7536
EMAIL: ANDY.HEIGL@ASTREACONNECT.COM

AT&T WI
COMMUNICATION LINE
MS. VICTORIA KASSAB
205 S. JEFFERSON STREET
GREEN BAY, WI 54301
MOBILE: (920) 401-7512
EMAIL: VK352K@ATT.COM

BAYLAND TELEPHONE
COMMUNICATION LINE
MR. RICK VINCENT
450 SECURITY BOULEVARD
GREEN BAY, WI 54313
TELEPHONE: (920) 617-7316
EMAIL: RICK.VINCENT@NSIGHT.COM

LITTLE SUAMICO SANITARY DISTRICT
SEWER
MR. DAN HERZBERG
5964 COUNTY ROAD S
SOBIESKI, WI 54171
TELEPHONE: (920) 606-1392
EMAIL: LSSANITARY@BAYLAND.NET

MERIT NETWORK
COMMUNICATION LINE
MR. DUSTIN LAPOINTE
10514 COUNTY ROAD 612
LEWISTON, MI 49756
TELEPHONE: (734) 476-6100
EMAIL: DLAPOINT@MERIT.EDU

NETLEC, LLC
COMMUNICATION LINE
MR. RICK VINCENT
450 SECURITY BOULEVARD
GREEN BAY, WI 54313
TELEPHONE: (920) 617-7316
EMAIL: RICK.VINCENT@NSIGHT.COM

SPECTRUM
COMMUNICATION LINE
MR. VINCE ALBIN
3520 DESTINATION DRIVE
APPLETON, WI 54915
TELEPHONE: (920) 831-9249
MOBILE: (920) 378-0444
EMAIL: VINCE.ALBIN@CHARTER.COM

WISCONSIN PUBLIC SERVICE CORPORATION
ELECTRICITY
MR. SCOTT ZELLNER
2850 S. ASHLAND AVENUE
GREEN BAY, WI 54304
TELEPHONE: (920) 617-5068
MOBILE: (920) 680-2188
EMAIL: SCOTT.ZELLNER@WISCONSINPUBLICSERVICE.COM

WISCONSIN PUBLIC SERVICE CORPORATION
GAS/PETROLEUM
MS. CHRISTINE BALZEI
2850 S. ASHLAND AVENUE
GREEN BAY, WI 54304
TELEPHONE: (920) 617-5132

MR. JIM EIDEN
2850 S. ASHLAND AVENUE
GREEN BAY, WI 54304
TELEPHONE: (920) 617-5231

24-HR CUSTOMER SERVICE CONTACT
TELEPHONE: 1-800-450-7260

24-HR EMERGENCY GAS CONTACT
TELEPHONE: 1-800-450-7280

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

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 = 395 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 4.8 ACRES

AGENCY/PROJECT CONTACTS

WISCONSIN DNR LIAISON
MR. JIM DOPERALSKI
NORTHEAST REGION
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
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WISCONSIN DEPARTMENT OF TRANSPORTATION
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NORTHEAST REGION
944 VANDERPERREN WAY
GREEN BAY, WI 54304-5344
TEL: (920) 362-1732
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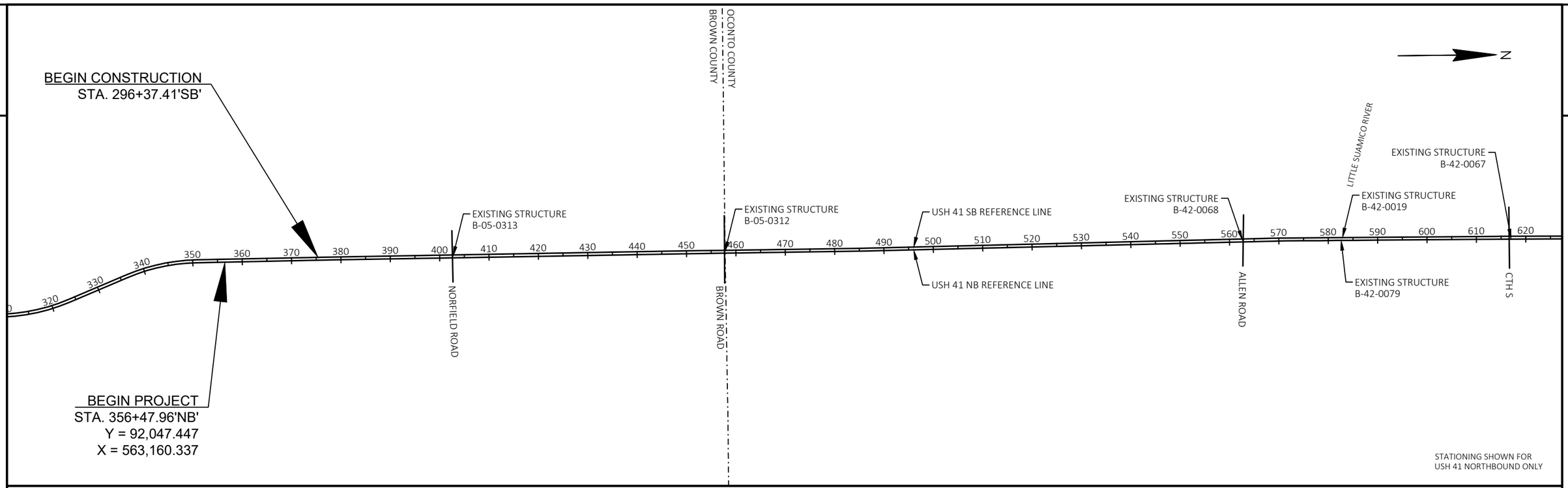
DESIGNER
MR. ANDREW BLOCK
JT ENGINEERING, INC.
1077 CENTENNIAL CENTRE BLVD.
HOBART, WI 54155
TEL: (920) 468-4771
EMAIL: ANDYB@JT-ENGINEERING.COM

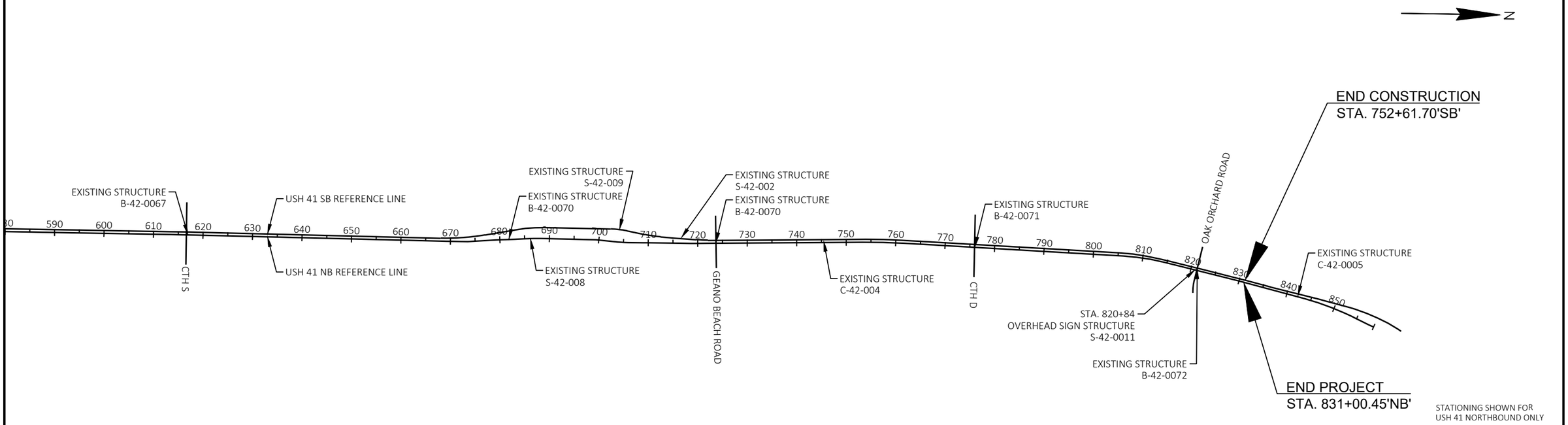
SEQUENCE OF PLANS AND DETAILS IN SECTION 2

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL PLAN
TRAFFIC CONTROL PLAN

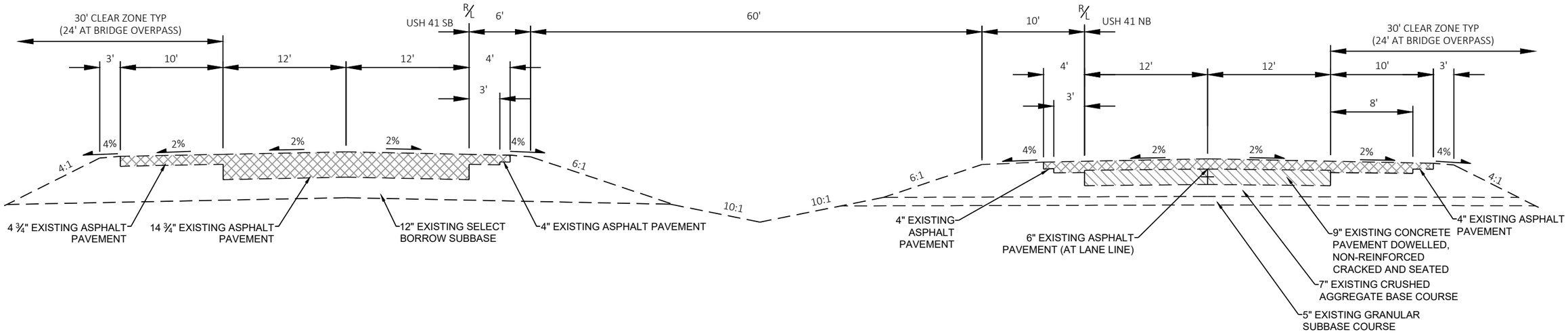
GENERAL NOTES

1. THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. ANY LOCAL OR MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
3. WETLANDS ARE PRESENT IN AREAS WITHIN THE PROJECT LIMITS. DO NOT OPERATE EQUIPMENT OUTSIDE OF THE SLOPE INTERCEPTS IN WETLAND AREAS UNLESS DIRECTED BY THE ENGINEER.
4. DISTURBED AREAS WITHIN THE RIGHT-OF-WAY ARE TO BE COVERED WITH TOPSOIL, FERTILIZER, SEED AND EROSION MAT, AS DIRECTED BY THE ENGINEER. RESTORE DISTURBED AREAS OUTSIDE OF THE CONSTRUCTION LIMITS SHOWN IN THE PLANS AT NO ADDITIONAL COST TO THE DEPARTMENT.
5. REMOVAL OF ANY STEEL REINFORCEMENT OR WIRE MESH IN THE EXISTING CONCRETE IS INCIDENTAL TO THE REMOVING PAVEMENT OR APPLICABLE BID ITEM.
6. TYPICAL PROPOSED AGGREGATE SHOULDERS SHOULD NOT BE WIDENED FROM WHAT IS PRESENT IN THE EXISTING CONDITION.
7. SUPERELEVATION RATES AND TRANSITIONS SHALL BE APPROVED BY THE ENGINEER IN THE FIELD.



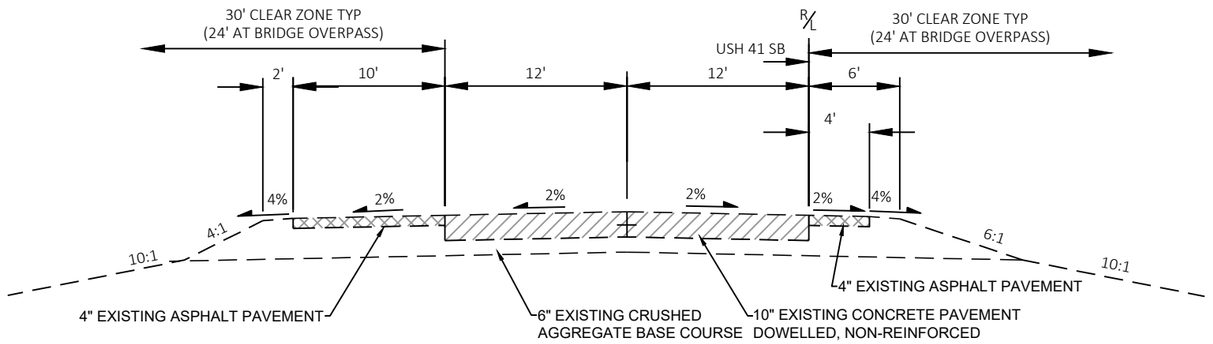


PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION
USH 41

STA 356+47.96 - STA 831+00.45 'NB'
STA 296+37.41 - STA 586+74.50 'SB'
STA 646+46.48 - STA 752+61.70 'SB'



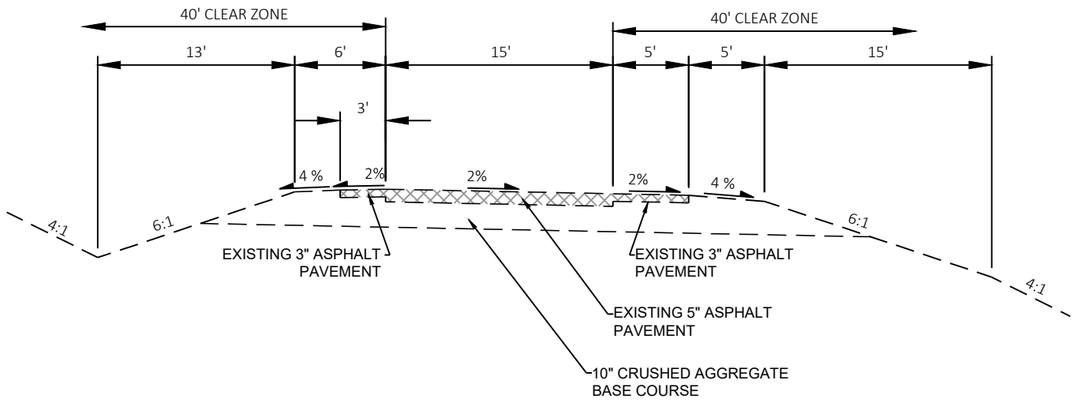
TYPICAL EXISTING SECTION
USH 41 SB

STA 586+74.50 - STA 646+46.48'SB'

NOTE: SOUTHBOUND REFERENCE LINE DOES NOT FOLLOW THE INSIDE EDGE OF TRAVELED WAY FOR THROUGH TRAFFIC NEAR THE SCALE AREA

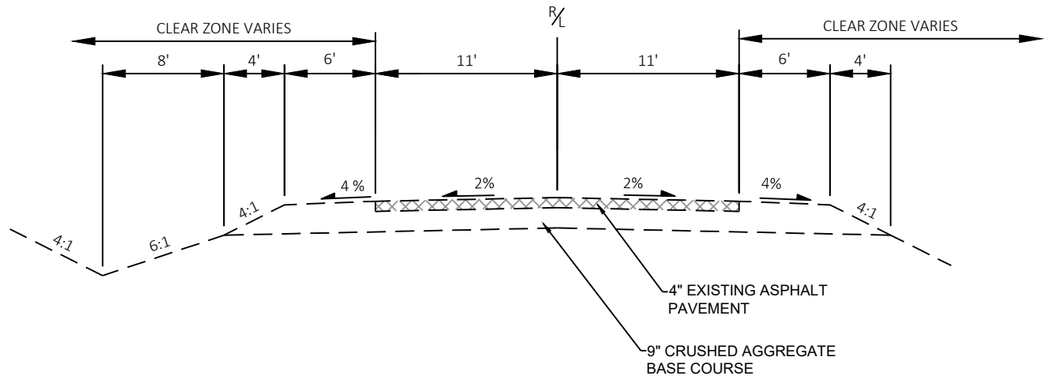
PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	TYPICAL SECTIONS	SHEET 4	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 020301-ts 1in-10ft
PLOT DATE : 11/10/2021 12:24 PM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



TYPICAL EXISTING SECTION
INTERCHANGE RAMPS

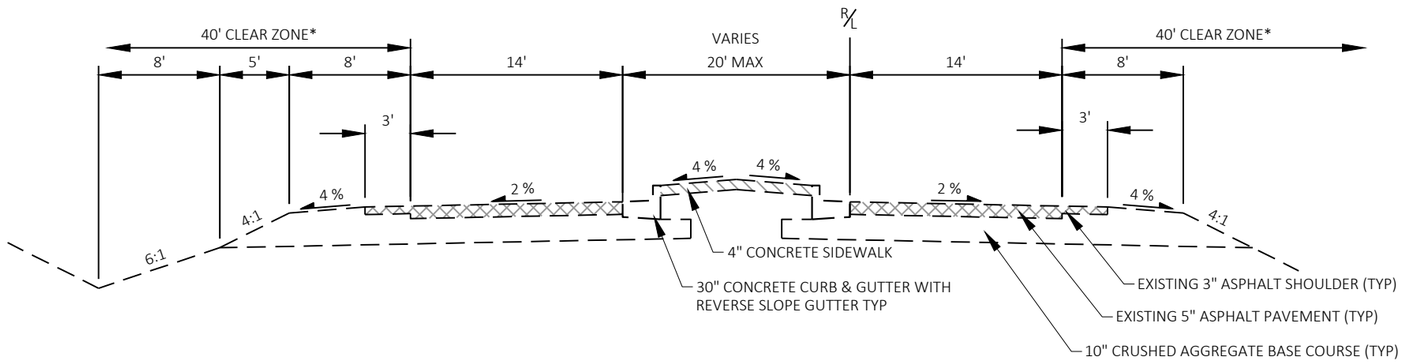
BROWN ROAD
CTH S
CTHD



TYPICAL EXISTING SECTION
SIDEROADS

NORFIELD ROAD
ALLEN ROAD
GEANO BEACH ROAD
OAK ORCHARD ROAD

NOTE:
20' CLEAR ZONE FOR NORFIELD ROAD AND OAK ORCHARD ROAD
18' CLEAR ZONE FOR ALLEN ROAD AND GEANO BEACH ROAD

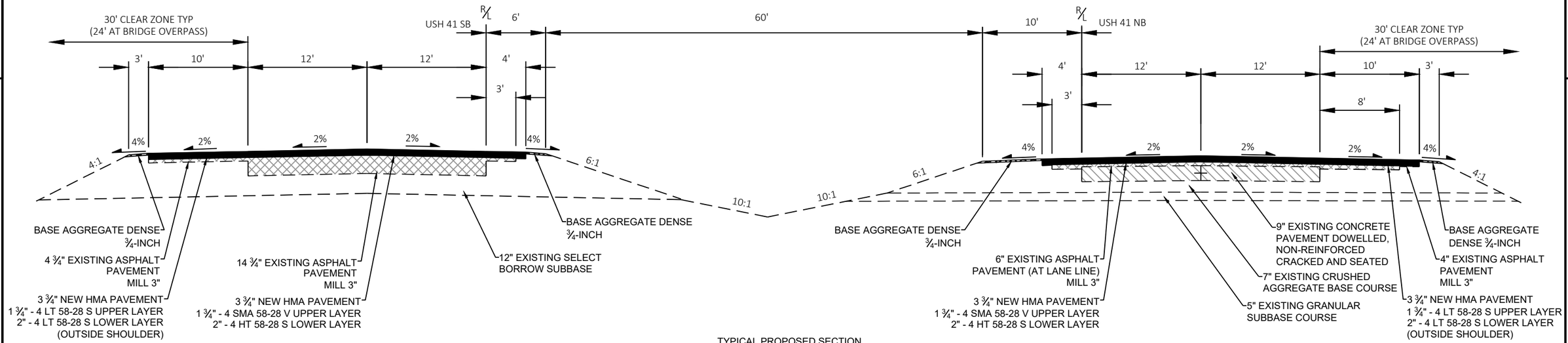


TYPICAL EXISTING SECTION
SIDEROADS

BROWN ROAD
CTH S
CTH D

*CTH D CLEAR ZONE IS 33'

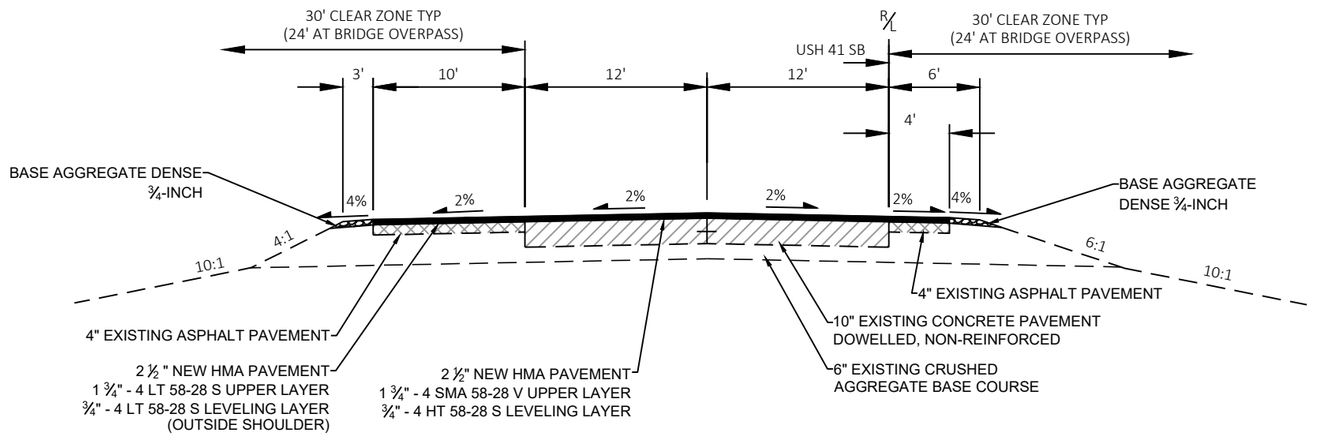
NOTE:
BROWN ROAD PAVEMENT STRUCTURE CONSISTS OF 4" ASPHALT PAVEMENT OVER 9" CRUSHED AGGREGATE BASE COURSE



NOTE: INCREASE MILLING DEPTH ALONG USH 41 SB WITHIN THE LIMITS OF THE CURB & GUTTER AT THE APPROACH TO B-42-19 SO THE PROPOSED PAVEMENT STRUCTURE DOES NOT INCREASE THE ROADWAY PROFILE.

TYPICAL PROPOSED SECTION
USH 41

STA 356+47.96 - STA 831+00.45 'NB'
STA 296+37.41 - STA 586+74.50 'SB'
STA 646+46.48 - STA 752+61.70 'SB'

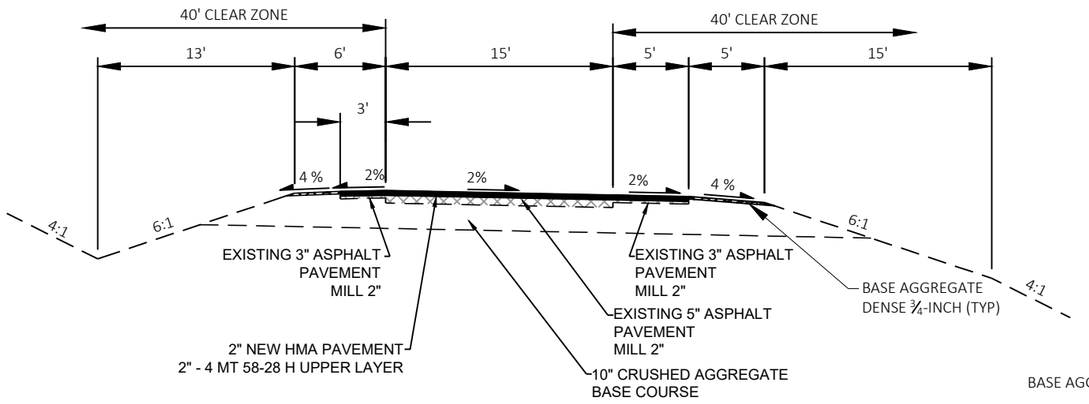


NOTE: SOUTHBOUND REFERENCE LINE DOES NOT FOLLOW THE INSIDE EDGE OF TRAVELED WAY FOR THROUGH TRAFFIC NEAR THE SCALE AREA

TYPICAL PROPOSED SECTION
USH 41 SB

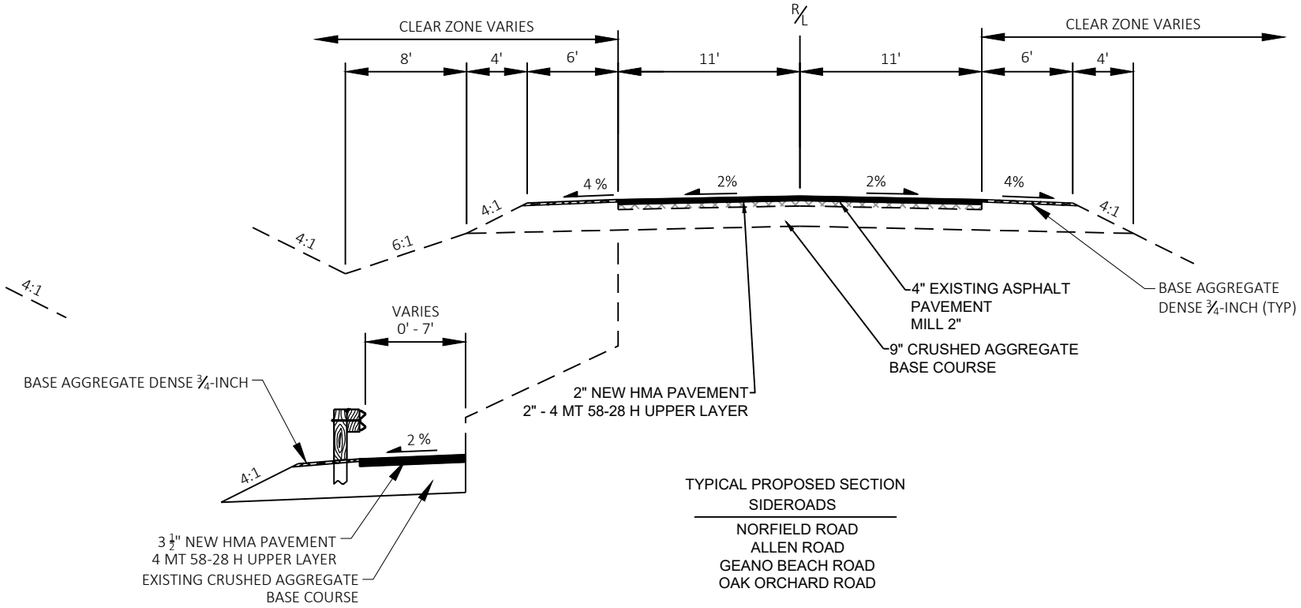
STA 586+74.50 - STA 646+46.48'SB'

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	TYPICAL SECTIONS	SHEET 6	E



TYPICAL PROPOSED SECTION
INTERCHANGE RAMPS

BROWN ROAD
CTH S
CTHD

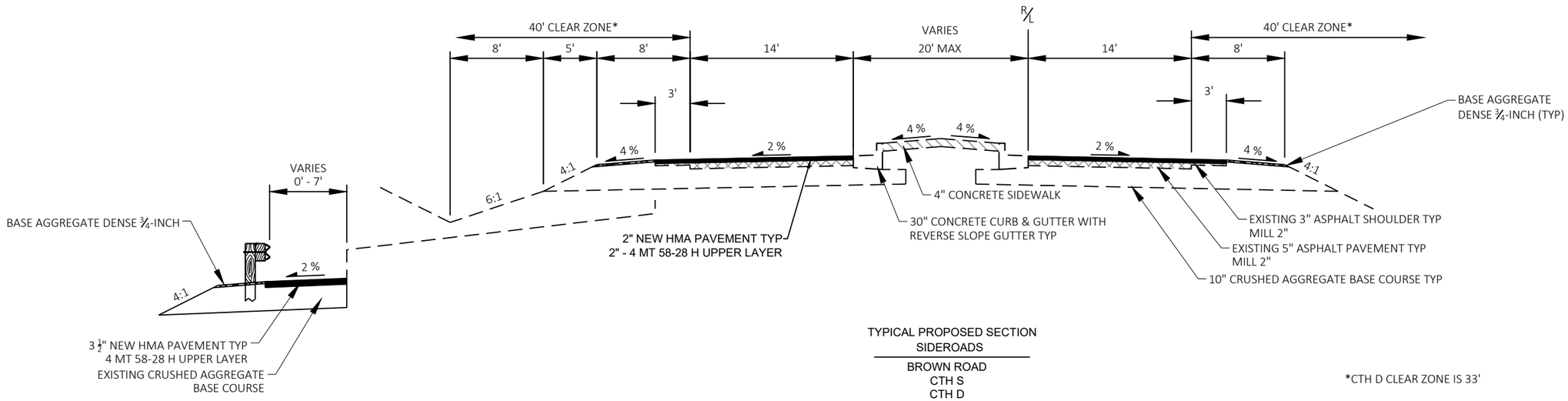


PROPOSED TYPICAL SECTION
FOR SIDEROAD PAVEMENT WIDENING TO FACE OF RAIL

TYPICAL PROPOSED SECTION
SIDEROADS

NORFIELD ROAD
ALLEN ROAD
GEANO BEACH ROAD
OAK ORCHARD ROAD

NOTE:
20' CLEAR ZONE FOR NORFIELD ROAD AND OAK ORCHARD ROAD
18' CLEAR ZONE FOR ALLEN ROAD AND GEANO BEACH ROAD



PROPOSED TYPICAL SECTION
FOR SIDEROAD PAVEMENT WIDENING TO FACE OF RAIL

TYPICAL PROPOSED SECTION
SIDEROADS

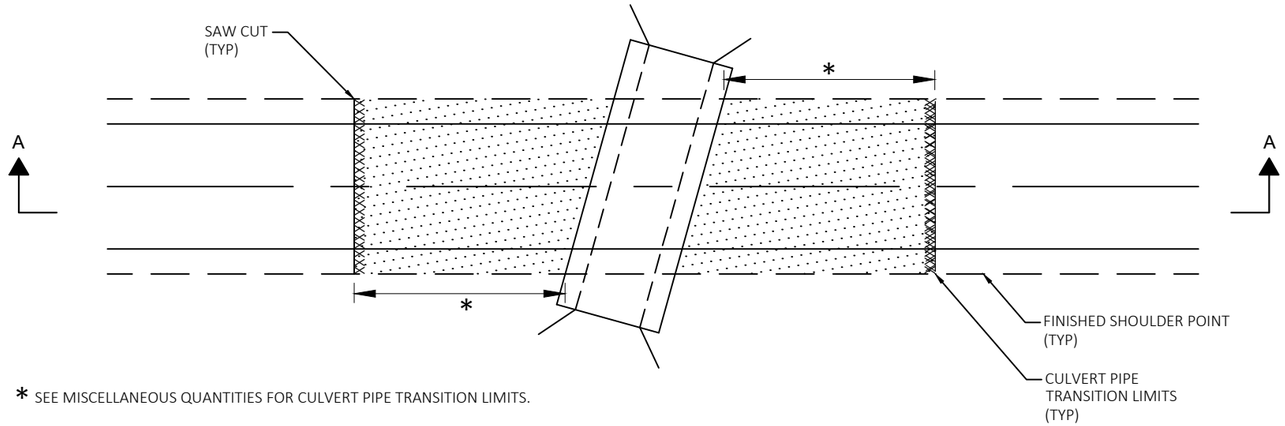
BROWN ROAD
CTH S
CTH D

*CTH D CLEAR ZONE IS 33'

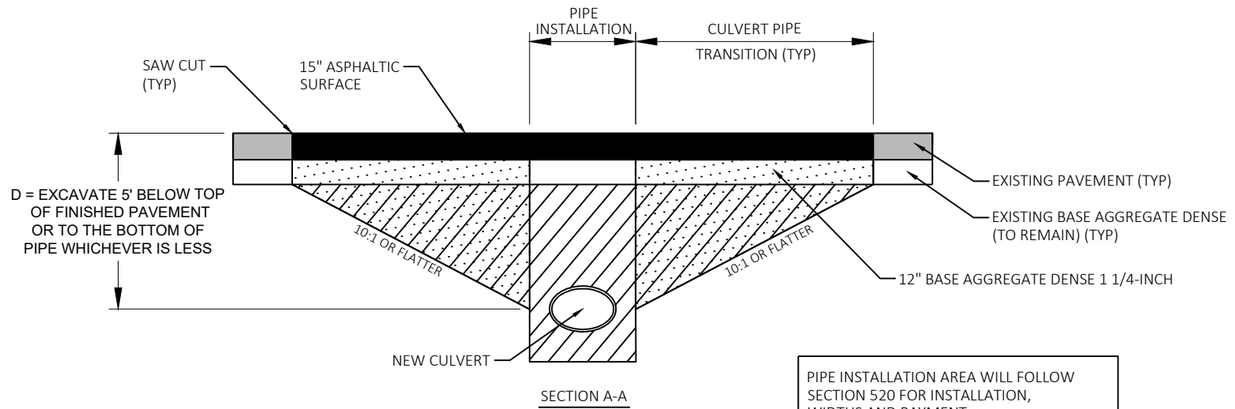
NOTE:
BROWN ROAD PAVEMENT STRUCTURE CONSISTS OF 4" ASPHALT PAVEMENT OVER 9" CRUSHED AGGREGATE BASE COURSE

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	TYPICAL SECTIONS	SHEET 7	E

2



* SEE MISCELLANEOUS QUANTITIES FOR CULVERT PIPE TRANSITION LIMITS.



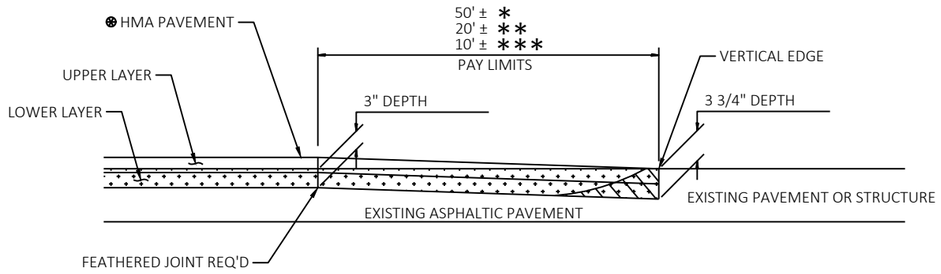
PIPE INSTALLATION AREA WILL FOLLOW SECTION 520 FOR INSTALLATION, WIDTHS AND PAYMENT.

CONSTRUCT TRANSITION PERPENDICULAR TO CULVERT PIPE.

CULVERT PIPE TRANSITION AREAS WILL BE PAID BY COMMON EXCAVATION & SPV FOUNDATION BACKFILL.

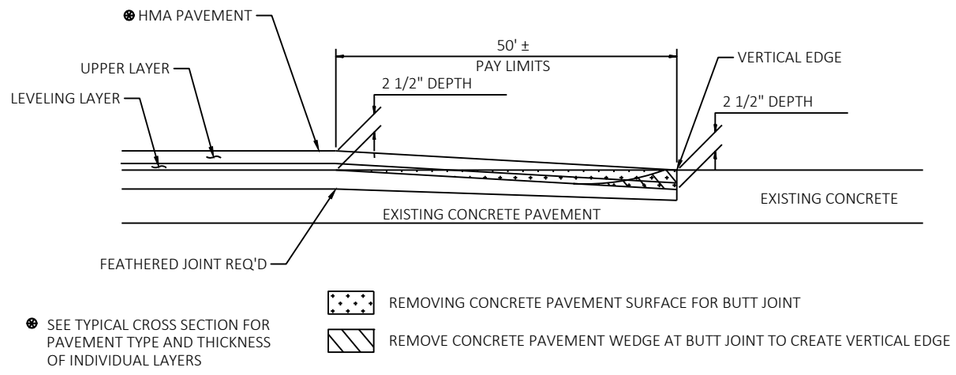
PAVEMENT SAW CUT TO BE PERPENDICULAR TO ROADWAY ALIGNMENT.

NEW CULVERT PIPES WITH TRANSITION

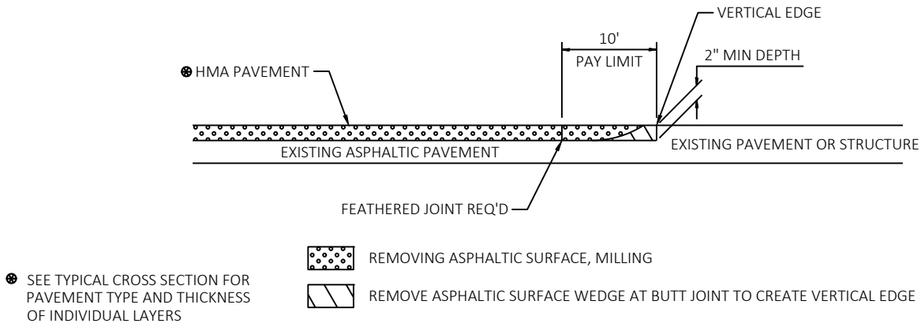


BUTT JOINT DETAIL FOR MILLED ASPHALTIC PAVEMENTS (PROFILE CHANGE)

* MAINLINE
** SIDEROADS
*** PRIVATE ENTRANCES

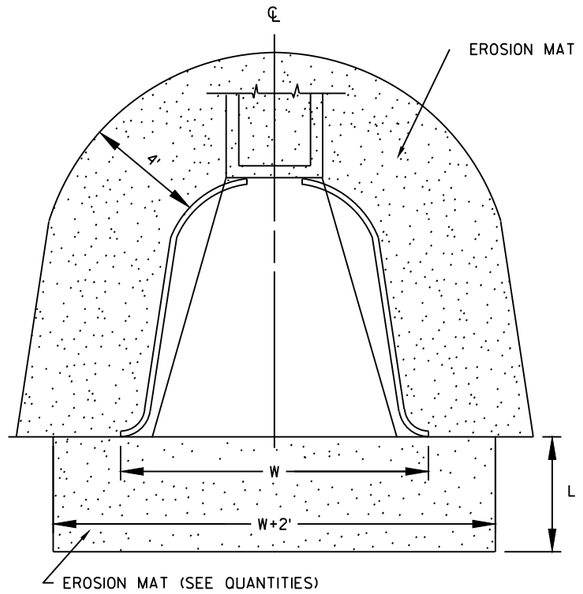


BUTT JOINT DETAIL FOR CONCRETE PAVEMENTS (PROFILE CHANGE)



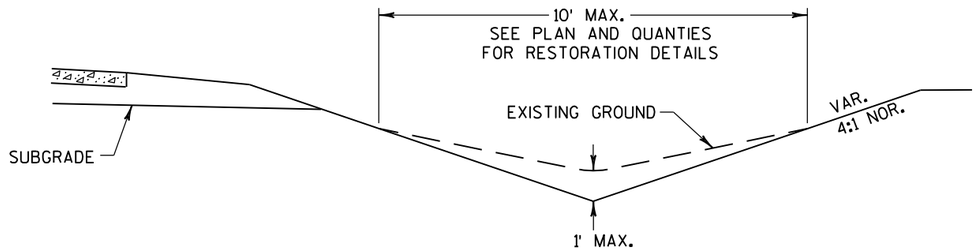
BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)

2

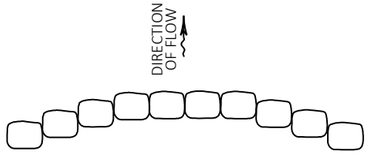


EROSION CONTROL AT PIPE ENDS

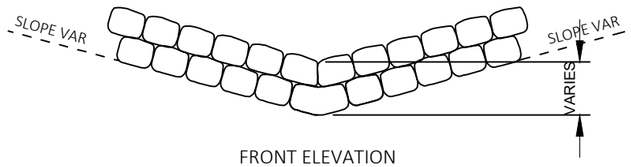
L = 3 TIMES DIAMETER OR 10' MIN.
INCREASE IF WARRANTED



DETAIL FOR GRADING AND SHAPING FOR DITCH



PLAN VIEW



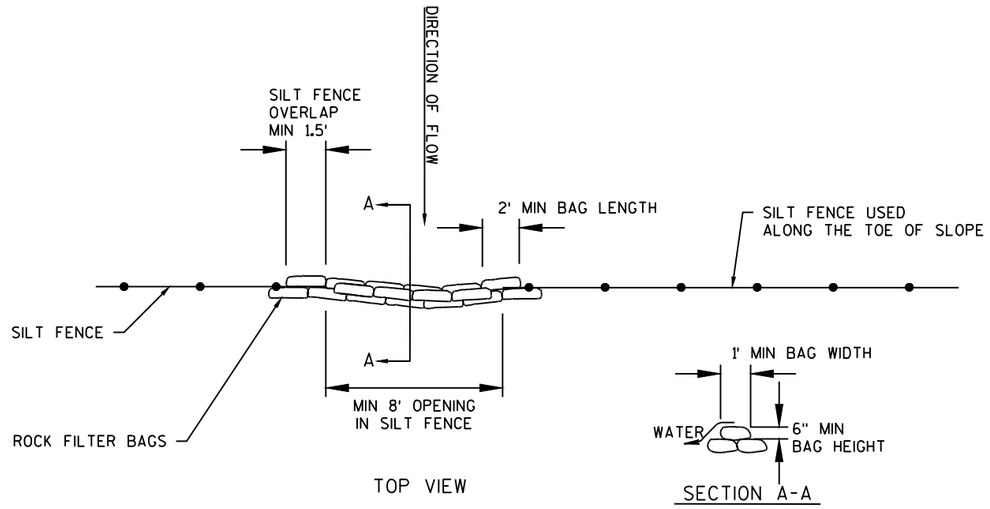
FRONT ELEVATION

NOTES:

1. PLACE ROCK FILTER BAGS TIGHTLY AGAINST EACH OTHER TO PREVENT VOIDS.
2. STAGGER JOINTS BETWEEN BOTTOM AND TOP ROWS.
3. BOTTOM ELEVATION OF END FILTER BAG SHALL BE EQUAL TO OR GREATER THAN TOP OF LOWEST FILTER BAG OR AS DIRECTED BY THE ENGINEER.
4. DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DETAIL SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

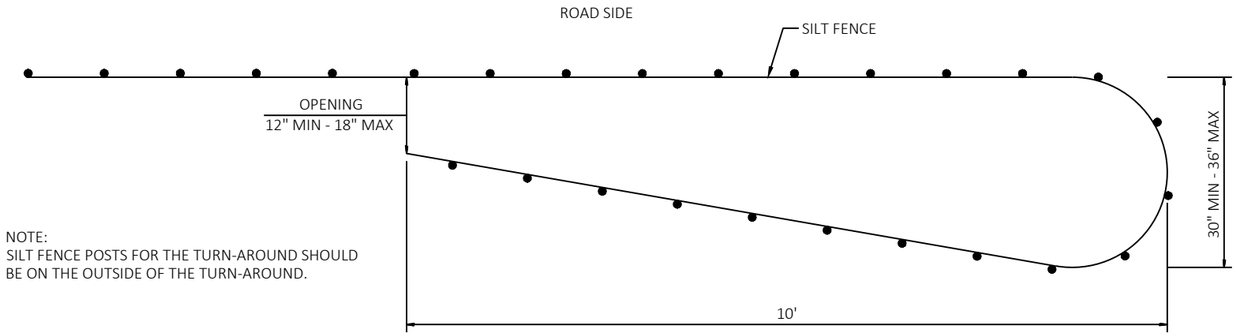
ROCK BAGS FOR CULVERT OUTFALL SEDIMENT CONTROL

SEE EROSION CONTROL PLANS FOR LOCATIONS



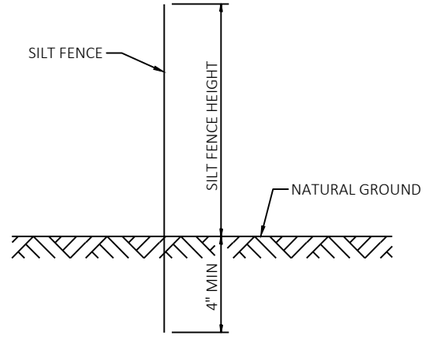
TOP VIEW

ROCK BAGS USED FOR SILT FENCE RELIEF



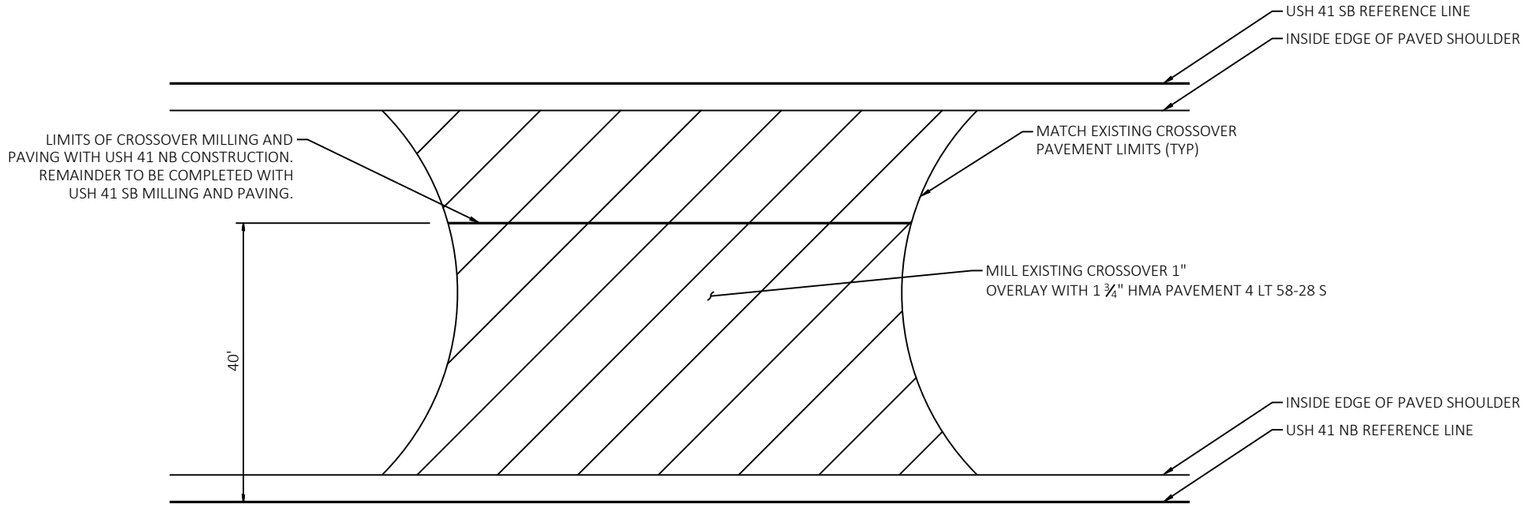
NOTE:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND.

PLAN VIEW



SIDE VIEW

SILT FENCE TURN-AROUND DETAIL

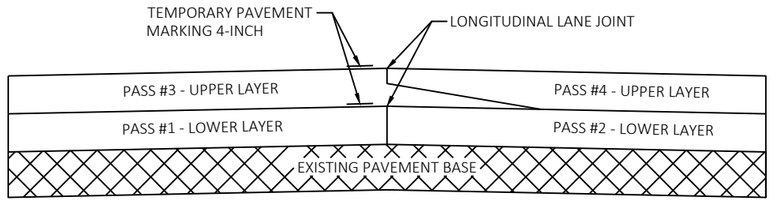


NOTE:
CONSTRUCT MAINTENANCE CROSSOVER AT STA 819+92 NB ACCORDING TO THE APPLICABLE STANDARD DETAIL DRAWING WITH USH 41 NB PAVING OPERATIONS AND TAPER PAVEMENT TO MATCH THE EXISTING EDGE OF USH 41 SB SHOULDER. COMPLETE CROSSOVER CONSTRUCTION WITH USH 41 SB MILLING AND PAVING OPERATIONS.

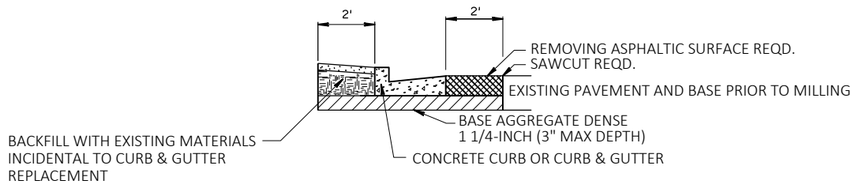
DETAIL OF EXISTING MAINTENANCE CROSSOVER RESURFACING

STA 423+70 NB
STA 493+65 NB
STA 574+20 NB
STA 654+55 NB
STA 732+25 NB

2



PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS



NOTES:

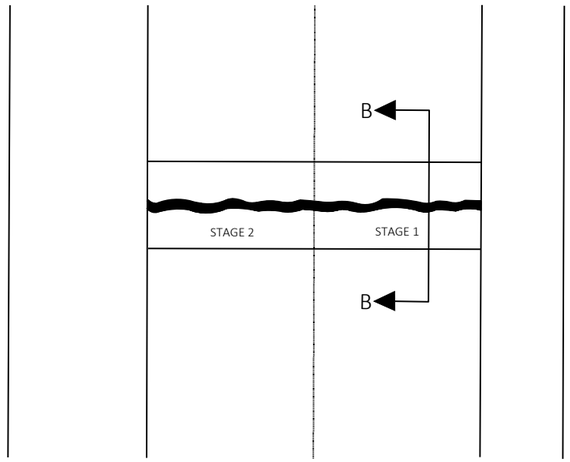
BASE COURSE BELOW PROPOSED CURB OR CURB & GUTTER SHALL BE CONSTRUCTED TO PROVIDE A SUITABLE BASE AS DETERMINED BY THE ENGINEER IN THE FIELD

IN LOCATIONS WHERE SIDEWALK IS PROPOSED BEHIND THE BACK OF CURB & GUTTER A MAXIMUM OF 3" BASE AGGREGATE DENSE 1 1/4-INCH SHALL BE USED TO A SUITABLE BASE

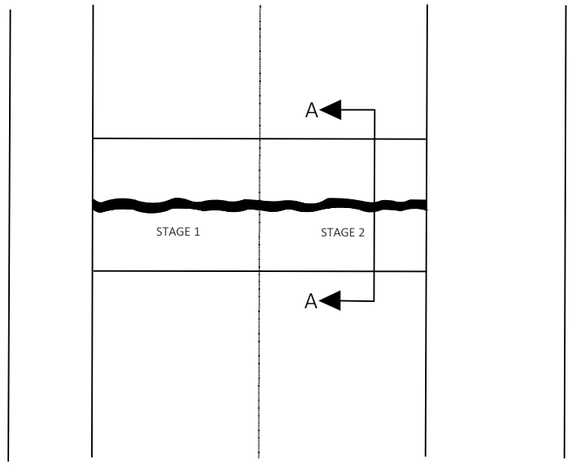
SEE CROSS SECTIONS FOR ADDITIONAL DETAIL

DETAIL FOR CURB & GUTTER PLACEMENT

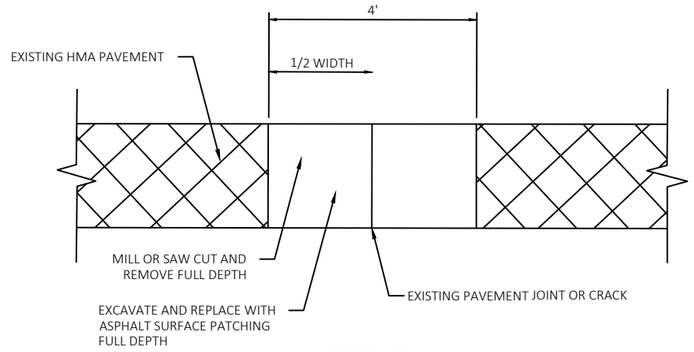
2



SOUTHBOND LANES

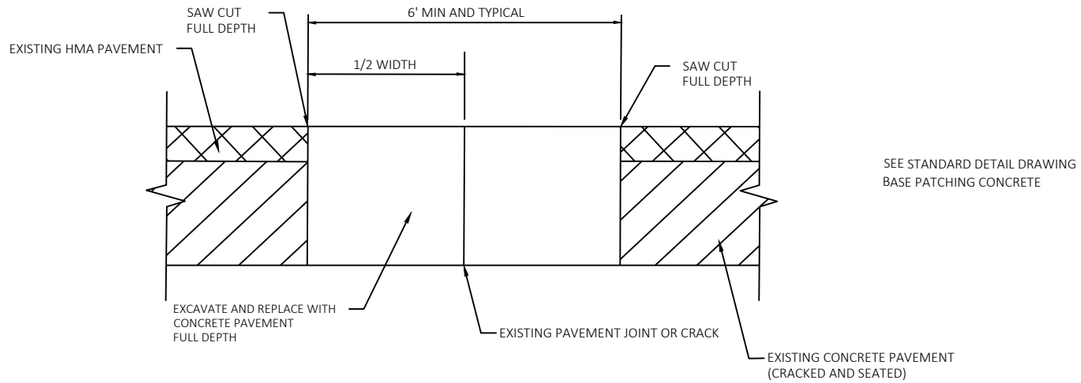


NORTHBOUND LANES



SECTION B-B
STAGE 1 AND STAGE 2

BASE PATCHING ASPHALTIC
IN DEEP STRENGTH HMA PAVEMENT
USH 41 SB

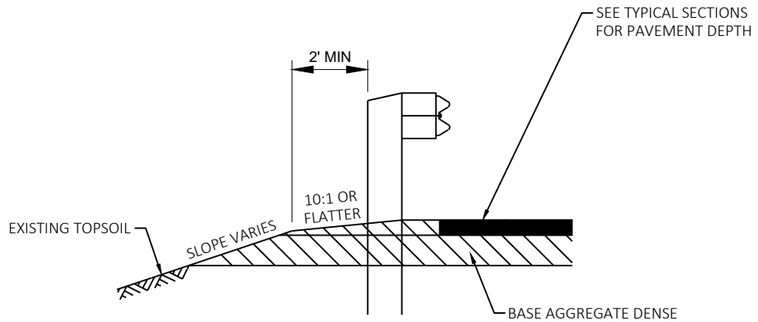


SECTION A-A
STAGE 1 AND STAGE 2

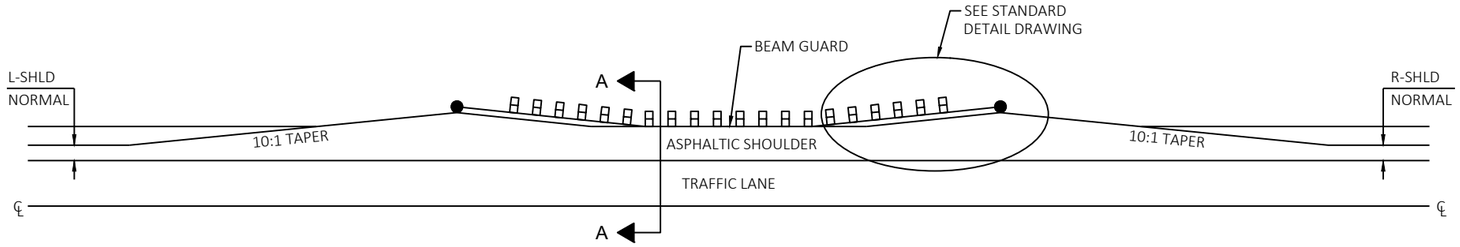
BASE PATCHING CONCRETE SHES
IN CONCRETE PAVEMENT OVERLAID WITH ASPHALT
USH 41 NB

NOTE:
BASE PATCHING SHALL BE COMPLETE PRIOR TO
MAINLINE MILLING AND PAVING OPERATIONS

2

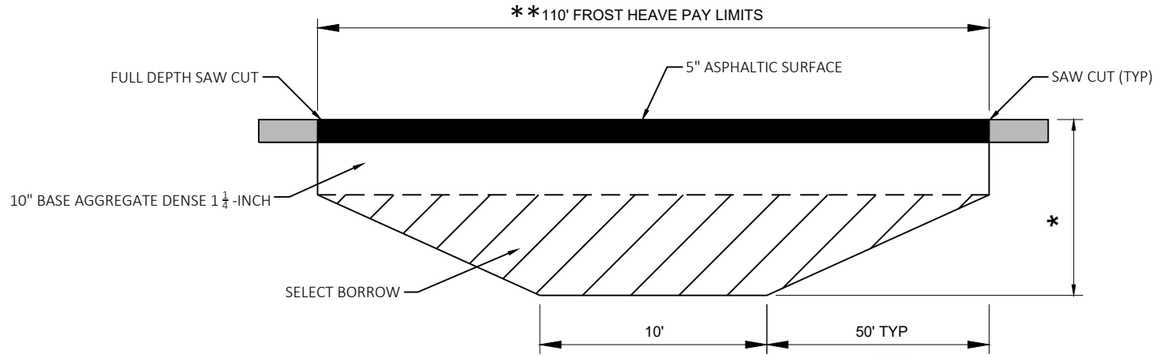


SECTION A-A



DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

2

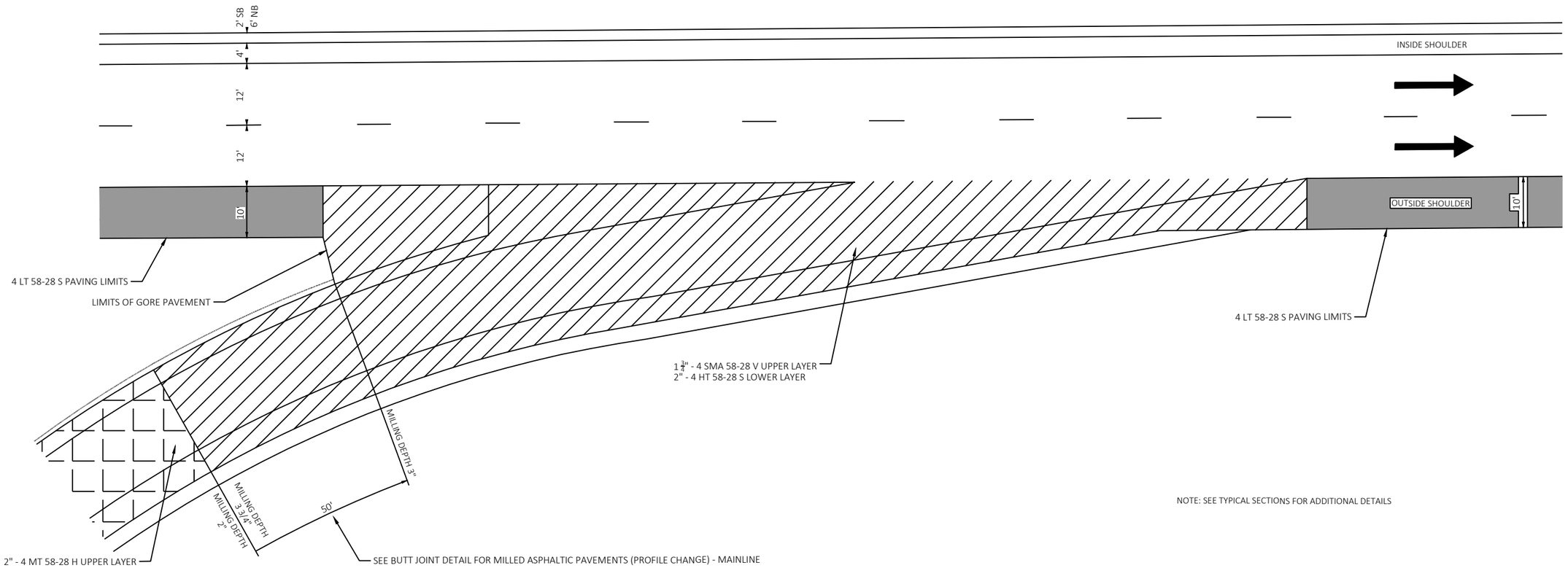


NOTE:
* EXCAVATE 5' BELOW TOP OF FINISHED PAVEMENT.

** PAID AS COMMON EXCAVATION.

LONGITUDINAL DETAIL FOR FROST HEAVE REPAIR AREA ON BROWN ROAD EXIT RAMP

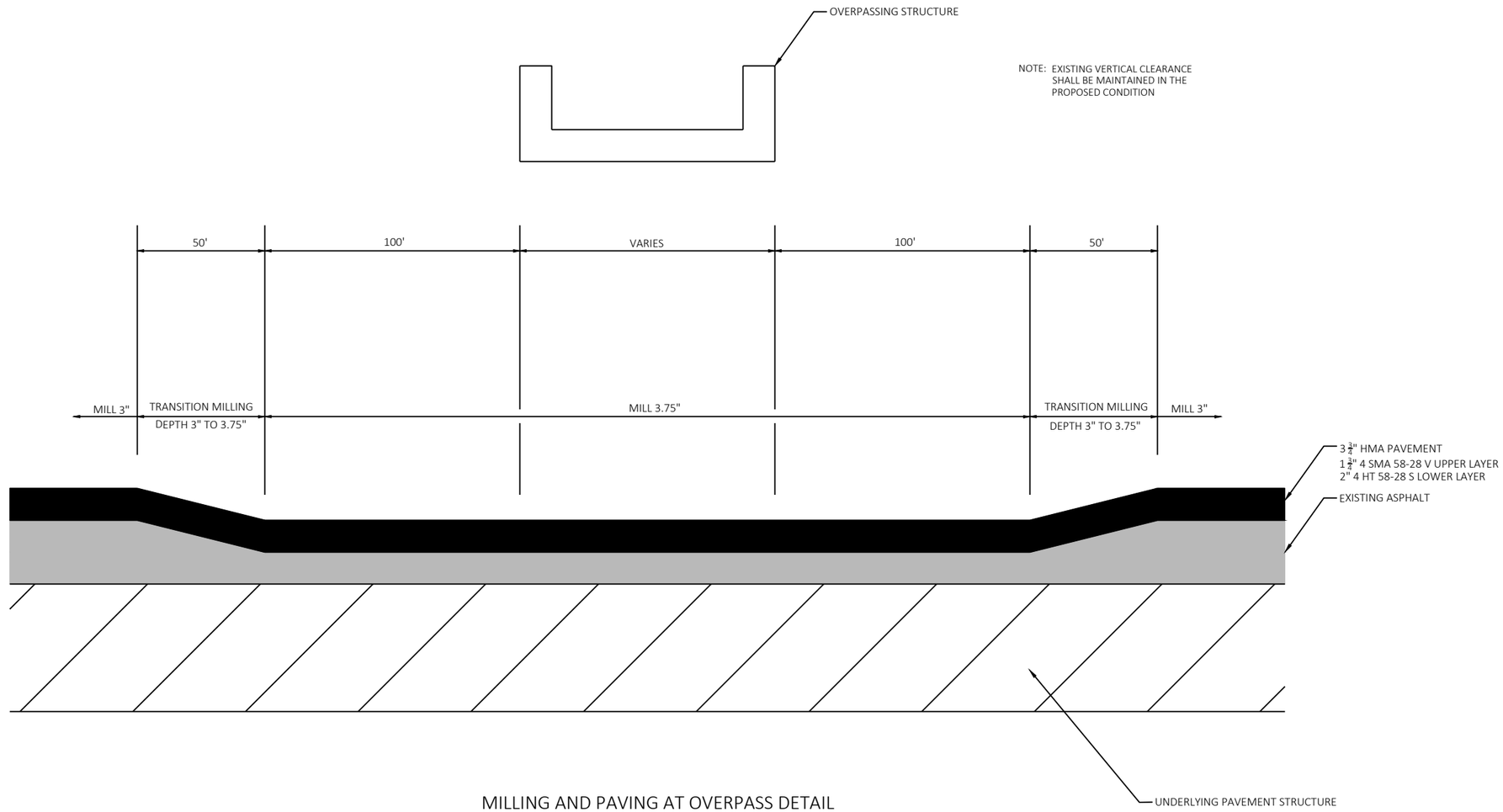
2



NOTE: SEE TYPICAL SECTIONS FOR ADDITIONAL DETAILS

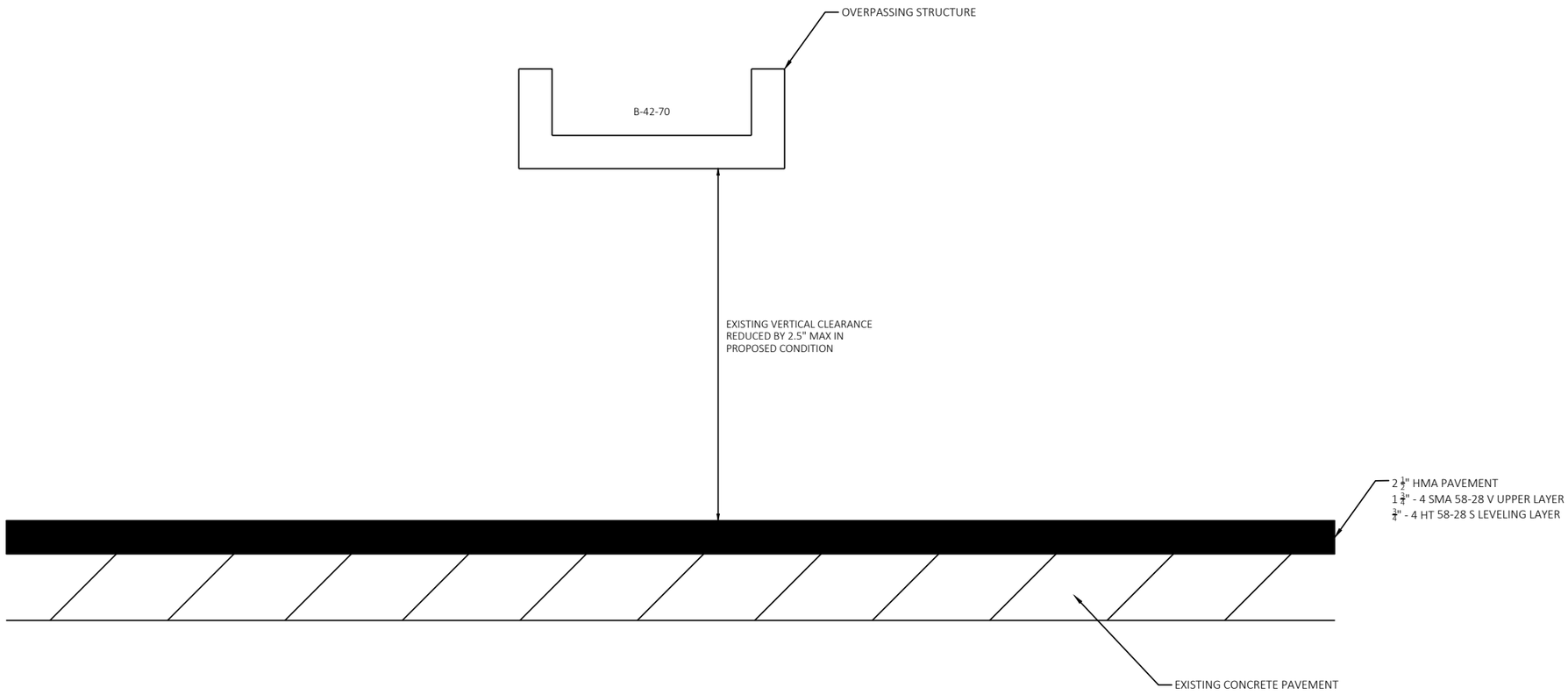
MILLING AND PAVING AT ENTRANCE AND EXIT RAMP DETAIL

2



MILLING AND PAVING AT OVERPASS DETAIL

APPLIES AT:
USH 41 NB & SB AT NORFIELD ROAD
USH 41 NB & SB AT BROWN ROAD
USH 41 NB & SB AT ALLEN ROAD
USH 41 NB & SB AT CTH S
USH 41 NB AT GEANO BEACH ROAD (SEE ALTERNATE DETAIL FOR SB)
USH 41 NB & SB AT CTH D
USH 41 NB & SB AT OAK ORCHARD ROAD



MILLING AND PAVING USH 41 SB AT GEANO BEACH ROAD OVERPASS DETAIL

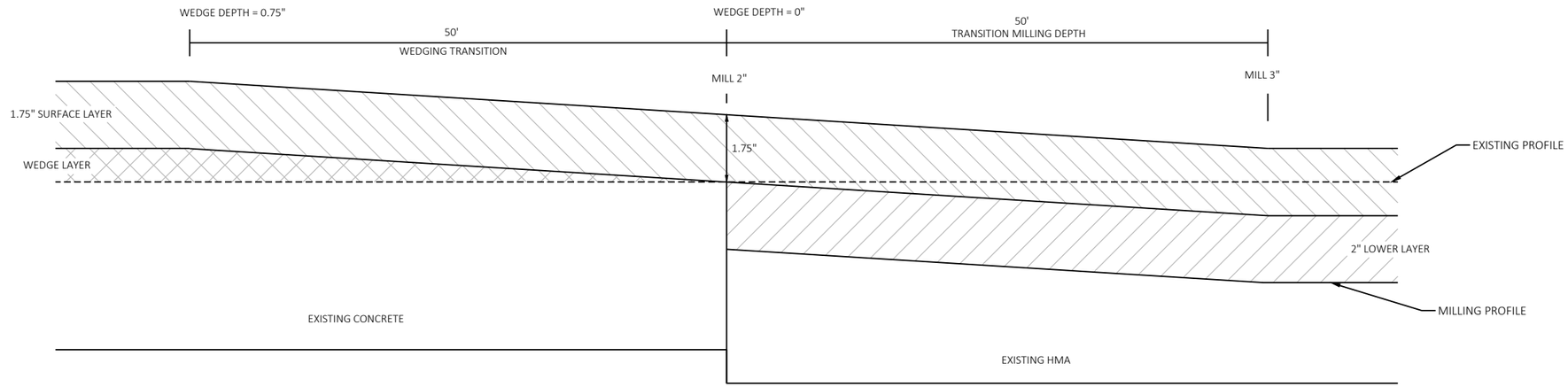
PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	CONSTRUCTION DETAILS	SHEET 18	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\021001_CD.DWG
LAYOUT NAME - Page 12

PLOT DATE : 1/11/2022 6:01 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 42

2



MILL AND PAVE DETAIL FOR USH 41 SB AT STA. 586+71.50 AND STA. 646+46.48

2

2

LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT URBAN CLASS 1 TYPE A
- SILT FENCE
- RIPRAP
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- ROCK BAGS

N

N89° 28' 25"E

128

130

132

134

136

316 318 320 322 324 326 328 330

396 398 400 402 404 406 408 410

USH 41 SB

USH 41 NB

N0° 21' 34"W

N0° 21' 39"W

NORFIELD RD

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN	EROSION CONTROL PLAN	SHEET 20	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 050202

PLOT DATE : 1/24/2022 11:50 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT URBAN CLASS 1 TYPE A
- SILT FENCE
- RIPRAP
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- ROCK BAGS

N

USH 41

USH 41 SB

USH 41 NB

BROWN ROAD

376 378 380 382 384 386

454 456 458 460 462 464

128 130 132 134 136

USH 41 SB EXIT RAMP AT BROWN ROAD

390 392 USH 41 SB

470 472 USH 41 NB

2

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	EROSION CONTROL PLAN	SHEET 21	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 050204

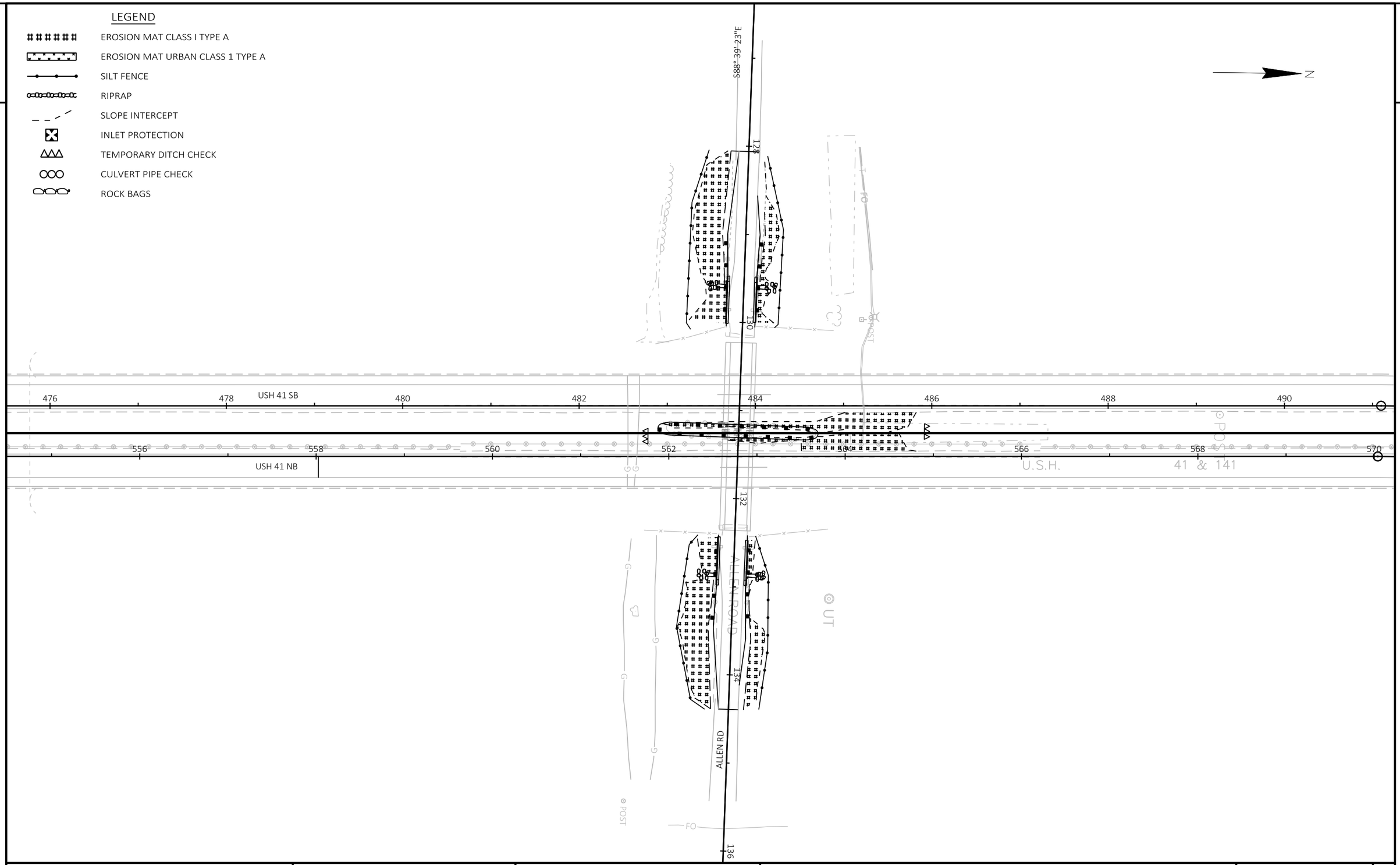
PLOT DATE : 1/24/2022 11:51 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

2

LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT URBAN CLASS 1 TYPE A
- SILT FENCE
- RIPRAP
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- ROCK BAGS



PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	EROSION CONTROL PLAN	SHEET 22	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 050207

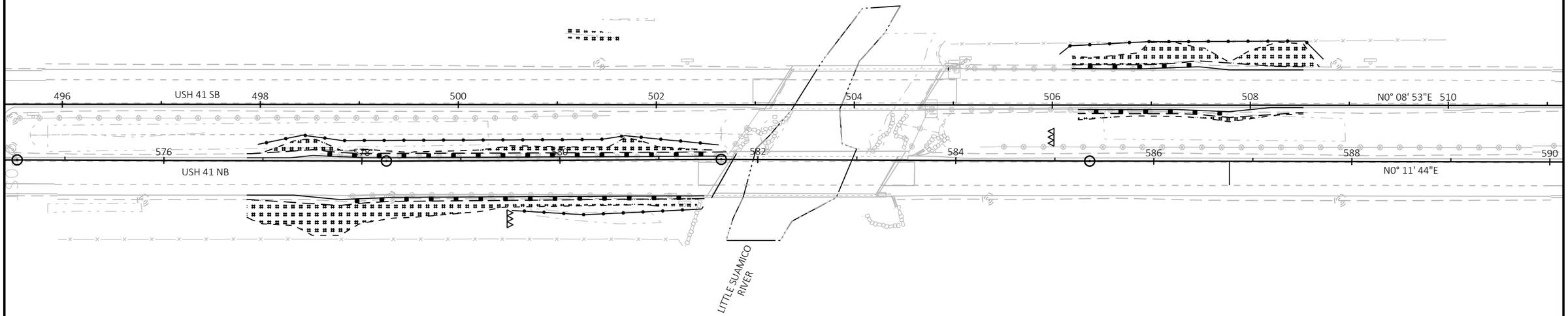
PLOT DATE : 1/24/2022 11:51 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT URBAN CLASS 1 TYPE A
- SILT FENCE
- RIPRAP
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- ROCK BAGS

N



PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	EROSION CONTROL PLAN	SHEET 23	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 050208

PLOT DATE : 3/16/2022 6:26 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

2

LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT URBAN CLASS 1 TYPE A
- SILT FENCE
- RIPRAP
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- ROCK BAGS

N

U.S.H. 41 & 141

USH 41 SB

USH 41 NB

C.T.H. 'S'

CTH S

FO

SIGN

532 534 536 538 540 542

612 614 616 618 620 622

128 130 132 134 136

578 580

656 658

2

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	EROSION CONTROL PLAN	SHEET 24	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 050209
PLOT DATE : 1/24/2022 11:51 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : ############
WISDOT/CADDS SHEET 44

LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT URBAN CLASS 1 TYPE A
- SILT FENCE
- RIPRAP
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- ROCK BAGS

N

5

5

634 636 638 640 642 644 646 648

714 716 718 720 722 724 726 728

128 130 132 134 136

U.S.H. 41 & 141

USH 41 SB

USH 41 NB

GEANO BEACH RD

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	EROSION CONTROL PLAN	SHEET 25	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 050214

PLOT DATE : 1/24/2022 11:51 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT URBAN CLASS 1 TYPE A
- SILT FENCE
- RIPRAP
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- ROCK BAGS

N

128

130

783+25.00

690 692 USH 41 SB 694 696 698 700 702 704

U.S.H. 41 & 141

768 770 772 774 776 778 780 782

USH 41 NB

132

B-42-71

SAMPSON RD.

134

768+00.00

CTH D (SAMPSON RD)

136

2

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	EROSION CONTROL PLAN	SHEET 26	E

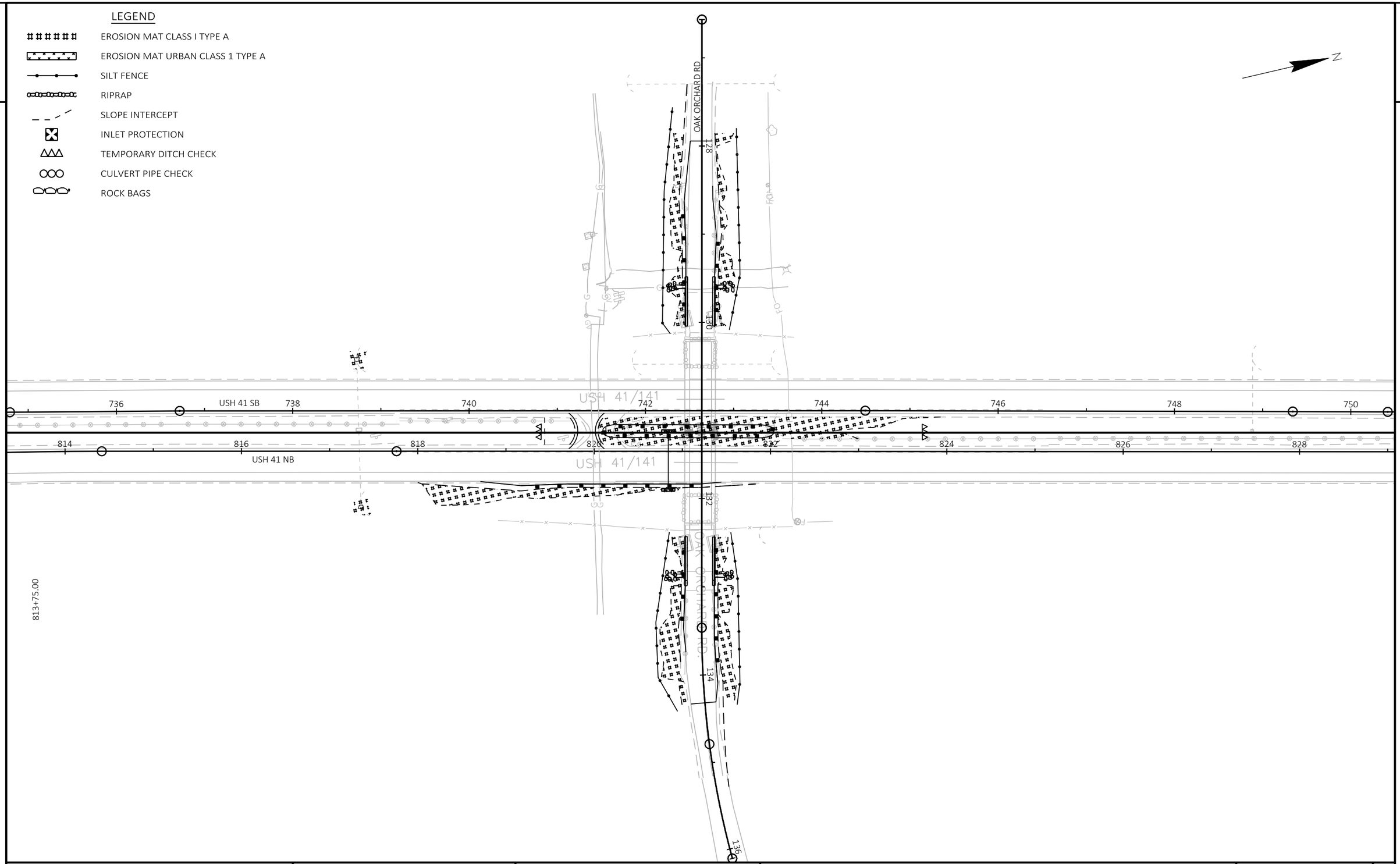
FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 050216

PLOT DATE : 1/24/2022 11:52 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- EROSION MAT CLASS I TYPE A
- EROSION MAT URBAN CLASS 1 TYPE A
- SILT FENCE
- RIPRAP
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- ROCK BAGS



2

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	EROSION CONTROL PLAN	SHEET 27	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - 050218

PLOT DATE : 1/24/2022 11:52 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

2

STAGE 1

TRAFFIC

1. USH 41 TRAFFIC IS REDUCED TO ONE LANE IN EITHER DIRECTION. TRAFFIC WILL BE MOVED TO THE OUTSIDE LANE AND OUTSIDE SHOULDER
2. SWEF RAMPS TO BE CLOSED AS NECESSARY TO COMPLETE WORK
3. SEE SPECIAL PROVISIONS FOR WORK TO BE COMPLETED DURING THE 2022 AND 2023 CONSTRUCTION SEASONS

CONSTRUCTION

1. MILLING AND LOWER LAYER PAVING OF INSIDE LANE AND SHOULDER
2. CONCRETE PAVEMENT REPLACEMENT, REPAIRS AND CONCRETE/ASPHALTIC BASE PATCHING OF INSIDE LANE
3. MEDIAN GUARDRAIL IMPROVEMENTS
4. MEDIAN DRAINAGE IMPROVEMENTS (EXCEPT SYSTEM AT STA. 463+80. SEE MAINLINE CLOSURE FOR CULVERT REPLACEMENT DETAIL)
5. MILLING AND LOWER LAYER PAVING OF SWEF RAMPS

STAGE 3

TRAFFIC

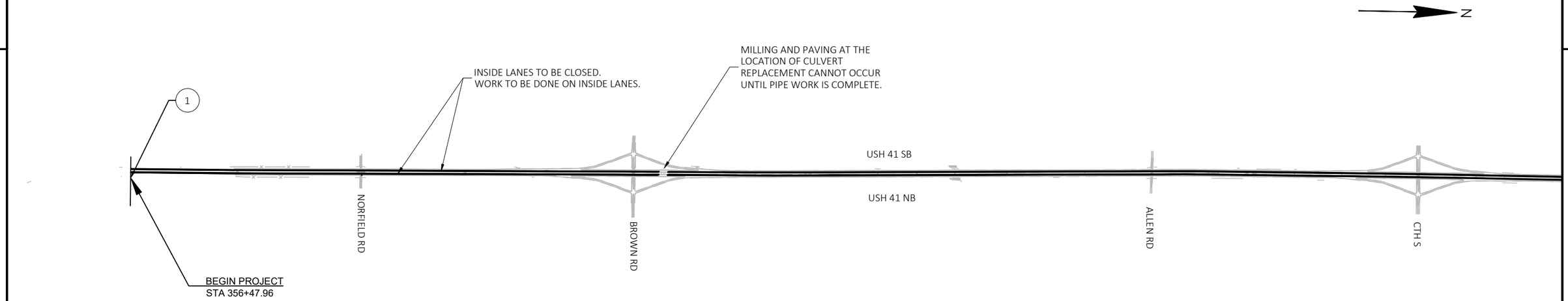
1. USH 41 TRAFFIC IS REDUCED TO ONE LANE IN EITHER DIRECTION. TRAFFIC WILL BE MOVED TO THE OUTSIDE LANE AND OUTSIDE SHOULDER
2. SWEF RAMPS TO BE CLOSED AS NECESSARY TO COMPLETE WORK
3. SEE SPECIAL PROVISIONS FOR WORK TO BE COMPLETED DURING THE 2022 AND 2023 CONSTRUCTION SEASONS

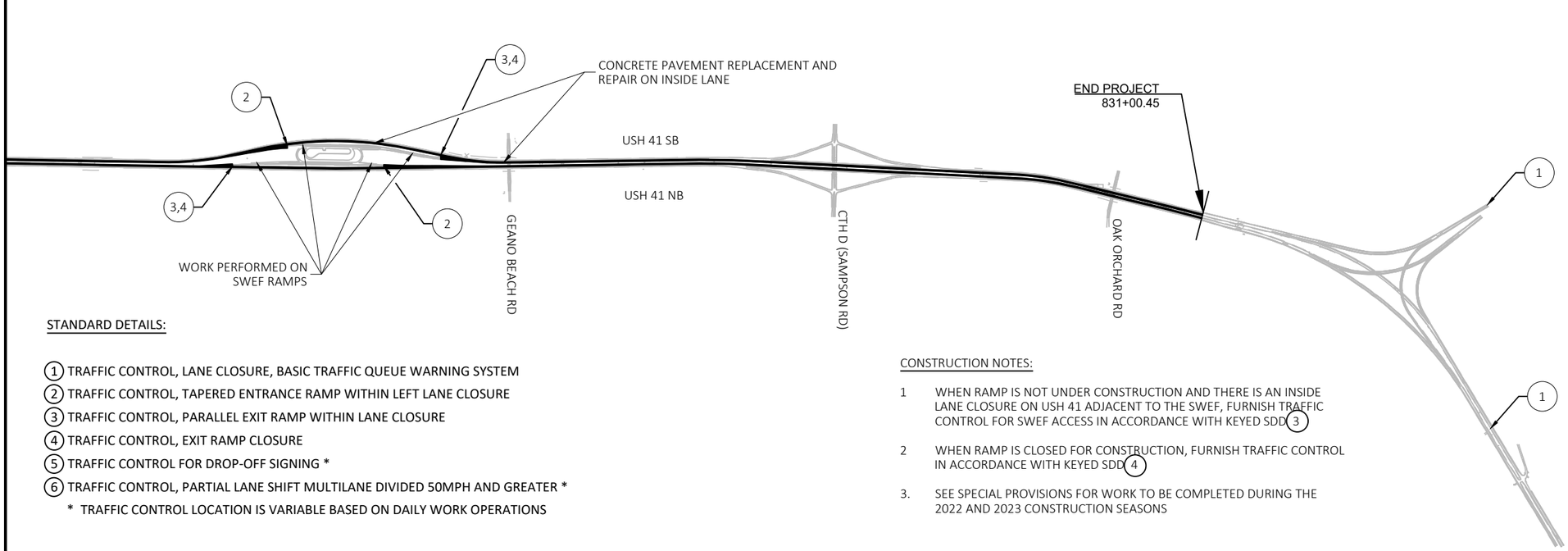
CONSTRUCTION

1. SURFACE LAYER PAVING OF INSIDE LANE AND SHOULDER
2. MEDIAN GUARDRAIL IMPROVEMENTS
3. MEDIAN DRAINAGE IMPROVEMENTS (EXCEPT SYSTEM AT STA. 463+80. SEE MAINLINE CLOSURE FOR CULVERT REPLACEMENT DETAIL)
4. SURFACE LAYER PAVING OF SWEF RAMPS

GENERAL NOTES FOR TRAFFIC CONTROL

1. ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.
2. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
3. SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION AND SPACING MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO MEET FIELD CONDITIONS.
4. ALL SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE COVERED OR REMOVED AS NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
5. LANE CLOSURES NOT TO EXCEED 5 MILES IN LENGTH
6. IF SEPARATE LANE CLOSURES IN THE SAME DIRECTION ARE LESS THAN 2 MILES APART FROM END TO BEGIN, THEY NEED TO BE LINKED TOGETHER FOR ONE CONTINUOUS CLOSURE.





STANDARD DETAILS:

(1) TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
(2) TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE
(3) TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
(4) TRAFFIC CONTROL, EXIT RAMP CLOSURE
(5) TRAFFIC CONTROL FOR DROP-OFF SIGNING *
(6) TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50MPH AND GREATER *
* TRAFFIC CONTROL LOCATION IS VARIABLE BASED ON DAILY WORK OPERATIONS

CONSTRUCTION NOTES:

1 WHEN RAMP IS NOT UNDER CONSTRUCTION AND THERE IS AN INSIDE LANE CLOSURE ON USH 41 ADJACENT TO THE SWEF, FURNISH TRAFFIC CONTROL FOR SWEF ACCESS IN ACCORDANCE WITH KEYED SDD (3)

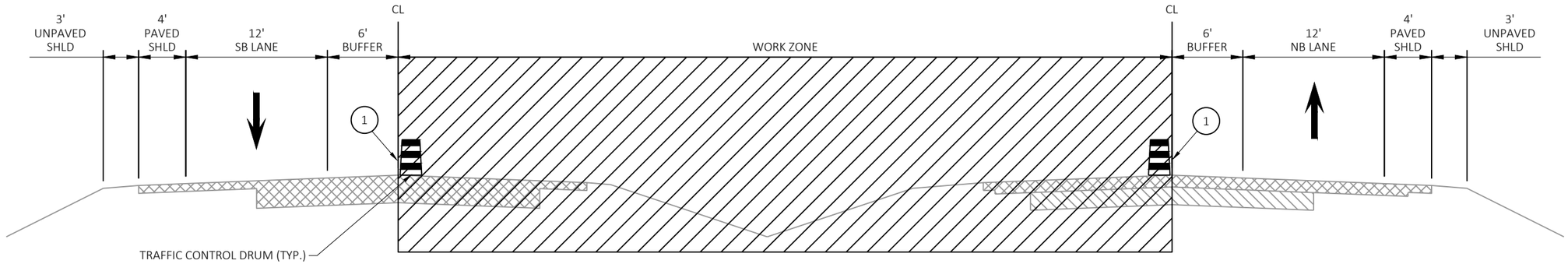
2 WHEN RAMP IS CLOSED FOR CONSTRUCTION, FURNISH TRAFFIC CONTROL IN ACCORDANCE WITH KEYED SDD (4)

3. SEE SPECIAL PROVISIONS FOR WORK TO BE COMPLETED DURING THE 2022 AND 2023 CONSTRUCTION SEASONS

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	TRAFFIC CONTROL: STAGES 1 & 3, OVERVIEW	SHEET 29	E

FILE NAME : G:\JT\USH 41 BROWN & OCONTO COUNTIES\CIVIL 3D\SHEETSPLAN\025100-TC_STAGE1.DWG
LAYOUT NAME - OVERVIEW
PLOT DATE : 3/18/2022 10:05 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:2000 FT

2



STAGES 1 & 3 TYPICAL SECTION

KEYED NOTES:

(1) DRUMS FOR USH 41 LANE CLOSURES MUST REMAIN ON THE CLOSED SIDE OF THE LANE LINE OF THE ROADWAY EXCEPT FOR WHEN ACTIVE WORK IN A GIVEN LOCATION IS OCCURING, AT WHICH TIME ASSOCIATED DRUMS MAY BE MOVED TO THE OTHER SIDE OF THE LANE LINE TO ACCOMPLISH THE GIVEN WORK AT THAT LOCATION. ONCE THE WORK HAS BEEN COMPLETED IN A GIVEN LOCATION, DRUMS ARE REQUIRED TO BE MOVED BACK TO THE WORK ZONE SIDE OF THE LANE LINE.

* SEE SPECIAL PROVISIONS FOR WORK TO BE COMPLETED DURING THE 2022 AND 2023 CONSTRUCTION SEASONS

2

STAGE 2

TRAFFIC

1. USH 41 TRAFFIC IS REDUCED TO ONE LANE IN EITHER DIRECTION. TRAFFIC WILL BE MOVED TO THE INSIDE LANE AND INSIDE SHOULDER. INTERCHANGE RAMPS TO BE CLOSED AS NECESSARY.
2. WHEN INTERCHANGE RAMPS ARE CLOSED, TRAFFIC ON THE CORRESPONDING SIDEROADS TO BE ROUTED TO OTHER NEARBY INTERCHANGES.
3. SEE SPECIAL PROVISIONS FOR WORK TO BE COMPLETED DURING THE 2022 AND 2023 CONSTRUCTION SEASONS

CONSTRUCTION

1. MILLING AND LOWER LAYER PAVING OF OUTSIDE LANE AND SHOULDER
2. CONCRETE PAVEMENT REPLACEMENT, REPAIRS AND CONCRETE/ASPHALTIC BASE PATCHING OF INSIDE LANE
3. OUTSIDE GUARDRAIL IMPROVEMENTS
4. OUTSIDE DRAINAGE IMPROVEMENTS (EXCEPT SYSTEM AT STA. 463+80. SEE MAINLINE CLOSURE FOR CULVERT REPLACEMENT DETAIL)
5. REPAIR FROST HEAVE SECTION ON BROWN RD SB EXIT RAMP
5. INTERCHANGE RAMP AND OVERPASSING ROADWAY WORK CAN BE COMPLETED

STAGE 4

TRAFFIC

1. USH 41 TRAFFIC IS REDUCED TO ONE LANE IN EITHER DIRECTION. TRAFFIC WILL BE MOVED TO THE INSIDE LANE AND INSIDE SHOULDER. INTERCHANGE RAMPS TO BE CLOSED AS NECESSARY
2. WHEN INTERCHANGE RAMPS ARE CLOSED, TRAFFIC ON THE CORRESPONDING SIDE ROADS TO BE ROUTED TO OTHER NEARBY INTERCHANGES
3. WORK ON OVERPASS APPROACHES TO BE COMPLETED UNDER FLAGGING
4. SEE SPECIAL PROVISIONS FOR WORK TO BE COMPLETED DURING THE 2022 AND 2023 CONSTRUCTION SEASONS

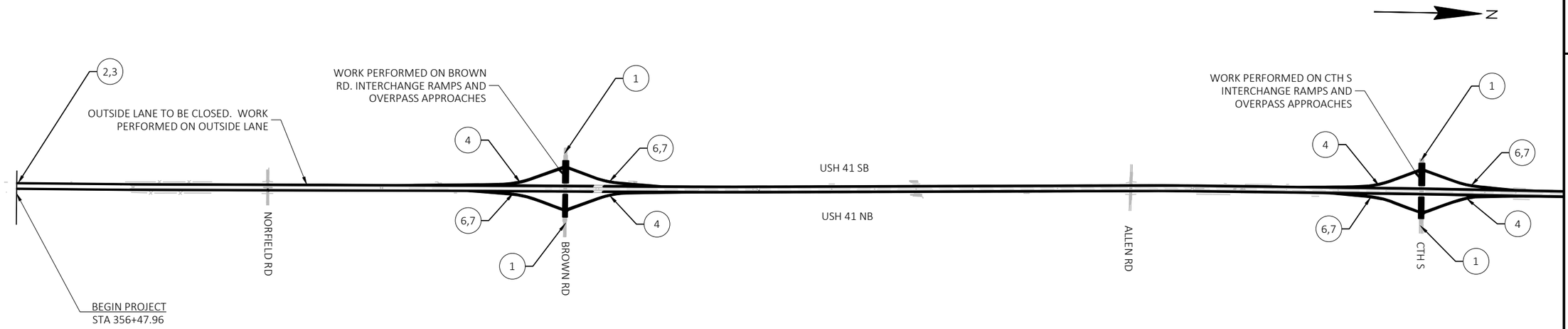
CONSTRUCTION

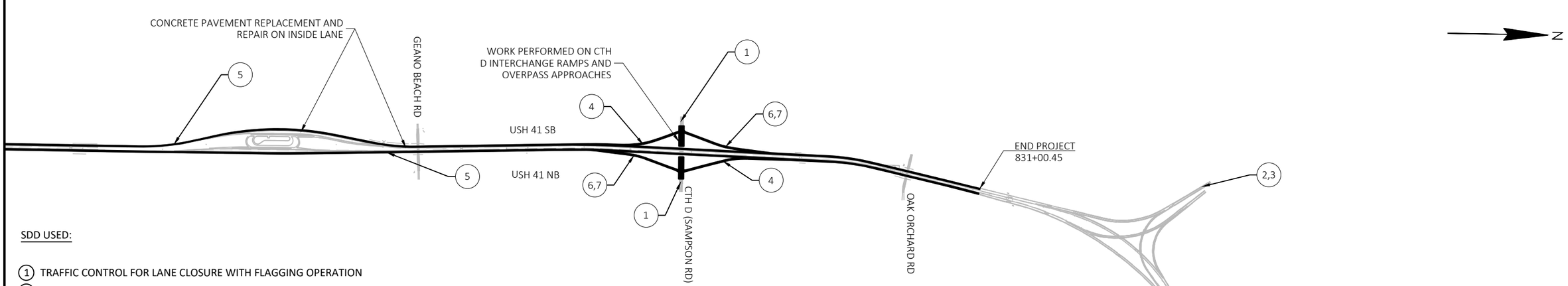
1. SURFACE LAYER PAVING OF OUTSIDE LANE AND SHOULDER
2. CONCRETE PAVEMENT REPLACEMENT AND REPAIR ON OUTSIDE LANE
3. OUTSIDE GUARDRAIL IMPROVEMENTS
4. OUTSIDE DRAINAGE IMPROVEMENTS (EXCEPT SYSTEM AT STA. 463+80. SEE MAINLINE CLOSURE FOR CULVERT REPLACEMENT DETAIL)
5. COMPLETE OVERPASSING ROADWAY AND INTERCHANGE RAMP WORK

GENERAL NOTES FOR TRAFFIC CONTROL

1. ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.
2. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
3. SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION AND SPACING MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO MEET FIELD CONDITIONS.
4. ALL SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE COVERED OR REMOVED AS NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
5. LANE CLOSURES NOT TO EXCEED 5 MILES IN LENGTH
6. IF SEPARATE LANE CLOSURES IN THE SAME DIRECTION ARE LESS THAN 2 MILES APART FROM END TO BEGIN, THEY NEED TO BE LINKED TOGETHER FOR ONE CONTINUOUS CLOSURE.
7. INTERCHANGE RAMP CLOSURES TO NOT EXCEED 3 DAYS. RAMP TO REMAIN OPEN WHEN NOT IN CONSTRUCTION.

2





SDD USED:

1. TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
2. TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
3. TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
4. TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN RIGHT LANE CLOSURE
5. TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE
6. TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
7. TRAFFIC CONTROL, EXIT RAMP CLOSURE
8. TRAFFIC CONTROL FOR DROP-OFF SIGNING *
9. TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50MPH AND GREATER *

* TRAFFIC CONTROL LOCATION IS VARIABLE BASED ON DAILY WORK OPERATIONS

CONSTRUCTION NOTES:

1 WHEN EXIT RAMPS ARE NOT UNDER CONSTRUCTION AND THERE IS AN ADJACENT INSIDE LANE CLOSURE ON USH 41, FURNISH TRAFFIC CONTROL FOR IN ACCORDANCE WITH KEYED SDD 6

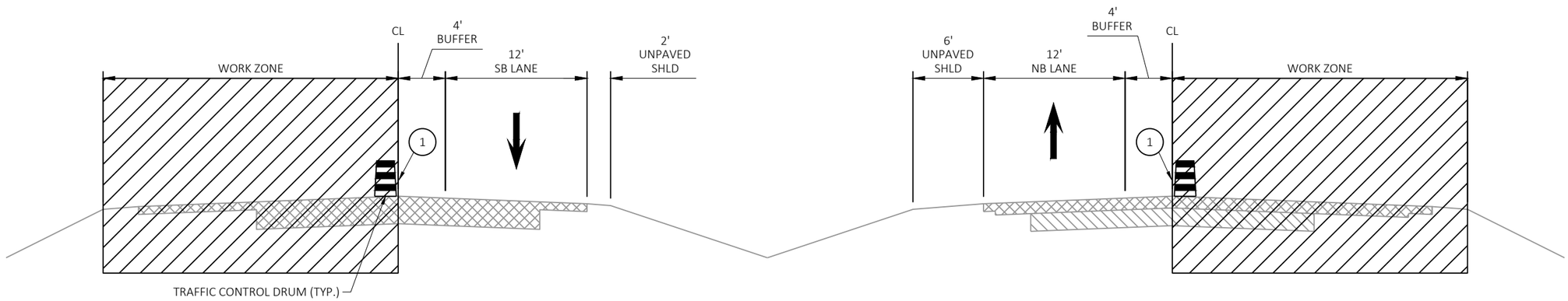
2 WHEN EXIT RAMP IS CLOSED FOR CONSTRUCTION, FURNISH TRAFFIC CONTROL IN ACCORDANCE WITH KEYED SDD 7

3 SEE SPECIAL PROVISIONS FOR WORK TO BE COMPLETED DURING THE 2022 AND 2023 CONSTRUCTION SEASONS

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	TRAFFIC CONTROL: STAGES 2 & 4, OVERVIEW	SHEET 32	E

FILE NAME : G:\JT\USH 41 BROWN & OCONTO COUNTIES\CIVIL 3D\SHEETSPLAN\025100-TC_STAGE2.DWG
LAYOUT NAME - OVERVIEW
PLOT DATE : 3/18/2022 10:04 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:2000 FT
WISDOT/CADDS SHEET 44

2



STAGE 2 & 4 TYPICAL SECTION

KEYED NOTES:

(1) DRUMS FOR USH 41 LANE CLOSURES MUST REMAIN ON THE CLOSED SIDE OF THE LANE LINE OF THE ROADWAY EXCEPT FOR WHEN ACTIVE WORK IN A GIVEN LOCATION IS OCCURING, AT WHICH TIME ASSOCIATED DRUMS MAY BE MOVED TO THE OTHER SIDE OF THE LANE LINE TO ACCOMPLISH THE GIVEN WORK AT THAT LOCATION. ONCE THE WORK HAS BEEN COMPLETED IN A GIVEN LOCATION, DRUMS ARE REQUIRED TO BE MOVED BACK TO THE WORK ZONE SIDE OF THE LANE LINE.

* SEE SPECIAL PROVISIONS FOR WORK TO BE COMPLETED DURING THE 2022 AND 2023 CONSTRUCTION SEASONS

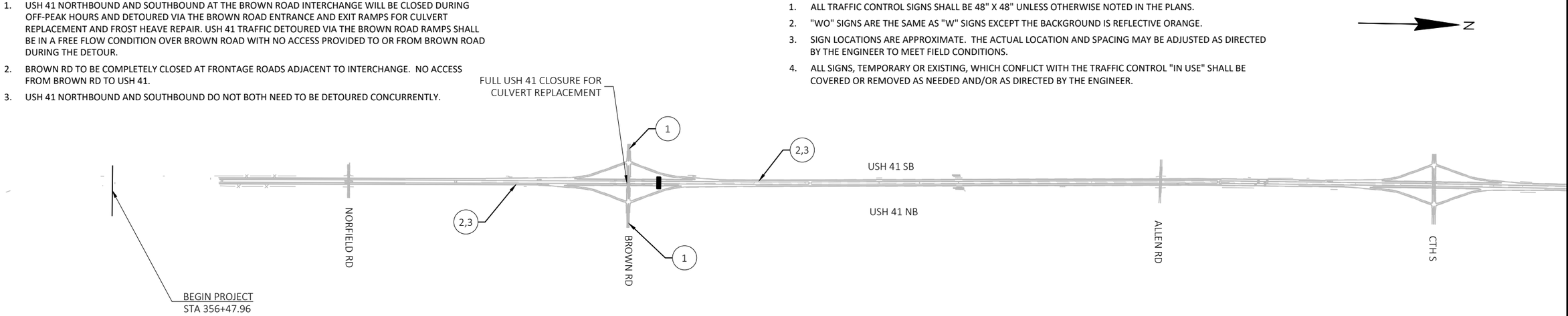
2

TRAFFIC

1. USH 41 NORTHBOUND AND SOUTHBOUND AT THE BROWN ROAD INTERCHANGE WILL BE CLOSED DURING OFF-PEAK HOURS AND DETOURED VIA THE BROWN ROAD ENTRANCE AND EXIT RAMPS FOR CULVERT REPLACEMENT AND FROST HEAVE REPAIR. USH 41 TRAFFIC DETOURED VIA THE BROWN ROAD RAMPS SHALL BE IN A FREE FLOW CONDITION OVER BROWN ROAD WITH NO ACCESS PROVIDED TO OR FROM BROWN ROAD DURING THE DETOUR.
2. BROWN RD TO BE COMPLETELY CLOSED AT FRONTAGE ROADS ADJACENT TO INTERCHANGE. NO ACCESS FROM BROWN RD TO USH 41.
3. USH 41 NORTHBOUND AND SOUTHBOUND DO NOT BOTH NEED TO BE DETOURED CONCURRENTLY.

GENERAL NOTES FOR TRAFFIC CONTROL

1. ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.
2. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.
3. SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION AND SPACING MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO MEET FIELD CONDITIONS.
4. ALL SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE COVERED OR REMOVED AS NEEDED AND/OR AS DIRECTED BY THE ENGINEER.

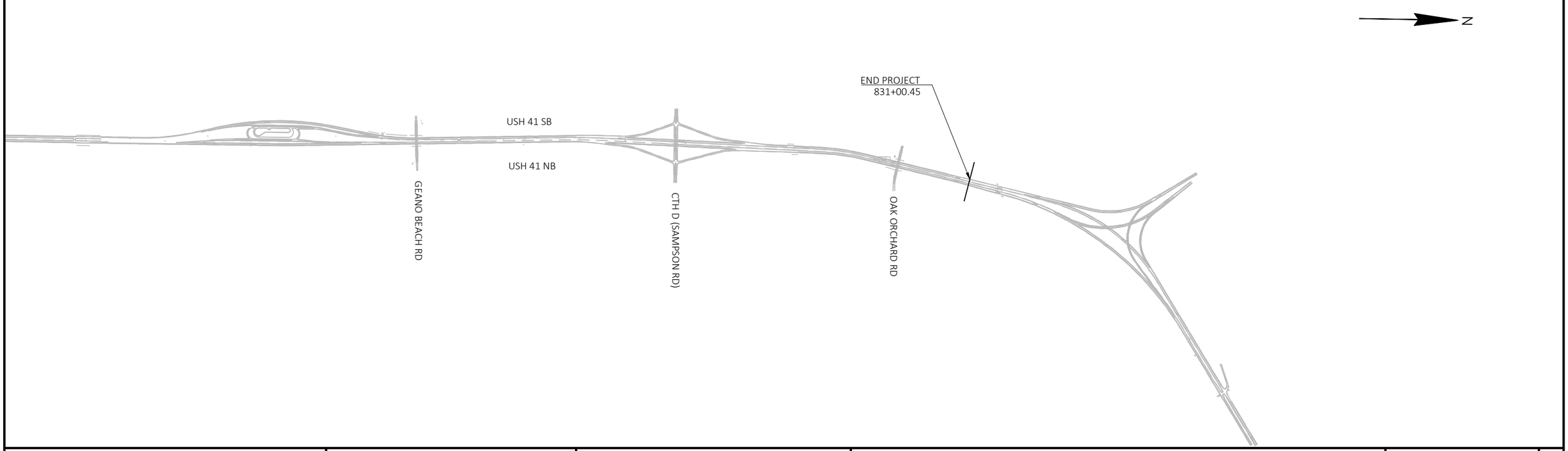


CONSTRUCTION

1. REPLACE EXISTING STORM SEWER PIPE
2. REPLACE EXISTING INLETS
3. REPLACE EXISTING CABLE GUARD

STANDARD DETAILS:

(1) BARRICADES AND SIGNS FOR MAINLINE CLOSURES
(2) BARRICADES AND SIGN FOR VARIOUS CLOSURES
(3) TRAFFIC CONTROL, TWO LANE FULL FREEWAY CLOSURE



PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN	TRAFFIC CONTROL: MAINLINE CLOSURE FOR CULVERT REPLACEMENT	SHEET 34	E

FILE NAME : G:\JT\USH 41 BROWN & OCONTO COUNTIES\CIVIL 3D\SHEETSPLAN\025100-TC_STAGE3.DWG
LAYOUT NAME - OVERVIEW
PLOT DATE : 3/18/2022 10:05 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:2000 FT

2

LEGEND

TYPE III BARRICADE

WORK AREA

DIRECTION OF TRAFFIC

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

STANDARD DETAILS:

1. BARRICADES AND SIGNS FOR MAINLINE CLOSURES
2. BARRICADES AND SIGN FOR VARIOUS CLOSURES
3. TRAFFIC CONTROL, TWO LANE FULL FREEWAY CLOSURE

N

PLACE PCMS WITH MESSAGE SOUTHBOUND USH 41 AHEAD.
SEE STSP ARTICLE FOR DETAILS

SEE NOTE 1

USH 41 MAINLINE CLOSURE FOR
CULVERT REPLACEMENT

PLACE PCMS AT CLOSEST INTERSECTION
SEE STSP ARTICLE FOR DETAILS

BP: 123+80.72

EP: 137+69.07

ROAD CLOSED
R11-2
48"X30"

ROAD CLOSED
R11-2
48"X30"

USH 41 SB

USH 41 NB

USH 41

BROWN RD

BROWN RD.

SIGN

PCMS

PLACE PCMS AT CLOSEST INTERSECTION
SEE STSP ARTICLE FOR DETAILS

SEE NOTE 2

SEE NOTE 3

SEE NOTE 1

PCMS

PLACE PCMS WITH MESSAGE NORTHBOUND USH 41 AHEAD
SEE STSP ARTICLE FOR DETAILS

CONSTRUCTION NOTES

1. REMOVE/COVER STOP CONDITION DURING FREE FLOW.
2. OMIT BARRICADES ON THE WEST SIDE OF THE RAMPS IF ONLY NORTHBOUND IS BEING DETOURED UP THE RAMPS.
3. OMIT BARRICADES ON THE EAST SIDE OF THE RAMPS IF ONLY SOUTHBOUND IS BEING DETOURED UP THE RAMPS.

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	TRAFFIC CONTROL: MAINLINE CLOSURE FOR CULVERT REPLACEMENT	SHEET 35	E

FILE NAME : G:\JT\USH 41 BROWN & OCONTO COUNTIES\CIVIL 3D\SHEETSPLAN\025100-TC_STAGE3.DWG
LAYOUT NAME - DETAIL

PLOT DATE : 3/18/2022 10:06 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

1150-78-71

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	7.000	7.000
0004	203.0220	Removing Structure (structure) 01. Culvert ID 42041016838	EACH	1.000	1.000
0006	204.0100	Removing Concrete Pavement	SY	250.000	250.000
0008	204.0105	Removing Pavement Butt Joints	SY	645.000	645.000
0010	204.0110	Removing Asphaltic Surface	SY	495.000	495.000
0012	204.0115	Removing Asphaltic Surface Butt Joints	SY	4,005.000	4,005.000
0014	204.0120	Removing Asphaltic Surface Milling	SY	441,700.000	441,700.000
0016	204.0150	Removing Curb & Gutter	LF	200.000	200.000
0018	204.0155	Removing Concrete Sidewalk	SY	120.000	120.000
0020	204.0165	Removing Guardrail	LF	7,610.000	7,610.000
0022	204.0170	Removing Fence	LF	430.000	430.000
0024	204.0190	Removing Surface Drains	EACH	5.000	5.000
0026	204.0220	Removing Inlets	EACH	16.000	16.000
0028	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	485.000	485.000
0030	204.0245	Removing Storm Sewer (size) 02. 24-Inch	LF	95.000	95.000
0032	204.0291.S	Abandoning Sewer	CY	5.000	5.000
0034	204.9060.S	Removing (item description) 01. Cable Barrier End Terminal Type 1	EACH	2.000	2.000
0036	205.0100	Excavation Common	CY	1,348.000	1,348.000
0038	208.0100	Borrow	CY	3,591.000	3,591.000
0040	208.1100	Select Borrow	CY	200.000	200.000
0042	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1150-78-71	LS	1.000	1.000
0044	213.0100	Finishing Roadway (project) 01. 1150-78-71	EACH	1.000	1.000
0046	305.0110	Base Aggregate Dense 3/4-Inch	TON	18,740.000	18,740.000
0048	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,760.000	1,760.000
0050	390.0201	Base Patching Asphaltic	TON	230.000	230.000
0052	390.0403	Base Patching Concrete Shes	SY	495.000	495.000
0054	416.0610	Drilled Tie Bars	EACH	35.000	35.000
0056	416.0620	Drilled Dowel Bars	EACH	944.000	944.000
0058	416.1010	Concrete Surface Drains	CY	38.000	38.000
0060	416.1715	Concrete Pavement Repair SHES	SY	260.000	260.000
0062	416.1725	Concrete Pavement Replacement SHES	SY	750.000	750.000
0064	450.4000	HMA Cold Weather Paving	TON	5,400.000	5,400.000
0066	455.0605	Tack Coat	GAL	62,105.000	62,105.000
0068	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0070	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0072	460.0115.S	HMA Pavement Test Strips Volumetrics	EACH	1.000	1.000
0074	460.0120.S	HMA Pavement Test Strips Density	EACH	1.000	1.000
0076	460.2000	Incentive Density HMA Pavement	DOL	35,870.000	35,870.000
0078	460.2005	Incentive Density PWL HMA Pavement	DOL	29,350.000	29,350.000
0080	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	39,495.000	39,495.000
0082	460.2010	Incentive Air Voids HMA Pavement	DOL	34,475.000	34,475.000
0084	460.5224	HMA Pavement 4 LT 58-28 S	TON	18,810.000	18,810.000
0086	460.6424	HMA Pavement 4 MT 58-28 H	TON	6,435.000	6,435.000
0088	460.7224	HMA Pavement 4 HT 58-28 S	TON	34,475.000	34,475.000
0090	460.8624	HMA Pavement 4 SMA 58-28 V	TON	31,340.000	31,340.000
0092	460.9000.S	Material Transfer Vehicle (project) 01. 1150-78-71	EACH	1.000	1.000
0094	465.0105	Asphaltic Surface	TON	610.000	610.000
0096	465.0110	Asphaltic Surface Patching	TON	100.000	100.000
0098	465.0400	Asphaltic Shoulder Rumble Strips	LF	188,080.000	188,080.000

1150-78-71

Line	Item	Item Description	Unit	Total	Qty
0100	520.8000	Concrete Collars for Pipe	EACH	13.000	13.000
0102	520.9700.S	Culvert Pipe Liners (size) 01. 18-Inch	LF	140.000	140.000
0104	520.9700.S	Culvert Pipe Liners (size) 02. 21-Inch	LF	95.000	95.000
0106	520.9700.S	Culvert Pipe Liners (size) 03. 72-Inch	LF	170.000	170.000
0108	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	4.000	4.000
0110	522.0472	Culvert Pipe Reinforced Concrete Class IV 72-Inch	LF	168.000	168.000
0112	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000
0114	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	1.000	1.000
0116	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	2.000	2.000
0118	522.1042	Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	EACH	2.000	2.000
0120	522.1072	Apron Endwalls for Culvert Pipe Reinforced Concrete 72-Inch	EACH	2.000	2.000
0122	531.2036	Drilling Shaft 36-Inch	LF	88.000	88.000
0124	531.6120	Foundation Two-Shaft Type FF-II (structure) 01. S-42-11	EACH	1.000	1.000
0126	532.6120	Truss Full Span 4-Chord Type II (structure) 01. S-42-11	EACH	1.000	1.000
0128	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	200.000	200.000
0130	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	1,215.000	1,215.000
0132	602.0405	Concrete Sidewalk 4-Inch	SF	1,050.000	1,050.000
0134	606.0200	Riprap Medium	CY	180.000	180.000
0136	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	92.000	92.000
0138	611.0430	Reconstructing Inlets	EACH	1.000	1.000
0140	611.3901	Inlets Median 1 Grate	EACH	4.000	4.000
0142	611.3903	Inlets Median 3 Grate	EACH	1.000	1.000
0144	611.9710	Salvaged Inlet Covers	EACH	7.000	7.000
0146	613.1200.S	Cable Barrier End Terminal Type 1	EACH	2.000	2.000
0148	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	14.000	14.000
0150	614.0230	Steel Thrie Beam	LF	1,100.000	1,100.000
0152	614.0400	Adjusting Steel Plate Beam Guard	LF	280.000	280.000
0154	614.2300	MGS Guardrail 3	LF	2,562.500	2,562.500
0156	614.2500	MGS Thrie Beam Transition	LF	985.000	985.000
0158	614.2610	MGS Guardrail Terminal EAT	EACH	31.000	31.000
0160	614.2620	MGS Guardrail Terminal Type 2	EACH	5.000	5.000
0162	616.0100	Fence Woven Wire (height) 01. 4-Feet	LF	430.000	430.000
0164	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1150-78-71	EACH	1.000	1.000
0166	619.1000	Mobilization	EACH	1.000	1.000
0168	624.0100	Water	MGAL	310.000	310.000
0170	625.0100	Topsoil	SY	23,880.000	23,880.000
0172	628.1504	Silt Fence	LF	7,675.000	7,675.000
0174	628.1520	Silt Fence Maintenance	LF	15,350.000	15,350.000
0176	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0178	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0180	628.2002	Erosion Mat Class I Type A	SY	23,095.000	23,095.000
0182	628.2006	Erosion Mat Urban Class I Type A	SY	780.000	780.000
0184	628.7005	Inlet Protection Type A	EACH	8.000	8.000
0186	628.7504	Temporary Ditch Checks	LF	450.000	450.000
0188	628.7555	Culvert Pipe Checks	EACH	100.000	100.000
0190	628.7570	Rock Bags	EACH	55.000	55.000
0192	629.0210	Fertilizer Type B	CWT	17.000	17.000
0194	630.0120	Seeding Mixture No. 20	LB	675.000	675.000
0196	630.0500	Seed Water	MGAL	555.000	555.000

1150-78-71

Line	Item	Item Description	Unit	Total	Qty
0198	637.1220	Signs Type I Reflective SH	SF	289.000	289.000
0200	638.2102	Moving Signs Type II	EACH	29.000	29.000
0202	638.2601	Removing Signs Type I	EACH	2.000	2.000
0204	638.3100	Removing Structural Steel Sign Supports	EACH	2.000	2.000
0206	638.4000	Moving Small Sign Supports	EACH	29.000	29.000
0208	642.5001	Field Office Type B	EACH	1.000	1.000
0210	643.0300	Traffic Control Drums	DAY	299,835.000	299,835.000
0212	643.0420	Traffic Control Barricades Type III	DAY	7,825.000	7,825.000
0214	643.0705	Traffic Control Warning Lights Type A	DAY	11,290.000	11,290.000
0216	643.0715	Traffic Control Warning Lights Type C	DAY	22,910.000	22,910.000
0218	643.0800	Traffic Control Arrow Boards	DAY	570.000	570.000
0220	643.0900	Traffic Control Signs	DAY	21,390.000	21,390.000
0222	643.0910	Traffic Control Covering Signs Type I	EACH	20.000	20.000
0224	643.0920	Traffic Control Covering Signs Type II	EACH	30.000	30.000
0226	643.1050	Traffic Control Signs PCMS	DAY	450.000	450.000
0228	643.1205.S	Basic Traffic Queue Warning System	DAY	570.000	570.000
0230	643.5000	Traffic Control	EACH	1.000	1.000
0232	645.0120	Geotextile Type HR	SY	325.000	325.000
0234	646.1020	Marking Line Epoxy 4-Inch	LF	21,815.000	21,815.000
0236	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	219,765.000	219,765.000
0238	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	31,025.000	31,025.000
0240	646.3020	Marking Line Epoxy 8-Inch	LF	610.000	610.000
0242	646.3555	Marking Line Grooved Contrast Permanent Tape 8-Inch	LF	16,730.000	16,730.000
0244	646.5020	Marking Arrow Epoxy	EACH	11.000	11.000
0246	646.5420	Marking Aerial Enforcement Bar Epoxy	EACH	56.000	56.000
0248	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	45,000.000	45,000.000
0250	646.7220	Marking Chevron Epoxy 24-Inch	LF	705.000	705.000
0252	649.0105	Temporary Marking Line Paint 4-Inch	LF	442,540.000	442,540.000
0254	650.4000	Construction Staking Storm Sewer	EACH	5.000	5.000
0256	650.5000	Construction Staking Base	LF	2,623.000	2,623.000
0258	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,363.000	1,363.000
0260	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0262	650.8000	Construction Staking Resurfacing Reference	LF	97,356.000	97,356.000
0264	650.9910	Construction Staking Supplemental Control (project) 01. 1150-78-71	LS	1.000	1.000
0266	650.9920	Construction Staking Slope Stakes	LF	11,227.000	11,227.000
0268	690.0150	Sawing Asphalt	LF	1,670.000	1,670.000
0270	690.0250	Sawing Concrete	LF	5,800.000	5,800.000
0272	740.0440	Incentive IRI Ride	DOL	158,700.000	158,700.000
0274	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,100.000	2,100.000
0276	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	5,760.000	5,760.000
0278	SPV.0035	Special 01. Foundation Backfill	CY	640.000	640.000
0280	SPV.0060	Special 01. Resetting Pipe Ends	EACH	3.000	3.000
0282	SPV.0090	Special 01. Salvage and Reinstall High Tension Cable Barrier	LF	1,375.000	1,375.000
0284	SPV.0090	Special 02. Grading and Shaping for Ditch	LF	115.000	115.000

3

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	REMARKS
428+30	USH 41 SB, LT	1	8 LF (24" AEW ONLY)
596+95	USH 41 NB, RT	1	8 LF (30" AEW ONLY)
701+19	USH 41 NB, LT/RT	2	2 X 8 LF (42" AEW'S ONLY)
817+34	USH 41 NB, LT/RT	2	2 X 8 LF (36" AEW'S ONLY)
822+05	USH 41 NB, LT	1	6" CPCPE
TOTAL		7	

REMOVING ANCILLARY CONCRETE

STATION		STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	REMARKS
129+88	-	130+13	CTH S	50	30	CTH S MEDIAN (WEST SIDE)
132+32	-	132+57	CTH S	50	30	CTH S MEDIAN (EAST SIDE)
129+90	-	130+15	CTH D	50	30	CTH D MEDIAN (WEST SIDE)
132+59	-	132+33	CTH D	50	30	CTH D MEDIAN (EAST SIDE)
TOTALS				200	120	

REMOVING SURFACE DRAINS

STATION	LOCATION	204.0190 EACH
129+94	NORFIELD RD, LT	1
129+93	NORFIELD RD, RT	1
130+00	BROWN RD, LT	1
130+04	BROWN RD, RT	1
132+41	CTH S, RT	1
TOTAL		5

REMOVING ASPHALTIC SURFACE

STATION	STATION	LOCATION	204.0110 SY
USH 41			
819+91		USH 41 NB, LT	170
		USH 41 TOTAL	170
SIDEROADS			
129+53	- 130+04	NORFIELD RD	25
132+42	- 132+93	NORFIELD RD	25
129+63	- 130+13	BROWN RD	15
132+31	- 132+51	BROWN RD	5
132+31	- 132+81	BROWN RD	15
129+53	- 130+00	ALLEN RD	25
132+44	- 132+94	ALLEN RD	25
129+60	- 130+14	CTH S	20
132+32	- 132+86	CTH S	20
129+48	- 130+01	GEANO BEACH RD	25
132+41	- 132+91	GEANO BEACH RD	25
129+62	- 130+15	CTH D	20
132+33	- 132+87	CTH D	30
129+50	- 130+04	OAK ORCHARD RD	25
132+43	- 132+97	OAK ORCHARD RD	25
		SIDEROAD TOTAL	325
		TOTAL	495

REMOVING GUARDRAIL

STATION		STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	REMARKS
401+84	-	403+34	USH 41 NB	350	MEDIAN BULLNOSE SYSTEM
456+93	-	458+68	USH 41 NB	425	MEDIAN BULLNOSE SYSTEM
562+03	-	563+53	USH 41 NB	350	MEDIAN BULLNOSE SYSTEM
577+51	-	581+63	USH 41 NB	410	BEAM GUARD SYSTEM (LT)
577+78	-	581+63	USH 41 NB	360	BEAM GUARD SYSTEM (RT)
615+80	-	617+67	USH 41 NB	425	MEDIAN BULLNOSE SYSTEM
722+91	-	724+41	USH 41 NB	350	MEDIAN BULLNOSE SYSTEM
775+19	-	776+94	USH 41 NB	425	MEDIAN BULLNOSE SYSTEM
820+26	-	821+88	USH 41 NB	350	MEDIAN BULLNOSE SYSTEM
506+20	-	507+40	USH 41 SB	125	BEAM GUARD SYSTEM (LT)
506+26	-	507+17	USH 41 SB	95	BEAM GUARD SYSTEM (RT)
577+17	-	579+97	USH 41 SB	280	BEAM GUARD SYSTEM (LT)
637+64	-	641+43	USH 41 SB	380	BEAM GUARD SYSTEM (RT)
637+70	-	639+74	USH 41 SB	205	BEAM GUARD SYSTEM (LT)
129+00	-	133+46	NORFIELD	385	RAIL @ EACH BRIDGE CORNER ON NORFIELD RD
129+11	-	133+35	BROWN	315	RAIL @ SW & NE BRIDGE CORNERS ON BROWN RD
129+00	-	133+71	ALLEN	330	RAIL @ EACH BRIDGE CORNER ON ALLEN RD
128+61	-	133+85	CTH S	305	RAIL @ SW & NE BRIDGE CORNERS ON CTH S
128+61	-	134+06	GEANO BEACH	630	RAIL @ EACH BRIDGE CORNER ON GEANO BEACH RD
129+00	-	134+09	CTH D	485	RAIL @ SW, NE & NW BRIDGE CORNERS ON CTH D
128+63	-	134+10	OAK ORCHARD	630	RAIL @ EACH BRIDGE CORNER ON OAK ORCHARD RD
TOTAL				7,610	

REMOVING PAVEMENT BUTT JOINTS

STATION	LOCATION	204.0105 SY	REMARKS
609+12	USH 41 SB	445	WEIGH SCALE SB ON-RAMP
634+58	USH 41 SB	200	WEIGH SCALE SB OFF-RAMP
TOTAL		645	

REMOVING PAVEMENT

STATION	LOCATION	204.0100 SY	REMARKS
463+77	USH 41 NB	250	EXISTING CONCRETE PAVEMENT ON NB SIDE ONLY
TOTAL		250	

ABANDONING SEWER

STATION	LOCATION	204.0291.S CY
355+26	USH 41 SB	5
TOTAL		5

3

REMOVING STORM SEWER

STATION	LOCATION	204.0220 INLETS EACH	204.0245.01 STORM SEWER 12-IN LF	204.0245.02 STORM SEWER 24-IN LF	REMARKS
463+53	USH 41 NB	1	---	30	EXISTING STORM SEWER IN MEDIAN
464+02	USH 41 NB	1	---	21	EXISTING STORM SEWER IN MEDIAN
799+59	USH 41 NB	1	---	22	EXISTING STORM SEWER IN MEDIAN
800+01	USH 41 NB	1	---	22	EXISTING STORM SEWER IN MEDIAN
355+26	USH 41 SB	1	---	---	EXISTING INLET IN MEDIAN
555+26	USH 41 SB	1	---	---	EXISTING INLET IN MEDIAN
132+40	BROWN RD, LT	1	92	---	EXISTING SLOPE DRAIN
132+40	BROWN RD, RT	1	92	---	EXISTING SLOPE DRAIN
132+55	GEANO BEACH RD, LT	1	91	---	EXISTING SLOPE DRAIN
132+55	GEANO BEACH RD, RT	1	90	---	EXISTING SLOPE DRAIN
132+41	CTH D, LT	1	20	---	EXISTING SLOPE DRAIN
132+42	CTH D, RT	1	20	---	EXISTING SLOPE DRAIN
129+97	OAK ORCHARD, LT	1	20	---	EXISTING SLOPE DRAIN
129+97	OAK ORCHARD, RT	1	20	---	EXISTING SLOPE DRAIN
132+49	OAK ORCHARD, LT	1	20	---	EXISTING SLOPE DRAIN
132+49	OAK ORCHARD, RT	1	20	---	EXISTING SLOPE DRAIN
TOTALS		16	485	95	

REMOVING OLD STRUCTURE 01. 42041016838

STATION	LOCATION	203.0220 EACH	REMARKS
463+77	USH 41 NB & SB	1	72-INCH CPRC X 185 LF (PREVIOUSLY LINED)
TOTAL		1	

REMOVING ASPHALTIC SURFACE MILLING

STATION		STATION	LOCATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	REMARKS
USH 41 NB						
356+48	-	406+50	NB	195	20,909	BUTT JOINT AT PROJECT LIMIT
406+50	-	456+50	NB	---	21,360	
456+50	-	506+50	NB	260	30,772	BROWN RD RAMPS
506+50	-	556+50	NB	---	21,112	
556+50	-	606+50	NB	390	24,966	B-42-19 BUTT JOINT & CTH S OFF-RAMP
606+50	-	656+50	NB	130	25,639	CTH S ON-RAMP
656+50	-	706+50	NB	200	23,882	BUTT JOINTS BY WEIGH SCALE
706+50	-	756+50	NB	---	21,265	
756+50	-	806+50	NB	260	29,799	SAMPSON RD (CTH D) RAMPS
806+50	-	831+00	NB	195	10,136	BUTT JOINT AT PROJECT LIMIT
		USH 41 NB TOTALS		1,630	229,840	
USH 41 SB						
296+37	-	346+50	SB	190	20,954	BUTT JOINT AT PROJECT LIMIT
346+50	-	396+50	SB	260	30,726	BROWN RD RAMPS
396+50	-	446+50	SB	---	21,112	
446+50	-	496+50	SB	---	21,112	
496+50	-	546+50	SB	390	24,999	B-42-19 BUTT JOINT & CTH S ON-RAMP
546+50	-	586+75	SB	130	21,194	CTH S OFF-RAMP
646+46	-	696+50	SB	130	25,110	SAMPSON RD (CTH D) ON-RAMP
696+50	-	746+50	SB	130	25,260	SAMPSON RD (CTH D) OFF-RAMP
746+50	-	752+62	SB	190	2,372	BUTT JOINT AT PROJECT LIMIT
		USH 41 SB TOTALS		1,420	192,839	
SIDEROADS						
128+10	-	134+37	NORFIELD	98	915	NORFIELD RD
126+06	-	136+40	BROWN	178	4,972	BROWN RD
128+25	-	134+39	ALLEN	98	884	ALLEN RD
126+06	-	136+26	CTH S	192	4,819	CTH S
127+38	-	135+00	GEANO	98	1,242	GEANO BEACH RD
126+20	-	136+72	CTH D	192	5,249	SAMPSON RD (CTH D)
127+94	-	134+32	OAK	99	940	OAK ORCHARD RD
		SIDEROAD TOTALS		955	19,021	
TOTALS				4,005	441,700	

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW
DIVISION 1											
BNBG_USH 41_ALLEN RD	560+50/564+50		2	0	0	2	28	35	-33	0	33
BNBG_USH 41_BROWN RD	454+67.569/460+50		2	0	0	2	291	364	-362	0	362
BNBG_USH 41_CTH S	614+00/619+00		4	0	0	4	92	115	-111	0	111
BNBG_USH 41_GEANO BEACH RD	720+65.277/726+00		1	0	0	1	72	90	-89	0	89
BNBG_USH 41_NORFIELD RD	400+50/404+50		0	0	0	0	55	69	-69	0	69
BNBG_USH 41_OAK ORCHARD RD	819+50/823+13.893		81	0	0	81	32	40	41	41	0
BNBG_USH 41_SAMPSON RD	773+00/778+50		0	0	0	0	113	141	-141	0	141
DIVISION 1 SUBTOTAL			90	0	0	90	683	854	-764	41	805
DIVISION 2											
OVERPASS_ALLEN RD_EAST	132+46.801/134+39.18		22	0	0	22	234	293	-271	0	271
OVERPASS_ALLEN RD_WEST	128+06/129+99.393		25	0	0	25	289	361	-336	0	336
OVERPASS_BROWN RD_EAST	132+50/134+48.057		43	0	0	43	82	103	-60	0	60
OVERPASS_BROWN RD_WEST	128+30.47/130+13.395		8	0	0	8	288	360	-352	0	352
OVERPASS_CTH D_EAST	132+35.4/134+90.461		32	0	0	32	517	646	-614	0	614
OVERPASS_CTH D_WEST	128+24.241/130+15.337		9	0	0	9	81	101	-92	0	92
OVERPASS_CTH S_EAST	132+32.121/134+43.493		11	0	0	11	39	49	-38	0	38
OVERPASS_CTH S_WEST	127+91.976/130+13.417		19	0	0	19	20	25	-6	0	6
OVERPASS_GEANO BEACH RD_EAST	132+40.979/134+91.781		22	0	0	22	163	204	-182	0	182
OVERPASS_GEANO BEACH RD_WEST	127+28.093/130+00.527		32	0	0	32	123	154	-122	0	122
OVERPASS_NORFIELD RD_EAST	132+43/134+36.715		23	0	0	23	148	185	-162	0	162
OVERPASS_NORFIELD RD_WEST	128+09.921/130+00		42	0	0	42	58	73	-31	0	31
OVERPASS_OAK ORCHARD RD_EAST	132+43.456/134+31.59		16	0	0	16	73	91	-75	0	75
OVERPASS_OAK ORCHARD RD_WEST	127+85.521/130+04.059		32	0	0	32	33	41	-9	0	9
DIVISION 2 SUBTOTAL			336	0	0	336	2,148	2,685	-2,349	0	2,349
DIVISION 3											
USH 41_STA 463+77		72" PIPE CROSSING	563	0	0	563	0	0	563	563	0
USH 41 SB_STA 470+00		FROST HEAVE REPAIR	267	0	0	267	0	0	267	267	0
USH 41 SB_STA 577+50	576+84.561/580+72.967		4	0	0	4	77	96	-92	0	92
USH 41 SB_STA 637+50	637+50/641+43.433		41	0	0	41	88	110	-69	0	69
USH 41_NORTH BRIDGE APPROACH	584+00.101/587+50.956		16	0	0	16	83	103	-87	0	87
USH 41_OAK ORCHARD RD	818+50/821+50		0	0	0	0	53	66	-66	0	66
USH 41_SOUTH BRIDGE APPROACH	577+00/581+53.633		31	0	0	31	123	154	-123	0	123
DIVISION 3 SUBTOTAL			922	0	0	922	424	529	392	830	437
GRAND TOTAL			1,348	0	0	1,348	3,255	4,068	-2,720	871	3,591
TOTAL COMMON EXC			1,348								

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR

(13) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

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BACKFILL SUMMARY

STATION	LOCATION	208.1100 SELECT BORROW CY	SPV.0035.01 FOUNDATION BACKFILL CY	REMARKS
STA 463+77	USH 41	---	640	72" PIPE CROSSING
STA 470+00	USH 41 SB, LT	200	---	FROST HEAVE REPAIR ON BROWN RD OFF-RAMP
TOTALS		200	640	

BASE PATCHING

STATION	TO	STATION	LOCATION	390.0201 BASE PATCHING ASPHALTIC TON	390.0403 BASE PATCHING CONCRETE SHES SY	416.0620 DRILLED DOWEL BARS * EACH	690.0250 SAWING CONCRETE * LF	REMARKS
USH 41 NB								
356+48	-	403+00	NB	---	240	32	990	SEE CONSTRUCTION DETAIL & SDD 13C14
403+00	-	457+00	NB	---	50	32	200	SEE CONSTRUCTION DETAIL & SDD 13C14
457+00	-	563+00	NB	---	50	32	200	SEE CONSTRUCTION DETAIL & SDD 13C14
563+00	-	617+00	NB	---	15	32	65	SEE CONSTRUCTION DETAIL & SDD 13C14
617+00	-	724+00	NB	---	80	32	330	SEE CONSTRUCTION DETAIL & SDD 13C14
724+00	-	776+00	NB	---	---	---	---	
776+00	-	821+00	NB	---	---	---	---	
821+00	-	831+00	NB	---	15	32	65	SEE CONSTRUCTION DETAIL & SDD 13C14
UNDISTRIBUTED				---	45	32	185	SEE CONSTRUCTION DETAIL & SDD 13C14
USH 41 NB TOTALS				0	495	224	2,035	
USH 41 SB								
296+37	-	323+00	SB	10	---	---	60	SEE CONSTRUCTION DETAIL
323+00	-	379+00	SB	75	---	---	465	SEE CONSTRUCTION DETAIL
379+00	-	484+00	SB	---	---	---	---	
484+00	-	538+00	SB	20	---	---	120	SEE CONSTRUCTION DETAIL
538+00	-	645+00	SB	25	---	---	165	SEE CONSTRUCTION DETAIL
645+00	-	697+00	SB	30	---	---	200	SEE CONSTRUCTION DETAIL
697+00	-	742+00	SB	25	---	---	180	SEE CONSTRUCTION DETAIL
742+00	-	752+62	SB	20	---	---	120	SEE CONSTRUCTION DETAIL
UNDISTRIBUTED				25	---	---	135	SEE CONSTRUCTION DETAIL
USH 41 SB TOTALS				230	0	0	1,445	
TOTALS				230	495	224	3,480	

* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

BASE AGGREGATE SUMMARY

STATION		STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	624.0100 WATER MGAL
USH 41 NB						
356+48	-	406+50	NB	---	1,030	15.0
406+50	-	456+50	NB	---	1030	15.0
456+50	-	506+50	NB	250	1030	15.0
506+50	-	556+50	NB	---	1030	15.0
556+50	-	606+50	NB	---	1210	18.0
606+50	-	656+50	NB	---	1030	15.0
656+50	-	706+50	NB	---	1030	15.0
706+50	-	756+50	NB	---	1030	15.0
756+50	-	806+50	NB	---	1030	15.0
806+50	-	831+00	NB	---	540	8.0
UNDISTRIBUTED				---	1000	22.0
USH 41 NB TOTALS				250	10,990	168
USH 41 SB						
296+37	-	346+50	SB	---	640	10.0
346+50	-	396+50	SB	520	640	10.0
396+50	-	446+50	SB	---	640	10.0
446+50	-	496+50	SB	---	640	10.0
496+50	-	546+50	SB	---	790	12.0
546+50	-	586+75	SB	---	760	11.0
586+75		646+46	SB	---	1290	19.0
646+46	-	696+50	SB	---	640	10.0
696+50	-	746+50	SB	---	640	10.0
746+50	-	752+62	SB	---	80	2.0
UNDISTRIBUTED				---	680	16.0
USH 41 SB TOTALS				520	7,440	120
SIDEROADS						
128+10	-	134+37	NORFIELD	190	40	4.0
126+06	-	136+40	BROWN	80	20	1.0
128+25	-	134+39	ALLEN	150	30	3.0
126+06	-	136+26	CTH S	60	30	1.0
127+38	-	135+00	GEANO	140	60	3.0
126+20	-	136+72	CTH D	90	40	2.0
127+94	-	134+32	OAK	150	60	3.0
UNDISTRIBUTED				130	30	5.0
SIDEROAD TOTALS				990	310	22
TOTALS				1,760	18,740	310.0

PREPARE FOUNDATION FOR ASPHALTIC PAVING 01. 1150-78-71

STATION		STATION	LOCATION	211.0100 LS
356+47.96	-	831+00.45	USH 41 NB	
296+37.41	-	752+63.70	USH 41 SB	
128+09.75	-	134+36.89	NORFIELD RD	
126+05.94	-	136+40.41	BROWN RD	
128+06.00	-	134+39.18	ALLEN RD	
126+05.89	-	136+25.93	CTH S	
127+38.47	-	134+99.33	GEANO BEACH RD	1
126+19.62	-	136+71.56	CTH D	
127+94.40	-	134+31.59	OAK ORCHARD RD	
INTERCHANGE RAMPS AT USH 41 AND BROWN ROAD				
INTERCHANGE RAMPS AT USH 41 AND CTH S				
INTERCHANGE RAMPS AT USH 41 AND CTH D				
			TOTAL	1

CONCRETE SURFACE DRAINS

STATION	LOCATION	416.1010 CONCRETE SURFACE DRAINS CY	606.0200 RIPRAP MEDIUM * CY	645.0125 GEOTEXTILE FABRIC TYPE HR * SY	REMARKS
SIDEROADS					
129+53	NORFIELD RD, LT/RT	3	10	20	SEE SDD 8D02
132+86	NORFIELD RD, LT/RT	3	10	20	SEE SDD 8D02
129+70	BROWN RD, RT	2	5	10	SEE SDD 8D02
132+39	BROWN RD, RT	2	5	10	SEE SDD 8D02
132+75	BROWN RD, LT	2	5	10	SEE SDD 8D02
129+60	ALLEN RD, LT/RT	3	10	20	SEE SDD 8D02
132+88	ALLEN RD, LT/RT	3	10	20	SEE SDD 8D02
129+70	CTH S, RT	2	5	10	SEE SDD 8D02
132+76	CTH S, LT	2	5	10	SEE SDD 8D02
129+58	GEANO BEACH RD, LT/RT	3	10	20	SEE SDD 8D02
132+85	GEANO BEACH RD, LT/RT	3	10	20	SEE SDD 8D02
129+72	CTH D, RT	2	5	10	SEE SDD 8D02
132+77	CTH D, LT/RT	4	10	20	SEE SDD 8D02
129+60	OAK ORCHARD RD, LT/RT	2	10	20	SEE SDD 8D02
132+87	OAK ORCHARD RD, LT/RT	2	10	20	SEE SDD 8D02
	SIDEROAD TOTALS	38	120	240	
	TOTALS	38	120	240	

* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE PAVEMENT REPAIR & REPLACEMENT

STATION	TO	STATION	LOCATION	416.1715 CONCRETE PAVEMENT REPAIR SHES SY	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS * EACH	690.0250 SAWING CONCRETE * LF	REMARKS
614+10	-	614+16	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
614+73	-	614+79	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
615+22	-	615+28	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
618+93	-	618+99	USH 41 SB, LT	10	---	---	16	36	SEE SDD 13C9
626+90	-	626+96	USH 41 SB, LT	10	---	---	16	36	SEE SDD 13C9
627+22	-	627+74	USH 41 SB, LT	---	138	---	32	204	SEE SDD 13C9
628+14	-	628+20	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
628+61	-	628+99	USH 41 SB, LT	---	85	5	32	162	SEE SDD 13C9
630+75	-	630+82	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
631+90	-	631+96	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
632+51	-	632+77	USH 41 SB, LT	---	70	---	32	126	SEE SDD 13C9
633+05	-	633+11	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
633+31	-	633+37	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
633+50	-	633+56	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
633+68	-	634+40	USH 41 SB, LT	---	96	30	16	168	SEE SDD 13C9
634+75	-	634+81	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
635+04	-	635+10	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
635+54	-	635+72	USH 41 SB, LT	---	50	---	32	101	SEE SDD 13C9
636+17	-	637+09	USH 41 SB, LT	---	245	---	32	324	SEE SDD 13C9
637+52	-	637+58	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
638+00	-	638+06	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
643+20	-	643+45	USH 41 SB, LT	---	66	---	32	123	SEE SDD 13C9
643+70	-	643+76	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
644+30	-	644+36	USH 41 SB, LT	16	---	---	32	66	SEE SDD 13C9
			TOTALS	260	750	35	720	2,270	

* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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HMA SUMMARY

STATION		STATION	LOCATION	455.0605 TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S (10' Shld. & X-Over) TON	460.6424 HMA PAVEMENT 4 MT 58-28 H (Upper) TON	460.7224 HMA PAVEMENT 4 HT 58-28 S (Lower) TON	460.8624 HMA PAVEMENT 4 SMA 58-28 V (Upper) TON
USH 41 NB								
356+48	-	406+50	NB	2,955	1,170	---	1,745	1,530
406+50	-	456+50	NB	2,990	1,070	---	1,915	1,670
456+50	-	506+50	NB	3,075	850	---	2,145	1,880
506+50	-	556+50	NB	2,955	1,170	---	1,745	1,530
556+50	-	606+50	NB	2,985	1,070	---	1,915	1,680
606+50	-	656+50	NB	2,980	880	---	2,145	1,880
656+50	-	706+50	NB	2,955	1,170	---	1,745	1,530
706+50	-	756+50	NB	2,980	1,190	---	1,745	1,530
756+50	-	806+50	NB	3,560	750	---	2,225	1,950
806+50	-	831+00	NB	1,450	570	---	855	750
BROWN RD OFF-RAMP				220	---	345	---	---
BROWN RD ON-RAMP				185	---	290	---	---
CTH S OFF-RAMP				220	---	355	---	---
CTH S ON-RAMP				160	---	255	---	---
CTH D OFF-RAMP				245	---	390	---	---
CTH D ON-RAMP				205	---	325	---	---
USH 41 NB TOTALS				30,120	9,890	1,960	18,180	15,930
USH 41 SB								
296+37	-	346+50	SB	2,965	1,170	---	1,745	1,530
346+50	-	396+50	SB	3,950	630	---	2,455	2,150
396+50	-	446+50	SB	2,955	1,170	---	1,745	1,530
446+50	-	496+50	SB	2,955	1,170	---	1,745	1,530
496+50	-	546+50	SB	3,385	910	---	2,085	1,830
546+50	-	586+75	SB	2,615	800	---	1,590	1,390
586+75		646+46	SB	3,530	930	---	780	1,820
646+46	-	696+50	SB	3,325	940	---	2,035	1,780
696+50	-	746+50	SB	3,150	1,060	---	1,900	1,660
746+50	-	752+62	SB	360	140	---	215	190
BROWN RD OFF-RAMP				230	---	365	---	---
BROWN RD ON-RAMP				185	---	295	---	---
CTH S OFF-RAMP				230	---	370	---	---
CTH S ON-RAMP				180	---	290	---	---
SAMPSON RD OFF-RAMP				210	---	335	---	---
SAMPSON RD ON-RAMP				175	---	280	---	---
USH 41 SB TOTALS				30,400	8,920	1,935	16,295	15,410
SIDEROADS								
128+10	-	134+37	NORFIELD	100	---	160	---	---
126+06	-	136+40	BROWN	400	---	640	---	---
128+25	-	134+39	ALLEN	95	---	150	---	---
126+06	-	136+26	CTH S	365	---	580	---	---
127+38	-	135+00	GEANO	135	---	220	---	---
126+20	-	136+72	CTH D	385	---	620	---	---
127+94	-	134+32	OAK	105	---	170	---	---
SIDEROAD TOTALS				1,585	0	2,540	0	0
TOTALS				62,105	18,810	6,435	34,475	31,340

HMA PERCENT WITHIN LIMITS (PWL) TEST STRIPS

LOCATION	4 HT 58-28 S: 460.0105.S TEST STRIP VOLUMETRICS EACH	4 HT 58-28 S: 460.0110.S TEST STRIP DENSITY EACH	4 SMA 58-28 V: 460.0115.S TEST STRIP VOLUMETRICS EACH	4 SMA 58-28 V: 460.0120.S TEST STRIP DENSITY EACH
USH 41 NB/SB (LOWER)	1	2	---	---
USH 41 NB/SB (UPPER)	---	---	1	1
TOTALS	1	2	1	1

NOTES:

4 HT 58-28 S: MAINLINE & INNER 4' SHOULDER LOWER LAYERS

4 SMA 58-28 V: MAINLINE & INNER 4' SHOULDER UPPER LAYERS

ASPHALTIC SURFACE

STATION		STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	REMARKS
356+48	-	831+00	USH 41 NB	---	50	USH 41 NB MINOR REPAIRS TO ASPHALT SHOULDERS, POT HOLES OR POP-OUTS
463+37	-	464+17	USH 41 NB	250	---	CROSS CULVERT REPLACEMENT AREA @ STA 463+77
819+70	-	820+12	USH 41 NB	30		MAINTENANCE CROSSOVER
296+37	-	752+62	USH 41 SB	---	50	USH 41 SB MINOR REPAIRS TO ASPHALT SHOULDERS, POT HOLES OR POP-OUTS
384+48	-	385+28	USH 41 SB	250	---	CROSS CULVERT REPLACEMENT AREA @ STA 463+77
390+74	-	391+83	USH 41 SB, LT	80	---	FROST HEAVE REPAIR AREA ON BROWN RD OFF-RAMP
TOTALS				610	100	

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PWL MIXTURE USE TABLE

LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12' DRIVING LANE (NB)	356+48 - 831+00	UPPER LAYER	4 HT 58-28 S	460.8624	13,845	1 3/4"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
12' DRIVING LANE (NB)	356+48 - 831+00	LOWER LAYER	MILLED EXISTING HMA SURFACE	460.7224	15,810	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
4' SHOULDER (NB)	356+48 - 831+00	UPPER LAYER	4 HT 58-28 S	460.8624	2,085	1 3/4"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
4' SHOULDER (NB)	356+48 - 831+00	LOWER LAYER	MILLED EXISTING HMA SURFACE	460.7224	2,370	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGLIBLE FOR INCENTIVE
10' SHOULDER (NB)	356+48 - 831+00	UPPER LAYER	4 LT 58-28 S	460.5224	4,570	1 3/4"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
MEDIAN CROSSOVER	423+50 - 732+50	UPPER LAYER	MILLED EXISTING HMA SURFACE	460.5224	100	1 3/4"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
10' SHOULDER (NB)	356+48 - 831+00	LOWER LAYER	MILLED EXISTING HMA SURFACE	460.5224	5,220	2"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
USH 41 NB ON & OFF-RAMPS	VARIOUS	UPPER LAYER	MILLED EXISTING HMA SURFACE	460.6424	1,960	2"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
12' DRIVING LANE (SB)	296+37 - 586+75 646+46 - 752+62	UPPER LAYER	4 HT 58-28 S	460.8624	11,845	1 3/4"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
12' DRIVING LANE (SB)	296+37 - 586+75 646+46 - 752+62	LOWER LAYER	MILLED EXISTING HMA SURFACE	460.7224	13,540	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12' DRIVING LANE (SB)	586+75 - 646+46	UPPER LAYER	4 HT 58-28 S	460.8624	1,560	1 3/4"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
12' DRIVING LANE (SB)	586+75 - 646+46	LOWER LAYER	EXISTING CONCRETE SURFACE	460.7224	670	3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE BY ORDINARY COMPACTION
4' SHOULDER (SB)	296+37 - 586+75 646+46 - 752+62	UPPER LAYER	4 HT 58-28 S	460.8624	1,745	1 3/4"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
4' SHOULDER (SB)	296+37 - 586+75 646+46 - 752+62	LOWER LAYER	MILLED EXISTING HMA SURFACE	460.7224	1,975	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGLIBLE FOR INCENTIVE
4' SHOULDER (SB)	586+75 - 646+46	UPPER LAYER	4 HT 58-28 S	460.8624	260	1 3/4"	QMP AS PER SS 460	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGLIBLE FOR INCENTIVE
4' SHOULDER (SB)	586+75 - 646+46	LOWER LAYER	EXISTING HMA SURFACE	460.7224	110	3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE BY ORDINARY COMPACTION
10' SHOULDER (SB)	296+37 - 586+75 646+46 - 752+62	UPPER LAYER	4 LT 58-28 S	460.5224	3,730	1 3/4"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
10' SHOULDER (SB)	296+37 - 586+75 646+46 - 752+62	LOWER LAYER	MILLED EXISTING HMA SURFACE	460.5224	4,260	2"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
10' SHOULDER (SB)	586+75 - 646+46	UPPER LAYER	4 LT 58-28 S	460.5224	650	1 3/4"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
10' SHOULDER (SB)	586+75 - 646+46	LOWER LAYER	EXISTING HMA SURFACE	460.5224	280	3/4"	QMP AS PER SS 460	ACCEPTANCE BY ORDINARY COMPACTION
USH 41 SB ON & OFF RAMPS	VARIOUS	UPPER LAYER	MILLED EXISTING HMA SURFACE	460.6424	1,935	2"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000
SIDEROADS	VARIOUS	UPPER LAYER	MILLED EXISTING HMA SURFACE	460.6424	2,540	2"	QMP AS PER SS 460	INCENTIVE DENSITY HMA PAVEMENT 460.2000

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RUMBLE STRIPS

STATION		STATION	LOCATION	465.0400 ASPHALTIC SHOULDER LF	REMARKS
USH 41 NB					
356+48	-	406+50	NB	10,005	
406+50	-	456+50	NB	9,510	
456+50	-	506+50	NB	9,185	
506+50	-	556+50	NB	10,000	
556+50	-	606+50	NB	9,185	
606+50	-	656+50	NB	8,700	
656+50	-	706+50	NB	9,565	
706+50	-	756+50	NB	10,000	
756+50	-	806+50	NB	8,240	
806+50	-	831+00	NB	4,900	
BROWN RD OFF-RAMP				1,185	OUTER SHOULDER ONLY
BROWN RD ON-RAMP				985	OUTER SHOULDER ONLY
CTH S OFF-RAMP				1,185	OUTER SHOULDER ONLY
CTH S ON-RAMP				860	OUTER SHOULDER ONLY
CTH D OFF-RAMP				1,375	OUTER SHOULDER ONLY
CTH D ON-RAMP				1,125	OUTER SHOULDER ONLY
USH 41 NB TOTALS				96,005	
USH 41 SB					
296+37	-	346+50	SB	10,025	
346+50	-	396+50	SB	8,565	
396+50	-	446+50	SB	9,985	
446+50	-	496+50	SB	10,000	
496+50	-	546+50	SB	8,580	B-42-19 BUTT JOINT & CTH S ON-RAMP
546+50	-	586+75	SB	7,650	CTH S OFF-RAMP
586+75		646+46	SB	10,700	
646+46	-	696+50	SB	9,010	SAMPSON RD (CTH D) ON-RAMP
696+50	-	746+50	SB	9,555	SAMPSON RD (CTH D) OFF-RAMP
746+50	-	752+62	SB	1,225	0
BROWN RD OFF-RAMP				1,285	OUTER SHOULDER ONLY
BROWN RD ON-RAMP				1,010	OUTER SHOULDER ONLY
CTH S OFF-RAMP				1,260	OUTER SHOULDER ONLY
CTH S ON-RAMP				960	OUTER SHOULDER ONLY
CTH D OFF-RAMP				1,300	OUTER SHOULDER ONLY
CTH D ON-RAMP				965	OUTER SHOULDER ONLY
USH 41 SB TOTALS				92,075	
TOTALS				188,080	

CONCRETE CURB AND GUTTER

STATION		STATION	LOCATION	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0588 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT LF
SIDEROADS					
129+53	-	130+04	NORFIELD RD	---	101
132+42	-	132+93	NORFIELD RD	---	101
129+63	-	130+13	BROWN RD	---	50
132+31	-	132+51	BROWN RD	---	20
132+31	-	132+81	BROWN RD	---	50
129+53	-	130+00	ALLEN RD	---	99
132+44	-	132+94	ALLEN RD	---	100
129+60	-	130+14	CTH S	50	54
132+32	-	132+86	CTH S	50	52
129+48	-	130+01	GEANO BEACH RD	---	106
132+41	-	132+91	GEANO BEACH RD	---	103
129+62	-	130+15	CTH D	50	53
132+33	-	132+87	CTH D	50	108
129+50	-	130+04	OAK ORCHARD RD	---	109
132+43	-	132+97	OAK ORCHARD RD	---	109
			TOTALS	200	1,215

RIPRAP & GEOTEXTILE FABRIC

STATION	LOCATION	606.0200 RIPRAP MEDIUM * CY	645.0120 GEOTEXTILE FABRIC TYPE HR * SY
443+75	USH 41 SB, LT	16	25
577+50	USH 41 SB, LT	44	60
TOTALS		60	85

* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE SIDEWALK

STATION		STATION	LOCATION	602.0405 4-INCH SF	REMARKS
129+88	-	130+13	CTH S	250	CTH S MEDIAN (WEST SIDE)
132+32	-	132+57	CTH S	265	CTH S MEDIAN (EAST SIDE)
129+90	-	130+15	CTH D	265	CTH D MEDIAN (WEST SIDE)
132+59	-	132+33	CTH D	270	CTH D MEDIAN (EAST SIDE)
			TOTALS	1,050	

CULVERT PIPES

STATION	LOCATION	520.8000 CONCRETE COLLARS FOR PIPE * EACH	520.7900.S.01 CULVERT PIPE LINERS 18-INCH LF	520.7900.S.02 CULVERT PIPE LINERS 21-INCH LF	520.7900.S.03 CULVERT PIPE LINERS 72-INCH LF	520.9750.S LEANING CULVER PIPES FOR LINER VERIFICATION EACH	522.0472 CULVERT PIPE REINF CONCRETE CLASS IV 72-INCH LF	522.1024 APR ENDWLS FOR CULVERT PIPE REINF CONC 24-INCH EACH	522.1030 APR ENDWLS FOR CULVERT PIPE REINF CONC 30-INCH EACH	522.1036 APR ENDWLS FOR CULVERT PIPE REINF CONC 36-INCH EACH	522.1042 APR ENDWLS FOR CULVERT PIPE REINF CONC 42-INCH EACH	522.1072 APR ENDWLS FOR CULVERT PIPE REINF CONC 72-INCH EACH	SPV.0060.01 RESETTING PIPE ENDS EACH	625.0100 TOPSOIL * SY	RESTORATION ITEMS FOR ITEM SPV.0060.01 628.2002 EROSION MAT CLASS I, TYPE A * SY	629.0210 FERTILIZER TYPE B * CWT	630.0120 SEEDING MIXTURE NO. 20 * LB	630.0500 SEED WATER * MGAL
USH 41 NB																		
396+03	USH 41 NB, LT	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
463+77	USH 41 NB	---	---	---	---	---	168	---	---	---	---	2	---	---	---	---	---	---
596+95	USH 41 NB, RT	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---
628+62	USH 41 NB, LT/RT	---	---	---	---	---	---	---	---	---	---	---	2	110	110	1.0	3	3
656+55	USH 41 NB	---	---	---	170	1	---	---	---	---	---	---	---	---	---	---	---	---
701+19	USH 41 NB	4	---	---	---	---	---	---	---	---	2	---	---	---	---	---	---	---
817+34	USH 41 NB, RT	1	---	---	---	---	---	---	---	2	---	---	---	---	---	---	---	---
	USH 41 NB TOTALS	7	0	0	170	1	168	0	1	2	2	2	2	110	110	1.0	3	3
USH 41 SB																		
336+30	USH 41 SB	---	65	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---
350+42	USH 41 SB, LT	---	---	---	---	---	---	---	---	---	---	---	1	65	65	1.0	2	2
428+30	USH 41 SB, RT	1	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---
512+73	USH 41 SB	---	---	95	---	1	---	---	---	---	---	---	---	---	---	---	---	---
555+27	USH 41 SB	---	75	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---
	USH 41 SB TOTALS	1	140	95	0	3	0	1	0	0	0	0	1	65	65	1.0	2	2
	TOTALS	8	140	95	170	4	168	1	1	2	2	2	3	175	175	2.0	5	5

* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CULVERT PIPE INFORMATION

FROM STA / OFFSET	INVERT ELEV		TO STA / OFFSET	INVERT ELEV	LOCATION	SLOPE	REMARKS
463+93.8, -113.7' LT	609.15	-	463+69.2, 57.7' RT	609.03	USH 41 NB	0.07%	NEW 72" PIPE
656+54.0, -102.2' LT	644.54	-	656+60.4, 61.8' RT	645.11	USH 41 NB	0.34%	72" LINER IN EXIST PIPE
336+30.2, -46.7' LT	609.41	-	336+30.2, 18.4' RT	611.25	USH 41 SB	2.83%	18" LINER IN EXIST PIPE
512.74.0, -63.1' LT	616.74	-	512+72.9, 30.6' RT	623.06	USH 41 SB	6.65%	21" LINER IN EXIST PIPE
555+28.6, -55.1' LT	632.93	-	555+26.1, 18.0' RT	636.16	USH 41 SB	4.31%	18" LINER IN EXIST PIPE

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STORM SEWER PIPE

FROM STRUCTURE	INVERT ELEV		TO STRUCTURE	INVERT ELEV	FROM / TO STATION/OFFSET	LOCATION	520.8000 CONCRETE COLLARS FOR PIPE * EACH	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF
1A	611.50	-	1B	612.26	463+53, 28.0' LT / 464+02, 29.0' LT	USH 41 NB	2	50
2A	666.90	-	2B	666.16	799+59, 30.8' LT / 800+01, 28.9' LT	USH 41 NB	2	42
					TOTALS		4	92

* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER STRUCTURES

STR NO	STATION/OFFSET	LOCATION	RIM ELEVATION	TOP OF STRUCURE ELEVATION	STRUCTURE INVERT ELEVATION	STR DEPTH	520.8000 CONCRETE COLLARS FOR PIPE * EACH	611.0430 RECONSTRUCTING INLETS EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.3903 INLETS MEDIAN 3 GRATE EACH	611.9710 SALVAGED INLET COVERS EACH
1A	463+53, 28.0' LT	USH 41 NB	613.59	613.59	611.50	2.09	---	---	1	---	1
1B	464+02, 29.0' LT	USH 41 NB	613.52	613.52	612.26	1.26	---	---	1	---	1
EXIST	635+88, 21.8' LT	USH 41 NB	636.16	---	633.80	---	---	1	---	---	---
2A	799+58.9, 30.8' LT	USH 41 NB	669.45	669.45	666.90	2.55	---	---	1	---	1
2B	800+01.4, 28.9' LT	USH 41 NB	668.66	668.66	666.16	2.50	---	---	1	---	1
3	555+26.1, 18.0' RT	USH 41 SB	636.16	636.16	633.80	2.35	1	---	---	1	3
					TOTALS		1	1	4	1	7

* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

GUARDRAIL SUMMARY

STATION		STATION	LOCATION	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL EACH	614.0230 STEEL THRIE BEAM LF	614.04 ADJUSTING STEEL PLATE BEAMGUARD LF	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH
401+84	-	403+34	USH 41 NB, LT	2	125	---	---	---	---	---
456+93	-	458+68	USH 41 NB, LT	2	175	---	---	---	---	---
562+03	-	563+53	USH 41 NB, LT	2	125	---	---	---	---	---
577+51	-	581+63	USH 41 NB, LT	---	---	---	325.0	39.4	1	---
577+78	-	581+63	USH 41 NB, RT	---	---	---	275.0	39.4	1	---
615+80	-	617+67	USH 41 NB, LT	2	200	---	---	---	---	---
722+91	-	724+41	USH 41 NB, LT	2	125	---	---	---	---	---
775+19	-	776+94	USH 41 NB, LT	2	175	---	---	---	---	---
819+17	-	821+20	USH 41 NB, RT	---	---	---	150.0	---	1	1
820+26	-	821+88	USH 41 NB, LT	2	175	---	---	---	---	---
504+97	-	507+48	USH 41 SB, LT	---	---	130	75.0	---	1	---
504+75	-	507+79	USH 41 SB, RT	---	---	150	100.0	---	1	---
577+17	-	579+97	USH 41 SB, LT	---	---	---	250.0	---	1	1
637+64	-	641+43	USH 41 SB, RT	---	---	---	350.0	---	1	1
637+70	-	639+74	USH 41 SB, LT	---	---	---	275.0	---	1	1
129+00	-	130+04	NORFIELD, LT/RT	---	---	---	25.0	78.8	2	---
132+42	-	133+46	NORFIELD, LT/RT	---	---	---	25.0	78.8	2	---
129+11	-	130+13	BROWN RD, RT	---	---	---	12.5	39.4	1	---
132+31	-	133+35	BROWN RD, LT	---	---	---	12.5	39.4	1	---
129+00	-	130+02	ALLEN RD, LT/RT	---	---	---	25.0	78.8	2	---
132+44	-	133+71	ALLEN RD, LT/RT	---	---	---	37.5	78.8	2	---
128+48	-	130+13	CTH S, RT	---	---	---	75.0	39.4	1	---
132+32	-	133+98	CTH S, LT	---	---	---	75.0	39.4	1	---
128+61	-	130+01	GEANO BEACH, LT/RT	---	---	---	75.0	78.8	2	---
132+41	-	134+06	GEANO BEACH, LT/RT	---	---	---	87.5	78.8	2	---
128+87	-	130+15	CTH D, RT	---	---	---	37.5	39.4	1	---
132+33	-	134+09	CTH D, LT/RT	---	---	---	125.0	78.8	2	1
128+63	-	130+04	OAK ORCHARD, LT/RT	---	---	---	62.5	78.8	2	---
132+43	-	134+10	OAK ORCHARD, LT/RT	---	---	---	87.5	78.8	2	---
			TOTALS	14	1,100	280	2,562.5	985.0	31	5

FENCING SUMMARY

STATION		STATION	LOCATION	204.0170 REMOVING FENCE LF	616.0100 FENCE WOVEN WIRE 4-FT LF
542+87	-	544+01	USH 41 NB, RT	130	130
745+15	-	745+42	USH 41 NB, RT	35	35
286+98	-	287+33	USH 41 SB, LT	40	40
443+50	-	444+00	USH 41 SB, LT	55	55
501+08	-	501+62	USH 41 SB, LT	60	60
512+48	-	512+98	USH 41 SB, LT	55	55
555+03	-	555+54	USH 41 SB, LT	55	55
			TOTALS	430	430

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EROSION CONTROL SUMMARY

LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH	628.7005 INLET PROTECTION TYPE A EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
USH 41 NB	665	1,330	---	---	6	365	80	50
USH 41 SB	1,100	2,200	---	---	1	45	10	---
NORFIELD RD	850	1,700	---	---	---	---	---	---
BROWN RD	490	980	---	---	---	---	---	---
ALLEN RD	820	1,640	---	---	---	---	---	---
CTH S	470	940	---	---	---	---	---	---
GEANO BEACH RD	1,000	2,000	---	---	---	---	---	---
CTH D	680	1,360	---	---	---	---	---	---
OAK ORCHARD RD	900	1,800	---	---	---	---	---	---
UNDISTRIBUTED	700	1,400	5	3	1	40	10	5
TOTALS	7,675	15,350	5	3	8	450	100	55

LANDSCAPING SUMMARY

LOCATION	625.0100 TOPSOIL SY	628.2002 EROSION MAT CLASS I, TYPE A SY	628.2006 EROSION MAT URBAN CLASS I, TYPE A SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0500 SEED WATER MGAL
USH 41 NB	9,835	9,580	255	1.0	266	221
USH 41 SB	2,080	1,655	425	1.0	56	47
NORFIELD RD	1,085	1,085	0	1.0	29	24
BROWN RD	1,505	1,505	0	1.0	41	34
ALLEN RD	1,565	1,565	0	1.0	42	35
CTH S	645	645	0	1.0	17	14
GEANO BEACH RD	1,210	1,210	0	1.0	33	27
CTH D	1,630	1,630	0	1.0	44	37
OAK ORCHARD RD	935	935	0	1.0	25	21
UNDISTRIBUTED	3,075	2,970	100	1.0	112	85
TOTALS	23,565	22,780	780	10.0	665	545

3

PERMANENT SIGNING SUMMARY

LOCATION	637.1220 SIGNS TYPE I REFLECTIVE SH SF	638.2102 MOVING SIGNS TYPE II EACH	638.2601 REMOVING SIGNS TYPE I EACH	638.3100 REMOVING STRUCTURAL STEEL SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH
USH 41 NB LT, N. OF OAK ORCHARD RD	---	---	1	1	---
USH 41 NB RT, N. OF OAK ORCHARD RD	---	---	1	1	---
USH 41 NB LT, S. OF OAK ORCHARD RD, MEDIAN	---	1	---	---	1
ATTACHED TO S-42-11	289	---	---	---	---
NORFIELD RD	---	4	---	---	4
BROWN RD	---	2	---	---	2
ALLEN RD	---	4	---	---	4
CTH S	---	2	---	---	2
GEANO BEACH RD	---	4	---	---	4
CTH D	---	6	---	---	6
OAK ORCHARD RD	---	6	---	---	6
TOTALS	289	29	2	2	29

CONSTRUCTION STAKING SUMMARY

LOCATION	650.4000 STORM SEWER EACH	650.5000 BASE LF	650.5500 CURB & GUTTER LF	650.6000 PIPE CULVERTS EACH	650.8000 RESURFACING REFERENCE LF	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF
USH 41 NB	4	---	---	1	47,453	---	3,922
USH 41 SB	1	---	---	---	45,661	---	4,517
NORFIELD RD	---	390	202	---	415	---	390
BROWN RD	---	400	70	---	817	---	400
ALLEN RD	---	323	199	---	402	---	323
CTH S	---	432	206	---	802	---	432
GEANO BEACH RD	---	306	209	---	548	---	471
CTH D	---	373	261	---	833	---	373
OAK ORCHARD RD	---	399	216	---	425	---	399
ENTIRE PROJECT	---	---	---	---	---	1	---
TOTALS	5	2,623	1,363	1	97,356	1	11,227

SAWING SUMMARY

STATION	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE * LF	REMARKS
USH 41					
463+77		USH 41 NB/SB	55	50	72" CULVERT PIPE REPLACEMENT
391+00		USH 41 SB, LT	48	---	FROST HEAVE REPAIR AREA ON BROWN RD SB OFF-RAMP
819+91		USH 41 NB, LT	82	---	MEDIAN CROSSOVER REPAIR
		USH 41 TOTALS	185	50	
SIDEROADS					
129+53	130+04	NORFIELD RD	110	---	TBT C&G INSTALL
132+42	132+93	NORFIELD RD	110	---	TBT C&G INSTALL
129+63	130+13	BROWN RD	55	---	TBT C&G INSTALL
132+31	132+51	BROWN RD	20	---	TBT C&G INSTALL
132+31	132+81	BROWN RD	55	---	TBT C&G INSTALL
129+53	130+00	ALLEN RD	110	---	TBT C&G INSTALL
132+44	132+94	ALLEN RD	110	---	TBT C&G INSTALL
129+60	130+14	CTH S	105	---	TBT C&G INSTALL & MEDIAN C&G REPLACEMENT
132+32	132+86	CTH S	105	---	TBT C&G INSTALL & MEDIAN C&G REPLACEMENT
129+48	130+01	GEANO BEACH RD	110	---	TBT C&G INSTALL
132+41	132+91	GEANO BEACH RD	110	---	TBT C&G INSTALL
129+62	130+15	CTH D	105	---	TBT C&G INSTALL & MEDIAN C&G REPLACEMENT
132+33	132+87	CTH D	160	---	TBT C&G INSTALL & MEDIAN C&G REPLACEMENT
129+50	130+04	OAK ORCHARD RD	110	---	TBT C&G INSTALL
132+43	132+97	OAK ORCHARD RD	110	---	TBT C&G INSTALL
		SIDEROAD TOTALS	1,485	0	
		TOTALS	1,670	50	

* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

BASIC TRAFFIC QUEUE WARNING SYSTEM (BQWS)

LOCATION	STAGE	FLASHING BEACON SIGNS (FBS)	643.1205.S BASIC TRAFFIC QUEUE WARNING SYSTEM (DAYS)
USH 41 NB	1,2,3,4	3	190
USH 41 SB	1,2,3,4	3	190
USH 141 SB	1,2,3,4	3	190
PROJECT TOTALS			570

3

TRAFFIC CONTROL DEVICES

		643.0300	643.0420	643.0705	643.0715	643.0800	643.0900	643.0910						643.0920	643.1050	643.5000
		TRAFFIC CONTROL														
								COVERING SIGNS								
	# OF DAYS	DRUMS (DAYS)	BARRICADES TYPE III (DAYS)	WARNING LIGHTS TYPE A (DAYS)	WARNING LIGHTS TYPE C (DAYS)	ARROW BOARDS (DAYS)	SIGNS (DAYS)	TYPE I SIGNS	CYCLES	(EACH)	TYPE II SIGNS	CYCLES	(EACH)	SIGNS PCMS (DAYS)	TRAFFIC CONTROL (EACH)
STAGE 1 - 2022																
NB & SB - INSIDE (LEFT) LANE CLOSURE	25	51,125	1,250	2,000	2,150	100	2,800	-	-	-	-	-	-	-	-	
NB - SWEF RAMP CLOSURES	4	128	12	16	-	-	32	-	-	-	-	-	-	22	-	
USH 41 CLOSURE - CULVERT REPLACEMENT	5	510	30	60	215	10	175	-	-	-	2	5	10	24	-	
STAGE 1 - 2023																
SB - INSIDE (LEFT) LANE CLOSURE	30	30,900	750	1,200	1,290	60	1,740	-	-	-	-	-	-	-	-	
SB - SWEF RAMP CLOSURES	4	128	12	16	-	-	32	-	-	-	-	-	-	22	-	
STAGE 1 TOTALS		82,791	2,054	3,292	3,655	170	4,779			-			10	68	-	
STAGE 2 - 2022																
NB & SB - OUTSIDE (RIGHT) LANE CLOSURE	30	66,570	1,740	2,280	7,260	120	5,280	-	-	-	-	-	-	-	-	
NB - INTERCHANGE RAMP CLOSURES	4	384	36	48	-	-	96	-	-	-	-	-	-	66	-	
SB - BROWN RD EXIT RAMP FROST HEAVE REPAIR	3	96	9	12	-	-	24	-	-	-	-	-	-	20	-	
STAGE 2 - 2023																
SB - OUTSIDE (RIGHT) LANE CLOSURE	25	27,925	725	950	3,025	50	2,250	-	-	-	-	-	-	-	-	
SB - INTERCHANGE RAMP CLOSURES	4	384	36	48	-	-	96	-	-	-	-	-	-	66	-	
STAGE 2 TOTALS		95,359	2,546	3,338	10,285	170	7,746			-			-	152	-	
STAGE 3 - 2022																
NB & SB - INSIDE (LEFT) LANE CLOSURE	20	40,900	1,000	1,600	1,720	80	2,240	-	-	-	-	-	-	-	-	
NB - SWEF RAMP CLOSURES	4	128	12	16	-	-	32	-	-	-	-	-	-	22	-	
STAGE 3 - 2023																
SB - INSIDE (LEFT) LANE CLOSURE	15	15,450	375	600	645	30	870	-	-	-	-	-	-	-	-	
SB - SWEF RAMP CLOSURES	4	128	12	16	-	-	32	-	-	-	-	-	-	22	-	
STAGE 3 TOTALS		56,606	1,399	2,232	2,365	110	3,174			-			-	44	-	
STAGE 4 - 2022																
SURFACE LAYER PAVING - OUTSIDE LANES	20	22,040	580	760	2,420	40	1,720	-	-	-	-	-	-	-	-	
NB - INTERCHANGE RAMP CLOSURES	4	384	36	48	-	-	96	-	-	-	-	-	-	66	-	
STAGE 4 - 2023																
SURFACE LAYER PAVING - OUTSIDE LANES	25	27,925	725	950	3,025	50	2,250	-	-	-	-	-	-	-	-	
SB - INTERCHANGE RAMP CLOSURES	4	384	36	48	-	-	96	-	-	-	-	-	-	66	-	
OVERPASSING ROADWAYS	15	-	-	-	-	-	450	-	-	-	-	-	-	-	-	
STAGE 4 TOTALS		50,733	1,377	1,806	5,445	90	4,612			-			-	132	-	
UNDISTRIBUTED		14,346	449	622	1,160	30	1,079	-	-	20	-	-	20	54	1	
TOTALS		299,835	7,825	11,290	22,910	570	21,390			20			30	450	1	

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	MISCELLANEOUS QUANTITIES	SHEET 52	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\030201_MQ.DWG
LAYOUT NAME - 14
PLOT DATE : 4/12/2022 10:30 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1" = 1'

3

3

PAVEMENT MARKING SUMMARY

LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF WHITE	646.1020 MARKING LINE EPOXY 4-INCH LF YELLOW	646.1040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH LF WHITE	646.1040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH LF YELLOW	646.1555 MARKING LINE GROOVED CNTRST PERMANENT TAPE 4-INCH LF	646.3020 MARKING LINE EPOXY 8-INCH LF WHITE	646.3555 MARKING LINE GROOVED CNTRST PERMANENT TAPE 8-INCH LF	646.5020 MARKING ARROW EPOXY EACH	646.5420 MARKING AERIAL ENFORCEMENT BAR EPOXY EACH	646.7220 MARKING CHEVRON EPOXY 24-INCH LF	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH LF	COMMENTS
USH 41 NB MAINLINE	---	---	44,840	46,235	15,815	---	2,245	---	28	---	201,155	Truck Scale ramps included in items 646.1040 & 646.3555
BROWN RD OFF-RAMP (NB)	---	---	1,725	1,190	---	---	695	---	---	135	---	
BROWN RD ON-RAMP (NB)	---	---	1,800	985	---	---	1,630	---	---	---	---	
CTH S OFF-RAMP (NB)	---	---	1,750	1,195	---	---	680	---	---	135	---	
CTH S ON-RAMP (NB)	---	---	1,630	860	---	---	1,530	---	---	---	---	
CTH D OFF-RAMP (NB)	---	---	1,865	1,340	---	---	590	---	---	90	---	
CTH D ON-RAMP (NB)	---	---	1,800	1,125	---	---	1,355	---	---	---	---	
USH 41 SB MAINLINE	---	---	43,455	44,940	15,210	---	1,705	---	28	---	201,155	Truck Scale ramps included in items 646.1040 & 646.3555
BROWN RD OFF-RAMP (SB)	---	---	1,580	1,250	---	---	665	---	---	125	---	
BROWN RD ON-RAMP (SB)	---	---	2,040	1,010	---	---	2,065	---	---	---	---	
CTH S OFF-RAMP (SB)	---	---	1,605	1,260	---	---	685	---	---	130	---	
CTH S ON-RAMP (SB)	---	---	1,535	960	---	---	1,160	---	---	---	---	
CTH D OFF-RAMP (SB)	---	---	1,595	1,300	---	---	595	---	---	90	---	
CTH D ON-RAMP (SB)	---	---	1,530	965	---	---	1,130	---	---	---	---	
NORFIELD RD	1,255	1,255	---	---	---	---	---	---	---	---	---	
BROWN RD	1,750	1,695	---	---	---	250	---	4	---	---	---	EB/WB LT TURN BAYS
ALLEN RD	1,265	1,265	---	---	---	---	---	---	---	---	---	
CTH S	1,720	1,850	---	---	---	200	---	4	---	---	---	EB/WB LT TURN BAYS
GEANO BEACH RD	1,520	1,520	---	---	---	---	---	---	---	---	---	
CTH D	1,720	1,850	---	---	---	160	---	3	---	---	---	EB/WB LT TURN BAYS
OAK ORCHARD RD	1,275	1,275	---	---	---	---	---	---	---	---	---	
UNDISTRIBUTED	300	300	3,250	3,150	---	---	---	---	---	---	40,230	
TOTALS	10,805	11,010	112,000	107,765	31,025	610	16,730	11	56	705	442,540	
	21,815		219,765									

GRADING AND SHAPING FOR DITCH SUMMARY

STATION		STATION	LOCATIONS	SPV.0090.02 GRADING AND SHAPING FOR DITCH LF	625.0100 TOPSOIL * SY	628.2002 EROSION MAT CLASS I, TYPE A * SY	629.0210 FERTILIZER TYPE B * CWT	630.0120 SEEDING MIXTURE NO. 20 * LB	630.0500 SEED WATER * MGAL
429+60	-	429+80	USH 41 NB, LT	20	25	25	1.0	1	1
429+80	-	430+05	USH 41 NB, RT	25	30	30	1.0	1	1
482+50	-	482+70	USH 41 NB, LT	20	25	25	1.0	1	1
355+15	-	355+40	USH 41 SB, RT	25	30	30	1.0	1	1
413+50	-	413+75	USH 41 SB, LT	25	30	30	1.0	1	1
			TOTALS	115	140	140	5.0	5	5

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CABLE BARRIER SUMMARY

STATION		STATION	LOCATION	204.9060.S REMOVING CABLE BARRIER END TERMINAL TYPE 1 EACH	613.1200.S CABLE BARRIER END TERMINAL TYPE 1 EACH	SPV.0090.01 SALVAGE & REINSTALL HIGH TENSION CABLE BARRIER LF	REMARKS
400+00	-	404+00	USH 41 NB, LT	1	1	400	
455+50	-	456+50	USH 41 NB, LT	---	---	100	CABLE BARRIER ALONG USH 41 SB SIDE IN MEDIAN
457+75	-	460+75	USH 41 NB, LT	1	1	300	CABLE BARRIER ALONG USH 41 NB SIDE IN MEDIAN
463+00	-	465+00	USH 41 NB, LT	---	---	200	
563+50	-	565+00	USH 41 NB, LT	---	---	150	
614+00	-	616+25	USH 41 NB, LT	---	---	225	
			TOTALS	2	2	1,375	

LEGEND

- BASE PATCHING
- CONCRETE PAVEMENT REPAIR
- CONCRETE PAVEMENT REPLACEMENT

STA 286+98 TO STA 287+33, LT
REMOVING FENCE - 35 LF REQD
FENCE WOVEN WIRE 4-FT - 35 LF REQD

WETLAND BOUNDARY (TYP)

N

371+75.00

278 R/L BEARING N0° 33' 27"W 280 282 284 USH 41 SB 286 288 290 292

358 360 362 364 366 368 370

R/L BEARING N 0° 34' 24.92" W

USH 41 NB

BEGIN PROJECT
STA 356+47.96
Y=92,047.447
X=563,160.337
BUTT JOINT REQD

5

5

BEGIN CONSTRUCTION
STA 296+37.41
BUTT JOINT REQD

PI: 299+92.32
Y=94289.15
X=563078.88
ANGLE=0°10'25"

PI: 379+06.44
Y=94305.81
X=563137.73
ANGLE=0°12'7"

N

387+00.00

294 R/L BEARING N0° 33' 27"W 296 298 300 302 USH 41 SB 304 306 308

EXISTING CABLE BARRIER TO REMAIN

372 374 376 378 380 382 384 386

R/L BEARING N0° 34' 25"W

USH 41 NB

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN	PLAN	SHEET 55	E

LEGEND

BASE PATCHING

CONCRETE PAVEMENT REPAIR

CONCRETE PAVEMENT REPLACEMENT

N

387+00.00

308 310 312 314 316 318 320 322

USH 41 SB

R/L BEARING N0° 23' 02"W

388 390 392 394 396 398 400 402

USH 41 NB

R/L BEARING N0° 22' 11"W

WETLAND BOUNDARY (TYP)

EXISTING CABLE BARRIER TO REMAIN

STA 392+52
EXISTING 42" CPRC
TO REMAIN

STA 395+77
EXISTING 72" CPRC
TO REMAIN

STA 396+03, LT - CONCRETE COLLAR REQD

SLOPE INTERCEPT (TYP)

SALVAGE AND REINSTALL HIGH TENSION CABLE BARRIER REQD

REMOVING CABLE BARRIER END TERMINAL TYPE 1 - 1 EA REQD
REPLACE WITH NEW CABLE BARRIER END TERMINAL TYPE 1 - 1 EA REQD

402+25.00

NORFIELD RD

130

132

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

324 326 328 330 332 334 336 338

USH 41 SB

R/L BEARING N0° 21' 34"W

404 406 408 410 412 414 416

USH 41 NB

R/L BEARING N0° 21' 39"W

PI: 410+91.90
Y=97491.21
X=563117.06
ANGLE=0°0'43"

PI: 332+09.72
Y=97506.47
X=563057.32
ANGLE=0°2'35"

N

417+50.00

STA 336+30
EXISTING 18" CPRC
CULVERT PIPE LINERS 18-INCH - 65 LF REQD

EXISTING CABLE BARRIER TO REMAIN

WETLAND BOUNDARY (TYP)

STA 401+84.3, 23.0' LT & STA 403+34.3, 22.8' LT
(POST #5 LOCATIONS)
STEEL THRIE BEAM BULLNOSE TERMINAL - 2 EA REQD
STEEL THRIE BEAM - 125 LF REQD
REMOVING GUARDRAIL - 350 LF REQD

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN	PLAN	SHEET 56	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050202

PLOT DATE : 1/24/2022 11:57 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

BASE PATCHING

CONCRETE PAVEMENT REPAIR

CONCRETE PAVEMENT REPLACEMENT

N

STA 350+42, LT
RESETTING PIPE ENDS - 1 EA REQD

SPECTRUM
COMMUNICATION LINE

WETLAND BOUNDARY (TYP)

USH 41 SB 340 R/L BEARING N0° 20' 28"W 342 344 346 348 350 352

418 420 422 424 426 428 430 432

USH 41 NB R/L BEARING N0° 22' 21"W

EXISTING CABLE BARRIER TO REMAIN

STA 423+69
EXISTING 72" CPRC
TO REMAIN

STA 429+60 TO STA 429+80, LT
GRADING, SHAPING AND FINISHING
FOR DITCH REQD

STA 429+80 TO STA 430+05, RT
GRADING, SHAPING AND FINISHING
FOR DITCH REQD

STA 429+76
EXISTING 72" CPRC
TO REMAIN

432+75.00

417+50.00

5

5

STA 355+26, 29.6' RT TO STA 355+28, 46.4' LT
ABANDONING SEWER REQD
(18" X 76' SSPRC)

N

448+00.00

SB ENTRANCE RAMP

354 USH 41 SB 356 R/L BEARING N0° 20' 28"W 358 360 USH 41 SB 362 364 366 368

434 436 438 440 442 444 446 448

R/L BEARING N0° 22' 21"W USH 41 NB USH 41 NB

EXISTING CABLE BARRIER TO REMAIN

STA 355+26, RT
REMOVING INLET REQD
GRADING, SHAPING AND
FINISHING FOR DITCH REQD

NB EXIT RAMP

STA 447+37
EXISTING 24" CPRC
TO REMAIN

432+75.00

APPROXIMATE ARCHAEOLOGICAL SITE BOUNDARY
SEE SPECIAL PROVISIONS

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN	PLAN	SHEET 57	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050203

PLOT DATE : 1/24/2022 11:58 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND
BASE PATCHING
CONCRETE PAVEMENT REPAIR
CONCRETE PAVEMENT REPLACEMENT

WETLAND BOUNDARY (TYP)
SB ENTRANCE RAMP
PI: 371+76.63
Y=101473.16
X=563033.71
ANGLE=0°7'16"
PI: 450+74.31
Y=101473.53
X=563091.16
ANGLE=0°8'43"
PI: 456+77.15
Y=102076.15
X=563031.40
ANGLE=180°
PI: 377+79.47
Y=102076.37
X=563088.77
ANGLE=180°
BROWN ROAD
B-5-312
130
N
463+25.00
STA 378+86
EXISTING 24" CPRC
TO REMAIN
STA 378+22
EXISTING 18" CPRC
TO REMAIN
SALVAGE AND REINSTALL HIGH TENSION CABLE BARRIER REQD
SALVAGE AND REINSTALL HIGH
TENSION CABLE BARRIER REQD
WETLAND BOUNDARY (TYP)
370
372
374
R/L BEARING N0° 13' 12"W
376
378
380
382
USH 41 SB
384
448
450
452
454
456
458
460
462
USH 41 NB
R/L BEARING N0° 13' 39"W
USH 41
EXISTING CABLE BARRIER TO REMAIN
SLOPE INTERCEPT (TYP)
SPECTRUM
COMMUNICATION LINE
EXISTING CABLE BARRIER TO REMAIN
STA 456+93.3, 22.4' LT & STA 458+68.3, 21.2' LT
(POST #5 LOCATIONS)
STEEL THRIE BEAM BULLNOSE TERMINAL - 2 EA REQD
STEEL THRIE BEAM - 175 LF REQD
REMOVING GUARDRAIL - 425 LF REQD
REMOVING CABLE BARRIER END TERMINAL TYPE 1 - 1 EA REQD
REPLACE WITH NEW CABLE BARRIER END TERMINAL TYPE 1 - 1 EA REQD
WETLAND BOUNDARY (TYP)
NB EXIT RAMP
448+00.00
STA 456+59
EXISTING 12" CSCP
CAUTION
WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM
FO
G
SIGN
132
BROWN RD.
5
5

STA 384+77
EXISTING 36" CPRC
COMMUNICATION LINE
FACILITY
STA 463+53, 28' LT
REMOVING INLETS - 1 EA REQD
REMOVING STORM SEWER 24-INCH - 30 LF REQD
INLETS MEDIAN 1 GRATE - 1 EA REQD
SALVAGED INLET COVERS - 1 EA REQD
STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH - 30 LF REQD
CONCRETE COLLARS FOR PIPE - 1 EA REQD (TIE INTO CROSS CULVERT)
STA 464+02, 29' LT
REMOVING INLETS - 1 EA REQD
REMOVING STORM SEWER 24-INCH - 20 LF REQD
INLETS MEDIAN 1 GRATE - 1 EA REQD
SALVAGED INLET COVERS - 1 EA REQD
STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH - 20 LF REQD
CONCRETE COLLARS FOR PIPE - 1 EA REQD (TIE INTO CROSS CULVERT)
WETLAND BOUNDARY (TYP)
FROST HEAVE REPAIR REQD
N
478+50.00
SB EXIT RAMP
USH 41 SB
386
388
R/L BEARING N0° 13' 12"W
390
392
394
396
398
EXISTING CABLE BARRIER TO REMAIN
464
466
468
470
472
474
476
478
USH 41 NB
R/L BEARING N0° 13' 39"W
STA 457+81 TO STA 475+91
SALVAGE AND REINSTALL HIGH
TENSION CABLE BARRIER - 100 LF REQD
NB ENTRANCE RAMP
STA 469+77
EXISTING 60" CPRC
TO REMAIN
STA 463+77
REMOVING OLD STRUCTURE 42041016838 - 1 LS REQD
(72-INCH CPRC X 185-LF, PREVIOUSLY LINED)
CULVERT PIPE REINFORCED CONCRETE CLASS IV 72-INCH - 168 LF REQD
APRON ENDWALLS FOR CULVERT PIPE 72-INCH - 2 EA REQD
WETLAND BOUNDARY (TYP)
463+25.00
STA 463+61
EXISTING 36" CPRC
TO REMAIN

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	PLAN	SHEET 58	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050204
PLOT DATE : 4/12/2022 6:49 AM
PLOT BY : ANDY BLOCK
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

LEGEND

BASE PATCHING

CONCRETE PAVEMENT REPAIR

CONCRETE PAVEMENT REPLACEMENT

N

PI: 404+64.37
Y=104761.02
X=563021.09
ANGLE=0°12'57"

PI: 406+66.31
Y=104962.97
X=563019.56
ANGLE=0°15'31"

PI: 485+62.42
Y=104961.61
X=563077.31
ANGLE=0°31'37"

PI: 413+63.48
Y=105660.08
X=563011.11
ANGLE=0°27'48"

493+75.00

STA 403+51
EXISTING 18" CPRC
TO REMAIN

WETLAND BOUNDARY (TYP)

400 R/L BEARING N0° 13' 12"W 402 404 406 408 410 USH 41 SB 412 414

480 482 484 486 488 490 492

R/L BEARING N0° 13' 39"W

USH 41 NB

EXISTING CABLE BARRIER TO REMAIN

STA 482+50 TO STA 482+70, LT
GRADING, SHAPING AND FINISHING
FOR DITCH REQD

STA 492+64
EXISTING 42" CPRC
TO REMAIN

STA 413+50 TO STA 413+75, LT
GRADING, SHAPING AND FINISHING
FOR DITCH REQD

5

478+50.00

5

N

509+00.00

WETLAND BOUNDARY (TYP)

416 R/L BEARING N0° 45' 29"W 418 420 422 424 426 USH 41 SB 428 430

494 496 498 500 502 504 506 508

R/L BEARING N0° 45' 16"W

USH 41 NB

EXISTING CABLE BARRIER TO REMAIN

STA 428+30
EXISTING 24" CPRC
REMOVING SMALL PIPE CULVERTS - 1 EA REQD (8-LF APRON ENDWALL ONLY)
APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH - 1 EA REQD
CONCRETE COLLARS FOR PIPE - 1 EA REQD

493+75.00

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 59	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050205

PLOT DATE : 1/24/2022 11:59 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

BASE PATCHING
CONCRETE PAVEMENT REPAIR
CONCRETE PAVEMENT REPLACEMENT

N

STA 443+50 TO STA 444+00, LT
REMOVING FENCE - 50 LF REQD
FENCE WOVEN WIRE 4-FT - 50 LF REQD

WETLAND BOUNDARY (TYP)

RIPRAP MEDIUM REQD
AT APRON ENDWALL

524+25.00

430 432 R/L BEARING N0° 45' 29"W 434 436 438 440 442 USH 41 SB 444

EXISTING CABLE BARRIER TO REMAIN

510 512 514 516 518 520 522 524

R/L BEARING N0° 45' 16"W

USH 41 NB

STA 515+25
EXISTING 42" CPRC
TO REMAIN

STA 523+00
EXISTING 36" CPRC
TO REMAIN

MERIT NETWORK
COMMUNICATION LINE

WETLAND BOUNDARY (TYP)

WISCONSIN PUBLIC SERVICE
ELECTRICITY

SPECTRUM
COMMUNICATION LINE

WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM

NSIGHT
COMMUNICATION LINE

CAUTION

5

509+00.00

5

N

539+50.00

446 448 R/L BEARING N0° 45' 29"W 450 452 454 456 USH 41 SB 458 460

EXISTING CABLE BARRIER TO REMAIN

4 526 528 530 532 534 536 538

R/L BEARING N0° 45' 16"W

USH 41 NB

STA 533+35
EXISTING 30" CPRC
TO REMAIN

524+25.00

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 60	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050206

PLOT DATE : 1/24/2022 11:59 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND

BASE PATCHING

CONCRETE PAVEMENT REPAIR

CONCRETE PAVEMENT REPLACEMENT

N

554+75.00

STA 470+22
EXISTING 18" CPRC
TO REMAIN

462 464 R/L BEARING N0° 45' 29"W 466 468 470 472 USH 41 SB 474

EXISTING CABLE BARRIER TO REMAIN

540 542 544 546 548 550 552 554

R/L BEARING N0° 45' 16"W

USH 41 NB

STA 541+90
EXISTING STRUCTURE C-42-37
TO REMAIN

WETLAND BOUNDARY (TYP)

STA 542+87 TO STA 544+01, RT
REMOVING FENCE - 130 LF REQD
FENCE WOVEN WIRE 4-FT - 130 LF REQD

539+50.00

5

5

ALLEN RD

T30

B-42-68

T33

SPECTRUM
COMMUNICATION LINE

WISCONSIN PUBLIC SERVICE
ELECTRICITY

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY (TYP)

N

PI: 495+00.00

476 478 R/L BEARING N0° 45' 29"W 480 482 484 486 488 USH 41 SB 490

EXISTING CABLE BARRIER TO REMAIN

556 558 560 562 564 566 568 570

R/L BEARING N0° 45' 16"W

U.S.H. 41 & 141

USH 41 NB

STA 554+75
EXISTING 29"x45" CSCP
TO REMAIN

SALVAGE AND REINSTALL HIGH TENSION CABLE BARRIER REQD

CAUTION

WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM

STA 562+03.2, 24.2' LT & STA 563+53.1, 18.7' LT
(POST #5 LOCATIONS)
STEEL THRIE BEAM BULLNOSE TERMINAL - 2 EA REQD
STEEL THRIE BEAM - 125 LF REQD
REMOVING GUARDRAIL - 350 LF REQD

554+75.00

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 61	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050207

PLOT DATE : 1/24/2022 11:59 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

BASE PATCHING

CONCRETE PAVEMENT REPAIR

CONCRETE PAVEMENT REPLACEMENT

PI: 491+09.59
Y=113405.51
X=562908.62
ANGLE=0°54'22"

PI: 570+04.01
Y=113402.47
X=562966.18
ANGLE=0°27' 31"

PI: 571+24.71
Y=113523.17
X=562965.55
ANGLE=0°21'49"

R/L BEARING N0° 08' 53"E

R/L BEARING N0° 04' 04"E

PI: 574+51.81
Y=113850.28
X=562965.94
ANGLE=0°12'47"

USH 41 SB

USH 41 NB

PI: 578+24.71
Y=114223.17
X=562967.77
ANGLE=0°27'9"

STA 501+08 TO STA 501+62, LT
REMOVING FENCE - 55 LF REQD
FENCE WOVEN WIRE 4-FT - 55 LF REQD

EXISTING CABLE BARRIER TO REMAIN

STA 576+88.1

WETLAND BOUNDARY (TYP)

STA 577+50.6, 5.4' LT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 325 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 410 LF REQD

STA 576+83.9

SLOPE INTERCEPT (TYP)

WETLAND BOUNDARY (TYP)

STA 577+78.4, 38.9' RT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 275 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 360 LF REQD

PI: 581+62.97
Y=114561.43
X=562966.75
ANGLE=0°32'34"

STA 581+75
BUTT JOINT REQD

STA 581+84
EXISTING 18" CSCP

B-42-79

B-42-19

STA 503+04
BUTT JOINT REQD

STA 504+96
BUTT JOINT REQD

STA 504+67
EXISTING 18" CSCP

STA 583+39
BUTT JOINT REQD

PI: 585+35.03
Y=114933.48
X=562969.16
ANGLE=0°10'31"

585+25.00

570+00.00

LITTLE SUAMICO RIVER

NOTE:
PAVE SHOULDERS TO STRUCTURES B-42-79 , AND MATCH THROUGH LANE PAVEMENT TO EXISTING APPROACH SLAB.

INCREASE MILLING DEPTH AT THE SB APPROACH TO B-42-19 WITHIN THE LIMITS OF THE TBTT CURB & GUTTER TO ELIMINATE ANY CHANGE IN THE ROADWAY PROFILE.

STA 507+47.9, 38.7' LT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 75 LF REQD
REMOVING GUARDRAIL - 125 LF REQD
MATCH MGS GUARDRAIL CONSTRUCTED BY OTHERS

SLOPE INTERCEPT (TYP)

STA 508+28.2

STA 508+53.7

STA 507+78.9, 6.5' RT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 100 LF REQD
REMOVING GUARDRAIL - 95 LF REQD
MATCH MGS GUARDRAIL CONSTRUCTED BY OTHERS

WETLAND BOUNDARY (TYP)

STA 512+48 TO STA 512+98, LT
REMOVING FENCE - 50 LF REQD
FENCE WOVEN WIRE 4-FT - 50 LF REQD

STA 512+73
EXISTING 21" CPRC
CULVERT PIPE LINERS 21-INCH - 95 LF REQD

PI: 590+32.83
Y=115431.27
X=562970.86
ANGLE=0°2'46"

EXISTING CABLE BARRIER TO REMAIN

STA 596+95
EXISTING 30" CPRC
REMOVING SMALL PIPE CULVERTS - 1 EA REQD (8-LF APRON ENDWALL ONLY)
APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH - 1 EA REQD
CONCRETE COLLARS FOR PIPE - 1 EA REQD

U.S.H. 41 & 141

600+50.00

585+25.00

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 62	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050208

PLOT DATE : 3/22/2022 9:18 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

BASE PATCHING

CONCRETE PAVEMENT REPAIR

CONCRETE PAVEMENT REPLACEMENT

STA 522+626
EXISTING 18" CPRC
TO REMAIN

SB ENTRANCE RAMP

SPECTRUM
COMMUNICATION LINE

PI: 534+39.74
Y=117735.65
X=562919.81
ANGLE=0°1'31"

PI: 613+40.35
Y=117738.79
X=562976.88
ANGLE=0°12'27"

PI: 536+75.45
Y=117971.35
X=562920.31
ANGLE=0°23'52"

615+75.00

WETLAND BOUNDARY (TYP)

522 524 526 528 530 532 534 536

R/L BEARING N0° 08' 53"E

USH 41 SB

EXISTING CABLE BARRIER TO REMAIN

602 604 606 608 610 612 614 6

R/L BEARING N0° 08' 58"E

USH 41 NB

STA 610+12
EXISTING 30" CPRC
TO REMAIN

SLOPE INTERCEPT (TYP)

CAUTION

WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM

NB EXIT RAMP

MERIT NETWORK
COMMUNICATION LINE

600+50.00

5

5

WISCONSIN PUBLIC SERVICE
ELECTRICITY

NSIGHT
COMMUNICATION LINE

SB EXIT RAMP

WETLAND BOUNDARY (TYP)

631+00.00

B-42-67

SLOPE INTERCEPT (TYP)

PI: 619+19.23
Y=118317.66
X=562980.49
ANGLE=0°10'51"

538 540 542 544 546 548 550 552

R/L BEARING N0° 29' 52"E

USH 41 SB

SALVAGE AND REINSTALL HIGH TENSION CABLE BARRIER REQD

616 618 620 622 624 626 628 630

R/L BEARING N0° 32' 16"E

USH 41 NB

STA 628+62
EXISTING 36" CPRC
TO REMAIN

STA 618+26
EXISTING 18" CPRC
TO REMAIN

NB ENTRANCE RAMP

WETLAND BOUNDARY (TYP)

STA 615+79.6, 21.0' LT & STA 617+67.1, 22.1' LT
(POST #5 LOCATIONS)
STEEL THRIE BEAM BULLNOSE TERMINAL - 2 EA REQD
STEEL THRIE BEAM - 200 LF REQD
REMOVING GUARDRAIL - 425 LF REQD

STA 628+62, LT & RT
RESETTING PIPE ENDS
2 EA REQD

615+75.00

C.T.H. 'S'

CTH S

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 63	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050209

PLOT DATE : 1/24/2022 12:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

STA 555+03 TO STA 555+54, LT
REMOVING FENCE - 50 LF REQD
FENCE WOVEN WIRE 4-FT - 50 LF REQD

WETLAND BOUNDARY (TYP)

STA 555+27
EXISTING 18" CPRC
CULVERT PIPE LINERS 18-INCH - 75 LF REQD

LEGEND
- BASE PATCHING
- CONCRETE PAVEMENT REPAIR
- CONCRETE PAVEMENT REPLACEMENT

N

646+25.00

PI: 635+61.66
Y=119960.01
X=562995.91
ANGLE=0°0'1"

STA 635+88, 21.8' LT
RECONSTRUCTING INLETS - 1 EA

552 R/L BEARING N0° 31' 14"E 554 556 558 560 562 USH 41 SB 564 566

EXISTING CABLE BARRIER TO REMAIN

632 634 636 638 640 642 644 646

R/L BEARING N0° 32' 16"E

USH 41 NB

STA 635+95
EXISTING 36" CPRC
TO REMAIN

STA 555+26.1, 18.0' RT
REMOVING INLETS - 1 EA REQD
INLETS MEDIAN 3 GRATE - 1 EA REQD
SALVAGED INLET COVERS - 3 EA REQD
CONCRETE COLLARS FOR PIPE - 1 EA REQD

631+00.00

5

5

SLOPE INTERCEPT (TYP)

N

STA 579+75.0, 36' LT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 212.5 LF REQD
MGS GUARDRAIL TERMINAL TYPE 2 - 1 EA REQD
REMOVING GUARDRAIL - 280 LF REQD
(NOTE: 10' OFFSET TO FACE OF RAIL TYP
FROM EDGE OF TRAVELED WAY)

WETLAND BOUNDARY (TYP)

661+50.00

RIPRAP MEDIUM REQD
AT APRON ENDWALL

STA 580+75.5

568 R/L BEARING N0° 31' 14"E 570 572 574 576 578 USH 41 SB 580 582

EXISTING CABLE BARRIER TO REMAIN

EXISTING CABLE BARRIER TO REMAIN

6 648 650 652 654 656 658 660

R/L BEARING N0° 32' 16"E

USH 41 NB

U.S.H. 41 & 141

STA 656+55
EXISTING 72" CPRC
CULVERT PIPE LINERS 72-INCH - 170 LF REQD

WETLAND BOUNDARY (TYP)

646+25.00

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 64	E

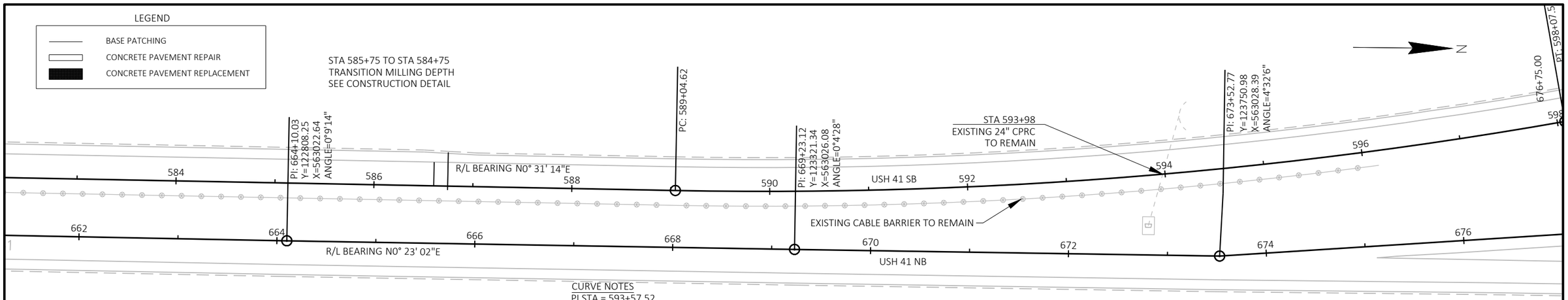
FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050210

PLOT DATE : 1/24/2022 12:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND

BASE PATCHING
CONCRETE PAVEMENT REPAIR
CONCRETE PAVEMENT REPLACEMENT

STA 585+75 TO STA 584+75
TRANSITION MILLING DEPTH
SEE CONSTRUCTION DETAIL



CURVE NOTES
PI STA = 593+57.52
Y = 123653.190
X = 562971.923
DELTA = 11°04'41"
D = 1°13'37"
T = 452.90'
L = 902.97'
R = 4670.20'
PC STA = 589+04.62
Y = 123200.310
X = 562967.809
PT STA = 598+07.59
Y = 124098.422
X = 562888.941
BK = N00°31'13.6"E
AH = N10°33'27.4"W
S.E. = 4.7%

5 661+50.00

5

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 65	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050211
PLOT DATE : 1/24/2022 12:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND

- BASE PATCHING
- CONCRETE PAVEMENT REPAIR
- CONCRETE PAVEMENT REPLACEMENT

CURVE NOTES
PI STA = 607+28.74
Y = 125003.978
X = 562720.164
DELTA = 10°54'22"
D = 1°50'35"
T = 296.76'
L = 591.72'
R = 3108.66'
PC STA = 604+31.98
Y = 124712.243
X = 562774.537
PT STA = 610+23.71
Y = 125300.730
X = 562721.969
BK = N10°33'27.4"W
AH = N00°20'54.5"E
S.E. = 4.0% (FOR THROUGH LANES)

N

692+00.00

STA 609+12
BUTT JOINT REQD

PT: 610+23.71

PC: 604+31.98

PT: 598+07.59

STA 599+21
EXISTING 18" CPRC
TO REMAIN

U.S.H. 41 & 141

USH 41 SB

U.S.H.

R/L BEARING N10° 33' 27"W

598 600 602 604 606 608 610 612

PI: 679+14.50
Y=124311.19
X=562987.01
ANGLE=0°24'35"

PI: 680+08.80
Y=124405.28
X=562980.73
ANGLE=0°32'35"

PI: 681+04.17
Y=124500.49
X=562975.29
ANGLE=0°30'34"

PI: 682+03.09
Y=124599.29
X=562970.29
ANGLE=0°31'16"

PI: 683+03.72
Y=124699.85
X=562966.58
ANGLE=1°34'25"

PI: 684+89.36
Y=124885.07
X=562954.23
ANGLE=1°2'37"

PI: 686+79.41
Y=125074.90
X=562945.03
ANGLE=0°35'3"

PI: 687+75.34
Y=125170.76
X=562941.37
ANGLE=0°5'28"

PI: 688+38.13
Y=125233.54
X=562939.98
ANGLE=1°49'49"

678 680 682 684 686 688 690 692

R/L BEARING N4° 13' 32"W

N3° 48' 57"W N3° 16' 22"W N2° 45' 48"W N2° 14' 32"W N3° 49' 00"W NB SCALE RAMP N2° 46' 23"W N2° 11' 19"W N1° 15' 52"W N0° 33' 58"E

U.S.H. 41 & 141 USH 41 NB

U.S.H. 41 & 141

STA 678+17
BUTT JOINT REQD

676+75.00

5

5

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 66	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050212

PLOT DATE : 1/24/2022 12:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

BASE PATCHING
CONCRETE PAVEMENT REPAIR
CONCRETE PAVEMENT REPLACEMENT

N

707+18.23

USH 41 SB

41 & 41

PC: 625+53.39

PT: 626+84.80

614 616 618 620 622 624 626 628

R/L BEARING N0° 20' 54"E

CURVE NOTES
PI STA = 625+19.57
Y = 126796.562
X = 562731.066
DELTA = 10°34'00"
D = 3°11'18"
T = 166.18'
L = 331.41'
R = 1797.00'
PC STA = 623+53.39
Y = 126630.387
X = 562730.056
PT STA = 626+84.80
Y = 126959.733
X = 562762.533
BK = N00°20'54.5"E
AH = N10°54'55.0"E

STATE PATROL WEIGHT STATION

PI: 699+48.59
Y=126343.95
X=562950.95
ANGLE=4°28'6"

PI: 703+70.60
Y=126764.33
X=562987.98
ANGLE=1°49'43"

PI: 705+04.67
Y=126898.19
X=562995.48
ANGLE=2°5'54"

PI: 705+99.08
Y=126992.58
X=562997.31
ANGLE=1°15'26"

692 694 696 698 700 702 704 706

R/L BEARING N0° 33' 58"E

N5° 02' 03"E

NB SCALE RAMP

N3° 12' 21"E

N1° 06' 27"E

N0° 08' 58"W

WETLAND BOUNDARY (TYP)

USH 41 NB

STA 704+03
BUTT JOINT REQD

STA 701+19
EXISTING 42" CPRC
REMOVING SMALL PIPE CULVERTS - 2 EA REQD (2 X 8-LF APRON ENDWALL ONLY)
APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 42-INCH - 2 EA REQD
CONCRETE COLLARS FOR PIPE - 2 EA REQD

CONCRETE COLLARS FOR PIPE - 2 EA REQD

WETLAND BOUNDARY (TYP)

692+00.00

5

5

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 67	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050213

PLOT DATE : 1/24/2022 12:01 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

LEGEND

- BASE PATCHING
- CONCRETE PAVEMENT REPAIR
- CONCRETE PAVEMENT REPLACEMENT

CURVE NOTES
PI STA = 632+17.80
Y = 127483.089
X = 562863.461
DELTA = 7°07'08"
D = 2°13'05"
T = 160.69'
L = 320.97'
R = 2583.29'
PC STA = 630+57.11
Y = 127325.307
X = 562833.033
PT STA = 633+78.08
Y = 127643.426
X = 562874.100
BK = N10°54'55.0"E
AH = N03°47'47.2"E

N

5

R/L BEARING N10° 54' 55"E

630

PC: 630+57.11

632

633+78.08

634

PI: 635+05.05
Y=127770.12
X=562882.51
ANGLE=0°30'8"

636

PI: 636+07.22
Y=127872.01
X=562890.17
ANGLE=0°39'3"

STA 634+58
BUTT JOINT REQD

WISDOT
ELECTRICITY

PI: 708+96.02
Y=127289.52
X=562996.53
ANGLE=0°18'10"

PI: 709+86.17
Y=127379.66
X=562995.82
ANGLE=0°21'1"

708

N0° 27' 09"W

710

R/L BEARING N0° 06' 08"W

712

USH 41 NB

714

N0° 15' 37"W

716

PI: 714+87.16
Y=127880.65
X=562994.93
ANGLE=0°9'29"

STA 640+73.6, 35.8' LT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 275 LF REQD
MGS GUARDRAIL TERMINAL TYPE 2 - 1 EA REQD
REMOVING GUARDRAIL - 205 LF REQD
(NOTE: 10' OFFSET TO FACE OF RAIL TYP
FROM EDGE OF TRAVELED WAY)

PI: 716+75.84
Y=128069.33
X=562994.07
ANGLE=0°30'13"

638

640

PI: 718+53.40
Y=128246.89
X=562994.82
ANGLE=0°45'22"

718

N0° 14' 36"E

PI: 719+52.46
Y=128345.94
X=562993.94
ANGLE=0°52'6"

720

N0° 30' 46"W

PC: 640+97.65

USH 41 SB

642

CURVE NOTES
PI STA = 642+15.70
Y = 128479.254
X = 562928.880
DELTA = 3°36'11"
D = 1°31'36"
T = 118.05'
L = 236.02'
R = 3753.21'
PC STA = 640+97.65
Y = 128361.444
X = 562921.370
PT STA = 643+33.68
Y = 128597.304
X = 562928.973
BK = N03°38'52.4"E
AH = N00°02'41.4"E
S.E. = 4.7% (FOR THROUGH LANES)

STA 641+25.4

PT: 643+33.68

STA 641+47.9

722

N1° 22' 51"W

U.S.H. 41 & 141

EXISTING CABLE BARRIER TO REMAIN

WISCONSIN PUBLIC SERVICE
ELECTRICITY

STA 709+30
EXISTING 24" CPRC
TO REMAIN

WETLAND BOUNDARY (TYP)

SLOPE INTERCEPT (TYP)

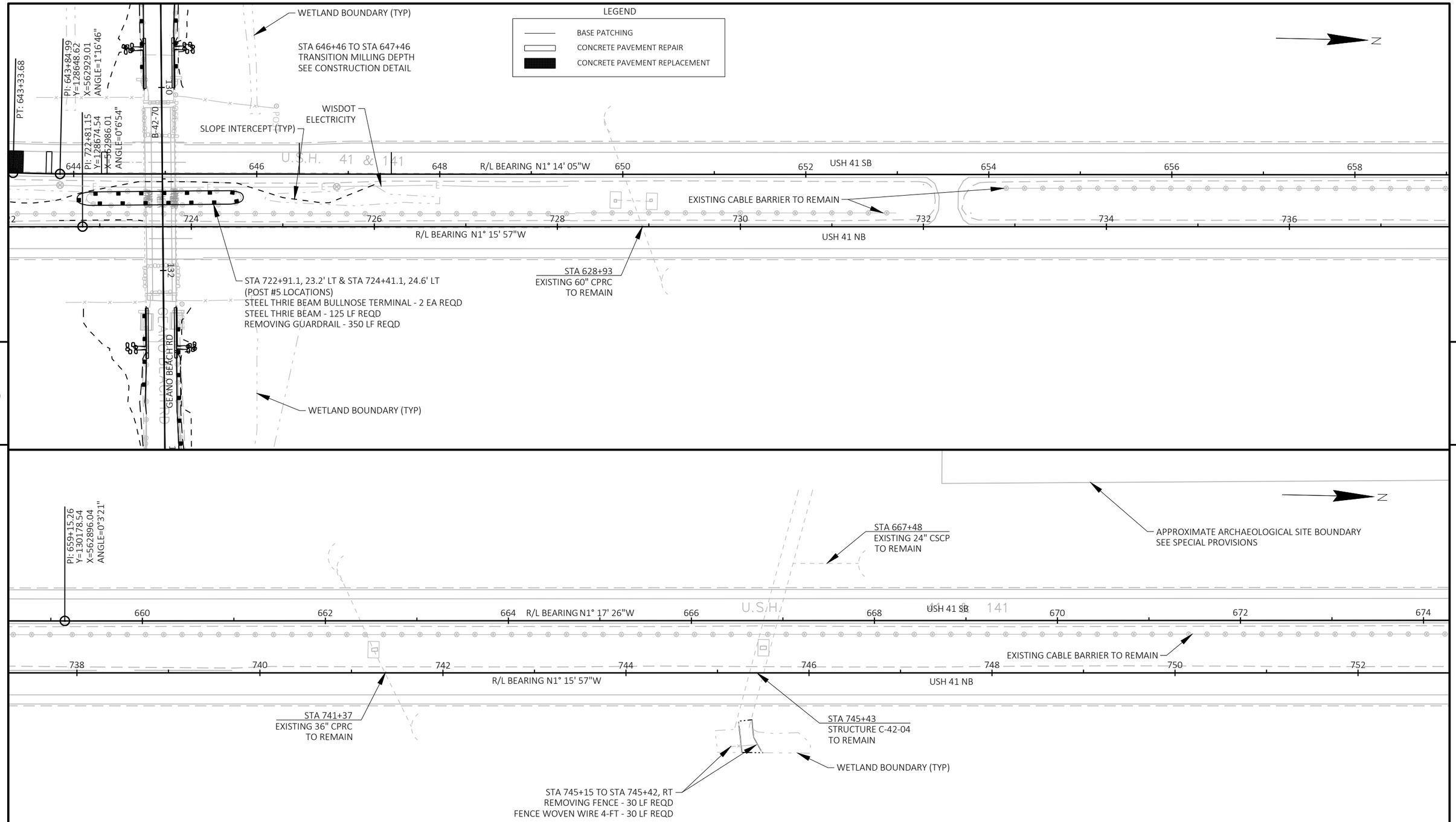
STA 641+43.4, 5.7' RT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 350 LF REQD
MGS GUARDRAIL TERMINAL TYPE 2 - 1 EA REQD
REMOVING GUARDRAIL - 380 LF REQD
(NOTE: 4' OFFSET TO FACE OF RAIL TYP
FROM EDGE OF TRAVELED WAY)

707+18.23

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 68	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050214

PLOT DATE : 1/24/2022 12:01 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT



5

5

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 69	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050215

PLOT DATE : 1/24/2022 12:01 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND
BASE PATCHING
CONCRETE PAVEMENT REPAIR
CONCRETE PAVEMENT REPLACEMENT

N

APPROXIMATE ARCHAEOLOGICAL SITE BOUNDARY
SEE SPECIAL PROVISIONS

PC: 753+26.75
PC: 675+21.53
PT: 682+51.09
PT: 761+69.14
PI: 766+50.78
Y=133042.85
X=562946.23
ANGLE=0°6'43"
PI: 687+83.52
Y=133045.80
X=562888.04
ANGLE=0°7'53"

SB ENTRANCE RAMP
USH 41 SB
R/L BEARING N2° 19' 29"E
U.S.H. 41 & 141
EXISTING CABLE BARRIER TO REMAIN
USH 41 NB
R/L BEARING N2° 20' 08"E
NB EXIT RAMP

674 676 678 680 682 684 686 688
754 756 758 760 762 764 766 768

STA 765+67
EXISTING 30" CPRC
TO REMAIN

STA 765+72
EXISTING 30" CPRC
TO REMAIN

CURVE NOTES
PI STA = 678+86.43
Y = 132149.202
X = 562851.642
DELTA = 3°36'55"
D = 0°29'44"
T = 364.90'
L = 729.56'
R = 11561.96'
PC STA = 675+21.53
Y = 131784.393
X = 562859.861
PT STA = 682+51.09
Y = 132513.804
X = 562866.444
BK = N01°17'26.2"W
AH = N02°19'29.2"E
S.E. = RC

CURVE NOTES
PI STA = 757+48.09
Y = 132140.631
X = 562909.430
DELTA = 3°36'05"
D = 0°25'39"
T = 421.33'
L = 842.39'
R = 13402.39'
PC STA = 753+26.75
Y = 131719.400
X = 562918.737
PT STA = 761+69.14
Y = 132561.614
X = 562926.599
BK = N01°15'56.8"W
AH = N02°20'07.7"E
S.E. = RC

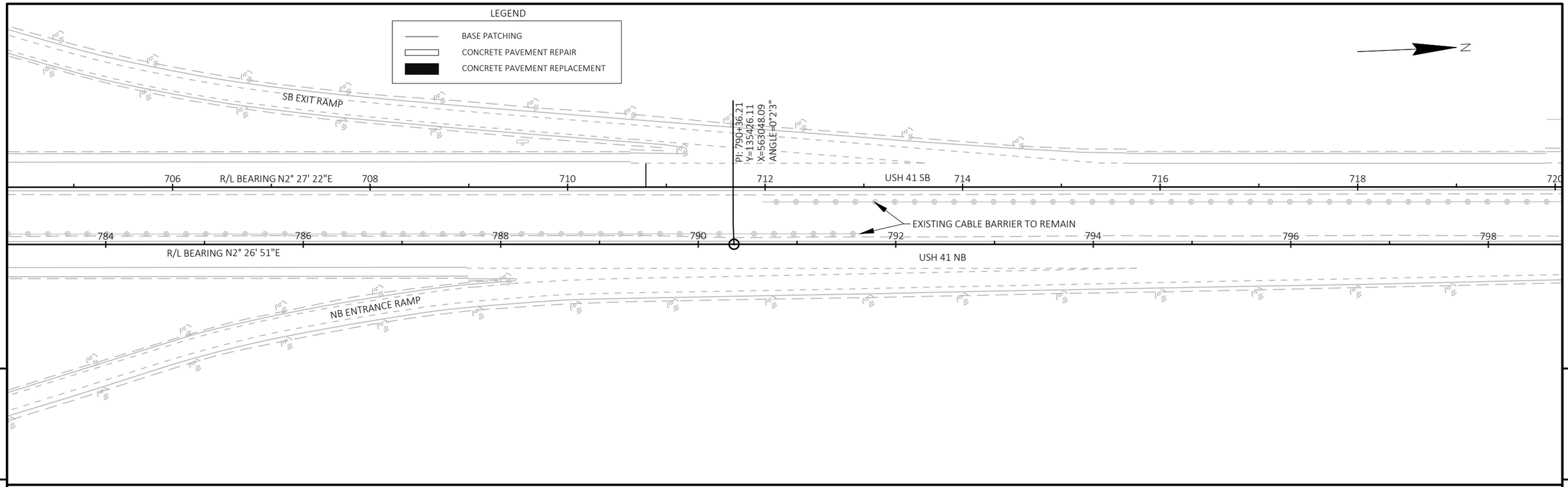
STA 775+19.4, 17.7' LT & STA 776+94.3, 24.1' LT
(POST #5 LOCATIONS)
STEEL THRIE BEAM BULLNOSE TERMINAL - 2 EA REQD
STEEL THRIE BEAM - 175 LF REQD
REMOVING GUARDRAIL - 425 LF REQD

N

WETLAND BOUNDARY (TYP)
B-42-71
U.S.H. 41 & 141
USH 41 SB
EXISTING CABLE BARRIER TO REMAIN
SLOPE INTERCEPT (TYP)
R/L BEARING N2° 27' 22"E
R/L BEARING N2° 26' 51"E
USH 41 NB
STA 778+06
EXISTING 24" CPRC
TO REMAIN
WETLAND BOUNDARY (TYP)
WETLAND BOUNDARY (TYP)
SAMPSON CTH D (SAMPSON RD)
WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM
CAUTION

690 692 694 696 698 700 702 704
768 770 772 774 776 778 780 782

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 70	E



U.S.H. 41 & 141

CURVE NOTES
PI STA = 730+66.10
Y = 137324.439
X = 563071.570
DELTA = 10°13'14"
D = 1°14'00"
T = 415.48'
L = 828.75'
R = 4645.90'
PC STA = 726+50.62
Y = 136909.342
X = 563053.765
PT STA = 734+79.37
Y = 137729.789
X = 563162.747
BK = N02°27'22.1"E
AH = N12°40'36.4"E
S.E. = 4.0%

CURVE NOTES
PI STA = 810+23.41
Y = 137411.442
X = 563134.134
DELTA = 10°37'08"
D = 1°15'58"
T = 420.58'
L = 838.76'
R = 4525.66'
PC STA = 806+02.83
Y = 136991.252
X = 563115.922
PT STA = 814+41.59
Y = 137821.080
X = 563229.463
BK = N02°28'54.0"E
AH = N13°06'02.0"E
S.E. = 4.0%

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 71	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050217
PLOT DATE : 1/24/2022 12:02 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND
BASE PATCHING
CONCRETE PAVEMENT REPAIR
CONCRETE PAVEMENT REPLACEMENT

CAUTION
WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM

NSIGHT
COMMUNICATION LINE
MERIT
NETWORK
COMMUNICATION
LINE

OAK ORCHARD RD

MOVING SIGNS
TYPE II - 1 EA REQD
MOVING SMALL SIGN
SUPPORTS - 1 EA REQD

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

STA 819+91
CONSTRUCT MEDIAN CROSSOVER
SEE STANDARD DETAIL DRAWING

STA 742+63
EXISTING 24" CSCP
TO REMAIN

STA 821+22
EXISTING 6" CPCPE
REMOVING SMALL PIPE
CULVERTS - 1 EA REQD

STA 748+89
EXISTING 18" CSCP
TO REMAIN

PI: 744+49.34
Y=1386674.85
X=563381.14
ANGLE=0°7'27"

PI: 749+34.11
Y=139146.78
X=563492.00
ANGLE=0°5'12"

PI: 736+71.79
Y=137917.52
X=563204.97
ANGLE=0°25'6"

PT: 814+41.59

PI: 817+75.91
Y=138146.70
X=563305.24
ANGLE=0°2'23"

R/L BEARING N13° 05' 42"E

R/L BEARING N13° 06' 02"E

R/L BEARING N13° 08' 25"E

R/L BEARING N13° 13' 09"E

USH 41 SB

USH 41 NB

USH 41/141

736 738 740 742 744 746 748 750
814 816 818 820 822 824 826 828

EXISTING CABLE BARRIER TO REMAIN

EXISTING CABLE BARRIER TO REMAIN

SLOPE INTERCEPT (TYP)

STA 820+25.6, 15.6' LT & STA 821+88.1, 15.4' LT
(POST #5 LOCATIONS)
STEEL THRIE BEAM BULLNOSE TERMINAL - 2 EA REQD
STEEL THRIE BEAM - 175 LF REQD
REMOVING GUARDRAIL - 350 LF REQD

STA 818+05.0

STA 819+17.1, 39' RT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 150 LF REQD
MGS GUARDRAIL TERMINAL TYPE 2 - 1 EA REQD
(NOTE: 13' OFFSET TO FACE OF RAIL TYP FROM
EDGE OF TRAVELED WAY)

STA 817+34
EXISTING 36" CPRC
REMOVING SMALL PIPE CULVERTS - 2 EA REQD (2 X 8-LF APRON ENDWALL ONLY)
APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH - 2 EA REQD
CONCRETE COLLARS FOR PIPE - 2 EA REQD

STA 820+84.08 - STRUCTURE S-42-11

CAUTION
WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM

PC: 133+46.33

B-42-72

132

5

5

END CONSTRUCTION
STA 752+61.70
BUTT JOINT REQD

PI: 750+41.85
Y=139251.62
X=563516.79
ANGLE=0°14'46"

PI: 829+93.84
Y=139332.75
X=563582.12
ANGLE=1°4'49"

PI: 752+62.34
Y=139466.41
X=563566.61
ANGLE=2°12'41"

PI: 753+14.44
Y=139516.67
X=563580.34
ANGLE=1°15'14"

PI: 757+29.67
Y=139919.54
X=563680.91
ANGLE=0°26'2"

PI: 758+26.87
Y=140013.66
X=563705.17
ANGLE=1°15'35"

C-42-05

PC: 843+71.15

USH 41/141

752 754 756 758 760 762 764
830 832 834 836 838 840 842 844

USH 41 SB

USH 41 NB

R/L BEARING N13° 11' 29"E

R/L BEARING N14° 13' 15"E

EXISTING CABLE BARRIER TO REMAIN

REMOVING SIGNS TYPE I - 2 EA REQD
REMOVING STRUCTURAL STEEL SIGN SUPPORTS - 2 EA REQD

END PROJECT
STA 831+00.45
BUTT JOINT REQD

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 72	E

STA 129+53 TO STA 130+04, LT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 51 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 129+59.3) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

STA 129+00.0, 20.4' LT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 12.5 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 98 LF REQD

BP: 125+93.60
Y=96653.21
X=562563.03

STA 130+16.33 AND
STA 132+29.20
BUTT JOINT REQD

SLOPE INTERCEPT (TYP)
STA 128+09.8

126 128 130 132 134 136
R/L BEARING N89° 28' 25"E

BEGIN CONSTRUCTION
STA 128+09.75
BUTT JOINT REQD

STA 128+55.1

STA 129+00.0, 16.2' RT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 12.5 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 98 LF REQD

STA 129+53 TO STA 130+03, RT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 50 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 129+59.3) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

USH 41 SB
USH 41 NB
326
324
322
404
402

STA 132+43 TO STA 132+92, LT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 50 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 132+86.2) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

STA 133+45.5, 19.9' LT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 12.5 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 98 LF REQD

END CONSTRUCTION
STA 134+36.89
BUTT JOINT REQD

STA 134+40.8

EP: 136+53.07
Y=96662.95
X=563622.45

NORFIELD RD

B-5-313

STA 133+91.0

STA 133+45.6, 17.0' RT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 12.5 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 98 LF REQD

AT&T WI
COMMUNICATION LINE

STA 132+42 TO STA 132+93, RT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 51 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 132+86.3) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

N

WETLAND BOUNDARY (TYP)

STA 132+40, LT
REMOVING INLETS - 1 EA REQD
REMOVING STORM SEWER 12-INCH - 90 LF REQD

STA 132+31 TO STA 132+81, LT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 50 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 132+75.3) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

STA 133+34.7, 44.3' LT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 12.5 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 160 LF REQD

STA 134+48.1

EP: 137+69.02
Y=102167.83
X=563705.41

USH 41 SB
USH 41 NB
460
458
456
380
378

BP: 123+80.72
Y=102172.27
X=562317.11

BEGIN CONSTRUCTION
STA 126+05.94
BUTT JOINT REQD

SLOPE INTERCEPT (TYP)

STA 130+13 AND STA 132+31
BUTT JOINT REQD

124 126 128 130 132 134 136
R/L BEARING
S89° 49' 01"E

B-5-312

BROWN RD.
BROWN RD

STA 128+30.5

STA 129+10.8, 23.4' RT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 12.5 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 160 LF REQD

PI: 377+79.47

STA 129+63 TO STA 130+13, RT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 50 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 129+70.1) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

PI: 456+77.15

WETLAND BOUNDARY (TYP)

STA 132+40, RT
REMOVING INLETS - 1 EA REQD
REMOVING STORM SEWER 12-INCH - 90 LF REQD

STA 132+31 TO STA 132+51, RT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 20 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 132+39.1) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

END CONSTRUCTION
STA 136+40.41
BUTT JOINT REQD

SPECTRUM
COMMUNICATION LINE

WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM

CAUTION

N

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN/OCONTO	PLAN	SHEET 73	E

WETLAND BOUNDARY (TYP)

STA 129+53 TO STA 130+00, LT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 47 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 129+59.4) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

SPECTRUM
COMMUNICATION LINE

WISCONSIN PUBLIC SERVICE
ELECTRICITY

STA 129+00.1, 16.2' LT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 12.5 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 85 LF REQD

STA 130+17 AND STA 132+30
BUTT JOINT REQD

STA 132+46 TO STA 132+96, LT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 50 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 132+86.8) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

STA 133+58.7, 16.5' LT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 25 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 85 LF REQD

BP: 125+94.25
Y=112689.73
X=562418.04

EP: 136+52.43
Y=112664.91
X=563475.93

SLOPE INTERCEPT (TYP)

STA 128+74.2

STA 134+39.2

R/L BEARING
S88° 39' 23"E

BEGIN CONSTRUCTION
STA 128+06.00
BUTT JOINT REQD

STA 128+06.0

END CONSTRUCTION
STA 134+39.18
BUTT JOINT REQD

MERIT NETWORK
COMMUNICATION LINE

STA 134+39.2

STA 129+00.1, RT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 12.5 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 85 LF REQD

STA 133+46.7, 20.6' RT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 12.5 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 85 LF REQD

STA 129+50 TO STA 130+02, RT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 52 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 129+59.4) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

STA 132+44 TO STA 132+94, RT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 50 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 132+87.3) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

WETLAND BOUNDARY (TYP)

WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM

CAUTION

USH 41 SB

USH 41 NB

ALLEN ROAD

ALLEN RD

B-42-68

N

5

5

WISCONSIN PUBLIC SERVICE
ELECTRICITY

STA 132+32 TO STA 132+86, LT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 52 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 132+75.8) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

STA 133+97.7, 44.3' LT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 75 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 160 LF REQD

BP: 124+94.43
Y=118062.82
X=562321.12

EP: 137+52.23
Y=118062.63
X=563578.91

STA 129+88 TO STA 130+13
REMOVE AND REPLACE MEDIAN CURB & GUTTER
AND CONCRETE SIDEWALK

STA 130+13 AND STA 132+32
BUTT JOINT REQD

STA 134+43.5

R/L BEARING S89° 59' 29"E

BEGIN CONSTRUCTION
STA 126+05.89
BUTT JOINT REQD

STA 127+92.0

B-42-67

CTH S

STA 132+32 TO STA 132+57
REMOVE AND REPLACE MEDIAN CURB & GUTTER
AND CONCRETE SIDEWALK

END CONSTRUCTION
STA 136+25.93
BUTT JOINT REQD

SLOPE INTERCEPT (TYP)

STA 128+48.0, 24.3' RT (POST #1)
MGS GUARDRAIL TERMINAL EAT - 1 EA REQD
MGS GUARDRAIL 3 - 75 LF REQD
MGS THRIE BEAM TRANSITION - 39.4 LF REQD
REMOVING GUARDRAIL - 147 LF REQD

MERIT NETWORK
COMMUNICATION LINE

SPECTRUM
COMMUNICATION LINE

PI: 536+75.45

WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM

CAUTION

STA 129+60 TO STA 130+14, RT
CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT - 54 LF REQD
CONCRETE SURFACE DRAINS (PERPENDICULAR, CENTER AT STA 129+69.9) - 1.0 CY REQD
MAINTAIN MINIMUM POST SEPARATION - SEE STANDARD DETAIL DRAWING

PI: 613+40.35

USH 41 SB

USH 41 NB

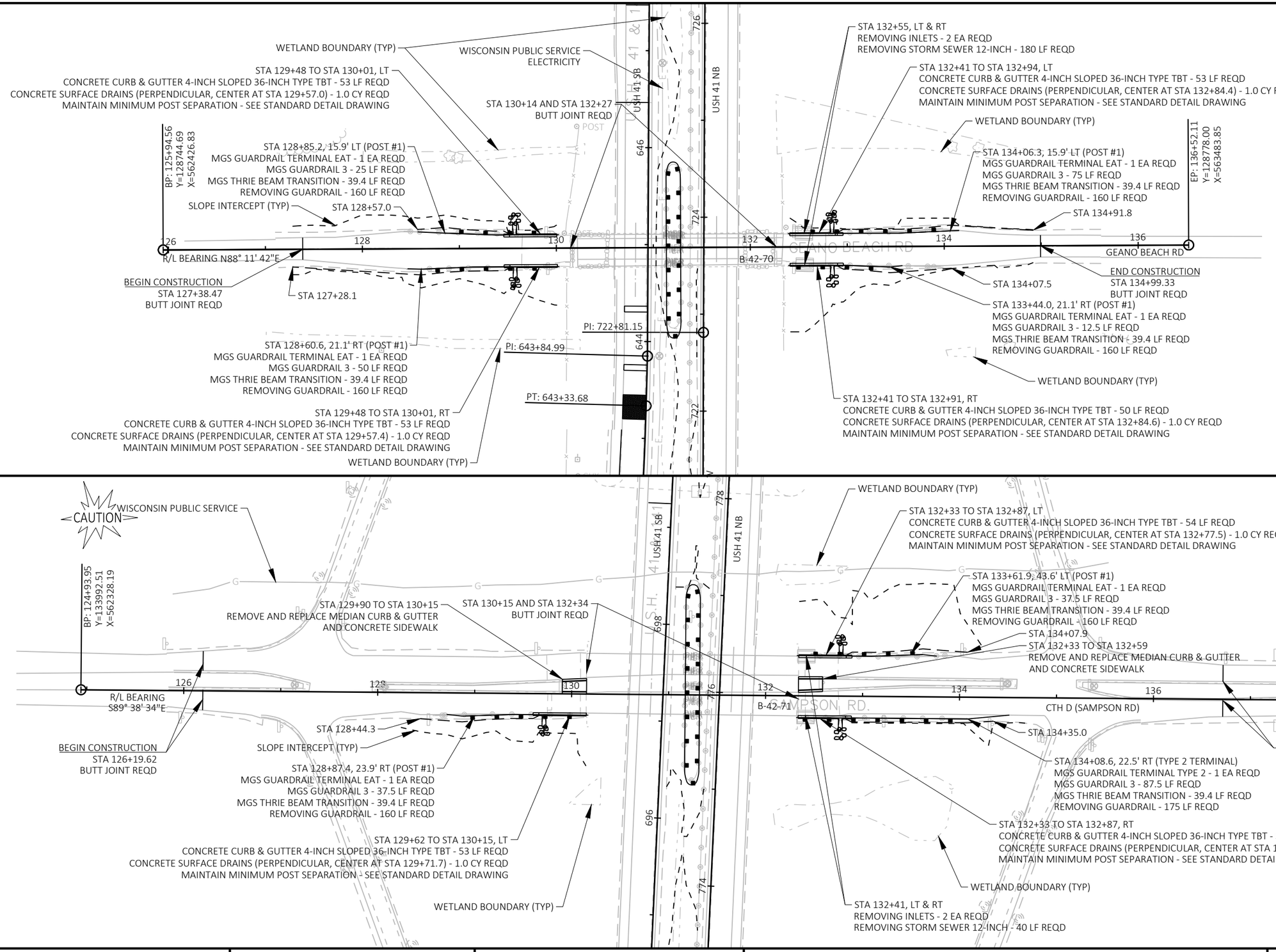
T.H. "S"

N

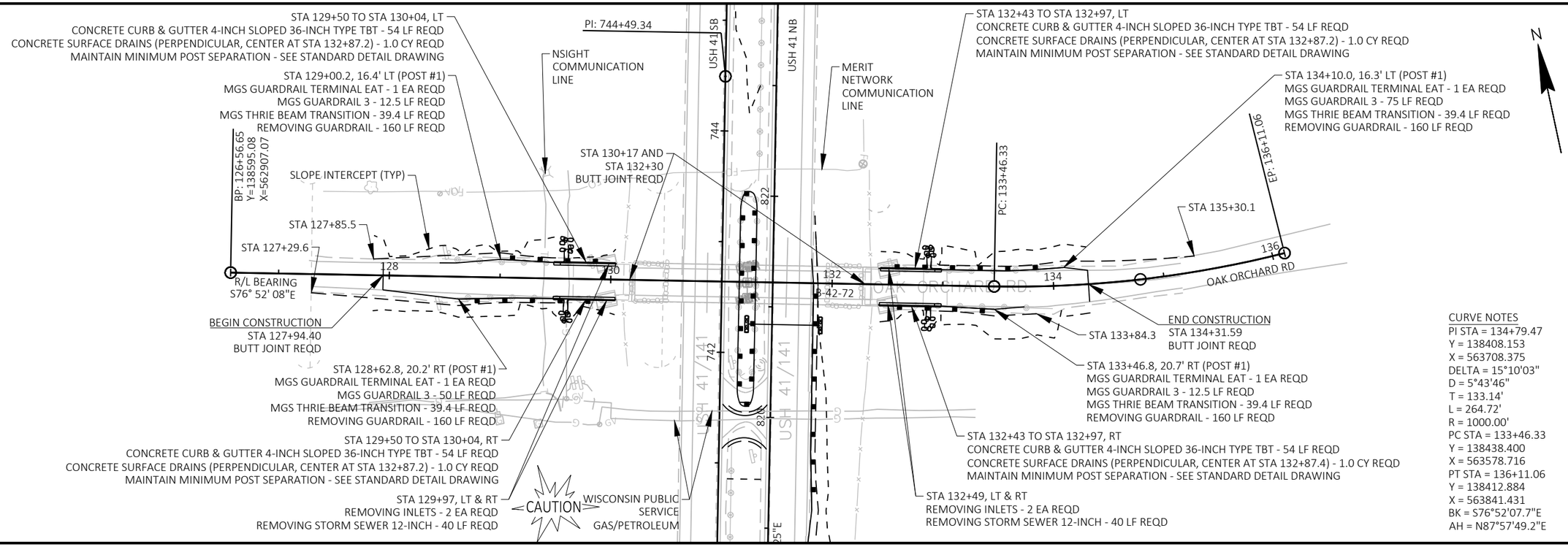
PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 74	E

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LAYOUT NAME - 050220

PLOT DATE : 1/24/2022 12:03 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 75	E



5

5

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PLAN	SHEET 76	E

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LAYOUT NAME - 050222

PLOT DATE : 1/24/2022 12:03 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : ##########

Standard Detail Drawing List

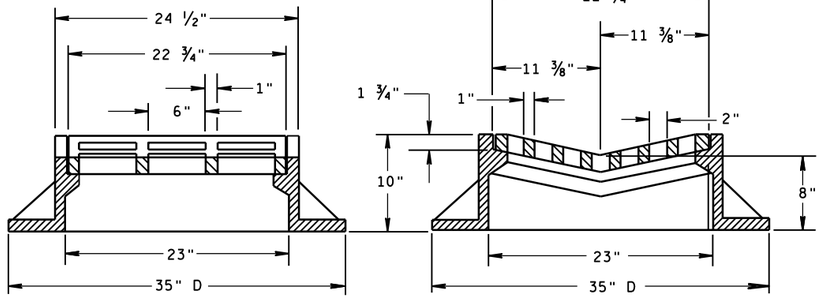
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08C09-02	INLETS MEDIAN 3 AND 4 GRATE
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-07A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-06	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
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
11A01-06	MAINTENANCE CROSSOVER FOR FREEWAYS
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-15A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
13C19-03	HMA LONGITUDINAL JOINTS
14B26-04A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04F	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04G	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-04H	STEEL THRIE BEAM BULLNOSE TERMINAL
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)
14B47-03A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-03B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-03C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-03D	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-03E	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-03F	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-03G	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B52-02A	CABLE BARRIER TYPE 1 LAYOUT
14B52-02B	CABLE BARRIER TYPE 1 LAYOUT
14B52-02C	CABLE BARRIER TYPE 1 LAYOUT
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE

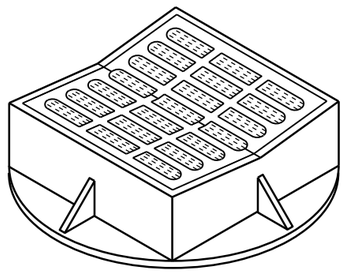
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Standard Detail Drawing List

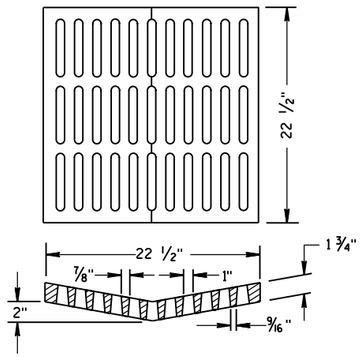
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-08	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C14-04	AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-06C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-04A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-04C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15D12-10A	TRAFFIC CONTROL, LANE CLOSURE
15D12-10B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D12-10D	TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
15D15-06A	TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-06B	TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-06C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-06D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D15-06E	TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE
15D16-05	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D40-03D	TRAFFIC CONTROL, PARTIAL LANE SHIFT MULTILANE DIVIDED 50 MPH AND GREATER
15D42-01	TRAFFIC CONTROL, TWO LANE FULL FREEWAY CLOSURE
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D47-02B	TRAFFIC CONTROL, INGRESS/EGRESS WITHOUT BARRIER

6



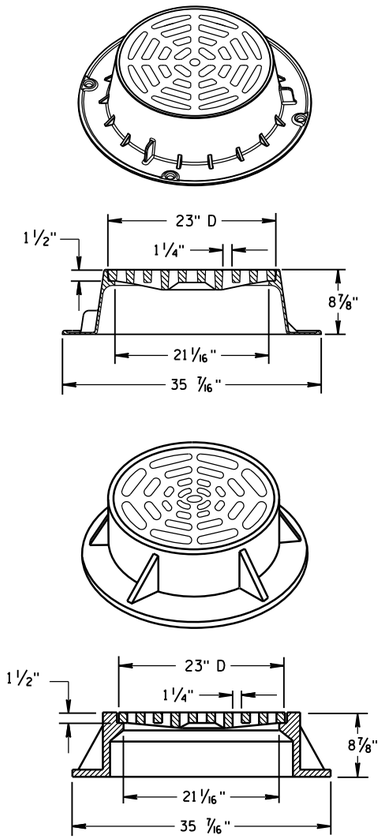


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

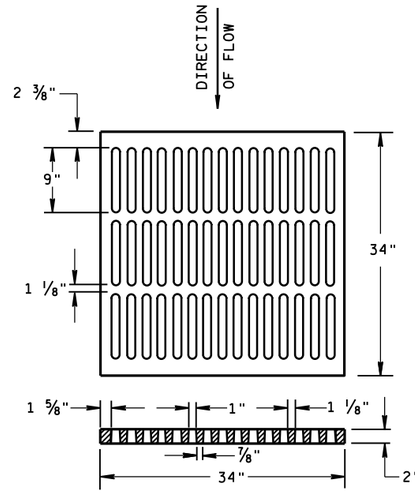
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

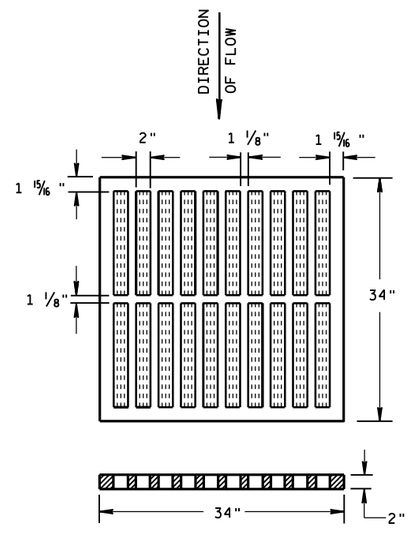
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



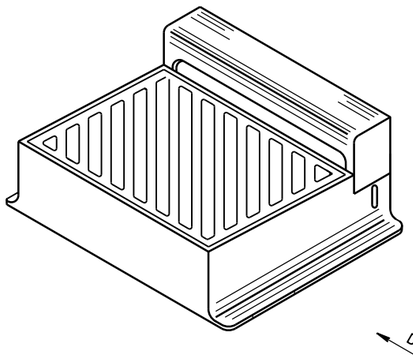
ALTERNATIVE TYPE "MS"

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

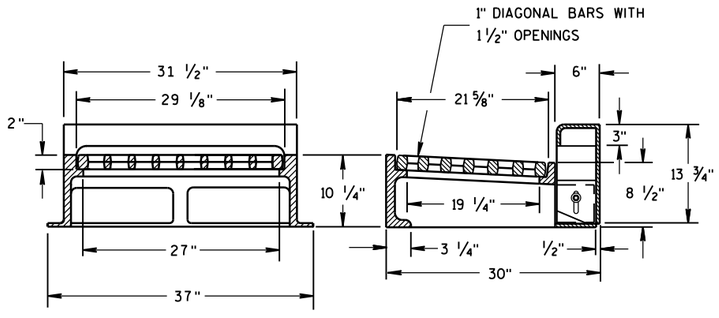


TYPE "MS"

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



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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

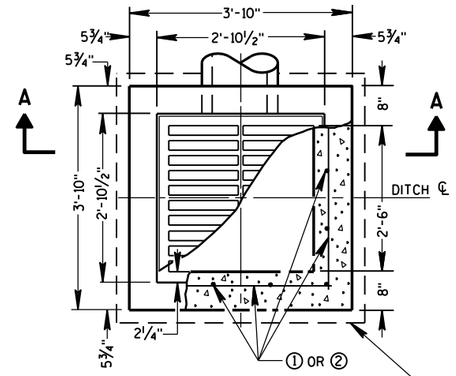
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

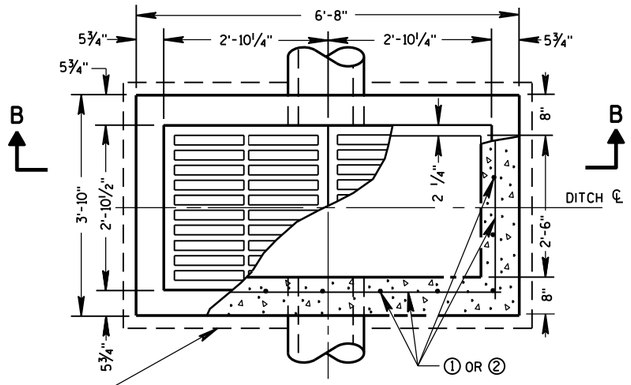
APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 8 A 5-19b

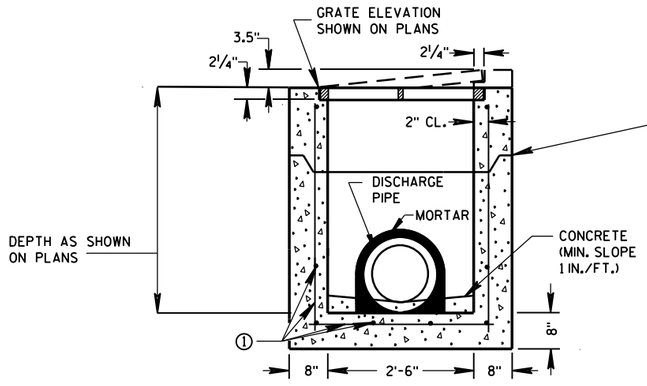


PLAN VIEW

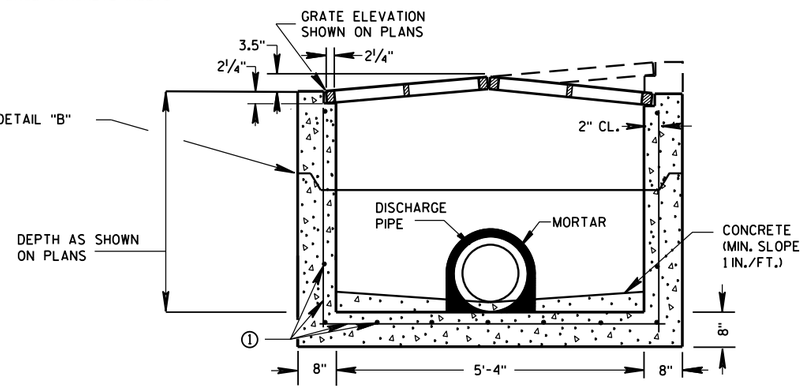


PLAN VIEW

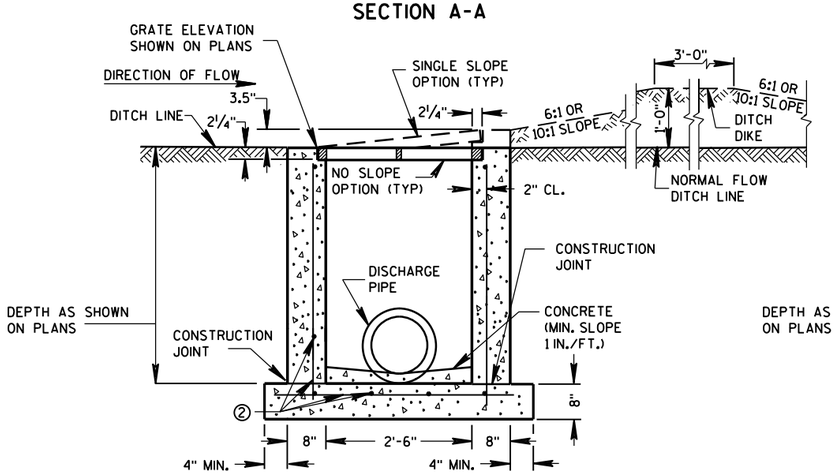
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



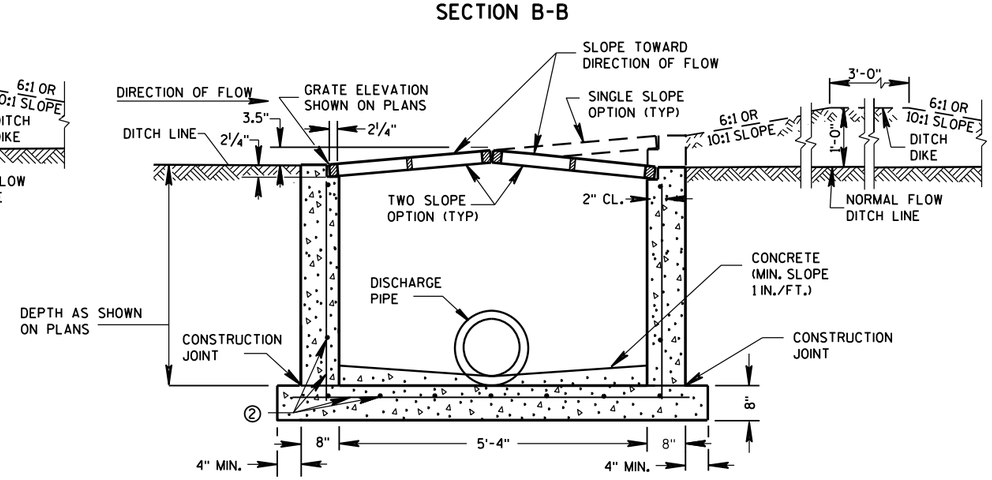
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

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

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

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

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

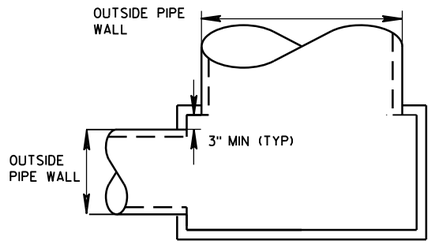
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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

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

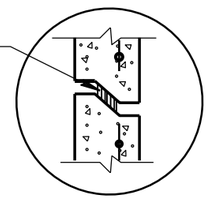
PIPE MATRIX

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



DETAIL "A"

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



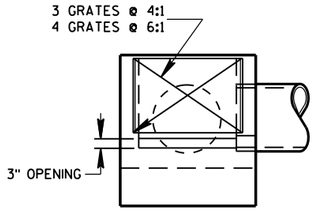
DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

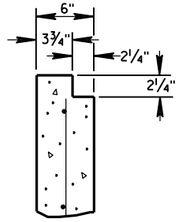
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVI ENT
FHWA

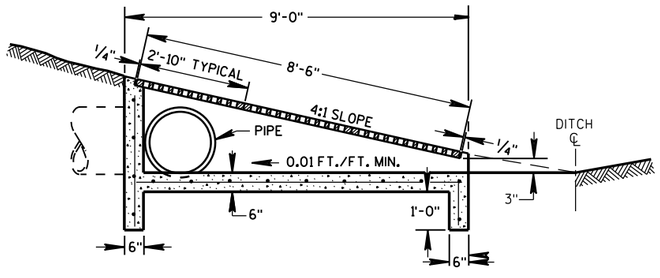
6
S.D.D. 8 C 8-2



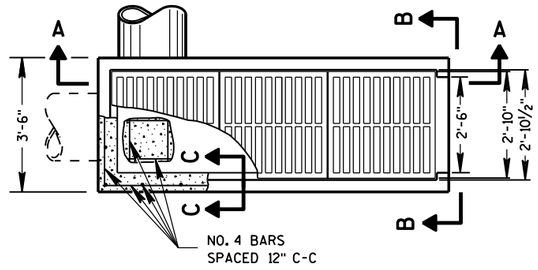
SECTION B-B



SECTION C-C

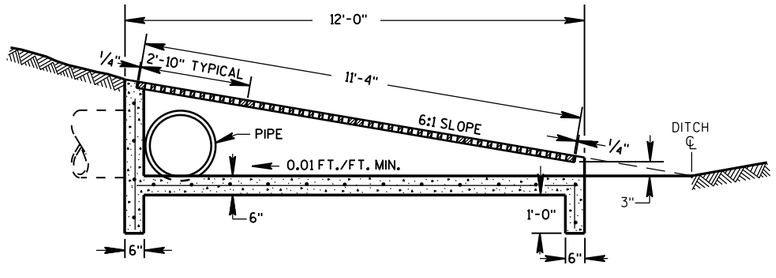


SECTION A-A

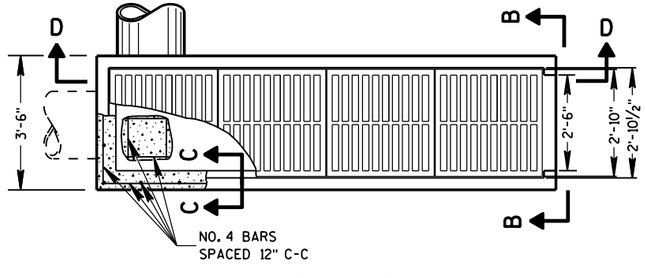


PLAN VIEW

INLETS MEDIAN 3 GRATE



SECTION D-D



PLAN VIEW

INLETS MEDIAN 4 GRATE

GENERAL NOTES

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ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 3G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

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

6

S.D.D. 8 C 9-2

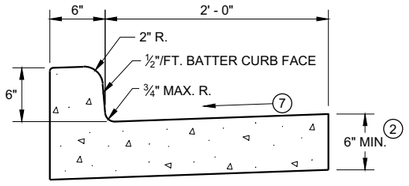
INLETS MEDIAN 3 AND 4 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

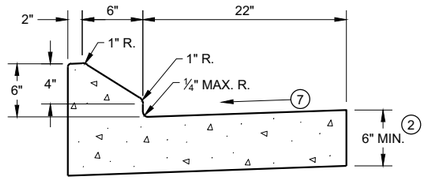
APPROVED
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS 81 ENT
UNIT SUPERVISOR
FHWA

6

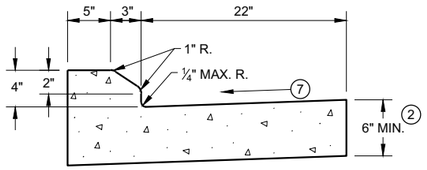
S.D.D. 8 C 9-2



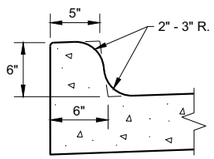
TYPES A (1) & D



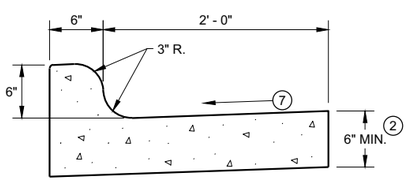
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

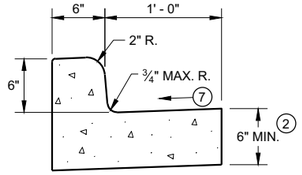


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



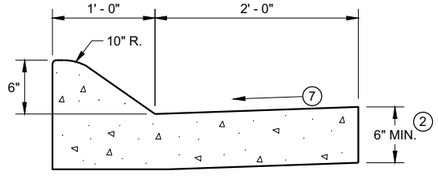
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"



TYPES A (1) & D

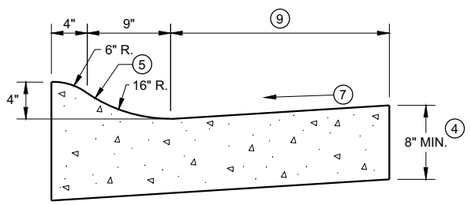
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

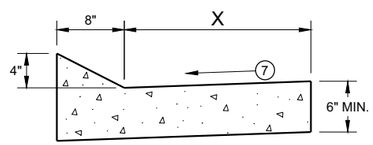
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

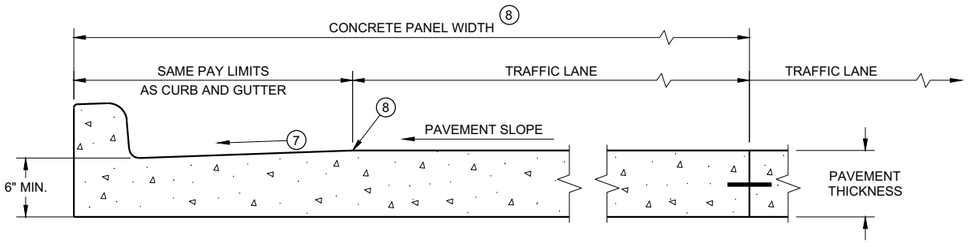


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

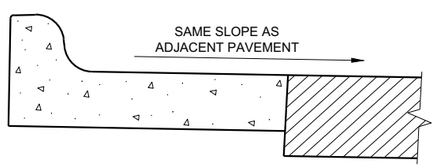
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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.

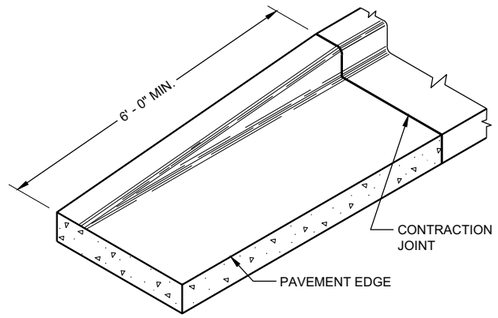
(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

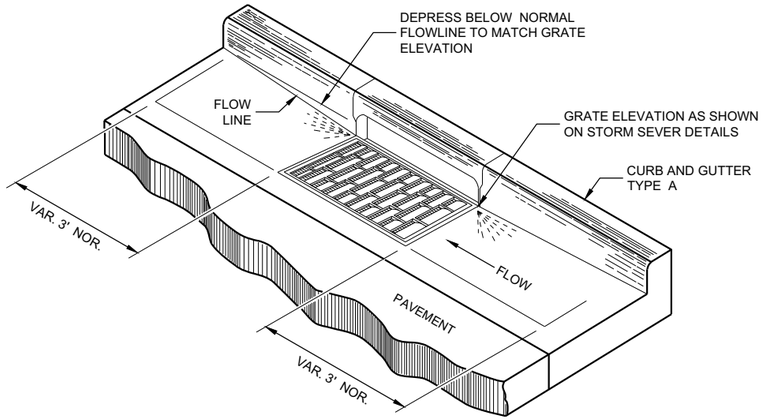
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 22a
SDD 08D01 - 22a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

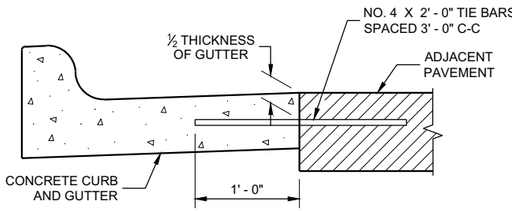
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

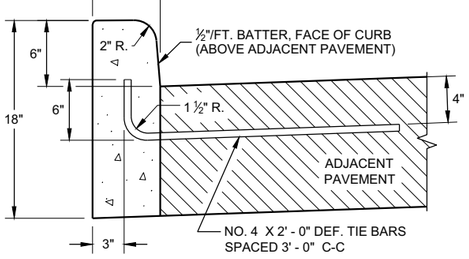
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

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

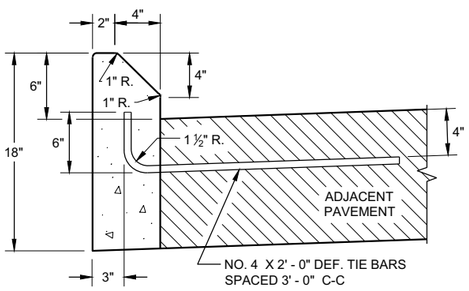
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

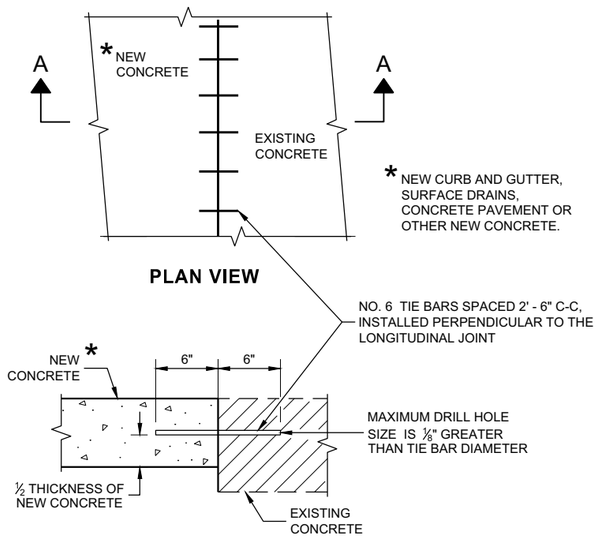


TYPES A (1) & D



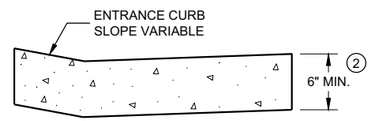
TYPES G (1) & J

CONCRETE CURB



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD08D01 - 22b

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)

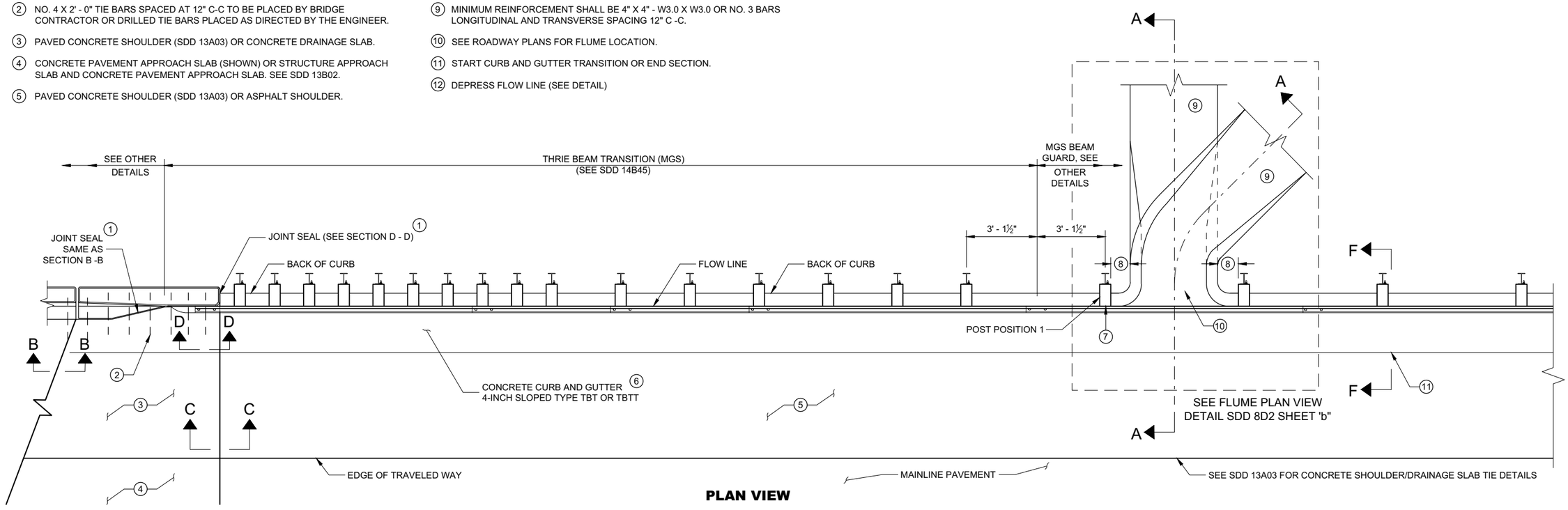
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

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

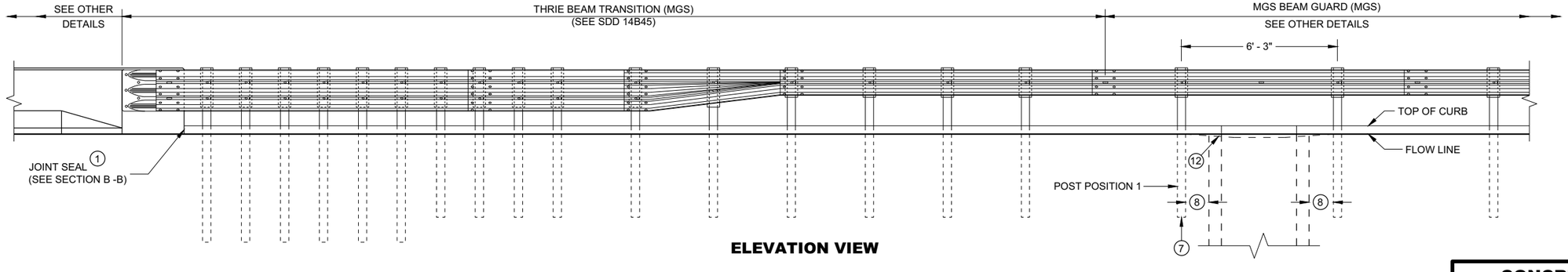
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



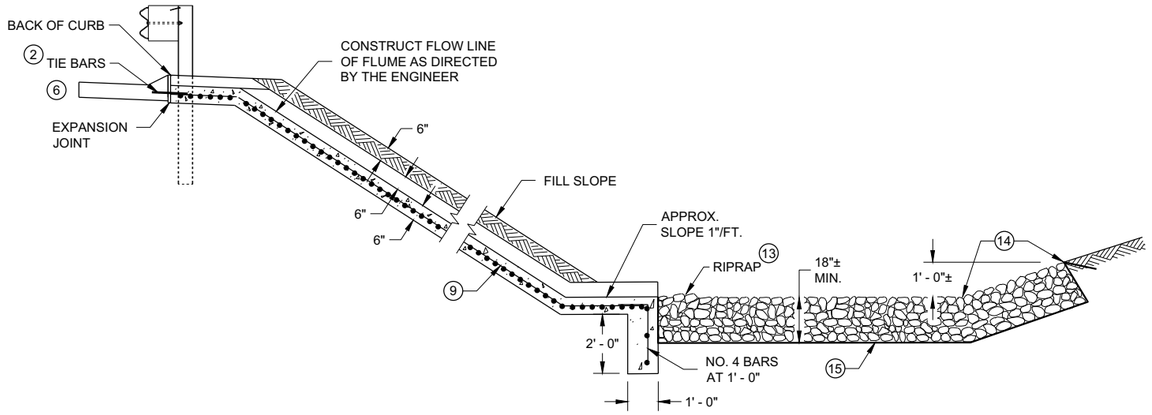
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

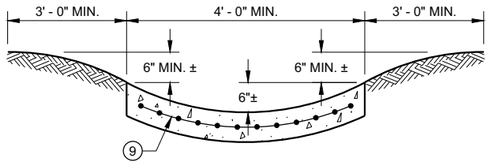
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D02 - 07a

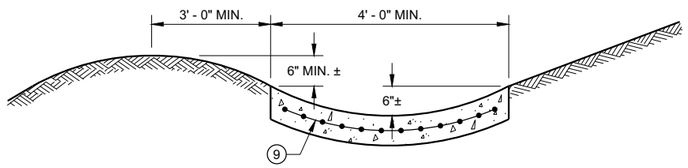
SDD 08D02 - 07a



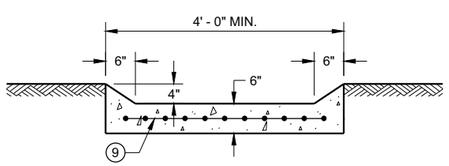
SECTION A - A



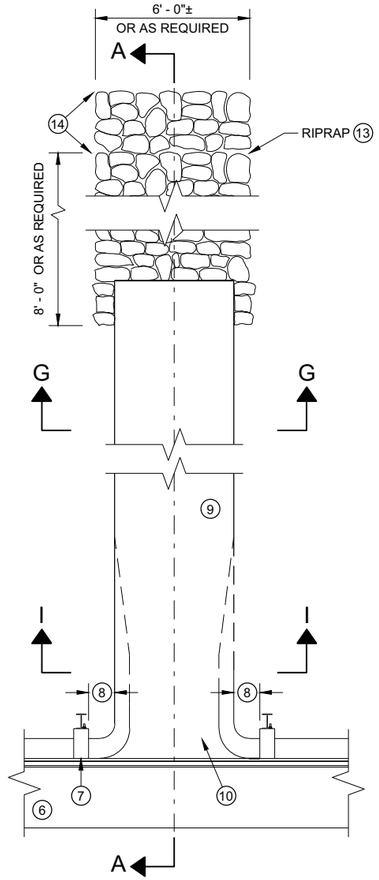
SECTION G - G



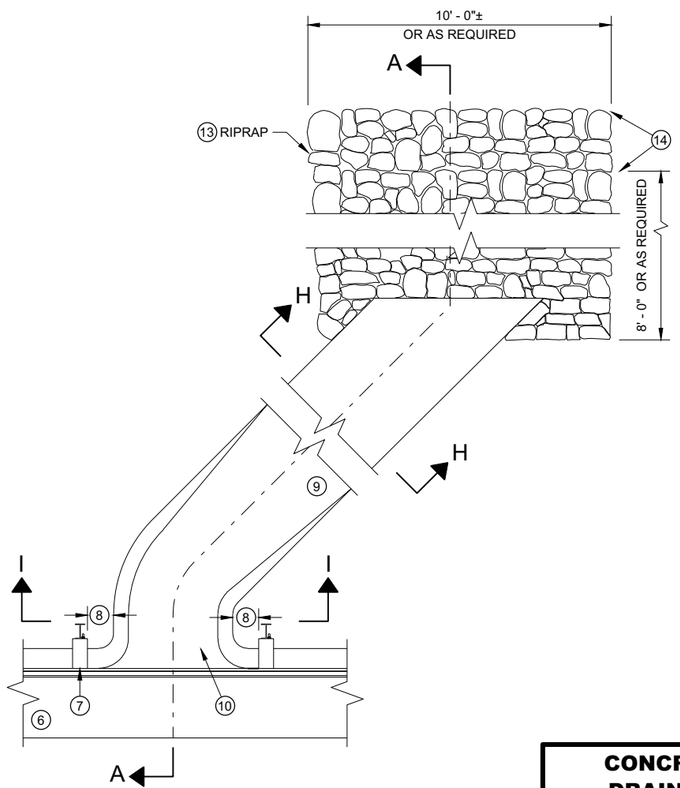
SECTION H - H



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.

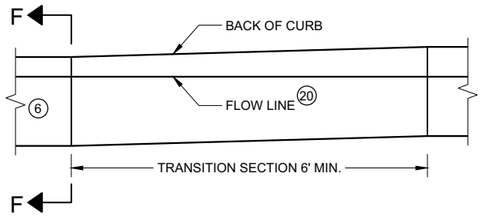
1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH 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 FABRIC TYPE HR.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

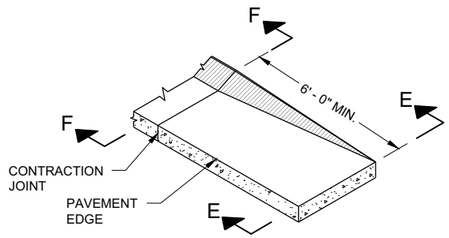
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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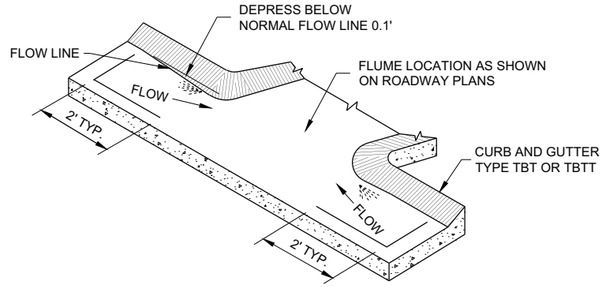
SDD 08D02 - 07b



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 FABRIC 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.

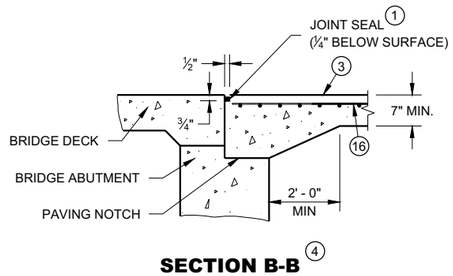
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

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

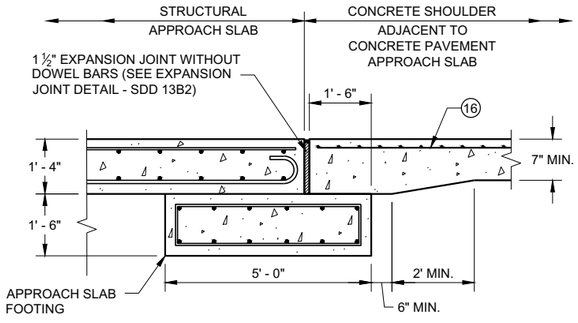
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

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

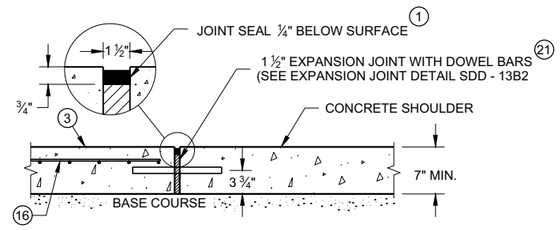
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



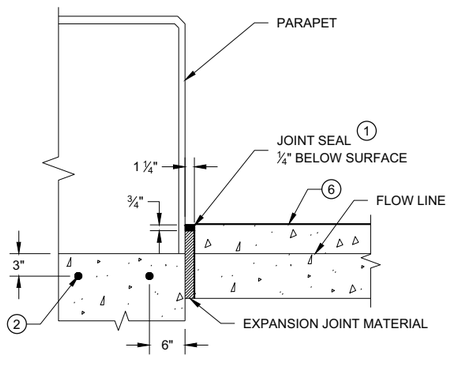
SECTION B-B



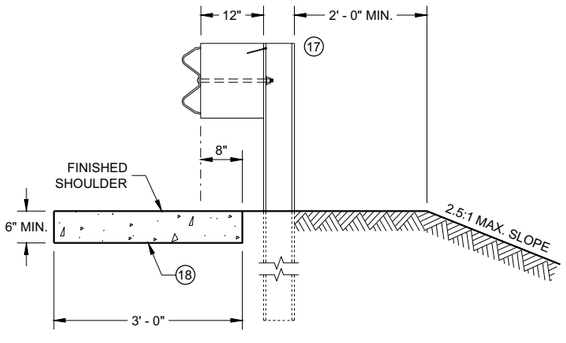
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



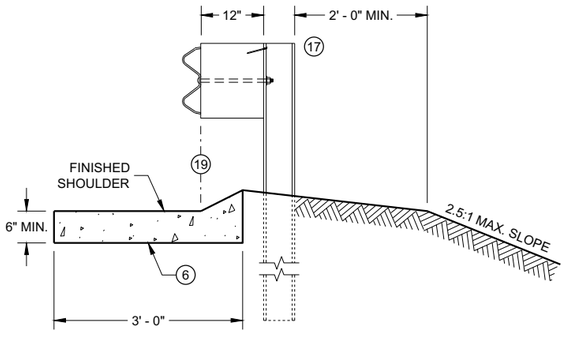
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

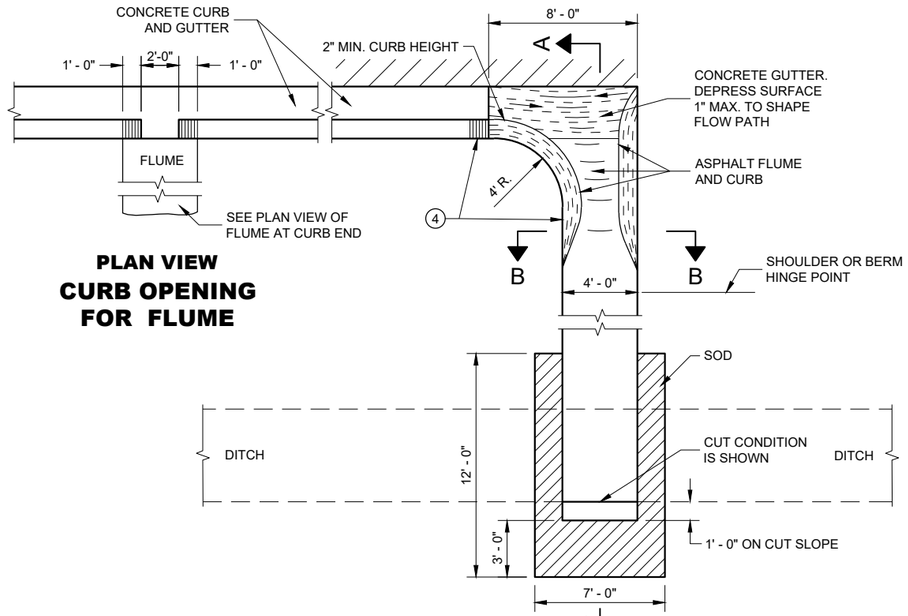
FHWA

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SDD 08D02 - 07c
SDD 08D02 - 07c

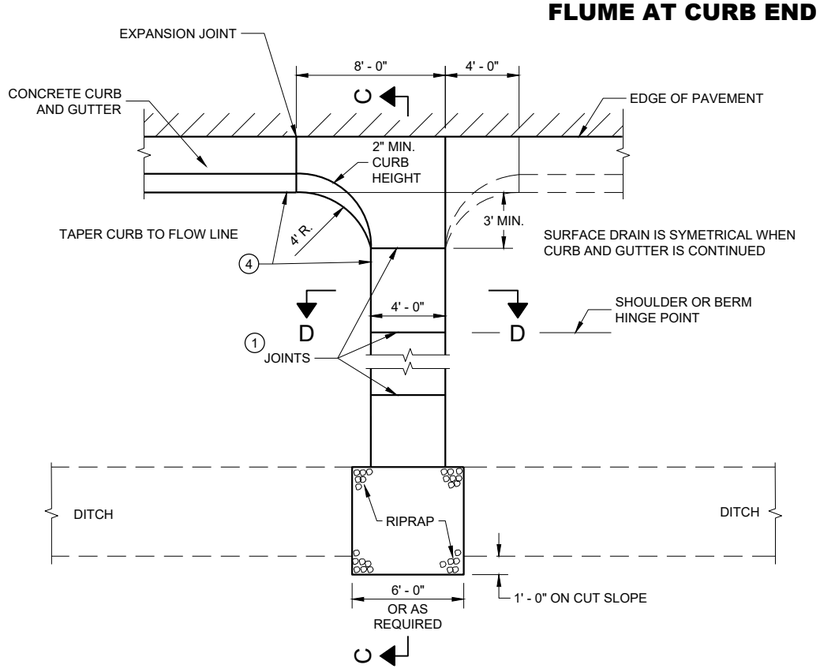
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



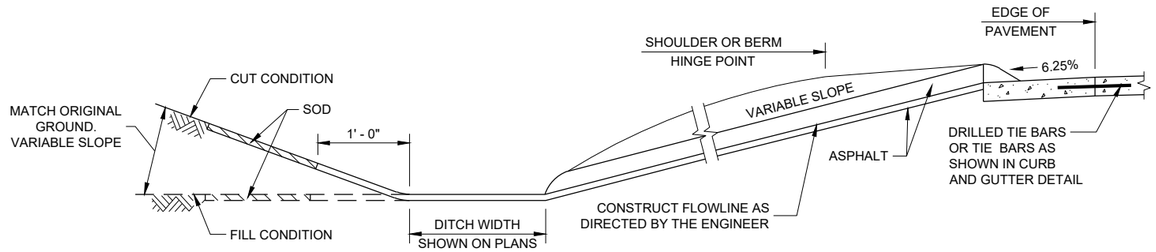
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

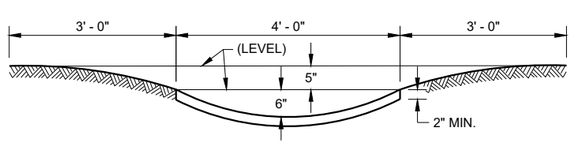
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

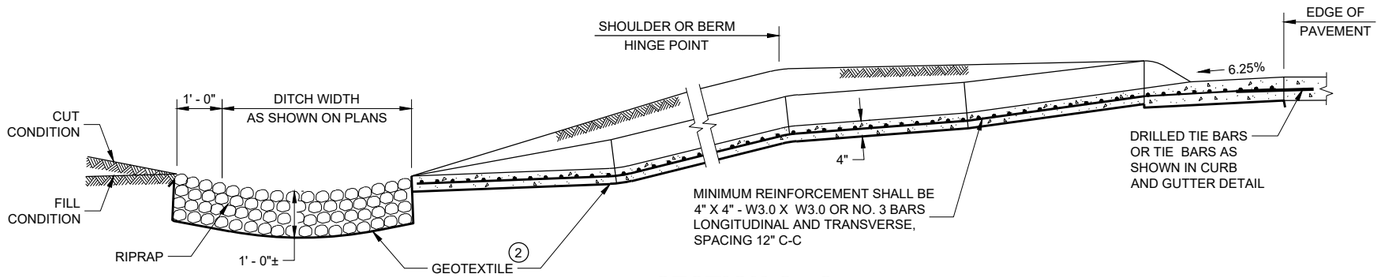
1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
2. GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
3. CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
4. ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



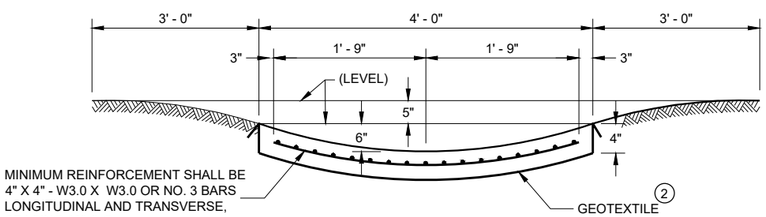
SECTION A - A



SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

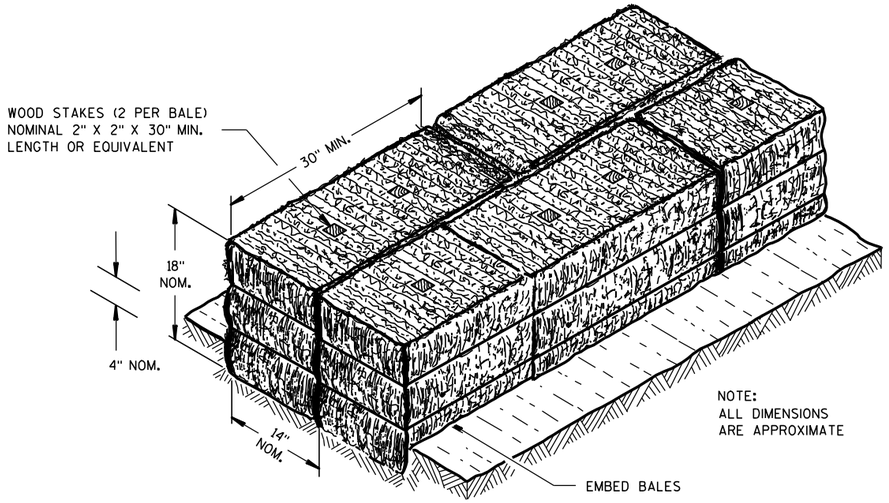
APPROVED
November 2021
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

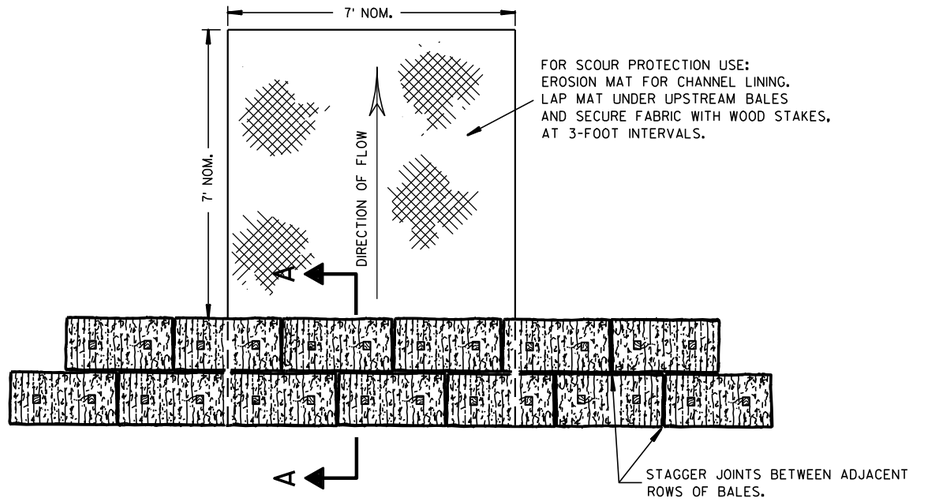
FHWA

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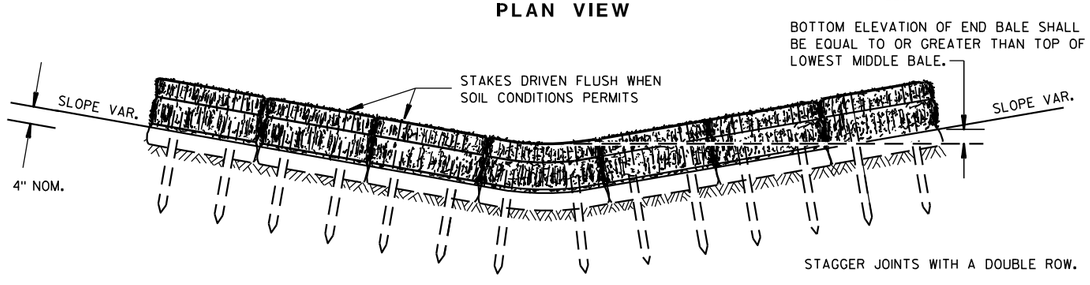
SDD 08D04 - 06



SECTION A-A



PLAN VIEW



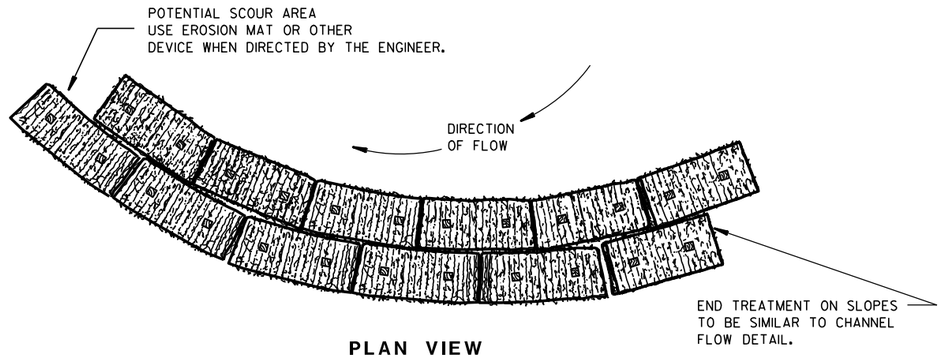
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

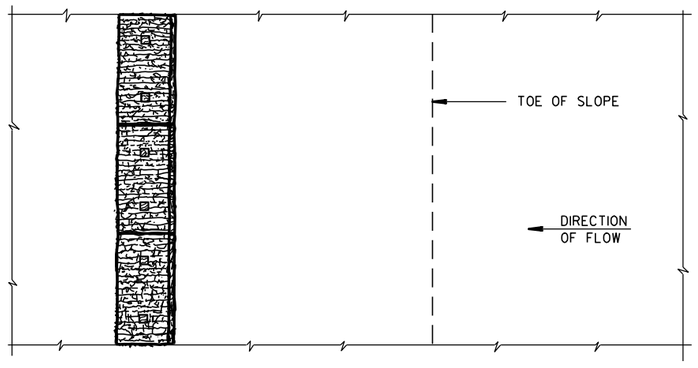
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

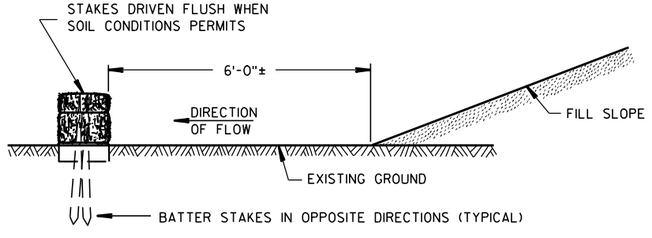


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

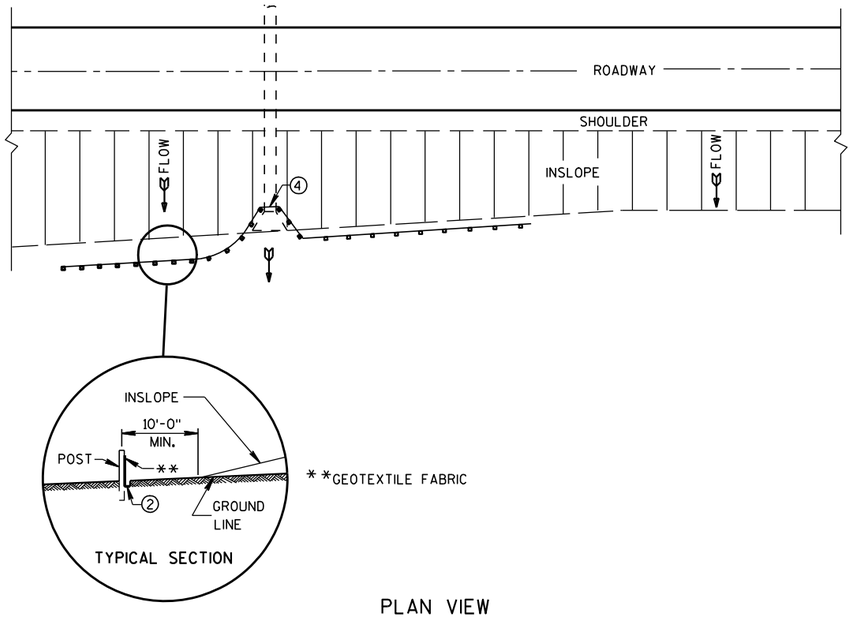
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

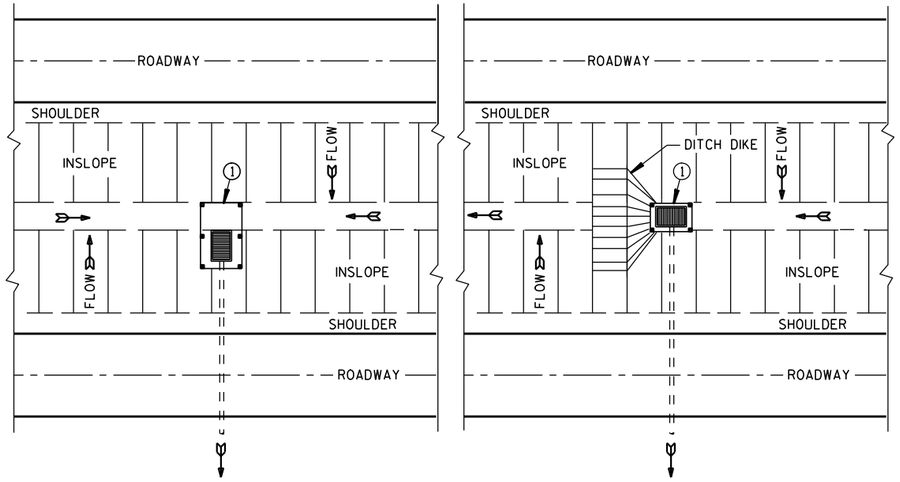
6/04/02 DATE — /S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



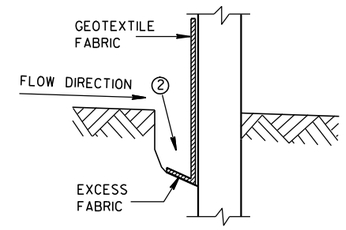
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

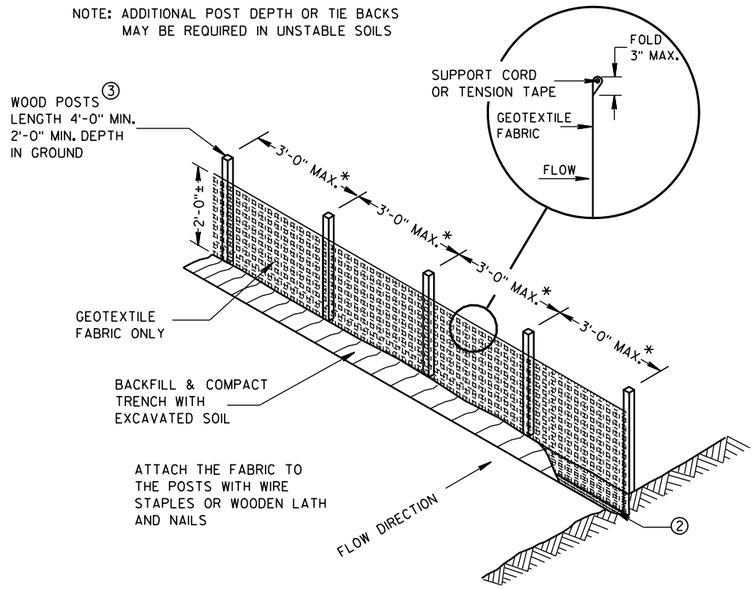
GENERAL NOTES

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

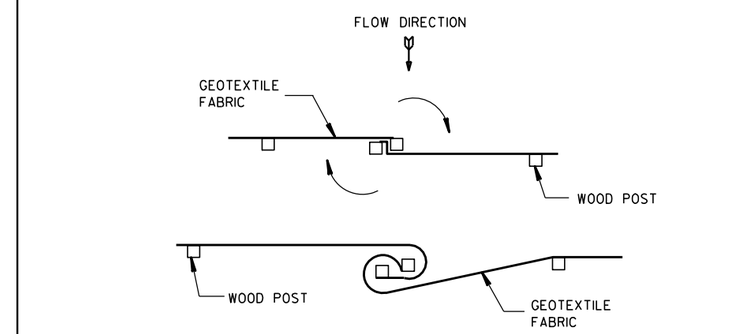
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



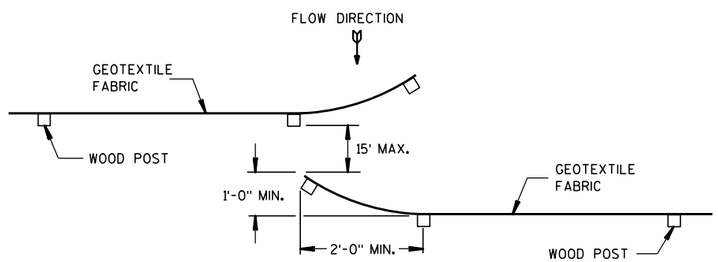
TRENCH DETAIL



SILT FENCE

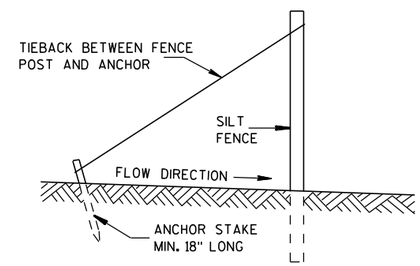


TWIST METHOD



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

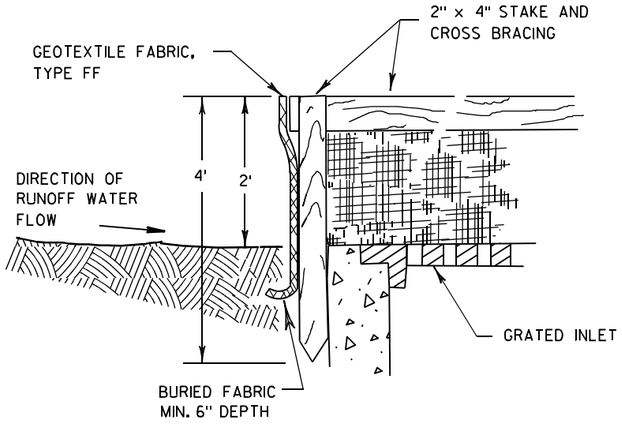
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

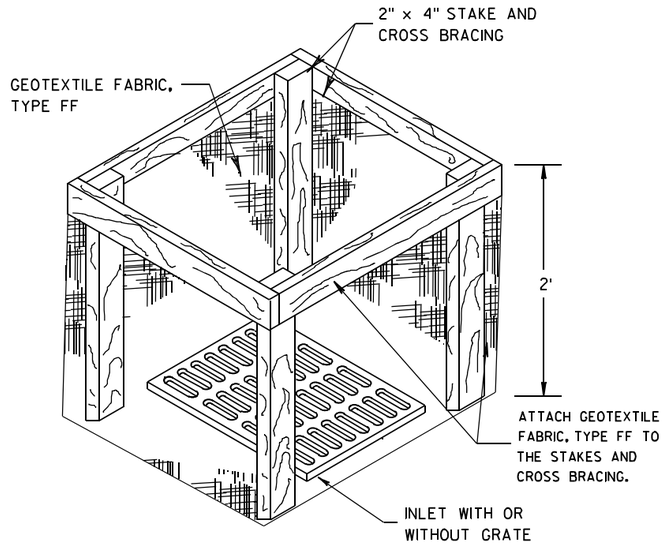
6

S.D.D. 8 E 9-6

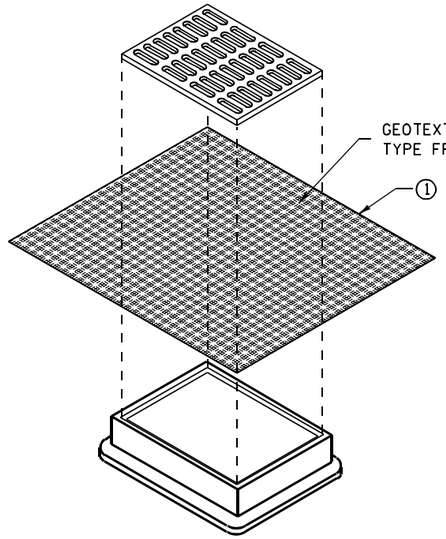
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S.D.D. 8 E 9-6



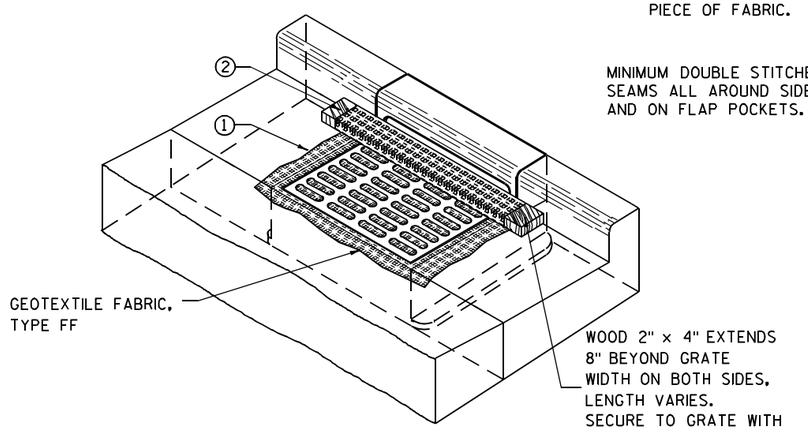


INLET PROTECTION, TYPE A

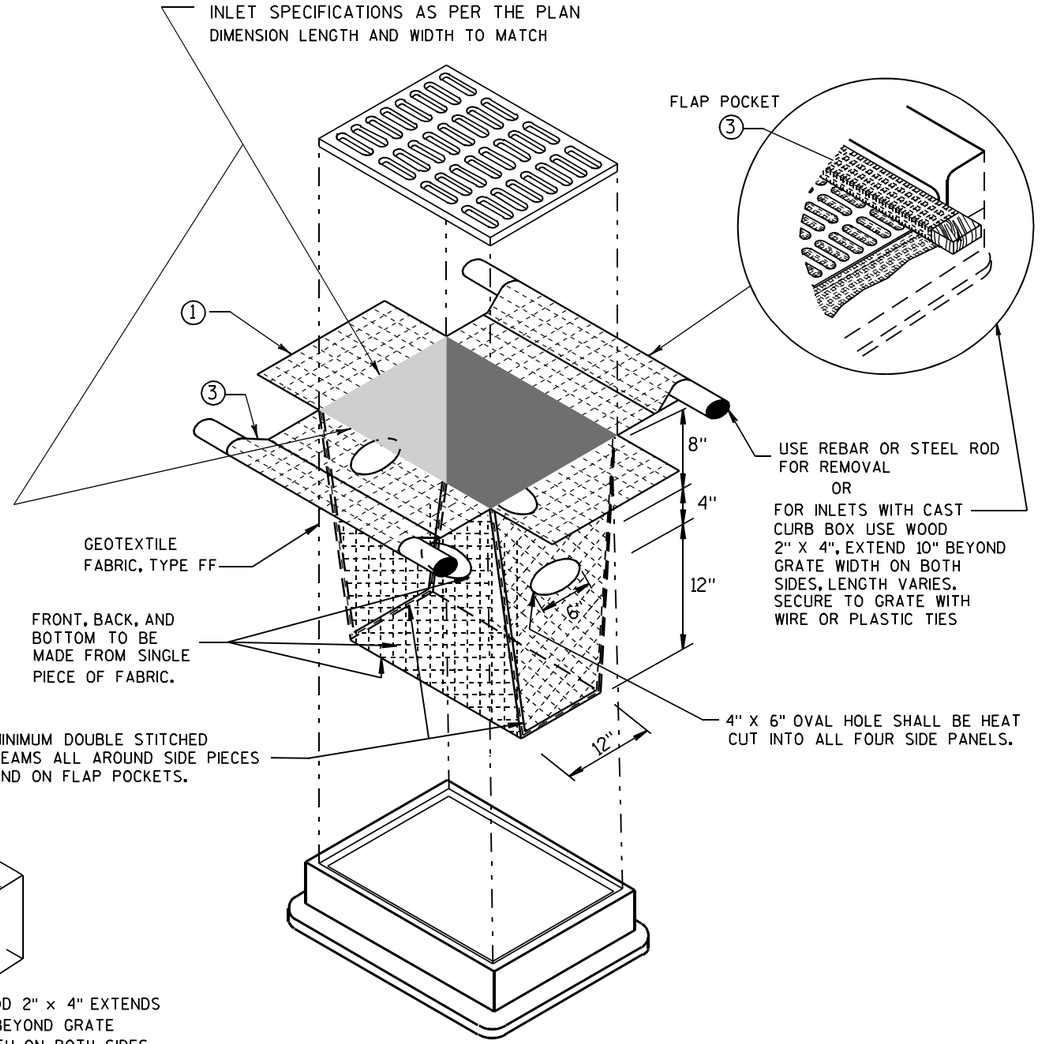


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

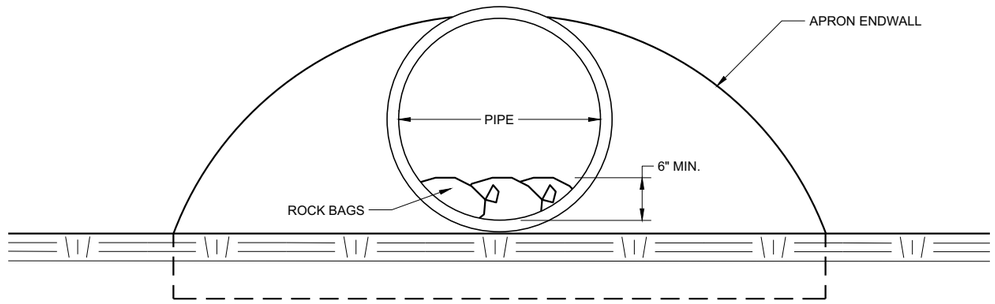
FHWA

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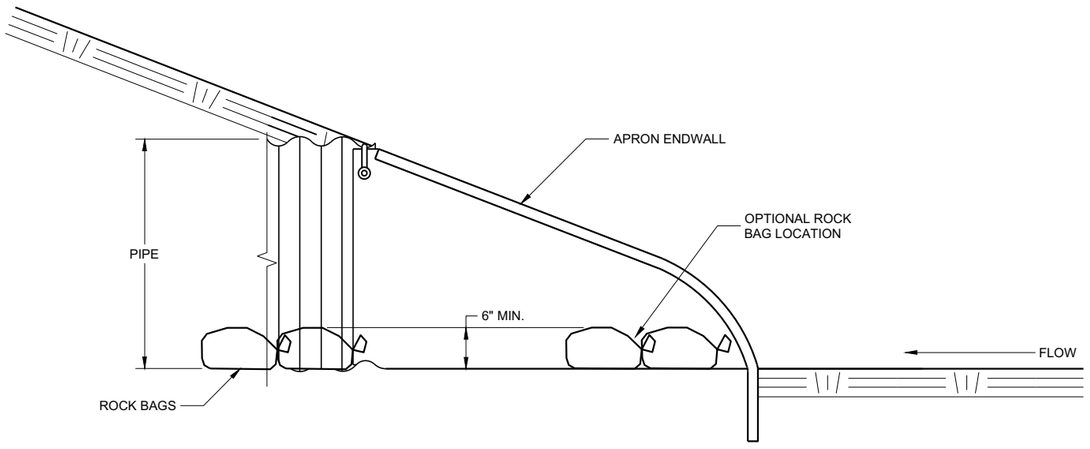
S.D.D. 8 E 10-2

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	

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SDD 08E15 - 01

METAL APRON ENDWALLS

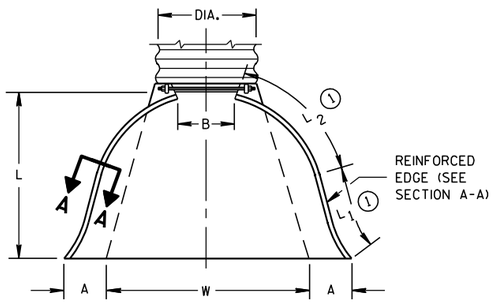
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

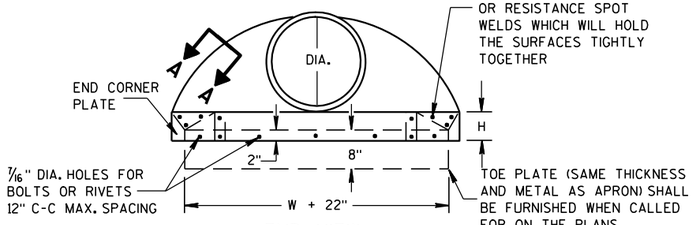
REINFORCED CONCRETE APRON ENDWALLS

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

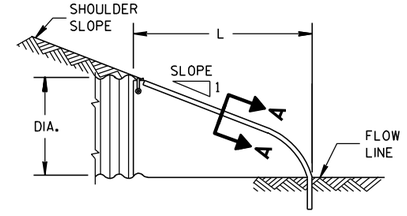
*MINIMUM
**MAXIMUM



PLAN VIEW

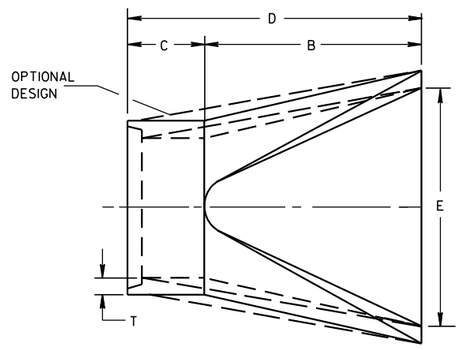


END VIEW

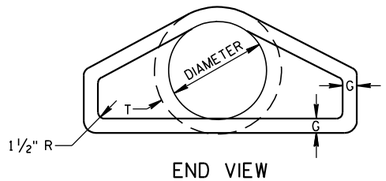


SIDE ELEVATION

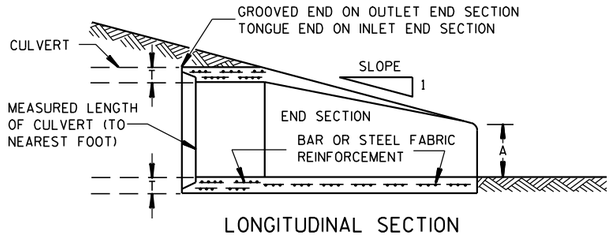
METAL ENDWALLS



PLAN

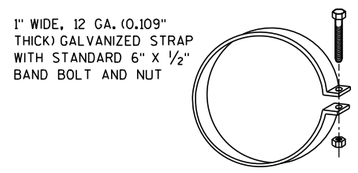


END VIEW



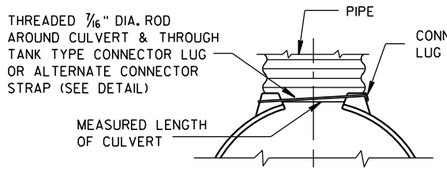
LONGITUDINAL SECTION

CONCRETE ENDWALLS

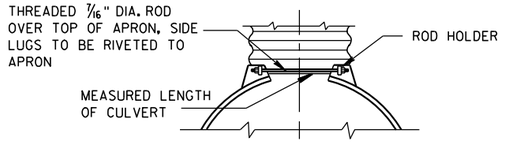


ALTERNATE FOR TYPE 1 CONNECTION

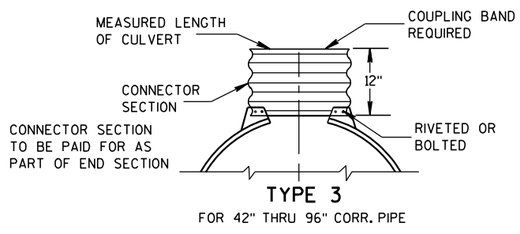
END SECTION CONNECTOR STRAP



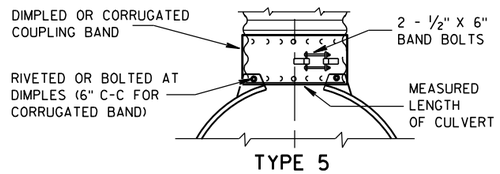
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

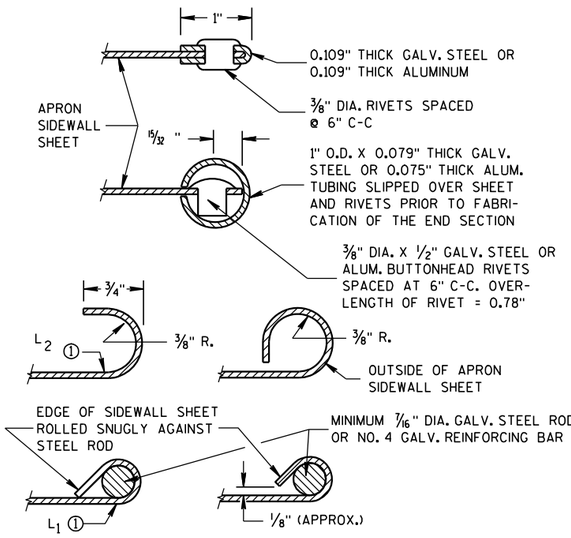
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

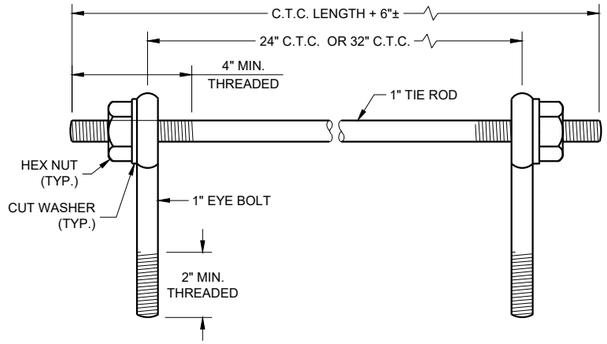
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

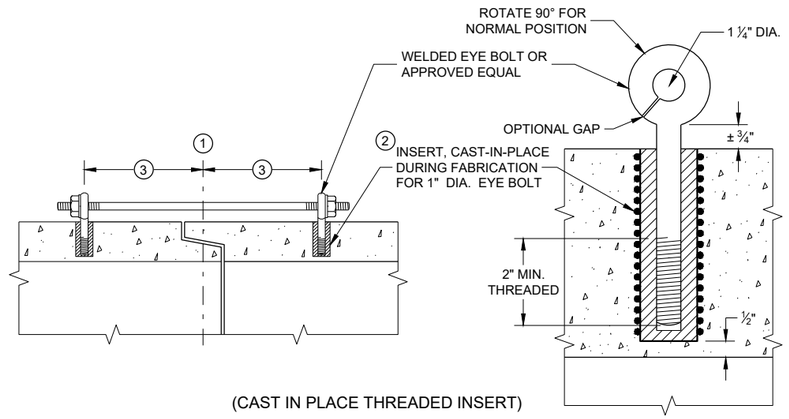
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

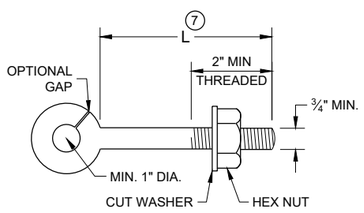
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

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

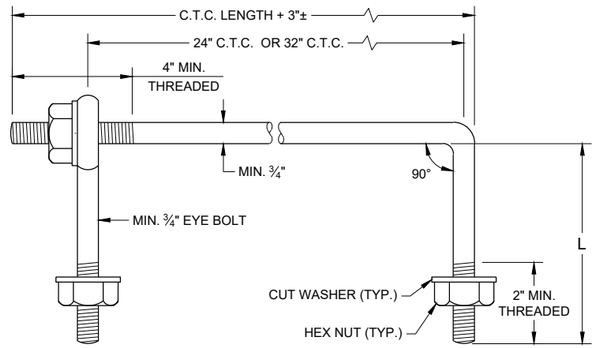
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

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

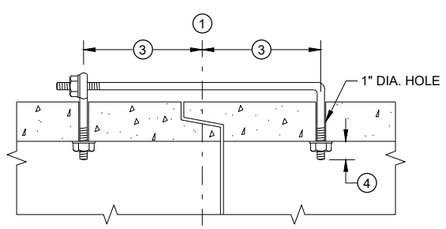


EYE BOLT (7)

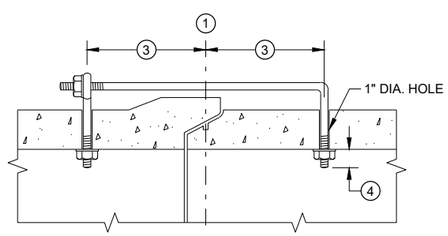
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

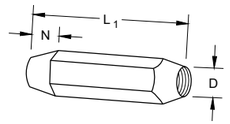
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

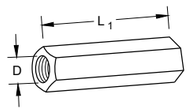
ADJUSTABLE TIE ROD TABLE

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



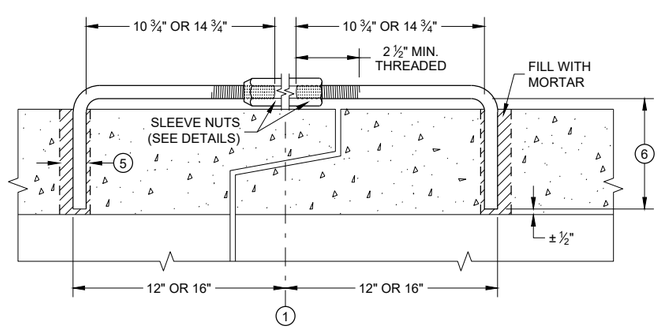
TAPERED



PLAIN

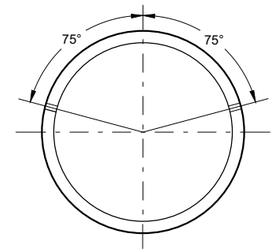
RIGHT AND LEFT THREADS

SLEEVE NUTS



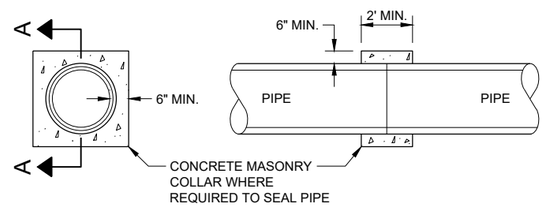
LONGITUDINAL SECTION

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

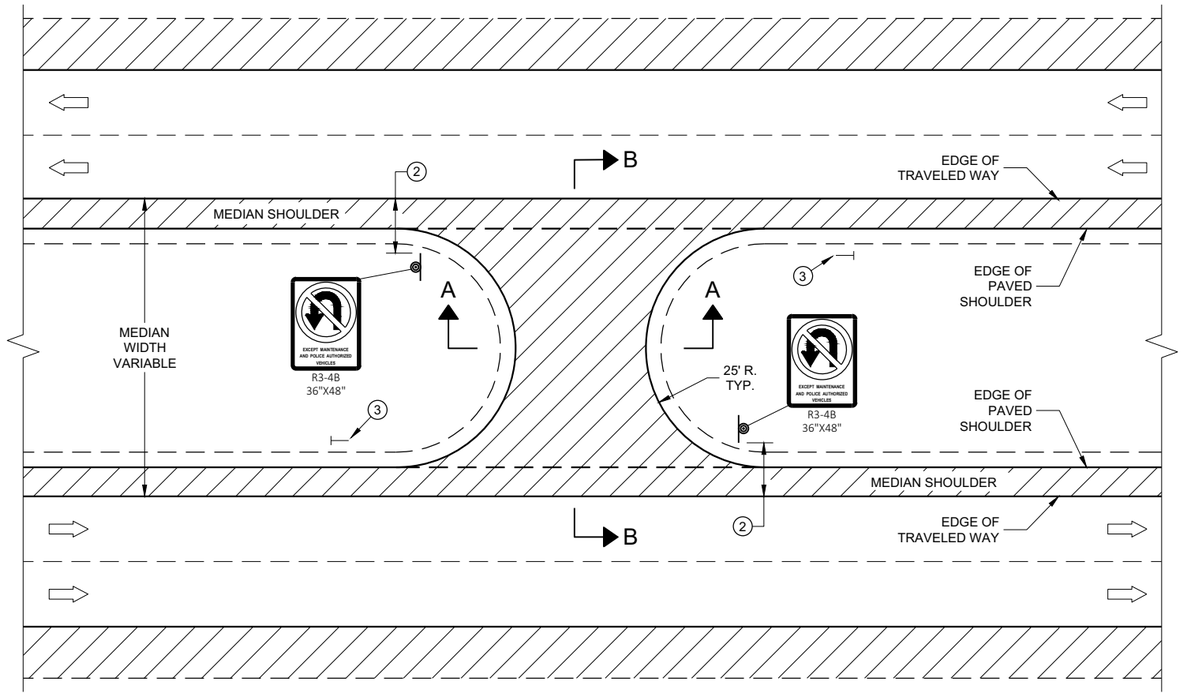
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

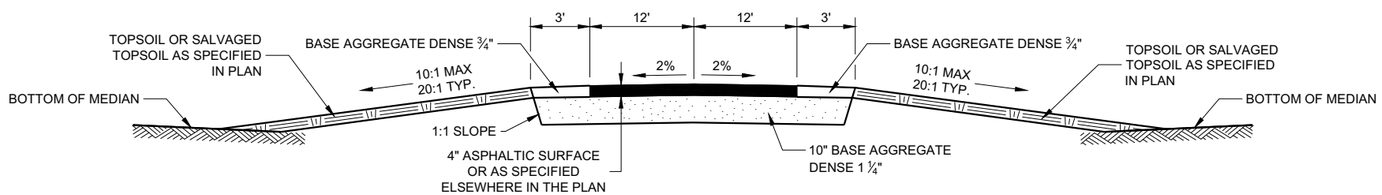
APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

SDD 08F04 - 08

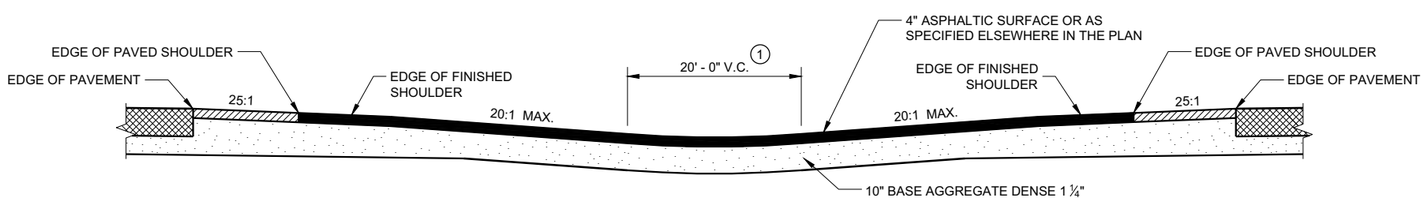
SDD 08F04 - 08



PLAN VIEW



SECTION A-A



SECTION B-B

GENERAL NOTES

1. ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.
2. SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.
3. INSTALL DELINEATOR. SEE STANDARD DETAIL DRAWING 15A4.

LEGEND

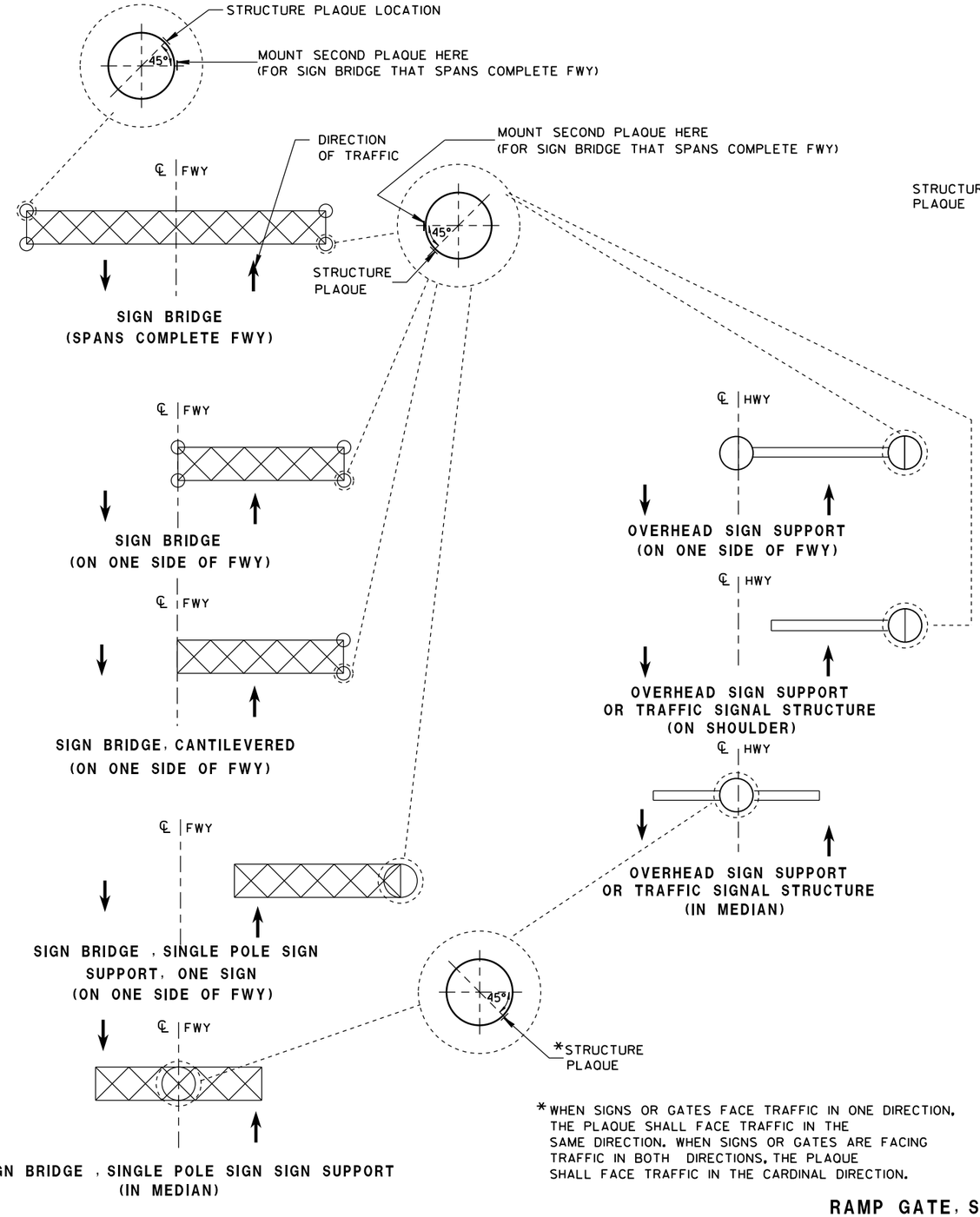
- SIGN ON PERMANENT SUPPORT
- DELINEATOR
- DIRECTION OF TRAFFIC

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

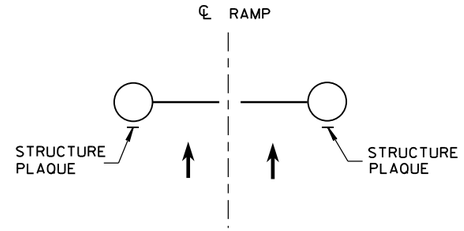
APPROVED
November 2019 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

6
SDD 11A01 - 06

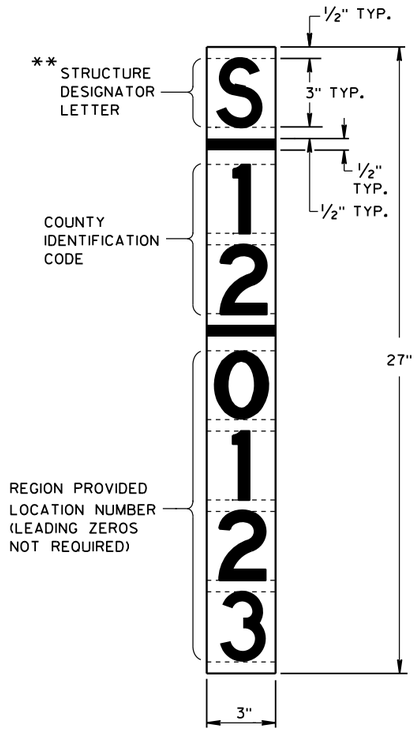


LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES

*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.



RAMP GATE
(ACROSS FWY ON-RAMP)



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

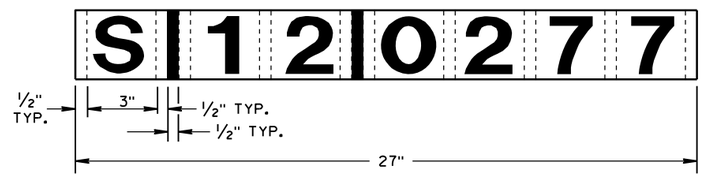
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

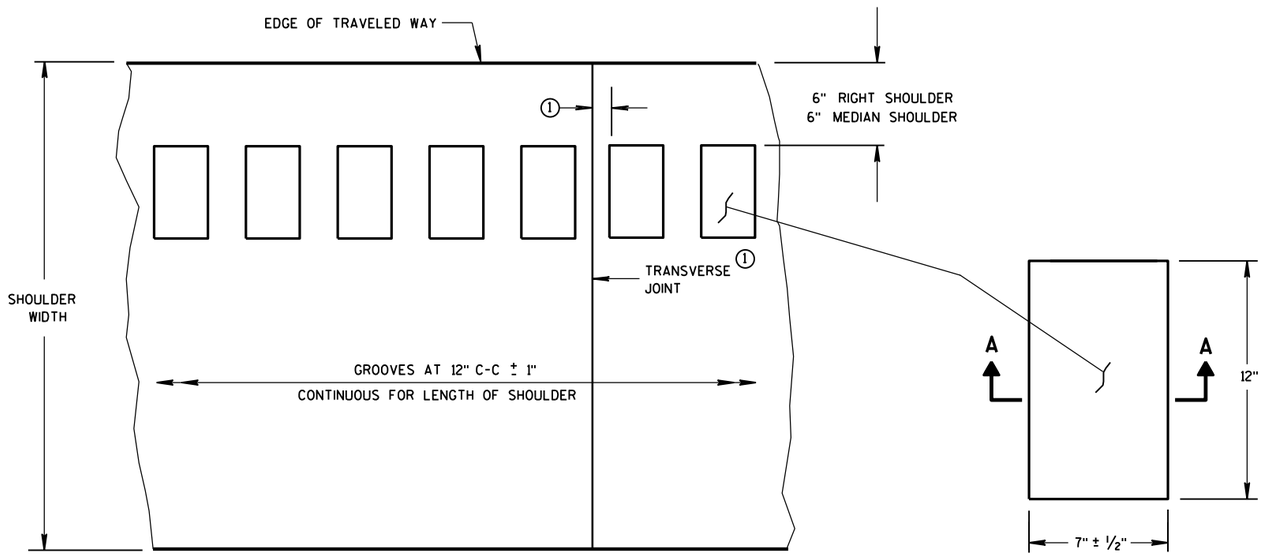
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 12 A 4-3

6

S.D.D. 12 A 4-3



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

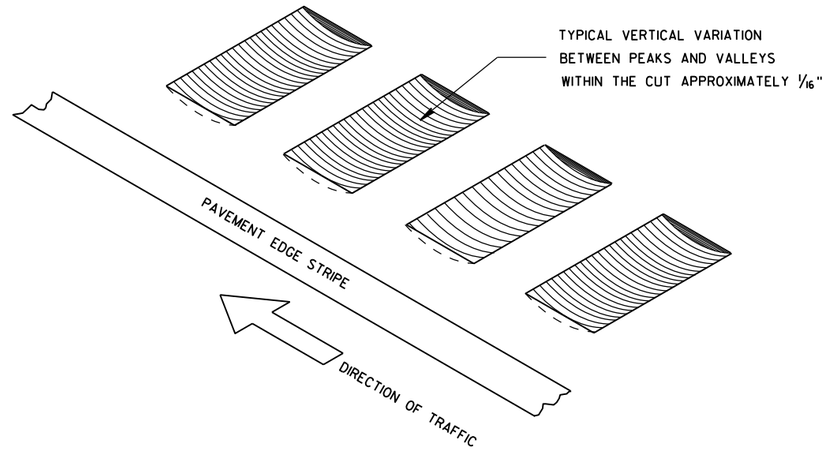
GENERAL NOTES

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

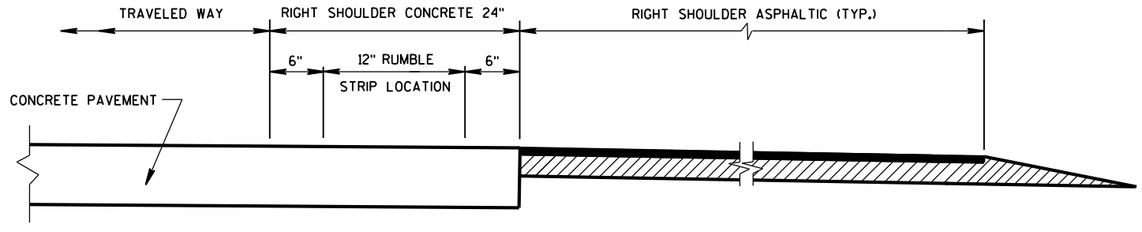
RUMBLE STRIPS ON EXPRESSWAYS

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

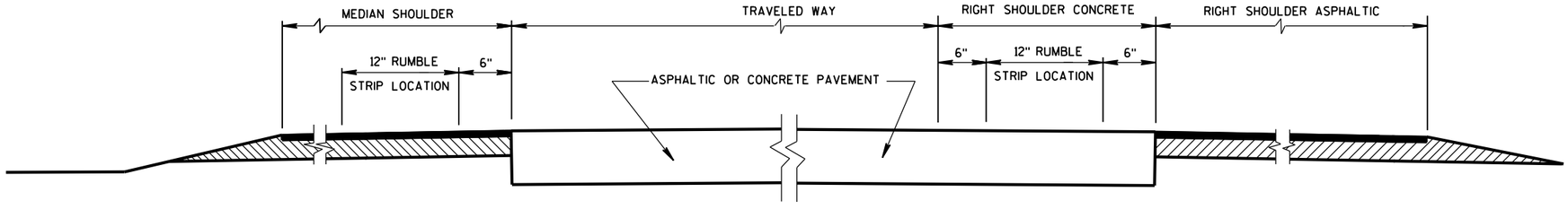
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



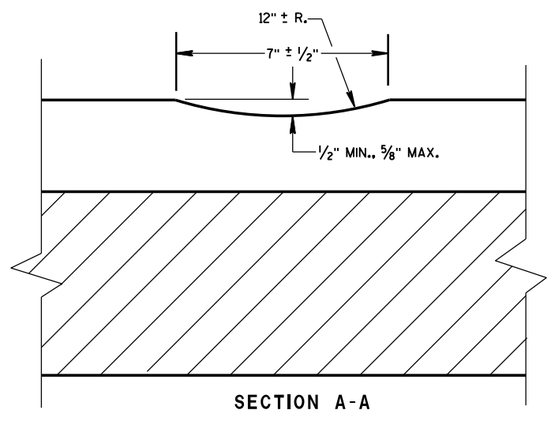
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

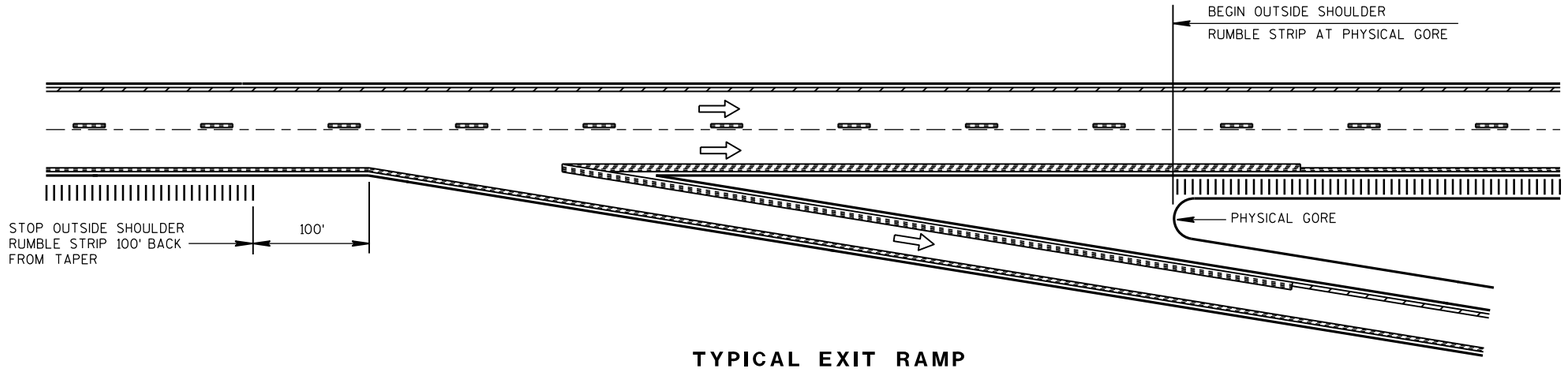
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

6

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



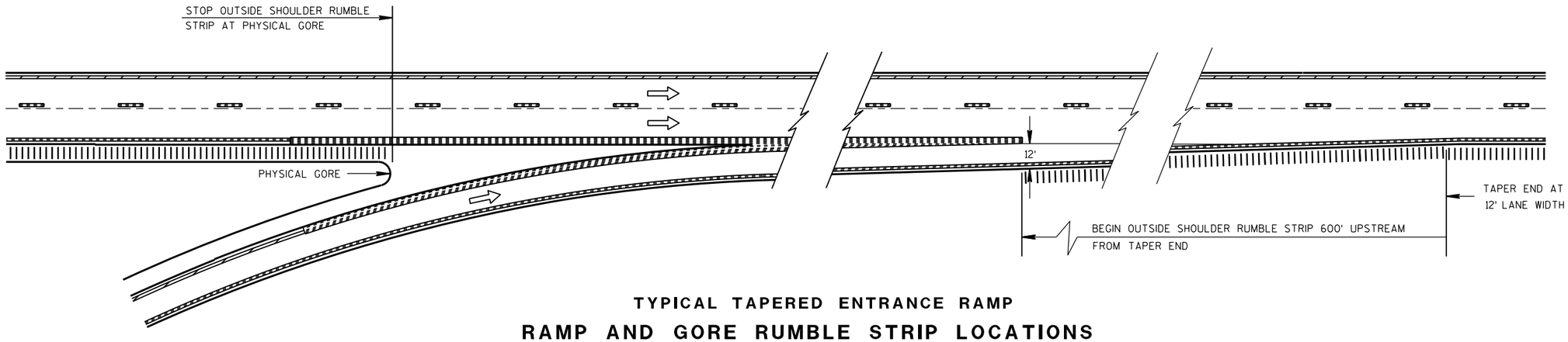
TYPICAL EXIT RAMP

NOTES:

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

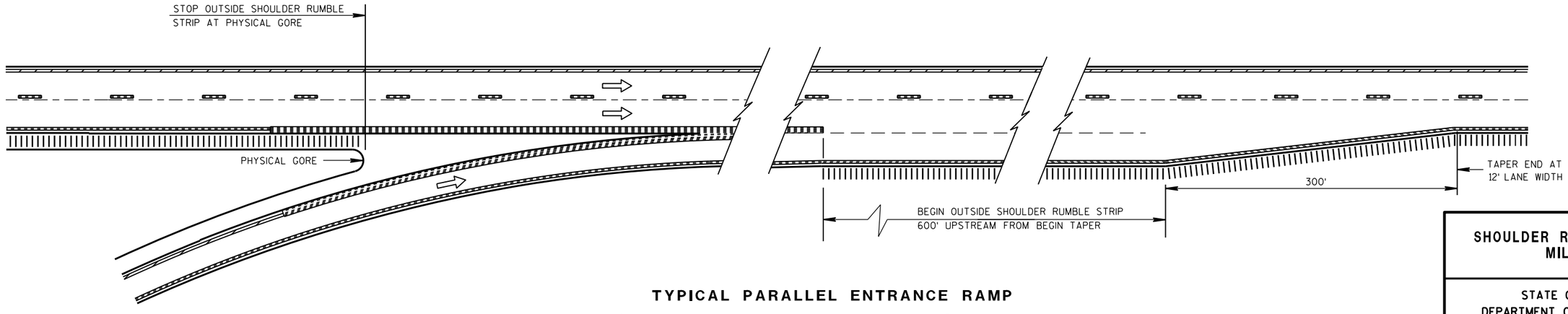
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/2012
DATE

/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER

FHWA

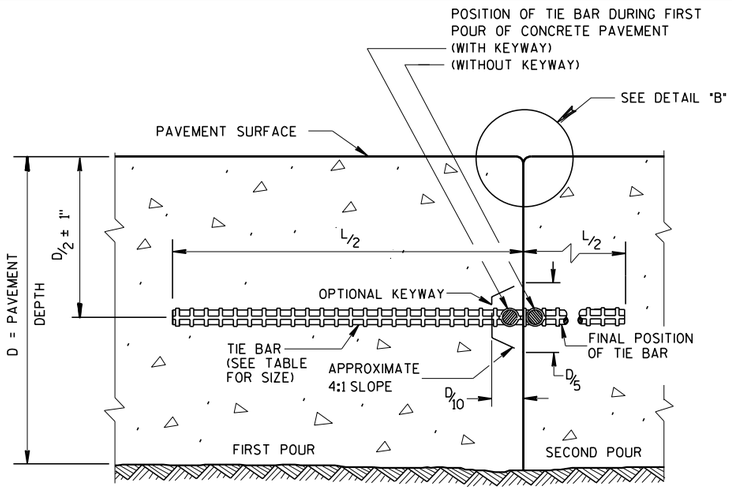
97

6

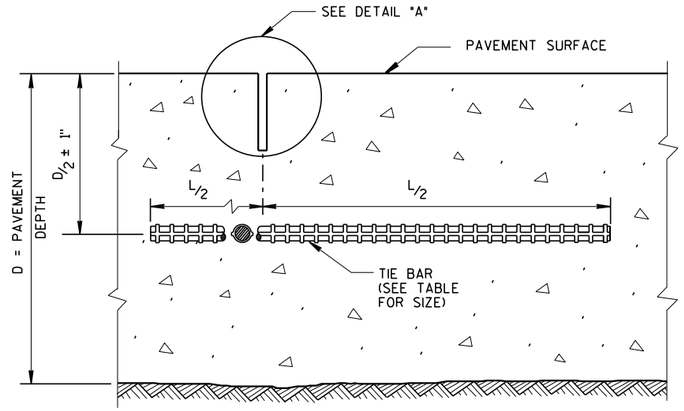
S.D.D. 13 A 5-5b

6

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



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

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

PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE
/S/ Peter Kerr, P.E.
PAVEMENT SUPE
FHWA

6

S.D.D. 13 C 1-19

6

S.D.D. 13 C 1-19

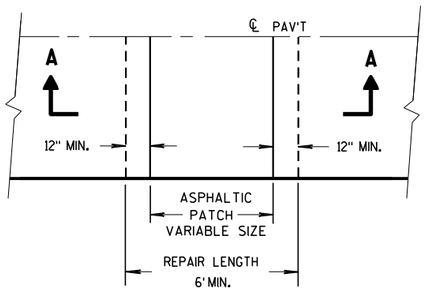
GENERAL NOTES

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.

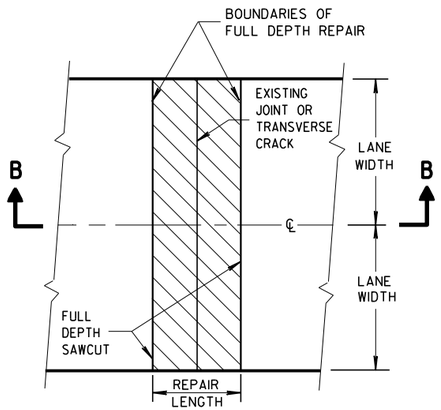
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

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

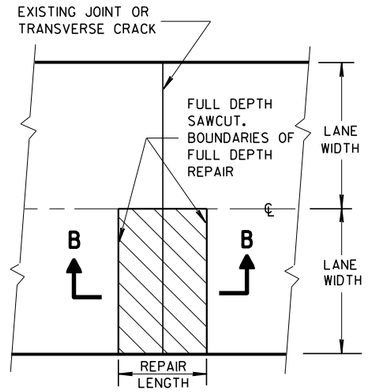
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

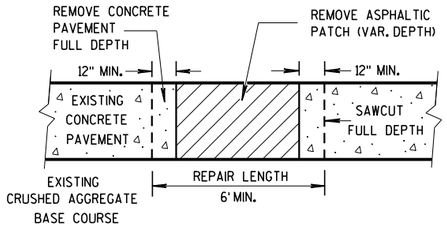


PLAN VIEW
(DOUBLE LANE REPAIR)



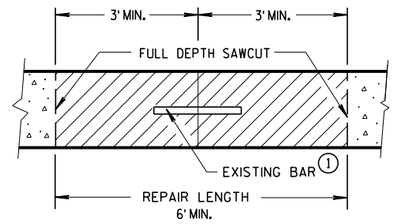
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

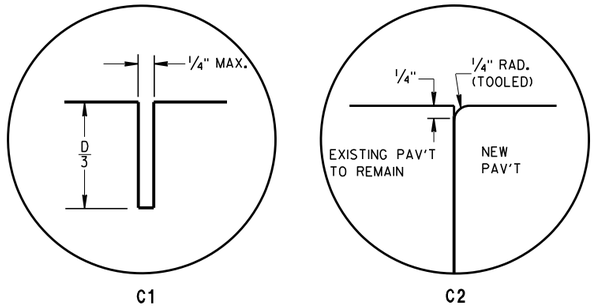
CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 13 C 9-15a



C1 C2

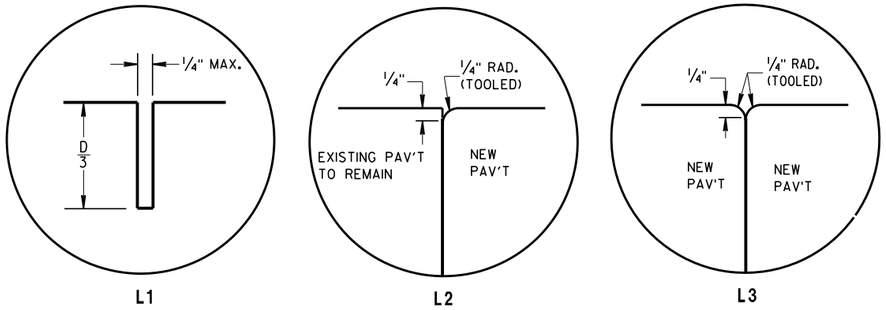
TRANSVERSE JOINTS

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

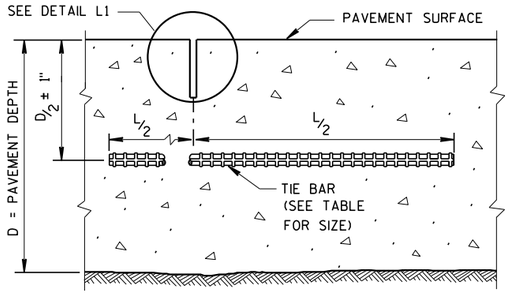
* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

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



L1 L2 L3

LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

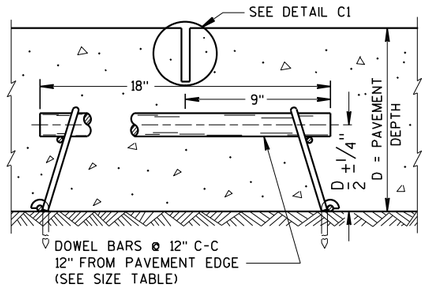
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

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

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

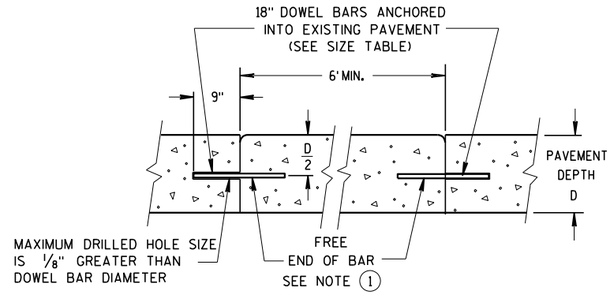
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

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

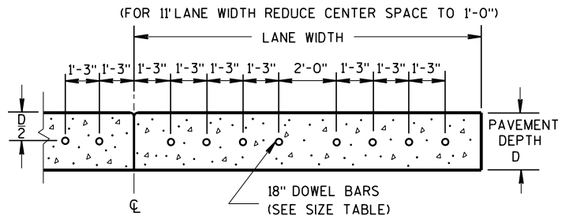


SECTION F-F

CONTRACTION JOINT



SECTION D-D

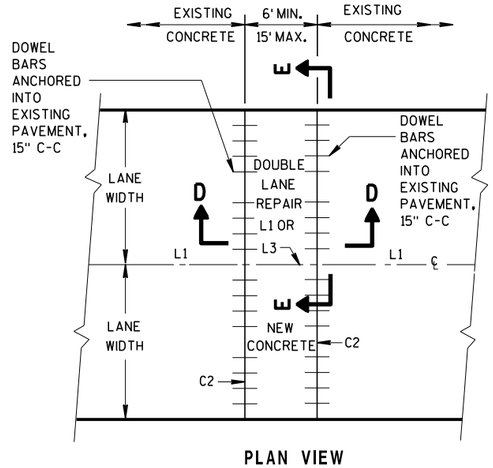


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

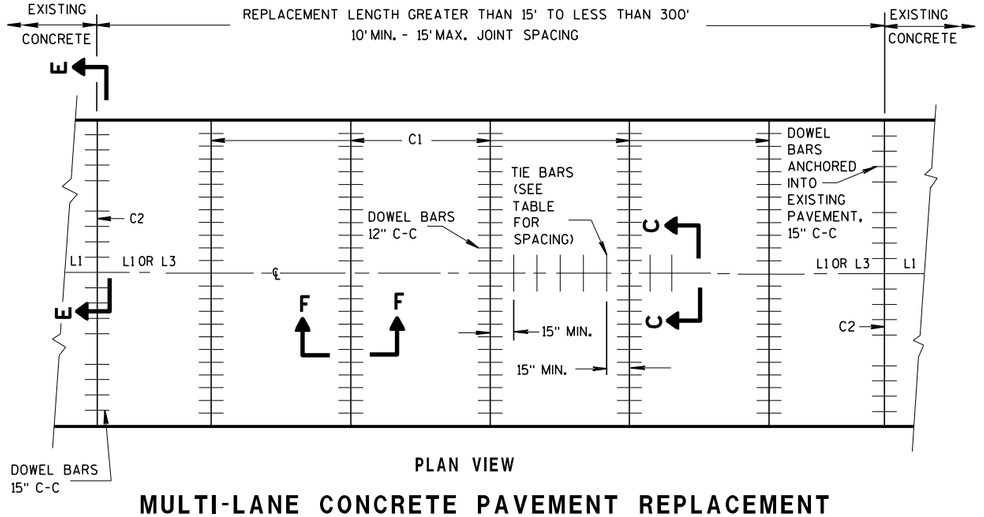
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	NONE	12'
7", 7 1/2"	1"	1"	14'
8", 8 1/2"	1 1/4"	1 1/4"	15'
9", 9 1/2"	1 1/4"	1 1/4"	15'
10" & ABOVE	1 1/2"	1 1/4"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

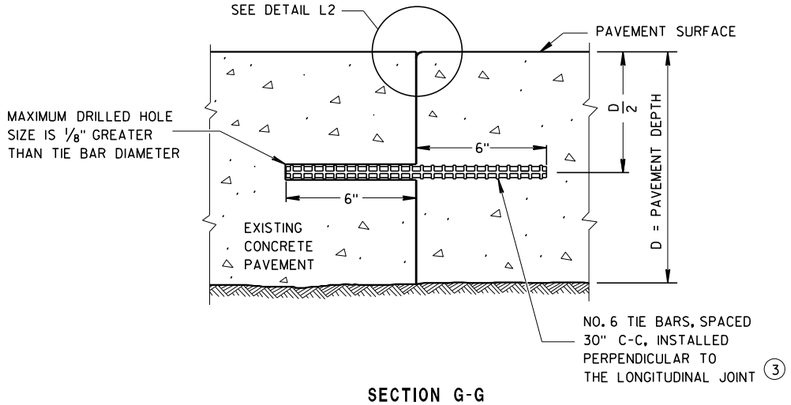
MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 13 C 9-15b



SECTION G-G

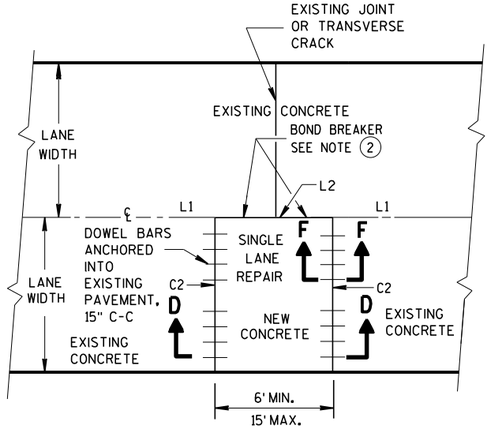
TIE BARS ANCHORED INTO EXISTING PAVEMENT

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.

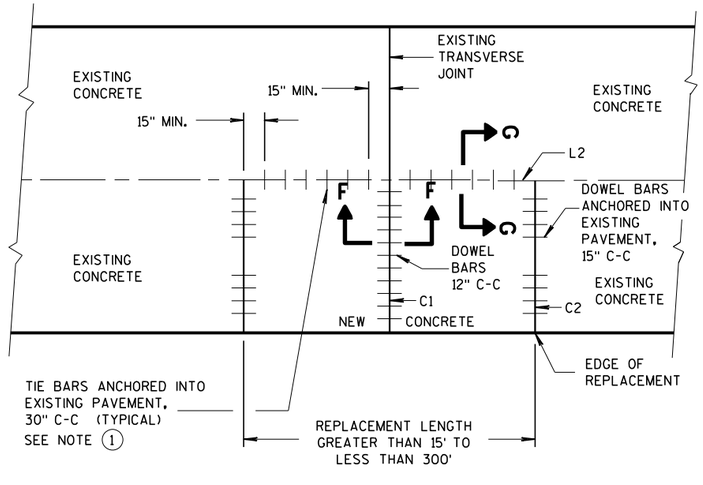
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

(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 PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Ken... — PAVEMENT SUPE...
FHWA

S.D.D. 13 C 9-15c

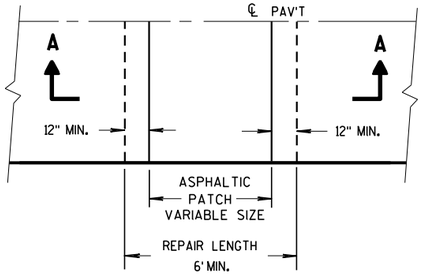
GENERAL NOTES

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.

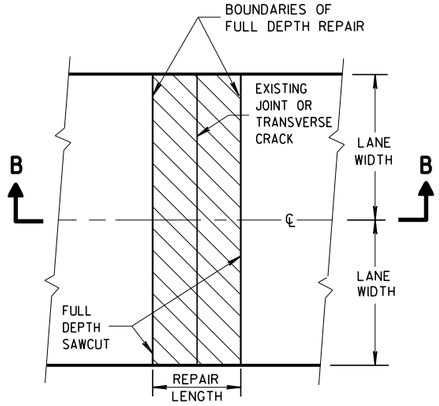
PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

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

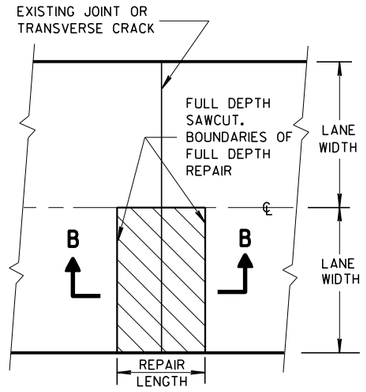
(1) DOWEL BARS MIGHT NOT EXIST.



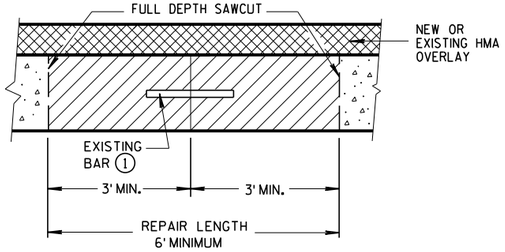
PLAN VIEW



PLAN VIEW
(DOUBLE LANE REPAIR)



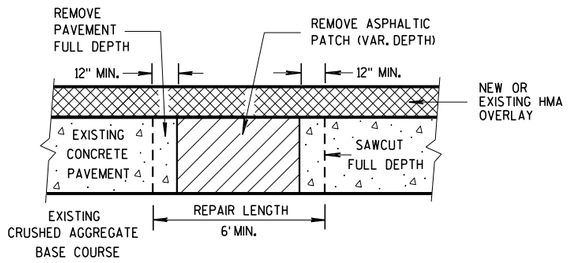
PLAN VIEW
(SINGLE LANE REPAIR)



SECTION B-B

CONCRETE REMOVAL

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL

BASE PATCHING CONCRETE

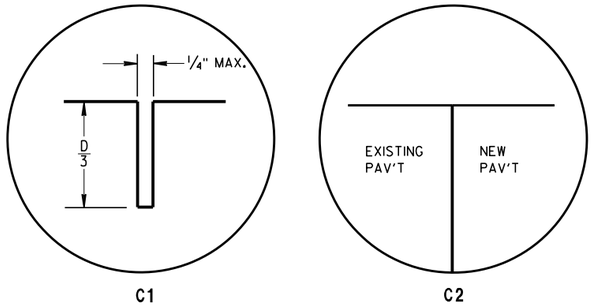
STATE OF WISCONSI
DEPARTMENT OF TRANSPORTATION

6

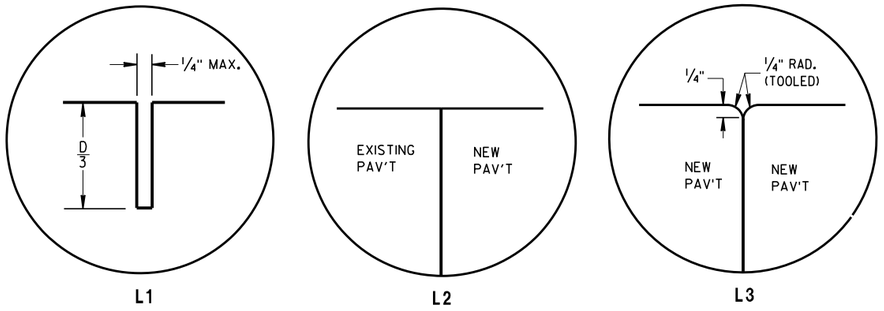
S.D.D. 13 C 14-7a

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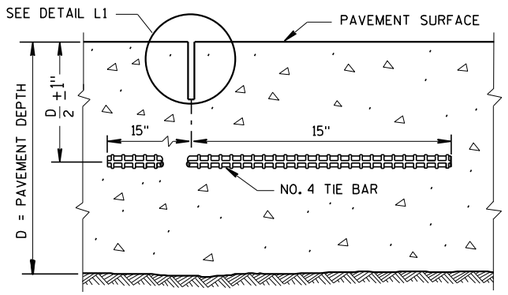
S.D.D. 13 C 14-7a



TRANSVERSE JOINTS

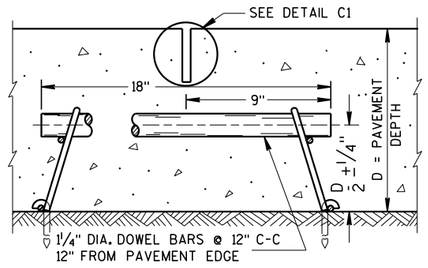


LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT



SECTION F-F

CONTRACTION JOINT

GENERAL NOTES

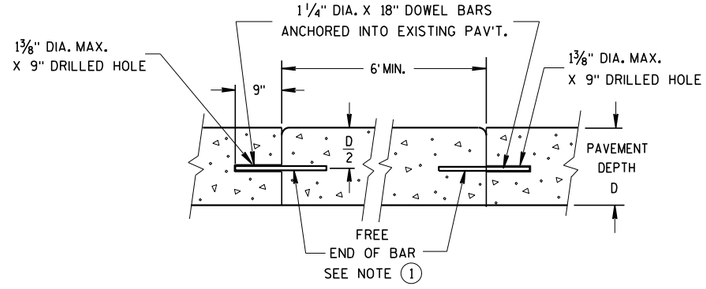
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

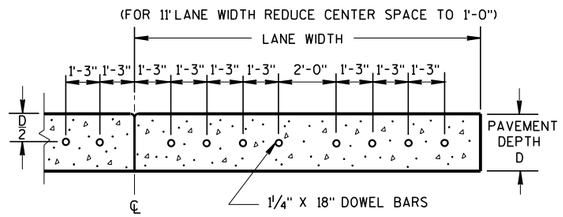
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE 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.

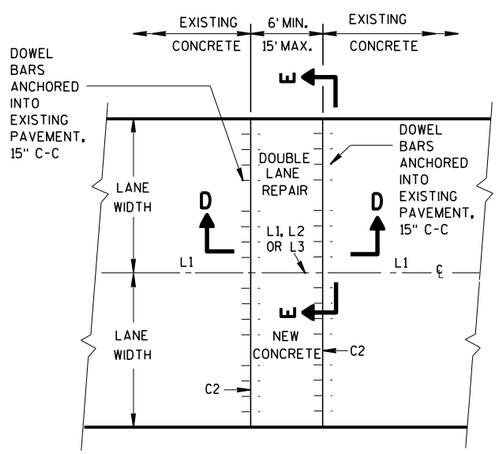


SECTION D-D



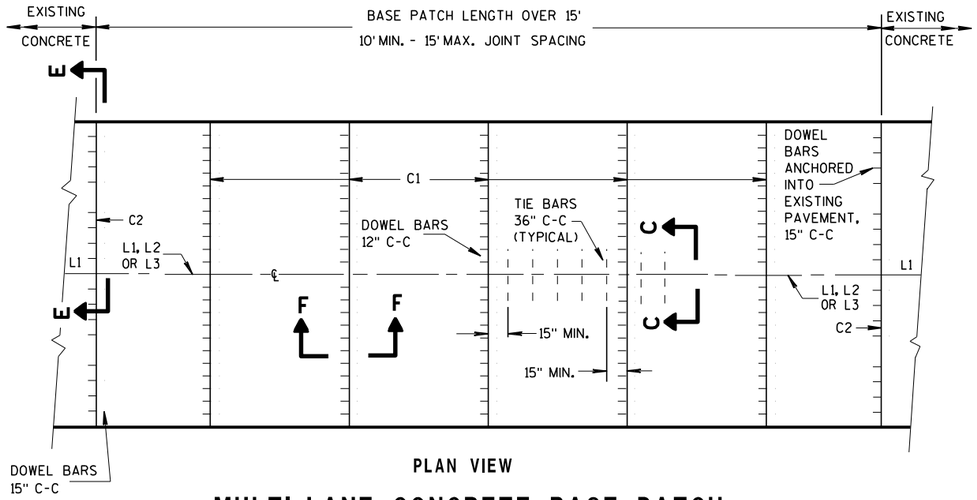
SECTION E-E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

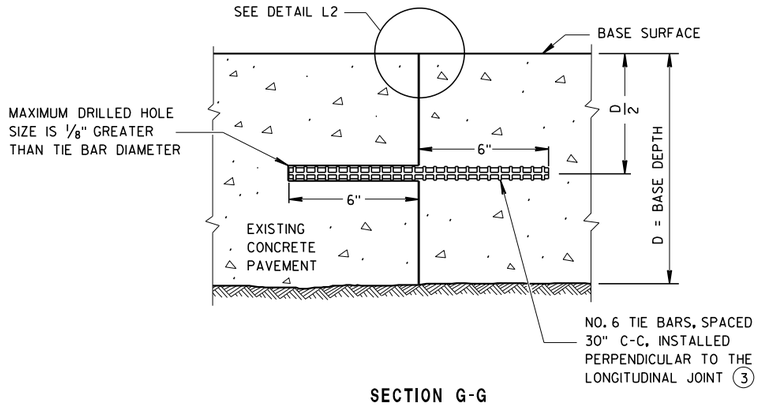
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S.D.D. 13 C 14-7b

GENERAL NOTES

(1) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.

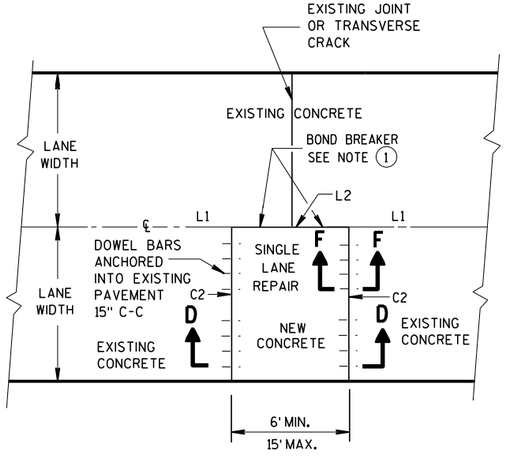
(2) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

(3) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



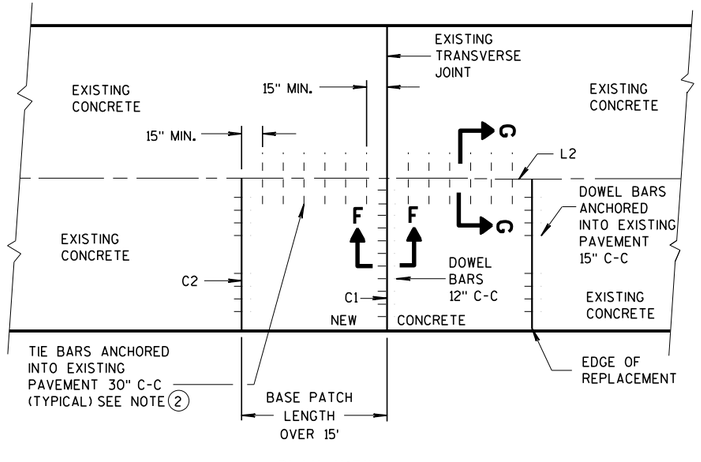
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

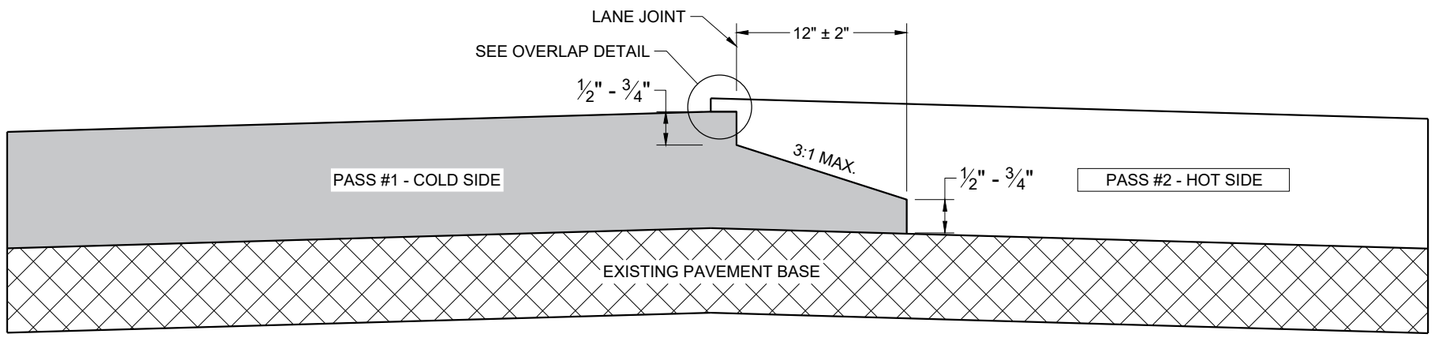
BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

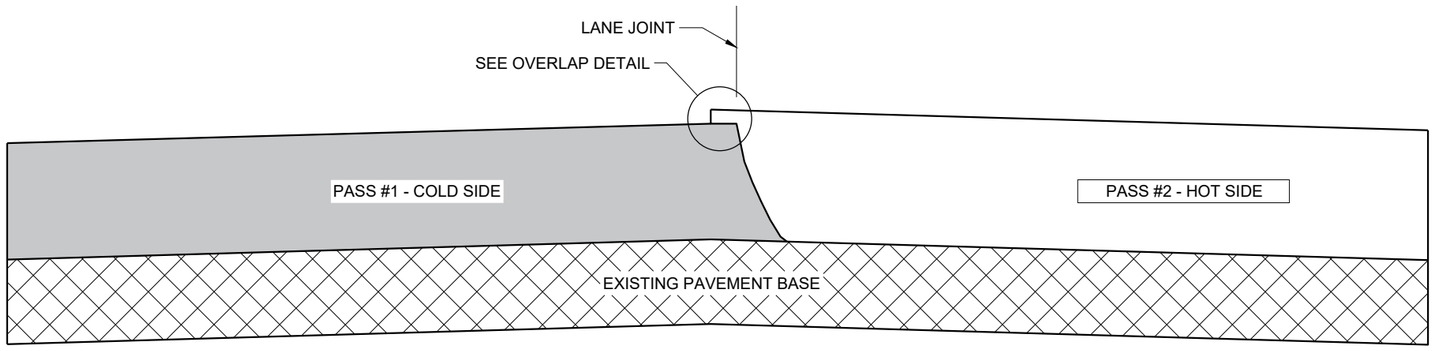
APPROVED
March 2018 — DATE
/S/ Peter Kemp P.E. — PAVEMENT SUPERVISOR
FHWA

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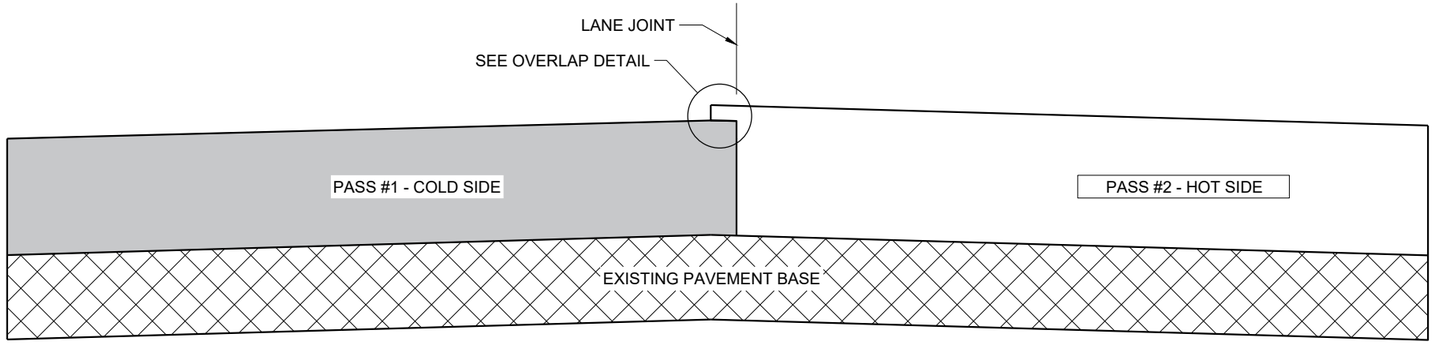
S.D.D. 13 C 14-7c



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

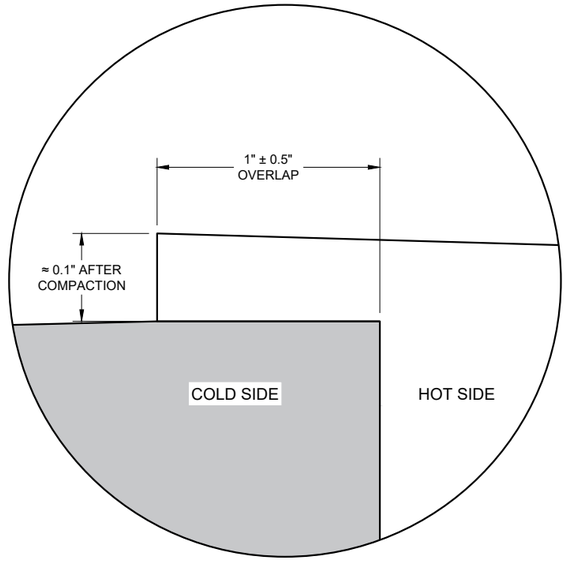
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

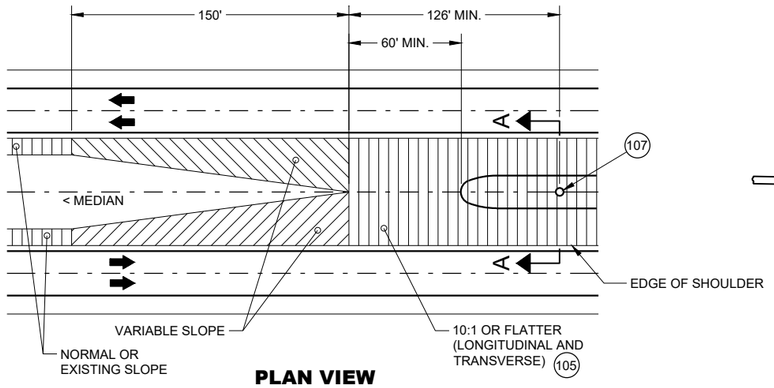
APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

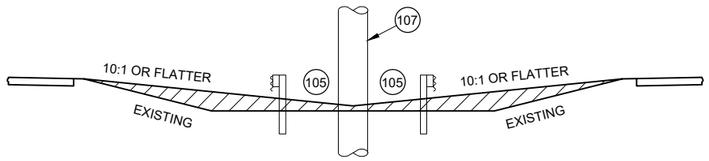
FHWA

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SDD 13C19 - 03



PLAN VIEW
GRADING AT BULLNOSE
(ALL INSTALLATIONS)



SECTION A -A
MEDIAN GRADING
(ALL INSTALLATIONS)

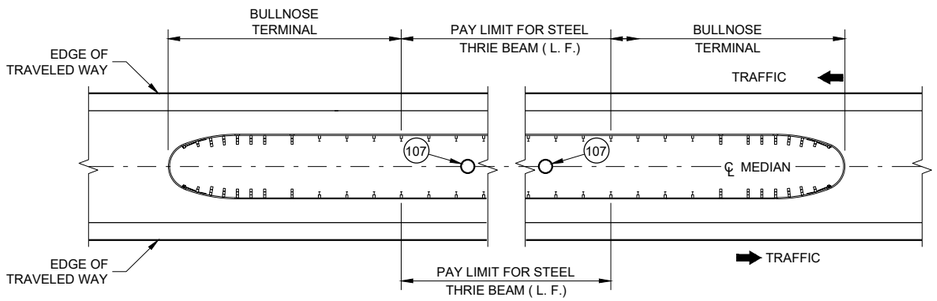
GENERAL NOTES

THRIE BEAM RAILS MAY NEED TO BE FIELD BENT TO FIT THE LOCATION.

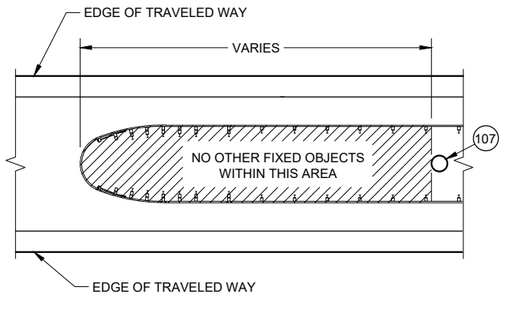
SEE STANDARD DETAIL DRAWINGS 14B26 SHEETS a-h.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 ½". MINIMUM DIAMETER OF THE ROCK REMOVAL IS 12" DIAMETER

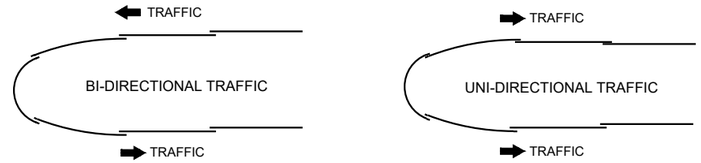
- E1 UNBENT STANDARD THRIE BEAM RAIL B1 (POST 8 TO POST 10 AND POST 10 TO POST 12)
- E2 SLOTTED THRIE BEAM RAIL E1 (POST 1 TO POST 1)
- E3 SLOTTED THRIE BEAM RAIL B3 (POST 5 TO POST 8)
- E4 SLOTTED THRIE BEAM RAIL E4 (POST 1 TO POST 5)
- 5 BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD 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.



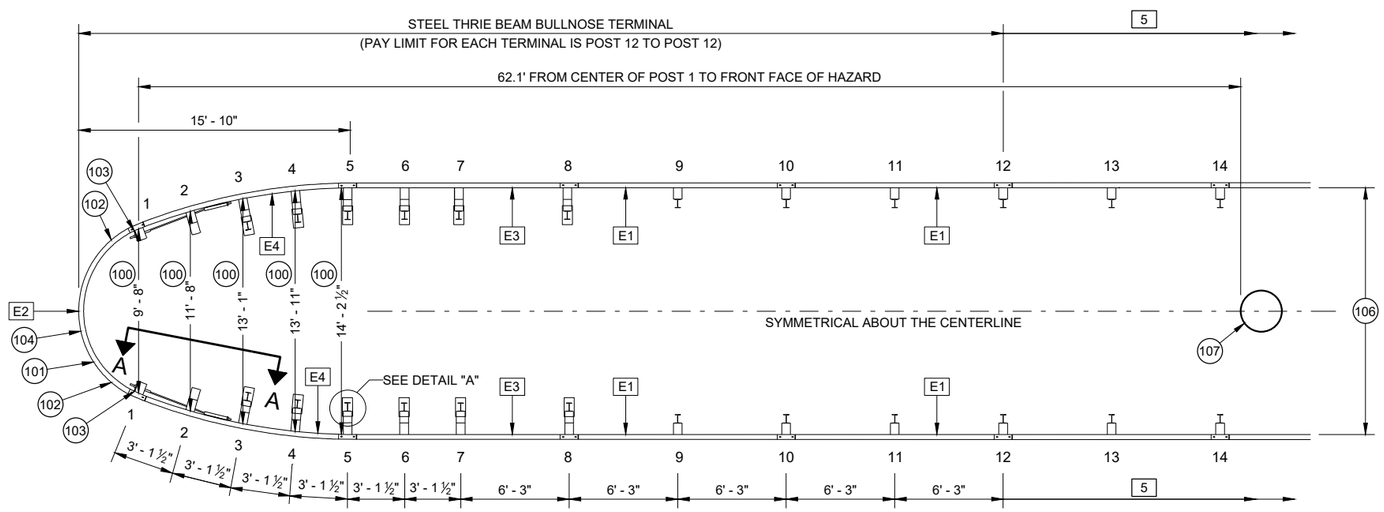
MEDIAN HAZARD PROTECTION PAY LIMITS



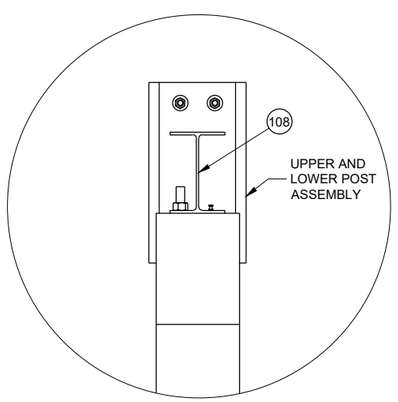
HAZARD FREE AREA
INSIDE BULLNOSE



LAPPING DETAIL



PLAN VIEW
TYPICAL BULLNOSE LAYOUT



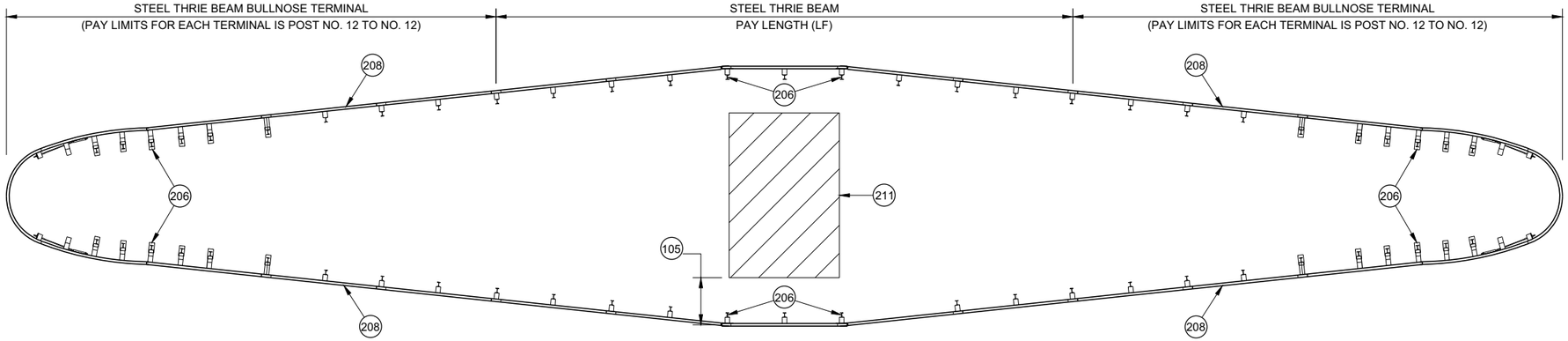
DETAIL "A"

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B26 - 04a



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.

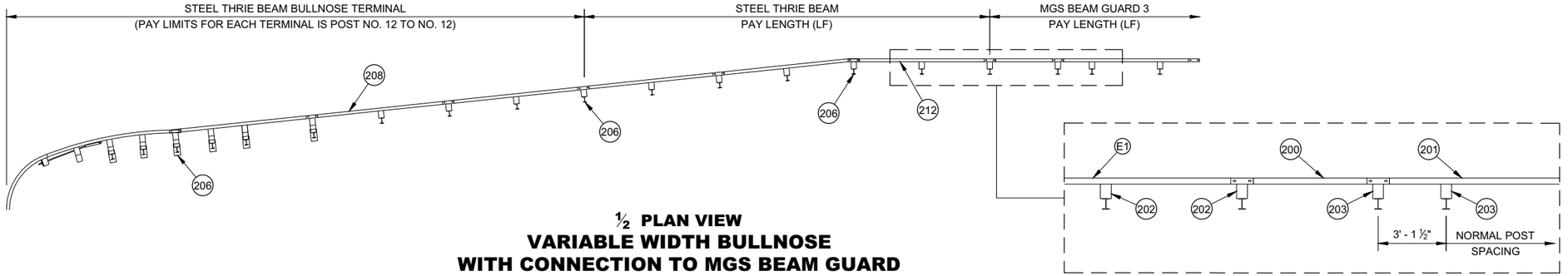
208 SEE PLAN FOR FLARE RATE.

209 A MINIMUM OF 25 FT OF THRIE BEAM TANGENT BEFORE TRANSITIONING TO BEAM GUARD OR THRIE BEAM TRANSITION.

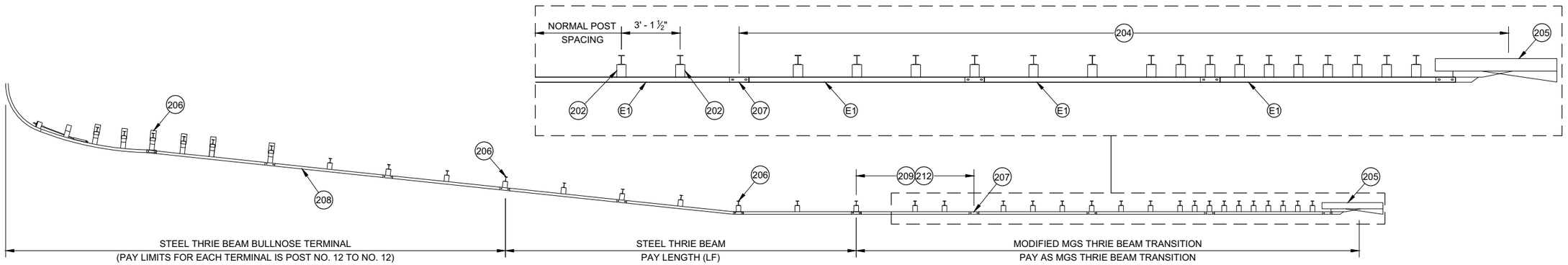
210 NOT ALL BULLNOSE HARDWARE SHOWN. SEE OTHER SHEETS IN 14B26.

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



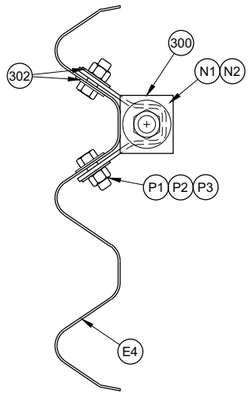
½ PLAN VIEW
VARIABLE WIDTH BULLNOSE
WITH CONNECTION TO RIGID BARRIER

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

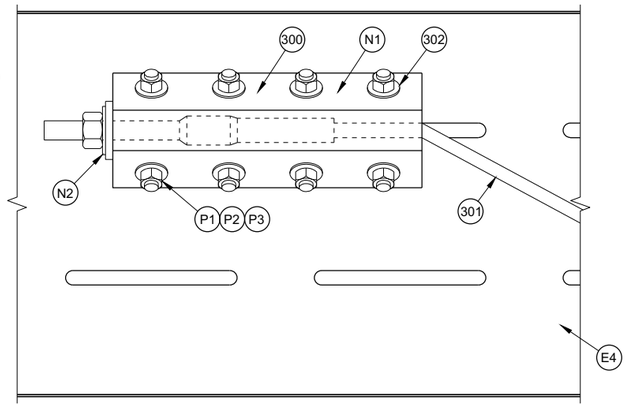
6

SDD 14B26 - 04b

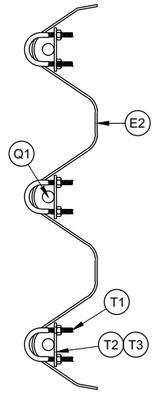


PROFILE VIEW

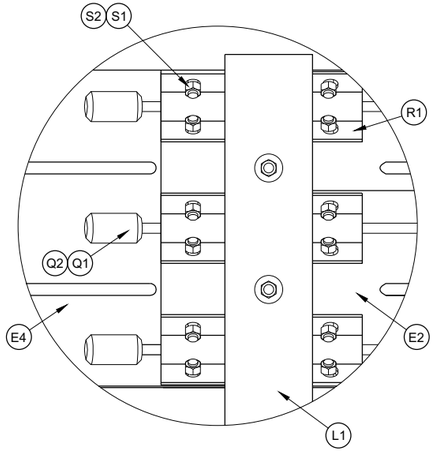
CABLE ANCHOR ASSEMBLY CONNECTION



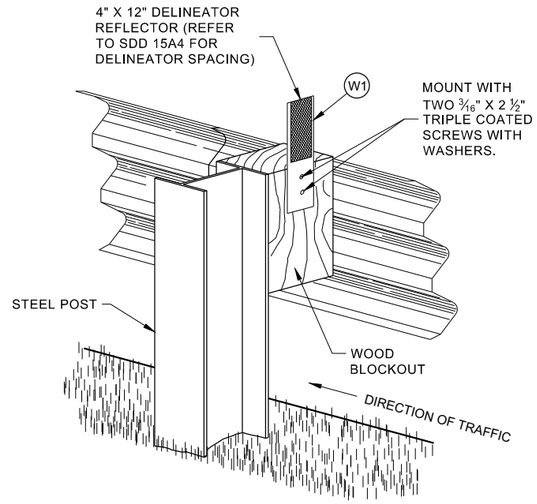
CABLE ANCHOR ASSEMBLY



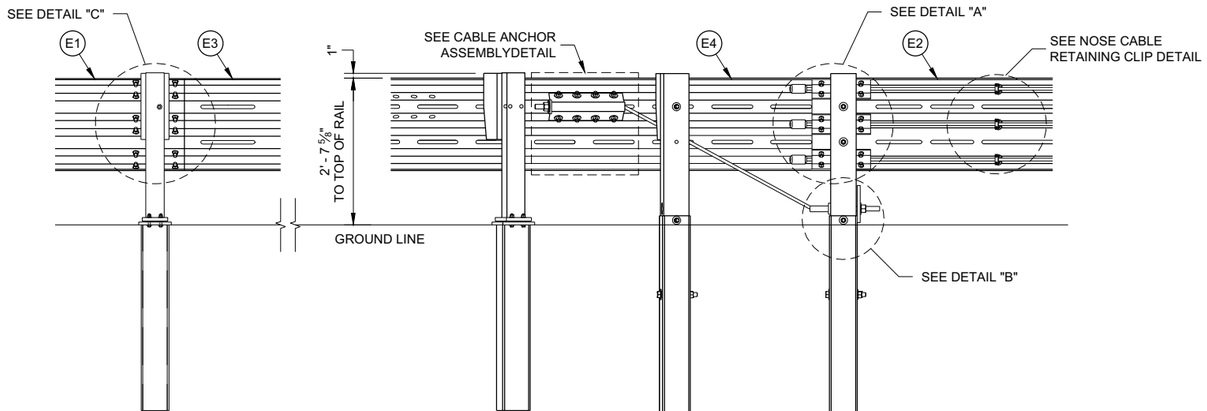
NOSE CABLE RETAINING CLIP



DETAIL "A"

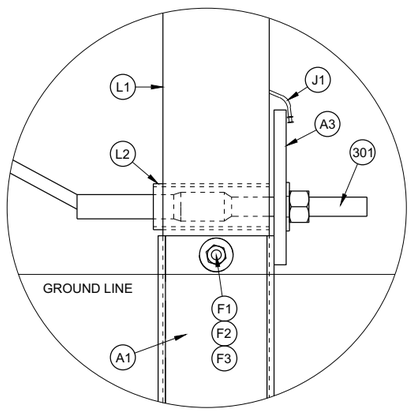


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

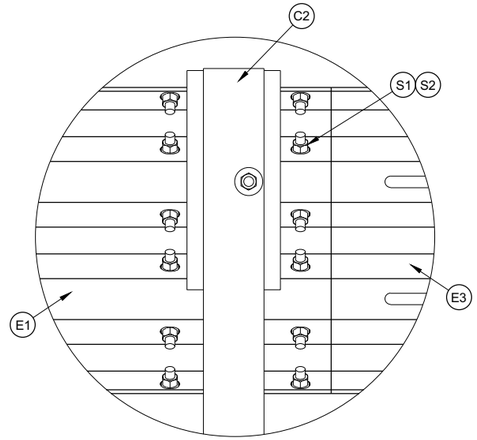


POST 8 **POST 3** **POST 2** **POST 1**

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.

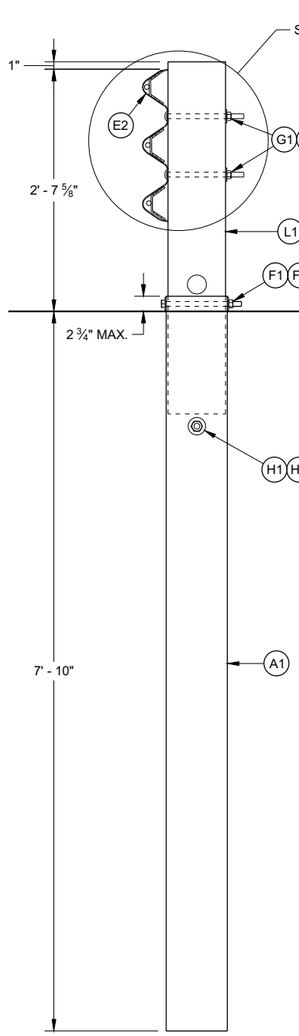
(303) ONE WASHER BETWEEN BOLD HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

STEEL THRIE BEAM BULLNOSE TERMINAL

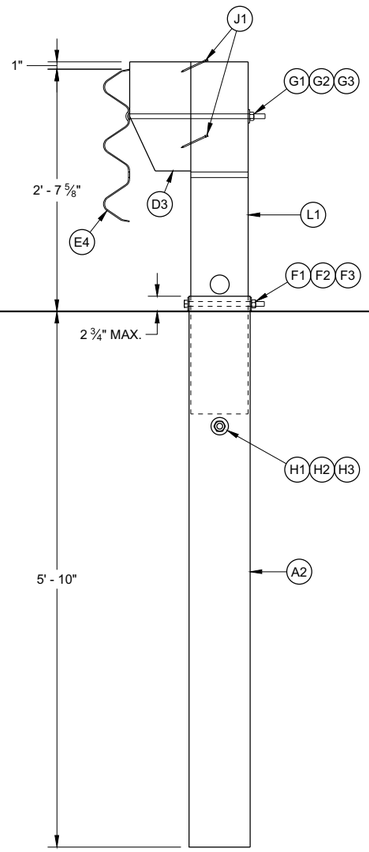
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

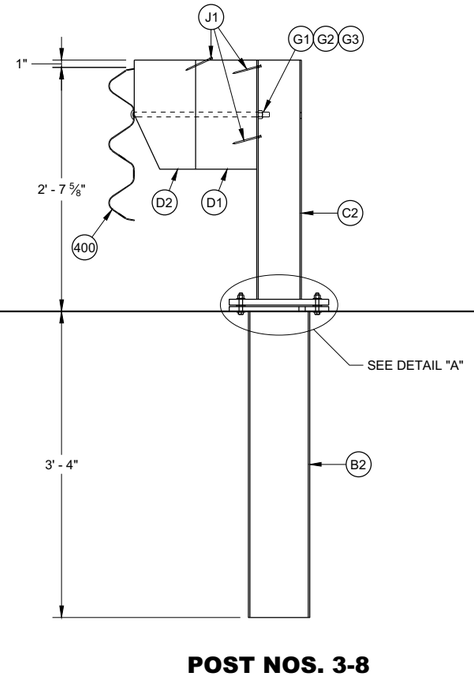
SDD 14B26 - 04c



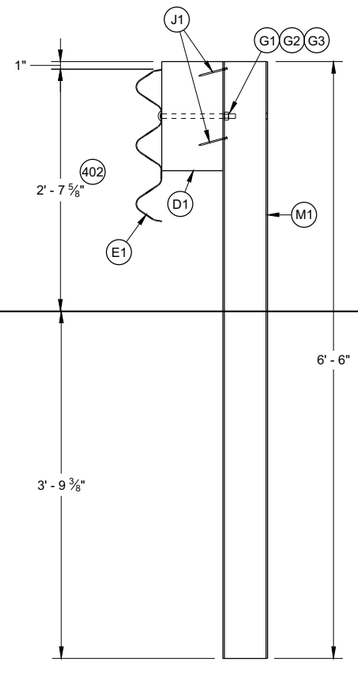
POST NO. 1



POST NO. 2



POST NOS. 3-8



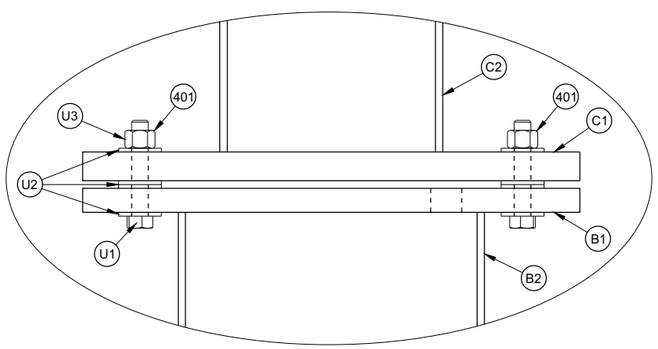
POST NOS. 9 AND ALL STEEL THRIE BEAM POSTS BEYOND

GENERAL NOTES

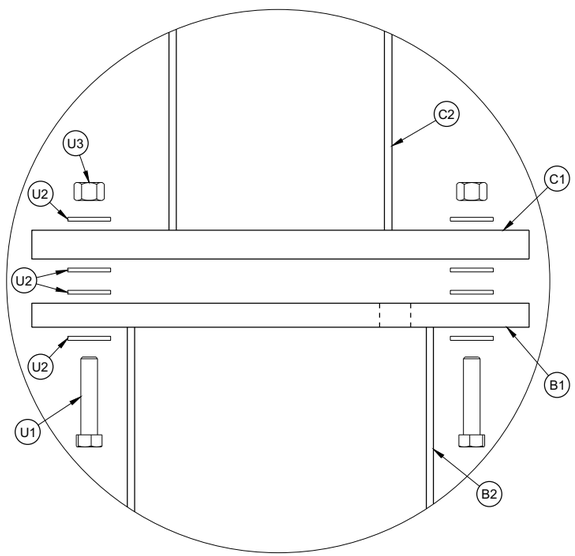
400 RAIL CAN BE E3 OR E4 DEPENDING ON POST LOCATION.

401 TORQUE BOLD BETWEEN 60-75 FT-LB

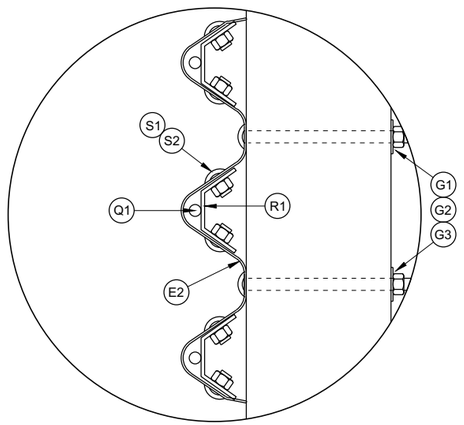
402 HEIGHT WILL VARY WITHIN HEIGHT TRANSITION TO OTHER HARDWARE. SEE NOTE 213, SHEET "b".



DETAIL "A"



EXPLODED VIEW
DETAIL "A"



DETAIL "B"

STEEL THRIE BEAM BULLNOSE TERMINAL

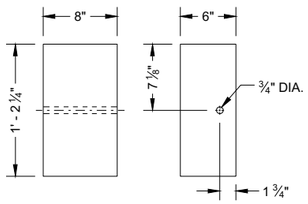
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B26 - 04d

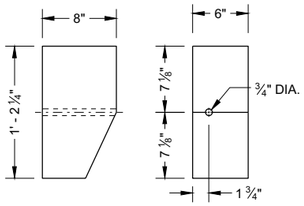
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SDD 14B26 - 04d



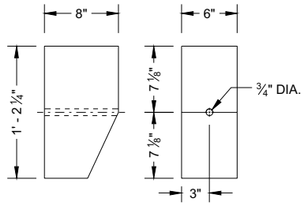
ELEVATION PROFILE

BLOCKOUT (D1)



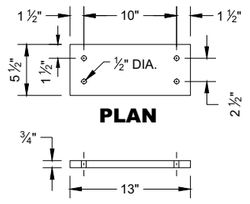
ELEVATION PROFILE

BLOCKOUT (D2)



ELEVATION PROFILE

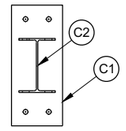
BLOCKOUT (D3)



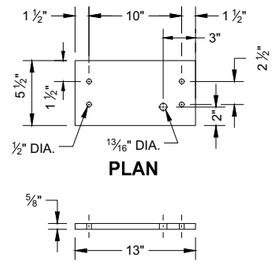
PLAN

PROFILE

UPPER SHEAR PLATE (C1)



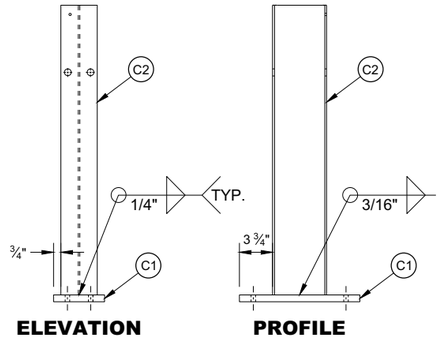
PLAN



PLAN

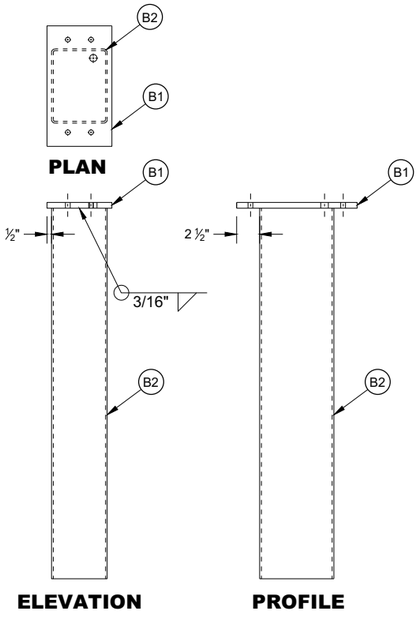
PROFILE

LOWER SHEAR PLATE (B1)



ELEVATION PROFILE

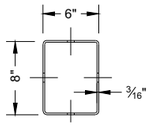
UPPER POST ASSEMBLY



PLAN

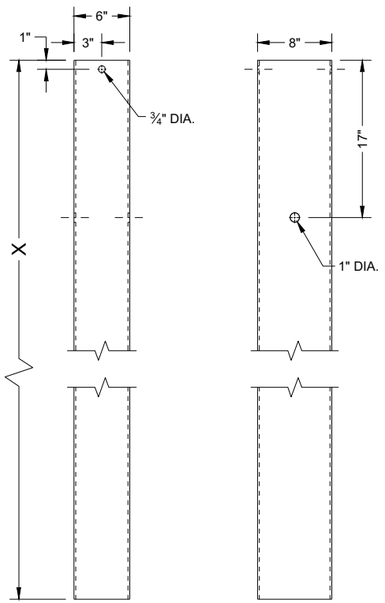
ELEVATION PROFILE

LOWER POST ASSEMBLY



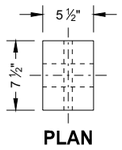
PLAN

PART	LENGTH "X"
A1	8' - 0"
A2	6' - 0"
B2	3' - 6"

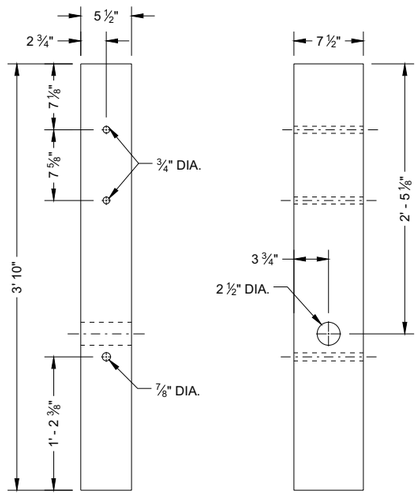


ELEVATION PROFILE

FOUNDATION TUBE

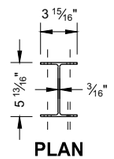


PLAN

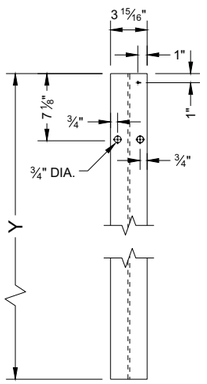


ELEVATION PROFILE

BCT POST (L1)



PLAN



ELEVATION

POST

PART	LENGTH "Y"
M1	6' - 6"
M2	5' - 8 5/8"
C2	2' - 8 5/8"

STEEL THRIE BEAM BULLNOSE TERMINAL

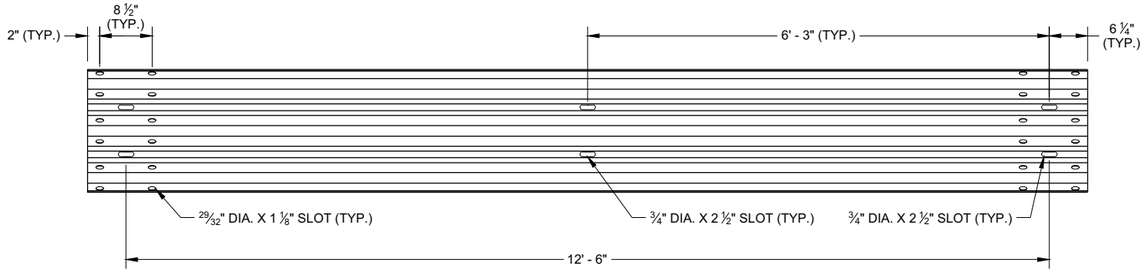
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTAT

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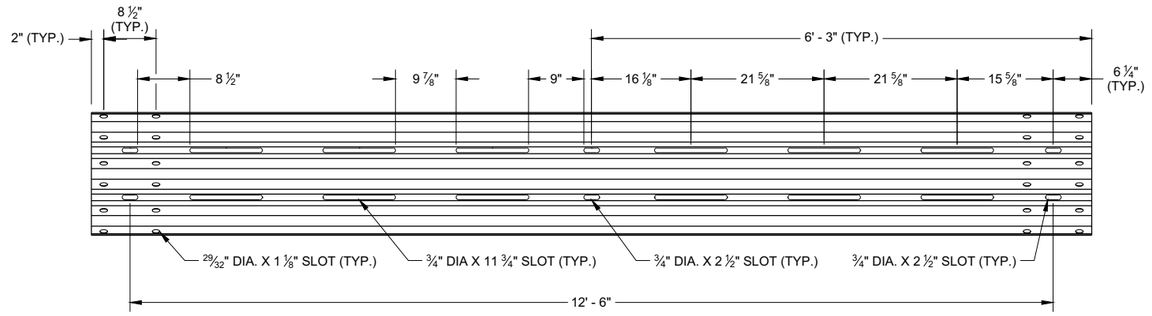
SDD 14B26 - 04e

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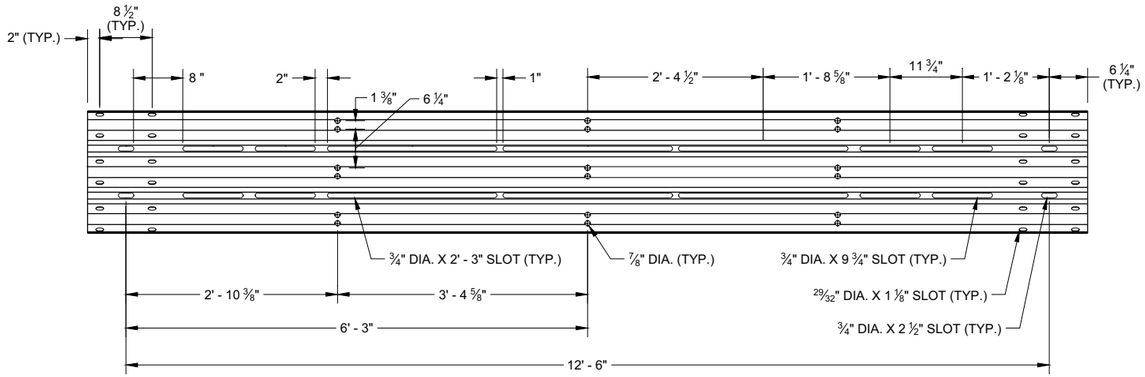
SDD 14B26 - 04e



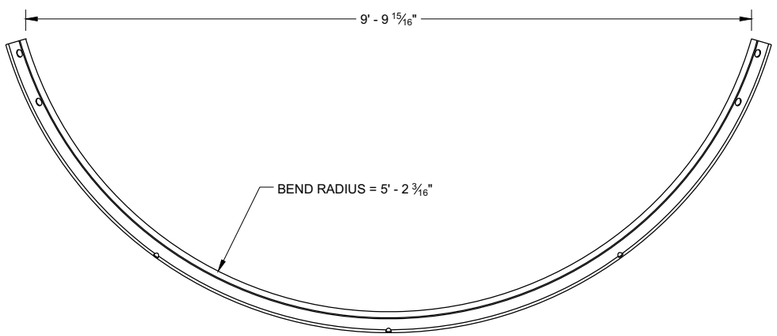
SLOTTED THRIE BEAM RAIL E1



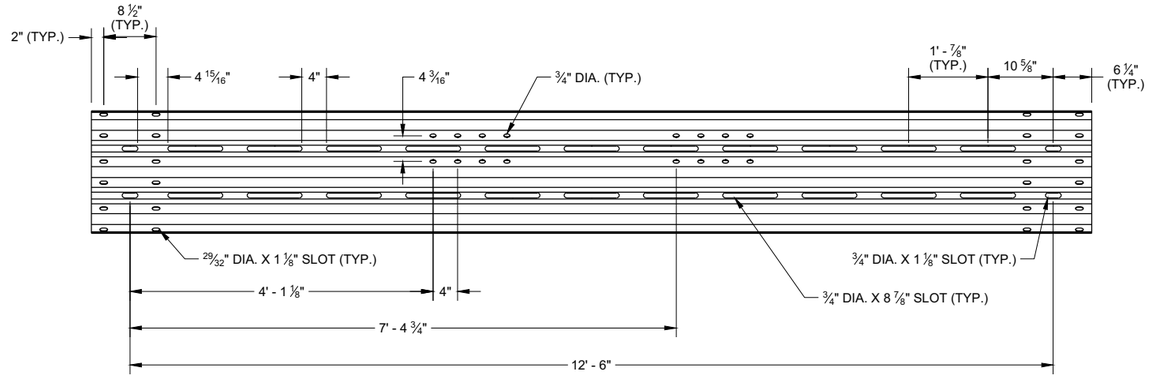
SLOTTED THRIE BEAM RAIL E3



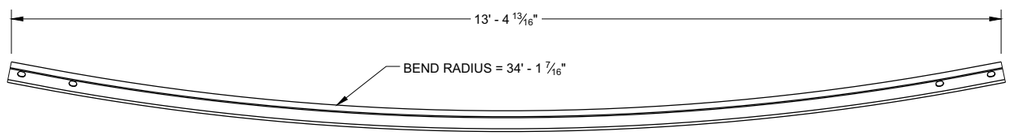
ELEVATION VIEW NON - RADIUSED
SLOTTED THRIE BEAM RAIL E2



PLAN VIEW
SLOTTED THRIE BEAM RAIL E2



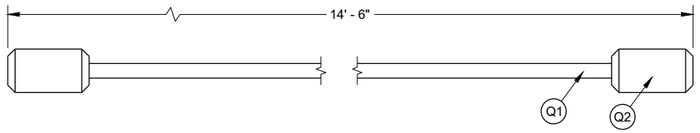
ELEVATION VIEW NON - RADIUSED
SLOTTED THRIE BEAM RAIL E4



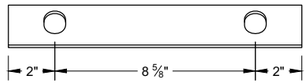
PLAN VIEW
SLOTTED THRIE BEAM RAIL E4

STEEL THRIE BEAM BULLNOSE TERMINAL

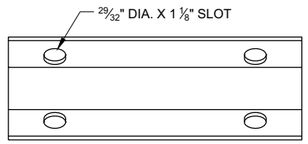
STATE OF WISCONSIN
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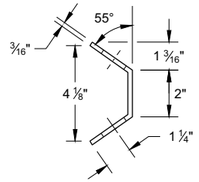
NOSE CABLE AND SWAGE BUTTON



PLAN VIEW

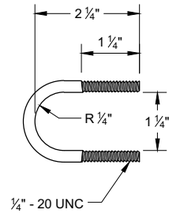


ELEVATION VIEW

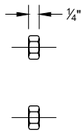


PROFILE VIEW

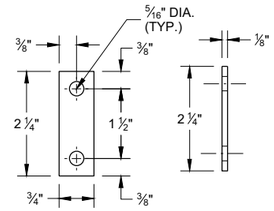
NOSE CABLE ANCHOR (R1)



U - BOLT (T1)

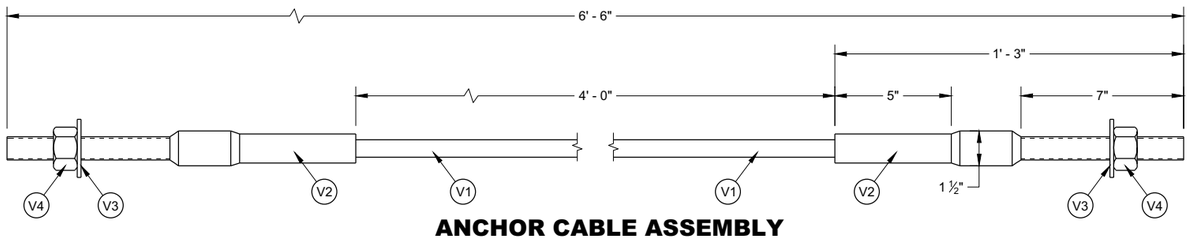


U - BOLT NUT (T3)

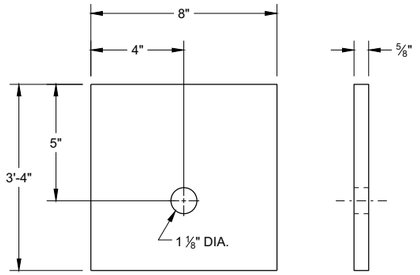


ELEVATION VIEW **PROFILE VIEW**

U - BOLT PLATE WASHER (T2)

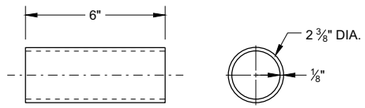


ANCHOR CABLE ASSEMBLY



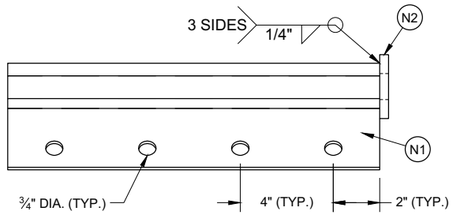
ELEVATION VIEW **PROFILE VIEW**

BCT BEARING PLATE (A3)

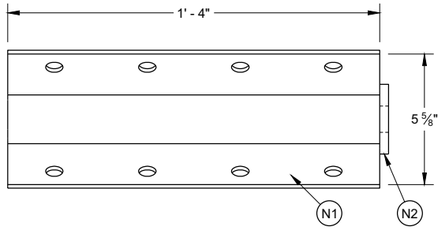


ELEVATION VIEW **PROFILE VIEW**

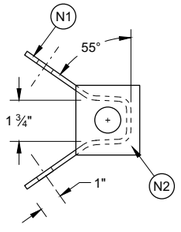
BCT POST SLEEVE (L2)



PLAN VIEW

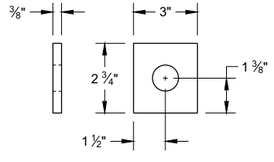


ELEVATION VIEW



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 - 04g

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

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

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SDD 14B26 - 04h

(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.

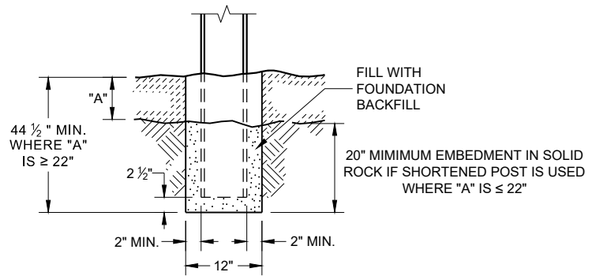
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL 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).

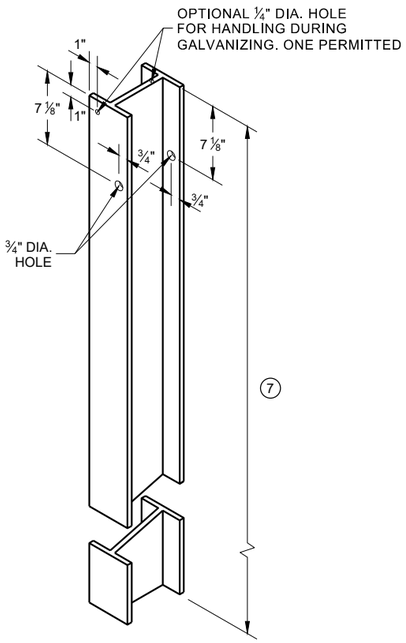
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

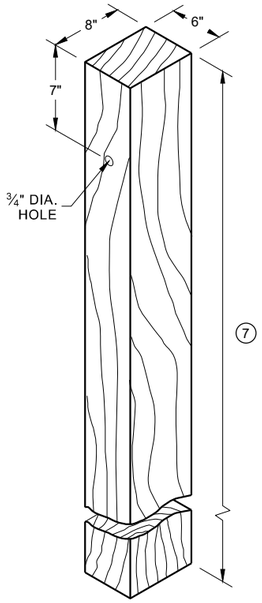
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



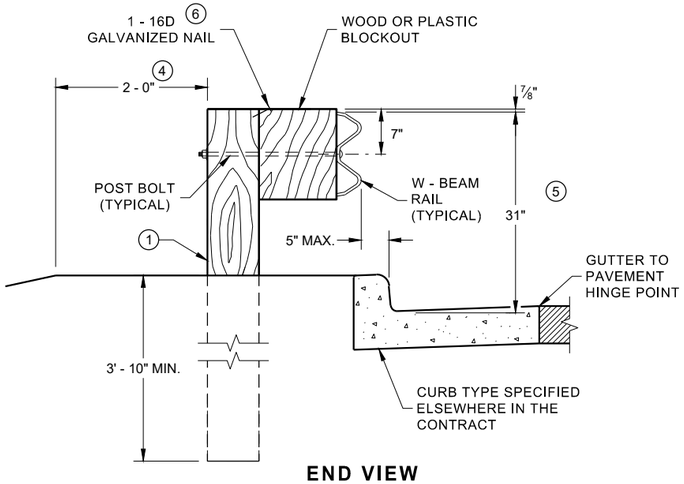
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



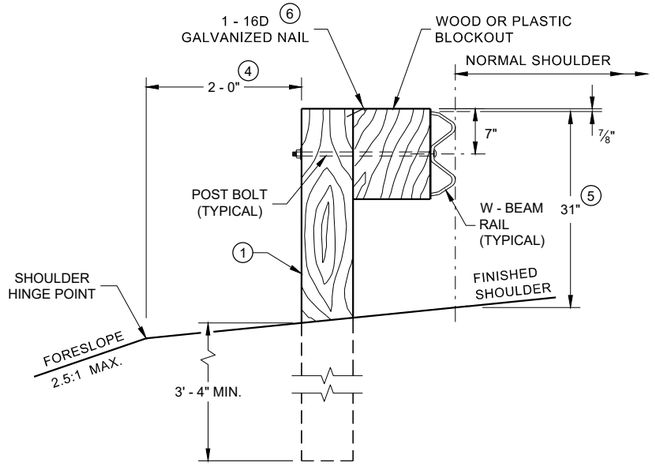
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



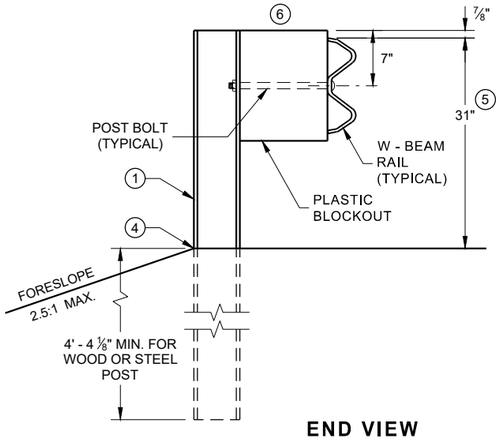
WOOD POST (6" X 8") NOMINAL (1)



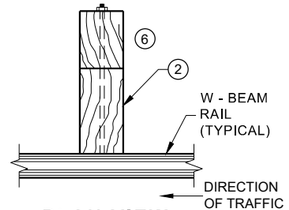
END VIEW
LOCATED ALONG A CURBED ROADWAY



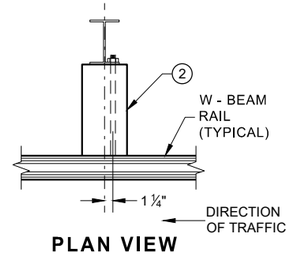
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



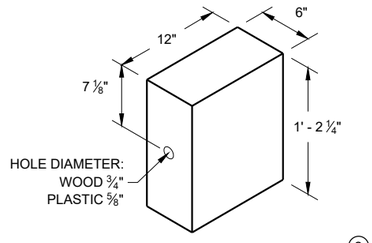
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



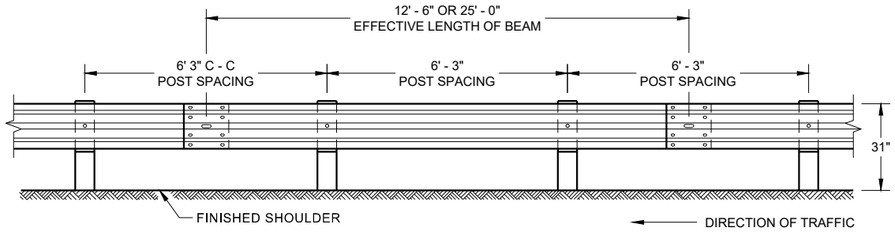
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

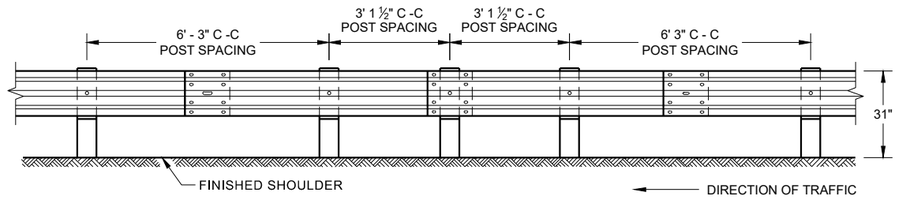
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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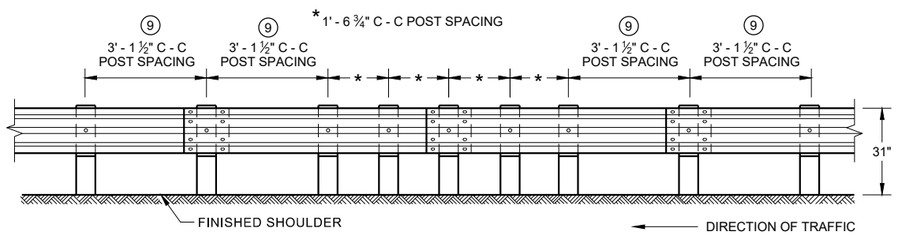
SDD 14B42 - 07a



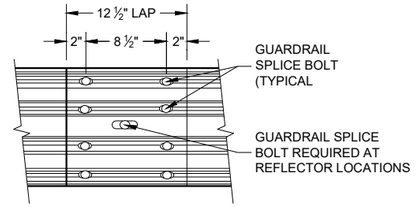
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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

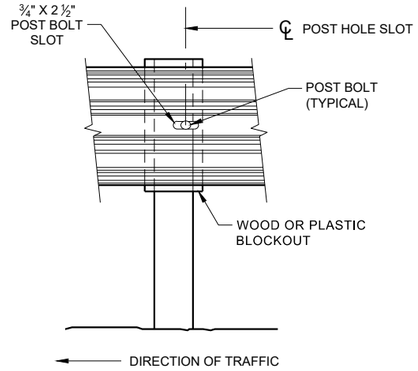
GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

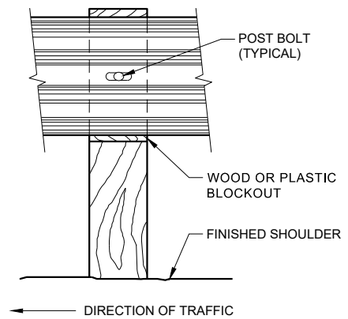
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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.

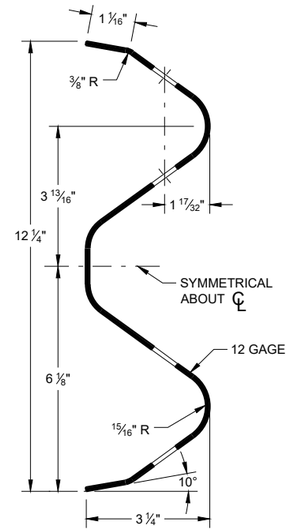
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



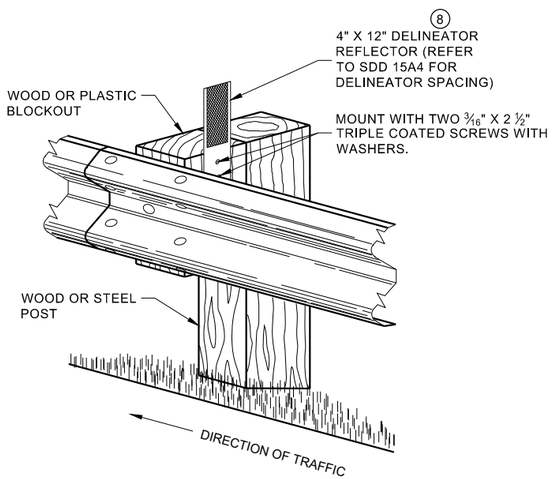
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



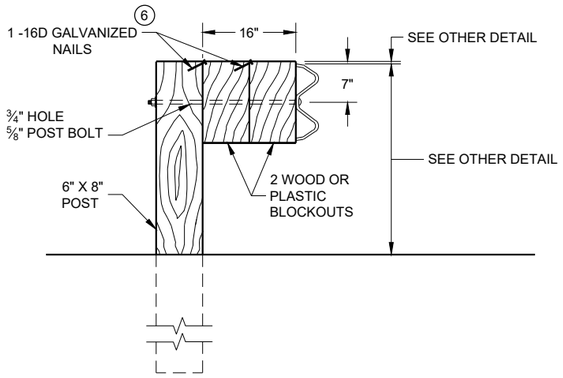
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B42 - 07b

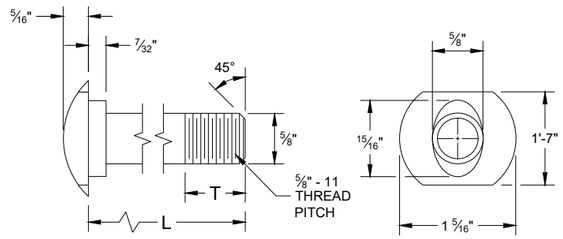


DETAIL FOR 16" BLOCKOUT DEPTH

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.

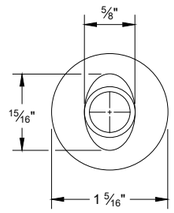
NOTE:

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.

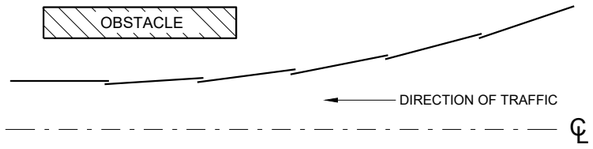


POST BOLT TABLE

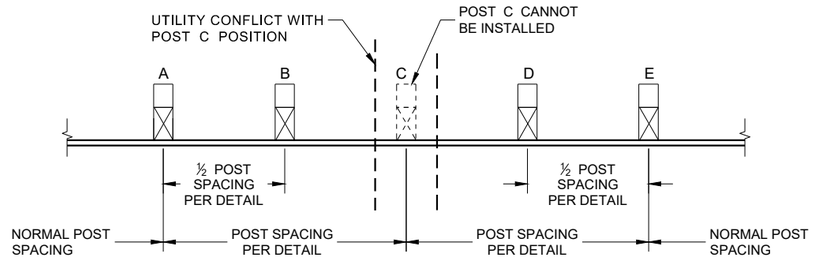
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



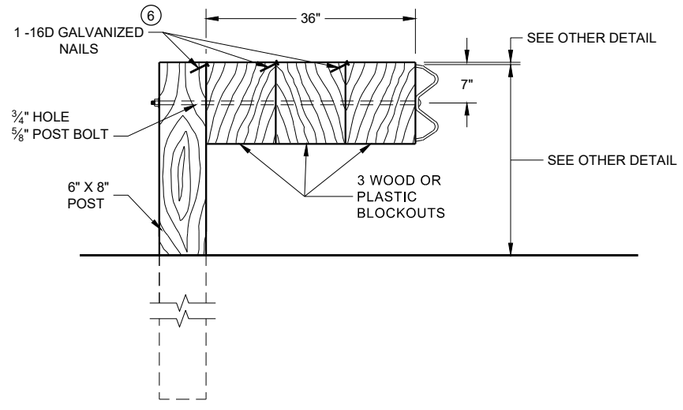
ALTERNATE BOLT HEAD



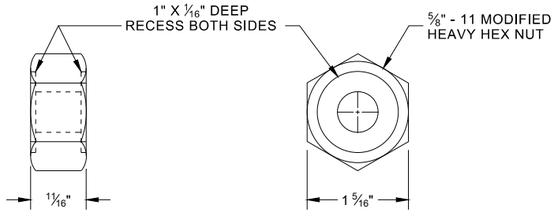
PLAN VIEW
BEAM LAPPING DETAIL



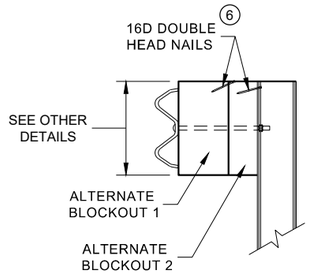
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



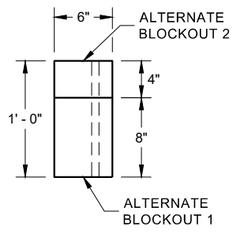
DETAIL FOR 36" BLOCKOUT DEPTH



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.

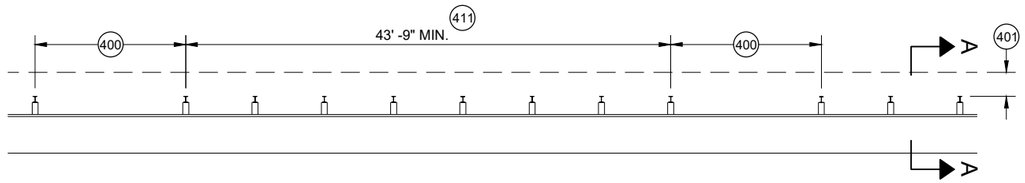
(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

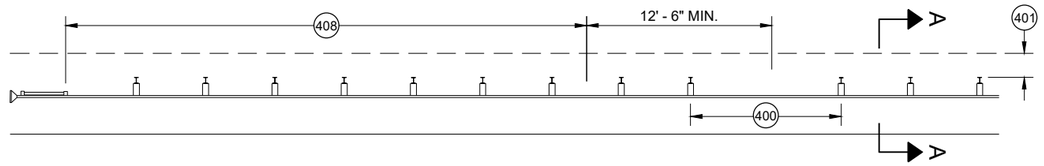
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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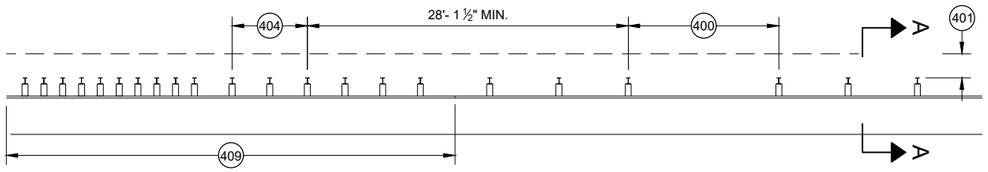
SDD 14B42 - 07c



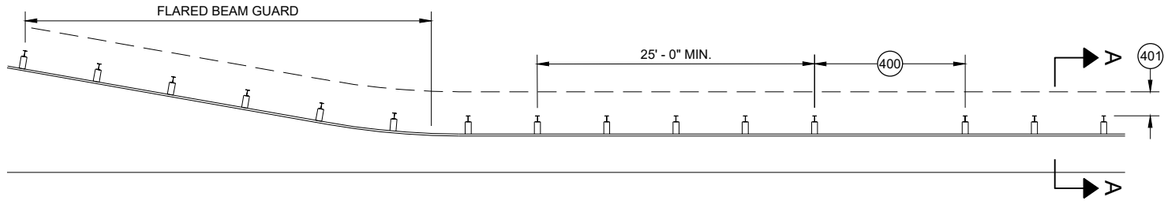
MISSING POST IN MGS GUARDRAIL



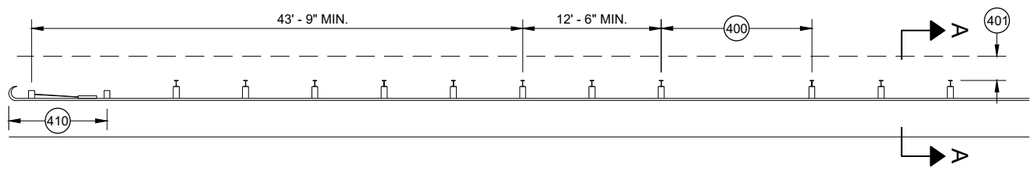
MISSING POST IN MGS GUARDRAIL NEAR EAT



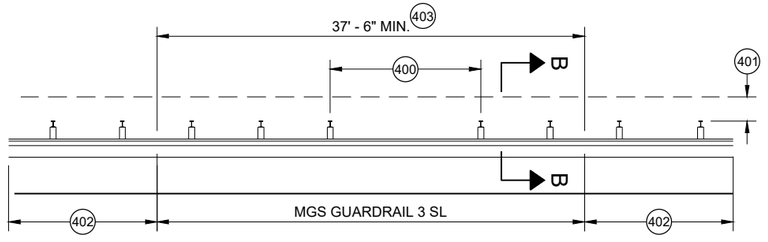
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

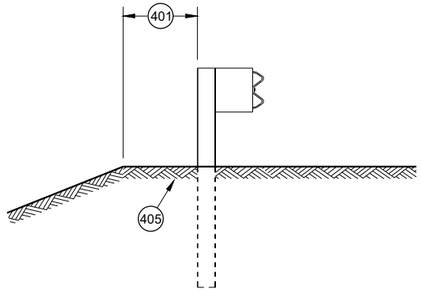


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

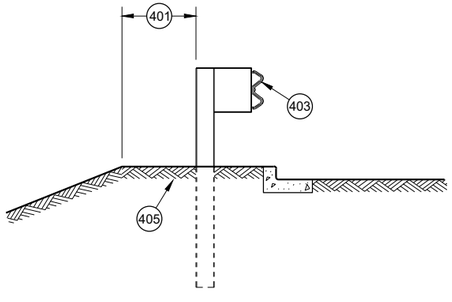


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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

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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.

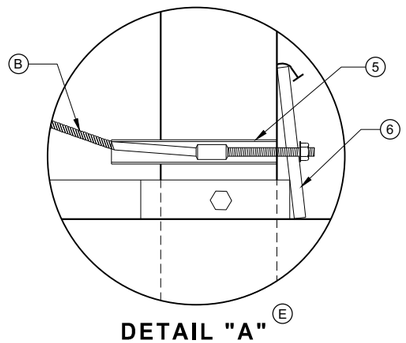
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

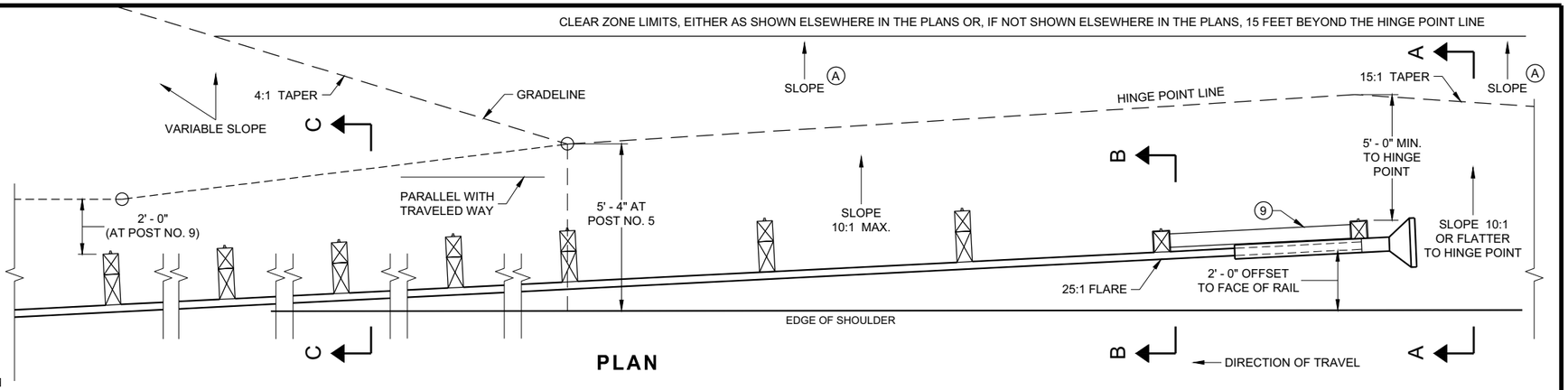
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

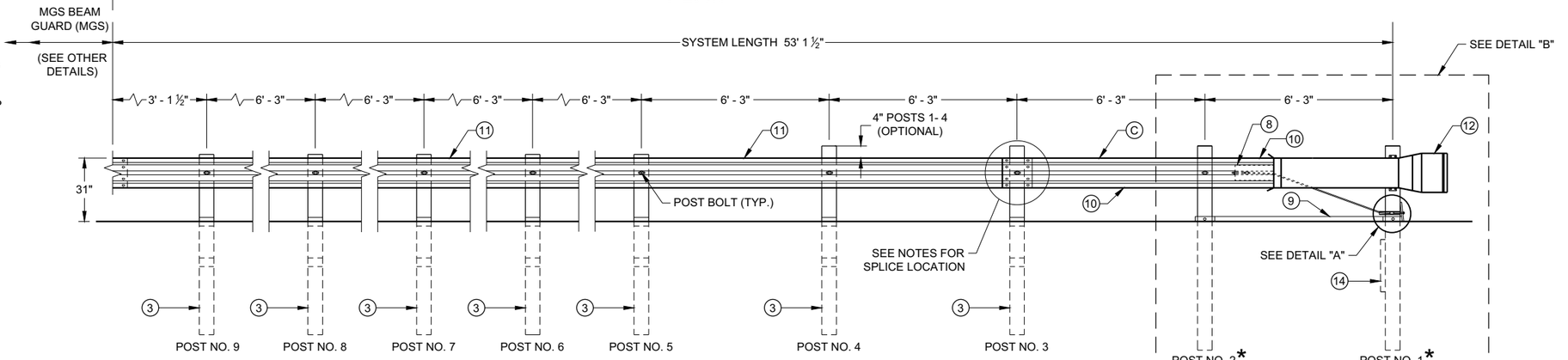
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



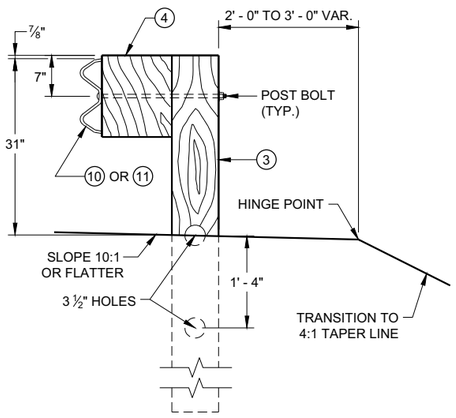
DETAIL "A" (E)



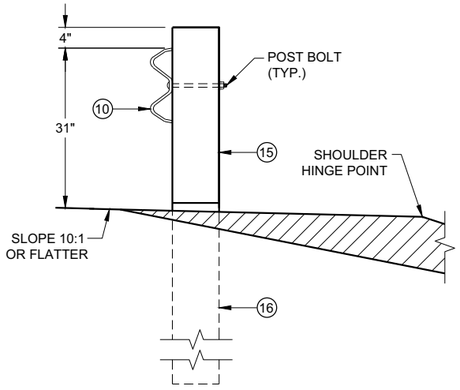
PLAN



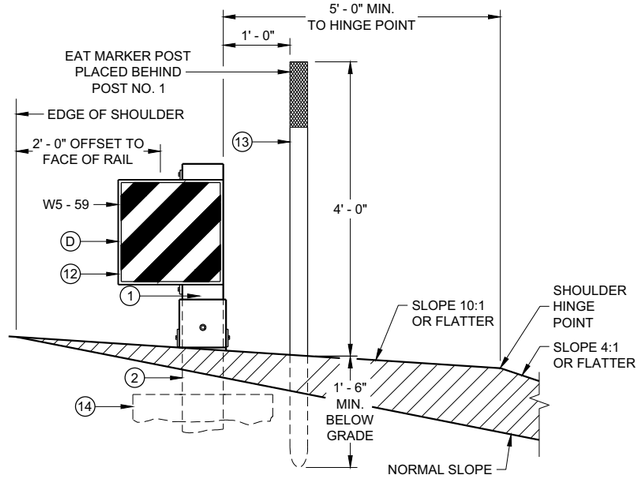
ELEVATION



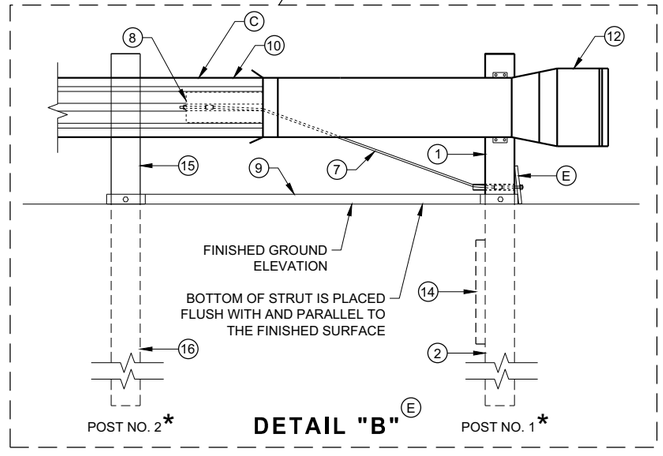
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



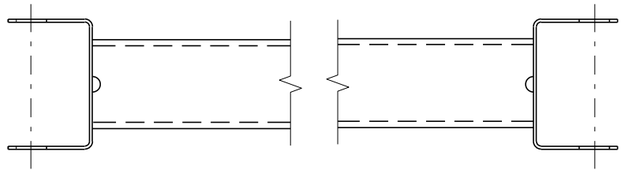
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

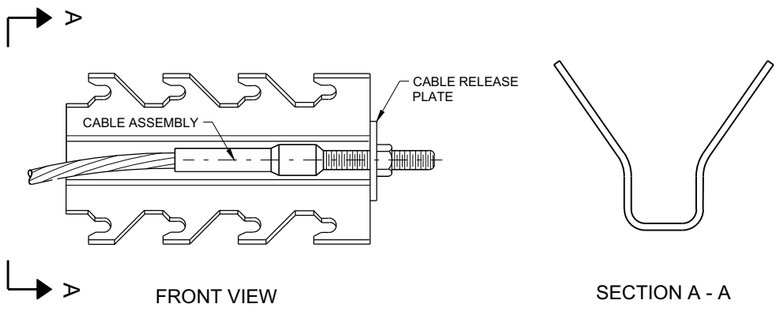
SDD 14B44 - 04a



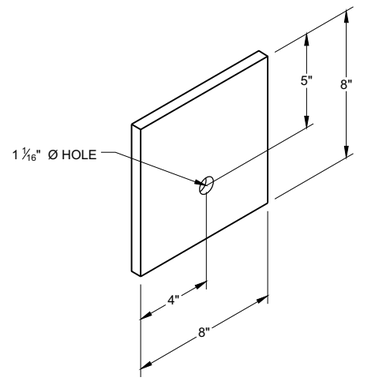
GENERIC GROUND STRUT ⑨ Ⓔ

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 ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

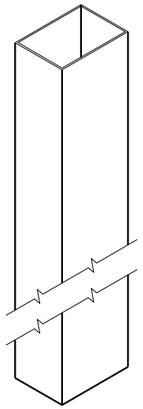
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SDD 14B44 - 04b

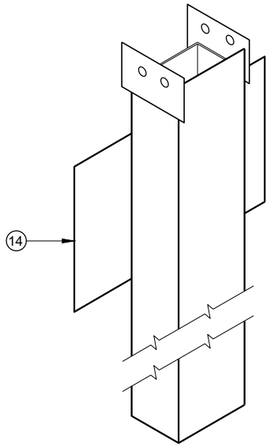
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

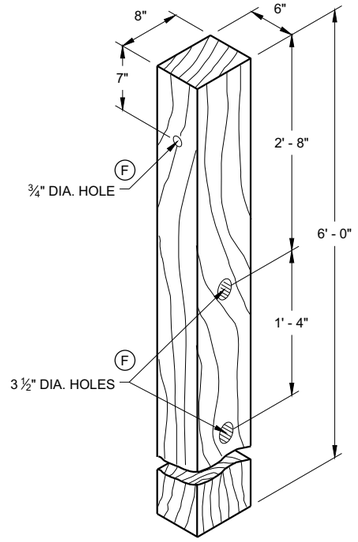
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



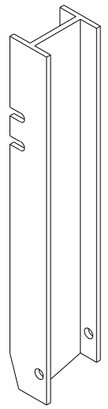
UPPER POST NO. 1 (1) (E)



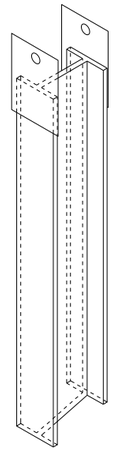
LOWER POST NO. 1 (2) (E)



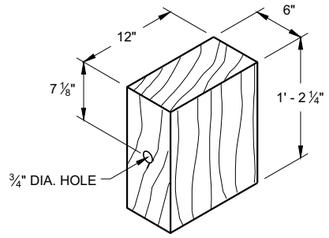
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



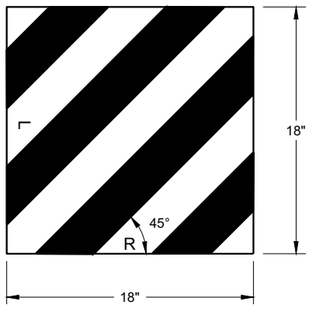
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

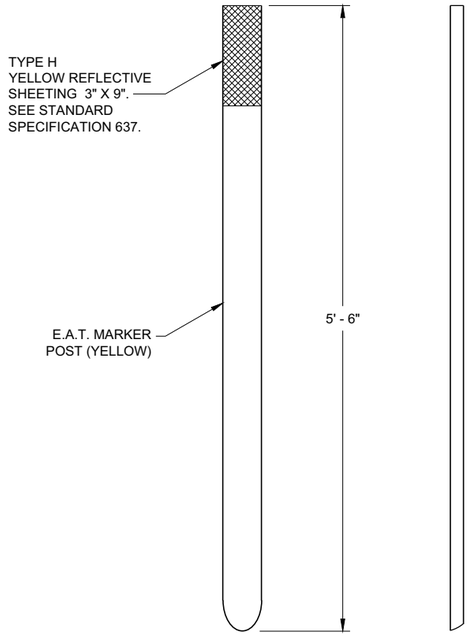


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



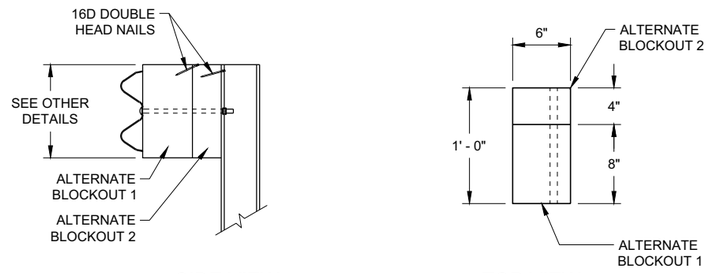
W5 - 59

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)

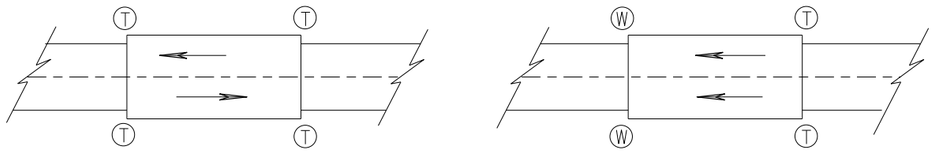
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

6

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.

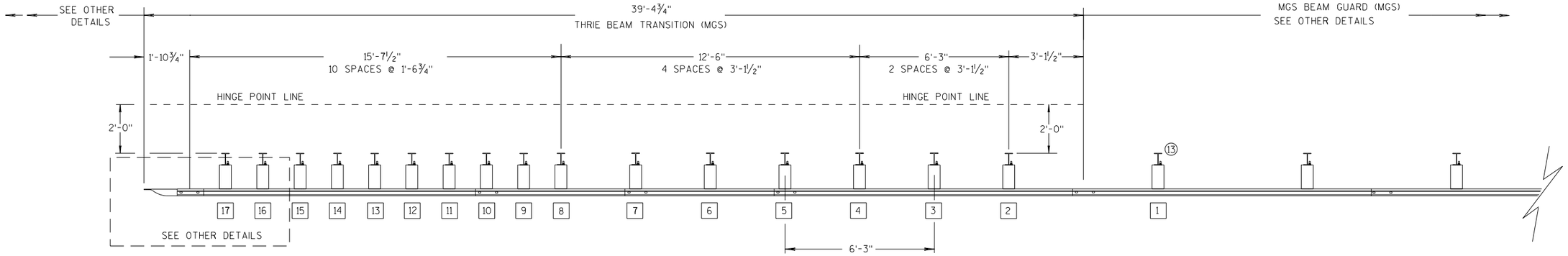
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

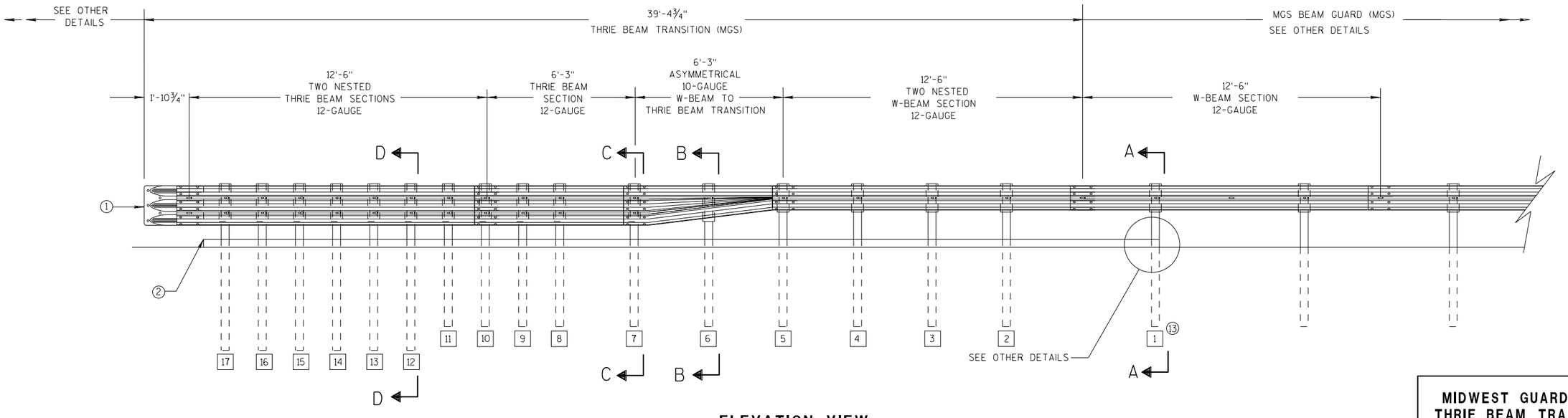
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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

6

S.D.D. 14 B 45-5a

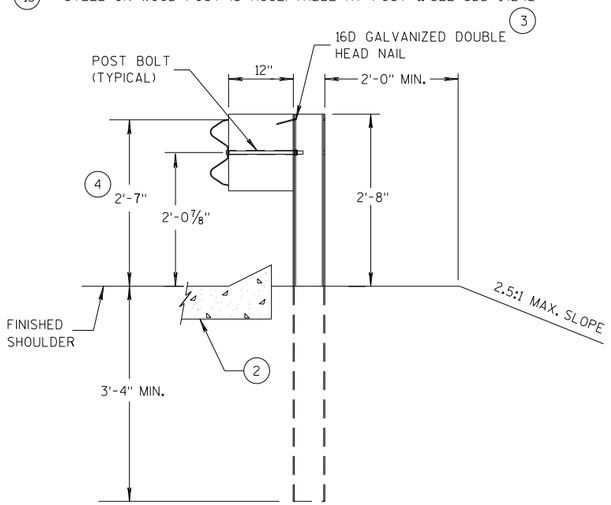
GENERAL NOTES

(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.

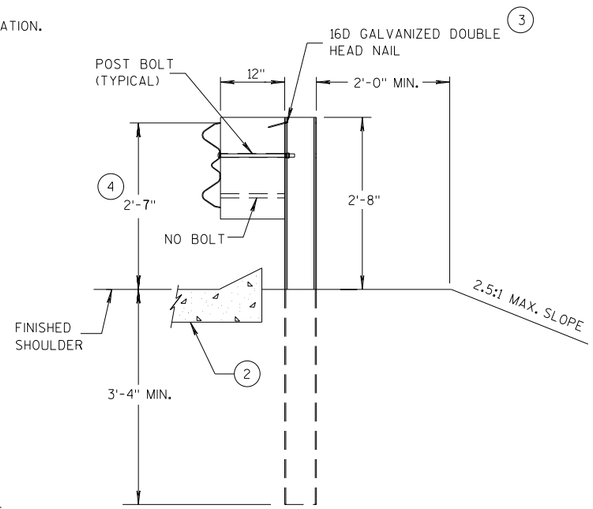
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



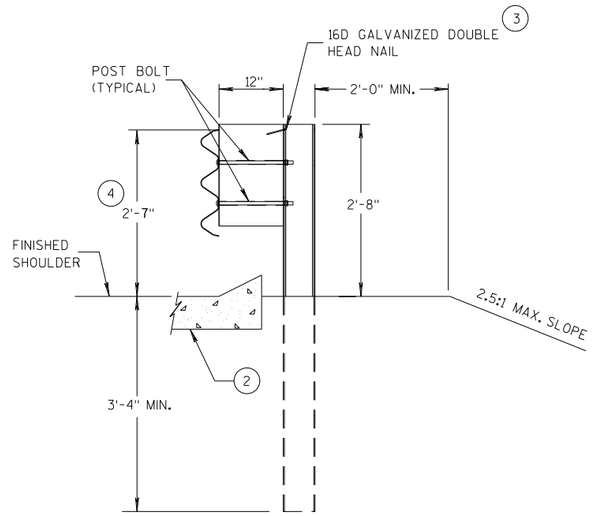
SECTION A-A (13)

POSTS 1-5



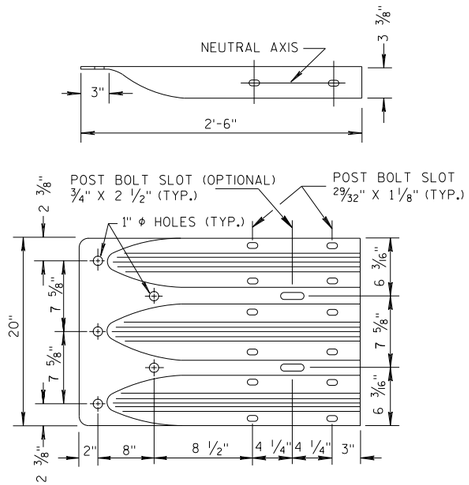
SECTION B-B

POST 6

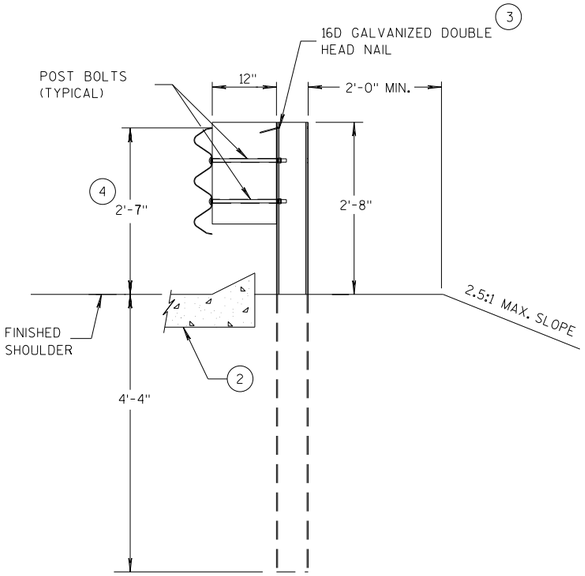


SECTION C-C

POSTS 7-11

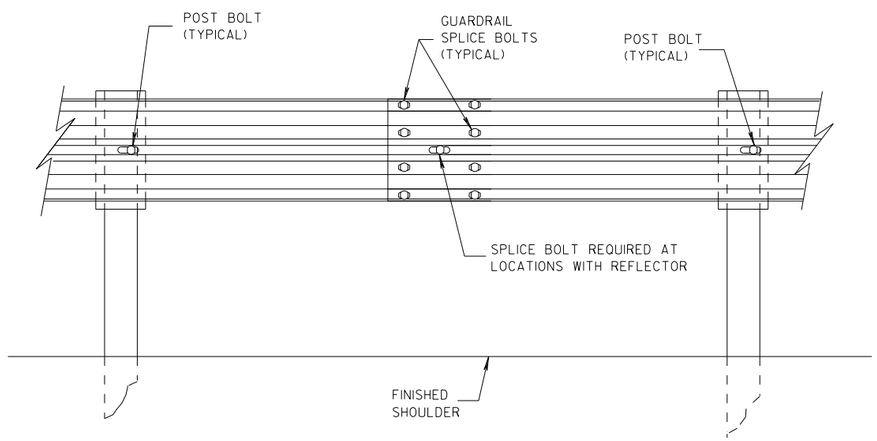


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

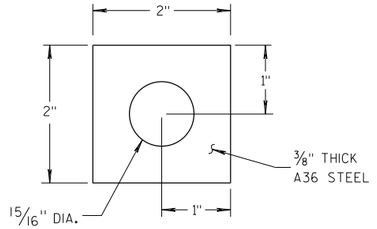
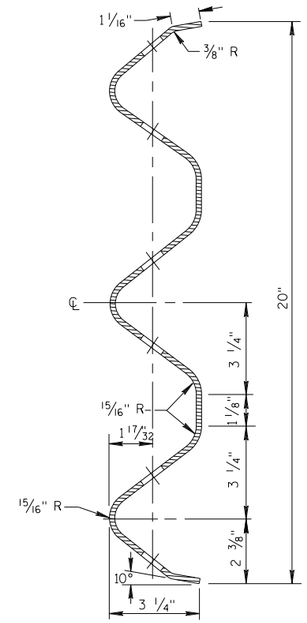


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

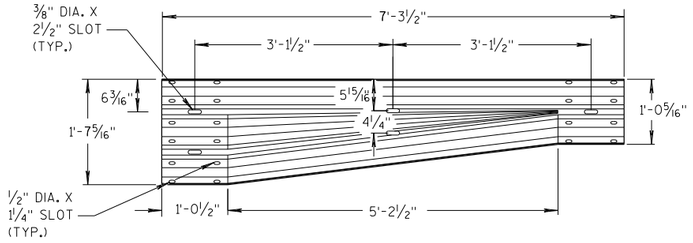
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 122

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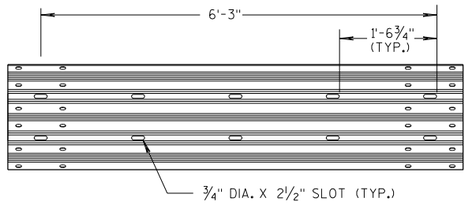
S.D.D. 14 B 45-5b

6

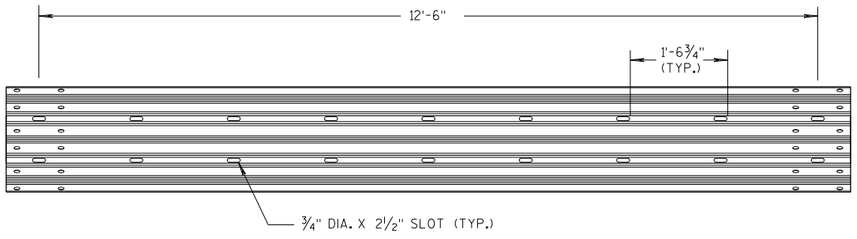
S.D.D. 14 B 45-5b



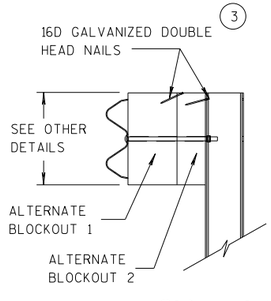
W-BEAM TO THRIE BEAM TRANSITION SECTION



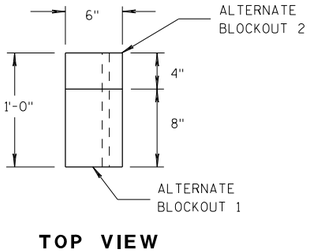
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

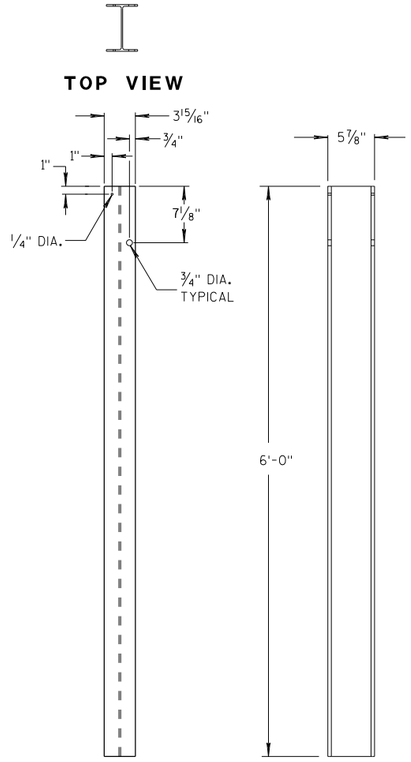


SIDE VIEW



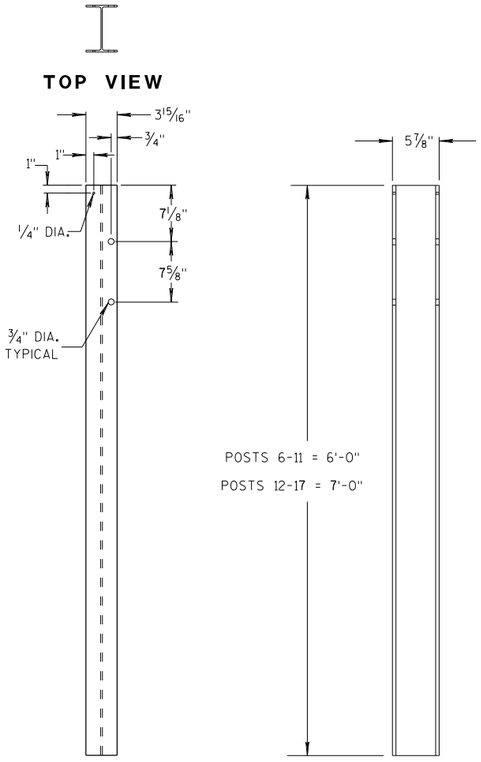
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



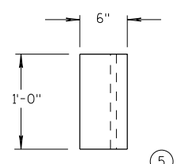
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

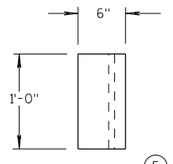


FRONT VIEW SIDE VIEW

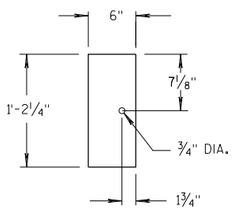
STEEL POSTS 6-17



TOP VIEW (5)

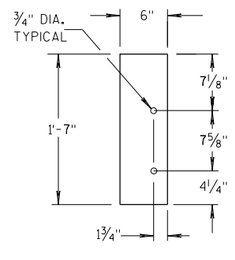


TOP VIEW (5)



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.

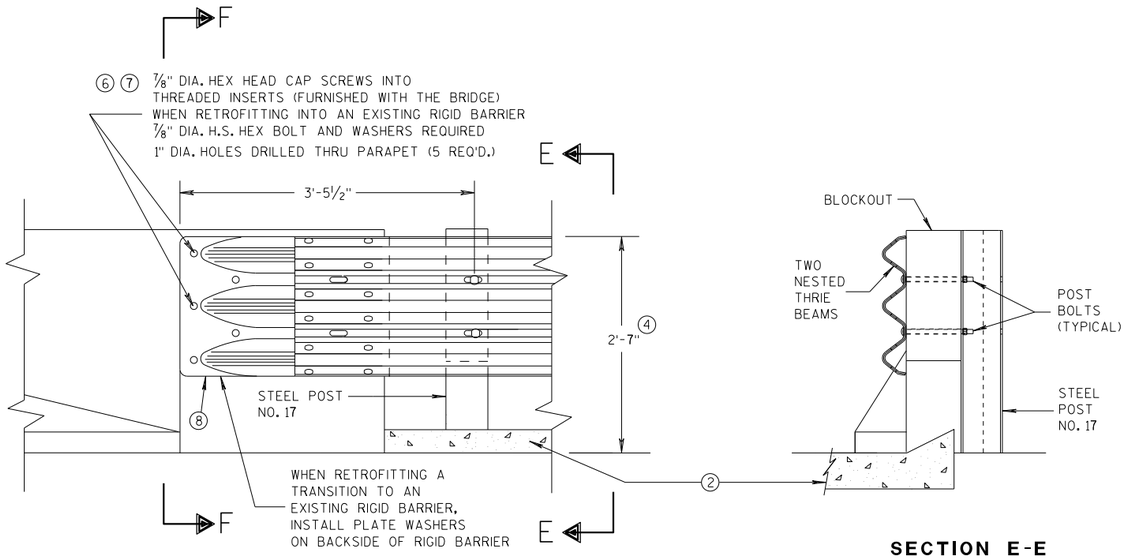
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

(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 123

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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.

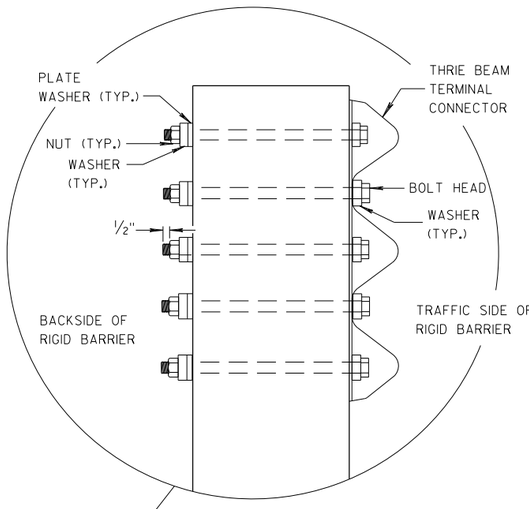
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

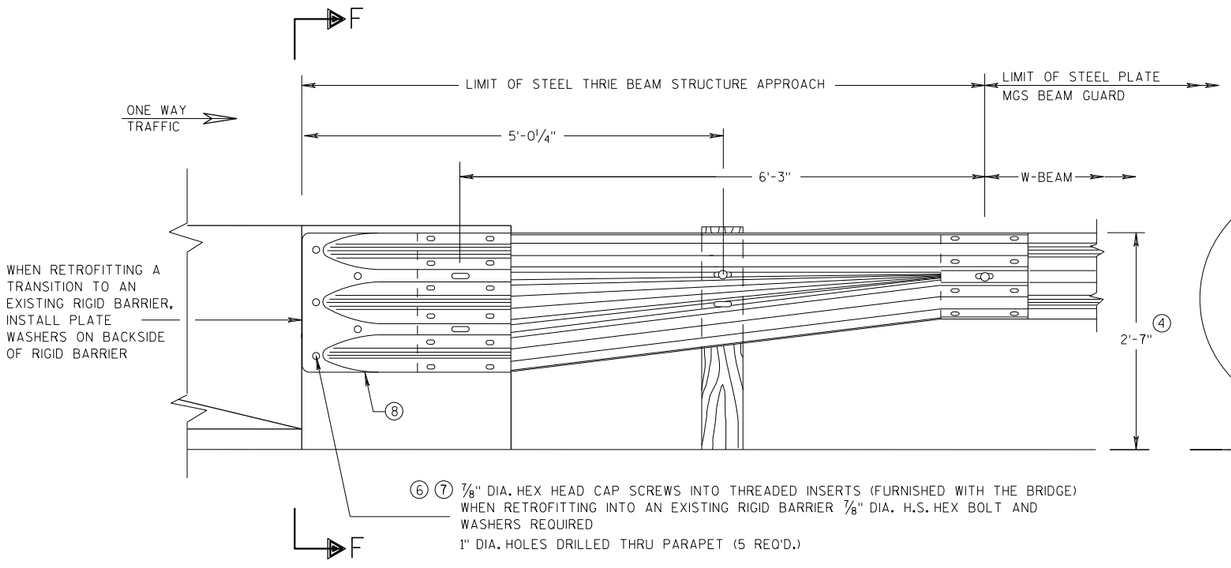
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

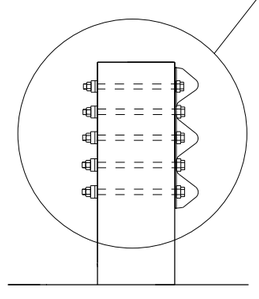
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⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

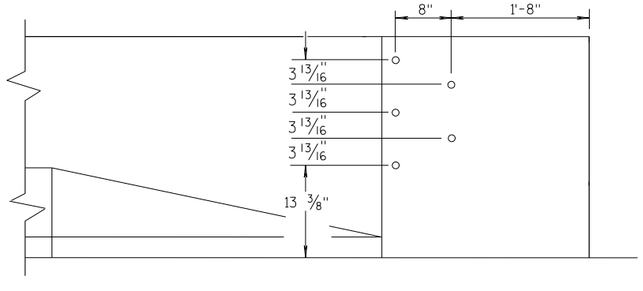




FRONT VIEW



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 — ROADWAY STANDARDS D[illegible] UNIT SUPERVIS[illegible]NT
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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.

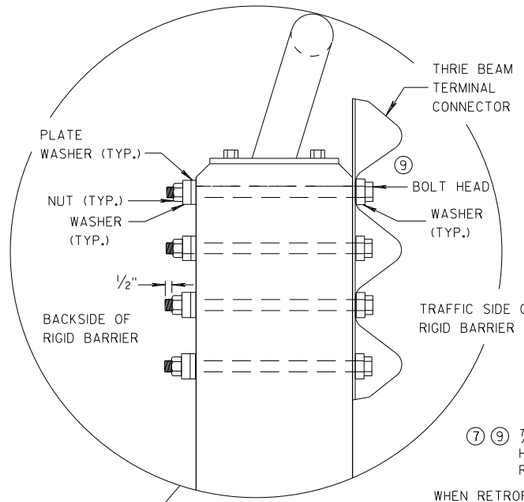
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

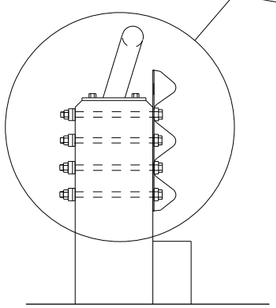
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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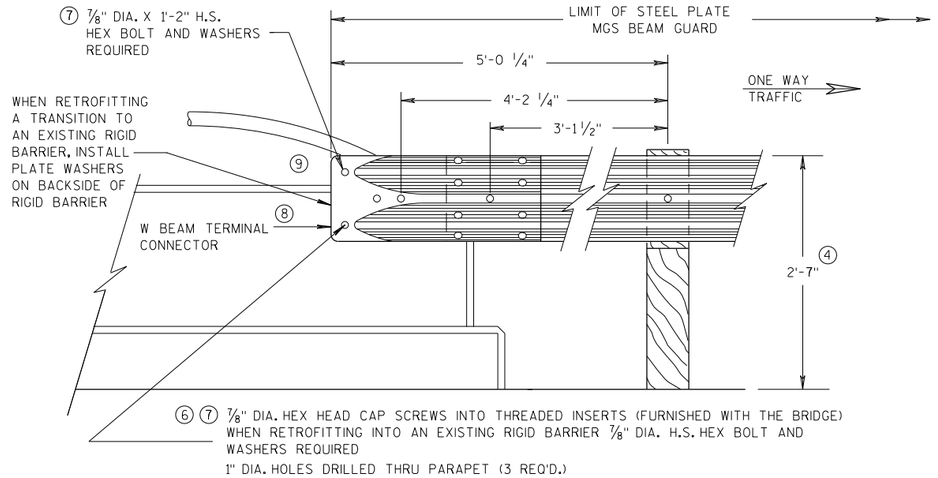
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(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.





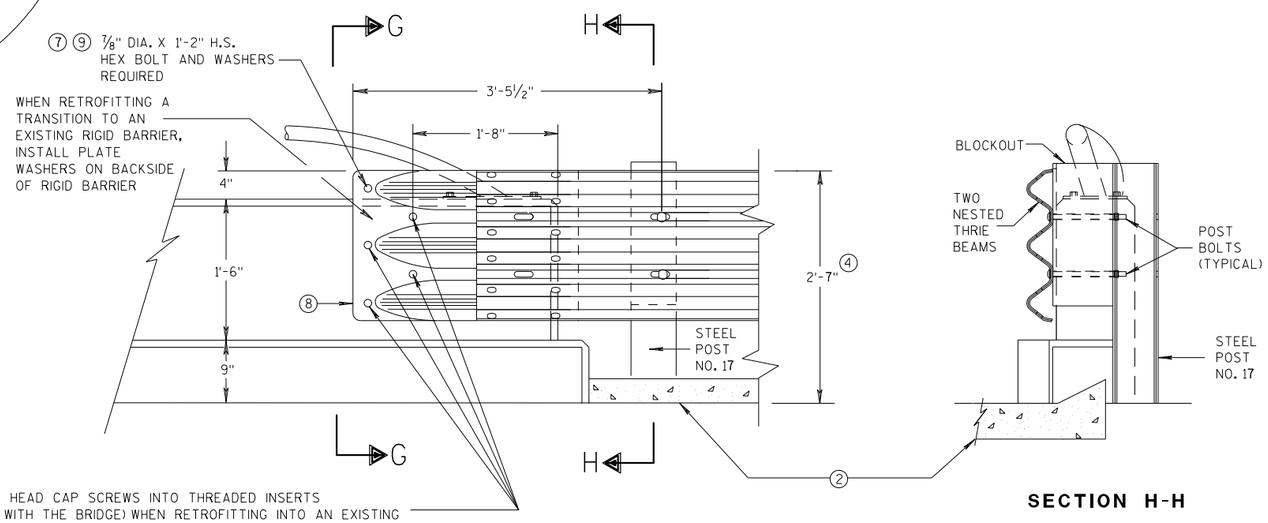
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

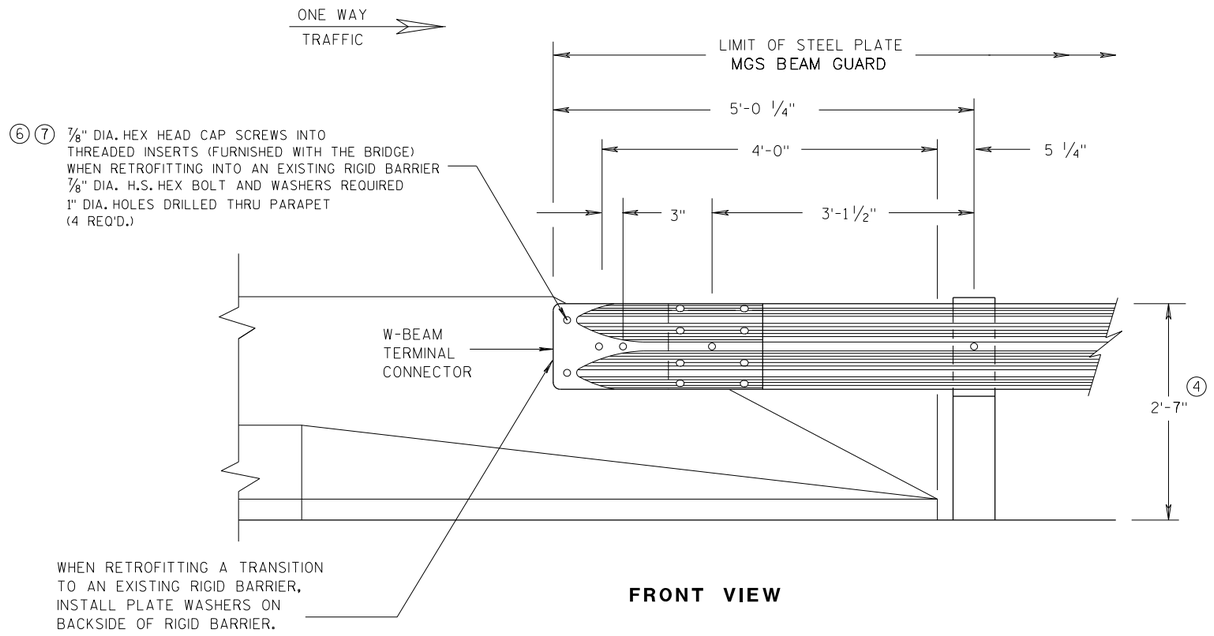
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S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

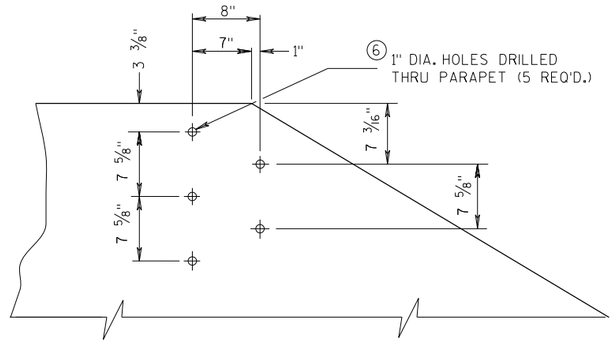
GENERAL NOTES

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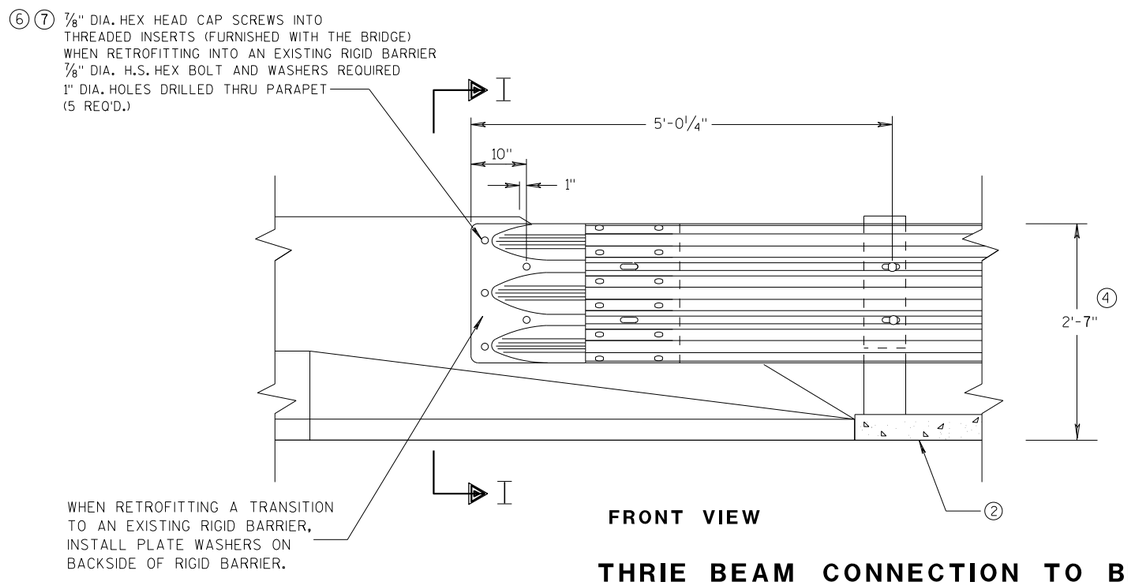
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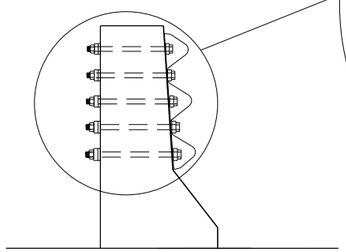
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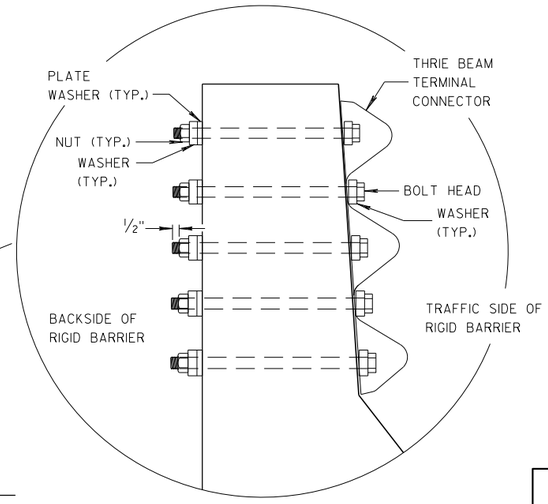
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



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

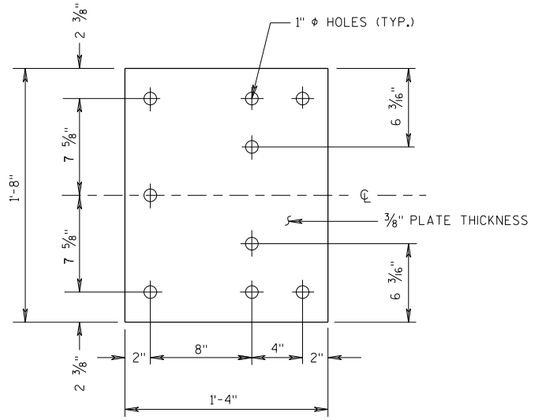
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FHWA

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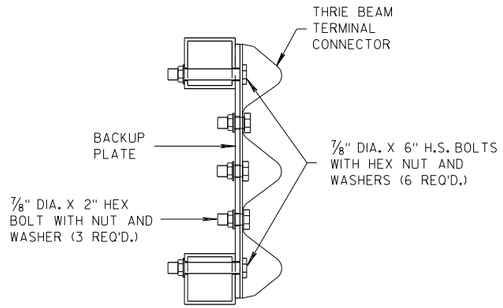
S.D.D. 14 B 45-5f

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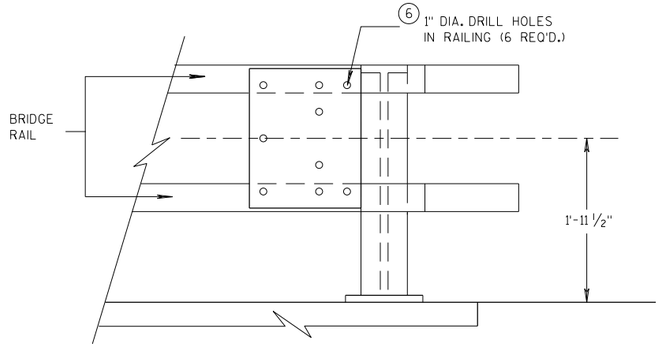
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BACK-UP PLATE DETAIL



SECTION J-J

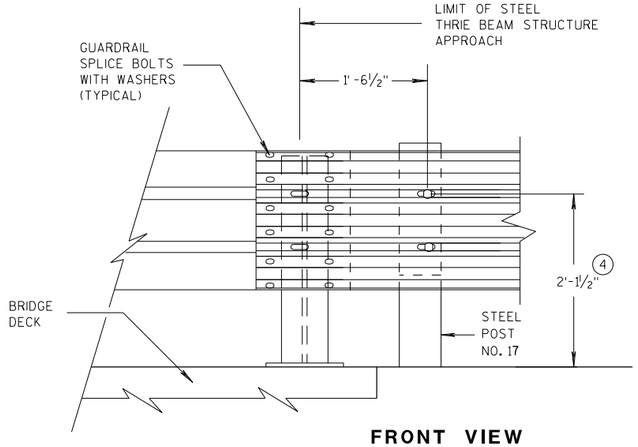


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

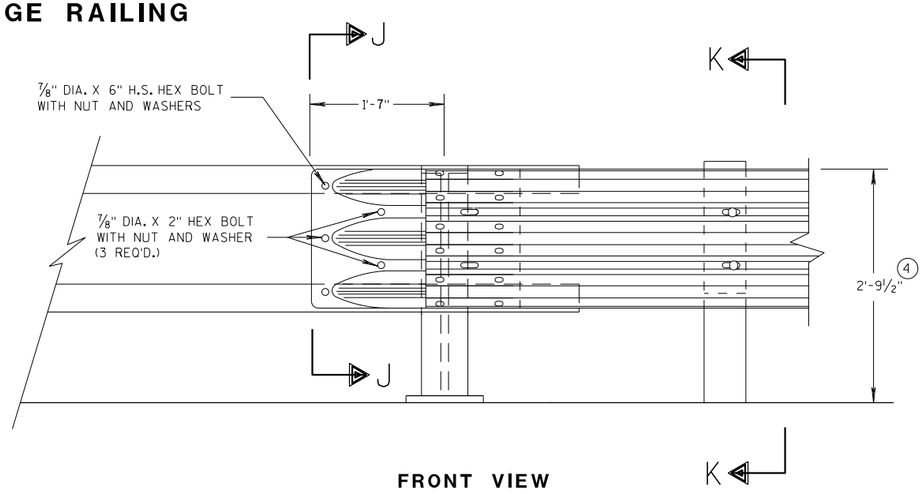
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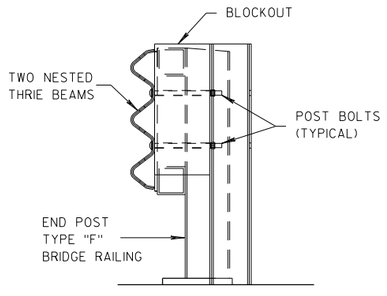


FRONT VIEW

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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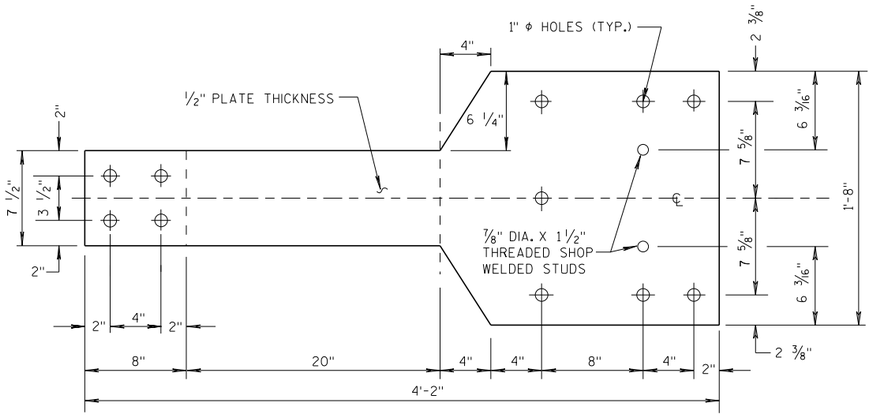
S.D.D. 14 B 45-5g

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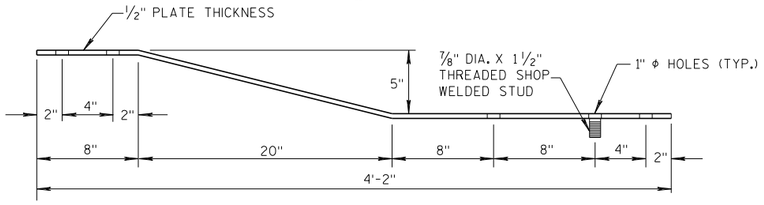
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GENERAL NOTES

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

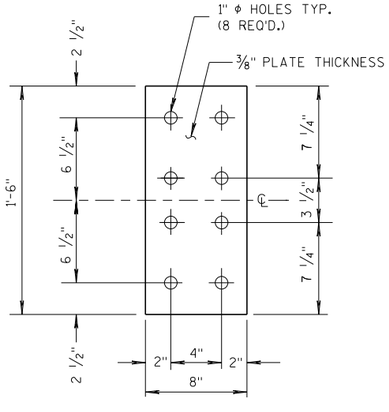


FRONT VIEW



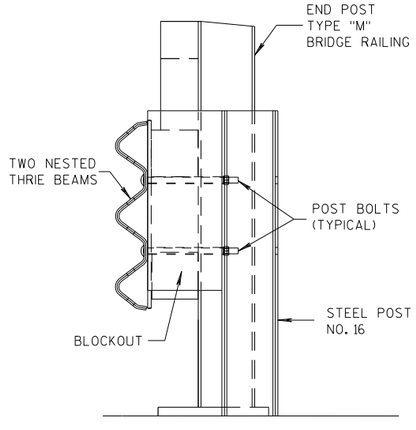
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

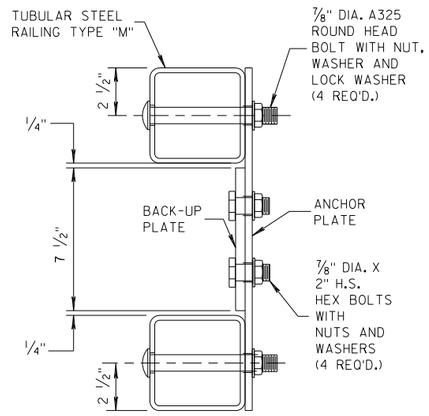


FRONT VIEW

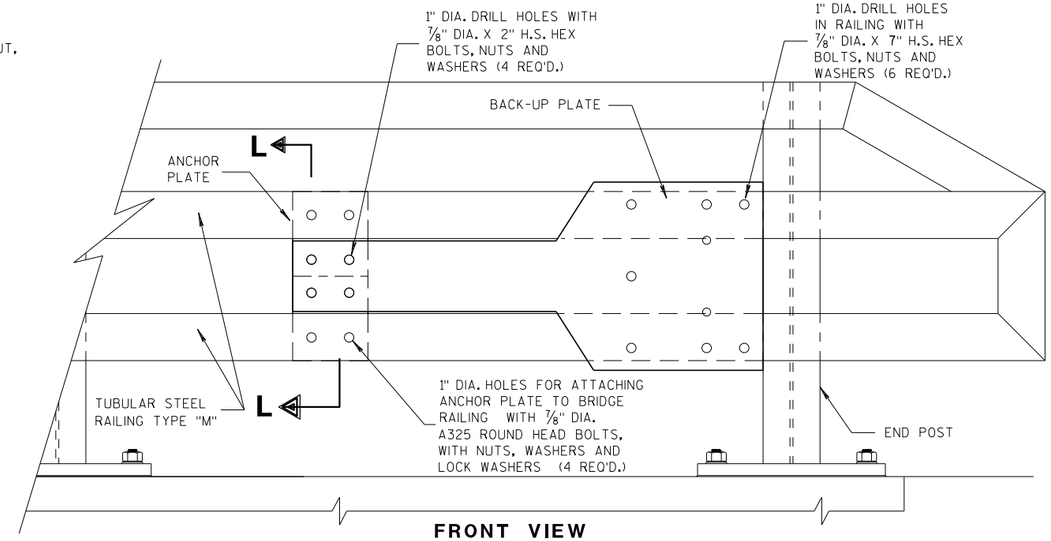
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

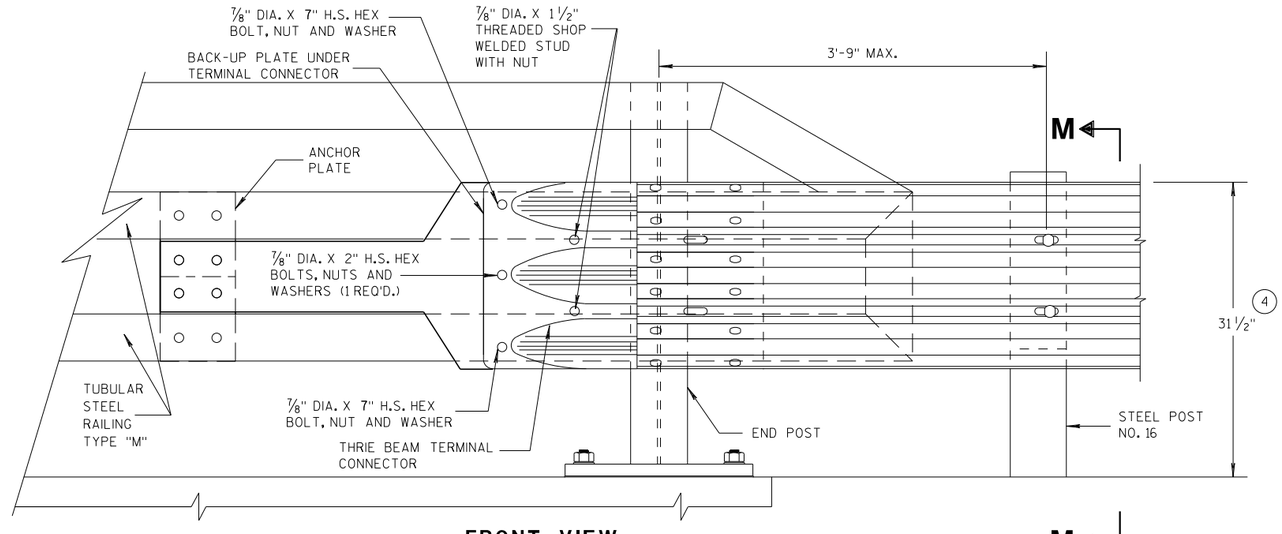


SECTION L-L

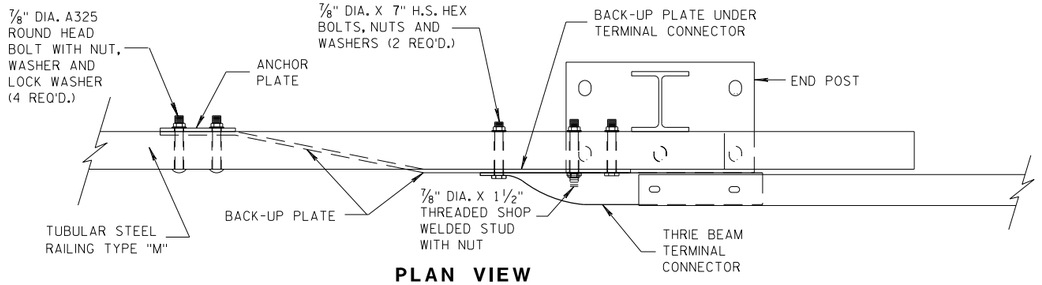


FRONT VIEW

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

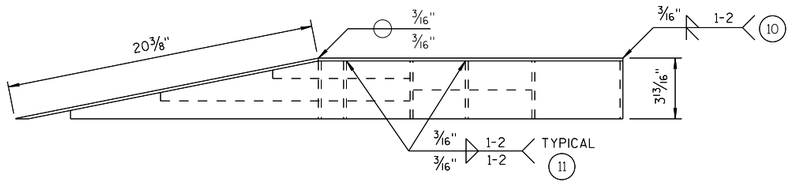
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FHWA

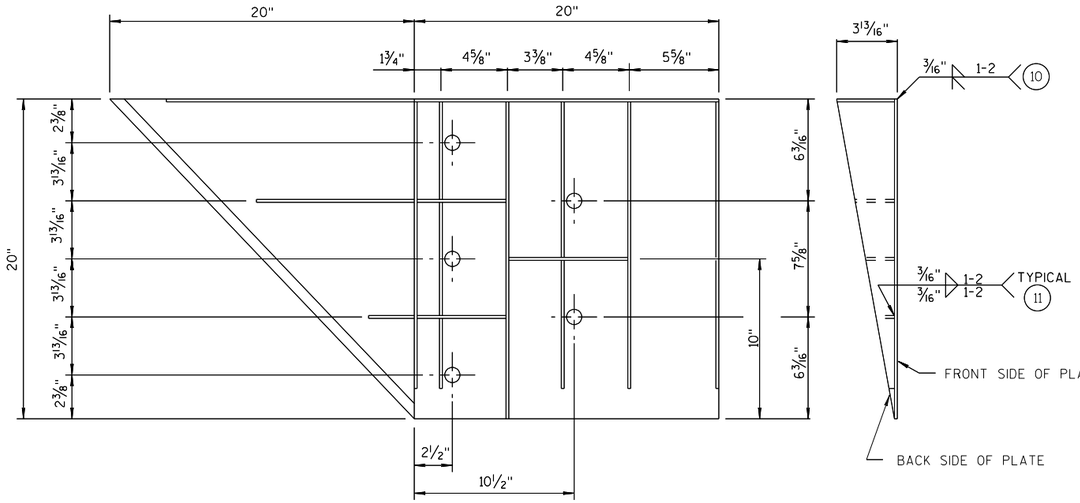
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WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

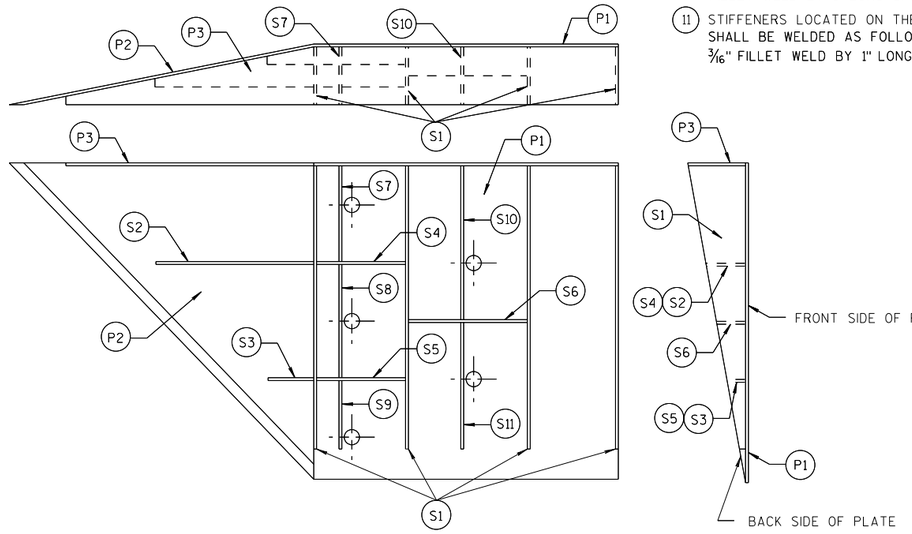


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

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".

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

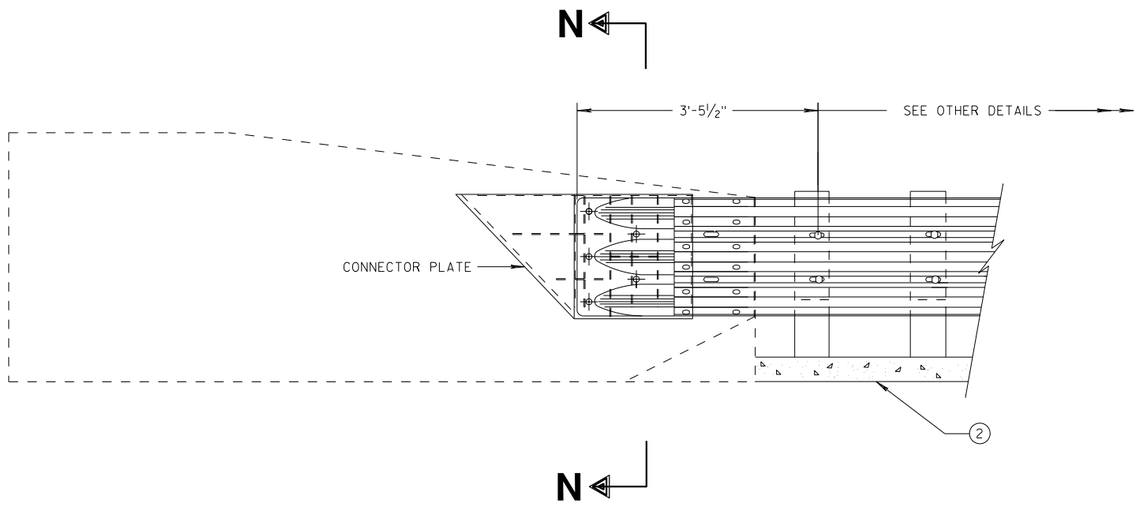
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

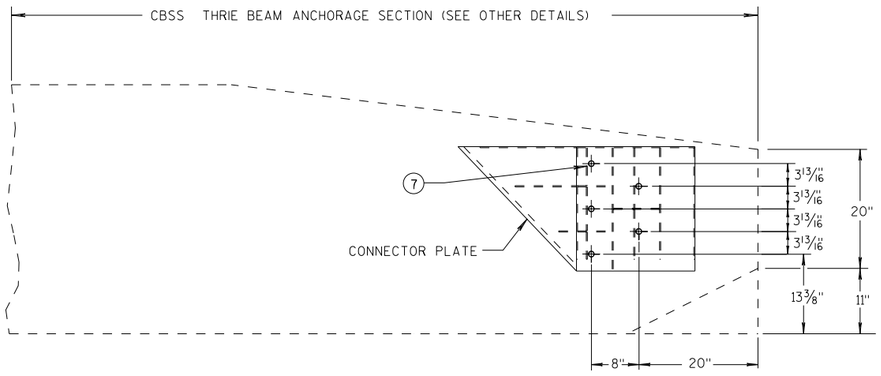
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THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



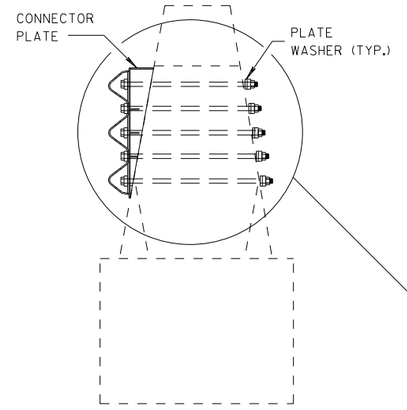
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

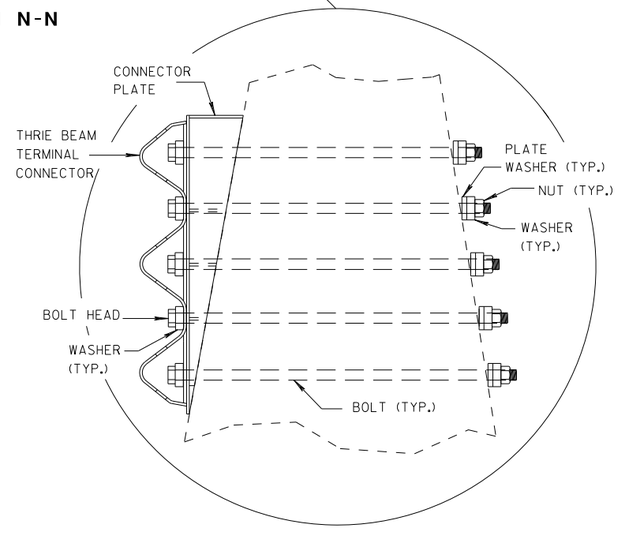
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SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

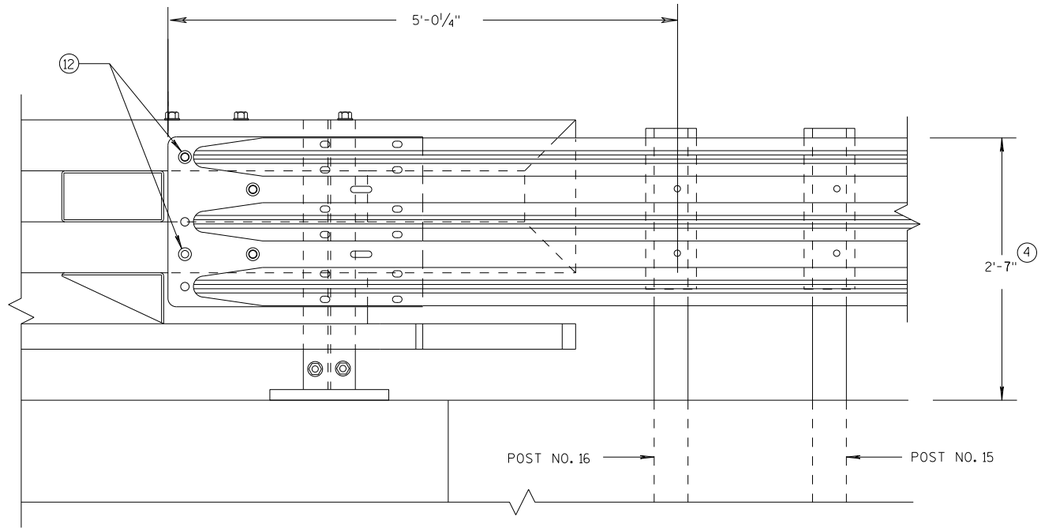
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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7/2018
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ROADWAY STANDARDS DI[illegible]NT
UNIT SUPERVIS

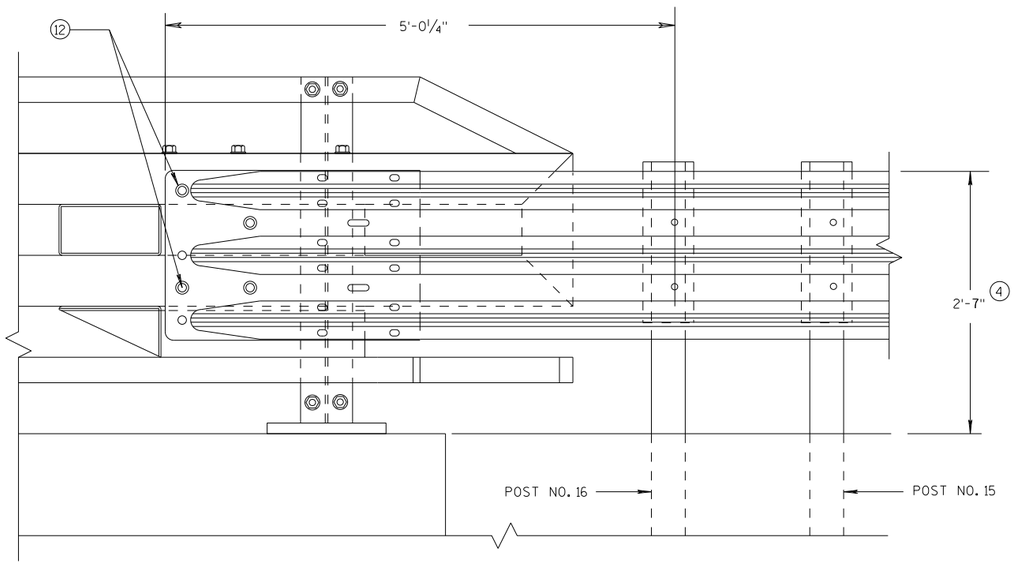
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S.D.D. 14 B 45-5j



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
UNIT SUPERVIS

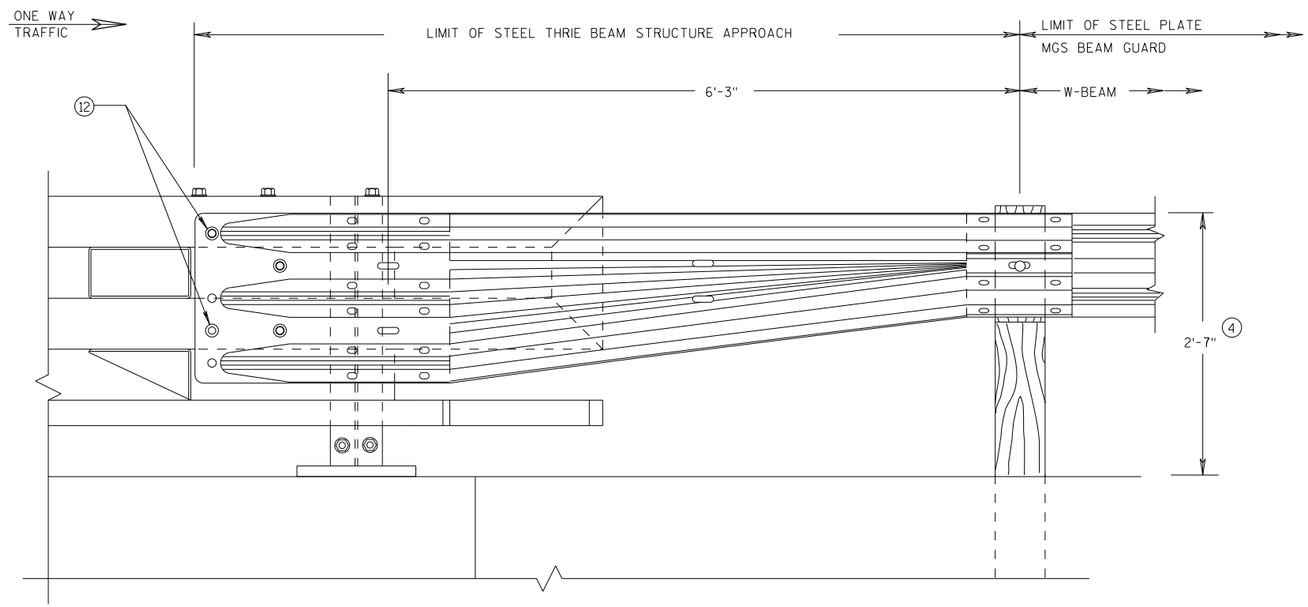
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S.D.D. 14 B 45-5k

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S.D.D. 14 B 45-5k



FRONT VIEW

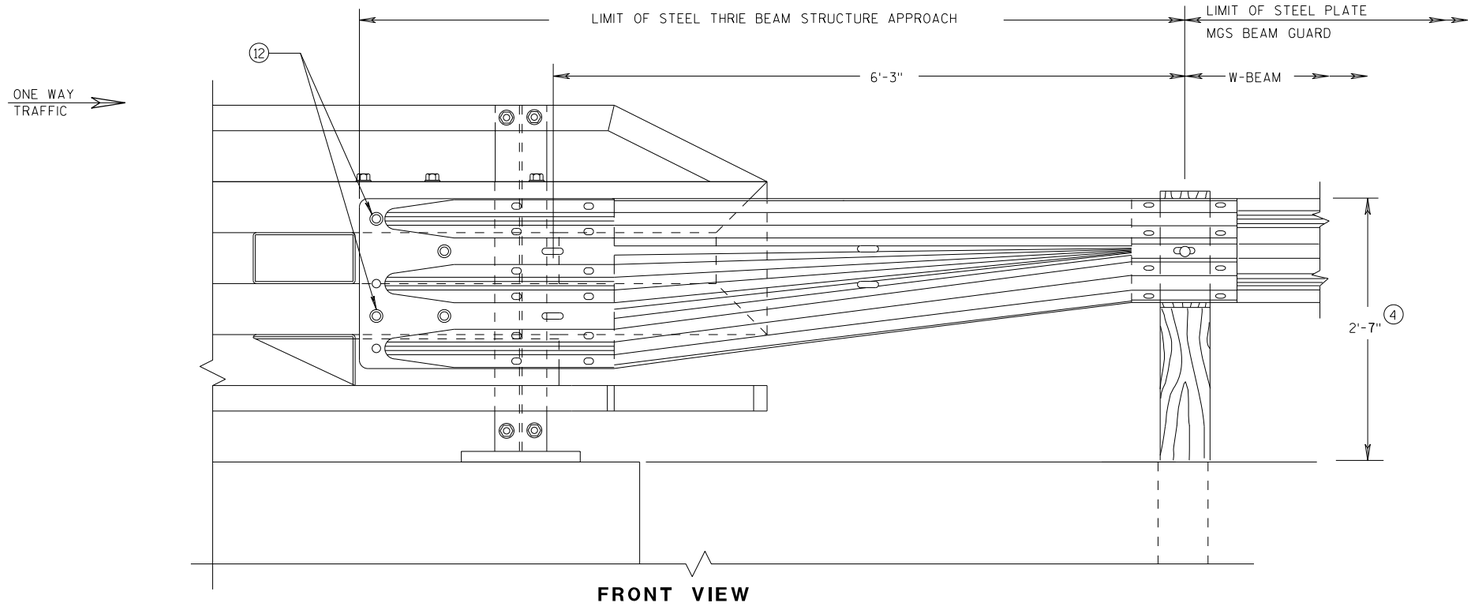
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(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

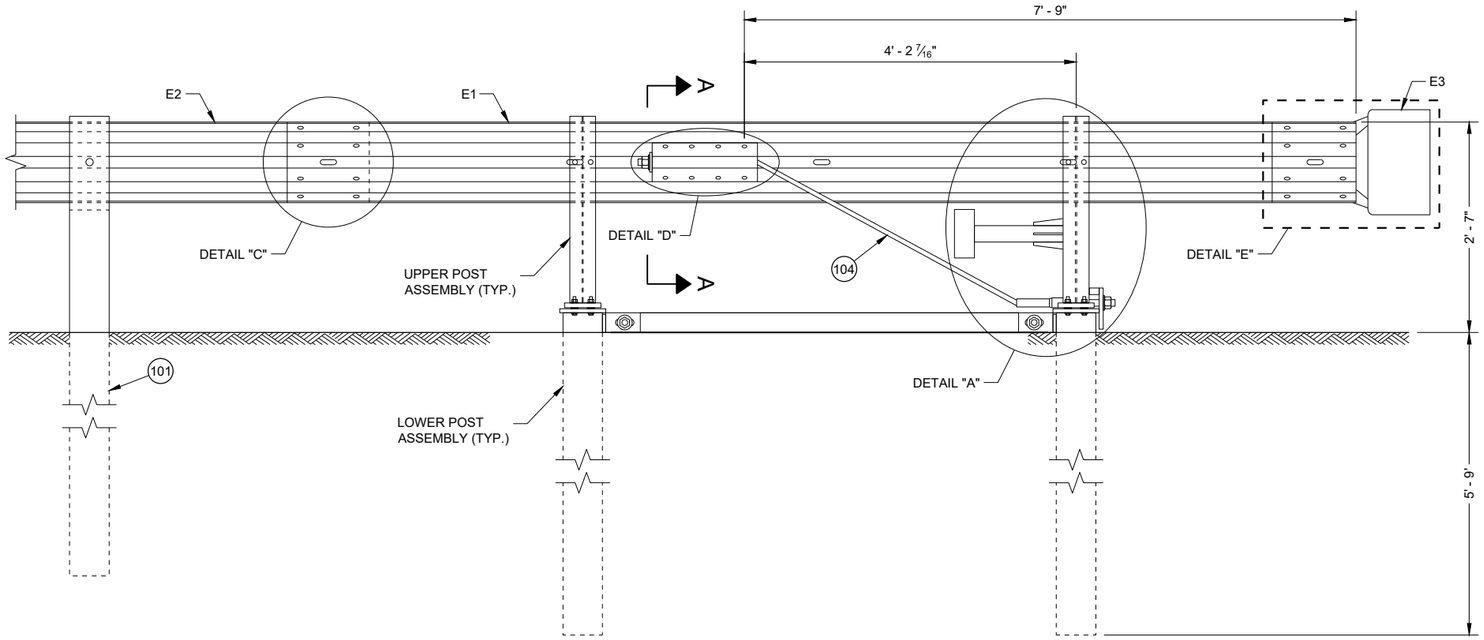
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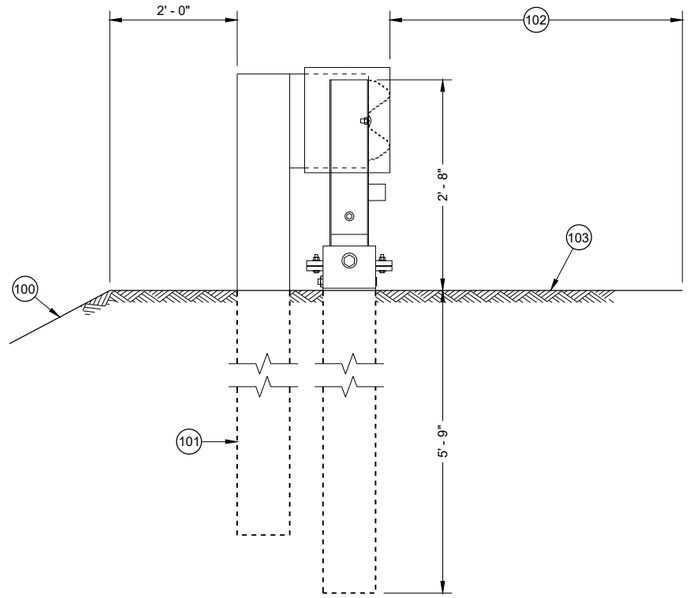
S.D.D. 14 B 45-5L

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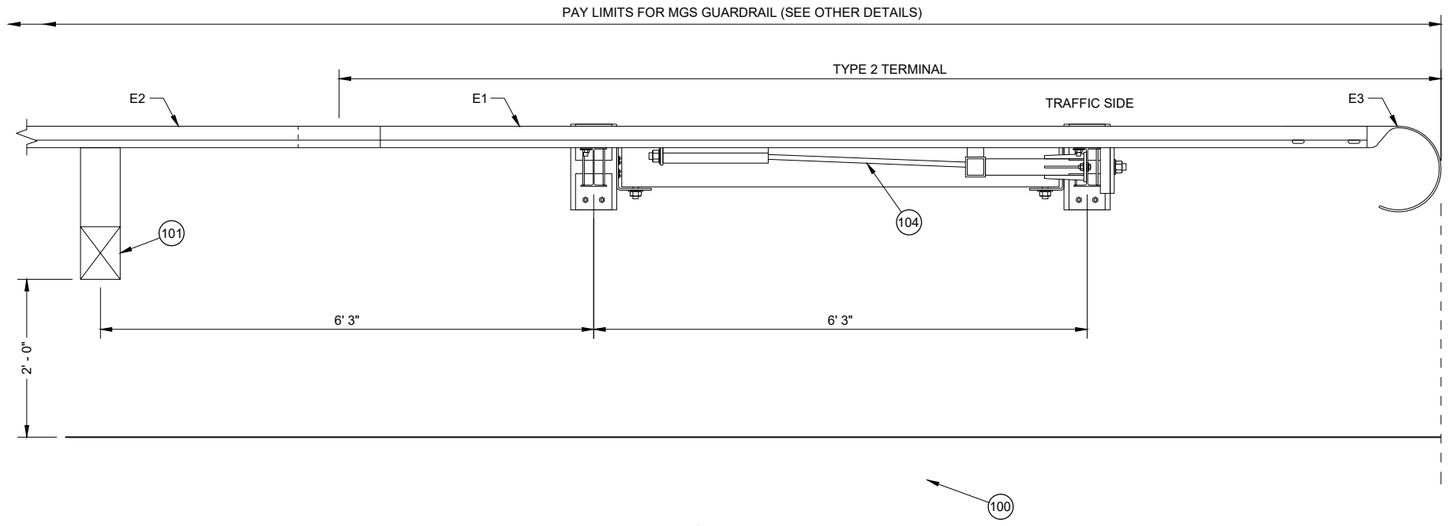
S.D.D. 14 B 45-5L



BACK VIEW
TYPE 2 TERMINAL



SIDE VIEW
TYPE 2 TERMINAL



TOP VIEW
TYPE 2 TERMINAL

GENERAL NOTES

100 MAXIMUM SLOPE IS 2.5:1.

101 SEE SDD 14B42 FOR MORE INFORMATION.

102 SHOULDER

103 MAXIMUM SLOPE IS 10:1.

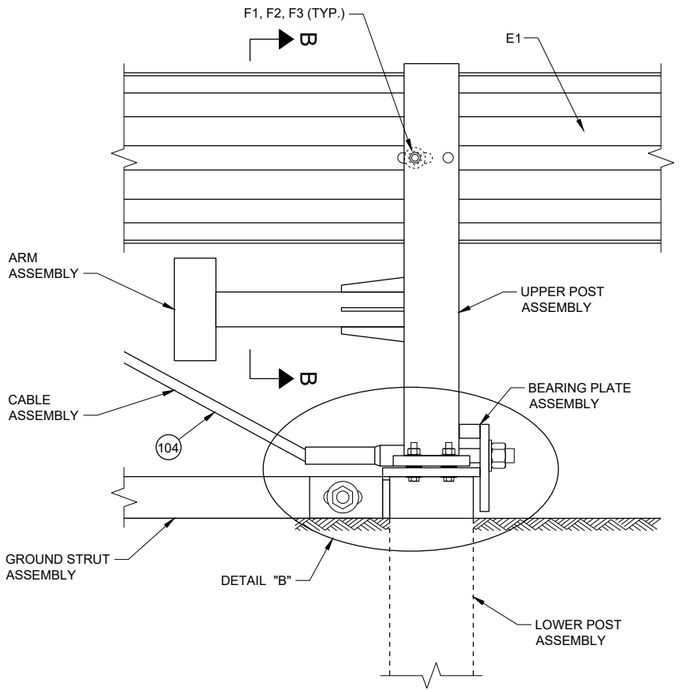
104 AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

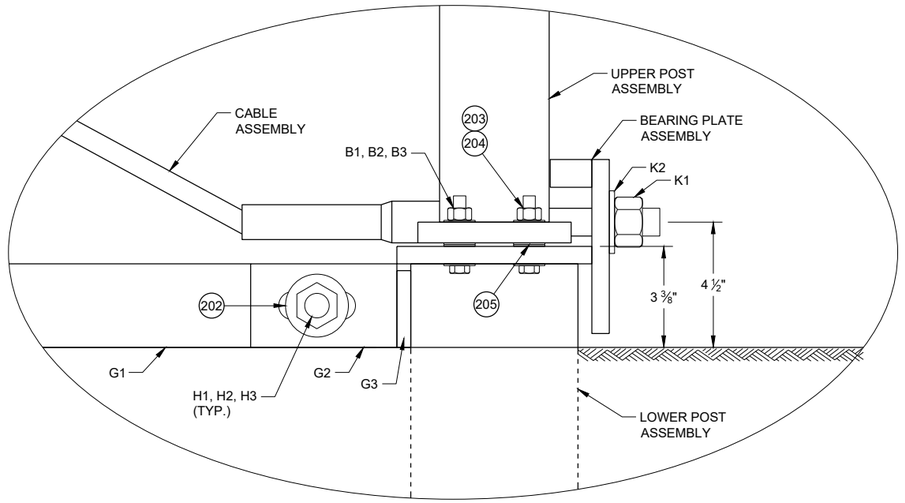
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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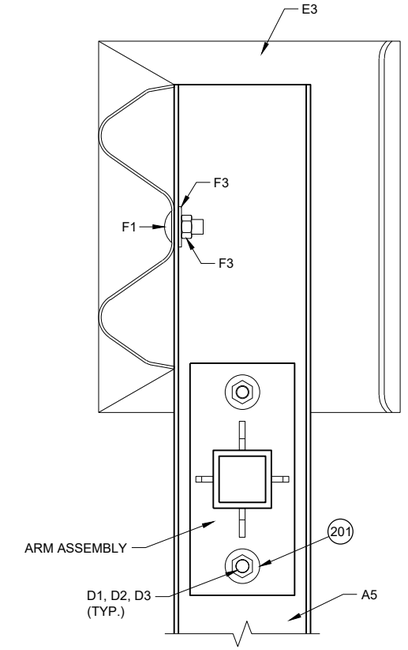
SDD 14B47 - 03a



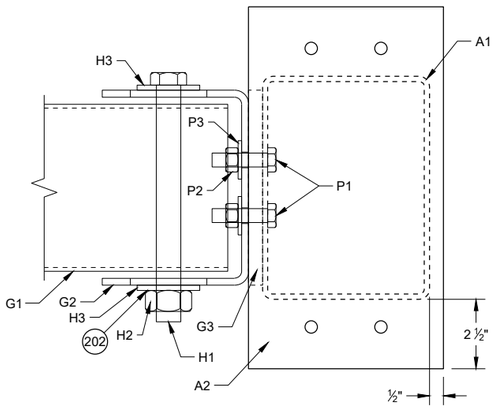
DETAIL "A"



DETAIL "B"

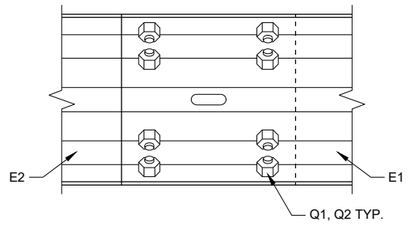


SECTION B - B

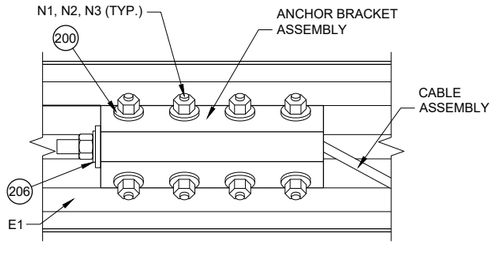


TOP VIEW

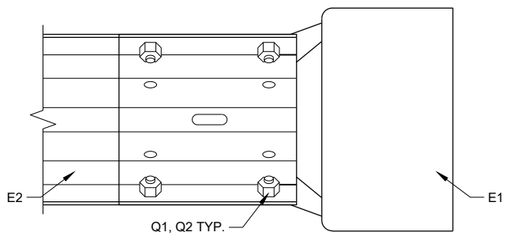
GROUND STRUT CONNECTION DETAIL



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.

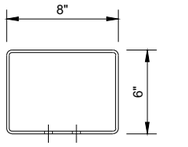
206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

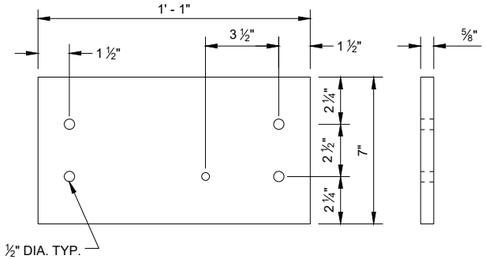
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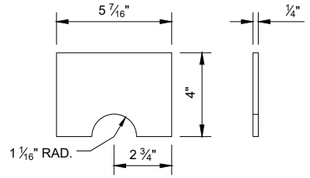
SDD 14B47 - 03b



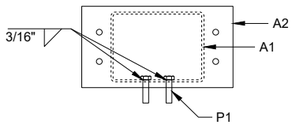
TOP VIEW



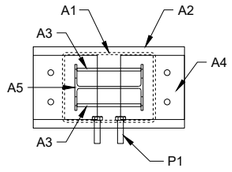
LOWER PLATE (A2)

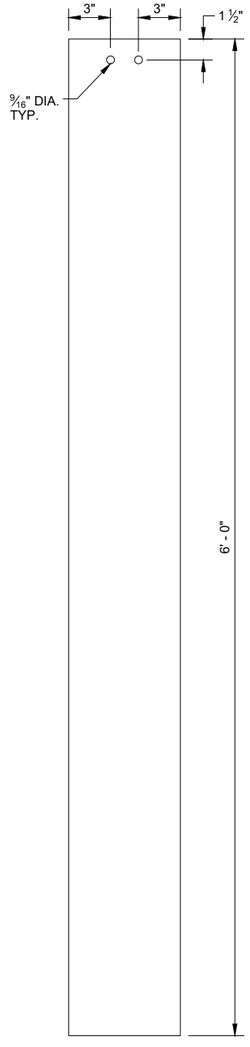


POST GUSSET (A3)



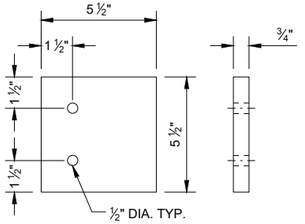
PLAN VIEW



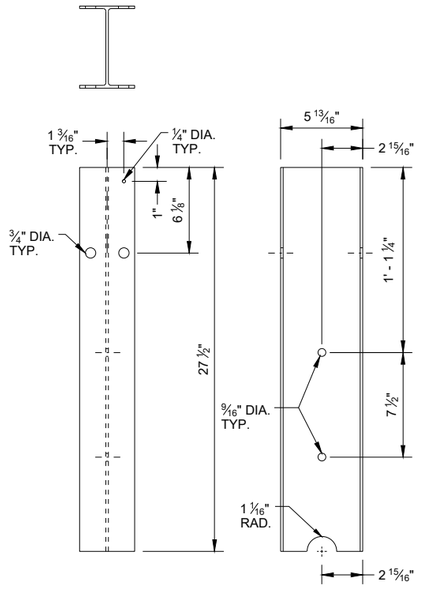


SIDE VIEW

FOUNDATION TUBE (A1)

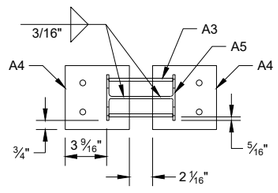


UPPER PLATE (A4)

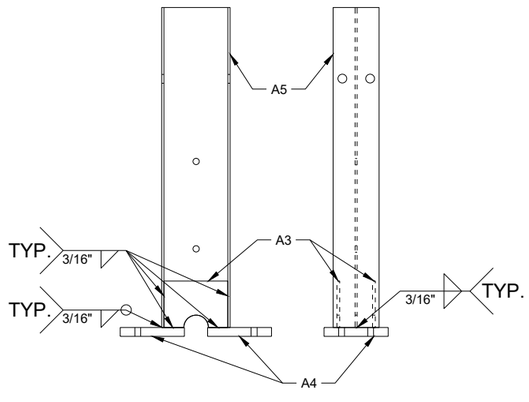


FRONT VIEW SIDE VIEW

TYPE 2 POST (A5)

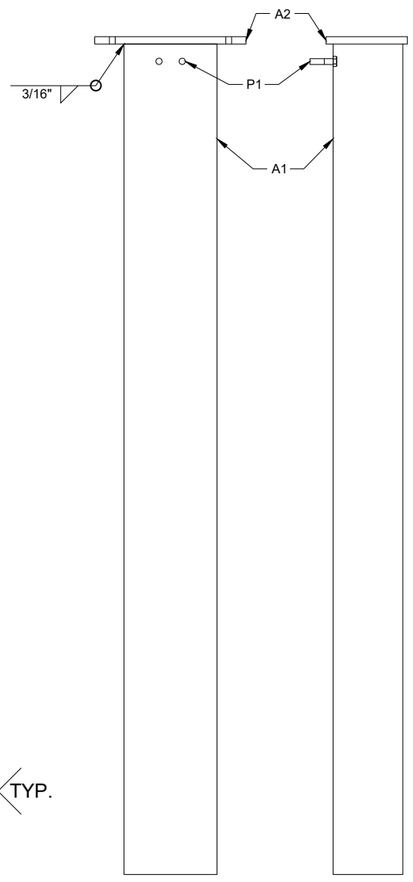


PLAN VIEW



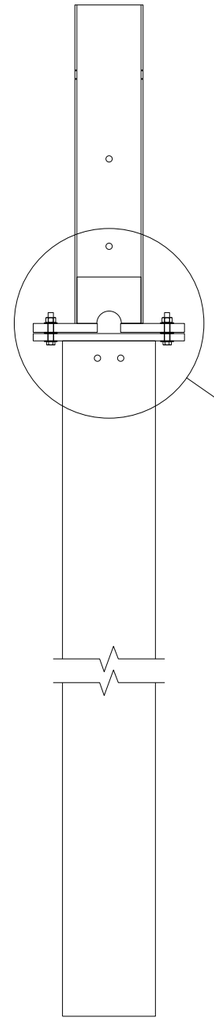
SIDE VIEW FRONT VIEW

UPPER POST ASSEMBLY

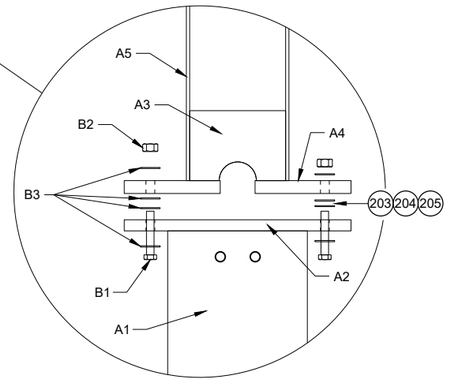


FRONT VIEW SIDE VIEW

LOWER POST ASSEMBLY



ASSEMBLED POST



POST CONNECTION DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

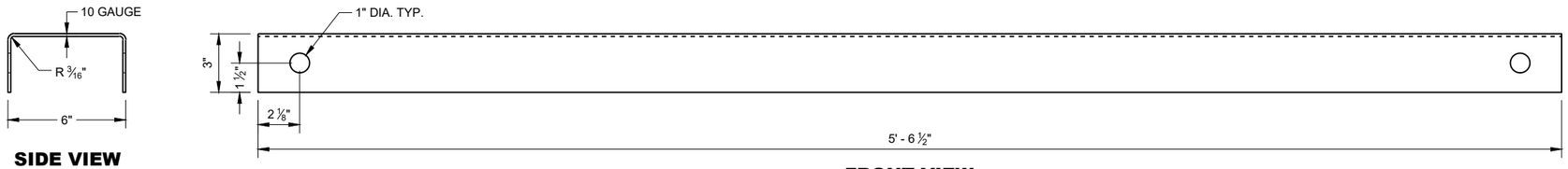
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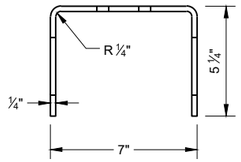
SDD14B47 - 03c



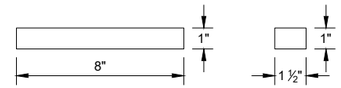
SIDE VIEW

FRONT VIEW

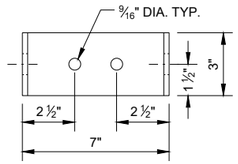
GROUND STRUT CHANNEL (G1)



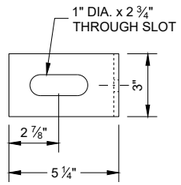
TOP VIEW



BEARING PLATE FLANGE (L2)

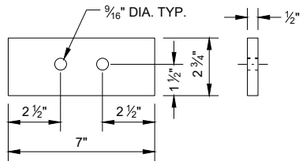


FRONT VIEW

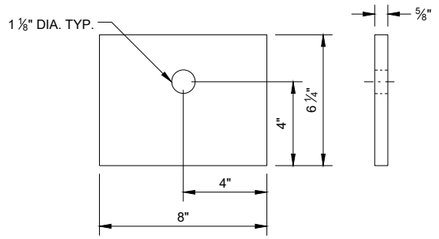


SIDE VIEW

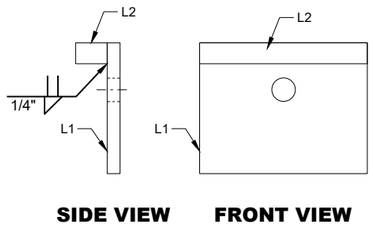
GROUND STRUT CONNECTOR (G2)



GROUND STRUT PLATE (G3)

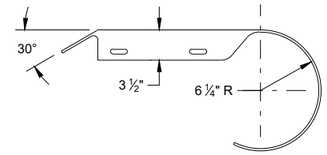


BEARING PLATE (L1)

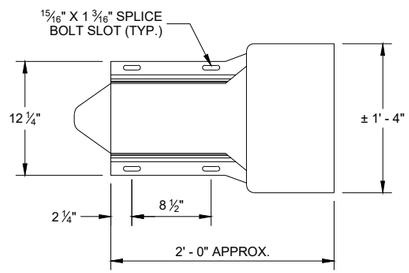


SIDE VIEW FRONT VIEW

BEARING PLATE ASSEMBLY

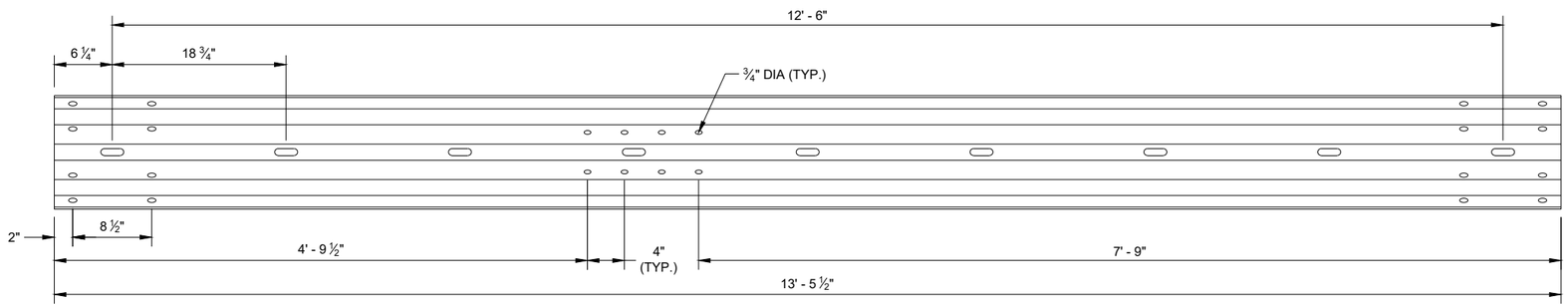


PLAN VIEW

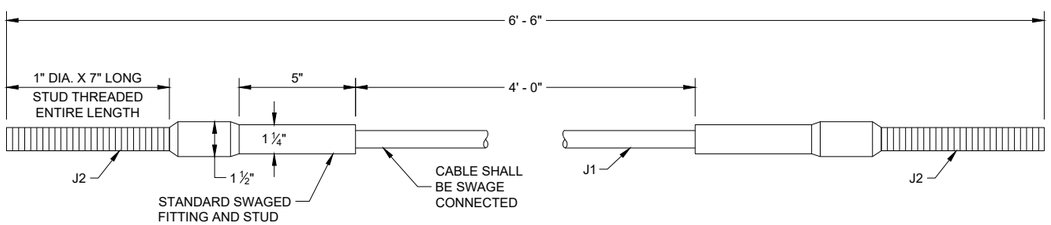


ELEVATION VIEW

ROUNDED BUFFER END (E3)



TYPE 2 GUARDRAIL (E1)



CABLE ASSEMBLY

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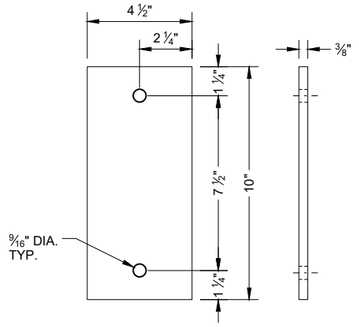
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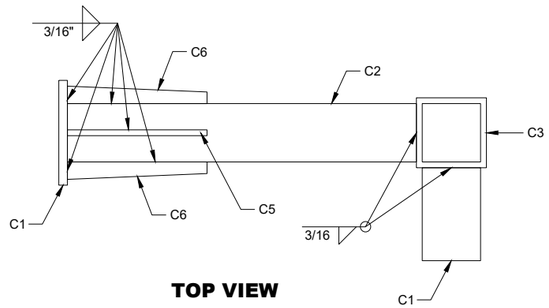
SDD 14B47 - 03d

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

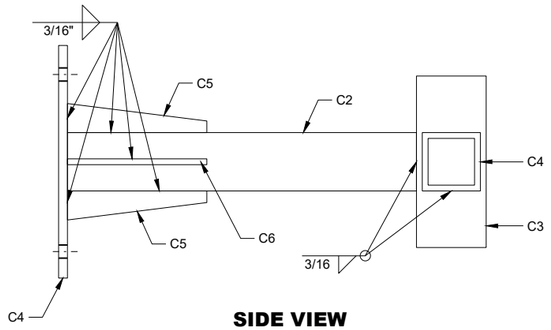
STATE OF WISCONSIN
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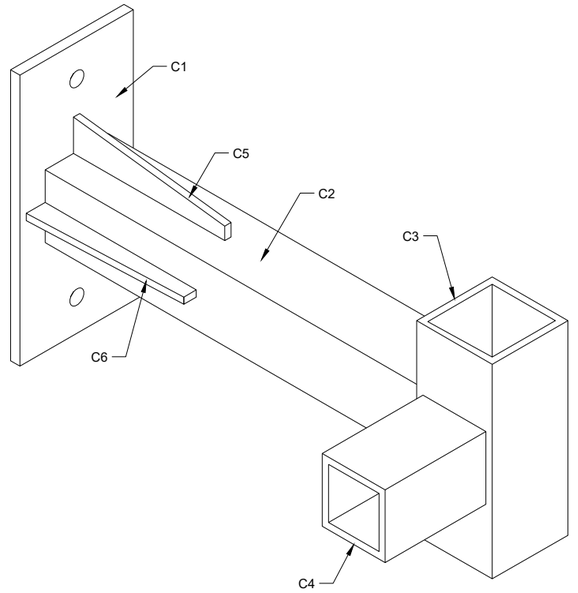
ARM PLATE (C1)



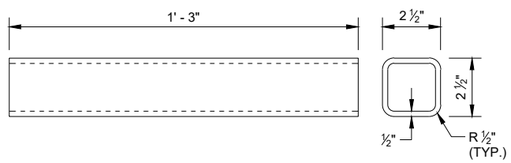
TOP VIEW
ARM ASSEMBLY



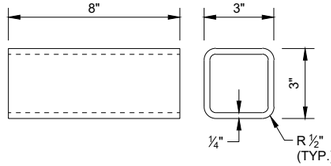
SIDE VIEW
ARM ASSEMBLY



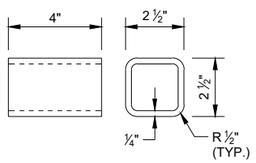
ISOMETRIC VIEW
ARM ASSEMBLY



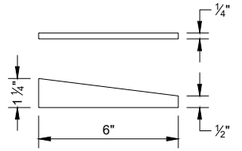
ARM TUBE 1 (C2)



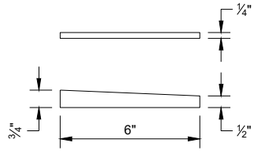
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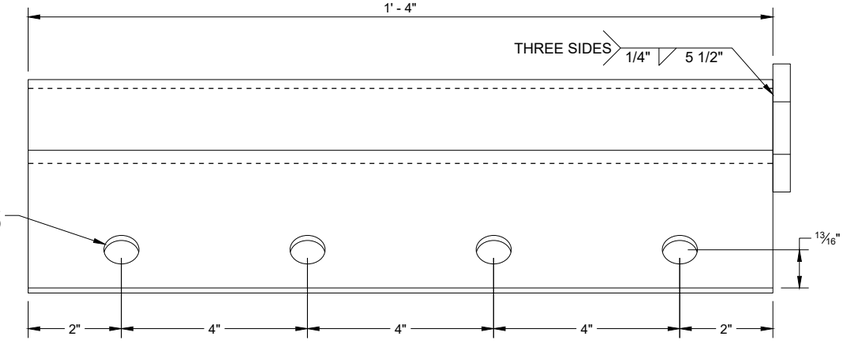
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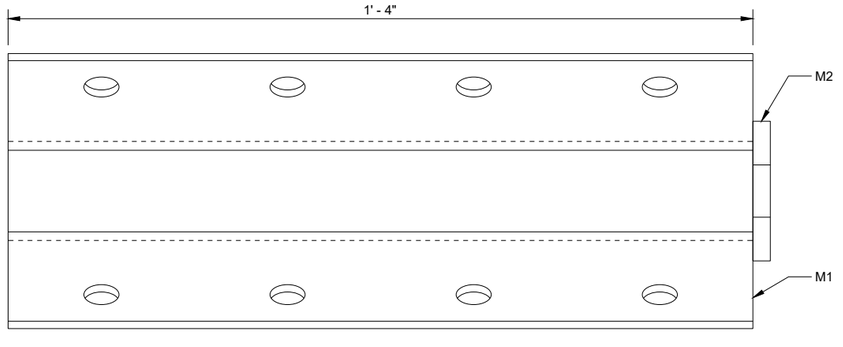


ARM GUSSET PLATE 1 (C5)

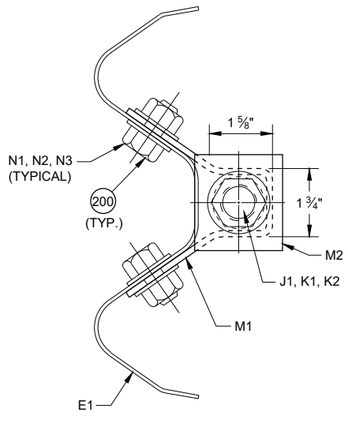


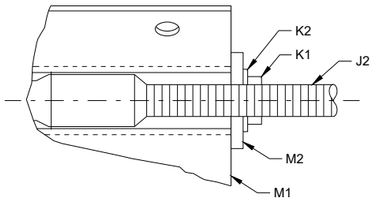
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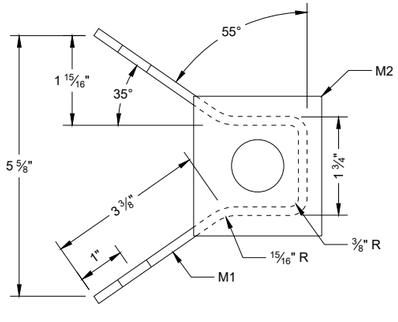


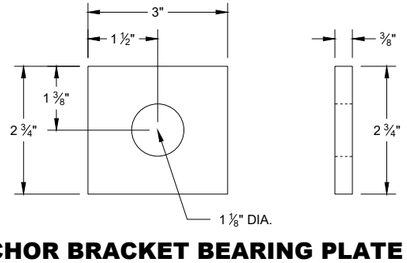
ANCHOR BRACKET (M1, M2)





SECTION A - A





ANCHOR BRACKET BEARING PLATE (M2)

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
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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	
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

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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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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.
P2	FOUNDATION TUBE 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 (HARDENED WASHER ONLY)	1/2" DIA.
P3	FOUNDATION TUBE 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	
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.

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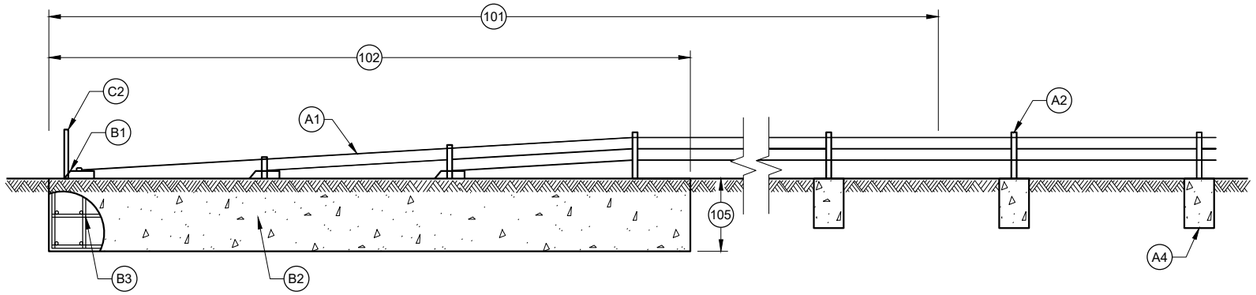
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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

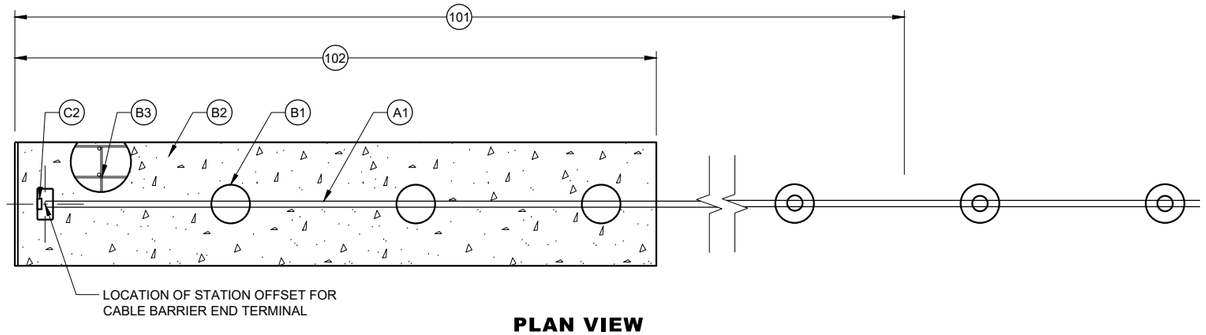
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APPROVED
August 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

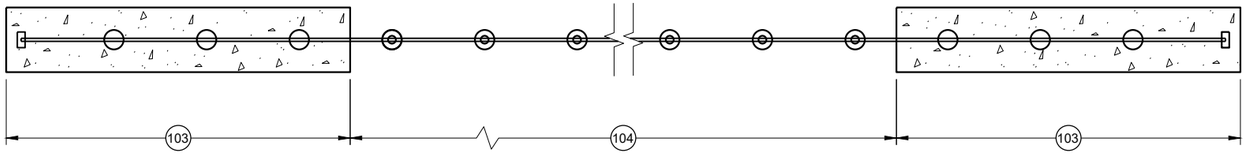


PROFILE VIEW

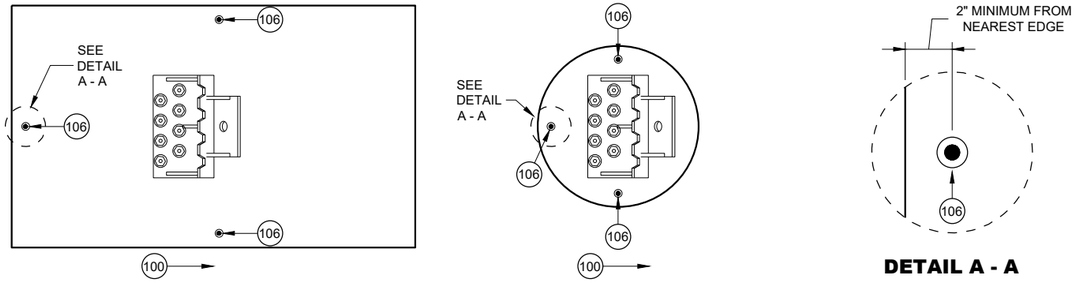


PLAN VIEW

TRANSITION FROM CABLE BARRIER TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW



DETAIL A - A

ANCHOR MONITOR POINTS FOR CABLE BARRIER END TERMINAL ANCHORS

GENERAL NOTES

DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.

PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.

INSTALL LINE POSTS PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.

PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.

PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICATED IN PLAN.

PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.

CONSTRUCT SHAFTS VERTICALLY. VERTICAL TOLERANCE OF SHAFT IS $\frac{1}{8}$" PER FOOT OF DEPTH. SHAFTS ARE TO MINIMIZE DISTURBANCE TO ADJACENT SOILS.

SECURE STEEL REINFORCEMENT AND STEEL SLEEVE PRIOR TO PLACEMENT OF CONCRETE. MAINTAIN CLEAR DISTANCE BETWEEN SOIL AND REINFORCEMENT CAGE.

PLACE CONCRETE IN ONE CONTINUOUS POUR FOR EACH FOOTING. USE VIBRATION TO CONSOLIDATE CONCRETE.

PROVIDE CASING AS NECESSARY TO PREVENT INTRUSION OF UNCONSOLIDATED MATERIALS OR WATER. USE CASINGS WHEN THERE IS 3 OR MORE INCHES OF WATER IN EXCAVATION.

PROVIDE WISCONSIN PROFESSIONAL ENGINEER SIGNED AND APPROVED FOOTING DESIGN USING A CASING AND CONSTRUCTION SEQUENCE. PROJECT ENGINEER WILL REVIEW AND APPROVED CASING DESIGN AND CONSTRUCTION SEQUENCE. CASING IS TO HAVE INTIMATE CONTACT WITH SHAFT SIDEWALL. CASING IT TO WITHSTAND INSERTION STRESS, REMOVAL STRESS, CONCRETE PRESSURE AND SOIL PRESSURE. REMOVE CASING DURING CONCRETE PLACEMENT OR IMMEDIATELY AFTER CONCRETE PLACEMENT. NO TEMPORARY CASING MAY REMAIN IN-PLACE.

PROVIDE WISCONSIN PROFESSIONAL ENGINEER SIGNED AND APPROVED FOOTING DESIGN AND CONSTRUCTION SEQUENCE WHEN OVER EXCAVATION IS REQUIRED NEAR A FOOTING. PROJECT ENGINEER WILL REVIEW AND APPROVED DESIGN AND CONSTRUCTION SEQUENCE.

FINISH TOP OF FOOTINGS TO THE DIMENSIONS INDICATED IN PLAN. REMOVE EXCESS CONCRETE.

DESIGN POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A NCHRP TL-3 SMALL CAR.

USE MARINE GRADE ANTI-SEIZE LUBRICANT FOR THREADING FITTINGS THAT IS ACCEPTABLE FOR USE ON GALVANIZED STEEL.

(100) DIRECTION THAT THE CABLE PULLS THE END ANCHOR FOOTING

(101) LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(102) PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(103) CABLE BARRIER END TERMINAL

(104) CABLE BARRIER AND LINE POSTS

(105) IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.

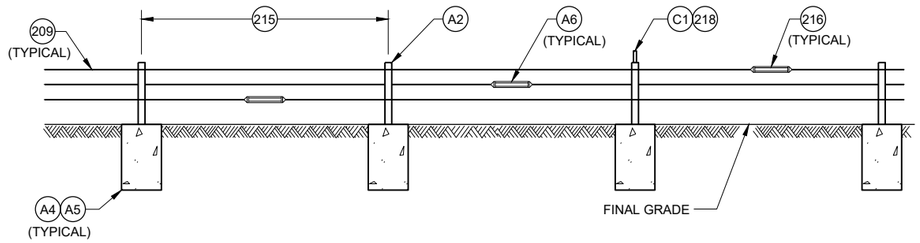
(106) ANCHOR MONITOR POINTS ARE GALVANIZED SURVEY NAIL, OR MASONRY NAIL, PLACED INTO CONCRETE FOOTING BEFORE HARDENING. IF THERE ARE MULTIPLE ANCHOR POINTS WITHIN A PAY LIMIT FOR A CABLE BARRIER END TERMINAL, EACH ANCHOR POINT NEEDS THREE ANCHOR MONITOR POINTS.

CABLE BARRIER TYPE 1 LAYOUT

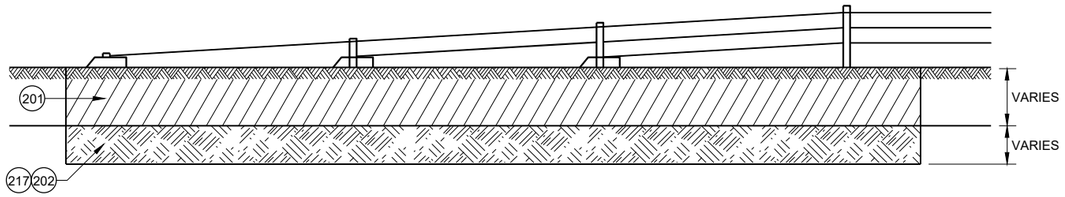
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PROFILE VIEW
LINE POST INSTALLATION



CABLE BARRIER END TERMINAL
ROCK EXCAVATION DETAIL

GENERAL NOTES

201 SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES)

202 ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES)

203 SOIL TO BE EXCAVATED FOR LINE POST (VARIES)

204 ROCK TO BE EXCAVATED FOR LINE POST (VARIES)

205 EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.

206 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.

207 DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURERS' INFORMATION.

208 MINIMUM DEPTH OF LINE POST FOOTING IS 4' - 0" IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.

209 NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURERS' INFORMATION.

210 LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURERS' INFORMATION.

211 LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.

212 PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

213 GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

214 CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.

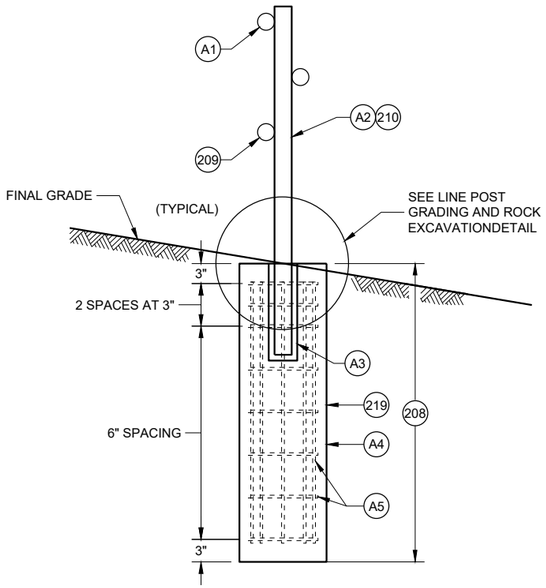
215 MAXIMUM POST SPACING IS 15 FEET.

216 STAGGER TURNBUCKLES (TYPICAL).

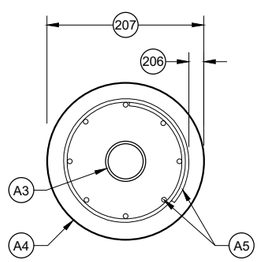
217 SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.

218 LINE POST DELINEATOR SPACING IS 100 FEET.

219 MINIMUM LINE POST FOOTING REINFORCEMENT SHOWN. MANUFACTURER IS TO INDICATE REINFORCEMENT IS ADEQUATE FOR THEIR SYSTEM. IF REINFORCEMENT IS NOT ADEQUATE, PROVIDE FOOTING DESIGN WITH A ADEQUATE REINFORCEMENT.

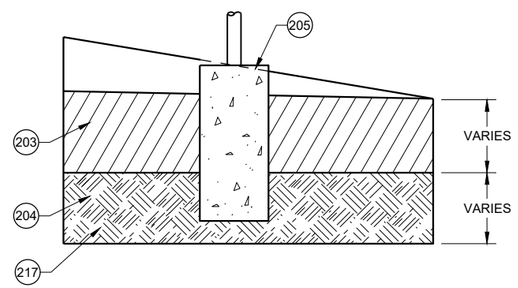


CROSS SECTION

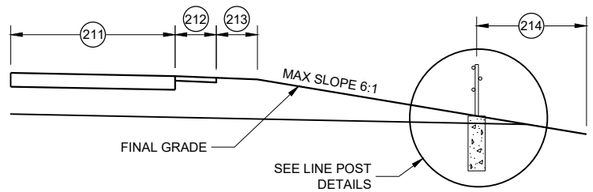


PROFILE VIEW
(LINE POSTS AND CABLES NOT SHOWN)

LINE POST DETAILS



LINE POST GRADING
AND ROCK EXCAVATION DETAIL



CABLE BARRIER OFFSET FROM DITCH LINE

CABLE BARRIER
TYPE 1 LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B52 - 02b

6

SDD 14B52 - 02b

BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
(A1)	3 OR 4	¾" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	AASHTO M30 TYPE 1 CLASS A OR ASTM A741 TYPE 1 CLASS A WITH MINIMUM BREAKING STRENGTH = 39 KIPS (173.5 KN)
(A2)	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A3)	1 PER LINE POST	GALVANIZED STEEL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A4)	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES.
			STANDARD SPECIFICATION 716 QMP FOR CLASS II ANCILLARY CONCRETE
			SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
(A5)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
			ALL BARS ARE NO. 4 BARS
(A6)	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
			MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE.
			TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATION AND DETAILS.
			PROVIDE DOCUMENTATION THAT THE FITTINGS ARE STRONGER THAN THE CABLE BARRIER. DOCUMENTATION IS TO INCLUDE: MANUFACTURER NAME, TESTING RESULTS, AND DATE OF TESTING.
(B1)	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
(B2)	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2.
			STANDARD SPECIFICATION 716 QMP FOR CLASS II ANCILLARY CONCRETE
(B3)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(C1)	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVED PRODUCT LIST YELLOW.
(C2)	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVED PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN

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SDD 14B52 - 02c

CABLE BARRIER TYPE 1 LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

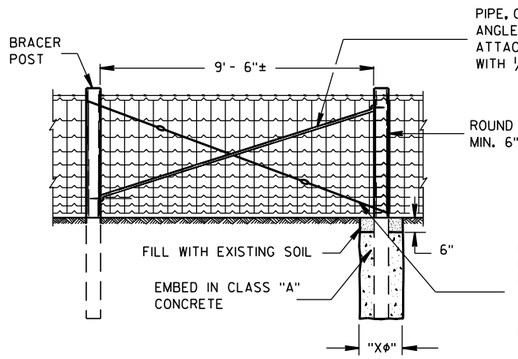
APPROVED
May 2021
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

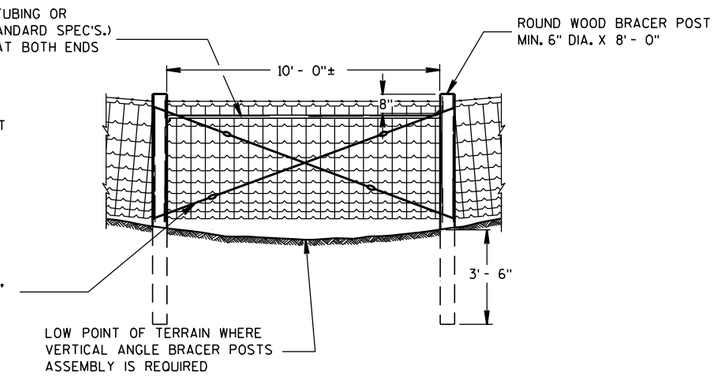
FHWA

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

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



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

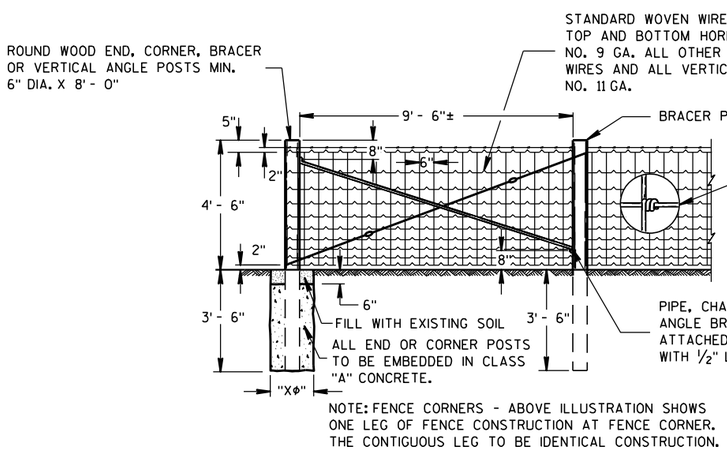
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

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

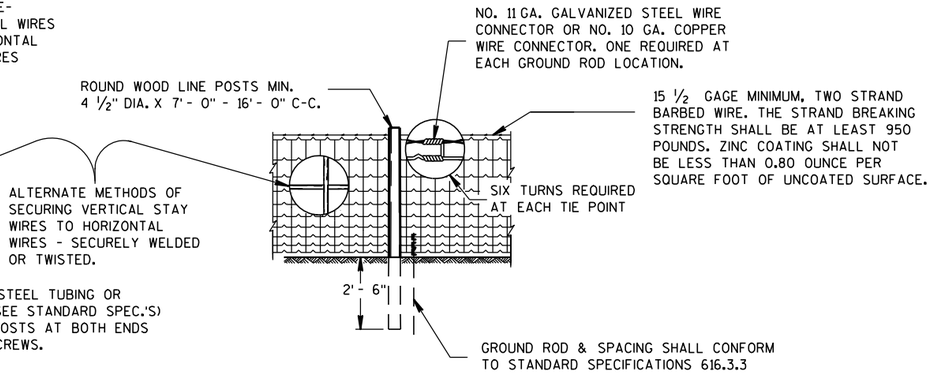
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED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

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



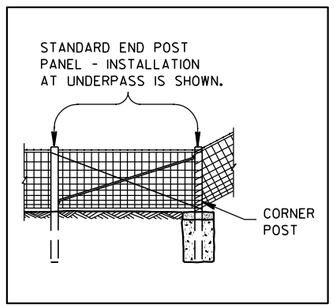
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

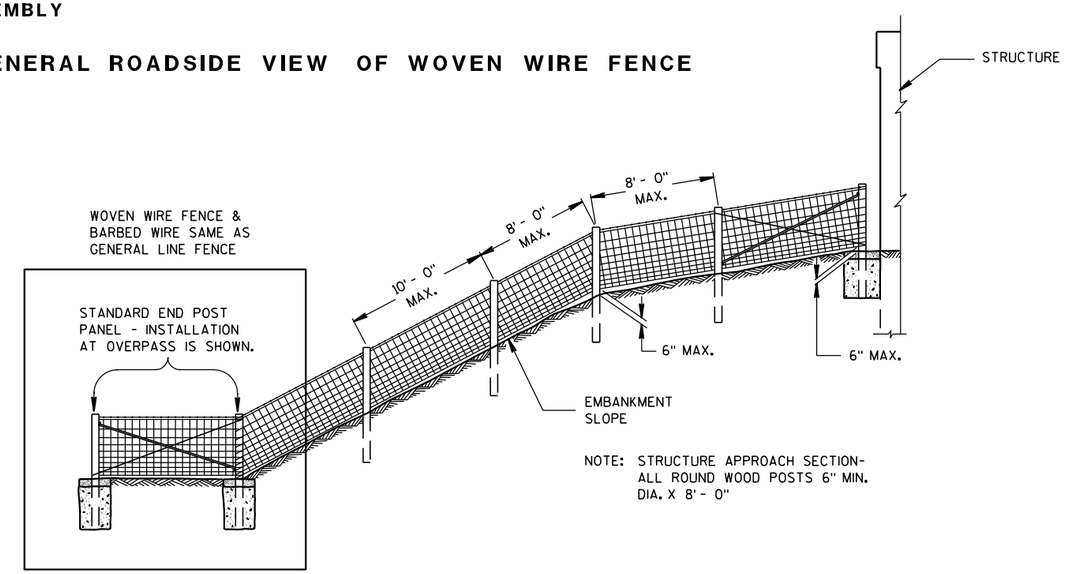


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

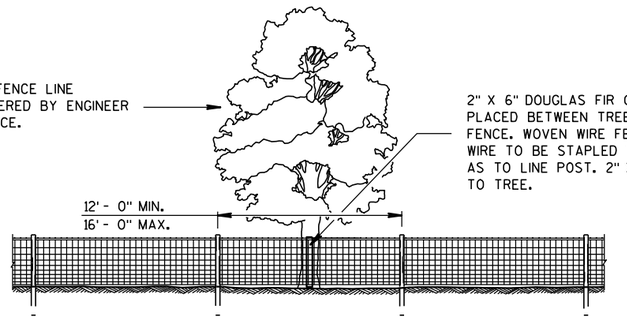
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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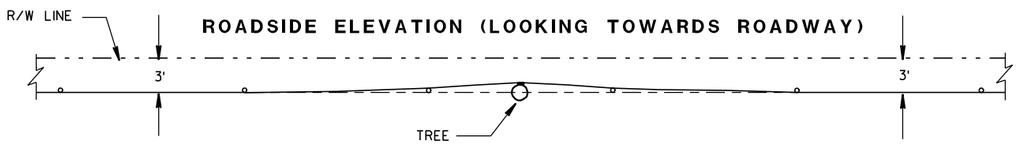
S.D.D. 15 B 1-8a

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

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

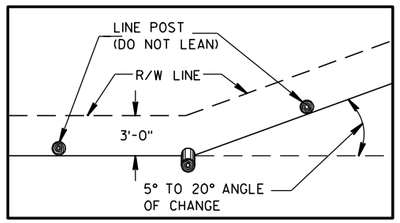


ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

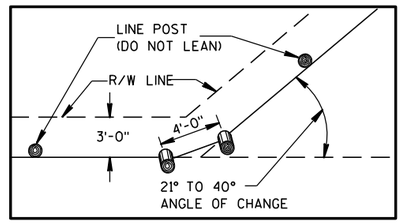


PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



PLAN VIEW
SINGLE POST CORNER

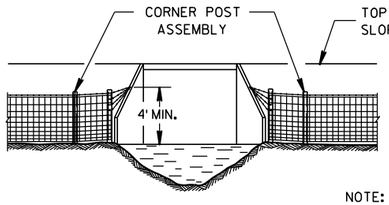


PLAN VIEW
DOUBLE POST CORNER

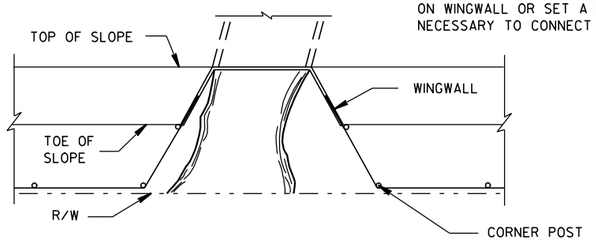
RIGHT OF WAY LINE CHANGE 40° AND LESS

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

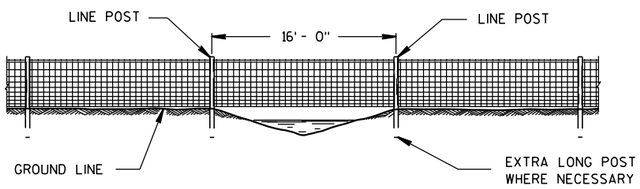
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



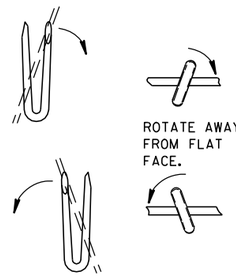
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

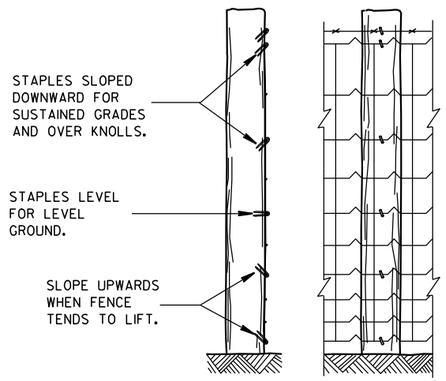


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



LINE POST

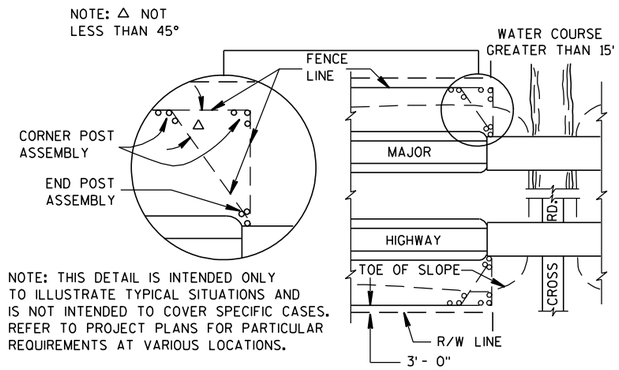
NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION — FARM SIDE ELEVATION

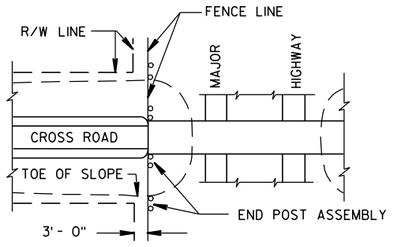
FENCE MOUNTING DETAIL

NOTE: △ NOT LESS THAN 45°



NOTE: THIS DETAIL IS INTENDED ONLY TO ILLUSTRATE TYPICAL SITUATIONS AND IS NOT INTENDED TO COVER SPECIFIC CASES. REFER TO PROJECT PLANS FOR PARTICULAR REQUIREMENTS AT VARIOUS LOCATIONS.

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



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

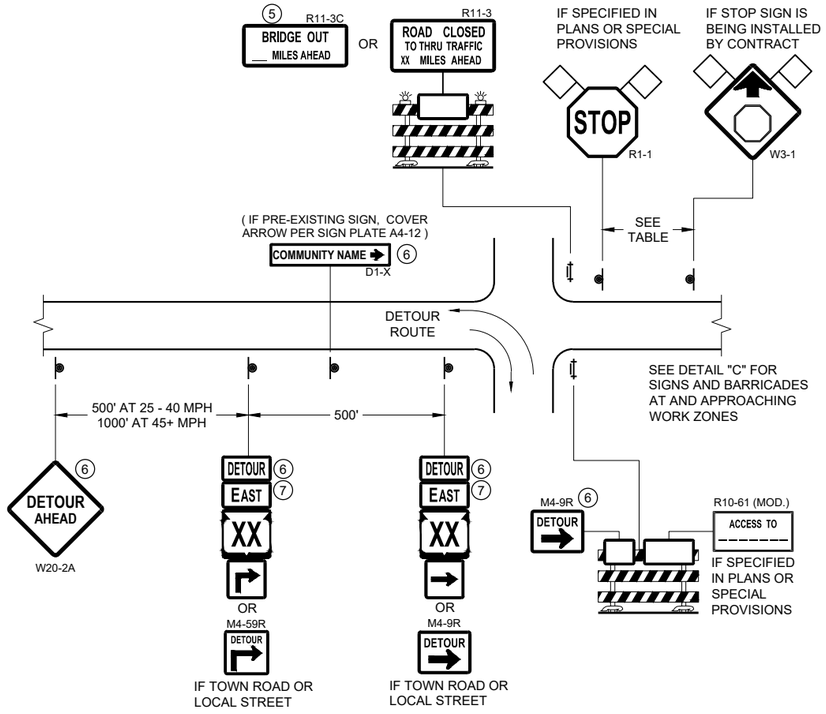
FENCE LOCATION AT STRUCTURES

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

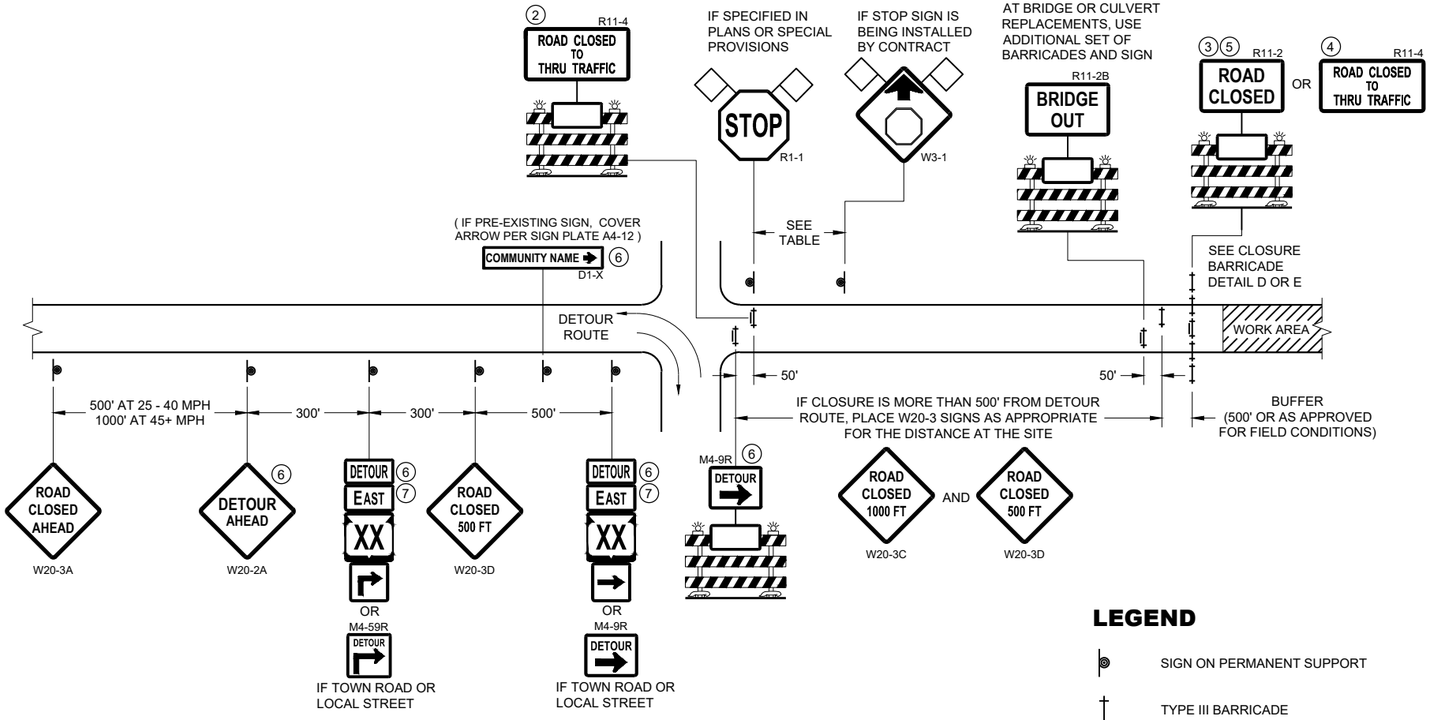
APPROVED
4/4/2008 — DATE
/S/ Jerry H. ---- — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 15 B 1-8b



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



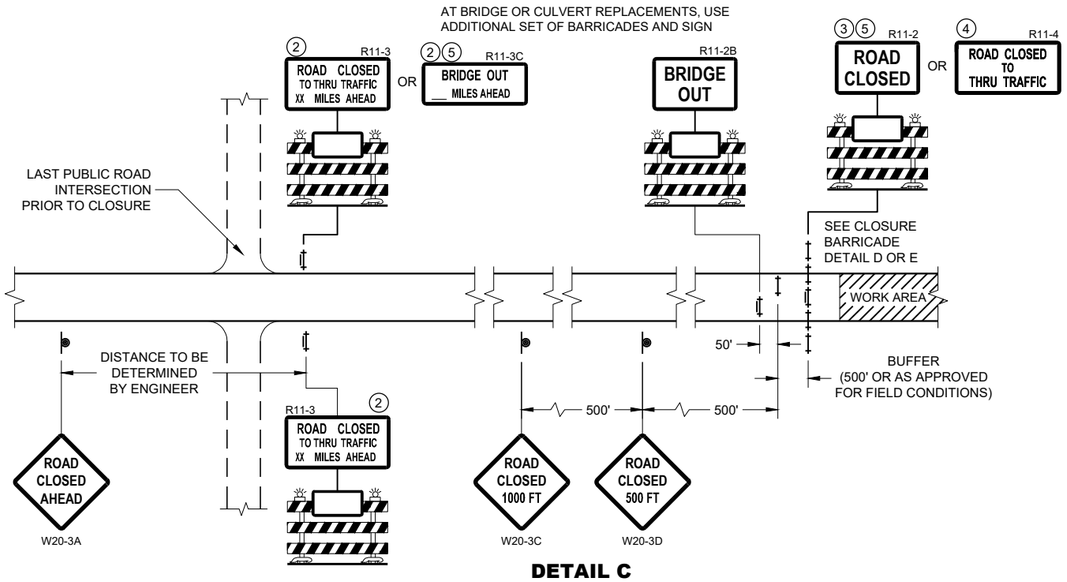
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

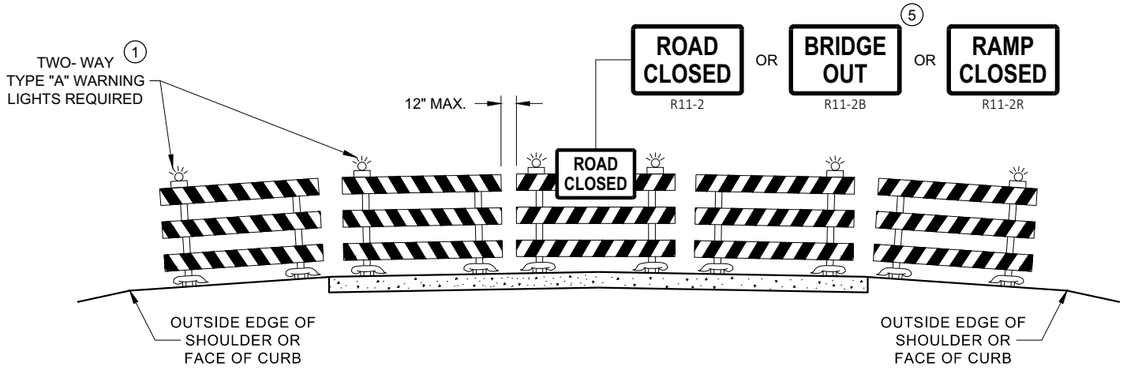
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

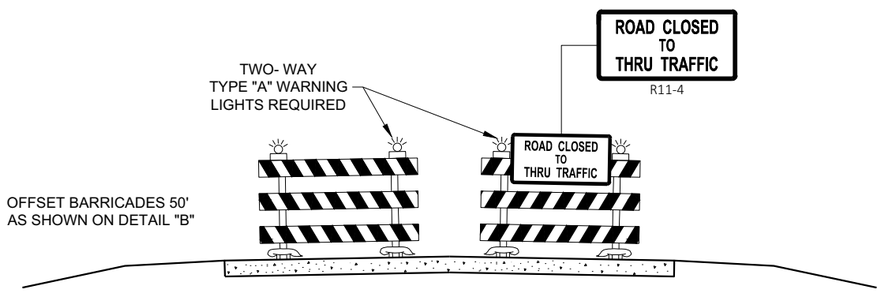
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SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

1. TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.
2. THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
3. FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
4. FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
5. FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
6. INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
7. "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 08b

GENERAL NOTES

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

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

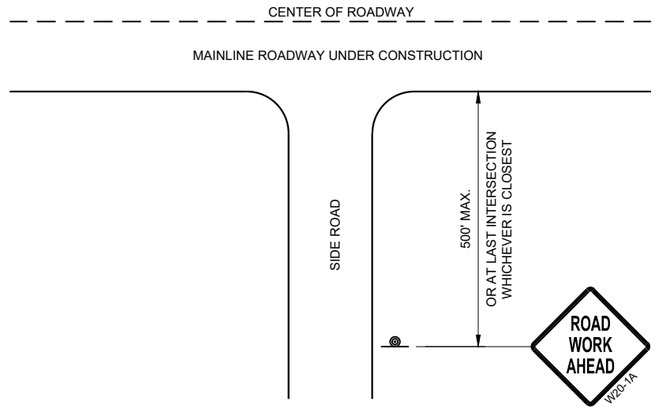
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

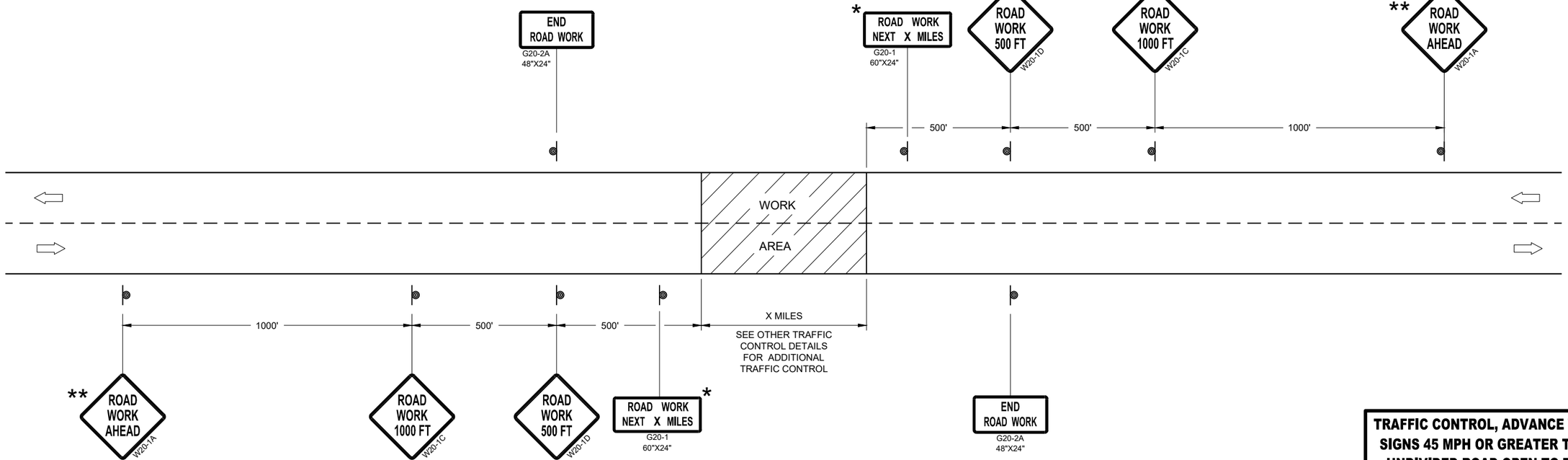
** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05

GENERAL NOTES

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

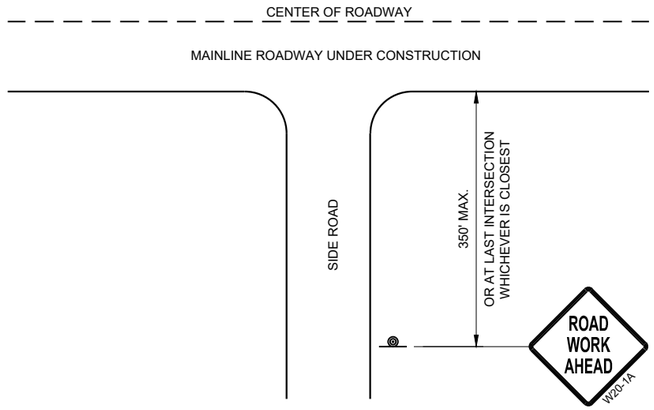
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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

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

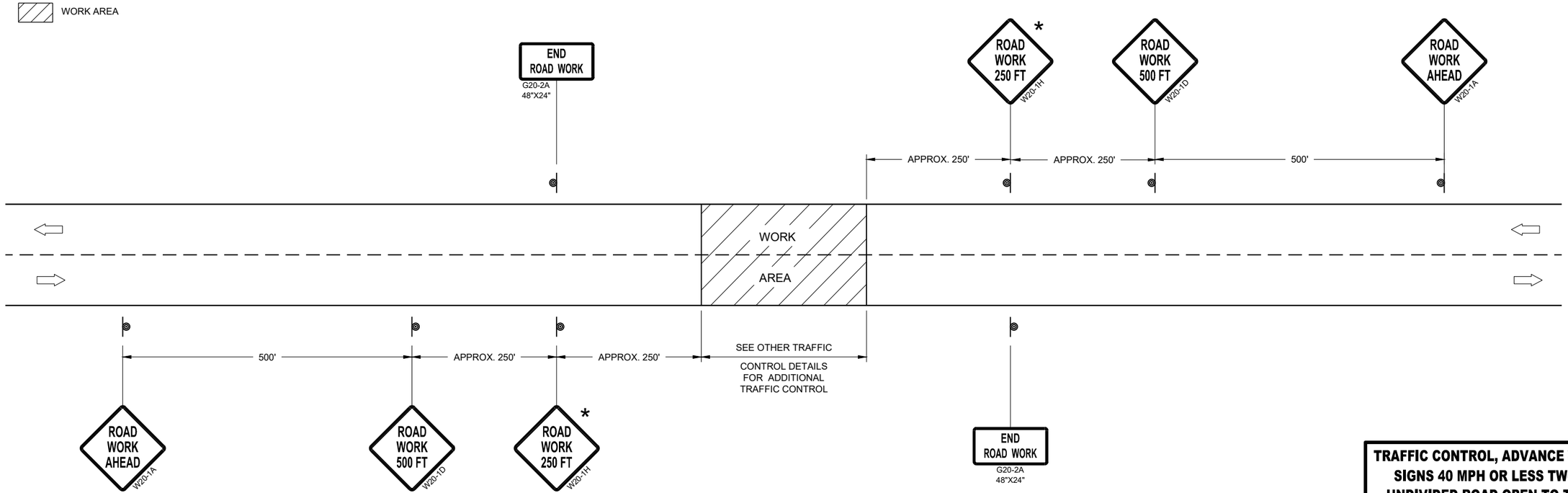
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

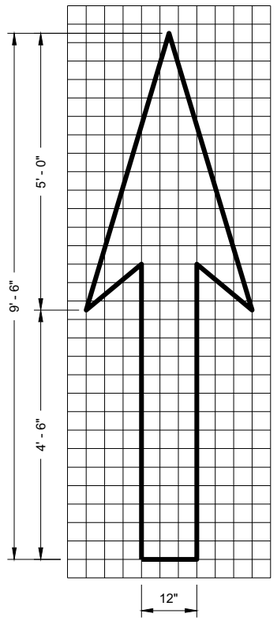
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

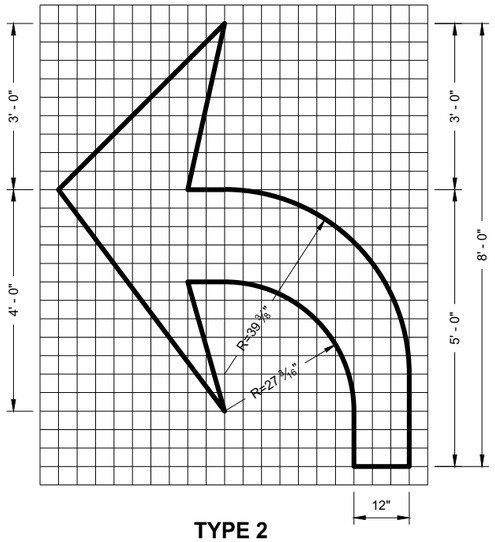
FHWA

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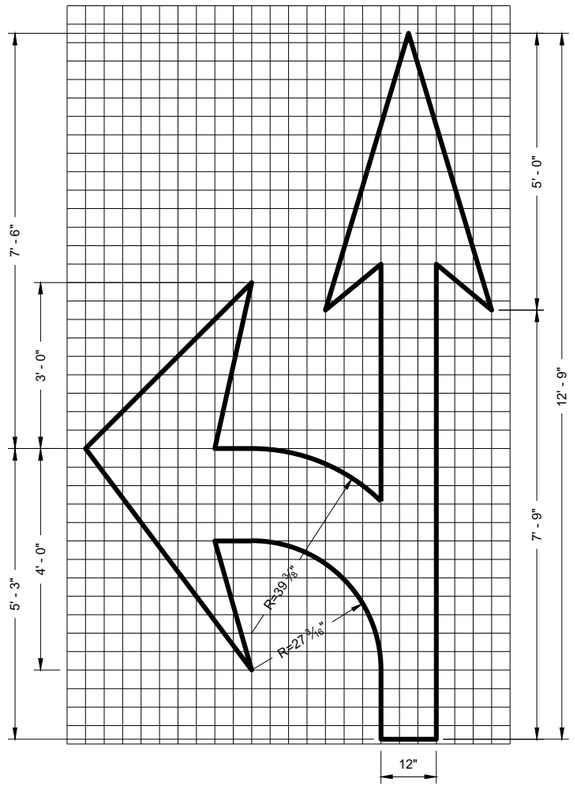
SDD 15C05 - 05



TYPE 1



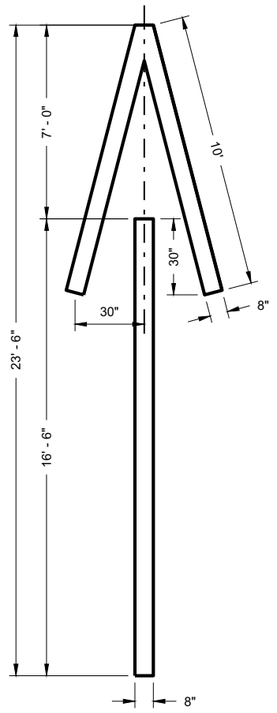
TYPE 2



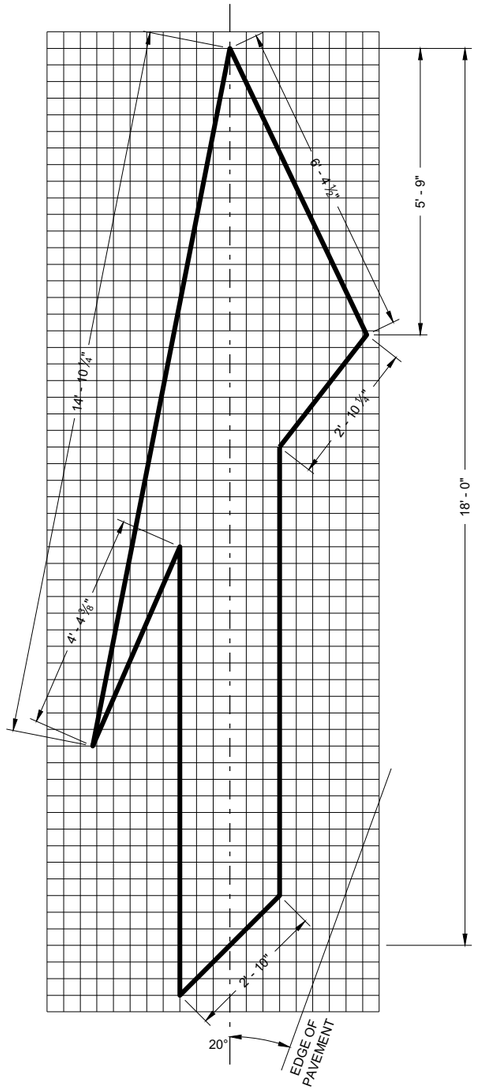
TYPE 3

GENERAL NOTES

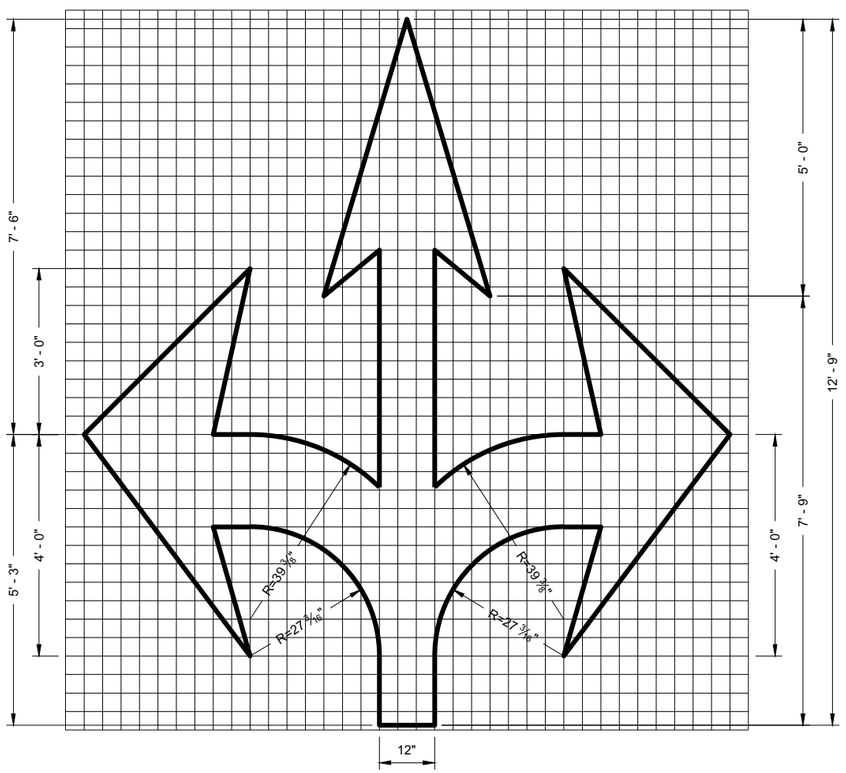
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



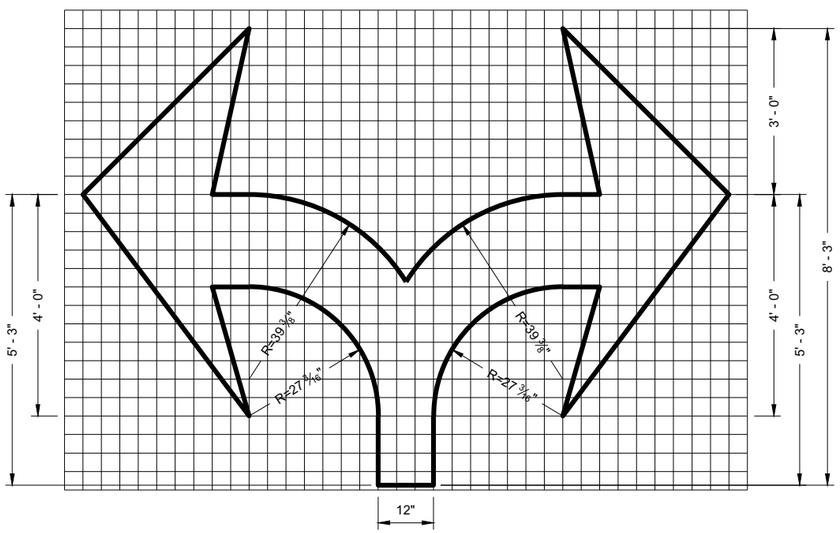
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

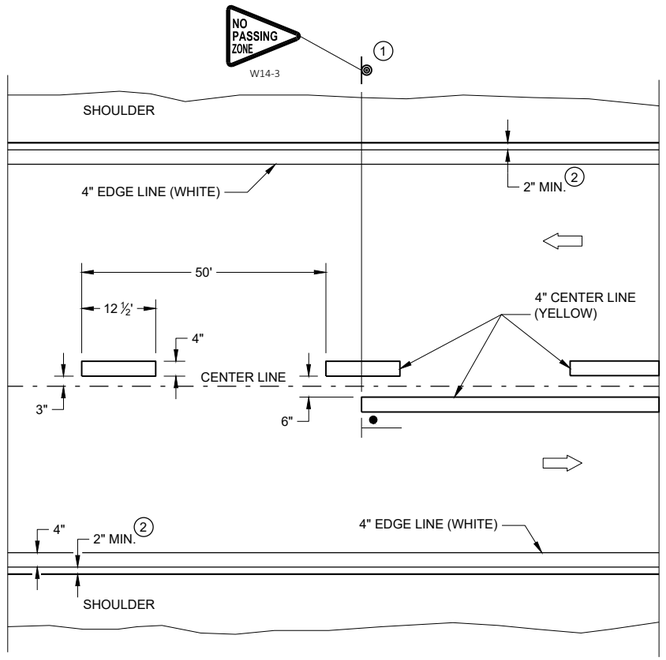
FHWA

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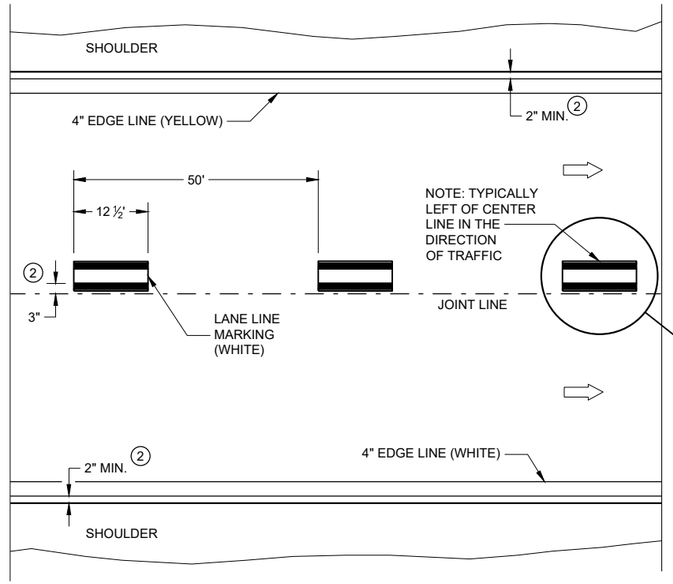
SDD 15C07 - 15c

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SDD 15C07 - 15c

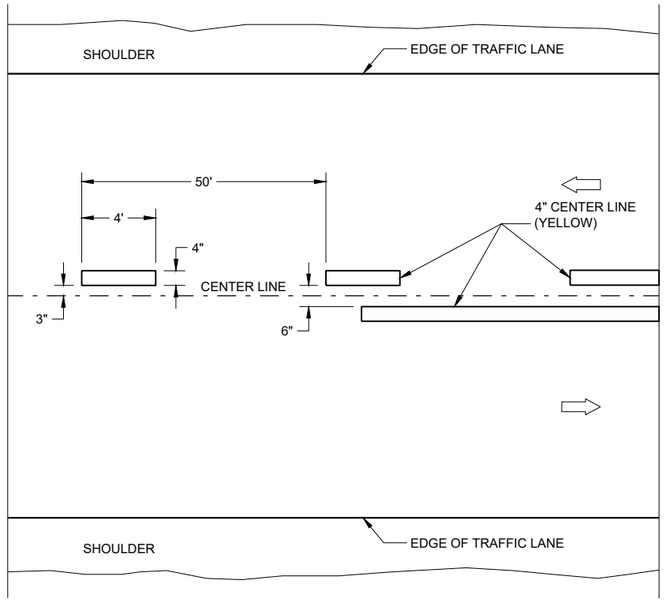


TWO WAY TRAFFIC

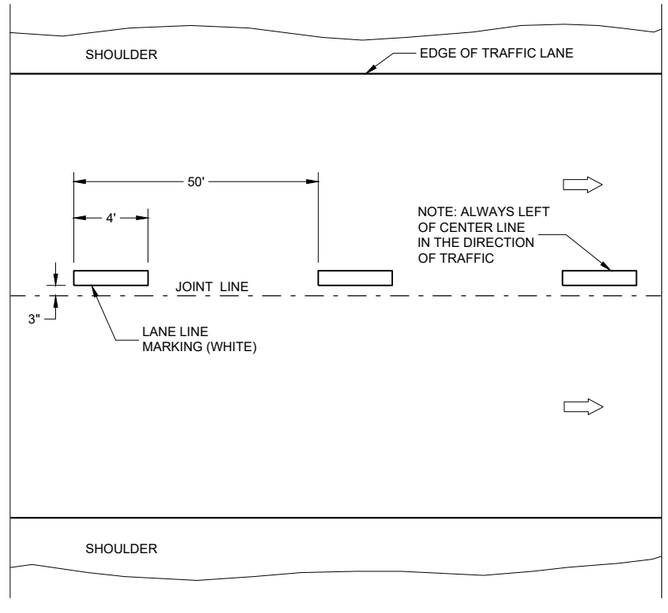


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

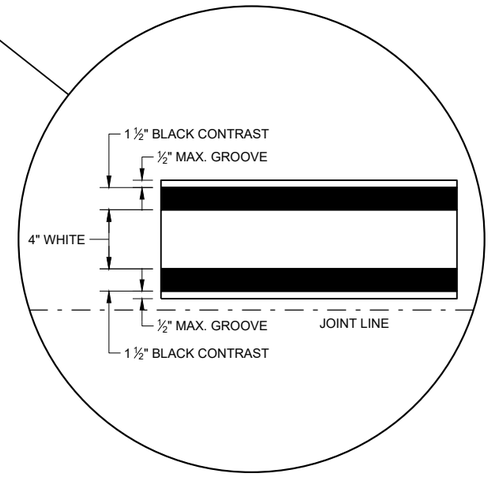
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Matthew Rauch — STATEWIDE SIGNING AND M ENGINEER

FHWA

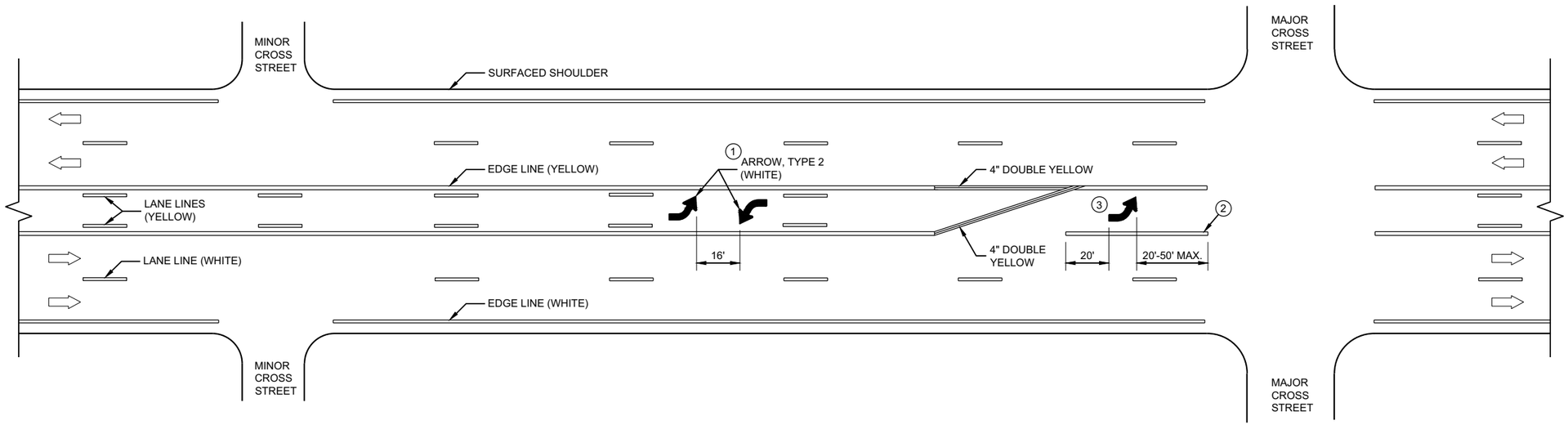
SDD 15C08 - 20a

SDD 15C08 - 20a

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 8" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

6

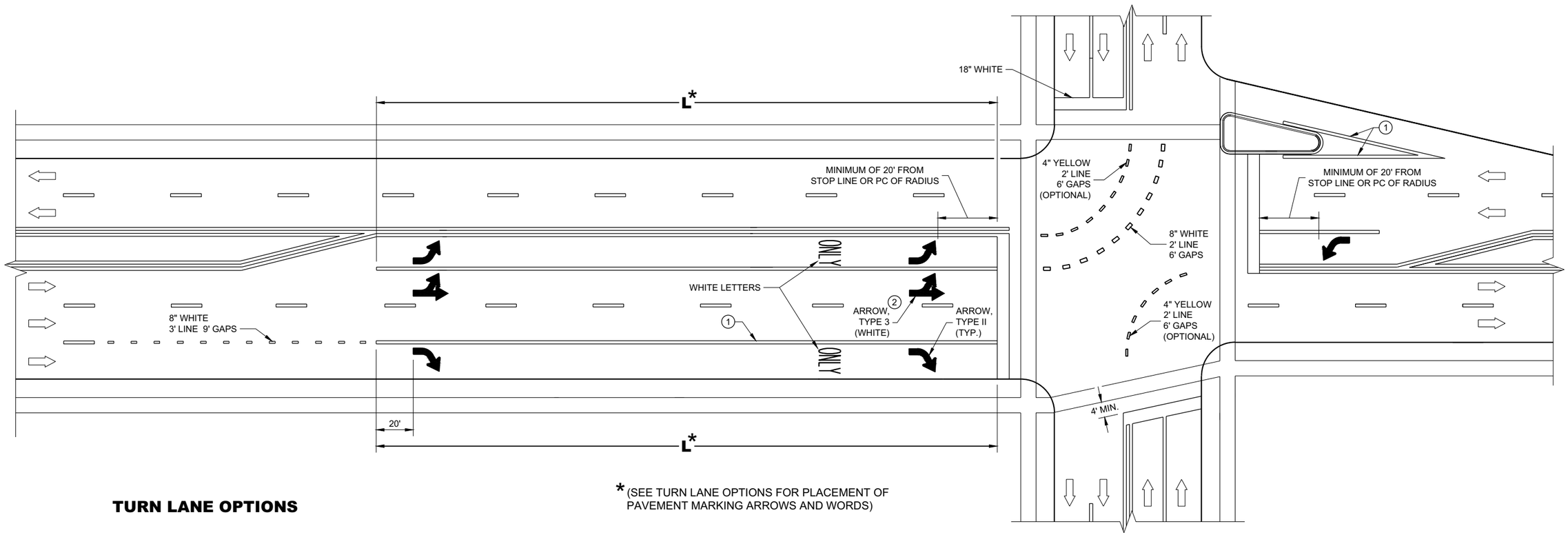
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SDD 15C08 - 20b

SDD 15C08 - 20b

PAVEMENT MARKING (TURN LANES)

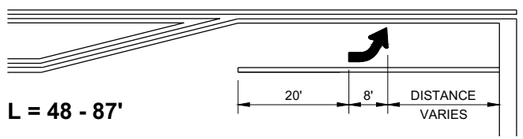
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA



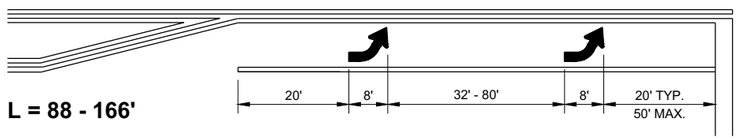
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

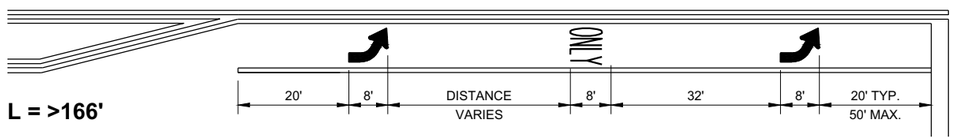
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

1. 8" WHITE
2. 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

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

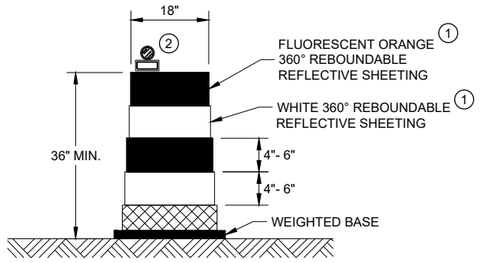
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SDD 15C08 - 20c

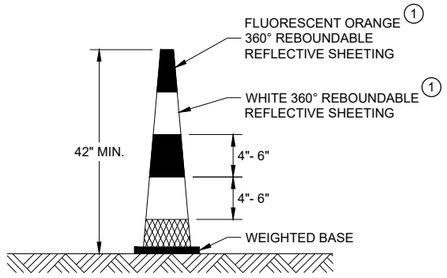
SDD 15C08 - 20c

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.

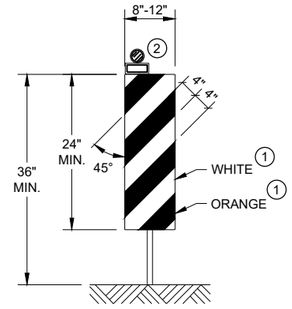


DRUM



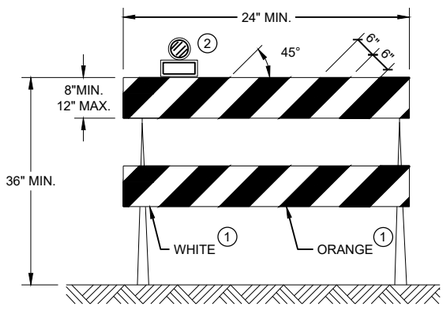
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



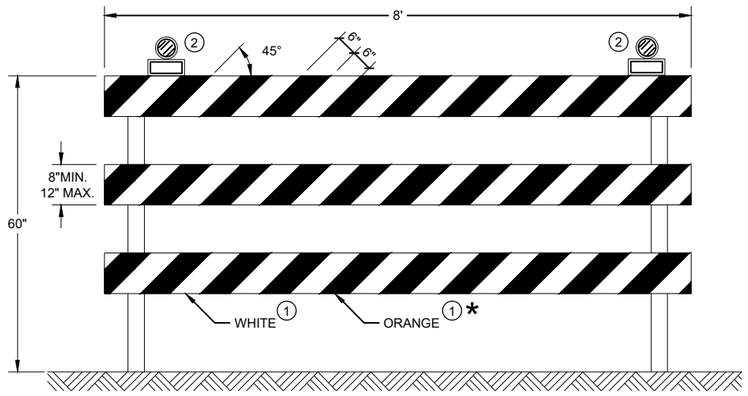
VERTICAL PANEL

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
May 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C11 - 09b
SDD 15C11 - 09b

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.

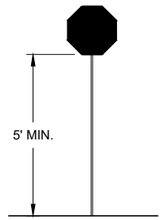
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

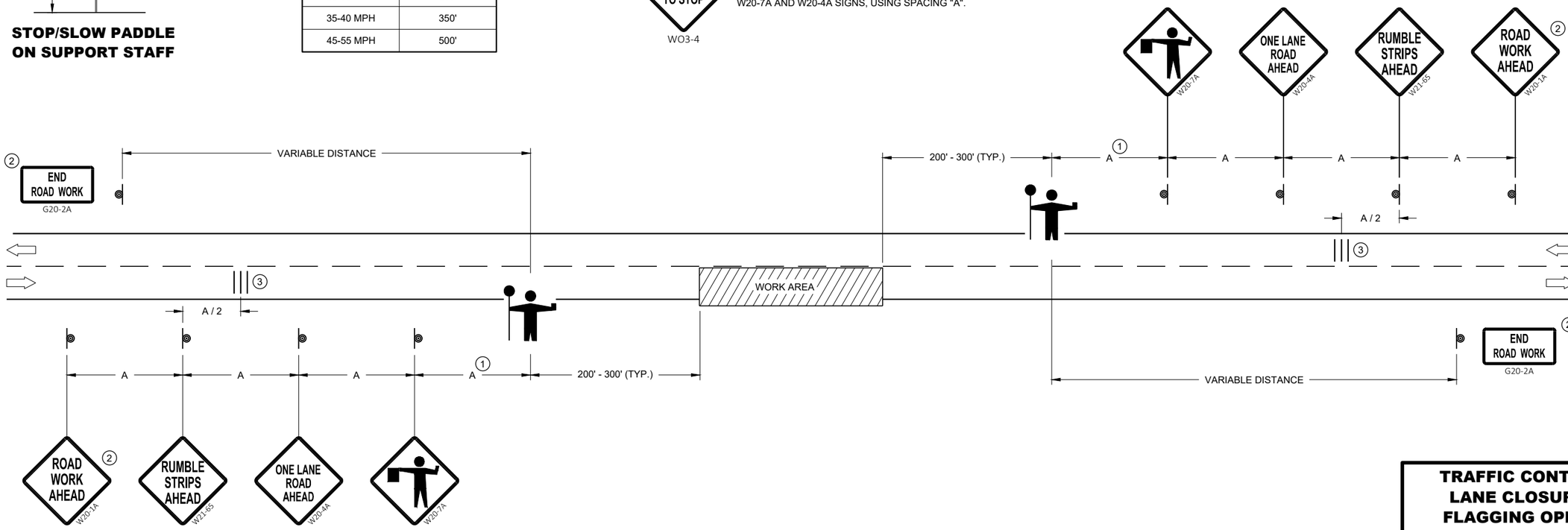
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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
November 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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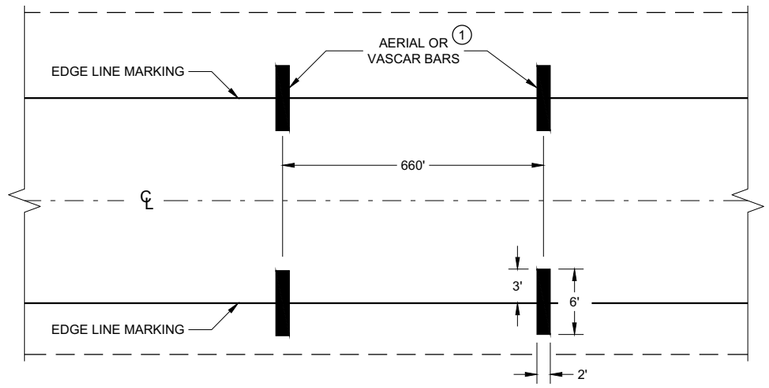
SDD 15C12 - 08

SDD 15C12 - 08

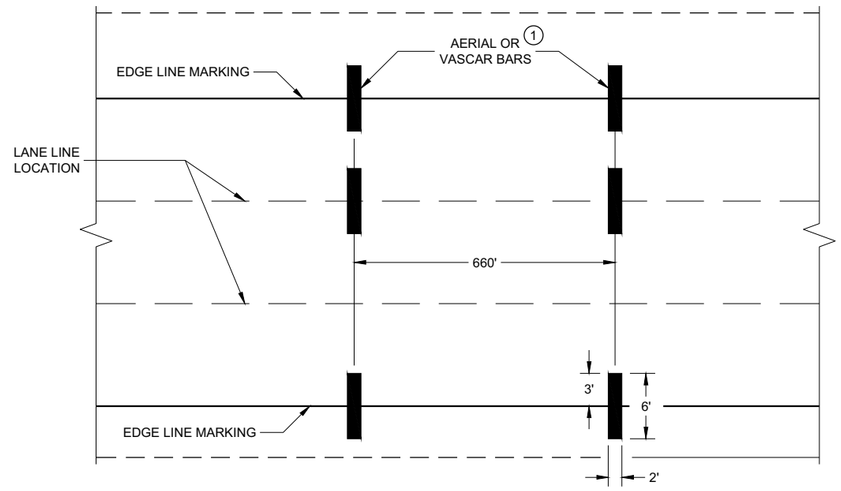
GENERAL NOTES

(1) PLACE TWO TO FIVE AERIAL OR VASCAR BARS AT 660 FOOT SPACING.

A CAR CAN BE PROVIDED BY THE WISCONSIN STATE PATROL FOR TRAFFIC CONTROL.



TYPICAL FOR TWO WAY OR ONE WAY TRAFFIC



TYPICAL FOR MULTILANE TRAFFIC

SPEED ENFORCEMENT ZONE WITH AERIAL OR VASCAR BARS

6

SDD 15C14 - 04

AERIAL ENFORCEMENT BARS PAVEMENT MARKING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2021
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAR ENGINEER

FHWA

6

SDD 15C14 - 04

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

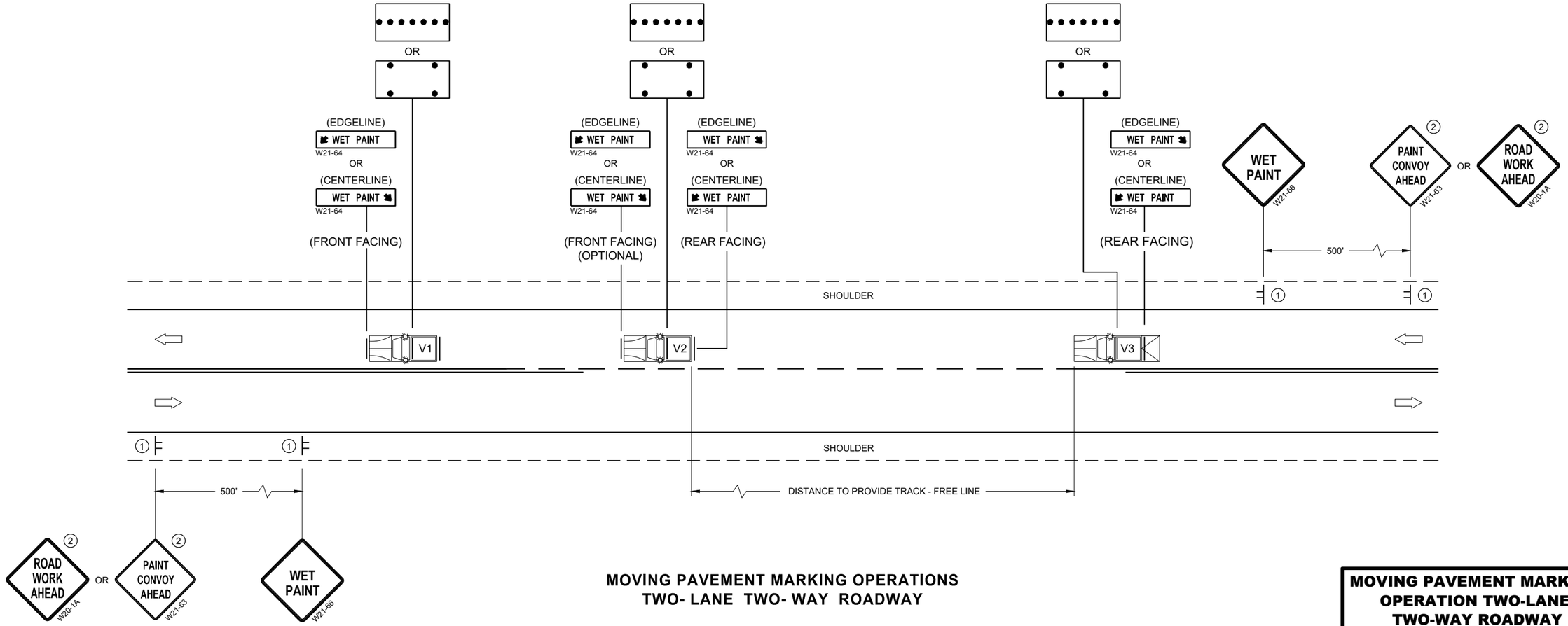
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING OPERATIONS TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

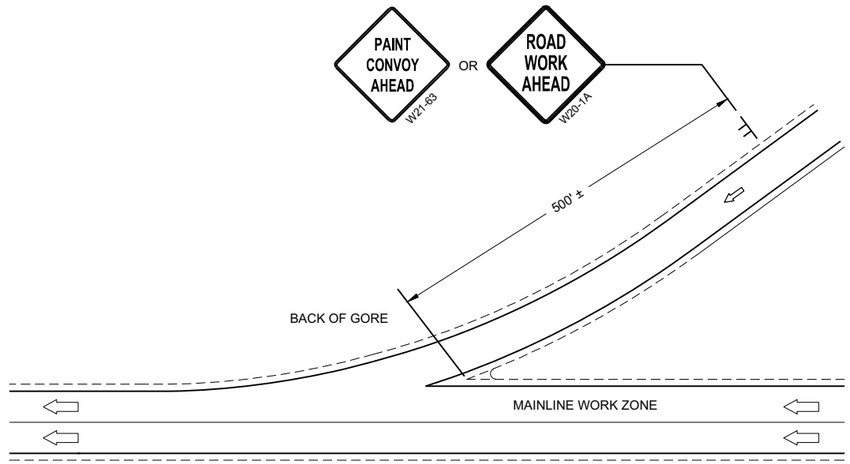
FHWA

SDD 15C19 - 06a

SDD 15C19 - 06a

LEGEND

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



GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.

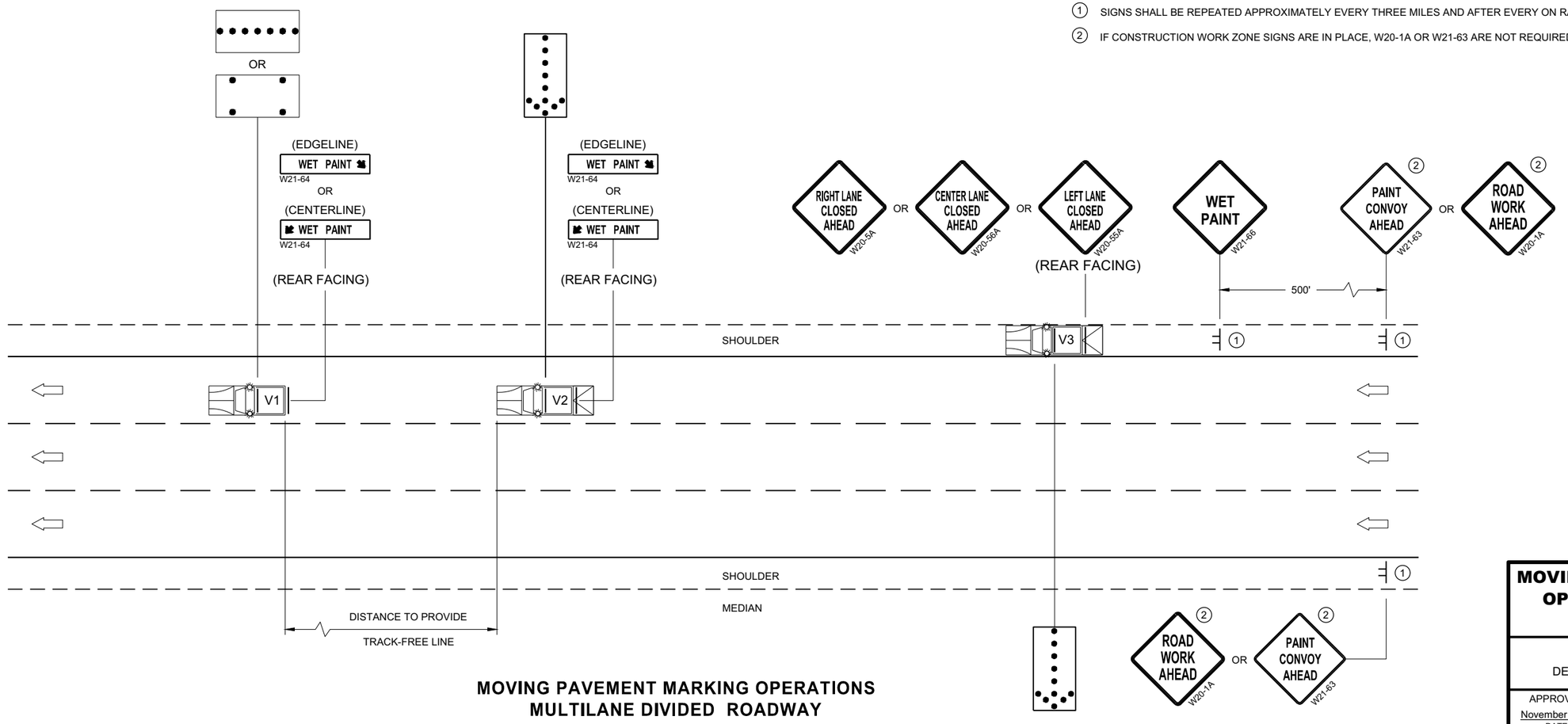
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM HEIGHT OF 18" FOR WET PAVEMENT MARKINGS

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY ON RAMP.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING OPERATIONS
MULTILANE DIVIDED ROADWAY

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

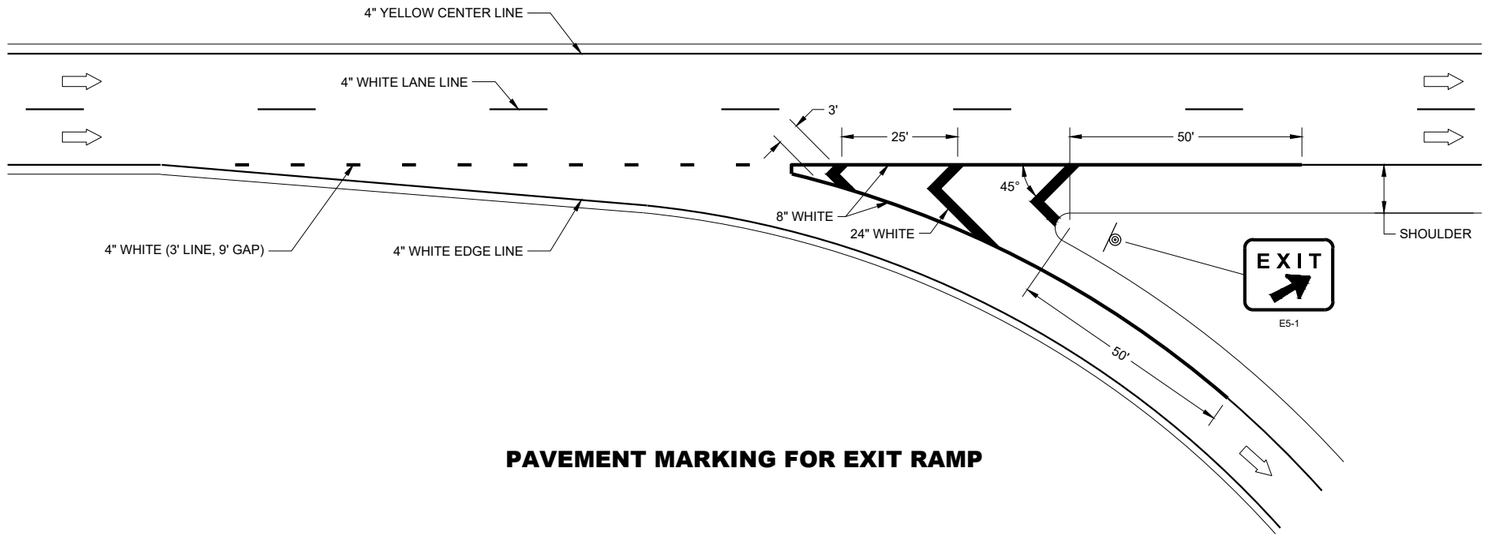
FHWA

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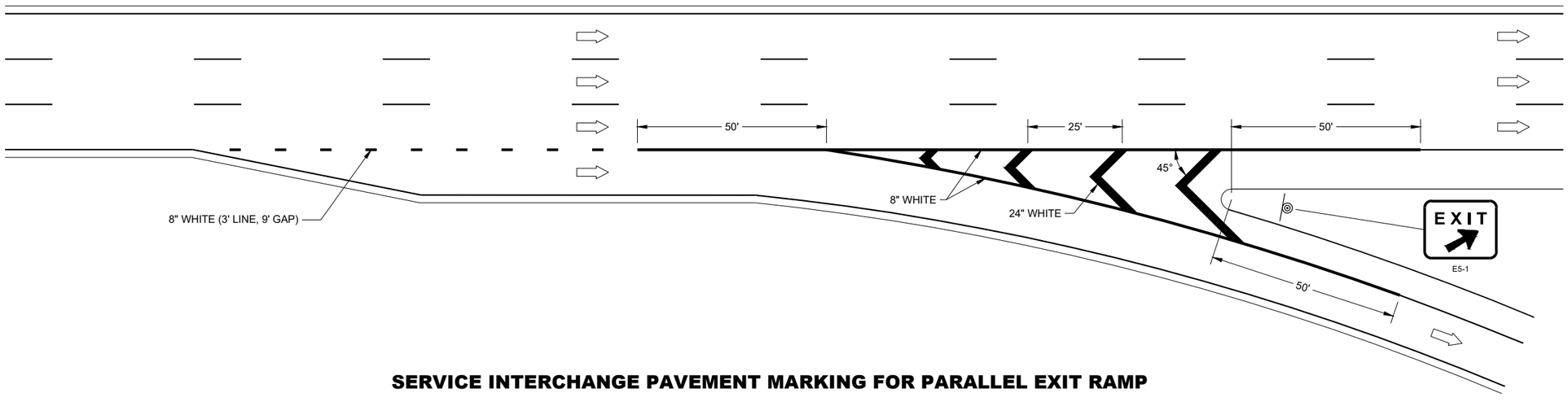
SDD15C19 - 06c

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SDD15C19 - 06c



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

6

SDD 15C31 - 04a

PAVEMENT MARKING, EXIT RAMP AND PARALLEL EXIT RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

SDD 15C31 - 04a

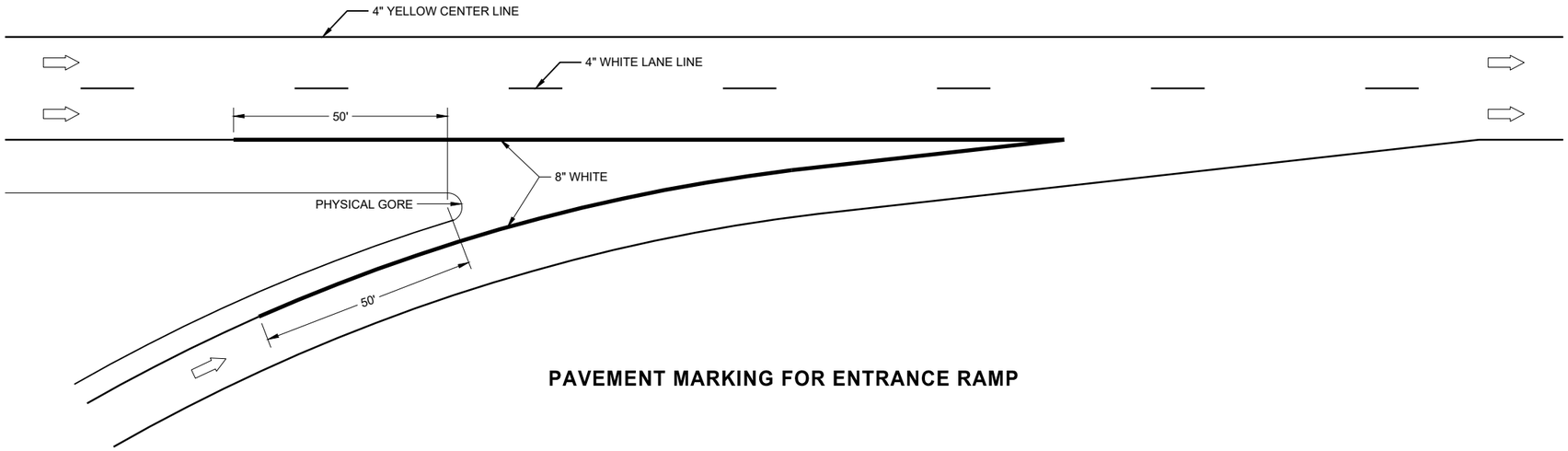
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

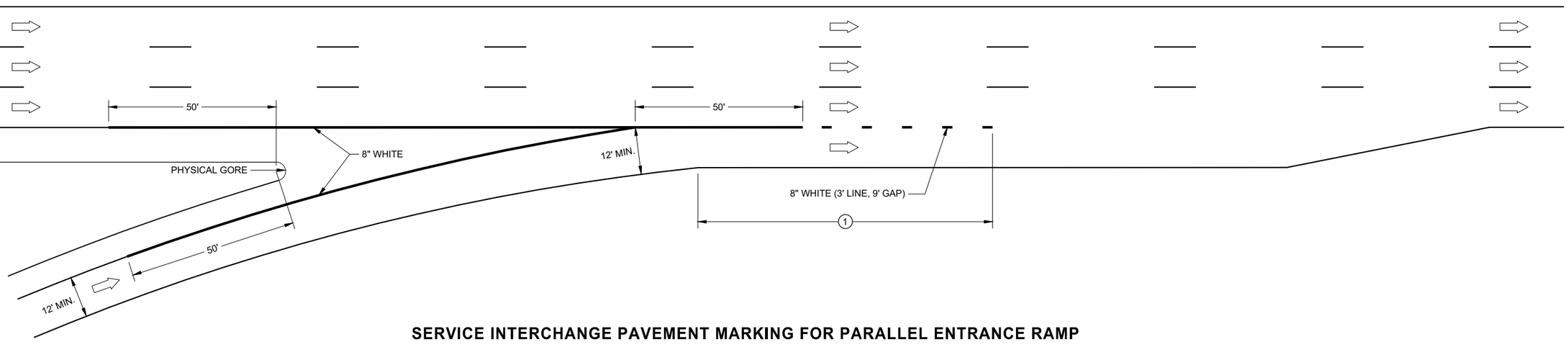
(1) ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

LEGEND

DIRECTION OF TRAVEL



PAVEMENT MARKING FOR ENTRANCE RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

6

6

SDD 14C31 - 04c

SDD 14C31 - 04c

PAVEMENT MARKING, ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

GENERAL NOTES

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

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

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

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

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

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

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.

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

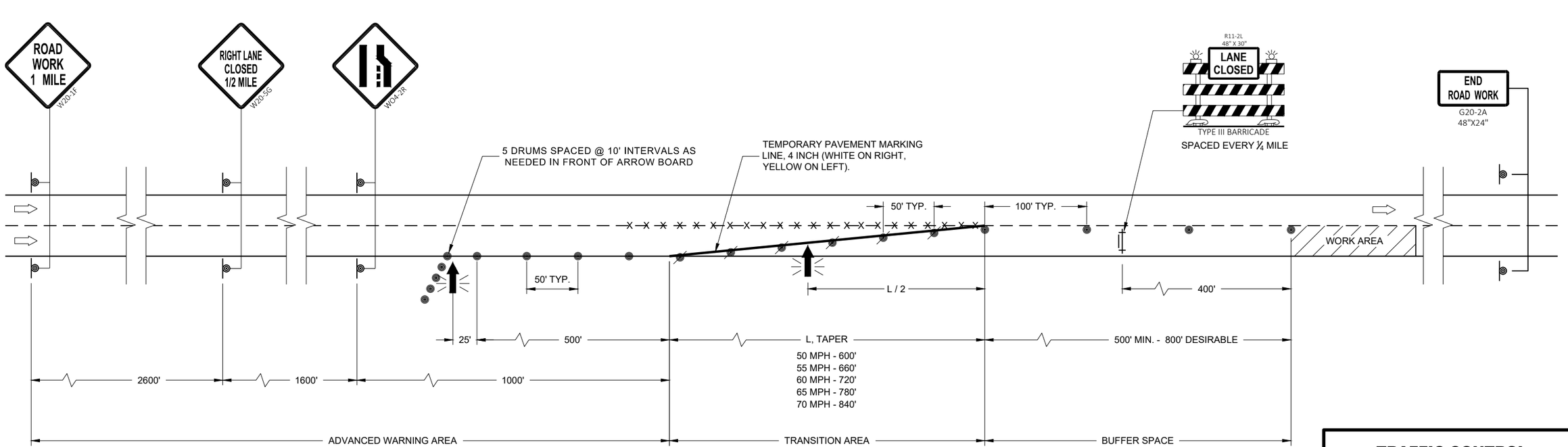
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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.

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

LEGEND

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



TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D12 - 10a

6

SDD15D12 - 10a

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

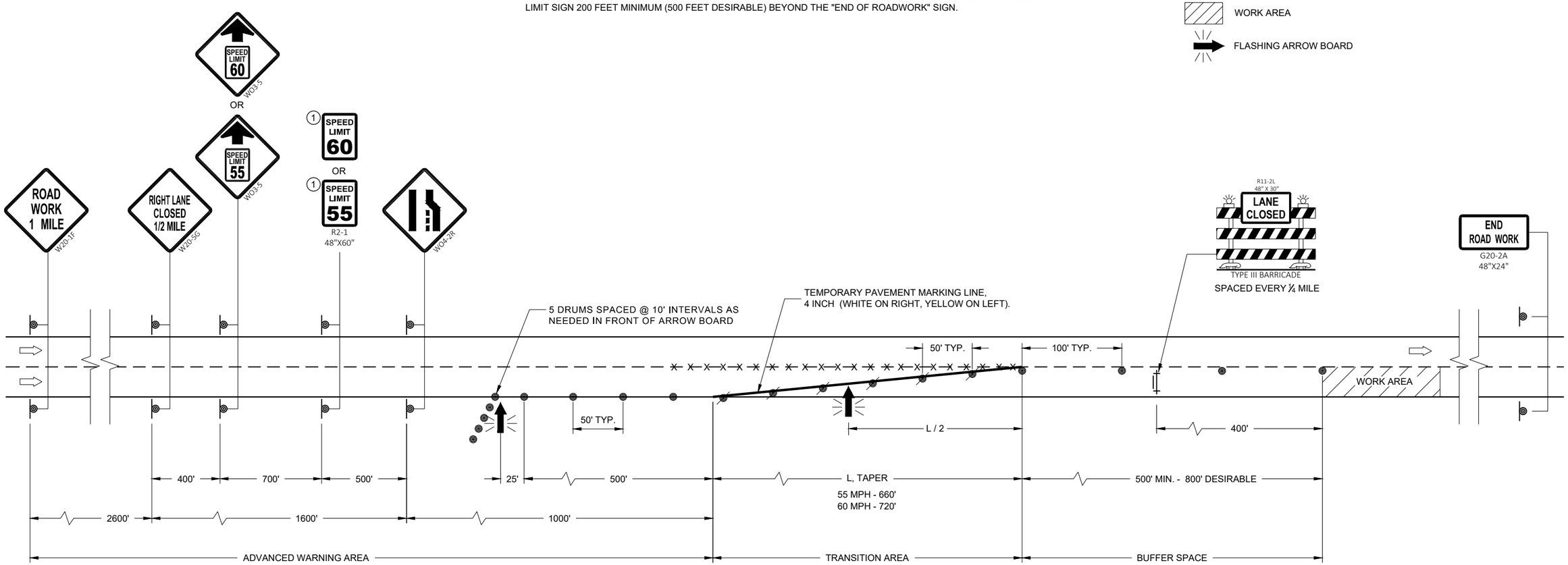
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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

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

LEGEND

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



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15D12 - 10b

6
SDD 15D12 - 10b

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD
- (S) PORTABLE TRAFFIC SENSOR (PTS)
- FBS FLASHING BEACON SIGN



WO8-76
96" x 48"

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS, INCLUDING FBS 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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED SIGNS.

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.

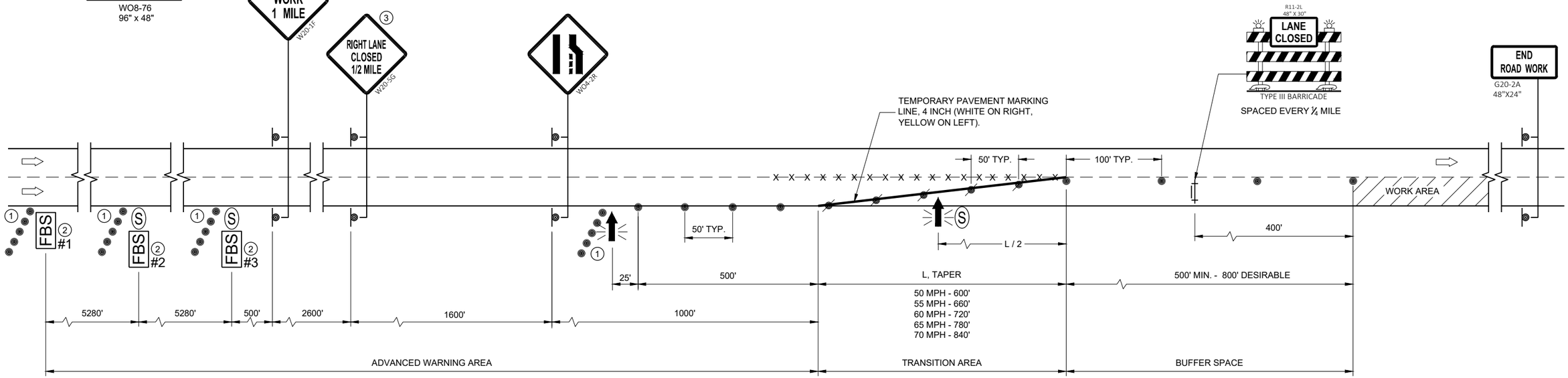
CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

PORTABLE TRAFFIC SENSOR (PTS) MAY BE MOUNTED ON THE FBS, ARROW BOARD OR OTHER TRAILER DEVICES.

(1) 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.

(2) IF THERE ARE MORE THAN TWO LANES OR IF SPECIFIED IN THE PLANS, PLACE FBS ON BOTH SIDES OF THE ROADWAY.

(3) IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"x60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Erin Schwark
WORK ZONE ENGINEE

FHWA

SDD 15D12 - 10d

SDD 15D12 - 10d

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. 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.

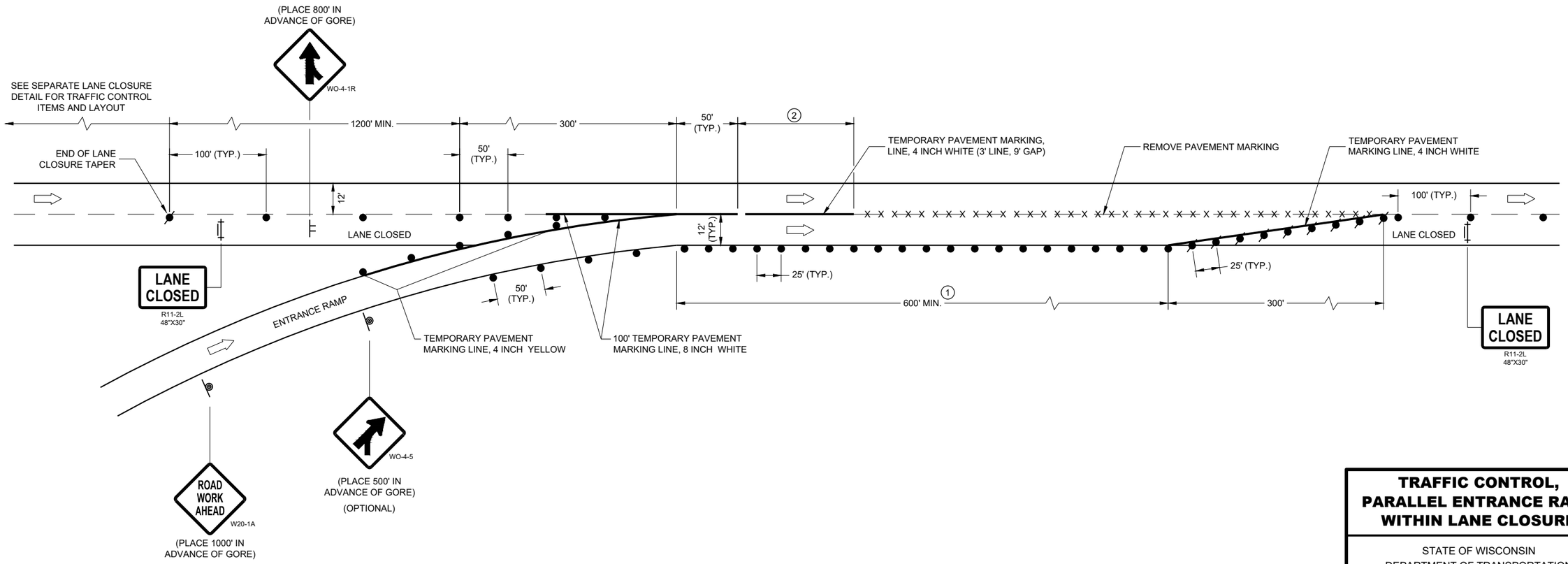
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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) EXTEND THE LENGTH OF THE MERGE ARE IF THE ENTERING (DESIGN) SPEED IS LESS THAN 50MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.

(2) END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



TRAFFIC CONTROL, PARALLEL ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D15 - 06a

6

SDD 15D15 - 06a

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 /OR DRUMS IN THE GORE BETWEEN THE EXIT RAMP AND MAINLINE TRAFFIC.

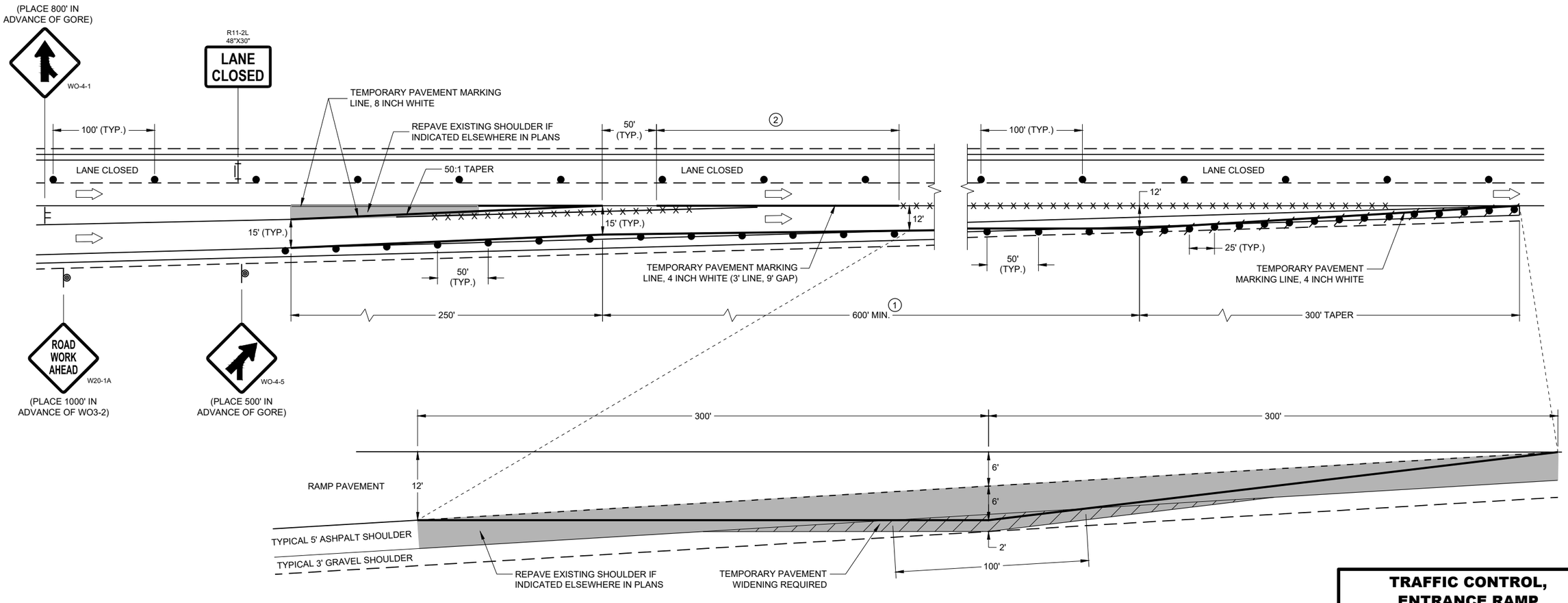
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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) EXTEND THE LENGTH OF THE MERGE AREA IF THE ENTERING (DESIGN) SPEED OF THE RAMP IS LESS THAN 50 MPH OR IF THE MAINLINE GRADE EXCEEDS ±2.2%.

(2) END TEMPORARY PAVEMENT MARKING LINE AT ½ THE LENGTH OF FULL WIDTH OF THE ACCELERATION LANE.



TEMPORARY PAVEMENT DETAIL

(EXISTING RAMP DIMENSIONS MAY VARY, ADJUST TEMPORARY PAVEMENT ACCORDINGLY)

TRAFFIC CONTROL, ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D15 - 06b

6

SDD15D15 - 06b

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.

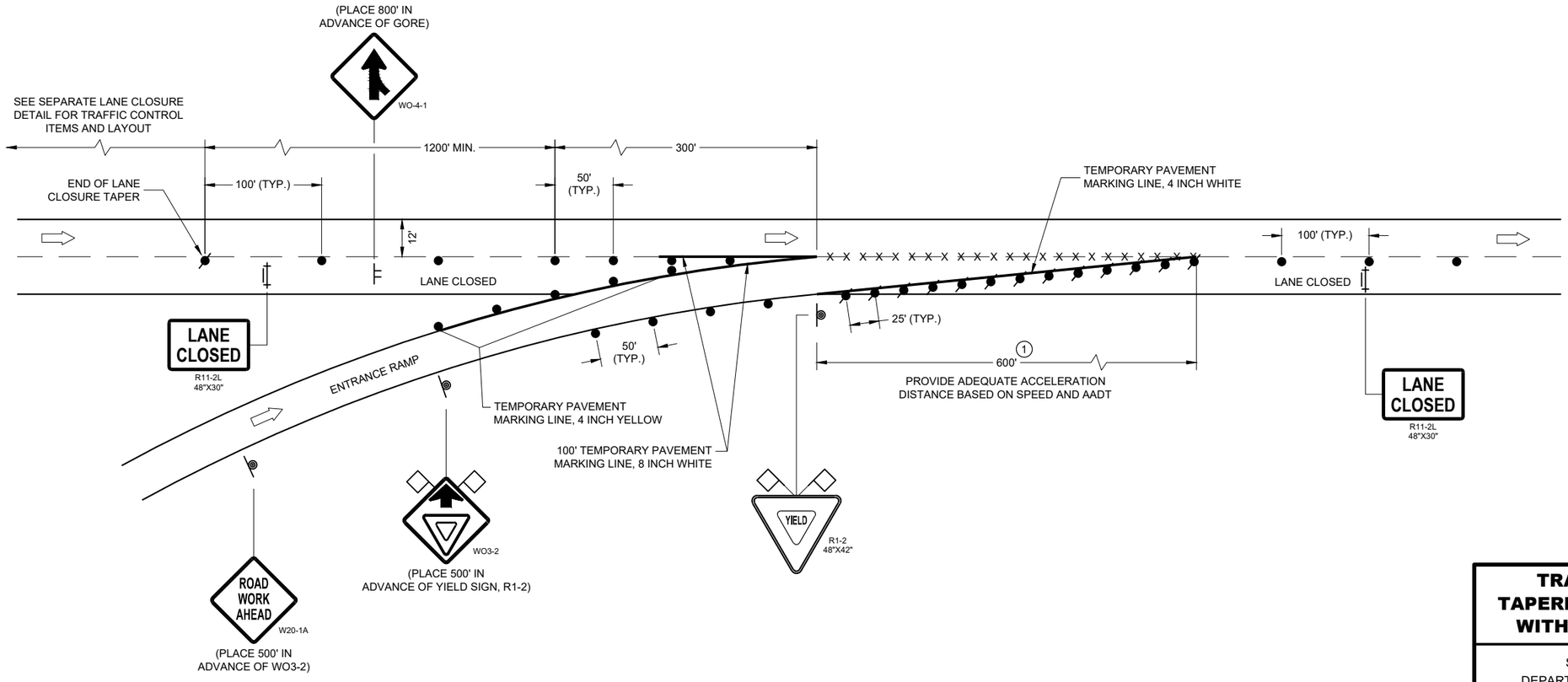
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.



TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D15 - 06c

6

SDD 15D15 - 06c

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.

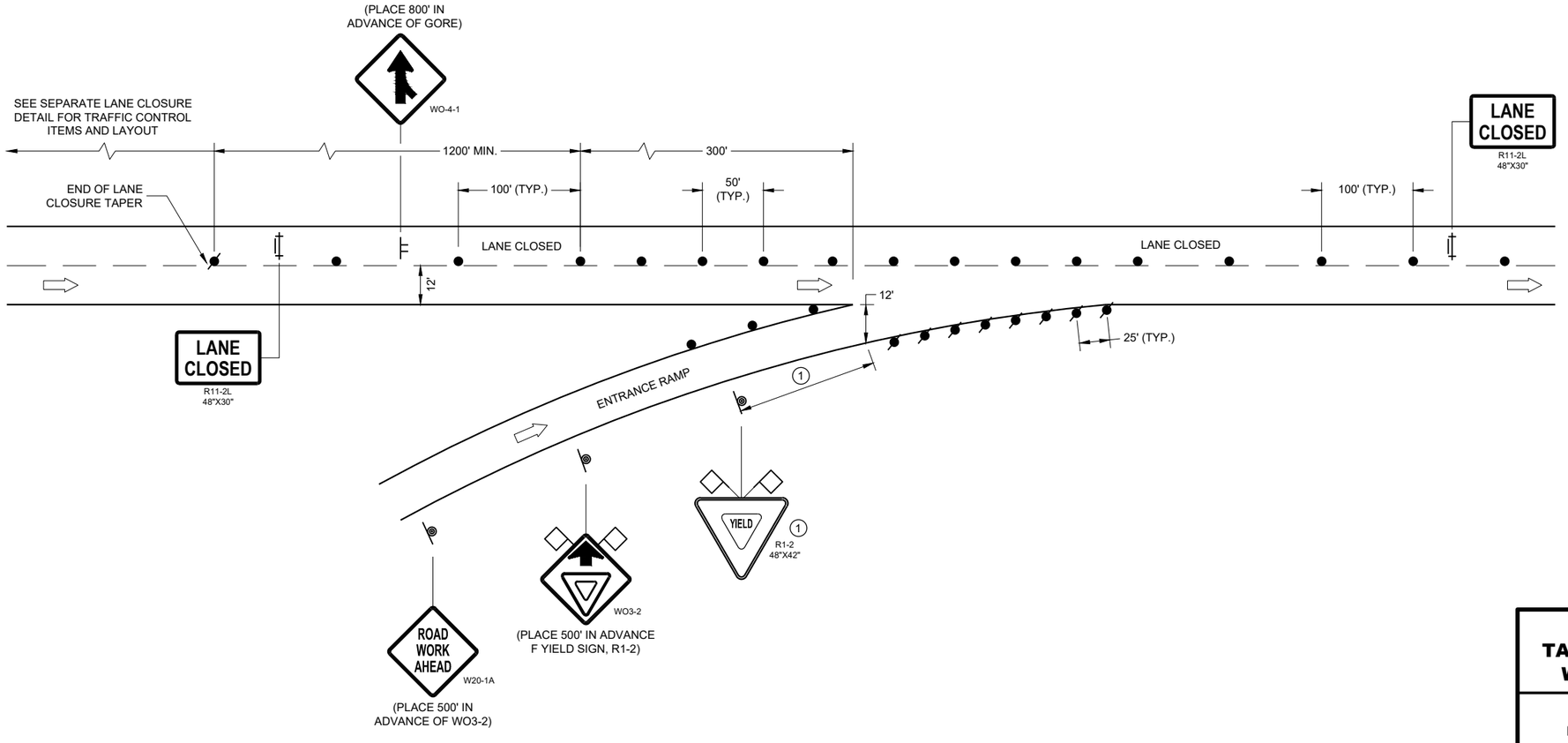
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS. USE SUPPORTS THAT PROVIDE A MINIMUM OF 5 FEET FROM THE BOTTOM OF THE SIGN TO THE PAVEMENT.

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.



TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D15 - 06d

6

SDD15D15 - 06d

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.

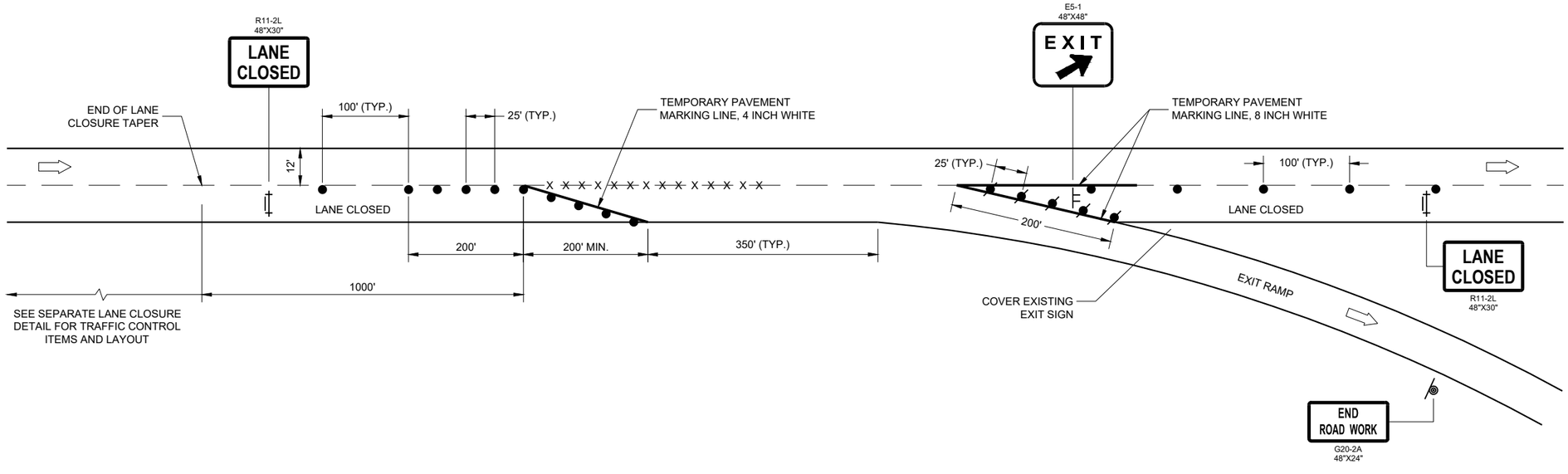
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONSECUTIVE DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.



6

SDD 15D15 - 06e

6

SDD15D15 - 06e

TRAFFIC CONTROL, PARALLEL EXIT RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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.

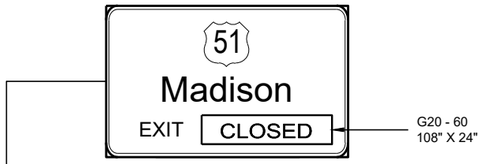
PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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.

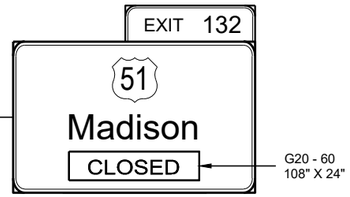
WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

(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.

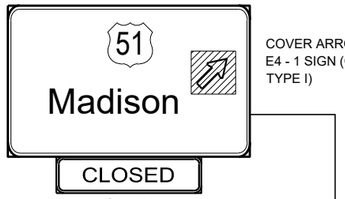
(2) PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



OR

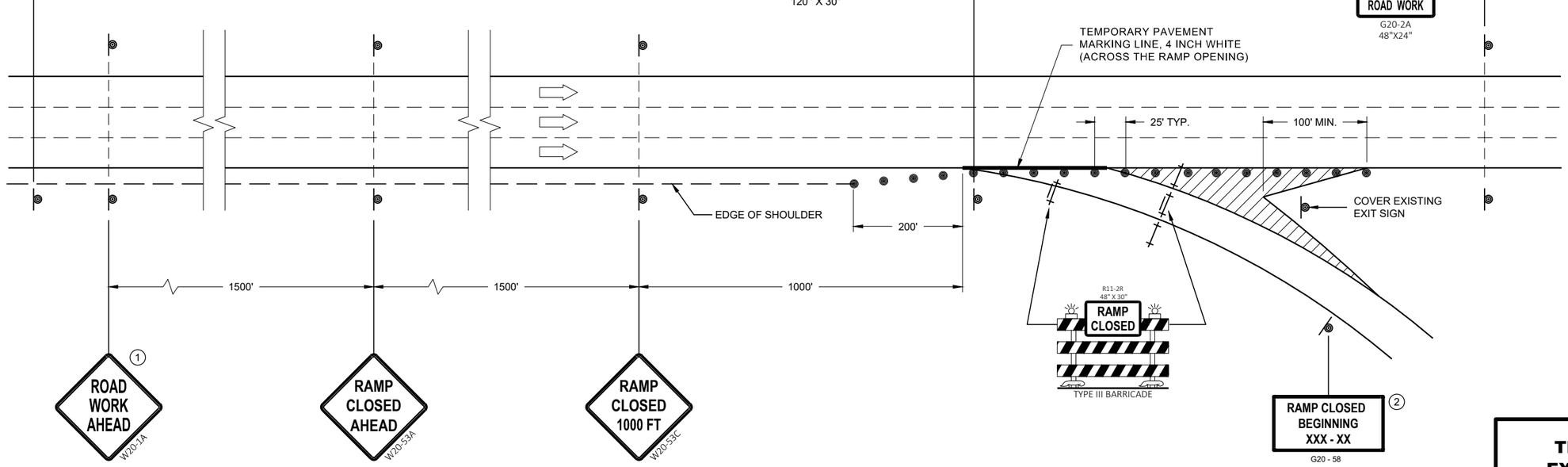


PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN



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
February 2022
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 15D16 - 05

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

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

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

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

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

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

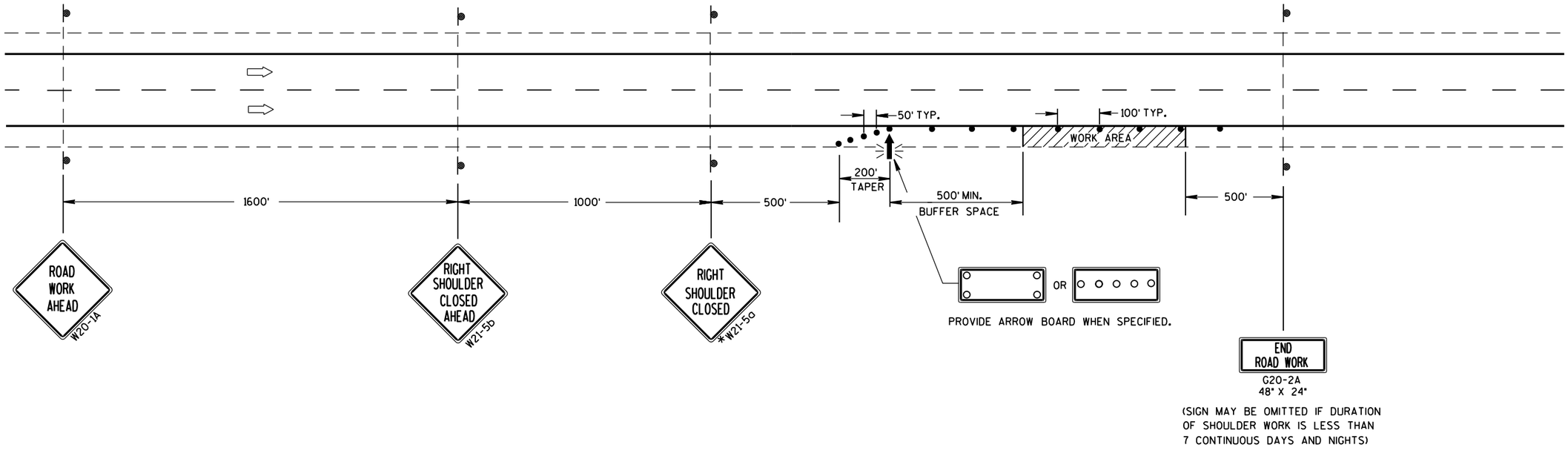
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

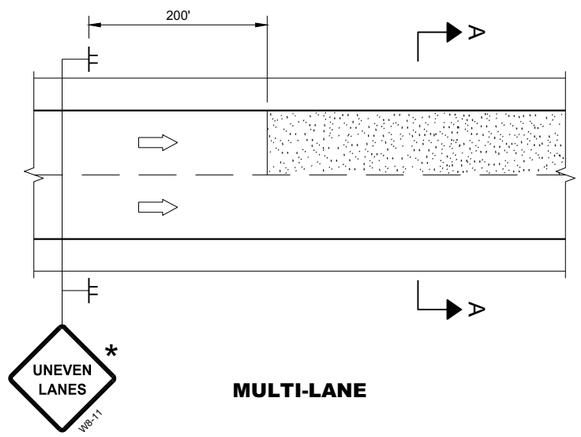
June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

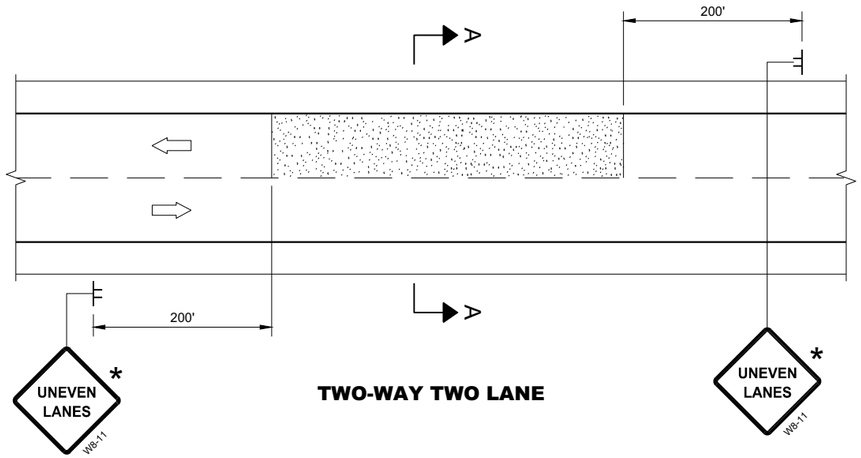
FHWA

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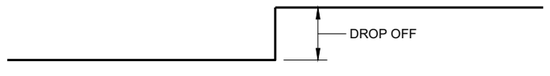
S.D.D. 15 D 27-3



MULTI-LANE

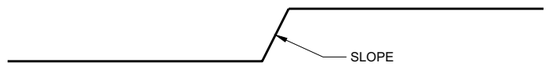


TWO-WAY TWO LANE

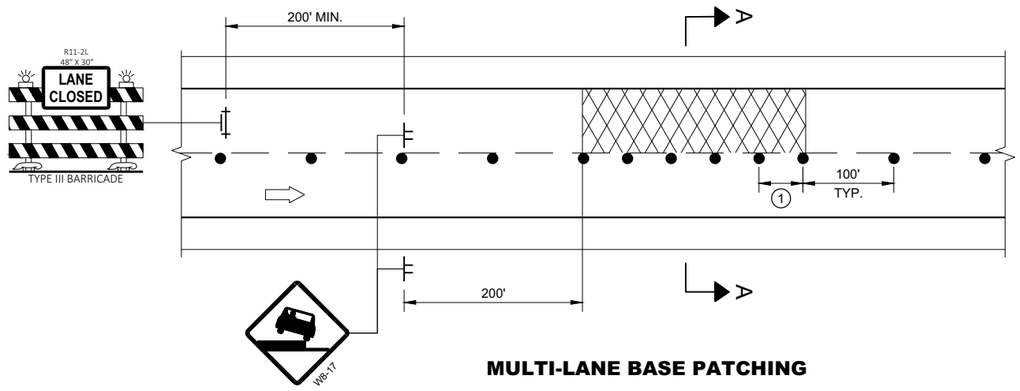


SECTION A - A

OR

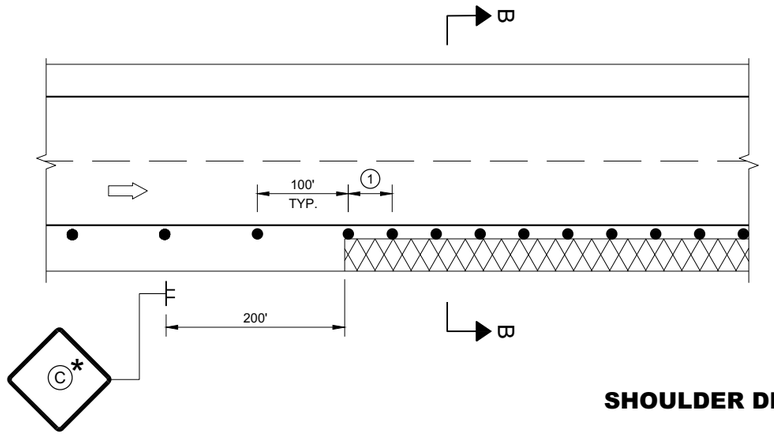


SECTION A - A

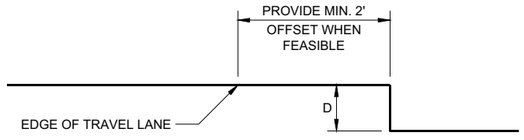


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



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

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

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D39 - 02

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

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

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

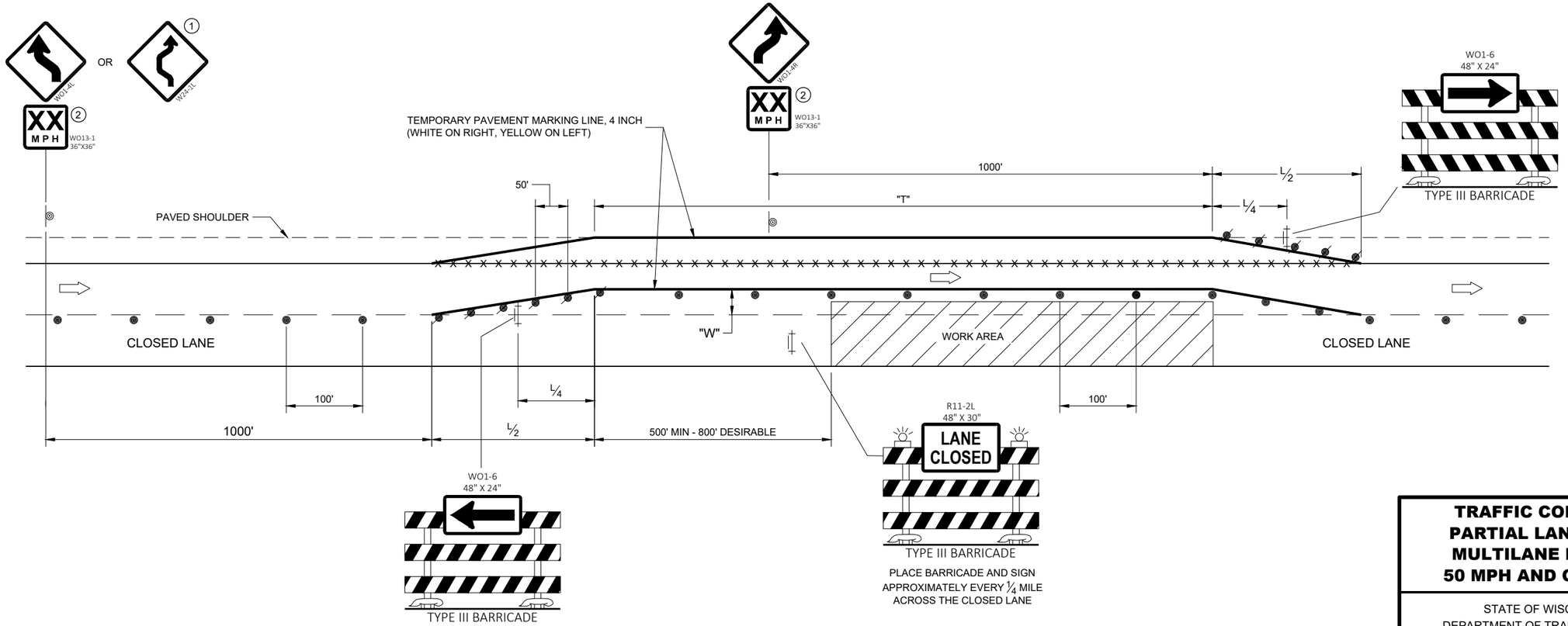
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

(1) USE ONLY WHEN T<600', OMIT WO1-4R.

(2) IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

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



PLACE BARRICADE AND SIGN APPROXIMATELY EVERY 1/4 MILE ACROSS THE CLOSED LANE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15D40 - 03d

6

SDD 15D40 - 03d

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

GENERAL NOTES

RIGHT CLOSURE SHOWN (LEFT LANE CLOSURE SIMILAR)

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

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

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

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

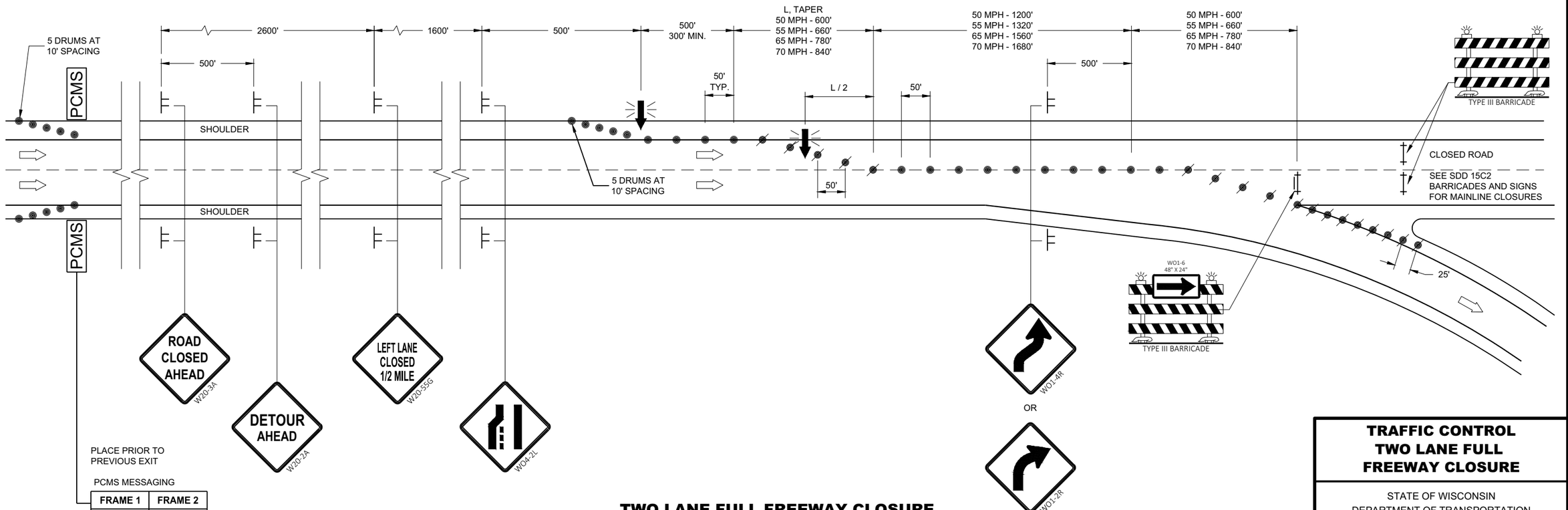
WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROL SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS EACH CLOSED LANE TO HELP REINFORCE THE DRUM LINE.

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

REFER TO DETOUR ROUTES FOR TRAFFIC GUIDANCE SIGNING.

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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.



PLACE PRIOR TO PREVIOUS EXIT

PCMS MESSAGING

FRAME 1	FRAME 2
FREEWAY CLOSED	EXIT AHEAD

TWO LANE FULL FREEWAY CLOSURE

TRAFFIC CONTROL TWO LANE FULL FREEWAY CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

6

SDD 15D42 - 01

SDD 15D42 - 01

GENERAL NOTES

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

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

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

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

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

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

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

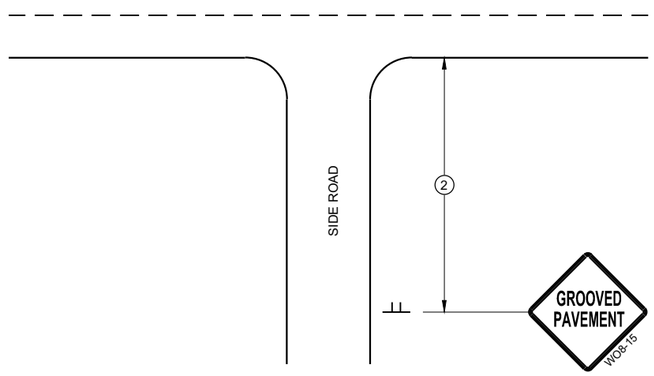
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

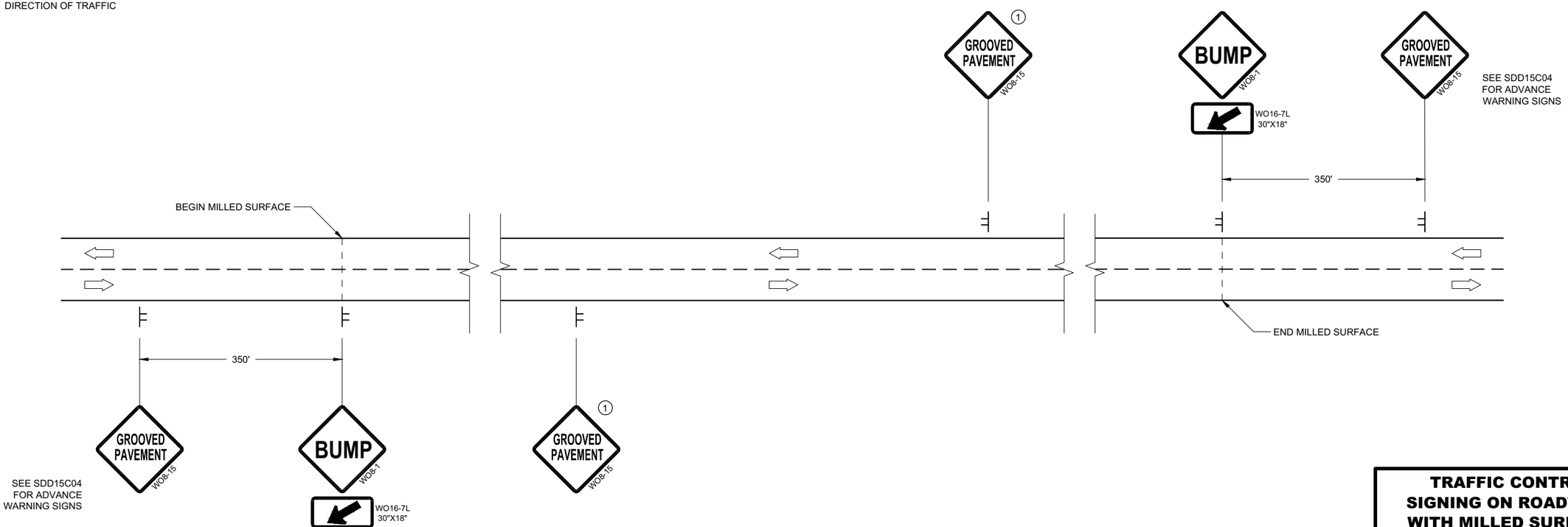
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15D44 - 02

SDD 15D44 - 02

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.

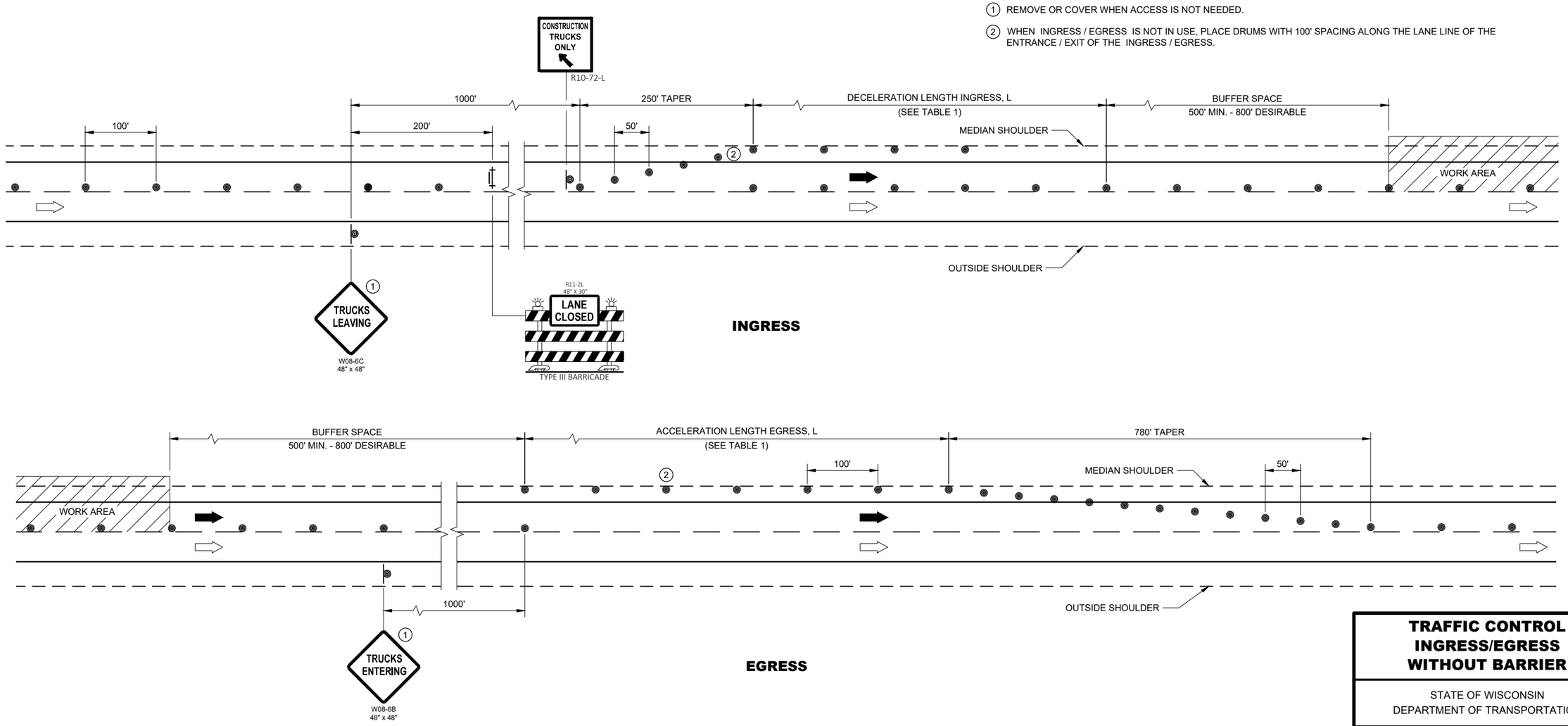
THIS ACCESS DETAIL IS TYPICAL FOR LEFT LANE ACCESS, FOR RIGHT LANE ACCESS, REVERSE THE TRAFFIC CONTROL

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
February 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

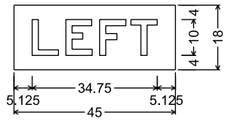
SDD 15D47 - 02b

6

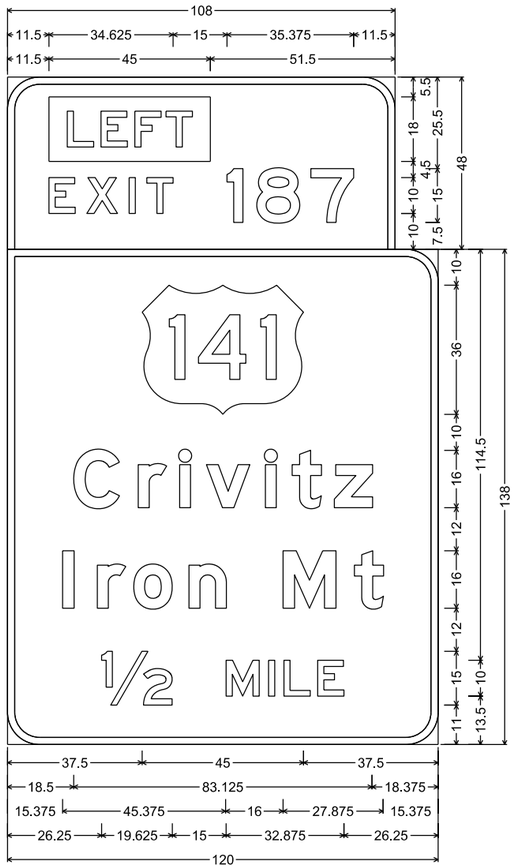
SDD 15D47 - 02b

NOTES

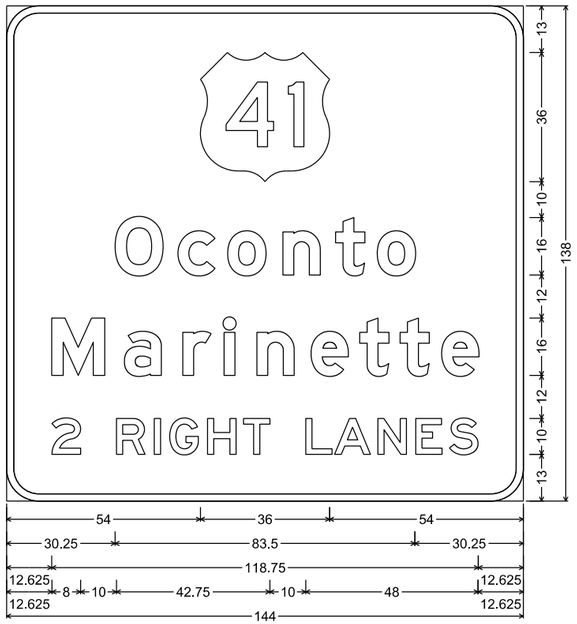
1. Signs are Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all Cap Words Series E or as noted
4. LEFT Plaque background on Yellow Type F Reflective Sheeting with Black Non-Reflective Message



No border, Black on, Yellow;
"LEFT", E;

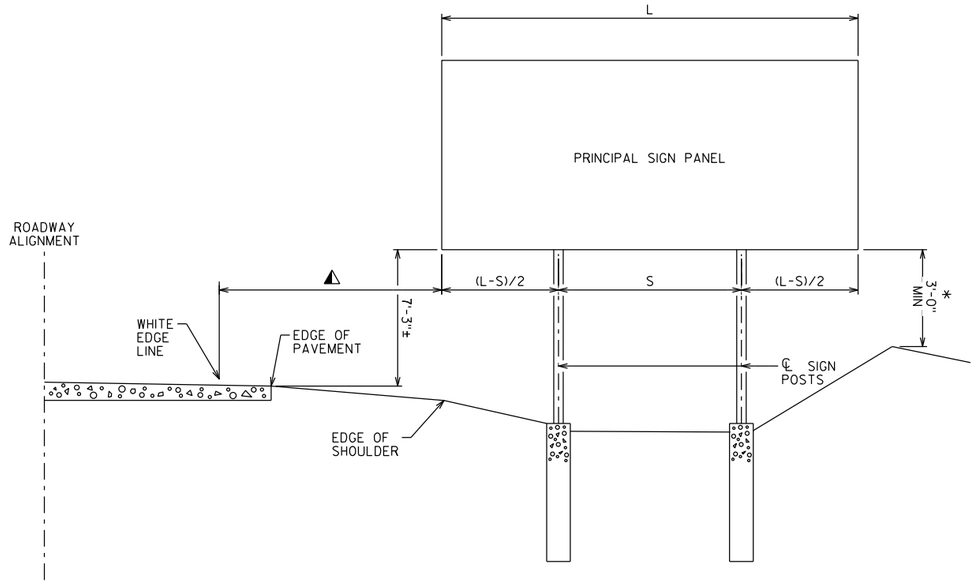


E1-5BP; 9.000" Radius, 2.000" Border,
E6-51; 9.000" Radius, 2.000" Border

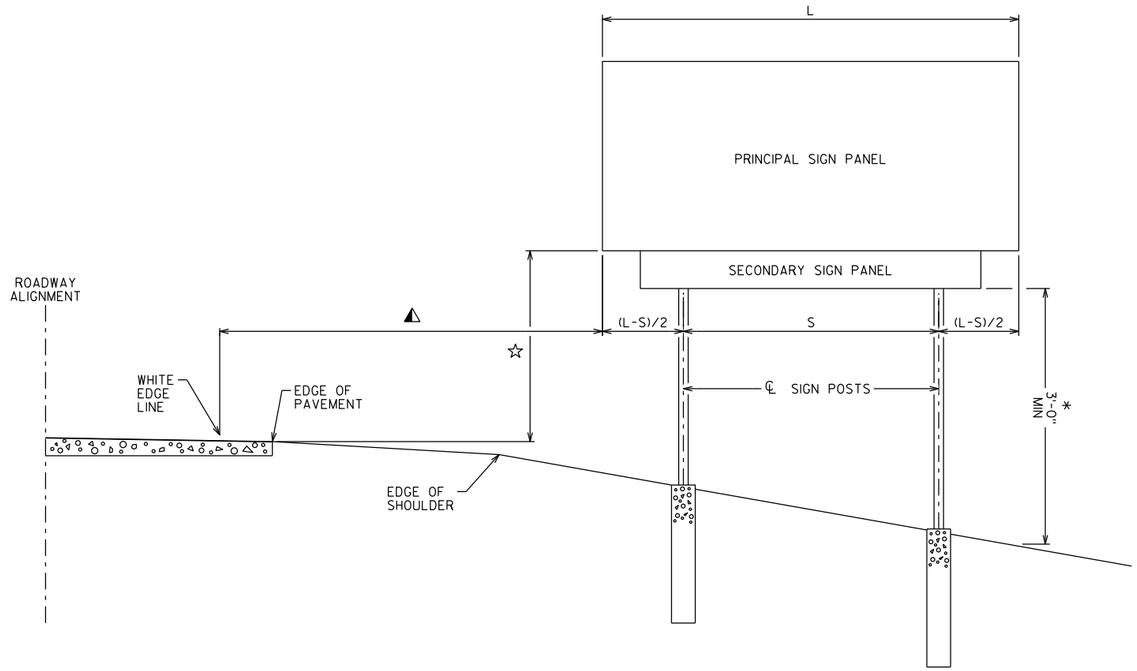


E6-51; 9.000" Radius, 2.000" Border

PROJECT: 1150-78-71	HWY: USH 41	COUNTY: OCONTO	PERMANENT SIGNING	SHEET NO: 175	E



INSTALLATION WITHOUT SECONDARY SIGN



INSTALLATION WITH SECONDARY SIGN

TYPE 1 SIGN INSTALLATION NOTES:

FOR A 2-POST INSTALLATION, "S" EQUALS 3L/5, BUT SHALL NOT BE LESS THAN 6'-0".

FOR A 3-POST INSTALLATION, "S" EQUALS 5L/7, BUT SHALL NOT BE LESS THAN 12'-0". THE SPACING BETWEEN ANY TWO POSTS SHALL NOT BE LESS THAN 6'-0".

⚠ UNLESS NOTED IN THE PLANS, THE SIGN OFFSET DISTANCE SHALL BE A MINIMUM OF 17'-6" FROM THE WHITE EDGE LINE, DESIRABLE 30'-0".

THE ± TOLERANCE SHOWN ON THIS SHEETS IS 3".

THE VERTICAL SIGN HEIGHT CLEARANCES SHOWN ON THIS SHEET ARE MEASURED FROM THE BOTTOM OF THE SIGN PANEL TO THE NEAR EDGE OF PAVEMENT.

☆ THE VERTICAL CLEARANCE SHALL BE 8'-3"± WHEN THE SECONDARY SIGN HEIGHT IS 3'-0" OR LESS. FOR SECONDARY SIGN HEIGHTS LARGER THAN 3'-0", THE VERTICAL CLEARANCE TO THE BOTTOM OF THE SECONDARY SIGN PANEL SHALL BE 5'-3"±.

* THE VERTICAL SIGN GROUND CLEARANCE ON RIGHT END OF SIGN SHALL BE A MINIMUM OF 3'-0"±.

POST LENGTHS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE ESTIMATED LENGTHS. THE CONTRACTOR SHALL VERIFY POST LENGTHS AT THE TIME OF FINAL GRADING.

REFER TO THE TRAFFIC ENGINEERING OPERATIONS AND SAFETY MANUAL FOR FURTHER GUIDANCE ON MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

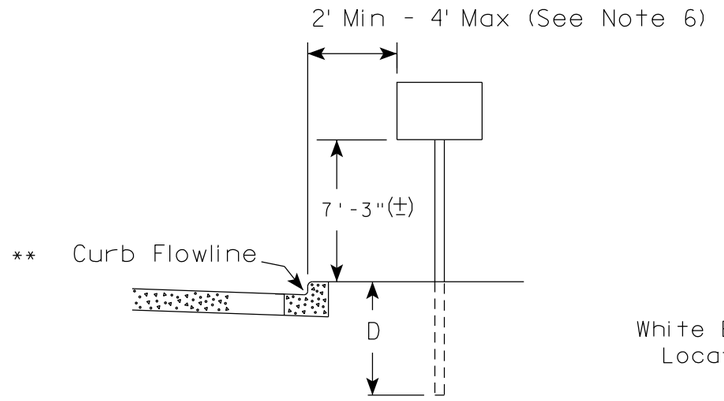
DRAWN BY | PLANS CK'D.

TYPICAL TYPE I SIGN INSTALLATION

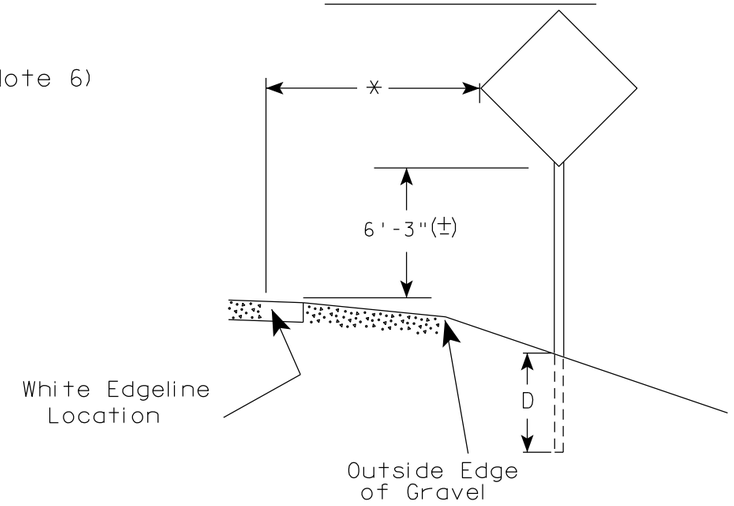
SHEET A4-1.10

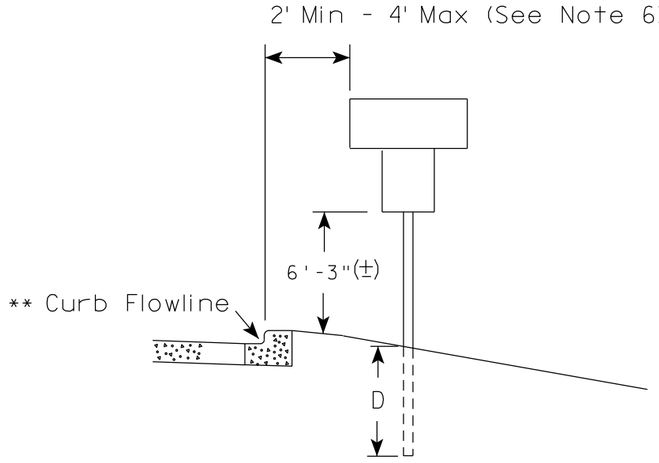
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 176 | E

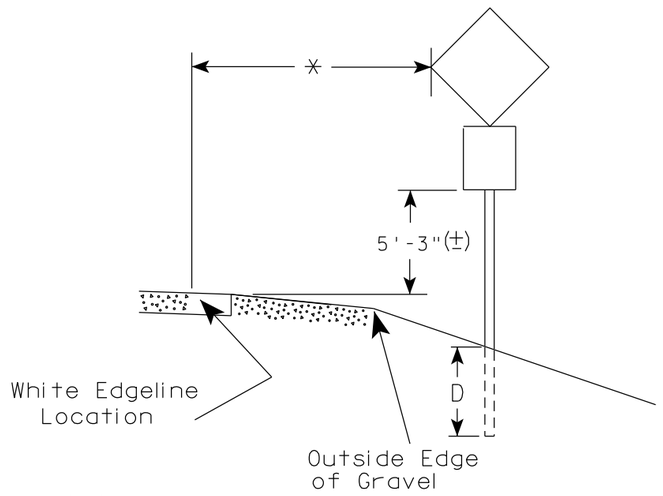
URBAN AREA



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.

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

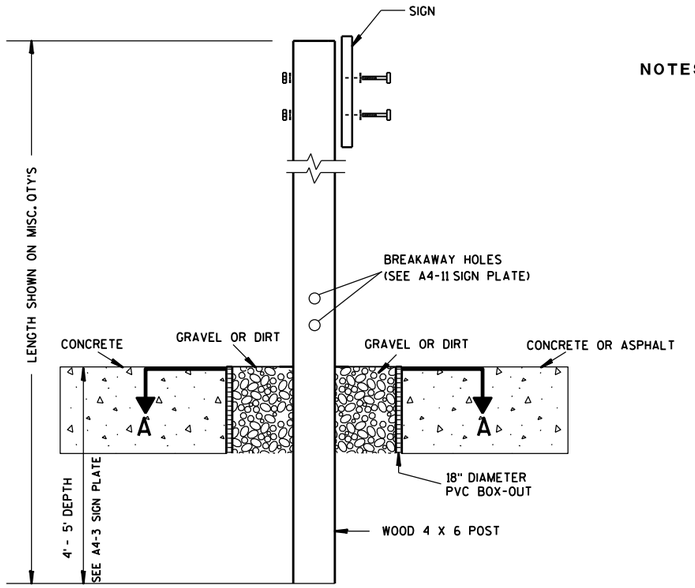
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

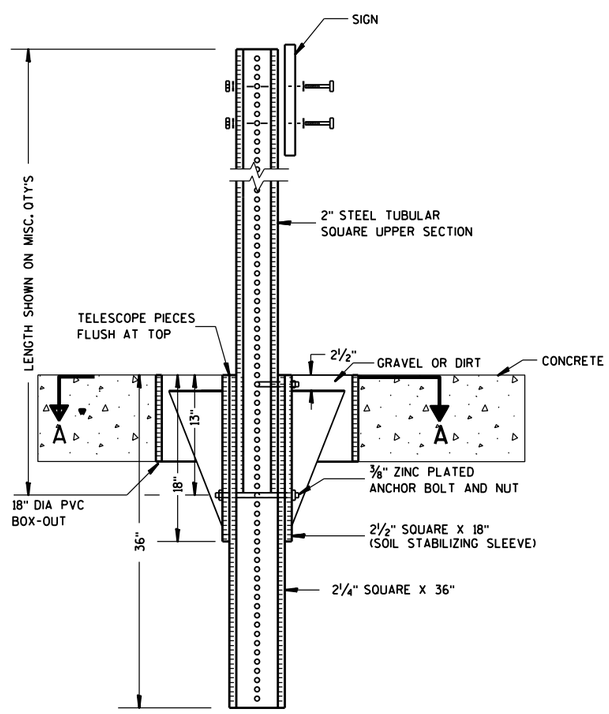
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 177	E



ELEVATION VIEW

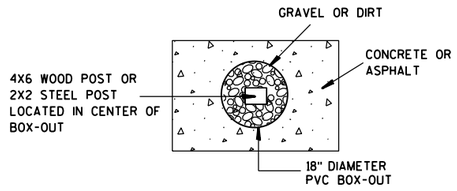
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

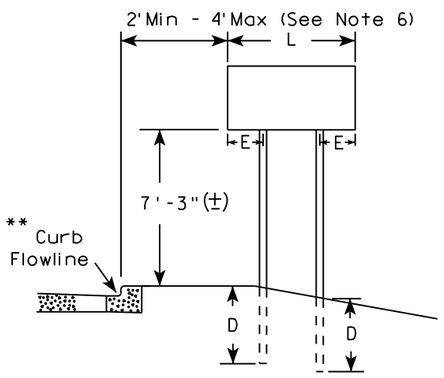
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

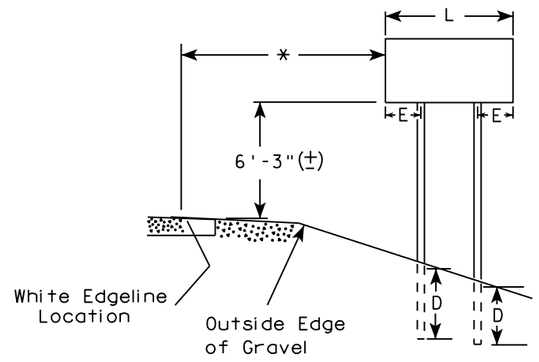
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

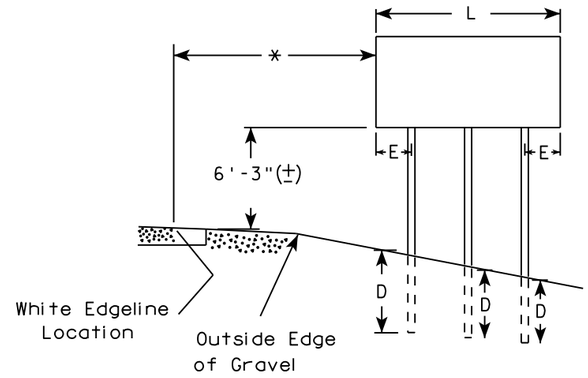
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

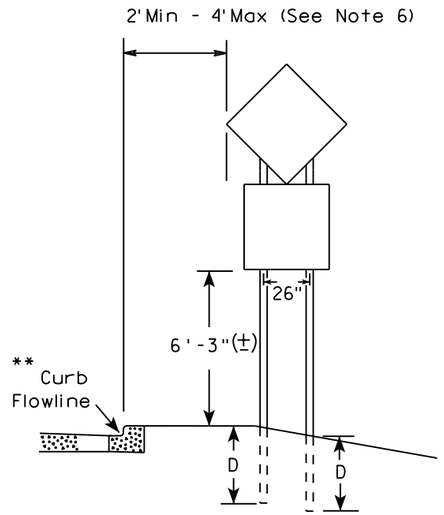
URBAN AREA



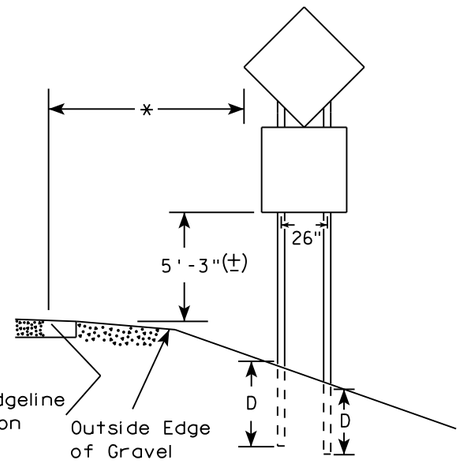
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



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

* 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

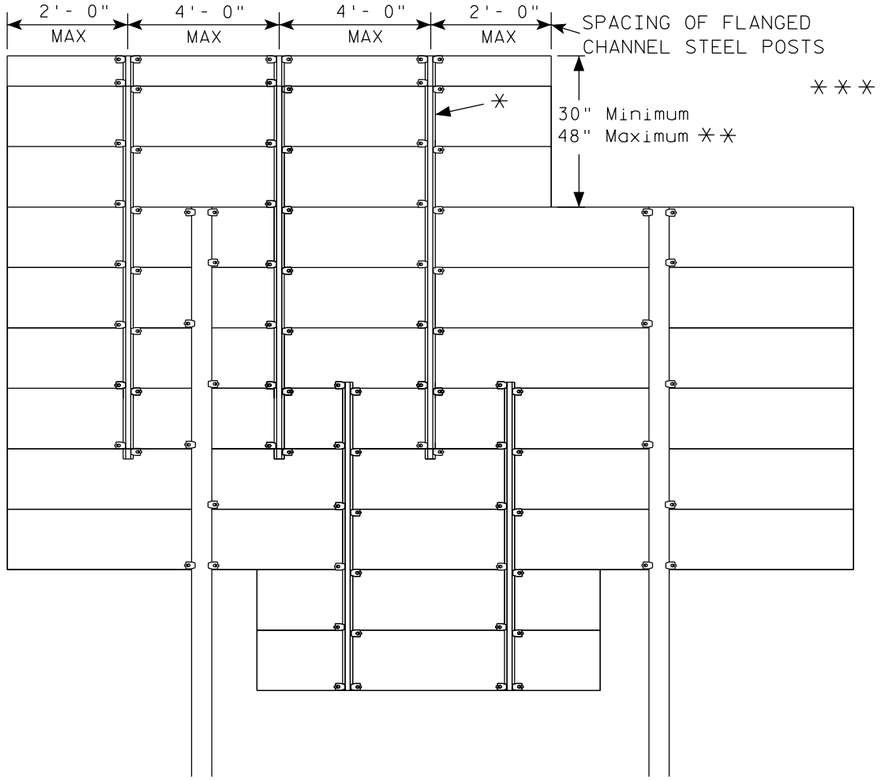
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 179	E

GROUND MOUNTED SIGN



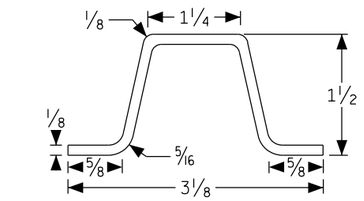
✳=2.00 lb/ft AND 4.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

✳✳=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

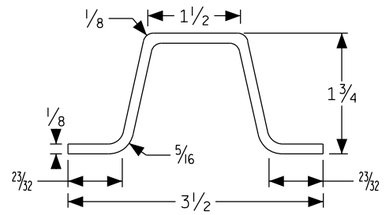
✳✳✳ THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 15 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 15 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAILS

NOT TO SCALE

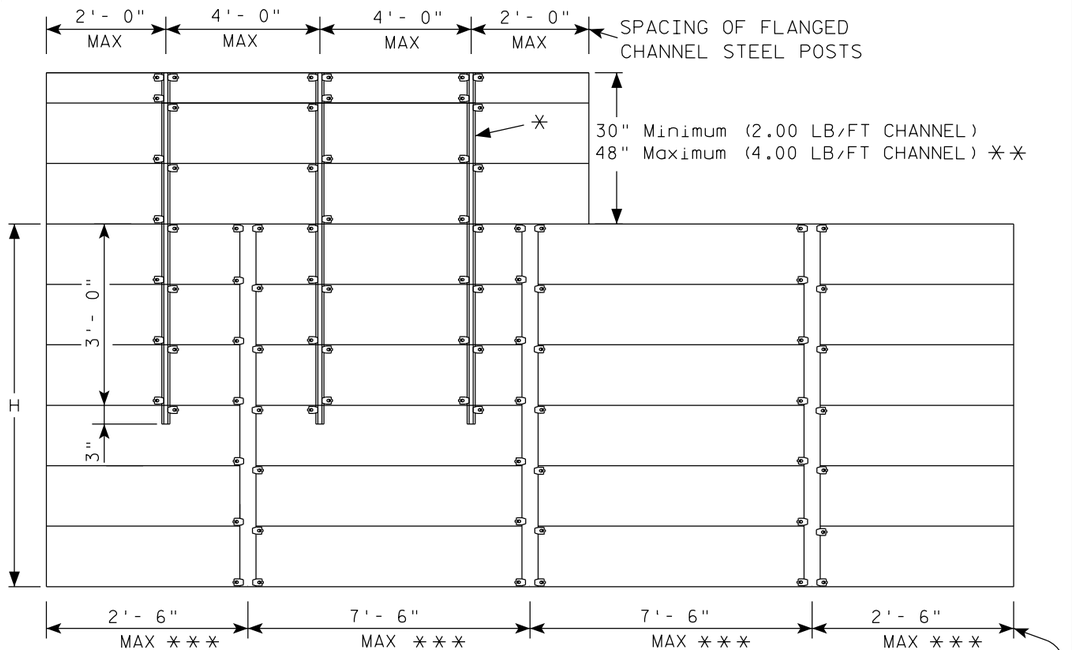


2.00 LB/FT CHANNEL



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

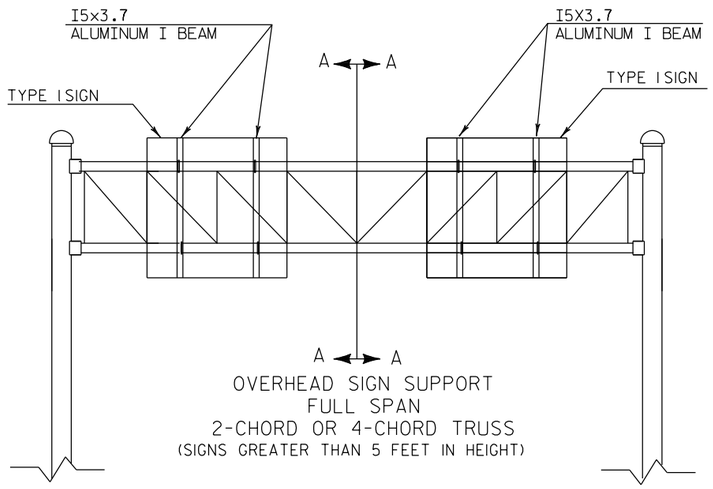
   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER 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

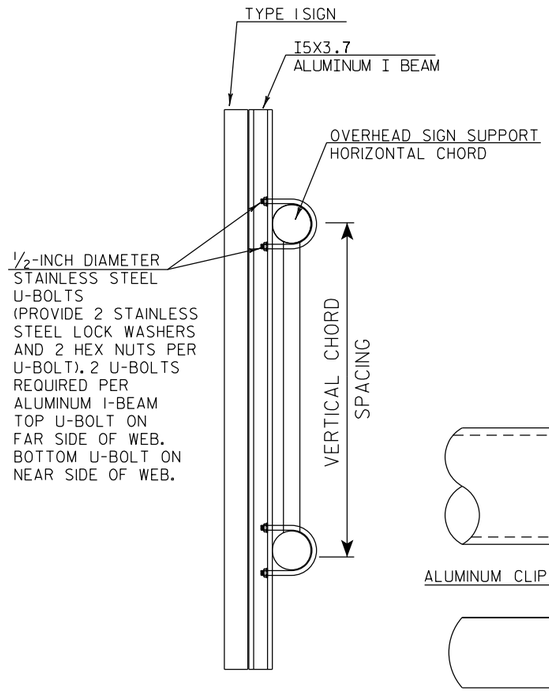
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

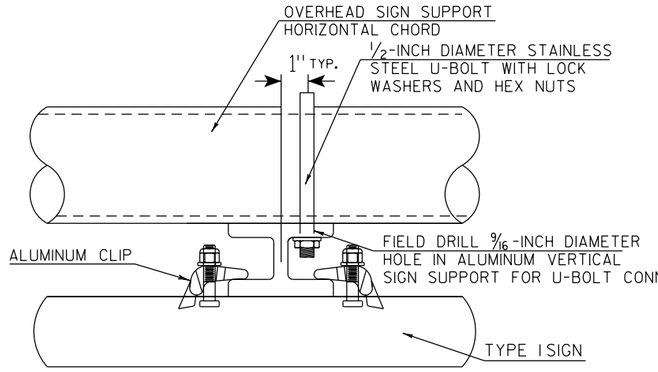
DATE 1/07/20 PLATE NO. A4-6.12



OVERHEAD SIGN SUPPORT
FULL SPAN
2-CHORD OR 4-CHORD TRUSS
(SIGNS GREATER THAN 5 FEET IN HEIGHT)



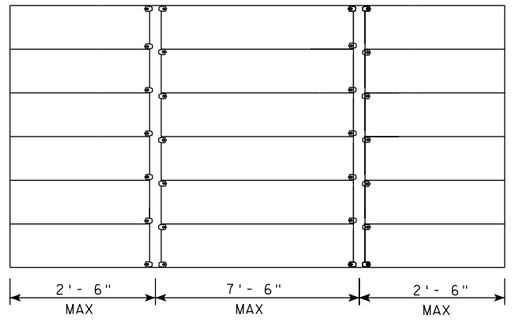
CUT SECTION A-A



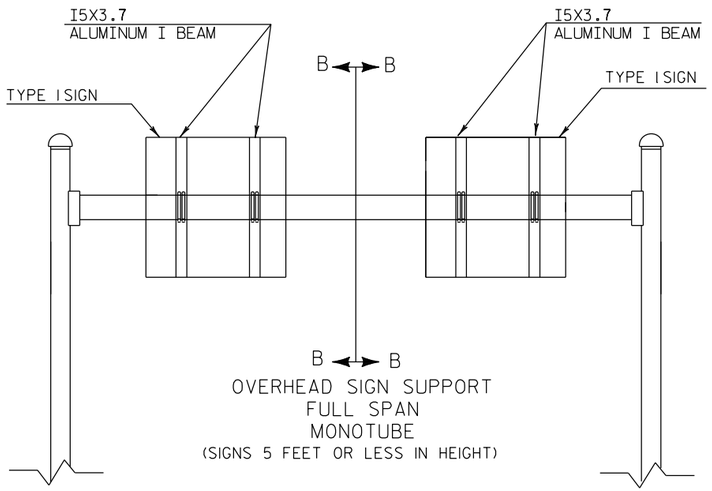
TYPICAL SIGN CONNECTION FOR
2-CHORD OR 4-CHORD TRUSS
PLAN VIEW

GENERAL NOTES

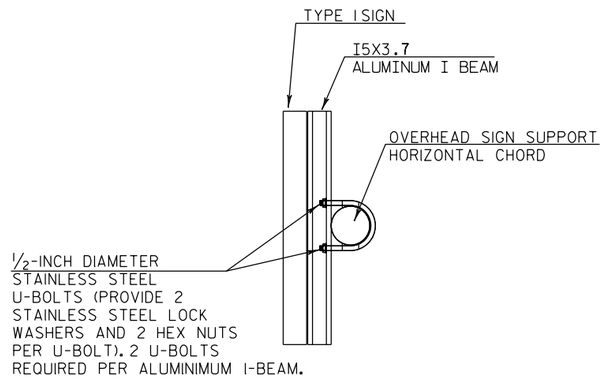
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.
9. SLOTTED HOLES IN I-BEAMS ARE NOT ALLOWED



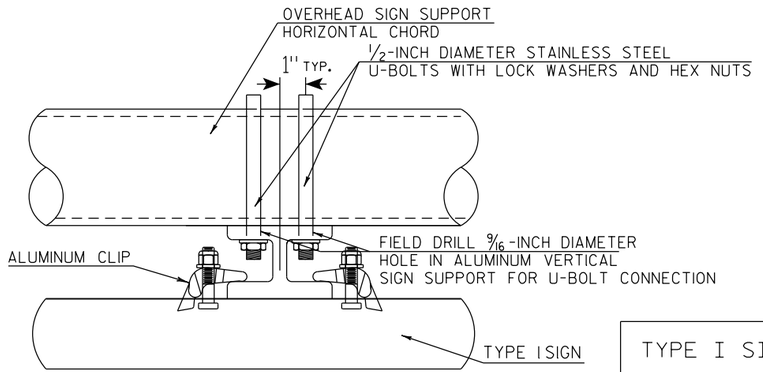
SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
MONOTUBE
(SIGNS 5 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
MONOTUBE
PLAN VIEW

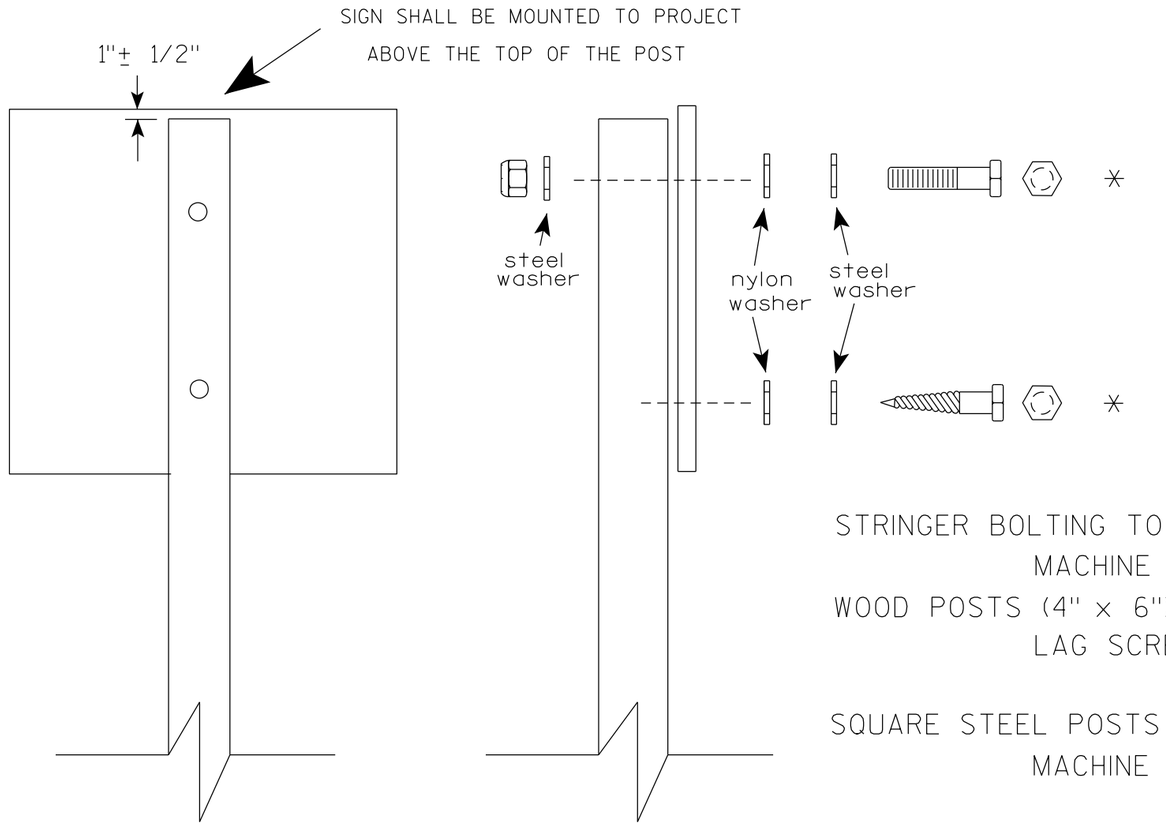
TYPE I SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
State Traffic Engineer

DATE 1/07/20 PLATE NO. A4-7A.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 181	E



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:

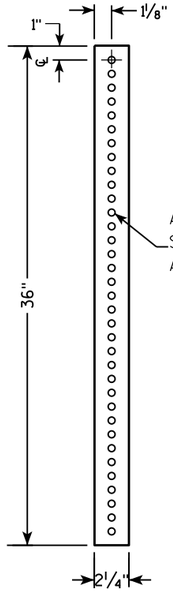
SHEET NO: 182 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 01-APRIL-2020 PLOT BY : dotc4c

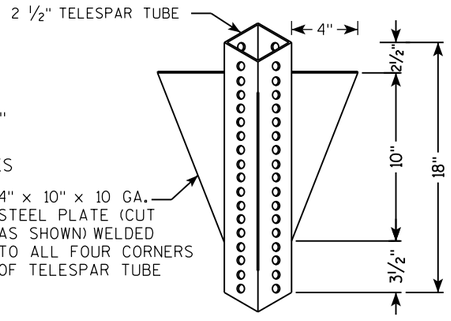
WISDOT/CADDS SHEET 42

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

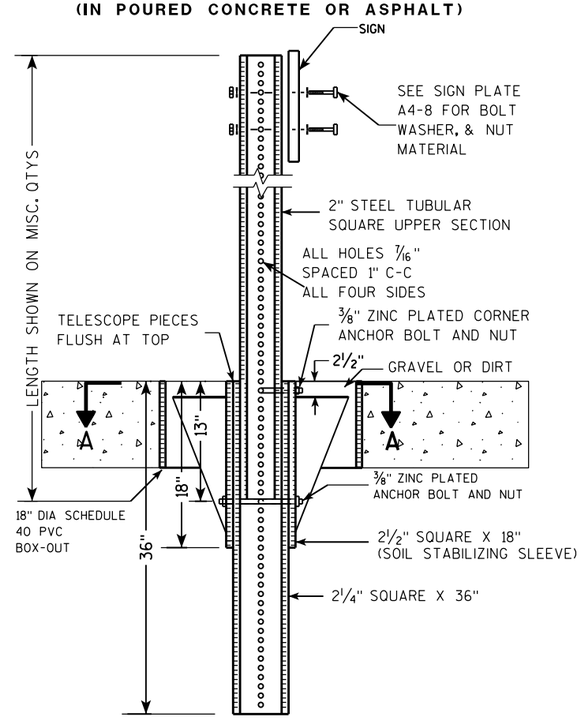
2 ¼ " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



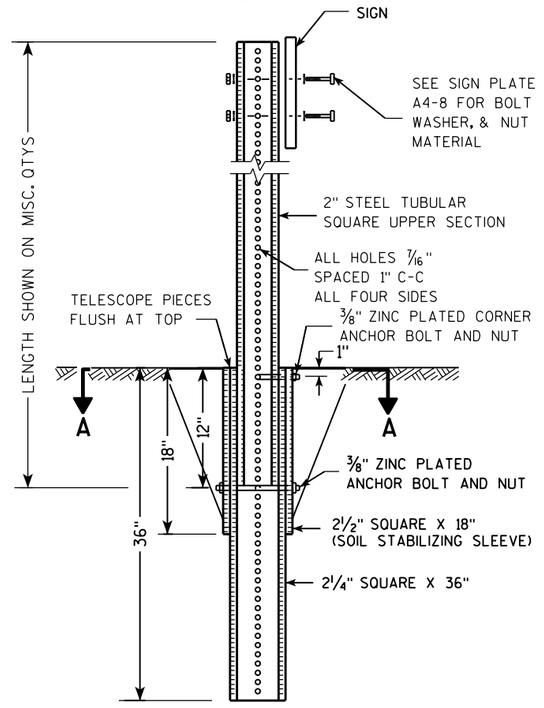
2 ½ " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

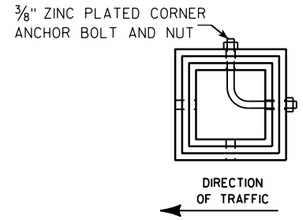


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

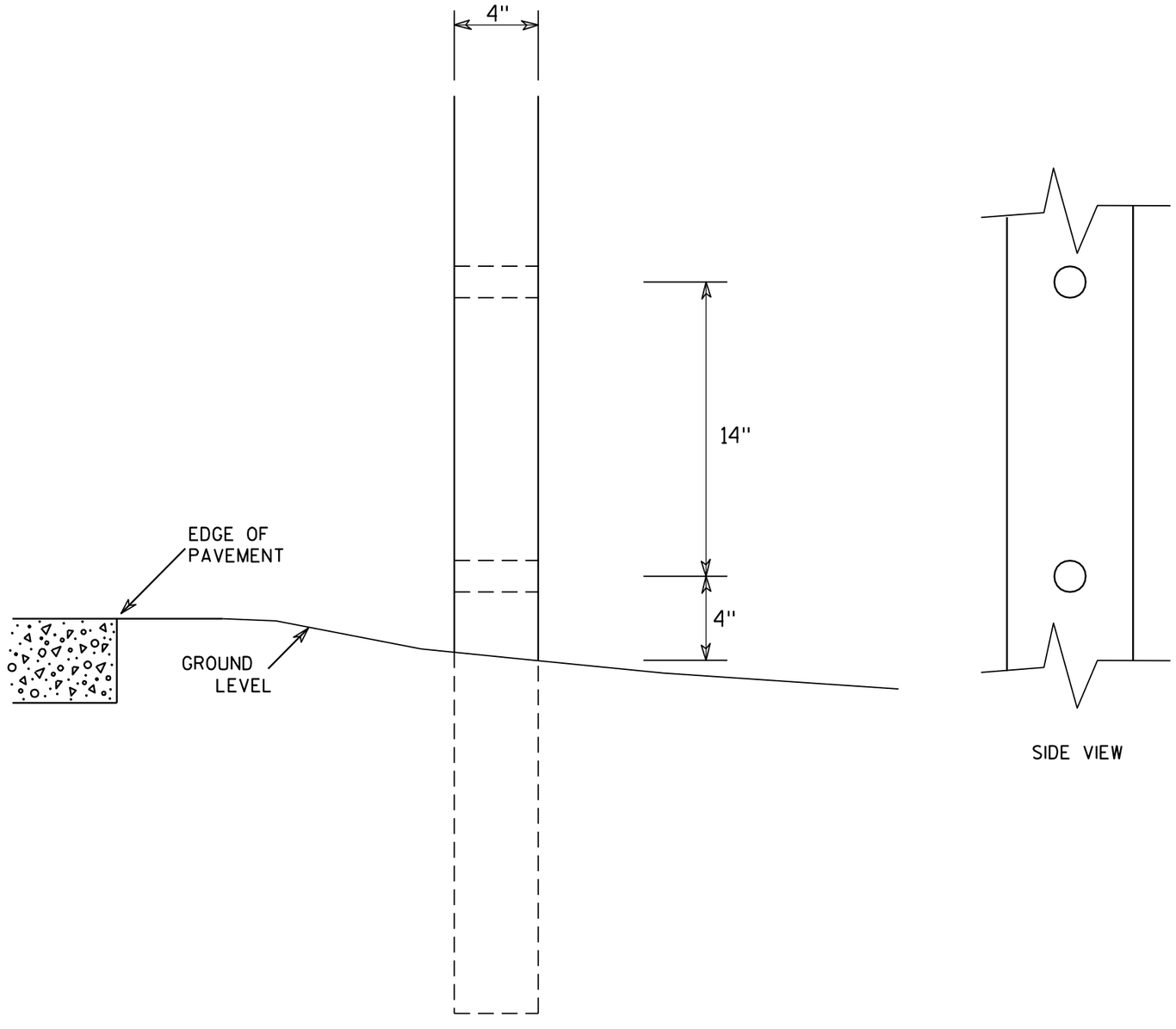
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 183 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42



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

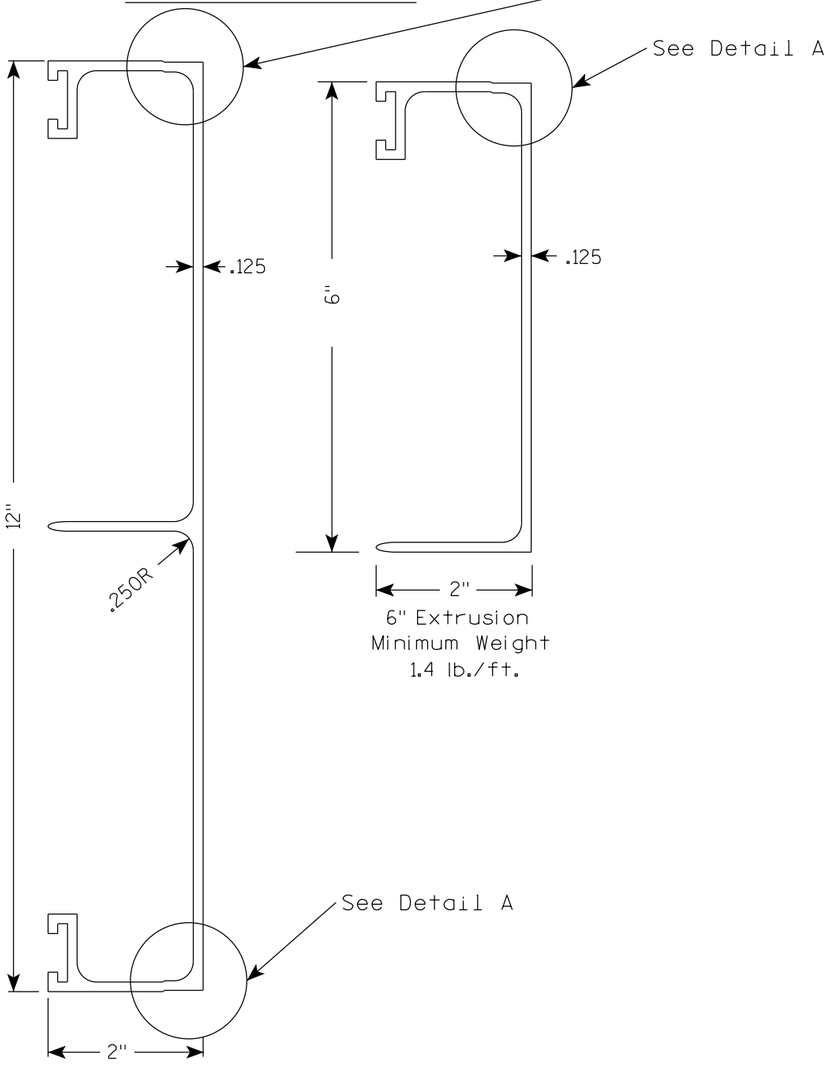
WISCONSIN DEPT OF TRANSPORTATION

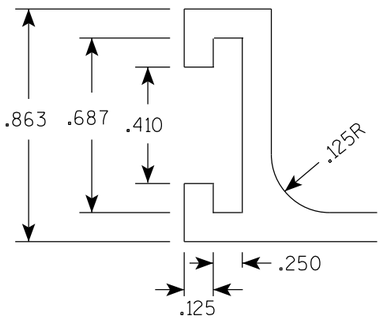
APPROVED Chester J Spang
for State Traffic Engineer

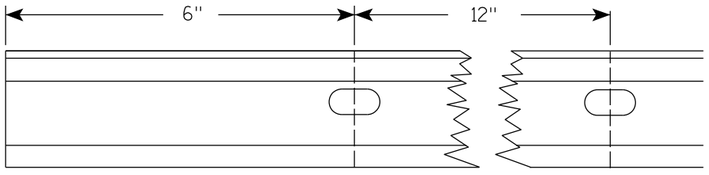
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 184	E

Extruded Shape







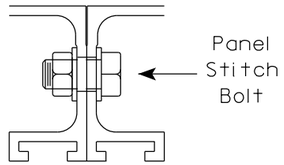
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

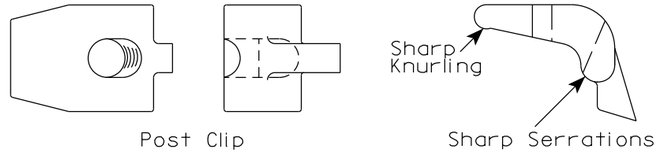
The hardware includes:

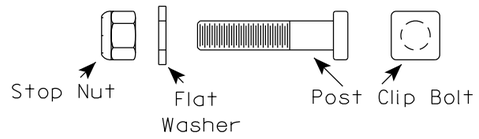
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

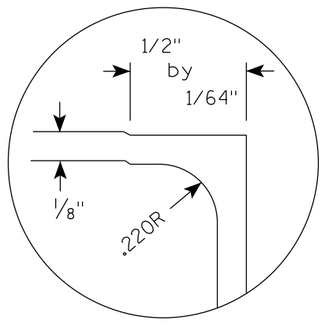
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





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

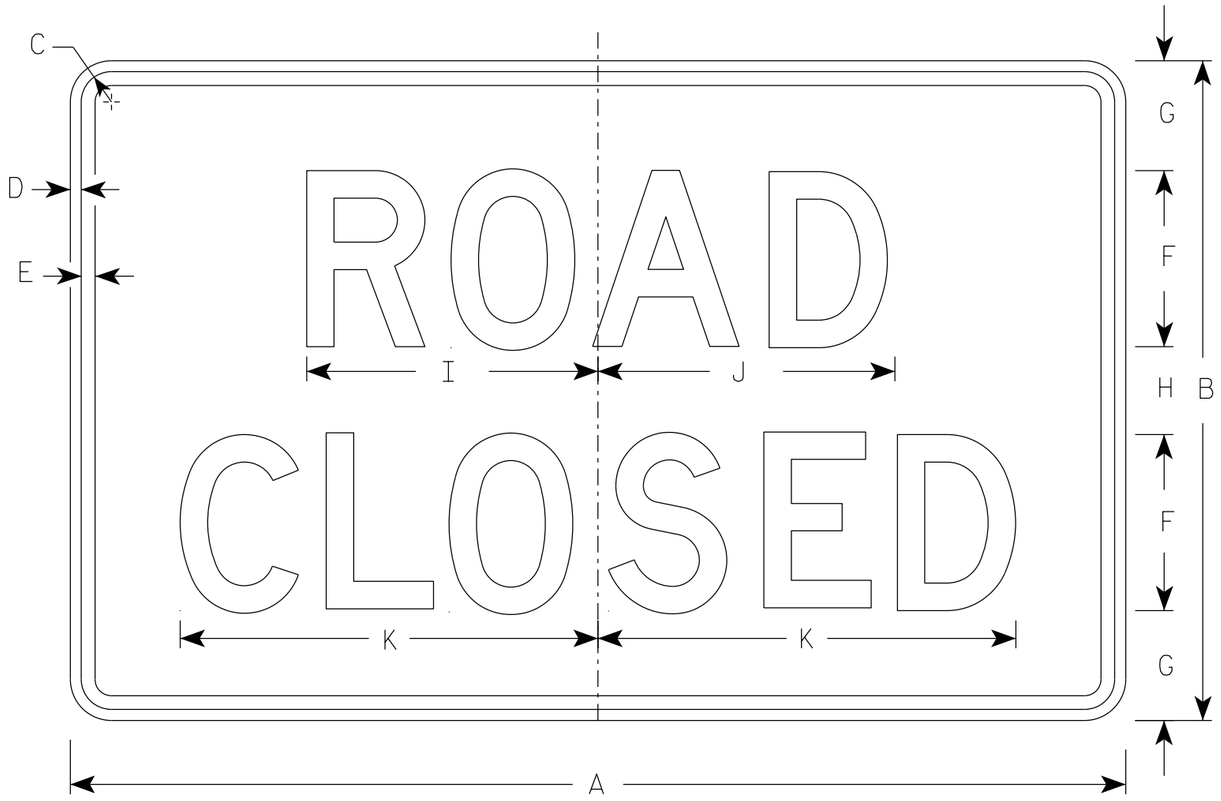
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/07/20 PLATE NO. A5-2.10

PROJECT NO:

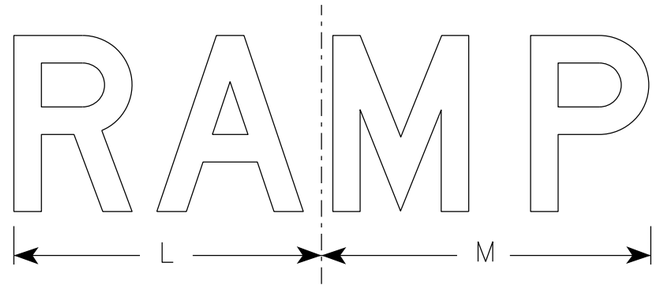
SHEET NO: 185 E



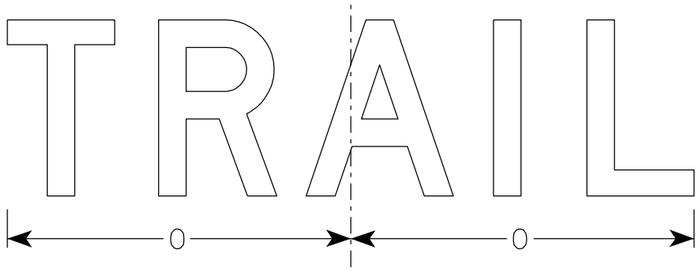
R11-2

NOTES

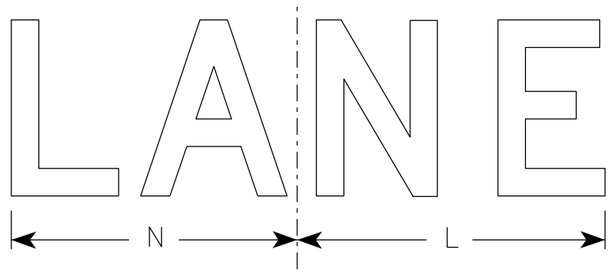
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the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



R11-2R



R11-2T



R11-2L

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

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: E

STATE PROJECT NUMBER

1150-78-71

DESIGN DATA

DESIGNED ACCORDING TO THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 1ST EDITION AND INTERIM SPECIFICATIONS, AND THE WISDOT BRIDGE MANUAL

FOUNDATION DESIGNED ACCORDING TO THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION.

DEAD LOAD: WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD: 3 PSF TO ONE FACE OF SIGN & SURFACE OF MEMBERS.
WIND PRESSURE: 120 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS. (1700 YEAR MEAN RECURRENCE INTERVAL)

WIND COMPONENTS	NORMAL	TRANSVERSE
LOAD CASE 1:	1.00	0.00
LOAD CASE 2:	0.00	1.00
LOAD CASE 3:	0.75	0.75

LOAD COMBINATIONS

STRENGTH I:	1.25 DC + 1.6 LL
EXTREME I (MAX DC):	1.1 DC + 1.0 W + 1.0 ICE
EXTERME I (MIN DC):	0.9 DC + 1.0 W
SERVICE I:	1.0 DC + 1.0 W
FATIGUE I:	1.0 NWG (NATURAL WIND GUST VIBRATION)
	1.0 TRG (TRUCK INDUCED GUST VIBRATION)

MATERIAL PROPERTIES

CONCRETE MASONRY..... f'c = 3,500 psi

HIGH STRENGTH STEEL REINFORCEMENT, GRADE 60..... fy = 60,000 psi

STRUCTURAL ANGLES, PLATE AND BARS - ASTM A709 GRADE 36..... fy = 36,000 psi

CHORDS & COLUMN PIPE - ASTM A500 GRADE C..... fy = 46,000 psi

HIGH STRENGTH BOLTS - A325..... fy = 92,000 psi

ANCHOR RODS - ASTM F1554 GRADE 55..... fy = 55,000 psi

HEAVY HEX NUTS FOR ANCHOR RODS - ASTM A563A

WASHERS FOR ANCHOR RODS - ASTM F436

FOUNDATION DATA

SIGN STRUCTURE FOUNDATIONS ARE SUPPORTED ON DRILLED SHAFTS THAT HAVE BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 24° (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 750 PSF (COHESIVE SOILS) AND A UNIT WEIGHT OF 125 PCF. THE GROUND WATER TABLE FOR DESIGN IS ASSUMED TO BE AT A DEPTH OF 10'-0" BELOW THE GROUND SURFACE, ACTUAL WATER LEVEL AT SITE MAY VARY. THE REGION GEOTECHNICAL ENGINEER SHALL VISUALLY INSPECT THE SUBSURFACE SOILS DURING DRILLING OF THE SHAFT HOLE TO CONFIRM THESE PROPERTIES PRIOR TO PLACEMENT OF THE DRILLED SHAFT CONCRETE.

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	S-42-11
531.2036	DRILLING SHAFT 36-INCH	LF	88
531.6120	FOUNDATION TWO-SHAFT TYPE FF-II S-42-11	EACH	1
532.6120	TRUSS FULL SPAN 4-CHORD TYPE II S-42-11	EACH	1

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), OCONTO COUNTY, NAD 83 (2011). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2012).

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "TRUSS FULL SPAN 4-CHORD (TYPE)" FOR EACH APPLICABLE SIGN STRUCTURE IN THE PLAN SET. LOCATE THE ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE AND INSTALL THE ID PLAQUE IN ACCORDANCE WITH S.D.D. 12 A 4-3.

CATWALKS ARE USED ON 4-CHORD STRUCTURES CARRYING DMS SIGNS. CATWALKS SHALL BE INCIDENTAL TO THE BID ITEM "TRUSS FULL SPAN 4-CHORD (TYPE)" FOR EACH DMS SIGN STRUCTURE IN THE PLAN SET.

UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF A TRUSS UNIT CAN BE GALVANIZED IN ONE PIECE.

WELD TEST AS PER AWS D1.1.

SEE SIGN PLATE NO. A4-6, A4-7A & A4-7B OF THE SIGN PLATE MANUAL FOR INSTRUCTIONS ON CENTERING SIGNS VERTICALLY ON THE TRUSS.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE 1/4 THE LENGTH OF THE CANTILEVER SPAN, 2'-0" DEEPER THAN THE C/L TO C/L OF CHORDS, AND SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED ON THE PLANS.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS PRIOR TO FABRICATION OF THE STRUCTURE. CONTRACTOR SHALL SHOW SIGNS ON THE SHOP DRAWINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRILLING OR EXCAVATING AND MAINTAINING A STABLE AND OPEN HOLE FOR SUBSEQUENT INSTALLATION OF CONCRETE MASONRY FOR THE DRILLED SHAFTS. PARTIAL OR FULL DEPTH TEMPORARY CASING MAY BE REQUIRED TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE FOR THE SIGN SUPPORT PRIOR TO FILLING THE HOLE WITH CONCRETE. PERMANENT CASING MADE FROM STEEL OR CORRUGATED METAL PIPE MAY BE USED IN LIEU OF TEMPORARY CASING. TEMPORARY/PERMANENT CASING, IF USED, SHALL BE INCIDENTAL TO THE BID ITEM "DRILLING SHAFT (DIA.)".

STRUCTURE DATA

SIGN STR	ACTUAL SIGN AREA	ACTUAL SIGN DEPTH	STANDARD DESIGN TRUSS
S-42-11	289 SF	15'-6"	II

TRAFFIC VOLUME

A.D.T. (2042) = 37,200
R.D.S. = 70 MPH

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. GENERAL LAYOUT S-42-11

LIST OF STANDARD DESIGN DRAWINGS

3. I. 4-CHORD TRUSS FULL SPAN TRUSS DETAILS
4. II. 4-CHORD TRUSS FULL SPAN COLUMN DETAILS
5. III. 4-CHORD TRUSS FULL SPAN CONNECTIONS 1
6. IV. 4-CHORD TRUSS FULL SPAN CONNECTIONS 2
7. V. 4-CHORD TRUSS FULL SPAN CATWALK DETAILS
8. VI. 4-CHORD TRUSS FULL SPAN ELECTRICAL DETAILS
9. VII. 4-CHORD TRUSS FULL SPAN FOUNDATIONS 1
10. VIII. 4-CHORD TRUSS FULL SPAN FOUNDATIONS 2

STRUCTURE DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK, P.E. (608) 261-0261

CONSULTANT:
VINCENT DIFRANCES, P.E. (920) 468-4771

THESE ARE STANDARD DESIGN PLANS, DEVELOPED AND MAINTAINED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION. THE DESIGNER CERTIFIES THAT THE DESIGN AND PLAN DETAILS CHOSEN ARE CONSISTENT WITH THE GUIDANCE PROVIDED IN THE CURRENT WISCONSIN BRIDGE MANUAL CHAPTER 39.

WISCONSIN
VINCENT J. DIFRANCES
E-45790
MILWAUKEE
WI
PROFESSIONAL ENGINEER

12/15/2021

NO.	DATE	REVISION	BY

JT ENGINEERING, INC
Consultant Services

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 04/11/22
CHIEF STRUCTURES DESIGN ENGINEER DATE

4-CHORD TRUSS FULL SPAN PLANS

OVER USH 41 NB

COUNTY	TOWN
OCONTO	ABRAMS

DESIGN SPEC.
AASHTO LRFDLTS-1 W/INTERIMS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
BOS	BOS	VJD	CJM

GENERAL NOTES & DESIGN DATA

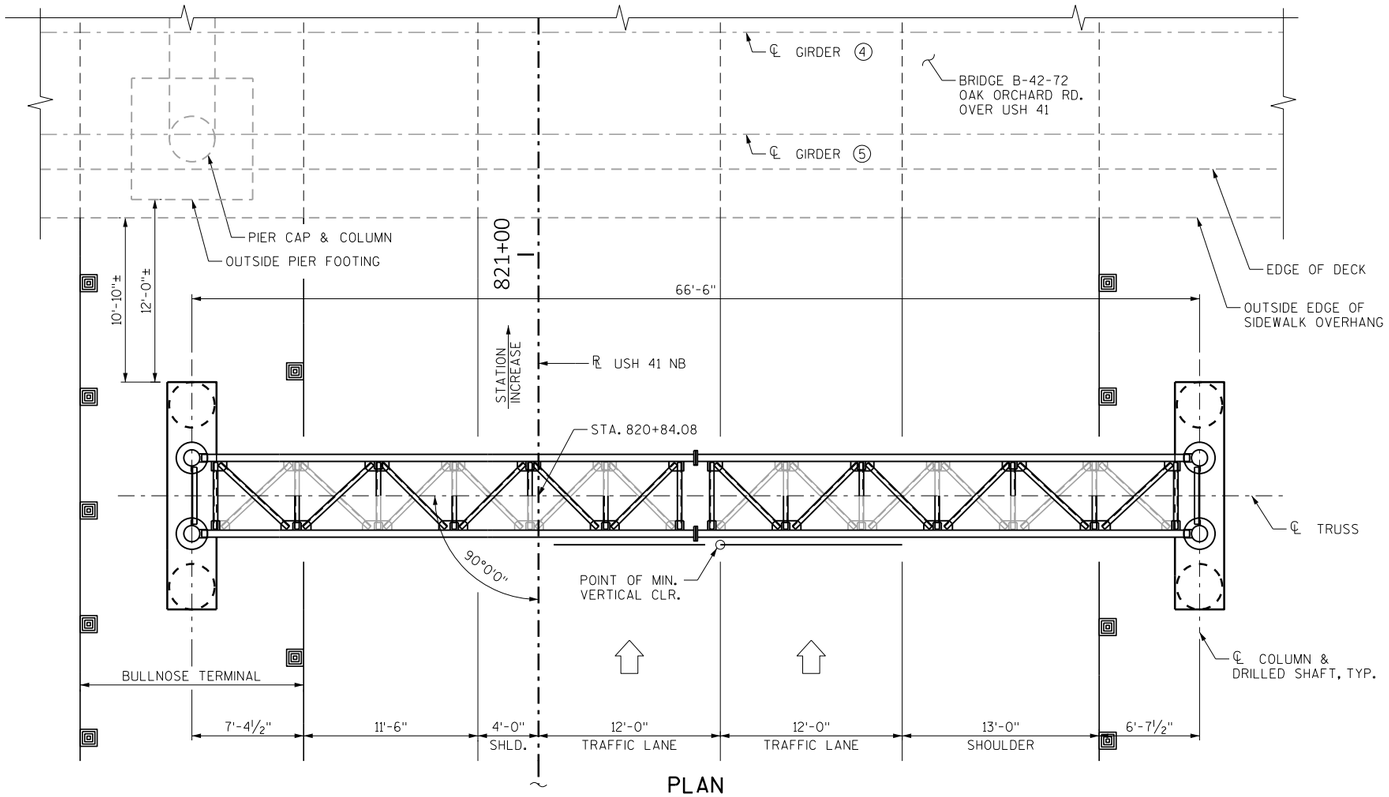
SHEET 1 OF 10
187

8

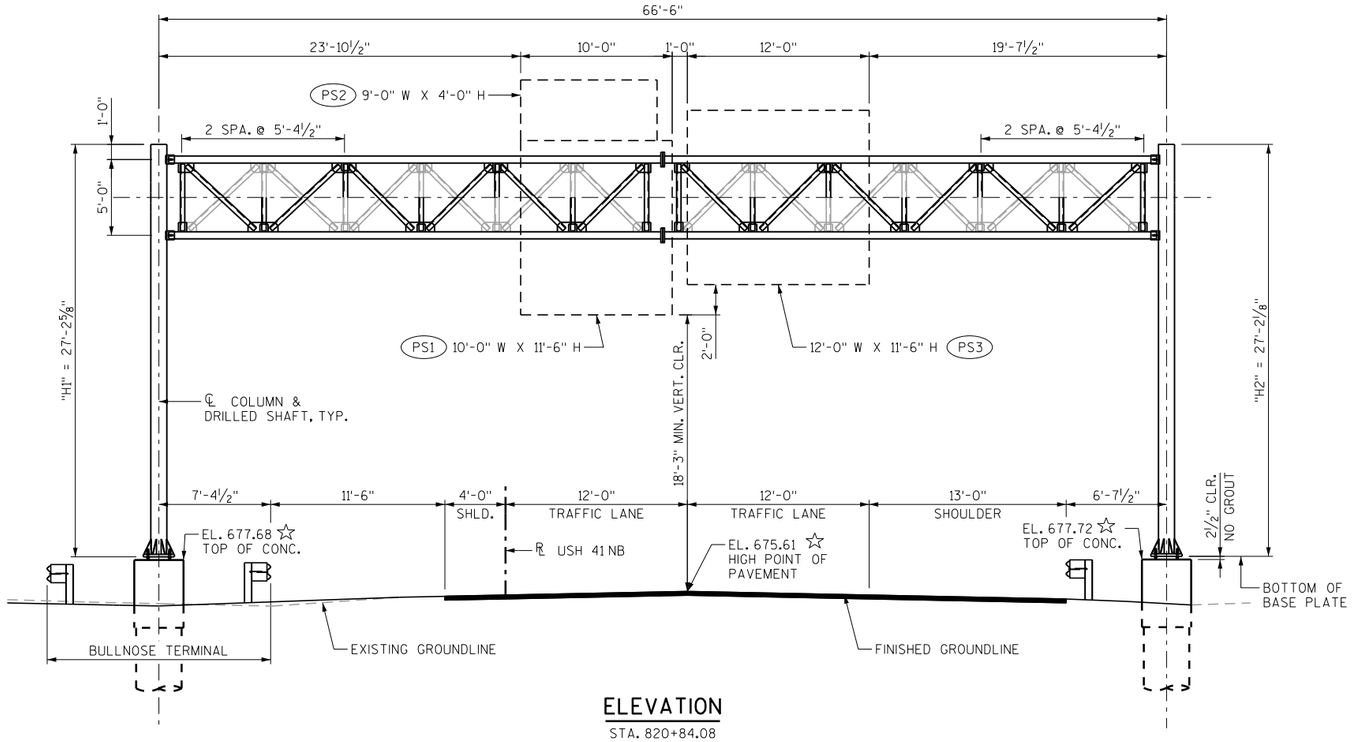
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STATE PROJECT NUMBER

1150-78-71

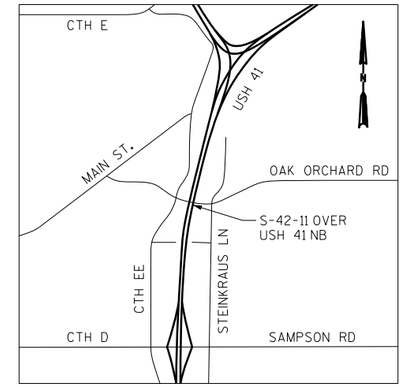


PLAN

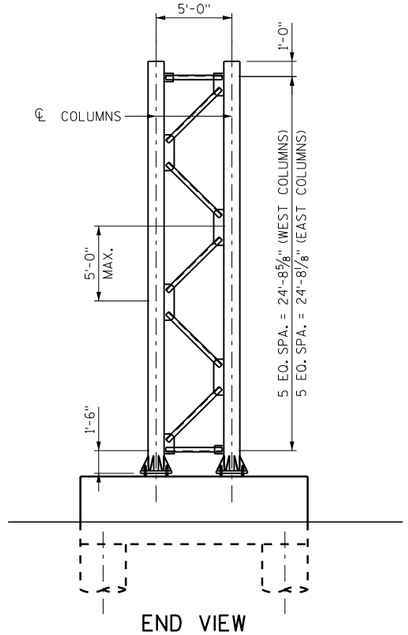


ELEVATION

STA. 820+84.08
(LOOKING UPSTATION AT FRONT OF SIGN)



LOCATION MAP



END VIEW

LOOKING WEST

NOTE

POINT OF MIN. VERTICAL CLEARANCE
STA. 820+84.08, 12.00' RT.
EL. 675.61

LEGEND

☆ ELEVATIONS GIVEN ALONG ℄ TRUSS

(XXX) SIGN NUMBERS (PERMANENT SIGNING PLAN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-42-11

DRAWN BY VJD | PLANS CK'D. CJM

GENERAL LAYOUT
S-42-11

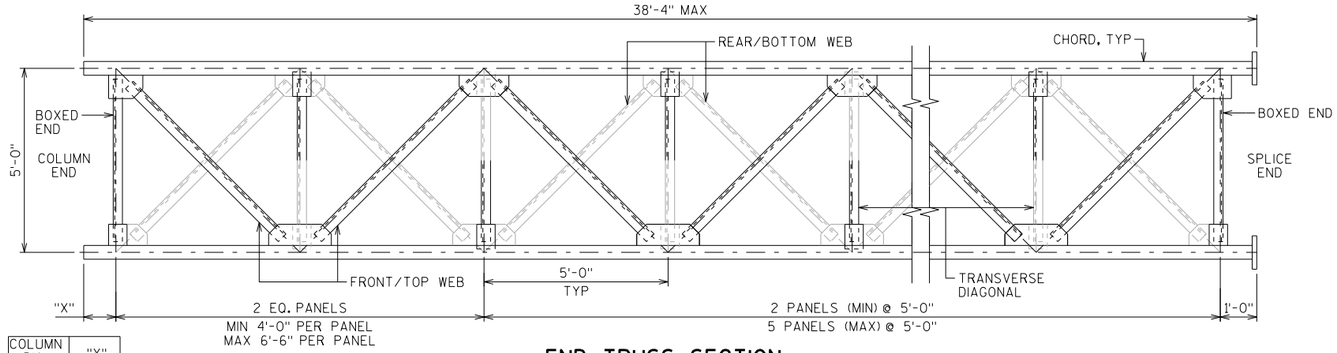
SHEET 2 OF 10
188

8

8

STATE PROJECT NUMBER

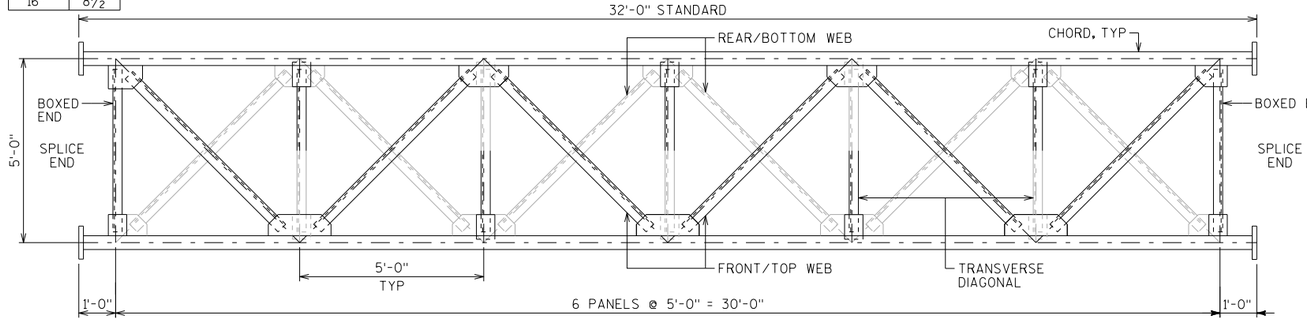
STANDARD



COLUMN DIA.	"X"
12¾"	10⅛"
14"	9½"
16"	8½"

END TRUSS SECTION

LOOKING AT F.F./TOP OF TRUSS

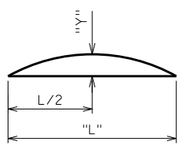


CENTER TRUSS SECTION

LOOKING AT F.F./TOP OF TRUSS

INTERPOLATE FOR VALUES NOT SHOWN

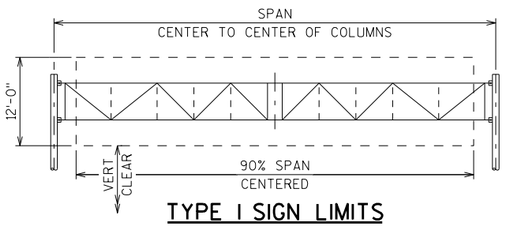
CAMBER VALUES		
SPAN "L"	"Y"	
	TYPE I	DMS
60'-0"	1"	1¼"
82'-0"	1½"	1⅞"
102'-0"	2⅛"	2⅝"
114'-0"	2⅝"	3¼"
130'-0"	3¼"	4"



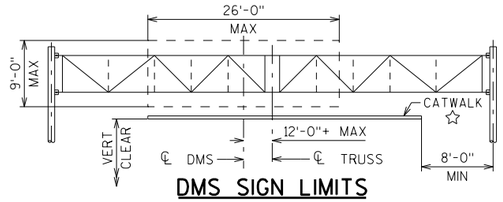
INTERPOLATE FOR VALUES NOT SHOWN. DMS VALUES INCLUDE DL OF CATWALK.

CAMBER DIAGRAM

CAMBER SHALL BE BUILT INTO THE TRUSS DURING FABRICATION. SHIM PLATES BETWEEN TRUSS SECTIONS TO CREATE CAMBER SHALL NOT BE ALLOWED.

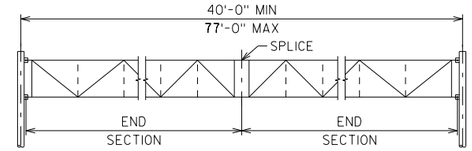


TYPE I SIGN LIMITS

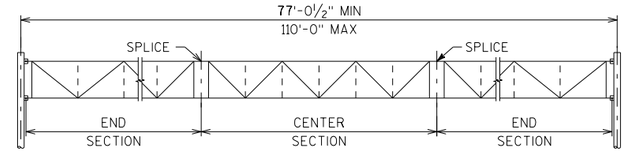


DMS SIGN LIMITS

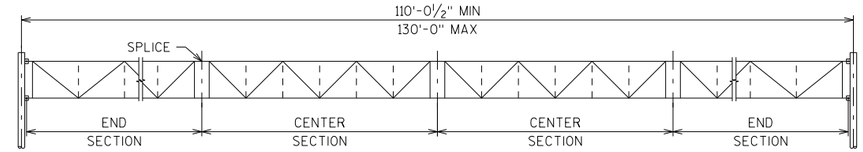
4,500 LB MAX DMS WEIGHT. INCLUDES DMS VERTICAL SUPPORT MEMBERS



2 SECTION TRUSS



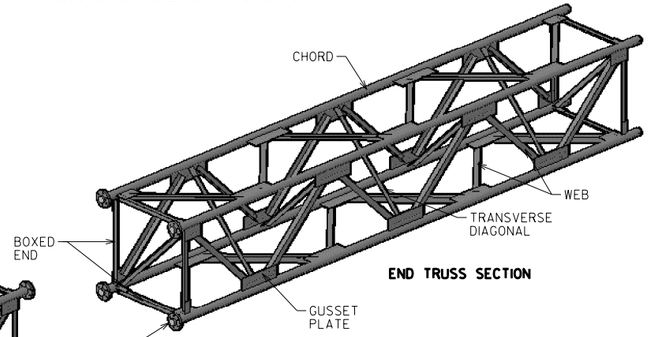
3 SECTION TRUSS



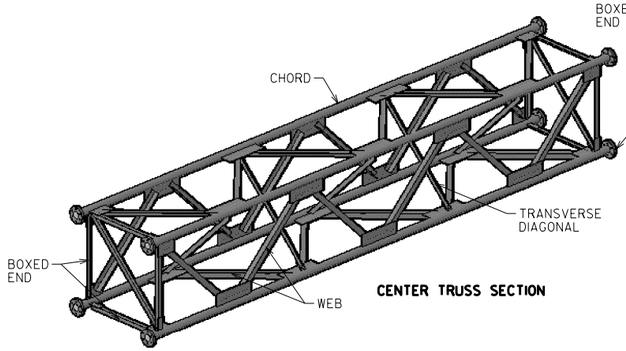
4 SECTION TRUSS

TRUSS CONFIGURATIONS

TRUSS SYMETRICAL ABOUT ℄ OF SPAN



END TRUSS SECTION



CENTER TRUSS SECTION

TYPICAL TRUSS SECTION

THE GENERAL PATTERN SHOWN ABOVE IS TO BE MAINTAINED WHEN ASSEMBLING TRUSSES. INTERIOR DIAGONALS SHOULD CONNECT TO TOP AND BOTTOM TRUSS WEB PANEL POINTS.

FULL SPAN 4-CHORD TRUSS MEMBER TABLE

STANDARD DESIGN TRUSS	TYPE I SIGN AREA (FT^2)	DMS AREA (FT^2)	MAXIMUM SPAN RANGE	CHORD OUTER DIA. X THK	WEB W X D X THK	BOXED END W X D X THK	TRANSVERSE DIAGONAL W X D X THK	SPLICE PLATE OUTER DIA. X THK	CHORD SPLICE NO. ¾" BOLTS
I	648	234	60'-0"	5.563" X 0.258"	L3½X3½X5⁄16	L3X3X¼	L3X3X¼	11" X 1½"	8
II	885	234	82'-0"	5.563" X 0.375"	L3½X3½X⅜	L3X3X¼	L3X3X¼	11⅝" X 1½"	8
III	1102	234	102'-0"	5.563" X 0.500"	L4X4X⅜	L3X3X¼	L3X3X¼	11⅝" X 1½"	8
IV	1232	234	114'-0"	6.625" X 0.375"	L4X4X7⁄16	L3X3X¼	L3X3X¼	1'-0⅝" X 1½"	8
V	1404	234	130'-0"	6.625" X 0.500"	L4X4X½	L3X3X¼	L3X3X¼	1'-0⅝" X 1½"	8

LEGEND

☆FOR OSS WITH DMS ONLY, SEE "CATWALK DETAILS" SHEET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

DRAWN BY BOS | PLANS CK'D. BOS

4-CHORD TRUSS FULL SPAN TRUSS DETAILS

SHEET I OF VIII

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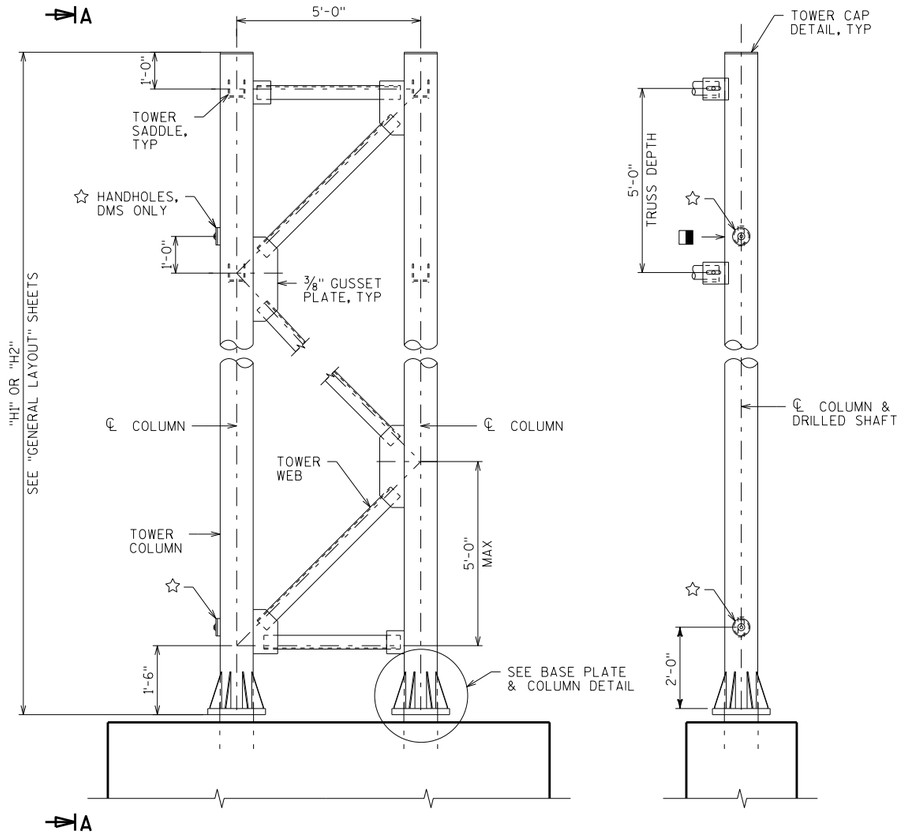
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8

STATE PROJECT NUMBER

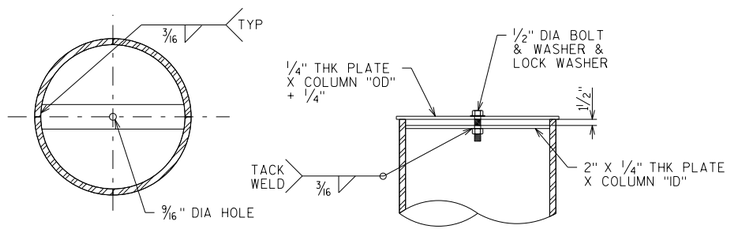
STANDARD



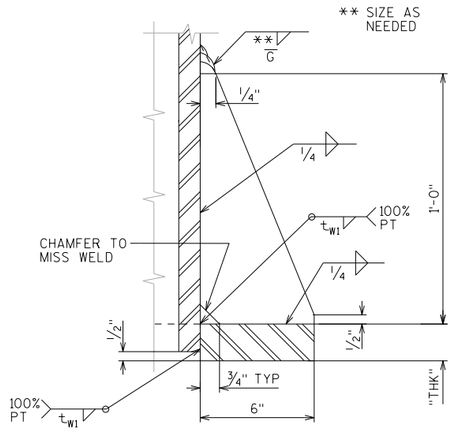
END VIEW COLUMN TRUSS

SECTION A-A

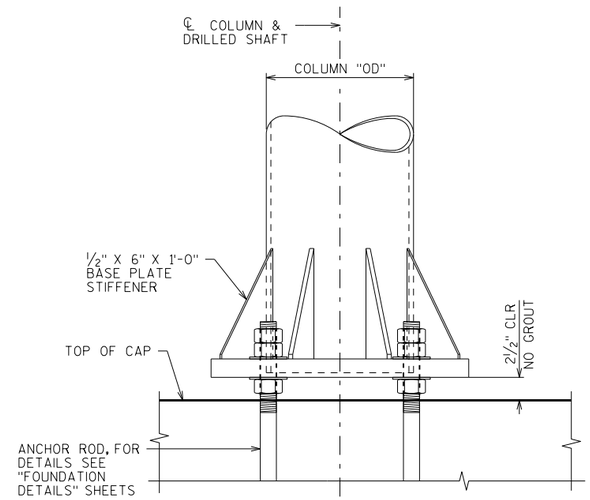
LOOKING AT F.F. OF STRUCTURE
OTHER COLUMN TRUSS SIMILAR



TOWER CAP DETAIL

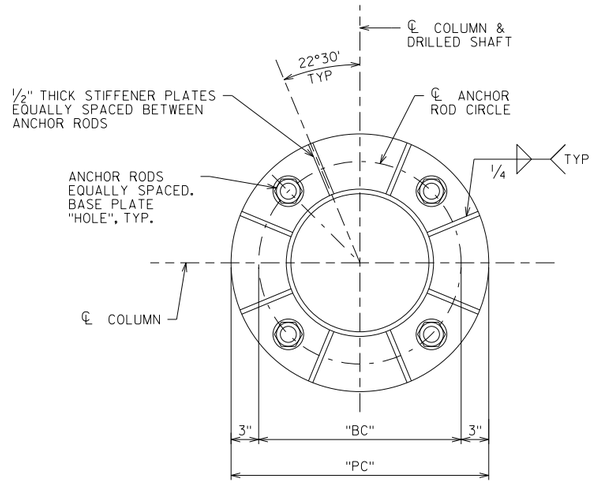


BASE PLATE STIFFENER DETAIL



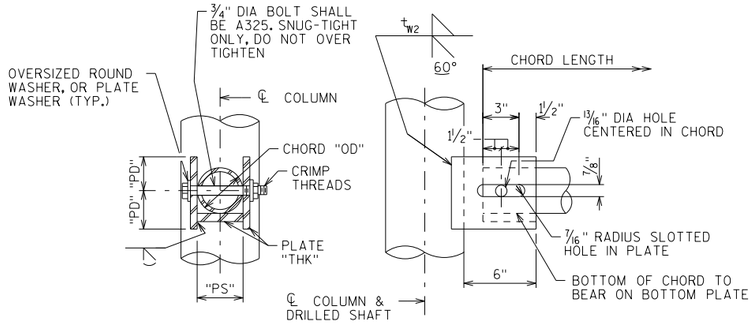
BASE PLATE & COLUMN DETAIL

LOOKING AT FRONT FACE OF STRUCTURE



BASE PLATE

PLAN



TOWER SADDLE CONNECTION DETAILS

BOLT AND HOLE DIMENSIONS SHOWN ARE MINIMUM

FULL SPAN 4-CHORD COLUMN MEMBER TABLE

STANDARD DESIGN TYPE	MAXIMUM COLUMN HEIGHT	COLUMN OUTER DIA x THK	WEB W x D x THK	STIFFENER W x D x THK	BASE PLATE					TOWER SADDLE CONNECTION			
					"t_{w1}"	"HOLE"	"THK"	"BC"	"PC"	"t_{w2}"	"THK"	"PS"	"PD"
I	31'-0"	12.75" x 0.250"	L3 1/2 x 3 1/2 x 3/8	6" x 12" x 1/2"	5/16"	1 13/16"	2"	1'-6 3/4"	2'-0 3/4"	1/4"	3/8"	5 3/16"	3 1/4"
II	31'-0"	12.75" x 0.375"	L4x4x3/8	6" x 12" x 1/2"	5/16"	1 13/16"	2"	1'-6 3/4"	2'-0 3/4"	1/4"	3/8"	5 3/4"	3 9/16"
III	31'-0"	12.75" x 0.500"	L4x4x1/2	6" x 12" x 1/2"	5/16"	2 1/16"	2"	1'-6 3/4"	2'-0 3/4"	1/4"	7/16"	5 3/4"	3 9/16"
IV	31'-0"	14.00" x 0.500"	L5x5x7/16	6" x 12" x 1/2"	5/16"	2 1/16"	2"	1'-8"	2'-2"	1/4"	7/16"	6 13/16"	4 1/16"
V	31'-0"	16.00" x 0.500"	L5x5x1/2	6" x 12" x 1/2"	5/16"	2 1/16"	2"	1'-10"	2'-4"	1/4"	1/2"	6 13/16"	4 1/16"

LEGEND

☆ FOR OSS WITH DMS ONLY, PROVIDE HANDHOLES AT COLUMN ADJACENT TO DMS. SEE "ELECTRICAL DETAILS" SHEET

◨ FOR OSS WITH DMS ONLY, DRILL HOLE AND TAP FOR (2) 2" STD. PIPE THREADS. LOCATE BOTTOM HOLE 6" UP FROM TOP OF BOTTOM CHORD AND SPACE VERTICALLY AT 6" C/C. PLACE CONDUIT PLUG IN HOLES THAT ARE NOT USED FOR WIRING SIGN PANELS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

DRAWN BY BOS | PLANS CK'D. BOS

4-CHORD TRUSS FULL SPAN COLUMN DETAILS

SHEET II OF VIII

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SCALE = 2.00

8

8

STATE PROJECT NUMBER

STANDARD

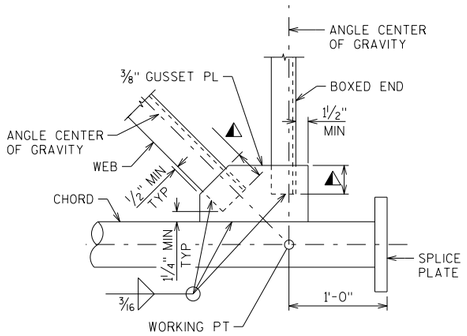
NOTE

FABRICATOR HAS THE OPTION TO USE NON-MITERED, RECTANGULAR GUSSET PLATES IN LIEU OF MITERED PLATES SHOWN ON THESE DETAILS.

MEMBER CONNECTION DATA

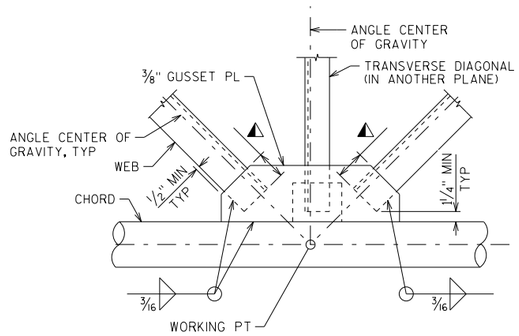
STANDARD DESIGN TYPE	WELD LEG LENGTH		NO. OF BOLTS	
	◭	◐	◪	☆
I	3" MIN	4" MIN	3	3
II	3½" MIN	6" MIN	3	3
III	3½" MIN	6" MIN	5	3
IV	4" MIN	6¼" MIN	5	4
V	4½" MIN	7¼" MIN	5	4

FOR ALL ANGLE TO GUSSET CONNECTIONS, BOLT SPACING = 2½"

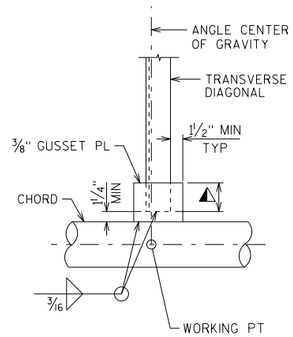


WELDED BOXED END CONNECTION

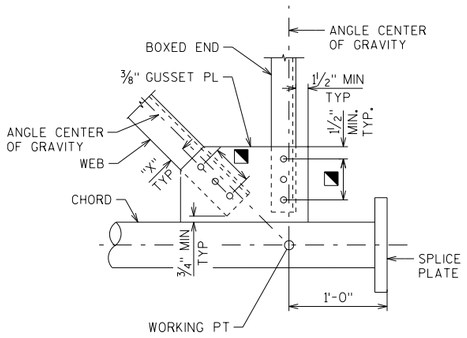
CONNECTION SHOWN AT CHORD SPLICE, CONNECTION AT COLUMN END SIMILAR



WELDED PANEL CONNECTION

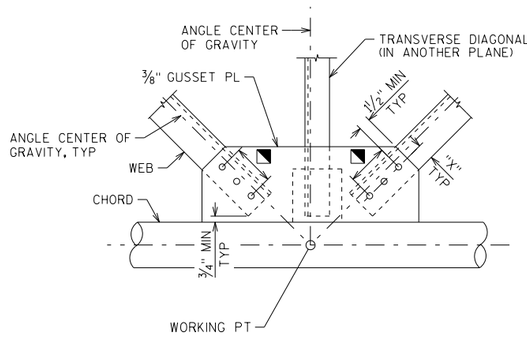


WELDED TRANSVERSE DIAGONAL CONNECTION

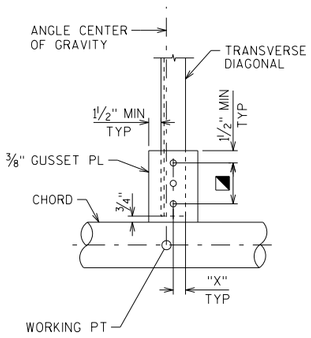


BOLTED BOXED END CONNECTION

CONNECTION SHOWN AT CHORD SPLICE, CONNECTION AT COLUMN END SIMILAR



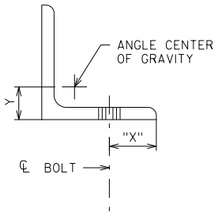
BOLTED PANEL CONNECTION

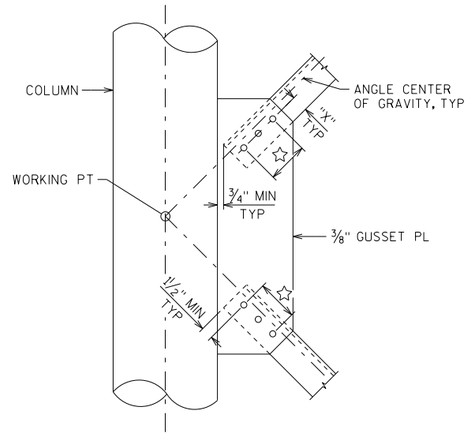


BOLTED TRANSVERSE DIAGONAL CONNECTION

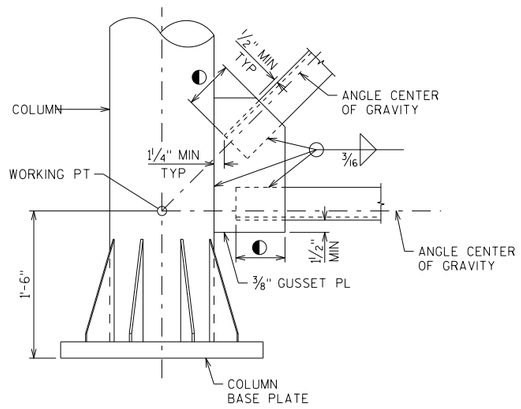
ANGLE DATA

ANGLE SIZE	$\bar{y}$	"X"
L3X3X¼	0.836"	1¼"
L3½X3½X5/16	0.979"	1½"
L3½X3½X⅜	1.00"	1½'
L4X4X⅜	1.13"	1½"
L4X4X7/16	1.15"	1½"
L4X4X½	1.18	1½"
L5X5X7/16	1.40"	2"
L5X5X½	1.42"	2"



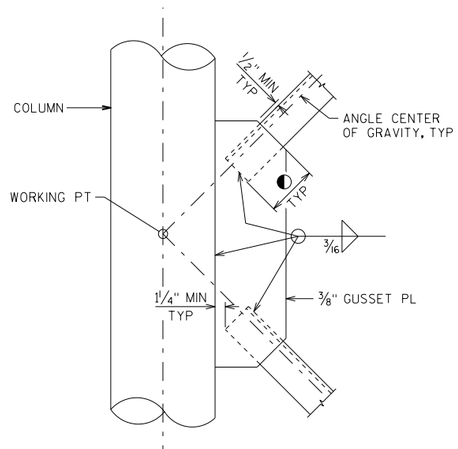


BOLTED COLUMN WEB CONNECTION

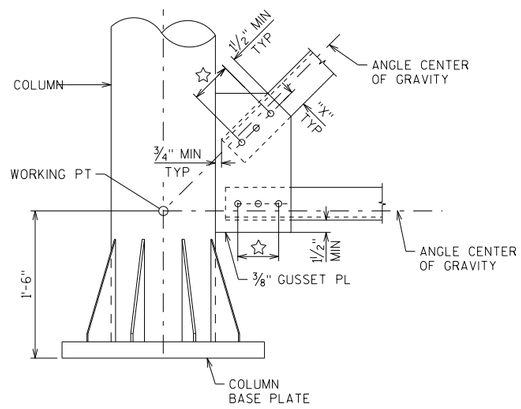


WELDED COLUMN BOTTOM CONNECTION

TOP CONNECTION SIMILAR



WELDED COLUMN WEB CONNECTION



BOLTED COLUMN BOTTOM CONNECTION

TOP CONNECTION SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

DRAWN BY BOS | PLANS CK'D. BOS

4-CHORD TRUSS FULL SPAN CONNECTIONS 1

SHEET III OF VIII

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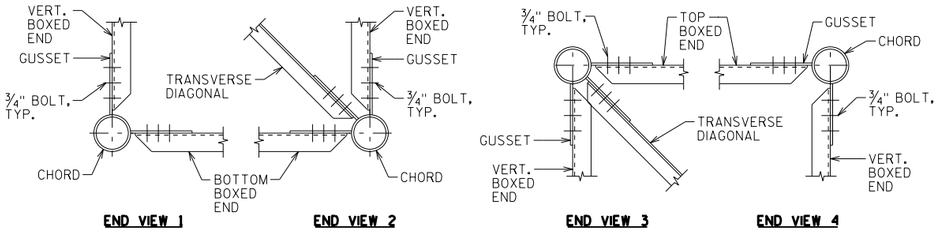
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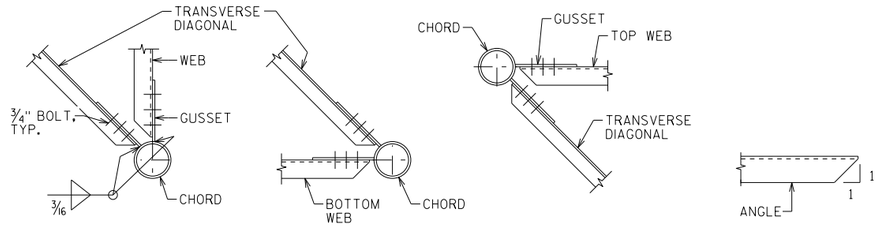
8

STATE PROJECT NUMBER

STANDARD



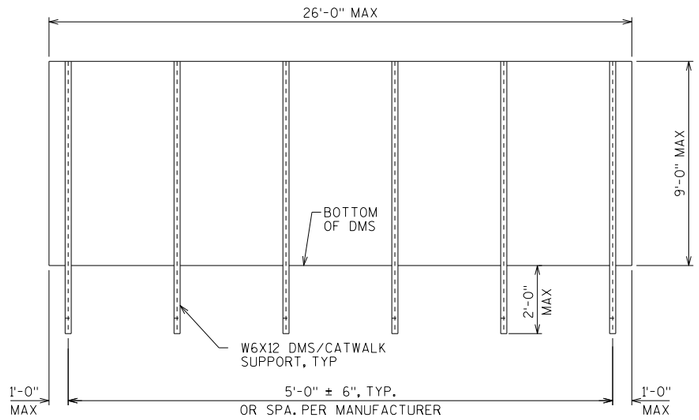
END VIEW 1 | END VIEW 2 | END VIEW 3 | END VIEW 4



END VIEW 1 | END VIEW 2 | END VIEW 3 | CLIP DETAIL

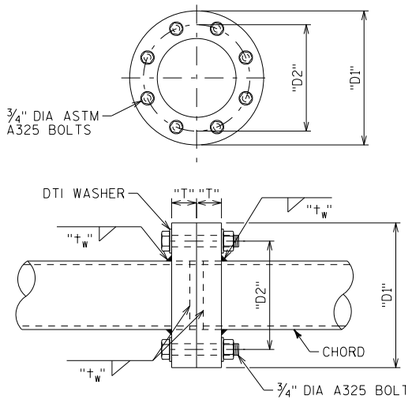
TRUSS CONNECTION DETAILS

BOLTED CONNECTIONS SHOWN, WELDED CONNECTIONS SIMILAR

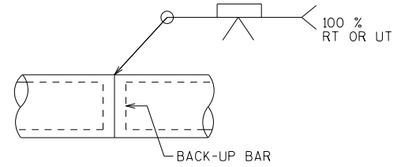


DMS MOUNTING POST SPACING DETAIL

POST SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS IS ENCOUNTERED.



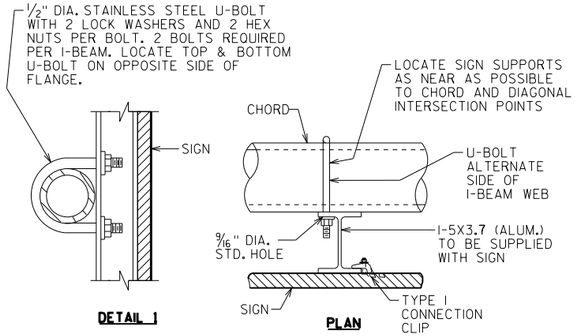
CHORD SPLICE PLATE DETAIL



CHORD SPLICE

CHORD SPLICE CONNECTION DATA

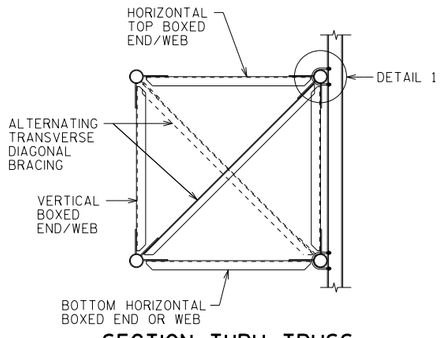
STANDARD DESIGN TRUSS	"D1"	"D2"	"T"	"+w"	# OF BOLTS
I	11"	8"	1½"	5/16"	8
II	11⅝"	8⅝"	1½"	5/16"	8
III	11⅝"	8⅝"	1½"	⅜"	8
IV	1'-0⅝"	9⅝"	1½"	⅜"	8
V	1'-0⅝"	9⅝"	1½"	⅜"	8



DETAIL 1 | PLAN

TYPICAL SIGN CONNECTION

USE FOR TYPE I AND II SIGNS
SEE SIGN PLATE MANUAL A4-7A & A4-7B FOR DETAILS

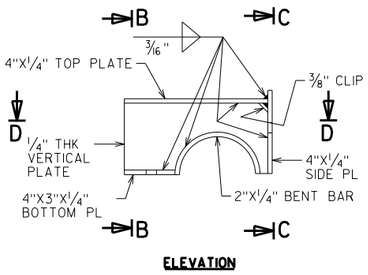


SECTION THRU TRUSS

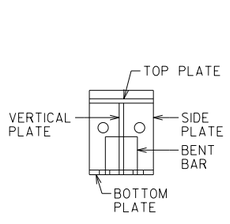
FOR SIGN CONNECTION

ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH THE SIGN PANEL

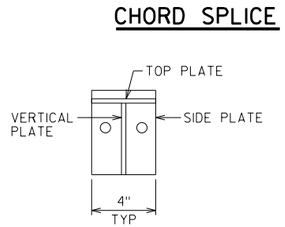
HARDWARE TO BE SUPPLIED BY THE CONTRACTOR



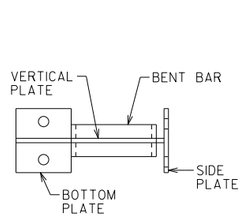
ELEVATION



SECTION B-B



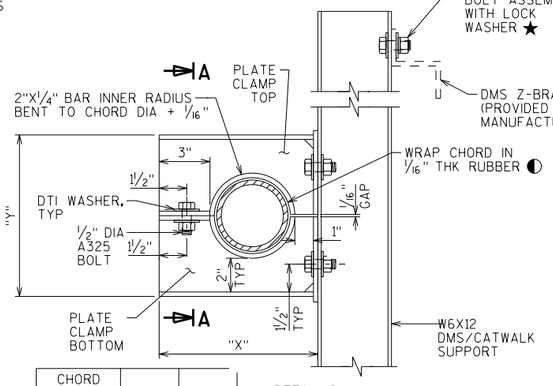
SECTION C-C



SECTION D-D

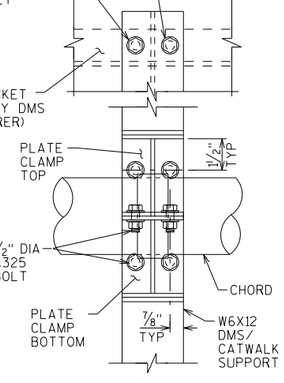
DMS WELDED PLATE CONNECTION DETAILS

TOP PLATE CLAMP SHOWN
BOTTOM PLATE CLAMP SIMILAR



CHORD OUTER DIA	"X"	"Y"
5.000"	9 13/16"	10 1/16"
5.563"	10 3/8"	10 5/8"
6.625"	11 7/16"	11 11/16"

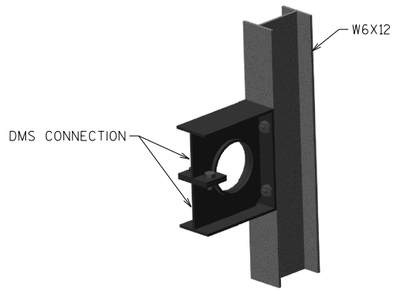
DETAIL 2



SECTION A-A

TYPICAL DMS CONNECTION

◐ NEOPRENE, GRADE 45±5, OTHERWISE MEETING THE REQUIREMENTS OF STD SPEC 506.2.6.1



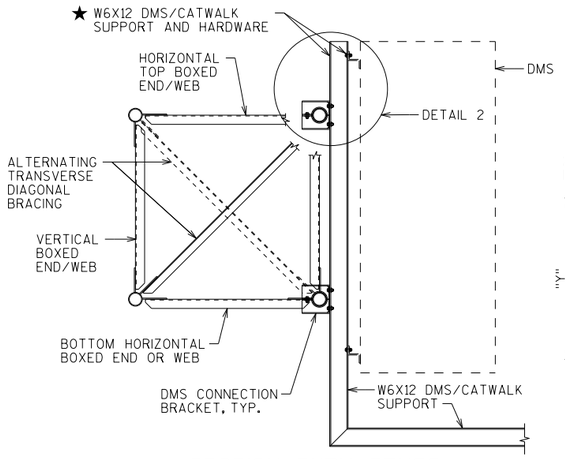
3-D VIEW DMS CONNECTION

CHORD NOT SHOWN FOR CLARITY

SECTION THRU TRUSS

FOR DMS/CATWALK CONNECTION

★ W6X12 SUPPORTS AND HARDWARE ARE TO BE SUPPLIED BY THE CONTRACTOR. ½" STAINLESS BOLT, NUT, WASHER AND LOCK WASHER REQUIRED, 4 PER W6X12.



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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

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4-CHORD TRUSS FULL SPAN CONNECTIONS 2

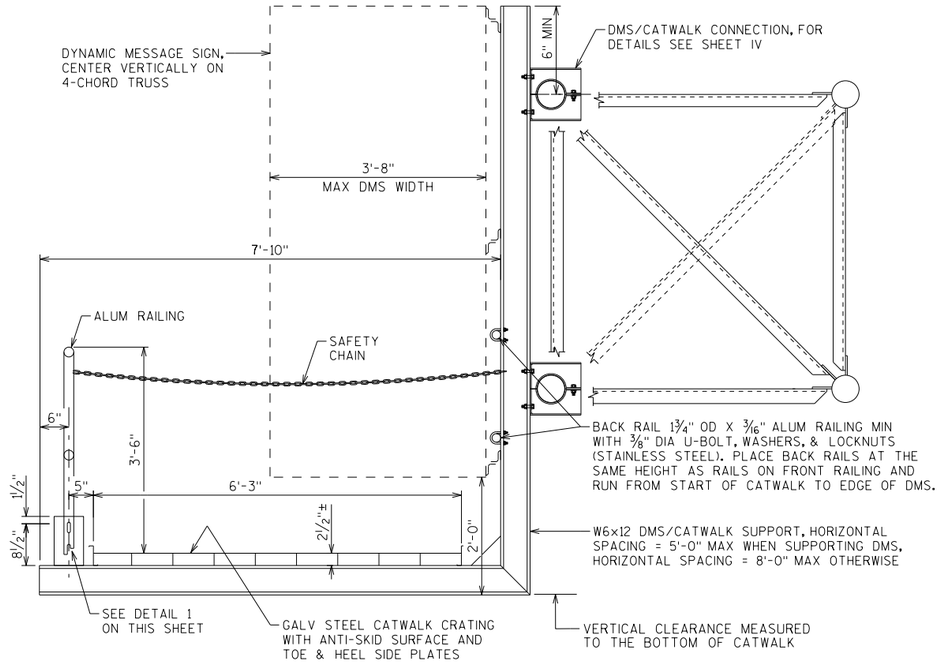
SHEET IV OF VIII

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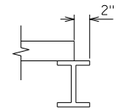
SCALE = 2.00

STATE PROJECT NUMBER

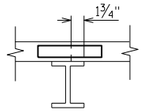
STANDARD



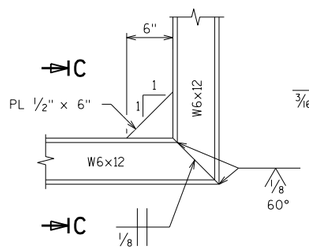
SECTION THRU WALKWAY



CATWALK TERMINATION DETAIL

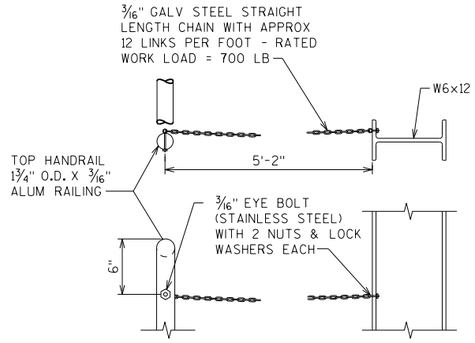


CATWALK SPLICE LOCATION DETAIL



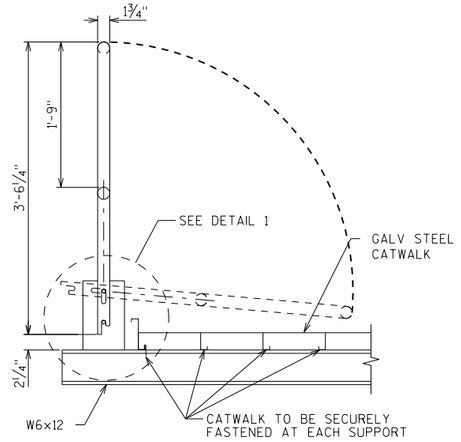
BRACKET DETAIL

SECTION C-C

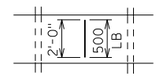


SAFETY CHAIN DETAIL

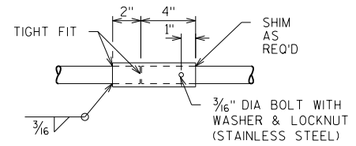
(PROVIDE SAFETY CHAIN AT EACH END OF THE CATWALK)



RAIL POST DETAIL

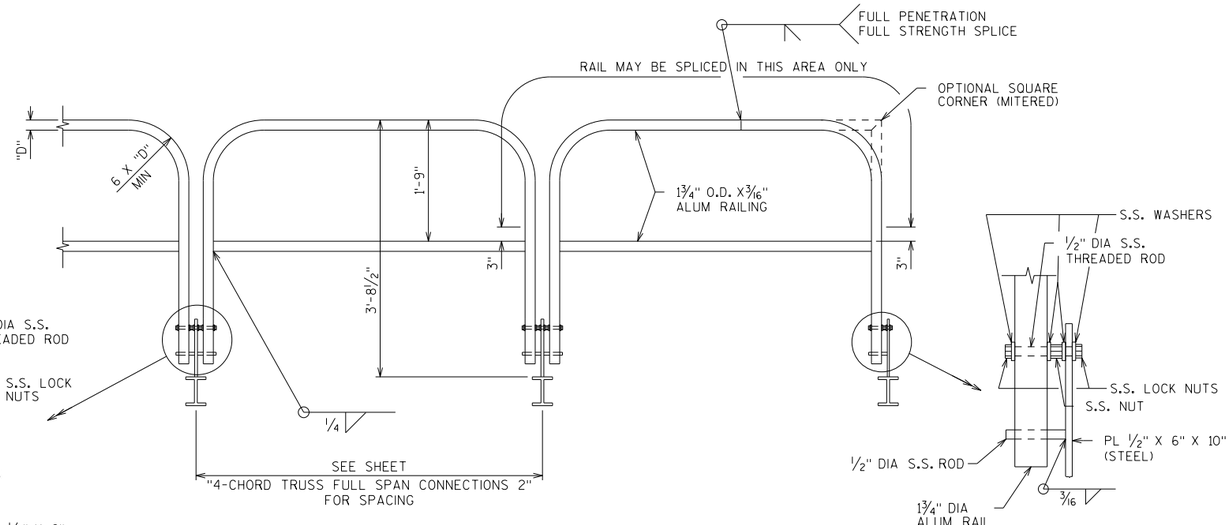


NOTE:
CATWALK GRATING SHALL MEET THE CURRENT AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS", (500 LB LIVE LOAD DISTRIBUTED OVER 2'-0" TRANSVERSELY - MAX SPAN IS 8'-0"). CATWALK SHALL ALSO MEET CURRENT OSHA STD'S FOR WALKING-WORKING SURFACES.

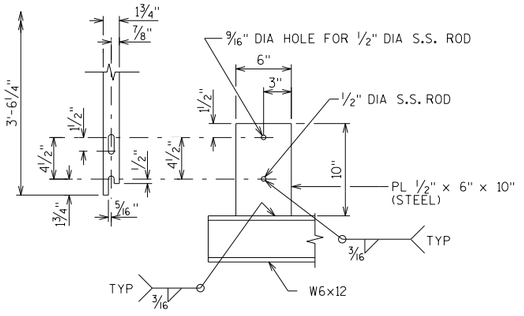


BACKRAIL SPLICE

ONE SPLICE ALLOWED FOR LENGTHS OVER 30'-0"



TYPICAL FRONT RAILING DETAILS



DETAIL 1

8

8

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

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4-CHORD TRUSS FULL SPAN CATWALK DETAILS

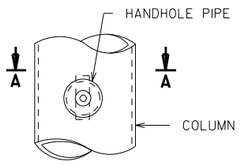
SHEET V OF VIII

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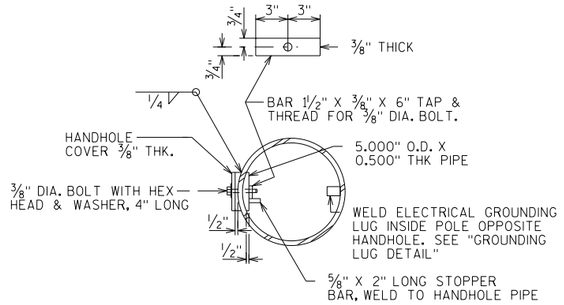
SCALE = 1.25

STATE PROJECT NUMBER

STANDARD



HANDHOLE DETAILS

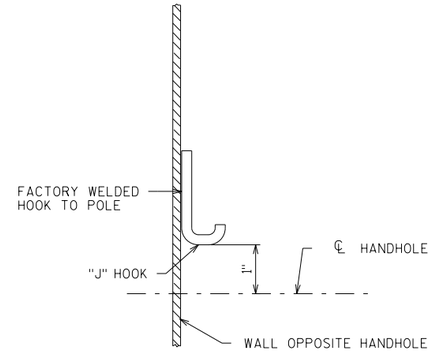


SECTION A-A

HANDHOLE NOTES

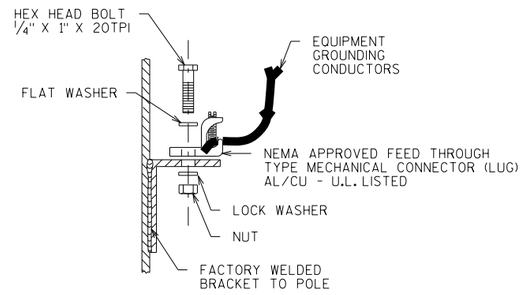
HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN BRIDGE STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL PLAN DETAIL SHEETS.

UNLESS NOTED OTHERWISE, ALL HANDHOLE ELEMENTS TO BE GALVANIZED PER THE WISDOT STANDARD SPECIFICATIONS.



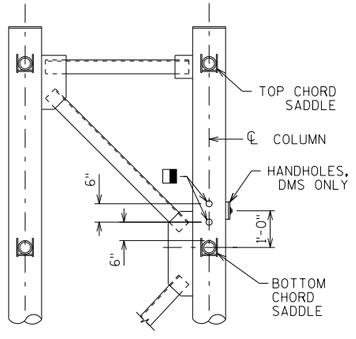
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



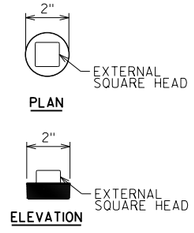
GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

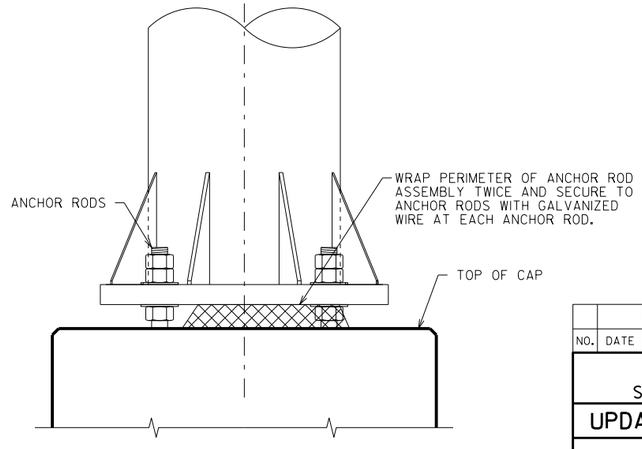


CONDUIT HOLE LOCATIONS

◧ 2" THREADED HOLE USE THREADED CONDUIT PLUG FOR UNUSED HOLES



CONDUIT PLUG DETAILS



RODENT SCREEN

(ONLY REQ'D. WHEN ELECTRICAL DEVICES ARE INSTALLED)

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DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

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4-CHORD TRUSS FULL SPAN ELECTRICAL DETAILS

SHEET VI OF VIII

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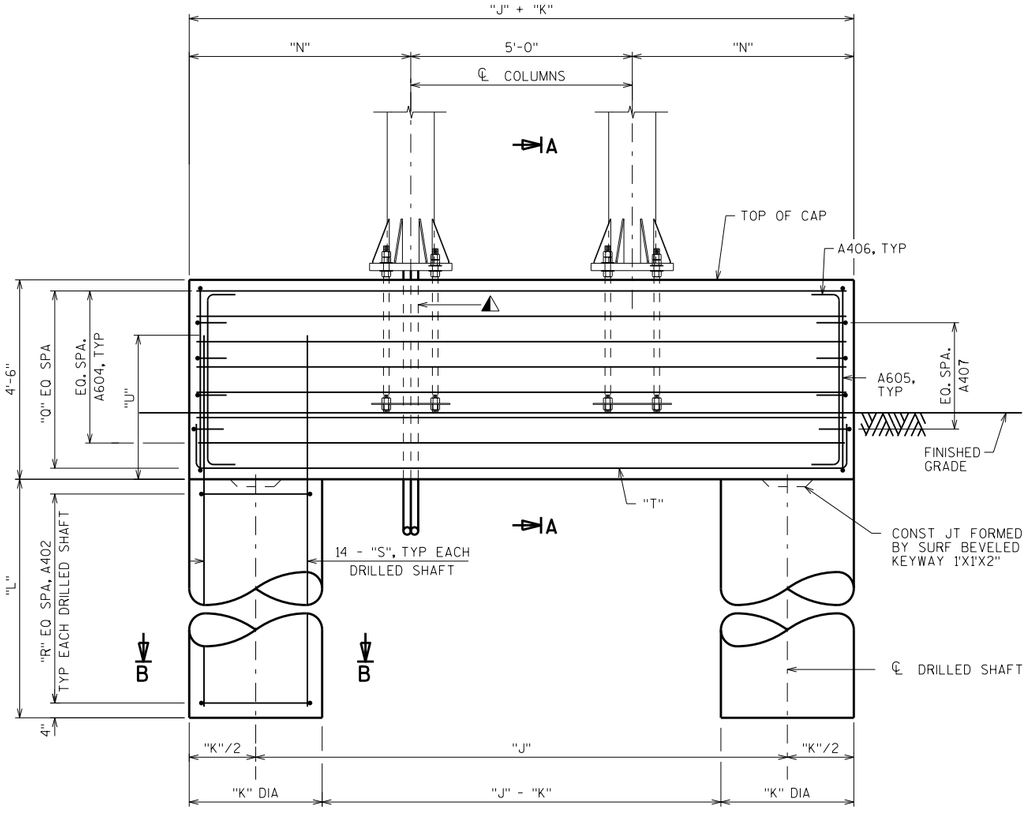
SCALE = 1.00

8

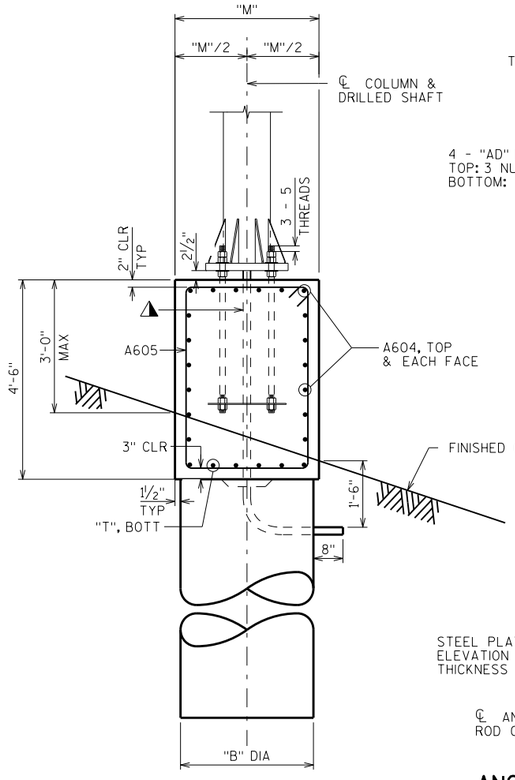
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STATE PROJECT NUMBER

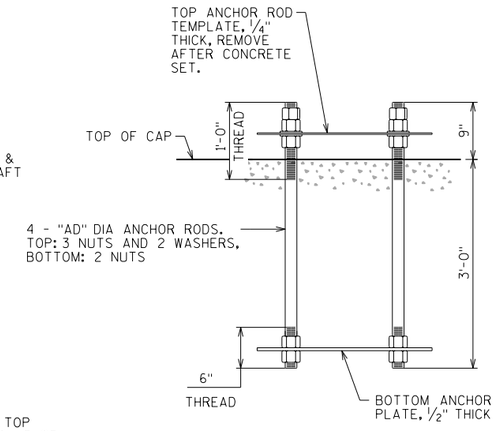
STANDARD



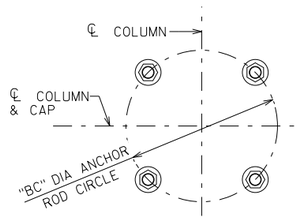
ELEVATION



SECTION A-A



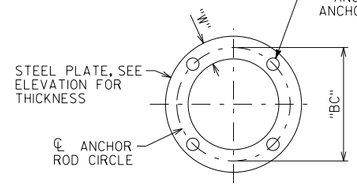
ELEVATION



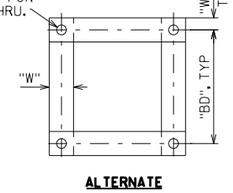
PLAN

ANCHOR ROD ASSEMBLY DETAILS

SINGLE ASSEMBLY SHOWN
4 ANCHOR RODS REQ'D PER ASSEMBLY



ANCHOR PLATE/TOP TEMPLATE
PLAN

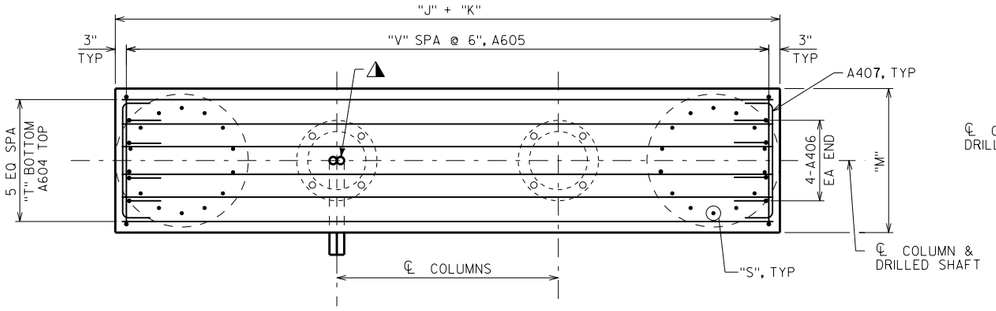


ALTERNATE

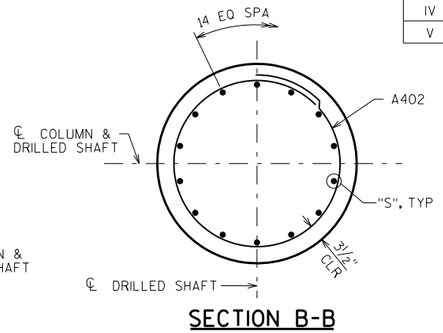
ANCHOR PLATE/TOP TEMPLATE
PLAN

FOUNDATION, REINFORCING & ANCHOR PLATE DATA

STD DESIGN TRUSS	FOUNDATION DIMENSIONS											ANCHOR PLATE DIMENSIONS			
	"J"	"K"	"L"	"M"	"N"	"Q"	"R"	"S"	"T"	"U"	"V"	"AD"	"BC"	"BD"	"W"
I	9'-0"	3'-0"	19'-0"	3'-3"	3'-6"	7	19	A801	A603	2'-2"	17	1½"	1'-6¾"	1'-1¼"	3"
II	12'-0"	3'-0"	22'-0"	3'-3"	5'-0"	7	22	A801	A603	2'-2"	23	1½"	1'-6¾"	1'-1¼"	3"
III	12'-0"	3'-6"	23'-0"	3'-9"	5'-3"	7	23	A901	A703	2'-9"	23	1¾"	1'-6¾"	1'-1¼"	3½"
IV	15'-0"	3'-6"	23'-0"	3'-9"	6'-9"	7	29	A901	A703	2'-9"	29	1¾"	1'-8"	1'-2⅛"	3½"
V	15'-0"	4'-0"	23'-0"	4'-3"	7'-0"	8	23	A1001	A703	3'-5"	29	1¾"	1'-10"	1'-3⅝"	3½"



PLAN



SECTION B-B

TYPICAL FOR EACH DRILLED SHAFT FOOTING

NOTES

CENTER ANCHOR ROD ASSEMBLY AND MAKE SURE IT IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE FOOTING AS DETAILED ON PLAN. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURED IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHOR RODS.

LEGEND

⚠ 2 - 2" DIA NONMETALLIC CONDUITS, INSTALL ONLY WITH DMS. EXTEND CONDUITS AS SHOWN AND CAP OR SEAL EACH END WITH A SUITABLE REMOVABLE PLUG. PLACE CONDUITS UNDER COLUMN ADJACENT TO THE DMS. CONDUITS INCIDENTAL TO THE FOUNDATION BID ITEMS.

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STRUCTURES DESIGN SECTION

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4-CHORD TRUSS FULL SPAN FOUNDATIONS 1

SHEET VII OF VIII

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SCALE = 1.66

STATE PROJECT NUMBER

STANDARD

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BILL OF BARS - STANDARD DESIGN TYPE I

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		56	24'-2"			DRILLED SHAFT - VERTICAL
A402		80	9'-0"	X		DRILLED SHAFT - HORIZONTAL
A603	X	12	13'-3"	X		CAP - LONGITUDINAL - BOTTOM
A604	X	36	11'-8"			CAP - LONGITUDINAL - TOP & SIDES
A605	X	48	14'-10"	X		CAP - STIRRUP
A406	X	16	5'-2"	X		CAP - VERTICAL - EACH END
A407	X	16	3'-5"	X		CAP - HORIZONTAL - EACH END

BILL OF BARS - STANDARD DESIGN TYPE II

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		56	24'-2"			DRILLED SHAFT - VERTICAL
A402		92	9'-0"	X		DRILLED SHAFT - HORIZONTAL
A603	X	12	16'-3"	X		CAP - LONGITUDINAL - BOTTOM
A604	X	36	14'-8"			CAP - LONGITUDINAL - TOP & SIDES
A605	X	60	14'-10	X		CAP - STIRRUP
A406	X	16	5'-2"	X		CAP - VERTICAL - EACH END
A407	X	16	3'-5"	X		CAP - HORIZONTAL - EACH END

BILL OF BARS - STANDARD DESIGN TYPE III

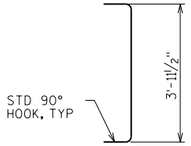
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		56	25'-9"			DRILLED SHAFT - VERTICAL
A402		96	10'-6"	X		DRILLED SHAFT - HORIZONTAL
A703	X	12	17'-1"	X		CAP - LONGITUDINAL - BOTTOM
A604	X	36	15'-2"			CAP - LONGITUDINAL - TOP & SIDES
A605	X	62	15'-10	X		CAP - STIRRUP
A406	X	16	5'-2"	X		CAP - VERTICAL - EACH END
A407	X	16	3'-11"	X		CAP - HORIZONTAL - EACH END

BILL OF BARS - STANDARD DESIGN TYPE IV

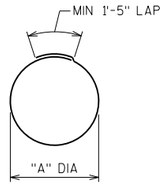
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		56	25'-9"			DRILLED SHAFT - VERTICAL
A402		120	10'-6"	X		DRILLED SHAFT - HORIZONTAL
A703	X	12	20'-1"	X		CAP - LONGITUDINAL - BOTTOM
A604	X	36	18'-2"			CAP - LONGITUDINAL - TOP & SIDES
A605	X	74	15'-10	X		CAP - STIRRUP
A406	X	16	5'-2"	X		CAP - VERTICAL - EACH END
A407	X	16	3'-11"	X		CAP - HORIZONTAL - EACH END

BILL OF BARS - STANDARD DESIGN TYPE V

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		56	26'-5"			DRILLED SHAFT - VERTICAL
A402		96	12'-1"	X		DRILLED SHAFT - HORIZONTAL
A703	X	12	20'-7"	X		CAP - LONGITUDINAL - BOTTOM
A604	X	36	18'-8"			CAP - LONGITUDINAL - TOP & SIDES
A605	X	76	16'-10	X		CAP - STIRRUP
A406	X	16	5'-2"	X		CAP - VERTICAL - EACH END
A407	X	16	4'-5"	X		CAP - HORIZONTAL - EACH END

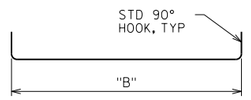


A406



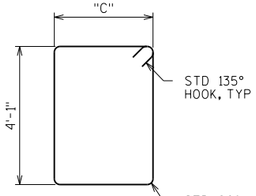
A402

DESIGN TYPE	"A"
I	2'-5"
II	2'-5"
III	2'-11"
IV	2'-11"
V	3'-5"



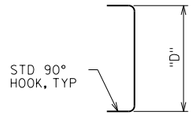
A603, A703

DESIGN TYPE	BAR MARK	"B"
I	A603	11'-7"
II	A603	14'-7"
III	A703	15'-1"
IV	A703	18'-1"
V	A703	18'-7"



A605

DESIGN TYPE	"C"
I	2'-11"
II	2'-11"
III	3'-5"
IV	3'-5"
V	3'-11"



A407

DESIGN TYPE	"D"
I	2'-9½"
II	2'-9½"
III	3'-3½"
IV	3'-3½"
V	3'-9½"

BAR BENDING DIAGRAMS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

ESTIMATED QUANTITIES - FOUNDATION

STANDARD DESIGN TRUSS	CONCRETE MASONRY (CY)	STEEL REINFORCEMENT HS (LBS)	STEEL REINFORCEMENT HS COATED (LBS)	ANCHOR ASSEMBLY 1½-INCH (EACH)	ANCHOR ASSEMBLY 1¾-INCH (EACH)	FOUNDATION DRILLNG (LF)		
						36" DIA.	42" DIA.	48" DIA.
I	33	4,100	2,030	4	----	76	----	----
II	40	4,170	2,520	4	----	88	----	----
III	53	5,580	2,810	----	4	----	92	----
IV	56	5,750	3,340	----	4	----	92	----
V	70	7,140	3,540	----	4	----	----	92

** QUANTITIES ARE FOR INFORMATION ONLY AND ARE BASED ON STANDARD STRUCTURE DIMENSIONS**

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

DRAWN BY BOS | PLANS CK'D. BOS

4-CHORD TRUSS
FULL SPAN
FOUNDATIONS 2

SHEET VIII OF VIII

196

SCALE = 0.50

DIVISION 1 - ALI-USH 41 NB_1150-78-00

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
400+50	40050.00	0.00	0.08	0.00	0.26	0	0	0	0	0	0
401+00	40100.00	50.00	0.00	0.00	15.22	0	0	14	0	18	-18
401+08.47	40108.47	8.47	0.00	0.00	18.28	0	0	5	0	24	-24
401+50	40150.00	41.53	0.00	0.00	7.98	0	0	20	0	49	-49
401+71.801	40171.80	21.80	0.00	0.00	9.66	0	0	7	0	58	-58
401+84.299	40184.30	12.50	0.49	0.00	4.39	0	0	3	0	61	-61
401+90.549	40190.55	6.25	0.43	0.00	4.05	0	0	1	0	63	-63
402+00	40200.00	9.45	0.00	0.00	3.39	0	0	1	0	64	-64
402+50	40250.00	50.00	0.00	0.00	0.23	0	0	3	0	68	-68
403+00	40300.00	50.00	0.00	0.00	0.00	0	0	0	0	68	-68
403+28.05	40328.05	28.05	0.04	0.00	0.00	0	0	0	0	68	-68
403+34.3	40334.30	6.25	0.02	0.00	0.04	0	0	0	0	68	-68
403+46.798	40346.80	12.50	0.28	0.00	0.64	0	0	0	0	68	-68
403+50	40350.00	3.20	0.36	0.00	0.36	0	0	0	0	68	-68
404+00	40400.00	50.00	0.00	0.00	0.42	0	0	1	0	69	-69
404+10.129	40410.13	10.13	0.00	0.00	0.31	0	0	0	0	69	-69
404+50	40450.00	39.87	0.00	0.00	0.00	0	0	0	0	69	-69

DIVISION 1 - ALI-USH 41 NB_1150-78-00

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
454+67.569	45467.57	0.00	0.00	0.00	0.52	0	0	0	0	0	0
455+00	45500.00	32.43	0.13	0.00	16.62	0	0	10	0	13	-13
455+50	45550.00	50.00	0.22	0.00	10.51	0	0	25	0	44	-44
456+00	45600.00	50.00	0.00	0.00	15.88	0	0	24	0	74	-74
456+17.541	45617.54	17.54	0.10	0.00	20.34	0	0	12	0	89	-89
456+50	45650.00	32.46	0.00	0.00	15.86	0	0	22	0	116	-116
456+81.012	45681.01	31.01	0.03	0.00	9.18	0	0	14	0	134	-134
456+93.25	45693.25	12.24	0.00	0.00	9.15	0	0	4	0	139	-139
457+00	45700.00	6.75	0.00	0.00	9.10	0	0	2	0	141	-141
457+23	45723.00	23.00	0.10	0.00	7.91	0	0	7	0	150	-150
457+50.632	45750.63	27.63	0.93	0.00	6.34	1	0	7	1	159	-158
458+00	45800.00	49.37	0.15	0.00	7.72	1	0	13	2	175	-173
458+10.844	45810.84	10.84	0.31	0.00	8.22	0	0	3	2	179	-177
458+50	45850.00	39.16	0.00	0.00	8.64	0	0	12	2	194	-192
458+68.246	45868.25	18.25	0.03	0.00	10.94	0	0	7	2	203	-201
458+80.661	45880.66	12.41	0.00	0.00	13.04	0	0	6	2	210	-208
459+00	45900.00	19.34	0.00	0.00	17.19	0	0	11	2	224	-222
459+44.196	45944.20	44.20	0.00	0.00	26.59	0	0	36	2	269	-267
459+50	45950.00	5.80	0.00	0.00	25.25	0	0	6	2	276	-274
460+00	46000.00	50.00	0.00	0.00	12.31	0	0	35	2	320	-318
460+50	46050.00	50.00	0.00	0.00	25.57	0	0	35	2	364	-362

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

9

9

PROJECT NO: 1150-78-71 | HWY: USH 41 | COUNTY: BROWN & OCONTO | EARTHWORK DATA | SHEET 197 | E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 01

PLOT DATE : 1/21/2022 10:25 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

DIVISION 1 - ALI-USH 41 NB_1150-78-00

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
560+50	56050.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0
561+00	56100.00	50.00	0.00	0.00	0.00	0	0	0	0	0	0
561+27.648	56127.65	27.65	0.00	0.00	0.00	0	0	0	0	0	0
561+50	56150.00	22.35	0.00	0.00	0.00	0	0	0	0	0	0
561+90.953	56190.95	40.95	0.00	0.00	0.00	0	0	0	0	0	0
562+00	56200.00	9.05	0.00	0.00	0.00	0	0	0	0	0	0
562+02.741	56202.74	2.74	0.00	0.00	0.83	0	0	0	0	0	0
562+50	56250.00	47.26	0.00	0.00	0.08	0	0	1	0	1	-1
562+64.676	56264.68	14.68	0.00	0.00	0.06	0	0	0	0	1	-1
562+92.131	56292.13	27.46	0.00	0.00	0.21	0	0	0	0	1	-1
563+00	56300.00	7.87	0.00	0.00	0.24	0	0	0	0	1	-1
563+50	56350.00	50.00	0.30	0.00	0.68	0	0	1	0	3	-3
563+53.368	56353.37	3.37	0.27	0.00	0.54	0	0	0	0	3	-3
563+65.505	56365.51	12.14	0.16	0.00	2.14	0	0	1	0	4	-4
564+00	56400.00	34.49	1.09	0.00	4.19	1	0	4	1	9	-8
564+29.188	56429.19	29.19	0.12	0.00	16.08	1	0	11	2	23	-21
564+50	56450.00	20.81	0.85	0.00	9.45	0	0	10	2	35	-33

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

DIVISION 1 - ALI-USH 41 NB_1150-78-00

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
614+00	61400.00	0.00	1.54	0.00	2.44	0	0	0	0	0	0
614+50	61450.00	50.00	0.86	0.00	5.94	2	0	8	2	10	-8
615+00	61500.00	50.00	0.41	0.00	12.92	1	0	17	3	31	-28
615+03.828	61503.83	3.83	0.41	0.00	13.28	0	0	2	3	34	-31
615+50	61550.00	46.17	0.44	0.00	11.37	1	0	21	4	60	-56
615+67.275	61567.28	17.28	0.53	0.00	2.32	0	0	4	4	65	-61
615+79.713	61579.71	12.44	0.49	0.00	0.27	0	0	1	4	66	-62
616+00	61600.00	20.29	0.00	0.00	0.12	0	0	0	4	66	-62
616+23.462	61623.46	23.46	0.00	0.00	0.01	0	0	0	4	66	-62
616+43.411	61643.41	19.95	0.00	0.00	0.00	0	0	0	4	66	-62
616+50	61650.00	6.59	0.00	0.00	0.00	0	0	0	4	66	-62
617+00	61700.00	50.00	0.00	0.00	0.00	0	0	0	4	66	-62
617+04.136	61704.14	4.14	0.00	0.00	0.00	0	0	0	4	66	-62
617+23.461	61723.46	19.32	0.00	0.00	0.00	0	0	0	4	66	-62
617+50	61750.00	26.54	0.72	0.00	0.10	0	0	0	4	66	-62
617+67.21	61767.21	17.21	0.46	0.00	0.99	0	0	0	4	66	-62
617+79.425	61779.43	12.22	0.09	0.00	3.08	0	0	1	4	68	-64
618+00	61800.00	20.57	0.00	0.00	12.72	0	0	6	4	75	-71
618+42.845	61842.85	42.85	0.00	0.00	12.76	0	0	20	4	100	-96
618+50	61850.00	7.15	0.00	0.00	10.17	0	0	3	4	104	-100
619+00	61900.00	50.00	0.00	0.00	0.06	0	0	9	4	115	-111

DIVISION 1 - ALI-USH 41 NB_1150-78-00

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
720+65.277	72065.28	0.00	0.00	0.00	0.46	0	0	0	0	0	0
721+00	72100.00	34.72	0.00	0.00	2.04	0	0	2	0	3	-3
721+50	72150.00	50.00	0.00	0.00	9.73	0	0	11	0	16	-16
722+00	72200.00	50.00	0.00	0.00	12.01	0	0	20	0	41	-41
722+15.277	72215.28	15.28	0.00	0.00	13.87	0	0	7	0	50	-50
722+50	72250.00	34.72	0.00	0.00	7.83	0	0	14	0	68	-68
722+78.789	72278.79	28.79	0.00	0.00	1.55	0	0	5	0	74	-74
722+91.208	72291.21	12.42	0.71	0.00	0.00	0	0	0	0	74	-74
722+97.457	72297.46	6.25	0.12	0.00	0.00	0	0	0	0	74	-74
723+00	72300.00	2.54	0.00	0.00	0.00	0	0	0	0	74	-74
723+34.956	72334.96	34.96	0.00	0.00	0.00	0	0	0	0	74	-74
723+50	72350.00	15.04	0.00	0.00	0.00	0	0	0	0	74	-74
723+53.201	72353.20	3.20	0.00	0.00	0.00	0	0	0	0	74	-74
723+81.15	72381.15	27.95	0.00	0.00	0.00	0	0	0	0	74	-74
723+97.453	72397.45	16.30	0.00	0.00	0.00	0	0	0	0	74	-74
724+00	72400.00	2.55	0.00	0.00	0.00	0	0	0	0	74	-74
724+41.201	72441.20	41.20	0.00	0.00	0.00	0	0	0	0	74	-74
724+50	72450.00	8.80	0.00	0.00	0.00	0	0	0	0	74	-74
724+53.375	72453.37	3.37	0.00	0.00	0.00	0	0	0	0	74	-74
725+00	72500.00	46.63	0.91	0.00	0.41	1	0	0	1	74	-73
725+16.83	72516.83	16.83	0.40	0.00	2.56	0	0	1	1	75	-74
725+50	72550.00	33.17	0.00	0.00	6.93	0	0	6	1	83	-82
726+00	72600.00	50.00	0.00	0.00	0.04	0	0	6	1	90	-89

DIVISION 1 - ALI-USH 41 NB_1150-78-00

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
773+00	77300.00	0.00	0.00	0.00	0.08	0	0	0	0	0	0
773+50	77350.00	50.00	0.00	0.00	3.45	0	0	3	0	4	-4
774+00	77400.00	50.00	0.00	0.00	4.73	0	0	8	0	14	-14
774+43.328	77443.33	43.33	0.00	0.00	16.18	0	0	17	0	35	-35
774+50	77450.00	6.67	0.00	0.00	13.82	0	0	4	0	40	-40
775+00	77500.00	50.00	0.00	0.00	1.50	0	0	14	0	58	-58
775+07.012	77507.01	7.01	0.65	0.00	0.57	0	0	0	0	58	-58
775+20.841	77520.84	13.83	0.00	0.00	0.00	0	0	0	0	58	-58
775+50	77550.00	29.16	0.00	0.00	0.00	0	0	0	0	58	-58
776+00	77600.00	50.00	0.00	0.00	0.00	0	0	0	0	58	-58
776+50	77650.00	50.00	0.00	0.00	0.00	0	0	0	0	58	-58
776+95.725	77695.72	45.72	0.00	0.00	0.00	0	0	0	0	58	-58
777+00	77700.00	4.28	0.03	0.00	0.00	0	0	0	0	58	-58
777+06.534	77706.53	6.53	0.00	0.00	0.12	0	0	0	0	58	-58
777+50	77750.00	43.47	0.10	0.00	15.30	0	0	12	0	73	-73
777+74.52	77774.52	24.52	0.01	0.00	30.83	0	0	21	0	99	-99
778+00	77800.00	25.48	0.00	0.00	14.13	0	0	21	0	125	-125
778+50	77850.00	50.00	0.12	0.00	0.00	0	0	13	0	141	-141

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

DIVISION 1 - AU-USH 41 NB_1150-78-00

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
819+50	81950.00	0.00	3.78	0.00	0.00	0	0	0	0	0	0
820+00	82000.00	50.00	18.12	0.00	0.01	20	0	0	20	0	20
820+00	82000.00	0.00	0.00	0.00	0.00	0	0	0	20	0	20
820+09.749	82009.75	9.75	22.98	0.00	0.00	4	0	0	24	0	24
820+13.239	82013.24	3.49	22.37	0.00	0.00	3	0	0	27	0	27
820+25.583	82025.58	12.34	0.68	0.00	0.71	5	0	0	32	0	32
820+50	82050.00	24.42	6.69	0.00	1.36	3	0	1	35	1	34
820+78.079	82078.08	28.08	6.83	0.00	0.91	7	0	1	42	3	40
820+84	82084.00	5.92	7.44	0.00	0.87	2	0	0	44	3	42
820+90.079	82090.08	6.08	9.19	0.00	0.82	2	0	0	46	3	44
821+00	82100.00	9.92	11.26	0.00	0.57	4	0	0	50	3	48
821+50	82150.00	50.00	9.10	0.00	0.00	19	0	1	69	4	65
821+88.077	82188.08	38.08	4.62	0.00	0.75	10	0	1	79	5	74
822+00	82200.00	11.92	2.88	0.00	1.04	2	0	0	81	5	76
822+03.909	82203.91	3.91	0.24	0.00	5.59	0	0	0	81	5	76
822+50	82250.00	46.09	0.00	0.00	9.90	0	0	13	81	21	60
823+00	82300.00	50.00	0.01	0.00	3.94	0	0	13	81	38	44
823+13.893	82313.89	13.89	0.00	0.00	2.29	0	0	2	81	40	41

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

9

9

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	EARTHWORK DATA	SHEET 200	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 04

PLOT DATE : 1/21/2022 10:25 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

DIVISION 2 - ALI-ALLEN RD

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
132+46.801	13246.80	0.00	6.81	0.00	46.17	0	0	0	0	0	0
132+50	13250.00	3.20	6.52	0.00	43.83	1	0	5	1	6	-5
132+75	13275.00	25.00	7.12	0.00	26.90	6	0	33	7	48	-41
133+00	13300.00	25.00	3.74	0.00	9.42	5	0	17	12	69	-57
133+25	13325.00	25.00	3.73	0.00	30.13	3	0	18	15	91	-76
133+50	13350.00	25.00	1.23	0.00	68.10	2	0	45	17	148	-131
133+75	13375.00	25.00	1.60	0.00	48.27	1	0	54	18	215	-197
134+00	13400.00	25.00	1.59	0.00	34.78	1	0	38	19	263	-244
134+25	13425.00	25.00	2.14	0.00	10.85	2	0	21	21	289	-268
134+39.18	13439.18	14.18	0.00	0.00	0.00	1	0	3	22	293	-271

DIVISION 2 - ALI-ALLEN RD

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
128+06	12806.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0
128+25	12825.00	19.00	1.75	0.00	30.87	1	0	11	1	14	-13
128+50	12850.00	25.00	2.46	0.00	43.54	2	0	34	3	56	-53
128+75	12875.00	25.00	1.65	0.00	67.70	2	0	52	5	121	-116
129+00	12900.00	25.00	1.04	0.00	77.93	1	0	67	6	205	-199
129+25	12925.00	25.00	1.12	0.00	42.93	1	0	56	7	275	-268
129+50	12950.00	25.00	7.73	0.00	15.61	4	0	27	11	309	-298
129+75	12975.00	25.00	7.27	0.00	13.96	7	0	14	18	326	-308
129+99.393	12999.39	24.39	8.03	0.00	48.51	7	0	28	25	361	-336

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

9

9

PROJECT NO: 1150-78-71 | HWY: USH 41 | COUNTY: BROWN & OCONTO | EARTHWORK DATA | SHEET 201 | E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 05

PLOT DATE : 1/21/2022 10:25 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

DIVISION 2 - ALI-BROWN RD

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
132+50	13250.00	0.00	3.84	0.00	4.17	0	0	0	0	0	0
132+75	13275.00	25.00	13.36	0.00	0.00	8	0	2	8	3	6
132+84.683	13284.68	9.68	22.07	0.00	0.05	6	0	0	14	3	12
133+00	13300.00	15.32	15.51	0.00	0.99	11	0	0	25	3	23
133+09.683	13309.68	9.68	12.04	0.00	1.13	5	0	0	30	3	28
133+25	13325.00	15.32	0.89	0.00	21.33	4	0	6	34	10	24
133+34.685	13334.68	9.68	0.30	0.00	41.77	0	0	11	34	24	10
133+50	13350.00	15.32	0.00	0.00	30.31	0	0	20	34	49	-15
133+75	13375.00	25.00	0.24	0.00	18.39	0	0	23	34	78	-44
134+00	13400.00	25.00	0.82	0.00	10.85	0	0	14	34	95	-61
134+25	13425.00	25.00	9.92	0.00	1.07	5	0	6	39	103	-64
134+48.057	13448.06	23.06	0.06	0.00	0.00	4	0	0	43	103	-60

DIVISION 2 - ALI-BROWN RD

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
128+30.47	12830.47	0.00	0.00	0.00	0.42	0	0	0	0	0	0
128+50	12850.00	19.53	0.00	0.00	1.07	0	0	1	0	1	-1
128+75	12875.00	25.00	5.31	0.00	8.06	2	0	4	2	6	-4
129+00	12900.00	25.00	0.02	0.00	75.65	2	0	39	4	55	-51
129+10.751	12910.75	10.75	0.04	0.00	121.81	0	0	39	4	104	-100
129+25	12925.00	14.25	0.00	0.00	113.98	0	0	62	4	181	-177
129+35.751	12935.75	10.75	0.19	0.00	97.20	0	0	42	4	234	-230
129+50	12950.00	14.25	0.11	0.00	74.74	0	0	45	4	290	-286
129+60.751	12960.75	10.75	1.45	0.00	59.97	0	0	27	4	324	-320
129+75	12975.00	14.25	2.41	0.00	2.28	1	0	16	5	344	-339
130+00	13000.00	25.00	2.10	0.00	6.62	2	0	4	7	349	-342
130+13.395	13013.39	13.39	2.42	0.00	28.93	1	0	9	8	360	-352

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

DIVISION 2 - ALI-CTH D

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
132+35.4	13235.40	0.00	6.17	0.00	117.15	0	0	0	0	0	0
132+50	13250.00	14.60	6.05	0.00	95.36	3	0	57	3	71	-68
132+75	13275.00	25.00	6.63	0.00	71.70	6	0	77	9	168	-159
133+00	13300.00	25.00	2.93	0.00	97.09	4	0	78	13	265	-252
133+11.869	13311.87	11.87	1.39	0.00	72.08	1	0	37	14	311	-297
133+25	13325.00	13.13	2.72	0.00	62.72	1	0	33	15	353	-338
133+36.869	13336.87	11.87	2.35	0.00	79.79	1	0	31	16	391	-375
133+50	13350.00	13.13	2.16	0.00	93.50	1	0	42	17	444	-427
133+61.871	13361.87	11.87	2.01	0.00	98.21	1	0	42	18	496	-478
133+75	13375.00	13.13	2.13	0.00	70.50	1	0	41	19	548	-529
134+00	13400.00	25.00	2.27	0.00	49.97	2	0	56	21	618	-597
134+25	13425.00	25.00	6.65	0.00	0.00	4	0	23	25	646	-621
134+50	13450.00	25.00	1.59	0.00	0.00	4	0	0	29	646	-617
134+75	13475.00	25.00	1.12	0.00	0.00	1	0	0	30	646	-616
134+90.461	13490.46	15.46	7.57	0.00	0.00	2	0	0	32	646	-614

DIVISION 2 - ALI-CTH D

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
128+24.241	12824.24	0.00	0.25	0.00	0.63	0	0	0	0	0	0
128+25	12825.00	0.76	0.25	0.00	0.66	0	0	0	0	0	0
128+50	12850.00	25.00	0.18	0.00	1.67	0	0	1	0	1	-1
128+75	12875.00	25.00	0.03	0.00	4.18	0	0	3	0	5	-5
128+87.351	12887.35	12.35	0.03	0.00	8.94	0	0	3	0	9	-9
129+00	12900.00	12.65	0.22	0.00	5.59	0	0	3	0	13	-13
129+12.351	12912.35	12.35	0.40	0.00	2.55	0	0	2	0	15	-15
129+25	12925.00	12.65	0.76	0.00	1.97	0	0	1	0	16	-16
129+37.351	12937.35	12.35	1.04	0.00	15.79	0	0	4	0	21	-21
129+50	12950.00	12.65	1.34	0.00	26.32	1	0	10	1	34	-33
129+75	12975.00	25.00	4.28	0.00	7.35	3	0	16	4	54	-50
130+00	13000.00	25.00	3.49	0.00	12.81	4	0	9	8	65	-57
130+15.337	13015.34	15.34	0.21	0.00	87.79	1	0	29	9	101	-92

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

DIVISION 2 - ALI-CTH S

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
132+32.121	13232.12	0.00	2.27	0.00	2.39	0	0	0	0	0	0
132+50	13250.00	17.88	3.38	0.00	11.47	2	0	5	2	6	-4
132+75	13275.00	25.00	3.62	0.00	4.27	3	0	7	5	15	-10
133+00	13300.00	25.00	0.28	0.00	4.30	2	0	4	7	20	-13
133+25	13325.00	25.00	0.00	0.00	9.45	0	0	6	7	28	-21
133+47.652	13347.65	22.65	0.04	0.00	0.92	0	0	4	7	33	-26
133+50	13350.00	2.35	0.15	0.00	0.98	0	0	0	7	33	-26
133+72.652	13372.65	22.65	2.59	0.00	3.93	1	0	2	8	35	-27
133+75	13375.00	2.35	2.16	0.00	4.70	0	0	0	8	35	-27
133+97.652	13397.65	22.65	0.02	0.00	10.78	1	0	6	9	43	-34
134+00	13400.00	2.35	0.11	0.00	9.08	0	0	1	9	44	-35
134+25	13425.00	25.00	1.43	0.00	0.48	1	0	4	10	49	-39
134+43.493	13443.49	18.49	0.66	0.00	0.00	1	0	0	11	49	-38

DIVISION 2 - ALI-CTH S

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
127+91.976	12791.98	0.00	0.14	0.00	0.15	0	0	0	0	0	0
128+00	12800.00	8.02	0.25	0.00	0.26	0	0	0	0	0	0
128+25	12825.00	25.00	0.35	0.00	3.78	0	0	2	0	3	-3
128+48.023	12848.02	23.02	1.74	0.00	8.54	1	0	5	1	9	-8
128+50	12850.00	1.98	1.61	0.00	12.53	0	0	1	1	10	-9
128+73.023	12873.02	23.02	0.22	0.00	1.07	1	0	6	2	18	-16
128+75	12875.00	1.98	0.31	0.00	0.86	0	0	0	2	18	-16
128+98.023	12898.02	23.02	4.36	0.00	0.00	2	0	0	4	18	-14
129+00	12900.00	1.98	4.73	0.00	0.00	0	0	0	4	18	-14
129+25	12925.00	25.00	0.29	0.00	3.95	2	0	2	6	20	-14
129+50	12950.00	25.00	4.29	0.00	0.00	2	0	2	8	23	-15
129+75	12975.00	25.00	5.75	0.00	0.69	5	0	0	13	23	-10
130+00	13000.00	25.00	3.92	0.00	2.48	4	0	1	17	24	-7
130+13.417	13013.42	13.42	2.39	0.00	3.16	2	0	1	19	25	-6

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

9

9

PROJECT NO: 1150-78-71 | HWY: USH 41 | COUNTY: BROWN & OCONTO | EARTHWORK DATA | SHEET 204 | E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 08

PLOT DATE : 1/21/2022 10:25 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

DIVISION 2 - ALI-GEANO BEACH RD

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
132+40.979	13240.98	0.00	2.90	0.00	132.12	0	0	0	0	0	0
132+50	13250.00	9.02	5.21	0.00	107.57	1	0	40	1	50	-49
132+75	13275.00	25.00	7.57	0.00	49.14	6	0	73	7	141	-134
132+93.966	13293.97	18.97	7.95	0.00	21.22	5	0	25	12	173	-161
133+00	13300.00	6.03	1.54	0.00	21.05	1	0	5	13	179	-166
133+18.966	13318.97	18.97	1.62	0.00	6.00	1	0	10	14	191	-177
133+25	13325.00	6.03	1.98	0.00	4.66	0	0	1	14	193	-179
133+43.966	13343.97	18.97	1.90	0.00	6.34	1	0	4	15	198	-183
133+50	13350.00	6.03	1.94	0.00	4.26	0	0	1	15	199	-184
133+56.272	13356.27	6.27	1.95	0.00	2.58	0	0	1	15	200	-185
133+75	13375.00	18.73	2.04	0.00	1.12	1	0	1	16	201	-185
133+81.272	13381.27	6.27	2.08	0.00	0.82	0	0	0	16	201	-185
134+00	13400.00	18.73	2.47	0.00	0.00	2	0	0	18	201	-183
134+06.272	13406.27	6.27	1.71	0.00	0.03	0	0	0	18	201	-183
134+25	13425.00	18.73	1.36	0.00	0.00	1	0	0	19	201	-182
134+50	13450.00	25.00	1.07	0.00	0.10	1	0	0	20	201	-181
134+75	13475.00	25.00	1.44	0.00	1.23	1	0	1	21	203	-182
134+91.781	13491.78	16.78	1.53	0.00	0.70	1	0	1	22	204	-182

DIVISION 2 - ALI-GEANO BEACH RD

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
127+28.093	12728.09	0.00	5.66	0.00	0.00	0	0	0	0	0	0
127+50	12750.00	21.91	3.77	0.00	0.00	4	0	0	4	0	4
127+75	12775.00	25.00	2.58	0.00	0.07	3	0	0	7	0	7
128+00	12800.00	25.00	1.33	0.00	4.45	2	0	2	9	3	7
128+25	12825.00	25.00	0.93	0.00	3.55	1	0	4	10	8	3
128+50	12850.00	25.00	0.73	0.00	3.13	1	0	3	11	11	0
128+60.538	12860.54	10.54	0.57	0.00	5.81	0	0	2	11	14	-3
128+75	12875.00	14.46	0.52	0.00	5.27	0	0	3	11	18	-7
128+85.538	12885.54	10.54	0.69	0.00	5.29	0	0	2	11	20	-9
129+00	12900.00	14.46	1.74	0.00	1.98	1	0	2	12	23	-11
129+10.538	12910.54	10.54	2.87	0.00	1.27	1	0	1	13	24	-11
129+25	12925.00	14.46	4.32	0.00	4.35	2	0	2	15	26	-11
129+35.17	12935.17	10.17	4.80	0.00	10.61	2	0	3	17	30	-13
129+50	12950.00	14.83	7.87	0.00	17.24	3	0	8	20	40	-20
129+75	12975.00	25.00	7.72	0.00	43.12	7	0	28	27	75	-48
130+00	13000.00	25.00	3.01	0.00	88.25	5	0	61	32	151	-119
130+00.527	13000.53	0.53	2.71	0.00	90.36	0	0	2	32	154	-122

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

9

9

PROJECT NO: 1150-78-71 | HWY: USH 41 | COUNTY: BROWN & OCONTO | EARTHWORK DATA | SHEET 205 | E

DIVISION 2 - ALI-NORFIELD RD

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
132+43	13243.00	0.00	2.85	0.00	95.72	0	0	0	0	0	0
132+50	13250.00	7.00	5.72	0.00	30.85	1	0	16	1	20	-19
132+75	13275.00	25.00	5.66	0.00	17.94	5	0	23	6	49	-43
132+95.664	13295.66	20.66	6.54	0.00	18.87	5	0	14	11	66	-55
133+00	13300.00	4.34	1.14	0.00	22.49	1	0	3	12	70	-58
133+20.647	13320.65	20.65	2.14	0.00	21.12	1	0	17	13	91	-78
133+25	13325.00	4.35	2.64	0.00	22.64	0	0	4	13	96	-83
133+50	13350.00	25.00	2.42	0.00	29.38	2	0	24	15	126	-111
133+75	13375.00	25.00	1.46	0.00	21.37	2	0	23	17	155	-138
134+00	13400.00	25.00	3.57	0.00	13.22	2	0	16	19	175	-156
134+25	13425.00	25.00	2.56	0.00	2.48	3	0	7	22	184	-162
134+36.715	13436.71	11.71	3.65	0.00	0.29	1	0	1	23	185	-162

DIVISION 2 - ALI-NORFIELD RD

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
128+09.921	12809.92	0.00	3.72	0.00	0.00	0	0	0	0	0	0
128+25	12825.00	15.08	4.12	0.00	0.00	2	0	0	2	0	2
128+50	12850.00	25.00	2.73	0.00	0.00	3	0	0	5	0	5
128+75	12875.00	25.00	0.50	0.00	7.03	1	0	3	6	4	2
129+00	12900.00	25.00	2.54	0.00	2.21	1	0	4	7	9	-2
129+25	12925.00	25.00	12.28	0.00	11.81	7	0	6	14	16	-2
129+50	12950.00	25.00	12.59	0.00	11.00	12	0	11	26	30	-4
129+75	12975.00	25.00	7.38	0.00	2.53	9	0	6	35	38	-3
130+00	13000.00	25.00	8.55	0.00	57.88	7	0	28	42	73	-31

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

9

9

PROJECT NO: 1150-78-71 | HWY: USH 41 | COUNTY: BROWN & OCONTO | EARTHWORK DATA | SHEET 206 | E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 10

PLOT DATE : 1/21/2022 10:25 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

DIVISION 2 - ALI-OAK ORCHARD

STATION		REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
				CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
							NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
132+43.456		13243.46	0.00	3.07	0.00	25.34	0	0	0	0	0	0
132+50		13250.00	6.54	3.20	0.00	14.04	1	0	5	1	6	-5
132+75		13275.00	25.00	2.89	0.00	1.22	3	0	7	4	15	-11
132+96.803		13296.80	21.80	5.40	0.00	1.44	3	0	1	7	16	-9
133+00		13300.00	3.20	2.03	0.00	5.84	0	0	0	7	16	-9
133+21.803		13321.80	21.80	0.74	0.00	10.03	1	0	6	8	24	-16
133+25		13325.00	3.20	0.55	0.00	8.84	0	0	1	8	25	-17
133+46.782		13346.78	21.78	2.07	0.00	18.23	1	0	11	9	39	-30
133+50		13350.00	3.22	2.08	0.00	18.67	0	0	2	9	41	-32
133+59.234		13359.23	9.23	1.95	0.00	18.34	1	0	6	10	49	-39
133+75		13375.00	15.77	1.14	0.00	15.10	1	0	10	11	61	-50
133+84.607		13384.61	9.61	1.22	0.00	12.85	0	0	5	11	68	-57
134+00		13400.00	15.39	1.44	0.00	13.77	1	0	8	12	78	-66
134+10.062		13410.06	10.06	3.95	0.00	10.56	1	0	5	13	84	-71
134+25		13425.00	14.94	4.33	0.00	6.46	2	0	5	15	90	-75
134+31.59		13431.59	6.59	4.24	0.00	4.51	1	0	1	16	91	-75

DIVISION 2 - ALI-OAK ORCHARD

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
127+85.521	12785.52	0.00	1.49	0.00	9.15	0	0	0	0	0	0
128+00	12800.00	14.48	2.68	0.00	1.13	1	0	3	1	4	-3
128+25	12825.00	25.00	2.73	0.00	0.71	3	0	1	4	5	-1
128+50	12850.00	25.00	3.26	0.00	1.55	3	0	1	7	6	1
128+62.776	12862.78	12.78	2.13	0.00	6.88	1	0	2	8	9	-1
128+75	12875.00	12.22	1.47	0.00	7.40	1	0	3	9	13	-4
128+87.776	12887.78	12.78	1.34	0.00	8.60	1	0	4	10	18	-8
129+00	12900.00	12.22	1.14	0.00	5.36	1	0	3	11	21	-10
129+12.776	12912.78	12.78	1.71	0.00	3.58	1	0	2	12	24	-12
129+25	12925.00	12.22	5.26	0.00	0.00	2	0	1	14	25	-11
129+50	12950.00	25.00	11.62	0.00	0.00	8	0	0	22	25	-3
129+75	12975.00	25.00	3.03	0.00	1.51	7	0	1	29	26	3
130+00	13000.00	25.00	2.40	0.00	15.36	3	0	8	32	36	-4
130+04.059	13004.06	4.06	2.99	0.00	31.28	0	0	4	32	41	-9

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

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PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	EARTHWORK DATA	SHEET 207	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 11

PLOT DATE : 1/21/2022 10:25 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1" = 1'

DIVISION 3 - ALI-USH 41 SB_1150-78-00

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
577+11.561	57711.56	0.00	0.99	0.00	0.42	0	0	0	0	0	0
577+50	57750.00	38.44	0.00	0.00	20.23	1	0	15	1	19	-18
578+00	57800.00	50.00	0.00	0.00	3.10	0	0	22	1	46	-45
578+50	57850.00	50.00	0.00	0.00	2.93	0	0	6	1	54	-53
579+00	57900.00	50.00	0.81	0.00	0.91	1	0	4	2	59	-57
579+50	57950.00	50.00	0.67	0.00	0.46	1	0	1	3	60	-57
579+64.684	57964.68	14.68	0.54	0.00	0.57	0	0	0	3	60	-57
579+89.666	57989.67	24.98	0.56	0.00	1.84	1	0	1	4	61	-57
580+00	58000.00	10.33	0.81	0.00	2.83	0	0	1	4	63	-59
580+14.648	58014.65	14.65	0.26	0.00	14.28	0	0	5	4	69	-65
580+50	58050.00	35.35	0.01	0.00	9.82	0	0	16	4	89	-85
580+72.967	58072.97	22.97	0.01	0.00	3.49	0	0	6	4	96	-92

DIVISION 3 - ALI-USH 41 SB_1150-78-00

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
637+50	63750.00	0.00	0.99	0.00	18.58	0	0	0	0	0	0
638+00	63800.00	50.00	12.64	0.00	3.51	13	0	20	13	25	-12
638+50	63850.00	50.00	1.35	0.00	6.33	13	0	9	26	36	-10
639+00	63900.00	50.00	1.96	0.00	3.42	3	0	9	29	48	-19
639+50	63950.00	50.00	1.38	0.00	4.21	3	0	7	32	56	-24
640+00	64000.00	50.00	0.94	0.00	3.62	2	0	7	34	65	-31
640+23.644	64023.64	23.64	0.75	0.00	3.79	1	0	3	35	69	-34
640+48.633	64048.63	24.99	0.52	0.00	6.47	1	0	5	36	75	-39
640+50	64050.00	1.37	0.52	0.00	6.72	0	0	0	36	75	-39
640+73.621	64073.62	23.62	0.94	0.00	10.50	1	0	8	37	85	-48
640+93.517	64093.52	19.90	1.40	0.00	9.56	1	0	7	38	94	-56
641+00	64100.00	6.48	0.66	0.00	9.60	0	0	2	38	96	-58
641+18.482	64118.48	18.48	3.39	0.00	6.95	1	0	6	39	104	-65
641+43.433	64143.43	24.95	0.42	0.00	4.50	2	0	5	41	110	-69

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

9

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DIVISION 3 - ALI-USH 41 NB_1150-78-00

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
577+00	57700.00	0.00	3.25	0.00	3.68	0	0	0	0	0	0
577+50	57750.00	50.00	5.61	0.00	14.15	8	0	17	8	21	-13
577+50.625	57750.62	0.62	5.40	0.00	14.12	0	0	0	8	21	-13
577+78.364	57778.36	27.74	9.36	0.00	26.05	8	0	21	16	48	-32
577+81.853	57781.85	3.49	7.91	0.00	21.94	1	0	3	17	51	-34
578+00	57800.00	18.15	3.01	0.00	8.88	4	0	10	21	64	-43
578+03.332	57803.33	3.33	2.79	0.00	8.52	0	0	1	21	65	-44
578+28.012	57828.01	24.68	1.67	0.00	6.54	2	0	7	23	74	-51
578+50	57850.00	21.99	1.12	0.00	11.86	1	0	7	24	83	-59
579+00	57900.00	50.00	0.29	0.00	6.78	1	0	17	25	104	-79
579+50	57950.00	50.00	0.12	0.00	5.56	0	0	11	25	118	-93
580+00	58000.00	50.00	0.10	0.00	4.50	0	0	9	25	129	-104
580+50	58050.00	50.00	0.04	0.00	5.35	0	0	9	25	140	-115
581+00	58100.00	50.00	0.27	0.00	3.31	0	0	8	25	150	-125
581+53.633	58153.63	53.63	5.54	0.00	0.00	6	0	3	31	154	-123

DIVISION 3 - ALI-USH 41 NB_1150-78-00

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
585+17	58517.00	0.00	0.16	0.00	9.59	0	0	0	0	0	0
585+50	58550.00	33.00	0.30	0.00	5.17	0	0	14	0	11	-11
585+95.174	58595.17	45.17	0.56	0.00	15.19	1	0	17	1	33	-32
586+00	58600.00	4.83	0.52	0.00	21.06	0	0	3	1	36	-35
586+20.156	58620.16	20.16	0.45	0.00	14.85	0	0	13	1	53	-52
586+26.247	58626.25	6.09	0.47	0.00	13.72	0	0	3	1	56	-55
586+45.127	58645.13	18.88	0.22	0.00	5.65	0	0	7	1	65	-64
586+50	58650.00	4.87	4.57	0.00	3.14	0	0	1	1	66	-65
586+51.23	58651.23	1.23	6.11	0.00	3.00	0	0	0	1	66	-65
586+76.203	58676.20	24.97	9.22	0.00	2.59	7	0	3	8	70	-62
587+00	58700.00	23.80	1.37	0.00	9.49	5	0	5	13	76	-63
587+50	58750.00	50.00	2.11	0.00	13.15	3	0	21	16	103	-87
587+50.956	58750.96	0.96	1.74	0.00	0.00	0	0	0	16	103	-87

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

9

9

PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	EARTHWORK DATA	SHEET 209	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 13

PLOT DATE : 3/15/2022 2:08 PM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49

DIVISION 3 - ALI-USH 41 NB_1150-78-00

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
818+50	81850.00	0.00	0.16	0.00	19.09	0	0	0	0	0	0
819+00	81900.00	50.00	0.00	0.00	1.82	0	0	19	0	24	-24
819+17	81917.00	17.00	0.00	0.00	5.71	0	0	2	0	26	-26
819+42.149	81942.15	25.15	0.00	0.00	10.08	0	0	7	0	35	-35
819+50	81950.00	7.85	0.00	0.00	8.75	0	0	3	0	39	-39
819+67.135	81967.13	17.13	0.00	0.00	5.66	0	0	5	0	45	-45
820+00	82000.00	32.87	0.00	0.00	6.08	0	0	7	0	54	-54
820+50	82050.00	50.00	0.00	0.00	2.14	0	0	8	0	64	-64
821+00	82100.00	50.00	0.00	0.00	0.00	0	0	2	0	66	-66
821+50	82150.00	50.00	0.00	0.00	0.00	0	0	0	0	66	-66

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - UNUSABLE PAVEMENT - (FILL * FILL FACTOR)

9

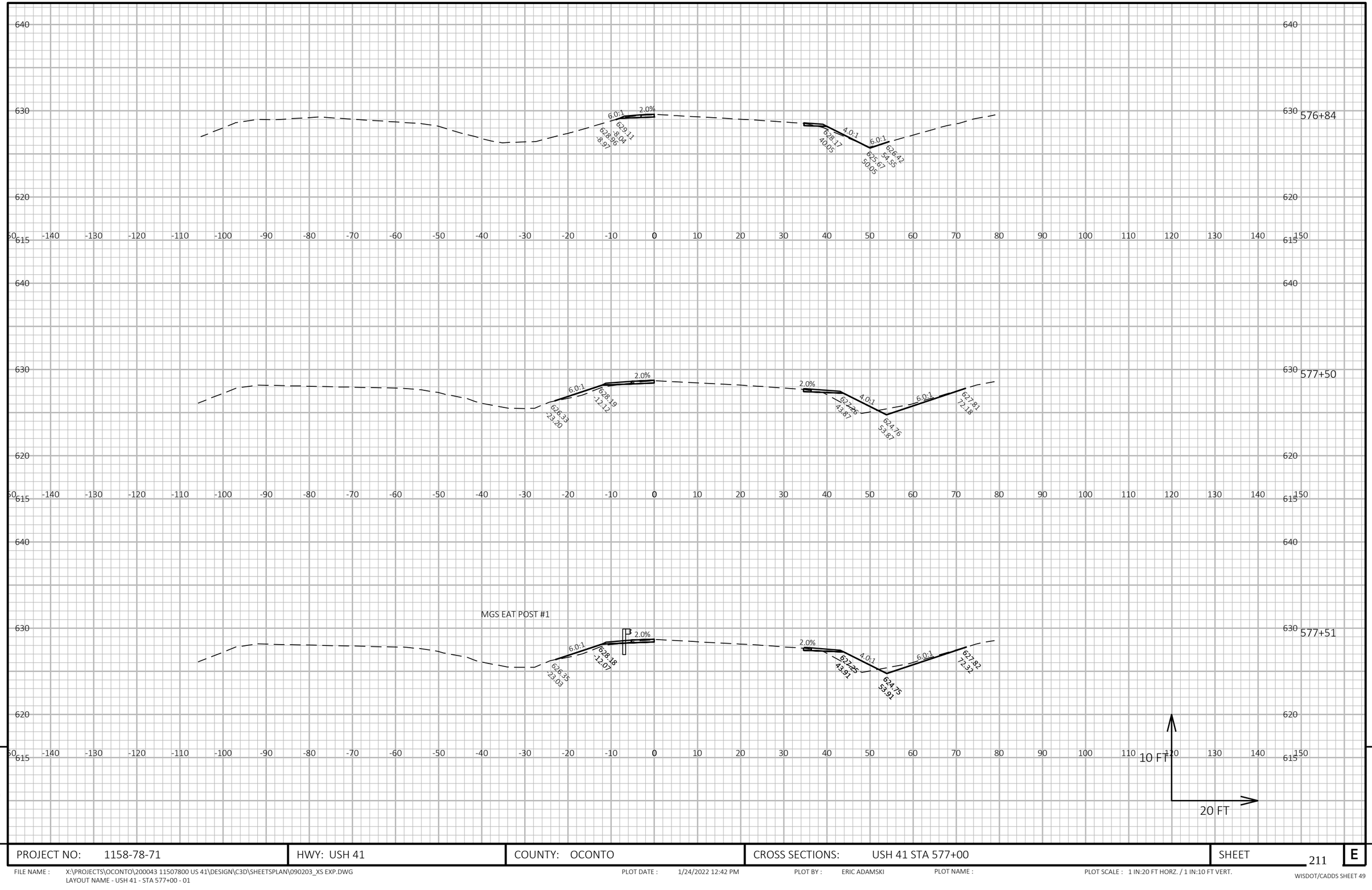
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PROJECT NO: 1150-78-71	HWY: USH 41	COUNTY: BROWN & OCONTO	EARTHWORK DATA	SHEET 210	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090101_EW.DWG
LAYOUT NAME - 14

PLOT DATE : 1/21/2022 10:25 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1" = 1'

WISDOT/CADDS SHEET 49



9

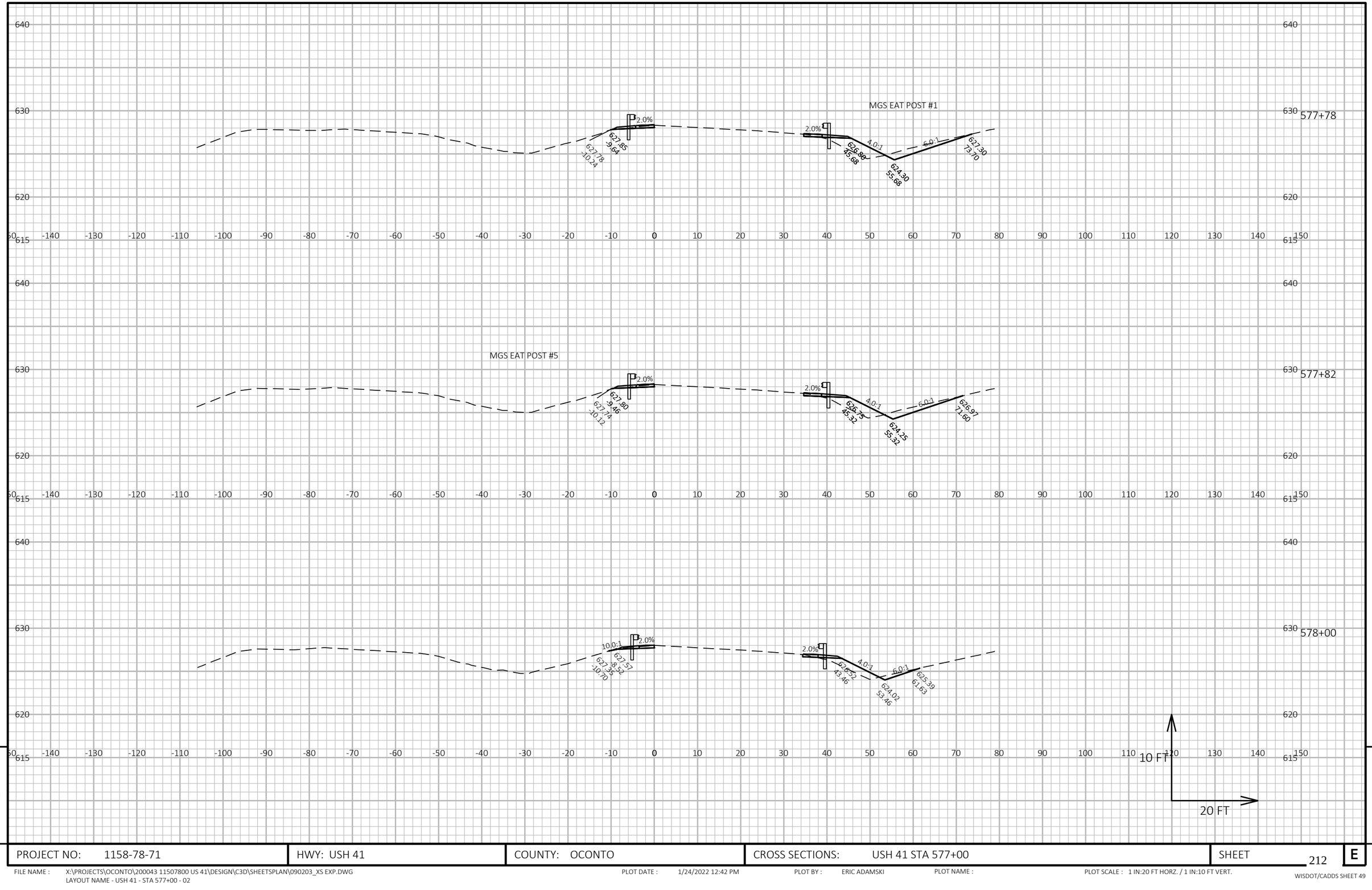
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 577+00	SHEET 211	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 - STA 577+00 - 01

PLOT DATE : 1/24/2022 12:42 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

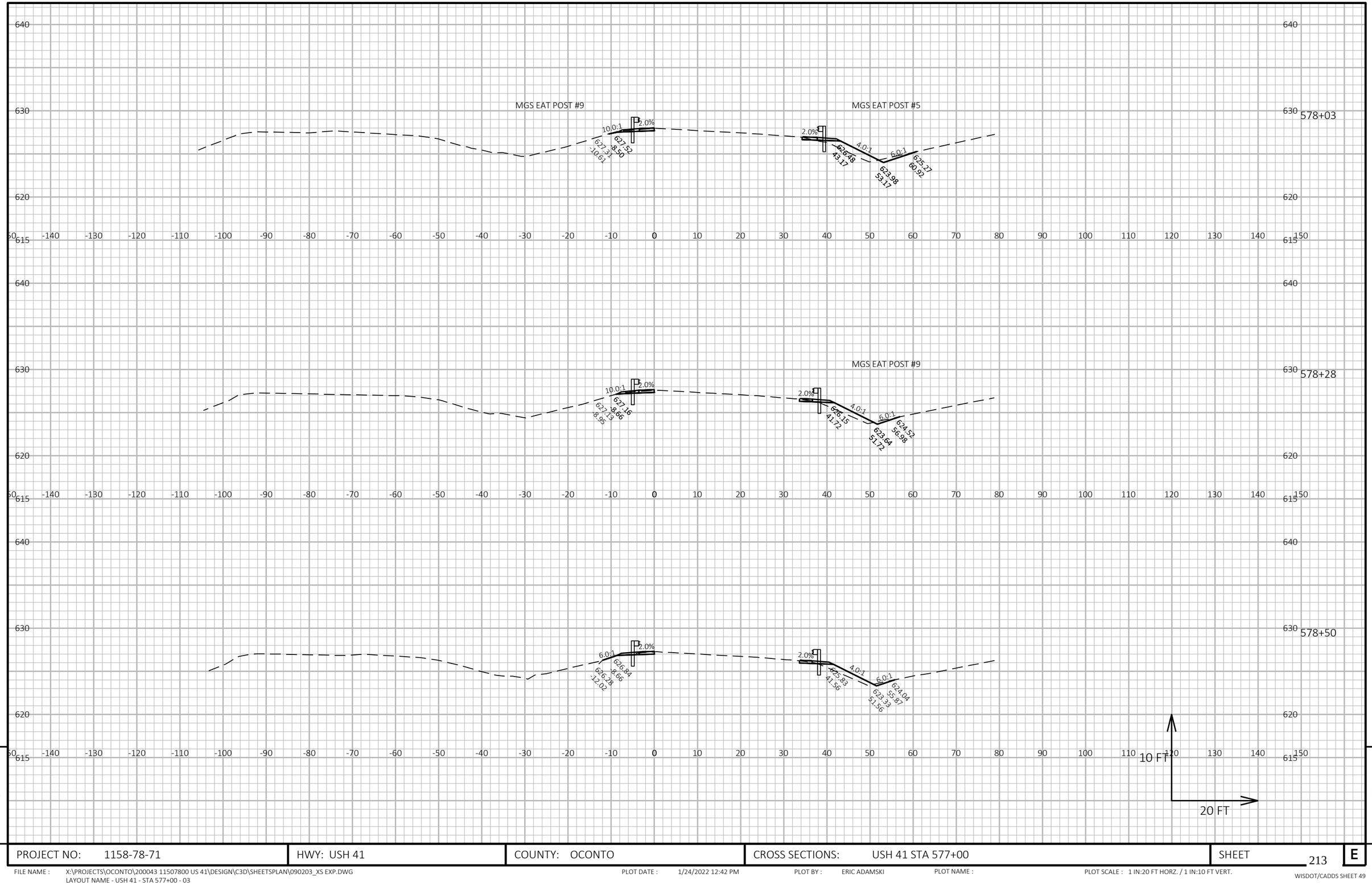
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 577+00	SHEET 212	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 - STA 577+00 - 02

PLOT DATE : 1/24/2022 12:42 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

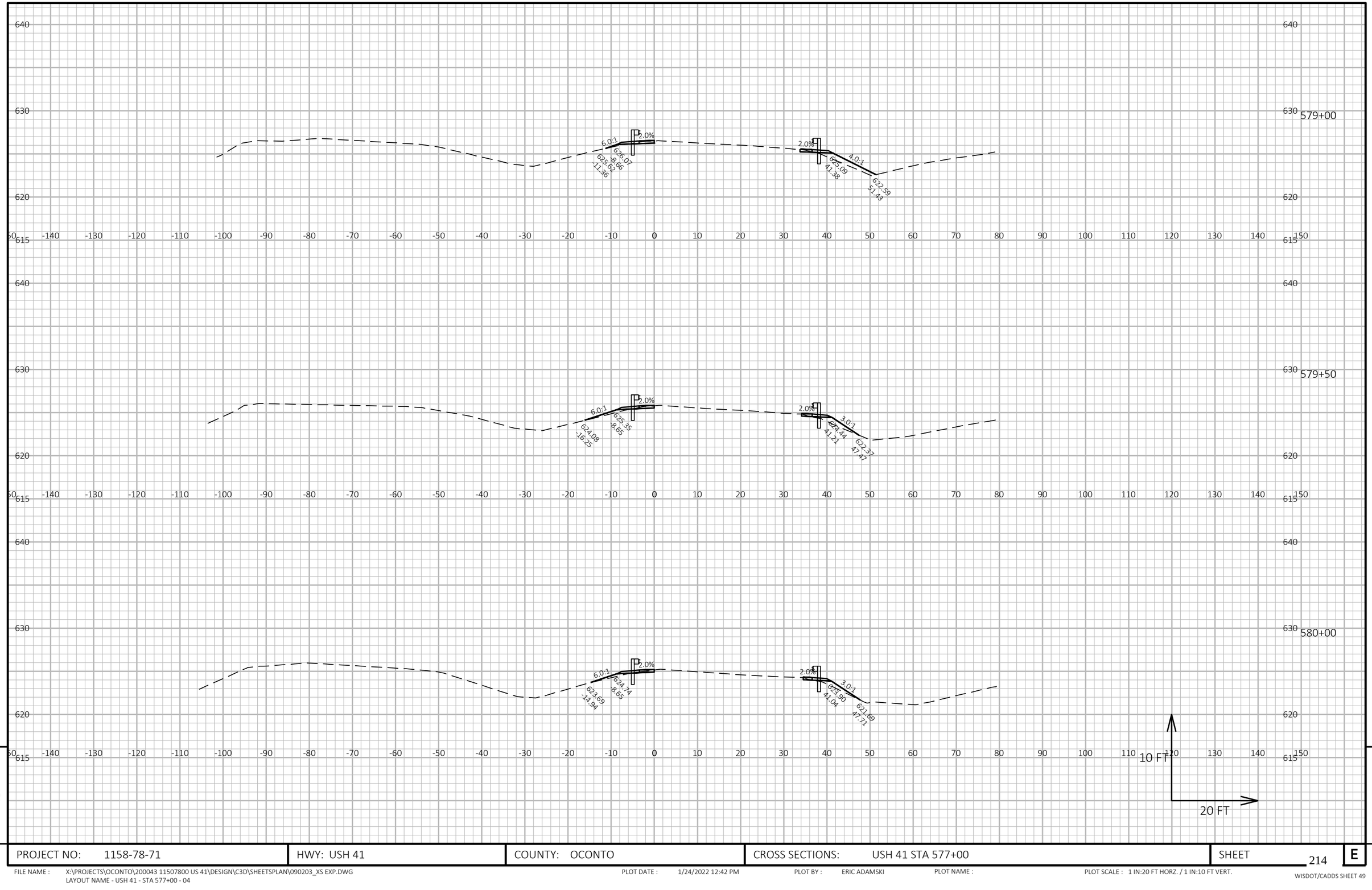
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 577+00	SHEET 213	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 - STA 577+00 - 03

PLOT DATE : 1/24/2022 12:42 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



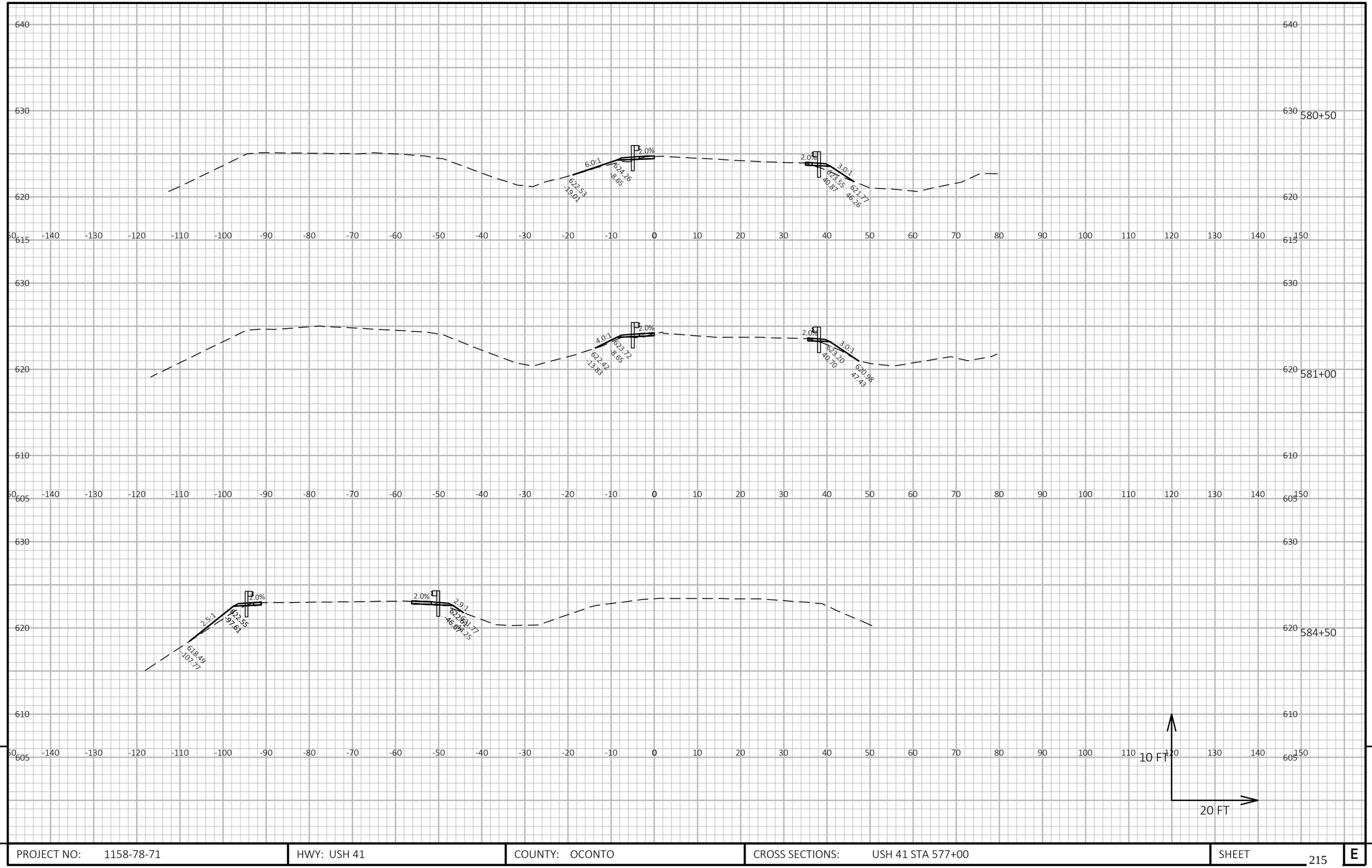
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 577+00	SHEET 214	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 - STA 577+00 - 04

PLOT DATE : 1/24/2022 12:42 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

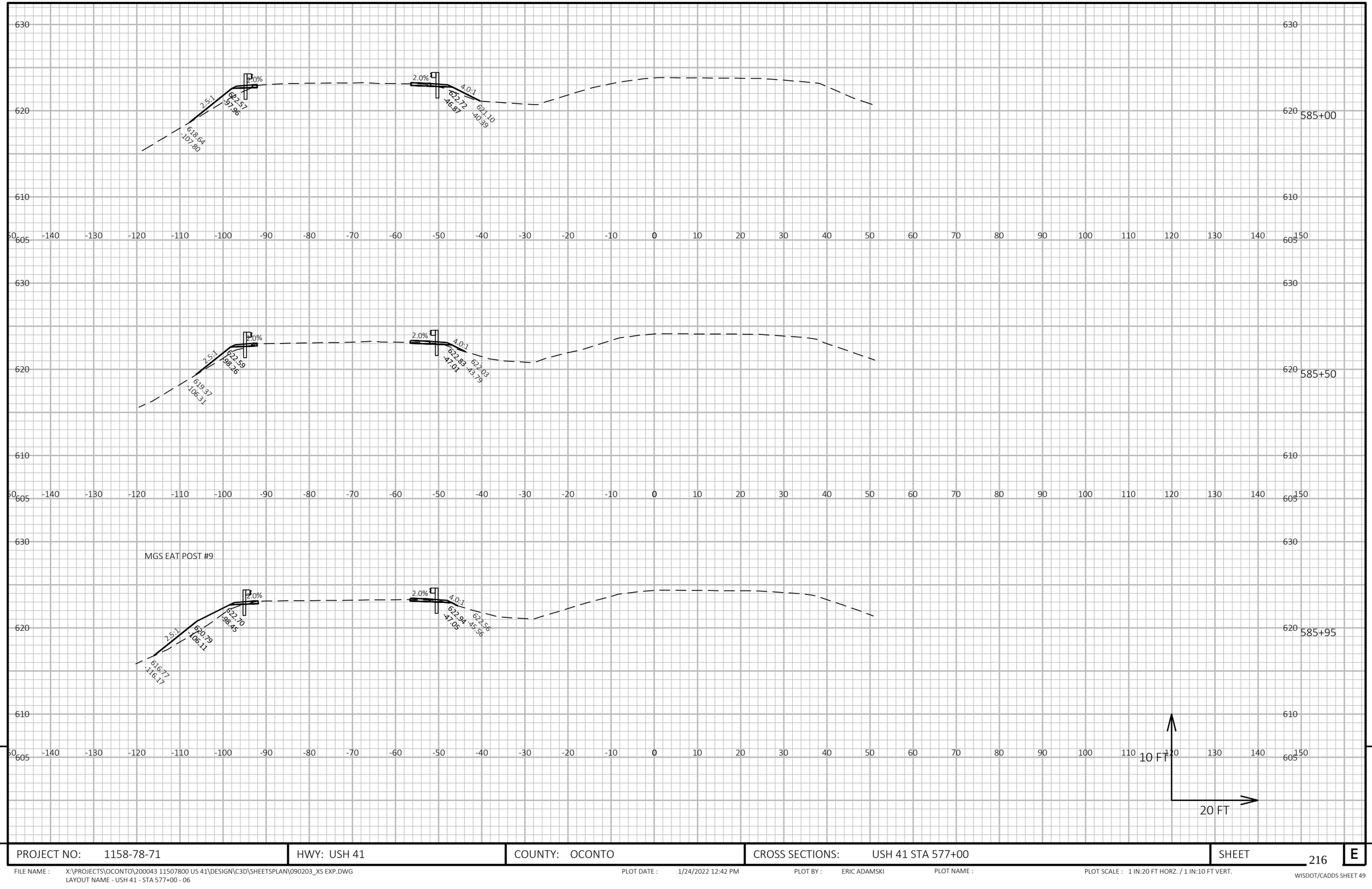
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 577+00	SHEET 215	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 - STA 577+00 - 05

PLOT DATE : 1/24/2022 12:42 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

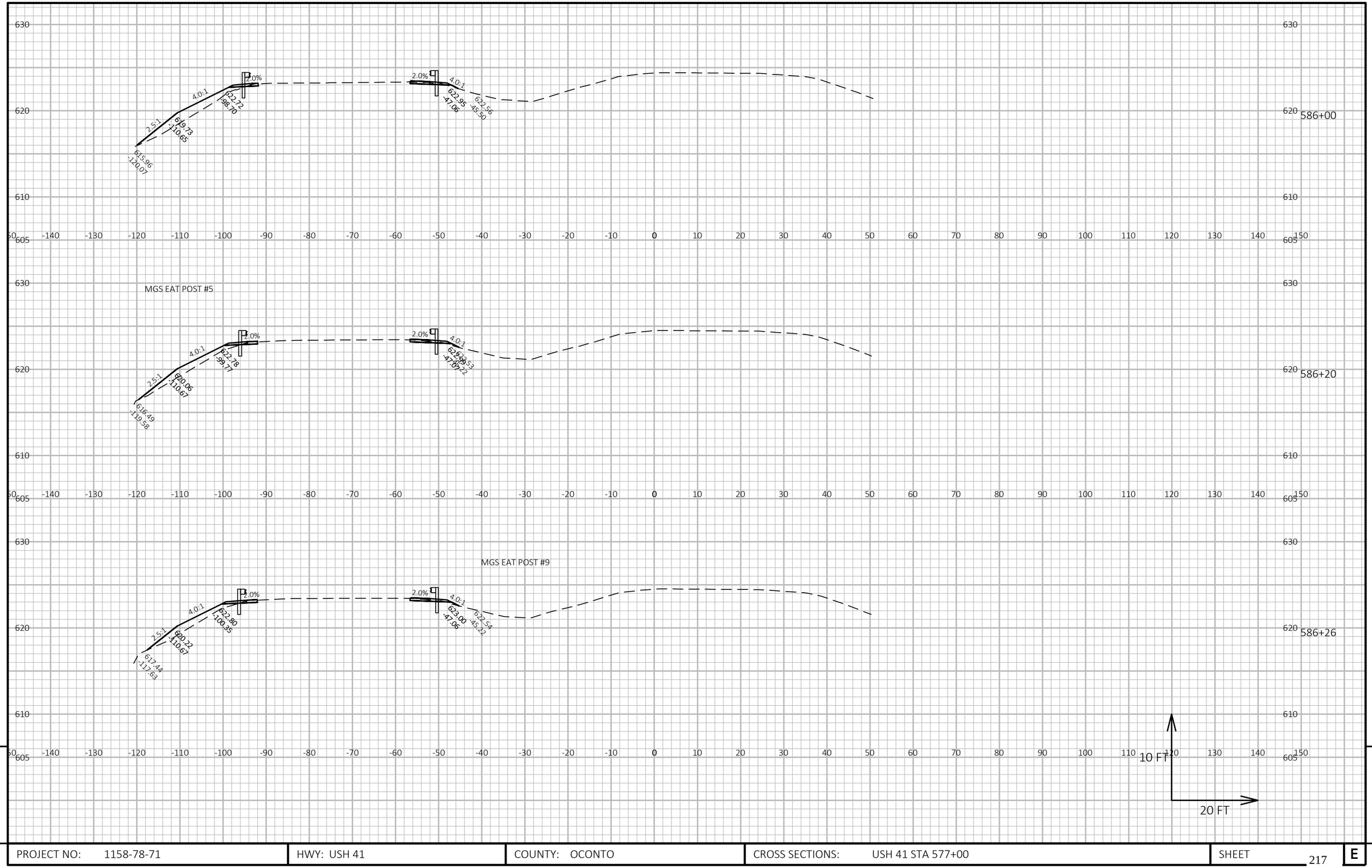
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 577+00	SHEET 216	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 - STA 577+00 - 06

PLOT DATE : 1/24/2022 12:42 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

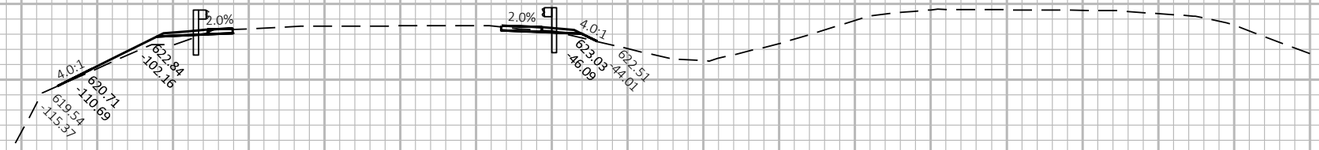
PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 577+00	SHEET 217	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 - STA 577+00 - 07

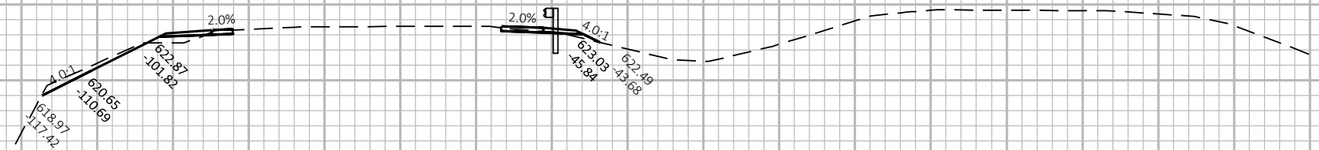
PLOT DATE : 1/24/2022 12:42 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

MGS EAT POST #1

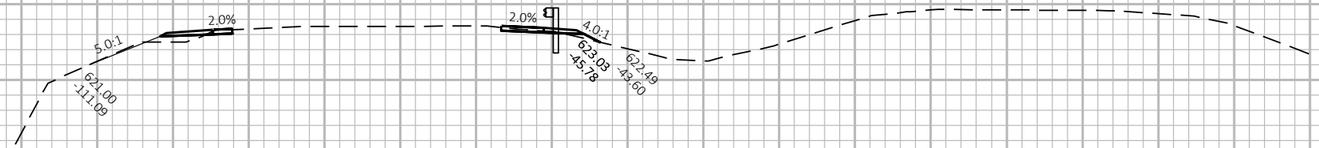


586+45

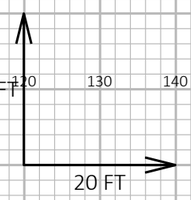


586+50

MGS EAT POST #5



586+51



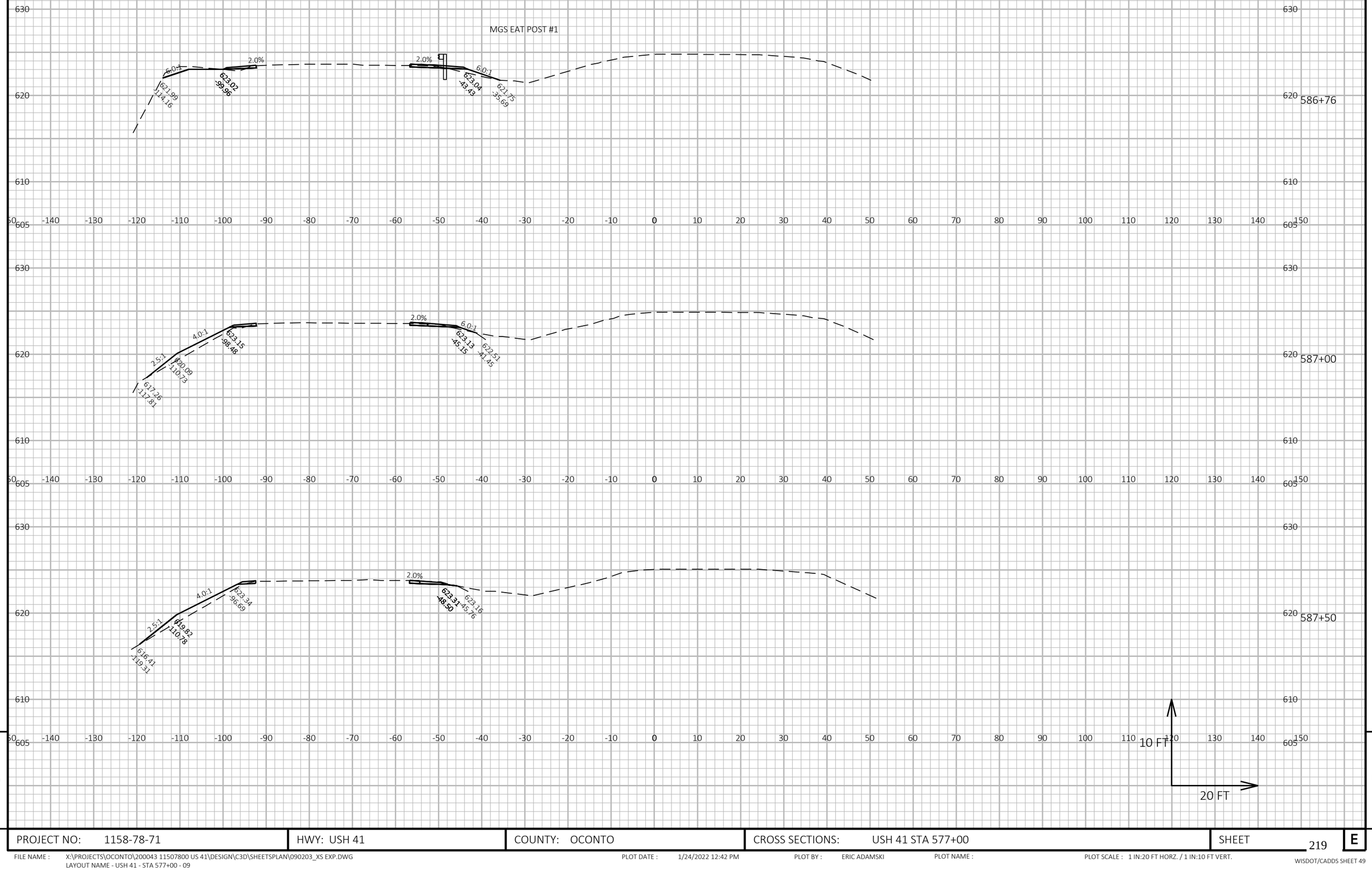
PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 577+00	SHEET 218	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 - STA 577+00 - 08

PLOT DATE : 1/24/2022 12:42 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

MGS EAT POST #1



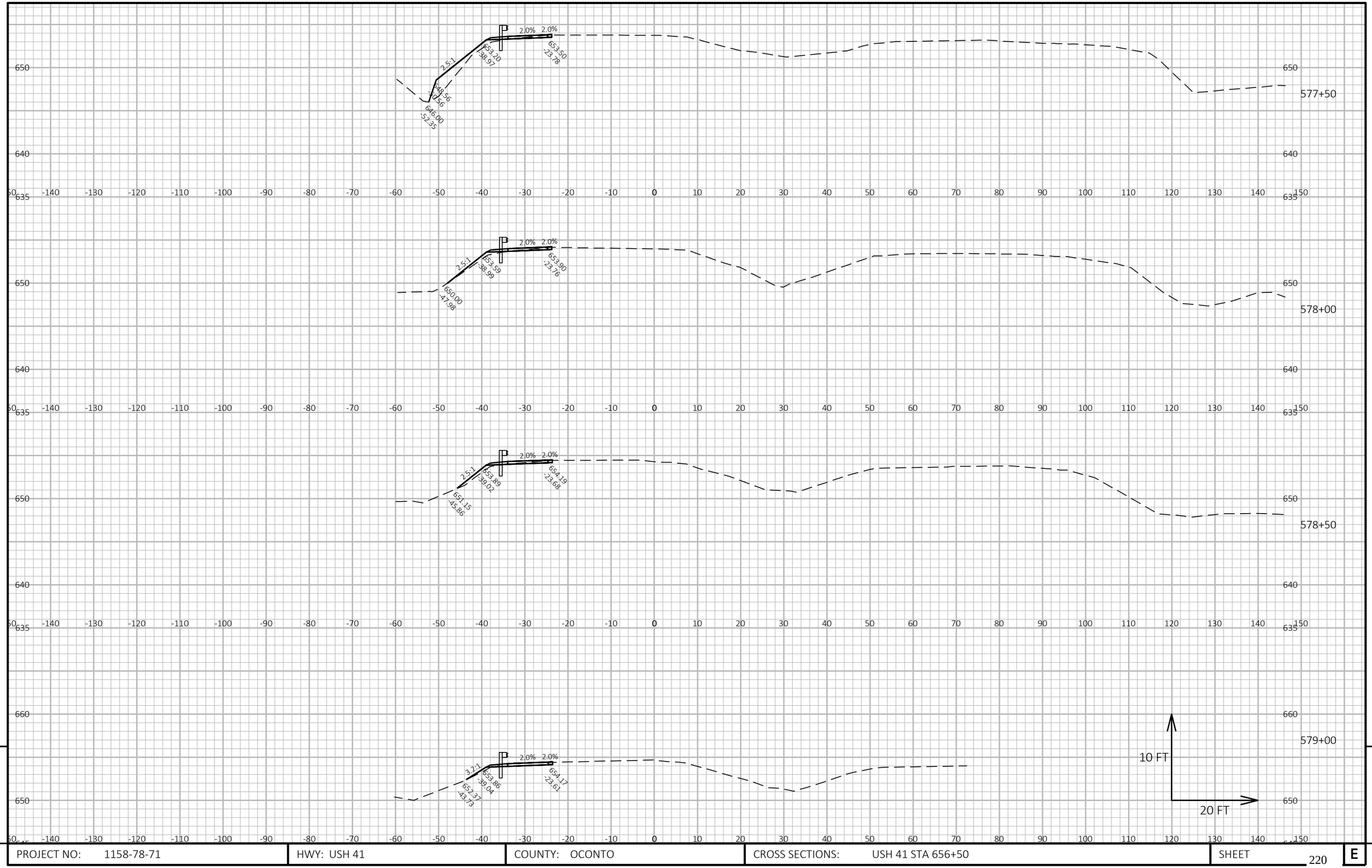
PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 577+00	SHEET 219 E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 - STA 577+00 - 09

PLOT DATE : 1/24/2022 12:42 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9 9

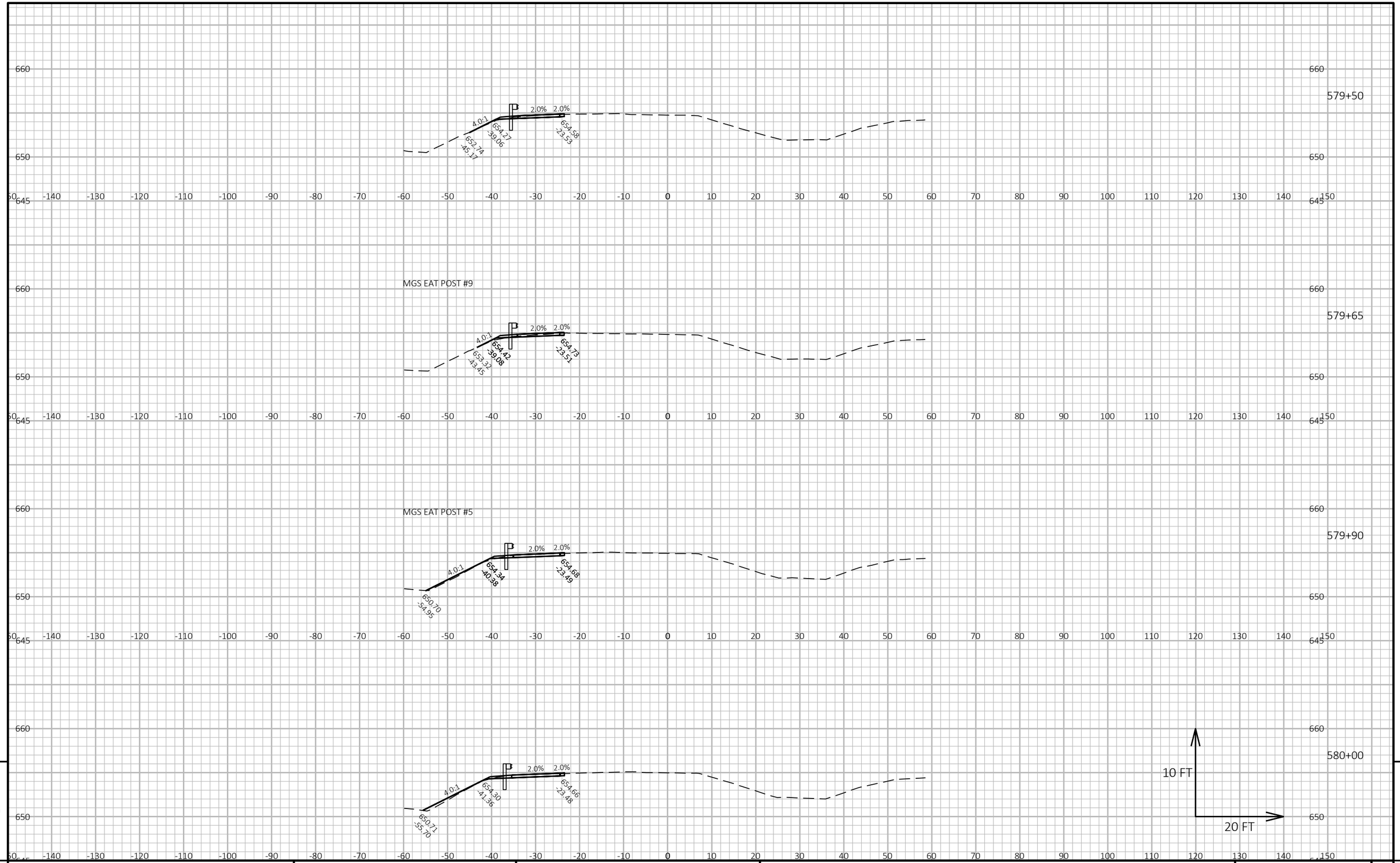


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 656+50	SHEET 220	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 - STA 656+50 01

PLOT DATE : 1/24/2022 12:43 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 656+50	SHEET 221	E

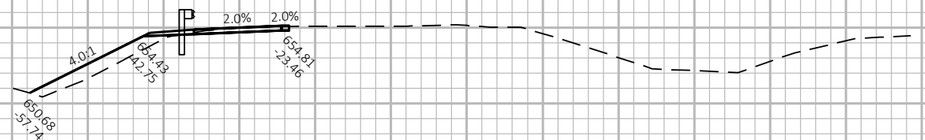
FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 - STA 656+50 02

PLOT DATE : 1/24/2022 12:43 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

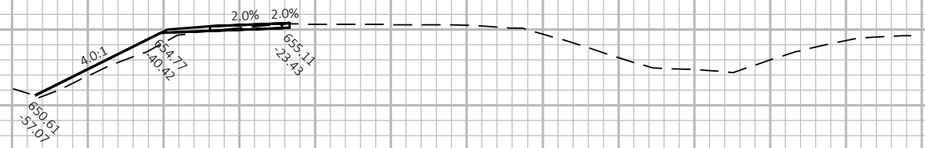
WISDOT/CADDS SHEET 49

MGS EAT POST #1

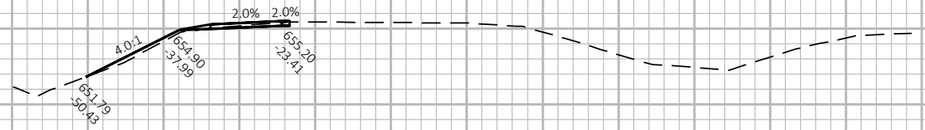
580+15

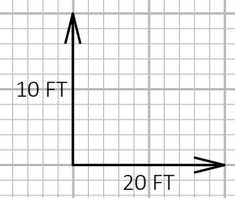


580+50



580+75





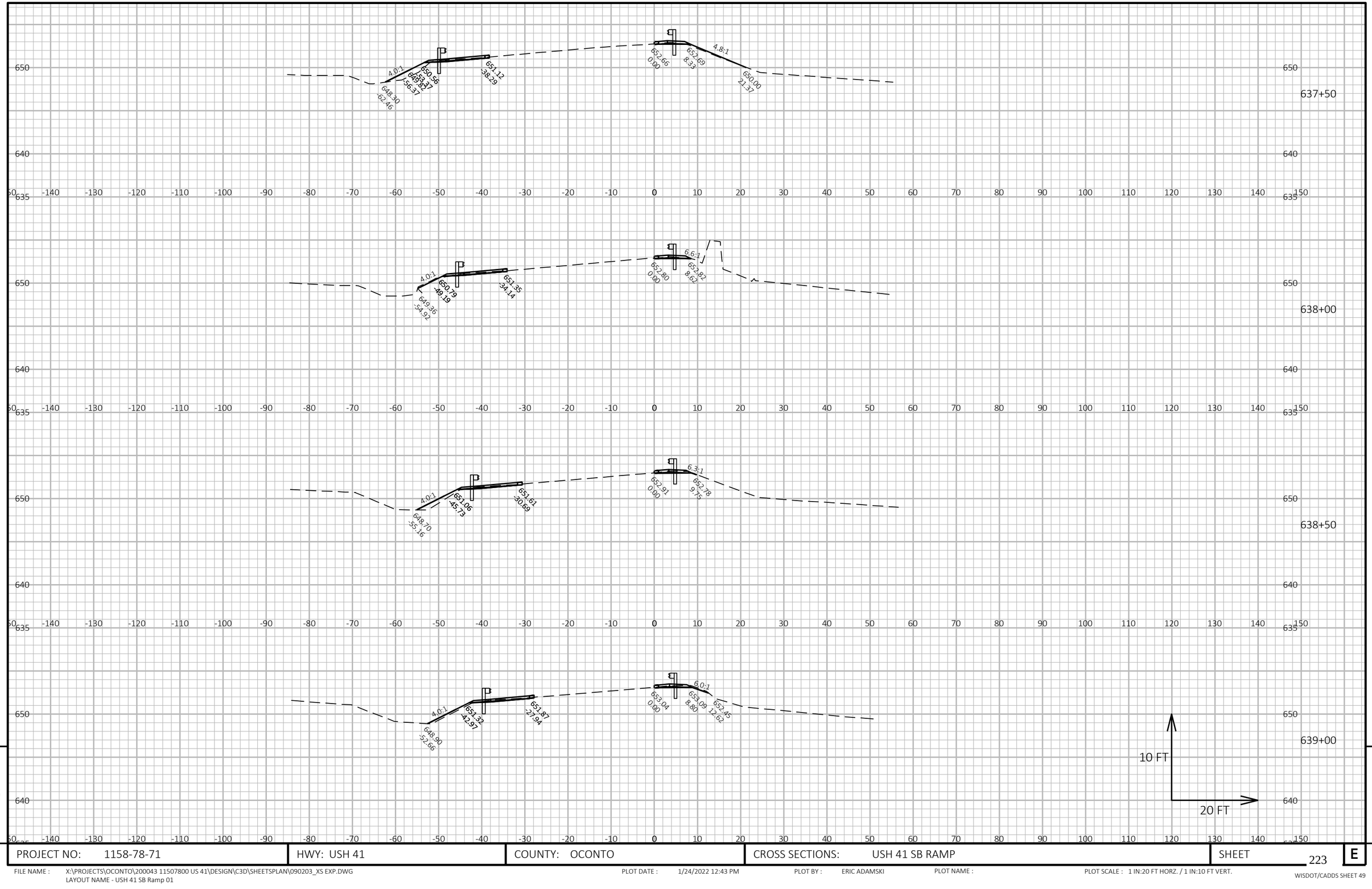
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9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 656+50	SHEET 222	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 - STA 656+50 03

PLOT DATE : 1/24/2022 12:43 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

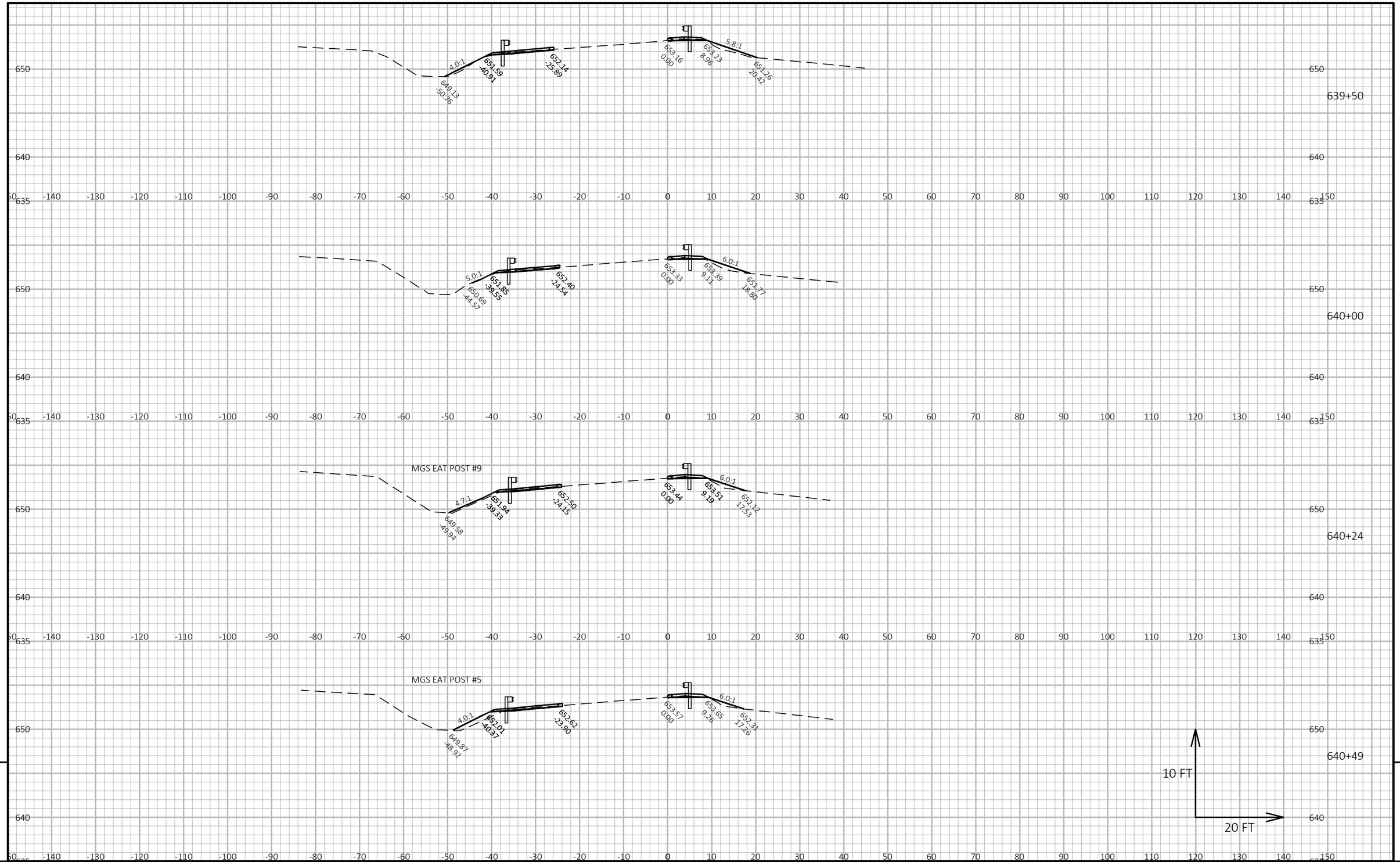


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 SB RAMP	SHEET 223	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 SB Ramp 01

PLOT DATE : 1/24/2022 12:43 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

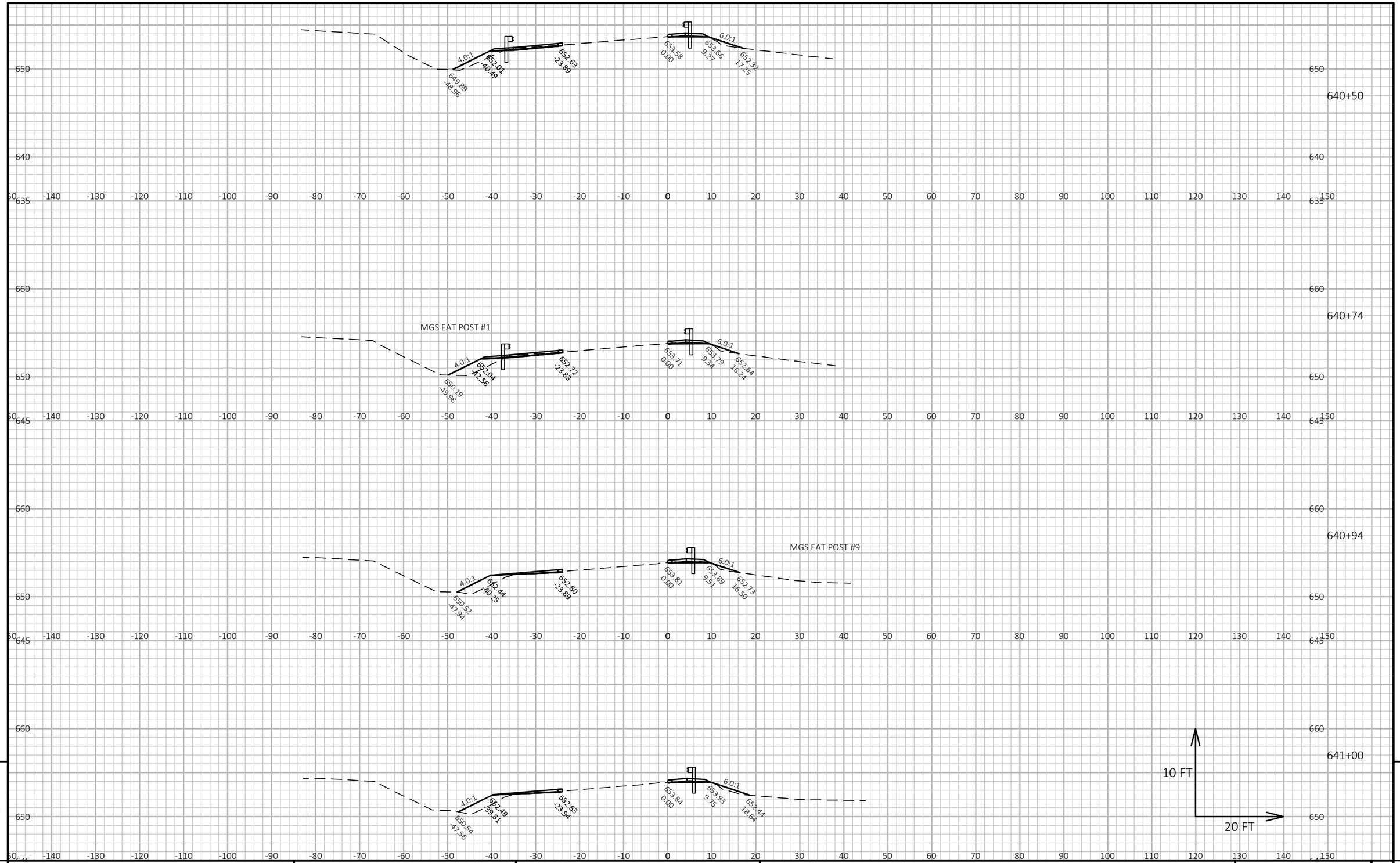
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 SB RAMP	SHEET 224	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 SB Ramp 02

PLOT DATE : 1/24/2022 12:43 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

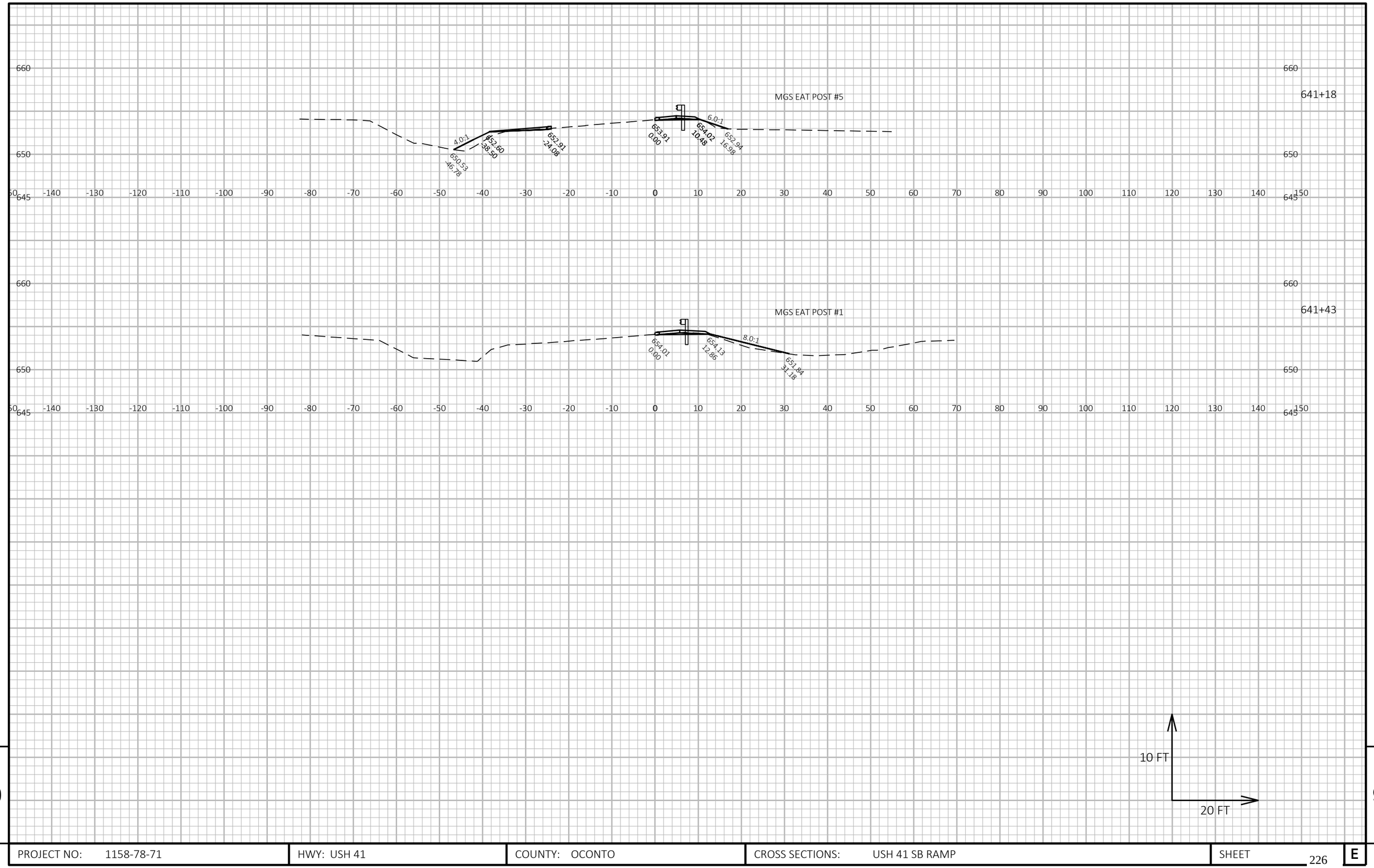


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 SB RAMP	SHEET 225	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 SB Ramp 03

PLOT DATE : 1/24/2022 12:43 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 SB RAMP	SHEET 226	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - USH 41 SB Ramp 04

PLOT DATE : 1/24/2022 12:43 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

818+05

675.43
34.16
675.67
36.84

819+00

2.0%
10.0:1
4.0:1
675.24
34.55
674.92
43.73
672.17
54.75

MGS EAT POST #1

819+17

2.0%
10.0:1
4.0:1
675.20
34.62
674.89
44.94
672.98
52.60

MGS EAT POST #5

819+42

2.0%
10.0:1
4.0:1
675.14
34.66
674.95
43.05
672.31
53.58

819+50

2.0%
675.12
34.64
674.96
42.46
672.29
53.14

10 FT
20 FT

9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 818+00	SHEET 227	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - 04

PLOT DATE : 1/24/2022 12:43 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

MGS EAT POST #9

819+67

820+00

820+50

821+00

821+50

10 FT

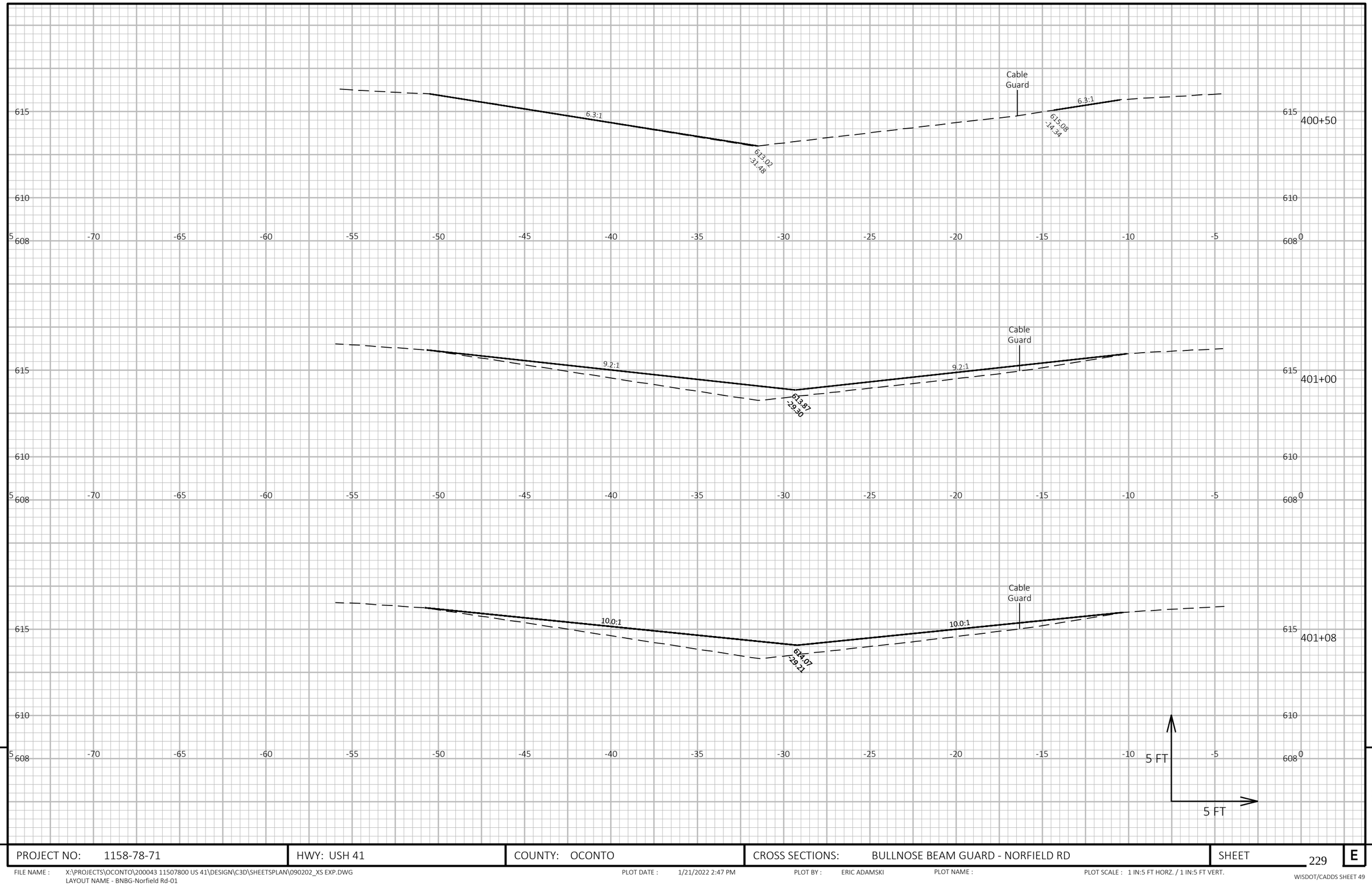
20 FT

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: USH 41 STA 818+00	SHEET 228 E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090203_XS EXP.DWG
LAYOUT NAME - 05

PLOT DATE : 1/24/2022 12:43 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

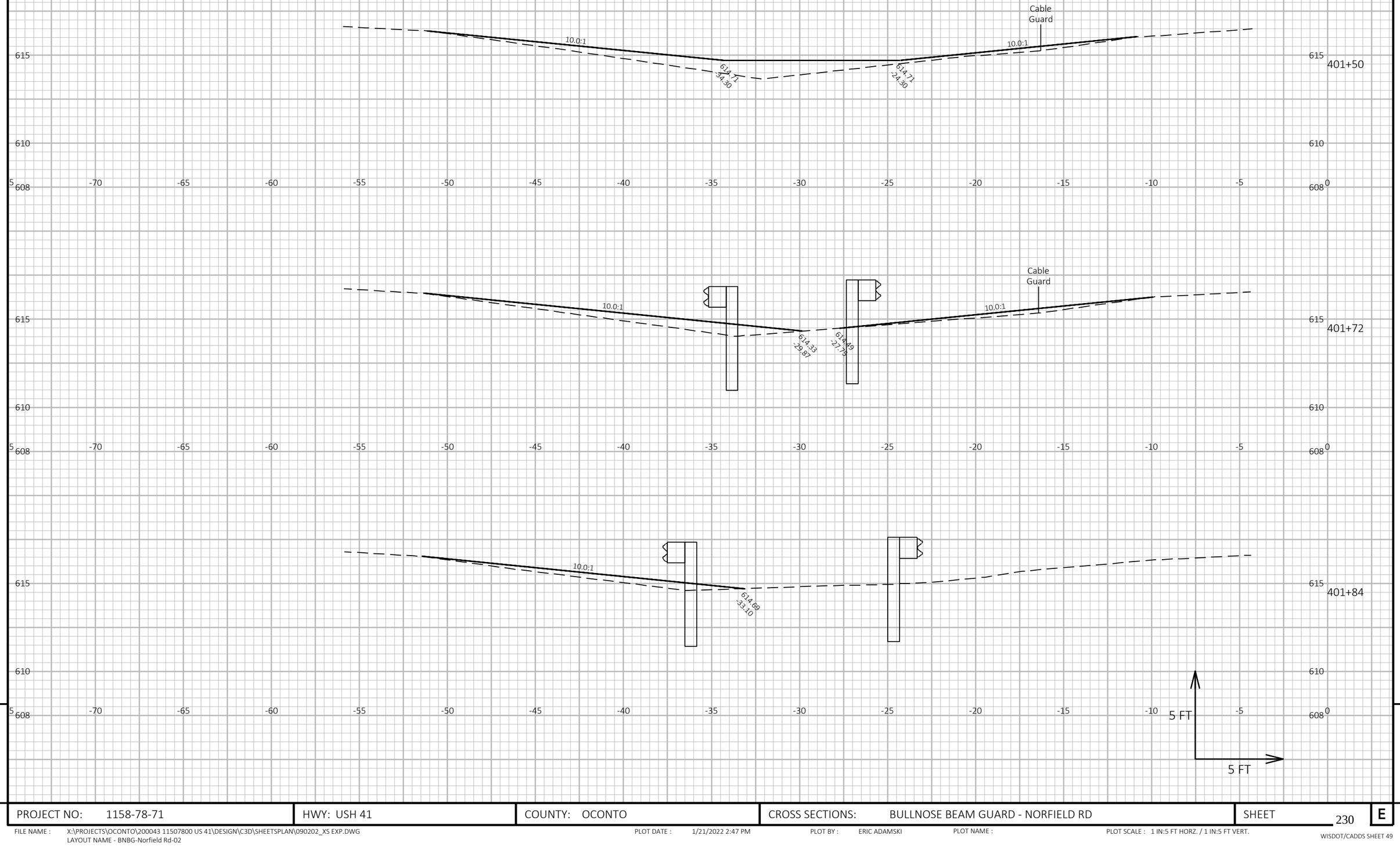
9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - NORFIELD RD	SHEET 229	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Norfield Rd-01

PLOT DATE : 1/21/2022 2:47 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

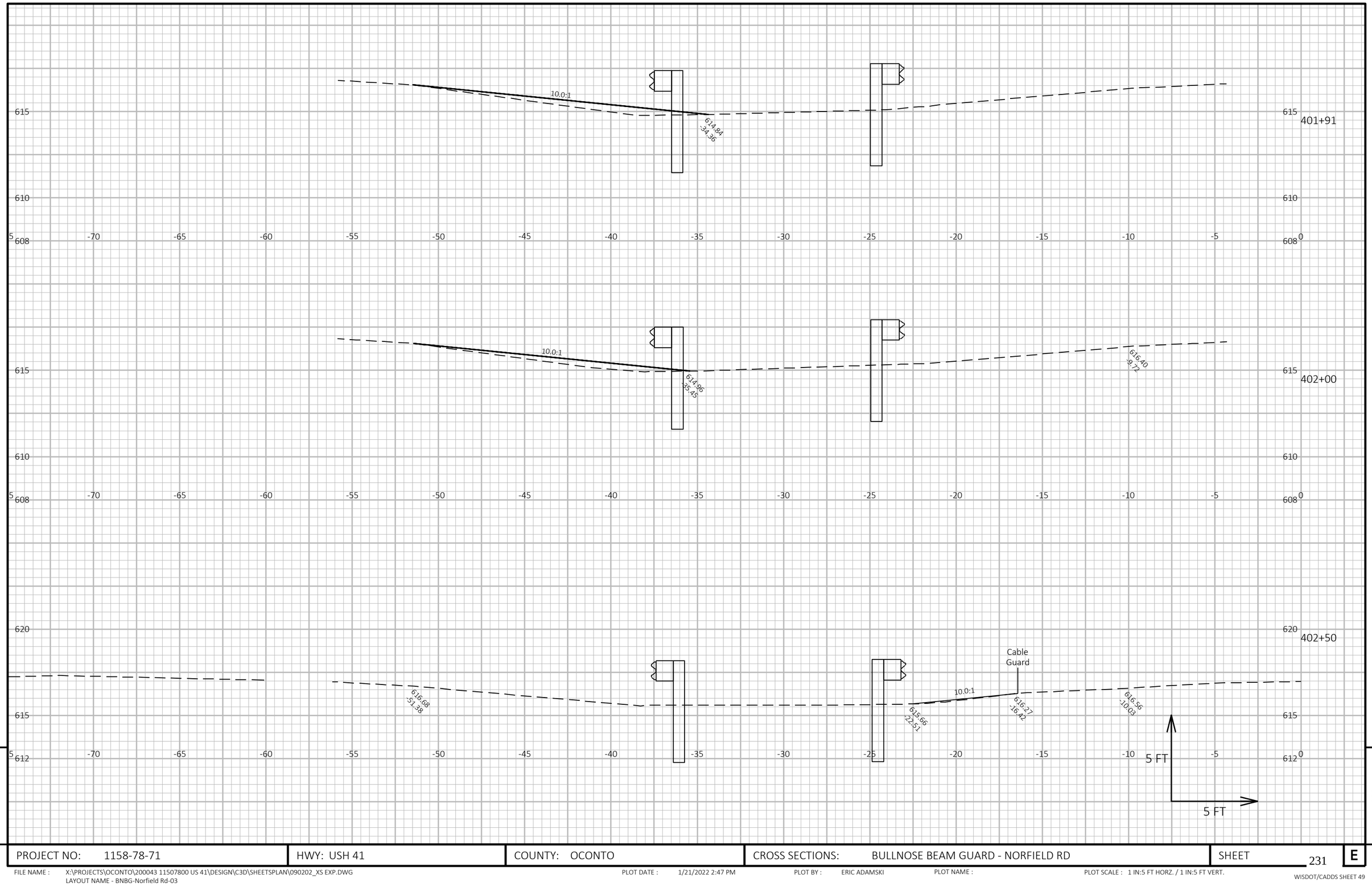
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - NORFIELD RD	SHEET 230	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Norfield Rd-02

PLOT DATE : 1/21/2022 2:47 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

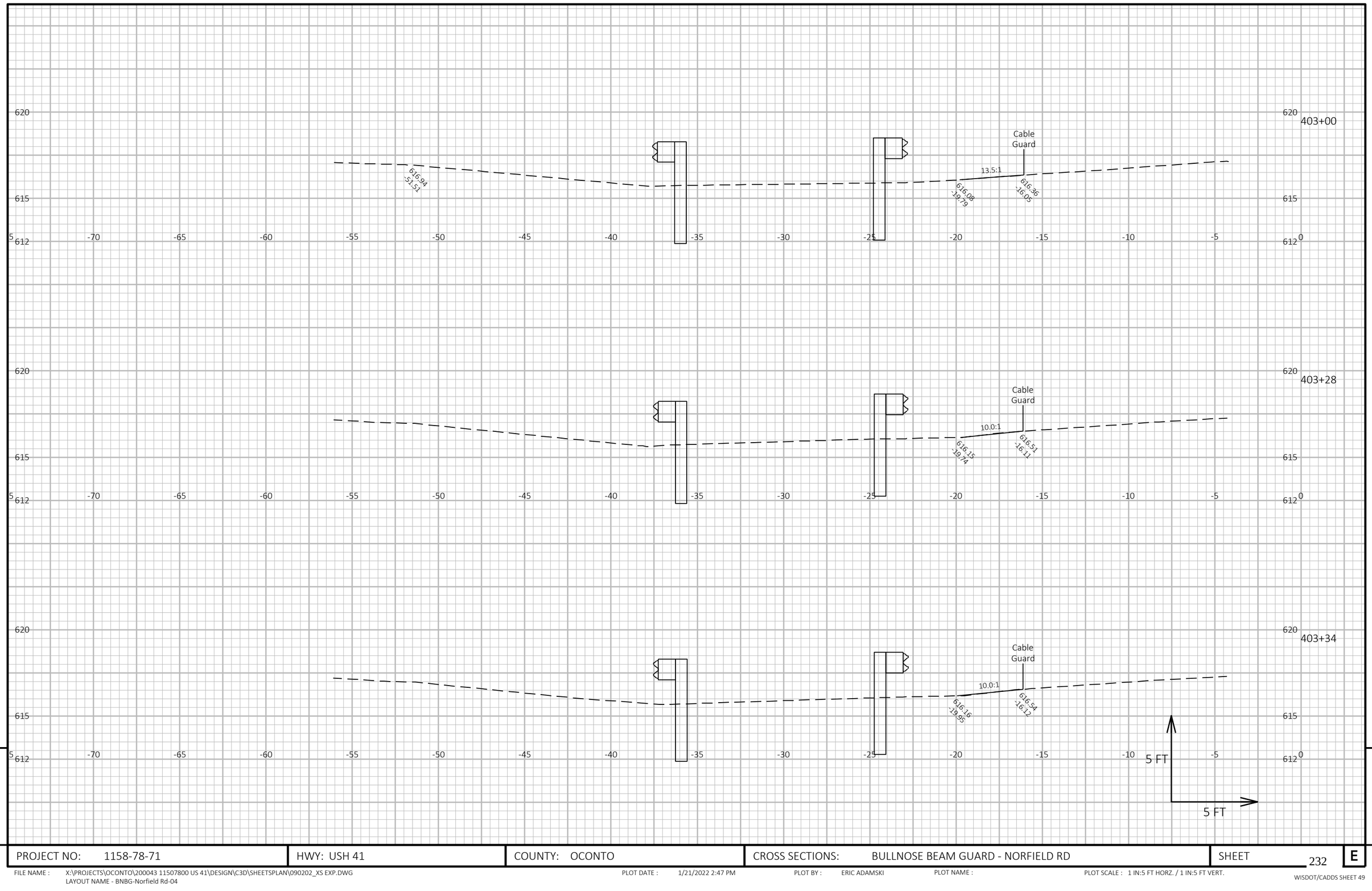
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - NORFIELD RD	SHEET 231	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Norfield Rd-03

PLOT DATE : 1/21/2022 2:47 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

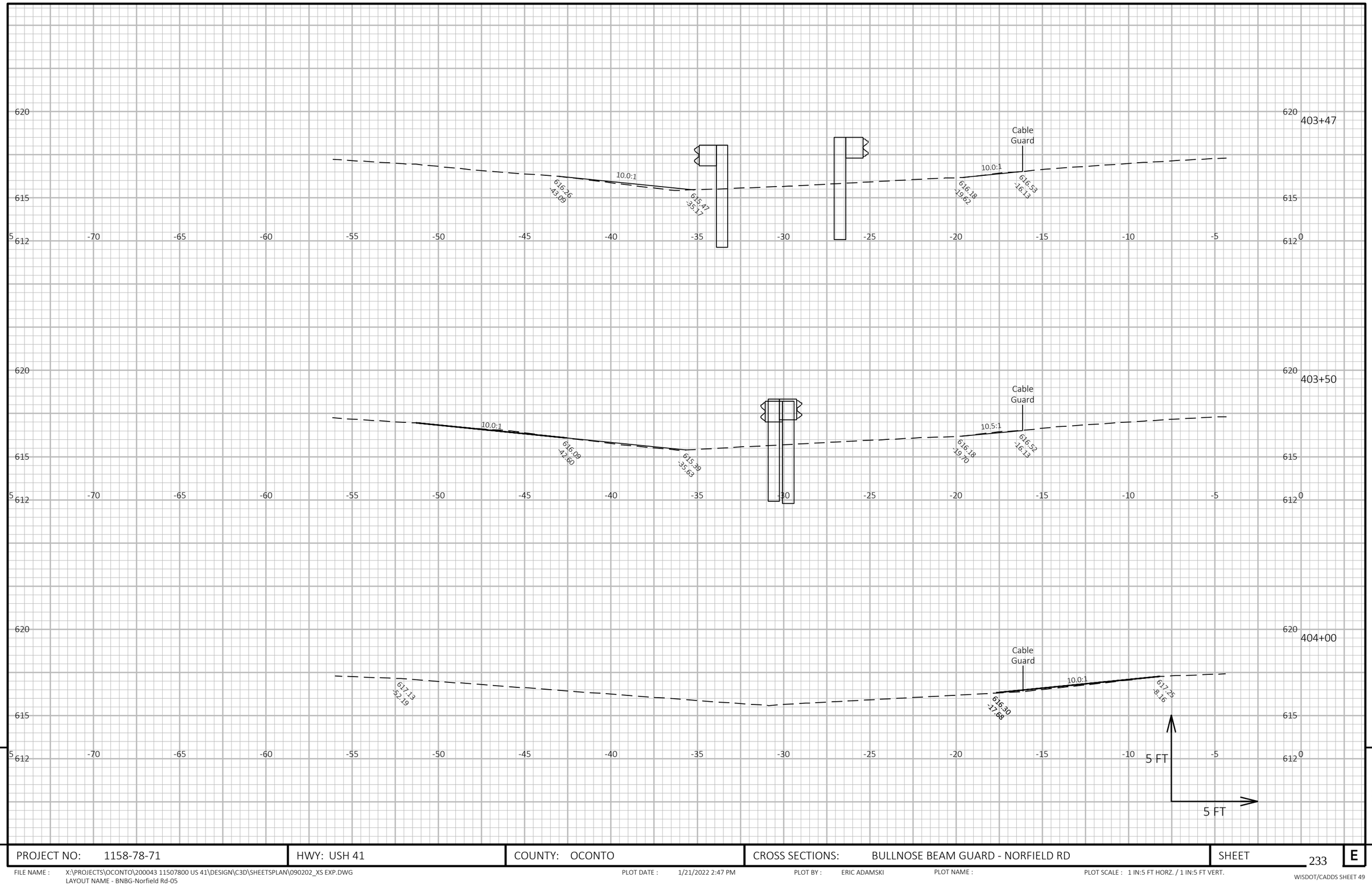
9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - NORFIELD RD	SHEET 232	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Norfield Rd-04

PLOT DATE : 1/21/2022 2:47 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

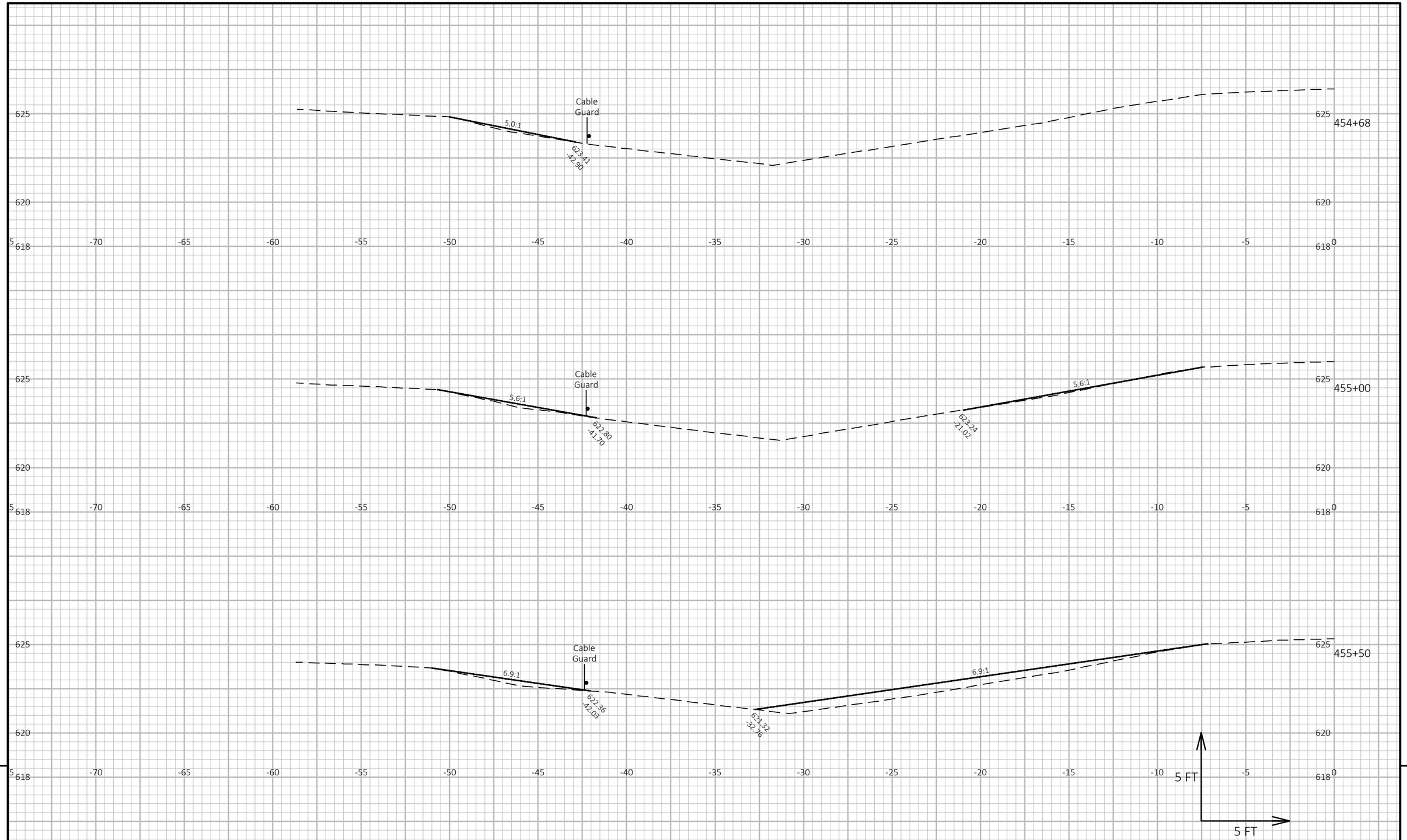
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - NORFIELD RD	SHEET 233	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Norfield Rd-05

PLOT DATE : 1/21/2022 2:47 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

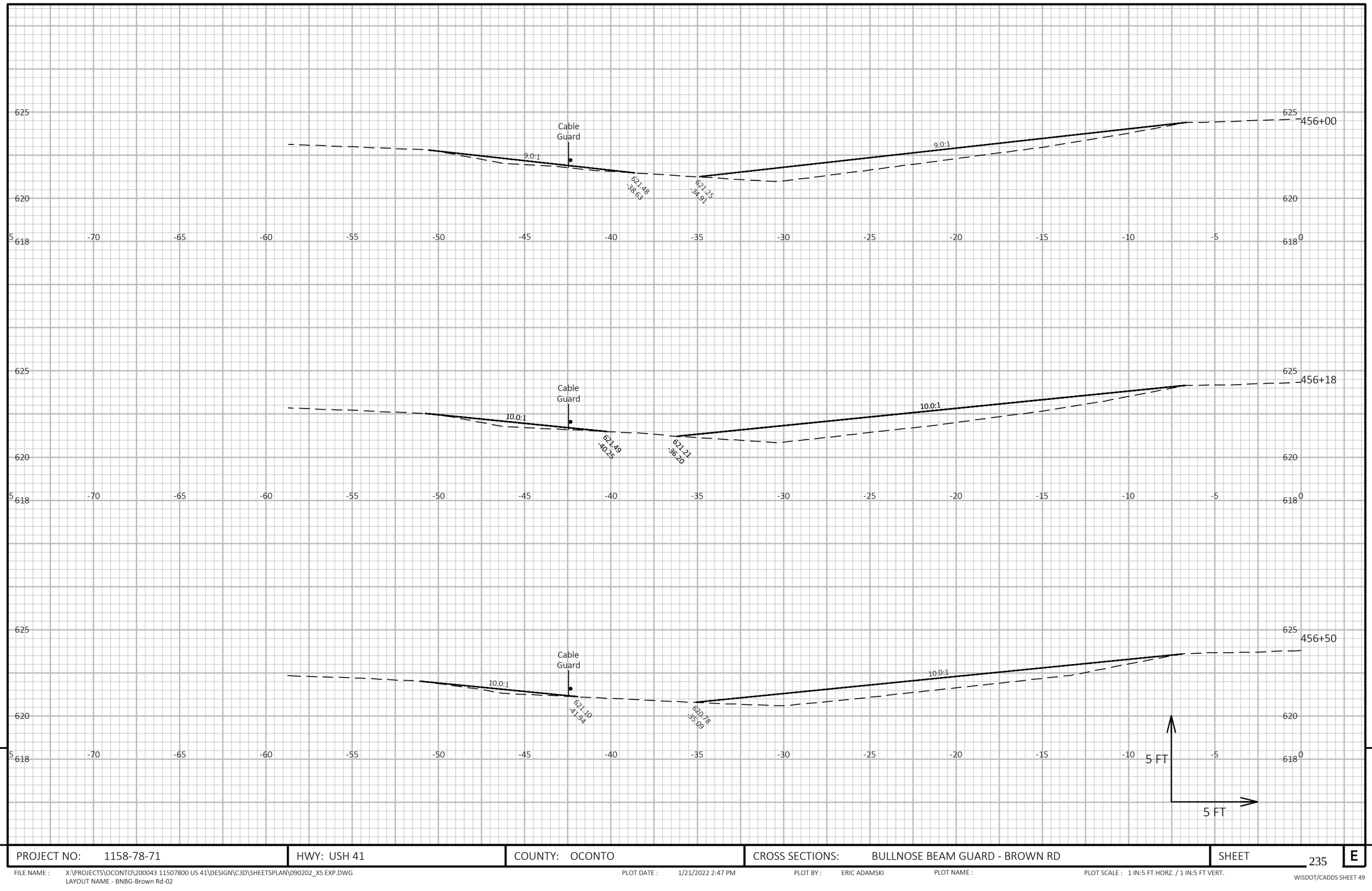
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - BROWN RD	SHEET 234	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Brown Rd-01

PLOT DATE : 1/21/2022 2:47 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

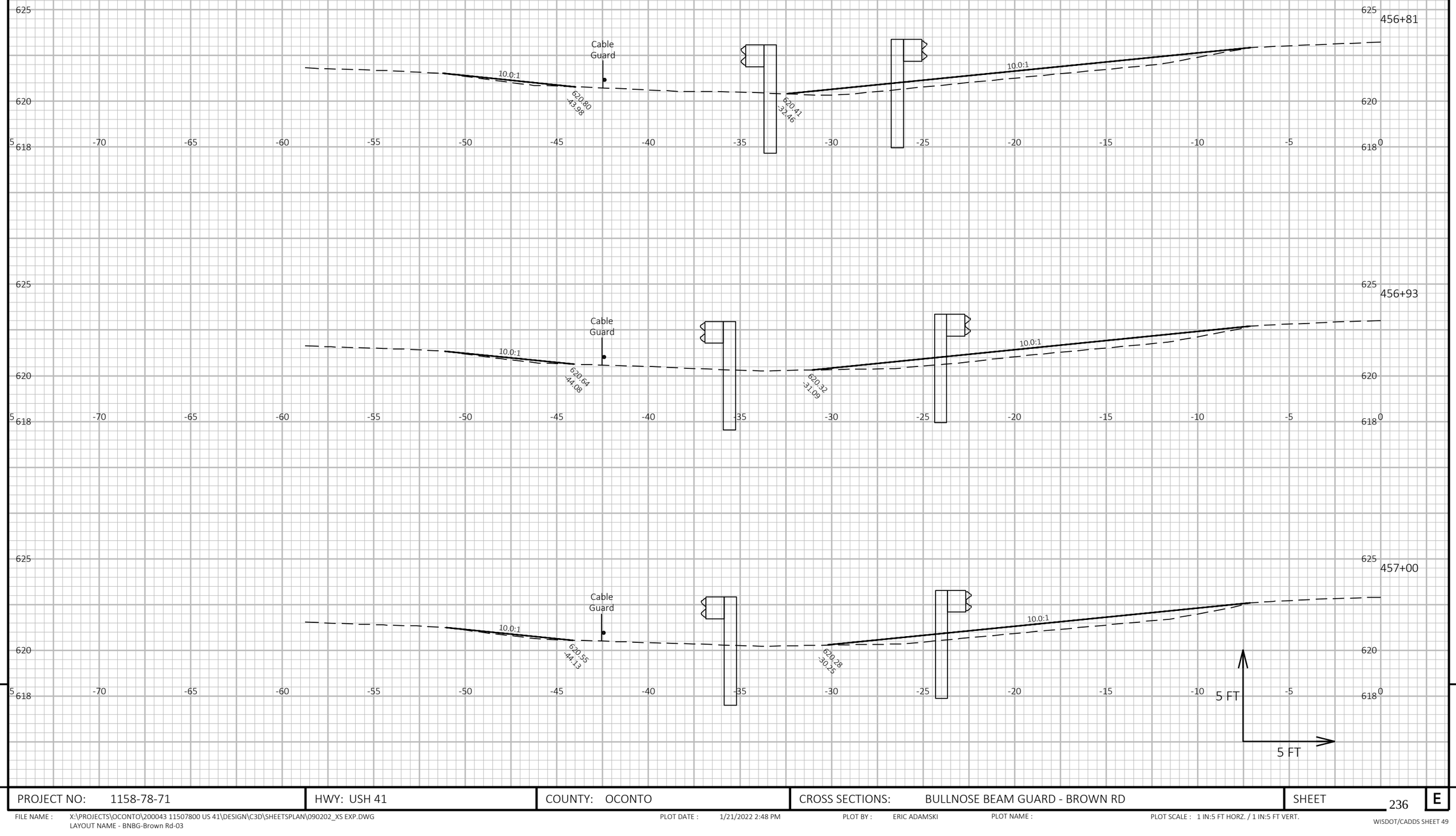
9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - BROWN RD	SHEET 235	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Brown Rd-02

PLOT DATE : 1/21/2022 2:47 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



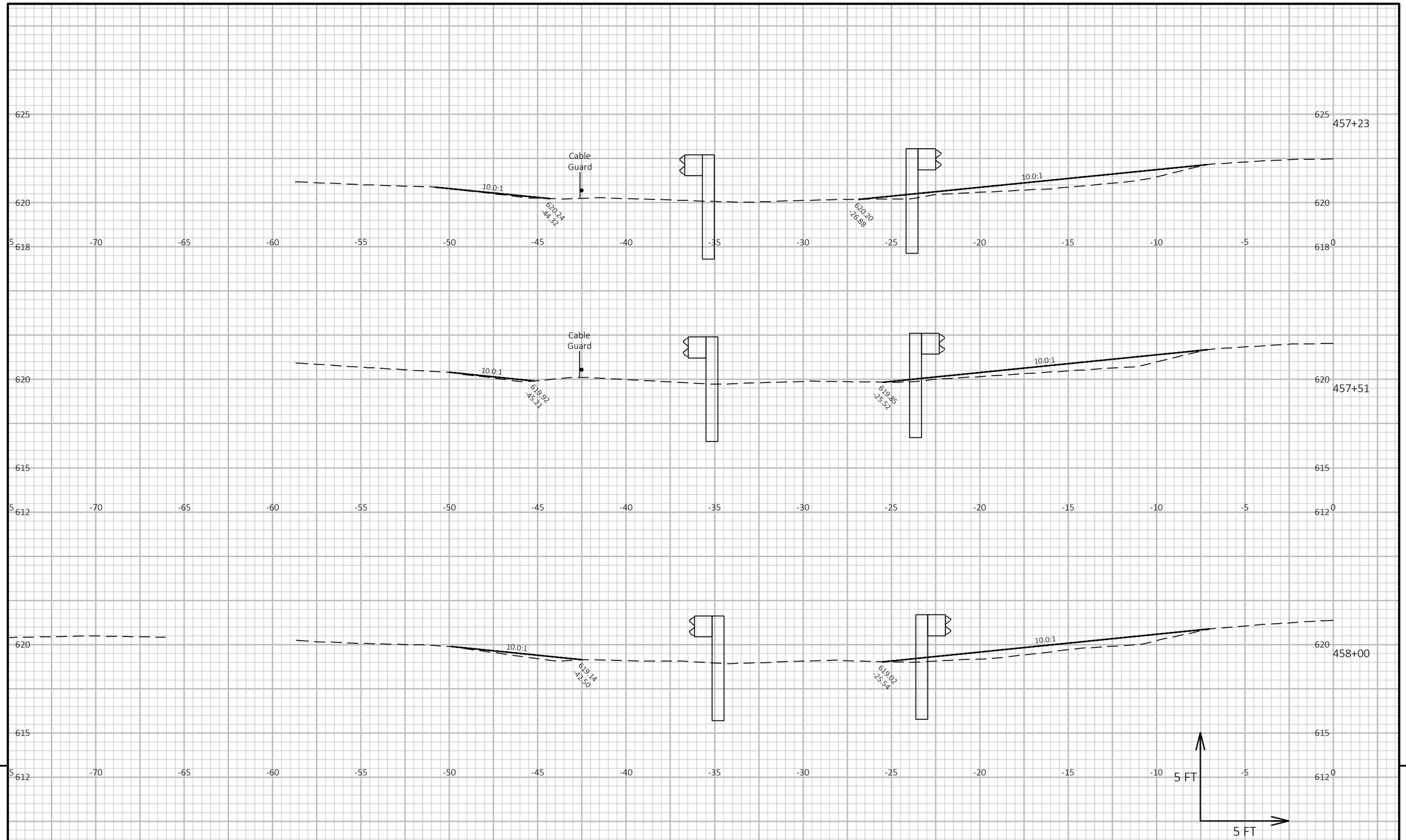
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9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - BROWN RD	SHEET 236	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Brown Rd-03

PLOT DATE : 1/21/2022 2:48 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.



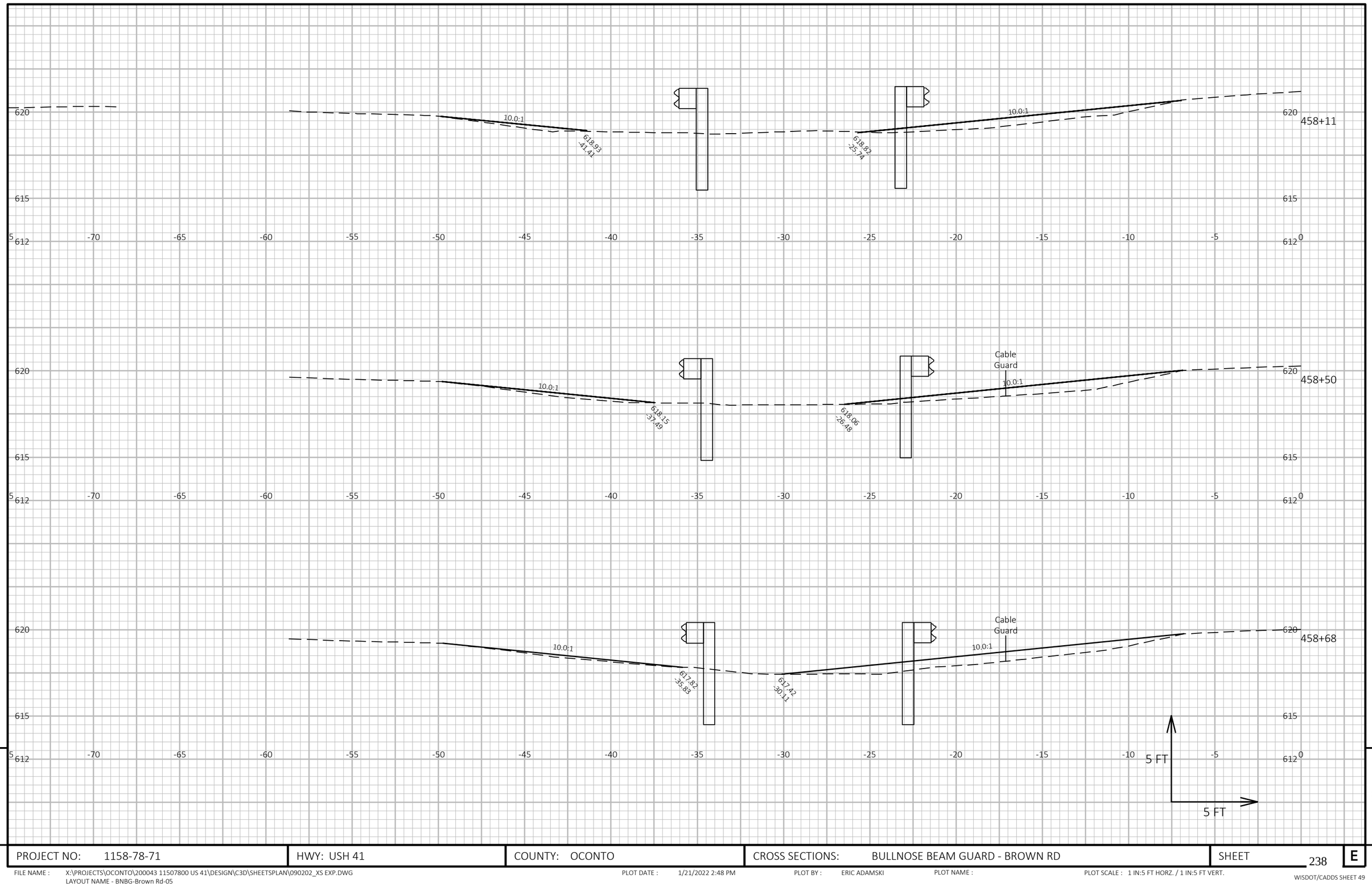
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - BROWN RD	SHEET 237	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Brown Rd-04

PLOT DATE : 1/21/2022 2:48 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.



9

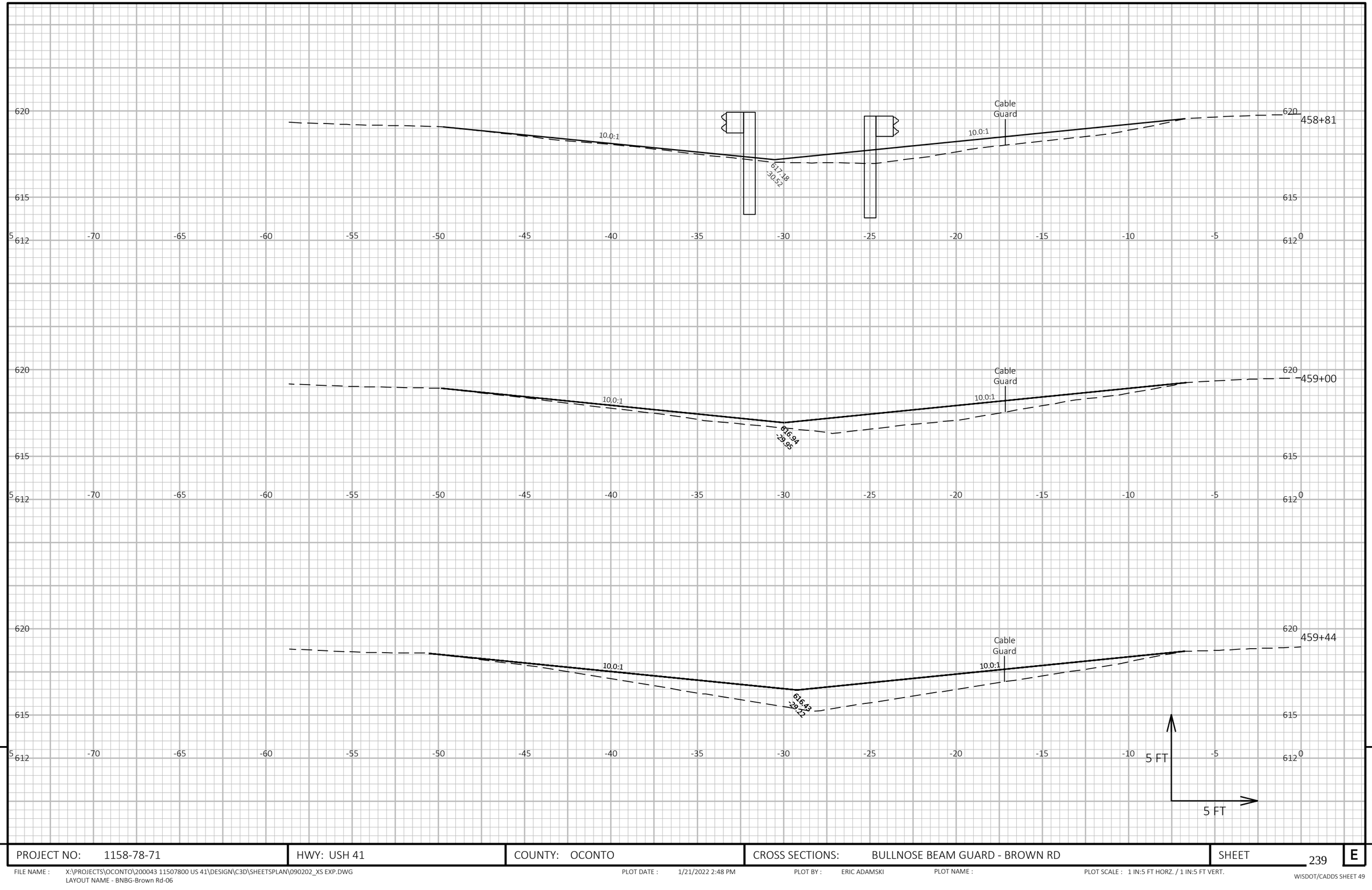
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - BROWN RD	SHEET 238	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Brown Rd-05

PLOT DATE : 1/21/2022 2:48 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

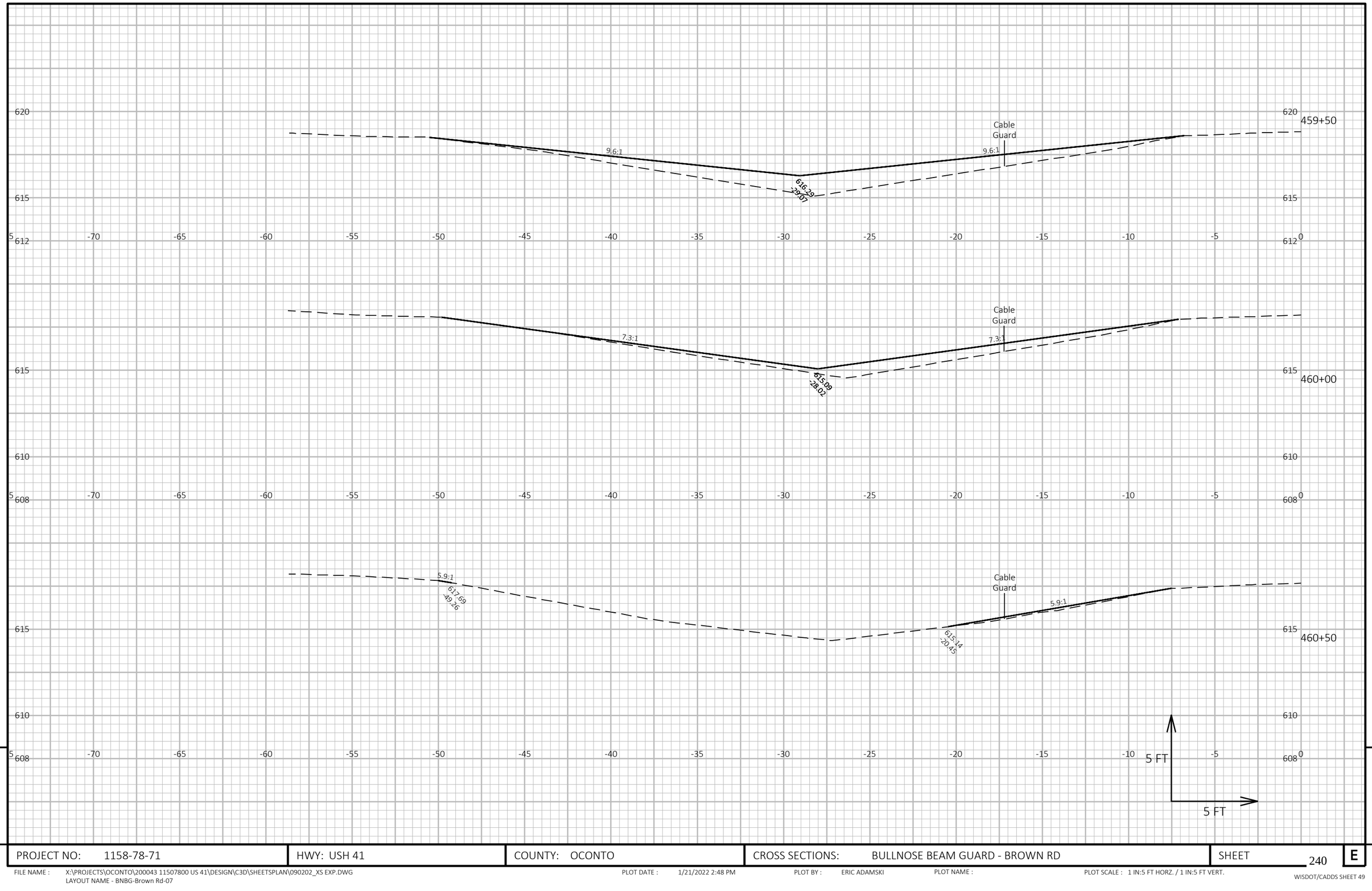
WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - BROWN RD	SHEET 239	E

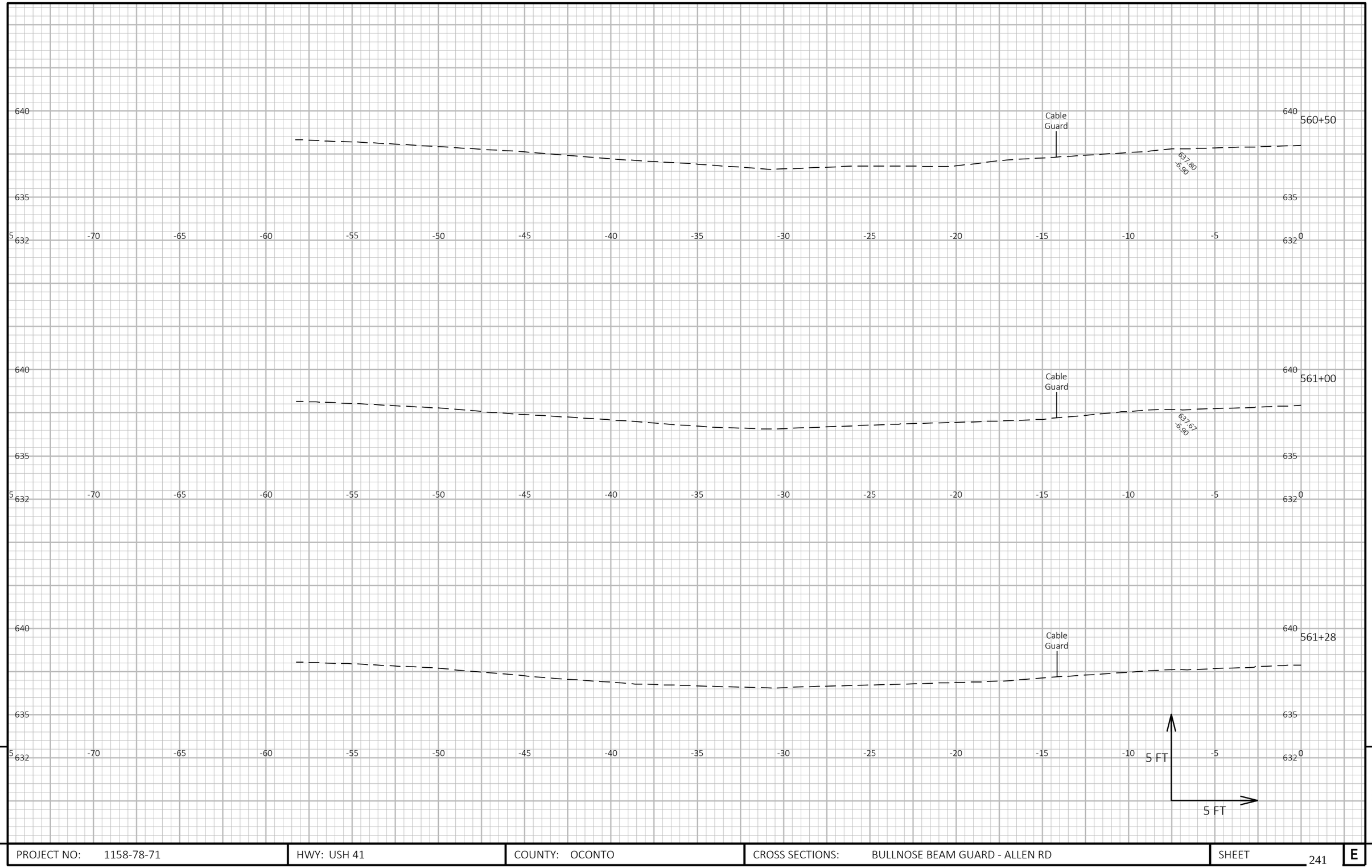


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - BROWN RD	SHEET 240	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Brown Rd-07

PLOT DATE : 1/21/2022 2:48 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



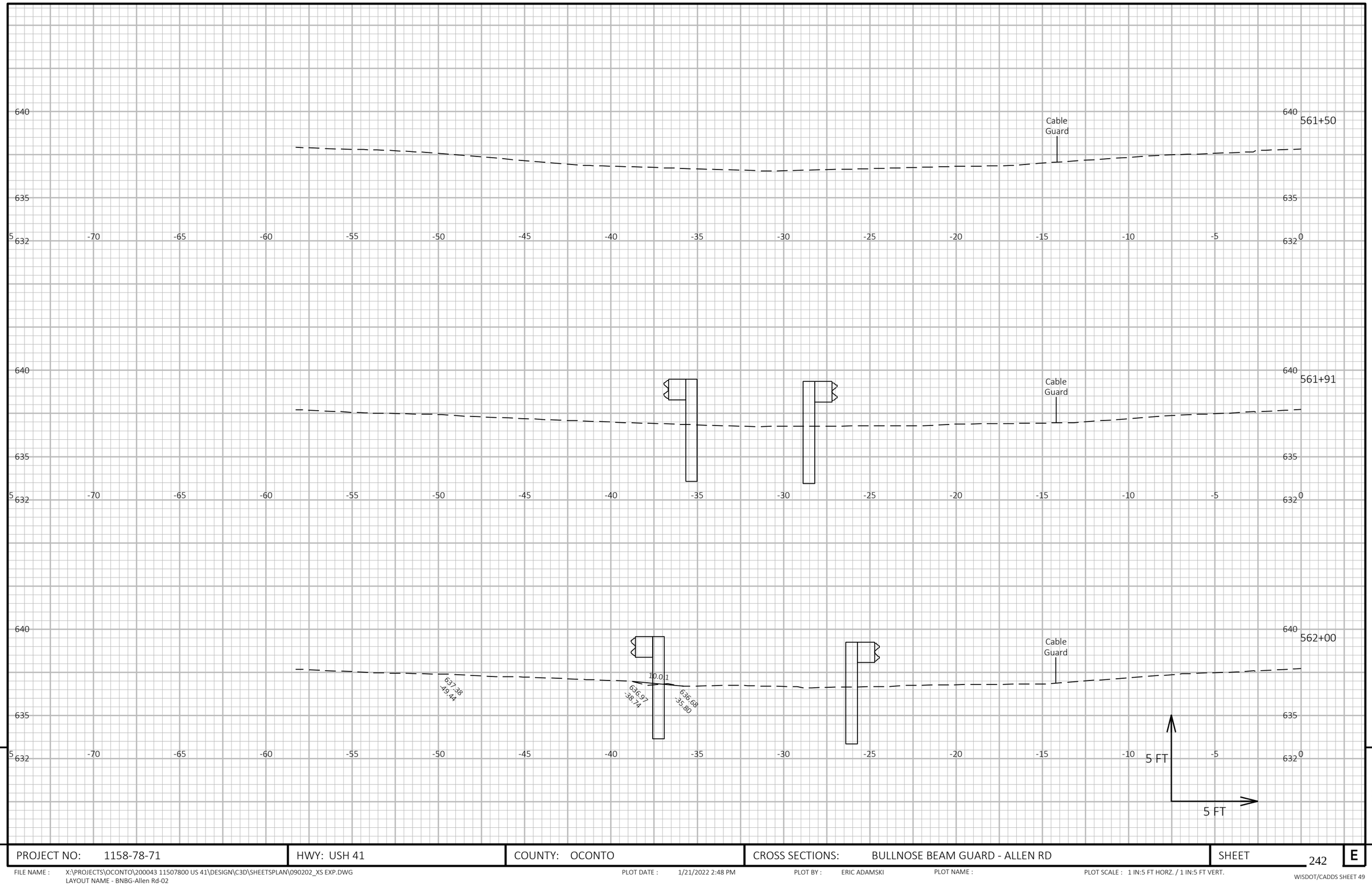
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - ALLEN RD	SHEET 241	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Allen Rd-01

PLOT DATE : 1/21/2022 2:48 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.



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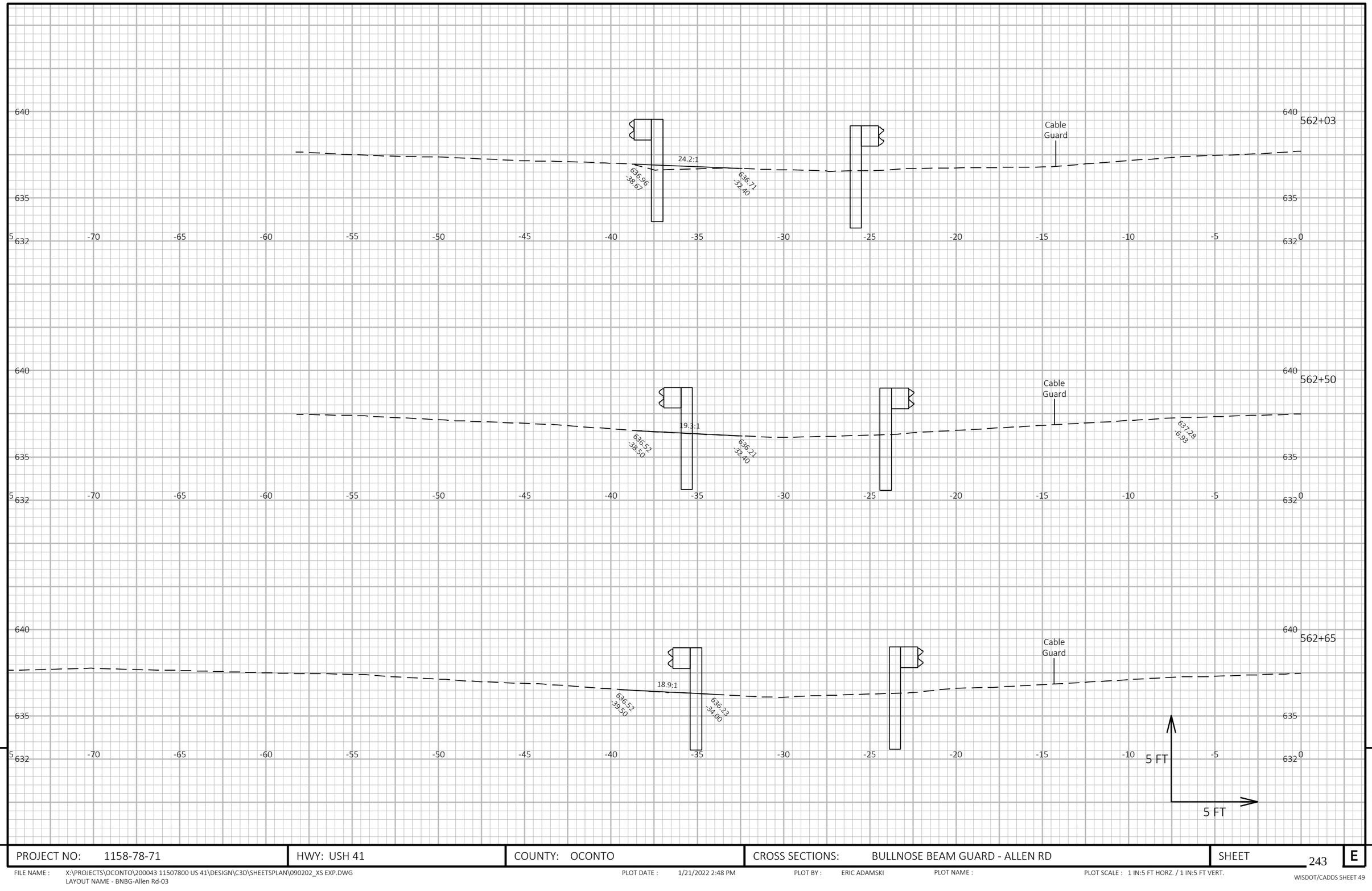
PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - ALLEN RD	SHEET 242	E

9

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Allen Rd-02

PLOT DATE : 1/21/2022 2:48 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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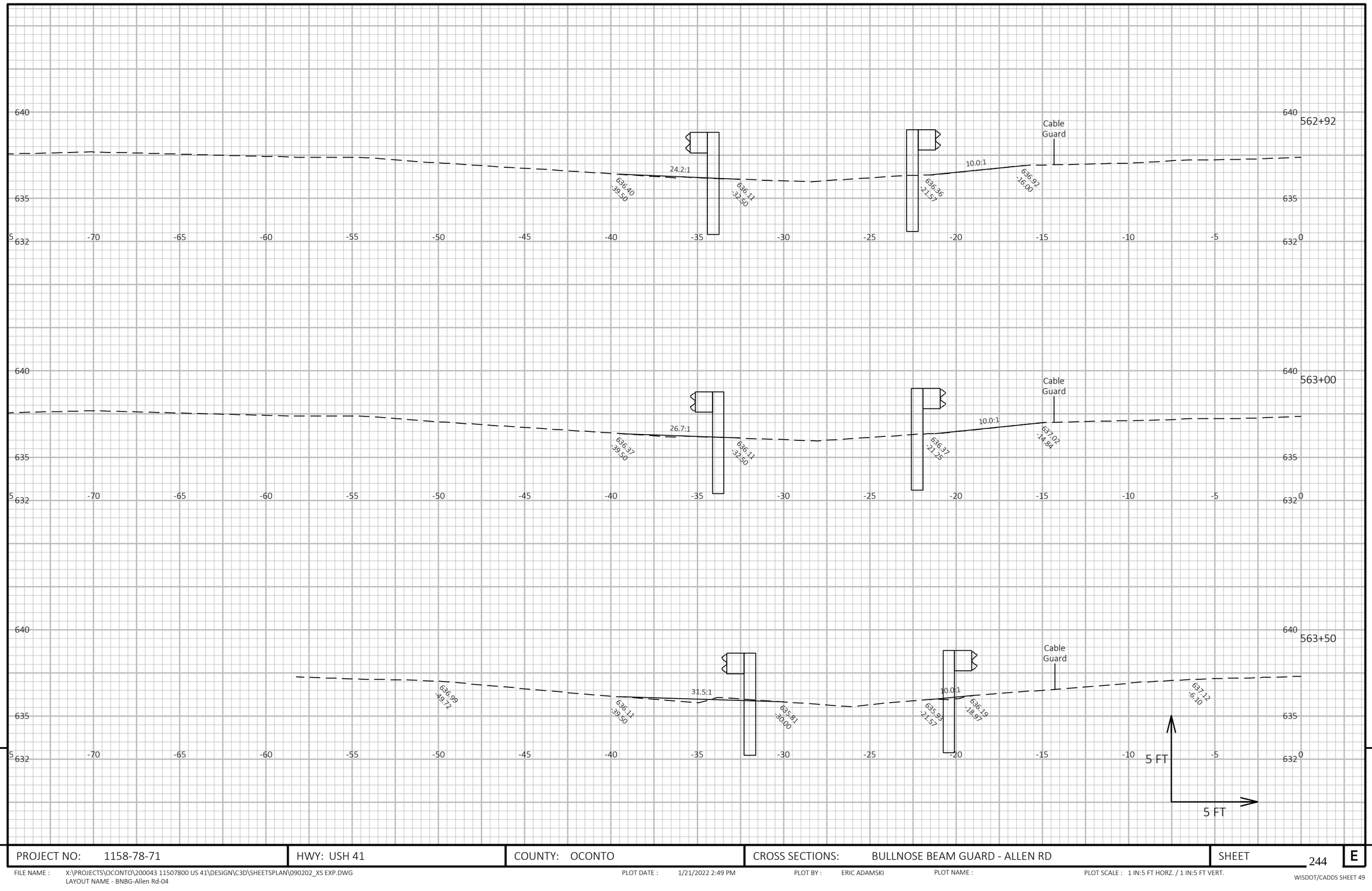
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - ALLEN RD	SHEET 243	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Allen Rd-03

PLOT DATE : 1/21/2022 2:48 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

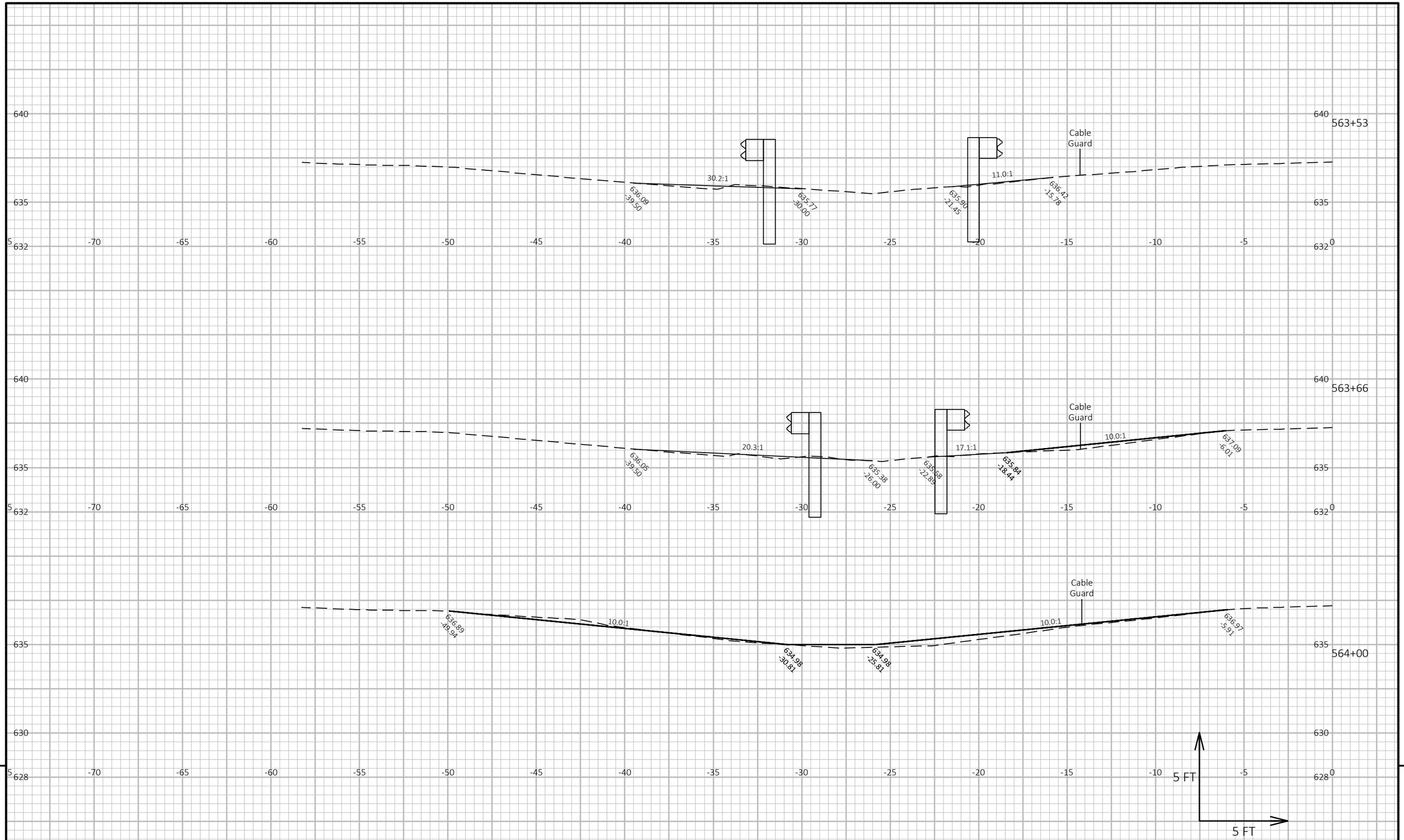
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - ALLEN RD	SHEET 244	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Allen Rd-04

PLOT DATE : 1/21/2022 2:49 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

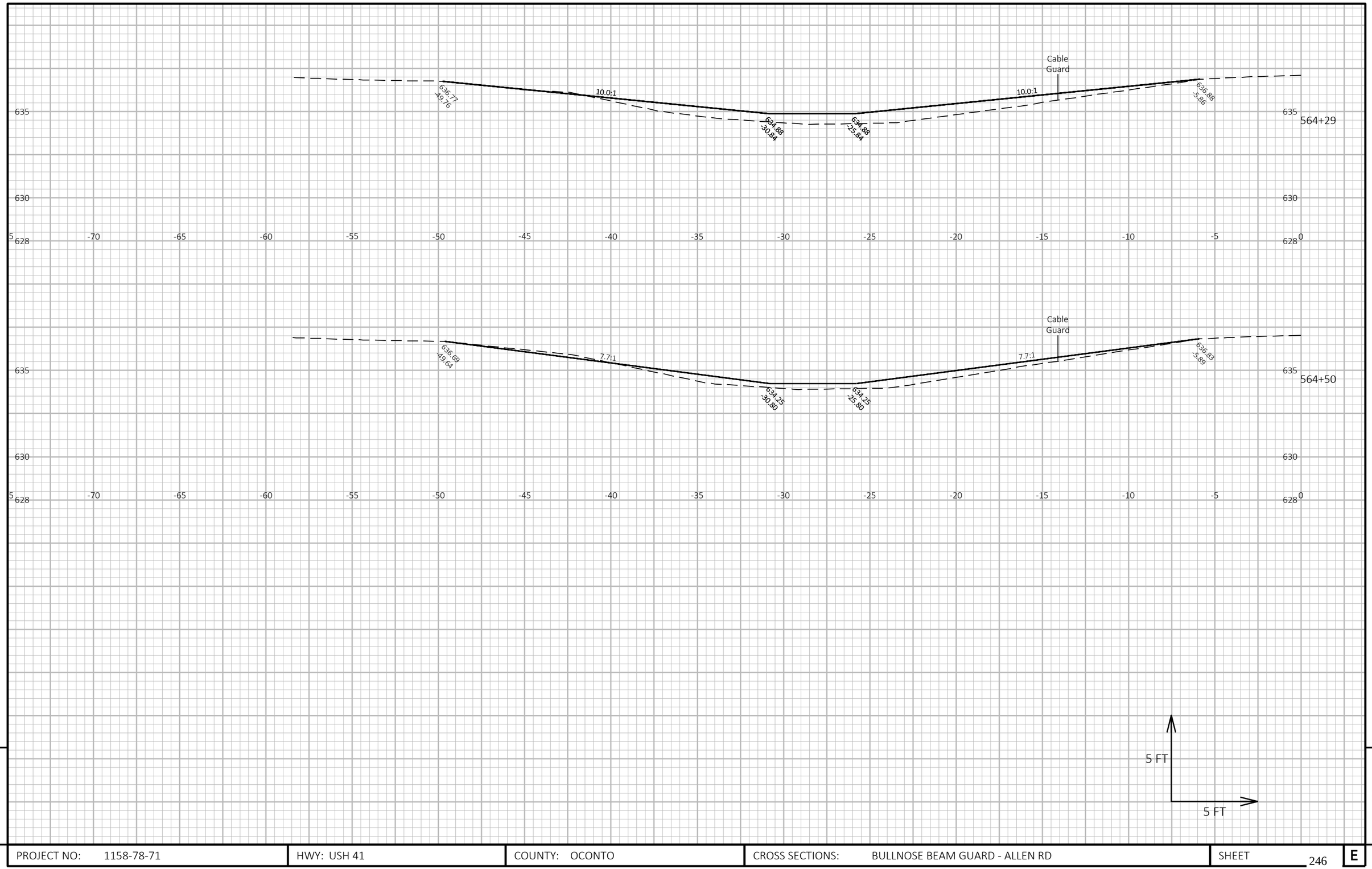
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - ALLEN RD	SHEET 245	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Allen Rd-05

PLOT DATE : 1/21/2022 2:49 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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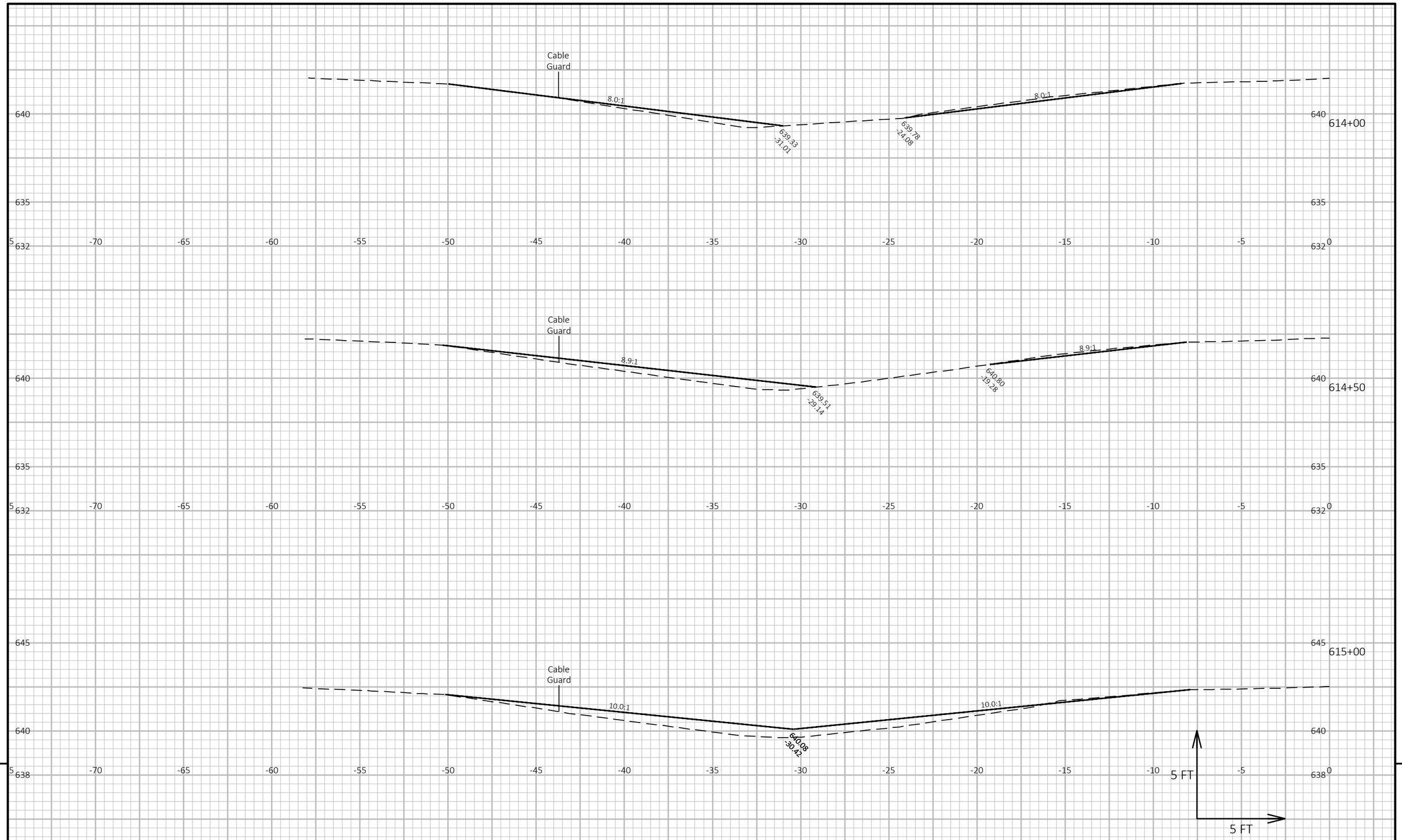
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - ALLEN RD	SHEET 246	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Allen Rd-06

PLOT DATE : 1/21/2022 2:49 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

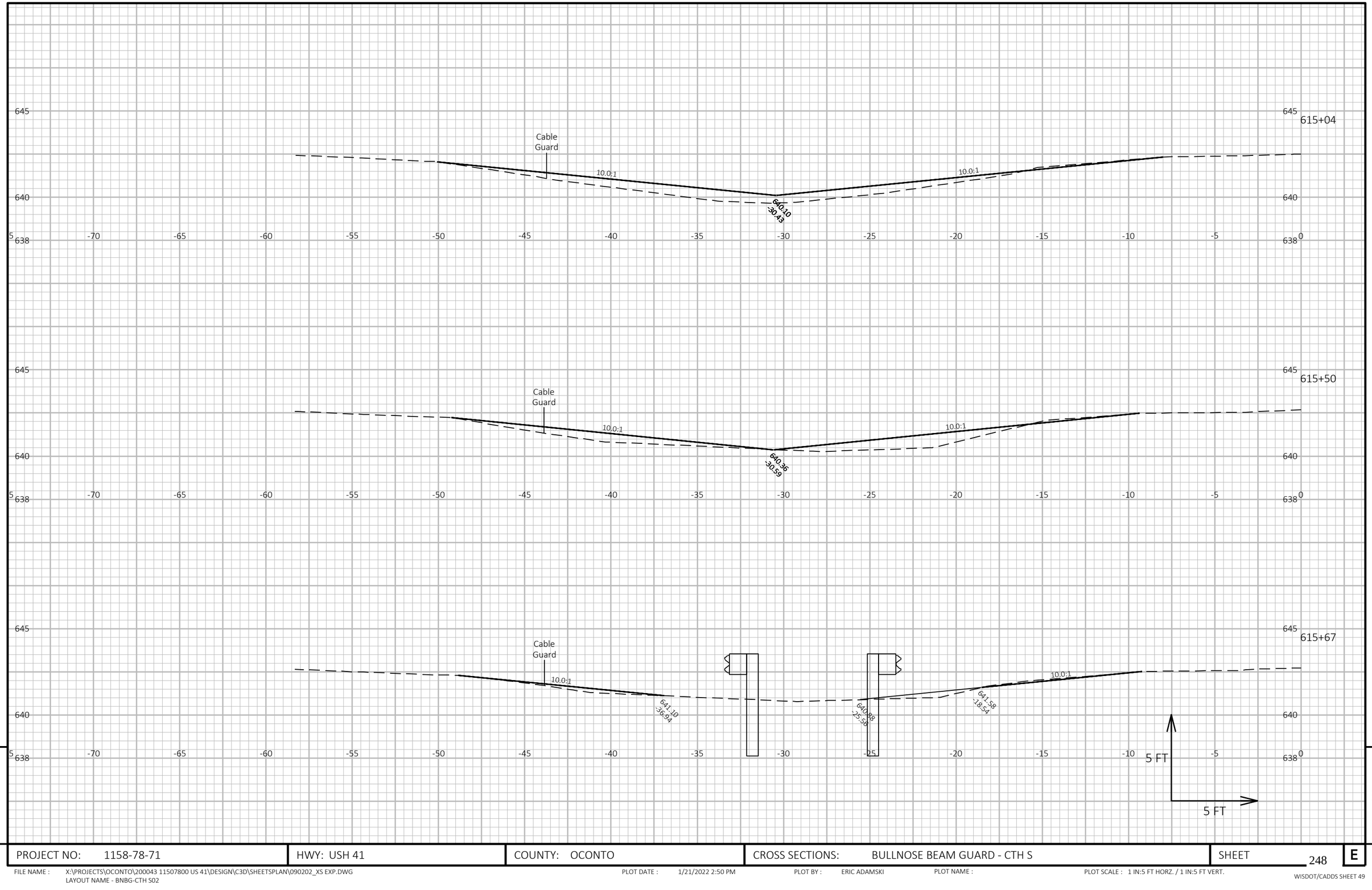


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - CTH S	SHEET 247	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-CTH S01

PLOT DATE : 1/21/2022 2:49 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

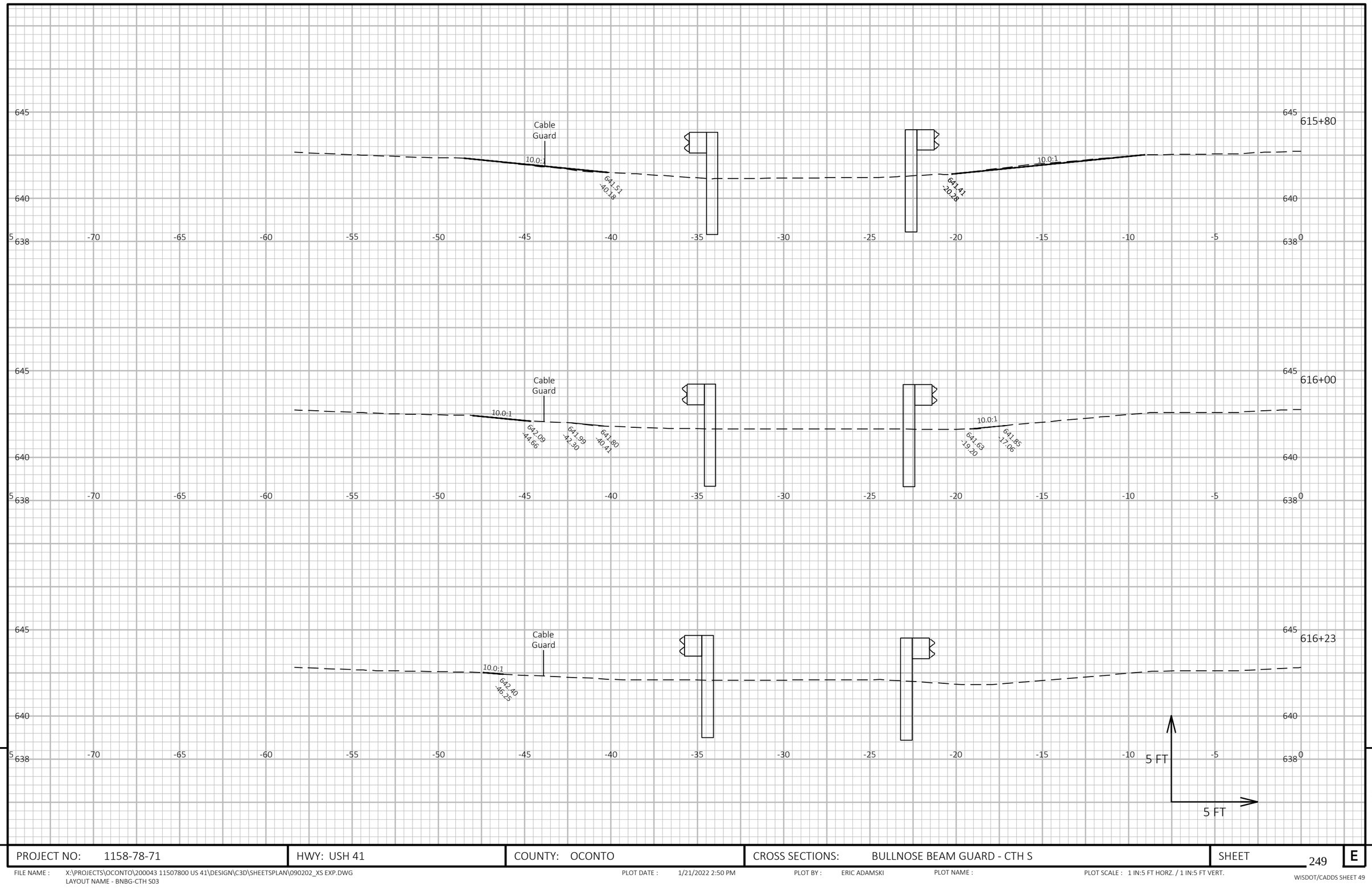


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - CTH S	SHEET 248	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-CTH S02

PLOT DATE : 1/21/2022 2:50 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

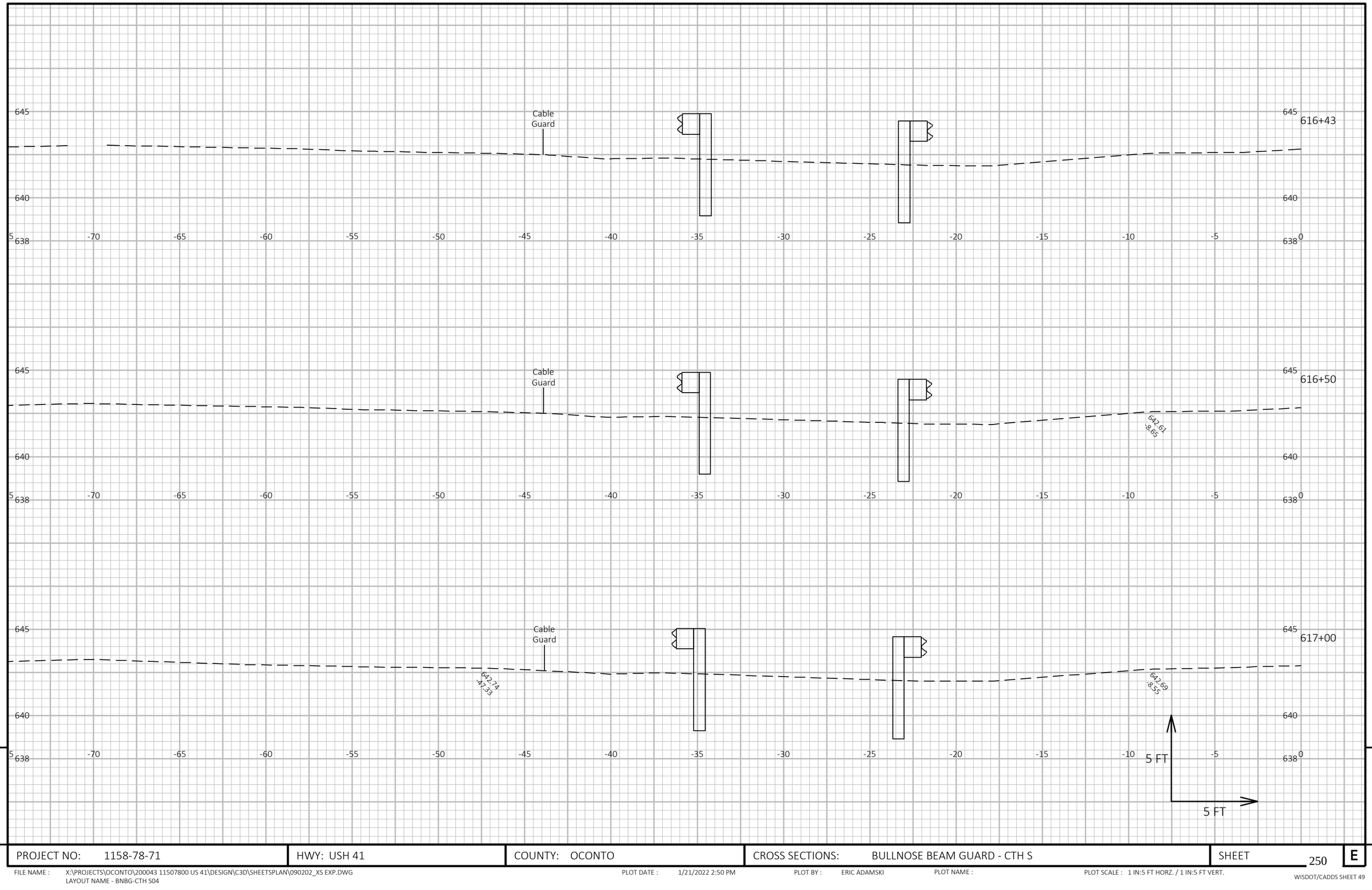
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - CTH S	SHEET 249	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-CTH S03

PLOT DATE : 1/21/2022 2:50 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



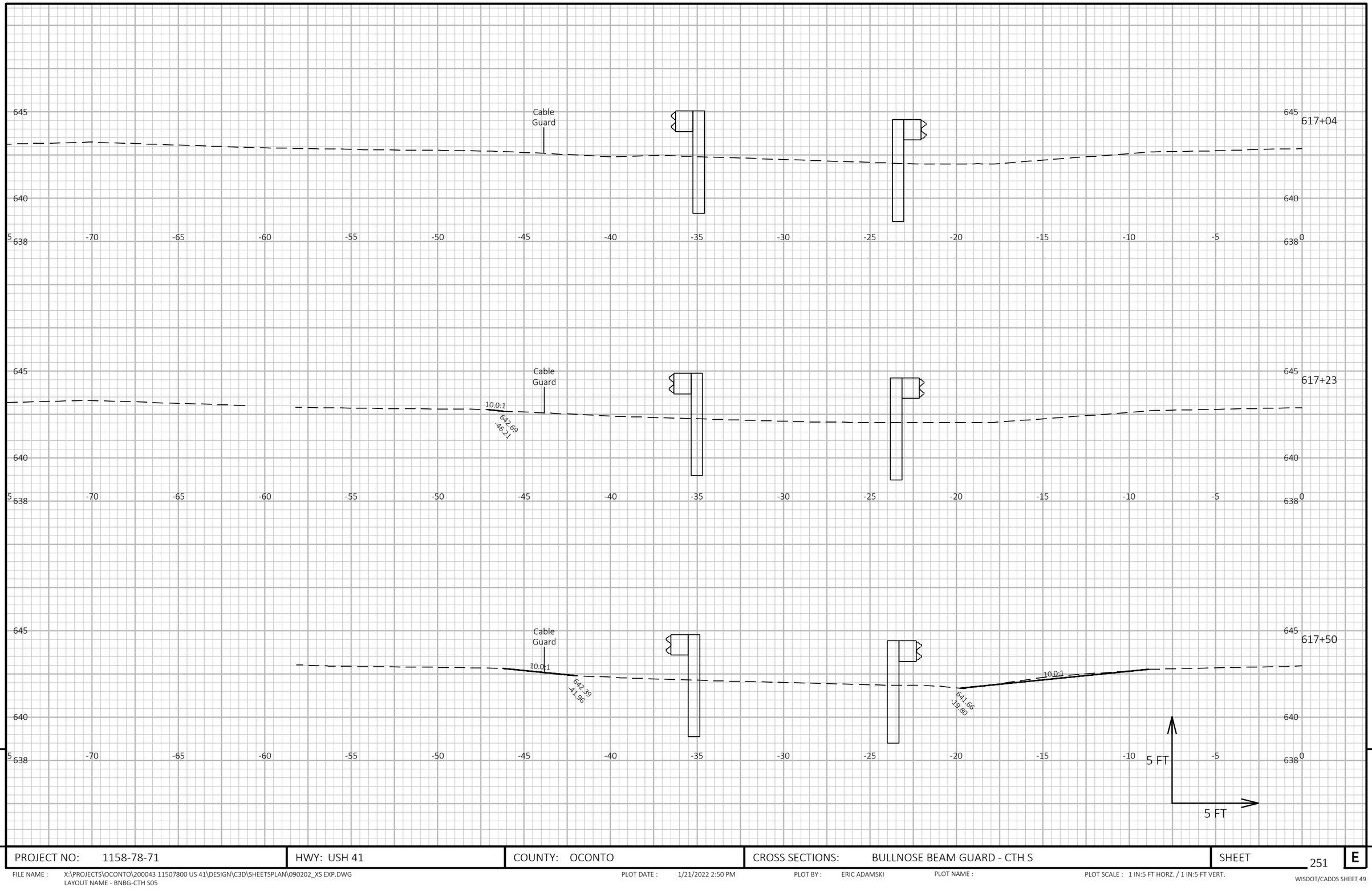
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - CTH S	SHEET 250	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-CTH S04

PLOT DATE : 1/21/2022 2:50 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.



9

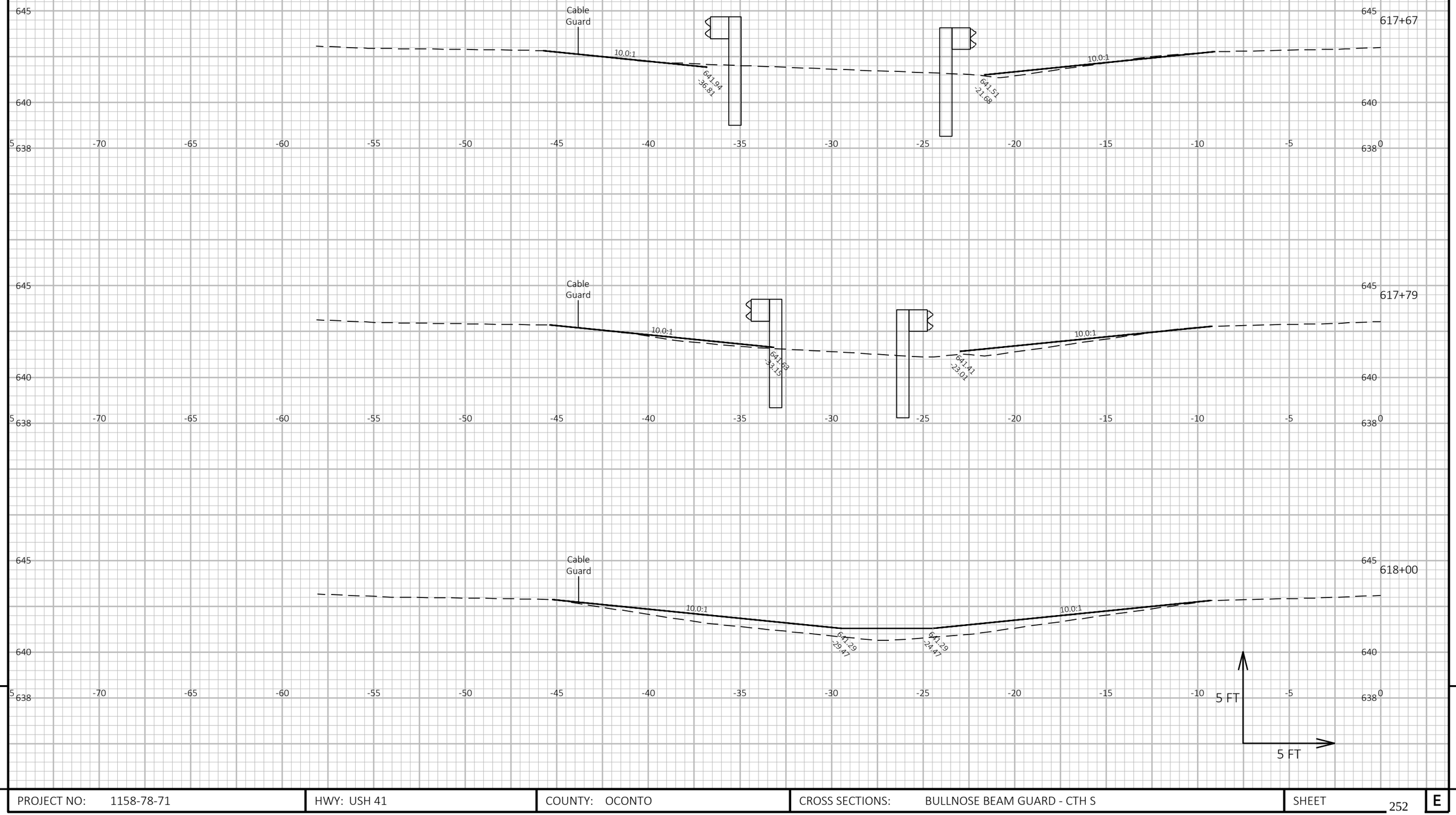
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - CTH S	SHEET 251	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-CTH S05

PLOT DATE : 1/21/2022 2:50 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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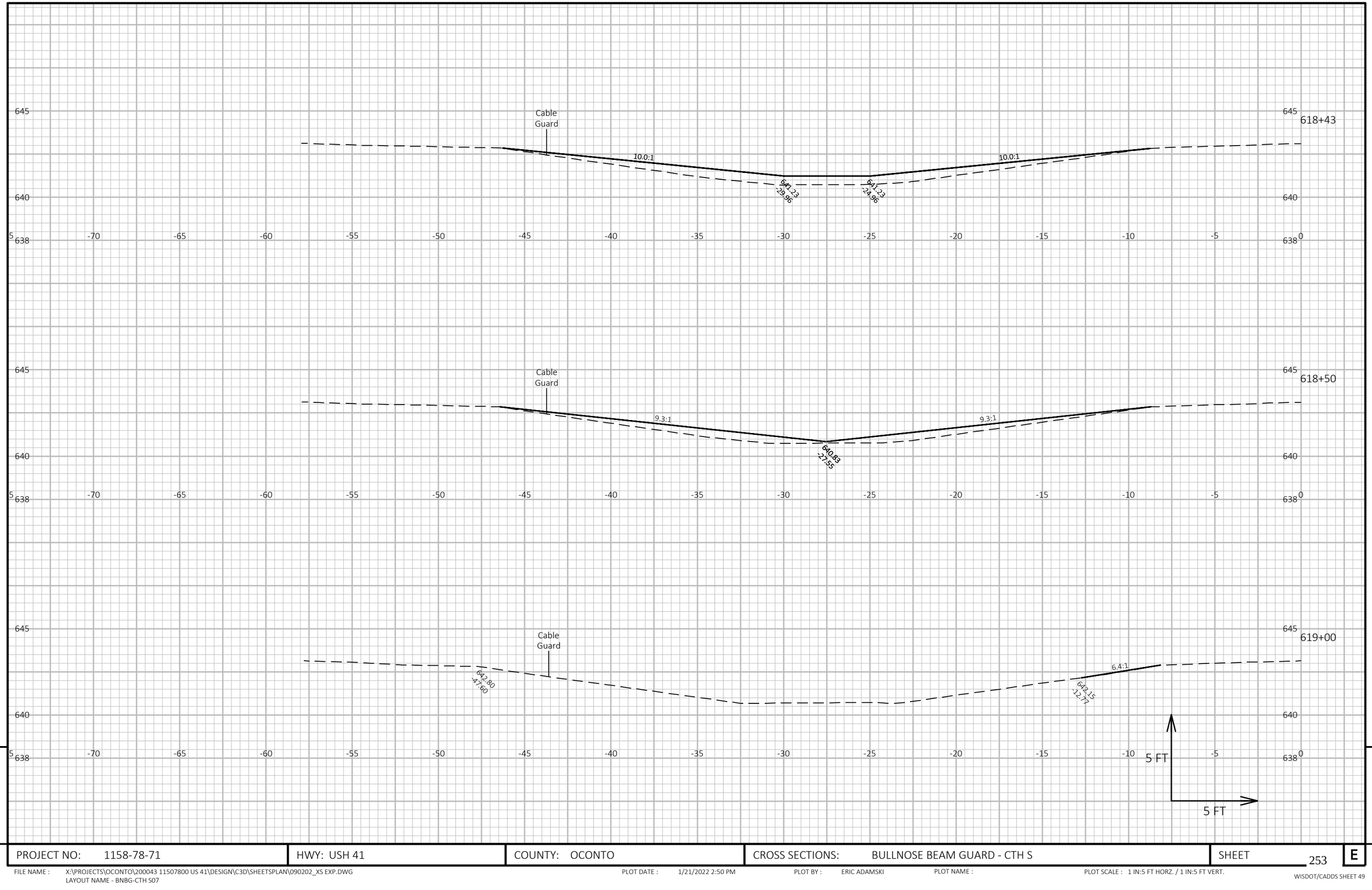
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - CTH S	SHEET 252	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-CTH S06

PLOT DATE : 1/21/2022 2:50 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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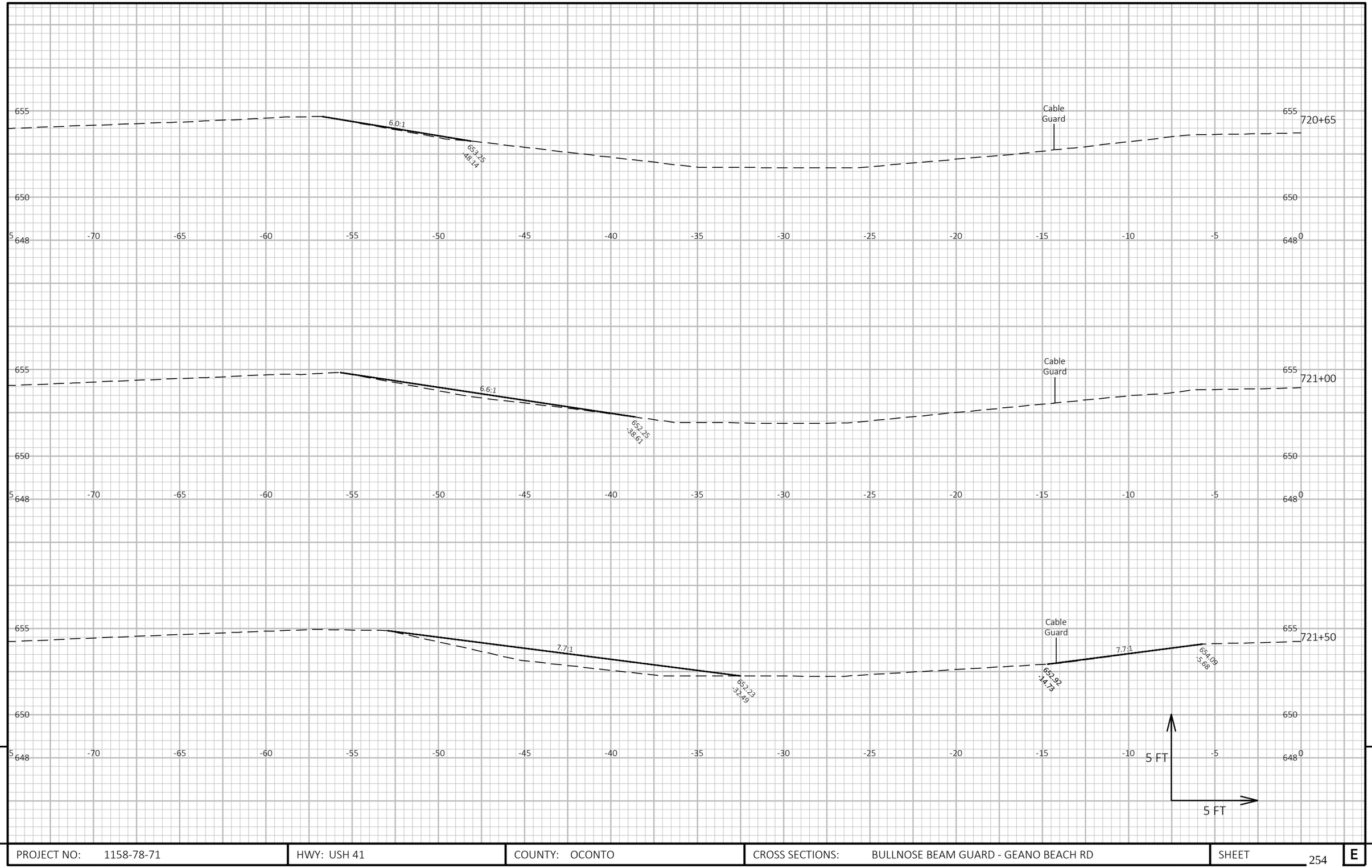
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - CTH S	SHEET 253	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-CTH S07

PLOT DATE : 1/21/2022 2:50 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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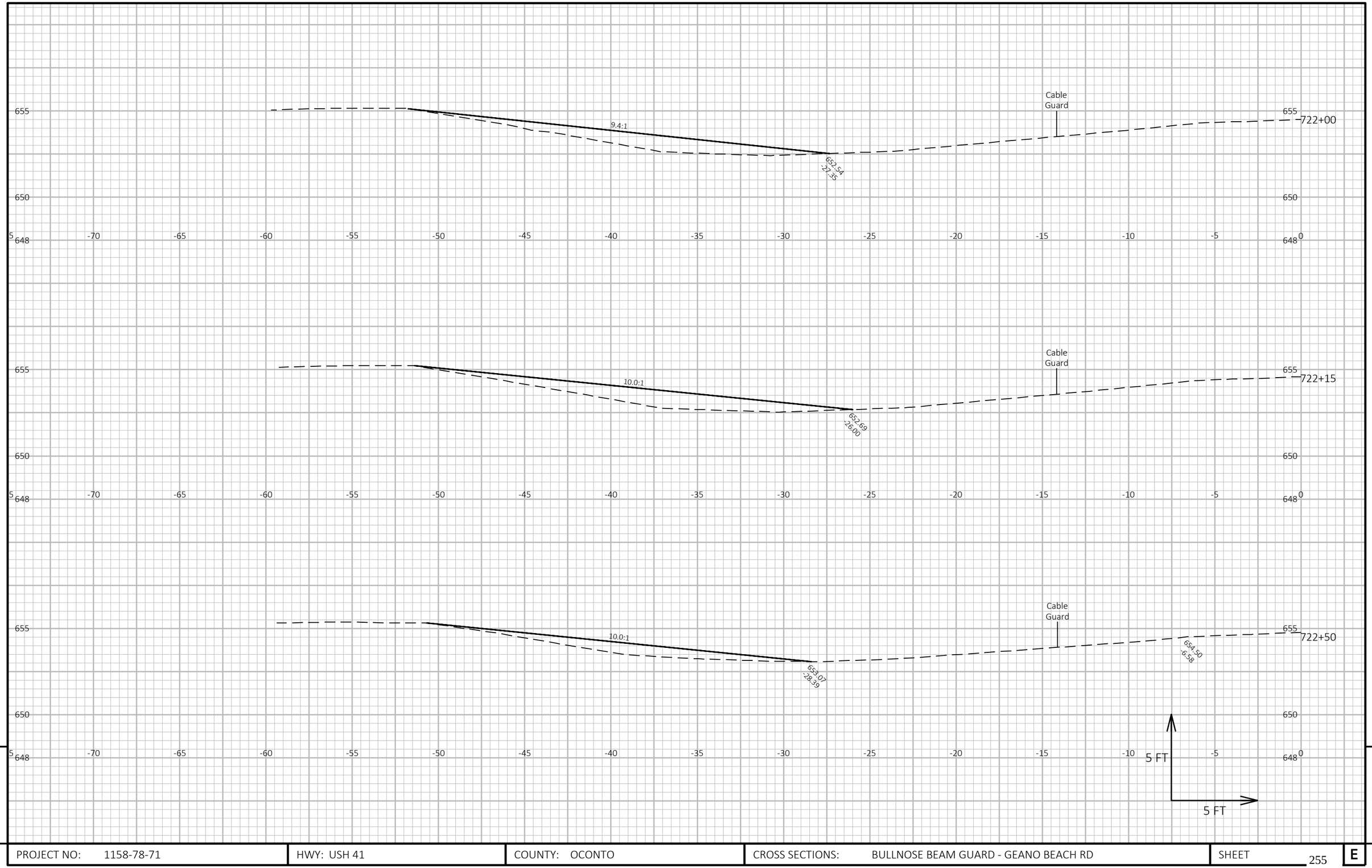
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - GEANO BEACH RD	SHEET 254	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Geano Beach-01

PLOT DATE : 1/21/2022 2:51 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



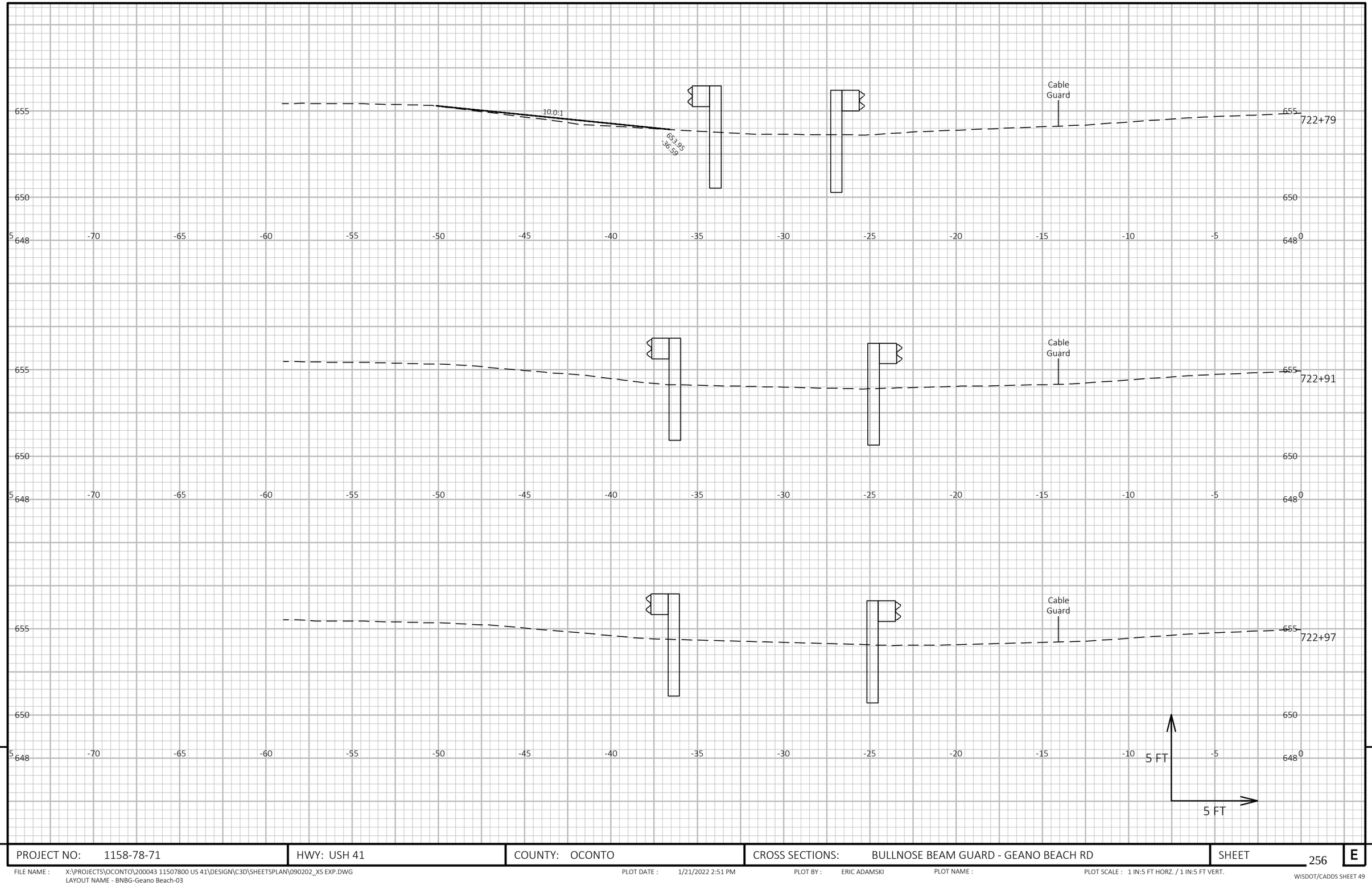
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - GEANO BEACH RD	SHEET 255	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Geano Beach-02

PLOT DATE : 1/21/2022 2:51 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.



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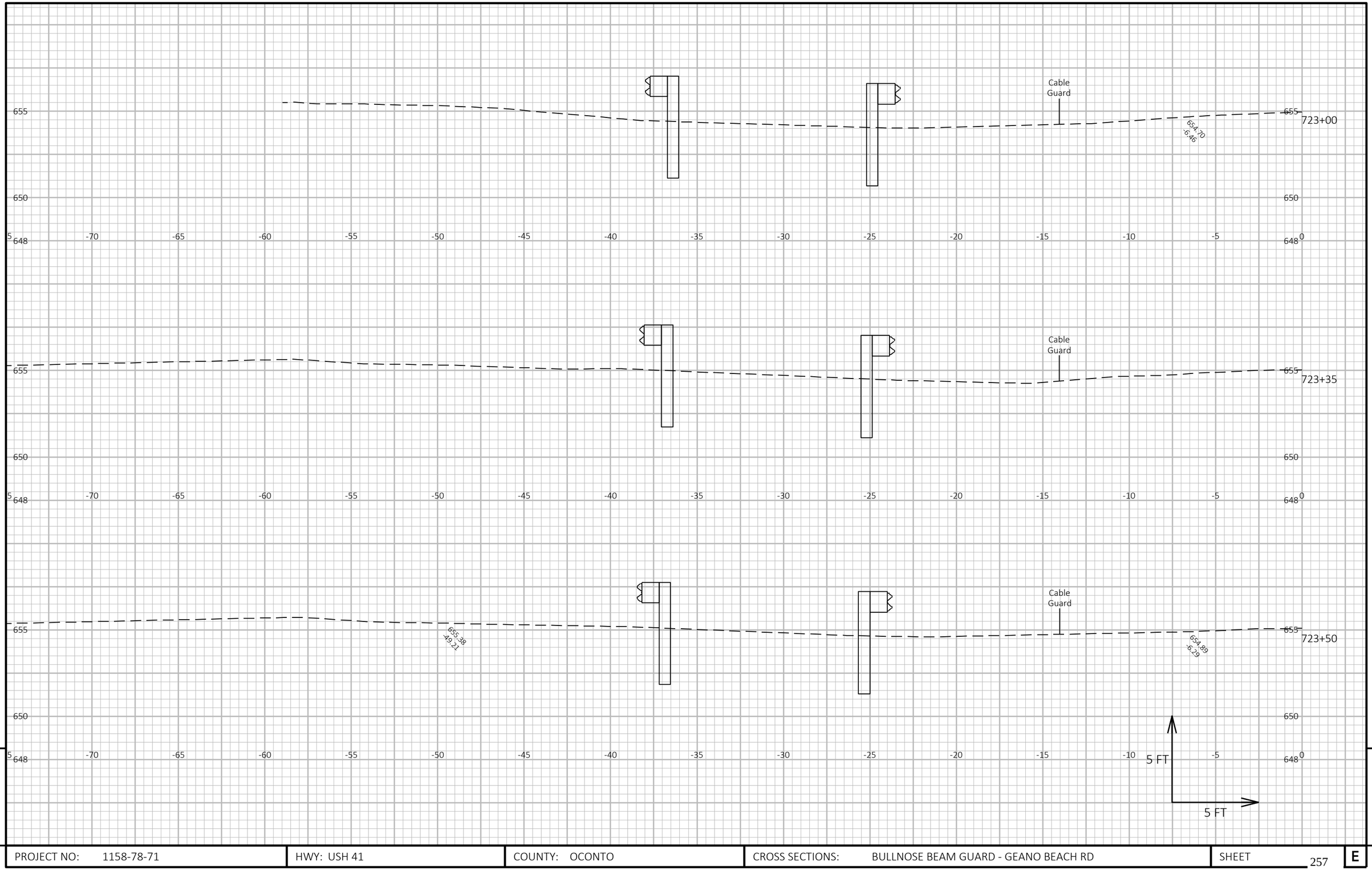
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - GEANO BEACH RD	SHEET 256	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Geano Beach-03

PLOT DATE : 1/21/2022 2:51 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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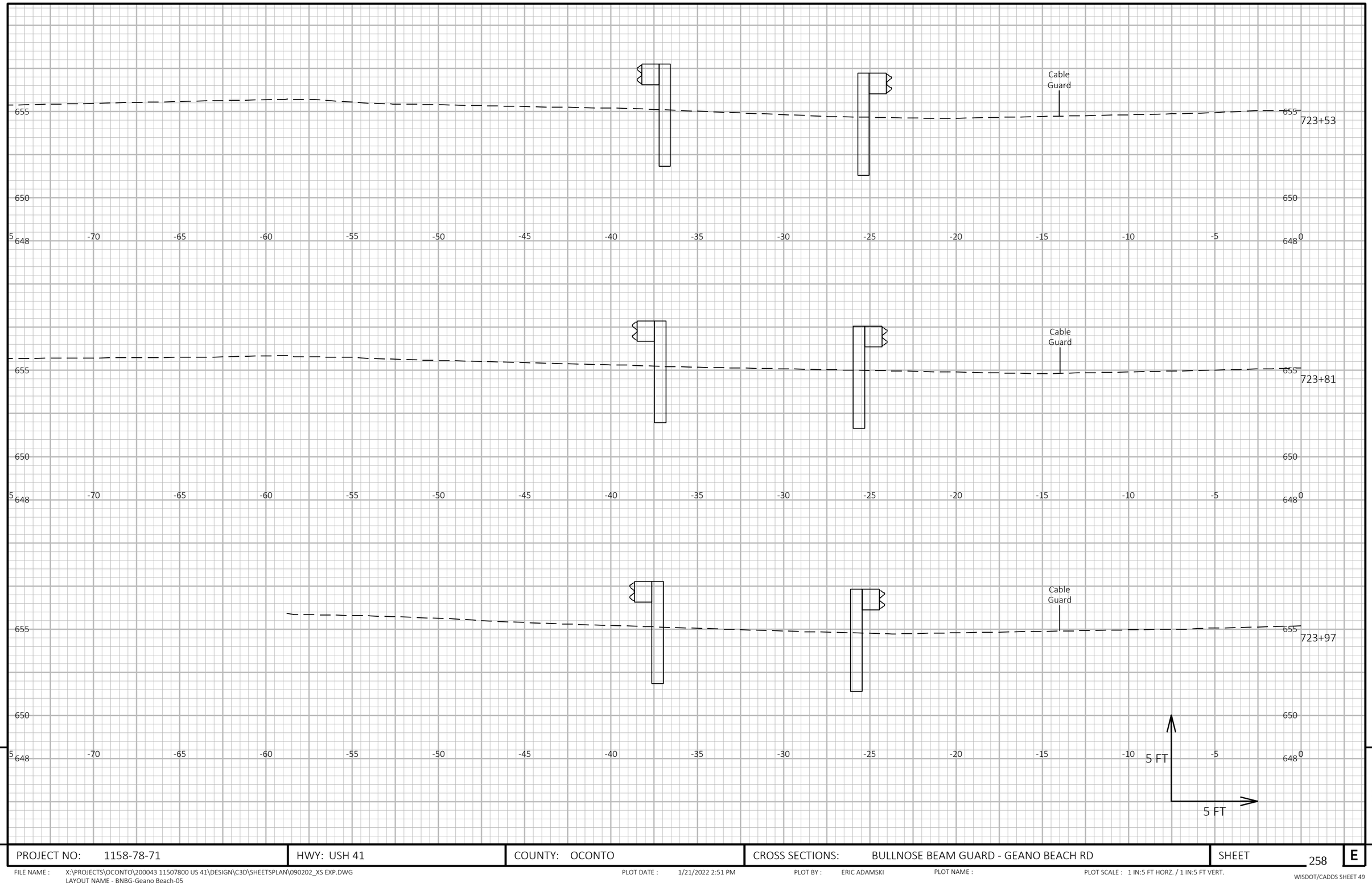
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - GEANO BEACH RD	SHEET 257	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Geano Beach-04

PLOT DATE : 1/21/2022 2:51 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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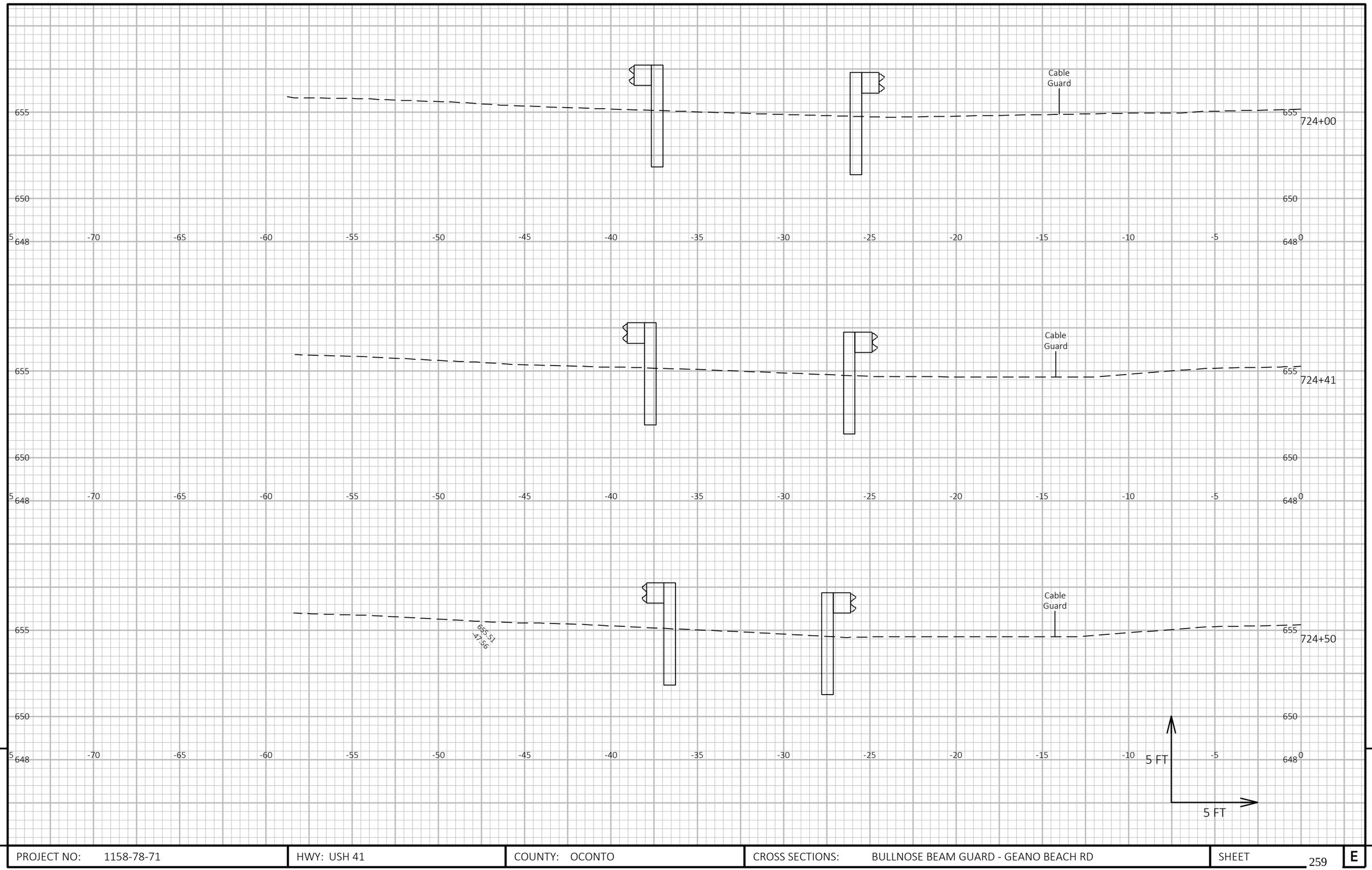
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - GEANO BEACH RD	SHEET 258	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Geano Beach-05

PLOT DATE : 1/21/2022 2:51 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



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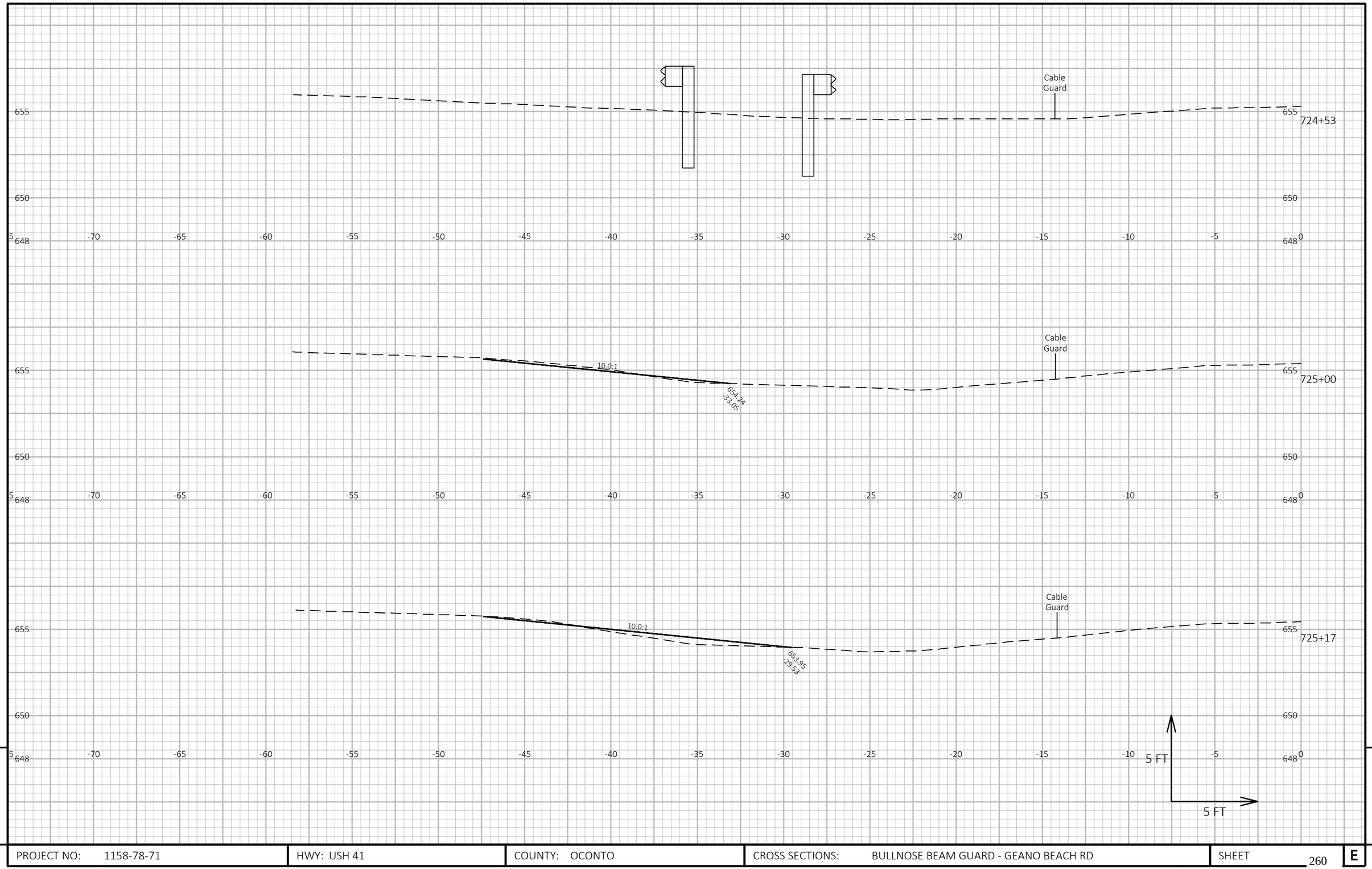
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - GEANO BEACH RD	SHEET 259	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Geano Beach-06

PLOT DATE : 1/21/2022 2:51 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

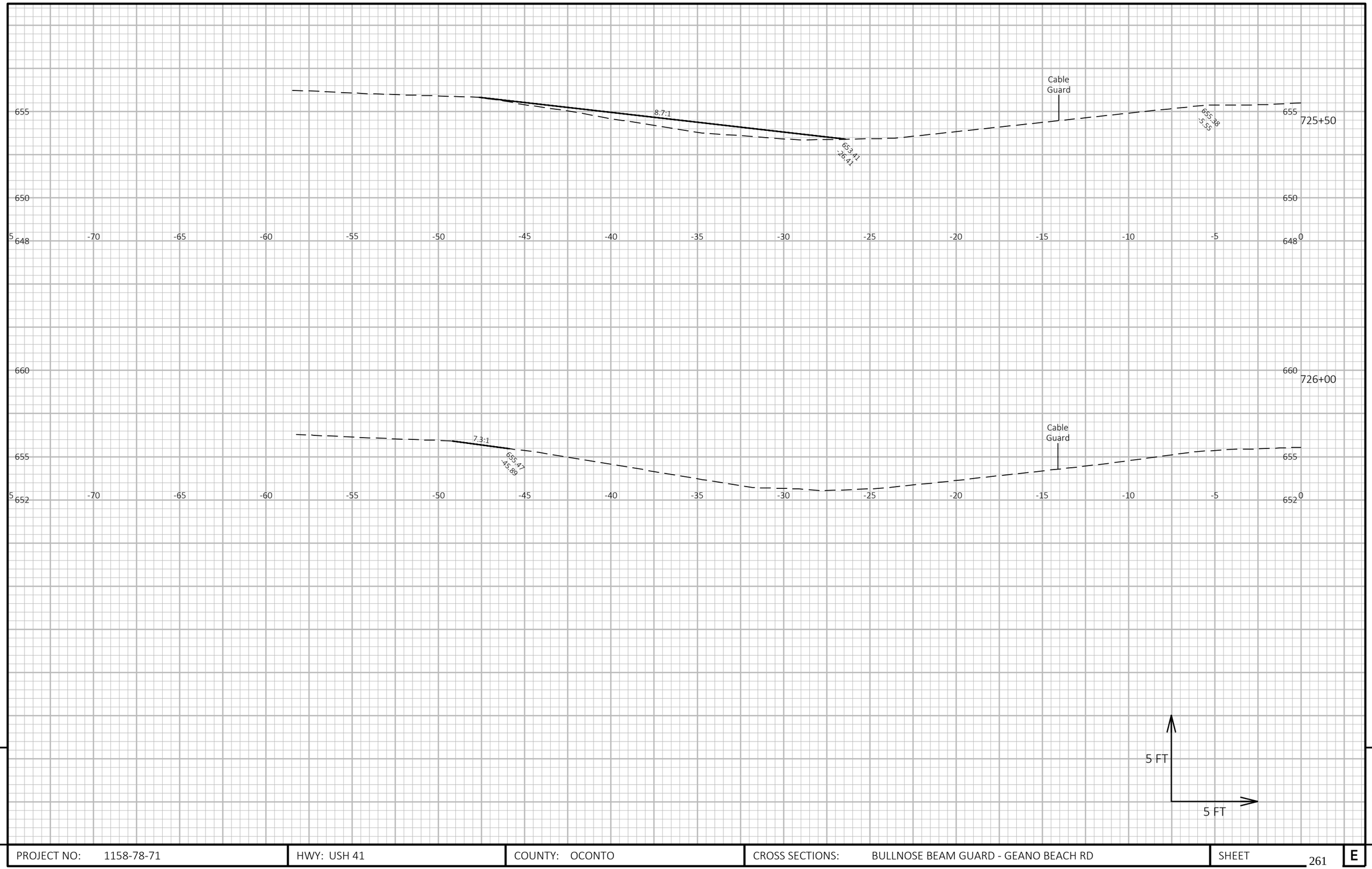
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - GEANO BEACH RD	SHEET 260	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Geano Beach-07

PLOT DATE : 1/21/2022 2:51 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

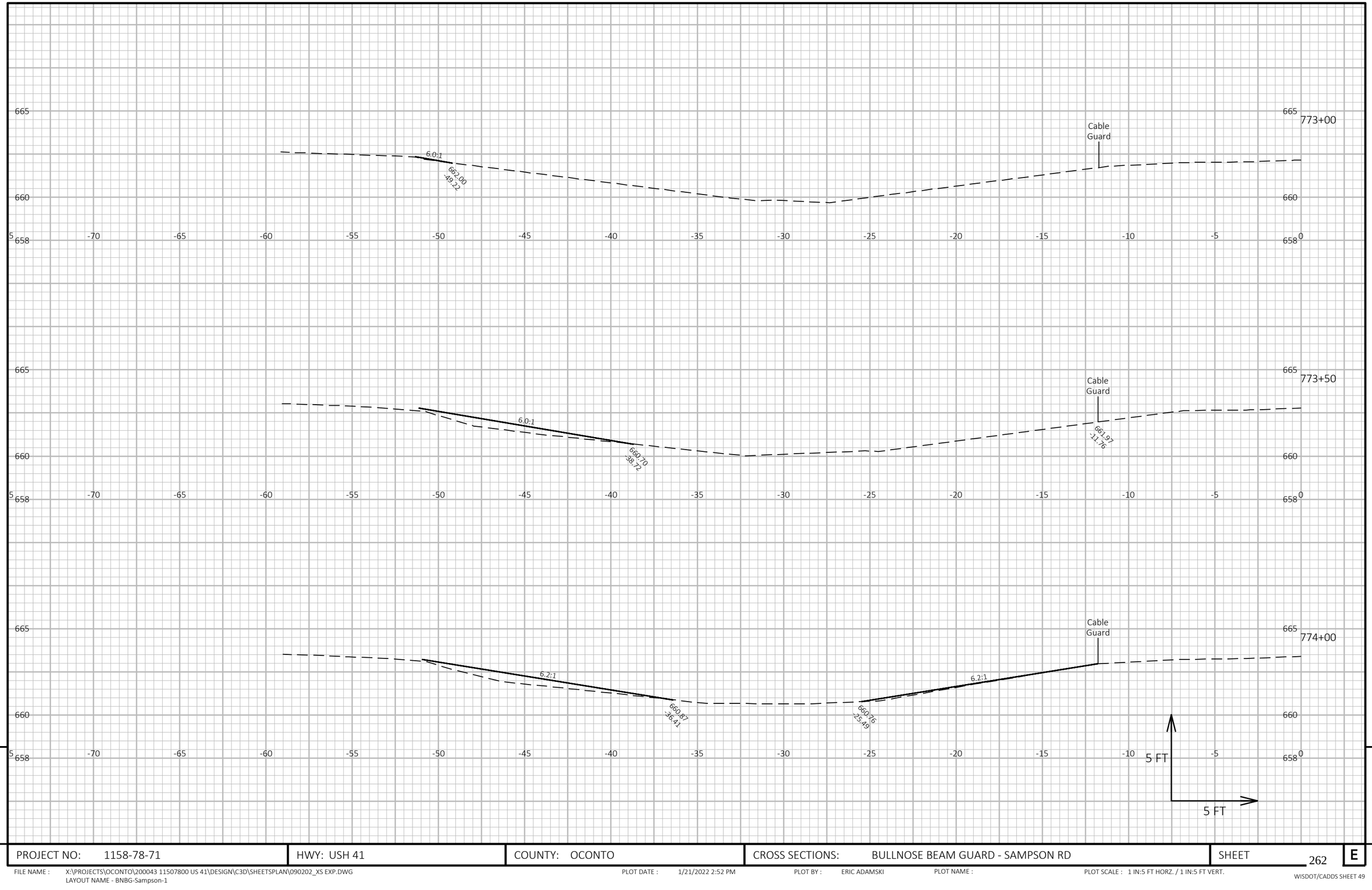
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - GEANO BEACH RD	SHEET 261	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Geano Beach-08

PLOT DATE : 1/21/2022 2:52 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

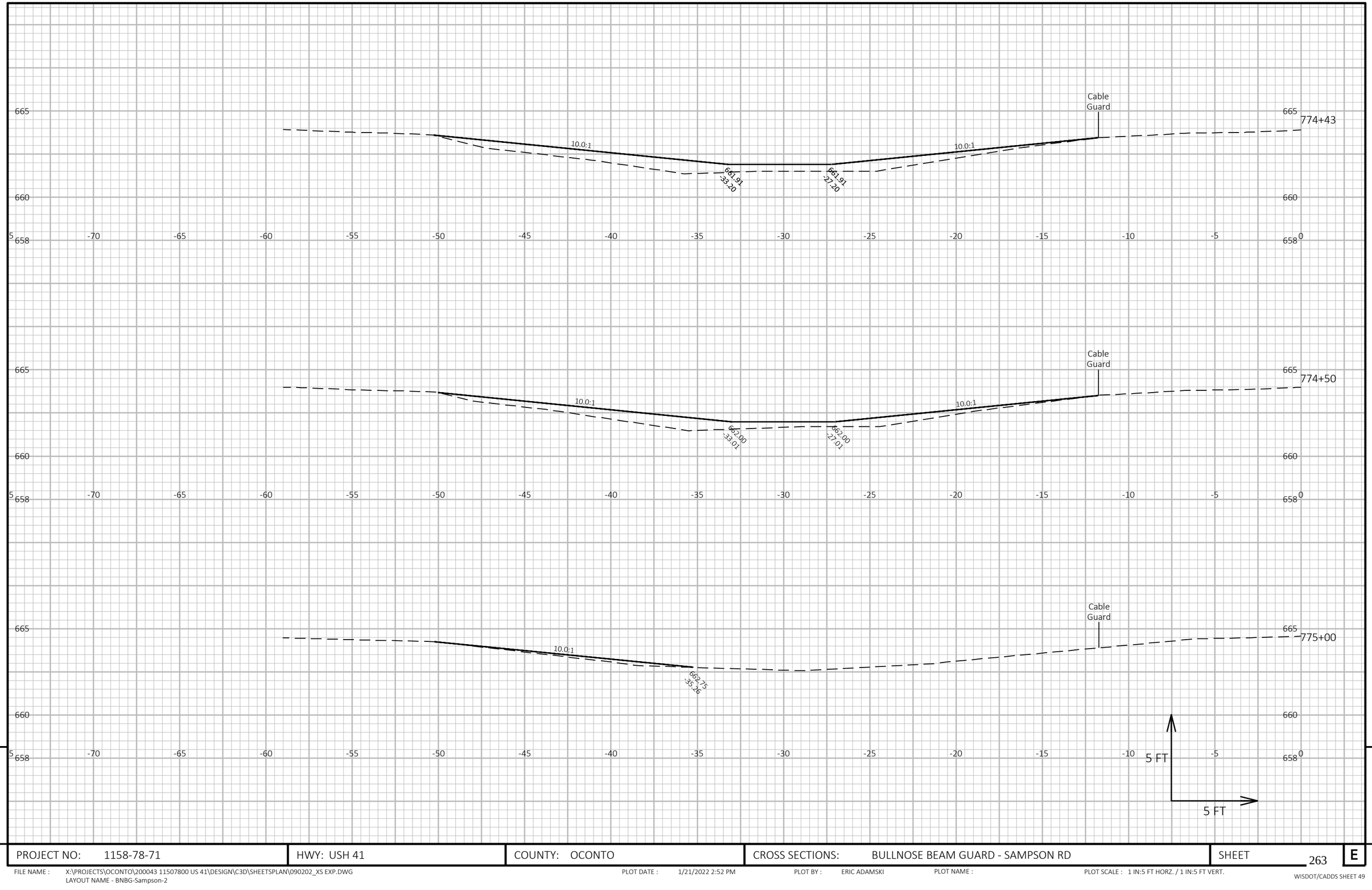
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - SAMPSON RD	SHEET 262	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Sampson-1

PLOT DATE : 1/21/2022 2:52 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

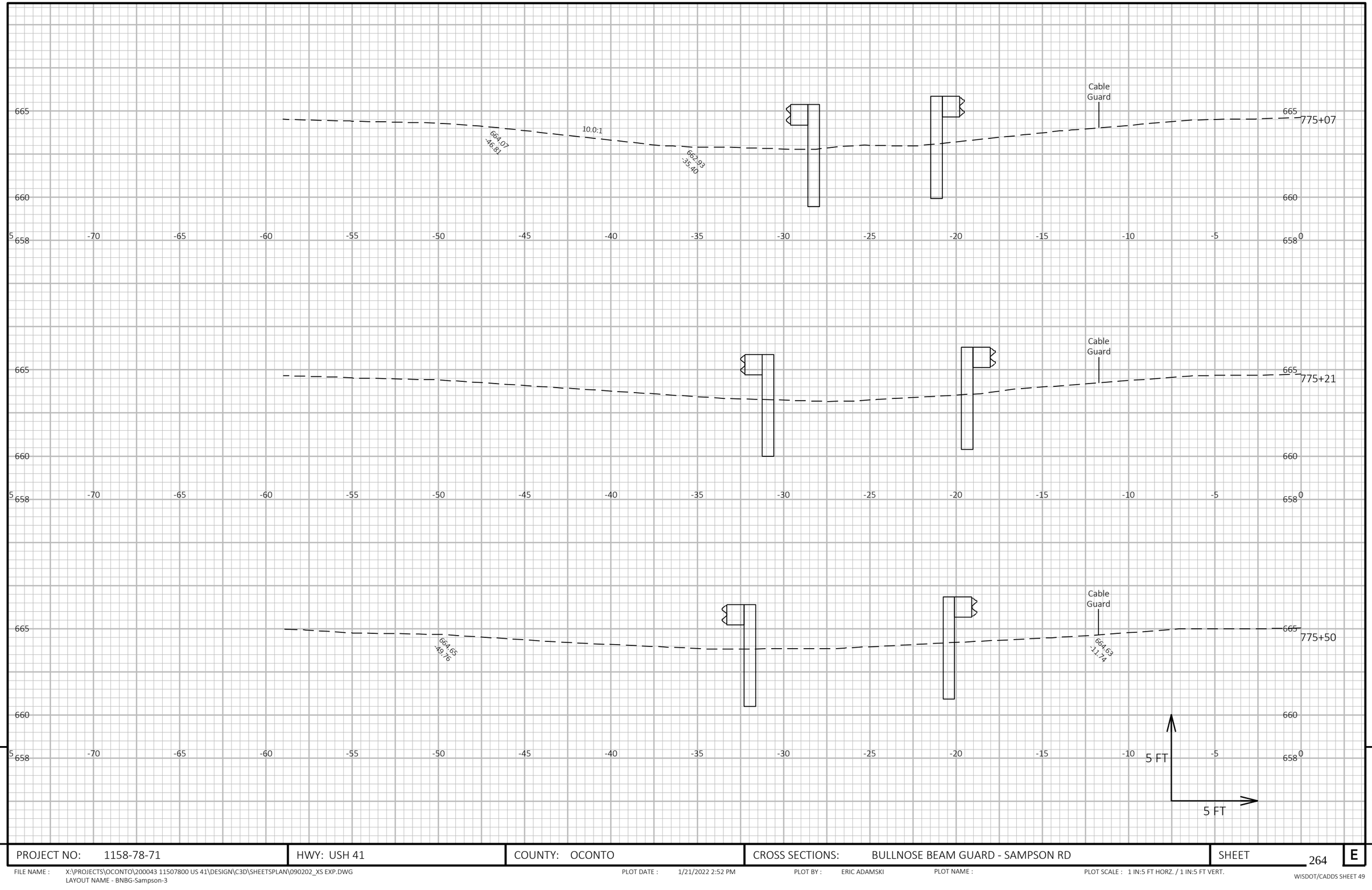
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - SAMPSON RD	SHEET 263	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Sampson-2

PLOT DATE : 1/21/2022 2:52 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

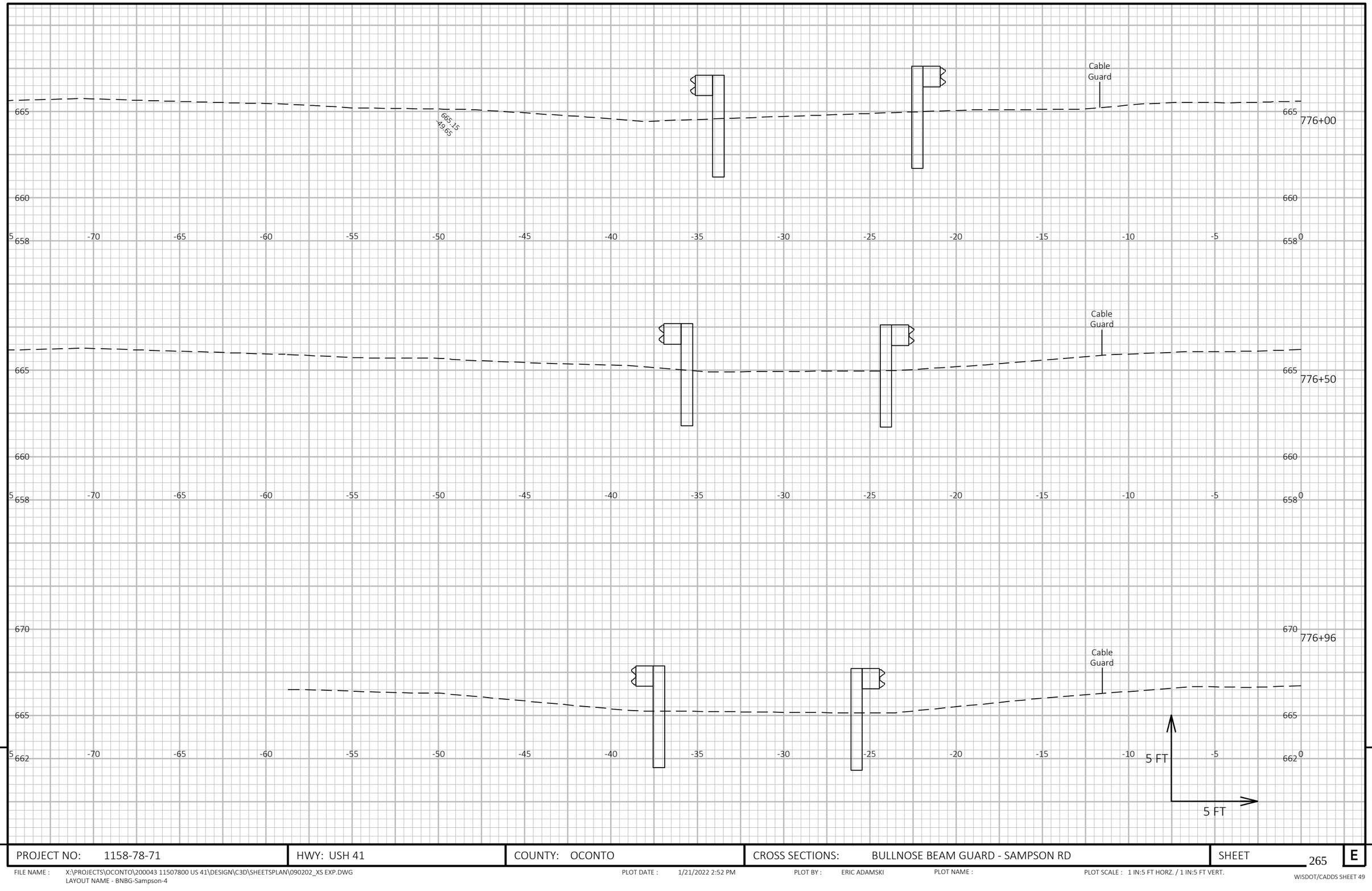
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - SAMPSON RD	SHEET 264	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Sampson-3

PLOT DATE : 1/21/2022 2:52 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

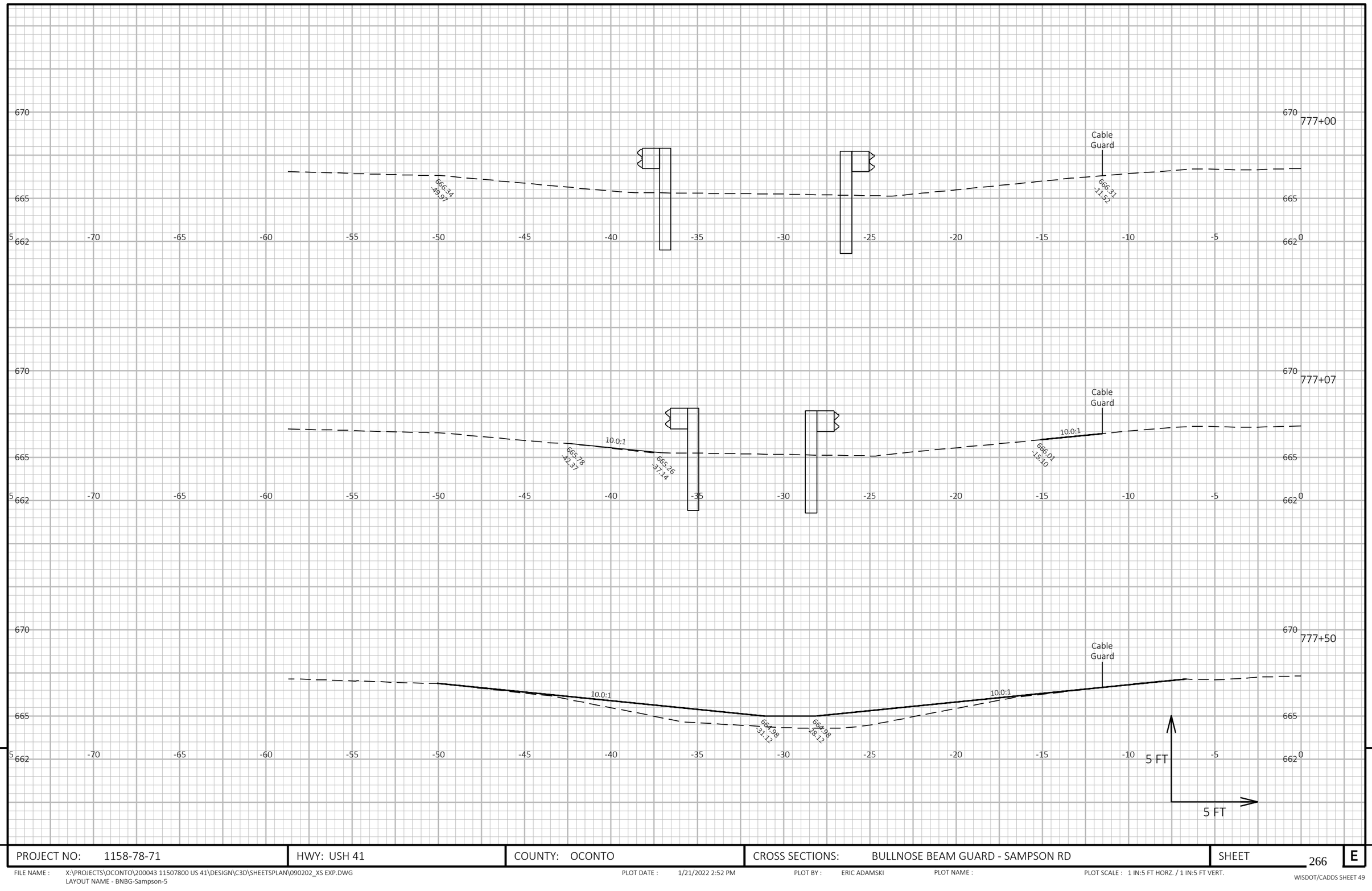
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - SAMPSON RD	SHEET 265	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Sampson-4

PLOT DATE : 1/21/2022 2:52 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

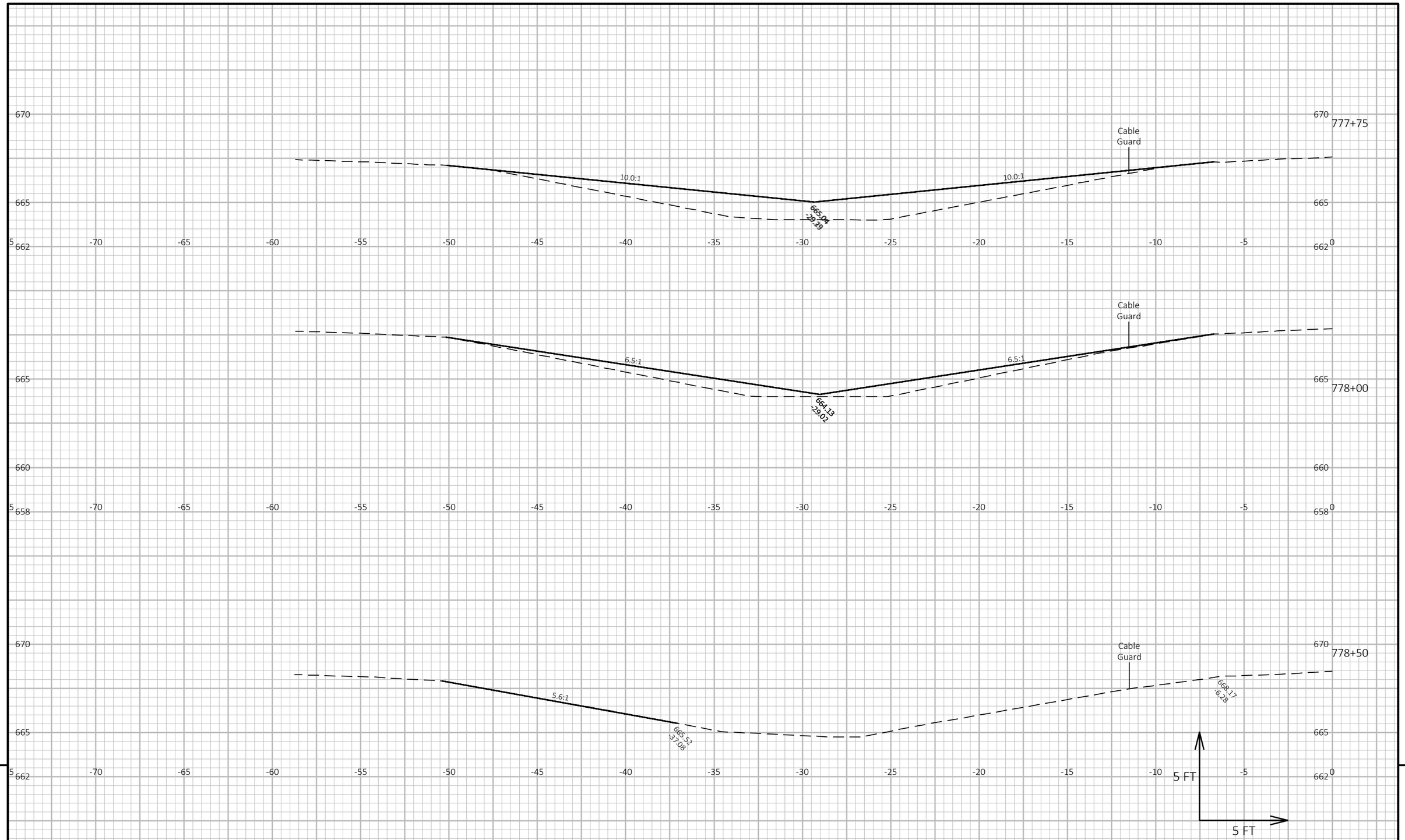
PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - SAMPSON RD	SHEET 266	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Sampson-5

PLOT DATE : 1/21/2022 2:52 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49

9



9

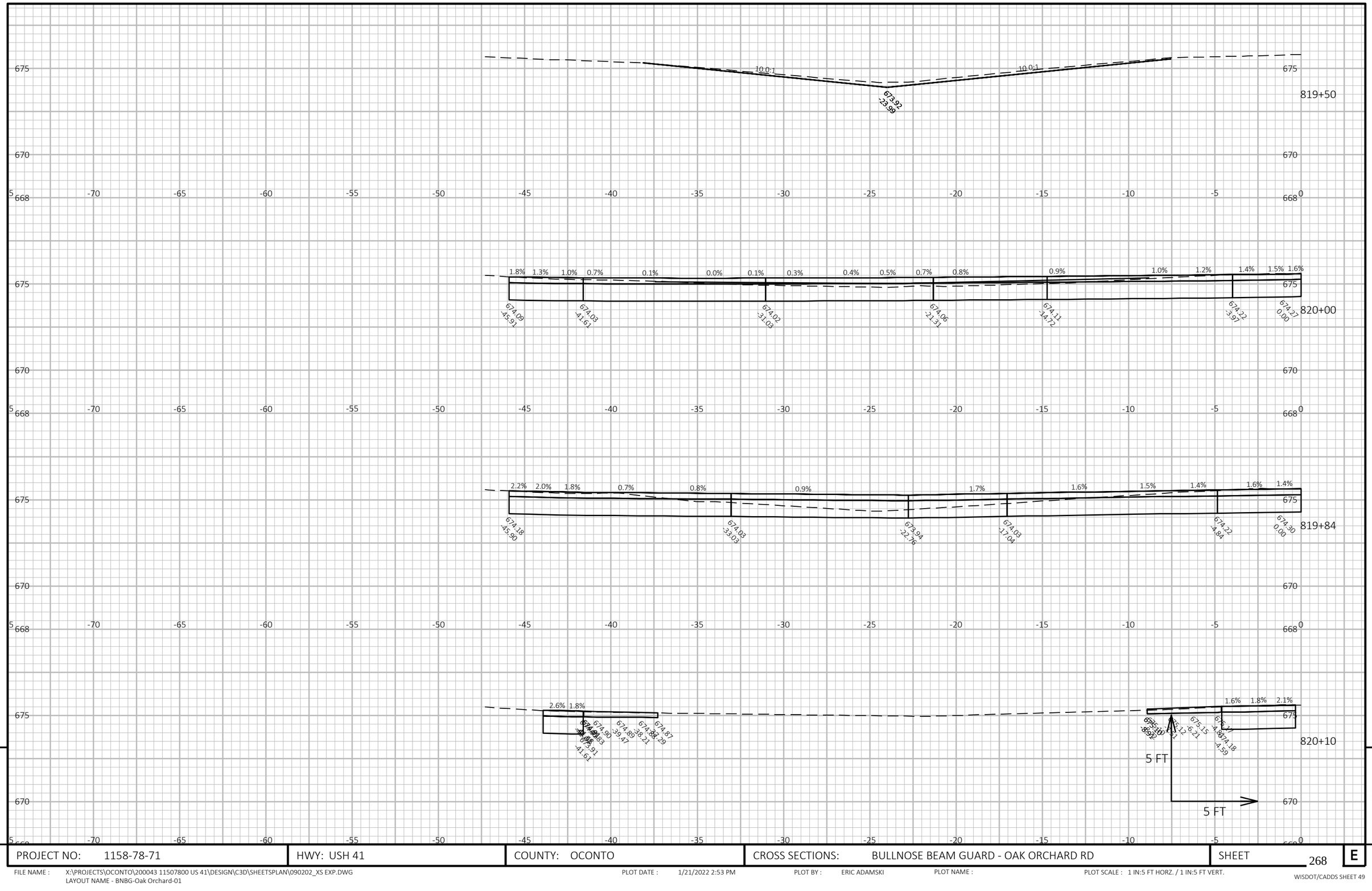
PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - SAMPSON RD	SHEET 267	E

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FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Sampson-6

PLOT DATE : 1/21/2022 2:52 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

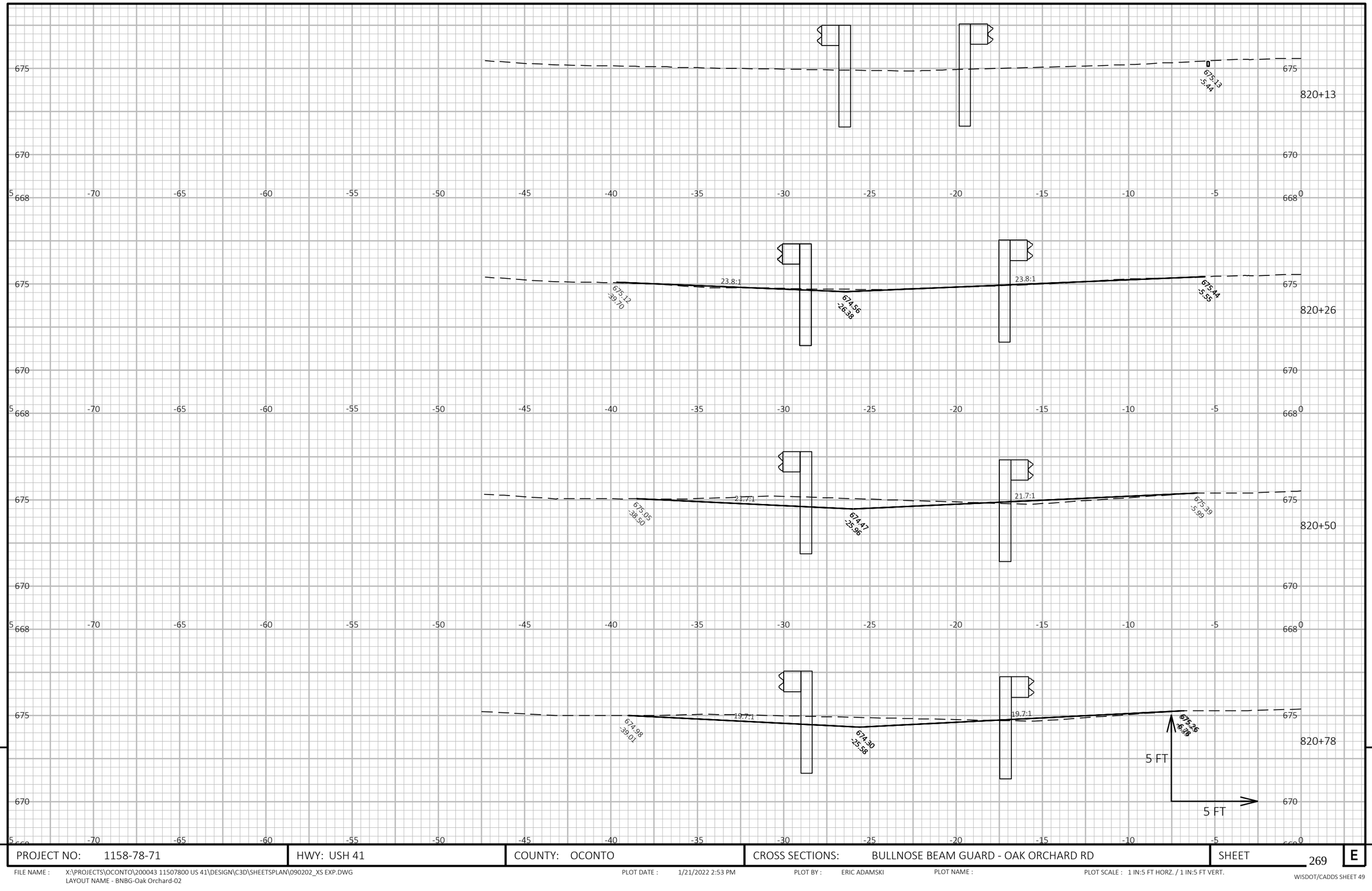
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - OAK ORCHARD RD	SHEET 268	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Oak Orchard-01

PLOT DATE : 1/21/2022 2:53 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

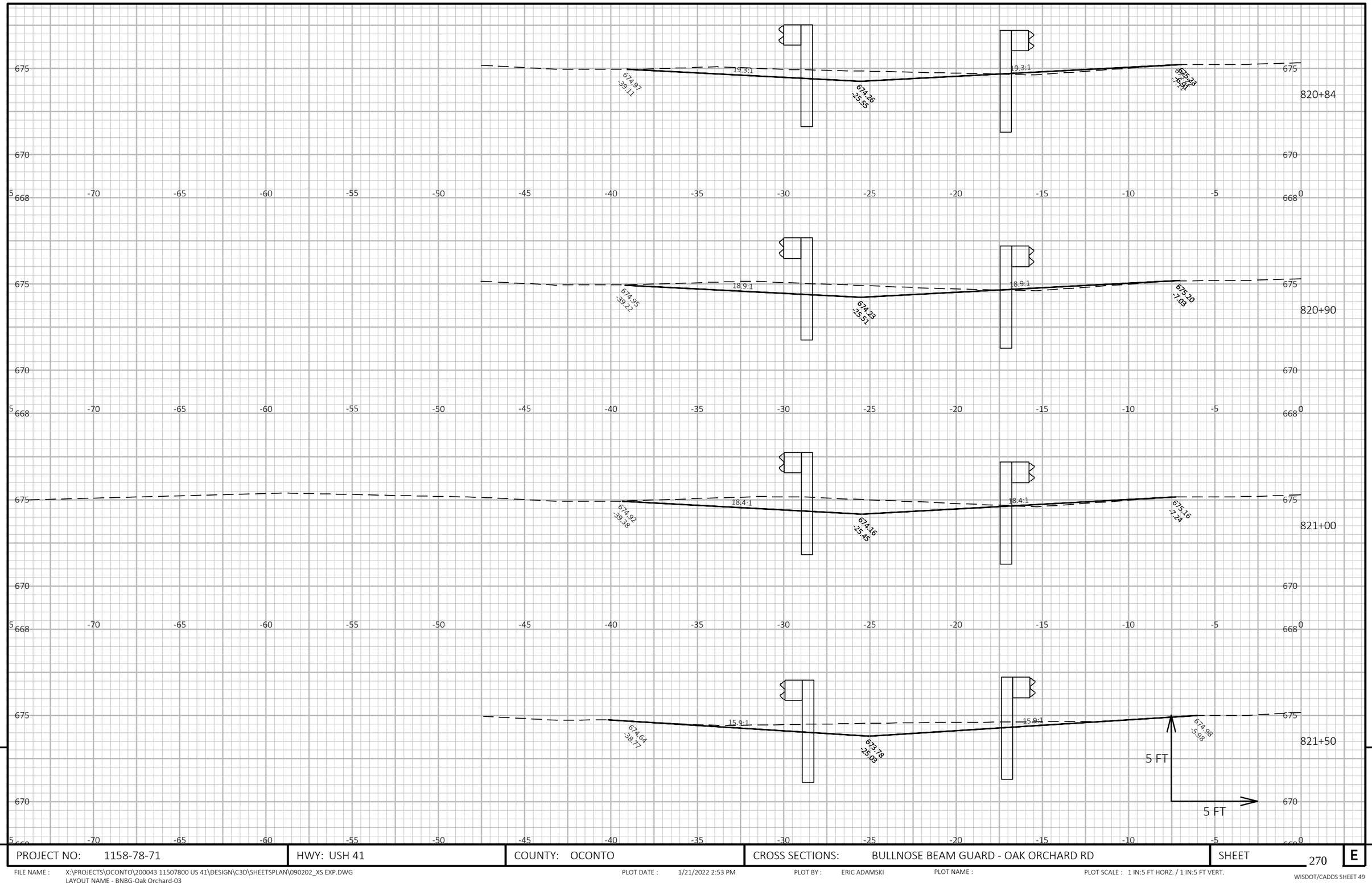
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - OAK ORCHARD RD	SHEET 269	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Oak Orchard-02

PLOT DATE : 1/21/2022 2:53 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



9

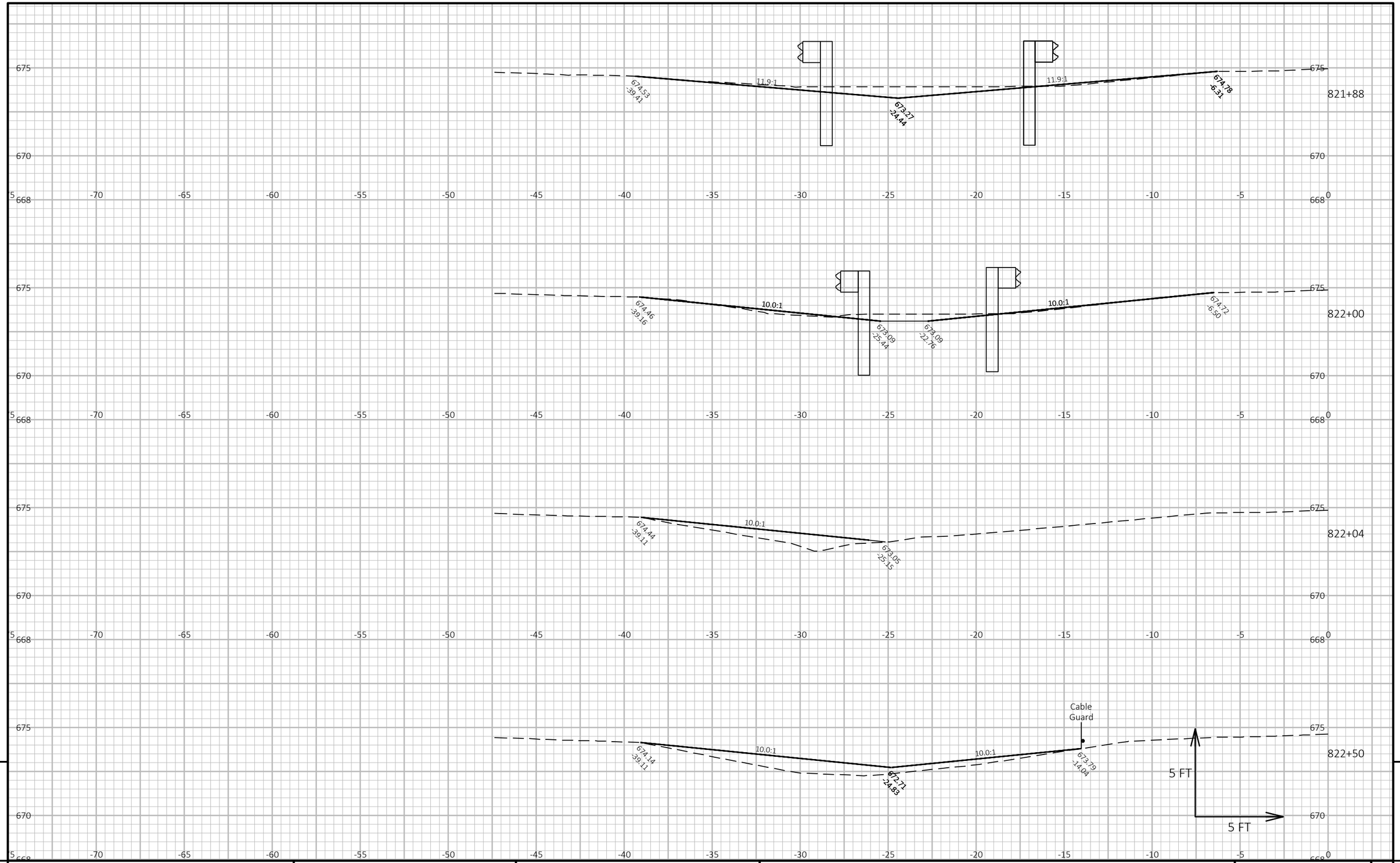
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - OAK ORCHARD RD	SHEET 270	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Oak Orchard-03

PLOT DATE : 1/21/2022 2:53 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.

WISDOT/CADDS SHEET 49



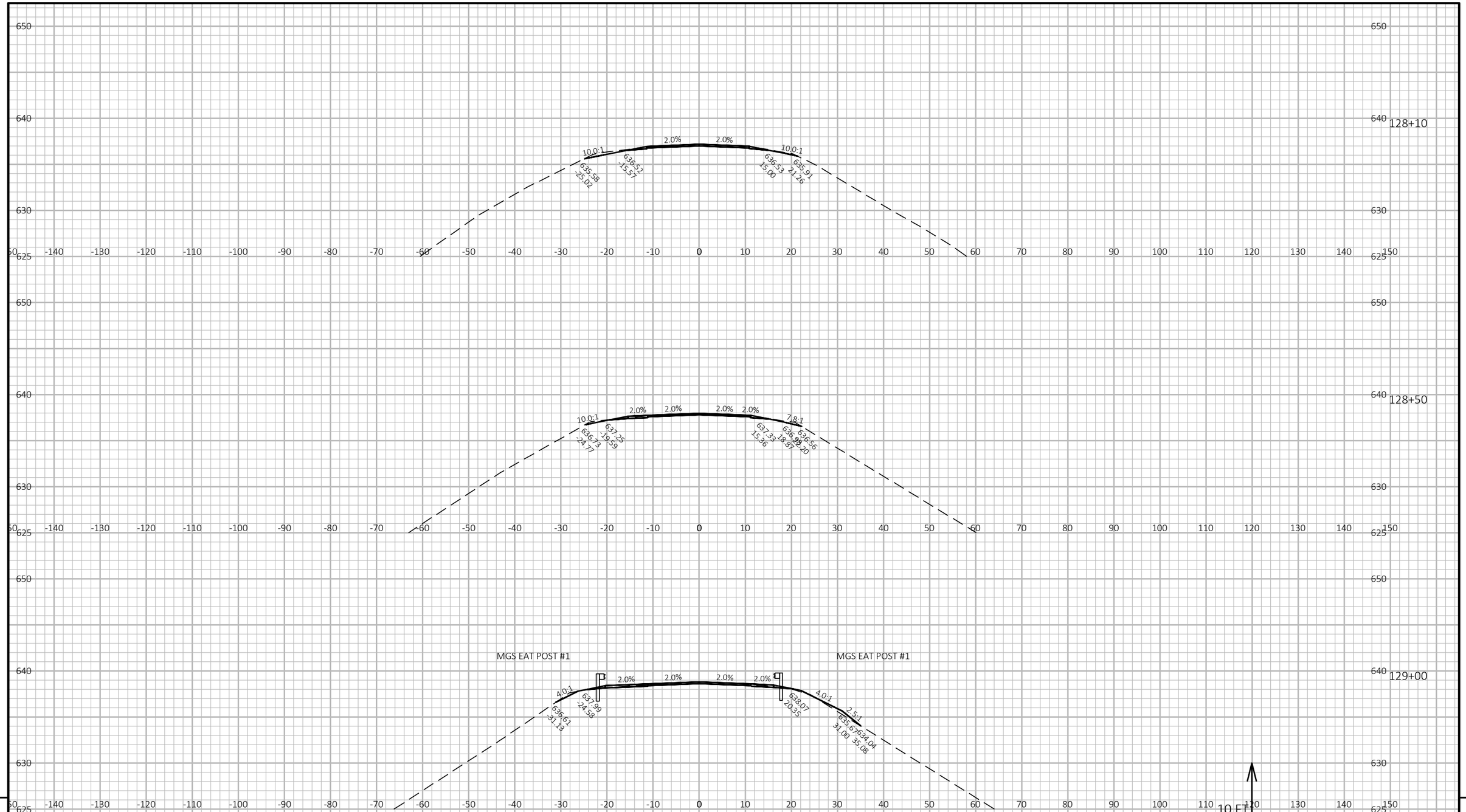
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BULLNOSE BEAM GUARD - OAK ORCHARD RD	SHEET 271	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090202_XS EXP.DWG
LAYOUT NAME - BNBG-Oak Orchard-04

PLOT DATE : 1/21/2022 2:53 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:5 FT VERT.



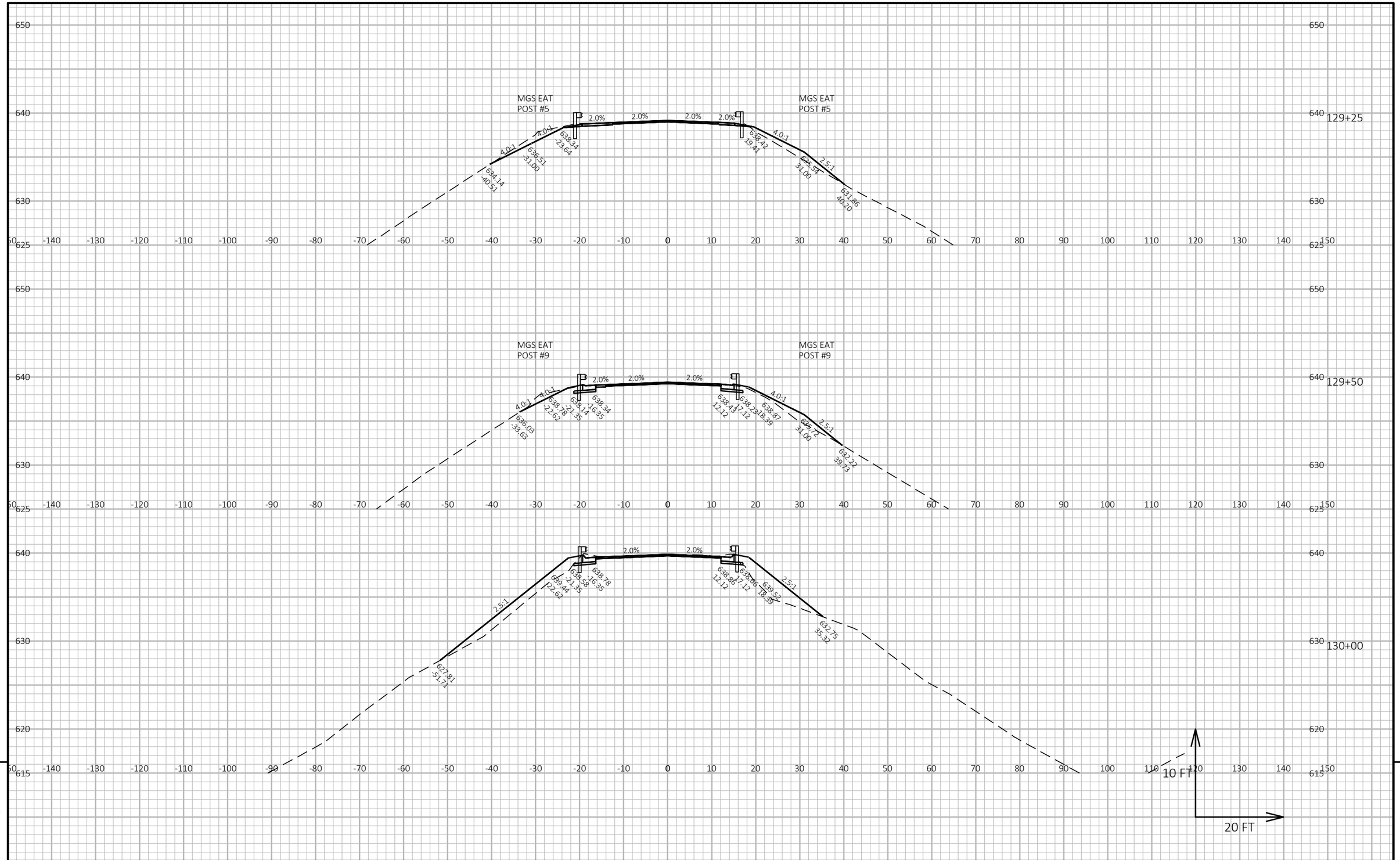
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: NORFIELD RD	SHEET 272	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Norfield Rd-01

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

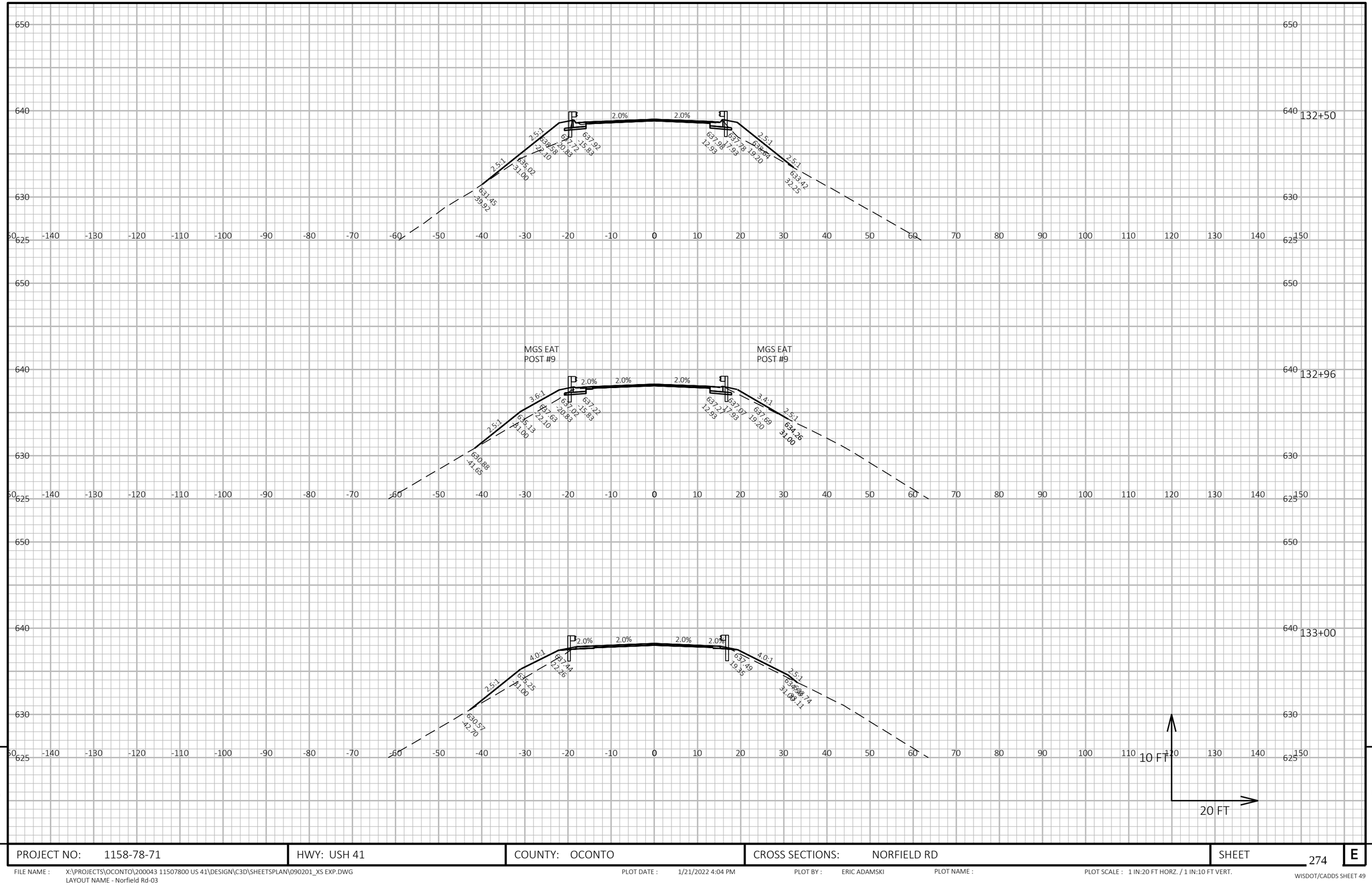


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: NORFIELD RD	SHEET 273	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Norfield Rd-02

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

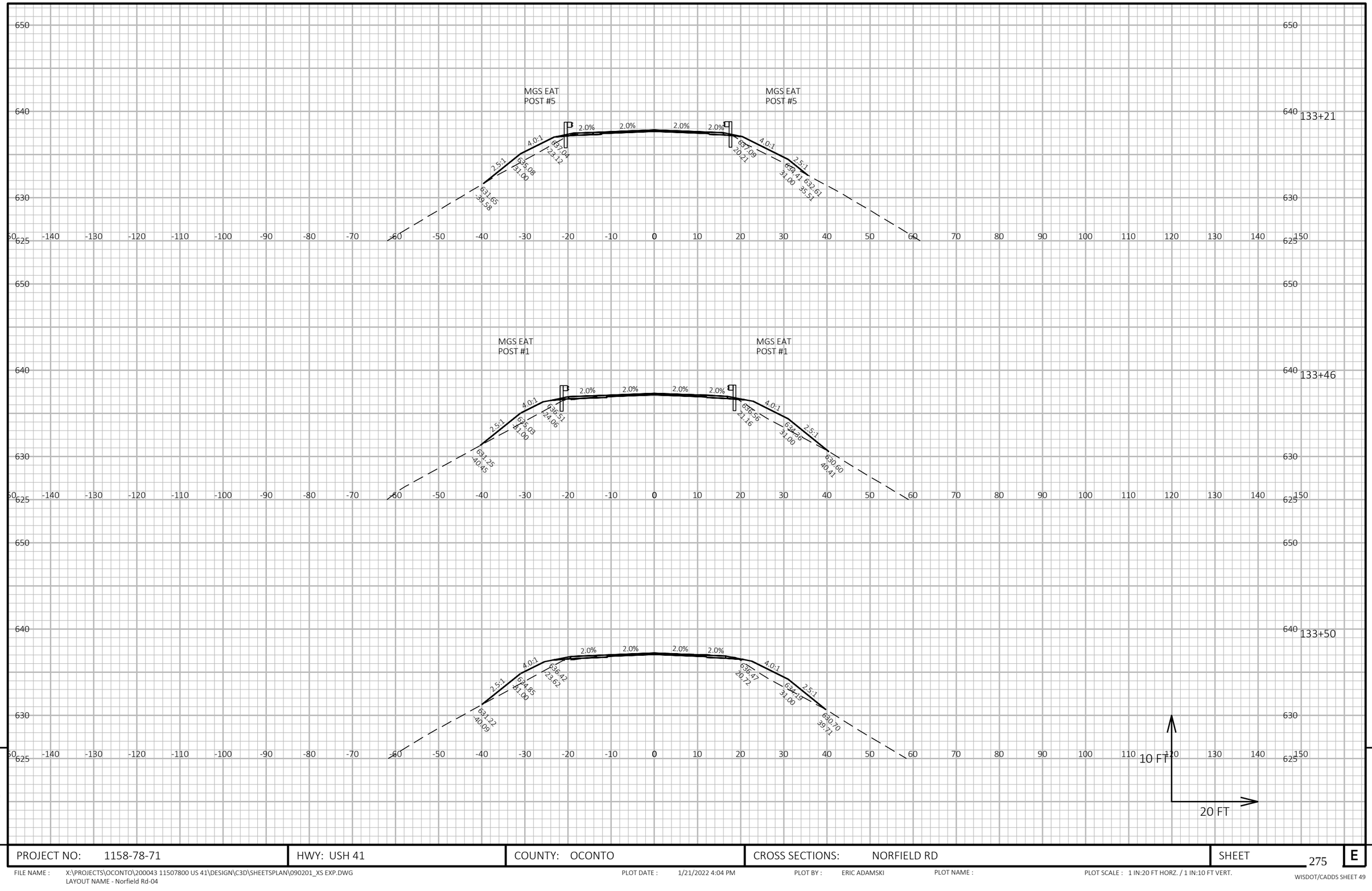


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: NORFIELD RD	SHEET 274 E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Norfield Rd-03

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: NORFIELD RD	SHEET 275	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Norfield Rd-04

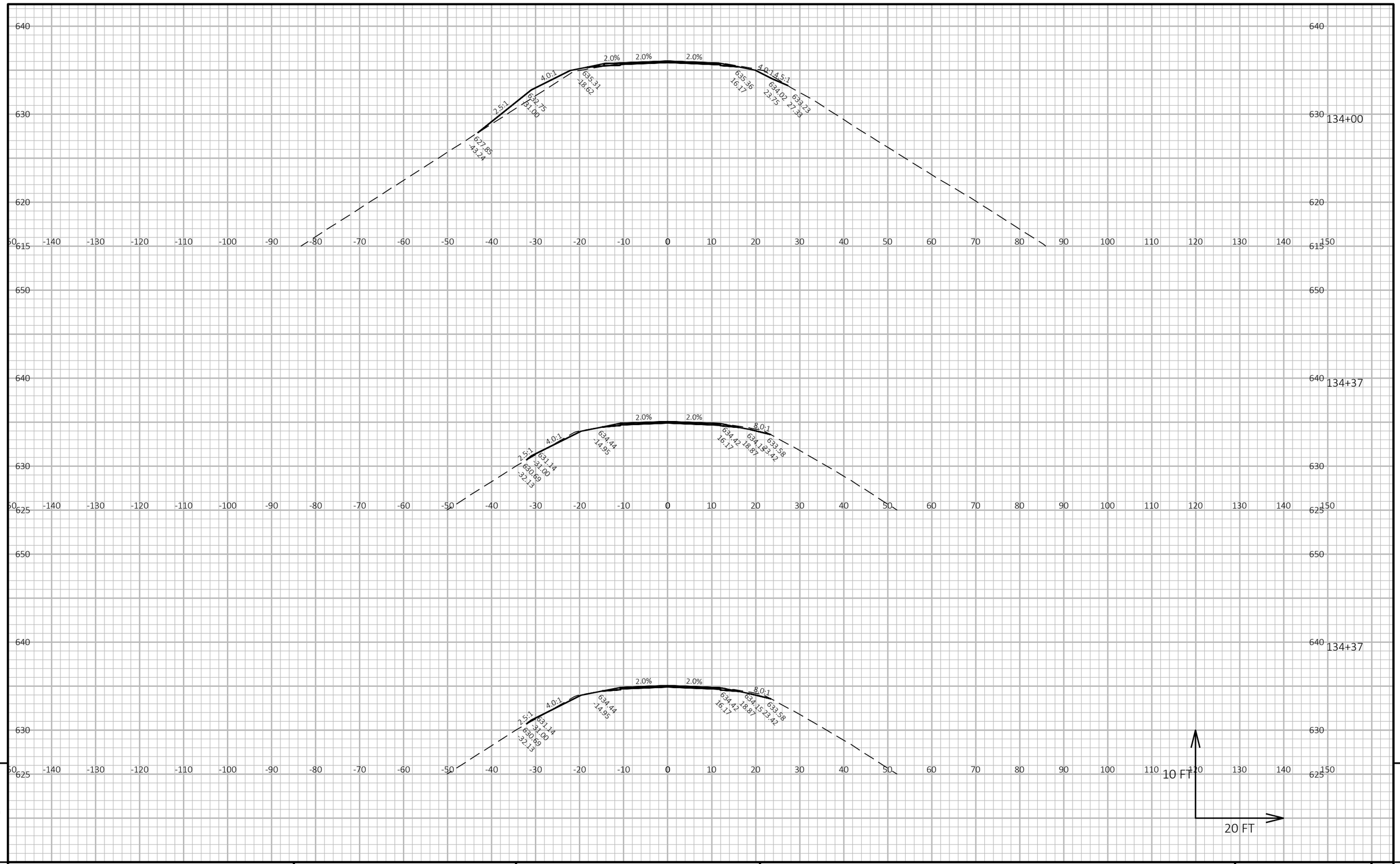
PLOT DATE : 1/21/2022 4:04 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

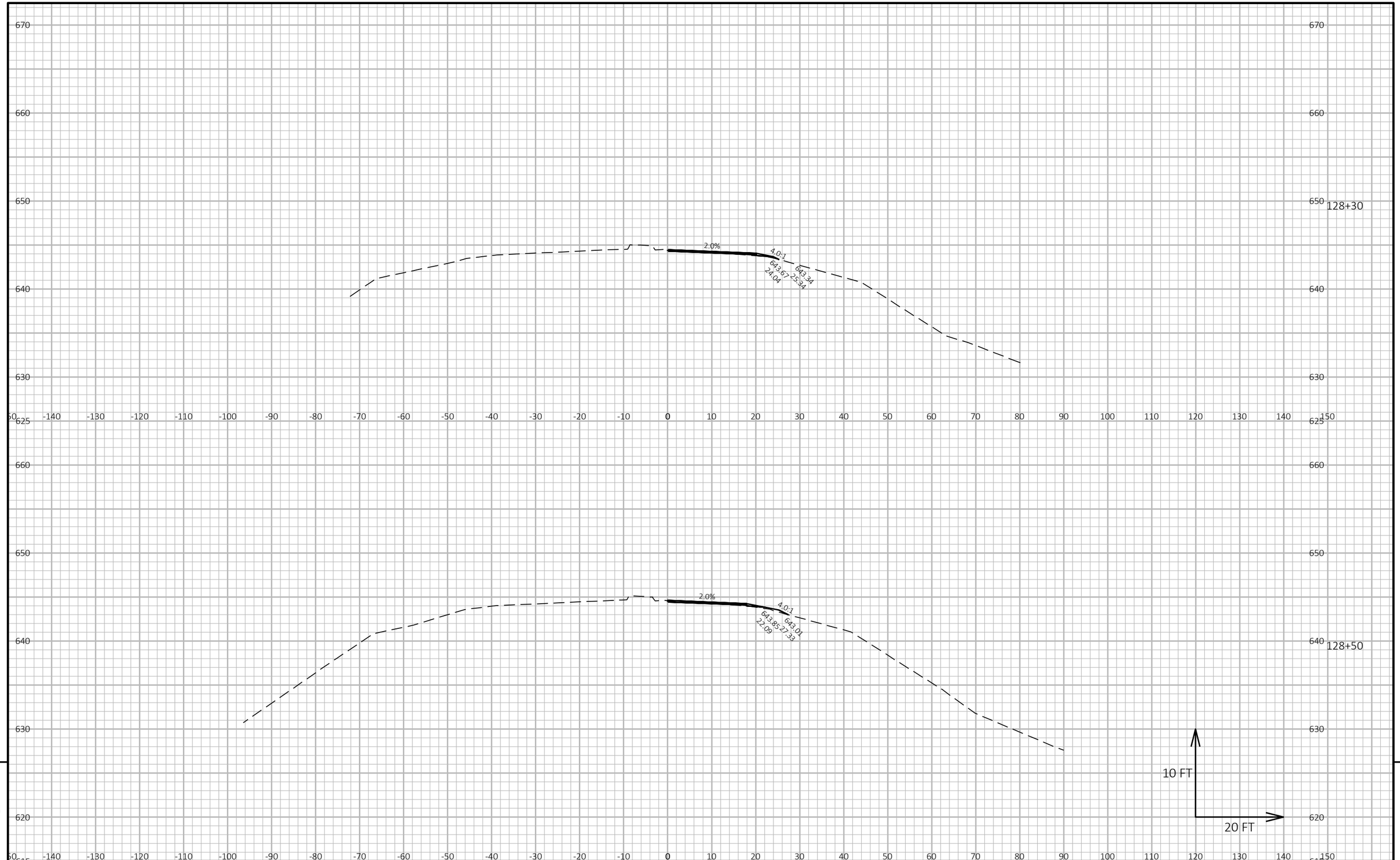


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: NORFIELD RD	SHEET 276	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Norfield Rd-05

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



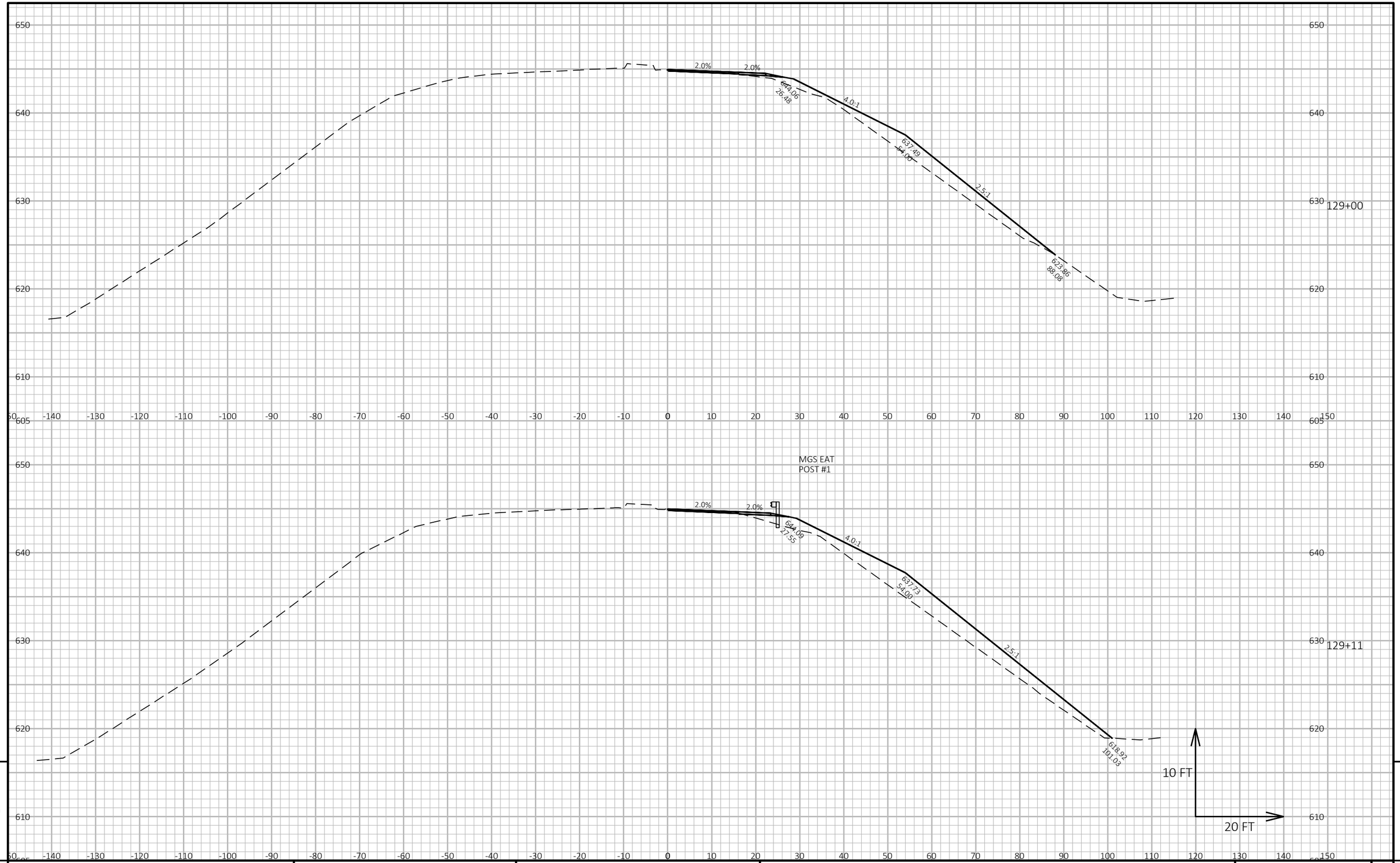
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BROWN RD	SHEET 277	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Brown Rd-01

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BROWN RD	SHEET 278	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Brown Rd-02

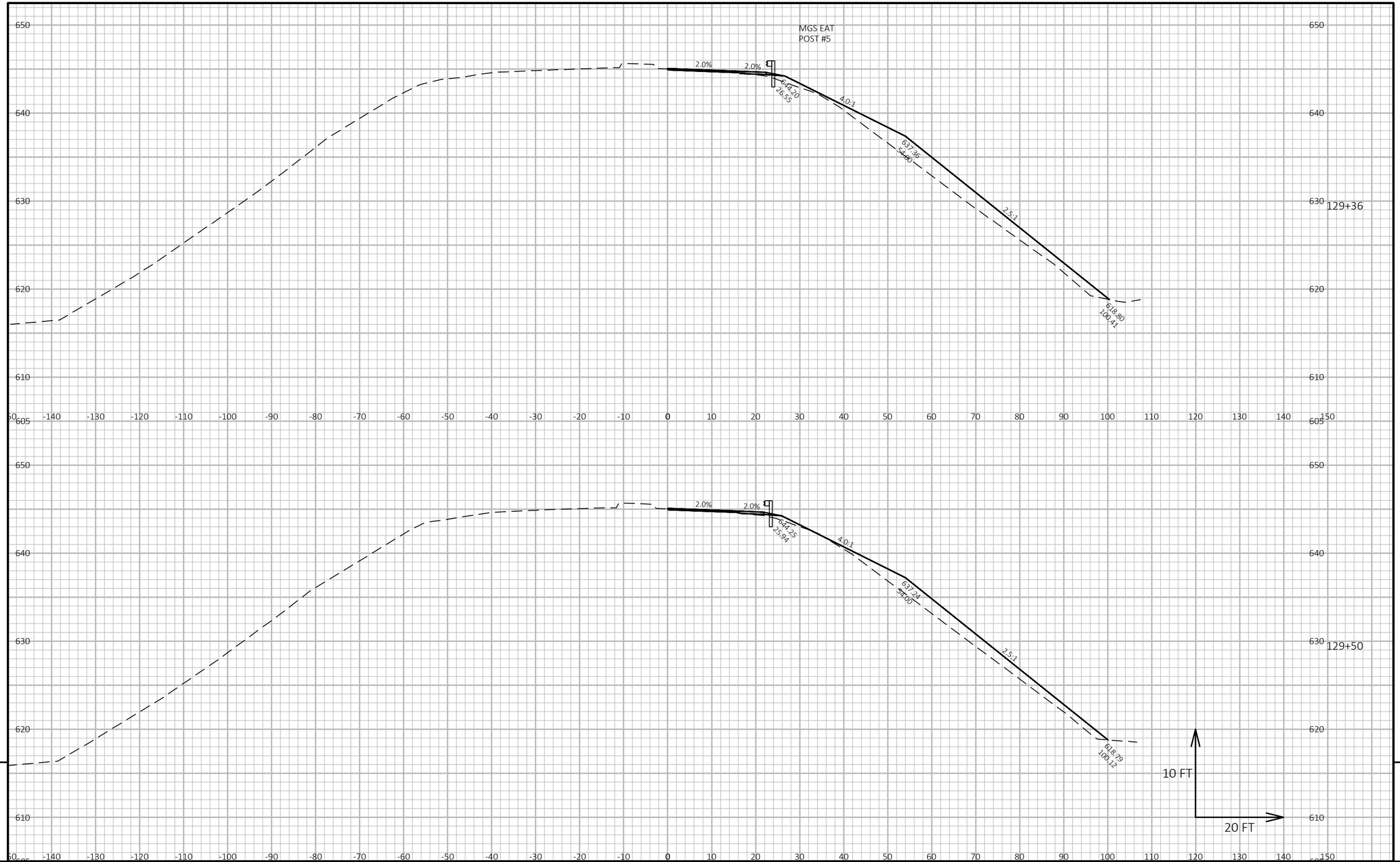
PLOT DATE : 1/21/2022 4:04 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BROWN RD	SHEET 279	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Brown Rd-03

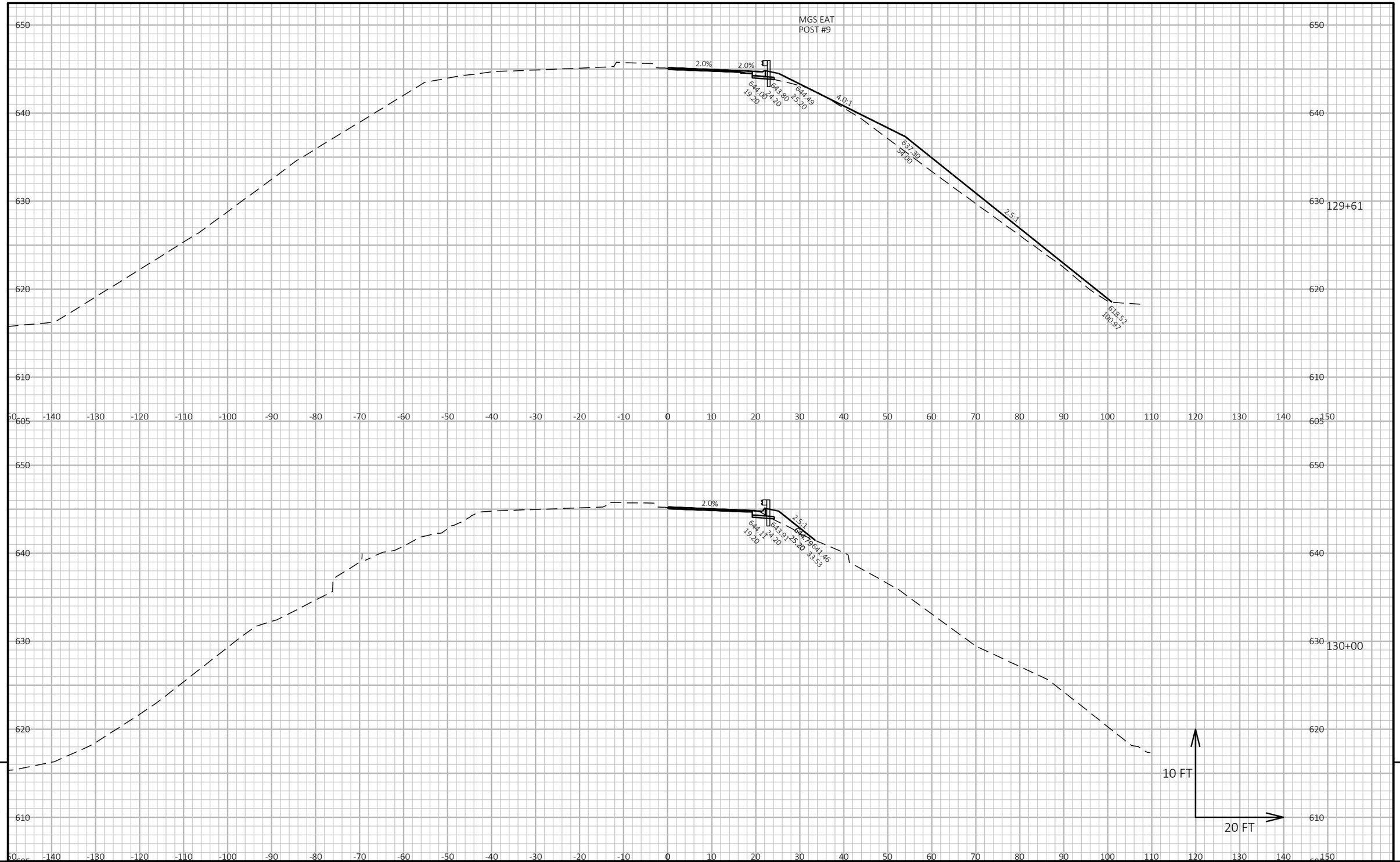
PLOT DATE : 1/21/2022 4:04 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

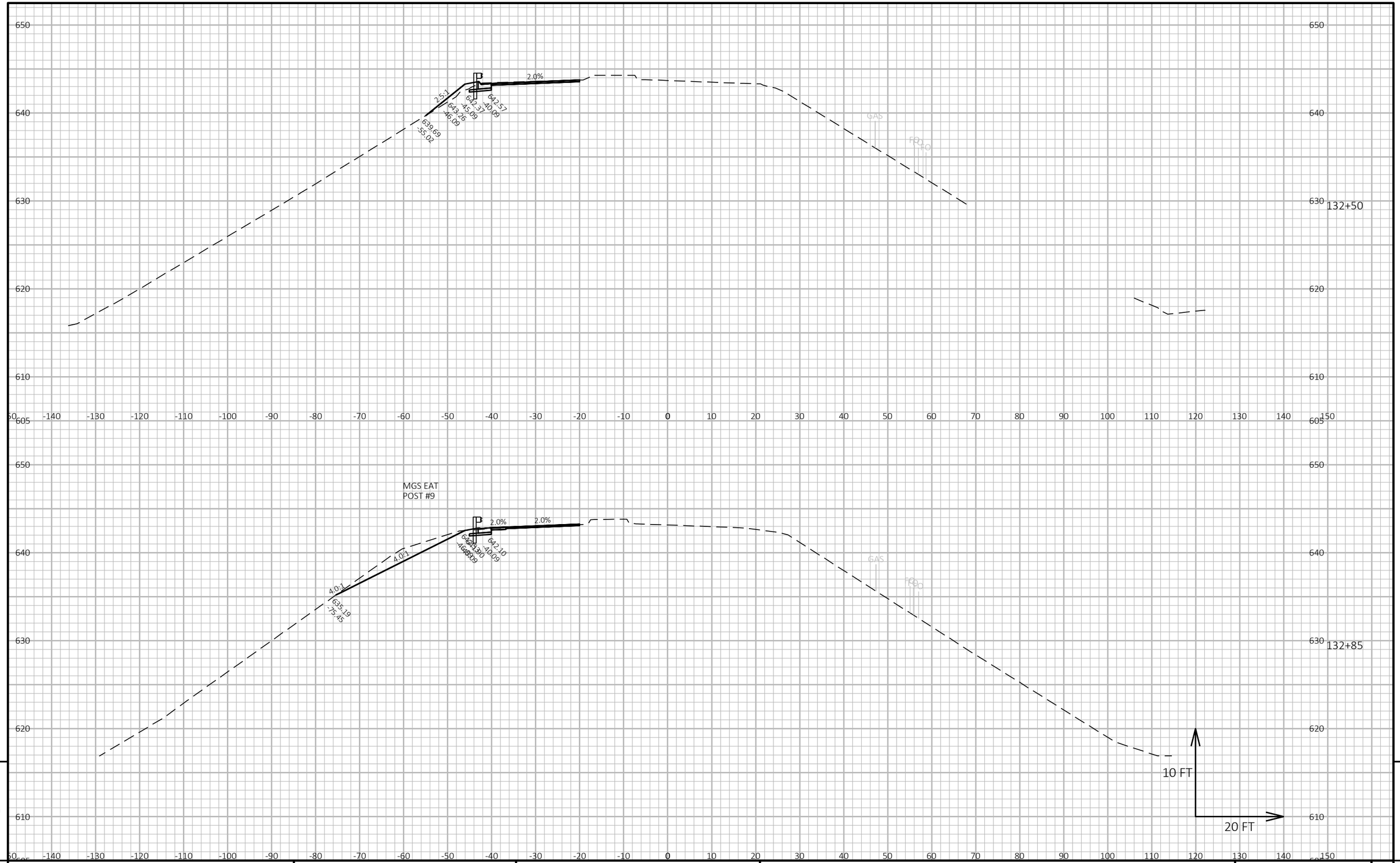


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BROWN RD	SHEET 280	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Brown Rd-04

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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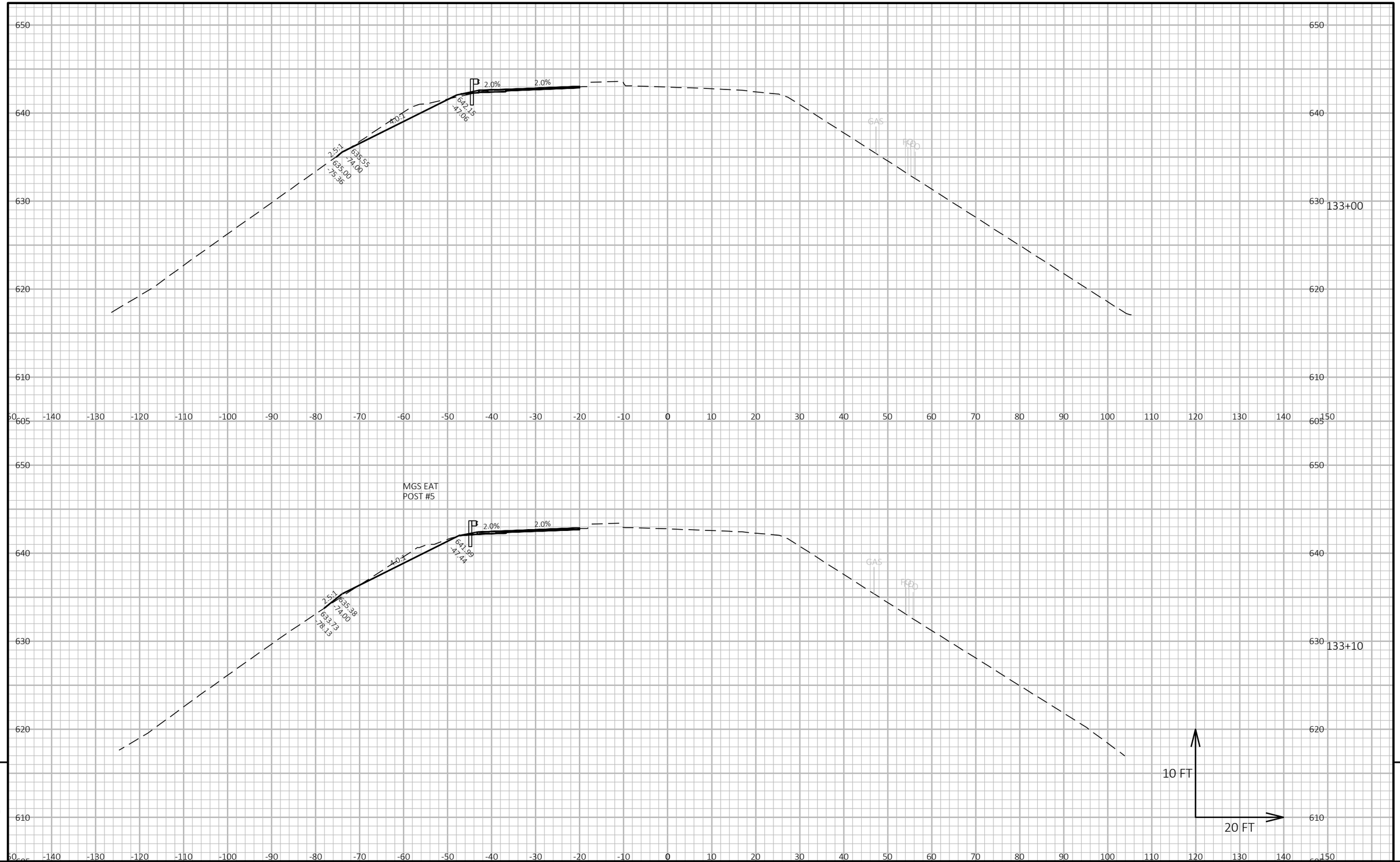
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BROWN RD	SHEET 281	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Brown Rd-05

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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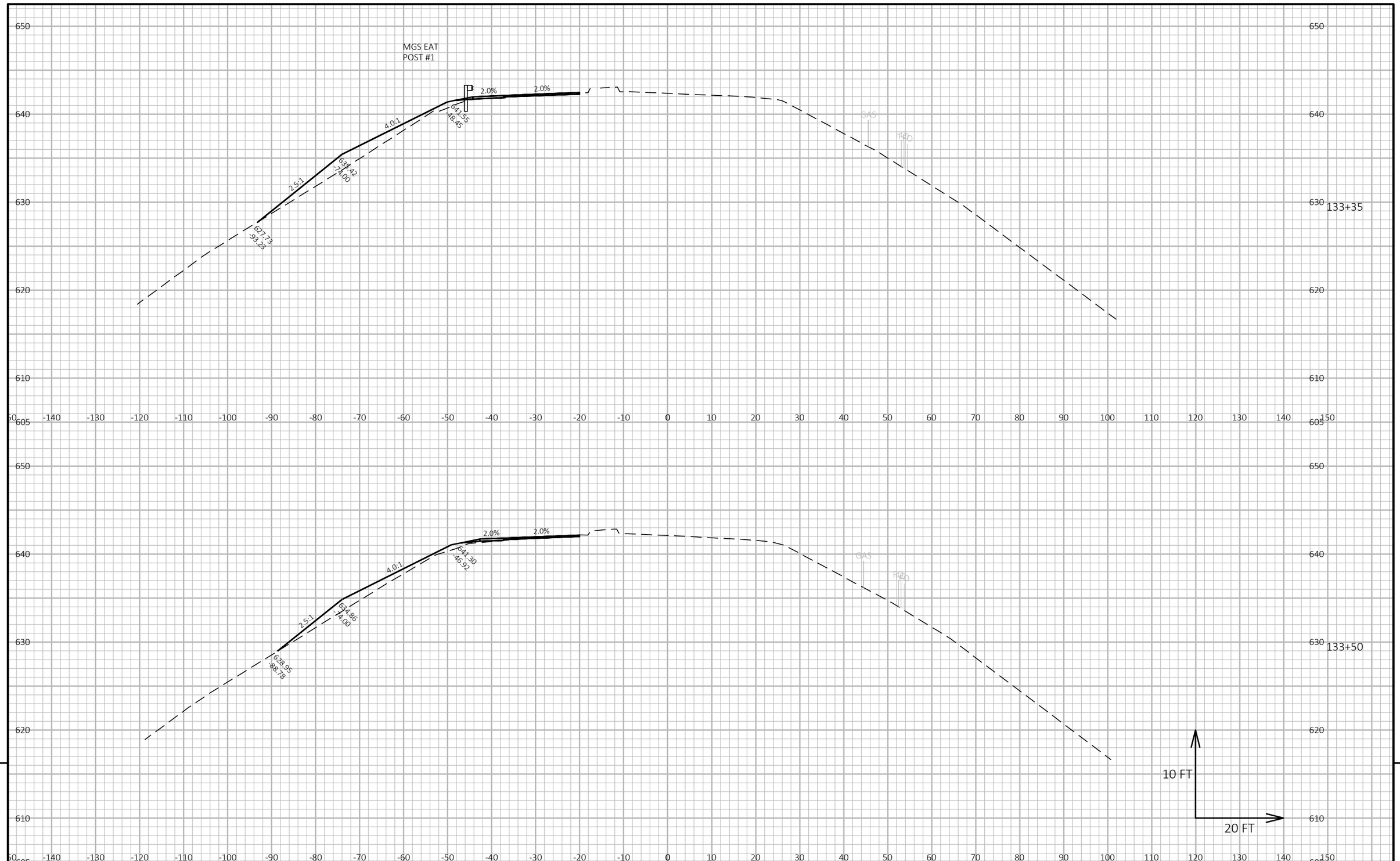
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BROWN RD	SHEET 282	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Brown Rd-06

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

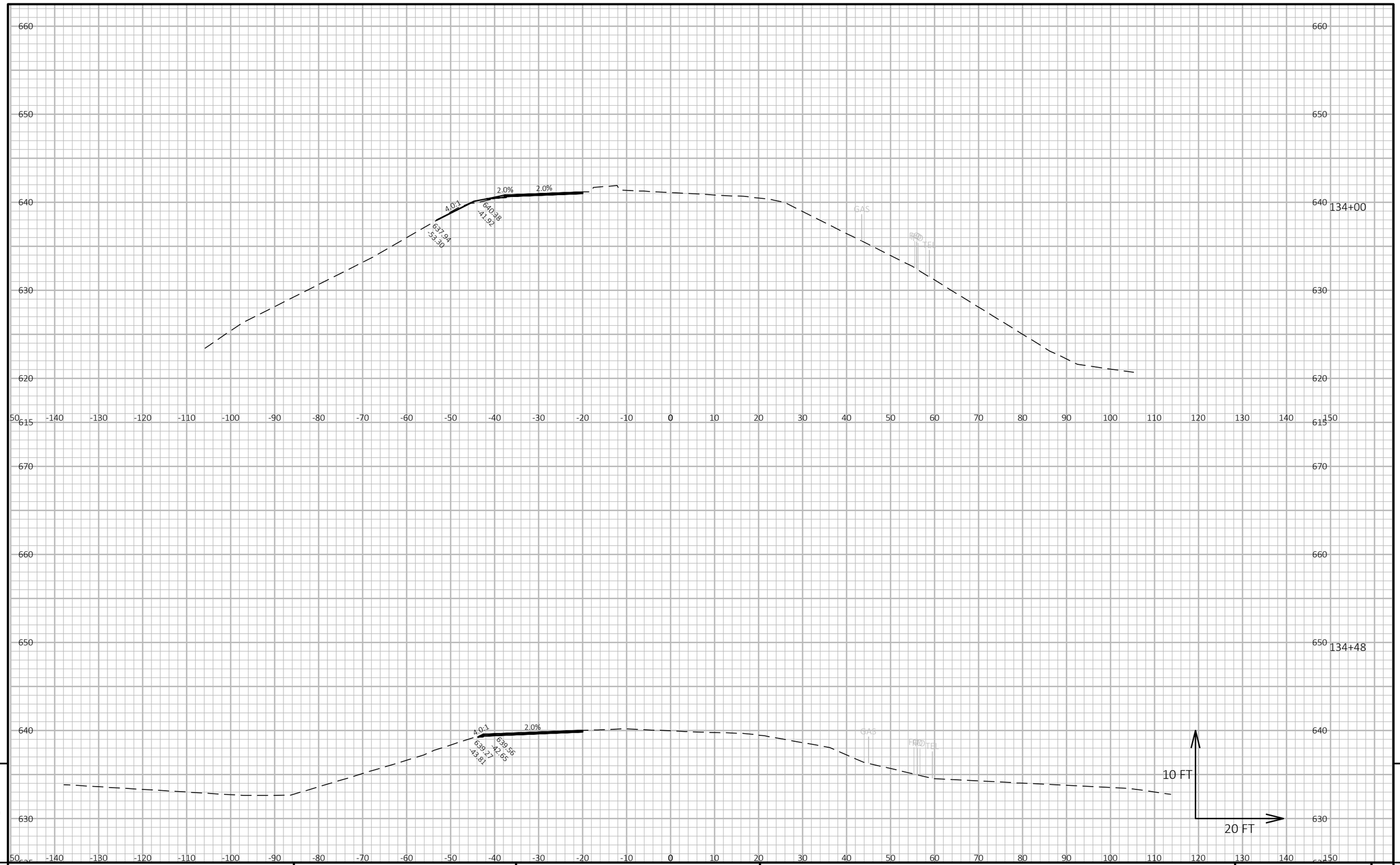


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BROWN RD	SHEET 283	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Brown Rd-07

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: BROWN RD	SHEET 284	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Brown Rd-08

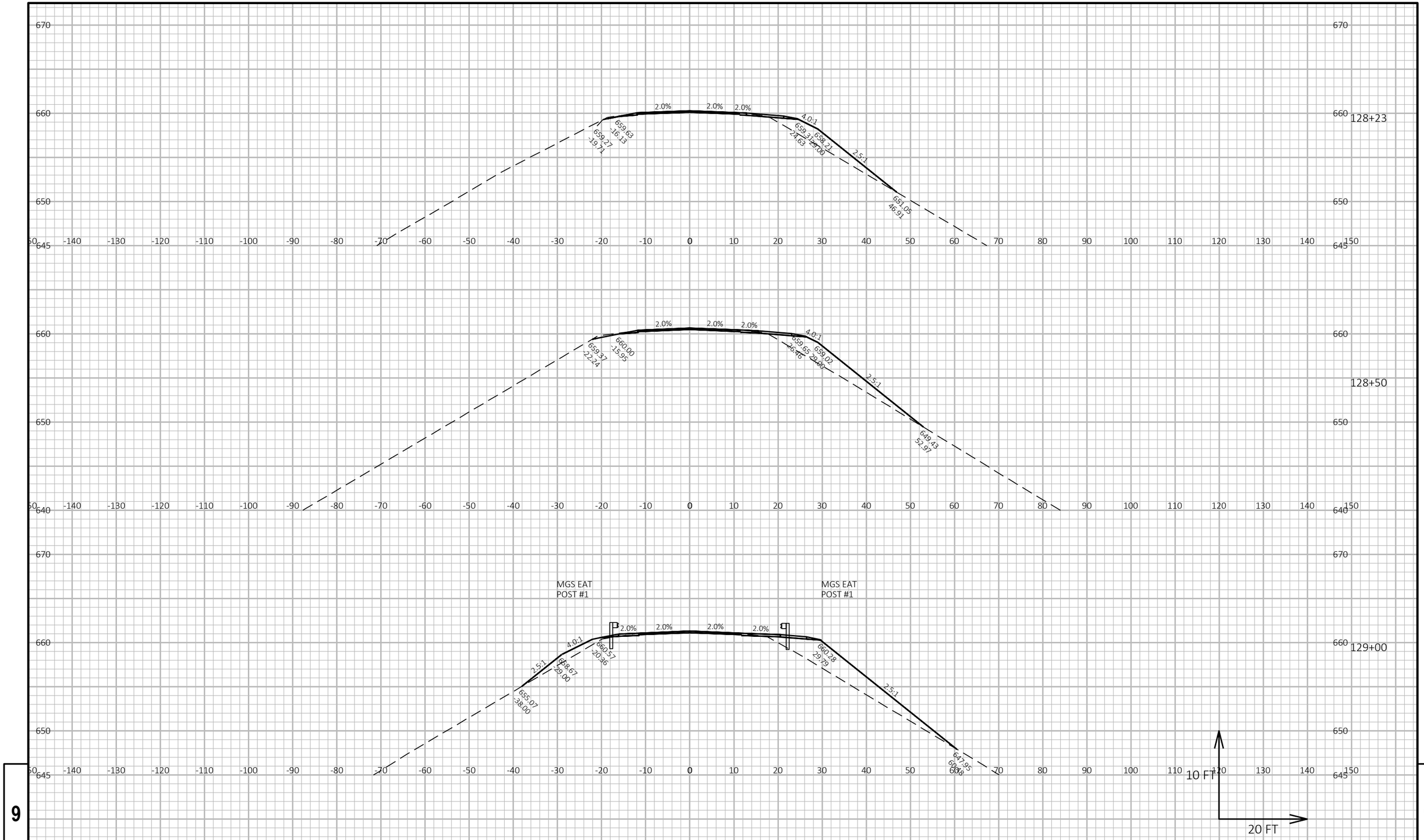
PLOT DATE : 1/21/2022 4:04 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: ALLEN RD	SHEET 285	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Allen Rd-01

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

MGS EAT
POST #5

MGS EAT
POST #5

2.0% 2.0% 2.0% 2.0%

4.0:1 2.5:1 4.0:1 2.5:1

660.85 -19.36
658.47 -29.00
657.90 -30.41
660.63 -27.25
660.18 29.00
649.93 54.63

129+25

MGS EAT
POST #9

MGS EAT
POST #9

2.0% 2.0% 2.0% 2.0%

4.0:1 2.5:1 4.0:1 2.5:1

660.77 -12.01
660.57 -12.20
660.01 -18.58
659.64 -18.98
659.24 -24.77
660.68 16.38
660.48 21.38
655.11 22.65
655.23 29.00
654.32 42.02

129+50

2.0% 2.0%

2.5:1 2.5:1

658.98 -12.31
658.78 -17.31
657.80 -23.18
659.56 22.66
658.90 16.39
655.70 21.39
651.96 41.65

132+50

10 FT

20 FT

9 9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: ALLEN RD	SHEET 286	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Allen Rd-02

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

MGS EAT
POST #9

132+97

133+00

MGS EAT
POST #9

133+09

10 FT

20 FT

9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: ALLEN RD	SHEET 287	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Allen Rd-03

PLOT DATE : 1/21/2022 4:04 PM

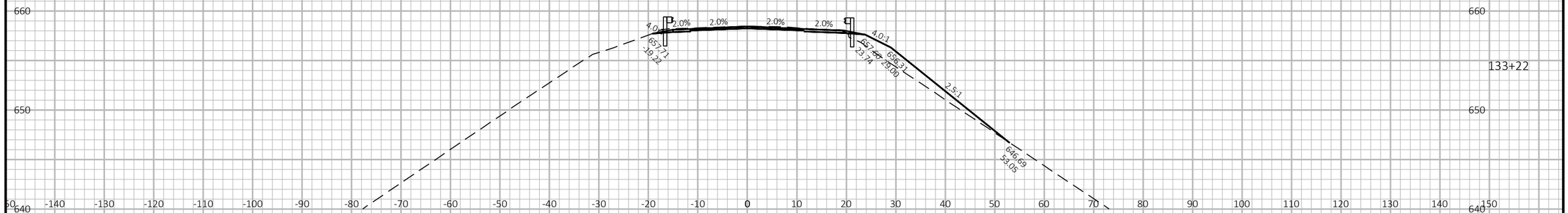
PLOT BY : ERIC ADAMSKI

PLOT NAME :

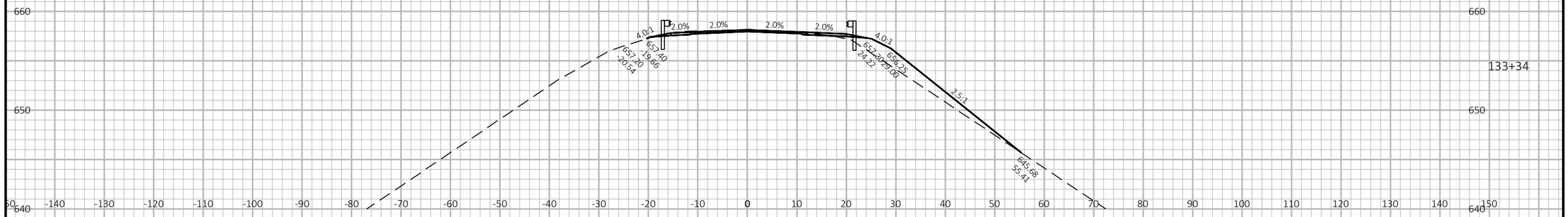
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

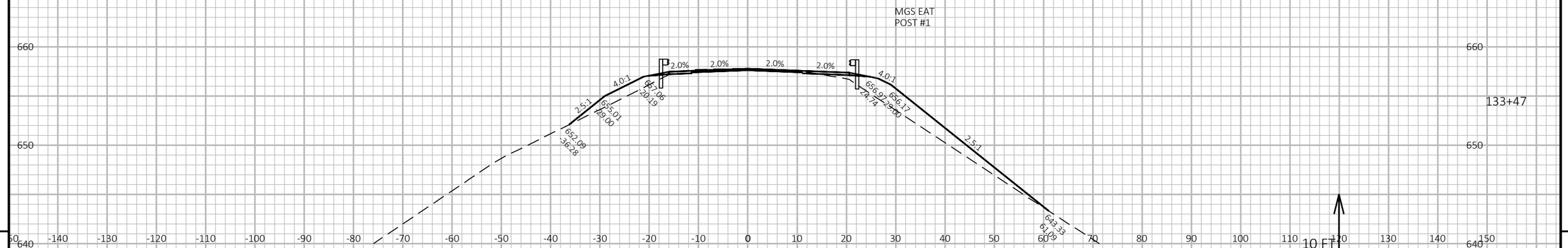
MGS EAT
POST #5



MGS EAT
POST #5



MGS EAT
POST #1



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: ALLEN RD	SHEET 288	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Allen Rd-04

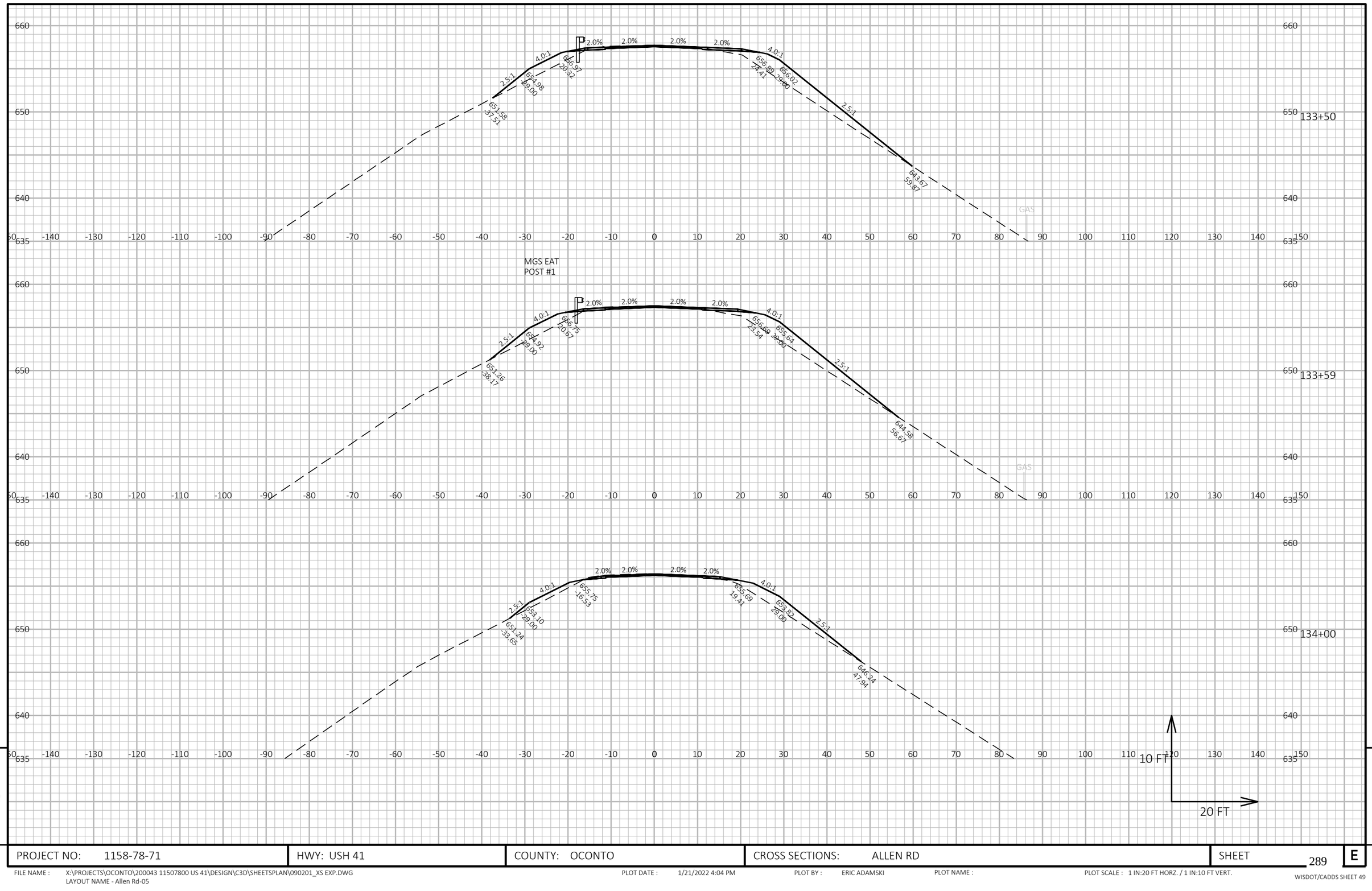
PLOT DATE : 1/21/2022 4:04 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

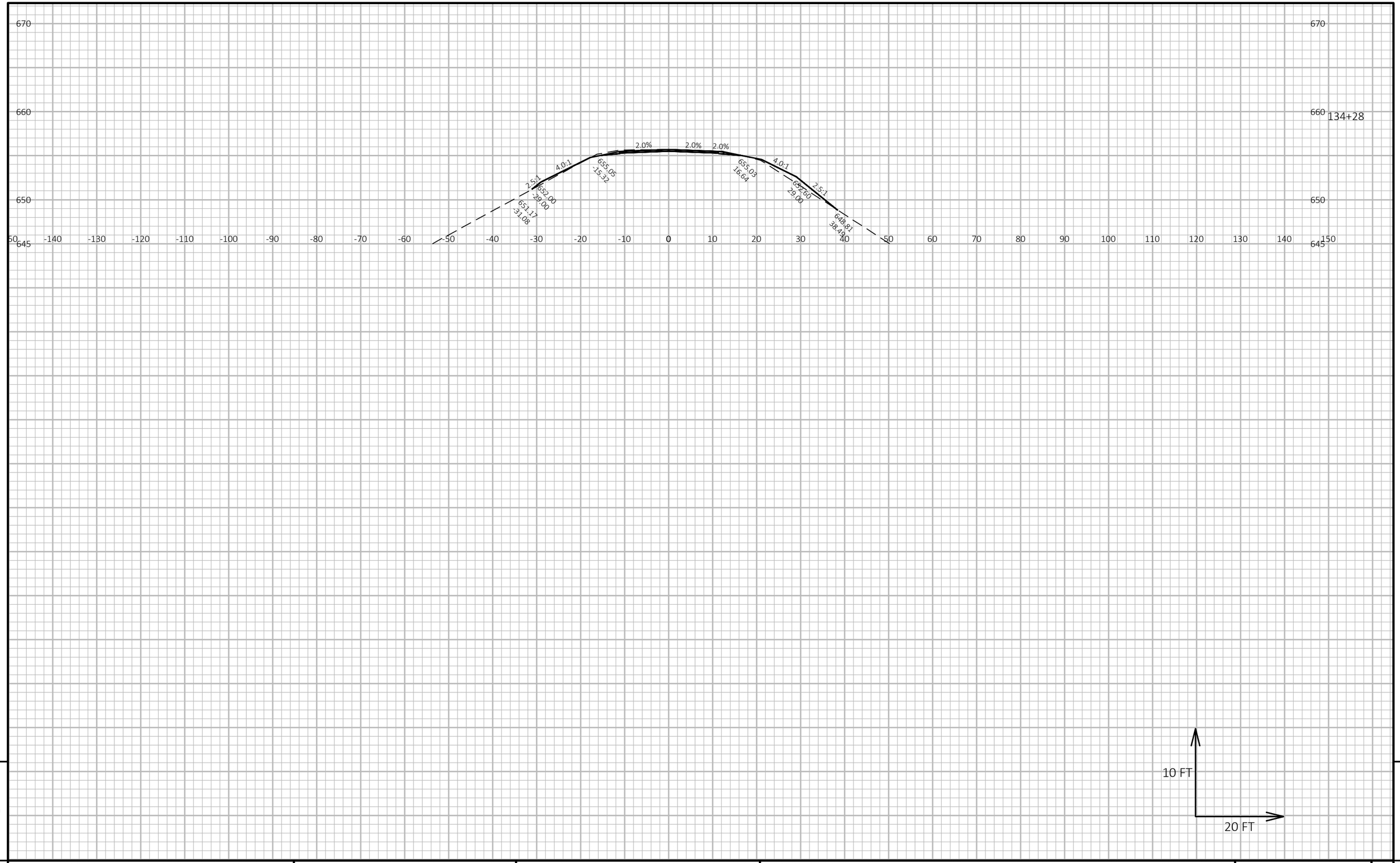


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: ALLEN RD	SHEET 289	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Allen Rd-05

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



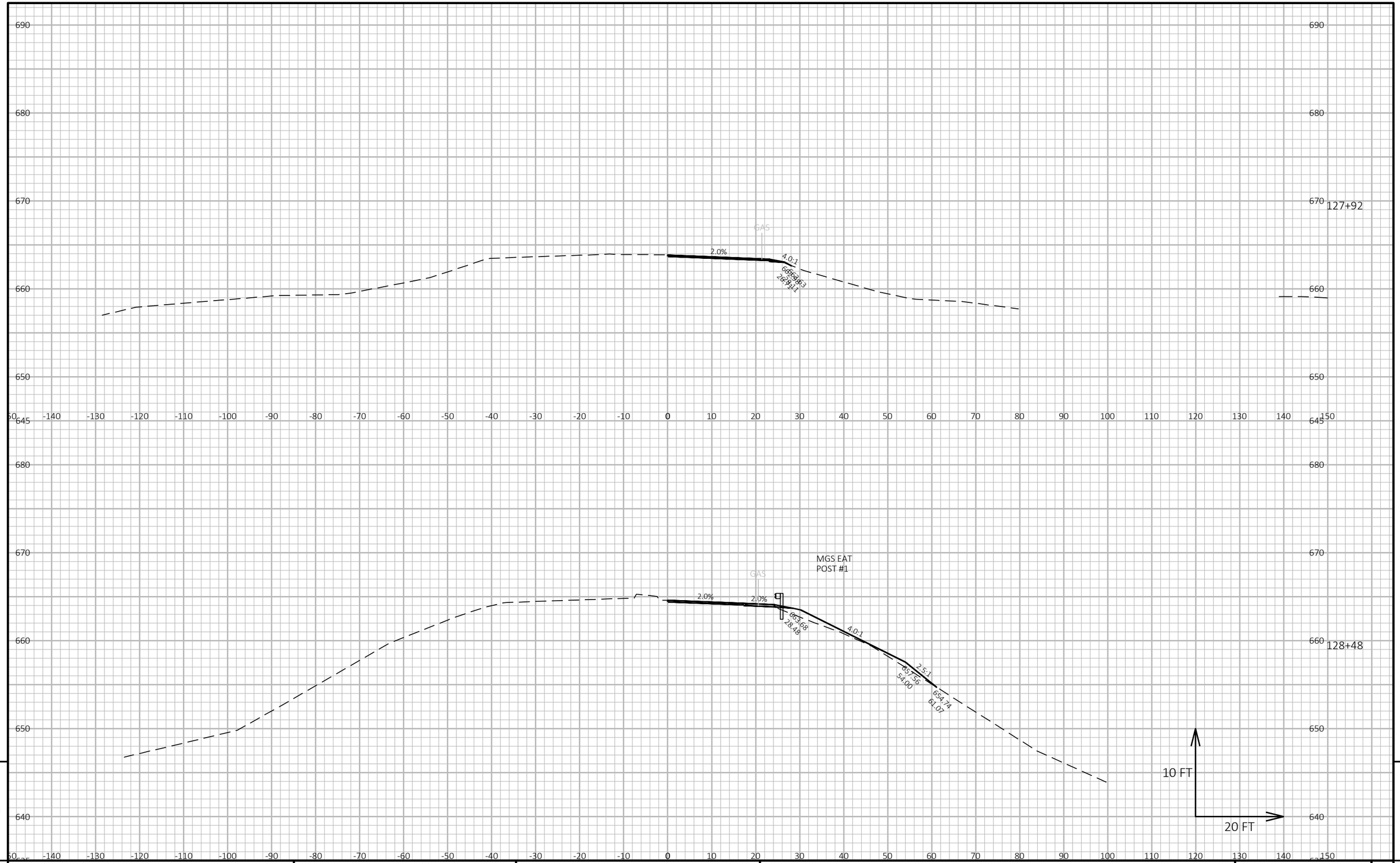
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: ALLEN RD	SHEET 290	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Allen Rd-06

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH S	SHEET 291	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH S-01

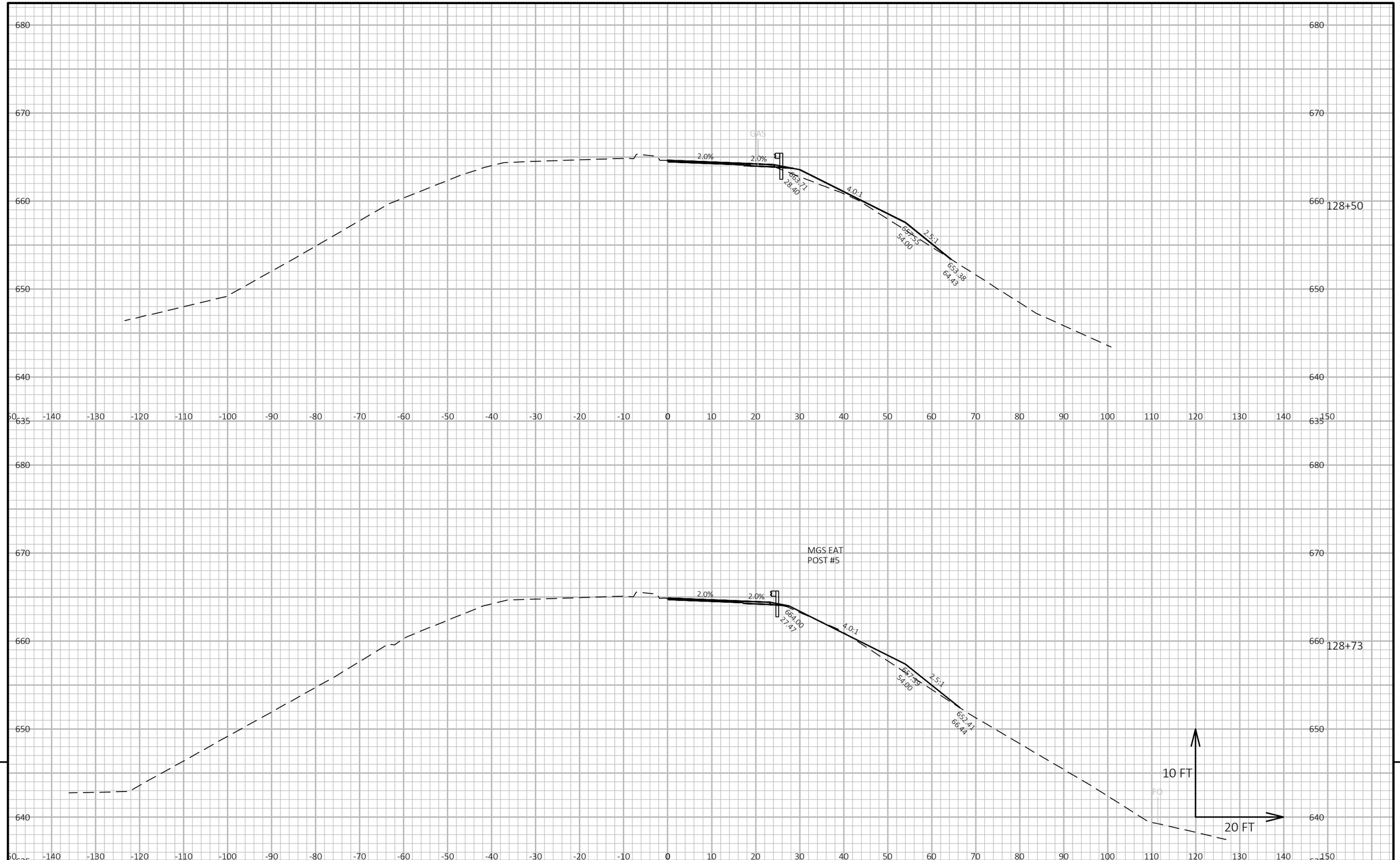
PLOT DATE : 1/21/2022 4:04 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH S	SHEET 292	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH S-02

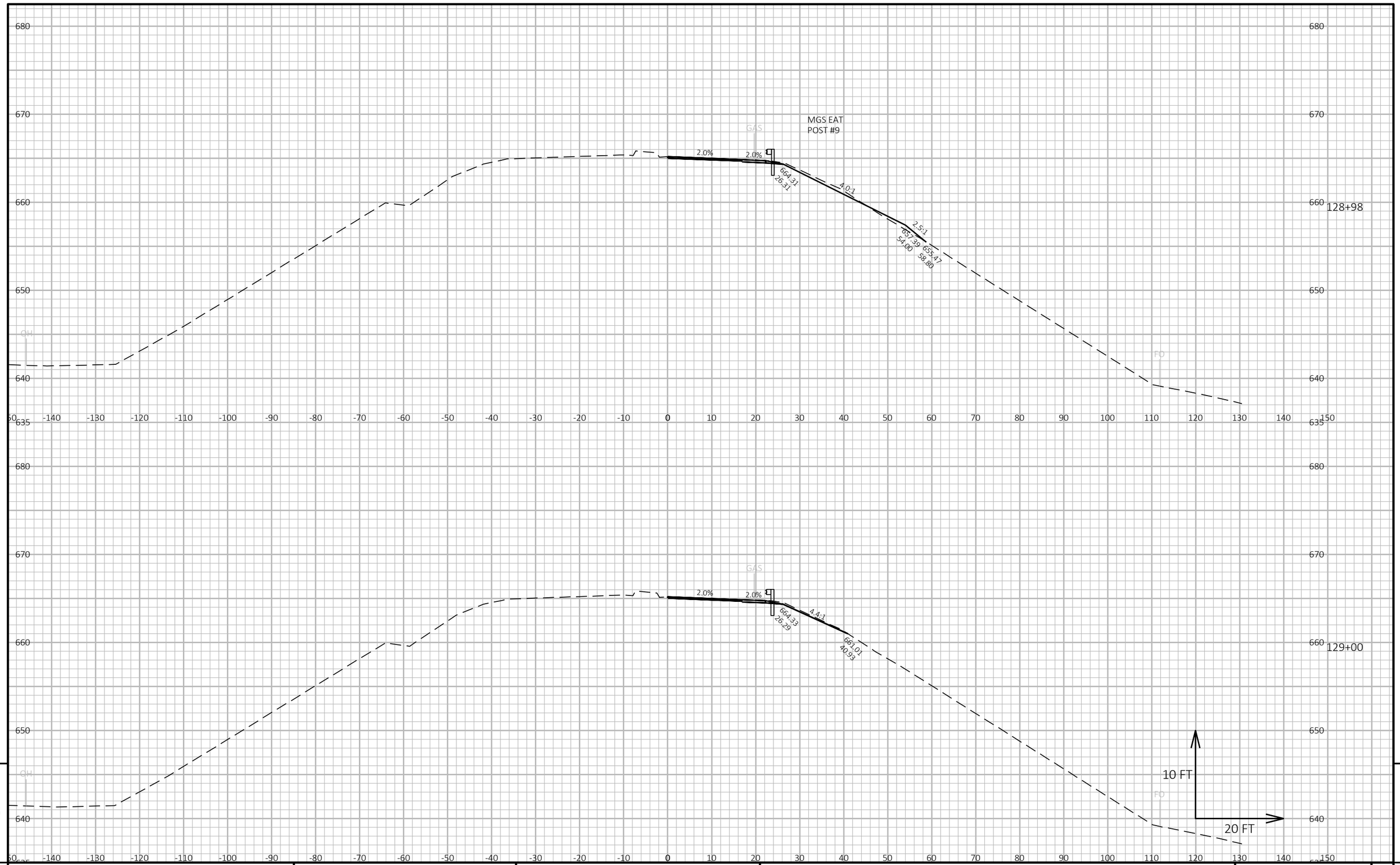
PLOT DATE : 1/21/2022 4:04 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



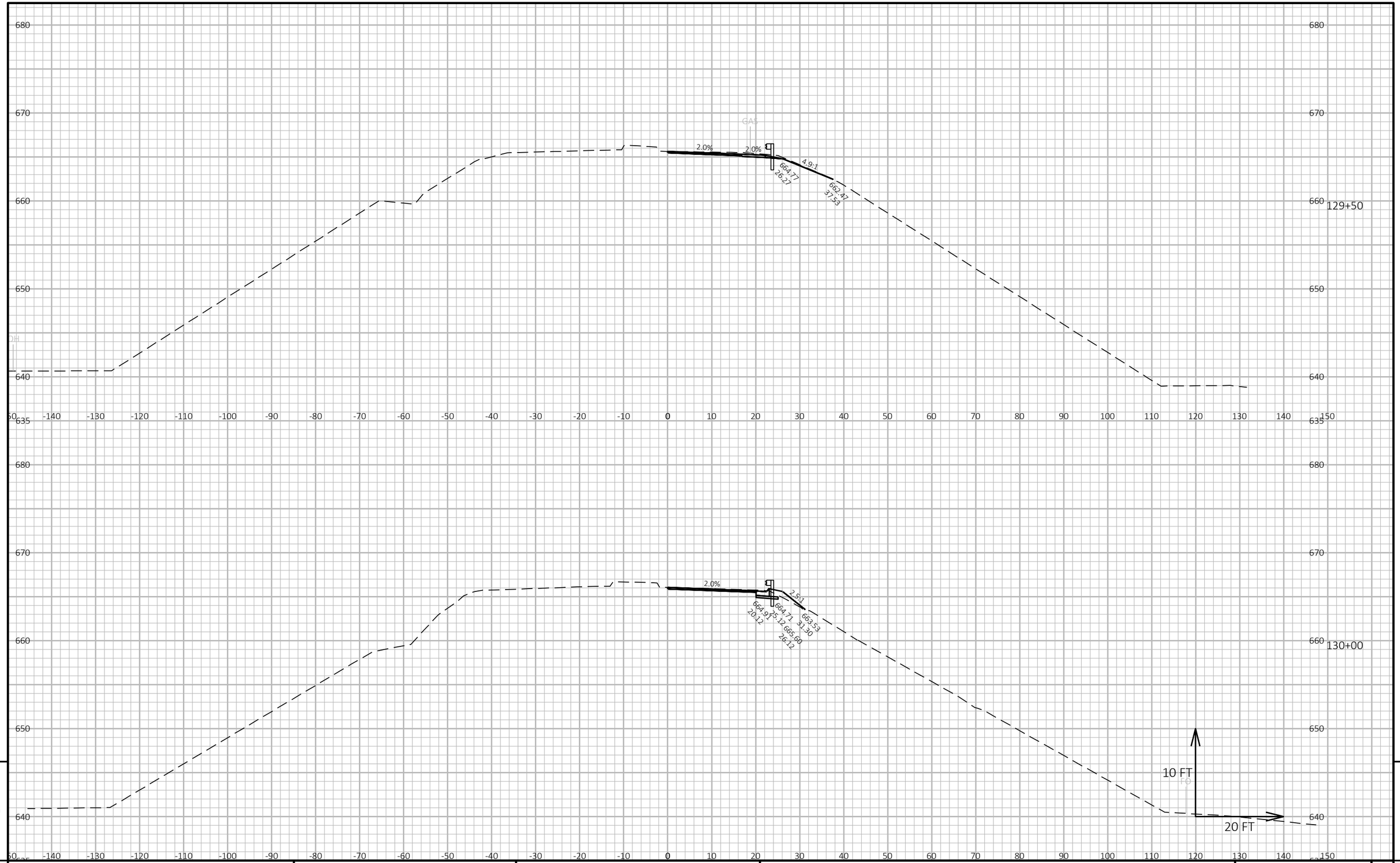
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH S	SHEET 293	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH S-03

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

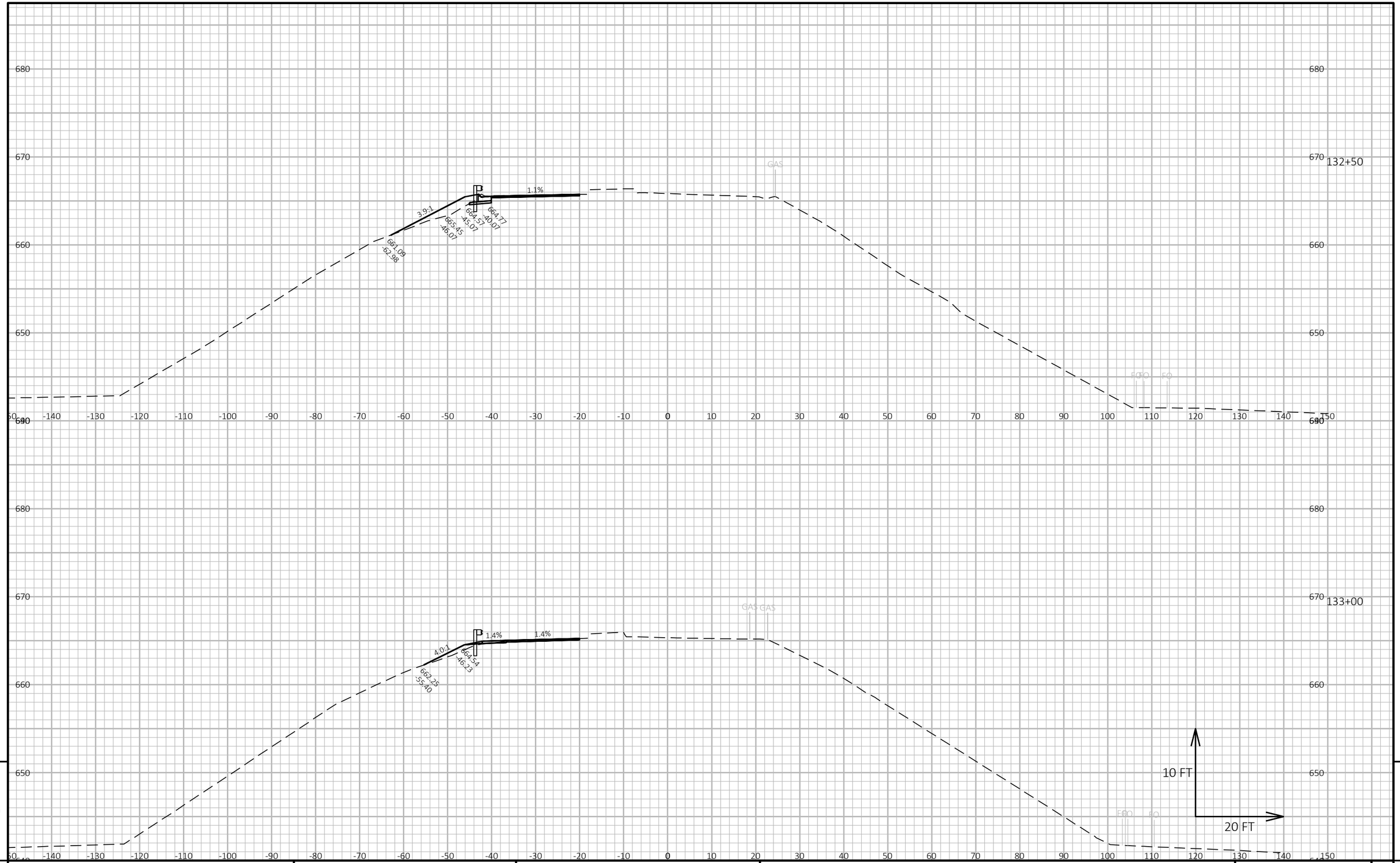
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH S	SHEET 294	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH S-04

PLOT DATE : 1/21/2022 4:04 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH S	SHEET 295	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH S-05

PLOT DATE : 1/21/2022 4:05 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

MGS EAT
POST #9

1.7%

1.7%

4:1

663.97
-46.26

657.16
-74.00

GAS

GAS

133+48

680
670
660
650
640

-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

680
670
660
650
640

GAS

GAS

133+50

4:1

663.94
-46.38

657.10
-74.00

10 FT

20 FT

9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH S	SHEET 296	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH S-06

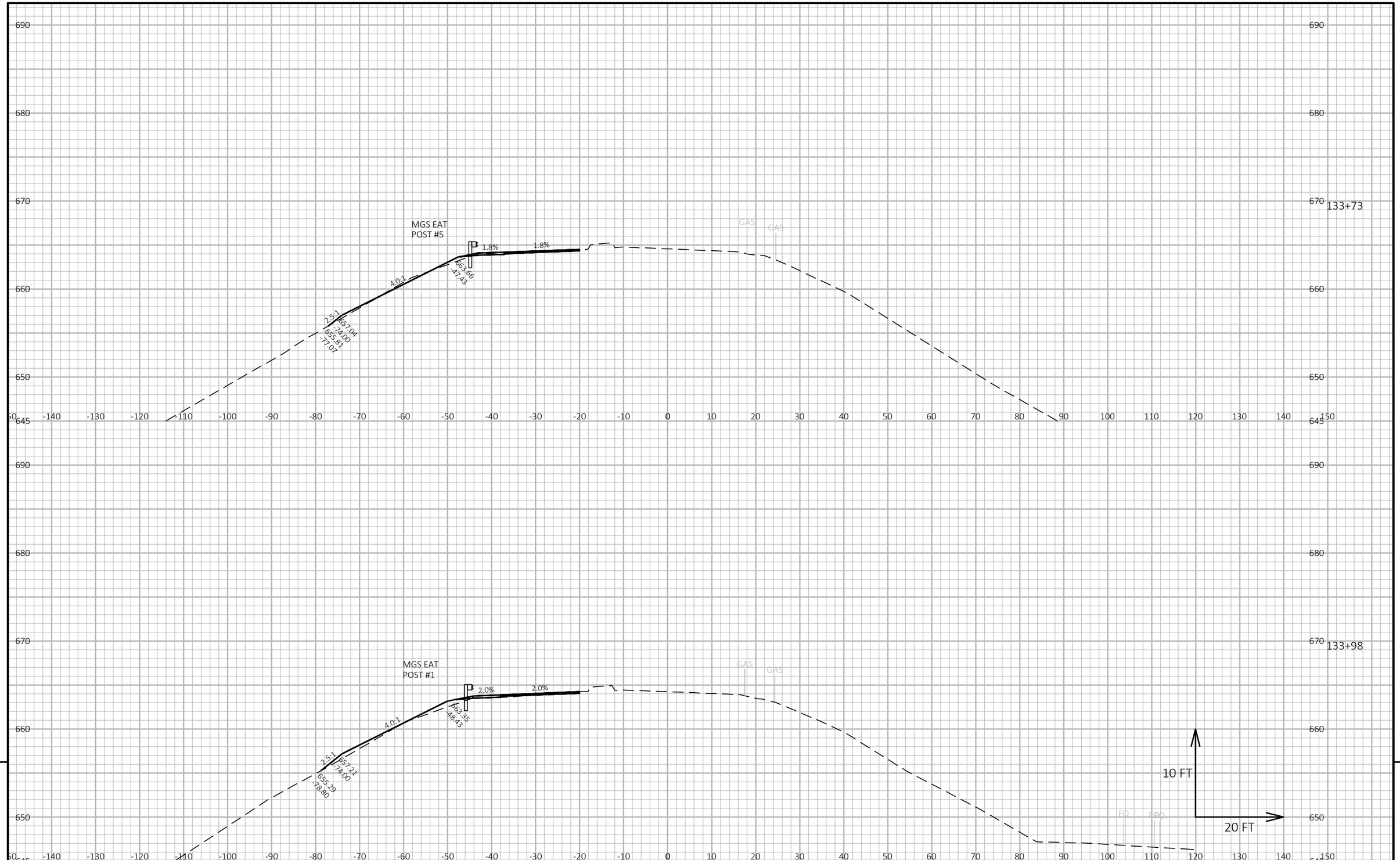
PLOT DATE : 1/21/2022 4:05 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH S	SHEET 297	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH S-07

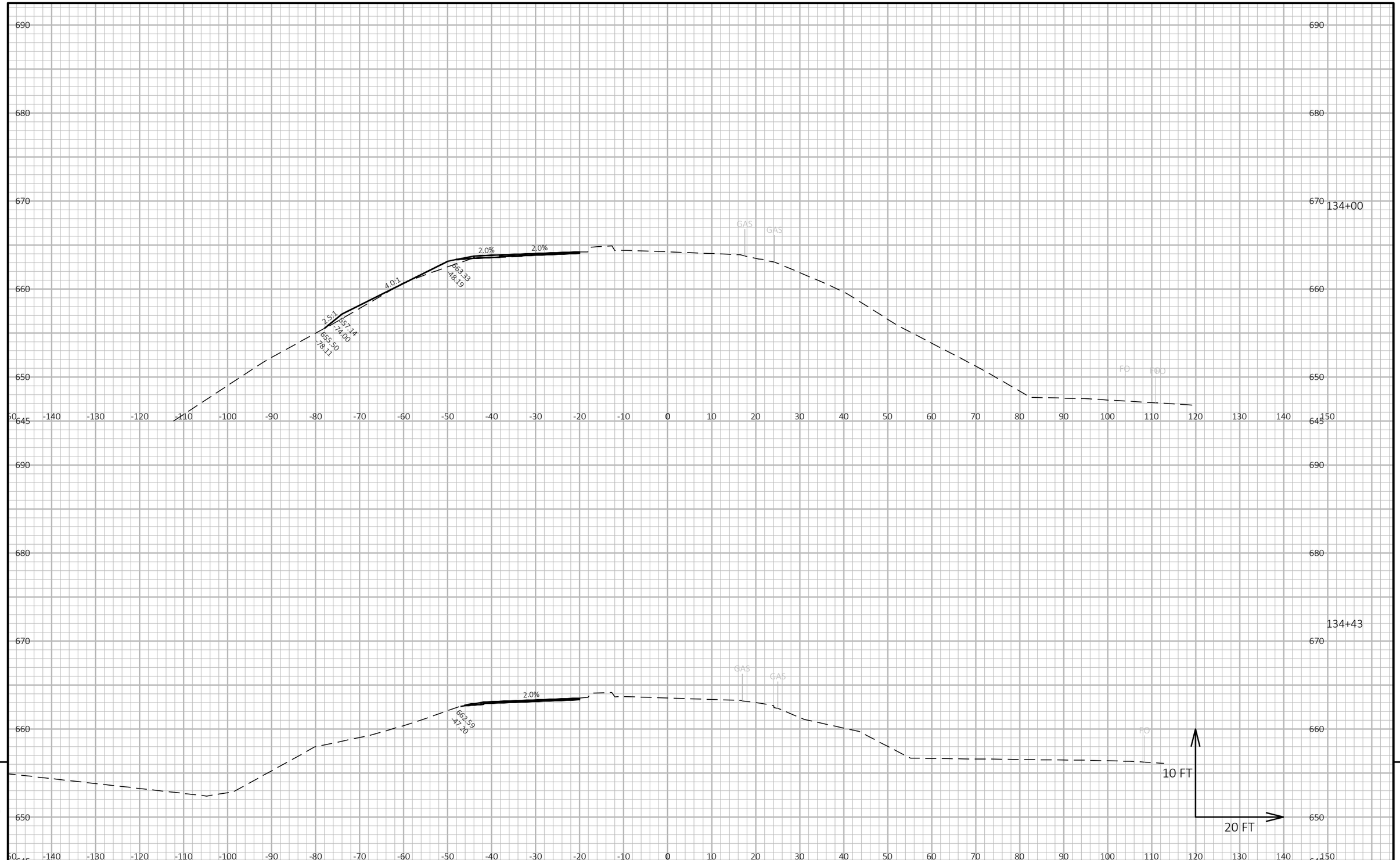
PLOT DATE : 1/21/2022 4:05 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH S	SHEET 298	E

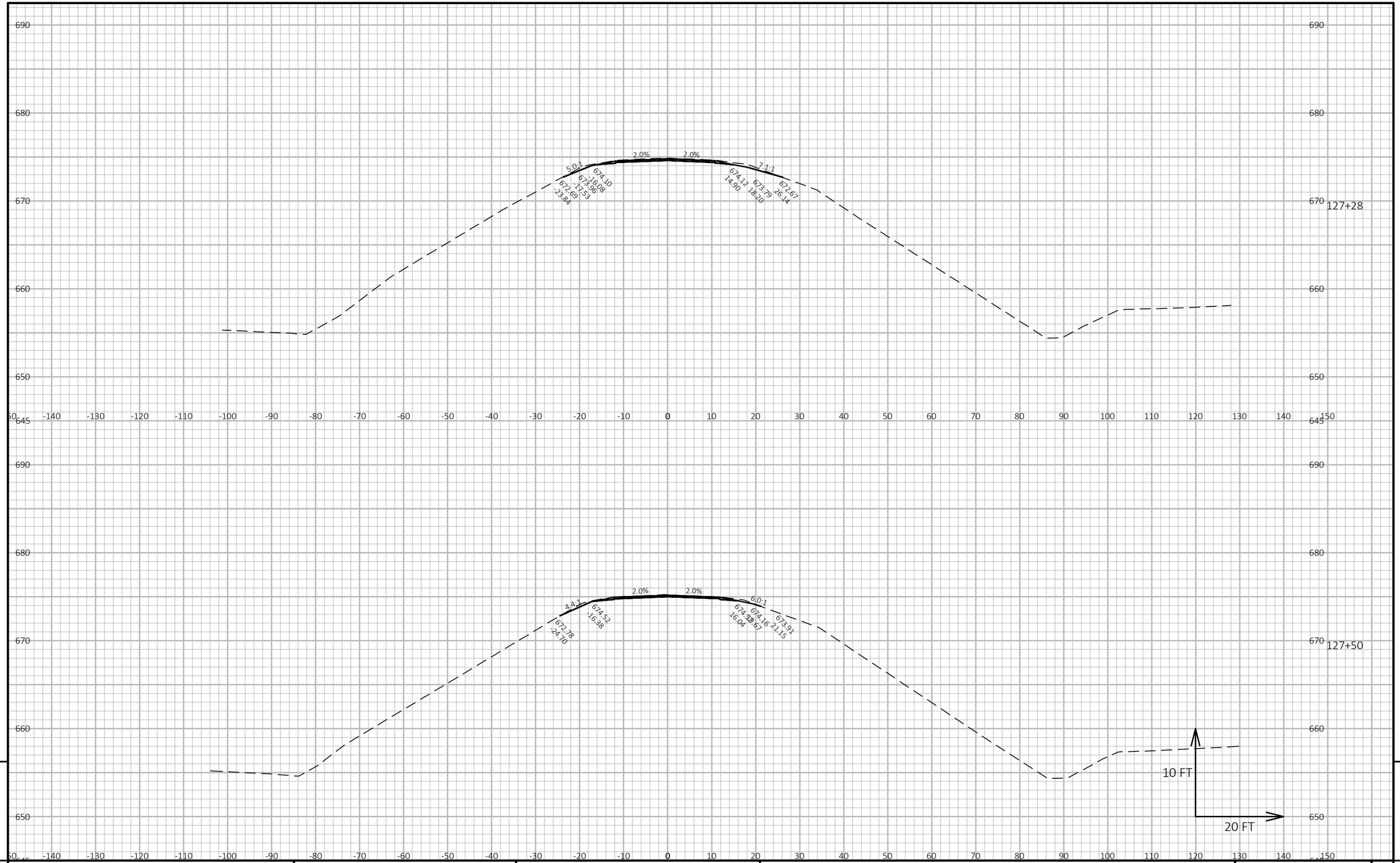
FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH S-08

PLOT DATE : 1/21/2022 4:05 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

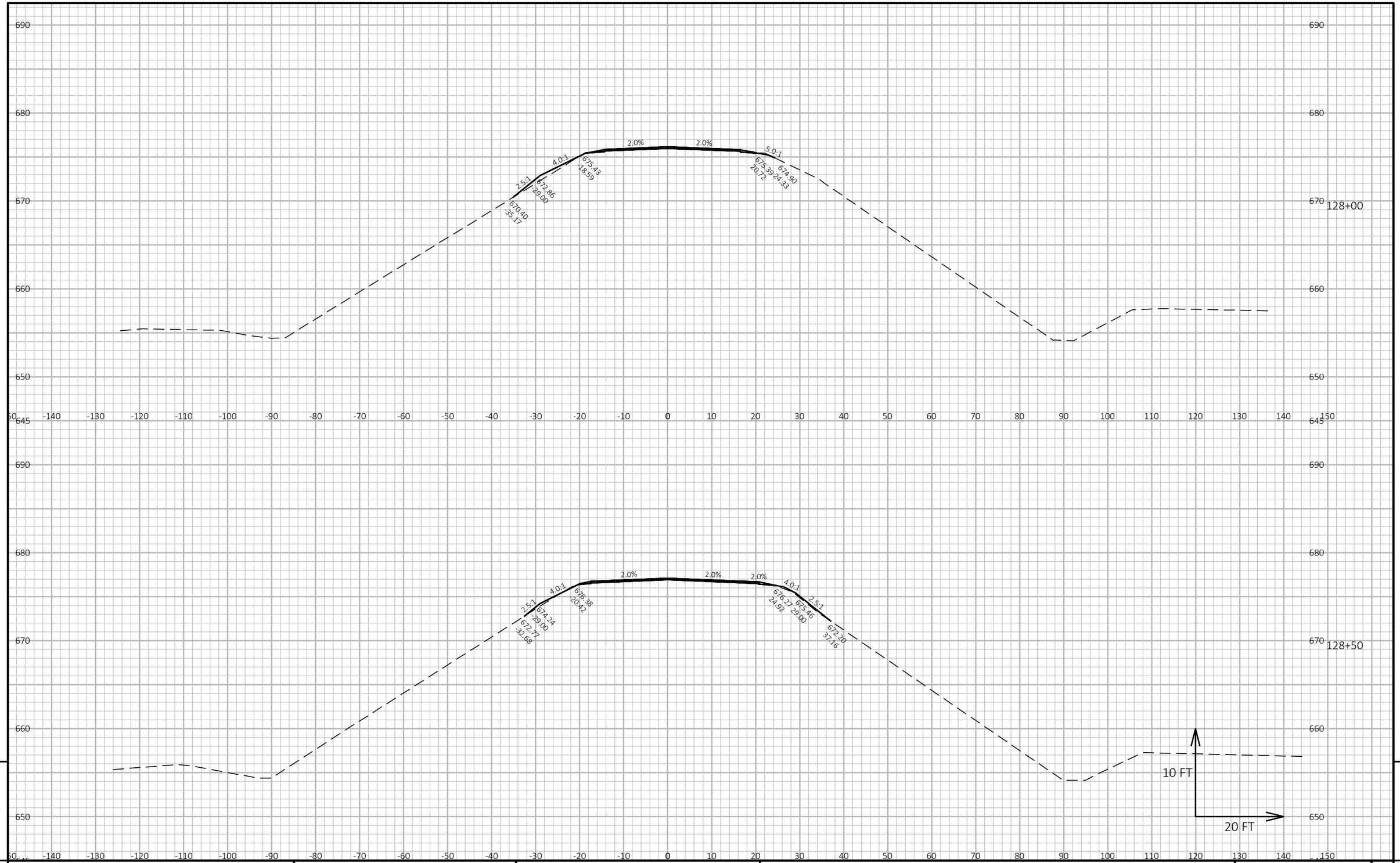
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: GEANO BEACH RD	SHEET 299	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Geano Beach Rd-01

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

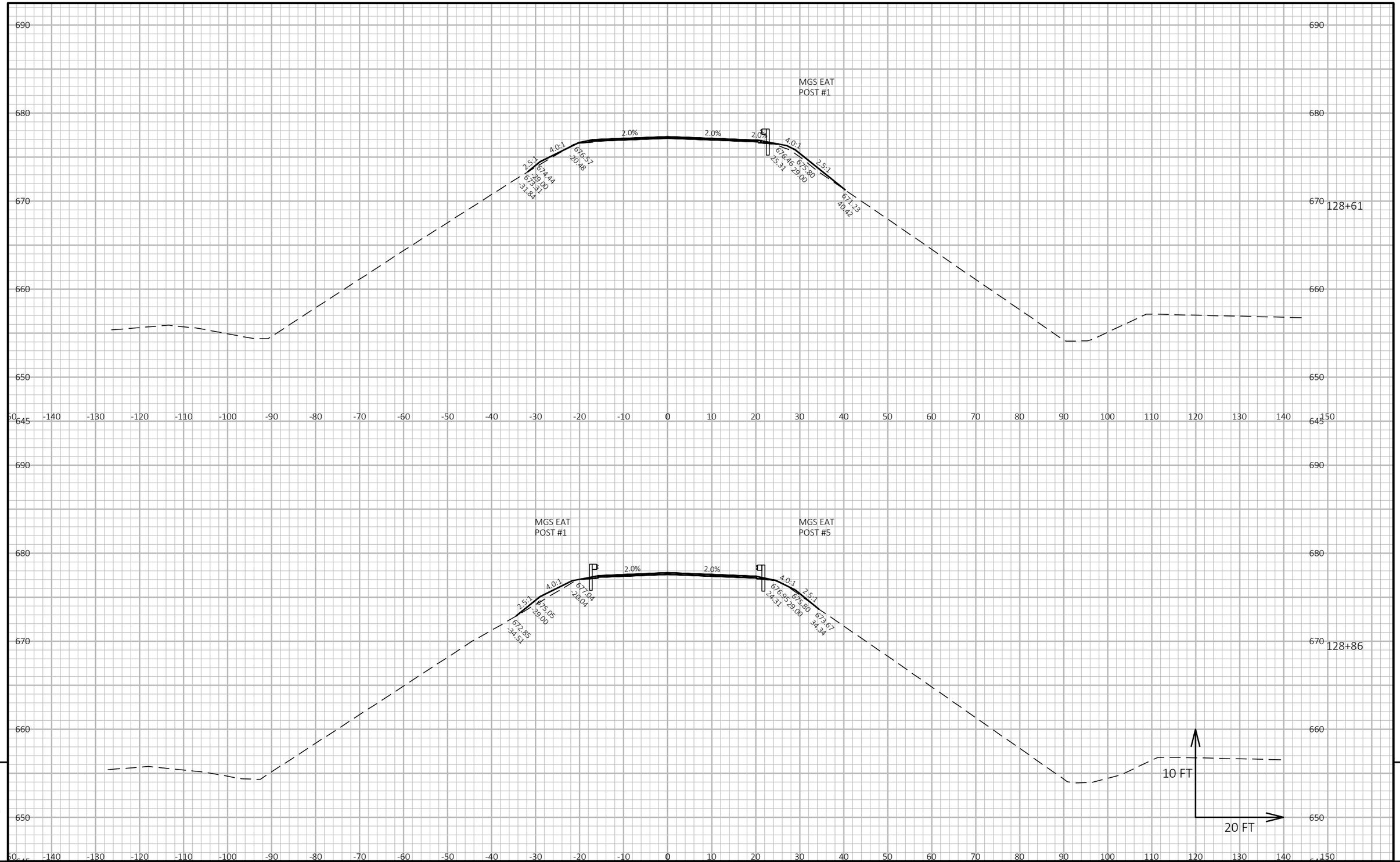
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: GEANO BEACH RD	SHEET 300	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Geano Beach Rd-02

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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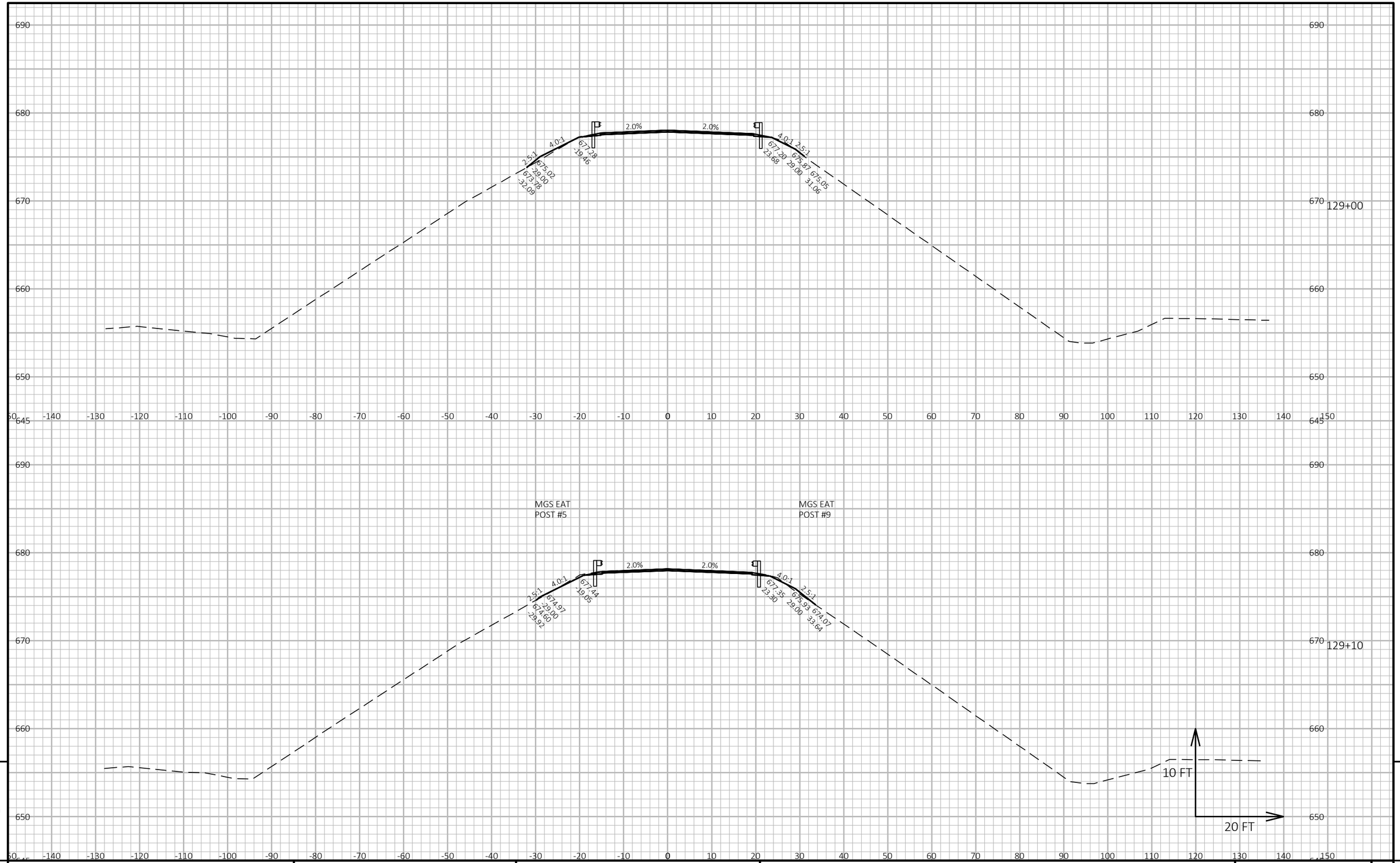
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: GEANO BEACH RD	SHEET 301	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Geano Beach Rd-03

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



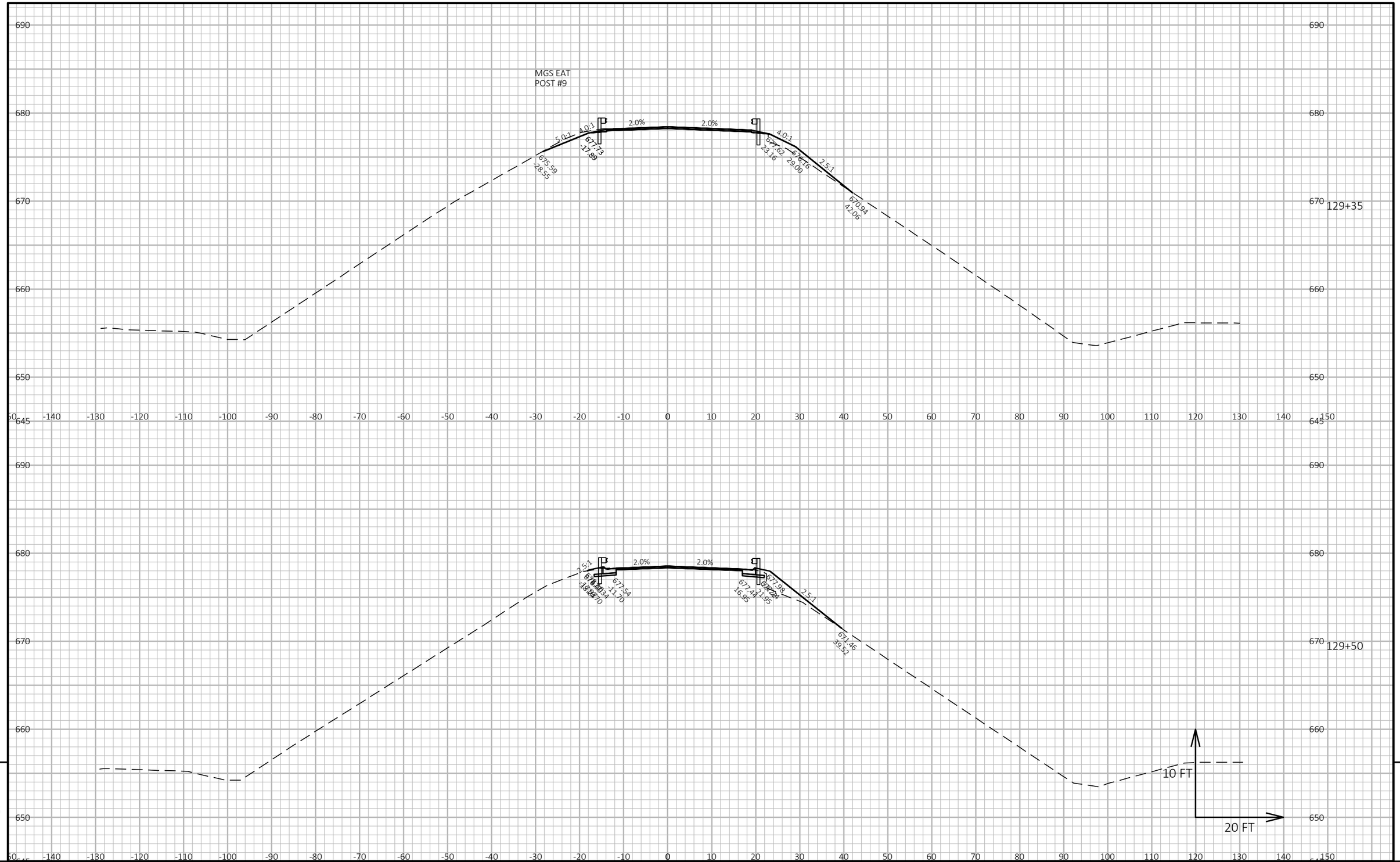
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: GEANO BEACH RD	SHEET 302	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Geano Beach Rd-04

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

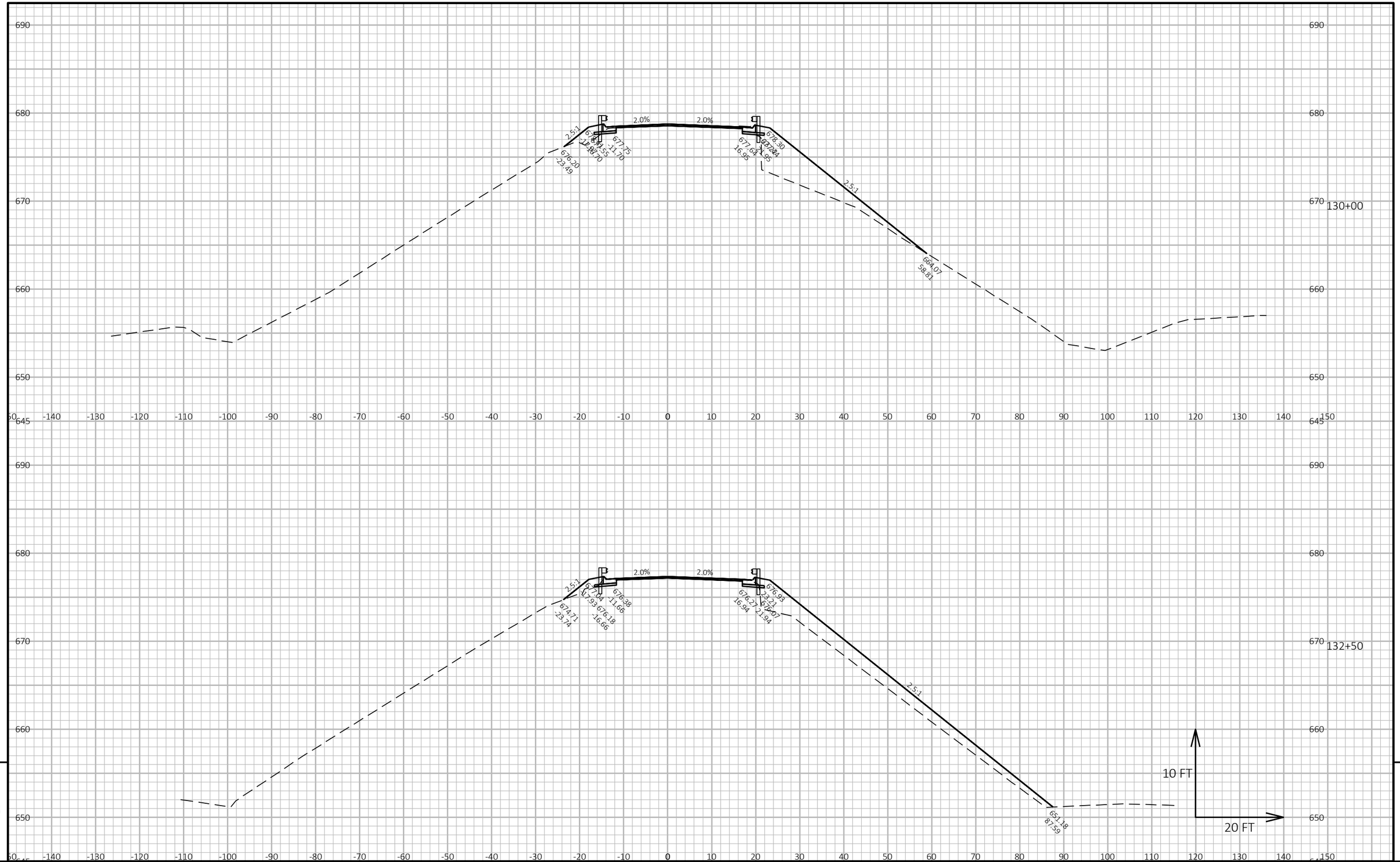
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: GEANO BEACH RD	SHEET 303	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Geano Beach Rd-05

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: GEANO BEACH RD	SHEET 304	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Geano Beach Rd-06

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

MGS EAT
POST #9

2.0%
2.0%
2.0%
4.0:1
4.0:1
2.5:1
2.5:1
675.74
675.61
675.51
675.89
675.87
675.71
675.81
676.24
676.00
664.94
664.82
-11.66
-16.66
-17.93
-17.81
-18.79
-19.33
-21.94
-23.44
16.94
23.21
29.00
51.21
53.20
132+94
133+00
10 FT
20 FT
680
670
660
650
640
635
-140
-130
-120
-110
-100
-90
-80
-70
-60
-50
-40
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150

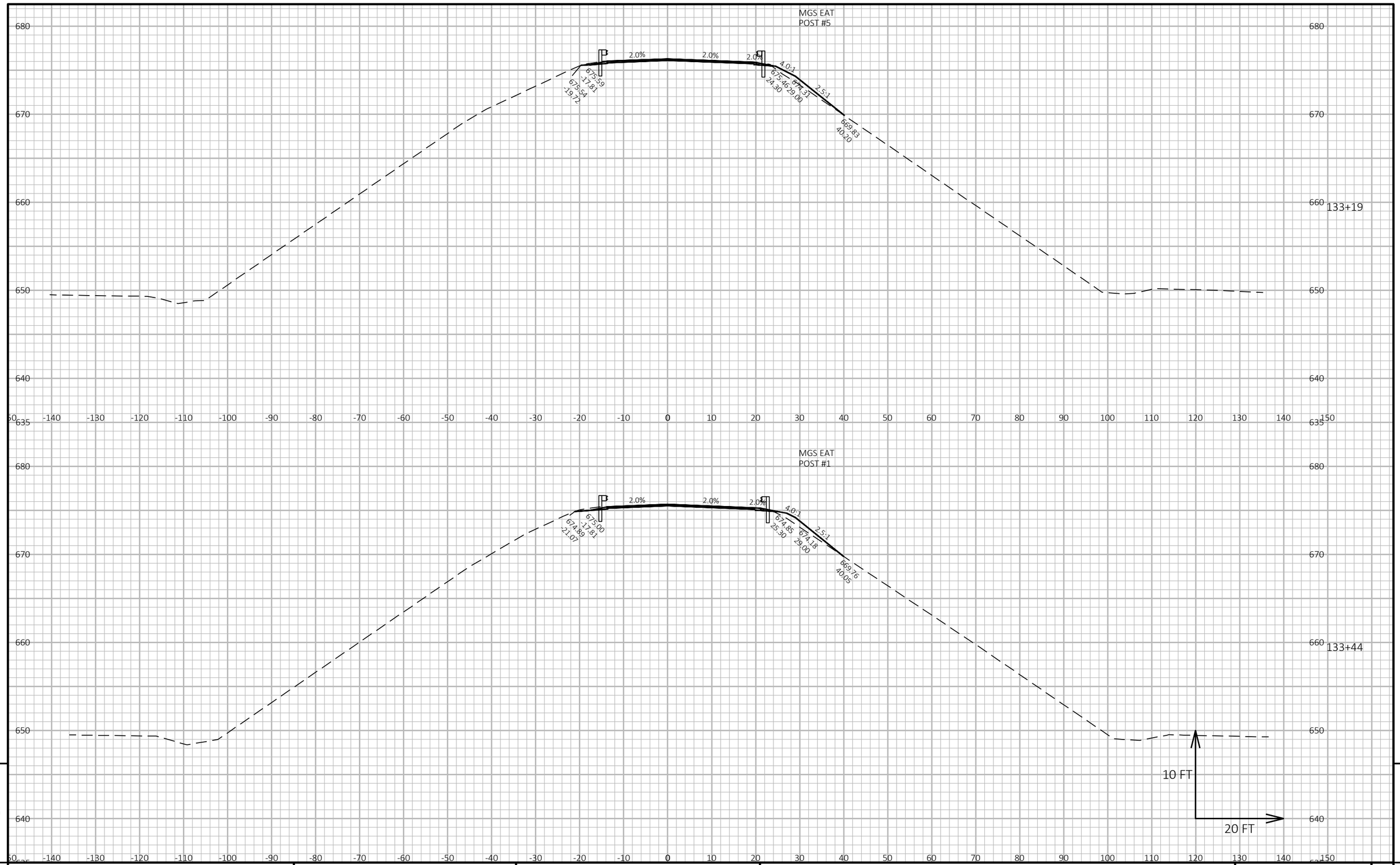
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: GEANO BEACH RD	SHEET 305	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Geano Beach Rd-07

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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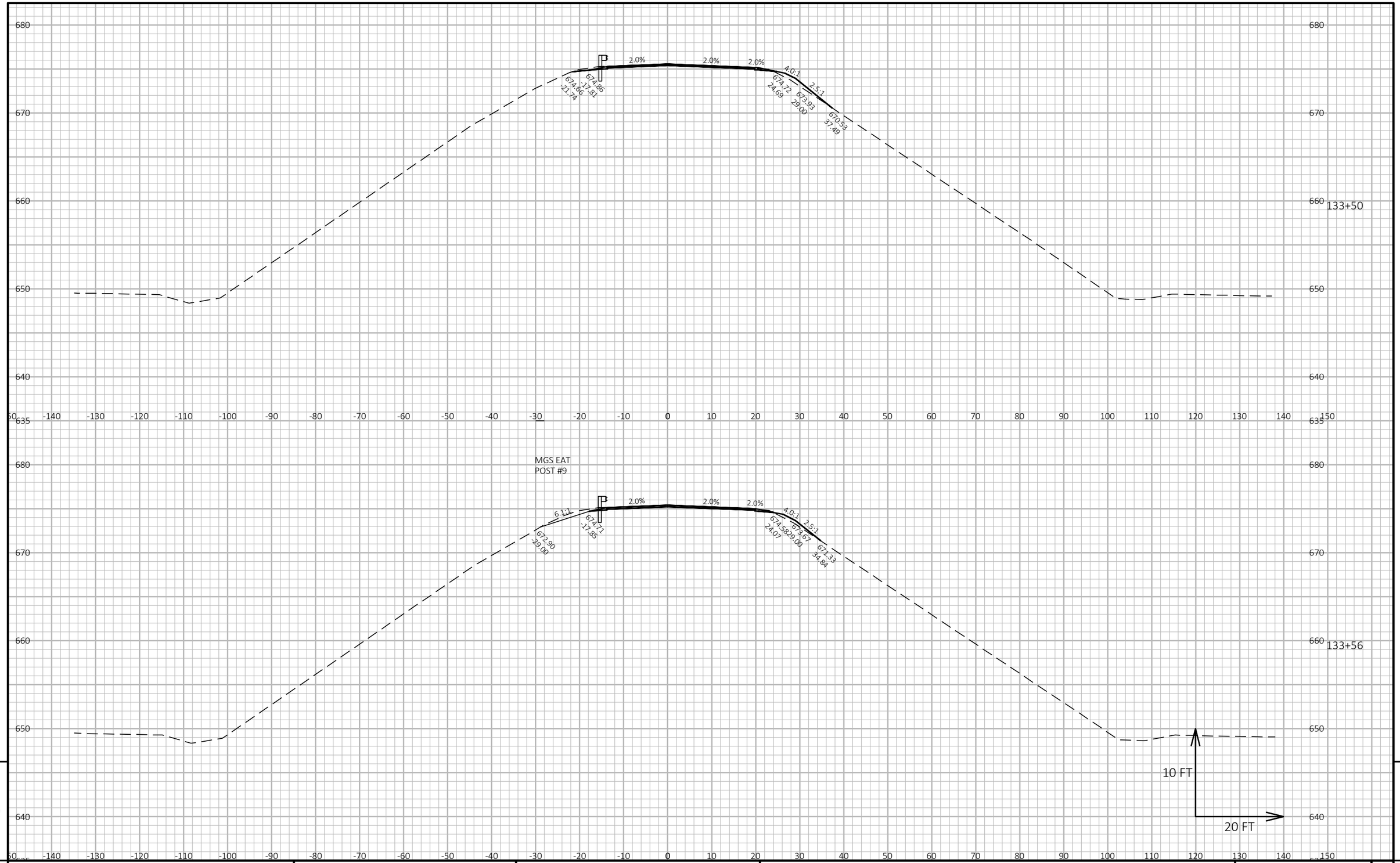
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: GEANO BEACH RD	SHEET 306	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Geano Beach Rd-08

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

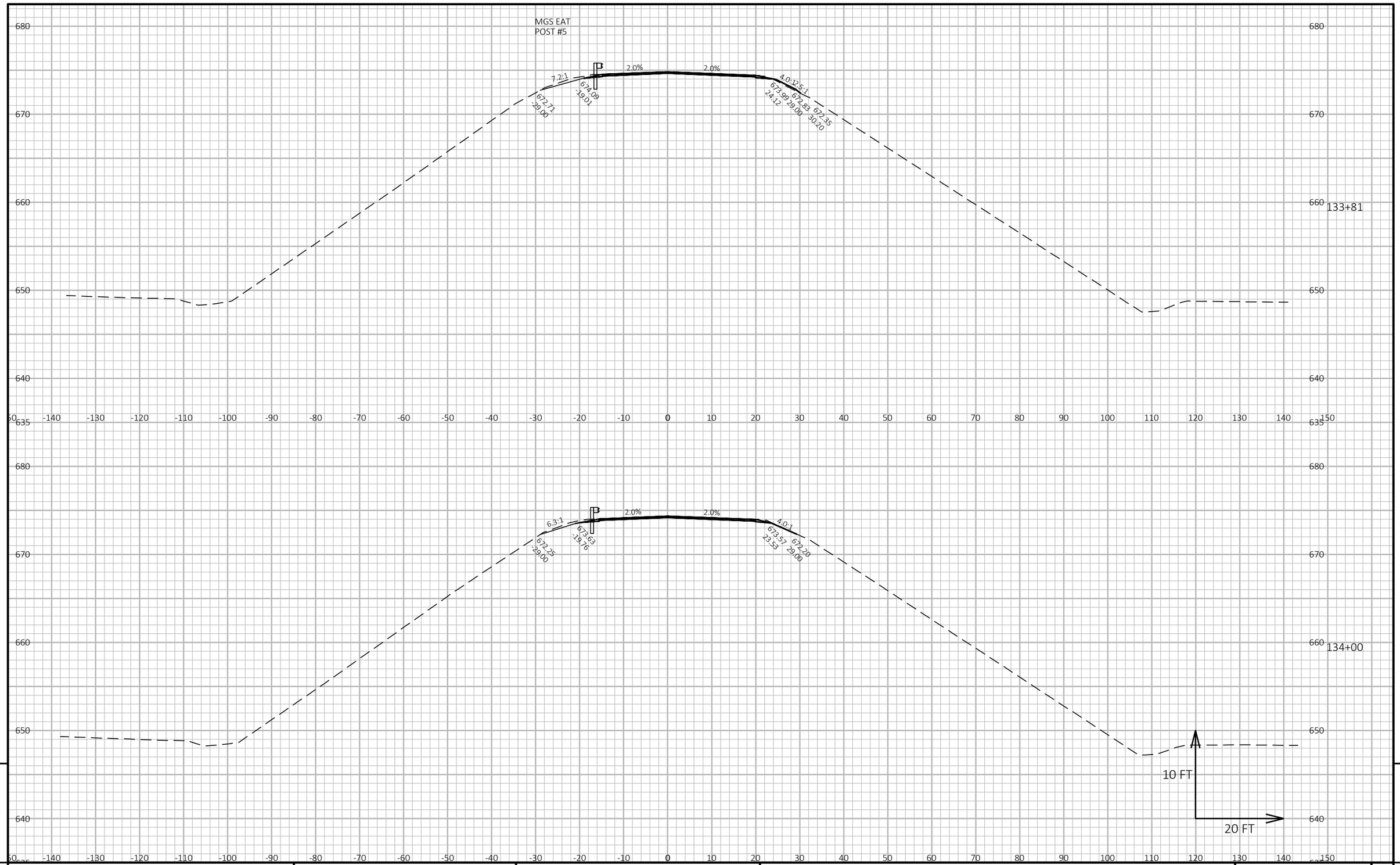
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: GEANO BEACH RD	SHEET 307	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Geano Beach Rd-09

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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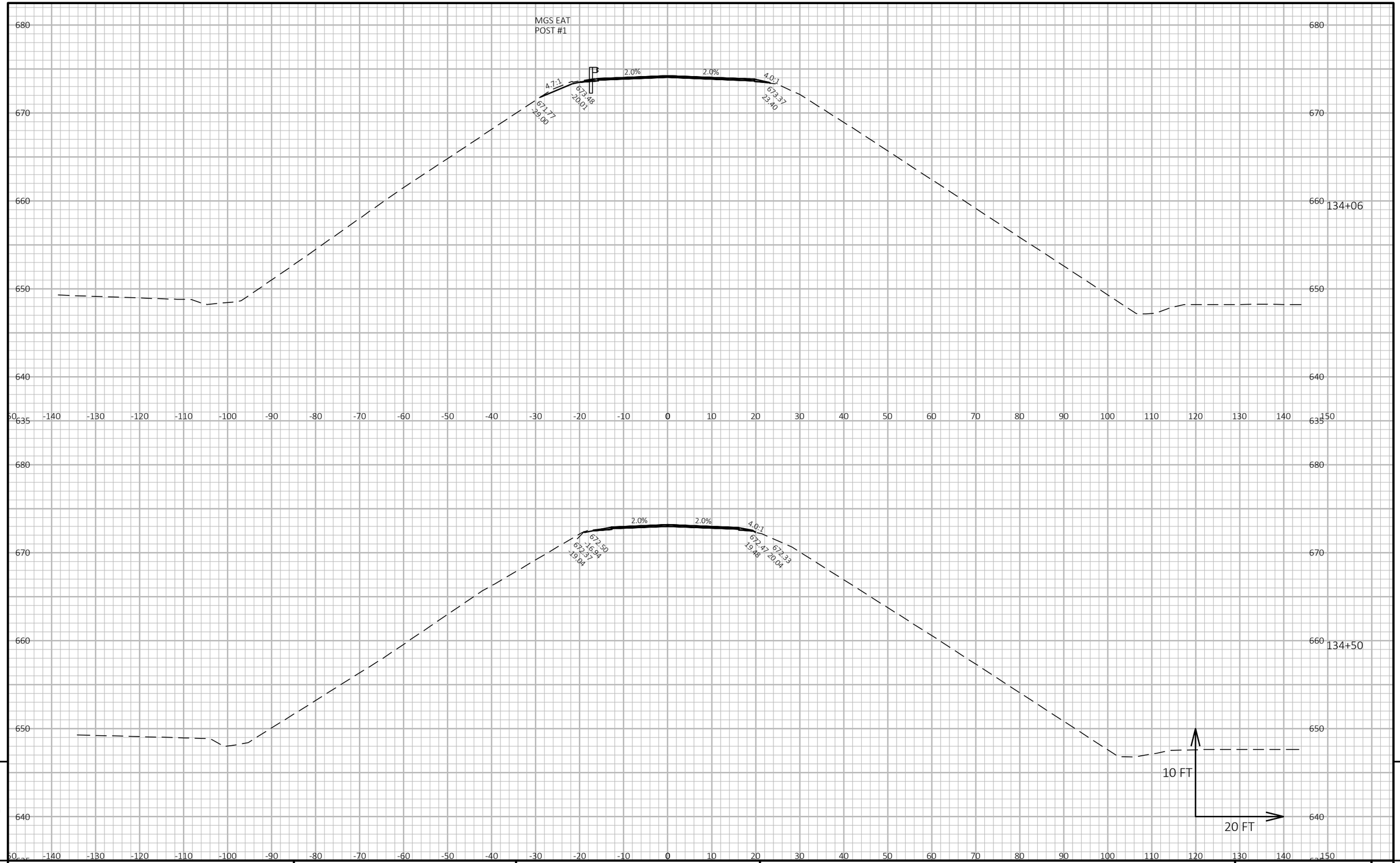
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: GEANO BEACH RD	SHEET 308	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Geano Beach Rd-10

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



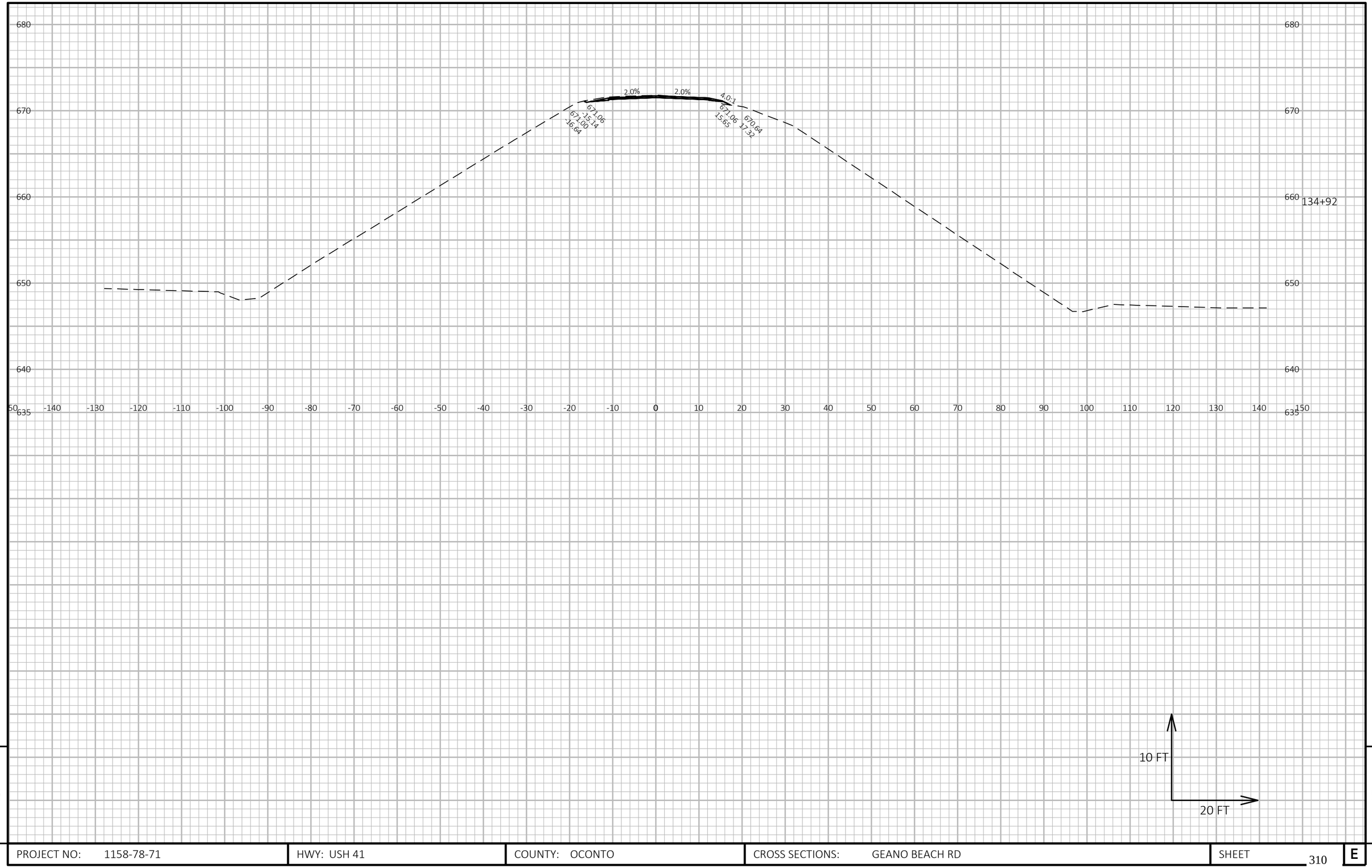
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: GEANO BEACH RD	SHEET 309	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Geano Beach Rd-11

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.



9

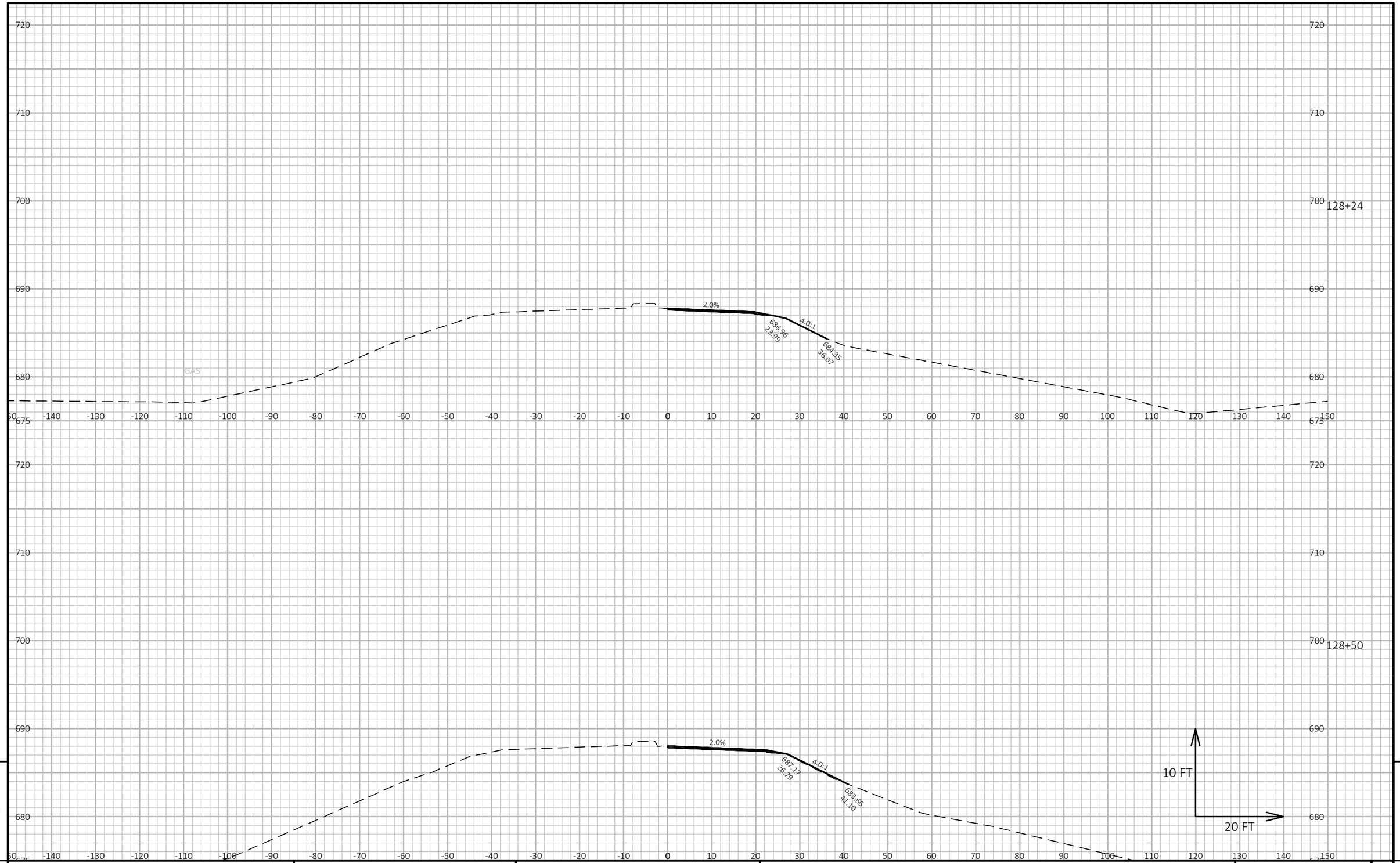
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: GEANO BEACH RD	SHEET 310	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Geano Beach Rd-12

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

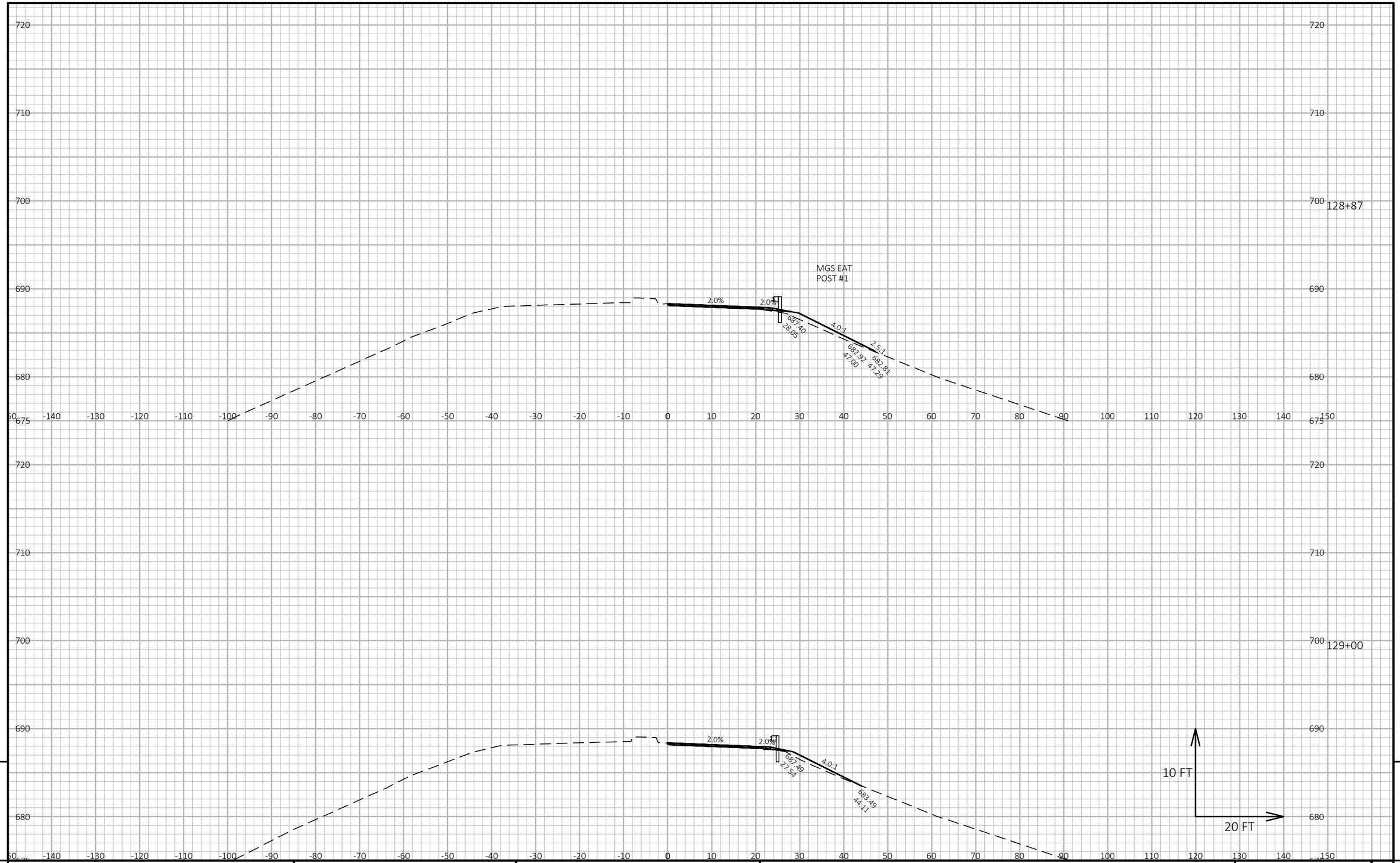
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH D	SHEET 311	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH D-01

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH D	SHEET 312	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH D-02

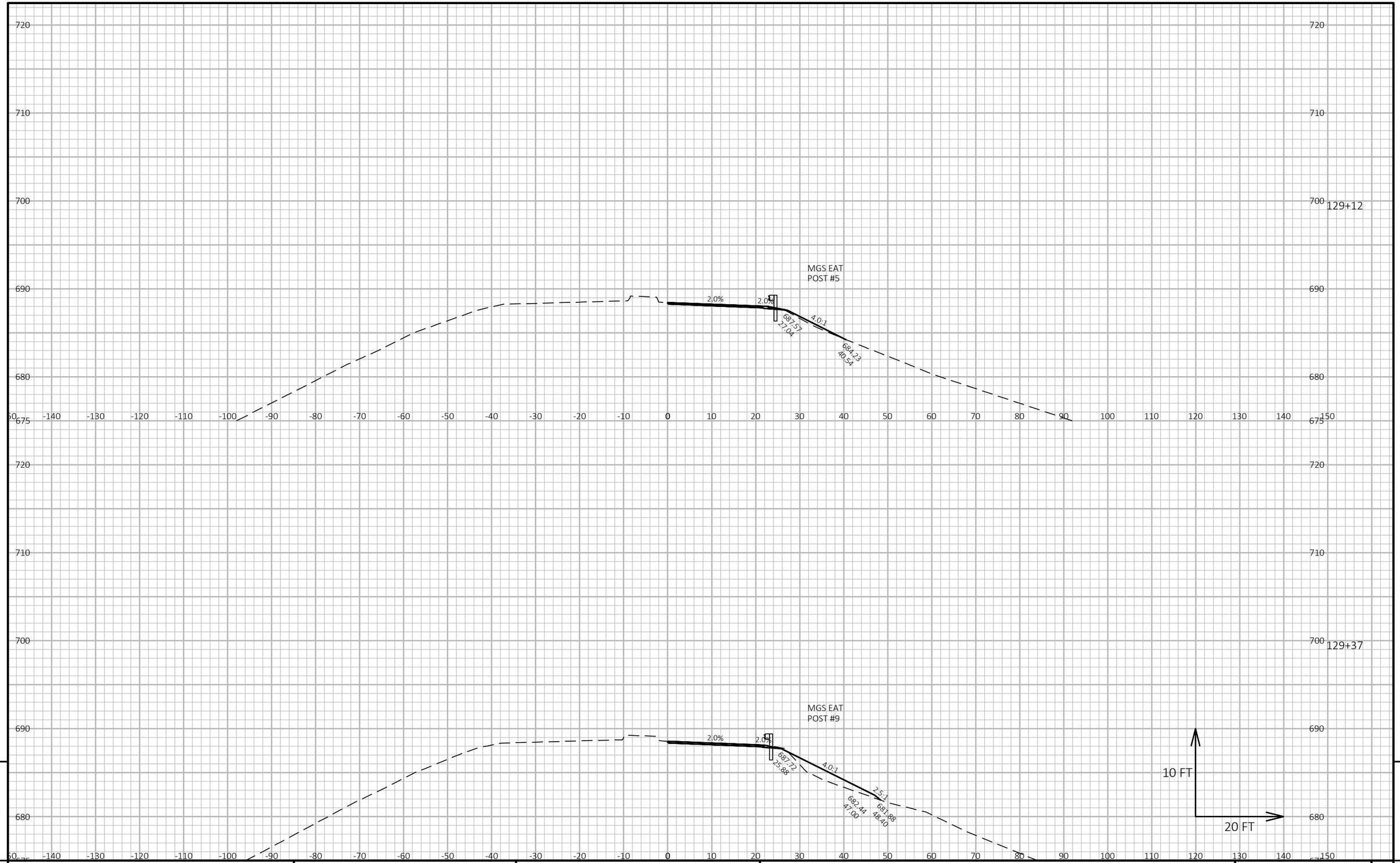
PLOT DATE : 1/21/2022 4:05 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



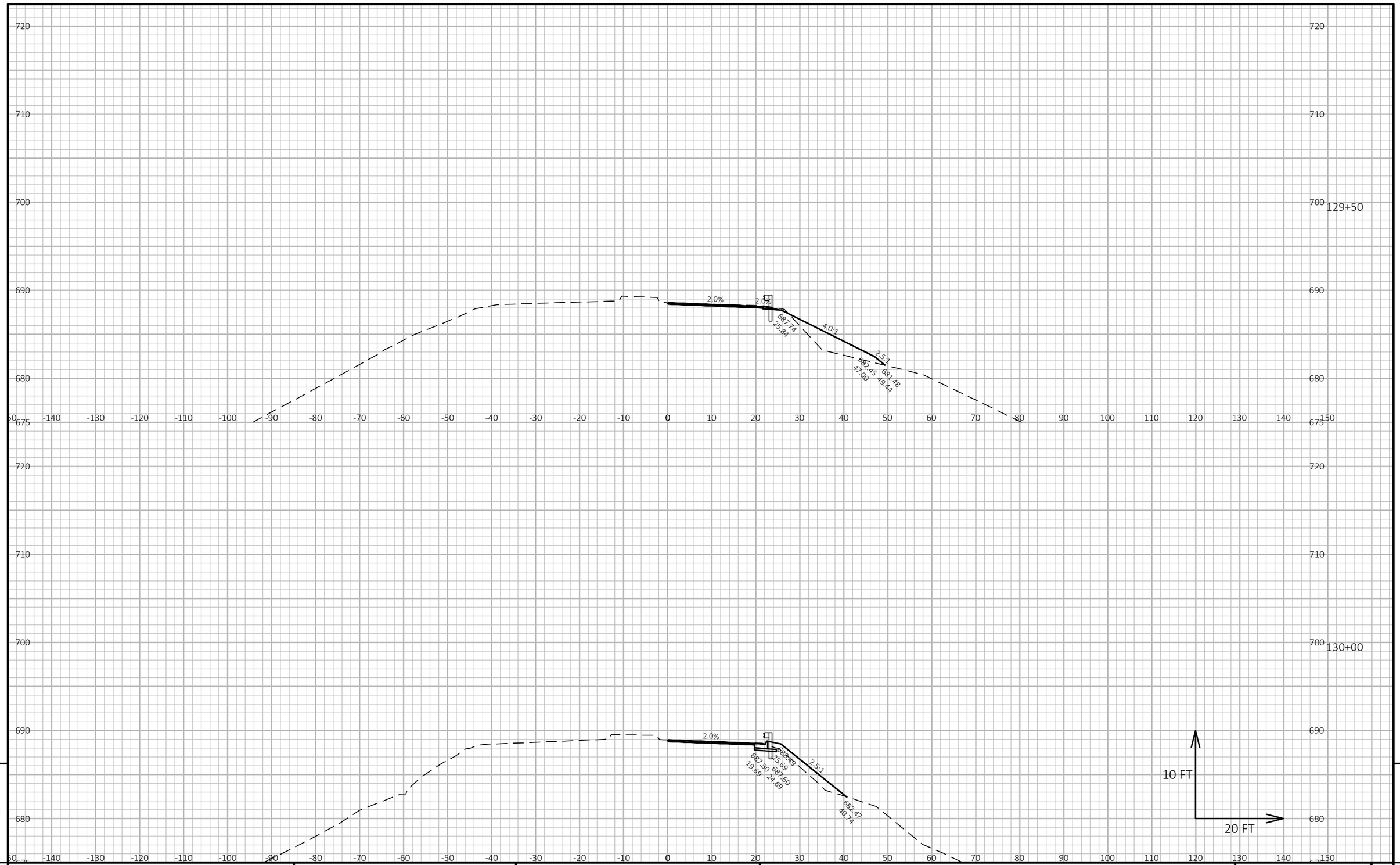
9 9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH D	SHEET 313	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH D-03

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH D	SHEET 314	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH D-04

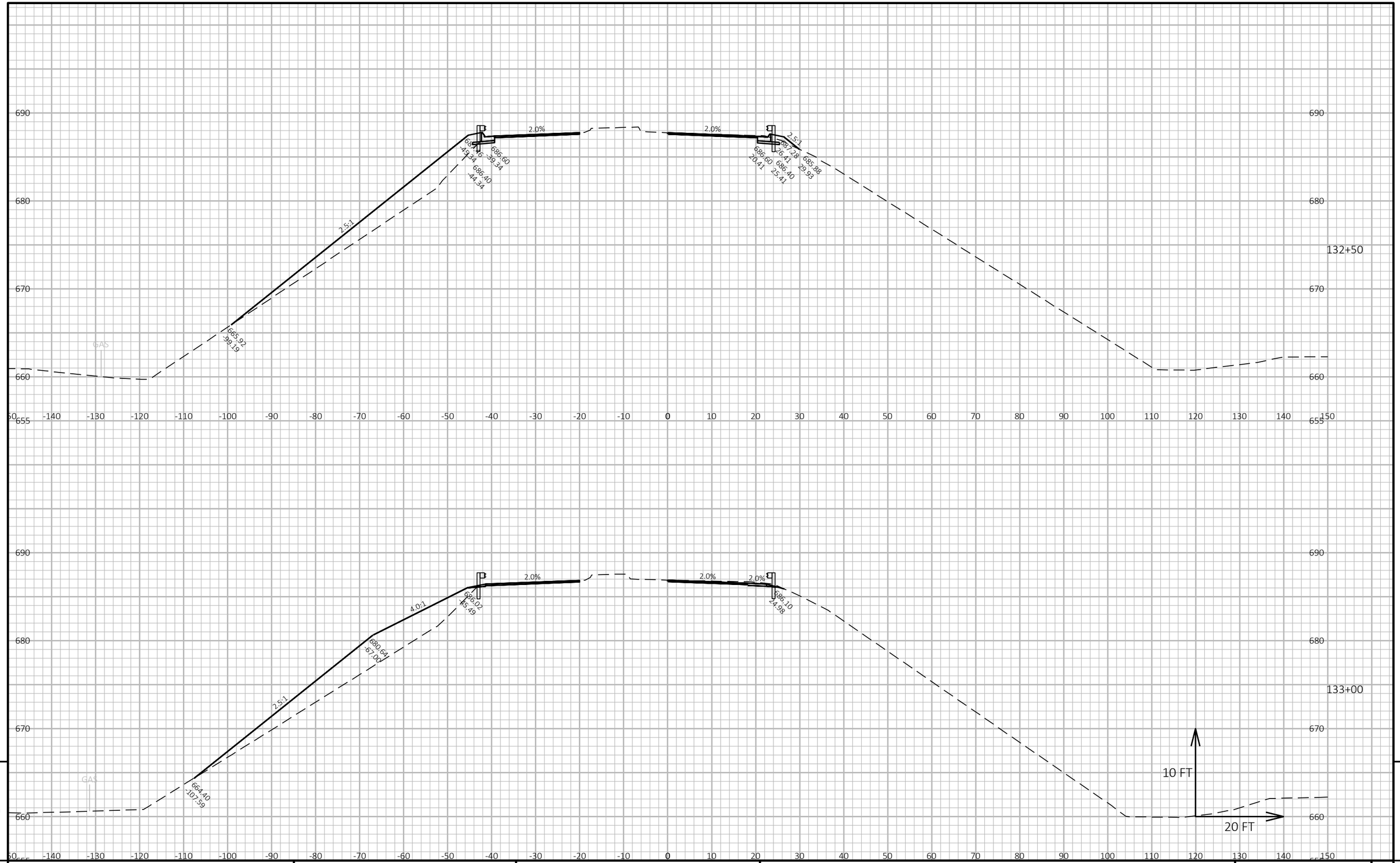
PLOT DATE : 1/21/2022 4:05 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

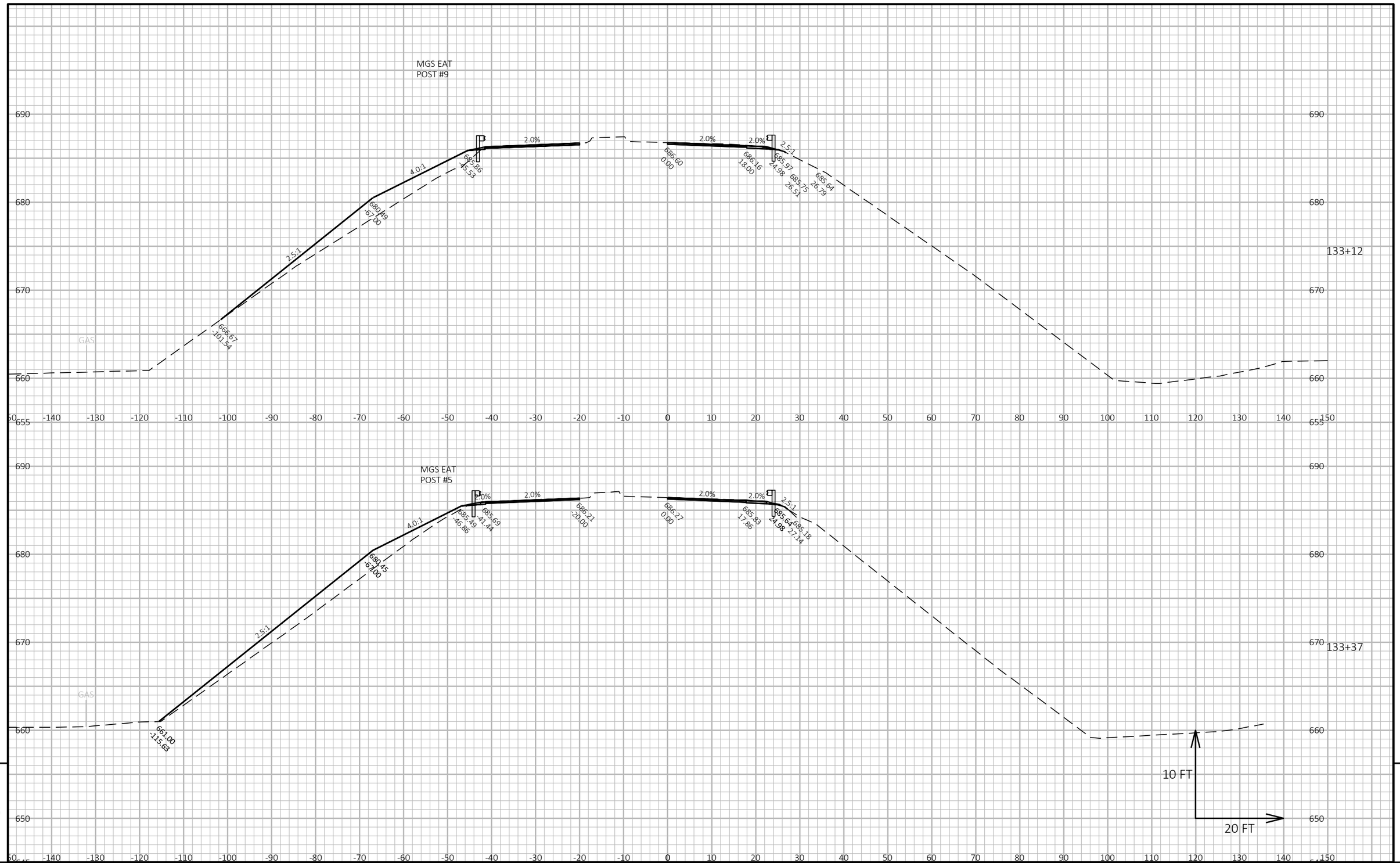


PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH D	SHEET 315	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH D-05

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH D	SHEET 316	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH D-06

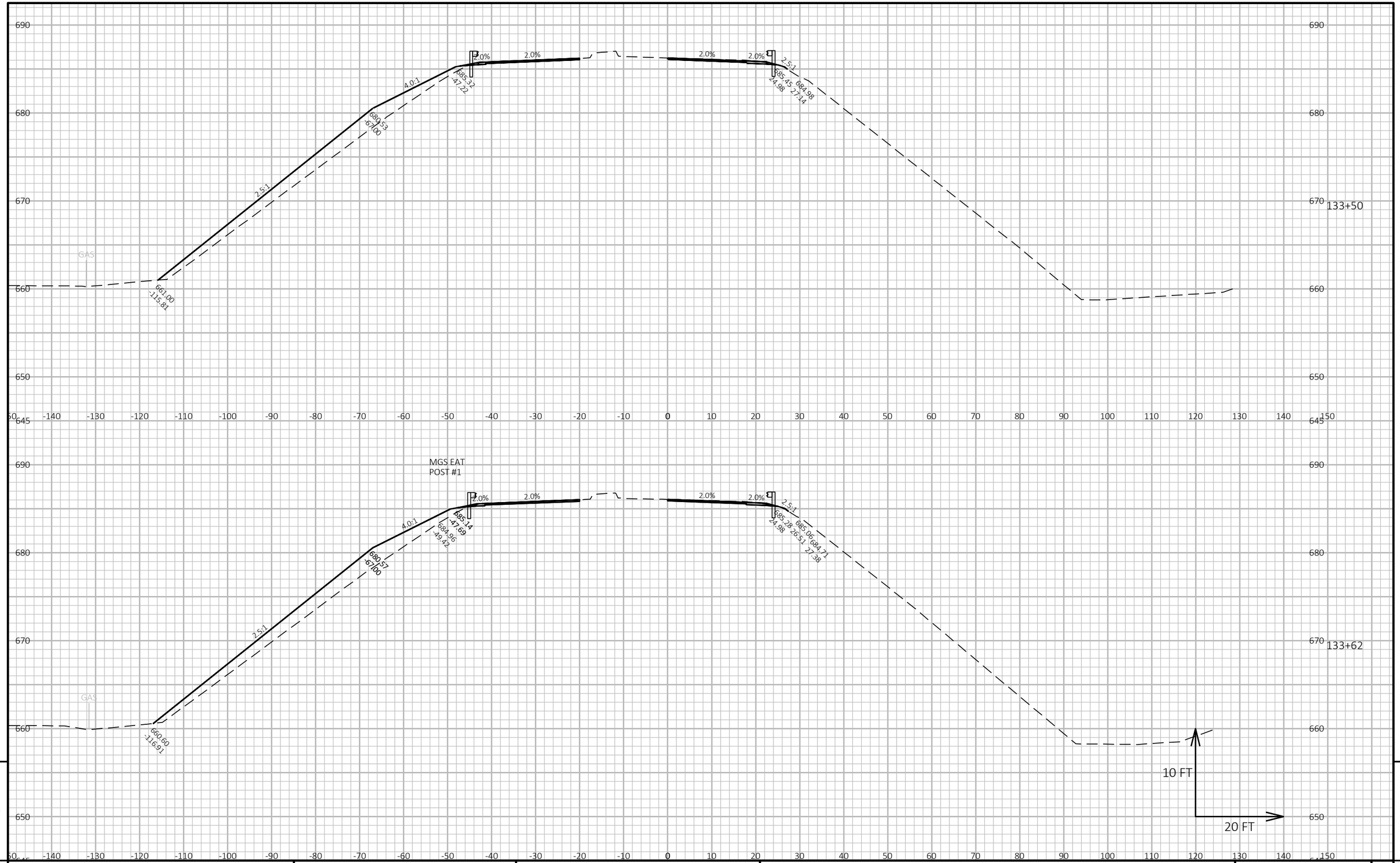
PLOT DATE : 1/21/2022 4:05 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH D	SHEET 317	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH D-07

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

720
710
700
690
680
675
720

134+50

2.0%
2.0%
8.0:1
683.60
23.08
683.42
25.10
683.25
16.44

134+75

1.6%
683.68
0.00
683.31
18.30
682.95
27.77

10 FT
20 FT

GAS

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

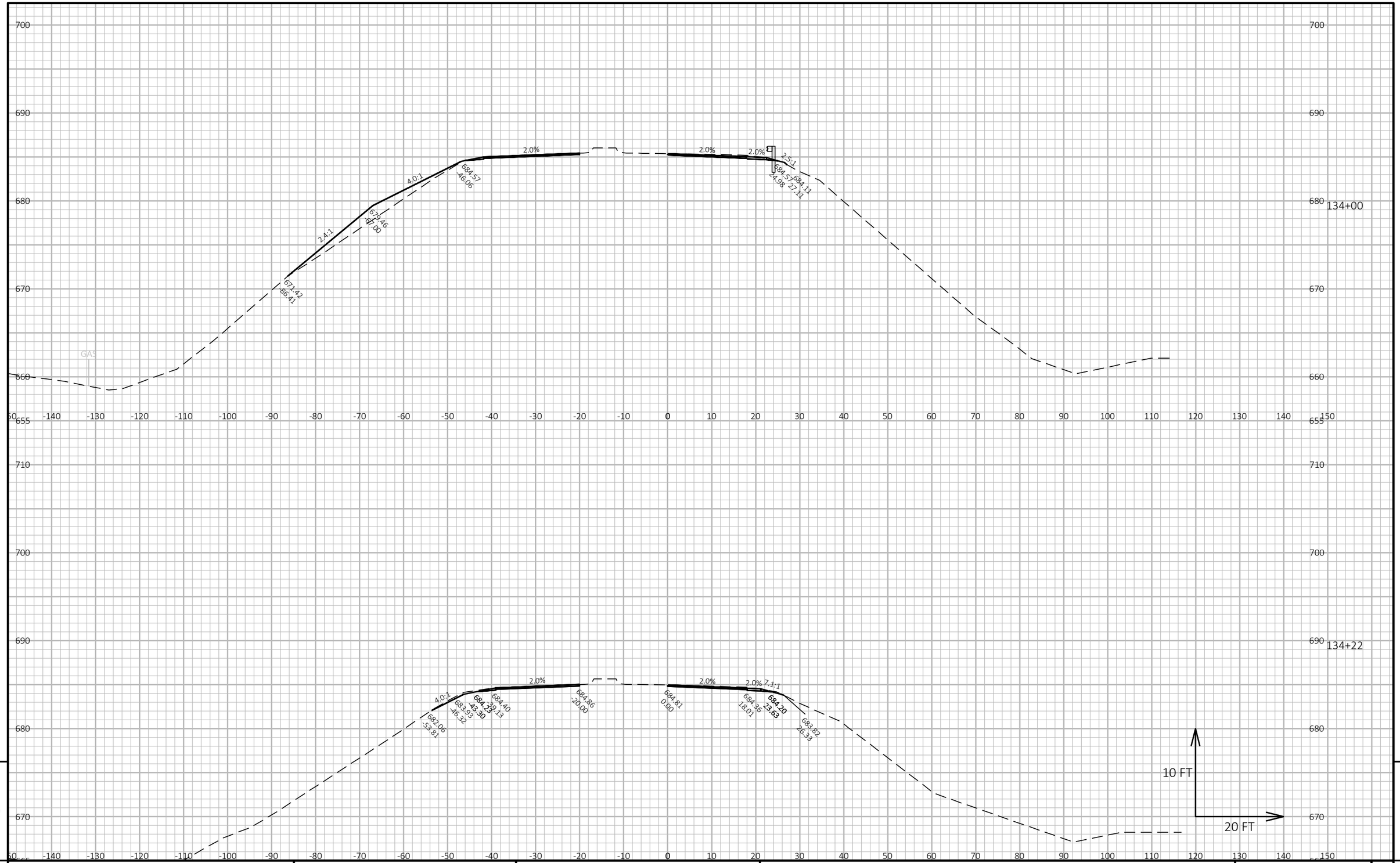
9 9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH D	SHEET 318	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH D-08

PLOT DATE : 1/21/2022 4:05 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

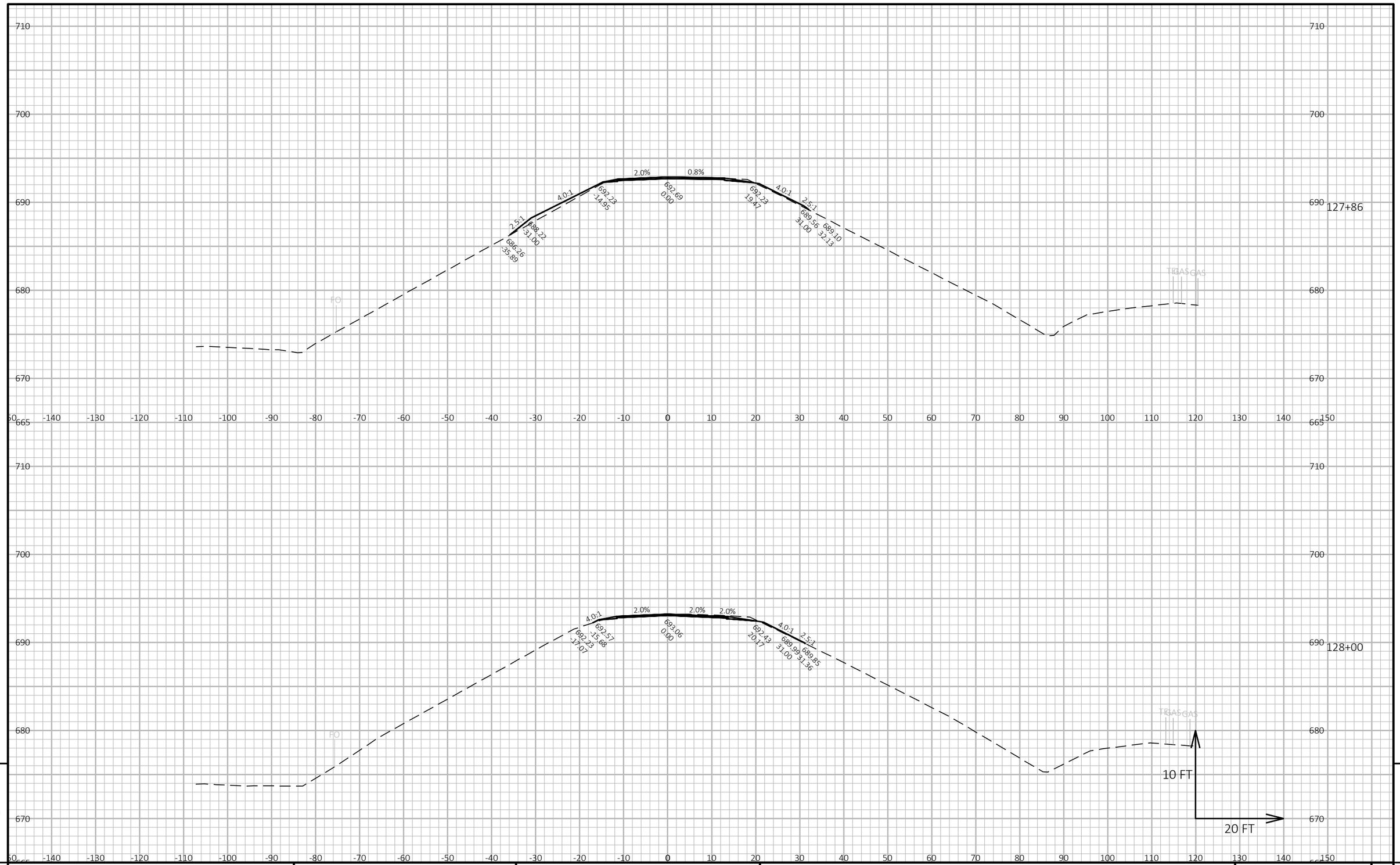
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: CTH D	SHEET 319	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - CTH D-09

PLOT DATE : 1/21/2022 4:06 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

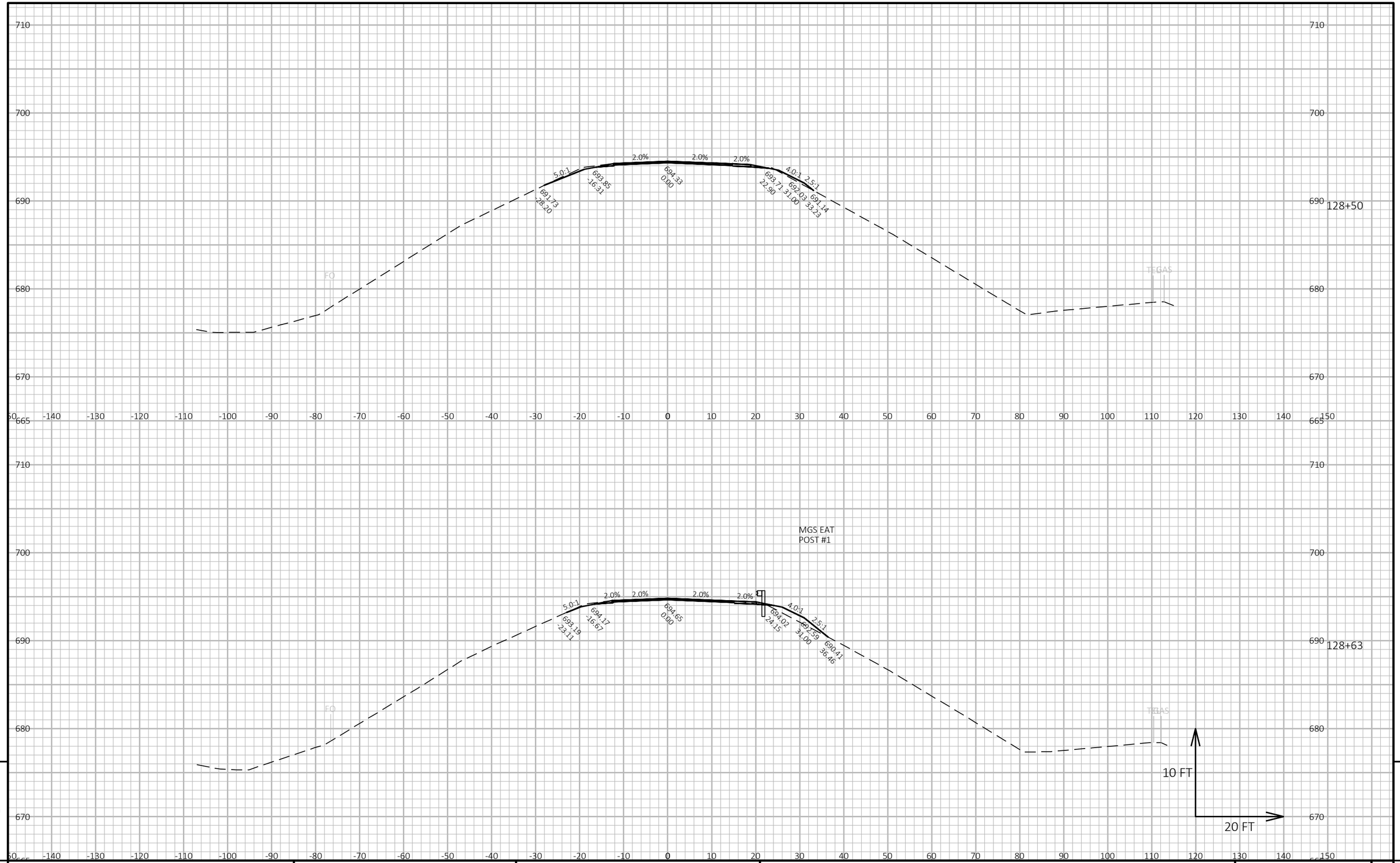
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: OAK ORCHARD RD	SHEET 320	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Oak Orchard-01

PLOT DATE : 1/21/2022 4:06 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: OAK ORCHARD RD	SHEET 321	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Oak Orchard-02

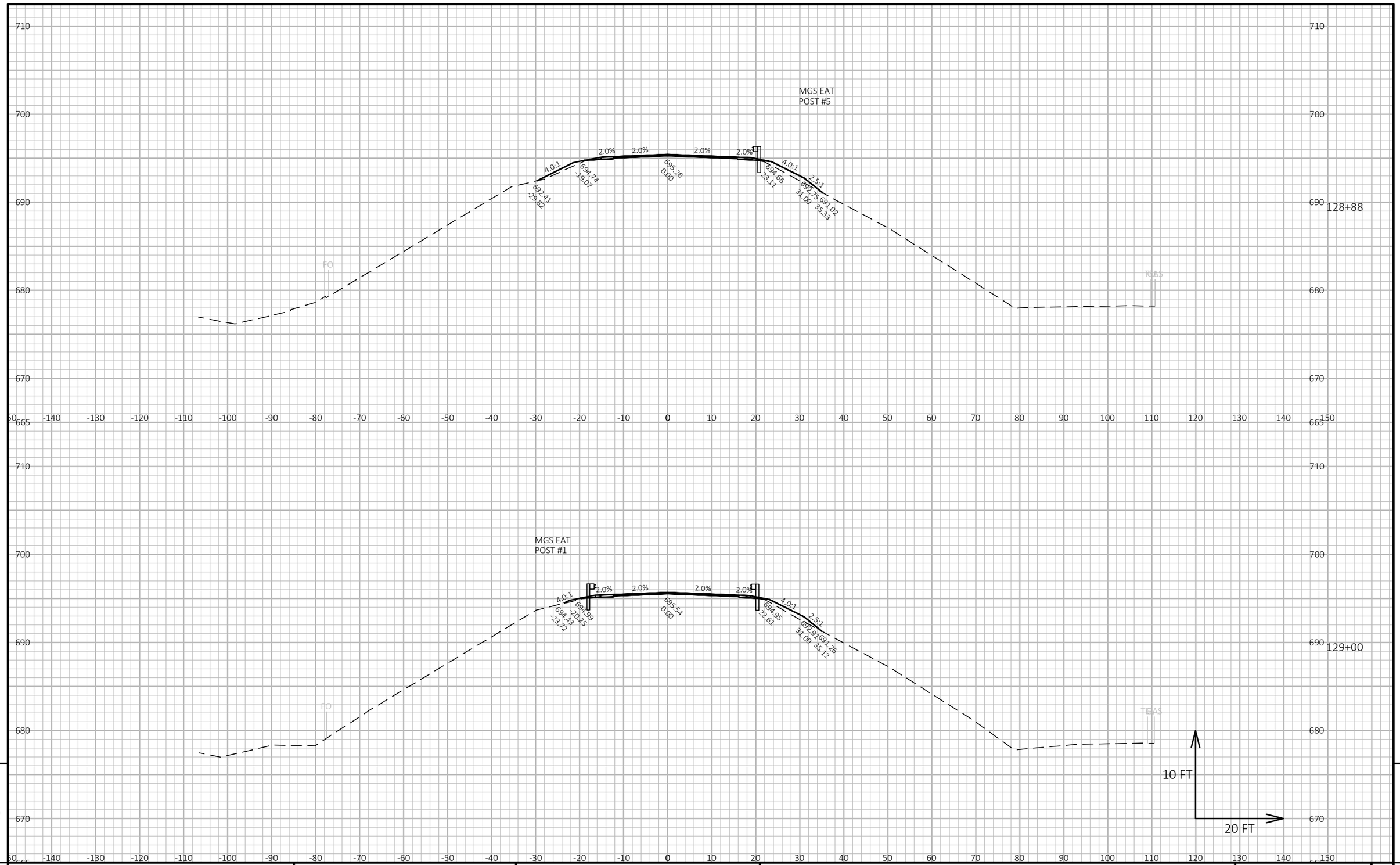
PLOT DATE : 1/21/2022 4:06 PM

PLOT BY : ERIC ADAMSKI

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

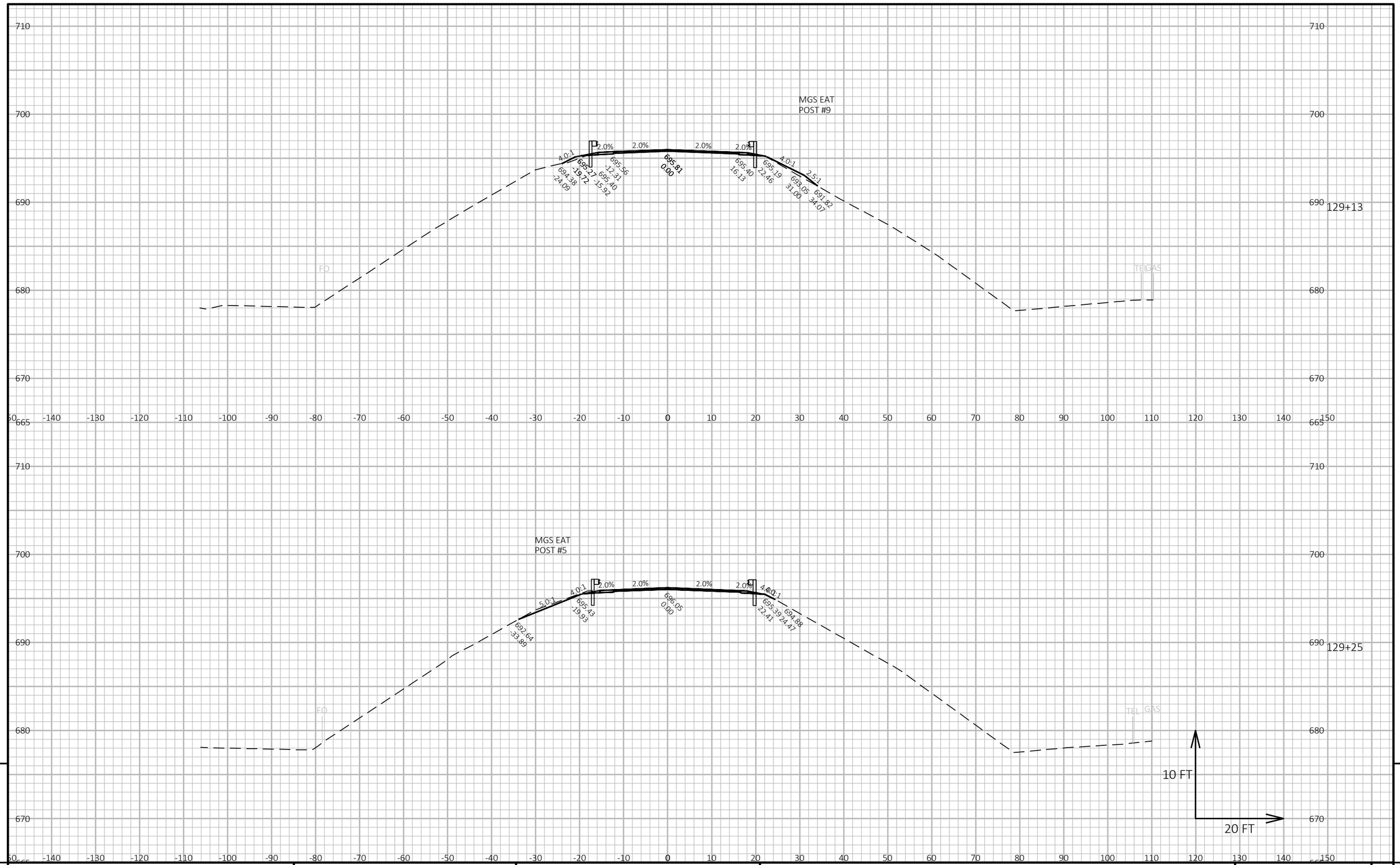
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: OAK ORCHARD RD	SHEET 322	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Oak Orchard-03

PLOT DATE : 1/21/2022 4:06 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

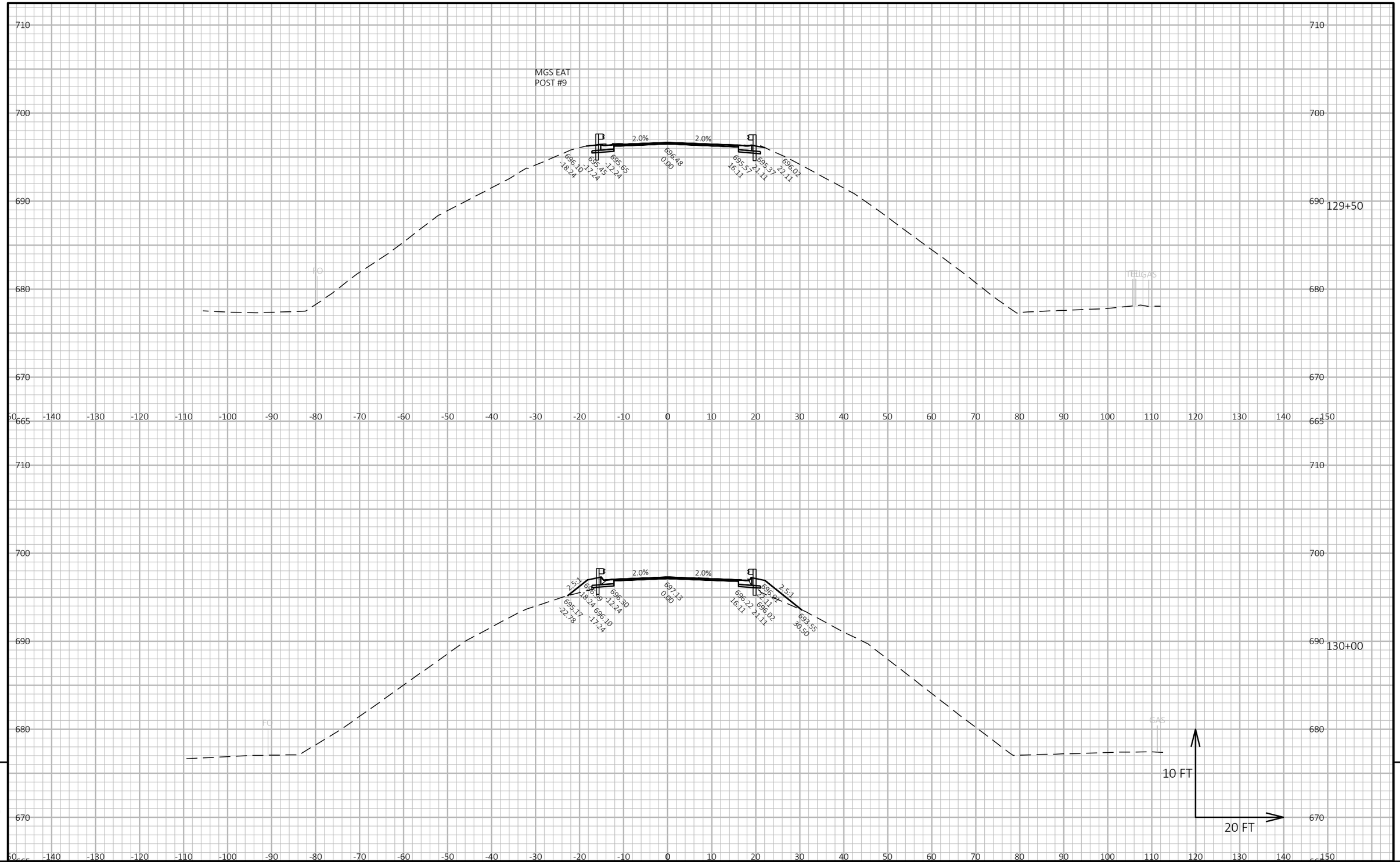
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: OAK ORCHARD RD	SHEET 323	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Oak Orchard-04

PLOT DATE : 1/21/2022 4:06 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

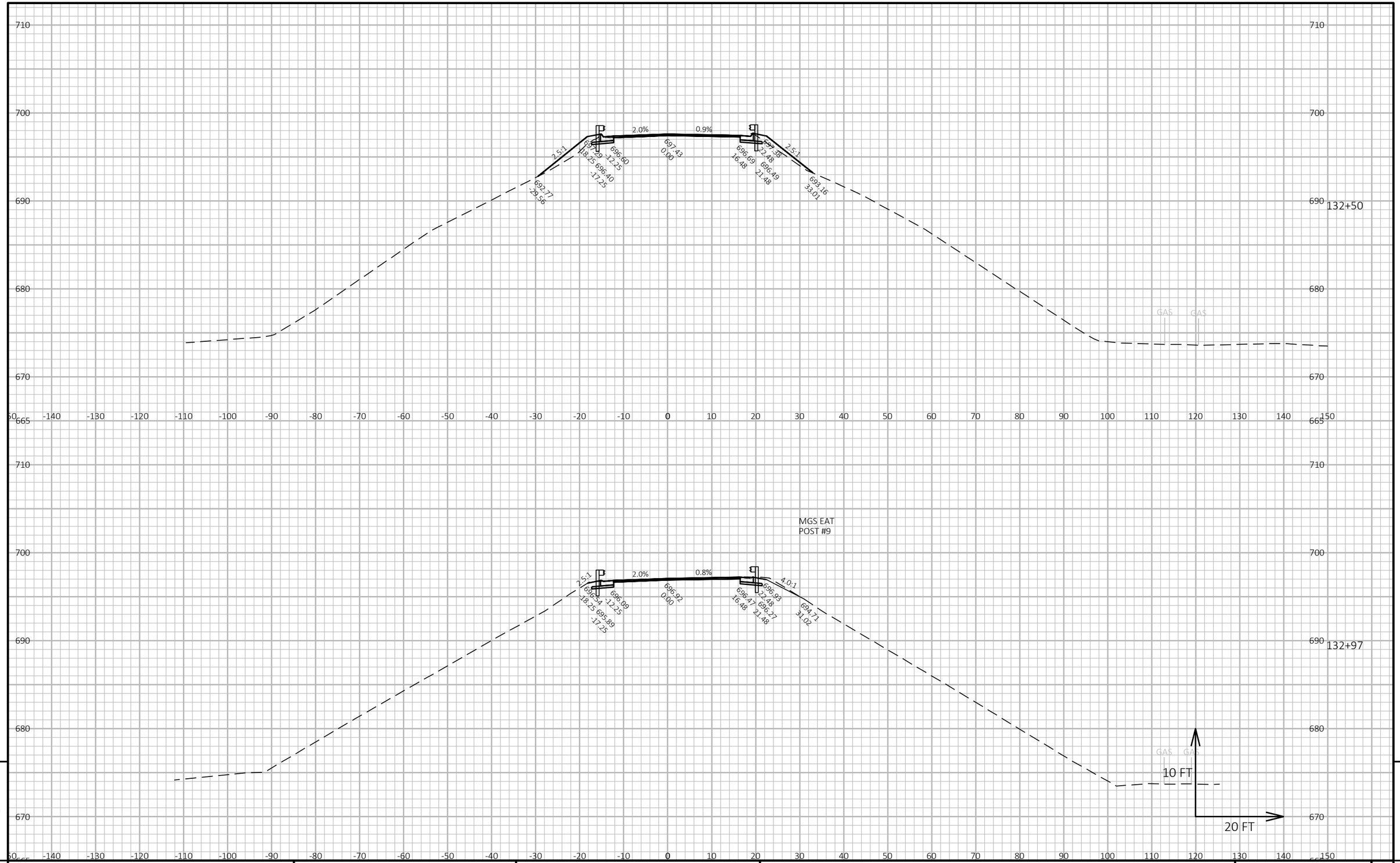
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: OAK ORCHARD RD	SHEET 324	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Oak Orchard-05

PLOT DATE : 1/21/2022 4:06 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

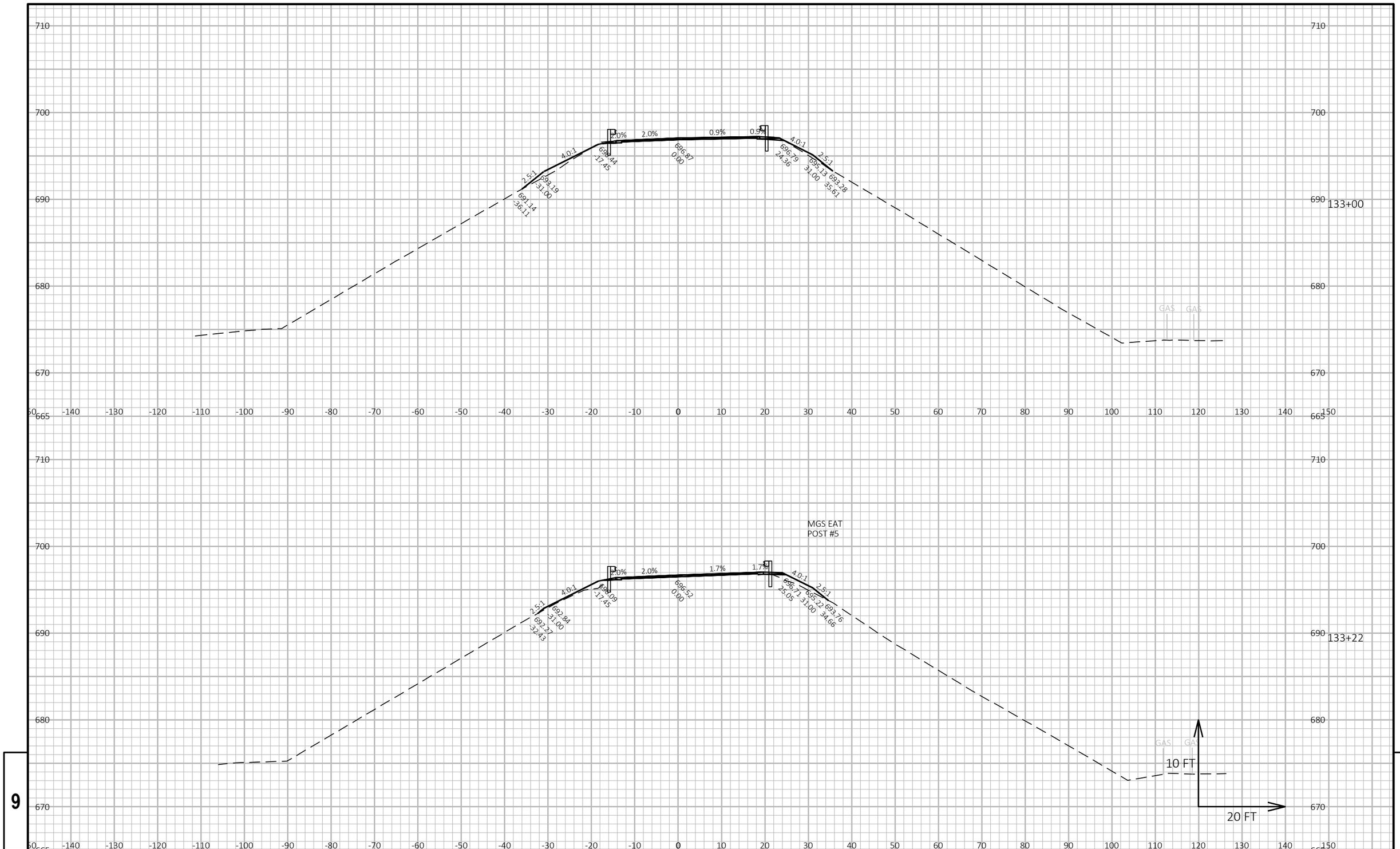
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: OAK ORCHARD RD	SHEET 325	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Oak Orchard-06

PLOT DATE : 1/21/2022 4:06 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: OAK ORCHARD RD	SHEET 326	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Oak Orchard-07

PLOT DATE : 1/21/2022 4:06 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

MGS EAT
POST #1

133+47

133+50

10 FT

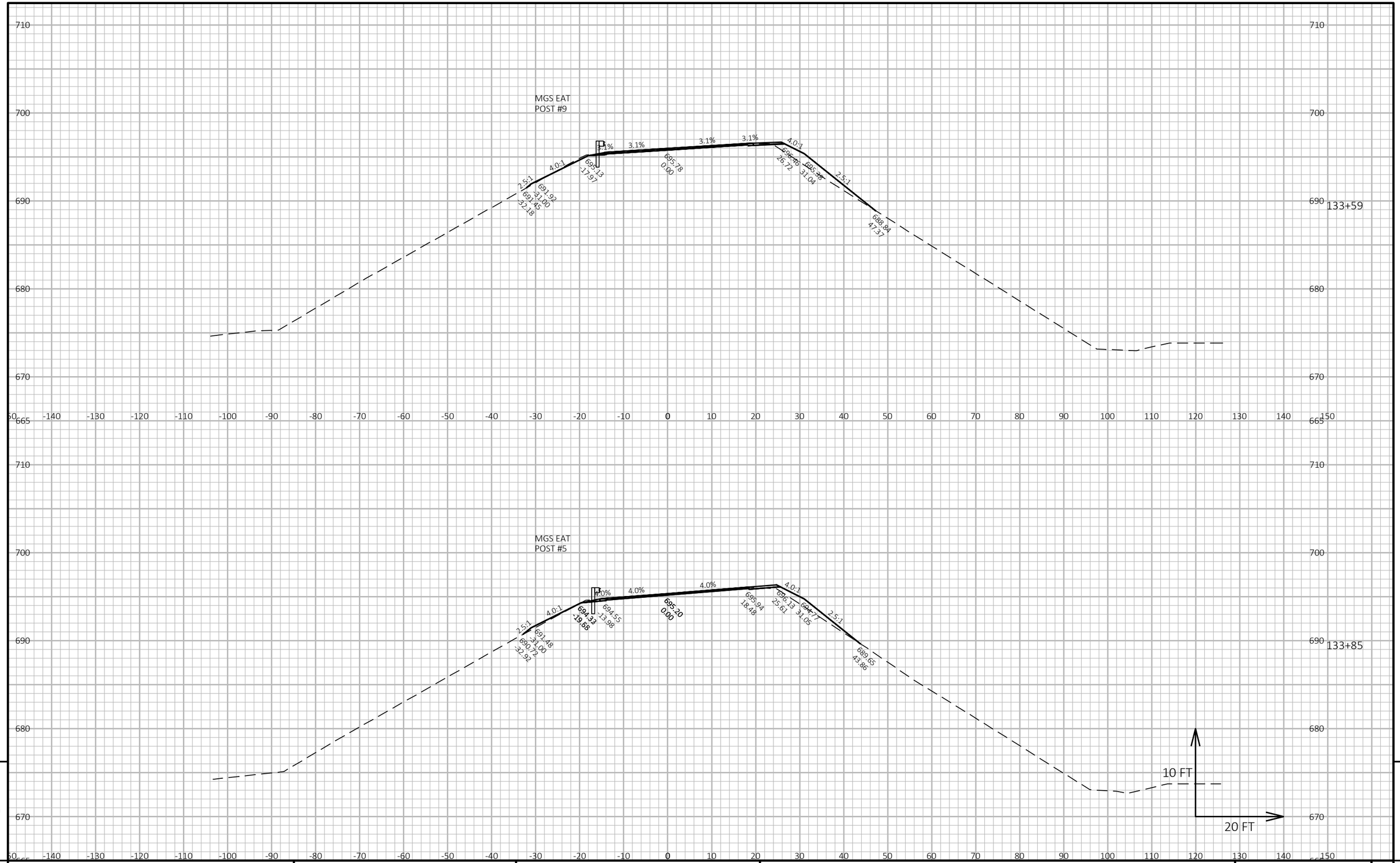
20 FT

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: OAK ORCHARD RD	SHEET 327 E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Oak Orchard-08

PLOT DATE : 1/21/2022 4:06 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

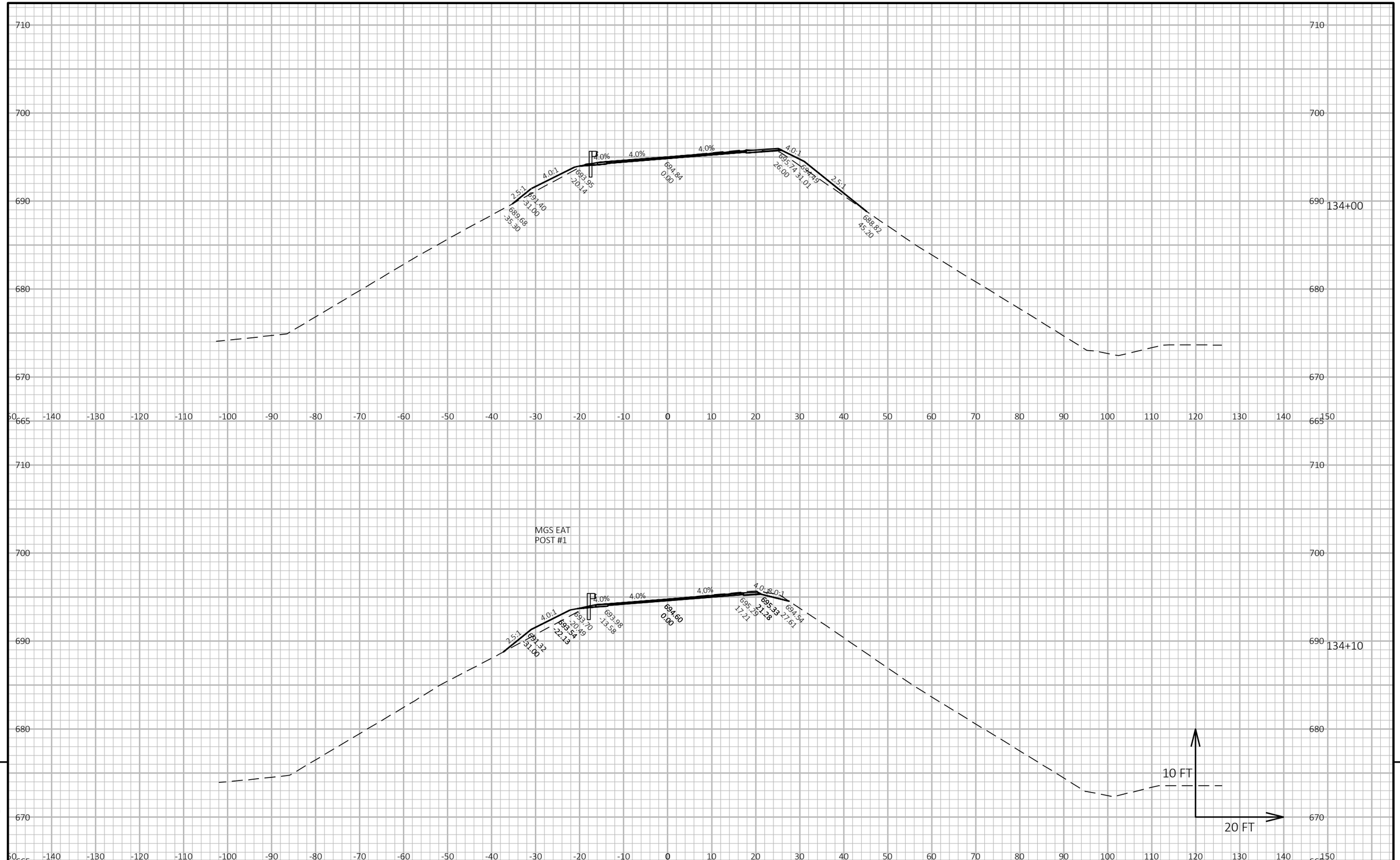
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: OAK ORCHARD RD	SHEET 328	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Oak Orchard-09

PLOT DATE : 1/21/2022 4:06 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

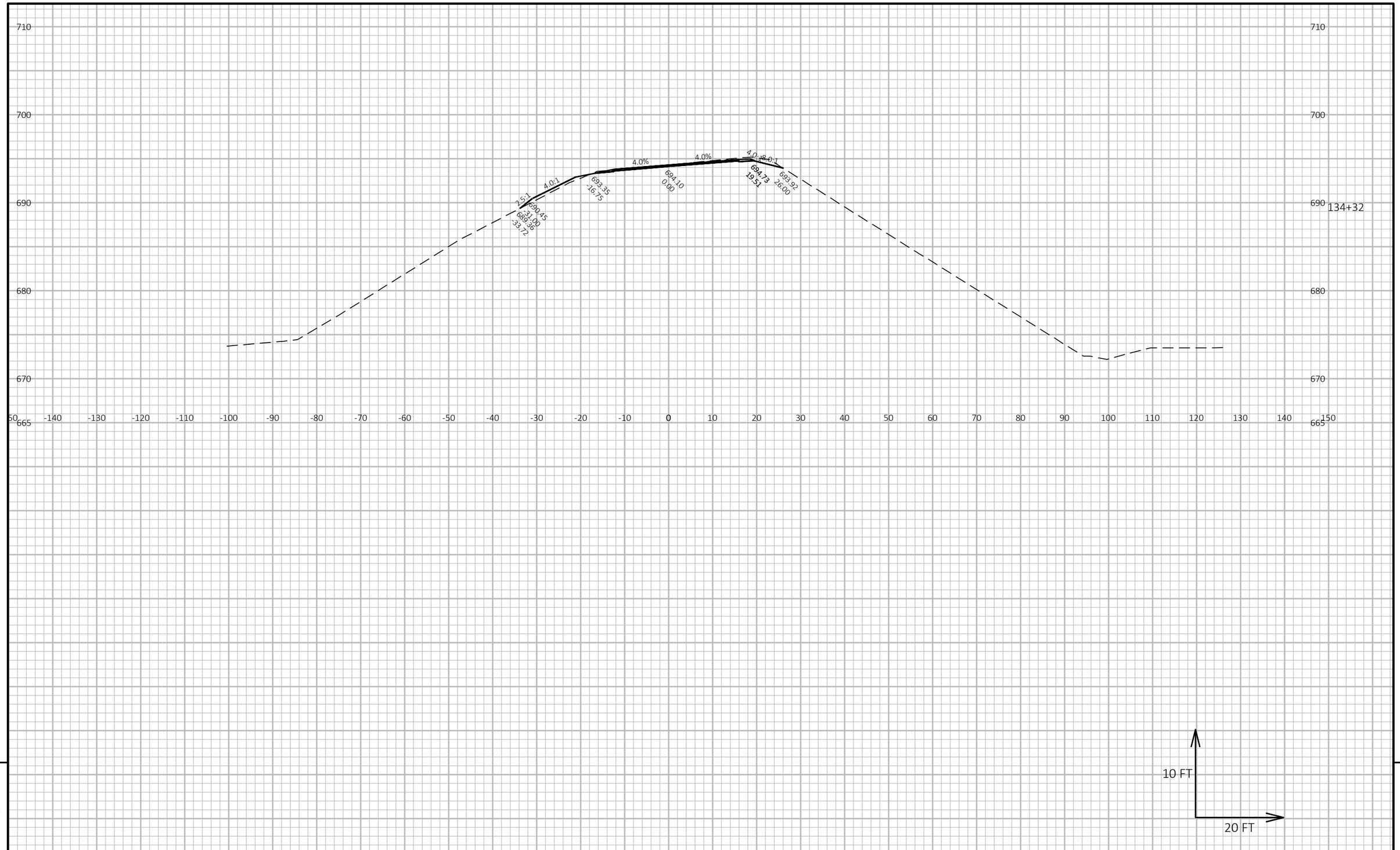
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PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: OAK ORCHARD RD	SHEET 329	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Oak Orchard-10

PLOT DATE : 1/21/2022 4:06 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1158-78-71	HWY: USH 41	COUNTY: OCONTO	CROSS SECTIONS: OAK ORCHARD RD	SHEET 330	E

FILE NAME : X:\PROJECTS\OCONTO\200043 11507800 US 41\DESIGN\C3D\SHEETSPLAN\090201_XS EXP.DWG
LAYOUT NAME - Oak Orchard-11

PLOT DATE : 1/21/2022 4:06 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov