MAD NOVEMBER 2027

PROJECT ID: 5845-16-77
WITH: NA

COUNTY: DANE

10

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 = 808

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STOUGHTON - MADISON

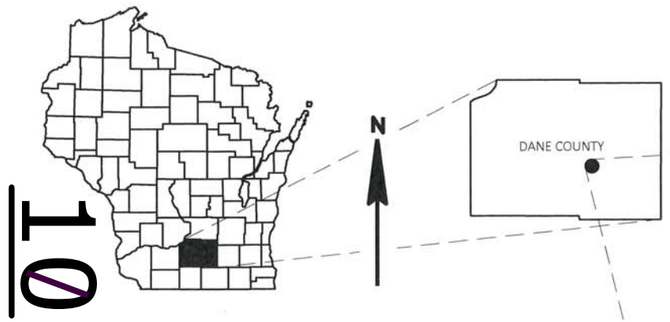
LARSON BEACH RD TO VOGES ROAD

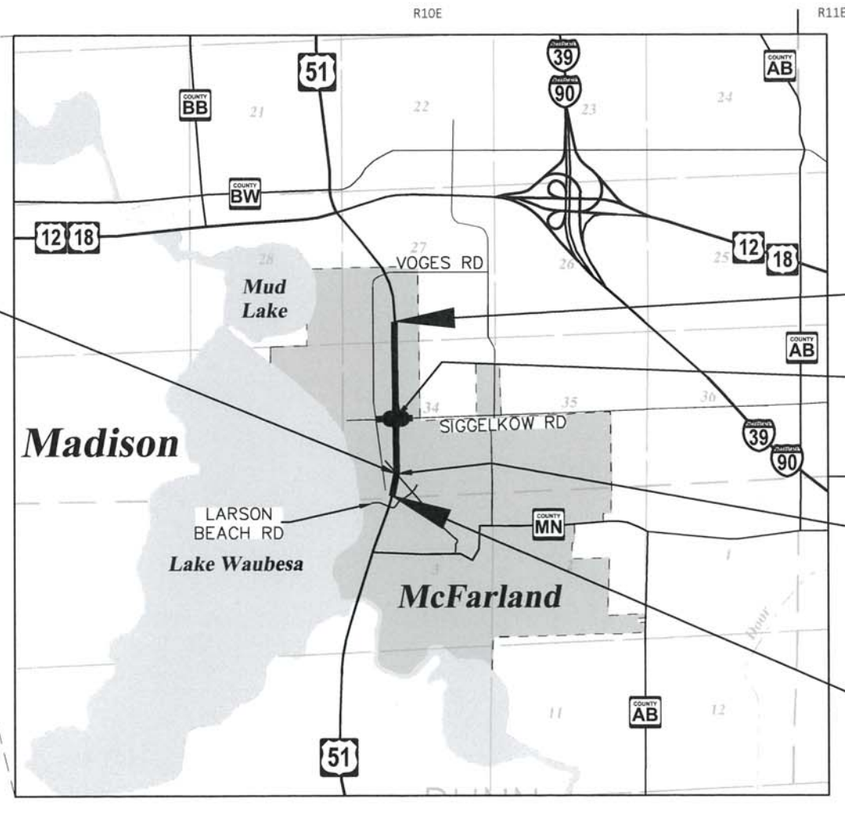
USH 51

DANE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5845-16-77	WISC 2025030	1

STATE PROJECT NUMBER
5845-16-77





REMOVE EXISTING BRIDGE B-13-60 (SB)
CONSTRUCT BRIDGE B-13-899

END PROJECT 5845-16-77
STA 953+40.00'NB'

STA. 920+07.09'NB' TO STA. 921+60.02'NB'
NET EXCEPTION TO PROJECT LENGTH
(SIGGELKOW RD STRUCTURE)

STA. 900+25.11'NB' TO STA. 902+99.79'NB'
NET EXCEPTION TO PROJECT LENGTH
(TAYLOR RD STRUCTURE)

BEGIN PROJECT 5845-16-77
STA 894+42.67'NB'
Y = 462,438.019
X = 843,621.896

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 1.037 mi.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), DANE 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 18.

DESIGN DESIGNATION 5845-16-06

A.A.D.T.	(2026)	=	28,800
A.A.D.T.	(2046)	=	31,000
D.H.V.		=	3.255
D.D.		=	67/33
T.		=	3.8%
DESIGN SPEED		=	60 mph
ESALS		=	3,200,000

CONVENTIONAL SYMBOLS

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

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

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

ORIGINAL PLANS PREPARED BY
AYRES

WISCONSIN
KEVIN M. KUHLOW
E-34276
MADISON
WI
PROFESSIONAL ENGINEER

7/25/2024 (Date)
(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SW REGION & AYRES ASSOCIATES
Designer	AYRES ASSOCIATES
Project Manager	DAVID SCHMIDT, P.E.
Regional Examiner	SW REGION
Regional Supervisor	JENNIFER KOBRYN, P.E.

APPROVED FOR THE DEPARTMENT
DATE: David B Schmidt Digitally signed by David B Schmidt Date: 2024.07.25 14:23:44-05'00'
(Signature)

E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_010101_TI.DWG
PLOT DATE : 7/25/2024 9:44 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME :

GENERAL NOTES

1. NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
3. WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIAL NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.
4. APPLY TACK COAT AT A RATE OF 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT.
5. HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
6. BROKEN CONCRETE CONTAINING REBAR SHALL NOT BE USED AS RIPRAP.
7. PLACE EROSION CONTROL DEVICES IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER. EROSION CONTROL FEATURES ARE SHOWN AT APPROXIMATE LOCATIONS, WITH EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.
8. DO NOT USE FERTILIZER WITHIN 20 FEET OF NAVIGABLE WATERWAYS OR WETLANDS.
9. PLACE SALVAGED TOPSOIL OR TOPSOIL IN ALL GRADED AREAS AS DESIGNATED BY THE ENGINEER IMMEDIATELY AFTER GRADING HAS BEEN COMPLETED. SEED, MULCH AND FERTILIZE ALL AREAS 5 DAYS AFTER PLACEMENT OF SALVAGED TOPSOIL OR TOPSOIL.
10. FINAL LIMITS OF ANY FENCE TO BE REMOVED TO BE DETERMINED BY THE ENGINEER.
11. STATIONING, DISTANCES, AND OFFSETS FOR SIGNS AND TRAFFIC CONTROL DEVICES SHOWN IN THE PLANS ARE APPROXIMATE. EXACT LOCATIONS ARE DETERMINED BY THE ENGINEER.

STANDARD ABBREVIATIONS

A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC
BM	BENCHMARK
CBTP	CONCRETE BARRIER TEMPORARY PRECAST
C/L	CENTERLINE
COMM	COMMUNICATION
CONST	CONSTRUCTION
CP	CONTROL POINT
CWT	HUNDRED WEIGHT
D.D.	DIRECTIONAL DISTRIBUTION
D.H.V.	DESIGN HOURLY VOLUME
EB	EASTBOUND
ELEC	ELECTRIC
ESALS	EQUIVALENT SINGLE AXLE LOADS
EX	EXISTING
GAL	GALLON
GPS	GLOBAL POSITIONING SYSTEM
HMA	HOT MIX ASPHALT
IN.	INCH
INL	INLET
ITS	INTELLIGENT TRAFFIC SYSTEM
LB	POUND
LF	LINEAR FOOT
LT	LEFT
LS	LUMP SUM
MAX	MAXIMUM
MGAL	MEGA GALLON (1000 GALLONS)
MI.	MILE
MIN	MINIMUM
MPH	MILES PER HOUR
MH	MANHOLE
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
NB	NORTHBOUND
NO.	NUMBER
NOR	NORMAL
PC	POINT OF CURVATURE
PCC	POINT OF COMMON CURVATURE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
PI	POINT OF INTERSECTION
PPOL	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
QTY.	QUANTITY
R/L	REFERENCE LINE
REQ'D	REQUIRED
RT	RIGHT
SB	SOUTHBOUND
SEG	SEGMENT
SSP	STORM SEWER PIPE
STA	STATION
SW	SOUTHWEST
SY	SQUARE YARD
T.	PERCENT TRUCKS
TYP	TYPICAL
VAR	VARIABLE
WB	WESTBOUND
Wt.	WEIGHT

UTILITY CONTACTS

ALLIANT ENERGY - ELECTRICITY
NICHOLAS DACHNIWSKYJ
935 WBR TOWNLINE RD
BELOIT, WI 53511
PHONE: (608) 364-6566
EMAIL: NICHOLASDACHNIWSKYJ@ALLIANTENERGY.COM

ALLIANT ENERGY - GAS/PETROLEUM
NICHOLAS DACHNIWSKYJ
935 WBR TOWNLINE RD
BELOIT, WI 53511
PHONE: (608) 364-6566
EMAIL: NICHOLASDACHNIWSKYJ@ALLIANTENERGY.COM

CENEX (CHS INC.) - GAS/PETROLEUM
DEREK PIRKL
4103 TRIANGLE ST
MCFARLAND, WI 53558
PHONE: (608) 630-7925
EMAIL: DEREK.PIRKI@CHSINC.COM

FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
CHRIS BLUMER
451 BROADWAY DR
SUN PRAIRIE, WI 53590
PHONE: (608) 622-3807
EMAIL: CHRISTOPHER.BLUMER@FTR.COM

KOCH PIPELINE COMPANY L.P./FLINT HILLS RESOURCES (FHR) - GAS/PETROLEUM
TIM KAROW
N 4240 HWY 26
WAUPUN, WI 53963
PHONE: (920) 296-8899
EMAIL: TIM.KAROW@FHR.COM

MADISON GAS AND ELECTRIC COMPANY - ELECTRICITY
MARK BOHM
623 RAILROAD ST
MADISON, WI 53703
PHONE: (608) 252-4730
EMAIL: MBOHM@MGE.COM

MADISON METROPOLITAN SEWERAGE DISTRICT - SEWER
AARON MCFARLIN
1610 MOORLAND RD
MADISON, WI 53713
PHONE: (608) 471-3005
EMAIL: AARONM@MADSEWER.ORG

SPECTRUM COMMUNICATIONS - COMMUNICATION LINE
BRAD WAGNER
2701 DANIELS ST
MADISON, WI 53718
PHONE: (608) 826-1318
EMAIL: BRAD.WAGNER@CHARTER.COM

SUNOCO LP - GAS/PETROLEUM
JON FITZGERALD
4009 TRIANGLE ST
MCFARLAND, WI 53558
PHONE: (608) 333-6722
EMAIL: JONANTHAN.FITZGERALD@SUNOCO.COM

TDS METROCOM LLC - COMMUNICATION LINE
CHASE STEBBINS
525 JUNCTION RD
MADISON, WI 53717
PHONE: (608) 664-0017
EMAIL: CHASE.STEBBINS@TDSTELECOM.COM

VILLAGE OF MCFARLAND - SEWER
LEE IGL
5115 TERMINAL DR
MCFARLAND, WI 53558
PHONE: (608) 838-7287
EMAIL: LEE.IGL@MCFARLAND.WI.US

VILLAGE OF MCFARLAND - WATER
LEE IGL
5115 TERMINAL DR
MCFARLAND, WI 53558
PHONE: (608) 838-7287
EMAIL: LEE.IGL@MCFARLAND.WI.US

WEST SHORE PIPELINE COMPANY - GAS/PETROLEUM
KEVIN CARR
8581 SUNSET DR
BYRON, IL 61010
PHONE: (815) 621-9413
EMAIL: KCARR@BUCKEYE.COM

WINDSTREAM KDL, LLC - COMMUNICATION LINE
LORI KETTER
969 WAUBE LANE
GREEN BAY, WI 54304
PHONE: (920) 410-6902
EMAIL: LORI.KETTER@WINDSTREAM.COM

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

HMA PAVEMENTS

PAVEMENT COMPOSITION	DESIGNATOR (SEE TYPICAL SECTIONS & PLAN DETAILS)
SIGGELKOW RD 4.0-INCH = 2.00" LOWER LAYER (4 MT 58-28 S) 2.00" UPPER LAYER (4 MT 58-28 S)	AP25
USH 51 SHOULDERS 3.5-INCH = SINGLE LAYER (4 MT 58-28 S)	AP04
USH 51 SHOULDERS AND CROSSOVERS 4.5-INCH = 2.25" LOWER LAYER (4 MT 58-28 S) 2.25" UPPER LAYER (4 MT 58-28 S)	AP06
USH 51 SOUTH MEDIAN 5.0-INCH = 2.75" LOWER LAYER (4 MT 58-28 S) 2.25" UPPER LAYER (4 MT 58-28 S)	AP07
TAYLOR RD OVERLAY 2.0-INCH = SINGLE LAYER (4 MT 58-28 S)	APO1
SHARED USE PATH 3.0-INCH = SINGLE LAYER ASPHALTIC SURFACE	APO3

ORDER OF SECTION 2 SHEETS

GENERAL NOTES AND CONTACTS
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
PLAN DETAILS
PAVING GRADES
CURB RAMP DETAILS
EROSION CONTROL PLAN
STORM SEWER PLAN
PIPE UNDERDRAIN PLAN
LIGHTING PLAN
PERMANENT SIGNING AND PAVEMENT MARKING
TRAFFIC CONTROL
STAGED CONSTRUCTION
DETOUR PLAN
ALIGNMENT DIAGRAM

PROJECT CONTACTS

WisDOT PROJECT MANAGER
DAVID SCHMIDT, P.E.|PROJECT MANAGER
SOUTHWEST REGION MADISON OFFICE
PHONE: (608) 246-3867
EMAIL: DAVID2.SCHMIDT@DOT.WI.GOV

WisDOT - SIGNALS
GRAHAM HEITZ, P.E.
2101 WRIGHT ST
MADISON, WI 53704
PHONE: (608) 246-5362
EMAIL: GRAHAM.HEITZ@DOT.WI.GOV

DNR AREA LIAISON
ERIC HEGGELUND
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
3911 FISH HATCHERY RD
FITCHBURG, WI 53711-5397
PHONE: (608) 275-3301
EMAIL: ERIC.HEGGELUND@WISCONSIN.GOV

DANE COUNTY
DANE COUNTY HIGHWAY DEPARTMENT
PAM DUNPHY
2302 FISH HATCHERY ROAD
MADISON, WI 53713
PHONE: (608) 266-4036
EMAIL: DUNPHY@COUNTYOFDANE.COM

CITY OF MADISON
CITY OF MADISON ENGINEERING
CHRISTOPHER PETYKOWSKI
210 MARTIN LUTHER KING, JR BLVD, ROOM 115
MADISON, WI 53703
PHONE: (608) 266-4589
EMAIL: CPETYKOWSKI@CITYOFMADISON.COM

VILLAGE OF MCFARLAND
PUBLIC WORKS DIRECTOR
LEE IGL
ADDRESS: 5115 TERMINAL DRIVE
MCFARLAND, WI 53558
PHONE: (608) 838-7287
EMAIL: LEE.IGL@MCFARLAND.WI.US

CONSULTANT DESIGN
KEVIN KUHLOW
AYRES ASSOCIATES
5201 E TERRACE DR, STE 200
MADISON, WI 53718
PHONE: (608) 443-1200
EMAIL: KUHLOWK@AYRESASSOCIATES.COM

2

2

LAKE WAUBESA

UPPER MUD LAKE

N

VILLAGE OF MCFARLAND

CITY OF MADISON

VILLAGE OF MCFARLAND

McDANIEL LN

ERLING AVE

REMOVE EXISTING BRIDGE B-13-60 (SB)
CONSTRUCT BRIDGE B-13-899
CONSTRUCT RETAINING WALL R-13-386

BEGIN PROJECT
STA 894+42.67'NB'

BEGIN CONSTRUCTION
892+91.14'SB', 26' LT

END CONSTRUCTION
12+27.42'TY'

BEGIN CONSTRUCTION
42+45.06'SGE'

EXISTING BRIDGES B-13-387 (NB) &
B-13-388 (SB) TO REMAIN

TERMINAL DR

SIGN STRUCTURE
S-13-0594

MCFARLAND CT

END CONSTRUCTION
957+07.15'SB'

TERMINAL DR

51

LARSON BEACH RD

890'SB'

890'NB'

TERMINAL DR

LORRAINE WAY

45'EB

WHITEHORSE PL

IVYWOOD TR

970'SB'

970'NB'

976'SB'

900'SB'

900'NB'

STA BACK = 908+31.92'SB'

STA AHEAD = 908+45.10 'SB'

410'D'

RAMP D

415'D'

420'C'

920'SB'

920'NB'

325'C'

330'C'

RAMP C

335'C'

940'SB'

940'NB'

950'SB'

950'NB'

960'SB'

960'NB'

51

10'A'

RAMP A

115'A'

225'B'

230'B'

RAMP B

235'B'

TRIANGLE ST

BEGIN CONSTRUCTION
10+16.96'TY'

TAYLOR RD

STA BACK = 408+31.92'D'

STA AHEAD = 408+45.10 'D'

55'EB

PAULSON RD

END PROJECT
STA 953+40.00'NB'

VOGES RD

WISCONSIN & SOUTHERN RR

EXISTING BRIDGE B-13-386 (NB)
TO REMAIN

END CONSTRUCTION
57+52.60'SGE'

SIGN STRUCTURE
S-13-0595

FIVE RETAINING WALLS
R-13-374 (WNW)
R-13-375 (WNE)
R-13-376 (ESW)
R-13-377 (ENE)
R-13-378 (ESE)

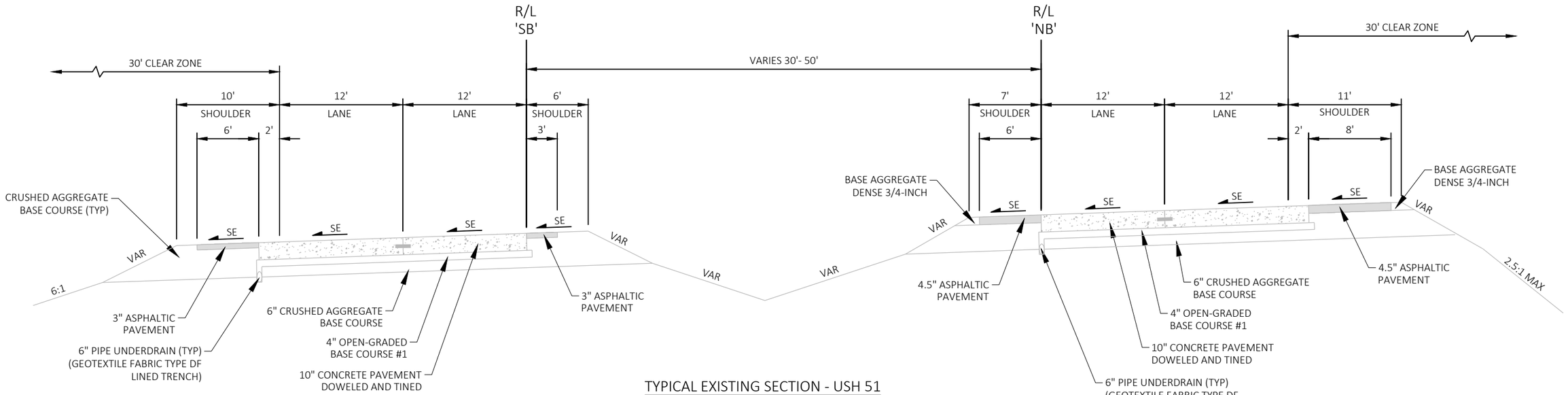
MEINDERS RD

SIGGELKOW RD

VILLAGE OF MCFARLAND

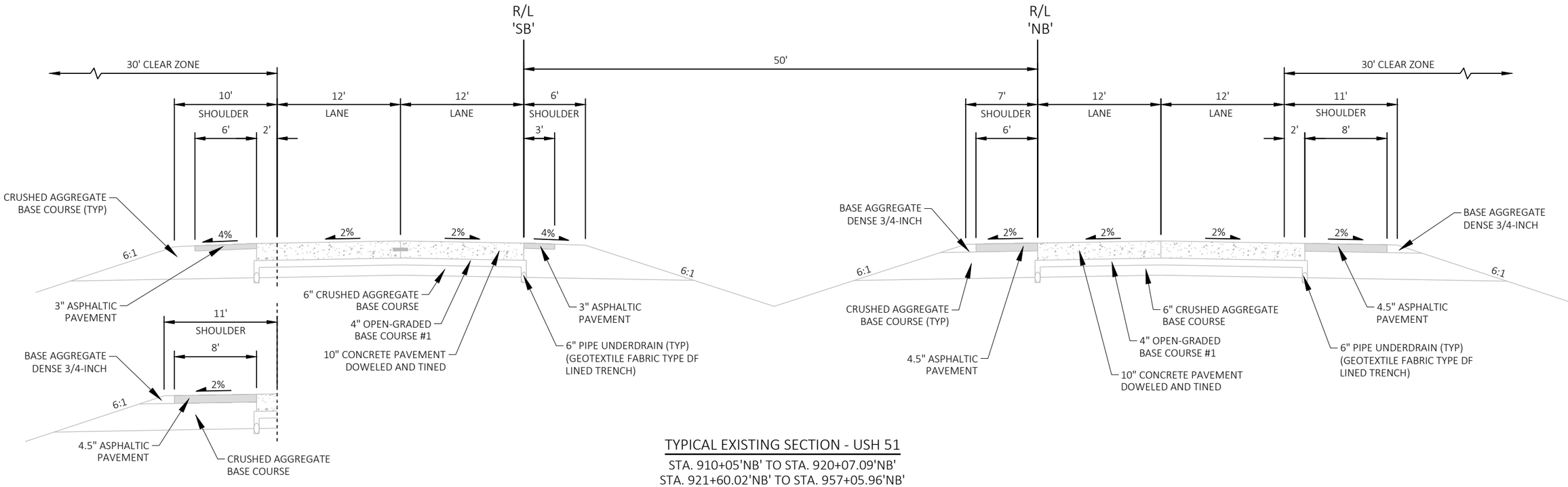
CITY OF MADISON

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION - USH 51

STA. 894+42.67'NB' TO STA. 900+25.11'NB'
STA. 902+99.79'NB' TO STA. 910+05'NB'

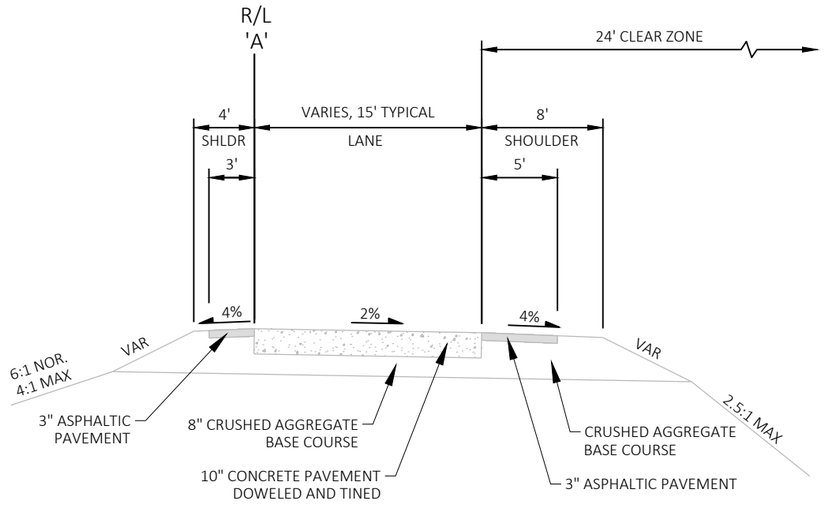


TYPICAL EXISTING SECTION - USH 51

STA. 910+05'NB' TO STA. 920+07.09'NB'
STA. 921+60.02'NB' TO STA. 957+05.96'NB'

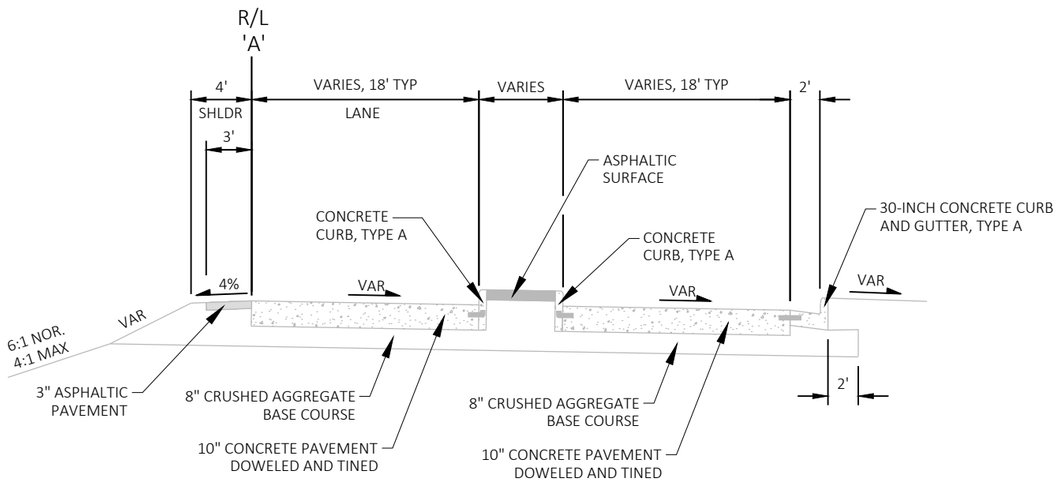
STA 935+93'SB' TO STA 959+28'SB'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 4	E



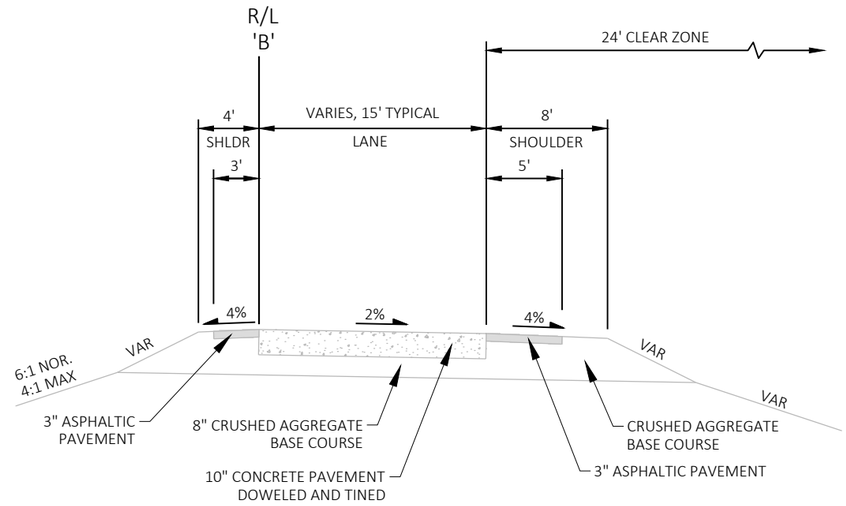
TYPICAL EXISTING SECTION - RAMP A

STA. 106+84'A' TO STA. 120+01'A'



TYPICAL EXISTING SECTION - RAMP A

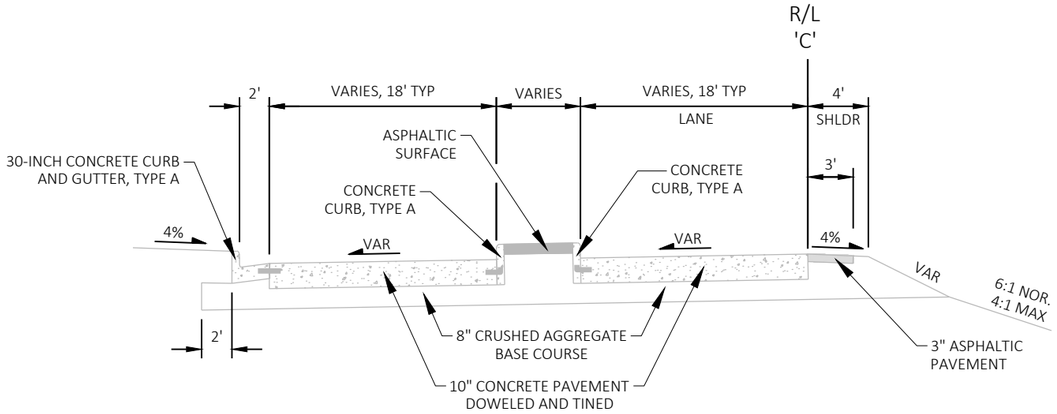
STA. 120+01'A' TO SIGGELKOW RD



TYPICAL EXISTING SECTION - RAMP B

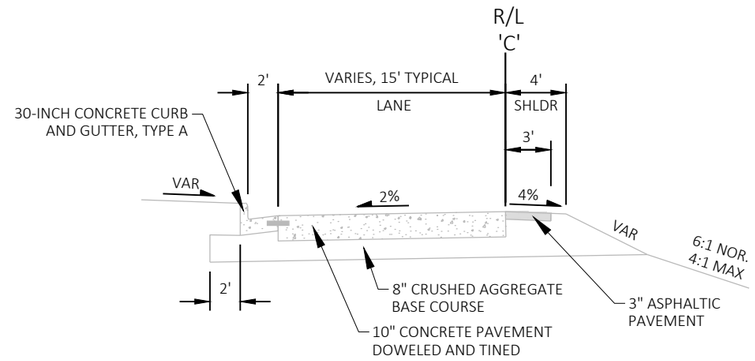
SIGGELKOW RD TO STA. 233+87'B'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 5	E



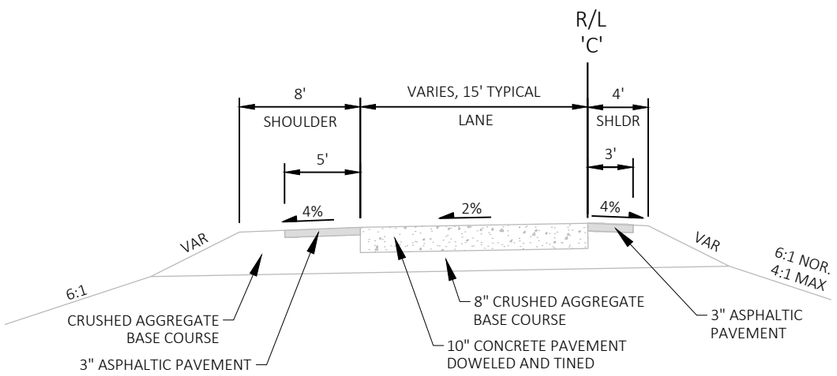
TYPICAL EXISTING SECTION - RAMP C

SIGGELKOW RD TO STA. 321+56'C'



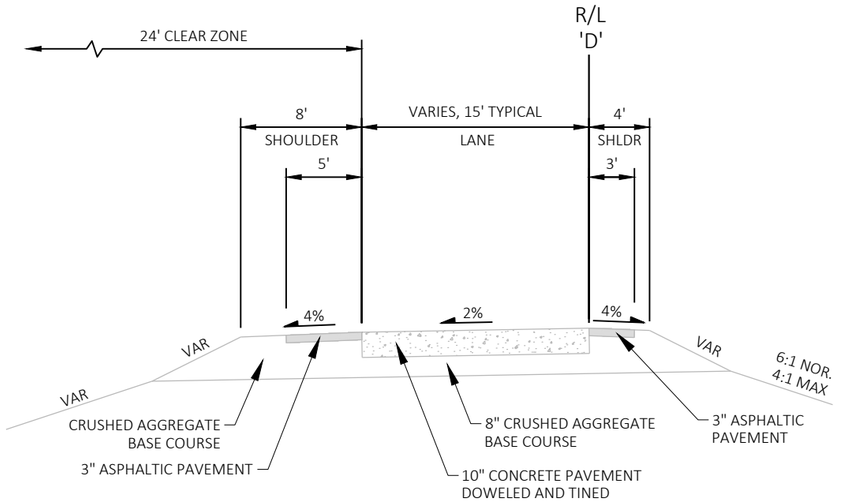
TYPICAL EXISTING SECTION - RAMP C

STA. 321+56'C' TO STA. 329+87'C'



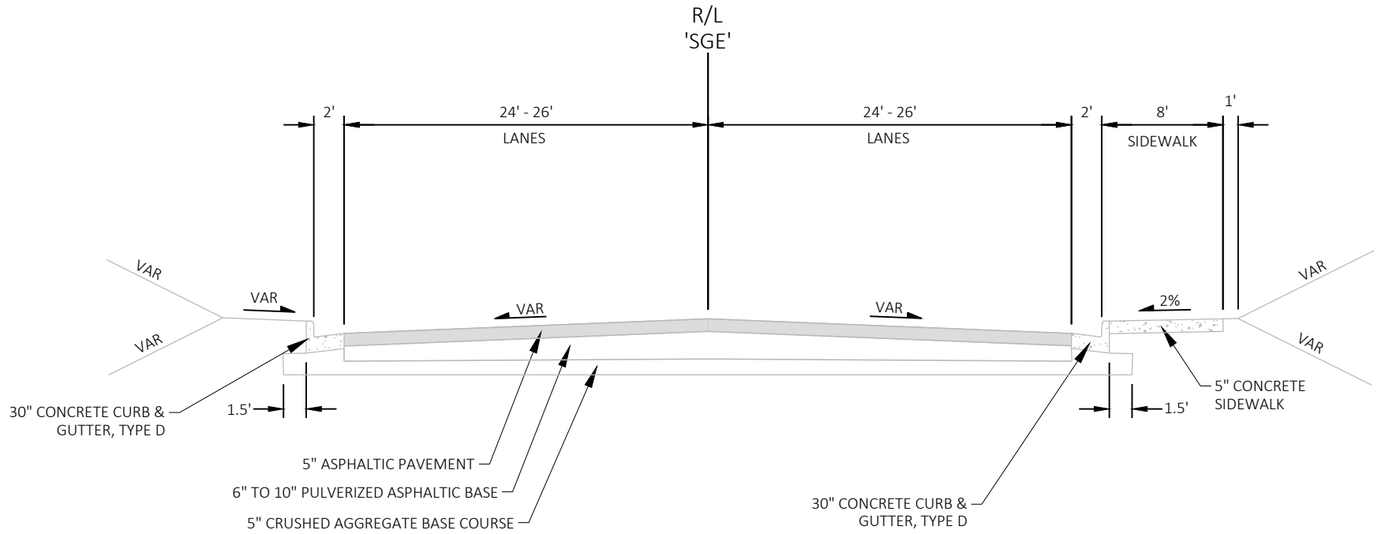
TYPICAL EXISTING SECTION - RAMP C

STA. 329+87'C' TO STA. 334+91'C'



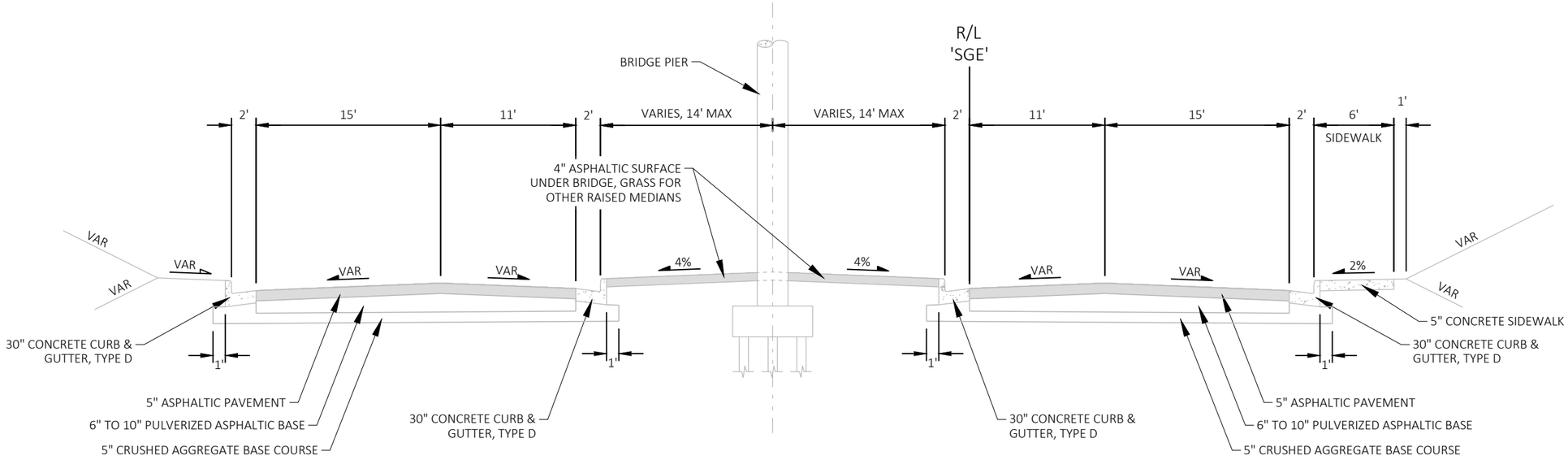
TYPICAL EXISTING SECTION - RAMP D

STA. 408+51'D' TO SIGGELKOW RD



TYPICAL EXISTING SECTION - SIGGELKOW RD

STA. 42+20'SGE' TO STA. 46+56'SGE'
STA. 54+31'SGE' TO STA. 55+63'SGE'

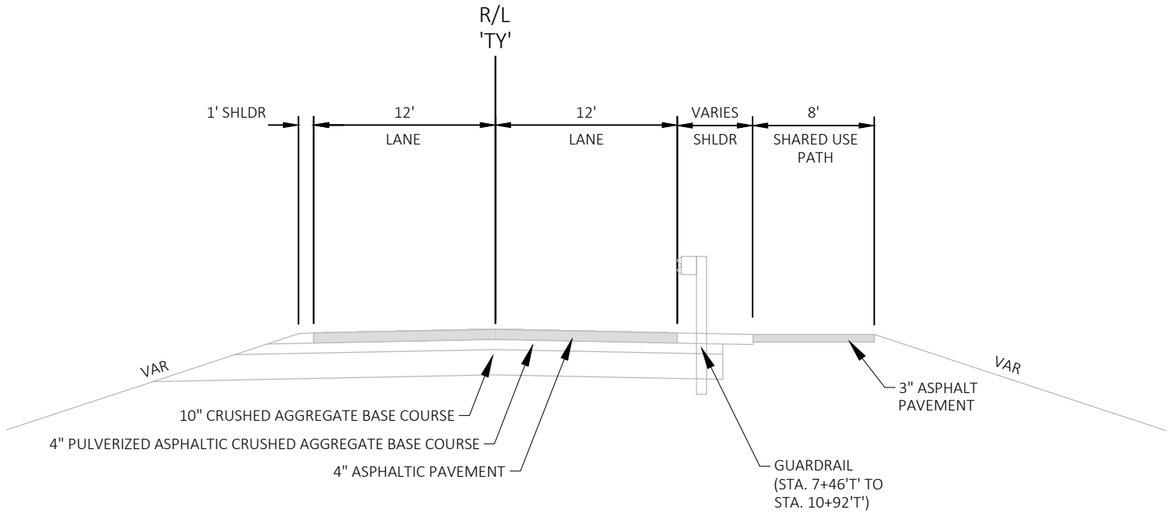


TYPICAL EXISTING SECTION - SIGGELKOW RD

STA. 46+56'SGE' TO STA. 54+31'SGE'

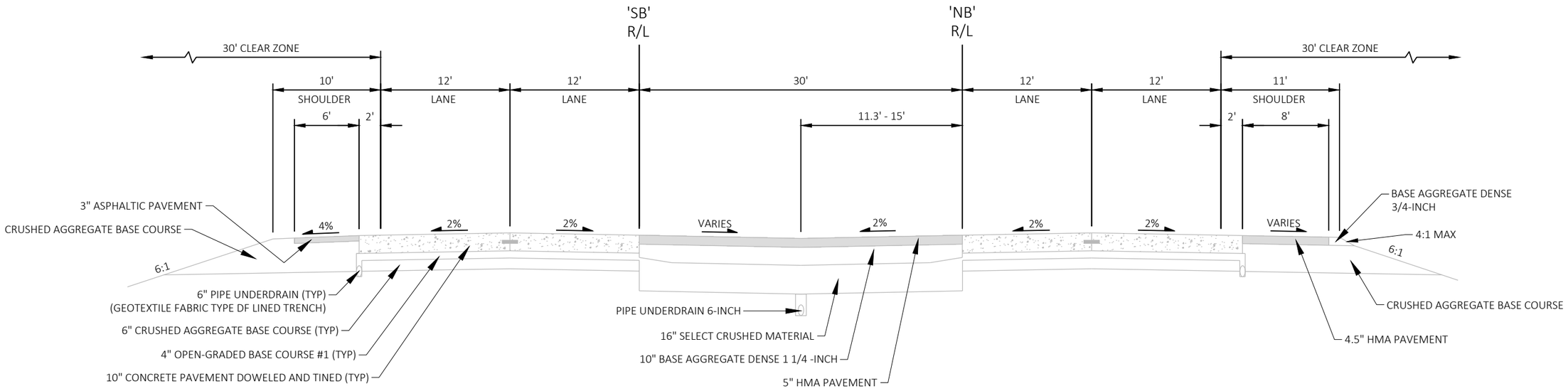
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 7	E

2



TYPICAL EXISTING SECTION - TAYLOR RD

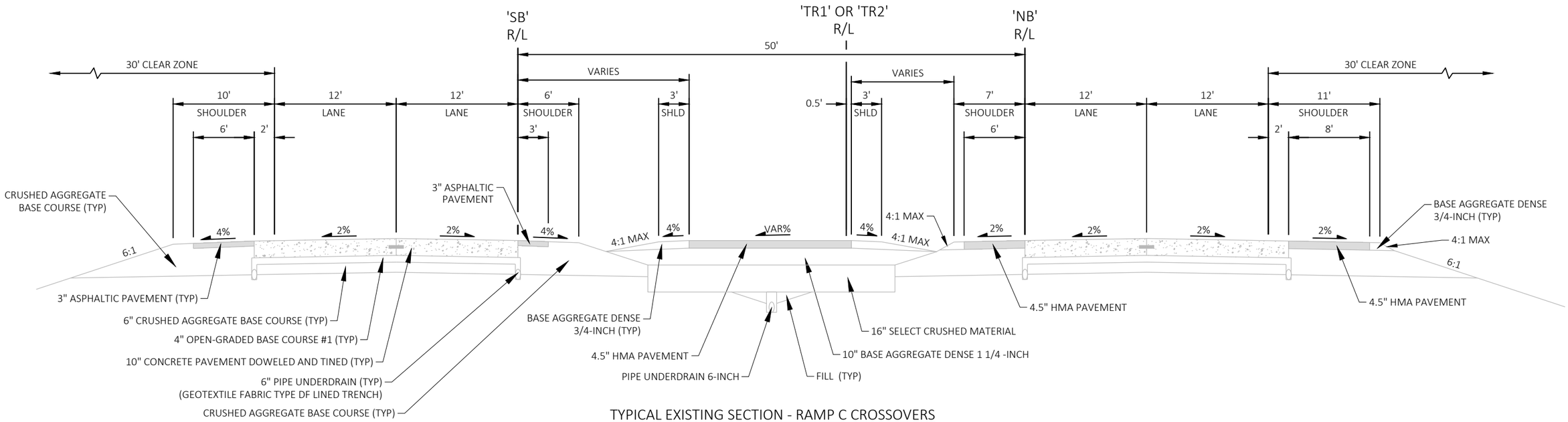
STA. 9+73'TY' TO STA. 11+83'TY'



TYPICAL EXISTING SECTION - SOUTH CROSSOVER

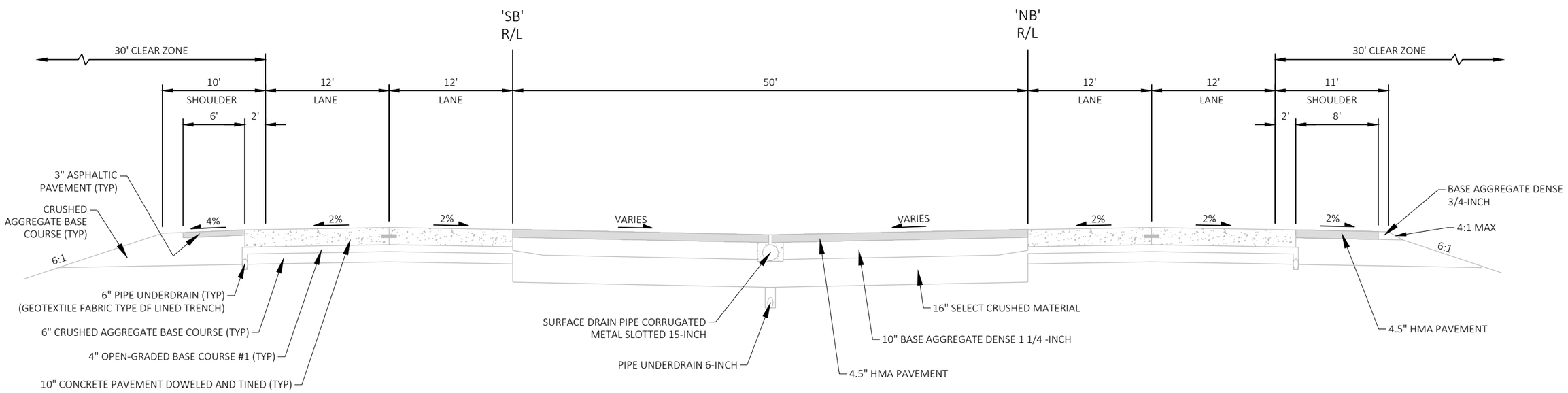
STA. 891+69'NB' TO STA. 895+83'NB'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 8	E



TYPICAL EXISTING SECTION - RAMP C CROSSOVERS

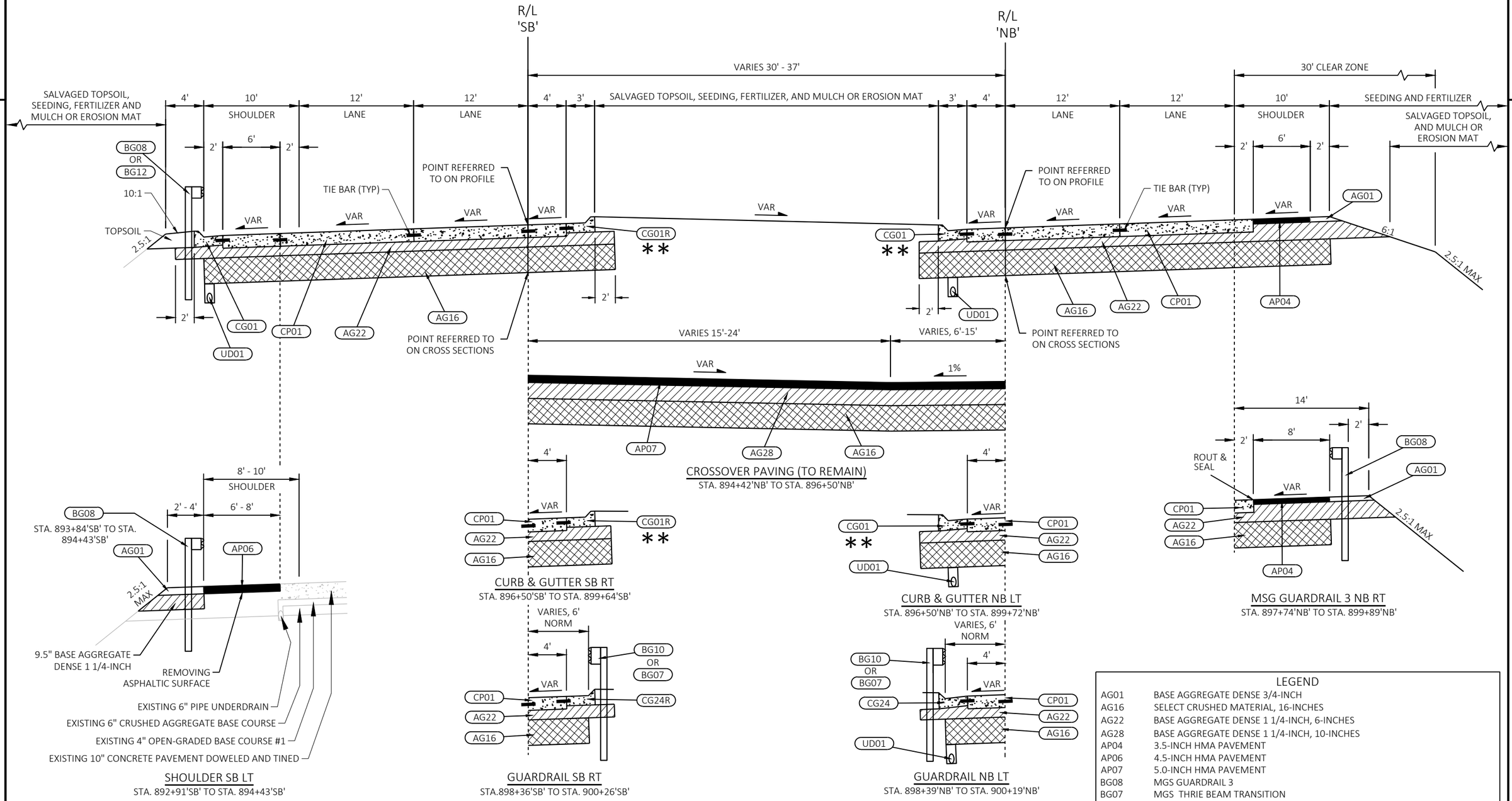
STA. 31+53'TR1' TO STA. 33+35'TR1'
STA. 35+99'TR2' TO STA. 37+86'TR2'



TYPICAL EXISTING SECTION - NORTH CROSSOVER

STA. 949+24'NB' TO STA. 957+77'NB'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 9	E



TYPICAL FINISHED SECTION - USH 51

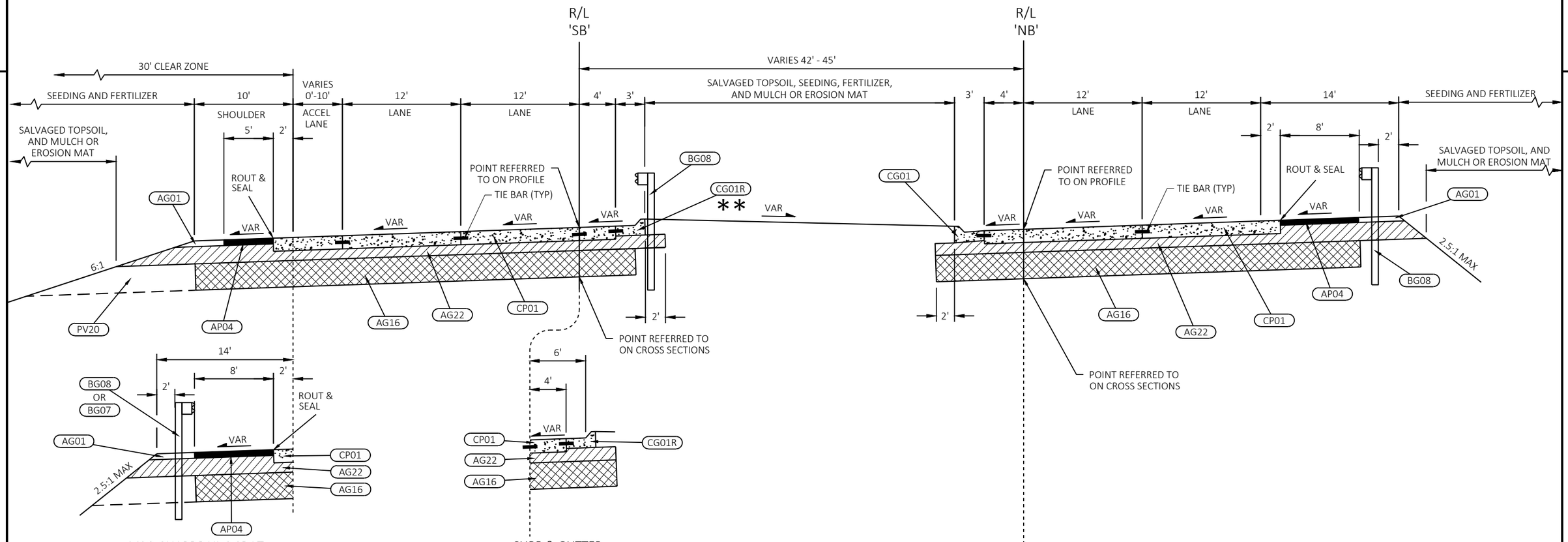
STA. 894+42'NB' TO STA. 900+25'NB'
STA. 894+43'SB' TO STA. 900+57'SB'

** USE DRIVEWAY ENTRANCE CURB
STA 897+20'NB', LT TO 899+57'NB', LT
STA 898+20'SB', RT TO 899+49'SB', RT

LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AG16	SELECT CRUSHED MATERIAL, 16-INCHES
AG22	BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCHES
AG28	BASE AGGREGATE DENSE 1 1/4-INCH, 10-INCHES
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
AP07	5.0-INCH HMA PAVEMENT
BG08	MGS GUARDRAIL 3
BG07	MGS THRIE BEAM TRANSITION
BG10	STEEL THRIE BEAM
BG12	MGS GUARDRAIL 3K
CG01	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
CG01R	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A, REVERSE SLOPE
CG24	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CG24R	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT, REVERSE SLOPE
CP01	CONCRETE PAVEMENT 8-INCH
PV20	RELIEF TRENCHES AT DITCH SAG POINTS OR EVERY 250 FEET
UD01	PIPE UNDERDRAIN 6-INCH

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 10	E

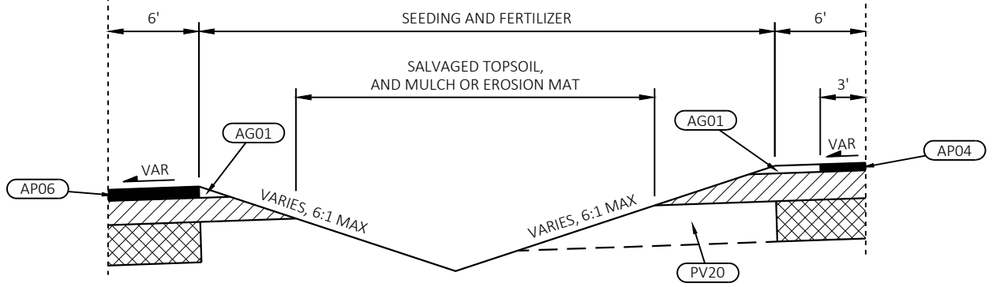


MSG GUARDRAIL 3 SB LT

STA. 904+22'SB' TO STA. 905+75'SB'

CURB & GUTTER

STA. 905+96'SB' TO STA. 907+58'SB'



SHOULDER

STA. 907+70'NB' TO STA. 910+05'NB'

STA. 907+58'SB' TO STA. 910+05'SB'

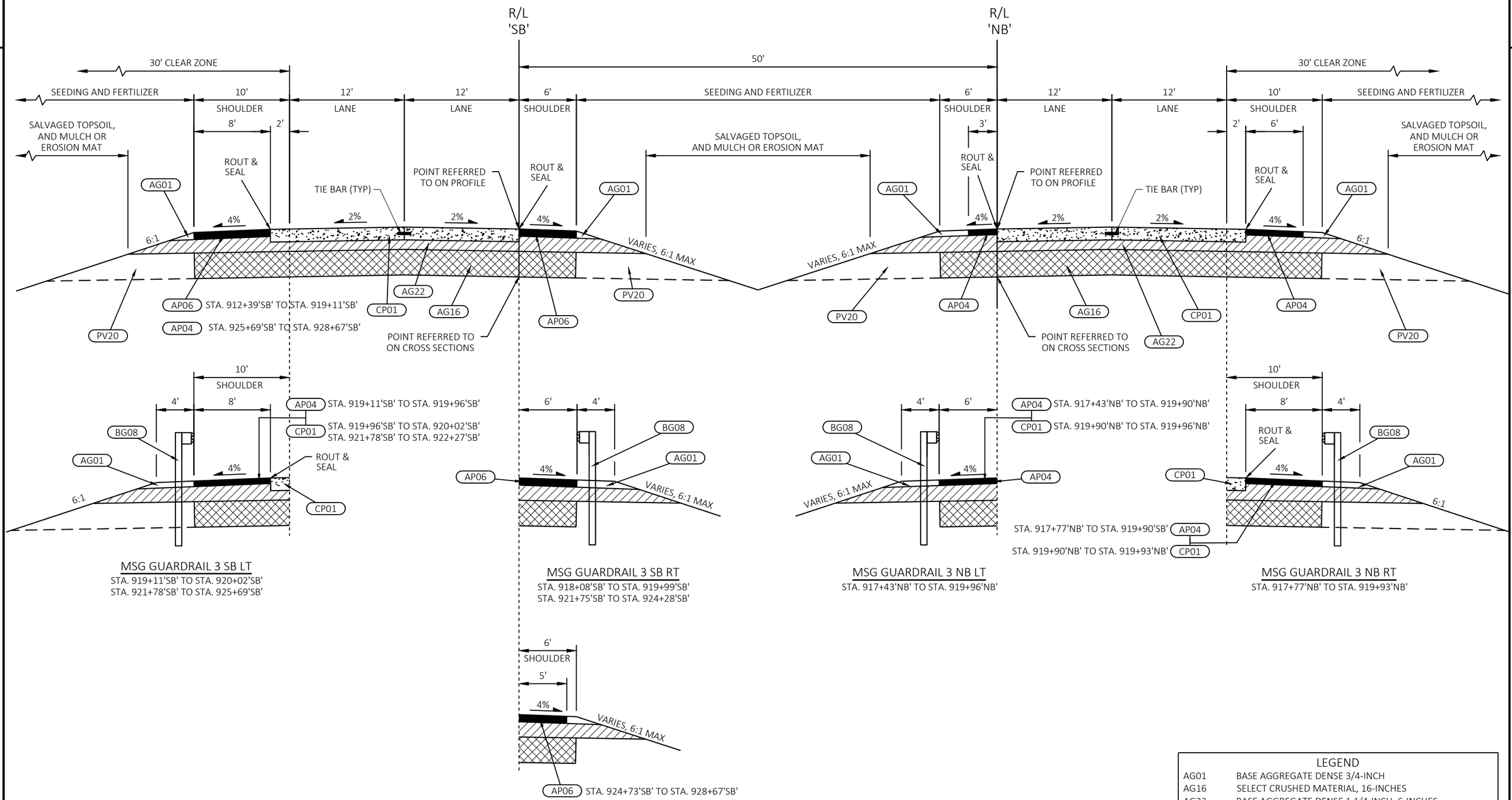
TYPICAL FINISHED SECTION - USH 51

STA. 902+98'NB' TO STA. 910+05'NB'

** USE DRIVEWAY ENTRANCE CURB
STA 905+84'SB', RT TO 906+96'SB', RT

LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AG16	SELECT CRUSHED MATERIAL, 16-INCHES
AG22	BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCHES
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
BG08	MGS GUARDRAIL 3
CP01	CONCRETE PAVEMENT 8-INCH
PV20	RELIEF TRENCHES AT DITCH SAG POINTS OR EVERY 250 FEET

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 11	E



MSG GUARDRAIL 3 SB LT
STA. 919+11'SB' TO STA. 920+02'SB'
STA. 921+78'SB' TO STA. 925+69'SB'

MSG GUARDRAIL 3 SB RT
STA. 918+08'SB' TO STA. 919+99'SB'
STA. 921+75'SB' TO STA. 924+28'SB'
AP06 STA. 924+73'SB' TO STA. 928+67'SB'

MSG GUARDRAIL 3 NB LT
STA. 917+43'NB' TO STA. 919+96'NB'

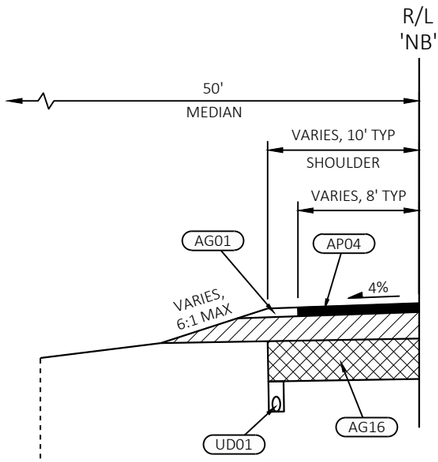
MSG GUARDRAIL 3 NB RT
STA. 917+77'NB' TO STA. 919+90'SB'
STA. 919+90'NB' TO STA. 919+93'NB'

TYPICAL FINISHED SECTION - USH 51
STA. 910+05'NB' TO STA. 920+09'NB'
STA. 921+58'NB' TO STA. 928+67'NB'

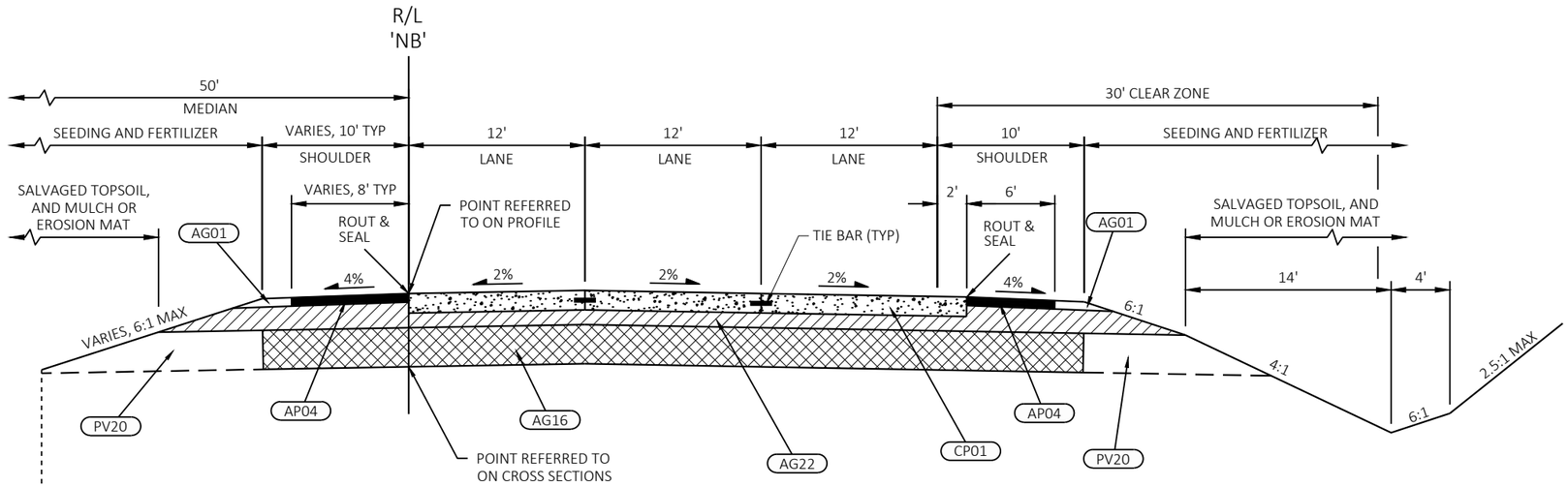
LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AG16	SELECT CRUSHED MATERIAL, 16-INCHES
AG22	BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCHES
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
CP01	CONCRETE PAVEMENT 8-INCH
PV20	RELIEF TRENCHES AT DITCH SAG POINTS OR EVERY 250 FEET

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 12	E

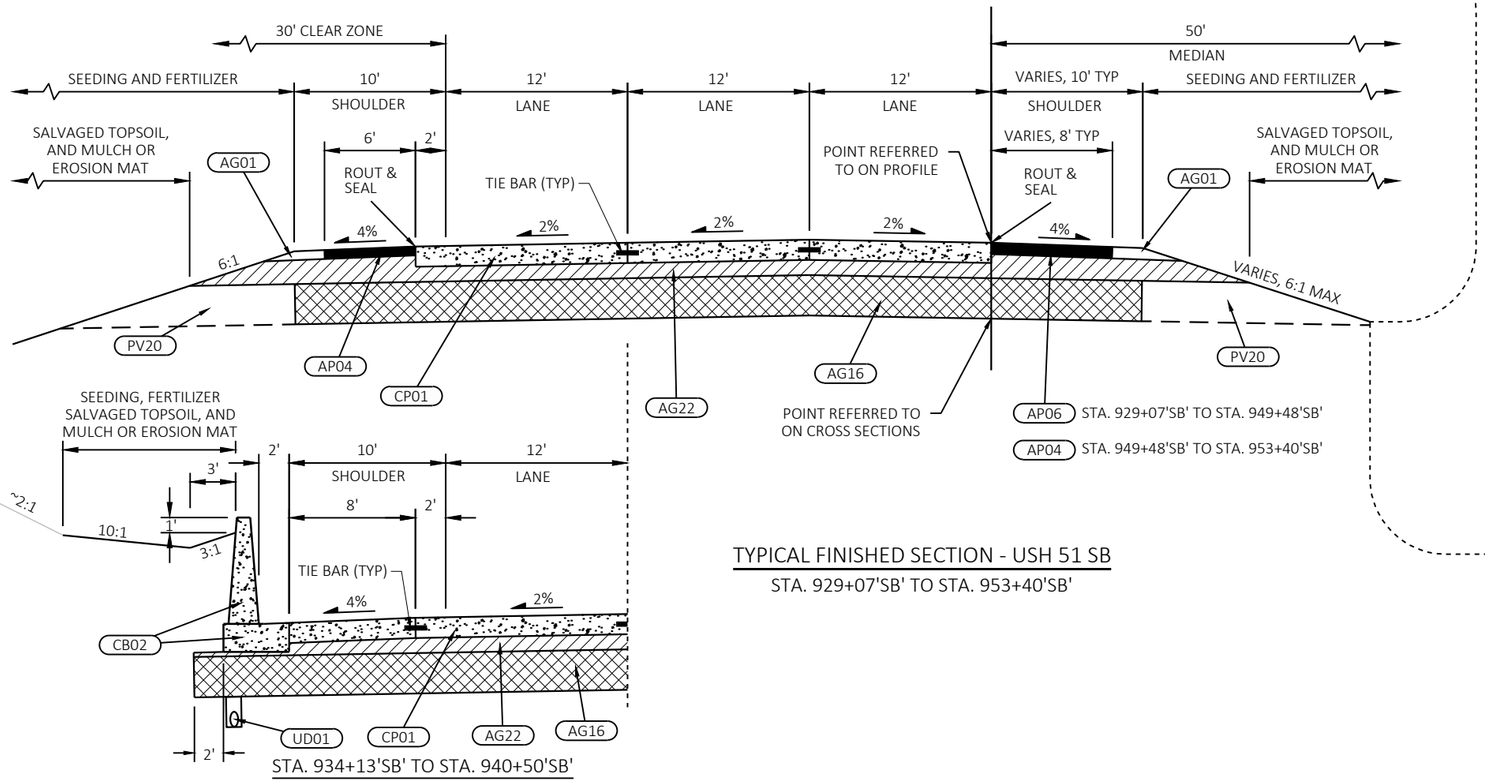
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_020301_TS.DWG
LAYOUT NAME - FIN-03
PLOT DATE : 7/26/2024 11:37 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



PIPE UNDERDRAIN
STA. 943+90'NB' TO STA. 946+54'NB'

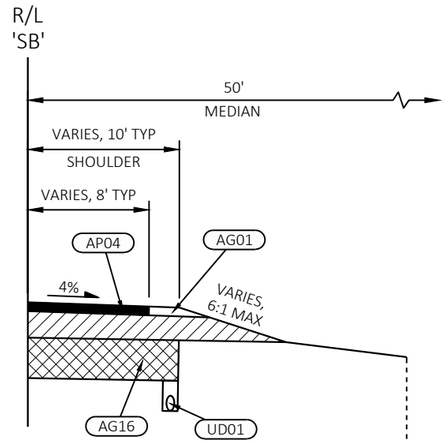


TYPICAL FINISHED SECTION - USH 51 NB
STA. 928+67'NB' TO STA. 953+40'NB'



STA. 934+13'SB' TO STA. 940+50'SB'

TYPICAL FINISHED SECTION - USH 51 SB
STA. 929+07'SB' TO STA. 953+40'SB'



PIPE UNDERDRAIN
STA. 943+75'SB' TO STA. 946+54'SB'

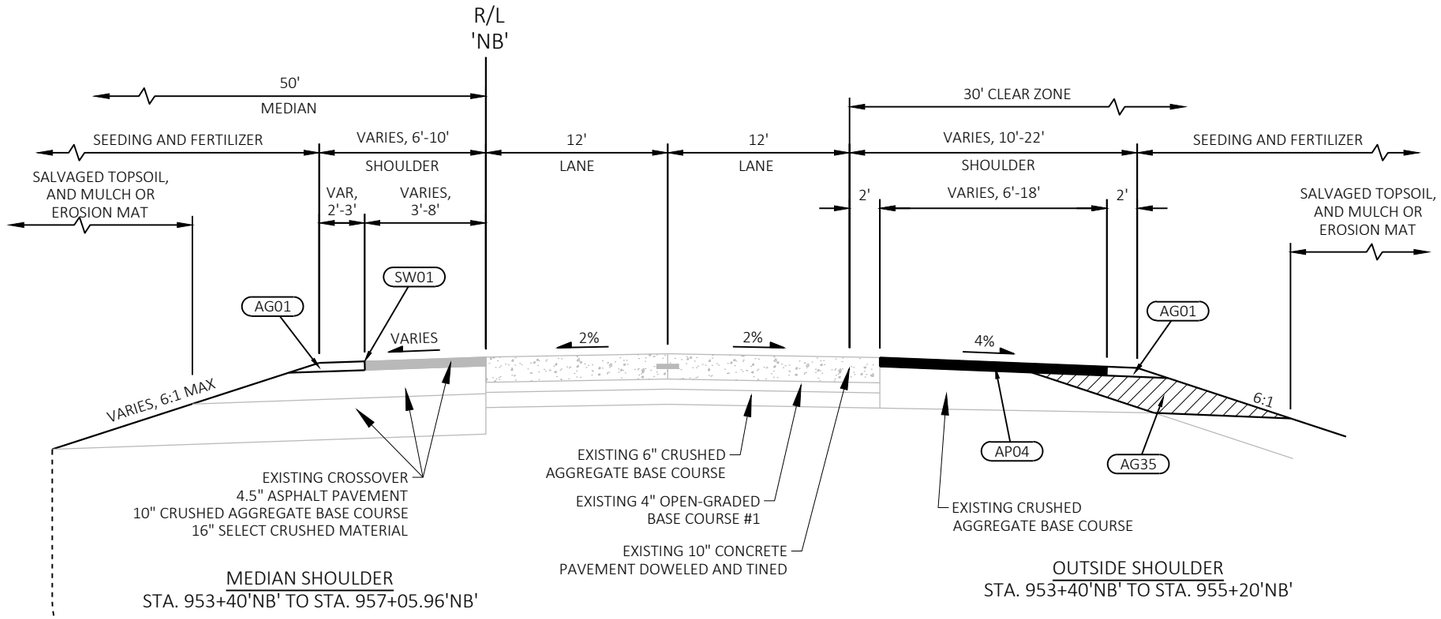
LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AG16	SELECT CRUSHED MATERIAL, 16-INCHES
AG22	BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCHES
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
CB02	CONCRETE BARRIER TYPE S42C
CP01	CONCRETE PAVEMENT 8-INCH
PV20	RELIEF TRENCHES AT DITCH SAG POINTS OR EVERY 250 FEET

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 13	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_020301_TS.DWG
LAYOUT NAME - FIN-04
PLOT DATE : 7/26/2024 11:37 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

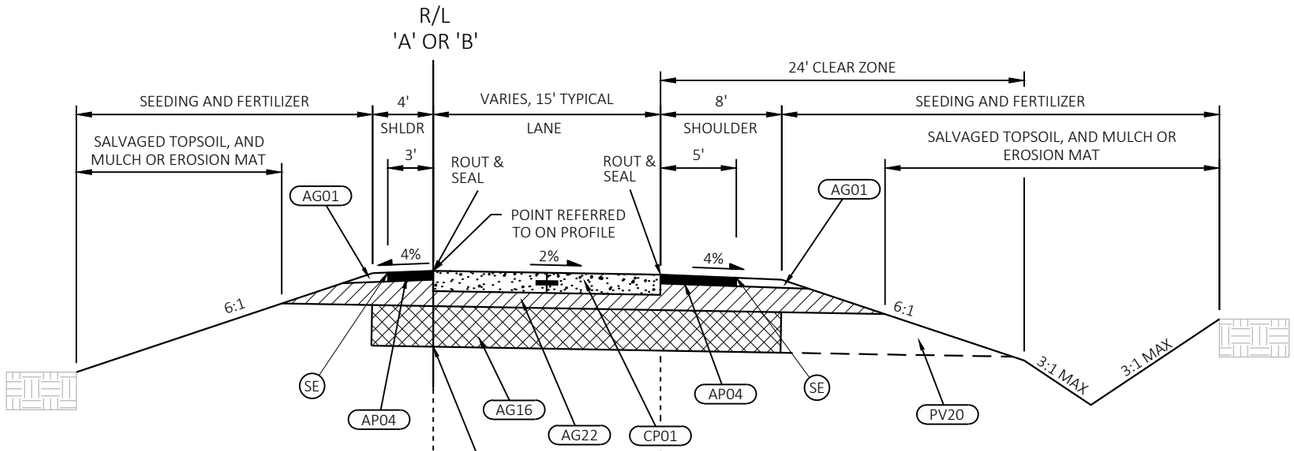
2



TYPICAL FINISHED SECTION - USH 51

STA. 953+40'NB' TO STA. 957+05.96'NB'

LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AG22	BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCHES
AG35	BASE AGGREGATE DENSE 1 1/4-INCH, 16.5 INCHES
AP04	3.5-INCH HMA PAVEMENT
SW01	SAWING ASPHALT

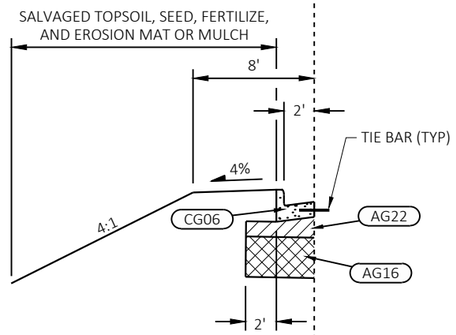


NO CURB AND GUTTER LT SIDE

STA 110+85'A' TO STA 117+69'A'
STA 222+76'B' TO STA 229+90'B'

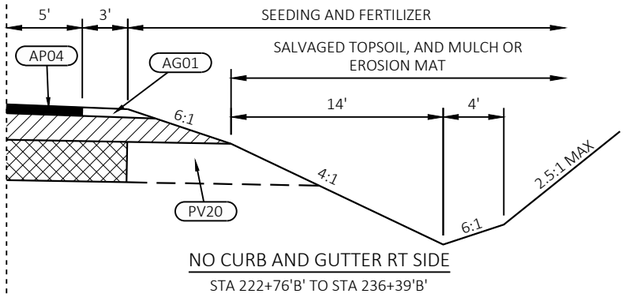
NO CURB AND GUTTER RT SIDE

STA 111+10'A' TO STA 117+69'A'



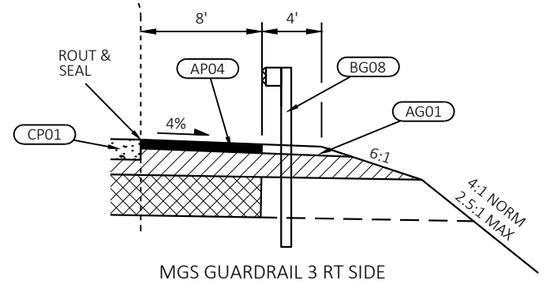
CURB & GUTTER LT

STA 117+69'A' TO STA 119+96'A'
STA 221+26'B' TO STA 222+76'B'



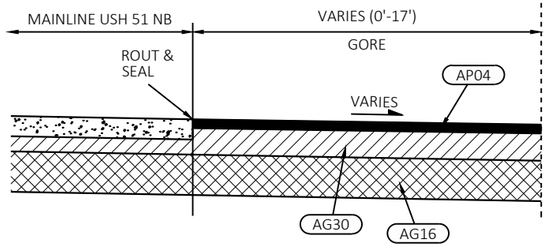
NO CURB AND GUTTER RT SIDE

STA 222+76'B' TO STA 236+39'B'



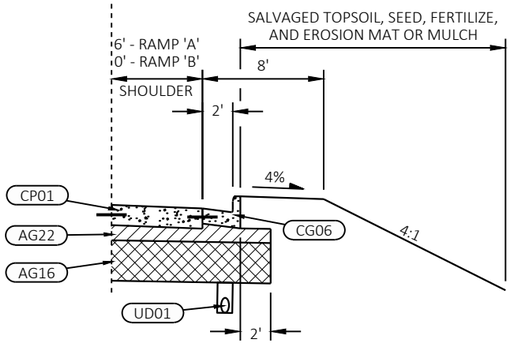
MGS GUARDRAIL 3 RT SIDE

STA. 108+72'A' TO STA. 111+10'A'



CONNECTION TO USH 51 MAINLINE NB

STA 108+97'A' TO STA 110+85'A'
STA 229+90'B' TO STA 233+39'B'



CURB & GUTTER RT

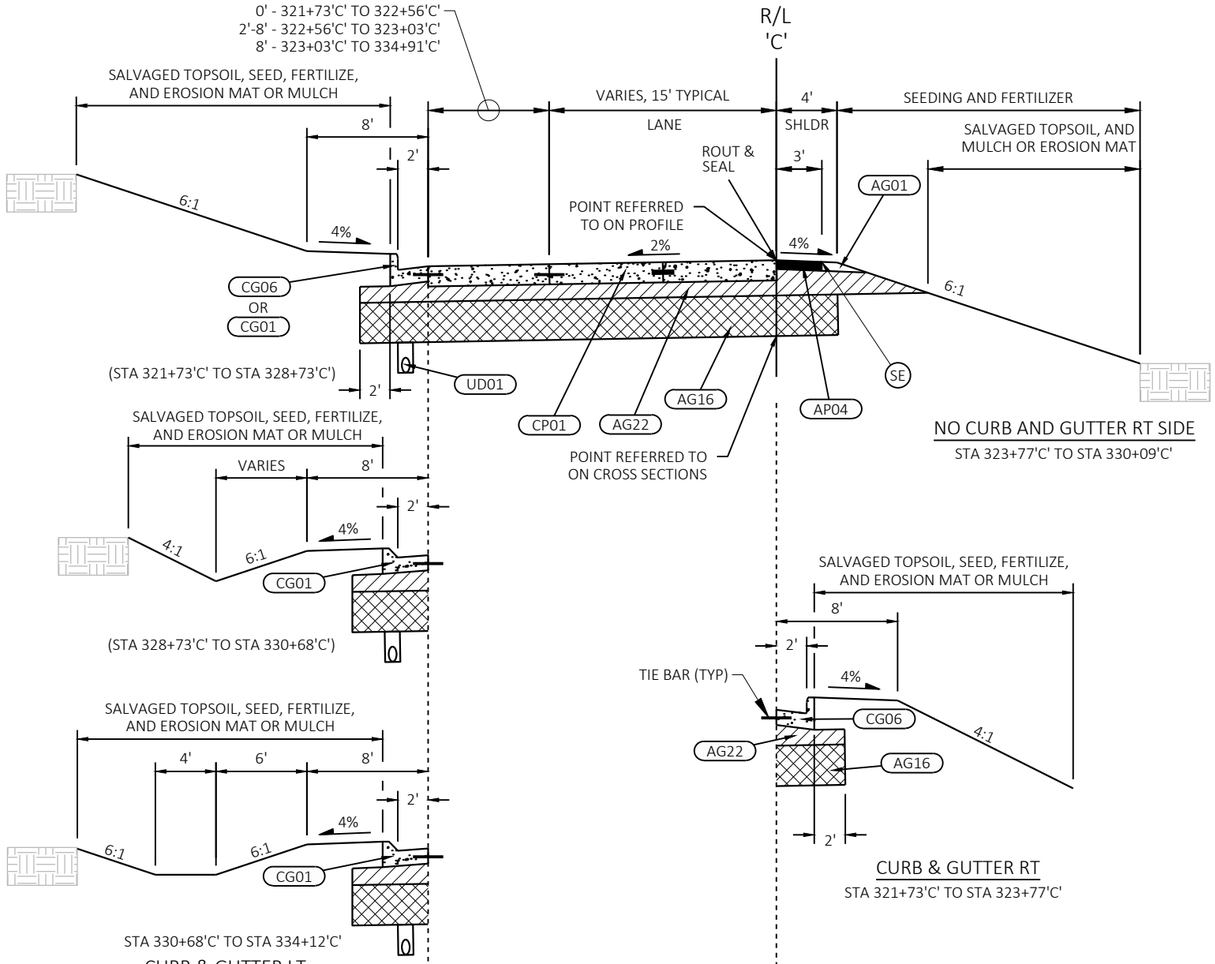
STA 117+69'A' TO STA 119+96'A'
STA 221+26'B' TO STA 222+76'B'

TYPICAL FINISHED SECTION - 'A' AND 'B' RAMPS

STA. 108+72'A' TO STA. 119+96'A'
STA. 221+26'B' TO STA. 236+39'B'

LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AG16	SELECT CRUSHED MATERIAL, 16-INCHES
AG30	BASE AGGREGATE DENSE 1 1/4-INCH, 10.5-INCHES
AP04	3.5-INCH HMA PAVEMENT
CG06	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG07	CONCRETE CURB & GUTTER 30-INCH TYPE D
CP01	CONCRETE PAVEMENT 8-INCH
PV20	RELIEF TRENCHES AT DITCH SAG POINTS OR EVERY 250 FEET
SE	SAFETY EDGE

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 15	E

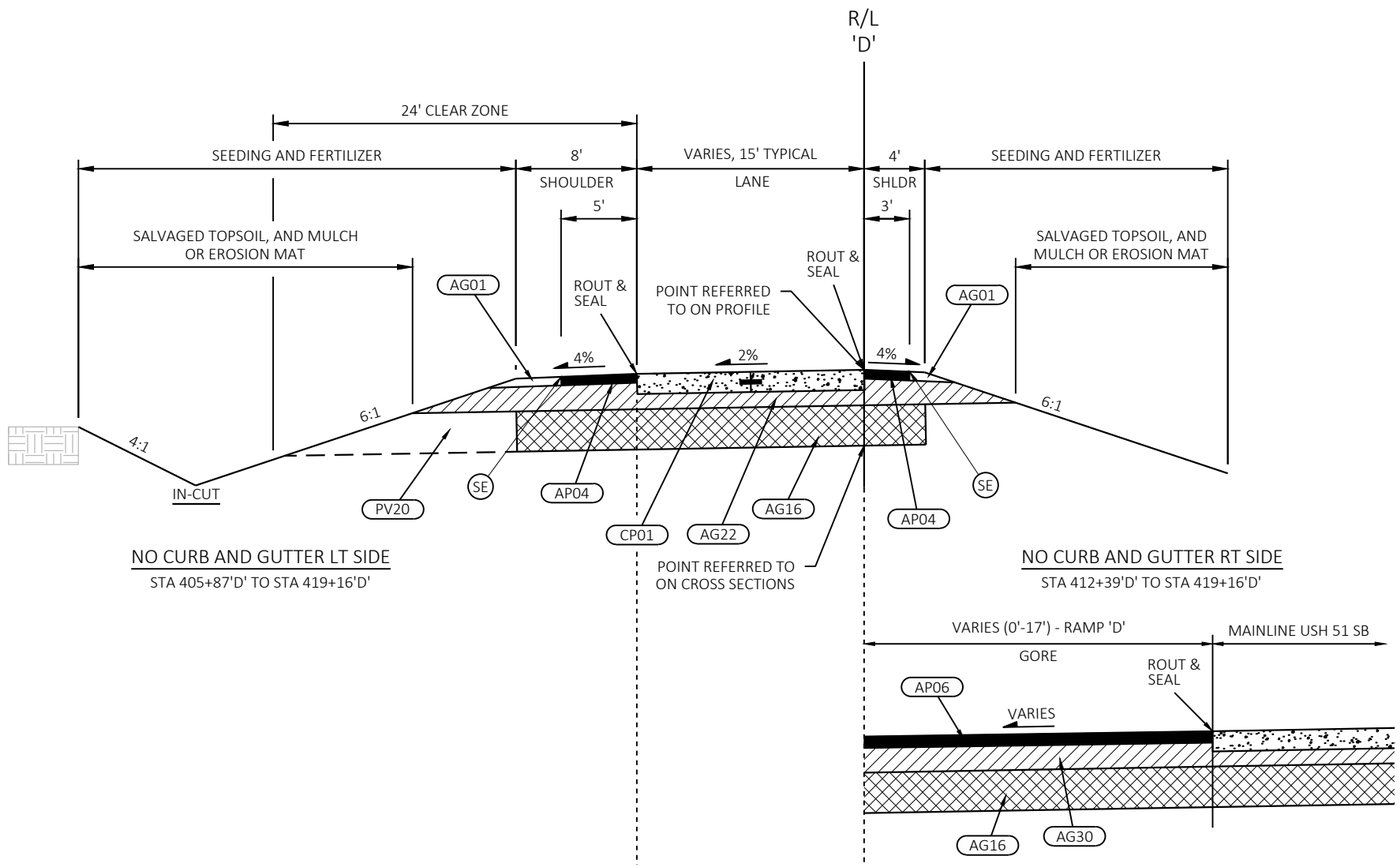


LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AG16	SELECT CRUSHED MATERIAL, 16-INCHES
AG22	BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCHES
AG30	BASE AGGREGATE DENSE 1 1/4-INCH, 10.5-INCHES
AP04	3.5-INCH HMA PAVEMENT
CB02	CONCRETE BARRIER TYPE S42C
CG01	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
CG06	CONCRETE CURB & GUTTER 30-INCH TYPE A
CP01	CONCRETE PAVEMENT 8-INCH
PV20	RELIEF TRENCHES AT DITCH SAG POINTS OR EVERY 250 FEET
SE	SAFETY EDGE

TYPICAL FINISHED SECTION - 'C' RAMP

STA. 321+73'C' TO STA. 334+91'C'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 16	E



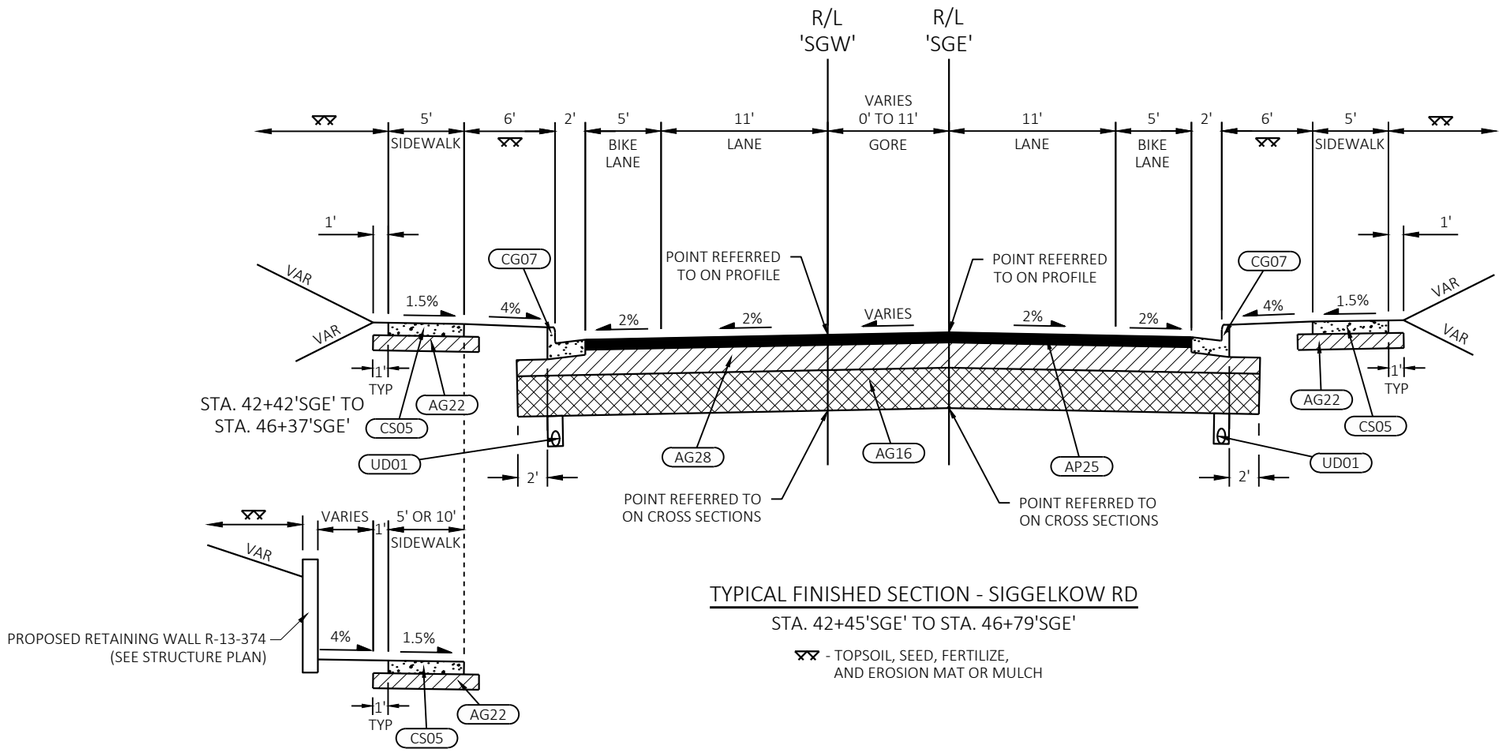
LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AG16	SELECT CRUSHED MATERIAL, 16-INCHES
AG22	BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCHES
AG30	BASE AGGREGATE DENSE 1 1/4-INCH, 10.5-INCHES
AP04	3.5-INCH HMA PAVEMENT
CG06	CONCRETE CURB & GUTTER 30-INCH TYPE A
CP01	CONCRETE PAVEMENT 8-INCH
PV20	RELIEF TRENCHES AT DITCH SAG POINTS OR EVERY 250 FEET
SE	SAFETY EDGE

TYPICAL FINISHED SECTION - 'D' RAMP

STA. 405+87'D' TO STA. 420+43'D'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 17	E

2

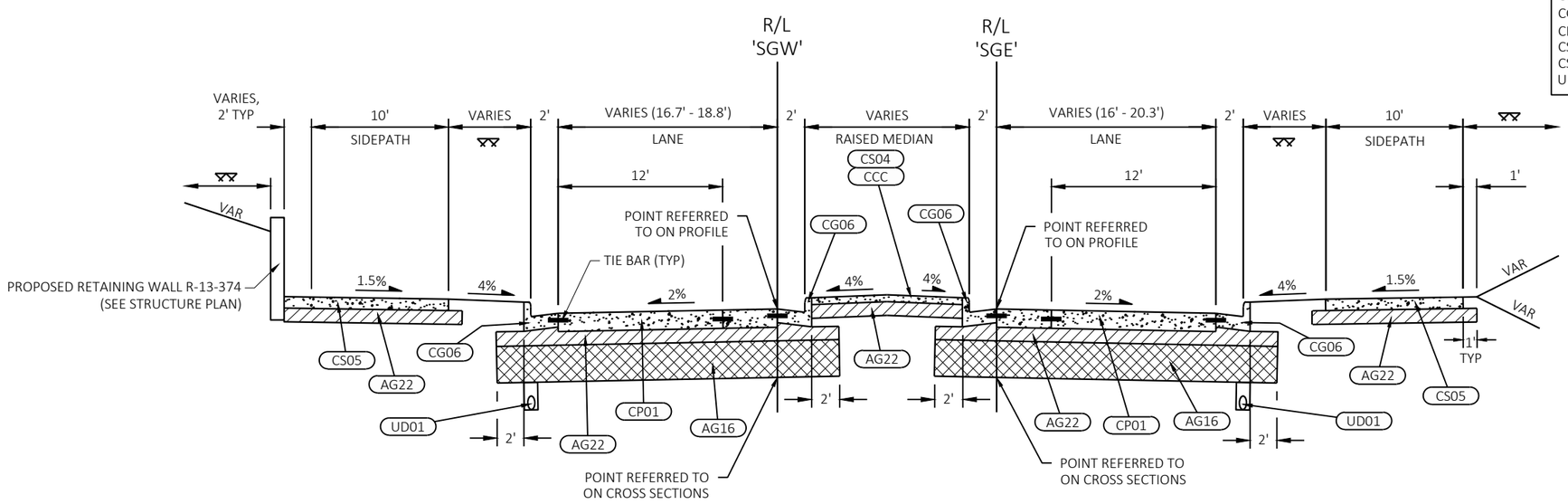


TYPICAL FINISHED SECTION - SIGGELKOW RD

STA. 42+45'SGE' TO STA. 46+79'SGE'

- TOPSOIL, SEED, FERTILIZE, AND EROSION MAT OR MULCH

LEGEND	
AG16	SELECT CRUSHED MATERIAL, 16-INCHES
AG22	BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCHES
AG28	BASE AGGREGATE DENSE 1 1/4-INCH, 10-INCHES
AP25	4.0-INCH HMA PAVEMENT
CCC	COLORING CONCRETE CUSTOM
CG06	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG07	CONCRETE CURB & GUTTER 30-INCH TYPE D
CP01	CONCRETE PAVEMENT 8-INCH
CS04	CONCRETE SIDEWALK 4-INCH
CS05	CONCRETE SIDEWALK 5-INCH
UD01	PIPE UNDERDRAIN 6-INCH



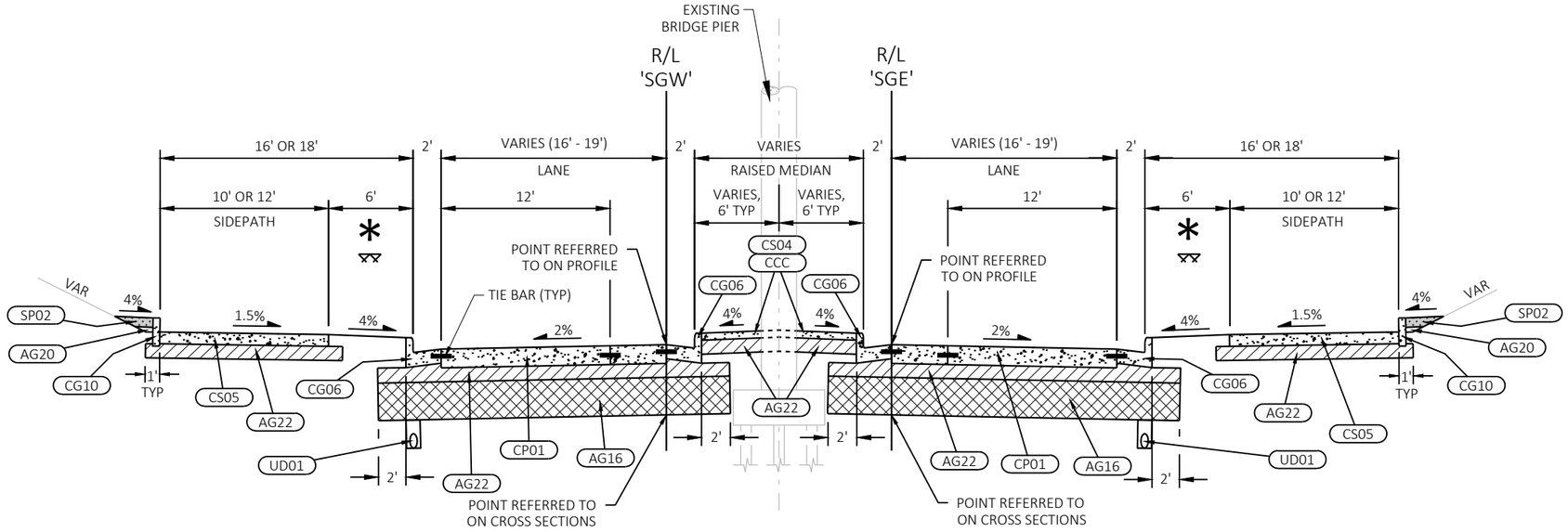
TYPICAL FINISHED SECTION - SIGGELKOW RD

STA. 46+79'SGE' TO STA. 47+39'SGE'

- TOPSOIL, SEED, FERTILIZE, AND EROSION MAT OR MULCH

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 18	E

2



TYPICAL FINISHED SECTION - SIGGELKOW RD

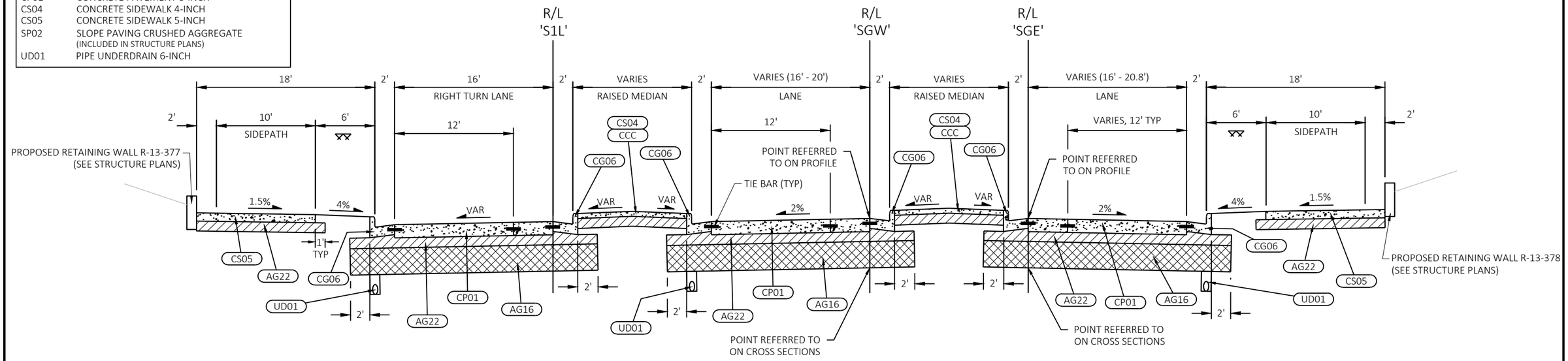
STA. 48+68'SGE' TO STA. 50+81'SGE'

* - BENEATH BRIDGE STRUCTURES, CONCRETE SIDEWALK 5-INCH WITH COLORING CONCRETE CUSTOM OVER 6 INCHES BASE AGGREGATE DENSE 1 1/4-INCH

⩛ - TOPSOIL, SEED, FERTILIZE, AND EROSION MAT OR MULCH

LEGEND

AG16	SELECT CRUSHED MATERIAL, 16-INCHES
AG20	BASE AGGREGATE DENSE 1 1/4-INCH
AG22	BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCHES
CCC	COLORING CONCRETE CUSTOM
CG06	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG10	CONCRETE CURB PEDESTRIAN
CP01	CONCRETE PAVEMENT 8-INCH
CS04	CONCRETE SIDEWALK 4-INCH
CS05	CONCRETE SIDEWALK 5-INCH
SP02	SLOPE PAVING CRUSHED AGGREGATE (INCLUDED IN STRUCTURE PLANS)
UD01	PIPE UNDERDRAIN 6-INCH

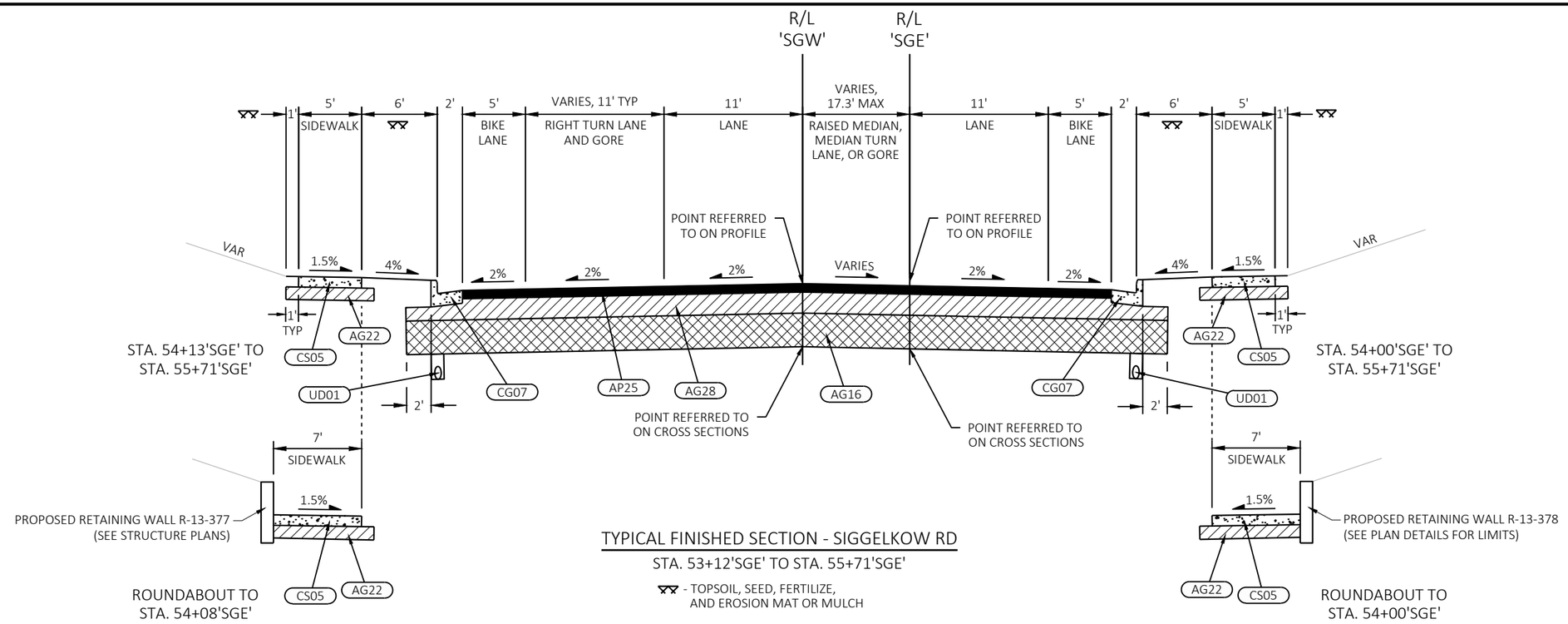


TYPICAL FINISHED SECTION - SIGGELKOW RD

STA. 52+17'SGE' TO STA. 53+12'SGE'

⩛ - TOPSOIL, SEED, FERTILIZE, AND EROSION MAT OR MULCH

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TYPICAL SECTIONS	SHEET 19	E

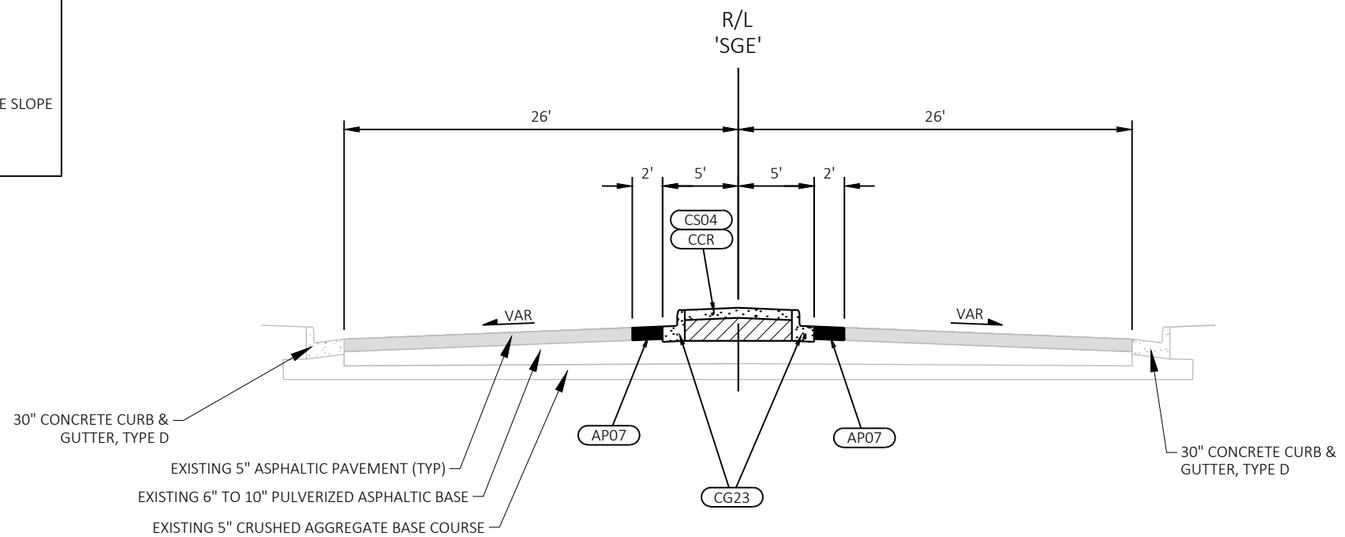


TYPICAL FINISHED SECTION - SIGGELKOW RD

STA. 53+12'SGE' TO STA. 55+71'SGE'

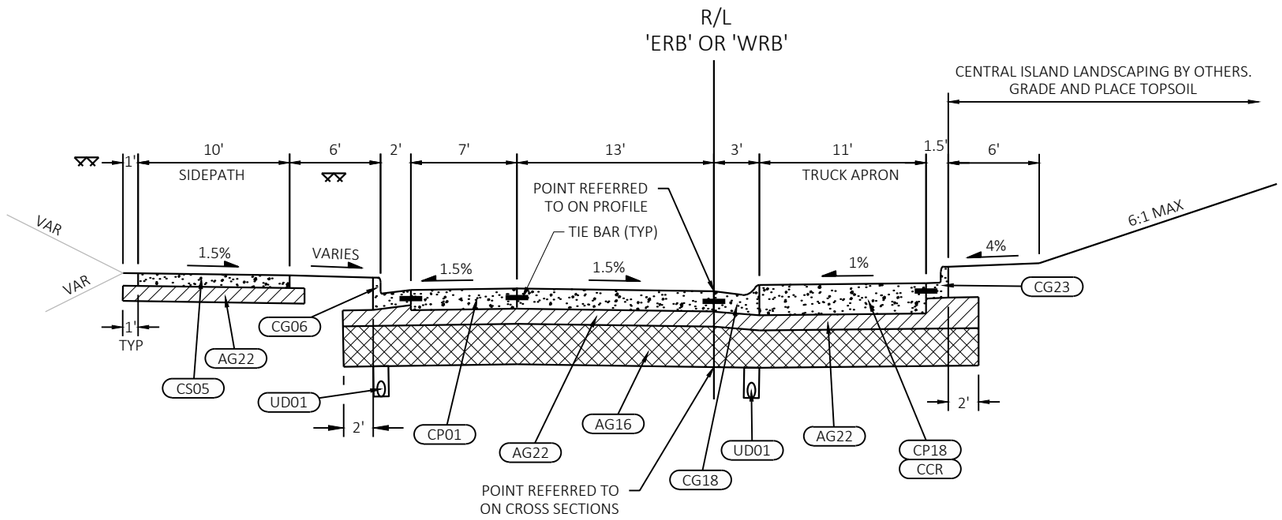
- TOPSOIL, SEED, FERTILIZE, AND EROSION MAT OR MULCH

LEGEND	
AG16	SELECT CRUSHED MATERIAL, 16-INCHES
AG22	BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCHES
AG28	BASE AGGREGATE DENSE 1 1/4-INCH, 10-INCHES
AP07	5.0-INCH HMA PAVEMENT
AP25	4.0-INCH HMA PAVEMENT
CCR	COLORING CONCRETE WISDOT RED
CG07	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG07R	CONCRETE CURB & GUTTER 30-INCH TYPE D, REVERSE SLOPE
CS04	CONCRETE SIDEWALK 4-INCH
CS05	CONCRETE SIDEWALK 5-INCH
UD01	PIPE UNDERDRAIN 6-INCH



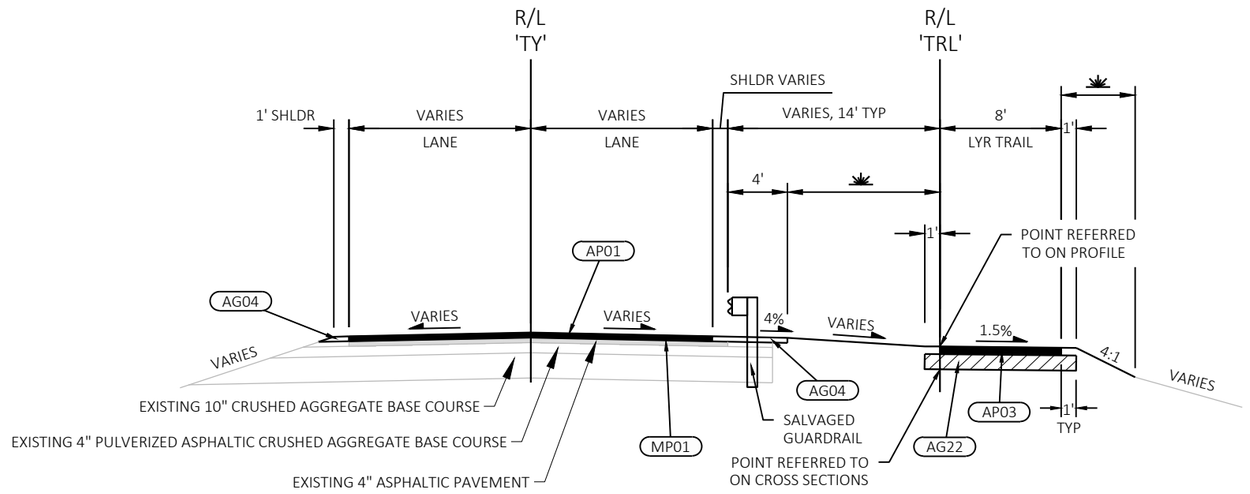
TYPICAL FINISHED PARTIAL SECTION - SIGGELKOW RD

STA. 56+58'SGE' TO STA. 57+52.60'SGE'



TYPICAL FINISHED HALF-SECTION - SIGGELKOW ROUNDABOUTS

- TOPSOIL, SEED, FERTILIZE, AND EROSION MAT OR MULCH



TYPICAL FINISHED SECTION - TAYLOR RD

STA 10+16.96'TY' TO STA 12+27.42'TY'
STA 10+30.33'TRL' TO STA 12+28.19'TRL'

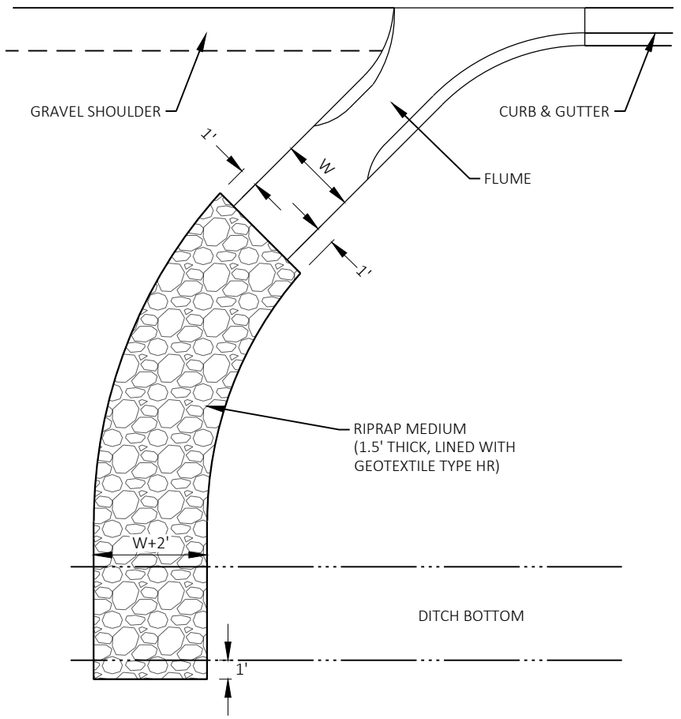
SALVAGED TOPSOIL, SEED, FERTILIZE, AND EROSION MAT OR MULCH

LEGEND	
AG04	BASE AGGREGATE DENSE 3/4-INCH, 2-INCHES
AG16	SELECT CRUSHED MATERIAL, 16-INCHES
AG22	BASE AGGREGATE DENSE 1 1/4-INCH, 6-INCHES
AP01	2.0-INCH HMA PAVEMENT
AP03	3.0-INCH HMA PAVEMENT
CCR	COLORING CONCRETE WISDOT RED
CG06	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG18	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R
CG23	CONCRETE CURB & GUTTER 18-INCH TYPE A, REVERSE SLOPE
CP01	CONCRETE PAVEMENT 8-INCH
CP18	CONCRETE TRUCK APRON 12-INCH
CS05	CONCRETE SIDEWALK 5-INCH
MP01	REMOVING ASPHALTIC SURFACE MILLING, 2-INCH
UD01	PIPE UNDERDRAIN 6-INCH

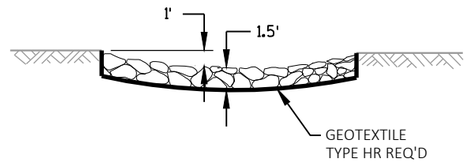
A	HYDROLOGIC SOIL GROUP											
	B		C						D			
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .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 = 57.43 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 34.91 ACRES

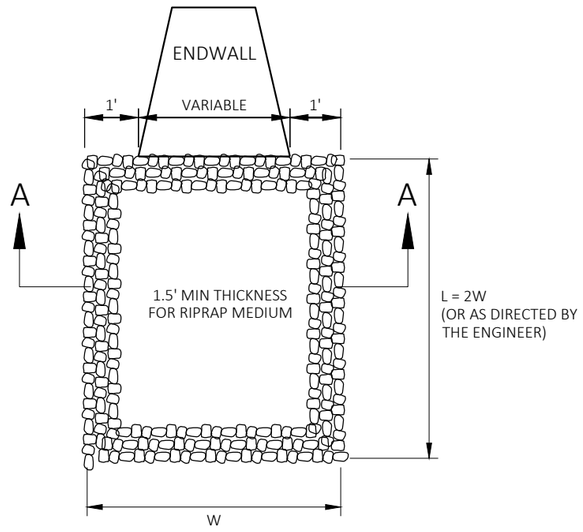
RUNOFF COEFFICIENT TABLE



DETAIL FOR RIPRAP MEDIUM AT FLUMES

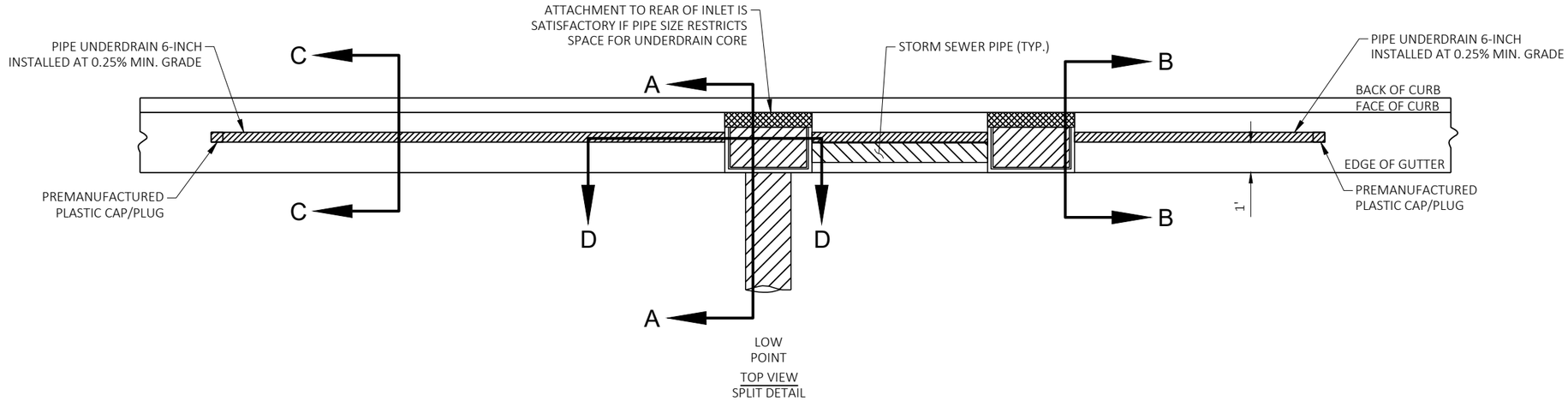


SECTION A-A

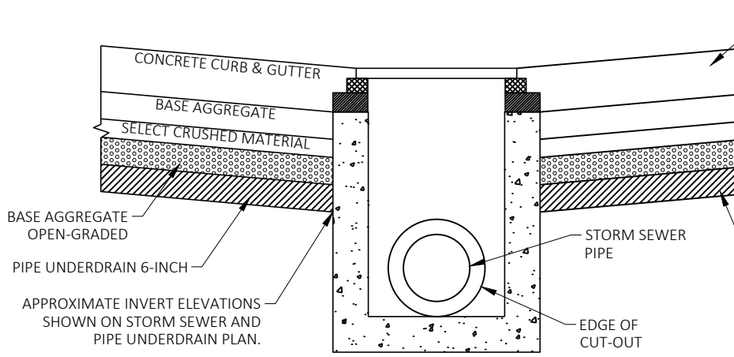


DETAIL FOR RIPRAP MEDIUM TREATMENT AT CULVERTS

2

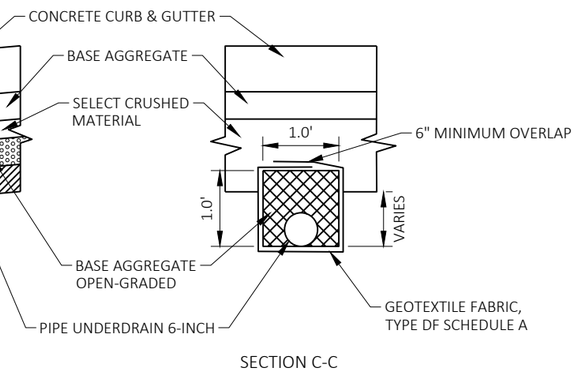


TOP VIEW
SPLIT DETAIL



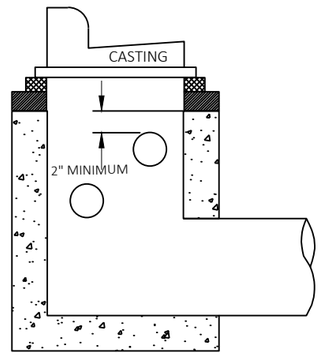
SECTION D-D

TYPICAL INLET CONFIGURATION
WITH UNDERDRAIN CORED INTO
WALL WITH NO PIPE FOUND AT LOW
POINTS WITHOUT FLANKING INLETS



SECTION C-C

NOTE:
(1) BOTTOM OF PIPE SHALL BE PLACED AT THE BOTTOM OF BASE AGGREGATE OPEN-GRADED MATERIAL.
(2) BOTTOM OF BASE AGGREGATE OPEN-GRADED MATERIAL IS NOT NECESSARILY THE BOTTOM OF THE SELECT CRUSHED MATERIAL.

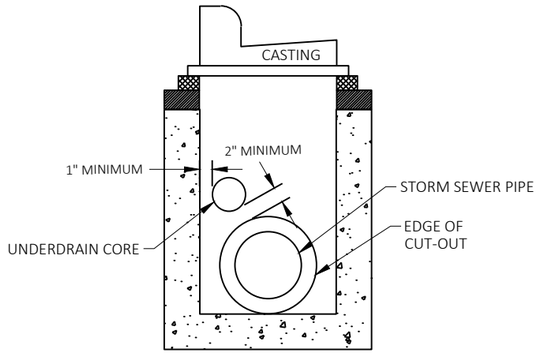


SECTION A-A

NOTE:
(1) TOP OF CORE HOLES WILL BE A MINIMUM OF 2" BELOW THE TOP OF THE INLET STRUCTURES (BOTTOM OF RINGS)
(2) DRAIN TILES SHALL NOT BE ALLOWED IN THE RING OF THE STRUCTURE OF INLETS OR SEWER ACCESS STRUCTURES

CROSS-SECTION VIEW
TYPICAL INLET CONFIGURATION
WITH UNDERDRAIN CORED INTO
WALL WITH CROSSPIPE ONLY

FOUND AT LOW POINTS
WITHOUT FLANKING INLETS



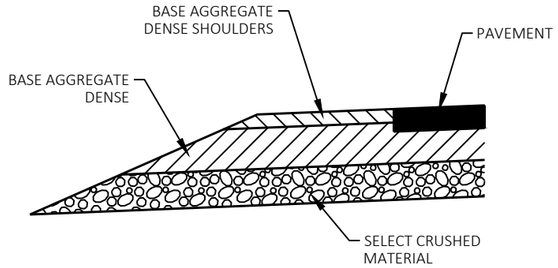
SECTION B-B

NOTE:
(1) CORE HOLES SHALL PROVIDE FOR A MINIMUM OF 2" OF CONCRETE BETWEEN THE CUTOUT FOR A CONCRETE PIPE AND THE EDGE OF THE CORE HOLE.
(2) CORE HOLES MAY HAVE 0" CLEARANCE FROM THE INSIDE WALLS OF A STRUCTURE.

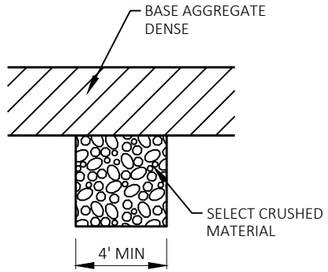
CROSS-SECTION VIEW
TYPICAL INLET IN SUMP
CONDITION WITH UNDERDRAIN
CORED INTO WALL WITH PIPE
FOUND AT FLANKING INLETS
NEAR LOWPOINTS

PIPE UNDERDRAIN 6-INCH

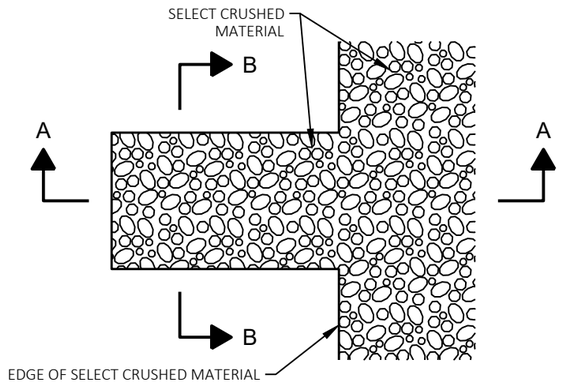
LOCATED ALONG LOW SIDE CURB



SECTION A-A

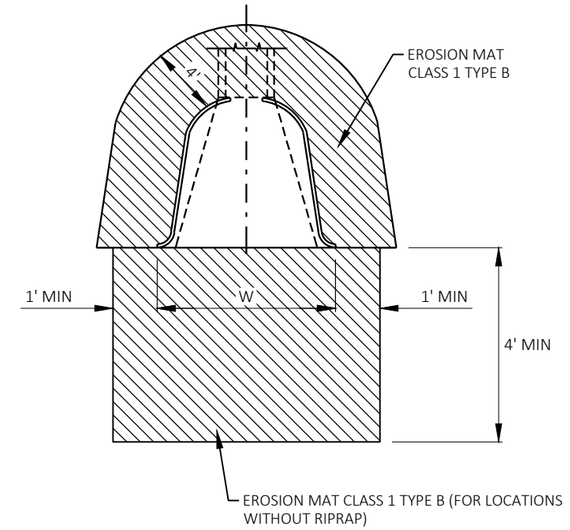


SECTION B-B



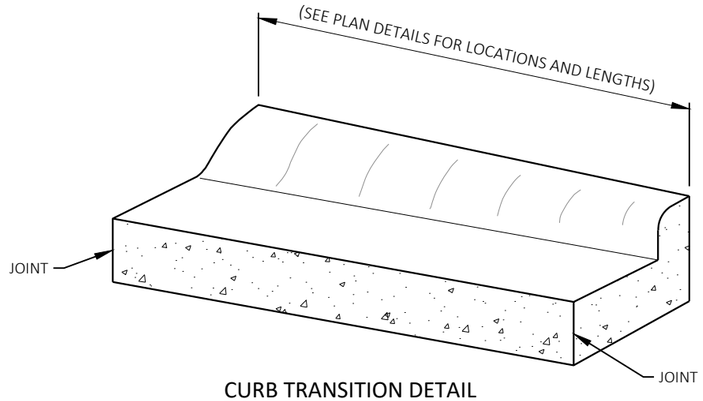
DETAIL FOR RELIEF TRENCHES

TRENCHES ARE TO BE CONSTRUCTED AT LEAST EVERY 250' AND AT EACH SAG VERTICAL CURVE IN THE PROFILE. LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER. EXCAVATION REQUIRED TO CONSTRUCT RELIEF TRENCHES SHALL BE CONSIDERED INCIDENTAL TO THE ITEM "SELECT CRUSHED MATERIAL".



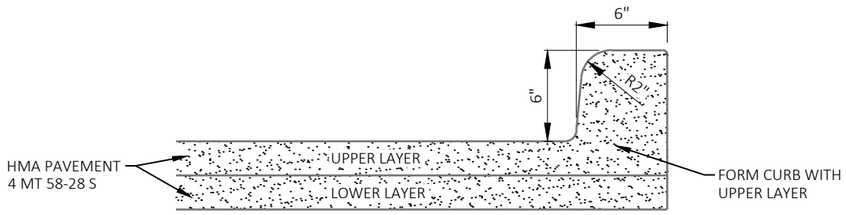
EROSION MAT AT APRON ENDWALLS

(SEE EROSION CONTROL PLANS FOR APPROXIMATE LOCATIONS)

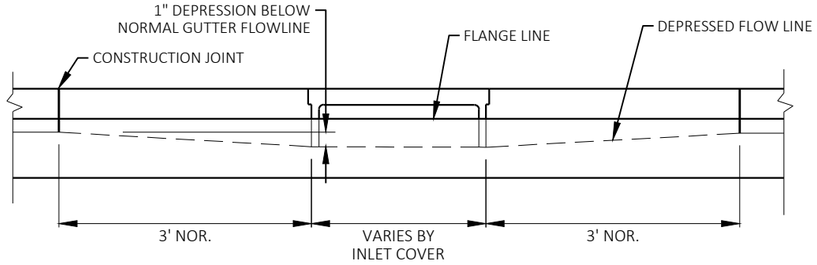


CURB TRANSITION DETAIL

TO BE MEASURED AND PAID FOR AS CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A

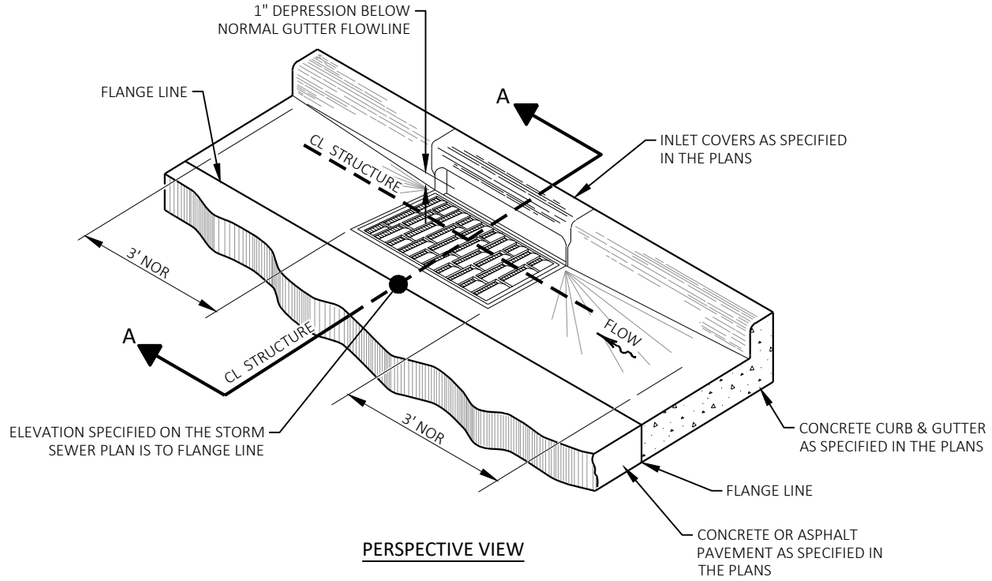


ASPHALTIC CURB DETAIL

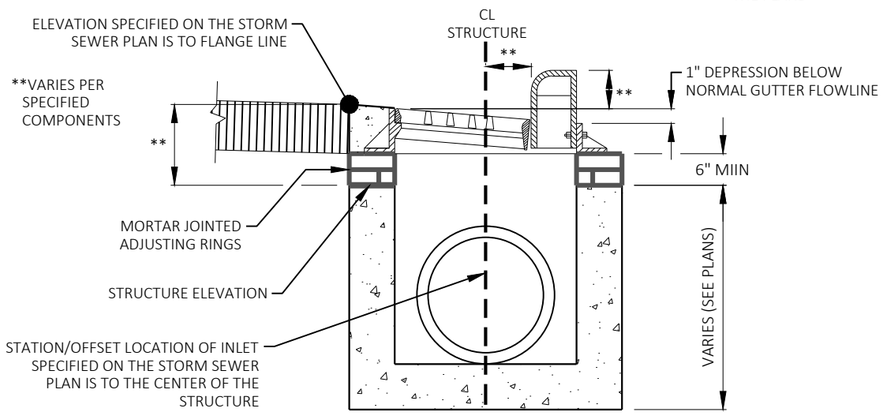


ELEVATION VIEW AT FLANGE LINE

(GRATE AND CURB DETAILS OMITTED FOR DRAWING CLARITY)



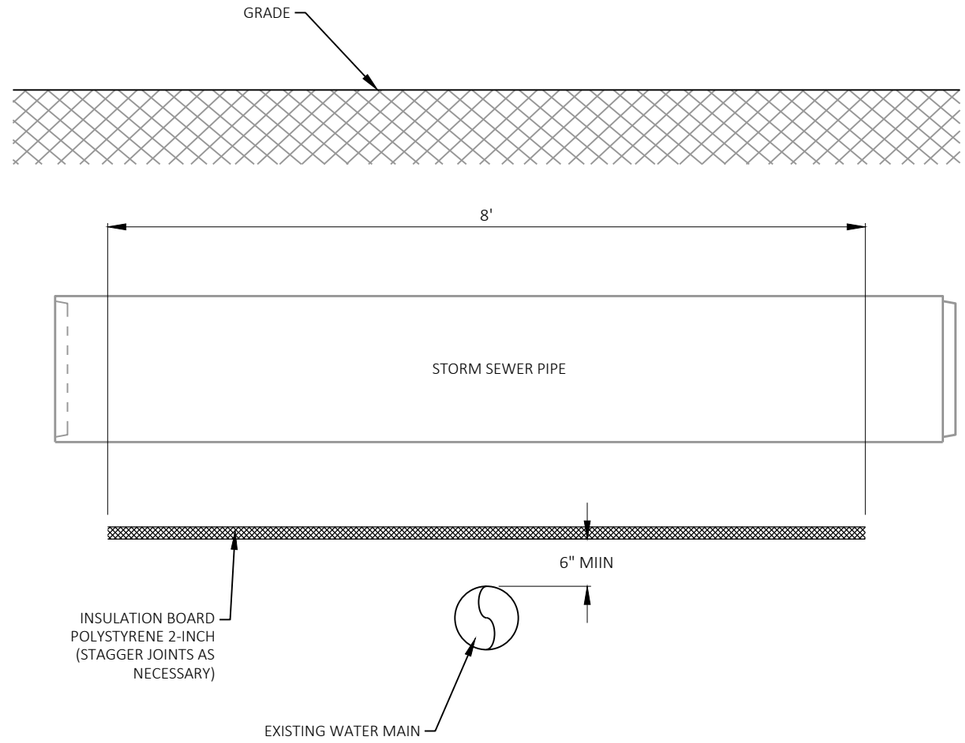
PERSPECTIVE VIEW



SECTION A-A

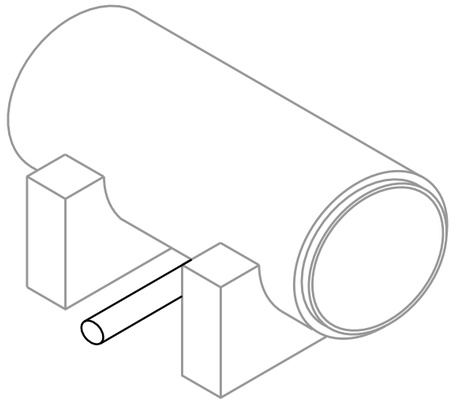
DETAIL OF CURB AND GUTTER AT INLETS

NOTE:
INLET COVER - TYPE H AND CONCRETE CURB AND GUTTER 30-INCH SHOWN FOR DETAIL ILLUSTRATION ONLY. GUTTER PAN DEPRESSION IS SIMILAR FOR OTHER CURB AND GUTTER /INLET COMBINATIONS

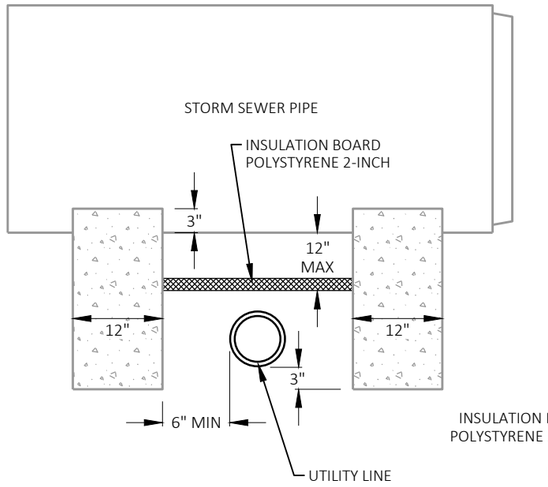


DETAIL OF INSULATION BOARD POLYSTYRENE

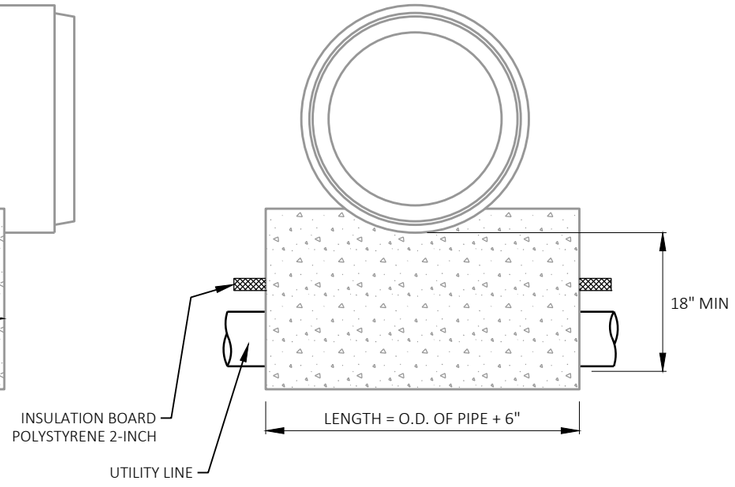
SEE STORM SEWER PLAN FOR LOCATIONS



PERSPECTIVE VIEW



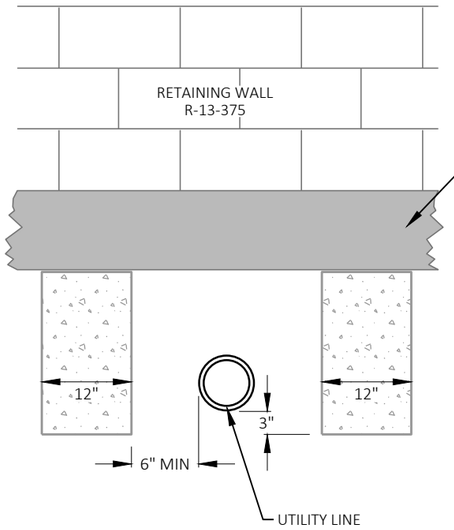
SIDE VIEW



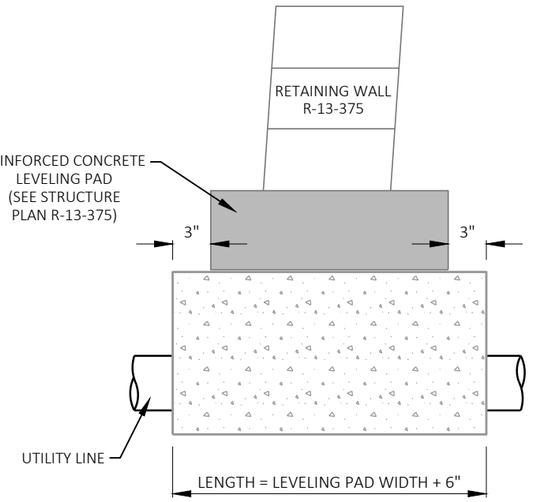
END VIEW

DETAIL OF CONCRETE SUPPORTS (STORM SEWER)

SEE STORM SEWER SHEETS FOR LOCATIONS



SIDE VIEW

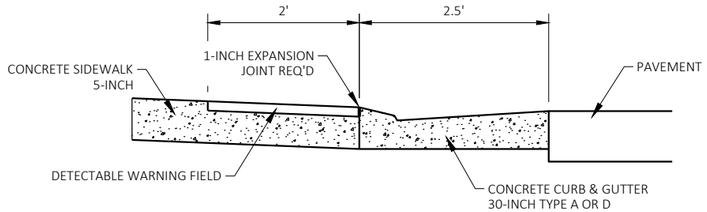


END VIEW

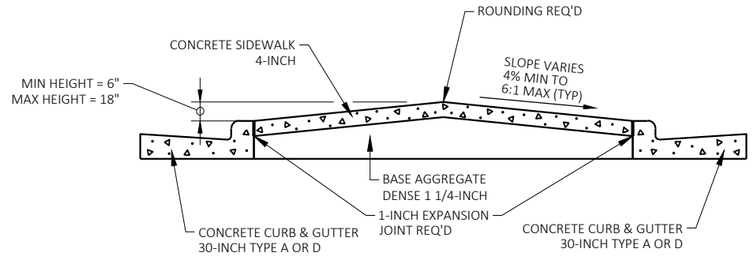
DETAIL OF CONCRETE SUPPORTS (RETAINING WALL)

SEE STRUCTURE PLAN R-13-375 FOR LOCATIONS

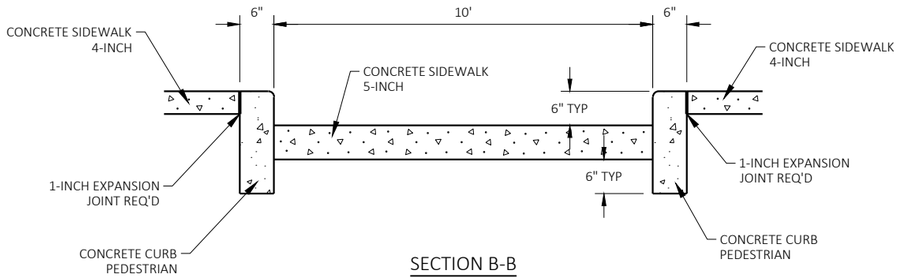
2



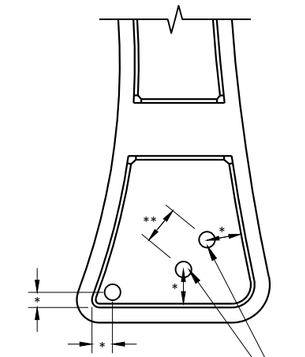
SECTION A-A



SECTION C-C



SECTION B-B

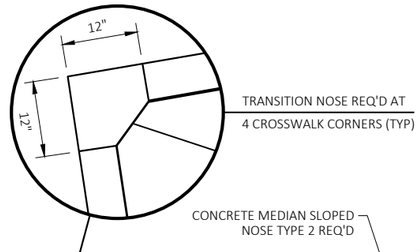


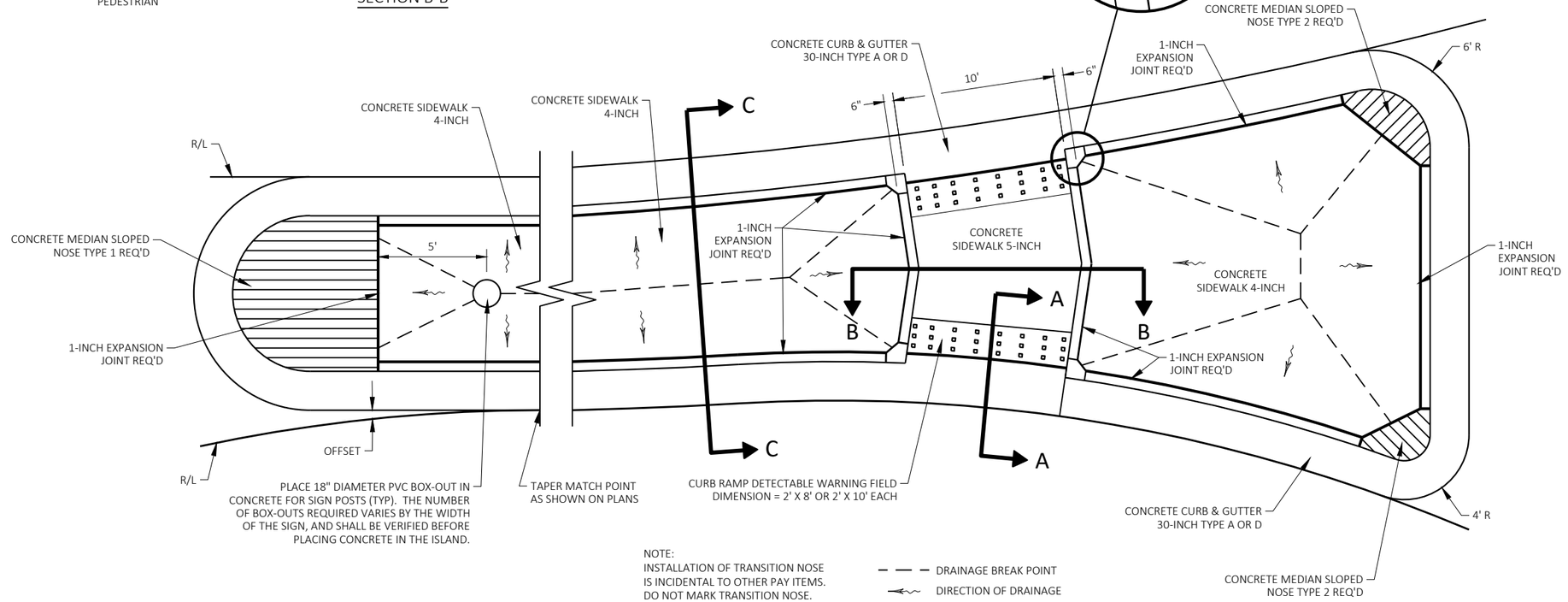
-LACE 18" DIAMETER PVC BOX-OUT IN CONCRETE FOR SIGN POSTS (TYP). THE NUMBER OF BOX-OUTS REQUIRED VARIES BY THE WIDTH OF THE SIGN, AND SHALL BE VERIFIED BEFORE PLACING CONCRETE IN THE ISLAND.

ISLAND SIGN LOCATION DETAIL (TYP)

* DISTANCE TO BE LAID OUT IN THE FIELD BASED ON SIGN SIZE. TWO FOOT MINIMUM CLEARANCE BETWEEN THE EDGE OF SIGN AND THE FACE OF CURB.

** SEE A4-4 SIGN PLATE FOR POST SPACING REQUIREMENTS.





NOTE:
INSTALLATION OF TRANSITION NOSE IS INCIDENTAL TO OTHER PAY ITEMS. DO NOT MARK TRANSITION NOSE.

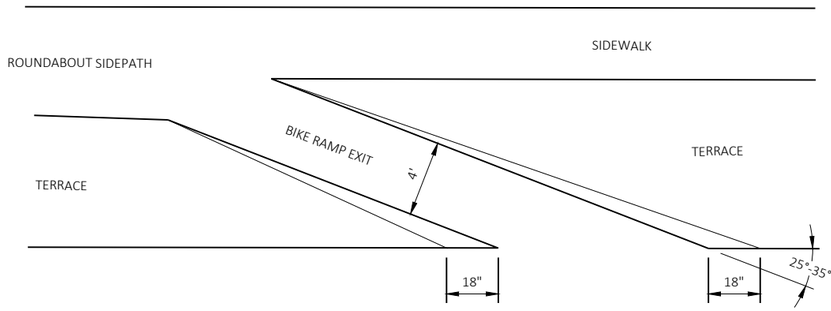
DRAINAGE BREAK POINT

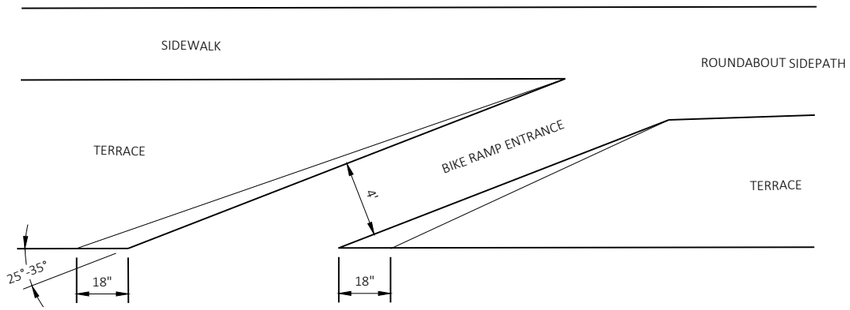
DIRECTION OF DRAINAGE

SPLITTER ISLAND DETAIL

NOT TO SCALE

2

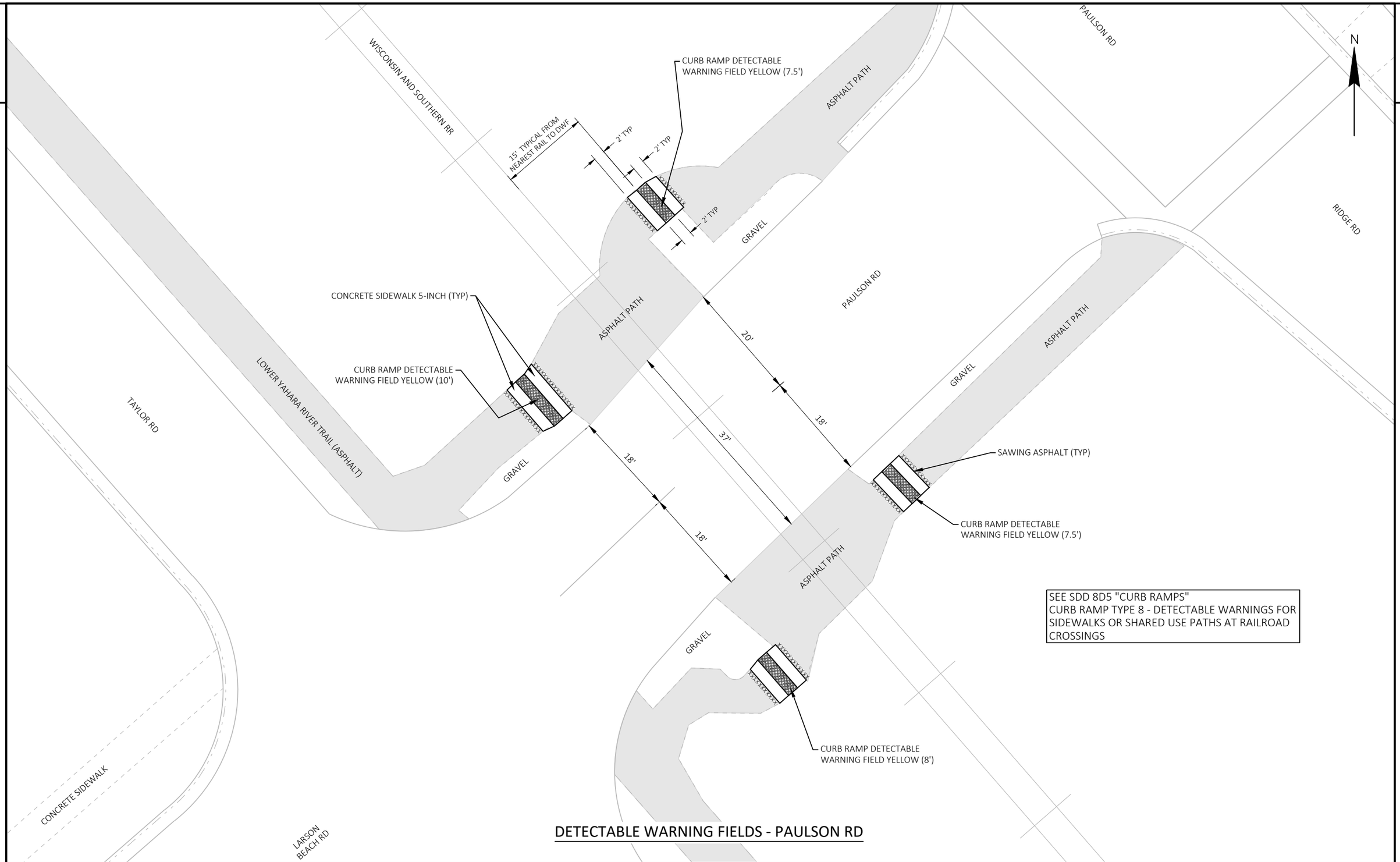




BIKE RAMP ENTRANCE AND EXIT

(TO BE MEASURED AND PAID FOR AS CONCRETE SIDEWALK 5-INCH)

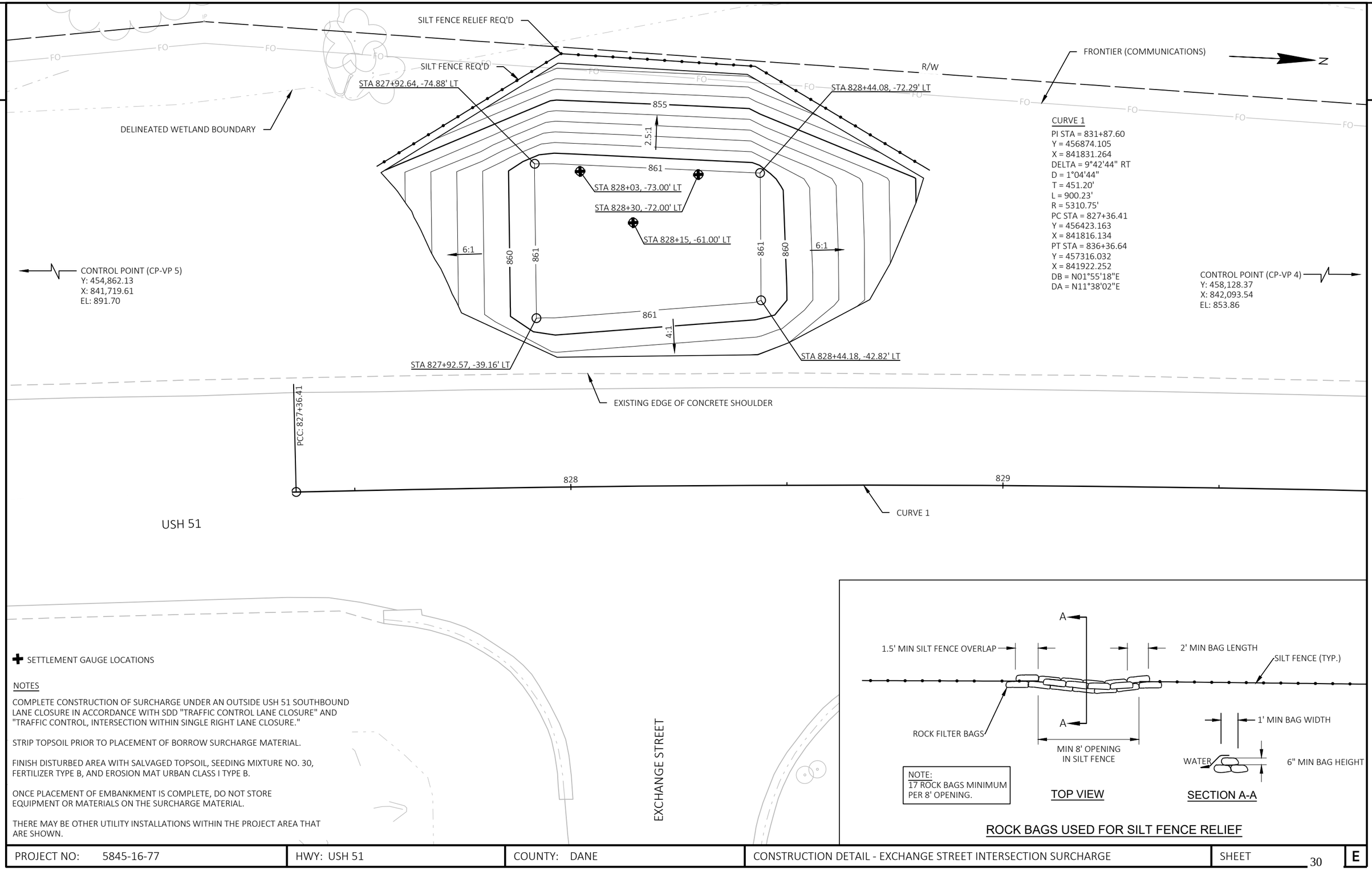
2



DETECTABLE WARNING FIELDS - PAULSON RD

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 29	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021001_CD.DWG
LAYOUT NAME - 08
PLOT DATE : 7/31/2024 1:56 PM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:15 FT
WISDOT/CADDS SHEET 42



NOTES

COMPLETE CONSTRUCTION OF SURCHARGE UNDER AN OUTSIDE USH 51 SOUTHBOUND LANE CLOSURE IN ACCORDANCE WITH SDD "TRAFFIC CONTROL LANE CLOSURE" AND "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE."

STRIP TOPSOIL PRIOR TO PLACEMENT OF BORROW SURCHARGE MATERIAL.

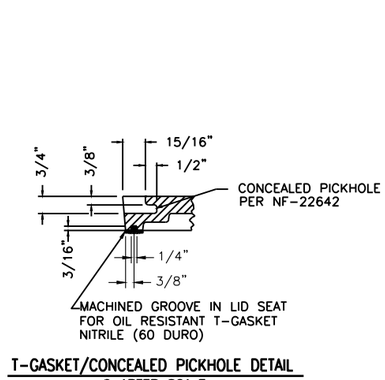
FINISH DISTURBED AREA WITH SALVAGED TOPSOIL, SEEDING MIXTURE NO. 30, FERTILIZER TYPE B, AND EROSION MAT URBAN CLASS I TYPE B.

ONCE PLACEMENT OF EMBANKMENT IS COMPLETE, DO NOT STORE EQUIPMENT OR MATERIALS ON THE SURCHARGE MATERIAL.

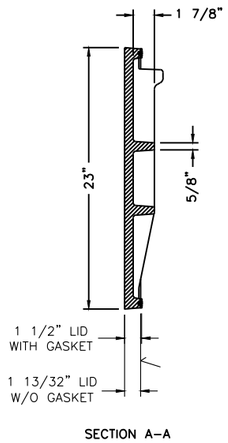
THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE SHOWN.

ROCK BAGS USED FOR SILT FENCE RELIEF

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION DETAIL - EXCHANGE STREET INTERSECTION SURCHARGE	SHEET 30	E

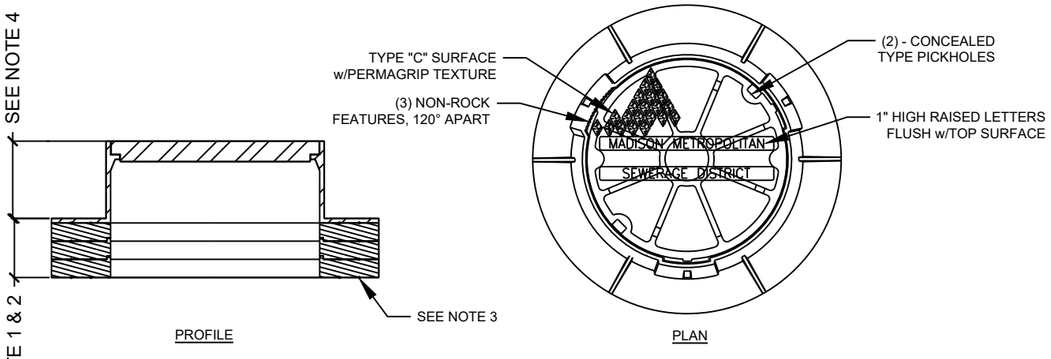


T-GASKET/CONCEALED PICKHOLE DETAIL
QUARTER SCALE



SECTION A-A

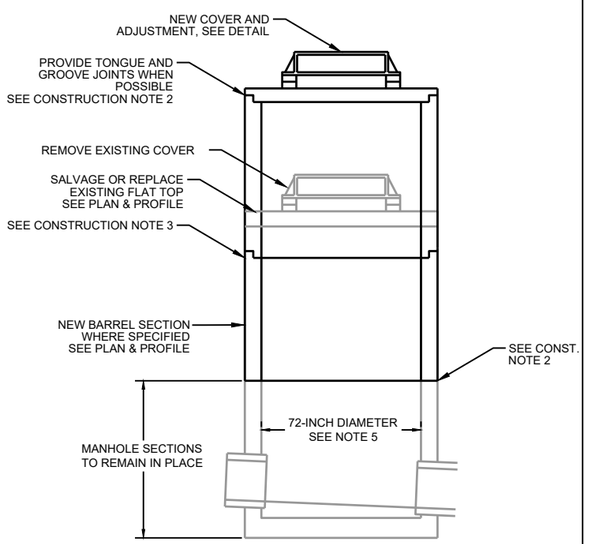
CAD DWG. REF: 1



STANDARD

NOTES:
1. THERE SHALL BE A MINIMUM HEIGHT OF 3" AND A MAXIMUM HEIGHT OF 9" OF ADJUSTING RINGS, EXCEPT WHERE SHOWN.
2. ADJUSTING RINGS SHALL BE EXPANDED POLYPROPYLENE (EPP), CRETEX PRO-RING OR APPROVED EQUAL.
3. SEAL BETWEEN RINGS, CASTING, AND FLAT TOP WITH TYPE M-1 STRUCTURAL ADHESIVE/SEALANT.
4. MANHOLE FRAME AND COVER SHALL BE CAST IRON WITH HEAVY DUTY, INDENTED TOP WITH SOLID LIDS AND MACHINED BEARING SURFACES, NON-ROCKING, SELF SEALING, WITH CONCEALED PICK HOLES, STAMPED WITH THE LETTERING "MADISON METROPOLITAN SEWERAGE DISTRICT".
5. BROKEN OR CRACKED ADJUSTING RINGS ARE NOT PERMITTED AND WILL BE REJECTED.

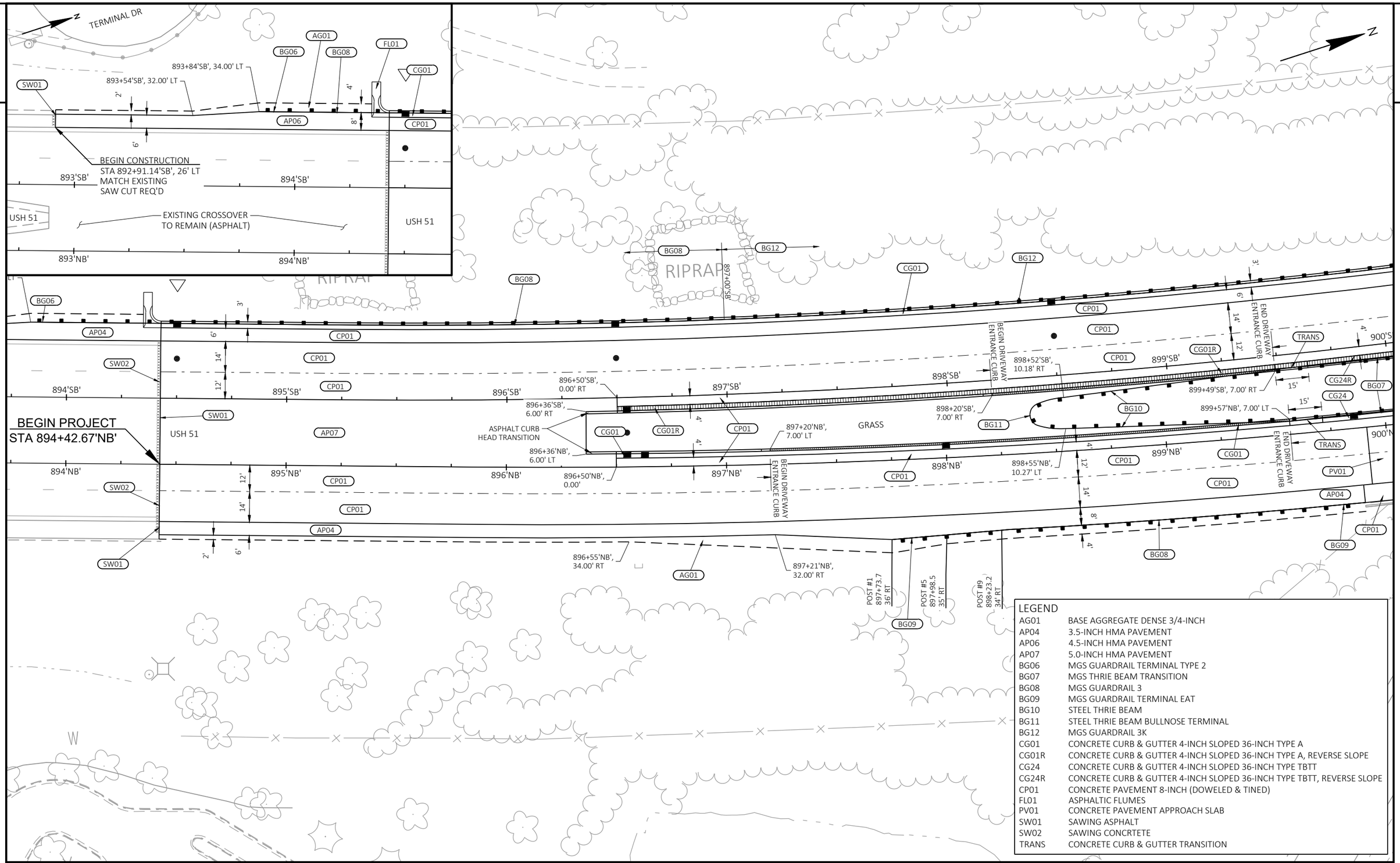
MANHOLE COVERS (TYPE J SPECIAL)
SCALE: NONE



RECONSTRUCTING MANHOLES
SCALE: NONE

CONSTRUCTION NOTES

1. SANITARY SEWER SHALL BE CONSTRUCTED WITH COVER INDICATED. INSTANCES WHERE COVER CANNOT BE PROVIDED DUE TO PHYSICAL CONSTRAINTS OR CONFLICTS SHALL BE EVALUATED AND MODIFIED BY THE MMSD SITE REPRESENTATIVE.
2. WHERE TONGUE AND GROOVE JOINT IS NOT POSSIBLE, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PROPER REINFORCEMENT TO JOINTS TO PREVENT LATERAL DISPLACEMENT. CARE SHALL BE TAKEN TO NOT DAMAGE EXTERNAL JOINT SEALS.
3. JOINTS SHALL RECEIVE NON-HARDENING BUTYL RUBBER SEALANT WITH A MINIMUM THICKNESS OF 3/4-INCH. EXTERIOR JOINTS SHALL RECEIVE JOINT PROTECTION SUCH AS MACWRAP OR APPROVED EQUAL TO A MINIMUM WIDTH OF 9-INCHES.
4. CONTRACTOR SHALL DISPOSE OF EXISTING COVERS.
5. CONTRACTOR SHALL FIELD VERIFY EXISTING MANHOLE DIMENSIONS, ADJUSTMENT HEIGHTS, PROPOSED BARREL SECTION HEIGHTS, AND ANY OTHER INFORMATION REQUIRED FOR MANHOLE ADJUSTMENTS OR RECONSTRUCTIONS.
6. MANHOLE ADJUSTMENT OR RECONSTRUCTION PLANS OR SUBMITTALS SHALL BE REVIEWED AND APPROVED BY MMSD PRIOR TO INSTALLATION.
7. BARREL SECTIONS SHALL NOT HAVE STEPS UNLESS SHOWN ON THE DRAWINGS OR PRESENT IN THE EXISTING MANHOLES.



LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
AP07	5.0-INCH HMA PAVEMENT
BG06	MGS GUARDRAIL TERMINAL TYPE 2
BG07	MGS THRIE BEAM TRANSITION
BG08	MGS GUARDRAIL 3
BG09	MGS GUARDRAIL TERMINAL EAT
BG10	STEEL THRIE BEAM
BG11	STEEL THRIE BEAM BULLNOSE TERMINAL
BG12	MGS GUARDRAIL 3K
CG01	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
CG01R	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A, REVERSE SLOPE
CG24	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CG24R	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT, REVERSE SLOPE
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)
FL01	ASPHALTIC FLUMES
PV01	CONCRETE PAVEMENT APPROACH SLAB
SW01	SAWING ASPHALT
SW02	SAWING CONCRTETE
TRANS	CONCRETE CURB & GUTTER TRANSITION

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 32	E

2

N

TAYLOR RD

900+86'SB',
82.97' LT

CONNECT TO EXISTING FENCE

REMOVING FENCE
FENCE CHAIN LINK 6-FT REQ'D

STRUCTURE B-13-899

RETAINING WALL R-13-386

904+43'SB',
83.94' LT

CONNECT TO EXISTING FENCE

REMOVING FENCE
FENCE CHAIN LINK 6-FT REQ'D

POST #9
905+24.3
-44.14' LT

POST #5
905+49.6
-45.15' LT

POST #1
905+74.9
-46.00' LT

905+84'SB',
7.00' RT

BEGIN DRIVEWAY
ENTRANCE CURB

406'D'

903+90'SB',
6.00' RT

POST #9
905+46.3
6' RT

POST #5
905+71.3
7' RT

POST #1
905+96.2
8' RT

USH 51

900'SB' 901'SB' 902'SB' 903'SB' 904'SB' 905'SB' 906'SB'

900'NB' 901'NB' 902'NB' 903'NB' 904'NB' 905'NB' 906'NB'

106'A'

EXISTING STRUCTURE B-13-386

TAYLOR RD

WISCONSIN & SOUTHERN RR

IKE PATH

LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
BG06	MGS GUARDRAIL TERMINAL TYPE 2
BG07	MGS THRIE BEAM TRANSITION
BG08	MGS GUARDRAIL 3
BG09	MGS GUARDRAIL TERMINAL EAT
CG01	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
CG01R	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A, REVERSE SLOPE
CG24	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CG24R	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT, REVERSE SLOPE
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)
CSDF	CONCRETE SURFACE DRAIN FLUME TYPE AT STRUCTURES
PV01	CONCRETE PAVEMENT APPROACH SLAB
TRANS	CONCRETE CURB & GUTTER TRANSITION

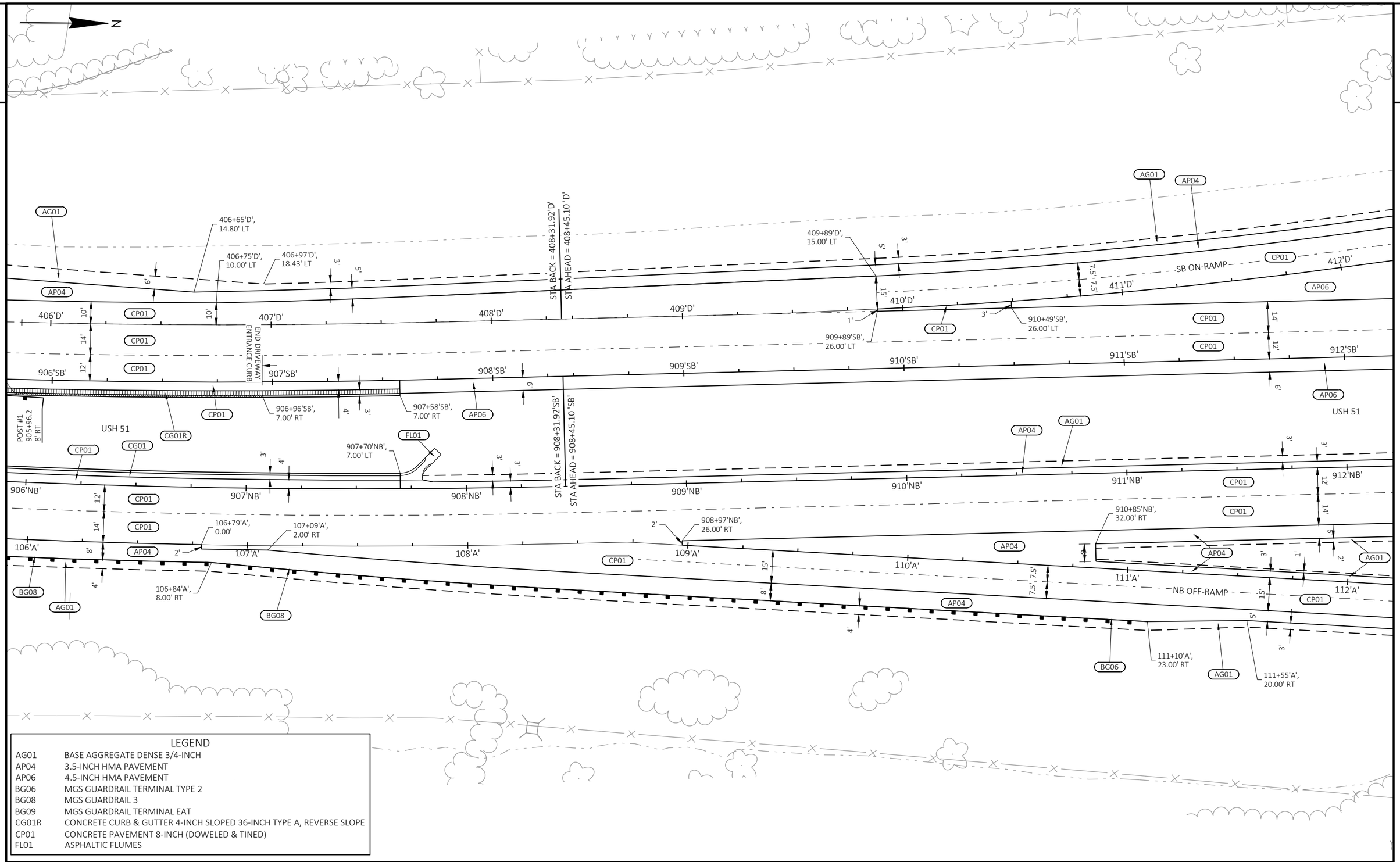
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 33	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021201_PD.DWG
LAYOUT NAME - 02

PLOT DATE : 8/28/2024 11:25 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
BG06	MGS GUARDRAIL TERMINAL TYPE 2
BG08	MGS GUARDRAIL 3
BG09	MGS GUARDRAIL TERMINAL EAT
CG01R	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A, REVERSE SLOPE
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)
FL01	ASPHALTIC FLUMES

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 34	E

2

2

N

AP04 AG01 CP01 SB ON-RAMP 418'D' 417'D' 416'D' 415'D' 414'D' 413'D' 412'D'

3' 5' 15' 1' 3' 7.5', 7.5' 8'

AP06 CP01 912+39'SB', 34.00' LT 917+91'SB', 34.00' LT 917+78'SB', 6.00' RT 916+88'SB', 6.00' RT

8' 14' 12' 6'

912'SB' 913'SB' 914'SB' 915'SB' 916'SB' 917'SB' 918'SB'

USH 51

AP06 AP04 AG01 BG09 BG08 CP01

POST #1 917+42.7 -8.00' LT
POST #5 917+67.7 -7.06' LT
POST #9 917+92.6 -6.12' LT
POST #1 918+08.1 8' RT

916+23'NB', 6.00' LT
916+68'NB', 3.00' LT

3' 3' 12' 14' 6' 2'

912'NB' 913'NB' 914'NB' 915'NB' 916'NB' 917'NB' 918'NB'

916+57'NB', 34.00' RT
917+17'NB', 32.00' RT

POST #1 917+77.2 36' RT
POST #5 918+02.1 35' RT

112'A' CP01 NB OFF-RAMP 113'A' 114'A' 115'A' 116'A' 117'A' 118'A'

1' 3' 15' 5' 3' 7.5', 7.5' 10' 6'

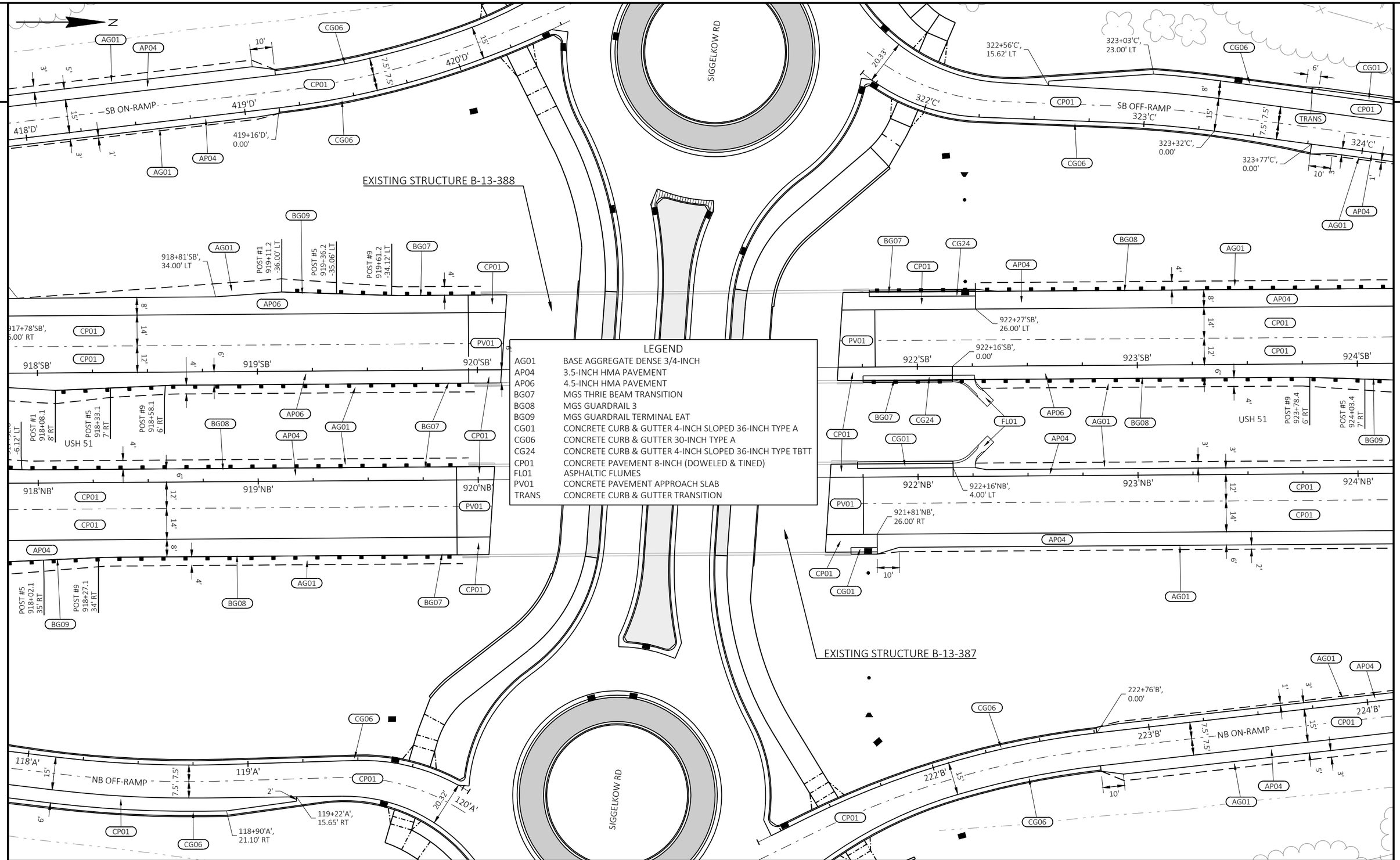
117+69'A', 0.00'

LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
BG08	MGS GUARDRAIL 3
BG09	MGS GUARDRAIL TERMINAL EAT
CG06	CONCRETE CURB & GUTTER 30-INCH TYPE A
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 35	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021201_PD.DWG
LAYOUT NAME - 04

PLOT DATE : 8/28/2024 11:25 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT



LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
BG07	MGS THRIE BEAM TRANSITION
BG08	MGS GUARDRAIL 3
BG09	MGS GUARDRAIL TERMINAL EAT
CG01	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
CG06	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG24	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)
FL01	ASPHALTIC FLUMES
PV01	CONCRETE PAVEMENT APPROACH SLAB
TRANS	CONCRETE CURB & GUTTER TRANSITION

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 36	E

2

N

SB OFF-RAMP

NB ON-RAMP

USH 51

924'SB' 925'SB' 926'SB' 927'SB' 928'SB' 929'SB' 930'SB'

924'NB' 925'NB' 926'NB' 927'NB' 928'NB' 929'NB' 930'NB'

224'B' 225'B' 226'B' 227'B' 228'B' 229'B' 230'B'

324'C' 325'C' 326'C' 327'C' 328'C' 329'C' 330'C'

CG01 CP01 AG01 AP04 AP06 BG08 BG09

POST #9 925+19.0 -34.12' LT

POST #5 925+44.0 -35.06' LT

POST #1 925+69.0 -36.00' LT

926+29'SB', 32.00' LT

926+64'SB', 26.00' LT

926+89'SB', 34.00' LT

928+13'SB', 32.00' LT

930+09'SB', 35.91' LT

POST #5 924+03.4 7' RT

POST #1 924+28.4 8' RT

924+73'SB', 5.00' RT

925+48'SB', 6.00' RT

929+07'SB', 5.00' RT

929+67'SB', 8.00' RT

928+67'NB', 3.00' LT

929+67'NB', 8.00' LT

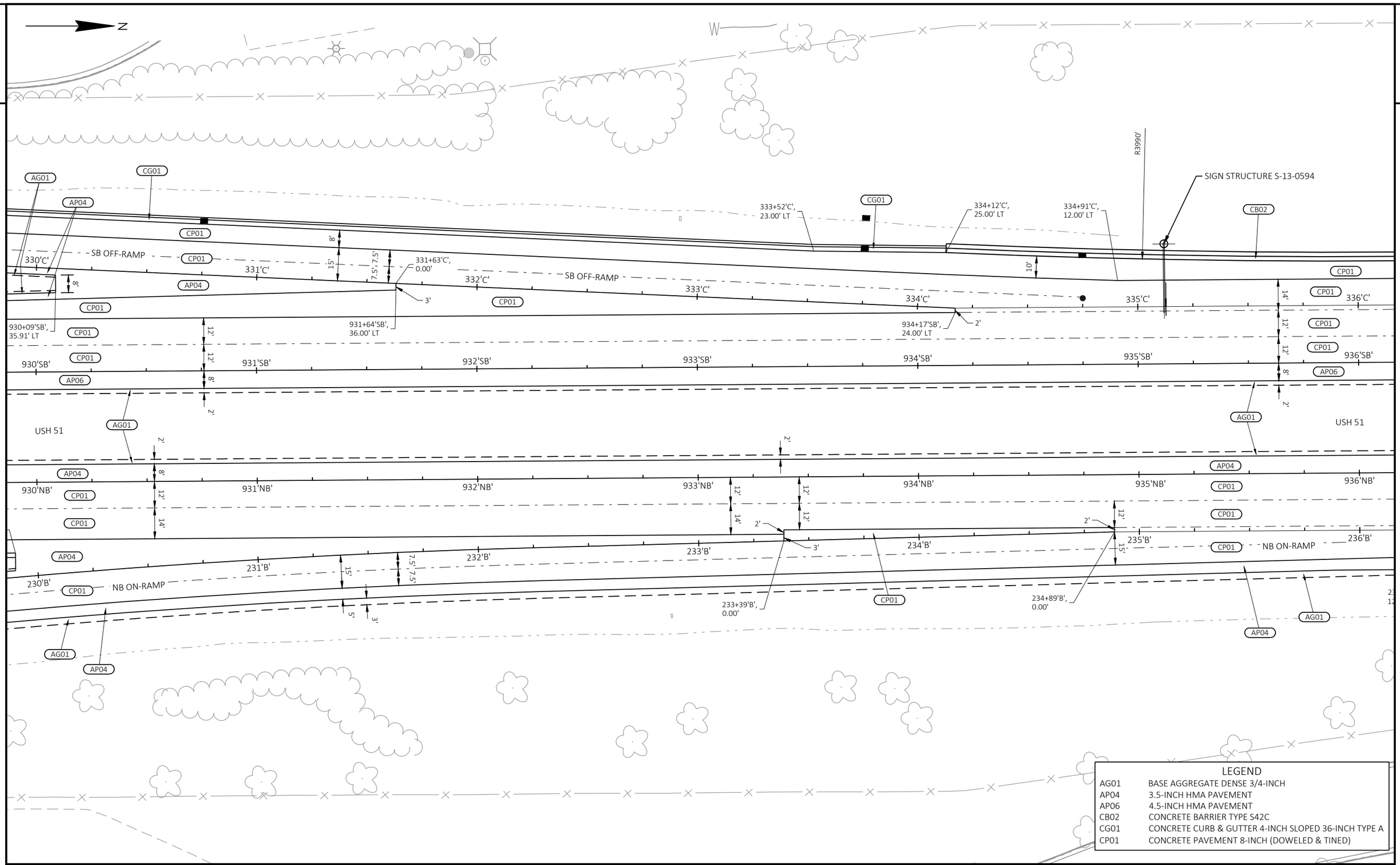
929+90'NB', 32.00' RT

LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
BG08	MGS GUARDRAIL 3
BG09	MGS GUARDRAIL TERMINAL EAT
CG01	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 37	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021201_PD.DWG
LAYOUT NAME - 06
PLOT DATE : 8/28/2024 11:26 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2



LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
CB02	CONCRETE BARRIER TYPE S42C
CG01	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 38	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021201_PD.DWG
LAYOUT NAME - 07
PLOT DATE : 8/28/2024 11:26 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N

R3390'

CB02

CB02

940+50'SB',
48.00' LT

BG07

POST #9
940+90.0
-48.12' LT

POST #5
941+15.0
-49.06' LT

BG09

POST #1
941+40.0
-50.00' LT

AG01

AP04

CP01

8'

14'

12'

12'

8'

2'

336'C'

936'SB'

937'SB'

938'SB'

939'SB'

940'SB'

941'SB'

942'SB'

AP06

USH 51

AG01

AG01

USH 51

2'

8'

12'

12'

14'

6'

2'

AP04

936'NB'

937'NB'

938'NB'

939'NB'

940'NB'

941'NB'

942'NB'

236'B'

236+39'B',
12.00' RT

AG01

AG01

TRIANGLE ST

LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
BG07	MGS THRIE BEAM TRANSITION
BG09	MGS GUARDRAIL TERMINAL EAT
CB02	CONCRETE BARRIER TYPE S42C
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 39	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021201_PD.DWG
LAYOUT NAME - 08

PLOT DATE : 8/28/2024 11:26 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

AG01

942+30'SB', 44.00' LT

942+90'SB', 46.00' LT

AG01

AP04

CP01

CP01

CP01

AP06

942'SB' 943'SB' 944'SB' 945'SB' 946'SB' 947'SB' 948'SB'

6' 2' 14' 12' 12' 8' 2'

AG01

AP04

CP01

CP01

CP01

AP06

USH 51

USH 51

AG01

AG01

946+50'NB', 25.00' LT

947+08'NB', 25.00' LT

R17'

R17'

AP06

AG01

2'

2'

2' 8' 12' 12' 14' 6' 2'

AP04

CP01

CP01

CP01

AP04

942'NB' 943'NB' 944'NB' 945'NB' 946'NB' 947'NB' 948'NB'

AP04

CP01

CP01

CP01

AP04

AG01

AG01

944+11'NB', 87.81' RT

REMOVING FENCE
FENCE CHAIN LINK 6-FT REQ'D

CONNECT TO EXISTING FENCE

TRIANGLE ST

LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 40	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021201_PD.DWG
LAYOUT NAME - 09

PLOT DATE : 8/28/2024 11:26 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

AG01
AP04
CP01
CP01
CP01
AP06
USH 51
948'SB'
949'SB'
950'SB'
951'SB'
952'SB'
953'SB'
954'SB'
949+48'SB', 0.00'
AP06
SW01
AP04
SW02
END PROJECT
STA 953+40'NB'
6'
2'
14'
12'
12'
8'
2'

948'NB'
949'NB'
950'NB'
951'NB'
952'NB'
953'NB'
954'NB'
948+82'NB', 81.78' RT
REMOVING FENCE
FENCE CHAIN LINK 6-FT REQ'D
CONNECT TO EXISTING FENCE

TRIANGLE ST

LEGEND	
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP04	3.5-INCH HMA PAVEMENT
AP06	4.5-INCH HMA PAVEMENT
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)
SW01	SAWING ASPHALT
SW02	SAWING CONCRETE

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 41	E

2

2

N

AG01

2'

6"

SW01

AP04

954+40'SB',
26.00' LT

954'SB'

955'SB'

956'SB'

957'SB'

957+07'SB',
0.00'

958'SB'

959'SB'

960'S

3'

3'

SW01

AP04

USH 51

AP04

AG01

USH 51

3'

3'

SW01

954'NB'

955'NB'

956'NB'

957'NB'

958'NB'

959'NB'

960'

955+20'NB',
26.00' RT

AP04

SW01

6"

2'

AG01

END CONSTRUCTION
STA 957+05.96'NB'
MATCH EXISTING
SAW CUT REQ'D

TRIANGLE ST

LEGEND

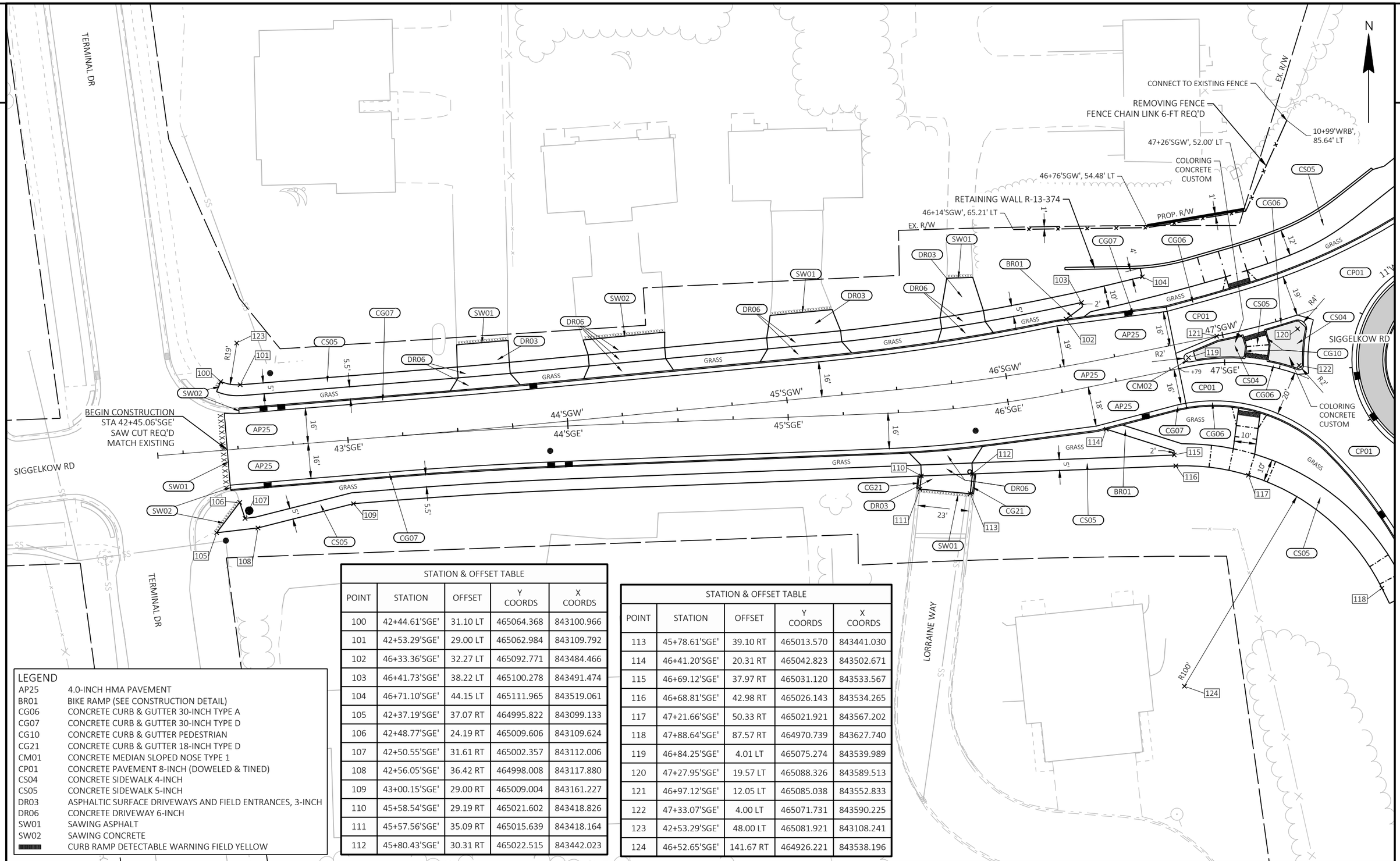
AG01	BASE AGGREGATE DENSE 3/4-INCH
AP04	3.5-INCH HMA PAVEMENT
SW01	SAWING ASPHALT

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 42	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021201_PD.DWG
LAYOUT NAME - 11

PLOT DATE : 8/28/2024 11:27 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42



LEGEND	
AP25	4.0-INCH HMA PAVEMENT
BR01	BIKE RAMP (SEE CONSTRUCTION DETAIL)
CG06	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG07	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG10	CONCRETE CURB & GUTTER PEDESTRIAN
CG21	CONCRETE CURB & GUTTER 18-INCH TYPE D
CM01	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)
CS04	CONCRETE SIDEWALK 4-INCH
CS05	CONCRETE SIDEWALK 5-INCH
DR03	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
DR06	CONCRETE DRIVEWAY 6-INCH
SW01	SAWING ASPHALT
SW02	SAWING CONCRETE
▬▬	CURB RAMP DETECTABLE WARNING FIELD YELLOW

STATION & OFFSET TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS
100	42+44.61'SGE'	31.10 LT	465064.368	843100.966
101	42+53.29'SGE'	29.00 LT	465062.984	843109.792
102	46+33.36'SGE'	32.27 LT	465092.771	843484.466
103	46+41.73'SGE'	38.22 LT	465100.278	843491.474
104	46+71.10'SGE'	44.15 LT	465111.965	843519.061
105	42+37.19'SGE'	37.07 RT	464995.822	843099.133
106	42+48.77'SGE'	24.19 RT	465009.606	843109.624
107	42+50.55'SGE'	31.61 RT	465002.357	843112.006
108	42+56.05'SGE'	36.42 RT	464998.008	843117.880
109	43+00.15'SGE'	29.00 RT	465009.004	843161.227
110	45+58.54'SGE'	29.19 RT	465021.602	843418.826
111	45+57.56'SGE'	35.09 RT	465015.639	843418.164
112	45+80.43'SGE'	30.31 RT	465022.515	843442.023

STATION & OFFSET TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS
113	45+78.61'SGE'	39.10 RT	465013.570	843441.030
114	46+41.20'SGE'	20.31 RT	465042.823	843502.671
115	46+69.12'SGE'	37.97 RT	465031.120	843533.567
116	46+68.81'SGE'	42.98 RT	465026.143	843534.265
117	47+21.66'SGE'	50.33 RT	465021.921	843567.202
118	47+88.64'SGE'	87.57 RT	464970.739	843627.740
119	46+84.25'SGE'	4.01 LT	465075.274	843539.989
120	47+27.95'SGE'	19.57 LT	465088.326	843589.513
121	46+97.12'SGE'	12.05 LT	465085.038	843552.833
122	47+33.07'SGE'	4.00 LT	465071.731	843590.225
123	42+53.29'SGE'	48.00 LT	465081.921	843108.241
124	46+52.65'SGE'	141.67 RT	464926.221	843538.196

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 43	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021202_PD.DWG
LAYOUT NAME - 01

PLOT DATE : 7/30/2024 11:40 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
200	11+18.70'WRB'	41.35 LT	465161.422	843644.034
201	11+39.23'WRB'	23.97 LT	465143.886	843678.124
202	12+52.03'WRB'	38.14 LT	465000.647	843705.296
203	12+80.04'WRB'	25.97 LT	465000.983	843657.619
204	12+05.96'WRB'	24.00 LT	465069.602	843733.013
205	12+17.93'WRB'	26.00 LT	465051.334	843731.477

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
210	11+11.19'WRB'	46.26 LT	465162.155	843628.820
211	11+11.63'WRB'	80.24 LT	465194.393	843618.015
212	11+48.56'WRB'	47.31 LT	465160.577	843701.079
213	11+43.57'WRB'	2.21 RT	465117.279	843676.075
214	12+31.21'WRB'	60.11 LT	465013.762	843750.613

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
206	50+69.81'SGE'	21.34 LT	465052.854	843929.533
207	50+75.03'SGE'	4.00 LT	465034.586	843927.997
208	51+43.73'SGE'	87.90 LT	465102.655	844009.697
209	51+52.35'SGE'	56.92 RT	464958.801	843990.903
215	50+49.51'SGE'	52.56 LT	465090.426	843910.397
216	50+99.42'SGE'	86.01 LT	465109.136	843965.830
217	51+43.02'SGE'	30.61 RT	464986.398	843986.696
218	51+36.29'SGE'	80.15 RT	464939.007	843970.756
219	52+24.68'SGE'	37.42 RT	464967.720	844077.805
220	51+92.13'SGE'	72.94 LT	465078.850	844054.422

LEGEND

AP25	4.0-INCH HMA PAVEMENT
CG06	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG06R	CONCRETE CURB & GUTTER 30-INCH TYPE A, REVERSE SLOPE
CG10	CONCRETE CURB PEDESTRIAN
CG18	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R
CG23	CONCRETE CURB & GUTTER 18-INCH TYPE A, REVERSE SLOPE
CM02	CONCRETE MEDIAN SLOPED NOSE TYPE 2
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)
CP18	CONCRETE TRUCK APRON 12-INCH
CR01	CURB RAMP DETECTABLE WARNING FIELD YELLOW
CS04	CONCRETE SIDEWALK 4-INCH
CS05	CONCRETE SIDEWALK 5-INCH
	CURB RAMP DETECTABLE WARNING FIELD YELLOW

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 44	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021202_PD.DWG
LAYOUT NAME - 02

PLOT DATE : 7/30/2024 11:40 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

LEGEND

AP07	5.0-INCH HMA PAVEMENT
AP25	4.0-INCH HMA PAVEMENT
BR01	BIKE RAMP (SEE CONSTRUCTION DETAIL)
CG06	CONCRETE CURB & GUTTER 30-INCH TYPE A
CG07	CONCRETE CURB & GUTTER 30-INCH TYPE D
CG10	CONCRETE CURB & GUTTER PEDESTRIAN
CG23	CONCRETE CURB & GUTTER 18-INCH TYPE A, REVERSE SLOPE
CM01	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CP01	CONCRETE PAVEMENT 8-INCH (DOWELED & TINED)
CS04	CONCRETE SIDEWALK 4-INCH
CS05	CONCRETE SIDEWALK 5-INCH
SW01	SAWING ASPHALT
SW02	SAWING CONCRETE
	CURB RAMP DETECTABLE WARNING FIELD YELLOW

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
334	56+33.07'SGE'	38.77 RT	464988.460	844485.233
335	56+58.60'SGE'	27.21 RT	465003.450	844508.913
336	56+94.37'SGE'	26.74 RT	465008.882	844544.272
337	56+59.05'SGE'	62.21 RT	464968.856	844514.228
338	56+87.23'SGE'	65.29 LT	465099.031	844524.411

EX R/W
CONNECT TO EXISTING FENCE
52+89'SGW', 124.05' LT
REMOVING FENCE
FENCE CHAIN LINK 6-FT REQ'D
53+01'SGW', 85.50' LT
COLORING CONCRETE CUSTOM
EX. R/W
RETAINING WALL R-13-377
SIGN STRUCTURE S-13-0595
TRIANGLE ST
MH
COLORING CONCRETE WISDOT RED
END CONSTRUCTION STA 57+52.60'SGE'
SIGGELKOW RD
END FULL ROADWAY RECONSTRUCTION STA 55+71.01'SGE'
RETAINING WALL R-13-378
COLORING CONCRETE CUSTOM
PAULSON RD
GRASS
101'S1L'
102'S1L'
91'S1R'
53'SGW'
54'SGW'
55'SGW'
56'SGW'
53'SGE'
54'SGE'
55'SGE'
56'SGE'
57'SGE'

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
301	53+08.12'SGE'	32.72 LT	465047.190	844153.518
302	53+61.18'SGE'	51.23 LT	465066.805	844209.594
303	53+64.83'SGE'	55.86 LT	465071.367	844213.327
304	53+72.93'SGE'	49.11 LT	465064.466	844221.302
305	55+41.70'SGE'	40.47 LT	465056.819	844386.535
306	55+68.25'SGE'	45.87 LT	465064.213	844411.131
307	55+87.37'SGE'	64.38 LT	465084.545	844426.823
308	56+47.89'SGE'	61.65 LT	465089.956	844485.964
309	52+22.97'SGE'	6.00 LT	465010.510	844070.250
310	52+25.52'SGE'	21.13 LT	465025.848	844070.728
311	54+28.61'SGE'	12.38 LT	465026.878	844276.146

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
312	52+95.18'SGE'	23.06 RT	464990.597	844144.665
313	52+98.65'SGE'	27.93 RT	464986.019	844148.378
314	53+07.49'SGE'	21.66 RT	464992.880	844156.374
315	53+68.34'SGE'	0.00 RT	465015.450	844215.795
316	54+71.66'SGE'	17.00 RT	464997.497	844319.229
317	55+68.93'SGE'	28.45 RT	464990.310	844419.020
318	55+85.79'SGE'	37.99 RT	464982.722	844437.508
319	55+93.53'SGE'	56.22 RT	464965.646	844447.889
320	56+62.84'SGE'	2.45 RT	465028.556	844509.672
321	56+61.84'SGE'	5.28 RT	465025.615	844509.081
322	56+85.10'SGE'	9.68 RT	465024.494	844532.726

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
323	57+07.75'SGE'	10.00 RT	465027.322	844555.192
324	57+47.56'SGE'	3.01 RT	465039.774	844593.650
325	54+13.11'SGE'	57.68 LT	465072.338	844261.306
326	54+04.93'SGE'	30.00 RT	464984.781	844251.901
327	55+63.90'SGE'	60.01 RT	464958.393	844416.722
328	55+45.56'SGE'	82.32 LT	465098.812	844387.321
329	56+80.79'SGE'	59.84 LT	465092.744	844518.794
330	56+56.80'SGE'	37.39 LT	465067.175	844498.159
331	56+80.46'SGE'	26.99 LT	465060.165	844523.030
332	56+87.05'SGE'	26.91 LT	465061.003	844529.568
333	56+24.12'SGE'	60.05 RT	464966.137	844479.334

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 45	E

2

2

USH 51

N

WISCONSIN & SOUTHERN RR

LOWER YAHARA RIVER TRAIL

LOWER YAHARA RIVER TRAIL

TAYLOR RD

TAYLOR RD

AG04

AP03

11'TRL'

8"

SW01

12'TRL'

4"

+39

SW01

SW01

12'TY'

AP01

13'

11'TY'

10'TY'

AP01

12'

AP01

1'

AG04

MP01

BEGIN CONSTRUCTION
STA 10+16.96'TY'
MATCH EXISTING
SAW CUT REQ'D

END CONSTRUCTION
STA 12+27.42'TY'
MATCH EXISTING
SAW CUT REQ'D

REMOVING, SALVAGE, AND REINSTALL GUARDRAIL REQ'D
REPLACING GUARDRAIL POSTS AND BLOCKS REQ'D

EX. R/W

POST

USH 51

LEGEND

AG04	BASE AGGREGATE DENSE 3/4-INCH, 2-INCH
AP01	2.0-INCH HMA PAVEMENT
AP03	3.0-INCH HMA PAVEMENT
MP01	REMOVING ASPHALTIC SURFACE MILLING, 2-INCH
SW01	SAWING ASPHALT

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN DETAILS	SHEET 46	E

2

N

RIPRAP

RIPRAP

+17.19'SB'
BEGIN R.C.

+66.83'SB'
BEGIN FULL
SUPER

873.18 874.20 875.25 876.25 877.14 878.08 879.13 880.19 881.24 882.30 883.35 884.41 885.46 886.52 887.57 888.63 889.68 890.74 891.80 892.83 893.82 894.78 895.69 896.56 896.80
873.42 874.44 875.49 876.49 877.38 878.32 879.37 880.43 881.48 882.54 883.59 884.65 885.70 886.76 887.81 888.87 889.92 890.98 892.04 893.07 894.06 895.02 895.93 897.26
-2.0% -2.0% -4.0% -4.0%
873.70 874.72 875.77 876.80 877.78 878.78 879.84 880.89 881.95 883.00 884.06 885.11 886.17 887.22 888.28 889.33 890.39 891.44 892.50 893.53 894.53 895.48 896.39 897.62
-1.5% -2.0% -3.3% -3.3%
873.90 874.96 876.01 877.07 878.12 879.18 880.23 881.29 882.34 883.40 884.45 885.51 886.56 887.62 888.67 889.73 890.78 891.84 892.89 893.93 894.92 895.87 896.79 897.79
895'SB' 896'SB' 897'SB' 898'SB' 899'SB' 900'SB'

USH 51

REJECT GUTTER

USH 51

REJECT GUTTER

882.47 883.53 884.58 885.64 886.69 887.75 888.80 889.86 890.91 891.97 893.03 894.06 895.05 896.01 896.92
873.50 874.52 875.51 876.56 877.58 878.62 879.62 880.65 881.61 882.61 883.61 884.60 885.60 886.60 887.59 888.59 889.59 890.58 891.58 892.58 893.56 894.50 900'NB
873.80 874.79 875.79 876.79 877.78 878.78 879.78 880.77 881.77 882.77 883.77 884.76 885.76 886.76 887.75 888.75 889.75 890.74 891.74 892.74 893.72 894.66
873.84 874.94 876.03 877.03 879.02 880.09 881.17 882.17 883.16 884.16 885.16 886.15 887.15 888.15 889.15 890.14 891.14 892.14 893.13 894.12 895.06
873.73 874.88 876.03 877.12 878.21 879.30 880.46 881.63 882.63 883.63 884.62 885.62 886.62 887.61 888.61 889.61 890.60 891.60 892.60 893.59 894.58 895.52
-0.1% -2.0% -2.0% -3.3%
-0.9% 0.0% -2.0% -3.3%
0.0% -2.0% -3.3%
895'NB' 896'NB' 897'NB' 898'NB' 899'NB'

+99.15'NB'
BEGIN L.C.

+75.51'NB'
BEGIN R.C.

+25.15'NB'
BEGIN FULL
SUPER

TAYLOR RD

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PAVING GRADES: USH 51	SHEET 47	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021203_PD (GRADES).DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2024 11:09 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

+28.26'SB'
END FULL SUPER

+77.90'SB'
BEGIN R.C.

+67.45'SB'
BEGIN L.C.

903'SB' 905.25 904.63 904.85 905.03 905.16 905.26 905.31 905.32 905.29 905.23 905.12 904.97 904.77 904.52 904.23 904.12 904.04 903.81 903.56 903.44 903.19 902.94
904.96 905.18 905.36 905.49 905.59 905.64 905.65 905.62 905.56 905.45 905.30 905.10 904.87 904.60 904.43 904.29 904.06 903.82 903.70 903.46 903.22
905.42 905.64 905.82 905.95 906.05 906.10 906.11 906.09 906.02 905.91 905.76 905.57 905.33 905.06 904.82 904.58 904.34 904.10 903.98 903.74 903.50
905.82 906.04 906.21 906.35 906.44 906.50 906.51 906.48 906.41 906.30 906.15 905.96 905.73 905.46 905.14 905.05 904.83 904.51 904.19 904.04 903.72 903.40
905.95 906.17 906.35 906.48 906.58 906.63 906.64 906.61 906.55 906.44 906.29 906.09 905.86 905.59 905.25 905.15

-3.3%
-4.0%
-3.3%
-2.0%
-4.0%
-2.0%
-2.0%
0.0%

904'SB' 905'SB' 906'SB' 907'SB' 908'SB' 909'SB'

406'D' 407'D' 408'D' 409'D'

USH 51

REJECT GUTTER

REJECT GUTTER

USH 51

903'NB' 903.55 903.66 903.84 904.00 904.14 904.30 904.40 904.56 904.62 904.78 904.80 904.96 904.94 905.10 905.04 905.20 905.09 905.25 905.11 905.27 905.09 905.25 905.03 905.19 904.92 905.08 904.78 904.94 904.61 904.77 904.44 904.60 904.25 904.41 904.05 904.21 903.89 904.05 904.01 903.79 903.56 903.33 903.08 902.83
904.05 904.39 904.69 904.95 905.17 905.35 905.49 905.59 905.65 905.67 905.65 905.58 905.48 905.34 905.17 904.99 904.80 904.61 904.40 904.19 903.89 903.54 903.32 903.07
904.52 904.86 905.16 905.42 905.64 905.82 905.95 906.05 906.11 906.13 906.11 906.01 905.94 905.80 905.60 905.45 905.27 905.07 904.86 904.65 904.27 903.87 903.50 903.18
905.63 905.66 905.52 905.37 905.24 905.10 904.95 904.58 904.14 903.71 903.19 903.12

-3.3%
-3.3%
-3.3%
-3.3%
-2.0%
-2.0%
-2.0%
-2.0%

904'NB' 905'NB' 906'NB' 907'NB' 908'NB' 909'NB'

106'A' 107'A'

+03.10'NB'
END FULL SUPER

+52.74'NB'
BEGIN R.C.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PAVING GRADES: USH 51	SHEET 48	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021203_PD (GRADES).DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2024 11:10 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

USH 51

907'SB' 908'SB' 909'SB' 910'SB' 911'SB' 912'SB' 913'SB'

907'NB' 908'NB' 909'NB' 910'NB' 911'NB' 912'NB' 913'NB'

+29.10'NB' BEGIN L.C.

+05.47'NB' BEGIN N.C.

USH 51 N

107'A' 110'A' 111'A' 112'A' 113'A'

RAMP 'A'

+03.10'NB' END FULL SUPER

+52.74'NB' BEGIN R.C.

+65.11'A' BEGIN N.C.

+90.00'A' END N.C.

+24.66'A' BEGIN FULL SUPER

915'NB' 914'NB' 913'NB'

USH 51 NB

N

113'A' 114'A' 115'A' 116'A' 117'A' 118'A' 119'A'

RAMP 'A'

61'ESE'

+74.95'A' END FULL SUPER

+09.62'A' BEGIN N.C.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PAVING GRADES: RAMP A	SHEET 49	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021203_PD (GRADES).DWG
LAYOUT NAME - 03
PLOT DATE : 9/24/2024 11:10 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

2

USH 51 NB

926'NB'

927'NB'

928'NB'

929'NB'

USH 51 NB

N

223'B' 224'B' 225'B' 226'B' 227'B' 228'B' 229'B'

886.52 887.26 887.92 888.49 888.98 889.39 889.71 889.96 890.12 890.20 890.19 890.11 889.94 889.71 889.49 889.26 889.04 888.81 888.58 888.36 888.13 887.90 887.68 887.45 887.22

RAMP 'B' -2.0%

886.22 886.96 887.62 888.19 888.68 889.09 889.41 889.66 889.82 889.90 889.89 889.81 889.64 889.41 889.19 888.96 888.74 888.51 888.28 888.06 887.83 887.60 887.38 887.13 886.77

RAMP 'B' -4.0% -2.0% -3.6%

+71.90'B'
END N.C.

BEGIN FULL
SUPER

929'SB' 930'SB' 931'SB' 932'SB' 933'SB' 934'SB' 935'SB'

USH 51

929'NB' 930'NB' 931'NB' 932'NB' 933'NB' 934'NB' 935'NB'

USH 51

N

886.89 886.57 886.24 885.92 885.59 885.27 884.94 884.62 884.29 883.97 883.64 883.32 882.99 882.67 882.34 882.01 881.69 881.37 881.07

230'B' 231'B' 232'B' 233'B' 234'B' 235'B'

RAMP 'B'

887.22 887.00 886.77 886.51 886.21 885.91 885.60 885.30 885.00 884.70 884.39 884.09 883.79 883.48 883.18 882.88 882.57 882.27 881.96 881.64 881.33 881.01 880.69 880.37 880.07

RAMP 'B' -3.6% -4.0% -3.6% -4.0% -2.0% -4.0%

886.77 886.46 886.23 885.97 885.67 885.37 885.06 884.76 884.46 884.16 883.85 883.55 883.27 883.11 882.88 882.58 882.27 881.97 881.66 881.34 881.03 880.71 880.39 880.07 879.77

+14.57'B'
BEGIN FULL
SUPER

+95.37'B'
END FULL SUPER

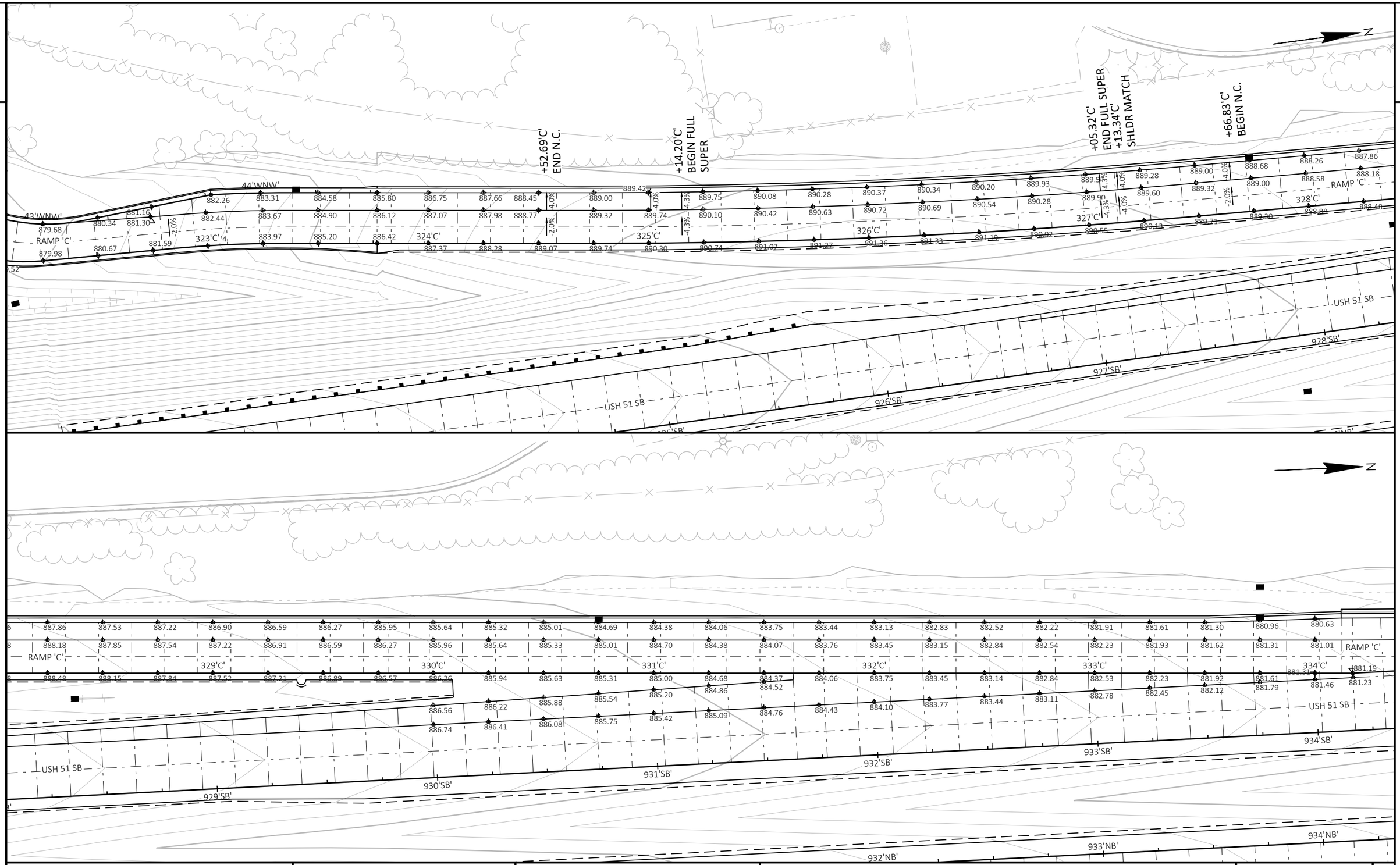
+38.04'B'
BEGIN N.C.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PAVING GRADES: RAMP B	SHEET 50	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021203_PD (GRADES).DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2024 11:10 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PAVING GRADES: RAMP C	SHEET 51	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021203_PD (GRADES).DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2024 11:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

+43.81'SB' BEGIN N.C.
+53.11'D' END N.C.
+06.31'D' SHLDR MATCH
+58.82'D' BEGIN FULL SUPER
+58.82'D' END FULL SUPER
+85.42'D' SHLDR MATCH
+38.62'D' BEGIN N.C.

RAMP 'D'

409'D' 410'D' 411'D' 412'D' 413'D' 414'D' 415'D'

902.94 902.69 902.42 901.96 901.49 901.05 900.70 900.43 900.18 899.95 899.74 899.66 899.64 899.65 899.60 899.47 899.35 899.22 899.10 898.97 898.85 898.72 898.59 898.39 898.09

903.22 902.99 902.72 902.39 902.04 902.09 901.75 901.80 901.45 901.53 901.18 901.30 900.93 901.08 900.70 900.90 900.49 900.75 900.31 900.62 900.16 900.52 900.03 900.45 899.90 900.40 899.77

903.50 903.40 903.08 902.77

909'SB' 910'SB' 911'SB' 912'SB' 913'SB' 914'SB' 915'SB'

USH 51

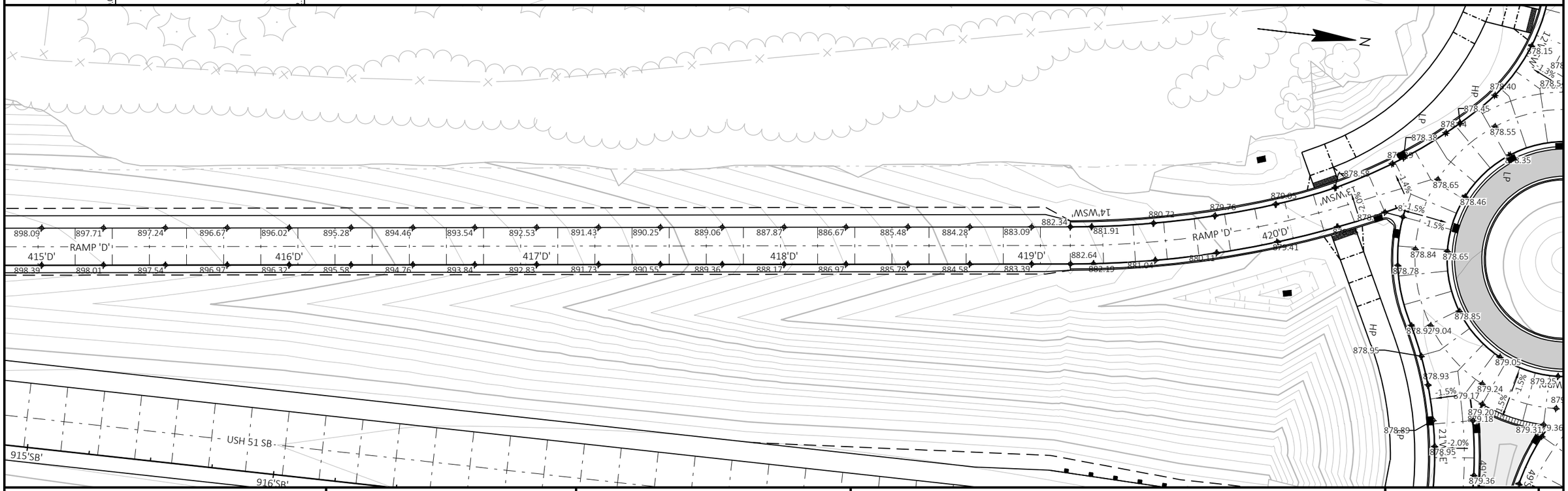
+29.10'NB' BEGIN L.C.
+05.47'NB' BEGIN N.C.

909'NB' 910'NB' 911'NB' 912'NB' 913'NB' 914'NB' 915'NB'

902.83 902.57 902.30 902.03 901.76 901.51

903.07 902.81 902.54 902.27 902.00 901.75

-2.0% -4.0% -5.0%



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PAVING GRADES: RAMP D	SHEET 52	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021203_PD (GRADES).DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2024 11:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

N

TERMINAL DR

SIGGELKOW RD

LORRAINE WAY

TERMINAL DR

SS

M

HP 878.93

LP 878.38

HP 878.45

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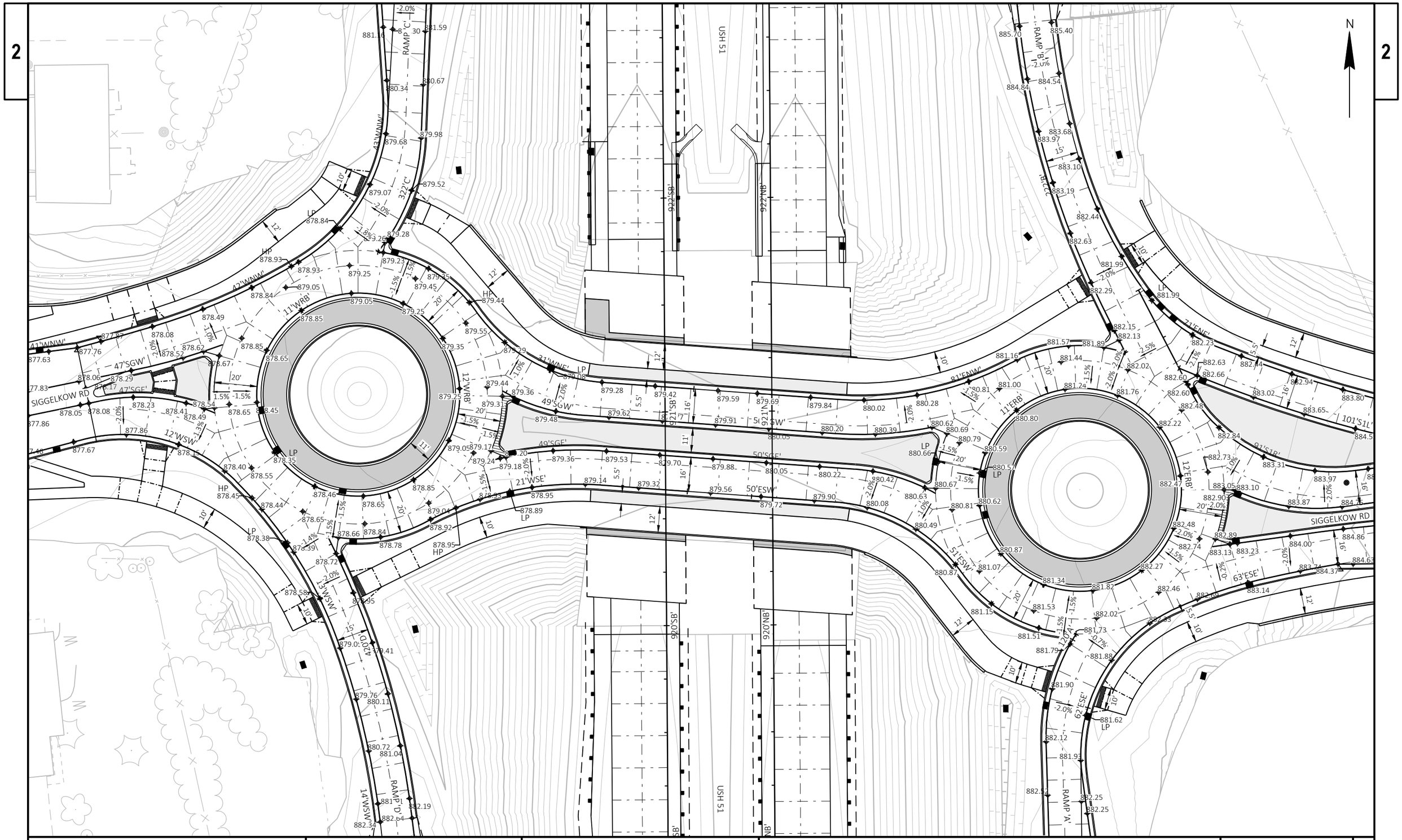
877.68

877.49

877.30

877.04

876.65



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PAVING GRADES: SIGGELKOW RD	SHEET 54	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021203_PD (GRADES).DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2024 11:12 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

N

SIGGELKOW RD

TRIANGLE ST

PAULSON RD

MH

SS

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PAVING GRADES: SIGGLEKOW RD	SHEET 55	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021203_PD (GRADES).DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2024 11:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

USH 51 SB

USH 51 NB

USH 51 SB OFF-RAMP

USH 51 NB ON-RAMP

TRIANGLE ST

SIGGELKOW RD

SIGGELKOW RD

PAULSON RD

CR-01

CR-02

CR-03

CR-04

CR-05

CR-06

CR-07

CR-08

CR-09

CR-10

CR-11

CR-12

CR-13

CR-14

CR-15

CR-16

CR-17

CR-18

CR-19

CR-20

CR-21

CR-22

USH 51 SB ON-RAMP

USH 51 SB

USH 51 NB

USH 51 NB OFF-RAMP

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CURB RAMP DETAILS	SHEET 56	E

2

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
101	12+15.67'WSW'	29.80 RT	465018.892	843575.772
102	12+00.49'WSW'	30.92 RT	465021.921	843567.202
103	11+84.87'WSW'	31.00 RT	465024.173	843558.328
104	11+69.60'WSW'	30.03 RT	465025.597	843549.350
105	12+13.25'WSW'	19.93 RT	465028.159	843579.530
106	11+99.56'WSW'	20.94 RT	465031.491	843570.103
108	11+71.81'WSW'	20.14 RT	465035.534	843550.466
109	11+97.74'WSW'	14.31 RT	465038.206	843570.980
110	11+85.33'WSW'	15.43 RT	465039.500	843561.064
111	11+96.64'WSW'	9.40 RT	465043.164	843571.627
112	11+85.16'WSW'	10.43 RT	465044.458	843561.711
113	11+95.34'WSW'	2.00 RT	465050.584	843572.677
114	11+84.94'WSW'	2.00 RT	465052.821	843562.814
115	11+95.34'WSW'	0.00 RT	465052.499	843573.253
116	11+84.94'WSW'	0.00 RT	465054.798	843563.121
117	11+84.97'WSW'	3.44 RT	465049.416	843562.358
118	11+84.97'WSW'	3.44 RT	465048.122	843572.274

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
200	47+18.91'SGE'	0.00 RT	465071.637	843575.233
201	47+09.13'SGE'	0.00 RT	465072.903	843565.533
202	47+18.91'SGE'	2.00 LT	465073.603	843575.600
203	47+09.13'SGE'	2.00 LT	465074.898	843565.684
204	47+18.54'SGE'	9.58 LT	465081.126	843576.581
205	47+09.40'SGE'	7.45 LT	465080.307	843566.390
206	47+16.69'SGE'	13.81 LT	465085.649	843575.231
207	47+08.56'SGE'	9.87 LT	465082.788	843565.649
208	47+15.76'SGE'	16.06 LT	465088.044	843574.516
209	47+07.66'SGE'	12.60 LT	465085.585	843564.814
210	47+15.09'SGE'	17.90 LT	465089.975	843573.992
211	47+07.17'SGE'	14.52 LT	465087.531	843564.355
212	47+18.78'SGE'	4.63 LT	465076.217	843575.941
213	47+09.26'SGE'	4.63 LT	465077.511	843566.025

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
400	41+53.57'WNW'	0.00 RT	465107.163	843568.842
401	41+43.53'WNW'	0.00 RT	465104.276	843559.220
402	41+53.57'WNW'	2.00 LT	465109.072	843568.245
403	41+43.53'WNW'	2.00 LT	465106.196	843558.658
404	41+63.92'WNW'	8.00 LT	465117.970	843576.014
405	41+53.64'WNW'	8.00 LT	465114.820	843566.522
406	41+43.50'WNW'	8.00 LT	465111.946	843556.944
407	41+33.42'WNW'	8.00 LT	465109.182	843547.333
408	41+63.92'WNW'	20.00 LT	465129.293	843572.040
409	41+53.64'WNW'	20.00 LT	465126.272	843562.938
410	41+43.50'WNW'	20.00 LT	465123.461	843553.569
411	41+33.42'WNW'	20.00 LT	465120.731	843544.074
412	41+33.42'WNW'	20.00 LT	465111.465	843567.523
413	41+33.42'WNW'	20.00 LT	465108.605	843557.941

SIGGELKOW RD

46+50 'SGE'

46+50 'SGW'

11+50 'WSW'

41+00 'WNW'

47+00 'SGE'

47+00 'SGW'

41+50 'WNW'

N

CR 01
TYPE 2 RAMP

CR 02
TYPE 5 RAMP MODIFIED

CR 03
TYPE 5 RAMP MODIFIED

CR 04
TYPE 2 RAMP

LL

UNPAVED NON-TRAVERSABLE FLARE

CONCRETE CURB PEDESTRIAN 6-INCH

EXISTING R/W

R - 13 - 374

2.6' @ 1.5%

2.9' @ 1.5%

2.5' @ 1.5%

2.5' @ 3.3%

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CURB RAMP DETAILS	SHEET 57	E

2

N

USH 51 SB OFF-RAMP

43+00 'WNW'

42+50 'WNW'

42+00 'WNW'

CR 05
TYPE 2 RAMP

UNPAVED
NON-TRAVERSABLE FLARE

502 879.81
505 879.69
510 879.25
3.3' @ 1.5%
507 879.20
501 879.69
509 879.28
500 880.00
504 879.54
506 879.06
503 879.85
508 878.96
2.5' @ 1.5%
511 879.10

LL

1.3% 9.2'
1.5% 8.0'
6.0% 7.4'
1.5% 10'
4.1% 7.6'
1.5% 10'
1.5% 10'
6.0% 7.4'
1.6% 10.1'
3.1% 10'
1.5% 10'
10'

UNPAVED
NON-TRAVERSABLE FLARE

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
500	42+55.96'WNW'	22.58 LT	465170.632	843639.449
501	42+66.20'WNW'	21.79 LT	465176.359	843644.450
502	42+77.07'WNW'	21.88 LT	465183.530	843648.171
503	42+54.05'WNW'	12.70 LT	465163.206	843646.147
504	42+65.67'WNW'	11.80 LT	465170.723	843652.711
505	42+77.32'WNW'	12.68 LT	465179.922	843656.633
506	42+67.18'WNW'	2.00 LT	465166.778	843661.789
507	42+77.52'WNW'	2.00 LT	465175.724	843666.459
508	42+67.18'WNW'	0.00 RT	465165.746	843663.503
509	42+77.52'WNW'	0.00 RT	465174.908	843668.285
510	42+77.52'WNW'	0.00 RT	465177.019	843663.443
511	42+77.52'WNW'	0.00 RT	465167.820	843659.521

CR 6
TYPE 2 RAMP

603 879.41
2.6' @ 6.8%
611 879.59
UNPAVED
NON-TRAVERSABLE FLARE
601 879.49
605 880.00
607 880.15
609 880.46
600 879.38
602 879.30
604 879.85
606 879.97
608 880.30
2.6' @ 6.8%
610 879.48
R - 13 - 375

LL

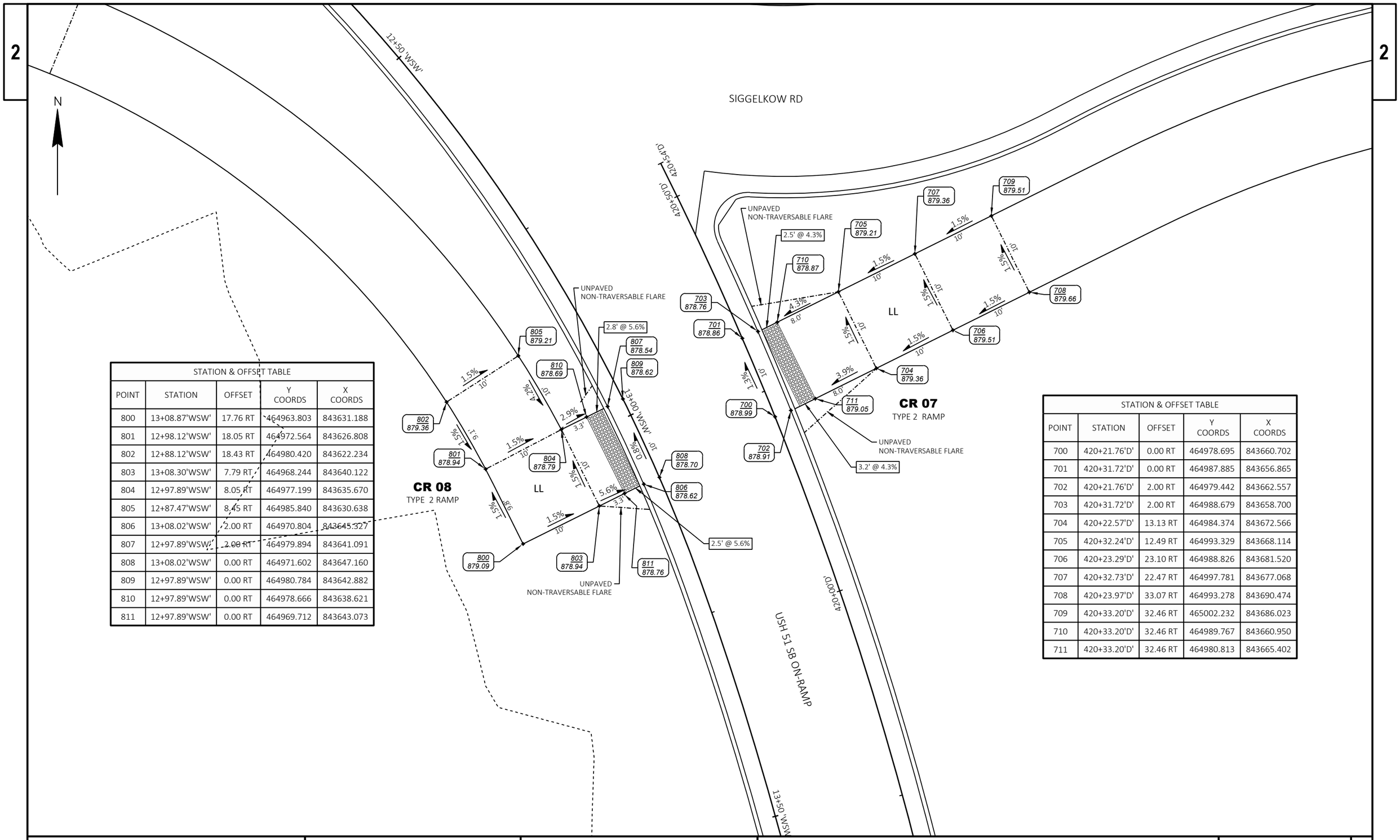
322+00'C'
1.1% 10.0'
6.8% 6.0'
1.2% 10'
1.5% 10'
6.2% 6.0'
3.3% 10'
1.5% 8'
1.5% 10'
4.1% 8'
1.5%
12'

UNPAVED
NON-TRAVERSABLE FLARE

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
600	321+87.59'C'	0.00 RT	465158.382	843682.003
601	321+97.33'C'	0.00 RT	465167.332	843685.819
602	321+87.59'C'	2.00 RT	465157.499	843683.798
603	321+97.33'C'	2.00 RT	465166.648	843687.698
604	321+87.99'C'	10.66 RT	465154.074	843691.762
605	321+96.93'C'	10.66 RT	465163.273	843695.684
606	321+87.65'C'	18.67 RT	465150.202	843698.791
607	321+95.71'C'	20.59 RT	465158.566	843704.562
608	321+86.13'C'	26.47 RT	465145.005	843704.906
609	321+93.22'C'	30.10 RT	465153.292	843713.695
610	321+93.22'C'	30.10 RT	465156.441	843686.211
611	321+93.22'C'	30.10 RT	465165.640	843690.132

SIGGELKOW RD

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CURB RAMP DETAILS	SHEET 58	E



STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
800	13+08.87'WSW'	17.76 RT	464963.803	843631.188
801	12+98.12'WSW'	18.05 RT	464972.564	843626.808
802	12+88.12'WSW'	18.43 RT	464980.420	843622.234
803	13+08.30'WSW'	7.79 RT	464968.244	843640.122
804	12+97.89'WSW'	8.05 RT	464977.199	843635.670
805	12+87.47'WSW'	8.45 RT	464985.840	843630.638
806	13+08.02'WSW'	2.00 RT	464970.804	843645.327
807	12+97.89'WSW'	2.00 RT	464979.894	843641.091
808	13+08.02'WSW'	0.00 RT	464971.602	843647.160
809	12+97.89'WSW'	0.00 RT	464980.784	843642.882
810	12+97.89'WSW'	0.00 RT	464978.666	843638.621
811	12+97.89'WSW'	0.00 RT	464969.712	843643.073

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
700	420+21.76'D'	0.00 RT	464978.695	843660.702
701	420+31.72'D'	0.00 RT	464987.885	843656.865
702	420+21.76'D'	2.00 RT	464979.442	843662.557
703	420+31.72'D'	2.00 RT	464988.679	843658.700
704	420+22.57'D'	13.13 RT	464984.374	843672.566
705	420+32.24'D'	12.49 RT	464993.329	843668.114
706	420+23.29'D'	23.10 RT	464988.826	843681.520
707	420+32.73'D'	22.47 RT	464997.781	843677.068
708	420+23.97'D'	33.07 RT	464993.278	843690.474
709	420+33.20'D'	32.46 RT	465002.232	843686.023
710	420+33.20'D'	32.46 RT	464989.767	843660.950
711	420+33.20'D'	32.46 RT	464980.813	843665.402

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CURB RAMP DETAILS	SHEET 59	E

2

N

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
900	221+43.60'B'	14.43 LT	465114.817	843994.282
901	221+53.18'B'	15.60 LT	465123.348	843989.063
902	221+44.11'B'	9.46 LT	465117.426	843998.547
903	221+53.81'B'	10.55 LT	465125.957	843993.329
904	221+44.85'B'	2.00 LT	465121.293	844004.970
905	221+54.70'B'	3.70 LT	465129.610	843999.300
906	221+54.86'B'	2.00 LT	465130.442	844000.787
907	221+44.85'B'	0.00 RT	465122.147	844006.779
908	221+54.86'B'	0.00 RT	465131.251	844002.617
909	221+54.86'B'	0.00 RT	465128.566	843997.594
910	221+54.86'B'	0.00 RT	465120.035	844002.812

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1000	70+57.77'ENE'	0.00 RT	465132.315	844023.009
1001	70+47.71'ENE'	0.00 RT	465140.954	844017.724
1002	70+57.84'ENE'	2.00 LT	465133.402	844024.688
1003	70+47.71'ENE'	2.00 LT	465141.954	844019.456
1004	70+70.51'ENE'	9.01 LT	465127.300	844037.442
1005	70+57.98'ENE'	8.00 LT	465136.544	844029.801
1006	70+47.57'ENE'	7.96 LT	465145.053	844024.547
1007	70+68.98'ENE'	20.93 LT	465135.469	844046.233
1008	70+57.12'ENE'	19.93 LT	465143.685	844039.393
1009	70+47.23'ENE'	19.50 LT	465151.079	844034.399
1010	70+47.23'ENE'	19.50 LT	465143.248	844021.596
1011	70+47.23'ENE'	19.50 LT	465134.717	844026.814

USH 51 NB ON-RAMP

221+00'B'

R - 13 - 377

UNPAVED NON-TRAVERSABLE FLARE

CR 10

TYPE 2 RAMP

LL

1.2' @ 1.5%

2' @ 4.1%

2.5' @ 6.0%

2.5' @ 4.1%

905 882.28
906 882.25
908 882.34
909 882.36
903 882.58
901 882.65
907 882.26
904 882.18
910 882.28
900 882.50
902 882.42
1010 882.13
1003 881.98
1001 882.06
1006 882.34
1009 882.51
1008 882.38
1005 882.19
1007 882.87
1000 882.02
1002 881.94
1011 882.09
1004 882.69

70+50 'ENE'

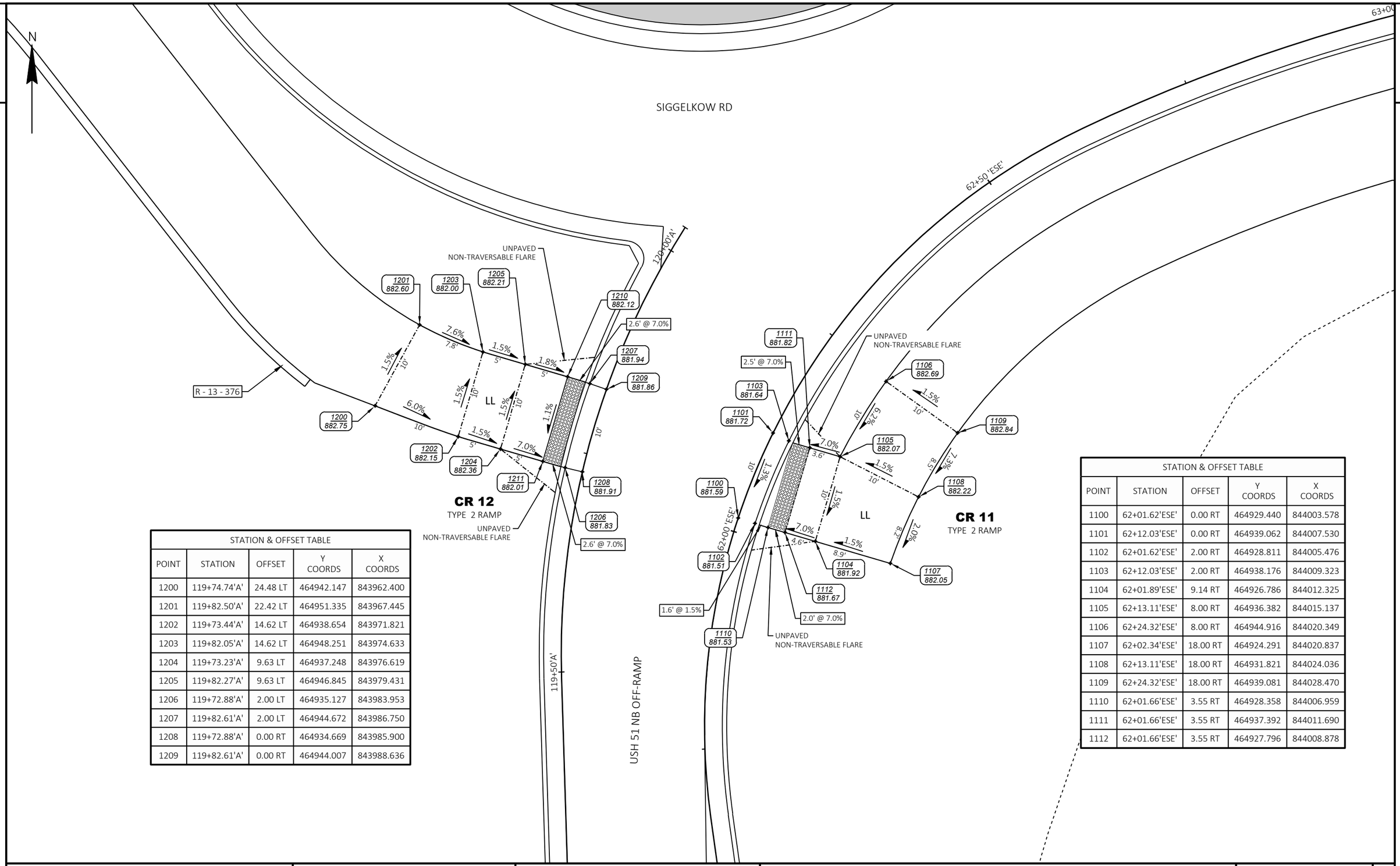
221+50'B'

71+00 'ENE'

SIGGELKOW RD

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CURB RAMP DETAILS	SHEET 60 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021301_CR.DWG
LAYOUT NAME - Sheet 4
PLOT DATE : 7/25/2024 4:43 PM PLOT BY : JOHNSON, ZACHARY PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1200	119+74.74'A'	24.48 LT	464942.147	843962.400
1201	119+82.50'A'	22.42 LT	464951.335	843967.445
1202	119+73.44'A'	14.62 LT	464938.654	843971.821
1203	119+82.05'A'	14.62 LT	464948.251	843974.633
1204	119+73.23'A'	9.63 LT	464937.248	843976.619
1205	119+82.27'A'	9.63 LT	464946.845	843979.431
1206	119+72.88'A'	2.00 LT	464935.127	843983.953
1207	119+82.61'A'	2.00 LT	464944.672	843986.750
1208	119+72.88'A'	0.00 RT	464934.669	843985.900
1209	119+82.61'A'	0.00 RT	464944.007	843988.636

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1100	62+01.62'ESE'	0.00 RT	464929.440	844003.578
1101	62+12.03'ESE'	0.00 RT	464939.062	844007.530
1102	62+01.62'ESE'	2.00 RT	464928.811	844005.476
1103	62+12.03'ESE'	2.00 RT	464938.176	844009.323
1104	62+01.89'ESE'	9.14 RT	464926.786	844012.325
1105	62+13.11'ESE'	8.00 RT	464936.382	844015.137
1106	62+24.32'ESE'	8.00 RT	464944.916	844020.349
1107	62+02.34'ESE'	18.00 RT	464924.291	844020.837
1108	62+13.11'ESE'	18.00 RT	464931.821	844024.036
1109	62+24.32'ESE'	18.00 RT	464939.081	844028.470
1110	62+01.66'ESE'	3.55 RT	464928.358	844006.959
1111	62+01.66'ESE'	3.55 RT	464937.392	844011.690
1112	62+01.66'ESE'	3.55 RT	464927.796	844008.878

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CURB RAMP DETAILS	SHEET 61	E

2

N

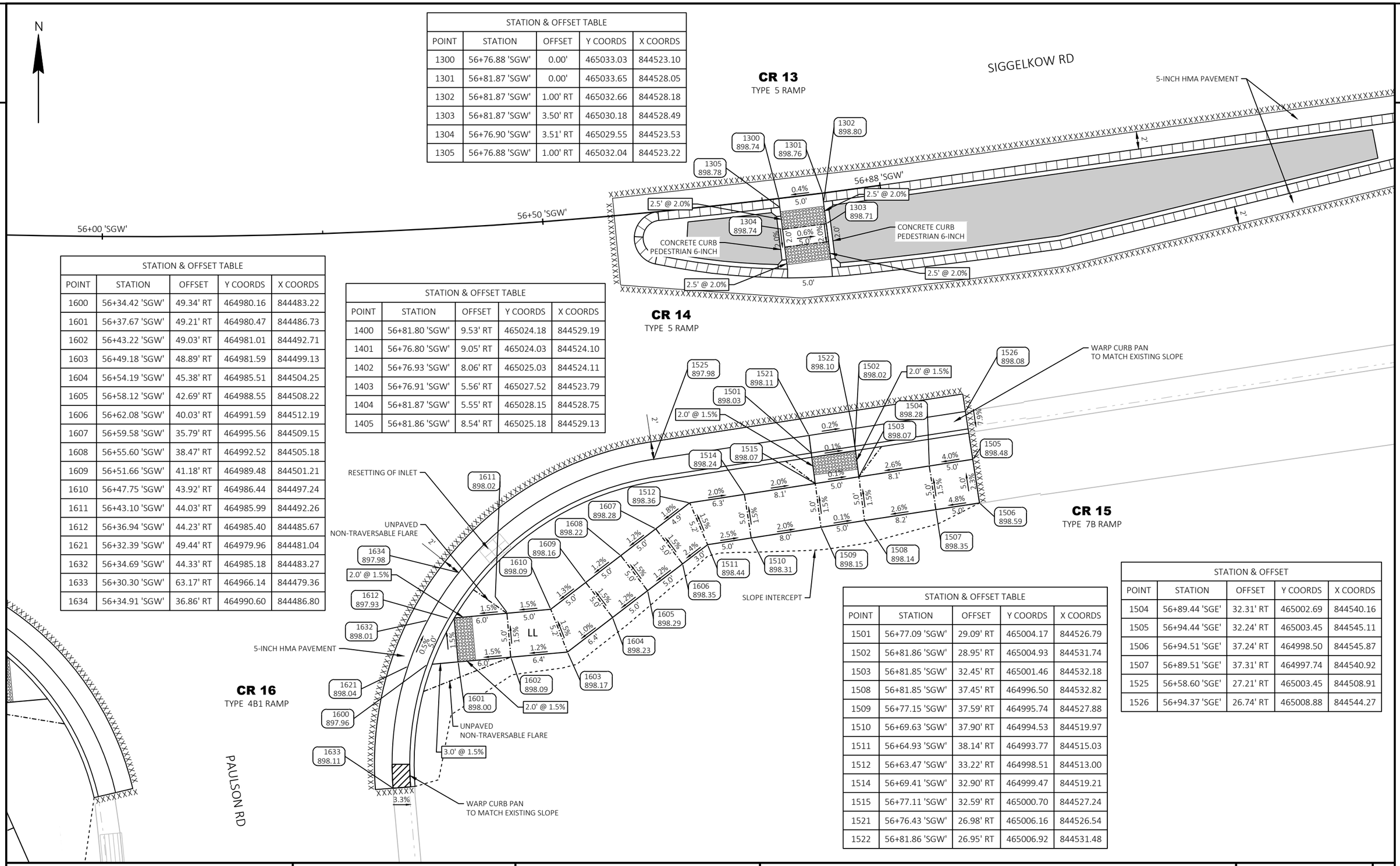
STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1300	56+76.88 'SGW'	0.00'	465033.03	844523.10
1301	56+81.87 'SGW'	0.00'	465033.65	844528.05
1302	56+81.87 'SGW'	1.00' RT	465032.66	844528.18
1303	56+81.87 'SGW'	3.50' RT	465030.18	844528.49
1304	56+76.90 'SGW'	3.51' RT	465029.55	844523.53
1305	56+76.88 'SGW'	1.00' RT	465032.04	844523.22

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1600	56+34.42 'SGW'	49.34' RT	464980.16	844483.22
1601	56+37.67 'SGW'	49.21' RT	464980.47	844486.73
1602	56+43.22 'SGW'	49.03' RT	464981.01	844492.71
1603	56+49.18 'SGW'	48.89' RT	464981.59	844499.13
1604	56+54.19 'SGW'	45.38' RT	464985.51	844504.25
1605	56+58.12 'SGW'	42.69' RT	464988.55	844508.22
1606	56+62.08 'SGW'	40.03' RT	464991.59	844512.19
1607	56+59.58 'SGW'	35.79' RT	464995.56	844509.15
1608	56+55.60 'SGW'	38.47' RT	464992.52	844505.18
1609	56+51.66 'SGW'	41.18' RT	464989.48	844501.21
1610	56+47.75 'SGW'	43.92' RT	464986.44	844497.24
1611	56+43.10 'SGW'	44.03' RT	464985.99	844492.26
1612	56+36.94 'SGW'	44.23' RT	464985.40	844485.67
1621	56+32.39 'SGW'	49.44' RT	464979.96	844481.04
1632	56+34.69 'SGW'	44.33' RT	464985.18	844483.27
1633	56+30.30 'SGW'	63.17' RT	464966.14	844479.36
1634	56+34.91 'SGW'	36.86' RT	464990.60	844486.80

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1400	56+81.80 'SGW'	9.53' RT	465024.18	844529.19
1401	56+76.80 'SGW'	9.05' RT	465024.03	844524.10
1402	56+76.93 'SGW'	8.06' RT	465025.03	844524.11
1403	56+76.91 'SGW'	5.56' RT	465027.52	844523.79
1404	56+81.87 'SGW'	5.55' RT	465028.15	844528.75
1405	56+81.86 'SGW'	8.54' RT	465025.18	844529.13

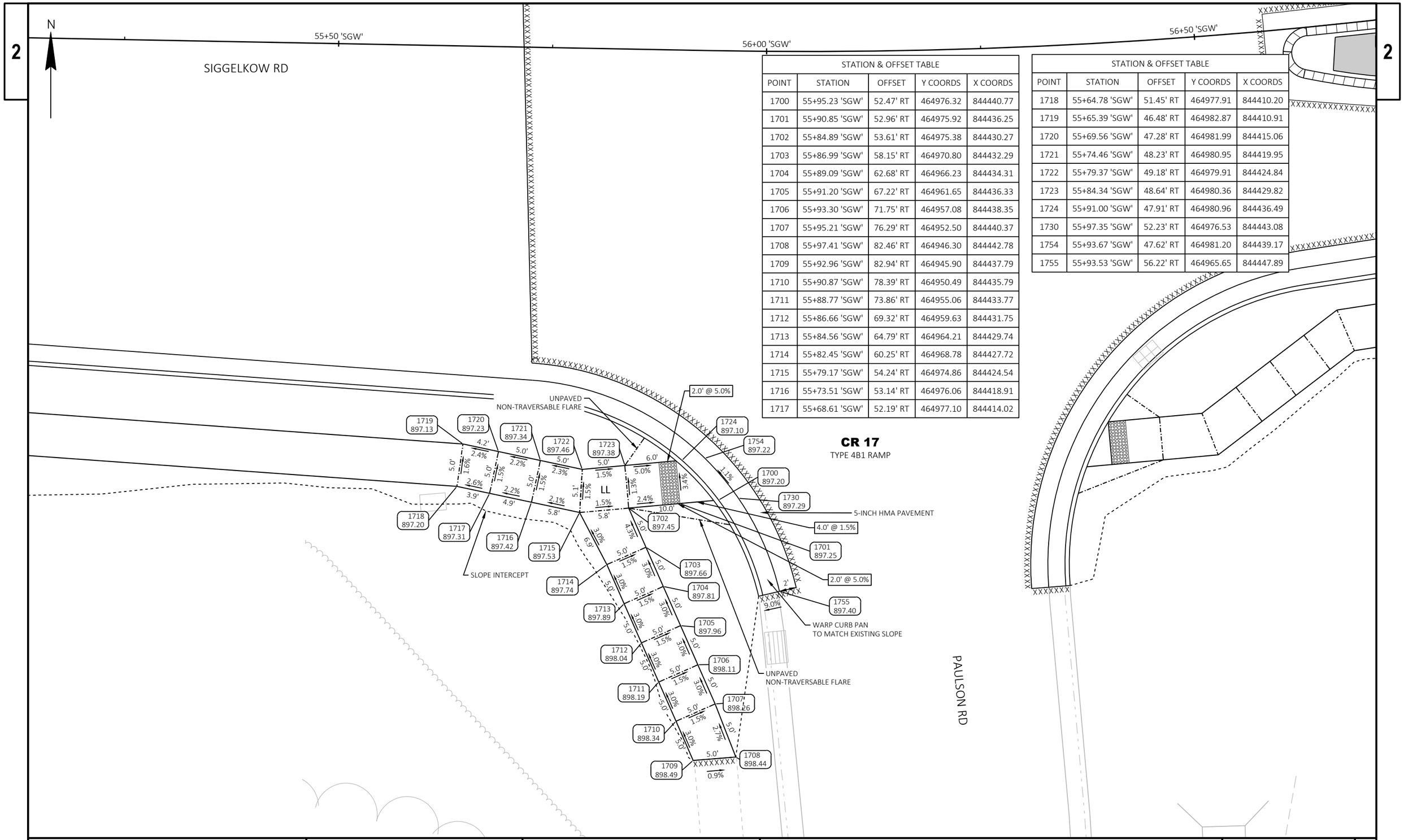
STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1501	56+77.09 'SGW'	29.09' RT	464004.17	844526.79
1502	56+81.86 'SGW'	28.95' RT	464004.93	844531.74
1503	56+81.85 'SGW'	32.45' RT	465001.46	844532.18
1508	56+81.85 'SGW'	37.45' RT	464996.50	844532.82
1509	56+77.15 'SGW'	37.59' RT	464995.74	844527.88
1510	56+69.63 'SGW'	37.90' RT	464994.53	844519.97
1511	56+64.93 'SGW'	38.14' RT	464993.77	844515.03
1512	56+63.47 'SGW'	33.22' RT	464998.51	844513.00
1514	56+69.41 'SGW'	32.90' RT	464999.47	844519.21
1515	56+77.11 'SGW'	32.59' RT	465000.70	844527.24
1521	56+76.43 'SGW'	26.98' RT	465006.16	844526.54
1522	56+81.86 'SGW'	26.95' RT	465006.92	844531.48

STATION & OFFSET				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1504	56+89.44 'SGE'	32.31' RT	465002.69	844540.16
1505	56+94.44 'SGE'	32.24' RT	465003.45	844545.11
1506	56+94.51 'SGE'	37.24' RT	464998.50	844545.87
1507	56+89.51 'SGE'	37.31' RT	464997.74	844540.92
1525	56+58.60 'SGE'	27.21' RT	465003.45	844508.91
1526	56+94.37 'SGE'	26.74' RT	465008.88	844544.27



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CURB RAMP DETAILS	SHEET 62 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021301_CR.DWG
LAYOUT NAME - Sheet 6
PLOT DATE : 7/25/2024 4:44 PM
PLOT BY : JOHNSON, ZACHARY
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1700	55+95.23 'SGW'	52.47' RT	464976.32	844440.77
1701	55+90.85 'SGW'	52.96' RT	464975.92	844436.25
1702	55+84.89 'SGW'	53.61' RT	464975.38	844430.27
1703	55+86.99 'SGW'	58.15' RT	464970.80	844432.29
1704	55+89.09 'SGW'	62.68' RT	464966.23	844434.31
1705	55+91.20 'SGW'	67.22' RT	464961.65	844436.33
1706	55+93.30 'SGW'	71.75' RT	464957.08	844438.35
1707	55+95.21 'SGW'	76.29' RT	464952.50	844440.37
1708	55+97.41 'SGW'	82.46' RT	464946.30	844442.78
1709	55+92.96 'SGW'	82.94' RT	464945.90	844437.79
1710	55+90.87 'SGW'	78.39' RT	464950.49	844435.79
1711	55+88.77 'SGW'	73.86' RT	464955.06	844433.77
1712	55+86.66 'SGW'	69.32' RT	464959.63	844431.75
1713	55+84.56 'SGW'	64.79' RT	464964.21	844429.74
1714	55+82.45 'SGW'	60.25' RT	464968.78	844427.72
1715	55+79.17 'SGW'	54.24' RT	464974.86	844424.54
1716	55+73.51 'SGW'	53.14' RT	464976.06	844418.91
1717	55+68.61 'SGW'	52.19' RT	464977.10	844414.02

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1718	55+64.78 'SGW'	51.45' RT	464977.91	844410.20
1719	55+65.39 'SGW'	46.48' RT	464982.87	844410.91
1720	55+69.56 'SGW'	47.28' RT	464981.99	844415.06
1721	55+74.46 'SGW'	48.23' RT	464980.95	844419.95
1722	55+79.37 'SGW'	49.18' RT	464979.91	844424.84
1723	55+84.34 'SGW'	48.64' RT	464980.36	844429.82
1724	55+91.00 'SGW'	47.91' RT	464980.96	844436.49
1730	55+97.35 'SGW'	52.23' RT	464976.53	844443.08
1754	55+93.67 'SGW'	47.62' RT	464981.20	844439.17
1755	55+93.53 'SGW'	56.22' RT	464965.65	844447.89

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CURB RAMP DETAILS	SHEET 63	E

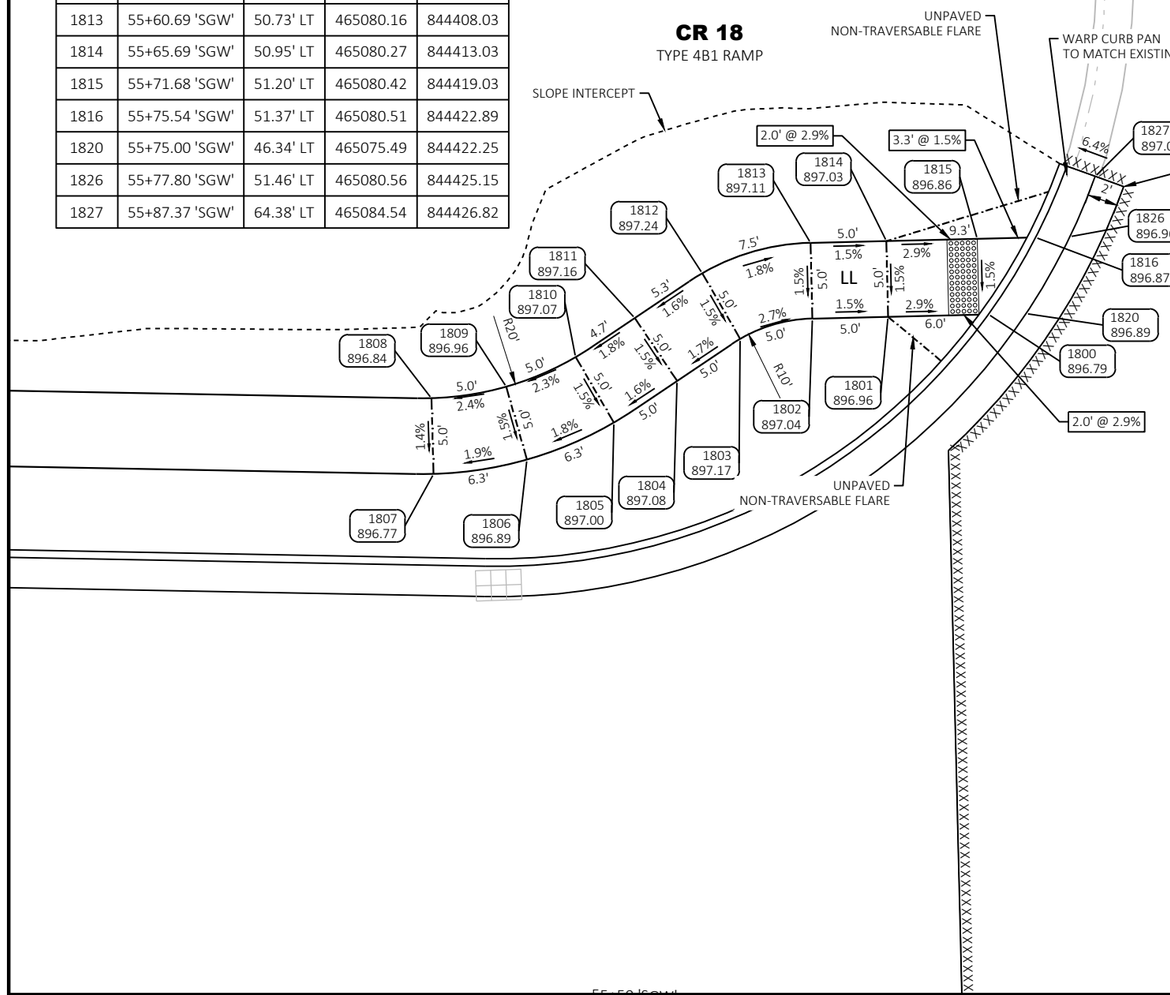
STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1800	55+72.52 'SGW'	46.23' LT	465075.43	844419.78
1801	55+65.90 'SGW'	45.95' LT	465075.28	844413.15
1802	55+60.90 'SGW'	45.74' LT	465075.16	844408.15
1803	55+56.17 'SGW'	44.31' LT	465073.82	844403.39
1804	55+52.06 'SGW'	41.46' LT	465071.05	844399.23
1805	55+47.93 'SGW'	38.64' LT	465068.30	844395.05
1806	55+42.24 'SGW'	36.09' LT	465065.86	844389.31
1807	55+36.10 'SGW'	35.03' LT	465064.91	844383.15
1808	55+35.87 'SGW'	40.02' LT	465069.91	844383.01
1809	55+40.78 'SGW'	40.87' LT	465070.67	844387.94
1810	55+45.33 'SGW'	42.91' LT	465072.62	844392.53
1811	55+49.19 'SGW'	45.56' LT	465075.20	844396.44
1812	55+53.59 'SGW'	48.59' LT	465078.15	844400.89
1813	55+60.69 'SGW'	50.73' LT	465080.16	844408.03
1814	55+65.69 'SGW'	50.95' LT	465080.27	844413.03
1815	55+71.68 'SGW'	51.20' LT	465080.42	844419.03
1816	55+75.54 'SGW'	51.37' LT	465080.51	844422.89
1820	55+75.00 'SGW'	46.34' LT	465075.49	844422.25
1826	55+77.80 'SGW'	51.46' LT	465080.56	844425.15
1827	55+87.37 'SGW'	64.38' LT	465084.54	844426.82

EXISTING R/W

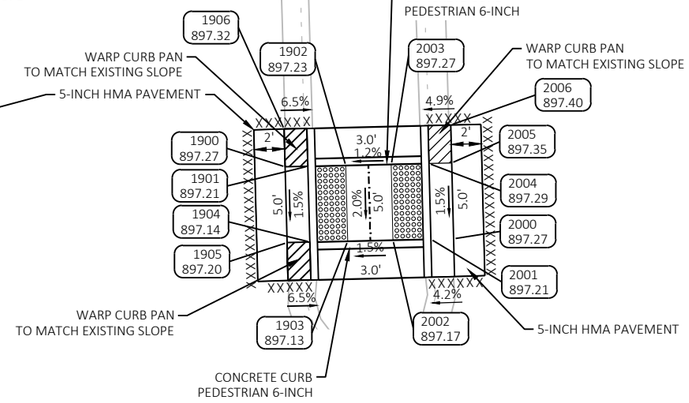
STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
1900	56+06.14 'SGW'	52.50' LT	465081.21	844452.41
1901	56+07.78 'SGW'	52.53' LT	465081.25	844453.91
1902	56+10.54 'SGW'	52.57' LT	465081.31	844456.42
1903	56+10.62 'SGW'	47.57' LT	465076.31	844456.54
1904	56+07.90 'SGW'	47.53' LT	465076.25	844454.04
1905	56+06.27 'SGW'	47.50' LT	465076.21	844452.54
1906	56+13.73 'SGW'	60.13' LT	465083.71	844452.35

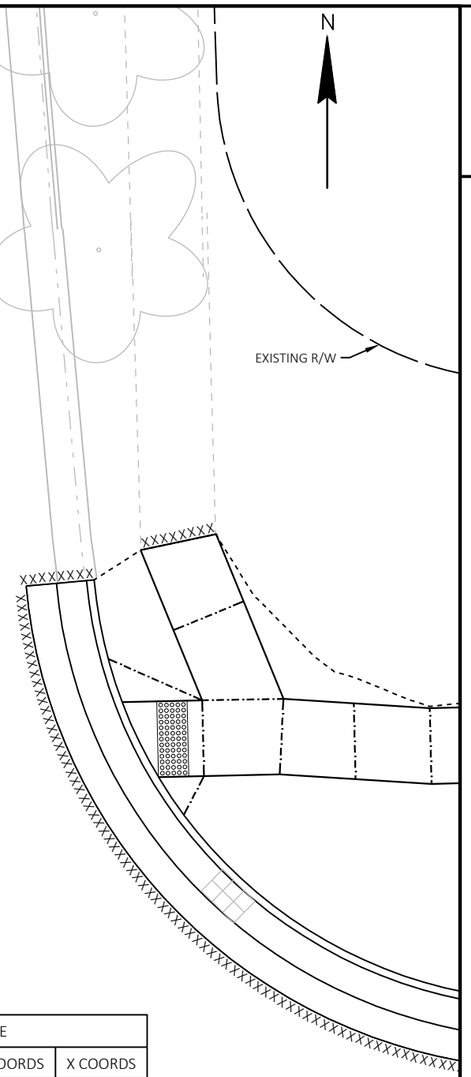
TRIANGLE ST

CR 18
TYPE 4B1 RAMP



CR 19
TYPE 5 RAMP





CR 20
TYPE 5 RAMP

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
2000	56+18.22 'SGW'	47.63' LT	465076.48	844463.54
2001	56+16.59 'SGW'	47.62' LT	465076.44	844462.04
2002	56+13.87 'SGW'	47.61' LT	465076.38	844459.54
2003	56+13.83 'SGW'	52.61' LT	465081.38	844459.42
2004	56+16.55 'SGW'	52.62' LT	465081.44	844461.91
2005	56+18.20 'SGW'	52.63' LT	465081.47	844463.41
2006	56+24.66 'SGW'	58.87' LT	465083.98	844463.34

SIGGELKOW RD

56+50 'SGW'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CURB RAMP DETAILS	SHEET 64	E

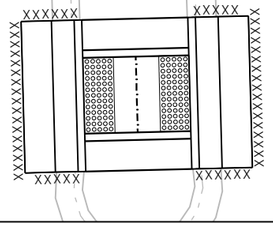
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021301_CR.DWG
LAYOUT NAME - Sheet 8
PLOT DATE : 7/25/2024 4:44 PM PLOT BY : JOHNSON, ZACHARY PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2

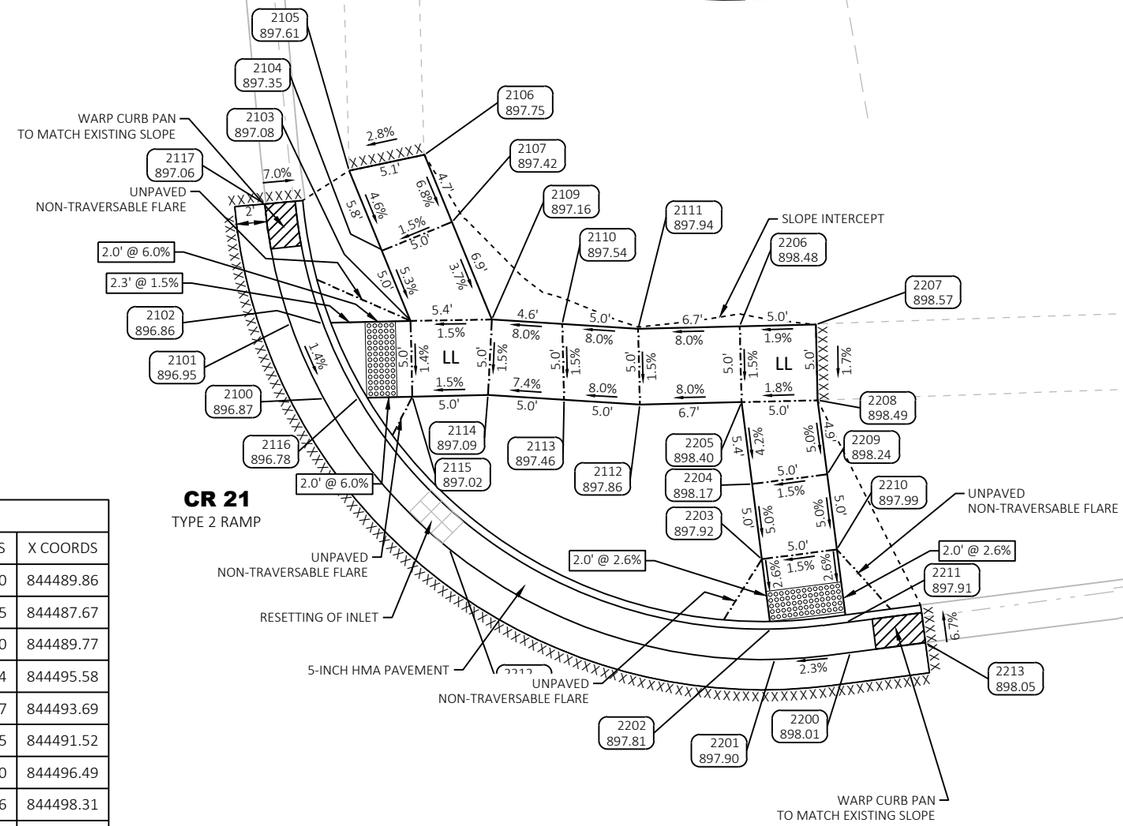
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TRIANGLE ST

EXISTING R/W



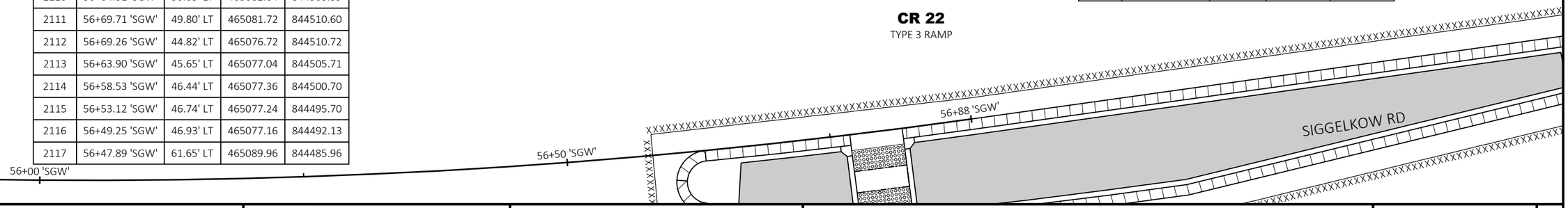
STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
2100	56+46.79 'SGW'	47.04' LT	465077.10	844489.86
2101	56+44.78 'SGW'	52.13' LT	465082.05	844487.67
2102	56+47.08 'SGW'	52.03' LT	465082.10	844489.77
2103	56+53.43 'SGW'	51.73' LT	465082.24	844495.58
2104	56+51.76 'SGW'	56.50' LT	465086.87	844493.69
2105	56+49.82 'SGW'	61.92' LT	465092.15	844491.52
2106	56+55.44 'SGW'	62.58' LT	465093.20	844496.49
2107	56+57.03 'SGW'	58.00' LT	465088.76	844498.31
2109	56+59.29 'SGW'	51.37' LT	465082.34	844500.94
2110	56+64.31 'SGW'	50.63' LT	465082.04	844505.59
2111	56+69.71 'SGW'	49.80' LT	465081.72	844510.60
2112	56+69.26 'SGW'	44.82' LT	465076.72	844510.72
2113	56+63.90 'SGW'	45.65' LT	465077.04	844505.71
2114	56+58.53 'SGW'	46.44' LT	465077.36	844500.70
2115	56+53.12 'SGW'	46.74' LT	465077.24	844495.70
2116	56+49.25 'SGW'	46.93' LT	465077.16	844492.13
2117	56+47.89 'SGW'	61.65' LT	465089.96	844485.96



CR 21
TYPE 2 RAMP

STATION & OFFSET TABLE				
POINT	STATION	OFFSET	Y COORDS	X COORDS
2200	56+81.87 'SGW'	26.94' LT	465060.37	844524.59
2201	56+76.63 'SGW'	27.10' LT	465059.91	844519.61
2202	56+76.61 'SGW'	29.11' LT	465061.90	844519.35
2203	56+76.57 'SGW'	33.77' LT	465066.52	844518.76
2204	56+76.52 'SGW'	38.77' LT	465071.48	844518.12
2205	56+76.47 'SGW'	44.21' LT	465076.87	844517.42
2206	56+76.99 'SGW'	49.19' LT	465081.88	844517.30
2207	56+82.44 'SGW'	48.69' LT	465082.00	844522.33
2208	56+81.87 'SGW'	43.72' LT	465077.01	844522.45
2209	56+81.87 'SGW'	38.79' LT	465072.12	844523.08
2210	56+81.87 'SGW'	33.79' LT	465067.16	844523.72
2211	56+81.87 'SGW'	28.94' LT	465062.35	844524.34
2212	56+56.80 'SGW'	37.39' LT	465067.18	844498.16
2213	56+87.05 'SGW'	26.91' LT	465061.00	844529.57

CR 22
TYPE 3 RAMP



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CURB RAMP DETAILS	SHEET 65	E

N

SIGGELKOW RD

45'SGE'

46'SGE'

46'SGW'

STA 47+00'SGE'

47'SGE'

SURFACE TO SURFACE VOLUME COMPUTED FOR ROUNDABOUT AREA

STA 420+00'D'

418'D'

416'D'

RAMP D

414'D'

412'D'

410'D'

408'D'

406'D'

M/L 'SB' & 'D'

906'SB'

908'SB'

910'SB'

912'SB'

914'SB'

916'SB'

918'SB'

920'SB'

USH 51

M/L 'NB' & 'SB'

906'NB'

908'NB'

910'NB'

912'NB'

914'NB'

916'NB'

918'NB'

920'NB'

USH 51

49'SGE'

49'SGW'

50'SGE'

50'SGW'

106'A'

108'A'

110'A'

112'A'

114'A'

RAMP A

M/L 'NB' & 'A'

116'A'

118'A'

STA 119+50'A'

SURFACE TO SURFACE VOLUME COMPUTED FOR ROUNDABOUT AREA

STA 52+50'SGE'

53'SGE'

53'SGW'

SIGGELKOW RD

54'SGE'

54'SGW'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTION MATCHLINES	SHEET 66	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021801_XM.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2024 2:57 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

N

SIGGELKOW RD

46'SGW'

STA 47+00'SGW'

SURFACE TO SURFACE VOLUME COMPUTED FOR ROUNDABOUT AREA

STA 322+00'C'

324'C'

326'C'

RAMP C

328'C'

330'C'

332'C'

334'C'

336'C'

M/L 'SB' & 'C'

49'SGW'

922'SB'

924'SB'

926'SB'

928'SB'

930'SB'

932'SB'

934'SB'

936'SB'

USH 51

M/L 'NB' & 'SB'

USH 51

922'NB'

924'NB'

926'NB'

928'NB'

930'NB'

932'NB'

934'NB'

936'NB'

232'B'

234'B'

236'B'

230'B'

228'B'

226'B'

RAMP B

224'B'

M/L 'NB' & 'B'

STA 222+00'B'

SURFACE TO SURFACE VOLUME COMPUTED FOR ROUNDABOUT AREA

STA 52+50'SGW'

SIGGELKOW RD

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTION MATCHLINES	SHEET 67	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021801_XM.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2024 2:57 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

USH 51

RAMP C

RAMP D

M/L 'NB' & 'SB'

M/L 'SB' & 'C'

M/L 'NB' & 'B'

324'C'

924'SB'

924'NB'

224'B'

922'SB'

922'NB'

STA 322+00'C'

STA 222+00'B'

M/L 'SGE' & 'SGW'

STA 47+00'SGW'

47'SGW'

SURFACE TO SURFACE VOLUME COMPUTED FOR ROUNDABOUT AREA

49'SGW'

50'SGW'

49'SGE'

50'SGE'

STA 52+50'SGW'

SIGGELKOW RD

43'SGE'

44'SGW'

44'SGE'

45'SGW'

45'SGE'

46'SGW'

46'SGE'

47'SGE'

STA 47+00'SGE'

53'SGW'

54'SGW'

55'SGW'

56'SGW'

56'SGE'

57'SGE'

58'S

53'SGE'

54'SGE'

55'SGE'

STA 52+50'SGE'

420'D'

STA 420+00'D'

120'A'

STA 119+50'A'

920'SB'

920'NB'

418'D'

918'SB'

918'NB'

118'A'

M/L 'SB' & 'D'

M/L 'NB' & 'SB'

M/L 'NB' & 'A'

RAMP D

RAMP A

USH 51

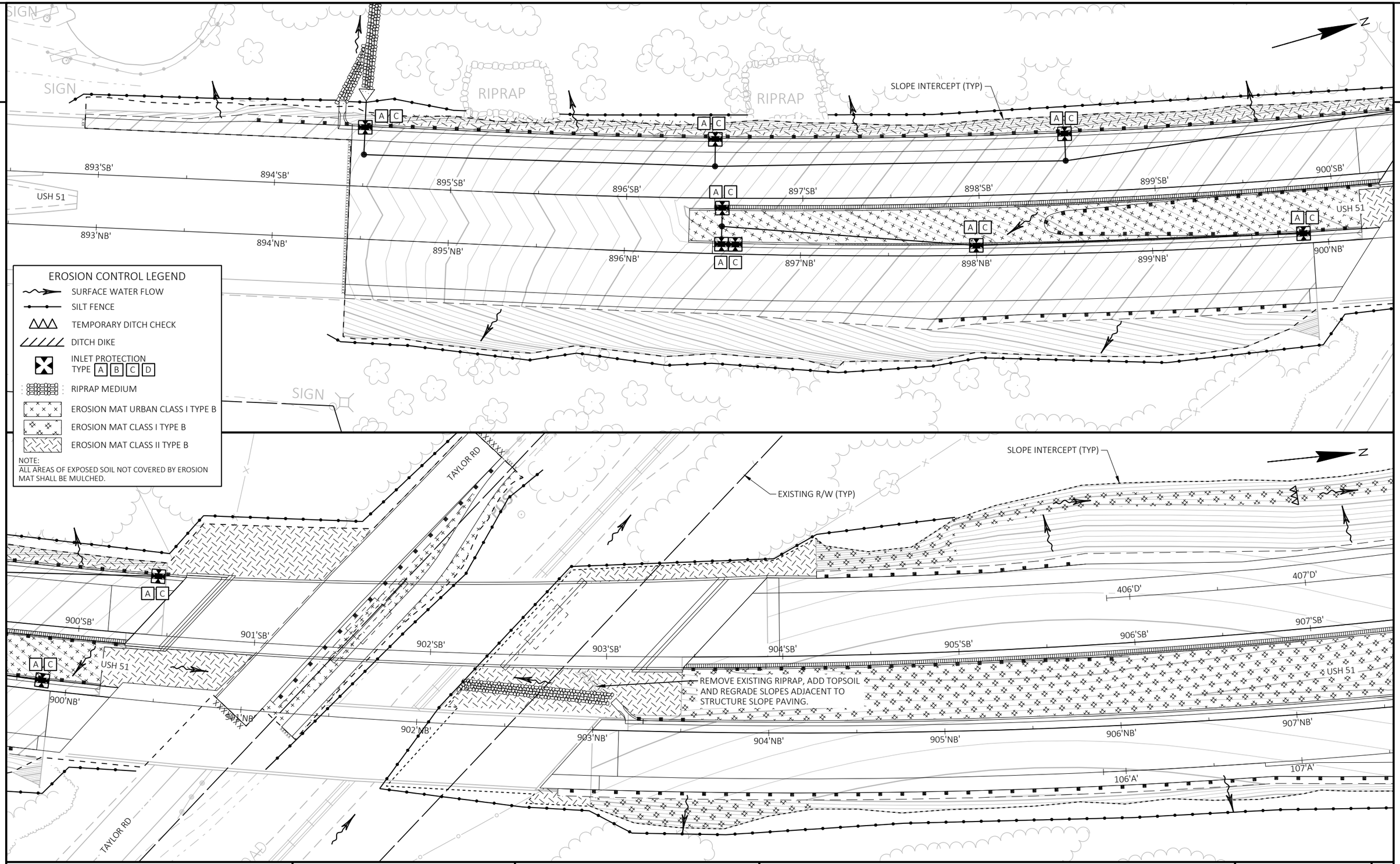
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTION MATCHLINES	SHEET 68	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_021801_XM.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2024 2:57 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	EROSION CONTROL	SHEET 69	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022001_EC.DWG
LAYOUT NAME - 01

PLOT DATE : 9/17/2024 10:43 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

SLOPE INTERCEPT (TYP)

RAMP D

'D' 408'D' 409'D' 410'D' 411'D' 412'D' 413'D' 414'D' 415'

'SB' 908'SB' 909'SB' 910'SB' 911'SB' 912'SB' 913'SB' 914'SB' 915

USH 51

A B

USH 51

908'NB' 909'NB' 910'NB' 911'NB' 912'NB' 913'NB' 914'NB' 915

108'A' RAMP A 109'A' 110'A' 111'A' 112'A' 113'A' 114'A' RAMP A 115'

EXISTING R/W (TYP)

EROSION CONTROL LEGEND

- SURFACE WATER FLOW
- SILT FENCE
- TEMPORARY DITCH CHECK
- DITCH DIKE
- INLET PROTECTION TYPE A B C D
- RIPRAP MEDIUM
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B

NOTE:
ALL AREAS OF EXPOSED SOIL NOT COVERED BY EROSION MAT SHALL BE MULCHED.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	EROSION CONTROL	SHEET 70	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022001_EC.DWG
LAYOUT NAME - 02

PLOT DATE : 9/17/2024 10:43 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

EROSION CONTROL LEGEND

- SURFACE WATER FLOW
- SILT FENCE
- TEMPORARY DITCH CHECK
- DITCH DIKE
- INLET PROTECTION TYPE [A] [B] [C] [D]
- RIPRAP MEDIUM
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B

NOTE:
ALL AREAS OF EXPOSED SOIL NOT COVERED BY EROSION MAT SHALL BE MULCHED.

N

EXISTING R/W (TYP)

SIGGELKOW RD

RAMP D

RAMP C

RAMP A

RAMP B

USH 51

ADD TOPSOIL AND REGRADE SLOPES ADJACENT TO STRUCTURE SLOPE PAVING.

SLOPE INTERCEPT (TYP)

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	EROSION CONTROL	SHEET 71 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022001_EC.DWG
LAYOUT NAME - 03

PLOT DATE : 9/17/2024 10:43 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

EROSION CONTROL LEGEND

- SURFACE WATER FLOW
- SILT FENCE
- TEMPORARY DITCH CHECK
- DITCH DIKE
- INLET PROTECTION TYPE A B C D
- RIPRAP MEDIUM
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B

NOTE:
ALL AREAS OF EXPOSED SOIL NOT COVERED BY EROSION MAT SHALL BE MULCHED.

N

EXISTING R/W (TYP)

POST

SIGN

SIGN

RAMP C

SLOPE INTERCEPT (TYP)

RAMP C

RAMP B

RAMP B

USH 51

USH 51

INL

323'C' 324'C' 325'C' 326'C' 327'C' 328'C' 329'C' 330'C'

923'SB' 924'SB' 925'SB' 926'SB' 927'SB' 928'SB' 929'SB' 930'SB'

923'NB' 924'NB' 925'NB' 926'NB' 927'NB' 928'NB' 929'NB' 930'NB'

223'B' 224'B' 225'B' 226'B' 227'B' 228'B' 229'B' 230'B'

A C A C A B A B A B

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	EROSION CONTROL	SHEET 72	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022001_EC.DWG
LAYOUT NAME - 04
PLOT DATE : 9/17/2024 10:43 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

N

POST

EROSION CONTROL LEGEND

- SURFACE WATER FLOW
- SILT FENCE
- TEMPORARY DITCH CHECK
- DITCH DIKE
- INLET PROTECTION TYPE [A] [B] [C] [D]
- RIPRAP MEDIUM
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B

NOTE:
ALL AREAS OF EXPOSED SOIL NOT COVERED BY EROSION MAT SHALL BE MULCHED.

SLOPE INTERCEPT (TYP)

[A] [C]

[A] [B]

[A] [C]

[A] [C]

330'C' RAMP C 331'C' 332'C' 333'C' 334'C' 335'C' RAMP C 336'C'

930'SB' 931'SB' 932'SB' 933'SB' 934'SB' 935'SB' 936'SB' 937'SB'

USH 51

USH 51

930'NB' 931'NB' 932'NB' 933'NB' 934'NB' 935'NB' 936'NB' 937'NB'

230'B' RAMP B 231'B' 232'B' 233'B' 234'B' 235'B' 236'B' RAMP B

EXISTING R/W (TYP)

TRIANGLE ST

SIGN

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	EROSION CONTROL	SHEET 73	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022001_EC.DWG
LAYOUT NAME - 05

PLOT DATE : 9/17/2024 10:44 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

EROSION CONTROL LEGEND

- SURFACE WATER FLOW
- SILT FENCE
- TEMPORARY DITCH CHECK
- DITCH DIKE
- INLET PROTECTION TYPE A B C D
- RIPRAP MEDIUM
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B

NOTE:
ALL AREAS OF EXPOSED SOIL NOT COVERED BY EROSION MAT SHALL BE MULCHED.

N

EXISTING R/W (TYP)

SLOPE INTERCEPT (TYP)

A C

A C

938'SB' 939'SB' 940'SB' 941'SB' 942'SB' 943'SB' 944'SB' 945'SB'

USH 51

A B

USH 51

938'NB' 939'NB' 940'NB' 941'NB' 942'NB' 943'NB' 944'NB' 945'NB'

INL INL

SIGN POST

TRIANGLE ST

TRIANGLE ST

MH INL INL

MH POST

2

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	EROSION CONTROL	SHEET 74	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022001_EC.DWG
LAYOUT NAME - 06

PLOT DATE : 9/17/2024 10:44 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

EROSION CONTROL LEGEND

- SURFACE WATER FLOW
- SILT FENCE
- TEMPORARY DITCH CHECK
- DITCH DIKE
- INLET PROTECTION TYPE A B C D
- RIPRAP MEDIUM
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B

NOTE:
ALL AREAS OF EXPOSED SOIL NOT COVERED BY EROSION MAT SHALL BE MULCHED.

N

2

EXISTING R/W (TYP)

SLOPE INTERCEPT (TYP)

945'SB' 946'SB' 947'SB' 948'SB' 949'SB' 950'SB' 951'SB' 952'SB'

USH 51

A B

945'NB' 946'NB' 947'NB' 948'NB' 949'NB' 950'NB' 951'NB' 952'NB'

SIGN INL POST POST POST SIGN

TRIANGLE ST

INL SIGN

TRIANGLE ST

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	EROSION CONTROL	SHEET 75	E

EROSION CONTROL LEGEND

- SURFACE WATER FLOW
- SILT FENCE
- TEMPORARY DITCH CHECK
- DITCH DIKE
- INLET PROTECTION TYPE A B C D
- RIPRAP MEDIUM
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B

NOTE:
ALL AREAS OF EXPOSED SOIL NOT COVERED BY EROSION MAT SHALL BE MULCHED.

N

EXISTING R/W (TYP)

953'SB' 954'SB' 955'SB' 956'SB' 957'SB' 958'SB' 959'SB' 960'SB'

A B

USH 51

INL

ST

POST

SIGN

953'NB' 954'NB' 955'NB' 956'NB' 957'NB' 958'NB' 959'NB' 960'NB'

SLOPE INTERCEPT (TYP)

SIGN SIGN MH SIGN INL POST MH POST SIGN

TRIANGLE ST

TRIANGLE ST

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	EROSION CONTROL	SHEET 76	E

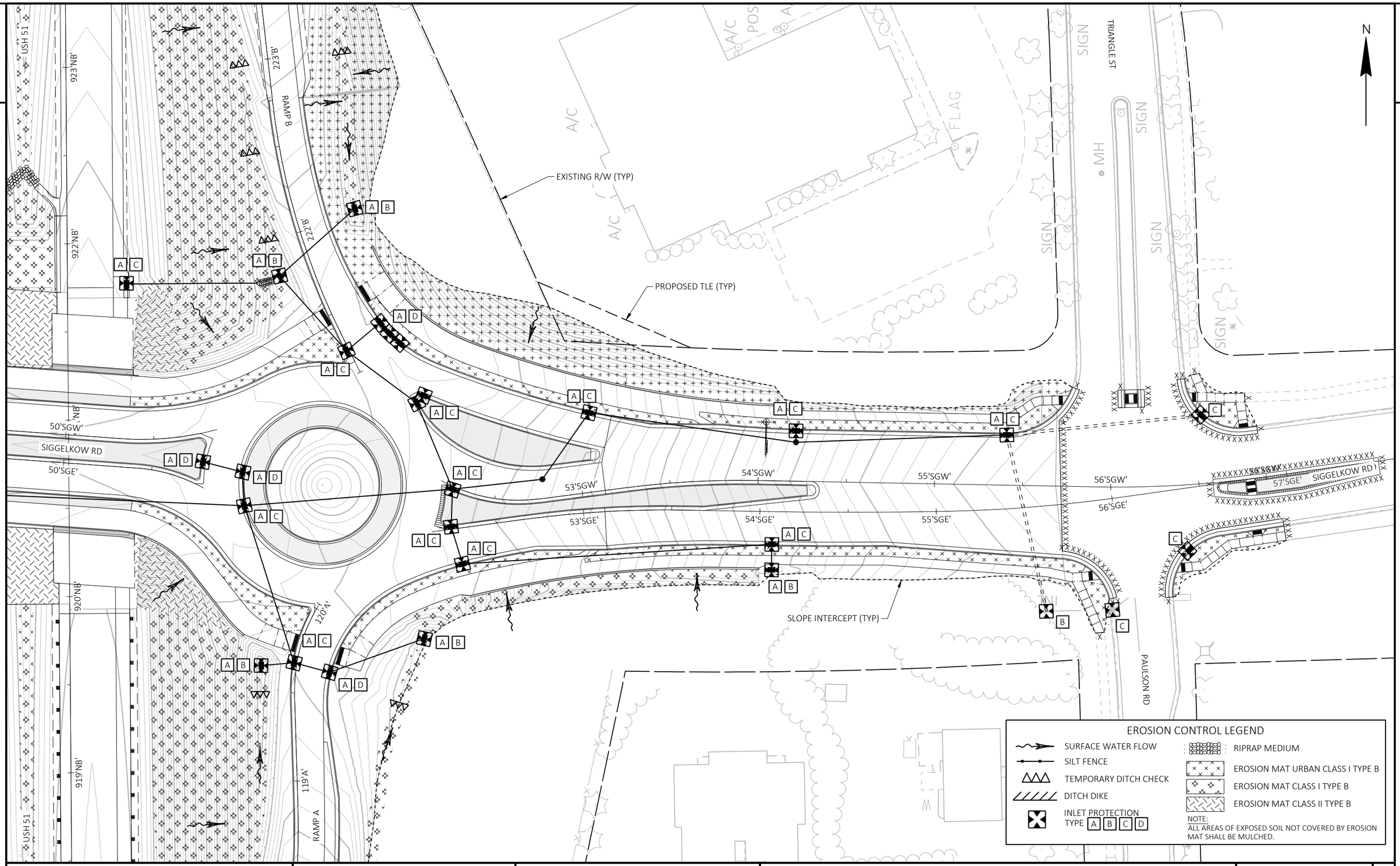
EROSION CONTROL LEGEND

- SURFACE WATER FLOW
- SILT FENCE
- TEMPORARY DITCH CHECK
- DITCH DIKE
- INLET PROTECTION TYPE [A] [B] [C] [D]
- RIPRAP MEDIUM
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B

NOTE:
ALL AREAS OF EXPOSED SOIL NOT COVERED BY EROSION MAT SHALL BE MULCHED.

N

PROPOSED TLE (TYP)
PROPOSED R/W (TYP)
EXISTING R/W (TYP)
SLOPE INTERCEPT (TYP)
SIGGELKOW RD
TERMINAL DR
RAMP C
RAMP D
USH 51
MAILBOX
POST
SIGN
43'SGE'
44'SGW'
44'SGE'
45'SGW'
45'SGE'
46'SGW'
46'SGE'
47'SGW'
47'SGE'
49'SGW'
49'SGE'
323'C'
322'C'
420'D'
419'D'
923'SB'
922'SB'
921'SB'
920'SB'
919'SB'



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	EROSION CONTROL	SHEET 78	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022001_EC.DWG
LAYOUT NAME - 10

PLOT DATE : 9/17/2024 10:45 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

SIGGELKOW RD

RAMP C

322'TC'

323'TC'

324'TC'

(EXISTING PAVEMENT)

(TEMPORARY PAVEMENT)

325'TC'

326'TC'

RAMP C

327'TC'

A

USH 51 SB

USH 51 SB

N

EROSION CONTROL LEGEND

- SURFACE WATER FLOW
- SILT FENCE
- TEMPORARY DITCH CHECK
- DITCH DIKE
- INLET PROTECTION TYPE A B C D
- RIPRAP MEDIUM AT CULVERTS
- EROSION MAT URBAN CLASS I TYPE B
- EROSION MAT CLASS I TYPE B
- EROSION MAT CLASS II TYPE B

NOTE:
ALL AREAS OF EXPOSED SOIL NOT COVERED BY EROSION MAT SHALL BE MULCHED.

POST

N

327'TC'

RAMP C

328'TC'

329'TC'

(EXISTING PAVEMENT)

(TEMPORARY PAVEMENT)

330'TC'

331'TC'

332'TC'

RAMP C

333'TC'

A

USH 51 SB

USH 51 SB

INL

POST

932'NB'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	EROSION CONTROL - RAMP C (STAGE 2A)	SHEET 79	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022002_EC (S2A).DWG
LAYOUT NAME - - RAMP C (STAGE 2A)

PLOT DATE : 7/25/2024 9:12 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

EXISTING R/W (TYP)

SIGN

N

SLOPE INTERCEPT (TYP)

PROPOSED DITCH LINE (TYP)

410'D' 411'D' RAMP D 412'D' 413'D' 414'D' 415'D' 416'D' 417'D' RAMP D

USH 51 SB

910'SB' 911'SB' 912'SB' 913'SB' 914'SB' 915'SB' 916'SB' 917'SB' USH 51 SB

SPECIAL SEEDING LEGEND

NATIVE SEEDING MIXTURE 75 UPDATED AND SEEDING NURSE CROP

NO MOW FESCUE AND SEEDING NURSE CROP

NOTE:
SEE MISCELLANEOUS QUANTITIES FOR SEEDING TYPES IN OTHER LOCATIONS.

N

927'NB' 928'NB' 929'NB' 930'NB' 931'NB' 932'NB' 933'NB' 934'NB'

USH 51 NB USH 51 NB

RAMP B 227'B' 228'B' 229'B' 230'B' 231'B' 232'B' 233'B' RAMP B 234'B'

PROPOSED DITCH LINE (TYP)

EXISTING R/W (TYP)

EXISTING R/W (TYP)

2

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	SPECIAL SEEDING LOCATIONS	SHEET 80	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022003_EC (SEED).DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2024 6:37 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

2

936'SB' 937'SB' 938'SB' 939'SB' 940'SB' 941'SB' 942'SB'

N

936'NB' 937'NB' 938'NB' 939'NB' 940'NB' 941'NB' 942'NB' 943'NB'

USH 51 NB

USH 51 NB

236'B'

PROPOSED DITCH LINE (TYP)

SLOPE INTERCEPT (TYP)

EXISTING R/W (TYP)

SIGN

POST

INL INL

USH 51 SB

TRIANGLE ST

TRIANGLE ST

MH

INL INL

MH

POST

SPECIAL SEEDING LEGEND

NATIVE SEEDING MIXTURE 75 UPDATED AND SEEDING NURSE CROP

NO MOW FESCUE AND SEEDING NURSE CROP

NOTE:
SEE MISCELLANEOUS QUANTITIES FOR SEEDING TYPES IN OTHER LOCATIONS.

N

944'NB' 945'NB' 946'NB' 947'NB' 948'NB' 949'NB' 950'NB' 951'N

USH 51 NB

USH 51 NB

PROPOSED DITCH LINE (TYP)

POST

POST

SIGN

INL

POST

POST

EXISTING R/W (TYP)

TRIANGLE ST

TRIANGLE ST

POST

INL

2

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	SPECIAL SEEDING LOCATIONS	SHEET 81	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022003_EC (SEED).DWG
LAYOUT NAME - 02

PLOT DATE : 7/31/2024 6:38 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

N

PROPOSED TLE (TYP)

PROPOSED R/W (TYP)

SEEDING MIXTURE NO. 40

EXISTING R/W (TYP)

SLOPE INTERCEPT (TYP)

RAMP C

RAMP D

RAMP A

USH 51

SIGGELKOW RD

MAILBOX

POST

323'C'

322'C'

420'D'

419'D'

223'B'

222'B'

120'A'

119'A'

923'SB'

922'SB'

921'SB'

920'SB'

919'SB'

923'NB'

922'NB'

921'NB'

920'NB'

919'NB'

46'WB'

46'SGE'

47'WB'

47'SGE'

49'WB'

49'SGE'

50'WB'

50'SGE'

53'WB'

53'SGE'

SPECIAL SEEDING LEGEND

NATIVE SEEDING MIXTURE 75 UPDATED AND SEEDING NURSE CROP

NO MOW FESCUE AND SEEDING NURSE CROP

NOTE:
SEE MISCELLANEOUS QUANTITIES FOR SEEDING TYPES IN OTHER LOCATIONS.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	SPECIAL SEEDING LOCATIONS	SHEET 82	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022003_EC (SEED).DWG
LAYOUT NAME - 03

PLOT DATE : 7/31/2024 6:38 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

N

RIPRAP

RIPRAP

PIPE UNDERDRAIN
6-INCH (TYP)

SIGN

SIGN

USH 51 SB

USH 51 SB

895'SB'

896'SB'

897'SB'

898'SB'

899'SB'

900'SB'

INL

SS

SS

SS

SS

SIGN

SIGN

POST

120 STA 898+00 'NB', 5.6' LT
INLETS 4-V

895'NB'

896'NB'

897'NB'

898'NB'

899'NB'

900'NB'

STA 899+86 'NB', 5.6' LT
INLETS 2x2.5-V 130

USH 51 NB

EX-101 STA 895+35 'NB', 13.2' LT
EXISTING INLET TO REMAIN

110 STA 896+55 'NB', 15.6' LT
MANHOLES 5-J

USH 51 NB

ALLIANT (ELEC)
(SPECTRUM & TDS ON PPOL)

STA. 894+44, 53.0' RT
INVERT EL. 869.68
Y=462422.384
x=843672.598

SIGN

POST

TDS
(COMM)

FO

FO

FO

FO

NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.

130
894.90

120
887.59

110

FINISHED GROUND
AT PIPE C/L

EXISTING GROUND
AT PIPE C/L

882.53

EX-101

186 LF SSPRC CLASS III 12-INCH @ 4.00%

890.50

883.08

882.08

145 LF SSPRC CLASS III 24-INCH @ 4.71%

COVER PLATES REQ'D

875.25

875.15

REMOVE EXISTING COVER PLATES,
CONNECT EXISTING STORM SEWER
PIPE TO PROPOSED STRUCTURE

895
890
885
880
875
870
865
860

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 83	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - ML_01

PLOT DATE : 9/24/2024 11:23 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

RIPRAP

RIPRAP

PIPE UNDERDRAIN
6-INCH (TYP)

SIGN

SIGN

USH 51 SB

USH 51 SB

895'SB'

896'SB'

897'SB'

898'SB'

899'SB'

900'SB'

115 STA 896+54 'SB', 5.5' RT
INLETS 2x3-H

INL

SS

SIGN

POST

SIGN

895'NB'

896'NB'

897'NB'

898'NB'

899'NB'

900'NB'

USH 51 NB

USH 51 NB

ALLIANT (ELEC)
(SPECTRUM & TDS ON PPOL)

STA 896+55 'NB', 5.5' LT
INLETS 2x3-H 111

112 STA 896+63 'NB', 5.5' LT
INLETS 2x3-H

110 STA 896+55 'NB', 15.6' LT
MANHOLES 5-J

SIGN

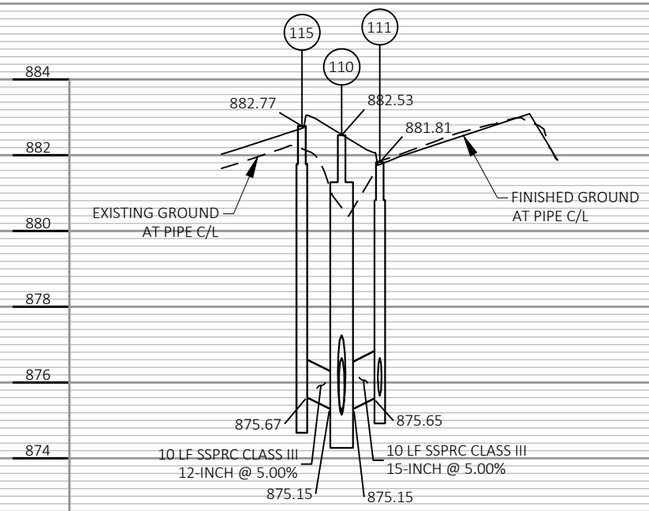
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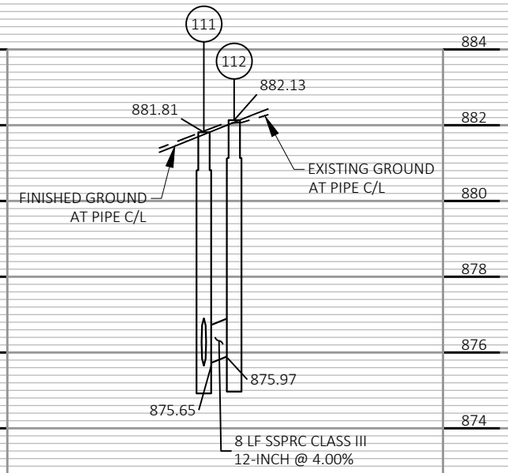
TDS
(COMM)

FO

NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.





PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 84	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - ML_02

PLOT DATE : 9/24/2024 11:23 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

N

RIPRAP

RIPRAP

SIGN

SIGN

PIPE UNDERDRAIN
6-INCH (TYP)

150 STA 894+50 'SB', 18.0' LT
MANHOLES 5-J

160 STA 896+50 'SB', 18.0' LT
MANHOLES 5-J

170 STA 898+50 'SB', 18.0' LT
MANHOLES 4-J

STA 900+43 'SB', 33.5' LT
INLETS 2x3-H 175

USH 51 SB

USH 51 NB

895'SB' 896'SB' 897'SB' 898'SB' 899'SB' 900'SB'

895'NB' 896'NB' 897'NB' 898'NB' 899'NB' 900'NB'

INL

SS

SIGN

POST

SIGN

ALLIANT (ELEC)
(SPECTRUM & TDS ON PPOL)

TDS
(COMM)

FO

NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.

900
895
890
885
880
875
870
865

150 873.58

160 881.75

170 890.19

175 897.15

EXISTING GROUND
AT PIPE C/L

FINISHED GROUND
AT PIPE C/L

200 LF SSPRC CLASS III 24-INCH @ 4.00%

867.73

875.71

875.81

199 LF SSPRC CLASS III 24-INCH @ 4.00%

883.77

884.87

192 LF SSPRC CLASS III 12-INCH @ 4.00%

892.55

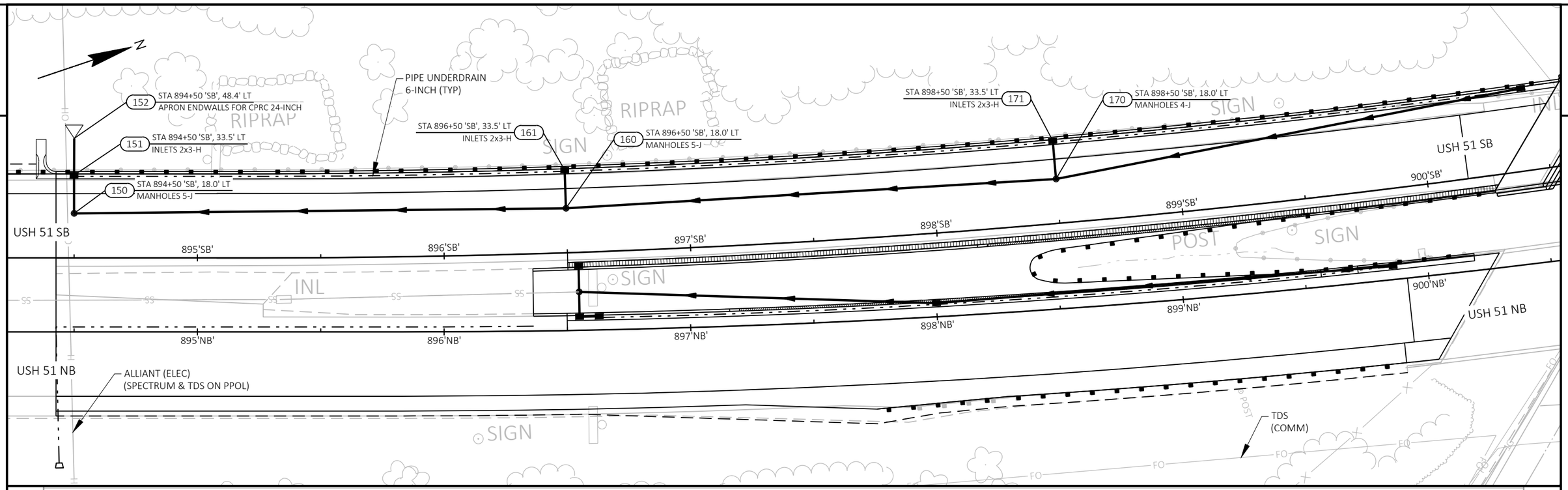
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 85	E

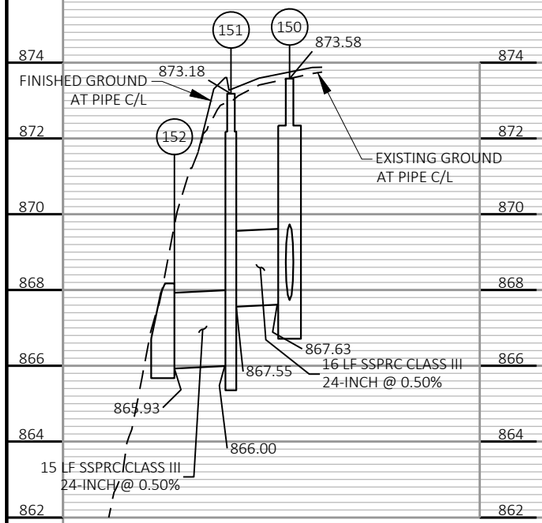
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - ML_03

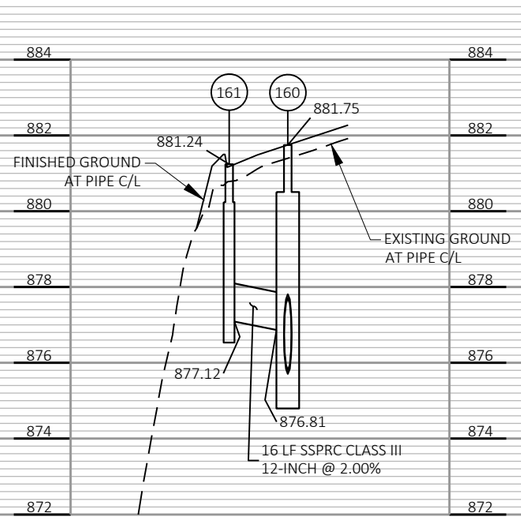
PLOT DATE : 9/24/2024 11:24 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

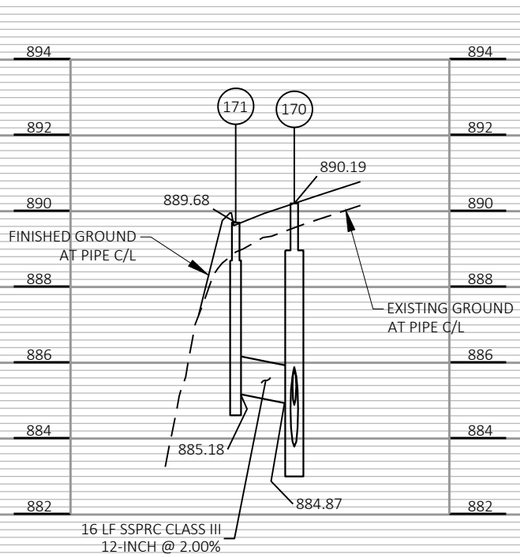
WISDOT/CADDS SHEET 44

2







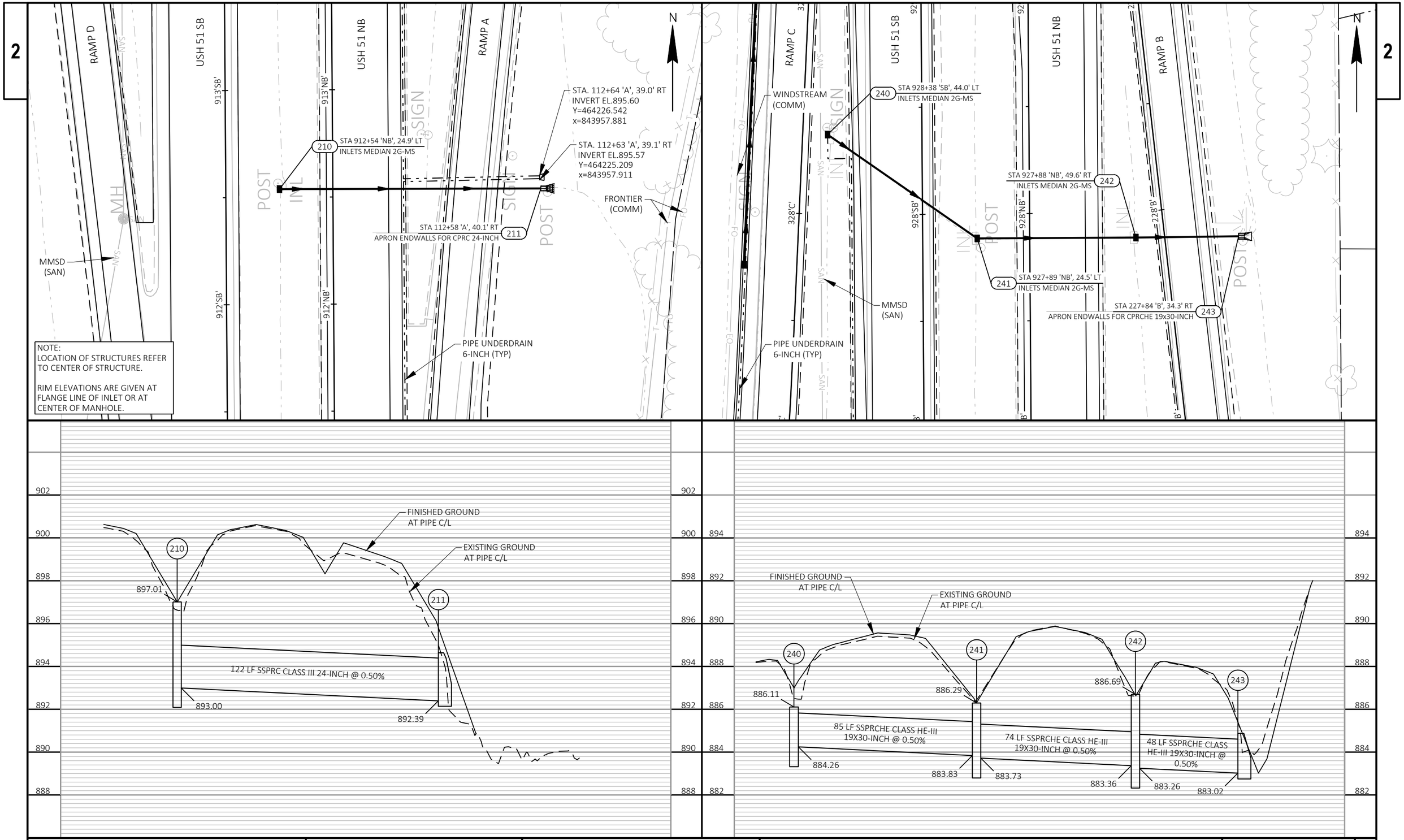


NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.

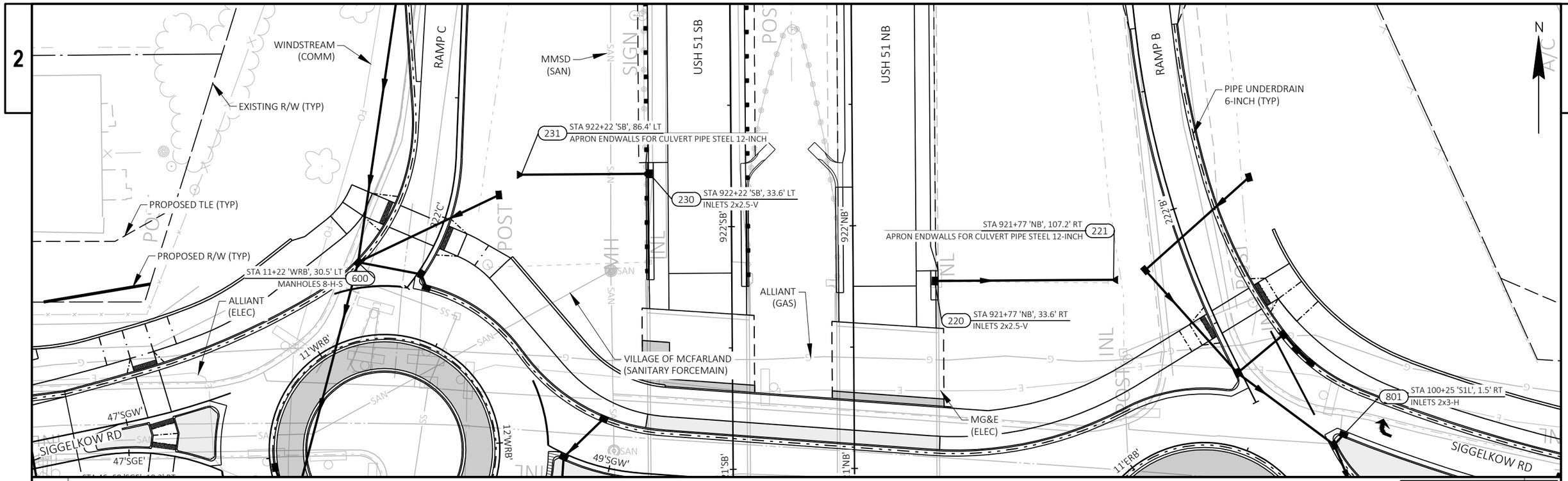
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 86	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - ML_04
PLOT DATE : 9/24/2024 11:24 AM
PLOT BY : BUTTERIS, BRADLEY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 87	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - ML_05
PLOT DATE : 9/24/2024 11:24 AM
PLOT BY : BUTTERIS, BRADLEY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44





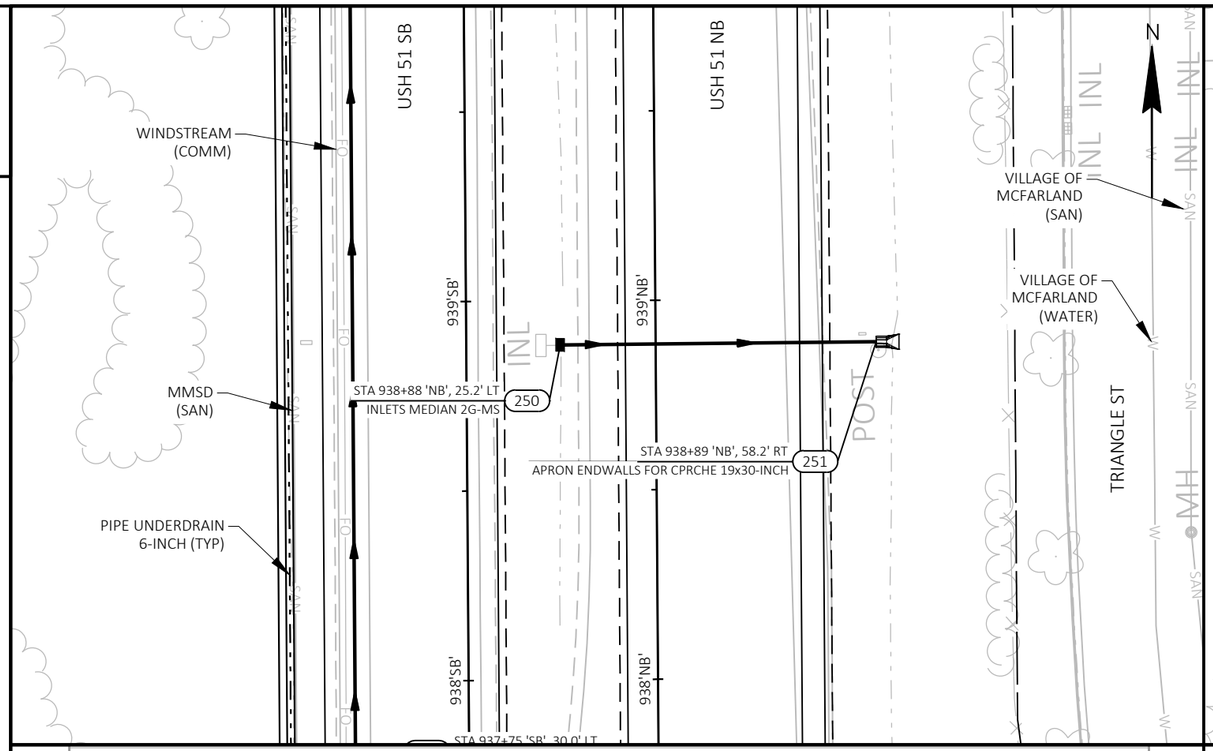
NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

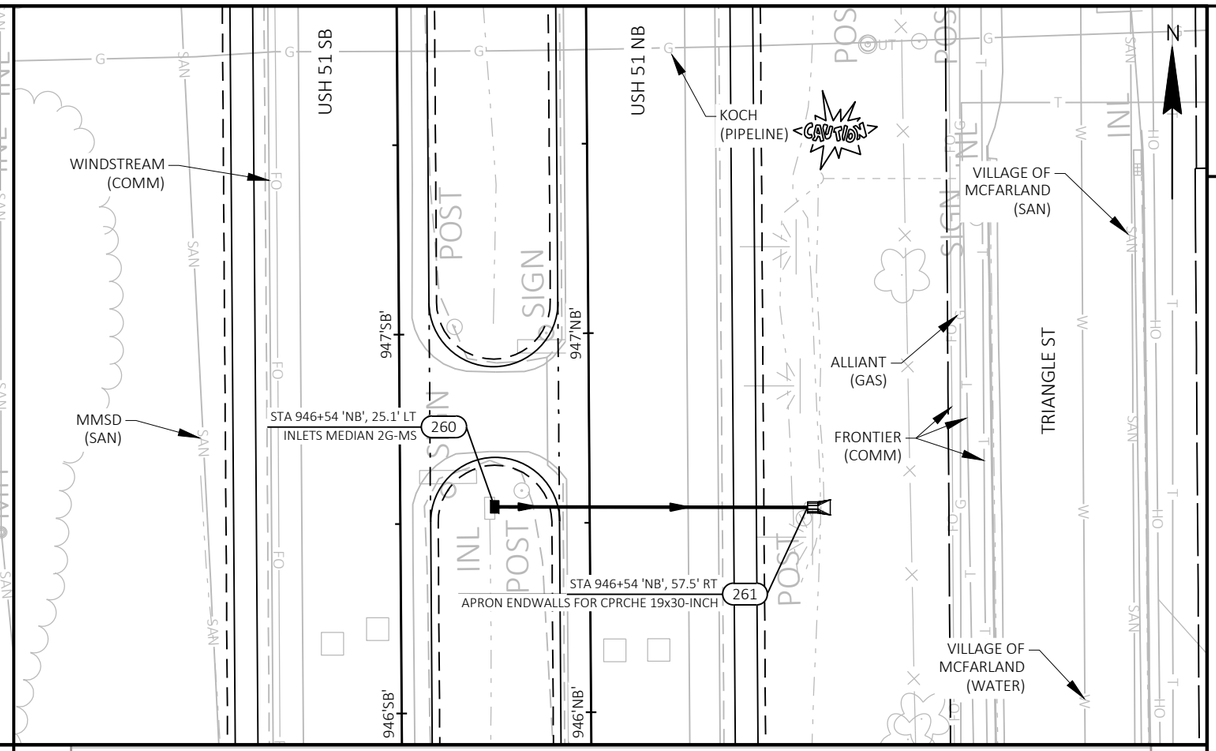
RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.

SEE SDD 08D03 CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES FOR ADDITIONAL INFORMATION

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 88	E

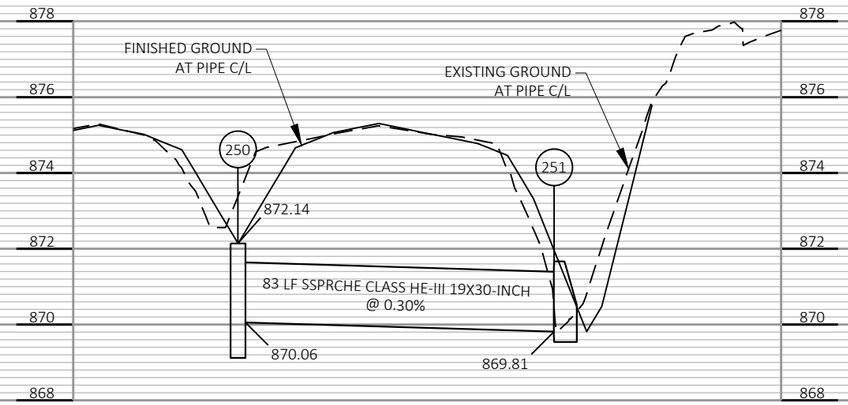
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LAYOUT NAME - ML_06
PLOT DATE : 9/24/2024 11:25 AM
PLOT BY : BUTTERIS, BRADLEY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

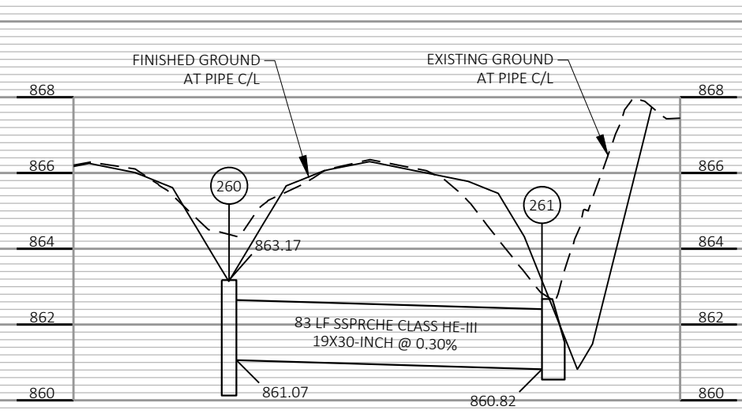




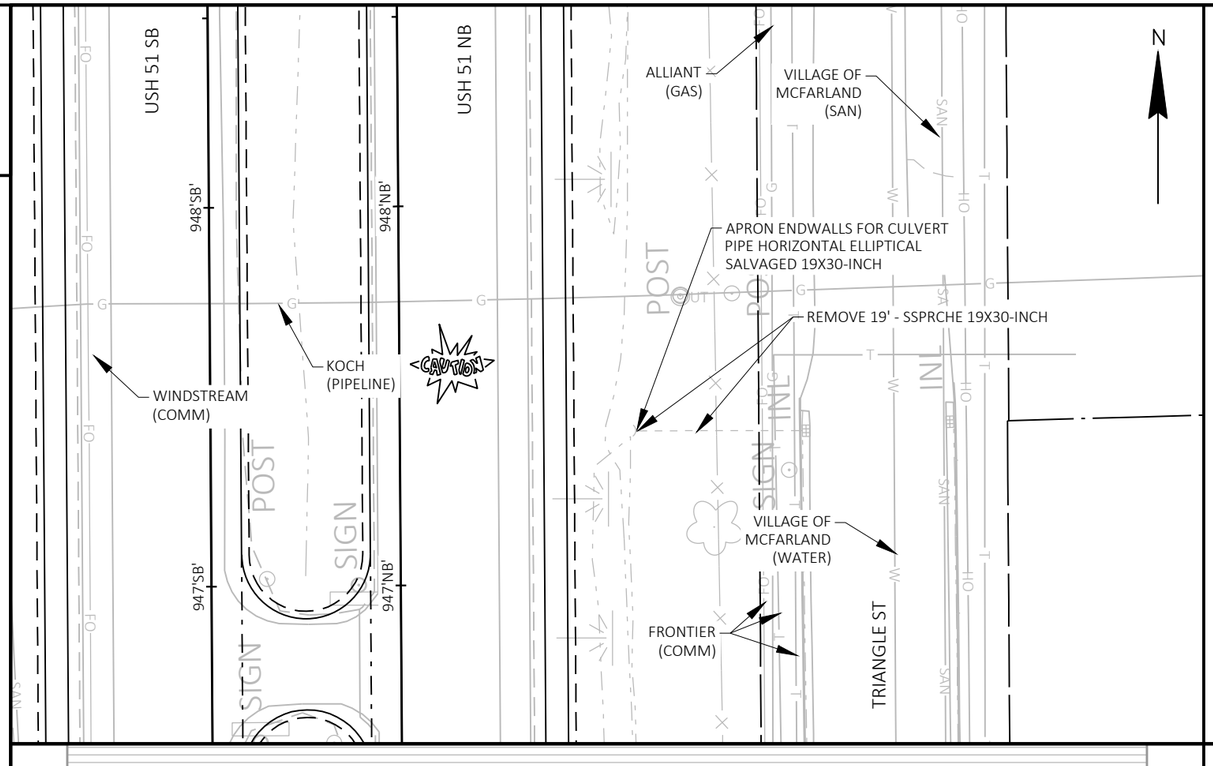
NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

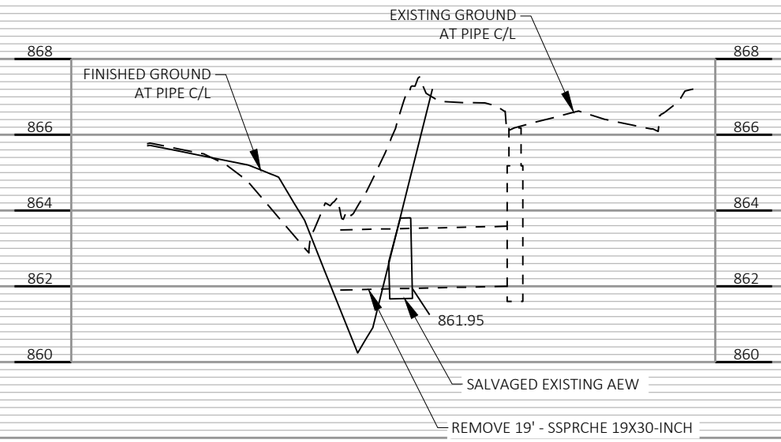
RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.



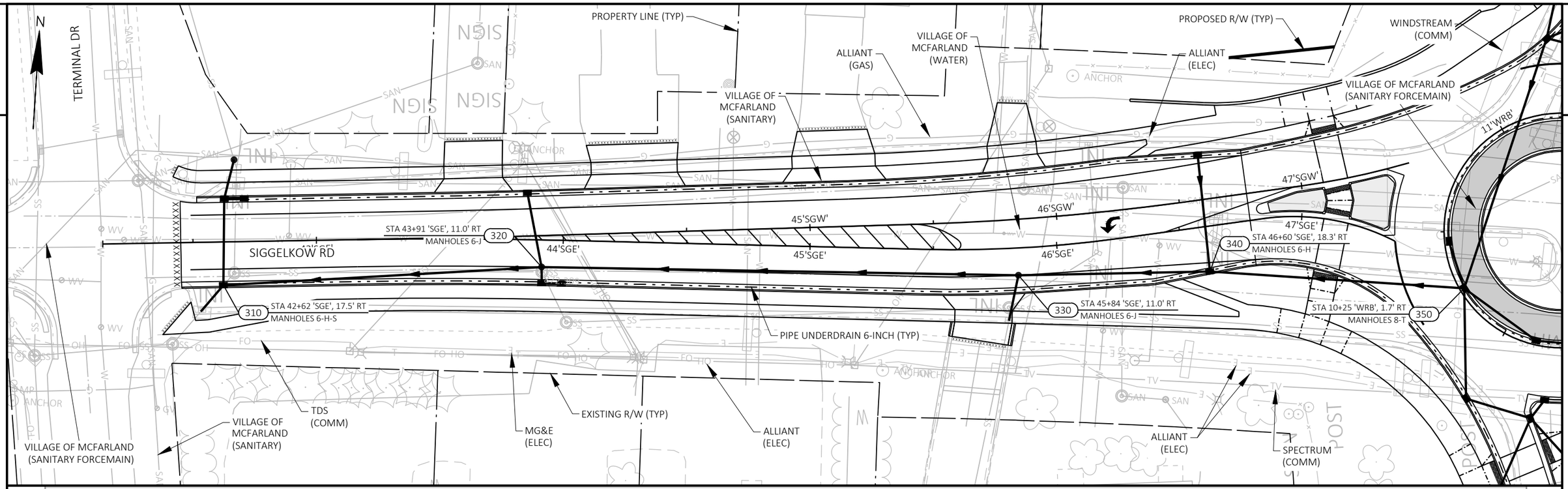


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 89	E



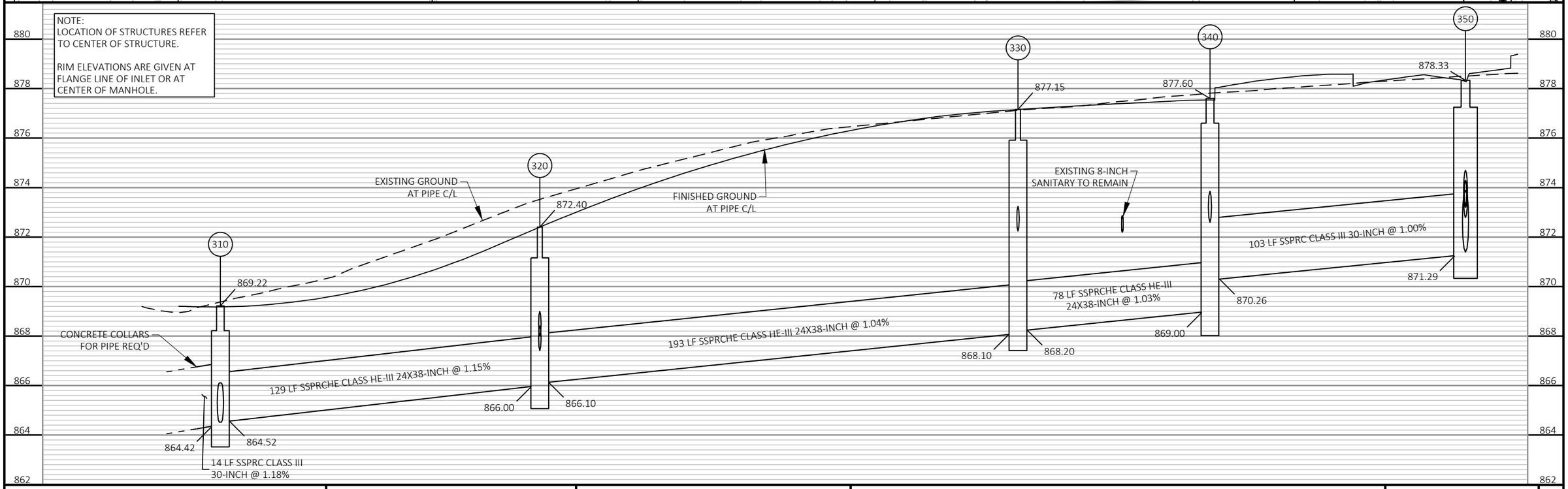


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 90	E



NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 91	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - SIG_01

PLOT DATE : 9/24/2024 11:26 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

PROPOSED R/W (TYP)

VILLAGE OF MCFARLAND (SANITARY FORCEMAIN)

ALLIANT (ELEC)

11'WRB'

12'WRB'

47'SGW'

47'SGE'

SIGGELKOW RD

STA 10+25 'WRB', 1.7' RT
MANHOLES 8-T
350

360
STA 12+85 'WRB', 1.7' RT
MANHOLES 6-T

USH 51 SB

USH 51 NB

ALLIANT (GAS)

MG&E (ELEC)

PIPE UNDERDRAIN 6-INCH (TYP)

VILLAGE OF MCFARLAND (WATER)

11'ERB'

12'ERB'

SIGGELKOW RD

49'SGW'

49'SGE'

921'SB'

921'NB'

50'SGW'

50'SGE'

380
STA 10+45 'ERB', 1.7' RT
MANHOLES 6-T

370
STA 48+76 'SGE', 17.5' RT
MANHOLES 5-H-S

MMSD (SAN)

SPECTRUM (COMM)

ALLIANT (ELEC)

WINDSTREAM (COMM)

920'SB'

920'NB'

EXISTING R/W (TYP)

720
STA 12+53 'ERB', 57.0' LT

884
882
880
878
876
874
872
870
868

EXISTING GROUND AT PIPE C/L

FINISHED GROUND AT PIPE C/L

350
360
370
380

878.33
878.55
878.89
880.63

36 LF SSPRC CLASS III 30-INCH @ 1.00%

79 LF SSPRC CLASS III 30-INCH @ 2.61%

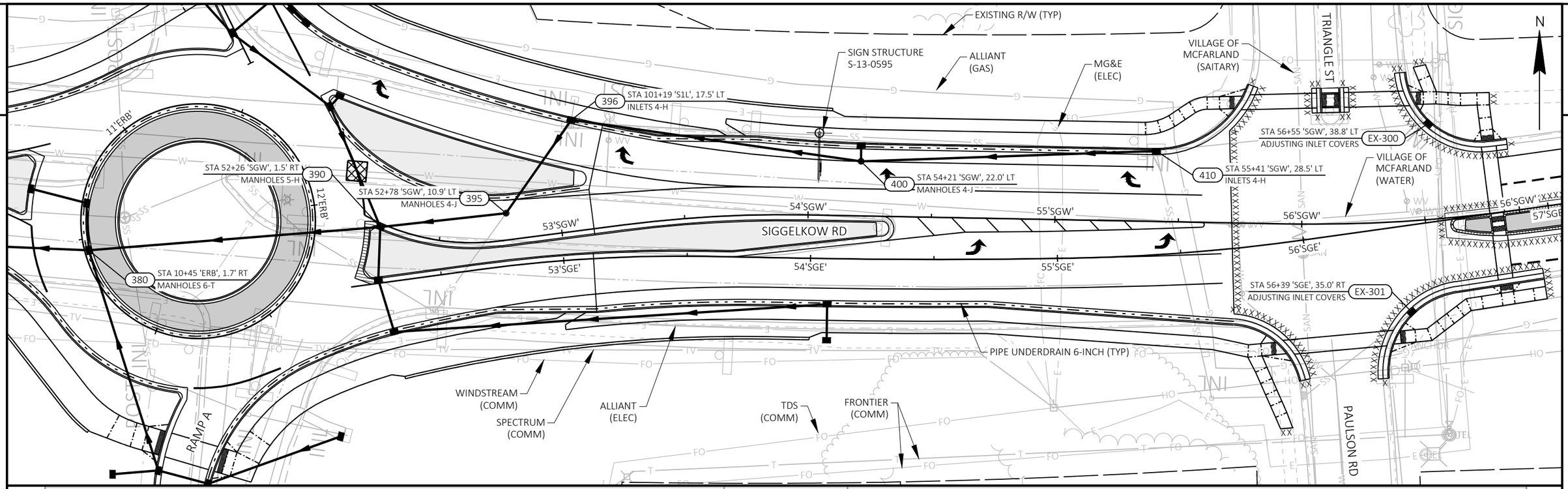
222 LF SSPRC CLASS III 30-INCH @ 0.40%

871.39
871.75
871.85
873.90
874.00
874.90

CONCRETE SUPPORT REQ'D (SEE CONSTRUCTION DETAIL)

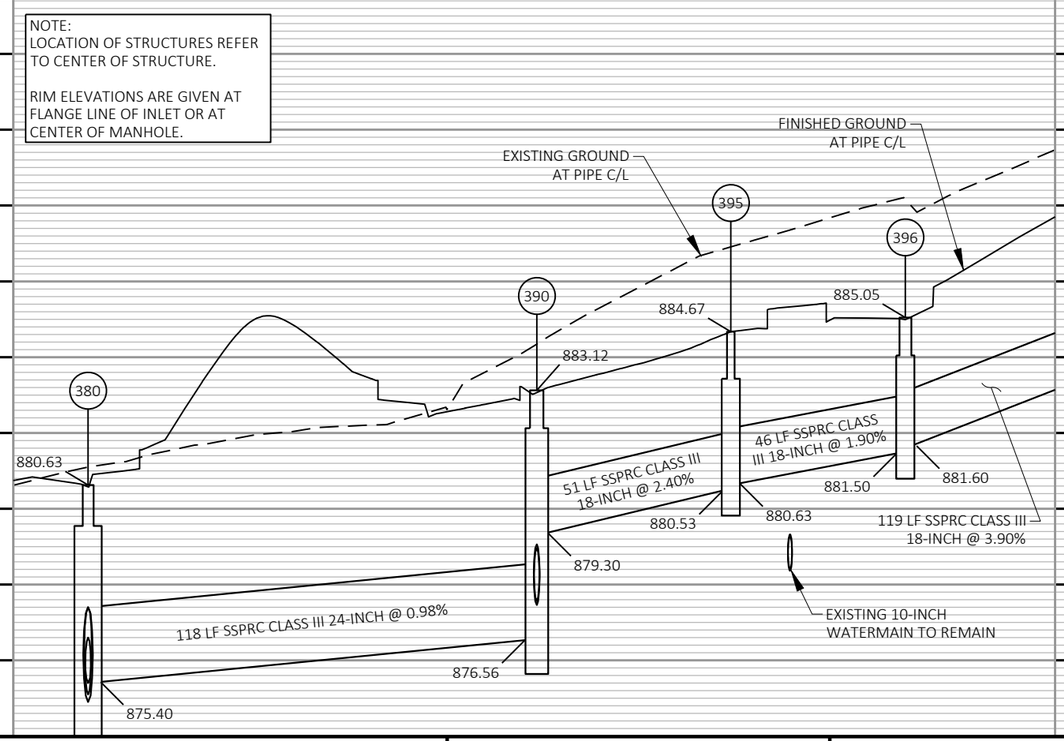
EXISTING 8-INCH SANITARY TO REMAIN

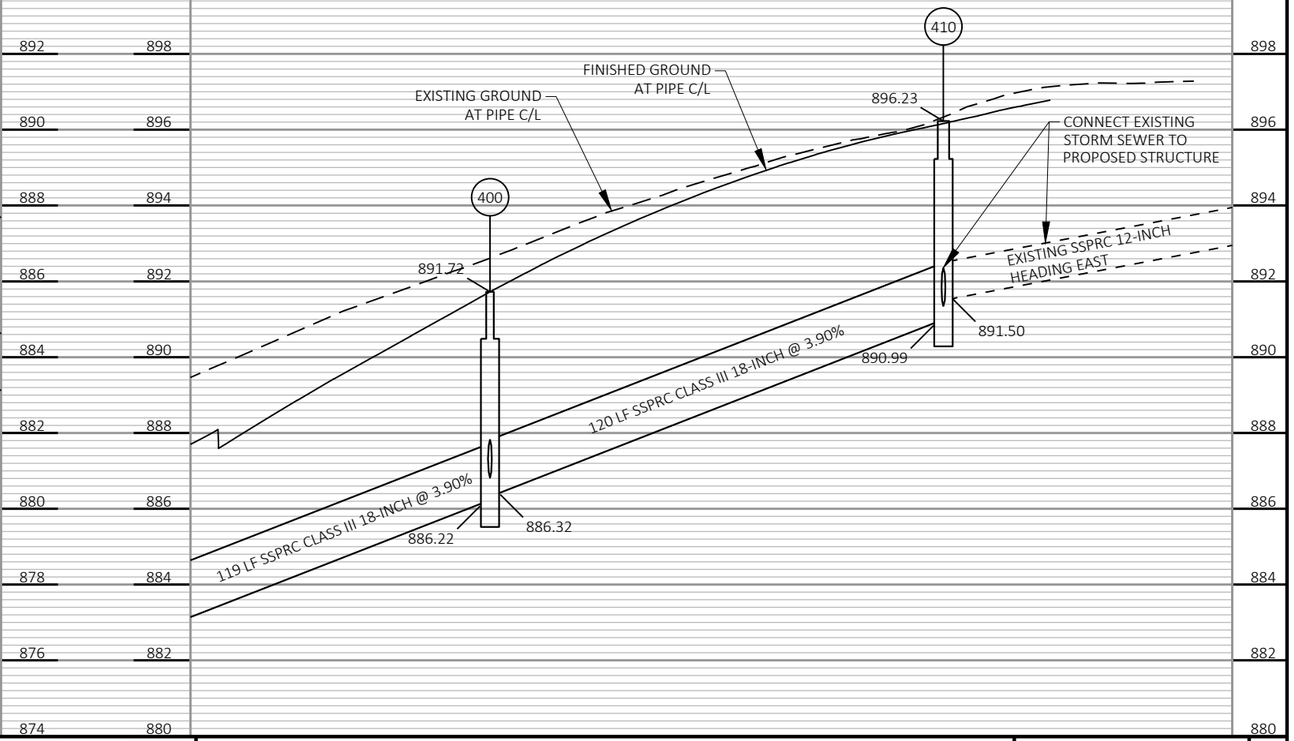
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 92	E



NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

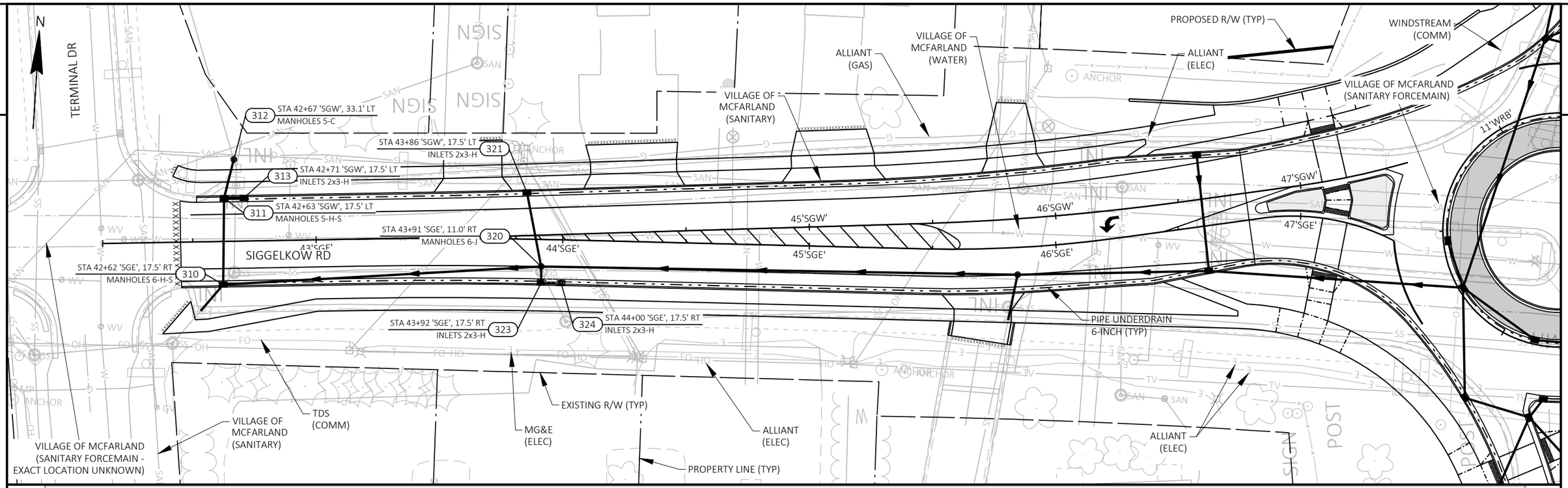
RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.





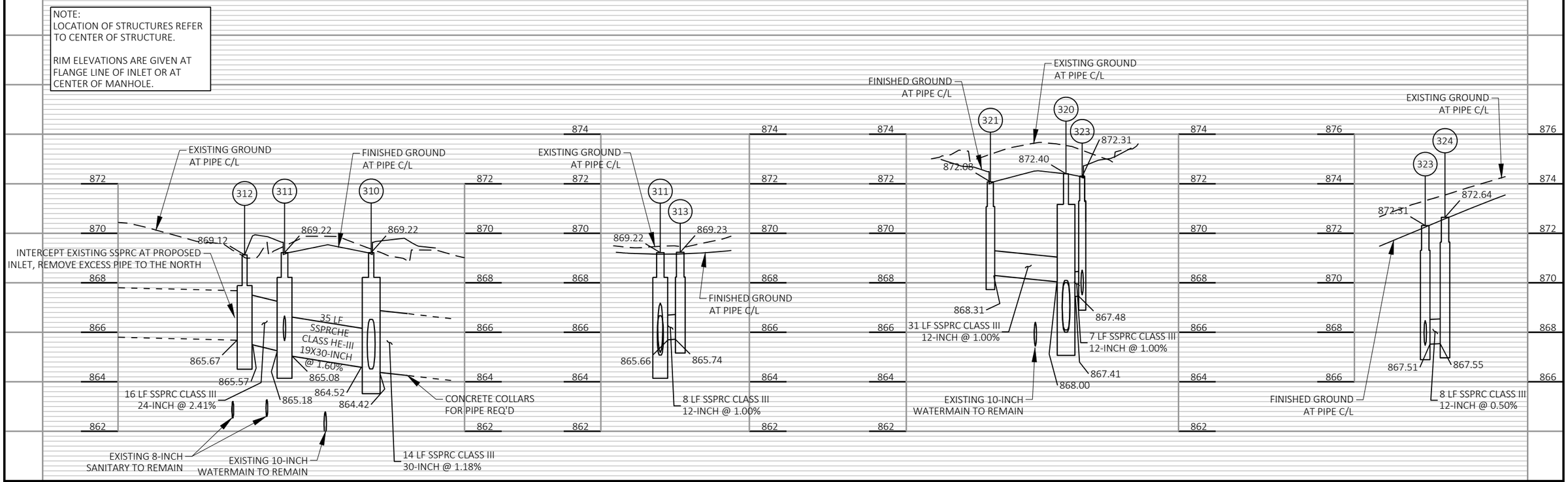
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 93 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - SIG_03
PLOT DATE : 9/24/2024 11:26 AM
PLOT BY : BUTTERIS, BRADLEY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 94	E

2

N

TERMINAL DR

SIGGELKOW RD

VILLAGE OF MCFARLAND (SANITARY FORCEMAIN)

VILLAGE OF MCFARLAND (SANITARY)

TDS (COMM)

MG&E (ELEC)

EXISTING R/W (TYP)

ALLIANT (ELEC)

PROPERTY LINE (TYP)

ALLIANT (GAS)

VILLAGE OF MCFARLAND (WATER)

VILLAGE OF MCFARLAND (SANITARY)

PROPOSED R/W (TYP)

ALLIANT (ELEC)

WINDSTREAM (COMM)

VILLAGE OF MCFARLAND (SANITARY FORCEMAIN)

11'WRB'

341

STA 46+60 'SGW', 18.3' LT
INLETS 2x3-H

47'SGW'

47'SGE'

46'SGW'

45'SGW'

43'SGE'

44'SGE'

45'SGE'

46'SGE

STA 46+60 'SGE', 18.3' RT
MANHOLES 6-H

340

STA 45+84 'SGE', 11.0' RT
MANHOLES 6-J

330

PIPE UNDERDRAIN 6-INCH (TYP)

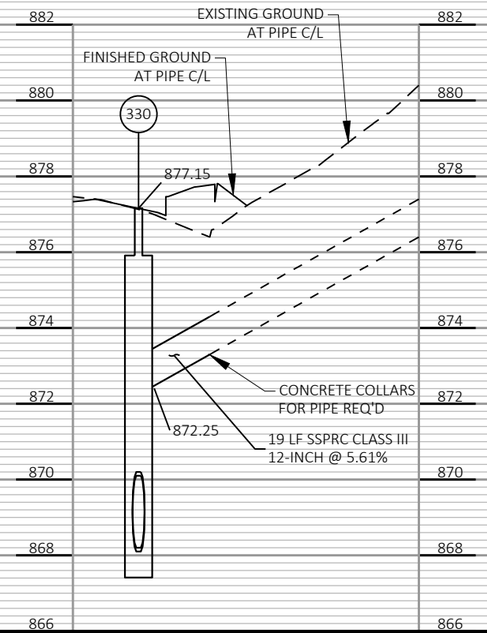
ALLIANT (ELEC)

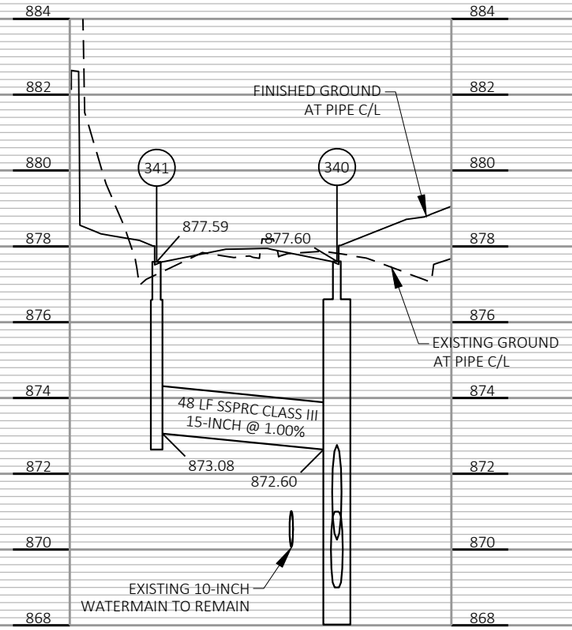
SIGN

POST

NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

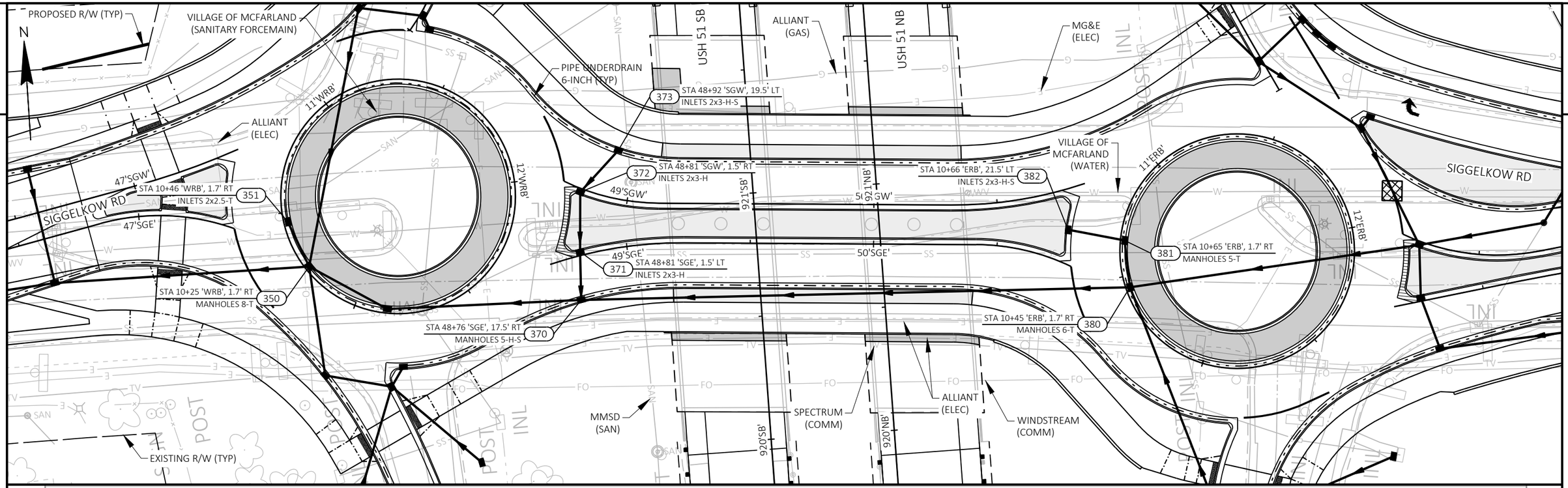
RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.

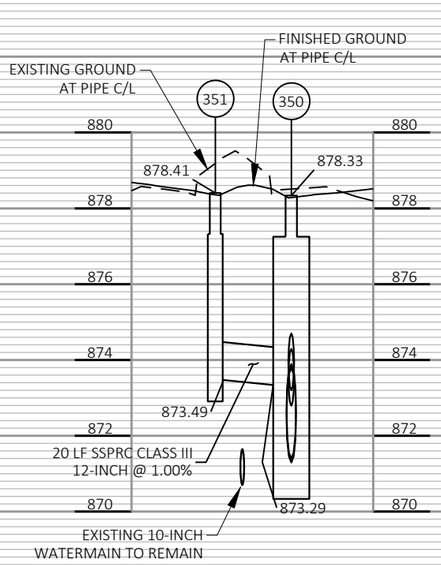


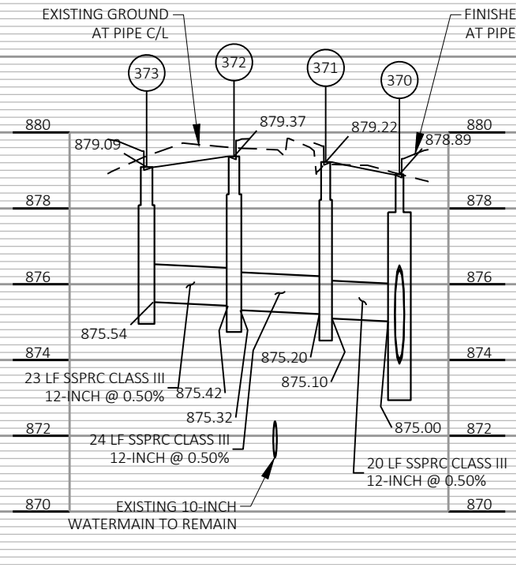


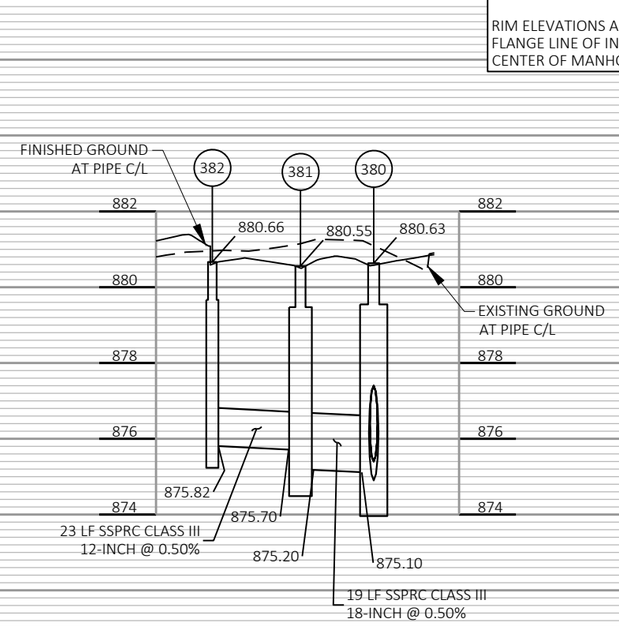
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 95	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - SIG_05
PLOT DATE : 9/24/2024 11:27 AM
PLOT BY : BUTTERIS, BRADLEY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44







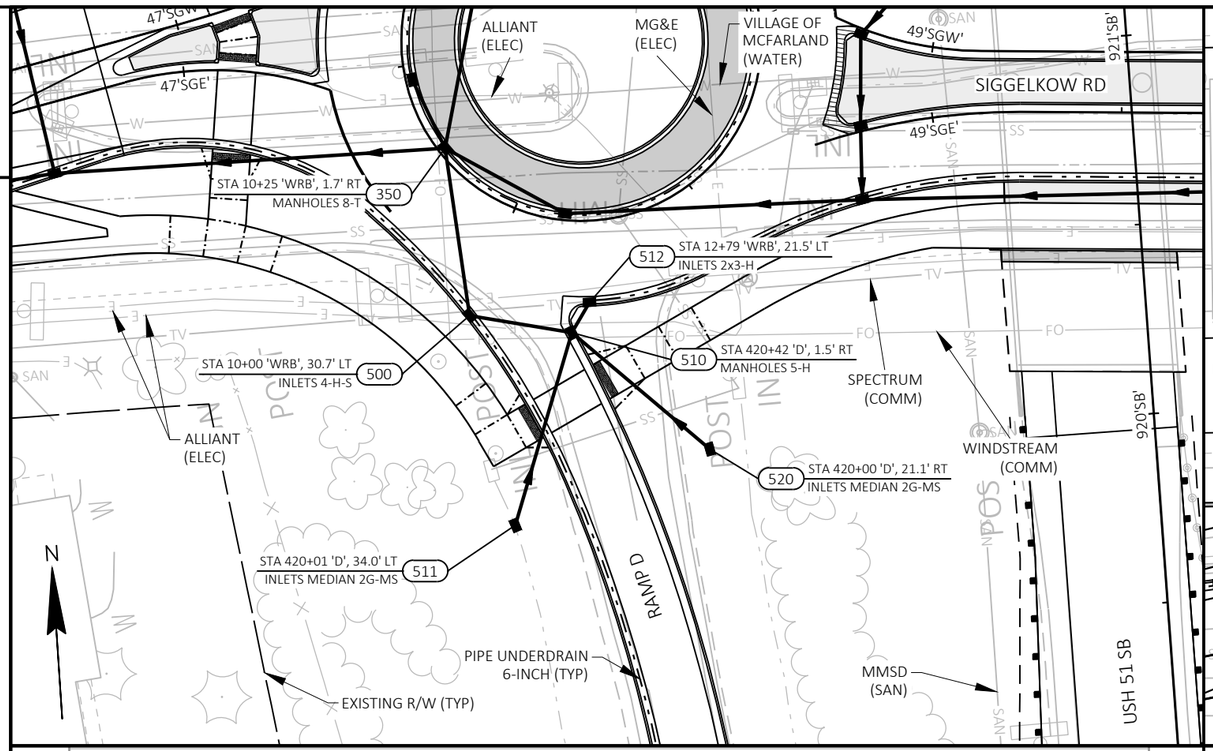


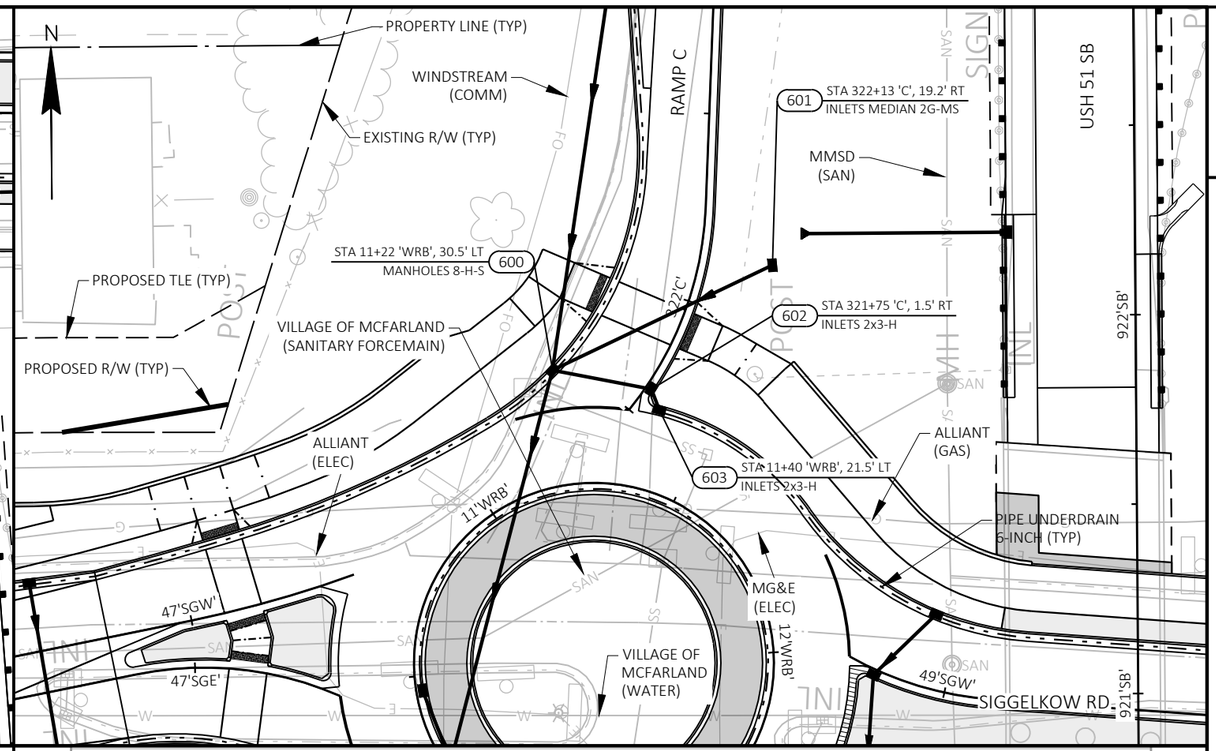
NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 96	E

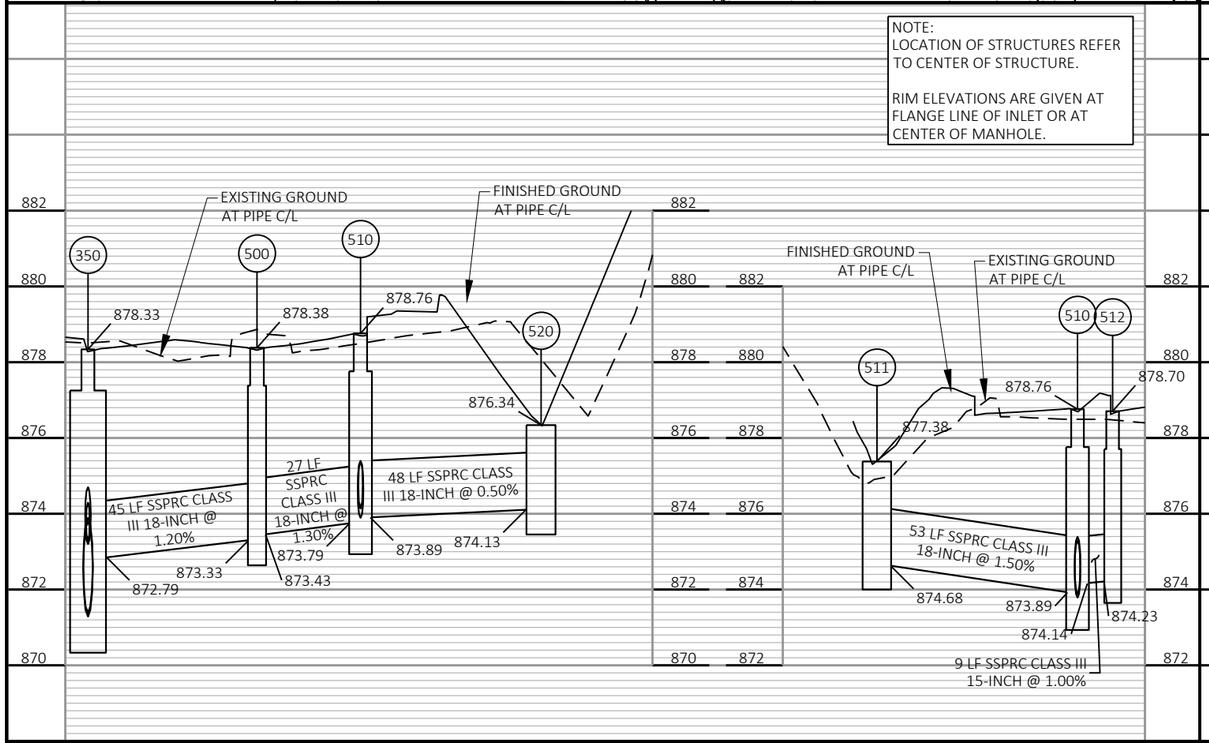
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LAYOUT NAME - SIG_06
PLOT DATE : 9/24/2024 11:27 AM
PLOT BY : BUTTERIS, BRADLEY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

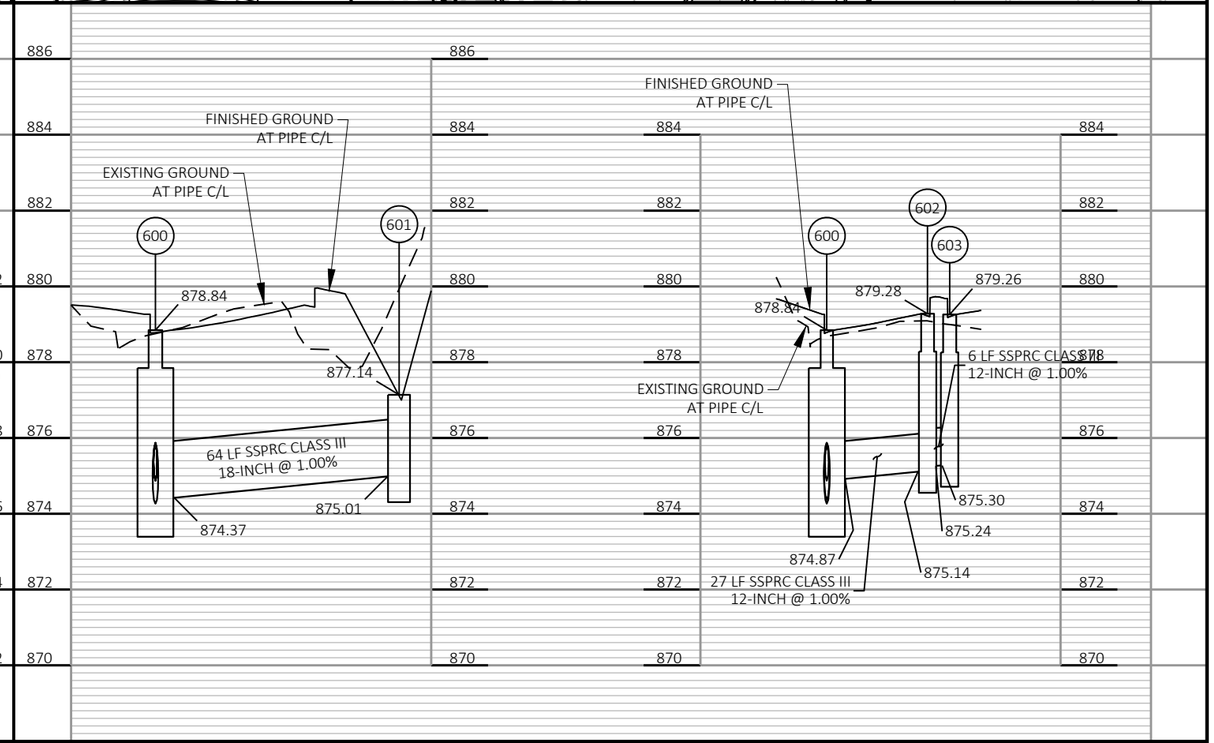




NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.





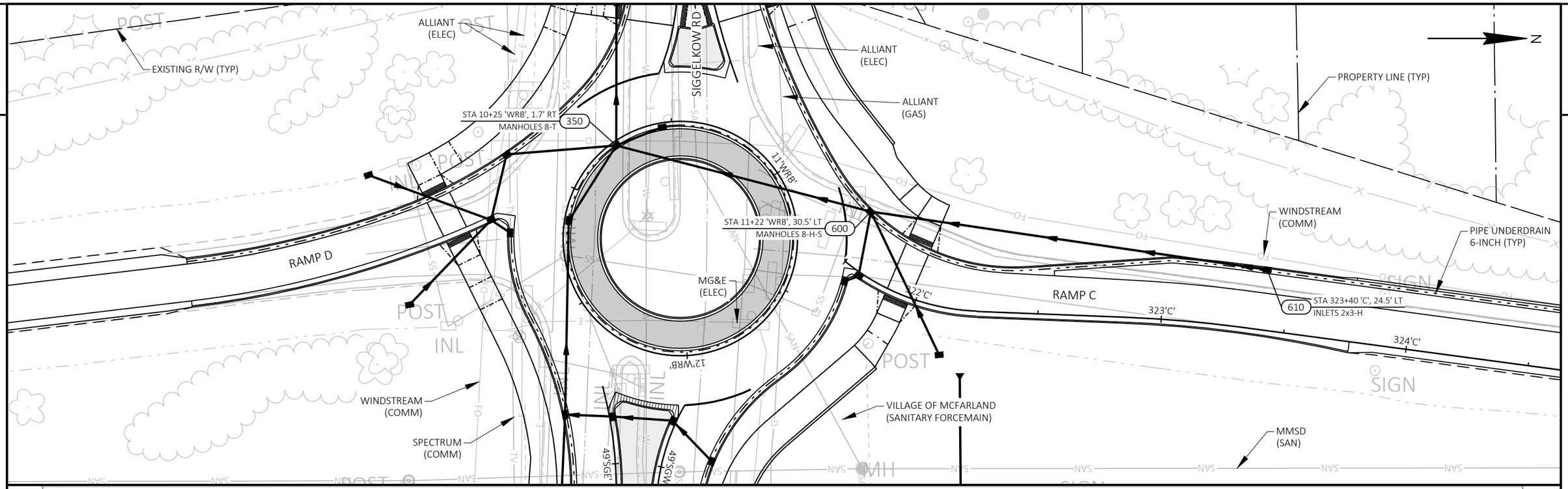
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 97	E

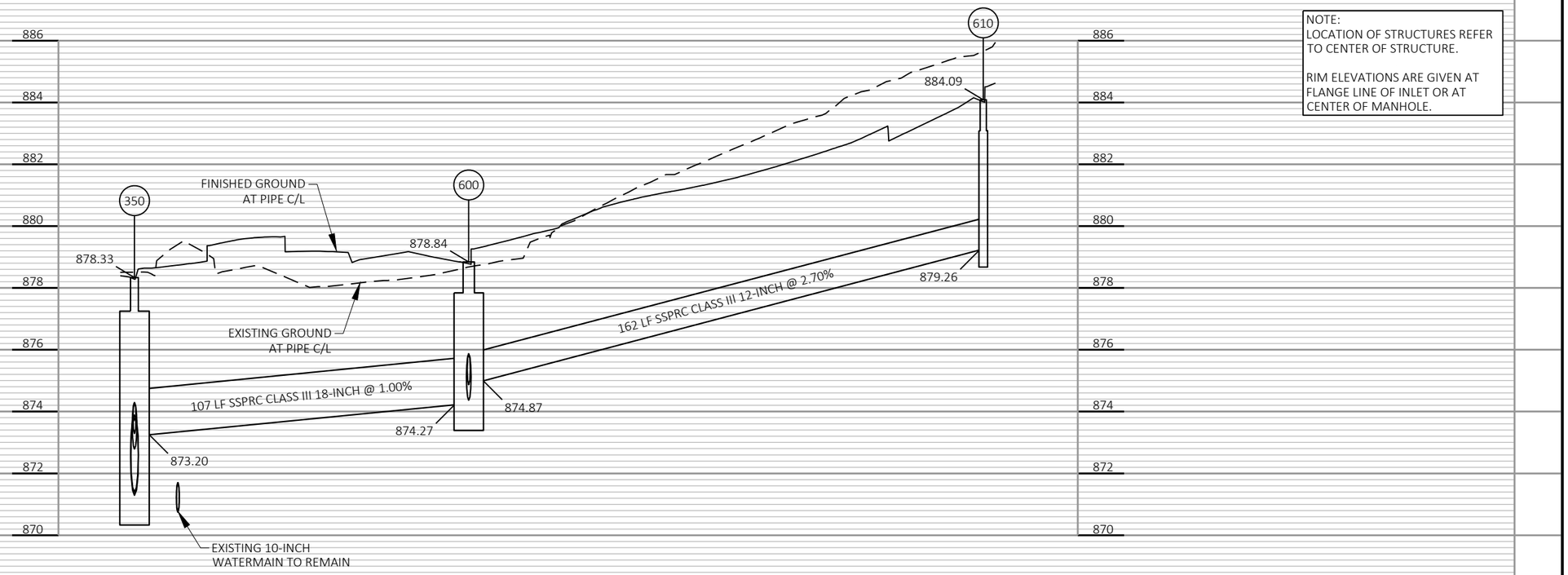
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - SIG_07

PLOT DATE : 9/24/2024 11:28 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2





NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 98	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - SIG_08

PLOT DATE : 9/24/2024 11:28 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

SIGGELKOW RD

380 STA 10+45 'ERB', 1.7' RT
MANHOLES 6-T

53'SGW'

53'SGE'

USH 51 NB

922'NB'

RAMP B

222'EB'

830 STA 222+04 'B', 33.5' RT
INLETS MEDIAN 2G-MS

N

PROPOSED TLE (TYP)

EXISTING R/W (TYP)

STA 221+80 'B', 19.1' LT
INLETS MEDIAN 2G-MS 820

MG&E
(ELEC)

ALLIANT
(ELEC)

ALLIANT
(GAS)

811 STA 221+33 'B', 22.7' RT
INLETS 2x3-H-S

812 STA 221+26 'B', 24.7' RT
INLETS 2x3-H

813 STA 221+18 'B', 27.6' RT
INLETS 2x3-H

STA 221+28 'B', 1.5' LT
INLETS 4-H 810

PIPE UNDERDRAIN
6-INCH (TYP)

VILLAGE OF
MCFARLAND
(WATER)

921'NB'

51'SGW'

SIGGELKOW RD

50'SGE'

12'ERB'

53'SGW'

920'NB'

WINDSTREAM
(COMM)

ALLIANT
(ELEC)

N

STA 119+67 'A', 1.5' LT
MANHOLES 5-H 700

STA 119+63 'A', 19.6' LT
INLETS MEDIAN 2G-MS 701

720 STA 12+53 'ERB', 57.0'
INLETS MEDIAN 2G-MS

SPECTRUM
(COMM)

710 STA 119+64 'A', 19.3' RT
INLETS 4-H-S

PIPE UNDERDRAIN
6-INCH (TYP)

EXISTING R/W (TYP)

919'NB'

USH 51 NB

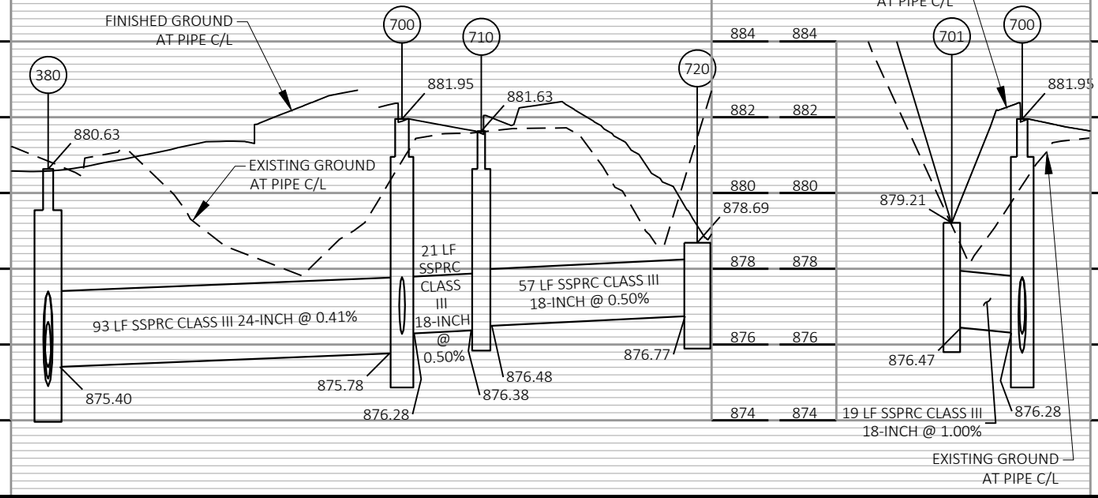
RAMP A

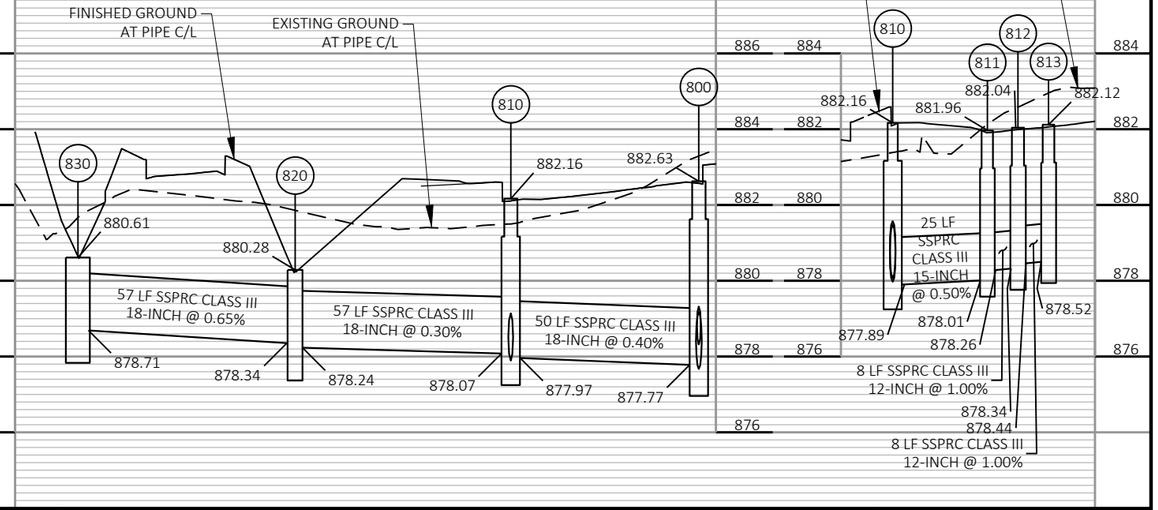
SIGN

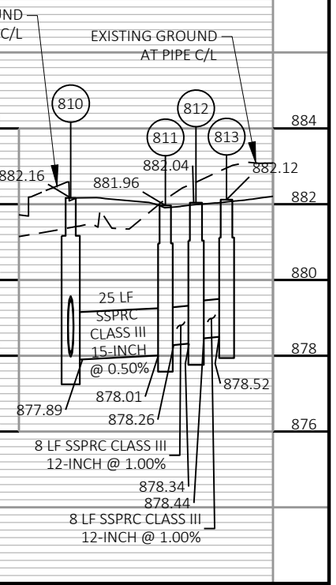
SIGN

NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

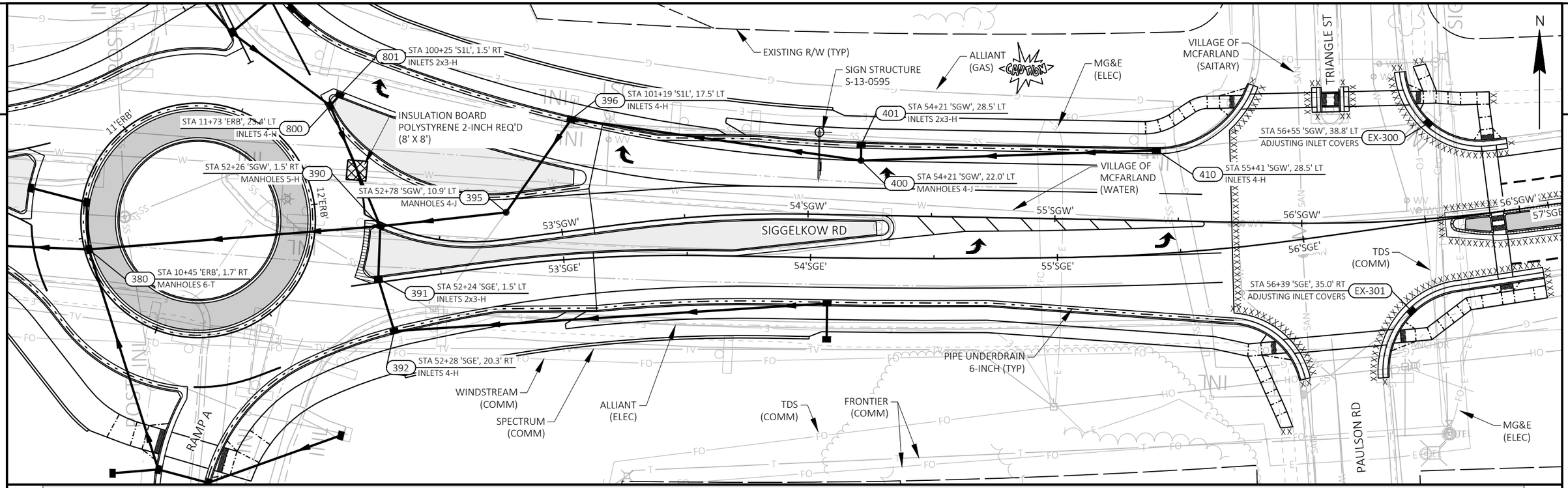
RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.





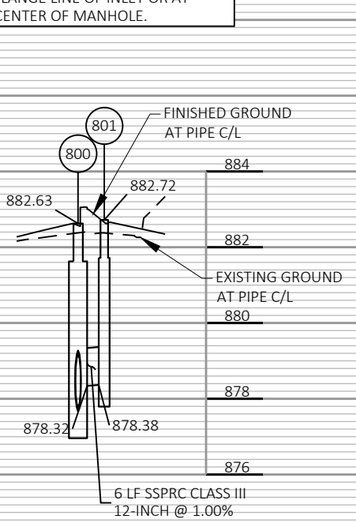


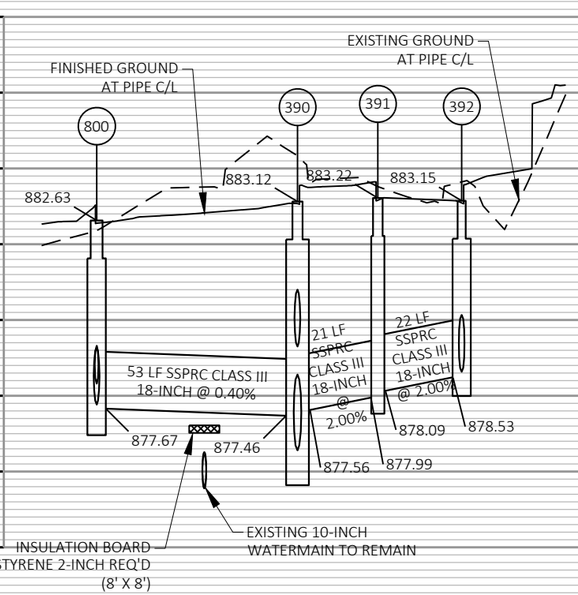
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 99	E

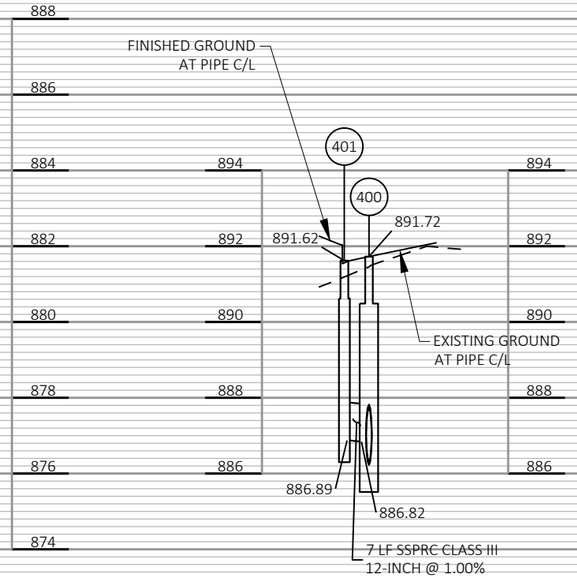


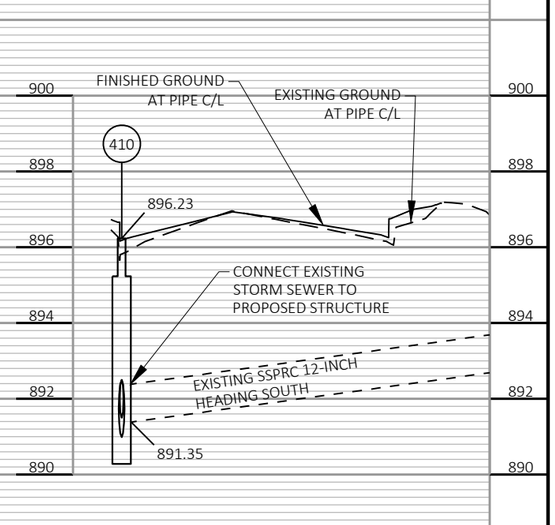
NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.

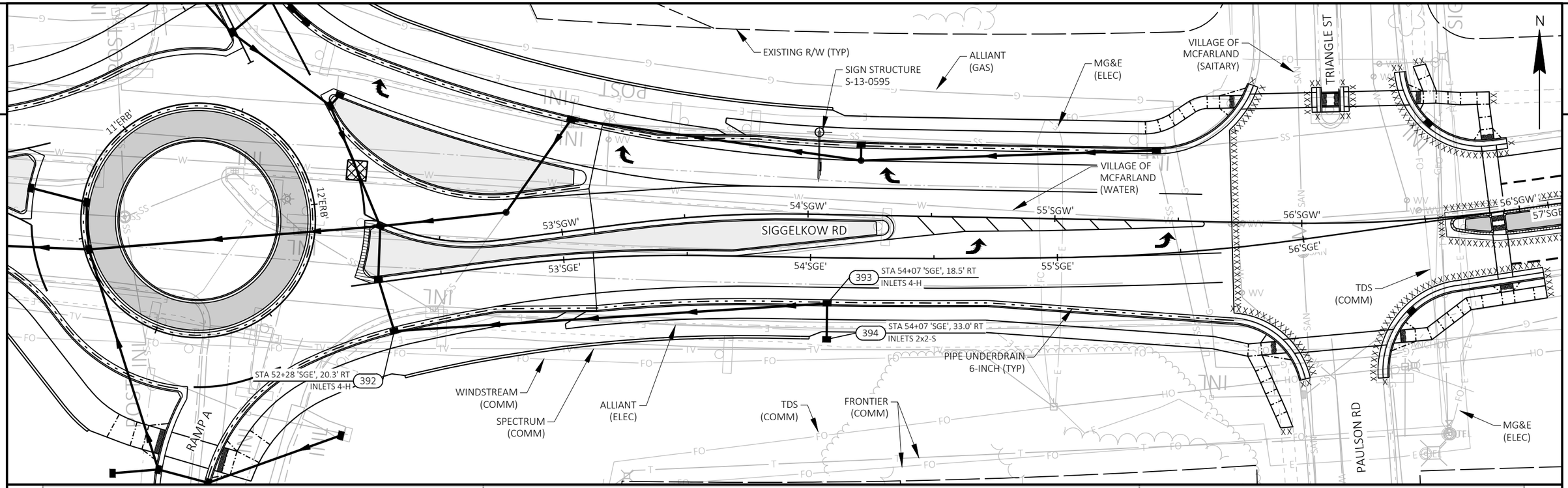






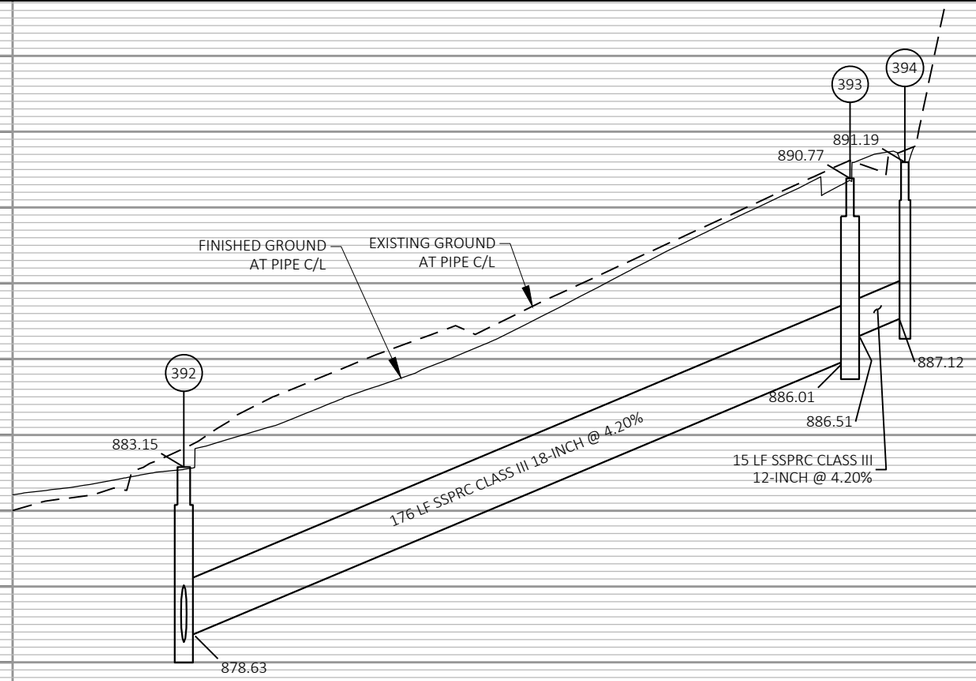


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 100	E



NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.

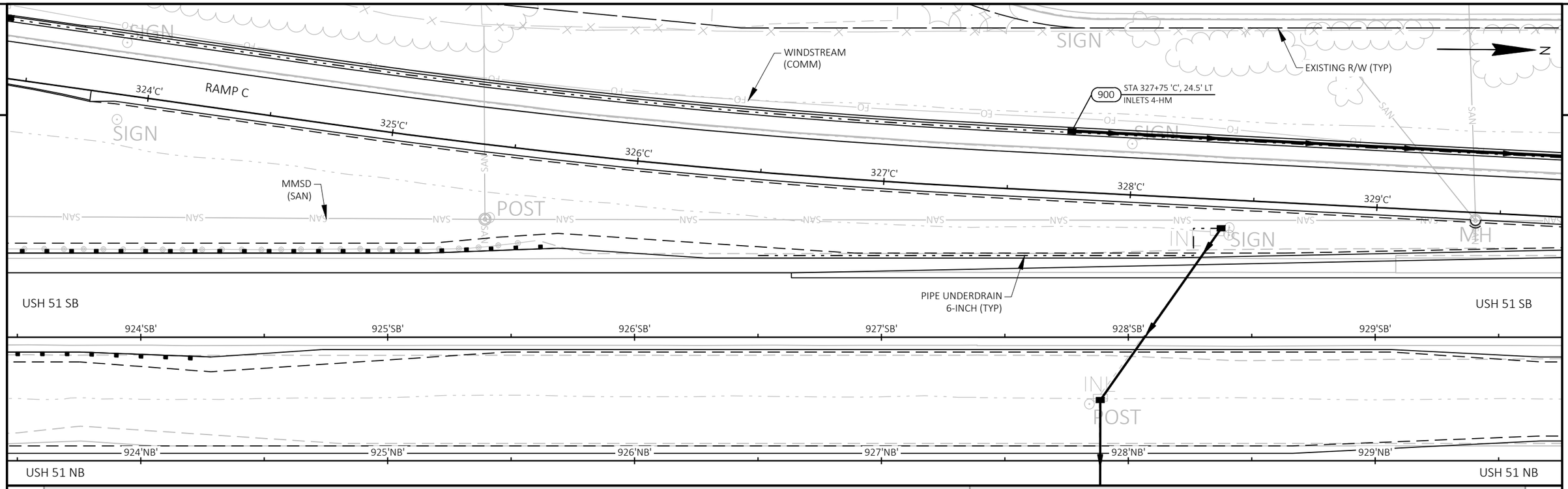


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 101	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - SIG_11

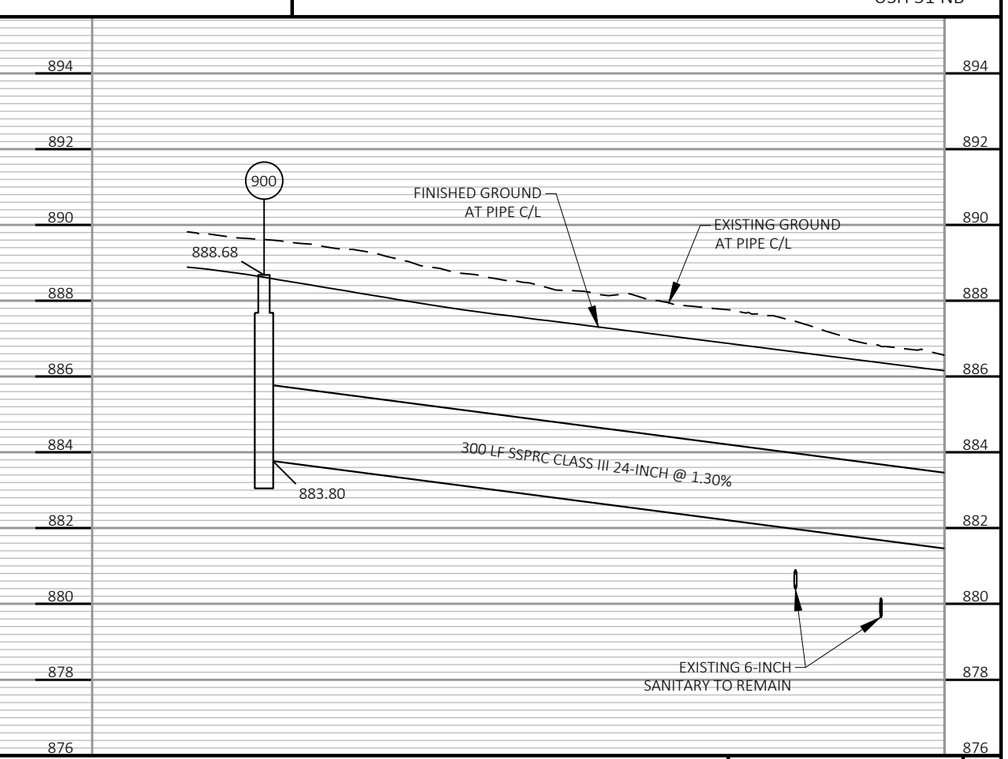
PLOT DATE : 9/24/2024 11:29 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

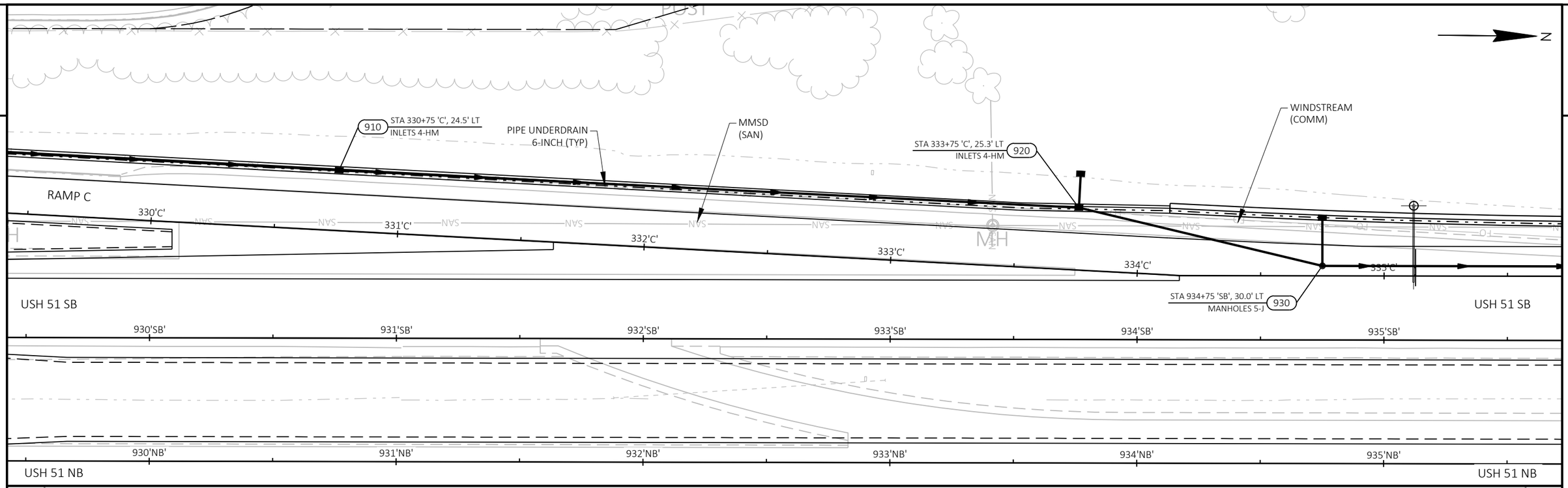
RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.

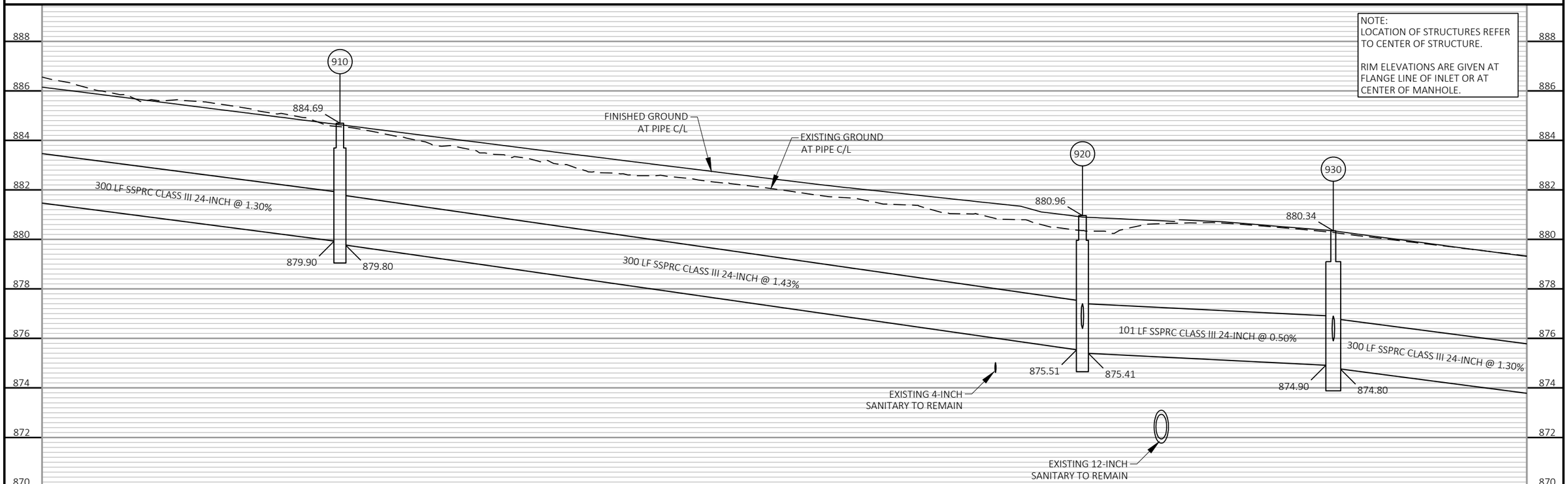


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 102	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - C_01
PLOT DATE : 9/24/2024 11:29 AM
PLOT BY : BUTTERIS, BRADLEY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2





PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 103	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - C_02
PLOT DATE : 9/24/2024 11:29 AM
PLOT BY : BUTTERIS, BRADLEY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

N

PIPE UNDERDRAIN
6-INCH (TYP)

SIGN

MMSD
(SAN)

WINDSTREAM
(COMM)

STA 940+70 'SB', 70.8' LT
APRON ENDWALLS FOR CPRC 24-INCH
970

STA 940+30 'SB', 47.0' LT
INLETS 4-BW
960

POST
MH

336'C'

940
STA 937+75 'SB', 30.0' LT
MANHOLES 5-J

950
STA 940+00 'SB', 30.0' LT
MANHOLES 5-J

USH 51 SB

USH 51 SB

936'SB' 937'SB' 938'SB' 939'SB' 940'SB' 941'SB'

INL

936'NB' 937'NB' 938'NB' 939'NB' 940'NB' 941'NB'

USH 51 NB

USH 51 NB

NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.

880 878 876 874 872 870 868 866 864 862

FINISHED GROUND
AT PIPE C/L

EXISTING GROUND
AT PIPE C/L

940

876.38

300 LF SSPRC CLASS III 24-INCH @ 1.30%

870.90

870.80

225 LF SSPRC CLASS III 24-INCH @ 1.29%

950

960

873.41

872.56

970

34 LF SSPRC CLASS III 24-INCH @ 2.03%

47 LF SSPRC CLASS III 24-INCH @ 2.14%

867.90

867.80

867.10

867.00

866.00

CONCRETE SUPPORT REQ'D
(SEE CONSTRUCTION DETAIL)

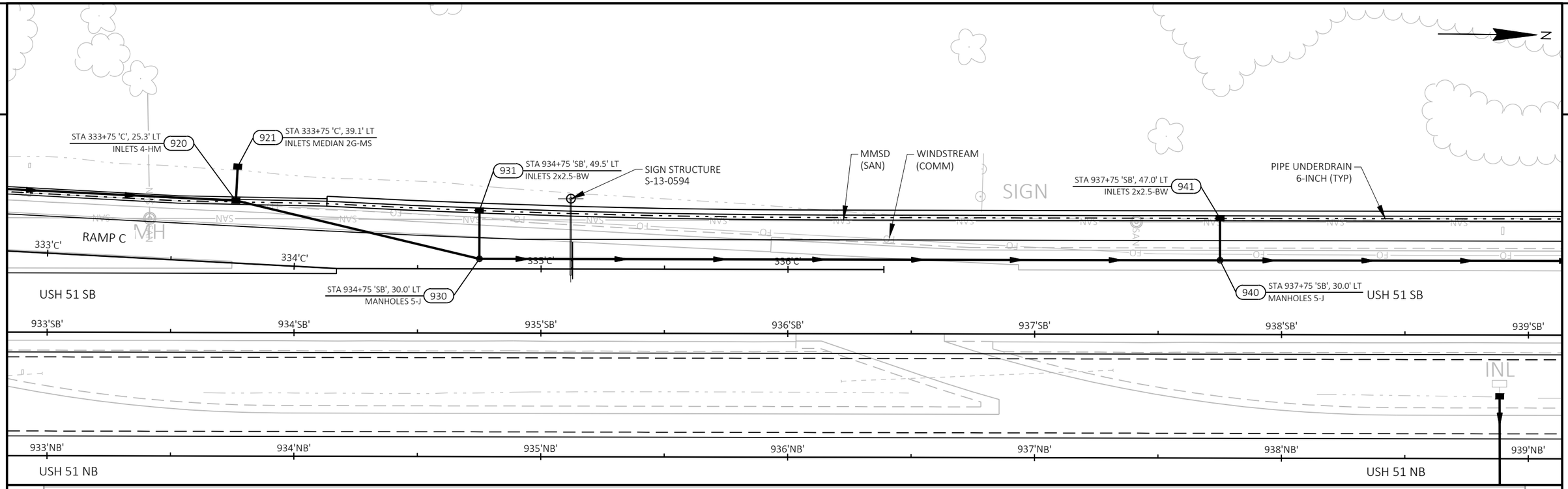
EXISTING 12-INCH
SANITARY TO REMAIN

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 104	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - C_03

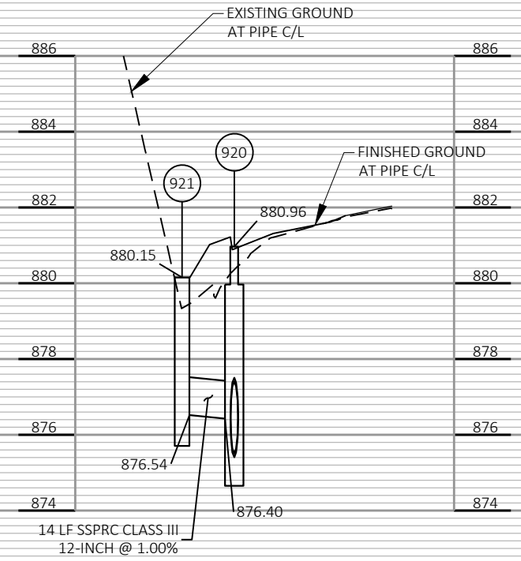
PLOT DATE : 9/24/2024 11:30 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:40 FT

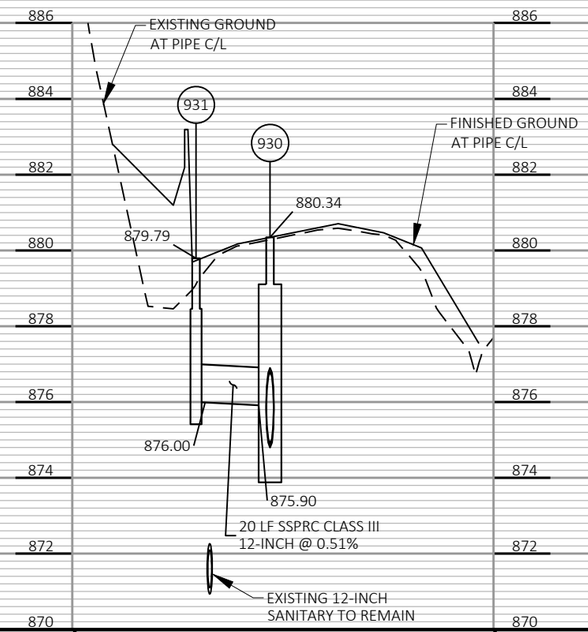
2

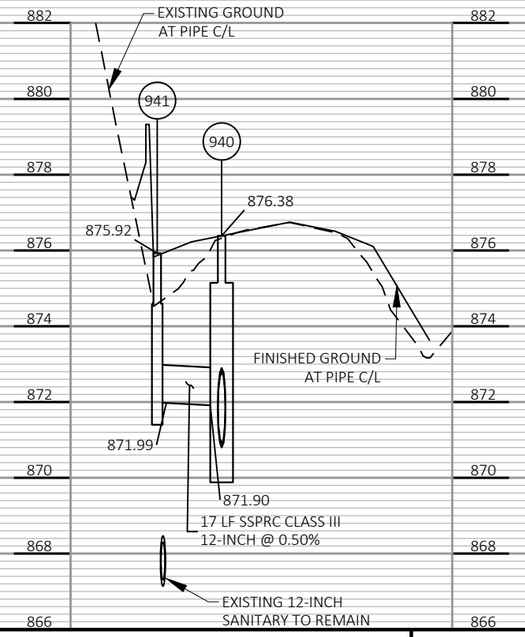


NOTE:
LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLANGE LINE OF INLET OR AT CENTER OF MANHOLE.



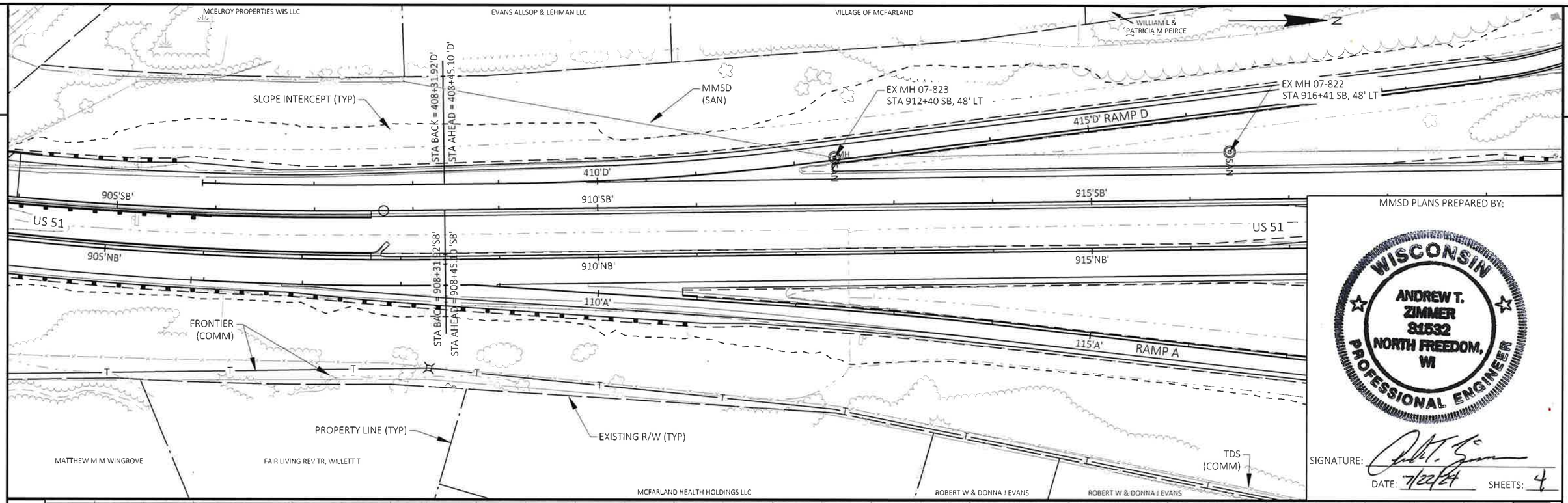




PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STORM SEWER PLAN	SHEET 105	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_022501_SS.DWG
LAYOUT NAME - C_04
PLOT DATE : 9/24/2024 11:30 AM
PLOT BY : BUTTERIS, BRADLEY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2

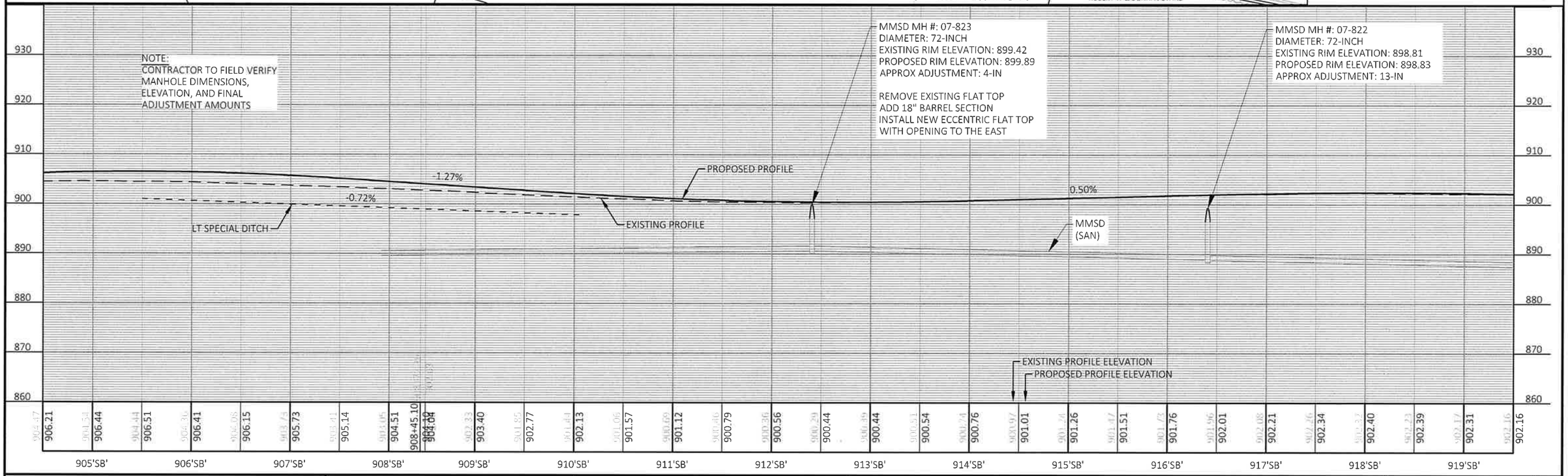


MMSD PLANS PREPARED BY:

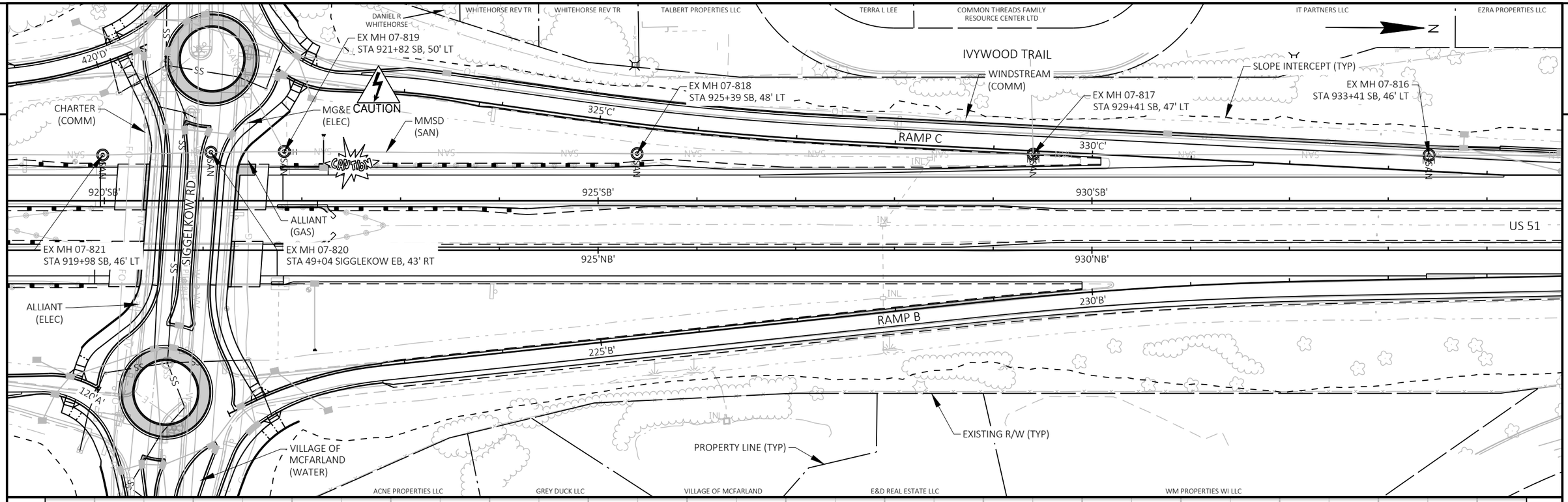
WISCONSIN
ANDREW T. ZIMMER
31532
NORTH FREEDOM, WI
PROFESSIONAL ENGINEER

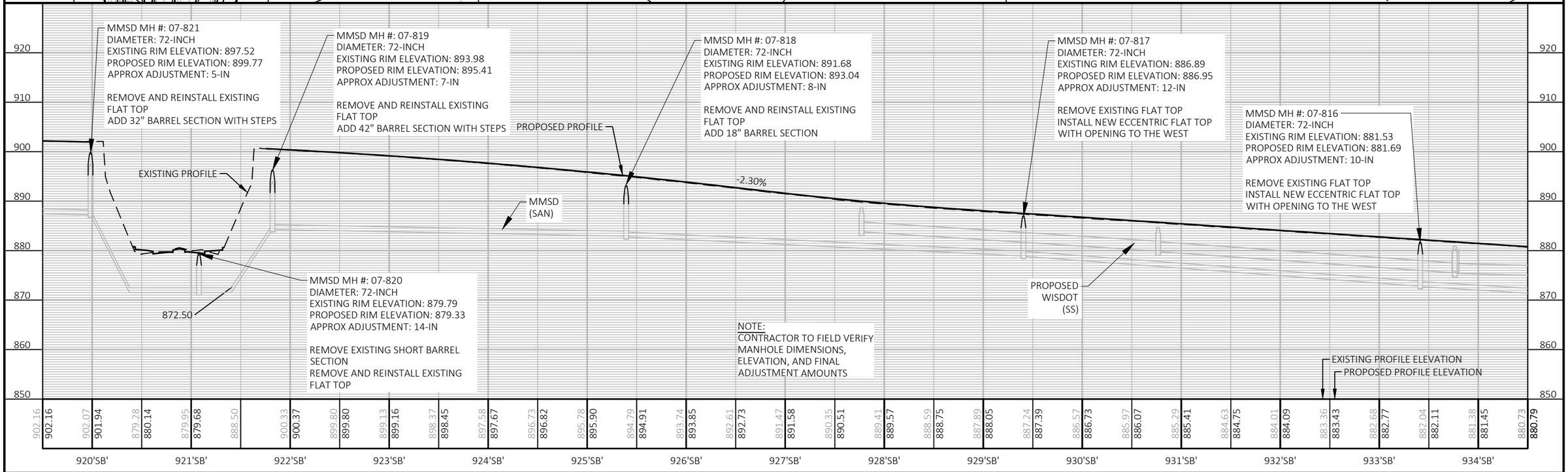
SIGNATURE:

DATE: 7/22/24 SHEETS: 4



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: MMSD PLAN AND PROFILES	SHEET 106 E





PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: MMSD PLAN AND PROFILES	SHEET 107	E

FILE NAME : G:\01\01579\01579055\CADD\CONSTRUCTION DOCUMENTS\SEGMENT A\5845-16-06_050101_PP_US51_EXHIBIT MMSD.DWG
LAYOUT NAME - sb-pp_03

PLOT DATE : 7/22/2024 2:39 PM PLOT BY : KRISTA SOMMERFELDT PLOT NAME : PLOT SCALE : 1 IN:100 FT

EZRA PROPERTIES LLC | EZRA PROPERTIES LLC | FLINT HILLS RESOURCES PINE BEND LLC

N

EX MH 07-812
STA 949+40 SB, 64' LT

WEST SHORE (PIPELINE) — CAUTION

MG&E (ELEC)

FLINT HILLS (PIPELINE) — CAUTION

SLOPE INTERCEPT (TYP)

EX MH 07-815
STA 937+41 SB, 45' LT

EX MH 07-814
STA 941+41 SB, 46' LT

EX MH 07-813
STA 945+41 SB, 46' LT

MMSD (SAN)

WINDSTREAM (COMM)

335'O

935'SB' | 940'SB' | 945'SB'

US 51 | US 51

935'NB' | 940'NB' | 945'NB'

235'B'

ALLIANT (GAS)

VILLAGE OF MCFARLAND (WATER)

TRIANGLE ST

VILLAGE OF MCFARLAND (SAN)

PROPERTY LINE (TYP)

EXISTING R/W (TYP)

CRULL INVESTMENTS LLC | TWIN BRO LLC | 4609 TRIANGLE STREET LLC | TMG RENTALS LLC | KAK ENTERPRISES LLC | FERGUSON ENTERPRISES INC | MADISON FORMS CORPORATION | MADISON FORMS CORPORATION

NOTE:
CONTRACTOR TO FIELD VERIFY MANHOLE DIMENSIONS, ELEVATION, AND FINAL ADJUSTMENT AMOUNTS

MMSD MH #: 07-815
DIAMETER: 72-INCH
EXISTING RIM ELEVATION: 874.92
PROPOSED RIM ELEVATION: 876.37
APPROX ADJUSTMENT: 7-IN

REMOVE EXISTING FLAT TOP
ADD 24" BARREL SECTION
INSTALL NEW ECCENTRIC FLAT TOP
WITH OPENING TO THE EAST

MMSD MH #: 07-814
DIAMETER: 72-INCH
EXISTING RIM ELEVATION: 869.05
PROPOSED RIM ELEVATION: 871.08
APPROX ADJUSTMENT: 7-IN

REMOVE EXISTING SHORT BARREL SECTION
REMOVE AND REINSTALL EXISTING FLAT TOP
ADD 36" BARREL SECTION

MMSD MH #: 07-813
DIAMETER: 72-INCH
EXISTING RIM ELEVATION: 864.61
PROPOSED RIM ELEVATION: 866.33
APPROX ADJUSTMENT: 5-IN

REMOVE EXISTING FLAT TOP AND SHORT BARREL SECTION
ADD 32" BARREL SECTION
INSTALL NEW ECCENTRIC FLAT TOP
WITH OPENING TO THE EAST

MMSD MH #: 07-812
DIAMETER: 72-INCH
EXISTING RIM ELEVATION: 857.70
PROPOSED RIM ELEVATION: 861.02
APPROX ADJUSTMENT: 6-IN

REMOVE AND REINSTALL EXISTING FLAT TOP
ADD 48" BARREL SECTION

-1.32%

PROPOSED PROFILE

EXISTING PROFILE

-0.50%

LT SPECIAL DITCH

MMSD (SAN)

PROPOSED WISDOT (SS)

EXISTING PROFILE ELEVATION

PROPOSED PROFILE ELEVATION

900 | 890 | 880 | 870 | 860 | 850 | 840 | 830

935'SB'	936'SB'	937'SB'	938'SB'	939'SB'	940'SB'	941'SB'	942'SB'	943'SB'	944'SB'	945'SB'	946'SB'	947'SB'	948'SB'	949'SB'
880.73	880.07	879.43	878.76	878.09	877.45	876.84	876.11	875.49	874.84	874.20	873.56	872.94	872.23	871.58	870.99	870.34	869.71	869.07	868.50	867.94	867.39	866.91	866.48	866.14	865.74	865.43	865.13	864.86	864.65	864.42
880.79	880.13	879.47	878.81	878.15	877.49	876.83	876.17	875.51	874.85	874.19	873.53	872.87	872.21	871.55	870.89	870.23	869.58	868.95	868.37	867.82	867.32	866.85	866.43	866.04	865.69	865.39	865.12	864.89	864.70	864.51

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: MMSD PLAN AND PROFILES	SHEET 108	E

FILE NAME : G:\01\01579\01579055\CADD\CONSTRUCTION DOCUMENTS\SEGMENT A\5845-16-06_050101_PP_US51_EXHIBIT MMSD.DWG
LAYOUT NAME - sb-pp_04

PLOT DATE : 7/22/2024 2:39 PM | PLOT BY : KRISTA SOMMERFELDT | PLOT NAME : | PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

FLINT HILLS RESOURCES PINE BEND LLC | VILLAGE OF MCFARLAND | BADGER TERMINAL LLC | BADGER TERMINAL LLC | OWNER INFORMATION LOCKED | NATIONAL PROPANE LP

2

PROPERTY LINE (TYP)

MMSD (SAN)

SLOPE INTERCEPT (TYP)

EX MH 07-811
STA 953+40 SB, 64' LT

WINDSTREAM (COMM)

950'SB'

955'SB'

960'SB'

US 51

950'NB'

955'NB'

960'NB'

US 51

TRIANGLE ST

MEINDERS RD

END CONSTRUCTION
STA 957+07.15'SB'
MATCH EXISTING

EXISTING R/W (TYP)

VILLAGE OF MCFARLAND (WATER)

FRONTIER (COMM)

ALLIANT (GAS)

ALLIANT (ELEC)

VILLAGE OF MCFARLAND (SAN)

MADISON FORMS CORPORATION | KRISTEN B BEASLEY | HLO LLC | 4313 LLC | LEO J & CAROL K DUREN | CBEK INVESTMENTS LLC | DMG HOLDINGS LLC | VANSTRUM LLC | CHS INC | FARMERS UNION CENTRAL EXCHANGE INC

NOTE:
CONTRACTOR TO FIELD VERIFY MANHOLE DIMENSIONS, ELEVATION, AND FINAL ADJUSTMENT AMOUNTS

STA 953+40.00 'SB'
EL 863.08

MMSD MH #: 07-811
DIAMETER: 72-INCH
EXISTING RIM ELEVATION: 856.12
PROPOSED RIM ELEVATION: 859.40
APPROX ADJUSTMENT: 4-IN

REMOVE EXISTING SHORT BARREL SECTION
REMOVE AND REINSTALL EXISTING FLAT TOP
ADD 52" BARREL SECTION

PROPOSED PROFILE

-0.37%

-0.80%

-0.97%

LT SPECIAL DITCH

MMSD (SAN)

EXISTING PROFILE

EXISTING PROFILE ELEVATION

PROPOSED PROFILE ELEVATION

890 880 870 860 850 840 830 820

864.42	864.51	864.26	864.33	864.05	864.15	863.90	863.96	863.68	863.78	863.52	863.59	863.37	863.41	863.18	863.22	863.02	862.89	862.70	862.49	862.30	862.19	862.01	861.80	861.55	861.32	861.16	860.99	860.82	860.63	860.47	860.30	860.14	859.94	859.78	859.59	859.44	859.29	859.20
	950'SB'				951'SB'				952'SB'				953'SB'				954'SB'				955'SB'				956'SB'				957'SB'				958'SB'				959'SB'	

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: MMSD PLAN AND PROFILES	SHEET 109	E

FILE NAME : G:\01\01579\01579055\CADD\CONSTRUCTION DOCUMENTS\SEGMENT A\5845-16-06_050101_PP_US51_EXHIBIT MMSD.DWG
LAYOUT NAME - sb-pp_05

PLOT DATE : 7/22/2024 2:39 PM | PLOT BY : KRISTA SOMMERFELDT | PLOT NAME : | PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

N

LEGEND

- LIGHTING UNIT
- PULL BOXES NON-CONDUCTIVE
- CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH UNLESS NOTED
- CONDUIT RIGID METALLIC 1-INCH
- LIGHTING CONTROL CABINET
- L1, 2-#8 — (CIRCUIT #) CONDUIT WIRE CONFIGURATION
- CONDUIT STUB

CONTROL CABINET DESIGNATION
POLE NUMBER
CIRCUIT(S)
LOCATION (TO CENTER OF POLE)

A-7 (1,3)
STATION, OFFSET
LED A-5(T)-8

ARM LENGTH
POLE TYPE
(T) INCLUDES TRANSFORMER BASE
LUMINAIRE DESIGNATION

GENERAL LIGHTING NOTES:
1. ALL CONDUITS WITH WIRES SHALL ALSO INCLUDE 1 - #8 GROUND.
2. PROVIDE CABLING TO ALTERNATING CIRCUITS PER LUMINAIRE SUCH THAT IF ONE CIRCUIT FAILS THE ROUNDABOUT LEG IS NOT WITHOUT LIGHT.

SIGGELKOW RD
43+00 'SGE'
44+00 'SGW'
44+00 'SGE'
45+00 'SGW'
45+00 'SGE'
46+00 'SGW'
46+00 'SGE'
47+00 'SGW'
47+00 'SGE'
11+00 'WRB'
12+00 'WRB'
49+00 'SGW'
49+00 'SGE'
RAMP C
323+00 'C'
USH 51 SB
MATCHLINE STA 49+75'SGE'
RAMP D
419+00 'D'
420+00 'D'
420+54 'D'

A-5 (1,3)
STA 322+17.89 C, 24.0' LT
LED A-5(T)-8

LPB-5
STA 321+76.60 C, 26.7' LT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

LPB-7
STA 321+79.39 C, 10.0' RT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

LBP-10
STA 49+65.03 WB, 21.9' LT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-3 (1,3)
STA 47+36.65 WB, 25.0' LT
LED A-5(T)-8

LPB-2
STA 47+30.51 WB, 24.5' LT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-9 (1,3)
STA 48+86.10 WB, 24.8' LT
LED A-5(T)-8

A-11 (2,4)
STA 49+39.84 WB, 6.3' RT
LUMINAIRES UNDERDECK LED A

A-2 (1,3)
STA 46+86.98 SGE, 27.0' RT
LED A-5(T)-8

LPB-1
STA 47+28.38 SGE, 26.3' RT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-4 (1,3)
STA 420+49.64 D, 23.6' LT
LED A-5(T)-8

A-1 (1,3)
STA 45+45.91 SGE, 22.5' RT
LED A-5(T)-8

LPB-3
STA 420+38.37 D, 22.7' LT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

LPB-4
STA 420+36.82 D, 9.9' RT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-10 (2,4)
STA 49+39.22 SGE, 9.8' RT
LUMINAIRES UNDERDECK LED A

LPB-9
STA 49+65.88 SGE, 4.8' LT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

LPB-8
STA 49+66.35 SGE, 21.7' RT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-8 (1,3)
STA 48+68.04 SGE, 23.1' RT
LED A-5(T)-8

LCC A
STA 420+20.07 D, 28.8' RT
LIGHTING CONTROL CABINET

LPB-6
STA 420+19.40 D, 21.3' RT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

(1,3) 3-#8
(1,3) 6-#8
(2,4) 3-#8
(2,4) 4-#8
(5,7) 3-#8
(6,8) 3-#8

HIGHWAY LIGHTING
USH 51 & SIGGELKOW ROAD

VILLAGE OF MCFARLAND — DANE COUNTY
INSTALLATION NO. L13-0875

REGION CONTACT: GRAHAM HEITZ
DESIGNED BY: AYRES
REVISED BY:

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	LIGHTING PLAN	SHEET 110	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_023601-LP.DWG
01 023501 lp
PLOT DATE : 7/23/2024 9:55 AM
PLOT BY : AYRES ASSOCIATES
PLOT NAME :
PLOT SCALE : ##########

2

N

LEGEND

- LIGHTING UNIT
- PULL BOXES NON-CONDUCTIVE
- CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH UNLESS NOTED
  - CONDUIT RIGID METALLIC 1-INCH
- LIGHTING CONTROL CABINET
- L1, 2-#8 — (CIRCUIT #) CONDUIT WIRE CONFIGURATION
- CONDUIT STUB

CONTROL CABINET DESIGNATION
POLE NUMBER
CIRCUIT(S)
LOCATION (TO CENTER OF POLE)
A-7 (1,3)
STATION, OFFSET
LED A-5(T)-8
ARM LENGTH
POLE TYPE
(T) INCLUDES TRANSFORMER BASE
LUMINAIRE DESIGNATION

GENERAL LIGHTING NOTES:
1. ALL CONDUITS WITH WIRES SHALL ALSO INCLUDE 1 - #8 GROUND.
2. PROVIDE CABLING TO ALTERNATING CIRCUITS PER LUMINAIRE SUCH THAT IF ONE CIRCUIT FAILS THE ROUNDABOUT LEG IS NOT WITHOUT LIGHT.

USH 51 NB

RAMP B

223

222+00 'B'

LPB-14
STA 221+37.00 B, 10.2' LT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-15 (6,8)
STA 50+86.40 WB, 25.9' LT
LED A-5(T)-8

LPB-16
STA 221+35.97 B, 27.3' RT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-20 (6,8)
STA 221+31.60 B, 28.2' RT
LED A-5(T)-8

LPB-12
STA 50+86.40 WB, 22.4' LT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-13 (2,4)
STA 50+16.30 WB, 6.0' RT
LUMINAIRES UNDERDECK LED A

LPB-18
STA 52+50.66 WB, 66.6' LT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-22 (6,8)
STA 52+35.33 WB, 30.5' LT
2 LED A-5(T)-8

LPB-18X
STA 52+55.80 WB, 45.2' LT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

SIGN STRUCTURE S-13-0595

A-23 (6,8)
STA 54+24.09 WB, 33.5' LT
LED A-5(T)-8

(6,8) 3-#8
(6,8), 6-#8

MATCHLINE
STA 49+75 'SGE'

(2,4) 3-#8
50+00 'SGW'
50+00 'SGE'

11+00 'ERB'

12+00 'ERB'

(5,7) 3-#8
(6,8) 3-#8

53+00 'SGW'
53+00 'SGE'
54+00 'SGW'
54+00 'SGE'
55+00 'SGW'
55+00 'SGE'
56+00 'SGW'
56+00 'SGE'

SIGGELKOW RD

A-12 (2,4)
STA 50+16.60 SGE, 10.2' RT
LUMINAIRES UNDERDECK LED A

A-14 (5,7)
STA 50+62.36 SGE, 24.5' RT
LED A-5(T)-8

LPB-11
STA 50+73.75 SGE, 24.9' RT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-16 (5,7)
STA 51+33.80 SGE, 89.3' RT
LED A-5(T)-8

LPB-13
STA 51+55.26 SGE, 91.4' RT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

120+00 'A'

119+00 'A'

RAMP A

(5,7), 6-#8

LPB-17
STA 52+36.98 SGE, 24.5' RT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-21 (5,7)
STA 52+33.65 SGE, 53.4' RT
LED A-5(T)-8

LPB-15
STA 51+97.39 SGE, 82.6' RT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-19 (5,7)
STA 51+86.31 A, 133.6' RT
LED A-5(T)-8

HUDSON RD

TRIANGLE

HIGHWAY LIGHTING
USH 51 & SIGGELKOW ROAD

VILLAGE OF MCFARLAND — DANE COUNTY
INSTALLATION NO. L13-0875

REGION CONTACT: GRAHAM HEITZ
DESIGNED BY: AYRES
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	LIGHTING PLAN	SHEET 111	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_023601-LP.DWG
02 023501 lp
PLOT DATE : 7/23/2024 7:58 AM
PLOT BY : AYRES ASSOCIATES
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

USH 51 NB

N

115+00 'A'

RAMP A

116+00 'A'

117+00 'A'

118+00 'A'

119+00 'A'

120+00 'A'

11+00 'ERB'

12+00 'ERB'

RAMP B

CAUTION

A-17 (5,7)
STA 52+40.19 A, 376.3' RT
LED A-5(T)-8

(5,7) 3-#8

A-18 (5,7)
STA 52+36.44 A, 252.0' RT
LED A-5(T)-8

(5,7) 3-#8

A-19 (5,7)
STA 51+86.31 A, 133.6' RT
LED A-5(T)-8

(5,7) 3-#8

L3, 4-#8

LPB-15
STA 51+97.39 SGE, 82.6' RT
PULL BOXES NON-CONDUCTIVE
24X42-INCH

A-21 (5,7)
STA 52+33.65 SGE, 53.4' RT
LED A-5(T)-8

N

11+00 'WRB'

12+00 'WRB'

RAMP D

420+00 'D'

420+54 'D'

CAUTION

49+00 'SGE'

49+00 'SGW'

(1,3) 3-#8

A-5 (1,3)
STA 322+17.89 C, 24.0' LT
LED A-5(T)-8

(1,3) 3-#8

A-6 (1,3)
STA 323+47.11 C, 29.6' LT
LED A-5(T)-8

322+00 'C'

323+00 'C'

324+00 'C'

325+00 'C'

326+00 'C'

327+00 'C'

RAMP C

(1,3) 3-#8

A-7 (1,3)
STA 324+70.76 C, 29.9' LT
LED A-5(T)-8

USH 51 SB

LEGEND

- LIGHTING UNIT
- PULL BOXES NON-CONDUCTIVE
- CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH UNLESS NOTED
- (M) CONDUIT RIGID METALLIC 1-INCH
- LIGHTING CONTROL CABINET
- L1, 2-#8 (CIRCUIT #) CONDUIT WIRE CONFIGURATION
- CONDUIT STUB

A-7 (1,3) — CONTROL CABINET DESIGNATION; POLE NUMBER; CIRCUIT(S)
STATION, OFFSET — LOCATION (TO CENTER OF POLE)
LED A-5(T)-8 — ARM LENGTH; POLE TYPE; (T) INCLUDES TRANSFORMER BASE; LUMINAIRE DESIGNATION

GENERAL LIGHTING NOTES:
1. ALL CONDUITS WITH WIRES SHALL ALSO INCLUDE 1 - #8 GROUND.
2. PROVIDE CABLING TO ALTERNATING CIRCUITS PER LUMINAIRE SUCH THAT IF ONE CIRCUIT FAILS THE ROUNDABOUT LEG IS NOT WITHOUT LIGHT.

HIGHWAY LIGHTING
USH 51 & SIGGELKOW ROAD

VILLAGE OF MCFARLAND — DANE COUNTY
INSTALLATION NO. L13-0875
REGION CONTACT: GRAHAM HEITZ
DESIGNED BY: AYRES
REVISED BY:
PAGE 3 OF 3

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	LIGHTING PLAN	SHEET 112	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_023601-LP.DWG 03 023501 lp
PLOT DATE : 7/23/2024 7:58 AM
PLOT BY : AYRES ASSOCIATES
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

LARSON BEACH RD

TERMINAL DR

TAYLOR RD

WISCONSIN & SOUTHERN RR

USH 51

SOUTH 51

R-02

R-03

R-04

R-05

R-06

R-07

R-08

R-09

R-10

R-11

R-12

R-13

R-14

R-103

SPEED LIMIT 40

SPEED LIMIT 55

EXIT

Siggelkow Rd

SALVAGE SIGN BRACKET FROM EXISTING POST

ADOPT A HIGHWAY SPONSOR MCFARLAND LIONS CLUB

SB ON-RAMP

NB OFF-RAMP

RIPRAP

SIGN

890'SB' 892'SB' 894'SB' 896'SB' 898'SB' 900'SB' 902'SB'

890'NB' 892'NB' 894'NB' 896'NB' 898'NB' 900'NB' 902'NB'

904'SB' 906'SB' 908'SB' 910'SB' 912'SB' 914'SB' 916'SB' 918'S

904'NB' 906'NB' 908'NB' 910'NB' 912'NB' 914'NB' 916'NB' 918'N

406'D' 408'D' 410'D' 412'D' 414'D' 416'D' 418'D

106'A' 108'A' 110'A' 112'A' 114'A' 116'A' 118'A

STA BACK = 408+31.92

STA AHEAD = 408+45.10

REMOVAL LEGEND

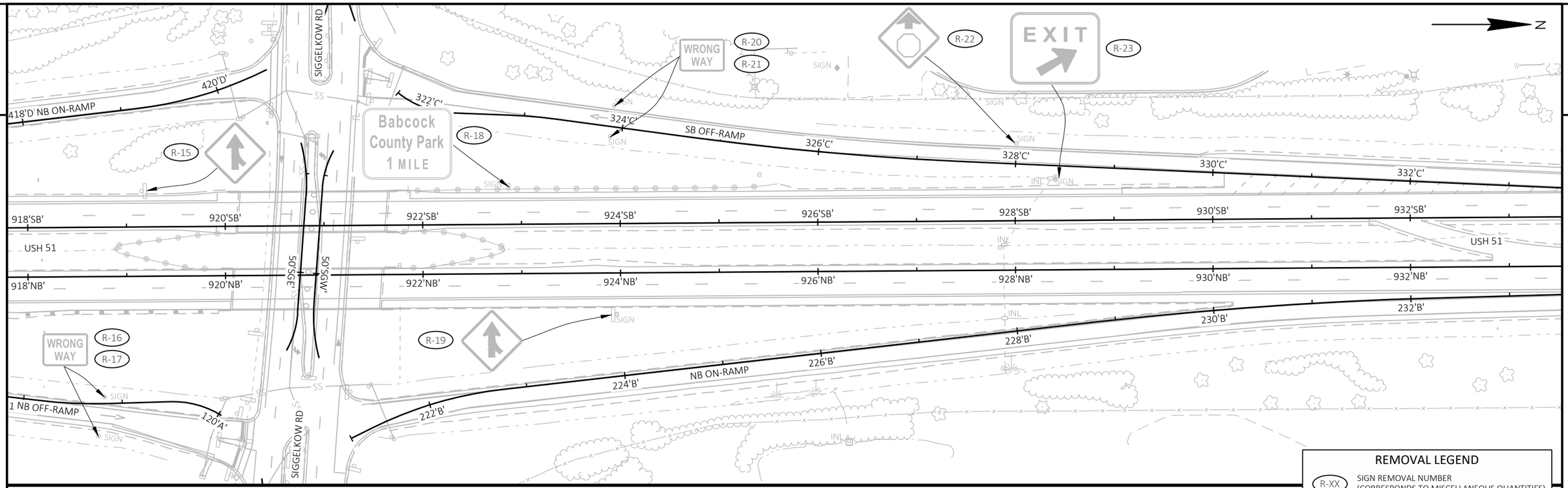
R-XX — SIGN REMOVAL NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

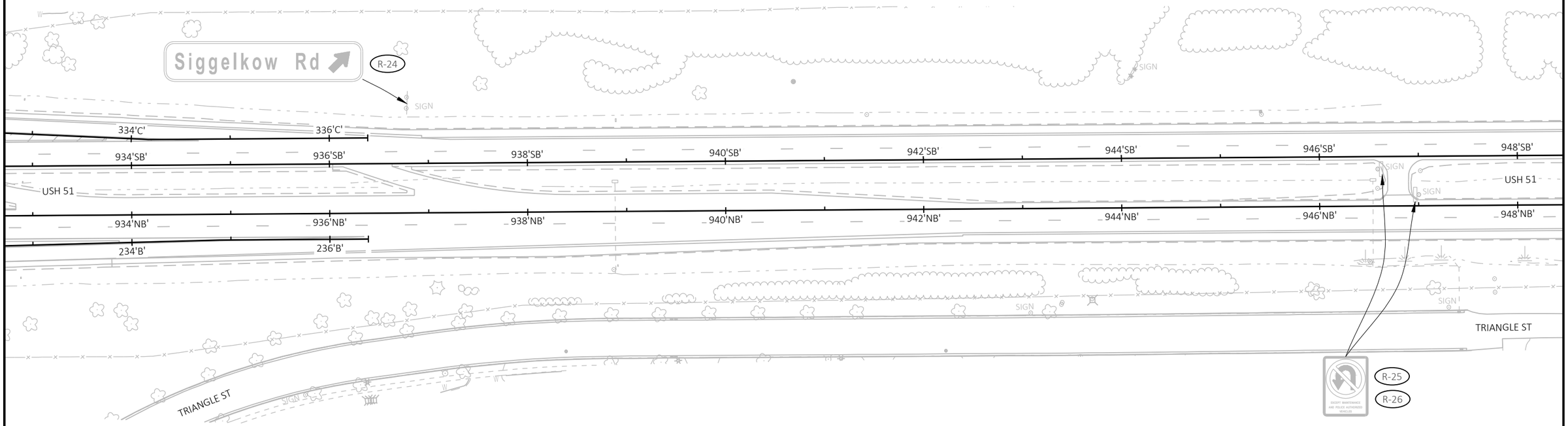
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	SIGN REMOVAL PLAN	SHEET 113	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_024500_RP.DWG
LAYOUT NAME - USH 51 - 1

PLOT DATE : 7/26/2024 2:49 PM PLOT BY : JOHNSON, ZACHARY PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42





REMOVAL LEGEND

R-XX — SIGN REMOVAL NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	SIGN REMOVAL PLAN	SHEET 114	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_024500_RP.DWG
LAYOUT NAME - USH 51 - 2

PLOT DATE : 7/26/2024 2:49 PM PLOT BY : JOHNSON, ZACHARY PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

REMOVAL LEGEND

R-XX — SIGN REMOVAL NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

N

Siggelkow Rd
EXIT ¼ MILE
R-27

R-28
EXISTING POST TO REMAIN (STA 972+01, LT)

948'SB' 950'SB' 952'SB' 954'SB' 956'SB' 958'SB' 960'SB' 962'SB'

USH 51

948'NB' 950'NB' 952'NB' 954'NB' 956'NB' 958'NB' 960'NB' 962'NB'

USH 51

SIGN

TRIANGLE ST

TRIANGLE ST

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	SIGN REMOVAL PLAN	SHEET 115	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_024500_RP.DWG
LAYOUT NAME - USH 51 - 3

PLOT DATE : 7/26/2024 2:49 PM PLOT BY : JOHNSON, ZACHARY PLOT NAME : PLOT SCALE : 1 IN:100 FT

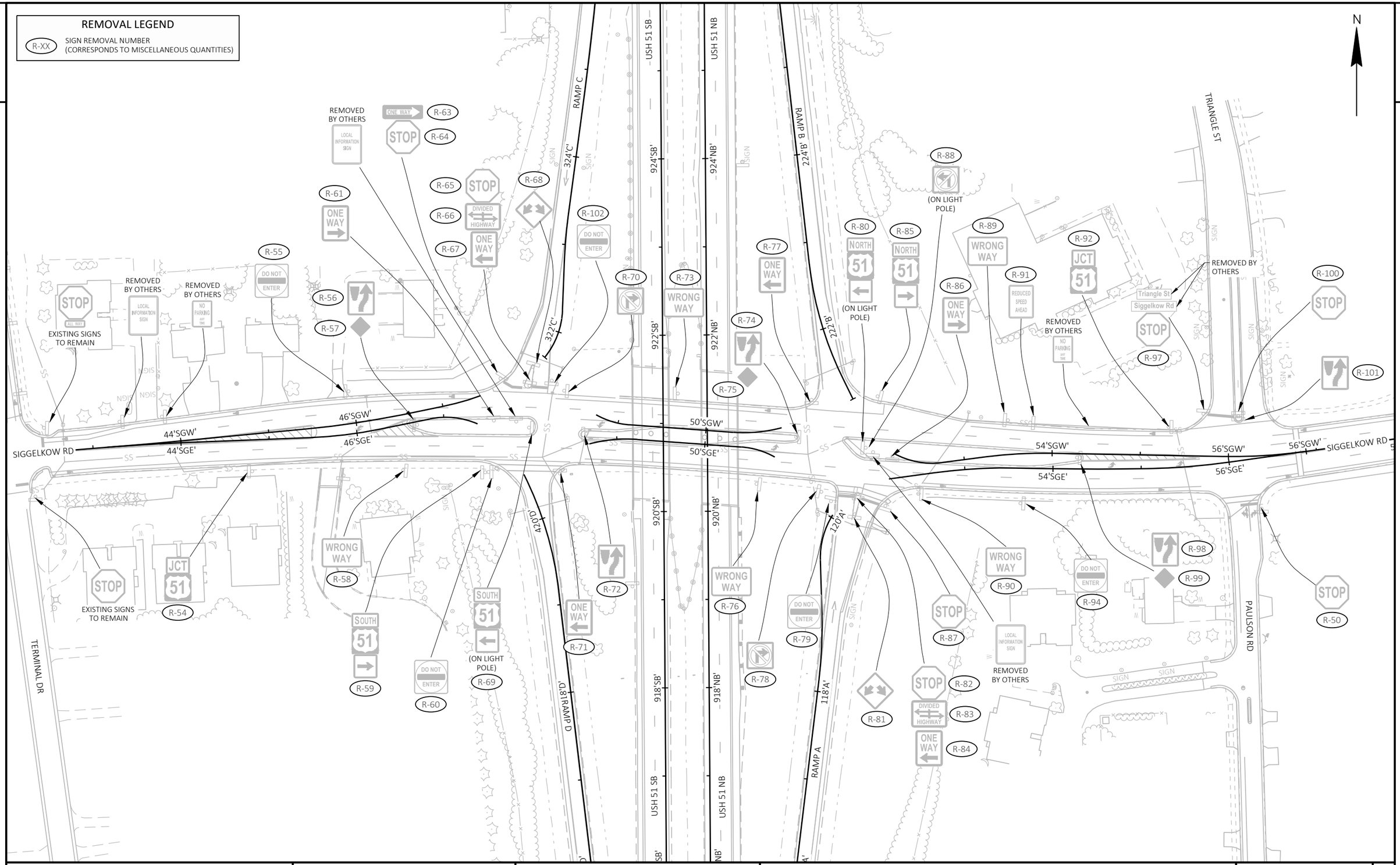
WISDOT/CADDS SHEET 42

REMOVAL LEGEND

R-XX SIGN REMOVAL NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

N

2



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	SIGN REMOVAL PLAN	SHEET 116	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_024500_RP.DWG
LAYOUT NAME - Siggelkow - 1
PLOT DATE : 7/26/2024 2:49 PM
PLOT BY : JOHNSON, ZACHARY
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

FLEXIBLE TUBULAR MARKERS INSTALLED PER SDD 15D11
FOR A CROSSOVER THAT IS NOT IN USE.
DELINEATORS AT SOUTH END OF CROSSOVER TO REMAIN.

DALE RD

LARSON BEACH RD

TERMINAL DR

USH 51

DALE CURTAIN DR

BIKE PATH

RIPRAP

U/C

SIGN

+89

+18

+24

W6

W10

W6-12.5

Y6

SL18

12"

890'SB'

892'SB'

894'SB'

890'NB'

892'NB'

894'NB'

STA. 889+24'NB'
BEGIN PROPOSED
PAVEMENT MARKING

NOTES

ALL SIGNS ARE TYPE II UNLESS NOTED OTHERWISE.

PERMANENT SIGNS LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

LEGEND

- PROPOSED SIGN ON SINGLE/DOUBLE SUPPORT
- TYPE I SIGN ON STRUCTURAL STEEL SUPPORTS
- XX-XX — SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)
- M-XX — MOVE EXISTING SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

LABEL	DESCRIPTION
W6	MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE
W6-12.5	MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE, 12.5' SEG. FOLLOWED BY 12.5' SEG OF GROOVED BLACK EPOXY, AND 25' GAP (SEE SDD 15C08)
Y6	MARKING LINE GROOVED WET REF EPOXY 6-INCH, YELLOW
W10	MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE
W10-3	MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE, 3' SEG., 9' GAP
W24	MARKING CHEVRON EPOXY 24-INCH, WHITE, 25-FOOT SPACING
SL18	MARKING STOP LINE EPOXY 18-INCH

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 117	E

FLEXIBLE TUBULAR MARKERS INSTALLED PER SDD 15D11 FOR A CROSSOVER THAT IS NOT IN USE

USE MARKING LINE EPOXY 6-INCH FOR PAVEMENT MARKING ON STRUCTURE AND STRUCTURE APPROACHES (IF APPLICABLE). DO NOT GROOVE PAVEMENT MARKING ON BRIDGE STRUCTURES.

REINSTALL SALVAGED SIGN BRACKET TO NEW POST (INCIDENTAL TO SIGN ITEMS)

LEGEND

- PROPOSED SIGN ON SINGLE/DOUBLE SUPPORT
- TYPE I SIGN ON STRUCTURAL STEEL SUPPORTS
- XX-XX — SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)
- M-XX — MOVE EXISTING SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

LABEL	DESCRIPTION
W6	MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE
W6-12.5	MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE, 12.5' SEG. FOLLOWED BY 12.5' SEG OF GROOVED BLACK EPOXY, AND 25' GAP (SEE SDD 15C08)
Y6	MARKING LINE GROOVED WET REF EPOXY 6-INCH, YELLOW
W10	MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE
W10-3	MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE, 3' SEG., 9' GAP
W24	MARKING CHEVRON EPOXY 24-INCH, WHITE, 25-FOOT SPACING
SL18	MARKING STOP LINE EPOXY 18-INCH

NOTES

ALL SIGNS ARE TYPE II UNLESS NOTED OTHERWISE.

PERMANENT SIGNS LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

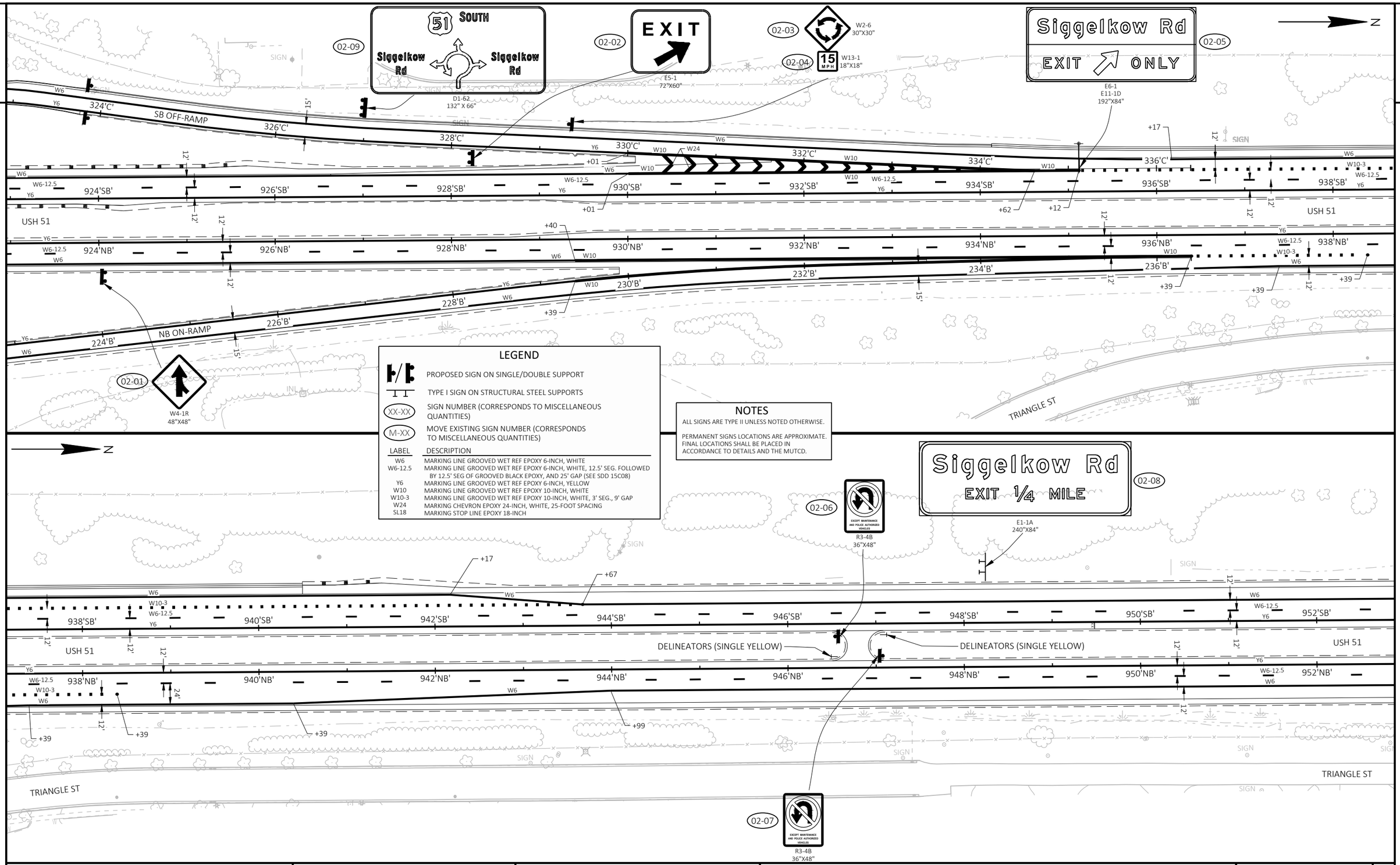
01-01	I55-56	ADOPT A HIGHWAY	30"X18"
01-02	I55-56P	MCFARLAND LIONS CLUB	30"X18"
01-03	W3-3		48"X48"
01-04	W3-3		48"X48"
01-05	R2-1	SPEED LIMIT 40	30"X36"
01-06	R2-1	SPEED LIMIT 40	30"X36"
01-07	W3-5	SPEED LIMIT 40	48"X48"
01-08	W3-5	SPEED LIMIT 40	48"X48"
01-09	E4-1A	Siggelkow Rd	276"X48"
01-10	W2-6		30"X30"
01-11	W13-1	15 MPH	18"X18"
01-12	R2-1	SPEED LIMIT 55	30"X36"
01-13	R2-1	SPEED LIMIT 55	30"X36"
01-14	E5-1	EXIT	72"X60"
01-15	R5-1A	WRONG WAY	36"X24"
01-16	R5-1A	WRONG WAY	36"X24"
01-17	W4-1R		48"X48"
01-18	R5-1	DO NOT ENTER	30"X30"
01-19	J1-1	SOUTH 51	24"X39"
01-20	R5-1	DO NOT ENTER	30"X30"
01-21	R5-1A	WRONG WAY	36"X24"
01-22	R5-1A	WRONG WAY	36"X24"
01-23	D1-62	51 NORTH; Siggelkow Rd; Siggelkow Rd	132"X66"

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 118 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_024501_PM.DWG
LAYOUT NAME - USH 51 - 2

PLOT DATE : 7/30/2024 10:39 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



LEGEND

	PROPOSED SIGN ON SINGLE/DOUBLE SUPPORT
	TYPE I SIGN ON STRUCTURAL STEEL SUPPORTS
XX-XX	SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)
M-XX	MOVE EXISTING SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

LABEL	DESCRIPTION
W6	MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE
W6-12.5	MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE, 12.5' SEG. FOLLOWED BY 12.5' SEG OF GROOVED BLACK EPOXY, AND 25' GAP (SEE SDD 15C08)
Y6	MARKING LINE GROOVED WET REF EPOXY 6-INCH, YELLOW
W10	MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE
W10-3	MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE, 3' SEG., 9' GAP
W24	MARKING CHEVRON EPOXY 24-INCH, WHITE, 25-FOOT SPACING
SL18	MARKING STOP LINE EPOXY 18-INCH

NOTES

ALL SIGNS ARE TYPE II UNLESS NOTED OTHERWISE.

PERMANENT SIGNS LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 119	E

2

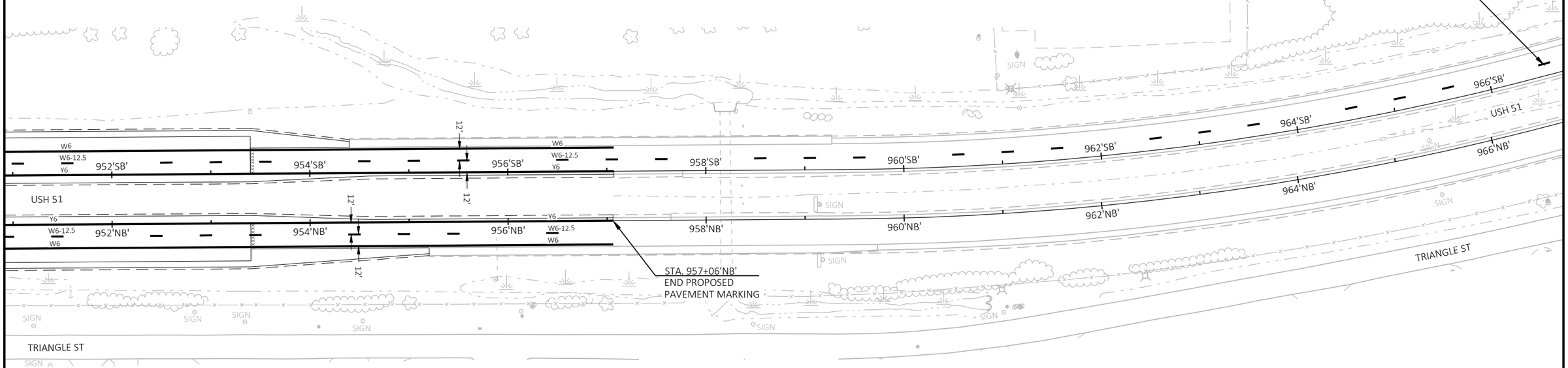
N

02-10 ADOPT A HIGHWAY I55-56 30"X18"

02-11 MCFARLAND LIONS CLUB I55-56P 30"X18"

REPLACE SIGN PLATES
(INSTALL ON EXISTING POST)
(STA 972+01, LT)

EXTEND W6-12.5 TO 967+50



LEGEND

	PROPOSED SIGN ON SINGLE/DOUBLE SUPPORT
	TYPE I SIGN ON STRUCTURAL STEEL SUPPORTS
XX-XX	SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)
M-XX	MOVE EXISTING SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

LABEL	DESCRIPTION
W6	MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE
W6-12.5	MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE, 12.5' SEG. FOLLOWED BY 12.5' SEG OF GROOVED BLACK EPOXY, AND 25' GAP (SEE SDD 15C08)
Y6	MARKING LINE GROOVED WET REF EPOXY 6-INCH, YELLOW
W10	MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE
W10-3	MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE, 3' SEG., 9' GAP
W24	MARKING CHEVRON EPOXY 24-INCH, WHITE, 25-FOOT SPACING
SL18	MARKING STOP LINE EPOXY 18-INCH

NOTES

ALL SIGNS ARE TYPE II UNLESS NOTED OTHERWISE.

PERMANENT SIGNS LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 120	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_024501_PM.DWG
LAYOUT NAME - USH 51 - 4
PLOT DATE : 7/30/2024 10:39 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

LEGEND

F/E	PROPOSED SIGN ON SINGLE/DOUBLE SUPPORT
XX-XX	SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)
M-XX	MOVE EXISTING SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

LABEL	DESCRIPTION
CBY	MARKING CURB EPOXY, YELLOW
INY	MARKING ISLAND NOSE EPOXY, YELLOW
W6	MARKING LINE 6-INCH EPOXY, WHITE
W6-3	MARKING LINE 6-INCH EPOXY, WHITE, 3' SEG., 9' GAP
W6-12.5	MARKING LINE 6-INCH EPOXY, WHITE, 12.5' SEG., 37.5' GAP
Y6	MARKING LINE 6-INCH EPOXY, YELLOW
DY6	MARKING LINE 6-INCH EPOXY, DOUBLE YELLOW
SL18	MARKING STOP LINE EPOXY 18-INCH WHITE
XW6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
W10	MARKING LINE EPOXY 10-INCH, WHITE
W10-3	MARKING LINE 10-INCH EPOXY, WHITE, 3' SEG., 9' GAP
Y12	MARKING DIAGONAL EPOXY 12-INCH, YELLOW, 25-FOOT SPACING
W18-2	MARKING DOTTED EXTENSION EPOXY 18-INCH, WHITE, 2' SEG., 2' GAP
WO	MARKING WORD EPOXY
A-1	MARKING ARROW EPOXY TYPE 1
A-2	MARKING ARROW EPOXY TYPE 2
A-3	MARKING ARROW EPOXY TYPE 3
A-3R	MARKING ARROW EPOXY TYPE 3R
BIKE	MARKING SYMBOLS EPOXY (BIKE LANE SYMBOL)

NOTES

ALL SIGNS ARE TYPE II UNLESS NOTED OTHERWISE.

YIELD SIGNS (R1-2) ARE TO BE MOUNTED AT 7.25'

CHEVRON SIGNS ARE TO HAVE A 4' MOUNTING HEIGHT FROM THE SURFACE OF THE TRUCK APRON.

PROVIDE A BOX OUT FOR ALL SIGNS LOCATED IN CONCRETE.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

N

TERMINAL DR

SIGGELKOW RD

BEGIN PAVEMENT MARKING
STA. 42+42.32'SGE'

03-06 DO NOT ENTER R5-1 30"X30"

R4-7 24"X30" 03-05

47'SGW' W10 XW6 XW6 W10

47'SGE' CBY INY

W6 W6-3 +27 DY6 Y6

46'SGW' W10 A-2 11' +98

46'SGE' +46 DY6 Y6

W6-3 W6 +13

45'SGW' DY6 R30' 45° DY6

45'SGE' Y12 DY6 R2'

44'SGW' DY6

44'SGE' DY6

43'SGE' 11' 11'

W6 SL18 DY6 W6 +48 5'

5'

SIGGELKOW RD

03-09 NORTH 51 SOUTH 51 J2-2 48"X57"

JCT 51 J1-1 24"X39" 03-02

LORRAINE WAY

W2-6 30"X30" 03-03

15 MPH W13-1 18"X18" 03-04

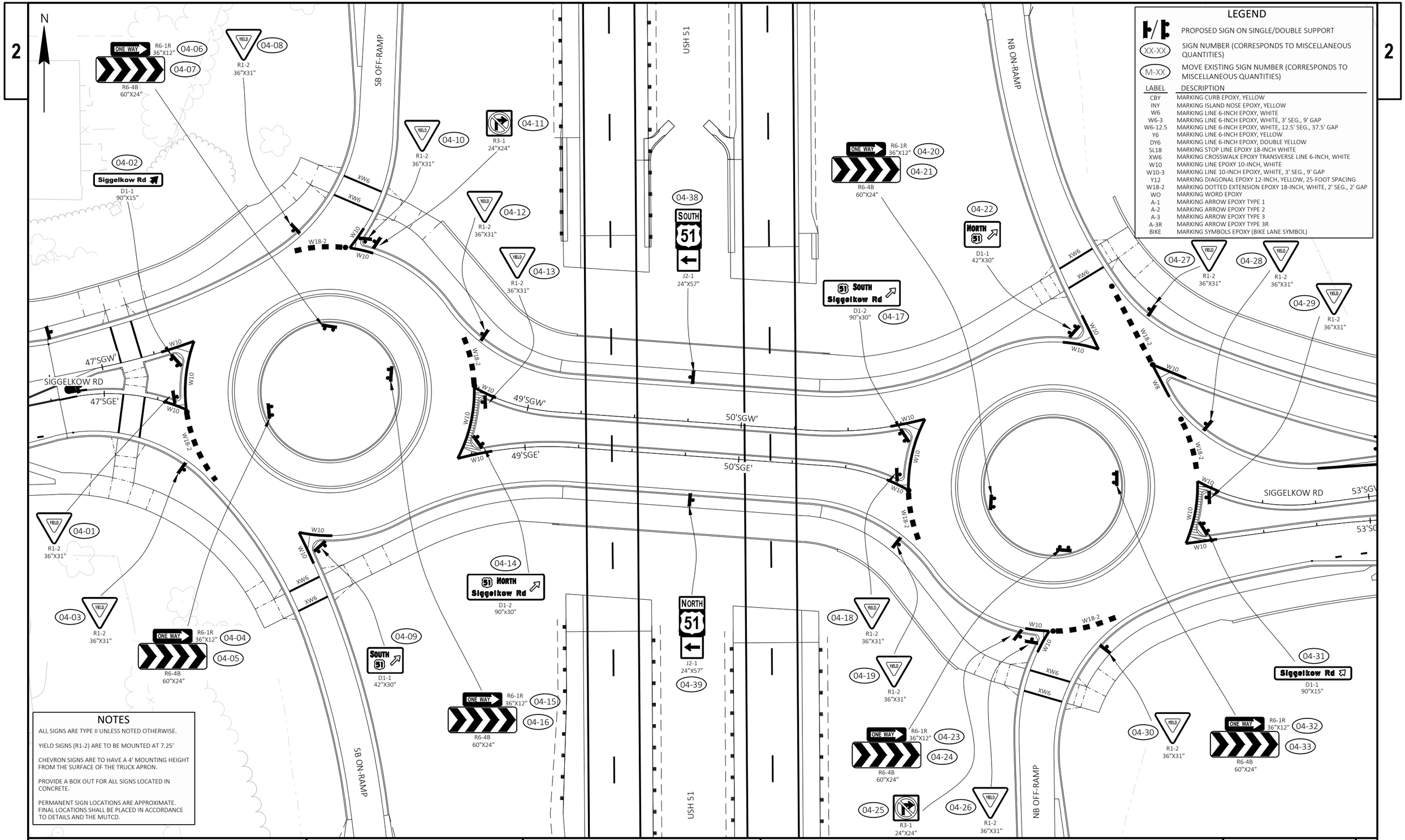
TERMINAL DR

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 121	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_024502_PM.DWG
LAYOUT NAME - SIGGELKOW - 1

PLOT DATE : 9/24/2024 7:25 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42



LEGEND

	PROPOSED SIGN ON SINGLE/DOUBLE SUPPORT
XX-XX	SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)
M-XX	MOVE EXISTING SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

LABEL	DESCRIPTION
CBY	MARKING CURB EPOXY, YELLOW
INY	MARKING ISLAND NOSE EPOXY, YELLOW
W6	MARKING LINE 6-INCH EPOXY, WHITE
W6-3	MARKING LINE 6-INCH EPOXY, WHITE, 3' SEG., 9' GAP
W6-12.5	MARKING LINE 6-INCH EPOXY, WHITE, 12.5' SEG., 37.5' GAP
Y6	MARKING LINE 6-INCH EPOXY, YELLOW
DY6	MARKING LINE 6-INCH EPOXY, DOUBLE YELLOW
SL18	MARKING STOP LINE EPOXY 18-INCH WHITE
XW6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
W10	MARKING LINE EPOXY 10-INCH, WHITE
W10-3	MARKING LINE 10-INCH EPOXY, WHITE, 3' SEG., 9' GAP
Y12	MARKING DIAGONAL EPOXY 12-INCH, YELLOW, 25-FOOT SPACING
W18-2	MARKING DOTTED EXTENSION EPOXY 18-INCH, WHITE, 2' SEG., 2' GAP
WO	MARKING WORD EPOXY
A-1	MARKING ARROW EPOXY TYPE 1
A-2	MARKING ARROW EPOXY TYPE 2
A-3	MARKING ARROW EPOXY TYPE 3
A-3R	MARKING ARROW EPOXY TYPE 3R
BIKE	MARKING SYMBOLS EPOXY (BIKE LANE SYMBOL)

NOTES

ALL SIGNS ARE TYPE II UNLESS NOTED OTHERWISE.

YIELD SIGNS (R1-2) ARE TO BE MOUNTED AT 7.25'

CHEVRON SIGNS ARE TO HAVE A 4' MOUNTING HEIGHT FROM THE SURFACE OF THE TRUCK APRON.

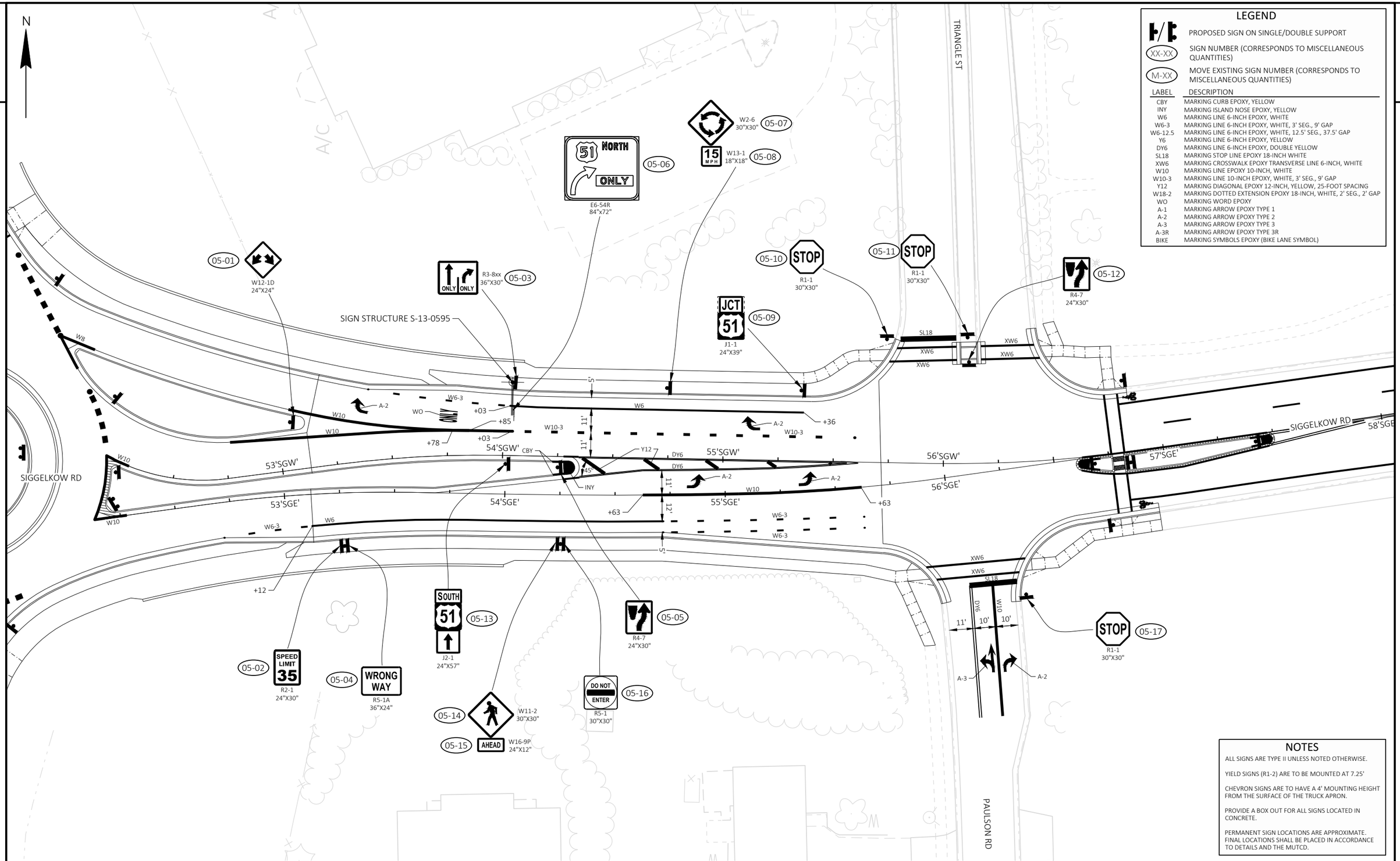
PROVIDE A BOX OUT FOR ALL SIGNS LOCATED IN CONCRETE.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 122	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_024502_PM.DWG
LAYOUT NAME - SIGGELKOW - 2

PLOT DATE : 9/24/2024 7:25 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT



NOTES

ALL SIGNS ARE TYPE II UNLESS NOTED OTHERWISE.

YIELD SIGNS (R1-2) ARE TO BE MOUNTED AT 7.25'

CHEVRON SIGNS ARE TO HAVE A 4' MOUNTING HEIGHT FROM THE SURFACE OF THE TRUCK APRON.

PROVIDE A BOX OUT FOR ALL SIGNS LOCATED IN CONCRETE.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 123	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_024502_PM.DWG
LAYOUT NAME - SIGGELKOW - 3

PLOT DATE : 9/24/2024 7:25 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

N

TRIANGLE ST

W11-2 30"X30" 06-01

W16-7L 24"X12" 06-02

W11-2 30"X30" 06-03

W16-7R 24"X12" 06-04

06-11 W11-2 30"X30"

06-12 AHEAD W16-9P 24"X12"

END PAVEMENT MARKING
STA. 60+70.15'SGE'

4'
11'
11'
11'
11'
4'

W6
W6-12.5
DY6
W6-12.5
W6
W6-12.5
CBY
DY6
DY6
INY
Y6
Y6
W6
XW6
XW6
XW6
BIKE
BIKE

SIGGELKOW RD
6'SGW'
56'SGE'
57'SGE'
58'SGE'
59'SGE'
60'SGE'
61'SGE'
62'SGE'

R4-7 24"X30" 06-09

W11-2 30"X30" 06-05

W16-7R 24"X12" 06-06

06-10 R4-7 24"X30"

W11-2 30"X30" 06-07

W16-7L 24"X12" 06-08

PAULSON RD

NOTES

ALL SIGNS ARE TYPE II UNLESS NOTED OTHERWISE.

YIELD SIGNS (R1-2) ARE TO BE MOUNTED AT 7.25'

CHEVRON SIGNS ARE TO HAVE A 4' MOUNTING HEIGHT FROM THE SURFACE OF THE TRUCK APRON.

PROVIDE A BOX OUT FOR ALL SIGNS LOCATED IN CONCRETE.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

LEGEND

PROPOSED SIGN ON SINGLE/DOUBLE SUPPORT

XX-XX SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

M-XX MOVE EXISTING SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

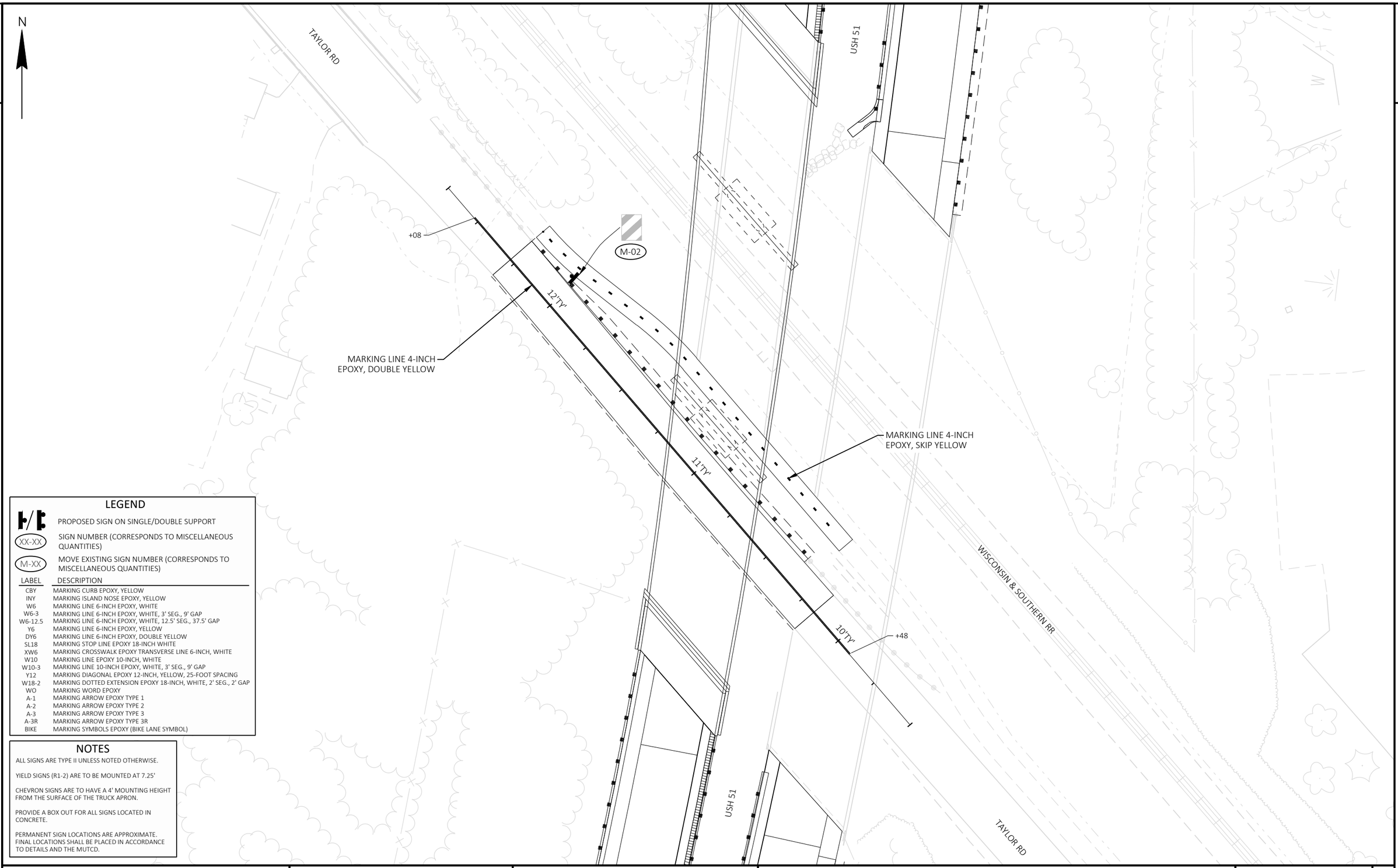
LABEL	DESCRIPTION
CBY	MARKING CURB EPOXY, YELLOW
INY	MARKING ISLAND NOSE EPOXY, YELLOW
W6	MARKING LINE 6-INCH EPOXY, WHITE
W6-3	MARKING LINE 6-INCH EPOXY, WHITE, 3' SEG., 9' GAP
W6-12.5	MARKING LINE 6-INCH EPOXY, WHITE, 12.5' SEG., 37.5' GAP
Y6	MARKING LINE 6-INCH EPOXY, YELLOW
DY6	MARKING LINE 6-INCH EPOXY, DOUBLE YELLOW
SL18	MARKING STOP LINE EPOXY 18-INCH WHITE
XW6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
W10	MARKING LINE EPOXY 10-INCH, WHITE
W10-3	MARKING LINE 10-INCH EPOXY, WHITE, 3' SEG., 9' GAP
Y12	MARKING DIAGONAL EPOXY 12-INCH, YELLOW, 25-FOOT SPACING
W18-2	MARKING DOTTED EXTENSION EPOXY 18-INCH, WHITE, 2' SEG., 2' GAP
WO	MARKING WORD EPOXY
A-1	MARKING ARROW EPOXY TYPE 1
A-2	MARKING ARROW EPOXY TYPE 2
A-3	MARKING ARROW EPOXY TYPE 3
A-3R	MARKING ARROW EPOXY TYPE 3R
BIKE	MARKING SYMBOLS EPOXY (BIKE LANE SYMBOL)

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 124	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_024502_PM.DWG
LAYOUT NAME - SIGGELKOW - 4

PLOT DATE : 9/24/2024 7:25 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42



LEGEND

F/E	PROPOSED SIGN ON SINGLE/DOUBLE SUPPORT
XX-XX	SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)
M-XX	MOVE EXISTING SIGN NUMBER (CORRESPONDS TO MISCELLANEOUS QUANTITIES)

LABEL	DESCRIPTION
CBY	MARKING CURB EPOXY, YELLOW
INY	MARKING ISLAND NOSE EPOXY, YELLOW
W6	MARKING LINE 6-INCH EPOXY, WHITE
W6-3	MARKING LINE 6-INCH EPOXY, WHITE, 3' SEG., 9' GAP
W6-12.5	MARKING LINE 6-INCH EPOXY, WHITE, 12.5' SEG., 37.5' GAP
Y6	MARKING LINE 6-INCH EPOXY, YELLOW
DY6	MARKING LINE 6-INCH EPOXY, DOUBLE YELLOW
SL18	MARKING STOP LINE EPOXY 18-INCH WHITE
XW6	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
W10	MARKING LINE EPOXY 10-INCH, WHITE
W10-3	MARKING LINE 10-INCH EPOXY, WHITE, 3' SEG., 9' GAP
Y12	MARKING DIAGONAL EPOXY 12-INCH, YELLOW, 25-FOOT SPACING
W18-2	MARKING DOTTED EXTENSION EPOXY 18-INCH, WHITE, 2' SEG., 2' GAP
WO	MARKING WORD EPOXY
A-1	MARKING ARROW EPOXY TYPE 1
A-2	MARKING ARROW EPOXY TYPE 2
A-3	MARKING ARROW EPOXY TYPE 3
A-3R	MARKING ARROW EPOXY TYPE 3R
BIKE	MARKING SYMBOLS EPOXY (BIKE LANE SYMBOL)

NOTES

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YIELD SIGNS (R1-2) ARE TO BE MOUNTED AT 7.25'

CHEVRON SIGNS ARE TO HAVE A 4' MOUNTING HEIGHT FROM THE SURFACE OF THE TRUCK APRON.

PROVIDE A BOX OUT FOR ALL SIGNS LOCATED IN CONCRETE.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PERMANENT SIGNING AND PAVEMENT MARKING	SHEET 125	E

Monona

2

2

N

COUNTY BB

MONONA DR

51

STOUGHTON RD

Broadway
EAST WEST

200'

MAX. 13' WIDTH
W12-52
48"X48"
(TWO SIGNS - ONE IN MEDIAN)

SOUTH 51
(ON SIGN BRIDGE BASE)

SOUTH 51
M3-3 24"X12"
M1-4 24"X24"
MAX. 13' WIDTH
W12-52 48"X48"

SOUTH 51
M3-3 36"X18"
M1-4 36"X36"
MAX. 13' WIDTH
W12-52 48"X48"
(TWO SIGNS - ONE IN MEDIAN)

MAX. 13' WIDTH
W12-52 48"X48"
1 MILE AHEAD
WO57-52 48"X36"
(TWO SIGNS - ONE IN MEDIAN)

FEMRITE DR

DUTCH MILL RD

AGRICULTURE DR

E BROADWAY

W BROADWAY

COUNTY BW

12 18

INTERSTATE 39 INTERSTATE 90

TRADEWINDS PKWY

S DUTCH MILL RD

EXIT 266
51
Stoughton Rd
½ MILE
EXIT ONLY

VOGES RD

EXIT 266
EAST 12
EAST 18
51
Stoughton Rd
¼ MILE
EXIT ONLY

SOUTH 51
M3-3 36"X18"
M1-4 36"X36"
MAX. 13' WIDTH
W12-52 48"X48"
(TWO SIGNS - ONE IN MEDIAN)

SOUTH 51
M3-3 24"X12"
M1-4 24"X24"
MAX. 13' WIDTH
W12-52 48"X48"

MAX. 13' WIDTH
W12-52 48"X48"

PCMS

FRAME A: ROAD WORK BEGINS
FRAME B: D.O.W. MM–DD
(IN PLACE 7 DAYS PRIOR TO STARTING DETOUR)

Mud Lake

TERMINAL DR

TRIANGLE ST

MARSH RD

51

McFarland

LEGEND:
- WORK AREA
- TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTE:
ALL SIGNS ARE 48"x48", UNLESS NOTED OTHERWISE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TRAFFIC CONTROL - ADVANCED WARNING SIGNING	SHEET 126	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_025000_AWS.DWG
LAYOUT NAME - 01

PLOT DATE : 7/26/2024 11:23 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:1000 FT

WISDOT/CADDS SHEET 42

2

LEGEND:

WORK AREA

TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT

PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTE:
ALL SIGNS ARE 48"x48", UNLESS NOTED OTHERWISE.

N

LARSON BEACH RD

PCMS

FARWELL RD

COUNTY MN

McFarland

COUNTY AB

COUNTY MN

Lake Waubesa

51

FRAME A: ROAD WORK BEGINS

FRAME B: D.O.W. MM–DD

(IN PLACE 7 DAYS PRIOR TO STARTING DETOUR)

INTERSTATE 39 INTERSTATE 90

E TOWER RD

Yahara River

MAX. 13' WIDTH — W12-52 48"X48"

WIDTH WARNING PRIOR TO COUNTY HIGHWAY (CTH MN)

1/2 MILE AHEAD — WO57-52 48"X36"

MAHONEY RD

NORTH 51 — M3-1 36"X18", M1-4 36"X36"

COUNTY AB

DYERSON RD

MAX. 13' WIDTH — W12-52 48"X48"

MAX. 13' WIDTH — W12-52 48"X48"

WIDTH WARNING PRIOR TO COUNTY HIGHWAY (CTH B/AB)

4 MILES AHEAD — WO57-52 48"X36"

COUNTY B

COUNTY B

Lake Kegonsa

SCHNEIDER DR

51

NORTH 51 — M3-1 36"X18", M1-4 36"X36"

MAX. 13' WIDTH — W12-52 48"X48"

HALVERSON RD

LAKE KEGONSA RD

COUNTY B

RUTLAND-DUNN TOWN LINE RD

NORTH 51 — M3-1 36"X18", M1-4 36"X36"

MAX. 13' WIDTH — W12-52 48"X48"

STAR SCHOOL RD

Stoughton

51

MAX. 13' WIDTH — W12-52 48"X48"

WIDTH WARNING PRIOR TO STATE HIGHWAY (STH 138)

8 1/2 MILES AHEAD — WO57-52 48"X36"

138

138

51

51

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	TRAFFIC CONTROL - ADVANCED WARNING SIGNING	SHEET 127	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_025000_AWS.DWG
LAYOUT NAME - 02

PLOT DATE : 7/26/2024 11:23 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:0.75 MI

WISDOT/CADDS SHEET 42

2

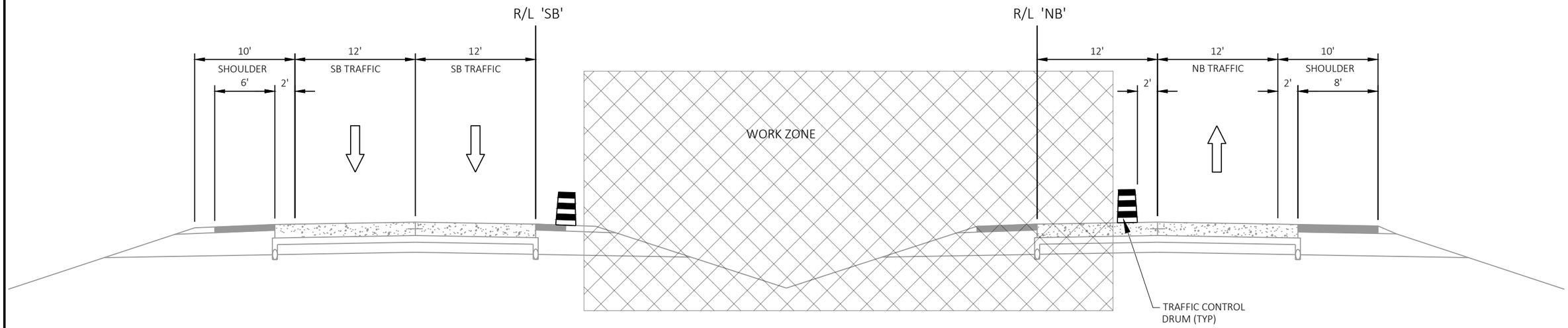
2

STAGE 1 NOTES:

TRAFFIC:
USH 51 NB MEDIAN LANE CLOSED BETWEEN TAYLOR ROAD AND SIGGELKOW ROAD.
USH 51 SB MEDIAN SHOULDER CLOSED BETWEEN TAYLOR ROAD AND SIGGELKOW ROAD.
ALL OTHER ROADS OPEN TO NORMAL TRAFFIC PATTERNS.

PEDESTRIANS AND BICYCLISTS:
ON EXISTING FACILITIES

CONSTRUCTION:
INSTALL GUARDRAIL AT NW CORNER OF USH 51 NB BRIDGES OVER TAYLOR ROAD AND SIGGELKOW ROAD.



TYPICAL TRAFFIC CONTROL SECTION - USH 51
STAGE 1

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 1	SHEET 128	E

2

2

LEGEND:

- WORK AREA
- DIRECTION OF TRAFFIC
- PAVEMENT MARKING REMOVAL
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
- TRAFFIC CONTROL ARROW BOARD

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

USH 51

USH 51 SB

USH 51 NB

BURMA RD

SEVERSON ST

CTH MN/FARWELL ST

DALE RD

DALE CURTIN RD

LARSON BEACH RD

BIKE PATH

ROAD WORK AHEAD W20-1A

END ROAD WORK G20-2A 48"X24"

350'

500'

500' TO LANE MERGE

890'SB'
890'NB'

SPEED LIMIT 40

LEFT LANE CLOSED AHEAD W20-5A

(500' PRIOR TO CONSTRUCTION)

W04-2L

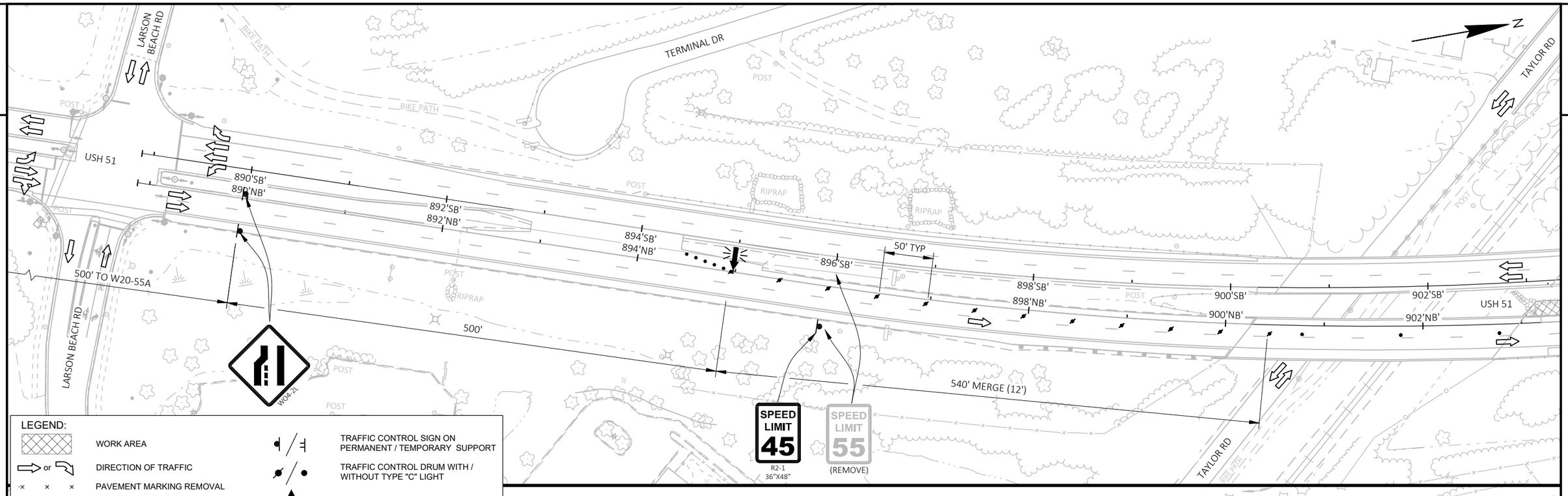
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 1	SHEET 129	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026100_S1.DWG
LAYOUT NAME - 01

PLOT DATE : 7/24/2024 3:19 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 1	SHEET 130	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026100_S1.DWG
LAYOUT NAME - 02
PLOT DATE : 7/24/2024 3:19 PM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

N

SIGGELKOW RD

RAMP D

RAMP C

RAMP B

RAMP A

USH 51

918'SB' 920'SB' 922'SB' 924'SB' 926'SB' 928'SB' 930'SB' 932'SB'

918'NB' 920'NB' 922'NB' 924'NB' 926'NB' 928'NB' 930'NB' 932'NB'

POST

LANE CLOSED
R11-2L
48"X30"

SPEED LIMIT 45
R2-1
36"X48"

END ROAD WORK
G20-2A
48"X24"

LEGEND:

	WORK AREA
or	DIRECTION OF TRAFFIC
× × ×	PAVEMENT MARKING REMOVAL
	TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
	CONCRETE BARRIER TEMPORARY PRECAST
	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
	TRAFFIC CONTROL ARROW BOARD

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

N

LEFT SHOULDER CLOSED
W21-5AL

LEFT SHOULDER CLOSED AHEAD
W21-5BL

RAMP C

RAMP B

USH 51

934'SB' 936'SB' 938'SB' 940'SB' 942'SB' 944'SB' 946'SB' 948'SB'

934'NB' 936'NB' 938'NB' 940'NB' 942'NB' 944'NB' 946'NB' 948'NB'

POST

TRIANGLE ST

MAINTENANCE CROSSOVER CLOSED ALL STAGES

SPEED LIMIT 45
R2-1
36"X48"

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 1	SHEET 131	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026100_S1.DWG
LAYOUT NAME - 03
PLOT DATE : 7/24/2024 3:19 PM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

N

USH 51

948'SB' 950'SB' 952'SB' 954'SB' 956'SB' 958'SB' 960'SB' 962'SB'

948'NB' 950'NB' 952'NB' 954'NB' 956'NB' 958'NB' 960'NB' 962'NB'

USH 51

TRIANGLE ST

LEGEND:

WORK AREA	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
or DIRECTION OF TRAFFIC	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
PAVEMENT MARKING REMOVAL	TRAFFIC CONTROL ARROW BOARD
TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS	
CONCRETE BARRIER TEMPORARY PRECAST	

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

N

ROAD WORK AHEAD
W20-1A

SPEED LIMIT 55

SPEED LIMIT 45
R2-1
36"X48"

SLAB

USH 51

964'SB' 966'SB' 968'SB' 970'SB' 972'SB' 974'SB' 976'SB'

964'NB' 966'NB' 968'NB' 970'NB' 972'NB' 974'NB' 976'NB'

TERMINAL DR

USH 51

TRIANGLE ST

VOGES RD

S DUTCH MILL RD

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 1	SHEET 132	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026100_S1.DWG
LAYOUT NAME - 04

PLOT DATE : 7/24/2024 3:20 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

STAGE 2A NOTES:

TRAFFIC:
USH 51 NB AND SB TRAFFIC ON EXISTING USH 51 NB PAVEMENT.
RAMP C OPEN.
RAMPS A, B, AND D CLOSED.
SIGGELKOW ROAD OPEN.
TAYLOR ROAD CLOSED.

PEDESTRIANS AND BICYCLISTS:
LOWER YAHARA RIVER TRAIL CLOSED BETWEEN PAULSON RD AND TERMINAL DRIVE. DETOUR PROVIDED ALONG PAULSON ROAD, SIGGELKOW RD, AND TERMINAL DRIVE.
SIGGELKOW ROAD ON EXISTING FACILITIES.

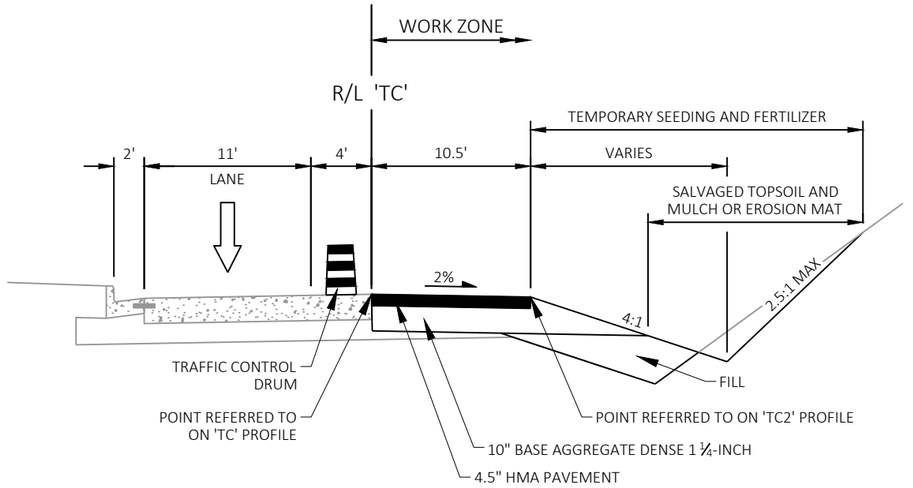
CONSTRUCTION:
REMOVE AND CONSTRUCT USH 51 SB BRIDGE OVER TAYLOR ROAD AND RAILROAD.
CONSTRUCT USH 51 SB.
CONSTRUCT RAMP D.
CONSTRUCT TAYLOR ROAD AND LOWER YAHARA RIVER TRAIL, FOLLOWING COMPLETION OF USH 51 SB BRIDGE.
CONSTRUCT TEMPORARY WIDENING ALONG EAST EDGE OF EXISTING RAMP C.

FOR REFERENCE ONLY

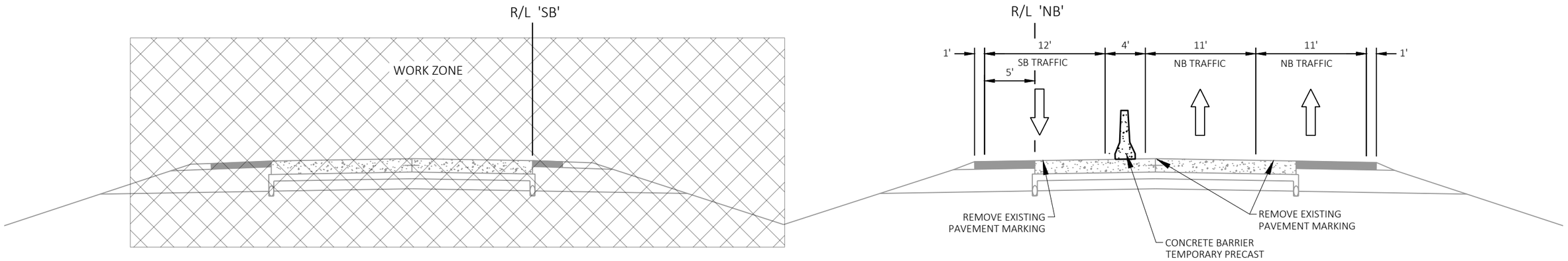
US 51/Stoughton Road & Voges Road/Terminal Drive
Temporary Signal Timing
Stage 2A

Phase	1	2	3	4	5	6	7	8
Description	NBLT	SB	-	WB	SBLT	NB	-	EB
Event 2, Action Plan 1 (06:15 to 09:00)								
Cycle length (s)	130							
Existing Splits (s)	16	88	-	26	39	65	-	26
Proposed Splits (s)	14	74	-	42	40	48	-	42
Event 4, Action Plan 3 (14:30 to 18:00)								
Cycle length (s)	130							
Existing Splits (s)	16	84	-	30	35	65	-	30
Proposed Splits	14	77	-	39	34	57	-	39

- SIGNAL TIMINGS SHALL BE REVIEWED IN THE FIELD AND ADJUSTED AS NECESSARY BY THE ENGINEER
- CONSIDERATION SHALL BE GIVEN TO RUNNING THE SIGNAL IN FREE MODE IF FIELD OBSERVATIONS SUGGEST ADDITIONAL TIME IS REQUIRED FOR VOGES ROAD/TERMINAL DRIVE.

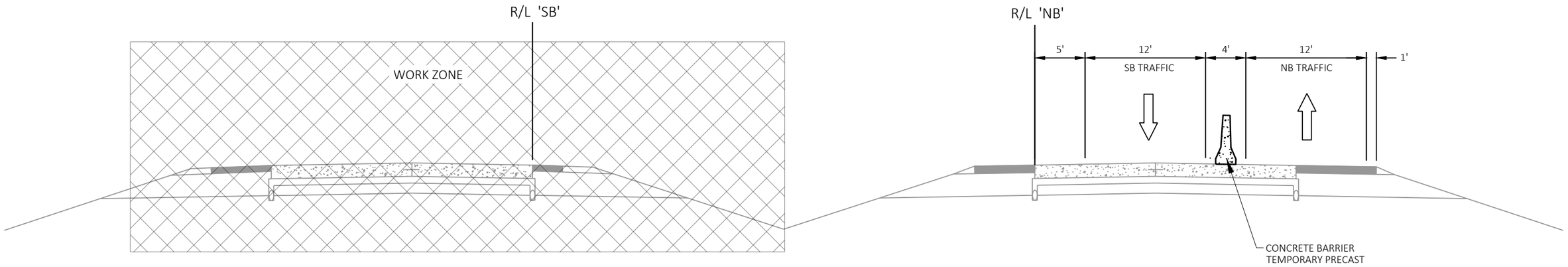


TYPICAL EXISTING SECTION - RAMP C
STAGE 2A



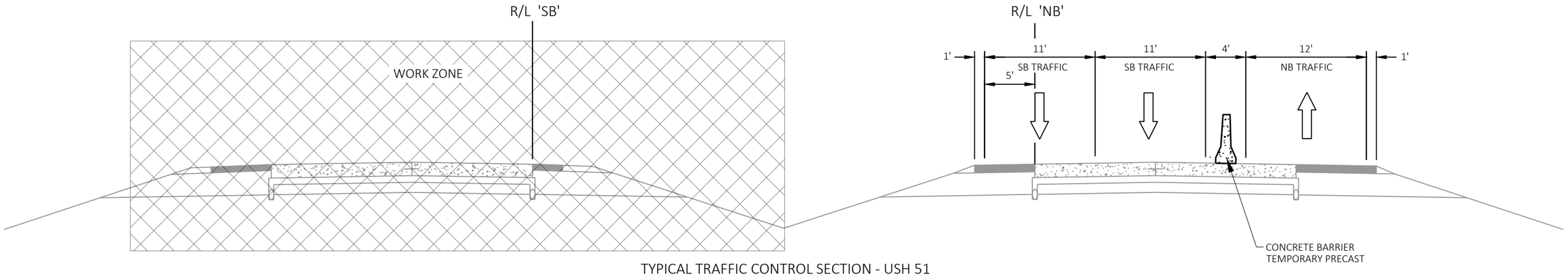
TYPICAL TRAFFIC CONTROL SECTION - USH 51

STAGE 2A (SOUTH OF RAMP A GORE)



TYPICAL TRAFFIC CONTROL SECTION - USH 51

STAGE 2A (RAMP A GORE TO ~926+00'NB')



TYPICAL TRAFFIC CONTROL SECTION - USH 51

STAGE 2A (NORTH OF ~926+00'NB')

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2A	SHEET 134	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026210_S2A.DWG
LAYOUT NAME - TS
PLOT DATE : 9/24/2024 9:57 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : Custom
WISDOT/CADDS SHEET 42

2

2

USH 51

USH 51 SB

USH 51 NB

BURMA RD

SEVERSON ST

CTH MN/FARWELL ST

DALE RD

DALE CURTIN RD

LARSON BEACH RD

BIKE PATH

CANOPY

POST

POSTS

PHONE POSTS

FILLER CAP

A/C

FLAG

MAN BOX

G.P.

LEGEND:

	WORK AREA
or	DIRECTION OF TRAFFIC
× × ×	PAVEMENT MARKING REMOVAL
	TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
	CONCRETE BARRIER TEMPORARY PRECAST
	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
	FLASHING ARROW BOARD
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

TEMPORARY PAVEMENT MARKING LEGEND

W6x	TEMPORARY MARKING 6-INCH WHITE
SDx	TEMPORARY MARKING 6-INCH WHITE (37.5-12.5 SKIP DASH)
W10x	TEMPORARY MARKING 10-INCH WHITE
WS-x	TEMPORARY MARKING 10-INCH WHITE (9-3 SKIP DASH)
Y6x	TEMPORARY MARKING 6-INCH YELLOW

FOR TEMPORARY PAVEMENT MARKING CALLOUTS:
"x" REPLACED BY "P" INDICATES PAINT
"x" REPLACED BY "T" INDICATES REMOVABLE TAPE

ROAD WORK AHEAD
W20-1A

END ROAD WORK
G20-2A
48"X24"

Y6T

+59'NB'

+96'NB'

890'NB'

W6T

WO1-6
48"X24"

400'

412'

MAX. 13' WIDTH
W12-52
48"X48"

WO1-46R

SPEED LIMIT 40

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2A	SHEET 135 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026210_S2A.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2024 9:57 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LARSON BEACH RD
BIKE PATH
TERMINAL DR
TAYLOR RD
USH 51
POST
RIPRAP
WO1-6 48"X24"
WO1-4R
W6T
Y6T
W6P
Y6P
SDP
+96'NB'
+59'NB'
890'NB'
+09'NB'
892'TS1'
892'NB'
15' CLEAR
150' SHIFT (11')
+45'NB'
894'TS1'
+14'NB'
896'NB'
898'NB'
900'NB'
902'NB'
SPEED LIMIT 40
(MOVE EXISTING SIGN)
BARRIER WALL DELINEATION REQ'D
Siggelkow Rd
COVER WITH
CLOSED
G20-60
108"X24"
SPEED LIMIT 45
R2-1
36"X48"
LEFT LANE CLOSED AHEAD
W20-5SA
USE ONLY TEMPORARY MARKING TAPE ON STRUCTURES

LEGEND:

- WORK AREA
- DIRECTION OF TRAFFIC
- PAVEMENT MARKING REMOVAL
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
- FLASHING ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

TEMPORARY PAVEMENT MARKING LEGEND

- W6x — TEMPORARY MARKING 6-INCH WHITE
- SDx — TEMPORARY MARKING 6-INCH WHITE (37.5-12.5 SKIP DASH)
- W10x — TEMPORARY MARKING 10-INCH WHITE
- WS-x — TEMPORARY MARKING 10-INCH WHITE (9-3 SKIP DASH)
- Y6x — TEMPORARY MARKING 6-INCH YELLOW

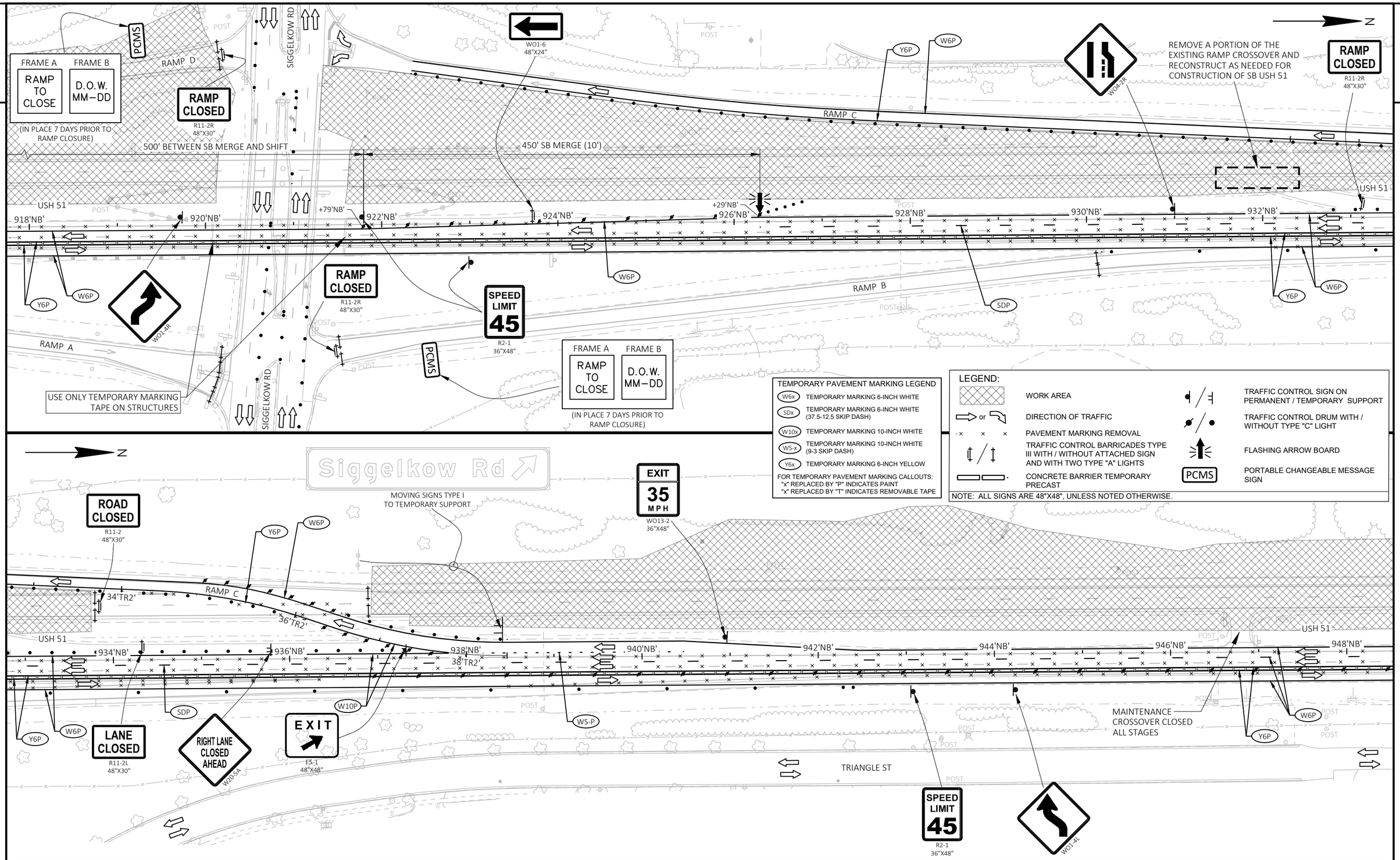
FOR TEMPORARY PAVEMENT MARKING CALLOUTS:
"x" REPLACED BY "P" INDICATES PAINT
"x" REPLACED BY "T" INDICATES REMOVABLE TAPE

N

RAMP D
330' SB SHIFT (10')
500' BETWEEN SB SHIFT AND MERGE
BARRIER WALL DELINEATION REQ'D
USH 51
904'NB'
906'NB'
908'NB'
+45'NB'
910'NB'
912'NB'
+48'NB'
914'NB'
916'NB'
+79'NB'
918'NB'
+95'NB'
REMOVE EXISTING EXIT SIGN
SEE SDD 15D16 FOR ADDITIONAL INFORMATION
450' NB MERGE (10')
REMOVE EXISTING EXIT SIGN
RAMP A
PCMS
WO4-2L
RAMP CLOSED
R11-2R
48"X30"
FRAME A: RAMP TO CLOSE
FRAME B: D.O.W. MM–DD
(IN PLACE 7 DAYS PRIOR TO RAMP CLOSURE)
RAMP CLOSED
R11-2R
48"X30"

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2A	SHEET 136	E

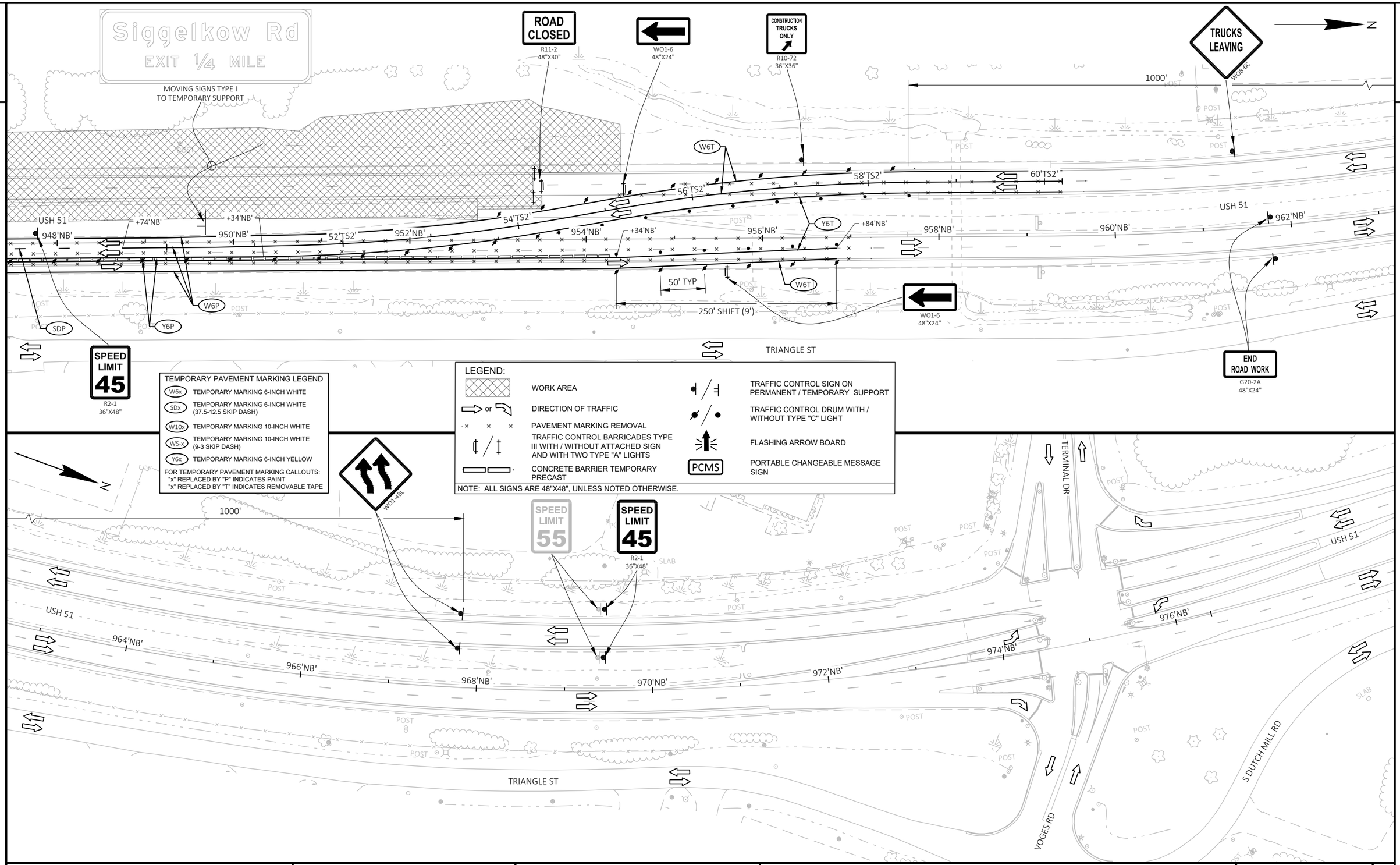
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026210_S2A.DWG
LAYOUT NAME - 02
PLOT DATE : 9/24/2024 9:58 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2A	SHEET 137	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026210_S2A.DWG
LAYOUT NAME - 03
PLOT DATE : 9/24/2024 9:58 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2A	SHEET 138	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026210_S2A.DWG
LAYOUT NAME - 04
PLOT DATE : 9/24/2024 9:58 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND:

WORK AREA	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
DIRECTION OF TRAFFIC	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
PAVEMENT MARKING REMOVAL	FLASHING ARROW BOARD
TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS	PORTABLE CHANGEABLE MESSAGE SIGN
CONCRETE BARRIER TEMPORARY PRECAST	

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

N

SOUTH 51 M3-3 36"X18" M1-4 36"X36" ROAD WORK AHEAD W20-1A

ROAD WORK 1/2 MILE W20-1G

MAX. 13' WIDTH W12-52 48"X48"

SOUTH 51 M3-3 36"X18" M1-4 36"X36" ROAD WORK AHEAD W20-1A

SOUTH 51 M3-3 36"X18" M1-4 36"X36" ROAD WORK AHEAD W20-1A

SOUTH 51 M3-3 36"X18" M1-4 36"X36" ROAD WORK AHEAD W20-1A

USH 12/18

CTH BW/ E BROADWAY

USH 51 SB

USH 51 NB

E BROADWAY

S DUTCH MILL RD

TERMINAL DR

VOGES RD

TRIANGLE ST

TRADEWINDS PKWY

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2A	SHEET 139	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026210_S2A.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2024 9:58 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:300 FT

WISDOT/CADDS SHEET 42

2

N

TERMINAL DR

USH 51 SB OFF RAMP

END
ROAD WORK
G20-2A
48"X24"

SIGGELKOW RD

SIGGELKOW RD

ROAD
WORK
AHEAD
W20-1A

ERLING AVE

ATHLETIC FIELD

POST

MAILBOX

51
M1-4
24"X24"

RAMP
CLOSED
AHEAD
W20-53A

R3-1
24"X24"

RAMP
CLOSED
R11-2R
48"X30"

TERMINAL DR

USH 51 SB ON RAMP

2

LEGEND:

WORK AREA	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
DIRECTION OF TRAFFIC	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
PAVEMENT MARKING REMOVAL	FLASHING ARROW BOARD
TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS	PORTABLE CHANGEABLE MESSAGE SIGN
CONCRETE BARRIER TEMPORARY PRECAST	

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2A	SHEET 140	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026210_S2A.DWG
LAYOUT NAME - 06
PLOT DATE : 9/24/2024 9:58 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

N

USH 51

USH 51 SB OFF RAMP

USH 51 NB ON RAMP

924'NB'

922'NB'

+79'NB'

920'NB'

918'NB'

+79'NB'

TRIANGLE ST

PAULSON RD

SIGGELKOW RD

SIGGELKOW RD

RAMP CLOSED
R11-2R
48"X30"

RAMP CLOSED
R11-2R
48"X30"

RAMP CLOSED
R11-2R
48"X30"

RAMP CLOSED
R11-2R
48"X30"

R3-2
24"X24"

R3-1
24"X24"

51
M1-4
24"X24"

RAMP CLOSED AHEAD
W20-3A

ROAD WORK AHEAD
W20-1A

END ROAD WORK
G20-2A
48"X24"

POST

A/C

FLAG

LEGEND:

- WORK AREA
- DIRECTION OF TRAFFIC
- PAVEMENT MARKING REMOVAL
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
- FLASHING ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2A	SHEET 141	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026210_S2A.DWG
LAYOUT NAME - 07

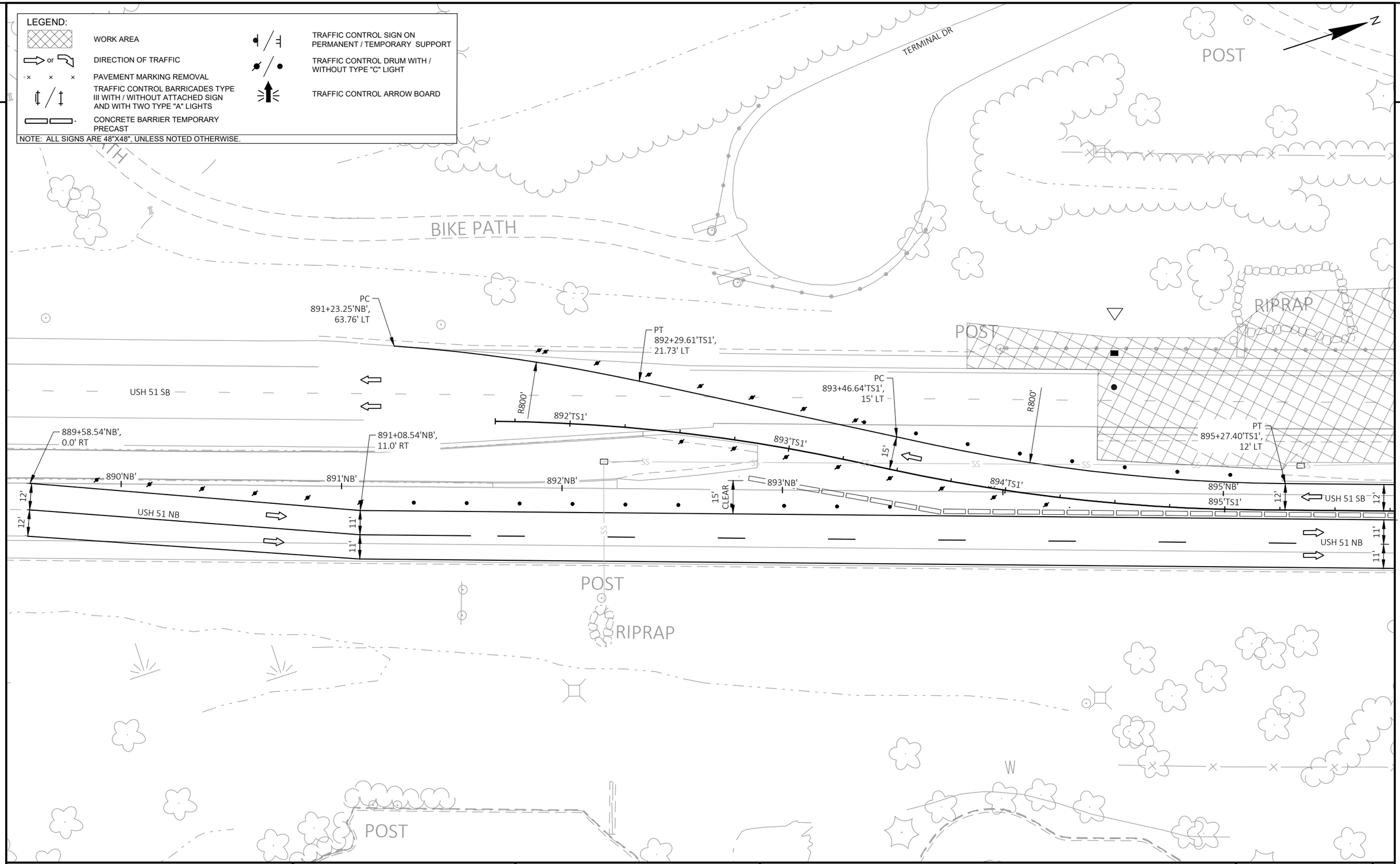
PLOT DATE : 9/24/2024 9:58 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

LEGEND:

- WORK AREA
- DIRECTION OF TRAFFIC
- PAVEMENT MARKING REMOVAL
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
- TRAFFIC CONTROL ARROW BOARD

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2A CROSSOVER DETAILS	SHEET 142	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026211_S2A (XOVER DETAILS).DWG
LAYOUT NAME - S XOVER DET
PLOT DATE : 8/30/2024 8:36 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

N

949+23.80'NB', 5' LT

50+32.29'TS2', 0' LT

51+09.83'TS2', 12' LT

51+61.39'TS2', 0' LT

949'NB'

950'NB'

51'TS2'

951'NB'

52'TS2'

952'NB'

53'TS2'

953'NB'

54'TS2'

954'NB'

55'TS2'

USH 51 SB

USH 51 NB

11'

12'

4'

LEGEND:

- WORK AREA
- DIRECTION OF TRAFFIC
- PAVEMENT MARKING REMOVAL
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
- TRAFFIC CONTROL ARROW BOARD

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

POST

N

55'TS2'

56'TS2'

57'TS2'

58'TS2'

59'TS2'

60'TS2

USH 51 SB

USH 51 NB

954'NB'

954+33.90'NB', 21' RT

955'NB'

956'NB'

956+83.90'NB', 12' RT

957'NB'

958'NB'

959'NB'

960'NB

POST

POST

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2A CROSSOVER DETAILS	SHEET 143	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026211_S2A (XOVER DETAILS).DWG
LAYOUT NAME - N XOVER DET

PLOT DATE : 8/30/2024 8:36 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

SIGGELKOW RD

REMOVE 82' OF CONCRETE CURB & GUTTER ALONG SIGGELKOW RD, AND 20' ALONG RAMP C.

BACKFILL GAP BETWEEN EXISTING AND TEMPORARY RAMP PAVEMENTS WITH BASE AGGREGATE DENSE

REMOVE ASPHALT SHOULDER

321+30'TC' 13.6' LT

321+30'TC' 2.5' LT

PI: 321+29.78 'TC'

RAMP C

PI STA = 323+08.67 'TC'
Y = 465277.977
X = 843694.408
DELTA = 5°23'40" RT
D = 11°27'33"
T = 23.56'
L = 47.08'
R = 500.00'
PC STA = 322+85.11 'TC'
Y = 465254.439
X = 843693.495
PT STA = 323+32.19 'TC'
Y = 465301.324
X = 843697.530
DB = N02°13'17"E
DA = N07°36'57"E

PC: 322+85.11 'TC'

PT: 323+32.19 'TC'

PI STA = 326+09.85 'TC'
Y = 465576.536
X = 843734.329
DELTA = 5°05'19" LT
D = 1°54'01"
T = 133.98'
L = 267.78'
R = 3015.00'
PC STA = 324+75.87 'TC'
Y = 465443.741
X = 843716.573
PT STA = 327+43.65 'TC'
Y = 465710.383
X = 843740.236
DB = N07°36'57"E
DA = N02°31'38"E

PC: 324+75.87 'TC'

N

2.5'

322'TC'

323'TC'

1'

322+72'TC' 2.5' LT

AP06

13'

10.5'

10.5'

STATION 321+00'TC'
X = 843,686.322
Y = 465,069.522

SAWCUT TO CREATE CLEAN PAVEMENT EDGE

2.5'

PCC: 21+13.52 'TC2'

PT: 21+82.82 'TC2'

CONSTRUCT ASPHALTIC FLUME

321+28'TC' 68.2' RT

PI STA = 21+53.62 'TC2'
Y = 465112.732
X = 843698.068
DELTA = 72°11'13" RT
D = 104°09'30"
T = 40.10'
L = 69.31'
R = 55.01'
PC STA = 21+13.52 'TC2'
Y = 465098.582
X = 843735.592
PT STA = 21+82.82 'TC2'
Y = 465152.785
X = 843700.060
DB = N69°20'24"W
DA = N02°50'49"E

(EXISTING PAVEMENT)

N7°36'57"E

324'TC'

325'TC'

326'TC'

327'TC'

EXISTING RAMP C PAVEMENT EDGE

AP06

10.5'

USH 51 SB

USH 51 SB

LEGEND

AP06	4.5-INCH HMA PAVEMENT (3 MT 58-28 S)

N

POST

PT: 327+43.65 'TC'

RAMP C

327'TC'

328'TC'

329'TC'

330'TC'

331'TC'

332'TC'

333'TC'

10.5'

(EXISTING PAVEMENT)

N2°31'38"E

AP06

329+57'TC' 10.5' RT

329+57'TC' 23.4' RT

EXISTING RAMP C PAVEMENT EDGE

EXISTING USH 51 SB PAVEMENT EDGE

332+36'TC' 9.3' RT

STATION 333+00'TC'
X = 843,764.767
Y = 466,266.194

USH 51 SB

USH 51 SB

INL

INL

POST

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2A DETAILS - TEMPORARY PAVEMENT	SHEET 144	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026212_S2A (DETAILS).DWG
LAYOUT NAME - - TEMPORARY PAVEMENT

PLOT DATE : 7/25/2024 9:09 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

REMOVE EXISTING INLET CASTING AND COVER INLET STRUCTURE.

SS

STA 321 'TC'+32, 7.7' LT
COVER PLATES TEMPORARY REQ'D
EX-4

PIPE CONNECTION TO EXISTING STRUCTURE REQ'D

RAMP C

(EXISTING PAVEMENT)

(BASE AGG. FILL)

322'TC'

STA 321 'TC'+60, 2.8' RT
COVER PLATES TEMPORARY REQ'D
EX-3

(TEMPORARY PAVEMENT)

321+50'TC2'

SIGGELKOW RD

(EXISTING PAVEMENT)

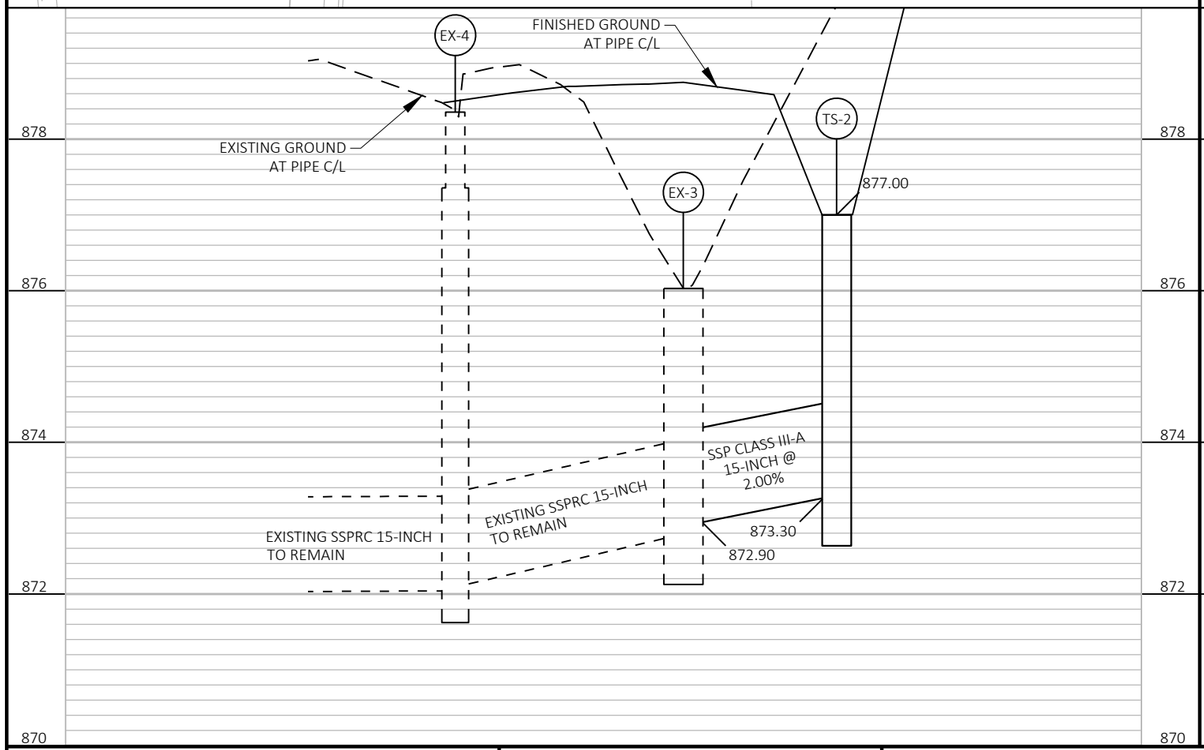
STA 321 'TC'+65, 22.5' RT
INLETS MEDIAN 1G-MS
TS-2

REMOVE APRON ENDWALL AND 15' OF EXISTING PIPE

INSTALL INLETS MEDIAN 1 GRADE

SLOPE INTERCEPTS

N



N

RAMP C

(EXISTING PAVEMENT)

328'TC'

329'TC'

STA 328 'TC'+37, 13.3' RT
REMOVING INLETS
EX-1

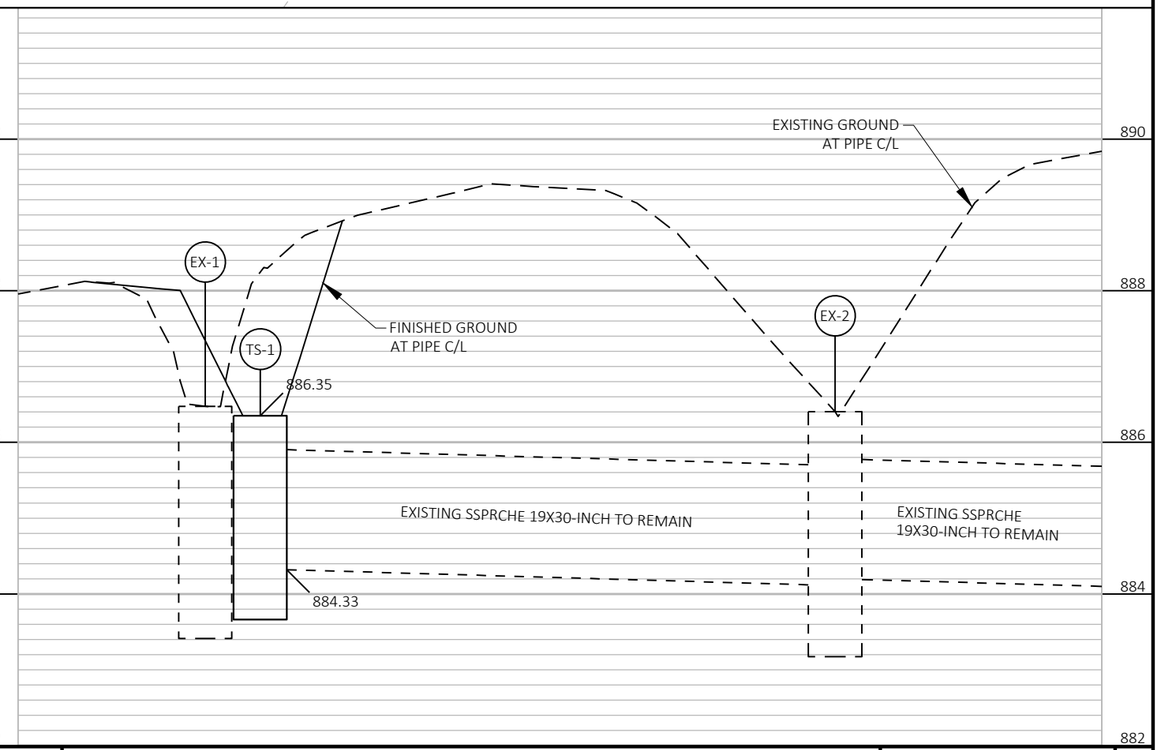
(TEMPORARY PAVEMENT)

STA 328 'TC'+33, 19.3' RT
INLETS MEDIAN 2G-MS
TS-1

SLOPE INTERCEPTS

REMOVE EXISTING INLET STRUCTURE, AND 7' OF EXISTING SSPRCHE 19X30-INCH

USH 51 SB



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2A - TEMPORARY SS CONNECTIONS	SHEET 145	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026213_S2A (TEMP STORM).DWG
LAYOUT NAME - 01
PLOT DATE : 7/27/2024 12:55 AM
PLOT BY : BUTTERIS, BRADLEY
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

STAGE 2B NOTES:

TRAFFIC:
USH 51 NB AND SB TRAFFIC ON EXISTING USH 51 NB PAVEMENT.
RAMP C OPEN TO EASTBOUND SIGGELKOW ROAD.
RAMPS A, B, AND D CLOSED.
SIGGELKOW ROAD CLOSED, EXCEPT EB FROM RAMP C TO TRIANGLE STREET.
TAYLOR ROAD OPEN.

PEDESTRIANS & BICYCLISTS:
LOWER YAHARA RIVER TRAIL OPEN.
SIGGELKOW ROAD
- ON-ROAD BICYCLE LANES CLOSED BETWEEN TERMINAL DRIVE AND TRIANGLE STREET.
- PEDESTRIANS
  - PHASE 1: ON EXISTING SIDEWALK
  - PHASE 2: ON NEW SIDEWALK WEST OF RAMP C AND EXISTING ROADWAY BETWEEN TEMPORARY BARRIER WALLS EAST OF RAMP C.

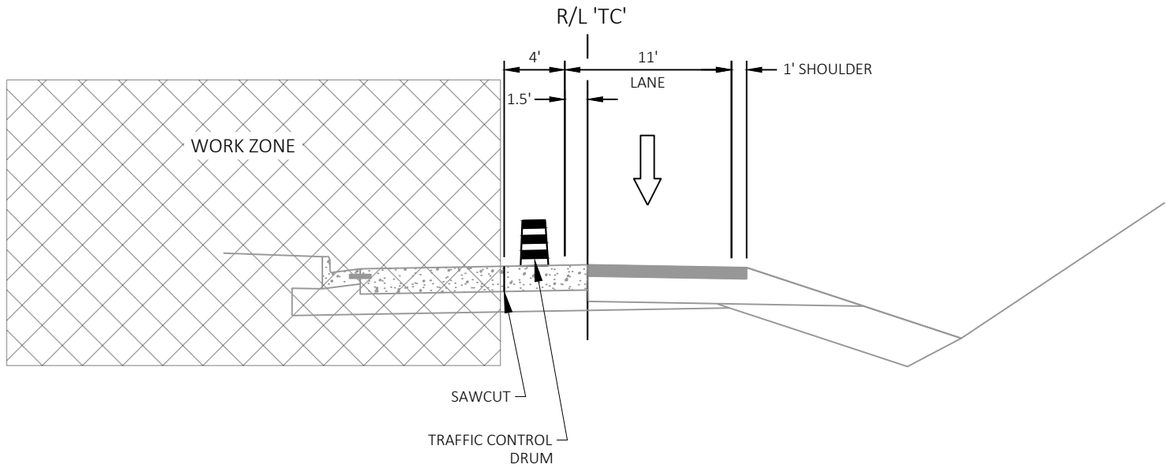
CONSTRUCTION:
CONSTRUCT USH 51 SB BRIDGE OVER TAYLOR ROAD AND RAILROAD.
CONSTRUCT USH 51 SB.
COMPLETE CONSTRUCTION OF USH 51 SB FROM STA 933+00'SB' TO STA 937+00'SB'.
CONSTRUCT SIGGELKOW ROAD.
CONSTRUCT RAMPS C & D.
CONSTRUCT TEMP PAVEMENT ALONG RAMP C.

FOR REFERENCE ONLY

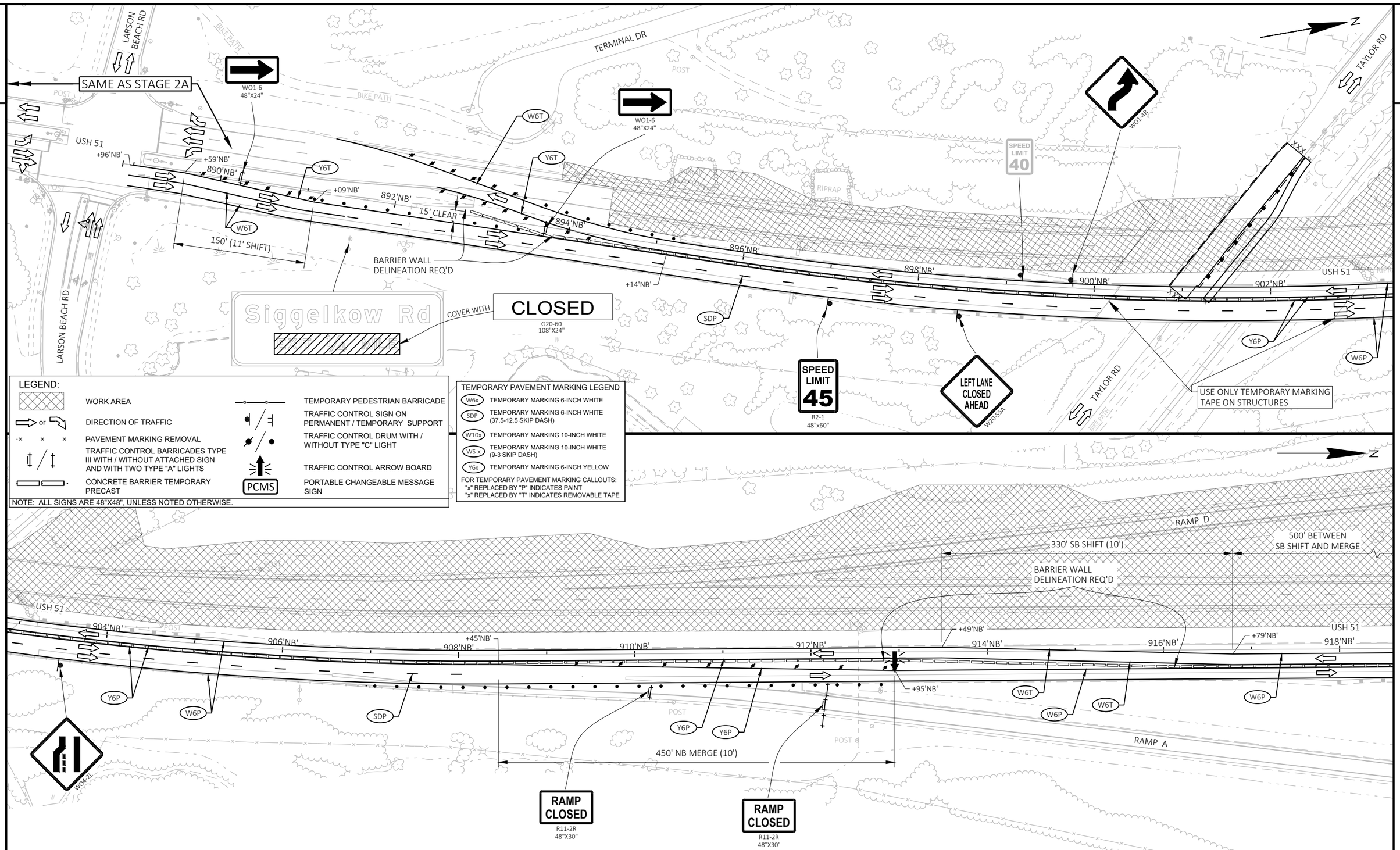
US 51/Stoughton Road & Voges Road/Terminal Drive
Temporary Signal Timing
Stage 2B

Phase	1	2	3	4	5	6	7	8
Description	NBLT	SB	-	WB	SBLT	NB	-	EB
Event 2, Action Plan 1 (06:15 to 09:00)								
Cycle length (s)	130							
Existing Splits (s)	16	88	-	26	39	65	-	26
Proposed Splits (s)	14	74	-	42	40	48	-	42
Event 4, Action Plan 3 (14:30 to 18:00)								
Cycle length (s)	130							
Existing Splits (s)	16	84	-	30	35	65	-	30
Proposed Splits	14	77	-	39	34	57	-	39

- SIGNAL TIMINGS SHALL BE REVIEWED IN THE FIELD AND ADJUSTED AS NECESSARY BY THE ENGINEER
- CONSIDERATION SHALL BE GIVEN TO RUNNING THE SIGNAL IN FREE MODE IF FIELD OBSERVATIONS SUGGEST ADDITIONAL TIME IS REQUIRED FOR VOGES ROAD/TERMINAL DRIVE.



TYPICAL TRAFFIC CONTROL SECTION - RAMP C
STAGE 2B



LEGEND:

- WORK AREA
- DIRECTION OF TRAFFIC
- PAVEMENT MARKING REMOVAL
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PEDESTRIAN BARRICADE
- TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
- TRAFFIC CONTROL ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

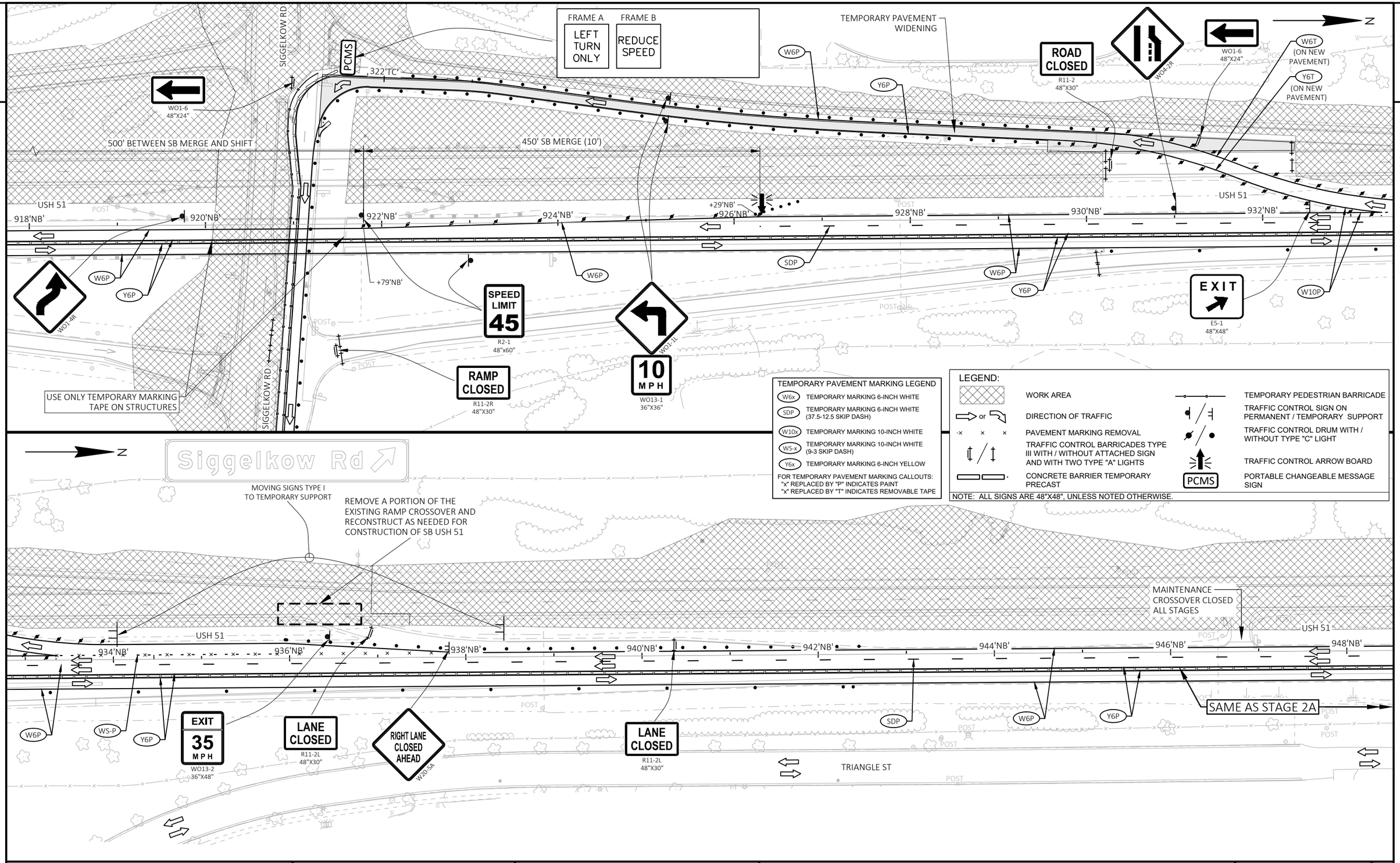
TEMPORARY PAVEMENT MARKING LEGEND

W6x	TEMPORARY MARKING 6-INCH WHITE
SDP	TEMPORARY MARKING 6-INCH WHITE (37.5-12.5 SKIP DASH)
W10x	TEMPORARY MARKING 10-INCH WHITE
WS-x	TEMPORARY MARKING 10-INCH WHITE (9-3 SKIP DASH)
Y6x	TEMPORARY MARKING 6-INCH YELLOW

FOR TEMPORARY PAVEMENT MARKING CALLOUTS:
"x" REPLACED BY "P" INDICATES PAINT
"x" REPLACED BY "T" INDICATES REMOVABLE TAPE

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2B	SHEET 147	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026220_S2B.DWG
LAYOUT NAME - 02
PLOT DATE : 9/3/2024 9:18 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



TEMPORARY PAVEMENT MARKING LEGEND

W6x	TEMPORARY MARKING 6-INCH WHITE
SDP	TEMPORARY MARKING 6-INCH WHITE (37.5-12.5 SKIP DASH)
W10x	TEMPORARY MARKING 10-INCH WHITE
WS-x	TEMPORARY MARKING 10-INCH WHITE (9-3 SKIP DASH)
Y6x	TEMPORARY MARKING 6-INCH YELLOW

FOR TEMPORARY PAVEMENT MARKING CALLOUTS:
"x" REPLACED BY "P" INDICATES PAINT
"x" REPLACED BY "T" INDICATES REMOVABLE TAPE

LEGEND:

	WORK AREA
or	DIRECTION OF TRAFFIC
	PAVEMENT MARKING REMOVAL
	TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
	CONCRETE BARRIER TEMPORARY PRECAST
	TEMPORARY PEDESTRIAN BARRICADE
	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
	TRAFFIC CONTROL ARROW BOARD
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2B	SHEET 148	E

2

N

ROAD WORK AHEAD
W20-1A

TERMINAL DR

USH 51 SB OFF RAMP

322' TC'

SIGGELKOW RD

SIGGELKOW RD

ROAD CLOSED AHEAD
W20-3A

ROAD CLOSED 500 FT
W20-3D

ERLING AVE

ROAD CLOSED TO THRU TRAFFIC
R11-4
60"X30"

ATHLETIC FIELD

POST

ROAD CLOSED
R11-2
48"X30"

SEE PHASE 1 AND PHASE 2 SHEETS FOR PEDESTRIAN ACCOMODATION DETAILS

TERMINAL DR

ROAD WORK AHEAD
W20-1A

USH 51 SB ON RAMP

2

LEGEND:

	WORK AREA		TEMPORARY PEDESTRIAN BARRICADE
or	DIRECTION OF TRAFFIC		TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
× × ×	PAVEMENT MARKING REMOVAL		TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
	TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS		TRAFFIC CONTROL ARROW BOARD
	CONCRETE BARRIER TEMPORARY PRECAST	PCMS	PORTABLE CHANGEABLE MESSAGE SIGN

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2B	SHEET 149	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026220_S2B.DWG
LAYOUT NAME - 06

PLOT DATE : 9/3/2024 9:18 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

2

N

USH 51

USH 51 NB ON RAMP

USH 51 SB OFF RAMP

924'NB'

922'NB'

920'NB'

918'NB'

+79'NB'

BARRIER WALL
DELINEATION REQ'D

W6P

SIGGELKOW RD

RAMP
CLOSED
R11-2R
48"X30"

ROAD
WORK
AHEAD
W20-1A

TRIANGLE ST

STOP
R1-1
30"X30"

WO1-7
48"X24"

ROAD
CLOSED
R11-2
48"X30"

R3-1
24"X24"

DO NOT
ENTER
R5-1
36"X36"

SEE PEDESTRIAN ACCOMMODATION
CONSTRUCTION DETAILS

BIKE LANE
ENDS
R3-17
30"X24"
R3-17bp
24"X12"

Y6T

245' MERGE (11')

350'

ROAD
CLOSED
500 FT
W20-3D

SIGGELKOW RD

END
ROAD WORK
G20-2A
48"X24"

STOP
R3-2
24"X24"

DO NOT
ENTER
R5-1
36"X36"

R3-2
24"X24"

PAULSON RD

REMOVE EXISTING PAVEMENT MARKING
ARROWS AND CHANNELIZING LINE ON
PAULSON RD

USH 51 NB OFF RAMP

ROAD
WORK
AHEAD
W20-1A

TEMPORARY PAVEMENT MARKING LEGEND

W6x	TEMPORARY MARKING 6-INCH WHITE
SDP	TEMPORARY MARKING 6-INCH WHITE (37.5-12.5 SKIP DASH)
W10x	TEMPORARY MARKING 10-INCH WHITE
WS-x	TEMPORARY MARKING 10-INCH WHITE (9-3 SKIP DASH)
Y6x	TEMPORARY MARKING 6-INCH YELLOW

FOR TEMPORARY PAVEMENT MARKING CALLOUTS:
"x" REPLACED BY "P" INDICATES PAINT
"x" REPLACED BY "T" INDICATES REMOVABLE TAPE

LEGEND:

	WORK AREA
or	DIRECTION OF TRAFFIC
	PAVEMENT MARKING REMOVAL
	TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
	CONCRETE BARRIER TEMPORARY PRECAST
	TEMPORARY PEDESTRIAN BARRICADE
	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
	TRAFFIC CONTROL ARROW BOARD
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2B	SHEET 150	E

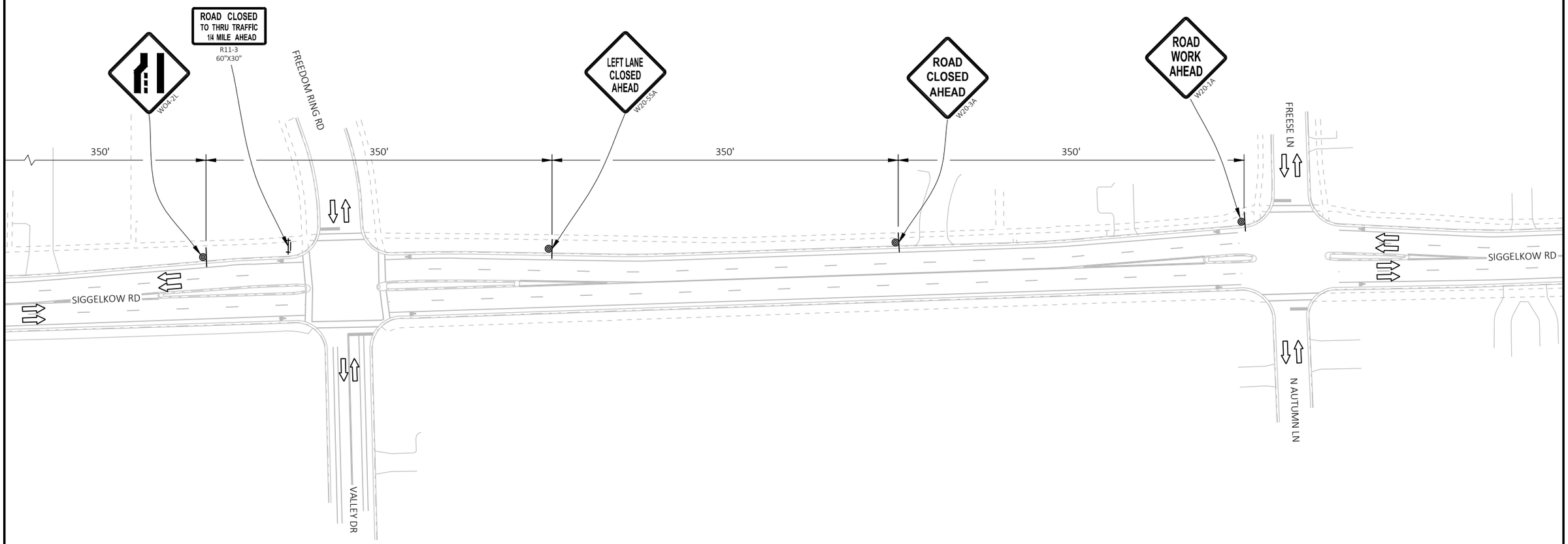
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026220_S2B.DWG
LAYOUT NAME - 07

PLOT DATE : 9/3/2024 9:18 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N



LEGEND:

	WORK AREA
or	DIRECTION OF TRAFFIC
× × ×	PAVEMENT MARKING REMOVAL
	TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
	CONCRETE BARRIER TEMPORARY PRECAST
	TEMPORARY PEDESTRIAN BARRICADE
	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
	TRAFFIC CONTROL ARROW BOARD
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2B	SHEET 151	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026220_S2B.DWG
LAYOUT NAME - 08
PLOT DATE : 9/3/2024 9:19 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND:

WORK AREA	TEMPORARY PEDESTRIAN BARRICADE
DIRECTION OF TRAFFIC	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
PAVEMENT MARKING REMOVAL	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS	TRAFFIC CONTROL ARROW BOARD
CONCRETE BARRIER TEMPORARY PRECAST	

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

LEGEND

AP06 4.5-INCH HMA PAVEMENT

N

SIGGELKOW RD

11+00'WRB'
100.6' LT

R78'

10+94'WRB'
21.7' LT

FINISHED RAMP C
PAVEMENT

ASPHALTIC CURB

TEMPORARY PAVEMENT
CONSTRUCTED THIS STAGE

322+12'C'
33.2' LT

AP06

180°

FINISHED RAMP C
CURB FACE

323+32'C'
23' LT

322'TC'

FINISHED RAMP C
PAVEMENT EDGE

RAMP C

SEE PHASE1 AND PHASE 2 DETAIL SHEETS FOR PEDESTRIAN ACCOMMODATIONS

TEMPORARY PAVEMENT
FROM PRIOR STAGES

EXISTING SIGGELKOW RD
PAVEMENT

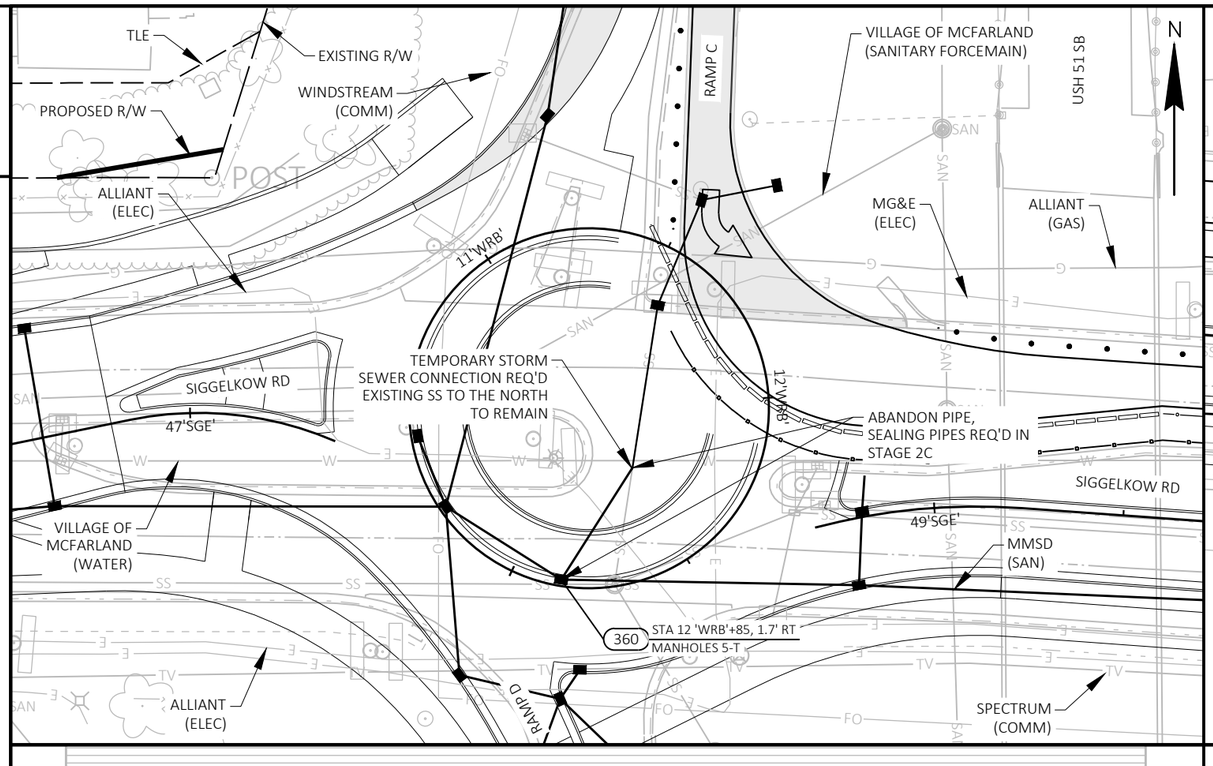
TEMPORARY PAVEMENT
FROM PRIOR STAGES

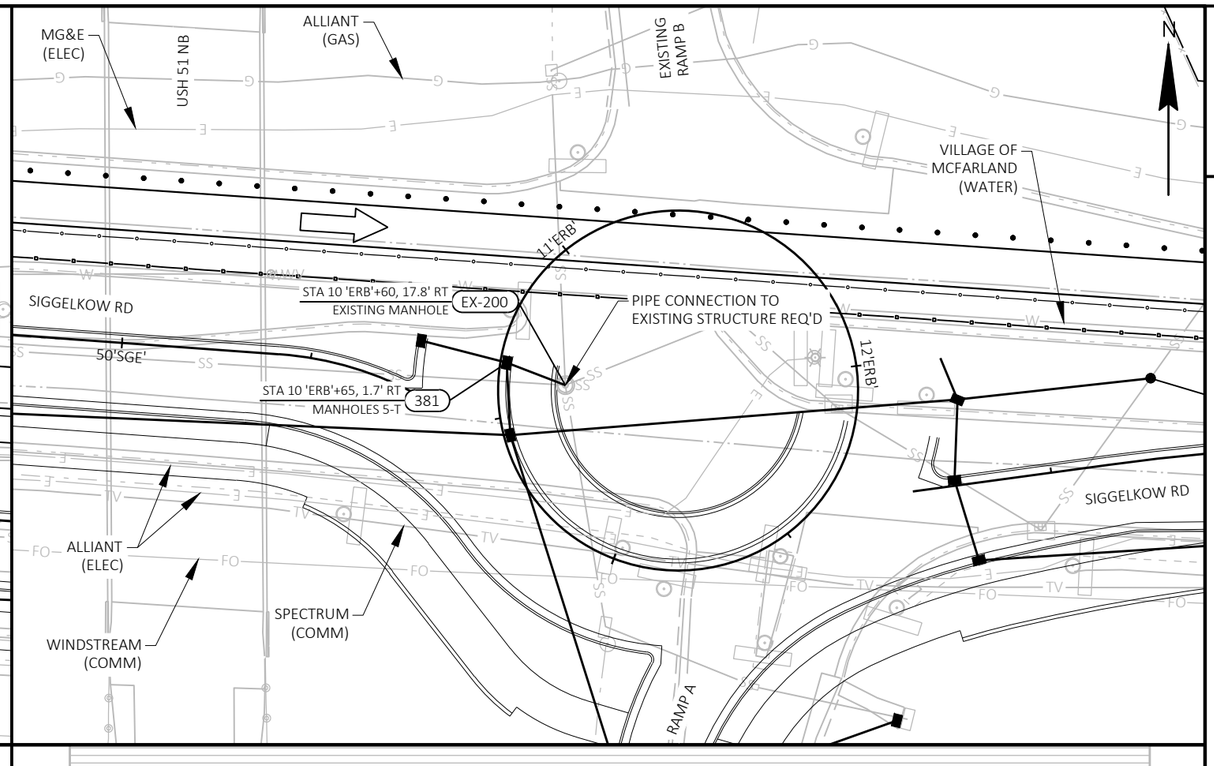
SIGGELKOW RD

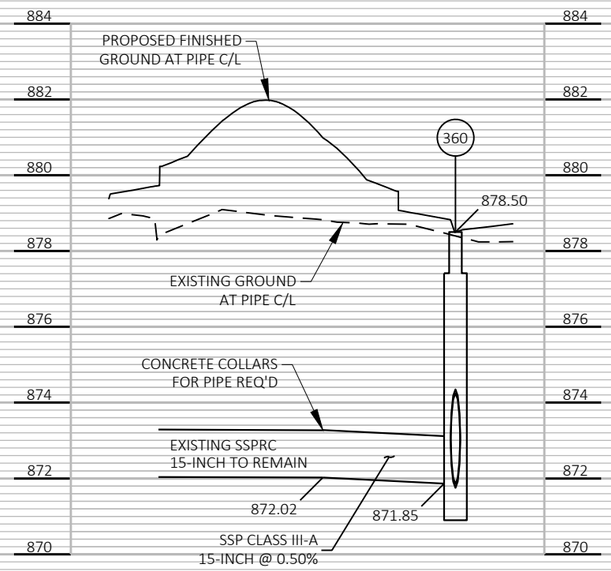
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2B - TEMPORARY PAVING DETAIL	SHEET 152	E

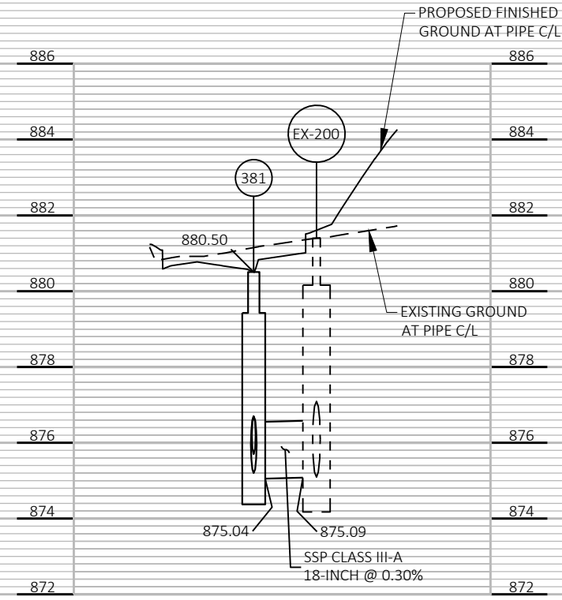
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026221_S2B (DETAILS).DWG
LAYOUT NAME - - TEMPORARY PAVEMENT DETAIL

PLOT DATE : 7/24/2024 4:03 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:40 FT



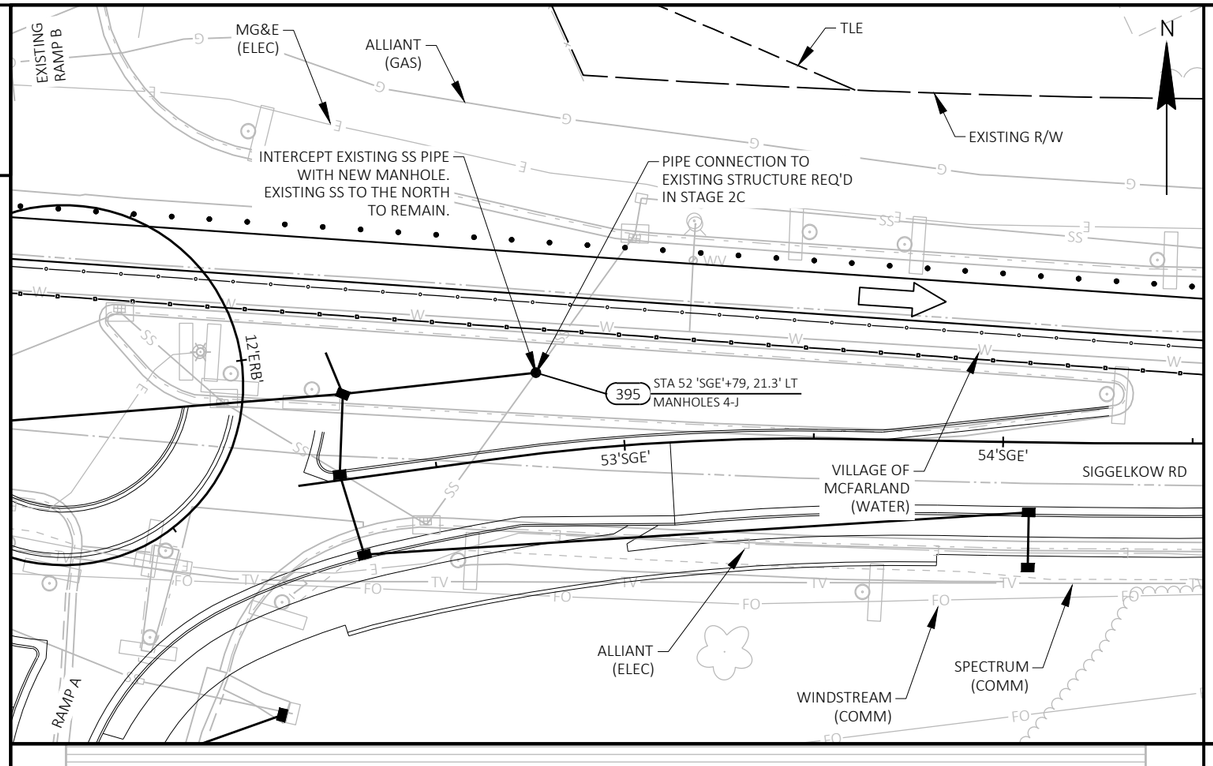


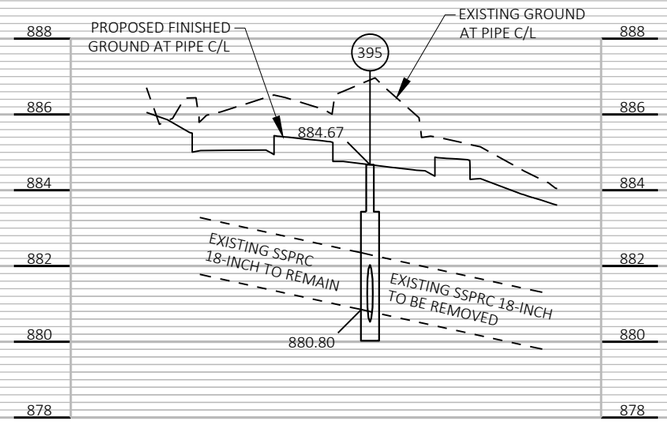




PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2B - TEMPORARY SS CONNECTIONS	SHEET 153	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026222_S2B (SS TEMP CONNECTIONS).DWG
LAYOUT NAME - 01
PLOT DATE : 7/27/2024 1:00 AM
PLOT BY : BUTTERIS, BRADLEY
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44





PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2B - TEMPORARY SS CONNECTIONS	SHEET 154	E

LEGEND:

- WORK AREA
- DIRECTION OF VEHICULAR TRAFFIC
- PEDESTRIAN TRAFFIC
- PEDESTRIAN DETOUR
- TRAFFIC CONTROL SIGN ON TEMPORARY/PERMANENT SUPPORT
- TRAFFIC CONTROL BARRICADES TYPE II WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PEDESTRIAN BARRICADE
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT

CONSTRUCT RETAINING WALL, WEST PORTION OF RAMP C, AND TEMP PAVEMENT WEST OF RAMP C.

CONSTRUCT CURB & GUTTER, SIDEWALK, AND NORTH SIDE DRIVEWAYS.

PLACE CONCRETE BARRIER TEMPORARY PRECAST THROUGH CURVE BETWEEN VEHICULAR TRAFFIC AND FUTURE PEDESTRIAN TRAFFIC IN STAGE 2B, PHASE 2. PLACE TEMPORARY PEDESTRIAN BARRICADE BETWEEN FUTURE PEDESTRIAN TRAFFIC AND CONSTRUCTION ZONE.

CONSTRUCT PORTION OF WEST ROUNDABOUT AND WESTBOUND PAVEMENT

PEDESTRIAN TRAFFIC ON EXISTING SIDEWALK. PLACE TEMPORARY PEDESTRIAN BARRICADE, MAINTAINING 5' MINIMUM CLEAR WIDTH.

MAINTAIN TEMPORARY PEDESTRIAN ACCOMMODATIONS DURING INSTALLATION OF STORM SEWER. SEE SDD 15D30.

MAINTAIN TEMPORARY PEDESTRIAN ACCOMMODATIONS DURING INSTALLATION OF STORM SEWER.

SIDEWALK CLOSED
CROSS HERE
R9-11AR
24"X12"

SIDEWALK CLOSED
CROSS HERE
R9-11AL
24"X12"

TERMINAL DR

SIGGELKOW RD

RAMP C

323'TC'

ATHLETIC FIELD

MAILBOX

POST

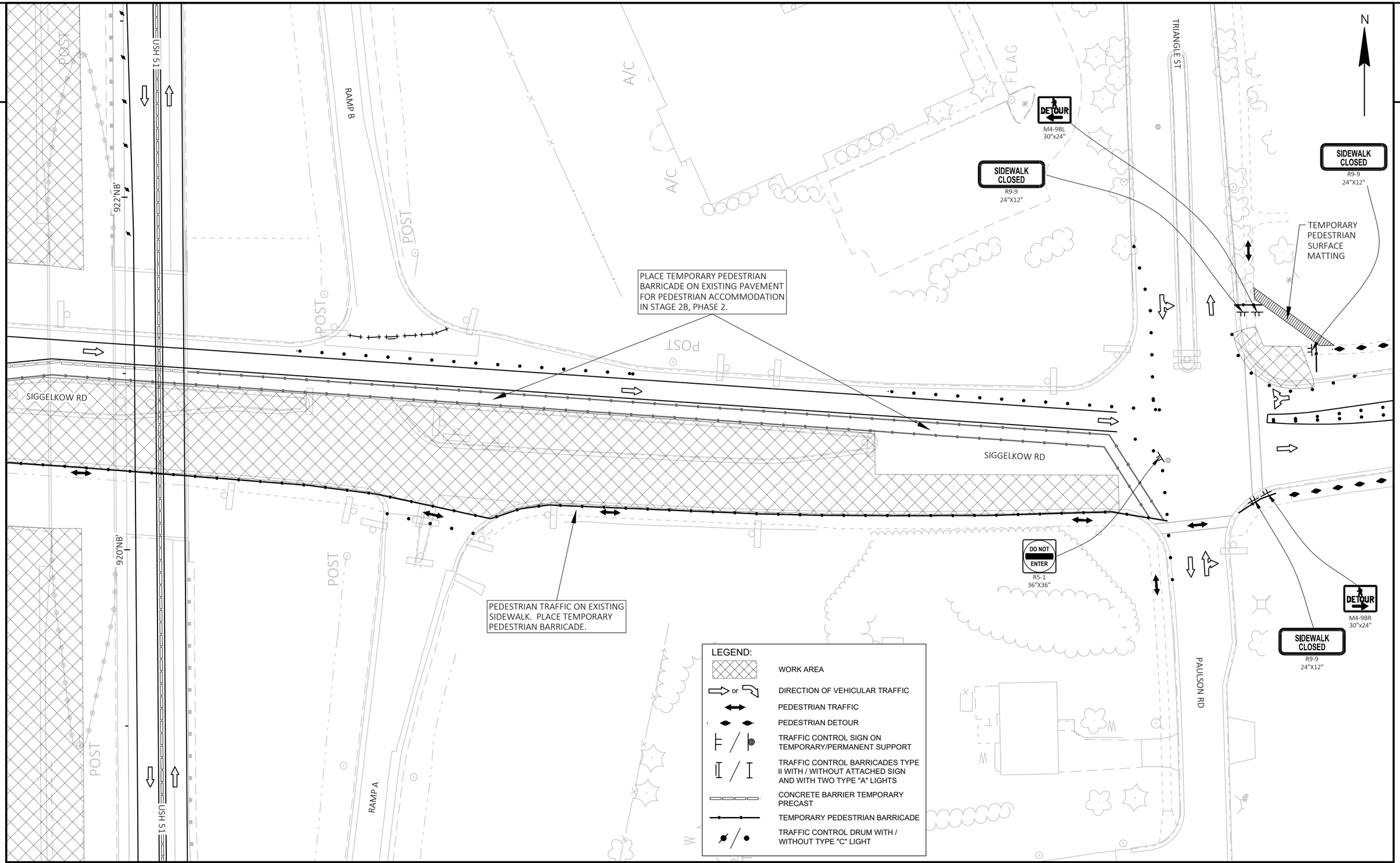
N

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STAGE 2B - PEDESTRIAN ACCOMMODATION - PHASE 1	SHEET 155	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026223_S2B (PED P1).DWG
LAYOUT NAME - - PHASE 1 (01)

PLOT DATE : 9/24/2024 9:59 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STAGE 2B - PEDESTRIAN ACCOMMODATION - PHASE 1	SHEET 156	E

2

2

LEGEND:

- WORK AREA
- DIRECTION OF VEHICULAR TRAFFIC (or)
- PEDESTRIAN TRAFFIC
- PEDESTRIAN DETOUR
- TRAFFIC CONTROL SIGN ON TEMPORARY/PERMANENT SUPPORT
- TRAFFIC CONTROL BARRICADES TYPE II WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PEDESTRIAN BARRICADE
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT

N

TRIANGLE ST

SIDEWALK CLOSED
R9-9
24"X12"

DETOUR
M4-9BL
30"x24"

SIDEWALK CLOSED AHEAD
R9-9A
30"X18"

SIDEWALK CLOSED AHEAD
R9-9A
30"X18"

SIDEWALK CLOSED AHEAD
R9-9A
30"X18"

SIDEWALK CLOSED AHEAD
R9-9A
30"X18"

DETOUR
M4-9BR
30"x24"

DETOUR
M4-9BL
30"x24"

FREEDOM RING RD

SIDEWALK CLOSED AHEAD
CROSS HERE
R9-11L
24"X12"

SIGGELKOW RD

SIGGELKOW RD

DETOUR
M4-9BR
30"x24"

DETOUR
M4-9BL
30"x24"

DETOUR
M4-9BR
30"x24"

SIDEWALK CLOSED
R9-9
24"X12"

VALLEY DR

PAULSON RD

POST

POST

POST

FLAG

A/C

A/C

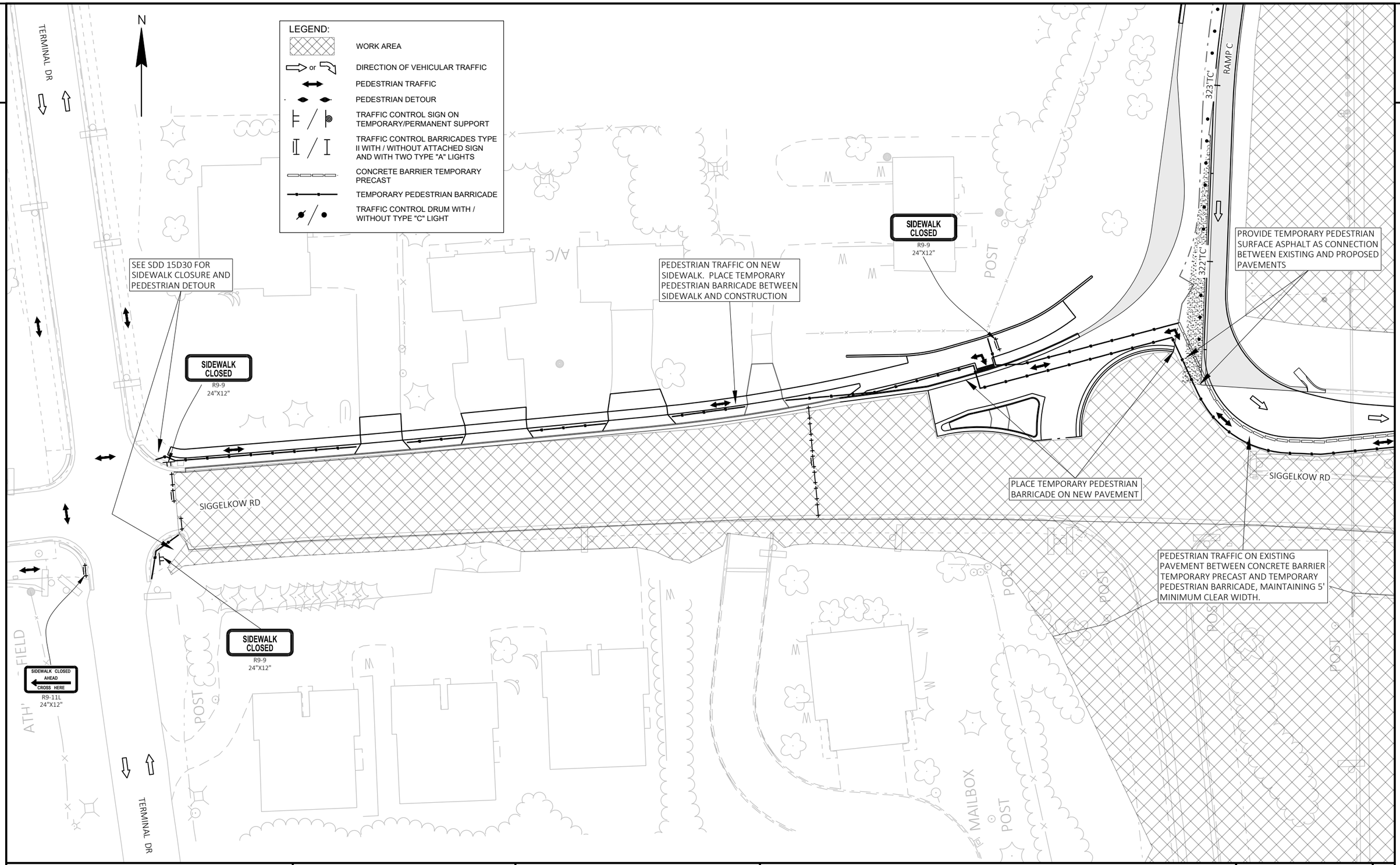
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	SIGGELKOW ROAD - PEDESTRIAN DETOUR	SHEET 157	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026223_S2B (PED P1).DWG
LAYOUT NAME - - PEDESTRIAN DETOUR

PLOT DATE : 9/24/2024 10:00 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

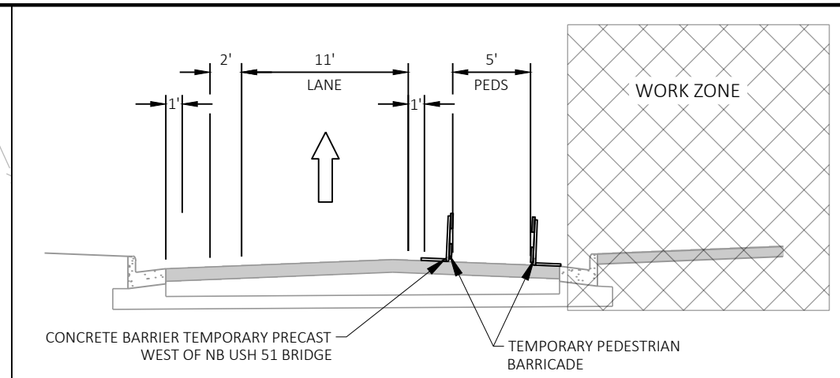
2



2

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STAGE 2B - PEDESTRIAN ACCOMMODATION - PHASE 2	SHEET 158	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026224_S2B (PED P2).DWG
LAYOUT NAME - - PHASE 2 (01)
PLOT DATE : 9/24/2024 10:01 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42



TYPICAL TRAFFIC CONTROL SECTION - EB SIGGELKOW ROAD

PEDESTRIAN TRAFFIC DURING PHASE 2 OF STAGE 2B

PEDESTRIAN TRAFFIC ON EXISTING PAVEMENT BETWEEN CONCRETE BARRIER TEMPORARY PRECAST AND TEMPORARY PEDESTRIAN BARRICADE, MAINTAINING 5' MINIMUM CLEAR WIDTH.

PEDESTRIAN TRAFFIC ON EXISTING PAVEMENT BETWEEN TWO RUNS OF TEMPORARY PEDESTRIAN BARRICADE, MAINTAINING 5' MINIMUM CLEAR WIDTH.

SIDEWALK CLOSED
R9-9
24"X12"

DETOUR
M4-9BL
30"x24"

SIDEWALK CLOSED
R9-9
24"X12"

DO NOT ENTER
R5-1
36"X36"

DETOUR
M4-9BR
30"x24"

SIDEWALK CLOSED
R9-9
24"X12"

TEMPORARY PEDESTRIAN SURFACE MATTING

TEMPORARY CURB RAMP

LEGEND:

- WORK AREA
- DIRECTION OF VEHICULAR TRAFFIC
- PEDESTRIAN TRAFFIC
- PEDESTRIAN DETOUR
- TRAFFIC CONTROL SIGN ON TEMPORARY/PERMANENT SUPPORT
- TRAFFIC CONTROL BARRICADES TYPE II WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PEDESTRIAN BARRICADE
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	STAGE 2B - PEDESTRIAN ACCOMMODATION - PHASE 2	SHEET 159 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026224_S2B (PED P2).DWG
LAYOUT NAME - - PHASE 2 (02)

PLOT DATE : 9/24/2024 10:01 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

STAGE 2C NOTES:

TRAFFIC:
USH 51 NB AND SB TRAFFIC ON EXISTING USH 51 NB PAVEMENT.
RAMP C OPEN TO WB AND EB SIGGELKOW ROAD.
RAMPS A, B, AND D CLOSED.
SIGGELKOW ROAD OPEN, EXCEPT WB FROM RAMP C TO TRIANGLE STREET.
TAYLOR ROAD OPEN.

PEDESTRIANS AND BICYCLISTS:
LOWER YAHARA RIVER TRAIL OPEN.
SIGGELKOW ROAD:
- ON ROAD, WB CLOSED, EB OPEN
- PEDESTRIANS ON NEW SIDEWALK ALONG SOUTH SIDE

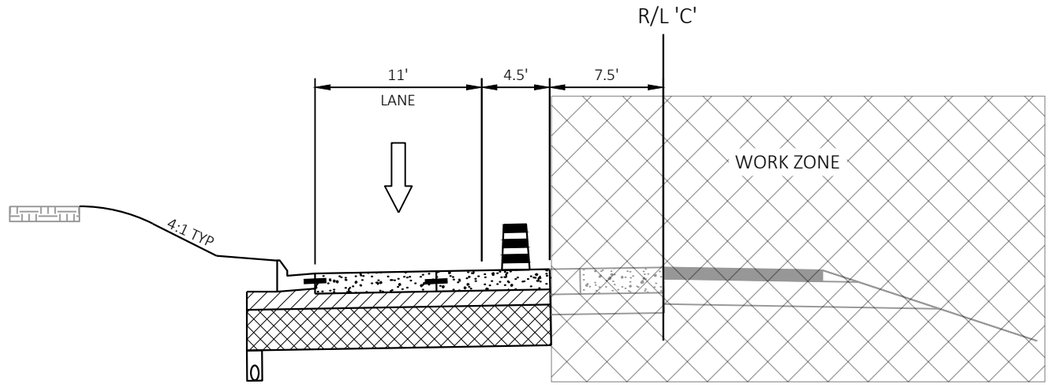
CONSTRUCTION:
CONSTRUCT USH 51 SB BRIDGE OVER TAYLOR ROAD AND RAILROAD.
CONSTRUCT USH 51 SB.
CONSTRUCT RAMPS C AND D.
CONSTRUCT SIGGELKOW ROAD EAST OF RAMP C.

FOR REFERENCE ONLY

US 51/Stoughton Road & Voges Road/Terminal Drive
Temporary Signal Timing
Stage 2C

Phase	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Description	NBLT	SB	-	WB	SBLT	NB	-	EB
Event 2, Action Plan 1 (06:15 to 09:00)								
Cycle length (s)	130							
Existing Splits (s)	16	88	-	26	39	65	-	26
Proposed Splits (s)	14	74	-	42	40	48	-	42
Event 4, Action Plan 3 (14:30 to 18:00)								
Cycle length (s)	130							
Existing Splits (s)	16	84	-	30	35	65	-	30
Proposed Splits	14	77	-	39	34	57	-	39

- SIGNAL TIMINGS SHALL BE REVIEWED IN THE FIELD AND ADJUSTED AS NECESSARY BY THE ENGINEER
- CONSIDERATION SHALL BE GIVEN TO RUNNING THE SIGNAL IN FREE MODE IF FIELD OBSERVATIONS SUGGEST ADDITIONAL TIME IS REQUIRED FOR VOGES ROAD/TERMINAL DRIVE.



TYPICAL TRAFFIC CONTROL SECTION - RAMP C
STAGE 2C

2

N

RAMP D

RAMP CLOSED
R11-2R
48"X30"

SIGGELKOW RD

TEMPORARY PAVEMENT WIDENING

ROAD CLOSED
R11-2
48"X30"

322'C'
324'C'
326'C'
328'C'
330'C'
332'C'

RAMP C

Y6T
W6T

W04-2R

LANE CLOSED
R11-2L
48"X30"

500' BETWEEN SB MERGE AND SHIFT
450' SB MERGE (10')

918'SB'
920'SB'
922'SB'
924'SB'
926'SB'
928'SB'
930'SB'
932'SB'

USH 51

Y6P

918'NB'
920'NB'
922'NB'
924'NB'
926'NB'
928'NB'
930'NB'
932'NB'

+29'NB'
+79'NB'

SAME AS STAGE 2B

SPEED LIMIT
45
R2-1
48"x60"

RAMP B

SDP

W6P

W01-1L

10
MPH
WO13-1
36"X36"

RAMP A

USE ONLY TEMPORARY MARKING TAPE ON STRUCTURES

ROAD CLOSED
R11-2
48"X30"

TEMPORARY PAVEMENT MARKING LEGEND

W6x	TEMPORARY MARKING 6-INCH WHITE
SDx	TEMPORARY MARKING 6-INCH WHITE (37.5-12.5 SKIP DASH)
W10x	TEMPORARY MARKING 10-INCH WHITE
WS-x	TEMPORARY MARKING 10-INCH WHITE (9-3 SKIP DASH)
Y6x	TEMPORARY MARKING 6-INCH YELLOW

FOR TEMPORARY PAVEMENT MARKING CALLOUTS:
"x" REPLACED BY "P" INDICATES PAINT
"x" REPLACED BY "T" INDICATES REMOVABLE TAPE

LEGEND:

	WORK AREA
or	DIRECTION OF TRAFFIC
× × ×	PAVEMENT MARKING REMOVAL
	TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
	CONCRETE BARRIER TEMPORARY PRECAST
	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
	TRAFFIC CONTROL ARROW BOARD

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

N

Siggelkow Rd

MOVING SIGNS TYPE I TO TEMPORARY SUPPORT

ROAD CLOSED
R11-2
48"X30"

EXIT
35
MPH
WO13-2
36"X48"

MAINTENANCE CROSSOVER CLOSED ALL STAGES

RAMP C

334'C'
336'C'

934'SB'
936'SB'
938'SB'
940'SB'
942'SB'
944'SB'
946'SB'
948'SB'

USH 51

934'NB'
936'NB'
938'NB'
940'NB'
942'NB'
944'NB'
946'NB'
948'NB'

SDP

SAME AS STAGE 2A

LANE CLOSED
R11-2L
48"X30"

RIGHT LANE CLOSED AHEAD
W20-5A

Y6P
W6P
W10P
WS-P

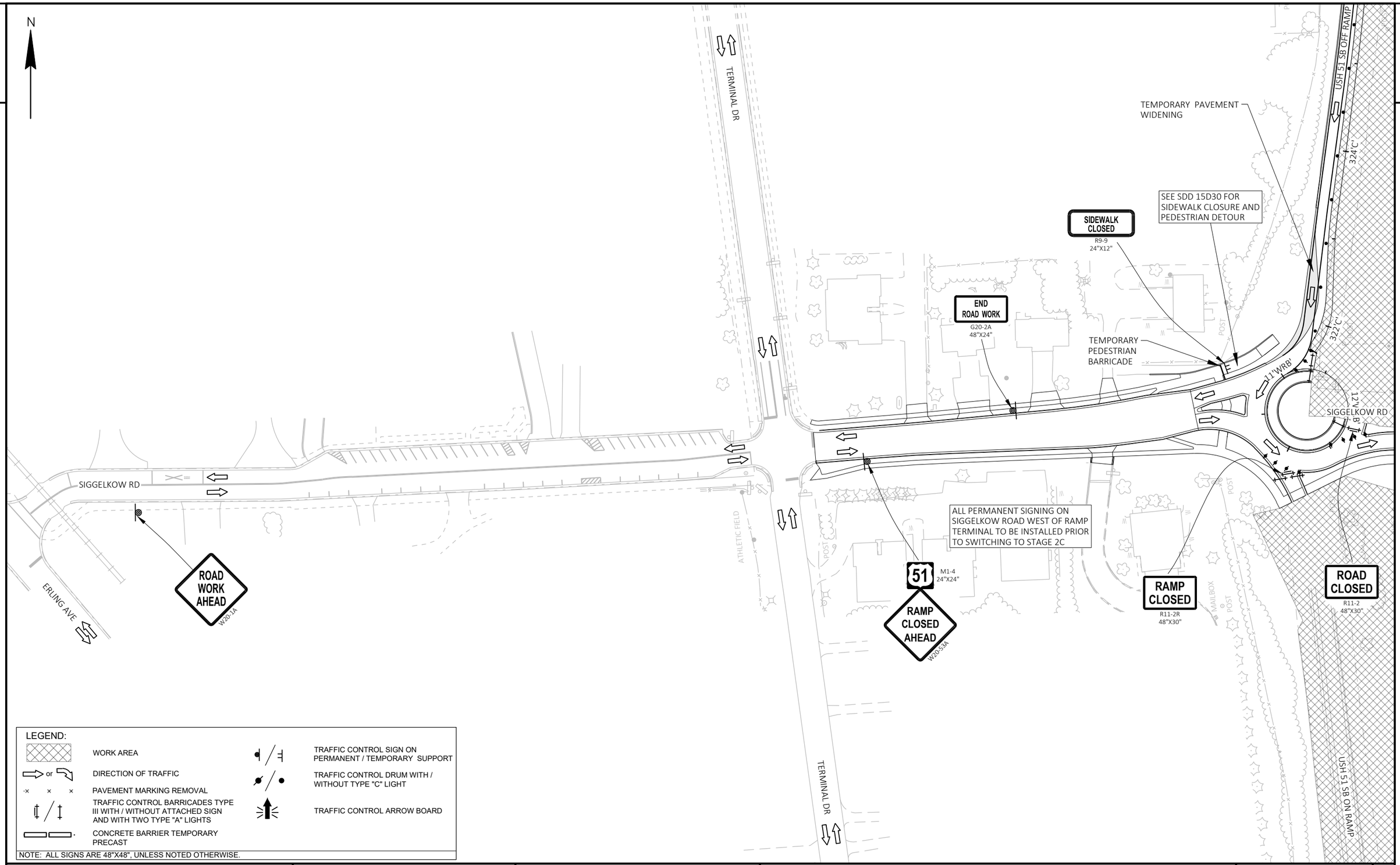
EXIT
E5-1
48"X48"

TRIANGLE ST

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2C	SHEET 161 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026230_S2C.DWG
LAYOUT NAME - 03

PLOT DATE : 9/3/2024 9:15 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

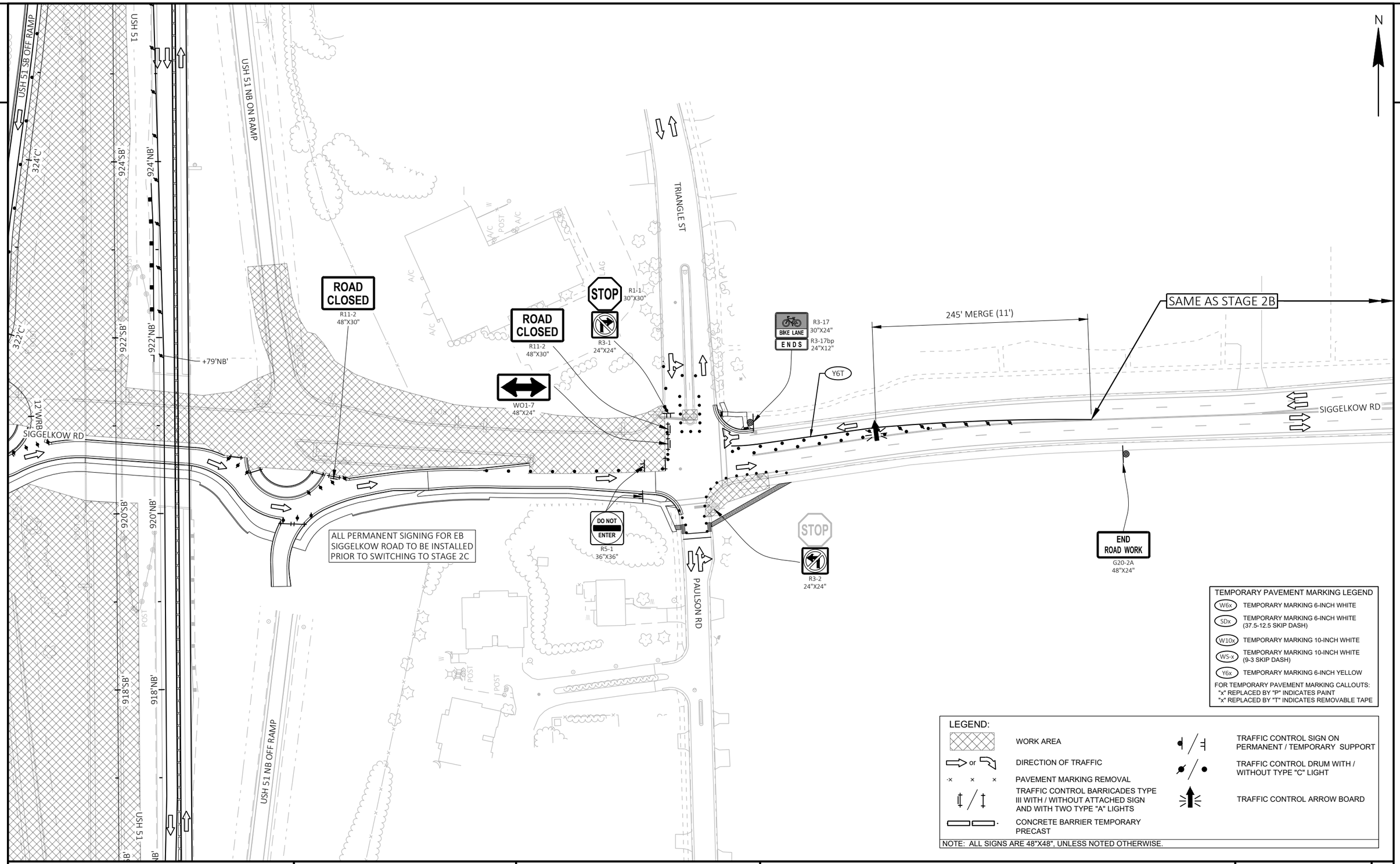


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2C	SHEET 162	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026230_S2C.DWG
LAYOUT NAME - 06

PLOT DATE : 9/3/2024 9:15 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



TEMPORARY PAVEMENT MARKING LEGEND

W6x	TEMPORARY MARKING 6-INCH WHITE
SDx	TEMPORARY MARKING 6-INCH WHITE (37.5-12.5 SKIP DASH)
W10x	TEMPORARY MARKING 10-INCH WHITE
WSx	TEMPORARY MARKING 10-INCH WHITE (9-3 SKIP DASH)
Y6x	TEMPORARY MARKING 6-INCH YELLOW

FOR TEMPORARY PAVEMENT MARKING CALLOUTS:
"x" REPLACED BY "P" INDICATES PAINT
"x" REPLACED BY "T" INDICATES REMOVABLE TAPE

LEGEND:

- WORK AREA
- DIRECTION OF TRAFFIC
- PAVEMENT MARKING REMOVAL
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
- TRAFFIC CONTROL ARROW BOARD

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2C	SHEET 163	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026230_S2C.DWG
LAYOUT NAME - 07
PLOT DATE : 9/3/2024 9:15 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

N

SIDEWALK CLOSED
R9-9
24"X12"

DETOUR
M4-9BL
30"x24"

SIDEWALK CLOSED
R9-9
24"X12"

TRIANGLE ST

FLAG

A/C

POST

11' MIN

11' MIN

SIGGELKOW RD

SIGGELKOW RD

SIDEWALK CLOSED
R9-9
24"X12"

22'

PEDESTRIAN TRAFFIC ON PROPOSED SIDEWALK TO TERMINAL DRIVE.

SIDEWALK CLOSED
R9-9
24"X12"

TEMPORARY PEDESTRIAN SURFACE MATTING

TEMPORARY CURB RAMP (PARALLEL)

TEMPORARY PEDESTRIAN SURFACE MATTING

TEMPORARY CURB RAMP (PARALLEL)

TEMPORARY CROSS WALK

PAULSON RD

LEGEND:

- WORK AREA
- or — DIRECTION OF VEHICULAR TRAFFIC
- PEDESTRIAN TRAFFIC
- PEDESTRIAN DETOUR
- TRAFFIC CONTROL SIGN ON TEMPORARY/PERMANENT SUPPORT
- TRAFFIC CONTROL BARRICADES TYPE II WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PEDESTRIAN BARRICADE
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2C - PEDESTRIAN DETAILS	SHEET 164	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026231_S2C (PED DETAILS).DWG
LAYOUT NAME - - PEDESTRIAN DETAILS
PLOT DATE : 7/25/2024 12:24 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

STAGE 2D NOTES:

TRAFFIC:
USH 51 NB AND SB TRAFFIC ON EXISTING USH 51 NB PAVEMENT.
RAMP C OPEN TO WB AND EB SIGGELKOW ROAD.
RAMPS A, B, AND D CLOSED.
SIGGELKOW ROAD OPEN, EXCEPT WB FROM RAMP C TO TRIANGLE STREET.
TAYLOR ROAD OPEN.

PEDESTRIANS AND BICYCLISTS:
LOWER YAHARA RIVER TRAIL OPEN.
SIGGELKOW ROAD:
- ON ROAD, WB CLOSED, EB OPEN
- PEDESTRIANS ON NEW SIDEWALK ALONG SOUTH SIDE

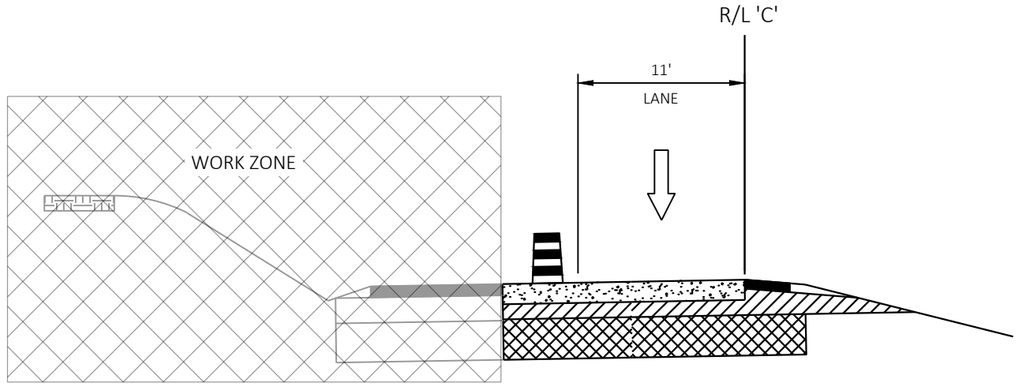
CONSTRUCTION:
CONSTRUCT USH 51 SB BRIDGE OVER TAYLOR ROAD.
CONSTRUCT USH 51 SB.
CONSTRUCT RAMP D.
CONSTRUCT WB SIGGELKOW RD EAST OF RAMP C.
CONSTRUCT NW CORNER OF SIGGELKOW ROAD AND RAMP C ROUNDABOUT.

FOR REFERENCE ONLY

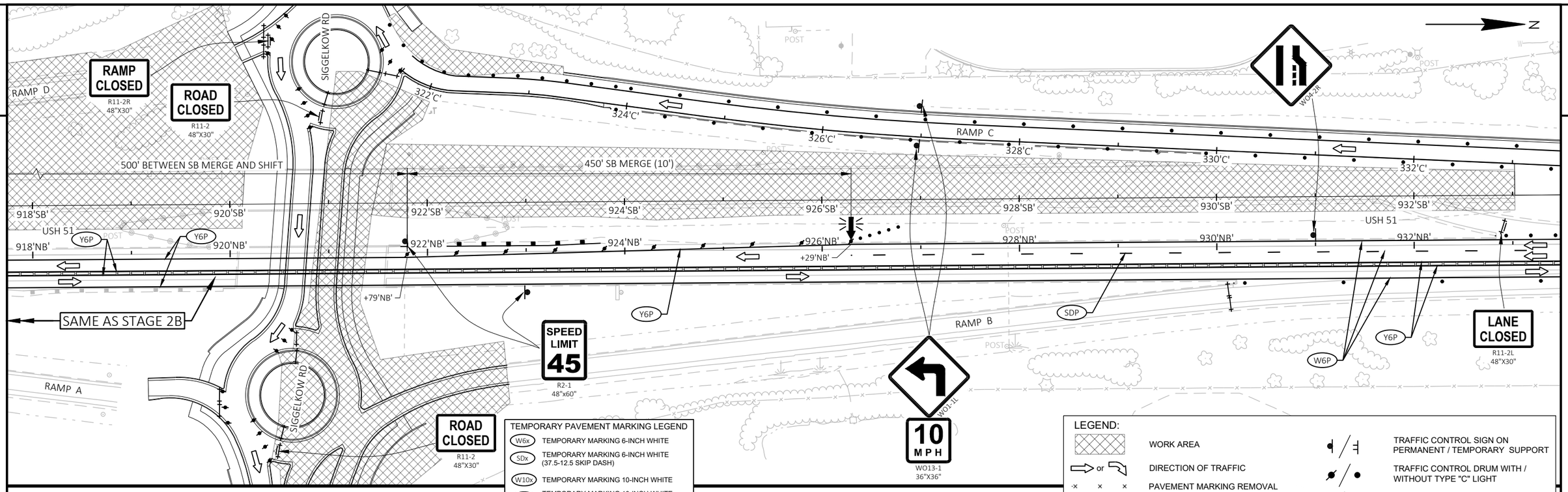
US 51/Stoughton Road & Voges Road/Terminal Drive
Temporary Signal Timing
Stage 2D

Phase	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Description	NBLT	SB	-	WB	SBLT	NB	-	EB
Event 2, Action Plan 1 (06:15 to 09:00)								
Cycle length (s)	130							
Existing Splits (s)	16	88	-	26	39	65	-	26
Proposed Splits (s)	14	74	-	42	40	48	-	42
Event 4, Action Plan 3 (14:30 to 18:00)								
Cycle length (s)	130							
Existing Splits (s)	16	84	-	30	35	65	-	30
Proposed Splits	14	77	-	39	34	57	-	39

- SIGNAL TIMINGS SHALL BE REVIEWED IN THE FIELD AND ADJUSTED AS NECESSARY BY THE ENGINEER
- CONSIDERATION SHALL BE GIVEN TO RUNNING THE SIGNAL IN FREE MODE IF FIELD OBSERVATIONS SUGGEST ADDITIONAL TIME IS REQUIRED FOR VOGES ROAD/TERMINAL DRIVE.



TYPICAL TRAFFIC CONTROL SECTION - RAMP C
STAGE 2D



TEMPORARY PAVEMENT MARKING LEGEND

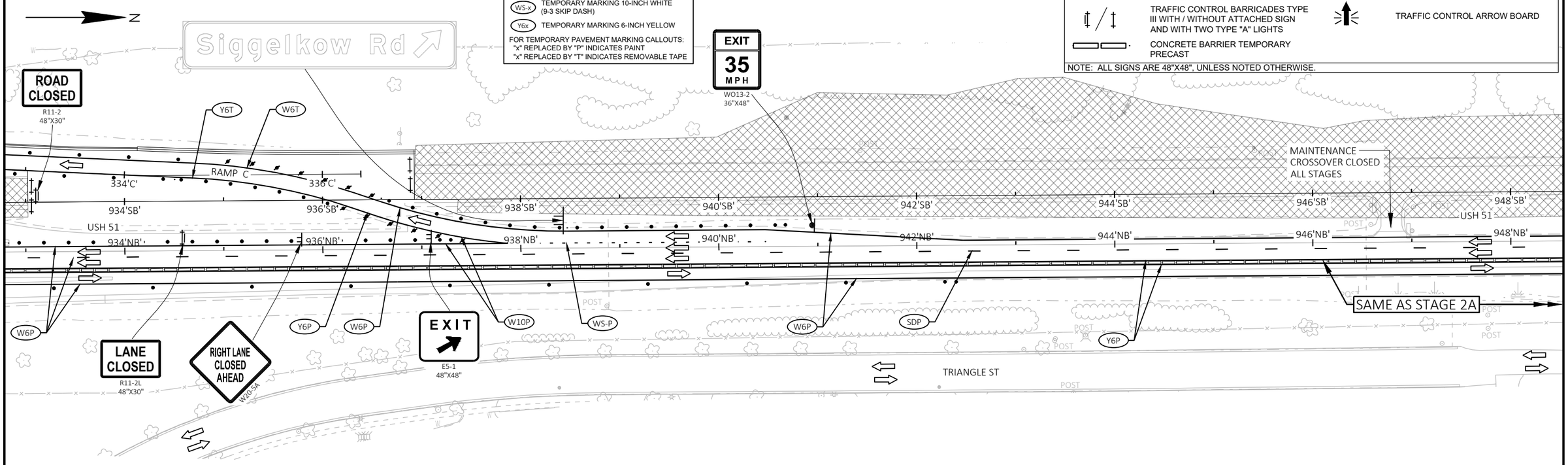
W6x	TEMPORARY MARKING 6-INCH WHITE
SDx	TEMPORARY MARKING 6-INCH WHITE (37.5-12.5 SKIP DASH)
W10x	TEMPORARY MARKING 10-INCH WHITE
WS-x	TEMPORARY MARKING 10-INCH WHITE (9-3 SKIP DASH)
Y6x	TEMPORARY MARKING 6-INCH YELLOW

FOR TEMPORARY PAVEMENT MARKING CALLOUTS:
"x" REPLACED BY "P" INDICATES PAINT
"x" REPLACED BY "T" INDICATES REMOVABLE TAPE

LEGEND:

	WORK AREA
or	DIRECTION OF TRAFFIC
× × ×	PAVEMENT MARKING REMOVAL
	TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
	CONCRETE BARRIER TEMPORARY PRECAST
	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
	TRAFFIC CONTROL ARROW BOARD

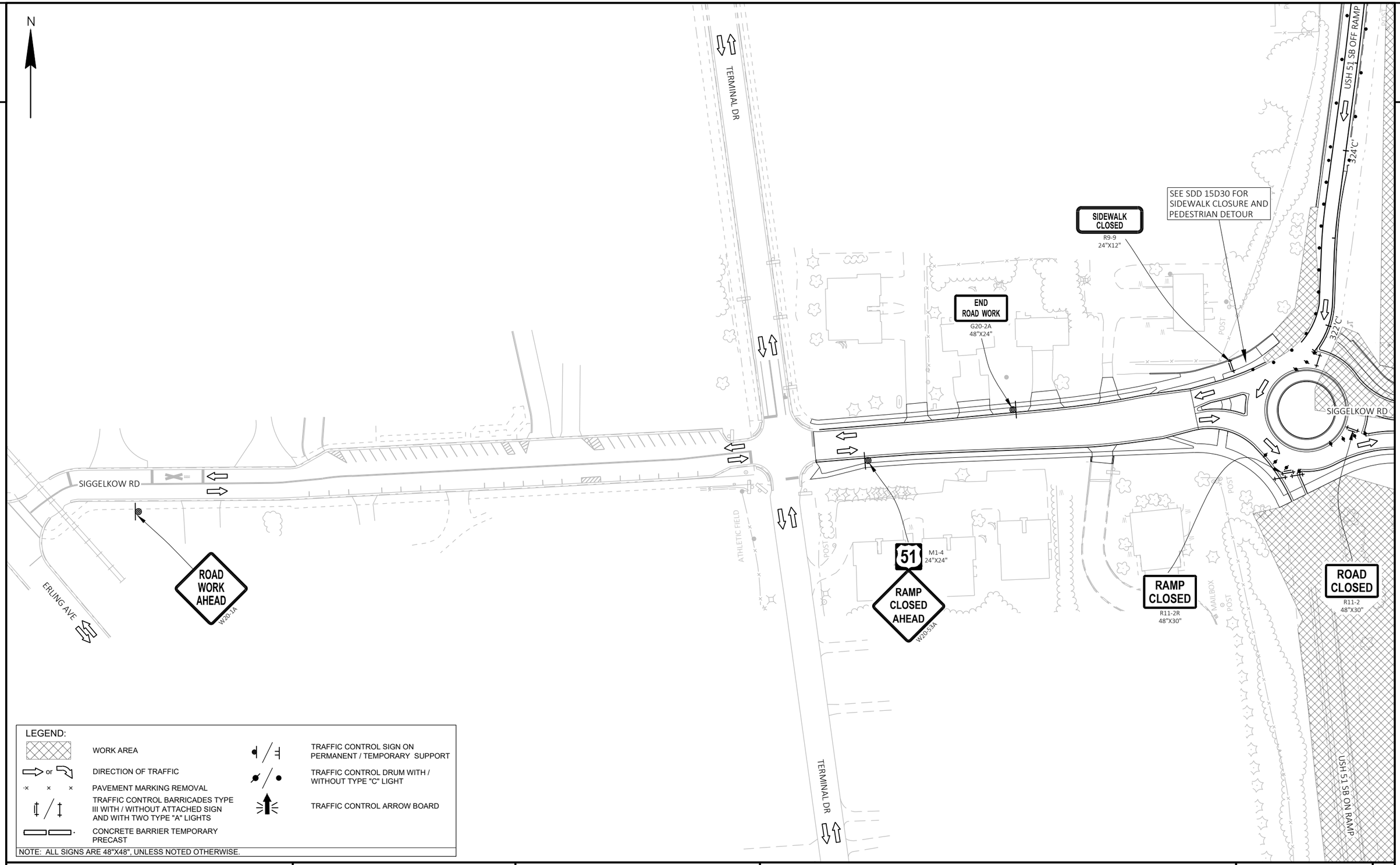
NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2D	SHEET 166 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026240_S2D.DWG
LAYOUT NAME - 03

PLOT DATE : 9/3/2024 9:11 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

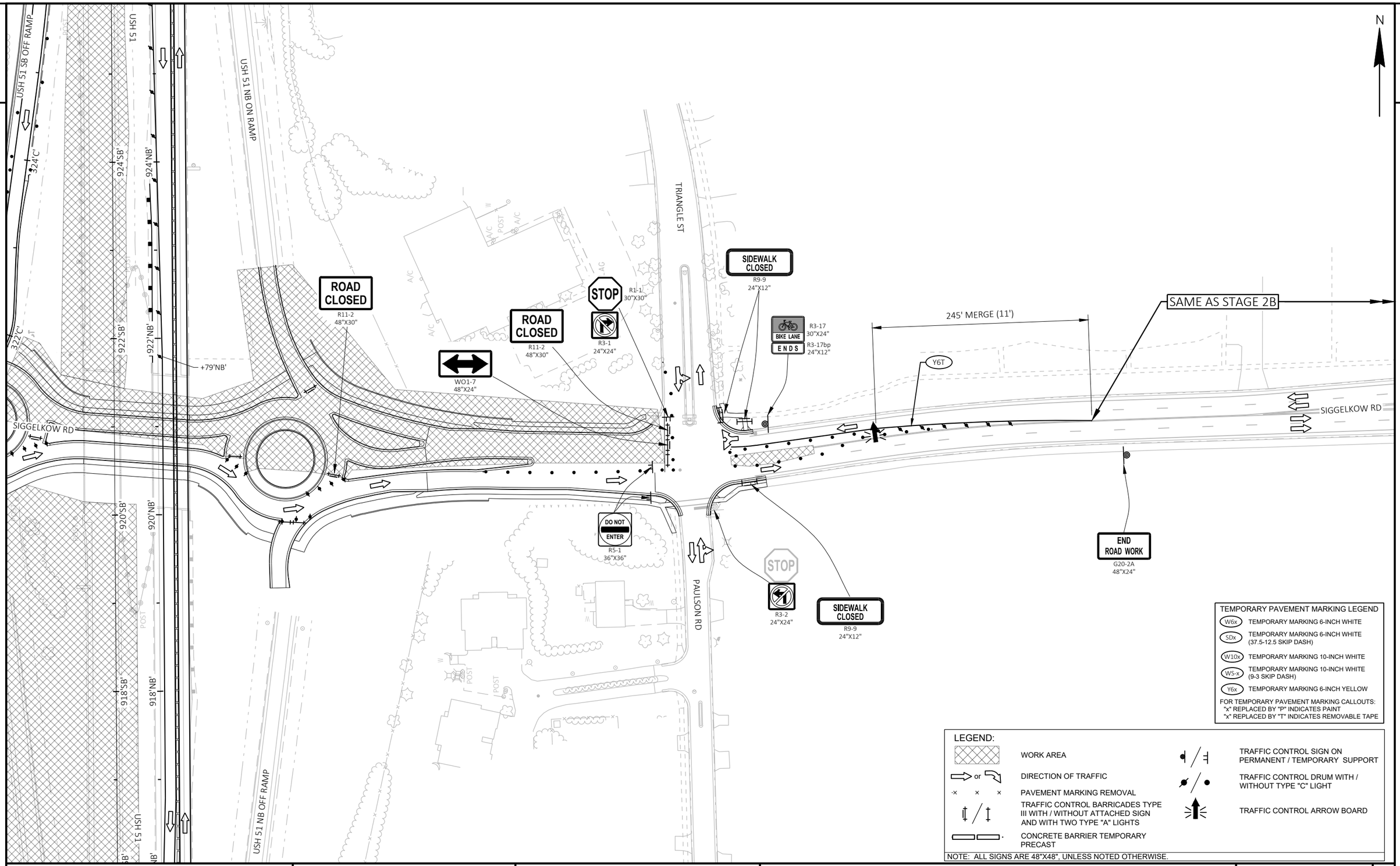


LEGEND:

WORK AREA	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
DIRECTION OF TRAFFIC	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
PAVEMENT MARKING REMOVAL	TRAFFIC CONTROL ARROW BOARD
TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS	
CONCRETE BARRIER TEMPORARY PRECAST	

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2D	SHEET 167 E

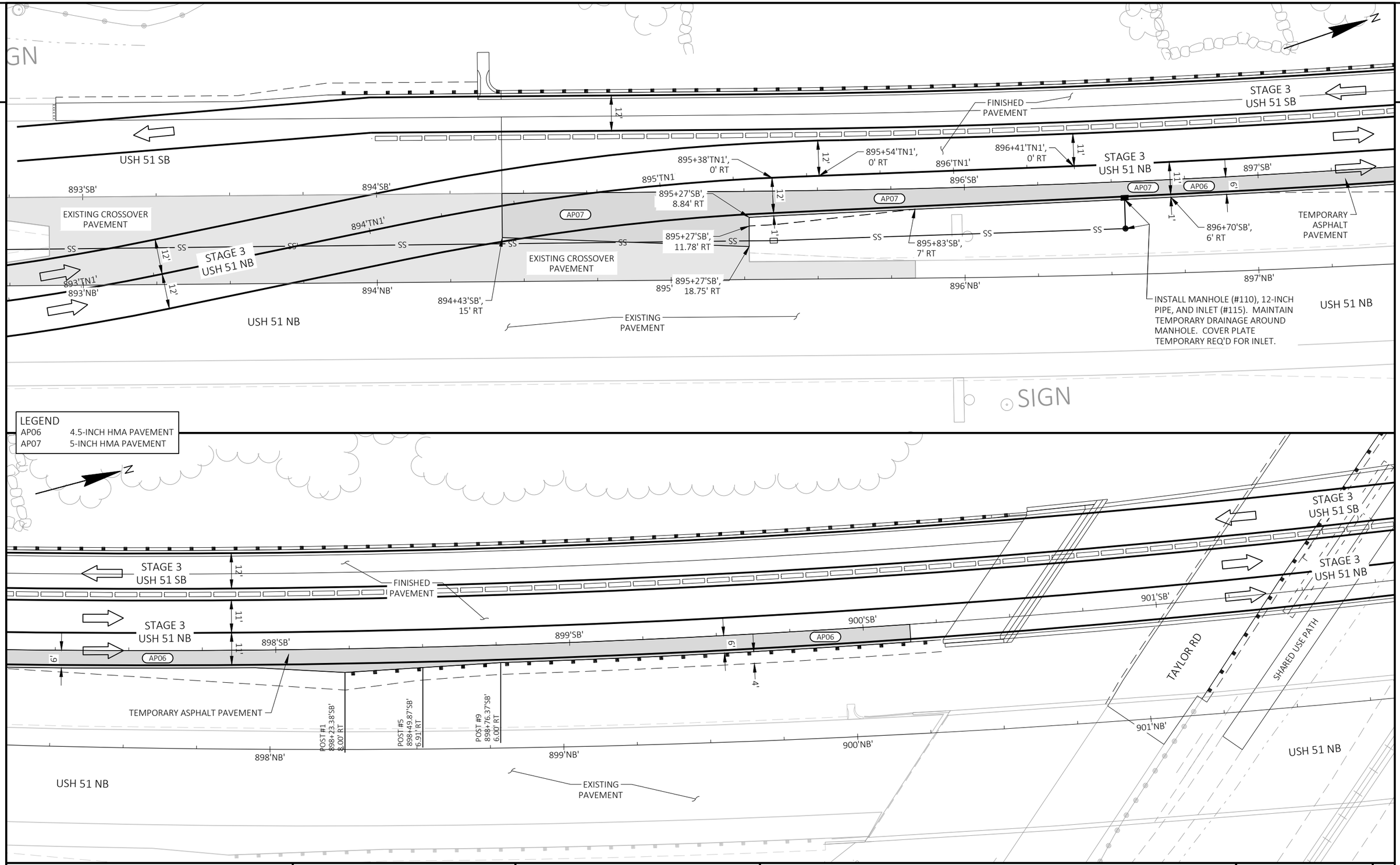


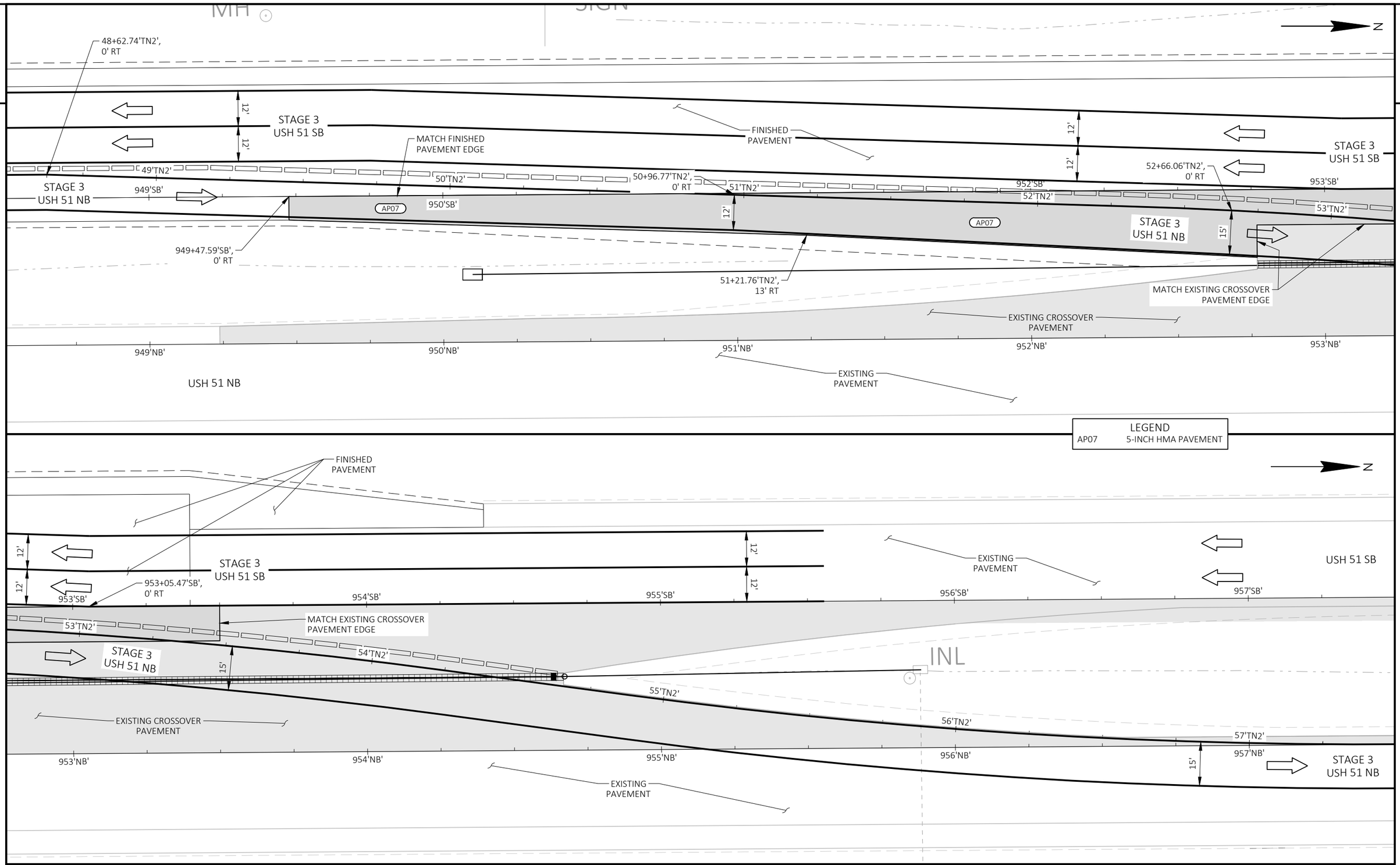
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2D	SHEET 168	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026240_S2D.DWG
LAYOUT NAME - 07

PLOT DATE : 9/3/2024 9:12 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42


GN
USH 51 SB
STAGE 3
USH 51 SB
FINISHED
PAVEMENT
12'
895+38'TN1',
0' RT
895+54'TN1',
0' RT
896+41'TN1',
0' RT
895'TN1
896'TN1
11'
STAGE 3
USH 51 NB
893'SB'
894'SB'
895+27'SB',
8.84' RT
896'SB'
897'SB'
AP07
AP06
6'
EXISTING CROSSOVER
PAVEMENT
894'TN1'
SS
STAGE 3
USH 51 NB
895+27'SB',
11.78' RT
895+83'SB',
7' RT
896+70'SB',
6' RT
TEMPORARY
ASPHALT
PAVEMENT
893'TN1'
893'NB'
894'NB'
894+43'SB',
15' RT
EXISTING CROSSOVER
PAVEMENT
895'
895+27'SB',
18.75' RT
896'NB'
897'NB'
INSTALL MANHOLE (#110), 12-INCH
PIPE, AND INLET (#115). MAINTAIN
TEMPORARY DRAINAGE AROUND
MANHOLE. COVER PLATE
TEMPORARY REQ'D FOR INLET.
USH 51 NB
EXISTING
PAVEMENT
SIGN
LEGEND
AP06 4.5-INCH HMA PAVEMENT
AP07 5-INCH HMA PAVEMENT
STAGE 3
USH 51 SB
STAGE 3
USH 51 NB
FINISHED
PAVEMENT
901'SB'
900'SB'
899'SB'
898'SB'
TAYLOR RD
SHARED USE PATH
TEMPORARY ASPHALT PAVEMENT
POST #1
898+23.38'SB'
8.00' RT
POST #5
898+49.87'SB'
6.91' RT
POST #9
898+76.37'SB'
6.00' RT
901'NB'
898'NB'
899'NB'
900'NB'
USH 51 NB
EXISTING
PAVEMENT



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2D DETAILS	SHEET 170	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026241_S2D (DETAILS).DWG
LAYOUT NAME - 02
PLOT DATE : 9/3/2024 7:59 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN: 30 FT
WISDOT/CADDS SHEET 42

2

2

N

SIDEWALK CLOSED
R9-9
24"X12"

DETOUR
M4-9BL
30"x24"

SIDEWALK CLOSED
R9-9
24"X12"

TRIANGLE ST

FLAG

A/C

SIGGELKOW RD

SIGGELKOW RD

PEDESTRIAN TRAFFIC ON PROPOSED SIDEWALK TO TERMINAL DRIVE.

CONSTRUCT MEDIAN ISLAND

SIDEWALK CLOSED
R9-9
24"X12"

DETOUR
M4-9BR
30"x24"

PAULSON RD

LEGEND:

- WORK AREA
- or — DIRECTION OF VEHICULAR TRAFFIC
- PEDESTRIAN TRAFFIC
- PEDESTRIAN DETOUR (SEE STAGE 2B)
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PEDESTRIAN BARRICADE
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 2D - PEDESTRIAN DETAILS	SHEET 171	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026242_S2D (PED DETAILS).DWG
LAYOUT NAME - - PEDESTRIAN DETAILS

PLOT DATE : 7/25/2024 12:27 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

STAGE 3 NOTES:

TRAFFIC:
USH 51 NB AND SB TRAFFIC ON FINISHED USH 51 SB PAVEMENT.
RAMPS C AND D OPEN.
RAMPS A AND B CLOSED.
SIGGELKOW ROAD OPEN.
TAYLOR ROAD OPEN.

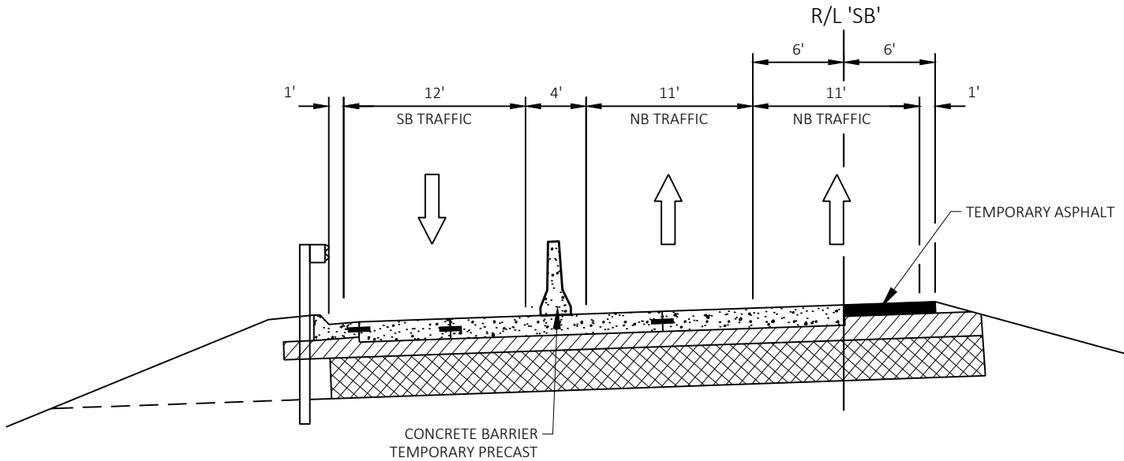
CONSTRUCTION:
CONSTRUCT USH 51 NB.
CONSTRUCT RAMPS A & B.

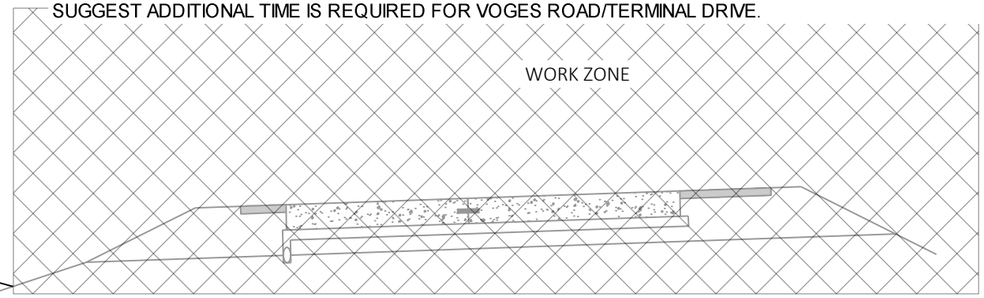
FOR REFERENCE ONLY

US 51/Stoughton Road & Voges Road/Terminal Drive
Temporary Signal Timing
Stage 3

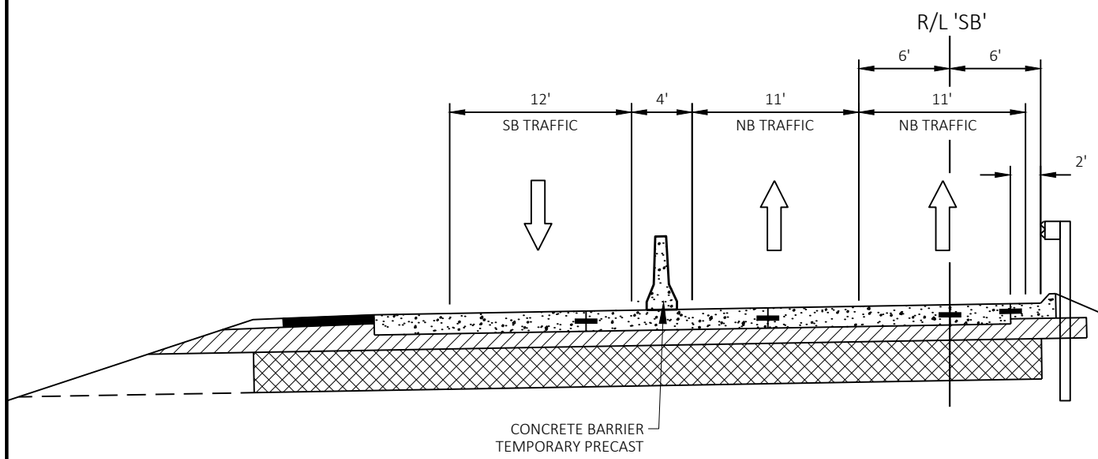
Phase	1	2	3	4	5	6	7	8
Description	NBLT	SB	-	WB	SBLT	NB	-	EB
Event 2, Action Plan 1 (06:15 to 09:00)								
Cycle length (s)	130							
Existing Splits (s)	16	88	-	26	39	65	-	26
Proposed Splits (s)	14	74	-	42	40	48	-	42
Event 4, Action Plan 3 (14:30 to 18:00)								
Cycle length (s)	130							
Existing Splits (s)	16	84	-	30	35	65	-	30
Proposed Splits	14	77	-	39	34	57	-	39

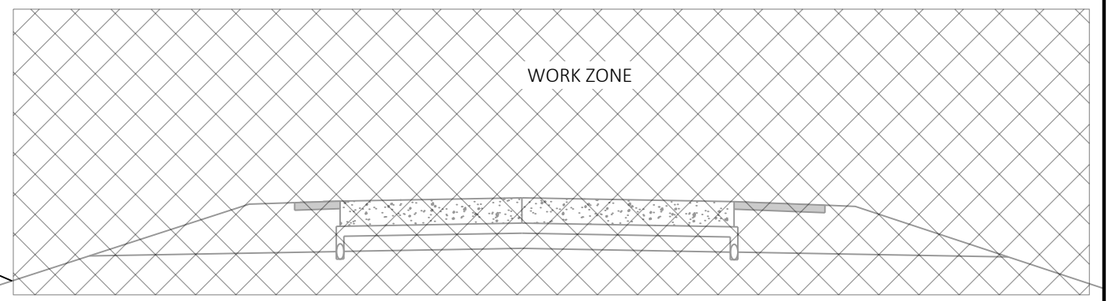
- SIGNAL TIMINGS SHALL BE REVIEWED IN THE FIELD AND ADJUSTED AS NECESSARY BY THE ENGINEER
- CONSIDERATION SHALL BE GIVEN TO RUNNING THE SIGNAL IN FREE MODE IF FIELD OBSERVATIONS SUGGEST ADDITIONAL TIME IS REQUIRED FOR VOGES ROAD/TERMINAL DRIVE.





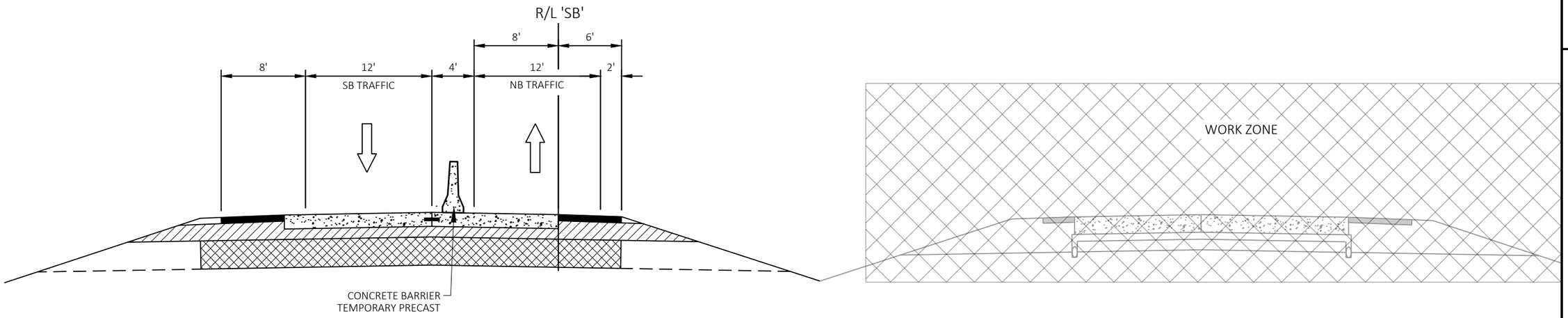
TYPICAL TRAFFIC CONTROL SECTION - MAINLINE
STAGE 3 - SOUTH OF TAYLOR RD





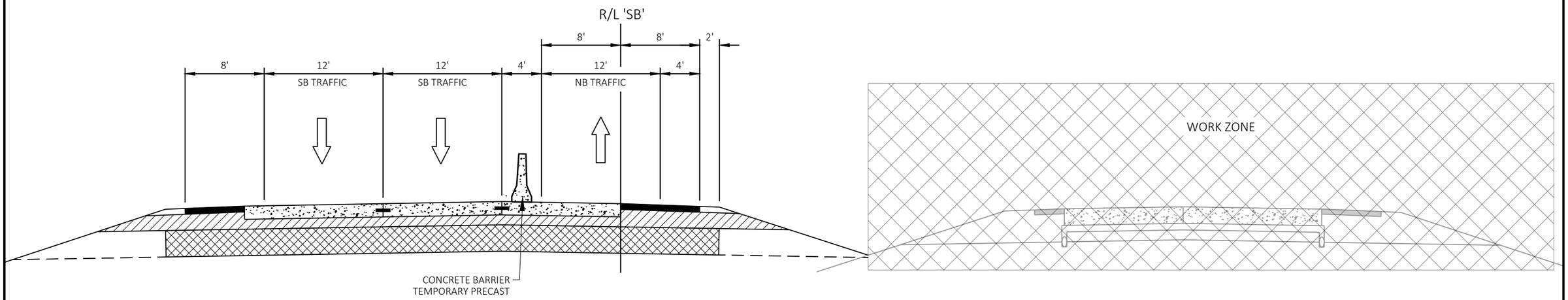
TYPICAL TRAFFIC CONTROL SECTION - MAINLINE
STAGE 3 - TAYLOR RD TO RAMP 'D' GORE

2



TYPICAL TRAFFIC CONTROL SECTION - MAINLINE

STAGE 3 - RAMP 'D' GORE TO RAMP 'C' GORE



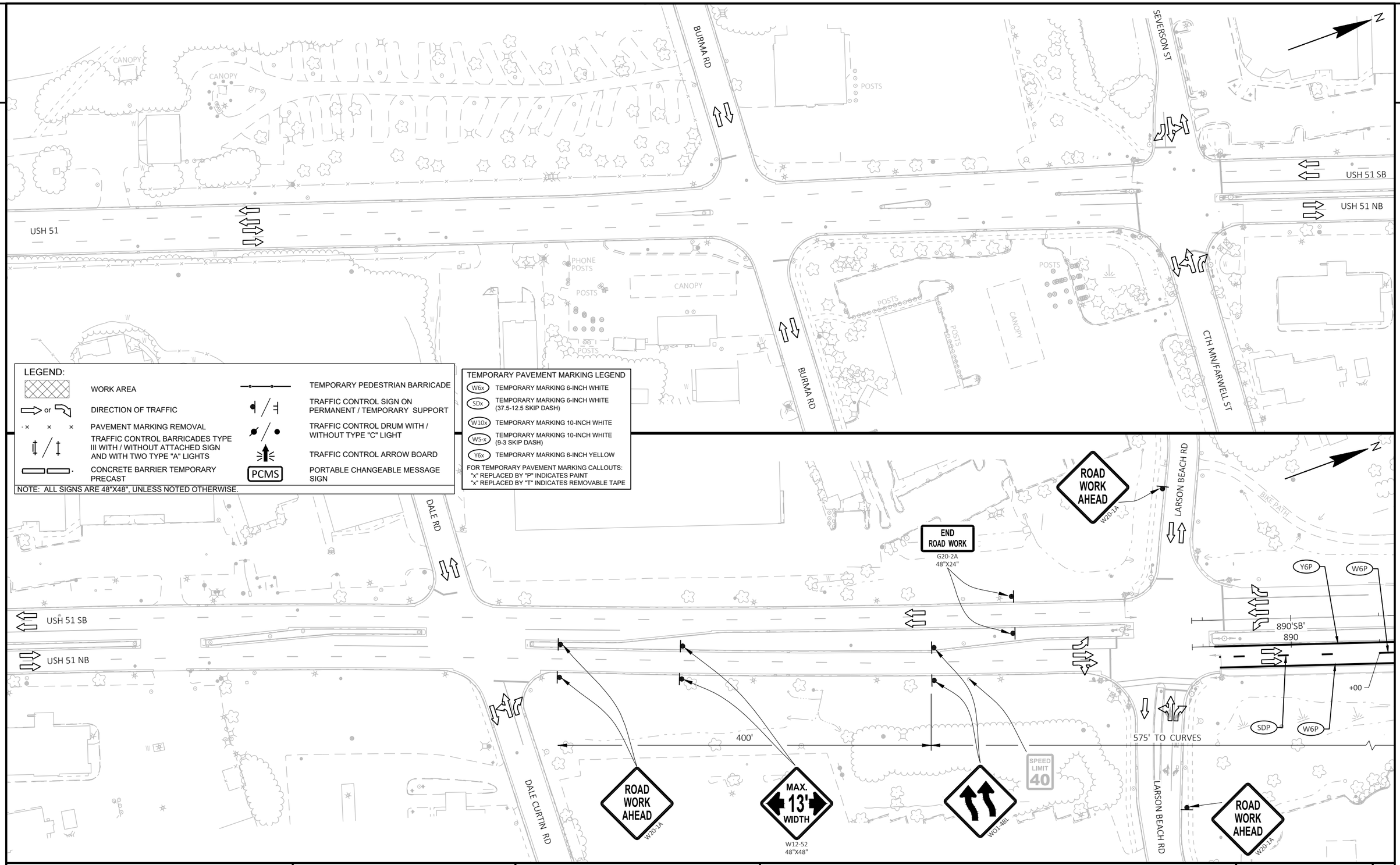
TYPICAL TRAFFIC CONTROL SECTION - MAINLINE

STAGE 3 - NORTH OF RAMP 'C' GORE

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 3	SHEET 173	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026300_S3.DWG
LAYOUT NAME - TS
PLOT DATE : 9/24/2024 10:03 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : Custom
WISDOT/CADDS SHEET 42

2



LEGEND:

- WORK AREA
- DIRECTION OF TRAFFIC
- PAVEMENT MARKING REMOVAL
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY PEDESTRIAN BARRICADE
- TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
- TRAFFIC CONTROL ARROW BOARD
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

TEMPORARY PAVEMENT MARKING LEGEND

W6x	TEMPORARY MARKING 6-INCH WHITE
SDx	TEMPORARY MARKING 6-INCH WHITE (37.5-12.5 SKIP DASH)
W10x	TEMPORARY MARKING 10-INCH WHITE
WS-x	TEMPORARY MARKING 10-INCH WHITE (9-3 SKIP DASH)
Y6x	TEMPORARY MARKING 6-INCH YELLOW

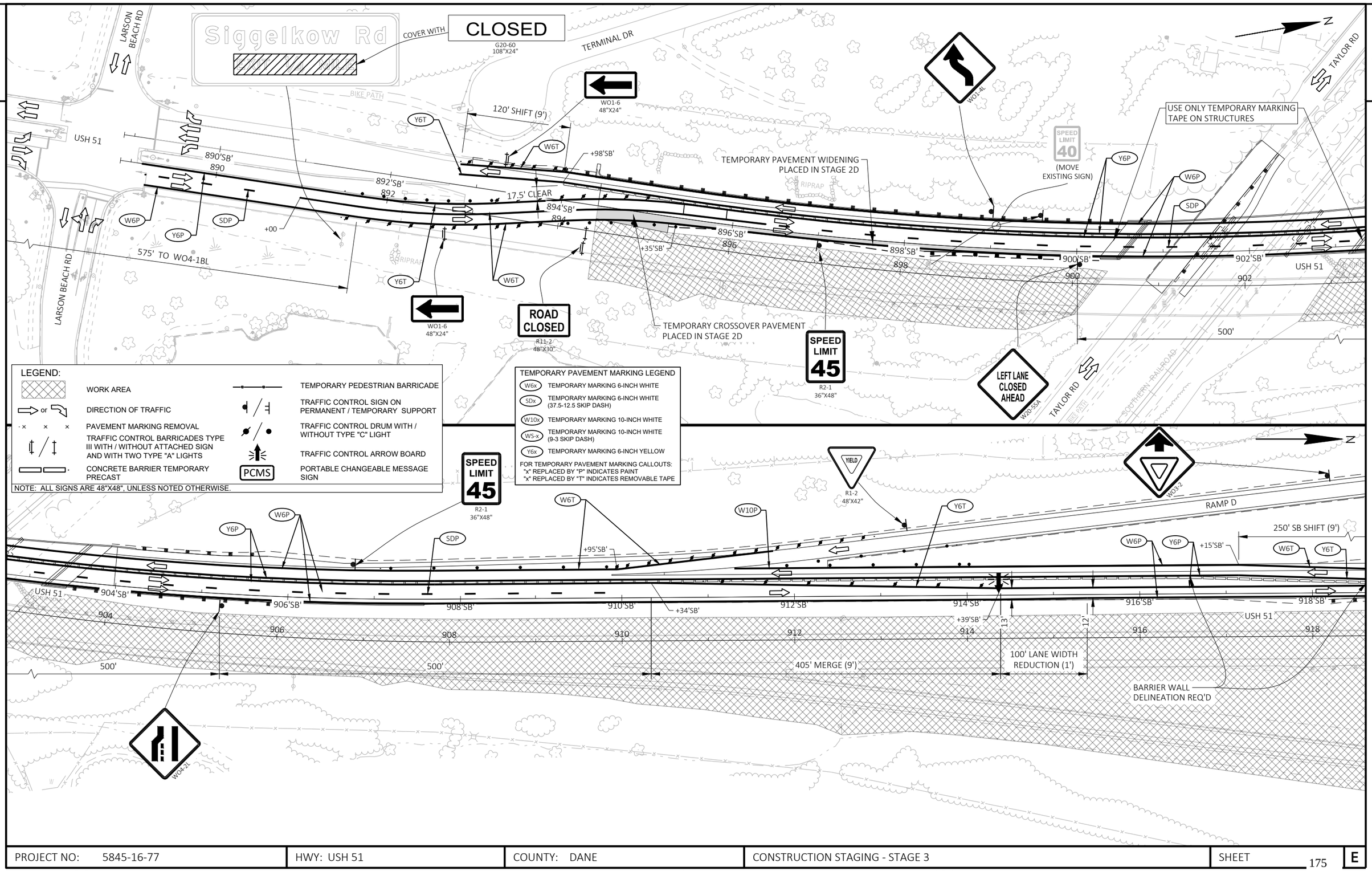
FOR TEMPORARY PAVEMENT MARKING CALLOUTS:
"x" REPLACED BY "P" INDICATES PAINT
"x" REPLACED BY "T" INDICATES REMOVABLE TAPE

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 3	SHEET 174	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026300_S3.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2024 10:03 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

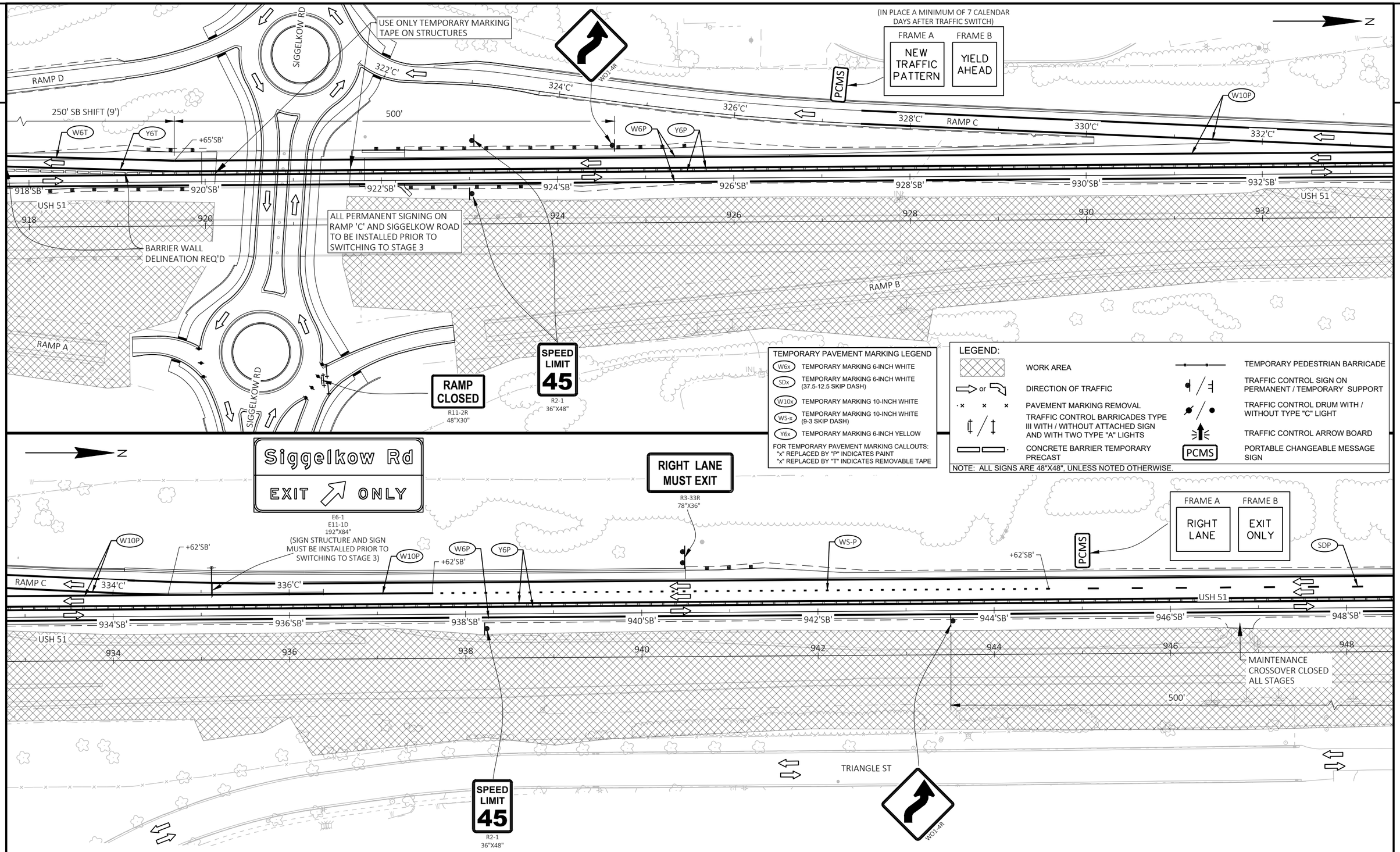


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 3	SHEET 175	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026300_S3.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2024 10:03 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 3	SHEET 176	E

2

N

SPEED LIMIT 45
R2-1
36"X48"

330' SHIFT (12')

TEMPORARY CROSSOVER PAVEMENT

1000'

WO1-6
48"X24"

Y6P
SDP
W6P
W6T
Y6T
W6P
Y6P

+26'SB'
+76'SB'
+06'SB'
+65'SB'
+54'SB'

USH 51

948'SB'
950'SB'
952'SB'
956'SB'
958'SB'
960'SB'
962'SB'

22' CLEAR

948
950
952
954
956
958
960
962

500'

BARRIER WALL
DELINEATION REQ'D

WO1-6
48"X24"

END
ROAD WORK
G20-2A
48"X24"

TRIANGLE ST

TEMPORARY PAVEMENT MARKING LEGEND

W6x	TEMPORARY MARKING 6-INCH WHITE
SDx	TEMPORARY MARKING 6-INCH WHITE (37.5-12.5 SKIP DASH)
W10x	TEMPORARY MARKING 10-INCH WHITE
WS-x	TEMPORARY MARKING 10-INCH WHITE (9-3 SKIP DASH)
Y6x	TEMPORARY MARKING 6-INCH YELLOW

FOR TEMPORARY PAVEMENT MARKING CALLOUTS:
"x" REPLACED BY "P" INDICATES PAINT
"x" REPLACED BY "T" INDICATES REMOVABLE TAPE

LEGEND:

	WORK AREA
or	DIRECTION OF TRAFFIC
	PAVEMENT MARKING REMOVAL
	TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
	CONCRETE BARRIER TEMPORARY PRECAST
	TEMPORARY PEDESTRIAN BARRICADE
	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
	TRAFFIC CONTROL ARROW BOARD
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

N

1000'

WO1-4BR

SPEED LIMIT 55

SPEED LIMIT 45
R2-1
36"X48"

USH 51

964'SB'
966'SB'
968'SB'
970'SB'
972'SB'
974'SB'
976'SB'

964
966
968
970
972
974
976

TRIANGLE ST

TERMINAL DR

VOGES RD

S DUTCH MILL RD

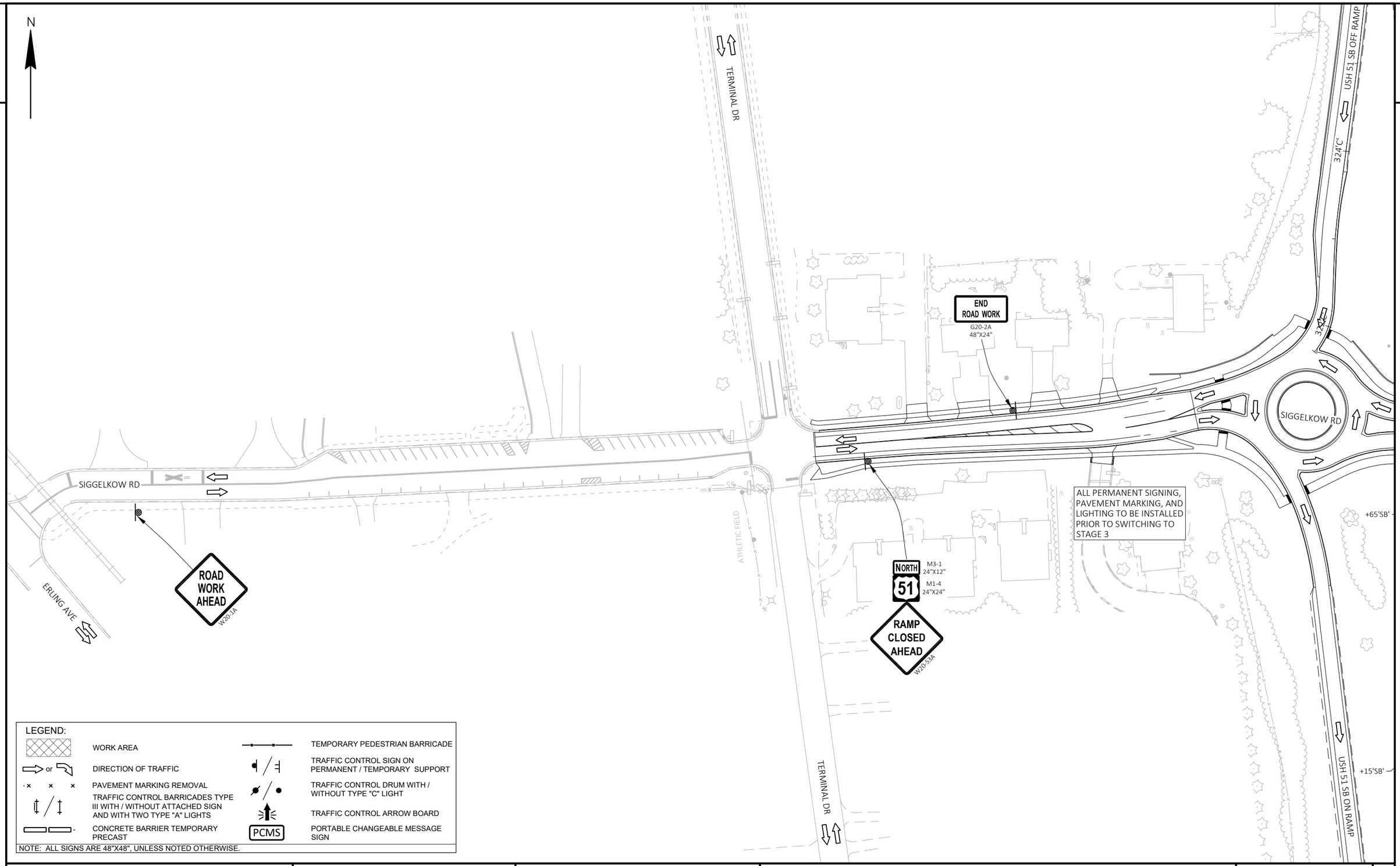
USH 51

SAME AS STAGE 2A

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 3	SHEET 177	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026300_S3.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2024 10:03 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT



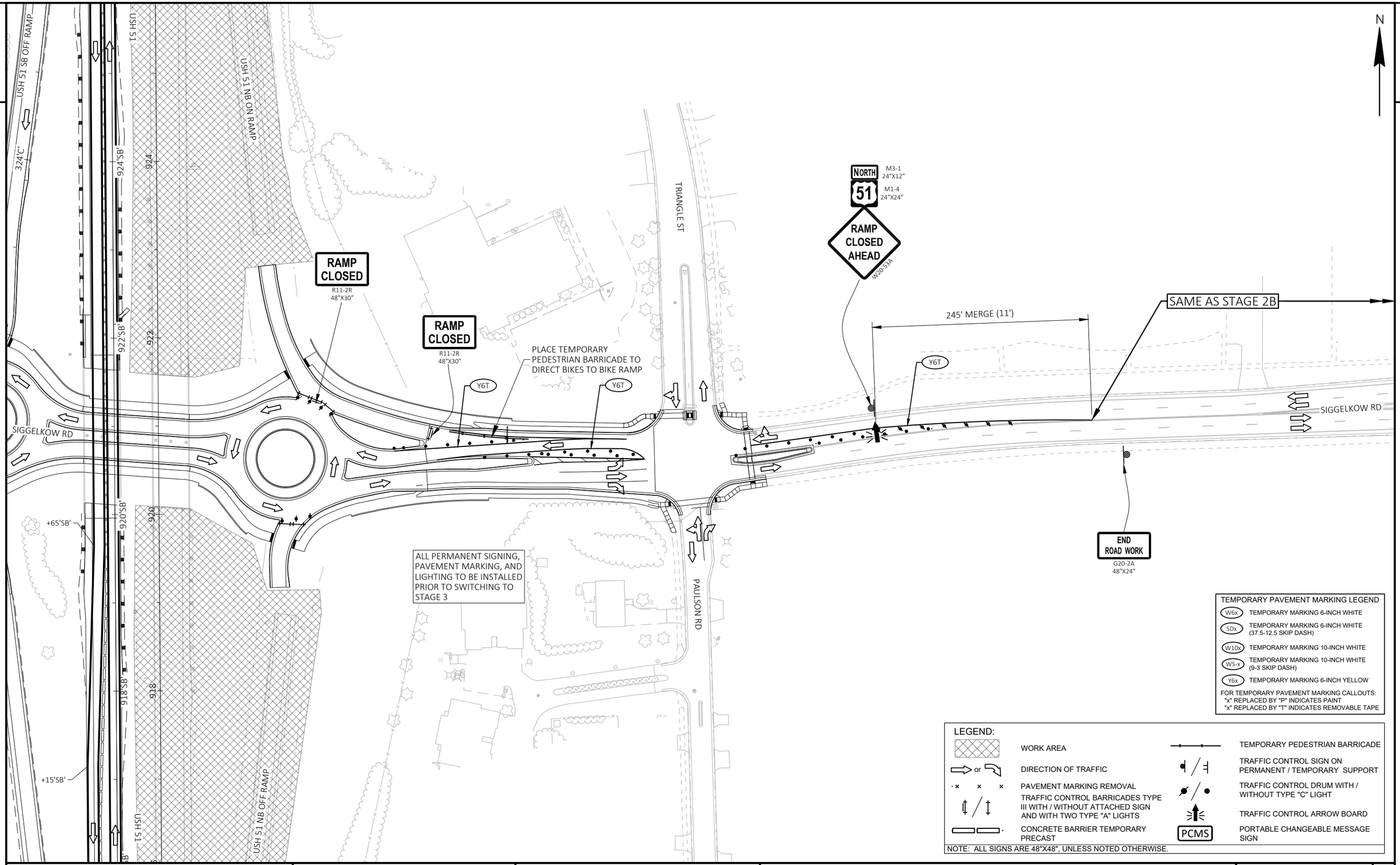
LEGEND:

WORK AREA	TEMPORARY PEDESTRIAN BARRICADE
DIRECTION OF TRAFFIC	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
PAVEMENT MARKING REMOVAL	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS	TRAFFIC CONTROL ARROW BOARD
CONCRETE BARRIER TEMPORARY PRECAST	PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 3	SHEET 178	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026300_S3.DWG
LAYOUT NAME - 06
PLOT DATE : 9/24/2024 10:03 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



TEMPORARY PAVEMENT MARKING LEGEND

W6x	TEMPORARY MARKING 6-INCH WHITE
SDx	TEMPORARY MARKING 6-INCH WHITE (37.5-12.5 SKIP DASH)
W10x	TEMPORARY MARKING 10-INCH WHITE
WS-x	TEMPORARY MARKING 10-INCH WHITE (9-3 SKIP DASH)
Y6x	TEMPORARY MARKING 6-INCH YELLOW

FOR TEMPORARY PAVEMENT MARKING CALLOUTS:
"x" REPLACED BY "P" INDICATES PAINT
"x" REPLACED BY "T" INDICATES REMOVABLE TAPE

LEGEND:

WORK AREA	TEMPORARY PEDESTRIAN BARRICADE
or DIRECTION OF TRAFFIC	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
PAVEMENT MARKING REMOVAL	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS	TRAFFIC CONTROL ARROW BOARD
CONCRETE BARRIER TEMPORARY PRECAST	PCMS PORTABLE CHANGEABLE MESSAGE SIGN

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 3	SHEET 179	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026300_S3.DWG
LAYOUT NAME - 07
PLOT DATE : 9/24/2024 10:04 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

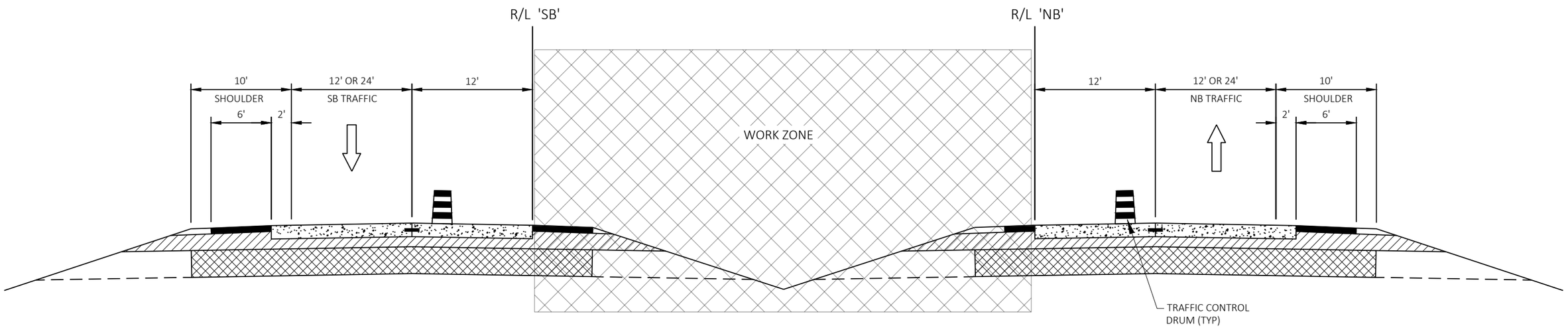
2

2

STAGE 4 NOTES:

TRAFFIC:
USH 51 NB AND SB TRAFFIC ON FINISHED PAVEMENT.
ALL RAMPS OPEN.
SIGGELKOW ROAD OPEN.
TAYLOR ROAD OPEN.
USH 51 SINGLE-LANE CLOSURES DURING OFF-PEAK HOURS

CONSTRUCTION:
REMOVE RAMP AND NORTH CROSSOVERS. RECONSTRUCT SOUTH CROSSOVER.
INSTALL USH 51 SB MEDIAN CURB AND GUTTER SOUTH OF TAYLOR ROAD BRIDGE.
REMOVE TEMPORARY AND PLACE PERMANENT GUARD RAIL IN MEDIAN SOUTH OF TAYLOR ROAD.
FINISH GRADING AND LANDSCAPING IN MEDIAN.

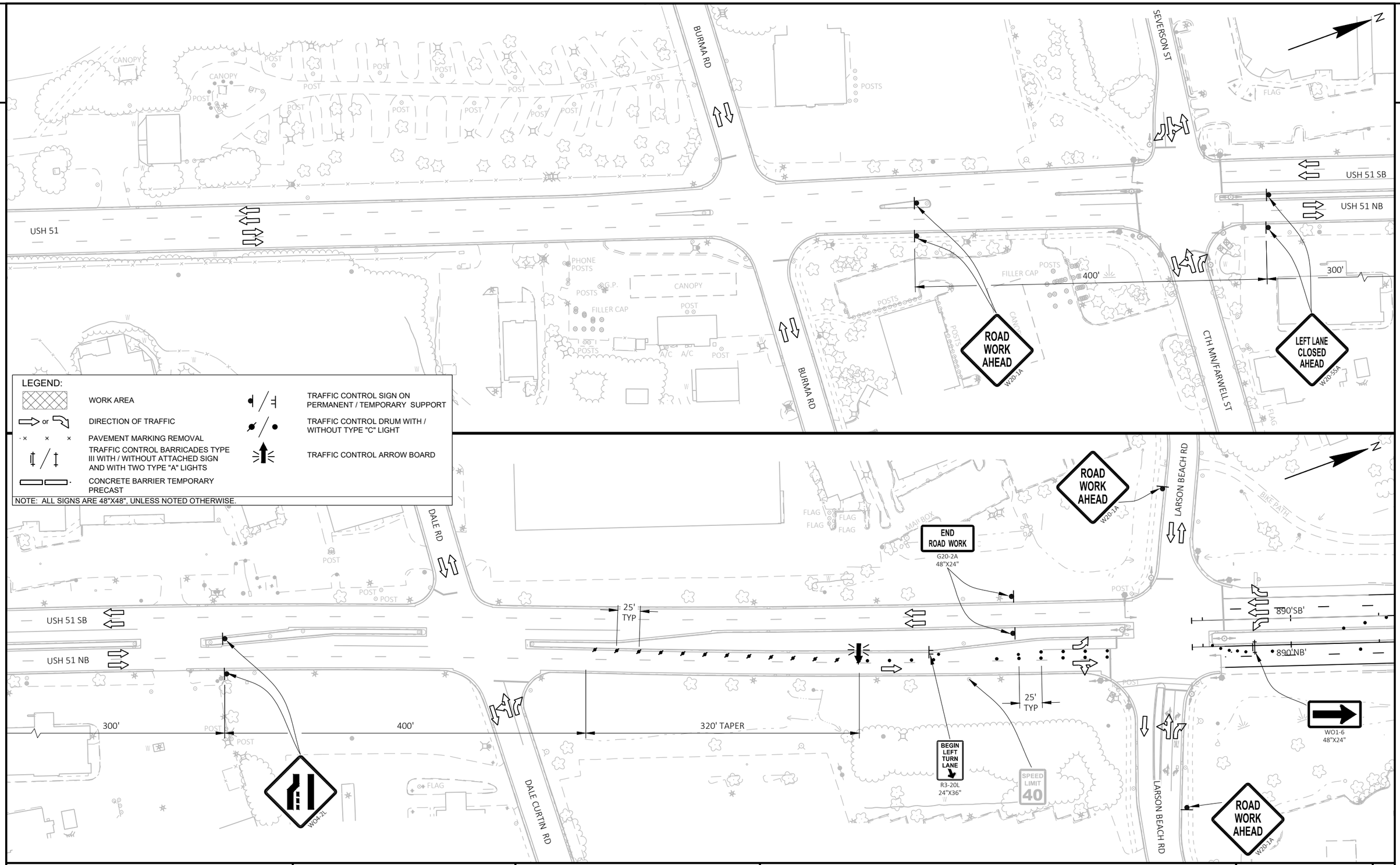


TYPICAL TRAFFIC CONTROL SECTION - USH 51
STAGE 4

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 4 - LANE CLOSURES	SHEET 180	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026400_S4.DWG
LAYOUT NAME - NOTES & TS
PLOT DATE : 9/24/2024 10:05 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : Custom
WISDOT/CADDS SHEET 42

2



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 4 - LANE CLOSURES	SHEET 181	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026400_S4.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2024 10:06 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

LARSON BEACH RD
BIKE PATH
TERMINAL DR
TAYLOR RD
USH 51
RIPRAP
POST

890'SB' 892'SB' 894'SB' 896'SB' 898'SB' 900'SB' 902'SB'
890'NB' 892'NB' 894'NB' 896'NB' 898'NB' 900'NB' 902'NB'

WO1-6
48"X24"

LANE CLOSED
R11-2L
48"X30"

SPEED LIMIT 45
R2-1
36"X48"

LANE CLOSED
R11-2L
48"X30"

SOUTHERN RAILROAD

LEGEND:

- WORK AREA
- DIRECTION OF TRAFFIC
- PAVEMENT MARKING REMOVAL
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
- TRAFFIC CONTROL ARROW BOARD

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

LANE CLOSED
R11-2L
48"X30"

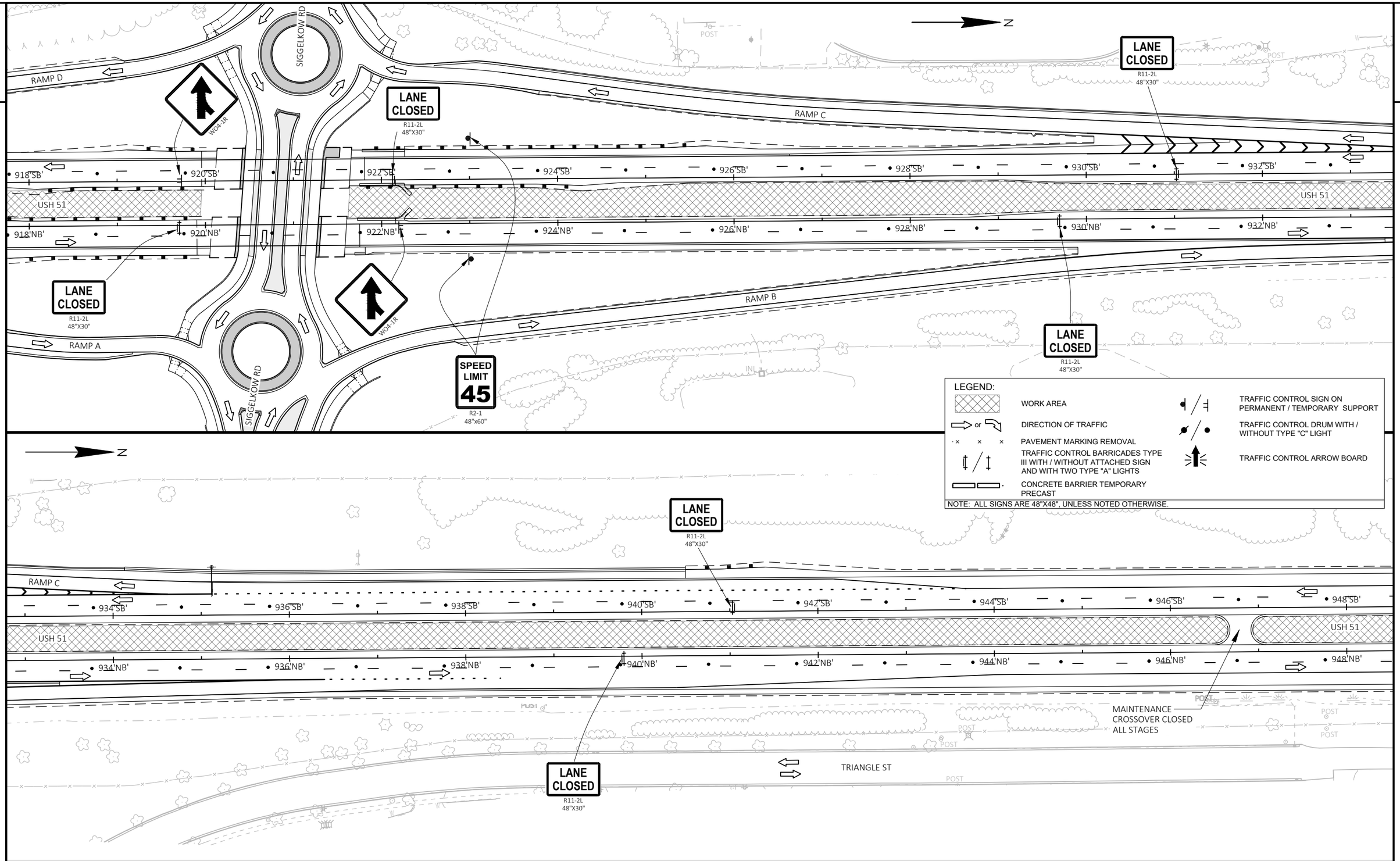
RAMP D
RAMP A

904'SB' 906'SB' 908'SB' 910'SB' 912'SB' 914'SB' 916'SB' 918'SB'
904'NB' 906'NB' 908'NB' 910'NB' 912'NB' 914'NB' 916'NB' 918'NB'

LANE CLOSED
R11-2L
48"X30"

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 4 - LANE CLOSURES	SHEET 182	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026400_S4.DWG
LAYOUT NAME - 02
PLOT DATE : 9/24/2024 10:06 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 4 - LANE CLOSURES	SHEET 183	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026400_S4.DWG
LAYOUT NAME - 03
PLOT DATE : 9/24/2024 10:06 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

N

LANE CLOSED
R11-2L
48"X30"

LANE CLOSED
R11-2L
48"X30"

LANE CLOSED
R11-2L
48"X30"

540' MERGE (12')

USH 51

948'SB' 950'SB' 952'SB' 954'SB' 956'SB' 958'SB' 960'SB' 962'SB'

948'NB' 950'NB' 952'NB' 954'NB' 956'NB' 958'NB' 960'NB' 962'NB'

END ROAD WORK
G20-2A
48"X24"

TRIANGLE ST

LEGEND:

- WORK AREA
- DIRECTION OF TRAFFIC
- PAVEMENT MARKING REMOVAL
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- CONCRETE BARRIER TEMPORARY PRECAST
- TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
- TRAFFIC CONTROL ARROW BOARD

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

SPEED LIMIT 55

SPEED LIMIT 45
R2-1
36"X48"

500'

W04-2L

540' MERGE (12')

USH 51

964'SB' 966'SB' 968'SB' 970'SB' 972'SB' 974'SB' 976'SB'

964'NB' 966'NB' 968'NB' 970'NB' 972'NB' 974'NB' 976'NB'

TRIANGLE ST

TERMINAL DR

VOGES RD

S DUTCH MILL RD

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 4 - LANE CLOSURES	SHEET 184	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026400_S4.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2024 10:06 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

SOUTH 51 M3-3 24"x12" M1-4 24"x24"
ROAD WORK AHEAD W20-1A

LEFT LANE CLOSED 1/2 MILE W20-5Sa

W04-2L

USH 12/18

CTH BW/ E BROADWAY

USH 51 SB

USH 51 NB

E BROADWAY

S DUTCH MILL RD

TERMINAL DR

TRADEWINDS PKWY

BROADWAY

VOGES RD

TRIANGLE ST

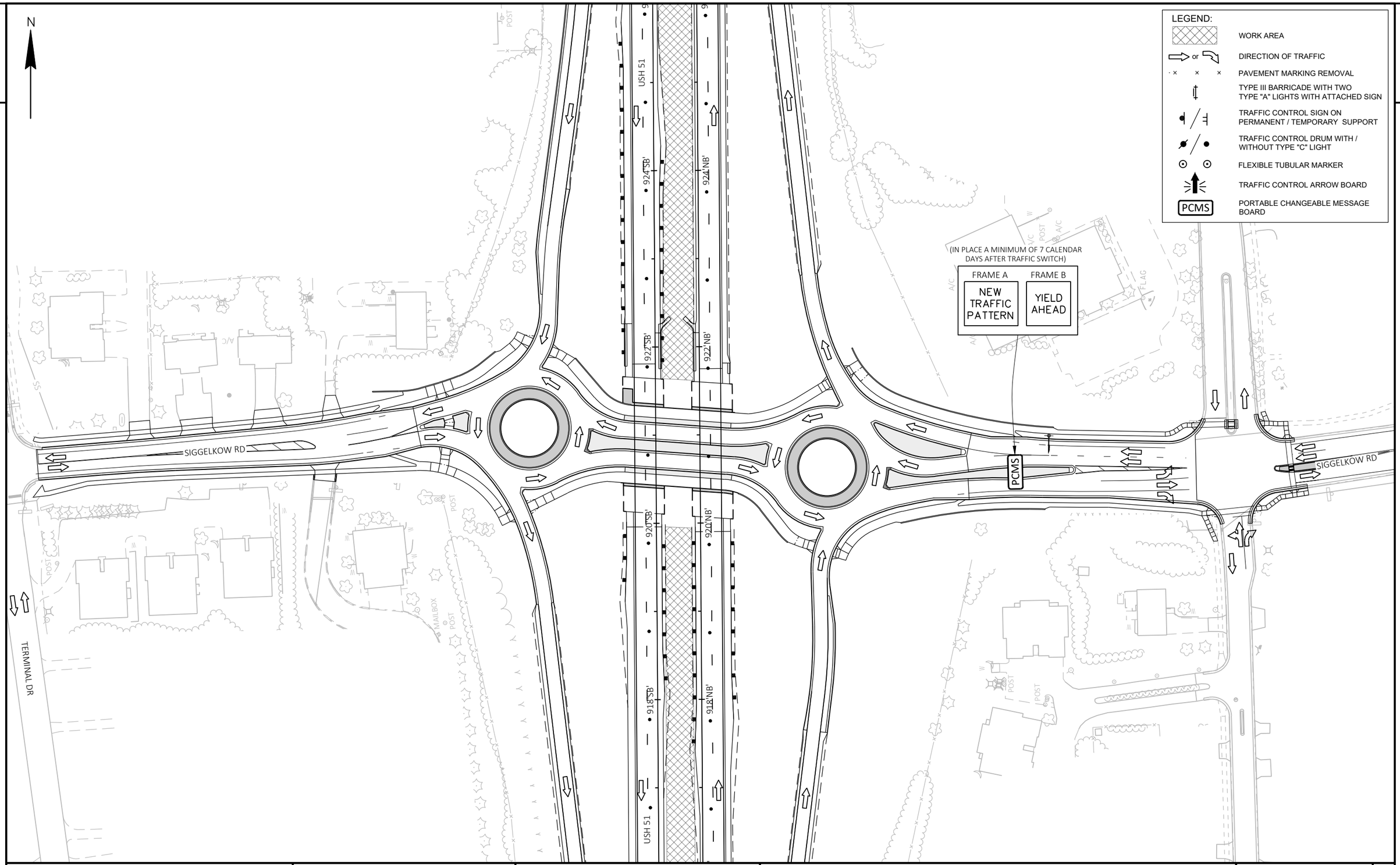
LEGEND:

WORK AREA	TRAFFIC CONTROL SIGN ON PERMANENT / TEMPORARY SUPPORT
DIRECTION OF TRAFFIC	TRAFFIC CONTROL DRUM WITH / WITHOUT TYPE "C" LIGHT
PAVEMENT MARKING REMOVAL	TRAFFIC CONTROL ARROW BOARD
TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS	
CONCRETE BARRIER TEMPORARY PRECAST	

NOTE: ALL SIGNS ARE 48"X48", UNLESS NOTED OTHERWISE.

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 4 - LANE CLOSURES	SHEET 185	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026400_S4.DWG
LAYOUT NAME - 05
PLOT DATE : 9/24/2024 10:06 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:300 FT
WISDOT/CADDS SHEET 42



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CONSTRUCTION STAGING - STAGE 4 - LANE CLOSURES	SHEET 186	E

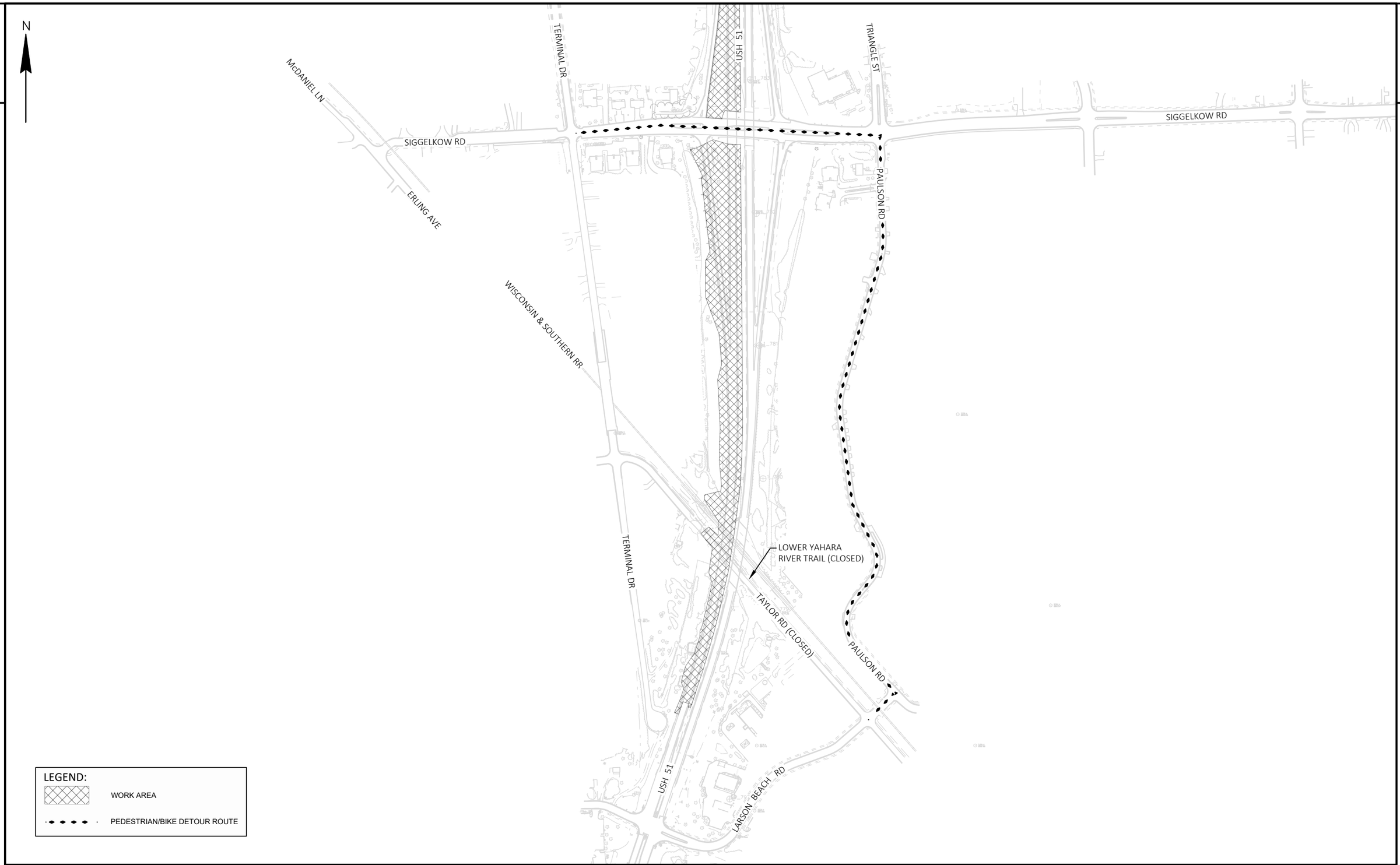
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_026400_S4.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2024 10:06 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N



LEGEND:

WORK AREA

PEDESTRIAN/BIKE DETOUR ROUTE

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	BIKE-PED DETOUR - STAGE 2A (LOWER YAHARA RIVER TRAIL CLOSURE)	SHEET 187	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027001_DT (BIKE-PED).DWG
LAYOUT NAME - OVERVIEW

PLOT DATE : 7/26/2024 12:43 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:400 FT

WISDOT/CADDS SHEET 42

2

N

LOWER YAHARA RIVER TRAIL

McDANIEL LN

WISCONSIN & SOUTHERN RR

SIGGELKOW RD

SIGGELKOW RD

LOWER YAHARA RIVER TRAIL

BECKER ST

ERLING AVE

TERMINAL DR

'A' MATCHLINE

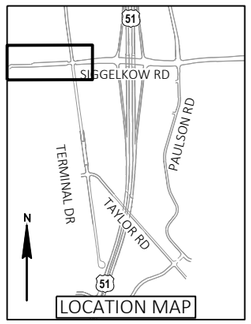
SIGGELKOW RD

ATHLETIC FIELD

TERMINAL DR

DETOUR AHEAD
M4-9AA
30"X24"

DETOUR
M4-9A(MOD)
30"X30"



LEGEND:

- WORK AREA
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING ARROW EPOXY, BIKE LANE SYMBOL FOR SHARED LANE

TERMINAL DR

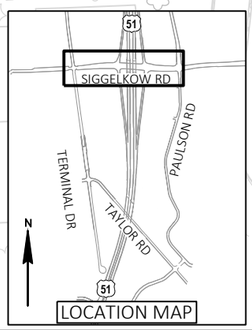
DETOUR
M4-9A(MOD)
30"X30"

USH 51

'A' MATCHLINE

SIGGELKOW RD

TERMINAL DR



DETOUR
M4-9A(MOD)
30"X30"

DETOUR
M4-9A(MOD)
30"X30"

USH 51

DETOUR
M4-9A(MOD)
30"X30"

DETOUR
M4-9A(MOD)
30"X30"

DETOUR
M4-9CL
30"X24"

TRIANGLE ST

N

SIGGELKOW RD

SEE NEXT SHEET

DETOUR
M4-9AR
30"X24"

PAULSON RD

2

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	BIKE-PED DETOUR - STAGE 2A (LOWER YAHARA RIVER TRAIL CLOSURE)	SHEET 188	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027001_DT (BIKE-PED).DWG
LAYOUT NAME - 01

PLOT DATE : 7/26/2024 12:43 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

N

SIGGELKOW RD

SEE PREVIOUS SHEET

PAULSON RD

PAULSON CT

DETOUR M4-9BL 30"X24"

DETOUR M4-9CL 30"X24"

DETOUR M4-9A(MOD) 30"X30"

MAY USE FULL LANE R4-11 30"X30"

DETOUR M4-9A(MOD) 30"X30"

R4-11 30"X30" MAY USE FULL LANE

DETOUR M4-9A(MOD) 30"X30"

M4-9A(MOD) 30"X30" DETOUR

R4-11 30"X30" MAY USE FULL LANE

DETOUR M4-9A(MOD) 30"X30"

'B' MATCHLINE

LEGEND:

- WORK AREA
- TRAFFIC CONTROL BARRICADES TYPE III WITH / WITHOUT ATTACHED SIGN AND WITH TWO TYPE "A" LIGHTS
- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING ARROW EPOXY, BIKE LANE SYMBOL FOR SHARED LANE

LOCATION MAP

SIGGELKOW RD

PAULSON RD

TERMINAL DR

TAYLOR RD

51

N

'B' MATCHLINE

PAULSON RD

M4-9A(MOD) 30"X30" DETOUR

R4-11 30"X30" MAY USE FULL LANE

M4-9A(MOD) 30"X30" DETOUR

R4-11 30"X30" MAY USE FULL LANE

M4-9A(MOD) 30"X30" DETOUR

'C' MATCHLINE

LOCATION MAP

SIGGELKOW RD

PAULSON RD

TERMINAL DR

TAYLOR RD

51

N

'C' MATCHLINE

PAULSON RD

M4-9A(MOD) 30"X30" DETOUR

R4-11 30"X30" MAY USE FULL LANE

DETOUR M4-9BL 30"X24"

DETOUR M4-9BR 30"X24"

DETOUR M4-9BR 30"X24"

DETOUR M4-9BL 30"X24"

DETOUR M4-9A(MOD) 30"X30"

R4-11 30"X30" MAY USE FULL LANE

DETOUR M4-9CR 30"X24"

DETOUR M4-9A(MOD) 30"X30"

R4-11 30"X30" MAY USE FULL LANE

PAULSON RD

LOWER YAHARA RIVER TRAIL (CLOSED)

TAYLOR RD (CLOSED)

ADD DETECTABLE WARNING FIELDS TO ASPHALT PATHS ON BOTH SIDES OF RR CROSSING PRIOR TO STAGE 2A (SEE CONSTRUCTION DETAIL)

DETOUR M4-9BR 30"X24"

DETOUR M4-9BL 30"X24"

DETOUR M4-9CL 30"X24"

DETOUR M4-9A(MOD) 30"X30"

PATH CLOSED R9-9(MOD) 30" X 18"

(MOUNTED ON TYPE III BARRICADE BEHIND TEMPORARY PEDESTRIAN BARRIER)

DETOUR M4-9AR 30"X24"

200'

DETOUR AHEAD M4-9AA 30"X24"

ROAD CLOSED AHEAD W20-3A

ROAD CLOSED TO THRU TRAFFIC 1/4 MILE AHEAD R11-3 60"X30"

LARSON BEACH RD

TAYLOR RD (OPEN)

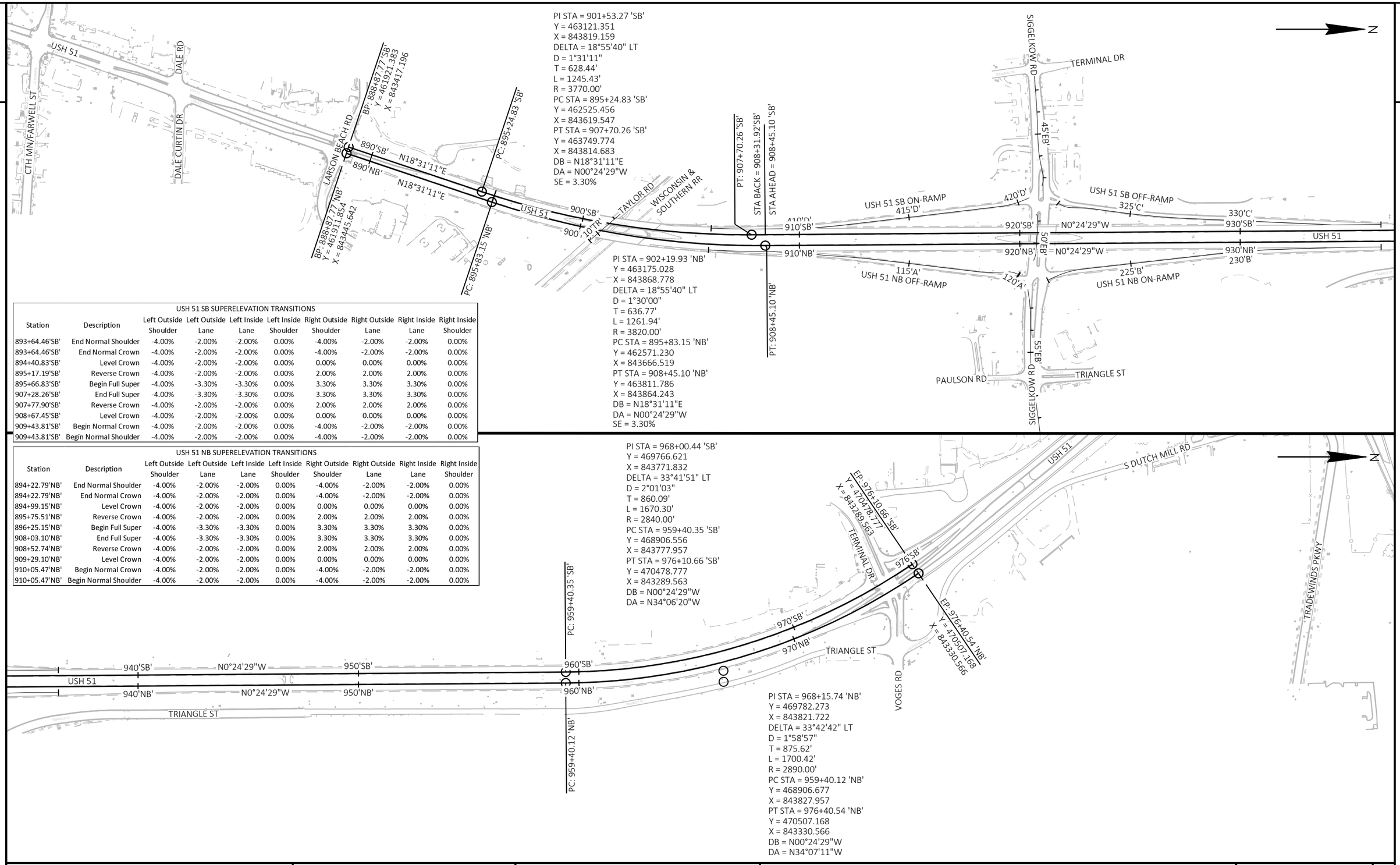
LOWER YAHARA RIVER TRAIL (OPEN)

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	BIKE-PED DETOUR - STAGE 2A (LOWER YAHARA RIVER TRAIL CLOSURE)	SHEET 189	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027001_DT (BIKE-PED).DWG
LAYOUT NAME - 02

PLOT DATE : 7/26/2024 12:44 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



USH 51 SB SUPERELEVATION TRANSITIONS

Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane	Right Inside Lane	Right Inside Shoulder
893+64.46'SB'	End Normal Shoulder	-4.00%	-2.00%	-2.00%	0.00%	-4.00%	-2.00%	-2.00%	0.00%
893+64.46'SB'	End Normal Crown	-4.00%	-2.00%	-2.00%	0.00%	-4.00%	-2.00%	-2.00%	0.00%
894+40.83'SB'	Level Crown	-4.00%	-2.00%	-2.00%	0.00%	0.00%	0.00%	0.00%	0.00%
895+17.19'SB'	Reverse Crown	-4.00%	-2.00%	-2.00%	0.00%	2.00%	2.00%	2.00%	0.00%
895+66.83'SB'	Begin Full Super	-4.00%	-3.30%	-3.30%	0.00%	3.30%	3.30%	3.30%	0.00%
907+28.26'SB'	End Full Super	-4.00%	-3.30%	-3.30%	0.00%	3.30%	3.30%	3.30%	0.00%
907+77.90'SB'	Reverse Crown	-4.00%	-2.00%	-2.00%	0.00%	2.00%	2.00%	2.00%	0.00%
908+67.45'SB'	Level Crown	-4.00%	-2.00%	-2.00%	0.00%	0.00%	0.00%	0.00%	0.00%
909+43.81'SB'	Begin Normal Crown	-4.00%	-2.00%	-2.00%	0.00%	-4.00%	-2.00%	-2.00%	0.00%
909+43.81'SB'	Begin Normal Shoulder	-4.00%	-2.00%	-2.00%	0.00%	-4.00%	-2.00%	-2.00%	0.00%

USH 51 NB SUPERELEVATION TRANSITIONS

Station	Description	Left Outside Shoulder	Left Outside Lane	Left Inside Lane	Left Inside Shoulder	Right Outside Shoulder	Right Outside Lane	Right Inside Lane	Right Inside Shoulder
894+22.79'NB'	End Normal Shoulder	-4.00%	-2.00%	-2.00%	0.00%	-4.00%	-2.00%	-2.00%	0.00%
894+22.79'NB'	End Normal Crown	-4.00%	-2.00%	-2.00%	0.00%	-4.00%	-2.00%	-2.00%	0.00%
894+99.15'NB'	Level Crown	-4.00%	-2.00%	-2.00%	0.00%	0.00%	0.00%	0.00%	0.00%
895+75.51'NB'	Reverse Crown	-4.00%	-2.00%	-2.00%	0.00%	2.00%	2.00%	2.00%	0.00%
896+25.15'NB'	Begin Full Super	-4.00%	-3.30%	-3.30%	0.00%	3.30%	3.30%	3.30%	0.00%
908+03.10'NB'	End Full Super	-4.00%	-3.30%	-3.30%	0.00%	3.30%	3.30%	3.30%	0.00%
908+52.74'NB'	Reverse Crown	-4.00%	-2.00%	-2.00%	0.00%	2.00%	2.00%	2.00%	0.00%
909+29.10'NB'	Level Crown	-4.00%	-2.00%	-2.00%	0.00%	0.00%	0.00%	0.00%	0.00%
910+05.47'NB'	Begin Normal Crown	-4.00%	-2.00%	-2.00%	0.00%	-4.00%	-2.00%	-2.00%	0.00%
910+05.47'NB'	Begin Normal Shoulder	-4.00%	-2.00%	-2.00%	0.00%	-4.00%	-2.00%	-2.00%	0.00%

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT DIAGRAM - USH 51	SHEET 190	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027201_AD.DWG
LAYOUT NAME - - USH 51
PLOT DATE : 7/16/2024 3:32 PM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:400 FT

PI STA = 406+78.56 'D'
Y = 463657.855
X = 843789.337
DELTA = 2°48'26" LT
D = 1°31'49"
T = 91.74'
L = 183.44'
R = 3744.00'
PC STA = 405+86.82 'D'
Y = 463566.199
X = 843785.497
PT STA = 407+70.26 'D'
Y = 463749.589
X = 843788.684
DB = N02°23'57"E
DA = N00°24'29"W

PI STA = 410+95.94 'D'
Y = 464062.022
X = 843783.312
DELTA = 5°11'53" LT
D = 2°25'22"
T = 107.36'
L = 214.56'
R = 2365.00'
PC STA = 409+88.58 'D'
Y = 463954.705
X = 843786.223
PT STA = 412+03.14 'D'
Y = 464168.633
X = 843770.690
DB = N01°33'14"W
DA = N06°45'07"W

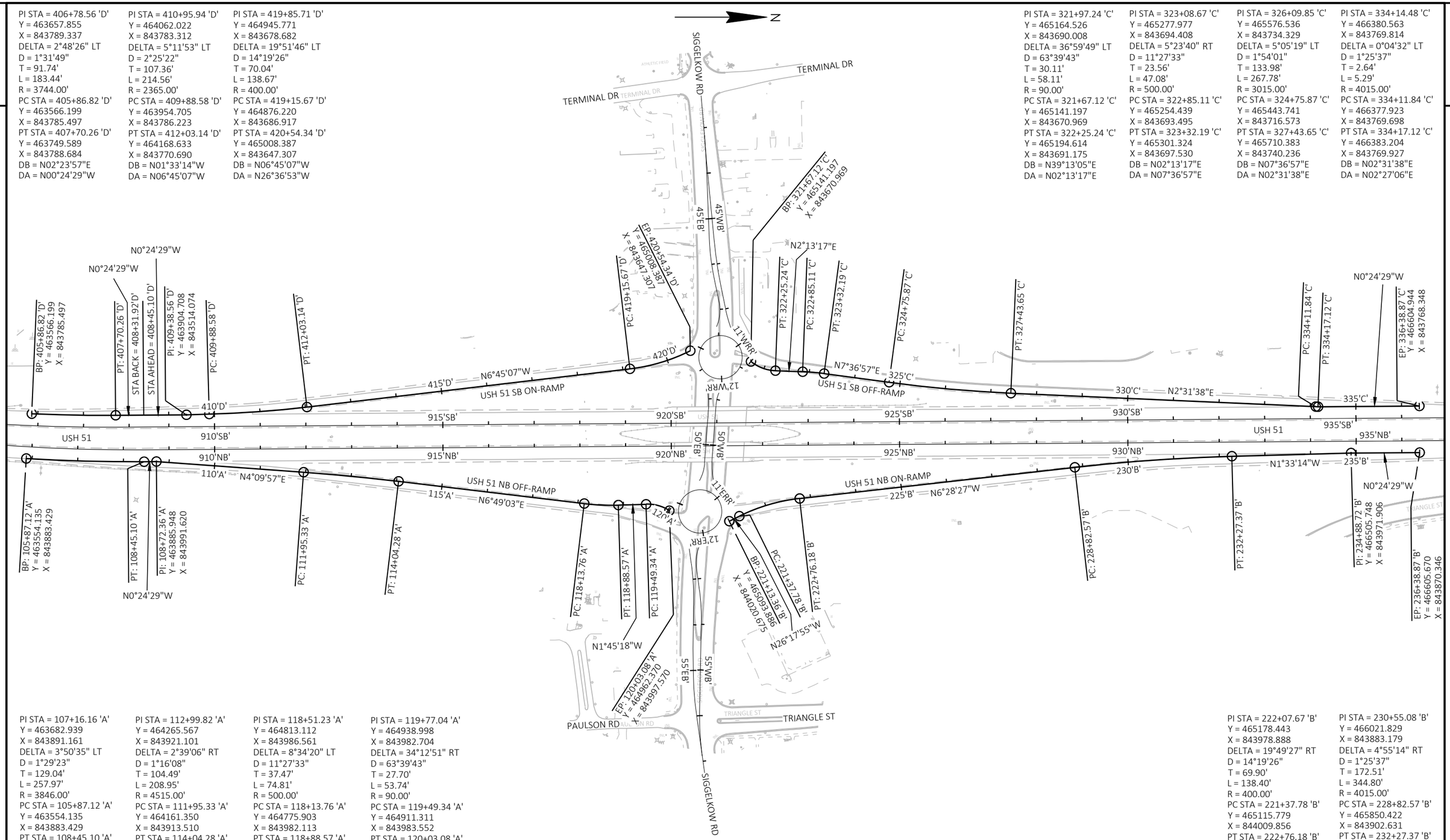
PI STA = 419+85.71 'D'
Y = 464945.771
X = 843678.682
DELTA = 19°51'46" LT
D = 14°19'26"
T = 70.04'
L = 138.67'
R = 400.00'
PC STA = 419+15.67 'D'
Y = 464876.220
X = 843686.917
PT STA = 420+54.34 'D'
Y = 465008.387
X = 843647.307
DB = N06°45'07"W
DA = N26°36'53"W

PI STA = 321+97.24 'C'
Y = 465164.526
X = 843690.008
DELTA = 36°59'49" LT
D = 63°39'43"
T = 30.11'
L = 58.11'
R = 90.00'
PC STA = 321+67.12 'C'
Y = 465141.197
X = 843670.969
PT STA = 322+25.24 'C'
Y = 465194.614
X = 843691.175
DB = N39°13'05"E
DA = N02°13'17"E

PI STA = 323+08.67 'C'
Y = 465277.977
X = 843694.408
DELTA = 5°23'40" RT
D = 11°27'33"
T = 23.56'
L = 47.08'
R = 500.00'
PC STA = 322+85.11 'C'
Y = 465254.439
X = 843693.495
PT STA = 323+32.19 'C'
Y = 465301.324
X = 843697.530
DB = N02°13'17"E
DA = N07°36'57"E

PI STA = 326+09.85 'C'
Y = 465576.536
X = 843734.329
DELTA = 5°05'19" LT
D = 1°54'01"
T = 133.98'
L = 267.78'
R = 3015.00'
PC STA = 324+75.87 'C'
Y = 465443.741
X = 843716.573
PT STA = 327+43.65 'C'
Y = 465710.383
X = 843740.236
DB = N07°36'57"E
DA = N02°31'38"E

PI STA = 334+14.48 'C'
Y = 466380.563
X = 843769.814
DELTA = 0°04'32" LT
D = 1°25'37"
T = 2.64'
L = 5.29'
R = 4015.00'
PC STA = 334+11.84 'C'
Y = 466377.923
X = 843769.698
PT STA = 334+17.12 'C'
Y = 466383.204
X = 843769.927
DB = N02°31'38"E
DA = N02°27'06"E



PI STA = 107+16.16 'A'
Y = 463682.939
X = 843891.161
DELTA = 3°50'35" LT
D = 1°29'23"
T = 129.04'
L = 257.97'
R = 3846.00'
PC STA = 105+87.12 'A'
Y = 463554.135
X = 843883.429
PT STA = 108+45.10 'A'
Y = 463811.971
X = 843890.242
DB = N03°26'06"E
DA = N00°24'29"W

PI STA = 112+99.82 'A'
Y = 464265.567
X = 843921.101
DELTA = 2°39'06" RT
D = 1°16'08"
T = 104.49'
L = 208.95'
R = 4515.00'
PC STA = 111+95.33 'A'
Y = 464161.350
X = 843913.510
PT STA = 114+04.28 'A'
Y = 464369.320
X = 843933.505
DB = N04°09'57"E
DA = N06°49'03"E

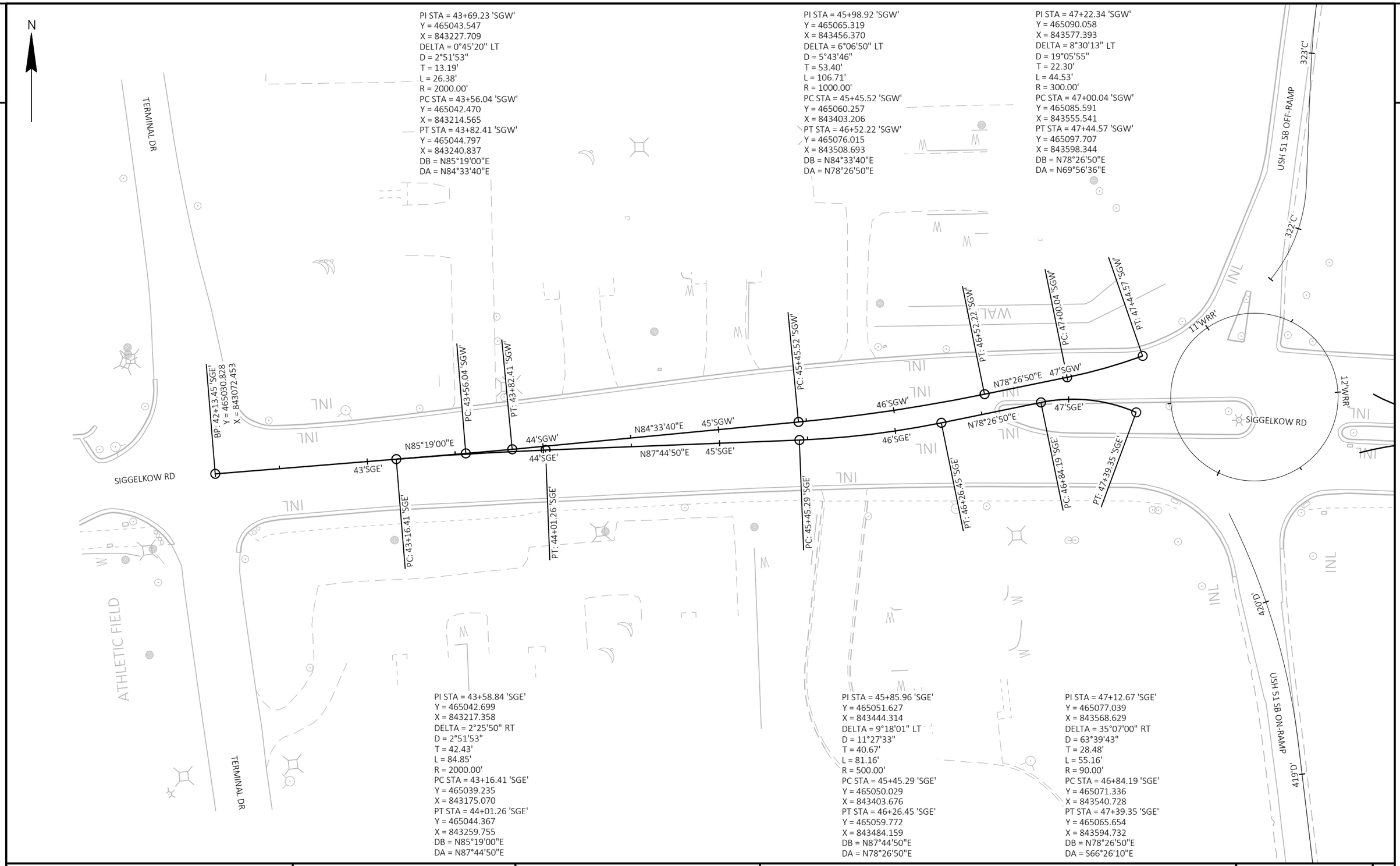
PI STA = 118+51.23 'A'
Y = 464813.112
X = 843986.561
DELTA = 8°34'20" LT
D = 11°27'33"
T = 37.47'
L = 74.81'
R = 500.00'
PC STA = 118+13.76 'A'
Y = 464775.903
X = 843982.113
PT STA = 118+88.57 'A'
Y = 464850.568
X = 843985.413
DB = N06°49'03"E
DA = N01°45'18"W

PI STA = 119+77.04 'A'
Y = 464938.998
X = 843982.704
DELTA = 34°12'51" RT
D = 63°39'43"
T = 27.70'
L = 53.74'
R = 90.00'
PC STA = 119+49.34 'A'
Y = 464911.311
X = 843983.552
PT STA = 120+03.08 'A'
Y = 464962.370
X = 843997.570
DB = N01°45'18"W
DA = N32°27'33"E

PI STA = 222+07.67 'B'
Y = 465178.443
X = 843978.888
DELTA = 19°49'27" RT
D = 14°19'26"
T = 69.90'
L = 138.40'
R = 400.00'
PC STA = 221+37.78 'B'
Y = 465115.779
X = 844009.856
PT STA = 222+76.18 'B'
Y = 465247.895
X = 843971.006
DB = N26°17'55"W
DA = N06°28'27"W

PI STA = 230+55.08 'B'
Y = 466021.829
X = 843883.179
DELTA = 4°55'14" RT
D = 1°25'37"
T = 172.51'
L = 344.80'
R = 4015.00'
PC STA = 228+82.57 'B'
Y = 465850.422
X = 843902.631
PT STA = 232+27.37 'B'
Y = 466194.272
X = 843878.502
DB = N06°28'27"W
DA = N01°33'14"W

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT DIAGRAM - RAMPS	SHEET 191	E



PI STA = 43+69.23 'SGW'
Y = 465043.547
X = 843227.709
DELTA = 0°45'20" LT
D = 2°51'53"
T = 13.19'
L = 26.38'
R = 2000.00'
PC STA = 43+56.04 'SGW'
Y = 465042.470
X = 843214.565
PT STA = 43+82.41 'SGW'
Y = 465044.797
X = 843240.837
DB = N85°19'00"E
DA = N84°33'40"E

PI STA = 45+98.92 'SGW'
Y = 465065.319
X = 843456.370
DELTA = 6°06'50" LT
D = 5°43'46"
T = 53.40'
L = 106.71'
R = 1000.00'
PC STA = 45+45.52 'SGW'
Y = 465060.257
X = 843403.206
PT STA = 46+52.22 'SGW'
Y = 465076.015
X = 843508.693
DB = N84°33'40"E
DA = N78°26'50"E

PI STA = 47+22.34 'SGW'
Y = 465090.058
X = 843577.393
DELTA = 8°30'13" LT
D = 19°05'55"
T = 22.30'
L = 44.53'
R = 300.00'
PC STA = 47+00.04 'SGW'
Y = 465085.591
X = 843555.541
PT STA = 47+44.57 'SGW'
Y = 465097.707
X = 843598.344
DB = N78°26'50"E
DA = N69°56'36"E

PI STA = 43+58.84 'SGE'
Y = 465042.699
X = 843217.358
DELTA = 2°25'50" RT
D = 2°51'53"
T = 42.43'
L = 84.85'
R = 2000.00'
PC STA = 43+16.41 'SGE'
Y = 465039.235
X = 843175.070
PT STA = 44+01.26 'SGE'
Y = 465044.367
X = 843259.755
DB = N85°19'00"E
DA = N87°44'50"E

PI STA = 45+85.96 'SGE'
Y = 465051.627
X = 843444.314
DELTA = 9°18'01" LT
D = 11°27'33"
T = 40.67'
L = 81.16'
R = 500.00'
PC STA = 45+45.29 'SGE'
Y = 465050.029
X = 843403.676
PT STA = 46+26.45 'SGE'
Y = 465059.772
X = 843484.159
DB = N87°44'50"E
DA = N78°26'50"E

PI STA = 47+12.67 'SGE'
Y = 465077.039
X = 843568.629
DELTA = 35°07'00" RT
D = 63°39'43"
T = 28.48'
L = 55.16'
R = 90.00'
PC STA = 46+84.19 'SGE'
Y = 465071.336
X = 843540.728
PT STA = 47+39.35 'SGE'
Y = 465065.654
X = 843594.732
DB = N78°26'50"E
DA = S66°26'10"E

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT DIAGRAM - SIGGELKOW (WEST)	SHEET 192	E

PI STA = -1+62.03 'WRB'
Y = 464533.592
X = 844691.307
DELTA = 184°40'54" RT
D = 120°37'22"
T = 1162.03'
L = 153.11'
R = 47.50'
PC STA = 10+00.00 'WRB'
Y = 465031.421
X = 843641.321
PCC STA = 11+53.11 'WRB'
Y = 465115.457
X = 843685.455
DB = N64°37'59"W
DA = S59°57'05"E

PI STA = 48+93.32 'SGW'
Y = 465066.178
X = 843746.745
DELTA = 25°18'43" LT
D = 63°39'43"
T = 20.21'
L = 39.76'
R = 90.00'
PC STA = 48+73.11 'SGW'
Y = 465076.115
X = 843729.147
PT STA = 49+12.87 'SGW'
Y = 465064.719
X = 843766.902
DB = S60°32'53"E
DA = S85°51'36"E

PI STA = 50+59.08 'SGW'
Y = 465054.163
X = 843912.727
DELTA = 19°02'12" LT
D = 34°30'56"
T = 27.83'
L = 55.15'
R = 166.00'
PC STA = 50+31.24 'SGW'
Y = 465056.173
X = 843884.966
PT STA = 50+86.40 'SGW'
Y = 465061.319
X = 843939.625
DB = S85°51'36"E
DA = N75°06'12"E

PI STA = 40+75.40 'ERB'
Y = 466081.407
X = 841108.911
DELTA = 178°13'49" RT
D = 120°37'22"
T = 3075.40'
L = 147.76'
R = 47.50'
PC STA = 10+00.00 'ERB'
Y = 464985.465
X = 843982.412
PCC STA = 11+47.76 'ERB'
Y = 465074.730
X = 844014.888
DB = N69°07'24"W
DA = S70°53'35"E

N

USH 51 SB OFF-RAMP
USH 51 SB
USH 51 NB
USH 51 NB ON-RAMP
SIGGELKOW RD
322'C'
323'C'
922'SB'
922'NB'
222'B'
223'B'
11'WRB'
12'WRB'
11'ERB'
12'ERB'
PCC: 11+53.11 'WRB'
PT: 46+52.22 'SGW'
PC: 47+00.04 'SGW'
PC: 48+73.11 'SGW'
PT: 49+12.87 'SGW'
PC: 50+31.24 'SGW'
PT: 50+86.40 'SGW'
PCC: 11+47.76 'ERB'
PT: 52+74.81 'SGW'
PC: 53+25.05 'SGW'
47'SGW'
46'SGW'
47'SGE'
46'SGE'
49'SGW'
S85°51'36"E 50'SGW'
49'SGE'
S85°51'36"E 50'SGE'
53'SGW'
53'SGE'
PT: 46+26.45 'SGE'
PC: 46+84.19 'SGE'
BP: 10+00.00 'WRB'
EP: 12+98.45 'WRB'
PC: 48+68.04 'SGE'
PT: 49+23.19 'SGE'
920+79.59'SB' = 49+52.68'EB'
920+75.61'SB' = 50+02.84'EB'
PC: 50+41.57 'SGE'
PT: 50+81.33 'SGE'
BP: 10+00.00 'ERB'
EP: 12+98.45 'ERB'
PC: 52+65.13 'SGE'
920'SB'
920'NB'
120'A'
119'A'
120'D'
119'D'

PI STA = 23+15.13 'WRB'
Y = 464533.592
X = 844691.307
DELTA = 175°19'06" RT
D = 120°37'22"
T = 1162.03'
L = 145.34'
R = 47.50'
PCC STA = 11+53.11 'WRB'
Y = 465115.457
X = 843685.455
PT STA = 12+98.45 'WRB'
Y = 465031.421
X = 843641.321
DB = S59°57'05"E
DA = N64°37'59"W

PI STA = 48+95.87 'SGE'
Y = 465050.025
X = 843748.283
DELTA = 19°02'12" RT
D = 34°30'56"
T = 27.83'
L = 55.15'
R = 166.00'
PC STA = 48+68.04 'SGE'
Y = 465042.869
X = 843721.385
PT STA = 49+23.19 'SGE'
Y = 465048.015
X = 843776.044
DB = N75°06'12"E
DA = S85°51'36"E

PI STA = 50+61.78 'SGE'
Y = 465038.010
X = 843914.265
DELTA = 25°18'43" RT
D = 63°39'43"
T = 20.21'
L = 39.76'
R = 90.00'
PC STA = 50+41.57 'SGE'
Y = 465039.469
X = 843894.108
PT STA = 50+81.33 'SGE'
Y = 465028.073
X = 843931.863
DB = S85°51'36"E
DA = S60°32'53"E

PI STA = -19+27.64 'ERB'
Y = 466081.407
X = 841108.911
DELTA = 181°46'11" RT
D = 120°37'22"
T = 3075.40'
L = 150.69'
R = 47.50'
PCC STA = 11+47.76 'ERB'
Y = 465074.730
X = 844014.888
PT STA = 12+98.45 'ERB'
Y = 464985.465
X = 843982.412
DB = S70°53'35"E
DA = N69°07'24"W

USH 51 SB ON-RAMP
USH 51 NB OFF-RAMP

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT DIAGRAM - SIGGELKOW (CENTER)	SHEET 193	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027204_AD.DWG
LAYOUT NAME - - SIGGELKOW (CENTER)
PLOT DATE : 4/26/2024 10:24 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

2

2

PI STA = 52+47.32 'SGW'
Y = 465018.096
X = 844092.606
DELTA = 36°15'47" LT
D = 63°39'43"
T = 29.47'
L = 56.96'
R = 90.00'
PC STA = 52+17.85 'SGW'
Y = 465032.320
X = 844066.794
PT STA = 52+74.81 'SGW'
Y = 465021.895
X = 844121.831
DB = S61°08'32"E
DA = N82°35'41"E

PI STA = 53+62.11 'SGW'
Y = 465033.146
X = 844208.397
DELTA = 8°28'35" RT
D = 11°27'33"
T = 37.05'
L = 73.97'
R = 500.00'
PC STA = 53+25.05 'SGW'
Y = 465028.370
X = 844171.653
PT STA = 53+99.02 'SGW'
Y = 465032.453
X = 844245.444
DB = N82°35'41"E
DA = S88°55'43"E

PI STA = 56+41.15 'SGW'
Y = 465027.926
X = 844487.525
DELTA = 9°03'30" LT
D = 9°32'57"
T = 47.53'
L = 94.86'
R = 600.00'
PC STA = 55+93.62 'SGW'
Y = 465028.815
X = 844440.005
PT STA = 56+88.48 'SGW'
Y = 465034.530
X = 844534.593
DB = S88°55'43"E
DA = N82°00'47"E

N

USH 51 NB ON-RAMP

TRIANGLE ST

SIGGELKOW RD

PAULSON RD

USH 51 NB OFF-RAMP

PI STA = 53+11.47 'SGE'
Y = 465016.516
X = 844158.749
DELTA = 8°49'56" RT
D = 9°32'57"
T = 46.34'
L = 92.49'
R = 600.00'
PC STA = 52+65.13 'SGE'
Y = 465010.259
X = 844112.836
PT STA = 53+57.62 'SGE'
Y = 465015.650
X = 844205.078
DB = N82°14'21"E
DA = S88°55'43"E

PI STA = 54+51.44 'SGE'
Y = 465013.896
X = 844298.877
DELTA = 2°10'56" LT
D = 1°59'25"
T = 54.83'
L = 109.65'
R = 2878.79'
PC STA = 53+96.61 'SGE'
Y = 465014.921
X = 844244.056
PCC STA = 55+06.26 'SGE'
Y = 465014.959
X = 844353.698
DB = S88°55'43"E
DA = N88°53'20"E

PI STA = 55+54.32 'SGE'
Y = 465015.891
X = 844401.751
DELTA = 6°52'34" LT
D = 7°09'43"
T = 48.06'
L = 96.01'
R = 800.00'
PCC STA = 55+06.26 'SGE'
Y = 465014.959
X = 844353.698
PT STA = 56+02.26 'SGE'
Y = 465022.569
X = 844449.346
DB = N88°53'20"E
DA = N82°00'47"E

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT DIAGRAM - SIGGELKOW (EAST)	SHEET 194	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027203_AD.DWG
LAYOUT NAME - - SIGGELKOW (EAST)
PLOT DATE : 7/16/2024 3:46 PM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

2

2

N

EP: 16+55.64'RR'
Y = 463388.413
X = 843617.300

16'RR' 15'RR' 14'RR' 13'RR' 12'RR' 11'RR'

WISCONSIN & SOUTHERN RR

WISCONSIN & SOUTHERN RR

BP: 10+00.00'RR'
Y = 462893.588
X = 844047.431

14+09.60'RR' =
902+21.54'NB'

13+56.73'RR' =
901+93.35'NB'

N40°59'57"W

902'NB

904'NB

904'SB

USH 51 SB

USH 51 NB

RIPRAP

BIKE PATH

BIKE PATH

EP: 12+98.74'TRL'
Y = 463289.365
X = 843627.297

PI: 12+53.21'TRL'
Y = 463253.979
X = 843655.949

PT: 12+28.19'TRL'

PC: 11+97.68'TRL'

PT: 11+67.64'TRL'

PC: 11+38.61'TRL'

902'SB

PI: 10+30.33'TRL'
Y = 463092.976
X = 843809.137

BP: 10+00.00'TRL'
Y = 463069.982
X = 843828.920

11'TRL'

12'TRL'

N38°59'50"W

N40°08'24"W

N51°47'40"W

N40°42'21"W

N40°42'21"W

TAYLOR RD

TAYLOR RD

12'TY' 11'TY' 10'TY'

N40°42'21"W

10+24.74'TY' =
901+22.07'SB'

9+75.07'TY' =
900+95.98'NB'

EP: 12+70.30 'TY'
Y = 463257.150
X = 843632.279

BP: 9+50.00 'TY'
Y = 463014.338
X = 843841.174

PI STA = 12+12.99 'TRL'
Y = 463223.146
X = 843681.950
DELTA = 11°39'16" RT
D = 38°11'50"
T = 15.31'
L = 30.51'
R = 150.00'
PC STA = 11+97.68 'TRL'
Y = 463213.678
X = 843693.979
PT STA = 12+28.19 'TRL'
Y = 463234.849
X = 843672.081
DB = N51°47'40"W
DA = N40°08'24"W

PI STA = 11+53.17 'TRL'
Y = 463186.092
X = 843729.028
DELTA = 11°05'19" LT
D = 38°11'50"
T = 14.56'
L = 29.03'
R = 150.00'
PC STA = 11+38.61 'TRL'
Y = 463175.054
X = 843738.524
PT STA = 11+67.64 'TRL'
Y = 463195.097
X = 843717.586
DB = N40°42'21"W
DA = N51°47'40"W

900'NB

900'SB

USH 51 NB

USH 51 SB

RIPRAP

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT DIAGRAM - TAYLOR RD	SHEET 195	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027203_AD.DWG
LAYOUT NAME - - TAYLOR RD

PLOT DATE : 7/16/2024 3:46 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

N

PI STA = 40+08.51 'WNW'
Y = 465078.572
X = 843426.760
DELTA = 6°17'57" LT
D = 5°45'30"
T = 54.75'
L = 109.39'
R = 995.00'
PC STA = 39+53.76 'WNW'
Y = 465073.382
X = 843372.255
PT STA = 40+63.15 'WNW'
Y = 465089.711
X = 843480.366
DB = N84°33'40"E
DA = N78°15'42"E

PI STA = 41+31.86 'WNW'
Y = 465100.899
X = 843548.053
DELTA = 2°06'03" LT
D = 5°43'46"
T = 18.33'
L = 36.67'
R = 1000.00'
PC STA = 41+13.53 'WNW'
Y = 465096.272
X = 843530.312
PCC STA = 41+50.19 'WNW'
Y = 465106.173
X = 843565.613
DB = N75°22'56"E
DA = N73°16'53"E

PI STA = 41+88.30 'WNW'
Y = 465117.136
X = 843602.111
DELTA = 14°28'44" LT
D = 19°05'55"
T = 38.11'
L = 75.81'
R = 300.00'
PCC STA = 41+50.19 'WNW'
Y = 465106.173
X = 843565.613
PCC STA = 42+26.01 'WNW'
Y = 465136.876
X = 843634.708
DB = N73°16'53"E
DA = N58°48'09"E

PI STA = 42+77.74 'WNW'
Y = 465163.673
X = 843678.960
DELTA = 62°39'06" LT
D = 67°24'24"
T = 51.73'
L = 92.95'
R = 85.00'
PCC STA = 42+26.01 'WNW'
Y = 465136.876
X = 843634.708
PT STA = 43+18.95 'WNW'
Y = 465215.290
X = 843675.488
DB = N58°48'09"E
DA = N03°50'56"W

PI STA = 30+29.09 'WNE'
Y = 465137.190
X = 843699.784
DELTA = 46°37'55" RT
D = 84°52'57"
T = 29.09'
L = 54.94'
R = 67.50'
PC STA = 30+00.00 'WNE'
Y = 465141.197
X = 843670.969
PRC STA = 30+54.94 'WNE'
Y = 465113.490
X = 843716.658
DB = S82°04'55"E
DA = S35°27'00"E

PI STA = 30+92.59 'WNE'
Y = 465082.817
X = 843738.496
DELTA = 50°24'36" LT
D = 71°37'11"
T = 37.65'
L = 70.39'
R = 80.00'
PRC STA = 30+54.94 'WNE'
Y = 465113.490
X = 843716.658
PT STA = 31+25.32 'WNE'
Y = 465080.098
X = 843776.052
DB = S35°27'00"E
DA = S85°51'36"E

PI STA = 10+47.85 'WSW'
Y = 465034.974
X = 843428.018
DELTA = 5°15'59" LT
D = 11°06'14"
T = 23.73'
L = 47.43'
R = 516.00'
PC STA = 10+24.12 'WSW'
Y = 465034.041
X = 843404.305
PT STA = 10+71.55 'WSW'
Y = 465038.079
X = 843451.545
DB = N87°44'50"E
DA = N82°28'51"E

PI STA = 11+96.92 'WSW'
Y = 465064.037
X = 843573.968
DELTA = 76°23'40" RT
D = 76°23'40"
T = 42.68'
L = 77.61'
R = 75.00'
PC STA = 11+54.24 'WSW'
Y = 465053.246
X = 843532.671
PCC STA = 12+31.85 'WSW'
Y = 465034.044
X = 843604.335
DB = N75°21'21"E
DA = S45°21'19"E

PI STA = 12+77.27 'WSW'
Y = 465002.124
X = 843636.653
DELTA = 25°35'29" RT
D = 28°38'52"
T = 45.42'
L = 89.33'
R = 200.00'
PCC STA = 12+31.85 'WSW'
Y = 465034.044
X = 843604.335
PCC STA = 13+21.18 'WSW'
Y = 464959.377
X = 843652.012
DB = S45°21'19"E
DA = S19°45'50"E

PI STA = 13+65.09 'WSW'
Y = 464918.058
X = 843666.859
DELTA = 13°00'43" RT
D = 14°52'55"
T = 43.91'
L = 87.43'
R = 385.00'
PCC STA = 13+21.18 'WSW'
Y = 464959.377
X = 843652.012
PT STA = 14+08.61 'WSW'
Y = 464874.457
X = 843672.021
DB = S19°45'50"E
DA = S06°45'07"E

PI STA = 20+24.81 'WSE'
Y = 465003.106
X = 843671.553
DELTA = 40°22'10" LT
D = 84°52'57"
T = 24.81'
L = 47.56'
R = 67.50'
PC STA = 20+00.00 'WSE'
Y = 465008.387
X = 843647.307
PRC STA = 20+47.56 'WSE'
Y = 465014.788
X = 843693.446
DB = S77°42'50"E
DA = N61°55'00"E

PI STA = 20+90.89 'WSE'
Y = 465035.185
X = 843731.673
DELTA = 32°13'24" RT
D = 38°11'50"
T = 43.33'
L = 84.36'
R = 150.00'
PRC STA = 20+47.56 'WSE'
Y = 465014.788
X = 843693.446
PT STA = 21+31.92 'WSE'
Y = 465032.057
X = 843774.888
DB = N61°55'00"E
DA = S85°51'36"E

PC: 43+77.56 'WNW'
PT: 43+18.95 'WNW'
PCC: 42+26.01 'WNW'
PT: 40+63.15 'WNW'
PC: 41+13.53 'WNW'
PCC: 41+50.19 'WNW'
BP: 39+53.76 'WNW'
Y = 465073.382
X = 843372.255
N82°31'00"E
BP: 10+24.12 'WSW'
Y = 465034.041
X = 843404.305
PT: 10+71.55 'WSW'
PI: 11+18.60 'WSW'
Y = 465044.236
X = 843498.187
N82°28'51"E
N75°21'21"E
PC: 11+54.24 'WSW'
PCC: 12+31.85 'WSW'
PCC: 13+21.18 'WSW'
EP: 14+08.61 'WSW'
Y = 464874.457
X = 843672.021
BP: 30+00.00 'WNE'
Y = 465141.197
X = 843670.969
PRC: 30+54.94 'WNE'
PT: 31+25.32 'WNE'
EP: 31+68.17 'WNE'
Y = 465077.005
X = 843818.783
S85°51'36"E
BP: 20+00.00 'WSE'
Y = 465008.387
X = 843647.307
PRC: 20+47.56 'WSE'
PT: 21+31.92 'WSE'
EP: 21+72.85 'WSE'
Y = 465029.102
X = 843815.713
S85°51'36"E

USH 51 SB OFF-RAMP
USH 51 SB ON-RAMP
USH 51 SB
SIGGELKOW RD
SIGGELKOW RD
TERMINAL DR
INL
INL
322'C'
323'C'
922'SB'
921'SB'
920'SB'
43'WNW'
44'WNW'
42'WNW'
41'WNW'
40'WNW'
47'WB'
47'EB'
46'WB'
46'EB'
45'WB'
45'EB'
44'WB'
44'EB'
43'EB'
11'WRR'
12'WRR'
49'WB'
49'EB'
31'WNE'
11'WSW'
12'WSW'
13'WSW'
14'WSW'
21'WSE'
42'D'
41'D'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT DIAGRAM - SIGGELKOW EOP (WEST)	SHEET 196	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027210_AD.DWG
LAYOUT NAME - - SIGGELKOW EOP (WEST)
PLOT DATE : 7/16/2024 4:15 PM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

2

PI STA = 70+35.35 'ENE'
Y = 465150.791
X = 844008.939
DELTA = 20°02'44" LT
D = 28°38'52"
T = 35.35'
L = 69.97'
R = 200.00'
PC STA = 70+00.00 'ENE'
Y = 465184.712
X = 843998.997
PCC STA = 70+69.97 'ENE'
Y = 465122.333
X = 844029.906
DB = S16°20'08"E
DA = S36°22'53"E

PI STA = 70+91.25 'ENE'
Y = 465105.203
X = 844042.527
DELTA = 31°40'41" LT
D = 76°23'40"
T = 21.28'
L = 41.47'
R = 75.00'
PCC STA = 70+69.97 'ENE'
Y = 465122.333
X = 844029.906
PCC STA = 71+11.44 'ENE'
Y = 465097.252
X = 844062.264
DB = S36°22'53"E
DA = S68°03'34"E

PI STA = 71+75.81 'ENE'
Y = 465073.201
X = 844121.970
DELTA = 12°14'48" LT
D = 9°32'57"
T = 64.37'
L = 128.25'
R = 600.00'
PCC STA = 71+11.44 'ENE'
Y = 465097.252
X = 844062.264
PT STA = 72+39.69 'ENE'
Y = 465062.362
X = 844185.419
DB = S68°03'34"E
DA = S80°18'21"E

PI STA = 73+04.78 'ENE'
Y = 465059.365
X = 844250.382
DELTA = 4°48'08" LT
D = 9°37'46"
T = 24.95'
L = 49.87'
R = 595.00'
PC STA = 72+79.83 'ENE'
Y = 465061.919
X = 844225.563
PT STA = 73+29.70 'ENE'
Y = 465058.899
X = 844275.327
DB = S84°07'35"E
DA = S88°55'43"E

PI STA = 80+81.10 'ENW'
Y = 465069.003
X = 843929.337
DELTA = 32°13'24" LT
D = 38°11'50"
T = 43.33'
L = 84.36'
R = 150.00'
PC STA = 80+37.77 'ENW'
Y = 465072.131
X = 843886.121
PRC STA = 81+22.14 'ENW'
Y = 465089.400
X = 843967.564
DB = S85°51'36"E
DA = N61°55'00"E

PI STA = 81+51.14 'ENW'
Y = 465103.055
X = 843993.155
DELTA = 46°30'34" RT
D = 84°52'57"
T = 29.01'
L = 54.79'
R = 67.50'
PRC STA = 81+22.14 'ENW'
Y = 465089.400
X = 843967.564
PT STA = 81+76.93 'ENW'
Y = 465093.886
X = 844020.675
DB = N61°55'00"E
DA = S71°34'25"E

PI STA = 50+72.53 'ESW'
Y = 465021.371
X = 843922.514
DELTA = 50°24'36" RT
D = 71°37'11"
T = 37.65'
L = 70.39'
R = 80.00'
PC STA = 50+34.87 'ESW'
Y = 465024.090
X = 843884.958
PRC STA = 51+05.26 'ESW'
Y = 464990.698
X = 843944.352
DB = S85°51'36"E
DA = S35°27'00"E

PI STA = 51+38.95 'ESW'
Y = 464963.253
X = 843963.892
DELTA = 53°02'54" LT
D = 84°52'57"
T = 33.69'
L = 62.50'
R = 67.50'
PRC STA = 51+05.26 'ESW'
Y = 464990.698
X = 843944.352
PT STA = 51+67.76 'ESW'
Y = 464962.370
X = 843997.570
DB = S35°27'00"E
DA = S88°29'54"E

PI STA = 60+79.60 'ESE'
Y = 464808.182
X = 844007.053
DELTA = 7°27'58" LT
D = 10°59'50"
T = 33.99'
L = 67.89'
R = 521.00'
PC STA = 60+45.61 'ESE'
Y = 464774.421
X = 844003.084
PT STA = 61+13.49 'ESE'
Y = 464842.172
X = 844006.602
DB = N06°42'20"E
DA = N00°45'38"W

PI STA = 62+22.31 'ESE'
Y = 464950.050
X = 843992.922
DELTA = 72°32'30" RT
D = 76°23'40"
T = 55.03'
L = 94.96'
R = 75.00'
PC STA = 61+67.27 'ESE'
Y = 464895.536
X = 844000.472
PCC STA = 62+62.23 'ESE'
Y = 464973.607
X = 844042.659
DB = N07°53'08"W
DA = N64°39'23"E

PI STA = 62+83.66 'ESE'
Y = 464982.781
X = 844062.029
DELTA = 12°13'59" RT
D = 28°38'52"
T = 21.43'
L = 42.70'
R = 200.00'
PCC STA = 62+62.23 'ESE'
Y = 464973.607
X = 844042.659
PCC STA = 63+04.93 'ESE'
Y = 464987.643
X = 844082.902
DB = N64°39'23"E
DA = N76°53'21"E

PI STA = 63+23.95 'ESE'
Y = 464991.956
X = 844101.422
DELTA = 3°37'50" RT
D = 9°32'57"
T = 19.02'
L = 38.02'
R = 600.00'
PCC STA = 63+04.93 'ESE'
Y = 464987.643
X = 844082.902
PT STA = 63+42.95 'ESE'
Y = 464995.088
X = 844120.178
DB = N76°53'21"E
DA = N80°31'11"E

PI STA = 64+18.25 'ESE'
Y = 464998.830
X = 844195.310
DELTA = 6°41'56" RT
D = 9°37'46"
T = 34.82'
L = 69.57'
R = 595.00'
PC STA = 63+83.43 'ESE'
Y = 464995.415
X = 844160.655
PT STA = 64+52.99 'ESE'
Y = 464998.179
X = 844230.127
DB = N84°22'20"E
DA = S88°55'43"E

PI STA = 65+04.36 'ESE'
Y = 464997.218
X = 844281.481
DELTA = 1°29'37" LT
D = 1°58'43"
T = 37.75'
L = 75.49'
R = 2895.79'
PC STA = 64+66.61 'ESE'
Y = 464997.924
X = 844243.738
PT STA = 65+42.10 'ESE'
Y = 464997.497
X = 844319.229
DB = S88°55'43"E
DA = N89°34'39"E

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT DIAGRAM - SIGGELKOW EOP (EAST)	SHEET 197 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027210_AD.DWG
LAYOUT NAME - - SIGGELKOW EOP (EAST)
PLOT DATE : 7/16/2024 4:15 PM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

2

2

N

PI STA = 100+70.89 'S1L'
Y = 465064.004
X = 844099.386
DELTA = 10°47'58" LT
D = 9°18'05"
T = 58.23'
L = 116.11'
R = 616.00'
PC STA = 100+12.67 'S1L'
Y = 465086.753
X = 844045.788
PCC STA = 101+28.77 'S1L'
Y = 465051.702
X = 844156.297
DB = S67°00'10"E
DA = S77°48'07"E

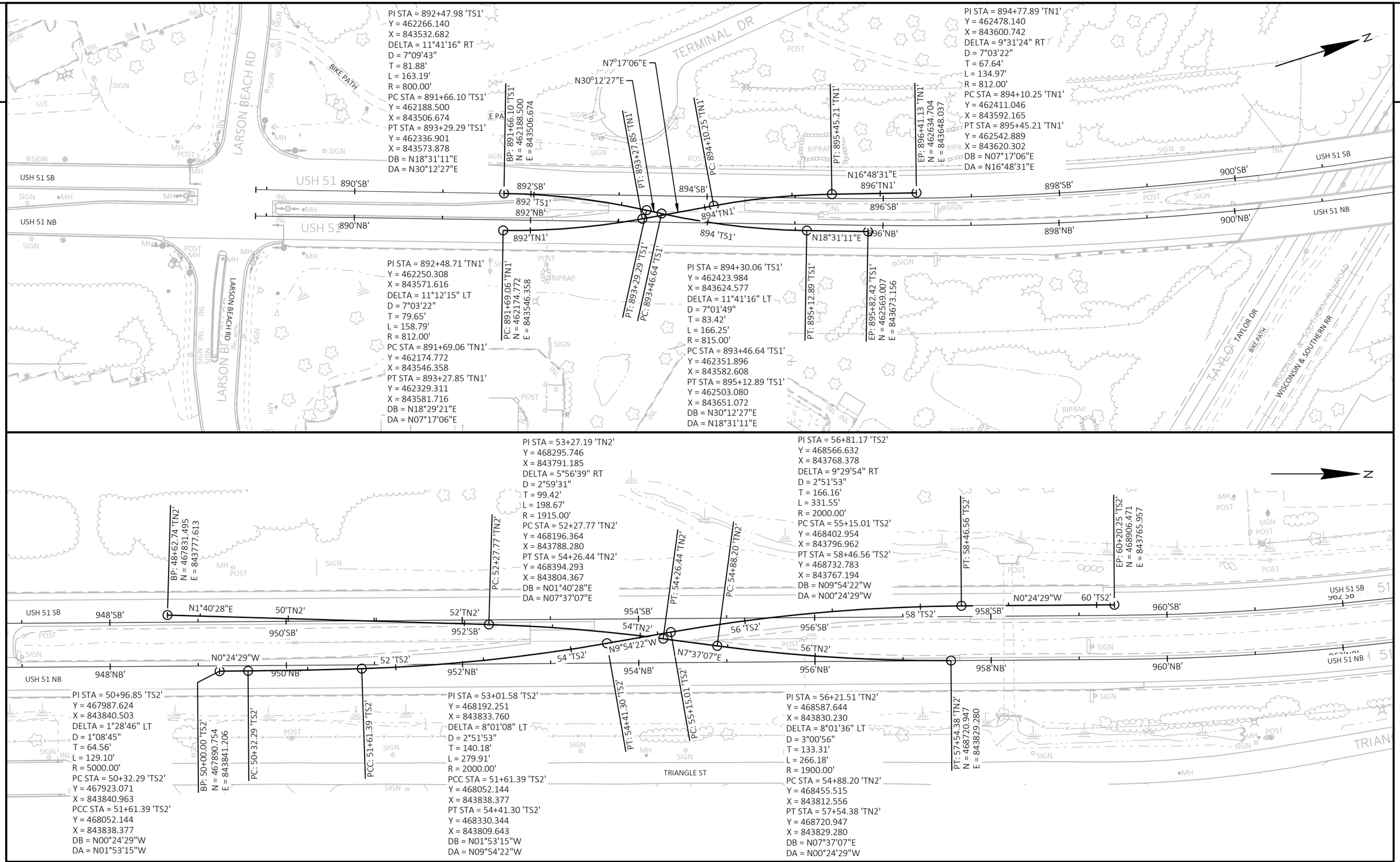
PI STA = 101+62.87 'S1L'
Y = 465044.499
X = 844189.619
DELTA = 11°07'36" LT
D = 16°22'13"
T = 34.09'
L = 67.97'
R = 350.00'
PCC STA = 101+28.77 'S1L'
Y = 465051.702
X = 844156.297
PT STA = 101+96.74 'S1L'
Y = 465043.861
X = 844223.705
DB = S77°48'07"E
DA = S88°55'43"E

PI STA = 90+63.16 'S1R'
Y = 465067.261
X = 844055.955
DELTA = 17°12'39" LT
D = 114°35'30"
T = 7.57'
L = 15.02'
R = 50.00'
PC STA = 90+55.60 'S1R'
Y = 465073.970
X = 844052.456
PCC STA = 90+70.62 'S1R'
Y = 465061.888
X = 844061.283
DB = S27°32'47"E
DA = S44°45'26"E

PI STA = 91+10.20 'S1R'
Y = 465033.782
X = 844089.151
DELTA = 52°38'52" LT
D = 71°37'11"
T = 39.58'
L = 73.51'
R = 80.00'
PCC STA = 90+70.62 'S1R'
Y = 465061.888
X = 844061.283
PT STA = 91+44.13 'S1R'
Y = 465038.883
X = 844128.401
DB = S44°45'26"E
DA = N82°35'41"E

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT DIAGRAM - SIGGELKOW (SPLITTER ISLAND)	SHEET 198 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027211_AD.DWG
LAYOUT NAME - - SIGGELKOW (SPLITTER ISLAND)
PLOT DATE : 7/16/2024 4:19 PM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT DIAGRAM - MAINLINE CROSSOVERS	SHEET 199	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027215_AD.DWG
LAYOUT NAME - - MAINLINE CROSSOVERS
PLOT DATE : 4/26/2024 10:27 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

N

PI STA = 30+64.07 'TR1'
Y = 466041.209
X = 843764.346
DELTA = 19°03'42" RT
D = 9°32'57"
T = 100.74'
L = 199.61'
R = 600.00'
PC STA = 29+63.33 'TR1'
Y = 465940.570
X = 843759.904
PT STA = 31+62.94 'TR1'
Y = 466134.879
X = 843801.411
DB = N02°31'38"E
DA = N21°35'19"E

PI STA = 35+26.63 'TR2'
Y = 466502.394
X = 843771.187
DELTA = 15°52'35" RT
D = 9°32'57"
T = 83.66'
L = 166.26'
R = 600.00'
PC STA = 34+42.96 'TR2'
Y = 466418.810
X = 843767.498
PT STA = 36+09.22 'TR2'
Y = 466581.780
X = 843797.601
DB = N02°31'38"E
DA = N18°24'13"E

BP: 29+11.08 'TR1'
N = 465888.375
E = 843757.601

PC: 29+63.33 'TR1'

STA 31+52.81'TR1' =
STA 931+59.16'SB'
Y=466,125.429
X=843,797.764

PT: 31+62.94 'TR1'

BP: 32+21.97 'TR2'
N = 466198.035
E = 843757.755

PC: 34+42.96 'TR2'

STA 35+99.41'TR2' =
STA 936+06.19'SB'
Y=466,572.447
X=843,794.580

PT: 36+09.22 'TR2'

PC: 36+49.11 'TR2'

EP: 38+46.11 'TR2'
N = 466813.328
E = 843840.866

STA 38+46.11'TR2' =
STA 938+46.73'NB'

STA 33+94.92'TR1' =
STA 933+94.82'NB'

N2°31'38"E 30 'TR1'

N2°31'38"E 34'TR2'

N21°35'19"E 32 'TR1'

N18°24'13"E 36'TR2'

38'TR2'

USH 51 SB

928'SB' 930'SB' 932'SB' 934'SB' 936'SB' 938'SB' 940'SB'

USH 51 NB

928'NB' 930'NB' 932'NB' 934'NB' 936'NB' 938'NB' 940'NB'

RAMP 'C'

RAMP 'B'

TRIANGLE ST

PC: 31+64.57 'TR1'

EP: 33+94.92 'TR1'
N = 466361.427
E = 843844.084

PI STA = 32+81.18 'TR1'
Y = 466244.820
X = 843844.915
DELTA = 21°59'48" LT
D = 9°32'57"
T = 116.61'
L = 230.35'
R = 600.00'
PC STA = 31+64.57 'TR1'
Y = 466136.390
X = 843802.009
PT STA = 33+94.92 'TR1'
Y = 466361.427
X = 843844.084
DB = N21°35'19"E
DA = N00°24'29"W

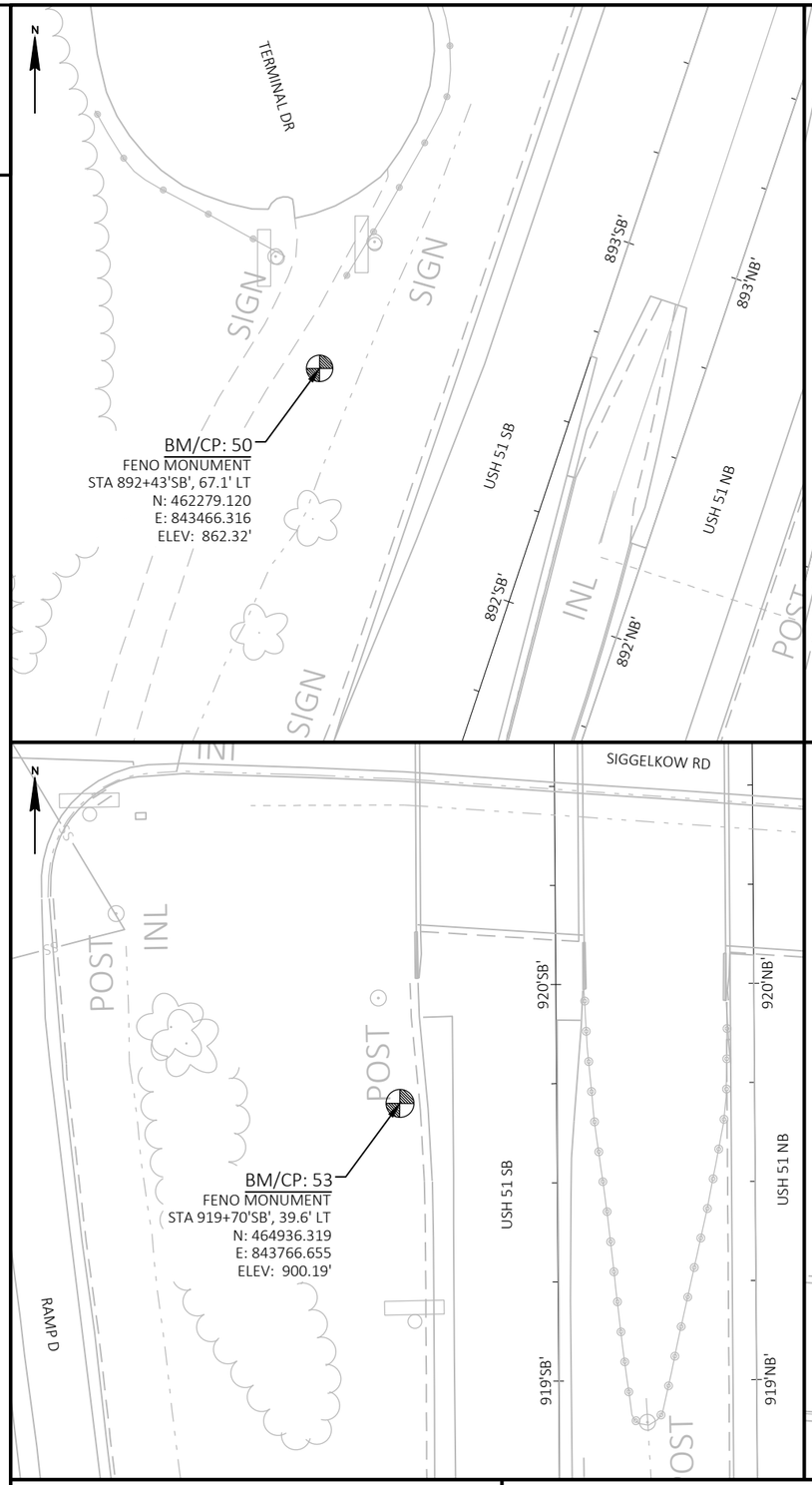
PI STA = 37+48.51 'TR2'
Y = 466713.939
X = 843841.574
DELTA = 18°48'42" LT
D = 9°32'57"
T = 99.39'
L = 196.99'
R = 600.00'
PC STA = 36+49.11 'TR2'
Y = 466619.631
X = 843810.195
PT STA = 38+46.11 'TR2'
Y = 466813.328
X = 843840.866
DB = N18°24'13"E
DA = N00°24'29"W

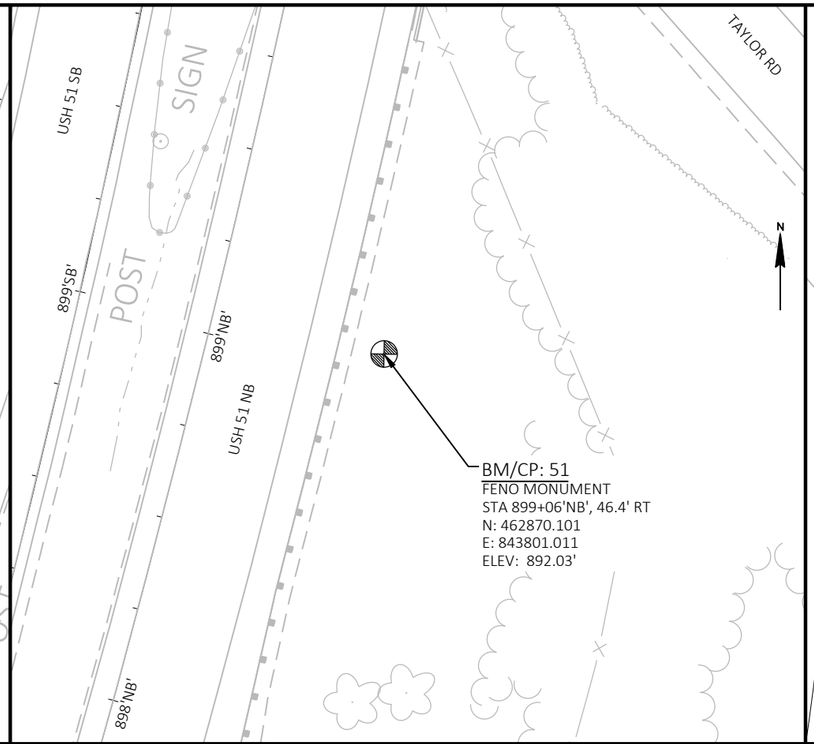
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT DIAGRAM - RAMP C CROSSOVERS	SHEET 200	E

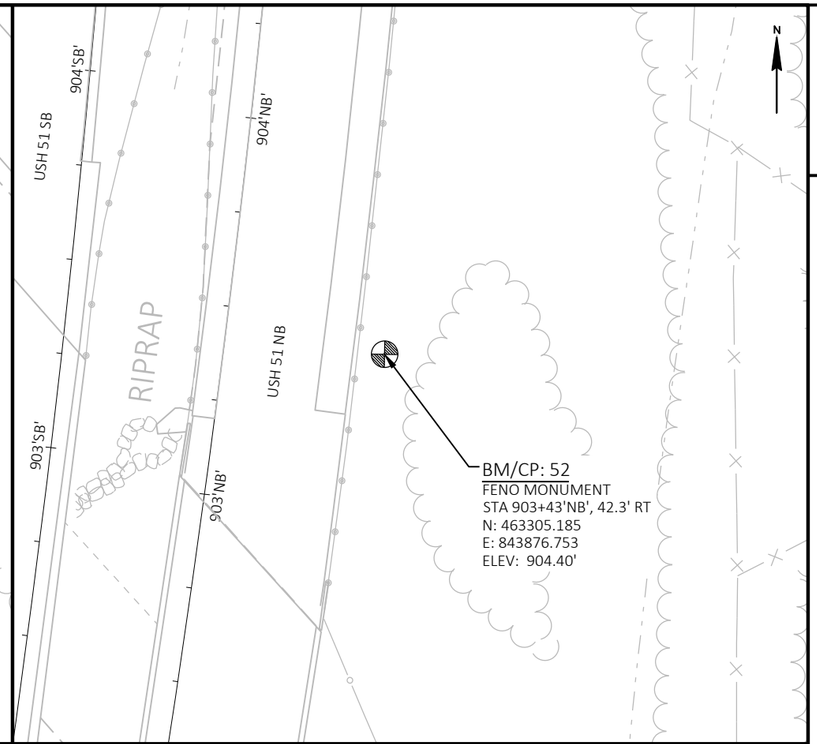
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027215_AD.DWG
LAYOUT NAME - - RAMP C CROSSOVERS

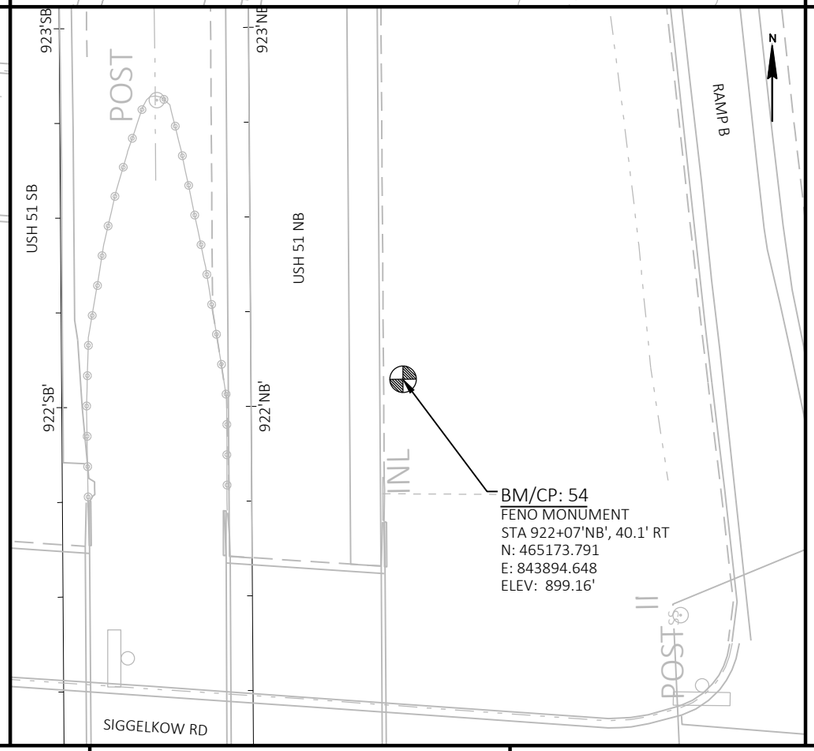
PLOT DATE : 4/26/2024 10:28 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

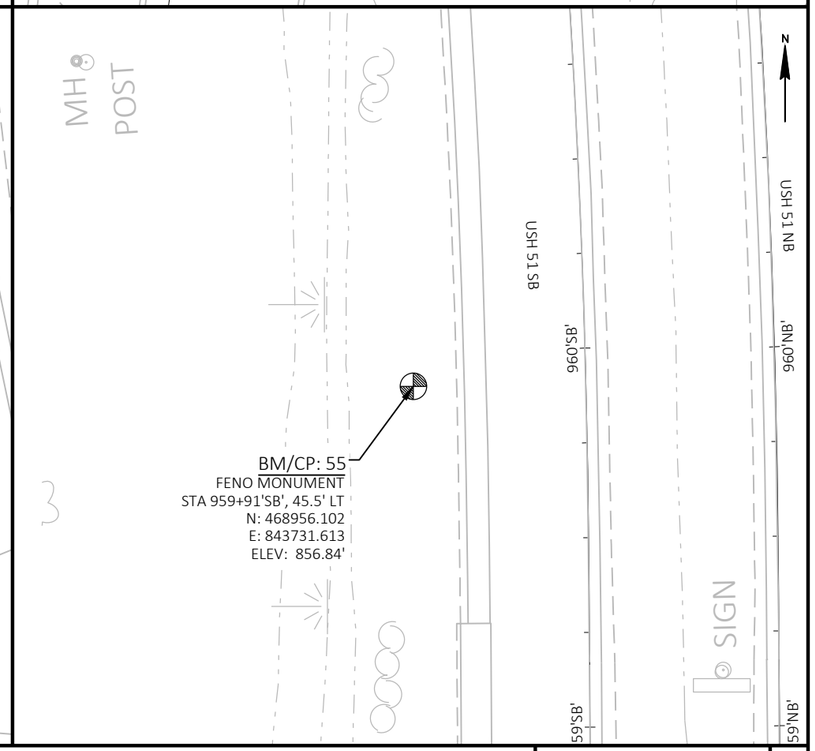
WISDOT/CADDS SHEET 42





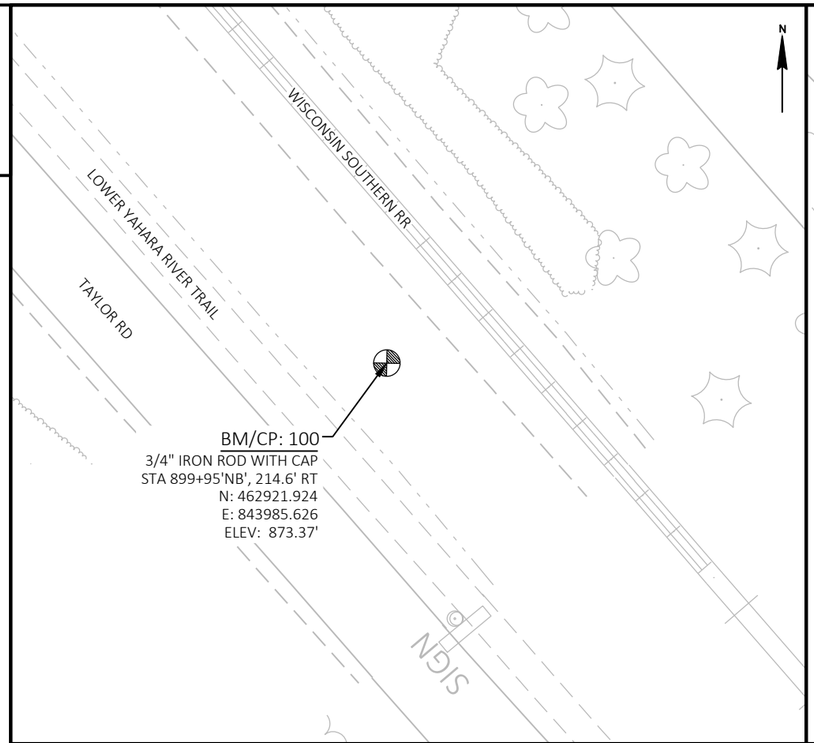


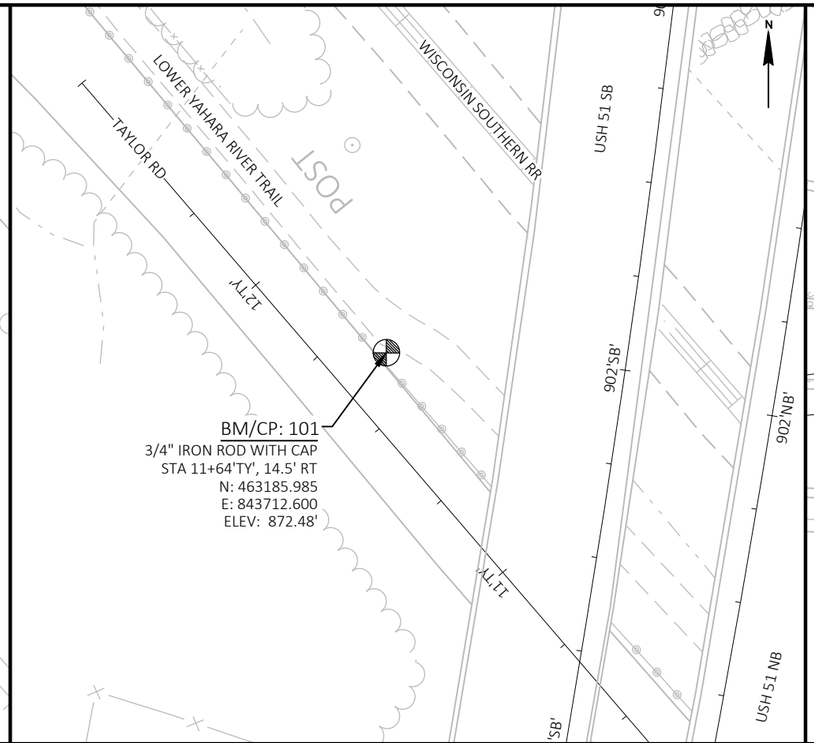


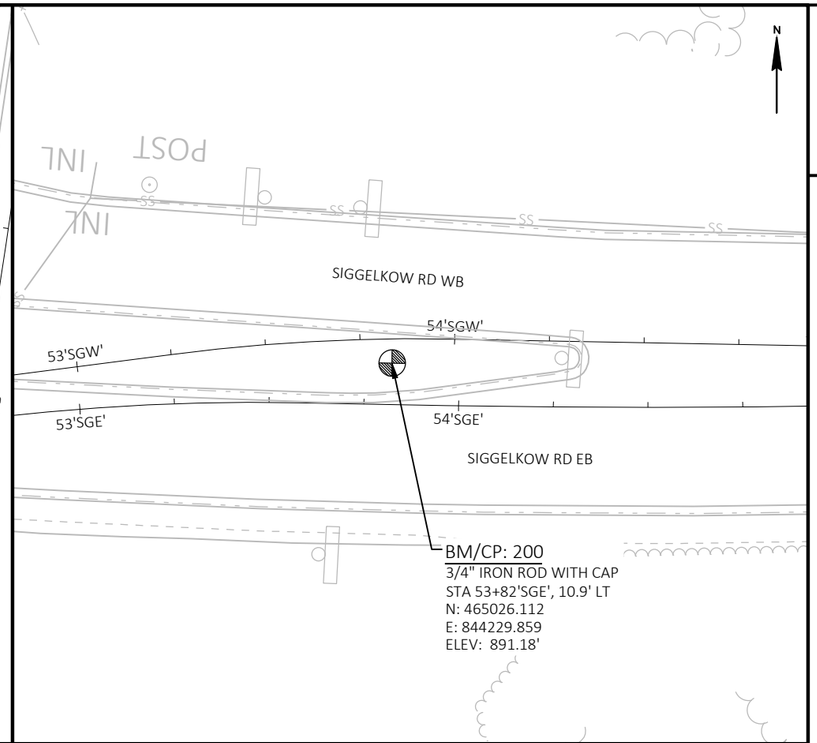


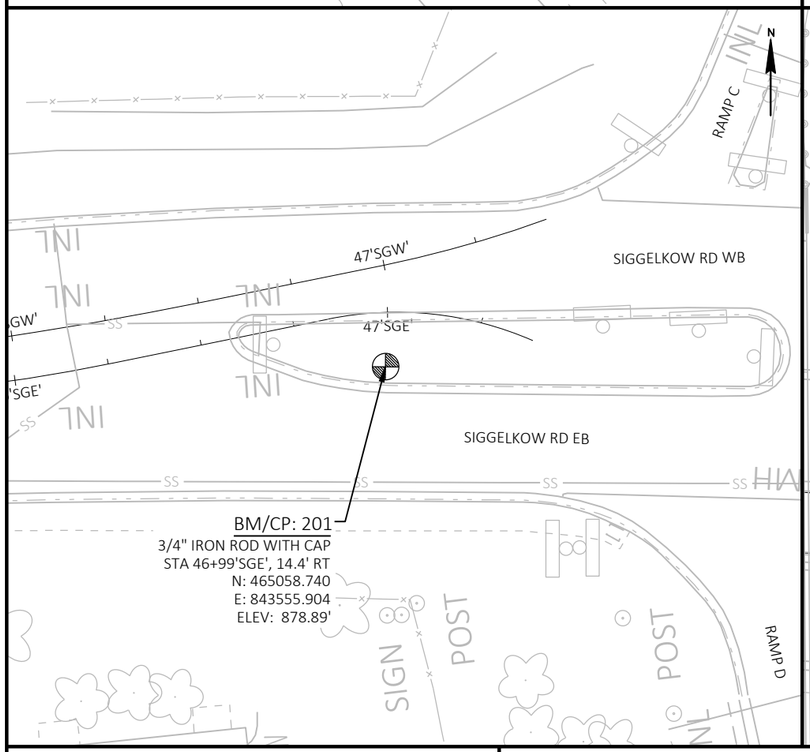
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT LAYOUT SURVEY CONTROL	SHEET 201	E

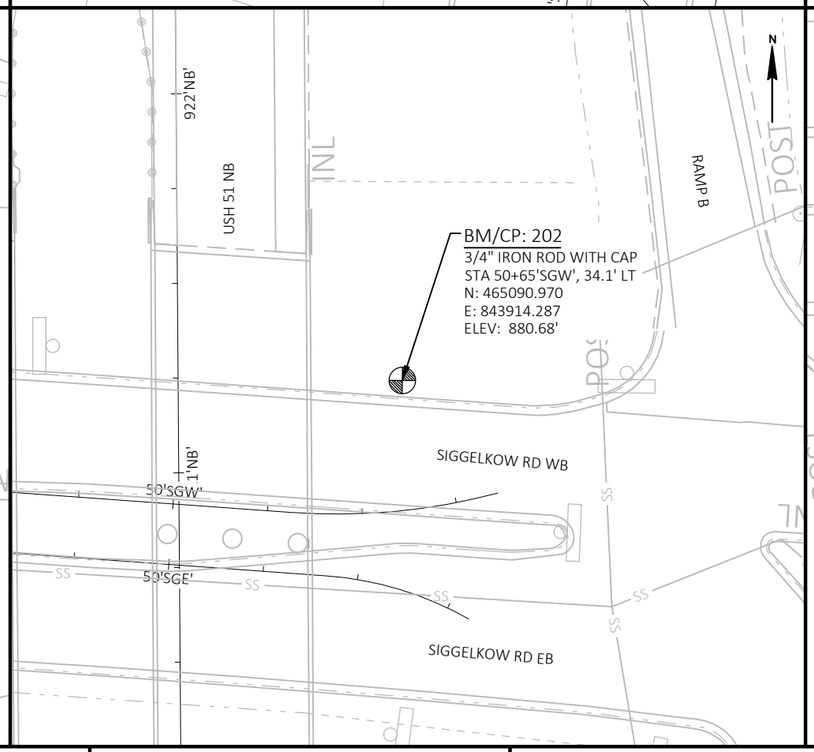
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027220_AD-CP.DWG
LAYOUT NAME - 01
PLOT DATE : 4/26/2024 10:31 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

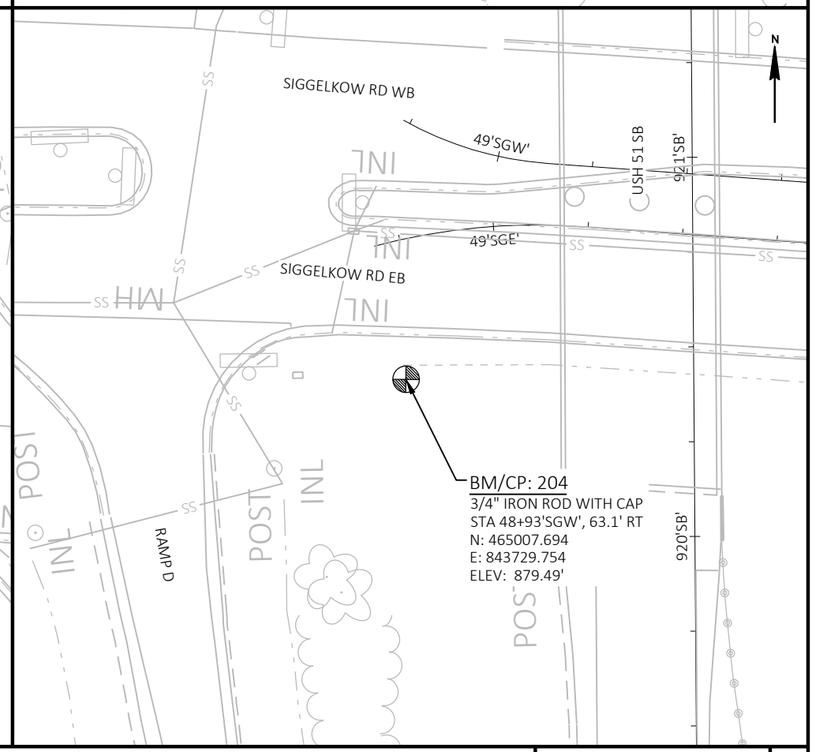












PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	ALIGNMENT LAYOUT SURVEY CONTROL	SHEET 202	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_027220_AD-CP.DWG
LAYOUT NAME - 02
PLOT DATE : 4/26/2024 10:31 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

Estimate Of Quantities

5845-16-77

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	36.000	36.000
0004	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0006	203.0220	Removing Structure (structure) 01. B-13-0060	EACH	1.000	1.000
0008	203.0220	Removing Structure (structure) 02. B-13-387	EACH	1.000	1.000
0010	203.0220	Removing Structure (structure) 03. B-13-388	EACH	1.000	1.000
0012	203.0330	Debris Containment (structure) 01. B-13-0060	EACH	1.000	1.000
0014	204.0100	Removing Concrete Pavement	SY	42,958.000	42,958.000
0016	204.0110	Removing Asphaltic Surface	SY	991.000	991.000
0018	204.0120	Removing Asphaltic Surface Milling	SY	540.000	540.000
0020	204.0130	Removing Curb	LF	122.000	122.000
0022	204.0150	Removing Curb & Gutter	LF	3,920.000	3,920.000
0024	204.0155	Removing Concrete Sidewalk	SY	990.000	990.000
0026	204.0165	Removing Guardrail	LF	3,380.000	3,380.000
0028	204.0170	Removing Fence	LF	790.000	790.000
0030	204.0180	Removing Delineators and Markers	EACH	142.000	142.000
0032	204.0210	Removing Manholes	EACH	6.000	6.000
0034	204.0220	Removing Inlets	EACH	42.000	42.000
0036	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	145.000	145.000
0038	204.0245	Removing Storm Sewer (size) 02. 15-Inch	LF	1,340.000	1,340.000
0040	204.0245	Removing Storm Sewer (size) 03. 18-Inch	LF	501.000	501.000
0042	204.0245	Removing Storm Sewer (size) 04. 24-Inch	LF	1,052.000	1,052.000
0044	204.0245	Removing Storm Sewer (size) 05. 19x30-Inch	LF	391.000	391.000
0046	204.0280	Sealing Pipes	EACH	2.000	2.000
0048	204.9060.S	Removing (item description) 01. Retaining Wall 'WNW'	EACH	1.000	1.000
0050	204.9060.S	Removing (item description) 02. Retaining Wall 'ESE'	EACH	1.000	1.000
0052	204.9090.S	Removing (item description) 01. Surface Drain Pipe Corrugated Metal Slotted 12-Inch	LF	184.000	184.000
0054	205.0100	Excavation Common	CY	86,148.000	86,148.000
0056	206.1001	Excavation for Structures Bridges (structure) 01. B-13-899	EACH	1.000	1.000
0058	206.1001	Excavation for Structures Bridges (structure) 02. B-13-387	EACH	1.000	1.000
0060	206.1001	Excavation for Structures Bridges (structure) 03. B-13-388	EACH	1.000	1.000
0062	206.3001	Excavation for Structures Retaining Walls (structure) 01. R-13-374	EACH	1.000	1.000
0064	206.3001	Excavation for Structures Retaining Walls (structure) 02. R-13-386	EACH	1.000	1.000
0066	210.1500	Backfill Structure Type A	TON	1,260.000	1,260.000
0068	213.0100	Finishing Roadway (project) 01. 5845-16-77	EACH	1.000	1.000
0070	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,058.000	2,058.000
0072	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	46,042.000	46,042.000
0074	305.0130	Base Aggregate Dense 3-Inch	TON	220.000	220.000
0076	310.0110	Base Aggregate Open-Graded	TON	495.000	495.000
0078	312.0110	Select Crushed Material	TON	70,270.000	70,270.000
0080	405.0100	Coloring Concrete WisDOT Red	CY	206.000	206.000
0082	405.0200	Coloring Concrete Custom	CY	97.000	97.000
0084	415.0080	Concrete Pavement 8-Inch	SY	52,050.000	52,050.000
0086	415.0410	Concrete Pavement Approach Slab	SY	531.000	531.000
0088	415.2010	Concrete Truck Apron 12-inch	SY	600.000	600.000
0090	415.4100	Concrete Pavement Joint Filling	SY	4,990.000	4,990.000
0092	415.6000.S	Rout and Seal	LF	24,470.000	24,470.000
0094	416.0610	Drilled Tie Bars	EACH	459.000	459.000
0096	416.0620	Drilled Dowel Bars	EACH	88.000	88.000
0098	450.4000	HMA Cold Weather Paving	TON	662.000	662.000

5845-16-77

Line	Item	Item Description	Unit	Total	Qty
0100	455.0605	Tack Coat	GAL	1,262.000	1,262.000
0102	460.2000	Incentive Density HMA Pavement	DOL	3,460.000	3,460.000
0104	460.6224	HMA Pavement 4 MT 58-28 S	TON	4,782.000	4,782.000
0106	465.0105	Asphaltic Surface	TON	74.000	74.000
0108	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	19.000	19.000
0110	465.0310	Asphaltic Curb	LF	221.000	221.000
0112	465.0315	Asphaltic Flumes	SY	50.000	50.000
0114	465.0510	Asphaltic Rumble Strips, Shoulder Divided Roadway	LF	10,166.000	10,166.000
0116	501.1000.S	Ice Hot Weather Concreting	LB	10,115.000	10,115.000
0118	502.0100	Concrete Masonry Bridges	CY	1,358.000	1,358.000
0120	502.3101	Expansion Device	LF	229.000	229.000
0122	502.3200	Protective Surface Treatment	SY	1,656.000	1,656.000
0124	502.3210	Pigmented Surface Sealer	SY	613.000	613.000
0126	502.4204	Adhesive Anchors No. 4 Bar	EACH	14.000	14.000
0128	502.4205	Adhesive Anchors No. 5 Bar	EACH	133.000	133.000
0130	503.0137	Prestressed Girder Type I 36W-Inch	LF	2,195.000	2,195.000
0132	504.0500	Concrete Masonry Retaining Walls	CY	39.100	39.100
0134	505.0400	Bar Steel Reinforcement HS Structures	LB	30,250.000	30,250.000
0136	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	260,560.000	260,560.000
0138	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	1,680.000	1,680.000
0140	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	32.000	32.000
0142	506.2610	Bearing Pads Elastomeric Laminated	EACH	16.000	16.000
0144	506.4000	Steel Diaphragms (structure) 01. B-13-899	EACH	35.000	35.000
0146	509.1000	Joint Repair	SY	46.000	46.000
0148	509.1500	Concrete Surface Repair	SF	8.000	8.000
0150	509.2100.S	Concrete Masonry Deck Repair	CY	22.000	22.000
0152	511.1200	Temporary Shoring (structure) 01. B-13-899	SF	175.000	175.000
0154	511.1200	Temporary Shoring (structure) 02. R-13-375	SF	600.000	600.000
0156	511.1200	Temporary Shoring (structure) 03. R-13-376	SF	600.000	600.000
0158	511.1200	Temporary Shoring (structure) 04. R-13-378	SF	1,500.000	1,500.000
0160	513.8016	Railing Steel Pedestrian Type C3	LF	738.900	738.900
0162	516.0500	Rubberized Membrane Waterproofing	SY	42.000	42.000
0164	517.1010.S	Concrete Staining (structure) 01. R-13-374	SF	190.000	190.000
0166	517.1010.S	Concrete Staining (structure) 02. R-13-375	SF	110.000	110.000
0168	517.1010.S	Concrete Staining (structure) 03. R-13-376	SF	100.000	100.000
0170	517.1010.S	Concrete Staining (structure) 04. R-13-377	SF	325.000	325.000
0172	517.1010.S	Concrete Staining (structure) 05. R-13-378	SF	210.000	210.000
0174	517.1801.S	Structure Repainting Recycled Abrasive (structure) 01. B-13-386	EACH	1.000	1.000
0176	517.4501.S	Negative Pressure Containment and Collection of Waste Materials (structure) 01. B-13-386	EACH	1.000	1.000
0178	517.6001.S	Portable Decontamination Facility	EACH	1.000	1.000
0180	520.8000	Concrete Collars for Pipe	EACH	4.000	4.000
0182	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	2.000	2.000
0184	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	3.000	3.000
0186	522.2619	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	3.000	3.000
0188	530.0112	Culvert Pipe Corrugated Polyethylene 12-Inch	LF	131.000	131.000
0190	531.1100	Concrete Masonry Ancillary Structures Type NS	CY	5.400	5.400
0192	531.1140	Steel Reinforcement HS Ancillary Structures Type NS	LB	813.000	813.000
0194	531.2024	Drilling Shaft 24-Inch	LF	45.500	45.500

5845-16-77

Line	Item	Item Description	Unit	Total	Qty
0196	531.2036	Drilling Shaft 36-Inch	LF	18.000	18.000
0198	531.2042	Drilling Shaft 42-Inch	LF	18.000	18.000
0200	531.5310	Foundation Single-Shaft Type TC-I (structure) 01. S-13-595	EACH	1.000	1.000
0202	531.5340	Foundation Single-Shaft Type TC-IV (structure) 01. S-13-594	EACH	1.000	1.000
0204	532.5310	Truss Cantilever 2-Chord Type I (structure) 01. S-13-595	EACH	1.000	1.000
0206	532.5340	Truss Cantilever 2-Chord Type IV (structure) 01. S-13-594	EACH	1.000	1.000
0208	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	5,285.000	5,285.000
0210	601.0405	Concrete Curb & Gutter 18-Inch Type A	LF	408.000	408.000
0212	601.0407	Concrete Curb & Gutter 18-Inch Type D	LF	173.000	173.000
0214	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	3,614.000	3,614.000
0216	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	1,835.000	1,835.000
0218	601.0551	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	LF	3,159.000	3,159.000
0220	601.0580	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type R	LF	572.000	572.000
0222	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	238.000	238.000
0224	601.0600	Concrete Curb Pedestrian	LF	319.000	319.000
0226	602.0405	Concrete Sidewalk 4-Inch	SF	6,863.000	6,863.000
0228	602.0410	Concrete Sidewalk 5-Inch	SF	26,622.000	26,622.000
0230	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	386.000	386.000
0232	602.0810	Concrete Driveway 6-Inch	SY	199.000	199.000
0234	602.3010	Concrete Surface Drains	CY	1.200	1.200
0236	602.3210	Concrete Rumble Strips, Shoulder Divided Roadway	LF	7,978.000	7,978.000
0238	603.1442	Concrete Barrier Type S42C	LF	637.000	637.000
0240	603.8000	Concrete Barrier Temporary Precast Delivered	LF	12,380.000	12,380.000
0242	603.8125	Concrete Barrier Temporary Precast Installed	LF	12,380.000	12,380.000
0244	604.0500	Slope Paving Crushed Aggregate	SY	721.000	721.000
0246	604.9010.S	Slope Paving Repair Crushed Aggregate	CY	5.000	5.000
0248	604.9015.S	Reseal Crushed Aggregate Slope Paving	SY	1,169.000	1,169.000
0250	606.0200	Riprap Medium	CY	101.000	101.000
0252	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	897.000	897.000
0254	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	111.000	111.000
0256	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	1,211.000	1,211.000
0258	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	2,231.000	2,231.000
0260	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	454.000	454.000
0262	608.2319	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 19x30-Inch	LF	408.000	408.000
0264	608.2324	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 24x38-Inch	LF	400.000	400.000
0266	608.3015	Storm Sewer Pipe Class III-A 15-Inch	LF	73.000	73.000
0268	611.0430	Reconstructing Inlets	EACH	1.000	1.000
0270	611.0530	Manhole Covers Type J	EACH	10.000	10.000
0272	611.0610	Inlet Covers Type BW	EACH	3.000	3.000
0274	611.0612	Inlet Covers Type C	EACH	1.000	1.000
0276	611.0624	Inlet Covers Type H	EACH	24.000	24.000
0278	611.0627	Inlet Covers Type HM	EACH	10.000	10.000
0280	611.0639	Inlet Covers Type H-S	EACH	11.000	11.000
0282	611.0642	Inlet Covers Type MS	EACH	31.000	31.000
0284	611.0651	Inlet Covers Type S	EACH	1.000	1.000
0286	611.0652	Inlet Covers Type T	EACH	5.000	5.000
0288	611.0654	Inlet Covers Type V	EACH	4.000	4.000
0290	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0292	611.2005	Manholes 5-FT Diameter	EACH	13.000	13.000

5845-16-77

Line	Item	Item Description	Unit	Total	Qty
0294	611.2006	Manholes 6-FT Diameter	EACH	4.000	4.000
0296	611.2008	Manholes 8-FT Diameter	EACH	2.000	2.000
0298	611.3004	Inlets 4-FT Diameter	EACH	11.000	11.000
0300	611.3220	Inlets 2x2-FT	EACH	4.000	4.000
0302	611.3225	Inlets 2x2.5-FT	EACH	4.000	4.000
0304	611.3230	Inlets 2x3-FT	EACH	30.000	30.000
0306	611.3901	Inlets Median 1 Grate	EACH	1.000	1.000
0308	611.3902	Inlets Median 2 Grate	EACH	15.000	15.000
0310	611.8110	Adjusting Manhole Covers	EACH	2.000	2.000
0312	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000
0314	611.8120.S	Cover Plates Temporary	EACH	4.000	4.000
0316	612.0106	Pipe Underdrain 6-Inch	LF	7,036.000	7,036.000
0318	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	201.000	201.000
0320	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	1,187.000	1,187.000
0322	612.0806	Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	EACH	3.000	3.000
0324	612.0902.S	Insulation Board Polystyrene (inch) 01. 2-Inch	SY	9.000	9.000
0326	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	6.000	6.000
0328	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	1.000	1.000
0330	614.0305	Steel Plate Beam Guard Class A	LF	186.000	186.000
0332	614.0950	Replacing Guardrail Posts and Blocks	EACH	31.000	31.000
0334	614.1000	MGS Guardrail Temporary	LF	337.500	337.500
0336	614.1100	MGS Guardrail Temporary Thrie Beam Transition	LF	118.200	118.200
0338	614.1200	MGS Guardrail Temporary Terminal EAT	EACH	3.000	3.000
0340	614.2300	MGS Guardrail 3	LF	2,349.500	2,349.500
0342	614.2330	MGS Guardrail 3 K	LF	312.500	312.500
0344	614.2500	MGS Thrie Beam Transition	LF	559.800	559.800
0346	614.2610	MGS Guardrail Terminal EAT	EACH	10.000	10.000
0348	614.2620	MGS Guardrail Terminal Type 2	EACH	3.000	3.000
0350	616.0206	Fence Chain Link 6-FT	LF	782.000	782.000
0352	616.0700.S	Fence Safety	LF	330.000	330.000
0354	618.0100	Maintenance and Repair of Haul Roads (project) 01. 5845-16-77	EACH	1.000	1.000
0356	619.1000	Mobilization	EACH	1.000	1.000
0358	620.0300	Concrete Median Sloped Nose	SF	582.000	582.000
0360	624.0100	Water	MGAL	464.000	464.000
0362	625.0100	Topsoil	SY	9,675.000	9,675.000
0364	625.0500	Salvaged Topsoil	SY	61,237.000	61,237.000
0366	627.0200	Mulching	SY	25,350.000	25,350.000
0368	628.1504	Silt Fence	LF	5,165.000	5,165.000
0370	628.1520	Silt Fence Maintenance	LF	5,165.000	5,165.000
0372	628.1905	Mobilizations Erosion Control	EACH	12.000	12.000
0374	628.1910	Mobilizations Emergency Erosion Control	EACH	12.000	12.000
0376	628.2004	Erosion Mat Class I Type B	SY	29,150.000	29,150.000
0378	628.2008	Erosion Mat Urban Class I Type B	SY	7,097.000	7,097.000
0380	628.2023	Erosion Mat Class II Type B	SY	12,760.000	12,760.000
0382	628.7005	Inlet Protection Type A	EACH	96.000	96.000
0384	628.7010	Inlet Protection Type B	EACH	23.000	23.000
0386	628.7015	Inlet Protection Type C	EACH	57.000	57.000
0388	628.7020	Inlet Protection Type D	EACH	18.000	18.000
0390	628.7504	Temporary Ditch Checks	LF	1,250.000	1,250.000

Line	Item	Item Description	Unit	Total	Qty
0392	628.7560	Tracking Pads	EACH	1.000	1.000
0394	628.7570	Rock Bags	EACH	21.000	21.000
0396	629.0210	Fertilizer Type B	CWT	58.300	58.300
0398	630.0120	Seeding Mixture No. 20	LB	437.500	437.500
0400	630.0130	Seeding Mixture No. 30	LB	2,678.100	2,678.100
0402	630.0140	Seeding Mixture No. 40	LB	512.000	512.000
0404	630.0200	Seeding Temporary	LB	2,241.000	2,241.000
0406	630.0400	Seeding Nurse Crop	LB	78.500	78.500
0408	630.0500	Seed Water	MGAL	2,077.800	2,077.800
0410	633.0100	Delineator Posts Steel	EACH	6.000	6.000
0412	633.0500	Delineator Reflectors	EACH	10.000	10.000
0414	633.1000	Delineators Barrier Wall	EACH	6.000	6.000
0416	633.5200	Markers Culvert End	EACH	7.000	7.000
0418	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	13.000	13.000
0420	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	67.000	67.000
0422	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	13.000	13.000
0424	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	15.000	15.000
0426	635.0200	Sign Supports Structural Steel HS	LB	2,048.000	2,048.000
0428	637.1220	Signs Type I Reflective SH	SF	330.000	330.000
0430	637.1230	Signs Type I Reflective F	SF	56.000	56.000
0432	637.2210	Signs Type II Reflective H	SF	688.750	688.750
0434	637.2220	Signs Type II Reflective SH	SF	12.500	12.500
0436	637.2230	Signs Type II Reflective F	SF	171.000	171.000
0438	638.2101	Moving Signs Type I	EACH	4.000	4.000
0440	638.2102	Moving Signs Type II	EACH	2.000	2.000
0442	638.2602	Removing Signs Type II	EACH	73.000	73.000
0444	638.3000	Removing Small Sign Supports	EACH	62.000	62.000
0446	638.3100	Removing Structural Steel Sign Supports	EACH	6.000	6.000
0448	638.4000	Moving Small Sign Supports	EACH	2.000	2.000
0450	642.5201	Field Office Type C	EACH	1.000	1.000
0452	643.0300	Traffic Control Drums	DAY	63,272.000	63,272.000
0454	643.0410	Traffic Control Barricades Type II	DAY	45.000	45.000
0456	643.0420	Traffic Control Barricades Type III	DAY	7,190.000	7,190.000
0458	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	70.000	70.000
0460	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	70.000	70.000
0462	643.0705	Traffic Control Warning Lights Type A	DAY	8,028.000	8,028.000
0464	643.0715	Traffic Control Warning Lights Type C	DAY	17,521.000	17,521.000
0466	643.0800	Traffic Control Arrow Boards	DAY	502.000	502.000
0468	643.0900	Traffic Control Signs	DAY	37,504.000	37,504.000
0470	643.1050	Traffic Control Signs PCMS	DAY	63.000	63.000
0472	643.3165	Temporary Marking Line Paint 6-Inch	LF	51,636.000	51,636.000
0474	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	19,712.000	19,712.000
0476	643.3265	Temporary Marking Line Paint 10-Inch	LF	3,607.000	3,607.000
0478	643.3350	Temporary Marking Crosswalk Removable Tape 6-inch	LF	58.000	58.000
0480	643.5000	Traffic Control	EACH	1.000	1.000
0482	644.1410	Temporary Pedestrian Surface Asphalt	SF	160.000	160.000
0484	644.1440	Temporary Pedestrian Surface Matting	SF	785.000	785.000
0486	644.1601	Temporary Pedestrian Curb Ramp	DAY	40.000	40.000
0488	644.1605	Temporary Pedestrian Detectable Warning Field	SF	30.000	30.000

5845-16-77

Line	Item	Item Description	Unit	Total	Qty
0490	644.1810	Temporary Pedestrian Barricade	LF	3,645.000	3,645.000
0492	645.0111	Geotextile Type DF Schedule A	SY	3,666.000	3,666.000
0494	645.0120	Geotextile Type HR	SY	328.000	328.000
0496	645.0130	Geotextile Type R	SY	10.000	10.000
0498	646.1020	Marking Line Epoxy 4-Inch	LF	583.000	583.000
0500	646.2020	Marking Line Epoxy 6-Inch	LF	7,571.000	7,571.000
0502	646.2025	Marking Line Grooved Black Epoxy 6-Inch	LF	3,526.000	3,526.000
0504	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	35,185.000	35,185.000
0506	646.3020	Marking Line Epoxy 8-Inch	LF	765.000	765.000
0508	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	4,565.000	4,565.000
0510	646.5020	Marking Arrow Epoxy	EACH	7.000	7.000
0512	646.5120	Marking Word Epoxy	EACH	1.000	1.000
0514	646.5220	Marking Symbol Epoxy	EACH	23.000	23.000
0516	646.5520	Marking Outfall Epoxy	EACH	3.000	3.000
0518	646.6120	Marking Stop Line Epoxy 18-Inch	LF	94.000	94.000
0520	646.6320	Marking Dotted Extension Epoxy 18-Inch	LF	142.000	142.000
0522	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	36,081.000	36,081.000
0524	646.6470	Cold Weather Marking Epoxy 10-Inch	LF	3,666.000	3,666.000
0526	646.7120	Marking Diagonal Epoxy 12-Inch	LF	91.000	91.000
0528	646.7220	Marking Chevron Epoxy 24-Inch	LF	380.000	380.000
0530	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	380.000	380.000
0532	646.8120	Marking Curb Epoxy	LF	40.000	40.000
0534	646.8220	Marking Island Nose Epoxy	EACH	4.000	4.000
0536	646.9000	Marking Removal Line 4-Inch	LF	17,575.000	17,575.000
0538	646.9002	Marking Removal Line 6-Inch	LF	138.000	138.000
0540	646.9100	Marking Removal Line 8-Inch	LF	1,749.000	1,749.000
0542	646.9200	Marking Removal Line Wide	LF	160.000	160.000
0544	646.9300	Marking Removal Special Marking	EACH	2.000	2.000
0546	650.4000	Construction Staking Storm Sewer	EACH	93.000	93.000
0548	650.4500	Construction Staking Subgrade	LF	20,408.000	20,408.000
0550	650.5000	Construction Staking Base	LF	1,782.000	1,782.000
0552	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,050.000	2,050.000
0554	650.6501	Construction Staking Structure Layout (structure) 03. B-13-899	EACH	1.000	1.000
0556	650.6501	Construction Staking Structure Layout (structure) 04. R-13-374	EACH	1.000	1.000
0558	650.6501	Construction Staking Structure Layout (structure) 05. R-13-375	EACH	1.000	1.000
0560	650.6501	Construction Staking Structure Layout (structure) 06. R-13-376	EACH	1.000	1.000
0562	650.6501	Construction Staking Structure Layout (structure) 07. R-13-377	EACH	1.000	1.000
0564	650.6501	Construction Staking Structure Layout (structure) 08. R-13-378	EACH	1.000	1.000
0566	650.7000	Construction Staking Concrete Pavement	LF	17,958.000	17,958.000
0568	650.8000	Construction Staking Resurfacing Reference	LF	210.000	210.000
0570	650.8501	Construction Staking Electrical Installations (project) 01. 5845-16-77	EACH	1.000	1.000
0572	650.9000	Construction Staking Curb Ramps	EACH	22.000	22.000
0574	650.9500	Construction Staking Sidewalk (project) 01. 5845-16-77	EACH	1.000	1.000
0576	650.9911	Construction Staking Supplemental Control (project) 01. 5845-16-77	EACH	1.000	1.000
0578	650.9920	Construction Staking Slope Stakes	LF	50,330.000	50,330.000
0580	652.0110	Conduit Rigid Metallic 1-Inch	LF	142.000	142.000
0582	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	2,546.000	2,546.000
0584	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	19.000	19.000
0586	654.0105	Concrete Bases Type 5	EACH	19.000	19.000

5845-16-77

Line	Item	Item Description	Unit	Total	Qty
0588	654.0224	Concrete Control Cabinet Bases Type L24	EACH	1.000	1.000
0590	655.0610	Electrical Wire Lighting 12 AWG	LF	2,964.000	2,964.000
0592	655.0620	Electrical Wire Lighting 8 AWG	LF	12,852.000	12,852.000
0594	656.0201	Electrical Service Meter Breaker Pedestal (location) 01. LCC A	EACH	1.000	1.000
0596	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	19.000	19.000
0598	657.0322	Poles Type 5-Aluminum	EACH	19.000	19.000
0600	657.0615	Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT	EACH	19.000	19.000
0602	659.1115	Luminaires Utility LED A	EACH	19.000	19.000
0604	659.1205	Luminaires Underdeck LED A	EACH	4.000	4.000
0606	659.2124	Lighting Control Cabinets 120/240 24-Inch	EACH	1.000	1.000
0608	690.0150	Sawing Asphalt	LF	808.000	808.000
0610	690.0250	Sawing Concrete	LF	235.000	235.000
0612	715.0502	Incentive Strength Concrete Structures	DOL	8,280.000	8,280.000
0614	715.0603	Incentive Strength Concrete Barrier	DOL	319.000	319.000
0616	715.0715	Incentive Flexural Strength Concrete Pavement	DOL	15,955.000	15,955.000
0618	740.0440	Incentive IRI Ride	DOL	10,400.000	10,400.000
0620	801.0117	Railroad Flagging Reimbursement	DOL	90,000.000	90,000.000
0622	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 901+25 'NB'	EACH	1.000	1.000
0624	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 02. 901+50 'SB'	EACH	1.000	1.000
0626	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,100.000	2,100.000
0628	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	6,480.000	6,480.000
0630	SPV.0060	Special 01. Cleaning and Painting Bearings	EACH	10.000	10.000
0632	SPV.0060	Special 02. Barrier Wall Delineation	EACH	164.000	164.000
0634	SPV.0060	Special 03. Settlement Guages	EACH	3.000	3.000
0636	SPV.0060	Special 04. Reconstructing Manholes	EACH	12.000	12.000
0638	SPV.0060	Special 05. Manhole Covers Type J-Special	EACH	13.000	13.000
0640	SPV.0060	Special 06. Concrete Supports	EACH	3.000	3.000
0642	SPV.0060	Special 07. Pipe Connection to Existing Structure	EACH	2.000	2.000
0644	SPV.0060	Special 08. Apron Endwalls for Culvert Pipe Horizontal Elliptical Salvaged 19x30-Inch	EACH	1.000	1.000
0646	SPV.0060	Special 09. Cover Plates	EACH	1.000	1.000
0648	SPV.0085	Special 01. Seeding No Mow Fescue	LB	53.600	53.600
0650	SPV.0085	Special 02. Native Seeding Mixture No. 75 Updated	LB	26.400	26.400
0652	SPV.0090	Special 01. Concrete Swale	LF	423.000	423.000
0654	SPV.0090	Special 02. Removing, Salvage, Reinstall Guardrail	LF	187.500	187.500
0656	SPV.0090	Special 03. Removing Existing Timber Piling	LF	1,184.000	1,184.000
0658	SPV.0165	Special 01. Temporary Shoring Railroad	SF	175.000	175.000
0660	SPV.0165	Special 02. Wall Modular Block Mechanically Stabilized Earth (R-13-374)	SF	927.000	927.000
0662	SPV.0165	Special 03. Wall Modular Block Mechanically Stabilized Earth (R-13-375)	SF	476.000	476.000
0664	SPV.0165	Special 04. Wall Modular Block Mechanically Stabilized Earth (R-13-376)	SF	480.000	480.000
0666	SPV.0165	Special 05. Wall Modular Block Mechanically Stabilized Earth (R-13-377)	SF	1,605.000	1,605.000
0668	SPV.0165	Special 06. Wall Modular Block Mechanically Stabilized Earth (R-13-378)	SF	1,197.000	1,197.000
0670	SPV.0180	Special 01. Abutment Seat Cleaning and Sealing	SY	31.000	31.000

GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0205 GRUBBING STA
0010	900+00 'SB'	-	902+00 'SB'	USH 51 SB LT	2
	903+00 'SB'	-	904+00 'SB'	USH 51 SB LT	1
	912+00 'SB'	-	915+00 'SB'	USH 51 SB LT	3
	918+00 'SB'	-	920+00 'SB'	USH 51 SB LT	2
	920+00 'SB'	-	921+00 'SB'	USH 51 SB LT	1
	921+00 'SB'	-	923+00 'SB'	USH 51 SB LT	2
	942+00 'SB'	-	945+00 'SB'	USH 51 SB LT	3
	948+00 'SB'	-	950+00 'SB'	USH 51 SB LT	2
	928+00 'NB'	-	934+00 'NB'	USH 51 NB RT	6
	936+00 'NB'	-	938+00 'NB'	USH 51 NB RT	2
	940+00 'NB'	-	949+00 'NB'	USH 51 NB RT	9
	45+00 'SGE'	-	46+00 'SGE'	SIGGELKOW RD RT	1
	46+00 'SGW'	-	47+00 'SGW'	SIGGELKOW RD LT	1
	53+00 'SGW'	-	54+00 'SGW'	SIGGELKOW RD RT	1
				TOTAL 0010	36

REMOVING CONCRETE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY	204.0130 REMOVING CURB LF	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY
0010	894+43 'SB'	-	900+73 'SB'	USH 51 SB	1,830	-	-	-
	903+26 'SB'	-	920+14 'SB'	USH 51 SB	4,820	-	-	-
	921+63 'SB'	-	953+40 'SB'	USH 51 SB	9,270	-	-	-
	894+43 'NB'	-	900+25 'NB'	USH 51 NB	1,660	-	-	-
	902+69 'NB'	-	920+07 'NB'	USH 51 NB	5,030	-	-	-
	921+58 'NB'	-	953+40 'NB'	USH 51 NB	9,190	-	-	-
	106+56 'A'	-	120+03 'A'	RAMP A	2,370	-	-	-
	221+13 'B'	-	236+39 'B'	RAMP B	3,310	-	-	-
	321+67 'C'	-	336+39 'C'	RAMP C	2,840	-	-	-
	405+87 'D'	-	420+54 'D'	RAMP D	2,610	-	-	-
	42+45 'SGE'	-	56+94 'SGE'	SIGGELKOW RD RT	-	122	1,280	990
	46+60 'SGE'	-	54+32 'SGE'	SIGGELKOW RD MEDIAN	-	-	1,360	-
	42+52 'SGW'	-	56+87 'SGW'	SIGGELKOW RD LT	28	-	1,280	-
				TOTAL 0010	42,958	122	3,920	990

REMOVING ASPHALTIC SURFACE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	REMARKS
	892+91 'SB'	-	894+43 'SB'	USH 51 SB, LT	95	-	
0010	48+57 'SGE'	-	51+02 'SGE'	SIGGELKOW RD MEDIAN	290	-	
	55+69 'SGE'	-	57+53 'SGE'	SIGGELKOW / PAULSON INTERSECTION	210	-	
	47+91 'SGW'	-	48+00 'SGW'	RAMP C ISLAND	16	-	
	321+67 'C'	-	323+32 'C'	RAMP C	190	-	STAGE 2D
	10+17 'TY'	-	12+27 'TY'	TAYLOR RD	190	540	
				TOTAL 0010	991	540	

REMOVING DELINEATORS

CATEGORY	STATION	TO	STATION	LOCATION	204.0180 REMOVING DELINEATORS AND MARKERS EACH
0010	892+89 'NB'	-	895+30 'NB'	SOUTH CROSSOVER	48
	932+04 'NB'	-	933+31 'NB'	RAMP 'TR1' CROSSOVER	24
	936+61 'NB'	-	937+73 'NB'	RAMP 'TR2' CROSSOVER	22
	952+57 'NB'	-	954+87 'NB'	NORTH CROSSOVER	46
	946+59 'NB'			USH 51 NB, LT	1
	947+02 'SB'			USH 51 SB, RT	1
				TOTAL 0010	142

REMOVING FENCE

CATEGORY	STATION	TO	STATION	LOCATION	204.0170 REMOVING FENCE LF
0010	900+75 'SB'	-	900+85 'SB'	USH 51 SB, LT	45
	903+58 'SB'	-	904+22 'SB'	USH 51 SB, LT	75
	944+14 'NB'	-	948+84 'NB'	USH 51 NB, RT	470
	46+14 'SGW'	-	47+50 'SGW'	SIGGELKOW RD, LT	160
	52+89 'SGW'	-	53+01 'SGW'	SIGGELKOW RD, LT	40
				TOTAL 0010	790

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
0010	893+98 'SB'	-	900+74 'SB'	USH 51 SB, LT	670
	899+20 'SB'	-	900+44 'SB'	USH 51 SB, RT	130
	903+58 'SB'	-	905+60 'SB'	USH 51 SB, LT	200
	903+24 'SB'	-	904+53 'SB'	USH 51 SB, RT	130
	918+89 'SB'	-	919+99 'SB'	USH 51 SB, RT	120
	921+74 'SB'	-	922+82 'SB'	USH 51 SB, RT	110
	921+78 'SB'	-	925+60 'SB'	USH 51 SB, LT	380
	897+86 'NB'	-	899+87 'NB'	USH 51 NB, RT	200
	899+23 'NB'	-	900+19 'NB'	USH 51 NB, LT	100
	902+81 'NB'	-	910+44 'NB'	USH 51 NB, RT	770
	903+18 'NB'	-	904+62 'NB'	USH 51 NB, LT	140
	917+90 'NB'	-	919+93 'NB'	USH 51 NB, RT	200
	918+89 'NB'	-	919+95 'NB'	USH 51 NB, LT	110
	921+73 'NB'	-	922+82 'NB'	USH 51 NB, LT	120
				TOTAL 0010	3,380

REMOVING SURFACE DRAIN PIPE

CATEGORY	STATION	TO	STATION	LOCATION	204.9090.S.01 REMOVING (ITEM DESCRIPTION) (01. SURFACE DRAIN PIPE CORRUGATED METAL SLOTTED 12-INCH) LF
0010	952+79 'NB'	-	954+63 'NB'	NORTH CROSSOVER	184
				TOTAL 0010	184

REMOVING DRAINAGE PIPE AND STRUCTURE ITEMS

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	204.0210 REMOVING MANHOLES EACH	204.0220 REMOVING INLETS EACH	204.0245.01 REMOVING STORM SEWER (SIZE) (01. 12-INCH) LF	204.0245.02 REMOVING STORM SEWER (SIZE) (02. 15-INCH) LF	204.0245.03 REMOVING STORM SEWER (SIZE) (03. 18-INCH) LF	204.0245.04 REMOVING STORM SEWER (SIZE) (04. 24-INCH) LF	204.0245.05 REMOVING STORM SEWER (SIZE) (05. 19X30-INCH) LF	204.0280 SEALING PIPES EACH	SPV.0060.08 SPECIAL (08. APRON ENDWALLS FOR CULVERT PIPE HORIZONTAL ELLIPTICAL SALVAGED 19X30-INCH) EACH	REMARKS
0010	2A	900+19 'SB'	-	900+59 'SB'	USH 51 SB, LT	-	-	1	-	-	-	-	-	1	-	
			921+86 'SB'		USH 51 SB, LT	-	-	1	66	-	-	-	-	-	-	
			328+36 'TC'		RAMP C, RT	-	-	1	-	-	-	-	9	-	-	
	2B	42+53 'SGE'	-	48+19 'SGE'	SIGGELKOW RD	-	5	12	-	338	-	622	-	-	-	
		48+19 'SGE'	-	51+58 'SGE'	SIGGELKOW RD	-	1	8	8	176	61	305	-	-	-	
		51+63 'SGW'	-	52+78 'SGW'	SIGGELKOW RD	-	-	2	-	-	148	-	-	-	-	
	2C	48+12 'SGW'	-	55+40 'SGW'	SIGGELKOW RD	-	-	7	-	236	292	-	-	-	-	
		321+60 'TC'	-	321+65 'TC'	RAMP C, RT	-	-	1	-	20	-	-	-	-	-	
			328+30 'TC'		RAMP C, RT	-	-	1	-	-	-	-	-	-	-	
		928+36 'SB'	-	927+88 'SB'	USH 51 SB	-	-	-	-	-	-	-	71	-	-	
		12+51 'WRB'	-	12+85 'WRB'	SIGGELKOW RD	-	-	-	-	-	-	-	-	1	-	TEMP. SS PIPE AT WEST RAB
	3		912+54 'NB'		USH 51 NB	-	-	1	-	-	-	125	-	-	-	
			921+77 'NB'		USH 51 NB, RT	-	-	1	71	-	-	-	-	-	-	
			927+88 'NB'		USH 51 NB	-	-	1	-	-	-	-	72	-	-	
			227+89 'B'		RAMP B	-	-	1	-	-	-	-	50	-	-	
		931+88 'NB'	-	932+98 'NB'	USH 51 MEDIAN	1	-	-	-	-	-	-	-	-	-	110' - 15-INCH CLASS III-A
		936+22 'NB'	-	937+32 'NB'	USH 51 MEDIAN	1	-	-	-	-	-	-	-	-	-	110' - 15-INCH CLASS III-A
			938+88 'NB'		USH 51 NB	-	-	1	-	-	-	-	88	-	-	
			946+54 'NB'		USH 51 NB	-	-	1	-	-	-	-	82	-	-	
			947+40 'NB'		USH 51 NB, RT	-	-	-	-	-	-	-	19	-	1	
	4	950+10 'NB'	-	955+88 'NB'	USH 51 MEDIAN	-	-	2	-	570	-	-	-	-	-	
					TOTAL 0010	2	6	42	145	1,340	501	1,052	391	2	1	

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

EARTHWORK SUMMARY

CATEGORY 0010

SUBSTAGE	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE (15)
STAGE 2	894+43 'SB' - 953+40 'SB'	USH 51 SB	26,305	-	4,700	21,605	4,742	5,928	15,678	15,678
	322+00 'C' - 334+00 'C'	RAMP C	3,603	-	800	2,803	217	271	2,532	2,532
	410+50 'D' - 420+00 'D'	RAMP D	2,855	-	770	2,085	73	91	1,994	1,994
	42+45 'SGE' - 55+71 'SGE'	SIGGELKOW RD	11,846	-	1,500	10,346	1,341	1,676	8,670	8,670
		UNDISTRIBUTED	-	2,260	-	-	-	-	-	-
		STAGE 2 SUBTOTALS	44,609	2,260	7,770	36,839	6,373	7,966	28,873	28,873
STAGE 3	894+43 'NB' - 953+40 'NB'	USH 51 NB	29,127	-	4,700	24,427	3,301	4,126	20,301	20,301
	109+00 'A' - 119+50 'A'	RAMP A	2,280	-	700	1,580	249	311	1,269	1,269
	221+50 'B' - 234+50 'B'	RAMP B	5,812	-	950	4,862	57	71	4,791	4,791
		UNDISTRIBUTED	-	1,940	-	-	-	-	-	-
		STAGE 3 SUBTOTALS	37,219	1,940	6,350	30,869	3,607	4,509	26,360	26,360
EXCHANGE ST. INTERSECTION SURCHARGE		-	-	-	-	-	584	730	-730	-
GRAND TOTAL			81,828	4,200	14,120	67,708	10,564	13,205	54,503	54,503
TOTAL COMMON EXC			86,028							

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT COLUMN. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) EBS EXCAVATION TO BE BACKFILLED WITH WASTE MATERIAL MEETING STANDARD SPEC 208.2.1
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
(13) EXPANDED FILL FACTOR = 1.25
EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR
(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.
(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

CONCRETE SURFACE DRAIN & GEOTEXTILE FABRIC

CATEGORY	STATION	LOCATION	602.3010 CONCRETE SURFACE DRAINS CY	645.0130 GEOTEXTILE TYPE R SY
0010	903+29 'NB'	USH 51 NB LT	1.2	10
		TOTAL 0010	1.2	10

CONCRETE BARRIER TYPE S42C

CATEGORY	STATION	TO	STATION	LOCATION	603.1442 CONCRETE BARRIER TYPE S42C LF
0010	934+13 'SB'	-	940+50 'SB'	USH 51 SB, LT	637
				TOTAL 0010	637

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

BASE AGGREGATE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	* 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON	624.0100 WATER MGAL	REMARKS
0010	892+91 SB'	-	894+43 'SB'	USH 51 SB, LT	18	71	-	1	
	895+27 'SB'	-	900+26 'SB'	USH 51 SB, RT	54	50	-	1	STAGE 2D
	894+43 'SB'		900+32 'SB'	USH 51 SB	-	950	2,550	10	
	903+49 'SB'	-	920+11 'SB'	USH 51 SB	180	4,110	6,820	43	
	921+64 'SB'	-	957+07 'SB'	USH 51 SB	540	9,600	15,300	101	
	949+48 'SB'	-	952+77 'SB'	USH 51 SB, RT	47	390	260	4	STAGE 2D
	894+43 'NB'	-	900+25 'NB'	USH 51 NB	55	1,610	2,340	17	
	903+00 'NB'	-	920+07 'NB'	USH 51 NB	250	4,480	6,410	47	
	921+60 'NB'	-	957+06 'NB'	USH 51 NB	450	9,840	14,600	103	
	106+79 'A'	-	120+03 'A'	RAMP A	140	1,950	3,280	21	
	221+13 'B'	-	234+89 'B'	RAMP B	140	2,090	3,580	22	
	321+67 'C'	-	334+17 'C'	RAMP C	29	1,670	4,020	17	
	406+97 'D'	-	420+54 'D'	RAMP D	140	1,870	2,750	20	
	10+37 'TY'	-	12+27 'TY'	TAYLOR RD, RT	15	-	-	1	
	42+45 'SGE'	-	47+39 'SGE'	SIGGELKOW RD	-	1,380	2,230	14	
	47+39 'SGE'	-	52+13 'SGE'	SIGGELKOW RD	-	1,430	3,620	14	
	53+13 'SGE'	-	55+71 'SGE'	SIGGELKOW RD	-	1,500	2,510	15	
	321+30 'TC'	-	332+36 'TC'	RAMP C, RT	-	1,230	0	12	STAGE 2A
	10+94 'WRB'	-	323+32 'C'	RAMP C, LT	-	54	0	1	STAGE 2B
				TOTAL 0010	2,058	44,275	70,270	464	

*** ADDITIONAL QUANTITIES LISTED ELSEWHERE**

CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STATION	TO	STATION	LOCATION	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
0010	900+17 'SB'	-	900+52 'SB'	USH 51 SB	73
	903+49 'SB'	-	903+98 'SB'	USH 51 SB	128
	919+96 'SB'	-	920+13 'SB'	USH 51 SB	46
	921+64 'SB'	-	921+81 'SB'	USH 51 SB	46
	899+91 'NB'	-	900+25 'NB'	USH 51 NB	71
	902+78 'NB'	-	903+15 'NB'	USH 51 NB	75
	919+90 'NB'	-	920+07 'NB'	USH 51 NB	46
	921+58 'NB'	-	921+75 'NB'	USH 51 NB	46
				TOTAL 0010	531

3

CONCRETE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	* 405.0100 COLORING CONCRETE WISDOT RED CY	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.2010 CONCRETE TRUCK APRON 12-INCH SY	415.4100 CONCRETE PAVEMENT JOINT FILLING SY
0010	894+43 'SB'	-	900+57 'SB'	USH 51 SB	-	2,230	-	-
	903+45 'SB'	-	920+14 'SB'	USH 51 SB	-	5,530	-	-
	921+64 'SB'	-	953+40 'SB'	USH 51 SB	-	12,820	-	-
	894+43 'NB'	-	900+30 'NB'	USH 51 NB	-	1,770	-	-
	902+71 'NB'	-	920+08 'NB'	USH 51 NB	-	5,320	-	-
	921+57 'NB'	-	953+40 'NB'	USH 51 NB	-	11,710	-	-
	108+99 'A'	-	120+00 'A'	RAMP A	-	1,950	-	500
	221+21 'B'	-	234+88 'B'	RAMP B	-	2,300	-	280
	321+69 'C'	-	334+17 'C'	RAMP C	-	3,120	-	460
	409+89 'D'	-	420+49 'D'	RAMP D	-	1,770	-	220
	42+45 'SGE'	-	46+78 'SGE'	SIGGELKOW RD	-	-	-	-
	46+78 'SGE'	-	53+21 'SGE'	SIGGELKOW RD	200	3,530	600	3,530
	53+21 'SGE'	-	55+70 'SGE'	SIGGELKOW RD	-	-	-	-
				TOTAL 0010	200	52,050	600	4,990

*** ADDITIONAL QUANTITIES LISTED ELSEWHERE**

ROUT AND SEAL

CATEGORY	STATION	TO	STATION	LOCATION	415.6000.S ROUT AND SEAL LF
0010	894+43 'NB'	-	900+57 'NB'	USH 51 NB, RT	550
	902+71 'NB'	-	920+08 'NB'	USH 51 NB, LT	1,220
	902+71 'NB'	-	920+08 'NB'	USH 51 NB, RT	1,470
	903+45 'SB'	-	920+14 'SB'	USH 51 SB, LT	1,580
	903+45 'SB'	-	920+14 'SB'	USH 51 SB, RT	1,230
	921+57 'NB'	-	953+40 'NB'	USH 51 NB, LT	3,170
	921+57 'NB'	-	953+40 'NB'	USH 51 NB, RT	3,270
	921+64 'SB'	-	953+40 'SB'	USH 51 SB, LT	2,230
	921+64 'SB'	-	953+40 'SB'	USH 51 SB, RT	3,130
	108+99 'A'	-	120+00 'A'	RAMP A, LT	870
	108+99 'A'	-	120+00 'A'	RAMP A, RT	1,090
	221+21 'B'	-	234+88 'B'	RAMP B, LT	1,060
	221+21 'B'	-	234+88 'B'	RAMP B, RT	950
	321+69 'C'	-	334+17 'C'	RAMP C, RT	790
	408+89 'D'	-	420+49 'D'	RAMP D, LT	930
	409+89 'D'	-	420+49 'D'	RAMP D, RT	930
				TOTAL 0010	24,470

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

DRILLED DOWEL & TIE BARS

CATEGORY	STATION	TO	STATION	LOCATION	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	REMARKS
0010		894+43 'SB'		USH 51 SB	-	8	
		953+40 'SB'		USH 51 SB	-	8	
		894+43 'NB'		USH 51 NB	-	8	
		953+40 'NB'		USH 51 NB	-	8	
		936+93 'SB'		USH 51 SB	-	8	STAGE 2B
	321+74 'C'	-	330+00 'C'	RAMP C, LT	275	-	STAGE 2C
	321+67 'C'	-	323+32 'C'	RAMP C, LT	46	-	STAGE 2D
	48+07 'SGW'	-	52+24 'SGW'	SIGGELKOW RD	12	48	STAGE 2D
	896+50 'SB'	-	900+28 'SB'	USH 51 SB	126	-	STAGE 4
				TOTAL 0010	459	88	

RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	465.0510 ASPHALTIC RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY LF	602.3210 CONCRETE RUMBLE STRIPS, SHOULDER DIVIDED ROADWAY LF
0010	903+40 'NB'	-	919+65 'NB'	USH 51 NB, LT	1,182	443
	903+40 'NB'	-	905+81 'NB'	USH 51 NB, RT	-	243
	910+85 'NB'	-	919+65 'NB'	USH 51 NB, RT	-	880
	904+24 'SB'	-	909+88 'SB'	USH 51 SB, LT	548	-
	912+39 'SB'	-	919+71 'SB'	USH 51 SB, LT	-	732
	904+23 'SB'	-	919+71 'SB'	USH 51 SB, RT	1,200	335
	922+31 'NB'	-	957+06 'NB'	USH 51 NB, LT	3,475	-
	922+00 'NB'	-	929+90 'NB'	USH 51 NB, RT	-	790
	934+89 'NB'	-	955+20 'NB'	USH 51 NB, RT	180	1,851
	922+27 'SB'	-	930+09 'SB'	USH 51 SB, LT	-	782
	934+18 'SB'	-	954+40 'SB'	USH 51 SB, LT	100	1,922
	922+26 'SB'	-	957+07 'SB'	USH 51 SB, RT	3,481	-
				TOTAL 0010	10,166	7,978

ASPHALTIC ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	465.0310 ASPHALTIC CURB LF	465.0315 ASPHALTIC FLUMES SY	REMARKS
0010	894+43 'NB'	-	900+30 'NB'	USH 51 NB, RT	21	22	64	-	14	-	
	894+43 'SB'	-	900+57 'SB'	USH 51 SB, LT	-	6	23	-	14	-	
	894+43 'SB'	-	896+50 'SB'	USH 51 MEDIAN	47	34	141	-	-	-	
	894+43 'SB'	-	900+16 'SB'	USH 51 SB, RT	-	26	128	-	-	-	STAGE 2D - SOUTH XO
	902+71 'NB'	-	920+08 'NB'	USH 51 NB, LT	26	26	76	-	-	20	
	902+71 'NB'	-	920+08 'NB'	USH 51 NB, RT	77	79	230	-	-	-	
	903+45 'SB'	-	920+14 'SB'	USH 51 SB, LT	-	73	335	-	-	-	
	903+45 'SB'	-	920+14 'SB'	USH 51 SB, RT	-	42	209	-	-	-	
	921+57 'NB'	-	953+40 'NB'	USH 51 NB, LT	125	128	374	-	-	10	
	921+57 'NB'	-	953+40 'NB'	USH 51 NB, RT	130	133	390	-	-	-	
	921+64 'SB'	-	953+40 'SB'	USH 51 SB, LT	-	88	342	-	-	-	
	921+64 'SB'	-	953+40 'SB'	USH 51 SB, RT	173	143	517	-	-	10	
	949+48 'SB'	-	953+50 'SB'	USH 51 SB, RT	-	34	168	-	-	-	STAGE 2D - NORTH XO
	108+99 'A'	-	120+00 'A'	RAMP A, LT	11	12	34	-	-	-	
	108+99 'A'	-	120+00 'A'	RAMP A, RT	20	20	58	-	-	-	
	221+21 'B'	-	234+88 'B'	RAMP B, LT	12	12	35	-	-	-	
	221+21 'B'	-	234+88 'B'	RAMP B, RT	20	20	58	-	-	-	
	321+69 'C'	-	334+17 'C'	RAMP C, LT	-	11	42	-	-	-	
	321+69 'C'	-	334+17 'C'	RAMP C, RT	-	-	-	-	-	-	
	321+30 'TC'	-	332+36 'TC'	RAMP C, LT	-	80	400	-	-	10	STAGE 2A - RAMP C
	321+67 'C'	-	323+32 'C'	RAMP C, LT	-	10	47	-	193	-	STAGE 2B - RAMP C
	408+89 'D'	-	420+49 'D'	RAMP D, LT	-	46	181	-	-	-	
	409+89 'D'	-	420+49 'D'	RAMP D, RT	-	12	45	-	-	-	
	42+45 'SGE'	-	46+78 'SGE'	SIGGELKOW RD	-	93	413	19	-	-	
	46+78 'SGE'	-	53+21 'SGE'	SIGGELKOW RD	-	-	-	-	-	-	
	53+21 'SGE'	-	55+70 'SGE'	SIGGELKOW RD	-	85	381	-	-	-	
	11+31 'TY'	-	11+83 'TY'	TAYLOR RD RT	-	27	91	-	-	-	
				TOTAL 0010	662	1,262	4,782	19	221	50	

NOTES

*** TACK COAT APPLICATION RATE = 0.05 GAL/SY**

**** ASSUMED ASPHALT AT 112 LB/SY/IN**

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

CONCRETE BARRIER TEMPORARY PRECAST

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF	SPV.0060.02 SPECIAL (02. BARRIER WALL DELINEATION) EACH
0010	2A	892+80 'NB'	-	954+34 'NB'	USH 51 NB	6,160	6,160	52
	2B	48+15 'SGW'	-	49+63 'SGW'	SIGGELKOW RD	170	170	21
	3	893+98 'SB'	-	954+67 'SB'	USH 51 SB	6,050	6,050	91
					TOTAL 0010	12,380	12,380	164

RIP RAP & GEOTEXTILE FABRIC ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
0010		894+54 'SB'		USH 51 SB, LT	28	89
	902+17 'NB'	-	903+11 'NB'	USH 51 MEDIAN	29	88
		907+90 'NB'		USH 51 NB,LT	3	10
		112+60 'A'		RAMP A, RT	4	14
		921+77 'NB'		USH 51 NB, RT	1	6
		922+37 'NB'		USH 51 MEDIAN	8	25
		922+22 'SB'		USH 51 SB, LT	1	6
		227+03 'B'		RAMP B, RT	3	11
		938+89 'NB'		USH 51 NB, RT	3	10
	940+75 'SB'	-	941+00 'SB'	USH 51 SB, LT	10	32
		946+54 'NB'		USH 51 NB, RT	3	10
		947+40 'NB'		USH 51 NB, RT	8	27
				TOTAL 0010	101	328

CONCRETE CURB AND GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	601.0405 CONCRETE CURB & GUTTER 18-INCH TYPE A LF	601.0407 CONCRETE CURB & GUTTER 18-INCH TYPE D LF	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0551 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A LF	601.0580 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R LF	601.0590 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT LF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF
0010	894+45 'SB'	-	900+59 'SB'	USH 51 SB, LT	-	-	-	-	610	-	-	-
	896+50 'NB'	-	900+19 'NB'	USH 51 NB, LT	-	-	-	-	321	-	48	-
	896+50 'SB'	-	900+28 'SB'	USH 51 SB, RT	-	-	-	-	314	-	65	-
	903+28 'NB'	-	907+70 'NB'	USH 51 NB, LT	-	-	-	-	441	-	-	-
	903+44 'SB'	-	907+58 'SB'	USH 51 SB, RT	-	-	-	-	378	-	35	-
	921+69 'NB'	-	921+81 'NB'	USH 51 NB, RT	-	-	-	-	12	-	-	-
	921+73 'NB'	-	922+16 'NB'	USH 51 NB, LT	-	-	-	-	44	-	-	-
	921+75 'SB'	-	922+16 'SB'	USH 51 SB, RT	-	-	-	-	-	-	41	-
	981+78 'SB'	-	922+27 'SB'	USH 51 SB, LT	-	-	-	-	-	-	49	-
	117+69 'A'	-	119+96 'A'	RAMP A, RT	-	-	223	-	-	-	-	-
	117+79 'A'	-	119+98 'A'	RAMP A, LT	-	-	229	-	-	-	-	-
	221+20 'B'	-	222+76 'B'	RAMP B, LT	-	-	157	-	-	-	-	-
	221+27 'B'	-	222+76 'B'	RAMP B, RT	-	-	145	-	-	-	-	-
	321+73 'C'	-	323+77 'C'	RAMP C, RT	-	-	205	-	-	-	-	-
	321+74 'C'	-	334+12 'C'	RAMP C, LT	-	-	189	-	1,039	-	-	-
	419+16 'D'	-	420+44 'D'	RAMP D, LT	-	-	124	-	-	-	-	-
	419+16 'D'	-	420+45 'D'	RAMP D, RT	-	-	130	-	-	-	-	-
	42+45 'SGE'	-	47+94 'SGE'	SIGGELKOW RD, RT	-	15	125	436	-	-	-	-
	42+52 'SGW'	-	47+94 'SGW'	SIGGELKOW RD, LT	-	-	145	424	-	-	-	-
	46+79 'SGE'	-	47+32 'SGE'	SIGGELKOW RD MEDIAN	-	-	106	-	-	-	-	114
	48+07 'SGE'	-	51+56 'SGE'	SIGGELKOW RD, RT	-	-	357	-	-	-	-	50
	48+07 'SGW'	-	51+54 'SGW'	SIGGELKOW RD, LT	-	-	355	-	-	-	-	51
	48+70 'SGE'	-	50+73 'SGE'	SIGGELKOW RD MEDIAN	-	-	419	-	-	-	-	101
	51+68 'SGW'	-	55+79 'SGW'	SIGGELKOW RD, LT	-	-	139	277	-	-	-	-
	51+86 'SGE'	-	54+34 'SGE'	SIGGELKOW RD MEDIAN	-	-	403	230	-	-	-	199
	51+75 'SGE'	-	55+95 'SGE'	SIGGELKOW RD, RT	-	-	163	300	-	-	-	-
	56+06 'SGW'	-	56+18 'SGW'	TRIANGLE STREET MEDIAN	-	-	-	20	-	-	-	-
	56+22 'SGE'	-	56+94 'SGE'	SIGGELKOW RD, RT	-	-	-	88	-	-	-	-
	56+60 'SGE'	-	57+51 'SGE'	SIGGELKOW RD MEDIAN	-	158	-	-	-	-	-	67
	56+43 'SGW'	-	56+87 'SGW'	SIGGELKOW RD, LT	-	-	-	60	-	-	-	-
	10+00 'WRB'	-	12+98 'WRB'	SIGGELKOW RD WEST RDBT	204	-	-	-	-	286	-	-
	10+00 'ERB'	-	12+98 'ERB'	SIGGELKOW RD EAST RDBT	204	-	-	-	-	286	-	-
				TOTAL 0010	408	173	3,614	1,835	3,159	572	238	582

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

CONCRETE SIDEWALK AND MULTI-USE PATH ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	* 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	* 405.0100 COLORING CONCRETE WISDOT RED CY	405.0200 COLORING CONCRETE CUSTOM CY	465.0105 ASPHALTIC SURFACE TON	601.0600 CONCRETE CURB PEDESTRIAN LF	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	602.0810 CONCRETE DRIVEWAY 6-INCH SY
0010	42+37 'SGE'	-	45+59 'SGE'	SIGGELKOW RD RT	85	-	-	-	-	-	1,630	-	-
	45+59 'SGE'	-	45+81 'SGE'	SIGGELKOW RD RT	6	-	-	-	-	-	-	-	32
	45+81 'SGE'	-	48+06 'SGE'	SIGGELKOW RD RT	98	-	-	-	-	-	2,105	40	-
	46+81 'SGE'	-	47+31 'SGE	SIGGELKOW RD MEDIAN	24	-	-	-	34	440	168	40	-
	48+22 'SGE'	-	51+51 'SGE'	SIGGELKOW RD RT	203	-	-	-	134	-	4,727	40	-
	48+70 'SGE'	-	50+73 'SGE'	SIGGELKOW RD MEDIAN	96	-	-	-	-	2,593	-	-	-
	51+73 'SGE'	-	55+88 'SGE'	SIGGELKOW RD RT	168	-	-	-	-	-	3,561	30	-
	50+88 'SGE'	-	54+33 'SGE'	SIGGELKOW RD MEDIAN	127	-	-	-	-	3,412	-	-	-
	56+30 'SGE'	-	56+94 'SGE'	SIGGELKOW RD RT	18	-	-	-	-	-	341	20	-
	56+58 'SGE'	-	57+53 'SGE'	SIGGELKOW RD MEDIAN	18	6	-	-	19	418	47	20	-
	42+42 'SGW'	-	42+45 'SGW'	SIGGELKOW RD, LT	-	-	-	-	-	-	-	-	-
	42+42 'SGW'	-	43+52 'SGW'	SIGGELKOW RD, LT	29	-	-	-	-	-	546	-	-
	43+52 'SGW'	-	43+76 'SGW'	SIGGELKOW RD, LT	7	-	-	-	-	-	-	-	30
	43+76 'SGW'	-	44+12 'SGW'	SIGGELKOW RD, LT	10	-	-	-	-	-	180	-	-
	44+12 'SGW'	-	44+47 'SGW'	SIGGELKOW RD, LT	10	-	-	-	-	-	-	-	70
	44+47 'SGW'	-	44+94 'SGW'	SIGGELKOW RD, LT	12	-	-	-	-	-	233	-	-
	44+94 'SGW'	-	45+27 'SGW'	SIGGELKOW RD, LT	9	-	-	-	-	-	-	-	42
	45+27 'SGW'	-	45+74 'SGW'	SIGGELKOW RD, LT	12	-	-	-	-	-	229	-	-
	45+74 'SGW'	-	45+94 'SGW'	SIGGELKOW RD, LT	6	-	-	-	-	-	-	-	25
	46+42 'SGW'	-	47+98 'SGW'	SIGGELKOW RD, LT	107	-	-	-	-	-	2,281	40	-
	48+16 'SGW'	-	51+36 'SGW'	SIGGELKOW RD, LT	195	-	-	-	118	-	5,254	40	-
	53+65 'SGW'	-	55+75 'SGW'	SIGGELKOW RD, LT	159	-	-	-	-	-	2,537	30	-
	56+08'SGW'	-	56+16 'SGW'	SIGGELKOW RD, LT	3	-	-	-	14	-	35	20	-
	11+31 'TY'	-	11+83 'TY'	TAYLOR RD RT	30	-	-	74	-	-	-	-	-
	-	-	-	PAULSON RD AT WSOR CROSSING	-	-	-	-	-	-	198	66	-
				TOTAL 0010	1,432	6	0	74	319	6,863	24,072	386	199
0020	42+42 'SGW'	-	43+52 'SGW'	SIGGELKOW RD, LT	-	-	-	-	-	-	546	-	-
	43+76 'SGW'	-	44+12 'SGW'	SIGGELKOW RD, LT	-	-	-	-	-	-	180	-	-
	44+47 'SGW'	-	44+94 'SGW'	SIGGELKOW RD, LT	-	-	-	-	-	-	233	-	-
	45+27 'SGW'	-	45+74 'SGW'	SIGGELKOW RD, LT	-	-	-	-	-	-	229	-	-
	45+94 'SGW'	-	46+42 'SGW'	SIGGELKOW RD, LT	-	-	-	-	-	-	222	-	-
	53+65 'SGW'	-	55+75 'SGW'	SIGGELKOW RD, LT	-	-	-	-	-	-	1,140	-	-
				TOTAL 0020	0	0	0	0	0	0	2,550	0	0
0160	46+87 'SGE'	-	47+34 'SGE'	SIGGELKOW RD MEDIAN	-	-	6	-	-	-	-	-	-
	48+77 'SGE'	-	50+76 'SGE'	SIGGELKOW RD MEDIAN	-	-	32	-	-	-	-	-	-
	49+15 'SGE'	-	50+40 'SGE'	SIGGELKOW RD LT & RT	-	-	17	-	-	-	-	-	-
	51+91 'SGE'	-	54+27 'SGE'	SIGGELKOW RD MEDIAN	-	-	42	-	-	-	-	-	-
				TOTAL 0160	0	0	97	0	0	0	0	0	0
				PROJECT TOTAL	1,432	6	97	74	319	6,863	26,622	386	199

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

STORM SEWER PIPE ITEMS

CATEGORY	FROM		TO	520.8000 CONCRETE COLLARS FOR PIPE EACH	530.0112 CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.2319 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH LF	608.2324 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH LF	608.3015 STORM SEWER PIPE CLASS III-A 15-INCH LF	SPV.0060.07 SPECIAL (07. PIPE CONNECTION TO EXISTING STRUCTURE) EACH	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE FT/FT
0010	111	-	110	-	-	-	10	-	-	-	-	-	-	-	875.65	875.15	0.0500
	112	-	111	-	-	8	-	-	-	-	-	-	-	-	875.97	875.65	0.0400
	115	-	110	-	-	10	-	-	-	-	-	-	-	-	875.67	875.15	0.0500
	120	-	110	-	-	-	-	-	145	-	-	-	-	-	882.08	875.25	0.0471
	130	-	120	-	-	186	-	-	-	-	-	-	-	-	890.50	883.08	0.0400
	150	-	151	-	-	-	-	-	16	-	-	-	-	-	867.63	867.55	0.0050
	151	-	152	-	-	-	-	-	15	-	-	-	-	-	866.00	865.93	0.0050
	160	-	150	-	-	-	-	-	200	-	-	-	-	-	875.71	867.73	0.0400
	161	-	160	-	-	16	-	-	-	-	-	-	-	-	877.12	876.81	0.0200
	170	-	160	-	-	-	-	-	199	-	-	-	-	-	883.77	875.81	0.0400
	171	-	170	-	-	16	-	-	-	-	-	-	-	-	885.18	884.87	0.0200
	175	-	170	-	-	192	-	-	-	-	-	-	-	-	892.55	884.87	0.0400
	210	-	211	-	-	-	-	-	122	-	-	-	-	-	893.00	892.39	0.0050
	220	-	221	-	75	-	-	-	-	-	-	-	-	-	895.74	895.69	0.0050
	230	-	231	-	56	-	-	-	-	-	-	-	-	-	895.45	895.43	0.0036
	240	-	241	-	-	-	-	-	-	-	85	-	-	-	884.26	883.83	0.0050
	241	-	242	-	-	-	-	-	-	-	74	-	-	-	883.73	883.36	0.0050
	242	-	243	-	-	-	-	-	-	-	48	-	-	-	883.26	883.02	0.0050
	250	-	251	-	-	-	-	-	-	-	83	-	-	-	870.06	869.81	0.0030
	260	-	261	-	-	-	-	-	-	-	83	-	-	-	861.07	860.82	0.0030
	310	-	EX. PIPE	1	-	-	-	-	-	14	-	-	-	-	864.42	864.25	0.0118
	311	-	310	-	-	-	-	-	-	-	35	-	-	-	865.08	864.52	0.0160
	312	-	311	-	-	-	-	-	16	-	-	-	-	-	865.57	865.18	0.0241
	313	-	311	-	-	12	-	-	-	-	-	-	-	-	865.74	865.66	0.0100
	320	-	310	-	-	-	-	-	-	-	-	129	-	-	866.00	864.52	0.0115
	321	-	320	-	-	31	-	-	-	-	-	-	-	-	868.31	868.00	0.0100
	323	-	320	-	-	7	-	-	-	-	-	-	-	-	867.48	867.41	0.0100
	324	-	323	-	-	8	-	-	-	-	-	-	-	-	867.55	867.51	0.0050
	330	-	320	-	-	-	-	-	-	-	-	193	-	-	868.10	866.10	0.0104
	EX. PIPE	-	330	1	-	19	-	-	-	-	-	-	-	-	873.30	872.25	0.0561
	340	-	330	-	-	-	-	-	-	-	-	78	-	-	869.00	868.20	0.0103
	341	-	340	-	-	-	48	-	-	-	-	-	-	-	873.08	872.60	0.0100
	350	-	340	-	-	-	-	-	-	103	-	-	-	-	871.29	870.26	0.0100
	351	-	350	-	-	20	-	-	-	-	-	-	-	-	873.49	873.29	0.0100
	360	-	350	-	-	-	-	-	-	36	-	-	-	-	871.75	871.39	0.0100
	370	-	360	-	-	-	-	-	-	79	-	-	-	-	873.90	871.85	0.0261
	371	-	370	-	-	20	-	-	-	-	-	-	-	-	875.10	875.00	0.0050
	372	-	371	-	-	24	-	-	-	-	-	-	-	-	875.32	875.20	0.0050
	373	-	372	-	-	23	-	-	-	-	-	-	-	-	875.54	875.42	0.0050
	380	-	370	-	-	-	-	-	-	222	-	-	-	-	874.90	874.00	0.0040
PAGE 1/2 - SUBTOTALS				2	131	592	58	0	713	454	408	400	0	0			

CONTINUED ON NEXT PAGE

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

STORM SEWER PIPE ITEMS (CONTINUED)

CATEGORY	FROM		TO	520.8000 CONCRETE COLLARS FOR PIPE EACH	530.0112 CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.2319 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH LF	608.2324 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH LF	608.3015 STORM SEWER PIPE CLASS III-A 15-INCH LF	SPV.0060.07 SPECIAL (07. PIPE CONNECTION TO EXISTING STRUCTURE) EACH	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE FT/FT
0010	381	-	380	-	-	-	19	-	-	-	-	-	-	-	875.20	875.10	0.0050
	382	-	381	-	-	23	-	-	-	-	-	-	-	-	875.82	875.70	0.0050
	390	-	380	-	-	-	-	-	118	-	-	-	-	-	876.56	875.40	0.0980
	391	-	390	-	-	-	-	21	-	-	-	-	-	-	877.99	877.56	0.0200
	392	-	391	-	-	-	-	22	-	-	-	-	-	-	878.53	878.53	0.0200
	393	-	392	-	-	-	-	176	-	-	-	-	-	-	886.01	878.63	0.0420
	394	-	393	-	-	15	-	-	-	-	-	-	-	-	887.12	886.51	0.0420
	395	-	390	-	-	-	-	51	-	-	-	-	-	-	880.53	879.30	0.0240
	396	-	395	-	-	-	-	46	-	-	-	-	-	-	881.50	880.63	0.0190
	400	-	396	-	-	-	-	119	-	-	-	-	-	-	886.22	881.60	0.0390
	401	-	400	-	-	7	-	-	-	-	-	-	-	-	886.89	886.82	0.0100
	410	-	400	-	-	-	-	120	-	-	-	-	-	-	890.99	886.32	0.0390
	500	-	350	-	-	-	-	45	-	-	-	-	-	-	873.33	872.79	0.0120
	500	-	510	-	-	-	-	27	-	-	-	-	-	-	873.79	873.43	0.0130
	511	-	510	-	-	-	-	53	-	-	-	-	-	-	874.68	873.89	0.0150
	510	-	512	-	-	-	9	-	-	-	-	-	-	-	874.23	874.14	0.0100
	520	-	510	-	-	-	-	48	-	-	-	-	-	-	874.13	873.89	0.0050
	600	-	350	-	-	-	-	107	-	-	-	-	-	-	874.27	873.20	0.0100
	601	-	600	-	-	-	-	64	-	-	-	-	-	-	875.01	874.37	0.0100
	602	-	600	-	-	27	-	-	-	-	-	-	-	-	875.14	874.87	0.0100
	603	-	602	-	-	6	-	-	-	-	-	-	-	-	875.30	875.24	0.0100
	610	-	600	-	-	162	-	-	-	-	-	-	-	-	879.26	874.87	0.0270
	700	-	380	-	-	-	-	-	93	-	-	-	-	-	875.78	875.40	0.0410
	701	-	700	-	-	-	-	19	-	-	-	-	-	-	876.47	876.28	0.0100
	710	-	700	-	-	-	-	21	-	-	-	-	-	-	876.38	876.28	0.0050
	720	-	710	-	-	-	-	55	-	-	-	-	-	-	876.77	876.48	0.0050
	800	-	390	-	-	-	-	53	-	-	-	-	-	-	877.67	877.46	0.0040
	801	-	800	-	-	6	-	-	-	-	-	-	-	-	878.38	878.32	0.0100
	810	-	800	-	-	-	-	50	-	-	-	-	-	-	877.97	877.77	0.0040
	811	-	810	-	-	-	25	-	-	-	-	-	-	-	878.01	877.89	0.0050
	812	-	811	-	-	8	-	-	-	-	-	-	-	-	878.34	878.26	0.0050
	820	-	810	-	-	-	-	57	-	-	-	-	-	-	878.24	878.07	0.0030
	830	-	820	-	-	-	-	57	-	-	-	-	-	-	878.71	878.34	0.0065
	900	-	910	-	-	-	-	-	300	-	-	-	-	-	883.80	879.90	0.0130
	910	-	920	-	-	-	-	-	300	-	-	-	-	-	879.80	875.51	0.0143
	930	-	920	-	-	-	-	-	101	-	-	-	-	-	875.41	874.90	0.0050
	921	-	920	-	-	14	-	-	-	-	-	-	-	-	876.54	876.40	0.0100
	930	-	940	-	-	-	-	-	300	-	-	-	-	-	874.80	870.90	0.0130
	931	-	930	-	-	20	-	-	-	-	-	-	-	-	876.00	875.90	0.0051
	940	-	950	-	-	-	-	-	225	-	-	-	-	-	870.80	867.90	0.0129
	941	-	940	-	-	17	-	-	-	-	-	-	-	-	871.99	871.90	0.0050
	950	-	960	-	-	-	-	-	34	-	-	-	-	-	867.80	867.10	0.0203
	960	-	970	-	-	-	-	-	47	-	-	-	-	-	867.00	866.00	0.0214
	TS-2	-	EX-3	-	-	-	-	-	-	-	-	-	20	1	873.30	872.90	0.0200
	EX. PIPE	-	360	1	-	-	-	-	-	-	-	-	35	-	872.02	871.85	0.0050
	EX-200	-	381	1	-	-	-	-	-	-	-	-	18	1	875.09	875.04	0.0030
	PAGE 2/2 - SUBTOTALS			2	0	305	53	1,211	1,518	0	0	0	73	2			
	TOTAL 0010			4	131	897	111	1,211	2,231	454	408	400	73	2			

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

STORM SEWER STRUCTURES

CATEGORY	STRUCTURE	**STATION	**OFFSET	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.2619 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0610 INLET COVERS TYPE BW EACH	611.0612 INLET COVERS TYPE C EACH	611.0624 INLET COVERS TYPE H EACH	611.0627 INLET COVERS TYPE HM EACH	611.0639 INLET COVERS TYPE H-S EACH	611.0642 INLET COVERS TYPE MS EACH	611.0651 INLET COVERS TYPE S EACH	611.0652 INLET COVERS TYPE T EACH	611.0654 INLET COVERS TYPE V EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3220 INLETS 2X2-FT EACH	611.3225 INLETS 2X2.5-FT EACH	611.3230 INLETS 2X3-FT EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	633.5200 MARKERS CULVERT END EACH	RIM ELEVATION	INVERT ELEVATION	***DEPTH FT
0010	110	896+55 'NB'	15.6' LT	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	882.53	875.15	6.11
	111	896+55 'NB'	5.5' LT	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	881.75	875.34	5.39
	112	896+63 'NB'	5.5' LT	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	882.07	875.39	5.66
	115	896+54 'SB'	5.5' RT	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	882.71	875.09	6.60
	120	898+00 'NB'	5.6' LT	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	887.53	882.08	4.10
	130	899+86 'NB'	5.6' LT	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	894.84	890.50	2.99
	150	894+50 'SB'	18' LT	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	873.75	867.63	4.85
	151	894+50 'SB'	33.5' LT	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	873.29	866.00	6.27
	152	894+50 'SB'	48.4' LT	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		865.89	
	160	896+50 'SB'	18' LT	-		-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	881.75	875.71	4.77
	161	896+50 'SB'	33.5' LT	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	881.18	877.12	3.04
	170	898+50 'SB'	18' LT	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	890.19	883.49	5.43
	171	898+50 'SB'	33.5' LT	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	889.62	885.18	3.42
	175	900+43 'SB'	33.5' LT	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	897.09	892.55	3.52
	210	912+54 'NB'	24.9 'LT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	897.01	893.00	4.01
	211	112+58 'A'	40.1' RT	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		892.39	
	220	921+77 'NB'	33.6' RT	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	900.32	895.74	3.23
	221	921+77 'NB'	107.2' RT	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		882.42	
	230	922+22 'SB'	33.6' LT	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	899.90	894.86	3.69
	231	922+22 'SB'	86.4' LT	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		879.70	
	240	928+38 'SB'	44' LT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	886.11	884.26	1.85
	241	927+89 'NB'	24.5' LT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	886.29	883.73	2.56
	242	927+88 'NB'	**49.6' RT**	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	886.69	883.26	3.43
	243	227+84 'B'	34.3' RT	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		883.02	
	250	938+88 'NB'	25.2' LT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	872.14	870.06	2.08
	251	938+89 'NB'	58.2' RT	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		869.81	
	260	946+54 'NB'	25.1' LT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	863.17	861.07	2.10
	261	946+54 'NB'	57.5' RT	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		860.82	
	310	42+62 'SGE'	17.5' RT	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	869.16	864.42	3.72
	311	42+63 'SGW'	17.5' LT	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	869.16	864.87	3.27
	312	42+67 'SGW'	33.1' LT	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	869.12	865.17	2.68
	320	43+91 'SGE'	11' RT	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	872.40	865.81	5.32
	321	43+91 'SGW'	17.5' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	872.22	867.65	3.55
	322	43+99 'SGW'	17.5' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	872.55	867.79	3.74
	323	43+92 'SGW'	17.5' RT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	872.25	867.48	3.75
	324	44+00 'SGE'	17.5' RT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	872.58	867.55	4.01
	330	45+84 'SGE'	11' RT	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	877.15	869.67	6.21
	340	46+60 'SGE'	18.3' RT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	877.54	870.87	5.65
	341	46+60 'SGW'	18.3' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	877.53	872.70	3.81
	350	10+25 'WRB'	1.7' RT	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	878.29	871.67	5.52
	351	10+46 'WRB'	1.7' RT	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	878.36	873.13	4.13
	360	12+85 'WRB'	1.7' RT	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	878.50	871.74	5.66
	370	48+76 'SGE'	17.5' RT	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	878.83	873.10	4.71
	371	48+81 'SGE'	1.5' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	879.16	873.96	4.18
	372	48+81 'SGW'	1.5' RT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	879.31	874.18	4.11
	373	48+92 'SGW'	19.5' LT	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	879.03	874.40	3.61
	380	10+45 'ERB'	1.7' RT	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	880.58	875.82	3.66
	381	10+65 'ERB'	1.7' RT	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	880.50	877.02	2.38
	382	10+66 'ERB'	21.5' LT	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	880.60	877.24	2.34
	390	52+26 'SGW'	1.5' RT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	883.06	876.63	5.41
		PAGE 1/2 - SUBTOTALS		2	2	3	6	0	1	9	7	5	12	0	5	4	0	9	4	1	1	3	2	17	0	6	6			

**** STATION & OFFSET ARE TO CENTER OF STRUCTURE**

***** DEPTH = RIM ELEV - TOP OF STR ELEV - COVER HT - 6 INCH ADJ RING HT**

CONTINUED ON NEXT PAGE

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

STORM SEWER STRUCTURES (CONTINUED)

CATEGORY	STRUCTURE	**STATION	**OFFSET	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.2619 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.0610 INLET COVERS TYPE BW EACH	611.0612 INLET COVERS TYPE C EACH	611.0624 INLET COVERS TYPE H EACH	611.0627 INLET COVERS TYPE HM EACH	611.0639 INLET COVERS TYPE H-S EACH	611.0642 INLET COVERS TYPE MS EACH	611.0651 INLET COVERS TYPE S EACH	611.0652 INLET COVERS TYPE T EACH	611.0654 INLET COVERS TYPE V EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3220 INLETS 2X2-FT EACH	611.3225 INLETS 2X2.5-FT EACH	611.3230 INLETS 2X3-FT EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	633.5200 MARKERS CULVERT END EACH	RIM ELEVATION	INVERT ELEVATION	***DEPTH FT
0010	391	52+24 'SGE'	1.5' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	883.16	877.74	4.40
	392	52+28 'SGE'	20.3' RT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	883.09	877.95	4.12
	393	54+07 'SGE'	18.5' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	890.71	885.96	3.73
	394	54+07 'SGE'	33' RT	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	891.19	886.71	3.48
	400	54+21 'SGW'	16.5' LT	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	891.83	884.96	5.60
	401	54+21 'SGW'	28.5' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	891.56	885.62	4.92
	402	54+12 'SGW'	28.7' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	891.09	885.56	4.51
	410	55+41 'SGW'	28.5' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	896.17	891.00	4.15
	500	10+00 'WRB'	30.7' LT	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	878.32	873.15	4.15
	510	420+42 'D'	1.5' RT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	878.70	873.46	4.22
	511	520+01 'D'	33' LT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	877.39	874.02	3.37
	512	12+79 'WRB'	21.5' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	878.64	873.76	3.86
	520	420+00 'D'	22.1' RT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	876.55	874.50	2.05
	600	11+22 'WRB'	30.5' LT	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	878.78	873.52	4.24
	601	322+13 'C'	19.2' RT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	877.16	874.69	2.47
	602	321+75 'C'	1.5' RT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	879.22	873.87	4.33
	603	11+40 'WRB'	21.5' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	879.20	874.48	3.70
	610	323+40 'C'	24.5' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	884.03	878.51	4.50
	700	119+71 'A'	1.5' LT	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	881.86	876.69	4.15
	701	119+63 'A'	19.6' LT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	879.21	876.89	2.32
	710	119+69 'A'	19.7' RT	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	881.52	876.85	3.65
	720	12+53 'ERB'	57' LT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	878.69	876.58	2.11
	800	11+73 'ERB'	23.4' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	882.57	876.79	4.76
	801	100+25 'S1L'	1.5' RT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	882.66	877.06	4.58
	810	221+28 'B'	1.5' LT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	882.10	877.64	3.44
	811	221+33 'B'	22.7' RT	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	881.90	877.96	2.92
	812	221+26 'B'	24.7' RT	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	881.98	878.25	2.71
	813	221+18 'B'	27.6' RT	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	882.12	878.35	2.75
	820	221+80 'B'	19.1' LT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	880.24	878.17	2.07
	830	222+04 'B'	33.5' RT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	880.61	878.71	1.90
	900	327+75 'C'	24.5' LT	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	888.62	883.80	3.80
	910	330+75 'C'	24.5' LT	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	884.63	879.80	3.81
	920	333+75 'C'	25.3' LT	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	880.90	875.41	4.47
	921	333+75 'C'	39.1' LT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	880.15	876.54	3.61
	930	934+75 'SB'	30' LT	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	880.34	874.80	4.27
	931	934+75 'SB'	49.5' LT	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	879.73	875.83	2.55
	940	937+75 'SB'	30' LT	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	876.38	870.80	4.31
	941	937+75 'SB'	47' LT	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	875.86	871.99	2.52
	950	940+00 'SB'	30' LT	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	873.41	867.80	4.34
	960	940+30 'SB'	47' LT	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	872.50	867.00	4.15
	970	940+70 'SB'	70.8' LT	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		866.00	
	TS-1	328+30 'TC'	21' RT	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	886.00	884.32	1.68
	TS-2	321+65 'TC'	22.5' RT	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	877.00	873.30	3.70
		PAGE 2/2 - SUBTOTALS		0	1	0	4	3	0	15	3	6	19	1	0	0	1	4	0	1	10	1	2	13	1	9	1			
		TOTAL 0010		2	3	3	10	3	1	24	10	11	31	1	5	4	1	13	4	2	11	4	4	30	1	15	7			

** STATION & OFFSET ARE TO CENTER OF STRUCTURE
*** DEPTH = RIM ELEV - TOP OF STR ELEV - COVER HT - 6 INCH ADJ RING HT

ADJUSTING INLET COVERS

CATEGORY	STRUCTURE	STATION	OFFSET	611.8115 ADJUSTING INLET COVERS EACH
0010	EX-300	56+55 'SGW'	38.8' LT	1
	EX-301	56+39 'SGE'	35.0' RT	1
			TOTAL 0010	2

INSULATION BOARD POLYSTYRENE 2-INCH

CATEGORY	STATION	LOCATION	612.0902.S.01 INSULATION BOARD POLYSTYRENE (INCH) (01. 2-INCH) SY
0010	49+04 'SGE'	SIGGELKOW RD, RT	0.7
	11+92 'ERB'	SIGGELKOW RD, LT	7
	940+27 'SB'	USH 51 SB, LT	1.3
		TOTAL 0010	9

CONCRETE SUPPORTS

CATEGORY	STATION	LOCATION	SPV.0060.06 SPECIAL (06. CONCRETE SUPPORTS) EACH
0010	49+04 'SGE'	SIGGELKOW RD, 21.8' RT	1
	48+87 'SGW'	SIGGELKOW RD, 40.2' LT	1
	940+27 'SB'	USH 51, 45.6' LT	1
		TOTAL 0010	3

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

PIPE UNDERDRAIN ITEMS

CATEGORY	BEGIN STATION	BEGIN OFFSET	BEGIN ELEV.	BEGIN STR. NO.	END STATION	END OFFSET	END ELEV.	END STR. NO.	LOCATION	310.0110 BASE AGGREGATE OPEN-GRADED TON	612.0106 PIPE UNDERDRAIN 6-INCH LF	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF	612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH EACH	* 645.0111 GEOTEXTILE TYPE DF SCHEDULE A SY	646.5520 MARKING OUTFALL EPOXY EACH
0010	896+50 'SB'	34' LT	877.67	161	894+50 'SB'	34' LT	869.77	151	USH 51 SB, LT	14	200	-	-	100	-
	898+50 'SB'	34' LT	886.11	171	896+50 'SB'	34' LT	877.67	161	USH 51 SB, LT	14	200	-	-	100	-
	900+43 'SB'	34' LT	893.58	175	898+50 'SB'	34' LT	886.11	171	USH 51 SB, LT	14	193	-	-	97	-
	926+50 'SB'	34' LT	888.87	END CAP REQ'D	928+38 'SB'	44' LT	884.91	240	USH 51 SB, LT	12	176	22	-	88	-
	896+36 'NB'	0'	877.73	END CAP REQ'D	894+43 'NB'	53' RT	868.95	AEW	USH 51 NB, RT	14	194	53	1	97	1
	899+86 'NB'	6.3' LT	891.51	130	898+00 'NB'	6' LT	884.02	120	USH 51 NB, LT	13	186	-	-	93	-
	898+00 'NB'	6' LT	884.02	120	896+63 'NB'	6' LT	878.55	112	USH 51 NB, LT	10	137	-	-	69	-
	910+85 'NB'	34' RT	897.31	END CAP REQ'D	912+58 'NB'	96.6' RT	895.26	AEW	USH 51 NB, RT	12	172	63	1	86	1
	913+50 'NB'	34' RT	896.67	END CAP REQ'D	912+59 'NB'	96.6' RT	894.77	AEW	USH 51 NB, RT	6	92	63	1	46	1
	43+92 'SGE'	18' RT	868.73	323	42+62 'SGE'	18' RT	865.64	310	SIGGELKOW RD, RT	9	129	-	-	65	-
	46+60 'SGE'	18.8' RT	874.12	340	44+00 'SGE'	18' RT	869.06	324	SIGGELKOW RD, RT	19	263	-	-	132	-
	10+01 'WRB'	31.2' LT	874.80	500	46+60 'SGE'	18.8' RT	874.12	340	SIGGELKOW RD, RT	9	126	-	-	63	-
	419+16 'D'	17' LT	878.76	END CAP REQ'D	10+01 'WRB'	31.2' LT	874.80	500	RAMP D, LT	10	138	-	-	69	-
	43+91 'SGW'	18' LT	868.70	321	42+63 'SGW'	18' LT	865.64	311	SIGGELKOW RD, LT	9	127	-	-	64	-
	46+60 'SGW'	18.8' LT	874.18	341	43+99 'SGW'	18' LT	869.04	322	SIGGELKOW RD, LT	18	259	-	-	130	-
	11+21 'WRB'	30.9' LT	875.26	600	46+60 'SGW'	18.8' LT	874.18	341	SIGGELKOW RD, LT	11	151	-	-	76	-
	323+40 'C'	25' LT	880.51	610	11+21 'WRB'	30.9' LT	875.26	600	RAMP C, LT	12	167	-	-	84	-
	12+85 'C'	2.5' RT	875.19	360	10+46 'WRB'	2.5' RT	875.04	351	WEST RAB	16	226	-	-	113	-
	12+85 'C'	2.5' RT	875.19	360	10+25 'WRB'	2.5' RT	874.97	350	WEST RAB	3	37	-	-	19	-
	12+79 'WRB'	22' LT	875.62	512	48+76 'SGE'	18' RT	875.31	370	SIGGELKOW RD, RT	5	78	-	-	39	-
	12+87 'ERB'	22' LT	878.09	END CAP REQ'D	48+76 'SGE'	18' RT	875.31	370	SIGGELKOW RD, RT	20	279	-	-	140	-
	11+40 'WRB'	22' LT	876.18	603	48+92 'SGW'	20' LT	875.51	373	SIGGELKOW RD, LT	6	92	-	-	46	-
	11+10 'ERB'	22' LT	878.02	END CAP REQ'D	48+92 'SGW'	20' LT	875.51	373	SIGGELKOW RD, LT	15	220	-	-	110	-
	10+65 'ERB'	2.5' RT	877.03	381	10+45 'ERB'	2.5' RT	877.1	380	EAST RAB	19	266	-	-	133	-
	117+69 'A'	23' RT	884.50	END CAP REQ'D	119+69 'A'	20.2 RT	878	710	RAMP A, RT	14	200	-	-	100	-
	52+28 'SGE'	20.8' RT	879.57	392	119+69 'A'	20.2 RT	878	710	RAMP A, RT	7	98	-	-	49	-
	54+07 'SGE'	19' RT	887.22	393	52+28 'SGE'	20.8' RT	879.57	392	SIGGELKOW RD, RT	12	176	-	-	88	-
	55+69 'SGE'	30.4' RT	893.57	END CAP REQ'D	54+07 'SGE'	19' RT	887.22	393	SIGGELKOW RD, RT	12	165	-	-	83	-
	53+09 'SGW'	18' LT	882.51	END CAP REQ'D	11+73 'ERB'	24' LT	879.55	800	SIGGELKOW RD, LT	8	114	-	-	57	-
	55+40 'SGW'	29' LT	892.63	410	54+21 'SGW'	29' LT	888.05	401	SIGGELKOW RD, LT	8	119	-	-	60	-
	54+12 'SGW'	29.2' LT	887.56	402	221+26 'B'	25.2' RT	878.46	812	SIGGELKOW RD, LT	16	232	-	-	116	-
	222+76 'B'	17' RT	881.86	END CAP REQ'D	221+34 'B'	23.1' RT	878.38	811	RAMP B, RT	10	137	-	-	69	-
	327+75 'C'	25' LT	885.10	900	323+40 'C'	25' LT	880.51	610	RAMP C, LT	30	433	-	-	217	-
	327+75 'C'	25' LT	885.10	900	330+75 'C'	25' LT	881.11	910	RAMP C, LT	21	300	-	-	150	-
	330+75 'C'	25' LT	881.11	910	333+75 'C'	25.8' LT	877.39	920	RAMP C, LT	21	300	-	-	150	-
	333+75 'C'	25.8' LT	877.39	920	934+75 'SB'	50.5' LT	876.19	931	RAMP C, LT	7	99	-	-	50	-
	934+75 'SB'	50.5' LT	876.19	931	937+75 'SB'	48' LT	872.33	941	USH 51 SB, LT	21	300	-	-	150	-
	937+75 'SB'	48' LT	872.33	941	940+30 'SB'	48' LT	868.96	960	USH 51 SB, LT	18	255	-	-	128	-
									TOTAL 0010	495	7,036	201	3	3,526	3

*ADDITIONAL QUANTITIES ELSEWHERE

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

RECONSTRUCTING INLETS

CATEGORY	STATION	LOCATION	611.0430 RECONSTRUCTING INLETS EACH	REMARKS
0010	955+88 'NB'	USH 51 MEDIAN	1	PATCH EX. INLET AFTER REMOVAL OF NORTH XO SS
		TOTAL 0010	1	

ADJUSTING MANHOLE COVERS

CATEGORY	STATION	LOCATION	611.8110 ADJUSTING MANHOLE COVERS EACH	REMARKS
0030	45+88 'SGW'	SIGGELKOW RD WB 12.1' LT	1	SANITARY MANHOLE
	46+28 'SGW'	SIGGELKOW RD WB 8.8' LT	1	SANITARY MANHOLE
		TOTAL 0030	2	

COVER PLATES

CATEGORY	STRUCTURE	STATION	OFFSET	LOCATION	611.8120.S COVER PLATES TEMPORARY EACH	SPV.0060.09 SPECIAL (09. COVER PLATES) EACH	REMARKS
0010	EX-3	321+60 'TC'	2.8' RT	RAMP C	1	-	STAGE 2A
	EX-4	321+32 'TC'	7.7' LT	RAMP C	1	-	STAGE 2A
	600	11+22 'WRB'	30.5' LT	RAMP C	1	-	STAGE 2B
	115	896+54 'SB'	5.5' RT	SOUTH XO	1	-	STAGE 2D
	EX-101	895+35 'NB'	13.2' LT	SOUTH XO	-	1	STAGE 4
				TOTAL 0010	4	1	

GUARDRAIL ITEMS

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL EACH	614.0305 STEEL PLATE BEAM GUARD CLASS A LF	614.0950 REPLACING GUARDRAIL POSTS AND BLOCKS EACH	614.1000 MGS GUARDRAIL TEMPORARY LF	614.1100 MGS GUARDRAIL TEMPORARY THRIE BEAM TRANSITION LF	614.1200 MGS GUARDRAIL TEMPORARY TERMINAL EAT EACH	614.2300 MGS GUARDRAIL 3 LF	614.2330 MGS GUARDRAIL 3 K LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH	SPV.0090.02 SPECIAL (02. REMOVING, SALVAGE, REINSTALL GUARDRAIL) LF
0010	1	903+18 'NB'	-	905+21 'NB'	USH 51 NB, LT	-	-	-	112.5	39.4	1	-	-	-	-	-	-
	1	921+73 'NB'	-	923+76 'NB'	USH 51 NB, LT	-	-	-	112.5	39.4	1	-	-	-	-	-	-
	2	893+84 'SB'	-	900+59 'SB'	USH 51 SB, LT	-	-	-	-	-	-	312.5	312.5	39.4	-	1	-
	2	897+86 'NB'	-	899+87 'NB'	USH 51 NB, RT	-	-	-	112.5	39.4	1	-	-	-	-	-	-
	2	903+44 'SB'	-	905+96 'SB'	USH 51 SB, RT	-	-	-	-	-	-	162.5	-	39.4	1	-	-
	2	904+20 'SB'	-	905+75 'SB'	USH 51 SB, LT	-	-	-	-	-	-	62.5	-	39.4	1	-	-
	2	918+08 'SB'	-	919+99 'SB'	USH 51 SB, RT	-	-	-	-	-	-	100	-	39.4	1	-	-
	2	919+11 'SB'	-	920+02 'SB'	USH 51 SB, LT	-	-	-	-	-	-	-	-	39.4	1	-	-
	2	921+75 'SB'	-	924+28 'SB'	USH 51 SB, RT	-	-	-	-	-	-	162.5	-	39.4	1	-	-
	2	921+78 'SB'	-	925+69 'SB'	USH 51 SB, LT	-	-	-	-	-	-	300	-	39.4	1	-	-
	2	940+50 'SB'	-	941+40 'SB'	USH 51 SB, LT	-	-	-	-	-	-	-	-	39.4	1	-	-
	2	10+39 'TY'		12+27 'TY'	TAYLOR RD RT	-	-	31	-	-	-	-	-	-	-	-	187.5
	3	897+74 'NB'	-	899+87 'NB'	USH 51 NB, RT	-	-	-	-	-	-	125	-	39.4	1	-	-
	3	902+82 'NB'	-	911+08 'NB'	USH 51 NB, RT	-	-	-	-	-	-	800	-	39.4	-	1	-
	3	903+18 'NB'	-	903+63 'NB'	USH 51 NB, LT	-	-	-	-	-	-	37	-	8.2	-	1	-
	3	917+43 'NB'	-	919+96 'NB'	USH 51 NB, LT	-	-	-	-	-	-	162.5	-	39.4	1	-	-
	3	917+77 'NB'	-	919+93 'NB'	USH 51 NB, RT	-	-	-	-	-	-	125	-	39.4	1	-	-
	4	898+36 'SB'	-	900+27 'SB'	USH 51 SB, RT	1	186	-	-	-	-	-	-	78.8	-	-	-
					TOTAL 0010	1	186	31	337.5	118.2	3	2,350	312.5	559.8	10	3	187.5

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

FENCE CHAIN LINK 6-FT

CATEGORY	STATION	TO	STATION	LOCATION	616.0206 FENCE CHAIN LINK 6-FT LF
0010	900+75 'SB'	-	900+85 'SB'	USH 51 SB, LT	45
	903+58 'SB'	-	904+22 'SB'	USH 51 SB, LT	75
	944+14 'NB'	-	948+84 'NB'	USH 51 NB, RT	470
	46+14 'SGW'	-	47+50 'SGW'	SIGGELKOW RD, LT	152
	52+89 'SGW'	-	53+01 'SGW'	SIGGELKOW RD, LT	40
				TOTAL 0010	782

MOBILIZATION EROSION CONTROL

CATEGORY	STAGE	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	2	USH 51 & SIGGELKOW RD	6	6
	3	USH 51	4	4
	4	USH 51	2	2
		TOTAL 0010	12	12

3

EROSION CONTROL ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2004 EROSION MAT CLASS I TYPE B SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.2023 EROSION MAT CLASS II TYPE B SY	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7560 TRACKING PADS EACH	628.7570 ROCK BAGS EACH
0010	894+43 'NB'	-	900+57 'NB'	USH 51 NB, RT	630	630	-	-	-	-	-	-	-	-	-	-
	894+43 'SB'	-	900+57 'SB'	USH 51 SB, LT	870	870	-	-	750	4	-	4	-	-	-	-
	894+43 'NB'	-	903+10 'NB'	USH 51 MEDIAN	170	170	-	840	180	6	-	5	-	-	-	-
	902+71 'NB'	-	920+08 'NB'	USH 51 NB, RT	1240	1240	160	-	180	-	-	-	-	-	-	-
	903+45 'SB'	-	920+14 'SB'	USH 51 SB, LT	230	230	1620	-	140	-	-	-	-	20	-	-
	902+71 'NB'		920+08 'NB'	USH 51 MEDIAN	-	-	2520	-	440	1	1	-	-	20	-	-
	921+57 'NB'	-	953+40 'NB'	USH 51 NB, RT	130	130	1890	-	5260	2	1	1	-	100	-	-
	921+64 'SB'	-	953+40 'SB'	USH 51 SB, LT	480	480	2620	-	-	8	2	6	-	30	-	-
	921+57 'NB'	-	953+40 'NB'	USH 51 MEDIAN	-	-	3170	-	170	5	4	-	-	180	-	-
	108+99 'A'	-	120+00 'A'	RAMP A, RT	-	-	720	-	-	2	1	-	1	90	-	-
	108+99 'A'	-	120+00 'A'	RAMP A, LT	-	-	2650	-	-	2	1	1	-	80	-	-
	221+21 'B'	-	234+88 'B'	RAMP B, RT	-	-	1200	-	-	4	1	-	3	70	-	-
	221+21 'B'	-	234+88 'B'	RAMP B, LT	-	-	2320	420	-	2	1	1	-	40	-	-
	321+69 'C'	-	334+17 'C'	RAMP C, RT	-	-	800	-	1290	2	1	1	-	80	-	-
	321+69 'C'	-	334+17 'C'	RAMP C, LT	-	-	-	-	-	3	-	2	1	10	-	-
	408+89 'D'	-	420+49 'D'	RAMP D, RT	-	-	480	-	1550	2	1	1	-	90	-	-
	409+89 'D'	-	420+49 'D'	RAMP D, LT	-	-	1630	-	-	2	1	-	1	120	-	-
	42+45 'SGE'	-	46+78 'SGE'	SIGGELKOW ROAD	-	-	440	1950	-	14	1	9	4	-	-	-
	46+78 'SGE'	-	53+21 'SGE'	SIGGELKOW ROAD	-	-	-	480	-	7	-	3	4	-	-	-
	53+21 'SGE'	-	55+70 'SGE'	SIGGELKOW ROAD	-	-	210	920	-	10	2	12	-	-	-	-
	11+31 'TY'	-	11+83 'TY'	TAYLOR RD RT	240	240	-	230	-	-	-	-	-	-	-	-
	321+30 'TC'	-	329+57 'TC'	RAMP C - STAGE 2A	-	-	890	-	250	2	-	-	-	70	-	-
	EXCHANGE STREET INTERSECTION SURCHARGE				145	145	-	837	-	-	-	-	-	-	1	17
				UNDISTRIBUTED	1,030	1,030	5,830	1,420	2,550	18	5	11	4	250	-	4
				TOTAL 0010	5,165	5,165	29,150	7,097	12,760	96	23	57	18	1,250	1	21

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

FINISHING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0130 SEEDING MIXTURE NO. 30 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0400 SEEDING NURSE CROP LB	630.0500 SEED WATER MGAL	SPV.0085.01 SPECIAL (01. SEEDING NO MOW FESCUE) LB	SPV.0085.02 SPECIAL (02. NATIVE SEEDING MIXTURE NO. 75 UPDATED) LB
0010	894+43 'NB'	-	900+57 'NB'	USH 51 NB, RT	-	1290	1290	0.8	-	58	-	35	-	29	-	-
	894+43 'SB'	-	900+57 'SB'	USH 51 SB, LT	620	330	50	0.6	-	15	28	25	-	21	-	-
	894+43 'NB'	-	903+10 'NB'	USH 51 MEDIAN	830	180	-	0.6	-	8	38	27	-	23	-	-
	902+71 'NB'	-	920+08 'NB'	USH 51 NB, RT	-	2780	500	2.7	110	83	-	120	-	97	-	-
	903+45 'SB'	-	920+14 'SB'	USH 51 SB, LT	-	4450	1900	3.7	100	160	-	160	-	130	-	-
	902+71 'NB'	-	920+08 'NB'	USH 51 MEDIAN	1460	2780	1560	4.2	20	220	66	180	-	151	-	-
	921+57 'NB'	-	953+40 'NB'	USH 51 NB, RT	-	6530	2770	4.8	-	180	-	110	42.1	173	-	15.8
	921+64 'SB'	-	953+40 'SB'	USH 51 SB, LT	-	6520	3000	4.9	120	230	-	210	-	174	-	-
	921+57 'NB'	-	953+40 'NB'	USH 51 MEDIAN	-	6060	2720	7.8	-	560	-	340	-	280	-	-
	108+99 'A'	-	120+00 'A'	RAMP A, RT	-	1240	520	1.2	-	83	-	50	-	41	-	-
	108+99 'A'	-	120+00 'A'	RAMP A, LT	-	1180	640	1.1	-	80	-	48	-	40	-	-
	221+21 'B'	-	234+88 'B'	RAMP B, RT	-	6340	1140	4.4	-	180	-	100	3.4	157	-	1.3
	221+21 'B'	-	234+88 'B'	RAMP B, LT	-	1240	190	0.8	-	56	-	34	-	28	-	-
	321+69 'C'	-	334+17 'C'	RAMP C, RT	-	650	650	0.4	-	30	-	18	-	15	-	-
	321+69 'C'	-	334+17 'C'	RAMP C, LT	-	1800	1340	1.1	0	-	81	49	-	40	-	-
	408+89 'D'	-	420+49 'D'	RAMP D, RT	-	510	510	0.7	-	50	-	30	-	25	-	-
	409+89 'D'	-	420+49 'D'	RAMP D, LT	-	2330	750	2.0	-	140	-	85	7.1	70	-	2.7
	42+45 'SGE'	-	46+78 'SGE'	SIGGELKOW RD	2380	-	-	1.5	-	-	79	48	5.6	53	13.9	1.3
	46+78 'SGE'	-	53+21 'SGE'	SIGGELKOW RD	475	-	-	0.3	-	-	21	13	3.1	11	19.5	-
	53+21 'SGE'	-	55+70 'SGE'	SIGGELKOW RD	1980	-	-	1.3	-	-	89	53	1.5	44	9.5	-
	11+31 'TY'	-	11+83 'TY'	TAYLOR RD RT	-	230	-	0.2	-	-	10	6	-	5	-	-
	321+30 'TC'	-	329+57 'TC'	STAGE 2A	-	1,130	-	0.7	-	-	-	30	-	25	-	-
	NORTH & SOUTH XO			STAGE 2D	-	750	750	0.5	-	-	-	20	-	17	-	-
	EXCHANGE ST. INTERSECTION SURCHARGE				-	837	-	0.5	-	15.1	-	-	-	18.8	-	-
				UNDISTRUBUTED	1,930	12,080	5,070	11.5	88	530	100	450	15.7	410	10.7	5.3
				TOTAL 0010	9,675	61,237	25,350	58.3	438	2,678.1	512	2,241	78.5	2,078	53.6	26.4

DELINEATORS

CATEGORY	STATION	TO	STATION	LOCATION	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS EACH	633.1000 DELINEATORS BARRIER WALL EACH	REMARKS
0010	892+74 'NB'	-	892+89 'NB'	SOUTH XO	4	8	-	STAGE 4
	946+40 'NB'	-	947+18 'NB'	USH 51 MEDIAN	2	2	-	
	934+13 'SB'	-	940+50 'SB'	USH 51 SB, LT	-	-	6	
				TOTAL 0010	6	10	6	

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

PERMANENT SIGNING ITEMS

CATEGORY	SIGN NUMBER	SIGN CODE	SIZE (INCH)	SIZE (INCH)	MESSAGE	LOCATION	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2220 SIGNS TYPE II REFLECTIVE SH SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	REMARKS
0010	01-01	I55-56	30	18	ADOPT A HIGHWAY	USH 51 NB, RT	--	1	--	--	3.75	--	--	
	01-02	I55-56P	30	18	SPONSOR LINE	USH 51 NB, RT	--	--	--	--	3.75	--	--	ON SAME POST AS SIGN CODE 01-01
	01-03	W3-3	48	48	TRAFFIC SIGNALS AHEAD SYMBOL	USH 51 SB, LT	--	1	1	--	--	--	16.00	
	01-04	W3-3	48	48	TRAFFIC SIGNALS AHEAD SYMBOL	USH 51 MEDIAN	--	--	2	--	--	--	16.00	
	01-05	R2-1	30	36	SPEED LIMIT	USH 51 MEDIAN	--	1	--	--	7.50	--	--	
	01-06	R2-1	30	36	SPEED LIMIT	USH 51 SB, LT	--	1	--	--	7.50	--	--	
	01-07	W3-5	48	48	SPEED REDUCTION AHEAD	USH 51 SB, LT	--	--	--	2	--	6.25	9.75	
	01-08	W3-5	48	48	SPEED REDUCTION AHEAD	USH 51 MEDIAN	--	--	2	--	--	6.25	9.75	
	01-10	W2-6	30	30	ROUNDABOUT AHEAD	RAMP A, RT	--	--	1	--	--	--	6.25	
	01-11	W13-1	18	18	ADV SL 15 MPH	RAMP A, RT	--	--	--	--	--	--	2.25	
	01-12	R2-1	30	36	SPEED LIMIT	USH 51 MEDIAN	--	1	--	--	7.50	--	--	
	01-13	R2-1	30	36	SPEED LIMIT	USH 51 SB, RT	--	1	--	--	7.50	--	--	
	01-14	E5-1	72	60	EXIT W/ARROW	RAMP A, LT	--	--	--	2	30.00	--	--	
	01-15	R5-1A	36	24	WRONG WAY	RAMP A,RT	--	1	--	--	6.00	--	--	
	01-16	R5-1A	36	24	WRONG WAY	RAMP A,LT	--	1	--	--	6.00	--	--	
	01-17	W4-1R	48	48	THRU TRAFFIC MERGE LEFT	USH 51 SB, LT	--	--	--	2	--	--	16.00	
	01-18	R5-1	30	30	DO NOT ENTER	RAMP A, LT	--	1	--	--	6.25	--	--	
	01-19	J1-1	24	39	USH 51 SOUTH	USH 51 SB, LT	--	--	1	--	6.50	--	--	
	01-20	R5-1	30	30	DO NOT ENTER	RAMP C, LT	--	1	--	--	6.25	--	--	
	01-21	R5-1A	36	24	WRONG WAY	RAMP C, LT	--	1	--	--	6.00	--	--	
	01-22	R5-1A	36	24	WRONG WAY	RAMP C, RT	--	1	--	--	6.00	--	--	
	01-23	D1-62	132	66	ROUNDABOUT DIRECTIONAL SIGN	RAMP A, RT	--	--	--	3	60.50	--	--	
	02-01	W4-1R	48	48	THRU TRAFFIC MERGE LEFT	USH 51 NB, RT	--	2	--	--	--	--	16.00	
	02-02	E5-1	72	60	EXIT W/ARROW	RAMP C, LT	--	--	--	2	30.00	--	--	
	02-03	W2-6	30	30	ROUNDABOUT AHEAD	RAMP C, RT	--	1	--	--	--	--	6.25	
	02-04	W13-1	18	18	ADV SL 15 MPH	RAMP C, RT	--	--	--	--	--	--	2.25	ON SAME POST AS SIGN CODE 02-03
	02-06	R3-4B	36	48	NO U-TURN SYMBOL	USH 51 SB, LT	--	--	1	--	12.00	--	--	
	02-07	R3-4B	36	48	NO U-TURN SYMBOL	USH 51 NB, RT	--	--	1	--	12.00	--	--	
	02-09	D1-62	132	66	ROUNDABOUT DIRECTIONAL SIGN	RAMP C, RT	--	--	--	3	60.50	--	--	
	02-10	I55-56	30	18	ADOPT A HIGHWAY	USH 51 SB, LT	--	1	--	--	3.75	--	--	
	02-11	I55-59P	30	18	SPONSOR LINE	USH 51 SB, LT	--	--	--	--	3.75	--	--	ON SAME POST AS SIGN CODE 02-11
	03-02	J1-1	24	39	JCT 51	SIGGELKOW RD, RT	--	--	1	--	6.50	--	--	
	03-03	W2-6	30	30	ROUNDABOUT AHEAD	SIGGELKOW RD, RT	--	1	--	--	--	--	6.25	
	03-04	W13-1	18	18	ADV SL 15 MPH	SIGGELKOW RD, RT	--	--	--	--	--	--	2.25	ON SAME POST AS SIGN CODE 03-03
	03-05	R4-7	24	30	KEEP LEFT	SIGGELKOW RD, MEDIAN	--	1	--	--	5.00	--	--	
	03-06	R5-1	30	30	DO NOT ENTER	SIGGELKOW RD, LT	--	--	--	--	6.25	--	--	
	03-09	J2-2	48	57	USH 51 DIRECTIONAL SIGN	SIGGELKOW RD, RT	--	--	2	--	19.00	--	--	
	04-01	R1-2	36	31	YIELD	SIGGELKOW RD, MEDIAN	--	1	--	--	7.75	--	--	
	04-02	D1-1	90	15	SIGGELKOW RD	SIGGELKOW RD, MEDIAN	--	2	--	--	9.375	--	--	
	04-03	R1-2	36	31	YIELD	SIGGELKOW WEST ROUNDABOUT	--	1	--	--	7.75	--	--	
	04-04	R6-1R	36	12	ONE WAY RIGHT ARROW	SIGGELKOW WEST ROUNDABOUT	2	--	--	--	3.00	--	--	
	04-05	R6-4B	60	24	DIRECTIONAL ARROW	SIGGELKOW WEST ROUNDABOUT	--	--	--	--	10.00	--	--	ON SAME POST AS SIGN CODE 04-04
	04-06	R6-1R	36	12	ONE WAY RIGHT ARROW	SIGGELKOW WEST ROUNDABOUT	2	--	--	--	3.00	--	--	
	04-07	R6-4B	60	24	DIRECTIONAL ARROW	SIGGELKOW WEST ROUNDABOUT	--	--	--	--	10.00	--	--	ON SAME POST AS SIGN CODE 04-06
	04-08	R1-2	36	31	YIELD	SIGGELKOW RD, LT	--	1	--	--	7.75	--	--	
	04-09	D1-1	42	30	SOUTH 51	SIGGELKOW RD, RT	--	2	--	--	8.75	--	--	
	04-10	R1-2	36	31	YIELD	SIGGELKOW RD, RT	--	1	--	--	7.75	--	--	
	04-11	R3-1	24	24	NO RIGHT TURN	SIGGELKOW RD, RT	--	1	--	--	4.00	--	--	
	04-12	R1-2	36	31	YIELD	SIGGELKOW RD, RT	--	1	--	--	7.75	--	--	
	04-13	R1-2	36	31	YIELD	SIGGELKOW RD, MEDIAN	--	1	--	--	7.75	--	--	
						PAGE 1/2 - SUBTOTALS	4	29	12	14	424.38	12.50	109.00	

CONTINUED ON NEXT PAGE

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

PERMANENT SIGNING ITEMS (CONTINUED)

CATEGORY	SIGN NUMBER	SIGN CODE	SIZE (INCH)	SIZE (INCH)	MESSAGE	LOCATION	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2220 SIGNS TYPE II REFLECTIVE SH SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	REMARKS
0010	04-14	D1-2	90	30	NORTH 51 / SIGGELKOW RD	SIGGELKOW RD, MEDIAN	--	2	--	--	18.75	--	--	
	04-15	R6-1R	36	12	ONE WAY RIGHT ARROW	SIGGELKOW RD, MEDIAN	2	--	--	--	3.00	--	--	
	04-16	R6-4B	60	24	DIRECTIONAL ARROW	SIGGELKOW RD, MEDIAN	--	--	--	--	10.00	--	--	ON SAME POST AS SIGN CODE 04-15
	04-17	D1-2	90	30	SOUTH 51 / SIGGELKOW RD	SIGGELKOW RD, MEDIAN	--	2	--	--	18.75	--	--	
	04-18	R1-2	36	31	YIELD	SIGGELKOW RD, MEDIAN	--	1	--	--	7.75	--	--	
	04-19	R1-2	36	31	YIELD	SIGGELKOW RD, MEDIAN	--	1	--	--	7.75	--	--	
	04-20	R6-1R	36	12	ONE WAY RIGHT ARROW	SIGGELKOW RD, MEDIAN	2	--	--	--	3.00	--	--	
	04-21	R6-4B	60	24	DIRECTIONAL ARROW	SIGGELKOW RD, MEDIAN	--	--	--	--	10.00	--	--	ON SAME POST AS SIGN CODE 04-20
	04-22	D1-1	42	30	NORTH 51	SIGGELKOW RD, LT	--	2	--	--	8.75	--	--	
	04-23	R6-1R	36	12	ONE WAY RIGHT ARROW	SIGGELKOW RD, MEDIAN	2	--	--	--	3.00	--	--	
	04-24	R6-4B	60	24	DIRECTIONAL ARROW	SIGGELKOW RD, MEDIAN	--	--	--	--	10.00	--	--	ON SAME POST AS SIGN CODE 04-23
	04-25	R3-1	24	24	NO RIGHT TURN	SIGGELKOW RD, RT	--	1	--	--	4.00	--	--	
	04-26	R1-2	36	31	YIELD	SIGGELKOW RD, LT	--	1	--	--	7.75	--	--	
	04-27	R1-2	36	31	YIELD	SIGGELKOW RD, MEDIAN	--	1	--	--	7.75	--	--	
	04-28	R1-2	36	31	YIELD	SIGGELKOW RD, MEDIAN	--	1	--	--	7.75	--	--	
	04-29	R1-2	36	31	YIELD	SIGGELKOW RD, MEDIAN	--	1	--	--	7.75	--	--	
	04-30	R1-2	36	31	YIELD	SIGGELKOW RD, RT	--	1	--	--	7.75	--	--	
	04-31	D1-1	90	15	SIGGELKOW RD	SIGGELKOW RD, MEDIAN	--	2	--	--	9.375	--	--	
	04-32	R6-1R	36	12	ONE WAY RIGHT ARROW	SIGGELKOW RD, MEDIAN	2	--	--	--	3.00	--	--	
	04-33	R6-4B	60	24	DIRECTIONAL ARROW	SIGGELKOW RD, MEDIAN	--	--	--	--	10.00	--	--	ON SAME POST AS SIGN CODE 04-32
	04-38	J2-1	24	57	USH 51 SOUTH LEFT	SIGGELKOW RD, LT	--	1	--	--	9.50	--	--	
	04-39	J2-1	24	57	USH 51 NORTH RIGHT	SIGGELKOW RD, RT	--	1	--	--	9.50	--	--	
	05-01	W12-1D	24	24	DOUBLE DIAGONAL ARROW	SIGGELKOW RD, MEDIAN	1	--	--	--	--	--	4.00	
	05-02	R2-1	24	30	SPEED LIMIT	SIGGELKOW RD, RT	--	1	--	--	5.00	--	--	
	05-03	R3-8AR	36	30	STRAIGHT AHEAD ONLY RIGHT ONLY	SIGGELKOW RD, LT	--	--	--	--	7.50	--	--	BANDED TO S-13-0595
	05-04	R5-1A	36	24	WRONG WAY	SIGGELKOW RD, RT	--	1	--	--	6.00	--	--	
	05-05	R4-7	24	30	KEEP RIGHT	SIGGELKOW RD, MEDIAN	--	1	--	--	5.00	--	--	
	05-07	W2-6	30	30	ROUNDABOUT AHEAD	SIGGELKOW RD, LT	--	--	--	1	--	--	6.25	
	05-08	W13-1	18	18	ADV SL 15 MPH	SIGGELKOW RD, LT	--	--	--	--	--	--	2.25	ON SAME POST AS SIGN CODE 05-07
	05-09	J1-1	24	39	JCT 51	SIGGELKOW RD, LT	--	1	--	--	6.50	--	--	
	05-10	R1-1	30	30	STOP SIGN	SIGGELKOW RD, LT	--	1	--	--	6.25	--	--	
	05-11	R1-1	30	30	STOP SIGN	SIGGELKOW RD, LT	--	1	--	--	6.25	--	--	
	05-12	R4-7	24	30	KEEP RIGHT	SIGGELKOW RD, LT	--	1	--	--	5.00	--	--	
	05-13	J2-1	24	57	USH 51 SOUTH STRAIGHT	SIGGELKOW RD, MEDIAN	--	1	--	--	9.50	--	--	
	05-14	W11-2	30	30	PEDESTRIAN CROSSING	SIGGELKOW RD, RT	--	1	--	--	--	--	6.25	
	05-15	W16-9P	24	12	AHEAD	SIGGELKOW RD, RT	--	1	--	--	--	--	2.00	ON SAME POST AS SIGN CODE 05-14
	05-16	R5-1	30	30	DO NOT ENTER	SIGGELKOW RD, RT	--	1	--	--	6.25	--	--	
	05-17	R1-1	30	30	STOP SIGN	SIGGELKOW RD, RT	--	1	--	--	6.25	--	--	
	06-01	W11-2	30	30	PEDESTRIAN CROSSING	SIGGELKOW RD, LT	--	1	--	--	--	--	6.25	
	06-02	W16-7L	24	12	YELLOW DIAGONAL ARROWS	SIGGELKOW RD, LT	--	--	--	--	--	--	2.00	ON SAME POST AS SIGN CODE 06-01
	06-03	W11-2	30	30	PEDESTRIAN CROSSING	SIGGELKOW RD, MEDIAN	--	1	--	--	--	--	6.25	
	06-04	W16-7R	24	12	YELLOW DIAGONAL ARROWS	SIGGELKOW RD, MEDIAN	--	--	--	--	--	--	2.00	ON SAME POST AS SIGN CODE 06-03
	06-05	W11-2	30	30	PEDESTRIAN CROSSING	SIGGELKOW RD, MEDIAN	--	1	--	--	--	--	6.25	
	06-06	W16-7R	24	12	YELLOW DIAGONAL ARROWS	SIGGELKOW RD, MEDIAN	--	--	--	--	--	--	2.00	ON SAME POST AS SIGN CODE 06-05
	06-07	W11-2	30	30	PEDESTRIAN CROSSING	SIGGELKOW RD, RT	--	1	--	--	--	--	6.25	
	06-08	W16-7L	24	12	YELLOW DIAGONAL ARROWS	SIGGELKOW RD, RT	--	--	--	--	--	--	2.00	ON SAME POST AS SIGN CODE 06-07
	06-09	R4-7	24	30	KEEP RIGHT	SIGGELKOW RD, MEDIAN	--	1	--	--	5.00	--	--	
	06-10	R4-7	24	30	KEEP RIGHT	SIGGELKOW RD, MEDIAN	--	1	--	--	5.00	--	--	
	06-11	W11-2	30	30	PEDESTRIAN CROSSING	SIGGELKOW RD, LT	--	1	--	--	--	--	6.25	
	06-12	W16-9P	24	12	AHEAD	SIGGELKOW RD, LT	--	1	--	--	--	--	2.00	ON SAME POST AS SIGN CODE 06-11
M-02	W5-65R	24	36	DIAGONAL MARKINGS	TAYLOR RD, RT	--	--	1	--	--	--	--	REMOVE FOR CONSTUCTION AND RE-INSTALL	
					PAGE 2/2 - SUBTOTALS		9	38	1	1	264.38	0.00	62.00	
					TOTAL 0010		13	67	13	15	688.75	12.50	171.00	

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

PERMANENT SIGNING TYPE I

CATEGORY	SIGN NUMBER	SIGN CODE	SIZE (INCH)	SIZE (INCH)		LOCATION	531.1100 CONCRETE MASONRY ANCILLARY STRUCTURES TYPE NS CY	531.1140 STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS LB	531.2024 DRILLING SHAFT 24-INCH LF	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS LB	637.1220 SIGNS TYPE I REFLECTIVE SH SF	637.1230 SIGNS TYPE I REFLECTIVE F SF	REMARKS
0010	01-09	E4-1A	276	48	SIGGELKOW RD	USH 51 NB, RT	3.0	453	25.5	1,034	92	-	
	02-05	E6-1 / E11-1D	192	84	SIGGELKOW RD / EXIT ONLY	USH 51 SB, LT	-	-	-	-	56	56	SIGN STRUCTURE S-13-0594
	02-08	E1-1A	240	84	SIGGELKOW RD EXIT 1/4 MILE	USH 51 SB, LT	2.4	360	20	1,014	140	-	
	05-06	E6-54R	84	72	51 NORTH RIGHT ONLY	SIGGELKOW RD, LT	-	-	-	-	42	-	SIGN STRUCTURE S-13-0595
						TOTAL 0010	5.4	813	45.5	2,048	330	56	

PCMS

CATEGORY	STAGE	LOCATION	QTY.	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY
0010	1	USH 51 NB & SB PROJECT LIMITS	2	14
	2A	RAMP A, B, & D	3	21
	2B	RAMP C	1	7
	3	USH 51 SB & RAMP C	2	14
	4	SIGGELKOW RD	1	7
		TOTAL 0010		63

TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH	REMARKS
0010	892+89 'NB'	-	896+36 'NB'	SOUTH XO	70	70	STAGE 4
				TOTAL 0010	70	70	

TEMPORARY MARKING ITEMS

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH LF	643.3265 TEMPORARY MARKING LINE PAINT 10-INCH LF	643.3350 TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH LF
0010	2A	888+96 'NB'	-	956+84 'NB'	USH 51	25,968	6,605	66	-
	2B	888+96 'NB'	-	956+84 'NB'	USH 51 & SIGGELKOW RD	5,287	989	66	-
	2C	888+96 'NB'	-	956+84 'NB'	USH 51	360	2,918	178	58
	2D	888+96 'NB'	-	956+84 'NB'	USH 51	-	2,978	-	-
	3	891+50 'NB'	-	957+54 'NB'	USH 51	20,021	6,222	3,297	-
					TOTAL 0010	51,636	19,712	3,607	58

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

SIGNING REMOVAL ITEMS

CATEGORY	SIGN NUMBER	DESCRIPTION	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	R-02	USH 51 SOUTH	--	--	1	1	--	--	
	R-03	ADOPT A HIGHWAY	--	--	1	1	--	--	
	R-04	SPEED LIMIT	--	--	1	1	--	--	
	R-05	SPEED LIMIT	--	--	1	--	--	--	
	R-06	SIGNAL AHEAD	--	--	1	1	--	--	
	R-07	SIGNAL AHEAD	--	--	1	1	--	--	
	R-08	SPEED LIMIT	--	--	1	1	--	--	
	R-09	SPEED LIMIT	--	--	1	1	--	--	
	R-10	SPEED REDUCED AHEAD	--	--	1	1	--	--	
	R-11	SPEED REDUCED AHEAD	--	--	1	1	--	--	
	R-12	SIGGELKOW RD	--	--	1	--	2	--	
	R-13	STOP SIGN AHEAD	--	--	1	1	--	--	
	R-14	EXIT	--	--	1	2	--	--	
	R-15	THROUGH TRAFFIC MERGE LEFT	--	--	1	1	--	--	
	R-16	WRONG WAY	--	--	1	1	--	--	
	R-17	WRONG WAY	--	--	1	1	--	--	
	R-18	BABCOCK COUNTY PARK	--	--	1	2	--	--	
	R-19	THROUGH TRAFFIC MERGE LEFT	--	--	1	1	--	--	
	R-20	WRONG WAY	--	--	1	1	--	--	
	R-21	WRONG WAY	--	--	1	1	--	--	
	R-22	STOP SIGN AHEAD	--	--	1	1	--	--	
	R-23	EXIT	--	--	1	2	--	--	
	R-24	SIGGELKOW RD	--	--	1	--	2	--	
	R-25	NO U-TURNS	--	--	1	1	--	--	
	R-26	NO U-TURNS	--	--	1	1	--	--	
	R-27	SIGGELKOW RD EXIT 1/4 MILE	--	--	1	--	2	--	
	R-28	SPEED REDUCED AHEAD	--	--	--	1	--	--	
	R-50	STOP SIGN	--	--	1	1	--	--	
	R-54	JCT USH 51	--	--	1	1	--	--	
	R-55	DO NOT ENTER	--	--	1	1	--	--	
	R-56	KEEP RIGHT	--	--	1	1	--	--	
	R-57	VISIBILITY DIAMOND	--	--	1	--	--	--	
	R-58	WRONG WAY	--	--	1	1	--	--	
	R-59	USH 51 SOUTH RIGHT	--	--	1	1	--	--	
	R-60	DO NOT ENTER	--	--	1	1	--	--	
	R-61	ONE WAY	--	--	1	1	--	--	
	R-63	ONE WAY	--	--	1	1	--	--	
	R-64	STOP SIGN	--	--	1	--	--	--	
	R-65	STOP SIGN	--	--	1	1	--	--	
	R-66	DIVIDED HIGHWAY	--	--	1	--	--	--	
		PAGE 1/2 - SUBTOTALS	0	0	39	36	6	0	

CONTINUED ON NEXT PAGE

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

SIGNING REMOVAL ITEMS (CONTINUED)

CATEGORY	SIGN NUMBER	DESCRIPTION	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	R-67	ONE WAY	--	--	1	--	--	--	
	R-68	DOUBLE ARROW	--	--	1	1	--	--	
	R-69	USH 51 SOUTH LEFT	--	--	1	--	--	--	
	R-70	NO RIGHT TURN	--	--	1	1	--	--	
	R-71	ONE WAY	--	--	1	1	--	--	
	R-72	KEEP RIGHT	--	--	1	1	--	--	
	R-73	WRONG WAY	--	--	1	1	--	--	
	R-74	KEEP RIGHT	--	--	1	1	--	--	
	R-75	VISIBILITY DIAMOND	--	--	1	--	--	--	
	R-76	WRONG WAY	--	--	1	1	--	--	
	R-77	ONE WAY	--	--	1	1	--	--	
	R-78	NO RIGHT TURN	--	--	1	1	--	--	
	R-79	DO NOT ENTER	--	--	1	1	--	--	
	R-80	USH 51 NORTH LEFT	--	--	1	--	--	--	
	R-81	DOUBLE ARROW	--	--	1	1	--	--	
	R-82	STOP SIGN	--	--	1	1	--	--	
	R-83	DIVIDED HIGHWAY	--	--	1	--	--	--	
	R-84	ONE WAY	--	--	1	--	--	--	
	R-85	USH 51 NORTH RIGHT	--	--	1	1	--	--	
	R-86	ONE WAY	--	--	1	1	--	--	
	R-87	STOP SIGN	--	--	1	1	--	--	
	R-88	NO LEFT TURN	--	--	1	--	--	--	
	R-89	WRONG WAY	--	--	1	1	--	--	
	R-90	WRONG WAY	--	--	1	1	--	--	
	R-91	REDUCED SPEED AHEAD	--	--	1	1	--	--	
	R-92	JCT USH 51	--	--	1	1	--	--	
	R-94	DO NOT ENTER	--	--	1	1	--	--	
	R-97	STOP	--	--	1	1	--	--	
	R-98	KEEP RIGHT	--	--	1	1	--	--	
	R-99	VISIBILITY DIAMOND	--	--	1	--	--	--	
	R-100	STOP SIGN	--	--	1	1	--	--	
	R-101	KEEP RIGHT	--	--	1	1	--	--	
	R-102	DO NOT ENTER	--	--	1	1	--	--	
	R-103	DIAGONAL MARKING	--	--	1	1	--	--	
	M-02	DIAGONAL MARKING	--	1	--	--	--	1	
		SPEED LIMIT	--	1	--	--	--	1	STAGE 2A & 3
		SIGGELKOW RD ARROW	3	--	--	--	--	--	STAGE 2A & 2B & 2C
		SIGGELKOW RD EXIT 1/4 MILE	1	--	--	--	--	--	STAGE 2A
		PAGE 2/2 - SUBTOTALS	4	2	34	26	0	2	
		TOTAL 0010	4	2	73	62	6	2	

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

TRAFFIC CONTROL ITEMS

CATEGORY	STAGE	LOCATION	APPROX SERVICE PERIOD DAYS	616.0700.S FENCE SAFETY LF	QTY	643.0300 TRAFFIC CONTROL DRUMS DAY	QTY	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAY	QTY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	QTY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	QTY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	QTY	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	QTY	643.0900 TRAFFIC CONTROL SIGNS DAY
0010	1	ADV. SIGNING & WIDTH RESTRICTION	3	-	-	-	-	-	-	-	-	-	-	-	-	-	43	11,352
		USH 51		-	73	219	-	-	3	9	6	18	9	27	2	6	29	87
	2A	USH 51	85	-	232	19,720	-	-	18	1,530	23	1,955	67	5,695	2	170	62	5,270
		SIGGELKOW RD		180	31	2,635	-	-	16	1,360	17	1,445	-	-	-	-	21	1,785
		BIKE-PED DETOUR		-	-	-	-	-	3	255	6	510	-	-	-	-	48	4,080
	2B	USH 51	32	-	277	8,864	-	-	18	576	23	736	67	2,144	2	64	65	2,080
		SIGGELKOW RD		150	80	2,560	-	-	25	800	21	672	7	224	1	32	32	1,024
		PED DETOUR		-	-	-	-	-	-	-	-	-	-	-	-	-	14	448
	2C	USH 51	25	-	258	6,450	-	-	17	425	21	525	67	1,675	2	50	62	1,550
		SIGGELKOW RD		-	60	1,500	-	-	12	300	11	275	19	475	1	25	26	650
		PED DETOUR		-	-	-	-	-	-	-	-	-	-	-	-	-	14	350
	2D	USH 51	15	-	258	3,870	-	-	16	240	21	315	67	1,005	2	30	61	915
		SIGGELKOW RD		-	60	900	3	45	15	225	13	195	19	285	-	-	26	390
		PED DETOUR		-	-	-	-	-	-	-	-	-	-	-	-	-	14	210
	3	USH 51	90	-	104	9,360	-	-	6	540	3	270	50	4,500	1	90	58	5,220
		SIGGELKOW RD		-	44	3,960	-	-	8	720	8	720	14	1,260	-	-	14	1,260
	4	USH 51	14	-	211	2,954	-	-	14	196	26	364	10	140	2	28	54	756
		SIGGELKOW RD		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		EXCHANGE STREET INTERSECTION SURCHARGE	7	-	40	280	-	-	2	14	4	28	13	91	1	7	11	77
		TOTAL 0010		330		63,272		45		7,190		8,028		17,521		502		37,504

TEMPORARY PEDESTRIAN ITEMS

CATEGORY	STAGE	LOCATION	* 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	644.1410 TEMPORARY PEDESTRIAN SURFACE ASPHALT SF	644.1440 TEMPORARY PEDESTRIAN SURFACE MATTING SF	644.1601 TEMPORARY PEDESTRIAN CURB RAMP DAY	644.1605 TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD SF	644.1810 TEMPORARY PEDESTRIAN BARRICADE LF
0010	STAGE 2B - PHASE 1	SIGGELKOW RD	7	-	260	-	-	2,820
	STAGE 2B - PHASE 2	SIGGELKOW RD	5	160	25	15	10	720
	STAGE 2C	PAULSON RD	13	-	500	25	20	75
	STAGE 2D	SIGGELKOW RD	-	-	-	-	-	30
		TOTAL 0010	25	160	785	40	30	3,645

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

PERMANENT PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	(SKIP WHITE) LF	* 646.2020 MARKING LINE EPOXY 6-INCH (SKIP BLACK) LF	(SOLID WHITE) LF	(SOLID YELLOW) LF	646.2025 MARKING LINE GROOVED BLACK EPOXY 6-INCH (SKIP BLACK) LF	(SKIP WHITE) LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH (SOLID WHITE) LF	(SOLID YELLOW) LF	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH (SOLID WHITE) LF	(SKIP WHITE) LF	* 646.6120 MARKING STOP LINE EPOXY 18-INCH (SOLID WHITE) LF	646.7220 MARKING CHEVRON EPOXY 24-INCH (SOLID WHITE) LF
0010	889+24 'NB'	-	900+08 'NB'	USH 51 NB, RT	-	-	-	-	288	288	1,086	-	-	-	-	-
	889+24 'NB'	-	900+25 'NB'	USH 51 NB, LT	-	-	-	-	-	-	-	1,101	-	-	-	-
	900+08 'NB'	-	902+80 'NB'	USH 51 NB, RT	75	75	275	-	-	-	-	-	-	-	-	-
	900+25 'NB'	-	903+00 'NB'	USH 51 NB, LT	-	-	-	275	-	-	-	-	-	-	-	-
	894+24 'SB'	-	900+32 'SB'	USH 51 SB, RT	-	-	-	-	-	-	-	1,108	195	-	-	-
	889+24 'SB'	-	900+52 'SB'	USH 51 SB, LT	-	-	-	-	300	300	1,115	-	166	-	51	-
	900+32 'SB'	-	903+49 'SB'	USH 51 SB, RT	-	-	-	329	-	-	-	-	-	-	-	-
	900+52 'SB'	-	903+83 'SB'	USH 51 SB, LT	88	88	329	-	-	-	-	-	-	-	-	-
	902+80 'NB'	-	920+05 'NB'	USH 51 NB, RT	-	-	-	-	-	-	-	-	-	-	-	-
	903+00 'NB'	-	920+07 'NB'	USH 51 NB, LT	-	-	-	-	-	-	-	-	-	-	-	-
	920+05 'NB'	-	921+58 'NB'	USH 51 NB, RT	50	50	153	-	450	450	1,254	-	290	51	-	120
	920+07 'NB'	-	921+60 'NB'	USH 51 NB, LT	-	-	-	153	-	-	-	1,708	-	-	-	-
	903+49 'SB'	-	920+11 'SB'	USH 51 SB, RT	-	-	-	-	-	-	-	1,648	-	-	-	-
	903+83 'SB'	-	920+13 'SB'	USH 51 SB, LT	-	-	-	-	425	425	1,127	-	485	54	-	-
	920+11 'SB'	-	921+64 'SB'	USH 51 SB, RT	-	-	-	153	-	-	-	-	-	-	-	-
	920+13 'SB'	-	921+66 'SB'	USH 51 SB, LT	50	50	153	-	-	-	-	-	-	-	-	-
	921+58 'NB'	-	953+40 'NB'	USH 51 NB, RT	-	-	-	-	900	900	2,089	-	700	55	-	-
	921+60 'NB'	-	953+40 'NB'	USH 51 NB, LT	-	-	-	-	-	-	-	3,546	-	-	-	-
	921+64 'SB'	-	953+40 'SB'	USH 51 SB, RT	-	-	-	-	-	-	-	3,544	-	220	-	-
	921+66 'SB'	-	967+60 'SB'	USH 51 SB, LT	-	-	-	-	1,163	1,163	2,176	-	510	-	-	260
	108+99 'A'	-	120+00 'A'	RAMP A, LT	-	-	-	-	-	-	-	846	290	-	-	-
	108+99 'A'	-	120+00 'A'	RAMP A, RT	-	-	-	-	-	-	1,300	-	-	-	-	-
	221+21 'B'	-	234+88 'B'	RAMP B, LT	-	-	-	-	-	-	-	809	-	-	-	-
	221+21 'B'	-	234+88 'B'	RAMP B, RT	-	-	-	-	-	-	2,226	-	650	-	-	-
	321+69 'C'	-	334+17 'C'	RAMP C, LT	-	-	-	-	-	-	2,164	-	-	-	-	-
	321+69 'C'	-	334+17 'C'	RAMP C, RT	-	-	-	-	-	-	-	813	465	-	-	-
	408+89 'D'	-	420+49 'D'	RAMP D, LT	-	-	-	-	-	-	1,232	-	-	-	-	-
	409+89 'D'	-	420+49 'D'	RAMP D, RT	-	-	-	-	-	-	-	767	434	-	-	-
				SUBTOTALS	263	263	910	910	3,526	3,526	15,769	15,890	4,185	380	51	380
				TOTAL 0010		2,346			3,526		35,185		4,565		51	380

*** ADDITIONAL QUANTITIES ELSEWHERE**

PERMANENT PAVEMENT MARKING (CONT.)

CATEGORY	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH (SOLID YELLOW) LF	(SKIP YELLOW) LF	(SOLID YELLOW) LF	* 646.2020 MARKING LINE EPOXY 6-INCH (SOLID WHITE) LF	(SKIP WHITE) LF	646.3020 MARKING LINE EPOXY 8-INCH (SOLID WHITE) LF	646.5020 MARKING ARROW EPOXY (TYPE 2 WHITE) EACH	(TYPE 3 WHITE) EACH	646.5120 MARKING WORD EPOXY (SOLID WHITE) EACH	646.5220 MARKING SYMBOL EPOXY (SOLID WHITE) EACH	* 646.6120 MARKING STOP LINE EPOXY 18-INCH (SOLID WHITE) LF	646.6320 MARKING DOTTED EXTENSION EPOXY 18-INCH (SKIP WHITE) LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH (SOLID WHITE) LF	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (SOLID WHITE) LF	646.8120 MARKING CURB EPOXY (SOLID YELLOW) LF	646.8220 MARKING ISLAND NOSE EPOXY (SOLID YELLOW) EACH
0010	42+45 'SGE'	-	46+78 'SGE'	SIGGELKOW RD	-	-	1,240	750	40	48	1	-	-	-	17	-	57	-	-	-
	46+78 'SGE'	-	53+21 'SGE'	SIGGELKOW RD	-	-	-	-	25	389	-	-	-	-	-	142	-	180	10	1
	53+21 'SGE'	-	60+70 'SGE'	SIGGELKOW RD	-	-	1,770	1,150	250	328	5	1	1	2	26	-	34	200	30	3
	11+31 'TY'	-	11+83 'TY'	TAYLOR RD	520	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				PAULSON RD	-	-	-	-	-	-	-	-	-	21	-	-	-	-	-	-
				SUBTOTALS	520	63	3,010	1,900	315	765	6	1	1	23	43	142	91	380	40	4
				TOTAL 0010	583			5,225		765	7		1	23	43	142	91	380	40	4

*** ADDITIONAL QUANTITIES ELSEWHERE**

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

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COLD WEATHER MARKING

CATEGORY	STATION	TO	STATION	LOCATION	(SKIP WHITE) LF	646.6466 COLD WEATHER MARKING EPOXY 6-INCH (SKIP BLACK) LF	(SOLID WHITE) LF	(SOLID YELLOW) LF	(SOLID WHITE) LF	646.6470 COLD WEATHER MARKING EPOXY 10-INCH (SKIP WHITE) LF
0010	889+24 'NB'	-	900+08 'NB'	USH 51 NB, RT	288	288	1,086	-	-	-
	889+24 'NB'	-	900+25 'NB'	USH 51 NB, LT	-	-	-	1,101	-	-
	900+08 'NB'	-	902+80 'NB'	USH 51 NB, RT	75	75	275	-	-	-
	900+25 'NB'	-	903+00 'NB'	USH 51 NB, LT	-	-	-	275	-	-
	894+24 'SB'	-	900+32 'SB'	USH 51 SB, RT	-	-	-	1,108	195	-
	889+24 'SB'	-	900+52 'SB'	USH 51 SB, LT	300	300	1,115	-	166	-
	900+32 'SB'	-	903+49 'SB'	USH 51 SB, RT	-	-	-	329	-	-
	900+52 'SB'	-	903+83 'SB'	USH 51 SB, LT	88	88	329	-	-	-
	902+80 'NB'	-	920+05 'NB'	USH 51 NB, RT	-	-	-	-	-	-
	903+00 'NB'	-	920+07 'NB'	USH 51 NB, LT	-	-	-	-	-	-
	920+05 'NB'	-	921+58 'NB'	USH 51 NB, RT	500	500	1,407	-	290	51
	920+07 'NB'	-	921+60 'NB'	USH 51 NB, LT	-	-	-	1,861	-	-
	903+49 'SB'	-	920+11 'SB'	USH 51 SB, RT	-	-	-	1,648	-	-
	903+83 'SB'	-	920+13 'SB'	USH 51 SB, LT	425	425	1,127	-	485	54
	920+11 'SB'	-	921+64 'SB'	USH 51 SB, RT	-	-	-	153	-	-
	920+13 'SB'	-	921+66 'SB'	USH 51 SB, LT	50	50	153	-	-	-
	921+58 'NB'	-	953+40 'NB'	USH 51 NB, RT	900	900	2,089	-	700	55
	921+60 'NB'	-	953+40 'NB'	USH 51 NB, LT	-	-	-	3,546	-	-
	921+64 'SB'	-	953+40 'SB'	USH 51 SB, RT	-	-	-	3,544	-	220
	921+66 'SB'	-	967+60 'SB'	USH 51 SB, LT	1,163	1,163	2,176	-	510	-
	108+99 'A'	-	120+00 'A'	RAMP A, LT	-	-	-	846	290	-
	108+99 'A'	-	120+00 'A'	RAMP A, RT	-	-	1,300	-	-	-
	221+21 'B'	-	234+88 'B'	RAMP B, LT	-	-	-	809	-	-
	221+21 'B'	-	234+88 'B'	RAMP B, RT	-	-	2,226	-	650	-
				SUBTOTALS	3,789	3,789	13,283	15,220	3,286	380
				TOTAL 0010		36,081				3,666

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

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MARKING REMOVAL ITEMS

CATEGORY	STAGE	STATION	TO	STATION	LOCATION	646.9000 MARKING REMOVAL LINE 4-INCH LF	646.9002 MARKING REMOVAL LINE 6-INCH LF	646.9100 MARKING REMOVAL LINE 8-INCH LF	646.9200 MARKING REMOVAL LINE WIDE LF	646.9300 MARKING REMOVAL SPECIAL MARKING EACH
0010	2A	889+09 'NB'	-	957+00 'NB'	USH 51 NB	15,689	-	1,596	130	-
		935+00 'SB'	-	958+00 'SB'	USH 51 SB	1,150	-	-	-	-
	2B	930+75 'SB'	-	932+00 'SB'	USH 51 SB	157	-	125	-	-
		48+25 'SGW'	-	55+59 SGW'	SIGGELKOW RD & PAULSON RD	439	-	28	-	2
	2C	55+82 'SGE'	-	60+70 'SGE'	SIGGELKOW RD/PAULSON RD INTERSECTION	140	138	-	30	-
					TOTAL 0010	17,575	138	1,749	160	2

CONSTRUCTION STAKING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	892+91 'SB'	-	894+43 'SB'	LT	-	152	-	-	-	-	-	152
	894+43 'NB'	-	953+40 'NB'	LT/RT	-	5,897	-	-	5,897	-	-	17,691
	894+43 'SB'	-	953+40 'SB'	LT/RT	-	5,897	-	-	5,897	-	-	17,691
	953+40 'NB'	-	957+06 'NB'	LT	-	366	-	-	-	-	-	366
	953+40 'SB'	-	957+06 'SB'	RT	-	366	-	-	-	-	-	366
	108+99 'A'	-	120+00 'A'	LT/RT	-	1,101	-	-	1,101	-	2	2,202
	221+21 'B'	-	234+88 'B'	LT/RT	-	1,367	-	-	1,367	-	2	2,734
	321+69 'C'	-	334+17 'C'	LT/RT	-	1,248	-	-	1,248	-	2	3,744
	408+89 'D'	-	420+49 'D'	LT/RT	-	1,160	-	-	1,160	-	2	2,320
	42+45 'SGE'	-	55+71 'SGE'	LT/RT	-	1,336	692	832	644	-	3	1,336
	42+45 'SGW'	-	55+71 'SGW'	LT/RT	-	1,336	692	820	644	-	3	1,336
	55+71 'SGE'	-	57+53 'SGE'	LT/RT	-	182	398	398	-	-	8	182
	9+73 'TY'	-	11+83 'TY'	LT/RT	-	-	-	-	-	210	-	210
				PROJECT WIDE	93	-	-	-	-	-	-	-
				TOTAL 0010	93	20,408	1,782	2,050	17,958	210	22	50,330

SAWING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
0010		894+43 'NB'		USH 51 NB	36	26
		953+40 'NB'		USH 51 NB	-	26
		892+91 'SB'		USH 51 SB	6	-
		894+43 'SB'		USH 51 SB	-	26
		953+40 'SB'		USH 51 SB	-	26
	42+45 'SGE'	-	47+39 'SGE'	SIGGELKOW RD	117	65
	55+71 'SGE'	-	57+53 'SGE'	SIGGELKOW RD	522	66
	10+17 'TY'	-	12+27 'TY'	TAYLOR RD	62	-
				PAULSON RD RR CROSSING	65	-
				TOTAL 0010	808	235

SETTLEMENT GAUGES

CATEGORY	STATION	LOCATION	SPV.0060.03 SPECIAL (03. SETTLEMENT GAUGES) EACH	REMARKS
0010	828+03	73' LT	1	EXCHANGE STREET INTERSECTION SURCHARGE
	828+15	61' LT	1	EXCHANGE STREET INTERSECTION SURCHARGE
	828+30	72' LT	1	EXCHANGE STREET INTERSECTION SURCHARGE
		TOTAL 0010	3	

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

LIGHTING UNITS AND ELECTRICAL WIRE LIGHTING

DESCRIPTION	STATION	OFFSET	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE 657.0255 EACH	POLES TYPE 5-ALUMINUM 657.0322 EACH	LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT 657.0615 LF	LUMINAIRES UTILITY LED A 659.1115 EACH	LUMINAIRES UNDERDECK LED A 659.1205 EACH	ELECTRICAL WIRE LIGHTING 12 AWG 655.0610 LF
A-1	45+45.91 SGE	22.5' RT	1	1	1	1	-	156
A-2	46+87.87 SGE	23.3' RT	1	1	1	1	-	156
A-3	47+36.65 WB	25.0' RT	1	1	1	1	-	156
A-4	420+49.64 D	23.6' LT	1	1	1	1	-	156
A-5	322+17.89 C	24.0' LT	1	1	1	1	-	156
A-6	323+47.11 C	29.6' LT	1	1	1	1	-	156
A-7	324+70.76 C	29.9' LT	1	1	1	1	-	156
A-8	48+68.04 SGE	23.1' RT	1	1	1	1	-	156
A-9	48+86.10 WB	24.8' LT	1	1	1	1	-	156
A-10	49+39.22 SGE	9.8' RT	-	-	-	-	1	-
A-11	49+39.84 WB	6.3' RT	-	-	-	-	1	-
A-12	50+16.60 SGE	10.2' RT	-	-	-	-	1	-
A-13	50+16.30 WB	6.0' RT	-	-	-	-	1	-
A-14	50+62.36 SGE	24.5' RT	1	1	1	1	-	156
A-15	50+86.40 WB	25.9' LT	1	1	1	1	-	156
A-16	51+33.80 SGE	89.3' RT	1	1	1	1	-	156
A-17	52+40.19 A	376.3' RT	1	1	1	1	-	156
A-18	52+36.44 A	252.0' RT	1	1	1	1	-	156
A-19	51+86.31 A	133.6' RT	1	1	1	1	-	156
A-20	221+31.60 B	28.2' RT	1	1	1	1	-	156
A-21	52+33.65 SGE	53.4' RT	1	1	1	1	-	156
A-22	52+35.33 WB	30.5' LT	1	1	1	1	-	156
A-23	54+24.09 WB	33.5' LT	1	1	1	1	-	156
TOTALS			19	19	19	19	4	2,964

CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS

DESCRIPTION	650.8501 EACH
PROJECT (5845-16-77)	1
TOTAL	1

LIGHTING CONTROL CABINET AND BASES

DESCRIPTION	STATION	OFFSET	CONCRETE CONTROL CABINET BASES TYPE L24 654.0224 EACH	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LCC A) 656.0201 EACH	LIGHTING CONTROL CABINETS 120/240 24-INCH 659.2124 EACH
LCC A	420+20.07 D	28.8' RT	1	1	1
TOTALS			1	1	1

PULL BOXES NON-CONDUCTIVE 24X42-INCH

DESCRIPTION	STATION	OFFSET	653.0164 EACH
LPB-1	47+28.38 SGE	26.3' RT	1
LPB-2	47+33.51 WB	25.0' LT	1
LPB-3	420+38.37 D	22.7' LT	1
LPB-4	420+36.82 D	9.9' RT	1
LPB-5	321+76.60 C	26.7' LT	1
LPB-6	420+19.40 D	21.3' RT	1
LPB-7	321+79.39 C	10.0' RT	1
LBP-8	49+66.35 SGE	21.7' RT	1
LBP-9	49+66.88 SGE	4.8' RT	1
LPB-10	49+65.03 WB	21.9' LT	1
LPB-11	50+73.75 SGE	24.9' RT	1
LPB-12	50+86.40 WB	22.4' LT	1
LPB-13	51+55.26 A	91.4' RT	1
LBP-14	221+37.00 B	10.2' RT	1
LPB-15	51+97.39 SGE	82.6' RT	1
LBP-16	221+35.97 B	27.3' RT	1
LPB-17	52+36.98 SGE	25.5' RT	1
LPB-18	52+50.66 WB	66.6' LT	1
LPB-18X	52+55.80 WB	45.2' LT	1
TOTAL			19

CONCRETE BASES TYPE 5

DESCRIPTION	STATION	OFFSET	654.0105 EACH
A-1	45+45.91 SGE	22.5' RT	1
A-2	46+87.87 SGE	23.2' RT	1
A-3	47+36.65 WB	25.0' LT	1
A-4	420+49.64 D	23.6' LT	1
A-5	322+17.89 C	24.0' LT	1
A-6	323+47.11 C	29.6' LT	1
A-7	324+70.76 C	29.9' LT	1
A-8	48+68.04 SGE	23.1' RT	1
A-9	48+86.10 WB	24.8' LT	1
A-14	50+62.36 SGE	24.5' RT	1
A-15	50+86.40 WB	25.9' LT	1
A-16	51+33.80 SGE	89.3' RT	1
A-17	52+40.19 A	376.3' RT	1
A-18	52+36.44 A	252.0' RT	1
A-19	51+86.31 A	133.6' RT	1
A-20	221+31.60 B	28.2' RT	1
A-21	52+33.65 SGE	53.4' RT	1
A-22	52+35.33 WB	30.5' LT	1
A-23	54+24.09 WB	33.5' LT	1
TOTAL			19

CONDUIT AND ELECTRICAL WIRE LIGHTING

FROM	TO	652.0110 CONDUIT RIGID METALLIC 1-INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF
LCC A	LBP-6	-	15	143
LPB-6	LPB-4	-	63	351
LPB-4	LPB-3	-	33	156
LPB-3	A-4	-	11	68
A-4	LPB-1	-	73	316
LPB-1	A-2	-	29	245
A-2	A-1	-	144	600
LPB-1	LPB-2	-	73	316
LPB-2	A-3	-	6	48
A-3	LPB-5	-	85	364
LPB-5	A-5	-	30	252
A-5	A-6	-	131	548
A-6	A-7	-	124	520
LPB-5	LPB-7	-	37	172
LPB-7	A-9	-	84	360
A-9	LPB-10	-	72	-
LPB-10	LPB-12	-	125	-
LPB-10	LPB-9	-	37	-
LPB-4	A-8	-	63	1104
A-8	LPB-8	-	96	1020
LPB-8	LPB-9	-	26	128
LPB-9	A-10	44	-	350
A-10	A-11	15	-	84
LPB-9	A-12	68	-	296
A-12	A-13	15	-	84
LPB-8	A-14	-	91	679
A-14	LPB-11	-	8	98
LPB-11	A-16	-	69	300
A-16	LPB-13	-	15	84
LBP-13	LBP-15	-	42	192
LPB-15	A-21	-	41	329
A-21	LBP-17	-	25	-
LPB-17	LPB-18X	-	72	-
LPB-15	A-19	-	54	240
A-19	A-18	-	126	528
A-18	A-17	-	126	528
LPB-11	LPB-12	-	78	336
LPB-12	A-15	-	10	64
A-15	LPB-14	-	61	268
LPB-14	LBP-16	-	38	176
LBP-16	A-20	-	5	44
A-20	LPB-18	-	65	497
LPB-18	A-23	-	180	744
LPB-18	LPB-18X	-	38	176
LPB-18X	A-22	-	5	44
CONDUITS STUBS		-	40	-
TOTALS		142	2546	12852

3

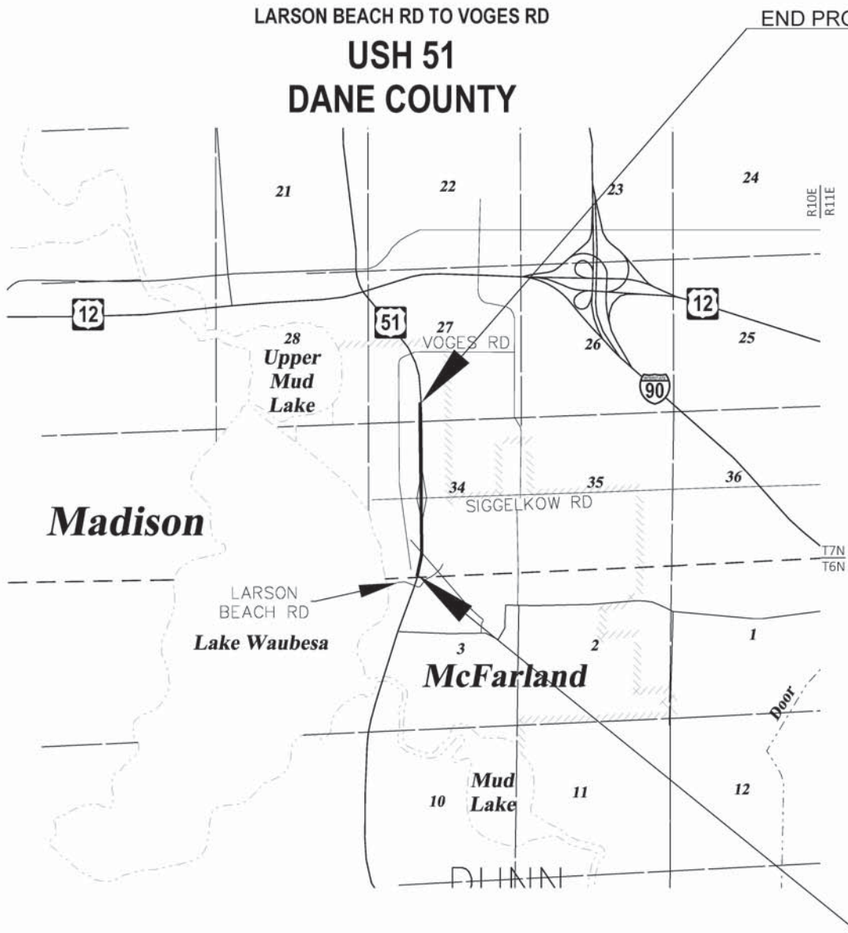
3

MMSD SANITARY MANHOLE ITEMS

CATEGORY	MANHOLE NUMBER	STATION	OFFSET DIST.	OFFSET DIR.	LOCATION	STRUCTURE	SPV.0060.04 RECONSTRUCTING MANHOLES EACH	BARREL HEIGHT IN	SPV.0060.05 MANHOLE COVERS TYPE J-SPECIAL EACH
0150	07-823	912+40 SB	48'	LT	USH 51	MANHOLE	1	18	1
	07-822	916+41 SB	48'	LT	USH 51	MANHOLE	-	-	1
	07-821	919+98 SB	46'	LT	USH 51	MANHOLE	1	32	1
	07-820	49+04 SIGGLEKOW EB	43'	RT	USH 51	MANHOLE	1	-	1
	07-819	921+82 SB	50'	LT	USH 51	MANHOLE	1	42	1
	07-818	925+39 SB	48'	LT	USH 51	MANHOLE	1	18	1
	07-817	929+41 SB	47'	LT	USH 51	MANHOLE	1	-	1
	07-816	933+40 SB	46'	LT	USH 51	MANHOLE	1	-	1
	07-815	937+41 SB	45'	LT	USH 51	MANHOLE	1	24	1
	07-814	941+41 SB	46'	LT	USH 51	MANHOLE	1	36	1
	07-813	945+41 SB	46'	LT	USH 51	MANHOLE	1	32	1
	07-812	949+40 SB	64'	LT	USH 51	MANHOLE	1	48	1
	07-811	953+40 SB	64'	LT	USH 51	MANHOLE	1	52	1
TOTAL CATEGORY 0150, 5845-16-77							12	302	13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
5845-16-27
STOUGHTON - MADISON
LARSON BEACH RD TO VOGES RD
USH 51
DANE COUNTY





THE NOTES,CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 5845-16-27

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), DANE COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

AN EASEMENT FOR HIGHWAY PURPOSES (HE), AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE.

PROPERTY LINES SHOWN ON THIS PLAT FOR PROPERTIES BEING IMPACTED ARE DRAWN FROM DATA DERIVED FROM FILED/RECORDED MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, CENTERLINE OF EXISTING PAVEMENTS AND/OR EXISTING OCCUPATIONAL LINES.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN MADISON

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE TPP DETAIL PAGES.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE TPP DETAIL PAGES.

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
TO BE REMOVED
BRIDGE

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED)

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER (25)
UTILITY NUMBER (40)
PARALLEL OFFSETS

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BUILDING	BLDG	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
CENTERLINE	C/L	RIGHT	RT
CERTIFIED SURVEY MAP	CSM	RIGHT OF WAY	R/W
CONCRETE	CONC	SECTION	SEC
COUNTY	CO	SEPTIC VENT	SEPV
COUNTY TRUNK HIGHWAY	CTH	SQUARE FEET	SF
DISTANCE	DIST	STATE TRUNK HIGHWAY	STH
CORNER	COR	STATION	STA
DOCUMENT NUMBER	DOC	TELEPHONE PEDESTAL	TP
EASEMENT	EASE	TEMPORARY LIMITED EASEMENT	TLE
EXISTING	EX	TRANSPORTATION PROJECT PLAT	TPP
GAS VALVE	GV	UNITED STATES HIGHWAY	USH
GRID NORTH	GN	VOLUME	V
HIGHWAY EASEMENT	HE		
IDENTIFICATION	ID		
LAND CONTRACT	LC		
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

CONVENTIONAL UTILITY SYMBOLS

W — WATER
G — GAS
T — TELEPHONE
OH — OVERHEAD TRANSMISSION LINES
E — ELECTRIC
TV — CABLE TELEVISION
FO — FIBER OPTIC
SAN — SANITARY SEWER
SS — STORM SEWER

GN

LAYOUT
SCALE 0 0.5 MI.

PROJECT NUMBER	5845-16-27 -4. 01
SHEET	2 OF 2
AMENDMENT NO:	

FILE NAME : V:\SURVEY\WK\47-0384.00 WISDOT US 51 - LARSON BEACH ROAD\CADD\C3D\SHEETSPLAN\4.01.TS.DWG
LAYOUT NAME: 4.01 TS
PLOT DATE : 11/21/2022 11:22 AM PLOT BY : LARSON, BENJAMIN PLOT NAME : _____
APPRAISAL PLAT DATE : 11/22/2022
USH 51 5845-16-27 - 4.01

TRANSPORTATION PROJECT PLAT NO: 5845-16-27 - 4.01

THAT PART OF LOT 1 OF CSM 13192 LOCATED IN THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 34, TOWNSHIP 7 NORTH, RANGE 10 EAST, VILLAGE OF MCFARLAND, DANE COUNTY, WISCONSIN.

RELOCATION ORDER USH 51, STOUGHTON - MADISON, LARSON BEACH RD TO VOGES RD, DANE COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

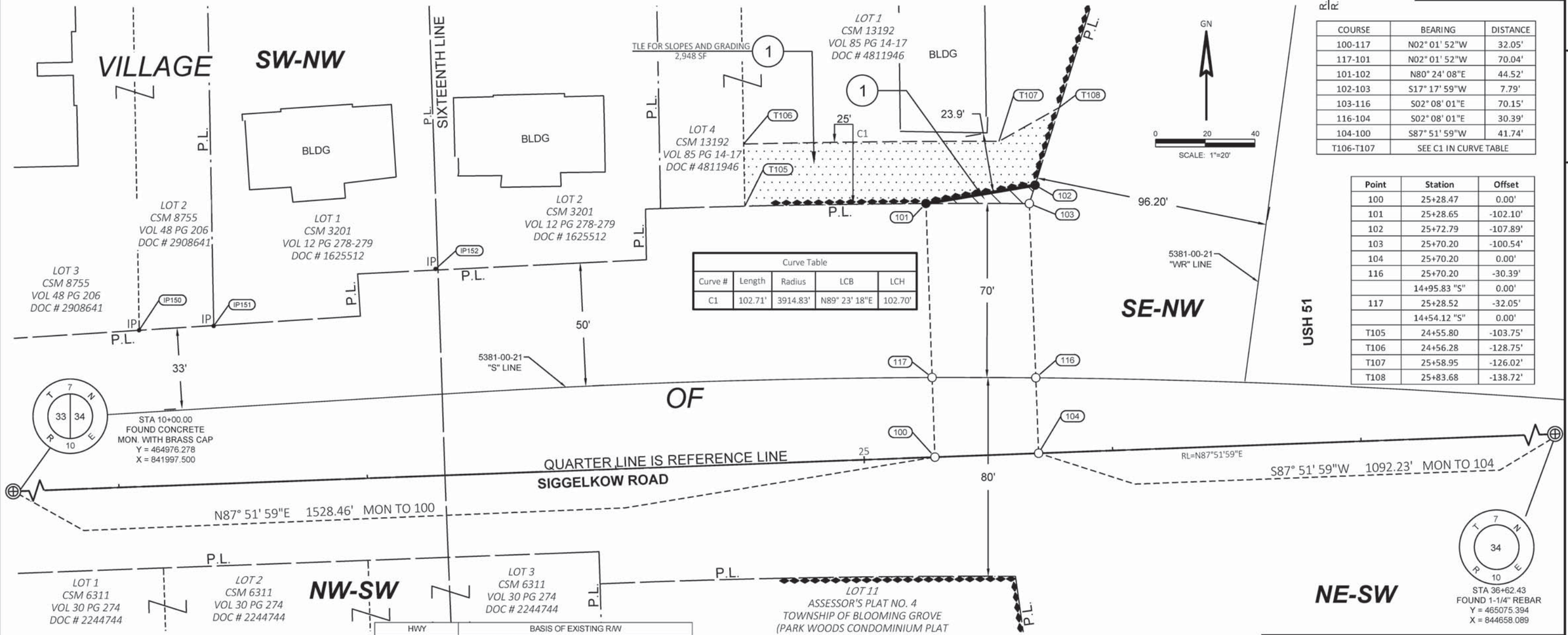
SCHEDULE OF LANDS & INTERESTS REQUIRED		OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSE ONLY AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO THE DEPARTMENT					
PARCEL NUMBER	OWNER (S)	INTEREST(S) REQUIRED	R/W SF REQUIRED			PLE SF	TLE SF
			NEW	EXISTING	TOTAL		
1	WHITEHORSE REVOCABLE TRUST	FEE/TLE	153	---	153	---	2,948



KRISTI CHLEBOWSKI
DANE COUNTY
REGISTER OF DEEDS

DOCUMENT #
5875101
11/23/2022 09:07 AM
Trans Fee:
Exempt #:
Rec. Fee: 25.00
Pages:
The above recording information verifies that this document has been electronically recorded and returned to the submitter.

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 5845-16-27-4.01
AMENDMENT NO:___
SHEET 1 OF 2



Curve Table				
Curve #	Length	Radius	LCB	LCH
C1	102.71'	3914.83'	N89° 23' 18"E	102.70'

COURSE	BEARING	DISTANCE
100-117	N02° 01' 52"W	32.05'
117-101	N02° 01' 52"W	70.04'
101-102	N80° 24' 08"E	44.52'
102-103	S17° 17' 59"W	7.79'
103-116	S02° 08' 01"E	70.15'
116-104	S02° 08' 01"E	30.39'
104-100	S87° 51' 59"W	41.74'
T106-T107	SEE C1 IN CURVE TABLE	

Point	Station	Offset
100	25+28.47	0.00'
101	25+28.65	-102.10'
102	25+72.79	-107.89'
103	25+70.20	-100.54'
104	25+70.20	0.00'
116	25+70.20	-30.39'
	14+95.83 "S"	0.00'
117	25+28.52	-32.05'
	14+54.12 "S"	0.00'
T105	24+55.80	-103.75'
T106	24+56.28	-128.75'
T107	25+58.95	-126.02'
T108	25+83.68	-138.72'

Point	Station	Offset	Description
IP 150	22+10.45	-62.93'	1.25" IRON PIPE
IP 151	22+40.52	-63.52'	1.25" IRON ROD
IP 152	23+30.57	-83.15'	1.25" IRON PIPE

HWY	BASIS OF EXISTING R/W
USH 51	R/W PROJECT NUMBER 5381-00-21
USH 51	ASSESSOR'S PLAT NO. 4, TOWNSHIP OF BLOOMING GROVE
USH 51	R/W PROJECT NUMBER T 05-1(6)
USH 51	CSM 13192
SIGGELKOW ROAD	ASSESSOR'S PLAT NO. 4, TOWNSHIP OF BLOOMING GROVE
SIGGELKOW ROAD	CSM 6311
SIGGELKOW ROAD	CSM 3201
SIGGELKOW ROAD	CSM 8755
SIGGELKOW ROAD	CSM 13192
SIGGELKOW ROAD	R/W PROJECT NUMBER 5381-00-21

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), DANE COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN MADISON..

EXISTING ACCESS CONTROL ALONG STH 51 HAS BEEN ESTABLISHED FROM PREVIOUS PROJECT 5381-00-21

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2

AYRES

I, BRIAN GLASZCZ PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF DEPARTMENT OF TRANSPORTATION I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN BRIAN F. GLASZCZ S-3118 WEST BEND WIS. LAND SURVEYOR

SIGNATURE: DATE: 11/22/2022
PRINT NAME: BRIAN GLASZCZ
REGISTRATION NUMBER: S-3118

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE DEPARTMENT OF TRANSPORTATION

SIGNATURE: Cory Schlagel DATE: 11/22/2022
PRINT NAME: CORY SCHLAGEL

FILE NAME : V:\SURVEY\WK\47-0384.00 WISDOT US 51 - LARSON BEACH ROAD\CADD\C3D\SHEETSPLAN\4.01.DWG
APPRAISAL PLAT DATE : 11/22/2022
PLOT DATE : 11/22/2022 1:57 PM
PLOT BY : GLASZCZ, BRIAN
PLOT NAME :

TRANSPORTATION PROJECT PLAT NO: 5845-16-27 - 4.02

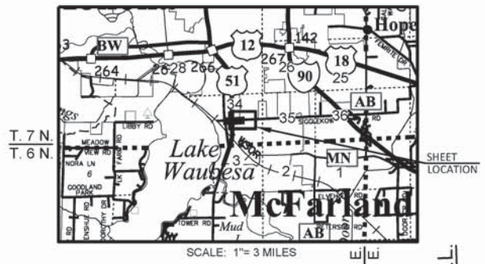
THAT PART OF LOT 16 OF COMMERCE PARK SUBDIVISION LOCATED IN THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 34, TOWNSHIP 7 NORTH, RANGE 10 EAST, VILLIAGE OF MCFARLAND, DANE COUNTY, WISCONSIN.

RELOCATION ORDER USH 51, STOUGHTON - MADISON, LARSON BEACH RD TO VOGES RD DANE COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

SCHEDULE OF LANDS & INTERESTS REQUIRED		OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSE ONLY AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND AND INTERESTS TO THE DEPARTMENT					
PARCEL NUMBER	OWNER (S)	INTEREST(S) REQUIRED	R/W SF REQUIRED			PLE SF	TLE SF
			NEW	EXISTING	TOTAL		
2	ACNE PROPERTIES, LLC	TLE	---	---	---	---	1,180



SHEET LOCATION

KRISTI CHLEBOWSKI
DANE COUNTY
REGISTER OF DEEDS

DOCUMENT #
5883551
01/24/2023 12:03 PM
Trans Fee:
Exempt #:
Rec. Fee: 25.00
Pages:
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RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 5845-16-27-4.02
AMENDMENT NO:___

VILLAGE

OUTLOT 1
COMMERCE PARK SUBDIVISION
VOL 56-103B PG 299-300

LOT 16
COMMERCE PARK SUBDIVISION
VOL 56-103B PG 299-300

SE-NW

USH 51

5381-00-21
"ER" LINE

P.L.

T201

T200

T202

C1

2 TLE FOR SLOPES AND GRADING
1,180 SF

136.12'

P.L.

80'

TRIANGLE STREET

STA 36+62.43
FOUND 1-1/4" REBAR
Y = 465075.394
X = 844658.089

T 7 N
R 10 E
34

STA 10+00.00
FOUND CONCRETE
MON. WITH BRASS CAP
Y = 464976.278
X = 841997.500

T 7 N
R 10 E
33 34

S87° 51' 59"W 85.43
203 TO 204

203

80'

30

QUARTER LINE IS REFERENCE LINE

RL=N87°51'59"E

204

206

SIGGELKOW ROAD

S87° 51' 59"W 448.21' MON TO 203

N87° 51' 59"E 2,128.79' MON TO 204

C2

205

OF

5381-00-21
"S" LINE

100'

NE-SW

P.L.

P.L.

P.L.

P.L.

66'

PAULSON ROAD

LOT 1
CSM 7995
VOL 42 PG 242-244
DOC # 2713675

BLDG

LOT 1
CSM 826
VOL 4 PG 42-43
DOC # 1326424

MCFARLAND

GN

0 20 40
SCALE: 1"=20'

Point	Station	Offset
T200	31+42.66	-55.60'
T201	31+28.80	-89.54'
T202	32+14.22	-49.02'
203	32+14.22	0.00'
204	31+28.80	0.00'
205	32+14.22	35.58'
	21+43.37 "S"	0.00'
206	31+28.80	27.46'
	20+57.55 "S"	0.00'

Curve Table				
Curve #	Length	Radius	LCB	LCH
C1	71.87'	2784.93'	S86° 52' 35"E	71.87'
C2	85.82'	2864.93'	N86° 42' 16"W	85.81'

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), DANE COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN MADISON

EXISTING ACCESS CONTROL ALONG USH 51 HAS BEEN ESTABLISHED FROM PREVIOUS PROJECT 5381-00-21 AND COMMERCE PARK SUBDIVISION

HWY	BASIS OF EXISTING R/W
USH 51	R/W PROJECT NUMBER 5381-00-21
USH 51	R/W PROJECT NUMBER T05-1(6)
USH 51	CSM 7995
USH 51	COMMERCE PARK SUBDIVISON
SIGGELKOW ROAD	CSM 7995
SIGGELKOW ROAD	CSM 826
SIGGELKOW ROAD	CSM 7813
SIGGELKOW ROAD	COMMERCE PARK SUBDIVISON
TRIANGLE STREET	COMMERCE PARK SUBDIVISON
PAULSON ROAD	COMMERCE PARK SUBDIVISON
PAULSON ROAD	CSM 7813
PAULSON ROAD	CSM 826
PAULSON ROAD	CSM 7995

COURSE	BEARING	DISTANCE
204-T201	N02° 08' 01"W	89.54'
T201-T200	S24° 21' 05"E	36.66'
T200-T202	SEE C1 IN CURVE TABLE	
T202-203	S02° 08' 01"E	49.02'
203-205	S02° 08' 01"E	35.58'
205-206	SEE C2 IN CURVE TABLE	
206-204	N02° 08' 01"W	27.46'

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 OF DOCUMENT NO. 5875101

AYRES

I,BRIAN GLASZCZ PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF DEPARTMENT OF TRANSPORTATION I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN BRIAN F. GLASZCZ S-3118 WEST BEND WI. LAND SURVEYOR

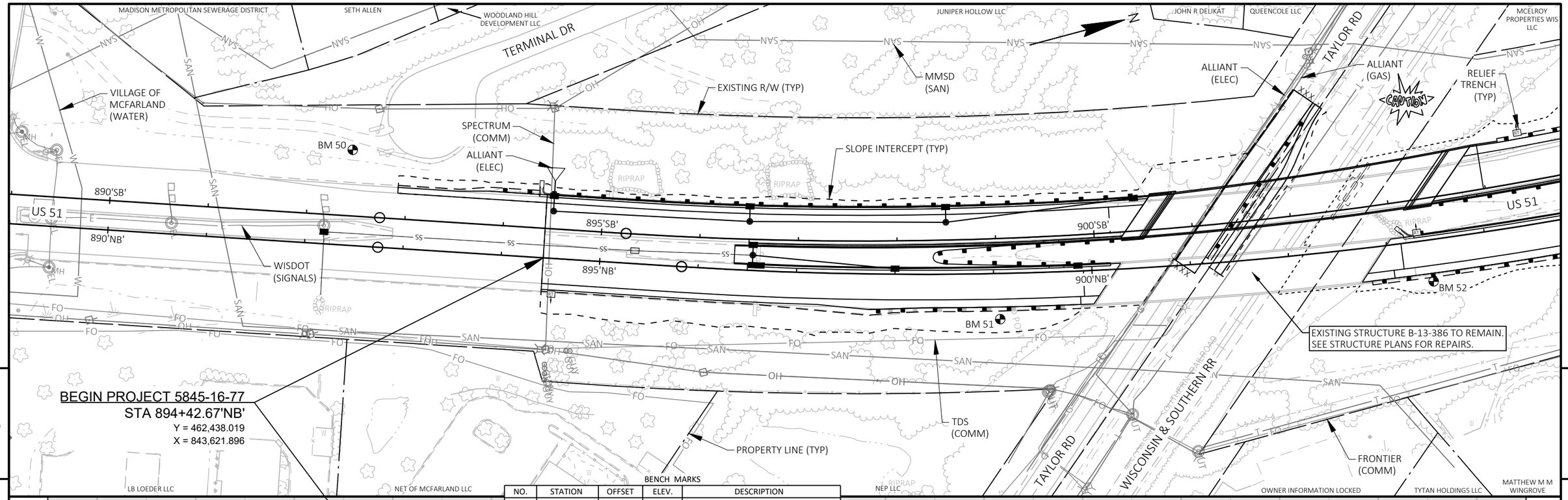
SIGNATURE: DATE:01/23/2023
PRINT NAME: BRIAN GLASZCZ
REGISTRATION NUMBER: S-3118

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE DEPARTMENT OF TRANSPORTATION

SIGNATURE: DATE: 1/24/2023
PRINT NAME: CORY SCHLAGEL

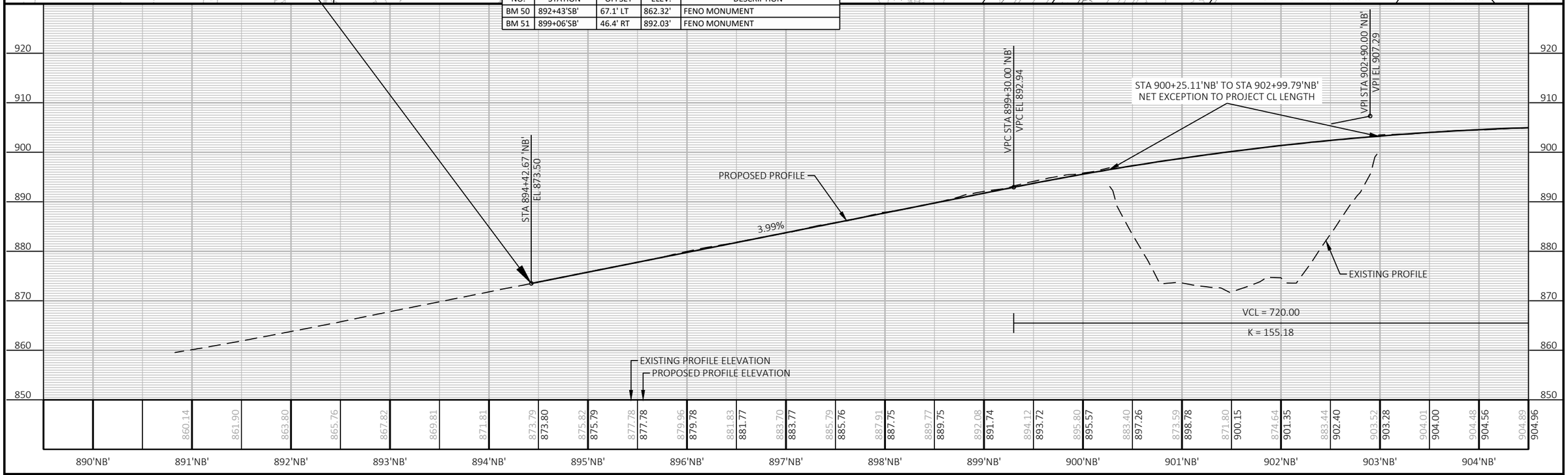
FILE NAME : V:\SURVEY\WK\47-0384.00 WISDOT US 51 - LARSON BEACH ROAD\CADD\C3D\SHEETSPLAN\4.02.DWG
APPRAISAL PLAT DATE : 1/23/2023
PLOT DATE : 1/23/2023 4:08 PM
PLOT BY : LARSON, BENJAMIN
PLOT NAME :

USH 51 5845-16-27 4.02



BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 50	892+43'SB'	67.1' LT	862.32'	FENO MONUMENT
BM 51	899+06'SB'	46.4' RT	892.03'	FENO MONUMENT



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: 'NB' 51	SHEET 240	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050101_PP_US51.DWG
LAYOUT NAME - pp_01
PLOT DATE : 9/3/2024 12:58 PM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

MCELROY PROPERTIES WIS LLC

EVANS ALLSOP & LEHMAN LLC

VILLAGE OF MCFARLAND

WILLIAM L & PATRICIA M PEIRCE

N

SLOPE INTERCEPT (TYP)

MMSD (SAN)

STA BACK = 408+31.92'D'

STA AHEAD = 408+45.10 'D'

RAMP D

415'D'

410'D'

BM 53

905'SB'

910'SB'

915'SB'

US 51

905'NB'

910'NB'

915'NB'

STA BACK = 908+31.92'SB'

STA AHEAD = 908+45.10 'SB'

110'A'

115'A'

RAMP A

FRONTIER (COMM)

RELIEF TRENCH (TYP)

PROPERTY LINE (TYP)

EXISTING R/W (TYP)

TDS (COMM)

MATTHEW M M WINGROVE

FAIR LIVING REV TR, WILLETT T

MCFARLAND HEALTH HOLDINGS LLC

ROBERT W & DONNA J EVANS

ROBERT W & DONNA J EVANS

5

5

BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 52	903+43'NB'	42.3' RT	904.40'	FENO MONUMENT
BM 53	919+70'SB'	39.6' LT	900.19'	FENO MONUMENT

VPC STA 906+50.00 'NB'
VPC EL 904.94

VPI STA 907+90.00 'NB'
VPI EL 904.03

VPT STA 909+30.00 'NB'
VPT EL 902.51

VCL = 400.00
K = 253.26

LP STA 912+64.15 'NB'
LP EL 900.38

VPC STA 916+40.00 'NB'
VPC EL 901.93

PROPOSED PROFILE

-1.08%

0.50%

EXISTING PROFILE

HP STA 905+48.76 'NB'
HP EL 905.27

VCL = 720.00
K = 155.18

VCL = 280.00
K = 650.98

VPC STA 909+90.00 'NB'
VPC EL 901.86

VPI STA 911+90.00 'NB'
VPI EL 899.70

VPT STA 913+90.00 'NB'
VPT EL 900.69

HP STA 918+16.41 'NB'
HP EL 902.37

VCL = 1000.00
K = 355.00

EXISTING PROFILE ELEVATION

PROPOSED PROFILE ELEVATION

930 920 910 900 890 880 870 860

904.89 904.96 905.12 905.20 905.22 905.27 905.17 905.19 904.92 904.94 904.57 904.60 904.21 904.21 903.75 903.79 903.34 903.33 902.83 902.83 902.26 902.30 901.71 901.76 901.21 901.28 900.85 900.91 900.61 900.64 900.43 900.46 900.33 900.38 900.38 900.40 900.52 900.52 900.75 900.74 901.01 900.99 901.26 901.24 901.59 901.49 901.85 901.74 902.00 901.98 902.18 902.18 902.28 902.31 902.39 902.37 902.40 902.36 902.37 902.27 902.27 902.12

905'NB' 906'NB' 907'NB' 908'NB' 909'NB' 910'NB' 911'NB' 912'NB' 913'NB' 914'NB' 915'NB' 916'NB' 917'NB' 918'NB' 919'NB'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: 'NB' 51	SHEET 241	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050101_PP_US51.DWG
LAYOUT NAME - pp_02

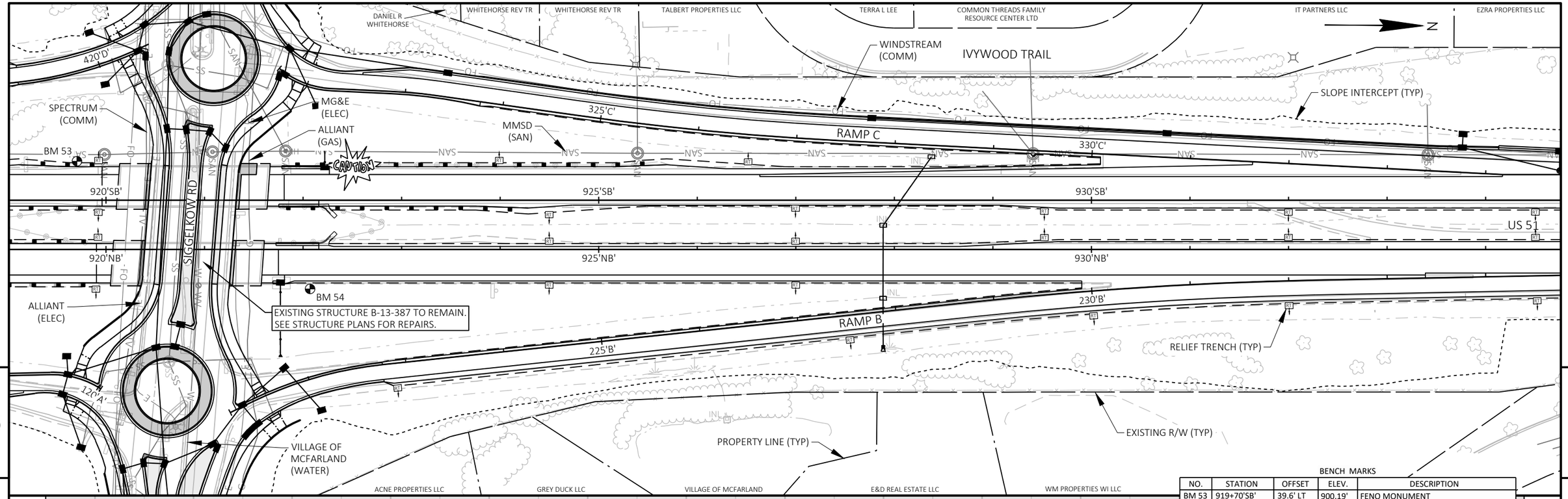
PLOT DATE : 9/3/2024 12:58 PM

PLOT BY : MUENCH, DOUGLAS

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

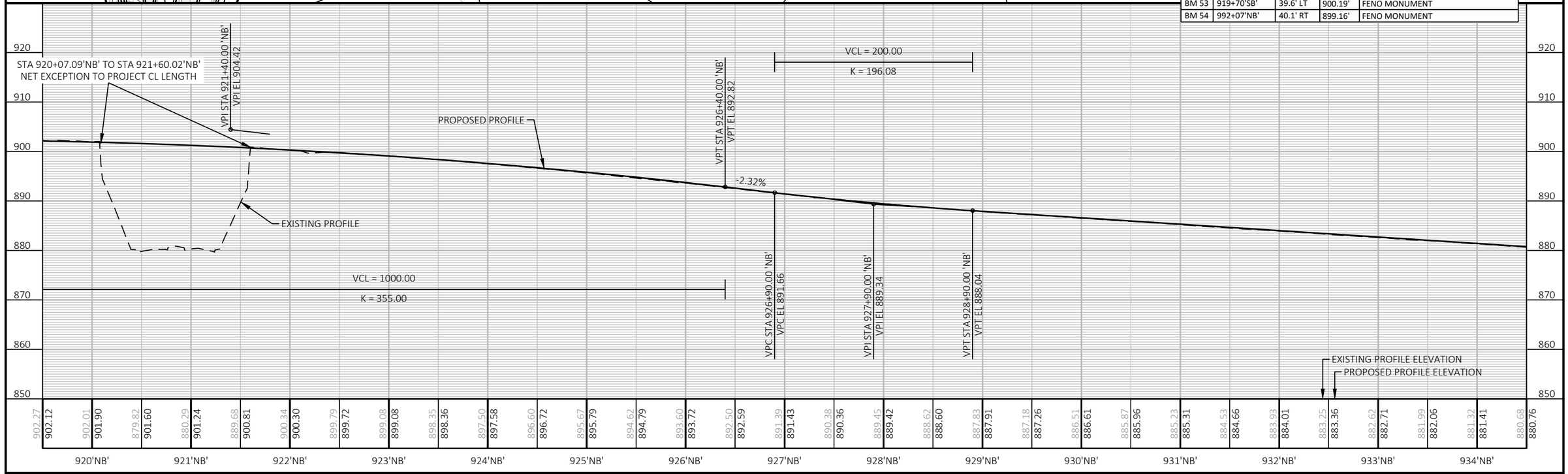


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BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 53	919+70'SB'	39.6' LT	900.19'	FENO MONUMENT
BM 54	992+07'NB'	40.1' RT	899.16'	FENO MONUMENT



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: 'NB' 51	SHEET 242	E

EZRA PROPERTIES LLC | EZRA PROPERTIES LLC | KOCH RESOURCES PINE BEND LLC

N

SIGN STRUCTURE S-13-0594

SLOPE INTERCEPT (TYP)

WEST SHORE (PIPELINE)

MG&E (ELEC)

MMSD (SAN)

KOCH (PIPELINE)

WINDSTREAM (COMM)

335'CL

935'SB' | 940'SB' | 945'SB'

US 51

935'NB' | 940'NB' | 945'NB'

235'B'

FRONTIER (COMM)

ALLIANT (GAS)

VILLAGE OF MCFARLAND (WATER)

RELIEF TRENCH (TYP)

TRIANGLE ST

PROPERTY LINE (TYP)

EXISTING R/W (TYP)

VILLAGE OF MCFARLAND (SAN)

CRULL INVESTMENTS LLC | TWIN BRO LLC | 4609 TRIANGLE STREET LLC | TMG RENTALS LLC | KAK ENTERPRISES LLC | FERGUSON ENTERPRISES INC | MADISON FORMS CORPORATION | MADISON FORMS CORPORATION

5 | 5

BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 54	922+07'NB'	40.1' RT	899.16'	FENO MONUMENT
BM 55	959+91'SB'	45.5' LT	856.84'	FENO MONUMENT

900 | 890 | 880 | 870 | 860 | 850 | 840 | 830

VCL = 600.00

K = 604.30

-1.30%

PROPOSED PROFILE

EXISTING PROFILE

VPC STA 943+15.00 'NB'
VPC EL 869.51

VPI STA 946+15.00 'NB'
VPI EL 865.61

VPT STA 949+15.00 'NB'
VPT EL 864.69

EXISTING PROFILE ELEVATION
PROPOSED PROFILE ELEVATION

935'NB'	936'NB'	937'NB'	938'NB'	939'NB'	940'NB'	941'NB'	942'NB'	943'NB'	944'NB'	945'NB'	946'NB'	947'NB'	948'NB'	949'NB'
880.68 / 880.76	880.03 / 880.11	879.40 / 879.46	878.76 / 878.81	878.12 / 878.16	877.46 / 877.51	876.81 / 876.86	876.15 / 876.21	875.55 / 875.56	874.86 / 874.91	874.20 / 874.26	873.53 / 873.61	872.90 / 872.96	872.31 / 872.31	871.62 / 871.66	870.93 / 871.01	870.27 / 870.36	869.61 / 869.71	868.99 / 869.07	868.45 / 868.47	867.91 / 867.91	867.38 / 867.39	866.88 / 866.92	866.52 / 866.48	866.07 / 866.09	865.78 / 865.74	865.47 / 865.42	865.22 / 865.16	864.98 / 864.93	864.77 / 864.74	864.61 / 864.59

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: 'NB' 51	SHEET 243	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050101_PP_US51.DWG
LAYOUT NAME - pp_04

PLOT DATE : 9/3/2024 12:58 PM | PLOT BY : MUENCH, DOUGLAS | PLOT NAME : | PLOT SCALE : 1 IN:100 FT

KOCH RESOURCES PINE BEND LLC | VILLAGE OF MCFARLAND | BADGER TERMINAL LLC | BADGER TERMINAL LLC | OWNER INFORMATION LOCKED | NATIONAL PROPANE LP

PROPERTY LINE (TYP)

MMSD (SAN)

SLOPE INTERCEPT (TYP)

RELIEF TRENCH (TYP)

WINDSTREAM (COMM)

950'SB'

US 51

950'NB'

955'SB'

955'NB'

960'SB'

960'NB'

BM 55

SUNOCO (GAS/PETRO)

CAUTION

CENEX (GAS/PETRO)

TRIANGLE ST

MEINDERS RD

VILLAGE OF MCFARLAND (WATER)

FRONTIER (COMM)

ALLIANT (GAS)

CAUTION

VILLAGE OF MCFARLAND (SAN)

ALLIANT (ELEC)

EXISTING R/W (TYP)

MADISON FORMS CORPORATION | KRISTEN B BEASLEY | HLO LLC | 4313 LLC | LEO J & CAROL K DUREN | CBEK INVESTMENTS LLC | DMG HOLDINGS LLC | VANSTRUM LLC | CHS INC | FARMERS UNION CENTRAL EXCHANGE INC

5 5

BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 54	922+07'NB'	40.1' RT	899.16'	FENO MONUMENT
BM 55	959+91'SB'	45.5' LT	856.84'	FENO MONUMENT

END PROJECT 5845-16-77
STA 953+40.00'NB'

STA 953+40.00 'NB'
EL 863.39

PROPOSED PROFILE

-0.31%

EXISTING PROFILE

EXISTING PROFILE ELEVATION

PROPOSED PROFILE ELEVATION

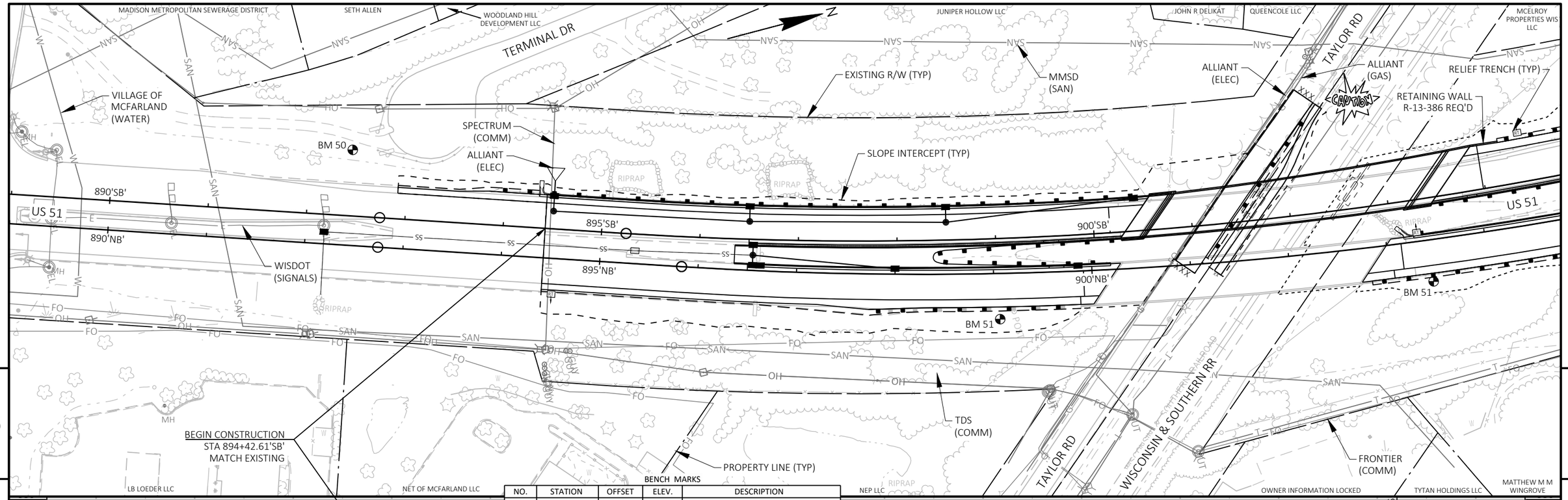
890 880 870 860 850 840 830 820

864.61	864.59	864.53	864.43	864.29	864.28	864.14	864.12	863.99	863.97	863.84	863.82	863.72	863.66	863.59	863.51	863.43	863.27	863.12	862.94	862.78	862.59	862.50	862.37	862.19	862.03	861.92	861.79	861.62	861.49	861.34	861.10	860.96	860.82	860.69	860.56	860.44	860.23	860.10
	950'NB'		951'NB'		952'NB'		953'NB'		954'NB'		955'NB'		956'NB'		957'NB'		958'NB'		959'NB'		960'NB'		961'NB'		962'NB'		963'NB'		964'NB'	

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: 'NB' 51	SHEET 244	E

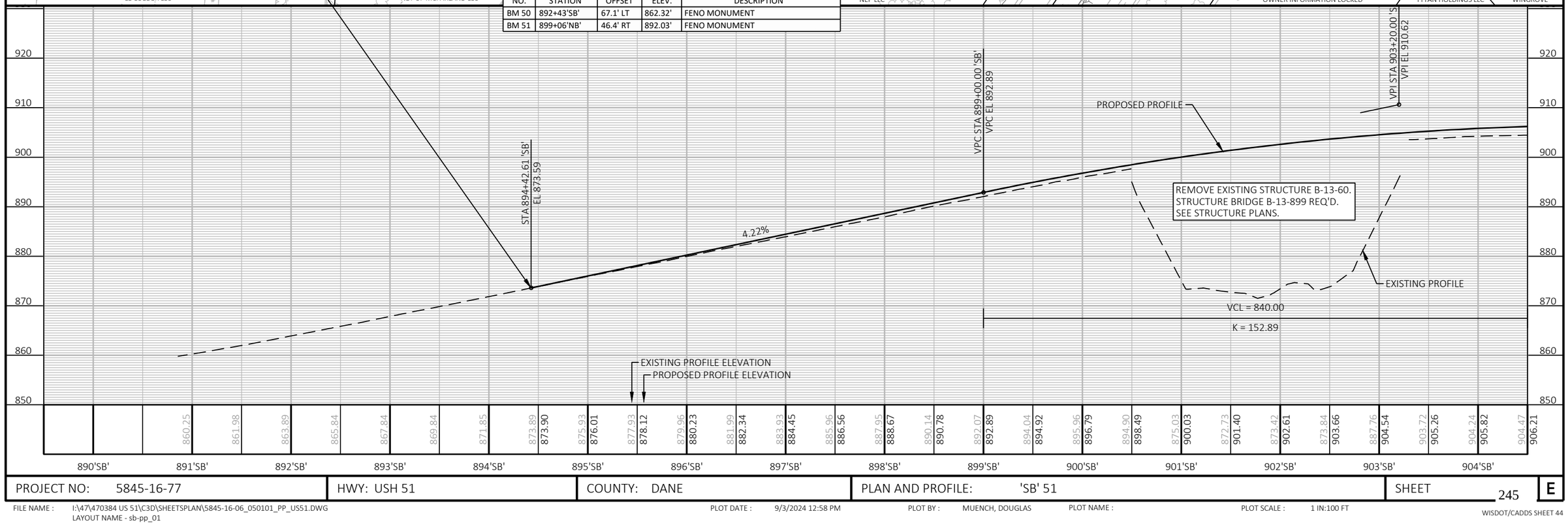
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050101_PP_US51.DWG
LAYOUT NAME - pp_05

PLOT DATE : 9/3/2024 12:58 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT



BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 50	892+43'SB'	67.1' LT	862.32'	FENO MONUMENT
BM 51	899+06'NB'	46.4' RT	892.03'	FENO MONUMENT



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: 'SB' 51	SHEET 245	E

MCELROY PROPERTIES WIS LLC

EVANS ALLSOP & LEHMAN LLC

VILLAGE OF MCFARLAND

WILLIAM L & PATRICIA M PEIRCE

N

SLOPE INTERCEPT (TYP)

MMSD (SAN)

RELIEF TRENCH (TYP)

RAMP D

415'D'

410'D'

STA BACK = 408+31.92'D'

STA AHEAD = 408+45.10 'D'

BM 53

905'SB'

910'SB'

915'SB'

US 51

905'NB'

910'NB'

915'NB'

STA BACK = 908+31.92'SB'

STA AHEAD = 908+45.10 'SB'

110'A'

115'A'

RAMP A

FRONTIER (COMM)

PROPERTY LINE (TYP)

EXISTING R/W (TYP)

TDS (COMM)

MATTHEW M M WINGROVE

FAIR LIVING REV TR, WILLETT T

MCFARLAND HEALTH HOLDINGS LLC

ROBERT W & DONNA J EVANS

ROBERT W & DONNA J EVANS

BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 52	903+43'NB'	42.3' RT	904.40'	FENO MONUMENT
BM 53	919+70'SB'	39.6' LT	900.19'	FENO MONUMENT

VCL = 400.00

K = 225.61

VPT STA 907+40.00 'SB'
VPT EL 905.27

LP STA 912+77.28 'SB'
LP EL 900.43

VPC STA 916+40.00 'SB'
VPC EL 901.96

PROPOSED PROFILE

-1.27%

0.50%

-0.51%

LT SPECIAL DITCH

EXISTING PROFILE

HP STA 905+45.32 'SB'
HP EL 906.51

VPC STA 909+90.00 'SB'
VPC EL 902.26

VPI STA 911+90.00 'SB'
VPI EL 899.71

VPT STA 913+90.00 'SB'
VPT EL 900.71

HP STA 918+18.46 'SB'
HP EL 902.40

VCL = 840.00

K = 152.89

VCL = 1000.00

K = 357.19

EXISTING PROFILE ELEVATION

PROPOSED PROFILE ELEVATION

930 920 910 900 890 880 870 860

904.47	904.54	904.44	904.36	904.08	903.73	903.41	903.05	908+45.10	902.63	902.33	901.85	901.44	901.06	900.69	900.46	900.36	900.29	900.39	900.51	900.74	901.24	901.47	901.73	901.96	902.08	902.26	902.32	902.23	902.17	902.16
906.21	906.44	906.51	906.41	906.15	905.73	905.14	904.51	904.04	902.36	903.40	902.77	902.13	901.57	901.12	900.79	900.56	900.44	900.44	900.54	900.76	901.01	901.26	901.51	901.76	902.01	902.21	902.34	902.40	902.39	902.31

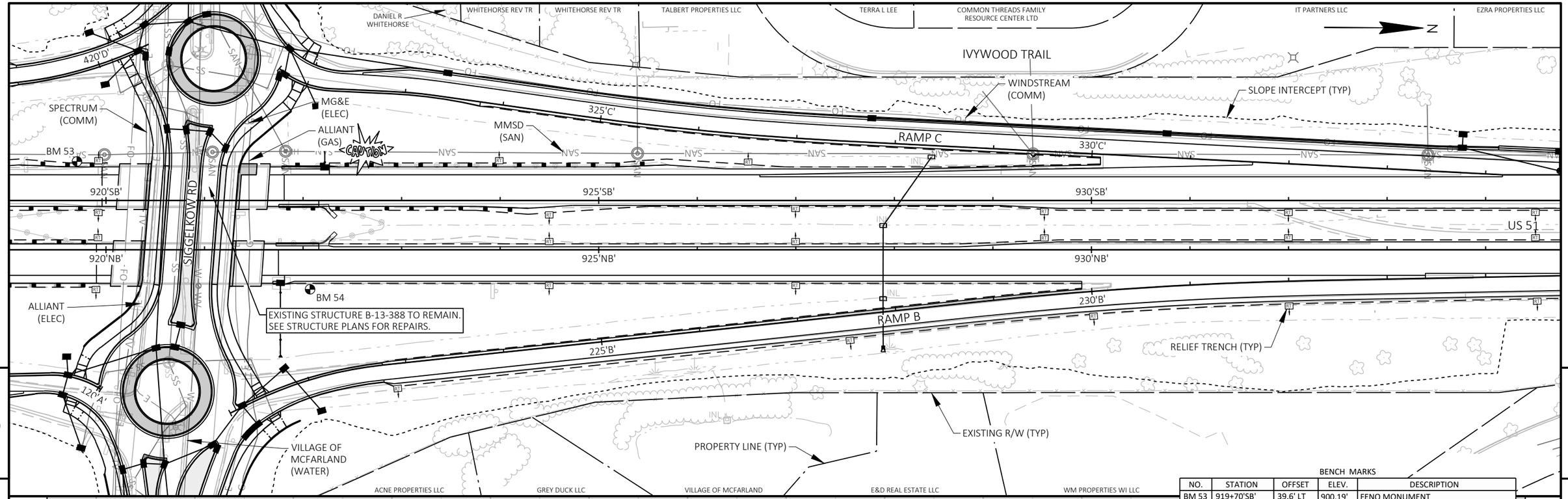
905'SB' 906'SB' 907'SB' 908'SB' 909'SB' 910'SB' 911'SB' 912'SB' 913'SB' 914'SB' 915'SB' 916'SB' 917'SB' 918'SB' 919'SB'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PLOTTING: 'SB' 51	SHEET 246	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050101_PP_US51.DWG
LAYOUT NAME - sb-pp_02

PLOT DATE : 9/3/2024 12:58 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

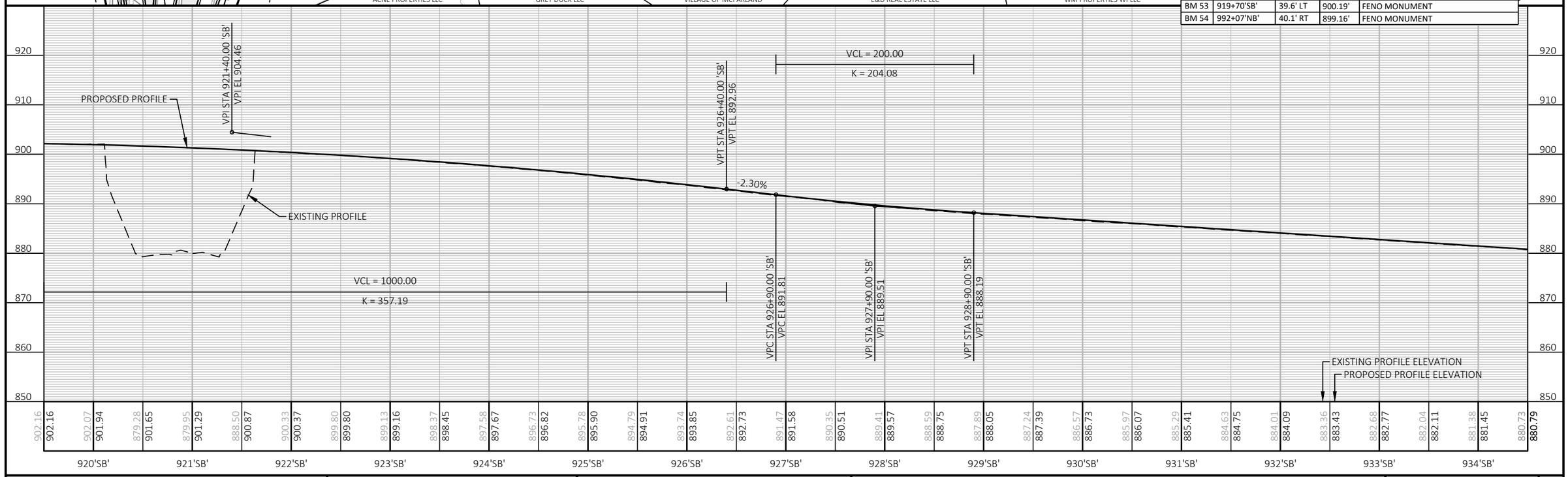


5

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BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 53	919+70'SB'	39.6' LT	900.19'	FENO MONUMENT
BM 54	992+07'NB'	40.1' RT	899.16'	FENO MONUMENT



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: 'SB' 51	SHEET 247	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050101_PP_US51.DWG
LAYOUT NAME - sb-pp_03
PLOT DATE : 9/3/2024 12:58 PM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

EZRA PROPERTIES LLC | EZRA PROPERTIES LLC | KOCH RESOURCES PINE BEND LLC

N

SIGN STRUCTURE S-13-0594

SLOPE INTERCEPT (TYP)

WEST SHORE (PIPELINE) CAUTION

MG&E (ELEC)

MMSD (SAN)

KOCH (PIPELINE) CAUTION

WINDSTREAM (COMM)

335'C

935'SB' | 940'SB' | 945'SB'

US 51 | US 51

935'NB' | 940'NB' | 945'NB'

235'B'

ALLIANT (GAS) CAUTION

VILLAGE OF MCFARLAND (WATER)

RELIEF TRENCH (TYP)

TRIANGLE ST

PROPERTY LINE (TYP)

EXISTING R/W (TYP)

VILLAGE OF MCFARLAND (SAN)

CRULL INVESTMENTS LLC | TWIN BRO LLC | 4609 TRIANGLE STREET LLC | TMG RENTALS LLC | KAK ENTERPRISES LLC | FERGUSON ENTERPRISES INC | MADISON FORMS CORPORATION | MADISON FORMS CORPORATION

5 | 5

BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 54	922+07'NB'	40.1' RT	899.16'	FENO MONUMENT
BM 55	959+91'SB'	45.5' LT	856.84'	FENO MONUMENT

VCL = 600.00

K = 630.73

-1.32%

PROPOSED PROFILE

EXISTING PROFILE

-0.50%

LT SPECIAL DITCH

VPC STA 942+80.00 'SB'
VPC EL 869.84

VPI STA 945+80.00 'SB'
VPI EL 865.88

VPT STA 948+80.00 'SB'
VPT EL 864.77

EXISTING PROFILE ELEVATION

PROPOSED PROFILE ELEVATION

900 | 890 | 880 | 870 | 860 | 850 | 840 | 830

880.73 880.79 880.07 880.13 879.43 879.47 878.76 878.81 878.09 878.15 877.45 877.49 876.84 876.83 876.11 876.17 875.49 875.51 874.84 874.85 874.20 874.19 873.56 873.53 872.94 872.87 872.23 872.21 871.58 871.55 870.99 870.89 870.34 870.23 869.71 869.58 869.07 868.95 868.50 868.37 867.94 867.82 867.39 867.32 866.91 866.85 866.48 866.43 866.14 866.04 865.74 865.69 865.43 865.39 865.13 865.12 864.86 864.89 864.65 864.70 864.42 864.51

935'SB' | 936'SB' | 937'SB' | 938'SB' | 939'SB' | 940'SB' | 941'SB' | 942'SB' | 943'SB' | 944'SB' | 945'SB' | 946'SB' | 947'SB' | 948'SB' | 949'SB'

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: 'SB' 51	SHEET 248	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050101_PP_US51.DWG
LAYOUT NAME - sb-pp_04

PLOT DATE : 9/3/2024 12:59 PM | PLOT BY : MUENCH, DOUGLAS | PLOT NAME : | PLOT SCALE : 1 IN:100 FT

KOCH RESOURCES PINE BEND LLC | VILLAGE OF MCFARLAND | BADGER TERMINAL LLC | BADGER TERMINAL LLC | OWNER INFORMATION LOCKED | NATIONAL PROPANE LP

PROPERTY LINE (TYP)

MMSD (SAN)

SLOPE INTERCEPT (TYP)

WINDSTREAM (COMM)

N

BM 55

SUNOCO (GAS/PETRO)

950'SB'

955'SB'

960'SB'

US 51

950'NB'

955'NB'

960'NB'

CAUTION

RELIEF TRENCH (TYP)

CENEX (GAS/PETRO)

TRIANGLE ST

END CONSTRUCTION
STA 957+07.15'SB'
MATCH EXISTING

VILLAGE OF MCFARLAND (WATER)

FRONTIER (COMM)

ALLIANT (GAS)

ALLIANT (ELEC)

VILLAGE OF MCFARLAND (SAN)

EXISTING R/W (TYP)

MEINDERS RD

MADISON FORMS CORPORATION | KRISTEN B BEASLEY | HLO LLC | 4313 LLC | LEO J & CAROL K DUREN | CBEK INVESTMENTS LLC | DMG HOLDINGS LLC | VANSTRUM LLC | CHS INC | FARMERS UNION CENTRAL EXCHANGE INC

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BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 54	922+07'NB'	40.1' RT	899.16'	FENO MONUMENT
BM 55	959+91'SB'	45.5' LT	856.84'	FENO MONUMENT

890 880 870 860 850 840 830 820

STA 953+40.00 'SB'
EL 863.08

PROPOSED PROFILE

-0.37%

-0.38%

-0.97%

LT SPECIAL DITCH

EXISTING PROFILE

EXISTING PROFILE ELEVATION

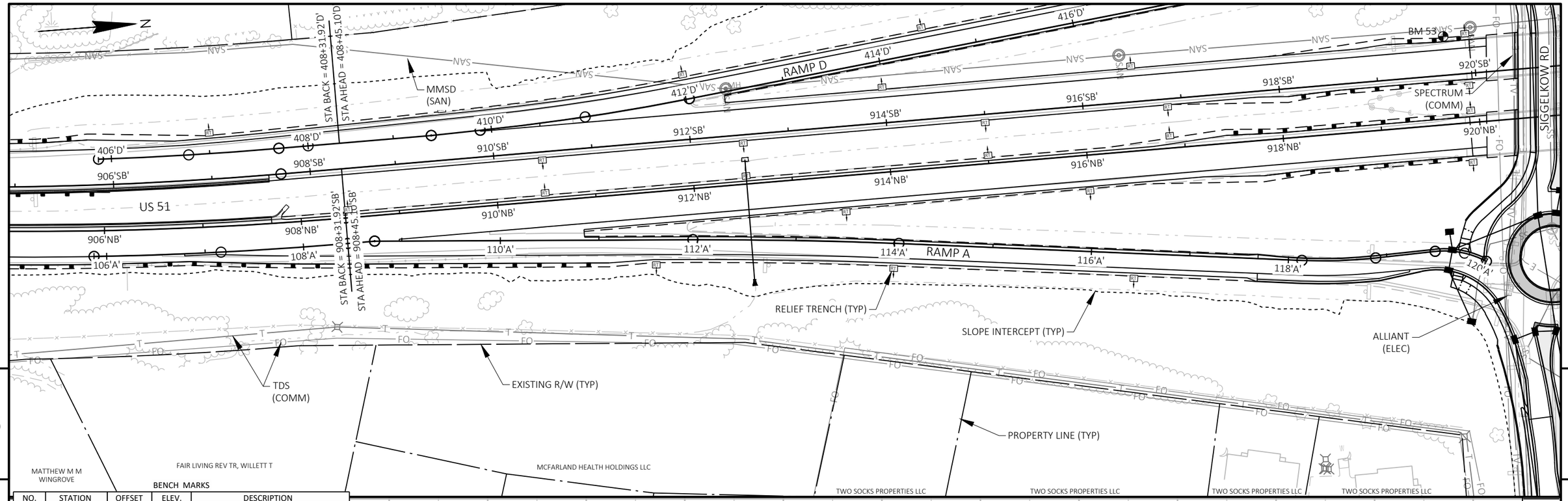
PROPOSED PROFILE ELEVATION

950'SB'	951'SB'	952'SB'	953'SB'	954'SB'	955'SB'	956'SB'	957'SB'	958'SB'	959'SB'	960'SB'	961'SB'	962'SB'	963'SB'	964'SB'
864.42	864.26	864.05	863.90	863.68	863.52	863.37	863.18	863.02	862.89	862.70	862.49	862.30	862.19	862.01	861.80	861.55	861.32	861.16	860.99	860.82	860.63	860.47	860.30	860.14	859.94	859.78	859.59	859.44	859.29	859.20
864.51	864.33	864.15	863.96	863.78	863.59	863.41	863.22																							

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: 'SB' 51	SHEET 249	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050101_PP_US51.DWG
LAYOUT NAME - sb-pp_05

PLOT DATE : 9/3/2024 12:59 PM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

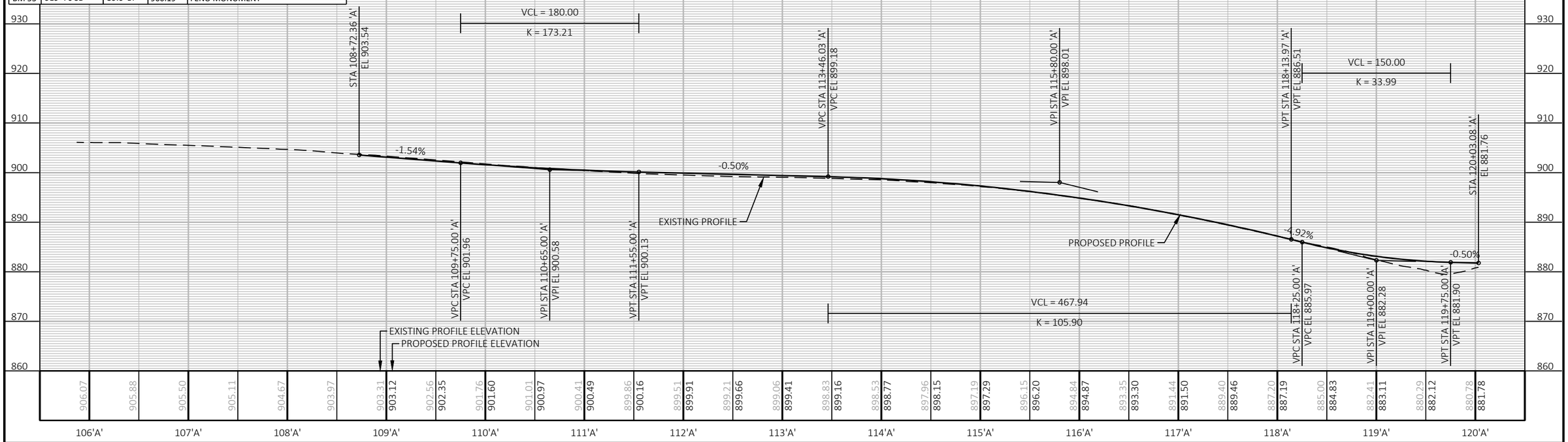


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BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 52	903+43'NB'	42.3' RT	904.40'	FENO MONUMENT
BM 53	919+70'SB'	39.6' LT	900.19'	FENO MONUMENT

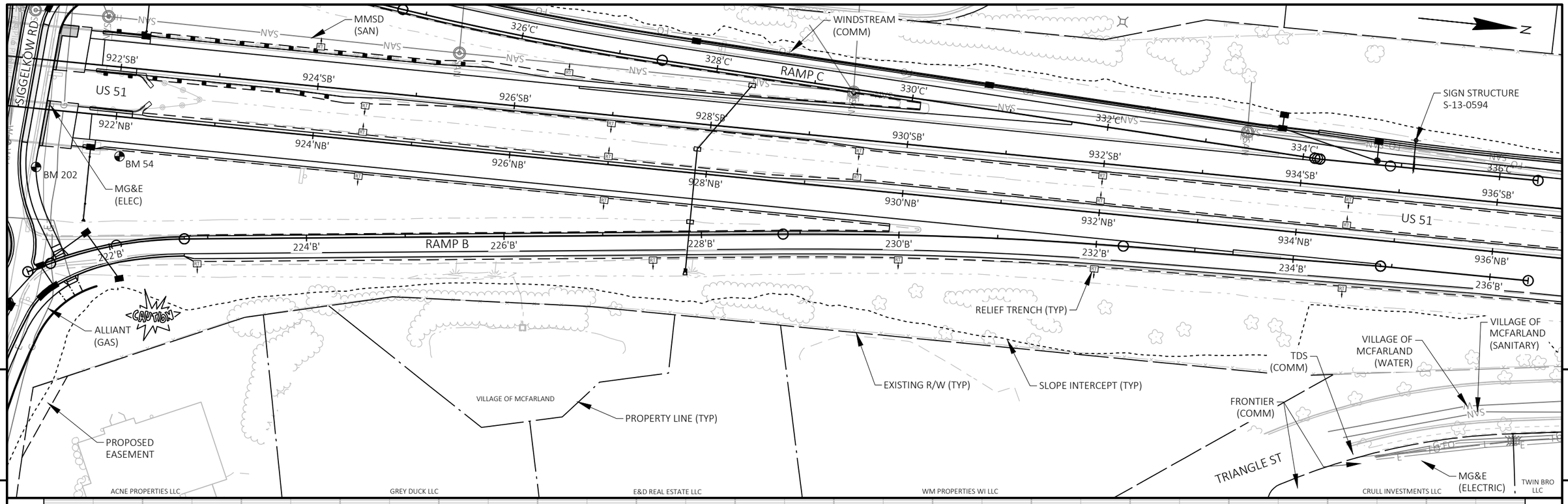


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: RAMP A (NB EXIT)	SHEET 250	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050102_PP_US51-RAMPS.DWG
LAYOUT NAME - a-pp_01

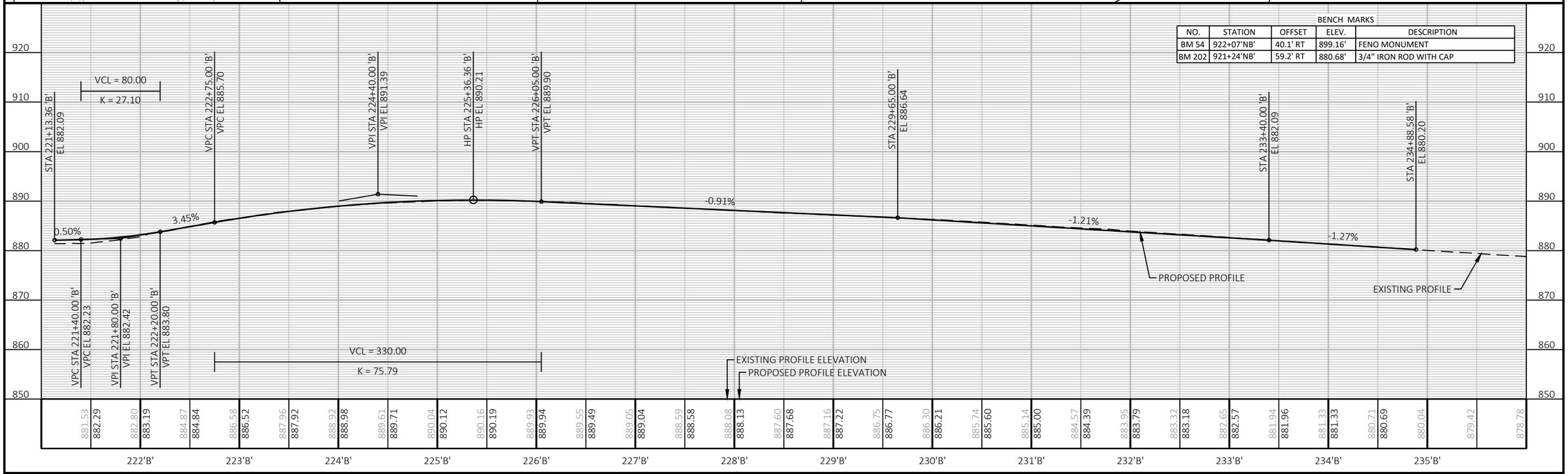
PLOT DATE : 7/22/2024 7:22 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



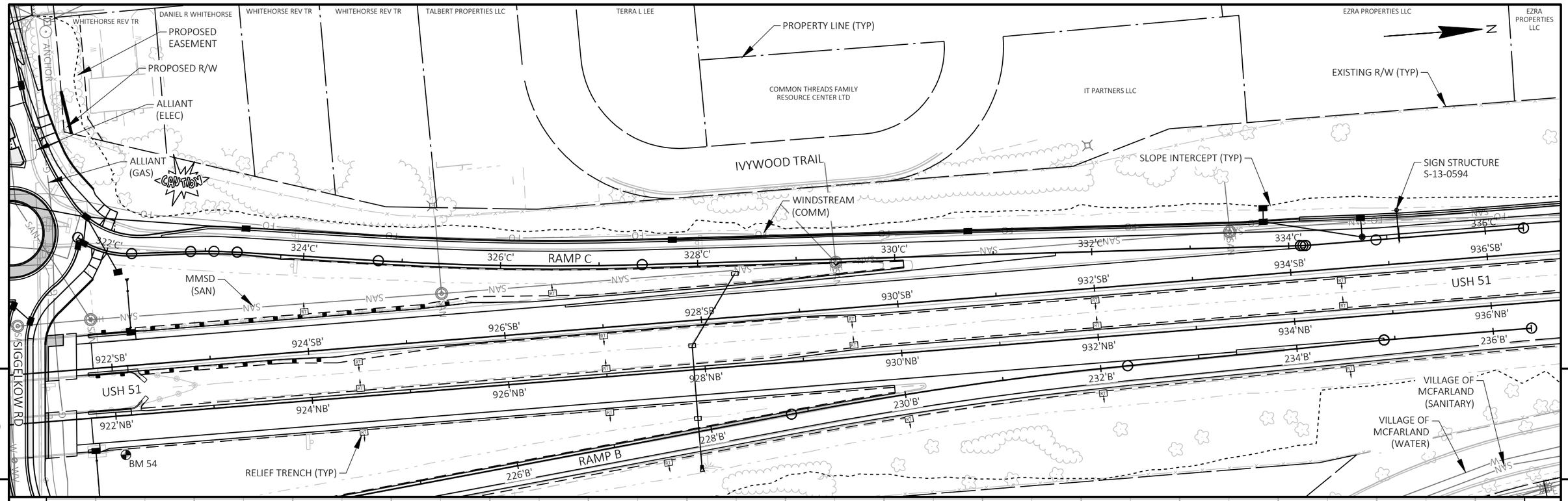
BENCH MARKS

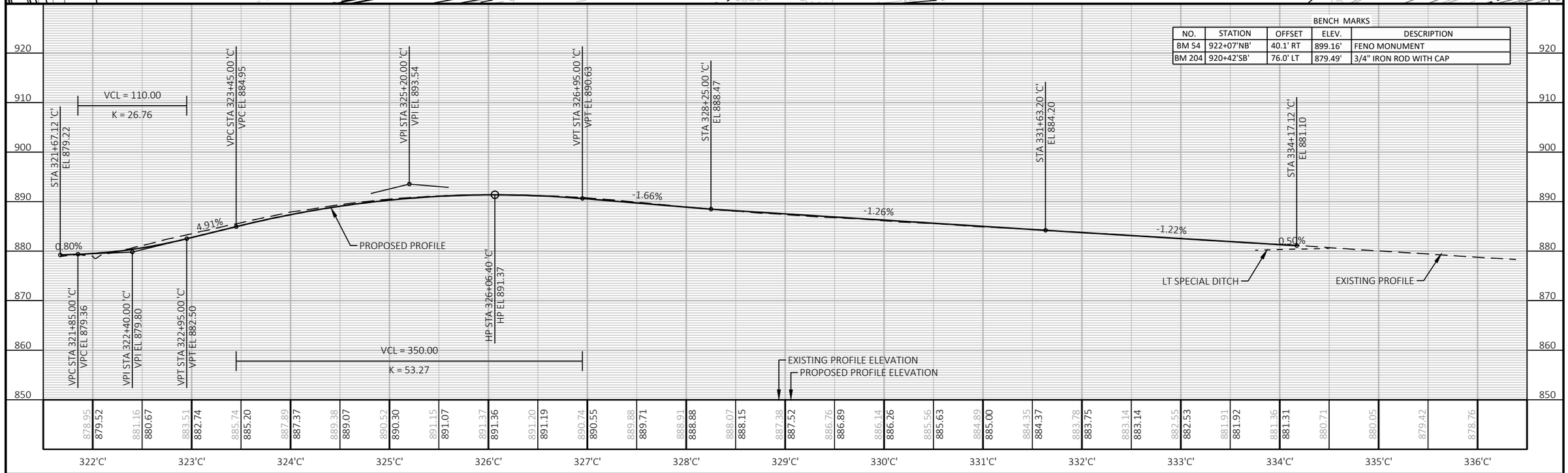
NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 54	922+07'NB'	40.1' RT	899.16'	FENO MONUMENT
BM 202	921+24'NB'	59.2' RT	880.68'	3/4" IRON ROD WITH CAP



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: RAMP B (NB ENTRANCE)	SHEET 251	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050102_PP_US51-RAMPS.DWG
LAYOUT NAME - b-pp_01
PLOT DATE : 7/22/2024 7:22 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44





PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: RAMP C (SB EXIT)	SHEET 252	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050102_PP_US51-RAMPS.DWG
LAYOUT NAME - c-pp_01
PLOT DATE : 7/22/2024 7:22 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

MCELROY PROPERTIES WIS LLC

EVANS ALLSOP & LEHMAN LLC

VILLAGE OF MCFARLAND

WILLIAM L & PATRICIA M PEIRCE

N

PROPERTY LINE (TYP)

EXISTING R/W (TYP)

MMSD (SAN)

SLOPE INTERCEPT (TYP)

RELIEF TRENCH (TYP)

ALLIANT (ELEC)

SPECTRUM (COMM)

MG&E (ELEC)

BM 204

BM 53

USH 51

US 51

RAMP D

RAMP A

SIGGELKOW RD

STA BACK = 408+31.92'D'

STA AHEAD = 408+45.10'D'

STA BACK = 908+31.92'SB'

STA AHEAD = 908+45.10'SB'

406'D' 408'D' 410'D' 412'D' 414'D' 416'D' 418'D' 420'D'

906'SB' 908'SB' 910'SB' 912'SB' 914'SB' 916'SB' 918'SB' 920'SB'

906'NB' 908'NB' 910'NB' 912'NB' 914'NB' 916'NB' 918'NB' 920'NB'

106'A' 108'A' 110'A' 112'A' 114'A' 116'A'

FRONTIER (COMM)

VILLAGE OF MCFARLAND (WATER)

5

5

BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 53	919+70'SB'	39.6' LT	900.19'	FENO MONUMENT
BM 204	920+42'SB'	76.0' LT	879.49'	3/4" IRON ROD WITH CAP

930 920 910 900 890 880 870 860

EXISTING PROFILE

PROPOSED PROFILE

-1.26%

-0.50%

-0.50%

-4.78%

-1.00%

LT SPECIAL DITCH

VCL = 200.00

K = 261.72

VCL = 300.00

K = 70.12

VCL = 100.00

K = 26.45

STA 410+00.00 'D'
EL 902.07

VPC STA 410+20.00 'D'
VPC EL 901.81

VPI STA 411+20.00 'D'
VPI EL 900.55

VPT STA 412+20.00 'D'
VPT EL 900.05

VPC STA 414+40.00 'D'
VPC EL 898.95

VPI STA 415+90.00 'D'
VPI EL 898.20

VPT STA 417+40.00 'D'
VPT EL 891.03

VPC STA 419+35.00 'D'
VPC EL 881.71

VPI STA 419+85.00 'D'
VPI EL 879.32

VPT STA 420+35.00 'D'
VPT EL 878.83

STA 420+54.34 'D'
EL 878.63

EXISTING PROFILE ELEVATION

PROPOSED PROFILE ELEVATION

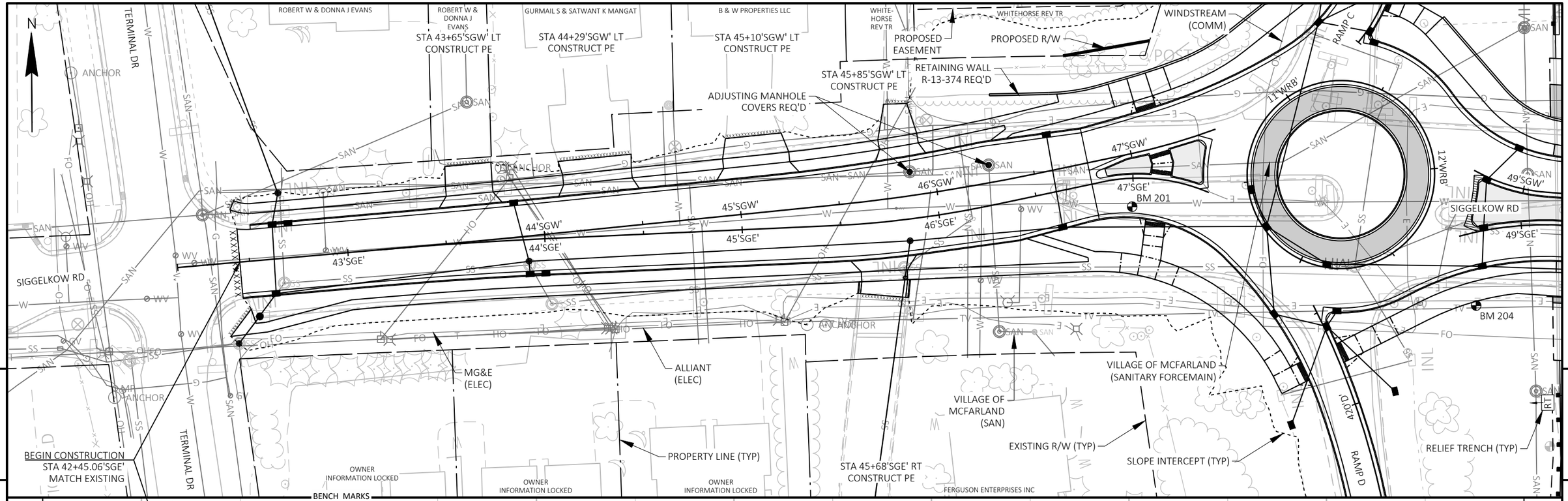
406'D'	407'D'	408'D'	409'D'	410'D'	411'D'	412'D'	413'D'	414'D'	415'D'	416'D'	417'D'	418'D'	419'D'	420'D'
903.58	903.39	903.11	902.89	902.62	408+45.10 902.45	902.13	901.77	901.33	902.07	900.87	901.45	900.55	900.93	900.16
900.49	899.81	900.16	899.46	899.90	899.43	899.65	899.49	899.40	899.46	899.15	899.20	898.89	898.57	898.39
897.58	897.54	896.36	896.32	894.76	894.76	892.97	892.83	890.69	890.55	888.43	888.17	886.13	885.78	883.84
883.39	881.52	881.04	879.36	879.41	878.36	878.68								

PROJECT NO: 5845-16-77 | HWY: USH 51 | COUNTY: DANE | PLAN AND PROFILE: RAMP D (SB ENTRANCE) | SHEET 253 | E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050102_PP_US51-RAMPS.DWG
LAYOUT NAME - d-pp_01

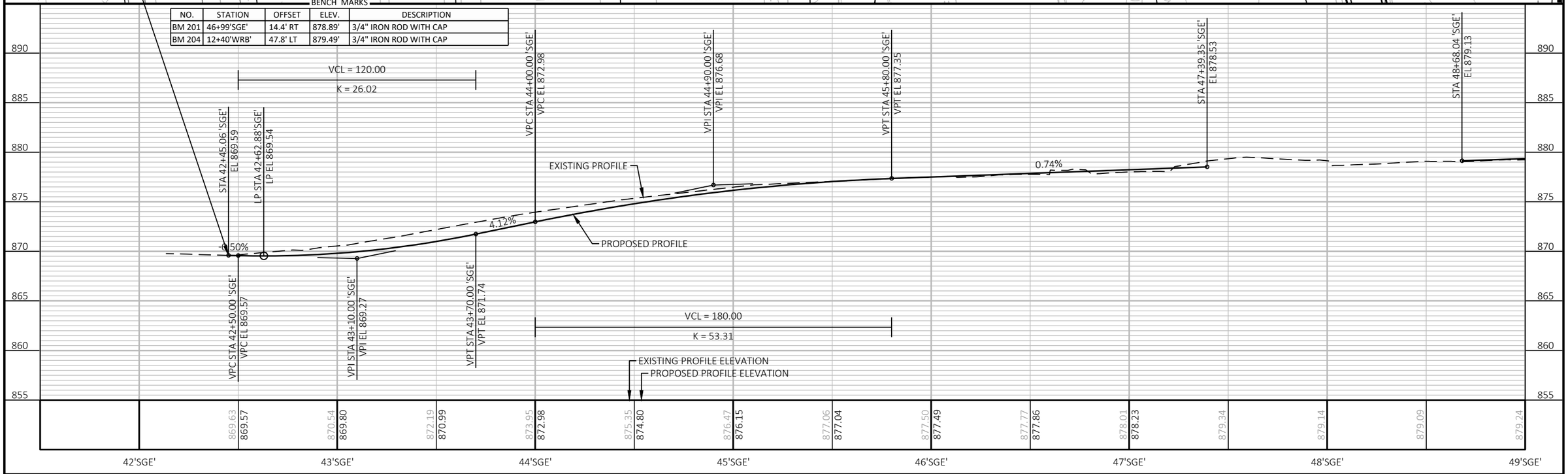
PLOT DATE : 7/22/2024 7:22 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



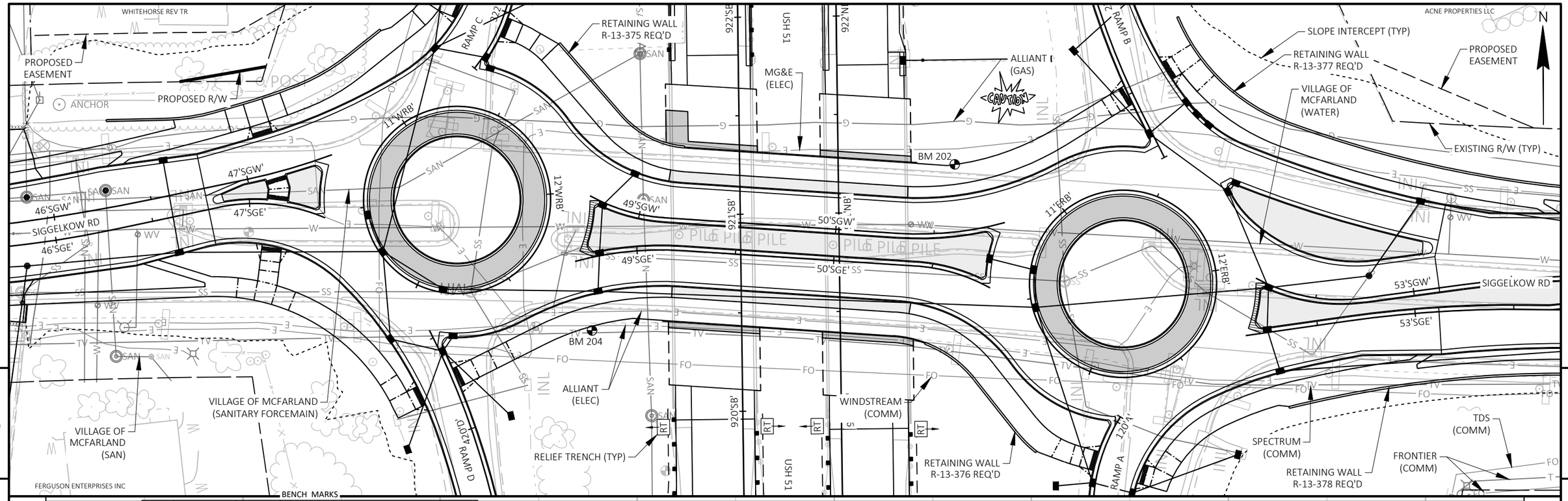
BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 201	46+99'SGE'	14.4' RT	878.89'	3/4" IRON ROD WITH CAP
BM 204	12+40'WRB'	47.8' LT	879.49'	3/4" IRON ROD WITH CAP



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: EB SIGGELKOW RD	SHEET 254	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050103_PP_SIGGELKOW.DWG
LAYOUT NAME - SGE-1
PLOT DATE : 7/26/2024 12:05 PM
PLOT BY : BUTTERIS, BRADLEY
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

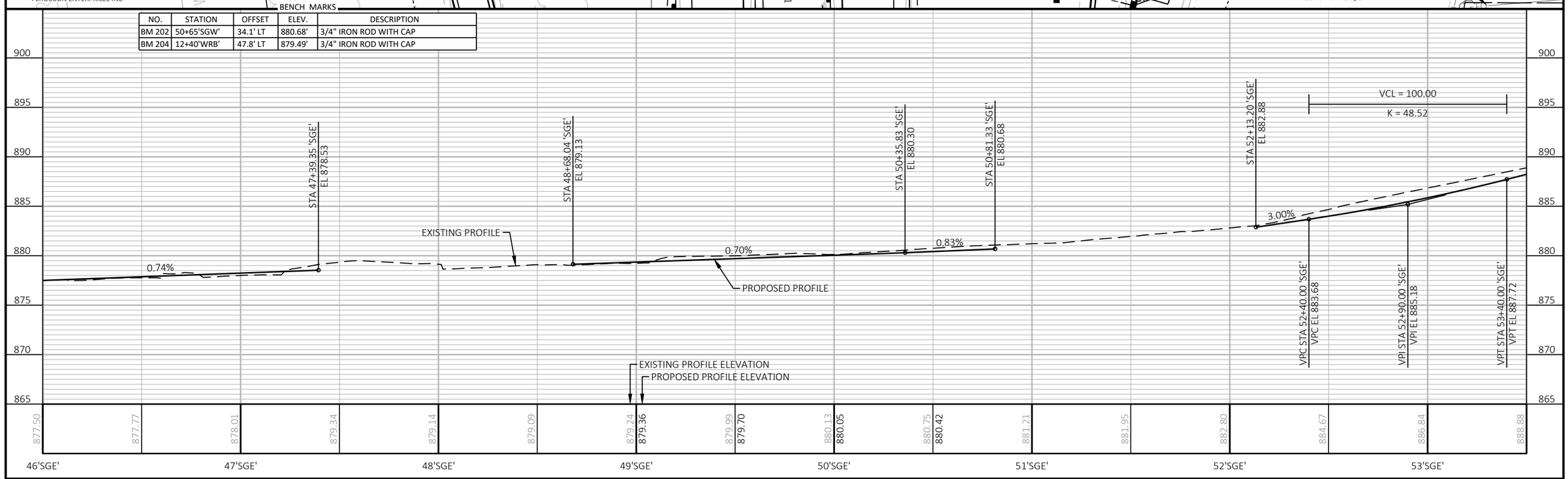


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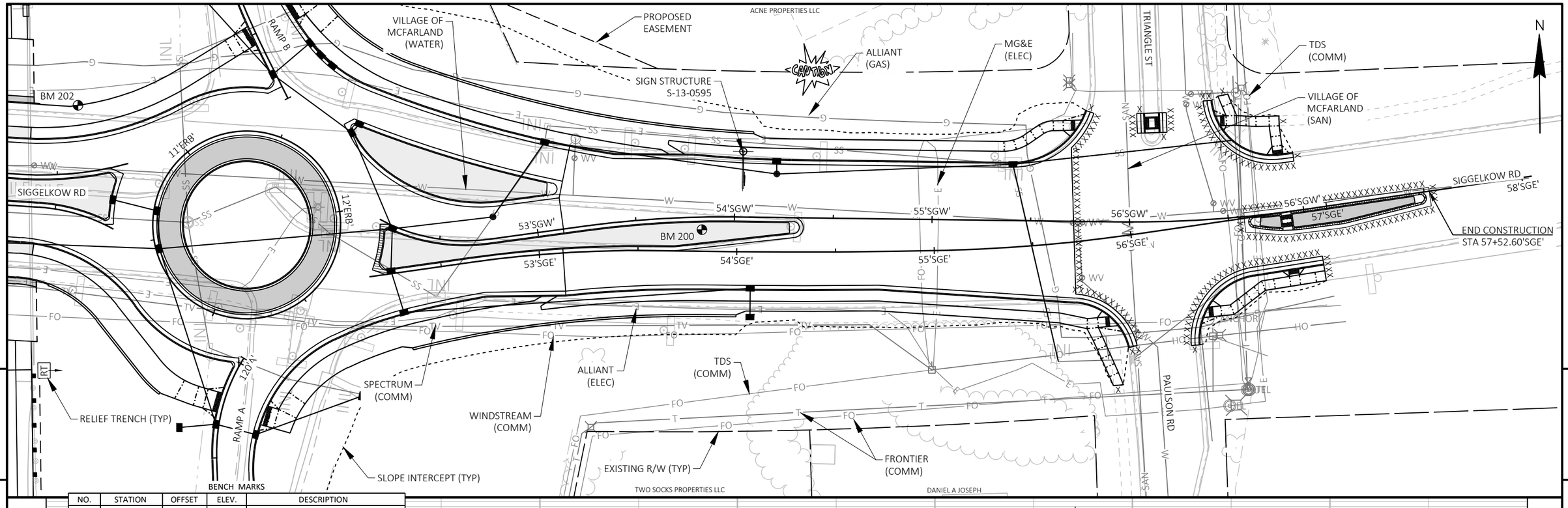
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BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 202	50+65'SGW'	34.1' LT	880.68'	3/4" IRON ROD WITH CAP
BM 204	12+40'WRB'	47.8' LT	879.49'	3/4" IRON ROD WITH CAP

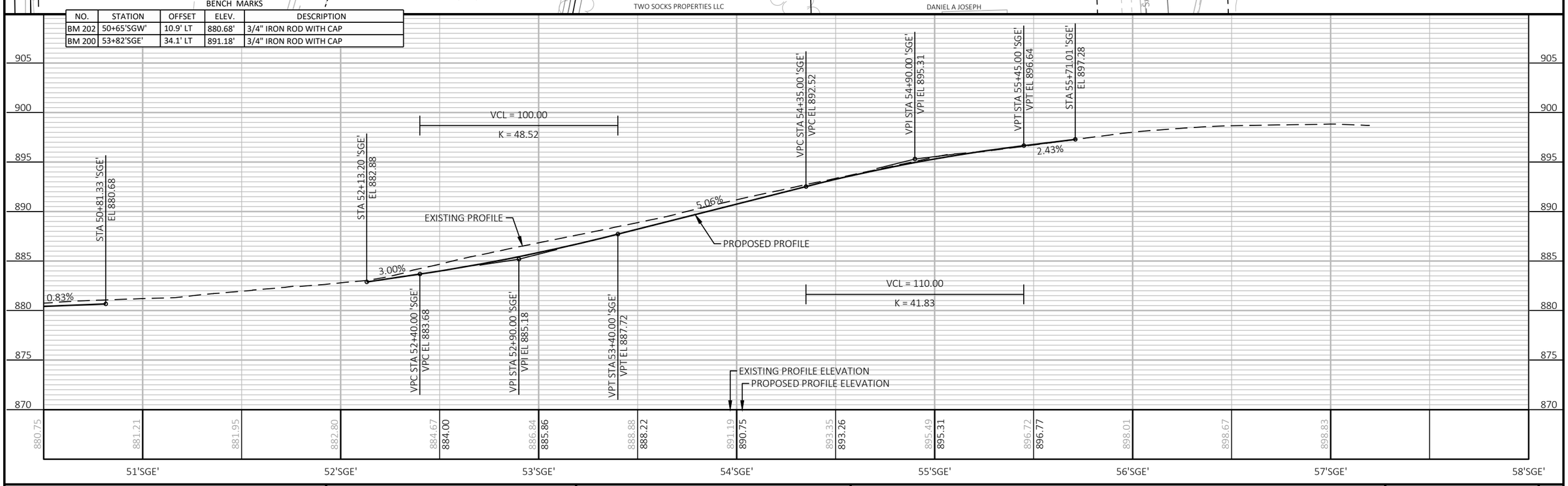


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: EB SIGGELKOW RD	SHEET 255	E



BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 202	50+65'SGW'	10.9' LT	880.68'	3/4" IRON ROD WITH CAP
BM 200	53+82'SGE'	34.1' LT	891.18'	3/4" IRON ROD WITH CAP

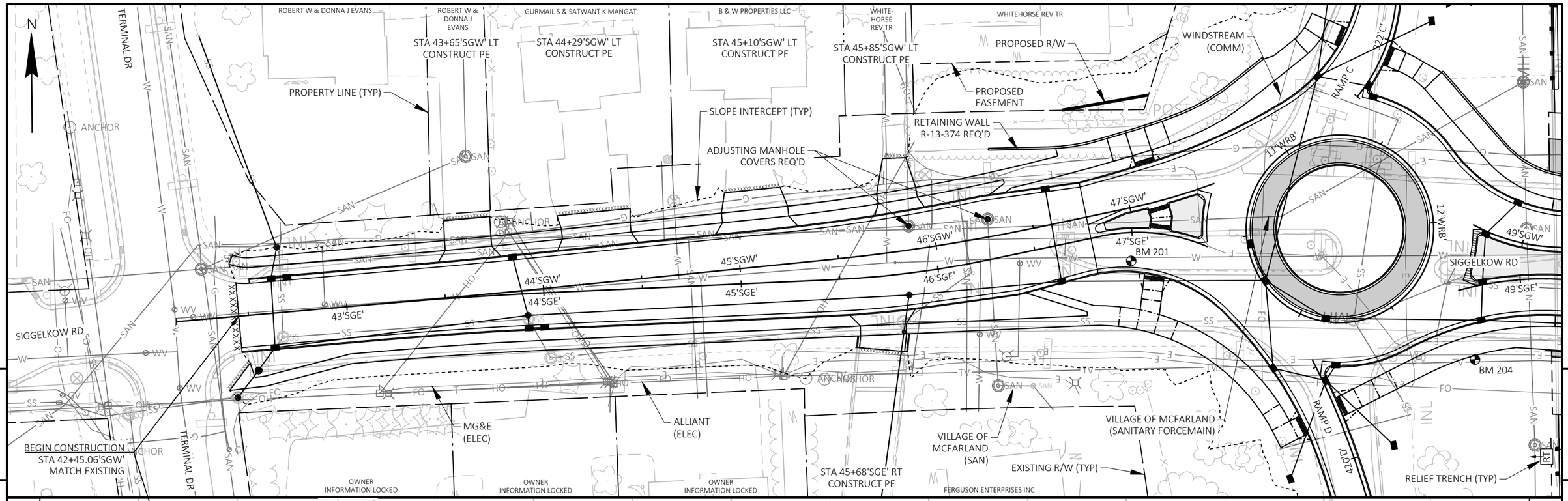


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: EB SIGGELKOW RD	SHEET 256	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050103_PP_SIGGELKOW.DWG
LAYOUT NAME - SGE-3

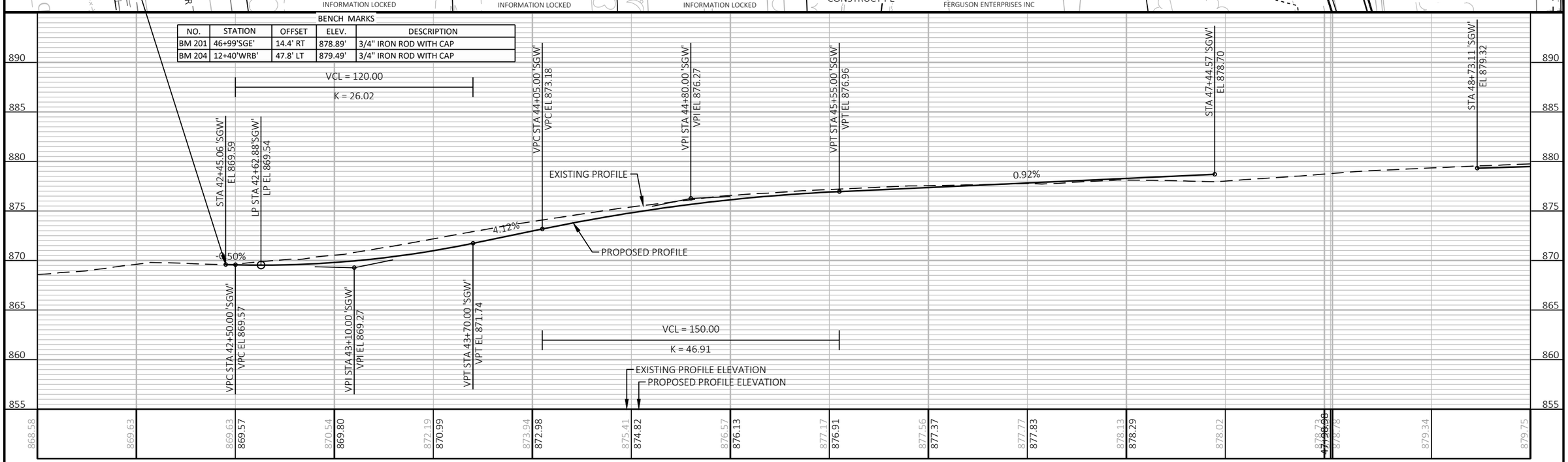
PLOT DATE : 7/26/2024 12:05 PM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

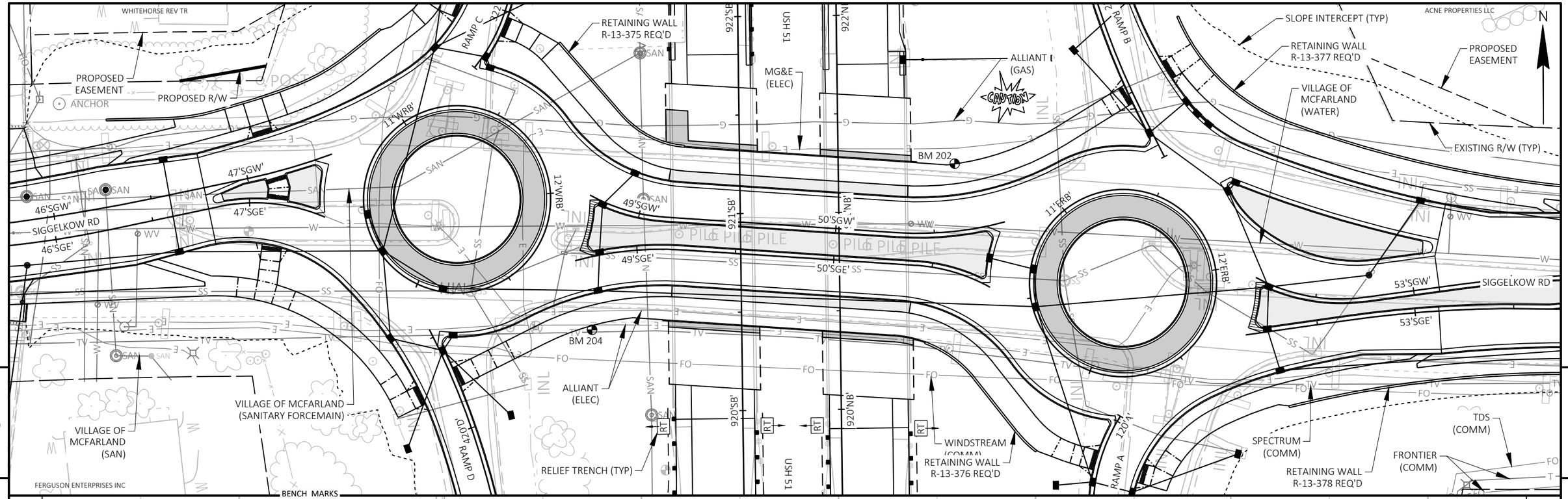


BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 201	46+99'SGE'	14.4' RT	878.89'	3/4" IRON ROD WITH CAP
BM 204	12+40'WRB'	47.8' LT	879.49'	3/4" IRON ROD WITH CAP

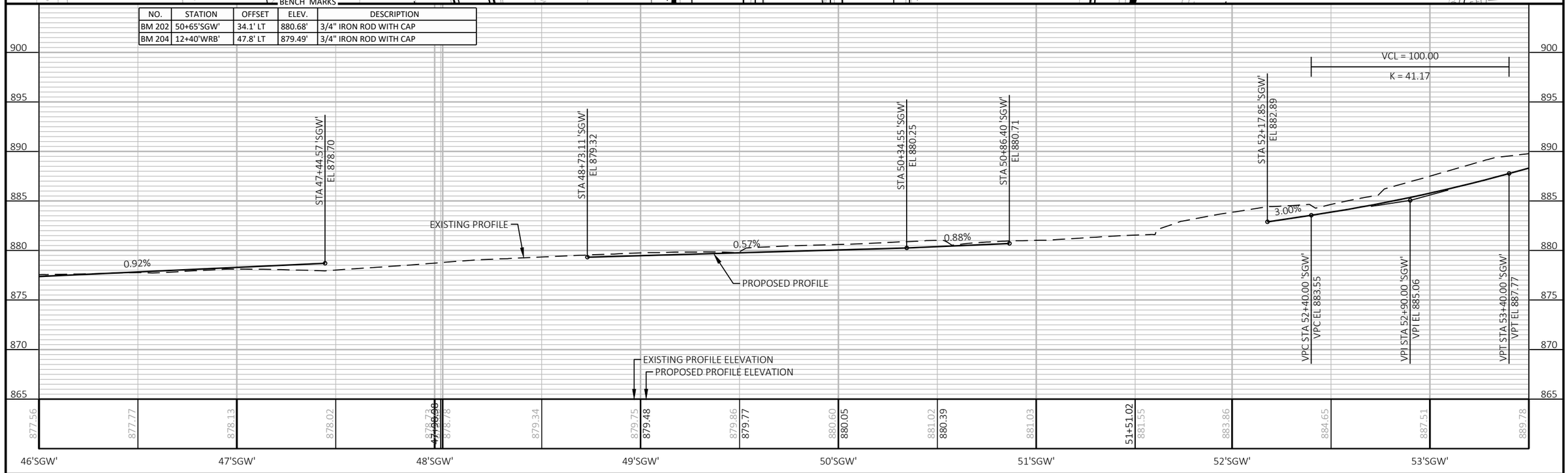


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: WB SIGGELKOW RD	SHEET 257 E

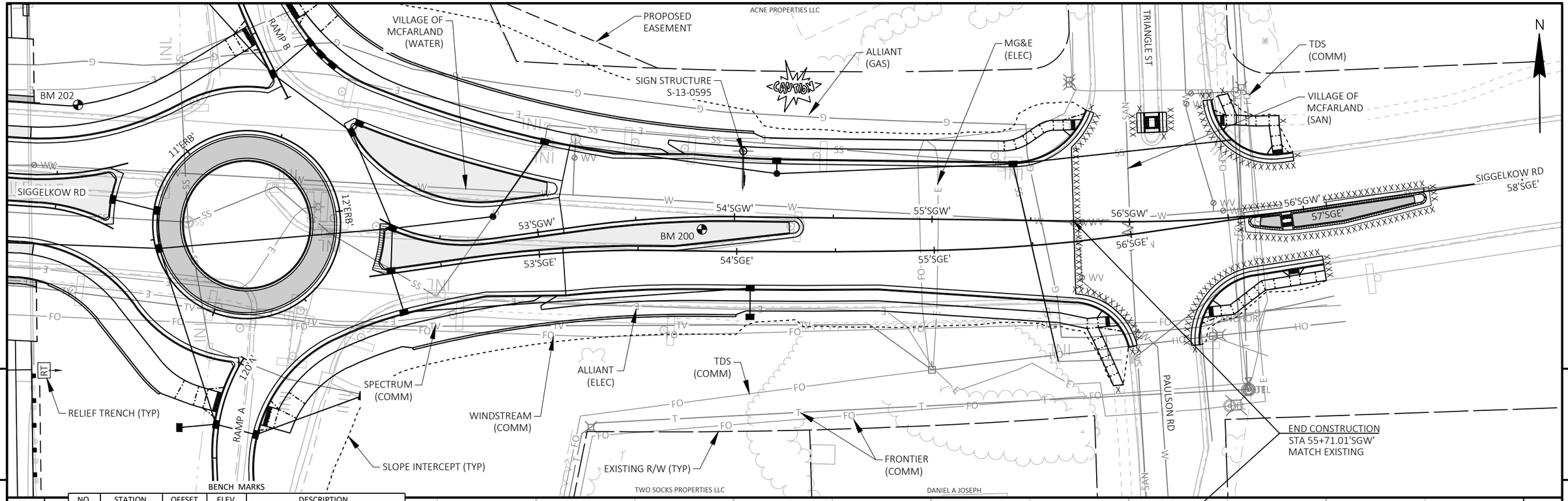


BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 202	50+65'SGW'	34.1' LT	880.68'	3/4" IRON ROD WITH CAP
BM 204	12+40'WRB'	47.8' LT	879.49'	3/4" IRON ROD WITH CAP



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: WB SIGGELKOW RD	SHEET 258	E

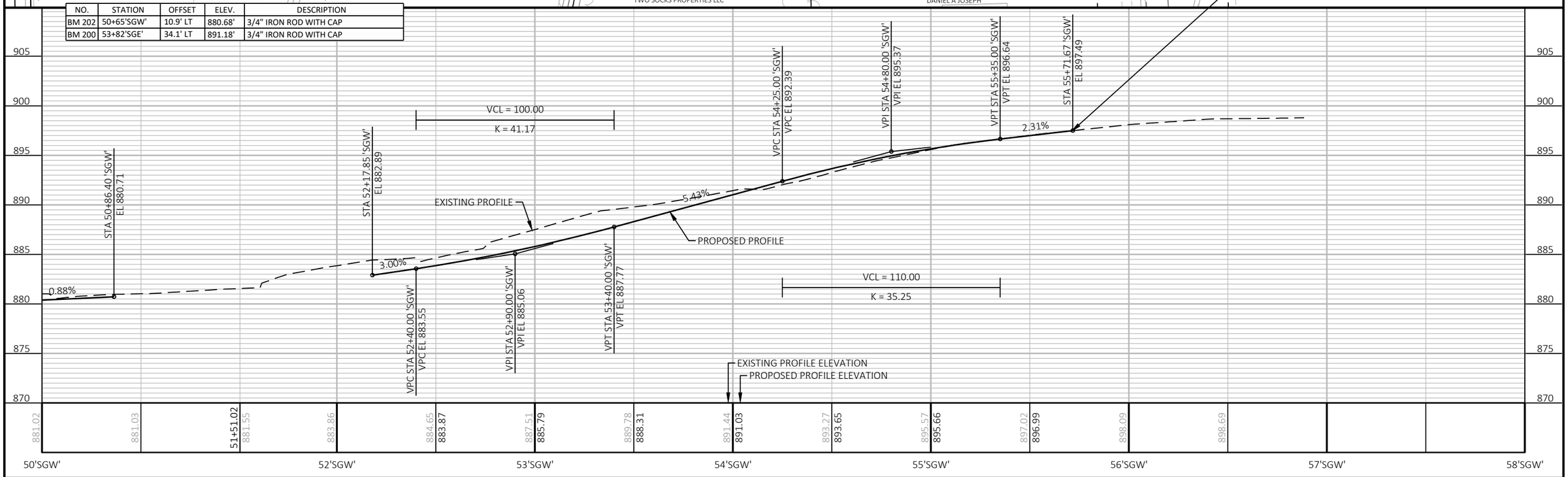


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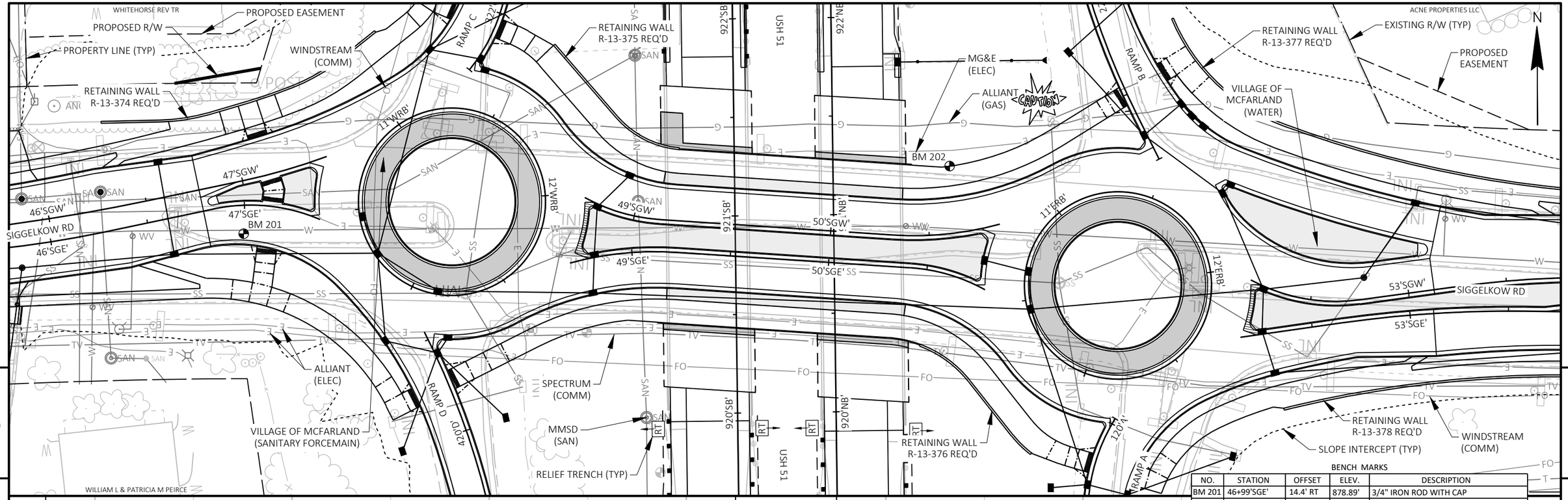
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BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 202	50+65'SGW'	10.9' LT	880.68'	3/4" IRON ROD WITH CAP
BM 200	53+82'SGE'	34.1' LT	891.18'	3/4" IRON ROD WITH CAP



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: WB SIGGELKOW RD	SHEET 259	E

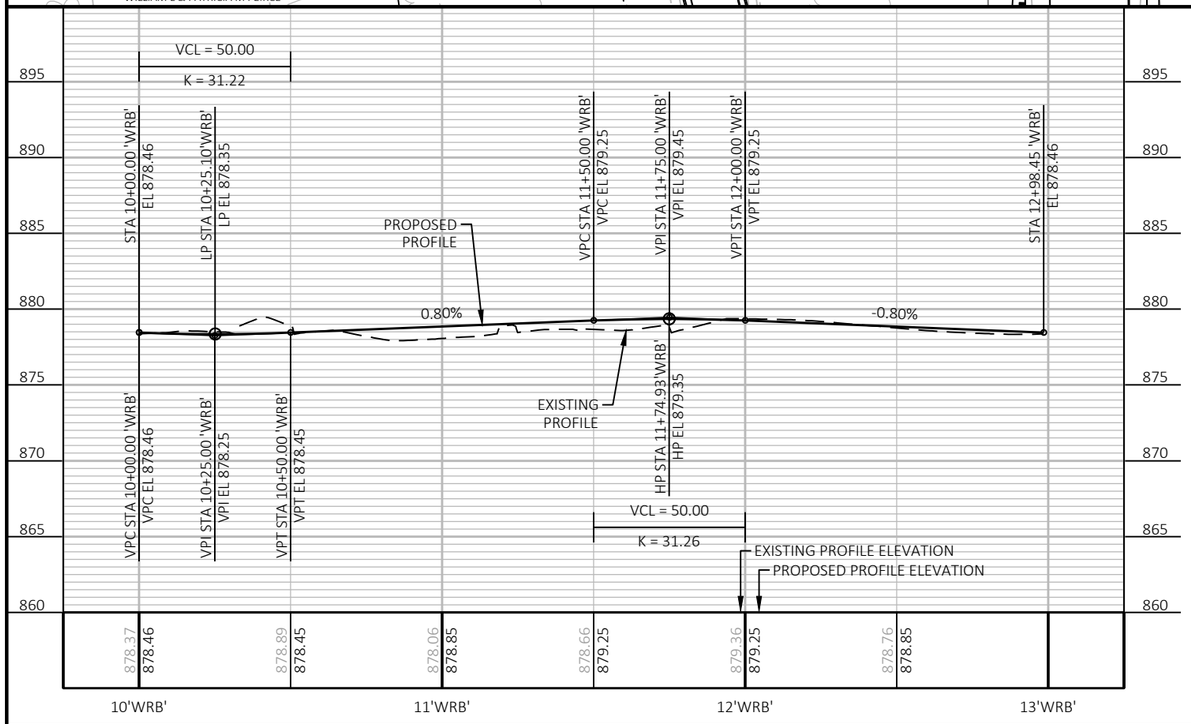


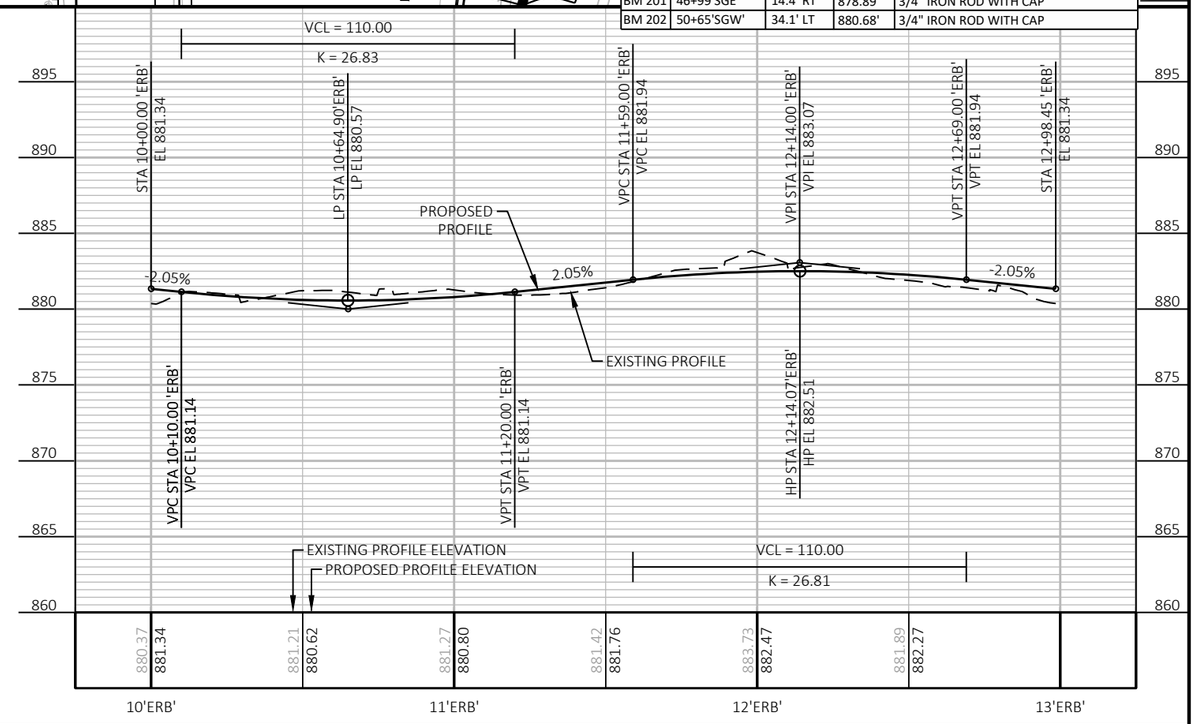
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BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 201	46+99'SGE'	14.4' RT	878.89'	3/4" IRON ROD WITH CAP
BM 202	50+65'SGW'	34.1' LT	880.68'	3/4" IRON ROD WITH CAP





PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: SIGGELKOW ROUNDABOUTS	SHEET 260	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050103_PP_SIGGELKOW.DWG
LAYOUT NAME - WRB-ERB
PLOT DATE : 7/26/2024 12:06 PM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

NEP LLC

JUNIPER HOLLOW LLC

QUEENCOLE LLC

CAMERON BACON

PROPERTY LINE (TYP)

MMSD

TDS (COMM)

ALLIANT (GAS)

ALLIANT (ELECTRIC)

FRONTIER (COMM)

USH 51 NB

USH 51 SB

STRUCTURE B-13-899

CAUTION

BEGIN CONSTRUCTION
TAYLOR RD
STA 10+16.96'TY'
MATCH EXISTING

END CONSTRUCTION
STA 12+27.42'TY'
MATCH EXISTING

TAYLOR RD

LHR TRAIL

BM 100

BM 101

SLOPE INTERCEPT (TYP)

WISCONSIN & SOUTHERN RR

BEGIN CONSTRUCTION
STA 10+30.33'TRL'
MATCH EXISTING
SAW CUT REQ'D

STRUCTURE B-13-386

EXISTING R/W (TYP)

END CONSTRUCTION
STA 12+28.19'TRL'
MATCH EXISTING
SAW CUT REQ'D

BENCH MARKS

NO.	STATION	OFFSET	ELEV.	DESCRIPTION
BM 100	899+95'NB'	214.6' RT	873.37'	3/4" IRON ROD WITH CAP
BM 101	11+64'TY'	14.5' RT	872.48'	3/4" IRON ROD WITH CAP

STA 10+30.33 'TRL'
EL 872.69

STA 12+28.19 'TRL'
EL 871.68

-0.51%

PROPOSED PROFILE

EXISTING PROFILE

EXISTING PROFILE ELEVATION

PROPOSED PROFILE ELEVATION

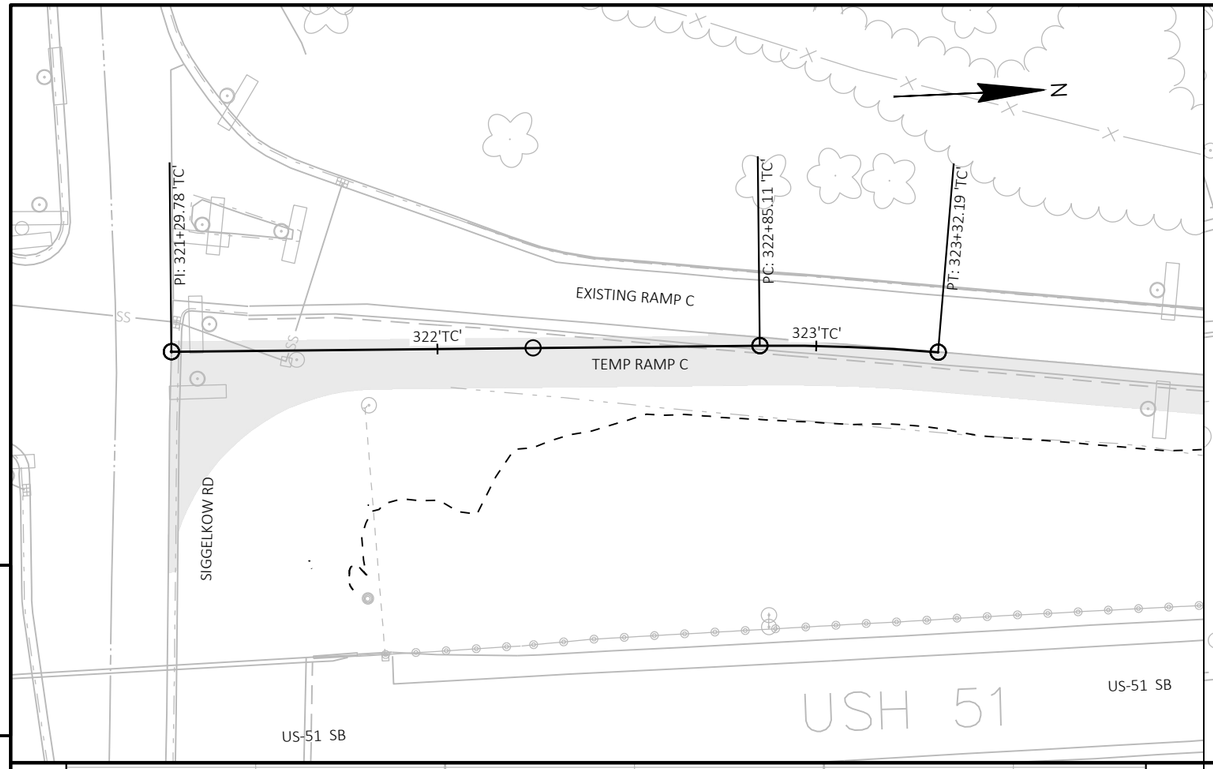
	8'TRL'	9'TRL'	10'TRL'	11'TRL'	12'TRL'	13'TRL'	14'TRL'	15'TRL'
EXISTING PROFILE ELEVATION			872.68	872.70	872.56	872.08	871.88	871.56
PROPOSED PROFILE ELEVATION				872.59	872.33	872.08	871.82	

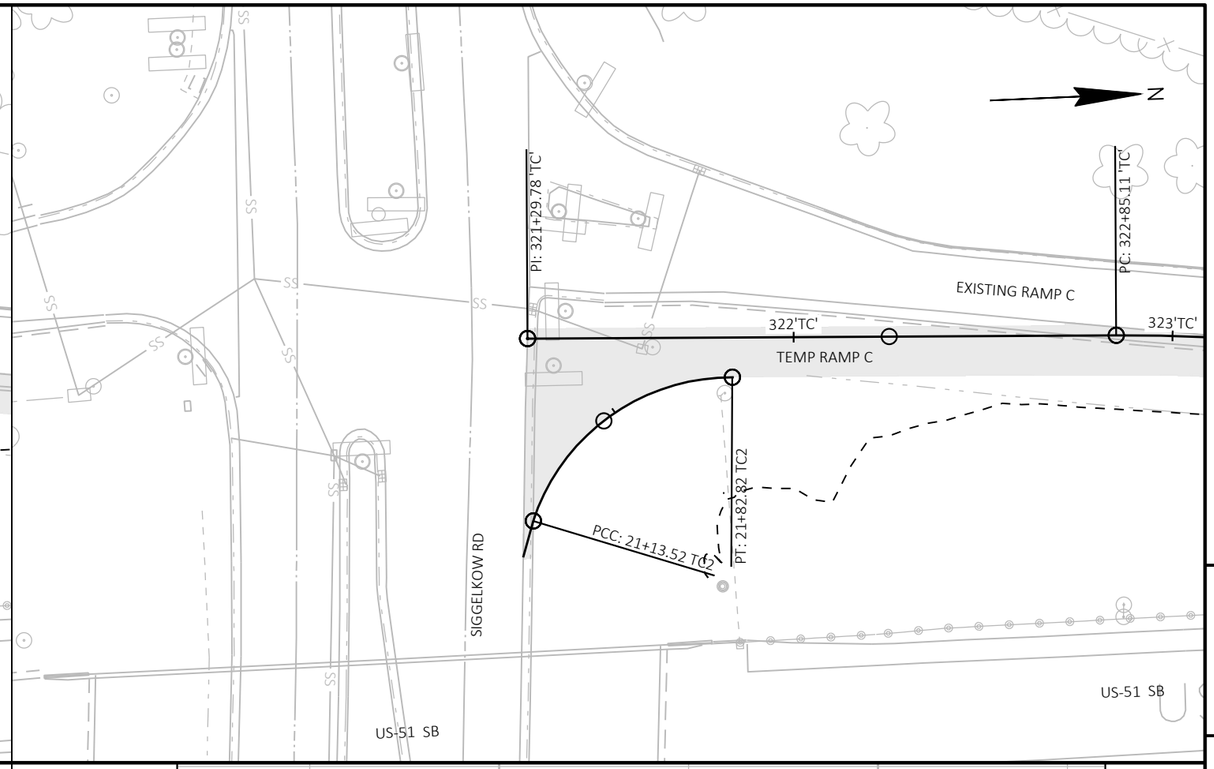
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: LOWER YAHARA RIVER TRAIL	SHEET 261	E

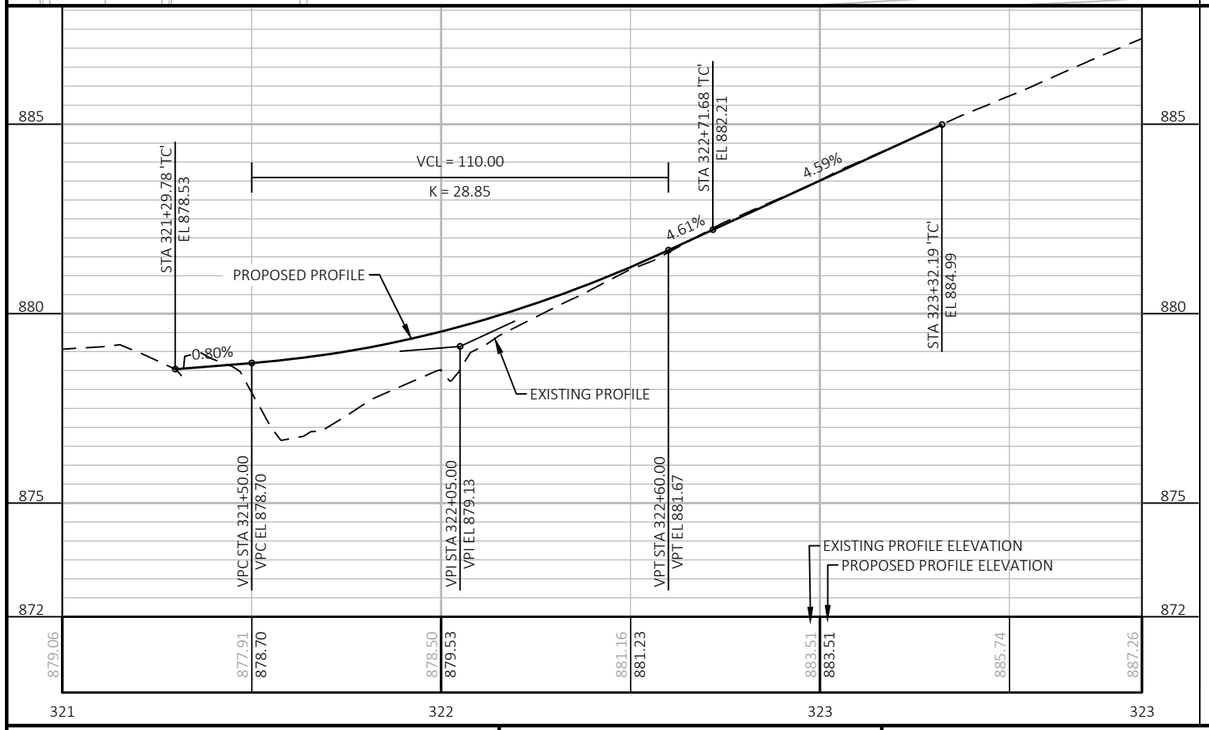
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050104_PP_TRAIL.DWG
LAYOUT NAME - Taylor-LYRT

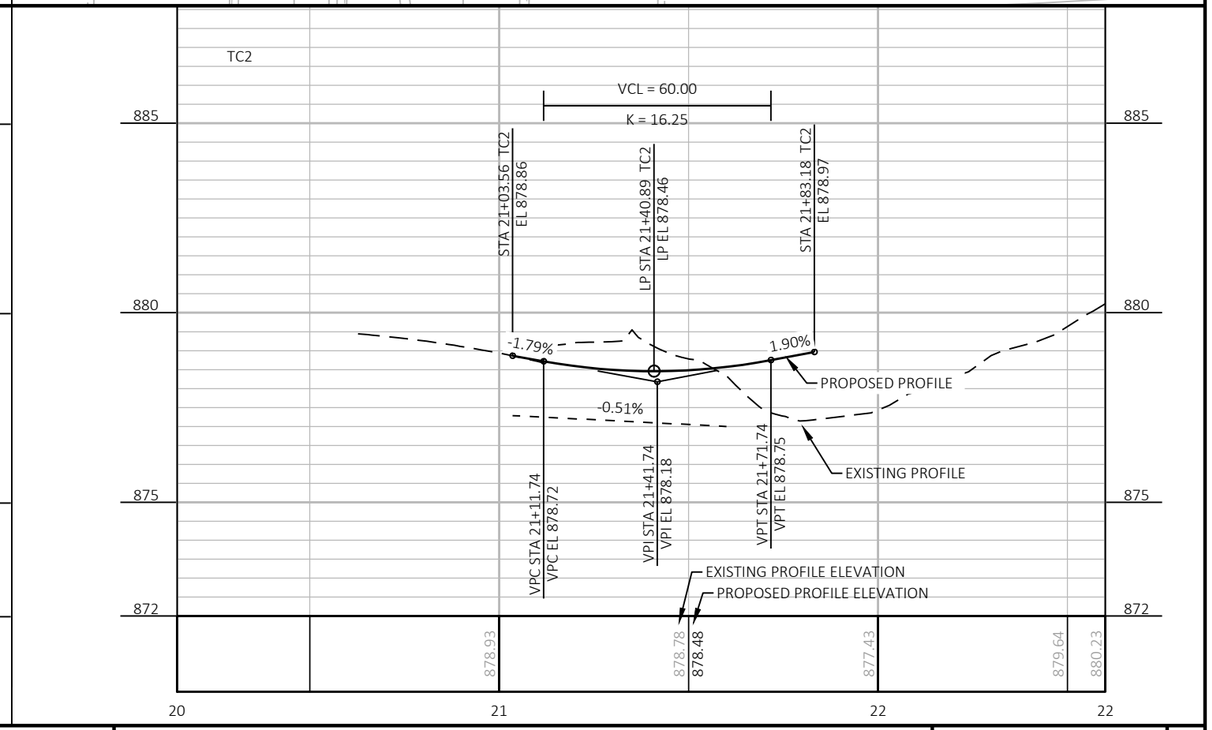
PLOT DATE : 7/25/2024 9:20 AM PLOT BY : MUENCH, DOUGLAS PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44









PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: TEMP RAMP C	SHEET 262	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_050104_PP_TEMP RAMP C.DWG
LAYOUT NAME - 01
PLOT DATE : 5/22/2023 9:18 AM
PLOT BY : MUENCH, DOUGLAS
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

08A05-21A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-21B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-21C	INLET COVERS TYPE F, HM, HM-S, S, T, HM-GJ & HM-GJ-S
08A05-21D	INLET COVERS TYPE V, V-B, & VV-B
08A05-21E	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-04	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C06-03	INLETS 3-FT AND 4-FT DIAMETER
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08C08-03	INLETS MEDIAN 1 AND 2 GRATE
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D03-09A	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D03-09B	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-21A	CURB RAMPS TYPES 1 AND 1-A
08D05-21B	CURB RAMPS TYPES 2 AND 3
08D05-21C	CURB RAMPS TYPES 4A AND 4A1
08D05-21D	CURB RAMPS TYPE 4B AND 4B1
08D05-21E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-21F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-21G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D15-05B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-05C	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D18-04	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
09B02-10	CONDUIT
09B16-02	PULL BOX NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C05-10	CONCRETE CONTROL CABINET BASES
09C14-03	CONCRETE CONTROL CABINET BASE, TYPE L
09D04-03	LIGHTING CONTROL CABINET 120/240 VOLT
09E01-15D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
11A01-06	MAINTENANCE CROSSOVER FOR FREEWAYS
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-14A	RURAL DOWELED CONCRETE PAVEMENT
13C11-14B	RURAL DOWELED CONCRETE PAVEMENT
13C18-08A	CONCRETE PAVEMENT JOINTING
13C18-08B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-08C	CONCRETE PAVEMENT JOINT TYPES
13C18-08D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
13C18-08E	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
13C18-08F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
13C18-08G	CONCRETE PAVEMENT JOINTING ACCELERATION/DECELERATION LANE
13C19-03	HMA LONGITUDINAL JOINTS
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

6

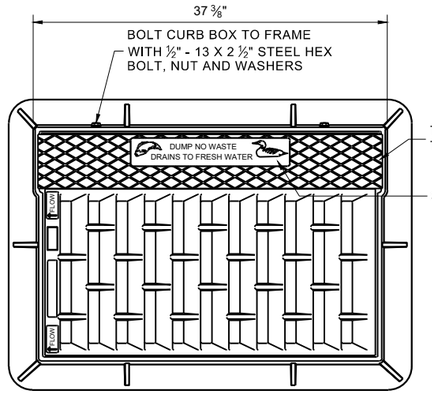
Standard Detail Drawing List

14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B26-05A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05F	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05G	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-05H	STEEL THRIE BEAM BULLNOSE TERMINAL
14B29-01	SAFETY EDGE
14B32-10A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10E	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10F	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10G	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-10H	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B41-03A	SINGLE SLOPE ROADSIDE RETAINING WALL
14B41-03B	SINGLE SLOPE ROADSIDE RETAINING WALL
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)
14B47-05A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05D	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05E	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05F	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05G	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-07A	FLEXIBLE DELINEATOR POST
15A04-07B	BARRIER WALL DELINEATOR WITH REFLECTIVE SHEETING
15A04-07C	DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A04-07E	DELINEATOR POST WITH REFLECTIVE SHEETING
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-15A	PAVEMENT MARKING SYMBOLS
15C07-15B	PAVEMENT MARKING WORDS

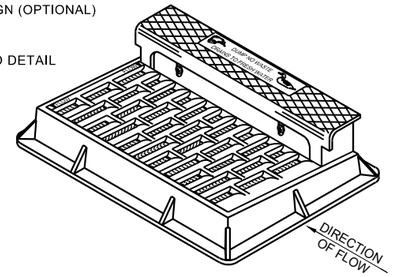
6

Standard Detail Drawing List

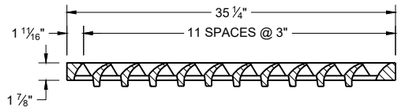
15C07-15C	PAVEMENT MARKING ARROWS
15C07-15D	ROUNDABOUT ARROWS
15C07-15E	PAVEMENT MARKING FOR BIKE LANES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-08A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-08B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C18-08C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C29-08B	PAVEMENT MARKING FOR SHARED LANE 35 MPH OR LESS
15C31-06A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-06C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D07-06	TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER
15D11-09	TRAFFIC CONTROL, SINGLE LANE CROSSOVER
15D12-12A	TRAFFIC CONTROL, LANE CLOSURE, WITH TEMPORARY RUMBLE STRIPS
15D15-07C	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-06	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-07A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-09A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D40-05A	TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
15D40-05C	TRAFFIC CONTROL, PARTIAL LANE SHIFT NON-FREEWAY/EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
15D41-04A	TRAFFIC CONTROL, MULTIPLE LANE SHIFT, MULTILANE DIVIDED ROAD

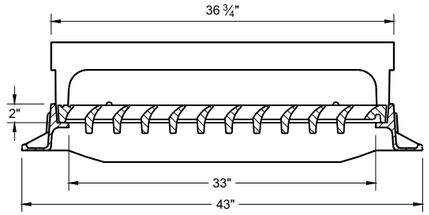


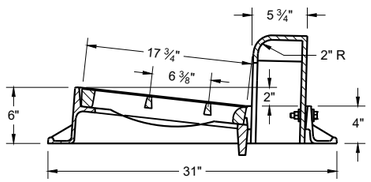
NOTE: EITHER CASTING IS ACCEPTABLE

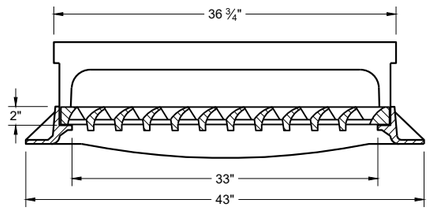


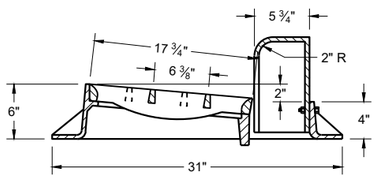
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"







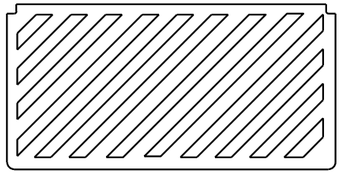




TYPE "H"

NOTE: EITHER CASTING IS ACCEPTABLE

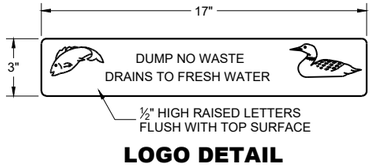
1 1/8" DIAGONAL BARS WITH 1 5/8" OPENINGS



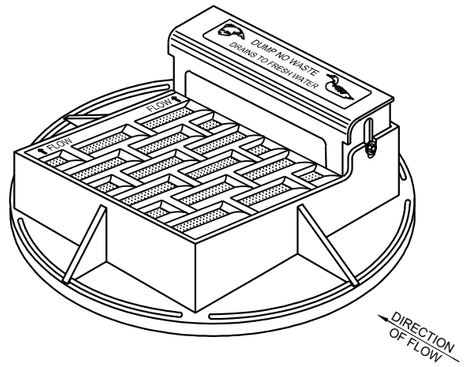
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

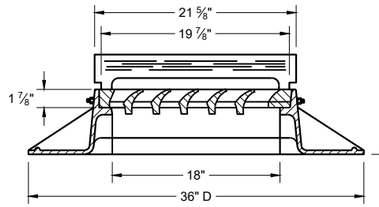


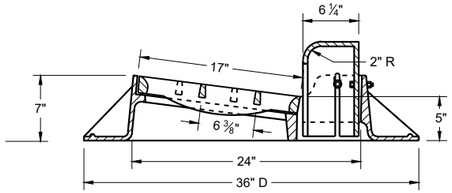
LOGO DETAIL



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

NOTE: EITHER CASTING IS ACCEPTABLE





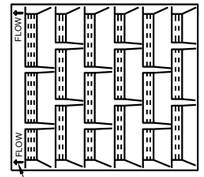
TYPE "A"

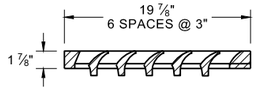
GENERAL NOTES

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.

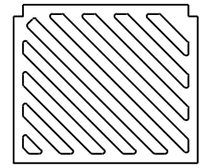
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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





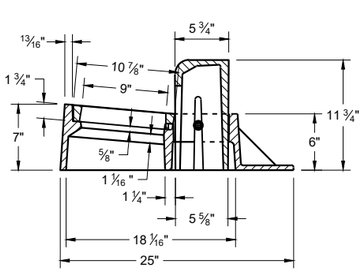
1" DIAGONAL BARS WITH 1 1/2" OPENINGS



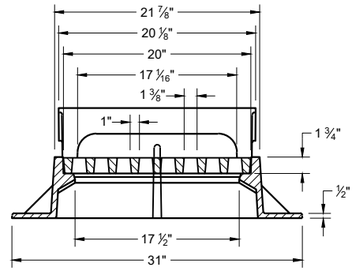
SPECIAL GRATE FOR TYPE "A" COVER

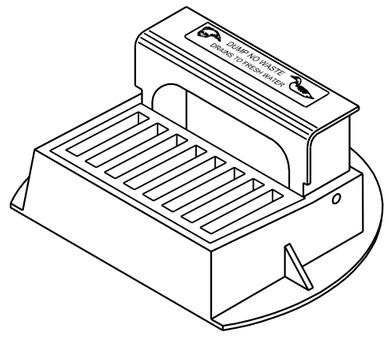
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "Z"





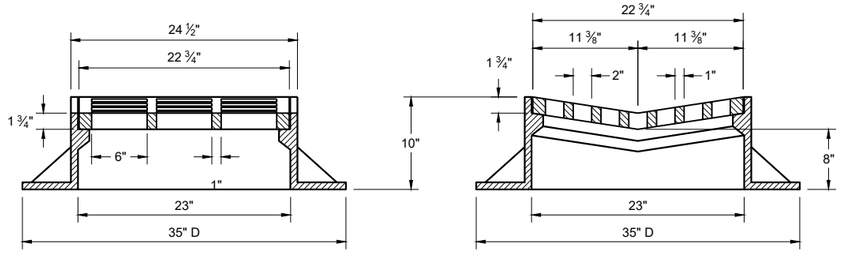
INLET COVERS
TYPES A, H, A-S, H-S AND Z

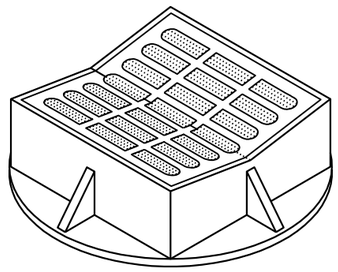
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023
DATE

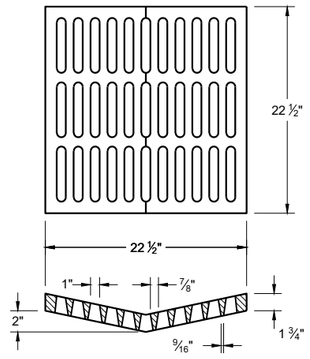
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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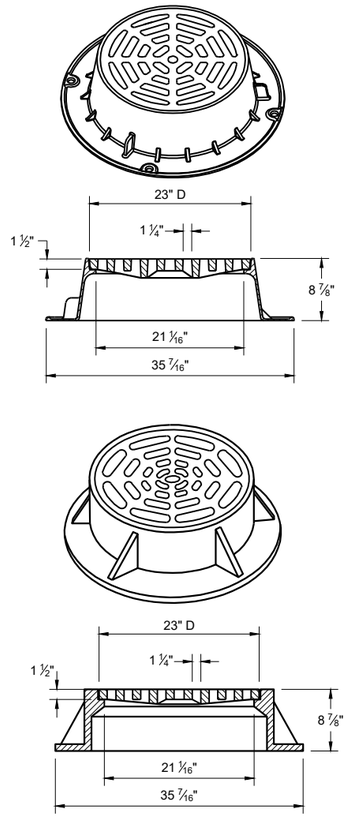
TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS POSSIBLE

NOTED AS TYPE B - A ON THE DRAINAGE TABLE



TYPE "C"

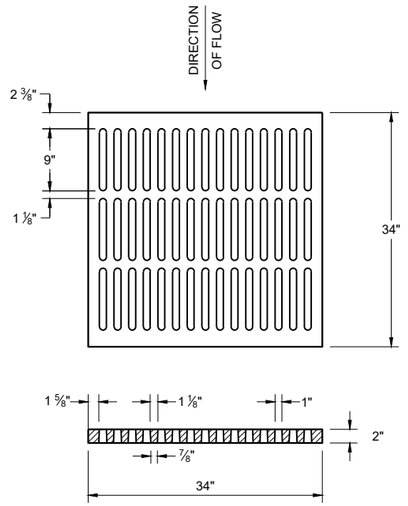
NOTE: EITHER CASTING IS ACCEPTABLE

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.

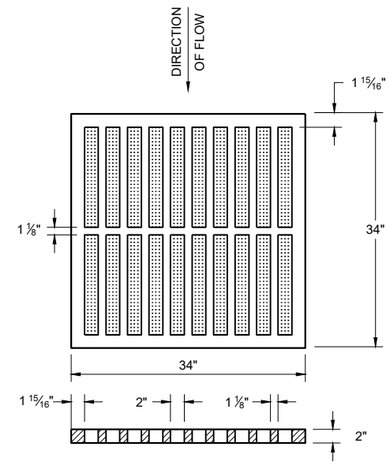
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED

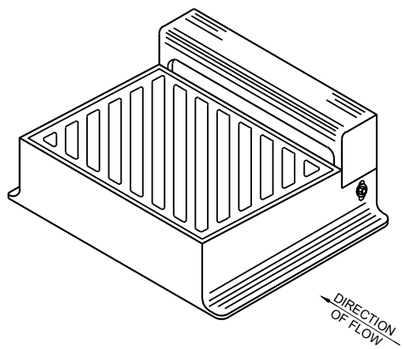
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



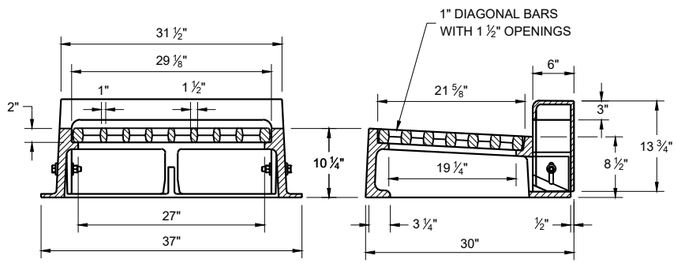
TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON THE DRAINAGE TABLE



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



TYPE "WM"

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

INLET COVERS TYPES B, B-A, C, MS, MS-A AND WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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6

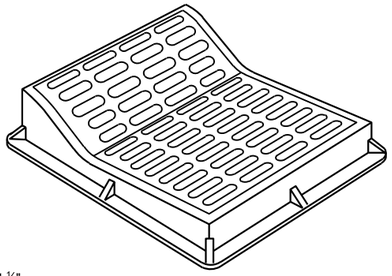
SDD 08A05-21b

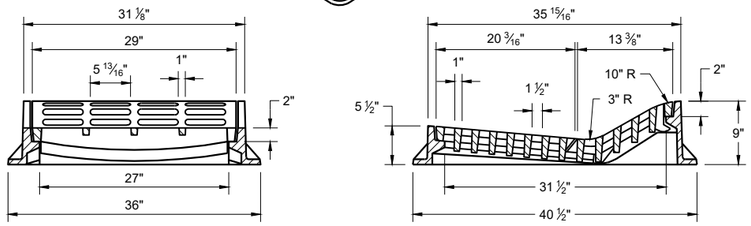
SDD 08A05-21b

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.

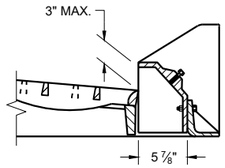
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.





TYPE "F"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

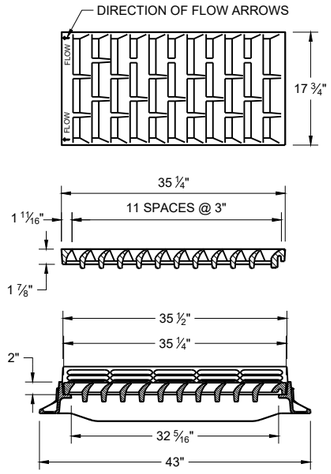


ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH
NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE

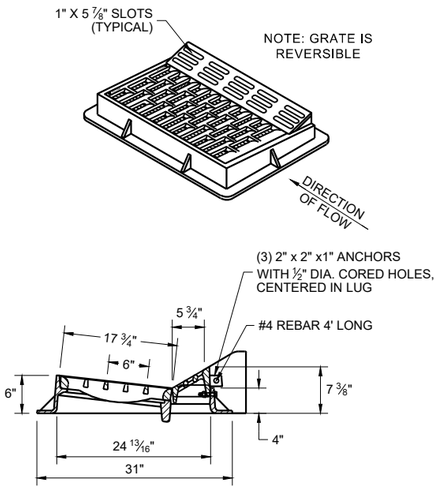
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.



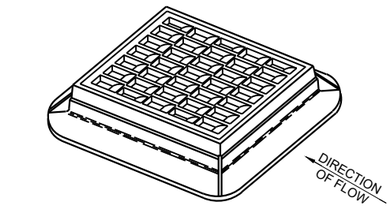
TYPE "HM"

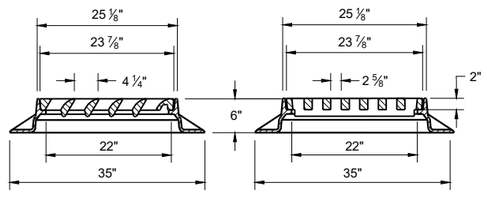
USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"



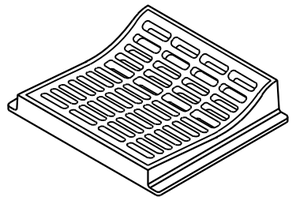
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

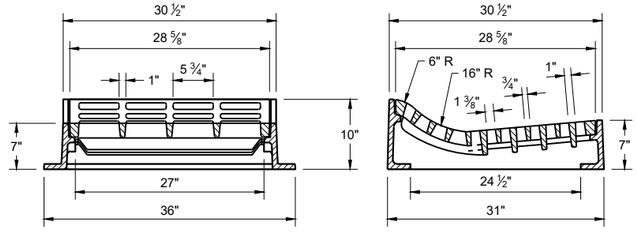
NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.





TYPE "S"





TYPE "T"

USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"

INLET COVERS
TYPES F, HM, HM-S, S, T, HM-GJ AND HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

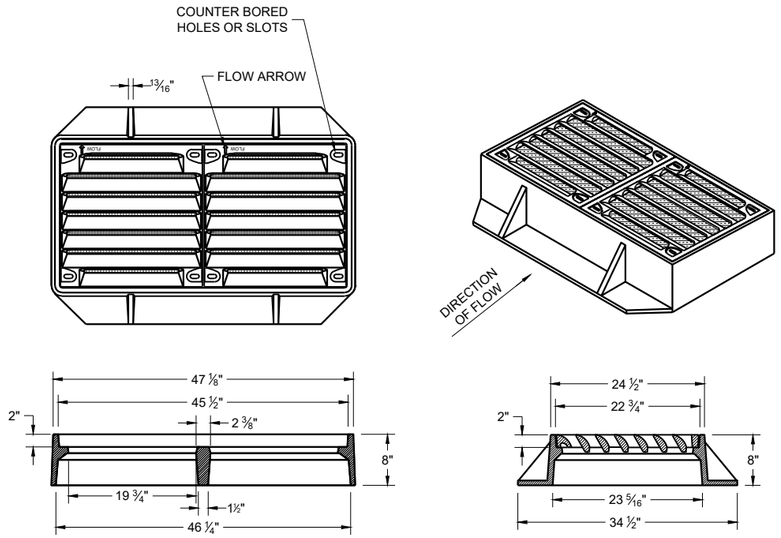
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6
SDD 08A05-21c

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.

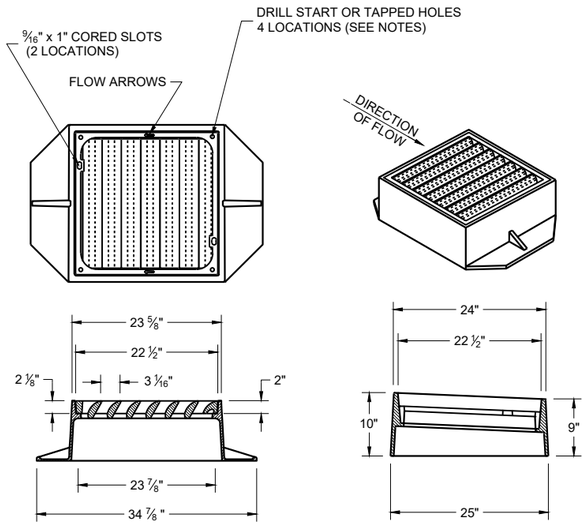
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



TYPE "VV-B"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER
ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

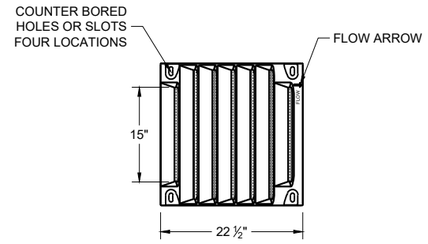
TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 35B
⅜" DIA. X 1/16" DRILL START IN 8 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



TYPE "V"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A
⅜" DIA. X 1/16" DRILL START IN 4 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



BOLT DOWN GRATE FOR TYPE "V" AND "VV-B" COVER

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER NOTED AS TYPE "V-B" OR "VV-B" (FOR DOUBLE GRATE) ON DRAINAGE TABLE

TAP ½" -13 HOLES IN FOUR LOCATIONS PER GRATE IN FRAME TO BOLT GRATE(S).
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A

GRATE - CAST DUCTILE IRON ASTM A536, 55+KSI YIELD
BOLTS - ½" -13 STAINLESS STEEL BOLTS WITH WASHERS
TORQUE BOLTS TO MANUFACTURER SPECIFICATION DO NOT OVERTIGHTEN.

INLET COVERS
TYPES V, V-B, AND VV-B

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023 — DATE
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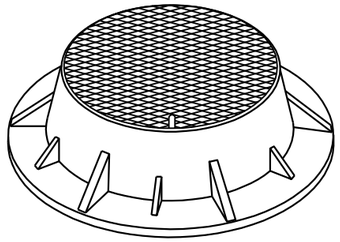
6
SDD 08A05-21d

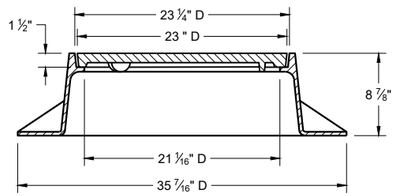
GENERAL NOTES

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 MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

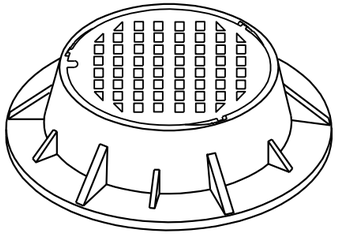
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

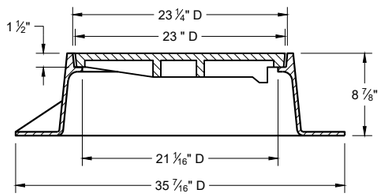




TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

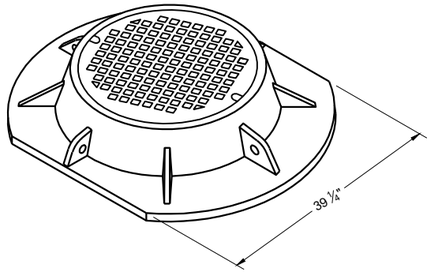


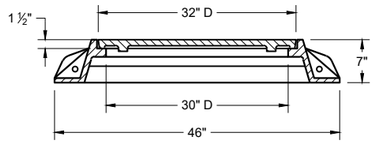


TYPE "J" SPECIAL

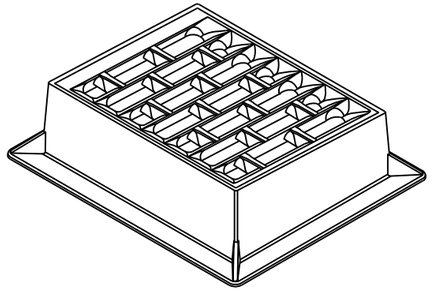
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

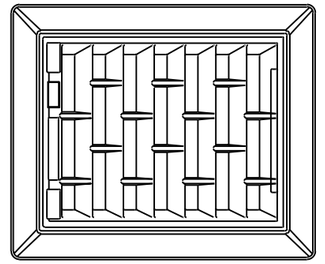
NOTE: EITHER CASTING IS ACCEPTABLE

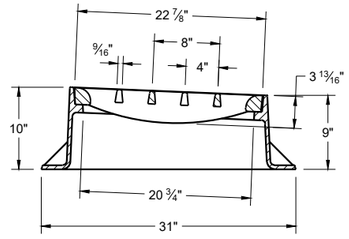


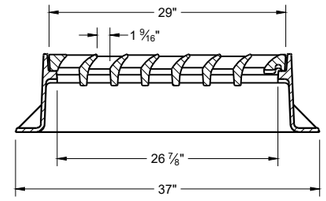


TYPE "K"

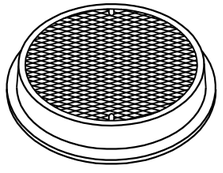


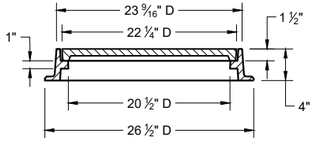




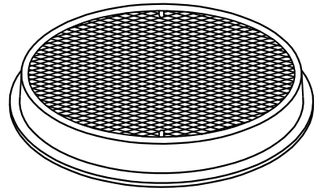


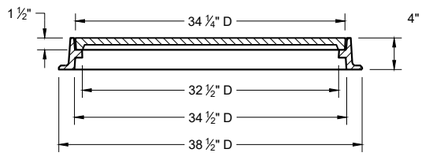
INLET COVER TYPE "BW"





TYPE "L"





TYPE "M"

INLET COVERS TYPES BW
MANHOLE COVERS TYPES K, J, J-S, L, AND M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

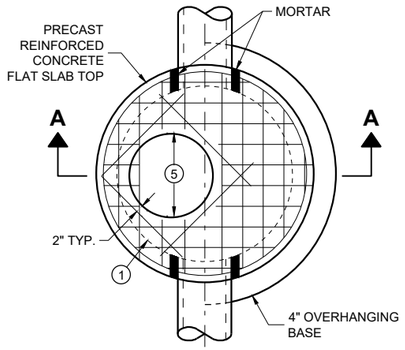
FHWA

6

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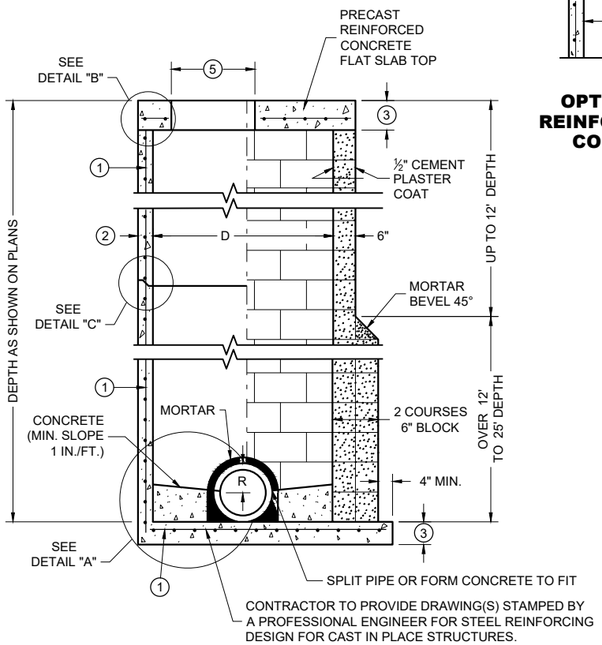
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SDD 08A05-21e



PLAN VIEW

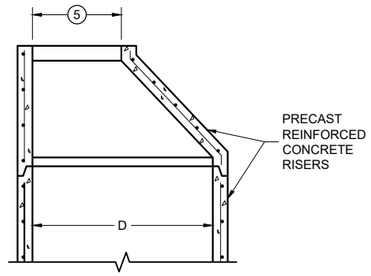
CIRCULAR OPENING



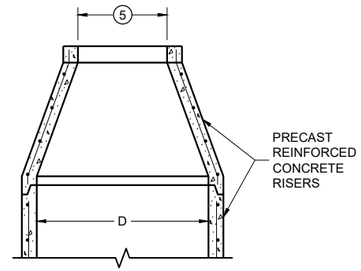
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

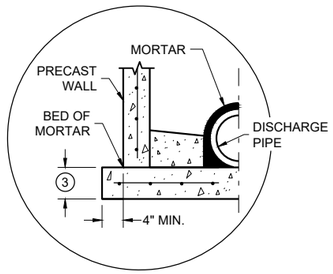
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)



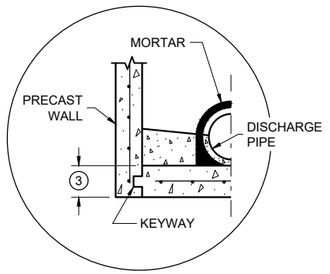
OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

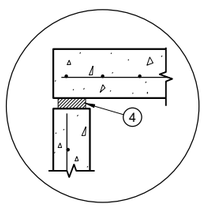


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

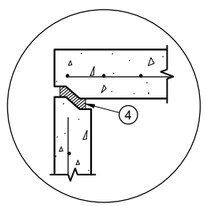


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

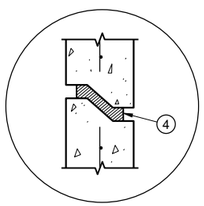
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

DETAIL "C"

MANHOLE COVER OPENING MATRIX

OPENING SIZE (FT.) (5) \ MANHOLE COVER TYPE	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42 *	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

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 MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES 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.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL IMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

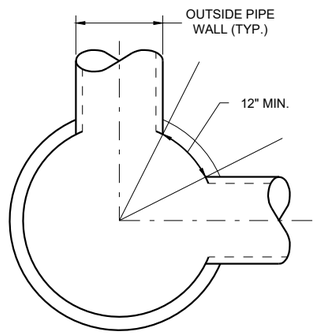
(1) FOR PRECAST MANHOLES AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(2) SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES

(3) SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.

(4) JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.

(5) SEE MANHOLE COVER OPENING MATRIX.



MINIMUM HORIZONTAL PIPE SEPARATION

DETAIL "D"

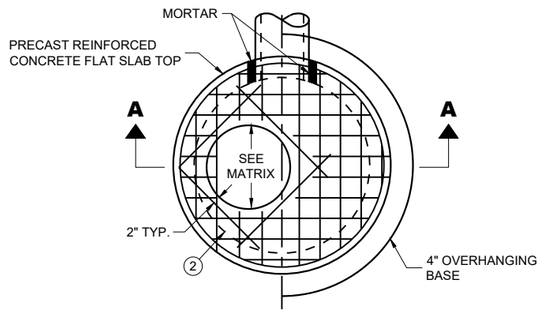
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

MANHOLES, 3-FT, 4-FT 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

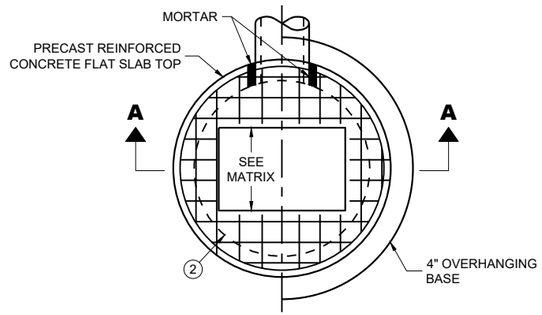
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

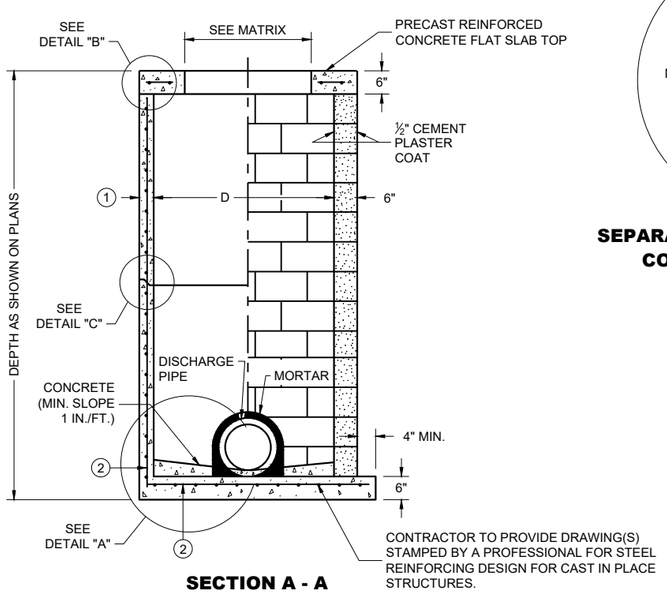
FHWA



PLAN VIEW CIRCULAR OPENING



PLAN VIEW RECTANGULAR OPENING



SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (2)

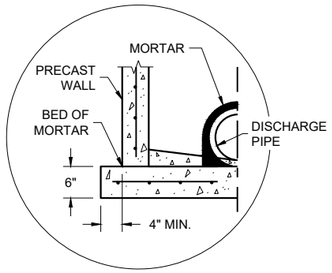
CIRCULAR INLETS WITH FLAT TOP

CATCH BASIN COVER OPENING MATRIX

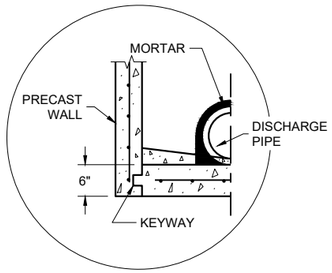
INLET SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT.)											
3-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
4-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
	2 X 2.5			X				X	X	X	X	
	2 X 3						X					
	2.5 X 3					X						

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

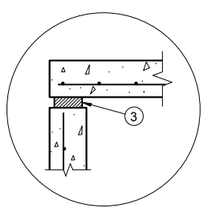


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

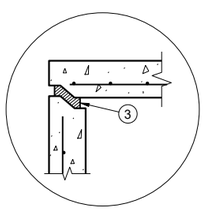


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

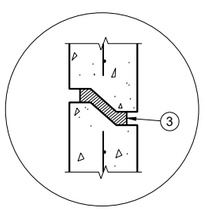
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B" **DETAIL "C"**

INLETS 3-FT AND 4-FT DIAMETER

GENERAL NOTES

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ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES 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.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

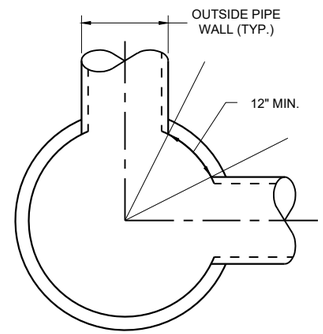
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

(1) MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT DIAMETER AND 5 INCHES FOR 4-FT DIAMTER PRECAST INLETS.

(2) FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(3) JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.



MINIMUM HORIZONTAL PIPE SEPARATION

DETAIL "D"

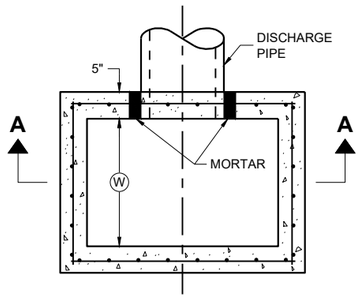
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

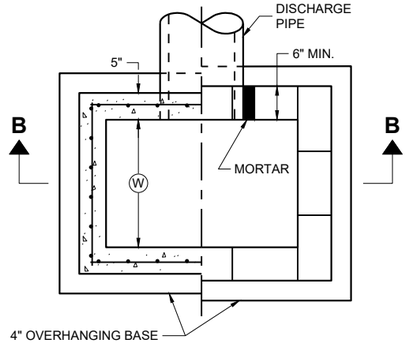
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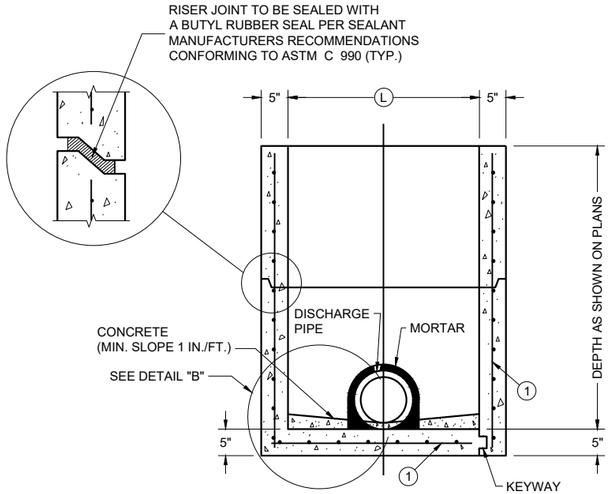
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PLAN VIEW



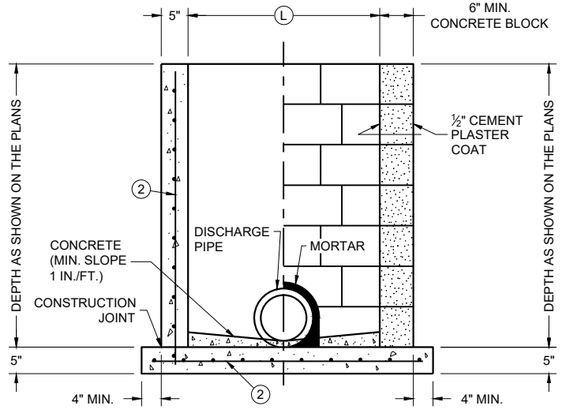
PLAN VIEW



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

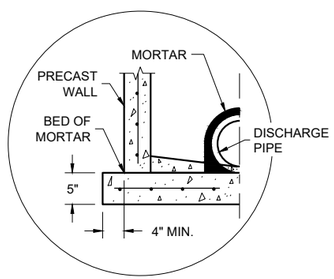
SECTION A - A



CAST IN PLACE REINFORCED CONCRETE

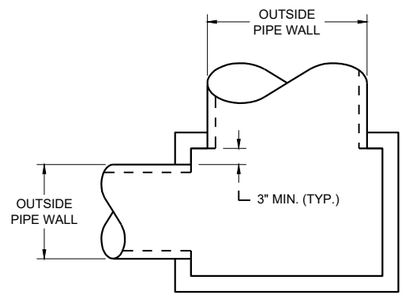
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)

SECTION B - B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "B"



DETAIL "A"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP N0T SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES 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.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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 AND REINFORCED CONCRETE BASES 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.

CATCH BASIN COVER MATRIX

INLET SIZE	WIDTH (W) (FT.)	LENGTH (L) (FT.)	INLET COVER TYPE									
			ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM	V V-B
2 X 2-FT	2	2	X	X				X				
2 X 2.5-FT	2	2.5			X			X	X	X	X	
2 X 3-FT	2	3					X					
2.5 X 3-FT	2.5	3				X						
2 X 3.5-FT	2	3.5										X

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2 X 2-FT	12	12
2 X 2.5-FT	12	18
2 X 3-FT	12	24
2.5 X 3-FT	18	24
2 X 3.5-FT	12	30

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2X3.5-FT

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2 X 3.5-FT

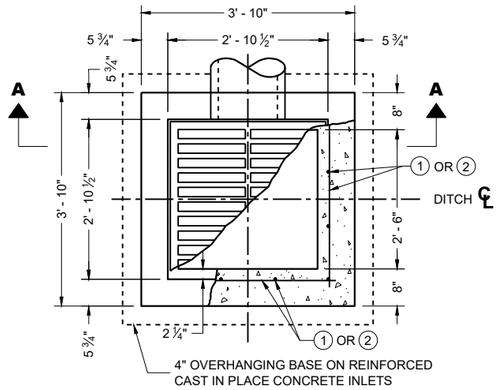
STATE OF WISCONSIN
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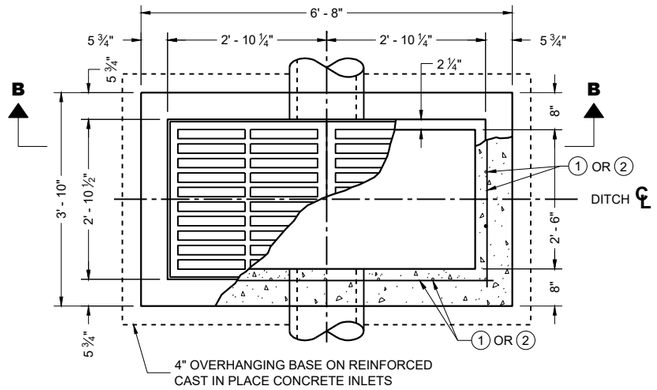
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ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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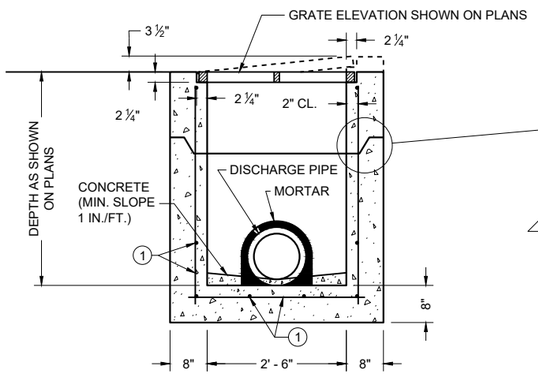
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SDD 08C07-03



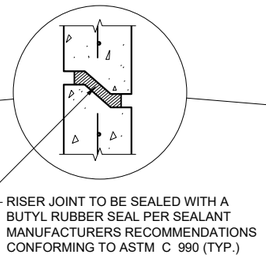
PLAN VIEW

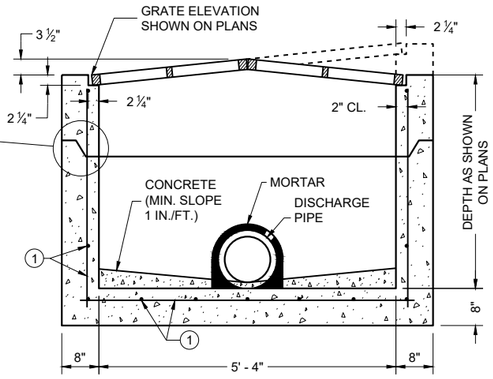


PLAN VIEW

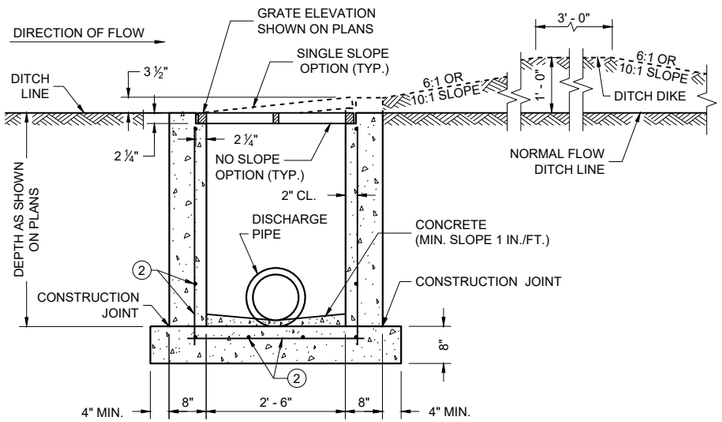


PRECAST REINFORCED CONCRETE SECTION A - A



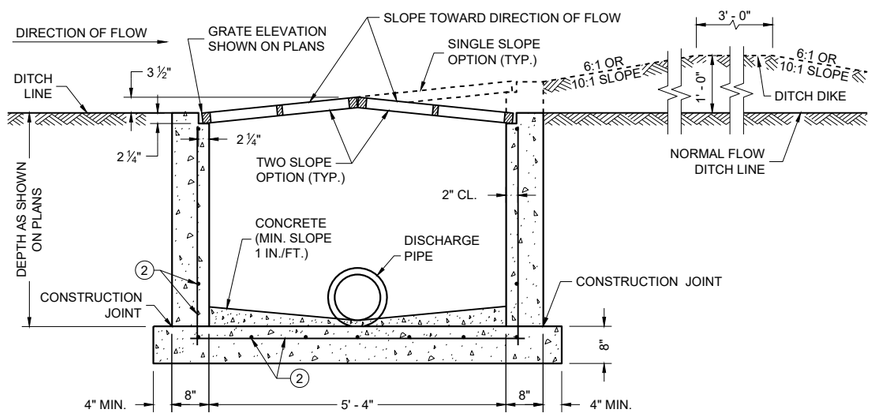


PRECAST REINFORCED CONCRETE SECTION B - B



REINFORCED CAST IN PLACE CONCRETE SECTION A - A

INLETS MEDIAN 1 GRATE



REINFORCED CAST IN PLACE CONCRETE SECTION B - B

INLETS MEDIAN 2 GRATE

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DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP N0T 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 PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

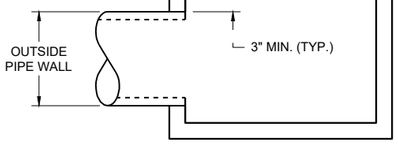
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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

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 AND REINFORCED CONCRETE BASES 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.



DETAIL "A"

PIPE MATRIX

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

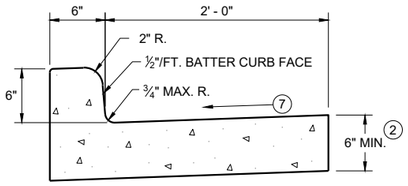
INLETS
MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

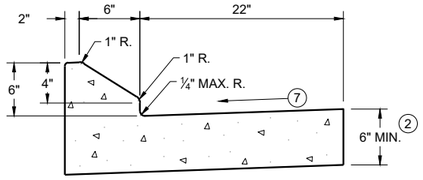
APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

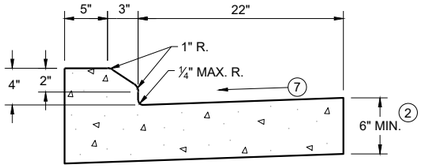
6
SDD 08C08-03



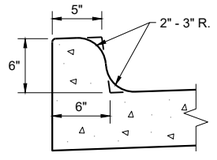
TYPES A (1) & D



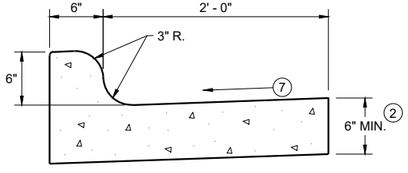
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

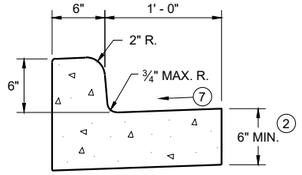


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



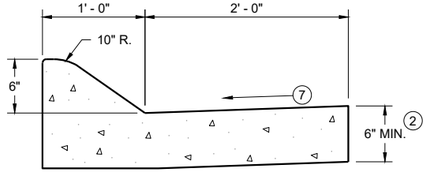
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

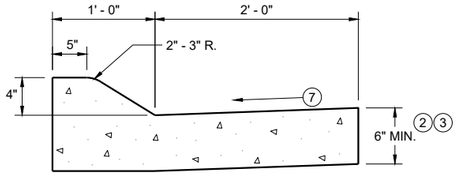


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

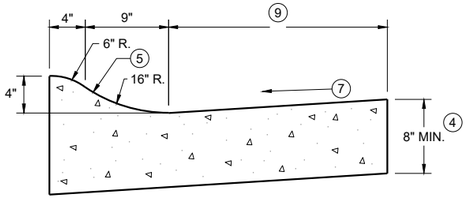


6" SLOPED CURB TYPES A (1) & D



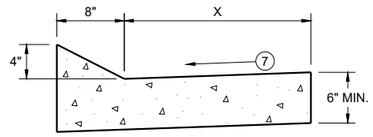
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

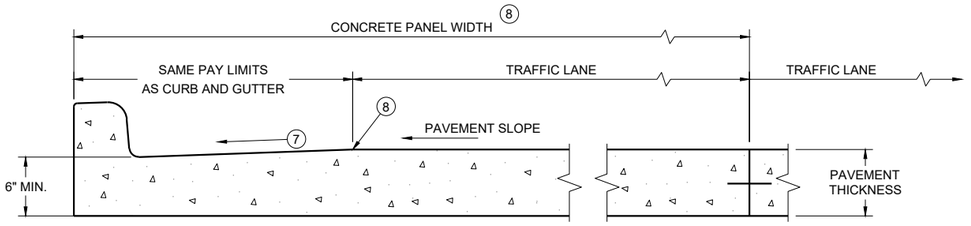


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

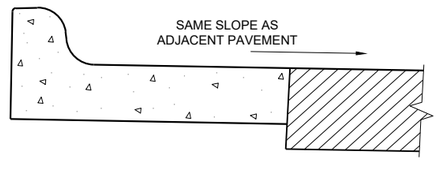
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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.

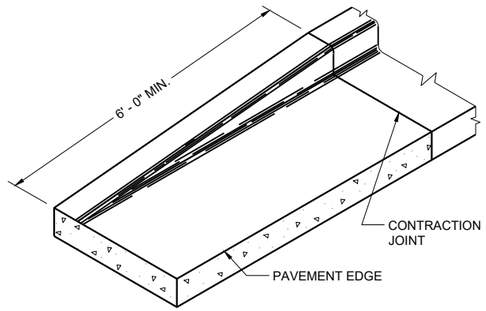
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(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

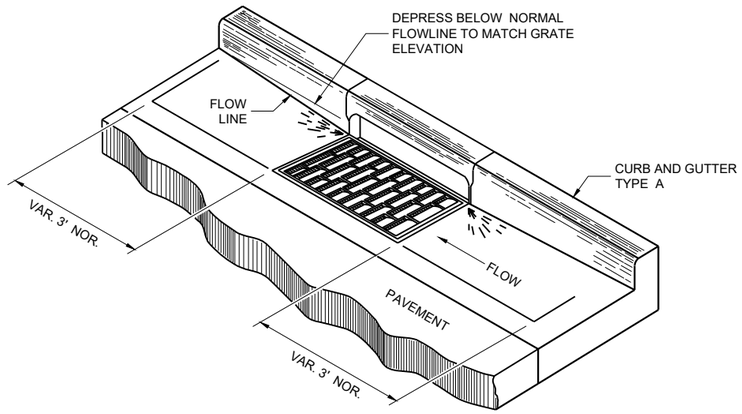
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D01-23a



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

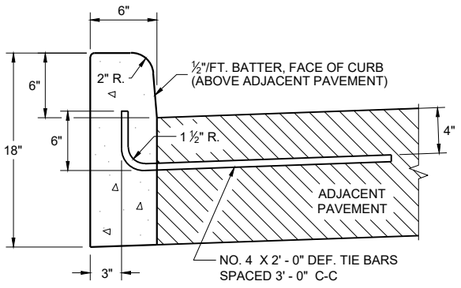
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

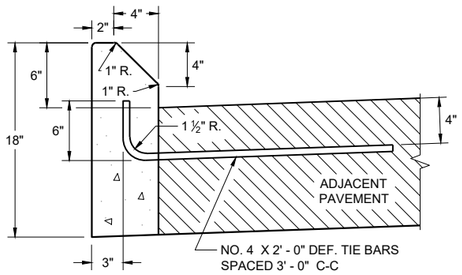
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

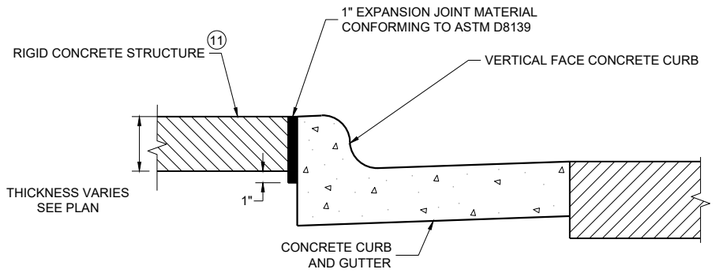


TYPES A (1) & D

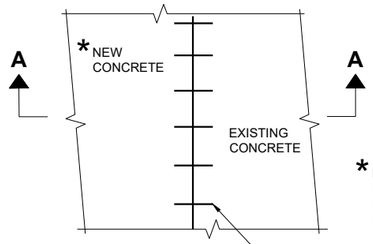


TYPES G (1) & J

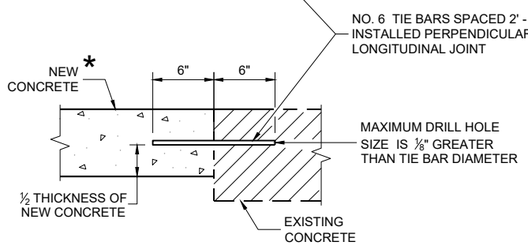
CONCRETE CURB



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

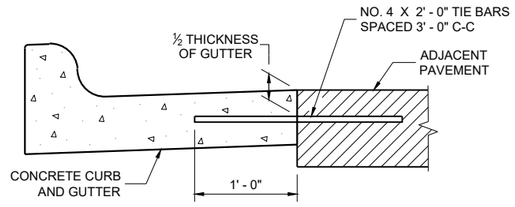


PLAN VIEW

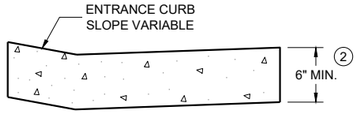


SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6

SDD 08D01-23b

6

SDD 08D01-23b

GENERAL NOTES

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

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

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

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

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

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

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

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

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

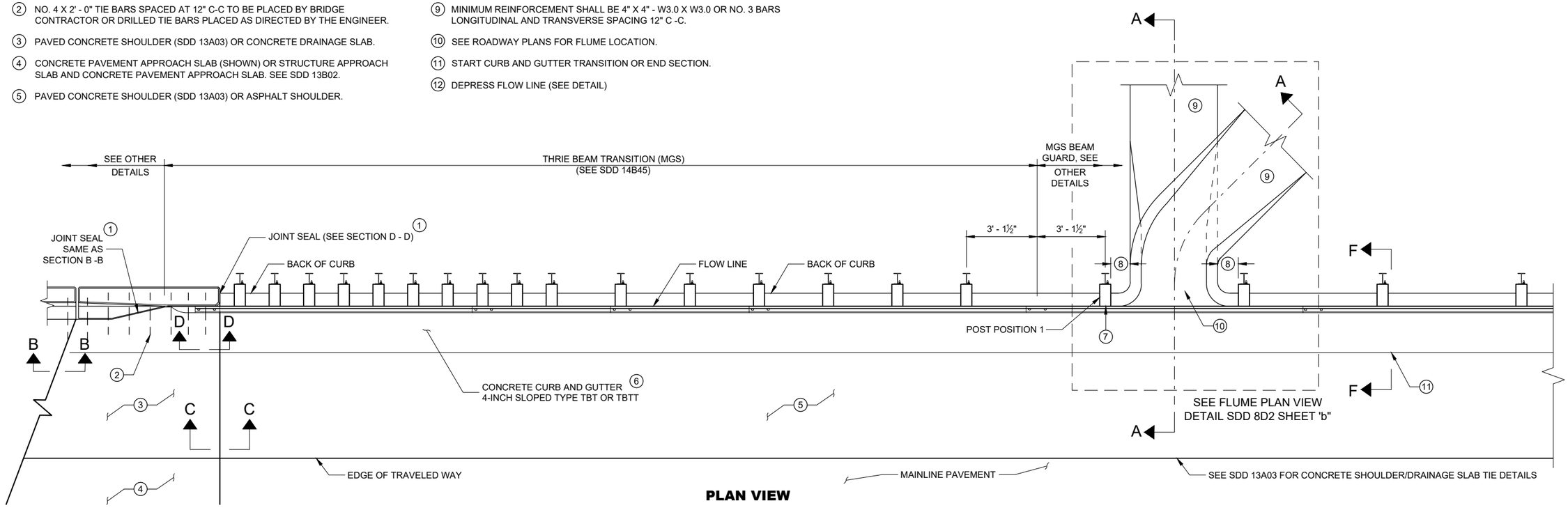
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

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

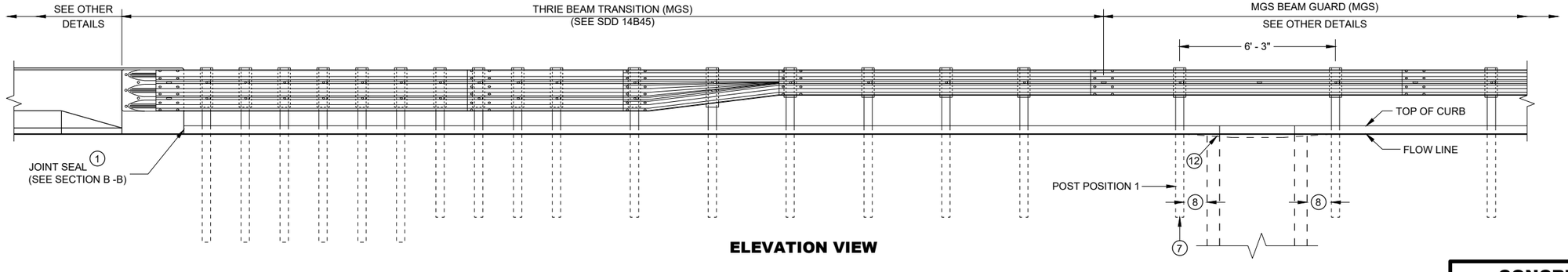
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

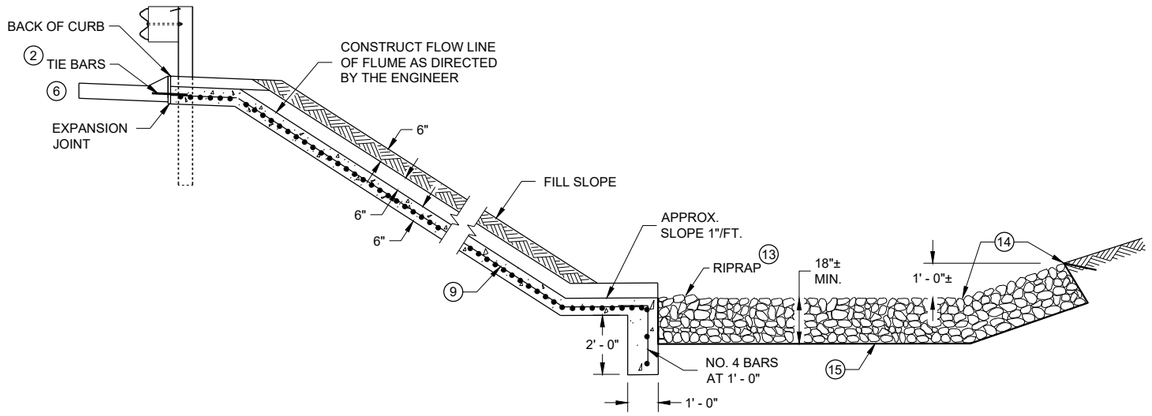
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

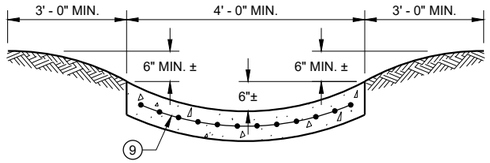
SDD 08D02 - 08a

6

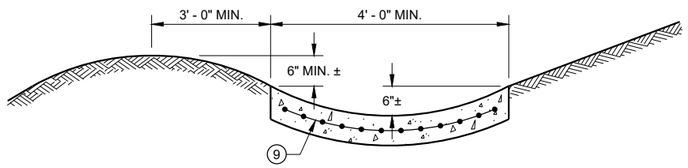
SDD 08D02 - 08a



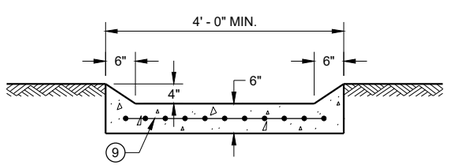
SECTION A - A



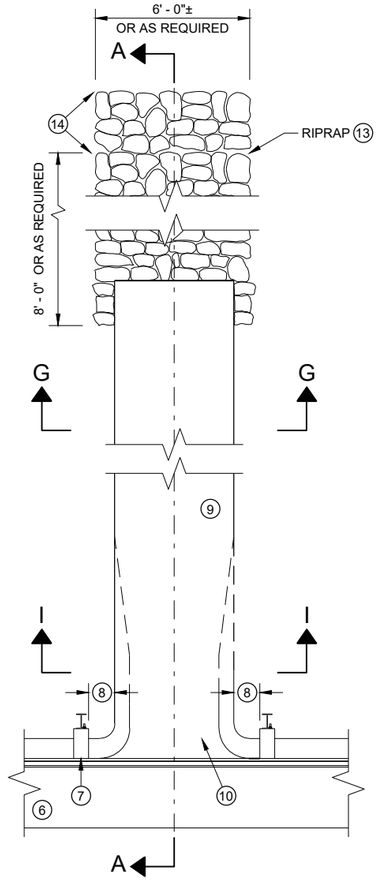
SECTION G - G



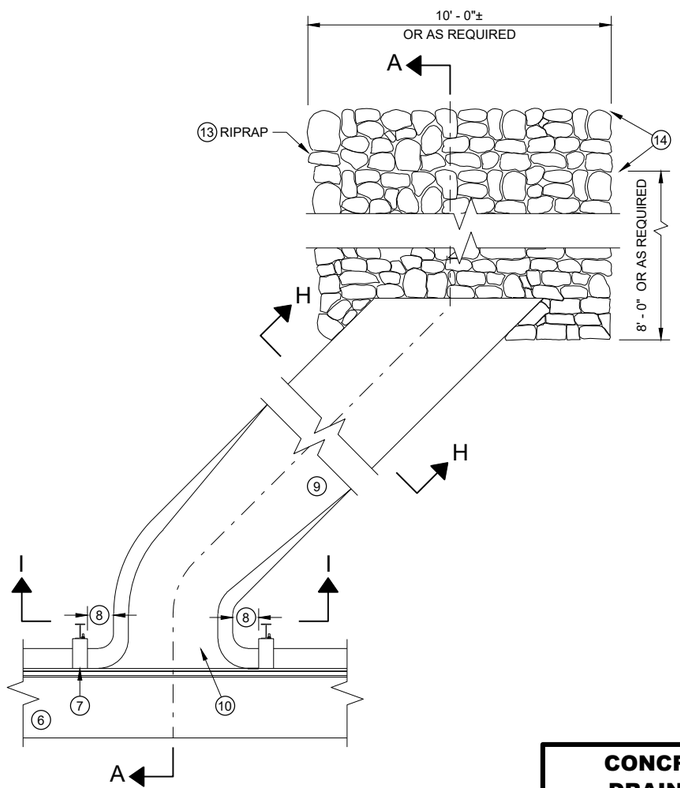
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

GENERAL NOTES

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

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

1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
5. PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
6. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
7. PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
8. CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
9. MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
10. SEE ROADWAY PLANS FOR FLUME LOCATION.
11. START CURB AND GUTTER TRANSITION OR END SECTION.
12. DEPRESS FLOW LINE (SEE DETAIL)
13. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
14. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
15. GEOTEXTILE TYPE HR.

6

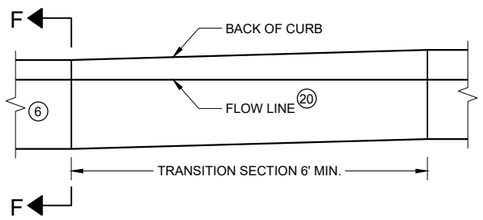
SDD 08D02 - 08b

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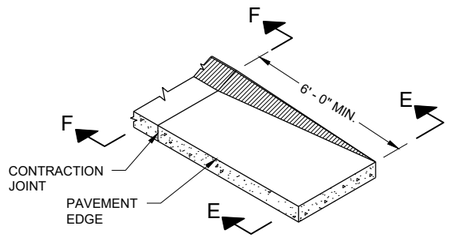
SDD 08D02 - 08b

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

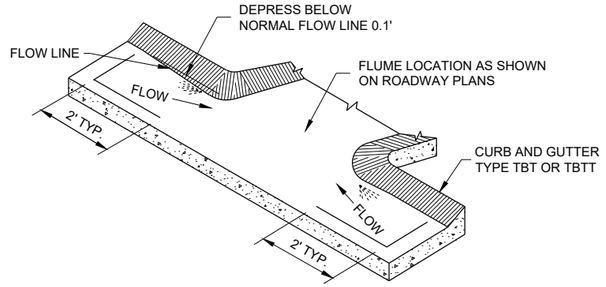
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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

(15) GEOTEXTILE TYPE HR.

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

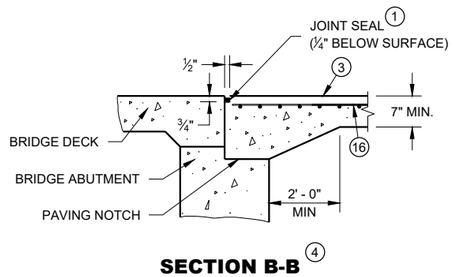
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

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

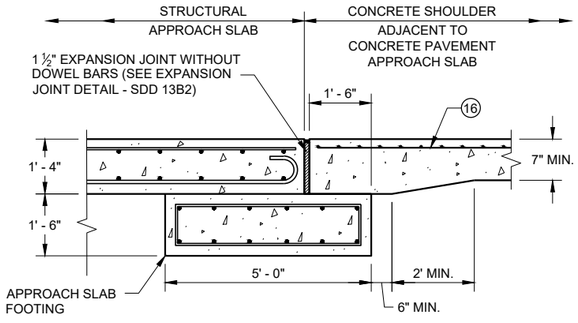
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

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

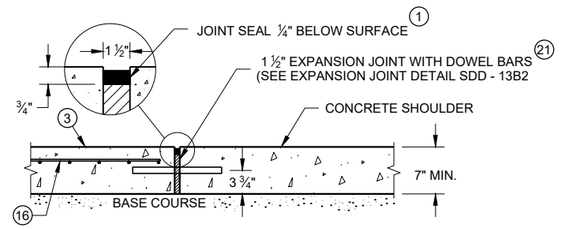
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



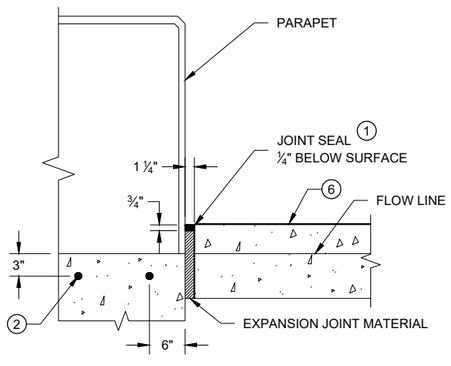
SECTION B-B



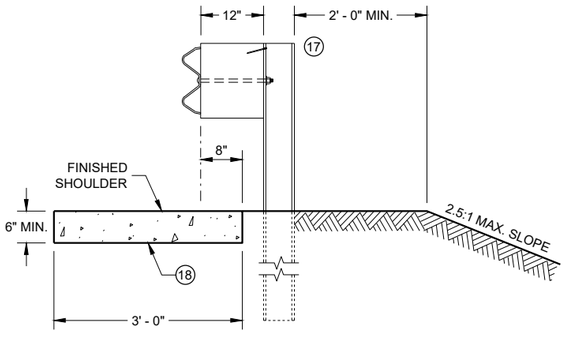
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



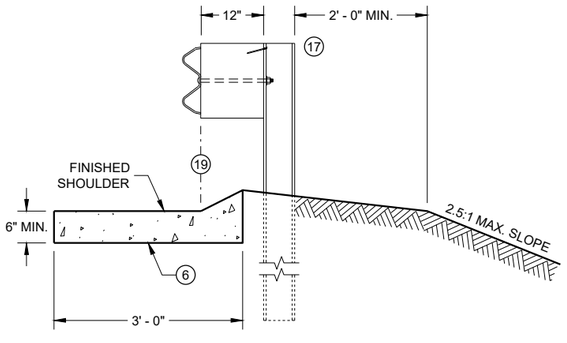
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

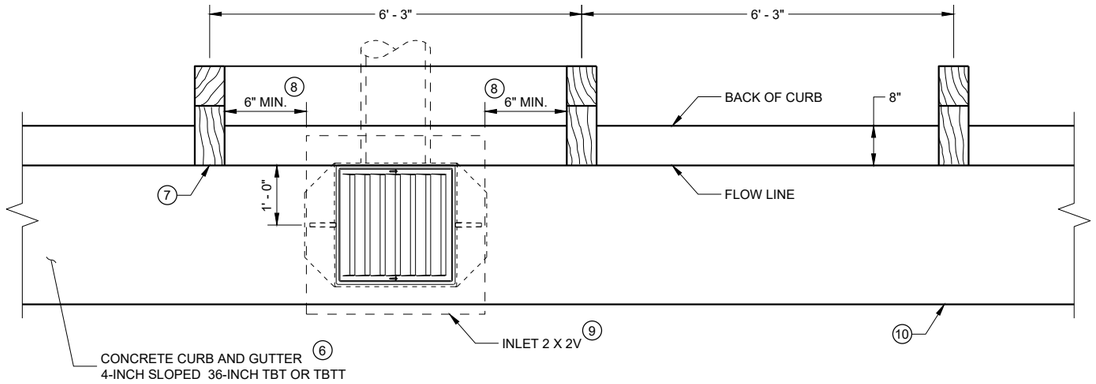
FHWA

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SDD 08D02 - 08c

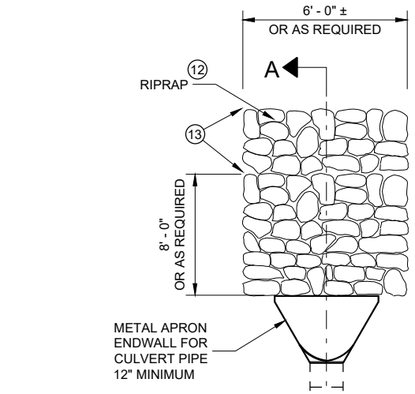
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SDD 08D02 - 08c



INLET PLAN VIEW

(NOTE: RAIL NOT SHOWN FOR CLARITY)



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.

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(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 DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

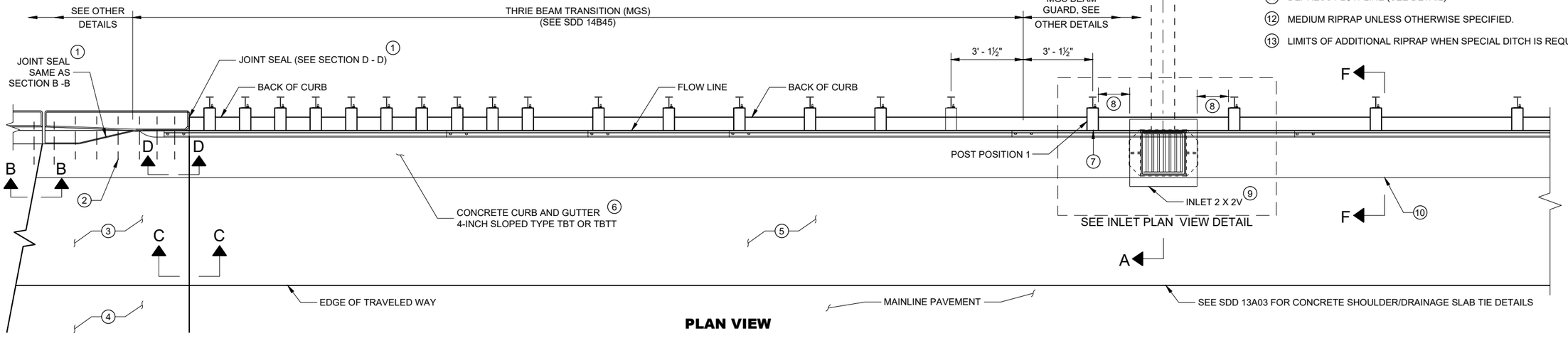
(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

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

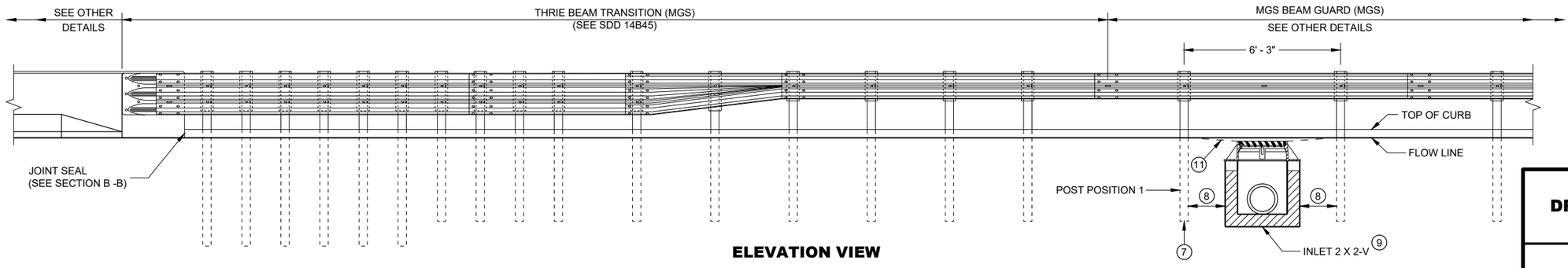
(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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



PLAN VIEW



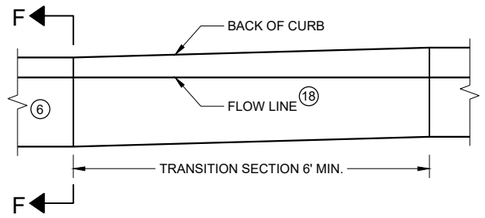
ELEVATION VIEW

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

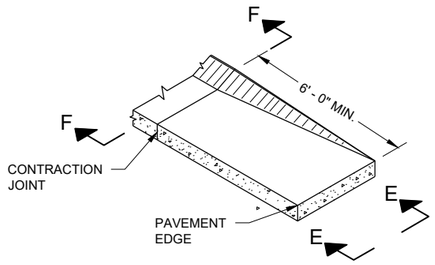
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

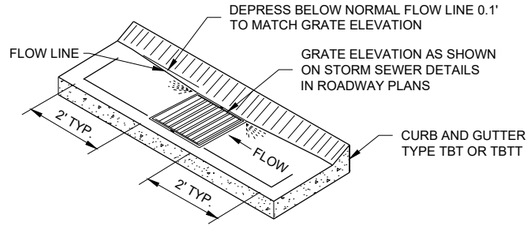
SDD 08D03 - 09a



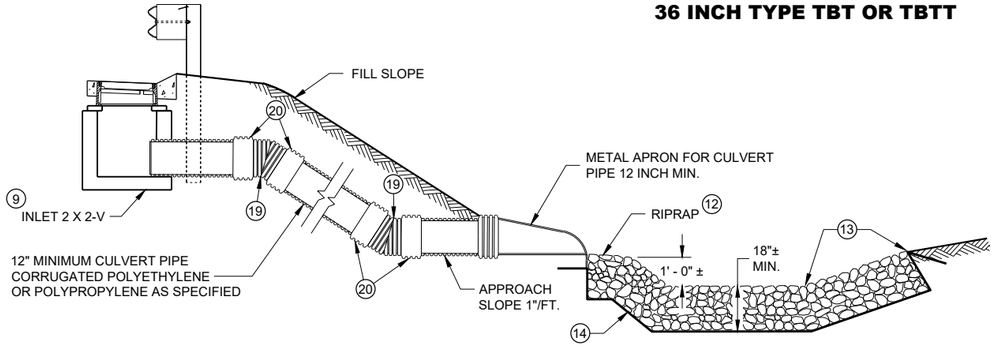
CURB AND GUTTER TRANSITION SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



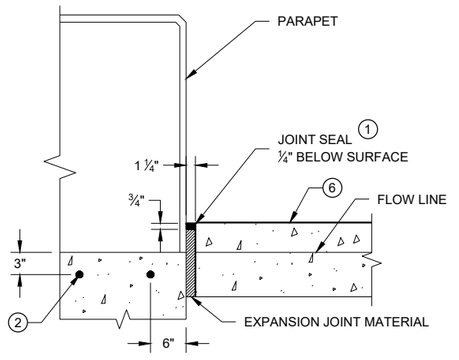
CURB AND GUTTER END SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



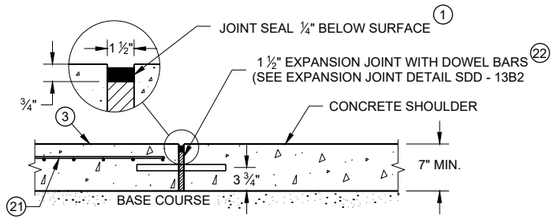
CURB AND GUTTER FLOW LINE DEPRESSION AT INLETS CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



SECTION A - A

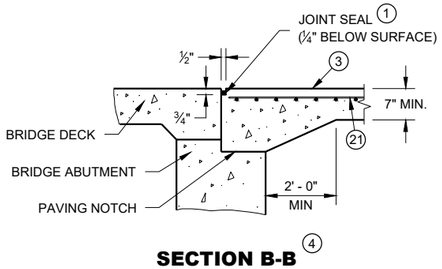


SECTION D - D

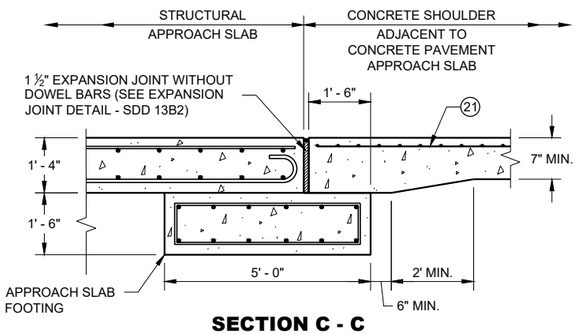


SECTION C - C

JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS

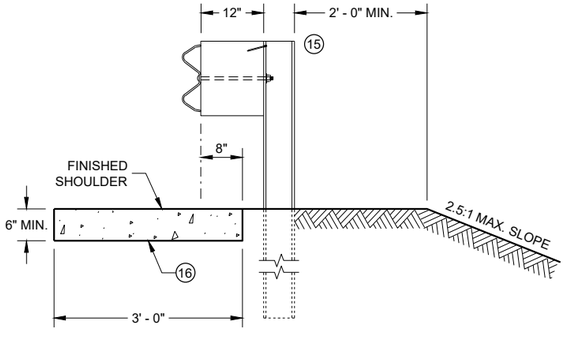


SECTION B-B 4

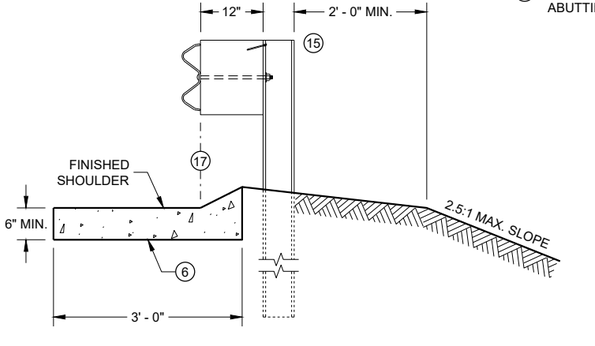


SECTION C - C

JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



SECTION E - E



SECTION F - F

GENERAL NOTES

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

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(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 DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

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

(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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

(14) GEOTEXTILE TYPE HR.

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

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

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

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

(19) MANUFACTURER SUPPLIED BEND.

(20) MANUFACTURER SUPPLIED EXTERNAL MECHANICAL COUPLING OR A MANUFACTURER RECOMMENDED COUPLING WITH A MASTIC IMPREGNATED GEOTEXTILE WRAP AND MECHANICAL FASTENING BANDS.

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

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

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

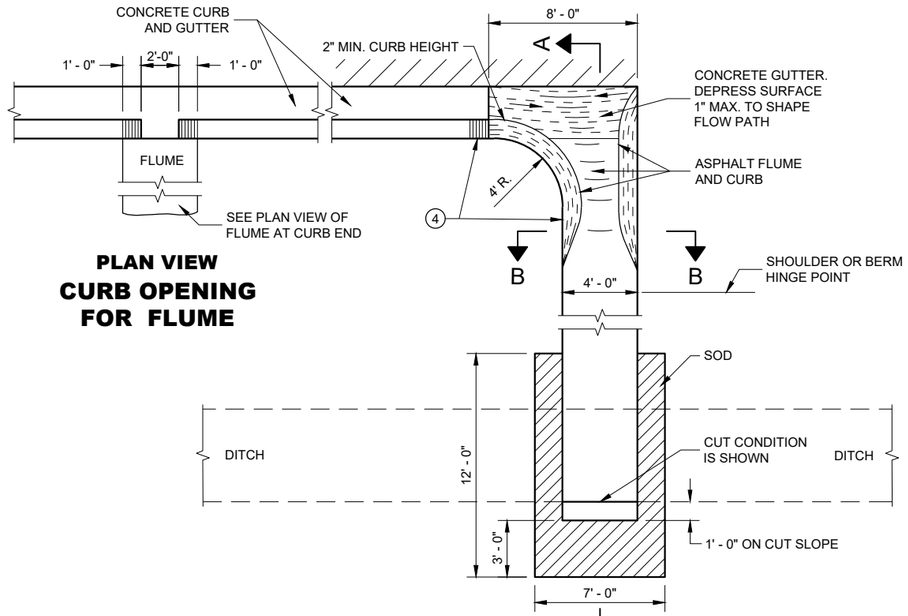
FHWA

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SDD 08D03 - 09b

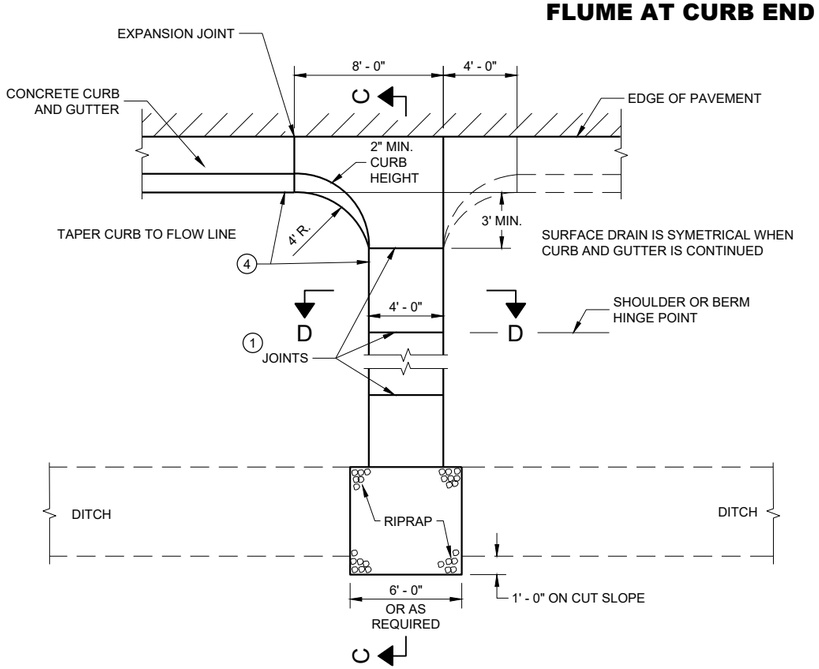
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



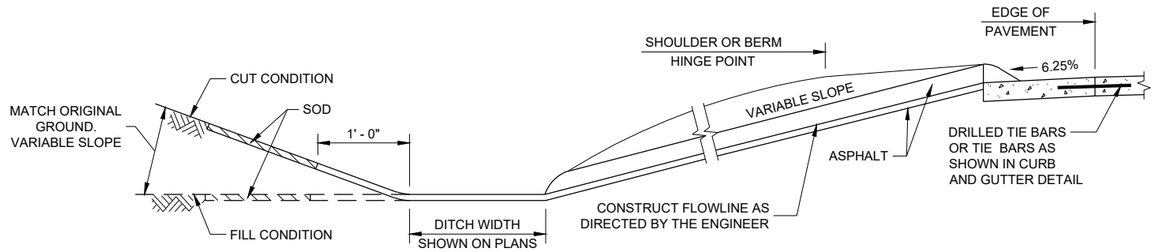
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

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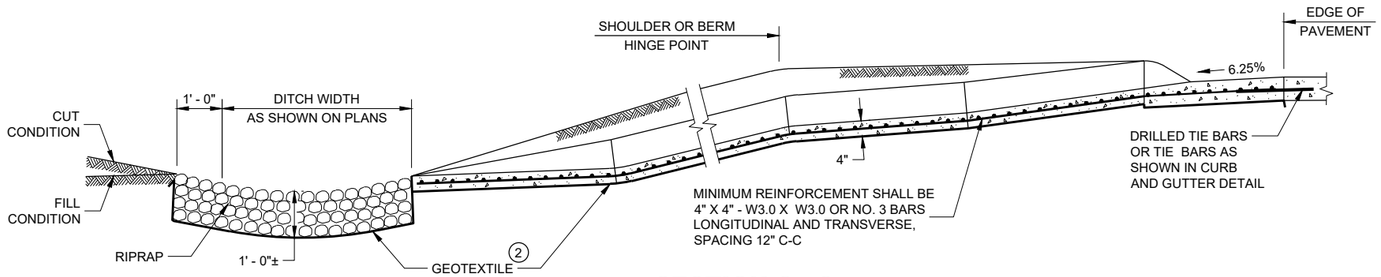
4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

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.

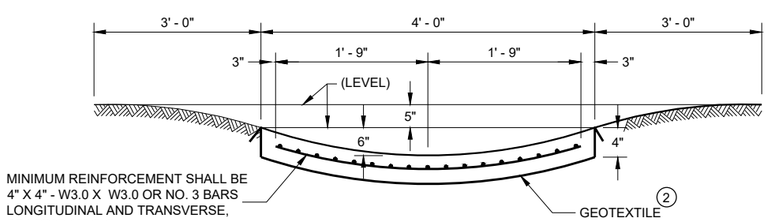


SECTION A - A

SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

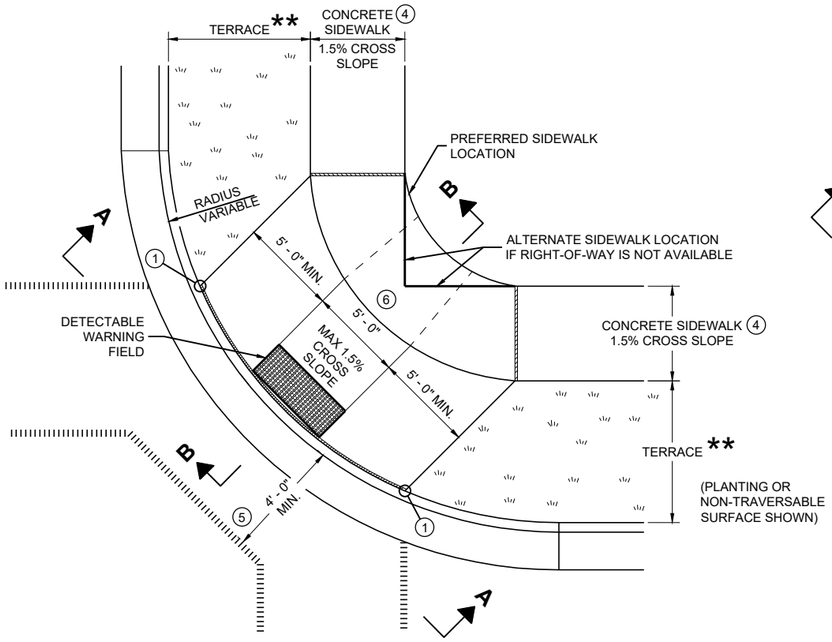
FHWA

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SDD 08D04 - 07

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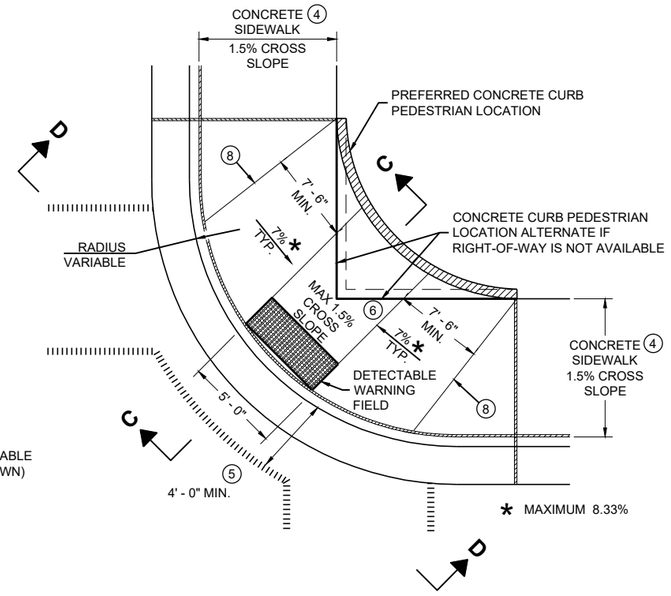
SDD 08D04 - 07



PLAN VIEW

CURB RAMP TYPE 1

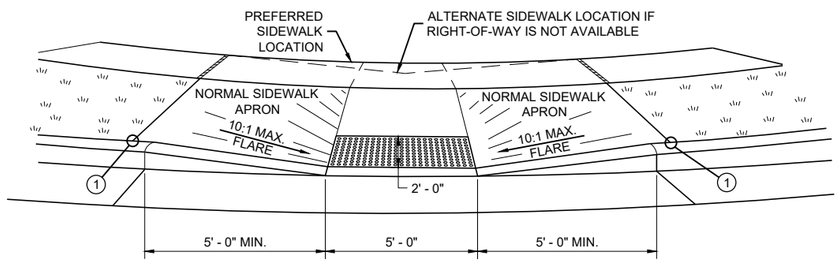
(CENTER OF CORNER RADIUS)



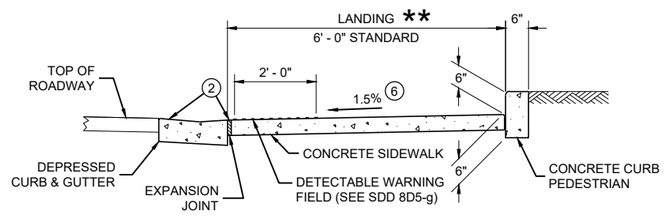
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

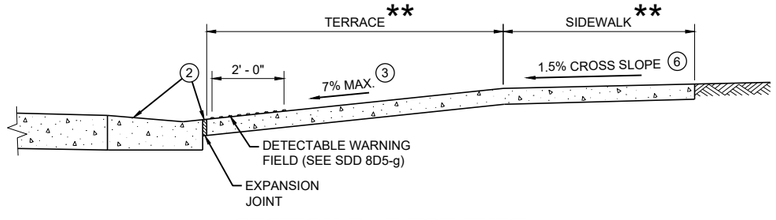


VIEW A - A FOR TYPE 1

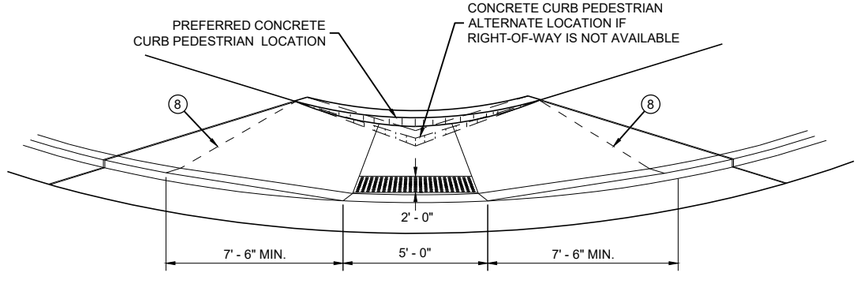


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FILED SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ½ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA. 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

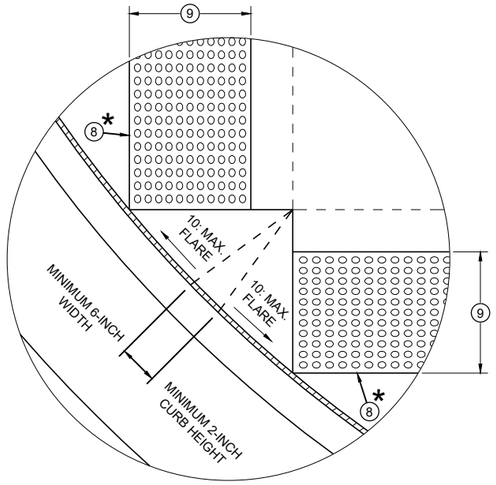
LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

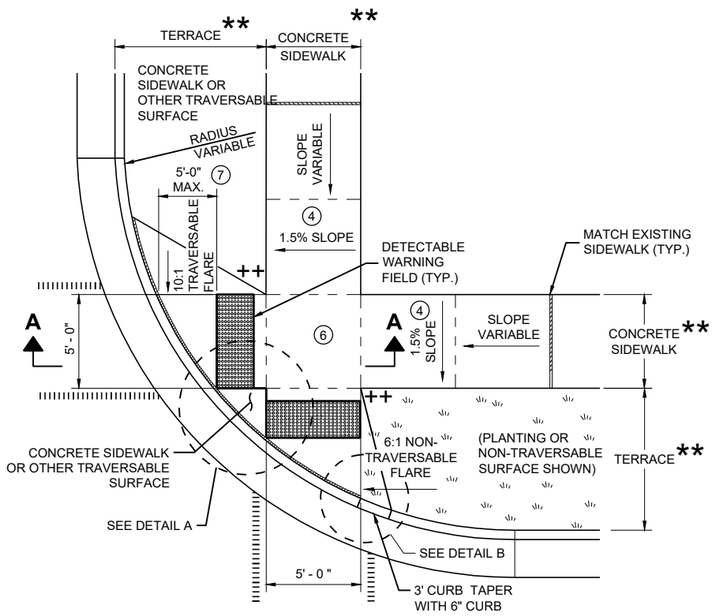
CURB RAMPS TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

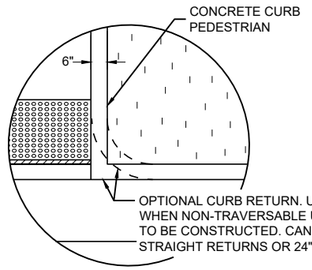
6
SDD 08D05-21a



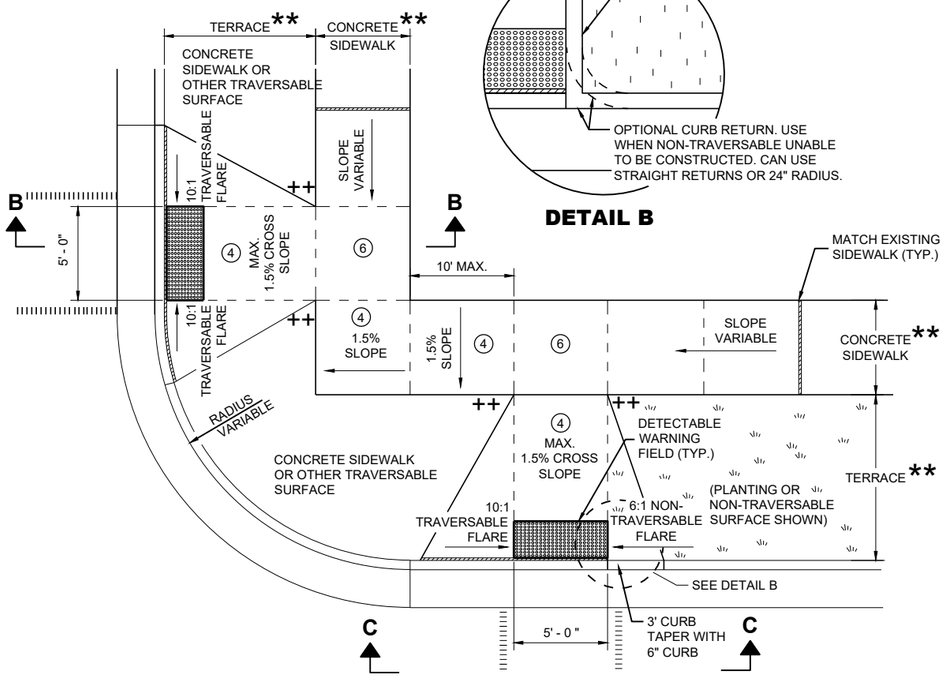
DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)



DETAIL B



PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

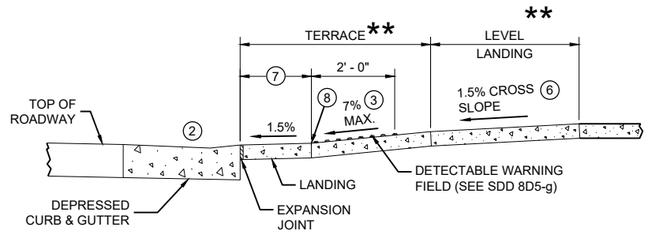
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

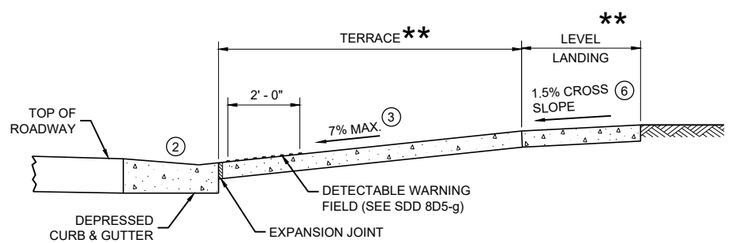


SECTION A - A FOR TYPE 2

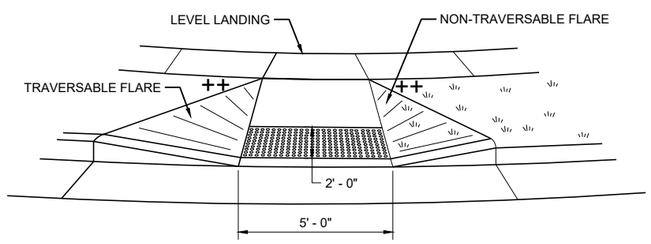
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



SECTION B - B FOR TYPE 3



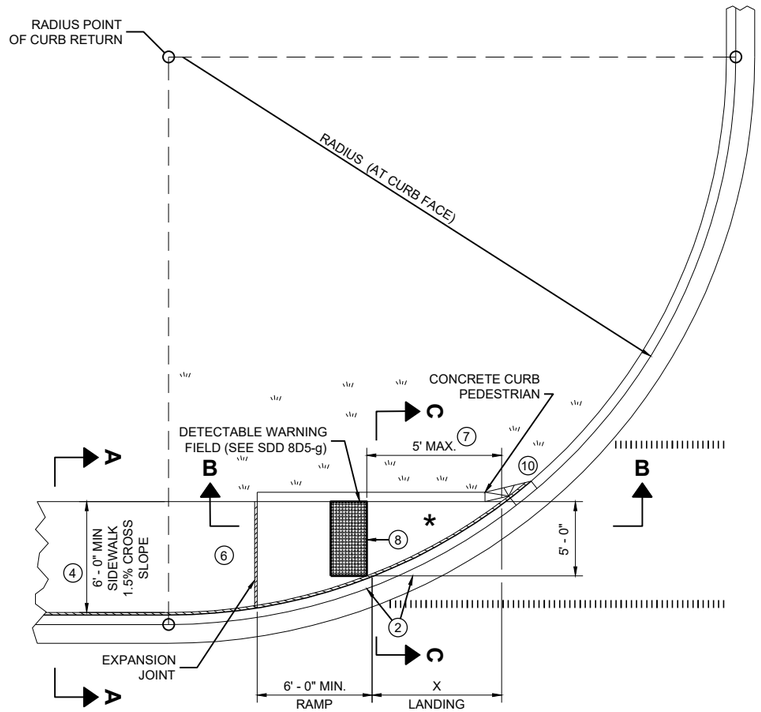
VIEW C - C FOR TYPE 3

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

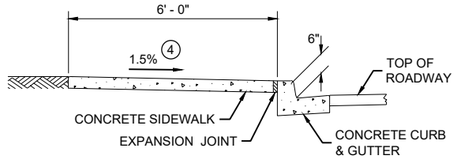


PLAN VIEW

CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

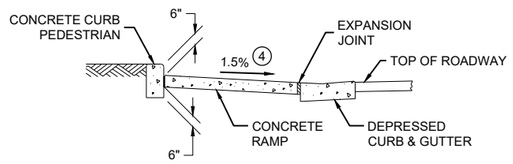
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

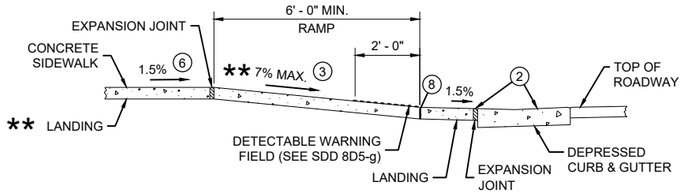
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)

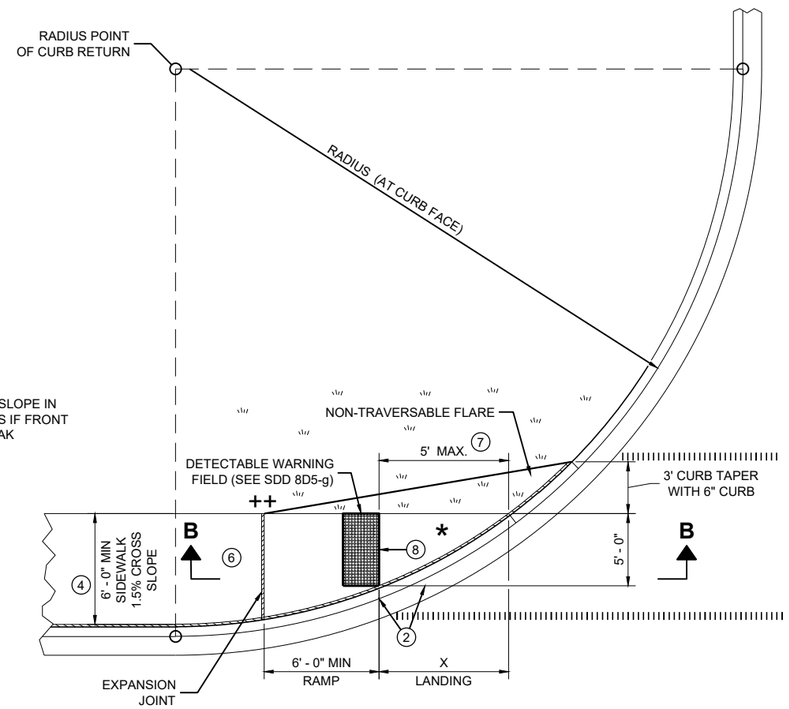


SECTION C - C FOR TYPE 4A



SECTION B - B FOR TYPE 4A AND TYPE 4A1

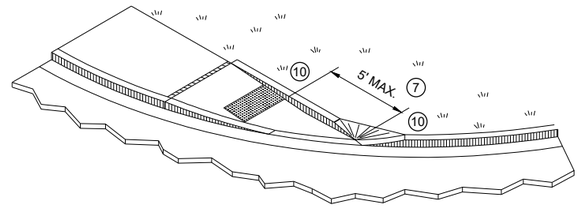
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



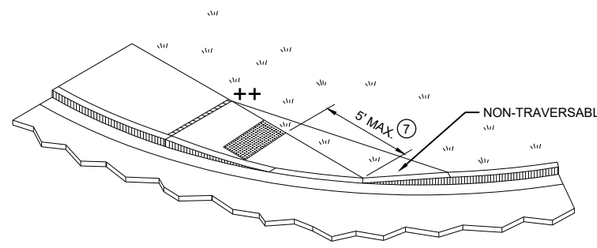
PLAN VIEW

CURB RAMP TYPE 4A1

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



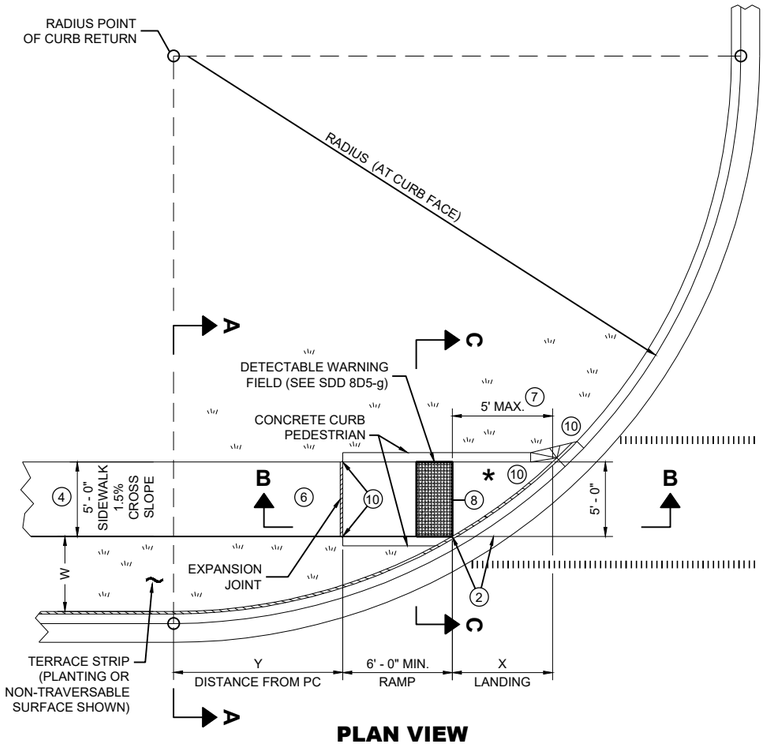
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

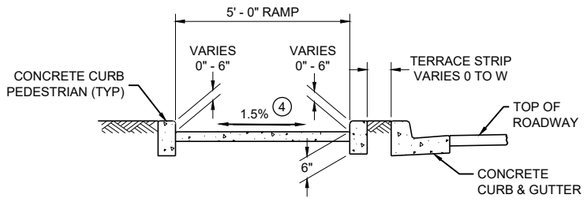
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET			4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET									4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET															4' - 10 3/4"	19' - 8 1/4"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C - C FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

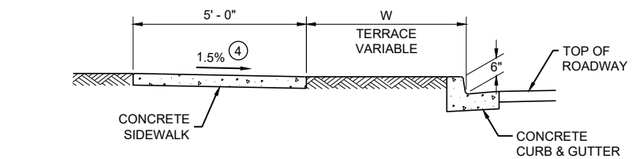
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

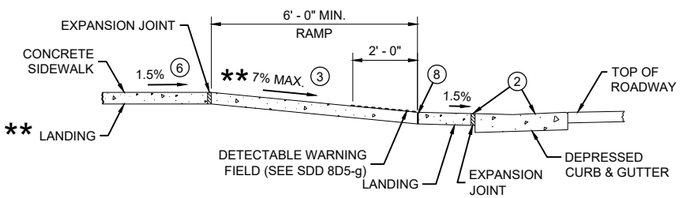
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

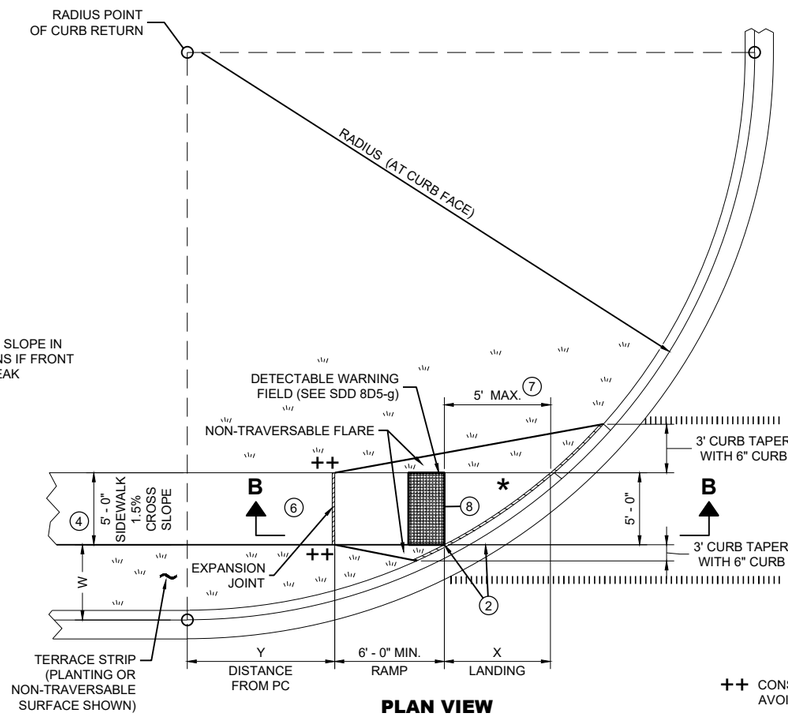


SECTION A - A FOR TYPE 4B



SECTION B - B FOR TYPE 4B AND TYPE 4B1

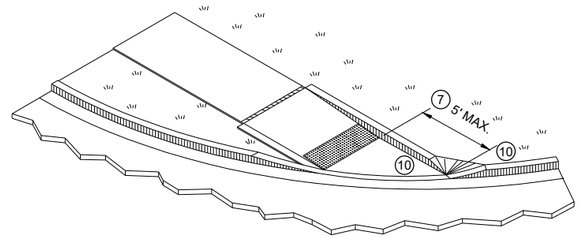
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



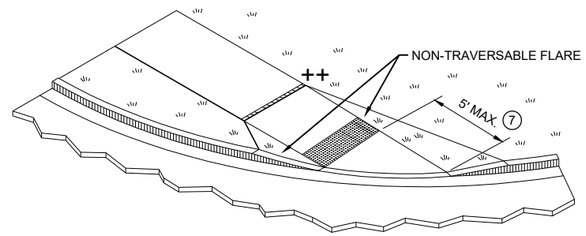
PLAN VIEW
CURB RAMP TYPE 4B1

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



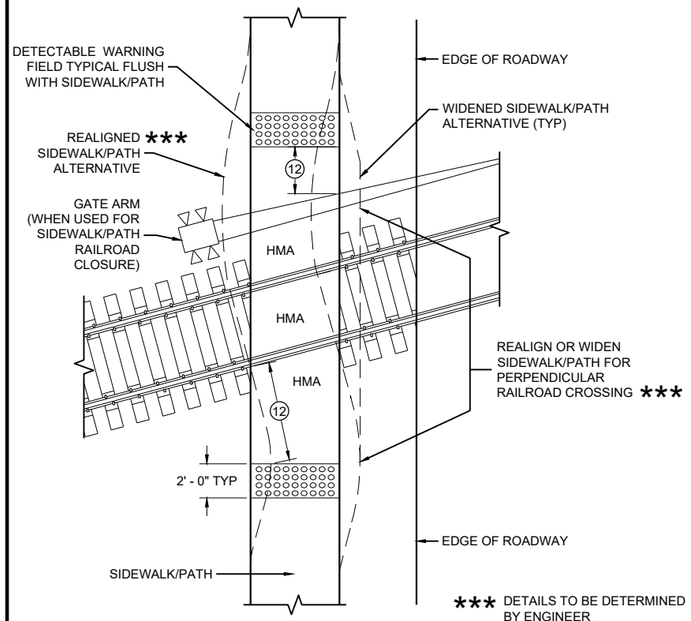
ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

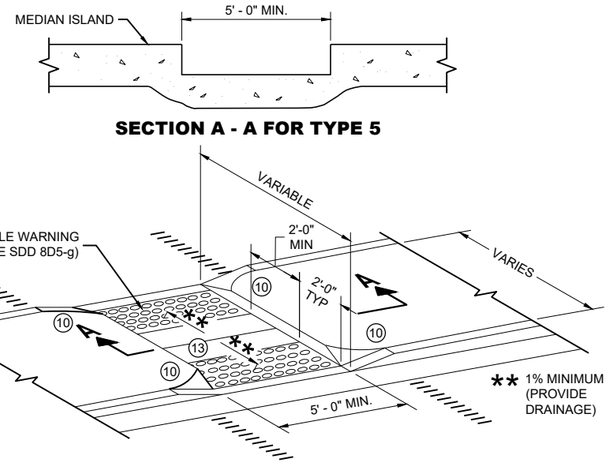
CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 8

DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS



SECTION A - A FOR TYPE 5

CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

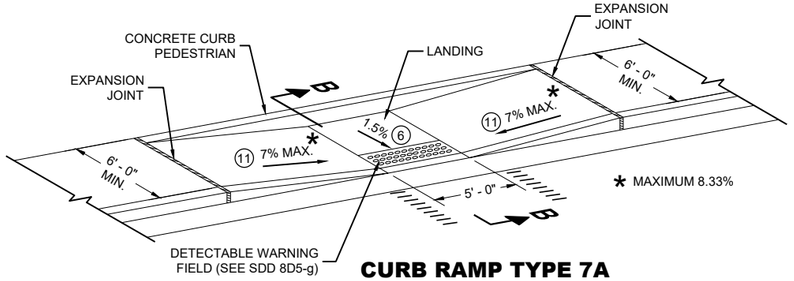
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

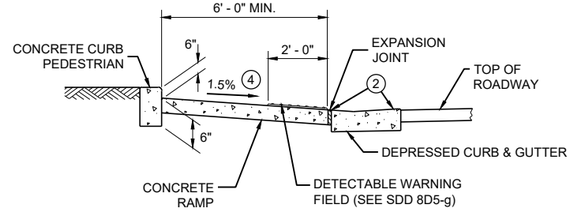
LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

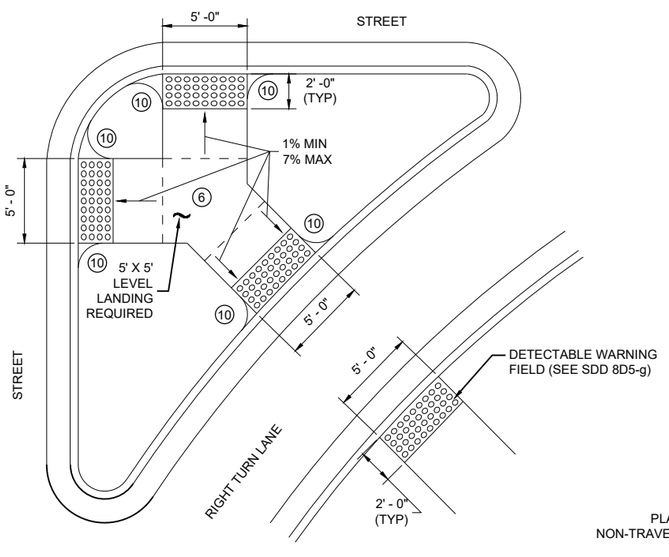


CURB RAMP TYPE 7A

FOR INTERSECTIONS AND MID BLOCK CROSSINGS



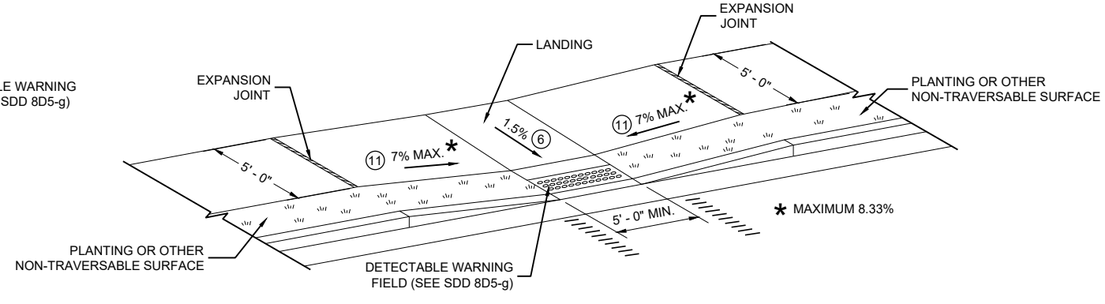
SECTION B - B FOR TYPE 7A



CURB RAMP TYPE 6

DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



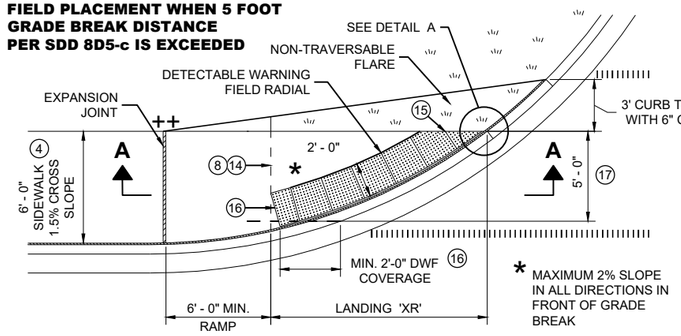
CURB RAMP TYPE 7B

FOR INTERSECTIONS AND MID BLOCK CROSSINGS

CURB RAMPS TYPE 5, 6, 7A, 7B & 8

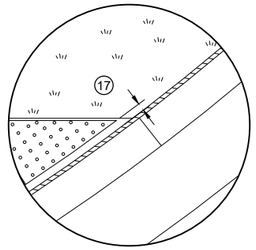
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED

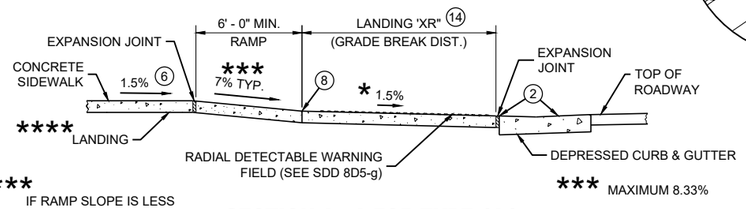


PLAN VIEW

CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL A

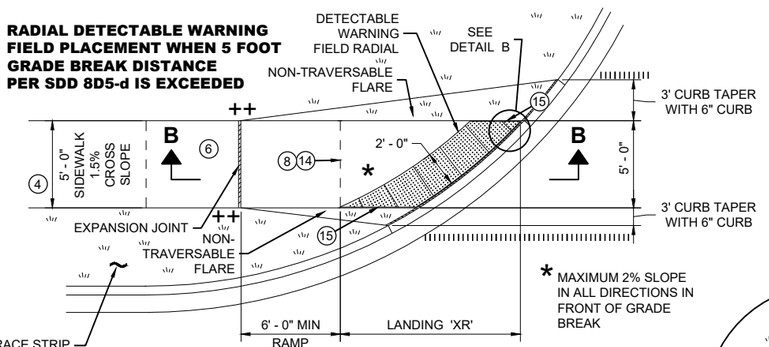


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

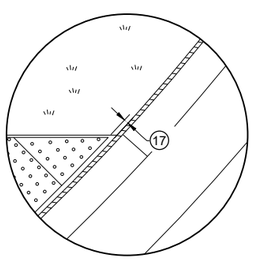
SECTION A - A FOR TYPE 4A1

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED

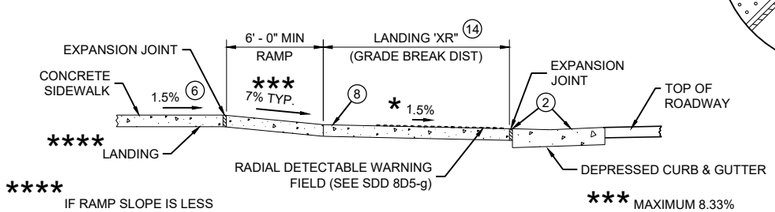


PLAN VIEW

CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION B - B FOR TYPE 4B1

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AD ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

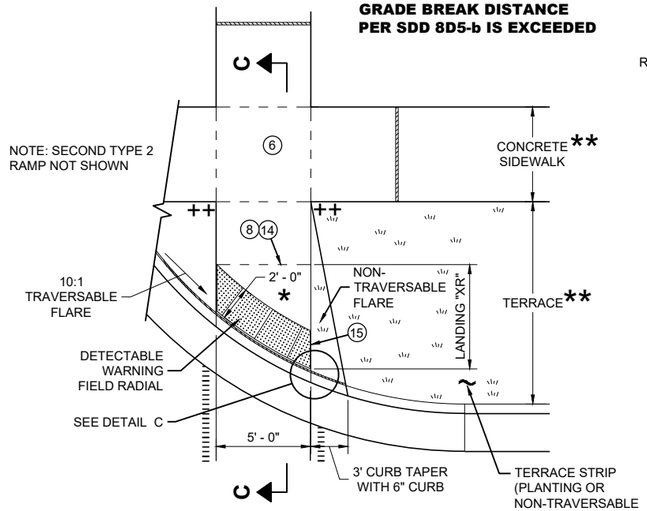
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

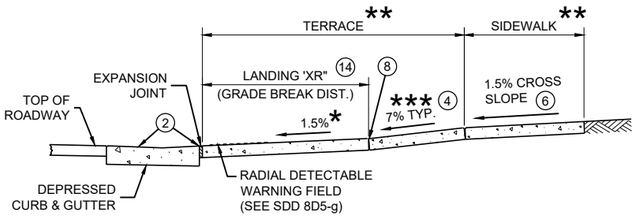
(17) A MAXIMUM 3 INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

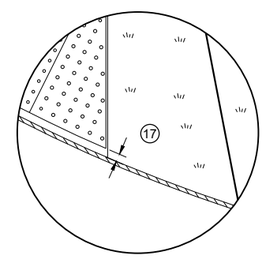


PLAN VIEW

CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)



SECTION C - C FOR TYPE 2



DETAIL C

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

CURB RAMPS
RADIAL DETECTABLE WARNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

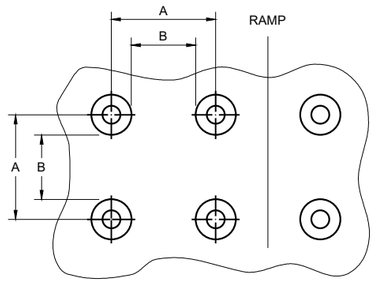
SDD 08D05-21f

6

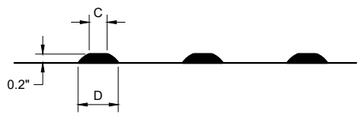
SDD 08D05-21f

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

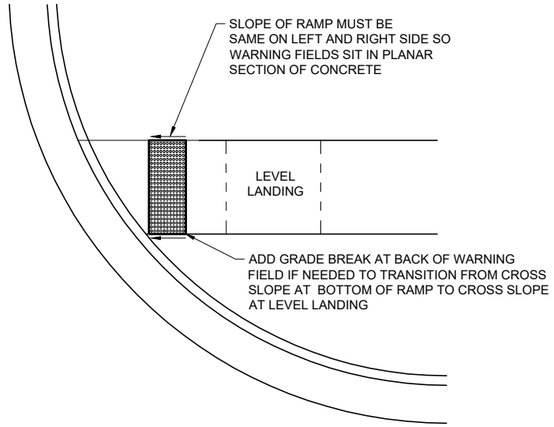
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



PLAN VIEW



ELEVATION VIEW



DETECTABLE WARNING FIELD
PLANAR INSTALLATION

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

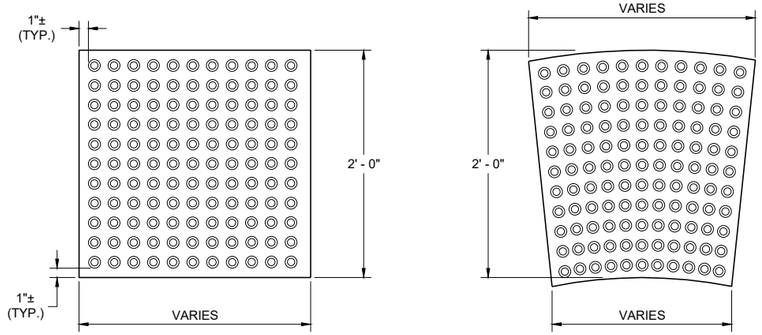
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

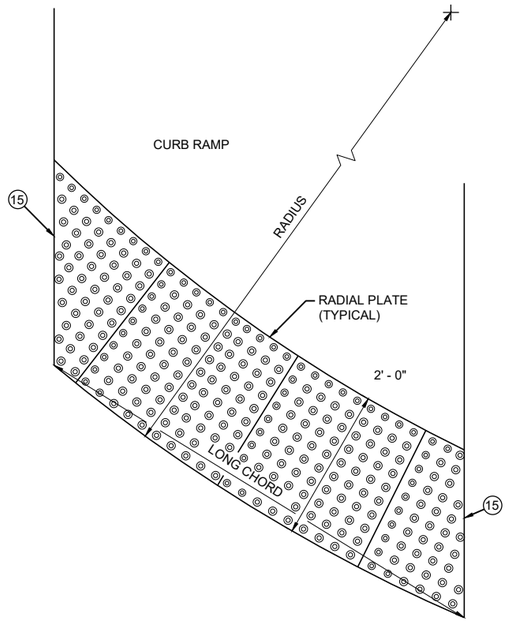
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



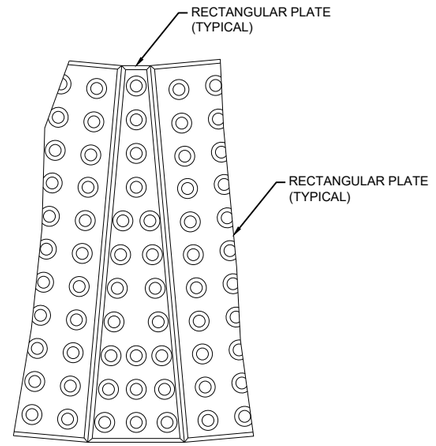
RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

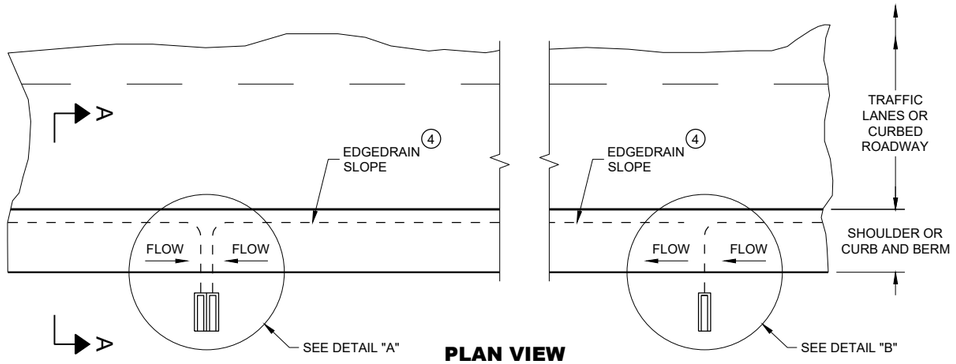
APPROVED

July 2023 — DATE

/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

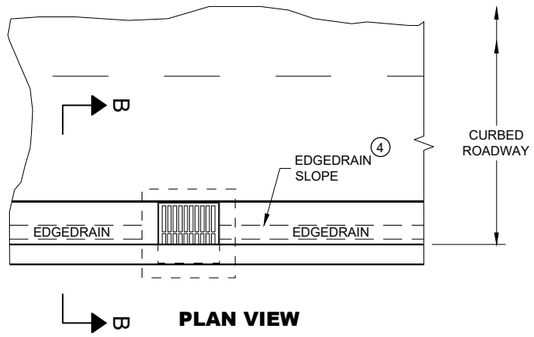
FHWA

6
SDD 08D05-21g



PLAN VIEW

ROADWAY WITH SHOULDERS OR CURBS
(EDGEDRAIN CONNECTS TO ROADSIDE) (2)



PLAN VIEW

ROADWAY WITH CURBS
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)

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) UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

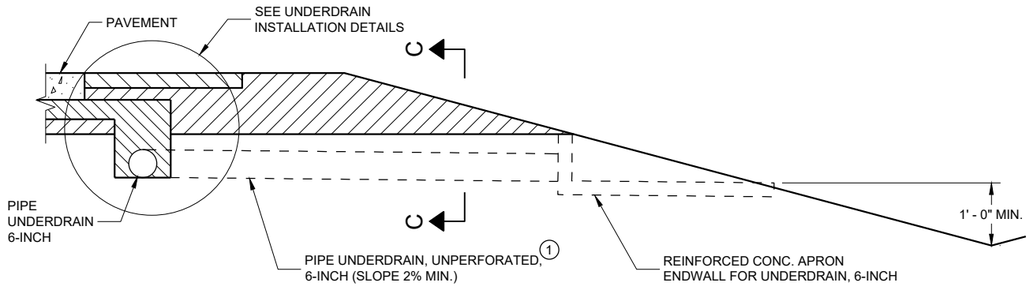
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.

(2) MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.

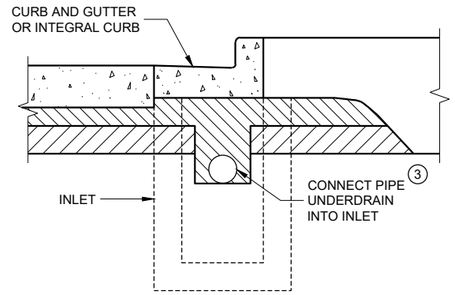
(3) EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.

(4) EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



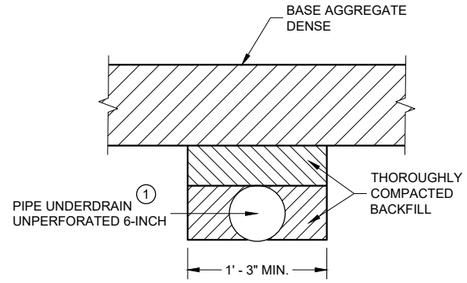
SECTION A - A

RURAL CROSS SECTION



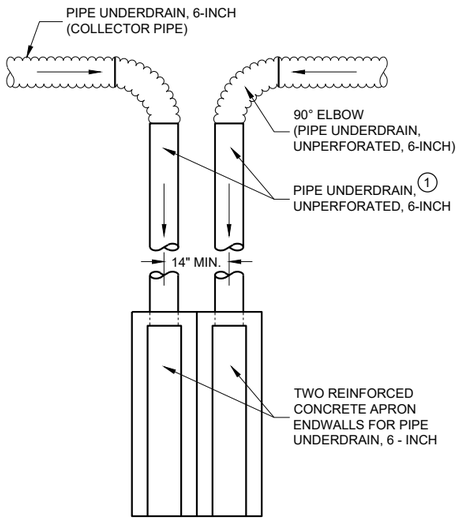
SECTION B - B

URBAN CROSS SECTION

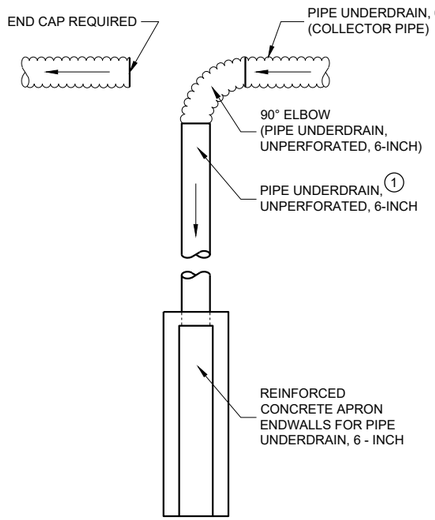


SECTION C - C

TRENCH FOR OUTFALL PIPE

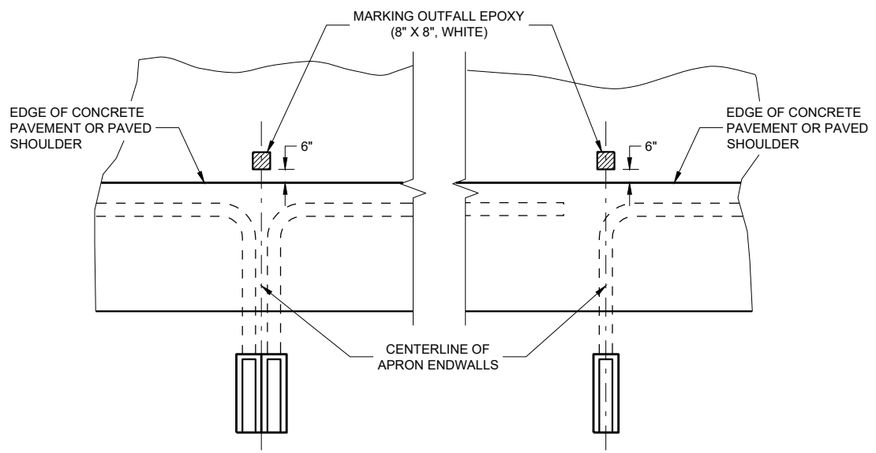


DETAIL "A"
TO BE USED AT LOW POINT LOCATIONS



DETAIL "B"
TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



LOW POINT LOCATIONS — INTERMEDIATE LOCATIONS

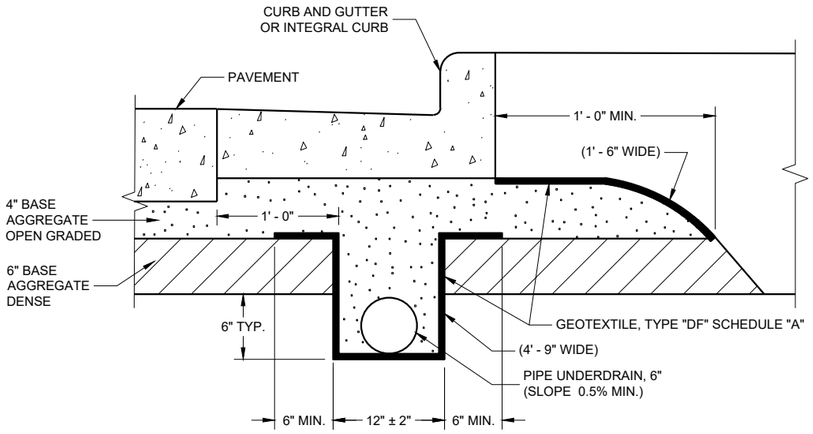
PAVEMENT MARKINGS FOR OUTFALL MARKERS

EDGEDRAIN OUTLET AND OUTFALL MARKERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD08D15 - 05a
SDD08D15 - 05a



EDGEDRAIN IN URBAN ROADWAY

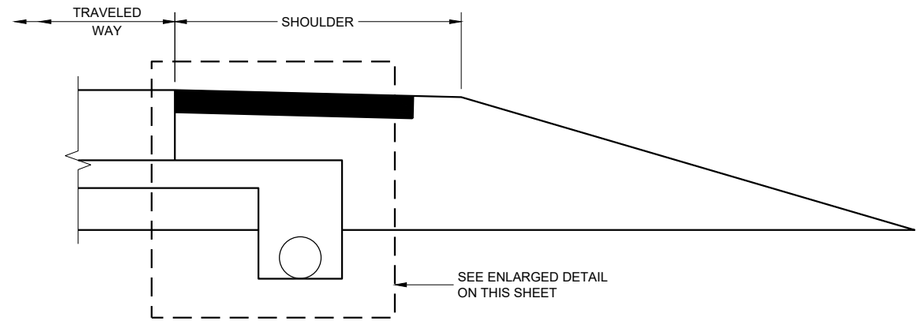
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

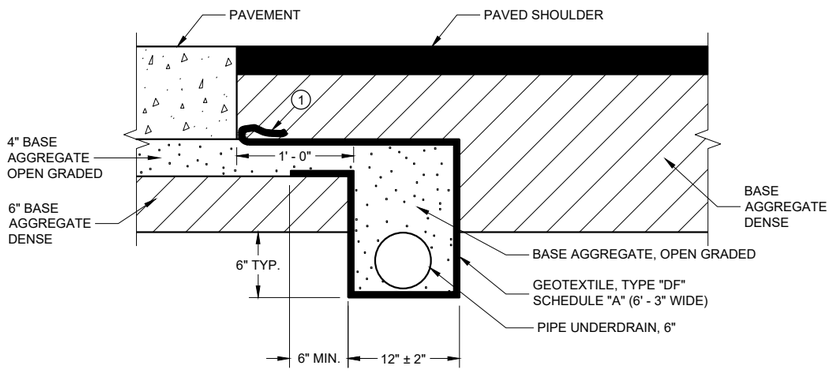
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

(1) FOLD OVER EXCESS GEOTEXTILE AT THIS LOCATION.

(2) TOTAL GEOTEXTILE WIDTH IS 6'-3" FOR PAYMENT.

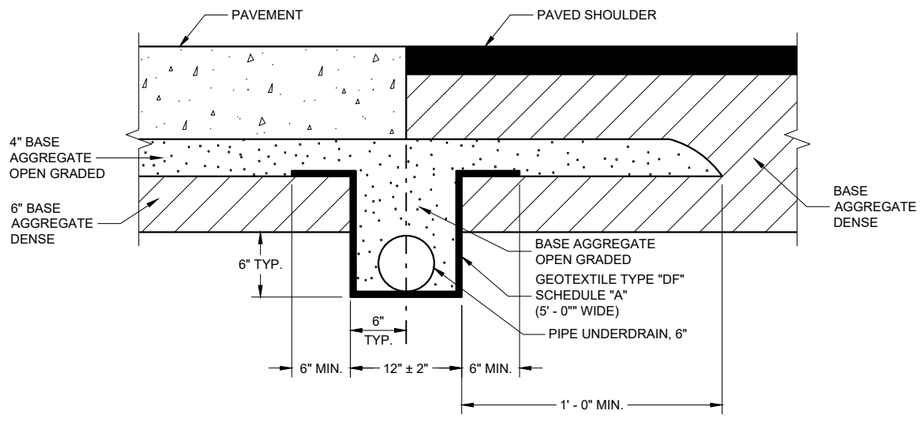


RURAL CROSS SECTION



POST PAVING INSTALLATION

(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

EGEDRAIN AND BASE AGGREGATE OPEN GRADED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

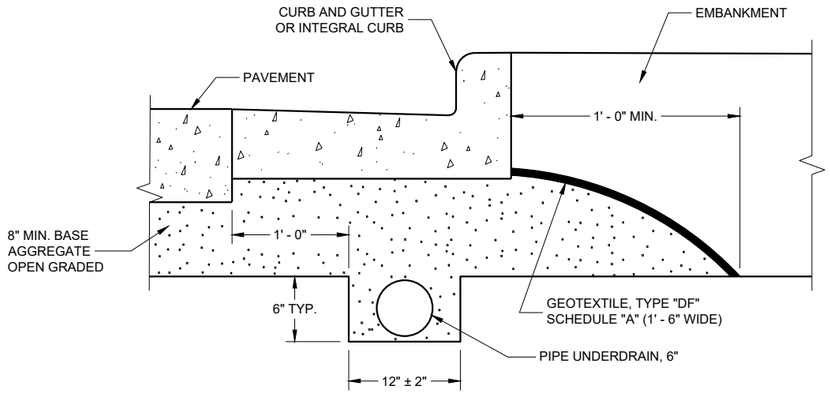
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SDD 08D15 - 05b

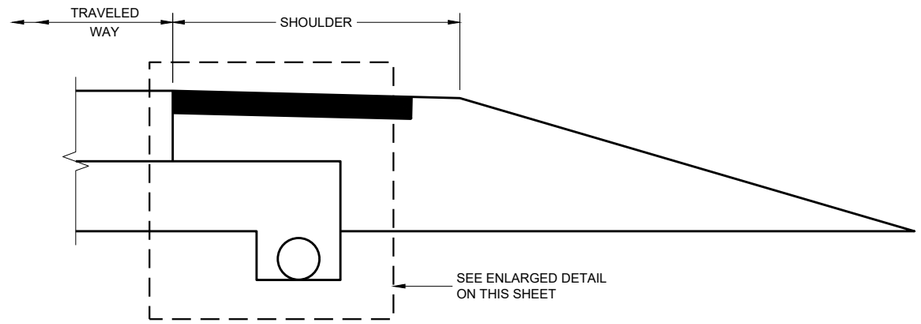
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

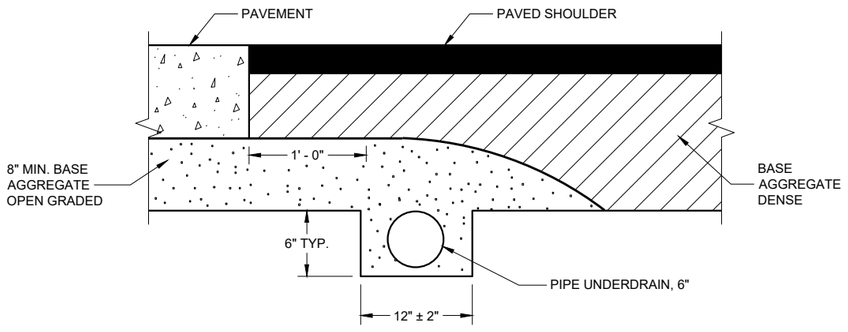
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.



EDGEDRAIN IN URBAN ROADWAY

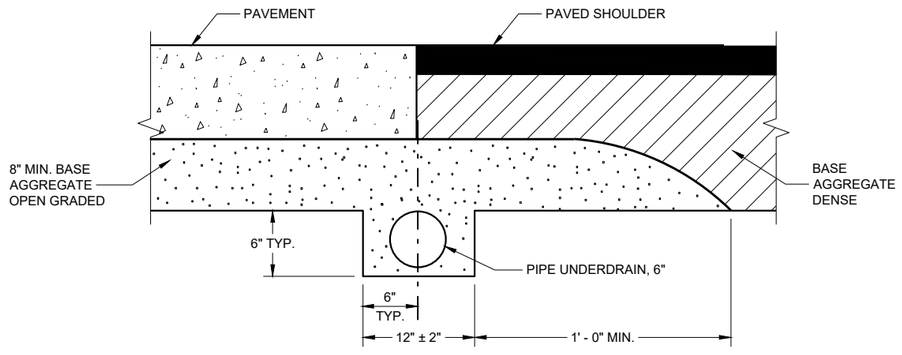


RURAL CROSS SECTION



POST PAVING INSTALLATION

(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

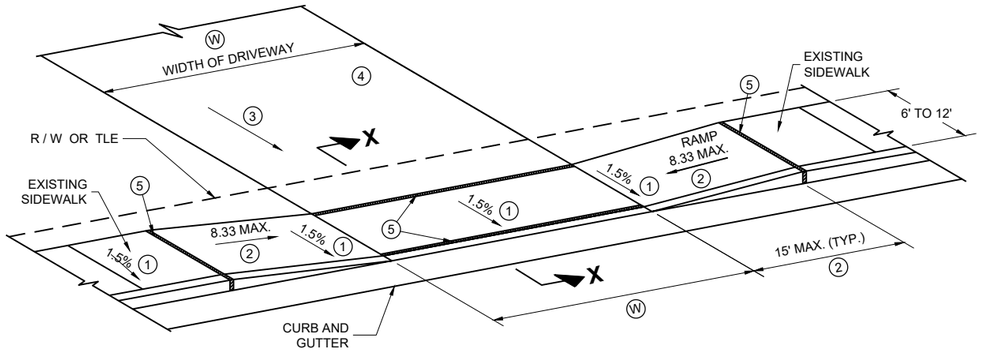
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

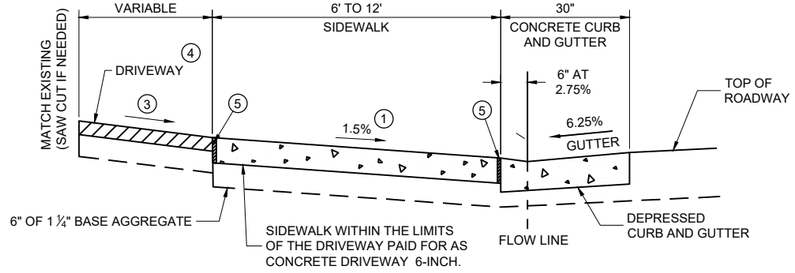
FHWA

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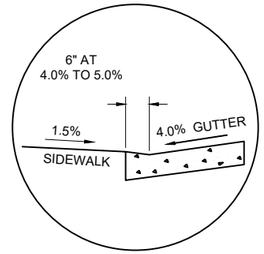
SDD 08D15 - 05c



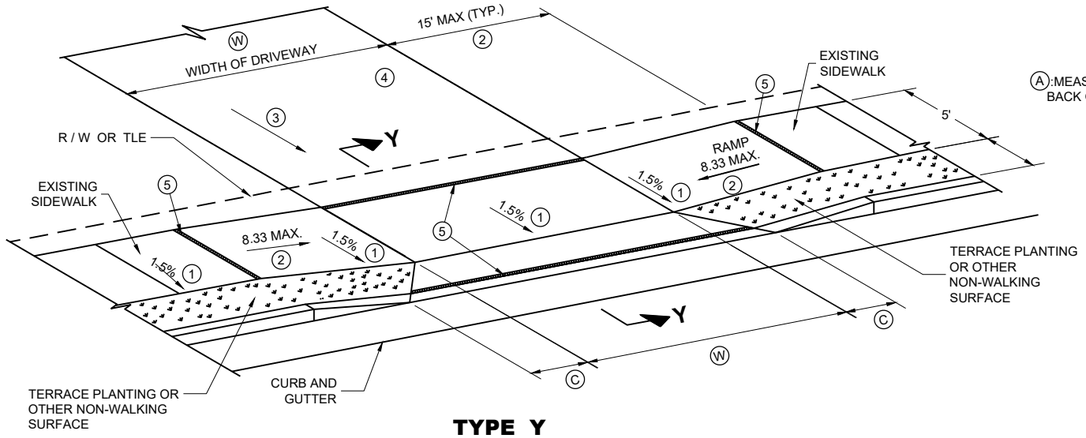
TYPE X
SIDEWALK ABUTS CURB AND GUTTER
TERRACE VARIES 0 TO 3 FEET



SECTION X - X



SECTION X - X
4% GUTTER SLOPE



TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET

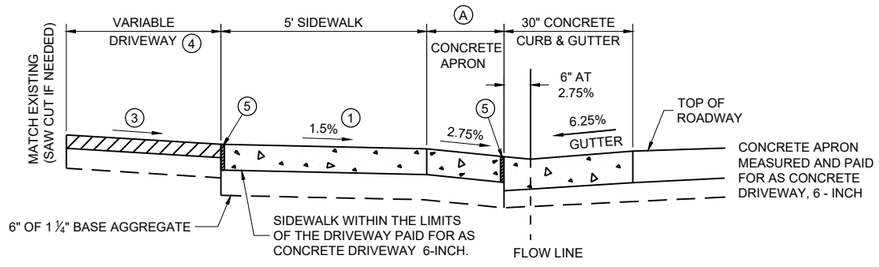
Ⓐ:MEASURE FROM BACK OF CURB

Ⓦ: 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

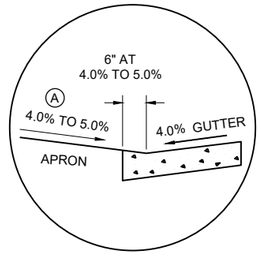
16' MIN. - 35' MAX. COMMERCIAL (CE)

TABLE Y

Ⓐ FEET	Ⓒ FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'



NOTE: SIDEWALK MY BE DEPRESSED IN DRIVEWAY AREAS



SECTION Y - Y
4% GUTTER SLOPE

SECTION Y - Y

DRIVEWAY DETAIL WITH CONCRETE CURB AND GUTTER

(URBAN AND SUBURBAN)

GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

Ⓦ IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

① CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

② THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

③ DRIVEWAY SLOPES: DESIRABLE MAXIMUM
- 10.5% UP AWAY FROM SIDEWALK (SAG)
- 8.5% DOWN AWAY FROM SIDEWALK (CREST)
- ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

④ DRIVEWAY TYPES
- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
- 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
- 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES.)

⑤ ½" EXPANSION JOINT FILLER

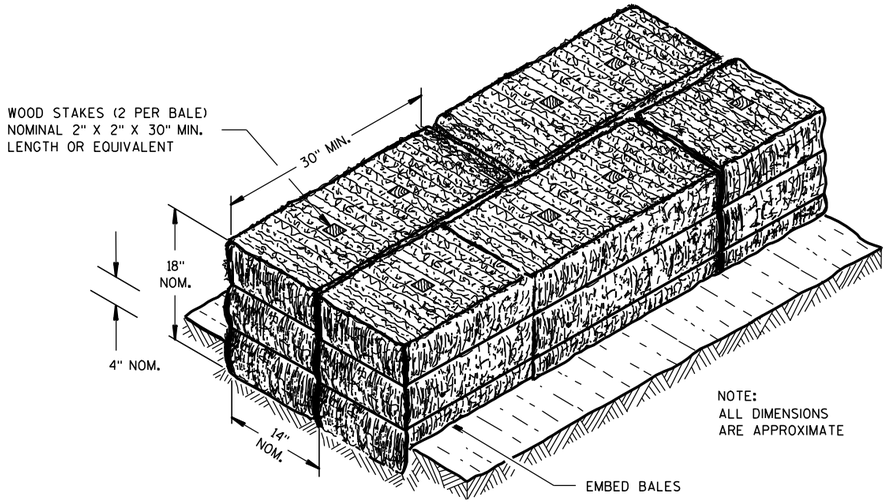
DRIVEWAY AND SIDEWALK RAMPS TYPES X AND Y

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

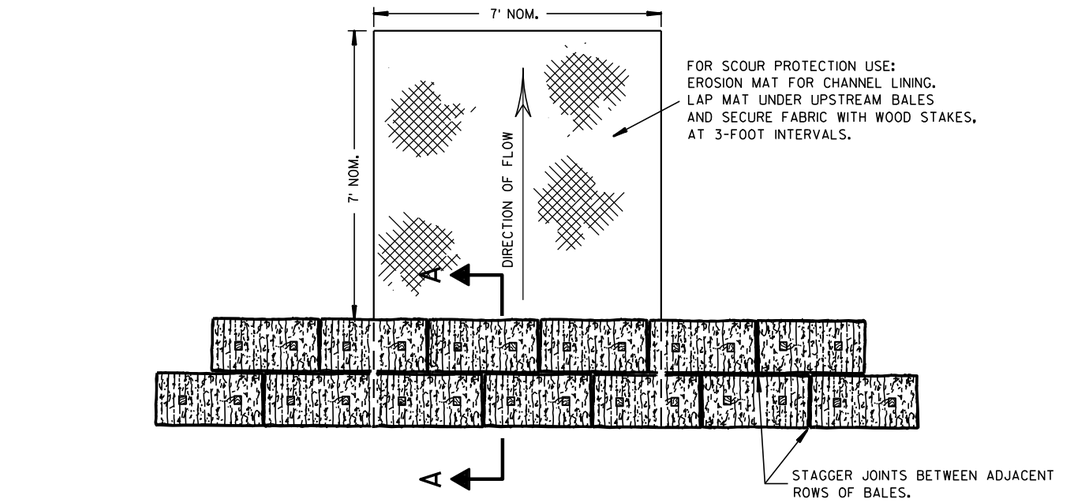
APPROVED
July 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

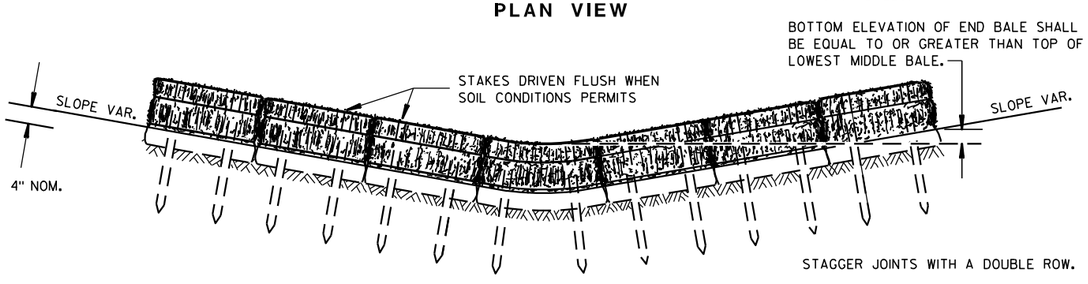
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SDD 08D18-04



SECTION A-A



PLAN VIEW



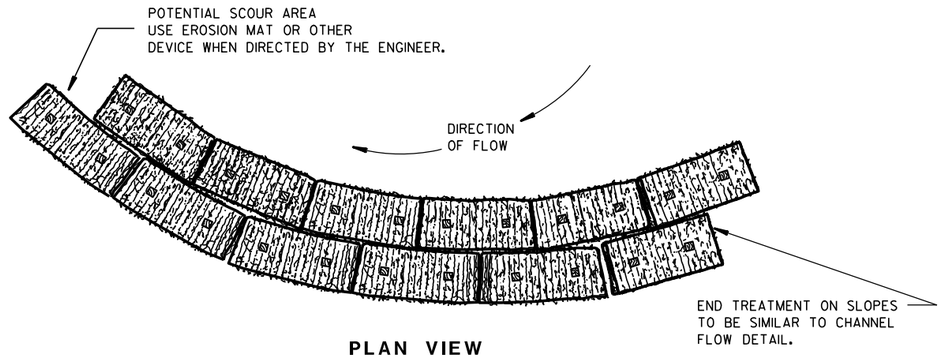
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

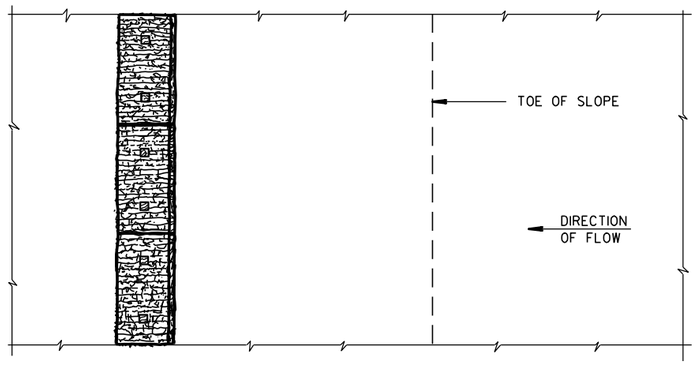
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

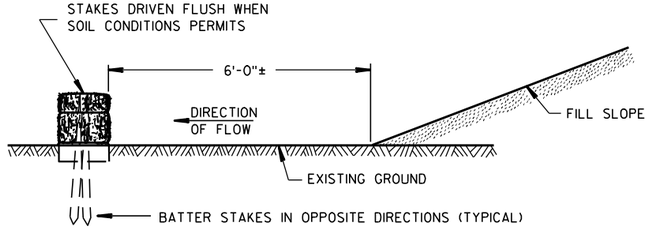


PLAN VIEW

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

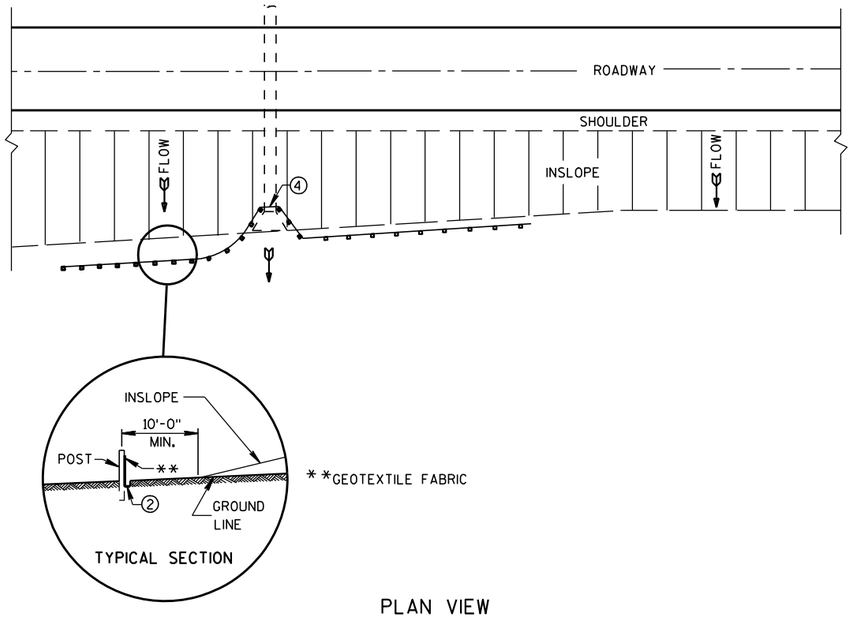
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

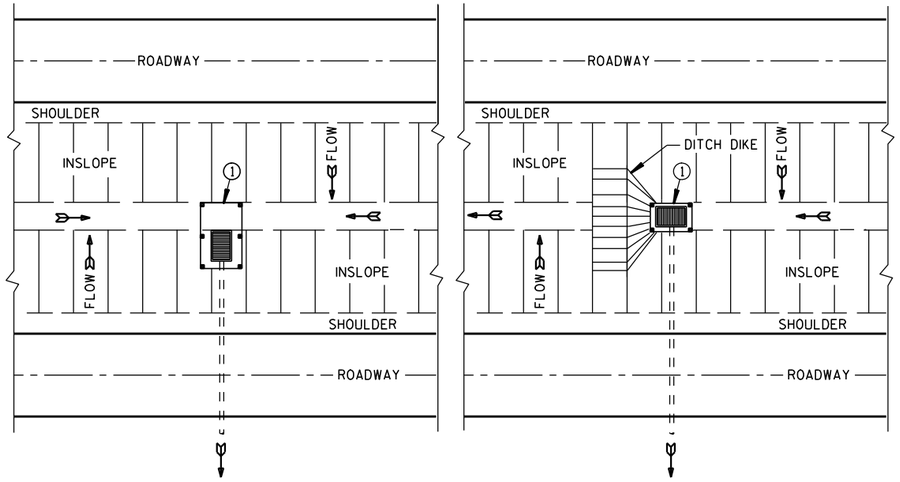
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

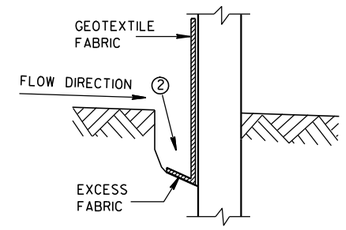
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

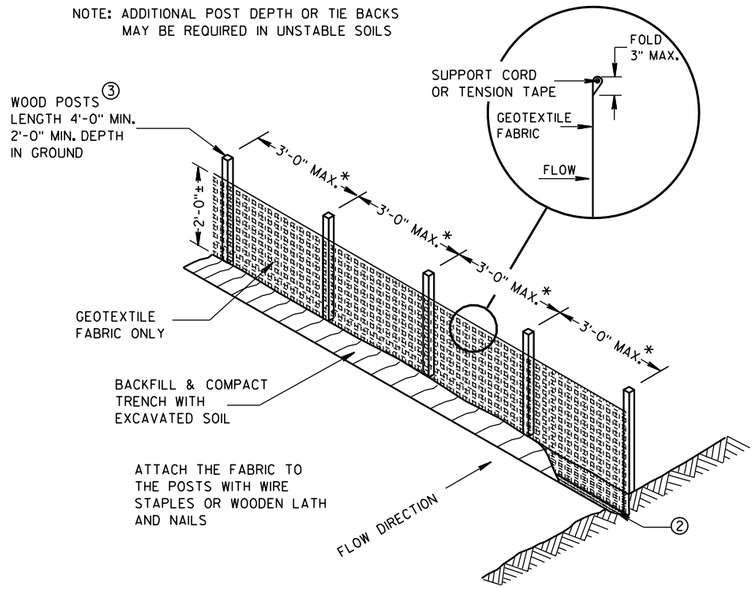
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

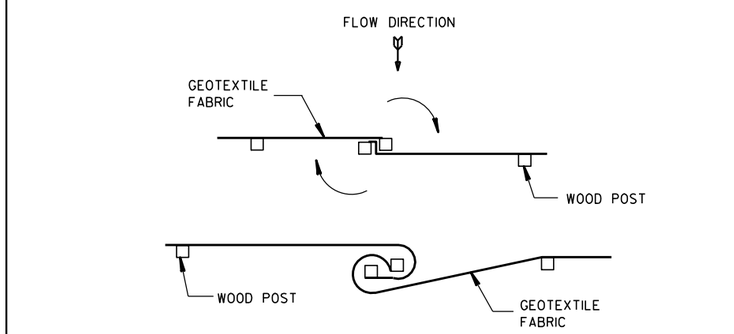
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



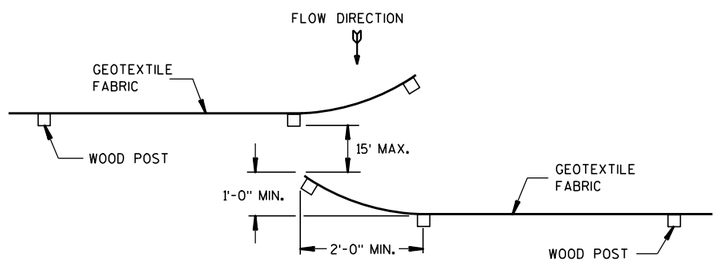
TRENCH DETAIL



SILT FENCE

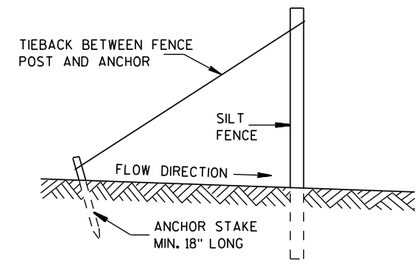


TWIST METHOD



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

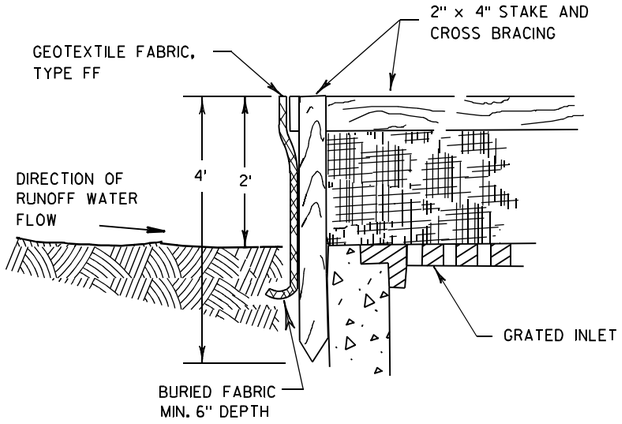
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

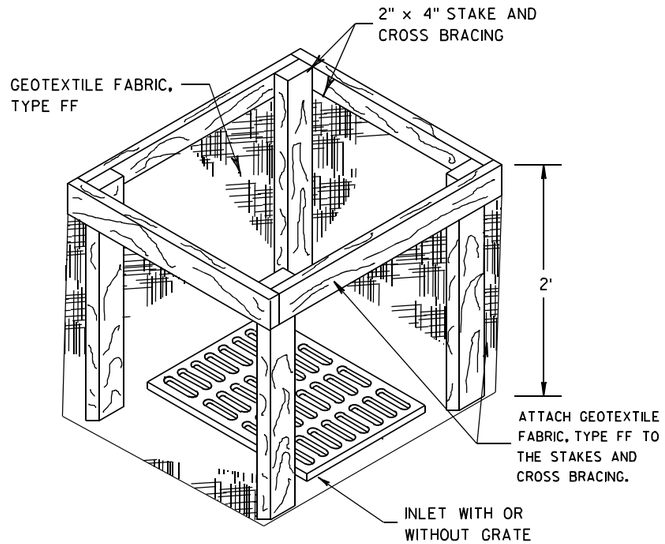
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S.D.D. 8 E 9-6

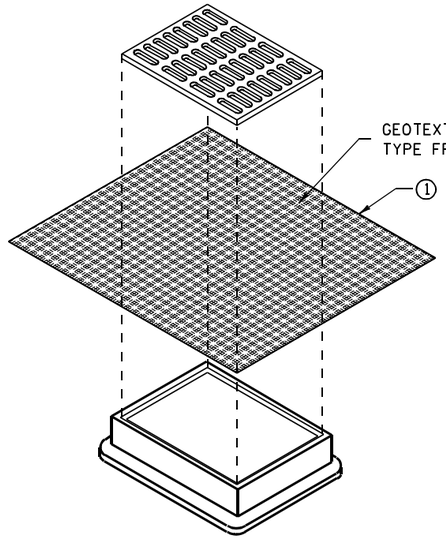
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S.D.D. 8 E 9-6



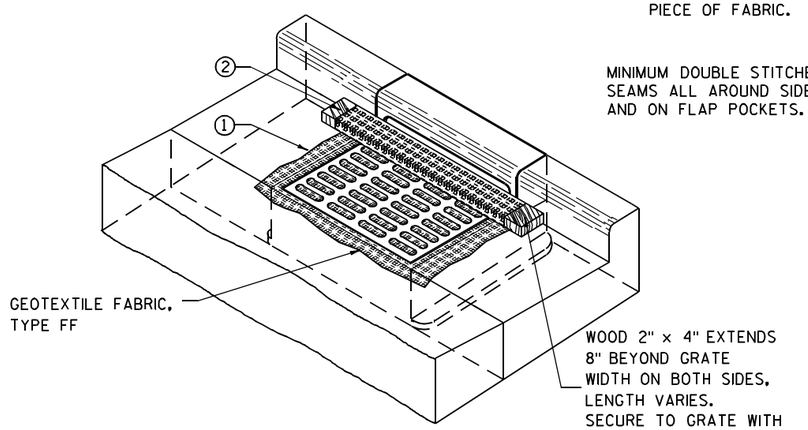


INLET PROTECTION, TYPE A

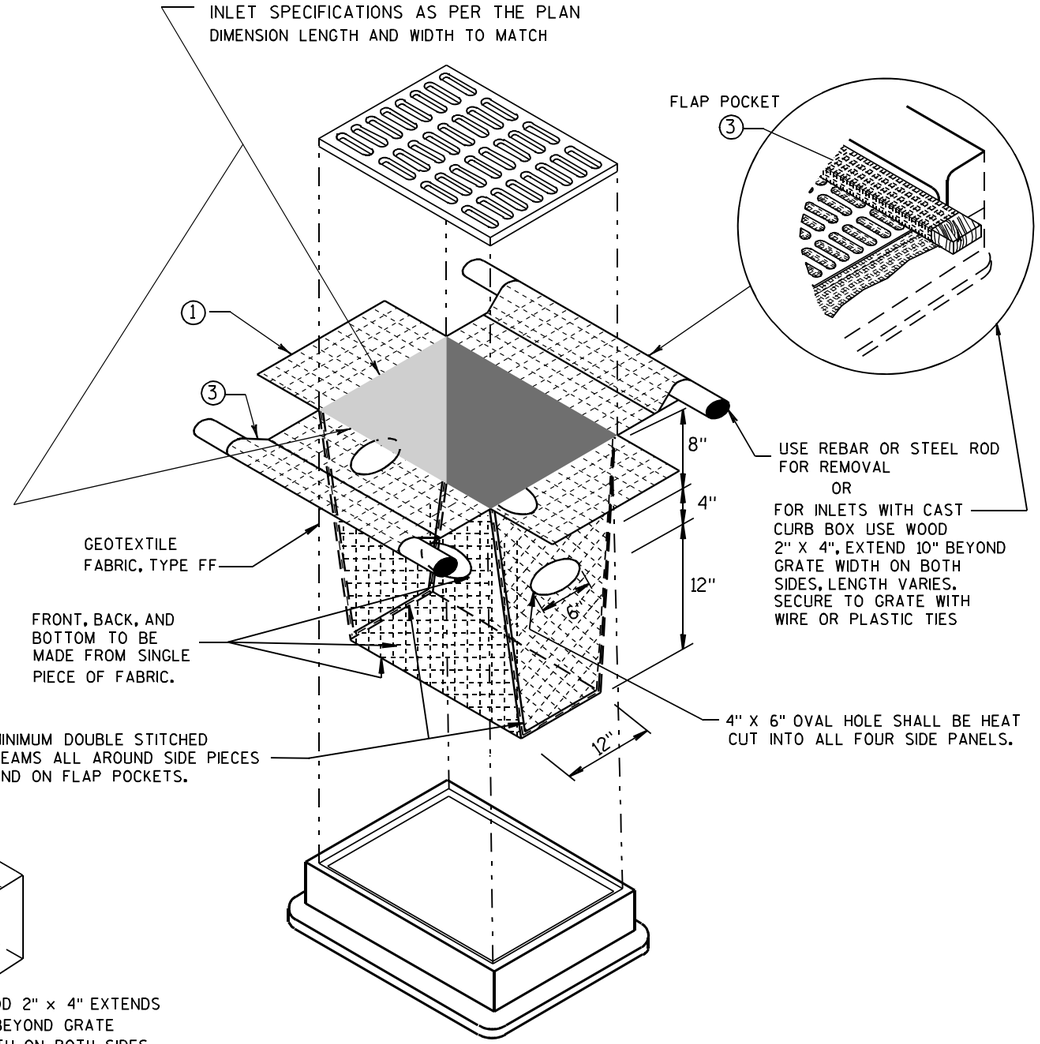


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

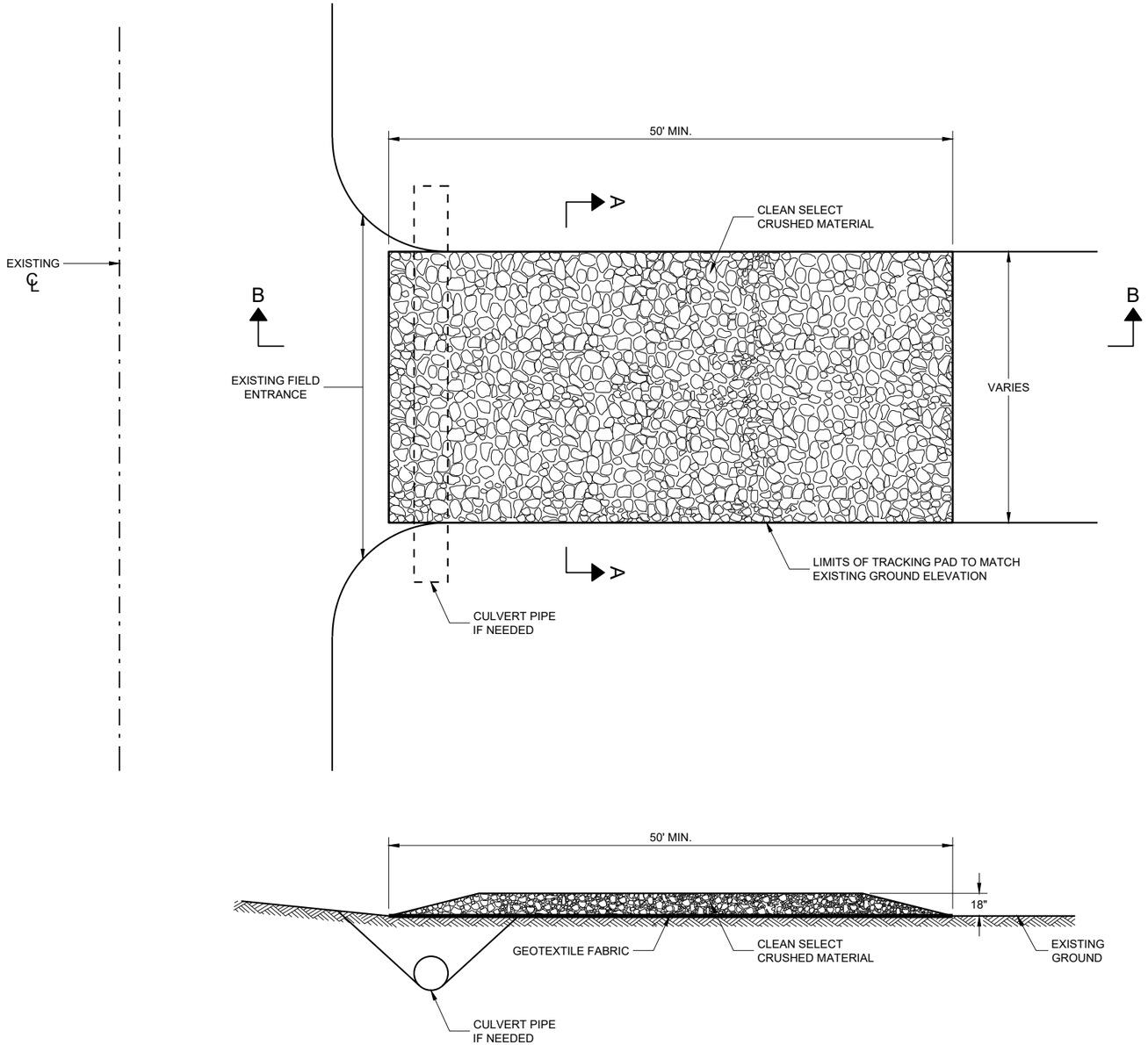
FHWA

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S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2



SECTION B - B

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

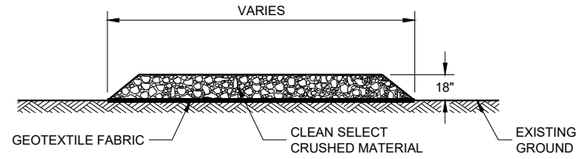
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A

6

SDD 08E14 - 01

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD 08E14 - 01

METAL APRON ENDWALLS

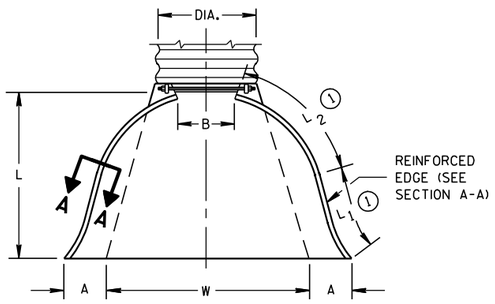
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

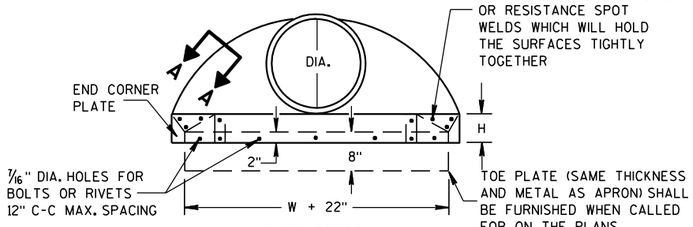
REINFORCED CONCRETE APRON ENDWALLS

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

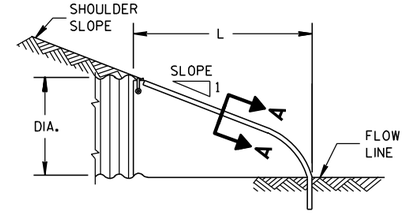
*MINIMUM
**MAXIMUM



PLAN VIEW

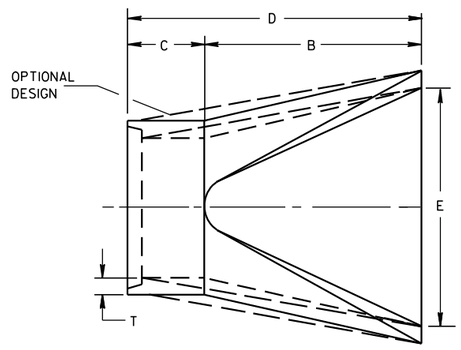


END VIEW

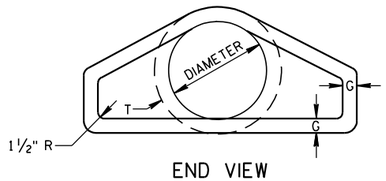


SIDE ELEVATION

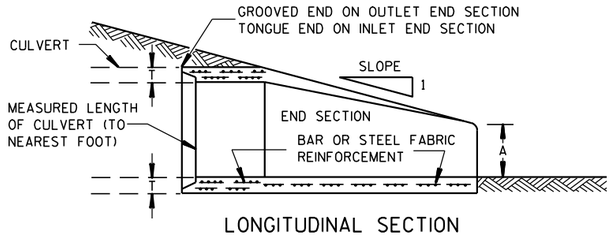
METAL ENDWALLS



PLAN

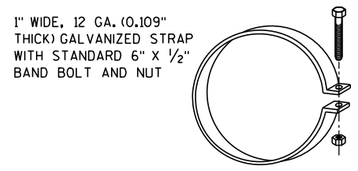


END VIEW



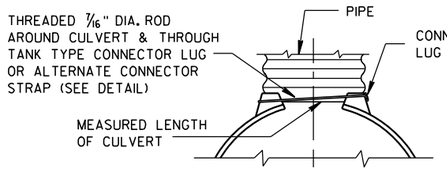
LONGITUDINAL SECTION

CONCRETE ENDWALLS

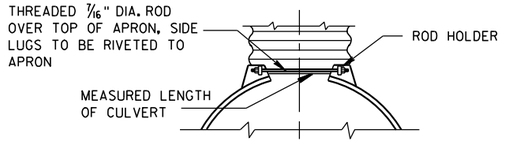


ALTERNATE FOR TYPE 1 CONNECTION

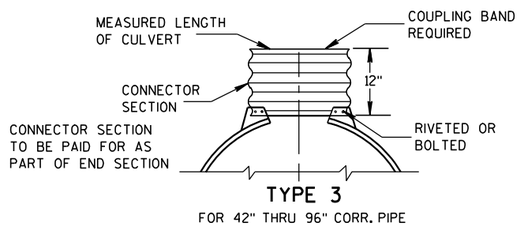
END SECTION CONNECTOR STRAP



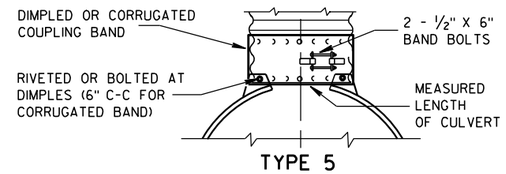
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

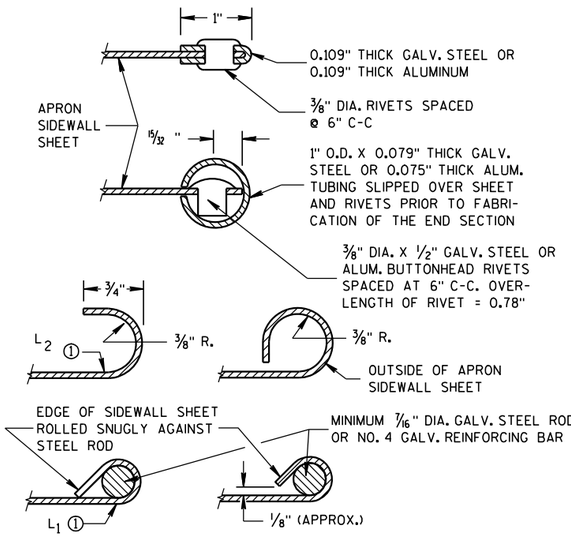
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

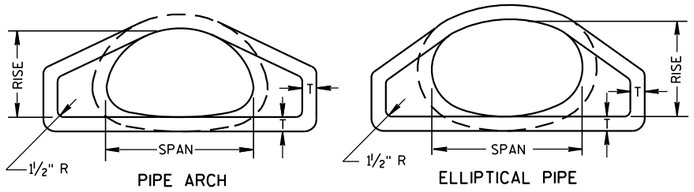
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

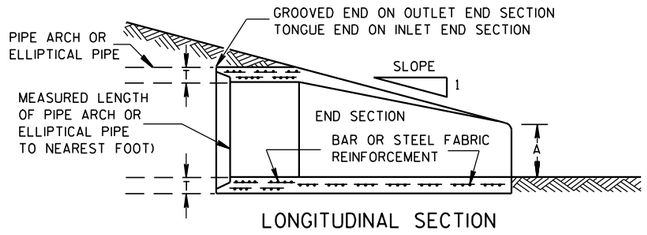
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

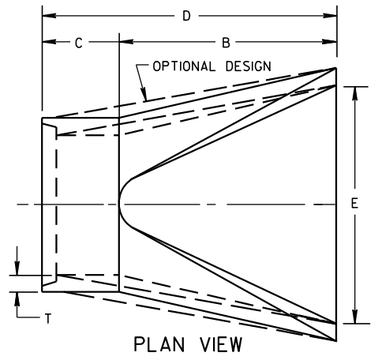
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



END VIEW

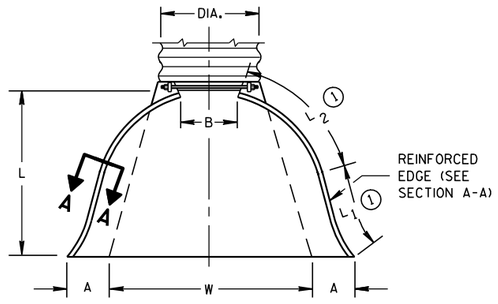


LONGITUDINAL SECTION

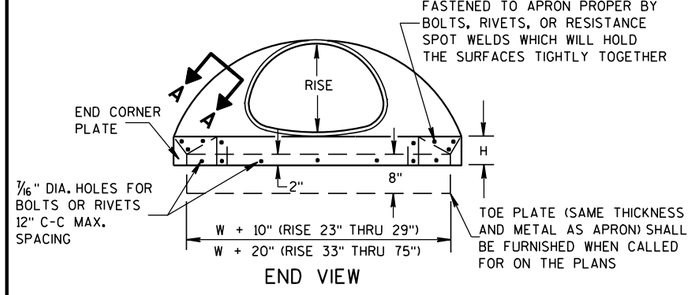


PLAN VIEW

CONCRETE ENDWALLS

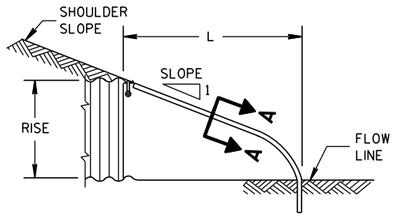


PLAN VIEW



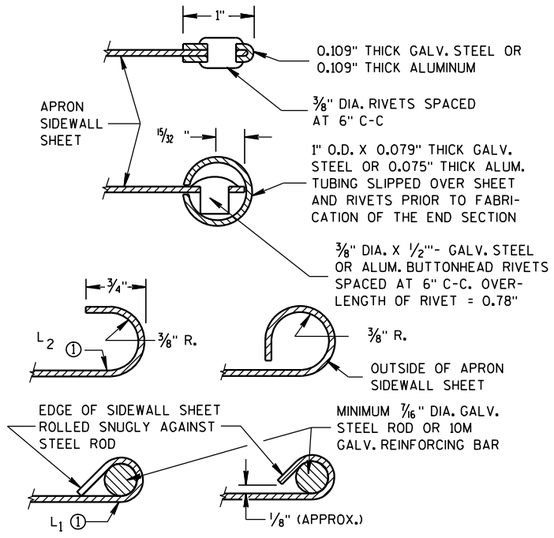
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

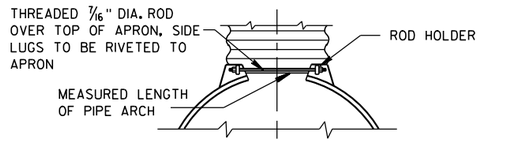
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

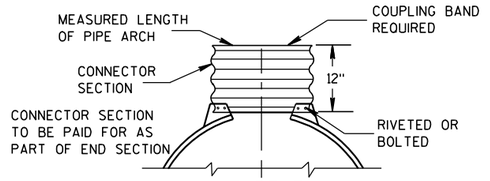
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



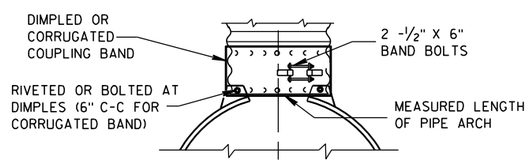
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH 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 77" X 52" THROUGH 112" X 75" 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 ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

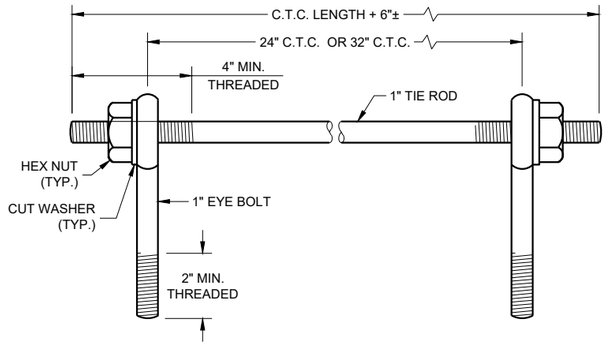
FHWA

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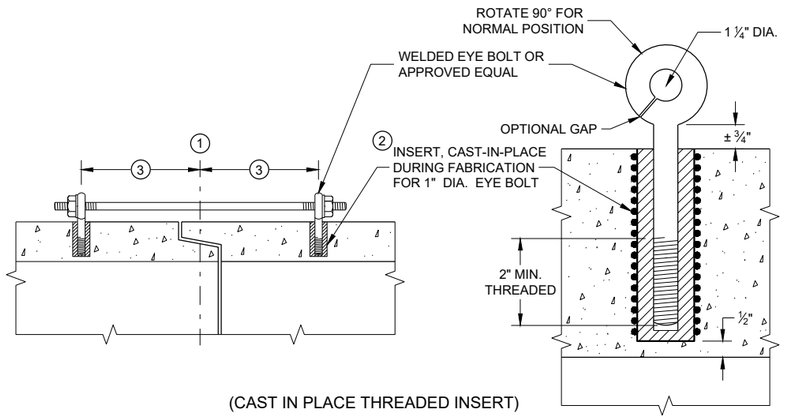
S.D.D. 8 F 2-1

6

S.D.D. 8 F 2-1



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.

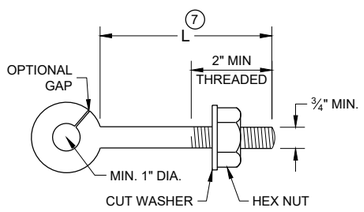
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

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

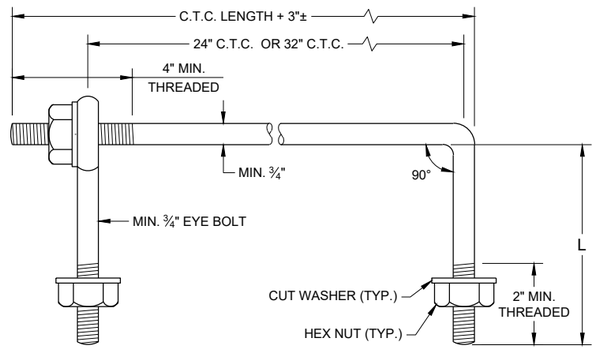
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

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

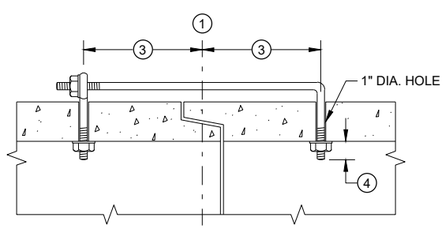


EYE BOLT (7)

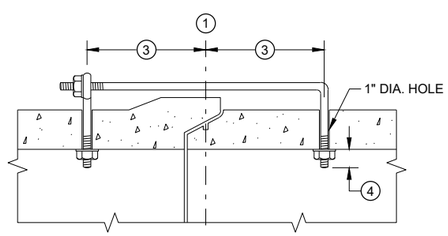
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

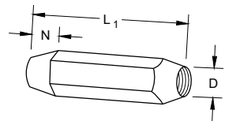
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

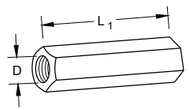
ADJUSTABLE TIE ROD TABLE

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



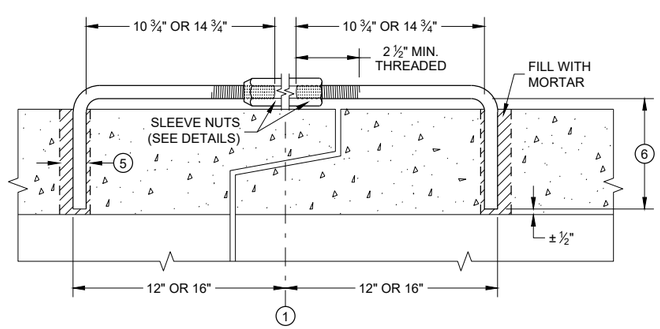
TAPERED



PLAIN

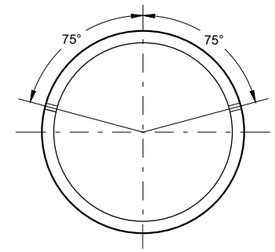
RIGHT AND LEFT THREADS

SLEEVE NUTS



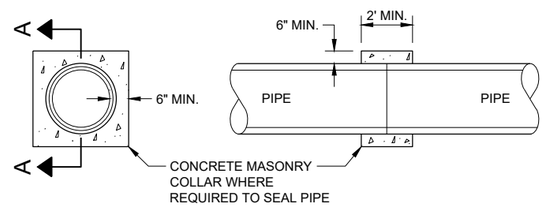
LONGITUDINAL SECTION

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

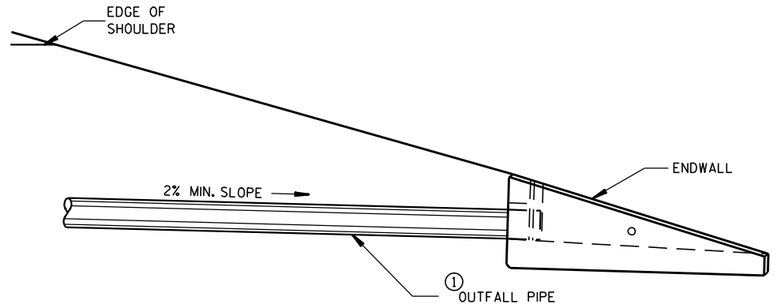
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

**APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION DETAIL

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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

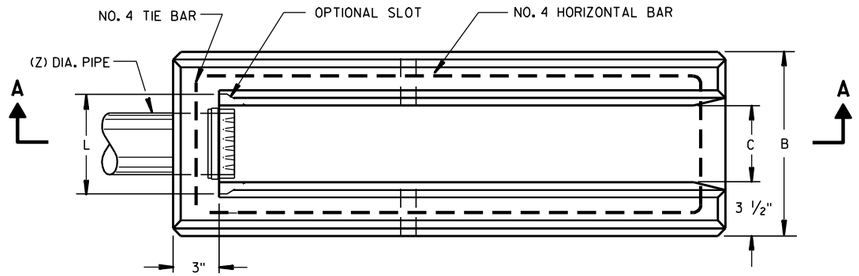
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

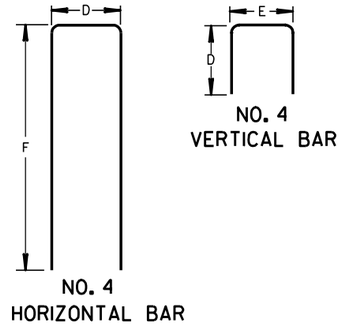
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

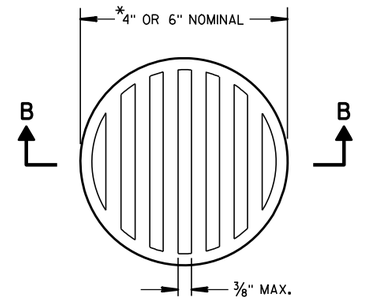
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



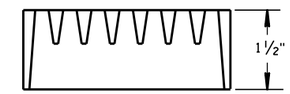
PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS



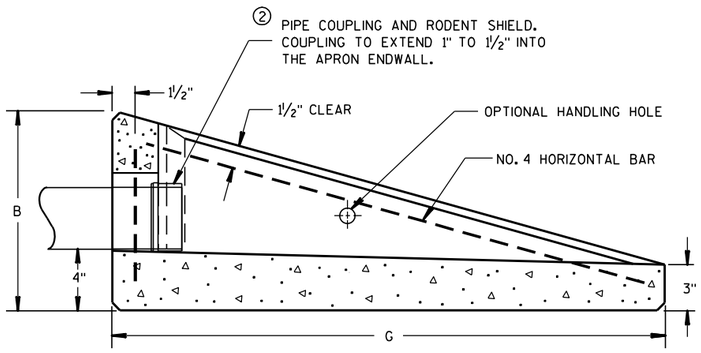
NOTE: ORIENT SHIELD SO SLOTS ARE VERTICAL.



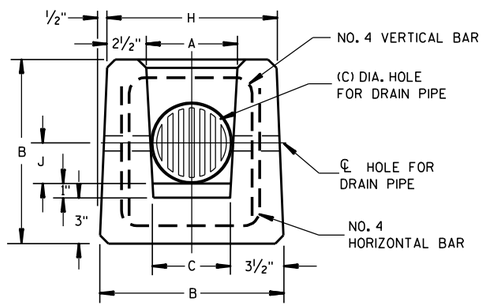
SECTION B-B

② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



SECTION A-A



END VIEW

CONCRETE APRON ENDWALL FOR UNDERDRAIN

REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

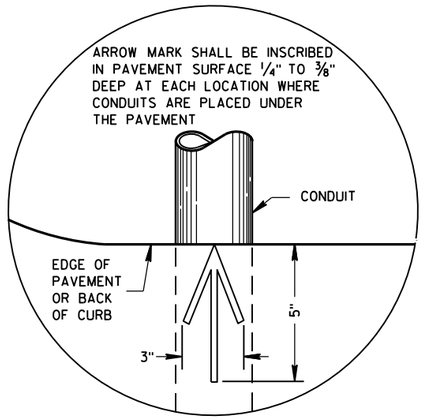
APPROVED
3/10/98 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 6-4

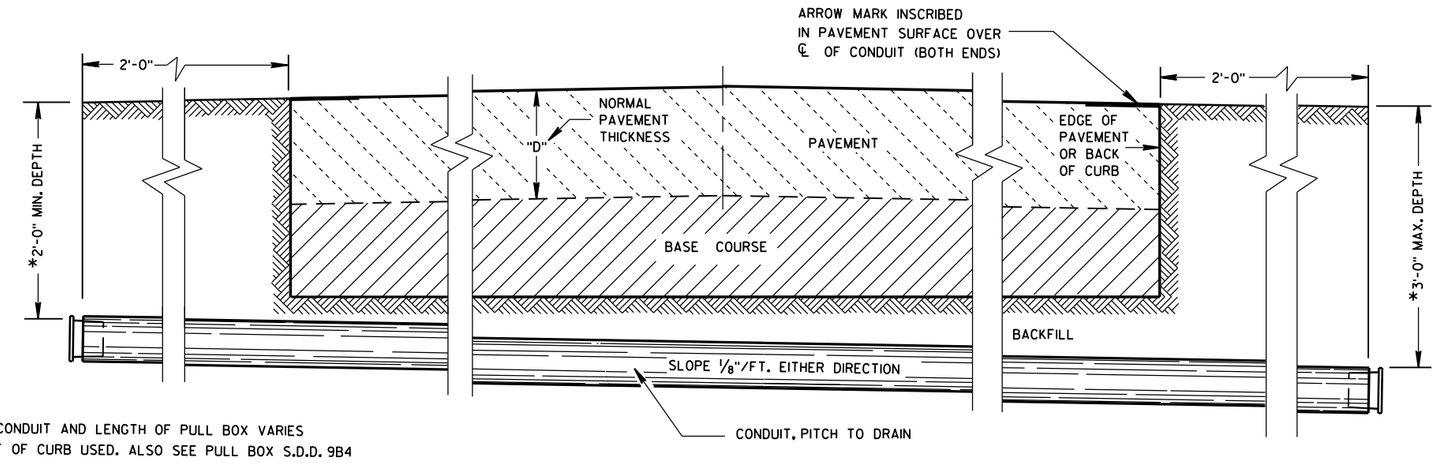
6

S.D.D. 8 F 6-4



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

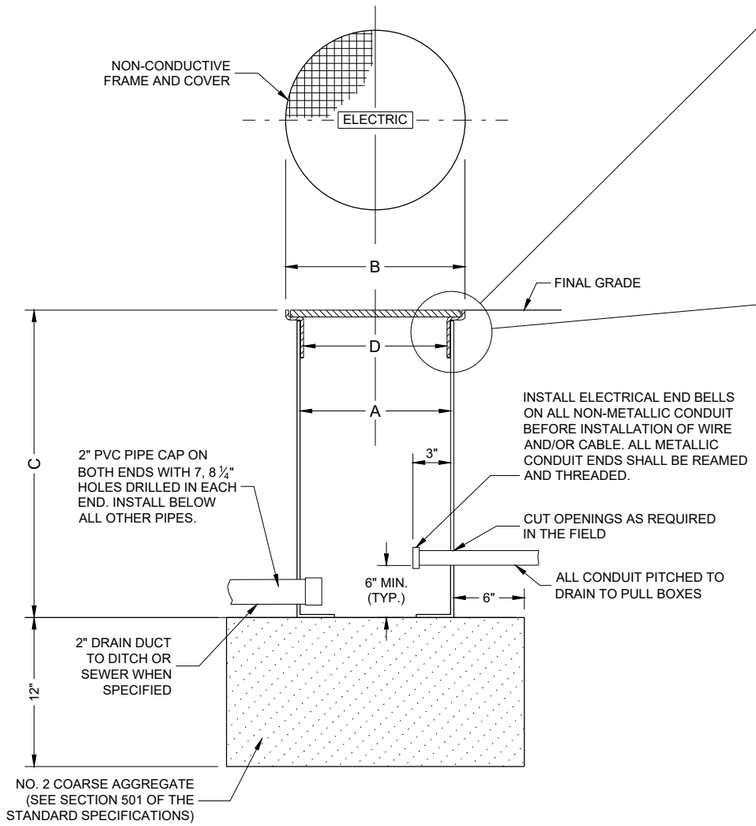
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

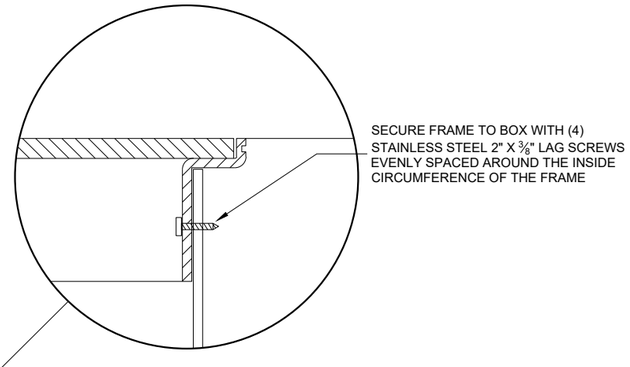
DIMENSION IN INCHES		NON- CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 ½	22 ½
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

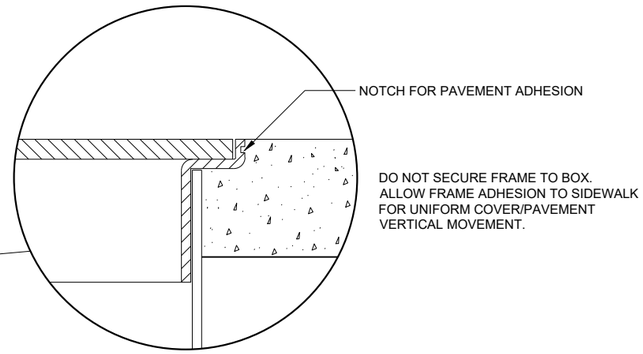
** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



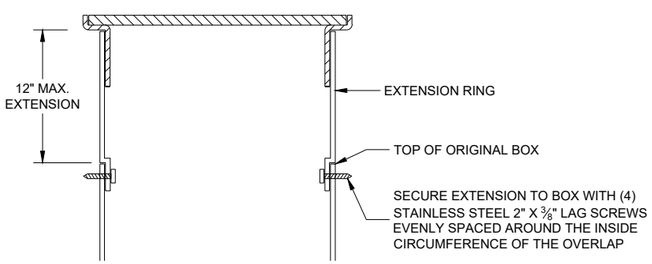
NON-CONDUCTIVE PULL BOX



INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



BOX EXTENSION

GENERAL NOTES

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN ½" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN ¼".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

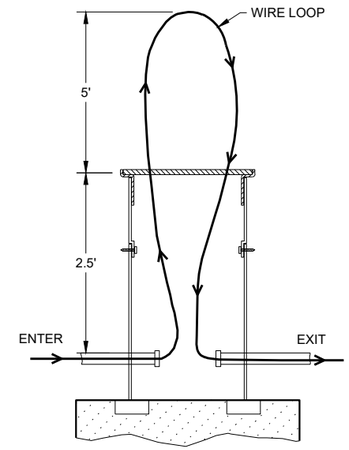
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

PULL BOXES NON-CONDUCTIVE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

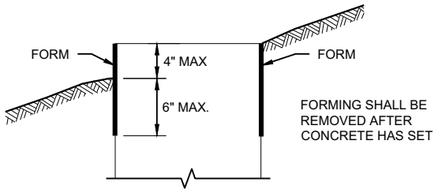
APPROVED
May 2022
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 303

FHWA

6
SDD 09B16 - 02

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWINGSHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FRO FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

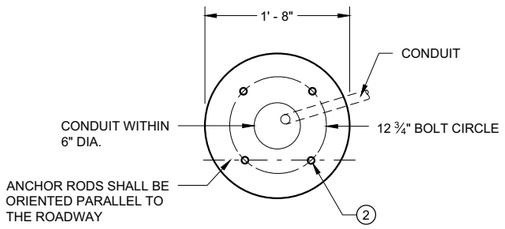
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

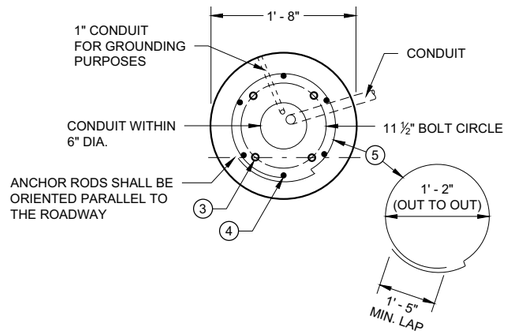
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

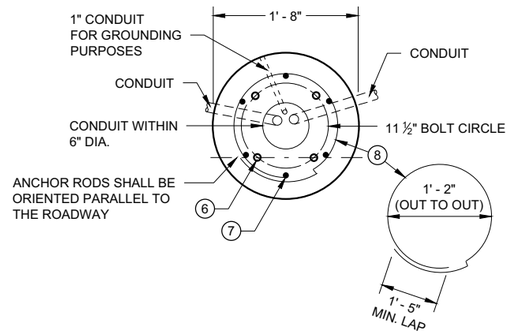
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).







1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.

4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.

5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.

6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.

8 (5) NO. 4 X 5' - 1" BAR STELL REINFORCEMENT @ 1' - 0" C -C.

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

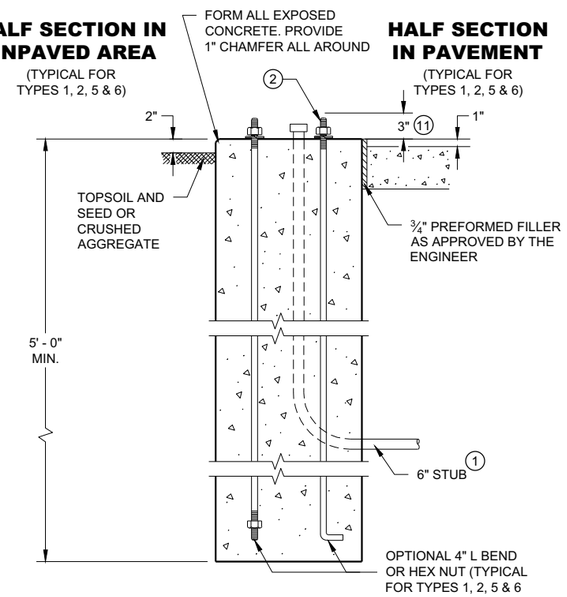
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

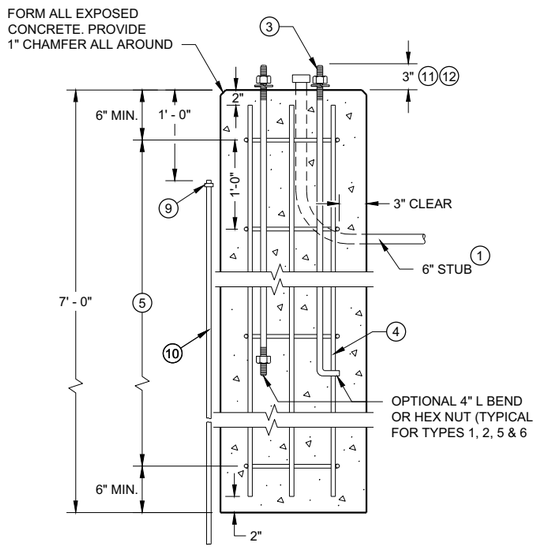
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

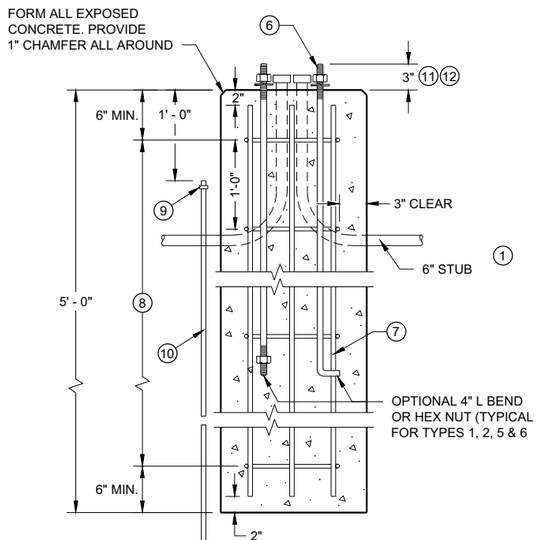
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

CONCRETE BASES TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGI
304

FHWA

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

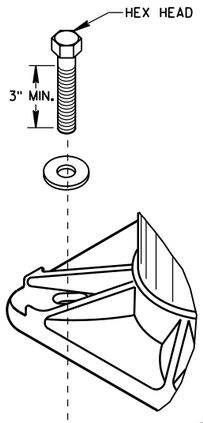
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

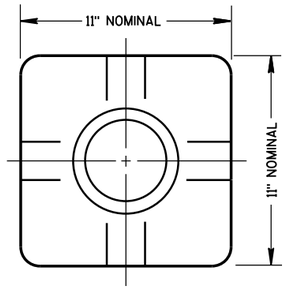
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

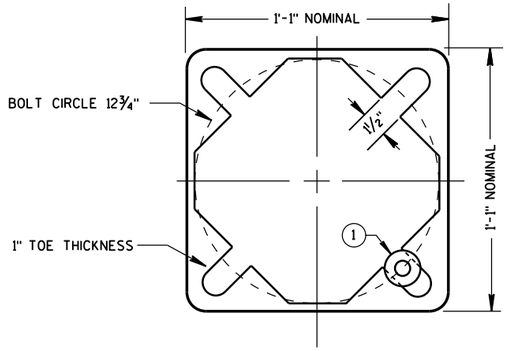
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

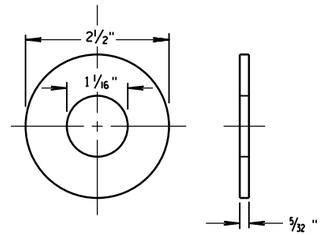




TOP VIEW
(PEDESTAL BASE)

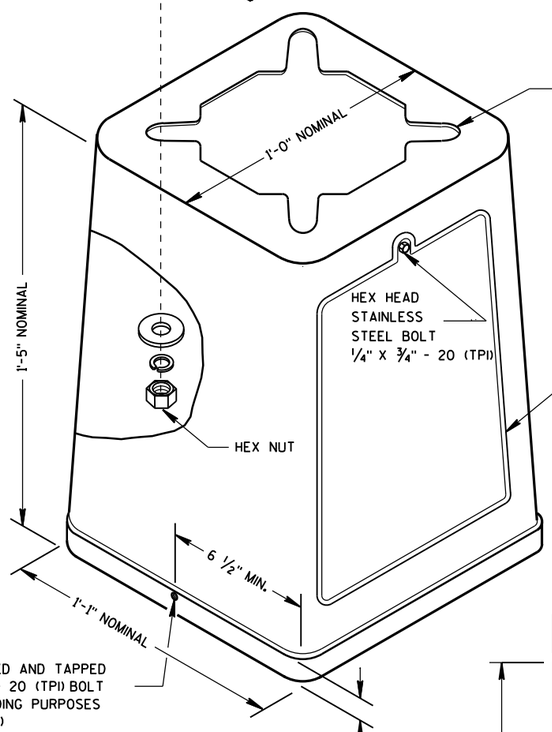


BOTTOM VIEW
(PEDESTAL BASE)

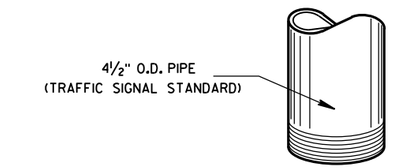


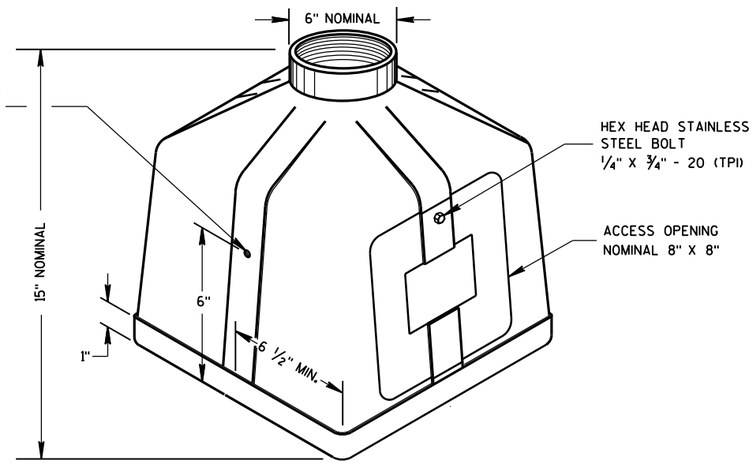
ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

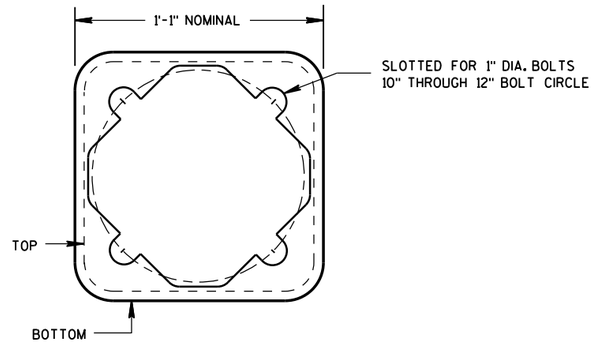


ISOMETRIC VIEW

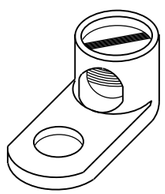




ISOMETRIC VIEW
PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

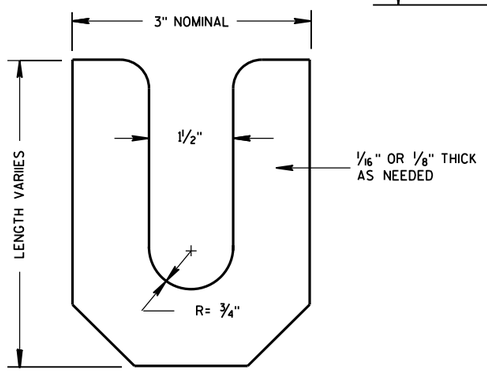


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

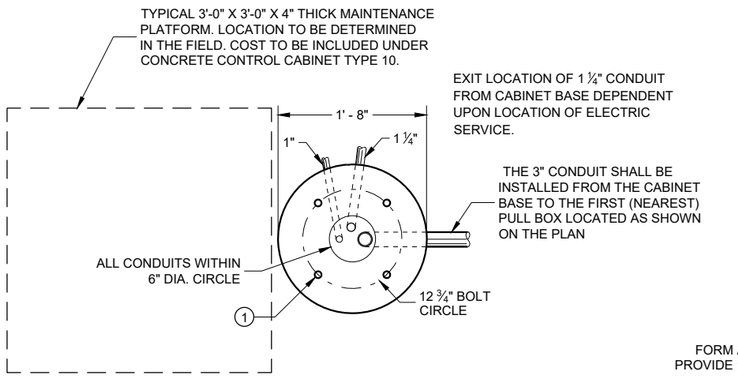
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

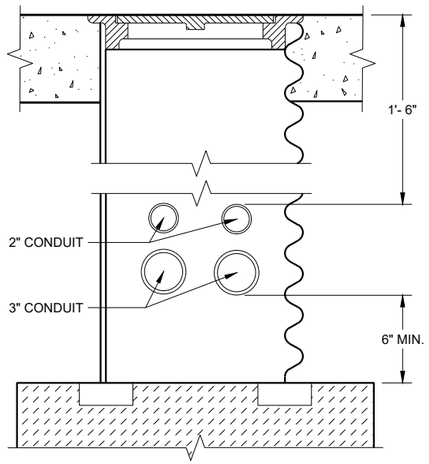
6

S.D.D. 9 C 3-4

CONTROL CABINET BASE TYPE	DIMENSIONS				CUBIC YARD CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.65*

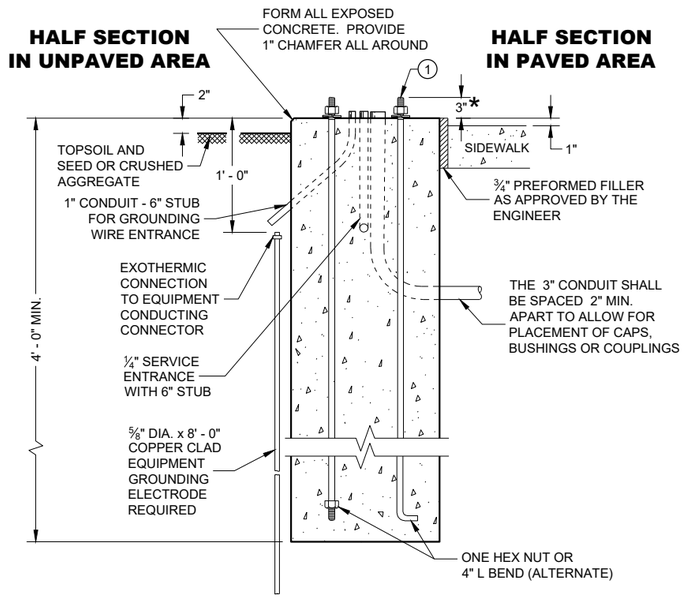
* INCLUDES MAINTENANCE PLATFORM.





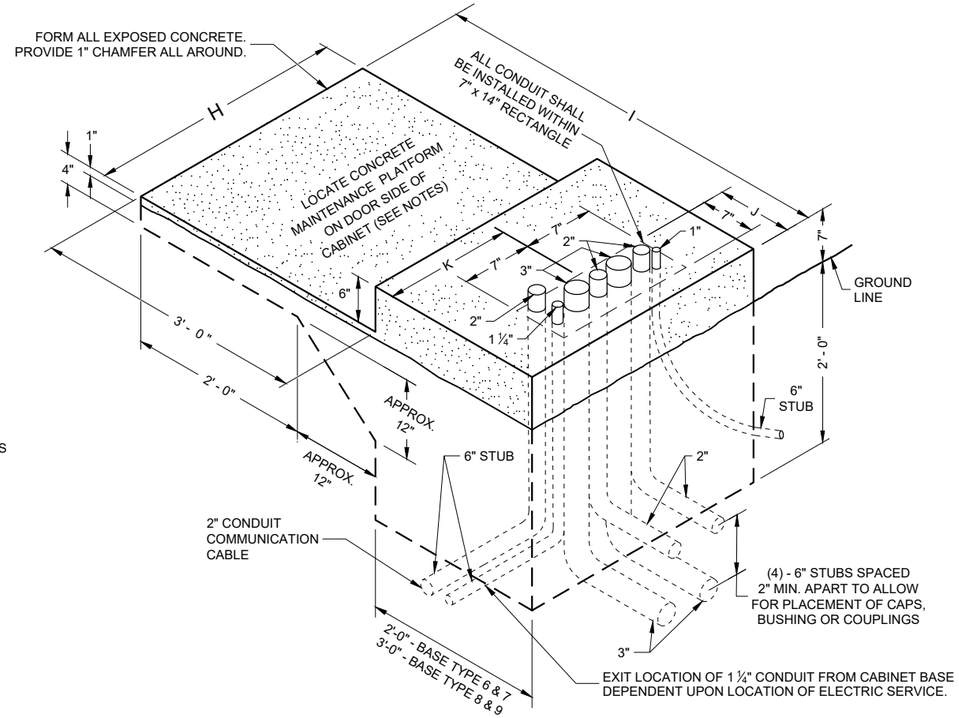
CONDUIT LOCATIONS IN 24" X 36" PULL BOX

(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)



TYPE 10

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.



ISOMETRIC VIEW
TYPE 6, 7, 8 AND 9

GENERAL NOTES

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

INSTALL FOUR (4) ½" INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NON - METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U. L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON - METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST PULL BOX LOCATED AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

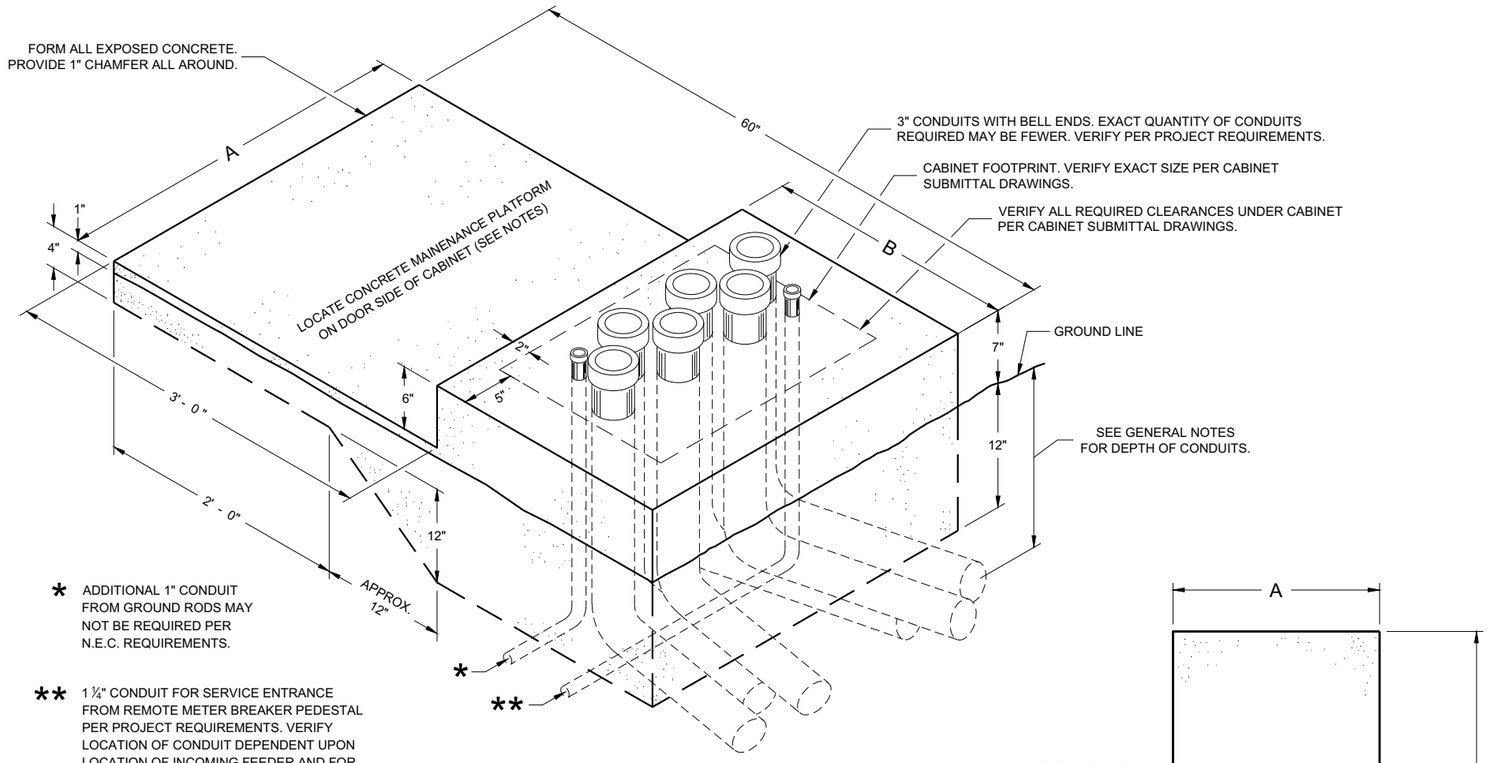
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1 :40 FROM VERTICAL.

(1) FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6". ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2 OF THE STANDARD SPECIFICATIONS.

CONCRETE CABINET CONTROL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2016
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI 306
FHWA



* ADDITIONAL 1" CONDUIT FROM GROUND RODS MAY NOT BE REQUIRED PER N.E.C. REQUIREMENTS.

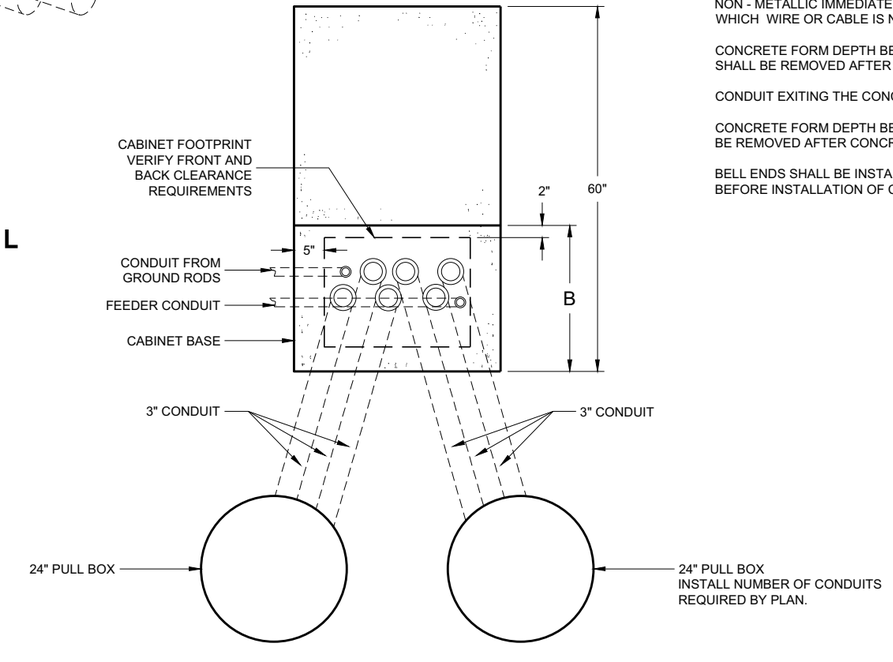
** 1 ¼" CONDUIT FOR SERVICE ENTRANCE FROM REMOTE METER BREAKER PEDESTAL PER PROJECT REQUIREMENTS. VERIFY LOCATION OF CONDUIT DEPENDENT UPON LOCATION OF INCOMING FEEDER AND FOR EASE OF CONNECTION TO LOAD CENTER.

ISOMETRIC VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

(C.Y. CONCRETE = APPROX. 0.4)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSIONS		MAXIMUM 3" CONDUITS
		A	B	
L24	24"	34"	24"	4
L30	30"	40"	24"	6



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

GENERAL NOTES

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

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NON - METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U. L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS UNLESS DETERMINED BY THE ENGINEER IN THE FIELD.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NON - METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON - METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCHES MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUIT EXITING THE CONCRETE BASE SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCH MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE L

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 307

FHWA

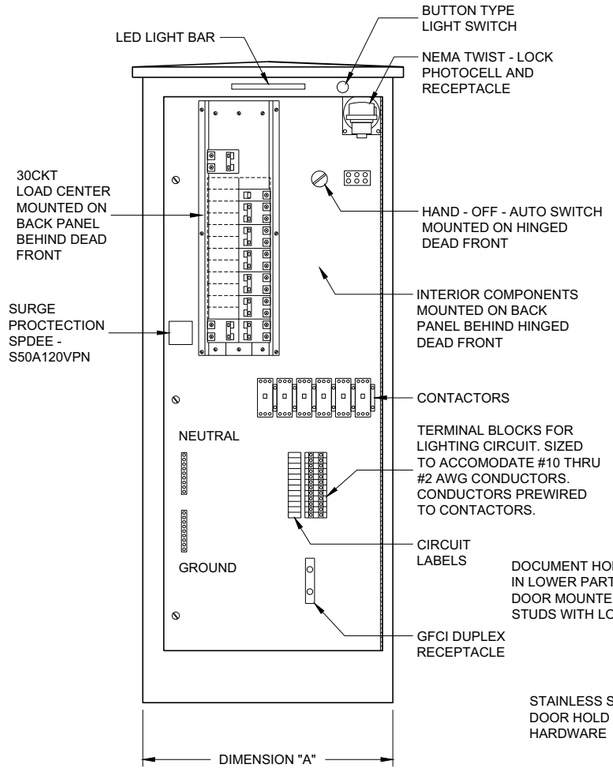
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SDD 09C14 - 03

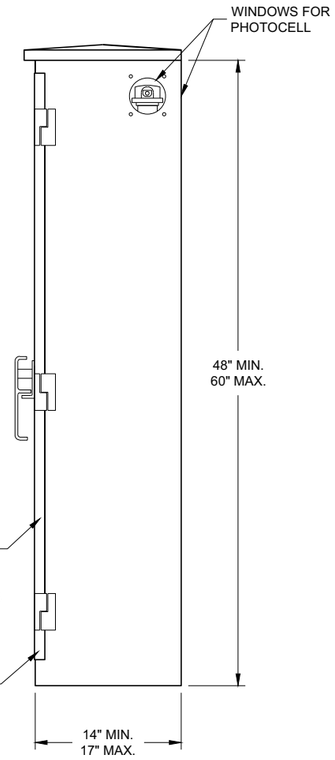
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SDD 09C14 - 03

FRONT INTERIOR ELEVATION



SIDE VIEW



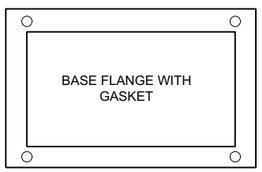
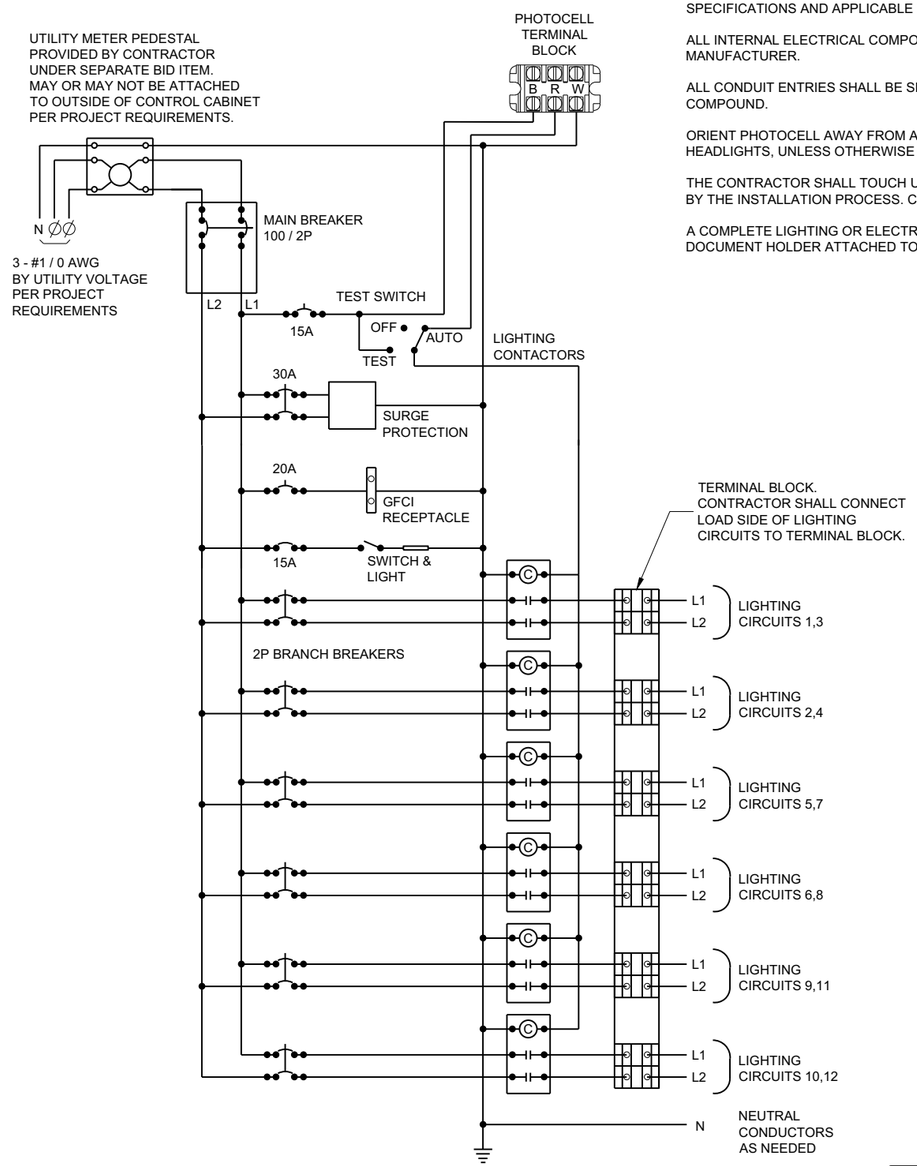


TABLE OF DIMENSIONS (INCHES)		
CONCRETE BASE TYPE	CABINET WIDTH	DIMENSION "A"
L24	24"	24"
L30	30"	30"

LIGHTING CONTROL CABINET



CONTROL CABINET SCHEMATIC

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.

ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE - WIRED BY THE CABINENT MANUFACTURER.

ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS, UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISION.

THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.

LIGHTING CONTROL CABINET
120 / 240 VOLT

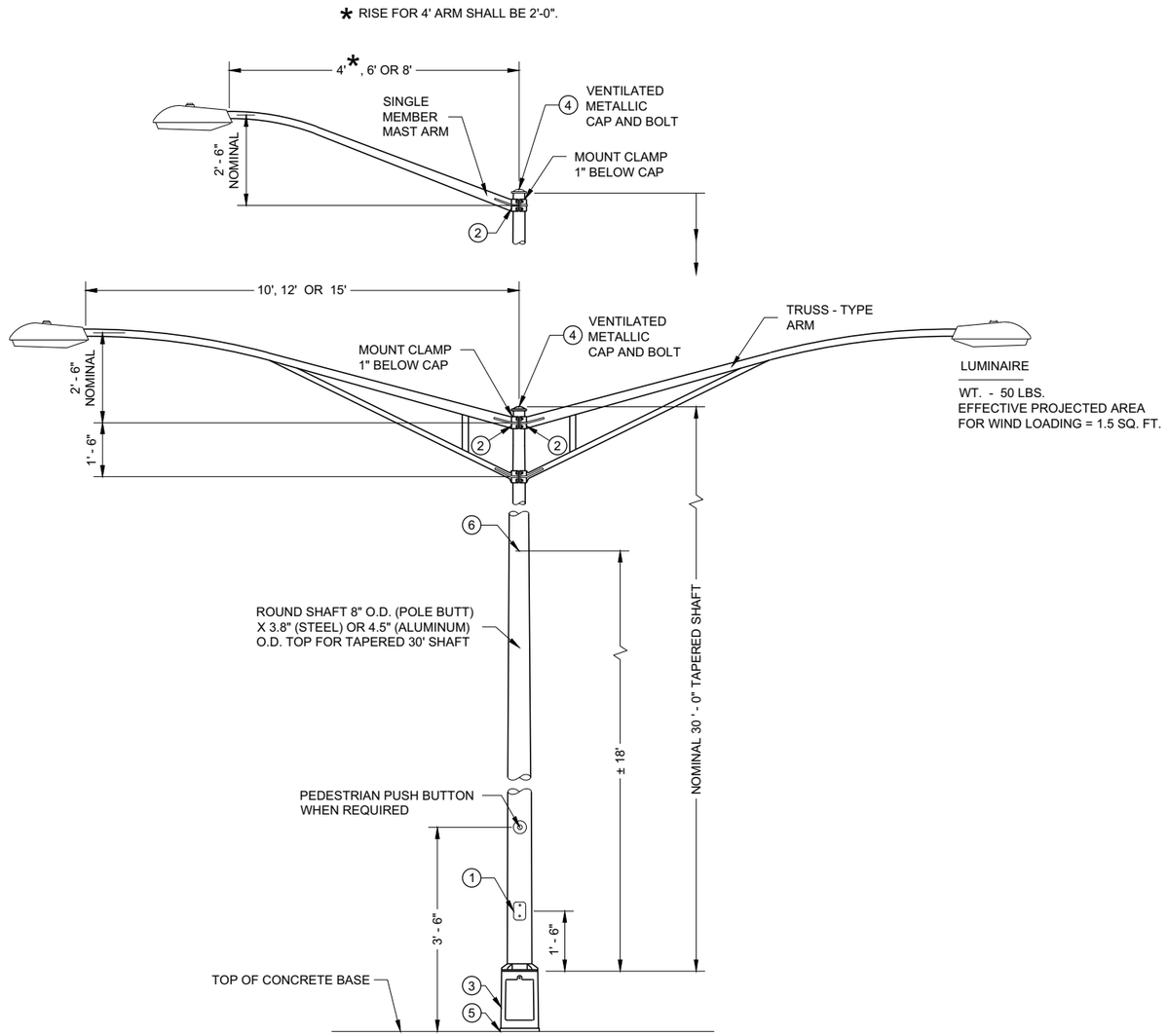
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 308

FHWA

6
SDD 09D04 - 03



TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY

GENERAL NOTES

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

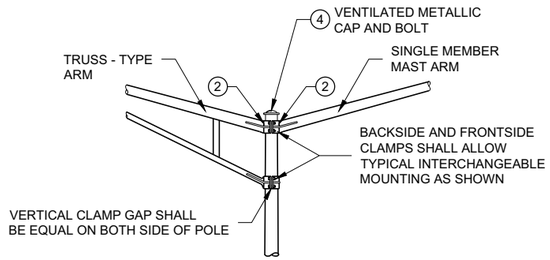
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(6) INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.

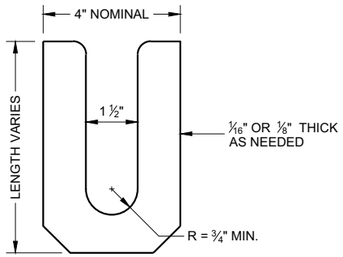


INTERCHANGEABLE MOUNTING DETAIL

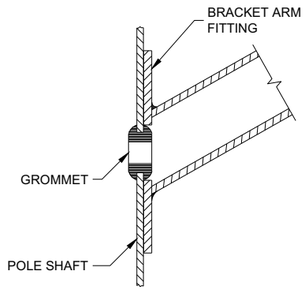
POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)

6

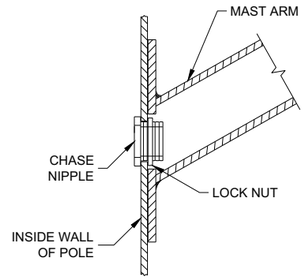
SDD 09E01 - 15d



LEVELING SHIM (1)
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

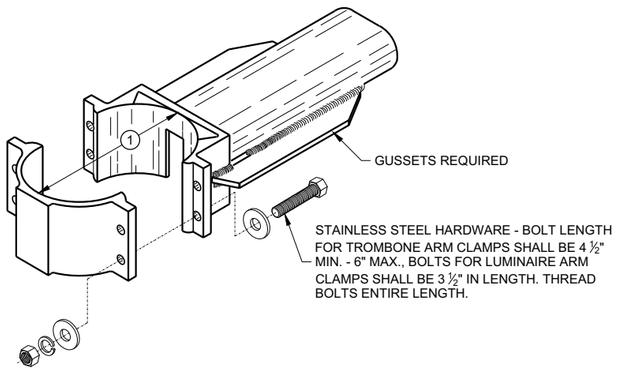
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(2) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

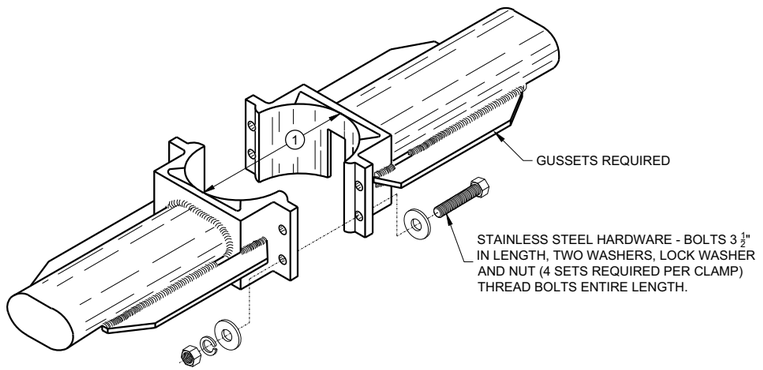
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(4) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

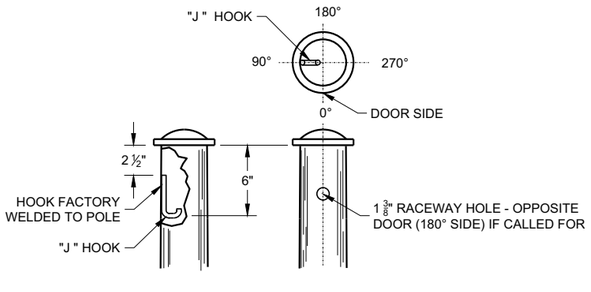
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



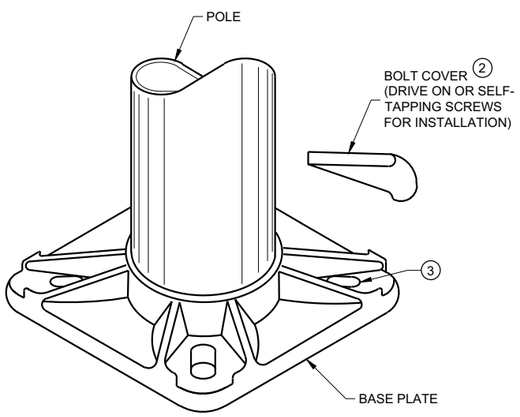
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



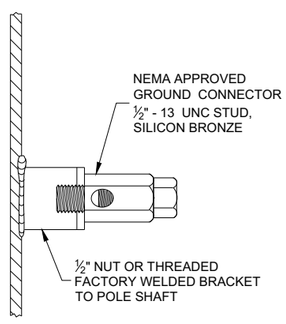
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

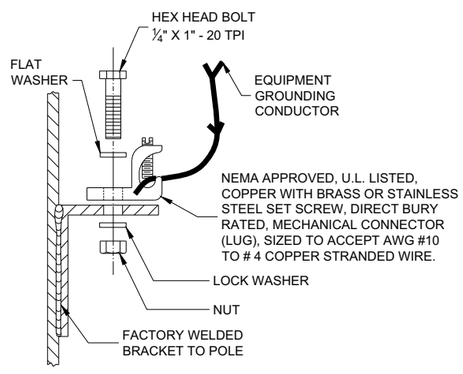


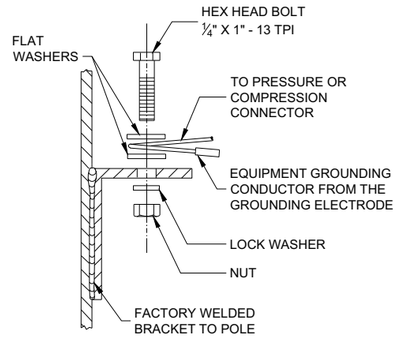
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

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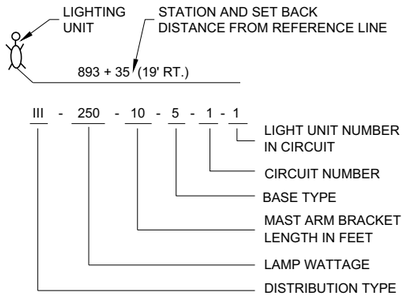
SDD09E01 - 15g

GENERAL NOTES

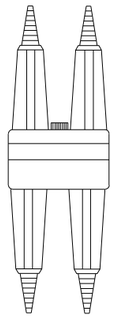
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

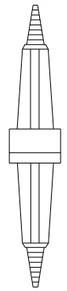
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



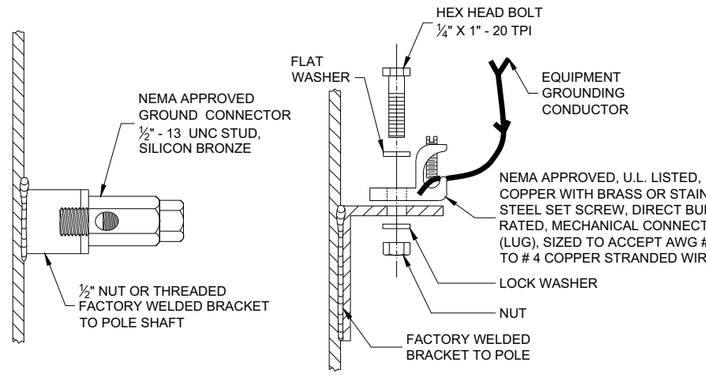
LIGHTING UNIT CODE
(TYPICAL)



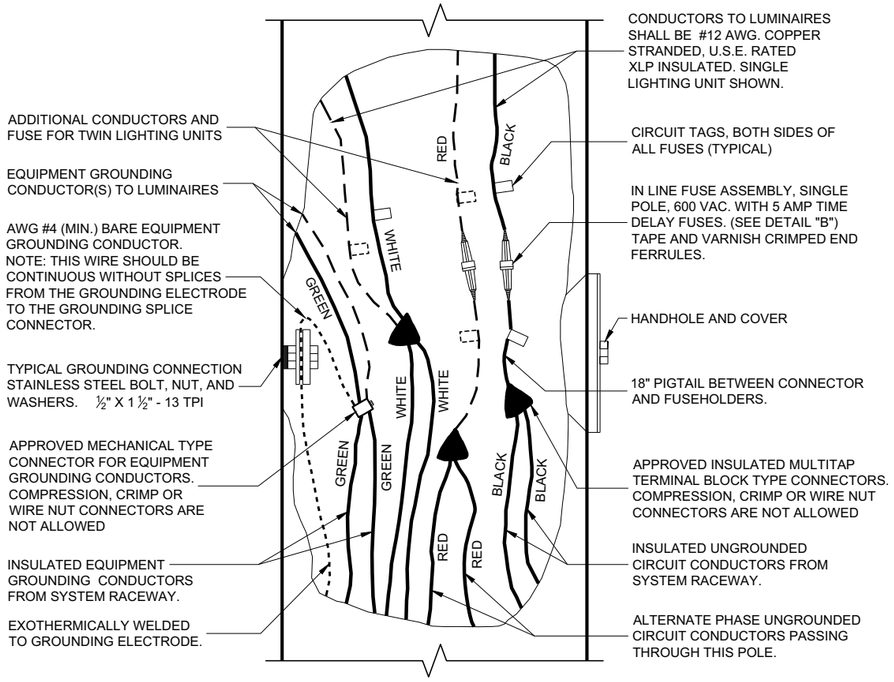
DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



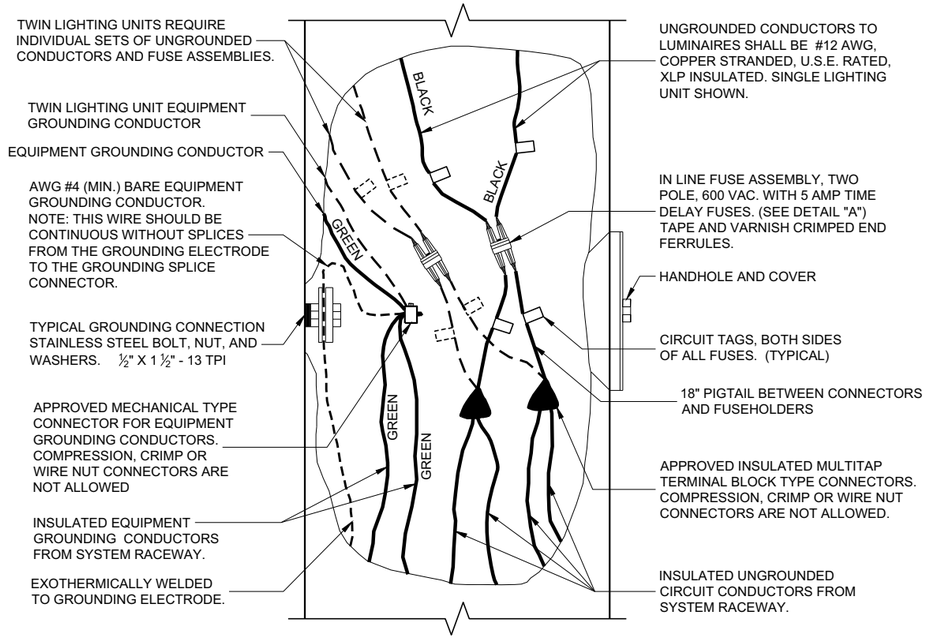
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR



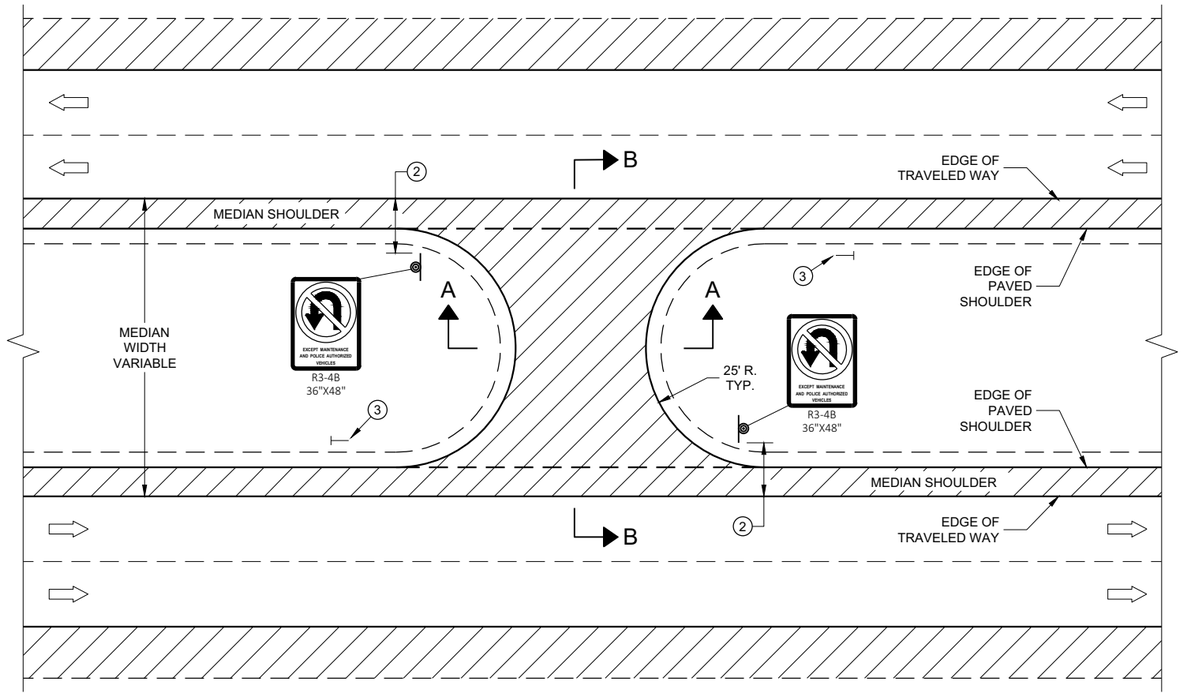
2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

NON - FREEWAY LIGHTING UNIT POLE WIRING

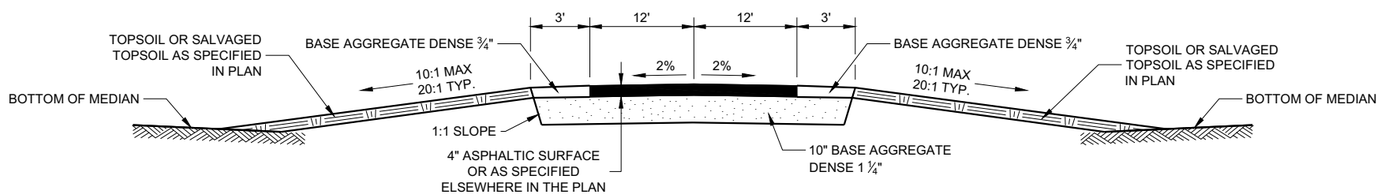
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 311

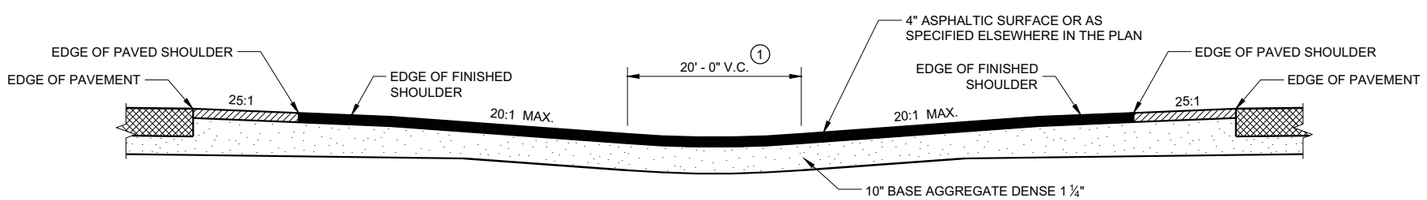
FHWA



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

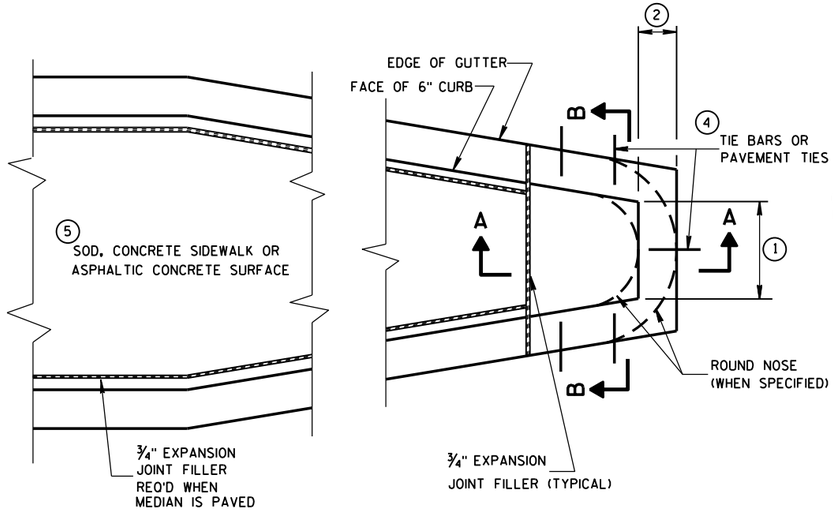
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

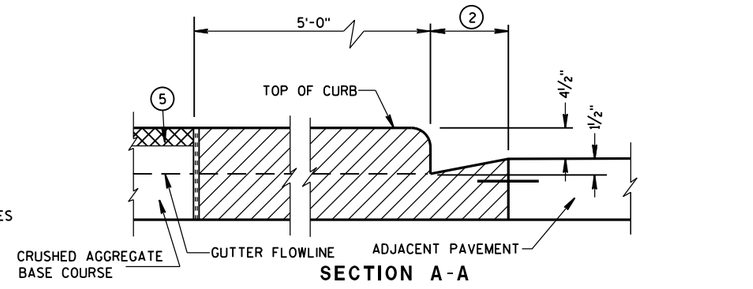
APPROVED
November 2019
DATE

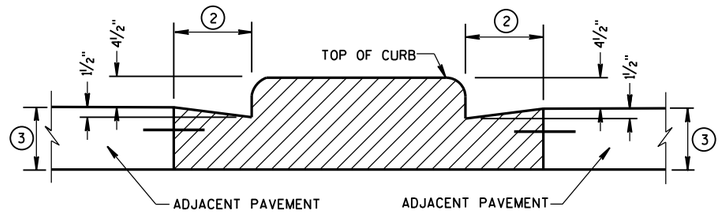
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD 11A01 - 06







CONCRETE MEDIAN BLUNT NOSE DETAIL

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) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

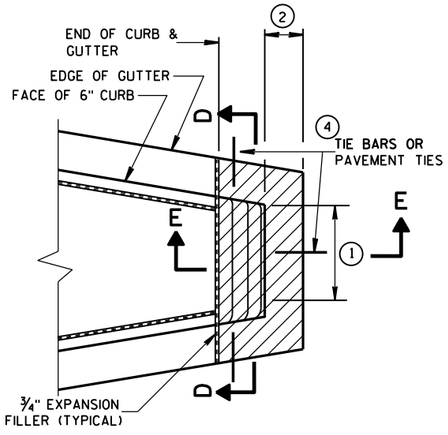
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

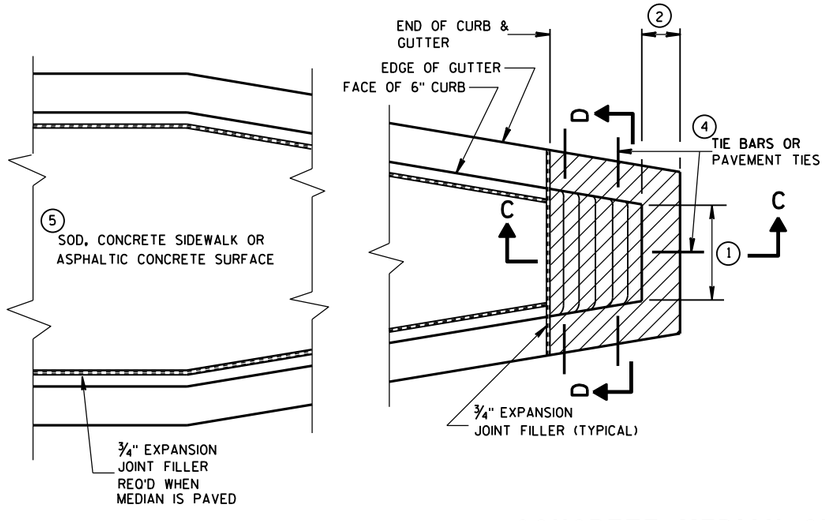
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

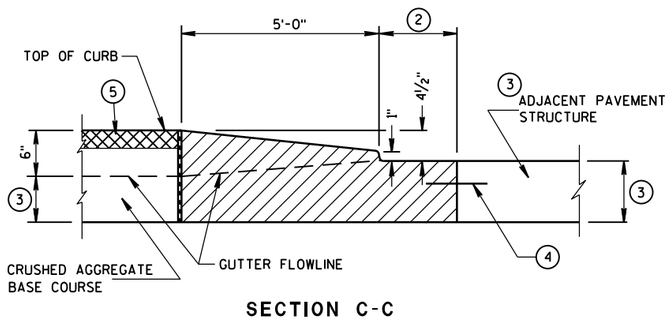
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

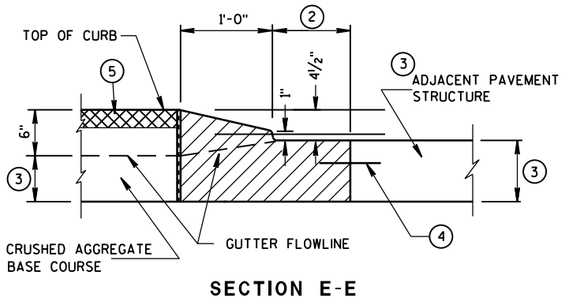
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



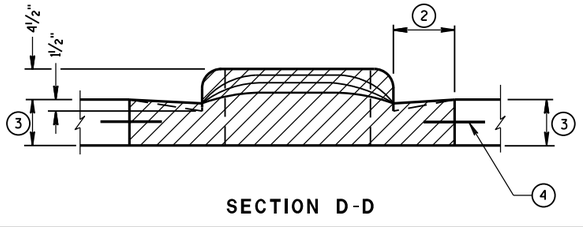




CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

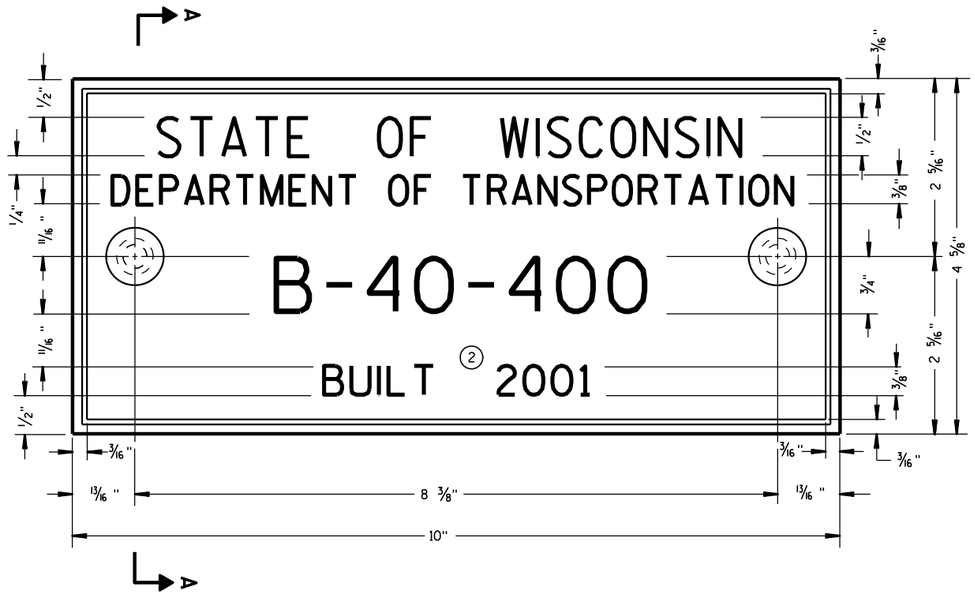
APPROVED
6/8/2006 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 11 B 2-2

6

S.D.D. 11 B 2-2



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

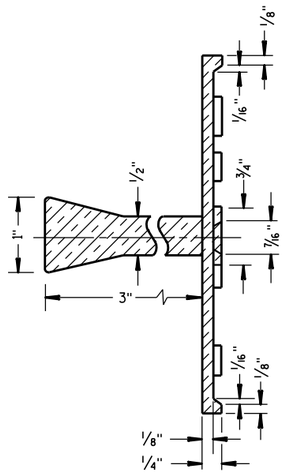
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

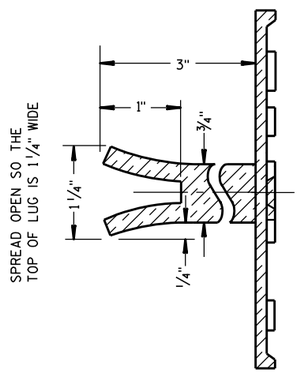
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

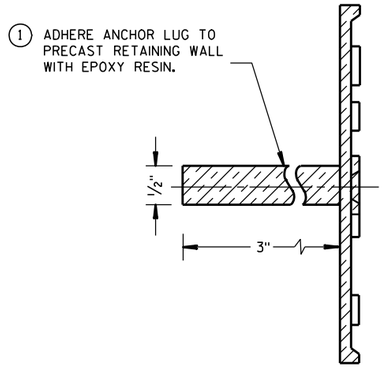
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

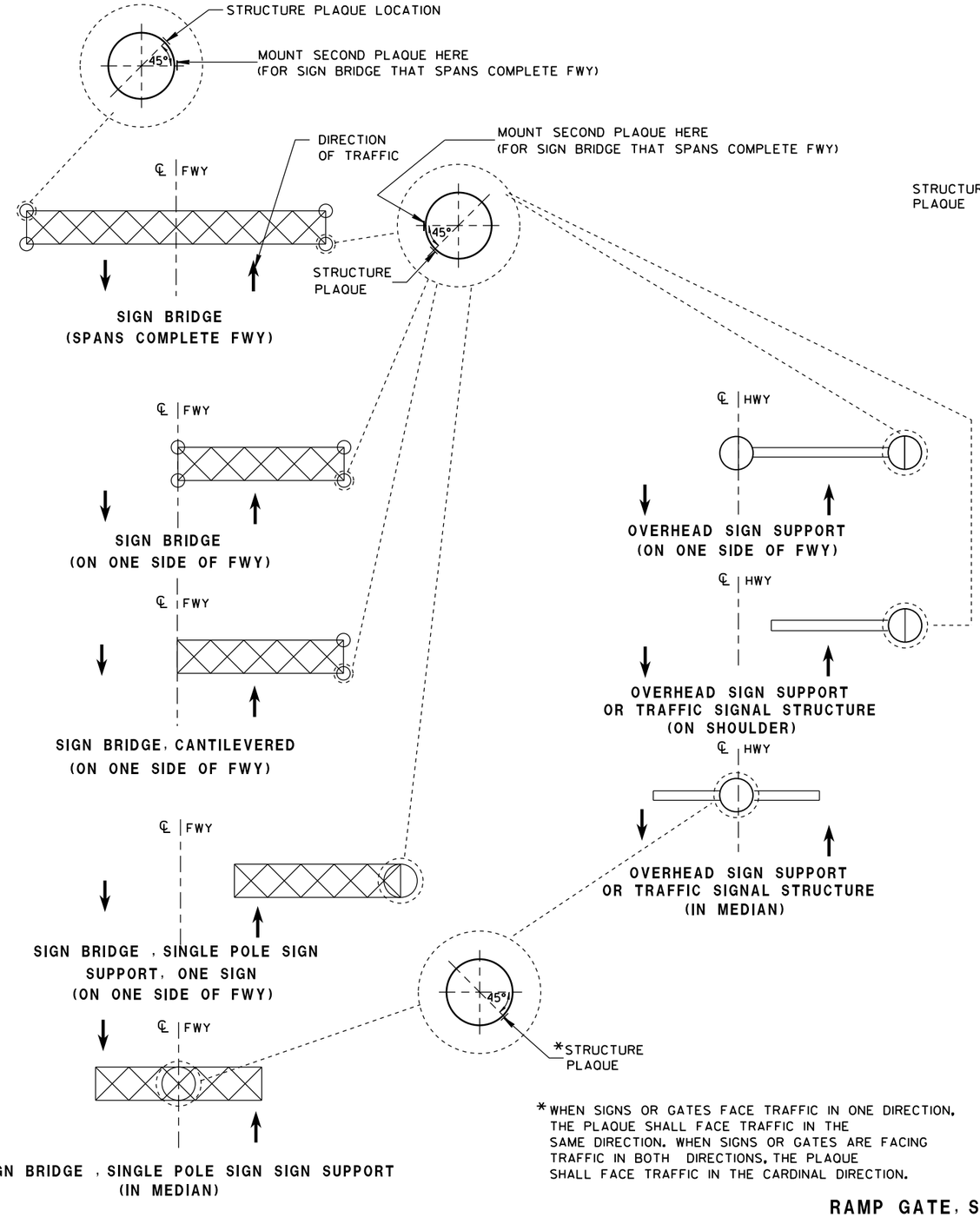
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

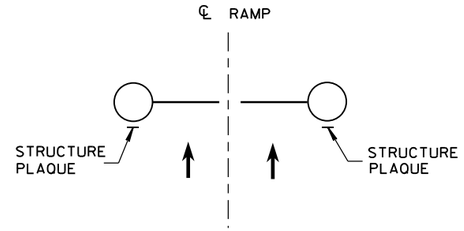
6

S.D.D. 12 A 3-10

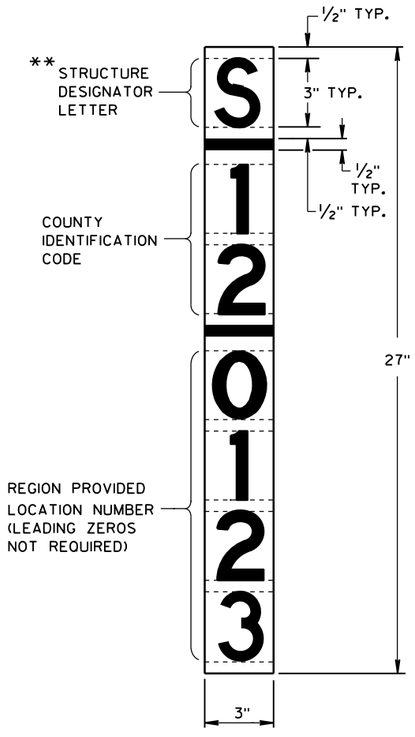


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

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



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.

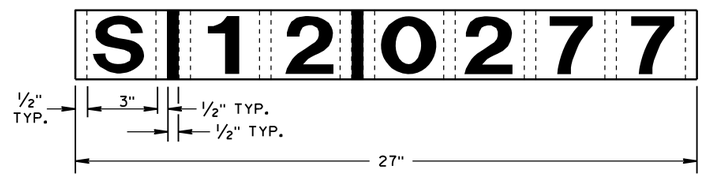
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

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

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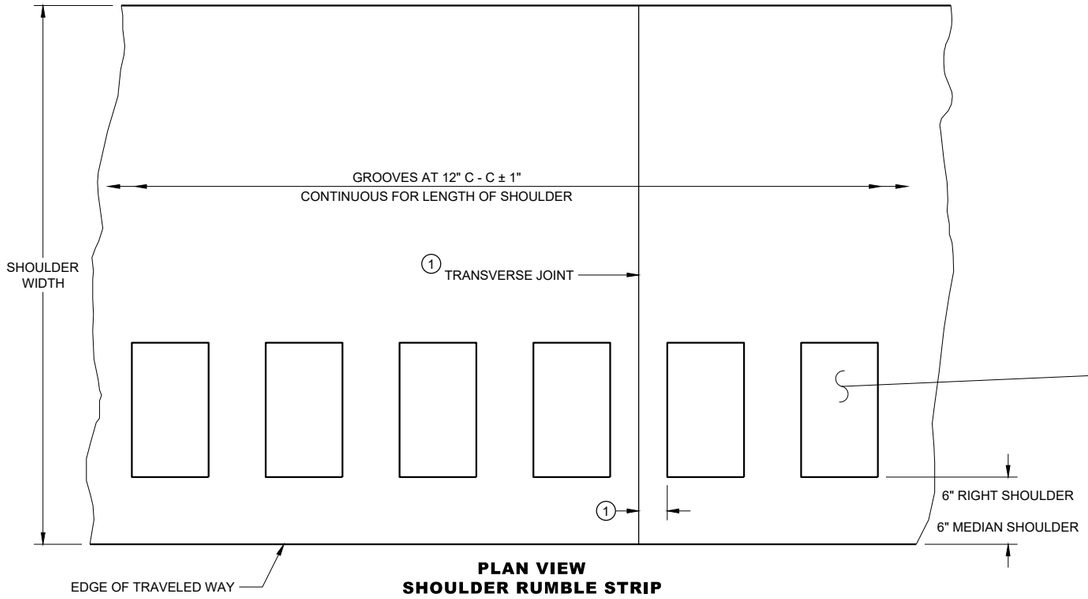
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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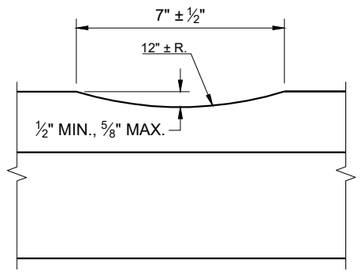
S.D.D. 12 A 4-3

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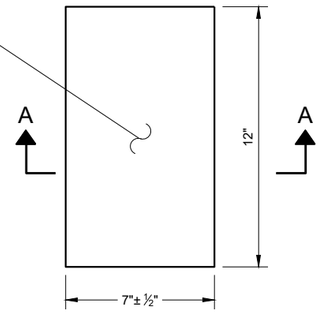
S.D.D. 12 A 4-3



PLAN VIEW
SHOULDER RUMBLE STRIP



SECTION A - A



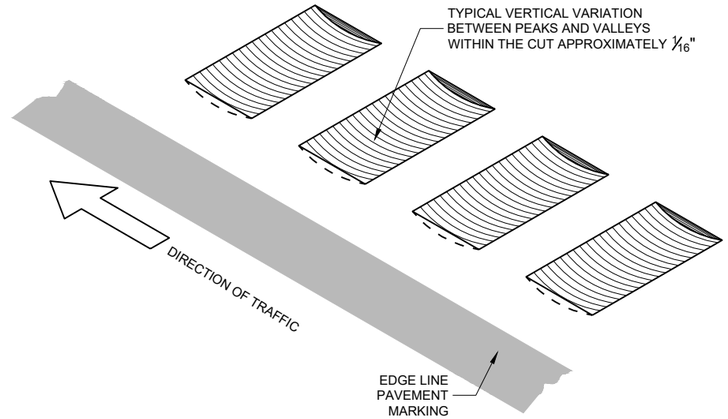
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

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

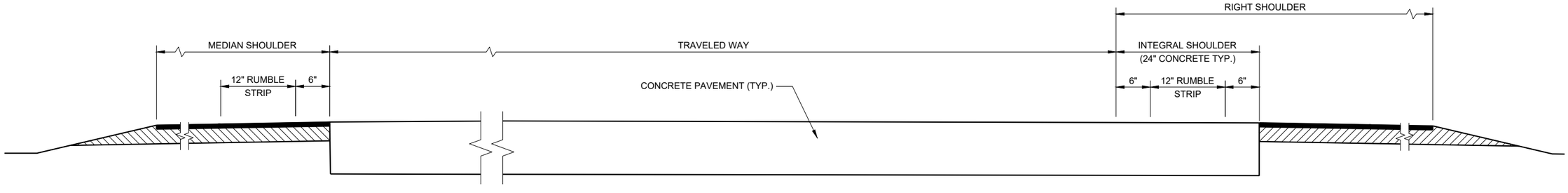
RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD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

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



ISOMETRIC

PLACEMENT DETAIL FOR RUMBLE STRIP



SECTION VIEW

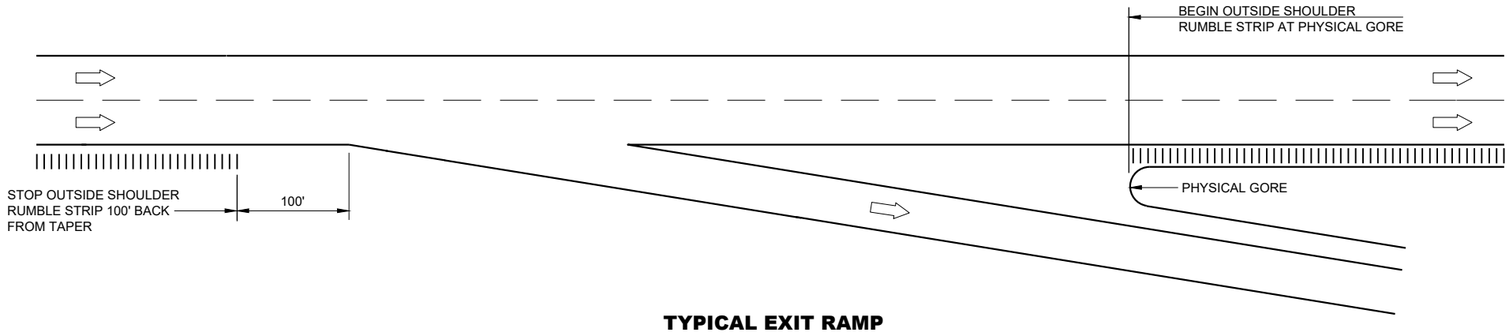
TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

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6

SDD 13A05-06a



TYPICAL EXIT RAMP

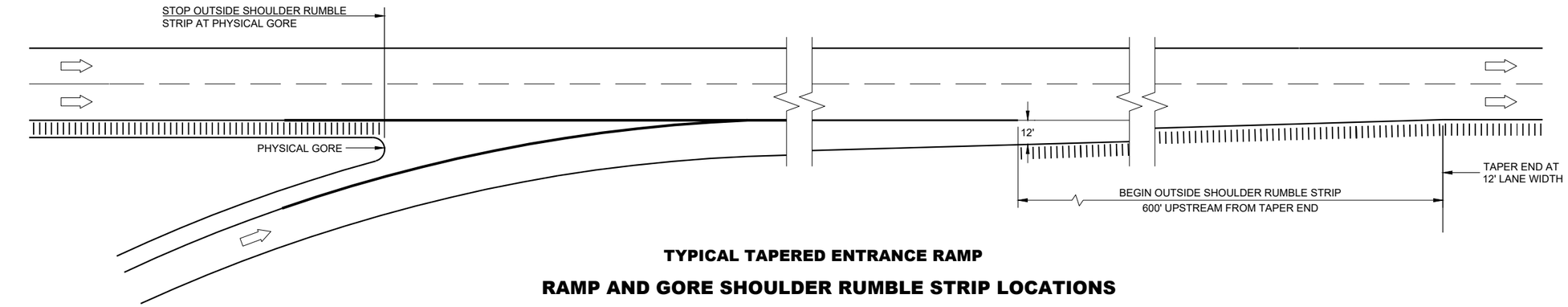
GENERAL NOTES

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

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

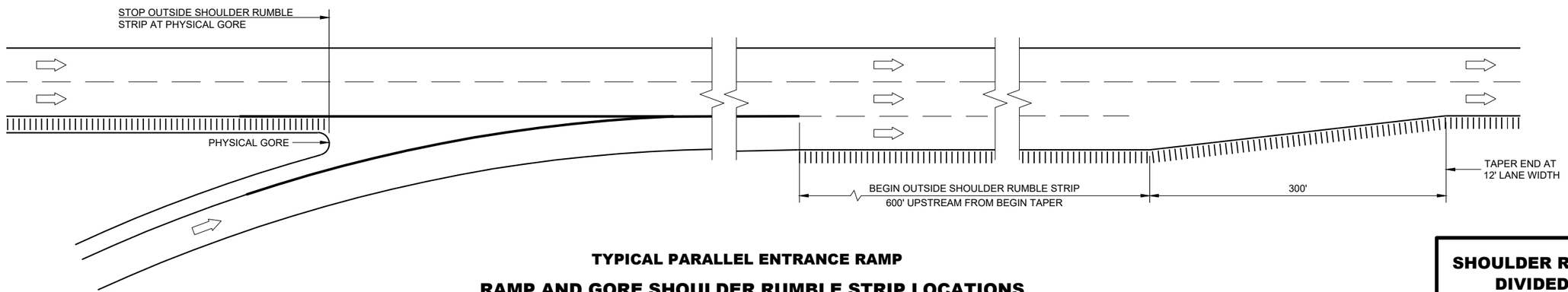
LEGEND

DIRECTION OF TRAFFIC



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

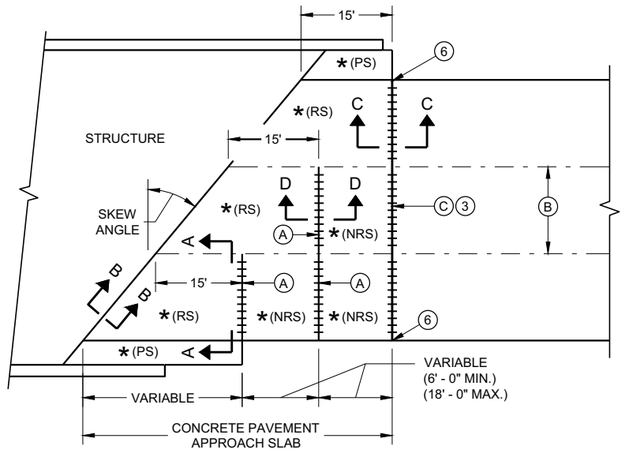
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APPROVED
May 2023
DATE

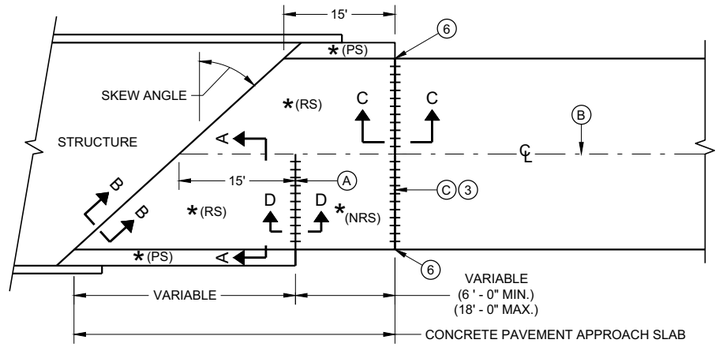
/S/ Rodney Taylor
ROADWAY DESIGN STANDARDS
UNIT SUPERVISOR

FHWA

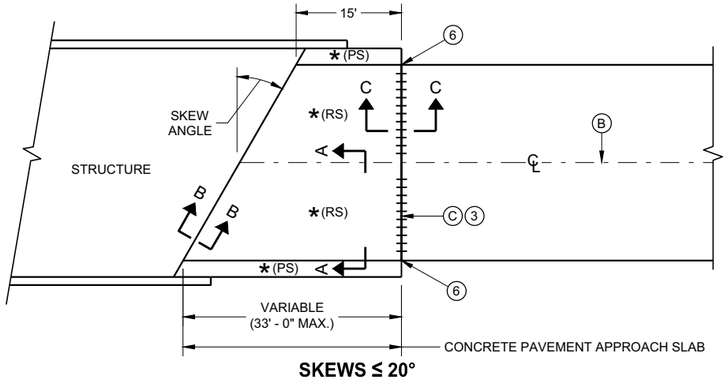
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SDD 13A05-06b



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

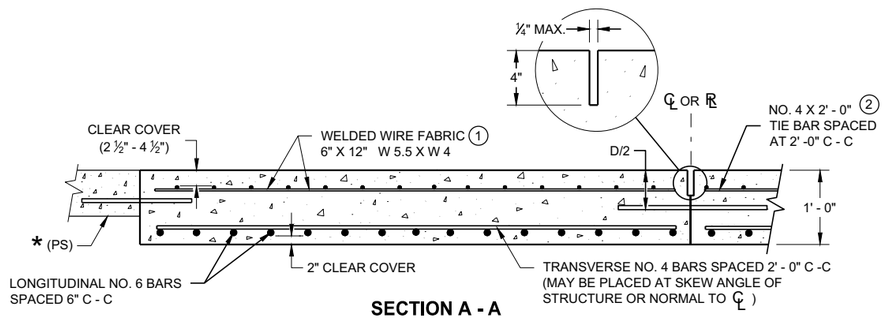
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

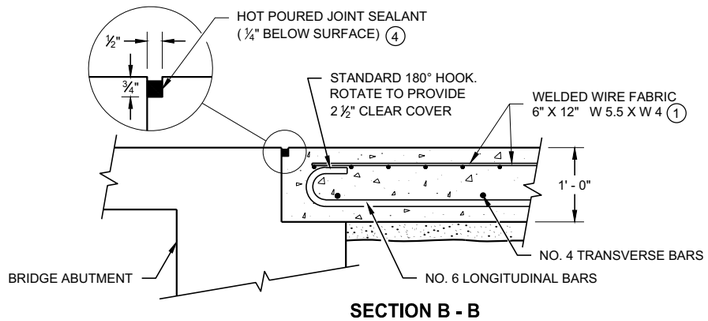
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

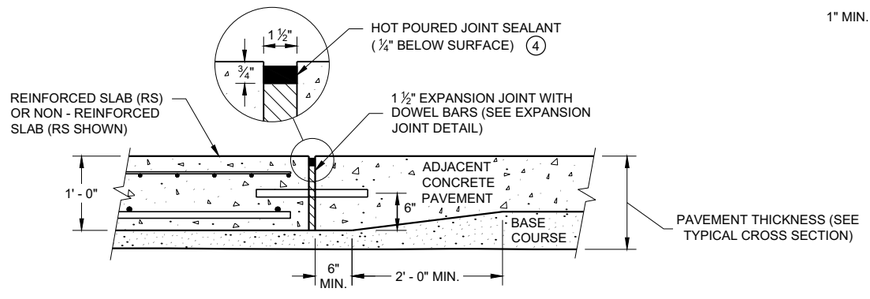
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

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

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

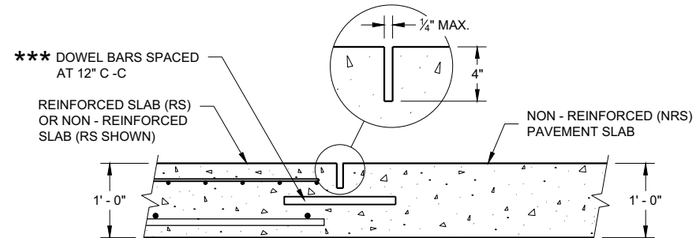
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

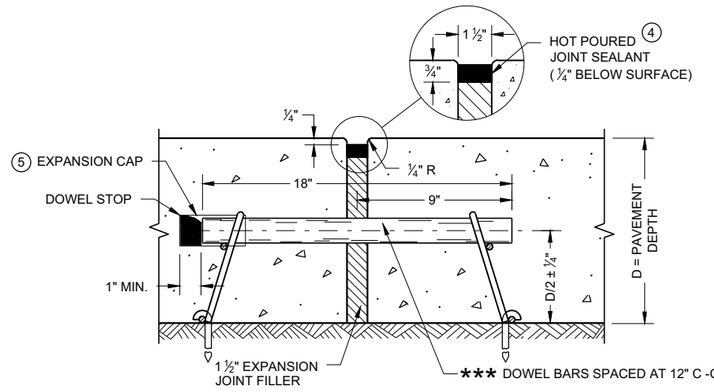
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
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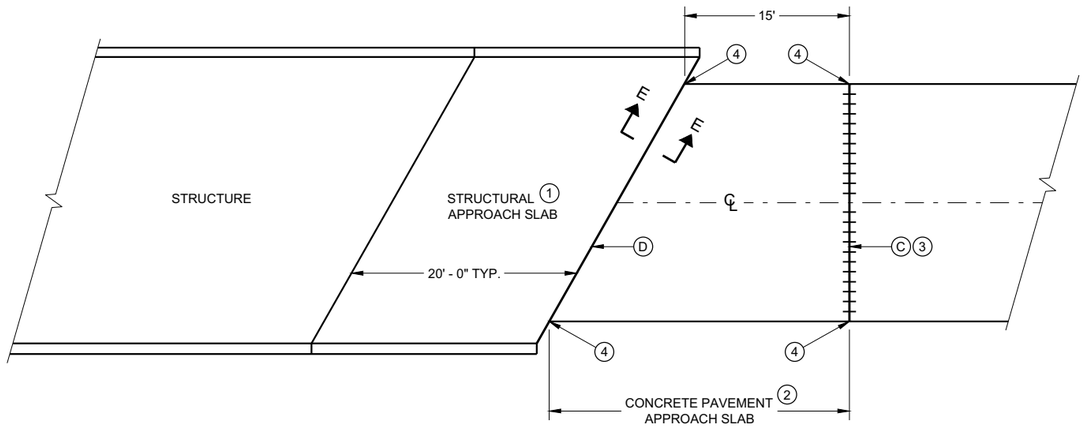
APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

FHWA

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SDD 13B02 - 09a



BRIDGE APPROACHES

GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

(1) SEE BRIDGE PLAN.

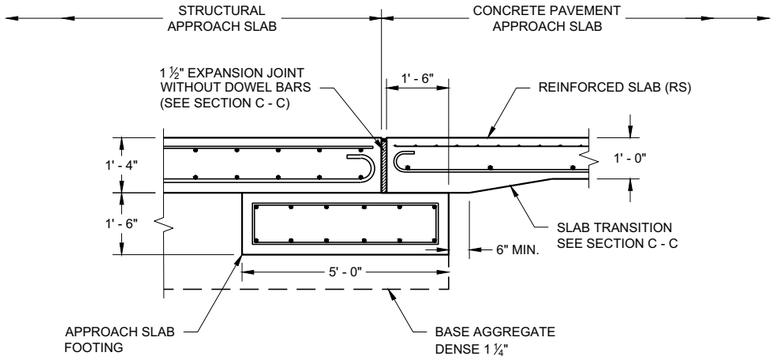
(2) CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS

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

(4) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞.

(D) 1 ½" EXPANSION JOINT (NO DOWELS)



SECTION E - E
FOOTING DETAIL
STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

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November 2018
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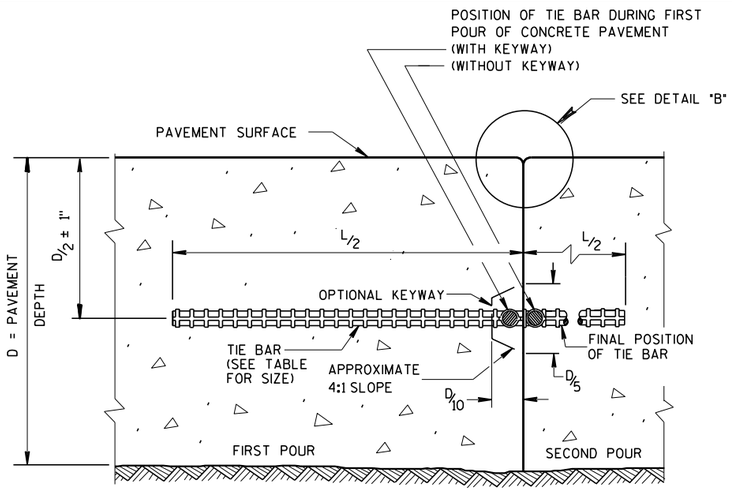
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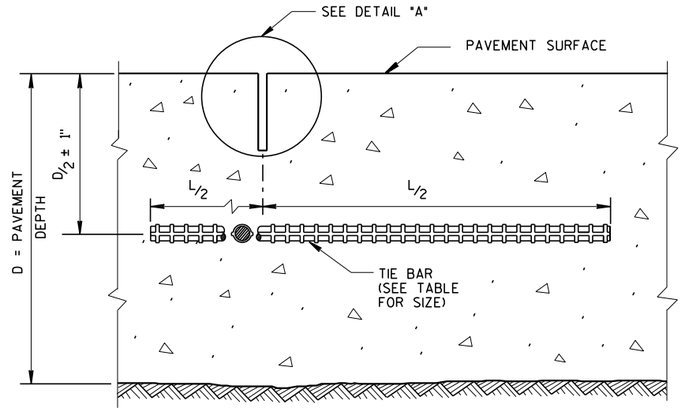
SDD 13B02 - 09b

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SDD 13B02 - 09b



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

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APPROVED
March 2018
DATE
/S/ Peter Kemp PE
PAVEMENT SUPE

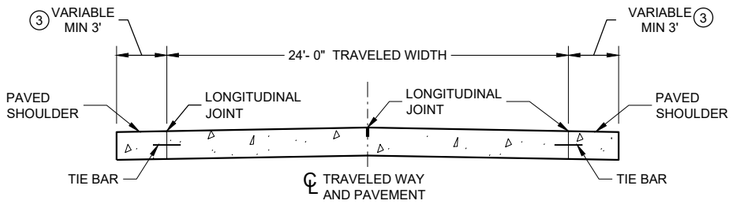
FHWA

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S.D.D. 13 C 1-19

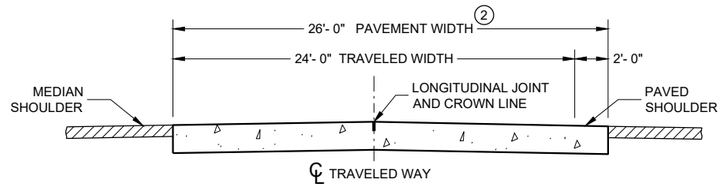
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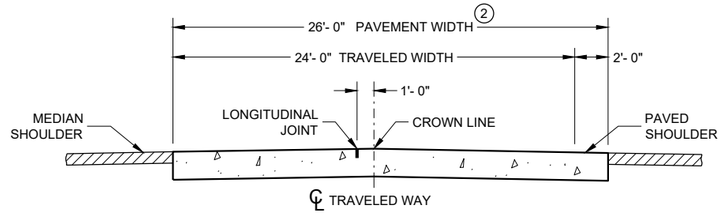


SECTION A - A

TWO-LANE TWO-WAY HIGHWAY (1)



SECTION B - B



ALTERNATIVE SECTION B - B

DIVIDED HIGHWAY (1)

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES FROM AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

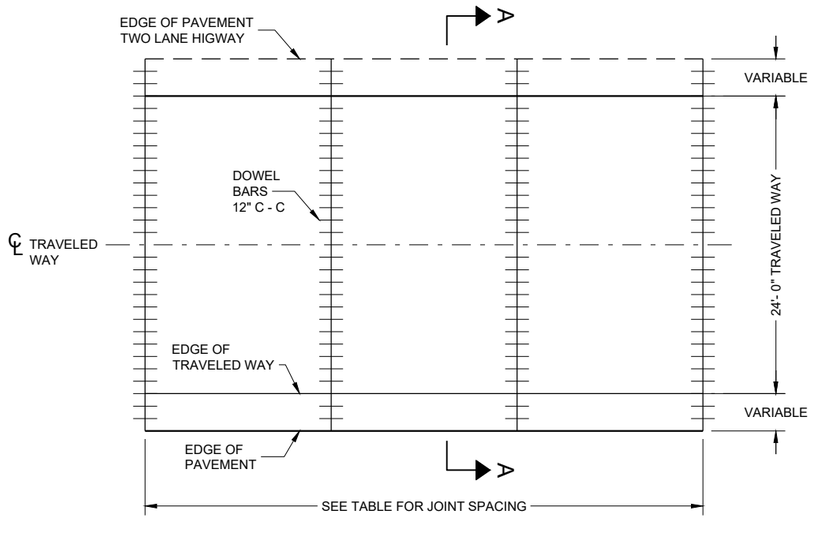
(1) REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

(2) MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED "PAVED SHOULDER" AS CONCRETE PAVEMENT.

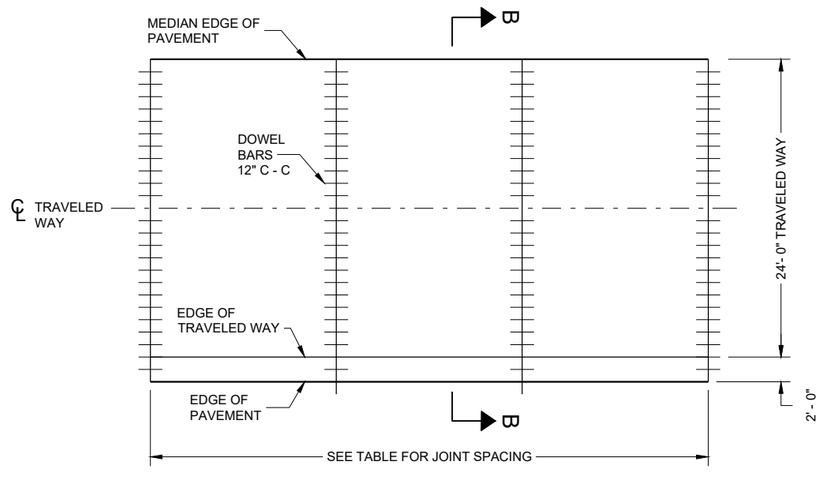
(3) SHOULDER WIDTHS LESS THAN 3 FEET SHALL BE PAVED INTEGRAL TO THE MAINLINE CONCRETE PAVEMENT, SEE SECTION B-B.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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



CONTRACTION JOINT LAYOUT FOR TWO-LANE TWO-WAY HIGHWAY



CONTRACTION JOINT LAYOUT FOR DIVIDED HIGHWAY

RURAL DOWELED CONCRETE PAVEMENT

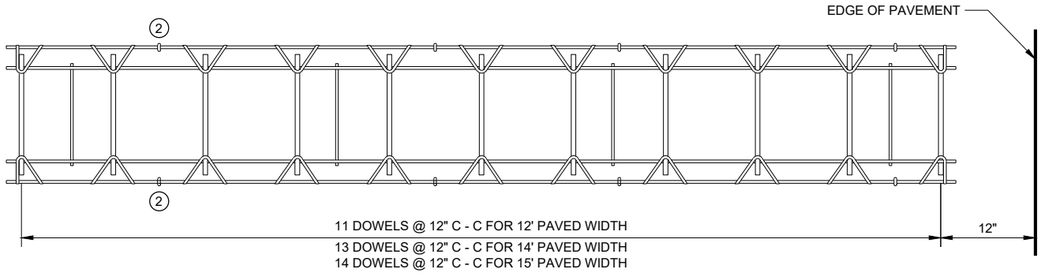
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 13C11 - 14a

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SDD13C11 - 14a



PLAN VIEW



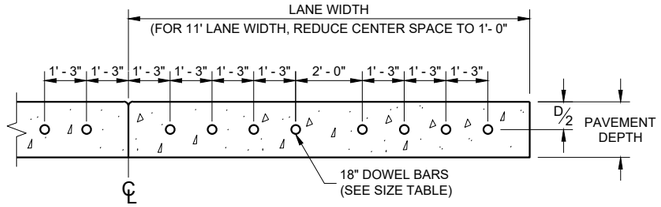
SIDE VIEW

(NORMAL TO CENTERLINE)

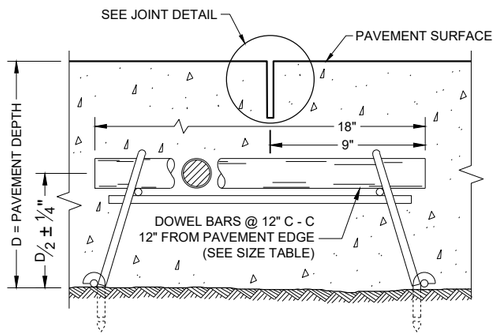
CONTRACTION JOINT DOWEL ASSEMBLY (1)

GENERAL NOTES

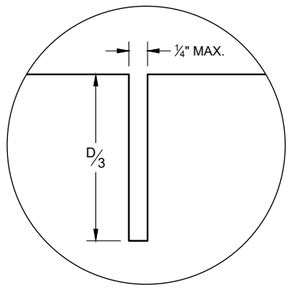
1. OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION CONTRACTION JOINTS.
2. SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
3. FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼" RADIUS AT FORMED JOINTS.
4. PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
5. INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C - C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO THE "DRILLED DOWEL BAR CONSTRUCTION JOINT" DETAIL.
6. APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
7. ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



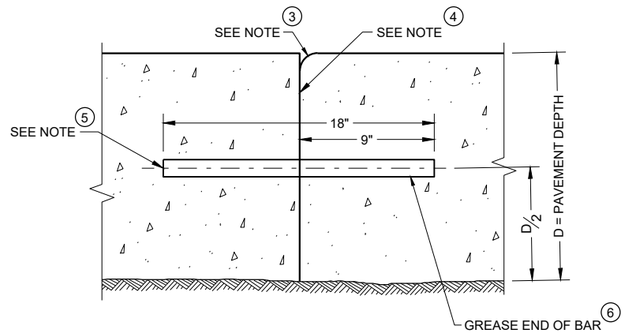
DRILLED DOWEL BAR CONSTRUCTION JOINT (7)



DOWELED CONTRACTION JOINT



JOINT DETAIL



TRANSVERSE CONSTRUCTION JOINT

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

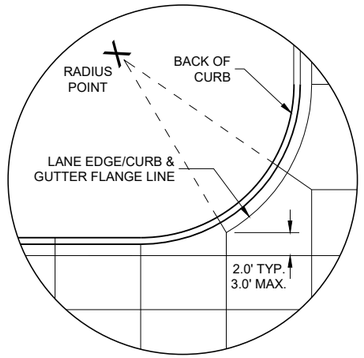
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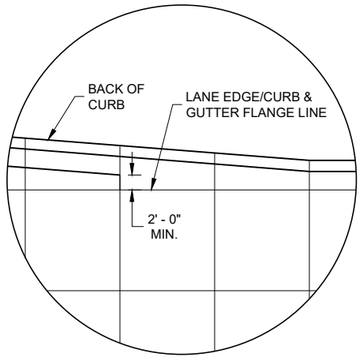
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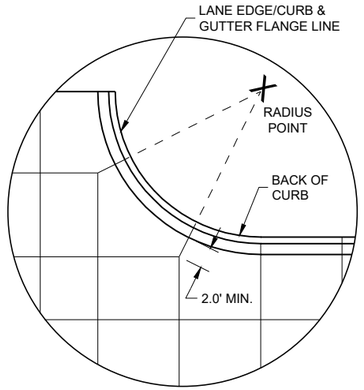
SDD 13C11 - 14b



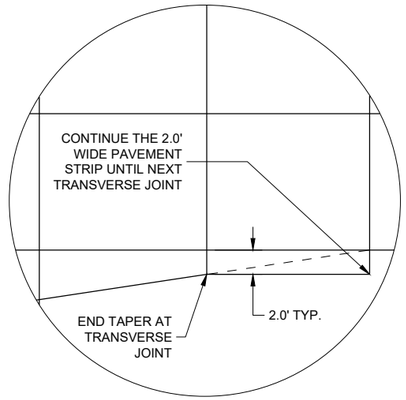
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

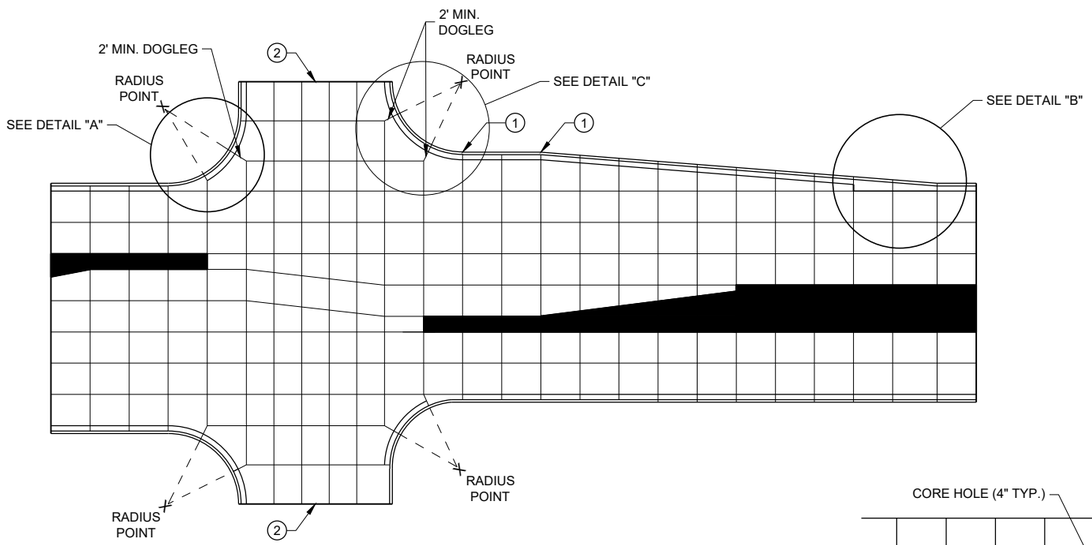
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.

(2) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.

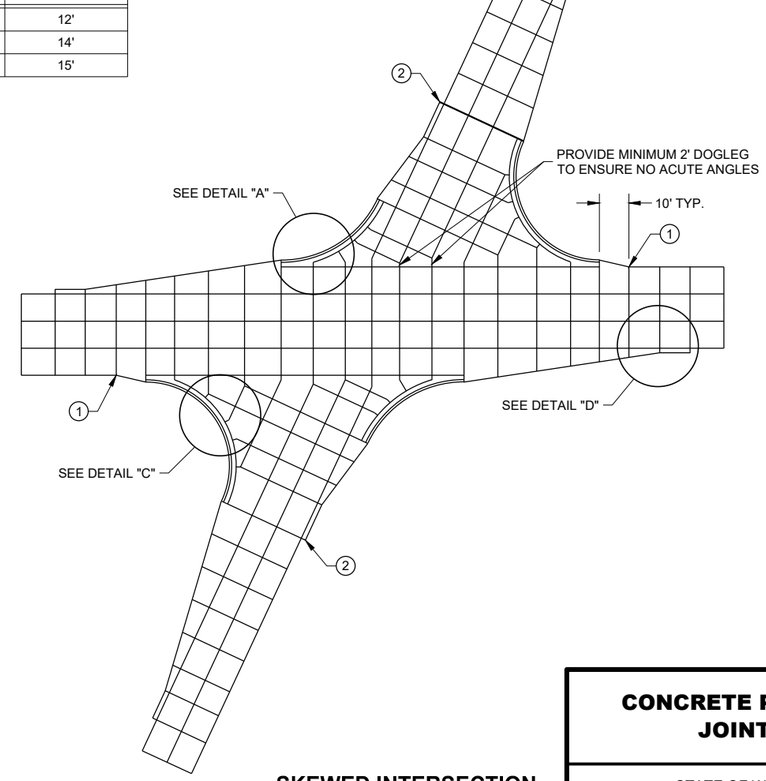
(3) THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



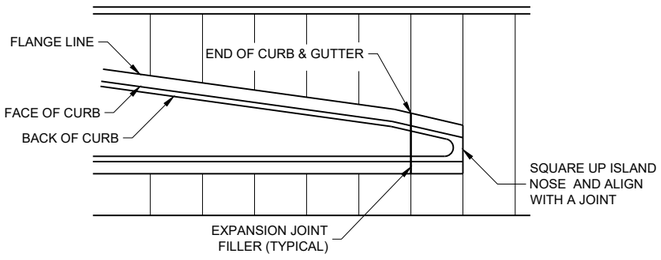
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

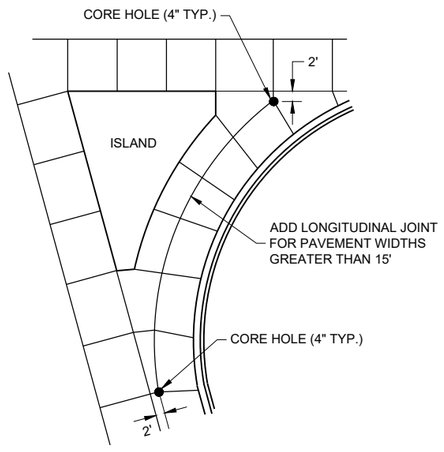
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
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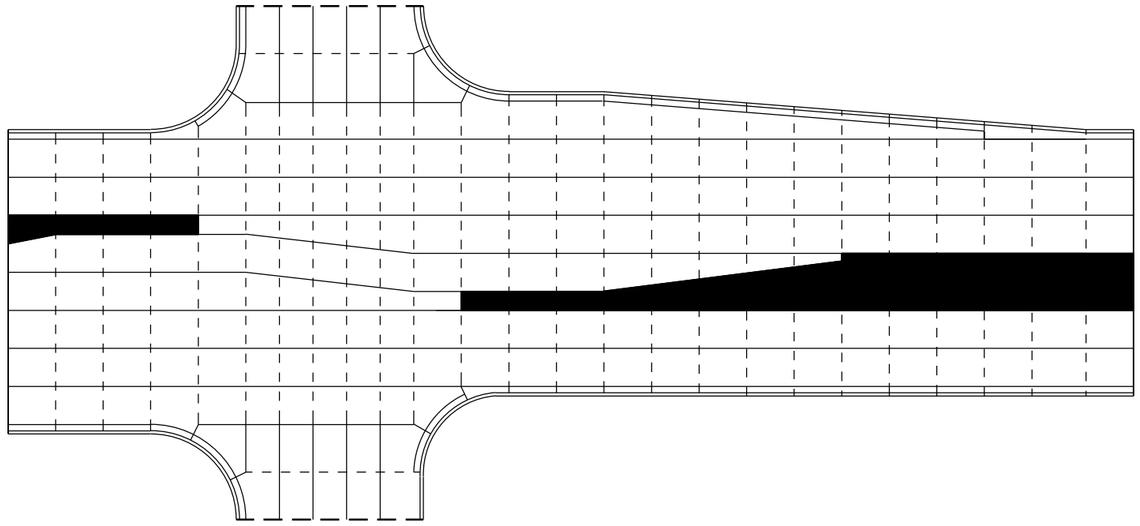
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LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

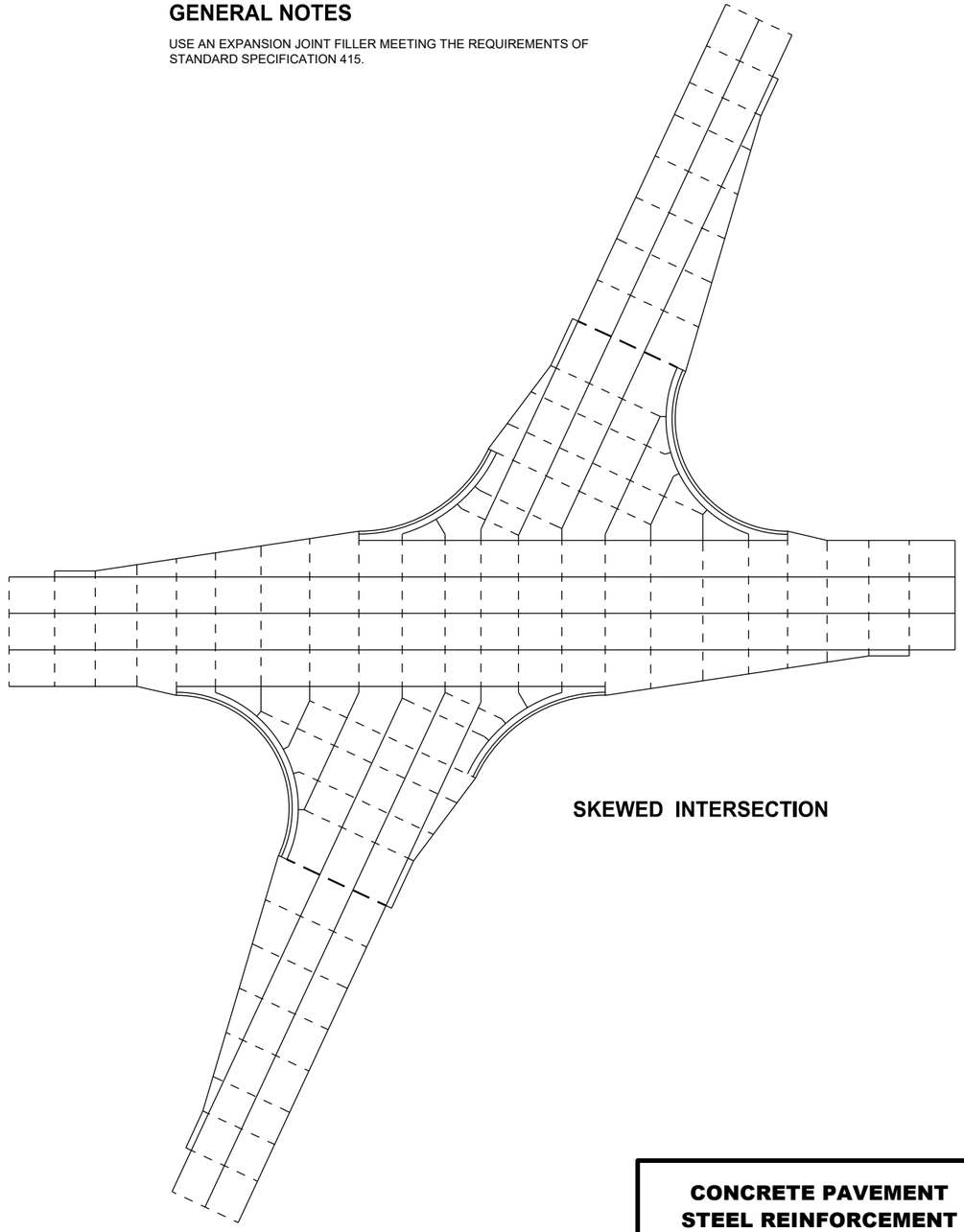
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

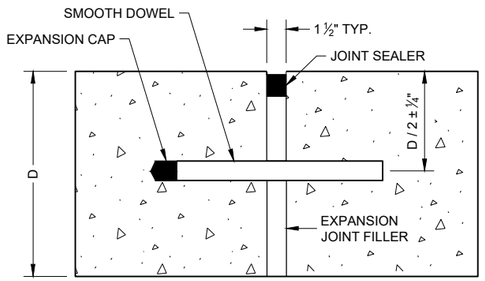
SDD 13C18 - 08b

CONCRETE PAVEMENT STEEL REINFORCEMENT

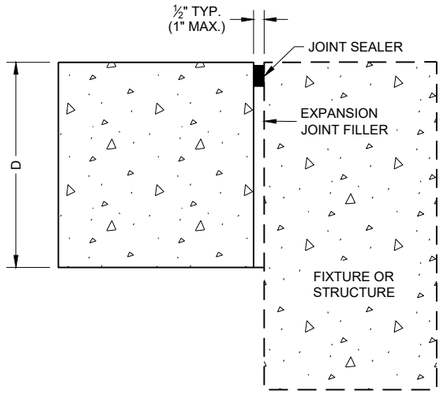
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 13C18 - 08b



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

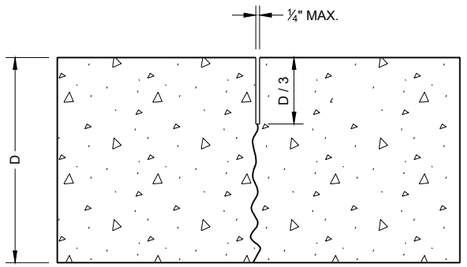
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

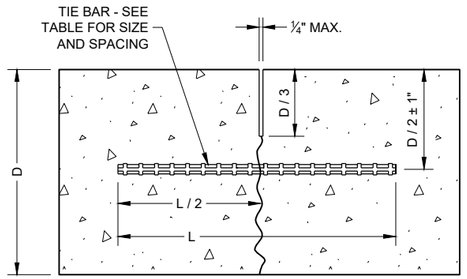
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A ¼" RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



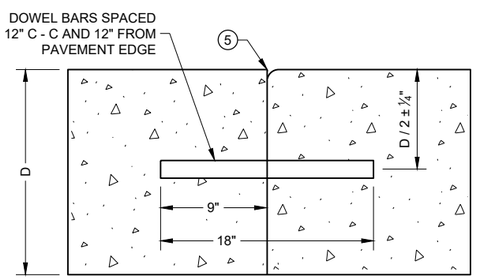
UNDOWELED TRANSVERSE



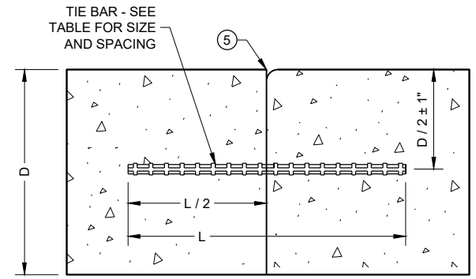
TIED LONGITUDINAL

DOWELED TRANSVERSE

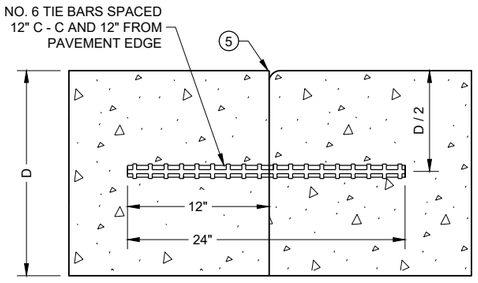
CONTRACTION JOINTS (2)



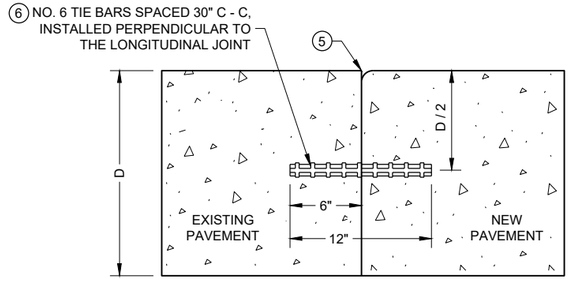
DOWELED TRANSVERSE (3)



TIED LONGITUDINAL



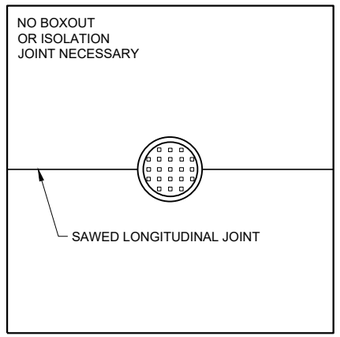
TIED TRANSVERSE (3)
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



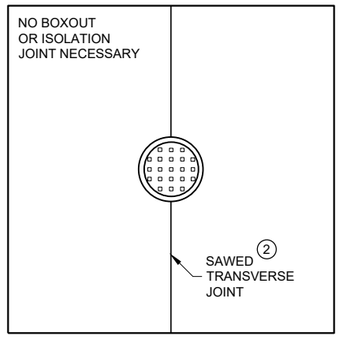
TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS (4)

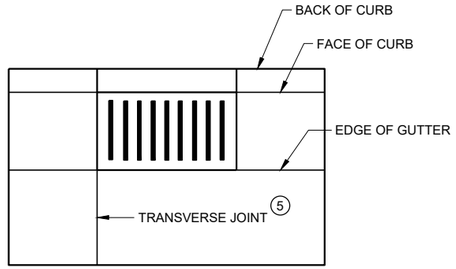
CONCRETE PAVEMENT JOINT TYPES



MANHOLE WITH LONGITUDINAL JOINT



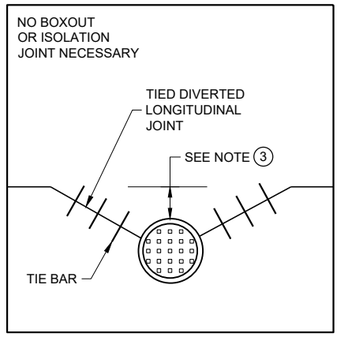
MANHOLE WITH TRANSVERSE JOINT



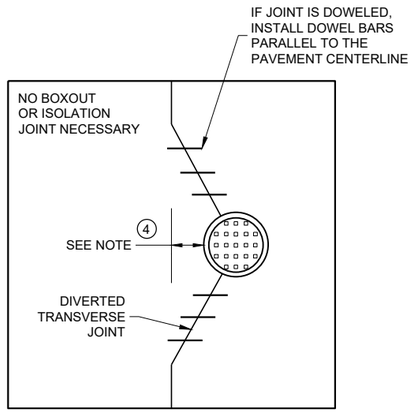
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

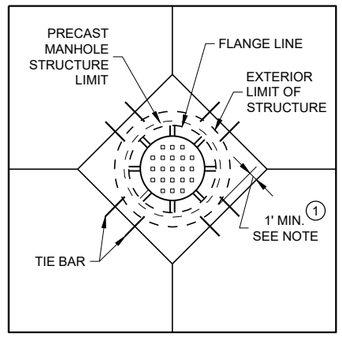
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
4. IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT



DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

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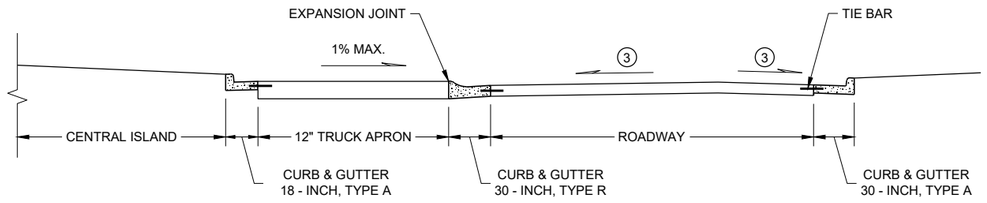
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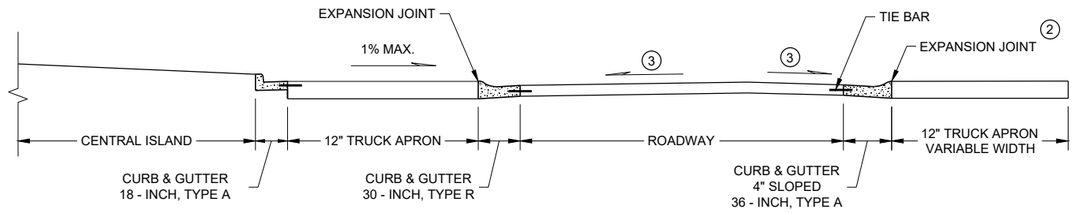
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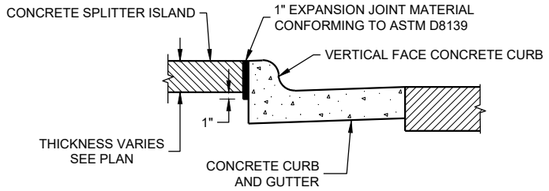
SDD13C18 - 08d
SDD13C18 - 08d



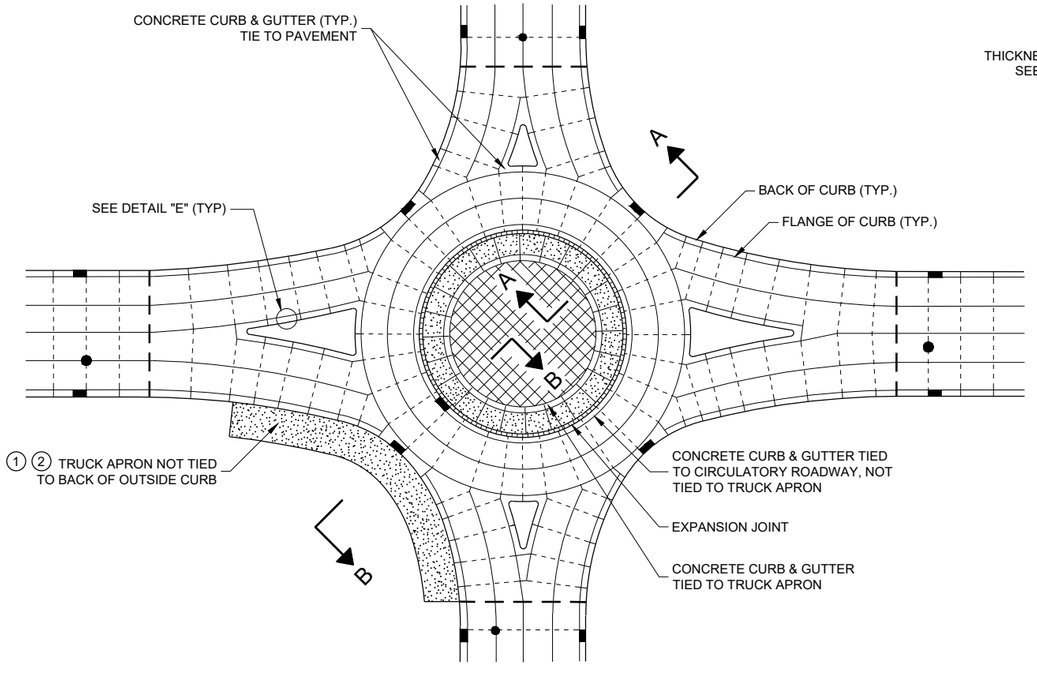
SECTION A - A



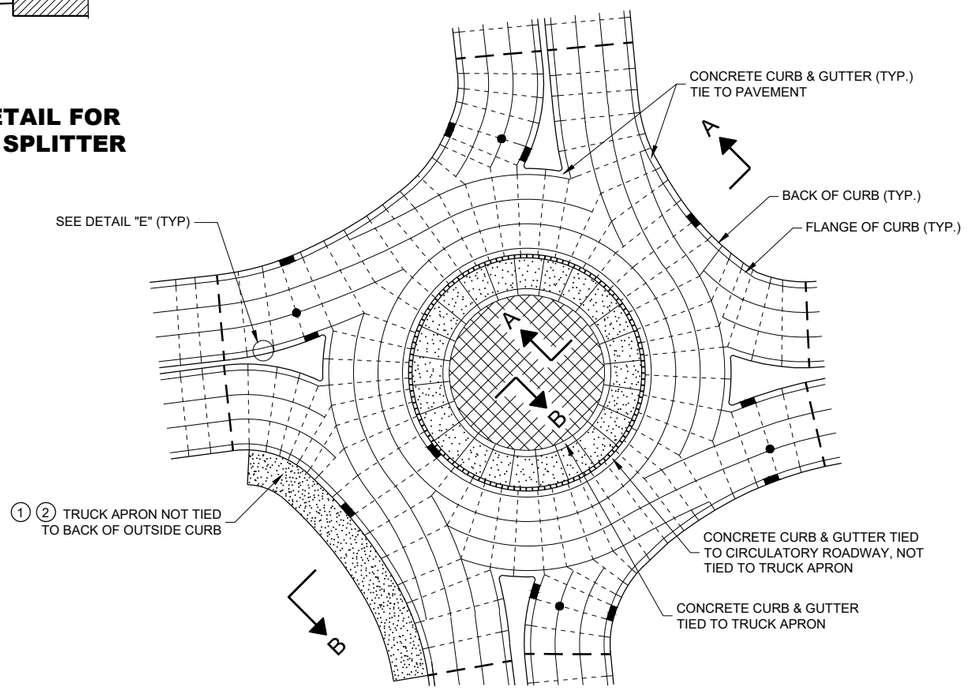
SECTION B - B



DETAIL 'E'
EXPANSION JOINT DETAIL FOR VERTICAL CURB AT A SPLITTER ISLAND



ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS



PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS

GENERAL NOTES

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 - SHEET "a"

USE EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.

(1) DESIGNER DETERMINES SIZE AND LOCATION(S) OF TRUCK APRON TO ACCOMMODATE TRACKING OF OVERSIZE / OVERWEIGHT VEHICLES.

(2) TIE THE OUTSIDE TRUCK APRON TO THE BACK SIDE OF CURB ONLY WHEN ENTIRE TRUCK APRON IS LESS THAN 3 FEET.

(3) CONFORM TO PLAN CONSTRUCTION DETAILS FOR CIRCULATORY ROADWAY CROSS SLOPE.

LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT
- TRUCK APRON
- CENTRAL ISLAND
- UTILITY STRUCTURES

CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS

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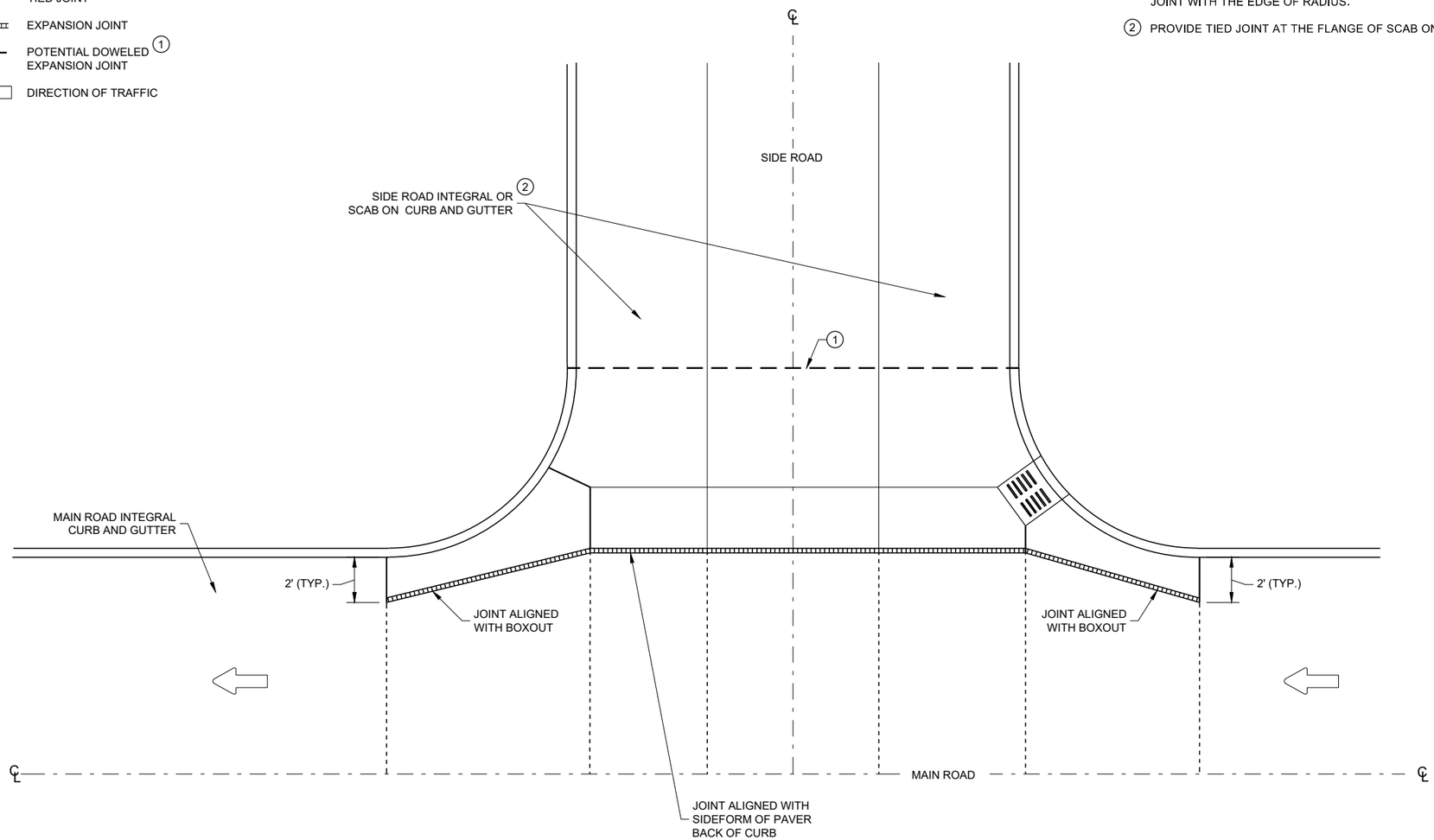
SDD 13C18 - 08e

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SDD 13C18 - 08e

LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT (1)
- DIRECTION OF TRAFFIC



GENERAL NOTES

(1) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH THE EDGE OF RADIUS.

(2) PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

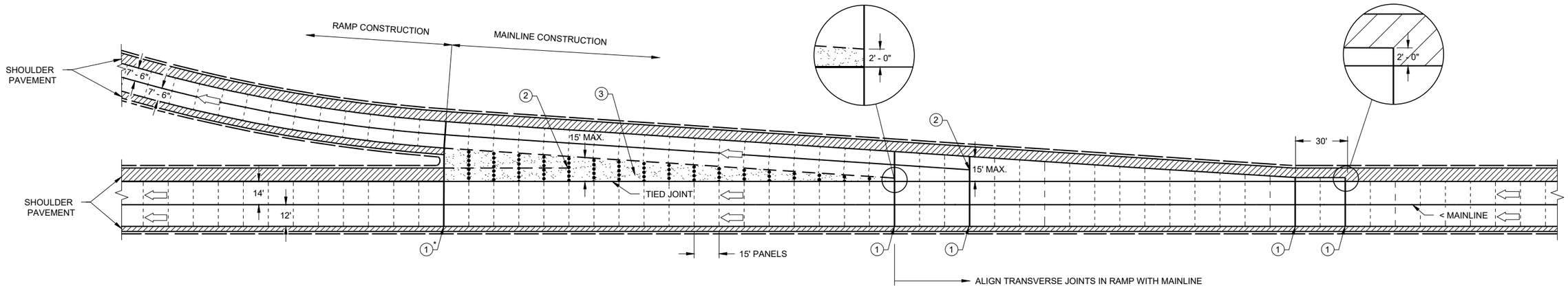
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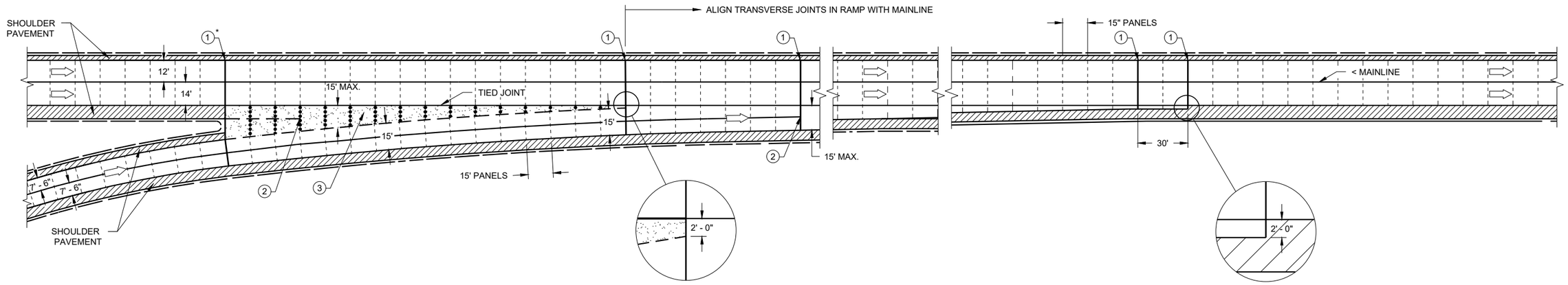
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DECELERATION LANE



ACCELERATION LANE

GENERAL NOTES

PAVEMENT AND BASE THICKNESS, PANEL LENGTHS, JOINTS AND REINFORCEMENT FOR THE DECELERATION AND ACCELERATION LANES, INCLUDING TAPERS, SHALL BE THE SAME AS THE MAINLINE, EXCEPT WHERE OTHERWISE NOTED.

ALL REINFORCEMENT BARS SHALL BE EPOXY COATED CONFORMING TO SUBSECTION 505.2.6 OF THE STANDARD SPECIFICATIONS.

LANE AND SHOULDER WIDTHS MAY VARY FROM SHOWN. SEE CONSTRUCTION PLANS FOR ACTUAL PROPOSED WIDTHS.

(1) CRITICAL TRANSVERSE JOINT LOCATIONS AT PAVEMENT WIDTH CHANGES.
((1)* IS NOT A CRITICAL TRANSVERSE JOINT WHEN ASPHALTIC GORE IS INSTALLED).

(2) STOP LONGITUDINAL JOINT WITH CORE HOLE (2" TYP.) WHEN IT MEETS THE FIRST TRANSVERSE JOINT LESS THAN 15' WIDE OR STOP LONGITUDINAL JOINT WHEN IT MEETS 2' AWAY FROM THE TIED JOINT OF THE MAINLINE.

(3) DISREGARD THE JOINT DETAILS IN AND AROUND THE GORE WHEN ASPHALTIC GORE IS INSTALLED.

LEGEND

- DOWELED JOINT
- UNDOWELED JOINT
- TIED JOINT
- UNTIED JOINT
- GORE
- DIRECTION OF TRAVEL

CONCRETE PAVEMENT JOINTING ACCELERATION/ DECELERATION LANE

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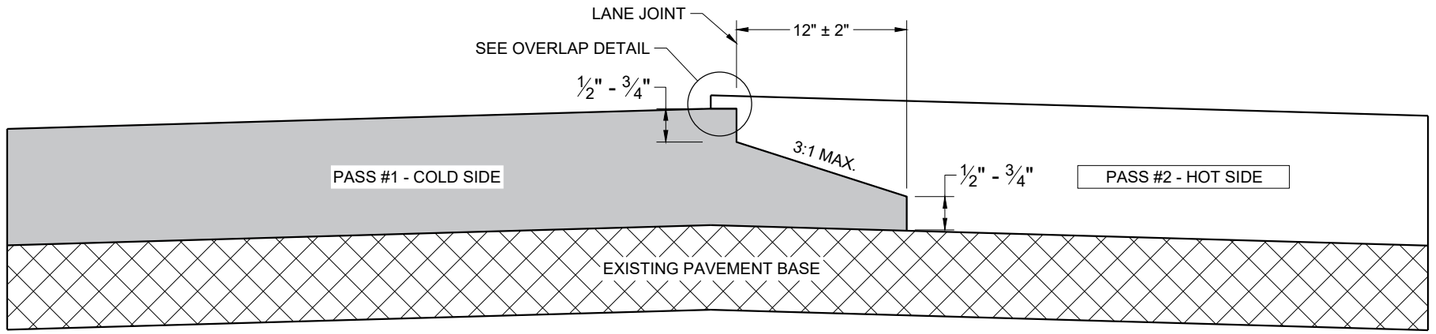
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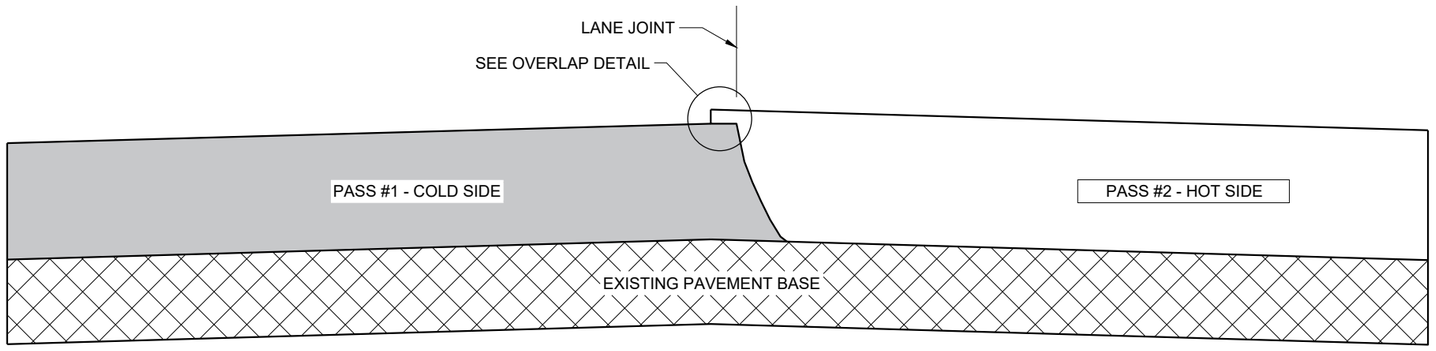
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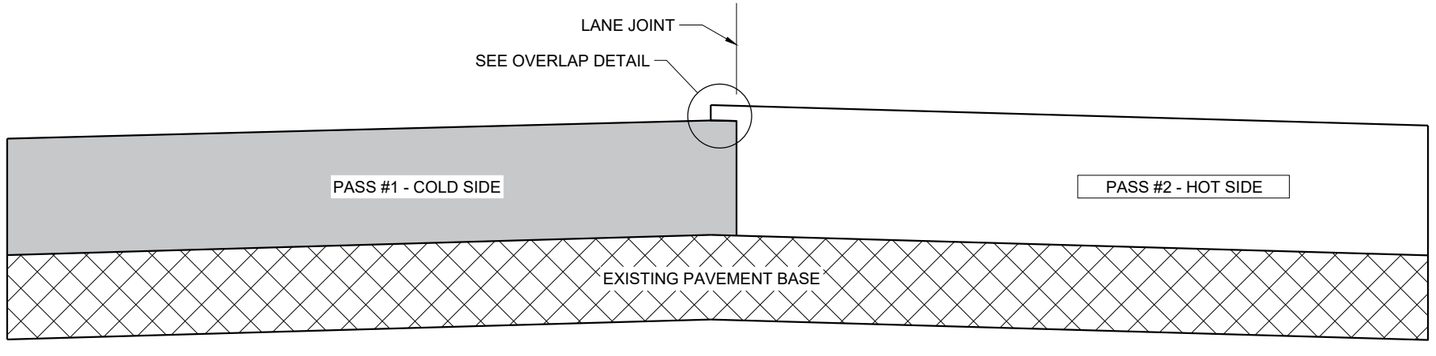
SDD13C18 - 08g



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

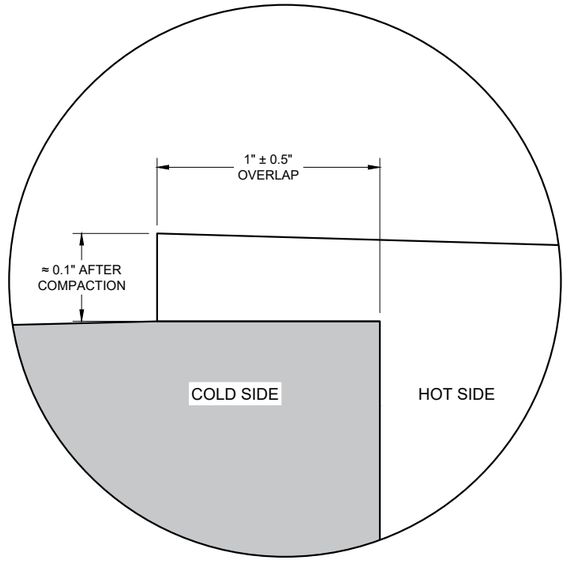
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS

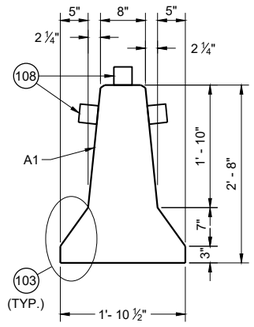
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

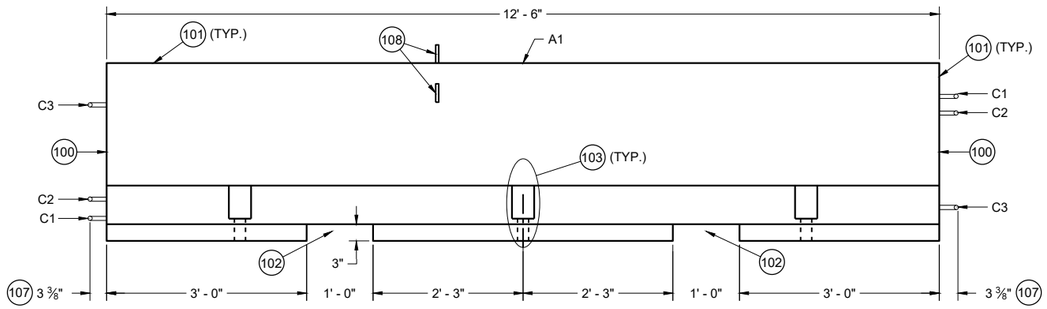
/S/ Steven Hefel
HMA PAVEMENT ENGIN

330

FHWA



CROSS SECTION



PROFILE VIEW

GENERAL NOTES

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

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

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

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

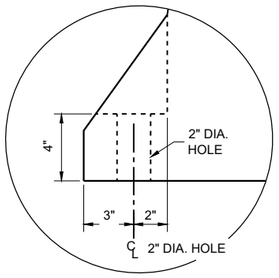
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

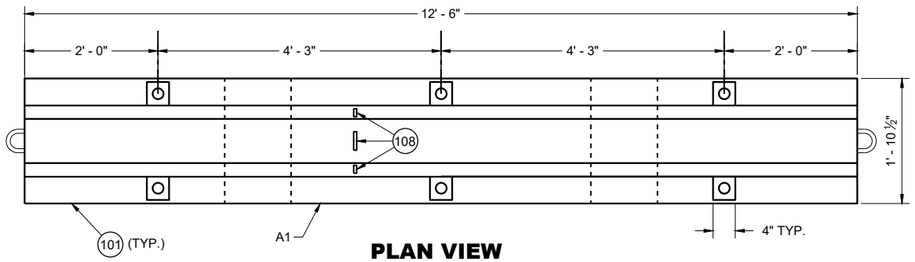
(106) 1" MIN. CLEAR COVER

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

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

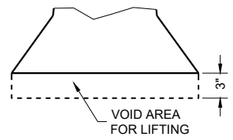


ANCHOR BLOCK DETAIL

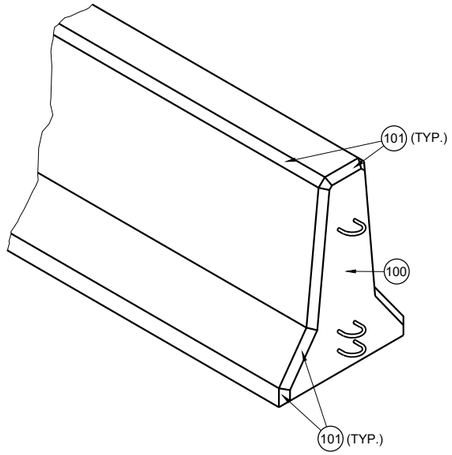


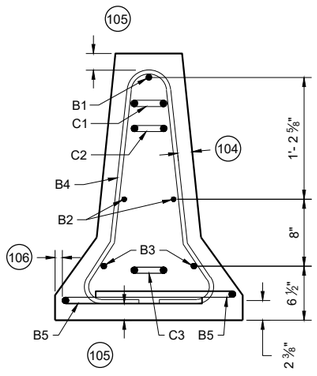
PLAN VIEW

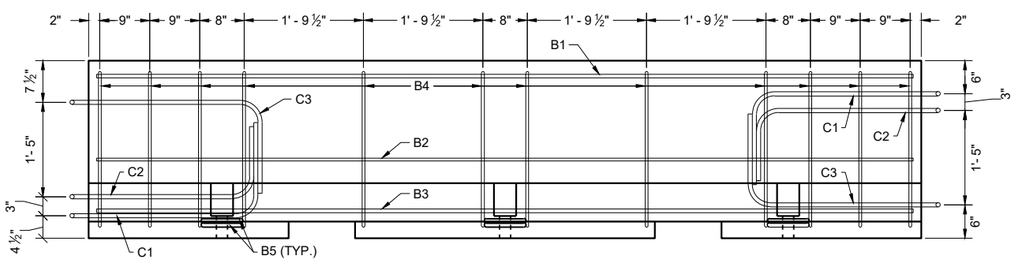
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)







PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

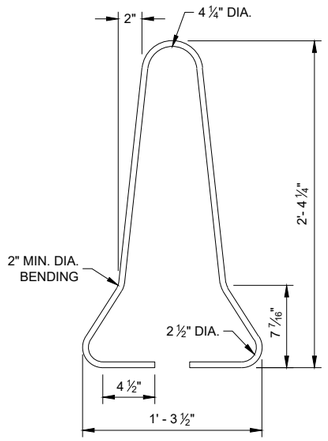
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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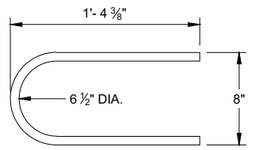
SDD 14B07-16a

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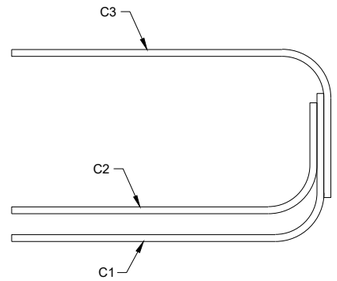
SDD 14B07-16a



B4 BAR DETAIL

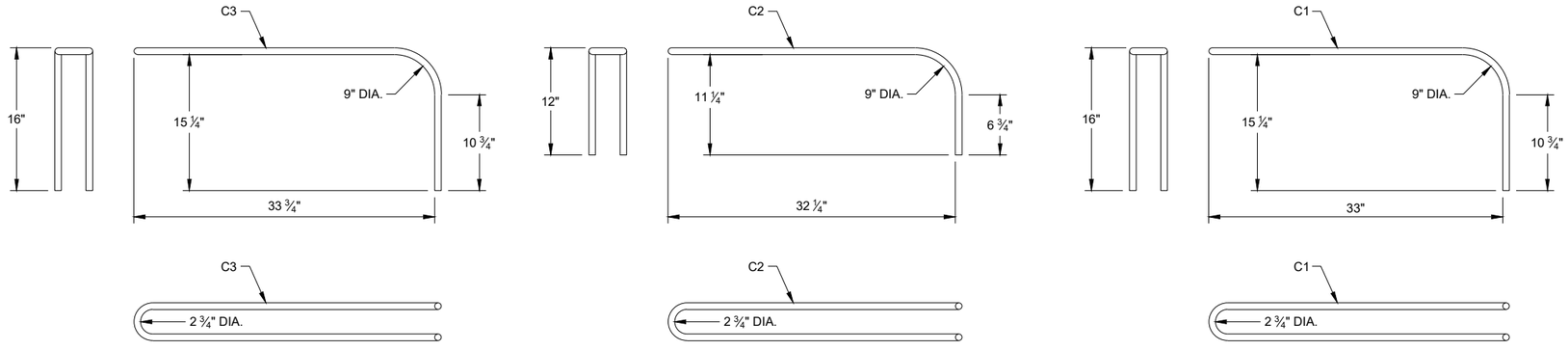


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY



C BAR DETAILS

6

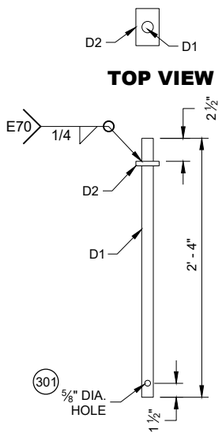
SDD 14B07-16b

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

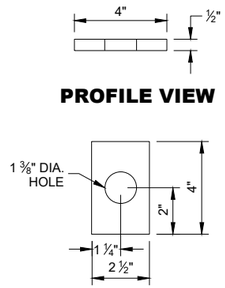
SDD 14B07-16b



TOP VIEW

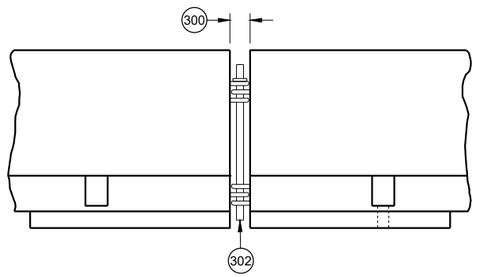
PROFILE VIEW

CONNECTOR PIN ASSEMBLY



PROFILE VIEW

TOP VIEW D2



CONNECTING TEMPORARY BARRIER SECTIONS

GENERAL NOTES

300 SET WITH 3 ⅝" WOOD BLOCK.

301 HOLE IS OPTIONAL.

302 CONNECTOR PIN ASSEMBLY.

303 CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

304 CONCRETE DECK.

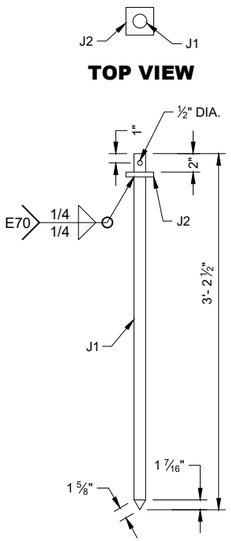
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

306 MINIMUM OF 2" OF ASPHALT.

307 ASPHALT ANCHOR PIN ASSEMBLY

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

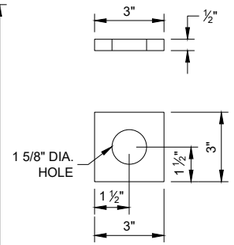
309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.



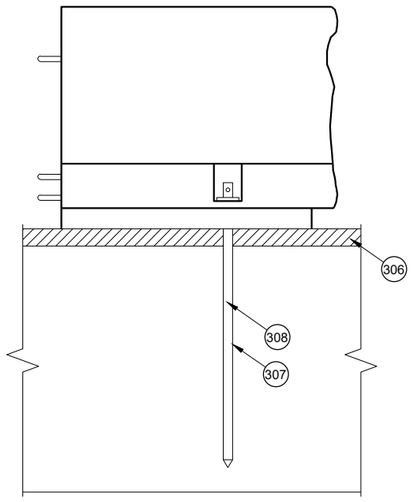
TOP VIEW

PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY

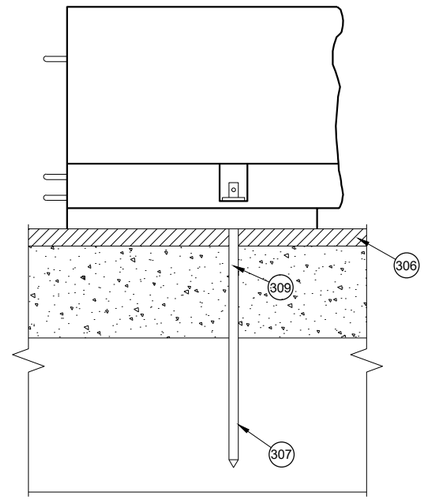


TOP VIEW J2



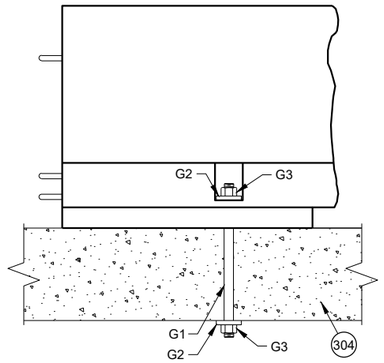
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



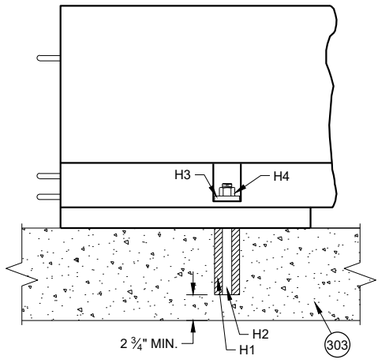
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION (305)



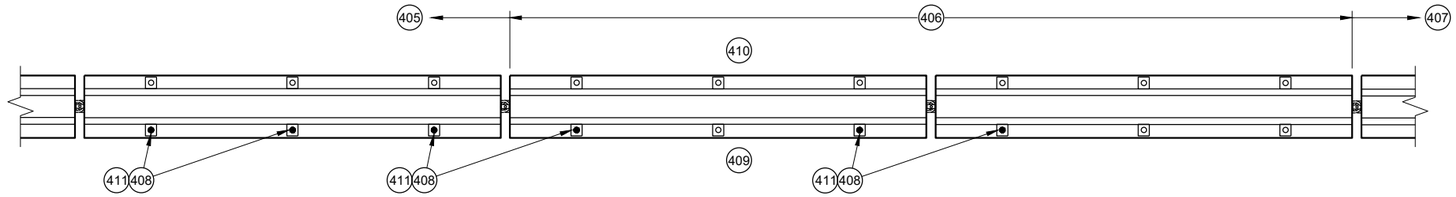
SIDE VIEW

ADHESIVE ANCHOR INSTALLATION (305)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

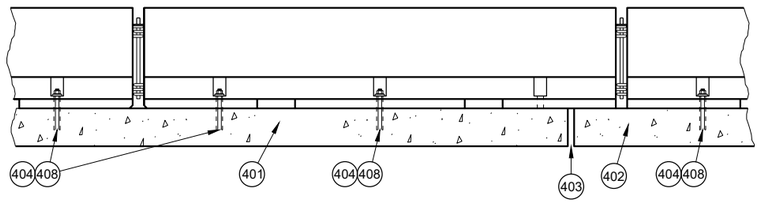
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SDD 14B07-16c



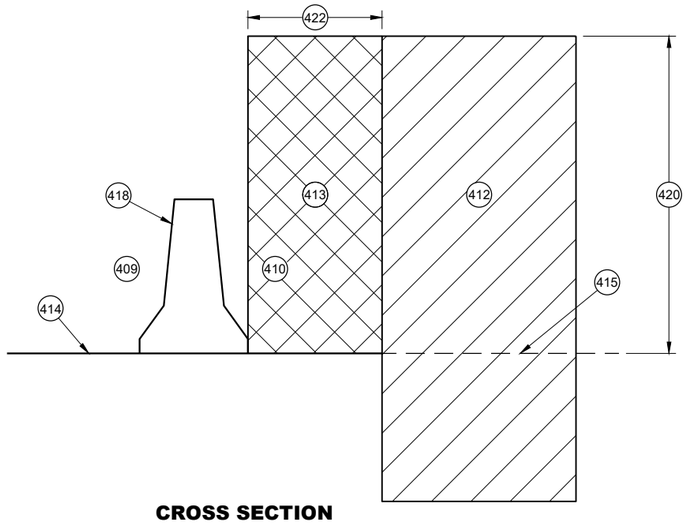
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



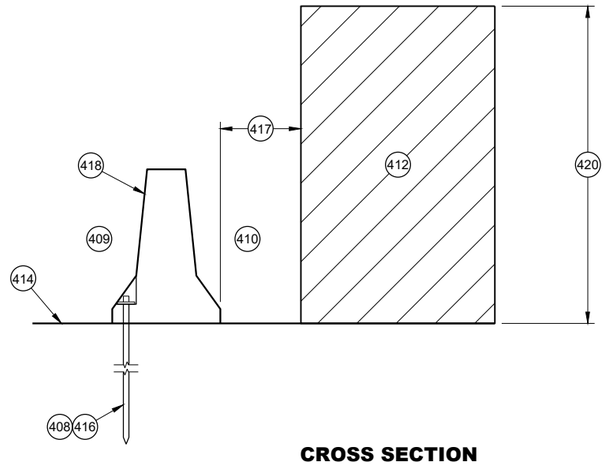
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



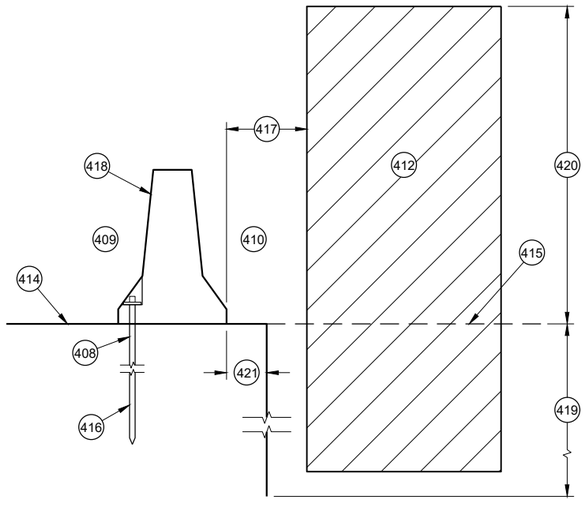
CROSS SECTION

FREE STANDING BARRIER



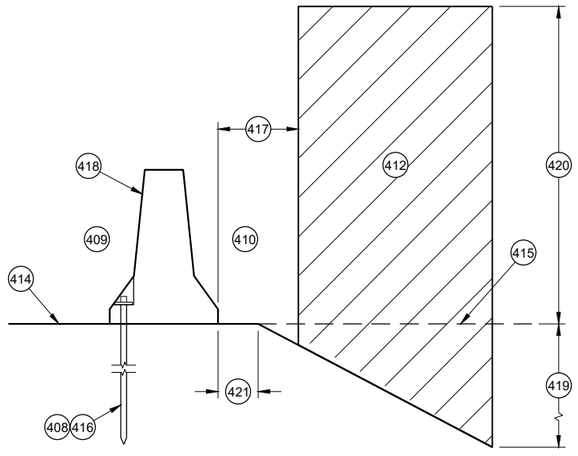
CROSS SECTION

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



CROSS SECTION

ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION

ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

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

(401) CONCRETE DECK

(402) CONCRETE DECK OR APPROACH SLAB.

(403) EXPANSION JOINT

(404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

(405) ANCHORED TEMPORARY BARRIER

(406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

(407) FREE STANDING BARRIER

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

(409) TRAFFIC SIDE

(410) NON-TRAFFIC SIDE

(411) ANCHOR LOCATION. SEE ANCHORING DETAILS.

(412) WORK AREA

(413) AREA FREE OF OBJECTS AND WORKERS

(414) GRADE LINE

(415) EXTENDED GRADE LINE

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

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

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

(419) DEPTHS OF 3 FEET OR MORE.

(420) Y = 6.5'

(421) OFFSET FROM BACK OF BARRIER EDGE:

CONCRETE PAVEMENT	0.5'
ASPHALT	0.5'

(422) POSTED SPEED (MPH):

45 OR GREATER	4.0'
40 OR LOWER	2.0'

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16d

GENERAL NOTES

500 EXISTING RIGID BARRIERS (VARIES)

501 TEMPORARY BARRIER

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

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

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

505 TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.

506 TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

507 VERTICAL BARRIER

508 SAFETY SHAPE BARRIER

509 SINGLE SLOPE BARRIER

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

511 BENT THRIE BEAM TO FIT.

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

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

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

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

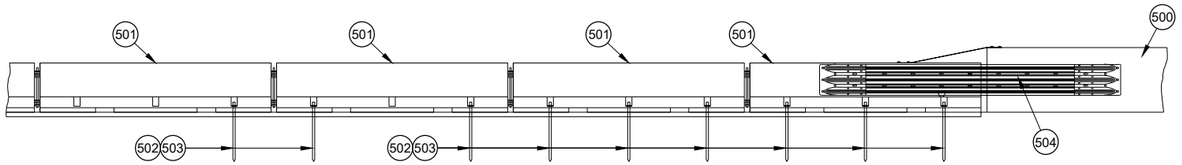
516 CUT WOOD BLOCK TO FIT.

517 SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

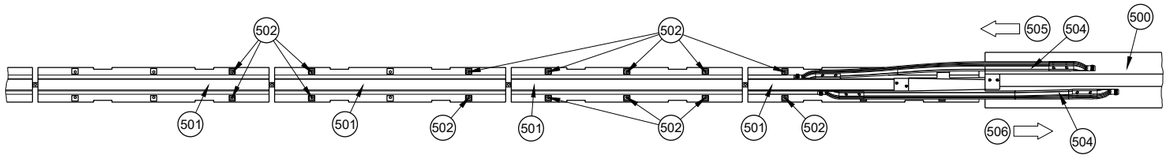
518 CAP ASSEMBLY

519 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

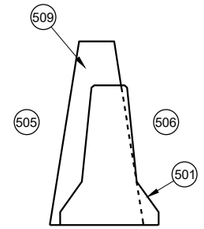
520 ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



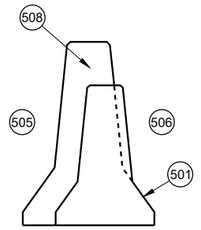
PROFILE VIEW



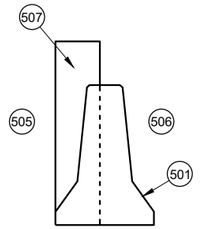
PLAN VIEW



CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE

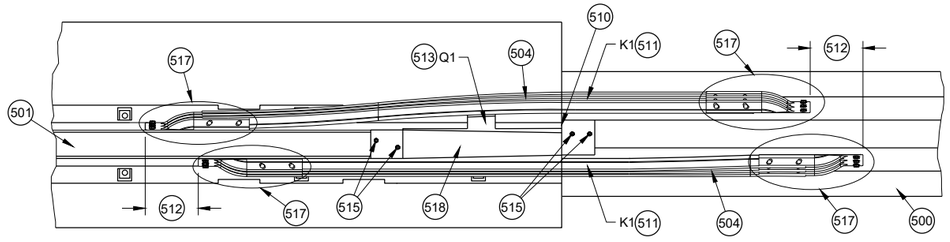


CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE

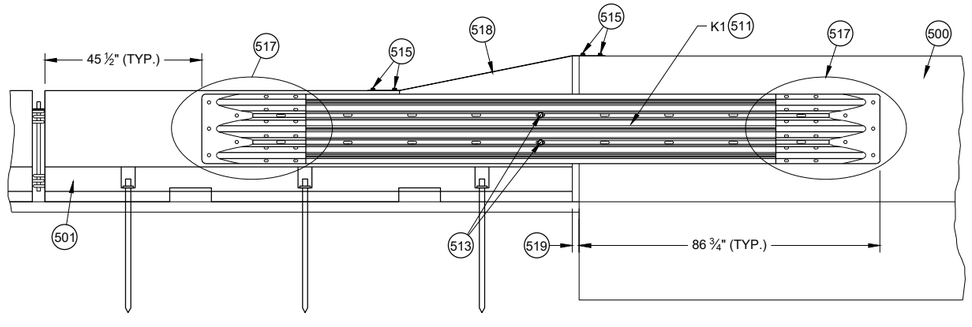


CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL

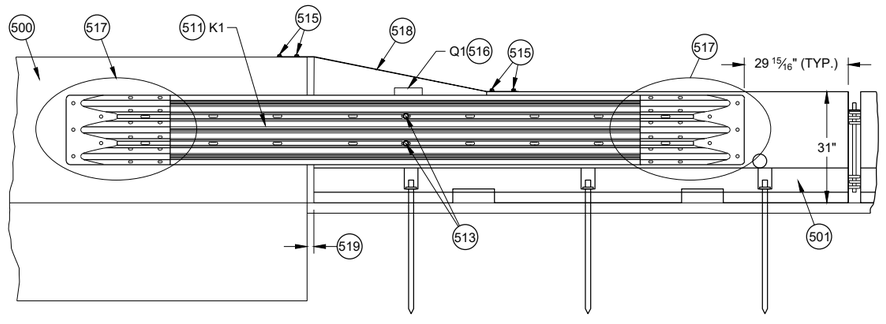
PLAN VIEW
TRANSITION TO RIGID BARRIER



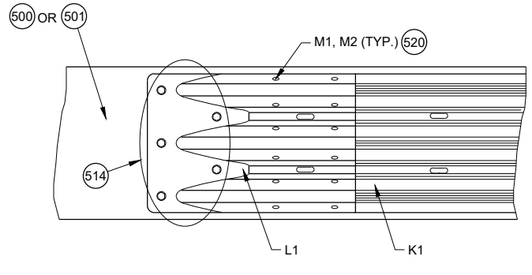
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER

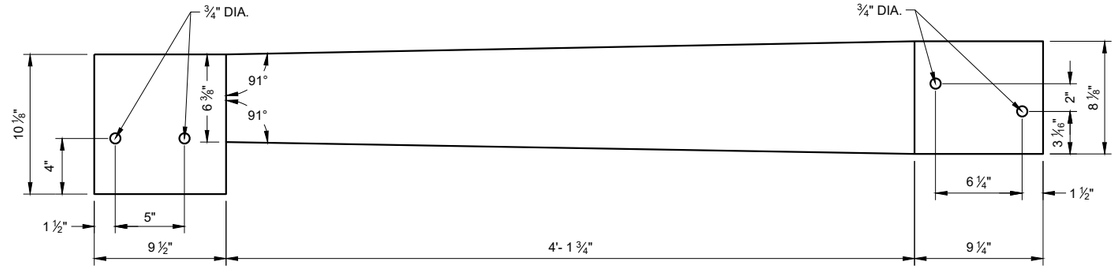


517 DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

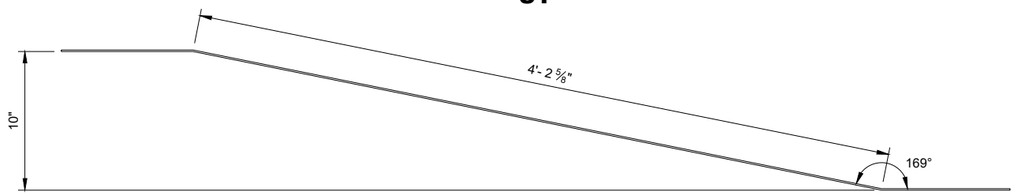
6

SDD 14B07-16e



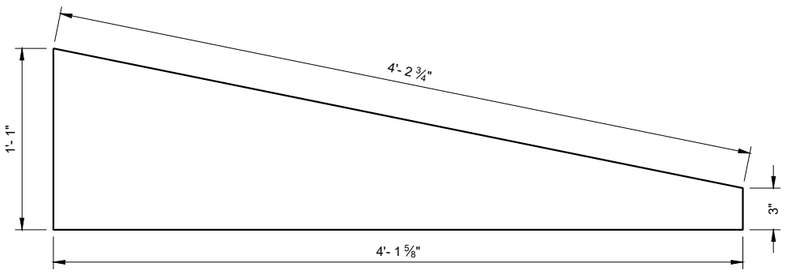
TOP VIEW

S1



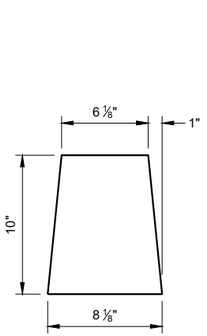
ELEVATION VIEW

S1

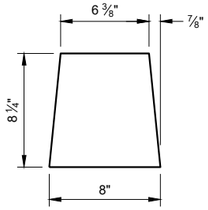


SIDE VIEW

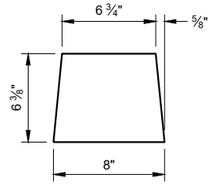
S3



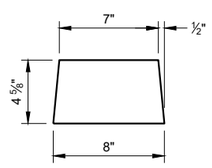
S2



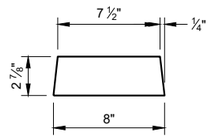
S4



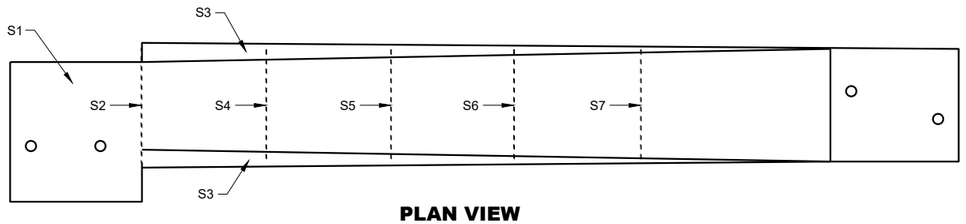
S5



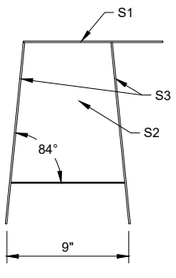
S6



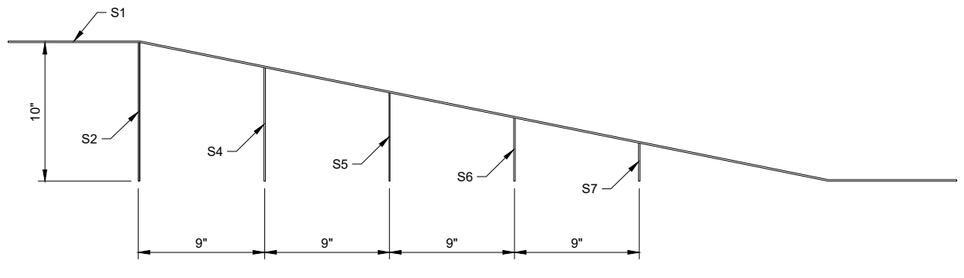
S7



PLAN VIEW



BACK VIEW



SIDE VIEW (600)

42" TOP CAP ASSEMBLY

GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

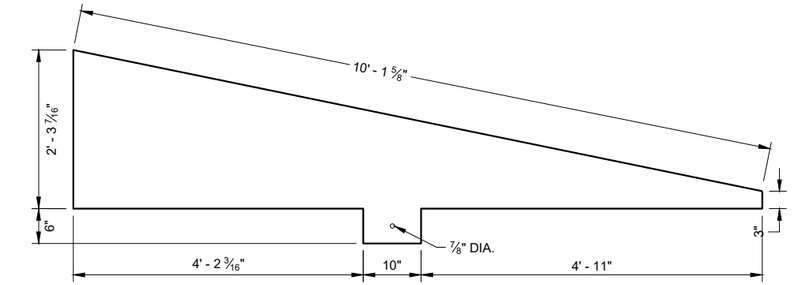
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

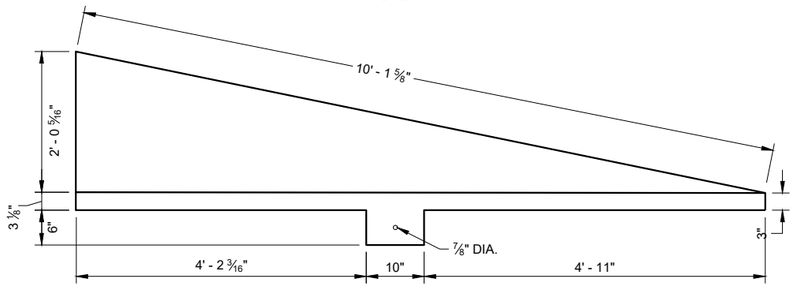
SDD 14B07-16f



SIDE VIEW
T4



END VIEW



SIDE VIEW
T3

END VIEW

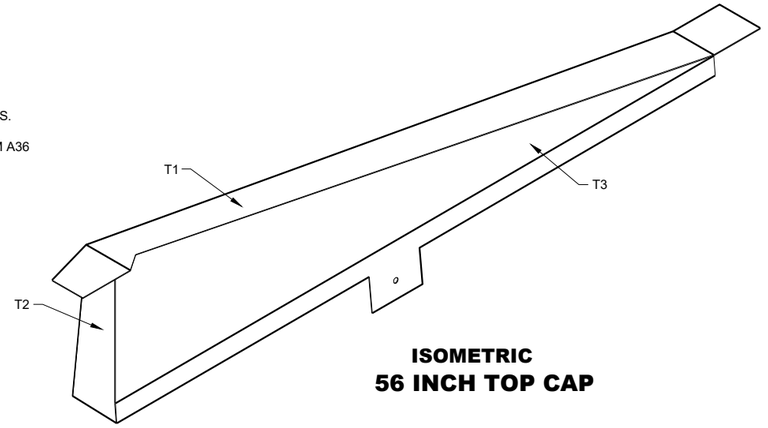
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

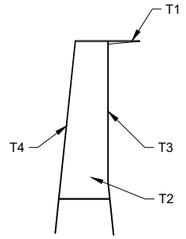
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

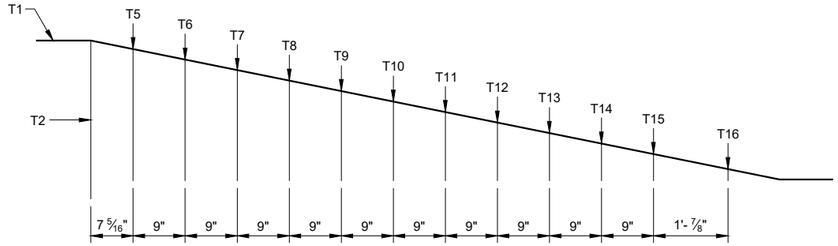
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



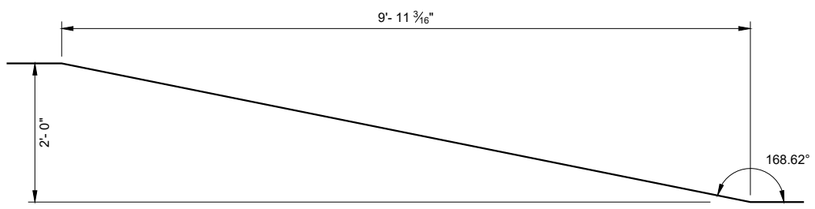
ISOMETRIC
56 INCH TOP CAP



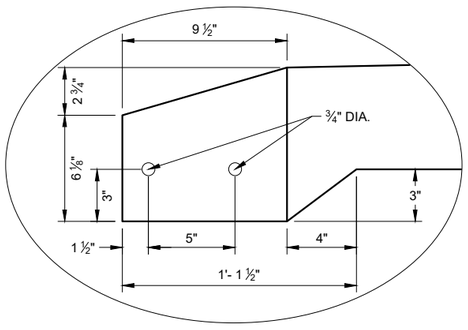
END VIEW
56 INCH TOP CAP



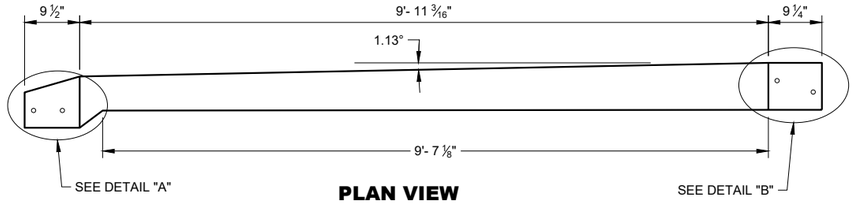
SIDE VIEW (700)
56 INCH TOP CAP



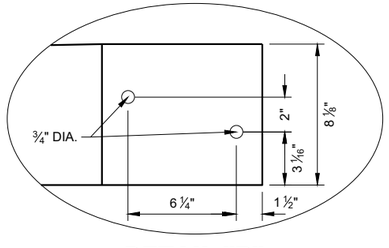
SIDE VIEW
TOP PLATE T1



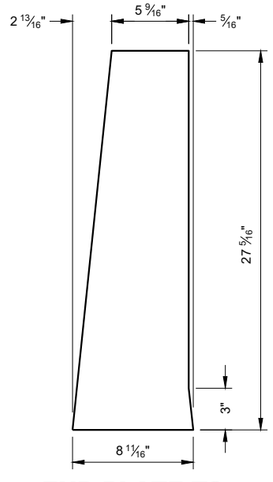
DETAIL "A"



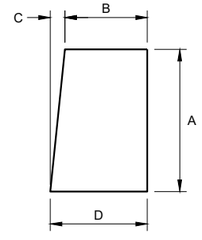
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



GUSSET PLATES
T5 - T16

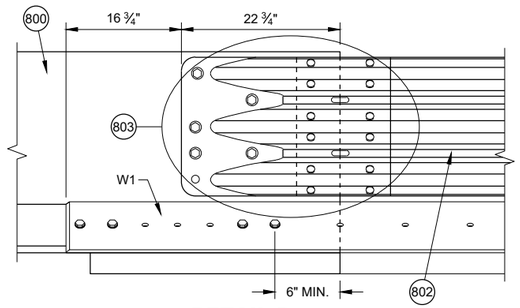
GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	1 1/16"	8 1/16"
T15	4 11/16"	7 9/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

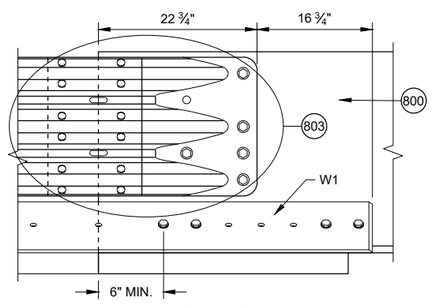
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

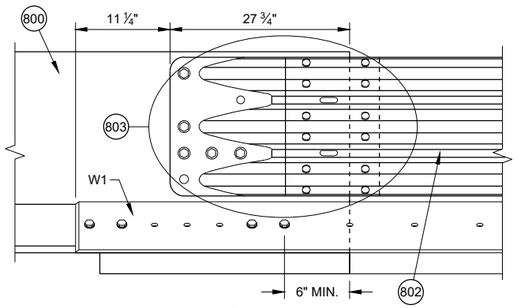
SDD 14B07-16g



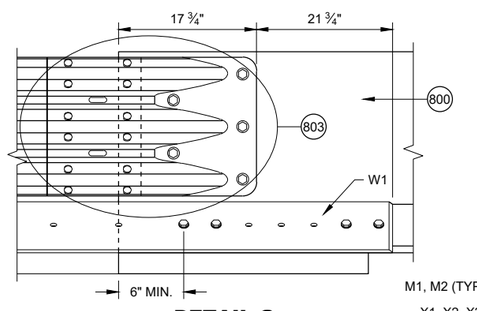
DETAIL D



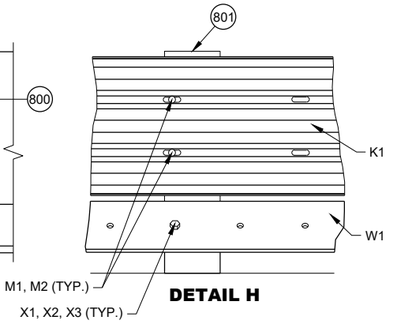
DETAIL E



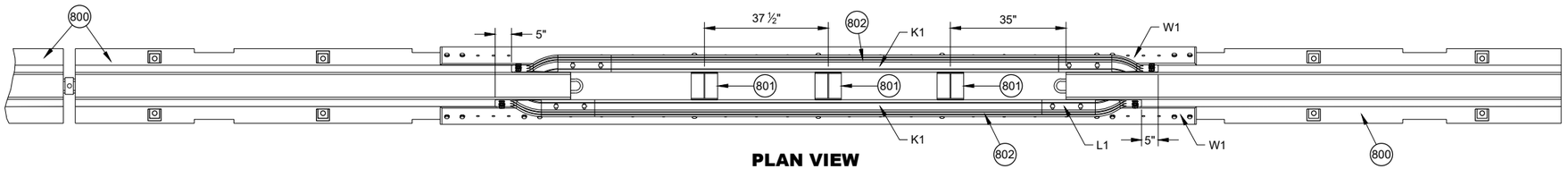
DETAIL F



DETAIL G



DETAIL H



PLAN VIEW

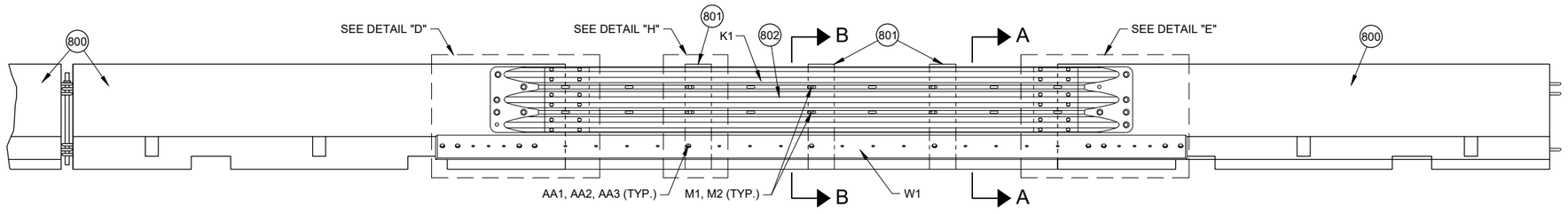
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

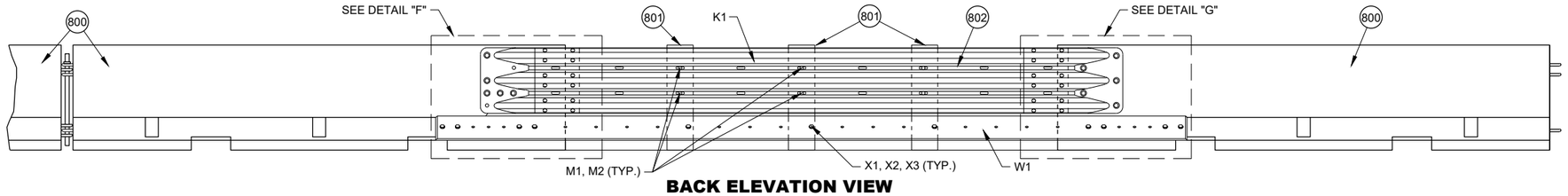
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



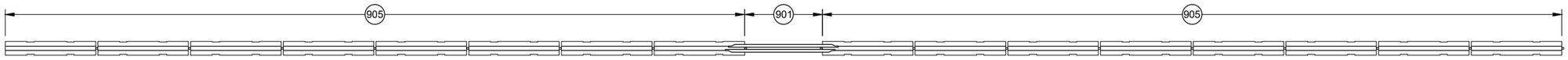
BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

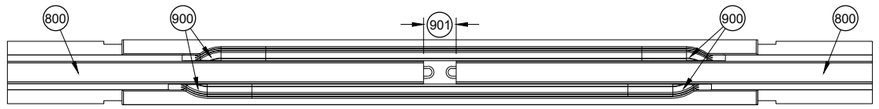
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16h



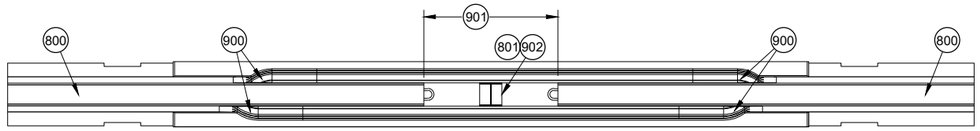
PLAN VIEW
GAP WITHIN SPACING



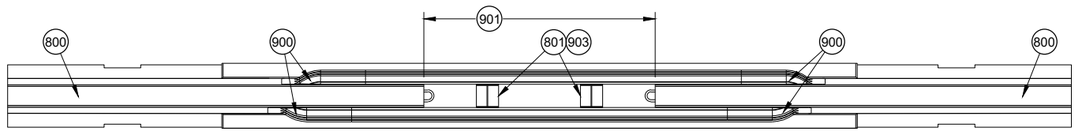
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

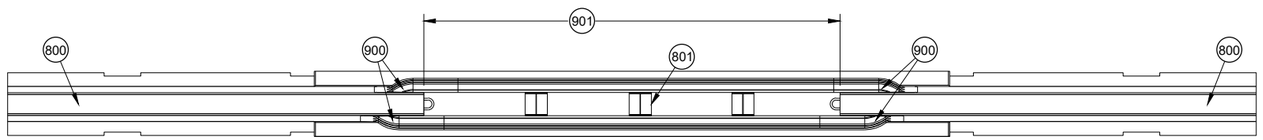
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)

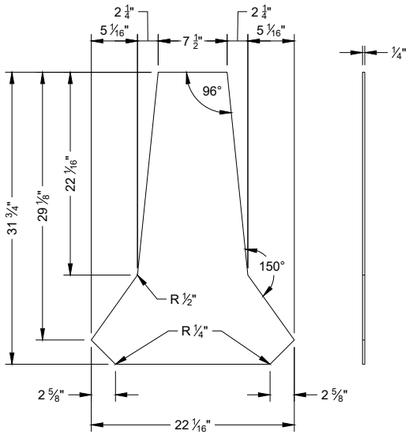


PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

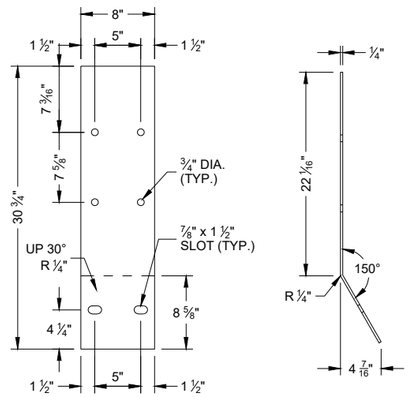
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16i



PROFILE VIEW SIDE VIEW

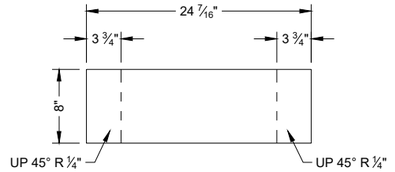
STIFFENER ASSEMBLY CENTER PANEL U1



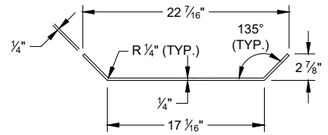
FLAT PATTERN

SIDE VIEW

STIFFENER ASSEMBLY SIDE PANEL U2

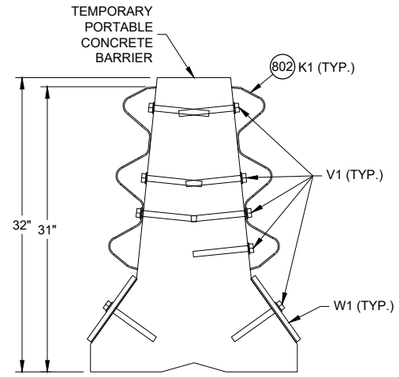


FLAT PATTERN

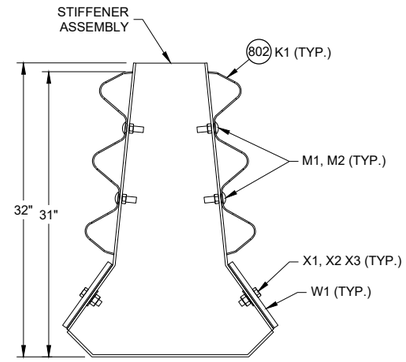


PROFILE VIEW

STIFFENER ASSEMBLY BOTTOM PANEL U3

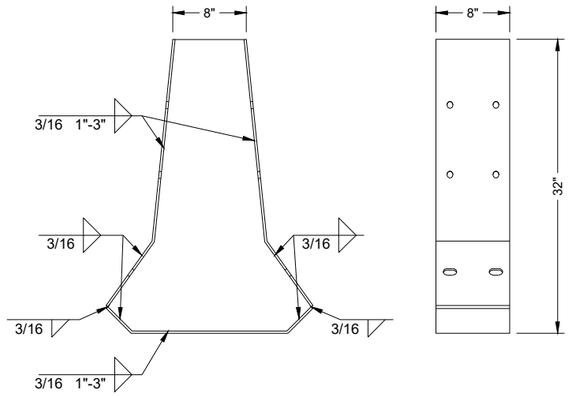


SECTION A - A



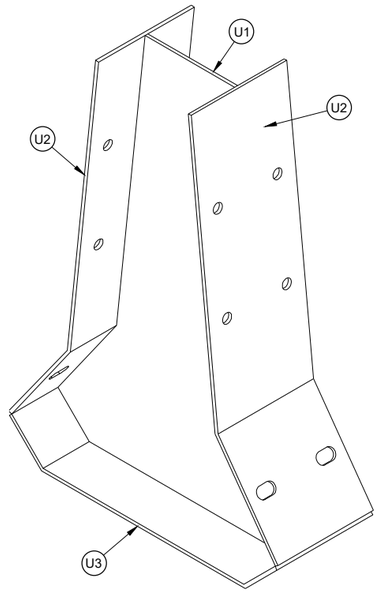
SECTION B - B

PLAN VIEW



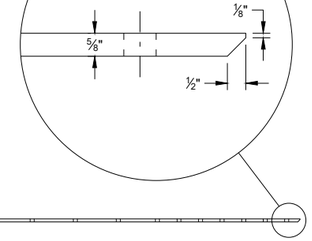
PROFILE VIEW

SIDE VIEW

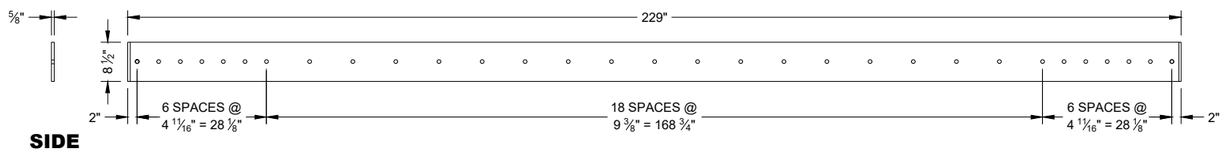


ISOMETRIC

GAP STIFFENER ASSEMBLY



PLAN VIEW



SIDE VIEW

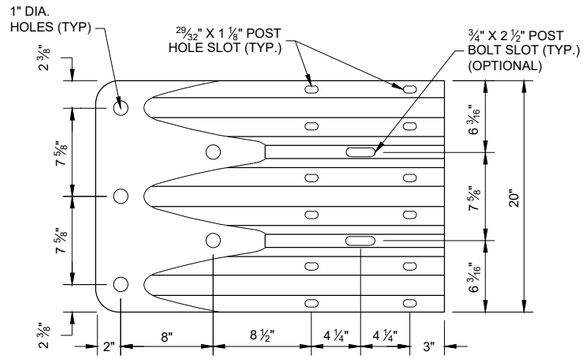
ELEVATION VIEW

W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

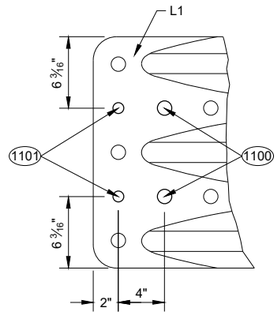
6

SDD 14B07-16j



ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

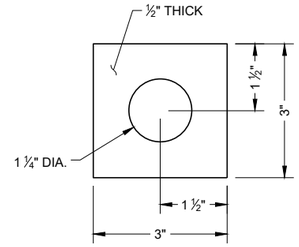


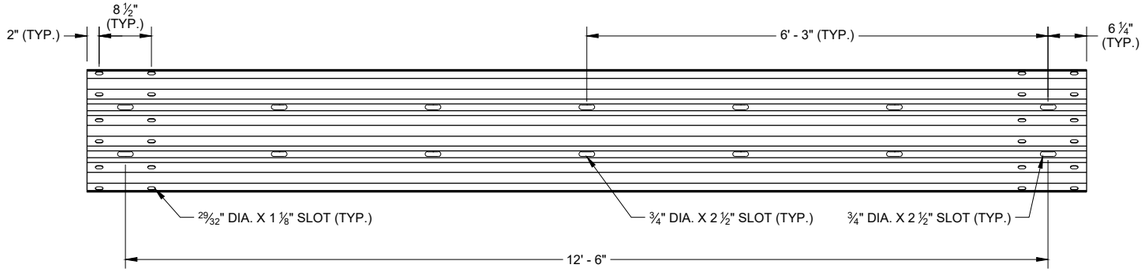
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

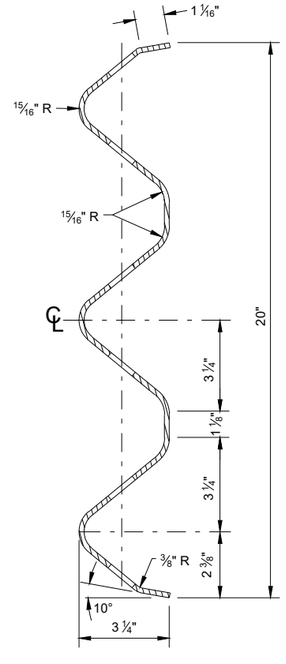
(1100) 1" DIA. HOLE

(1101) 3/4" DIA. HOLE

(1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



SLOTTED THRIE BEAM RAIL K1

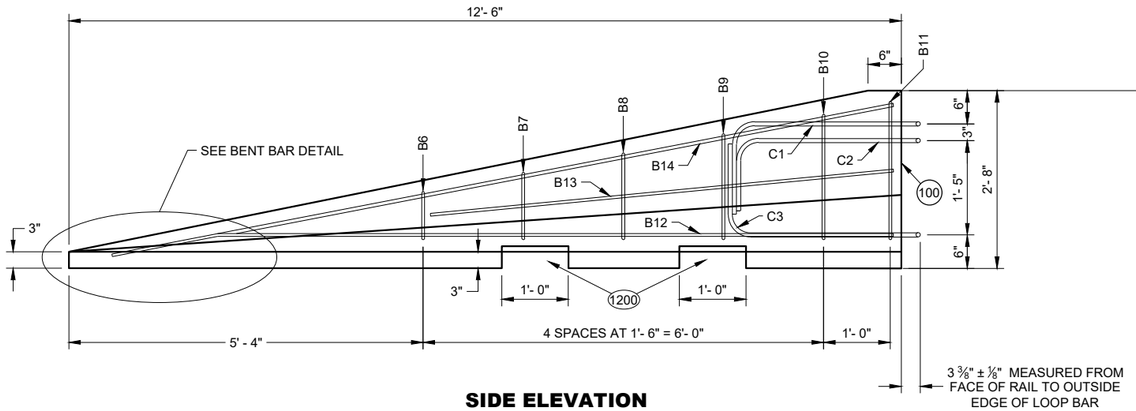


SECTION THROUGH BEAM K1

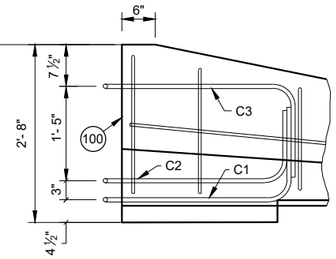
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16k



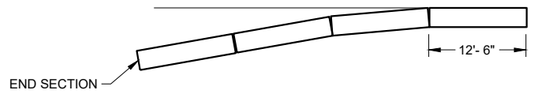
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

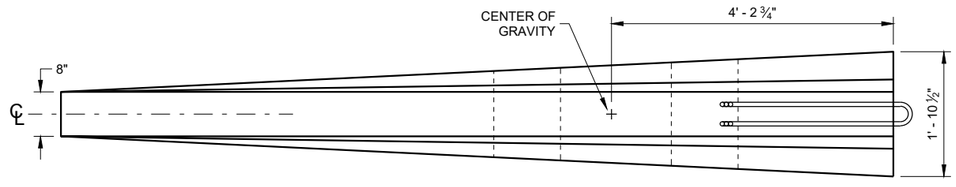
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

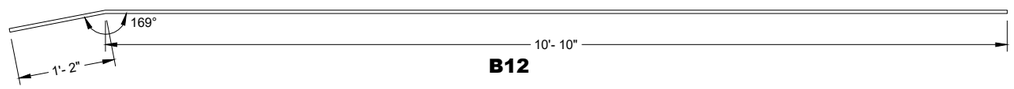


FLARE AT BARRIER END

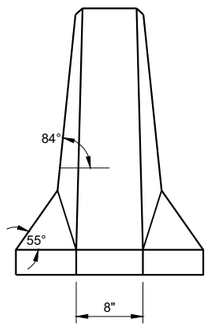
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



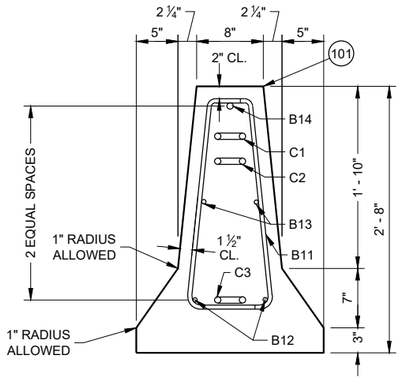
PLAN VIEW



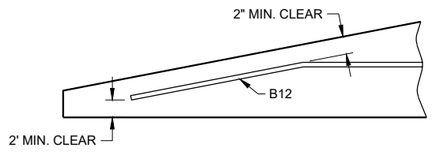
B12



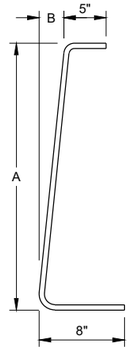
FRONT ELEVATION



END SECTION



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 ¼"
B8	1'- 5"	1 ⅝"
B9	1'- 8"	1 ⅞"
B10	2'- 0 ½"	2 ⅜"
B11	2'- 3"	2 ¾"

B BARS
2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16I

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f'c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ¼" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ⅛" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ⅛" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	⅝" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	⅝" DIA.
R2	CAP- BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

6

SDD 14B07-16m

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T2	CAP 56-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T3	CAP 56-INCH SIDE PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T4	CAP 56-INCH SIDE PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T5	CAP 56-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T6	CAP 56-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T7	CAP 56-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T8	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T9	CAP 42-INCH GUSSET 5	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T10	CAP 42-INCH GUSSET 6	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T11	CAP 42-INCH GUSSET 7	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T12	CAP 42-INCH GUSSET 8	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T13	CAP 42-INCH GUSSET 9	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T14	CAP 42-INCH GUSSET 10	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T15	CAP 42-INCH GUSSET 11	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T16	CAP 42-INCH GUSSET 12	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
U1	GAP STIFFENER	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U2	GAP STIFFENER - CONNECTOR PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U3	GAP STIFFENER - CONNECTOR PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

6

SDD 14B07-16n

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

SDD 14B07-16n

GENERAL NOTES

(1) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

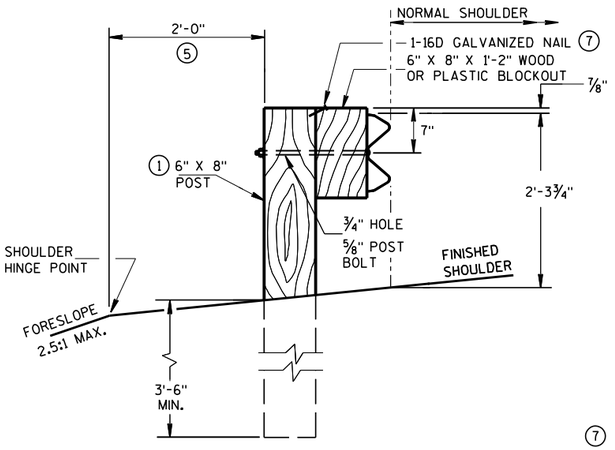
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

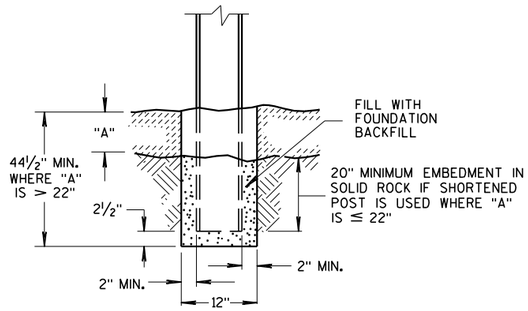
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

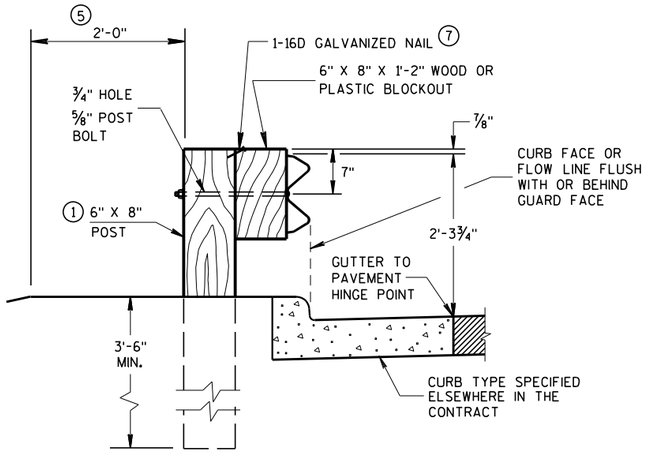
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



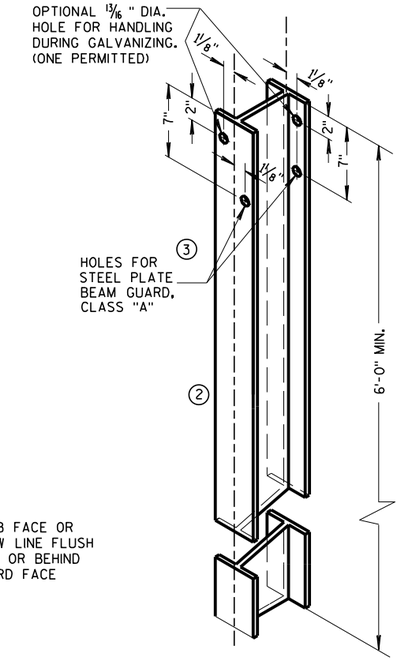
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)

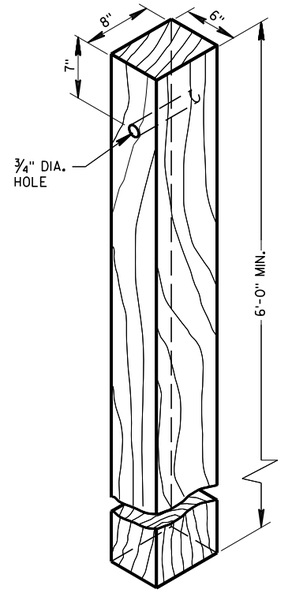


END VIEW
LOCATED ALONG A CURBED ROADWAY

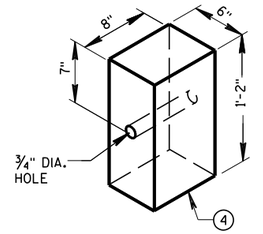


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

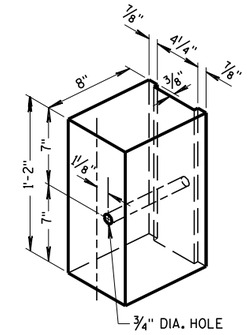
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



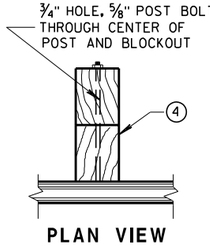
WOOD POST
(6"X8") NOMINAL



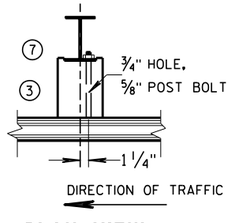
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



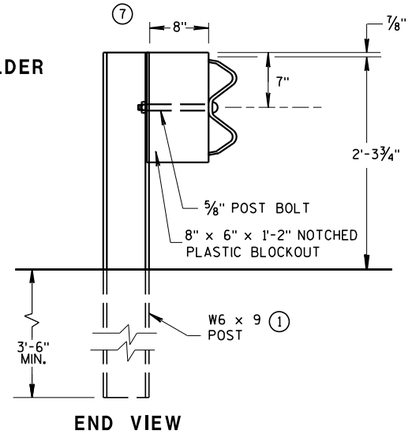
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS (1)



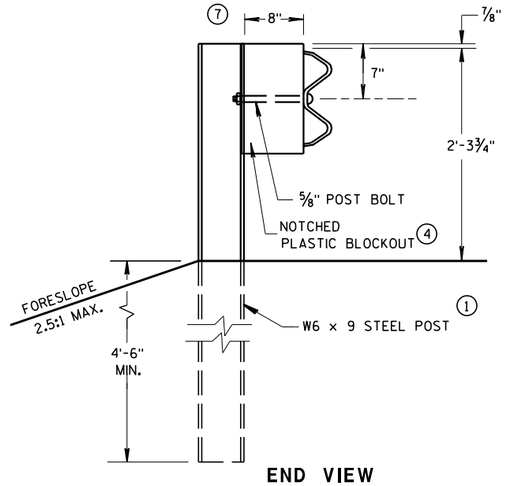
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



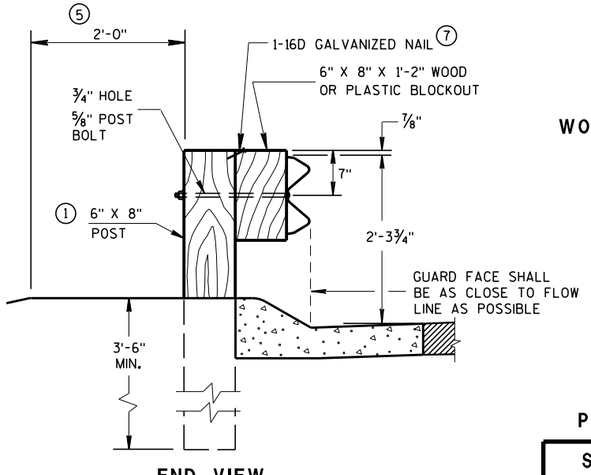
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



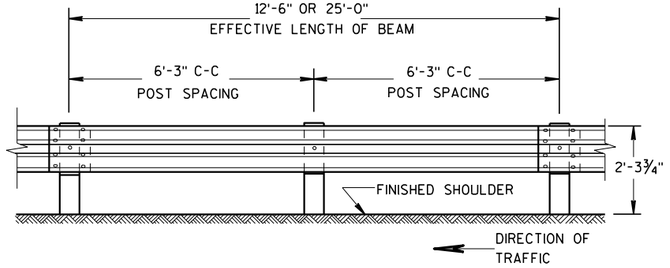
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

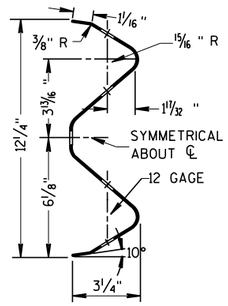
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-11a

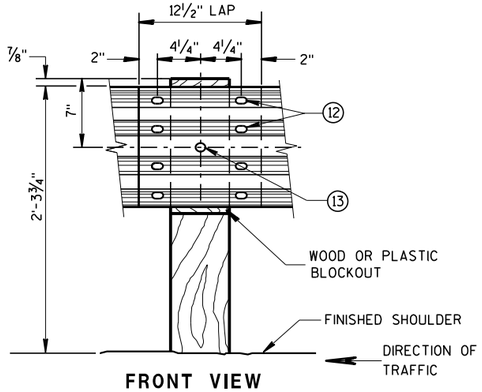


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

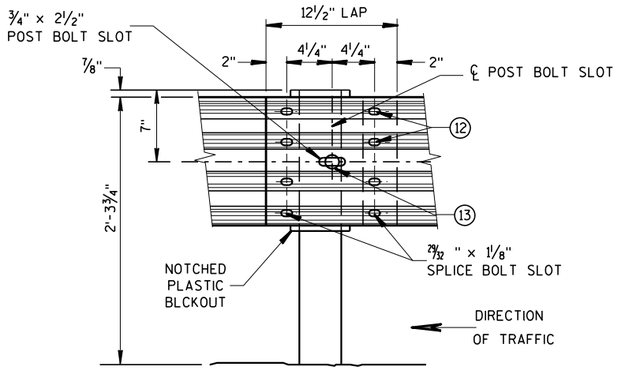
(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.

(12) 8 -5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.

FRONT VIEW

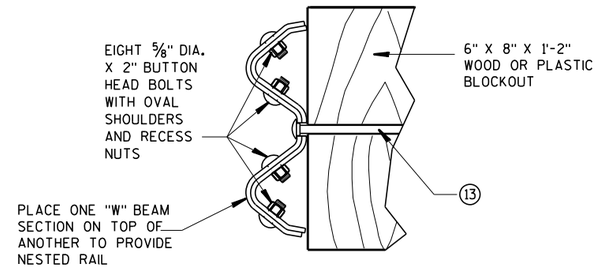
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

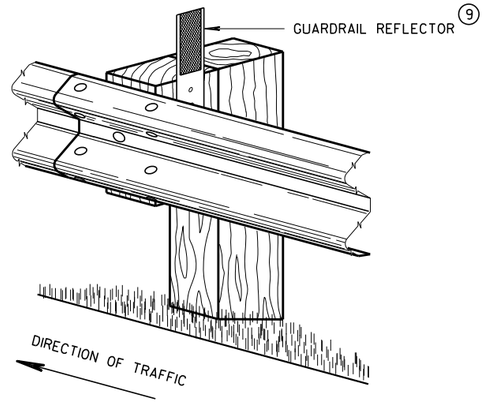
TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD



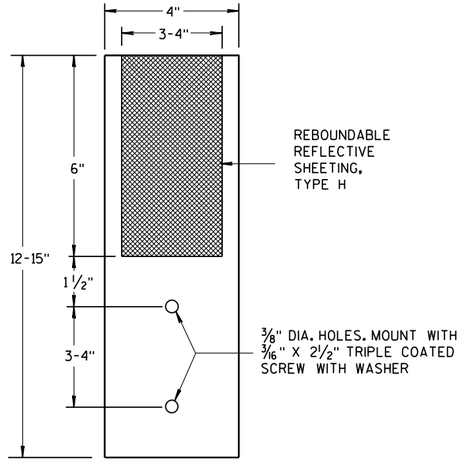
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

* USE DOUBLE SIDED WHITE GUADRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



4" X 12" GUARDRAIL REFLECTOR DETAIL AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

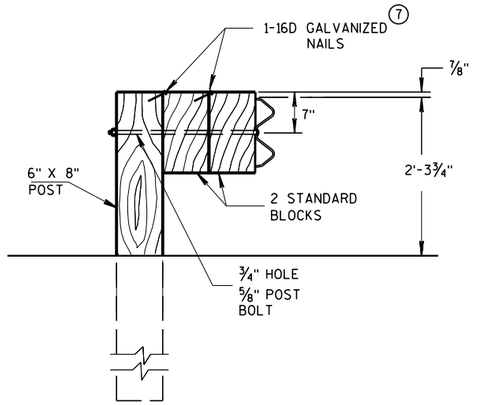
STATE OF WISCO 346
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 15-11b

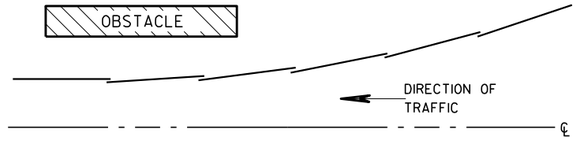
6

S.D.D. 14 B 15-11b

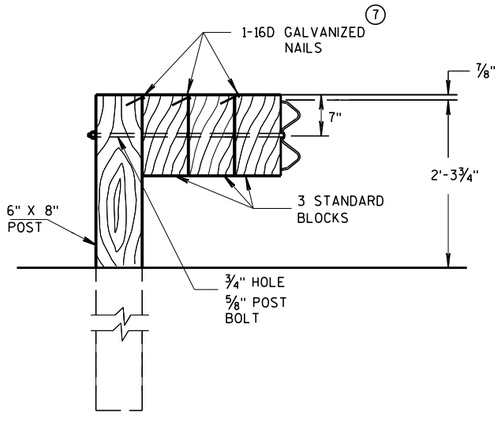


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

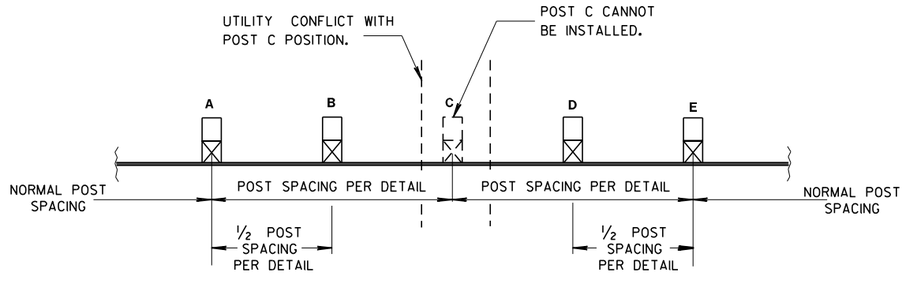


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

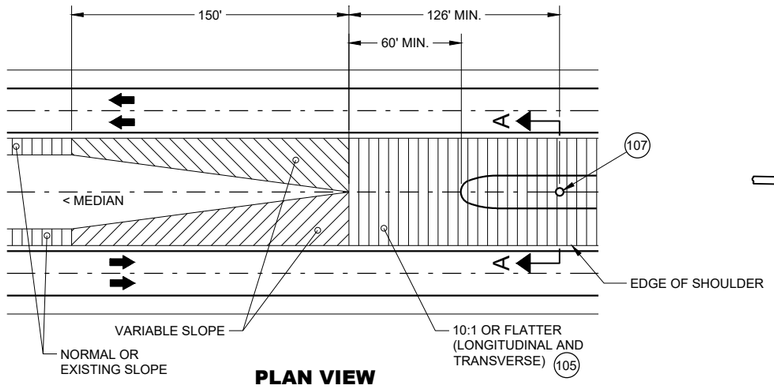
DO NOT USE EXTRA BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

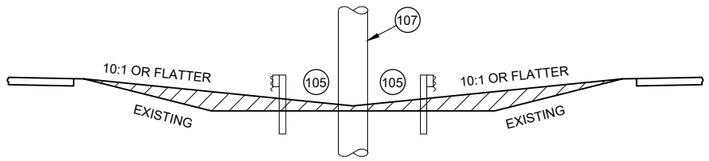
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
347
FHWA

6
S.D.D. 14 B 15-11c



PLAN VIEW
GRADING AT BULLNOSE
(ALL INSTALLATIONS)



SECTION A -A
MEDIAN GRADING
(ALL INSTALLATIONS)

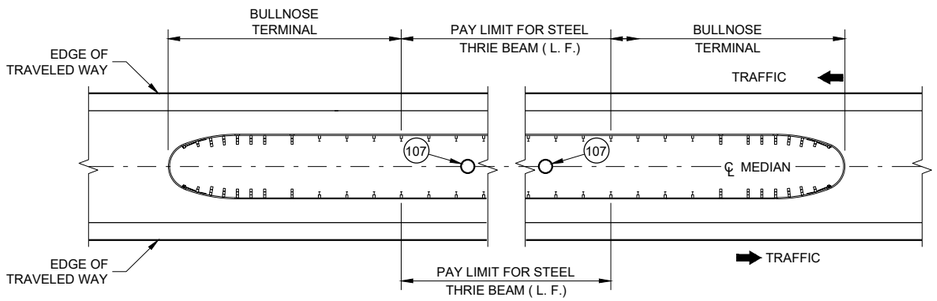
GENERAL NOTES

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

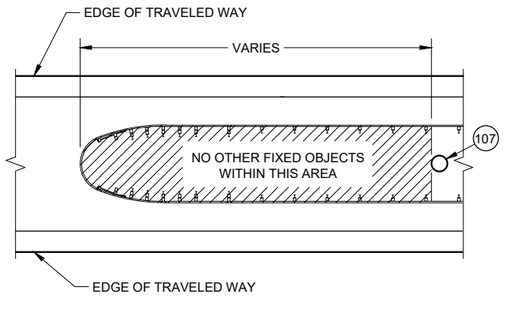
SEE STANDARD DETAIL DRAWINGS 14B26 SHEETS a-h.

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

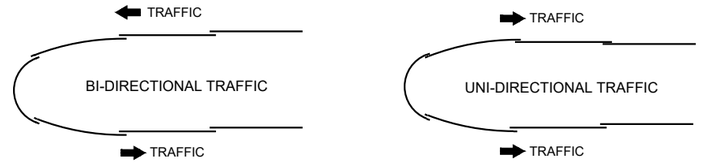
- E1 UNBENT STANDARD THRIE BEAM RAIL B1 (POST 8 TO POST 10 AND POST 10 TO POST 12)
- E2 SLOTTED THRIE BEAM RAIL E1 (POST 1 TO POST 1)
- E3 SLOTTED THRIE BEAM RAIL B3 (POST 5 TO POST 8)
- E4 SLOTTED THRIE BEAM RAIL E4 (POST 1 TO POST 5)
- 5 BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.
- (100) DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.
- (101) U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.
- (102) NOSE CABLE WITH SWAGGED END BUTTONS.
- (103) NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).
- (104) THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.
- (105) MINIMUM WORKING WIDTH 4' - 2".
- (106) MAX. WIDTH OF SYSTEM IS 14' - 2 ½" MEASURED FROM THE BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.
- (107) FIXED OBJECT OR OTHER HAZARD.
- (108) PLAN IS TO PROVIDE STATION OFFSET TO CENTER OF POST 5 IN PLANS.



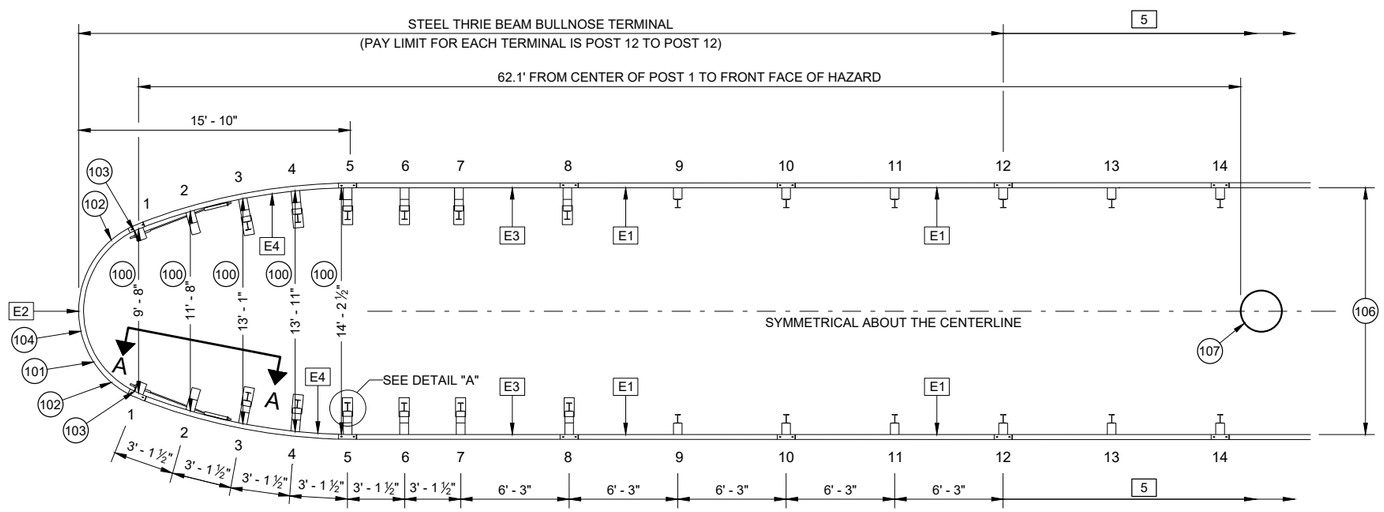
MEDIAN HAZARD PROTECTION PAY LIMITS



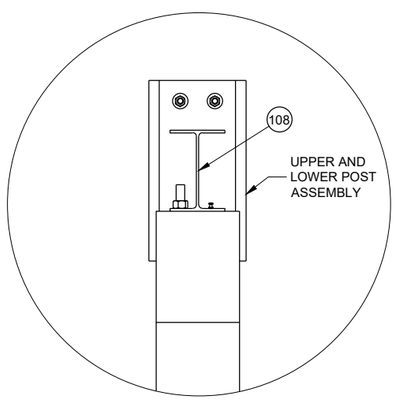
HAZARD FREE AREA
INSIDE BULLNOSE



LAPPING DETAIL



PLAN VIEW
TYPICAL BULLNOSE LAYOUT



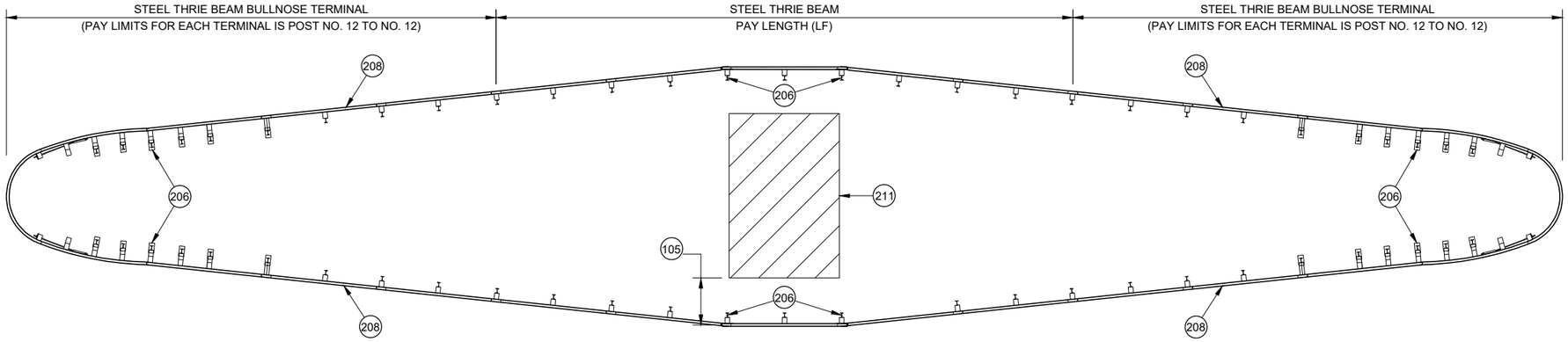
DETAIL "A"

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B26 - 05a

SDD 14B26 - 05a



VARIABLE WIDTH BULLNOSE

GENERAL NOTES

200 6' - 3" ASYMMETRICAL 10-GAUGE W-BEAM TO THRIE BEAM GUARD TRANSITION. SEE SDD 14B45 FOR MORE INFORMATION.

201 W-BEAM RAIL. SEE SDD 14B42 FOR MORE INFORMATION.

202 SEE POST NO. 9 AND ALL STEEL THRIE BEAM POST BEYOND DETAIL.

203 SEE SDD 14B42 FOR INSTALLATION INFORMATION.

204 SEE SDD 14B45 FOR INSTALLATION DETAILS. REPLACE ASYMMETRICAL W-BEAM TO THRIE BEAM TRANSITION AND W-BEAM RAIL WITH E1. PAY FOR MODIFIED THRIE BEAM TRANSITION.

205 CONCRETE BARRIER OR BRIDGE RAIL.

206 SEE PLAN FOR STATION AND OFFSET TO CENTER OF POST.

207 SEE PLAN FOR STATION AND OFFSET TO CENTER OF SPLICE.

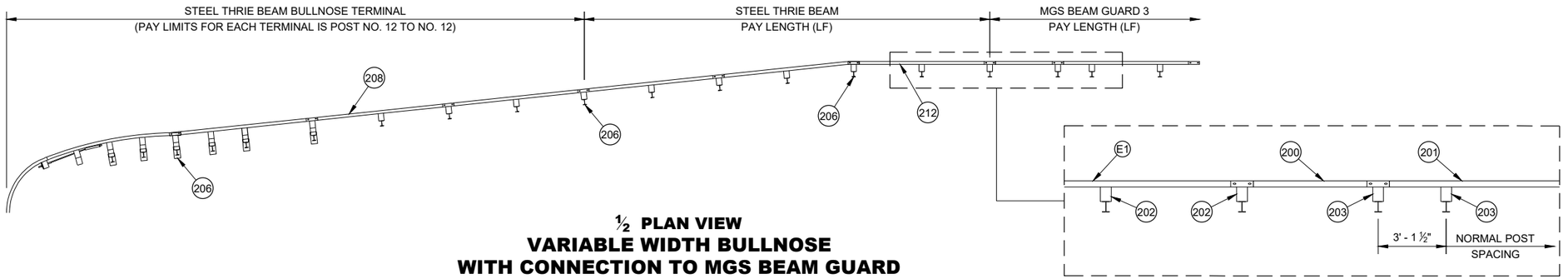
208 SEE PLAN FOR FLARE RATE.

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

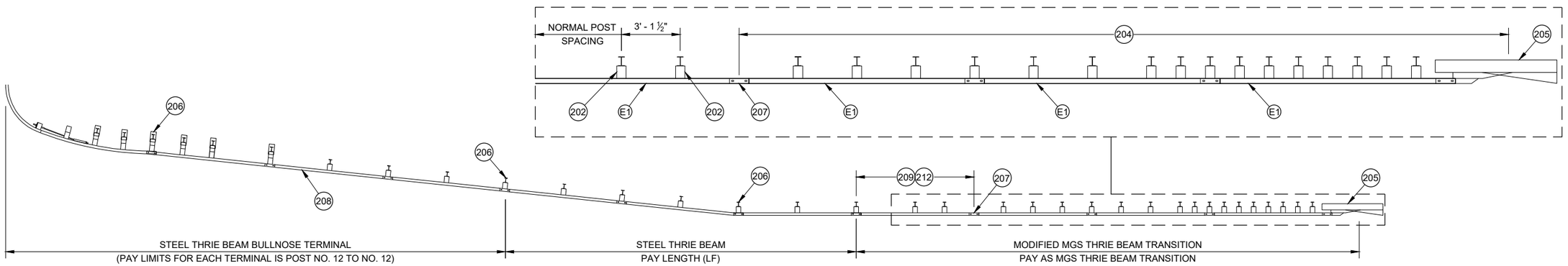
210 NOT ALL BULLNOSE HARDWARE SHOWN. SEE OTHER SHEETS IN 14B26.

211 WIDER HAZARD TO BE SHIELDED.

212 TRANSITION RAIL HEIGHT TO 31" OVER THE LENGTH OF A 12' - 6" BEAM SECTION.



½ PLAN VIEW
VARIABLE WIDTH BULLNOSE
WITH CONNECTION TO MGS BEAM GUARD

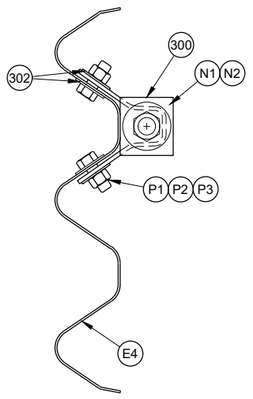


½ PLAN VIEW
VARIABLE WIDTH BULLNOSE
WITH CONNECTION TO RIGID BARRIER

STEEL THRIE BEAM BULLNOSE TERMINAL

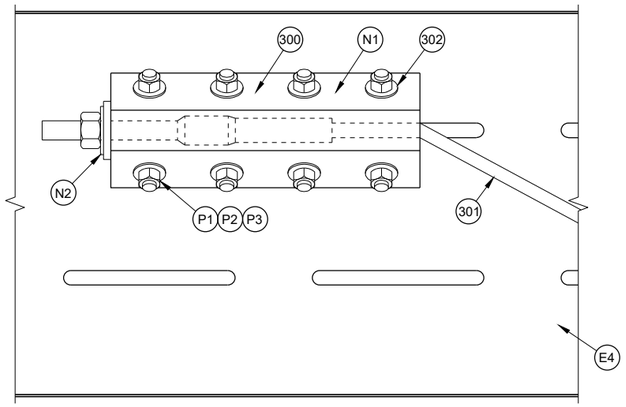
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B26 - 05b

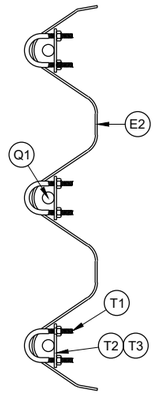


PROFILE VIEW

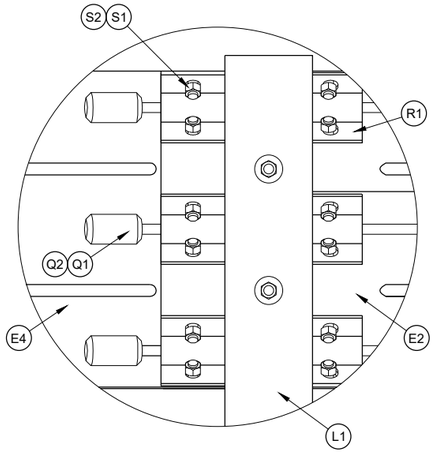
CABLE ANCHOR ASSEMBLY CONNECTION



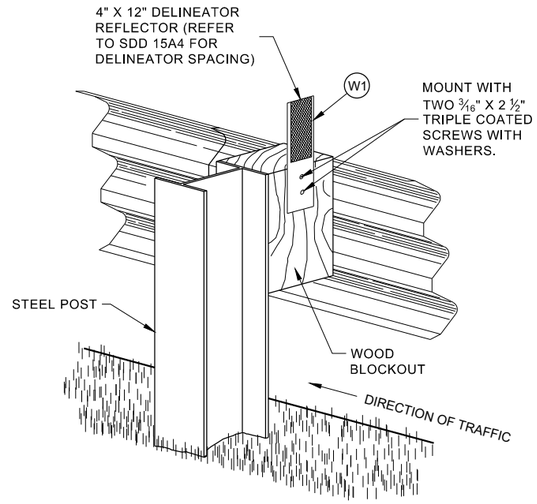
CABLE ANCHOR ASSEMBLY



NOSE CABLE RETAINING CLIP



DETAIL "A"



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

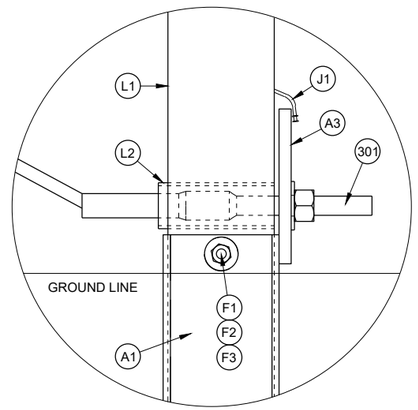
POST 8

POST 3

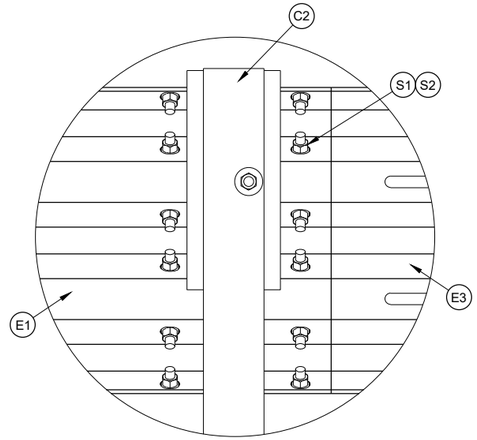
POST 2

POST 1

CROSS SECTION A - A



DETAIL "B"



DETAIL "C" THRIE BEAM SPLICE

GENERAL NOTES

(300) SEE ANCHOR BRACKET ASSEMBLY DETAIL.

(301) SEE ANCHOR CABLE ASSEMBLY DETAIL

(302) ONE WASHER BETWEEN BOLT HEAD AND RAIL AND BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

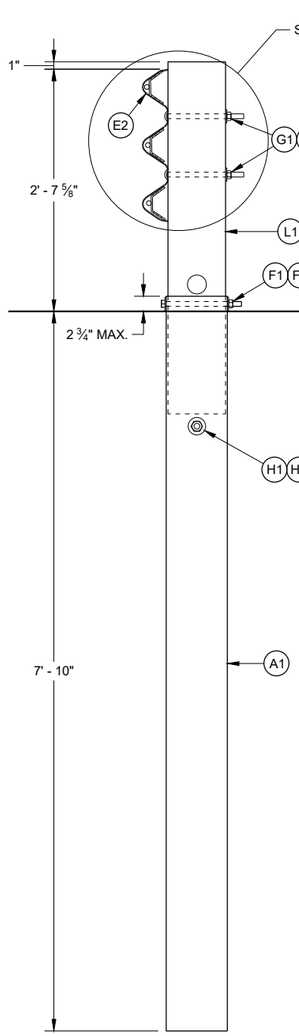
(303) ONE WASHER BETWEEN BOLD HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

STEEL THRIE BEAM BULLNOSE TERMINAL

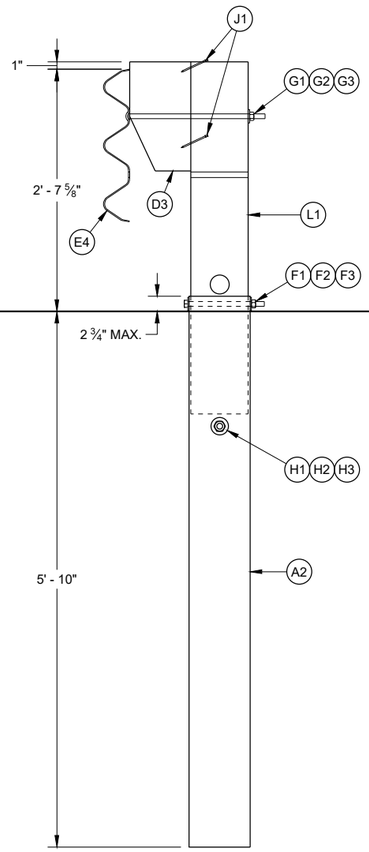
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

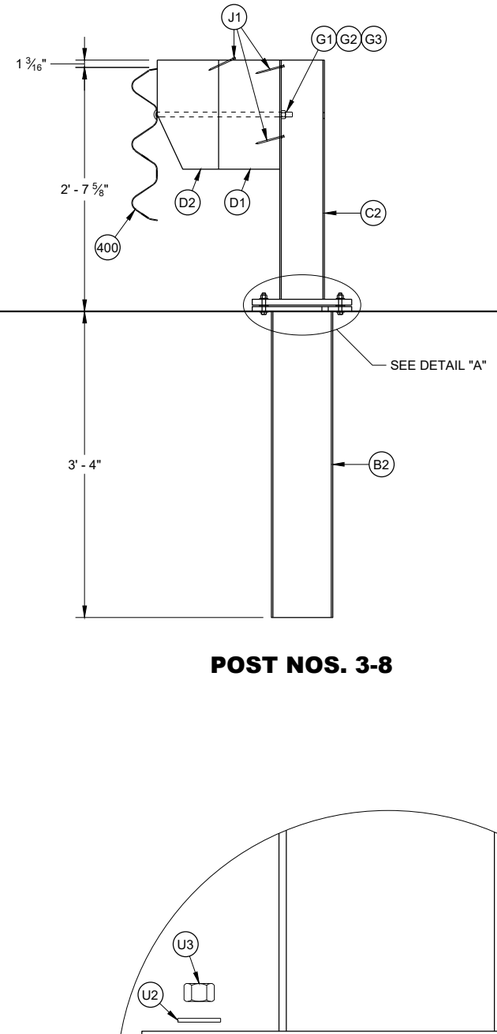
SDD 14B26 - 05c



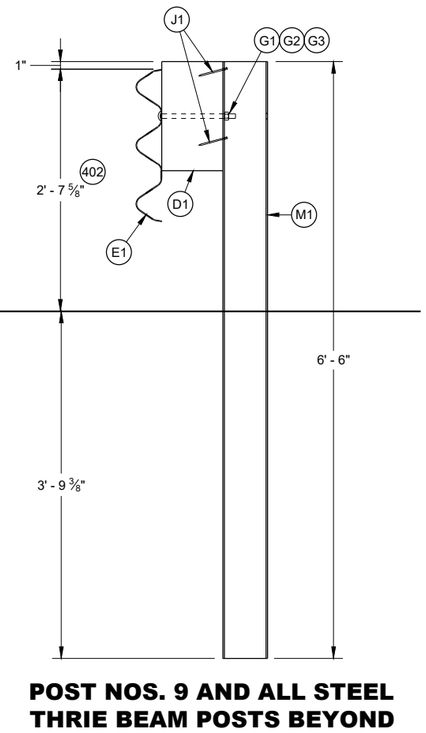
POST NO. 1



POST NO. 2



POST NOS. 3-8



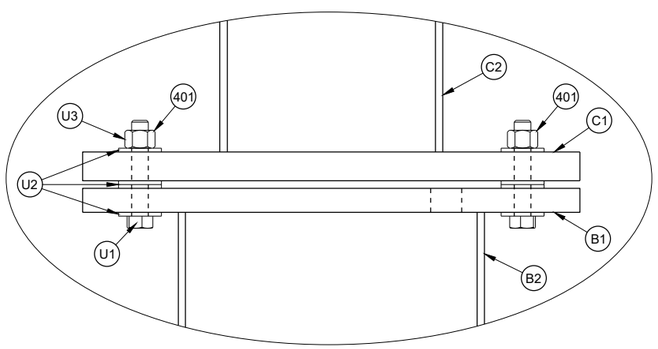
POST NOS. 9 AND ALL STEEL THRIE BEAM POSTS BEYOND

GENERAL NOTES

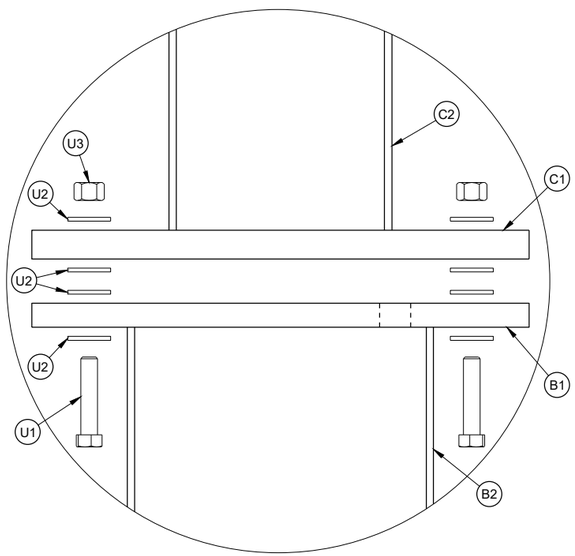
(400) RAIL CAN BE E3 OR E4 DEPENDING ON POST LOCATION.

(401) TORQUE BOLD BETWEEN 60-75 FT-LB

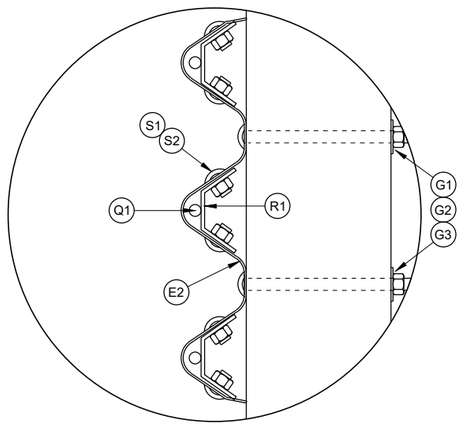
(402) HEIGHT WILL VARY WITHIN HEIGHT TRANSITION TO OTHER HARDWARE. SEE NOTE 213, SHEET "b".



DETAIL "A"



EXPLODED VIEW
DETAIL "A"



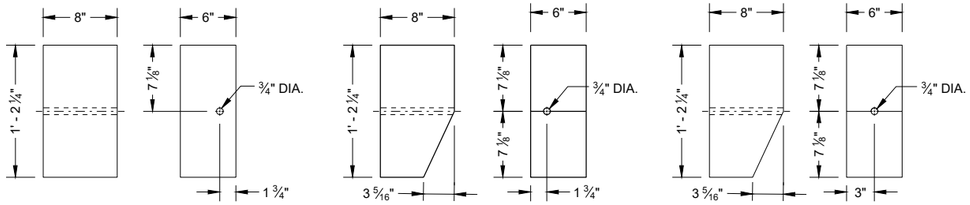
DETAIL "B"

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

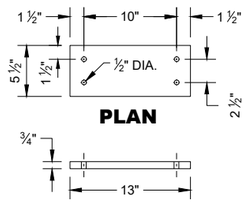
SDD 14B26 - 05d



ELEVATION PROFILE
BLOCKOUT (D1)

ELEVATION PROFILE
BLOCKOUT (D2)

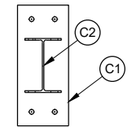
ELEVATION PROFILE
BLOCKOUT (D3)



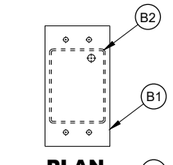
PLAN

PROFILE

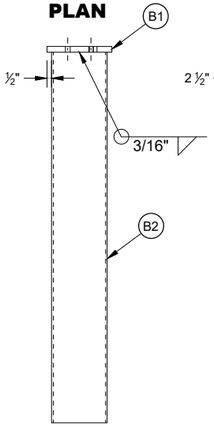
UPPER SHEAR PLATE (C1)



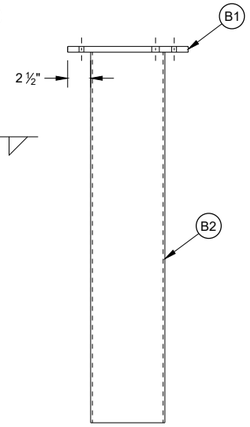
PLAN



PLAN

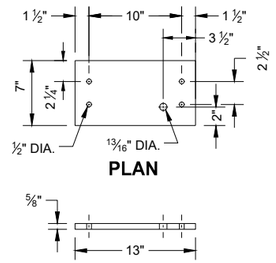


ELEVATION



PROFILE

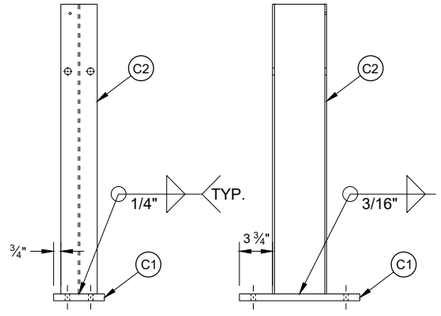
LOWER POST ASSEMBLY



PLAN

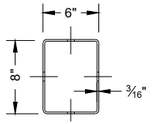
PROFILE

LOWER SHEAR PLATE (B1)



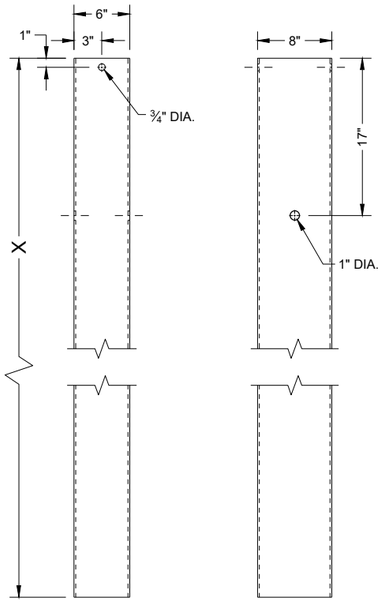
ELEVATION PROFILE

UPPER POST ASSEMBLY



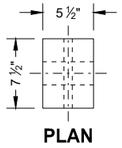
PLAN

PART	LENGTH "X"
A1	8' - 0"
A2	6' - 0"
B2	3' - 4"

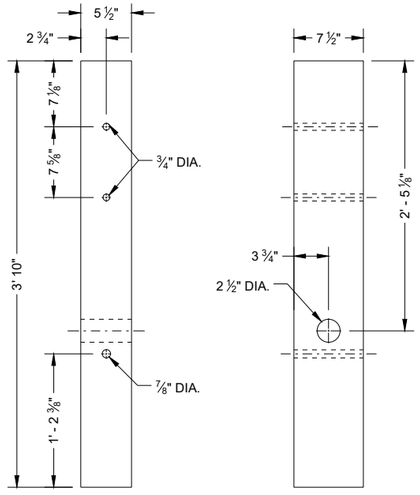


ELEVATION PROFILE

FOUNDATION TUBE

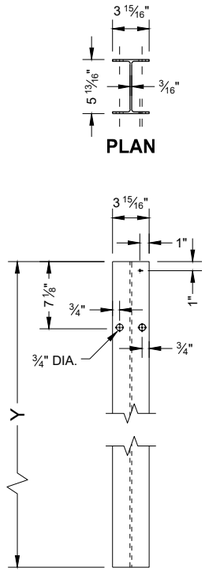


PLAN



ELEVATION PROFILE

BCT POST (L1)



ELEVATION

POST

PART	LENGTH "Y"
M1	6' - 6"
M2	5' - 8 5/8"
C2	2' - 7 5/8"

STEEL THRIE BEAM BULLNOSE TERMINAL

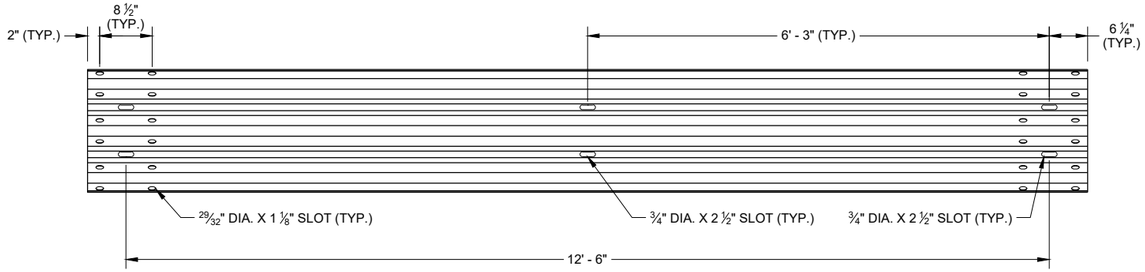
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

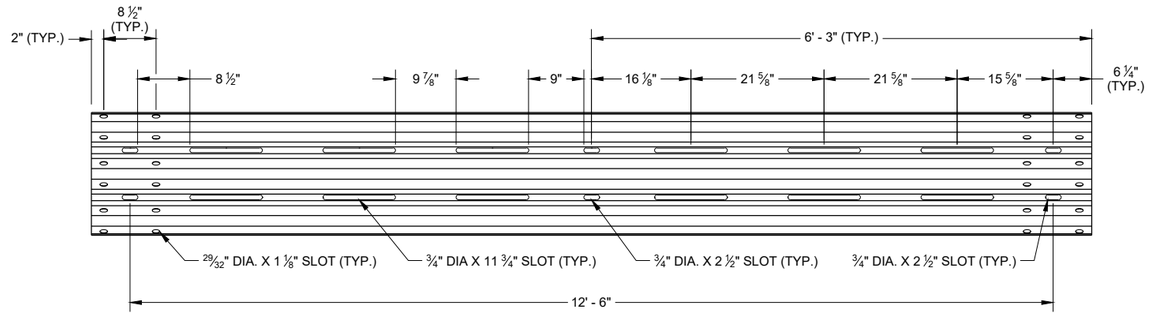
SDD 14B26 - 05e

6

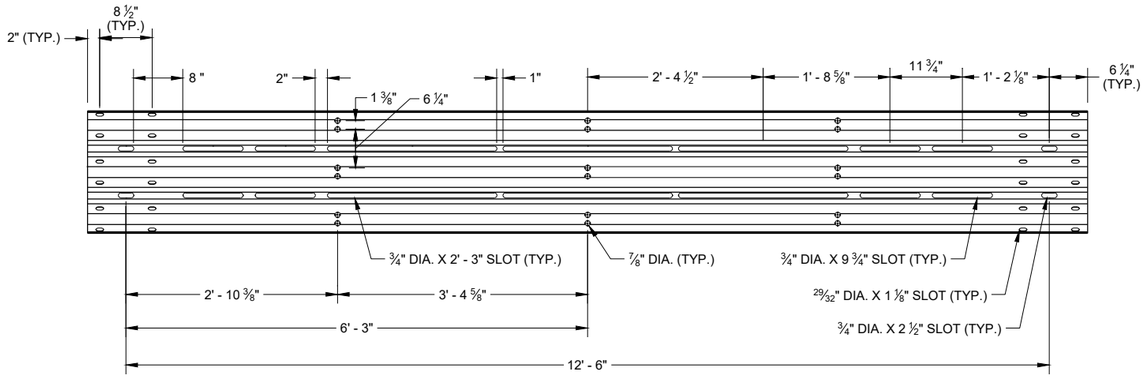
SDD 14B26 - 05e



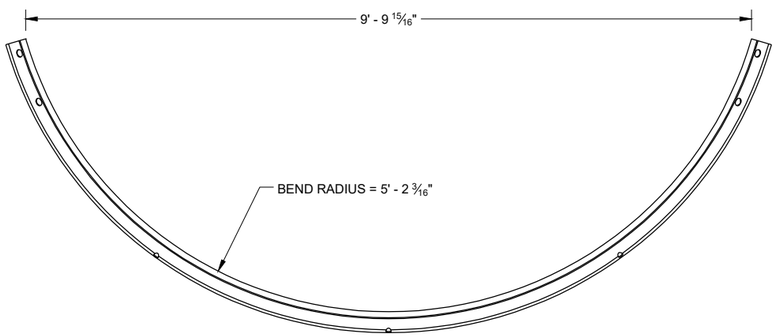
SLOTTED THRIE BEAM RAIL E1



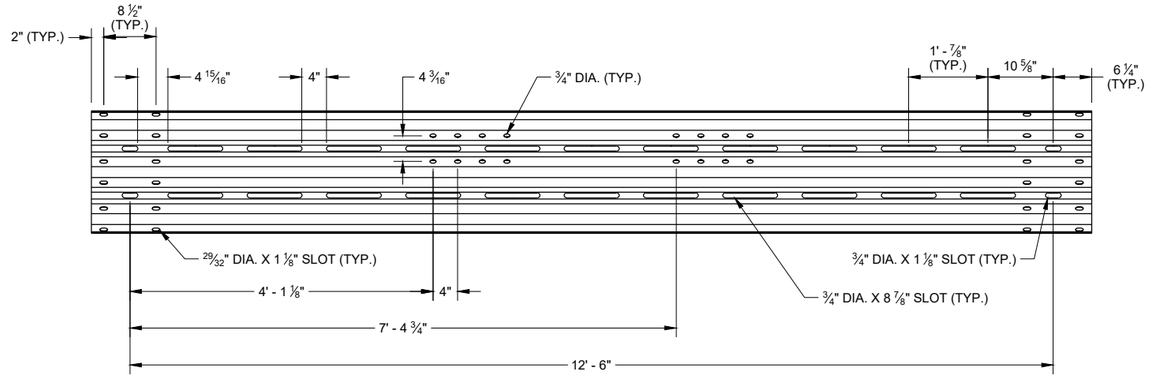
SLOTTED THRIE BEAM RAIL E3



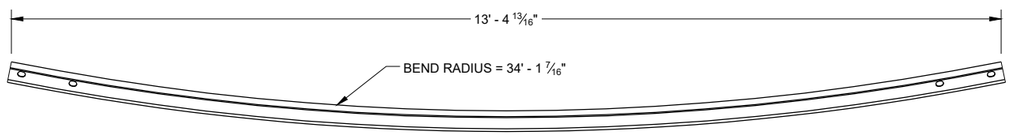
ELEVATION VIEW NON - RADIUSED
SLOTTED THRIE BEAM RAIL E2



PLAN VIEW
SLOTTED THRIE BEAM RAIL E2



ELEVATION VIEW NON - RADIUSED
SLOTTED THRIE BEAM RAIL E4

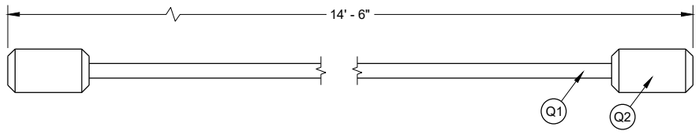


PLAN VIEW
SLOTTED THRIE BEAM RAIL E4

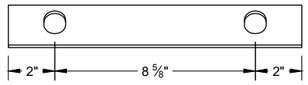
STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

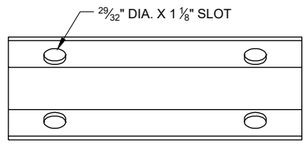
6
SDD 14B26 - 05f



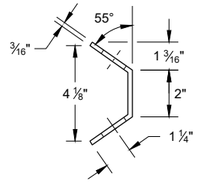
NOSE CABLE AND SWAGE BUTTON



PLAN VIEW

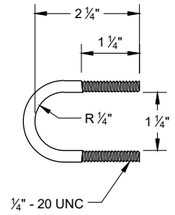


ELEVATION VIEW

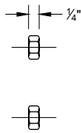


PROFILE VIEW

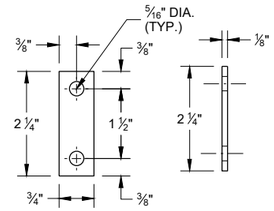
NOSE CABLE ANCHOR (R1)



U - BOLT (T1)

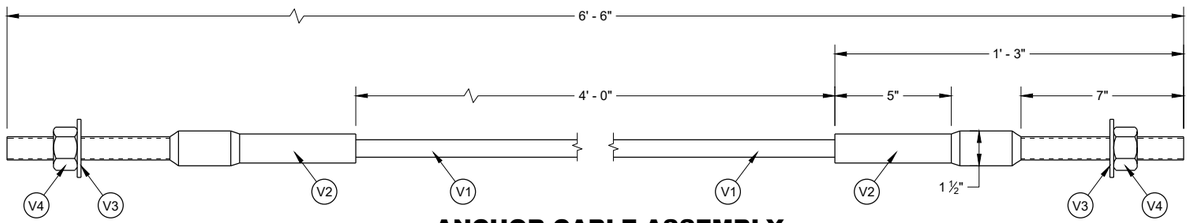


U - BOLT NUT (T3)

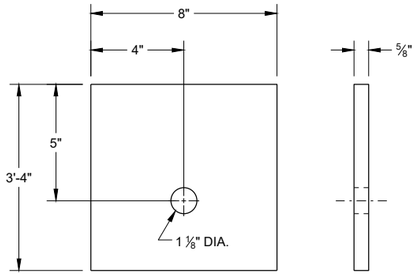


ELEVATION VIEW **PROFILE VIEW**

U - BOLT PLATE WASHER (T2)

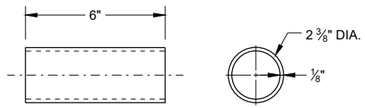


ANCHOR CABLE ASSEMBLY



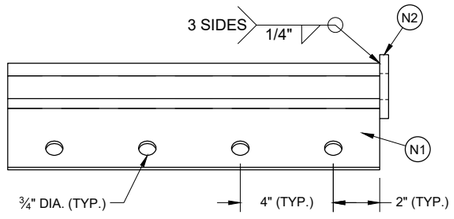
ELEVATION VIEW **PROFILE VIEW**

BCT BEARING PLATE (A3)

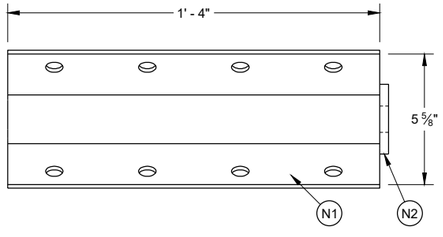


ELEVATION VIEW **PROFILE VIEW**

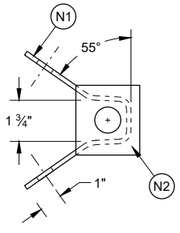
BCT POST SLEEVE (L2)



PLAN VIEW

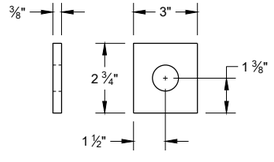


ELEVATION VIEW



PROFILE VIEW

ANCHOR BRACKET ASSEMBLY (N1)



ANCHOR BRACKET END PLATE (N2)

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B26 - 05g

6

SDD 14B26 - 05g

BILL OF MATERIALS LIST

PART NUMBER	DESCRIPTION	MATERIAL SPECIFICATION
A1	LONG FOUNDATION TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
A2	FOUNDATION TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
A3	BEARING PLATE AT POST	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
B1	LOWER SLIP POST ASSEMBLY - PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
B2	LOWER SLIP POST ASSEMBLY - TUBE	AASHTO M111/ASTM A123 ASTM A500 GRADE B OR ASTM A-501
C1	UPPER SLIP POST ASSEMBLY - PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
C2	UPPER SLIP POST ASSEMBLY - POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
D1	BLOCK FOR STEEL POST - WOOD	WISDOT SPEC. 614
D2	TAPERED BLOCK FOR STEEL POST - WOOD	WISDOT SPEC. 614
D3	TAPERED BLOCK FOR BCT POST - WOOD	WISDOT SPEC. 614
E1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER
E2	THRIE BEAM RAIL - SHOP BENT AND PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS.
E3	THRIE BEAM RAIL - PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER
E4	THRIE BEAM RAIL - SHOP BENT AND PUNCHED	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER. INDICATE RADIUS BEAM GUARD IS BENT TO ON THE BACKSIDE OF RAIL. FOLLOW AASHTO M180. MARK RADIUS.
F1	5/8" DIA. HEX HEAD GROUND STRUT AND YOKE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
F2	5/8" DIA. GROUND STRUT AND YOKE BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
F3	GROUND STRUT AND YOKE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
G1	5/8 " DIA. POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD)
G2	POST BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER TYPICALLY USED WITH STEEL POSTS) OR ASTM F844 (UNHARDENED WASHER TYPICALLY USED WITH WOOD)
G3	POST BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
H1	7/8" DIA. SOIL TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD 7/8" ASTM A563DH OR SAE J995 GRADE 5
H2	SOIL TUBE BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 7/8" ASTM F844 TYPE 1 (HARDEN WASHER ONLY)
H3	SOIL TUBE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD 7/8" ASTM A563DH OR SAE J995 GRADE 5
J1	16D DOUBLE HEAD NAIL	ASTM A153 HOT DIPPED CLASS D DOUBLE HEAD ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)
L1	BCT TIMBER POST	WISDOT SPEC. 614 S4S FINISH ON 4 SIDE
L2	BCT POST SLEEVE	AASHTO M111/ASTM A123 2 3/8" OD ASTM 53 GRADE B
M1	W6X8.5 OR W6X9 STEEL POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
M2	W6X8.5 OR W6X9 STEEL POST	AASHTO M111/ASTM A123 ASTM A6 W6X9 OR W6X8.5 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
N1	ANCHOR BRACKET	AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
N2	ANCHOR BRACKET - BEARING PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI

PART NUMBER	DESCRIPTION	MATERIAL SPECIFICATION
P1	5/8" DIA. ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
P2	ANCHOR BRACKET BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
P3	SOIL TUBE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
Q1	5/8" DIA. NOSE CABLE	6X19 AASTHO M30 / ASTM A741 XIPS INDEPENDENT WIRE CORE (IWRC) PR 6X25 XIPS, IWRC NOMINAL BREAKING STRENGTH OF 41.2 KIPS.
Q2	NOSE CABLE-SWAGE BUTTON	COLD TUFF BUTTON, S-409 SIZE NO. 12 STOCK NUMBER 1040395 OR ANY OTHER SIMILAR SIZED WAGED-GRIP-BUTTON FERRULES. ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FIELD SWAGED PER MANUFACTURERS RECOMMENDATION. NOMINAL BREAKING STRENGTH OF 41.2 KIPS.
R1	NOSE CABLE ANCHOR BRACKET	AASHTO M111/ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI
S1	5/8" DIA. SPLICE BOLT - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
S2	SPLICE - BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD 5/8" ASTM A563DH OR SAE J995 GRADE 5
T1	1/4" DIA. NOSE CABLE - U BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36
T2	U-BOLT - PLATE WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
T3	U-BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
U1	7/16" DIA. SLIP POST ASSEMBLY - BREAKAWAY BOLT	ASTM A153 OR B695 CLASS 55 OR F2329 UNC FULLY THREADED HEX HEAD TAP BOLT ASTM A449 OR SAE J429 GRADE 5
U2	7/16" DIA. SLIP POST ASSEBLY - BREAKAWAY BOLT - WASHER	ASTM F436 TYPE I (HARDEN TYPICALLY USED WITH STEEL) GALV. AASHTO M111/ASTM A 123 OR GALV. HOT DIP. TO POST BOLT CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 55, F2329
U3	SLIP POST ASSEBLY - BREAKAWAY BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / STM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
V1	¾" DIA. BCT CABLE	AASHTO M30 / ASTM A741 6X19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6X19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN BREAKING STRENGTH OF 42.7 KIPS
V2	ANCHOR CABLE-SWAGE FITTING	UNC ASTM A576 GRADE 1035 SWAGE FITTING ARE TO BE FACTORY SWAGED. MIN. BREAKING STRENGTH OF 42.7 KIPS. ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."
V3	1" DIA. ANCHOR CABLE-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)
V4	1" DIA. ANCHOR CABLE-NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5
W1	REFLECTOR	SEE SDD 15A4

6

SDD 14B26 - 05h

6

SDD 14B26 - 05h

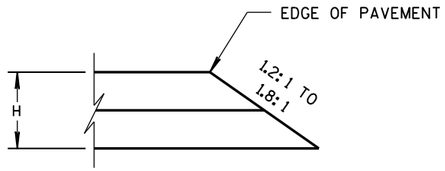
STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

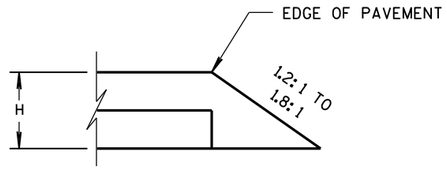
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA



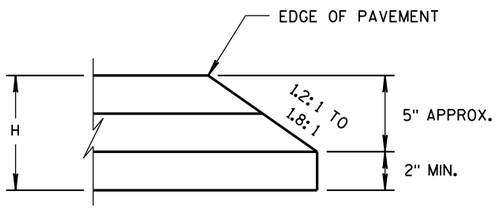
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



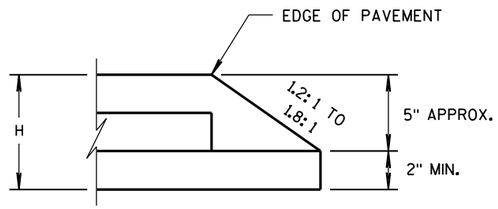
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FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

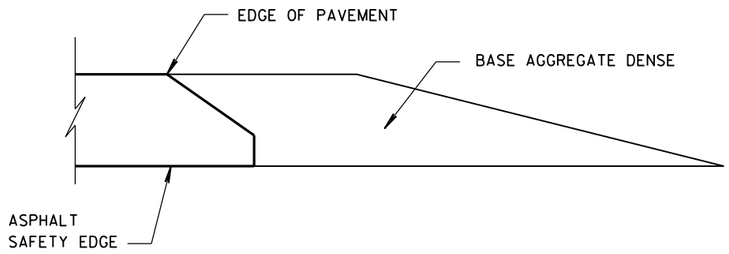
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

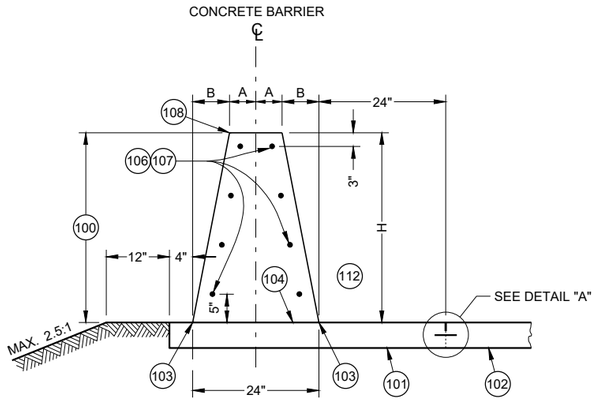
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

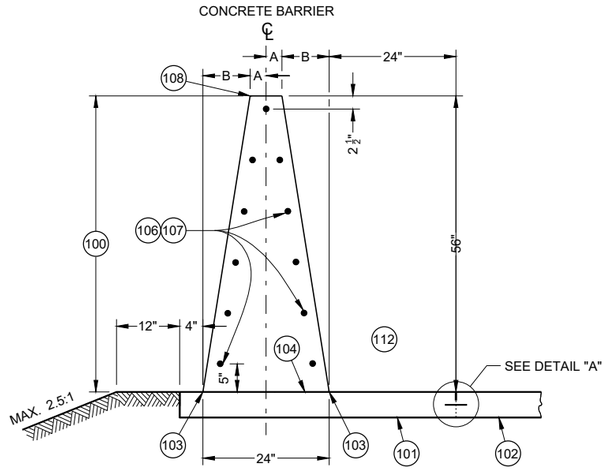
11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



32 - INCH, 36 - INCH OR 42 - INCH SINGLE SLOPE CONCRETE BARRIER
(TYPE S32, TYPE S36, TYPE S42)



56 - INCH SINGLE SLOPE CONCRETE BARRIER
(TYPE S56)

GENERAL NOTES

WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.

LOCATE EXPANSION JOINTS IN CONCRETE BARRIER SHALL AT ALL DECK AND PRINCIPAL WALL JOINTS. FILL EXPANSION JOINT WITH EXPANSION JOINT MATERIAL. SEAL THE EXPANSION JOINT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.

2" CLEAR COVER TYPICAL

ANCHORS ARE REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN IN THIS SDD OR DETAIL SHOWN ON SDD 14B33. ANCHORS INCIDENTAL TO CBSS.

PROVIDE A 1" DEEP CONTRACTION JOINT IN BARRIER PAD AND BARRIER. JOINT IS TO MATCH ADJACENT CONCRETE JOINTS. NO DOWEL BARS ARE REQUIRED FOR BARRIER PAD. IF ADJACENT TO ASPHALT, CONTRACTION JOINT IS REQUIRED EVERY 15'.

ALL REBAR SHALL BE EPOXY COATED M31 TYPE S. SEE STANDARD SPECIFICATION 505.

CONCRETE BARRIER, UPPER CONCRETE BARRIER, LOWER CONCRETE BARRIER, CONCRETE BARRIER PAD, AND FOOTINGS ARE TERMS USED TO DESCRIBE PARTS OF SINGLE SLOPE CONCRETE BARRIER BID ITEMS. THESE PARTS ARE INCIDENTAL TO THE SINGLE SLOPE CONCRETE BARRIER BID ITEMS.

(100) CONCRETE BARRIER

(101) CONCRETE BARRIER PAD

(102) PAVEMENT

(103) WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1 ½", USE TYPE A SINGLE SLOPE BARRIER.

(104) OPTIONAL CONSTRUCTION JOINT.

(105) CONSTRUCTION JOINTS MAY BE ELIMINATED WHEN CONCRETE SHOULDER IS LESS THAT 10'.

(106) STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL IS 2' BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.

(107) NO. 5 CONTINUOUS BARS EVENLY SPACED (SEE TABLE "A").

(108) USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.

(109) CONCRETE BARRIER PAD UNDER CBSS MAY BE PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED ⅓ DEPTH. CONCRETE BARRIER PAD AND SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE BARRIER PAD MINIMUM DEPTH IS 6", OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

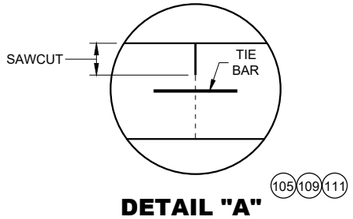
(110) SEE SDD 15A04 FOR DELINEATOR DETAILS AND SPACING.

(111) SEE SDD 13C01 FOR DETAILS TYPING CONCRETE BARRIER TO ADJACENT CONCRETE

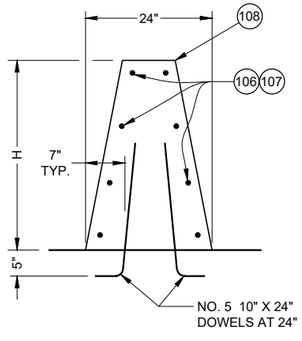
(112) TRAFFIC SIDE

TABLE "A"

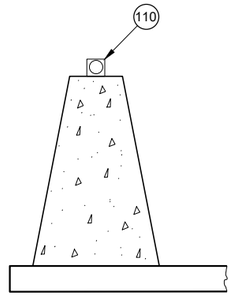
BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6 ¼	5 ¾	8
42	5 ¼	6 ¾	10
56	3	9	11



DETAIL "A"



SINGLE SLOPE CONCRETE BARRIER ON BRIDGE
(NON OUTER PARAPET APPLICATION)



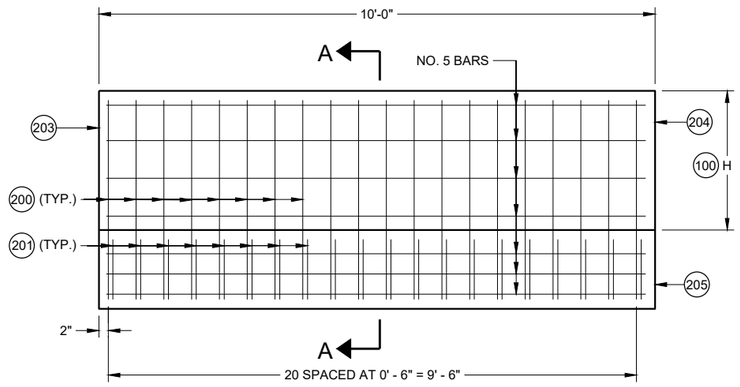
DELINEATION

CONCRETE BARRIER SINGLE SLOPE (CBSS)

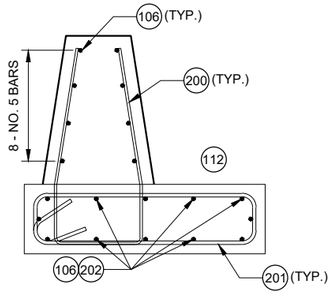
STATE OF WISCONSIN
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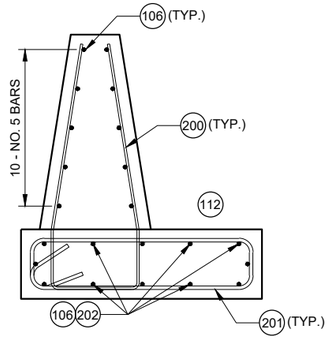
SDD 14B32 - 10a



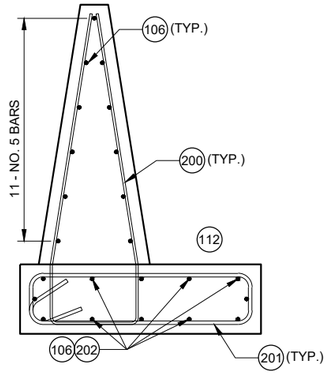
END ANCHOR SINGLE SLOPE CONCRETE BARRIER



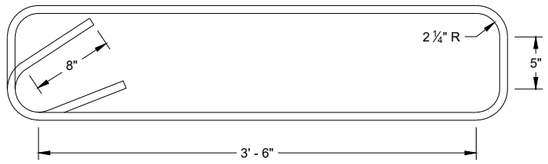
32" AND 36" CBSS



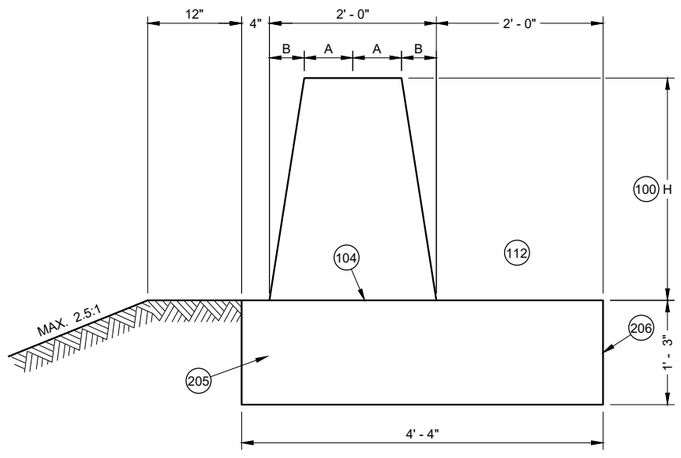
42" CBSS



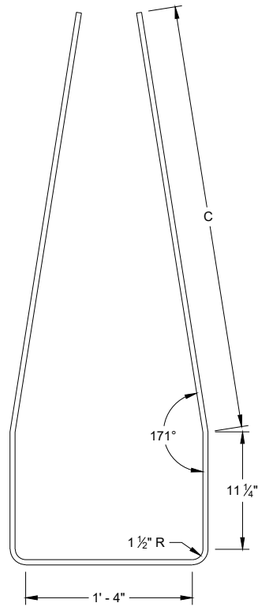
56" CBSS



STIRRUP BAR BENDING DETAIL



SECTION A - A



V1 BAR BENDING DETAIL

TABLE "B"

BARRIER HEIGHT H INCHES	C INCHES
32	2' - 6"
36	2' - 11"
42	3' - 4"
56	4' - 6 ½"

GENERAL NOTES

200 V1 BARS ARE NO. 5 BARS. (SEE BAR BENDING DETAIL)

201 STIRRUPS ARE NO. 6 BARS. (SEE BAR BENDING DETAIL)

202 TWELVE (12) NO. 5 BARS EVENLY SPACED

203 END OF INSTALLATION OR EXPANSION JOINT.

204 SEE COLD JOINT DETAIL TO CONNECT END ANCHOR SINGLE SLOPE CONCRETE BARRIER TO SINGLE SLOPE CONCRETE BARRIER.

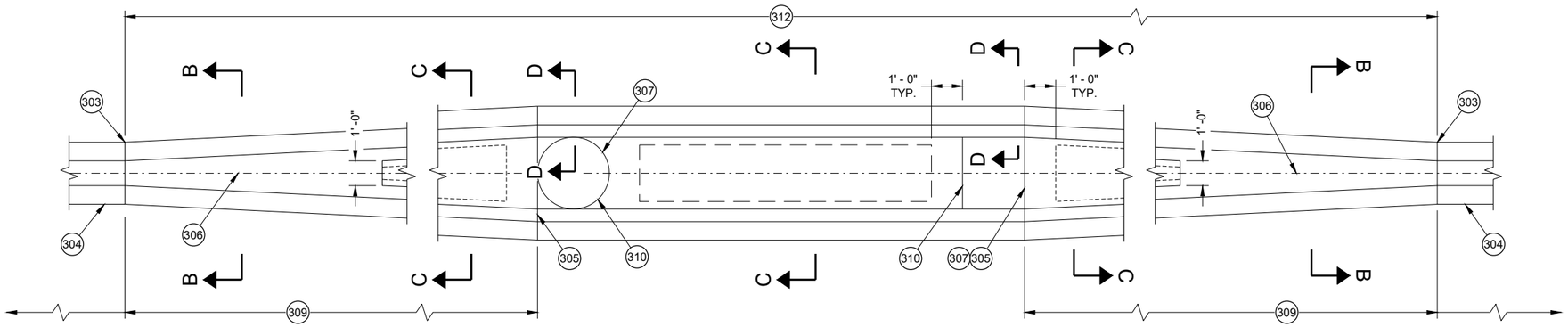
205 FOOTING

206 DO NOT TIE TO FOOTING TO ADJACENT PAVEMENT.

CONCRETE BARRIER SINGLE SLOPE (CBSS)

SDD 14B32 - 10b

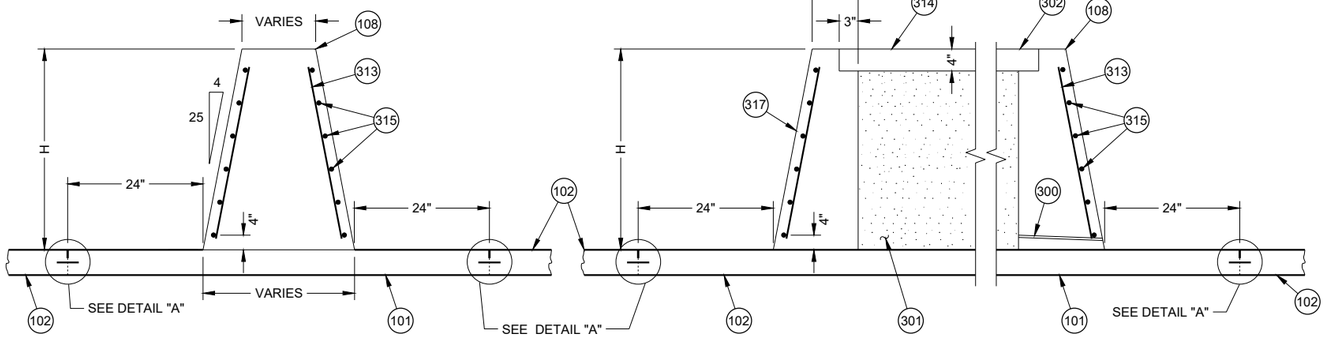
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LARGE FIXED OBJECTS PROTECTION
(TYPE S32, TYPE S36, TYPE S42, TYPE S56)

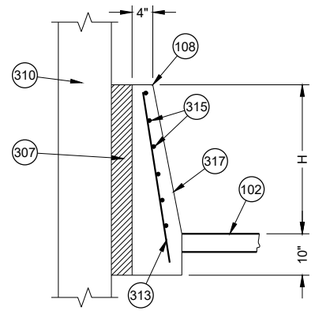
TABLE "C"

BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	6

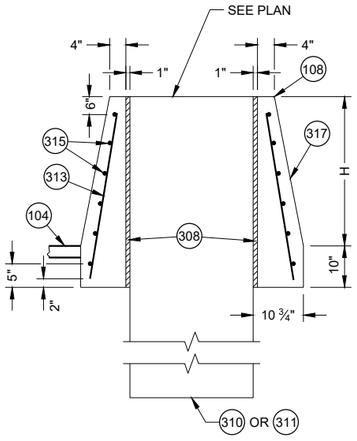


SECTION B - B

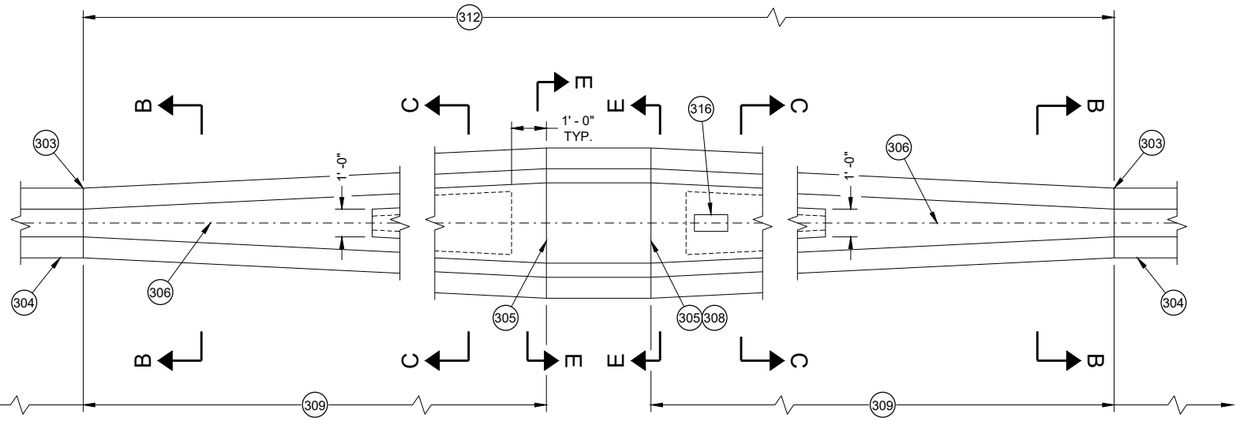
SECTION C - C



SECTION D - D



SECTION E - E



SMALL FIXED OBJECTS PROTECTION
(TYPE S32, TYPE S36, TYPE S42, TYPE S56)

GENERAL NOTES

300 INSTALL 1 INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B -B. MINIMUM ONE DRAIN CAVITY.

301 BETWEEN CONCRETE BARRIER WALLS FILL WITH FOUNDATION BACKFILL.

302 LEVEL THE TOP OF CONCRETE BARRIER CAP ACROSS TOP OF BARRIER. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.

303 USE COLD JOINTS BETWEEN FIXED OBJECT PROTECTION AND CONCRETE BARRIER ANCHOR.

304 INSTALL END ANCHOR SINGLE SLOPE CONCRETE BARRIER.

305 SEE COLD JOINT DETAIL

306 CENTERLINE OF CONCRETE BARRIER.

307 INSTALL 4" EXPANDED POLYSTYRENE BETWEEN COLUMN AND CONCRETE BARRIER.

308 INSTALL 1" EXPANDED POLYSTYRENE BETWEEN PEDESTAL AND CONCRETE BARRIER.

309 20:1 MIN. TRANSITION.

310 COLUMN

311 PEDESTAL

312 LIMITS OF PAYMENT FOR LARGE FIXED OBJECT PROTECTION (SEE PLAN)

313 NO. 4 BARS SPACED 12" CENTER TO CENTER (TYP.)

314 USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.

315 SEE TABLE "C" FOR BAR INFORMATION

316 ELECTRICAL PULL BOX FOR SIGN FLUSH WITH TOP OF CONCRETE BARRIER.

317 VARIABLE SLOPE

CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B32 - 10c

GENERAL NOTES

(400) END ANCHOR SINGLE SLOPE CONCRETE BARRIER.

(401) PARAPET, SIGN BRIDGE BASE, LIGHT POLE BASE OR OTHER OBJECT SINGLE SLOPE CONCRETE BARRIER CANNOT TIE INTO.

(402) JOINT SEAL CONFORMING TO STANDARD SPECIFICATION 415.2.6

(403) EXPANSION JOINT MATERIAL.

(404) INLET (SEE PLAN)

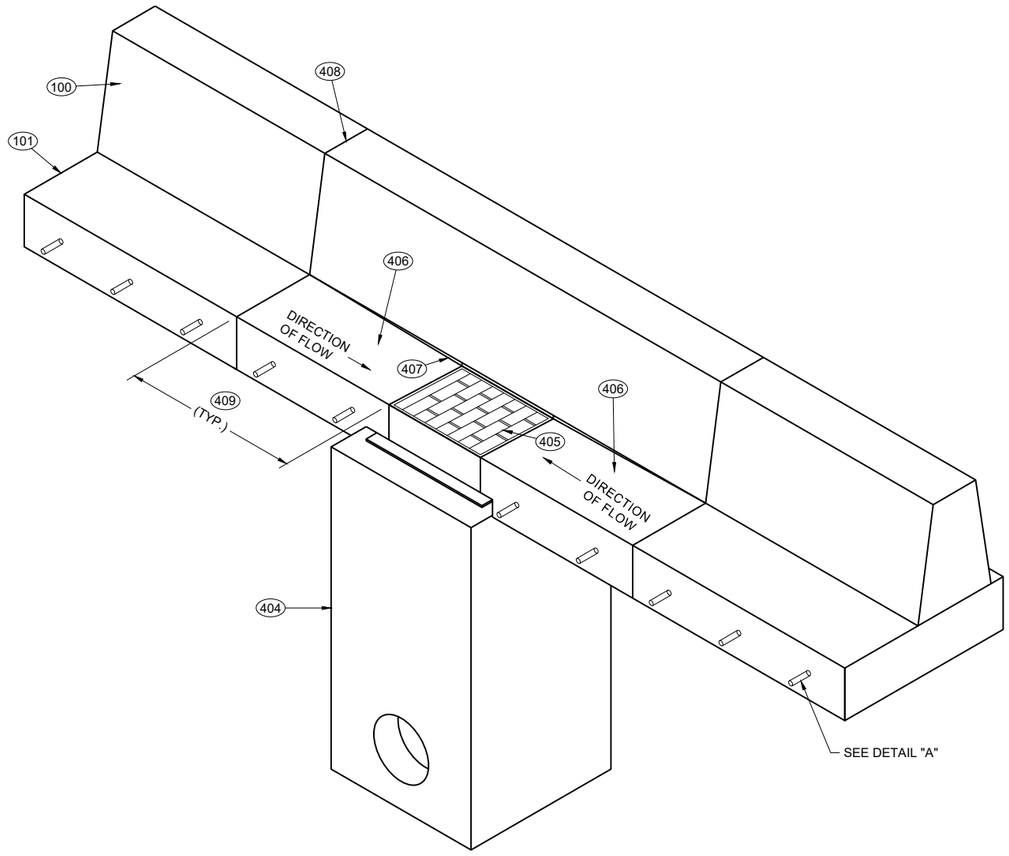
(405) INLET COVER BW (SEE PLAN)

(406) WARP PAN TO MATCH INLET COVER.

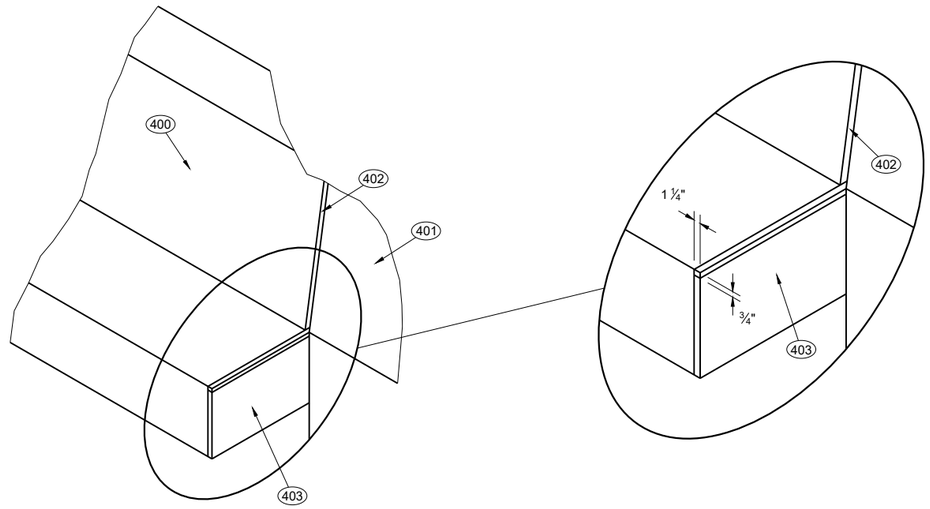
(407) EXTEND BARRIER SLOPE TO INLET. SEE PLAN FOR THE LENGTH OF EXTENSION.

(408) CONTRACTION JOINT.

(409) WHEN ADJACENT TO CONCRETE PAVEMENT OR SHOULDER, JOINT SHOULD MATCH CONCRETE JOINTS. OTHERWISE, 3' (TYP.). SEE SDD 13C18 FOR MORE INFORMATION.



DRAINAGE DETAIL



EXPANSION JOINT DETAIL

6

SDD 14B32-10d

CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B32-10d

GENERAL NOTES

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

(500) SEE TABLE "A" FOR DIMENSIONS

(501) SEE TABLE "D"

(502) MULTIPLE HEIGHT TRANSITION MAY BE USED IN SEQUENCE TO GET APPROPRIATE HEIGHT.

(503) COLD JOINT

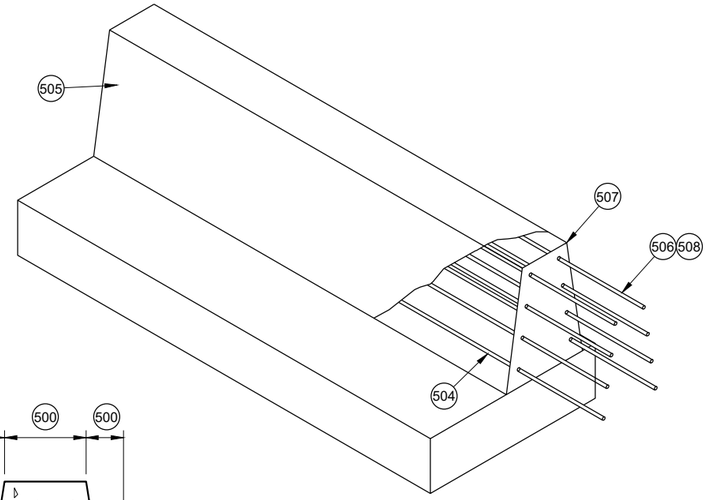
(504) BARRIER REBAR (SEE OTHER DETAILS FOR BAR SIZE, QUANTITY AND LOCATION).

(505) SINGLE SLOPE BARRIER SHOWN. SIMILAR DETAIL CAN BE USED FOR COLD JOINT IN END ANCHORS AND TRANSITIONS.

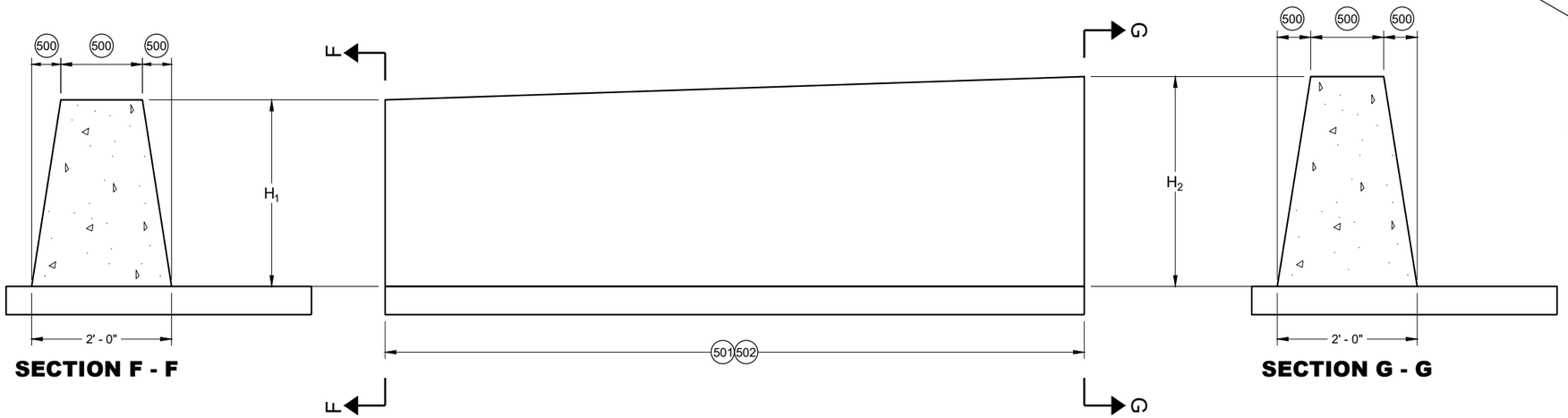
(506) NO. 5 REBAR FOR SPLICE. 3' OF SPLICE REBAR IS LAPPED AND TIED TO BARRIER REBAR. EXTEND 3' OF SPLICE REBAR BEYOND END OF POUR. ALL BARS ARE FIRMLY TIED OR CONNECTED. EVERY REBAR IN THE BARRIER SECTION REQUIRES A SPLICE BAR.

(507) END OF POUR.

(508) LAP AND TIE 3' OF NEXT POUR'S REBAR TO SPLICE REBAR.



COLD JOINT DETAIL



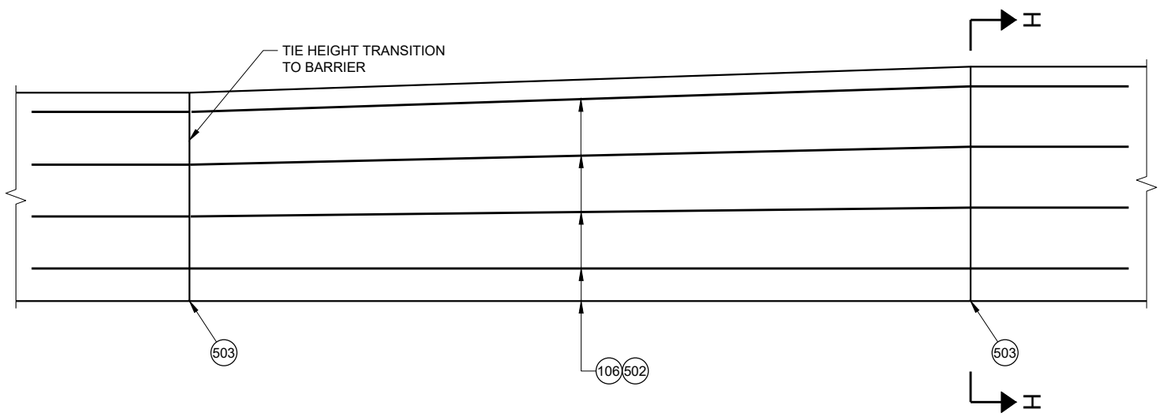
SECTION F - F

SECTION G - G

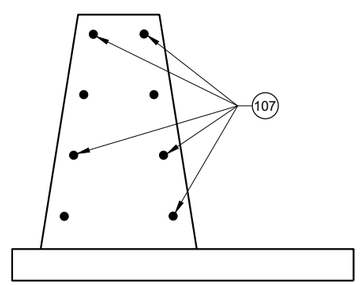
DOUBLE COLD JOINT HEIGHT TRANSITION

TABLE "D"

H_1	H_2	L	NUMBER OF NO. 5 BARS
32"	36"	10' - 0"	8
36"	42"	10' - 6"	10
42"	56"	24' - 6"	11



STEEL REINFORCEMENT DETAIL



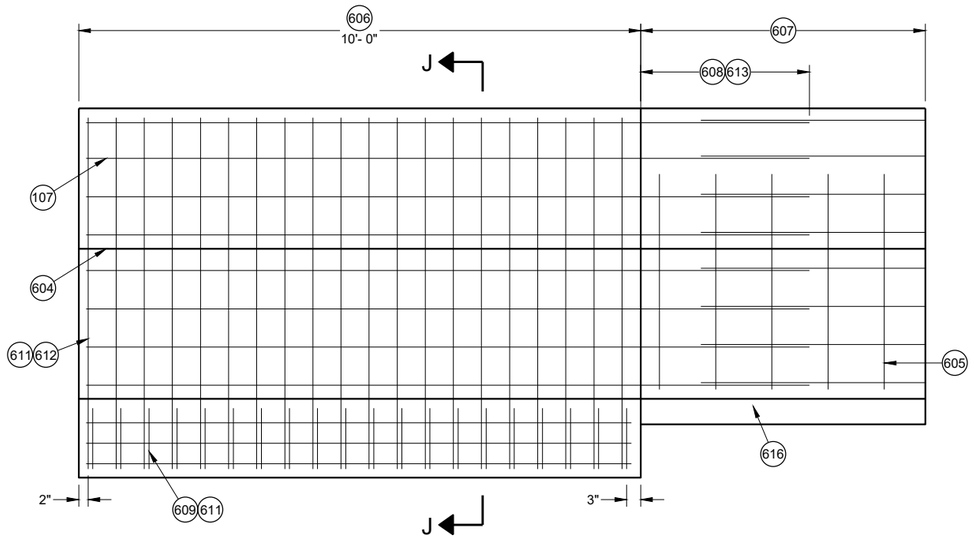
SECTION H - H

CONCRETE BARRIER SINGLE SLOPE (CBSS)

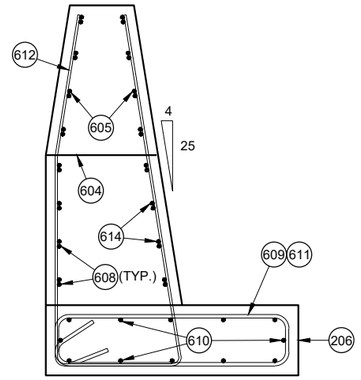
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B32 - 10e

SDD 14B32 - 10e



END ANCHOR MEDIAN BARRIER AND RETAINING WALL



SECTION J - J
END ANCHOR AND MEDIAN WALL END ANCHOR REINFORCEMENT DETAIL

GENERAL NOTES

600 UPPER CONCRETE BARRIER

601 LOWER CONCRETE BARRIER

602 MAX HEIGHT 36".

603 VERTICAL OFFSET FROM TOP ROADWAY SURFACES

604 OPTIONAL CONSTRUCTION JOINT WHEN HEIGHT IS GREATER THAN 1 ½".

605 NO. 4 BARRIER LOOP BARS ARE NOT REQUIRED FOR ROADWAY OFFSETS ARE LESS THAN 1'- 0", EXCEPT WHEN USED IN ANCHORS. BARRIER LOOP BARS ARE SPACED 12" CENTER TO CENTER OUTSIDE OF MEDIAN BARRIER AND RETAINING WALL END ANCHOR.

606 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL ANCHOR

607 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (SEE OTHER DETAILS)

608 NO. 5 REBAR 3' OF LAP OF LONGITUDINAL STEEL.

609 NO. 6 REBAR END ANCHOR FOOTING LOOP

610 TWELVE (12) NO. 5 BARS EVENLY SPACED.

611 SS ANCHOR END LOOP AND END ANCHOR FOOTING LOOP ARE SPACED 6" CENTER TO CENTER.

612 END ANCHOR LOOP BAR IS NO. 5 REBAR.

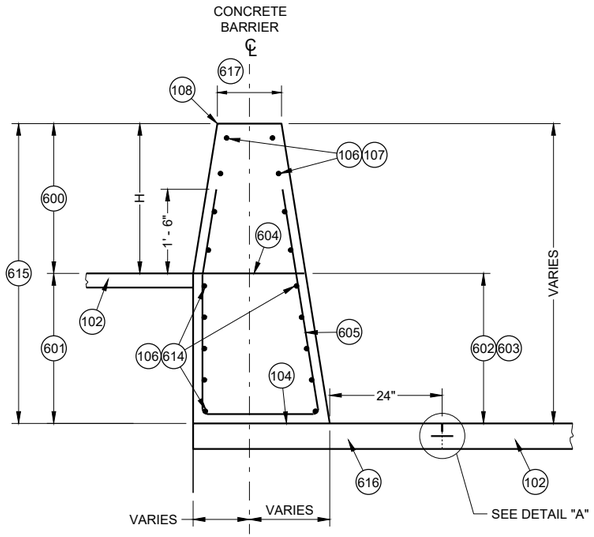
613 SEE COLD JOINT DETAIL.

614 SEE TABLE "E" FOR REQUIRED REBAR

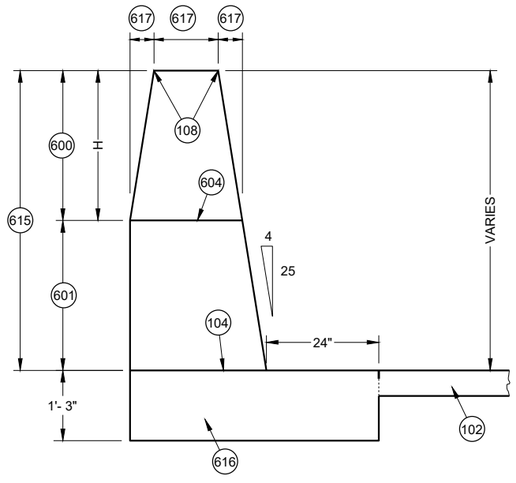
615 TOTAL BARRIER HEIGHT (SEE PLAN FOR HEIGHT)

616 FOR SOME LOCATIONS, NO PAN IS NEEDED. SEE OTHER DETAILS.

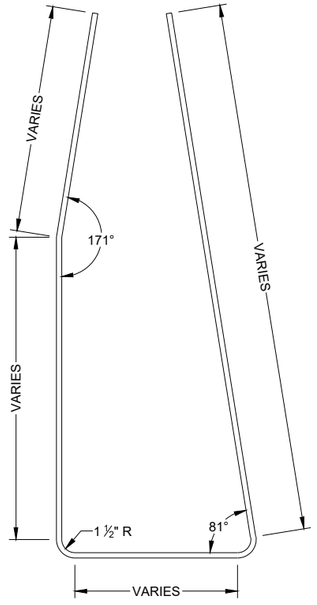
617 SEE TABLE "A" FOR DIMENSIONS



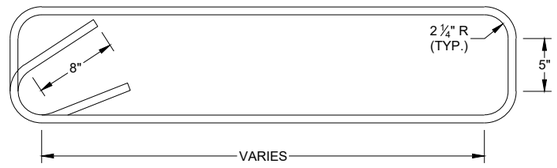
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)
(BETWEEN ADJACENT ROADWAYS)



SECTION J - J
MEDIAN BARRIER AND RETAINING WALL END ANCHOR DIMENSIONS



LOOP BAR BENDING DETAIL



END ANCHOR STIRRUP BAR BENDING DETAIL

TABLE "E"

HEIGHT BETWEEN ROADWAY	QUANTITY OF NO. 6 BARS
0 TO 3"	0
GREATER THAN 3" TO 8"	2
GREATER THAN 8" TO 12"	4
GREATER THAN 12" TO 36"	8

CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B32 - 10f

6

SDD 14B32 - 10f

GENERAL NOTES

700 END ANCHOR SINGLE SLOPE CONCRETE BARRIER

701 SEE EXPANSION JOINT DETAIL

702 END ANCHOR SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

703 PAY LIMIT FOR SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

704 SEE COLD JOINT DETAIL

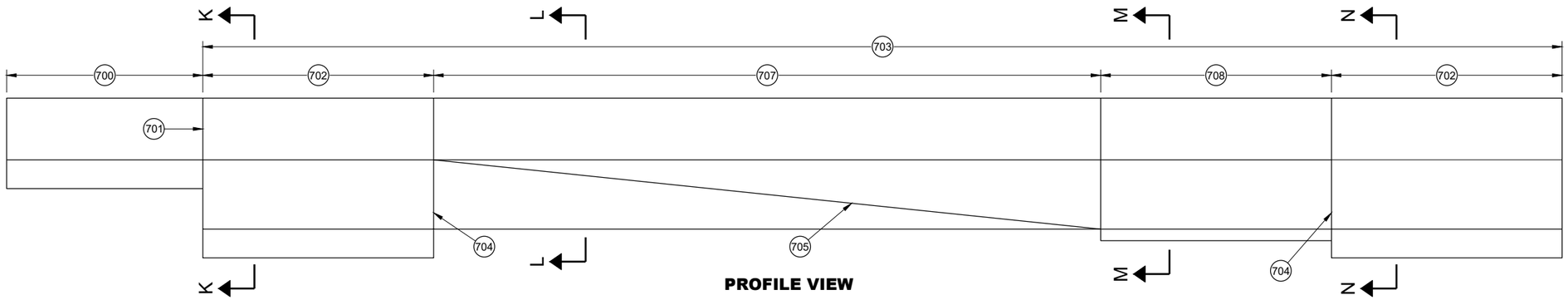
705 LOW SIDE SHOULDER

706 HIGH SIDE SHOULDER

707 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL INSTALLED WITHOUT A PAN.

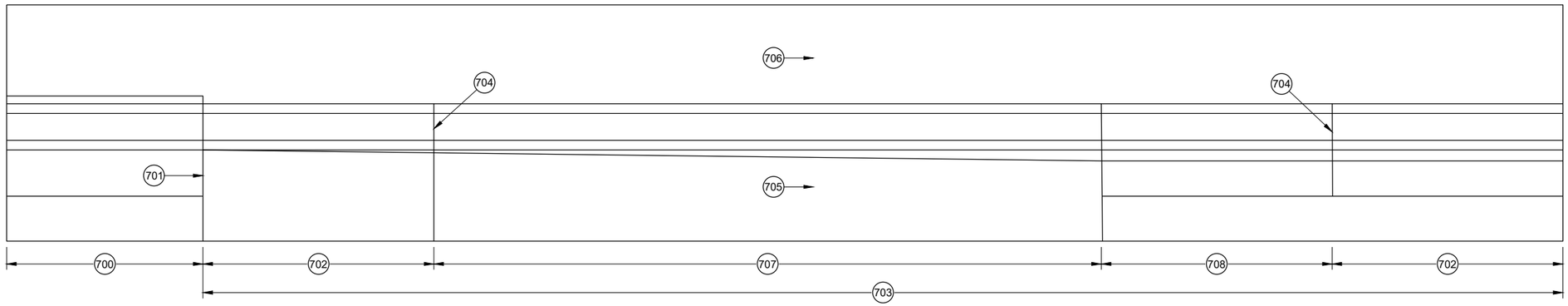
708 SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL INSTALLED WITH A PAN.

709 EXCAVATION AND COMPACTION



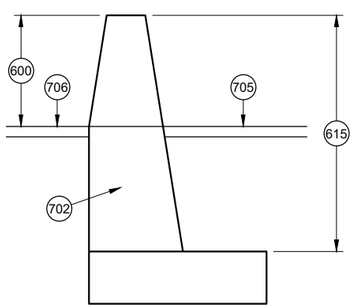
PROFILE VIEW

SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL

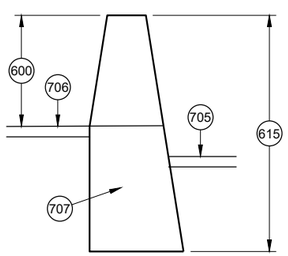


PLAN VIEW

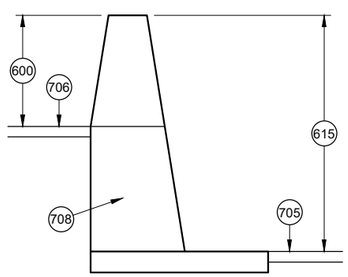
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL



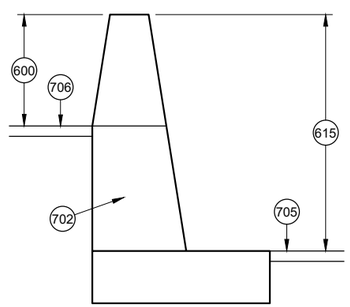
SECTION K - K



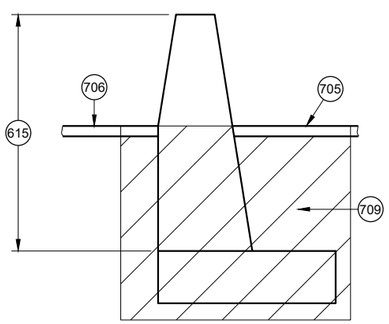
SECTION L - L



SECTION M - M



SECTION N - N

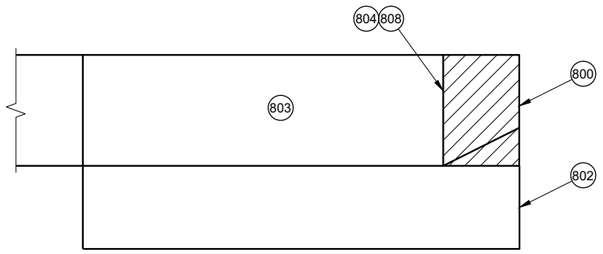


CONCRETE BARRIER
SINGLE SLOPE (CBSS)

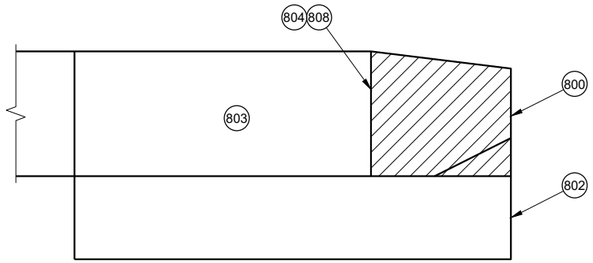
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

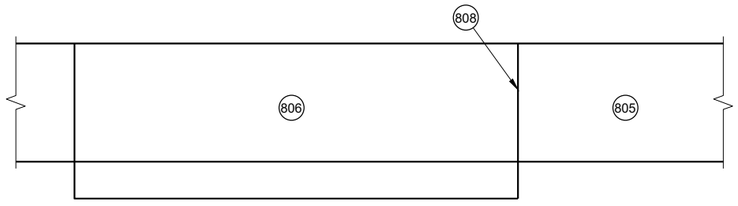
SDD 14B32 - 10g



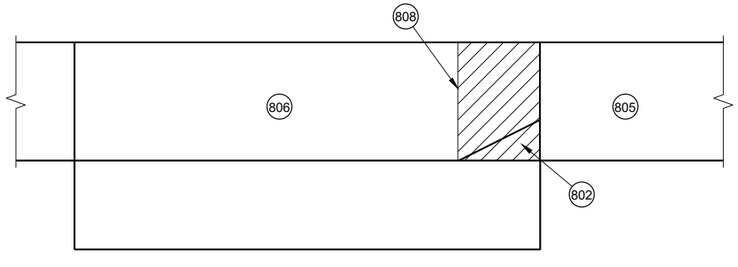
REMOVAL AREA OF
32" CONCRETE THRIE BEAM ANCHORAGE



REMOVAL AREA OF CONCRETE THRIE BEAM ANCHORAGE WITH HEIGHT GREATER THAN 32"



CONCRETE BARRIER EXTENSION NEAR END ANCHORAGE



CONCRETE BARRIER EXTENSION NEAR THRIE BEAM TERMINAL

GENERAL NOTES

END ANCHORAGE MAY OR MAY NOT BE PRESENT ON EXISTING BARRIER.

REMOVE THRIE BEAM ANCHORAGE AS SHOWN.

800 AREA OF BARRIER REMOVAL AN NEW CONCRETE AND STEEL IS INSTALLED.

801 MINIMUM LENGTH OF REMOVAL IS 15'

802 FOOTING BELOW GROUND MAY REMAIN IN PLACE.

803 CONCRETE BARRIER SINGLE SLOPE THRIE BEAM ANCHOR TO REMAIN.

804 SAW CUT

805 NEW SINGLE SLOPE CONCRETE BARRIER.

806 CONCRETE BARRIE SINGLE SLOPE TO REMAIN.

807 SINGLE SLOPE CONCRETE BARRIER OR CONCRETE BARRIER SINGLE SLOPE THRIE BEAM ANCHOR TO REMAIN.

808 SEE CONNECTION DETAIL.

809 NO. 5 CONTINUOUS BAR.

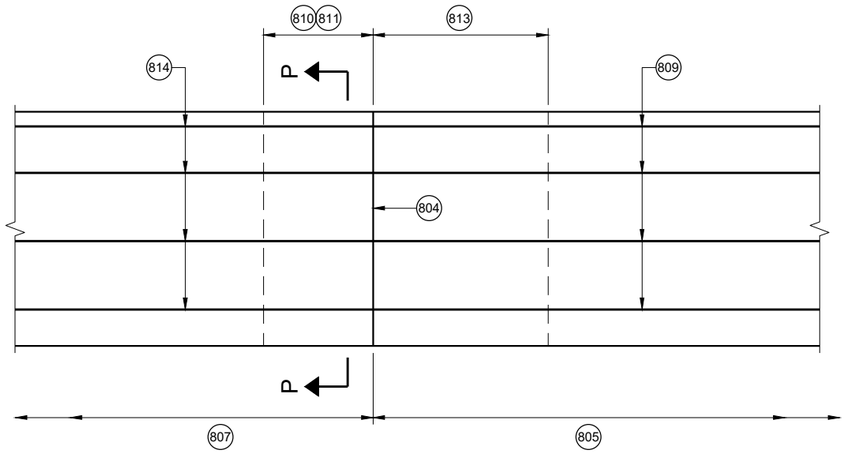
810 3' MIN. DRILL HOLES. USES NO. 5 ADHESIVE ANCHORS.

811 THE NUMBER OF DRILL HOLES IS EQUAL TO THE NUMBER OF HORIZONTAL REBAR IN BARRIER. DRILL HOLES ARE TO BE A MINIMUM OF 4" FROM EDGE OF CONCRETE.

812 EXISTING REBAR IN EXISTING BARRIER OR END ANCHOR.

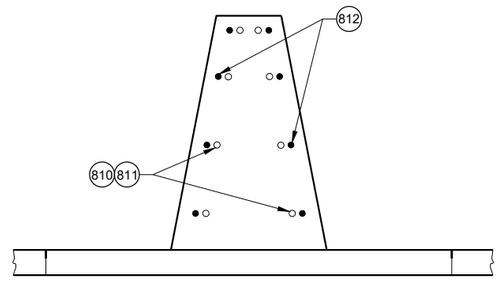
813 3' BAR OVERLAP

814 EXISTING REINFORCEMENT

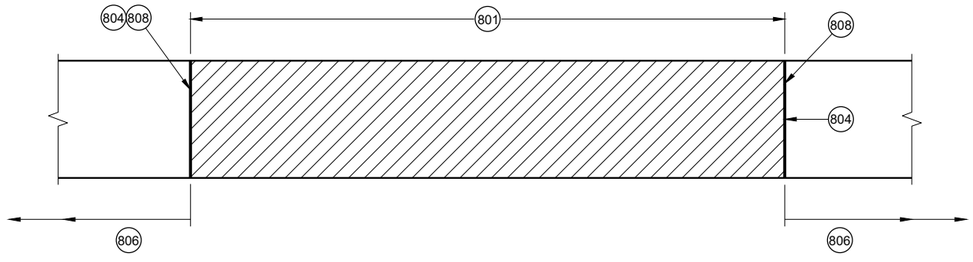


CONNECTION DETAIL

SINGLE SLOPE CONCRETE BARRIER TO
NEW SINGLE SLOPE CONCRETE BARRIER



SECTION P - P



BARRIER REMOVAL AND REPLACEMENT

RETROFIT OR REPAIR SINGLE SLOPE CONCRETE BARRIER

CONCRETE BARRIER
SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

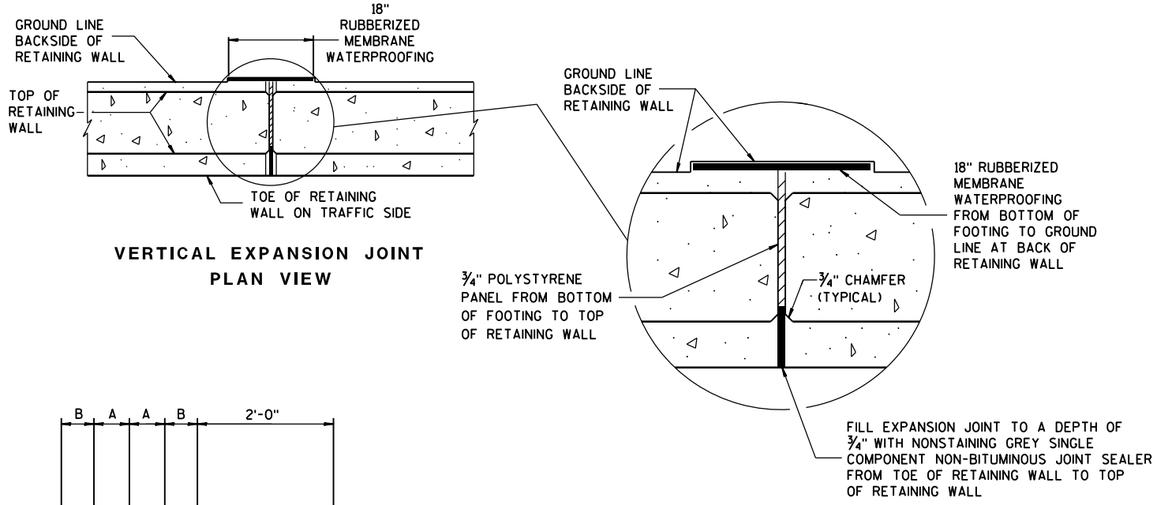
May 2022
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B32 - 10h



VERTICAL EXPANSION JOINT
PLAN VIEW



DELINEATION

GENERAL NOTES

PROVIDE EXPANSION JOINTS WHERE THERE ARE EXISTING EXPANSION JOINTS OR AT THE END OF EACH POUR.

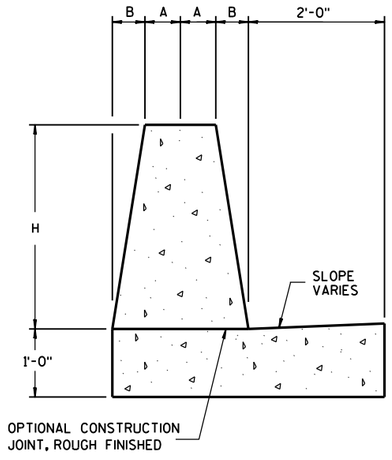
NO HORIZONTAL STEEL CROSSES EXPANSION JOINTS.

CONSTRUCT PER STANDARD SPECIFICATION 603. SPLICES OF LONGITUDINAL BARS TO BE 2' LONG AND FIRMLY TIED AND FASETENED TOGETHER UNLESS NOTED OTHERWISES.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR.



ROADSIDE RETAINING WALL

BARRIER WALL DIMENSIONS

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11



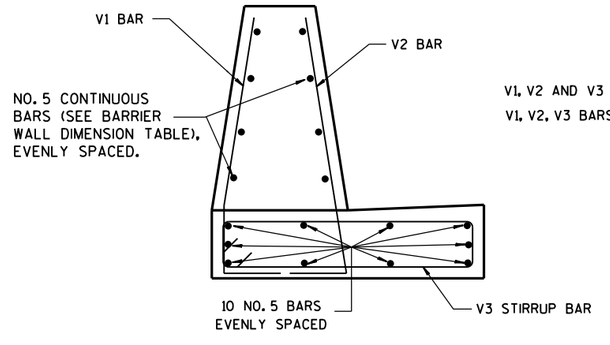
V1 BAR
BENDING DETAIL



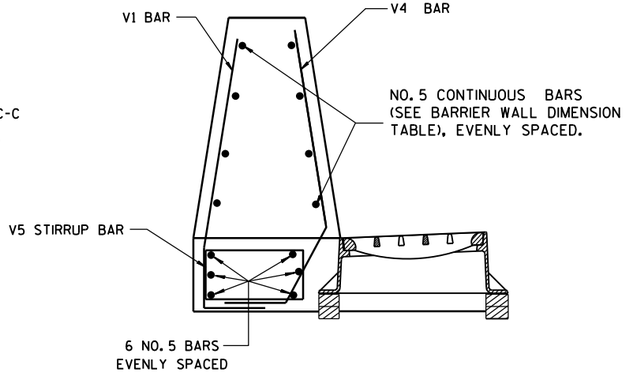
V2 BAR
BENDING DETAIL

BAR CHART
ROADSIDE RETAINING WALL

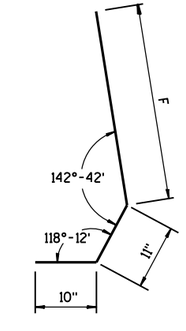
BARRIER HEIGHT	V1 BAR D	V2 BAR E	V4 BAR F
32"	2'-5½"	3'-4½"	2'-6½"
36"	2'-9½"	3'-9¾"	2'-10¾"
42"	3'-3½"	4'-2½"	3'-4¾"
56"	4'-5¾"	5'-4¾"	4'-6¾"



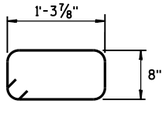
ROADSIDE RETAINING WALL
NORMAL BAR PLACEMENT



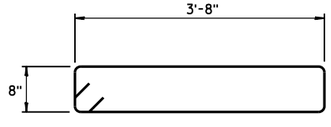
ROADSIDE RETAINING WALL
BAR PLACEMENT NEAR
INLET



V4 BAR
BENDING DETAIL



V5 STIRRUP BAR
BENDING DETAIL



V3 STIRRUP BAR
BENDING DETAIL

SINGLE SLOPE
ROADSIDE RETAINING WALL

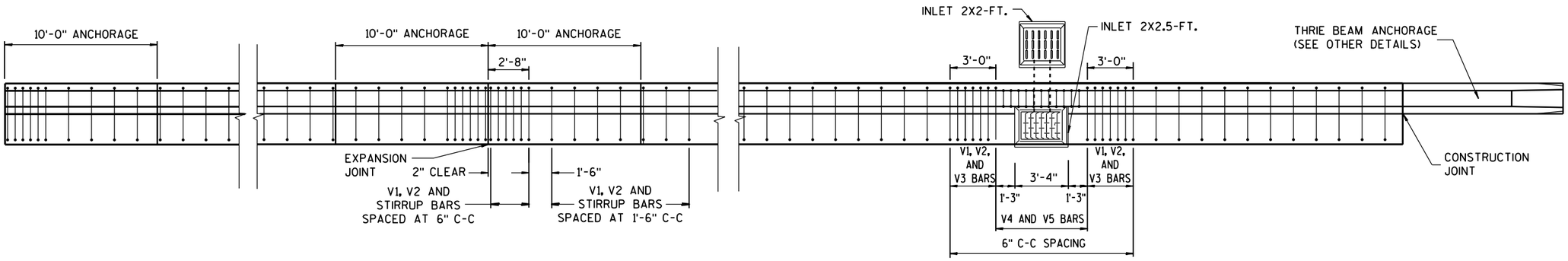
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 41-3a

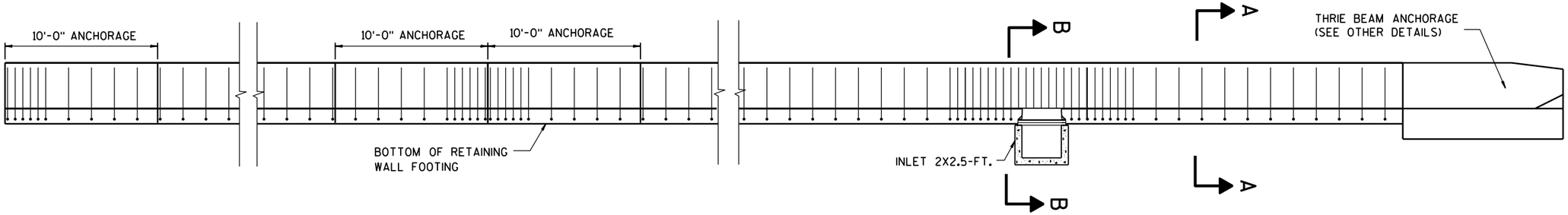
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S.D.D. 14 B 41-3a



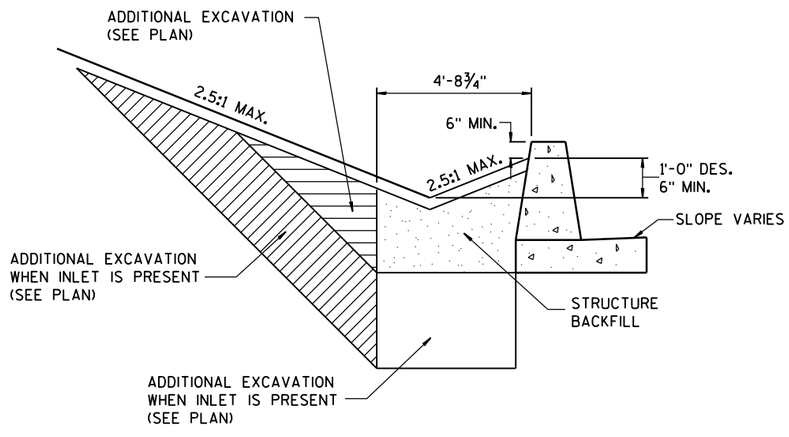
PLAN VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN. SEE OTHER DETAILS FOR HORIZONTAL BARS.

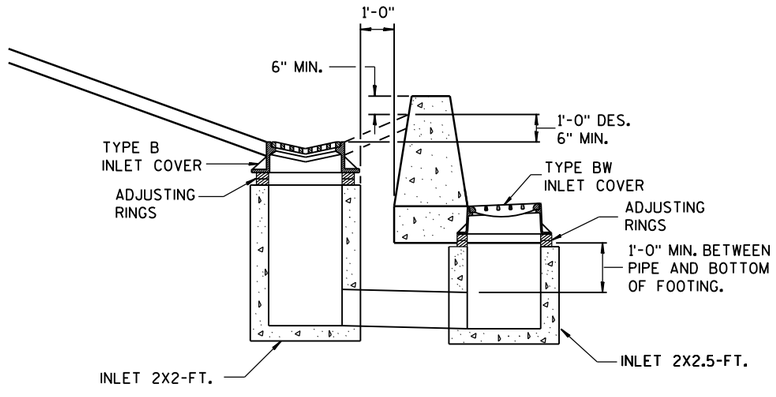


ELEVATION VIEW

NOTE: HORIZONTAL BARS ARE NOT SHOWN. SEE OTHER DETAILS FOR HORIZONTAL BARS.

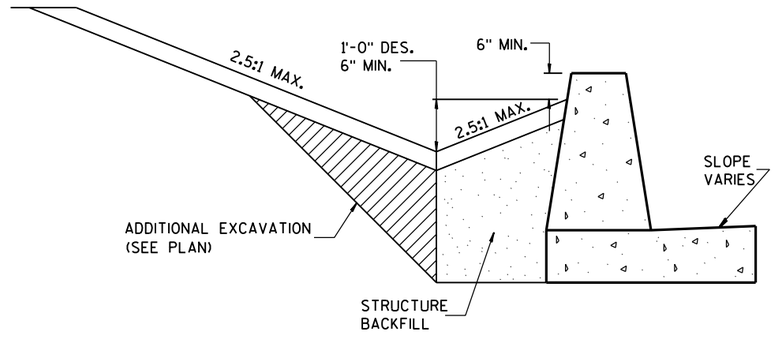


SECTION A-A



SECTION B-B

MINIMUM DESIGN OF EARTH WORK FOR INLET



MINIMUM DESIGN OF EARTH WORK

SINGLE SLOPE ROADSIDE RETAINING WALL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV...

FHWA

ENT

6

S.D.D. 14 B 41-3b

6

S.D.D. 14 B 41-3b

(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.

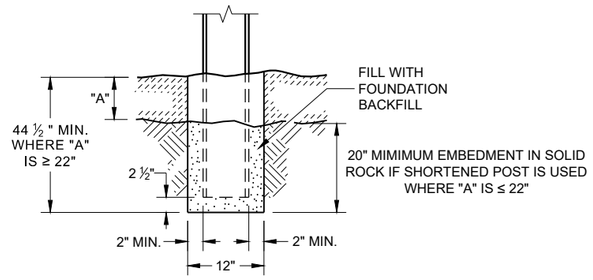
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

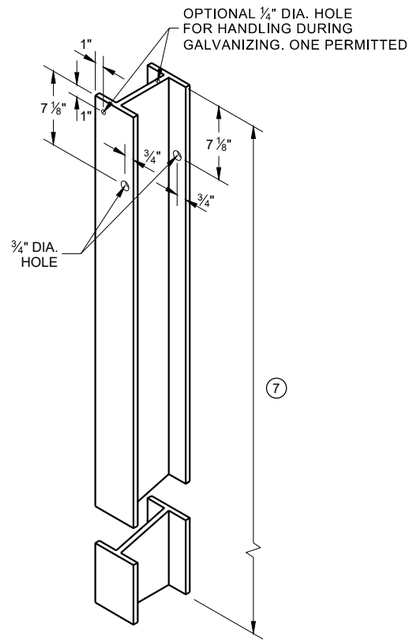
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

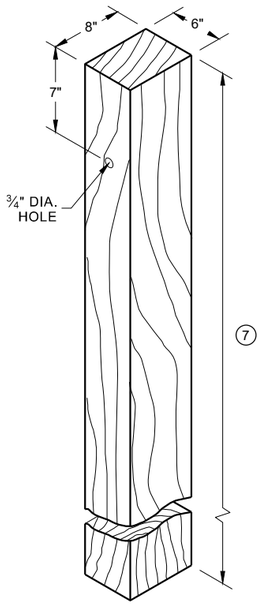
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



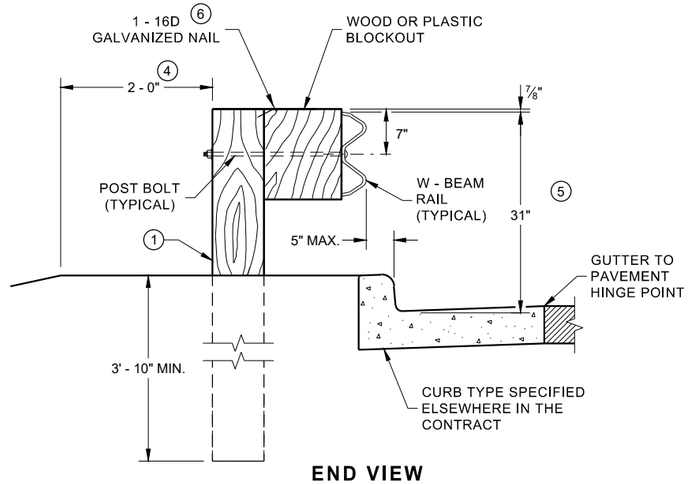
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



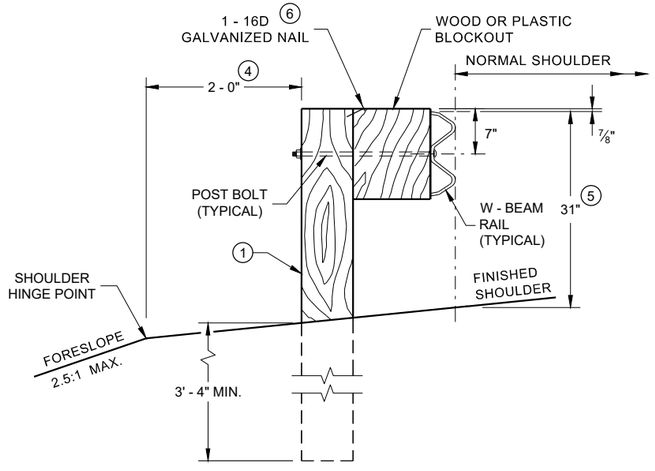
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



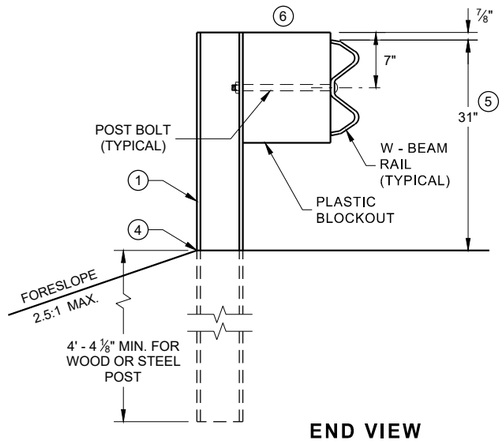
WOOD POST (6" X 8") NOMINAL (1)



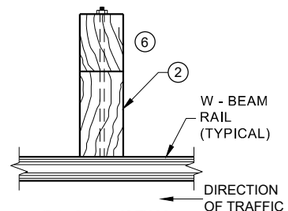
END VIEW
LOCATED ALONG A CURBED ROADWAY



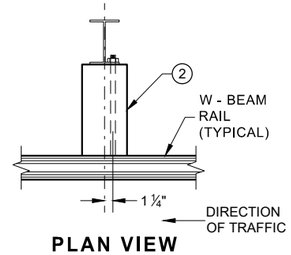
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



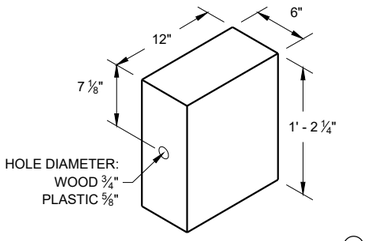
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

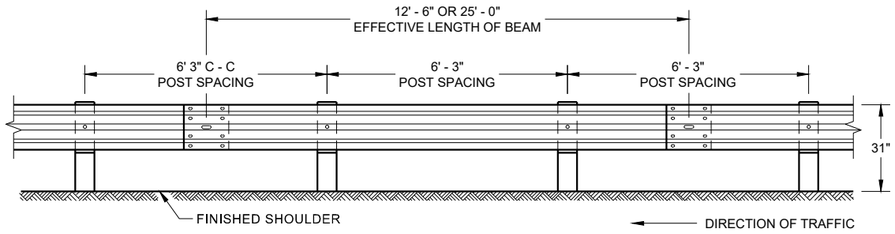
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

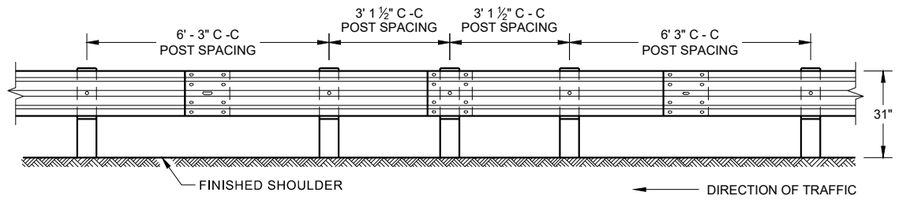
SDD 14B42 - 07a

6

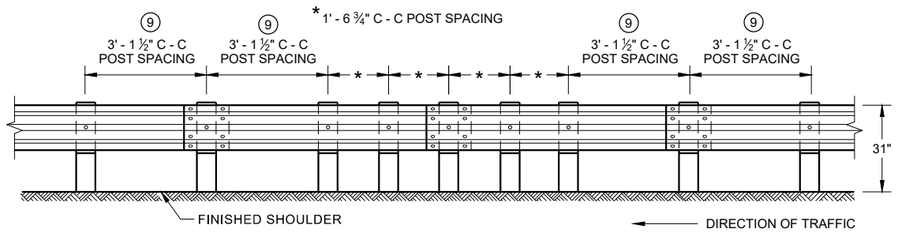
SDD 14B42 - 07a



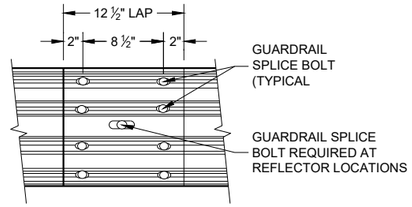
FRONT VIEW
POST SPACING STANDARD INSTALLATION



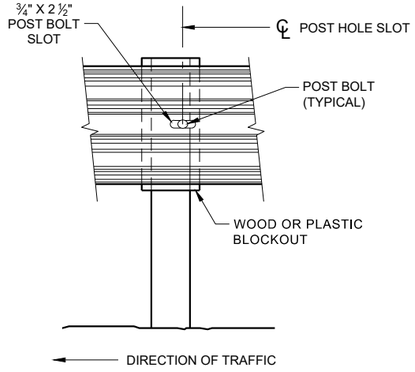
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



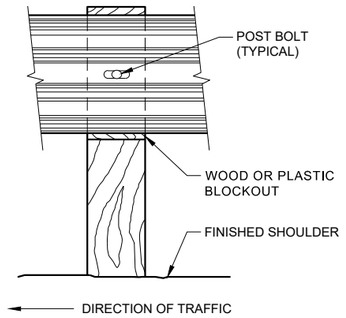
FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST

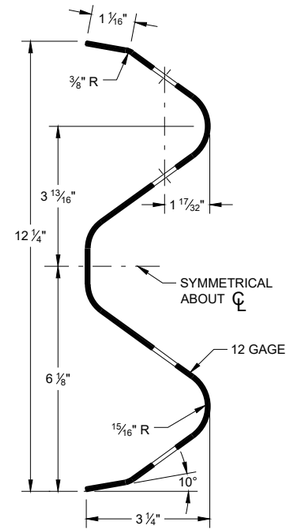
GENERAL NOTES

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

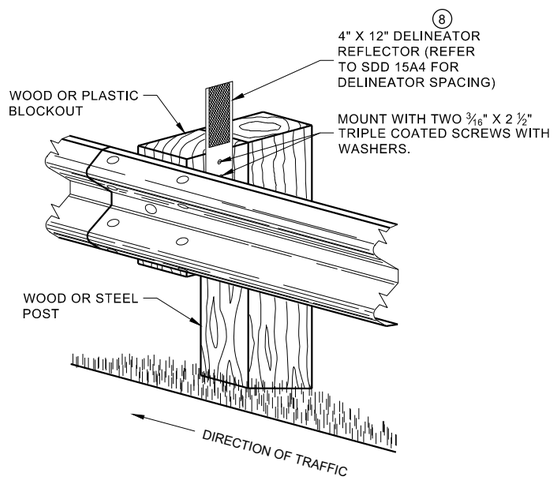
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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.



SECTION THRU W-BEAM RAIL



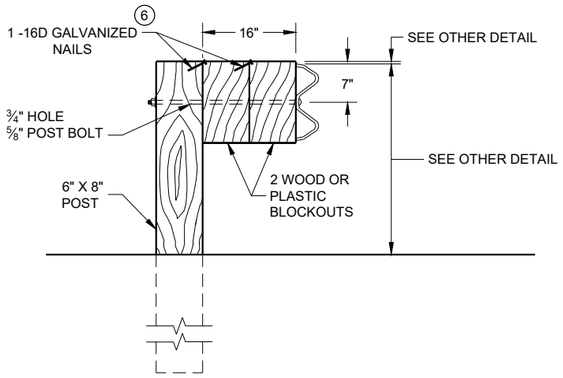
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

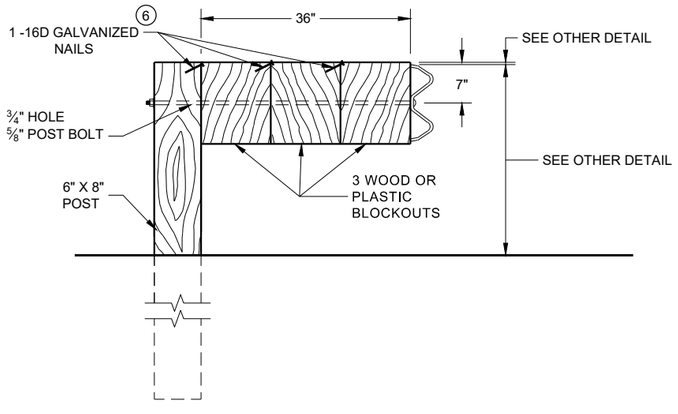
6

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.



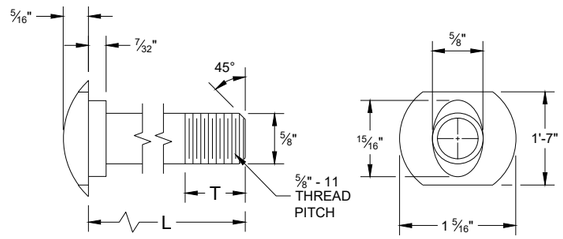
DETAIL FOR 36" BLOCKOUT DEPTH

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.

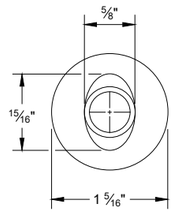
NOTE:

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.

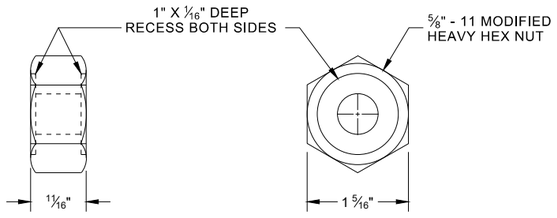


POST BOLT TABLE

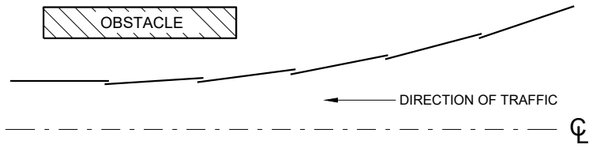
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

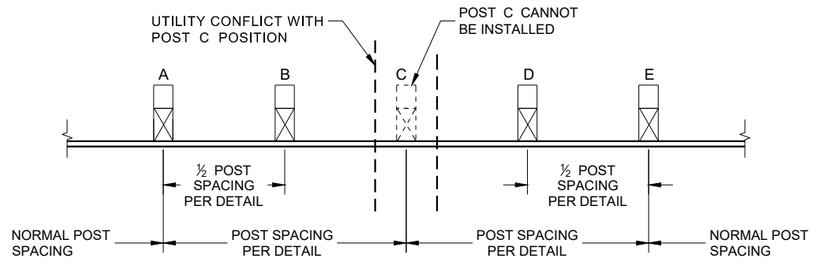


POST BOLT, SPLICE BOLT AND RECESS NUT

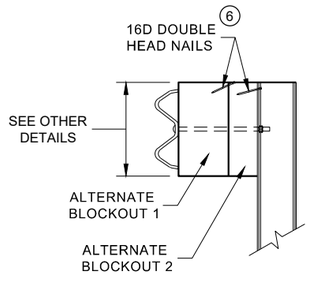


PLAN VIEW

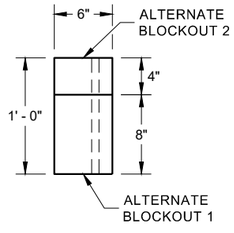
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW

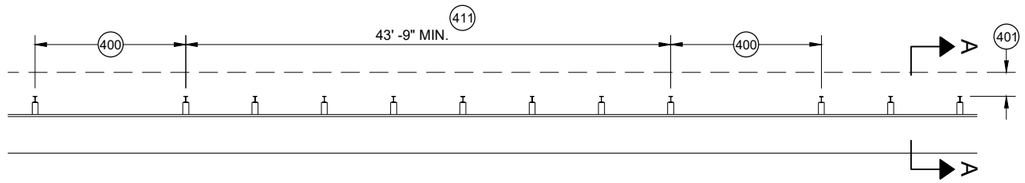


PLAN VIEW

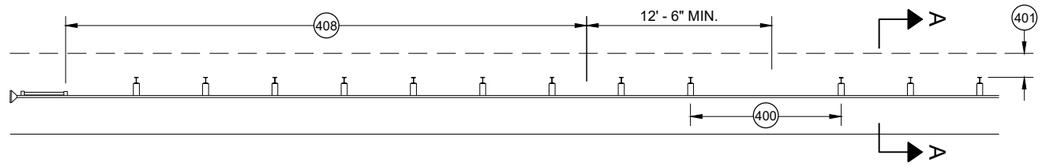
ALTERNATE WOOD BLOCKOUT DETAIL

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

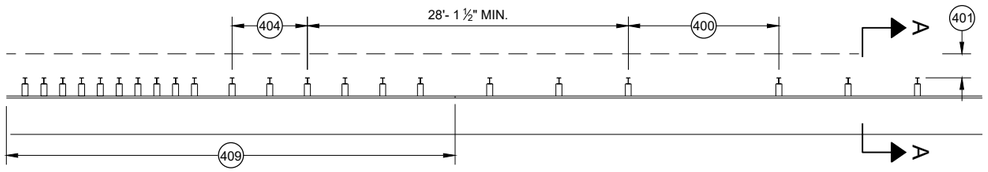
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



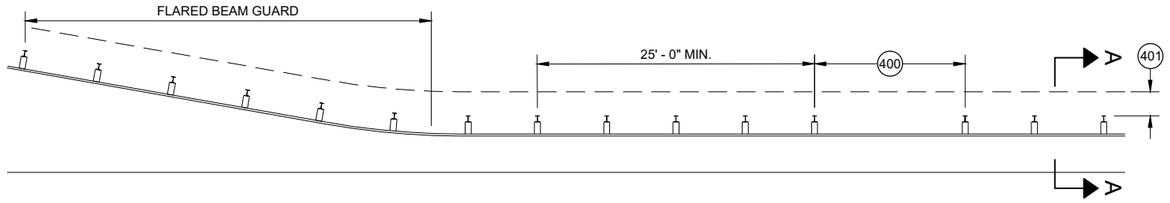
MISSING POST IN MGS GUARDRAIL



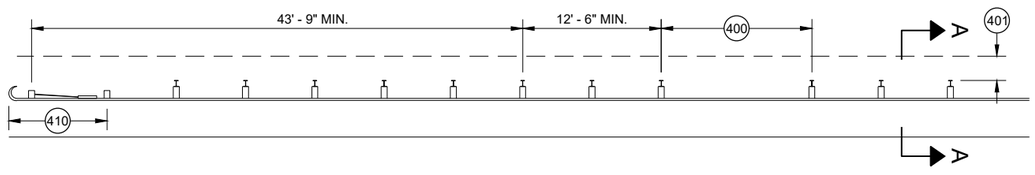
MISSING POST IN MGS GUARDRAIL NEAR EAT



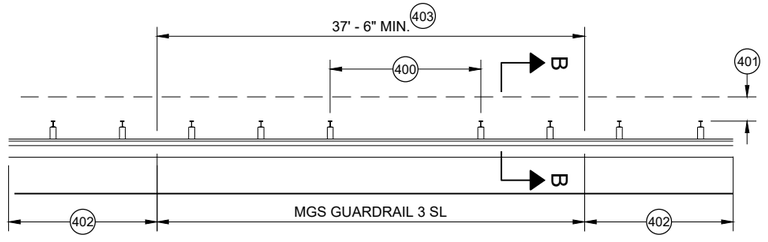
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

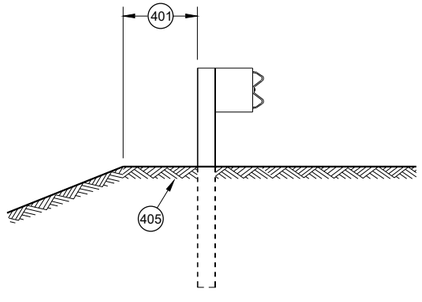


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

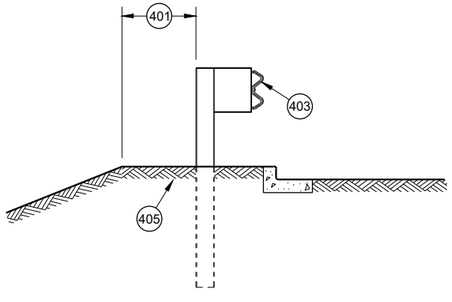


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

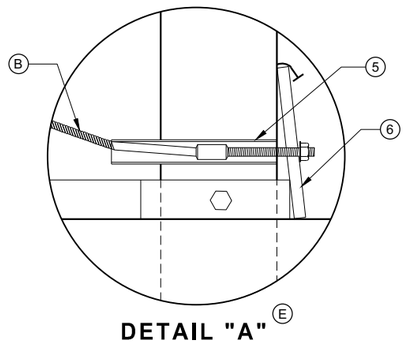
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

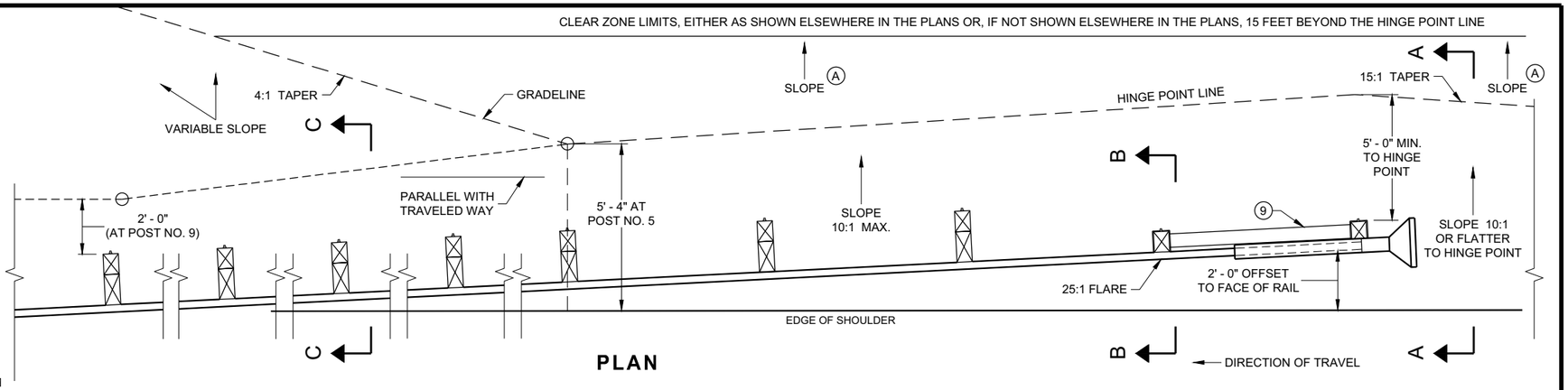
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

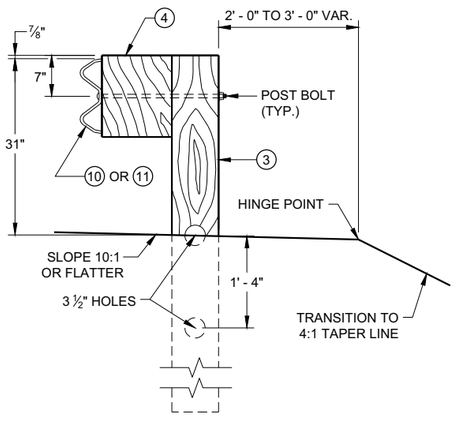
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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

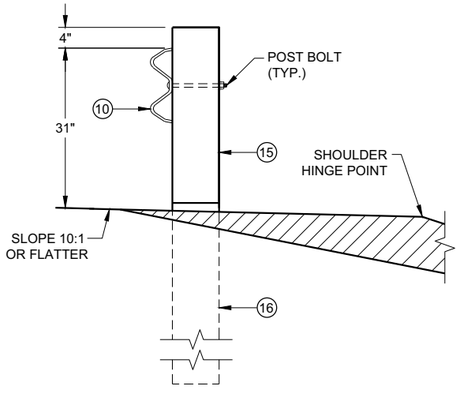


DETAIL "A" (E)

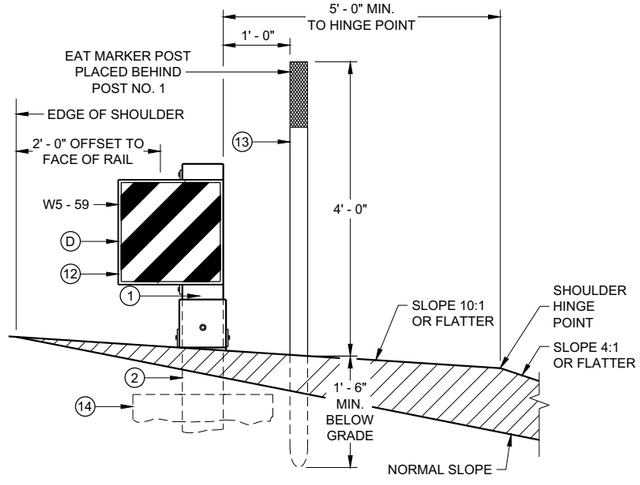




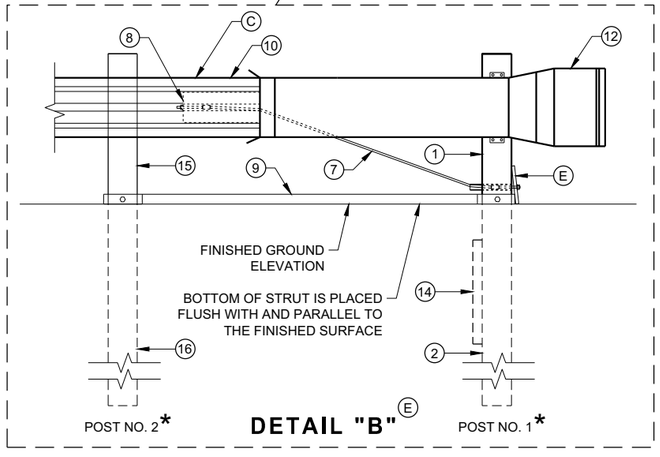
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



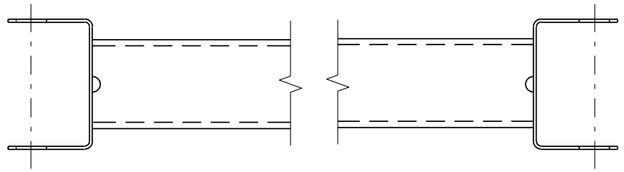
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

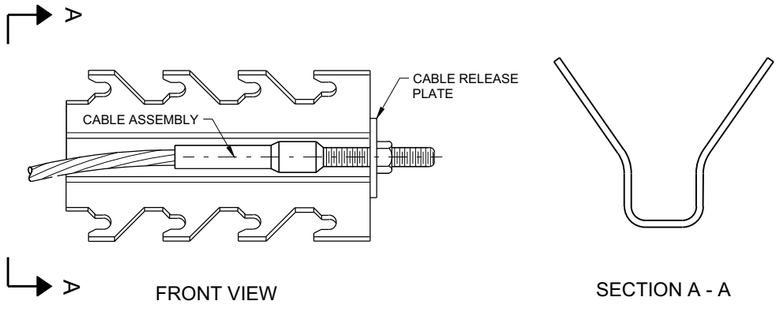
SDD 14B44 - 04a



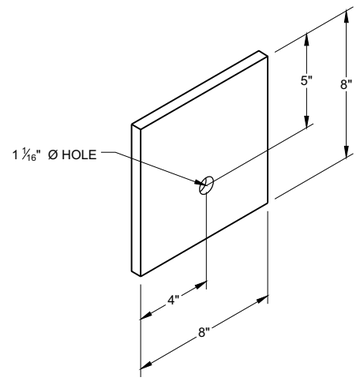
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

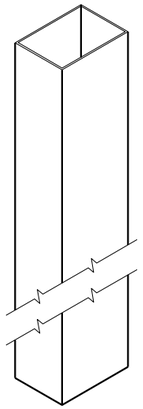
6

SDD 14B44 - 04b

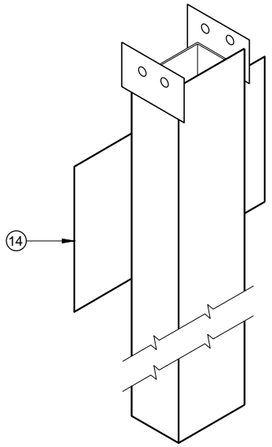
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

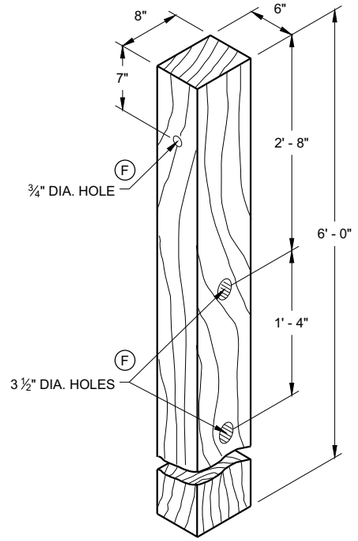
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



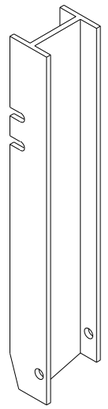
UPPER POST NO. 1 (1) (E)



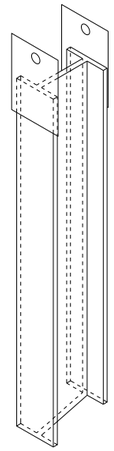
LOWER POST NO. 1 (2) (E)



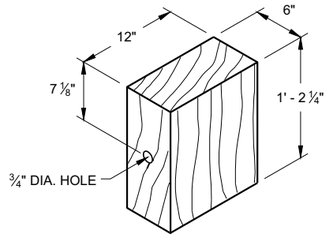
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



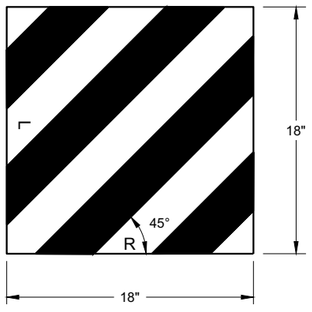
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

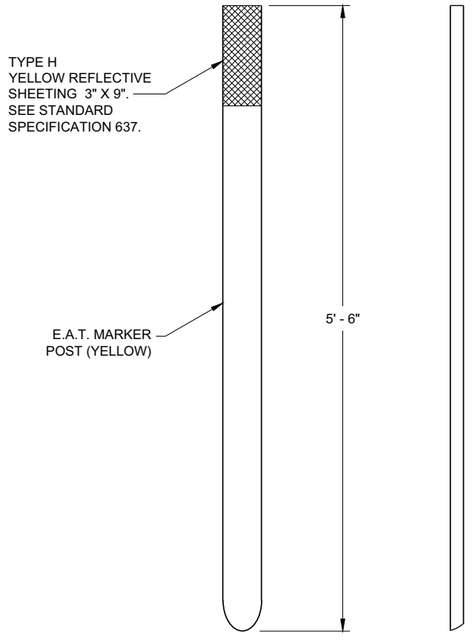


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



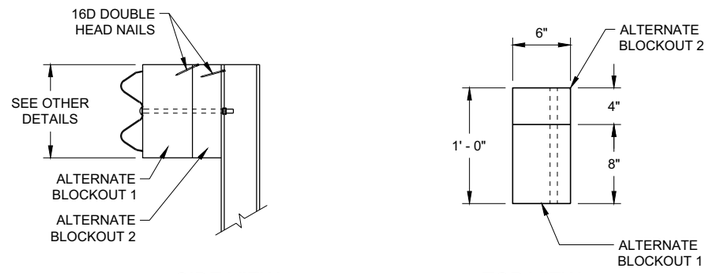
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

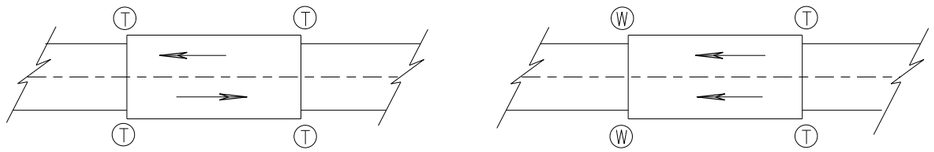
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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.

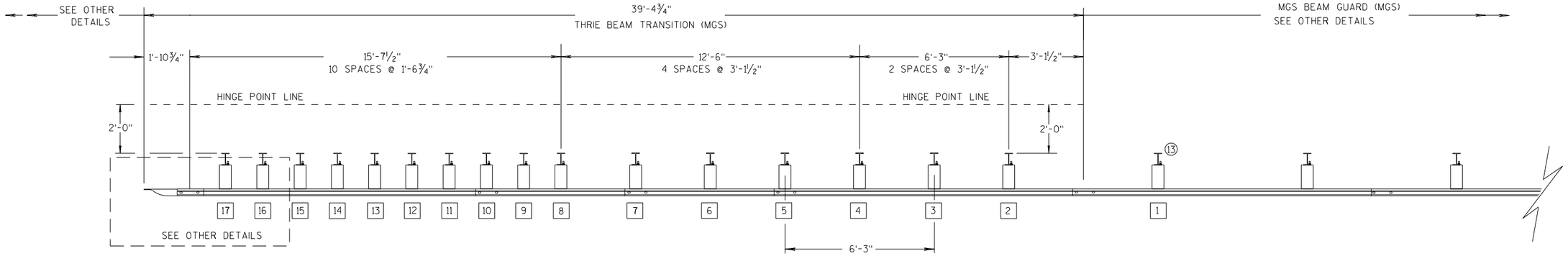
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

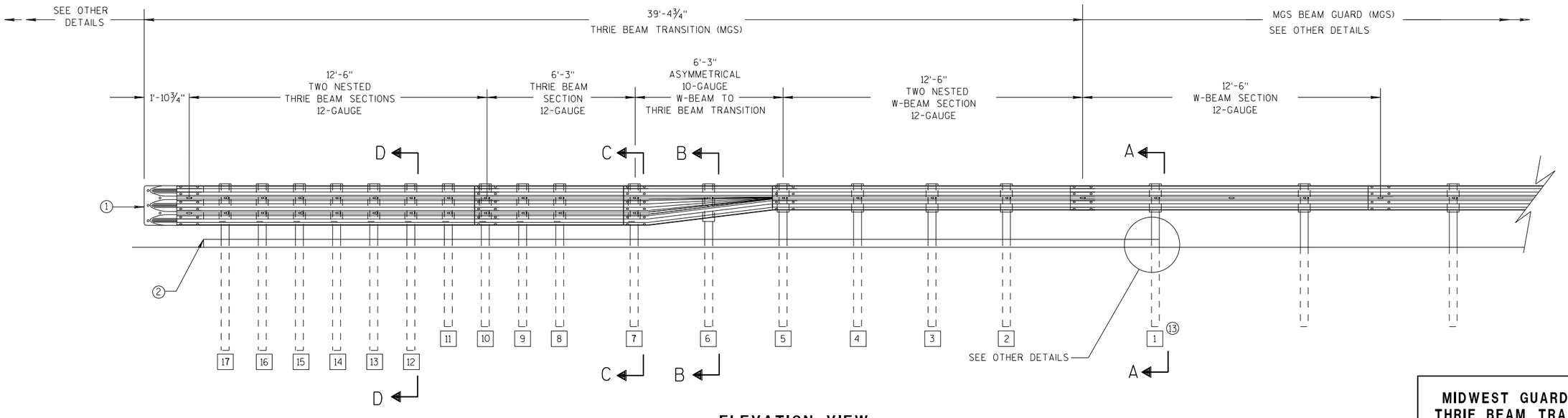
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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 TRANSPOF 374

6

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

6

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

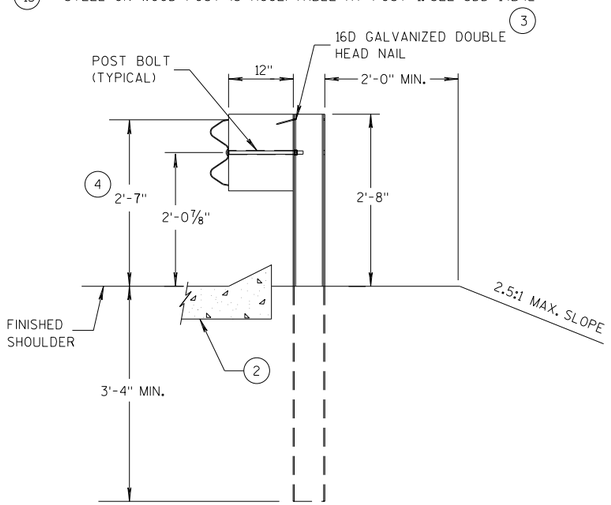
GENERAL NOTES

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

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

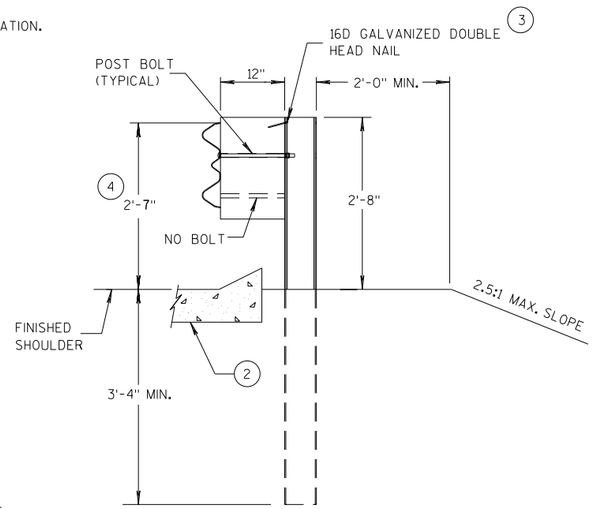
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



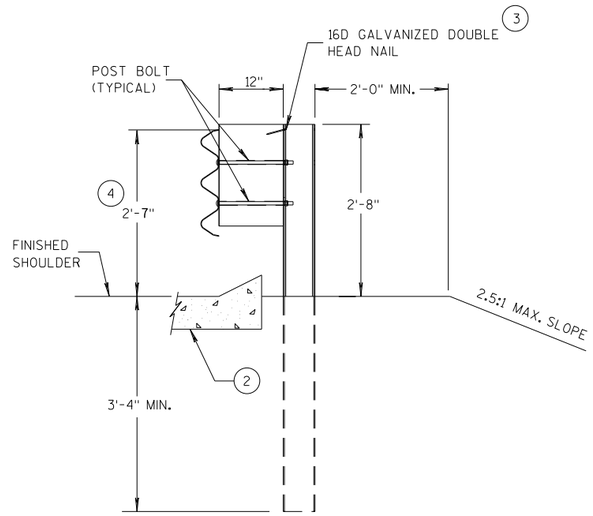
SECTION A-A (13)

POSTS 1-5



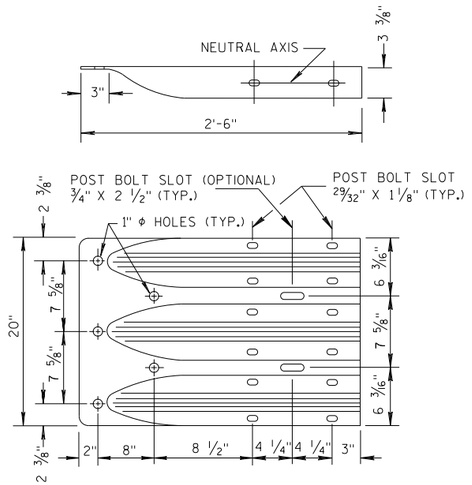
SECTION B-B

POST 6

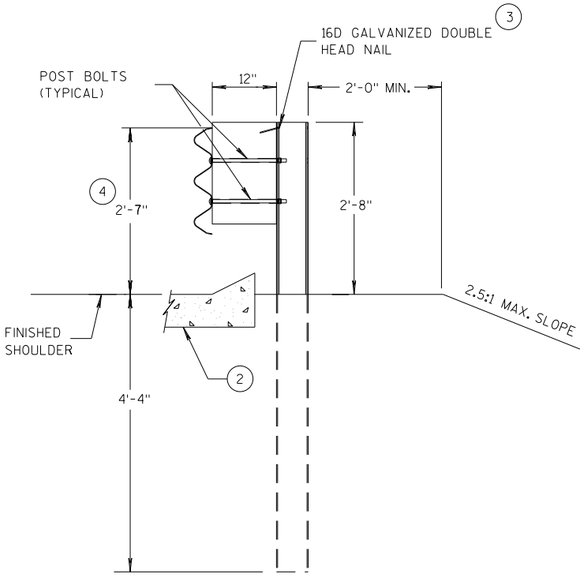


SECTION C-C

POSTS 7-11

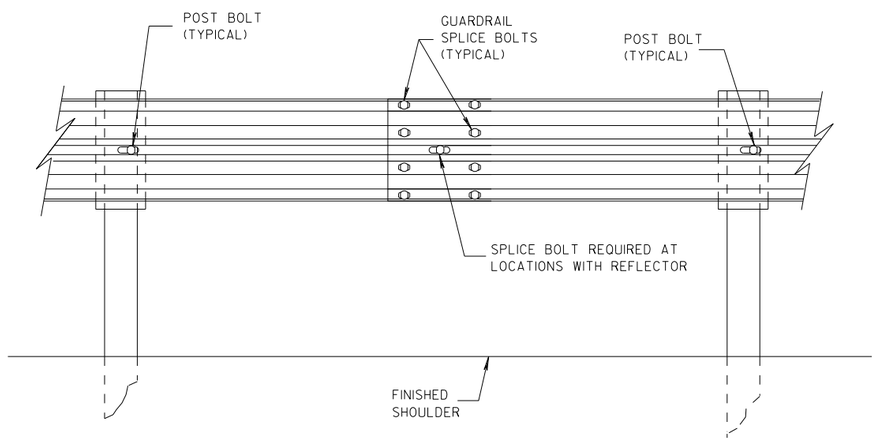


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

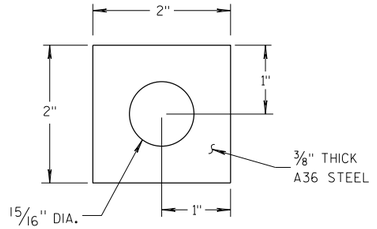
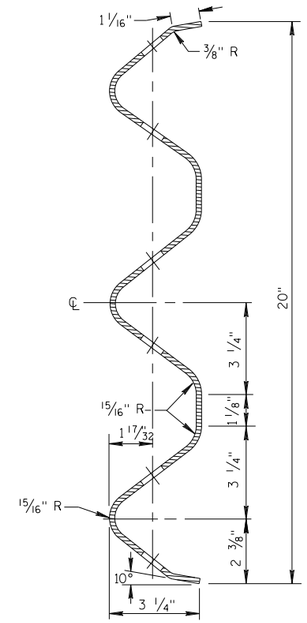


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

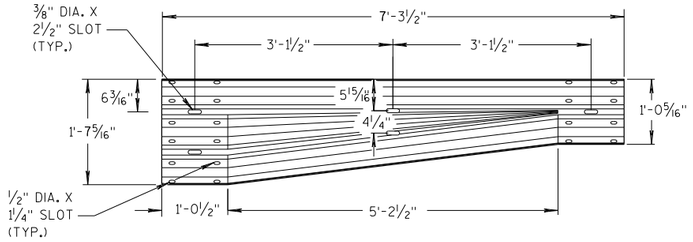
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF 375

6

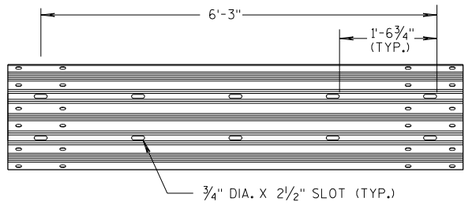
S.D.D. 14 B 45-5b

6

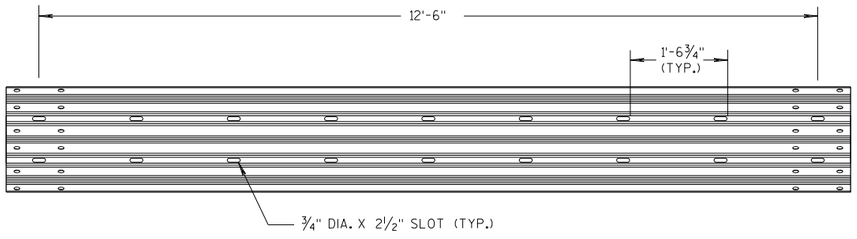
S.D.D. 14 B 45-5b



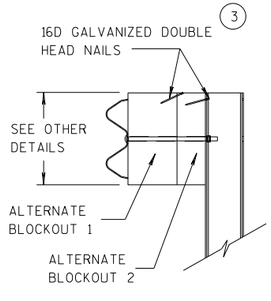
W-BEAM TO THRIE BEAM TRANSITION SECTION



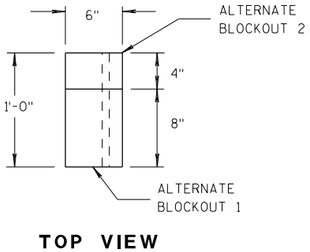
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

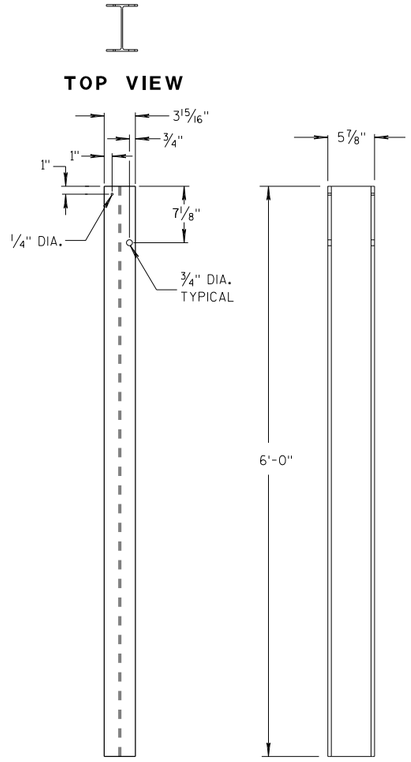


SIDE VIEW



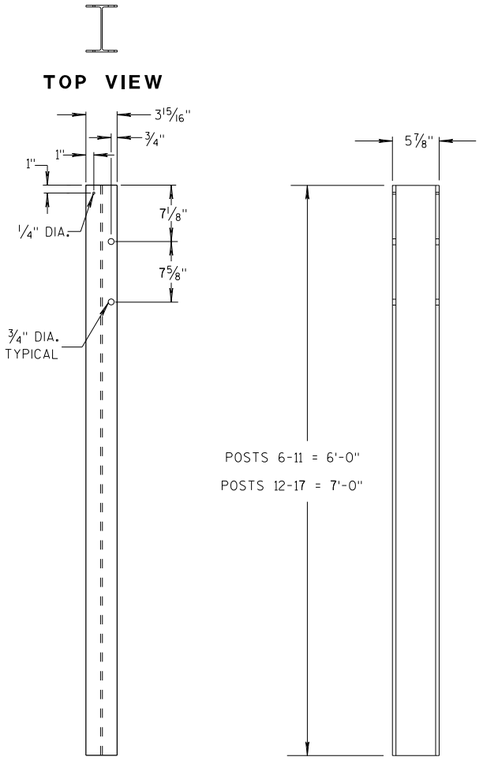
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



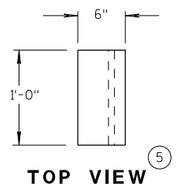
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

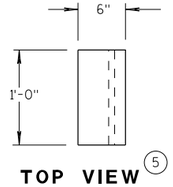


FRONT VIEW SIDE VIEW

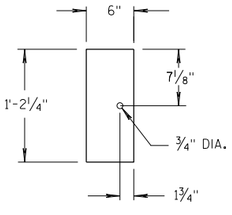
STEEL POSTS 6-17



TOP VIEW (5)

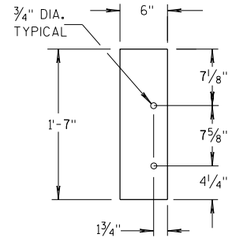


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

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

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

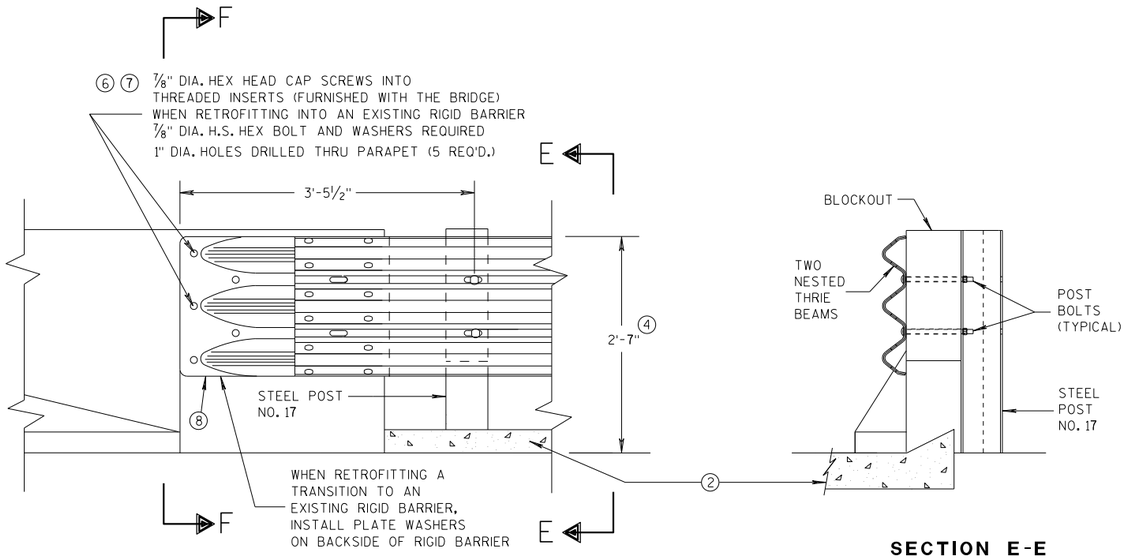
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

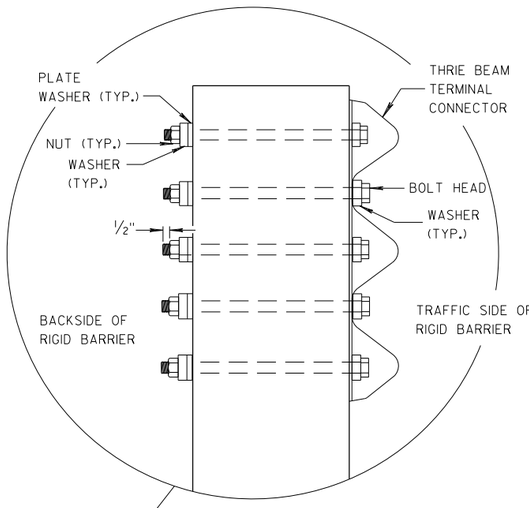
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

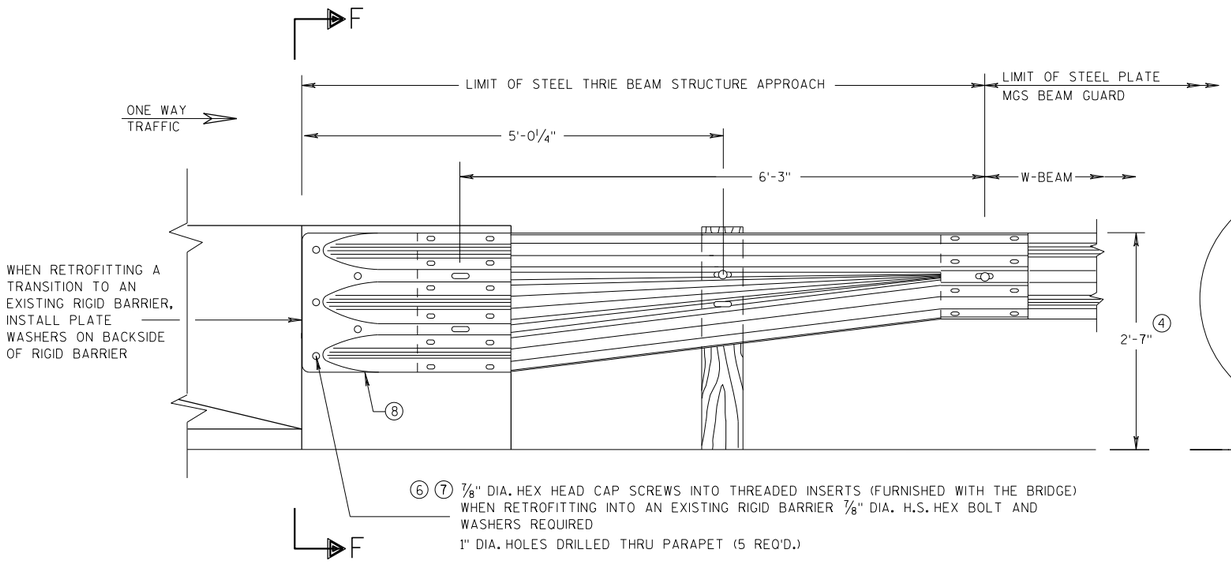
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

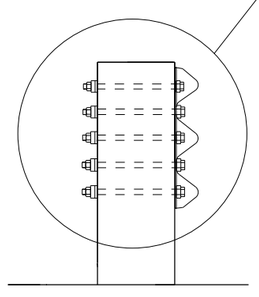
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

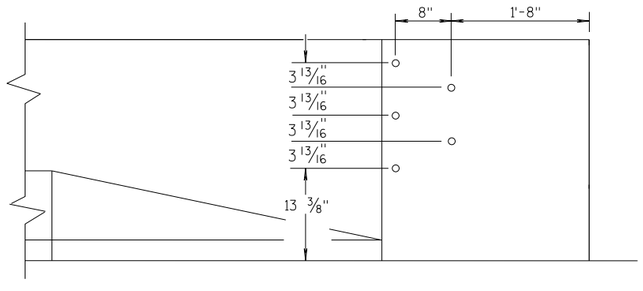




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

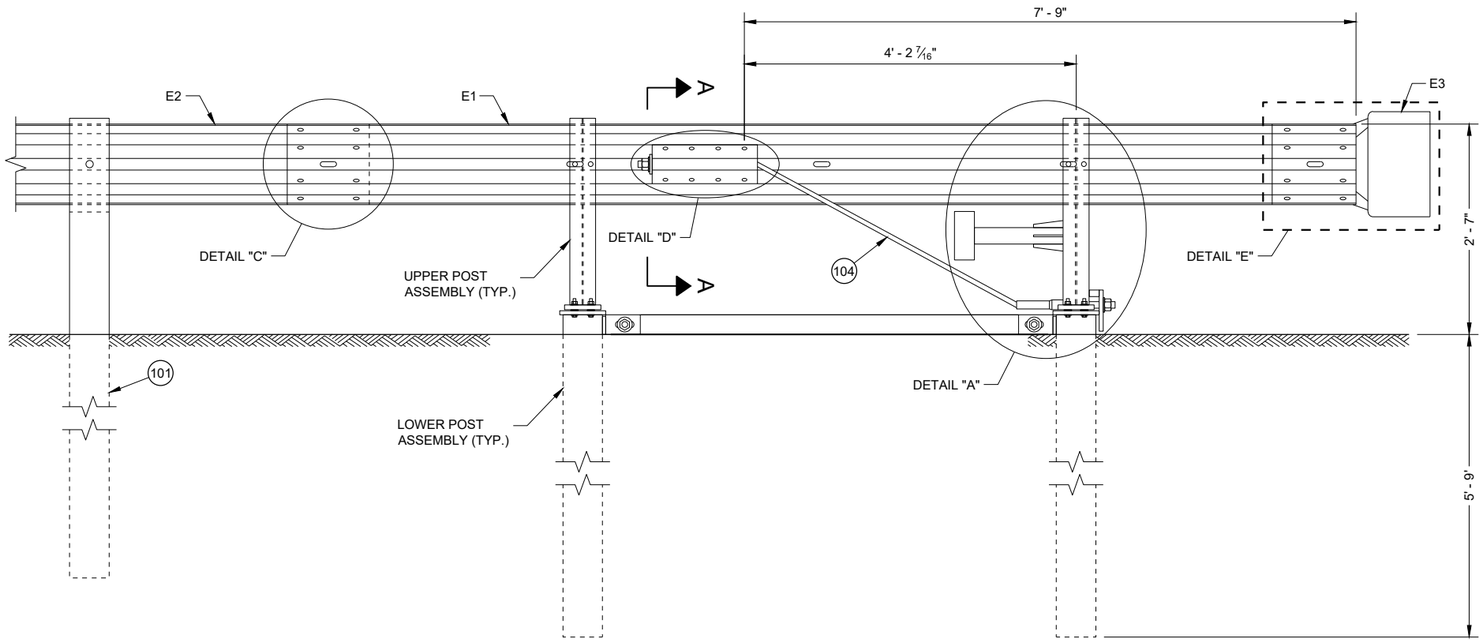
APPROVED
07/2018 DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI
NT
FHWA

6

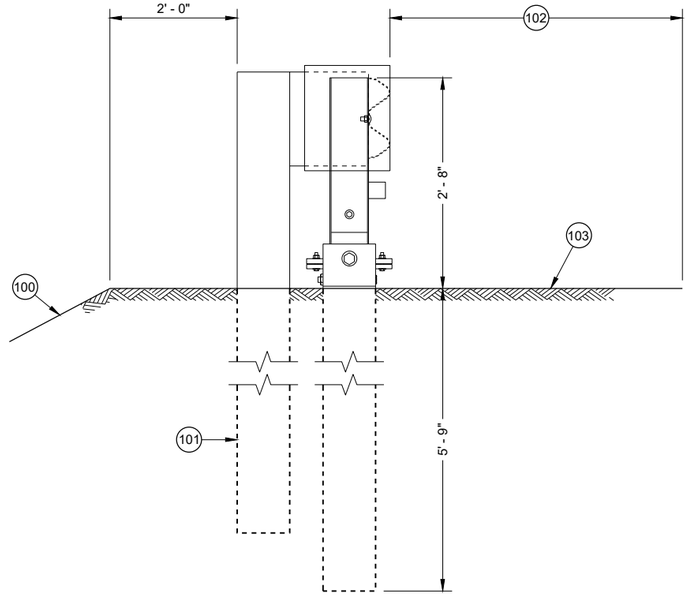
S.D.D. 14 B 45-5d

6

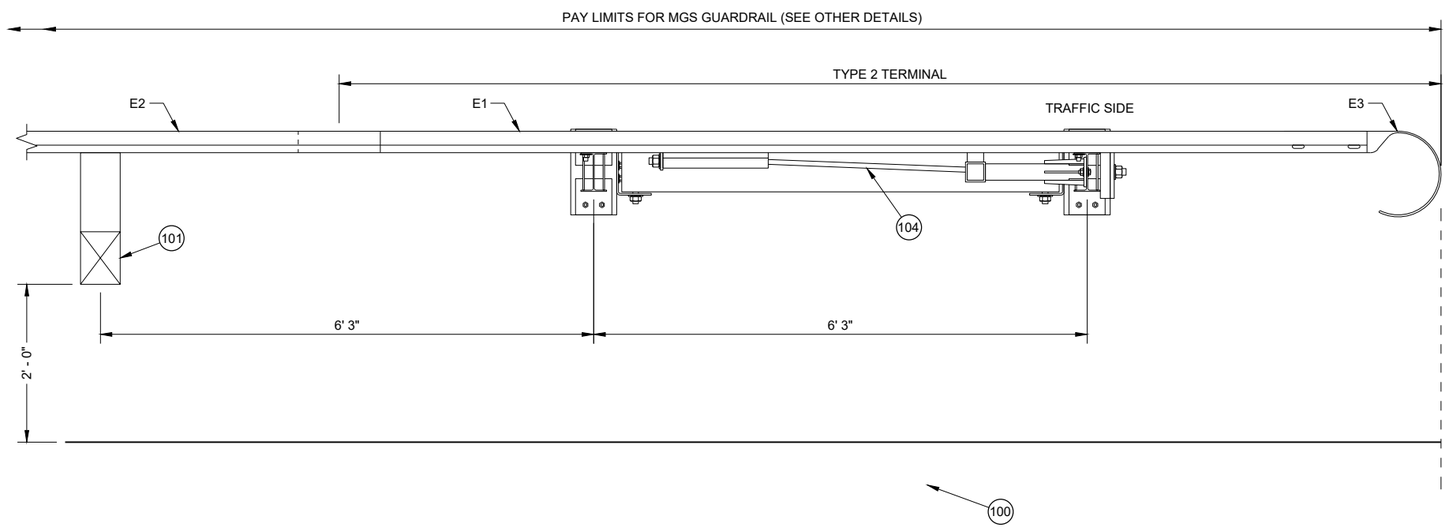
S.D.D. 14 B 45-5d



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.

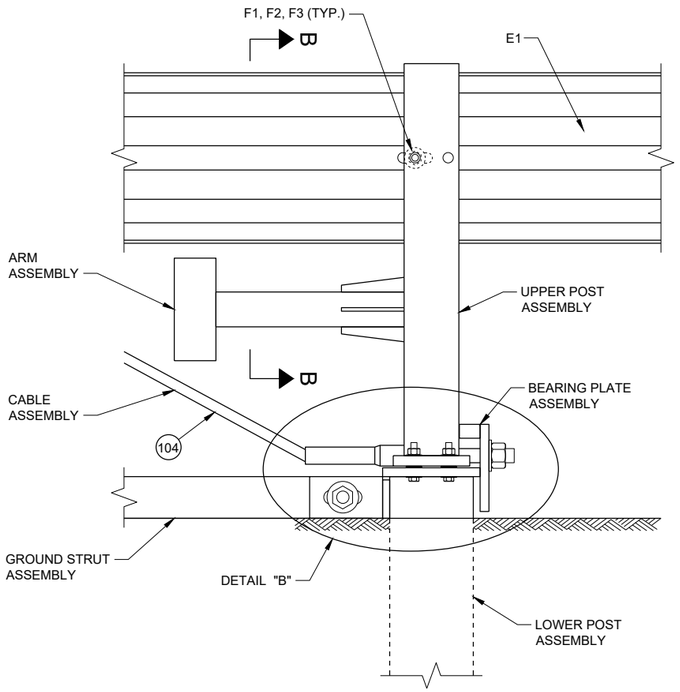
(104) AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

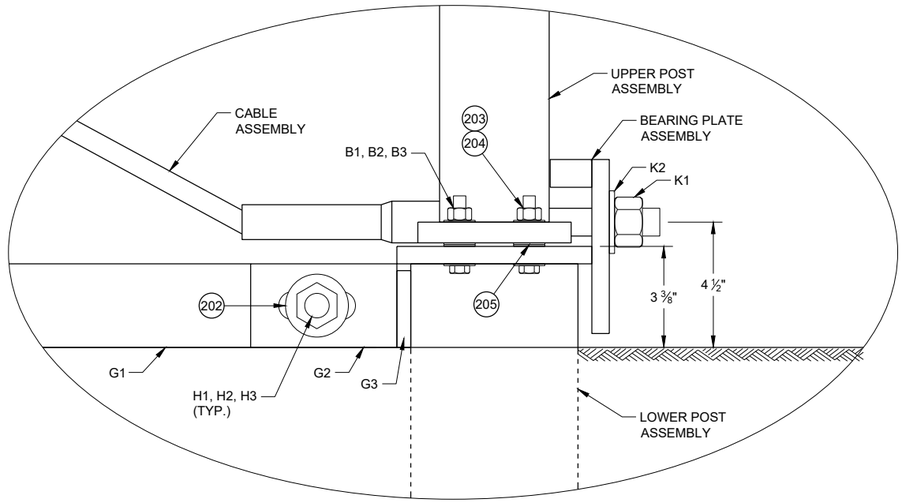
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

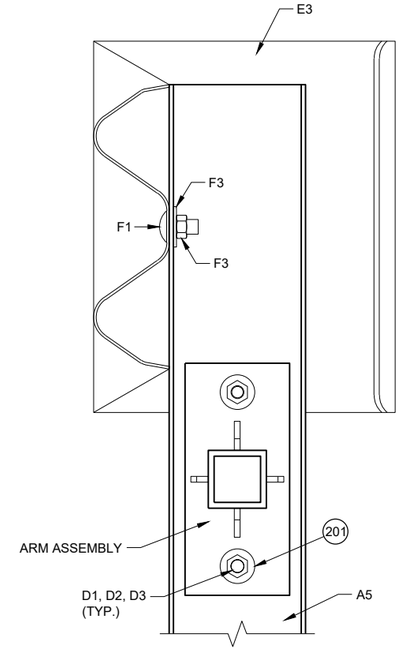
SDD 14B47 - 05a



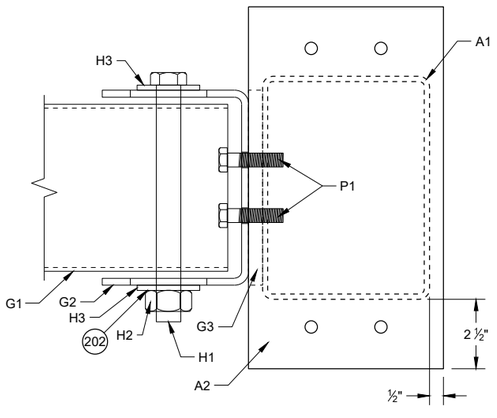
DETAIL "A"



DETAIL "B"

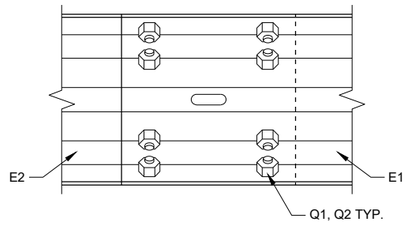


SECTION B - B



TOP VIEW

GROUND STRUT CONNECTION DETAIL



DETAIL "C"

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.

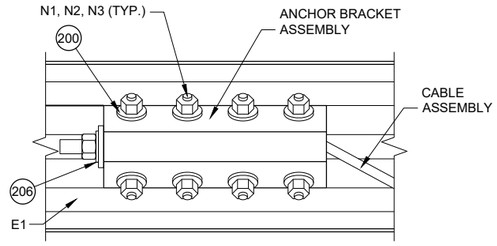
202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.

203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.

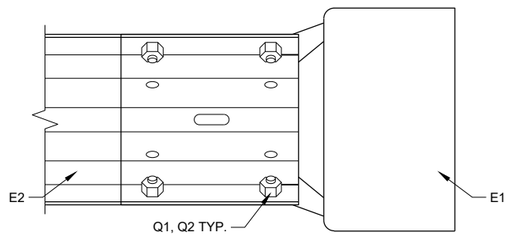
204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.

205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.

206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.



DETAIL "D"



DETAIL "E"

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

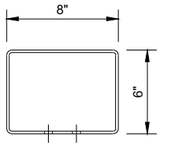
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

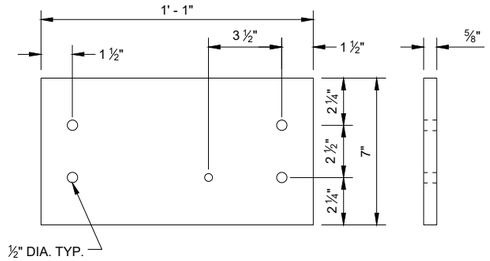
SDD 14B47 - 05b

GENERAL NOTES

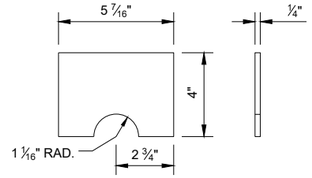
(300) TAP FOR 1/2" AFTER GALVANIZATION



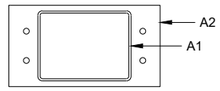
TOP VIEW



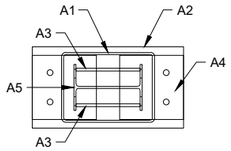
LOWER PLATE (A2)

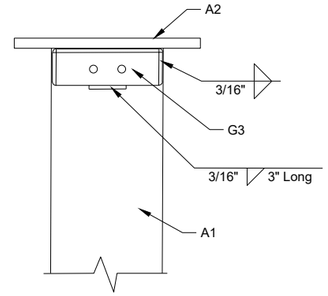


POST GUSSET (A3)

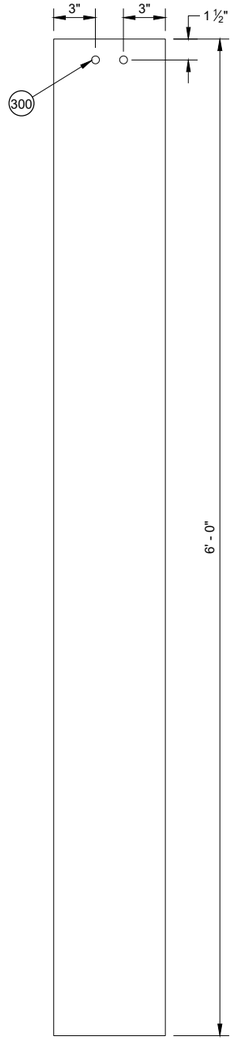


PLAN VIEW



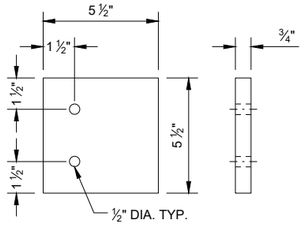


WELDING DETAIL
G3 AND A1

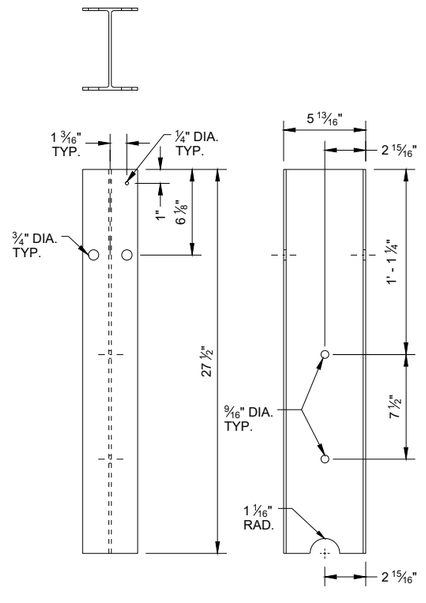


SIDE VIEW

FOUNDATION TUBE (A1)

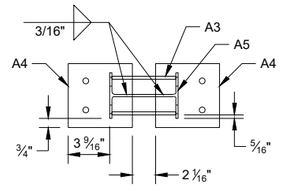


UPPER PLATE (A4)

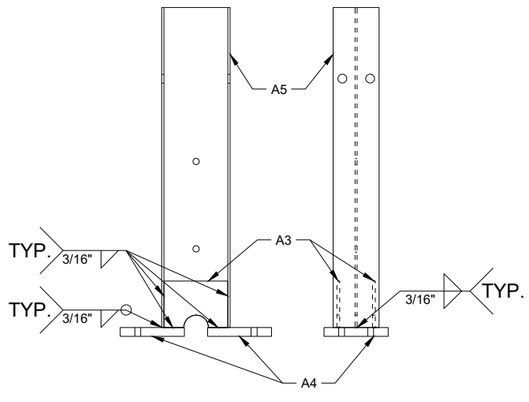


FRONT VIEW SIDE VIEW

TYPE 2 POST (A5)

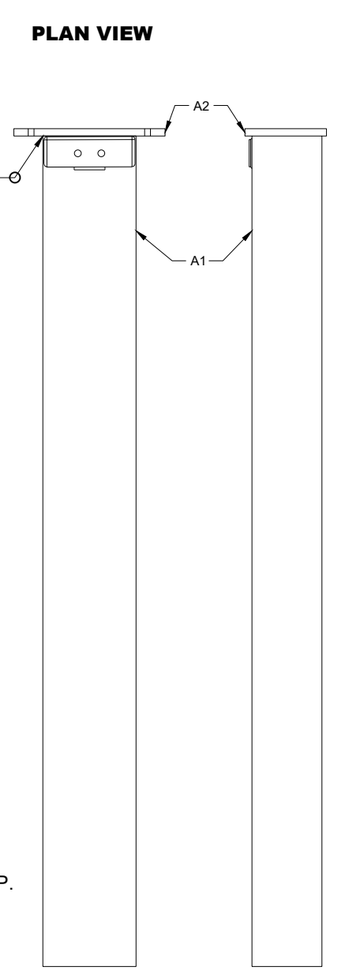


PLAN VIEW



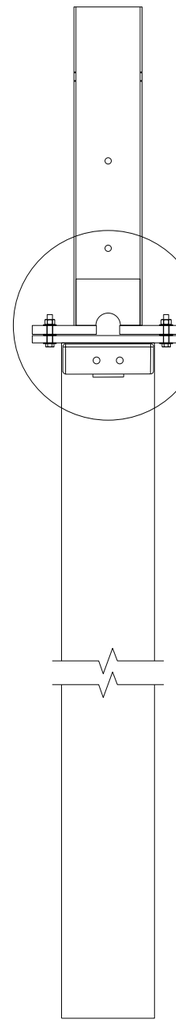
SIDE VIEW FRONT VIEW

UPPER POST ASSEMBLY

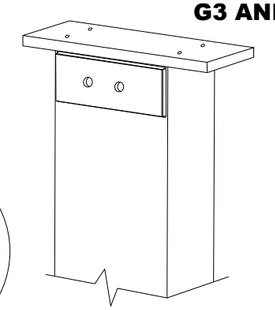


FRONT VIEW SIDE VIEW

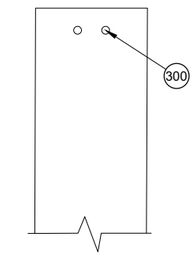
LOWER POST ASSEMBLY



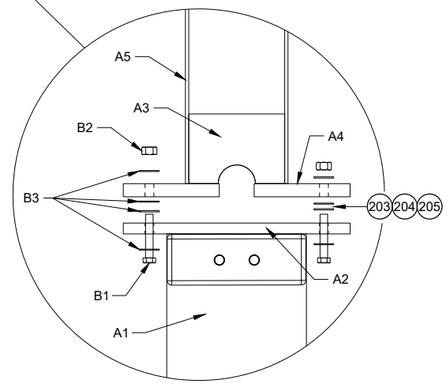
ASSEMBLED POST



ASSEMBLY DETAIL
ISOMETRIC



A1



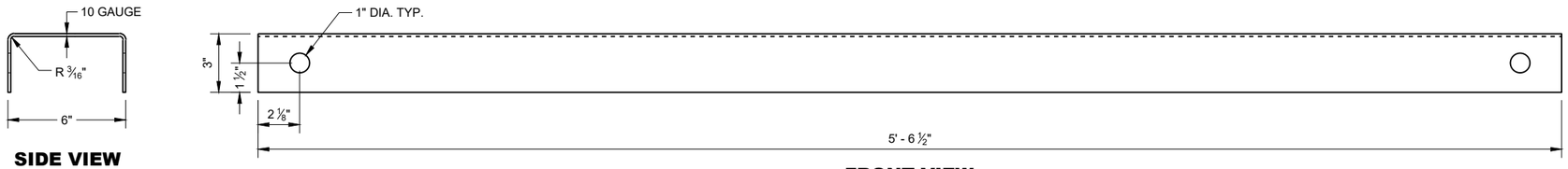
POST CONNECTION DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

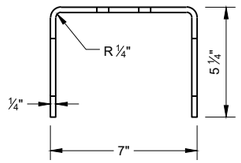
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

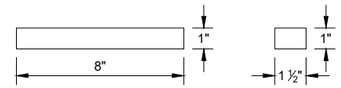
6

SDD14B47 - 05c

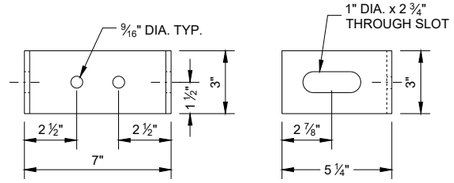


GROUND STRUT CHANNEL (G1)

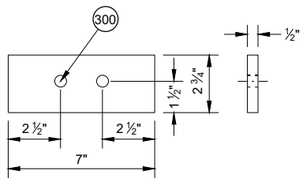




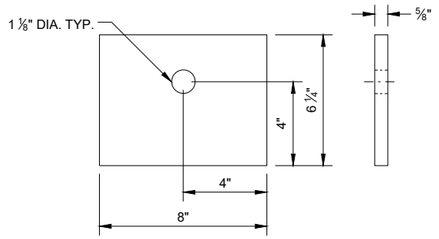
BEARING PLATE FLANGE (L2)



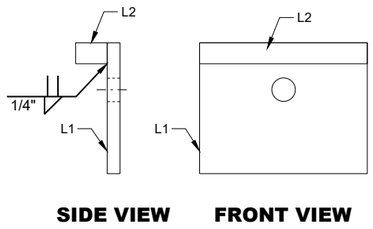
GROUND STRUT CONNECTOR (G2)



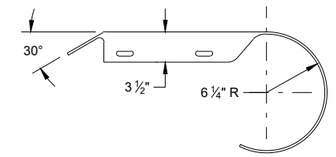
GROUND STRUT PLATE (G3)



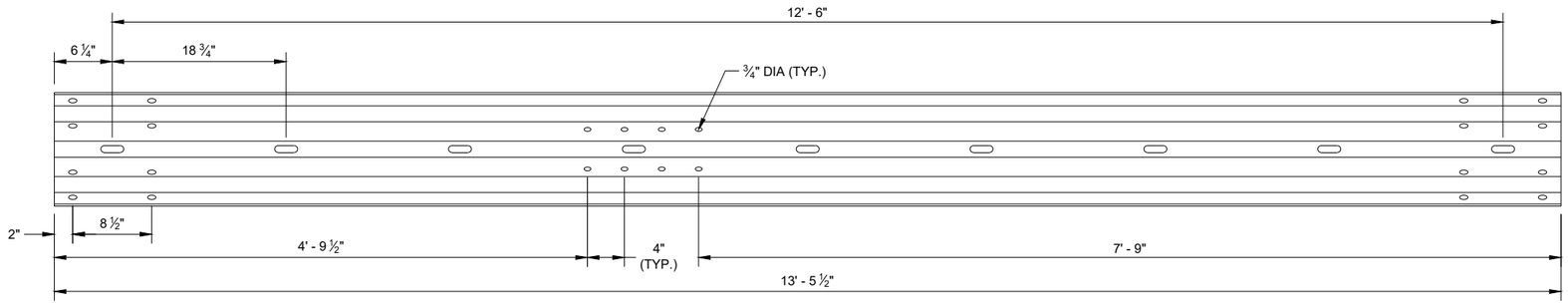
BEARING PLATE (L1)



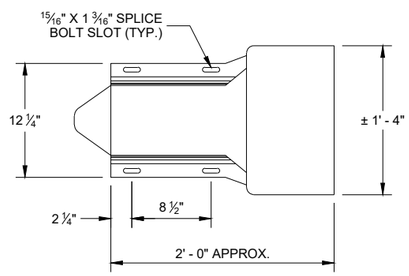
BEARING PLATE ASSEMBLY



PLAN VIEW

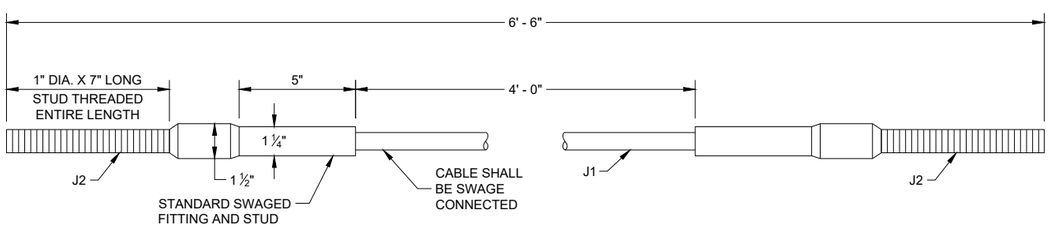


TYPE 2 GUARDRAIL (E1)



ELEVATION VIEW

ROUNDED BUFFER END (E3)



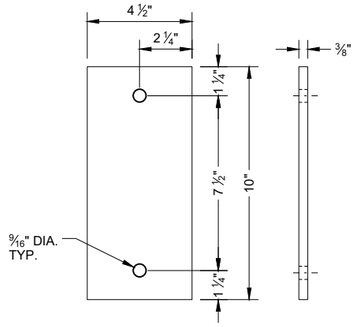
CABLE ASSEMBLY

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

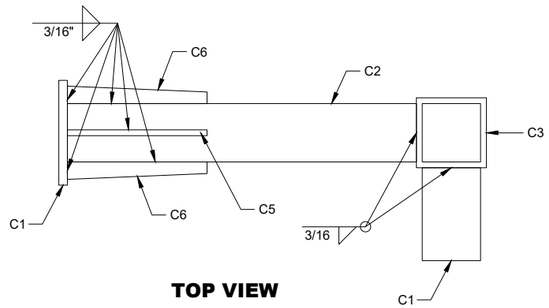
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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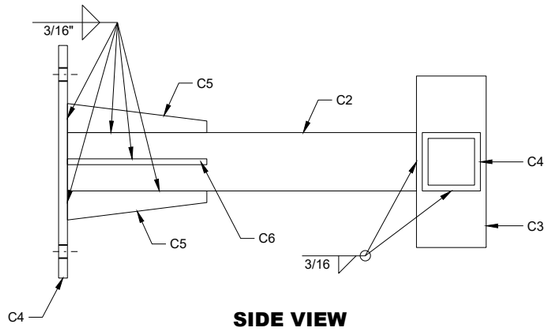
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SDD 14B47 - 05d



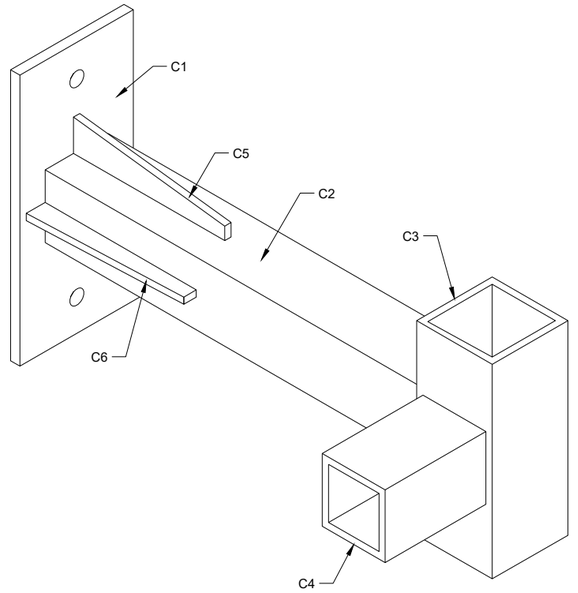
ARM PLATE (C1)



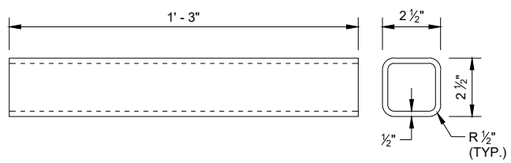
TOP VIEW
ARM ASSEMBLY



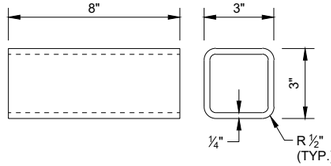
SIDE VIEW
ARM ASSEMBLY



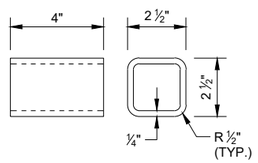
ISOMETRIC VIEW
ARM ASSEMBLY



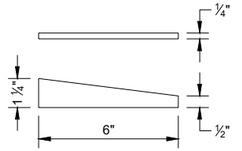
ARM TUBE 1 (C2)



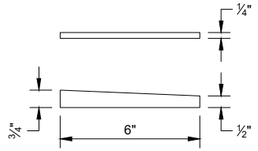
ARM TUBE 2 (C3)



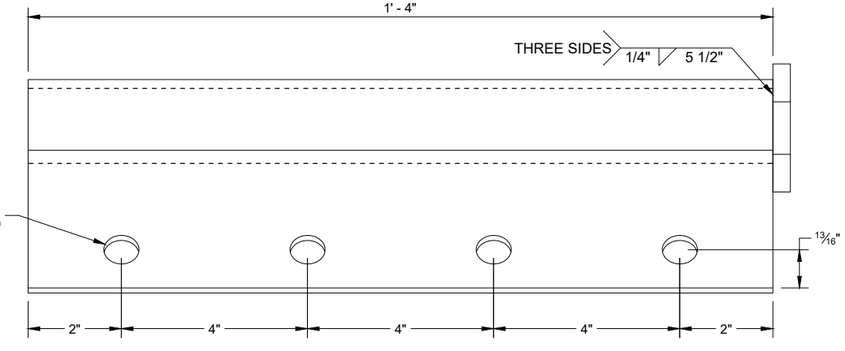
ARM TUBE 3 (C4)

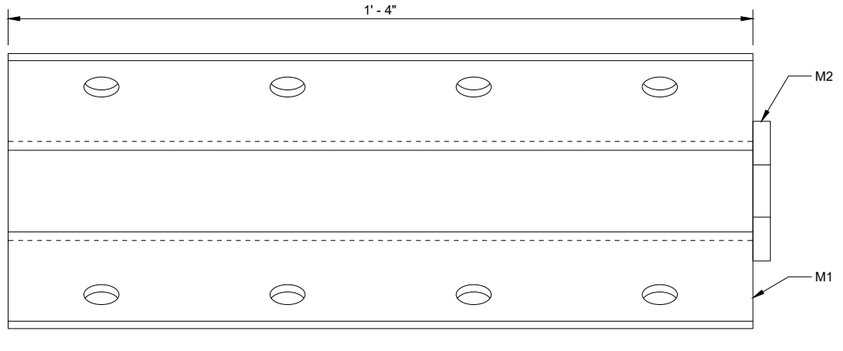


ARM GUSSET PLATE 1 (C5)

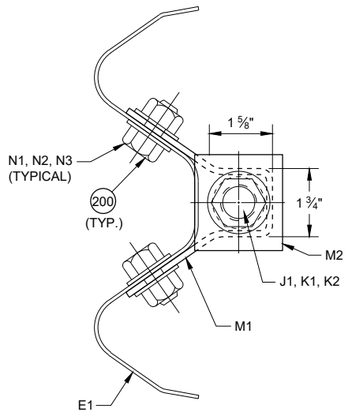


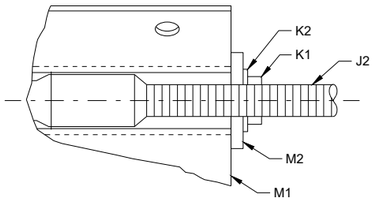
ARM GUSSET PLATE 2 (C6)



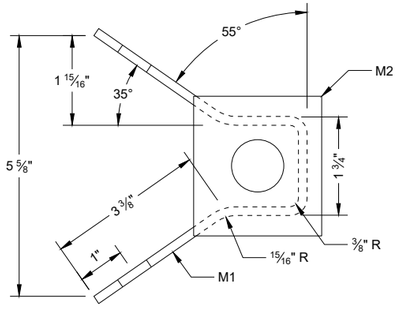


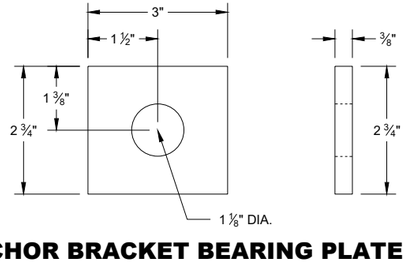
ANCHOR BRACKET (M1, M2)





SECTION A - A





ANCHOR BRACKET BEARING PLATE (M2)

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD14B47 - 05e

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	TYPE 2 FOUNDATION TUBE	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
A2	LOWER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
A3	POST GUSSET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
A4	UPPER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/4" THICKNESS
A5	TYPE 2 POST	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI, w6x9 or w6x8.5	
B1	BREAKAWAY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED . PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	7/16" DIA.
B2	BREAKAWAY BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/16" DIA.
B3	BREAKAWAY BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
C1	ARM ASSEMBLY PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
C2	ARM ASSEMBLY TUBE 1	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
C3	ARM ASSEMBLY TUBE 2	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 3" x 3" x 1/4"
C4	ARM ASSEMBLY TUBE 3	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 2 1/2" x 2 1/2" X 1/4"
C5	ARM ASSEMBLY GUSSET PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
C6	ARM ASSEMBLY GUSSET PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
D1	ARM ASSEMBLY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	1/2" DIA.
D2	ARM ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	1/2" DIA.
D3	ARM ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
E1	TYPE 2 GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E2	BEAM GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E3	BEAM GUARD ROUNDED BUFFER END	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
F1	POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
F2	POST BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
F3	POST BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
G1	GROUND STRUT CHANNEL	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" x 11 3/4" x 10 GAUGE
G2	GROUND STRUT CONNECTOR	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
G3	GROUND STRUT PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" THICKNESS

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
H1	GROUND STRUT BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	7/8" DIA.
H2	GROUND STRUT BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/8" DIA.
H3	GROUND STRUT BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
J1	BCT CABLE	AASHTO M30 / ASTM A741 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN. BREAKING STRENGTH OF 42.7 KIPS	**3/4" DIA.**
J2	BCT CABLE	UNC 1" ASTM A576 GRADE 1035 SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. MIN BREAKING STRENGTH OF 42.7 KIPS ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."	
K1	CABLE ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1" DIA.
K2	CABLE ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1	1" DIA.
L1	BEARING PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
L2	BEARING PLATE FLANGE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1" THICKNESS
M1	BEAM GUARD ANCHOR BRACKET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	
M2	BEAM GUARD ANCHOR END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
N1	ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
N2	ANCHOR BRACKET BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
N3	ANCHOR BRACKET BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 /ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
P1	FOUNDATION TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
Q1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
Q2	SPLICE NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	5/8" DIA.

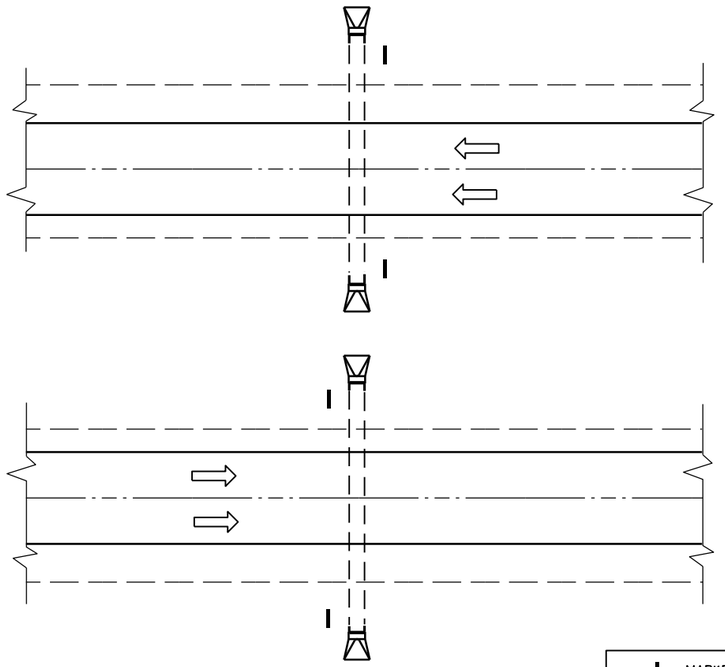
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MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

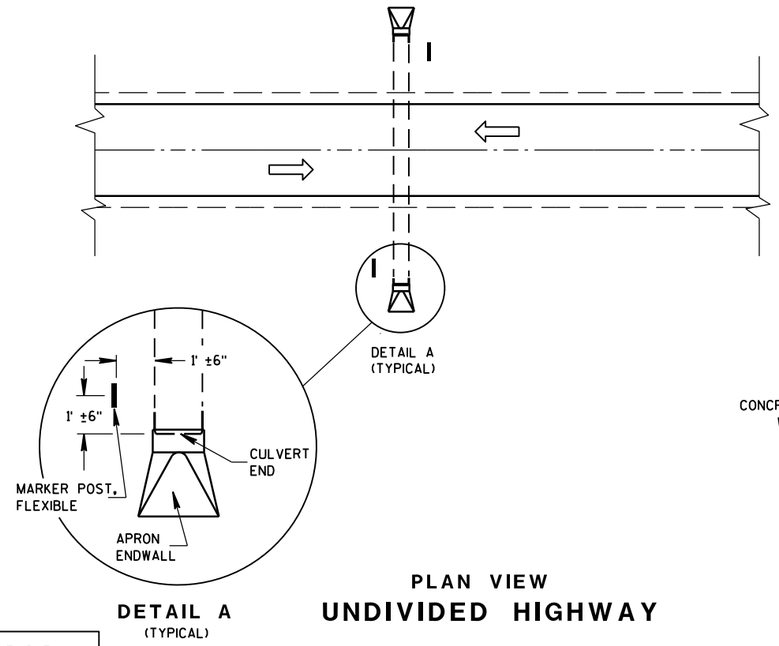
APPROVED
May 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER
FHWA

SDD 14B47 - 05g



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

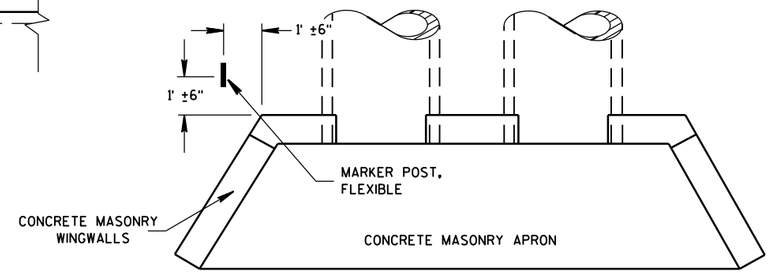
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

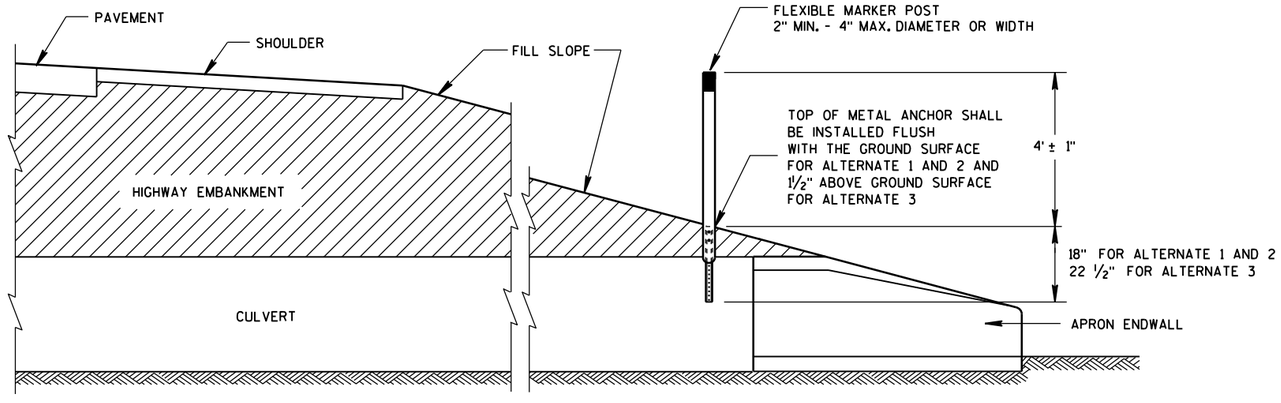
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

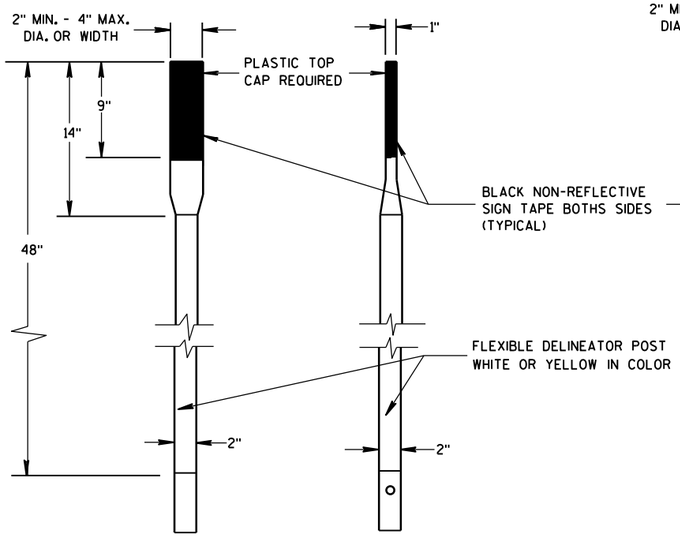
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

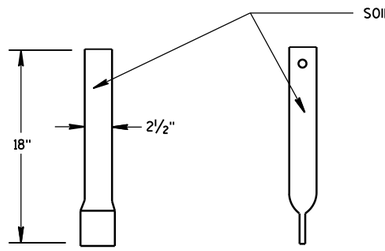
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S.D.D. 15 A 3-2a

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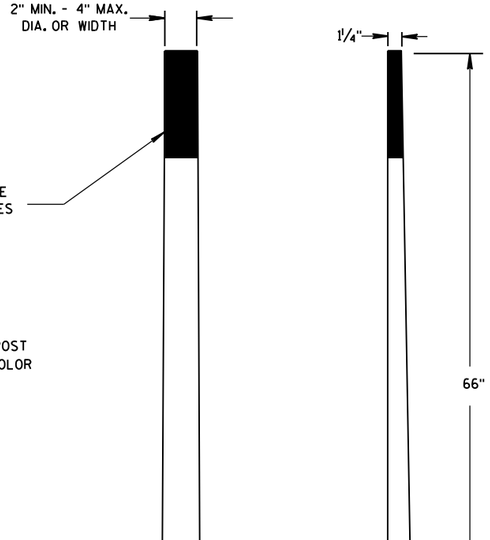
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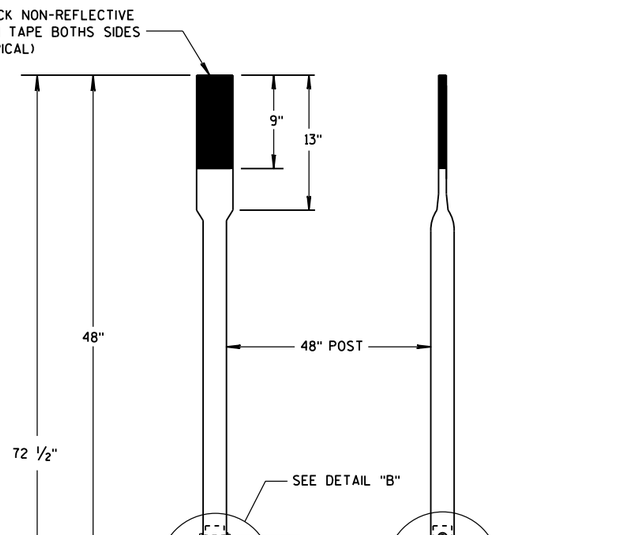
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

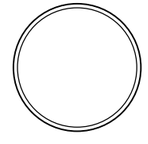
ALTERNATE 2



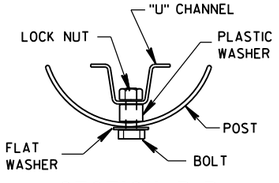
FRONT VIEW SIDE VIEW

ALTERNATE 3

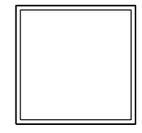
FLEXIBLE MARKER POSTS



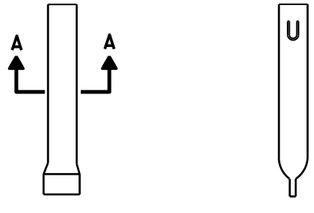
SECTION A-A



SECTION B-B

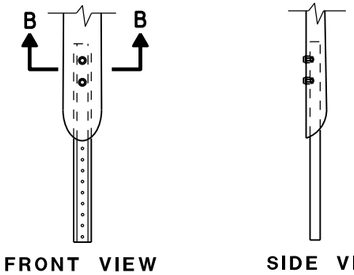


SECTION C-C



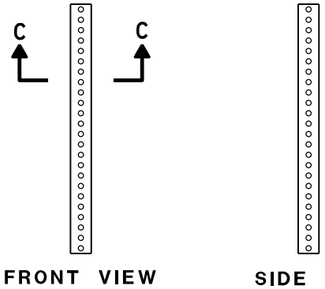
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

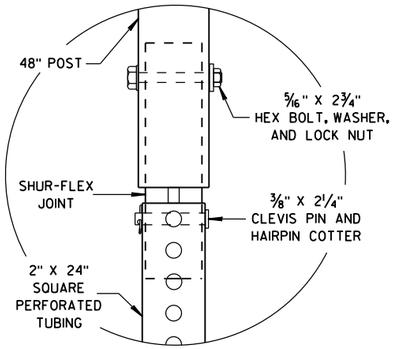
ALTERNATE 2



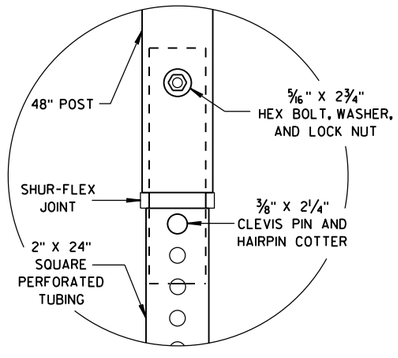
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

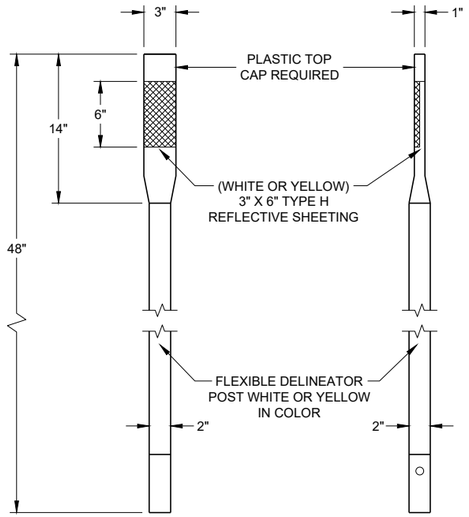
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

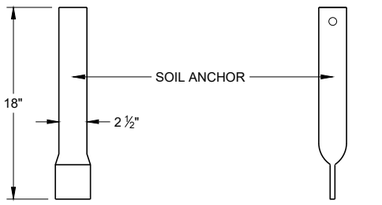
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S.D.D. 15 A 3-2b

6

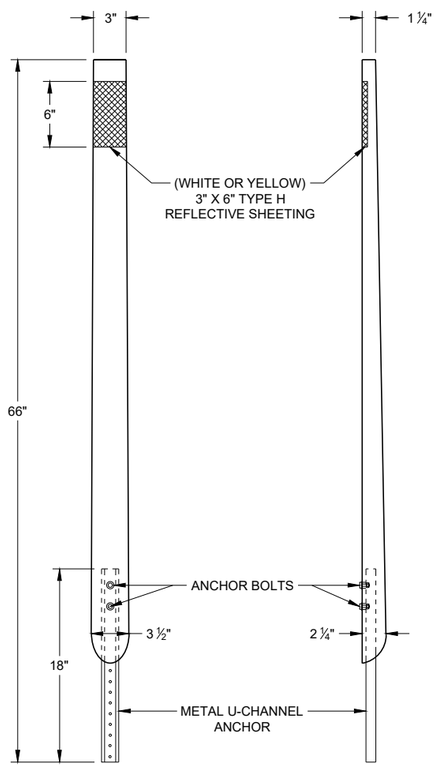
S.D.D. 15 A 3-2b





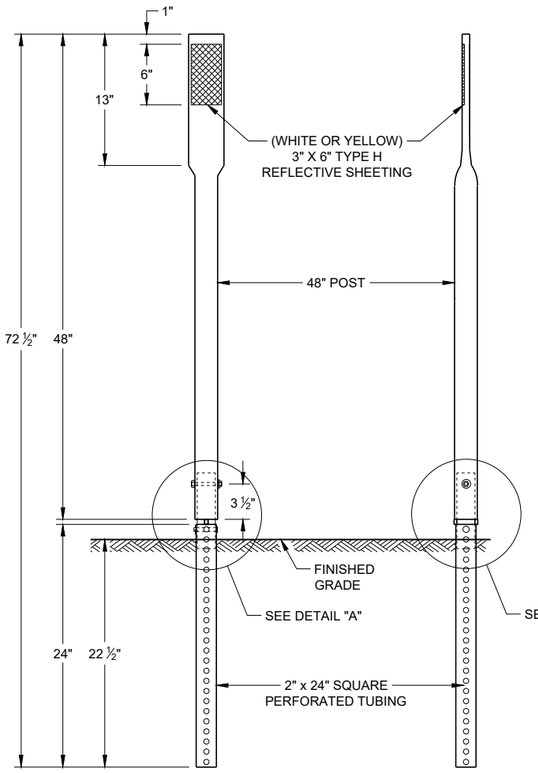
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

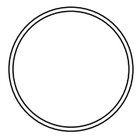
ALTERNATE 2



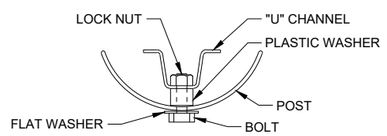
FRONT VIEW SIDE VIEW

ALTERNATE 3

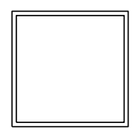
FLEXIBLE DELINEATOR POSTS



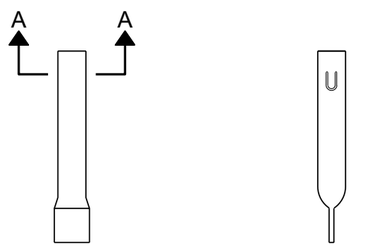
SECTION A - A



SECTION B - B

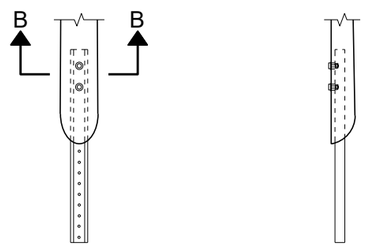


SECTION C - C



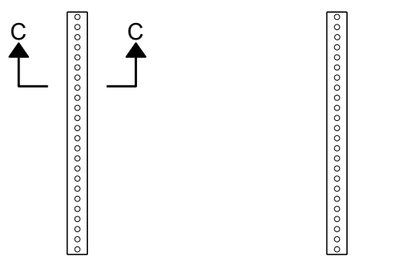
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



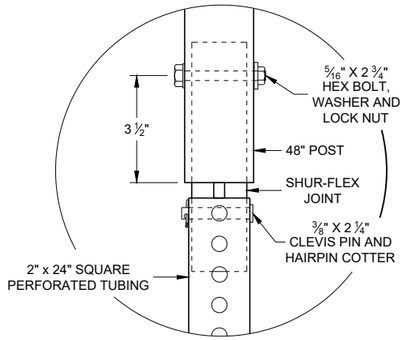
FRONT VIEW SIDE VIEW

ALTERNATE 3

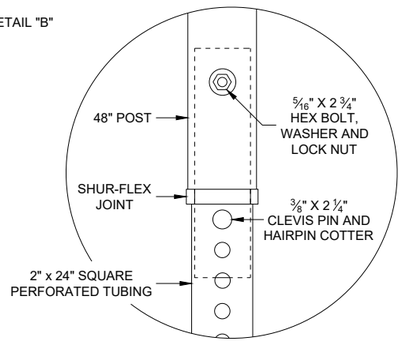
FLEXIBLE MARKER POST ANCHORS

GENERAL NOTES

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



DETAIL A



DETAIL B

REFLECTOR SPACING TABLE

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

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

FLEXIBLE DELINEATOR POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

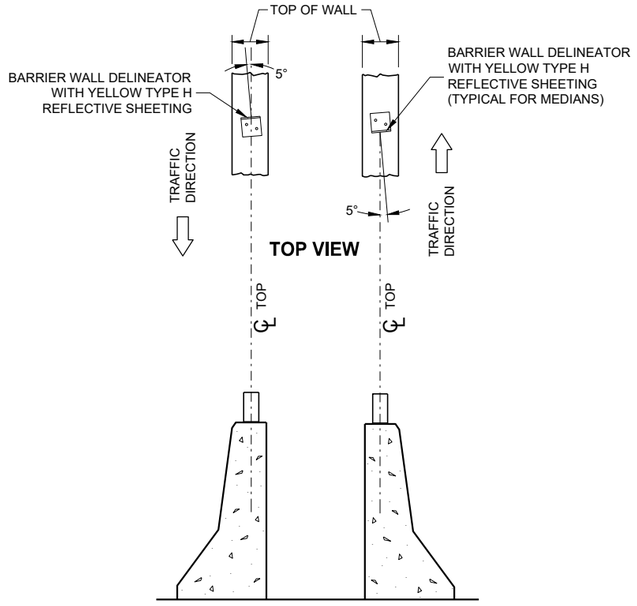
APPROVED
November 2021
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAR ENGINEER

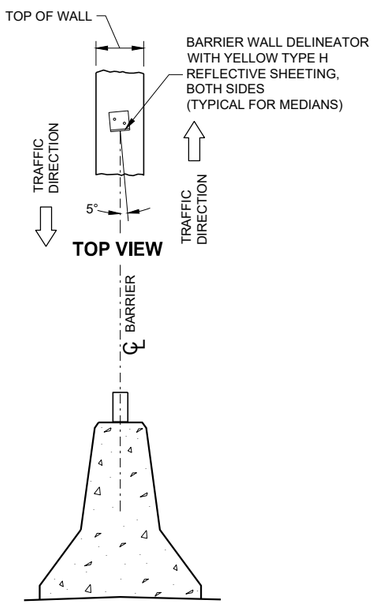
FHWA

SDD 15A04 - 07a

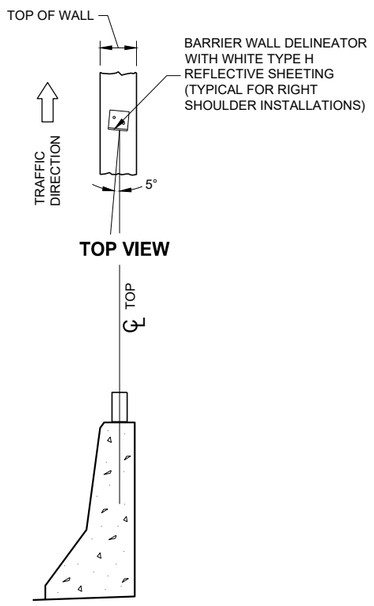
6
SDD 15A04 - 07a



SIDE VIEW
DOUBLE BARRIERS IN MEDIAN

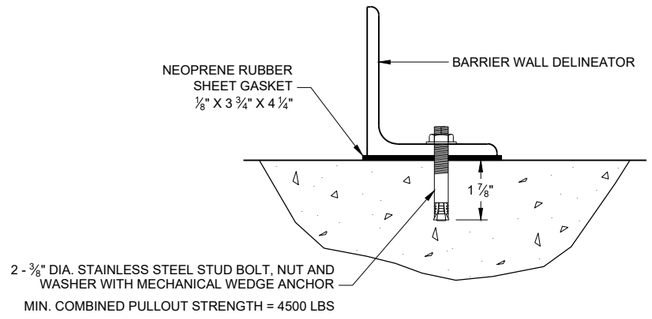


SIDE VIEW
MEDIAN BARRIER

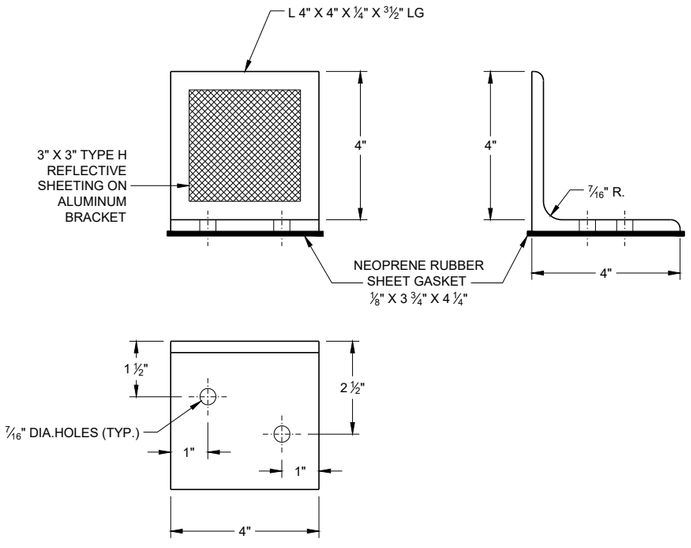


SIDE VIEW
TO RIGHT OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR BARRIER WALL DELINEATOR MOUNTED ON CONCRETE BARRIERS



BARRIER WALL DELINEATOR MOUNTING DETAIL



BARRIER WALL DELINEATOR

REFLECTOR SPACING TABLE

REFLECTOR SPACING	MINIMUM NUMBER OF REFLECTORS
100' C-C	3

BARRIER WALL DELINEATOR WITH REFLECTIVE SHEETING

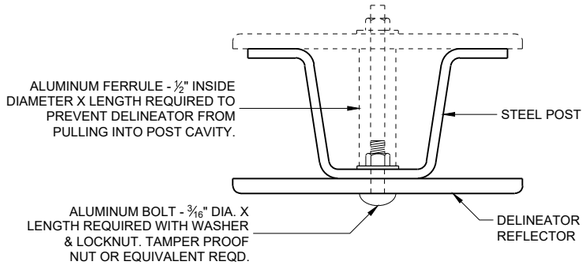
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER

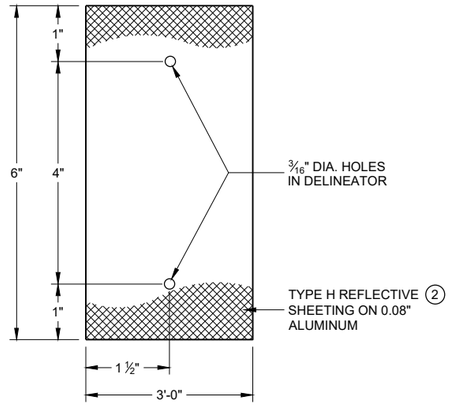
FHWA

6

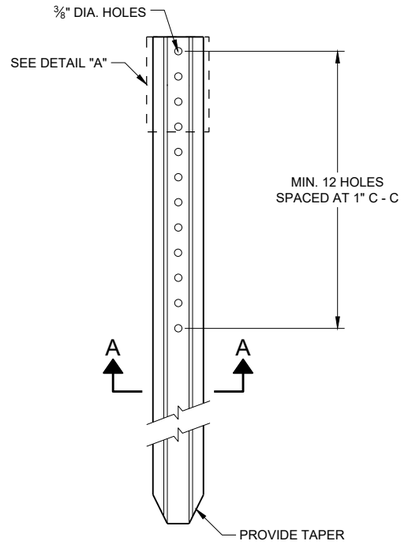
SDD 15A04 - 07b



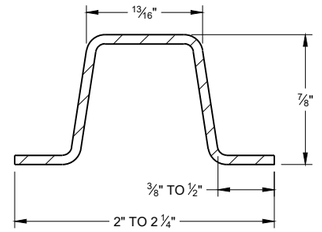
MOUNTING DETAIL FOR DELINEATOR REFLECTOR



DETAIL "A" 3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



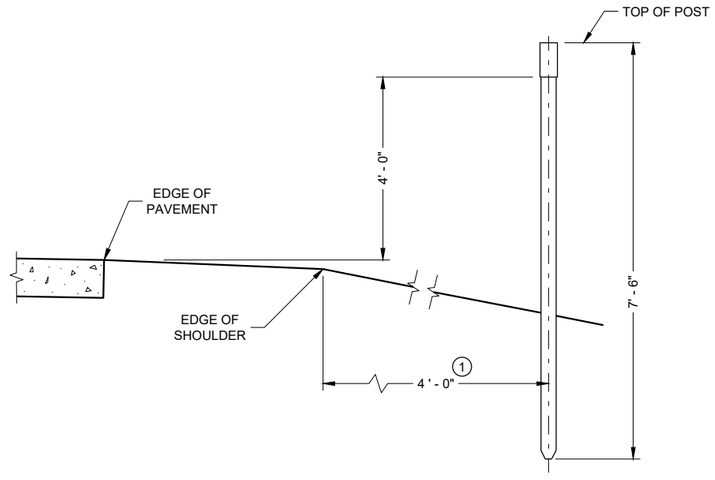
SECTION A - A

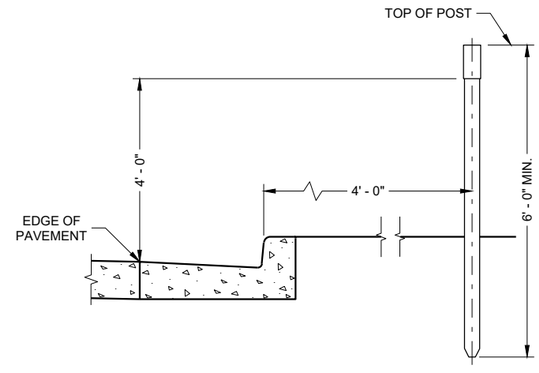
WEIGHT 1.12 LBS PER FT. \ 0.1 LB.

REFLECTOR SPACING TABLE

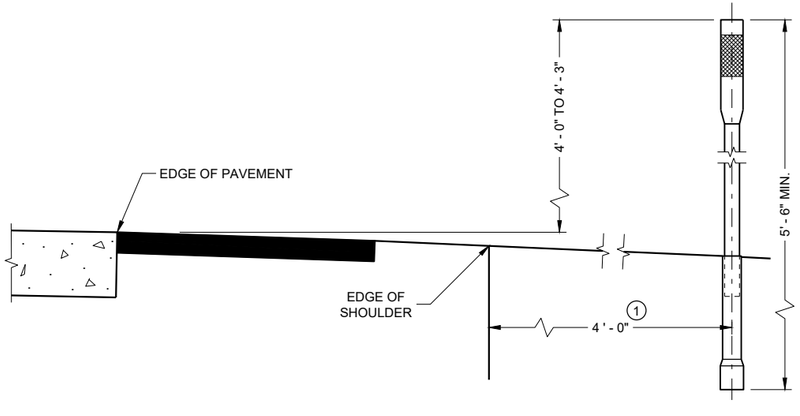
REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

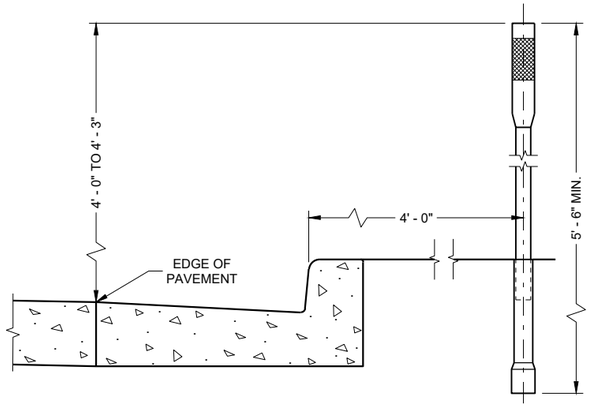
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER





TYPICAL INSTALLATIONS OF DELINEATOR POSTS





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

GENERAL NOTES

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

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

DELINEATOR POST WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

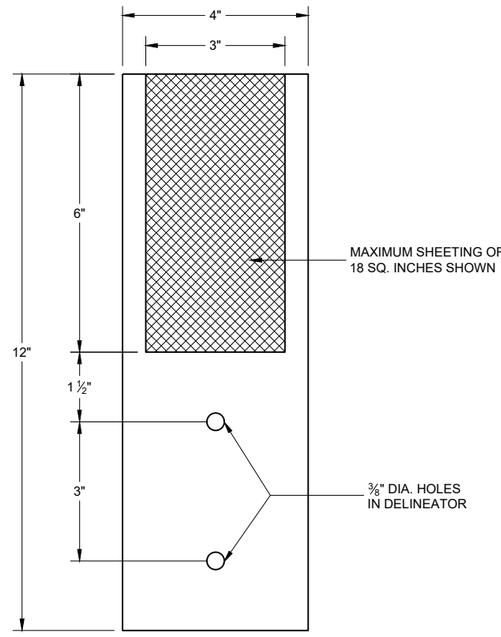
FHWA

6

SDD 15A04 - 07c

6

SDD 15A04 - 07c



4" x 12" DELINEATOR
WITH REFLECTIVE SHEETING

6

6

SDD 15A04 - 07e

SDD15A04 - 07e

DELINEATOR
WITH REFLECTIVE SHEETING

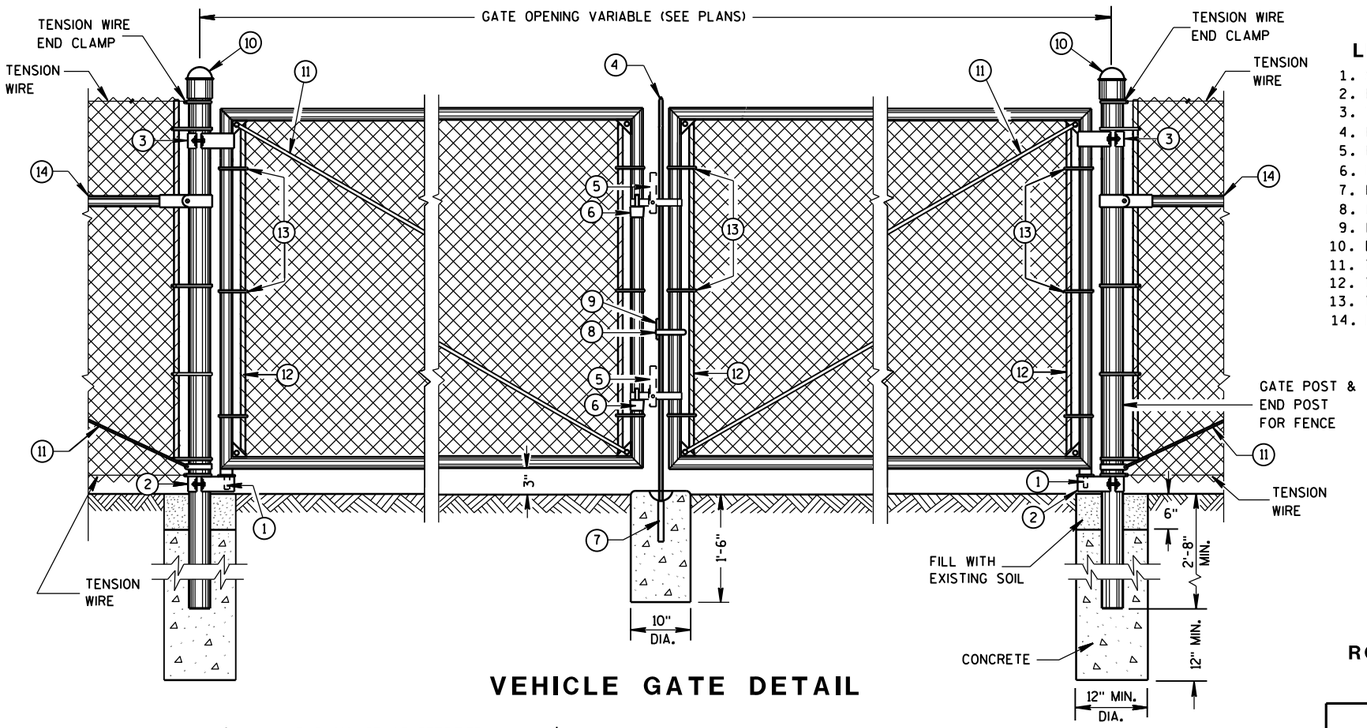
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

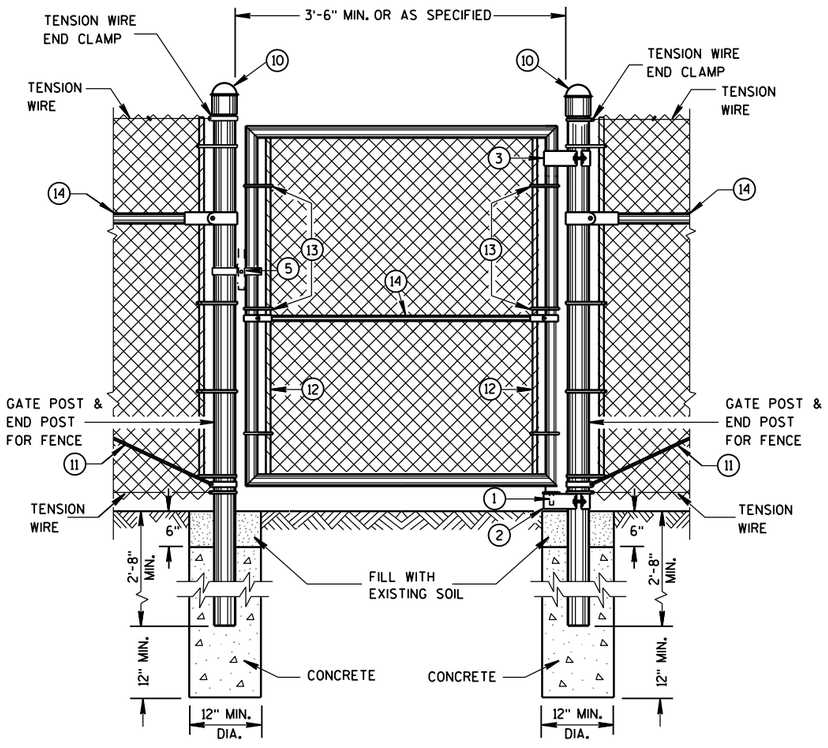
November 2021
DATE

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STATE SIGNING AND MAR ENGINEER

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VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

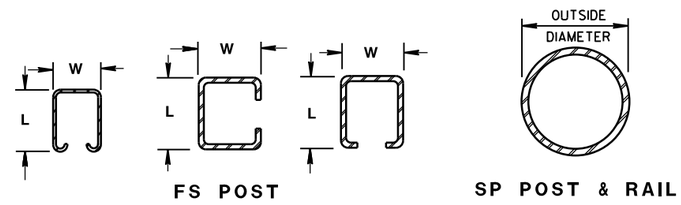
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



FS POST — SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

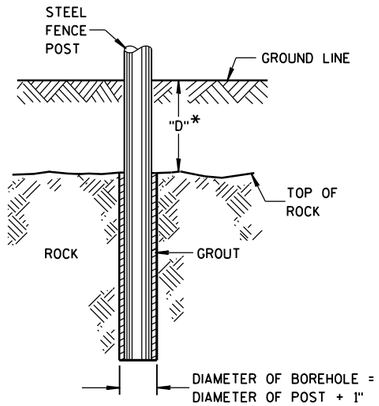
POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

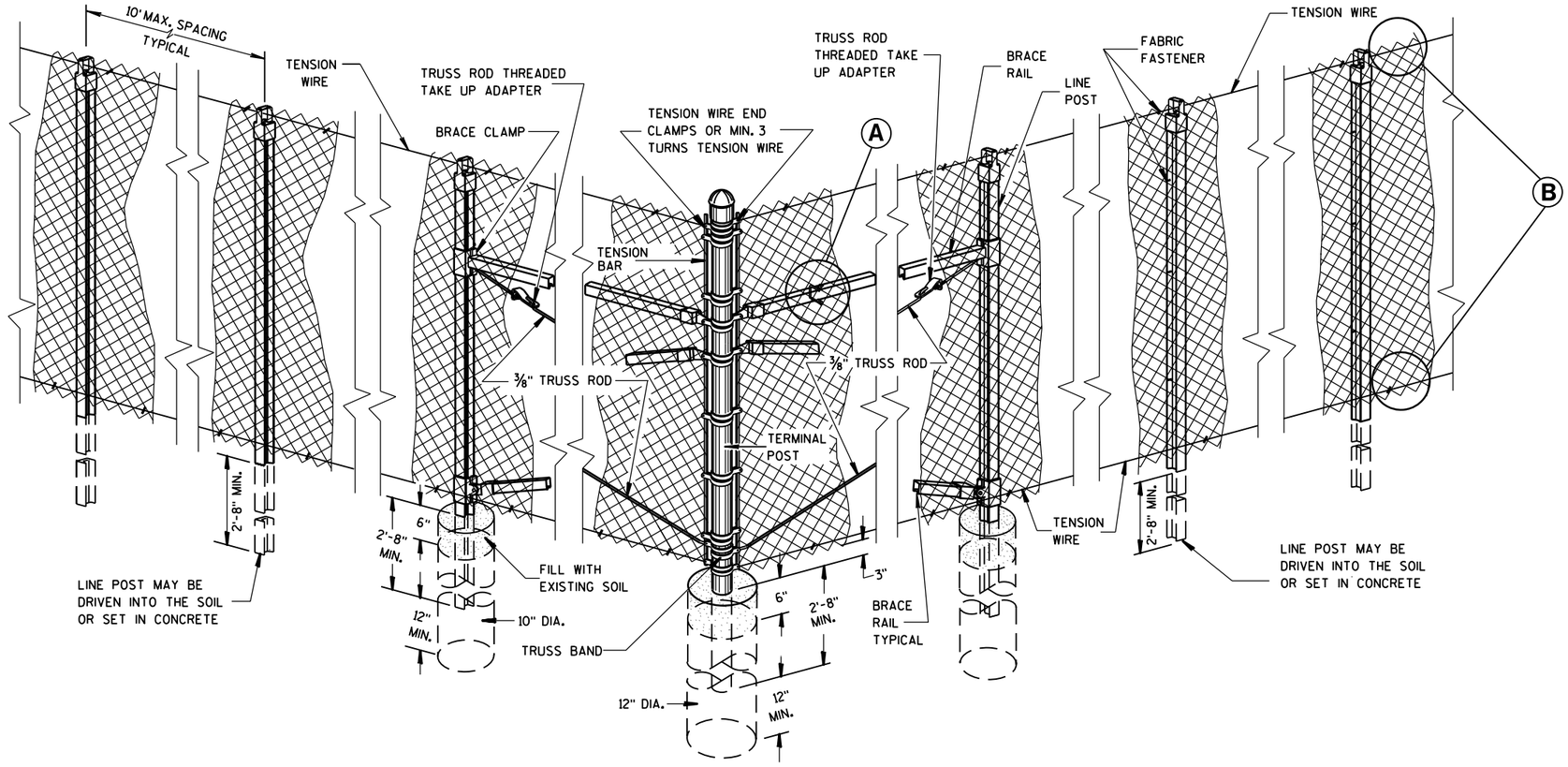
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S.D.D. 15 B 3-15a

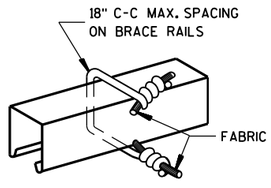


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



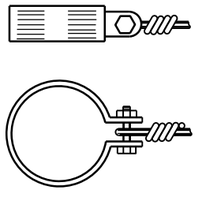
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



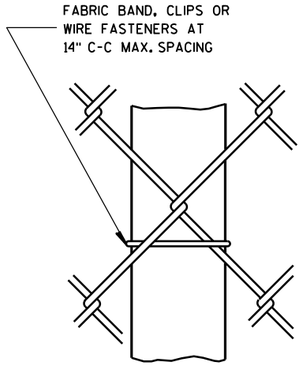
BRACE RAIL

FABRIC FASTENER

Ⓐ



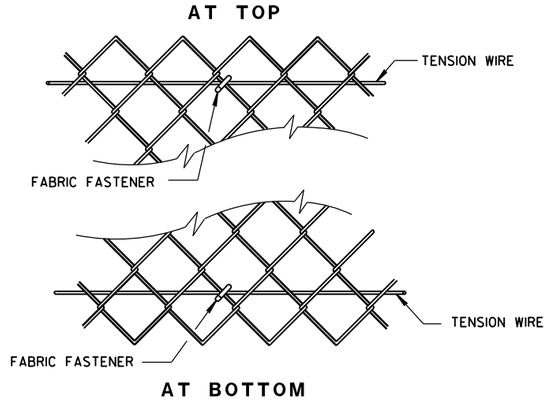
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

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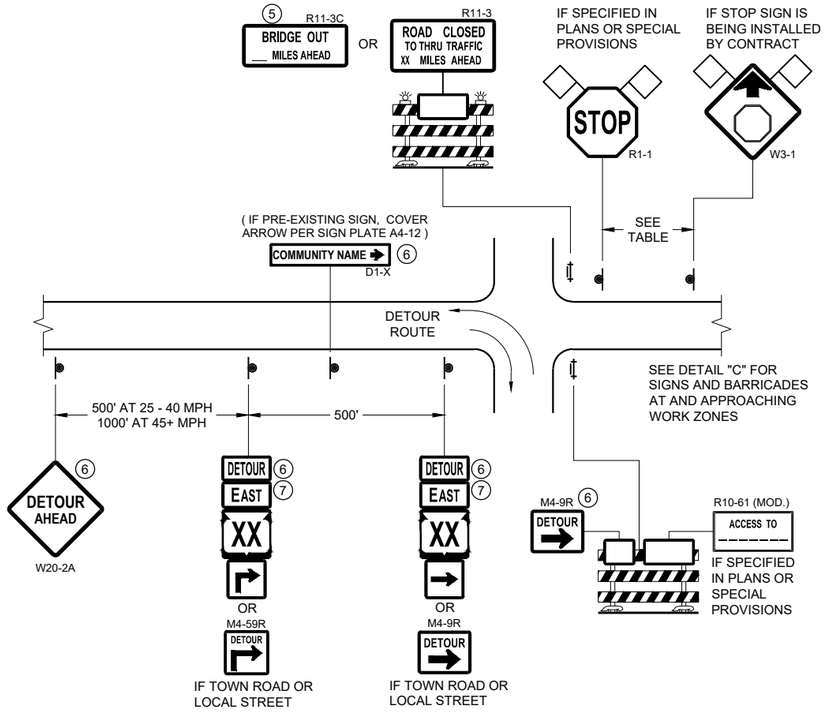
FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
FEB. 2015 DATE
FHWA
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

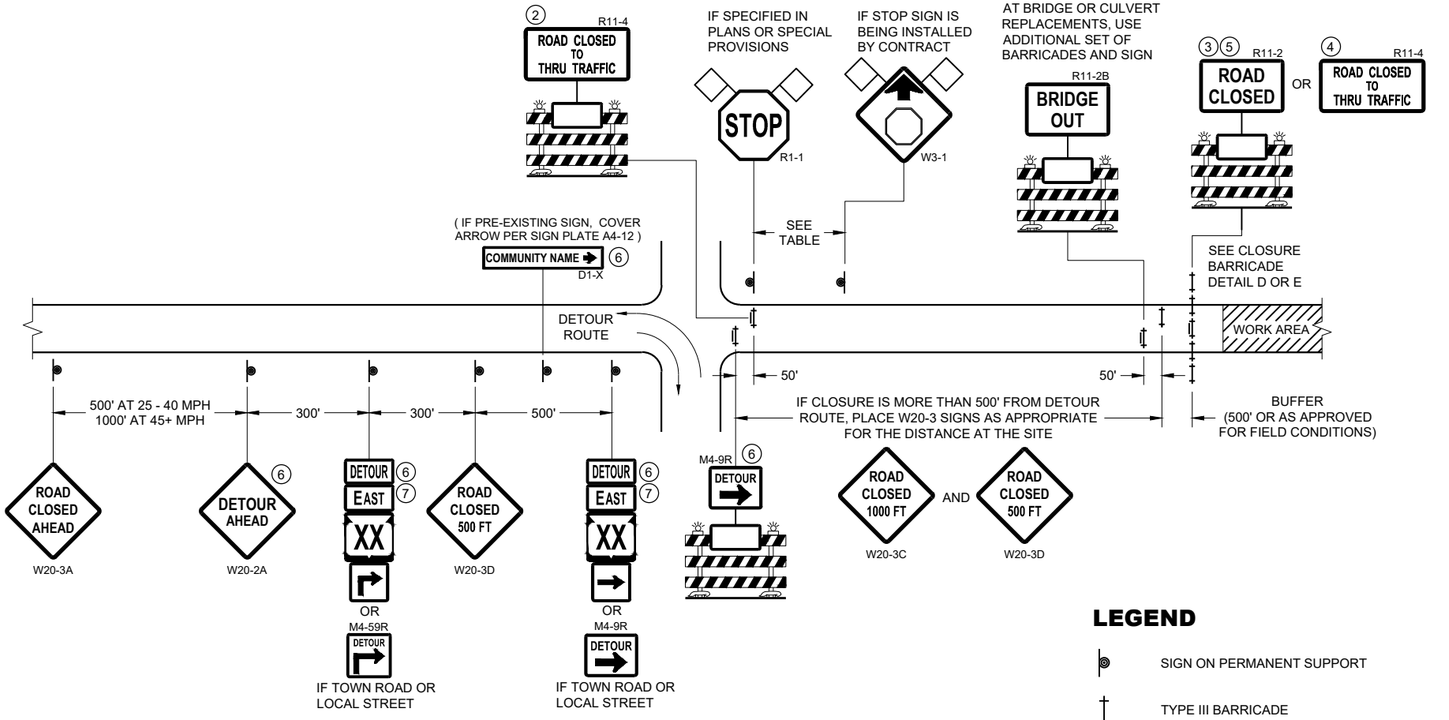
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S.D.D. 15 B 3-15b



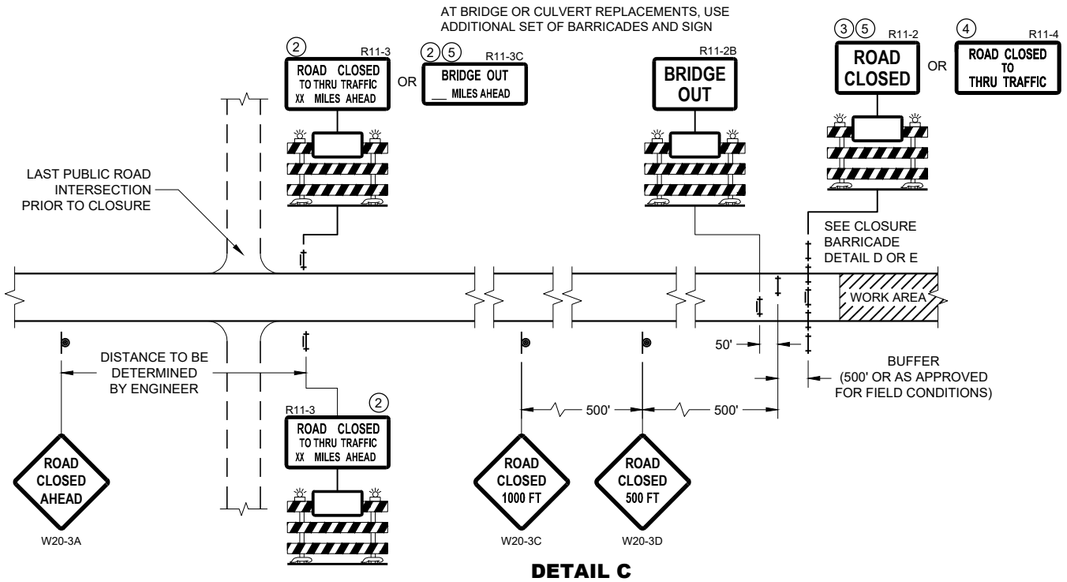
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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)



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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
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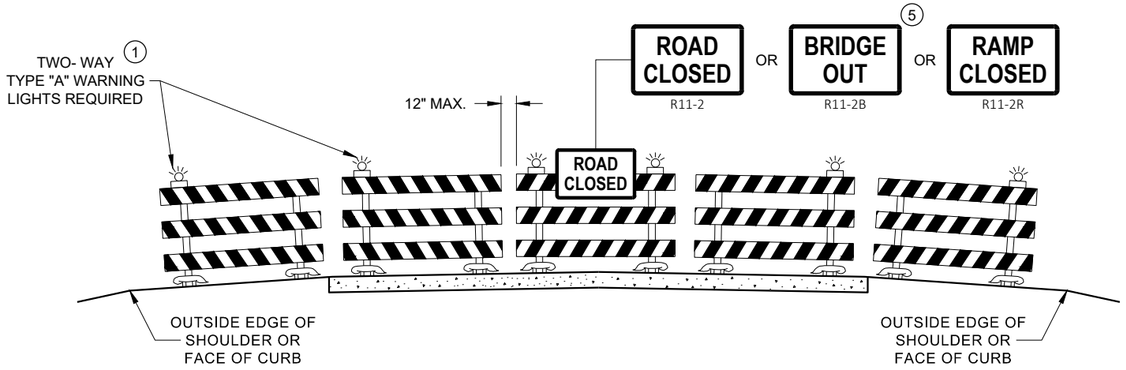
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

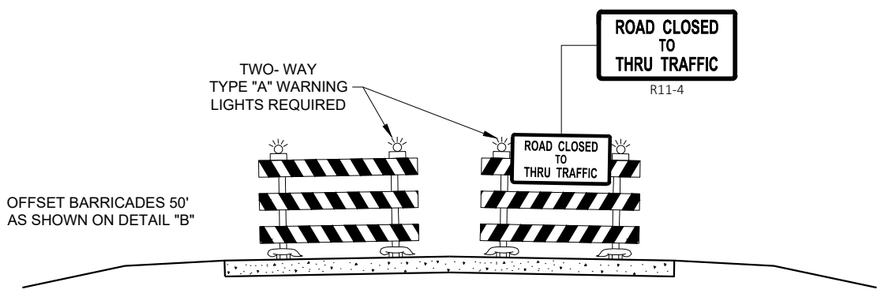
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SDD 15C02 - 09a

SDD 15C02 - 09a



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

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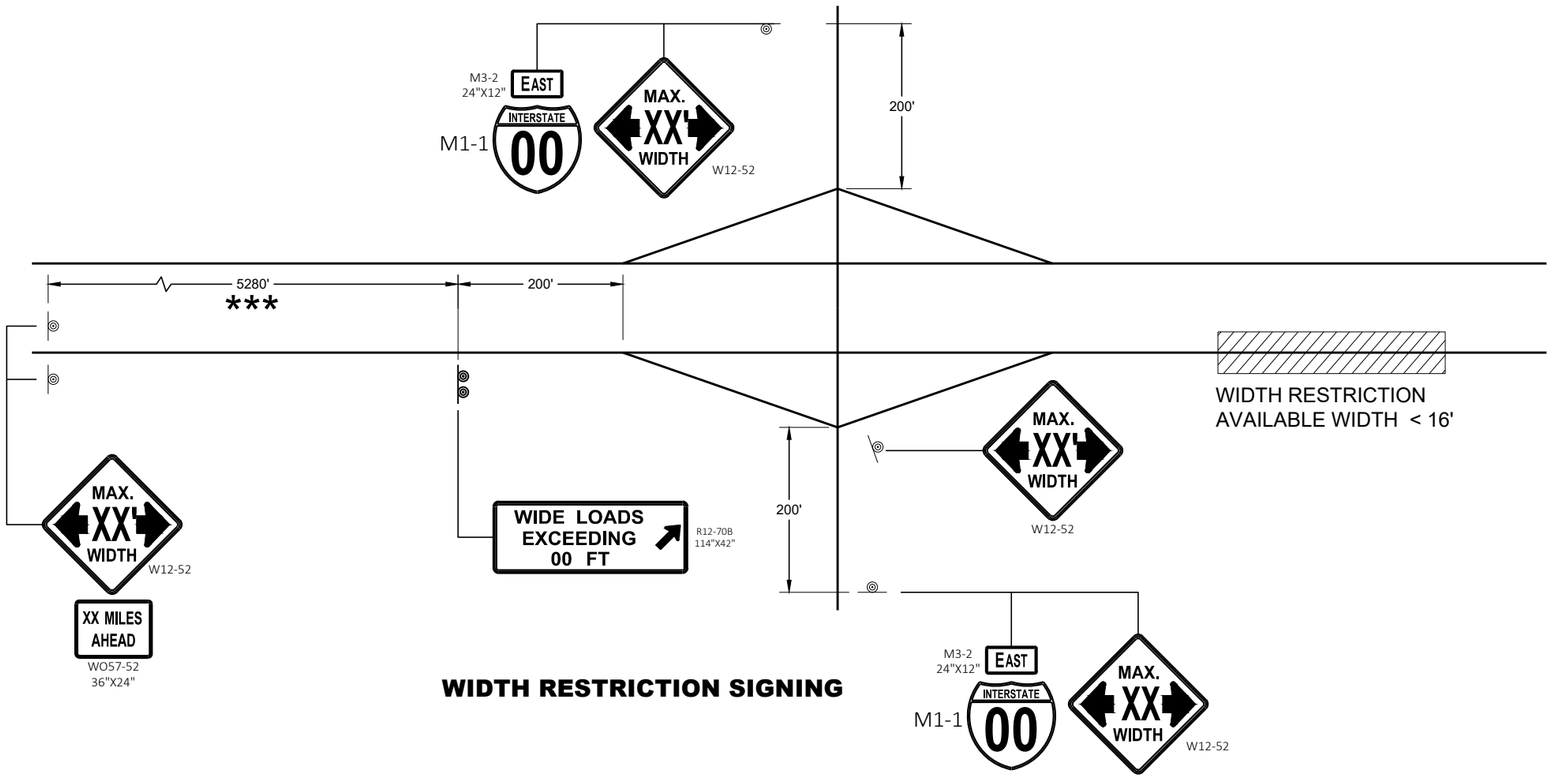
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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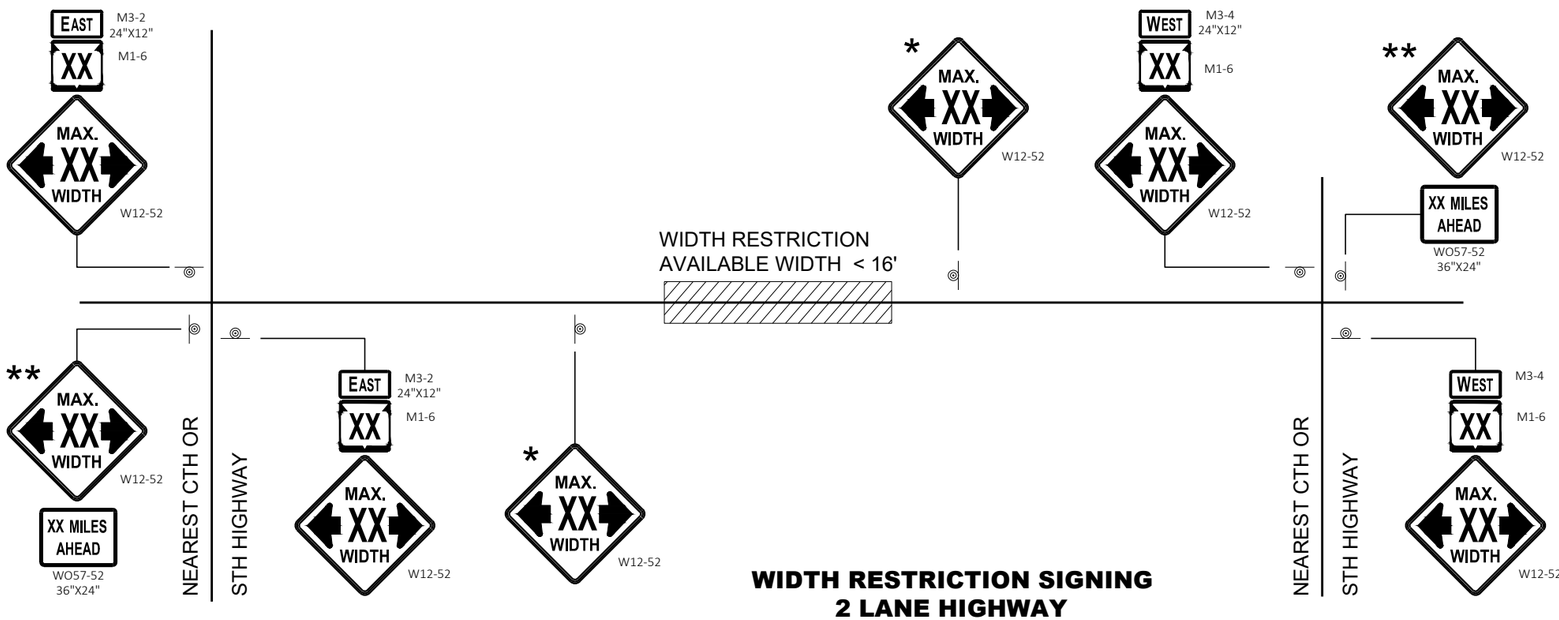
SDD 15C02 - 09b

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SDD 15C02 - 09b



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

LEGEND

◎ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

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

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

** SIGN SHALL BE VISIBLE FROM ROADWAY.

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



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

ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 15C02 - 09f

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.

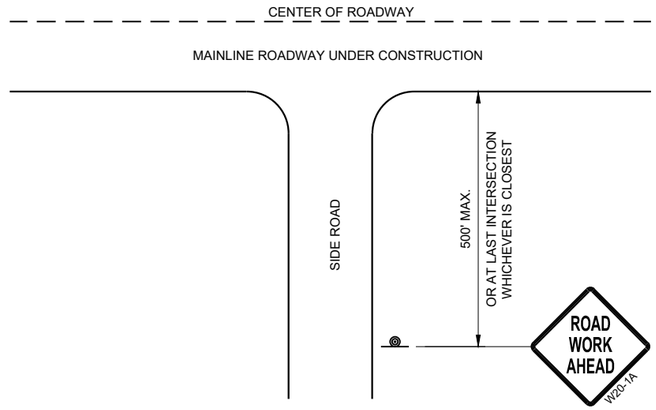
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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.



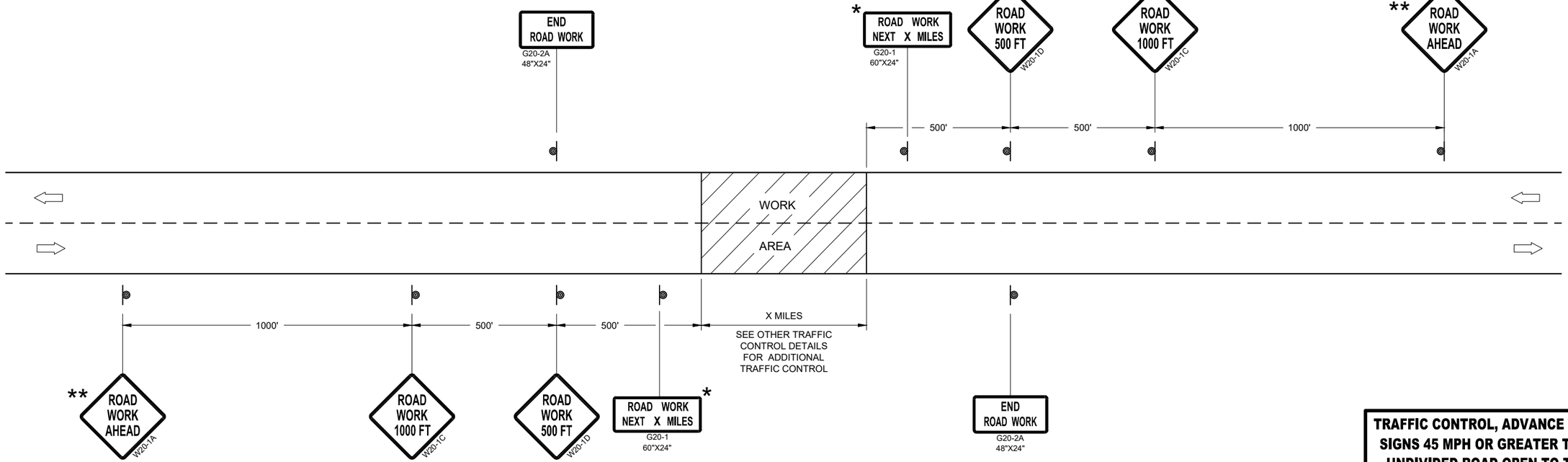
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

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

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SDD 15C04 - 05

GENERAL NOTES

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

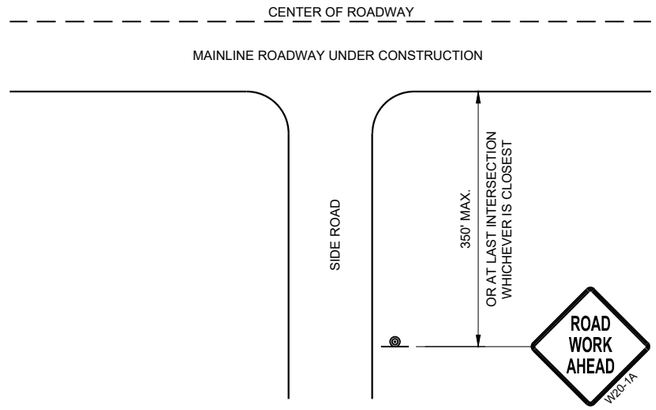
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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.

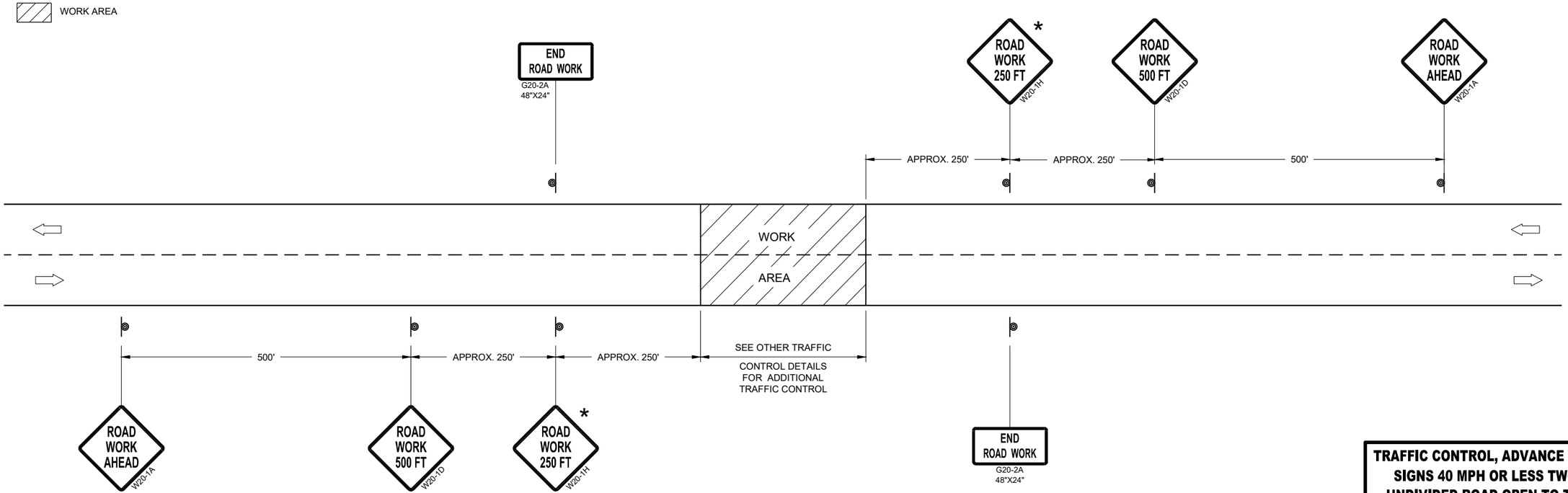
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



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

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WORK ZONE ENGINEE

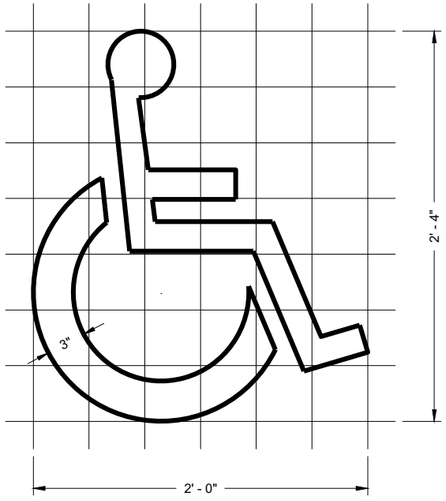
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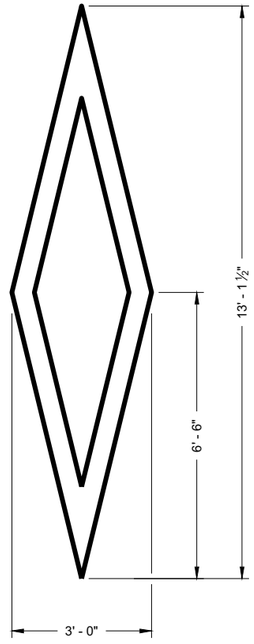
SDD 15C05 - 05

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.



HANDICAP SYMBOL



PREFERENTIAL LANE SYMBOL

6

6

SDD 15C07 - 15a

SDD 15C07 - 15a

PAVEMENT MARKING SYMBOLS

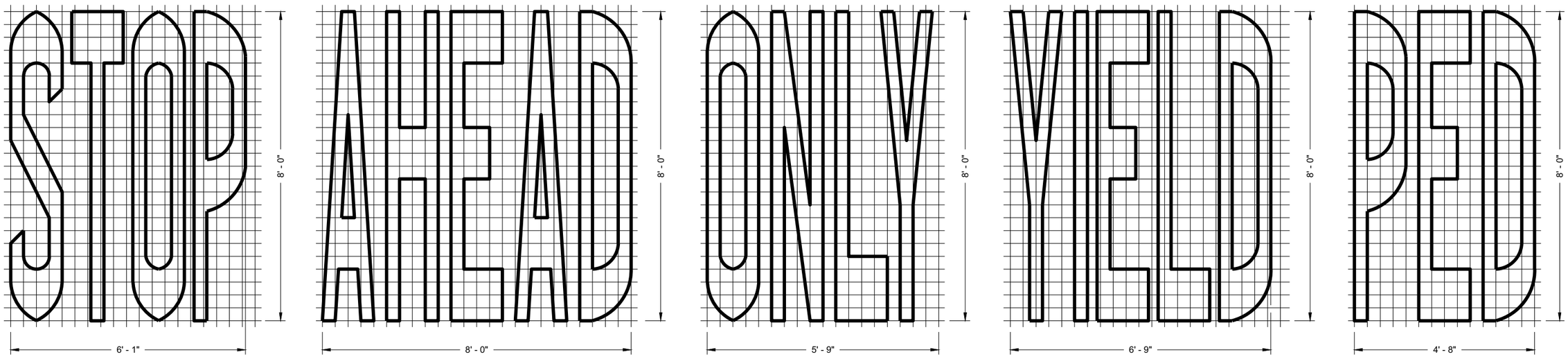
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

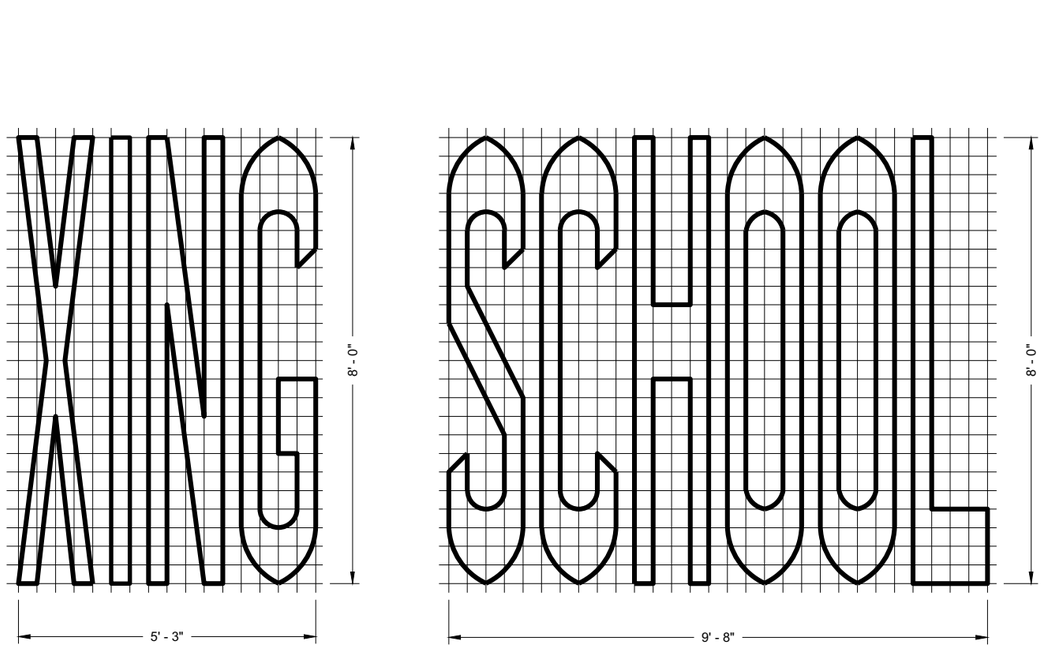
APPROVED

November 2019
DATE

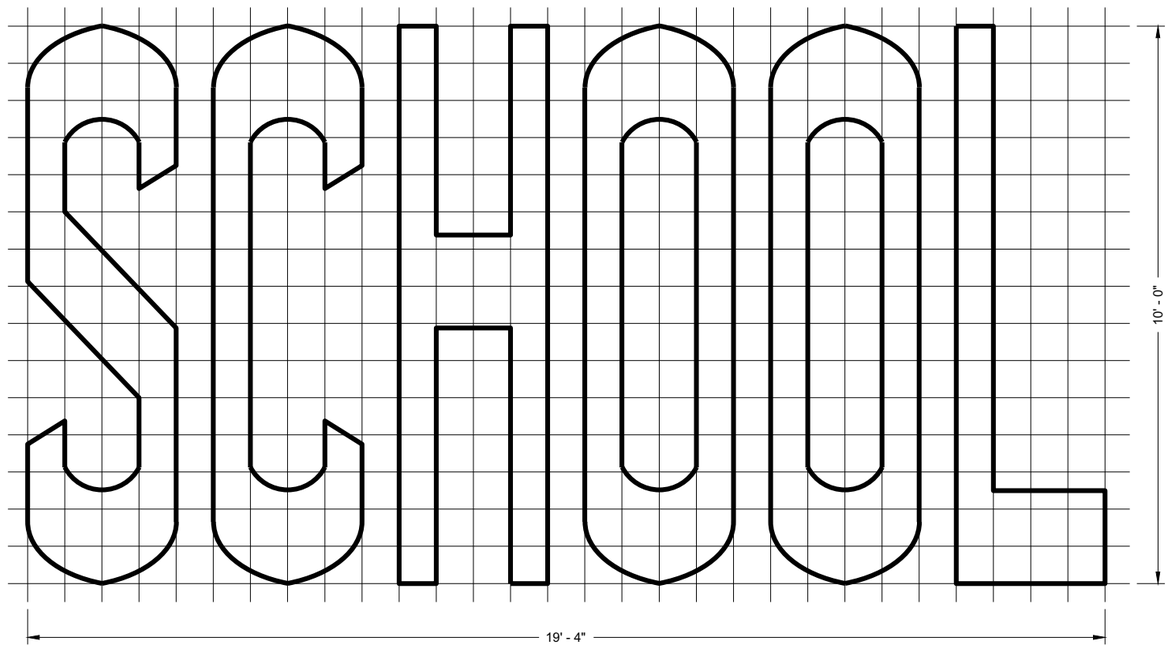
/S/ Matthew Rauch
STATE SIGNING AND MAR ENGINEER

FHWA





SINGLE LANE



TWO - LANE

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.

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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November 2019
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/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

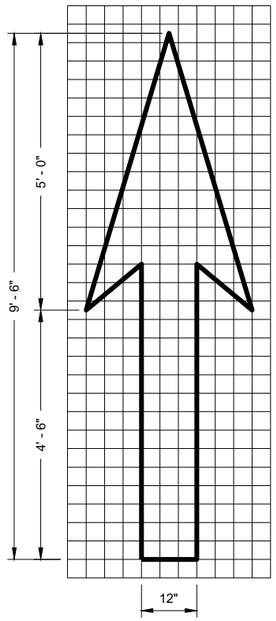
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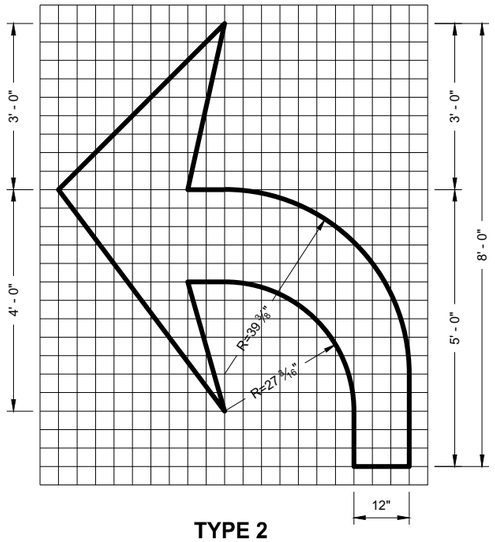
SDD 15C07 - 15b

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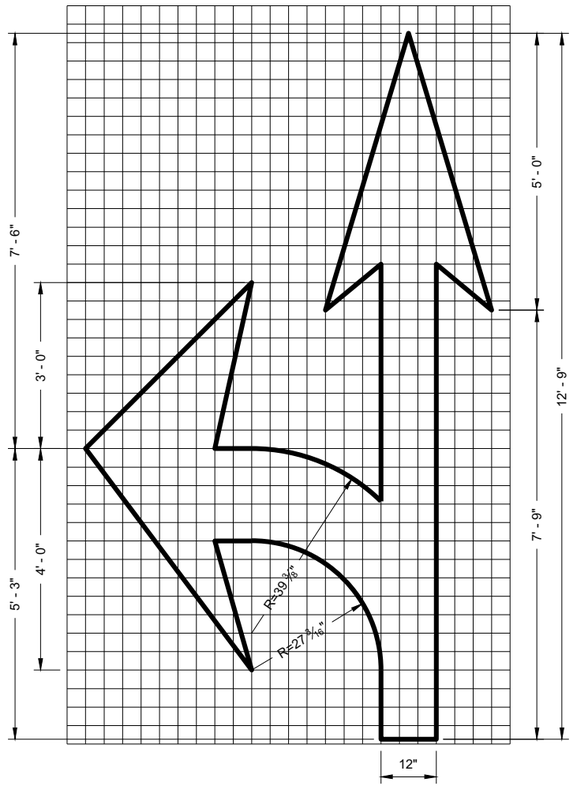
SDD 15C07 - 15b



TYPE 1



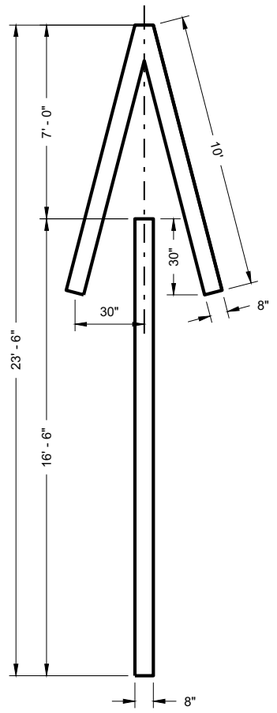
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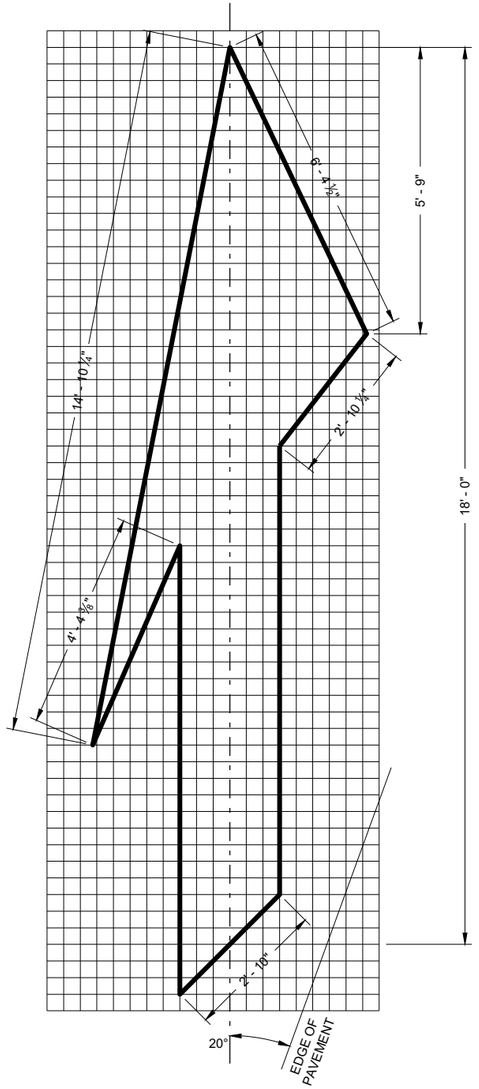
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GENERAL NOTES

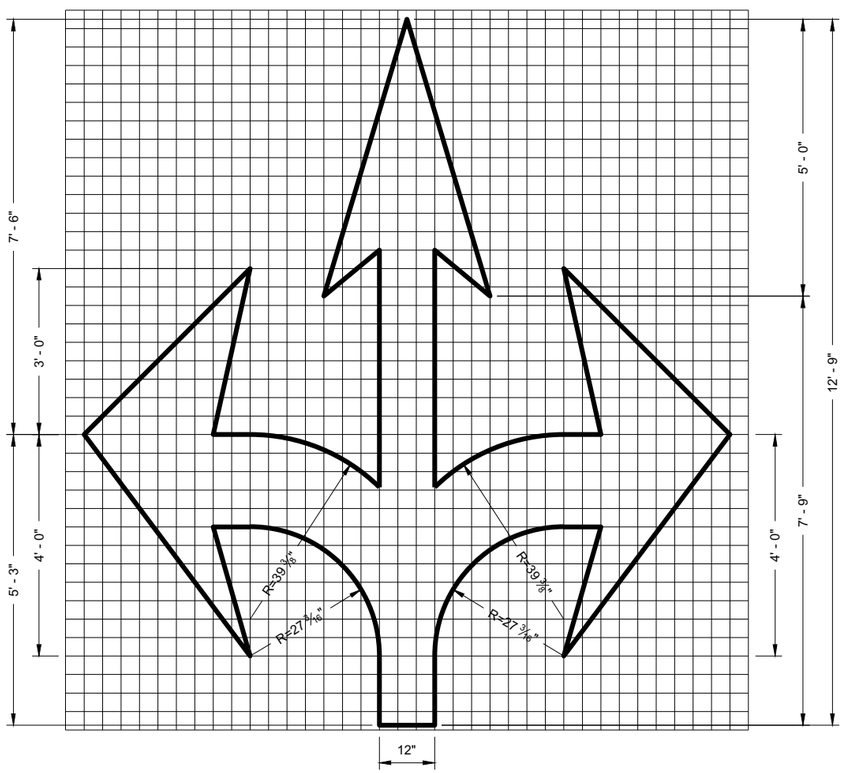
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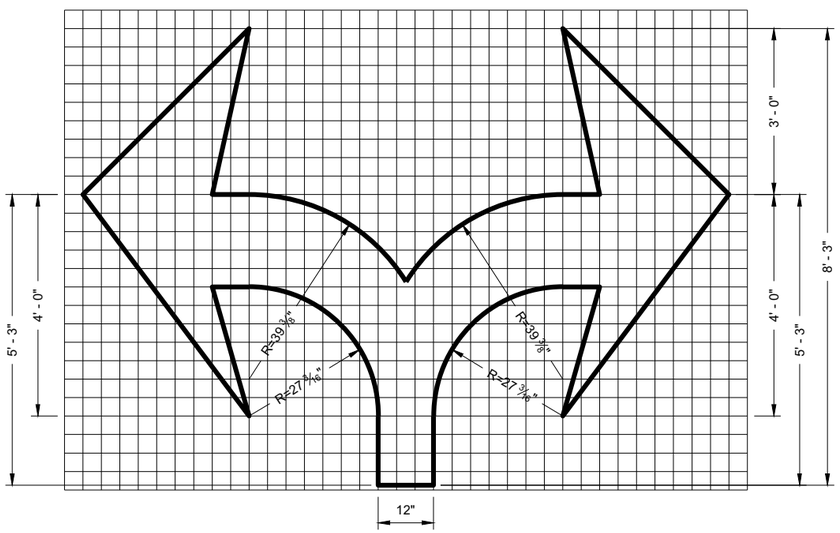
TYPE 4



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

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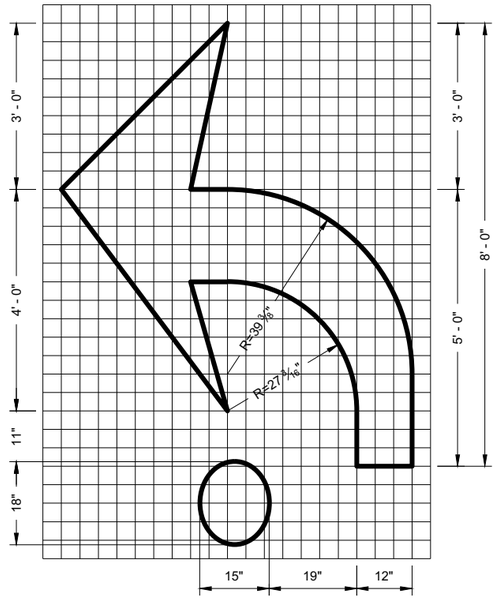
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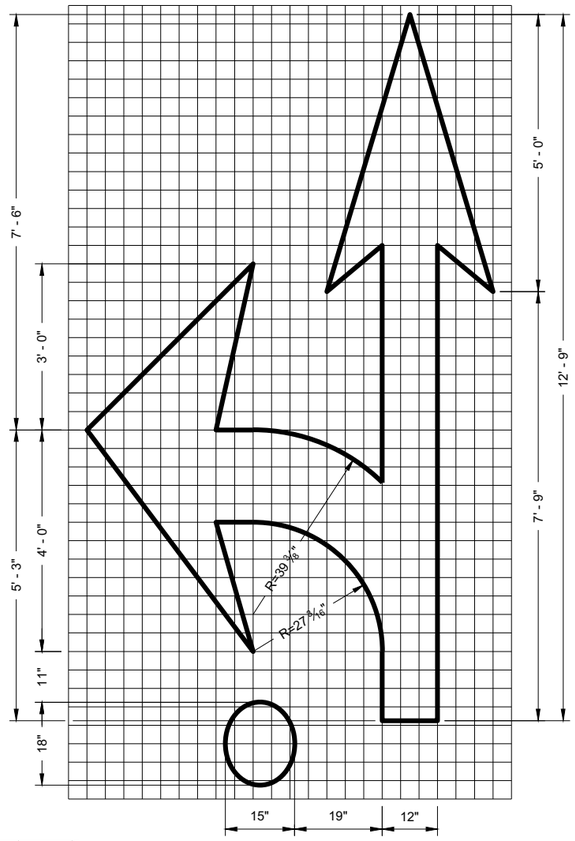
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GENERAL NOTES

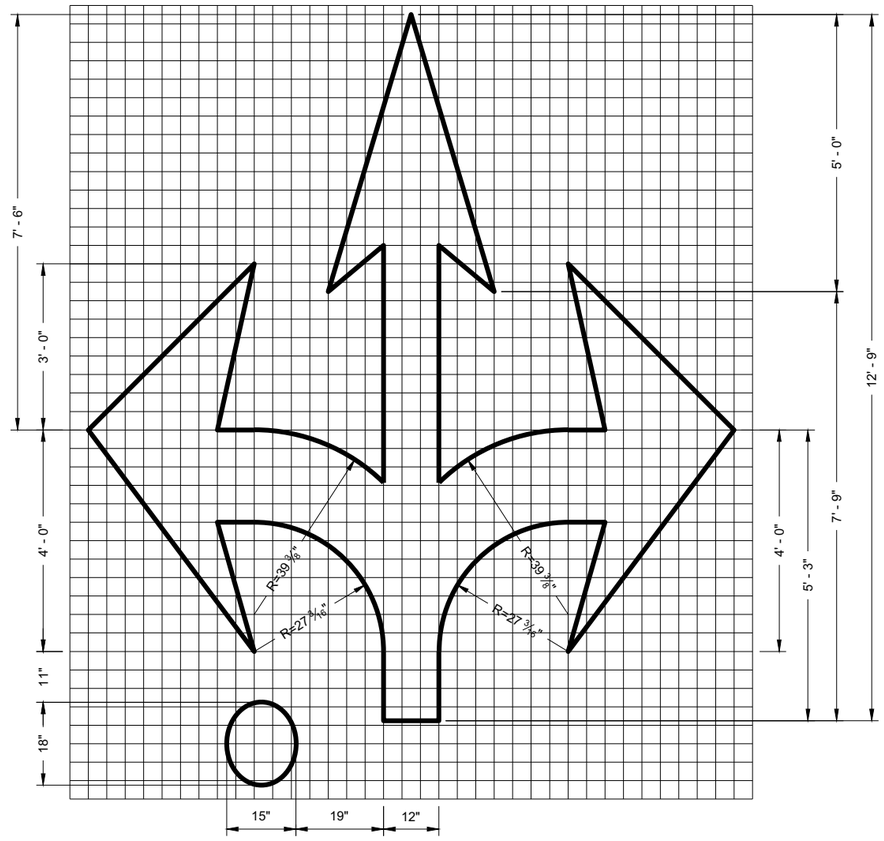
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



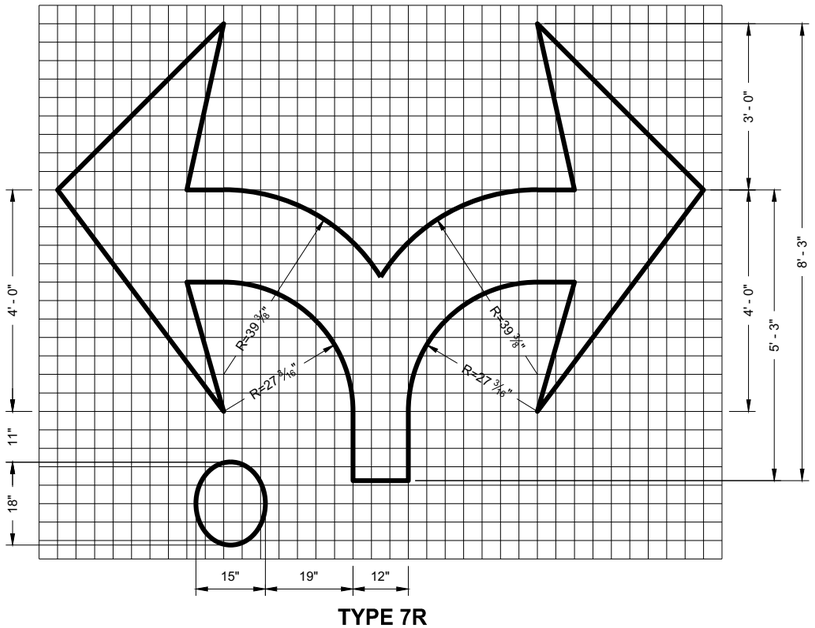
TYPE 2R



TYPE 3R



TYPE 6R



TYPE 7R

ROUNDABOUT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

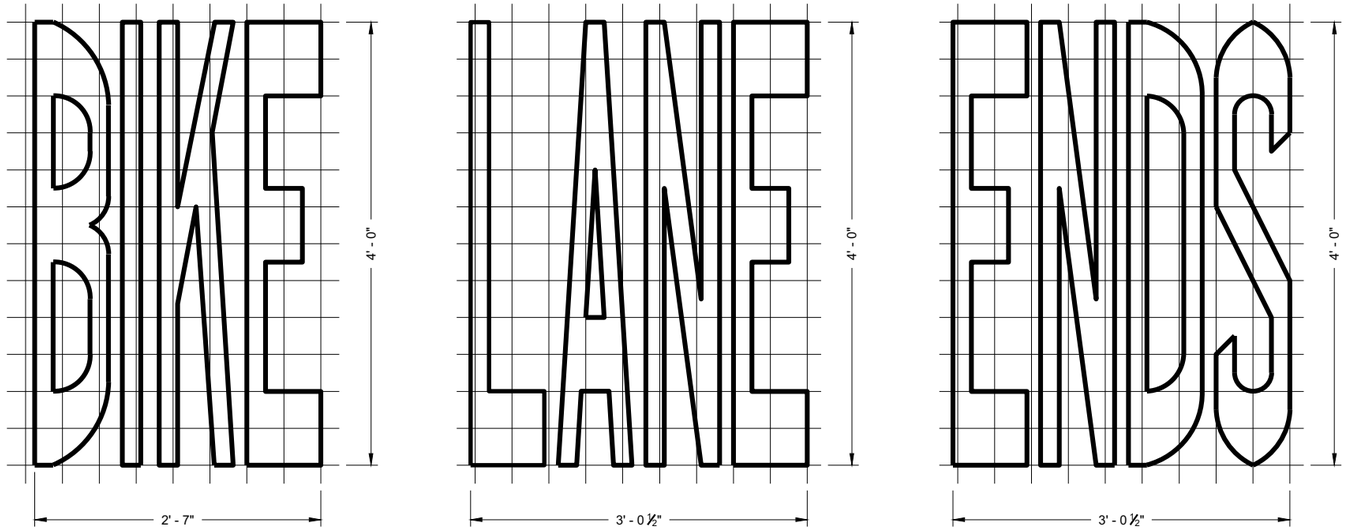
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SDD 15C07 - 15d

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SDD15C07 - 15d

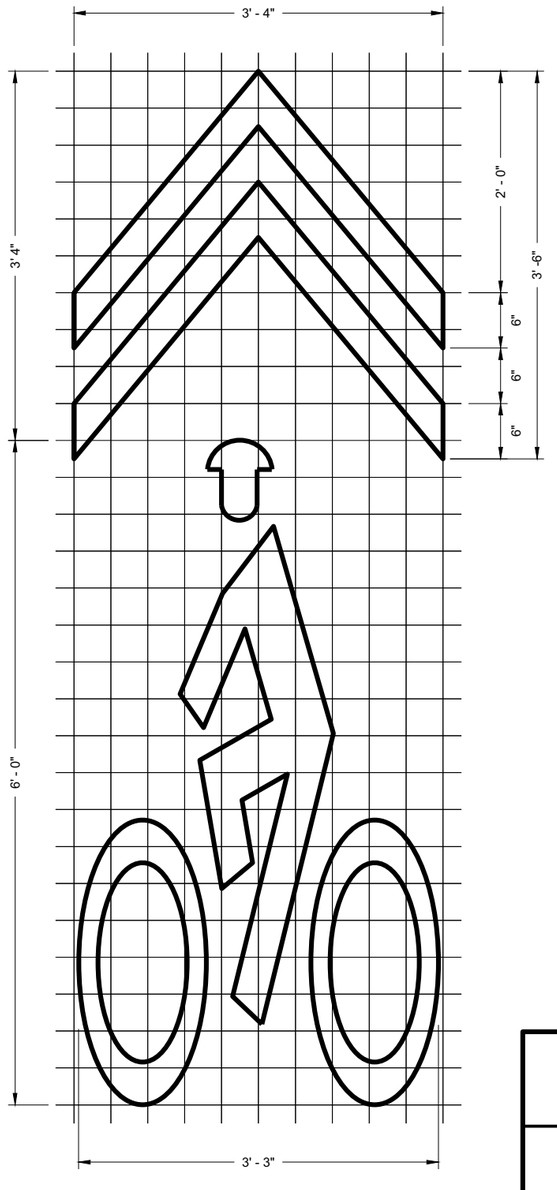
SDD 15C7-e Pavement Marking For Bike Lanes

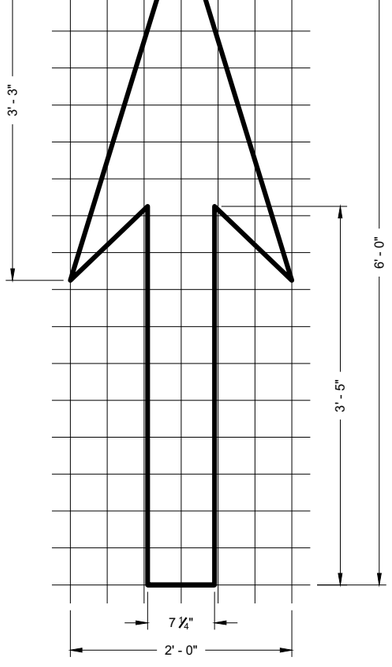


BIKE LANE WORDS

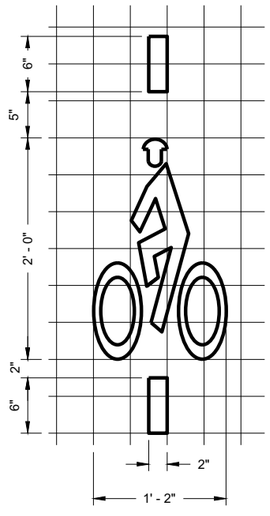
GENERAL NOTES

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.

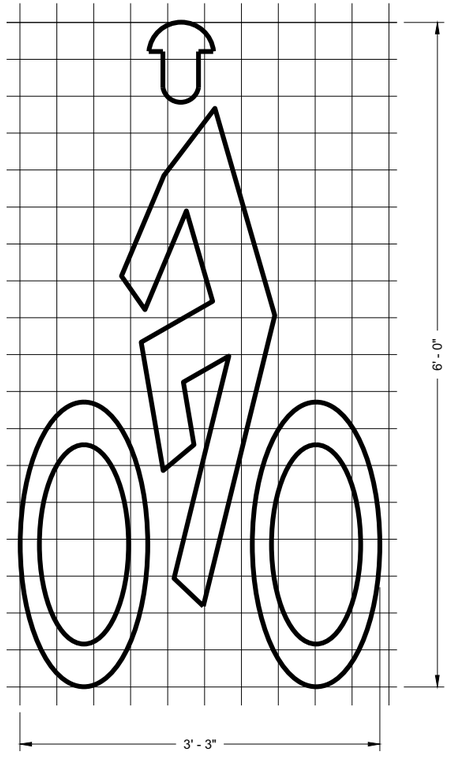




BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING



BIKE LANE SYMBOL

BIKE LANE SYMBOL FOR SHARED LANE

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

6

SDD 15C07 - 15e

6

SDD15C07 - 15e

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

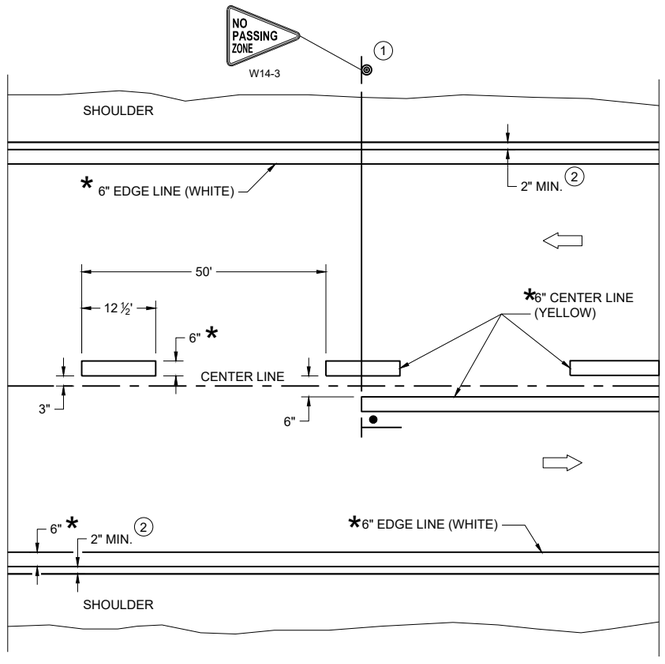
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

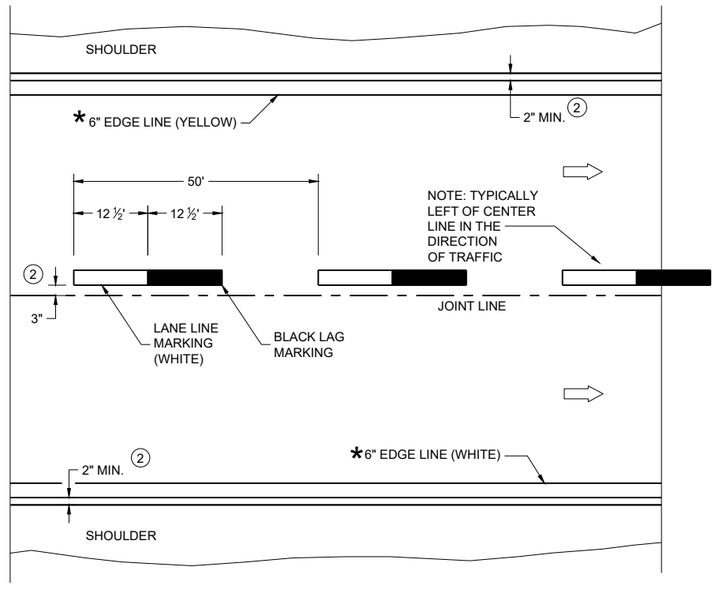
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

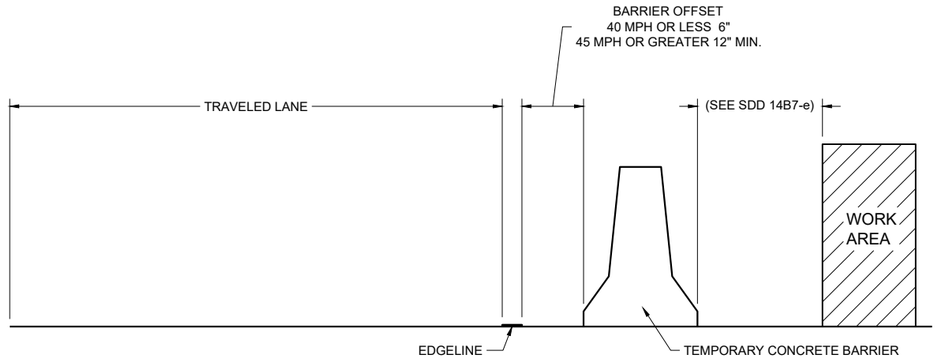
APPROVED
May 2023 — DATE
/S/ Jeannie Silver — Statewide Pavement Marking Engineer
FHWA

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SDD 15C08-23a

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SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

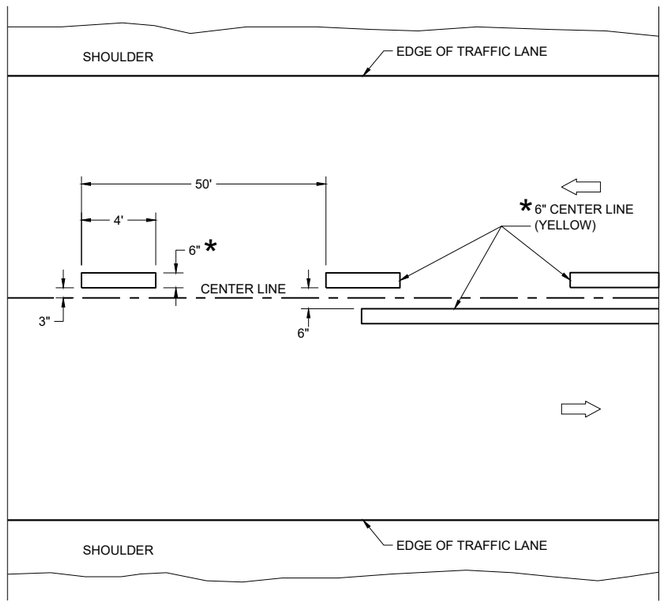
GENERAL NOTES

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

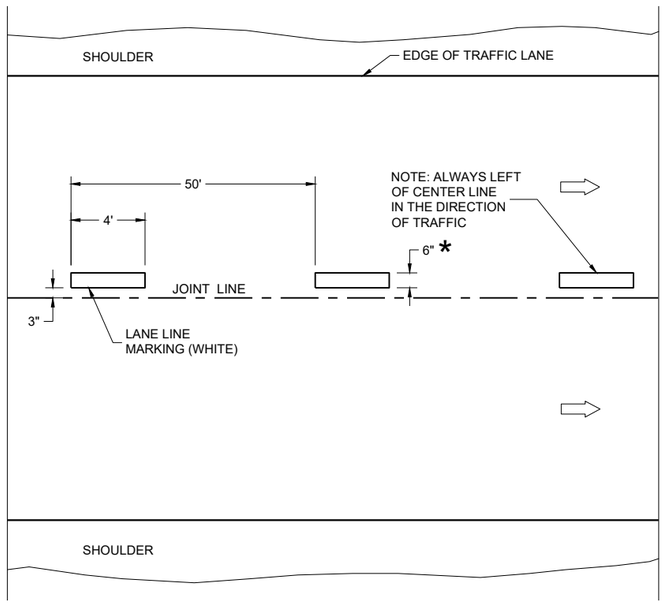
LEGEND

DIRECTION OF TRAFFIC

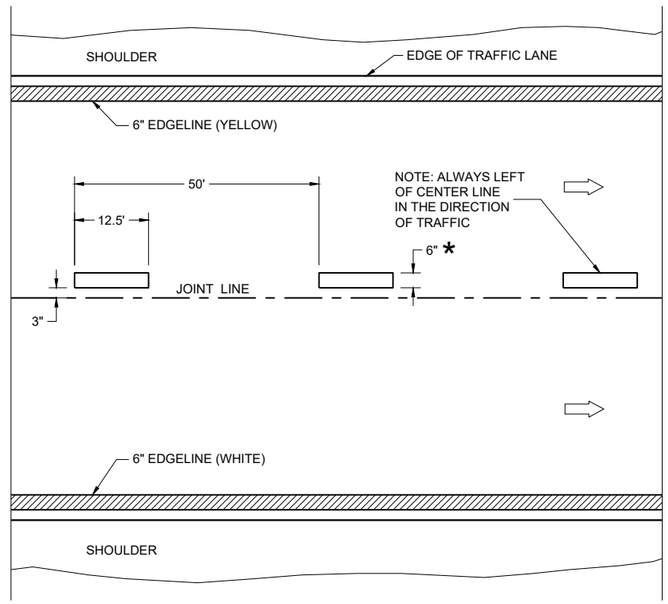
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

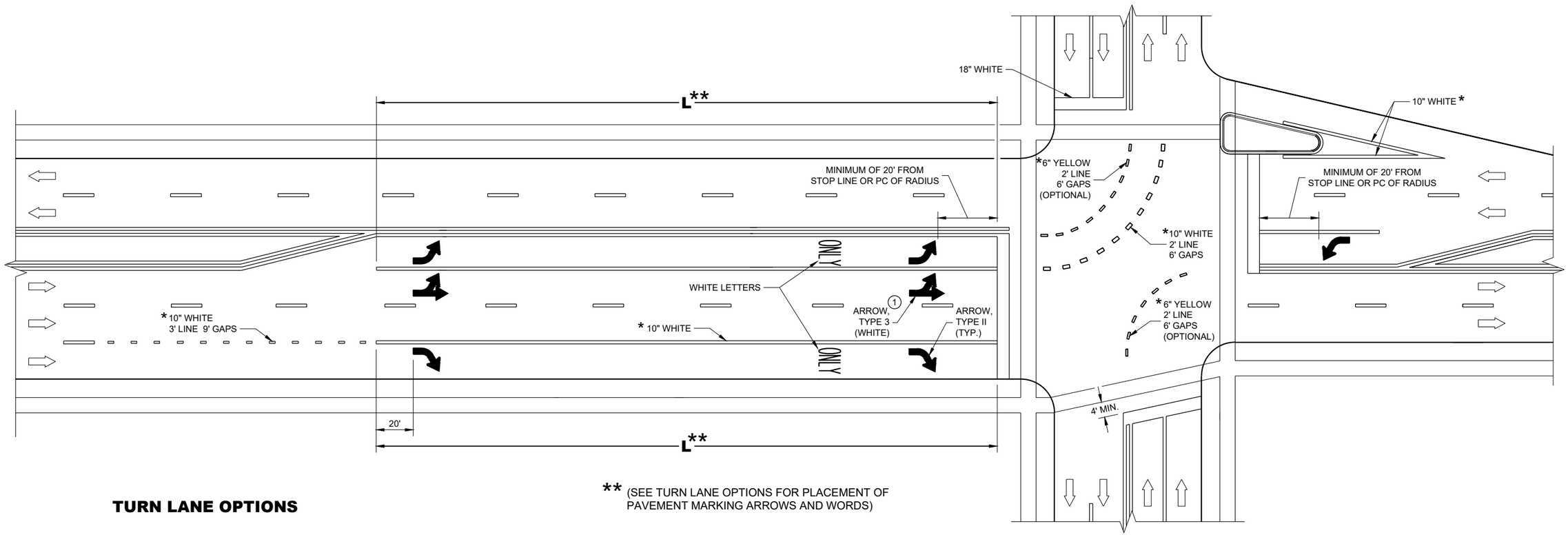
APPROVED
May 2023
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Statewide Pavement Marking Engineer
FHWA

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SDD 15C08-23b

6

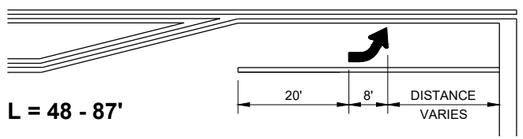
SDD 15C08-23b



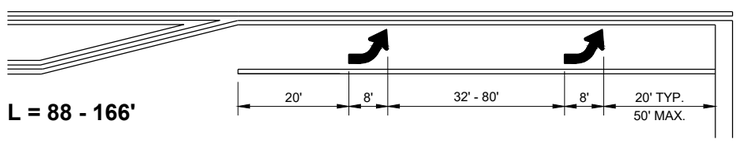
** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

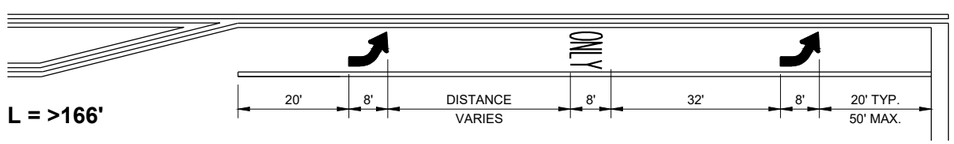
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

(1) QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

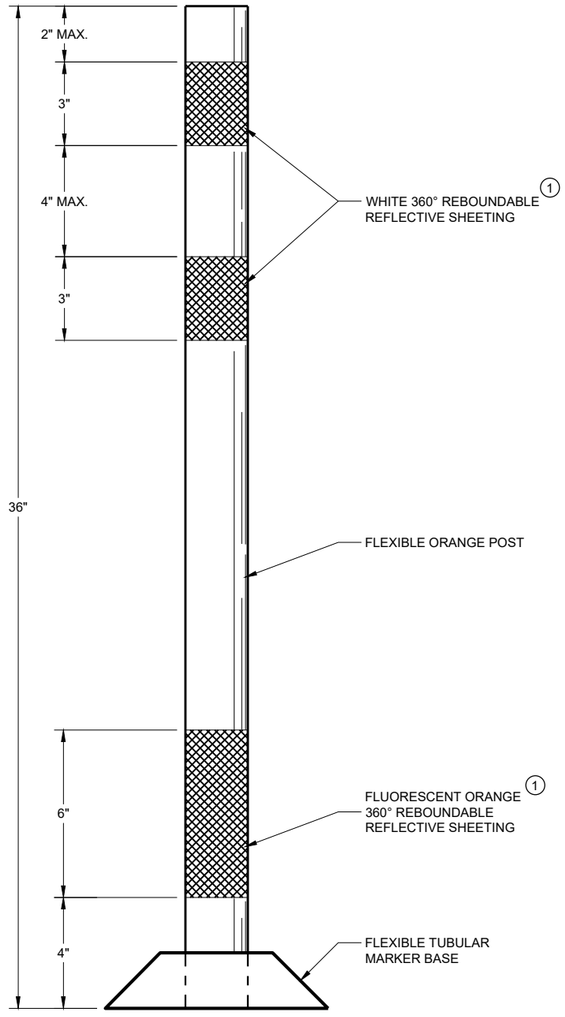
PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 15C08-23d

SDD 15C08-23d



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

6

SDD 15C11 - 10a

CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

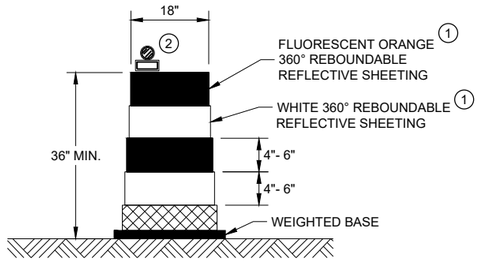
APPROVED
November 2022
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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SDD 15C11 - 10a

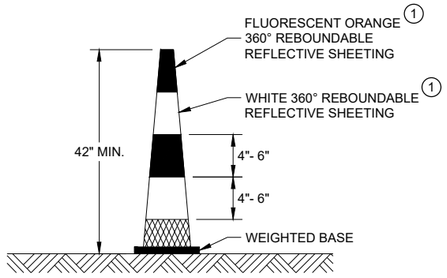
GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



DRUM

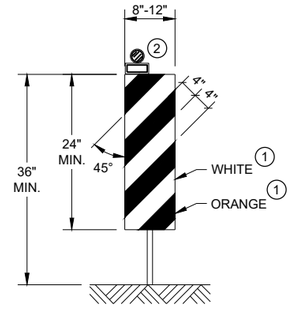
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

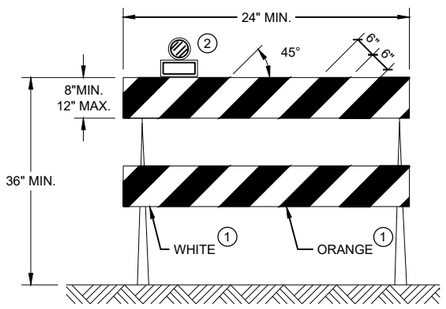
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



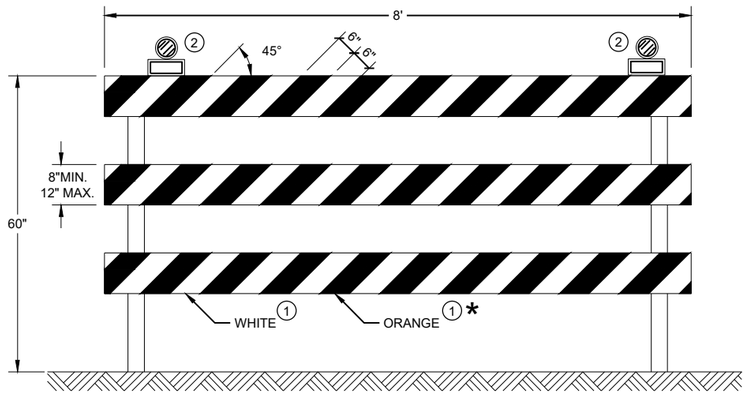
VERTICAL PANEL

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



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

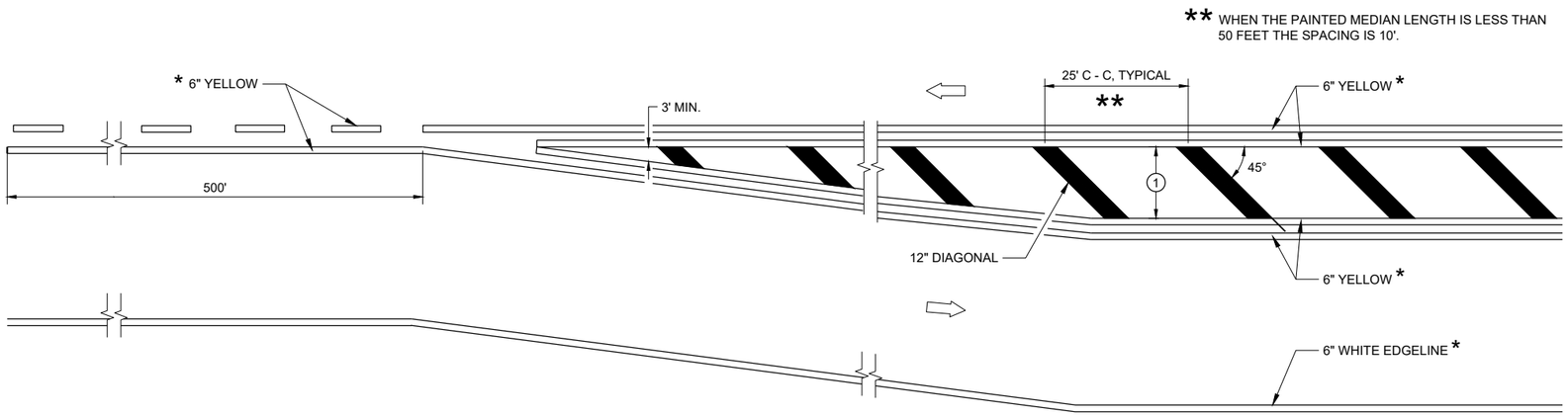
APPROVED
November 2022
DATE

/S/ Andrew Heidtke
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SDD 15C11 - 10b
SDD 15C11 - 10b



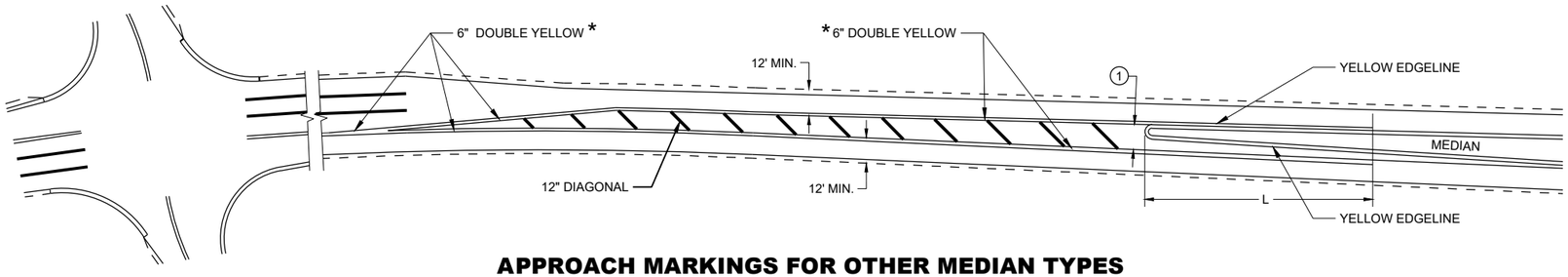
MEDIAN ISLAND DETAIL

GENERAL NOTES

1. DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

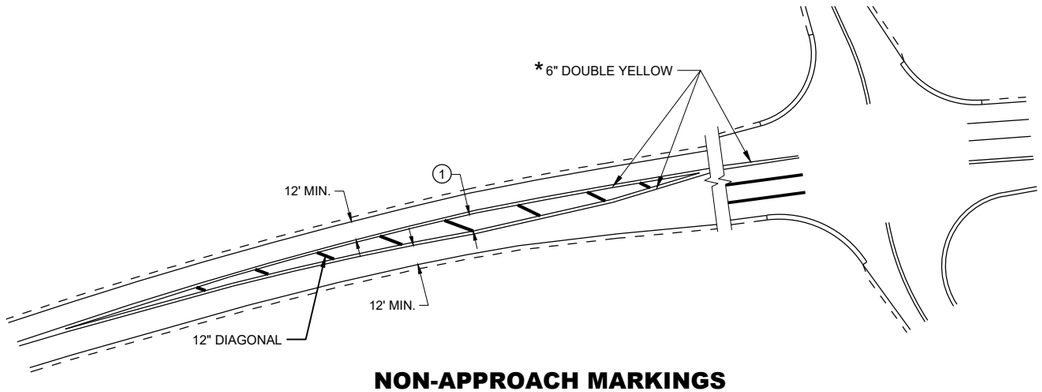
DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'



NON-APPROACH MARKINGS

MEDIAN ISLAND PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

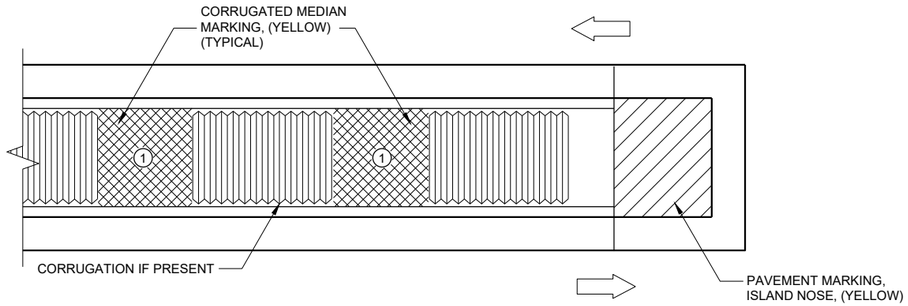
APPROVED
May 2023 — DATE
/S/ Jeannie Silver — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

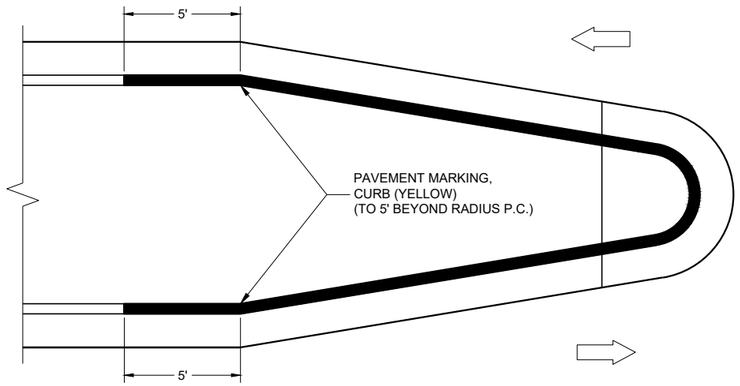
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SDD 15C18-08a

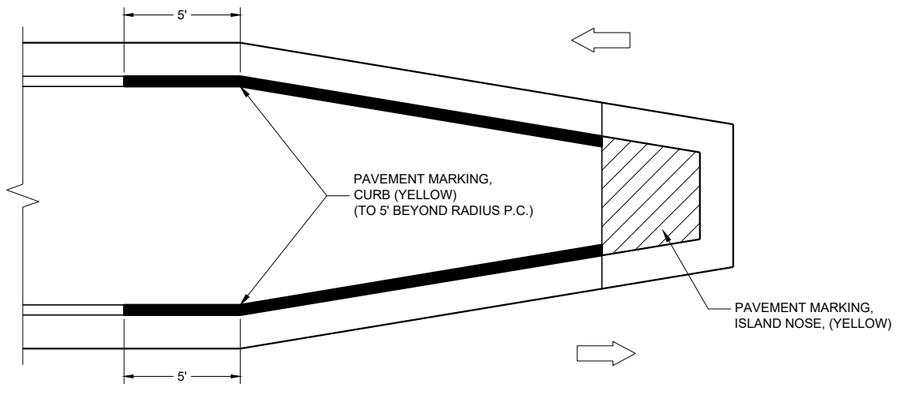
SDD 15C18-08a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

(1) APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

PAVEMENT MARKINGS, MEDIAN ISLAND NOSE

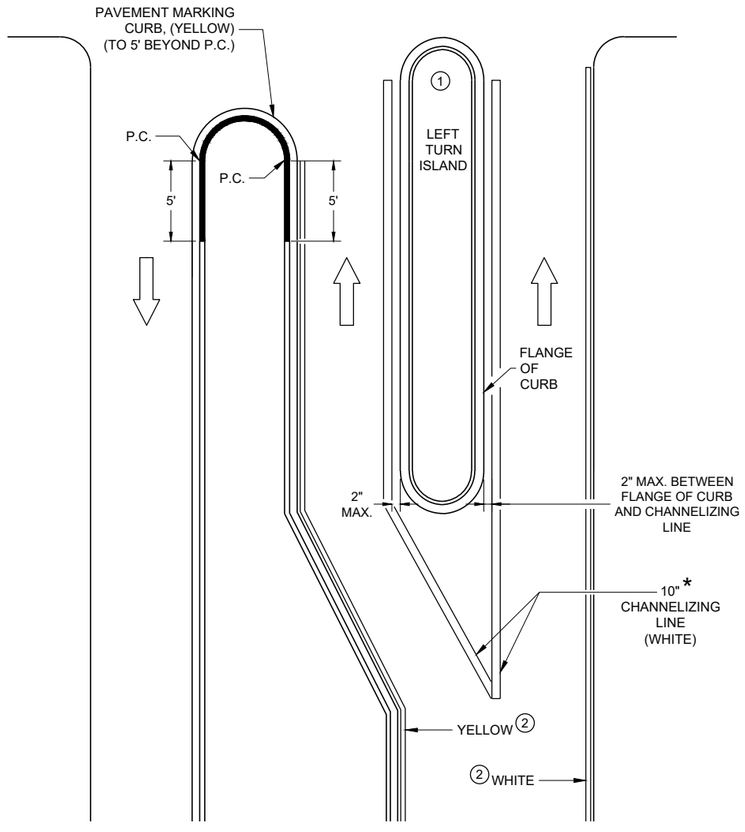
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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May 2023 — DATE
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SDD 15C18-08b

REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED



LEFT TURN & MEDIAN ISLAND

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

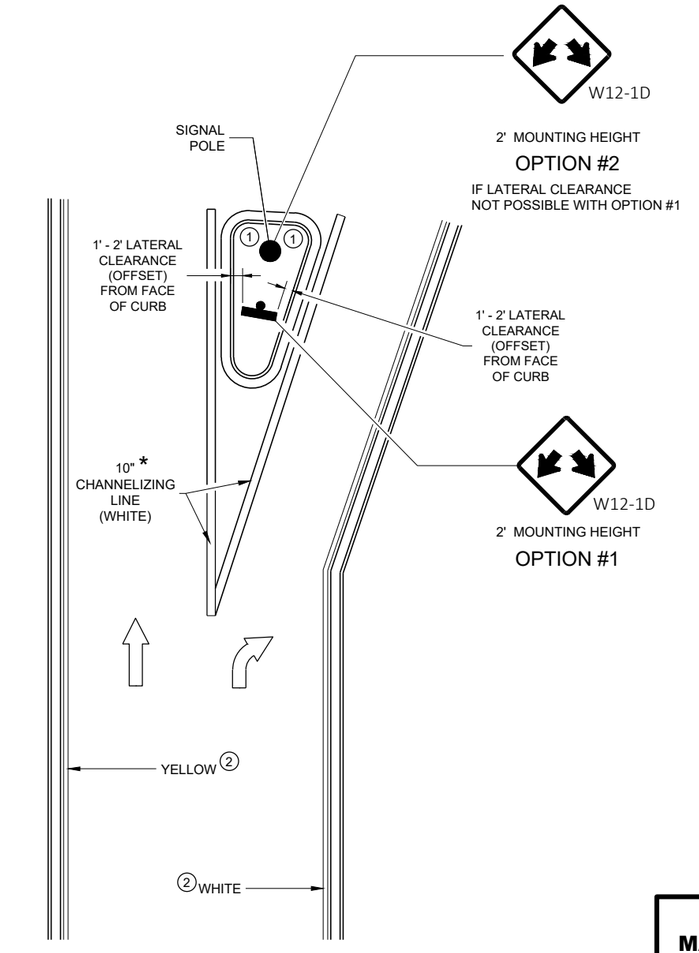
GENERAL NOTES

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

1. MARK CURB NOSES YELLOW.
2. MARK ACCORDING TO TABLE.

DIRECTION OF TRAVEL



RIGHT TURN ISLAND

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

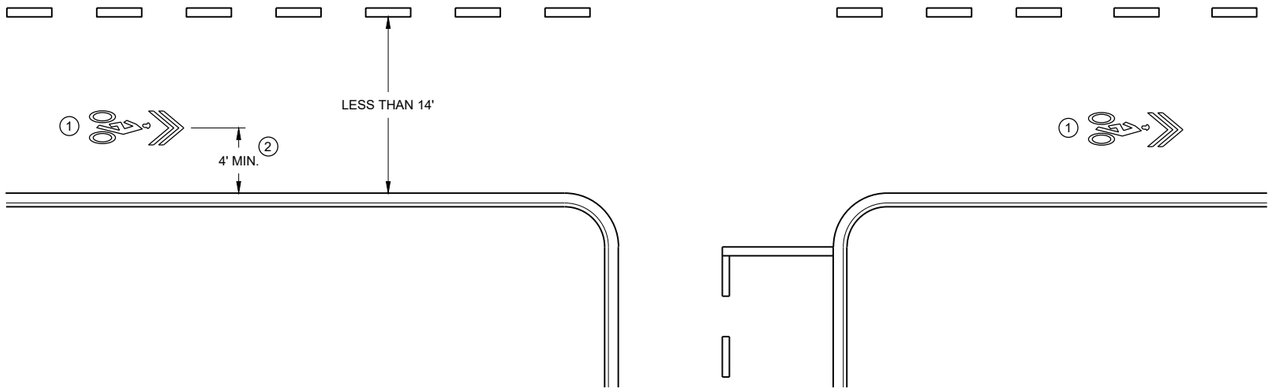
FHWA

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SDD 15C18-08c

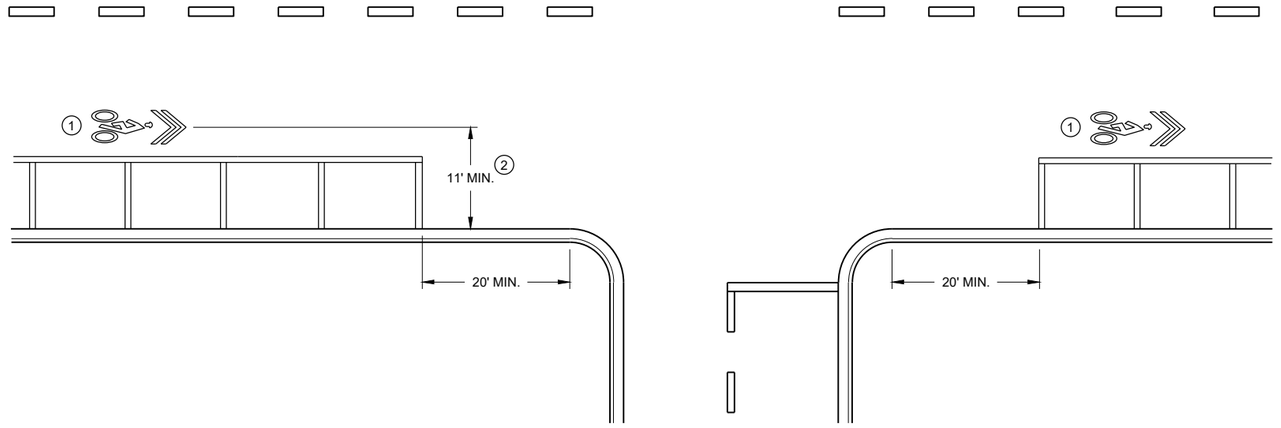
GENERAL NOTES

(1) MINIMUM OF ONE PER BLOCK, MAXIMUM OF 250 FEET.

(2) OR TO EDGE OF PAVEMENT WITHOUT CURB.



WITHOUT PARKING



WITH PARKING

6

6

SDD 15C29-08b

SDD 15C29-08b

PAVEMENT MARKING FOR SHARED LANE 35 MPH OR LESS

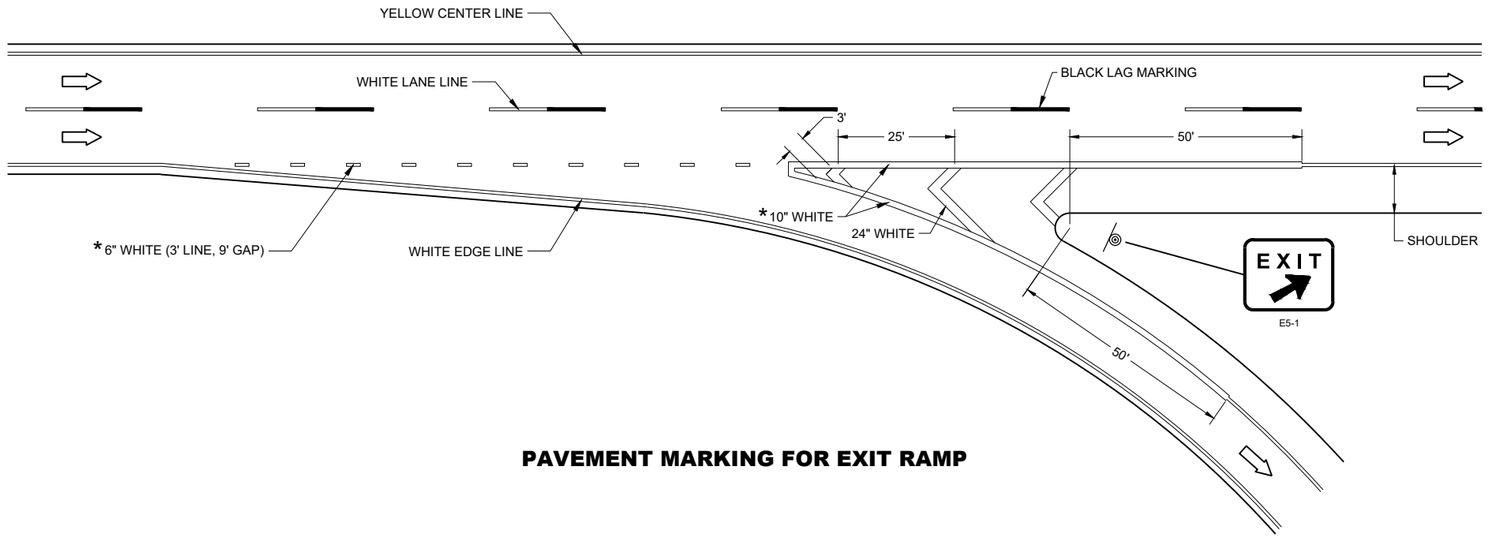
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

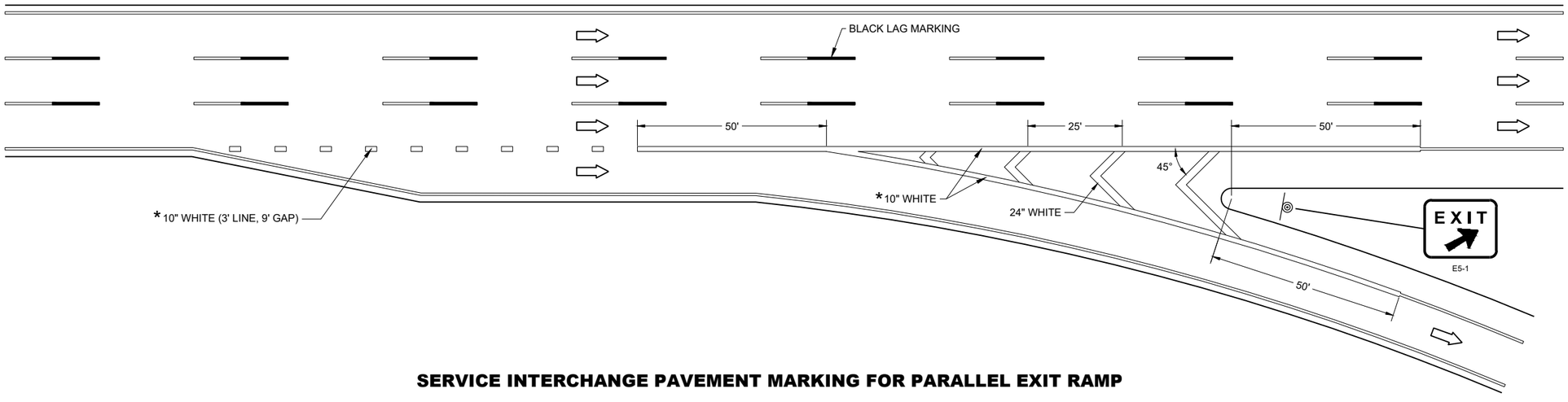
May 2023
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

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PAVEMENT MARKING FOR EXIT RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT RAMP

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

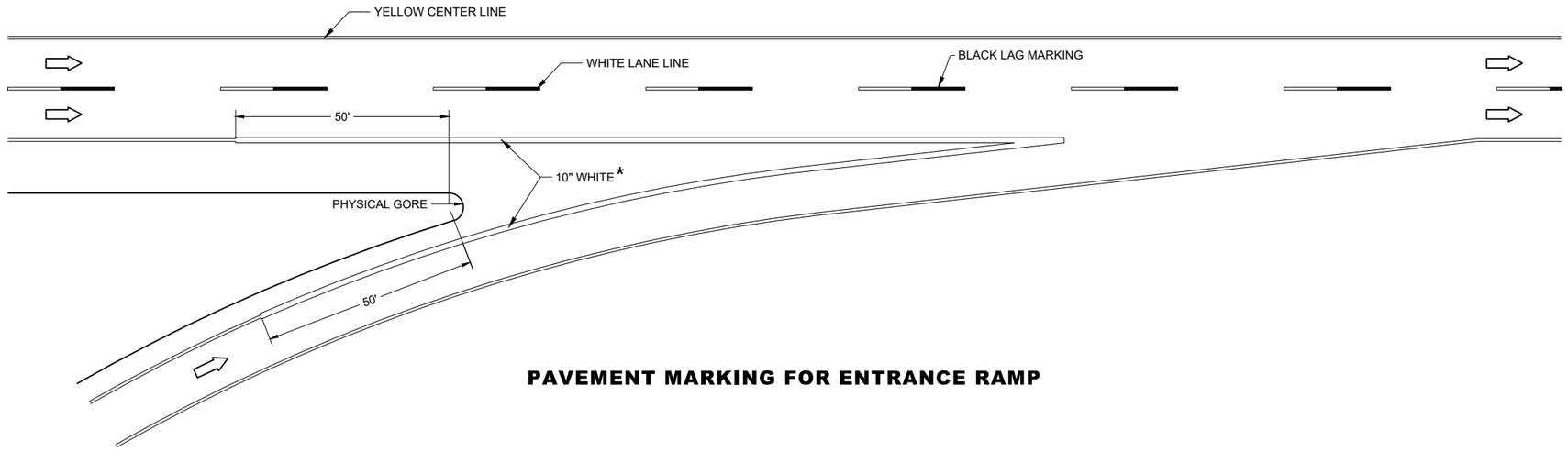
SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAVEL

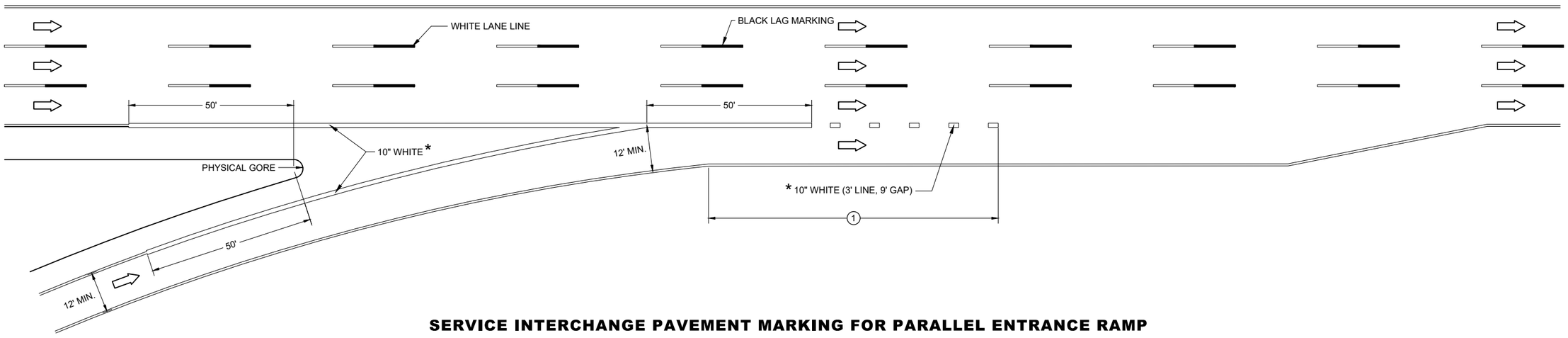
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING, EXIT RAMP AND PARALLEL EXIT RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PAVEMENT MARKING FOR ENTRANCE RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

(1) ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

LEGEND

DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

6

SDD 15C31-06c

PAVEMENT MARKING, ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

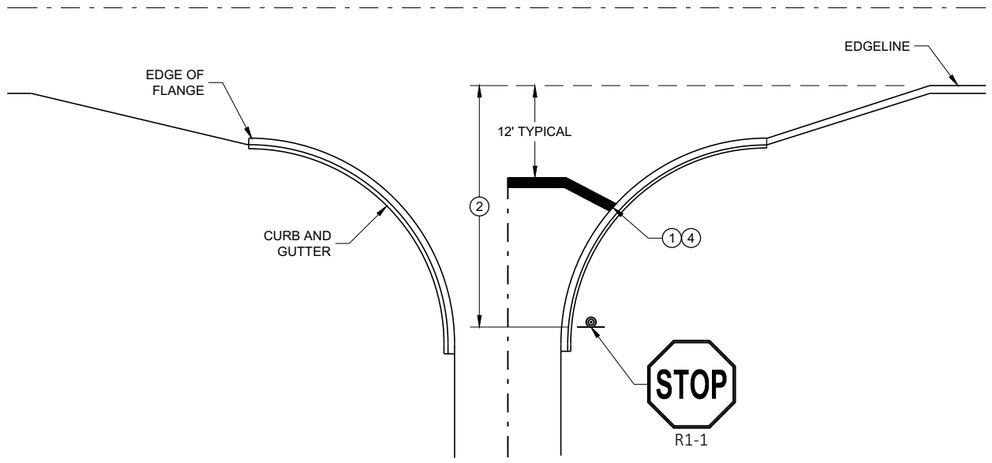
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SDD 15C31-06c

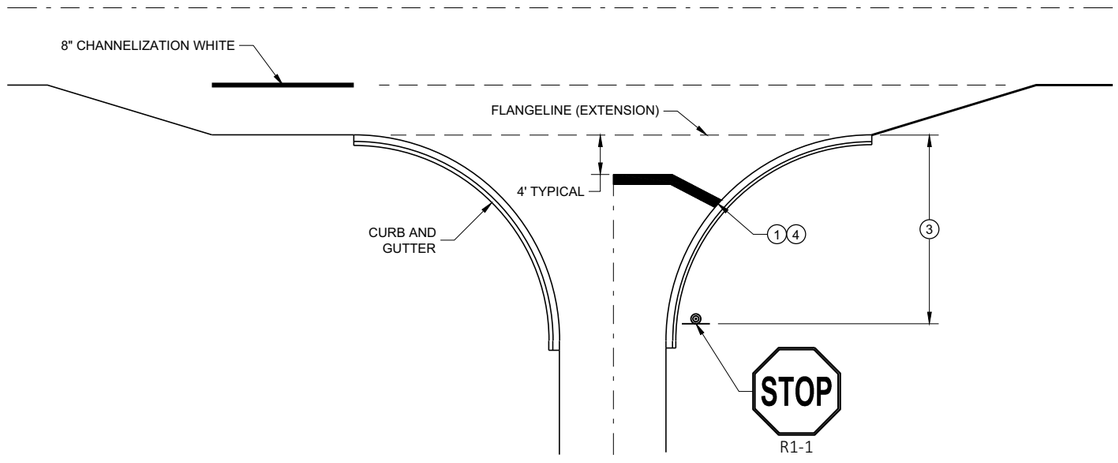
GENERAL NOTES

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

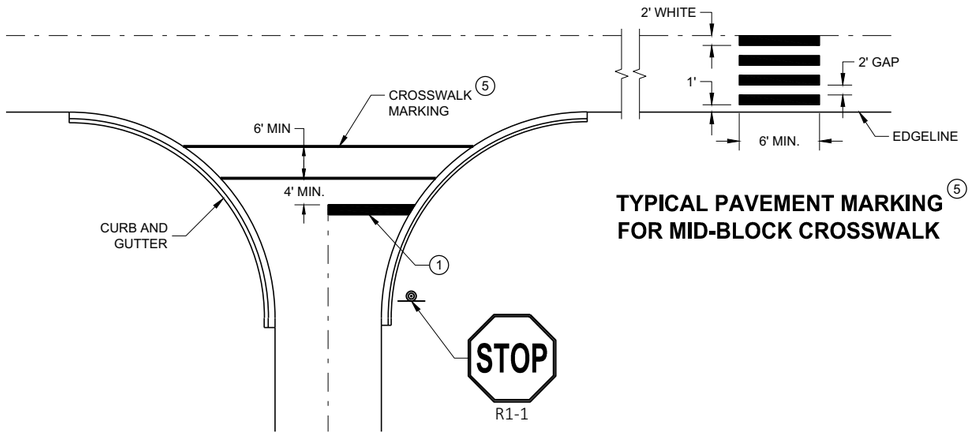
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE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



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

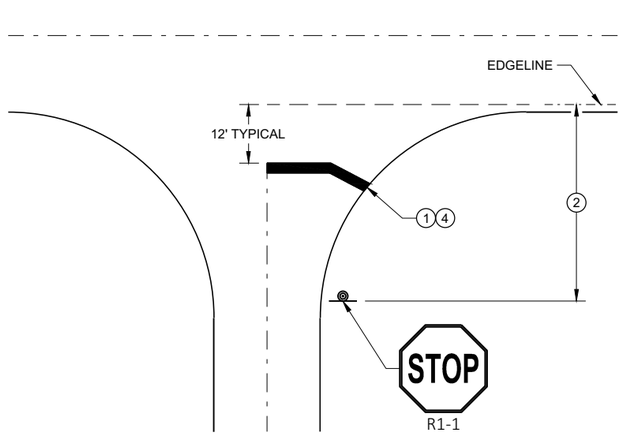


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING 5 FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

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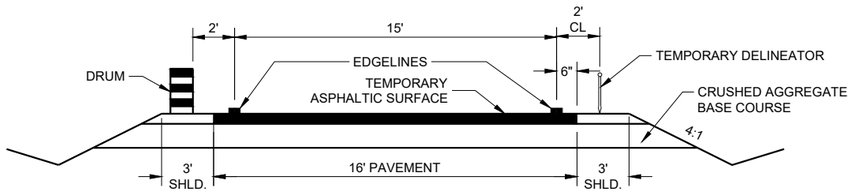
SDD 15C33 - 04

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SDD 15C33 - 04

LEGEND

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



TYPICAL RAMP CROSSOVER ROADWAY DIMENSIONS

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

** TABLE FOR ADVANCE WARNING SIGN DISTANCE (FT)

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

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

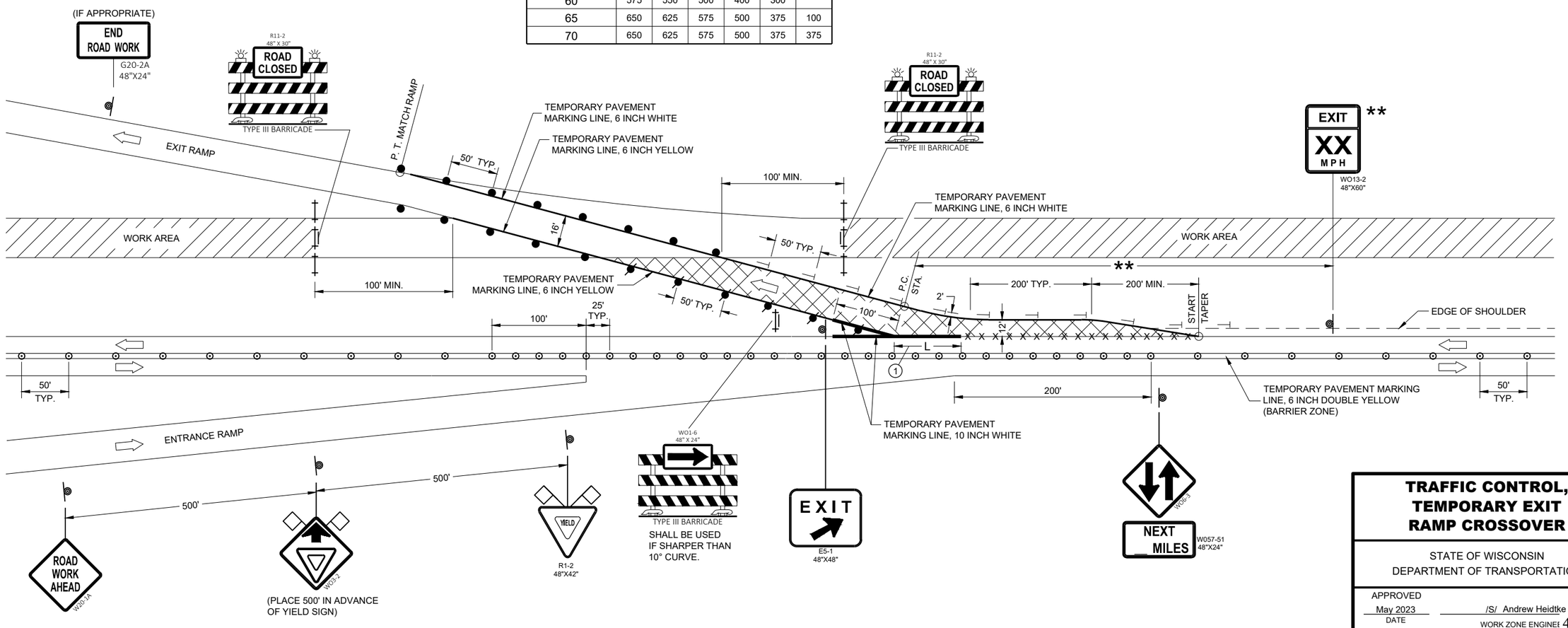
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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

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

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

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



TRAFFIC CONTROL, TEMPORARY EXIT RAMP CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

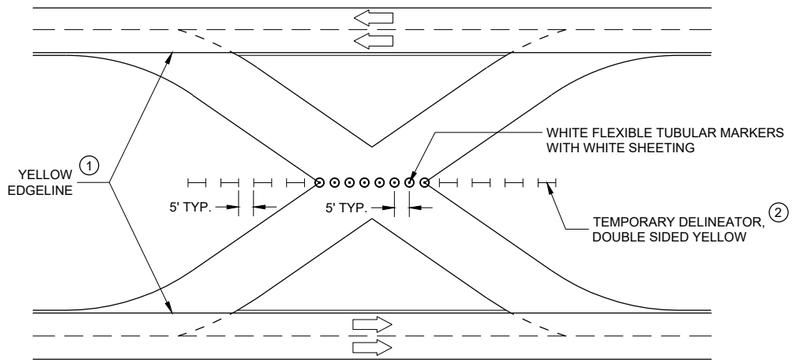
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6 SDD 15D07-06

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- DELINEATOR FLEXIBLE / TUBULAR MARKER
- TEMPORARY DELINEATOR (STEEL POST WITH SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- TEMPORARY DELINEATOR (DOUBLE SIDED)
- TYPE "A" WARNING LIGHT (FLASHING)
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKINGS
- WORK AREA



TRAFFIC CONTROL FOR CROSSOVER THAT IS NOT IN USE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

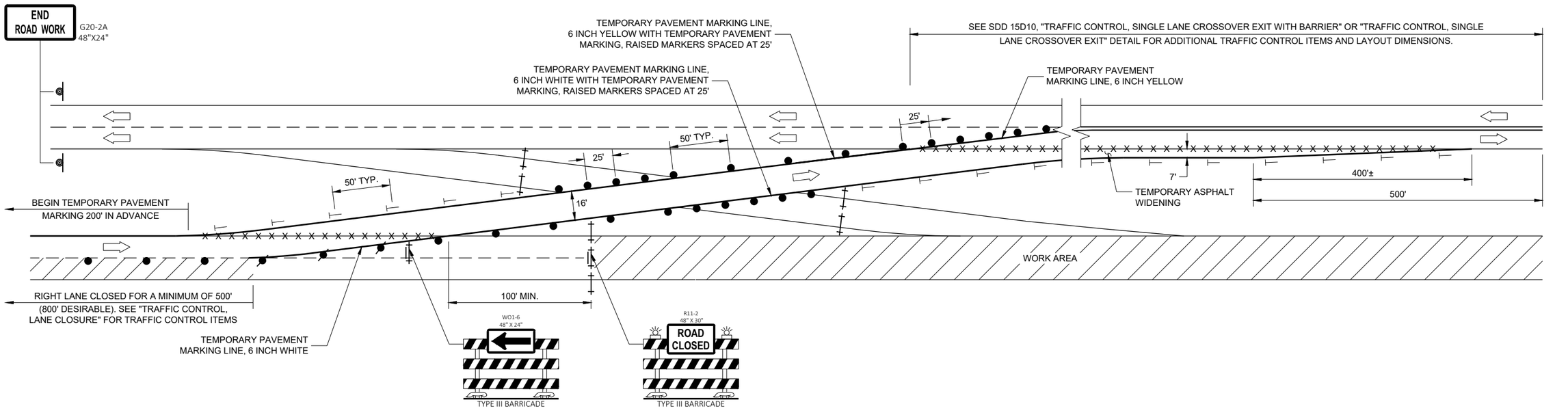
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

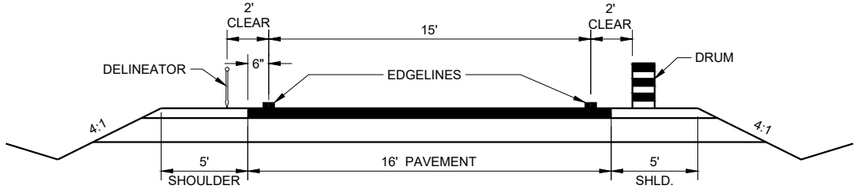
THE SPACING BETWEEN PROPOSED SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS.

REVERSE DEVICES WHEN OTHER LEG OF CROSSOVER IS IN USE.

(1) FOR PERMANENT CROSSOVER, PAVEMENT MARKING SHOULD CONFORM TO SECTION 646 OF THE STANDARD SPECIFICATIONS.

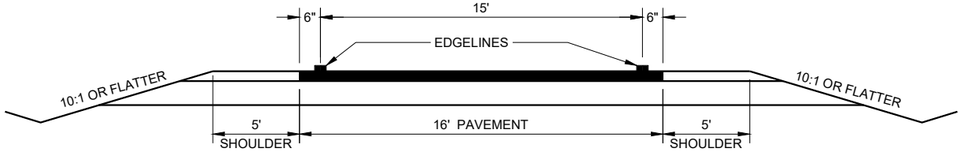
(2) FOR PERMANENT CROSSOVER, INSTALL PERMANENT DELINEATORS ACCORDING TO SECTION 633 OF THE STANDARD SPECIFICATIONS.





TYPICAL TEMPORARY CROSSOVER ROADWAY DIMENSIONS

(SEE PLAN FOR ROADWAY DESIGN ELEMENTS)



TYPICAL CROSSOVER TO REMAIN IN PLACE ROADWAY DIMENSIONS

(SEE PLAN FOR ROADWAY DESIGN ELEMENTS)

TRAFFIC CONTROL, SINGLE LANE CROSSOVER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6
SDD 15D11-09

GENERAL NOTES

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

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

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

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

"WO" 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.

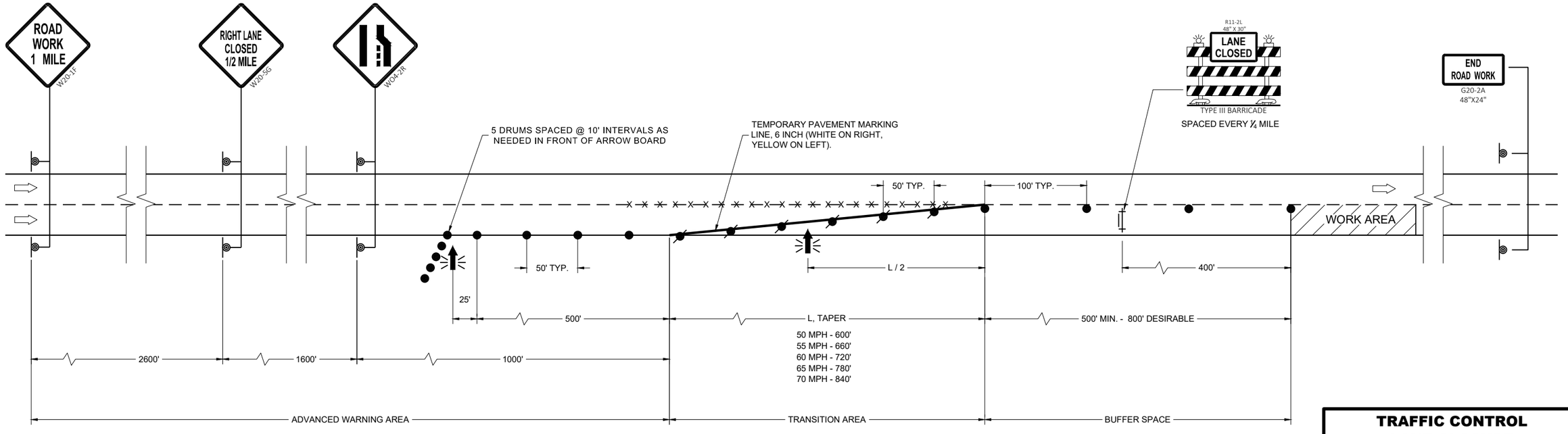
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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
September 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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SDD 15D12-12a

6

SDD 15D12-12a

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.

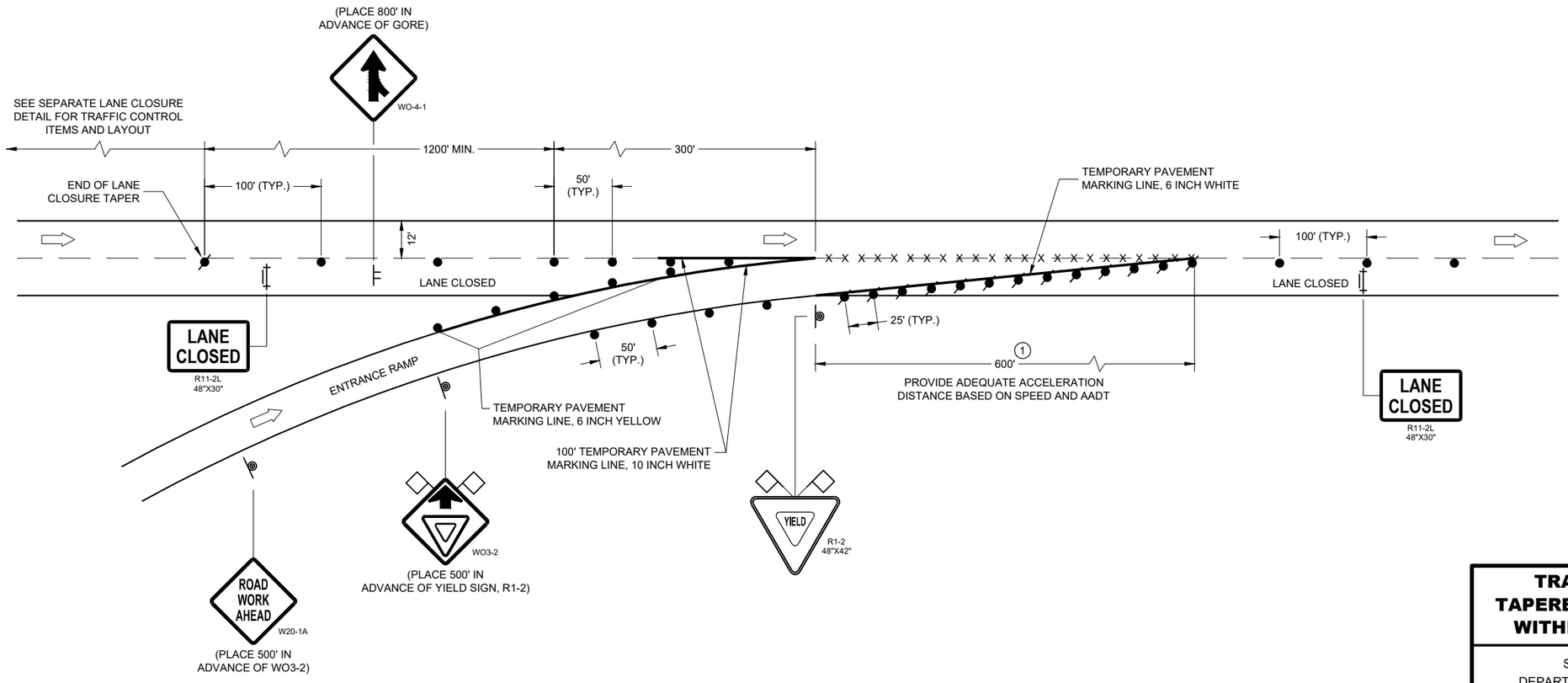
IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
SDD 15D15-07c

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.

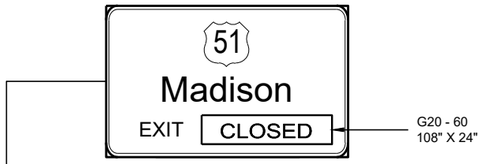
PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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.

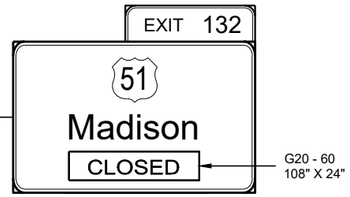
WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

(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

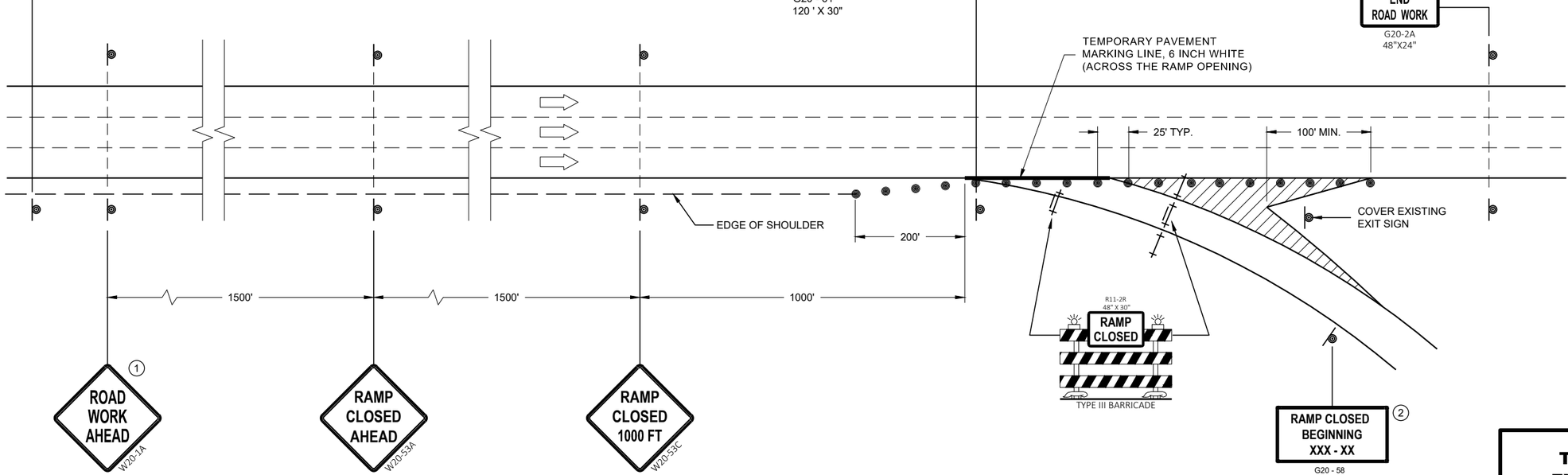


PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN



G20 - 61
120 ' X 30"

COVER ARROW ON EXISTING E4 - 1 SIGN (COVERING SIGNS TYPE I)



OR

PCMS MESSAGING

FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 15D16-06

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)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

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

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

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

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

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

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

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

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

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

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

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

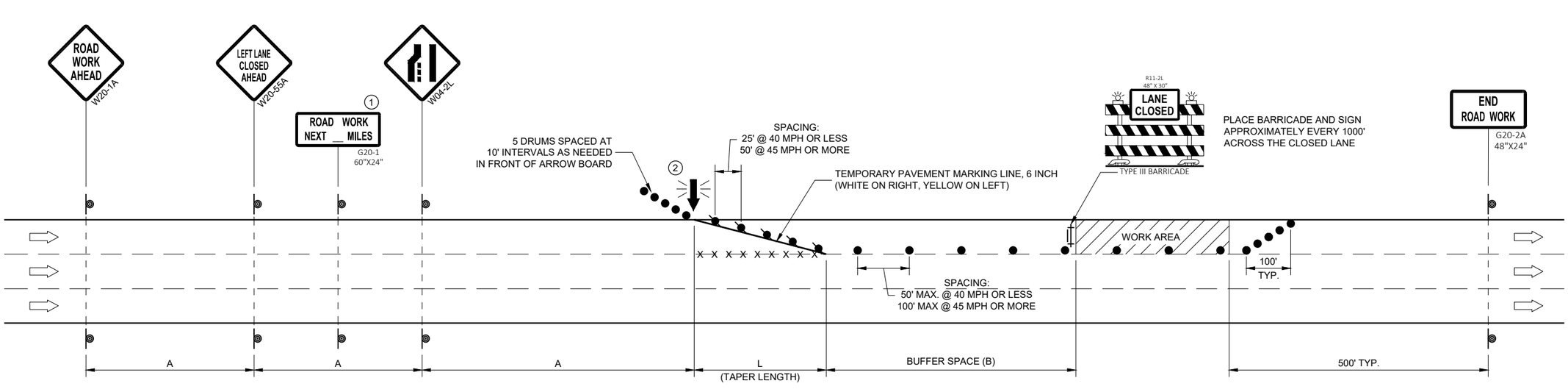
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

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

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

(2) WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

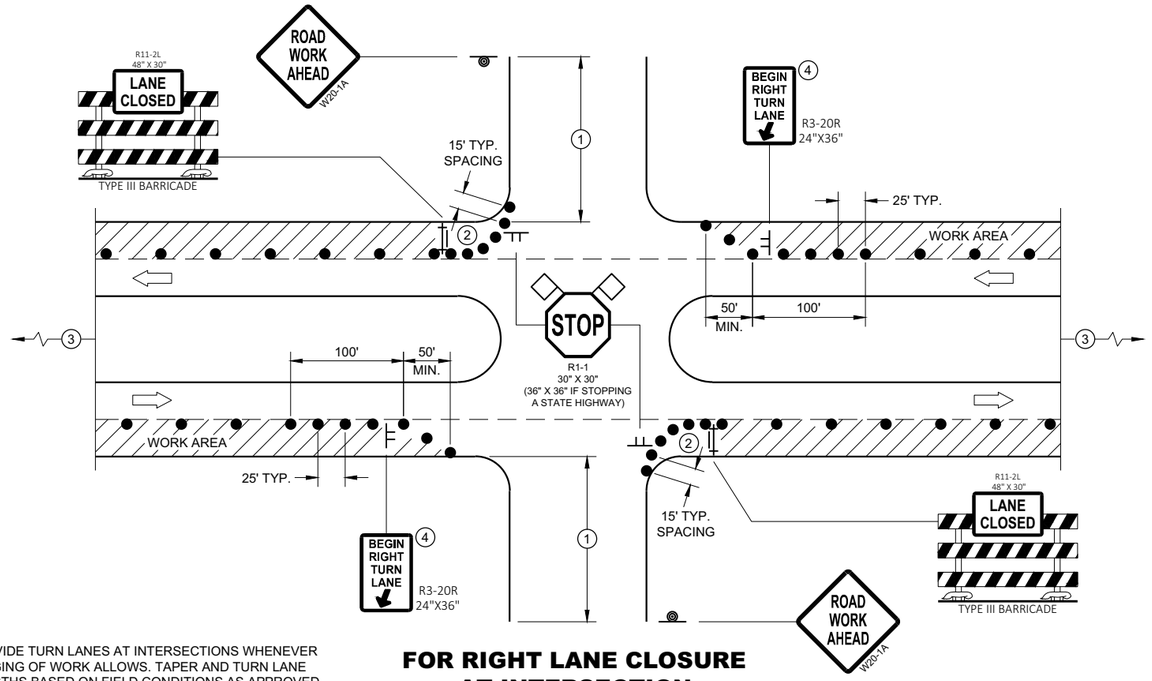
APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE 420

FHWA

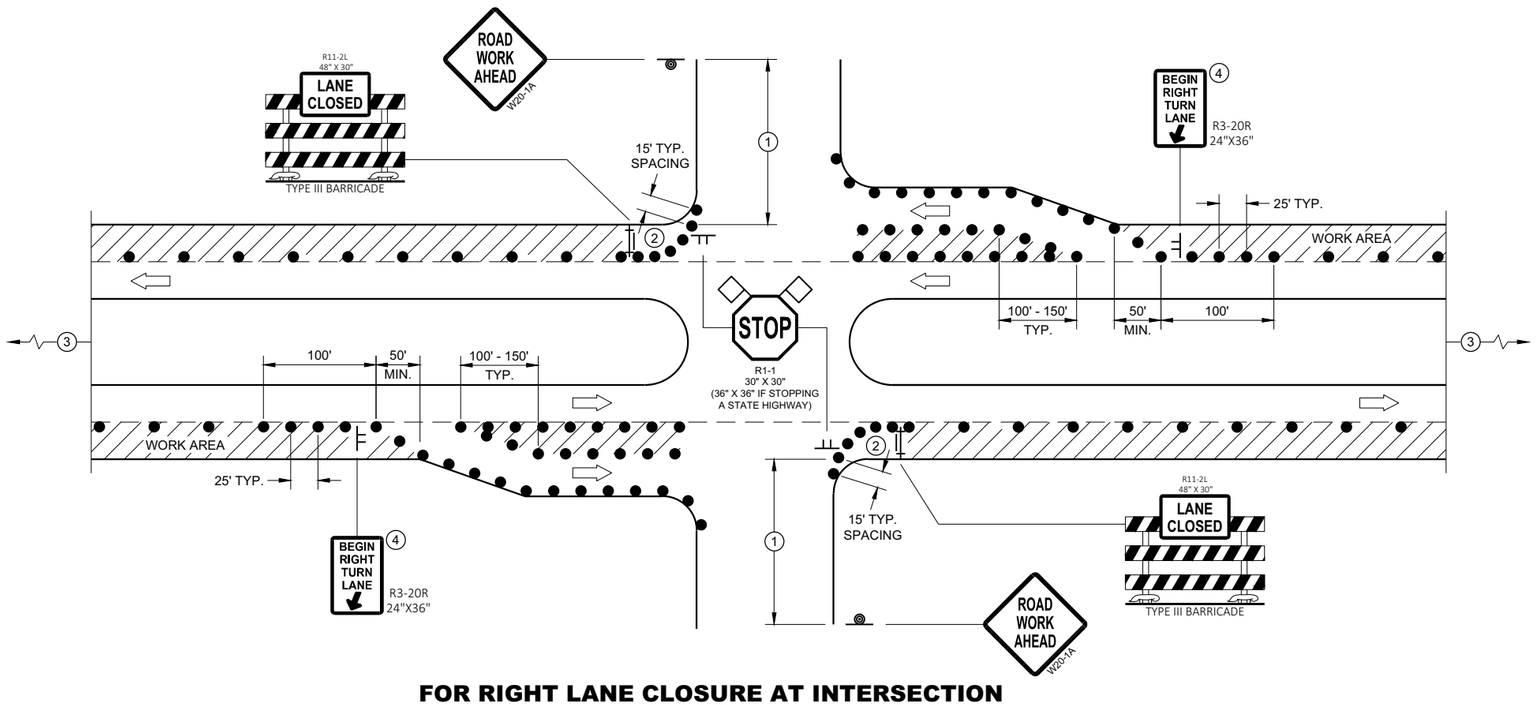
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SDD 15D20-07a



FOR RIGHT LANE CLOSURE AT INTERSECTION

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



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

GENERAL NOTES

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

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

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

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

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

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

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

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

LEGEND

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

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

GENERAL NOTES

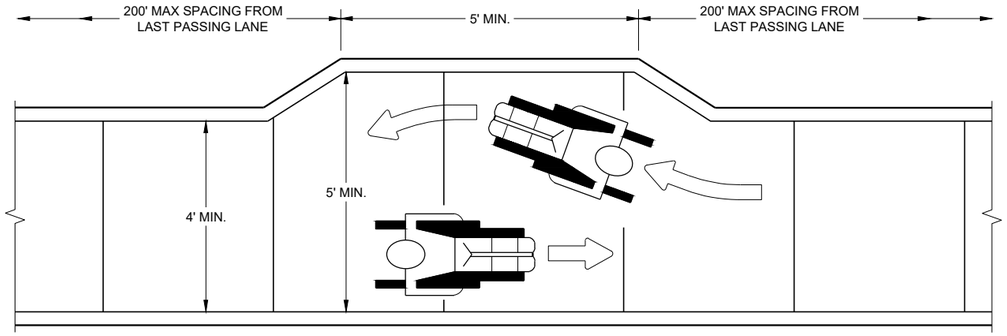
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

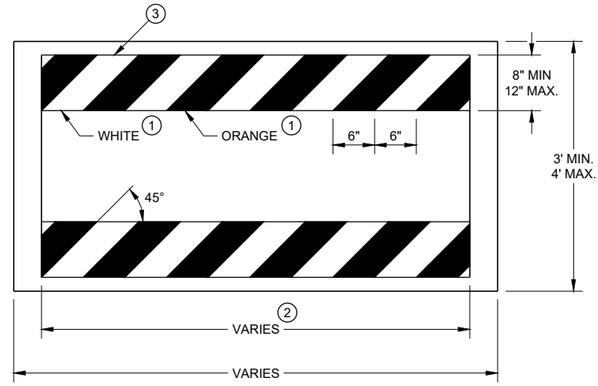
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

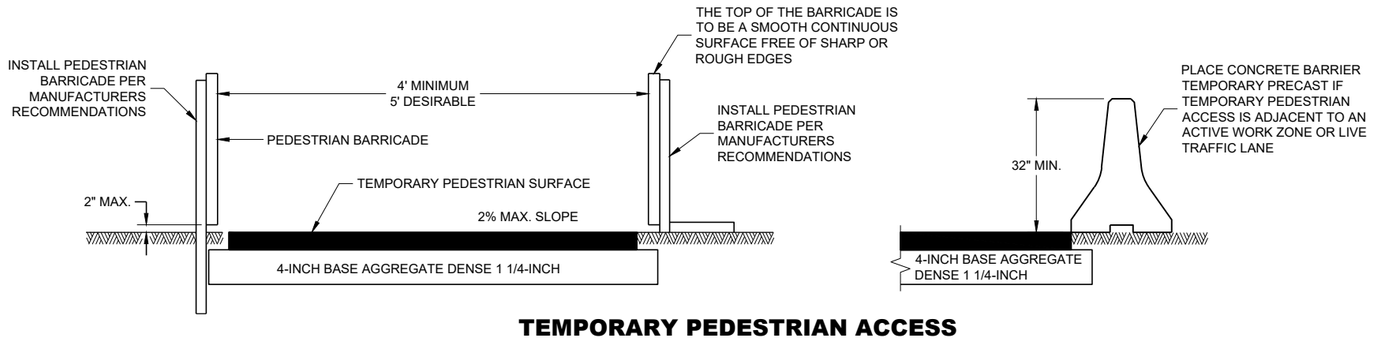
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



NARROW SIDEWALK PASSING DETAIL



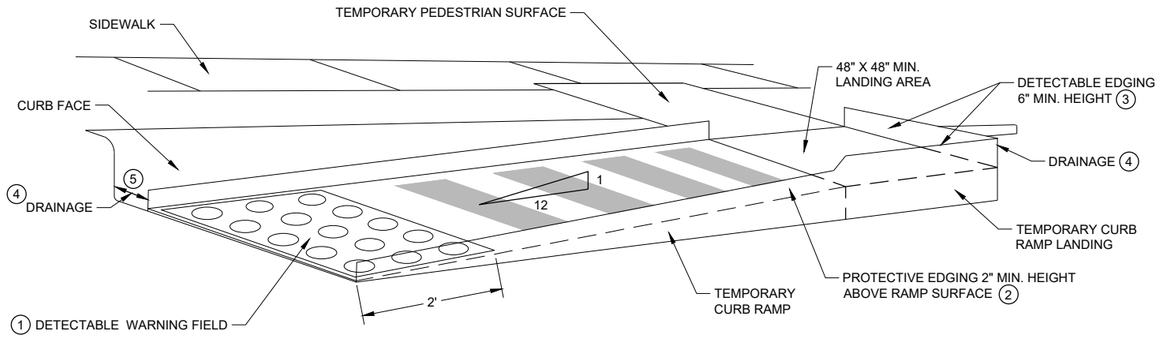
TEMPORARY PEDESTRIAN BARRICADE*



TEMPORARY PEDESTRIAN ACCESS

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

6
SDD 15D30 - 09a



PERSPECTIVE VIEW

GENERAL NOTES

CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.

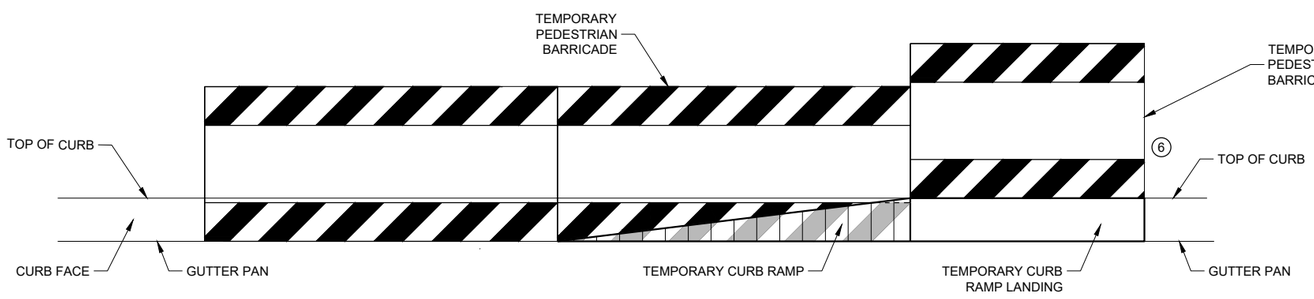
(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

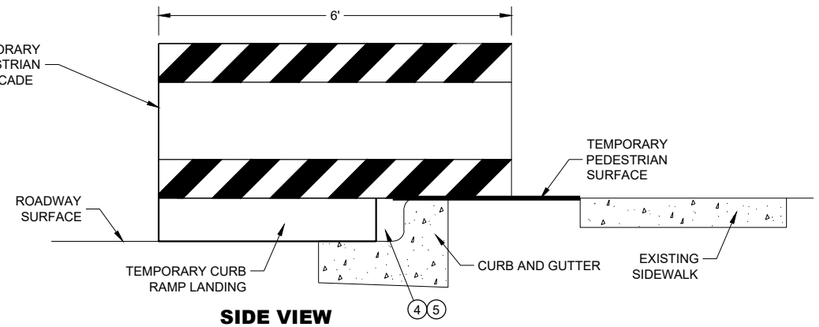
(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.

(6) IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.



FRONT VIEW



SIDE VIEW

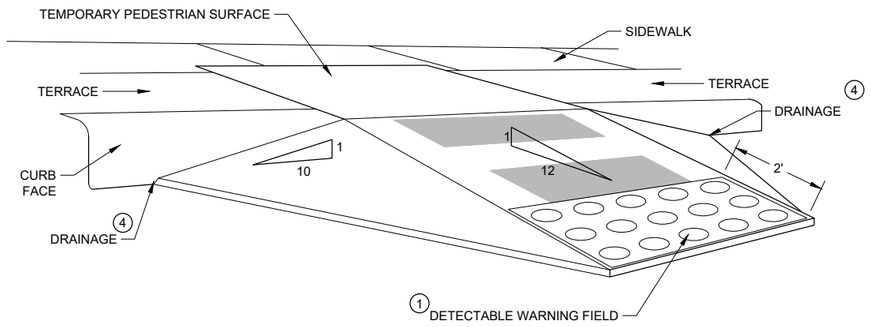
TEMPORARY CURB RAMP PARALLEL TO CURB

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

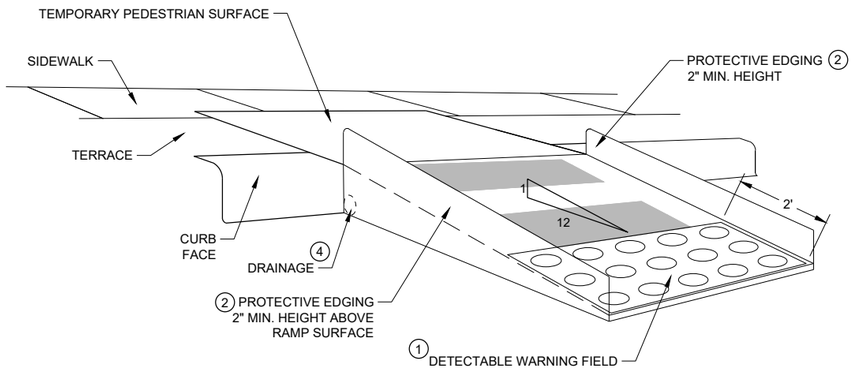
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30 - 09b



WITH SIDE APRON (5)



WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS

(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

6

SDD 15D30 - 09c

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

LEGEND

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

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)					BUFFER SPACE (B) FEET
		10	11	12	13	14	
25	200	52	57	63	68	73	55
30	200	75	83	90	98	105	85
35	350	102	112	123	133	143	120
40	350	133	147	160	173	187	170
45	500	225	248	270	293	315	220

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

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

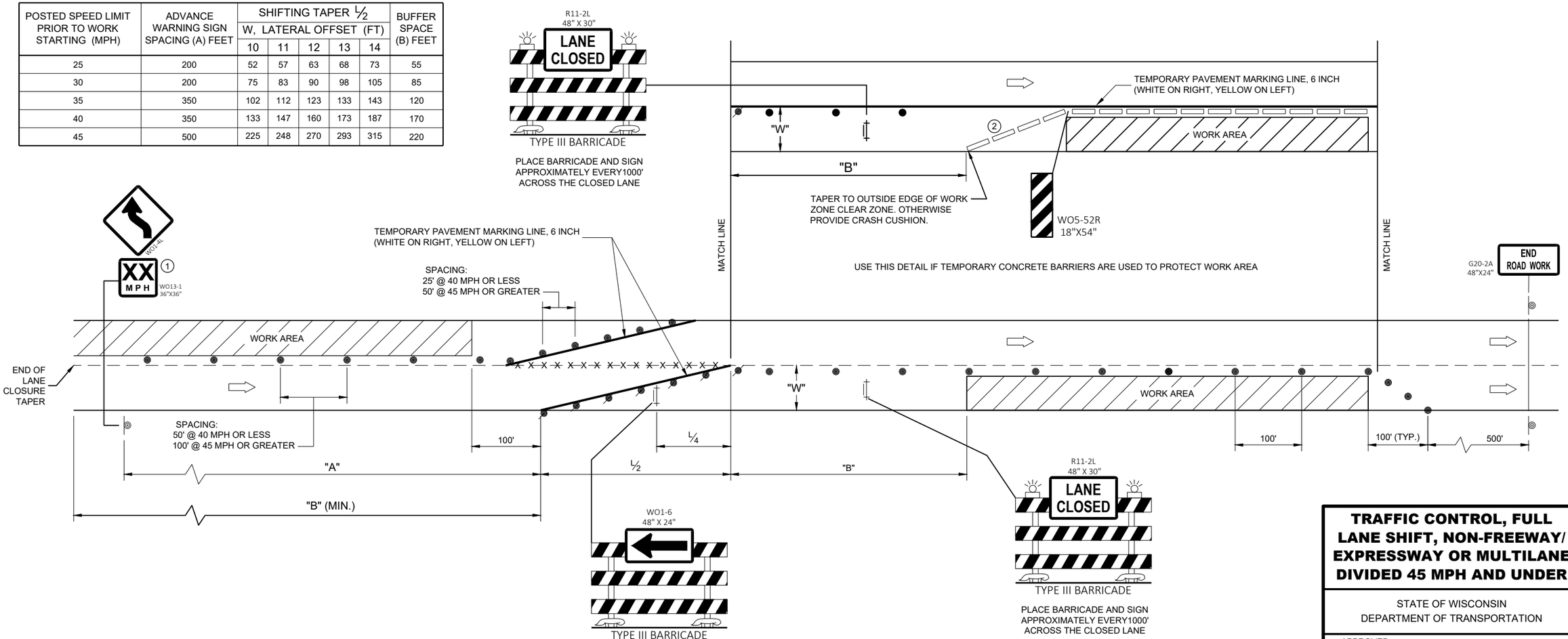
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER
SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL
CHANGE SUCH AS A CROSSOVER MANEUVER.

(1) USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

(2) BARRIER FLARE RATE: 6:1 @ 40 MPH OR LESS
8:1 @ 45 MPH OR GREATER



TRAFFIC CONTROL, FULL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D40-05a

6

SDD 15D40-05a

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

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

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

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

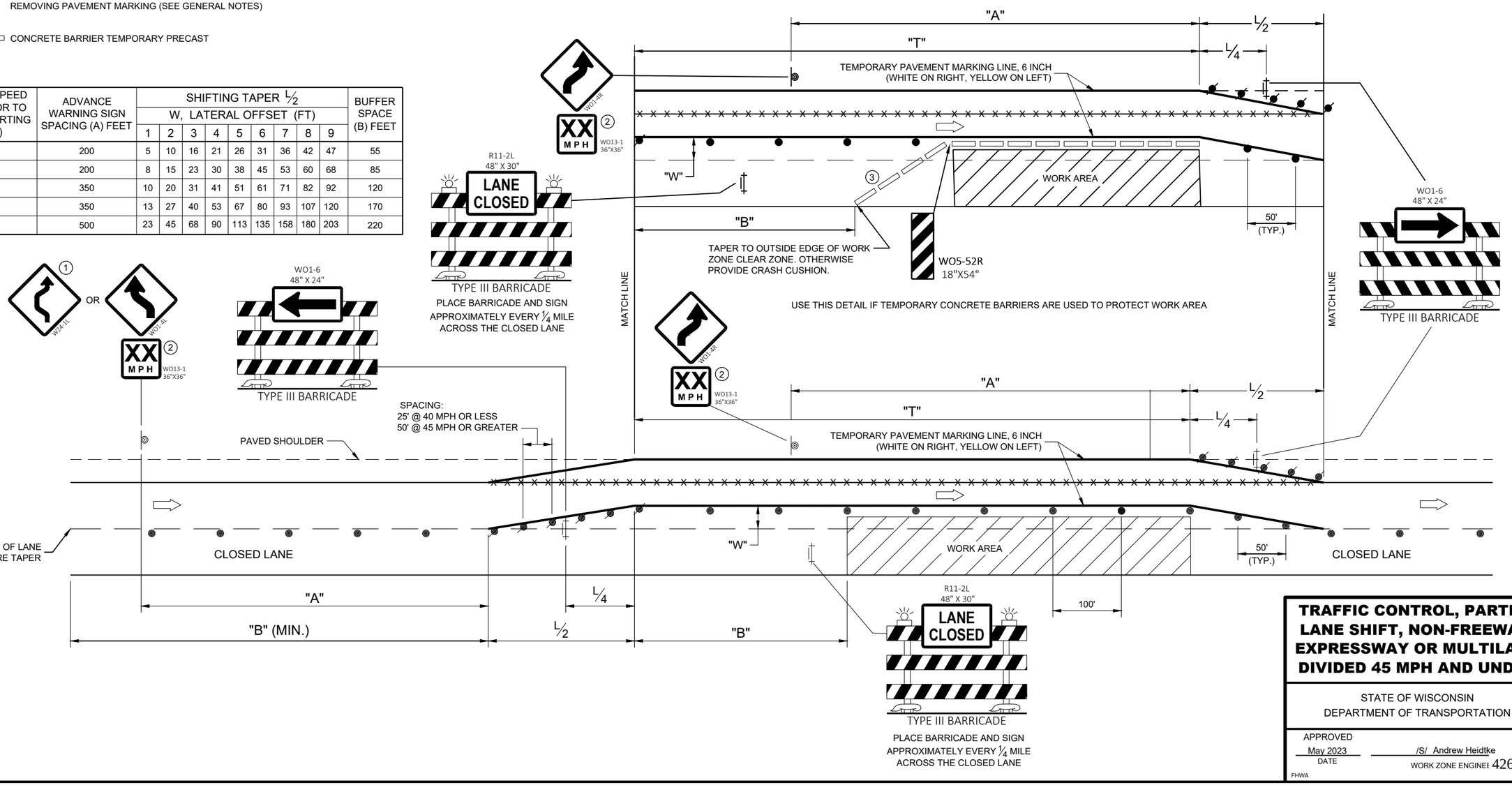
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

(1) USE ONLY WHEN T<600', OMIT WO1-4R.

(2) IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.

(3) BARRIER FLARE RATE: 6:1 @ 40 MPH OR LESS
8:1 @ 45 MPH OR GREATER

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER L/2 W, LATERAL OFFSET (FT)									BUFFER SPACE (B) FEET
		1	2	3	4	5	6	7	8	9	
25	200	5	10	16	21	26	31	36	42	47	55
30	200	8	15	23	30	38	45	53	60	68	85
35	350	10	20	31	41	51	61	71	82	92	120
40	350	13	27	40	53	67	80	93	107	120	170
45	500	23	45	68	90	113	135	158	180	203	220



TRAFFIC CONTROL, PARTIAL LANE SHIFT, NON-FREEWAY/ EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15D40-05c

6

LEGEND

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

CONCRETE BARRIER TEMPORARY PRECAST

TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

FULL SHIFT							
L, TAPER LENGTH (FT)							
POSTED SPEED (MPH)	W, LATERAL OFFSET (FT)						
	10	11	12	13	14	15	16
45	450	495	540	585	630	675	720
50	500	550	600	650	700	750	800
55	550	605	660	715	770	825	880
60	600	660	720	780	840	900	960
65	650	715	780	845	910	975	1040
70	700	770	840	910	980	1050	1120



OR



LOCATED
3000 FEET BEYOND THE
"ROAD WORK 1 MILE"
(W20-1F) SIGN



R2-1
48"X60"

OR



R2-1
48"X60"

(BLACK AND WHITE)
LOCATED
700 FEET BEYOND THE
W03-5 SIGN

IF THE REGULATORY SPEED HAS BEEN REDUCED, 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 INCORPORATED A MINIMUM OF EVERY 3 MILES.

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

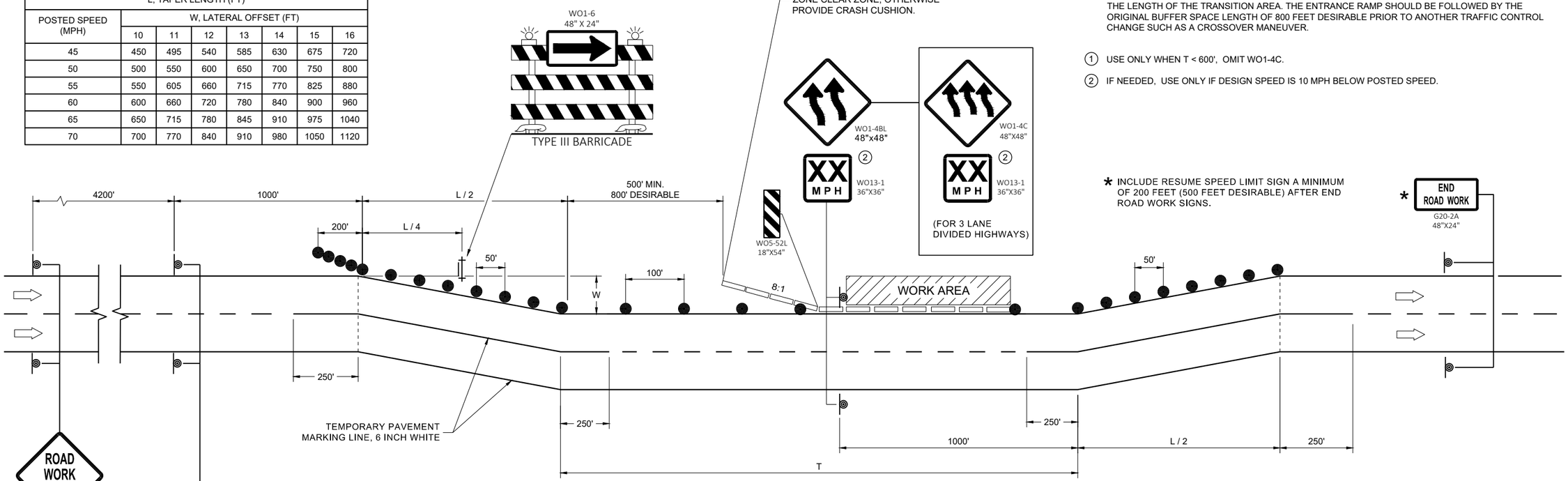
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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 WO1-4C.

(2) IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.



PARTIAL SHIFT									
POSTED SPEED PRIOR TO WORK STARTING (MPH)	SHIFTING TAPER L/2								
	W, LATERAL OFFSET (FT)								
	1	2	3	4	5	6	7	8	9
45	23	45	68	90	113	135	158	180	203
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

TRAFFIC CONTROL MULTIPLE LANE SHIFT MULTILANE DIVIDED ROAD

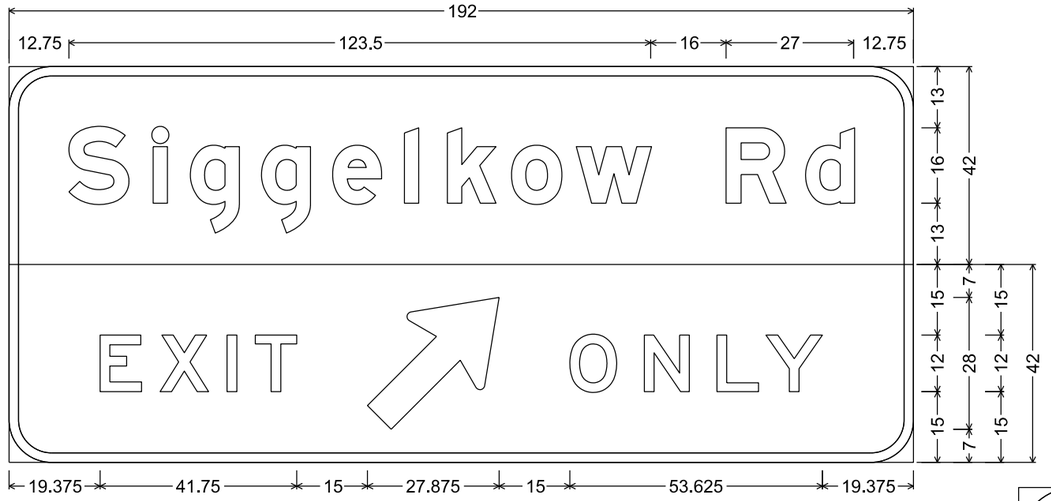
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

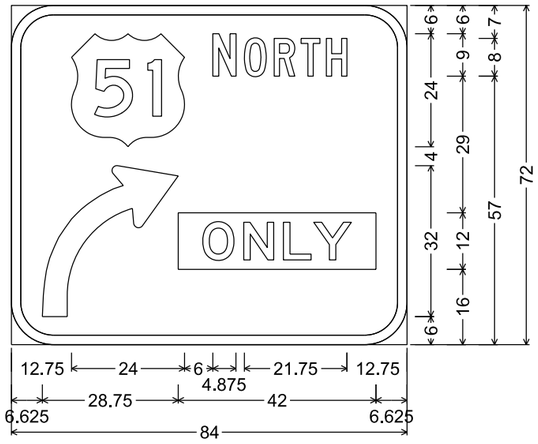
6
SDD 15D41-04a



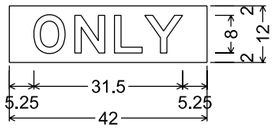
E6-1; 9.000" Radius, 2.000" Border, White on Green;
E11-1D; 9.000" Radius, 2.000" Border, Black on Yellow

NOTES

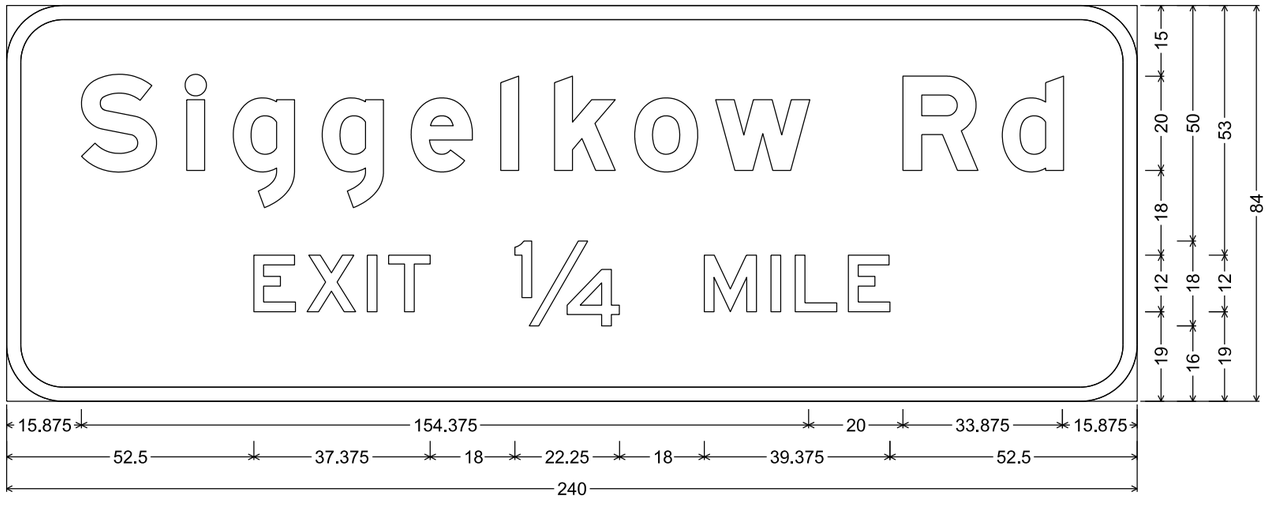
1. Signs are Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except as noted
4. EXIT ONLY and ONLY Panel on Type F Yellow Reflective Sheeting with Black Non-Reflective Message



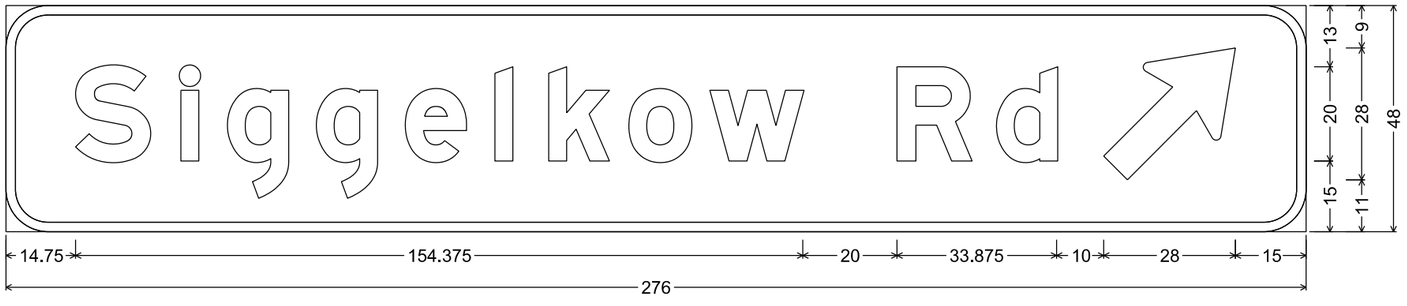
E6-54R; 9.000" Radius, 2.000" Border,
"NORTH", C



No border, Black on Fluorescent yellow;
"ONLY", E;



E1-1A; 12.000" Radius, 3.000" Border

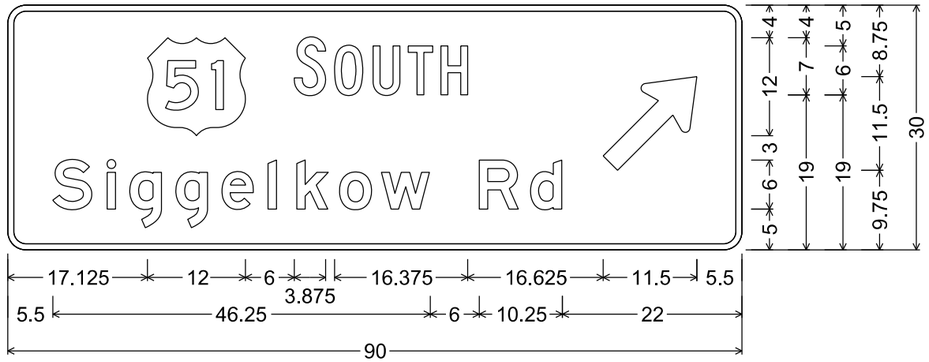


E4-1A; 9.000" Radius, 2.000" Border

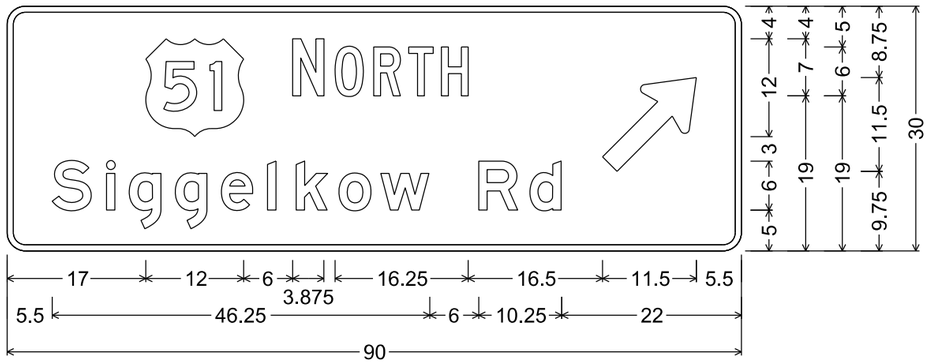
7

7

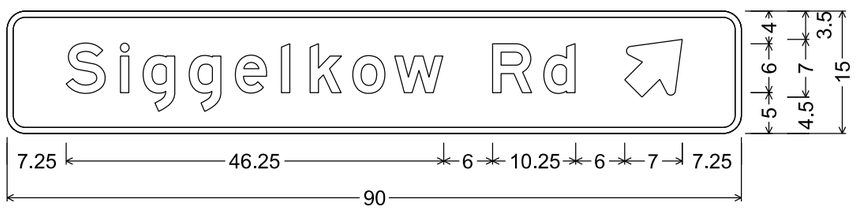
PROJECT: 5845-16-77	HWY: USH 51	COUNTY: DANE	PERMANENT SIGNING	SHEET NO: 428	E



D1-2; 2.250" Radius, 0.750" Border,
"SOUTH", C; "Siggelkow", E; "Rd", E



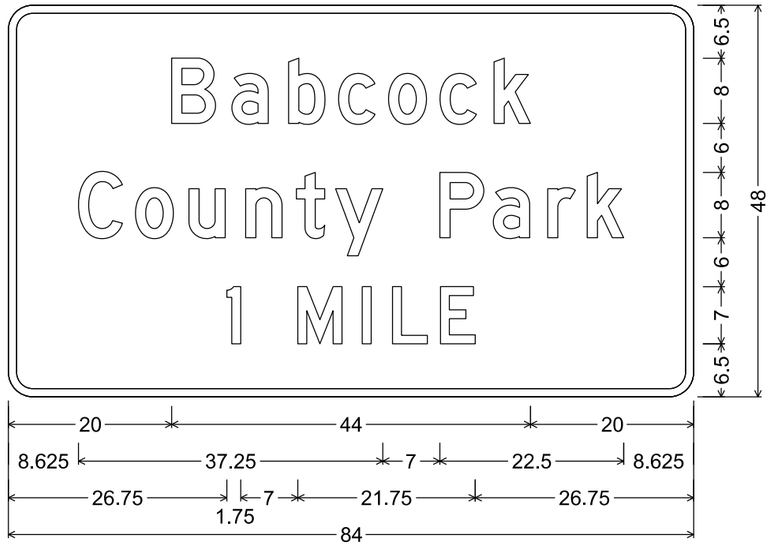
D1-2; 2.250" Radius, 0.750" Border
"NORTH", C; "Siggelkow", E; "Rd", E



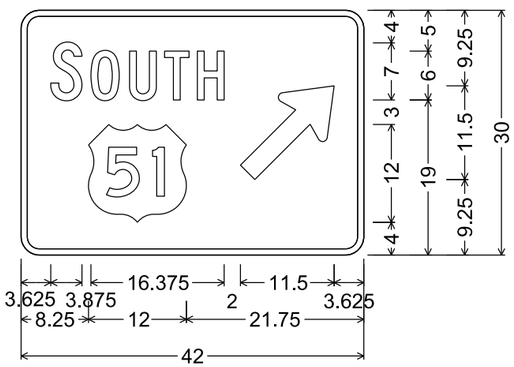
D1-1 (Qty. 3); 2.250" Radius, 0.750" Border

NOTES

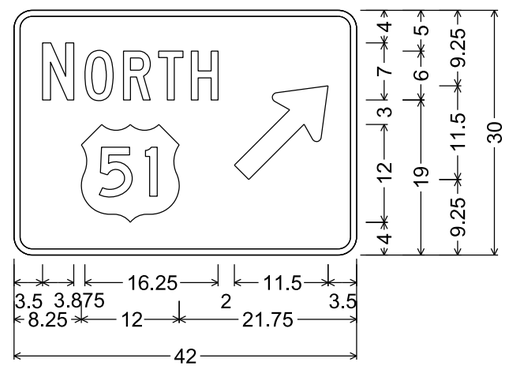
1. Signs are Type II - Type H Reflective
2. Color:
   Background - Green except as noted
   Message - White
3. Message Series - E except as noted



D7-67; 3.000" Radius, 1.000" Border, White on Brown;
"Babcock", D; "County", D; "Park", D; "1", D; "MILE", D



D1-1; 2.250" Radius, 0.750" Border,
"SOUTH", C

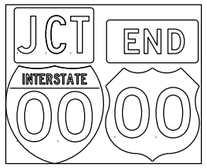


D1-1; 2.250" Radius, 0.750" Border
"NORTH", C

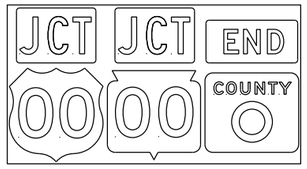
TYPICAL ASSEMBLIES



J1-1



J1-2



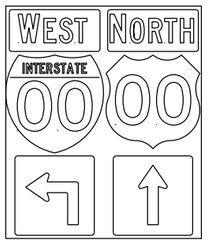
J1-3



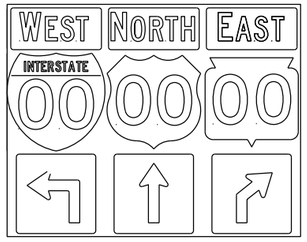
JR1-1



J2-1



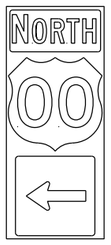
J2-2



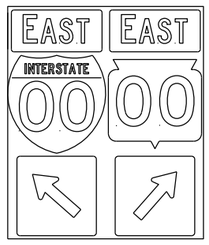
J2-3



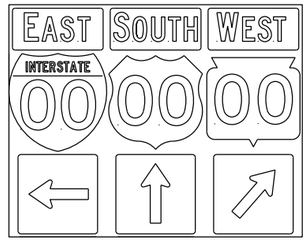
JV
(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1



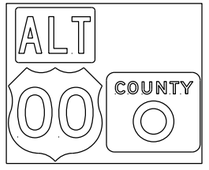
J3-2



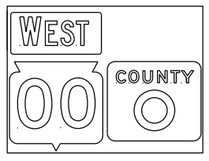
J3-3



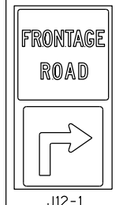
J4-1



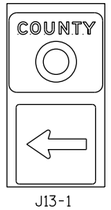
J4-2



J4-2



J12-1



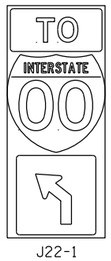
J13-1



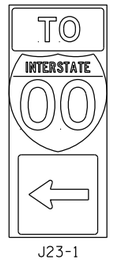
J32-1



J33-1



J22-1



J23-1



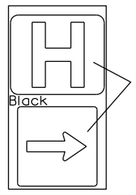
JR13-1



JR23-1



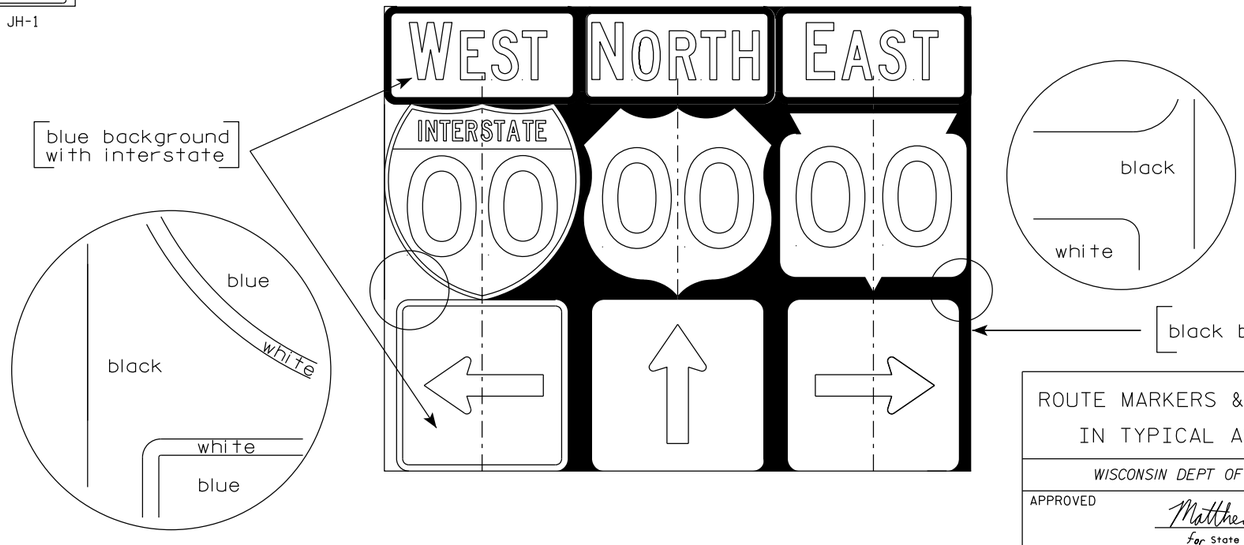
JR99-1



JH-1

NOTES

1. Signs are Type II - Type H Reflective
2. Color:
   Background - Black Non-reflective
   Message - see Note 4
3. Message Series - See Note 4
4. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
5. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
6. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
7. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
8. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. All Vertical J Assemblies are given a Sign Code of JV
10. For JV Assemblies that have a mixture of Interstate and Non-Interstate shields, arrows and cardinals shall be white on blue.
11. For JV Assemblies that have a mixture of Non-Interstate and Auto-Tour shields, arrows and cardinals shall be black on white.



ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

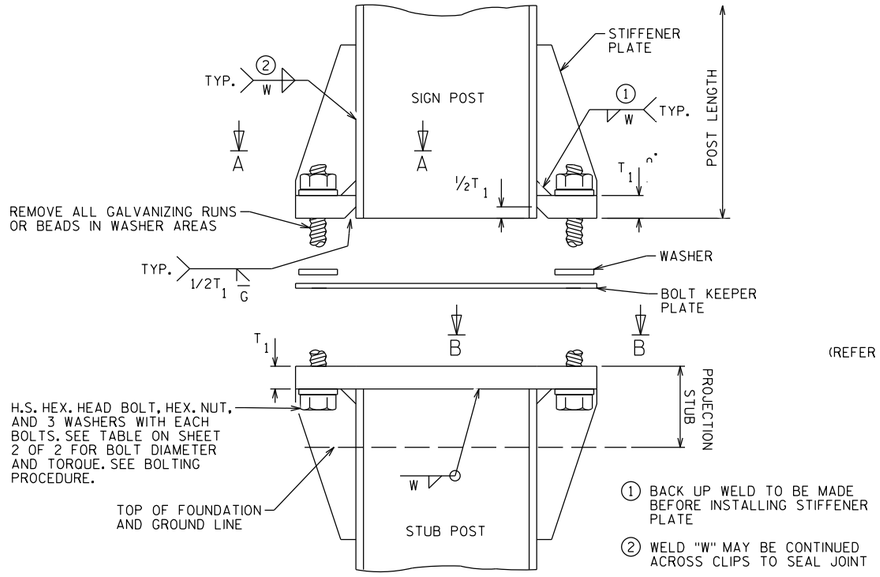
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

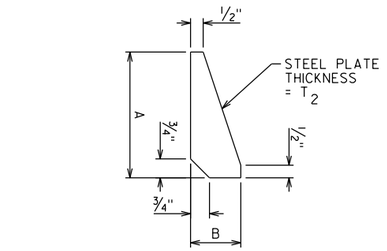
DATE 6/7/23 PLATE NO. A2-1S.10

PROJECT NO:

SHEET NO: 430 E

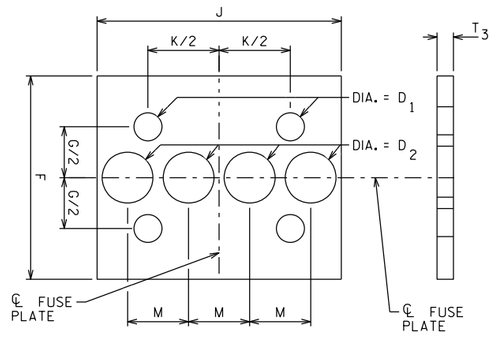


SIGN POST & STUB POST ELEVATION



STIFFENER PLATE DETAIL

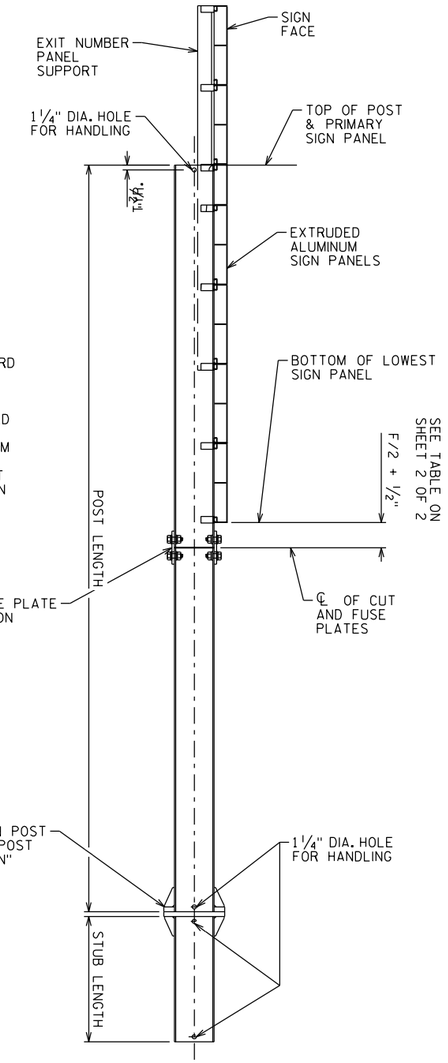
(REFER TO TABLE ON SHEET 2 OF 2 FOR DIMENSIONS)



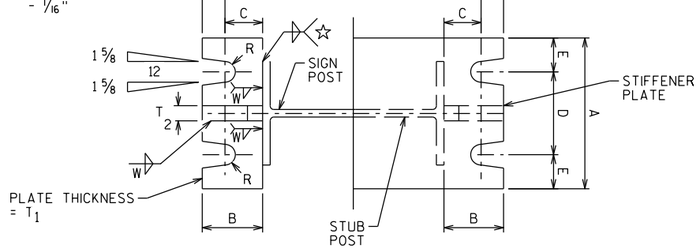
PERFORATED FUSE PLATE DETAIL

USE H.S. HEX HEAD BOLTS, HEX HEAD NUT AND FLAT WASHER UNDER NUT. INSTALL BOLTS PER THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION SECTION 506.3.12.3.

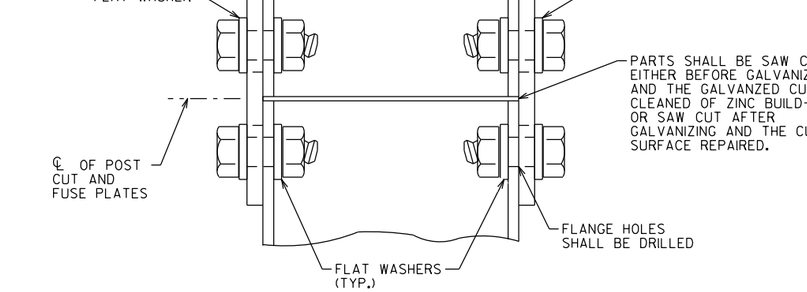
ALL HOLES SHALL BE DRILLED, SUB-PUNCHED AND REAMED. ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS. HOWEVER, FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE PERMITTED. STEEL FUSE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36. ASTM A572 GRADE 50 OR ASTM A588 MAY BE SUBSTITUTED FOR A36 AT THE OPTION OF THE FABRICATOR. MILL TEST REPORTS SHALL BE SUBMITTED FOR FUSE PLATES. STEEL USED SHALL HAVE AN ULTIMATE TENSILE STRENGTH NOT TO EXCEED 80 KSI.



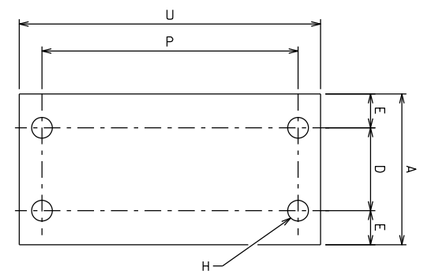
POST DETAIL



SECTION A-A SECTION B-B



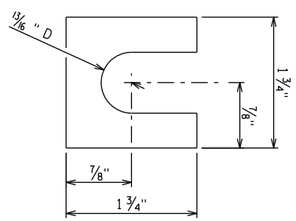
FUSE PLATE CONNECTION DETAIL



H = BOLT DIA. + 1/8"

BOLT KEEPER PLATE DETAIL

30 GA GALVANIZED SHEET STEEL



SHIM DETAIL

FURNISH TWO .012"± THICK AND TWO .032"± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO ASTM B36.

BOLTING PROCEDURE FOR BASE CONNECTION

1. ASSEMBLE SIGN POST, BOLT KEEPER PLATE, AND STUB POST WITH BOLTS AND THREE FLAT WASHERS PER BOLT AS SHOWN.
2. SHIM AS REQUIRED TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING, LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH A 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS.
5. LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PERSCRIBED TORQUE. (SEE TABLE FOR PERSCRIBED TORQUE). DO NOT OVER-TIGHTEN.
6. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

DRAWN BY	PLANS CK'D.

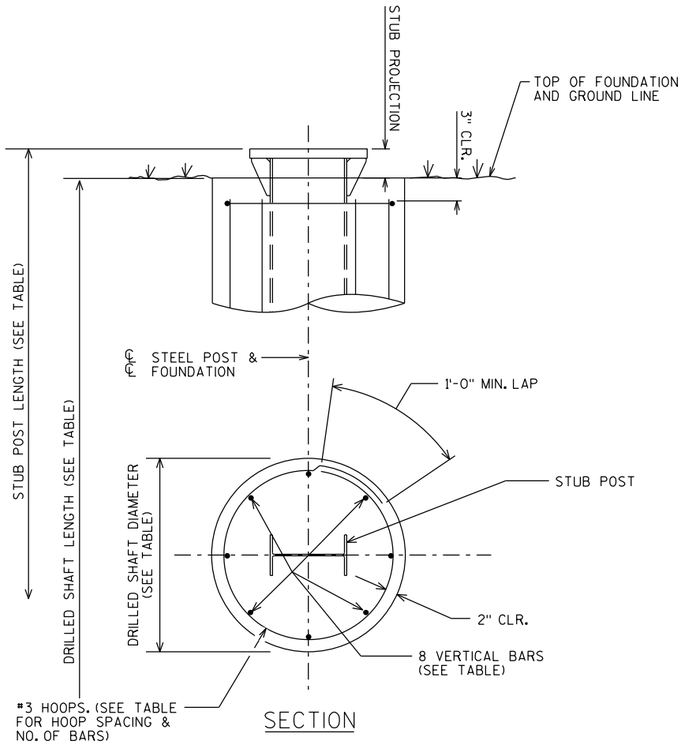
CONNECTION & FOUNDATION DETAILS 1 OF 2

SHEET A3-1.20

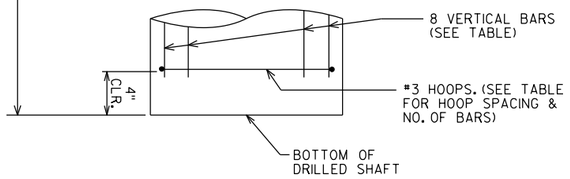
431

7

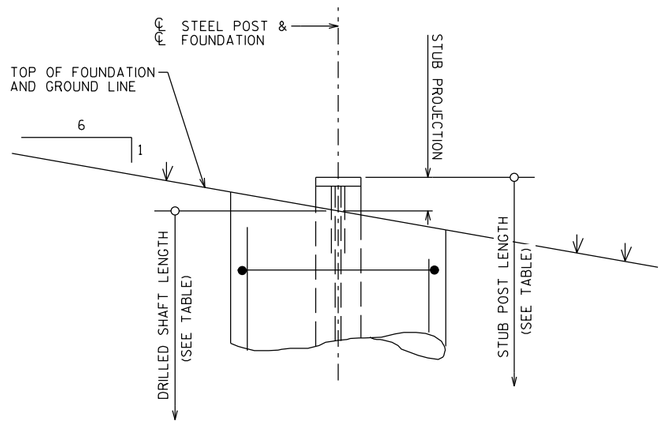
7



SECTION



FOUNDATION DETAIL



SHAFT PLACEMENT

FOUNDATION DATA TABLE

POST SHAPE	STUB LENGTH	STUB PROJECTION	DRILLED SHAFT DIAMETER	DRILLED SHAFT LENGTH	VERTICAL BARS		HOOPS		CONCRETE VOLUME ◆	TOTAL REINF. WEIGHT ◆
					SIZE	LENGTH	MAX SPA.	NO.		
W6X15	2'-6"	3"	24"	6'-6"	#5	5'-11"	10"	9	0.8 CY	71 LB
W8X18	2'-6"	3"	24"	7'-6"	#6	6'-11"	12"	8	0.9 CY	102 LB
W8X21	3'-0"	2½"	24"	8'-0"	#6	7'-5"	12"	9	1.0 CY	110 LB
W10X22	3'-0"	2½"	24"	8'-6"	#7	7'-11"	12"	9	1.0 CY	151 LB
W12X26	3'-0"	2½"	24"	10'-0"	#7	9'-5"	12"	11	1.2 CY	180 LB

◆ QUANTITIES SHOWN ARE FOR ONE DRILLED SHAFT

BASE CONNECTION & FUSE PLATE DATA TABLE

POST SHAPE	WEIGHT PER FOOT	BASE CONNECTION DATA: BOLT SIZE & TORQUE	A	B	C	D	E	T1	T2	W	R	BOLT KEEPER PLATE DATA: P	U	PERFORATED FUSE PLATE DATA: F	G	J	K	M	D1	D2	T3	BOLT DIA.	WGT. EA. LBS	BOLT LENGTH	V ◪
W6X15	15 LB	⅝" DIA. X 4" 36 TO 38 FT-LB	5"	2"	1¼"	2¾"	1⅛"	1¼"	½"	¼"	11/32"	8½"	10"	5"	2½"	6"	3½"	1½"	11/16"	1¼"	⅜"	⅝"	2.4	2	73.0 LB
W8X18	18 LB											10⅝"	12⅛"	5"	2½"	5¼"	2¾"	1¼"	11/16"	1 1/16"	⅜"	⅝"	2.0	2	83.0 LB
W8X21	21 LB	¾" DIA. X 4¾" 62 TO 63 FT-LB	6"	2¼"	1⅜"	3½"	1¼"	1½"	¾"	5/16"	13/32"	11"	12¾"	5½"	2½"	5¼"	2¾"	1¼"	13/16"	1"	½"	¾"	3.1	2¼"	124.0 LB
W10X22	22 LB											12⅞"	14⅝"	6"	3"	5¾"	2¾"	1⅜"	13/16"	1⅛"	½"	¾"	3.9	2¼"	134.0 LB
W12X26	26 LB											15"	16¾"	6"	3"	6½"	3½"	1⅝"	13/16"	1 5/16"	½"	¾"	4.5	2¼"	152.0 LB

◪ TOTAL STRUCTURAL CARBON STEEL WEIGHT FOR ONE POST = V + (POST LENGTH X POST WEIGHT PER FOOT)

"V" INCLUDES STUB POST, BASE PLATES, STIFFENER PLATES, PERFORATED FUSE PLATES, BOLTS, NUTS, AND WASHERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

MATERIALS SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 506, UNLESS NOTED OTHERWISE.

FABRICATION SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 506.

ALL POST, POST STUBS & ATTACHMENTS SHALL BE ASTM A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123.

THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST, FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.

H.S. BOLTS, WASHERS, & NUTS SHALL BE A325 GALVANIZED.

FOUNDATION MATERIAL PROPERTIES

CONCRETE MASONRY	F'C = 3,500 P.S.I.
BAR STEEL REINFORCEMENT (UNCOATED), GRADE 60	FY = 60,000 P.S.I.

DESIGN DATA

DESIGN CONFORMS TO AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS 1ST EDITION 2015 (WITH 2017 & 2018 INTERIM REVISIONS).

DEAD LOADS (DL):

- STEEL POST SELF WEIGHT
- SIGN PANEL WEIGHT = 3 PSF

WIND LOADS (WL):

WIND LOADS WERE APPLIED TO THE PROJECTED AREAS OF THE SIGN PANELS AND THE STEEL SIGN POSTS.

- BASIC WIND SPEED = 76 MPH
- MEAN RECURRANCE INTERVAL (MRI) = 10 YEARS
- HEIGHT & EXPOSURE FACTOR = 1.00
- DIRECTIONALITY FACTOR = 0.85
- GUST EFFECT FACTOR = 1.14

WIND LOAD CASES:

- WL CASE 1: 1.0 X NORMAL WIND
- WL CASE 2: 1.0 X TRANSVERSE WIND
- WL CASE 3: 0.75 X NORMAL WIND + 0.75 X TRANSVERSE WIND

LOAD COMBINATIONS:

LOAD COMBINATION	TYPE	DL FACTOR	WL FACTOR
STRENGTH I	GRAVITY	1.25	-
EXTREME I	WIND	1.10	1.0
		0.9	1.0
SERVICE I	DEFLECTION	1.0	1.0

FOUNDATION DESIGN DATA

THE FOUNDATION DESIGN ASSUMED COHESIONLESS SOILS (LOOSE SAND) ABOVE THE WATER TABLE WITH THE FOLLOWING PROPERTIES:

- SOIL UNIT WEIGHT = 115 PCF
- ANGLE OF INTERNAL FRICTION = 24 DEGREES
- SOIL MODULUS PARAMETER = 25 LB/IN3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

DRAWN BY | PLANS CK'D.

CONNECTION & FOUNDATION DETAILS 2 OF 2

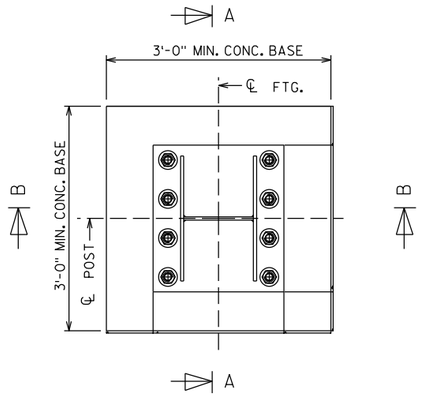
SHEET A3-1.20

432

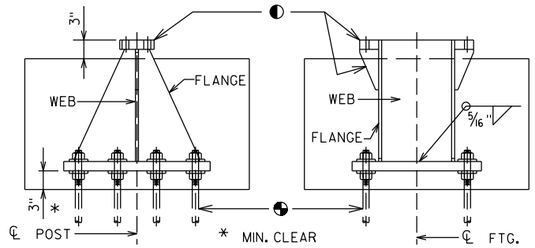
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7

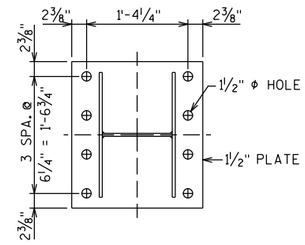
STUB AND ADHESIVE ANCHOR DETAILS



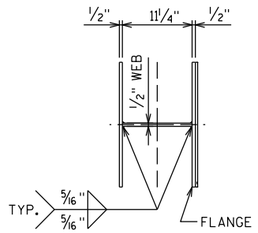
STUB SECTION



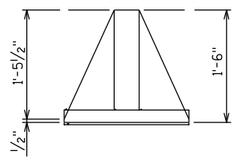
SECTION A-A SECTION B-B



BASE PLATE



STUB



FLANGE

◐ SEE BASE CONNECTION DETAILS ON "CONNECTIONS & FOUNDATION DETAILS" SHEETS.

◔ ADHESIVE ANCHORS 1¼-INCHES. ALLOWABLE PULL OUT CAPACITY = 15 KIPS. EMBED 1'-3" INTO ROCK.

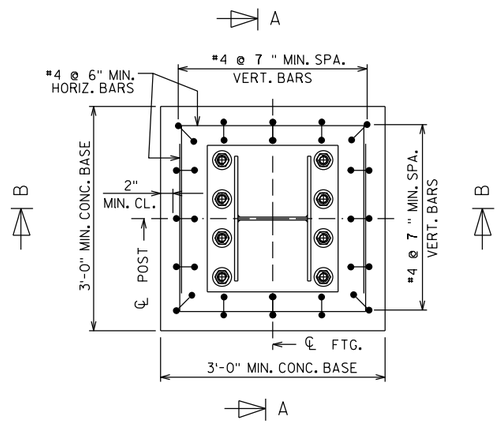
GENERAL NOTES:

QUANTITIES PER BASE:
REINFORCING STEEL = 62 LB
CONCRETE = 0.6 CY
STRUCTURAL STEEL = 335 LB

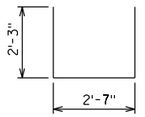
ALL MATERIALS, EXCEPT FOR ANCHOR ROD, NUTS, AND WASHERS, SHALL BE ASTM A709 GRADE 50. ALL MATERIALS TO BE GALVANIZED AFTER FABRICATION.

IF ROCK IS ENCOUNTERED PRIOR TO REACHING THE MINIMUM DRILLED SHAFT EMBEDMENT DEPTH DEFINED ON THE FOUNDATION DATA TABLE OF THE "CONNECTIONS & FOUNDATION DETAILS 2 OF 2" SHEET, THE CONTRACTOR SHALL INSTALL A TEST ADHESIVE ANCHOR AND DETERMINE THE PULL-OUT CAPACITY. IF THE FIELD TEST RESULTS IN A PULL-OUT CAPACITY GREATER THAN OR EQUAL TO 15 KIPS, THE CONTRACTOR MAY INSTALL THE ALTERNATE CONCRETE BASE AND BREAK-WAY STUB PER THE DETAILS ON THIS SHEET.

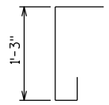
CONCRETE BASE DETAILS



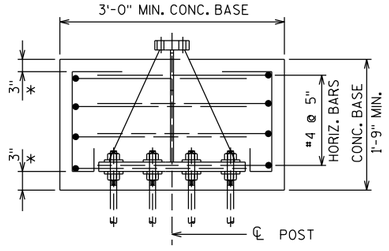
CONCRETE BASE PLAN



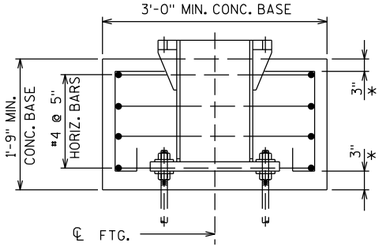
HORIZONTAL BAR
8 BARS @ 6'-11" LENGTH



VERTICAL BARS
16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A-A



SECTION B-B

* MIN. CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

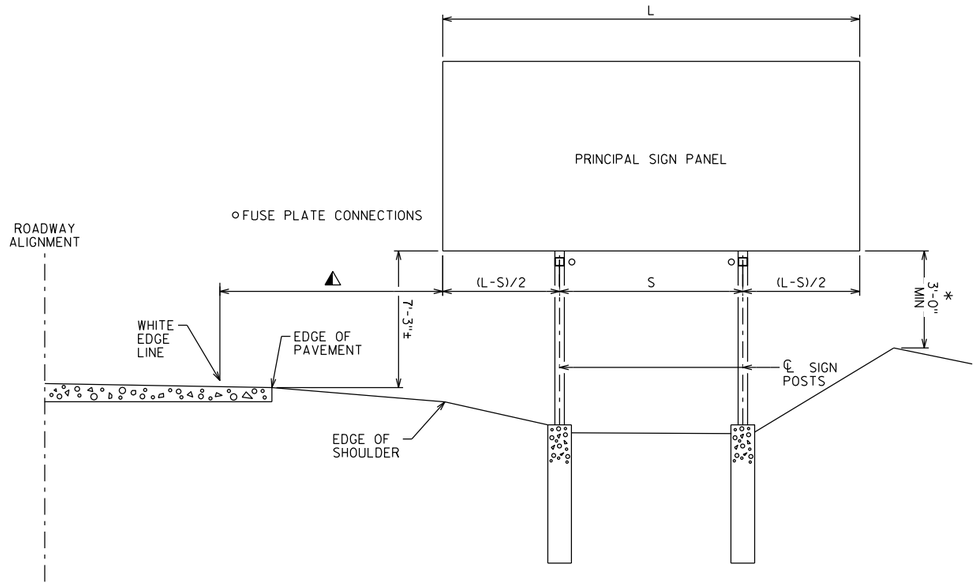
STRUCTURE BTO TYPE I SIGNS

DRAWN BY | PLANS CK'D.

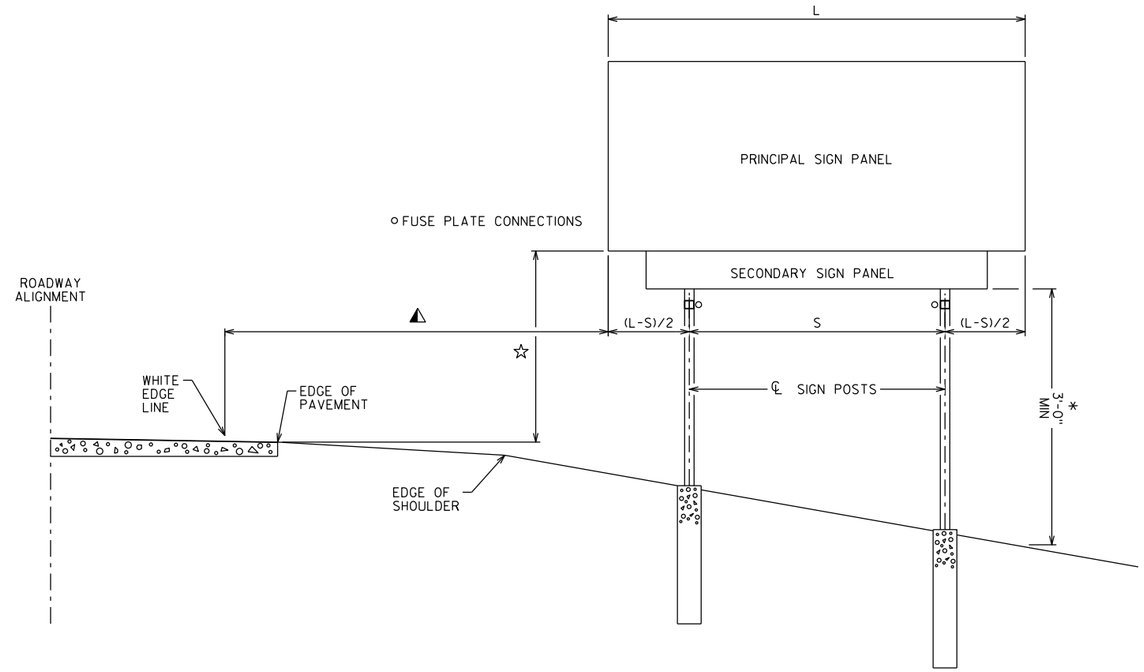
ALTERNATE BREAK-AWAY BASE ON ROCK

SHEET A3-1M.2

433



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".

WHERE SIGNS ARE MOUNTED BEHIND CRASH WORTHY PROTECTION SUCH AS GUARDRAIL OR BARRIER WALL, THE LATERAL OFFSET MAY BE 4'-6" BEHIND THE GUARDRAIL OR BARRIER WALL.

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"±.

○ FOR 2-POST SIGNS, IF THERE IS A SECONDARY SIGN THAT IS NOT AS WIDE AS THE POSTS, INSTALL FUSE PLATES BENEATH PRINCIPAL SIGN.

FOR SECONDARY SIGNS THAT ARE NOT AS WIDE AS THE EXTERIOR POSTS, SECURE SIGN WITH CHANNEL STEEL AS DESCRIBED IN A4-6.

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
	2/29/24		

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

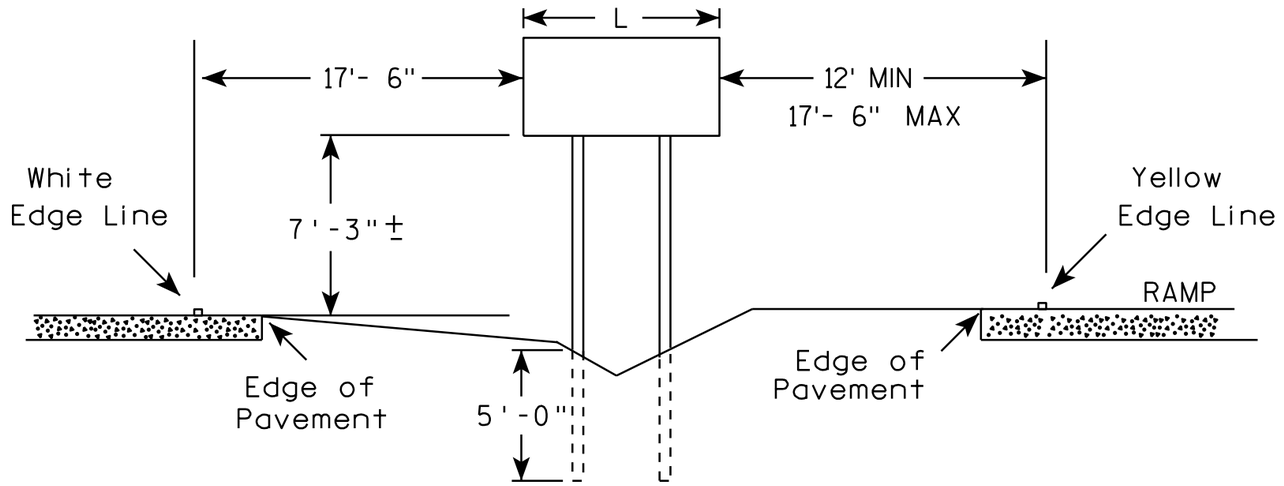
STRUCTURE BTO TYPE I SIGNS

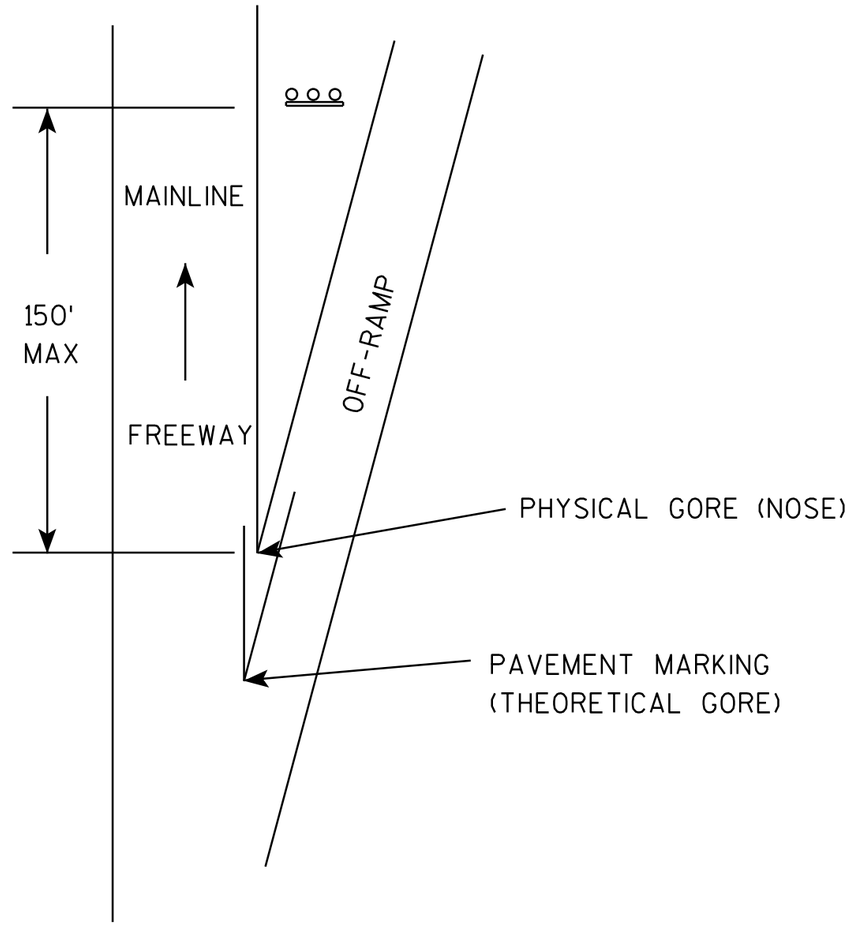
DRAWN BY	PLANS CK'D.

TYPICAL TYPE I SIGN INSTALLATION

SHEET A4-1.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 434	E





GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The (∓) tolerance for the mounting height is 3 inches.

7

7

TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

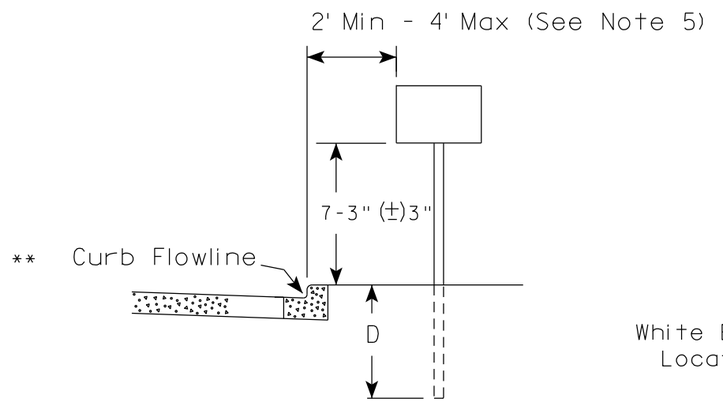
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

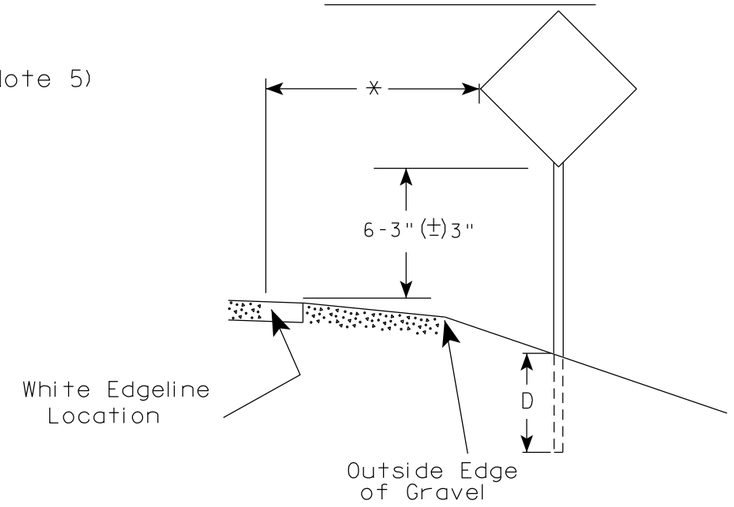
DATE 2/06/14 PLA 435 A4-2.3

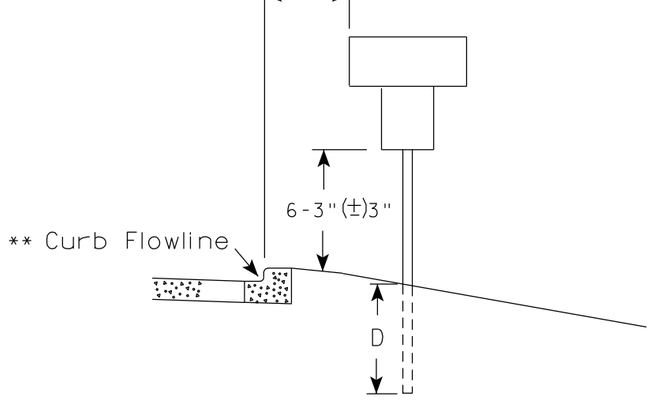
PROJECT NO: | SHEET NO: E

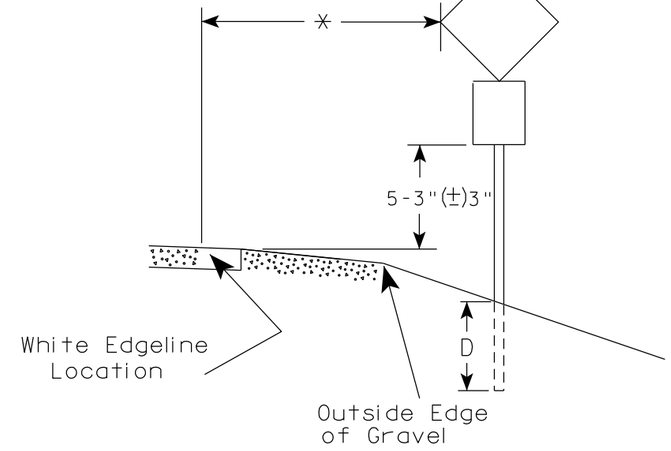
URBAN AREA



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" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directd by the Engineer.

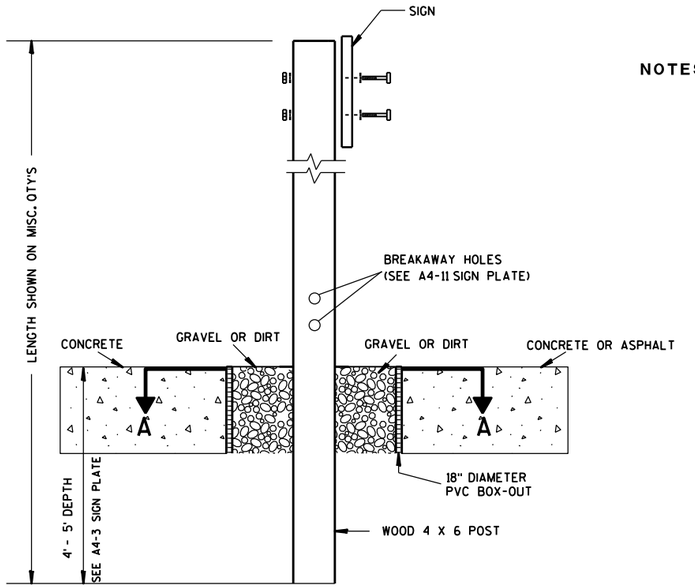
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

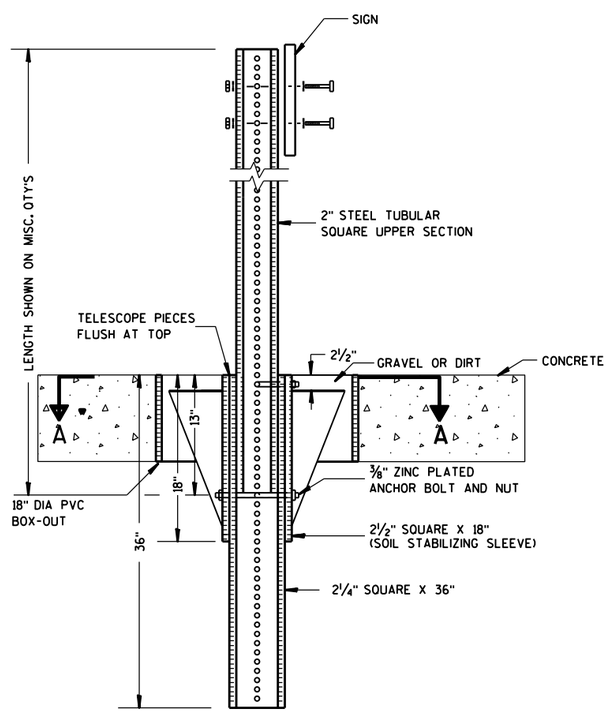
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 436	E



ELEVATION VIEW

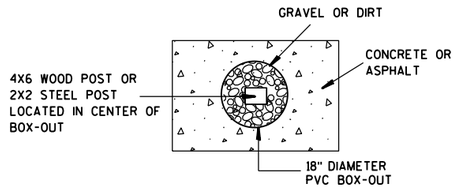
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

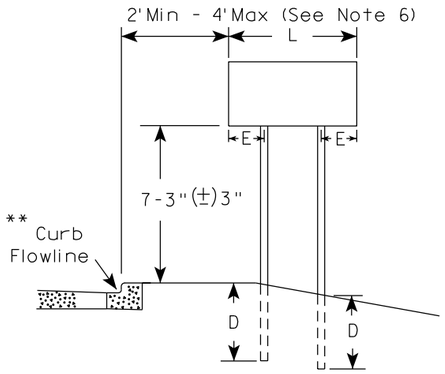
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

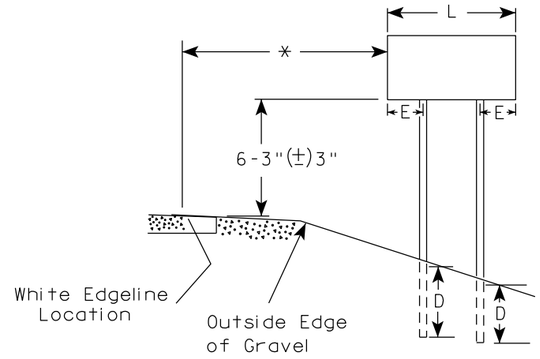
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

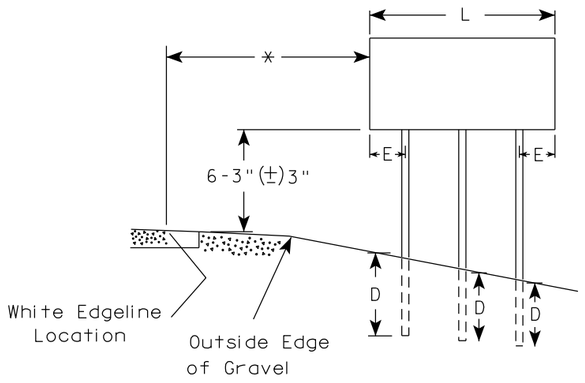
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

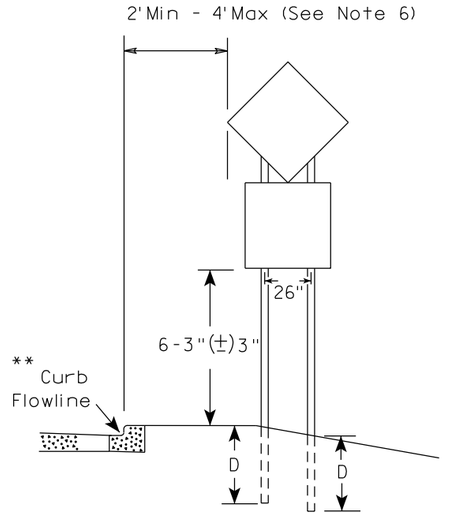
URBAN AREA



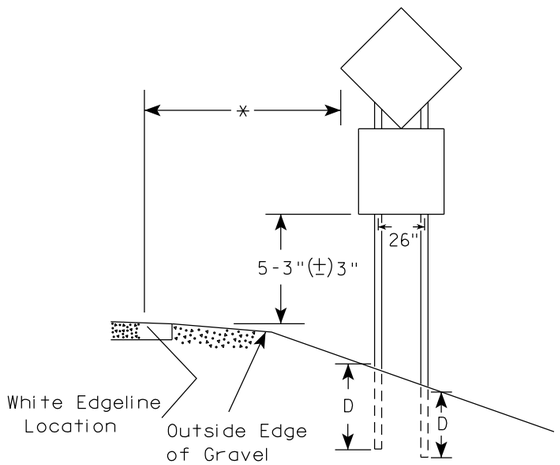
RURAL AREA (See Note 3)







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

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

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

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

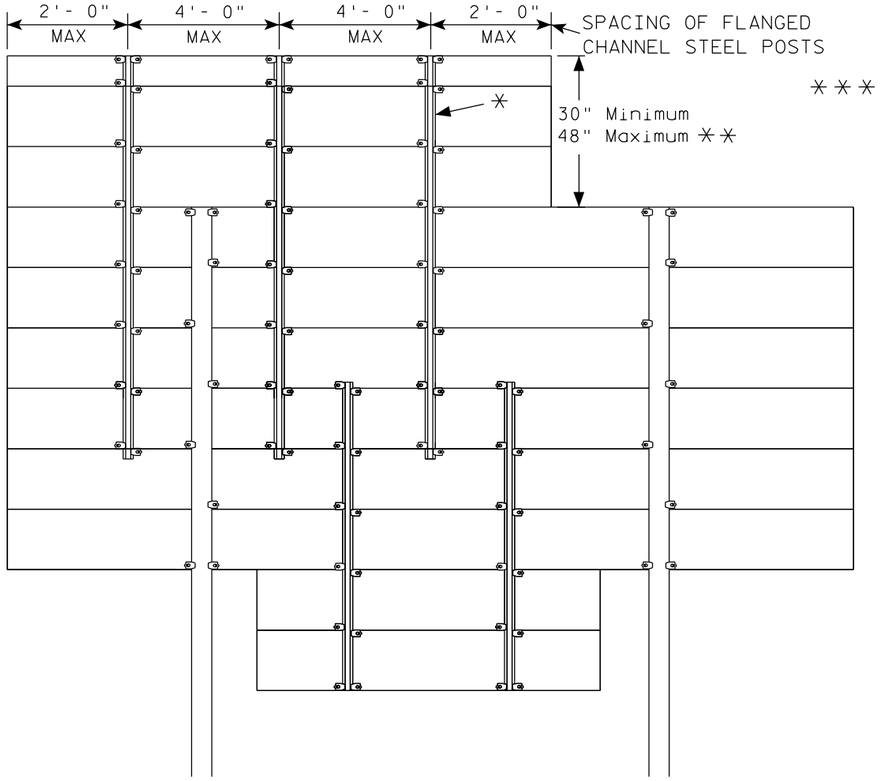
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 438	E

GROUND MOUNTED SIGN



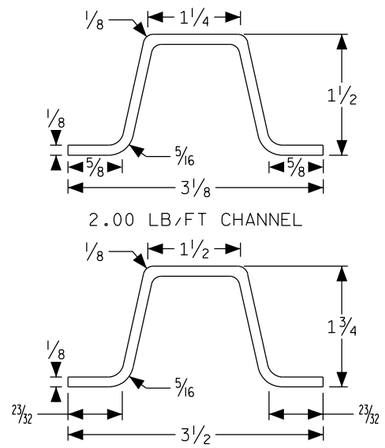
✳=2.00 lb/ft AND 4.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

✳✳=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

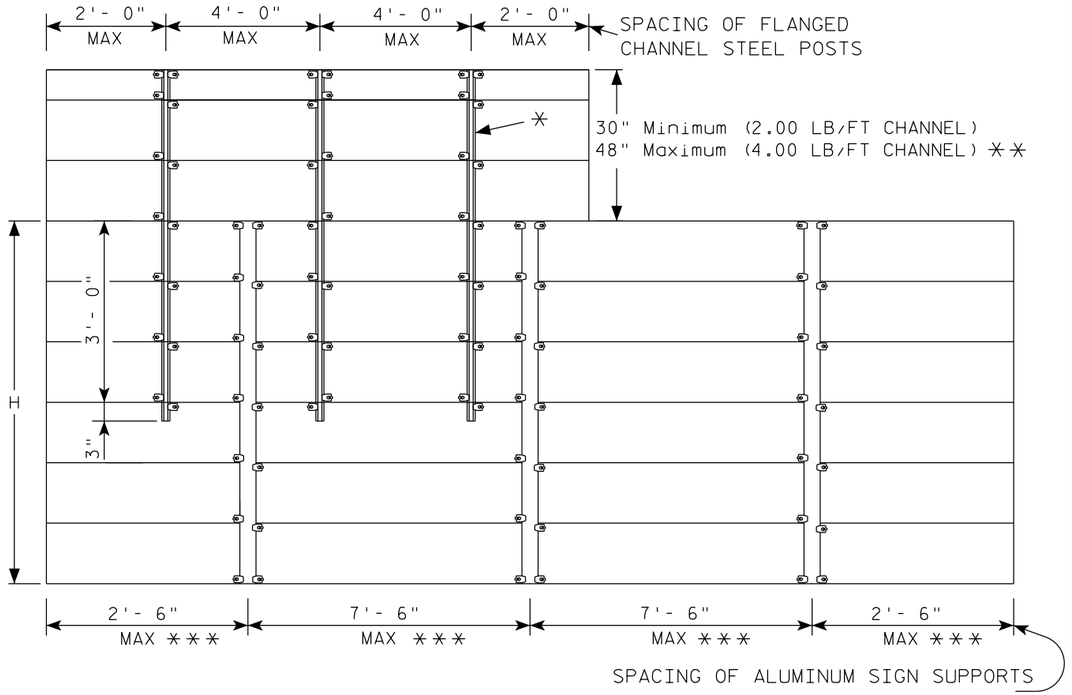
NOT TO SCALE



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

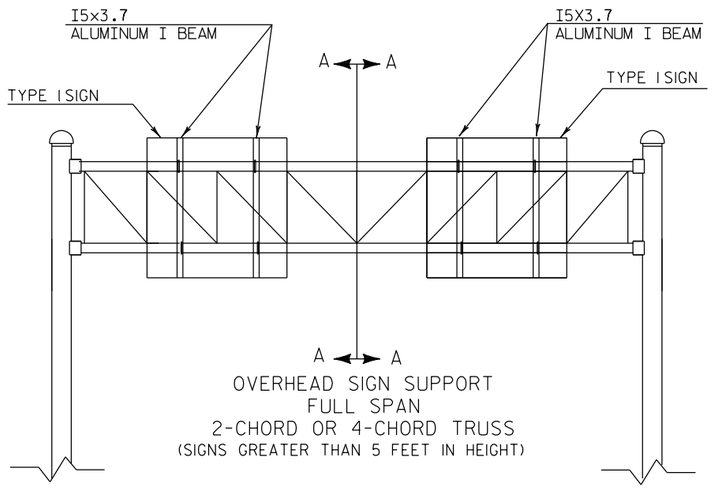
   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER 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

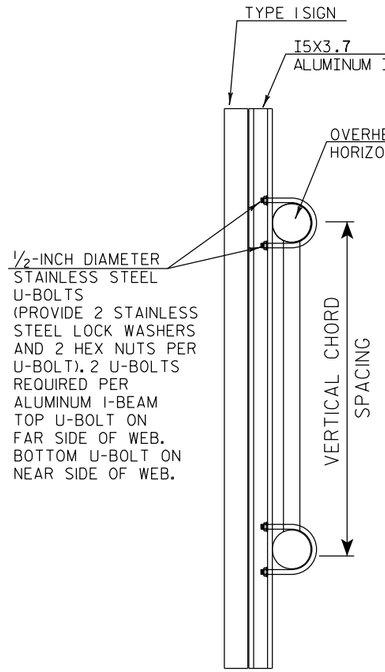
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

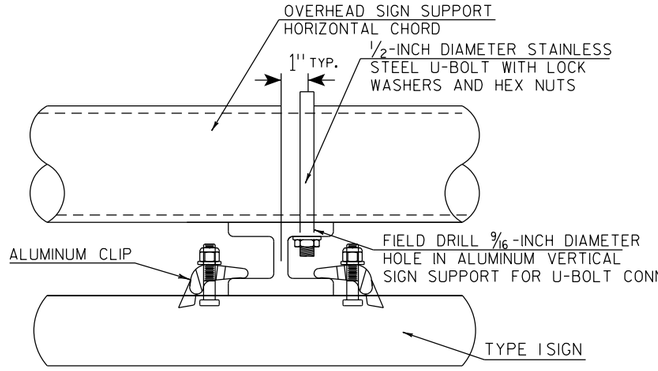
DATE 1/07/20 PLATE NO. A4-6.12



OVERHEAD SIGN SUPPORT
FULL SPAN
2-CHORD OR 4-CHORD TRUSS
(SIGNS GREATER THAN 5 FEET IN HEIGHT)



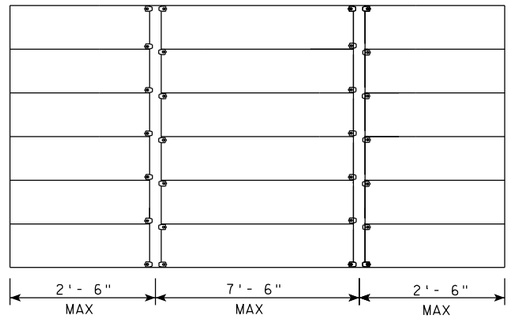
CUT SECTION A-A



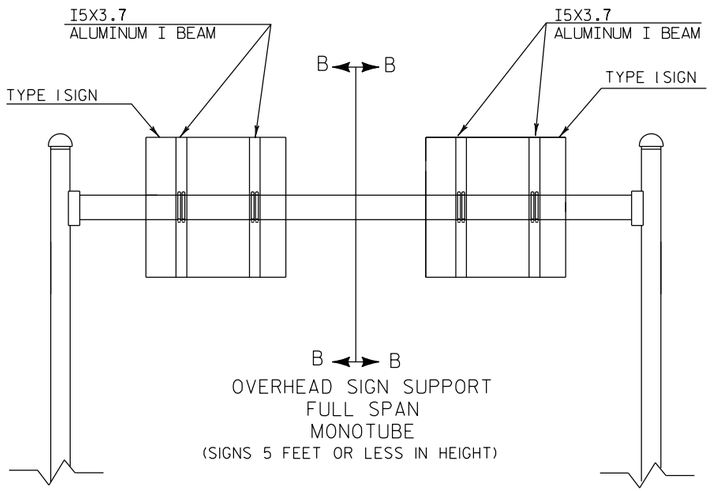
TYPICAL SIGN CONNECTION FOR
2-CHORD OR 4-CHORD TRUSS
PLAN VIEW

GENERAL NOTES

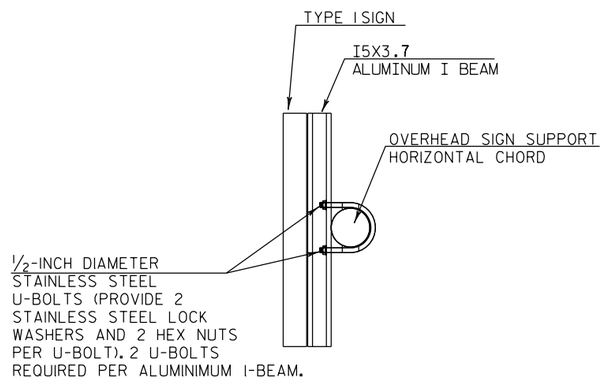
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE 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



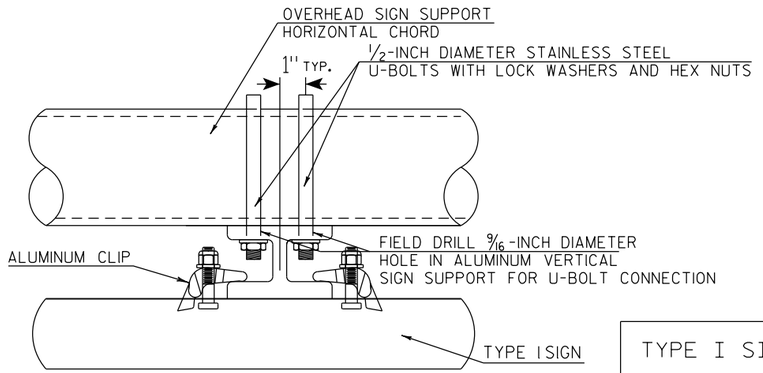
SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
MONOTUBE
(SIGNS 5 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
MONOTUBE
PLAN VIEW

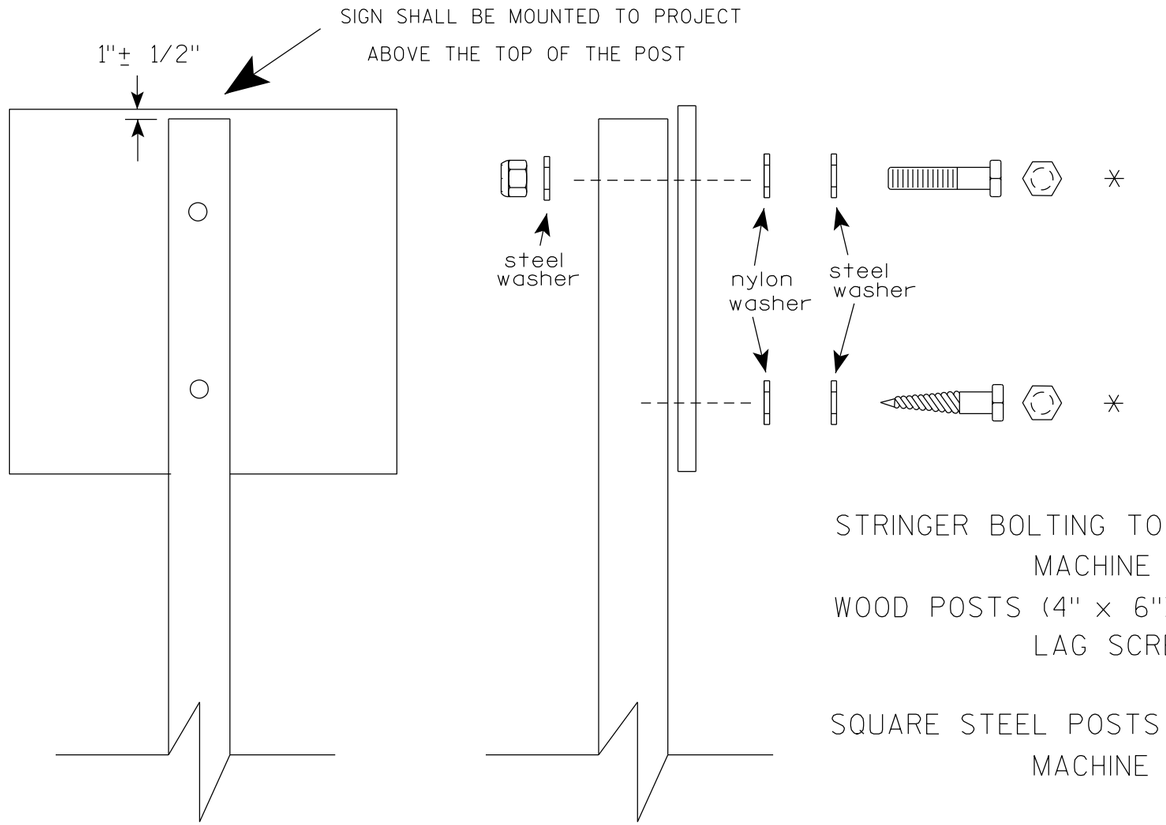
TYPE I SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

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: 440	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

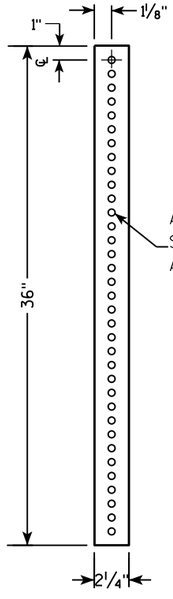
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

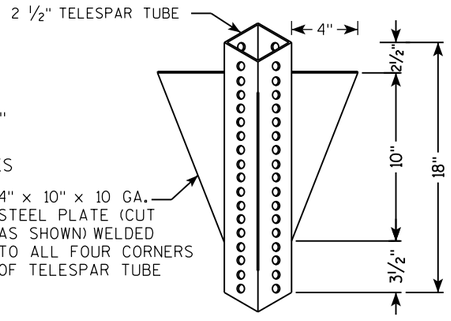
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

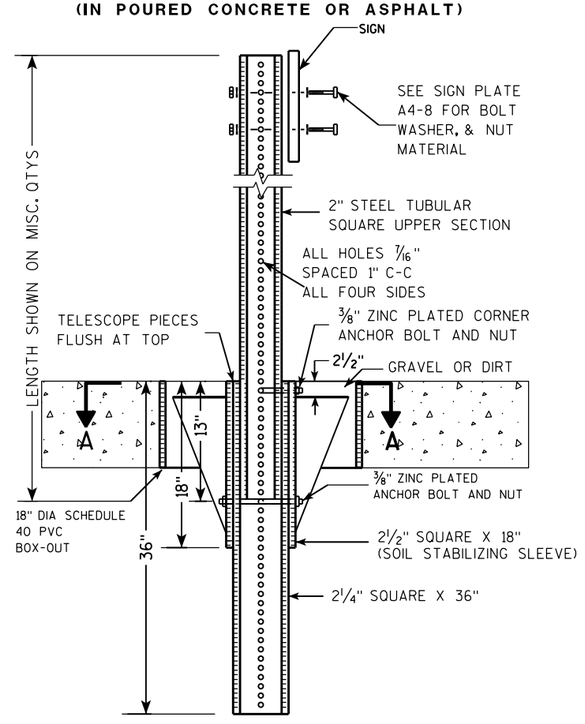
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



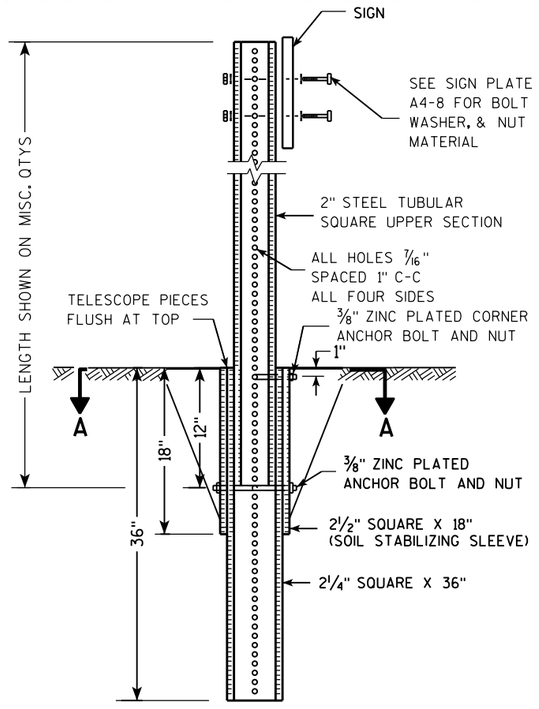
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

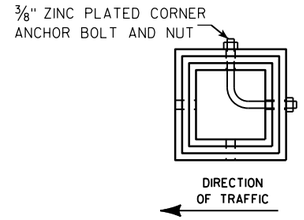


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

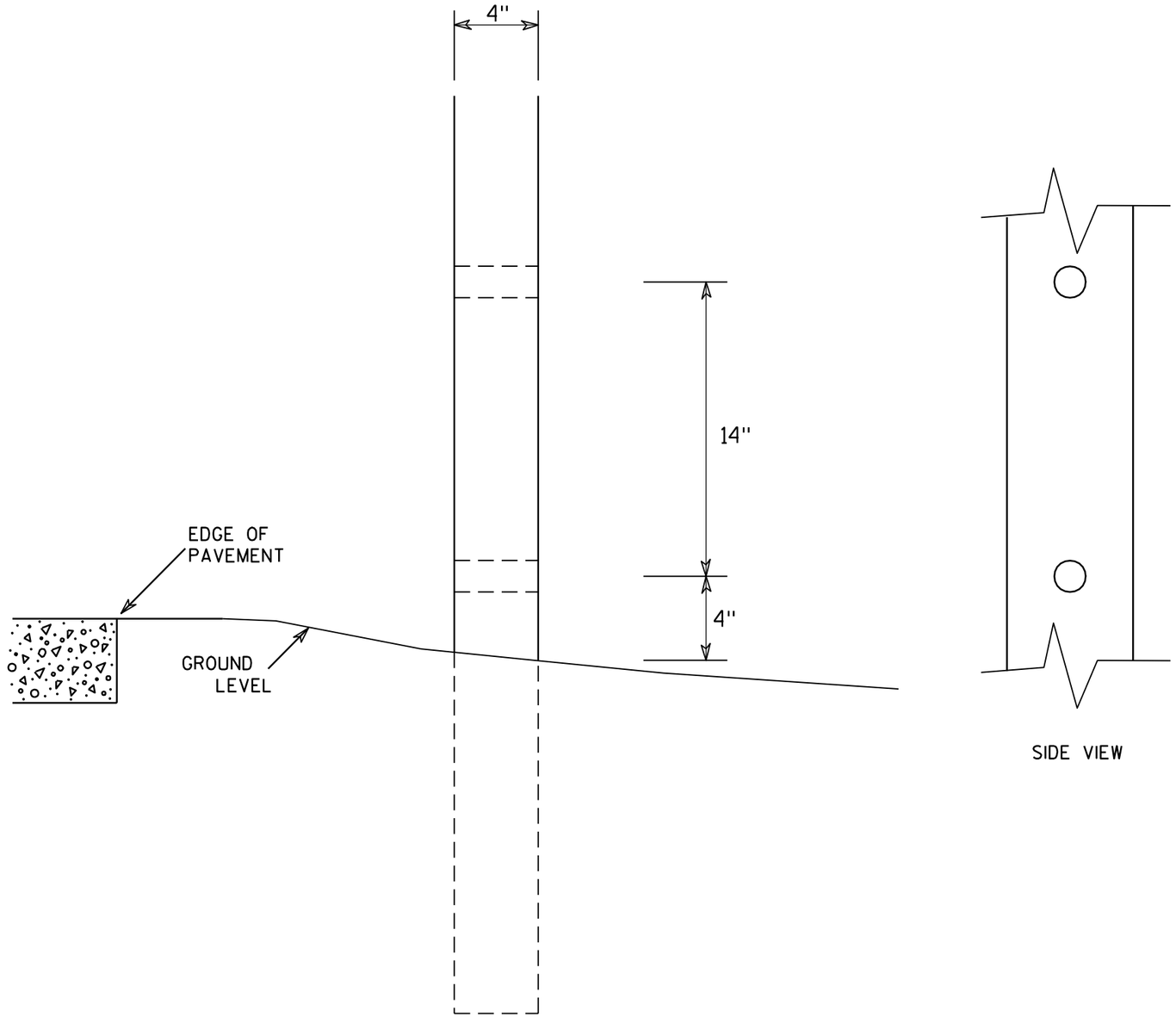
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 442 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

7

7

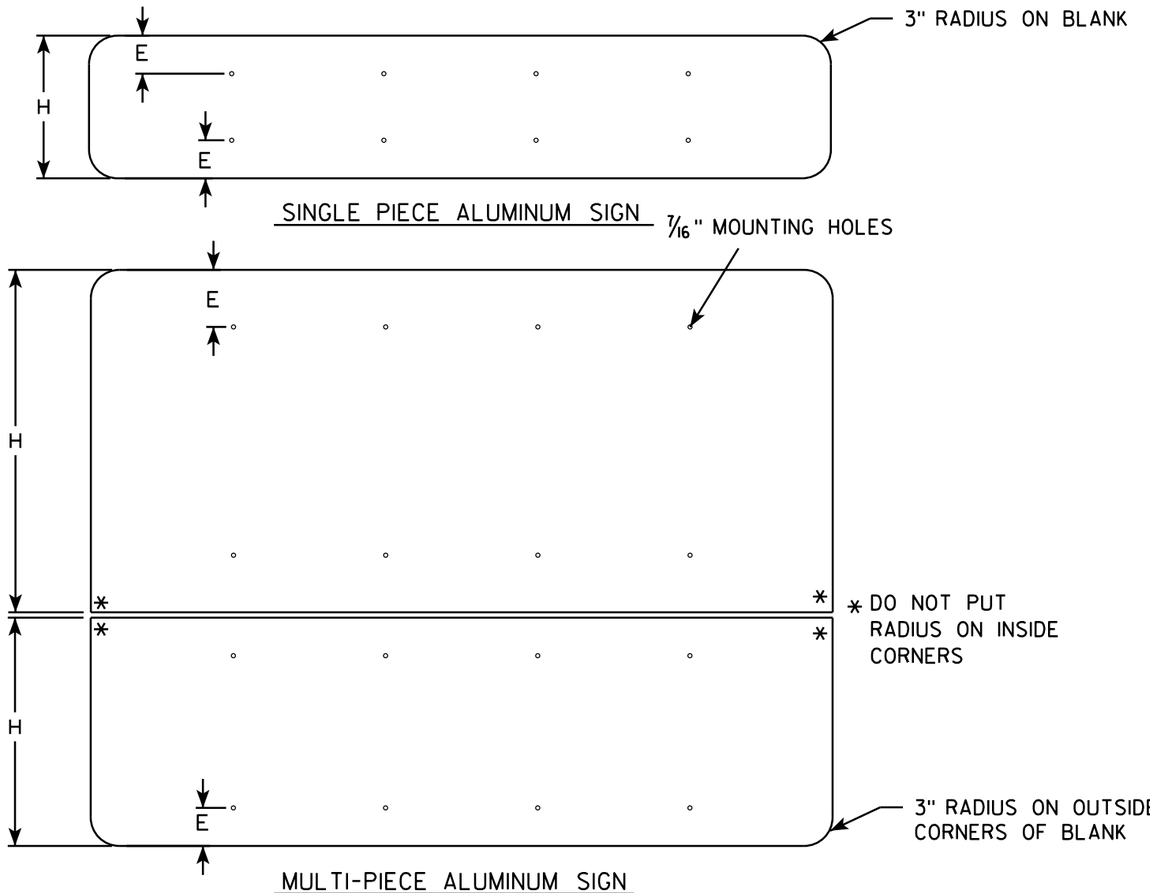
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

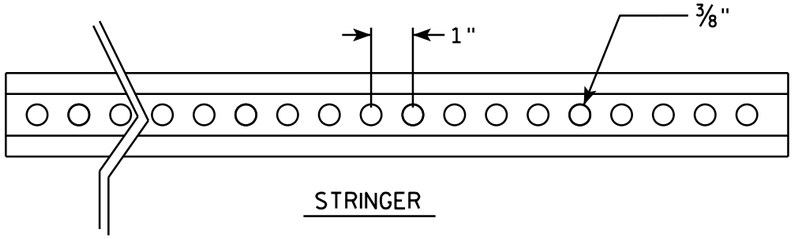
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 443	E



GENERAL NOTES

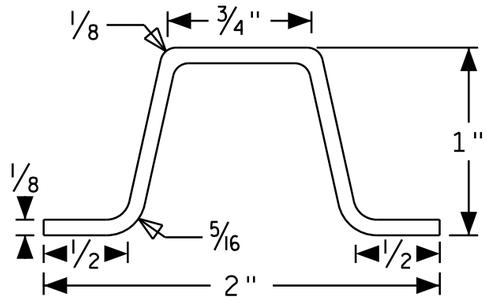
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

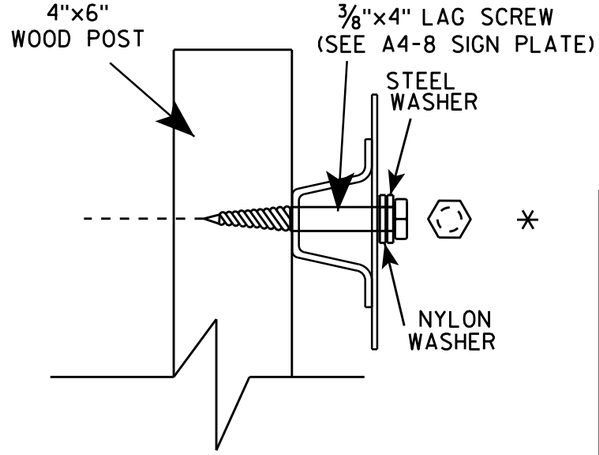


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

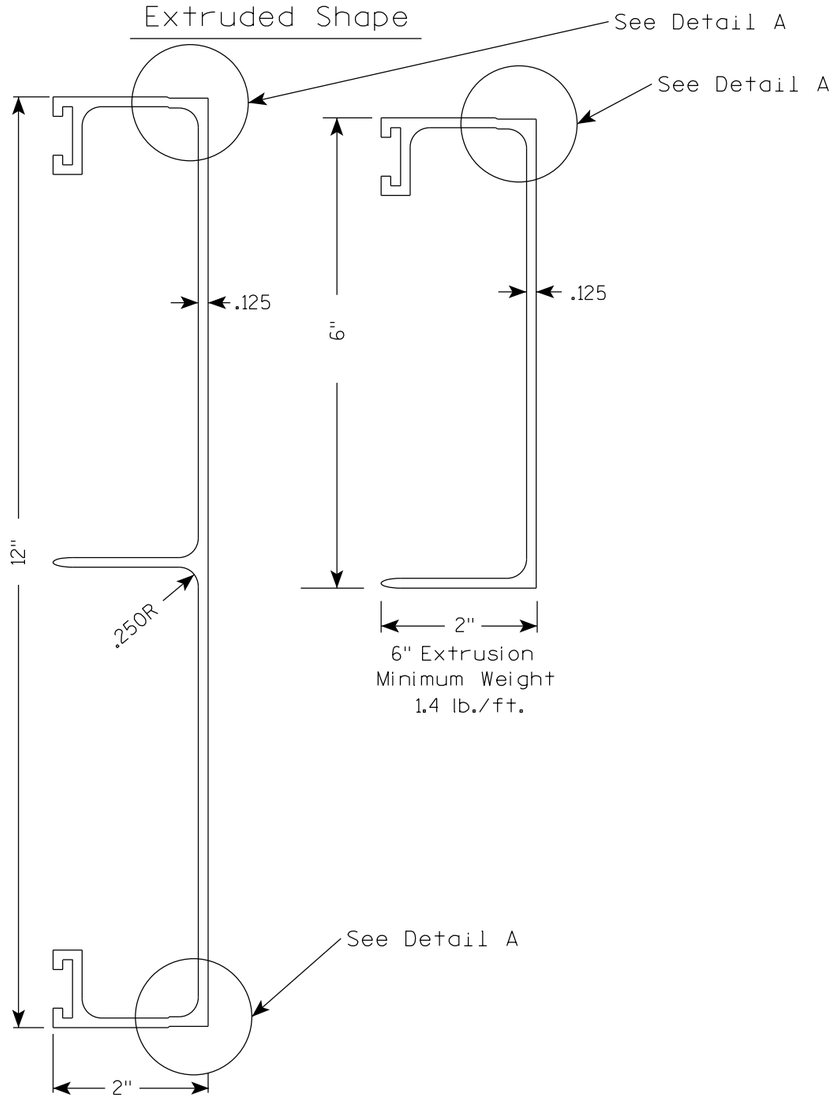
for State Traffic Engineer

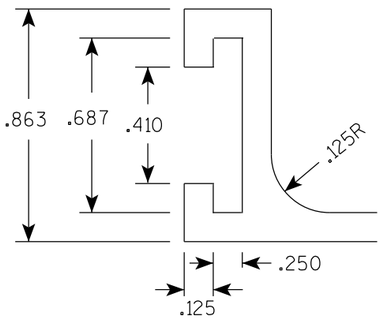
DATE 4/26/16 PLATE NO A4-18.1

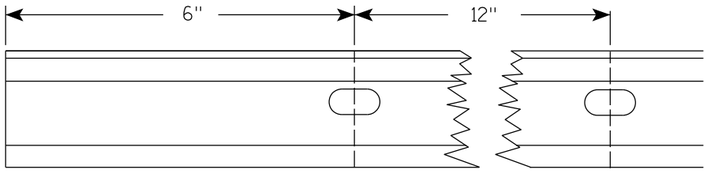
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000

Extruded Shape







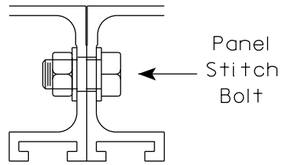
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

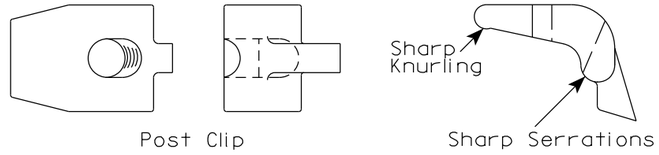
The hardware includes:

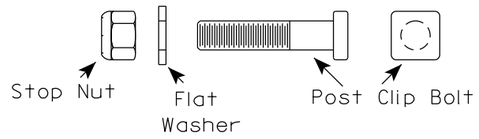
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

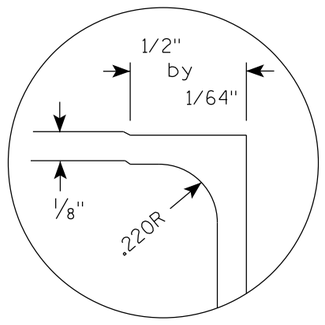
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





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

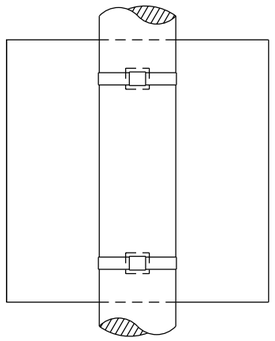
DATE 1/07/20 PLATE NO. A5-2.10

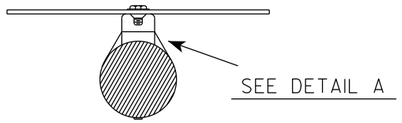
PROJECT NO:

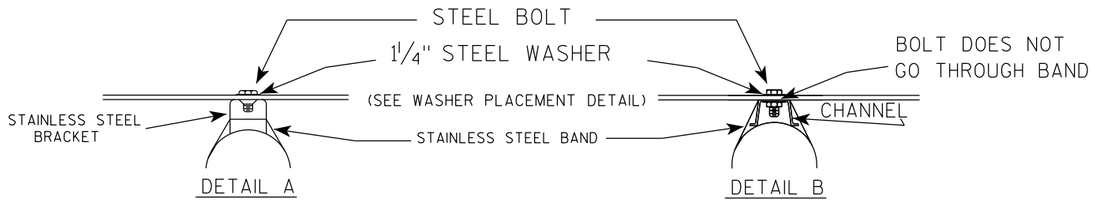
SHEET NO: 445 E

BANDING

SINGLE SIGN



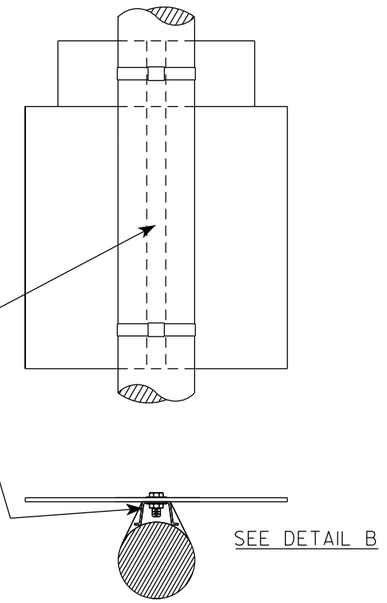




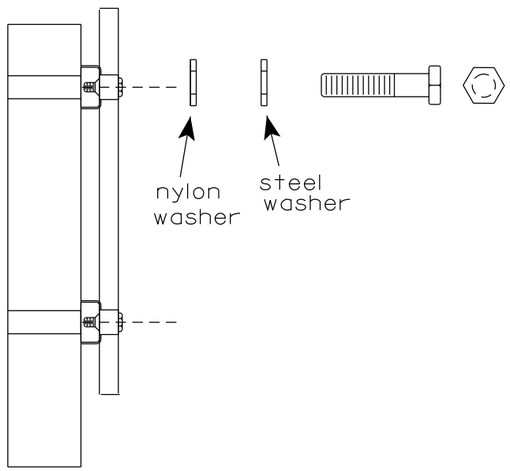
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

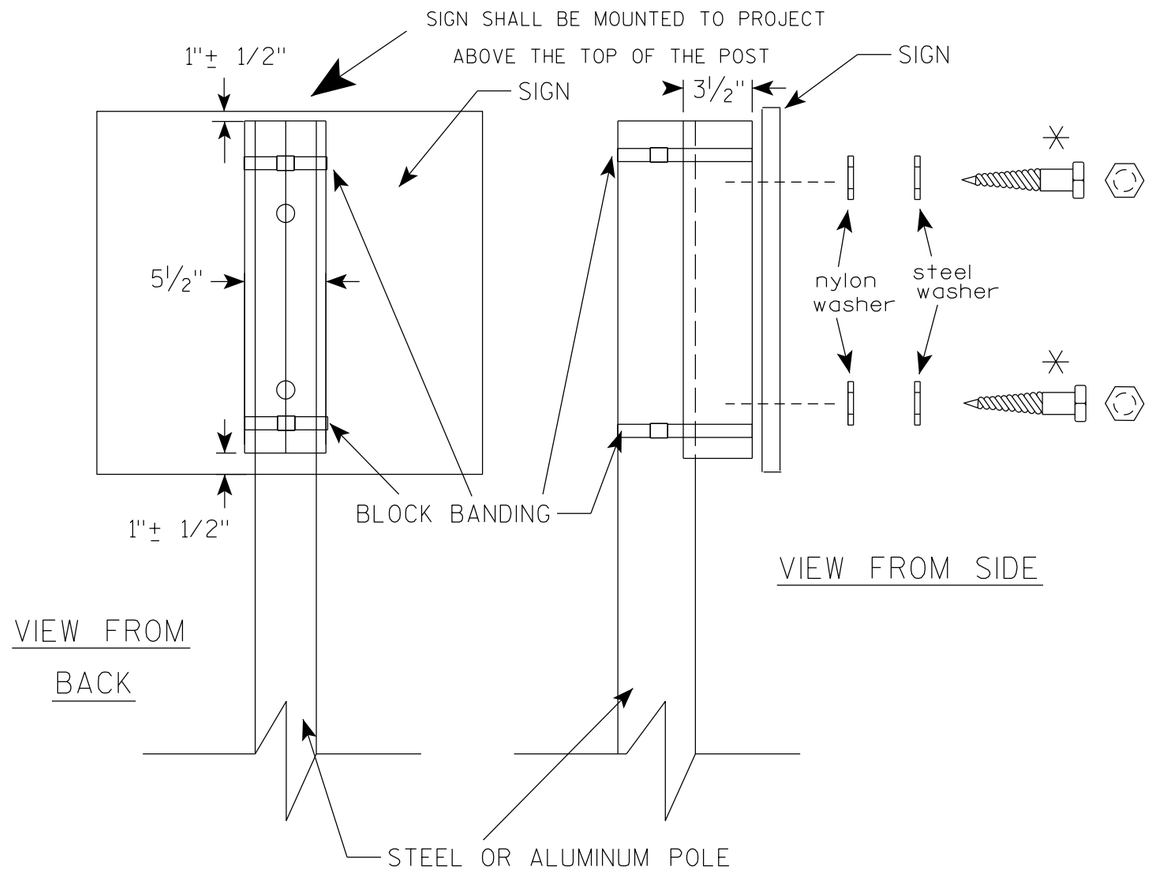
DATE 6/10/19 PLATE NO. A5-9.4

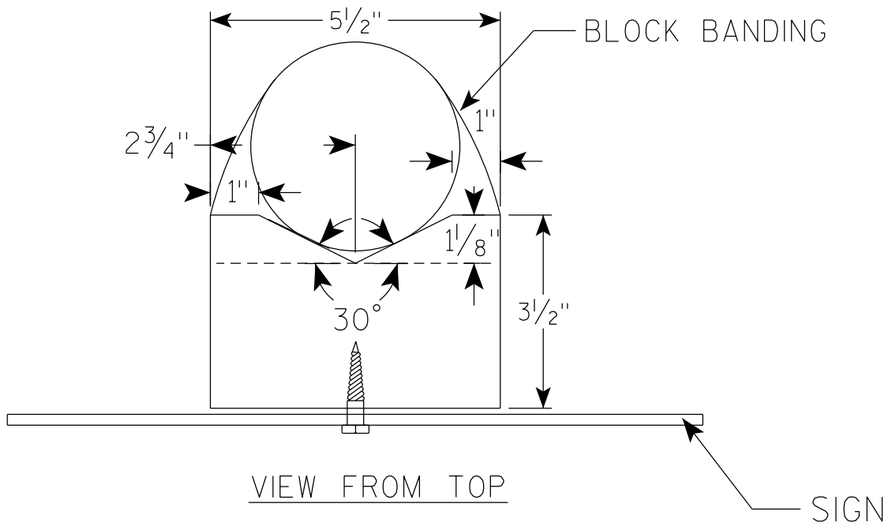
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 446	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

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GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

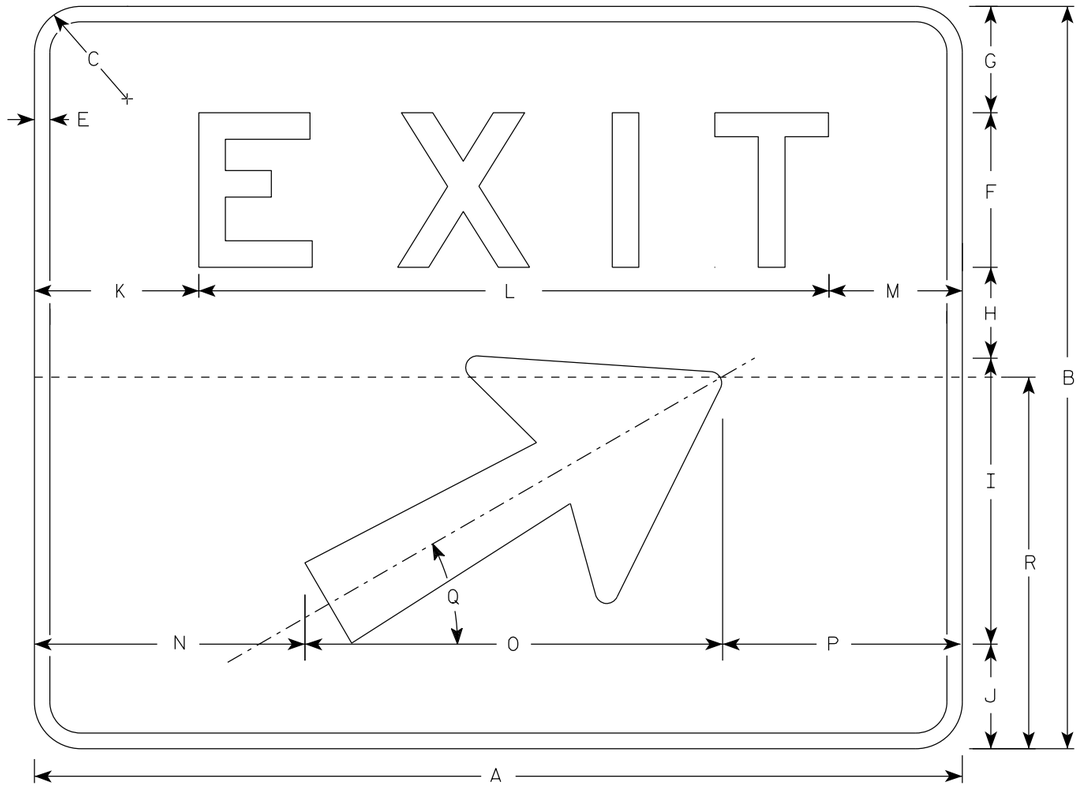
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 447 E



E5-1

NOTES

1. Sign is Type II - Type H reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E
4. Sign shall be split into two seperate pieces as shown on the detail by the dashed line (----------) for sizes 4 & 5.
5. Arrow is Type "A" from sign plate A1-1.
6. As per the Standard Spec's, this sign shall not have a vertical joint.
7. Size 3 E5-1 shall only be used in a Work Zone application with a Temporary Sign Support

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																											
2M																											
3	48	48	3		1	10	6 7/8	5 7/8	18 1/2	6 3/4	8 1/2	31 1/8	8 3/8	11 1/2	27	9 1/2	30°	30									16.0
4	60	48	3		1	10	6 7/8	5 7/8	18 1/2	6 3/4	10 5/8	40 3/4	8 5/8	17 1/2	27	15 1/2	30°	30									20.0
5	72	60	3		1	12	9 3/4	10	18 1/2	9 3/4	13 1/4	48 1/2	10 1/4	23 1/2	27	21 1/2	30°	30									30.0

STANDARD SIGN

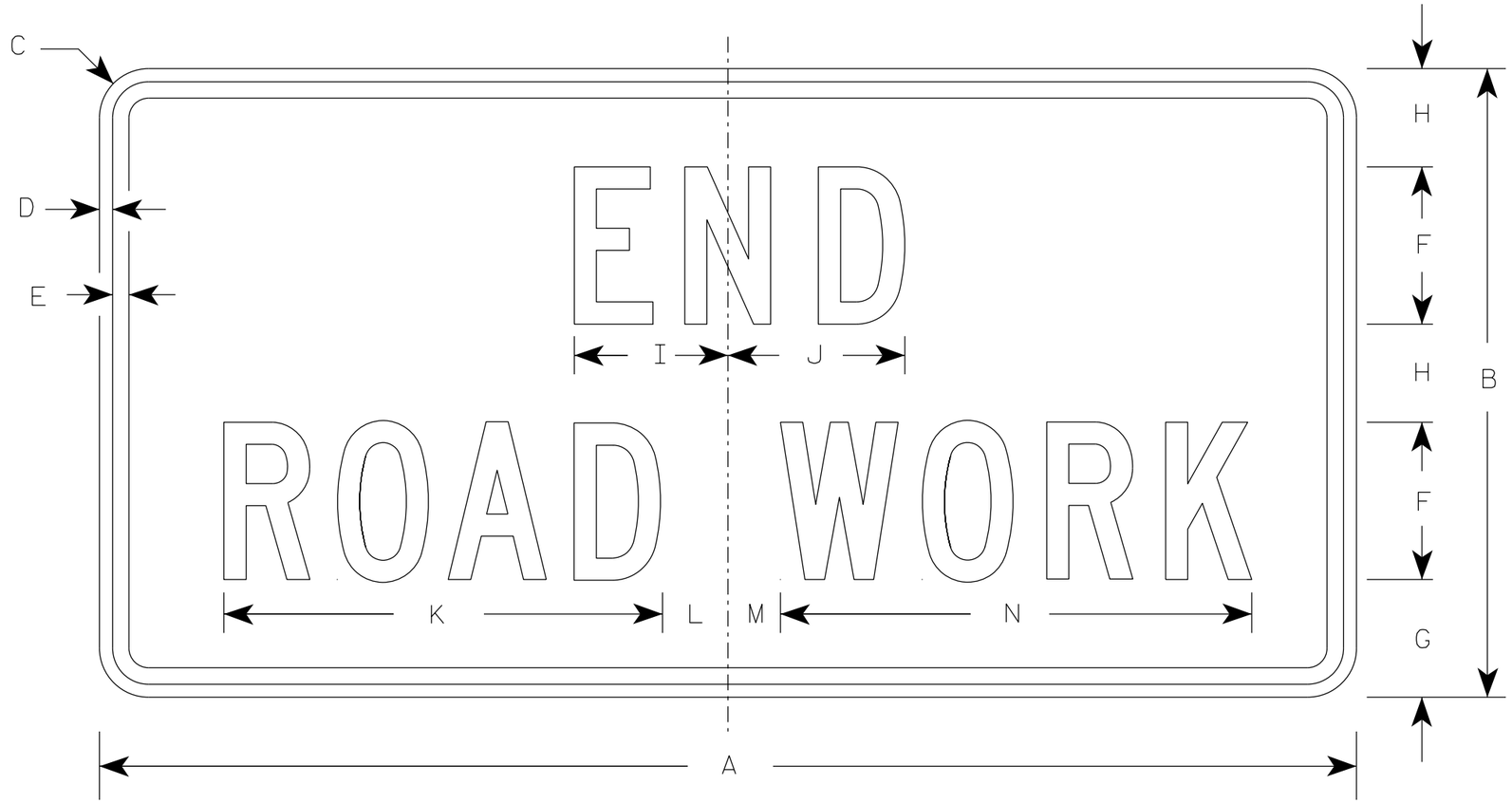
E5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. E5-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 448	E



G20-2A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 449 E

7

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - E
4. Material shall be .040 aluminmum



G20-60

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	108	24				12	6	14 7/8	78 1/4																		18.0
5																											

STANDARD SIGN
G20-60

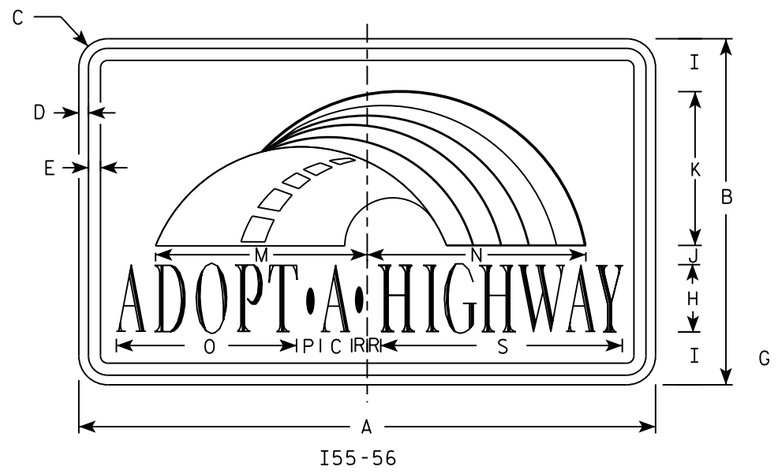
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

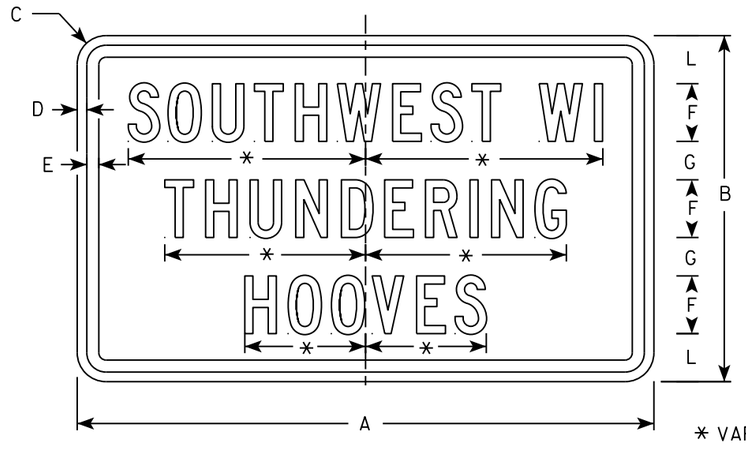
DATE 5/13/15 PLATE NO G20-60.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\G2060.DGN PLOT DATE : 13-MAY-2015 08:46 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 20.431338:1.000000
WISDOT/CADDS SHEET 42



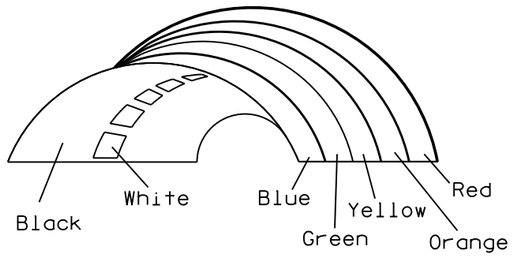
I55-56



I55-56P

* VARIES

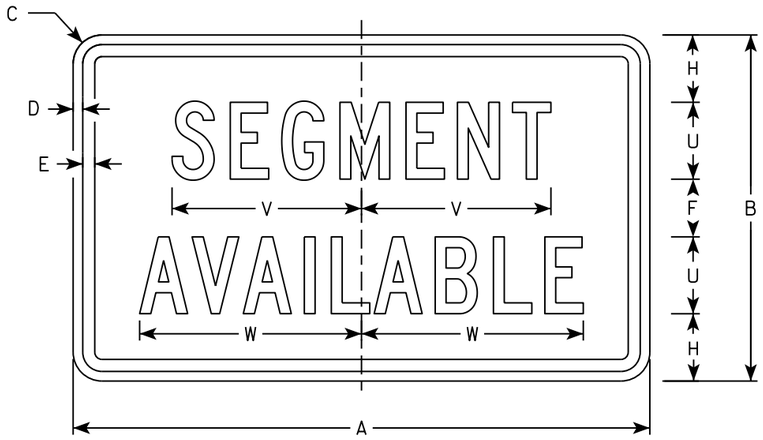
Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - (See Note 4)
3. Message Series - (See Note 5)
4. Border - Blue
   Adopt a Highway - Red
   All other Text - Blue
5. Adopt a Highway - Dutch 8011L
   All other Text - Series C
6. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.



I55-56S

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	18	1 1/2	1/2	5/8	3	2	3 1/2	2 3/4	1	8	2 1/2	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2	4	9 7/8	11 1/2				3.75
3																											
4																											
5																											

STANDARD SIGN
I55-56

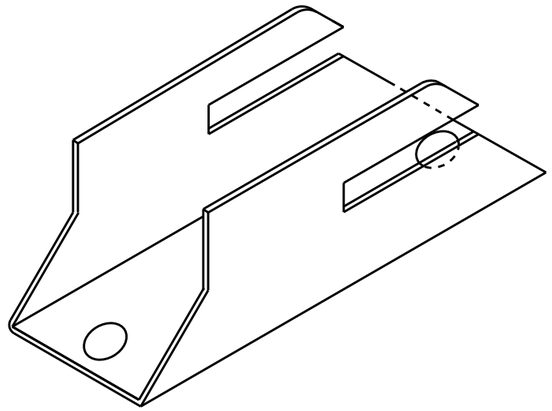
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

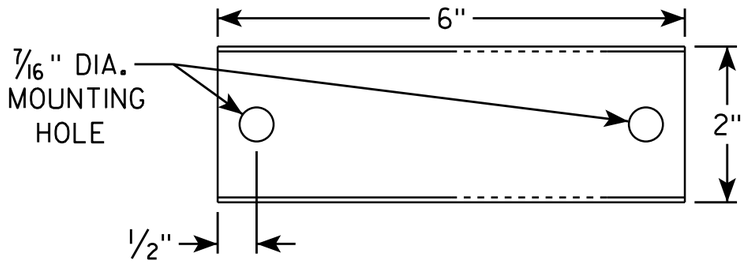
DATE 2/20/18 PLATE NO. I55-56.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 451 | E

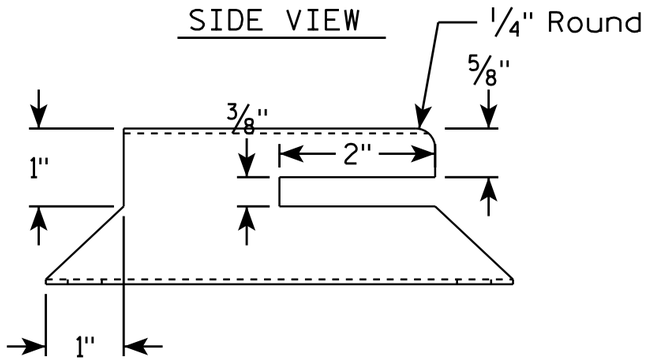
ISOMETRIC VIEW



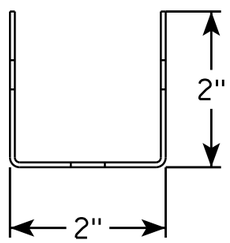
TOP VIEW



SIDE VIEW



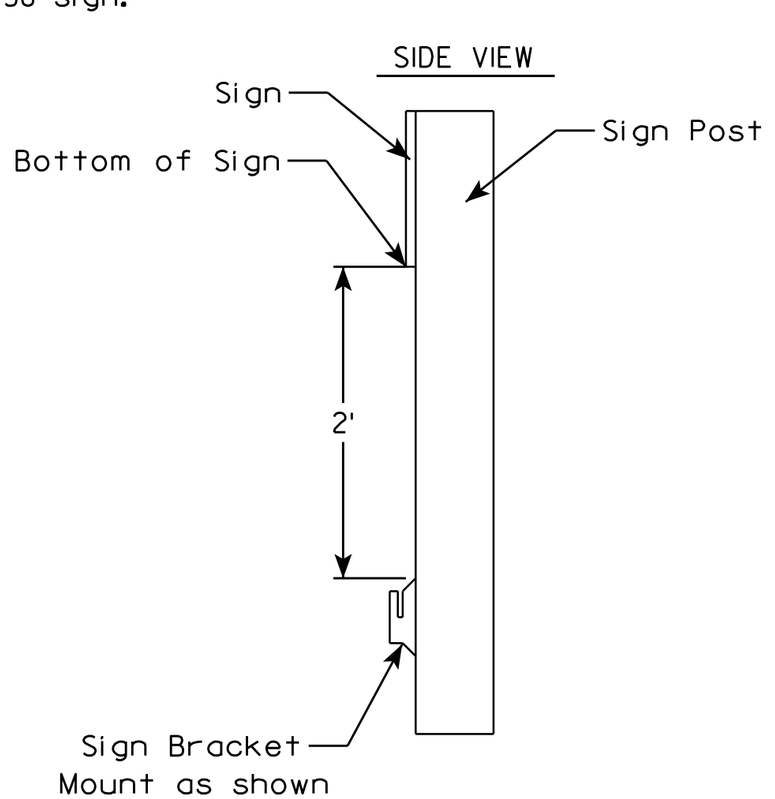
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

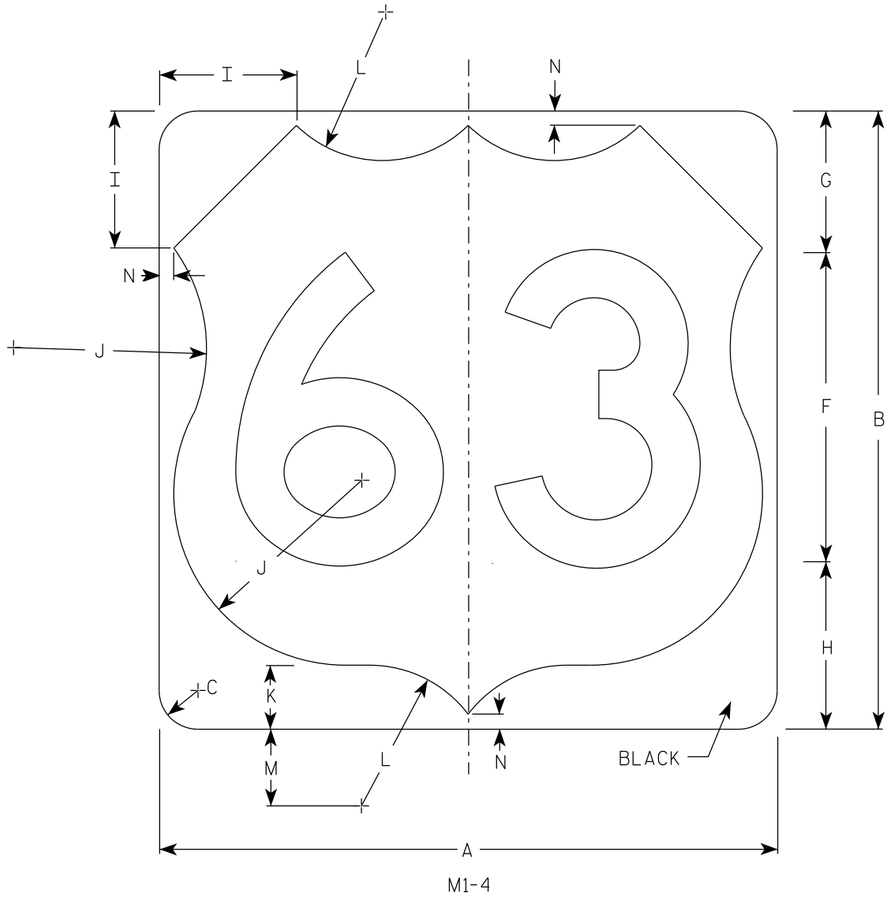
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/26/16 PLATE I55-56B.2

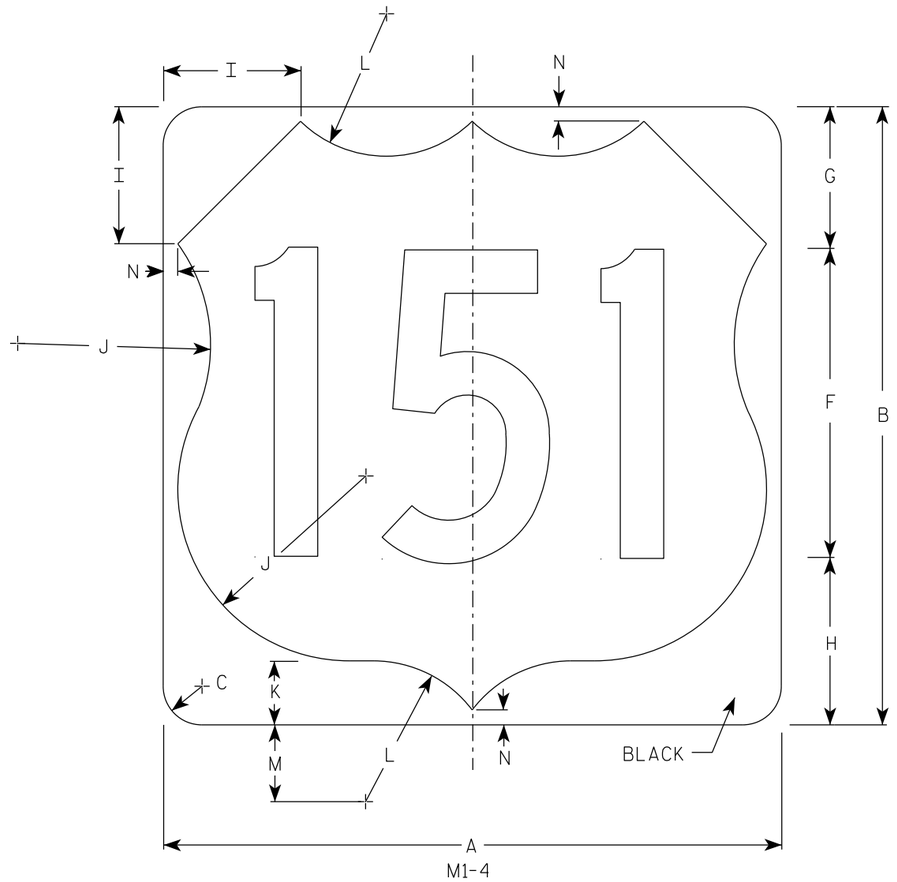
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs Series C



M1-4



M1-4

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

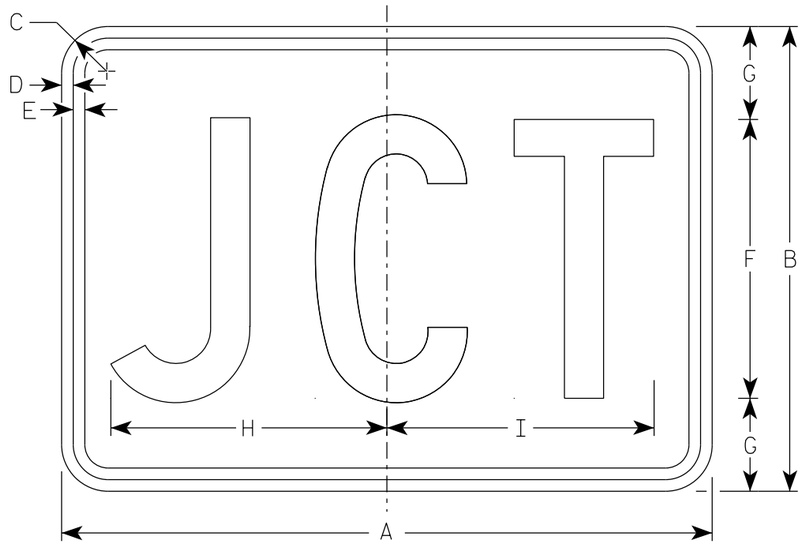
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

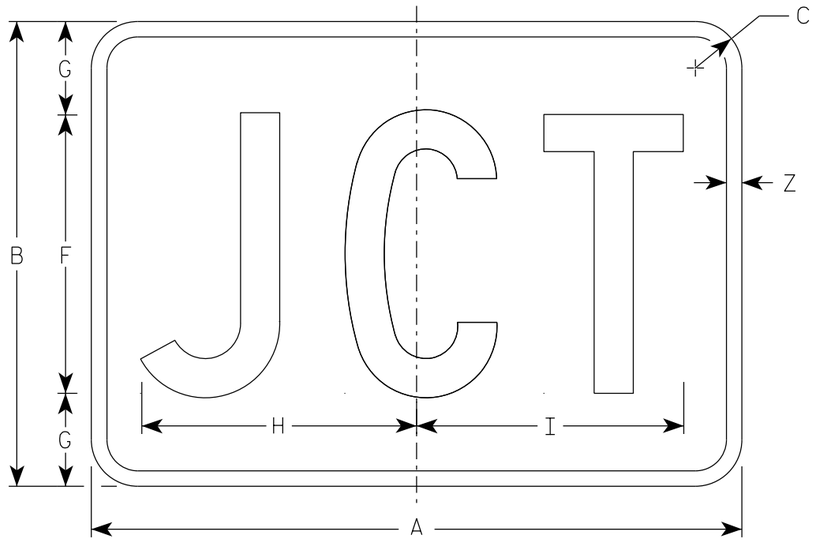
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/20/22 PLATE NO. M1-4.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 453 E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21	15	1 1/2	3/8	3/8	9	3	8 7/8	8 5/8																	1/2	2.20
2M	21	15	1 1/2	3/8	3/8	9	3	8 7/8	8 5/8																	1/2	2.20
3	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40
4	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40
5	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40

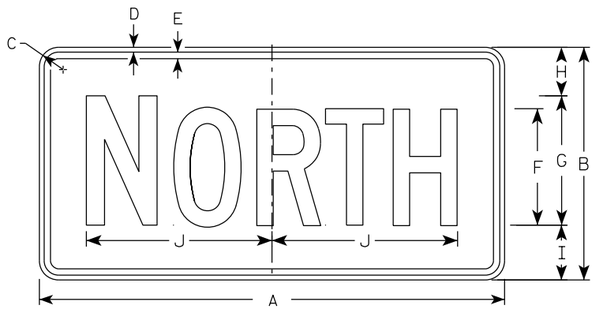
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

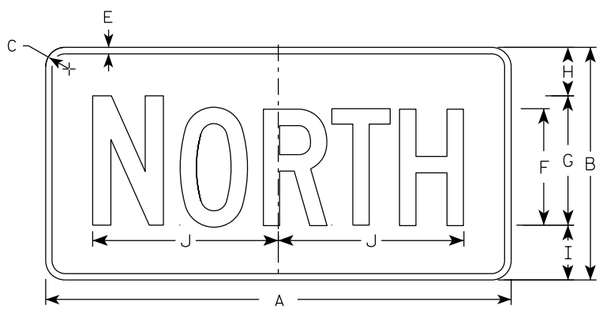
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/8/2023 PLATE NO. M2-1.14

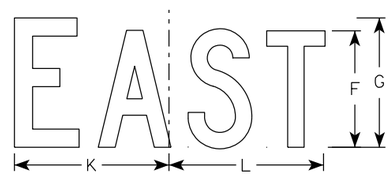
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 454 | E



M3-1
MM3-1
MP3-1



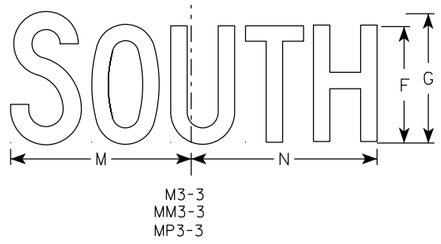
MB3-1
MK3-1
MN3-1



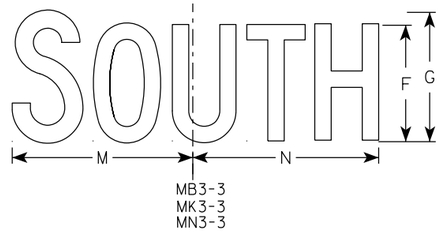
M3-2
MM3-2
MP3-2



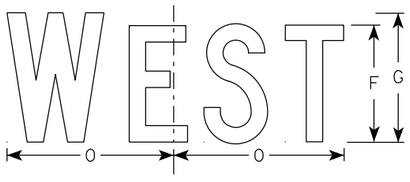
MB3-2
MK3-2
MN3-2



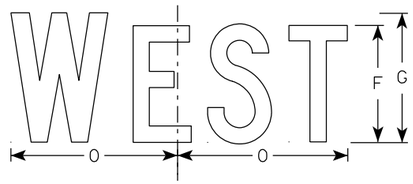
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

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

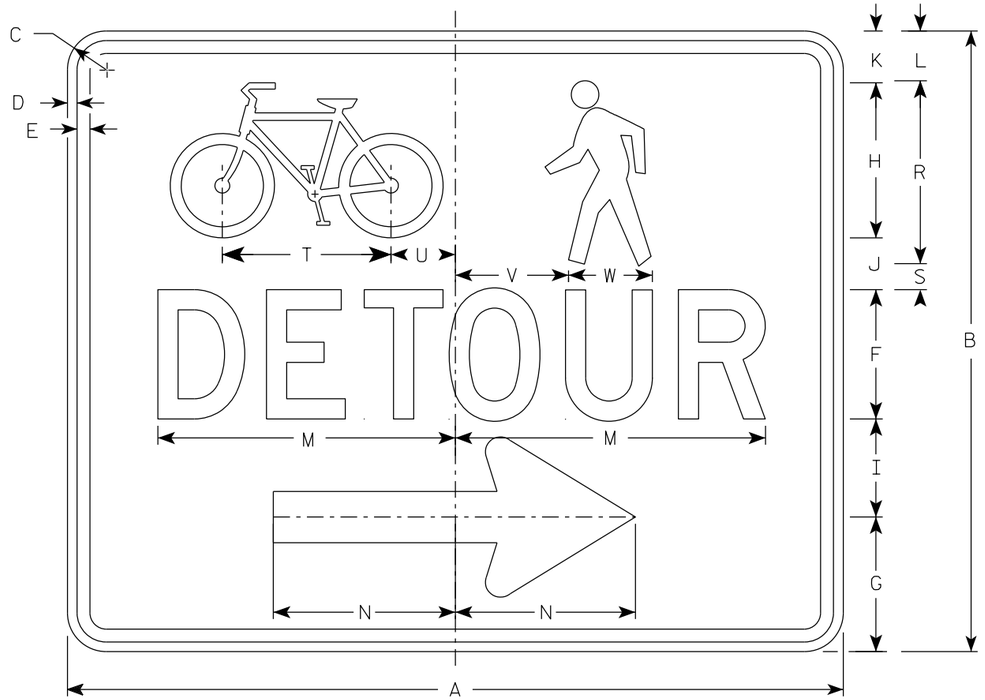
STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

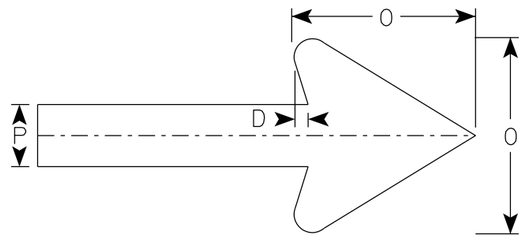
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 455 | E



M4-9AR

NOTES

1. Sign is Type II-Type F Reflective
2. Color:
   Background - Orange
   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. M4-9AL is the same as M4-9AR except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 1/2	3/8	1/2	5	5 1/4	6	3 3/4	2	2	1 7/8	11 3/4	7	6	2		7 1/8	1	6 1/2	2 1/2	4 3/8	3 1/4				5.00
2M	30	24	1 1/2	3/8	1/2	5	5 1/4	6	3 3/4	2	2	1 7/8	11 3/4	7	6	2		7 1/8	1	6 1/2	2 1/2	4 3/8	3 1/4				5.00
3																											
4																											
5																											

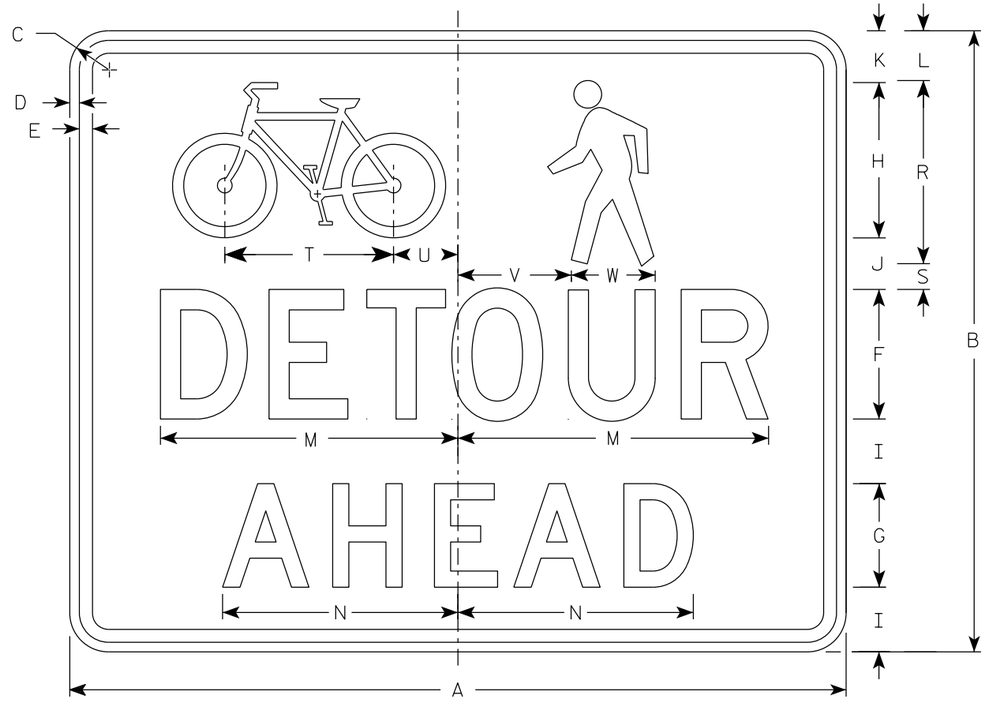
STANDARD SIGN
M4-9A L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9A.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 456	E



M4-9AA

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   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.

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	30	24	1 1/2	3/8	1/2	5	4	6	2 1/2	2	2	1 7/8	11 3/4	9 1/8				7 1/8	1	6 1/2	2 1/2	4 3/8	3 1/4				5.00
2M	30	24	1 1/2	3/8	1/2	5	4	6	2 1/2	2	2	1 7/8	11 3/4	9 1/8				7 1/8	1	6 1/2	2 1/2	4 3/8	3 1/4				5.00
3																											
4																											
5																											

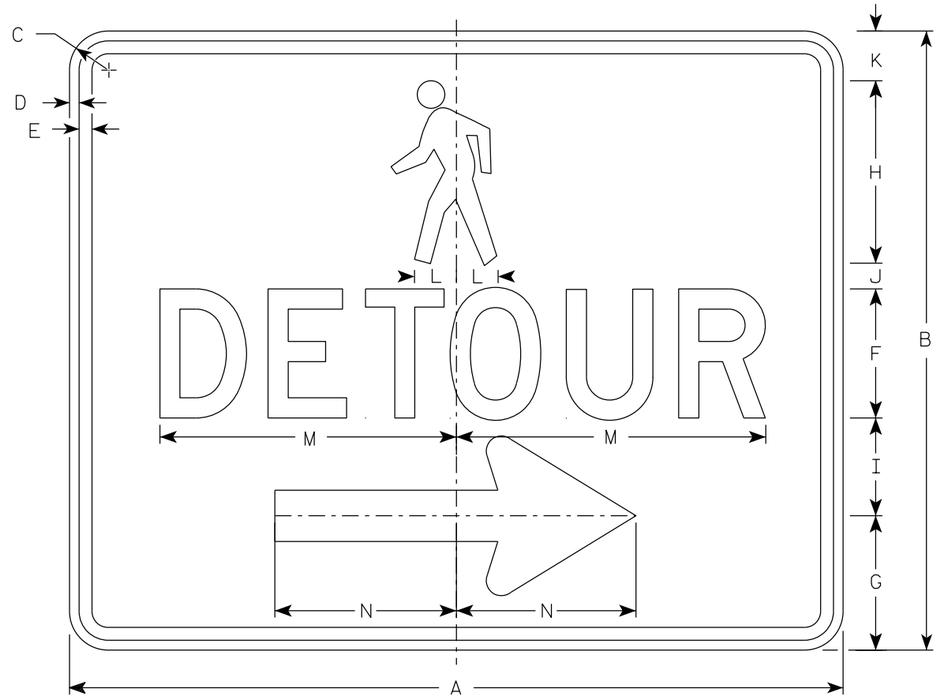
STANDARD SIGN
M4-9AA

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9AA.3

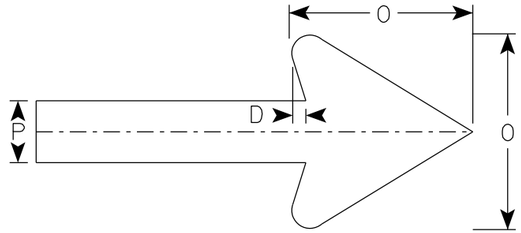
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 457 | E



M4-9BR

NOTES

1. Sign is Type II-Type F Reflective
2. Color:
   Background - Orange
   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. M4-9BL is the same as M4-9BR except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 1/2	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.0
2M	30	24	1 1/2	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.0
3																											
4																											
5																											

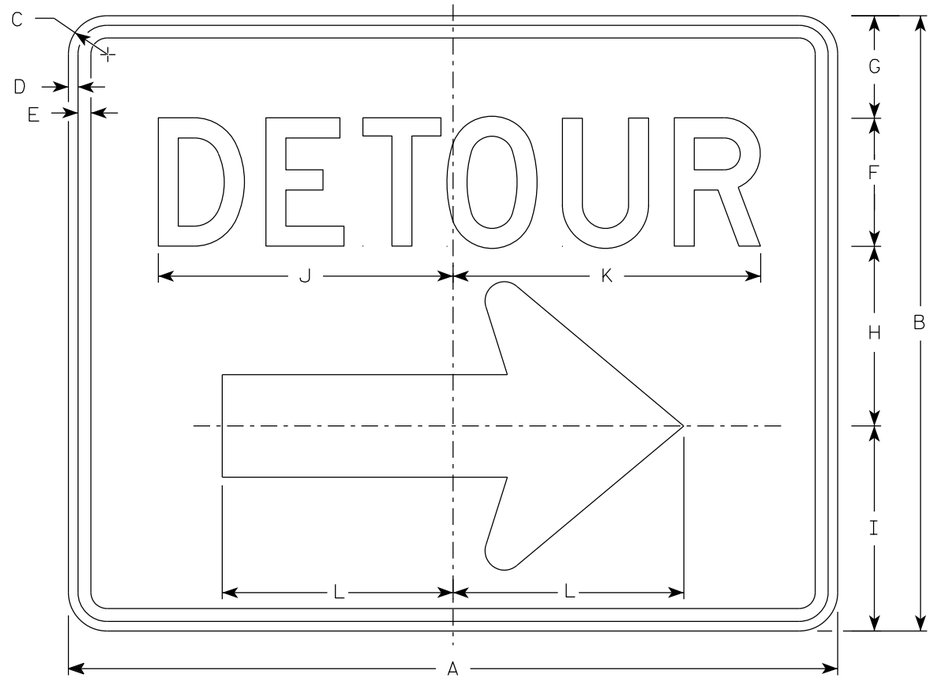
STANDARD SIGN
M4-9B L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9B.4

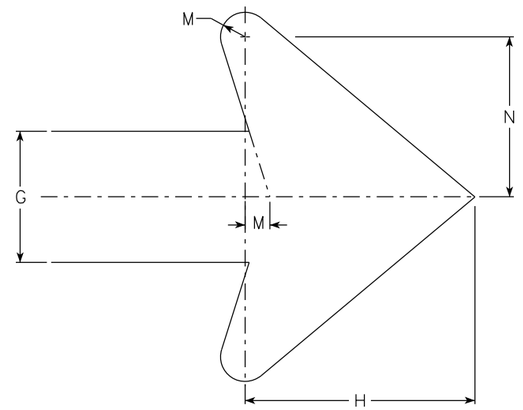
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 458 | E



M4-9R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   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.
4. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
2M	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 7/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 7/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

STANDARD SIGN
M4-9 R & L

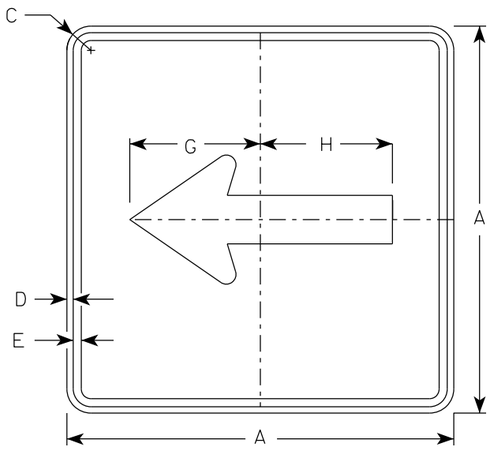
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

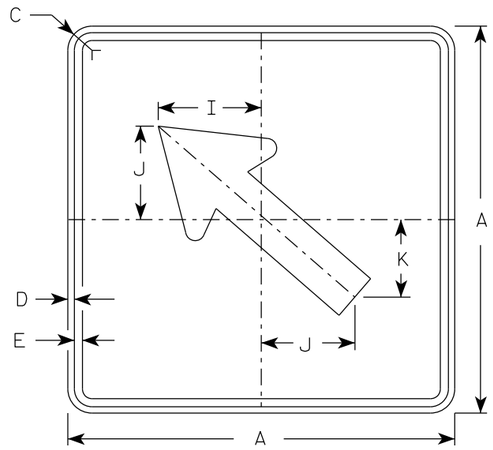
DATE 2/9/2023 PLATE NO. M4-9R.6

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

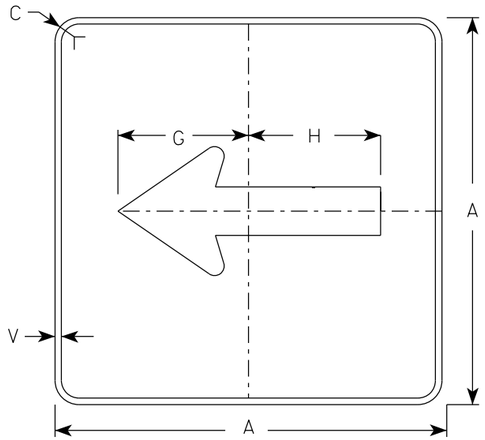
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M49R.dgn PLOT DATE : 21-MARCH 2023 1:40 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



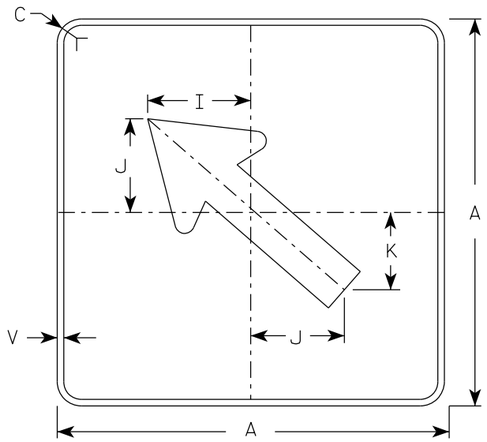
M6-1
MM6-1
MO6-1
MP6-1



M6-2
MM6-2
MO6-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1

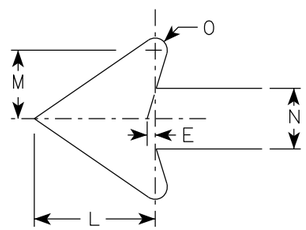


MB6-2
MK6-2
MN6-2
MR6-2

NOTES

1. Signs are Type II - Type H Reflective except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow

ARROW DETAIL



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
4	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
5	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

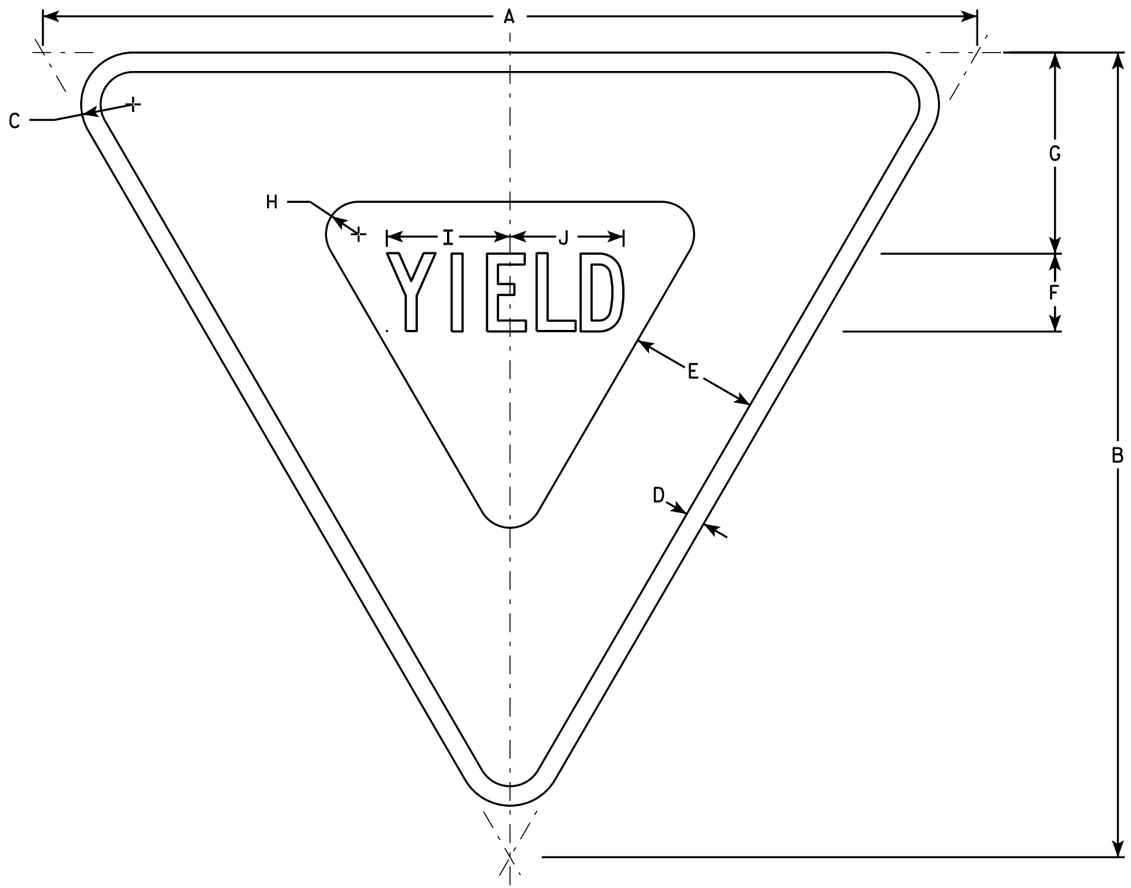
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/13/2023 PLATE NO. M6-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 460 | E

7

7



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

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	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

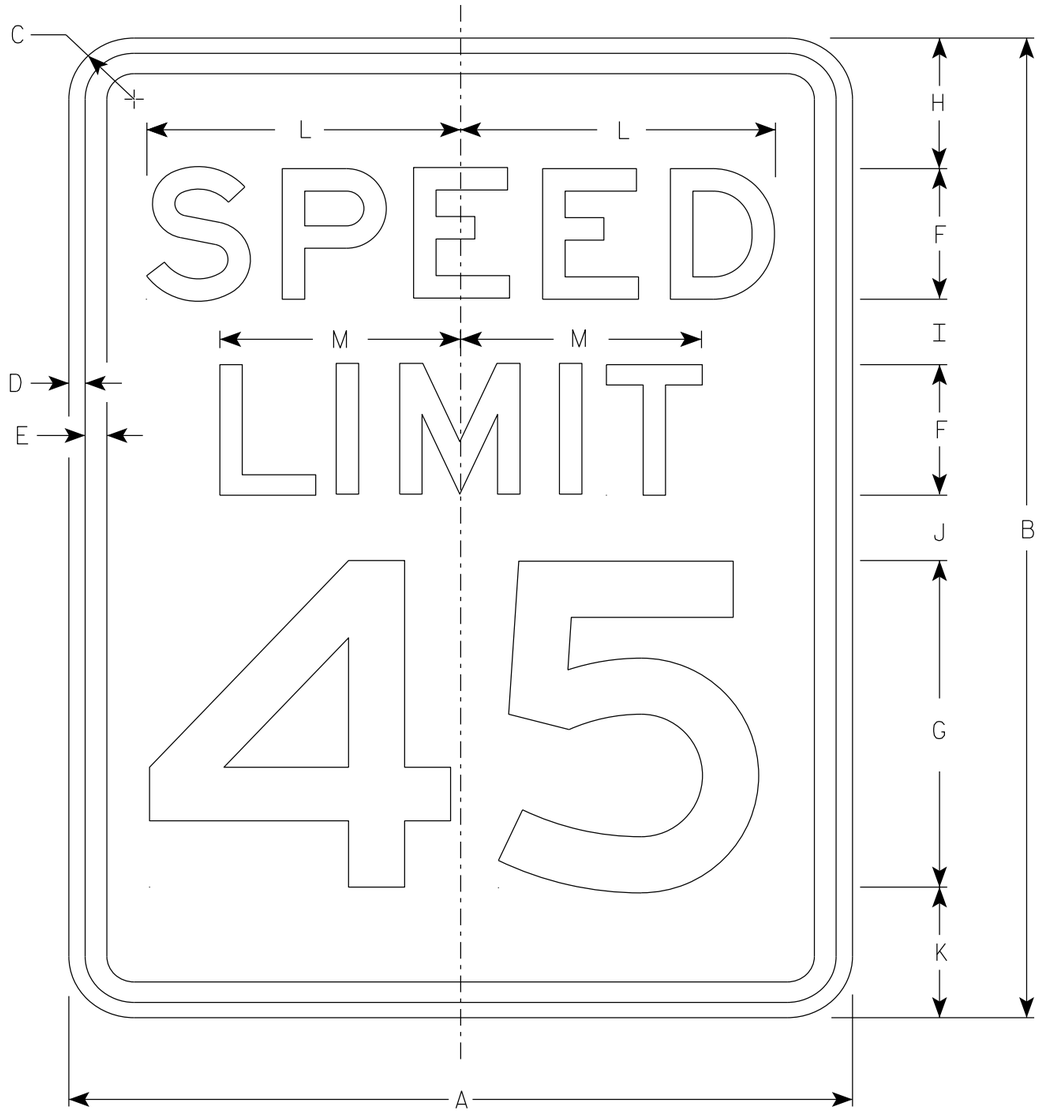
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE P1-2.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



R2-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/2	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/2	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 7/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	3	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

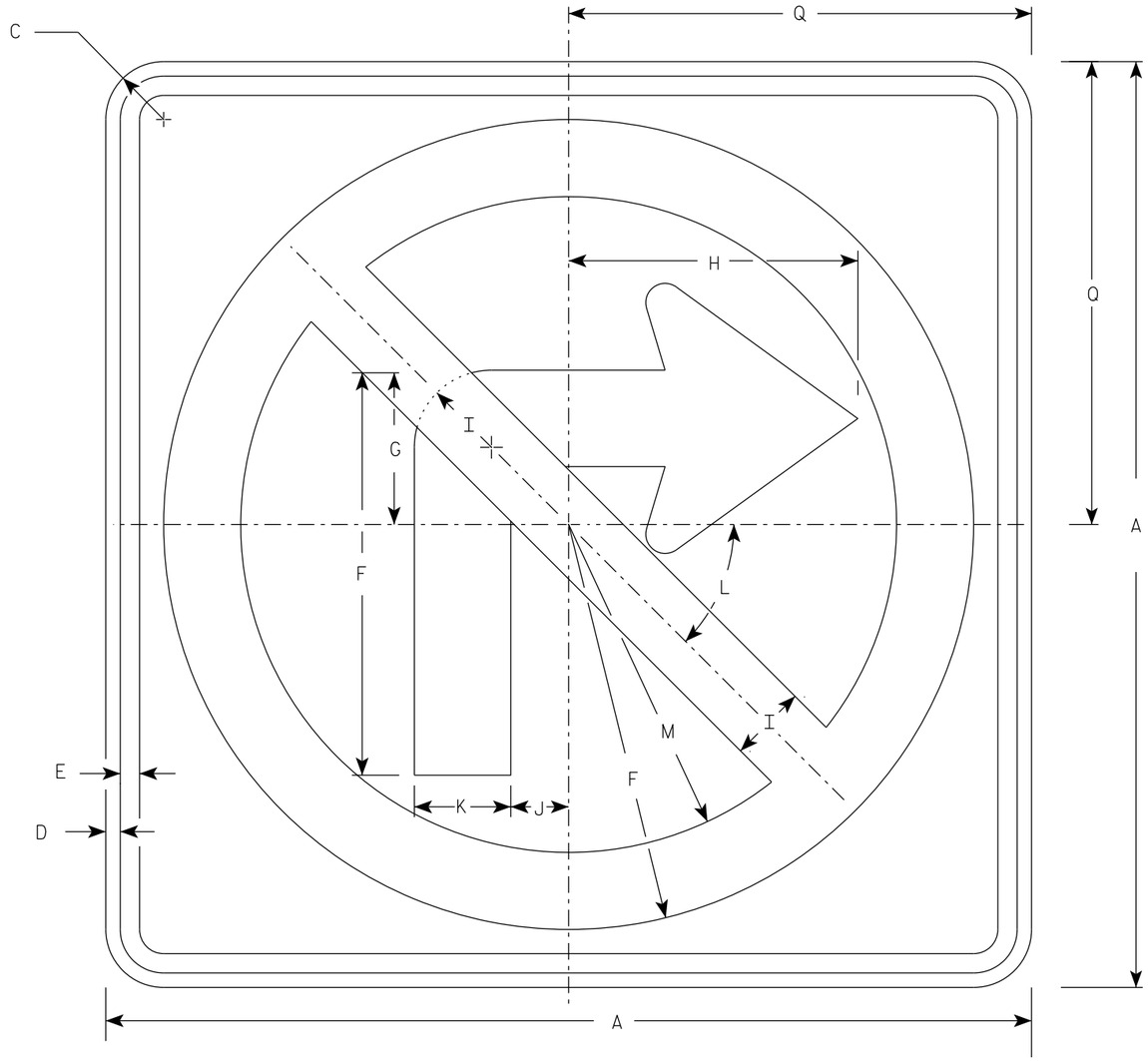
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/23 PLATE NO. R2-1.14

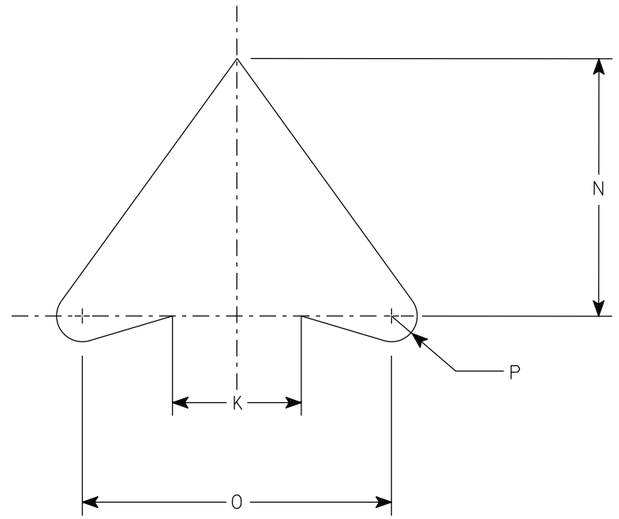
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 462 | E



R3-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 ½	⅜	½	10 ½	4	7 ½	2	1 ½	2 ½	45	8 ½	5	6	½	12										4.0
2S	24		1 ½	⅜	½	10 ½	4	7 ½	2	1 ½	2 ½	45°	8 ½	5	6	½	12										4.0
2M	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45	12 ¾	7 ½	9	¾	18										9.0
3	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45	12 ¾	7 ½	9	¾	18										9.0
4	36		2 ¼	⅝	¾	15 ¾	6	11 ¼	3	2 ¼	3 ¾	45°	12 ¾	7 ½	9	¾	18										9.0
5	48		2 ¼	¾	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

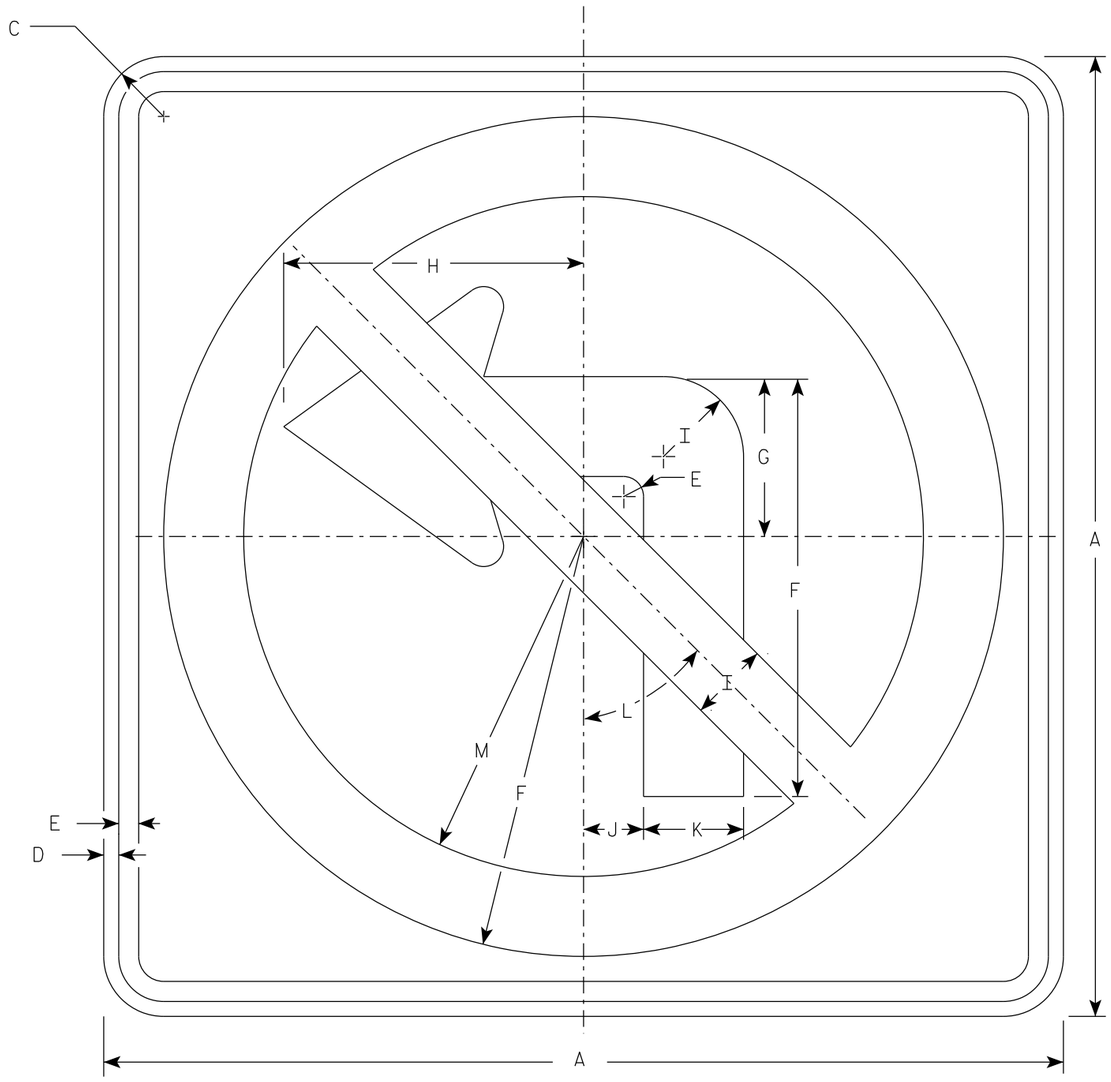
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/2/23 PLATE NO. R3-1.6

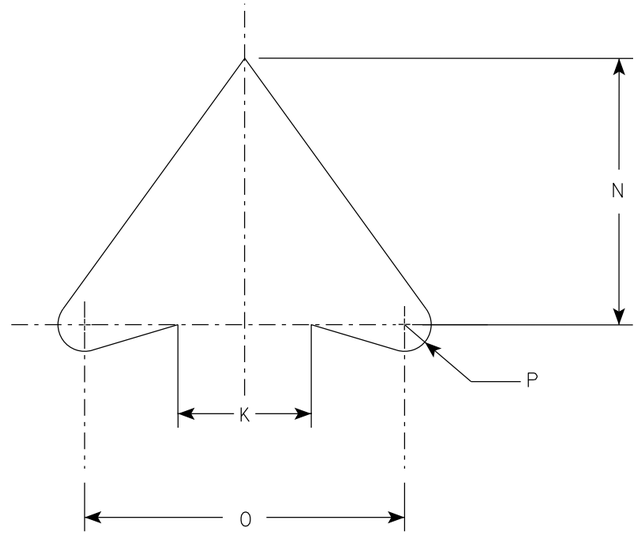
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 463 | E



R3-2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/2	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		2 1/4	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		2 1/4	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		2 1/4	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

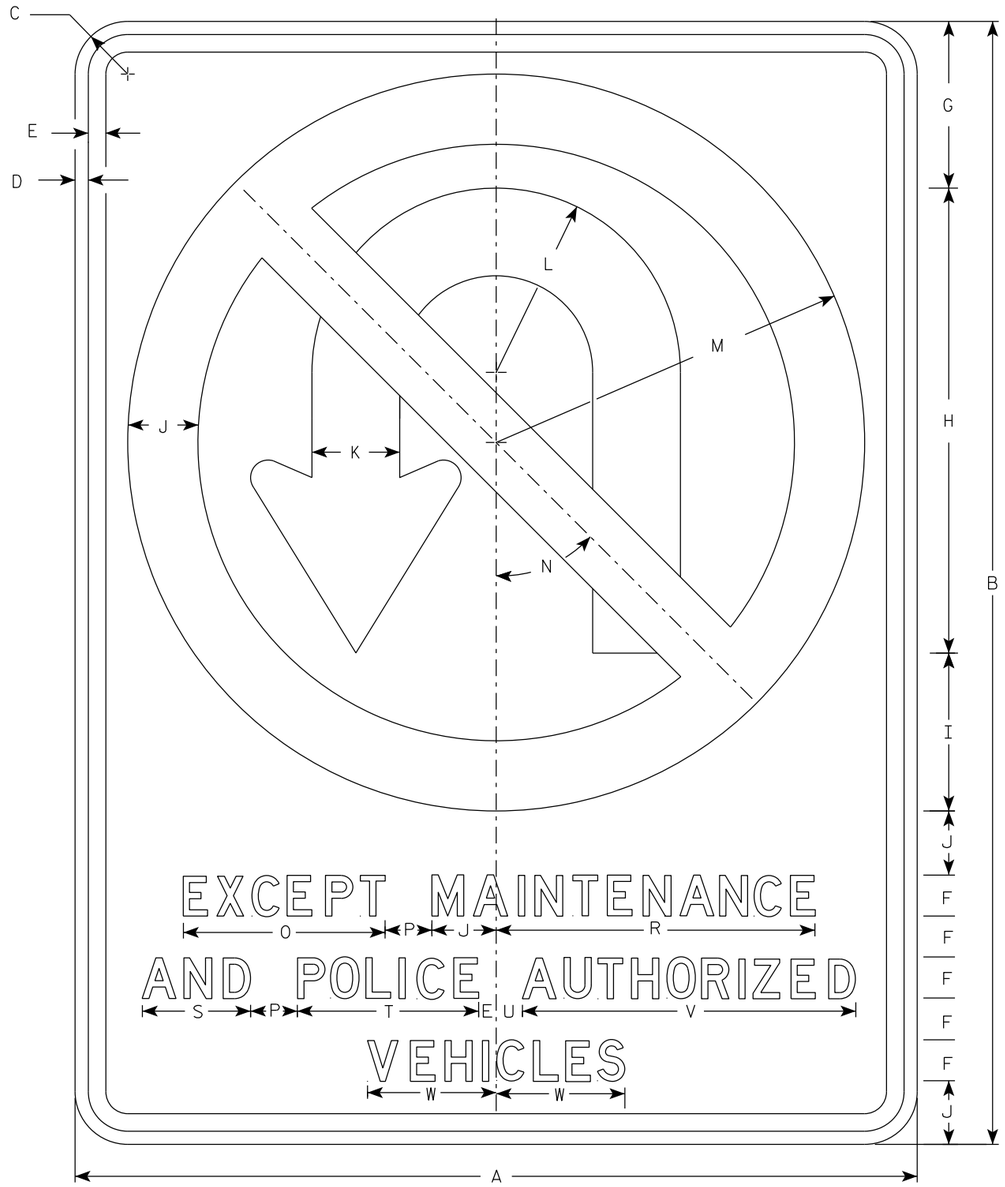
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/2/23 PLATE NO. R3-2.11

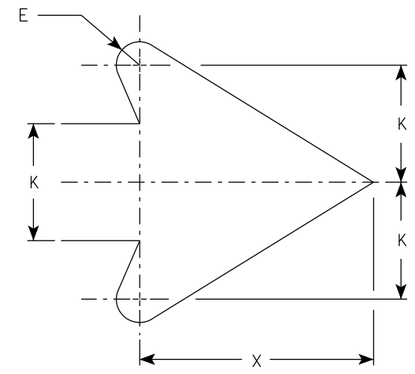
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 464 | E



R3-4B

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - See note 4
3. Message Series - D
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36	48	1 7/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0
5	36	48	1 7/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0

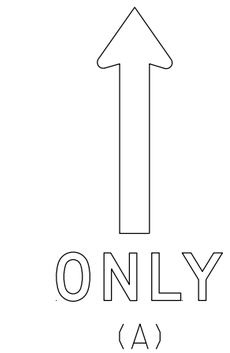
STANDARD SIGN
R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/26/24 PLATE NO. R3-4B.3

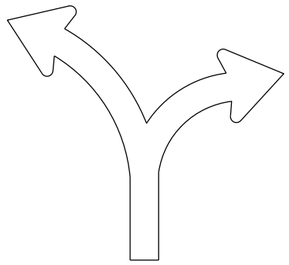
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 465 | E



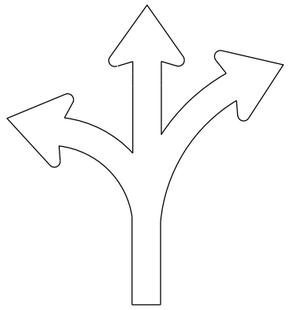
(A)



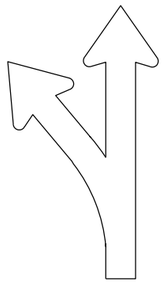
(B)



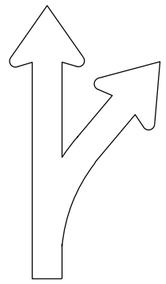
(C)



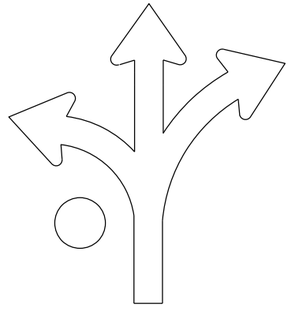
(D)



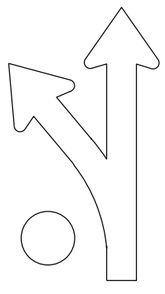
(E)



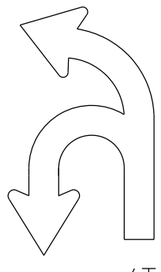
(F)



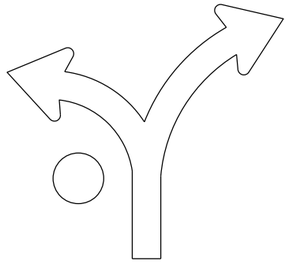
(G)



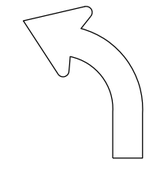
(H)



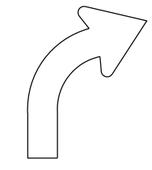
(I)



(J)



(L)



(R)

NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
   Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1 Letter =	3.75 sq ft	for Size 2
	6.0 sq ft	for Size 3
	10.0 sq ft	for Size 4 or 5
2 Letters =	7.5 sq ft	for Size 2
	12.0 sq ft	for Size 3
	20.0 sq ft	for Size 4 or 5
3 Letters =	11.25 sq ft	for Size 2
	18.0 sq ft	for Size 3
	30.0 sq ft	for Size 4 or 5
4 Letters =	15.0 sq ft	for Size 2
	24.0 sq ft	for Size 3
	40.0 sq ft	for Size 4 or 5
5 Letters =	18.75 sq ft	for Size 2
	30.0 sq ft	for Size 3
	50.0 sq ft	for Size 4 or 5
6 Letters =	22.5 sq ft	for Size 2
	36.0 sq ft	for Size 3
	60.0 sq ft	for Size 4 or 5

6. When letters C,D,G,J are used on the Left or Right end of the sign the Sq. Ft. changes.
   Add the amounts when these letters are used:
   1.25 sq ft for Size 2
   1.5 sq ft for Size 3
   2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

7

7

PROJECT NO:

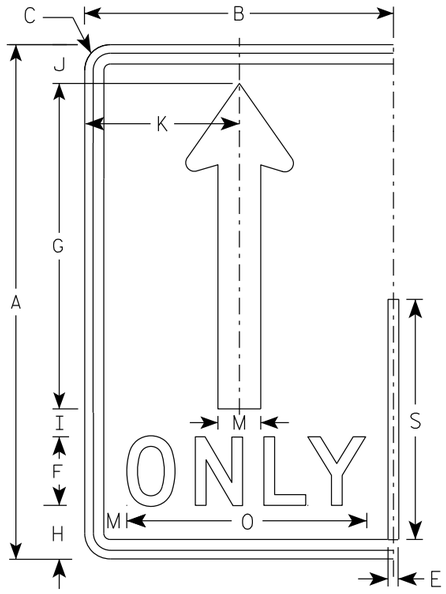
SHEET NO: 466 E

FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn PLOT DATE : 14-FEB 2023 3:01 PLOT BY : mscj9h PLOT NAME :

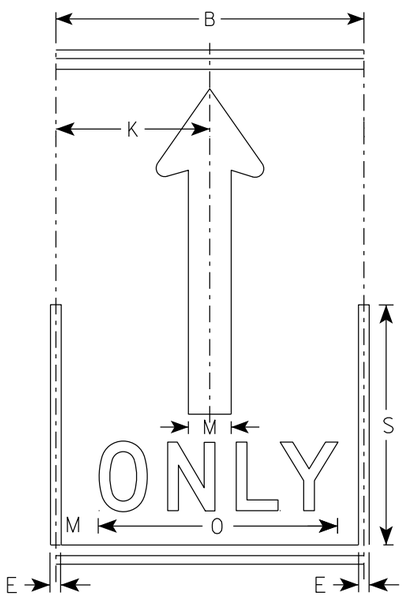
WISDOT/CADDS SHEET 42

NOTES

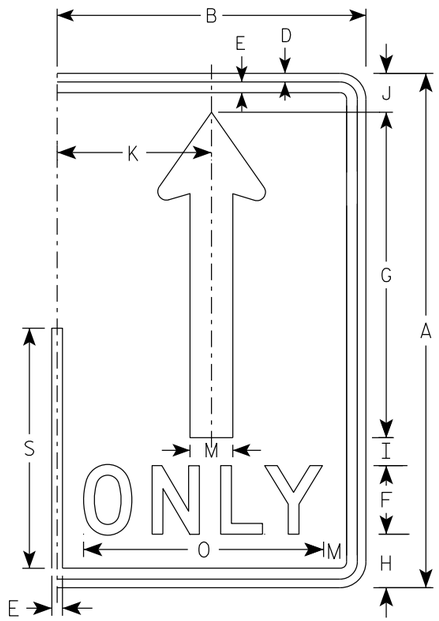
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



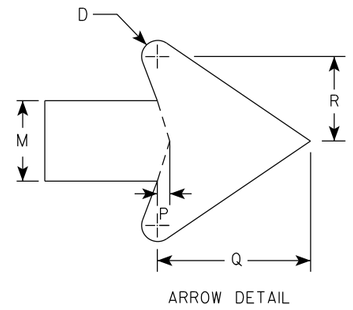
(A)



(A)



(A)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 1/2	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 1/2	1/2	5/8	5	22 3/4	3 3/4	1 3/4	2 3/4	12		3		17 5/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

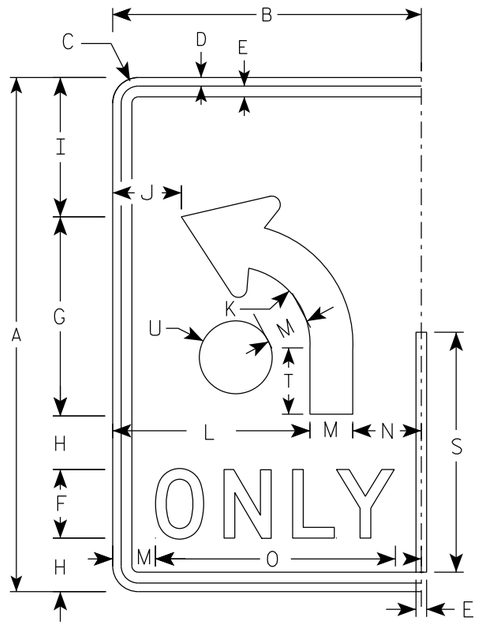
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

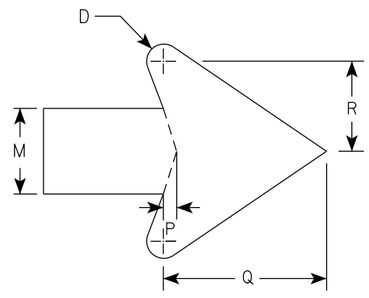
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 467 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
   Message Series - D



(B)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
2M	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
3	36	24	1 1/2	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8	2 1/2						6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

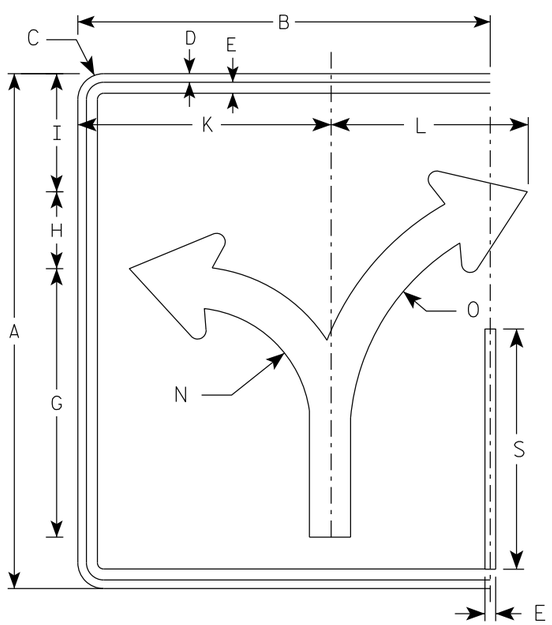
DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

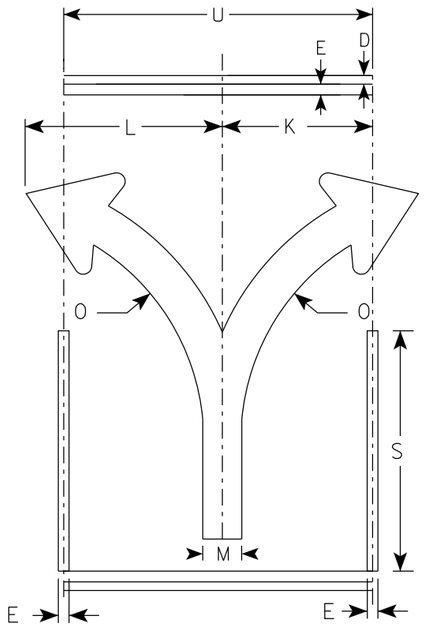
SHEET NO: 468 E

NOTES

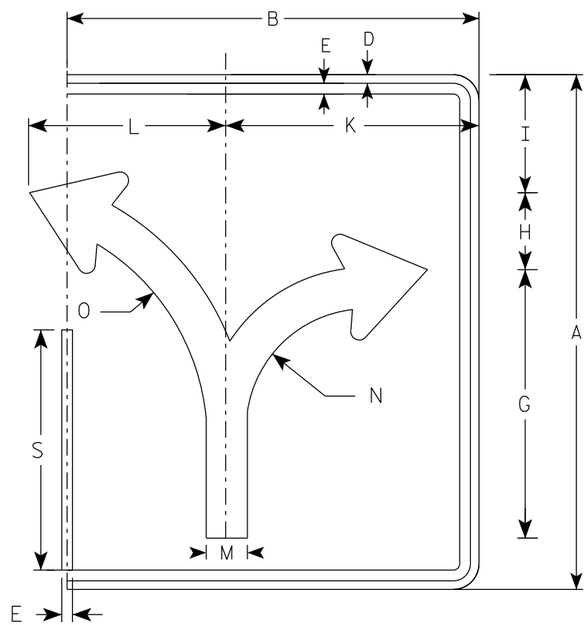
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



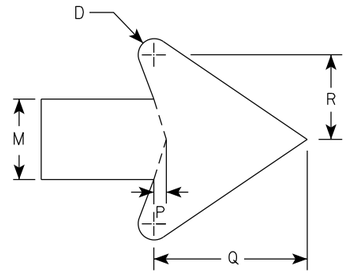
(C)



(C)



(C)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

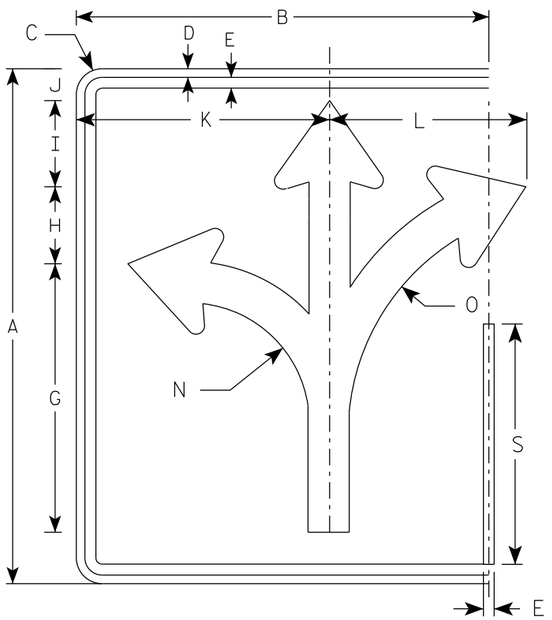
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 469 | E

7

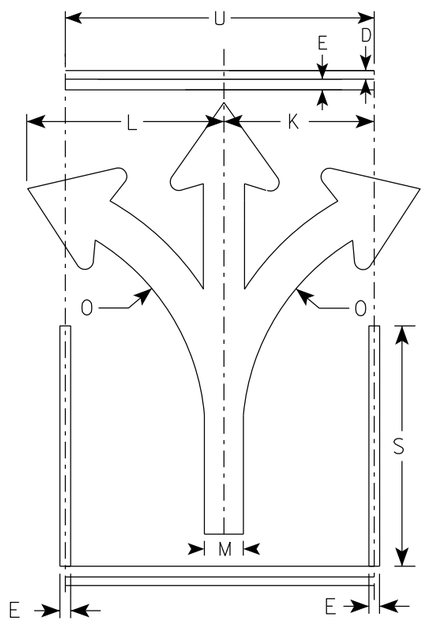
7

NOTES

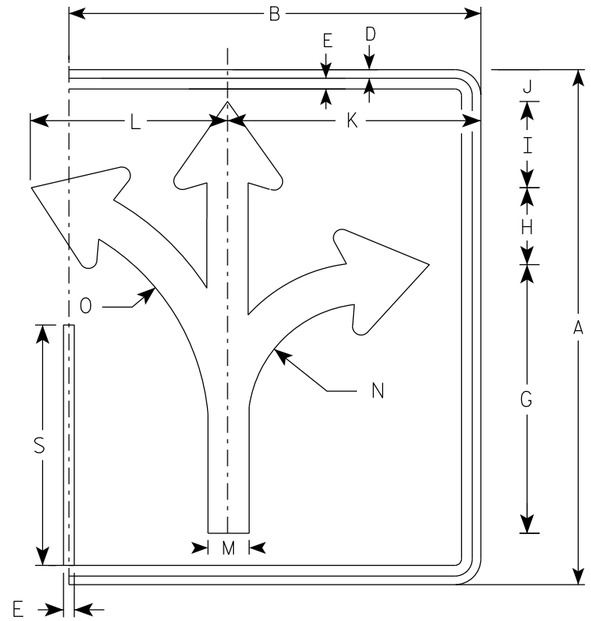
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



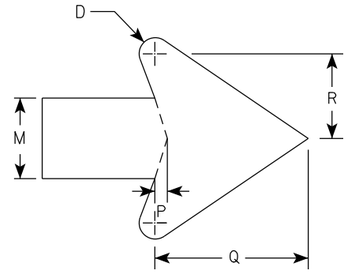
(D)



(D)



(D)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENDS Area sq. ft.	MIDDLE Area sq. ft.
1																												
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	6	2 1/4	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN
R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

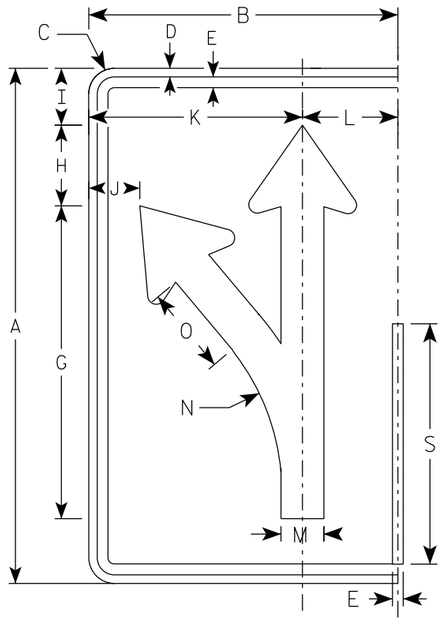
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

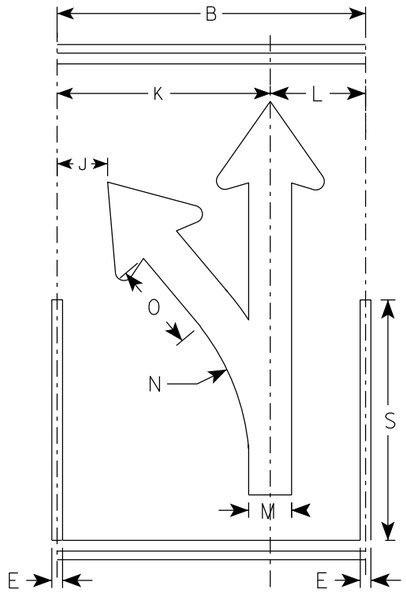
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 470 | E

NOTES

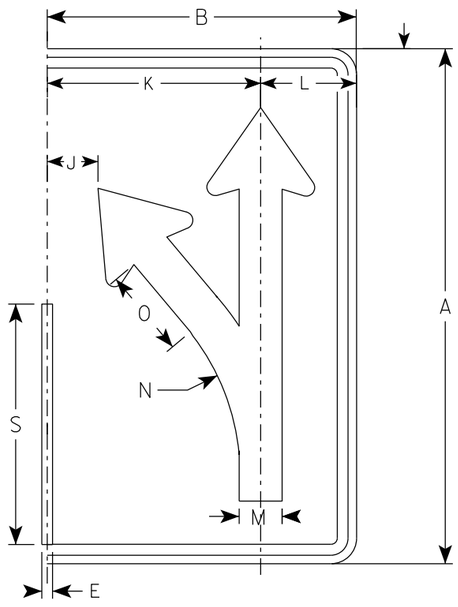
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



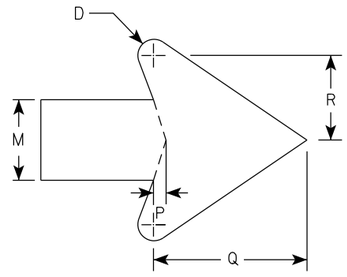
(E)



(E)



(E)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

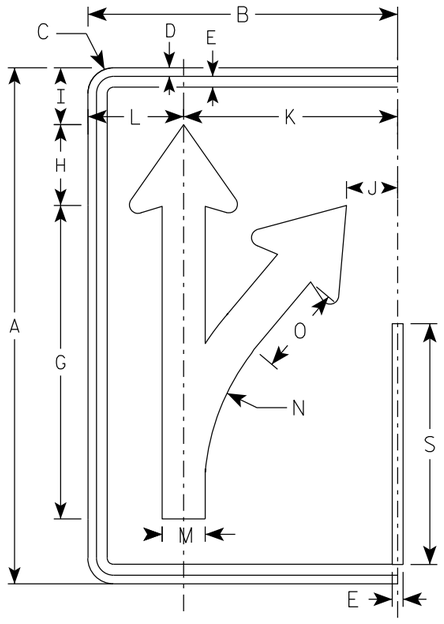
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

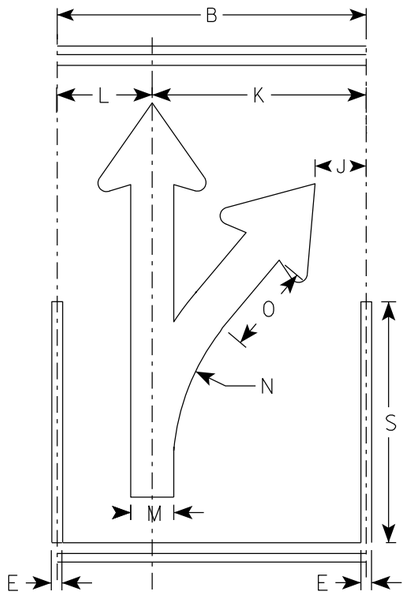
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 471 | E

NOTES

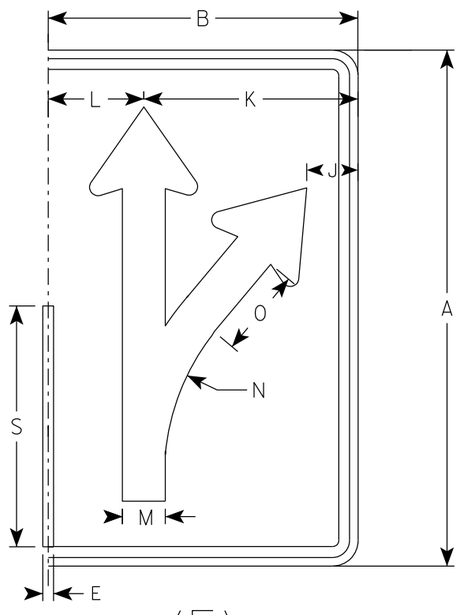
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



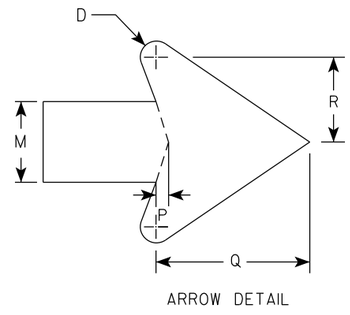
(F)



(F)



(F)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

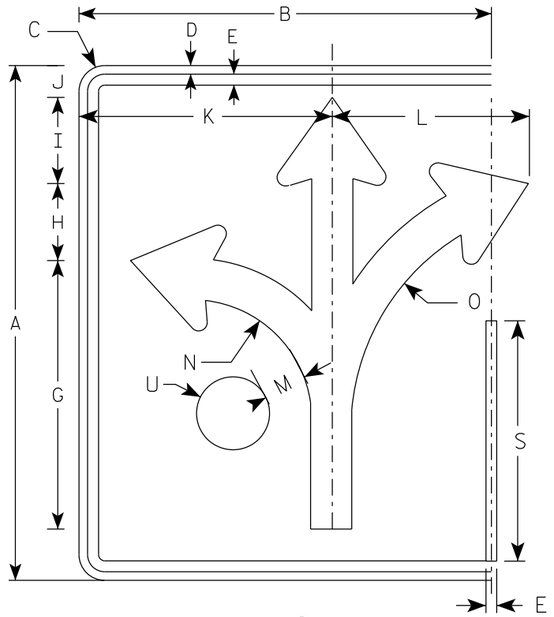
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

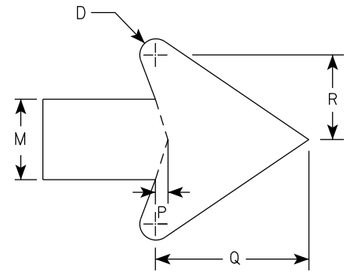
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 472 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(G)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	6	3 1/8	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

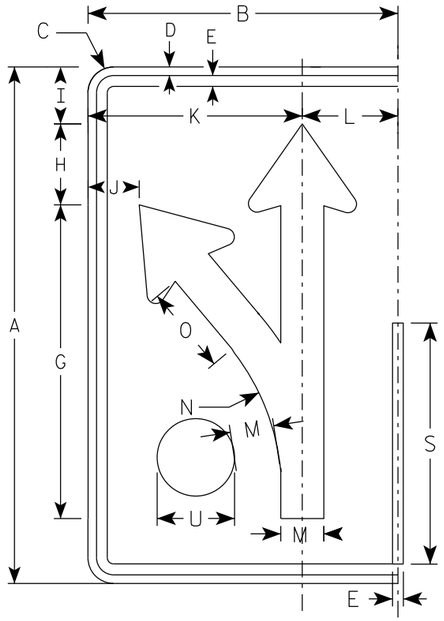
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

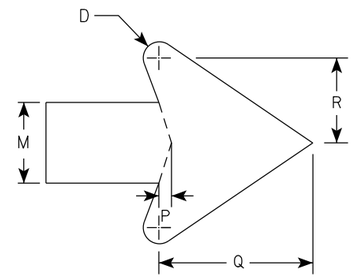
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 473	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(H)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
2M	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4		2 1/2						6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

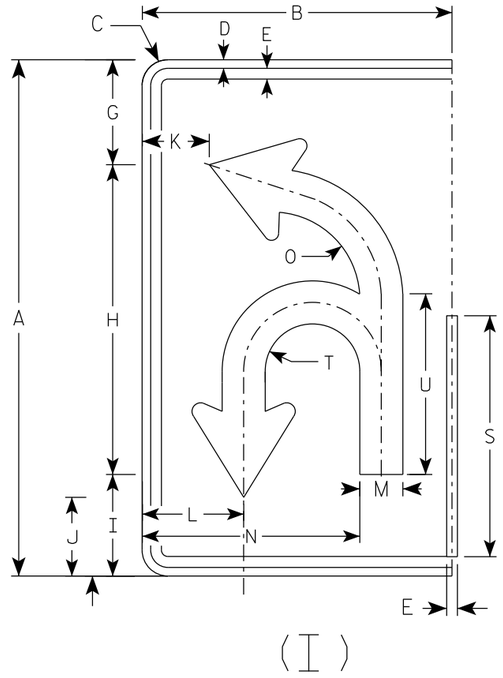
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

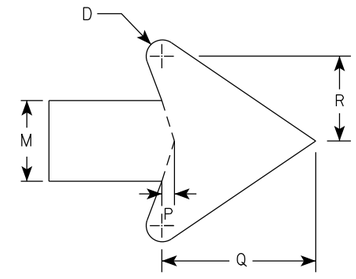
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 474 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(I)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
2M	30	18	1 1/2	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	21 5/8	7 1/8	5 1/2	5 7/8	8 1/4	3	16 3/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4	3 1/4	12 5/8						6.0
4	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0
5	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0

STANDARD SIGN
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

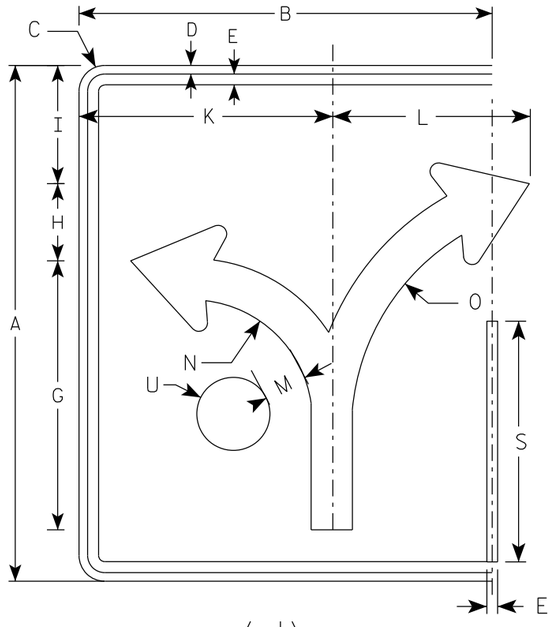
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

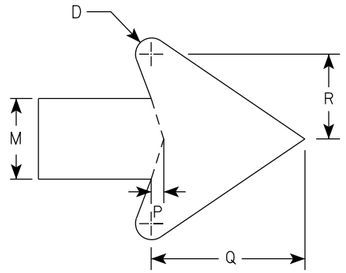
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 475 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



(J)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN
R3-8 (J) Arrow

WISCONSIN DEPT OF TRANSPORTATION

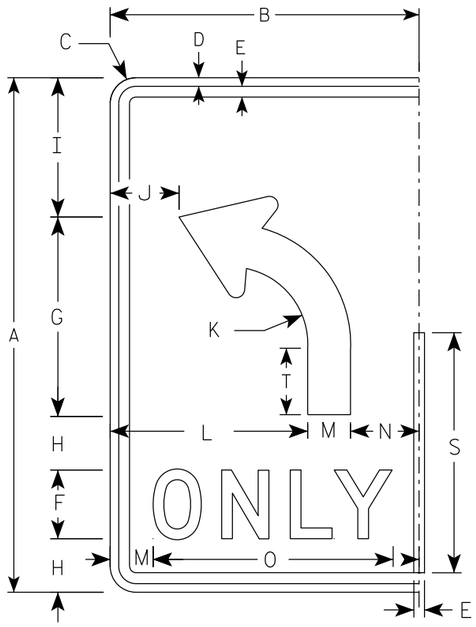
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

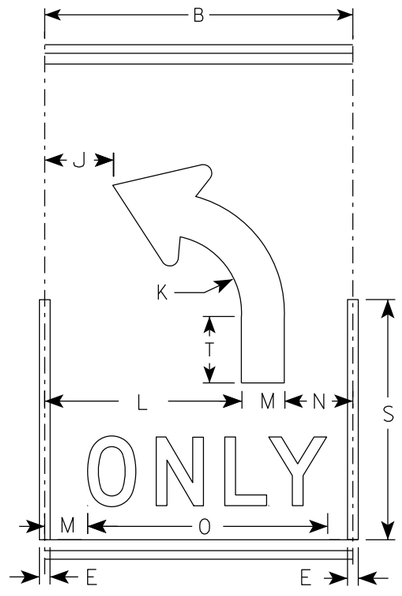
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 476 | E

NOTES

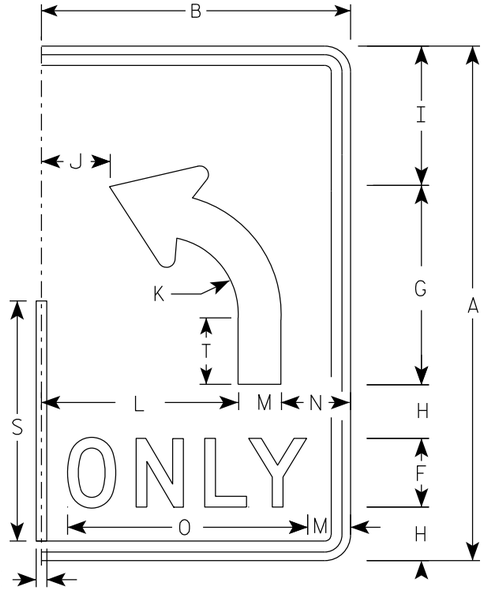
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



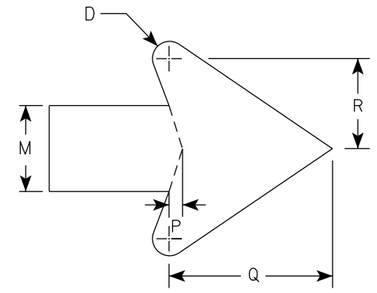
(L)



(L)



(L)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 1/2	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN
R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

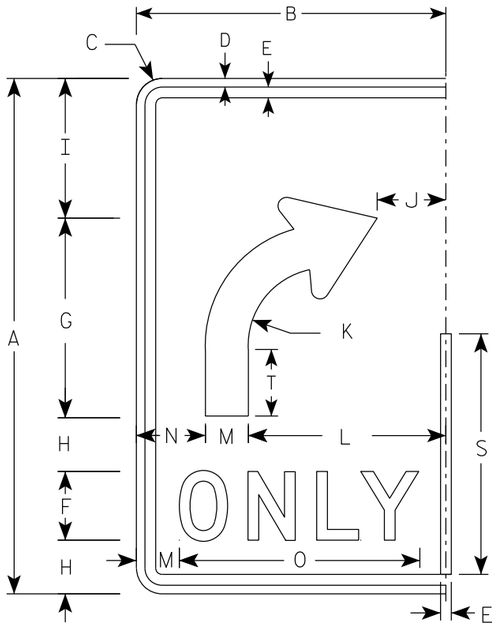
DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

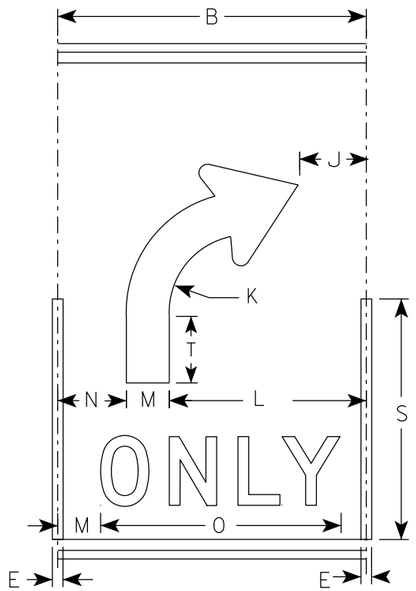
SHEET NO: 477 E

NOTES

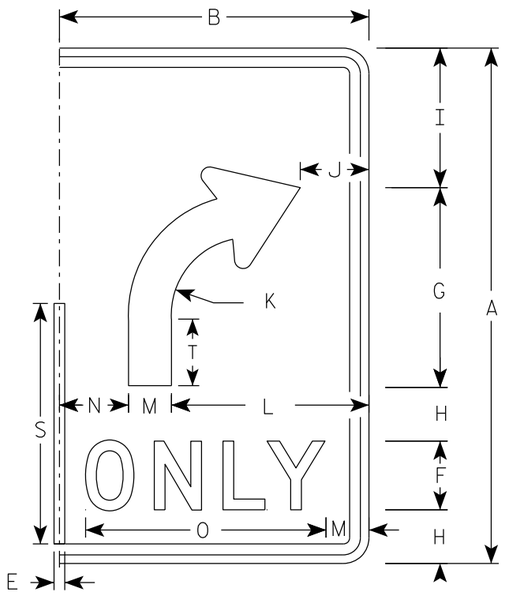
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



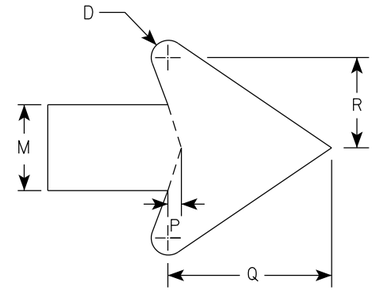
(R)



(R)



(R)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 1/2	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (R) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

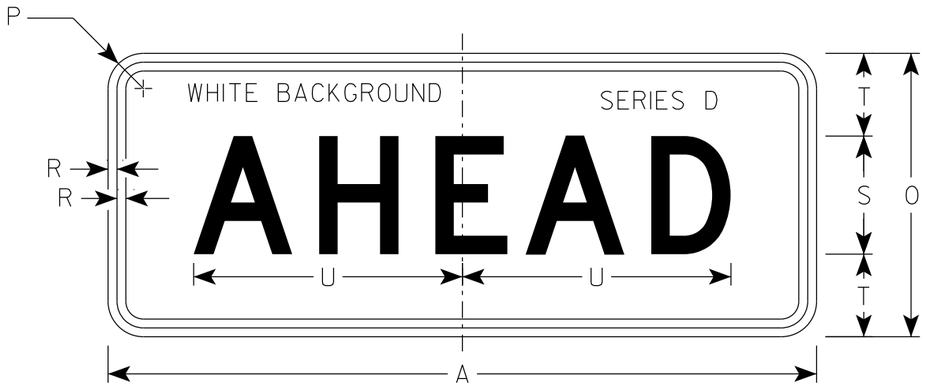
SHEET NO: 478 **E**



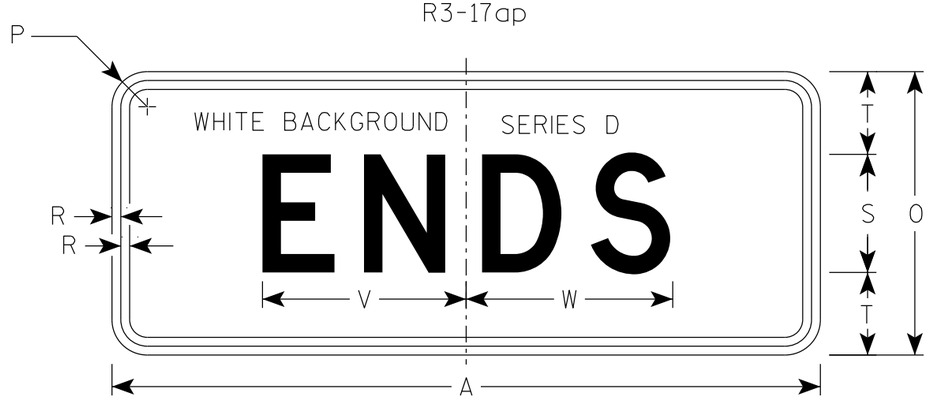
R3-17

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - AS SHOWN
   Message - BLACK
3. Message Series - C or as noted



R3-17ap



R3-17bp

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	R3-17 Area sq. ft.	R3-17ap Area sq. ft.	R3-17bp Area sq. ft.
1																													
2S	30	24	1 1/2	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/2	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
2M	30	24	1 1/2	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/2	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
3																													
4																													
5																													

STANDARD SIGN
R3-17 & R3-17a&bp

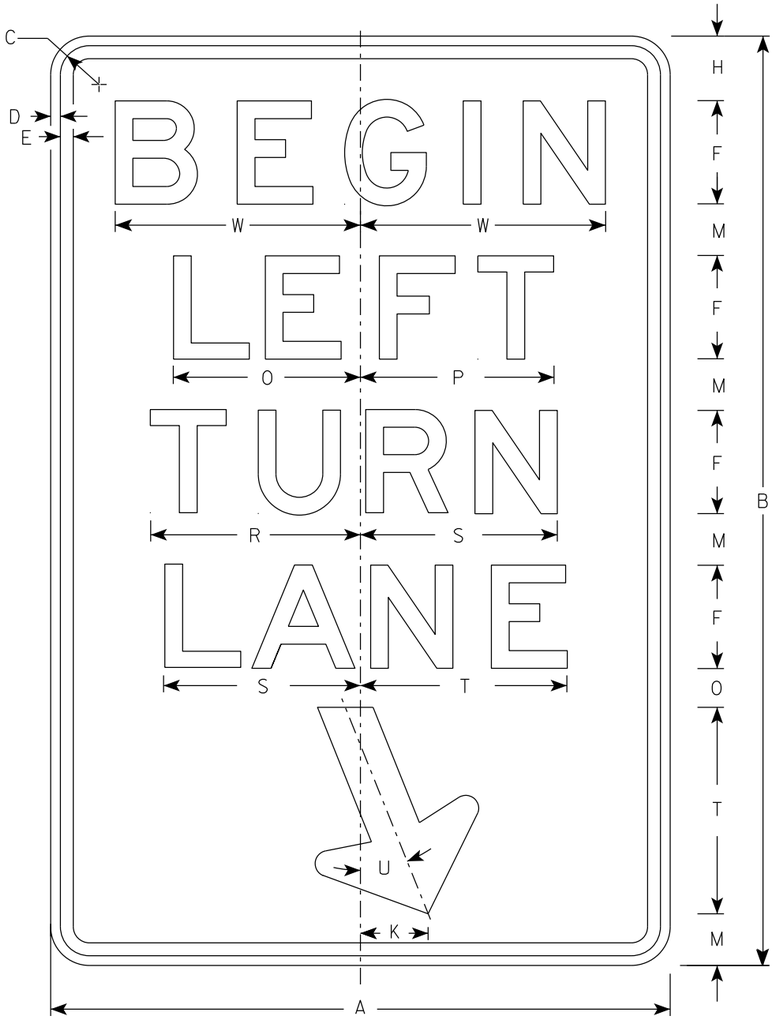
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/23/23 PLATE NO. R3-17.3

PROJECT NO:

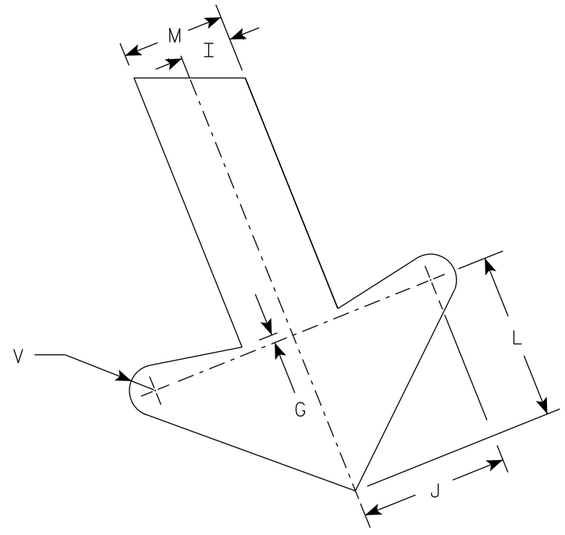
SHEET NO: 479 E



R3-20L

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - E



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/2	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/2	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 7/8	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

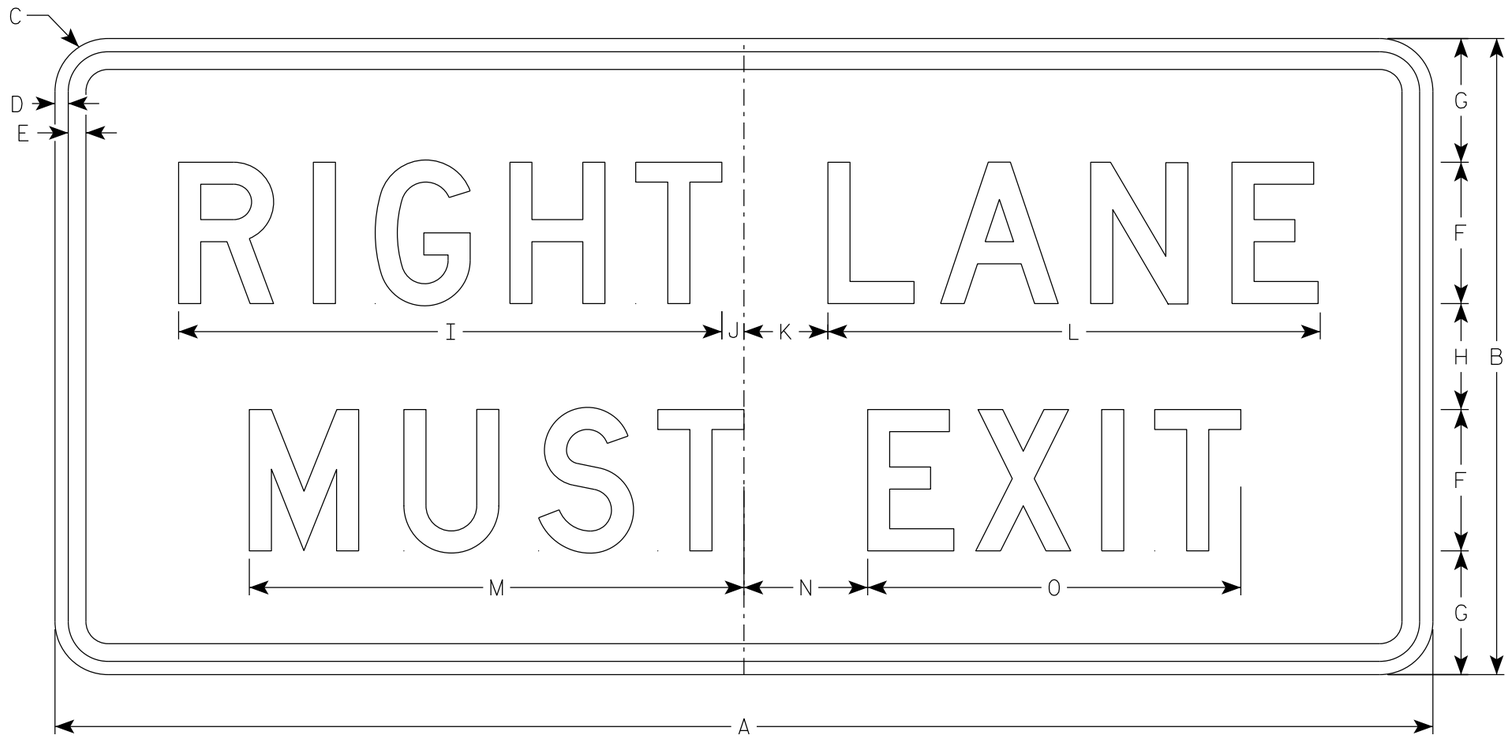
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/23/23 PLATE NO. R3-20L.8

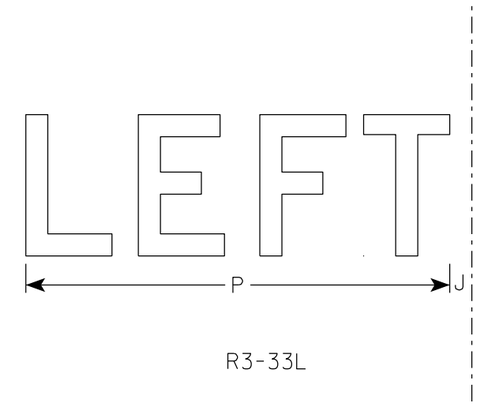
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 480	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



R3-33R



R3-33L

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																											
2M																											
3																											
4	78	36	3	¾	1	8	7	6	30 ¾	1 ¼	4 ¾	27 ⅞	28	7	21 ⅛	24											19.5
5	78	36	3	¾	1	8	7	6	30 ¾	1 ¼	4 ¾	27 ⅞	28	7	21 ⅛	24											19.5

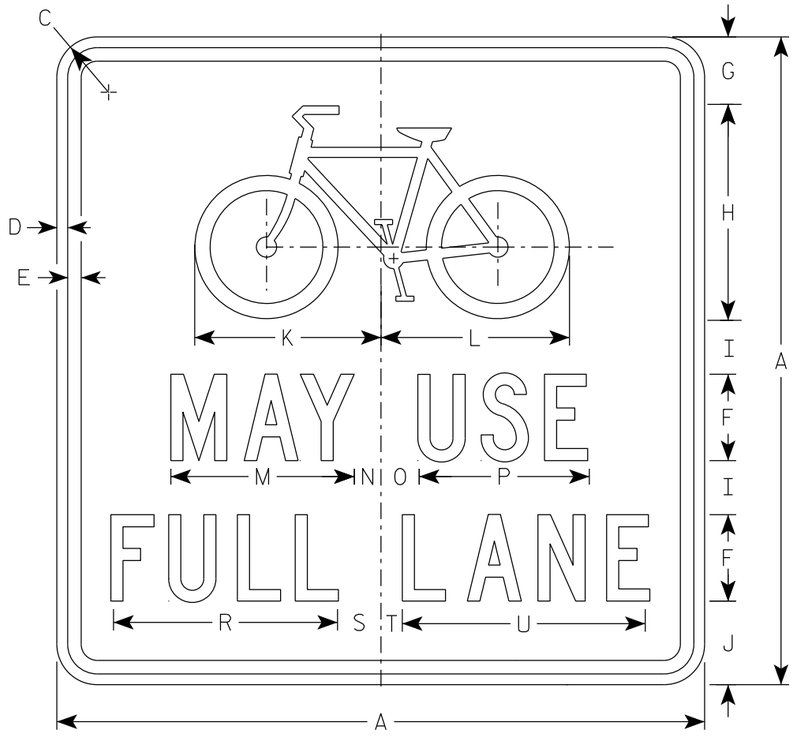
STANDARD SIGN
R3-33

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/27/24 PLATE NO. R3-33.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 481 | E



R4-11

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8	1/2	5/8	4	3 1/8	10	2 1/2	3 7/8	8 5/8	8 3/4	8 1/2	1 1/4	1 3/4	7 7/8		10 3/8	2	1	11 1/4						6.25
2M	30		1 7/8	1/2	5/8	4	3 1/8	10	2 1/2	3 7/8	8 5/8	8 3/4	8 1/2	1 1/4	1 3/4	7 7/8		10 3/8	2	1	11 1/4						6.25
3																											
4																											
5																											

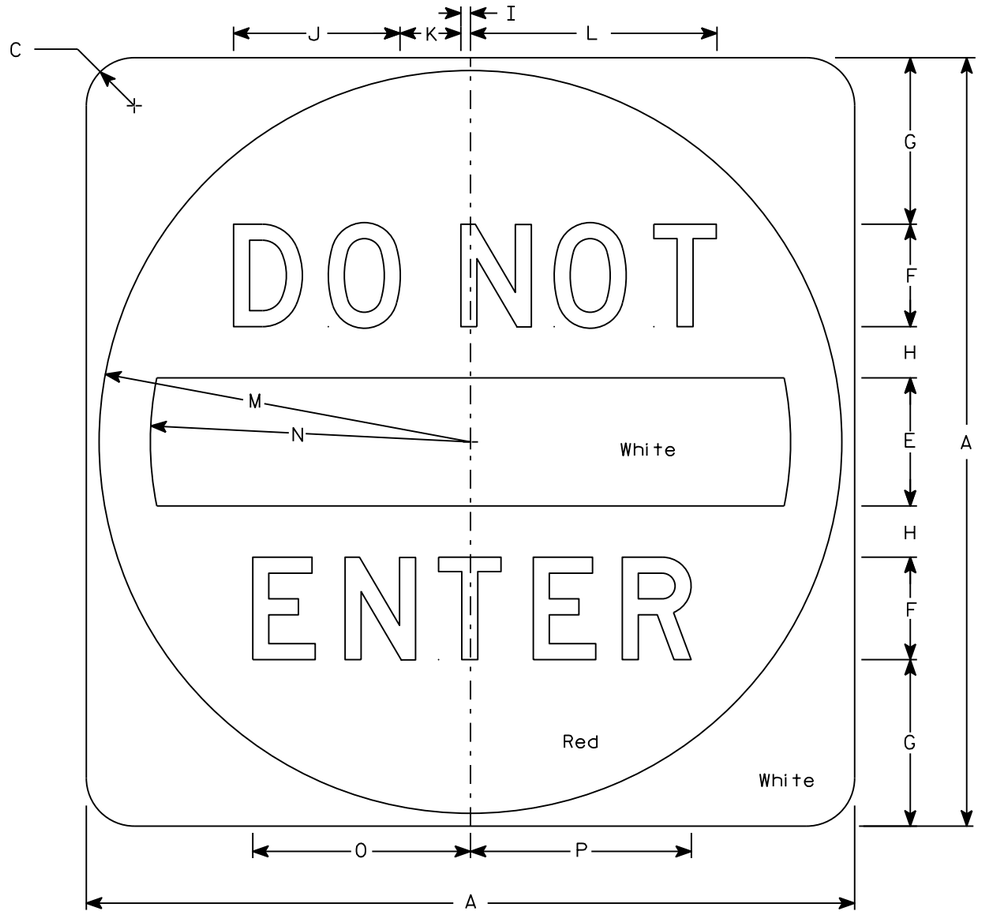
STANDARD SIGN
R4-11

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/23 PLATE NO. R4-11.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 482 | E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message Series - D

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	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

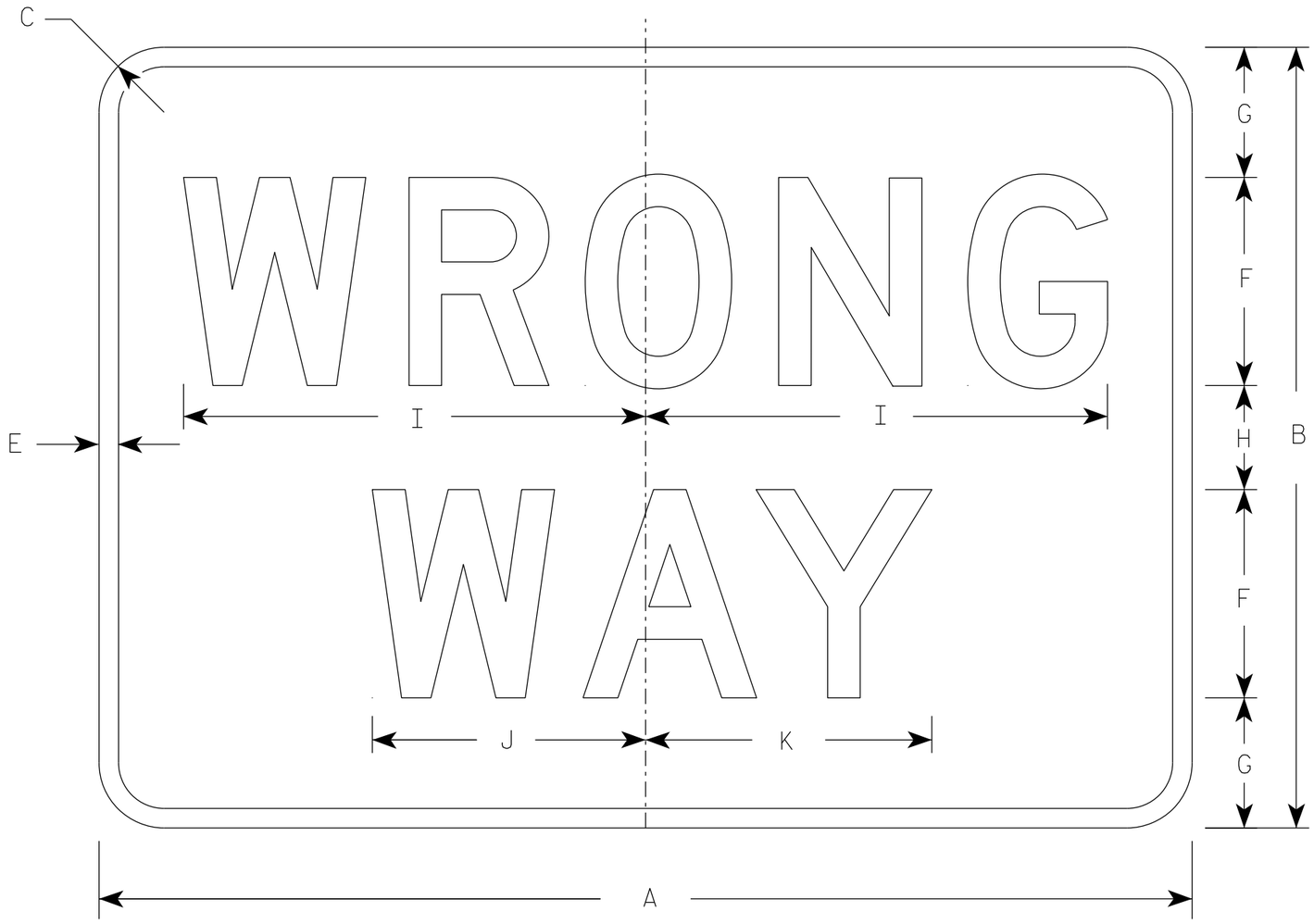
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 483 | E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Red
   Message - White
3. Message Series - D

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	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	1 1/2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	1 7/8		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	1 7/8		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	1 7/8		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	1 7/8		3/4	8	5	4	17 3/4	10 1/2	11																8.75

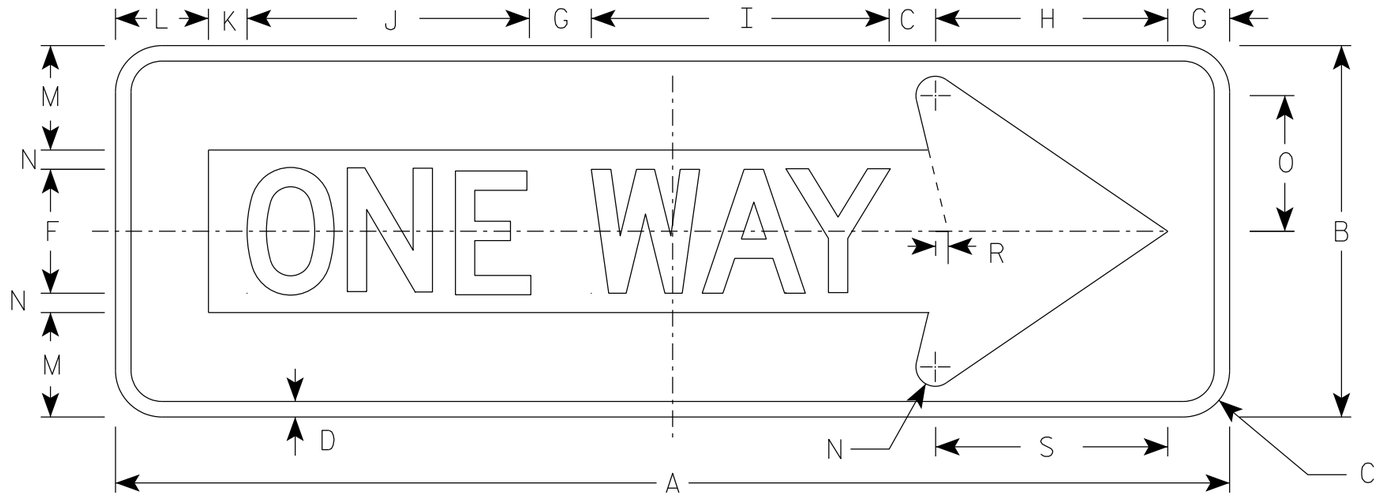
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/23 PLATE NO. R5-1A.3

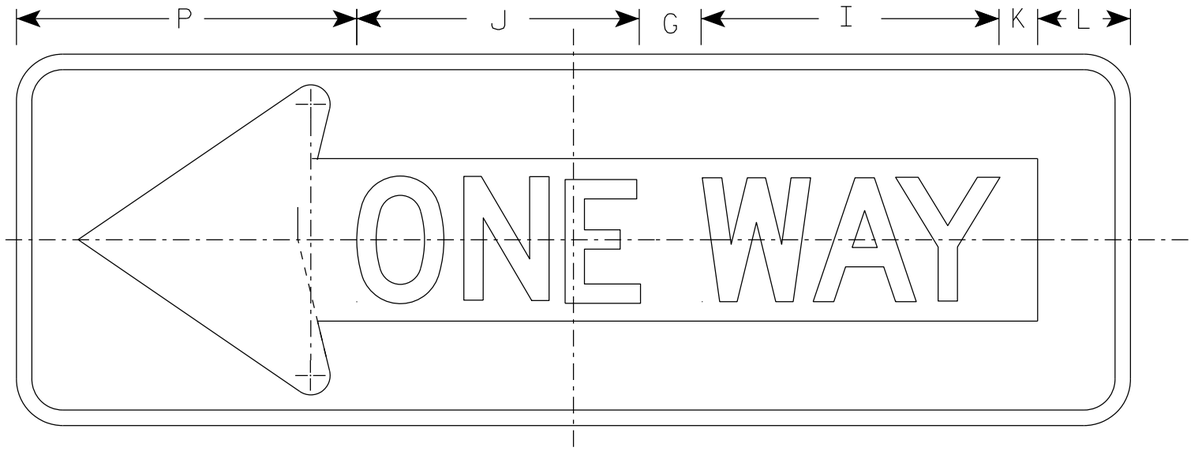
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 484 | E



R6-1R

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Black
   Message - Black Legend & White Arrow & Border
3. Message Series - D



R6-1L

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	36	12	1 ½	½		4	2	7 ½	9 ⅝	9 ⅛	1 ¼	3	3 ⅜	⅝	4 ⅜	11		⅜	7 ½								3.0
2M	54	18	1 ½	¾		6	3	11 ¼	13 ⅝	14 ½	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
3	54	18	1 ½	¾		6	3	11 ¼	13 ⅝	14 ½	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
4	54	18	1 ½	¾		6	3	11 ¼	13 ⅝	14 ½	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
5																											

STANDARD SIGN
R6-1 L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

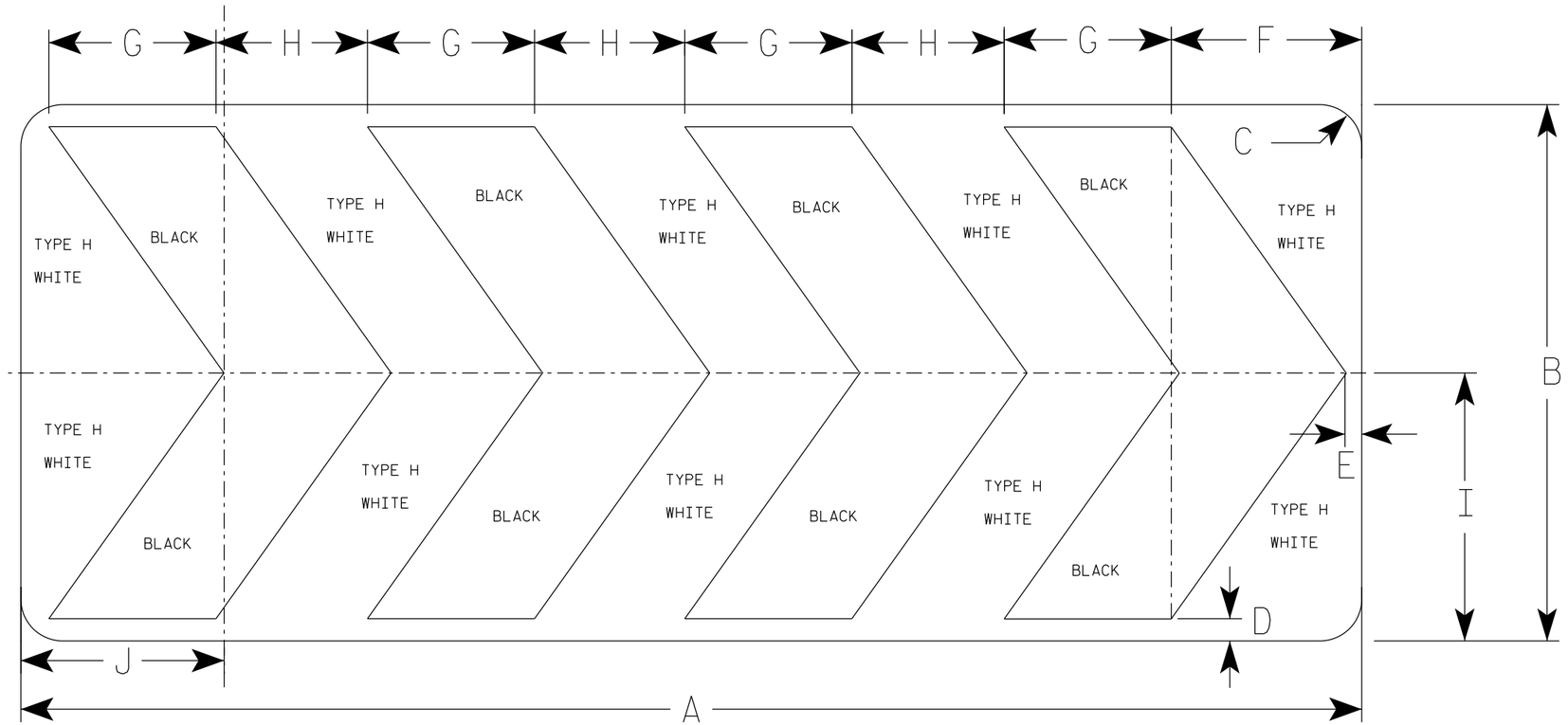
DATE 8/30/23 PLATE NO. R6-1.4

PROJECT NO:

SHEET NO: 485 E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - WHITE
   Message - BLACK



R6-4B

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	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
2M	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
3																											
4																											
5																											

STANDARD SIGN
R6-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

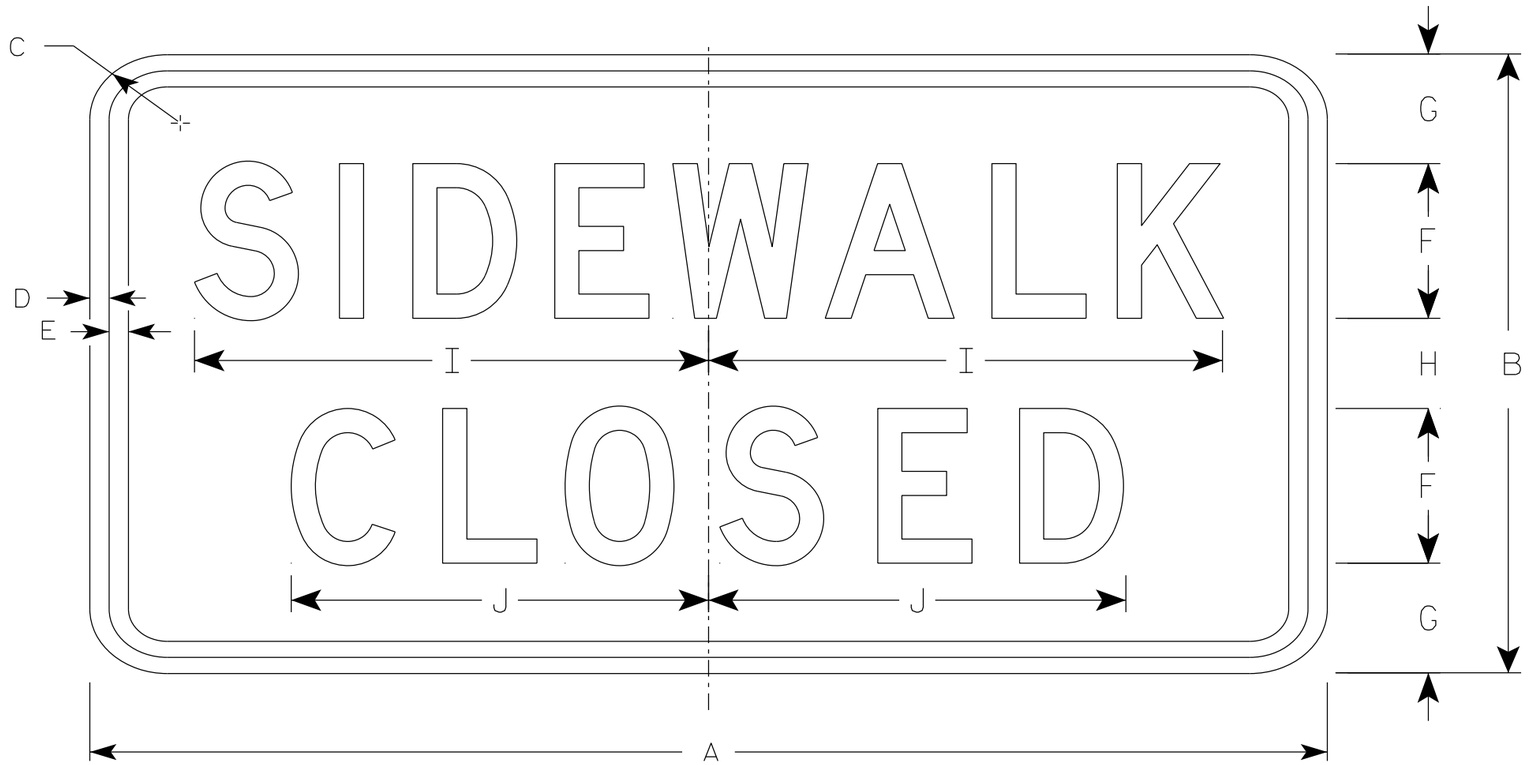
DATE 10/26/23 PLATE NO. R6-4.4

PROJECT NO: | SHEET NO: 486 | E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R64B.dgn PLOT DATE : 26-OCT 2023 1:36 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

7 7



R9-9

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 ½	½	½	3	2 ⅛	1 ¾	10	8 ⅛																	2.0
2M	24	12	1 ½	½	½	3	2 ⅛	1 ¾	10	8 ⅛																	2.0
3	30	18	1 ½	½	½	4	3 ½	3	12 ½	10 ¼																	3.75
4																											
5																											

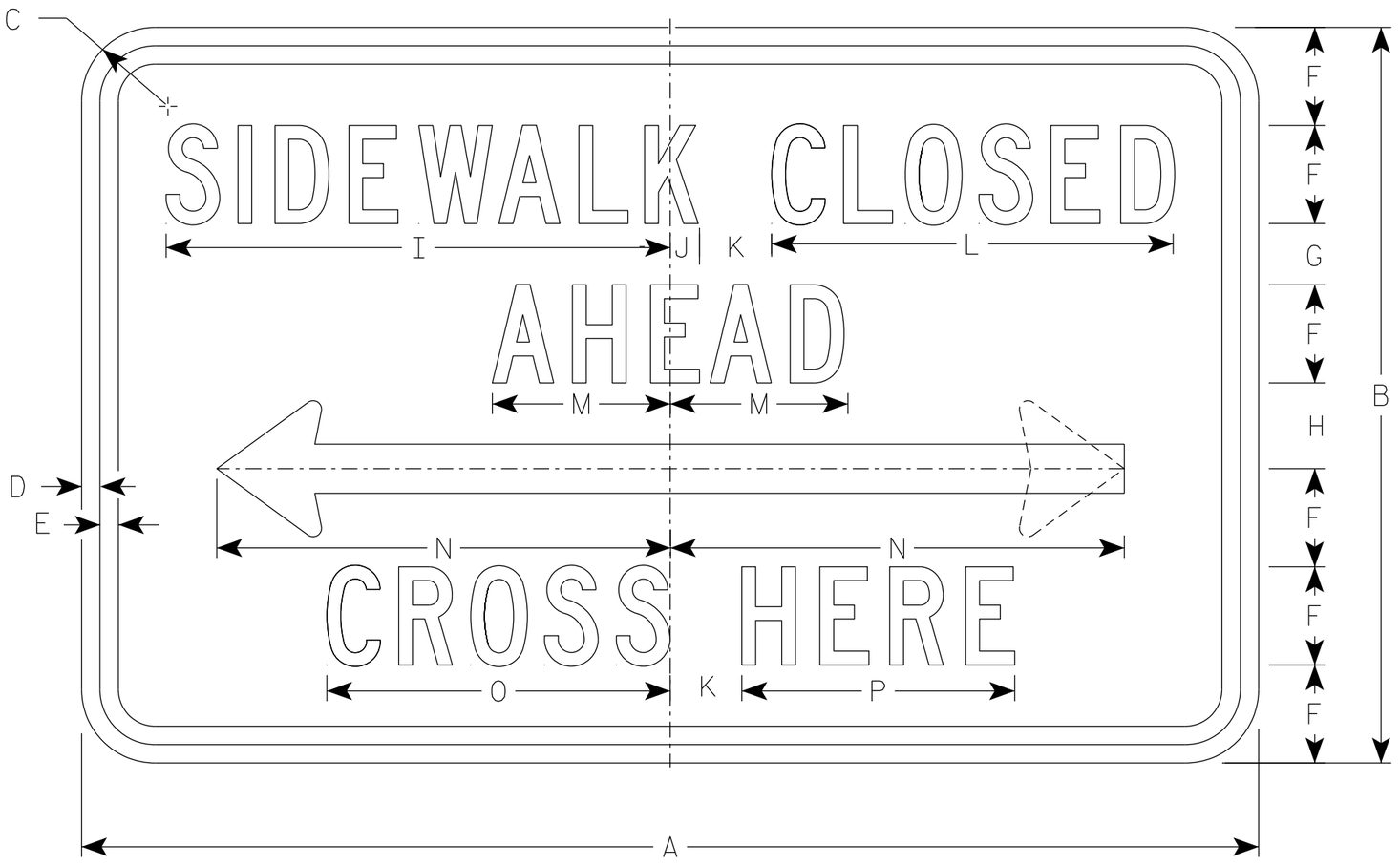
STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

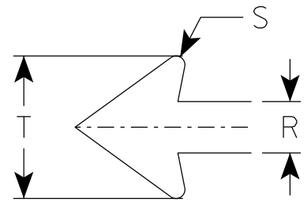
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-9.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 487 | E



R9-11



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C except Size 1 is Series D
4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.
5. R9-11 D (double arrow)
   R9-11 L (left arrow)
   R9-11 R (right arrow)

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
2M	24	12	1 1/2	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
3	30	15	1 1/2	3/8	1/2	2	1 1/2	1 1/2	13	3/4	2	10 1/4	4 5/8	12 3/8	8 7/8	6 7/8		1 1/4	1/4	3 5/8							3.125
4																											
5																											

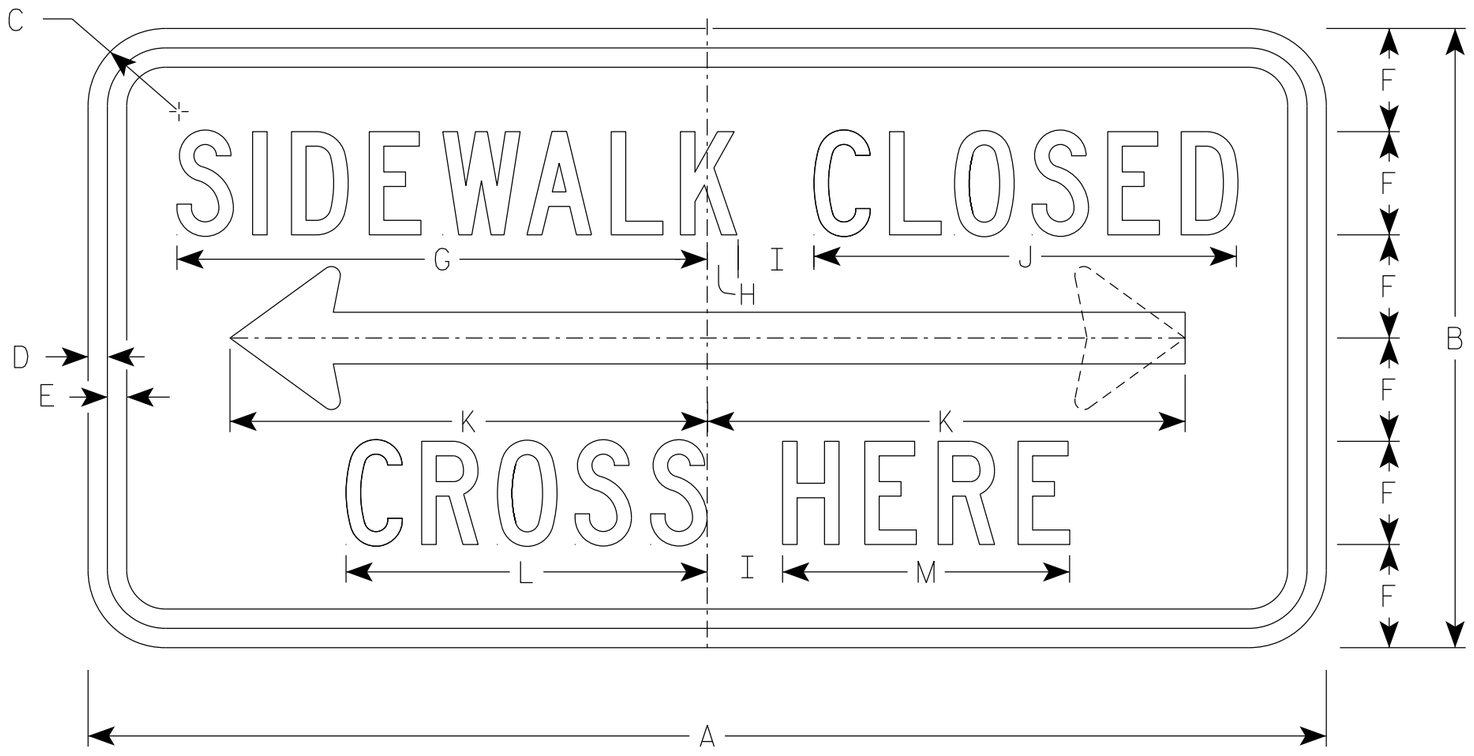
STANDARD SIGN
R9-11

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-11.5

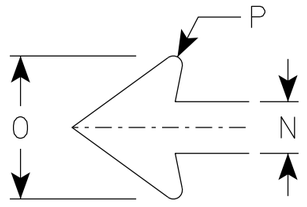
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 488 E



R9-11A

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Use Size 2 for Sidewalks. Use Size 3 for paths and Trails.
5. R9-11AD (double arrow)
   R9-11AL (left arrow)
   R9-11AR (right arrow)



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	2	10 1/4	5/8	1 1/2	8 1/4	9 1/4	7	5 5/8	1	2 3/4	1/8											2.0
2M	24	12	1 1/2	3/8	3/8	2	10 1/4	5/8	1 1/2	8 1/4	9 1/4	7	5 5/8	1	2 3/4	1/8											2.0
3	30	15	1 1/2	3/8	1/2	2 1/2	12 3/4	1/2	2	10 1/4	12 3/8	8 5/8	6 3/4	1 1/4	3 5/8	1/4											3.125
4																											
5																											

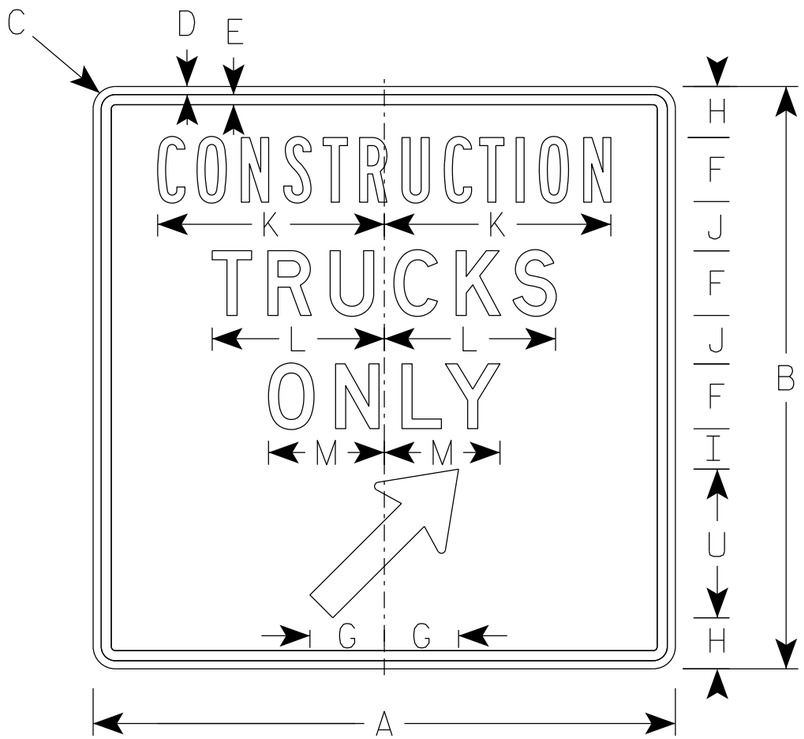
STANDARD SIGN
R9-11A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-11A.6

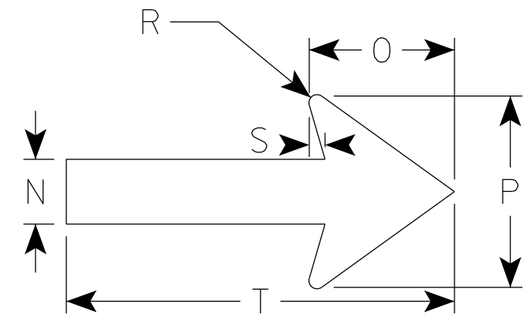
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 489 | E



R10-72R

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - Line 1 Series B Line 2-3 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. R10-72L is same as R10-72R except arrow is reversed



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	36	2 1/4	1/2	5/8	4	4 5/8	3 1/8	2 1/2	3	14	10 5/8	7 1/8	2	4 1/2	6		1/2	1/2	12	9 1/4						9.0
2M	36	36	2 1/4	1/2	5/8	4	4 5/8	3 1/8	2 1/2	3	14	10 5/8	7 1/8	2	4 1/2	6		1/2	1/2	12	9 1/4						9.0
3	36	36	2 1/4	1/2	5/8	4	4 5/8	3 1/8	2 1/2	3	14	10 5/8	7 1/8	2	4 1/2	6		1/2	1/2	12	9 1/4						9.0
4																											
5																											

STANDARD SIGN
R10-72

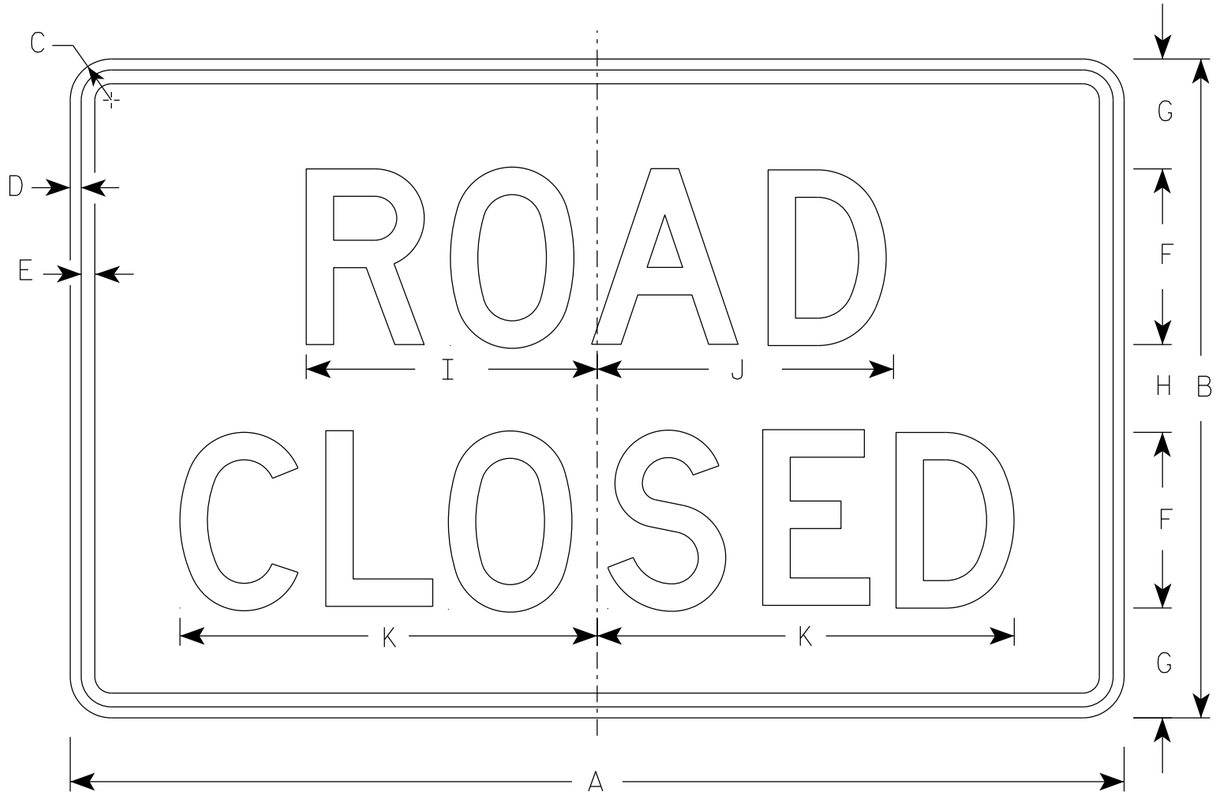
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R10-72.2

PROJECT NO:

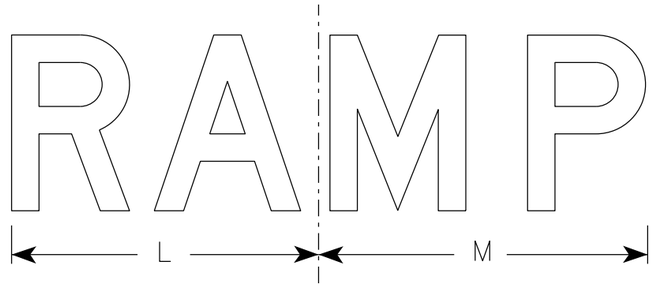
SHEET NO: 490 E



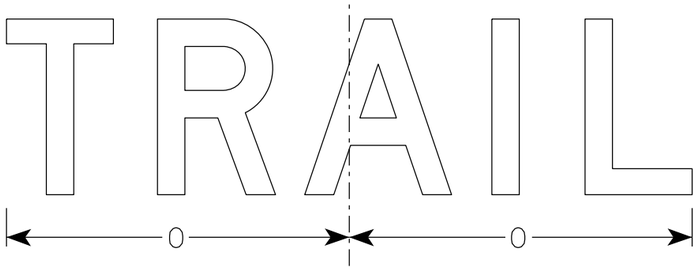
R11-2

NOTES

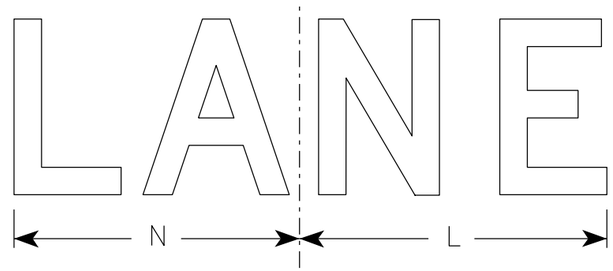
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the 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 7/8	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 7/8	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 7/8	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 7/8	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 7/8	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 2/5/24 PLATE NO. R11-2.12

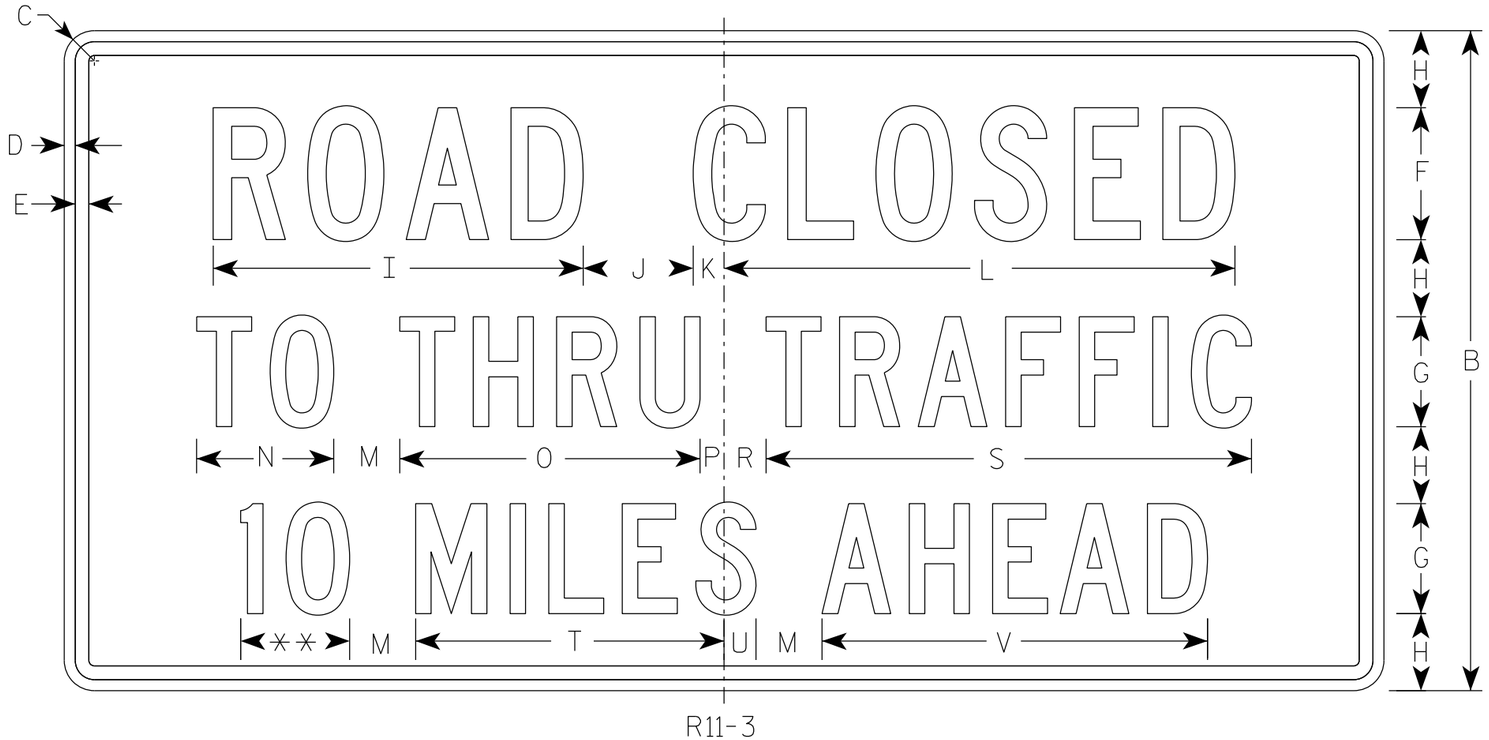
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.dgn PLOT DATE : 5-FEB 2024 2:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

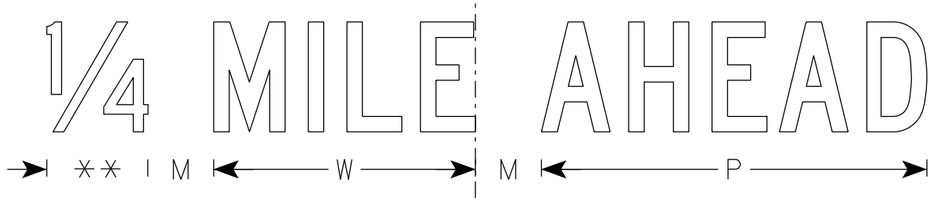
NOTES

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



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

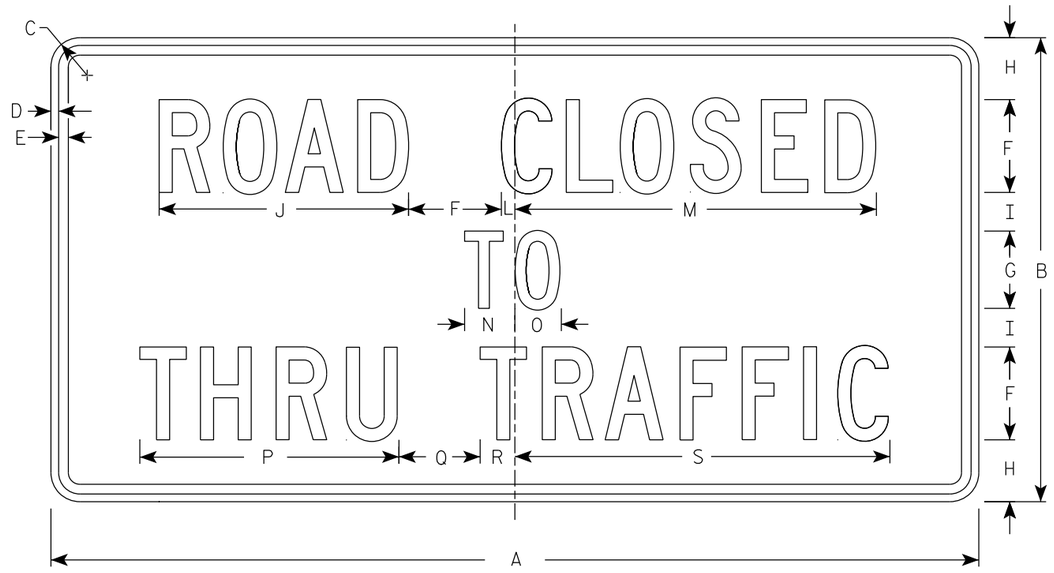
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-3.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 492	E



R11-4

NOTES

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

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	60	30	1 7/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 7/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

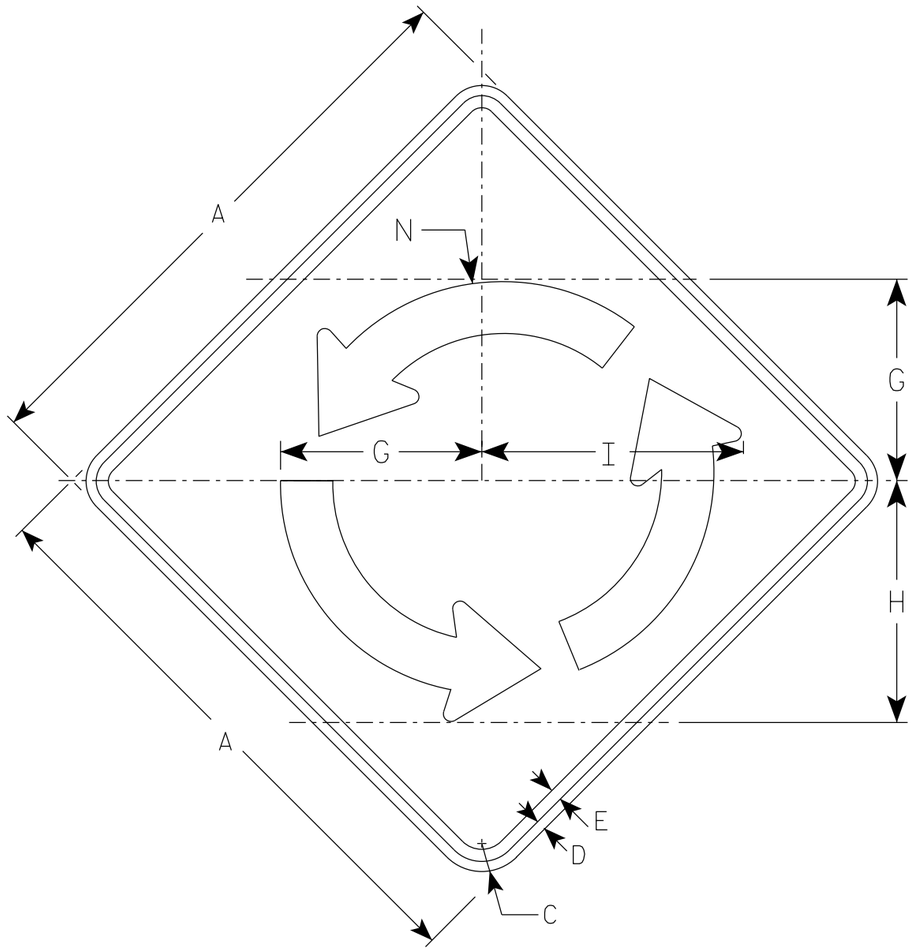
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-4.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 493 | E

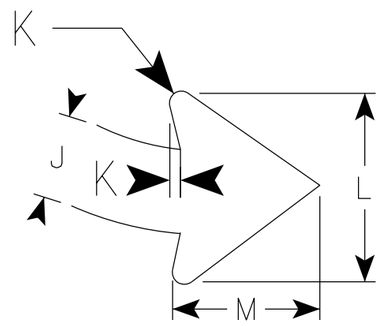


W2-6

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black

Arrow Detail



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Area sq. ft.
1																									
2S	30		1 7/8	1/2	5/8		10 3/8	12 1/2	13 1/2	2 3/4	3/8	6	4 3/4	11 1/8											6.25
2M	30		1 7/8	1/2	5/8		10 3/8	12 1/2	13 1/2	2 3/4	3/8	6	4 3/4	11 1/8											6.25
3	36		2 1/4	5/8	3/4		12 1/2	15	16 1/4	3 1/4	1/2	7 3/8	5 3/4	13 3/8											9.00
4	48		3	3/4	1		16 5/8	20	16 1/4	4 3/8	5/8	9 3/4	7 5/8	17 7/8											16.0
5																									

STANDARD SIGN
W2-6

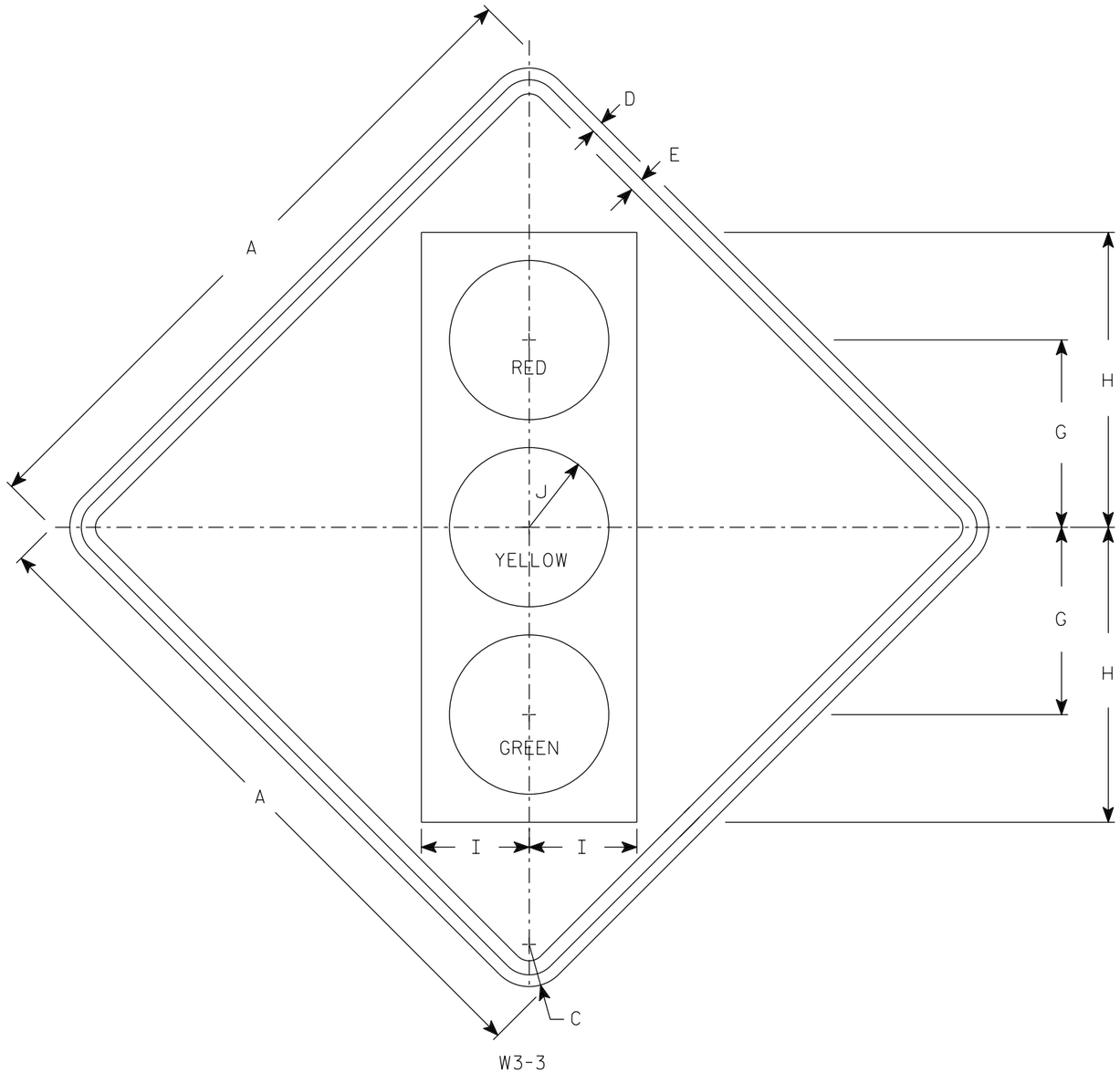
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/2023 PLATE NO. W2-6.8

PROJECT NO:

SHEET NO: 494 E



W3-3

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - See Note 3
3. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

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	30		1 7/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		2 1/4	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		2 1/4	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		2 1/4	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W3-3

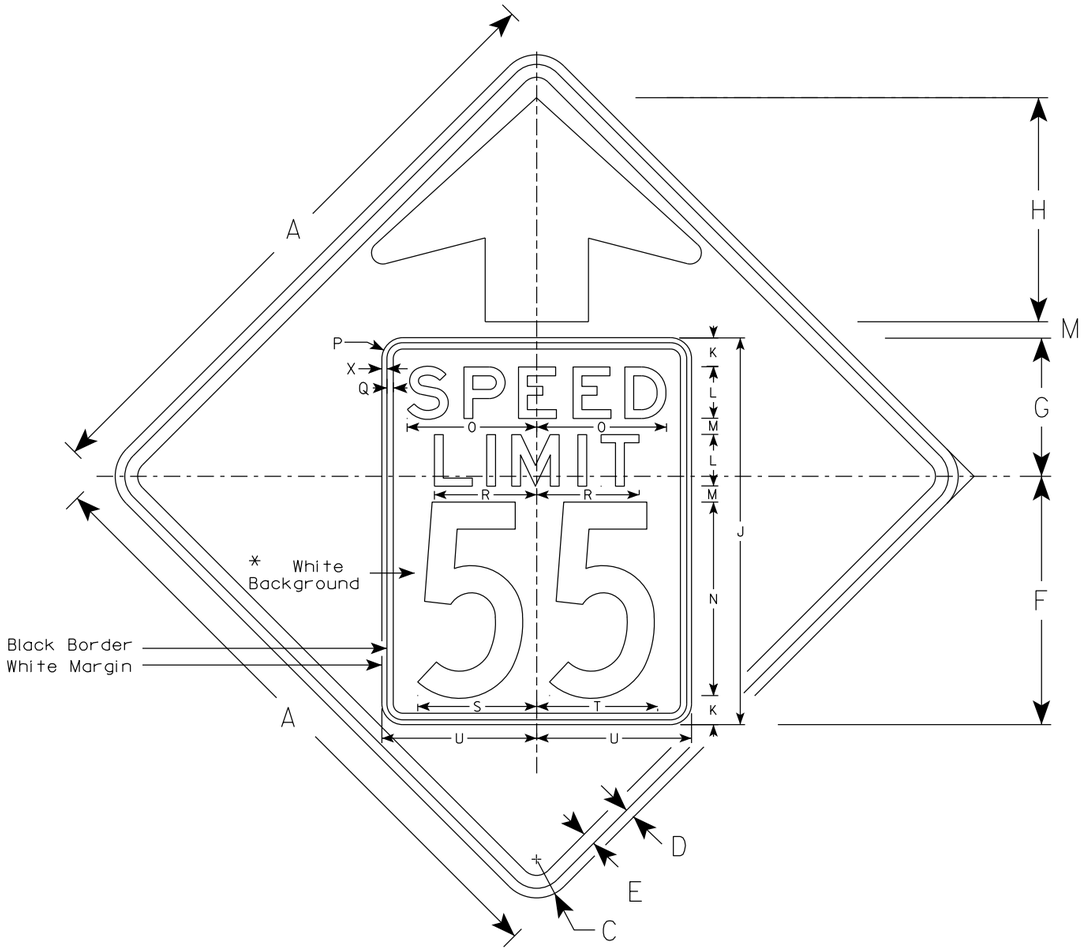
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/2023 PLATE NO. W3-3.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 495	E

7

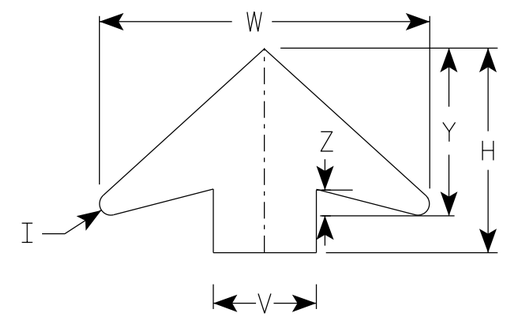


W3-5

NOTES

1. Sign is Type II - See Note 2 for Sheeting Type
2. Color: *
   Background - Yellow* (Type F Reflective)
   Message - Black
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background with black message (Type SH Reflective)



ARROW DETAIL

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

STANDARD SIGN
W3-5

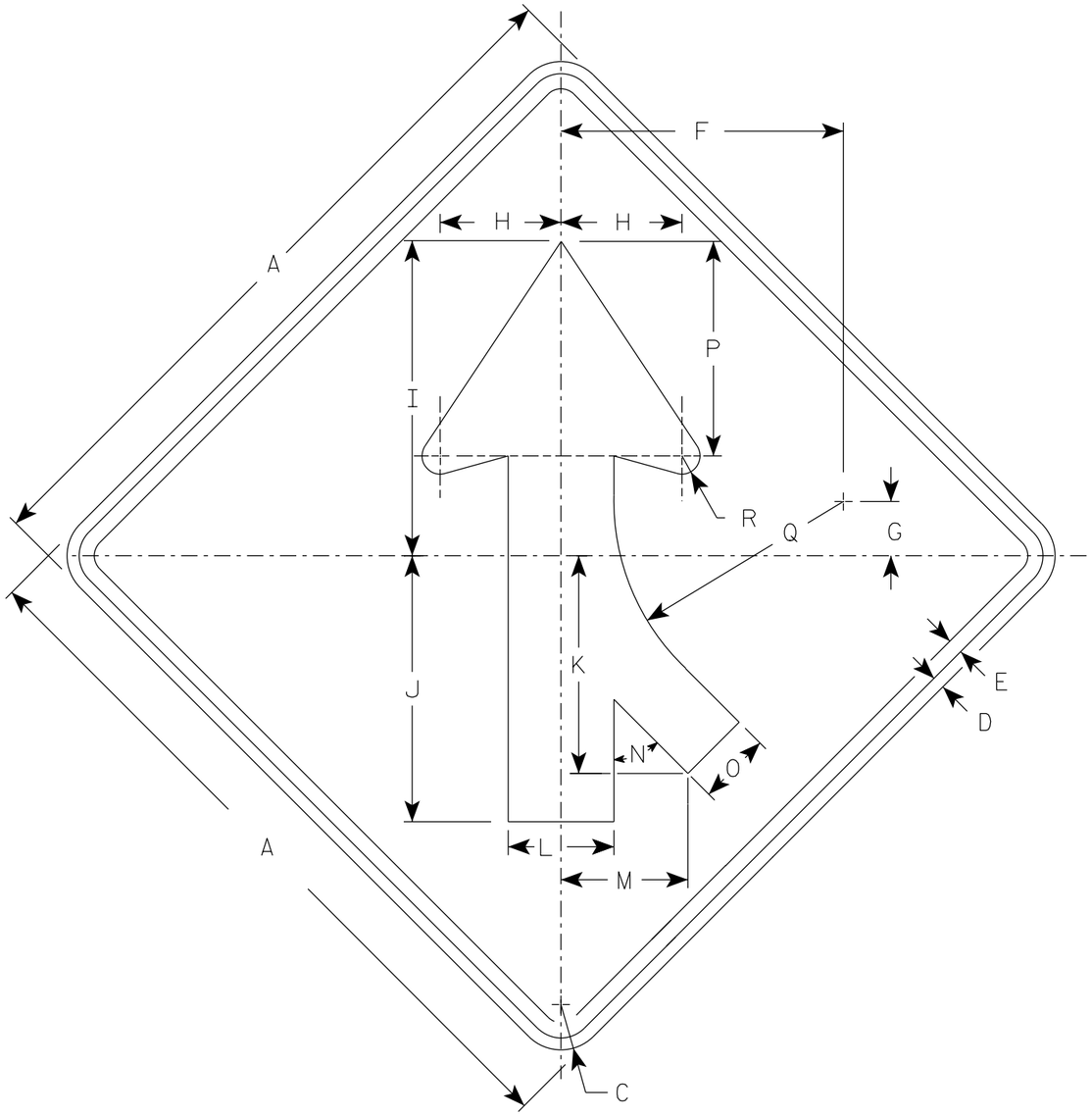
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/30/2023 PLATE NO. W3-5.7

PROJECT NO:

SHEET NO: 496 E



W4-1R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

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	30		1 7/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		2 1/4	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		2 1/4	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		2 1/4	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		3	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		3	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

STANDARD SIGN
W4-1

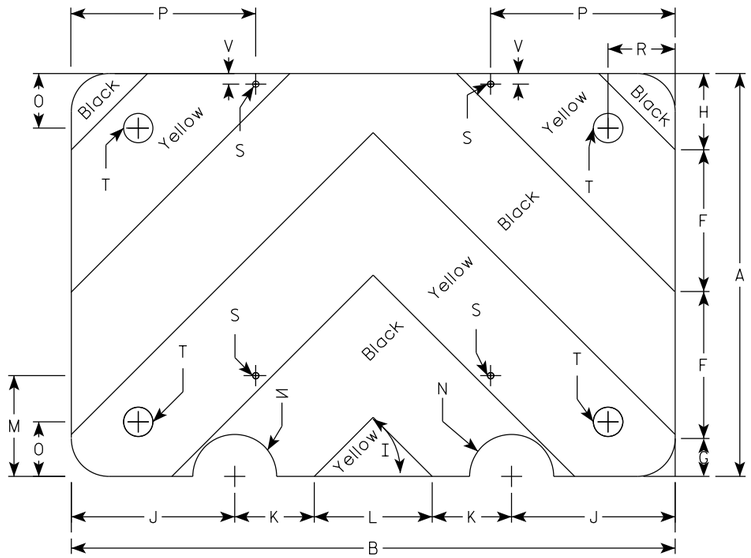
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

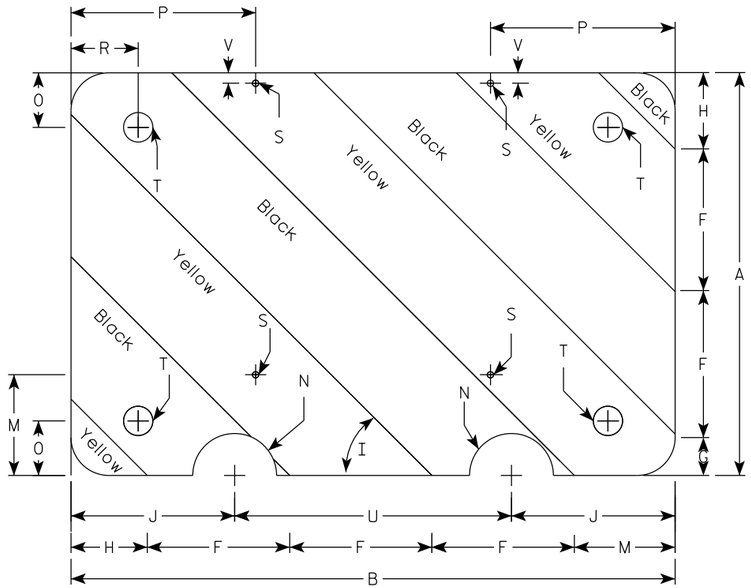
DATE 8/31/2023 PLATE NO. W4-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 497 E

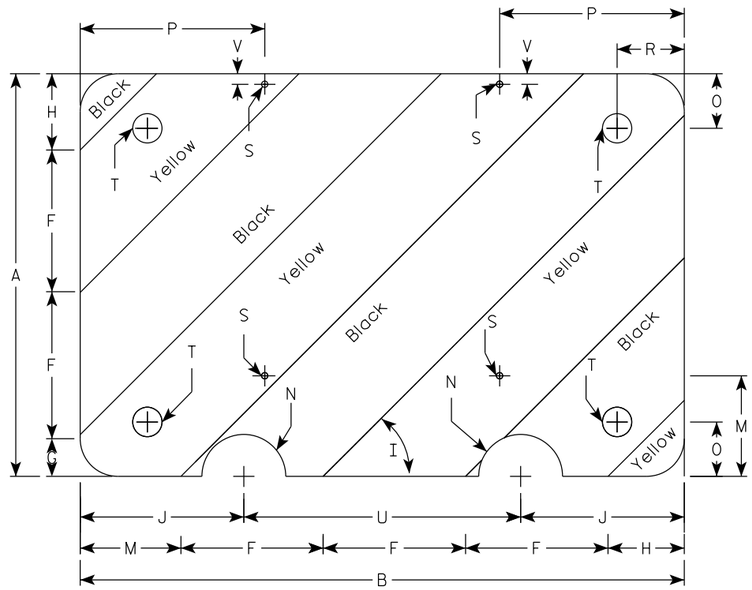
7



W5-65D



W5-65L



W5-65R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Base material is to be .040" sheet aluminum.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36				8 ½	2 ¼	4 ½	45°	9 ¾	4 ¾	7	6	5	3 ¼	11		4	⅜	1 ¾	16 ½	⅝					6.0
2M	24	36				8 ½	2 ¼	4 ½	45	9 ¾	4 ¾	7	6	5	3 ¼	11		4	⅜	1 ¾	16 ½	⅝					6.0
3																											
4																											
5																											

STANDARD SIGN

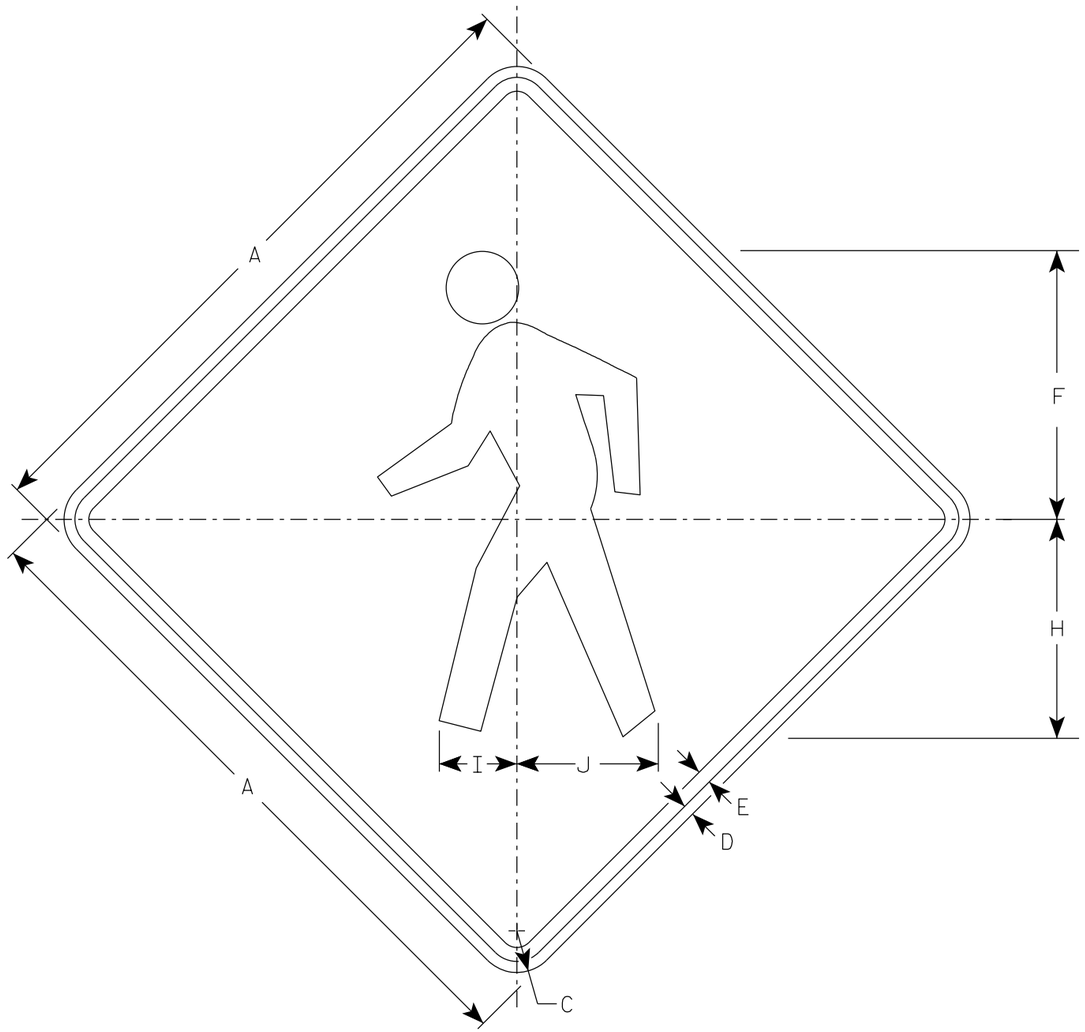
W5-65D & W5-65

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/5/2024 PLATE NO. W5-65.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 498	E



W11-2

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 7/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		2 1/4	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		2 1/4	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		3	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN

W11-2

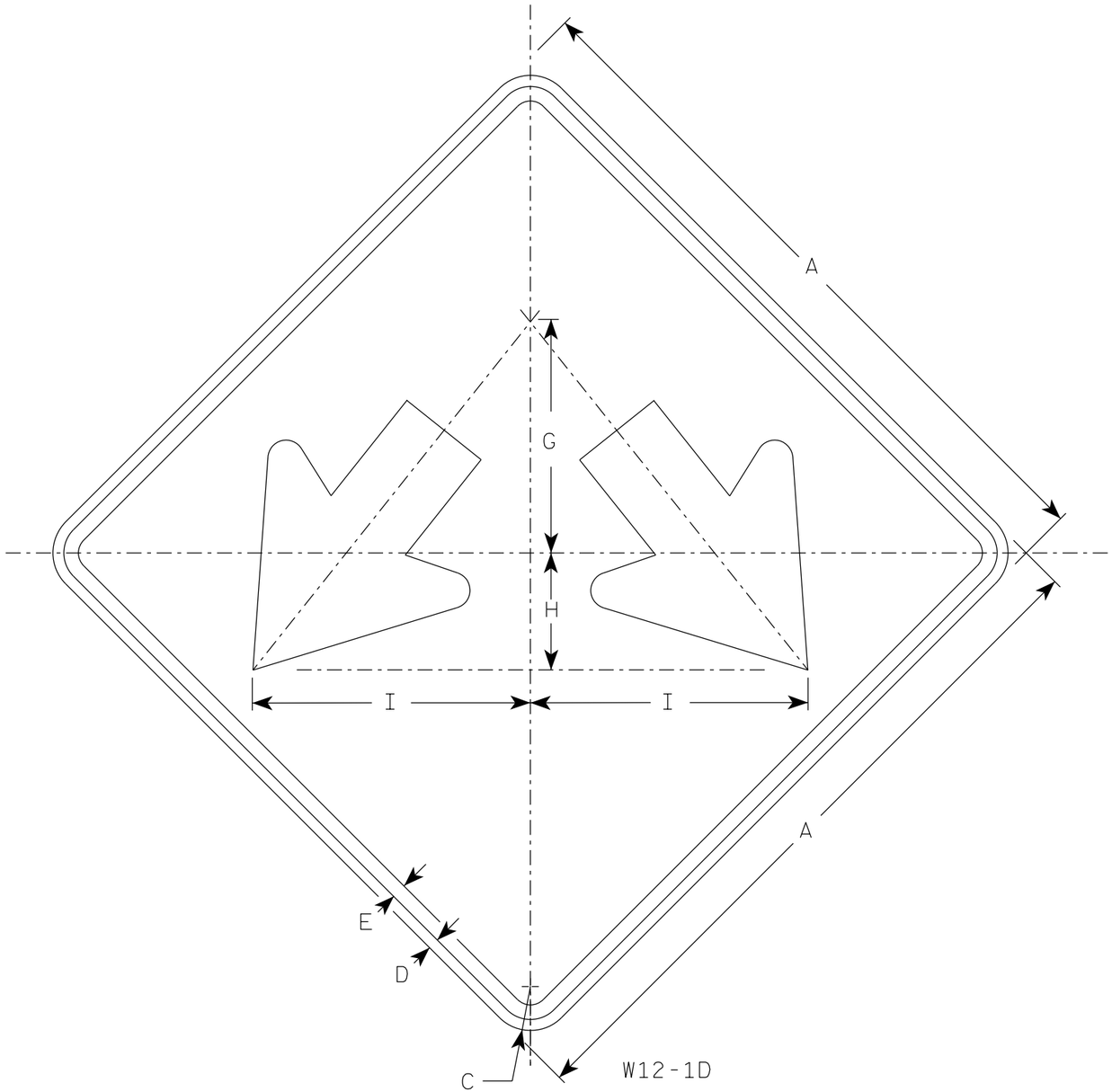
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

For State Traffic Engineer

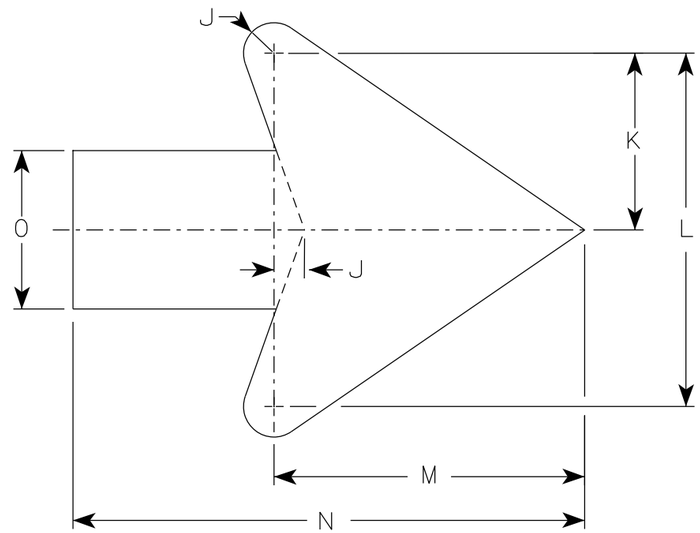
DATE 6/15/2023 PLATE NO. W11-2.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 499 E



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Areq sq. ft.
1																											
2S	24		1 1/2	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/2	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 7/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		2 1/4	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		3	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

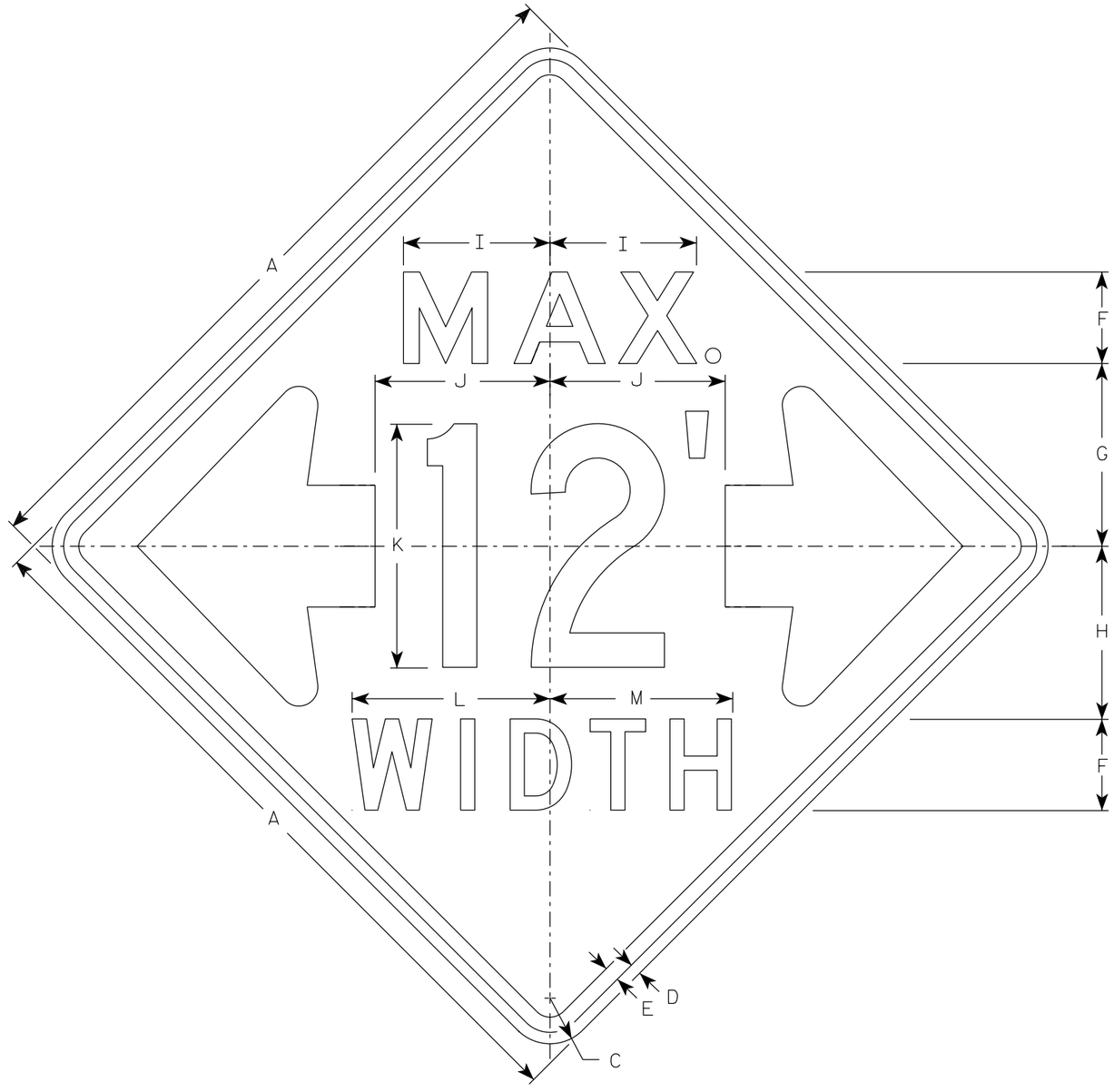
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/30/2023 PLATE NO. W12-1D.16

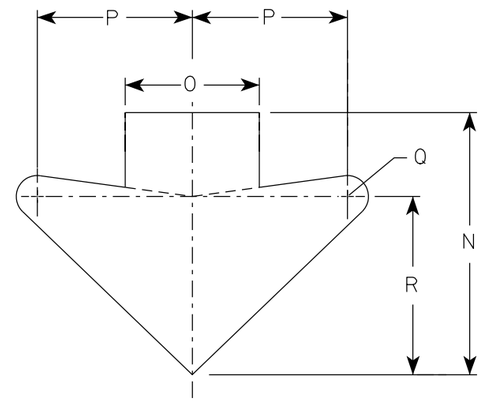
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 500	E



W12-52

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. The top line is series E, the numerals are series C, and the bottom line is series D.
5. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
2M	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
3																											
4																											
5																											

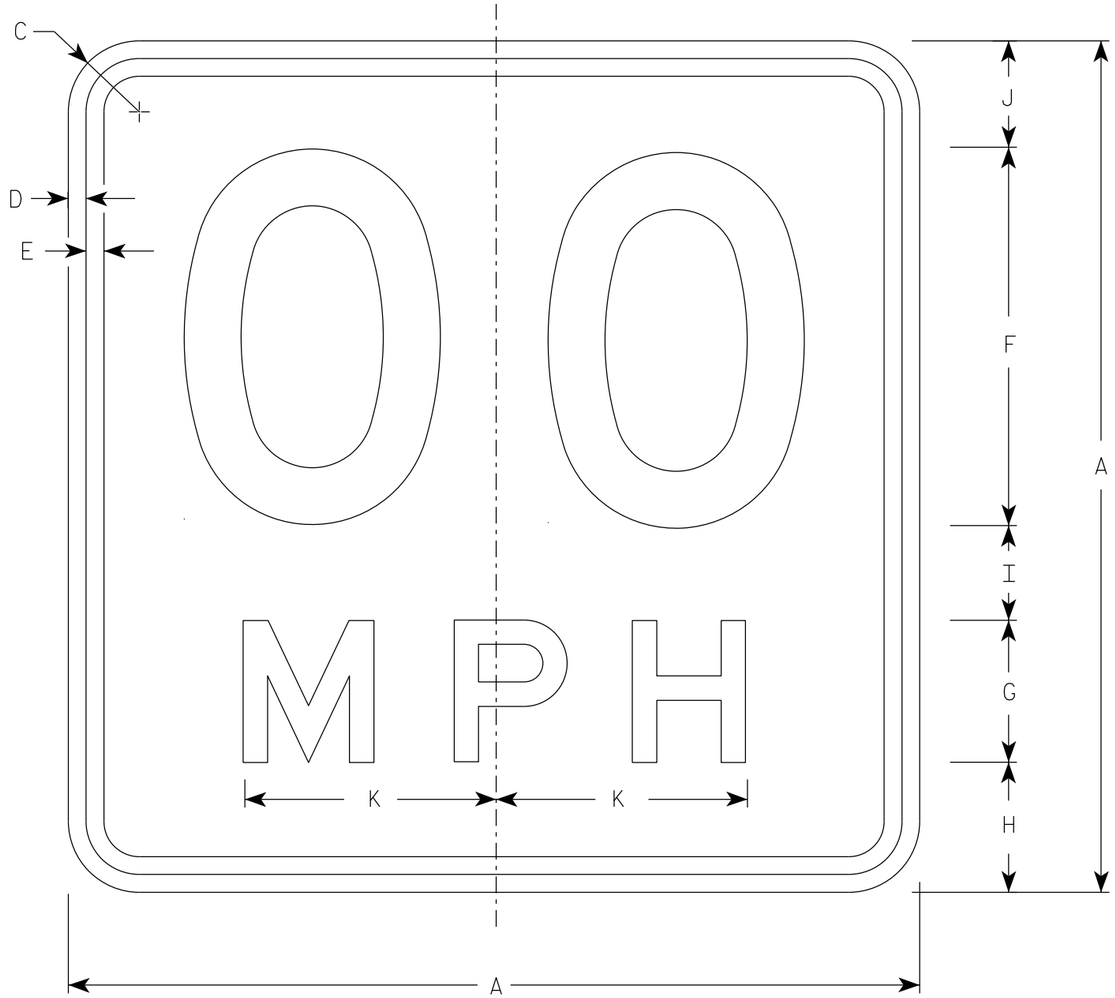
STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/10/2024 PLATE NO. W12-52.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 501 | E



W13-1

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 5
4. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
5. Line 1 is Series D
   Line 2 is Series E

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2S	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
* 2M	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
3	24		1 1/2	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
4	36		2 1/4	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		2 1/4	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W13-1

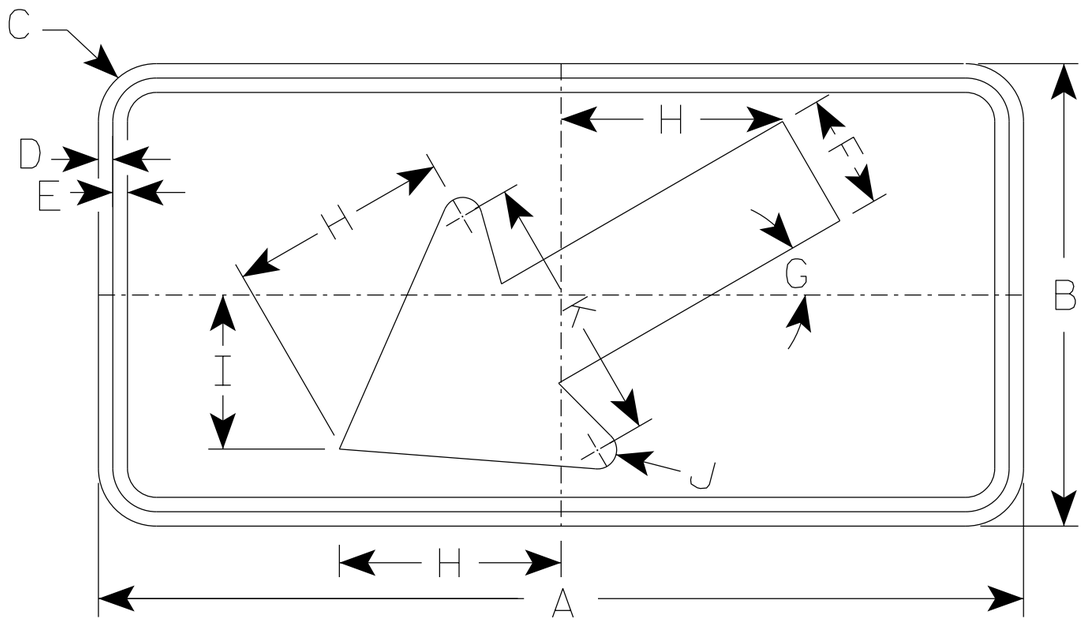
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/8/2024 PLATE NO. W13-1.17

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W131.dgn PLOT DATE : 8-Jan 2024 11:07 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



W16-7L

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. W16-7R is the same as W16-7L except the arrow is reversed along the vertical centerline.

* For 36" x 36" Warning Signs, use 30" x 18" W16-7L signs.
* For 48" x 48" Warning Signs, use 48" x 24" W16-7L signs.

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1																											
	2S	24	12	1 ½	⅜	⅜	3	30°	5 ¾	4	½	7																2.0
*	2M	30	18	1 ½	⅜	½	4 ½	30°	8 ½	6	⅝	10 ¼																3.75
*	3	30	18	1 ½	⅜	½	4 ½	30°	8 ½	6	⅝	10 ¼																3.75
*	4	48	24	1 ⅞	½	⅝	6	30°	11 ½	8	1	14																8.0
	5																											

STANDARD SIGN
W16-7

WISCONSIN DEPT OF TRANSPORTATION

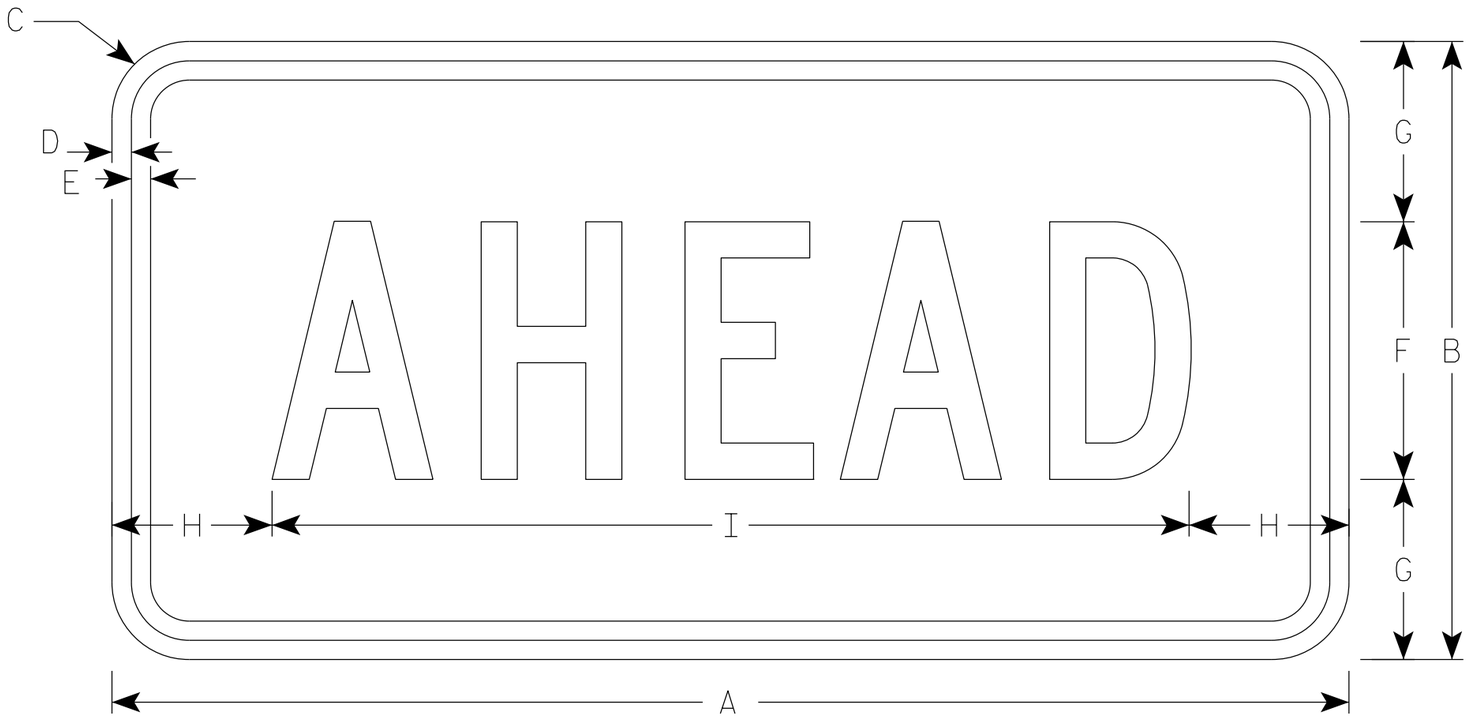
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/9/2024 PLATE NO. W16-7.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 503 E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - C



W16-9P

* For 36" x 36" Warning Signs, use 30" x 18" W16-9P signs.
* For 48" x 48" Warning Signs, use 48" x 24" W16-9P signs.

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1																											
	2S	24	12	1 1/2	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
*	2M	30	18	1 1/2	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
*	3	30	18	1 1/2	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
*	4	48	24	1 7/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
	5																											

STANDARD SIGN
W16-9P

WISCONSIN DEPT OF TRANSPORTATION

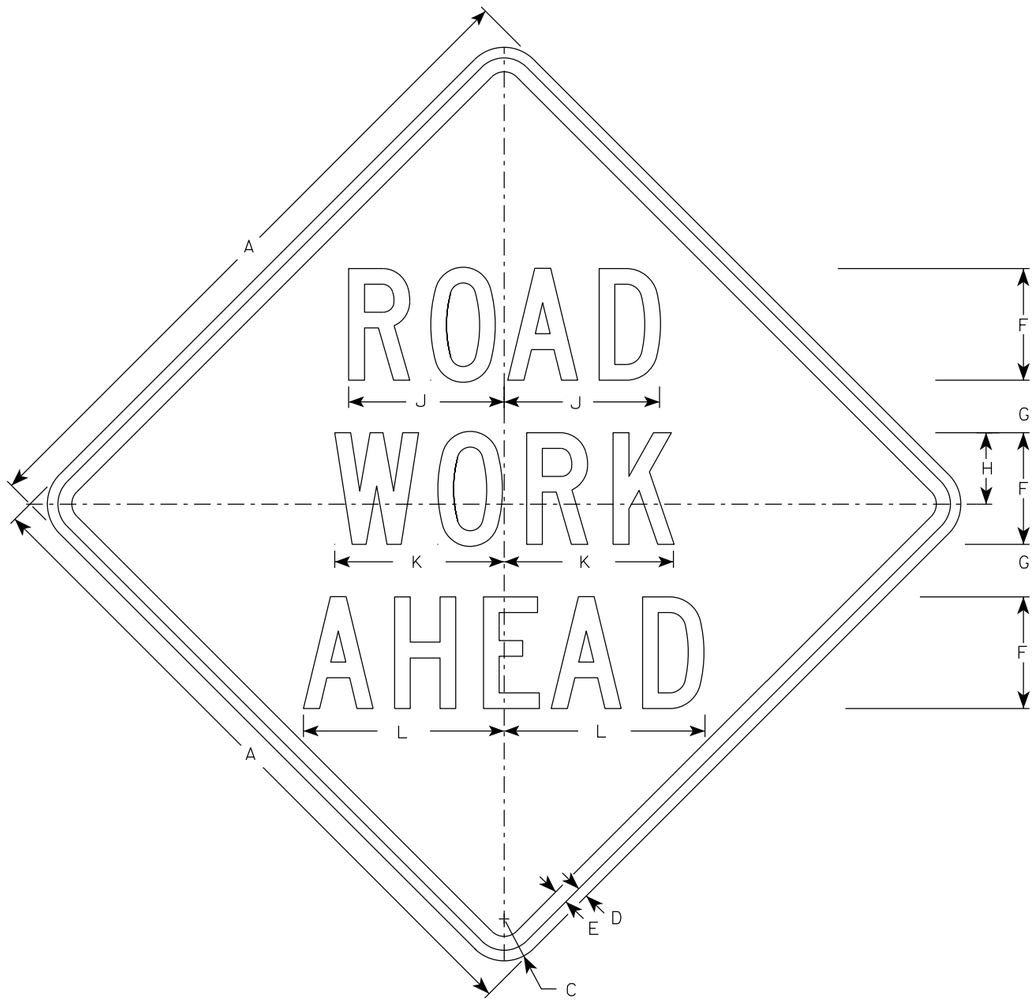
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/9/2024 PLATE NO. W16-9P.9

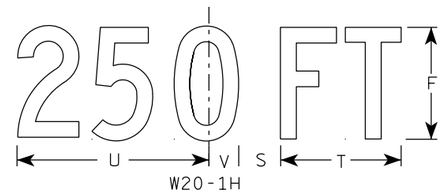
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 504 E

7

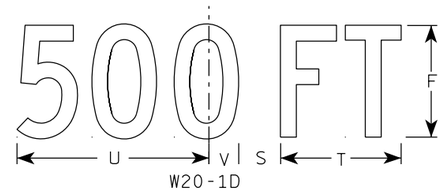
7



W20-1A



W20-1H



W20-1D



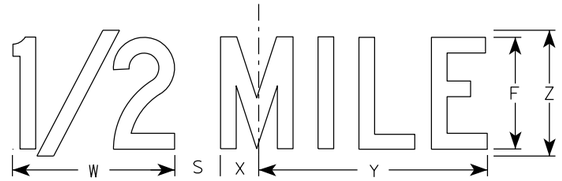
W20-1C



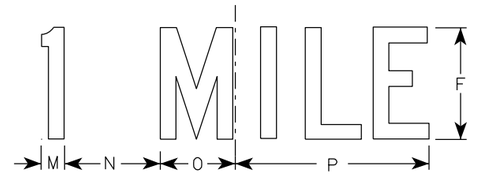
W20-1B

NOTES

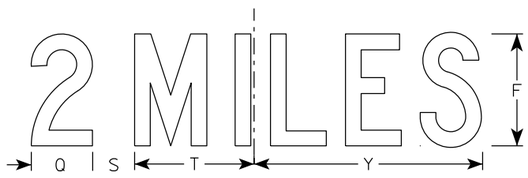
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12

PROJECT NO:

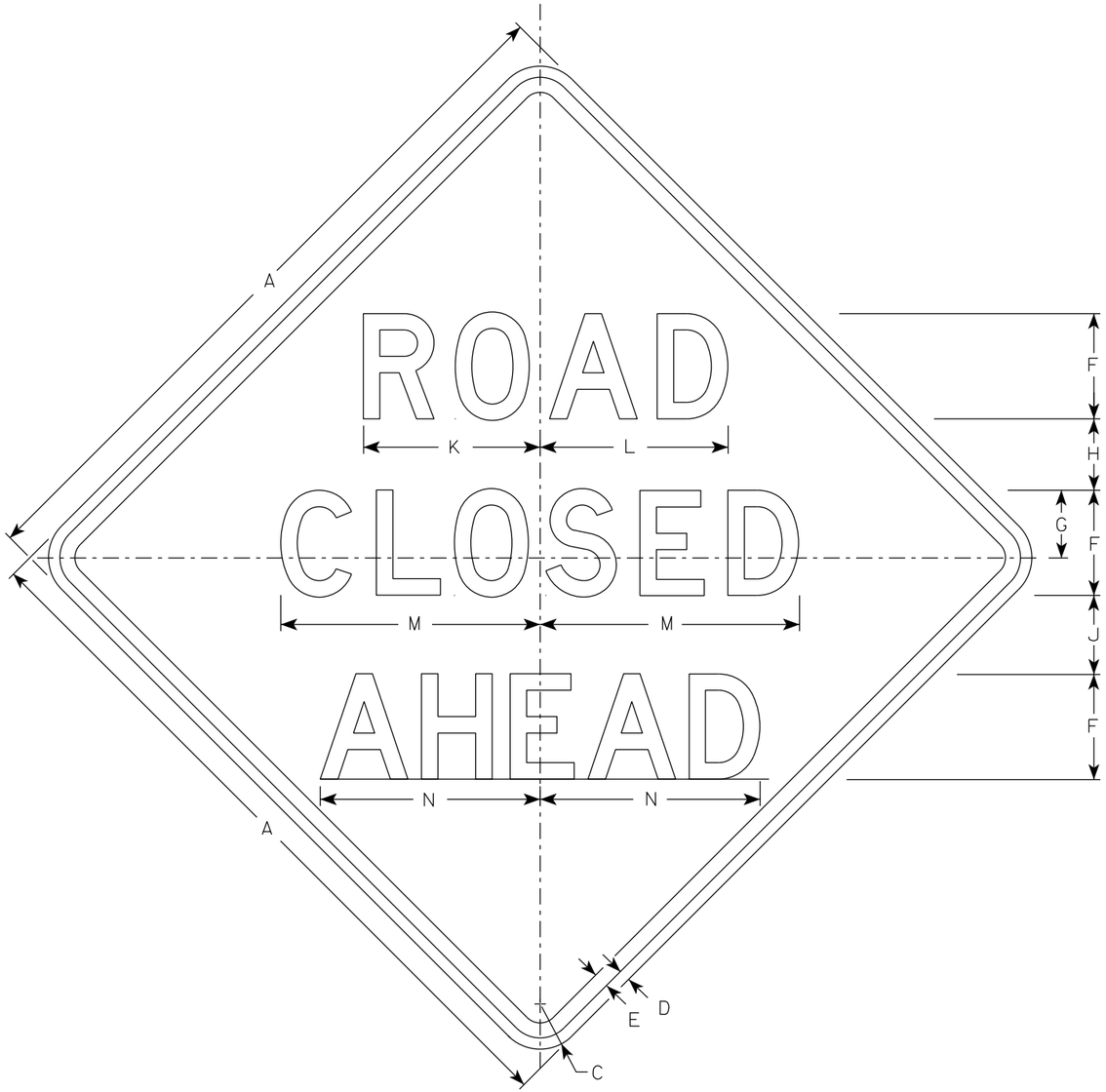
SHEET NO: 505 E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 10-JAN 2024 11:16 PLOT BY : dotc4c

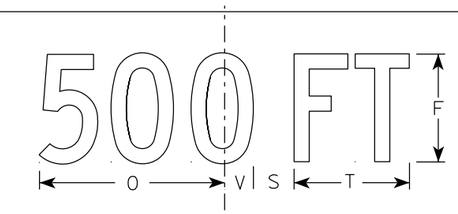
WISDOT/CADDS SHEET 42

7

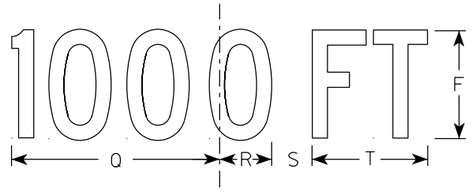
7



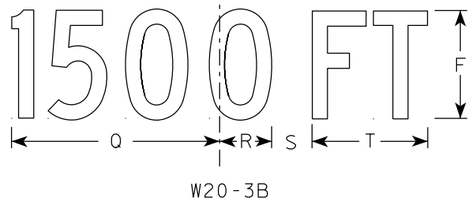
W20-3A



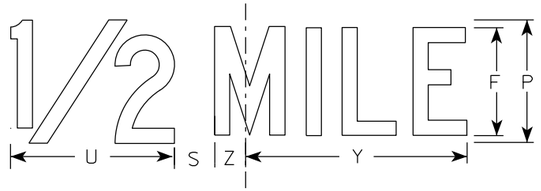
W20-3D



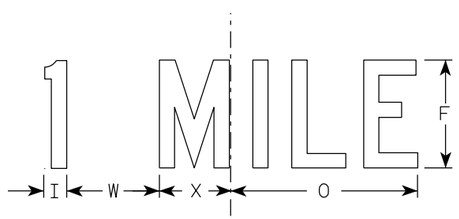
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

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

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

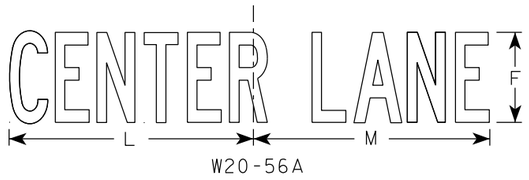
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-3.8

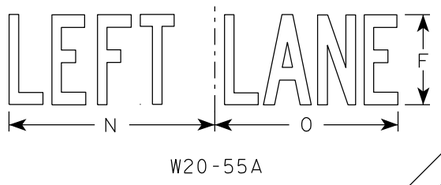
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W203.DGN PLOT DATE : 10-JAN 2024 12:02 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

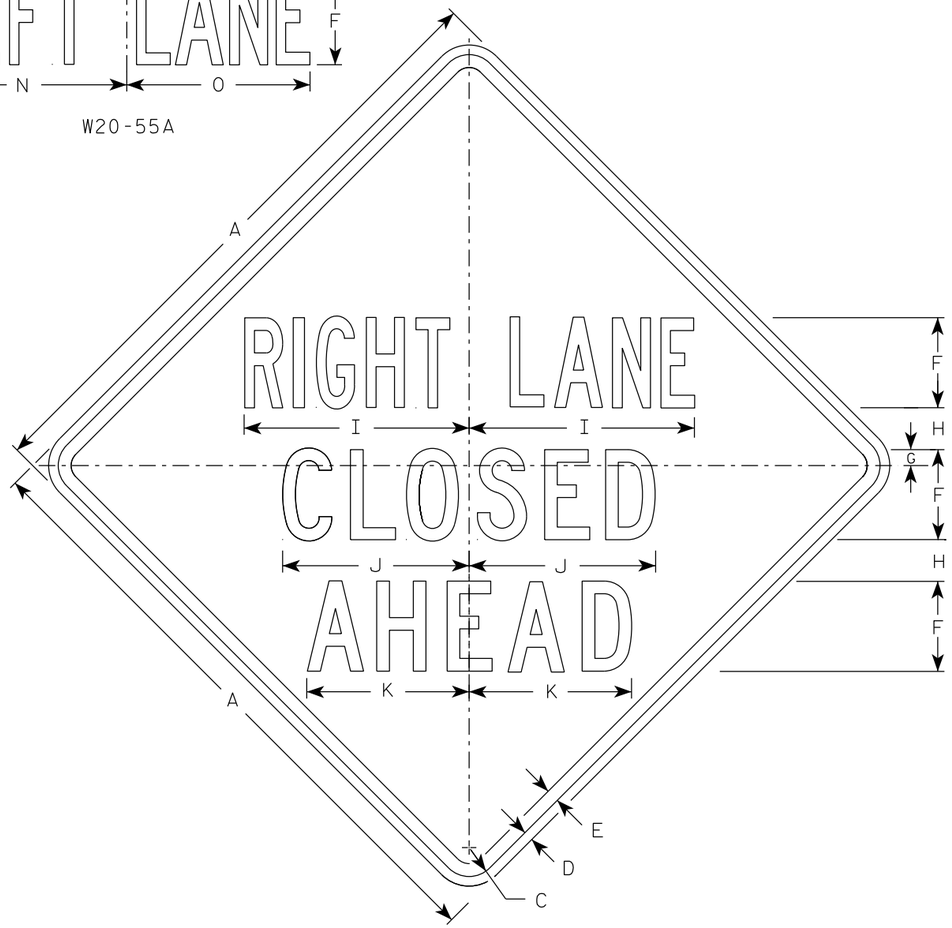
7



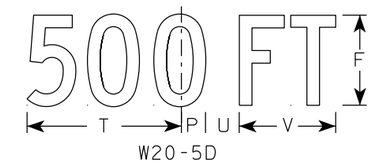
W20-56A



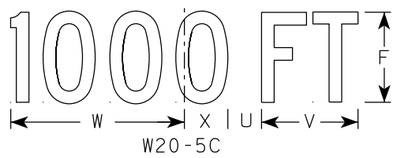
W20-55A



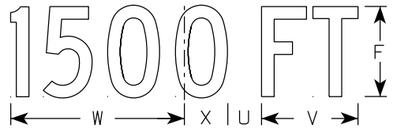
W20-5A



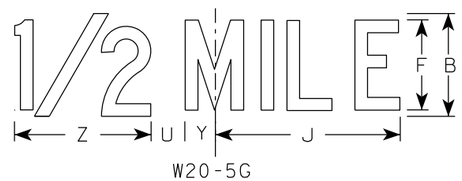
W20-5D



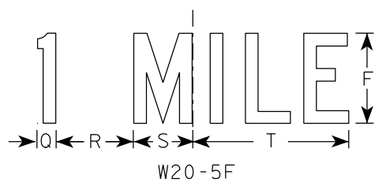
W20-5C



W20-5B



W20-5G



W20-5F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	2 1/4	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

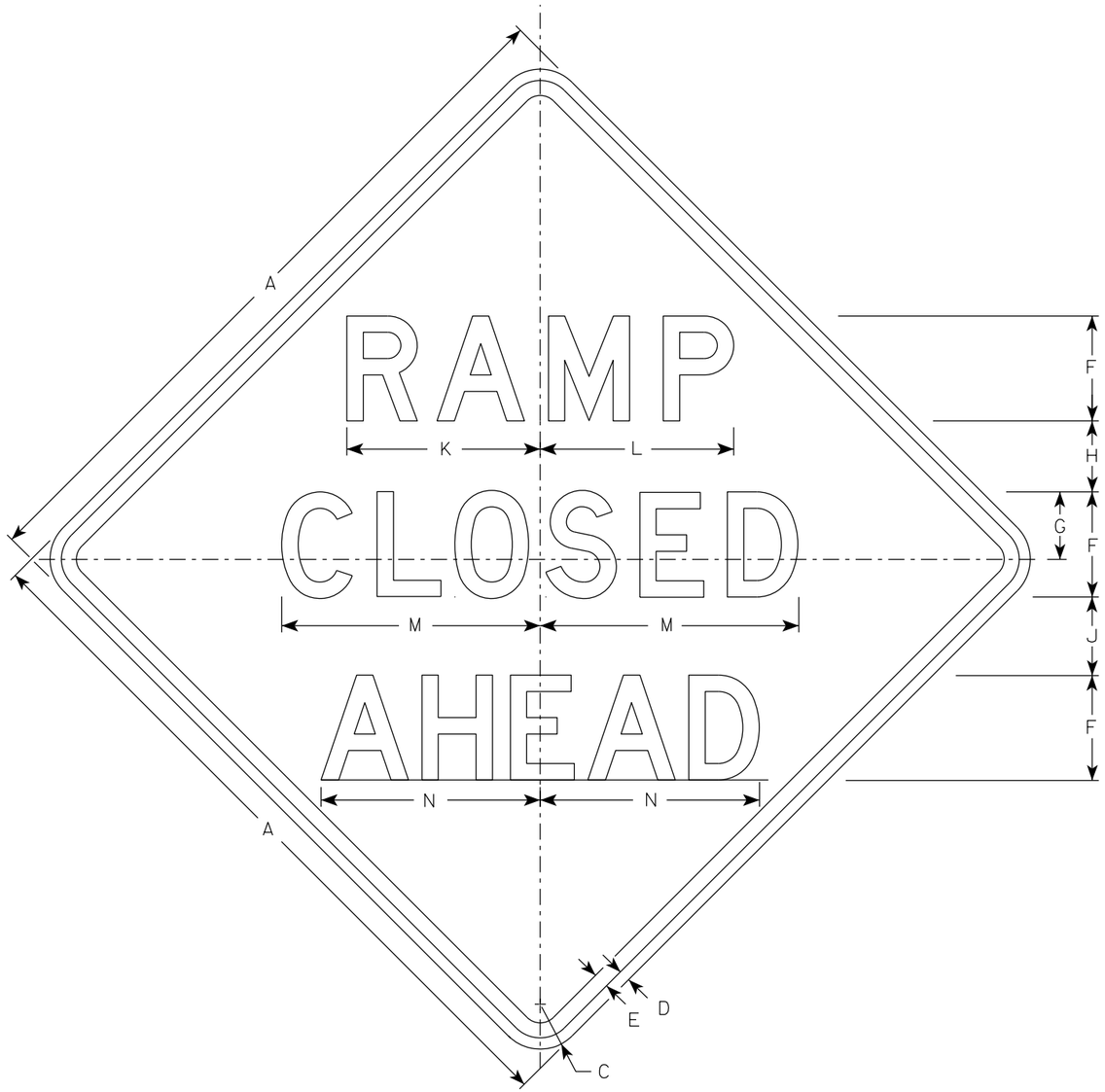
STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

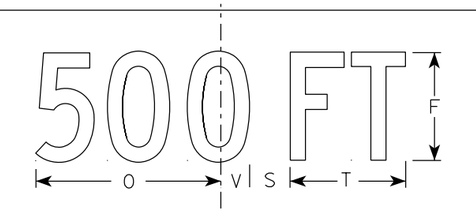
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/27/24 PLATE NO. W20-5.12

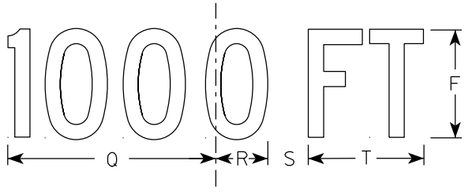
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 507 | E



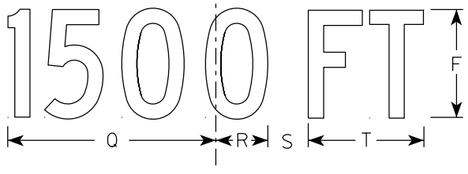
W20-53A



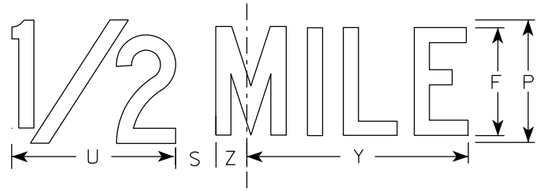
W20-53D



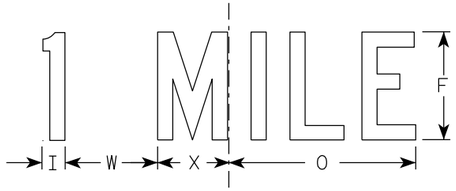
W20-53C



W20-53B



W20-53G



W20-53F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

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

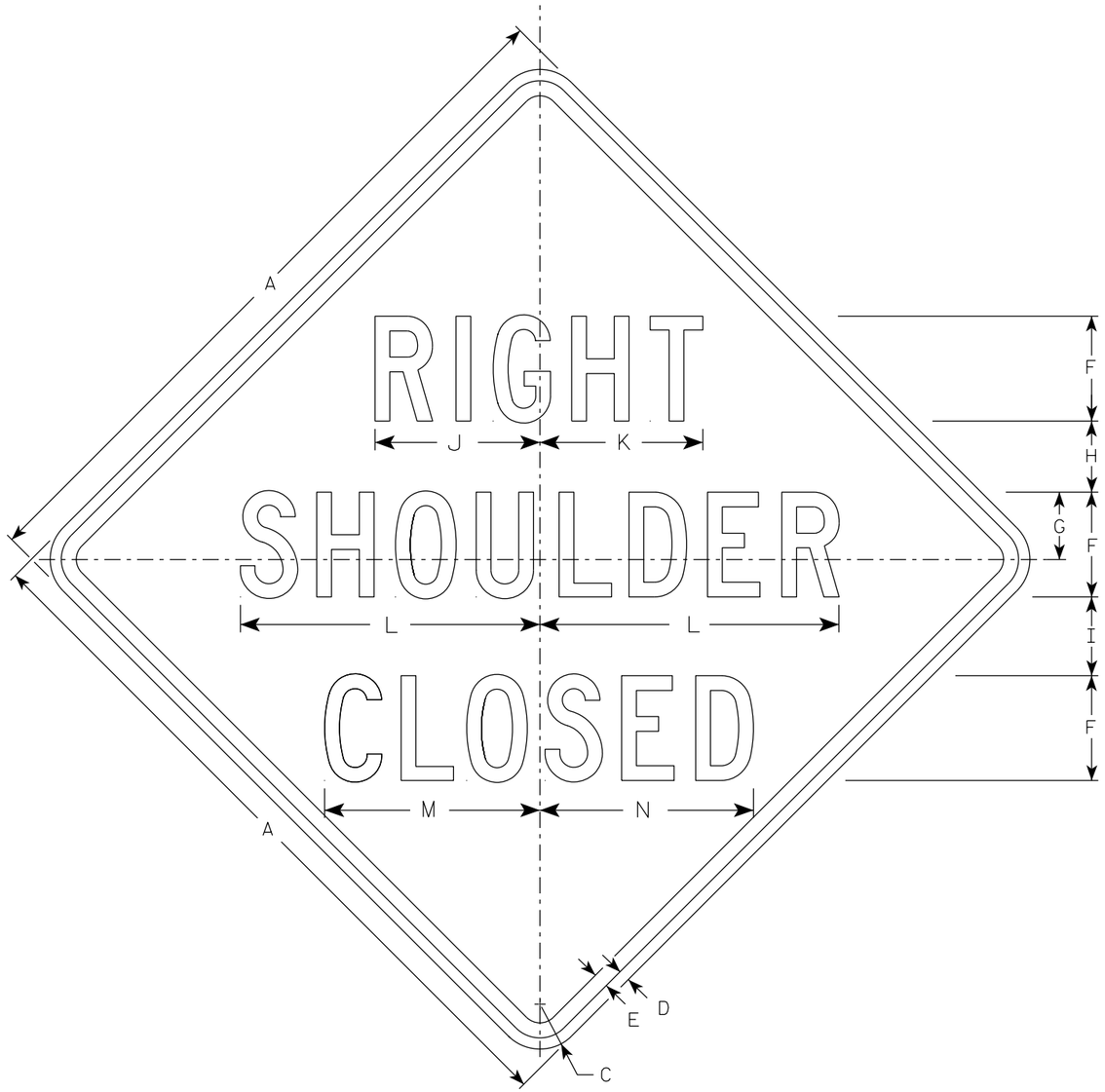
STANDARD SIGN
W20-53A,B,C,D,F,G

WISCONSIN DEPT OF TRANSPORTATION

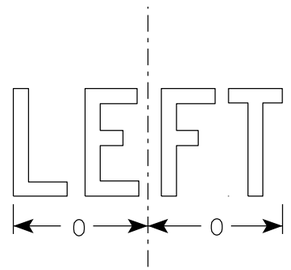
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-53.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W21-5A



W21-5AL

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	3 3/8	3 1/2	4	7 7/8	7 3/4	14 1/4	10 1/4	10 1/8	6 1/4												9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0

STANDARD SIGN
W21-5A

WISCONSIN DEPT OF TRANSPORTATION

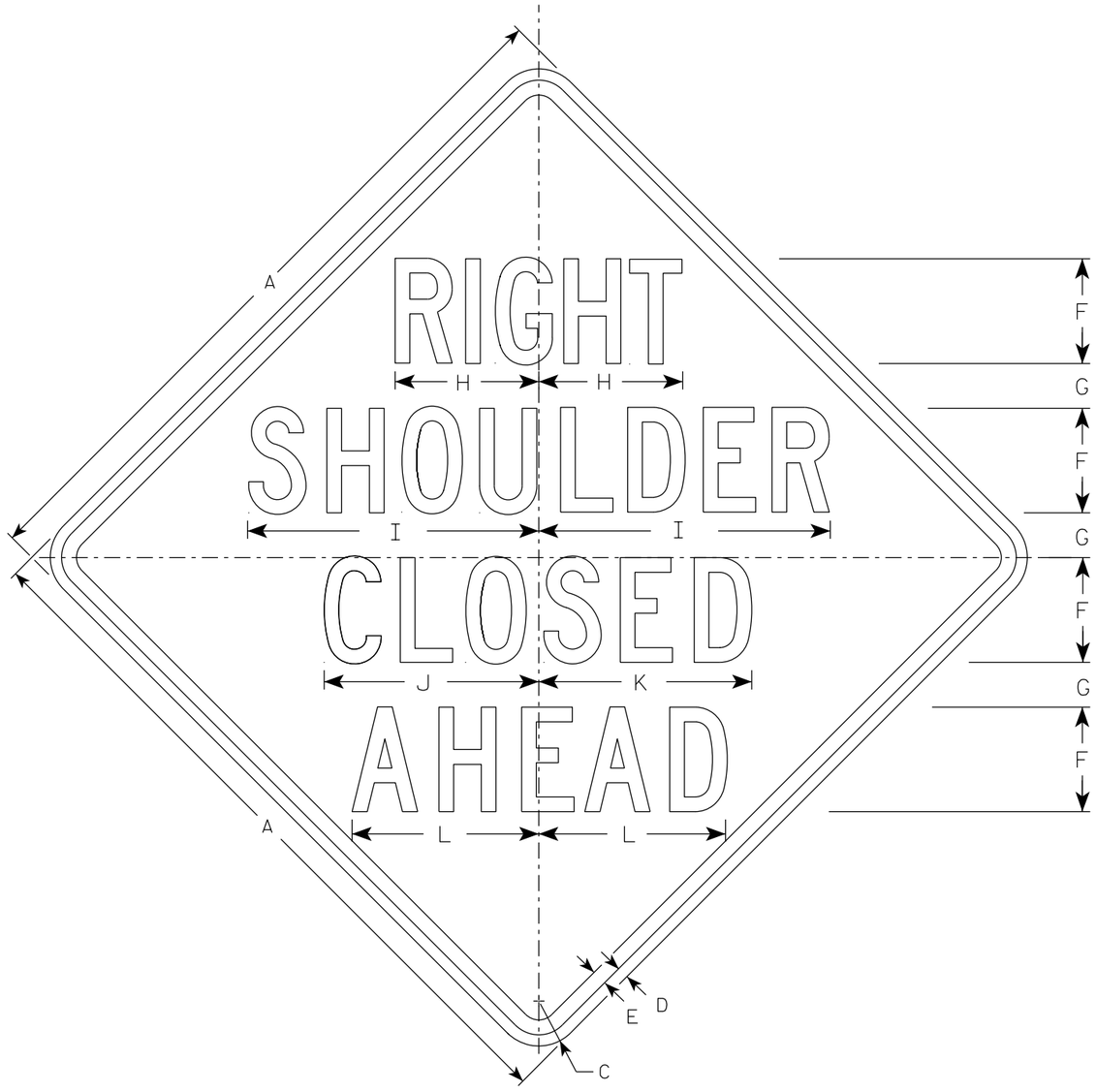
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/11/2024 PLATE NO. W21-5A.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 509 | E

7

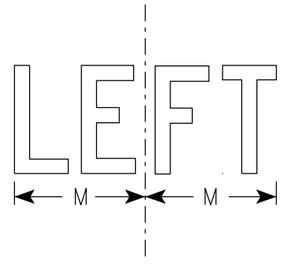
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W215A.dgn PLOT DATE : 11-JAN 2024 3:48 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



W21-5B

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C



W21-5BL

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

STANDARD SIGN
W21-5B

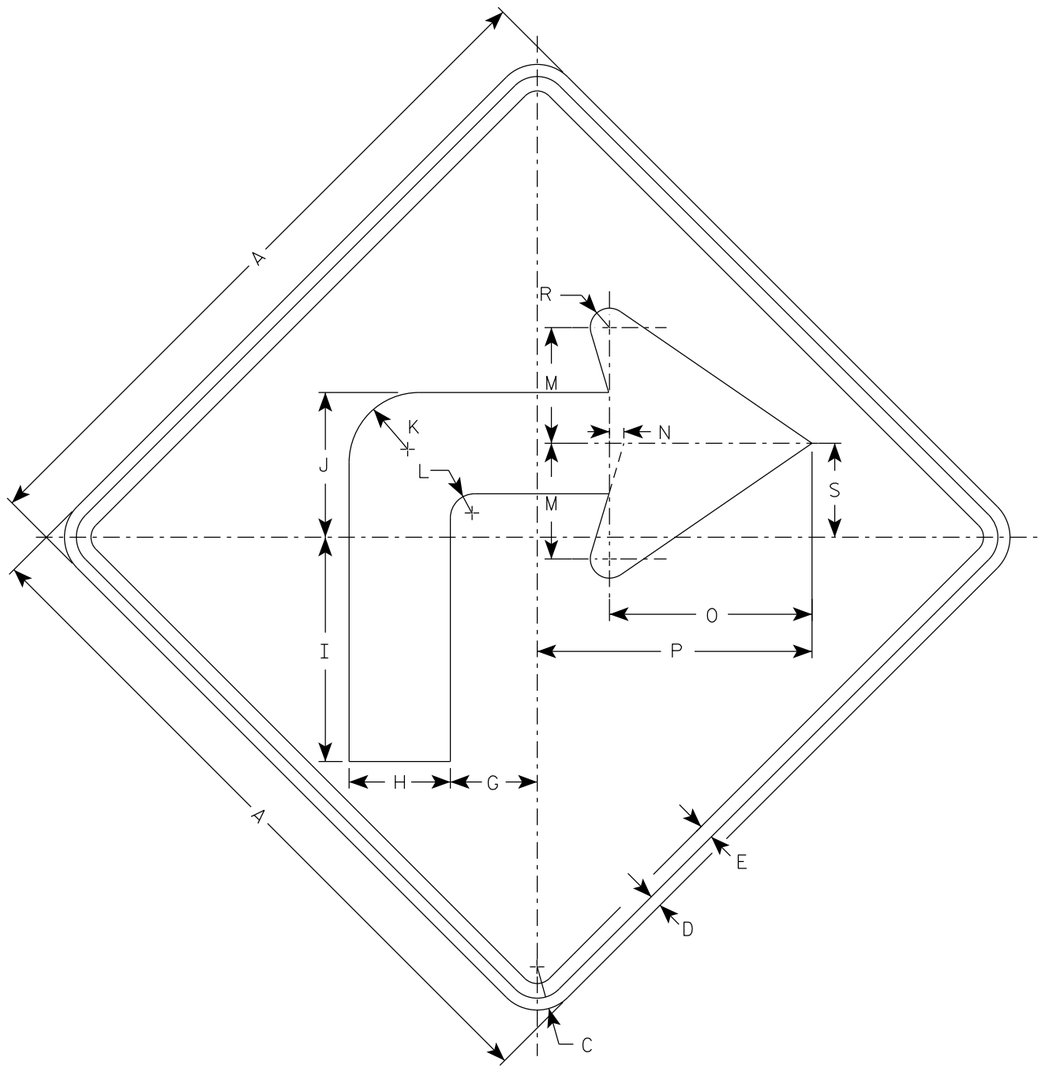
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/16/2024 PLATE NO. W21-5B.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 510 E

7



W01-1R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-1L is the same as W01-1R except the arrow is reversed along the vertical centerline.

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

STANDARD SIGN

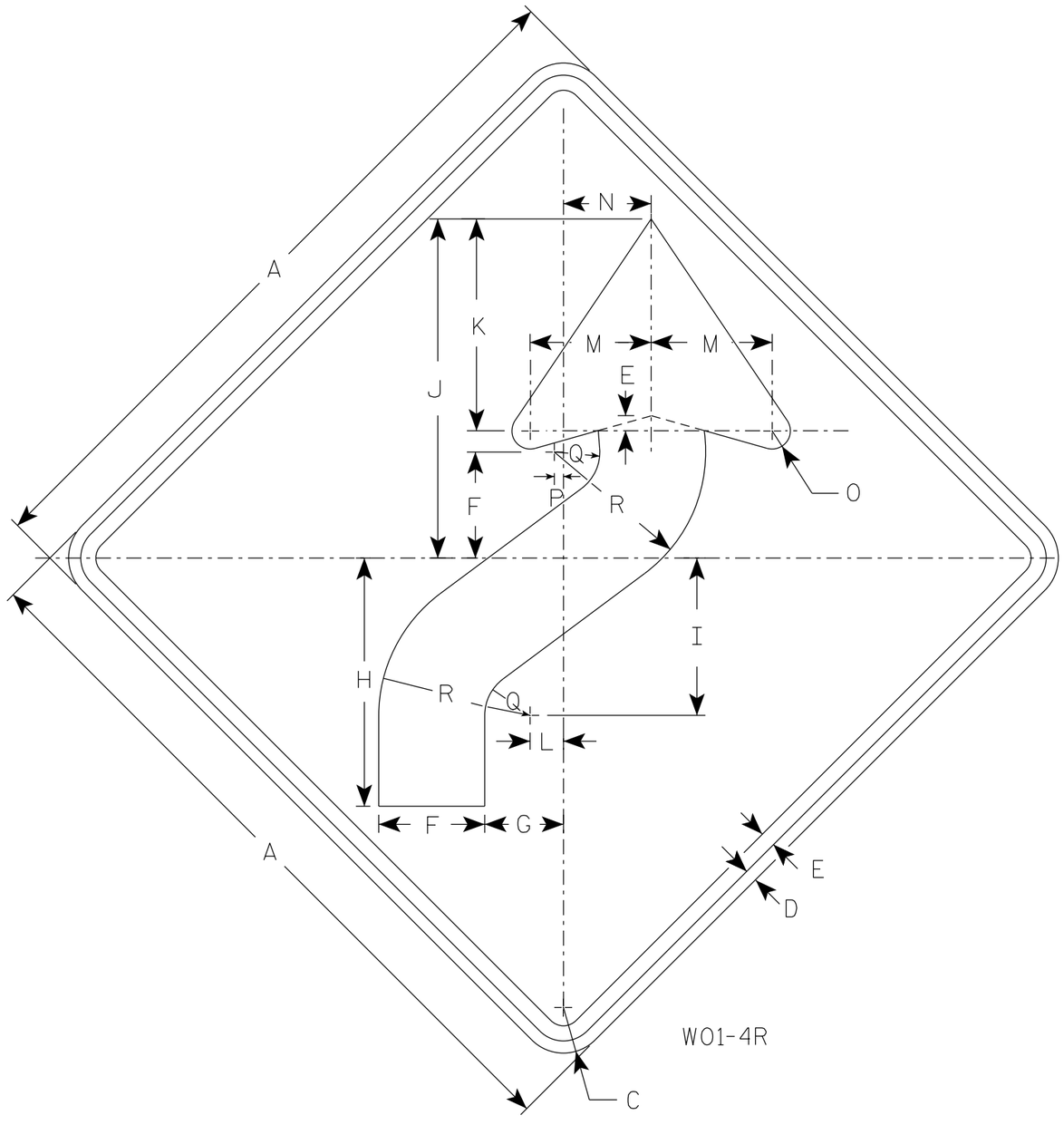
W01-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-1.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 511 E



W01-4R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

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

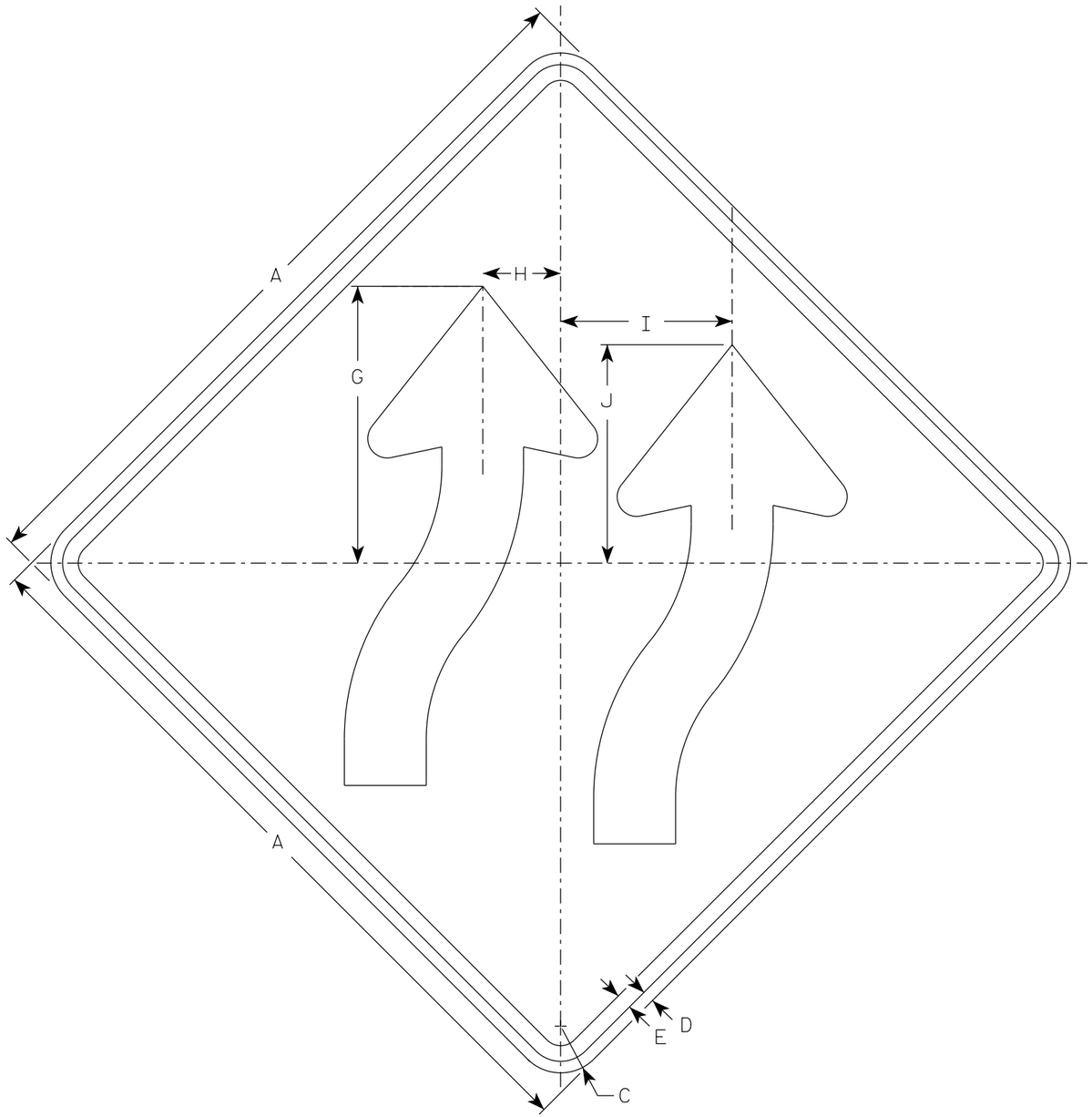
STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-4.2

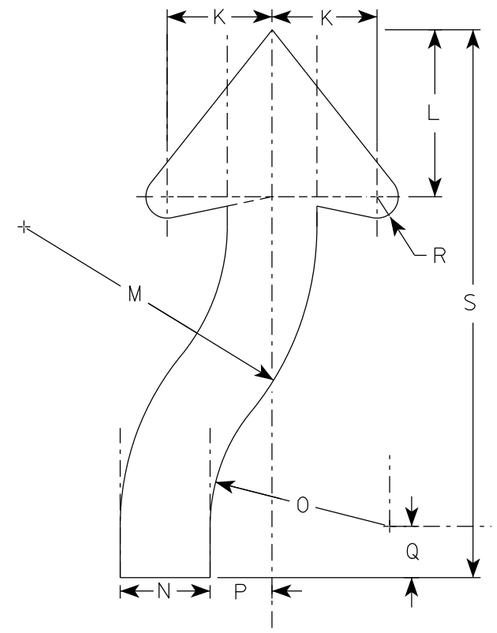
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 512 | E



WO1-4BR

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4BL is the same as W014-BR exept arrows are reversed along the vertical centerline



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		3	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		3	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		3	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		3	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		3	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

STANDARD SIGN
W01-4B

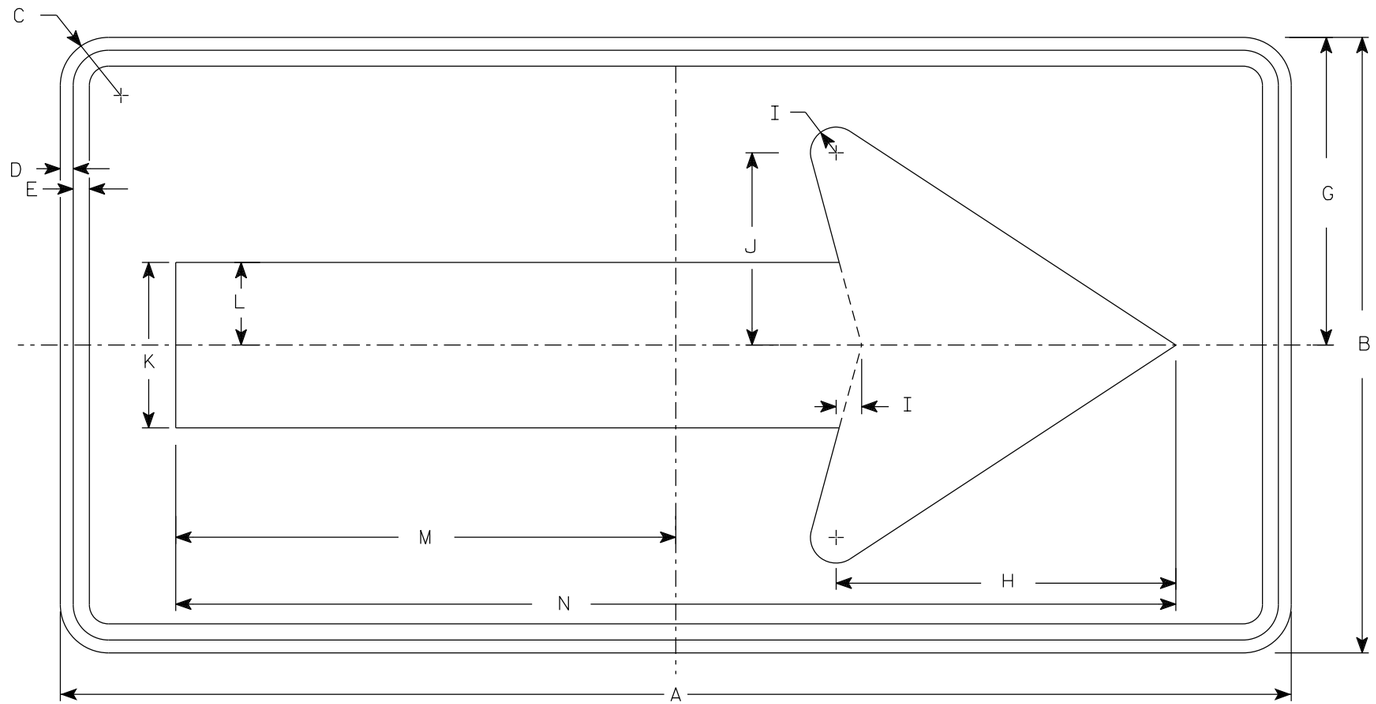
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-4B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014B.dgn PLOT DATE : 29-JAN 2024 3:41 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



WO1-6

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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

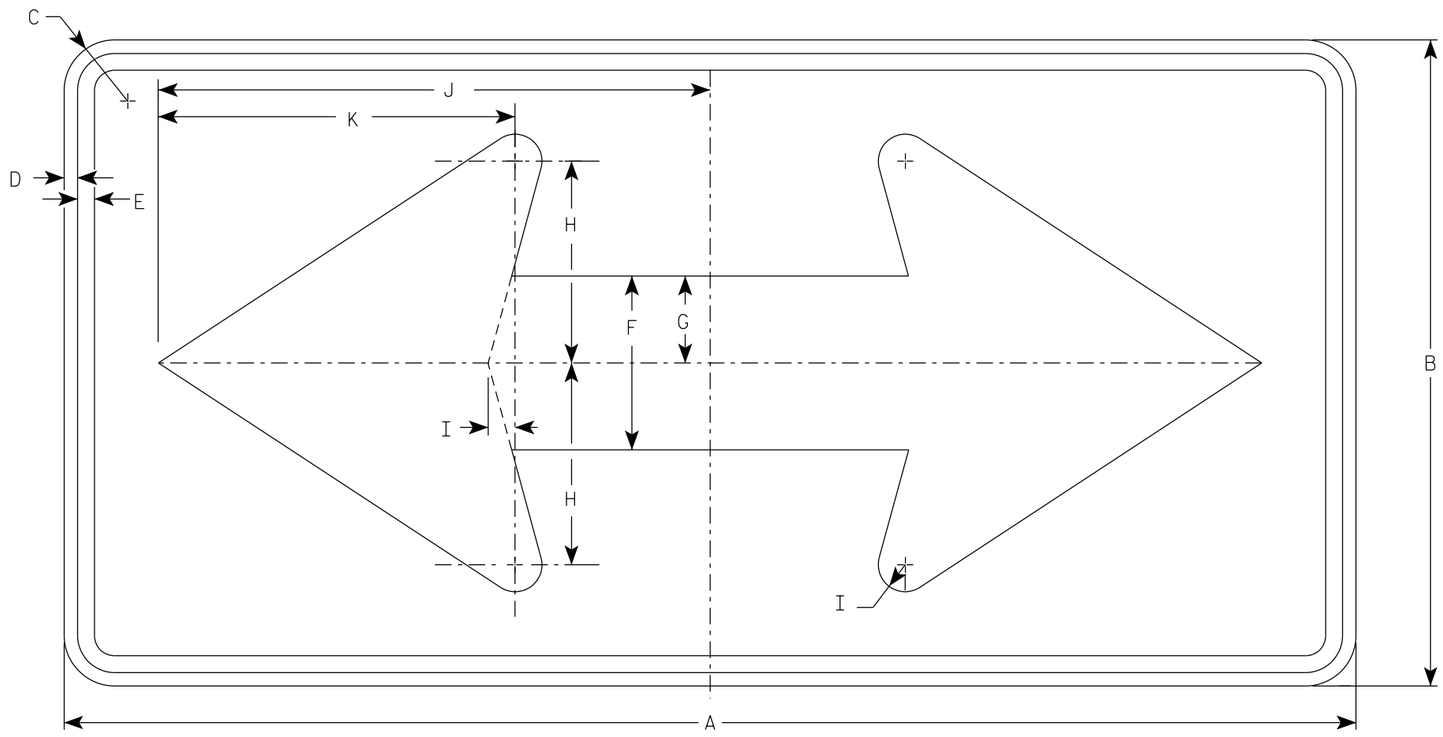
STANDARD SIGN
WO1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. WO1-6.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



W01-7

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 7/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 7/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 7/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 7/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	60	30	1 7/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5

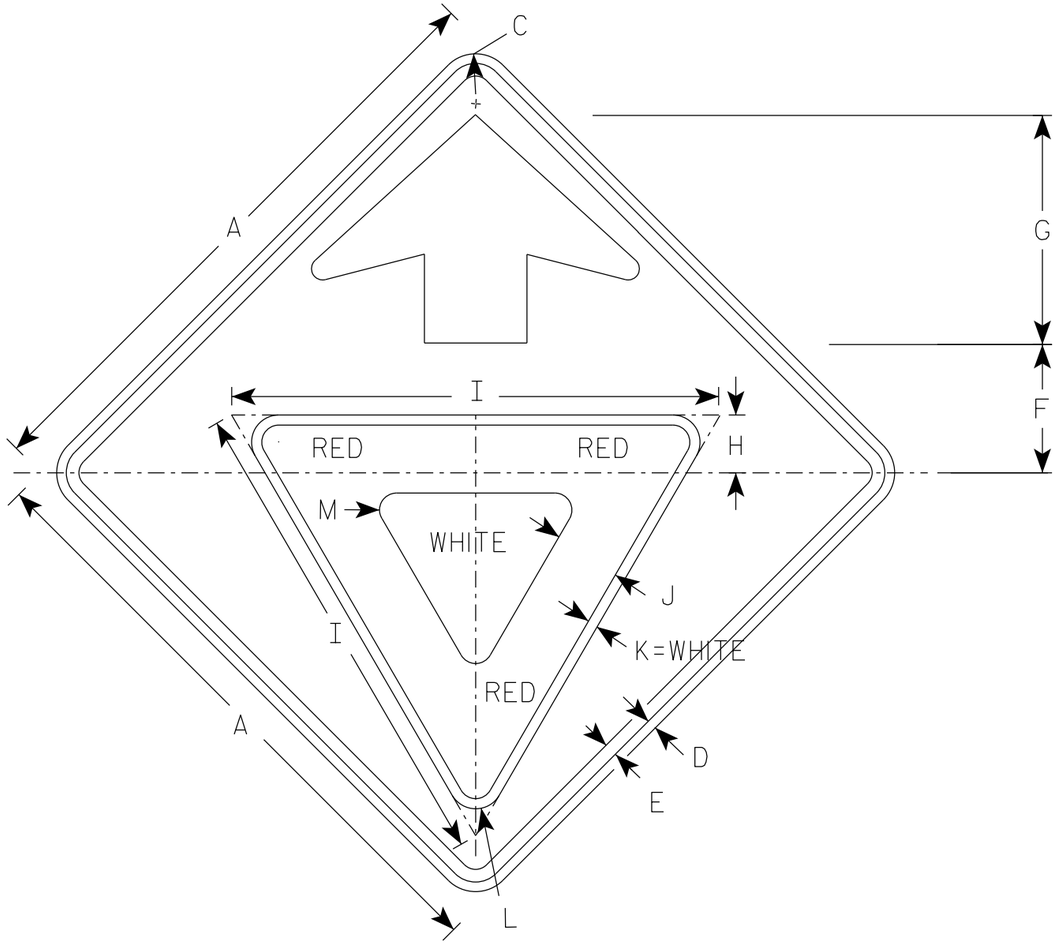
STANDARD SIGN
W01-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-7.2

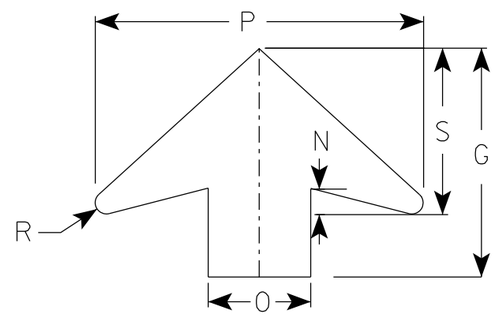
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 515 | E



W03-2

NOTES

1. All Signs Type II - Type F Reflective
2. Color:
   Background - ORANGE
   Arrow & Border - BLACK
   Yield Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2S	48		3	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
2M	48		3	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
3	48		3	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
4	48		3	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		3	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

STANDARD SIGN
W03-2

WISCONSIN DEPT OF TRANSPORTATION

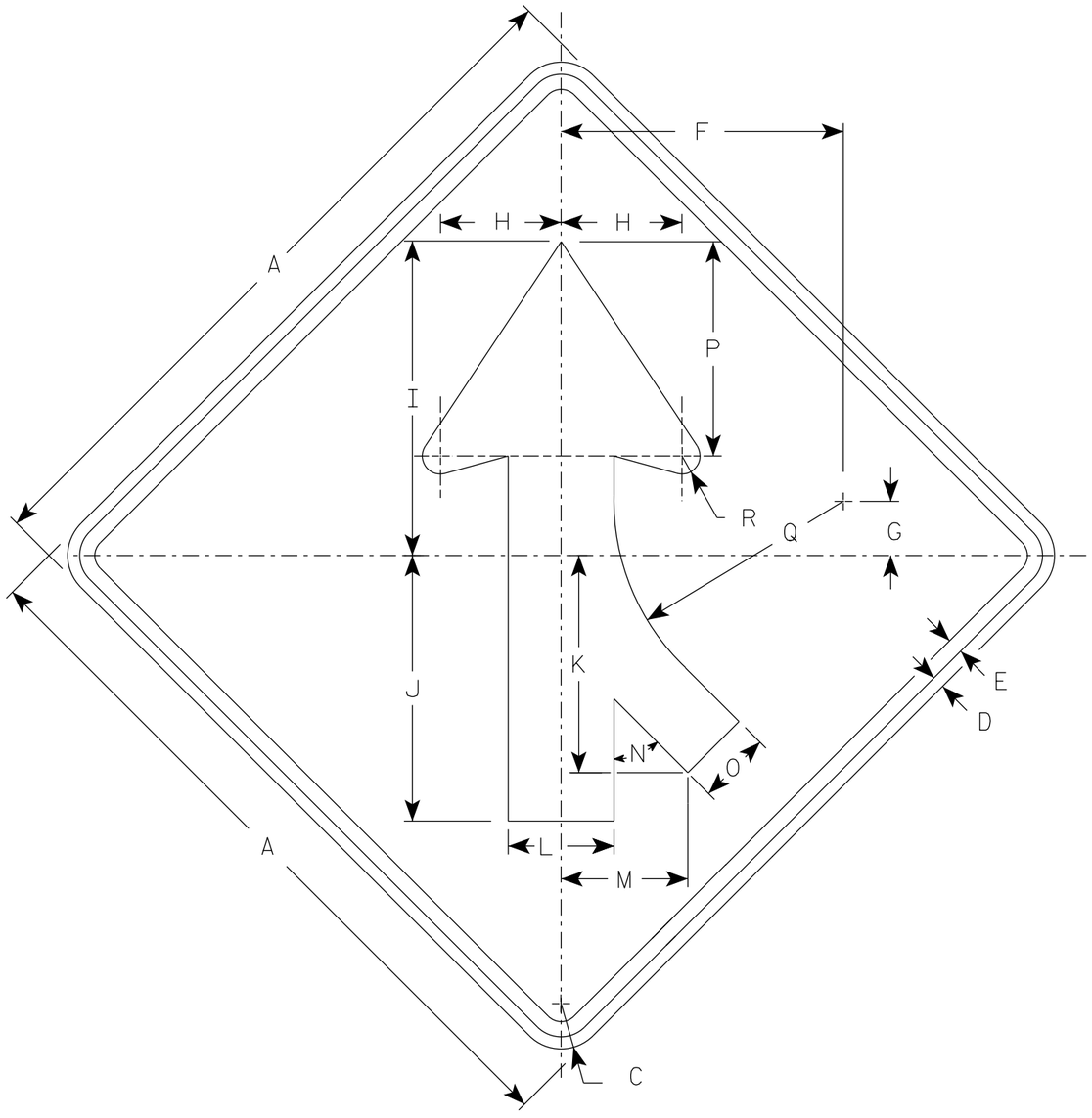
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. W03-2.2

PROJECT NO:

SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W032.DGN
PLOT DATE : 24-JAN 2024 1:55
PLOT BY : dotc4c
WISDOT/CADDS SHEET 42



W04-1R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-1L is the same as W04-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2S	48		3	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
2M	48		3	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
3	48		3	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
4	48		3	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		3	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

STANDARD SIGN
W04-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/25/2024 PLATE NO. W04-1.3

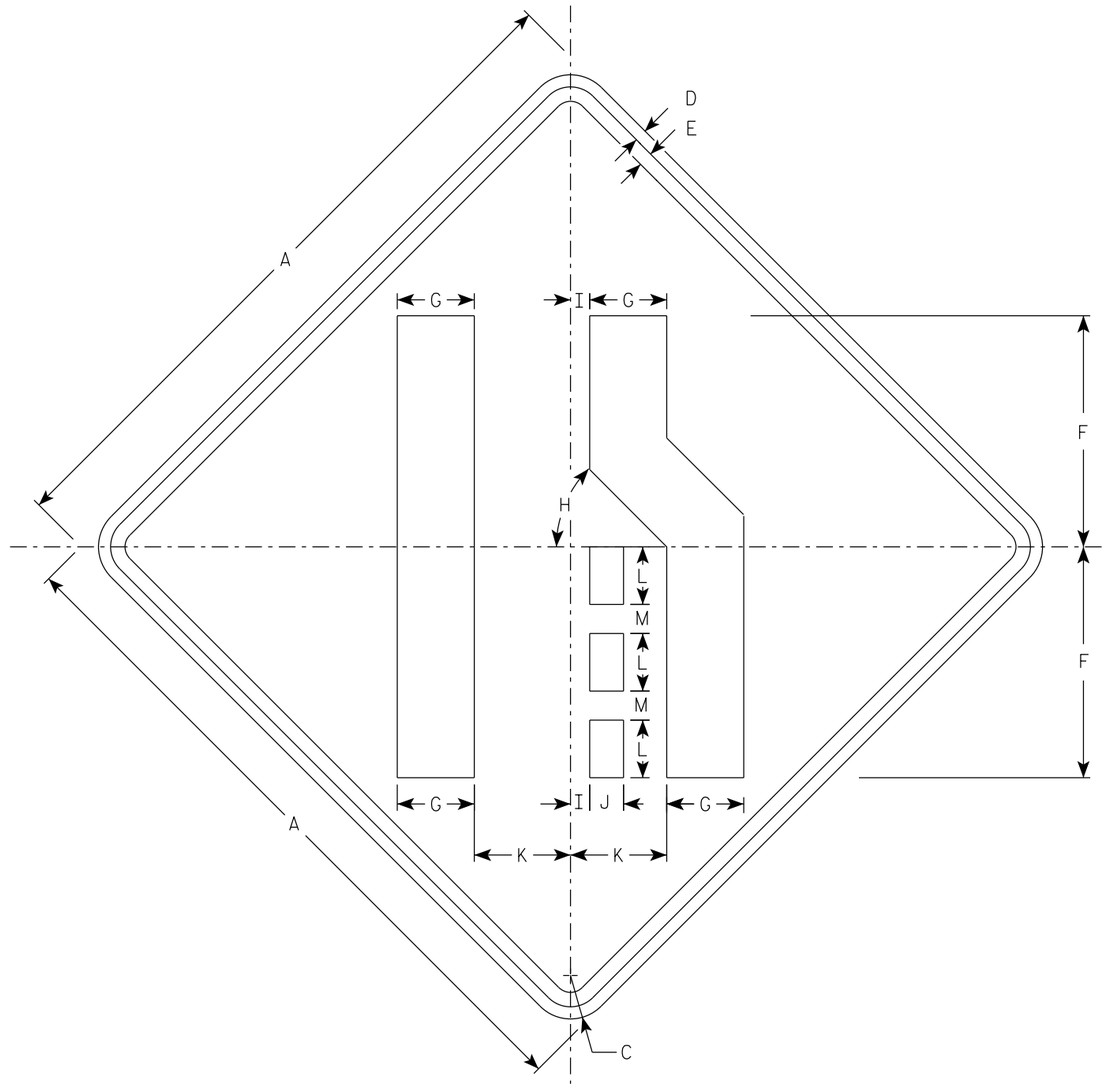
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 517 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W041.dgn PLOT DATE : 25-JAN 2024 8:20 PLOT BY : dotc4c PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

7

7



W04-2R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W04-2

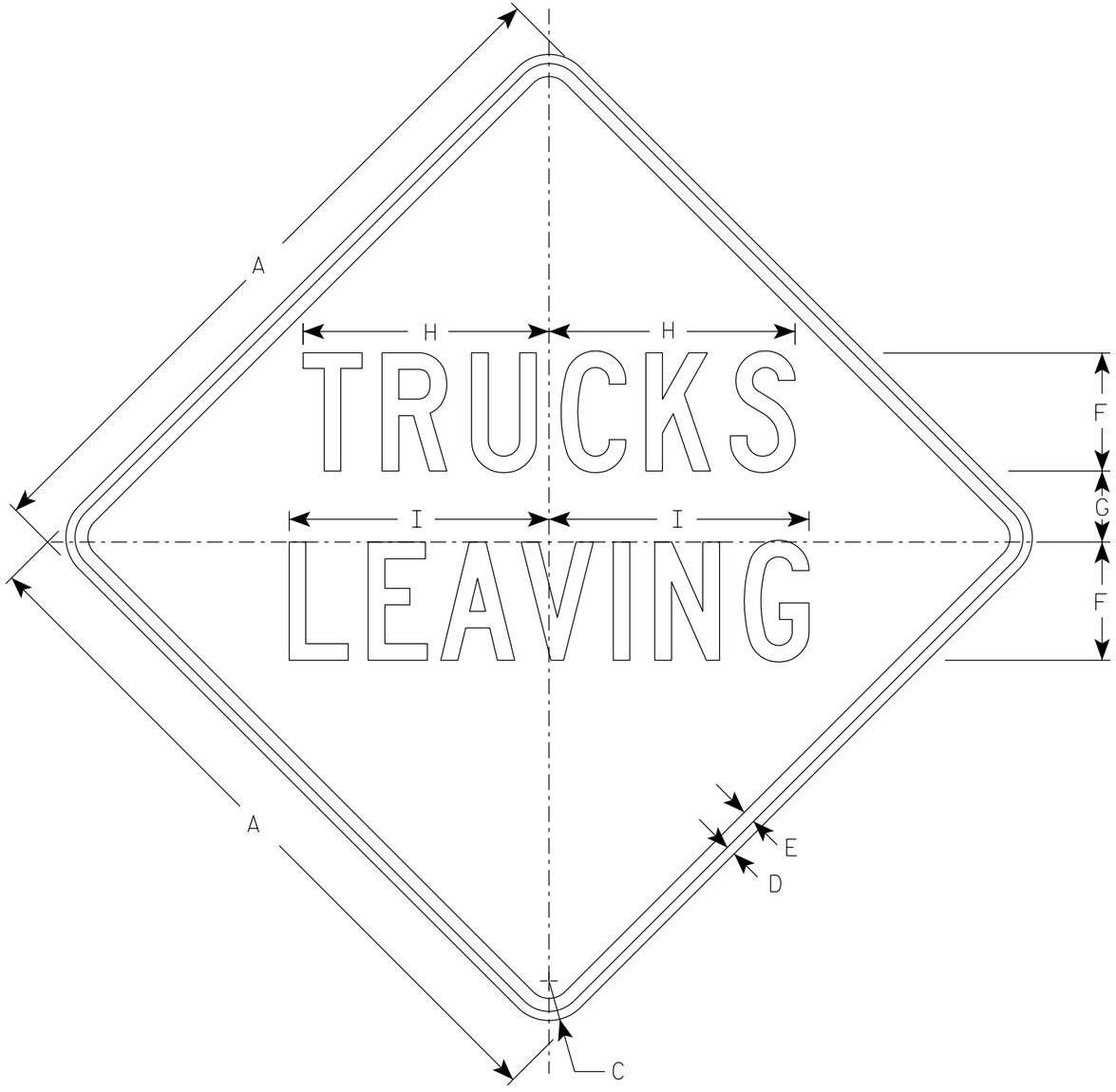
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/25/2024 PLATE NO. W04-2.2

PROJECT NO:

SHEET NO: 518 E



W08-6C

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	6	3 5/8	12 1/2	13 1/4																		9.0
2S	48		3	3/4	1	8	5	16 5/8	17 5/8																		16.0
2M	48		3	3/4	1	8	5	16 5/8	17 5/8																		16.0
3	48		3	3/4	1	8	5	16 5/8	17 5/8																		16.0
4	48		3	3/4	1	8	5	16 5/8	17 5/8																		16.0
5	48		3	3/4	1	8	5	16 5/8	17 5/8																		16.0

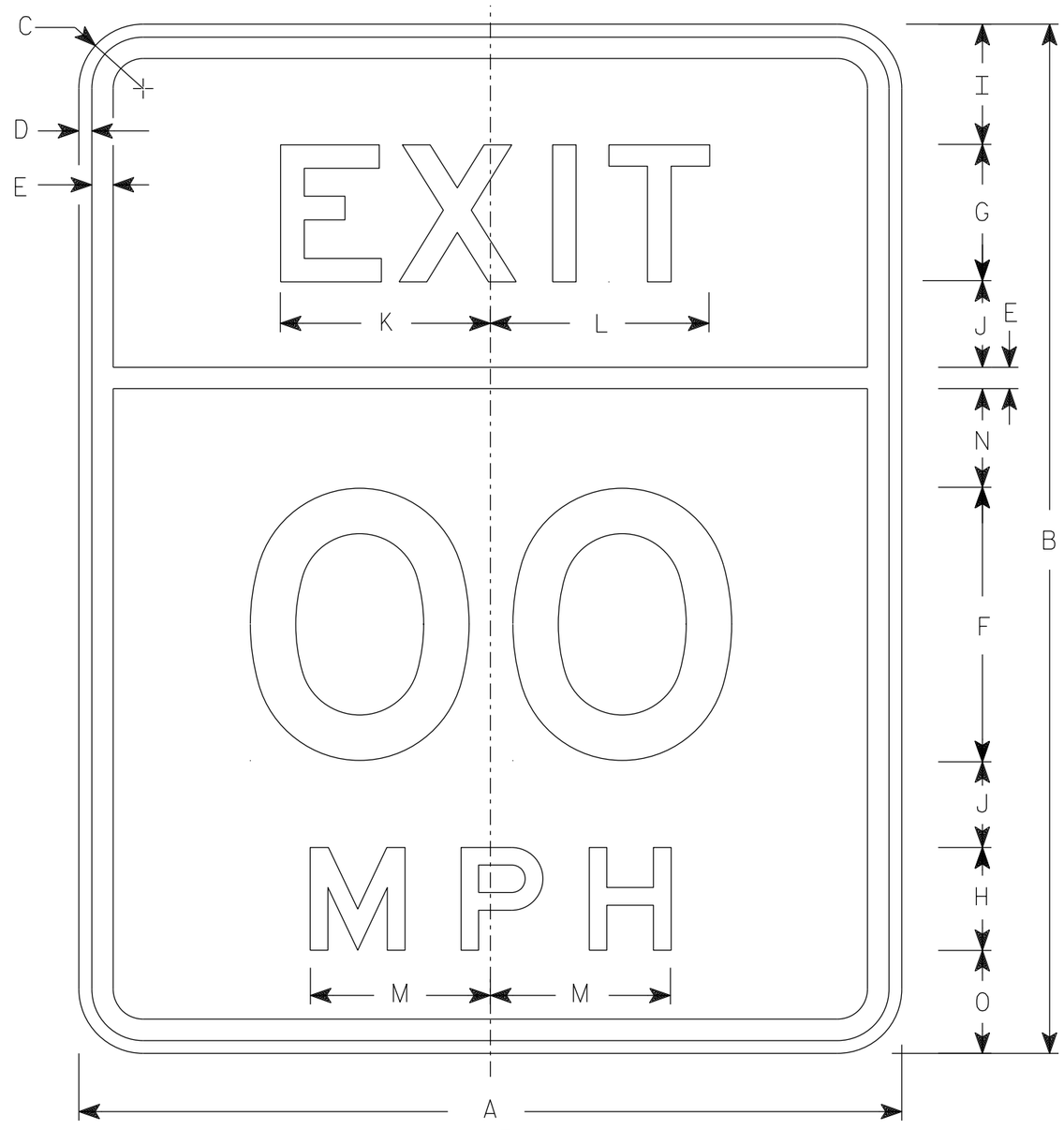
STANDARD SIGN
W08-6C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/31/2024 PLATE NO. W08-6C.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 519 E



WO13-2

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/2	3/8	5/8	8	4	3	3 1/2	2 1/2	6 1/8	6 3/8	5 1/4	2 7/8	3												5.0
2M	24	30	1 1/2	3/8	5/8	8	4	3	3 1/2	2 1/2	6 1/8	6 3/8	5 1/4	2 7/8	3												5.0
3	36	48	1 7/8	5/8	7/8	12	6	4	6	4	9 1/4	9 1/2	7 1/8	5 1/8	6												12.0
4	36	48	1 7/8	5/8	7/8	12	6	4	6	4	9 1/4	9 1/2	7 1/8	5 1/8	6												12.0
5	48	60	3	3/4	1	16	8	6	7	5	12 1/4	12 3/4	10 5/8	5 3/4	6												20.0

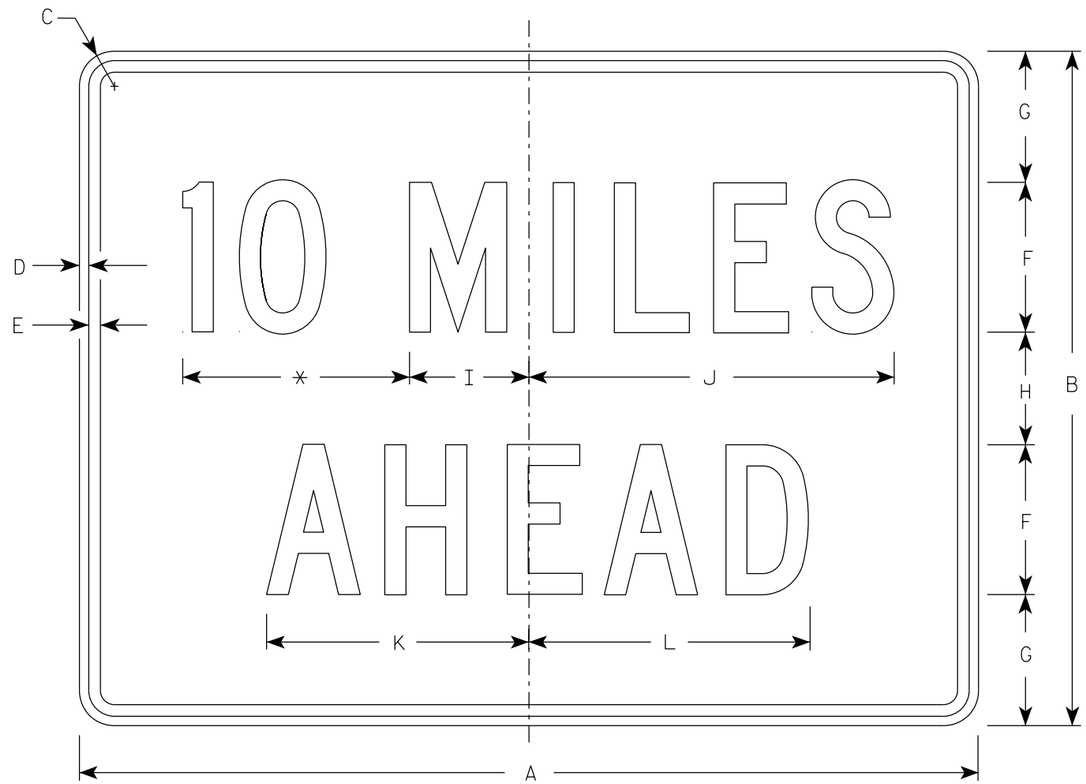
STANDARD SIGN
WO13-2

WISCONSIN DEPT OF TRANSPORTATION

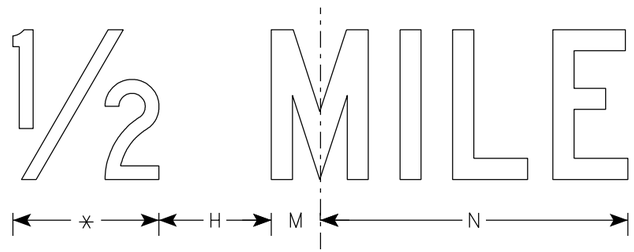
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/2024 PLATE NO. WO13-2.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W057-52



NOTES

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

* See note 5

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

STANDARD SIGN
W057-52

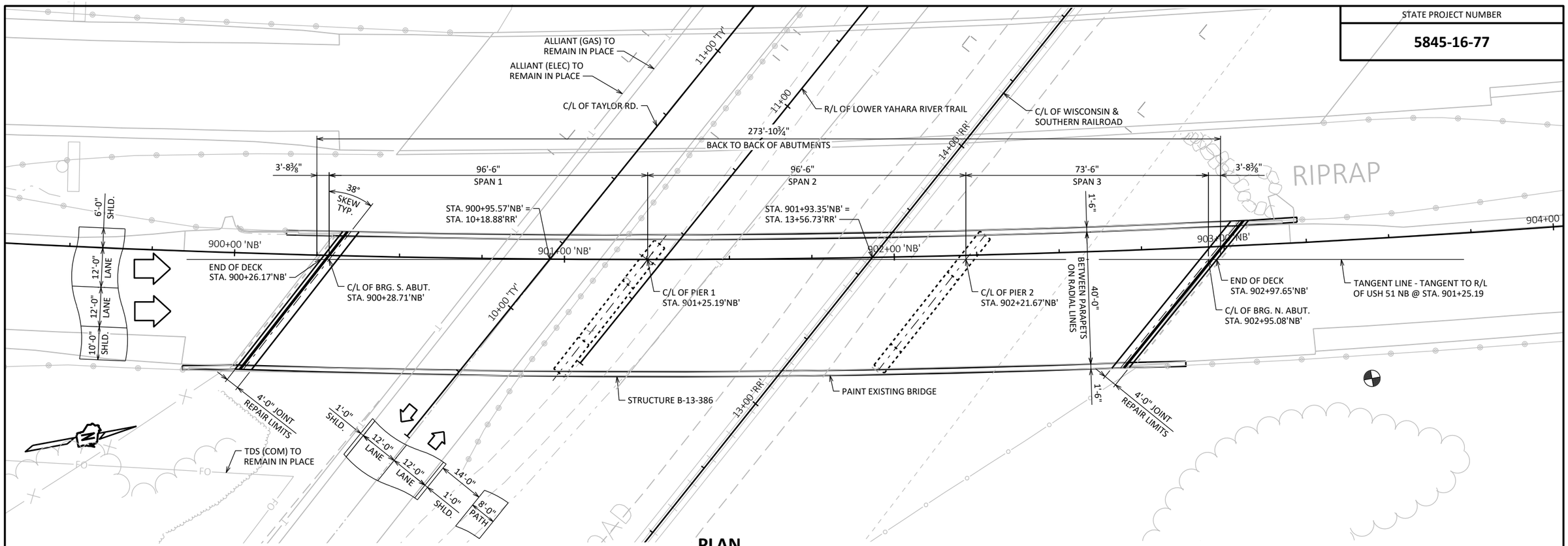
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

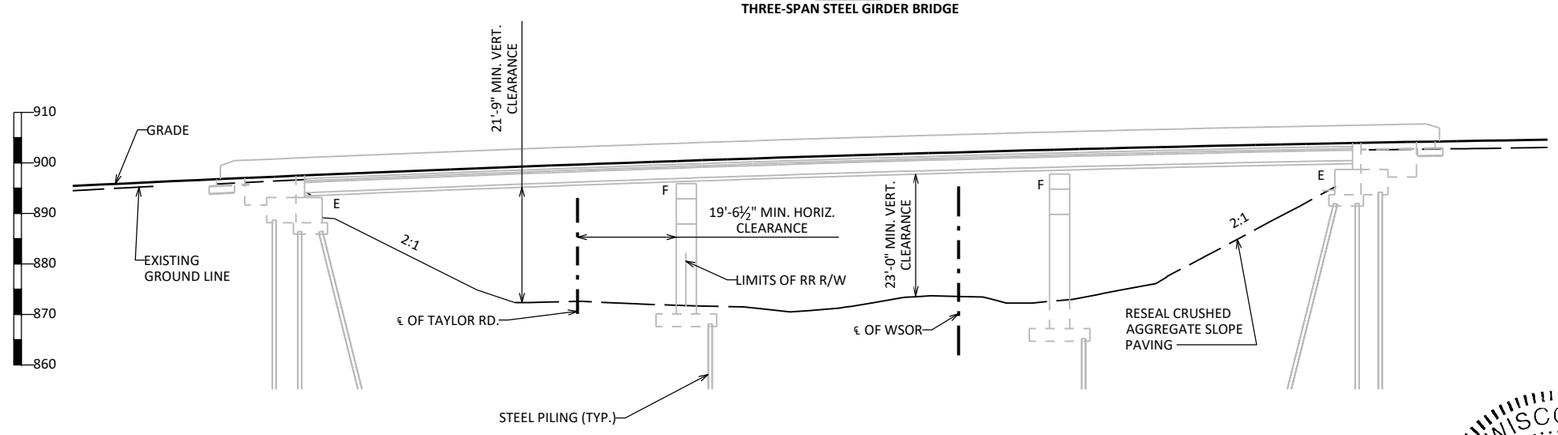
DATE 2/1/2024 PLATE NO. W057-52.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 521 E

STATE PROJECT NUMBER
5845-16-77



PLAN
THREE-SPAN STEEL GIRDER BRIDGE



ELEVATION
(TAKEN NORMAL TO RAILROAD TRACKS)
(LOOKING WEST)

LIST OF DRAWINGS:

1. GENERAL PLAN
2. CROSS SECTION, NOTES, AND QUANITIES
3. COVER PLATE DETAILS
4. EXPANSION DEVICE
5. EXPANSION JOINT DETAILS

NO.	DATE	REVISION	BY

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON
PROFESSIONAL ENGINEER

7/29/2024

STRUCTURE DESIGN CONTACTS:

AARON BONK	608-261-0261
KRISTOFER OLSON	920-498-1200

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED SDR 08/06/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-13-386

USH 51 NB OVER TAYLOR RD/WSOR

COUNTY	VILLAGE
DANE	MCFARLAND

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
ZSS	KRO	ZSS	KRO

GENERAL PLAN

SHEET 1 OF 5
522

SCALE =

I.D. 5845-16-06

DATE: 04/22/22

8

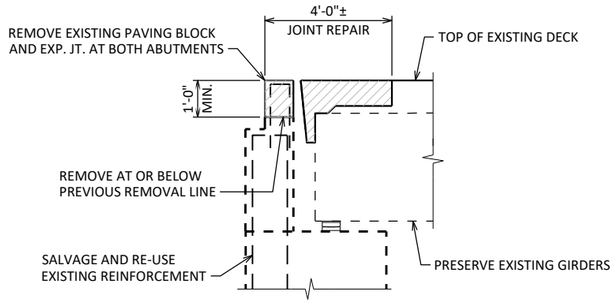
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STATE PROJECT NUMBER

5845-16-77

TOTAL ESTIMATED QUANITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
502.3101	EXPANSION DEVICE B-13-386	LF	103
502.3200	PROTECTIVE SURFACE TREATMENT	SY	46
502.3210	PIGMENTED SURFACE SEALER	SY	270
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	105
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	3,830
509.1000	JOINT REPAIR	SY	46
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	22
517.1801.S	STRUCTURE REPAINTING RECYCLED ABRASIVE STRUCTURE B-13-386	EACH	1
517.4501.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS STRUCTURE B-13-386	EACH	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1
604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	630
SPV.0060.01	CLEANING AND PAINTING BEARINGS	EACH	10
SPV.0180	ABUTMENT SEAT CLEANING AND SEAL	SY	31



JOINT REPAIR LIMITS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS ARE BASED ON EXISTING PLANS.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP SURFACE OF THE JOINT REPAIR CONCRETE. PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE ENTIRE FRONT FACES AND TOPS OF PARAPETS REPAIRED DUE TO JOINT REPAIR.

SEAL CONSTRUCTION JOINTS ACCORDING TO SECTION 502.3.13.1 OF THE STANDARD SPECIFICATIONS. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY DECK REPAIR".

ANY EXCAVATION REQUIRED TO COMPLETE THE JOINT REPAIRS AT THE ABUTMENTS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY DECK REPAIR".

APPLY BRIDGE SEAT PROTECTION, TO THE TOP SURFACE OF BOTH ABUTMENTS IN ACCORDANCE WITH "ABUTMENT SEAT CLEANING AND SEALING".

CLEAN AND PAINT ALL EXPOSED STEEL SUPERSTRUCTURE SURFACES UNDERNEATH THE BRIDGE DECK. THE SURFACES INCLUDE GIRDERS, DIAPHRAGMS, CONNECTIONS AND BEARINGS. PAINT APPLICATION FOR BEARINGS SHALL BE BRUSHED ON.

PAINT COLOR TO BE LIGHT GRAY (AMS STANDARD COLOR NO. 26293).

DESIGN DATA

RATINGS (FROM HSI 10/25/2022):

DESIGN LOADING	HS20
INVENTORY RATING	HS28
OPERATING RATING	HS47
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	230 KIPS

MATERIAL PROPERTIES:

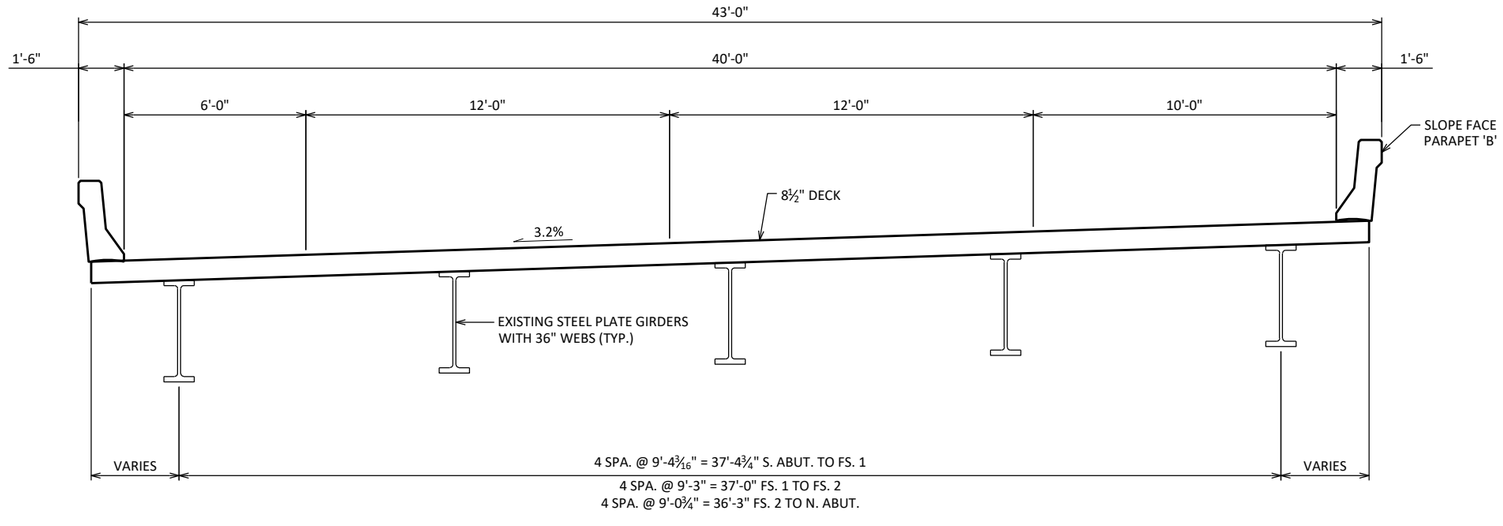
CONCRETE MASONRY:
SUPERSTRUCTURE — f'_c = 4,000 PSI

BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

TRAFFIC DATA

FEATURE ON: USH 51 SB
ADT = 31,000 (2045)
R.D.S. = 60 MPH

FEATURE UNDER: TAYLOR RD.
ADT = <500 (2045)
R.D.S. = 30 MPH



CROSS SECTION THRU ROADWAY

LOOKING NORTH
DIMENSIONS TAKEN NORMAL TO R/L

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-386

DRAWN BY ZSS | PLANS CK'D KRO

CROSS SECTION, NOTES, AND QUANITIES

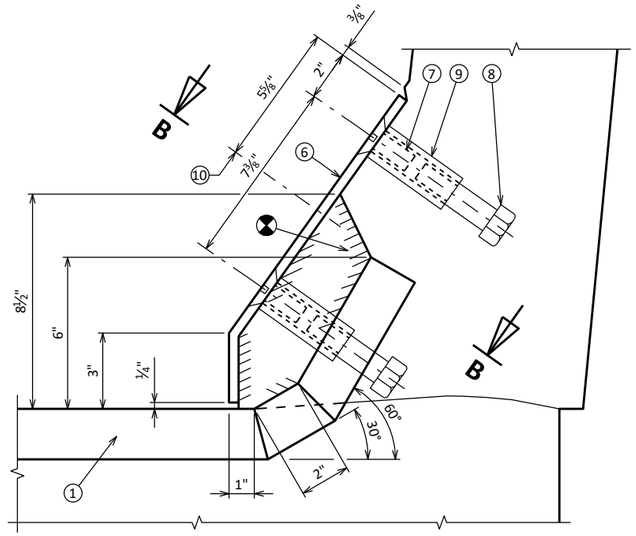
SHEET 2 OF 5

523

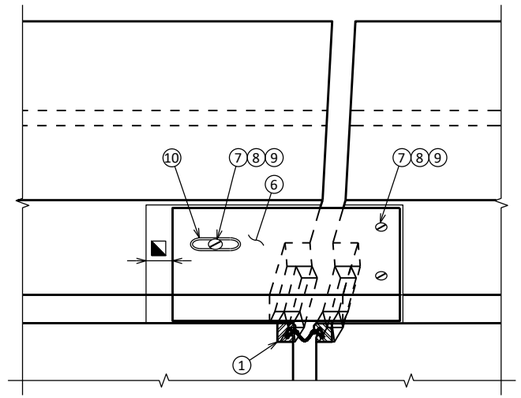
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STATE PROJECT NUMBER

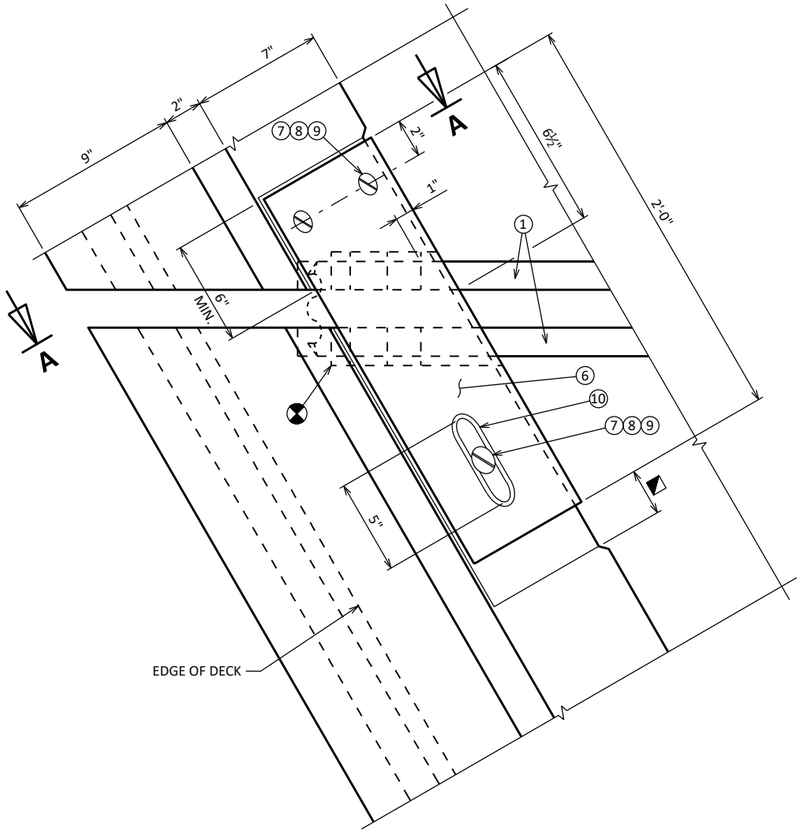
5845-16-77



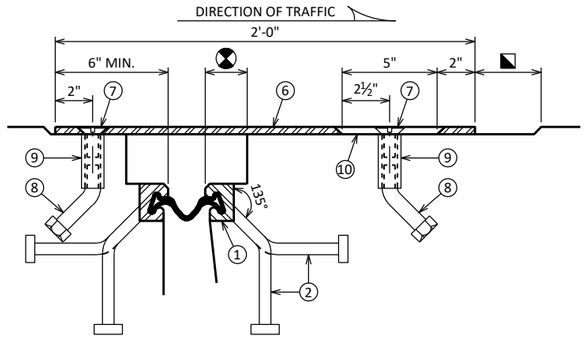
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



PLAN



SECTION B-B

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-386

DRAWN BY	ZSS	PLANS CK'D	KRO

COVER PLATE DETAILS

SHEET 3 OF 5

524

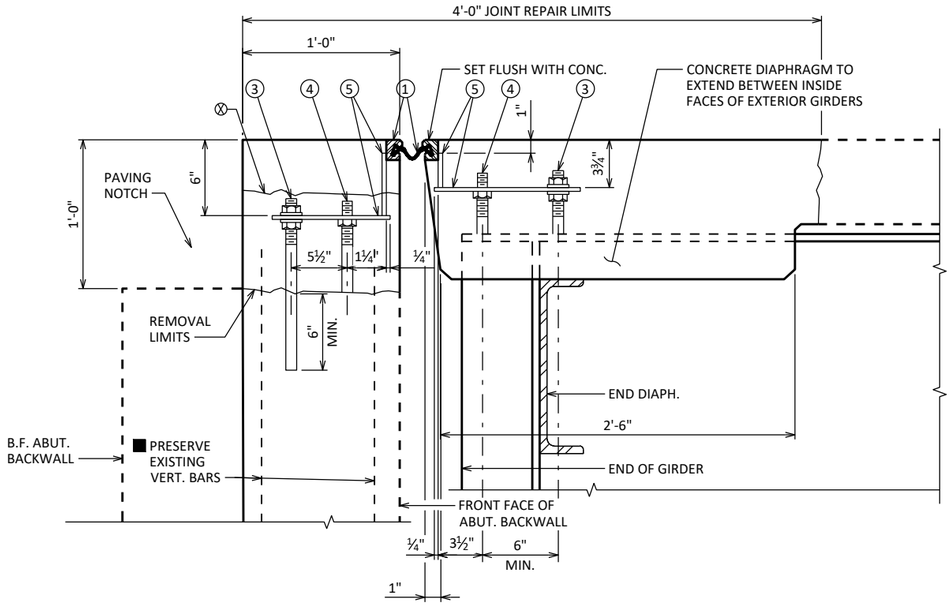
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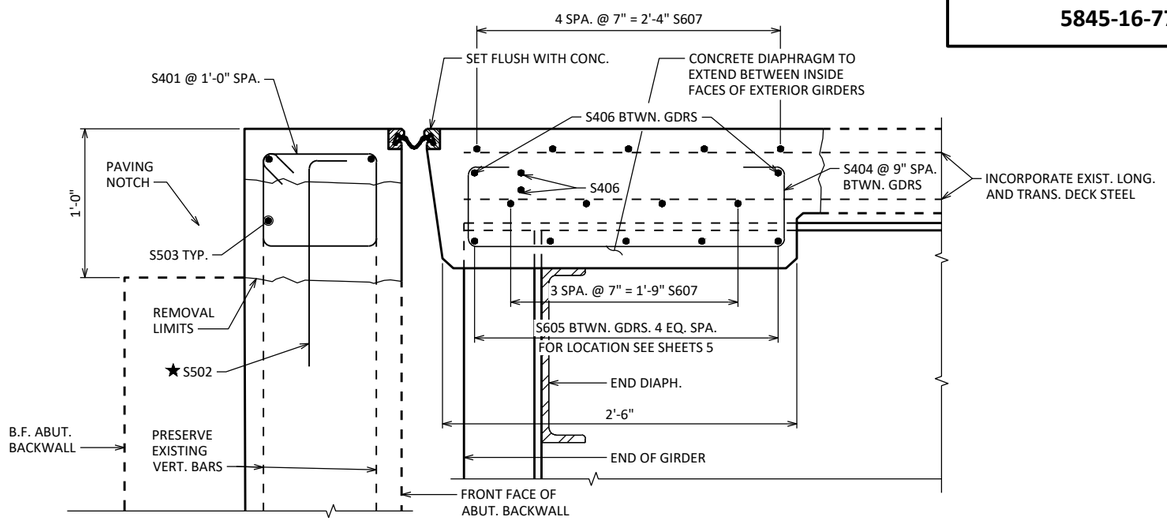
STATE PROJECT NUMBER

5845-16-77



SECTION THRU JOINT AT ABUTMENT

NORMAL TO C/L SUBSTRUCTURE



SECTION THRU JOINT AT ABUTMENT

NORMAL TO C/L SUBSTRUCTURE

LEGEND

(1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

(2) STUDS ⅝" DIA. X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.

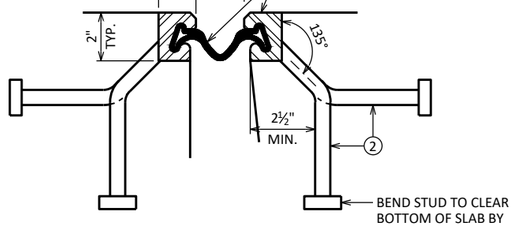
(6) GALVANIZED PLATE ⅜" X 10" X 2'-2" LONG WITH HOLES FOR NO.7.

(7) ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

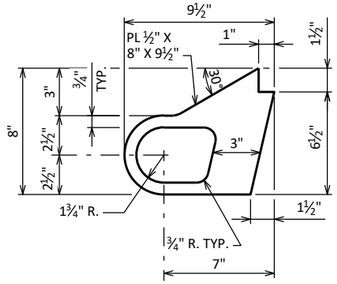
(9) ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.

(11) 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

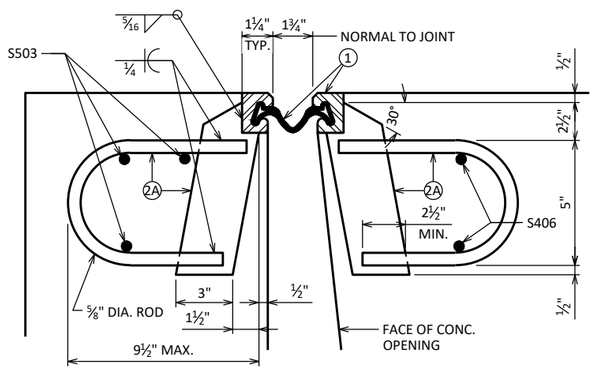


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS



ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE B-13-386 LF.

■ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. SALVAGE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ★.

★ ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-0" IN CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.

Ⓧ OPT. CONST. JT. 1" MIN. BELOW EXIST. REIN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-386

DRAWN BY ZSS | PLANS CK'D KRO

EXPANSION DEVICE

SHEET 4 OF 5

525

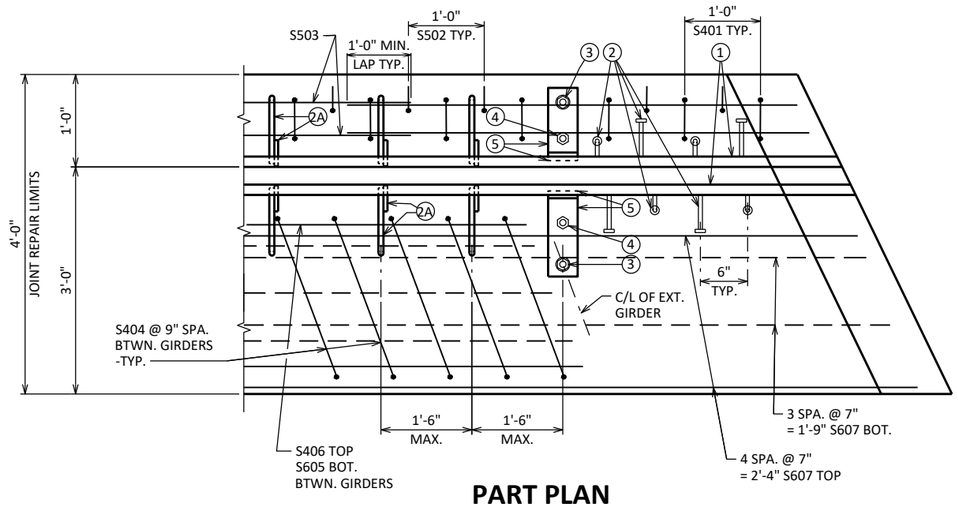
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8

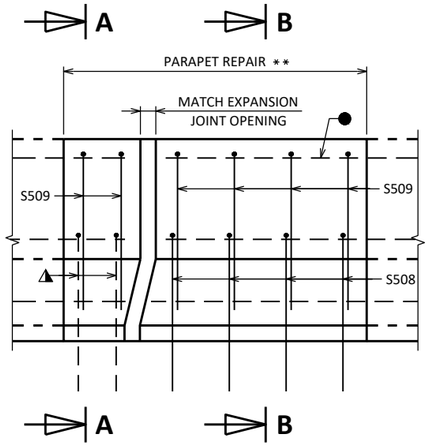
STATE PROJECT NUMBER

5845-16-77



PART PLAN

WINGS 2 & 4 SHOWN
(WINGS 1 & 3 SIMILAR)



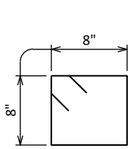
INSIDE ELEVATION

WINGS 2 &4

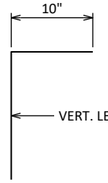
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

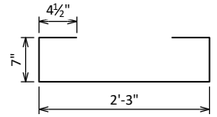
	BAR MARK	COAT	SOUTH ABUT.	NORTH ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
	S401	X	52	55	3'-2"	X		PAVING BLOCK VERT.
(MO3)	S502	X	51	54	2'-7"	X		PAVING BLOCK VERT. ANCHOR
	S503	X	21	21	8'-7"			PAVING BLOCK HORIZ.
	S404	X	48	51	3'-10"	X		DIAPH. VERT.
	S605	X	20	20	10'-8"			DIAPH. HORIZ.
	S406	X	16	16	10'-8"			DIAPH. HORIZ.
	S607	X	18	18	28'-7"			DECK TRANS.
	S508	X	11	11	4'-3"	X		PARAPET VERT.
	S509	X	18	18	4'-10"	X		PARAPET VERT.



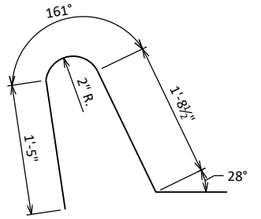
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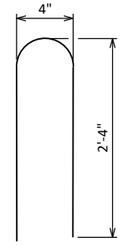
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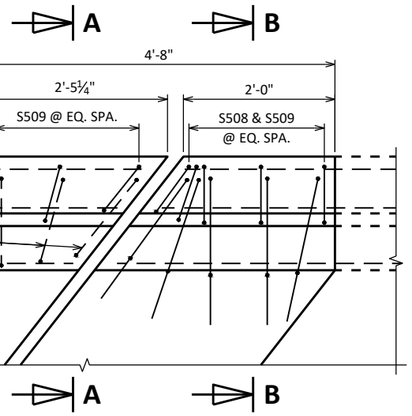
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S508

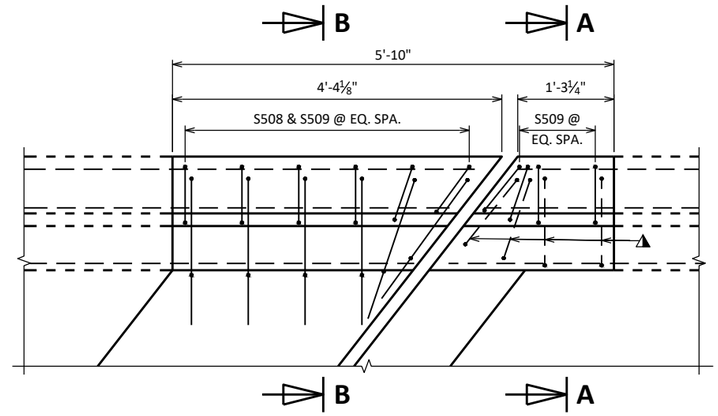


S509



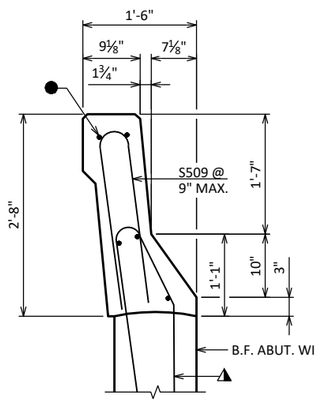
PLAN

WINGS 2 & 4

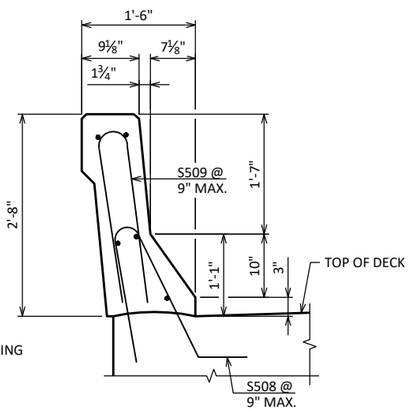


PLAN

WINGS 1 & 3



SECTION A



SECTION B

(MO3) "ADHESIVE ANCHROS NO. 5 BAR". EMBED 1'-0" IN CONCRETE.

● INCORPORATE ALL EXIST. PPT. HORIZ. REINF. INTO NEW WORK.

◭ UTILIZE EXISTING VERTICAL BAR STEEL FOR PARAPET ON WINGS.

** EXTENT OF COMPLETE REMOVAL OF EXISTING PARAPET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-386

DRAWN BY ZSS | PLANS CK'D KRO

EXPANSION JOINT DETAILS

SHEET 5 OF 5

526

SCALE = 2.00

8

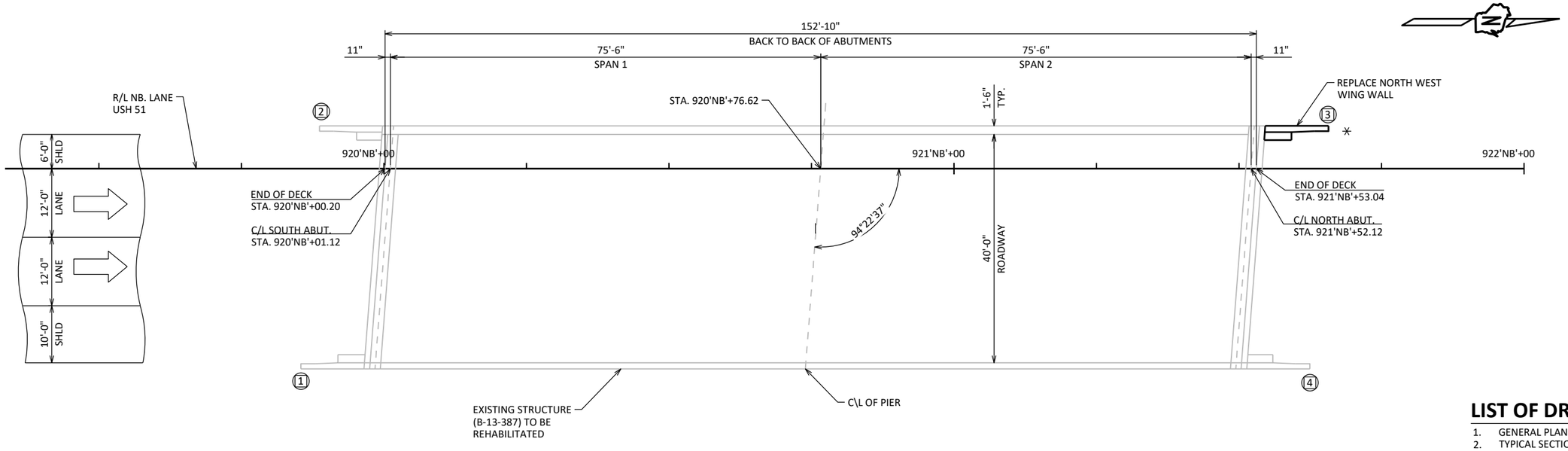
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STATE PROJECT NUMBER

5845-16-77

(2) INDICATES WING NUMBER

✳ ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.



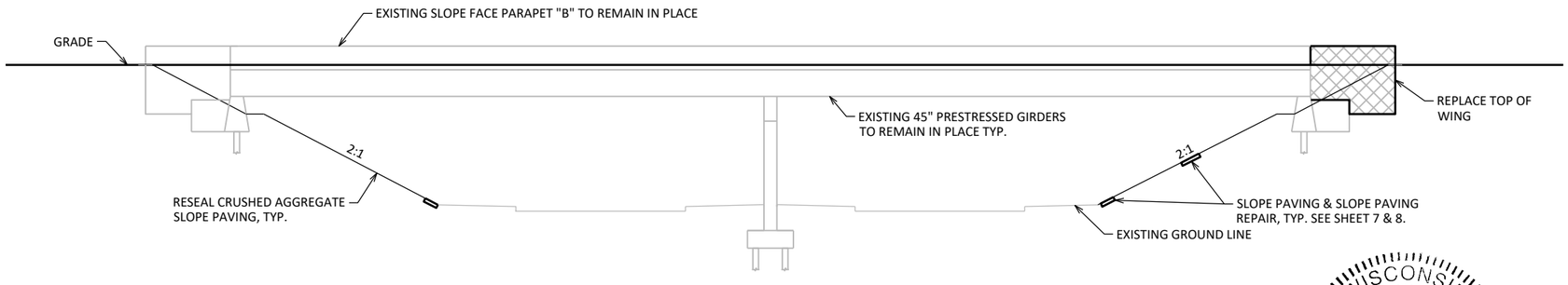
PLAN

2 SPAN 45" PRESTRESSED CONCRETE GIRDER BRIDGE
(WING REPLACEMENT)

LIST OF DRAWINGS:

1. GENERAL PLANS
2. TYPICAL SECTION, QUANTITIES AND NOTES
3. REMOVAL DETAILS
4. WING 3 DETAILS
5. WING 3 DETAILS AND BILL OF BARS
6. SLOPED FACE PARAPET "B"
7. SLOPE PAVING REPAIR DETAILS (SOUTH ABUT.)
8. SLOPE PAVING REPAIR DETAILS (NORTH ABUT.)

FOR TYPICAL SECTION
SEE SHEET 2



ELEVATION

DESIGN DATA

RATINGS (FROM HSI 5/30/2024)

DESIGN LOADING: HS - 20
INVENTORY RATING: HS - 22
OPERATING RATING: HS - 40
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY — f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

TRAFFIC DATA

FEATURE ON: NB USH 51
ADT = 28,800 (2026)
ADT = 31,000 (2046)
R.D.S. = 60 MPH

FEATURE UNDER: SIGGELKOW RD.
ADT = 8,000 (2026)
ADT = 9,300 (2046)
R.D.S. = 35 MPH

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
BM 53	919+70'SB'	FENO MOUNUMENT, 39.6' LT.	900.19
BM 54	992+07'NB'	FENO MOUNUMENT, 40.1' RT.	899.16

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER
8/27/2024

STRUCTURE DESIGN CONTACTS:
AARON BONK 608-261-0261
KRISTOFER OLSON 920-498-1200

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/28/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-13-387

NB USH 51 OVER SIGGELKOW ROAD

COUNTY	VILLAGE
DANE	MCFARLAND

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
NBE	ZSS	JMC	KRO

GENERAL PLAN

SHEET 1 OF 8
527

I.D. DATE:

8

8

STATE PROJECT NUMBER
5845-16-77

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0220	REMOVING STRUCTURE B-13-387	EACH	1
206.1001	EXCAVATION FOR STRUCTURE BRIDGES B-13-387	EACH	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	15
502.0100	CONCRETE MASONRY BRIDGES	CY	5
502.3210	PIGMENTED SURFACE SEALER	SY	5
502.4204	ADHESIVE ANCHORS NO. 4 BARS	EACH	7
502.4205	ADHESIVE ANCHORS NO. 5 BARS	EACH	14
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	700
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	2
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	32
604.9010.S	SLOPE PAVING REPAIR CRUSHED AGGREGATE	CY	2
604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	276
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	20
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1
645.01100	GEOTEXTILE TYPE DF SCHEDULE A	SY	15
	NON-BID ITEMS		
	FILLER	SIZE	½", ¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETER INTO NEW WORK. UNLESS SPECIFIED OTHERWISE.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

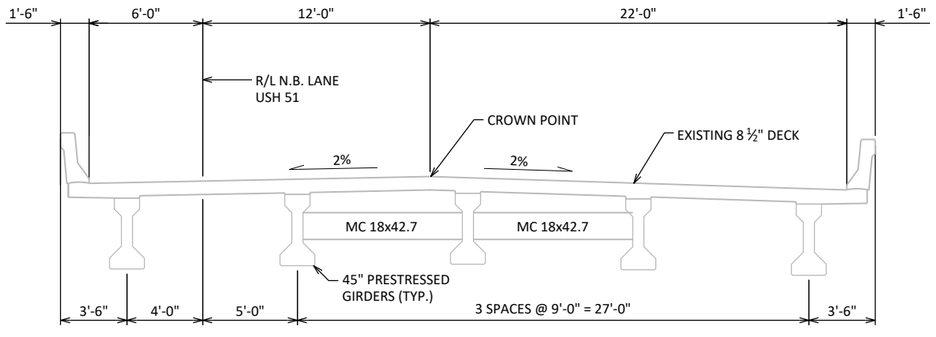
THE UPPER LIMITS OF EXCAVATION SHALL BE THE EXISTING GROUND LINE.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT UNLESS SHOWN OR NOTED OTHERWISE.

AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

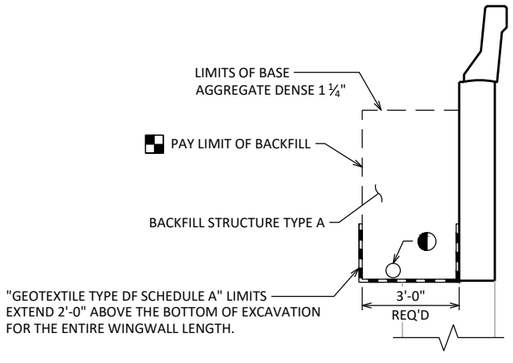
PIGMENTED SURFACE SEALER TO BE APPLIED AS SHOWN IN THE DETAILS ON SHEET 2.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT THE ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND WING FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURE.



TYPICAL SECTION THRU BRIDGE

(LOOKING NORTH)

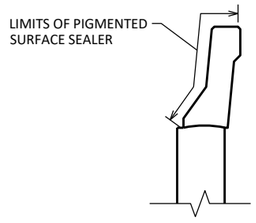


BACKFILL STRUCTURE LIMITS

AT ABUTMENT WINGWALL

BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

PIPE UNDERDRAIN WRAPPED 6-INCH SLOPED 0.5% MIN. TO SUITABLE DRAINAGE ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 5.



PIGMENTED SURFACE SEALER DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-387

DRAWN BY JMC | PLANS CK'D KRO

TYPICAL SECTION, QUANTITIES, AND NOTES

SHEET 2 OF 8

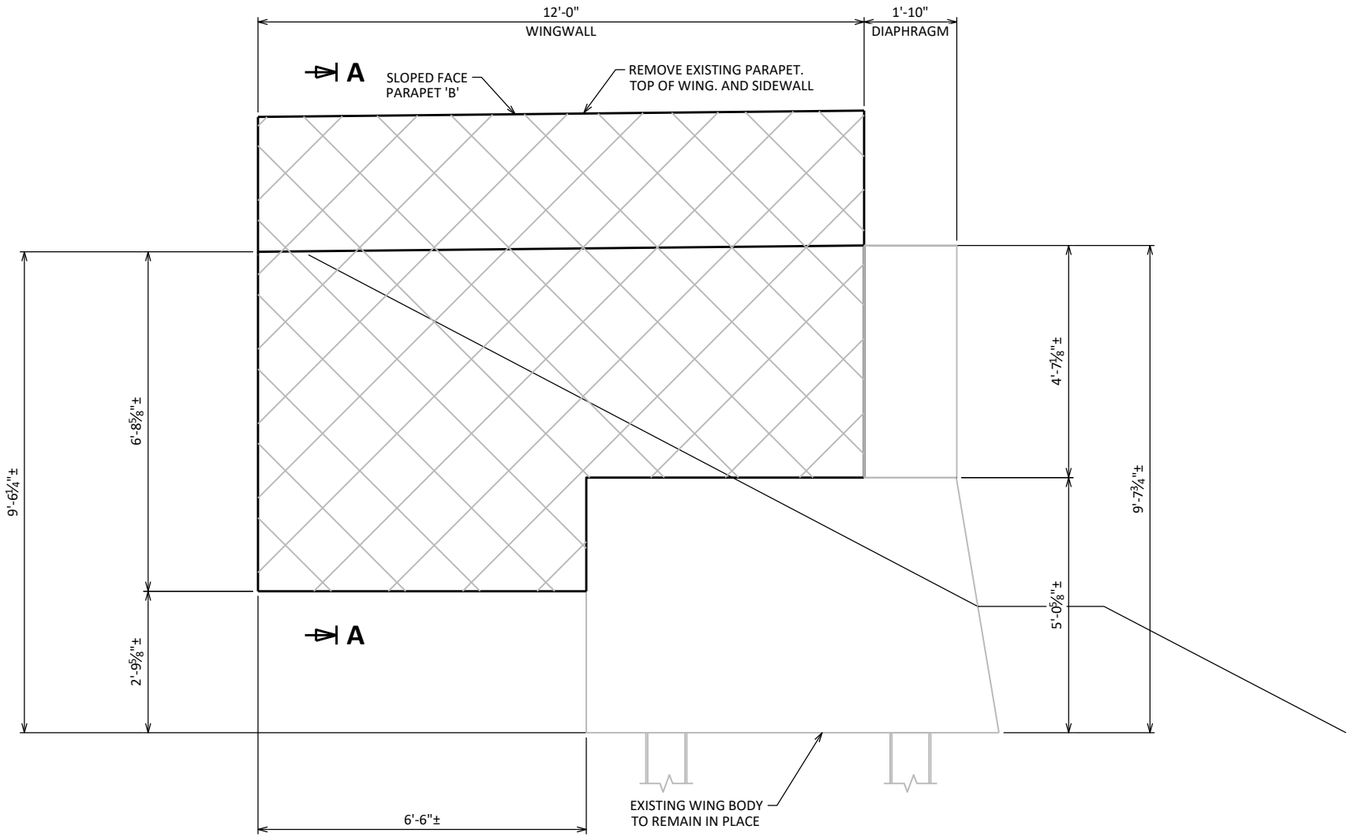
528

8

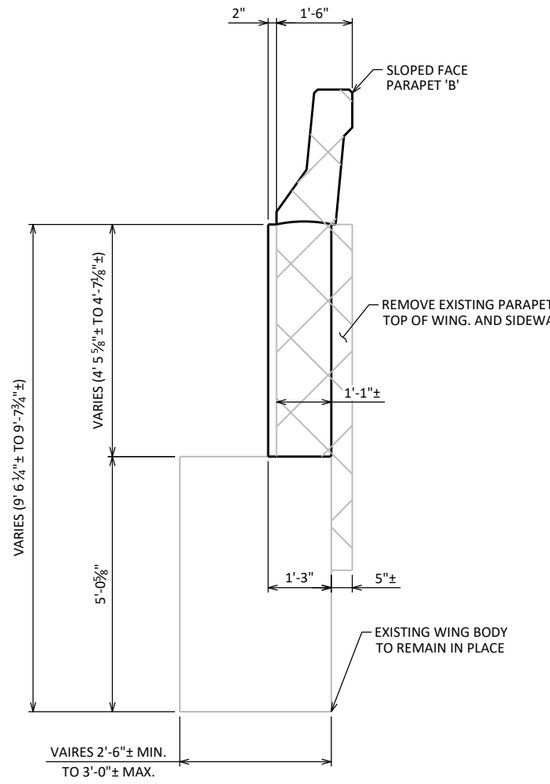
8

STATE PROJECT NUMBER

5845-16-77



WING 3 ELEVATION



SECTION A

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-387

DRAWN BY JMC | PLANS CK'D KRO

REMOVAL DETAILS

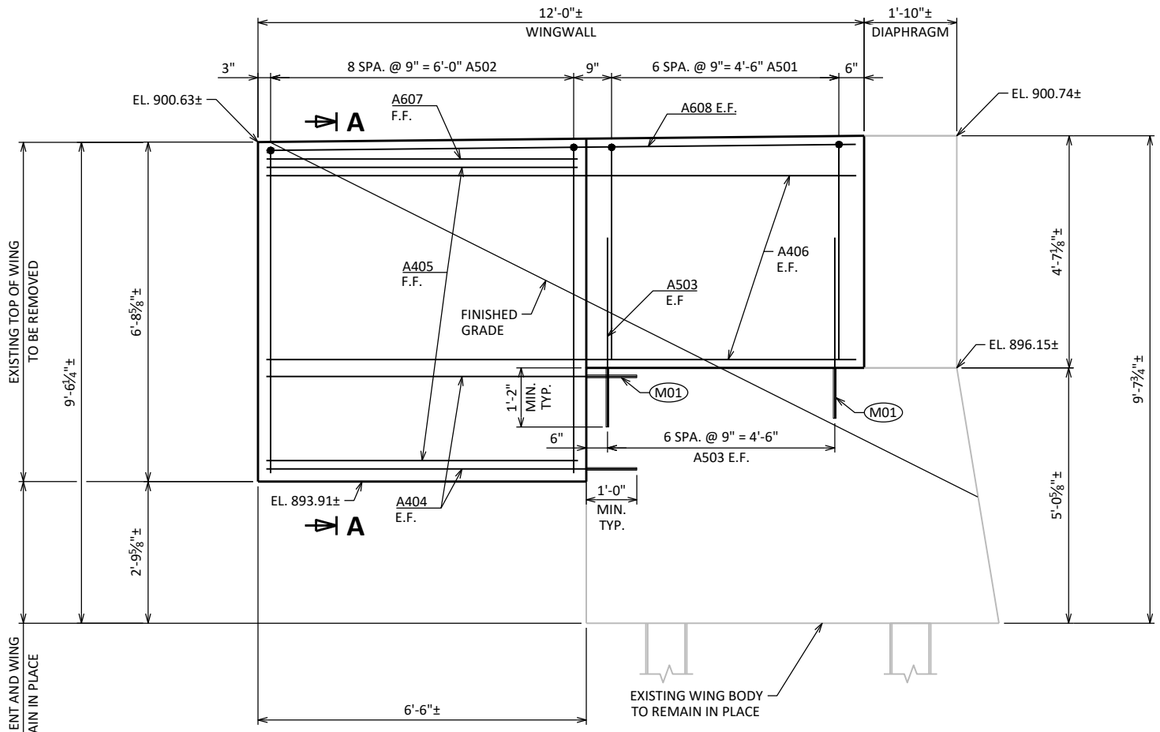
SHEET 3 OF 8

529

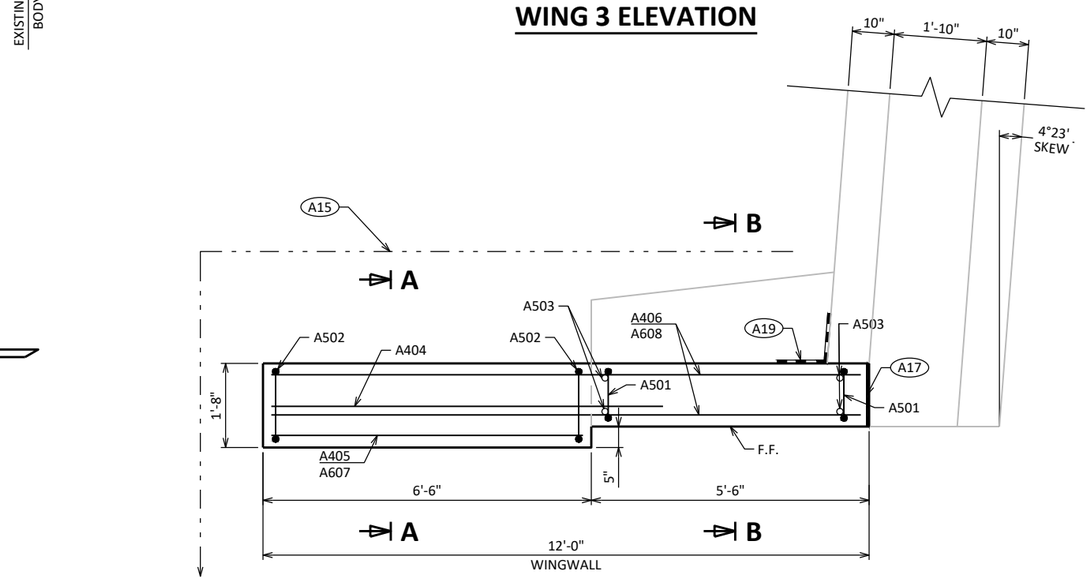
STATE PROJECT NUMBER

5845-16-77

SLOPED FACE PARAPET "B" NOT SHOWN. FOR DETAILS SEE SHEET 6.



WING 3 ELEVATION



PLAN

(M01) ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-2" IN CONCRETE. ADHESIVE ANCHORS NO. 4 BAR. EMBED 1'-0" IN CONCRETE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-387

DRAWN BY JMC | PLANS CK'D KRO

WING 3 DETAILS

SHEET 4 OF 8

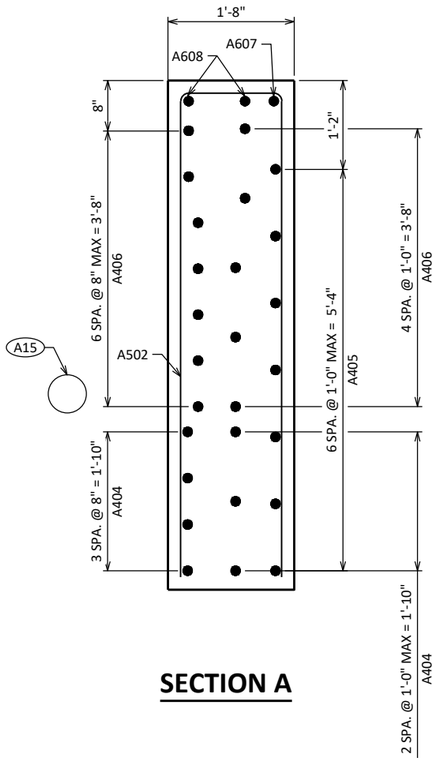
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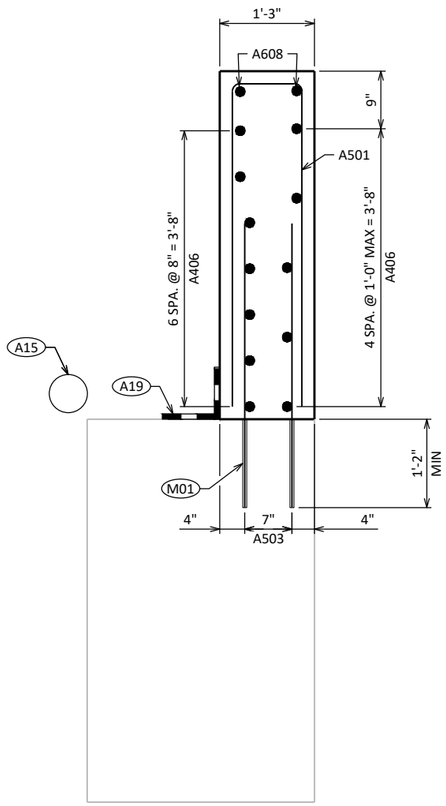
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STATE PROJECT NUMBER

5845-16-77



SECTION A



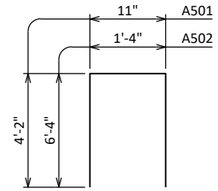
SECTION B

SLOPED FACE PARAPET "B" NOT SHOWN. FOR DETAILS SEE SHEET 6.

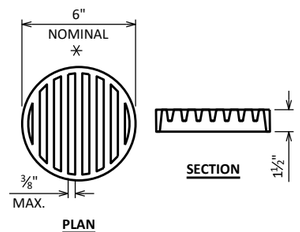
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
	A501	X	7	9'-0"	X		WING 3 VERT.
	A502	X	9	13'-9"	X		WING 3 VERT.
M01	A503	X	14	3'-9"			WING 3 VERT. ANCHOR DOWEL E.F.
M01	A404	X	7	7'-4"			WING 3 HORIZ. E.F.
	A405	X	7	6'-2"			WING 3 HORIZ. F.F.
	A406	X	12	11'-7"			WING 3 HORIZ. B.F.
	A607	X	1	6'-2"			WING 3 HORIZ. TOP F.F.
	A608	X	2	11'-7"			WING 3 HORIZ TOP E.F.



A501, A502



RODENT SHIELD DETAIL

⚹ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

M01 ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-2" IN CONCRETE. ADHESIVE ANCHORS NO. 4 BAR. EMBED 1'-0" IN CONCRETE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-387

DRAWN BY JMC | PLANS CK'D KRO

WING 3 DETAILS AND BILL OF BARS

SHEET 5 OF 8

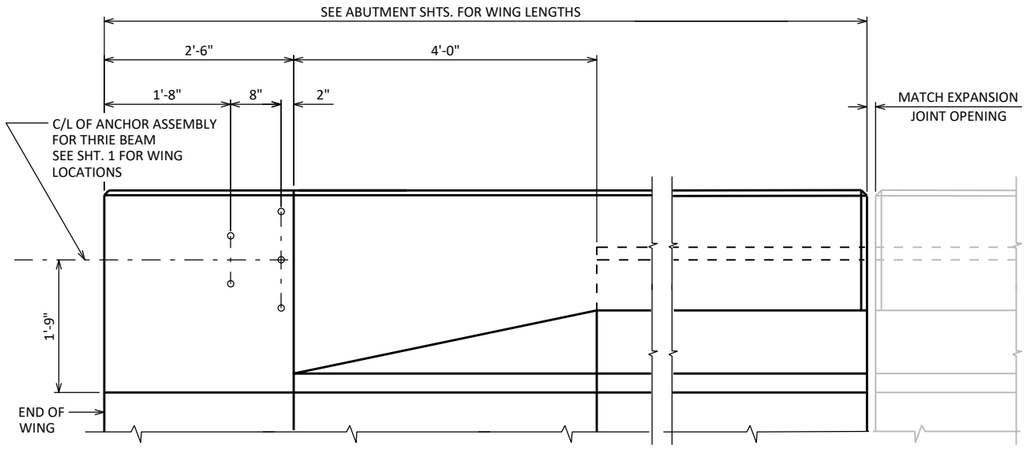
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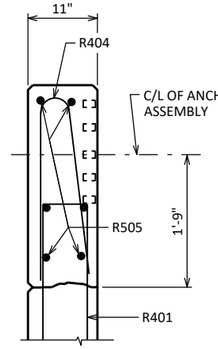
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STATE PROJECT NUMBER

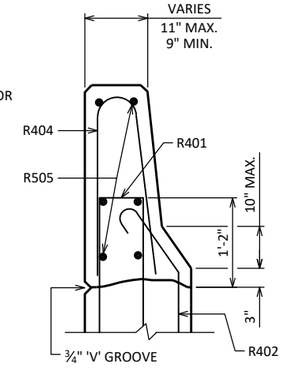
5845-16-77



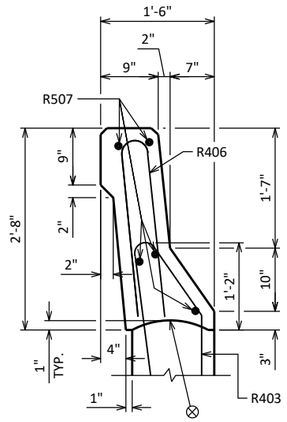
INSIDE ELEVATION



SECTION A-A



SECTION B-B



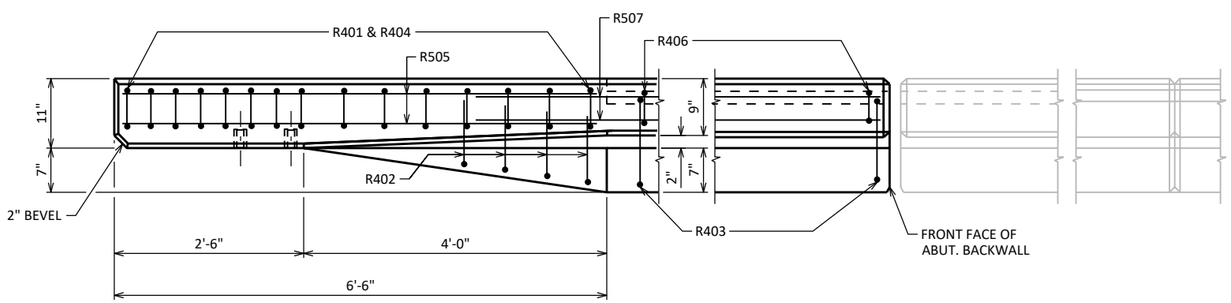
SECTION C-C

BILL OF BARS

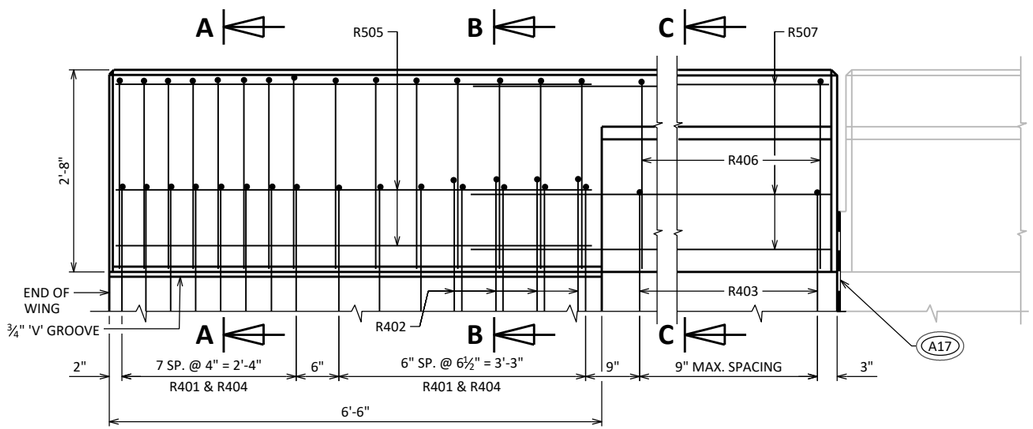
FOR ABUTMENT PARAPETS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
EPOXY COAT ALL PARAPET REINF.

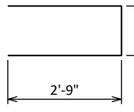
BAR MARK	NO. REQ'D. S. ABUT.	NO. REQ'D. N. ABUT.	LENGTH	BENT	LOCATION
R401		15	5'-10"	X	WING STIRRUPS
R402		4	3'-1"	X	WINGS
R403		8	4'-7"	X	WING STIRRUPS
R404		15	4'-9"	X	WINGS
R505		6	6'-2"		WINGS
R406		8	4'-10"	X	WINGS
R507		5	8'-6"		WINGS



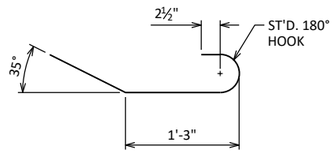
PLAN



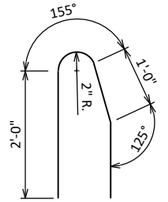
OUTSIDE ELEVATION



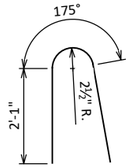
R401



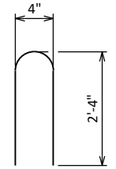
R402



R403

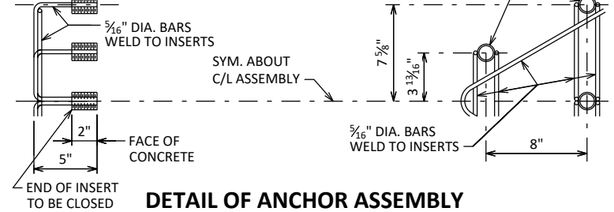


R404



R406

⊗ CONST. JOINT - STRIKE OFF AS SHOWN



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH ASTM F2329.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

A17 ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-387

DRAWN BY JMC | PLANS CK'D KRO

SLOPED FACE PARAPET "B"

SHEET 6 OF 8
532

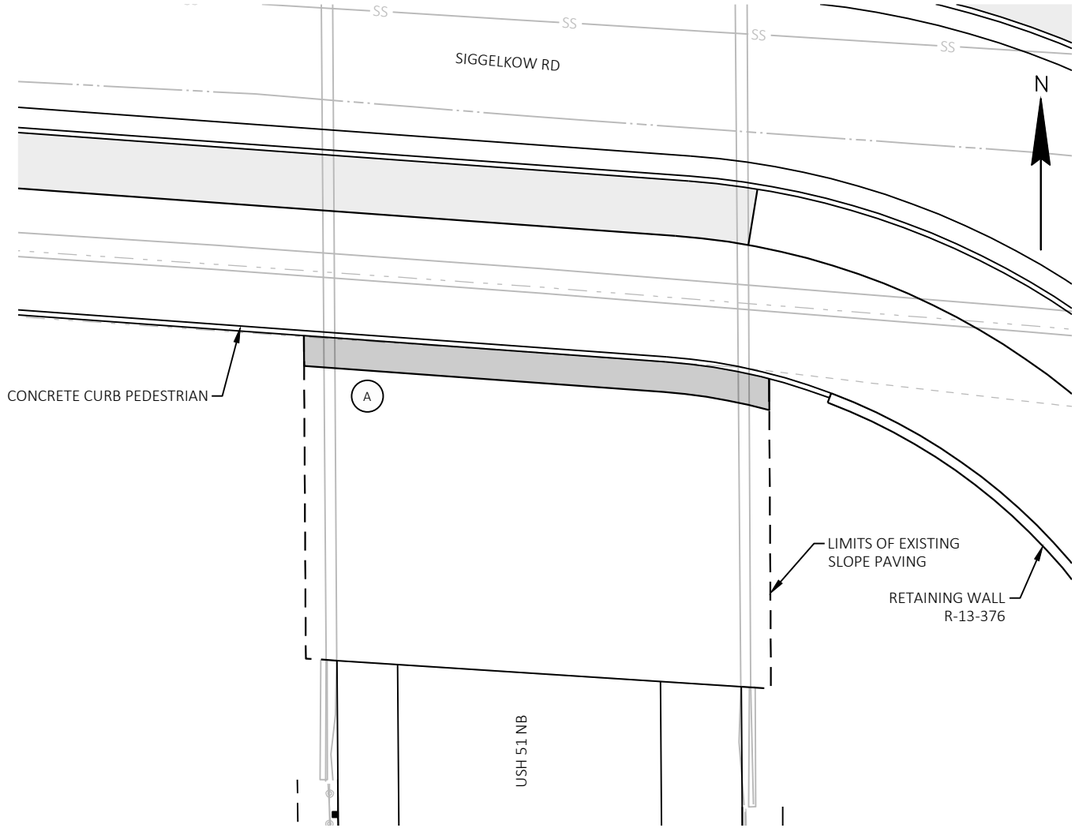
SCALE = 2.00

8

8

STATE PROJECT NUMBER

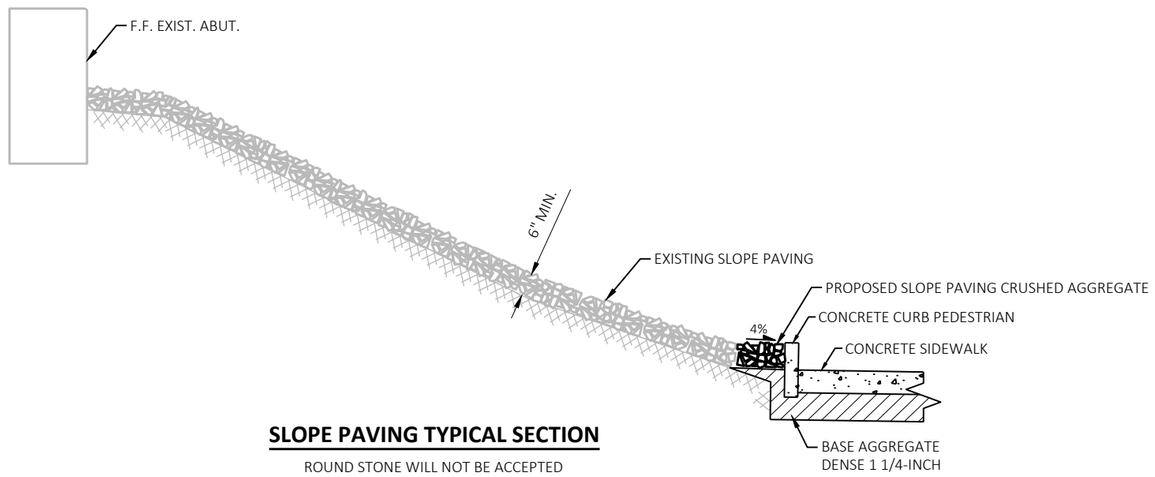
5845-16-77



SLOPE PAVING LOCATIONS

LOCATION	AREA (SY)
A	16

LIMITS OF SLOPE PAVING
CRUSHED AGGREGATE



SLOPE PAVING TYPICAL SECTION

ROUND STONE WILL NOT BE ACCEPTED

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-387

DRAWN BY BDB | PLANS CK'D KRO

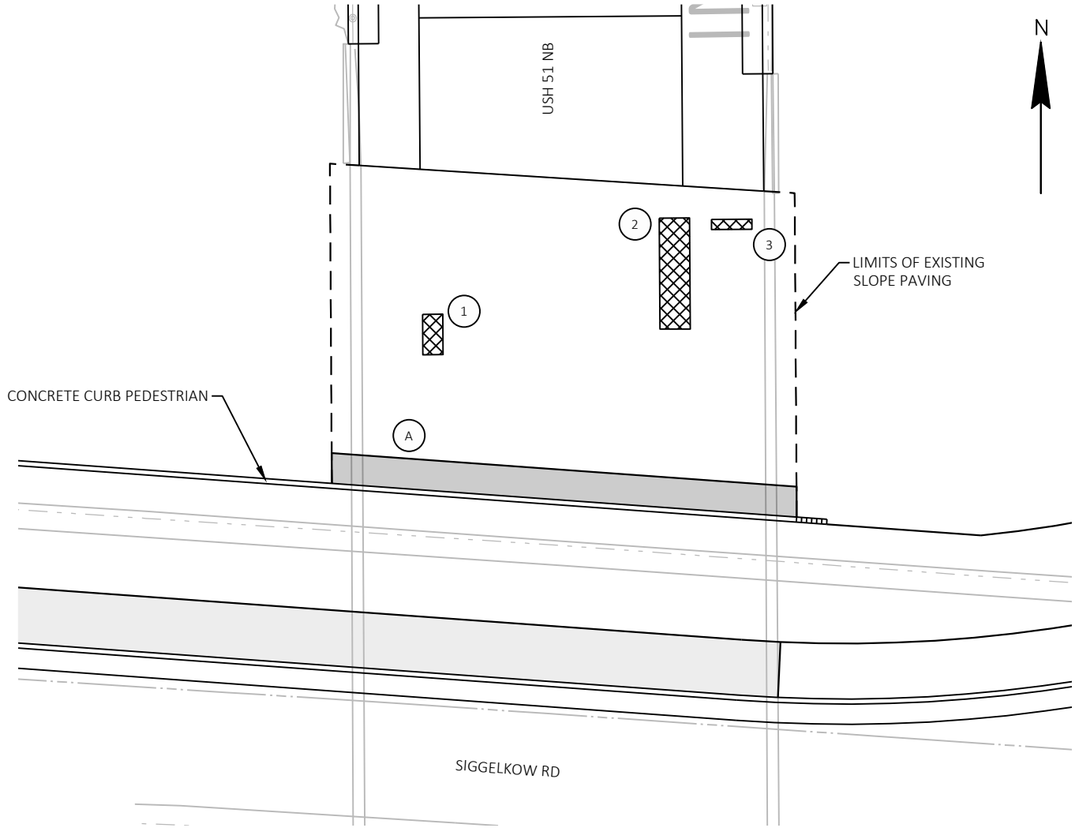
SLOPE PAVING REPAIR DETAILS (SOUTH ABUT.)

SHEET 7 OF 8

533

STATE PROJECT NUMBER

5845-16-77



SLOPE PAVING REPAIR LOCATIONS

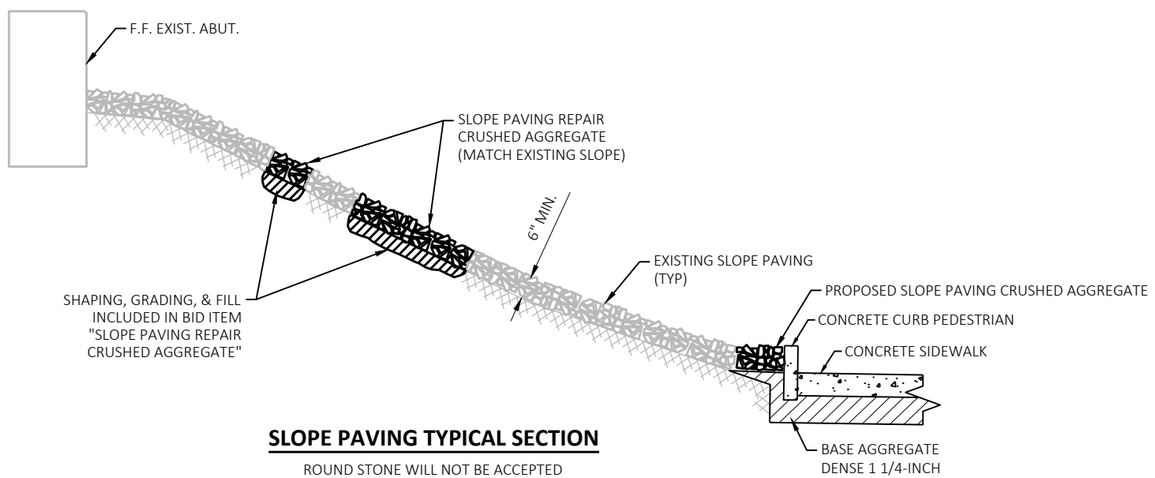
LOCATION	VOLUME (CY)
1	0.3
2	1.2
3	0.2
TOTAL	1.7

SLOPE PAVING LOCATIONS

LOCATION	AREA (SY)
A	16

LIMITS OF SLOPE PAVING
REPAIR CRUSHED AGGREGATE

LIMITS OF SLOPE PAVING
CRUSHED AGGREGATE



SLOPE PAVING TYPICAL SECTION

ROUND STONE WILL NOT BE ACCEPTED

EXISTING SLOPE PAVING HAS SETTLED OR WASHED AWAY IN SEVERAL LOCATIONS. ONLY EXISTING DETERIORATED AREAS TO BE REPAIRED.

ADD NEW CRUSHED AGGREGATE (AS REQ'D) AND RESTORE SLOPE PAVING TO THE ELEVATIONS AND SLOPES INDICATED. TO BE COMPLETED PRIOR TO SEALING THE NEW SLOPE PAVING CRUSHED AGGREGATE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-387

DRAWN BY BDB | PLANS CK'D KRO

SLOPE PAVING REPAIR DETAILS (NORTH ABUT.)

SHEET 8 OF 8

534

8

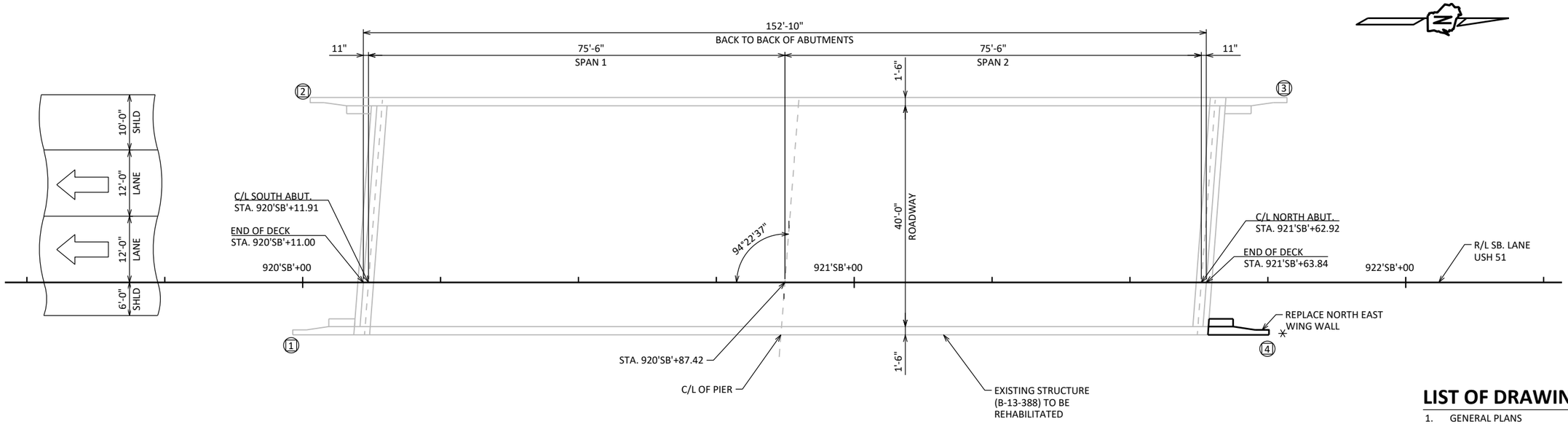
8

STATE PROJECT NUMBER

5845-16-77

INDICATES WING NUMBER

ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL



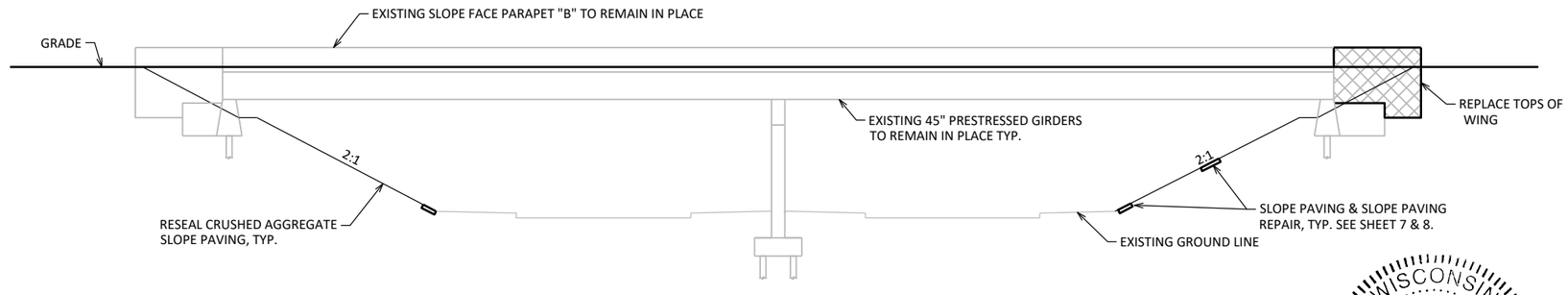
PLAN

2 SPAN 45" PRESTRESSED CONCRETE GIRDER BRIDGE
(WING REPLACEMENT)

LIST OF DRAWINGS:

1. GENERAL PLANS
2. TYPICAL SECTION, QUANTITIES AND NOTES
3. REMOVAL DETAILS
4. WING 4 DETAILS
5. WING 4 DETAILS AND BILL OF BARS
6. SLOPED FACE PARAPET "B"
7. SLOPE PAVING REPAIR DETAILS (SOUTH ABUT.)
8. SLOPE PAVING REPAIR DETAILS (NORTH ABUT.)

FOR TYPICAL SECTION
SEE SHEET 2



ELEVATION

DESIGN DATA

RATINGS (FROM HSI 5/30/2024)

DESIGN LOADING: HS - 20
INVENTORY RATING: HS - 22
OPERATING RATING: HS - 40
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY — f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

TRAFFIC DATA

FEATURE ON: SB USH 51
ADT = 28,800 (2026)
ADT = 31,000 (2046)
R.D.S. = 60 MPH

FEATURE UNDER: SIGGELKOW RD.
ADT = 8,000 (2026)
ADT = 9,300 (2046)
R.D.S. = 35 MPH

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
BM 53	919+70'SB'	FENO MOUNUMENT, 39.6' LT.	900.19
BM 54	992+07'NB'	FENO MOUNUMENT, 40.1' RT.	899.16

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER

8/27/2024

STRUCTURE DESIGN CONTACTS:

AARON BONK 608-261-0261
KRISTOFER OLSON 920-498-1200

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/28/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-13-388

SB USH 51 OVER SIGGELKOW ROAD

COUNTY: DANE | VILLAGE: MCFARLAND

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
NBE	ZSS	JMC	KRO

GENERAL PLAN

SHEET 1 OF 8
535

I.D. DATE:

8

8

STATE PROJECT NUMBER

5845-16-77

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0220	REMOVING STRUCTURE B-13-388	EACH	1
206.1001	EXCAVATION FOR STRUCTURE BRIDGES B-13-388	EACH	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	15
502.0100	CONCRETE MASONRY BRIDGES	CY	5
502.3210	PIGMENTED SURFACE SEALER	SY	5
502.4204	ADHESIVE ANCHORS NO. 4 BARS	EACH	7
502.4205	ADHESIVE ANCHORS NO. 5 BARS	EACH	14
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	700
509.1500	CONCRETE SURFACE REPAIR	SF	8
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	2
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	49
604.9010.S	SLOPE PAVING REPAIR CRUSHED AGGREGATE	CY	3
604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	263
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	20
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	15
	NON-BID ITEMS		
	FILLER	SIZE	½", ¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETER INTO NEW WORK. UNLESS SPECIFIED OTHERWISE.

DIMENSIONS SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

THE UPPER LIMITS OF EXCAVATION SHALL BE THE EXISTING GROUND LINE.

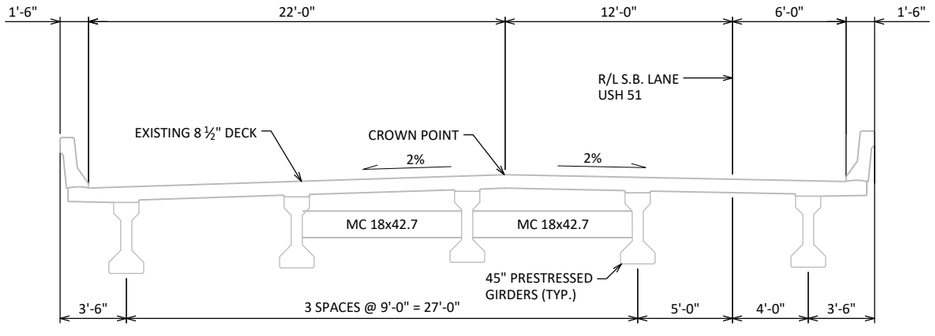
ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT UNLESS SHOWN OR NOTED OTHERWISE.

AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

PIGMENTED SURFACE SEALER TO BE APPLIED AS SHOWN IN THE DETAILS ON SHEET 2.

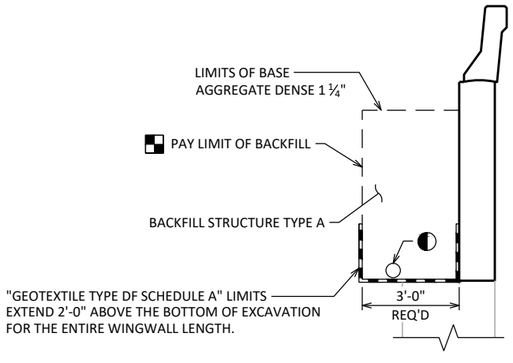
THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT THE ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND WING FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURE.

CONCRETE SURFACE REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER. "CONCRETE SURFACE REPAIR" TO INCLUDE BUT NOT LIMITED TO SE, NE, NW, ABUTMENT CORNERS.



TYPICAL SECTION THRU BRIDGE

(LOOKING NORTH)

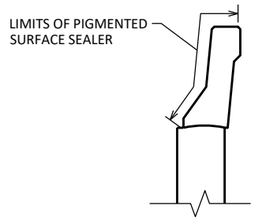


BACKFILL STRUCTURE LIMITS

AT ABUTMENT WINGWALL

BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

PIPE UNDERDRAIN WRAPPED 6-INCH SLOPED 0.5% MIN. TO SUITABLE DRAINAGE ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 5.



PIGMENTED SURFACE SEALER DETAIL

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-388

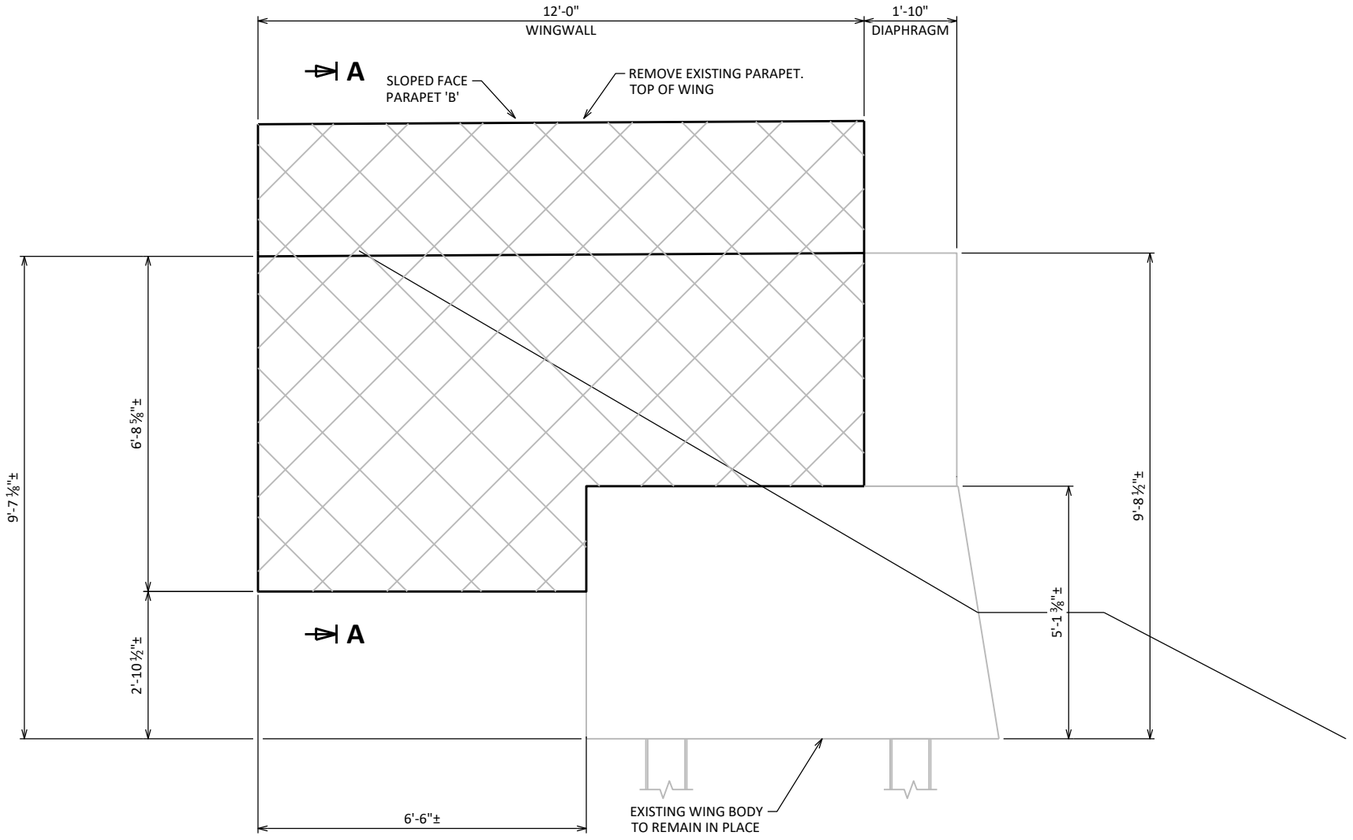
DRAWN BY JMC | PLANS CK'D KRO

TYPICAL SECTION, QUANTITIES, AND NOTES

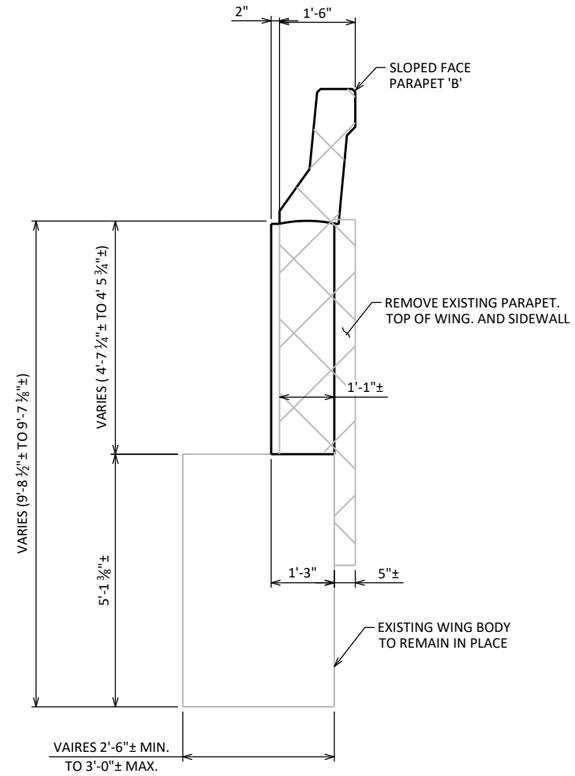
SHEET 2 OF 8

STATE PROJECT NUMBER

5845-16-77



WING 4 ELEVATION



SECTION A

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-388

DRAWN BY JMC | PLANS CK'D KRO

REMOVAL DETAILS

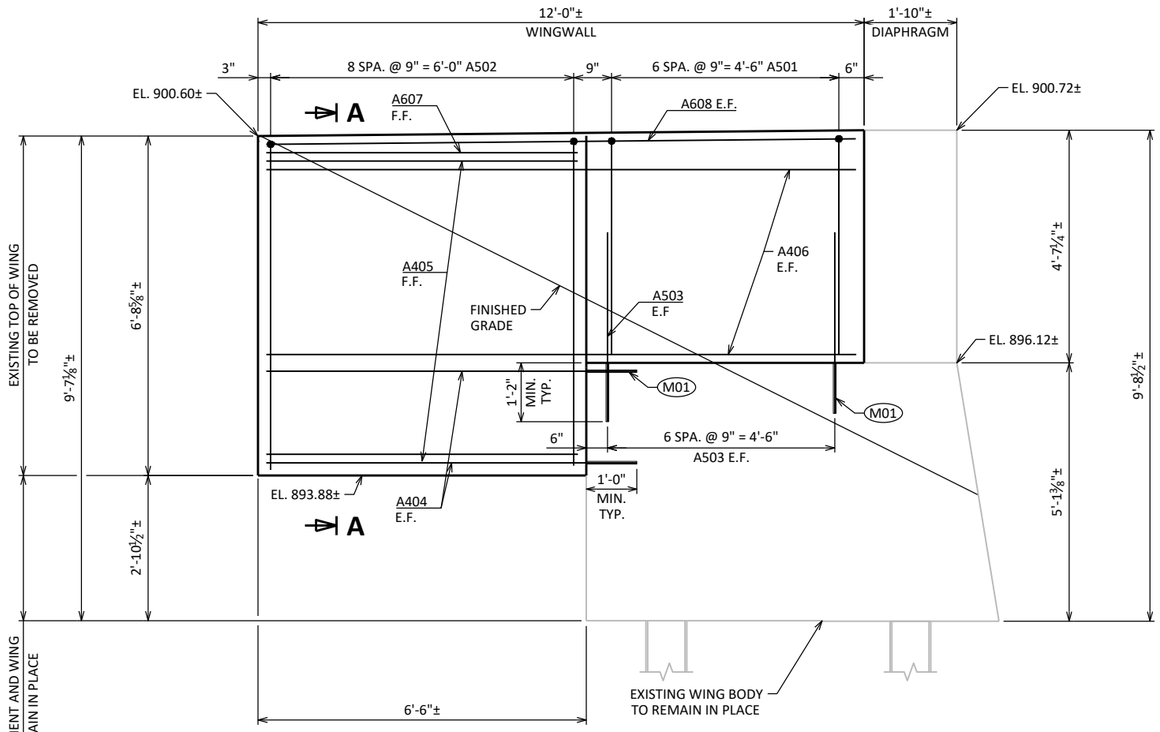
SHEET 3 OF 8

537

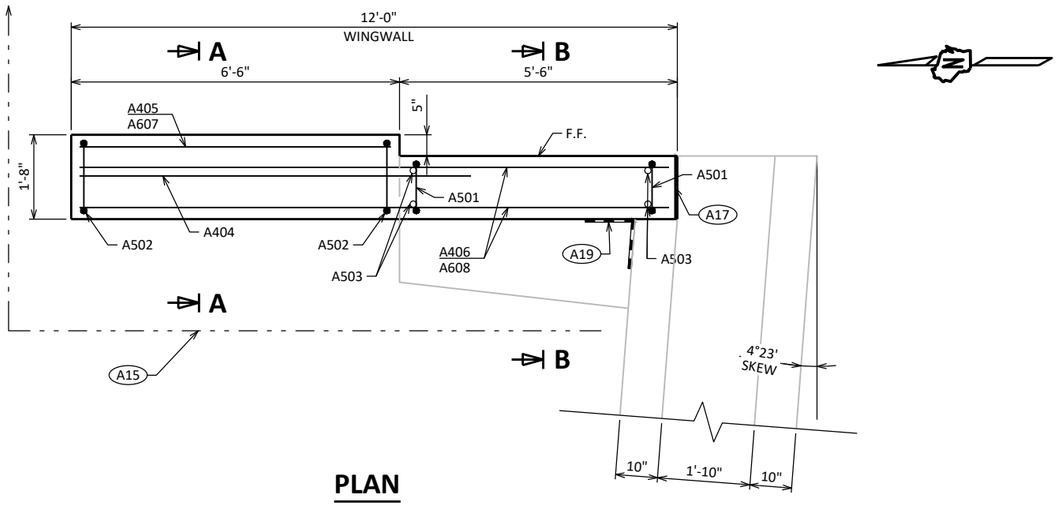
STATE PROJECT NUMBER

5845-16-77

SLOPED FACE PARAPET "B" NOT SHOWN. FOR DETAILS SEE SHEET 6.



WING 4 ELEVATION



PLAN

M01 ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-2" IN CONCRETE. ADHESIVE ANCHORS NO. 4 BAR. EMBED 1'-0" IN CONCRETE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A17 ½" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-388

DRAWN BY JMC | PLANS CK'D KRO

WING 4 DETAILS

SHEET 4 OF 8

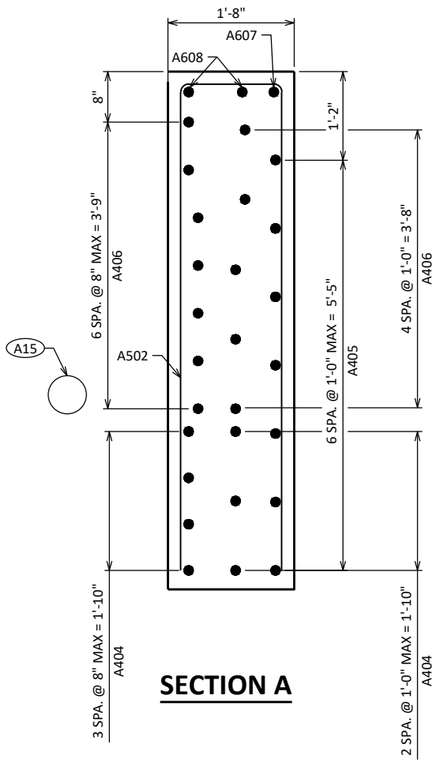
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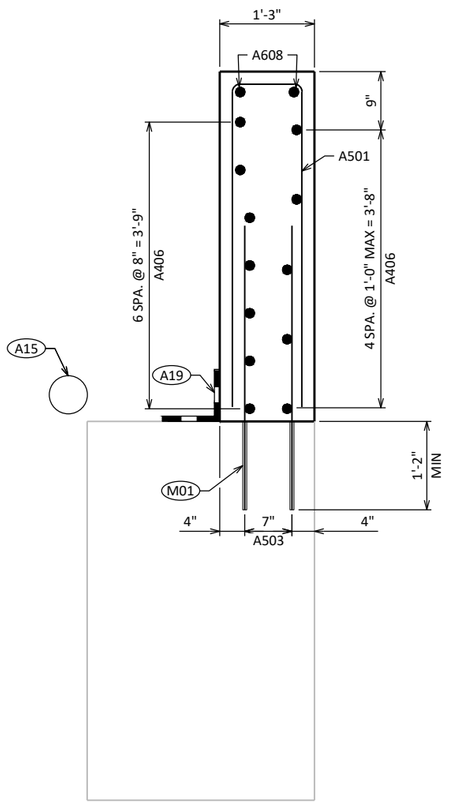
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STATE PROJECT NUMBER

5845-16-77



SECTION A



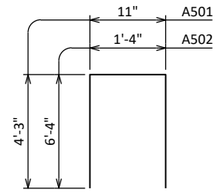
SECTION B

SLOPED FACE PARAPET "B" NOT SHOWN. FOR DETAILS SEE SHEET 6.

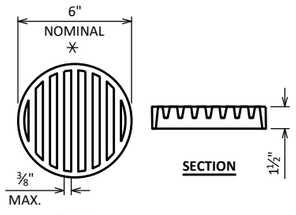
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

	BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
	A501	X	7	9'-2"	X		WING 4 VERT.
	A502	X	9	13'-9"	X		WING 4 VERT.
M01	A503	X	14	3'-9"			WING 4 VERT. ANCHOR DOWEL E.F.
M01	A404	X	7	7'-4"			WING 4 HORIZ. E.F.
	A405	X	7	6'-2"			WING 4 HORIZ. F.F.
	A406	X	12	11'-7"			WING 4 HORIZ. B.F.
	A607	X	1	6'-2"			WING 4 HORIZ. TOP F.F.
	A608	X	2	11'-7"			WING 4 HORIZ TOP E.F.



A501, A502



RODENT SHIELD DETAIL

✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

M01 ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-2" IN CONCRETE. ADHESIVE ANCHORS NO. 4 BAR. EMBED 1'-0" IN CONCRETE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-388

DRAWN BY JMC | PLANS CK'D KRO

WING 4 DETAILS AND BILL OF BARS

SHEET 5 OF 8

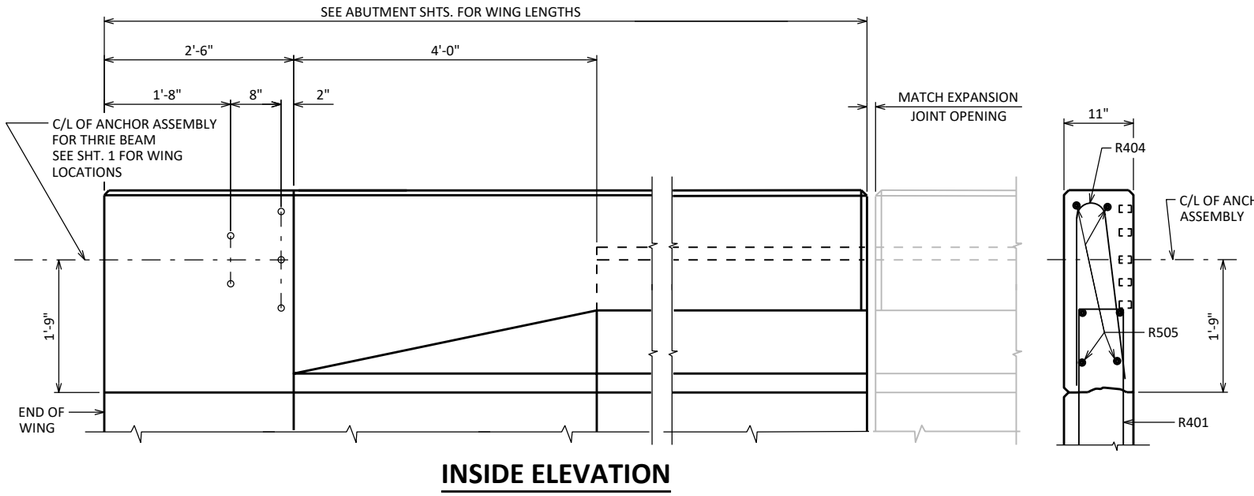
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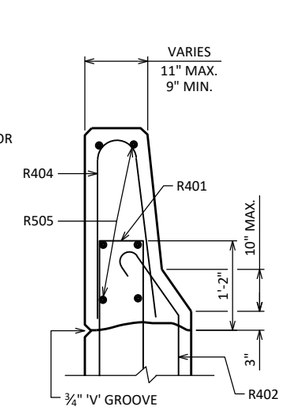
STATE PROJECT NUMBER

5845-16-77

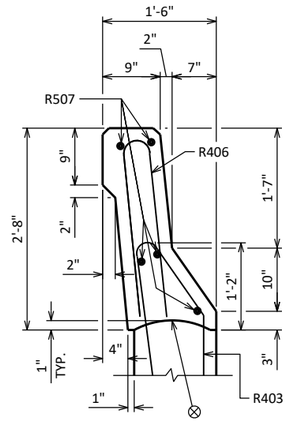


INSIDE ELEVATION

SECTION A-A



SECTION B-B



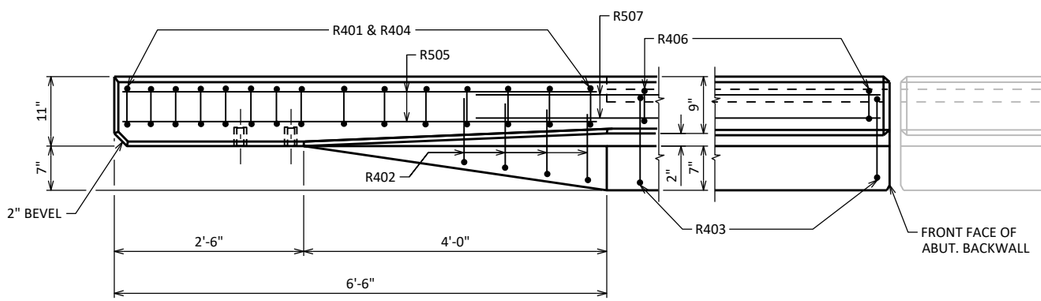
SECTION C-C

BILL OF BARS

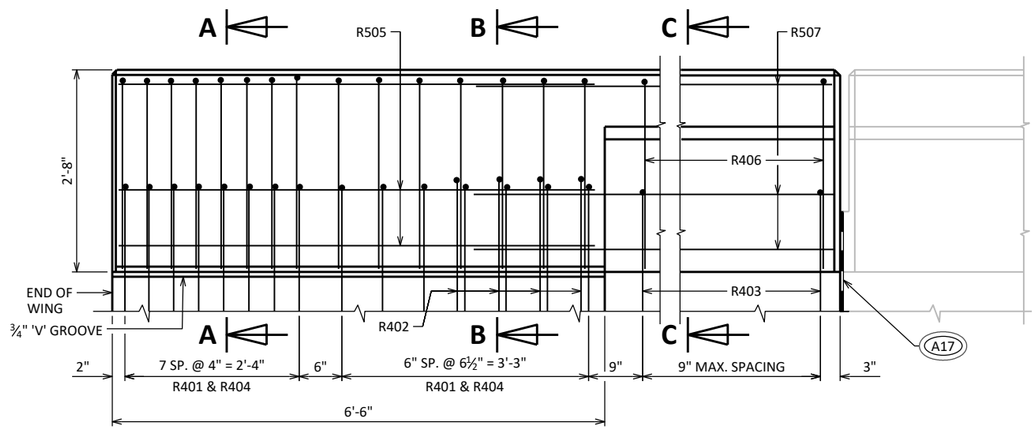
FOR ABUTMENT PARAPETS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
EPOXY COAT ALL PARAPET REINF.

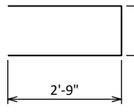
BAR MARK	NO. REQ'D. S. ABUT.	NO. REQ'D. N. ABUT.	LENGTH	BENT	LOCATION
R401		15	5'-10"	X	WING STIRRUPS
R402		4	3'-1"	X	WINGS
R403		8	4'-7"	X	WING STIRRUPS
R404		15	4'-9"	X	WINGS
R505		6	6'-2"		WINGS
R406		8	4'-10"	X	WINGS
R507		5	8'-6"		WINGS



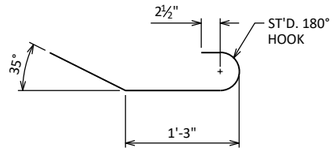
PLAN



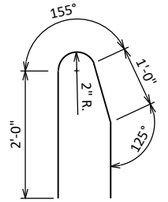
OUTSIDE ELEVATION



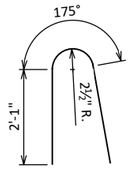
R401



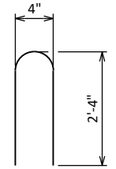
R402



R403

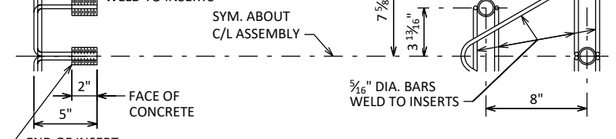


R404



R406

⊗ CONST. JOINT - STRIKE OFF AS SHOWN



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH ASTM F2329.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

A17 ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-388

DRAWN BY JMC | PLANS CK'D KRO

SLOPED FACE PARAPET "B"

SHEET 6 OF 8
540

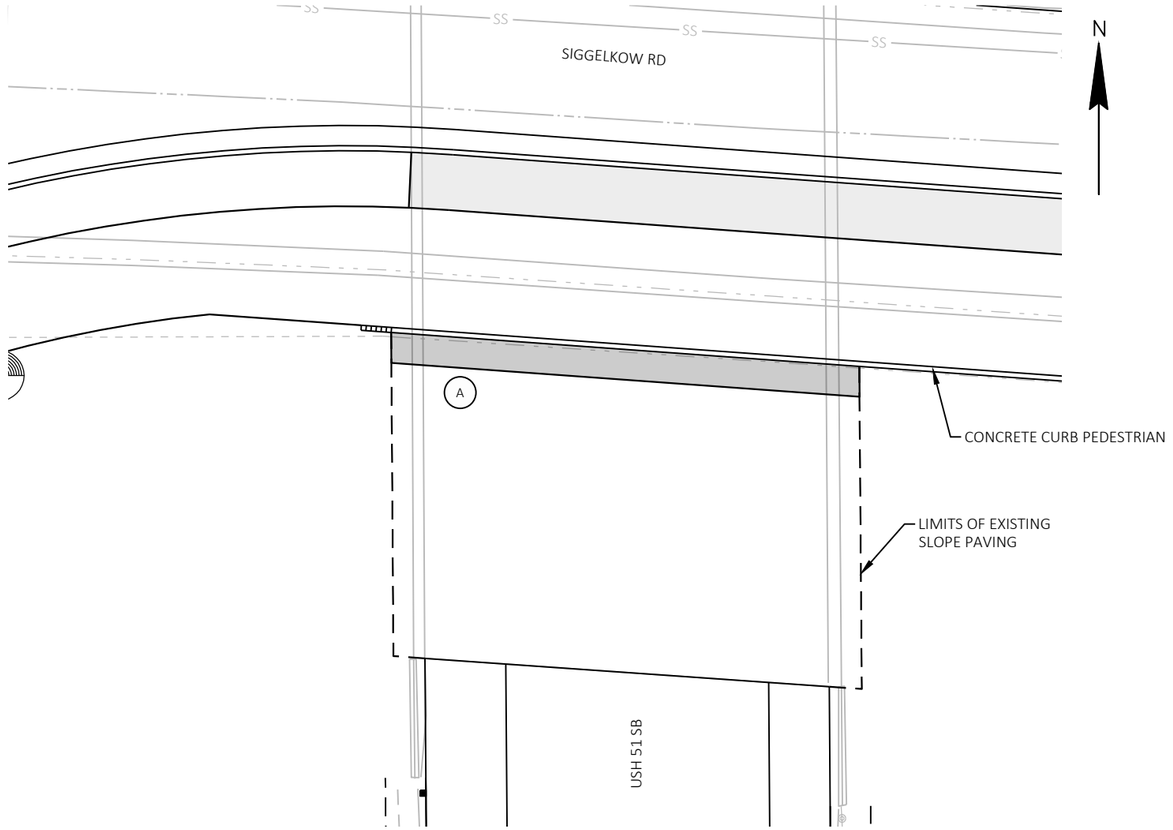
SCALE = 2.00

8

8

STATE PROJECT NUMBER

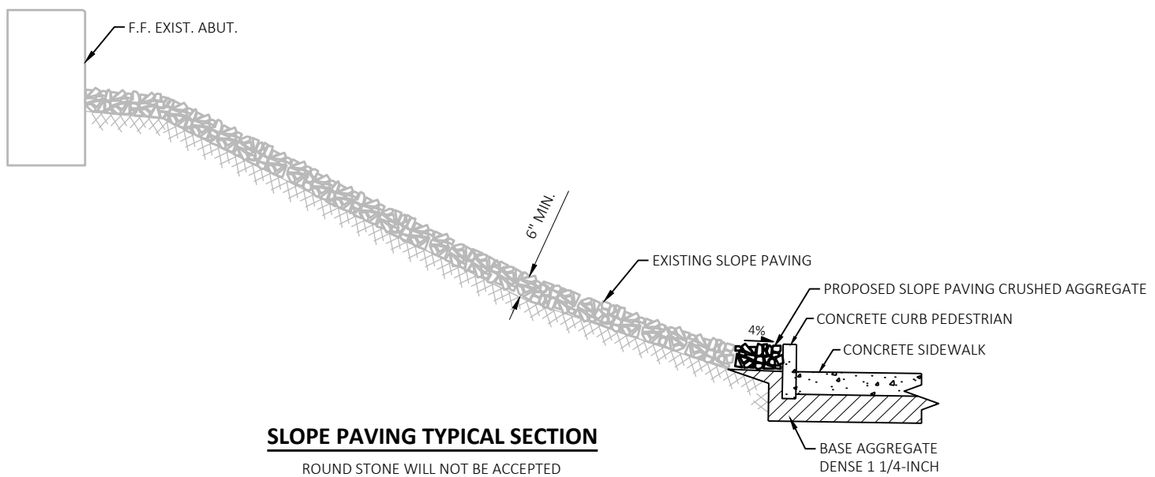
5845-16-77



SLOPE PAVING LOCATIONS

LOCATION	AREA (SY)
A	16

LIMITS OF SLOPE PAVING
CRUSHED AGGREGATE



SLOPE PAVING TYPICAL SECTION

ROUND STONE WILL NOT BE ACCEPTED

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-388

DRAWN BY BDB | PLANS CK'D KRO

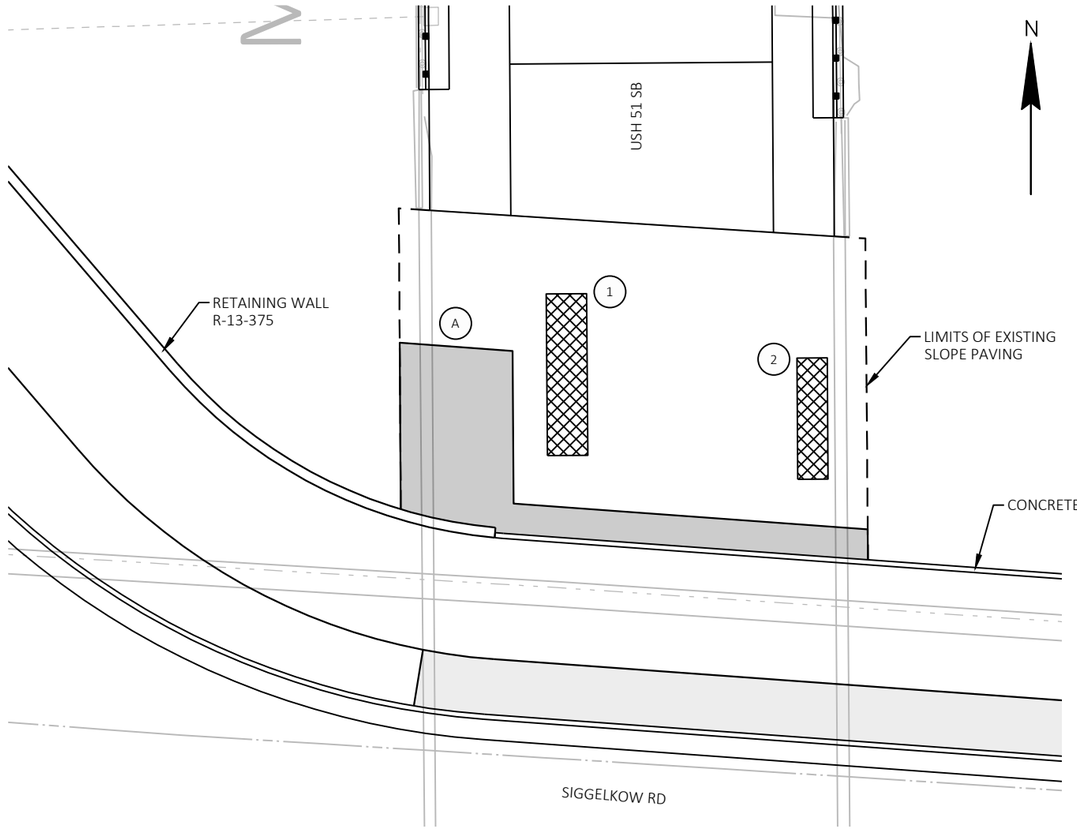
SLOPE PAVING REPAIR DETAILS (SOUTH ABUT.)

SHEET 7 OF 8

541

STATE PROJECT NUMBER

5845-16-77



SLOPE PAVING REPAIR LOCATIONS

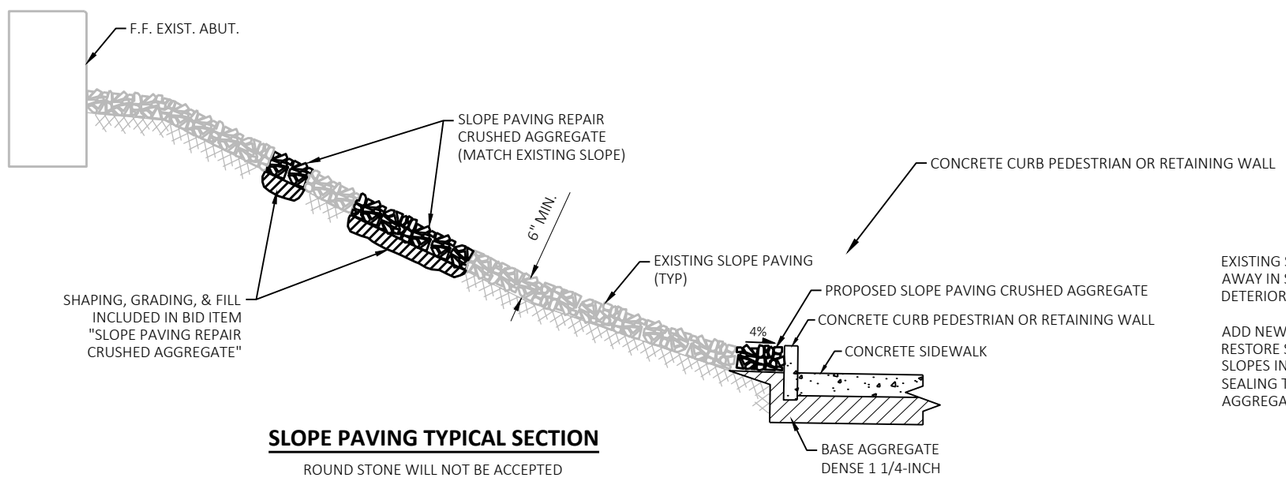
LOCATION	VOLUME (CY)
1	2.4
2	0.7
TOTAL	3.1

SLOPE PAVING LOCATIONS

LOCATION	AREA (SY)
A	33

LIMITS OF SLOPE PAVING
REPAIR CRUSHED AGGREGATE

LIMITS OF SLOPE PAVING
CRUSHED AGGREGATE



SLOPE PAVING TYPICAL SECTION

ROUND STONE WILL NOT BE ACCEPTED

EXISTING SLOPE PAVING HAS SETTLED OR WASHED AWAY IN SEVERAL LOCATIONS. ONLY EXISTING DETERIORATED AREAS TO BE REPAIRED.

ADD NEW CRUSHED AGGREGATE (AS REQ'D) AND RESTORE SLOPE PAVING TO THE ELEVATIONS AND SLOPES INDICATED. TO BE COMPLETED PRIOR TO SEALING THE NEW SLOPE PAVING CRUSHED AGGREGATE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-388

DRAWN BY BDB | PLANS CK'D KRO

SLOPE PAVING REPAIR DETAILS (NORTH ABUT.)

SHEET 8 OF 8

542

8

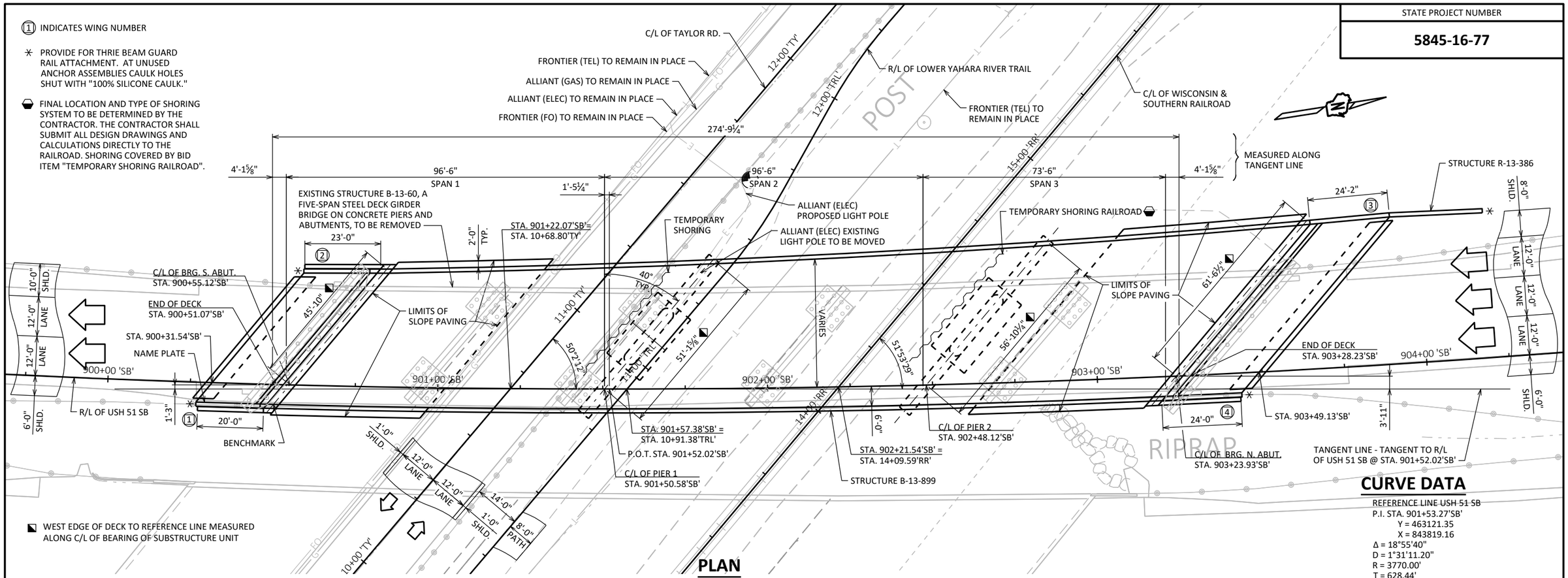
8

STATE PROJECT NUMBER
5845-16-77

(1) INDICATES WING NUMBER

✳ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK."

⬟ FINAL LOCATION AND TYPE OF SHORING SYSTEM TO BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT ALL DESIGN DRAWINGS AND CALCULATIONS DIRECTLY TO THE RAILROAD. SHORING COVERED BY BID ITEM "TEMPORARY SHORING RAILROAD".



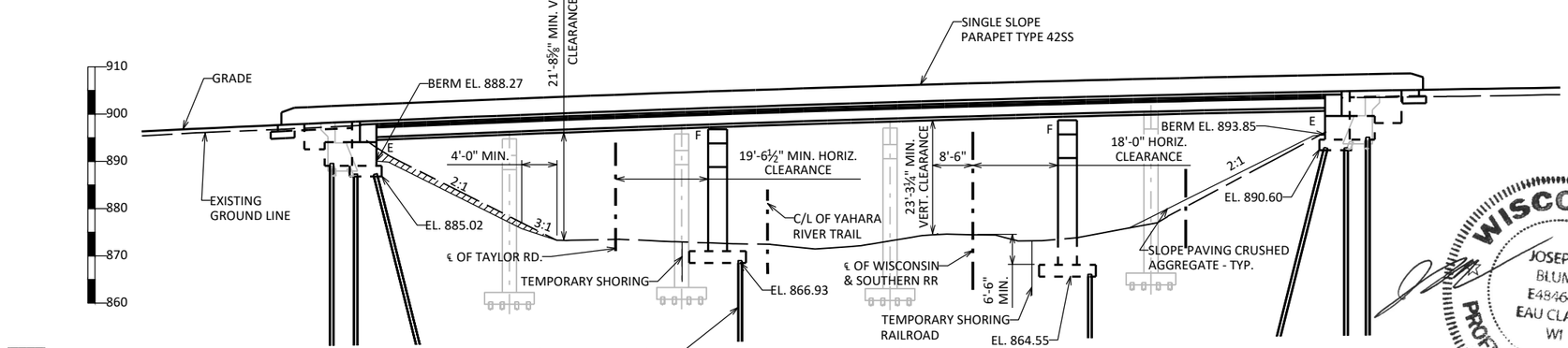
WEST EDGE OF DECK TO REFERENCE LINE MEASURED ALONG C/L OF BEARING OF SUBSTRUCTURE UNIT

PLAN

THREE-SPAN 36W" PRESTRESSED CONCRETE GIRDER BRIDGE

CURVE DATA

REFERENCE LINE USH 51 SB
P.I. STA. 901+53.27'SB'
Y = 463121.35
X = 843819.16
Δ = 18°55'40"
D = 1°31'11.20"
R = 3770.00'
T = 628.44'
L = 1245.43'
S.E. = 0.033%
P.C. STA. 895+24.83'SB'
P.T. STA. 907+70.26'SB'



COST OF EXCAVATION IN THE HATCHED AREAS AND SHAPING OF EMBANKMENT BETWEEN B-13-899 AND ADJACENT EXISTING BRIDGE STRUCTURE B-13-386 SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-13-899".

HP 10x42 PILING- TYP. @ ABUTMENTS AND PIERS

ELEVATION

(TAKEN NORMAL TO RAILROAD TRACKS)
(LOOKING WEST)

LIST OF DRAWINGS:

1. GENERAL PLAN
2. QUANTITIES, NOTES, DESIGN DATA & PROFILE GRADE LINE
3. TYPICAL SECTION & DETAILS
4. SUBSURFACE EXPLORATION
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT FOOTING LAYOUT
7. WING 1
8. WING 2
9. SOUTH ABUTMENT DETAILS AND BILL OF BARS
10. NORTH ABUTMENT
11. NORTH ABUTMENT FOOTING LAYOUT
12. WING 3
13. WING 4
14. NORTH ABUTMENT DETAILS AND BILL OF BARS
15. ALTERNATE CONSTRUCTION JOINT
16. PIER 1
17. PIER 1 DETAILS
18. PIER 2
19. PIER 2 DETAILS
20. PRESTRESSED GIRDER BEARINGS
21. 36W" PRESTRESSED GIRDER DETAILS
22. 36W" PRESTRESSED GIRDER DETAILS
23. 36W" PRESTRESSED GIRDER DETAILS
24. STEEL DIAPHRAGM
25. GIRDER LAYOUT
26. DECK ELEVATIONS
27. SUPERSTRUCTURE
28. LONGITUDINAL DECK STEEL
29. TRANSVERSE DECK STEEL
30. SUPERSTRUCTURE DETAILS
31. DIAPHRAGM DETAILS
32. EXPANSION DEVICE
33. COVER PLATE DETAILS
34. SUPERSTRUCTURE BILL OF BARS
35. SLOPE PAVING (CRUSHED AGGREGATE) SOUTH ABUTMENT
36. SLOPE PAVING (CRUSHED AGGREGATE) NORTH ABUTMENT
37. SOUTH STRUCTURAL APPROACH SLAB
38. NORTH STRUCTURAL APPROACH SLAB
39. STRUCTURAL APPROACH SLAB DETAILS
40. SINGLE SLOPE PARAPET 42SS
41. SINGLE SLOPE PARAPET 42SS
42. PILE REMOVAL SOUTH ABUT. & PIER 1
43. PILE REMOVAL NORTH ABUTMENT

STRUCTURE DESIGN CONTACTS:

AARON BONK	608-261-0261
JOE BLUMA	715-834-3161

WISCONSIN — JOSEPH L. BLUMA — E48464-6 — EAU CLAIRE, WI — PROFESSIONAL ENGINEER

08/15/2024

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/16/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-13-899

USH 51 SB OVER TAYLOR RD/WSOR

COUNTY	VILLAGE
DANE	MCFARLAND

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
JLB	NBE	ZSS	JLB

GENERAL PLAN

SHEET 1 OF 43
543

I.D. DATE:

STATE PROJECT NUMBER

5845-16-77

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	S. STRUCT. APP. SLAB	SOUTH ABUT.	PIER 1	PIER 2	NORTH ABUT.	N. STRUCT. APP. SLAB	TOTALS
203.0220	REMOVING STRUCTURE B-13-060	EACH	-----	-----	-----	-----	-----	-----	-----	1
203.0330	DEBRIS CONTAINMENT B-13-060	EACH	-----	-----	-----	-----	-----	-----	-----	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-13-899	EACH	-----	-----	-----	-----	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-----	-----	445	-----	-----	600	-----	1,045
305.0120	BASE AGGREGATE DENSE 1¼-INCH	TON	-----	135	-----	-----	-----	-----	175	310
501.1000.S	ICE HOT WEATHER CONCRETING	LB	3,755	435	1,130	1,260	1,500	1,500	535	10,115
502.0100	CONCRETE MASONRY BRIDGES	CY	492.9	57.7	150.4	167.8	200.0	200.0	71.1	1,348
502.3101	EXPANSION DEVICE	LF	126	-----	-----	-----	-----	-----	-----	126
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,404	88	-----	-----	-----	-----	118	1,610
502.3210	PIGMENTED SURFACE SEALER	SY	275	20	-----	-----	-----	12	11	318
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	2,195	-----	-----	-----	-----	-----	-----	2,195
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-----	-----	6,700	6,550	6,520	9,010	-----	28,780
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	134,870	13,010	5,030	35,220	41,910	7,750	15,270	253,060
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	-----	730	-----	-----	-----	-----	950	1,680
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	-----	-----	16	16	-----	-----	32
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	-----	-----	8	-----	-----	8	-----	16
506.4000	STEEL DIAPHRAGMS B-13-899	EACH	35	-----	-----	-----	-----	-----	-----	35
511.1200	TEMPORARY SHORING B-13-899	SF	-----	-----	-----	175	-----	-----	-----	175
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-----	-----	16	-----	-----	20	-----	36
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	-----	-----	1,040	1,575	1,350	1,320	-----	5,285
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	-----	-----	270	-----	-----	370	-----	640
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-----	-----	121	-----	-----	126	-----	247
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-----	2	-----	-----	-----	-----	1	3
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	-----	-----	48	-----	-----	62	-----	110
SPV.0090.03	REMOVING EXISTING TIMBER PILING	LF	-----	-----	500	184	-----	500	-----	1,184
SPV.0165.01	TEMPORARY SHORING RAILROAD	SF	-----	-----	-----	-----	175	-----	-----	175
	NON-BID ITEMS									
	FILLER	SIZE								½", ¾" & 1¼"

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.13
OPERATING RATING: RF = 1.52
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & STRUCTURAL APPROACH SLAB ——— f'_c = 4,000 PSI
ALL OTHER ——— f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 ——— f_y = 60,000 PSI
STAINLESS, GRADE 60 ——— f_y = 60,000 PSI

36W" PRESTRESSED GIRDERS:
CONCRETE MASONRY——— f'_c = 8,000 PSI
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP10x42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 40'-0" LONG AT SOUTH ABUTMENT.
ESTIMATED 40'-0" LONG AT NORTH ABUTMENT.

PIERS TO BE SUPPORTED ON HP10x42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 35'-0" LONG AT PIER 1
ESTIMATED 30'-0" LONG AT PIER 2

**THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE PILE CAPACITY.

TRAFFIC DATA

FEATURE ON: USH 51 SB
ADT = 28,800 (2026)
ADT = 31,000 (2046)
R.D.S. = 60 MPH

FEATURE UNDER: TAYLOR RD.
ADT = <500 (2046)
R.D.S. = 30 MPH

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-13-899" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH" AS DETAILED ON SHEET 3.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN ON SHEET 3.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND APPROACH SLAB SURFACES AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

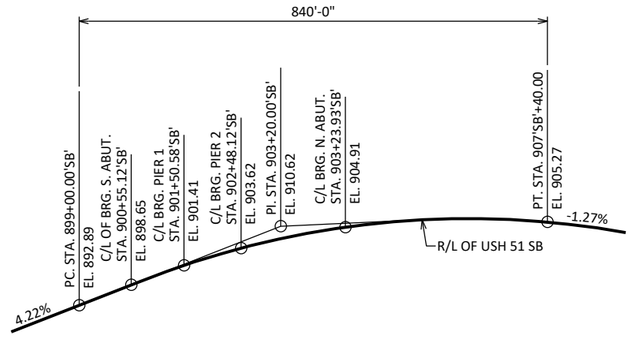
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON APPROACH SLABS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1, THE ABUTMENT DETAILS, AND THE SLOPE PAVING DETAILS.

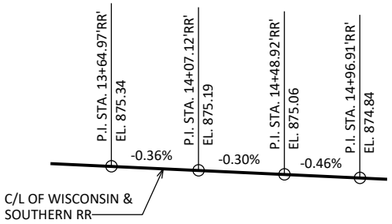
APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACES OF ALL ABUTMENTS AND PIERS BELOW EXPANSION DEVICES.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "36W PRESTRESSED GIRDER DETAILS" SHEET.

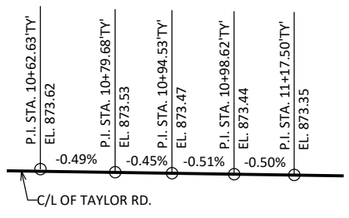
EXISTING SUBSTRUCTURE LOCATIONS ARE BASED ON SURVEY AND EXISTING PLANS. EXTENT OF BELOW GRADE SUBSTRUCTURES ARE NOT KNOWN. REMOVE EXISTING SUBSTRUCTURES AS NEEDED TO BUILD NEW SUBSTRUCTURES. COST OF SUBSTRUCTURE REMOVAL IS CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE" BID ITEM.



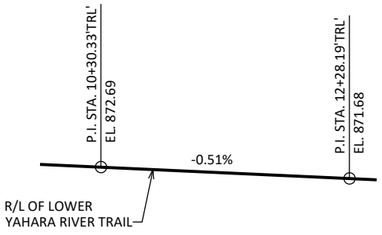
PROFILE GRADE LINE



PROFILE GRADE LINE



PROFILE GRADE LINE



PROFILE GRADE LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

QUANTITIES, NOTES, DESIGN DATA & PROFILE GRADE LINE

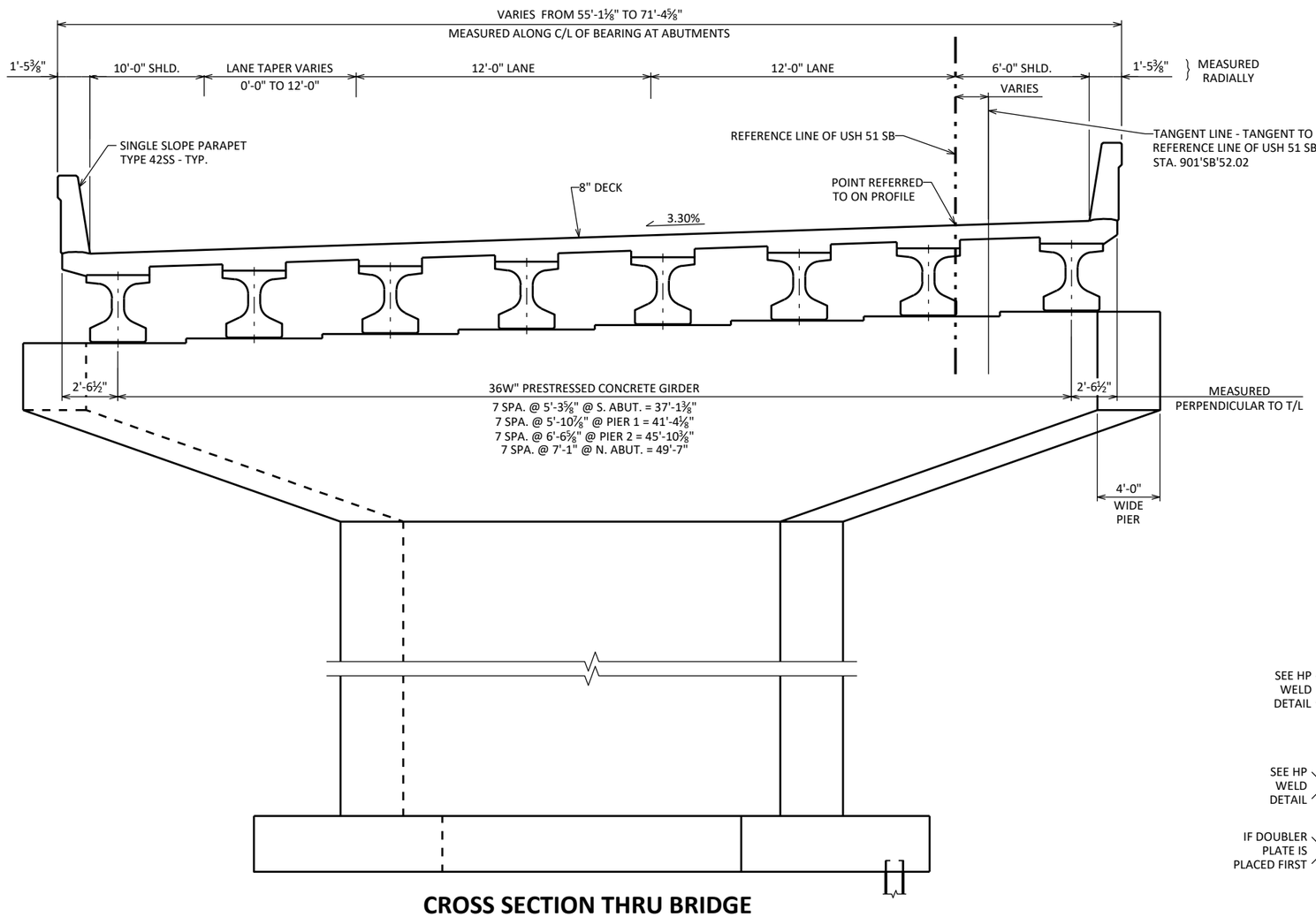
SHEET 2 OF 43
544

8

8

STATE PROJECT NUMBER

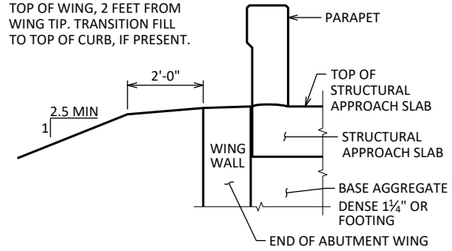
5845-16-77



CROSS SECTION THRU BRIDGE

(LOOKING NORTH)

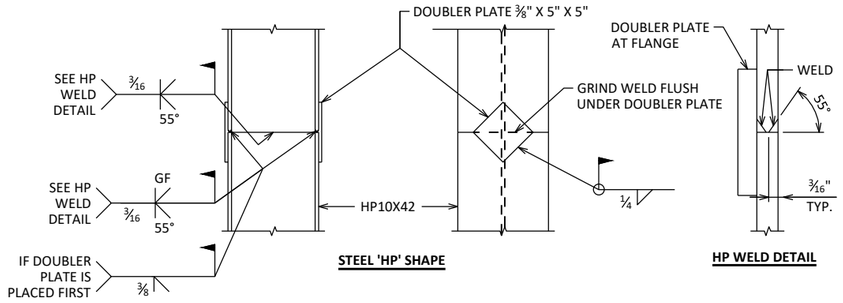
NOTE: PLACE FILL EVEN WITH TOP OF WING, 2 FEET FROM WING TIP. TRANSITION FILL TO TOP OF CURB, IF PRESENT.



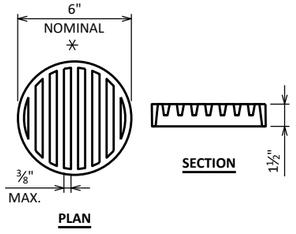
TYPICAL FILL SECTION AT WING TIPS

(WINGS 1, 2 & 4)

SEE R-13-386 PLANS FOR TYPICAL FILL AT WING WALL 3 DETAIL



'HP' PILE DETAILS

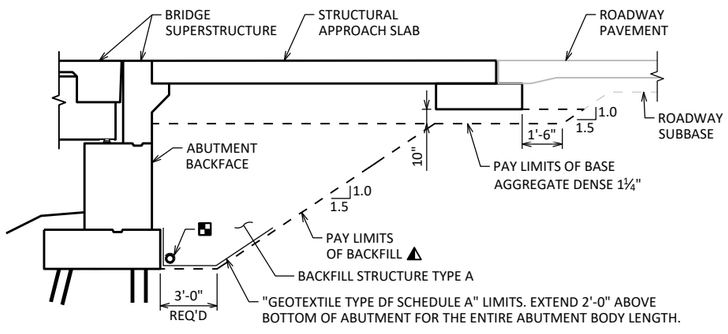


RODENT SHIELD DETAIL

⚹ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

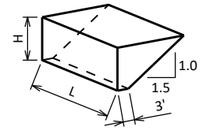
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



TYPICAL SECTION THRU ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

▪ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

TYPICAL SECTION & DETAILS

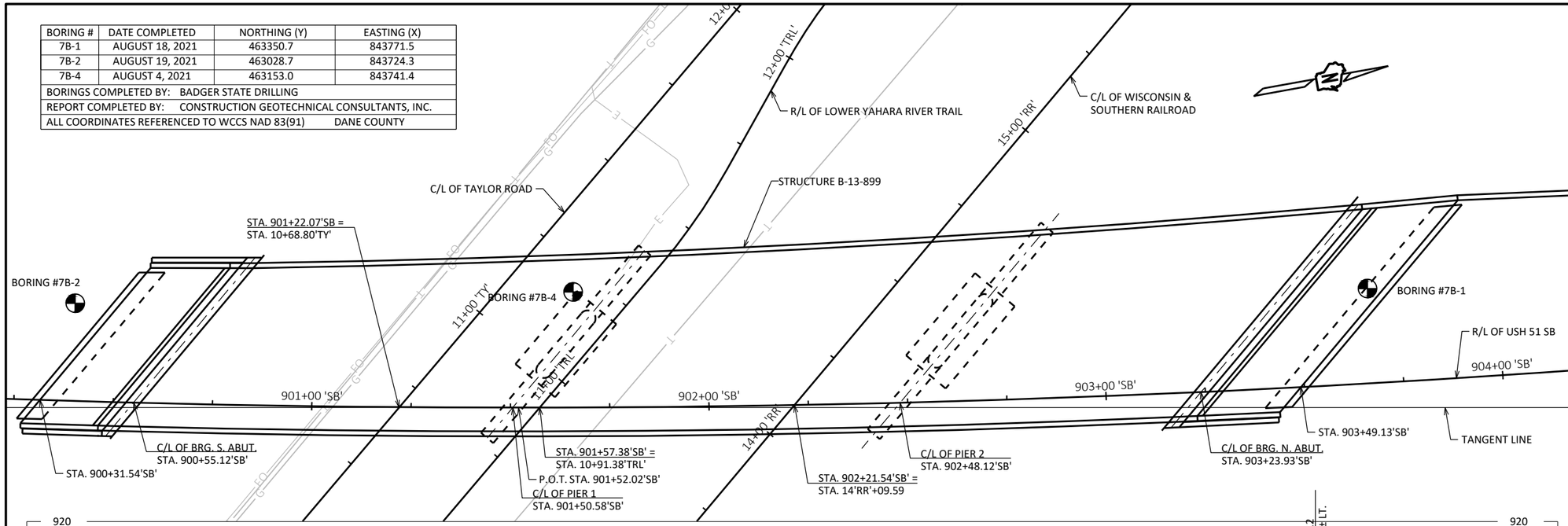
SHEET 3 OF 43

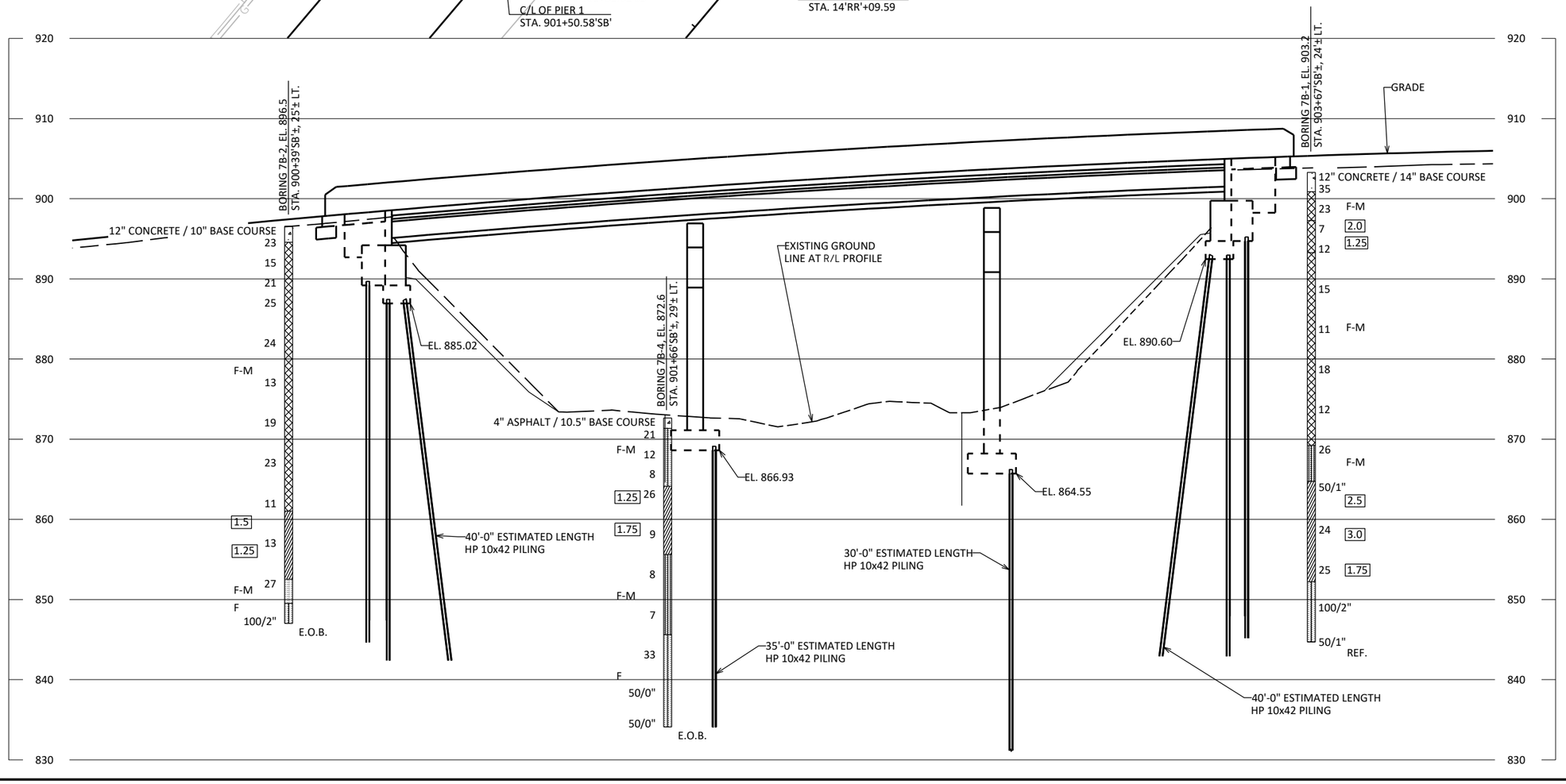
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
7B-1	AUGUST 18, 2021	463350.7	843771.5
7B-2	AUGUST 19, 2021	463028.7	843724.3
7B-4	AUGUST 4, 2021	463153.0	843741.4
BORINGS COMPLETED BY: BADGER STATE DRILLING			
REPORT COMPLETED BY: CONSTRUCTION GEOTECHNICAL CONSULTANTS, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			





STATE PROJECT NUMBER

5845-16-77

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING

BORING #/EL. STA./OFFSET

ST

0.25 (1) 17 (2)

F-C COBBLE OR BOULDER

WEATHERED LIMESTONE

CORE RUN #1 - 24'-29' REC=80%, RQD=72%

(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

AT TIME OF DRILLING

END OF DRILLING

AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

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SUBSURFACE EXPLORATION

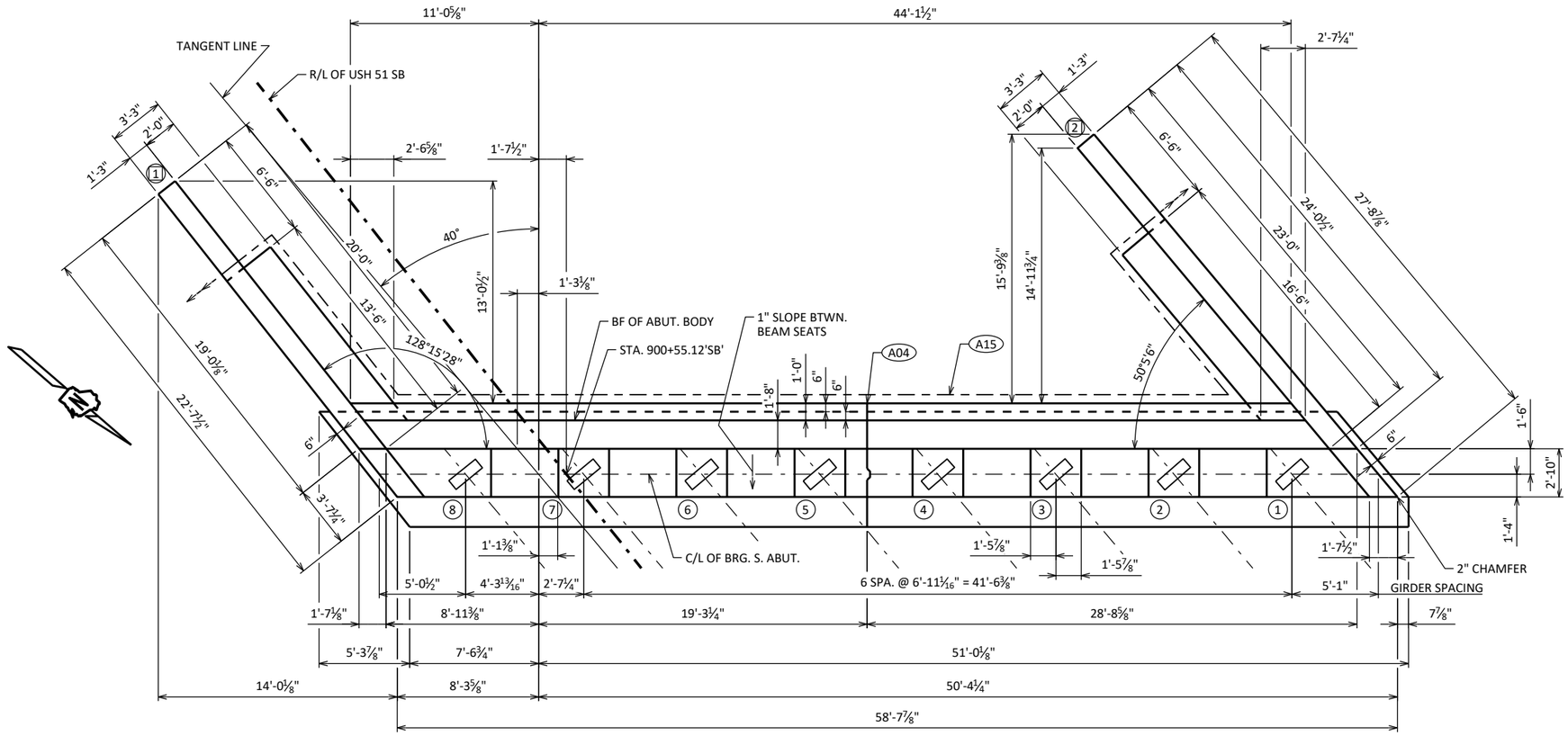
SHEET 4 OF 43

546

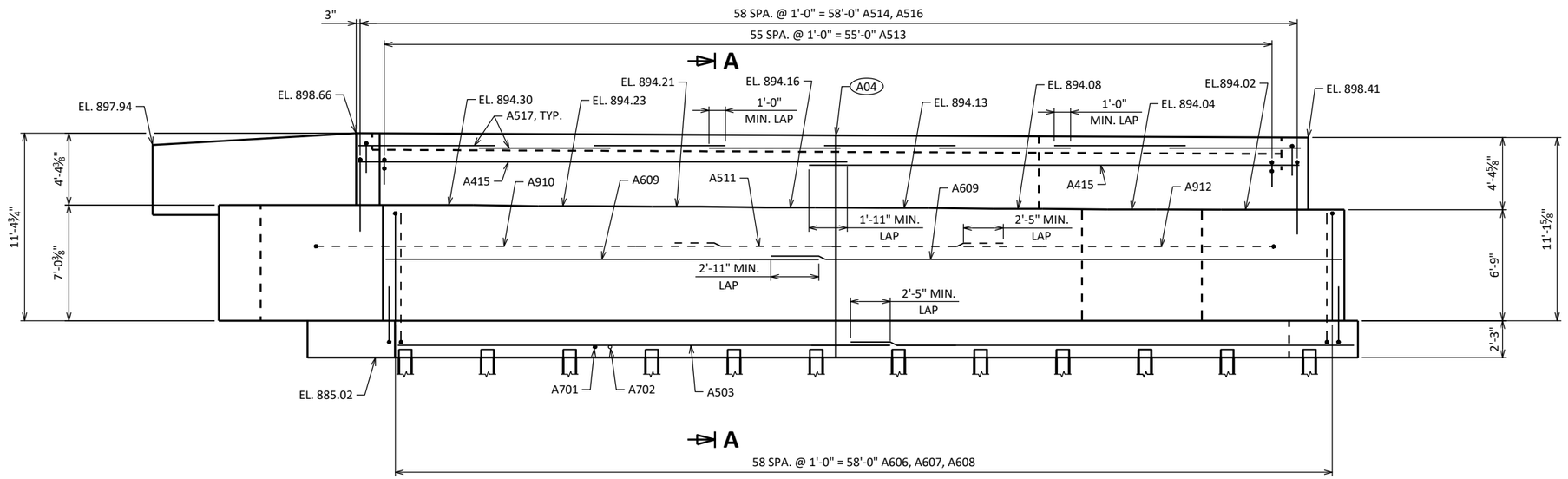
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STATE PROJECT NUMBER
5845-16-77



PLAN



ELEVATION

(LOOKING SOUTH)

FOR SECTION A, SEE SHEET 9.

(A04) VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. ¾" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

SOUTH ABUTMENT

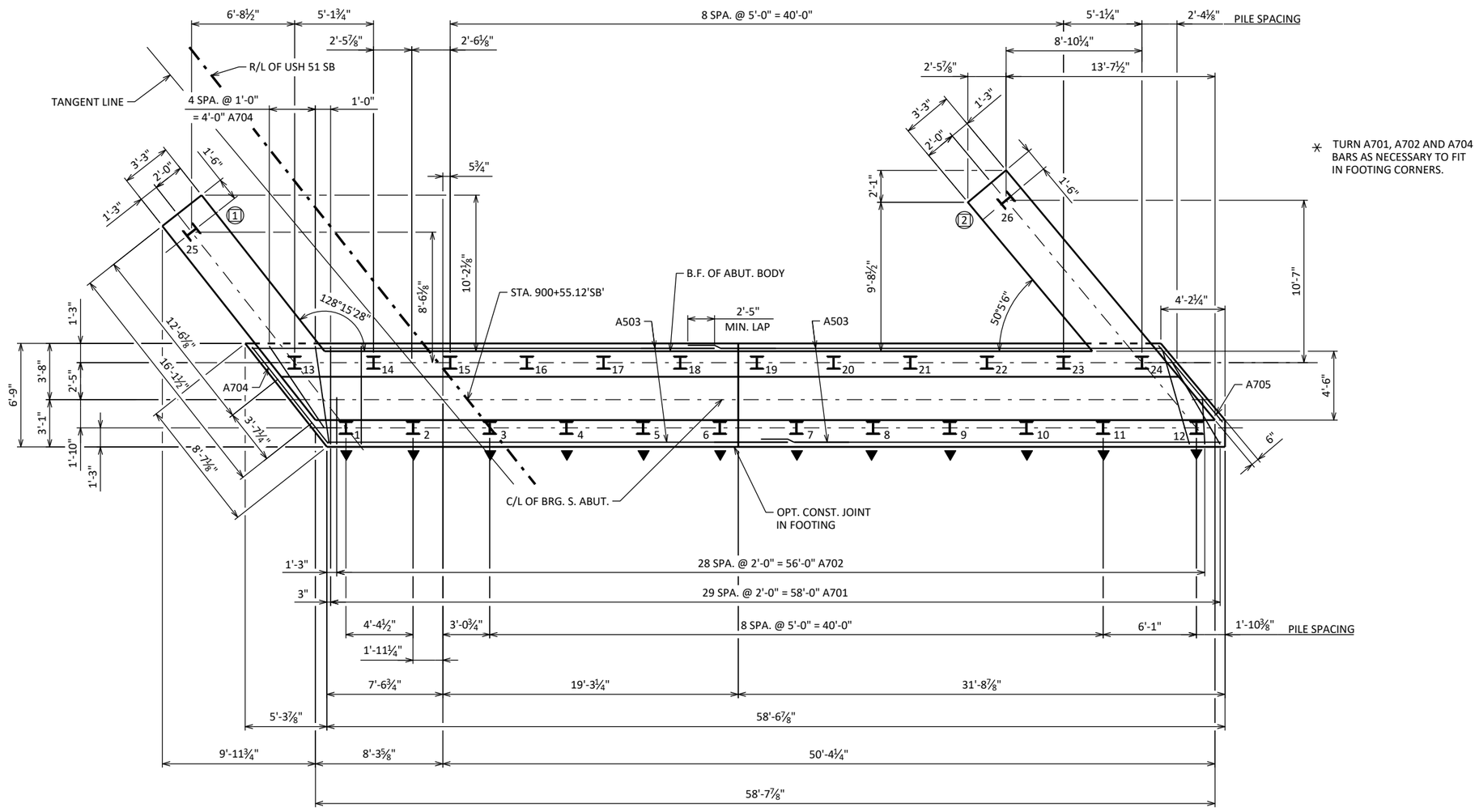
SHEET 5 OF 43
547

8

8

STATE PROJECT NUMBER

5845-16-77



✳ TURN A701, A702 AND A704 BARS AS NECESSARY TO FIT IN FOOTING CORNERS.

FOOTING LAYOUT

A13 INDICATES PILE BATTERED 3" PER FT. IN DIRECTION OF ARROW. ▼

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

SOUTH ABUTMENT FOOTING LAYOUT

SHEET 6 OF 43

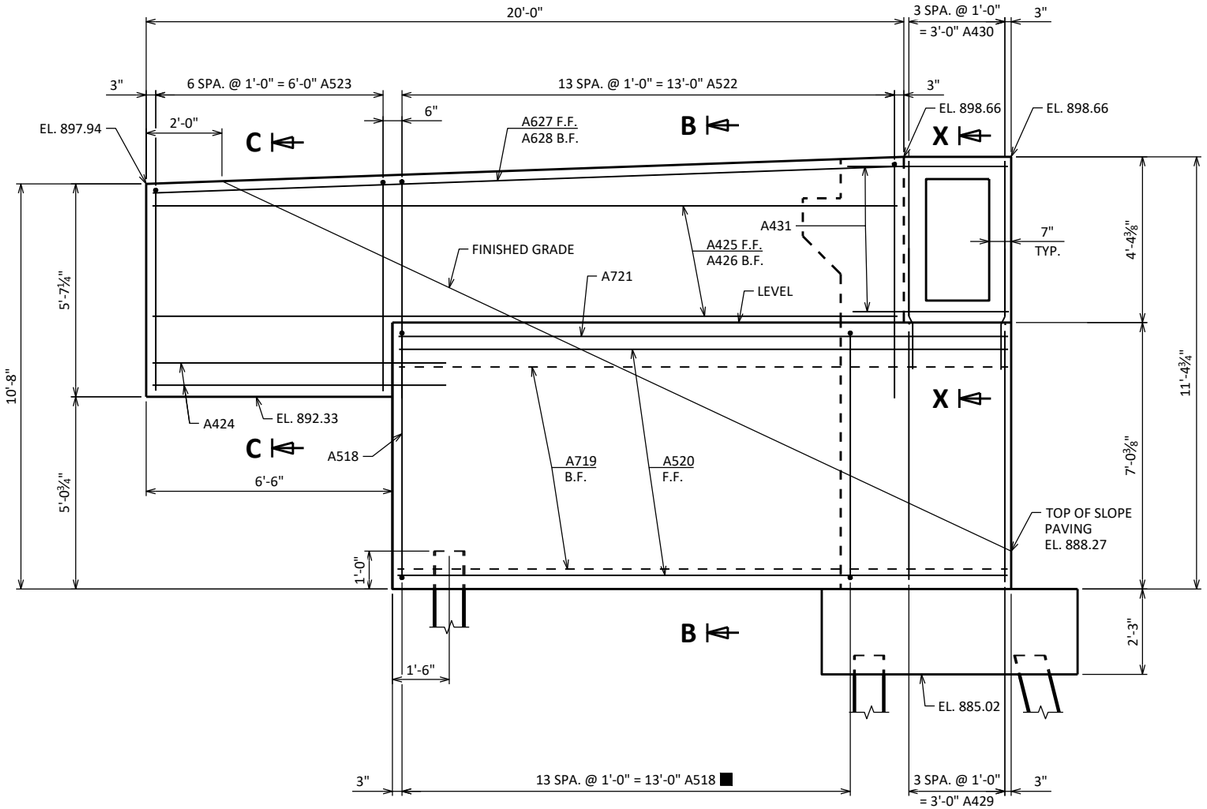
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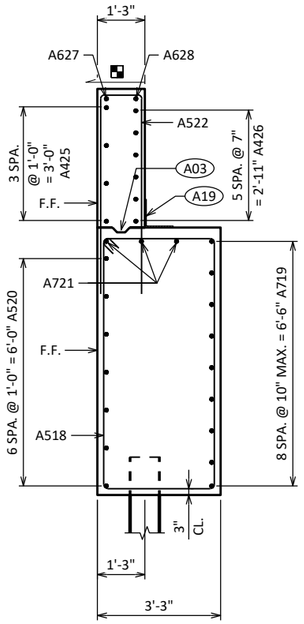
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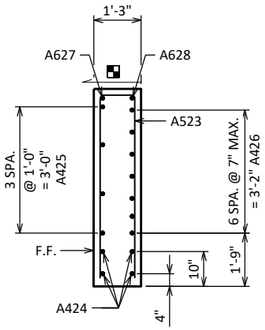
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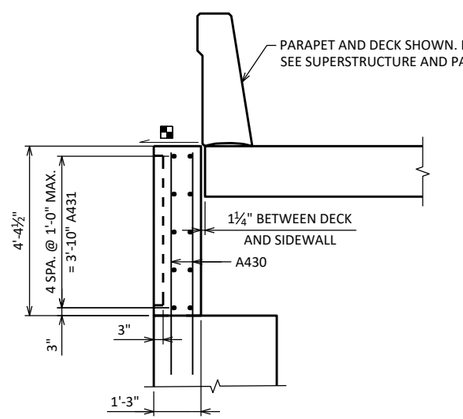
ELEVATION WING 1



SECTION B



SECTION C



SECTION X

■ SLOPE TO DRAIN.

■ DISPLACE BARS AT PILE.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

WING 1

SHEET 7 OF 43

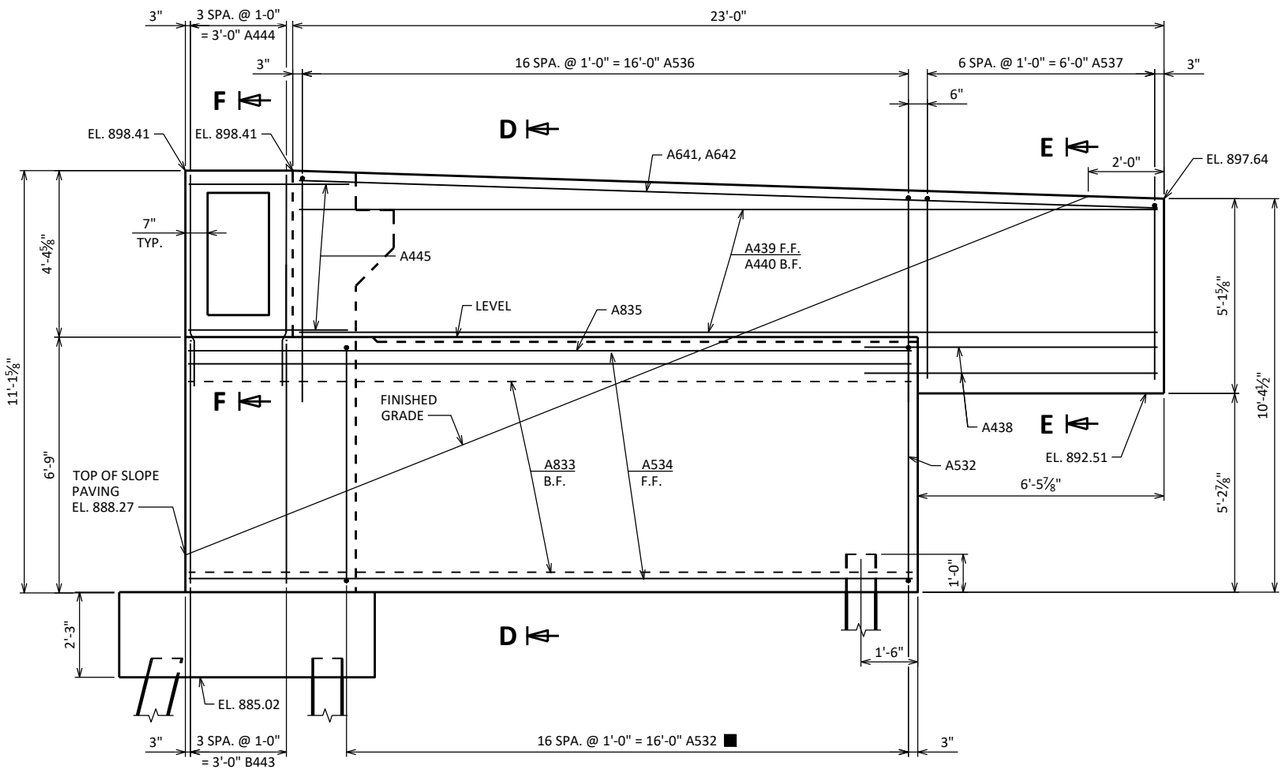
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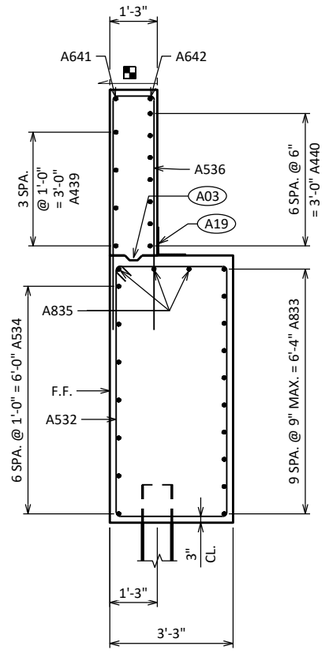
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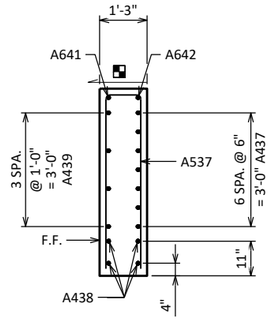
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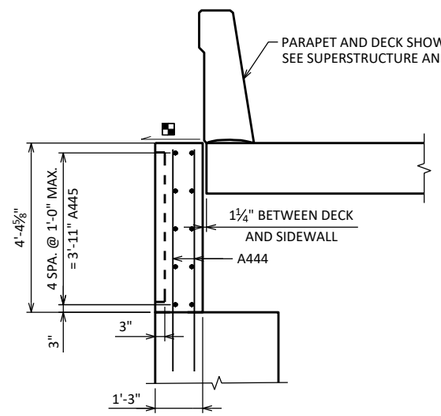
ELEVATION WING 2



SECTION D



SECTION E



SECTION F

■ SLOPE TO DRAIN.

■ DISPLACE BARS AT PILE.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

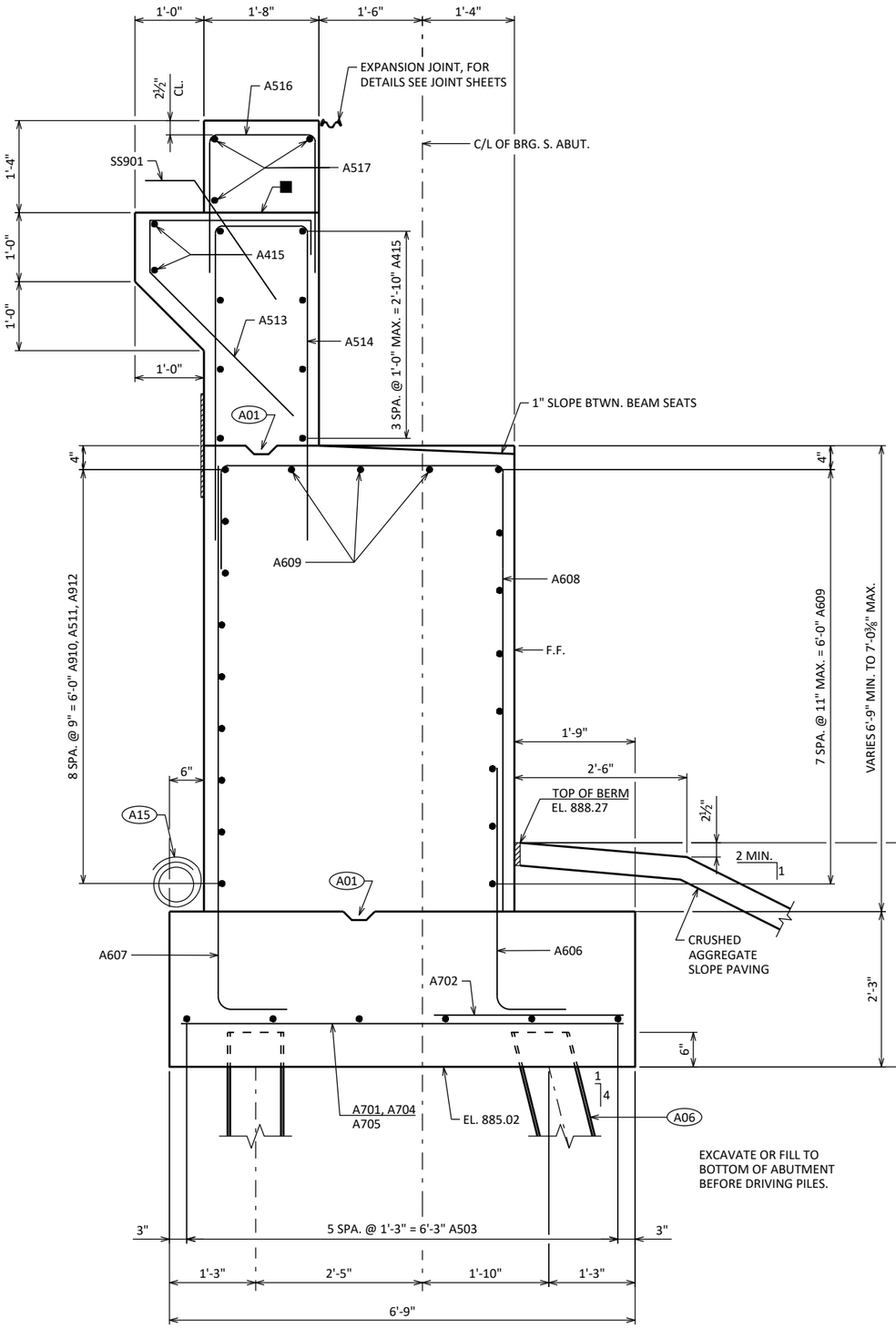
WING 2

SHEET 8 OF 43

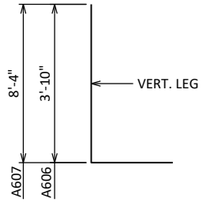
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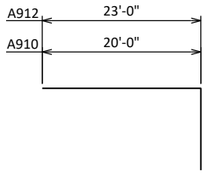
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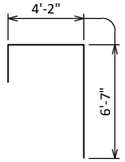
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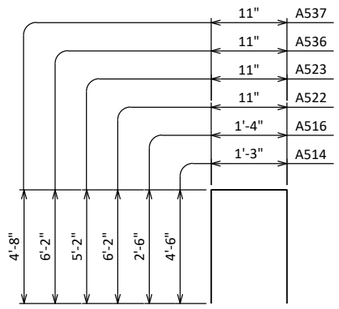
SECTION A

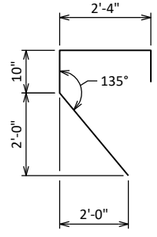




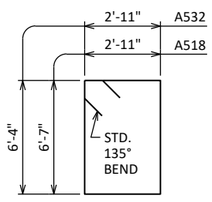


A608





A513



BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A701		30	6'-5"			FOOTING TRANS.
A702		29	3'-1"			FOOTING TRANS.
A503		12	30'-11"			FOOTING LONG.
A704		5	8'-2"			FOOTING TRANS. @ WING 1
A705		1	6'-1"			FOOTING TRANS. @ WING 2
A606		59	4'-8"	X		FOOTING DOWELS F.F.
A607		59	9'-2"	X		FOOTING DOWELS B.F.
A608		59	11'-11"	X		BODY VERT.
A609		20	30'-8"			BODY HORIZ.
A910		9	21'-4"	X		BODY HORIZ. B.F.
A511		9	19'-8"			BODY HORIZ. B.F.
A912		9	24'-3"	X		BODY HORIZ. B.F.
A513	X	56	6'-6"	X		BACKWALL VERT. NOTCH
A514	X	59	10'-3"	X		BACKWALL VERT.
A415	X	20	30'-1"			BACKWALL HORIZ.
A516	X	59	6'-1"	X		PAVING BLOCK VERT.
A517	X	24	8'-0"			PAVING BLOCK HORIZ.
A518	X	14	19'-8"	X		WING 1 VERT.
A719	X	9	15'-1"			WING 1 HORIZ. B.F.
A520	X	7	15'-9"			WING 1 HORIZ. F.F.
A721	X	3	15'-9"			WING 1 HORIZ. TOP
A522	X	14	13'-0"	X		WING 1 VERT.
A523	X	7	11'-0"	X		WING 1 VERT. END
A424	X	4	7'-9"			WING 1 HORIZ. E.F.
A425	X	4	18'-8"			WING 1 HORIZ. F.F.
A426	X	7	19'-6"			WING 1 HORIZ. B.F.
A627	X	1	18'-8"			WING 1 HORIZ. F.F. TOP
A628	X	1	19'-6"			WING 1 HORIZ. B.F. TOP
A429		4	6'-8"			ABUT. END @ WING 1
A430	X	8	5'-5"			SIDEWALL VERT. @ WING 1
A431	X	10	4'-8"			SIDEWALL HORIZ. @ WING 1
A532	X	17	19'-2"	X		WING 2 VERT.
A833	X	10	15'-6"			WING 2 HORIZ. B.F.
A534	X	7	20'-8"			WING 2 HORIZ. F.F.
A835	X	3	20'-1"		X	WING 2 HORIZ. TOP
A536	X	17	13'-0"	X		WING 2 VERT.
A537	X	7	10'-0"	X		WING 2 VERT. END
A438	X	4	7'-9"			WING 2 HORIZ. E.F.
A439	X	4	23'-6"			WING 2 HORIZ. F.F.
A440	X	9	22'-8"			WING 2 HORIZ. B.F.
A641	X	1	23'-6"			WING 2 HORIZ. F.F. TOP
A642	X	1	22'-8"			WING 2 HORIZ. B.F. TOP
A443		4	6'-5"			ABUT. END @ WING 2
A444	X	8	5'-5"			SIDEWALL VERT. @ WING 2
A445	X	10	4'-11"			SIDEWALL HORIZ. @ WING 2

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
A835	1 SERIES OF 3	19'-6" TO 20'-8"

FOR LOCATION OF SECTION A SEE SHEET 5.

■ CONST. JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE.

(A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 40'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

STATE PROJECT NUMBER

5845-16-77

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

SOUTH ABUTMENT DETAILS AND BILL OF BARS

SHEET 9 OF 43

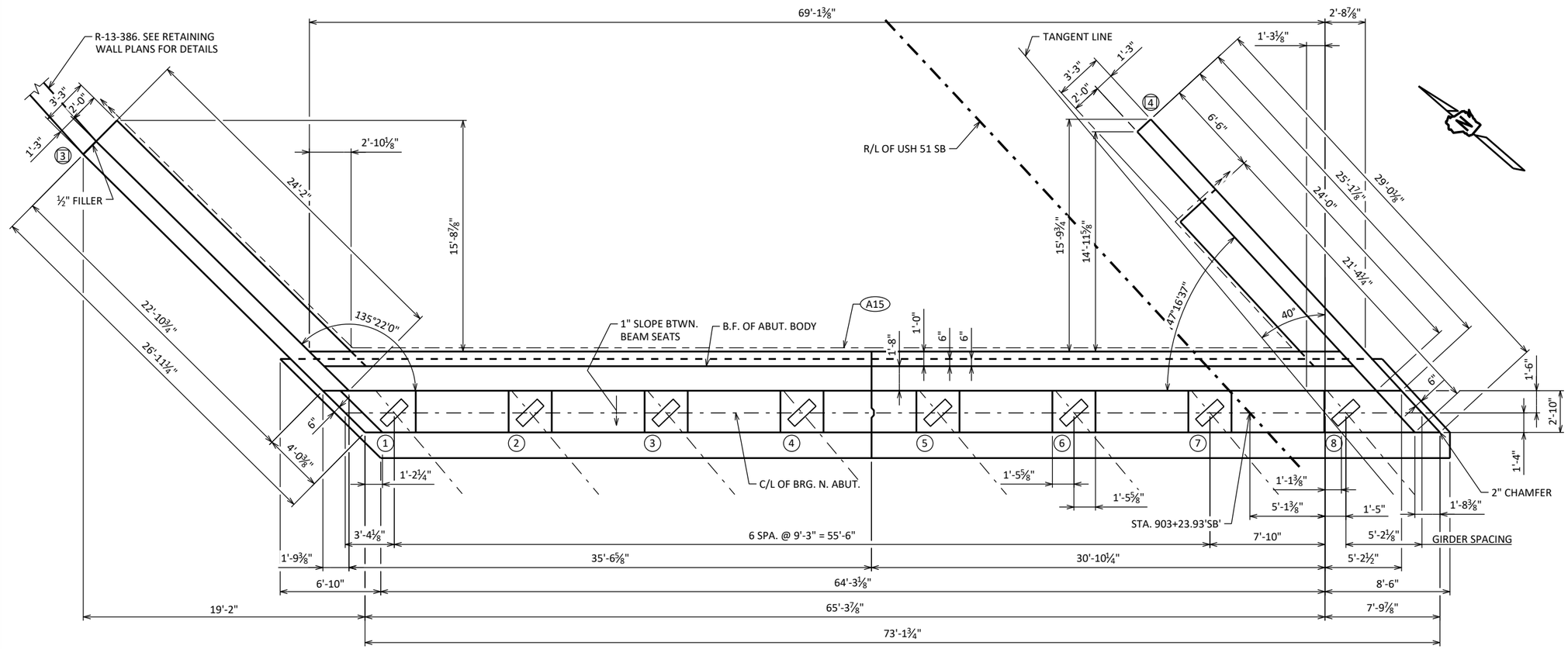
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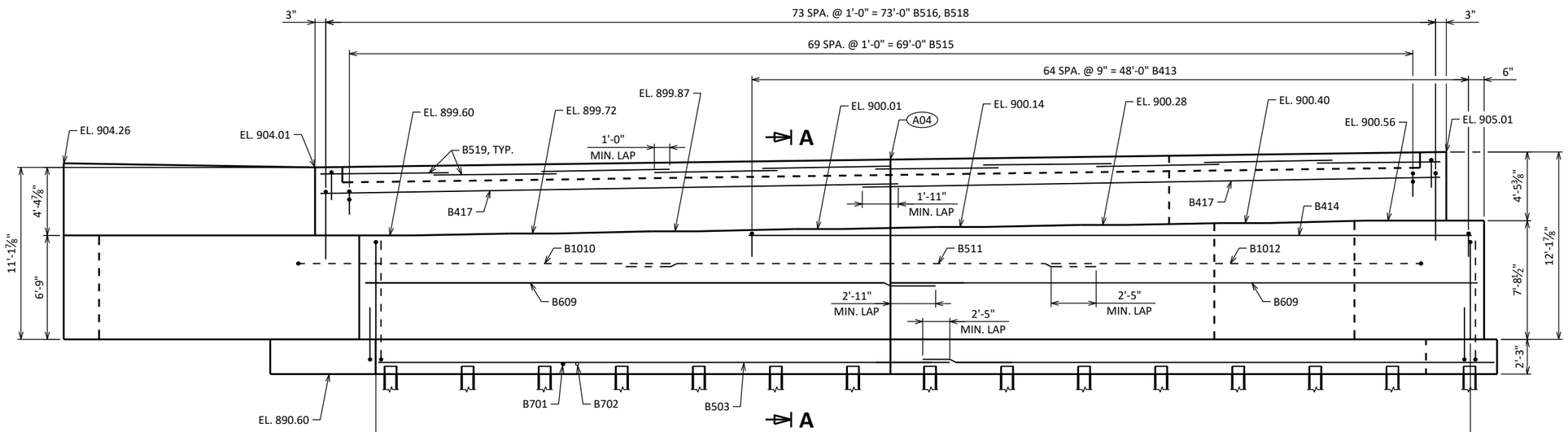
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STATE PROJECT NUMBER

5845-16-77



PLAN



ELEVATION

(LOOKING NORTH)

FOR SECTION A, SEE SHEET 14.

A04 VERT. CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 8. ¾" "V" GROOVE @ THE FRONT FACE AND 18" RMW @ BACKFACE. FOR OPTIONAL DETAILS SEE "ALTERNATE CONSTRUCTION JOINT" SHEET.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

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STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

NORTH ABUTMENT

SHEET 10 OF 43

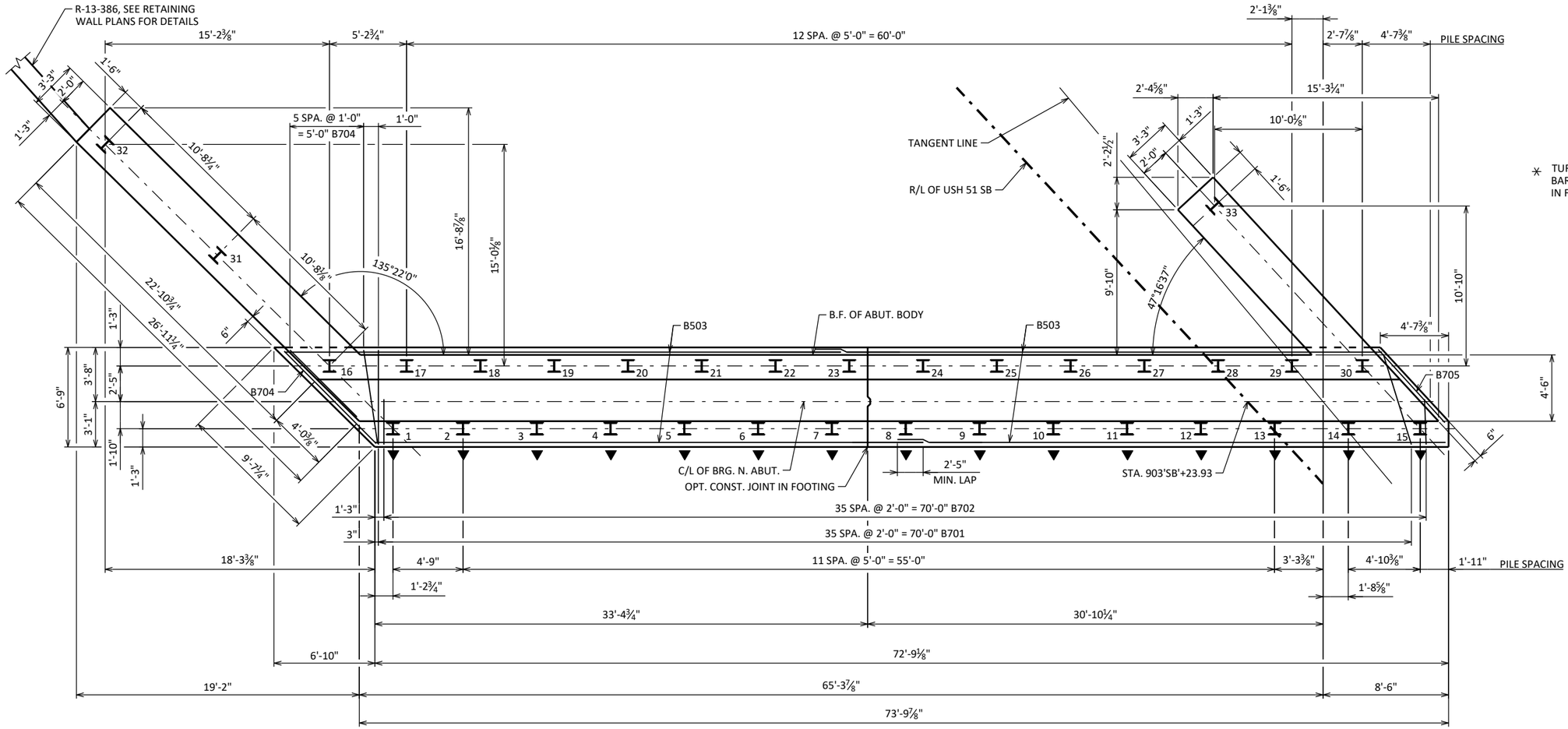
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STATE PROJECT NUMBER

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✳ TURN B701, B702 AND B704 BARS AS NECESSARY TO FIT IN FOOTING CORNERS.

FOOTING LAYOUT

Ⓐ13 INDICATES PILE BATTERED 3" PER FT. IN DIRECTION OF ARROW. ▼

NO.	DATE	REVISION	BY

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STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

NORTH ABUTMENT FOOTING LAYOUT

SHEET 11 OF 43

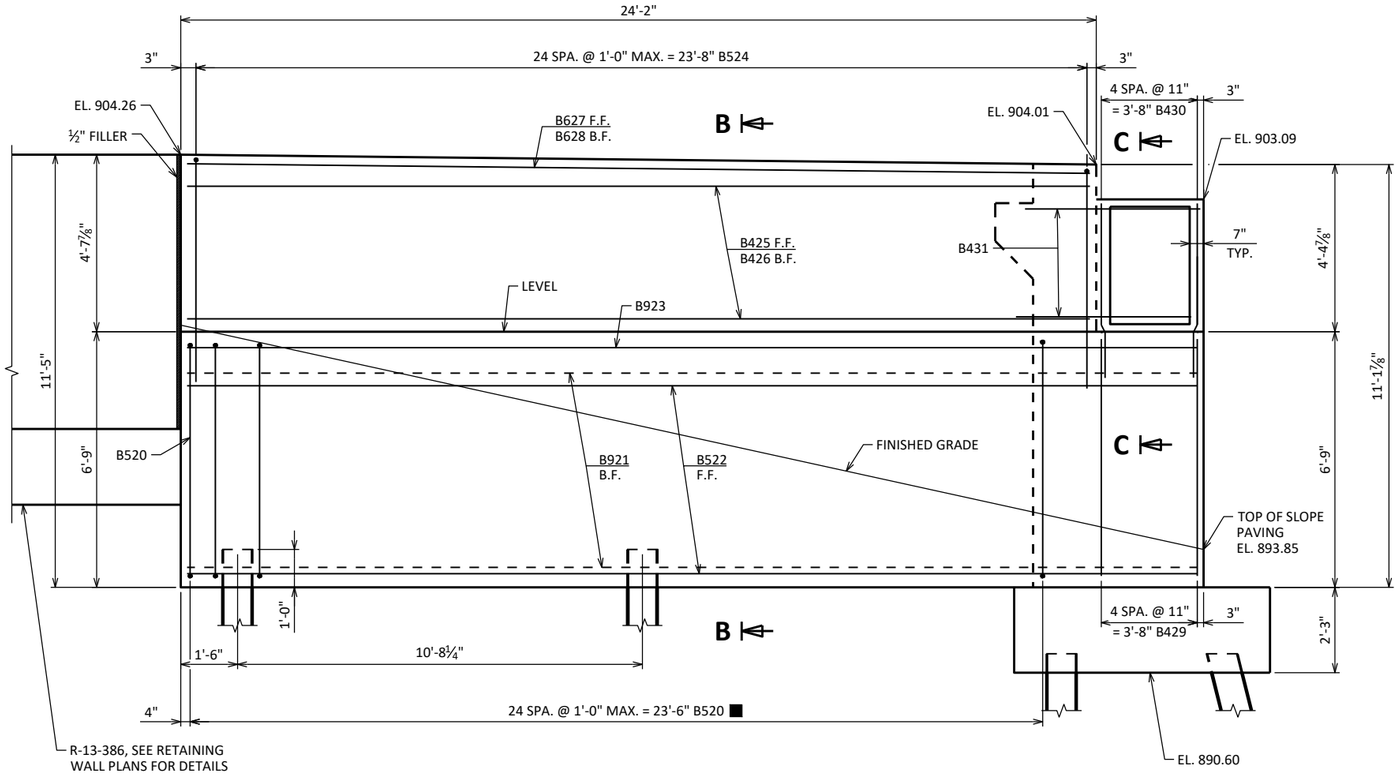
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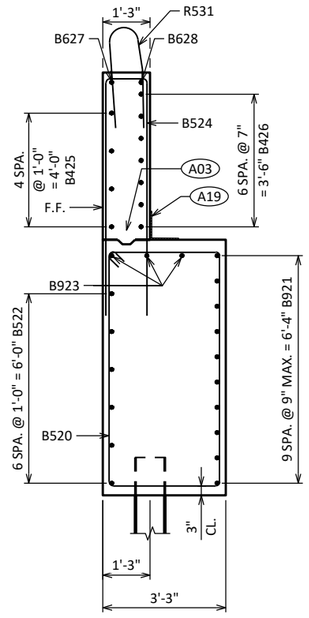
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STATE PROJECT NUMBER

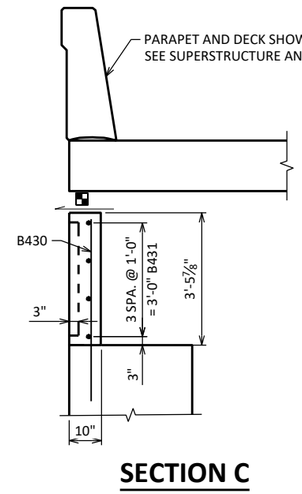
5845-16-77



ELEVATION WING 3



SECTION B



SECTION C

■ SLOPE TO DRAIN.

■ DISPLACE BARS AT PILE.

PARAPET ON WINGWALL 3 NOT SHOWN. FOR DETAILS SEE SHEET 41.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

WING 3

SHEET 12 OF 43

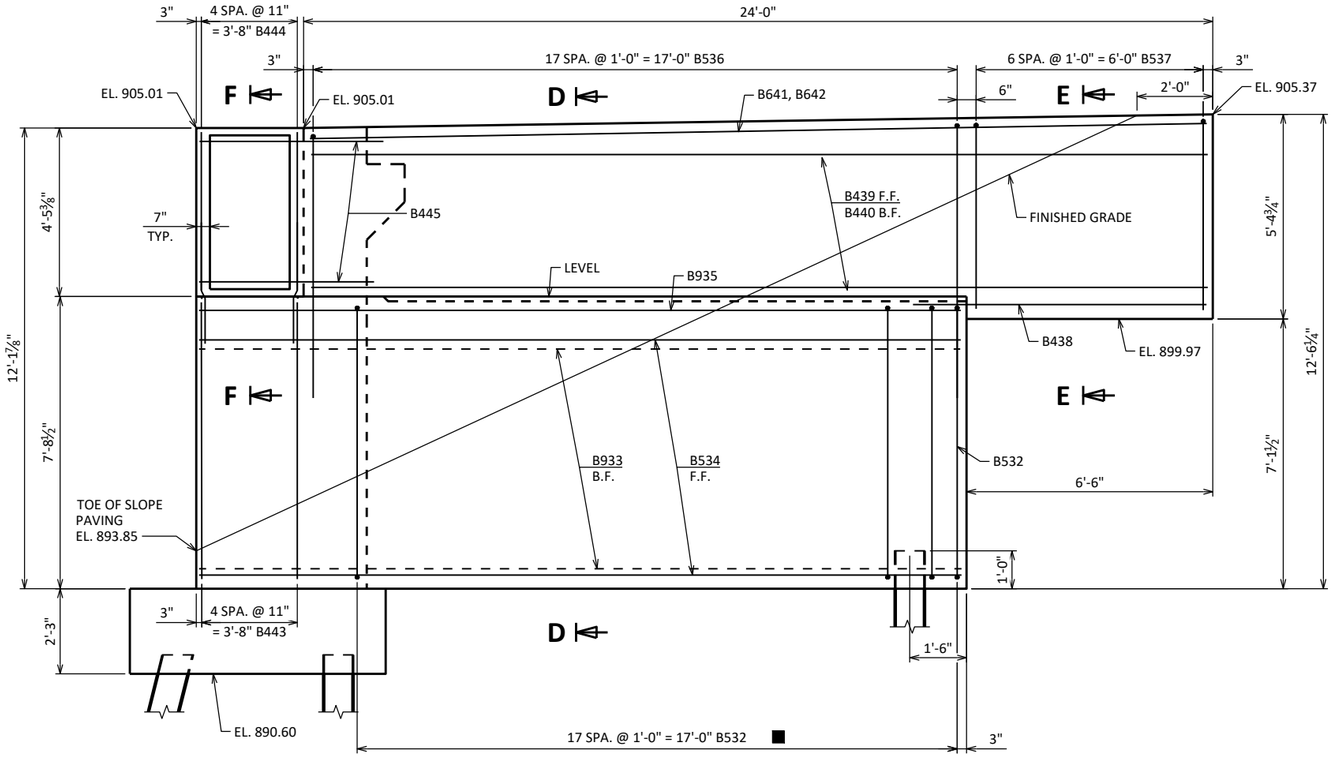
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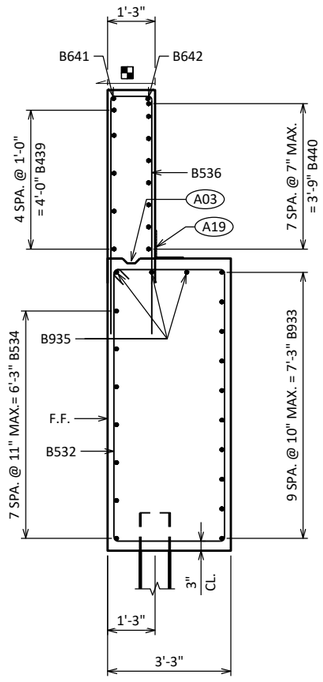
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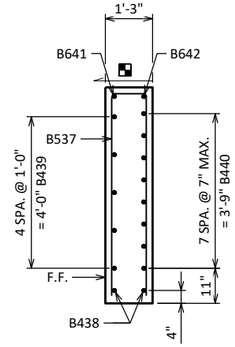
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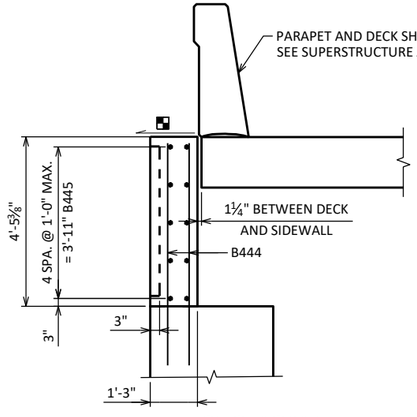
ELEVATION WING 4



SECTION D



SECTION E



SECTION F

■ SLOPE TO DRAIN.

■ DISPLACE BARS AT PILE.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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STRUCTURE B-13-899

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WING 4

SHEET 13 OF 43

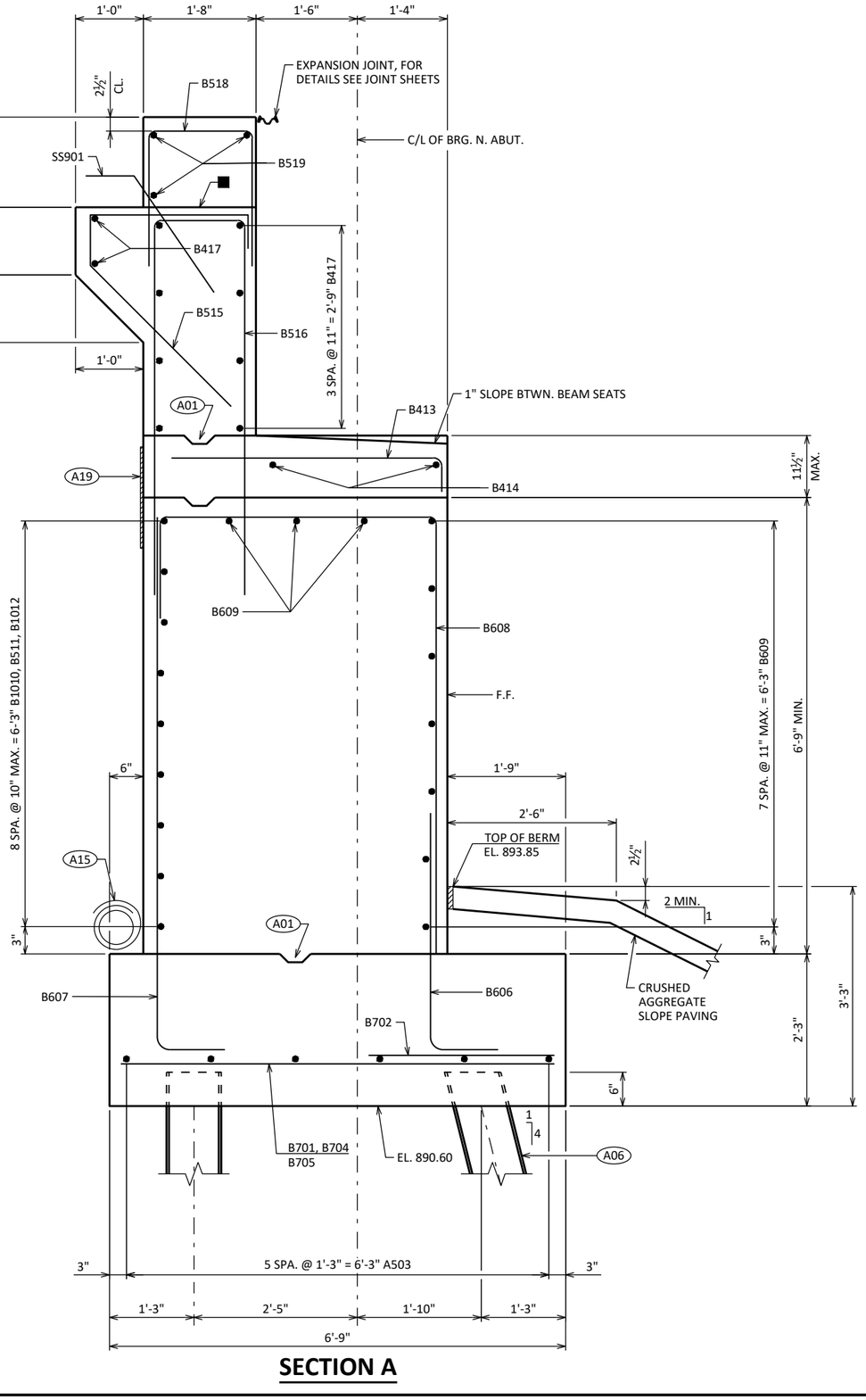
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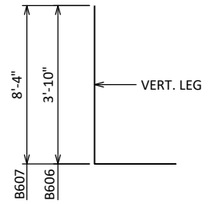
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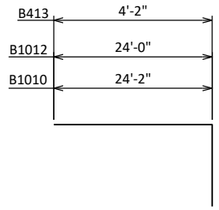
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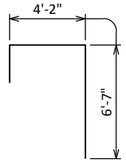
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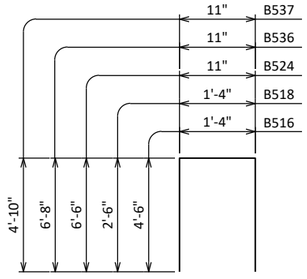
SECTION A

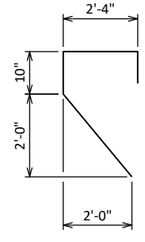




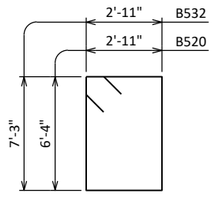


B608





B513



BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B701		36	6'-5"			FOOTING TRANS.
B702		36	3'-1"			FOOTING TRANS.
B503		12	38'-6"			FOOTING LONG.
B704		6	9'-1"			FOOTING TRANS. @ WING 3
B705		1	6'-4"			FOOTING TRANS. @ WING 4
B606		74	4'-8"	X		FOOTING DOWELS F.F.
B607		74	9'-2"	X		FOOTING DOWELS B.F.
B608		74	11'-11"	X		BODY VERT.
B609		22	38'-1"			BODY HORIZ.
B1010		9	25'-8"	X		BODY HORIZ. B.F.
B511		9	29'-10"			BODY HORIZ. B.F.
B1012		9	25'-6"	X		BODY HORIZ. B.F.
B413		65	6'-1"	X		BODY HORIZ. TOP
B414		2	48'-6"			BODY HORIZ. TOP
B515	X	70	6'-6"	X		BACKWALL VERT. NOTCH
B516	X	74	10'-1"	X		BACKWALL VERT.
B417	X	20	37'-8"			BACKWALL HORIZ.
B518	X	74	6'-1"	X		PAVING BLOCK VERT.
B519	X	30	8'-0"			PAVING BLOCK HORIZ.
B520	X	25	19'-2"	X		WING 3 VERT.
B921	X	10	27'-5"			WING 3 HORIZ. B.F.
B522	X	7	26'-6"			WING 3 HORIZ. F.F.
B823	X	3	26'-6"			WING 3 HORIZ. TOP
B524	X	25	13'-8"	X		WING 3 VERT.
B425	X	5	22'-5"			WING 3 HORIZ. F.F.
B426	X	7	23'-7"			WING 3 HORIZ. B.F.
B627	X	1	22'-5"			WING 3 HORIZ. F.F. TOP
B628	X	1	23'-7"			WING 3 HORIZ. B.F. TOP
B429		5	6'-4"			ABUT. END @ WING 3
B430	X	4	4'-7"			SIDEWALL VERT. @ WING 3
B431	X	4	5'-1"			SIDEWALL HORIZ. @ WING 3
B532	X	18	21'-0"	X		WING 4 VERT.
B933	X	10	18'-3"			WING 4 HORIZ. B.F.
B534	X	8	22'-3"			WING 4 HORIZ. F.F.
B935	X	3	21'-8"		X	WING 4 HORIZ. TOP
B536	X	18	14'-0"	X		WING 4 VERT.
B537	X	7	10'-4"	X		WING 4 VERT. END
B438	X	2	7'-9"			WING 4 HORIZ. E.F.
B439	X	5	24'-7"			WING 4 HORIZ. F.F.
B440	X	8	23'-7"			WING 4 HORIZ. B.F.
B641	X	1	24'-7"			WING 4 HORIZ. F.F. TOP
B642	X	1	23'-7"			WING 4 HORIZ. B.F. TOP
B443		5	7'-3"			ABUT. END @ WING 4
B444	X	10	5'-6"			SIDEWALL VERT. @ WING 4
B445	X	10	5'-3"			SIDEWALL HORIZ. @ WING 4

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
B935	1 SERIES OF 3	19'-11" TO 22'-3"

FOR LOCATION OF SECTION A SEE SHEET 10.

■ CONST. JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE.

(A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 40'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

NORTH ABUTMENT DETAILS AND BILL OF BARS

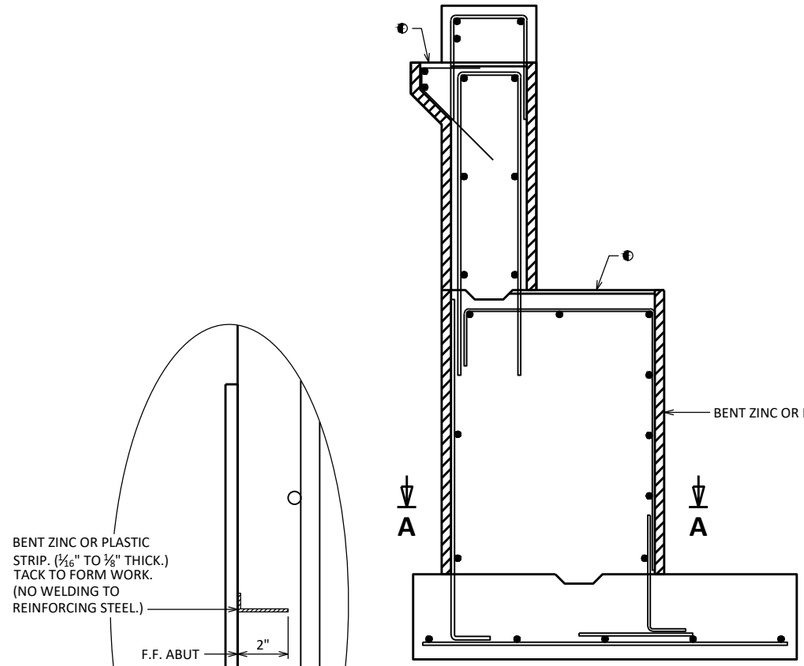
SHEET 14 OF 43

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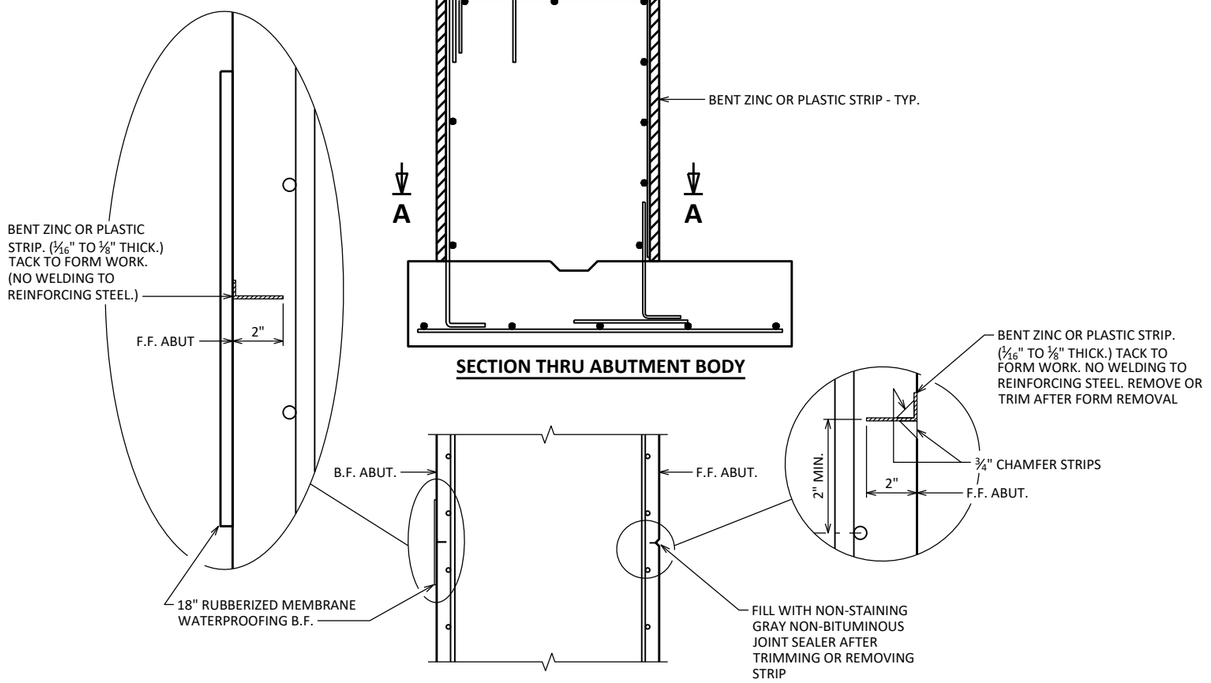
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STATE PROJECT NUMBER

5845-16-77



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATIVE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◐ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY ½" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-899

DRAWN BY	ZSS	PLANS CK'D	JLB

ALTERNATE CONSTRUCTION JOINT

SHEET 15 OF 43

557

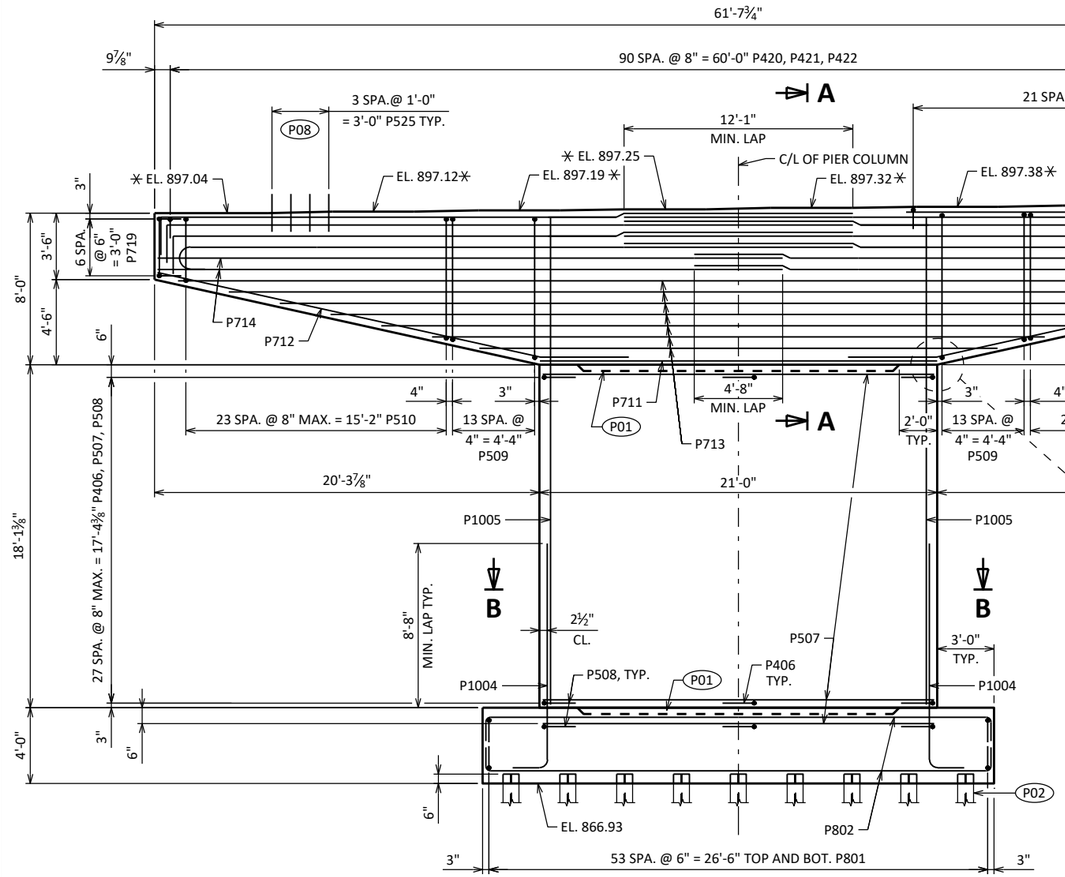
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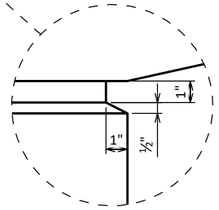
STATE PROJECT NUMBER

5845-16-77



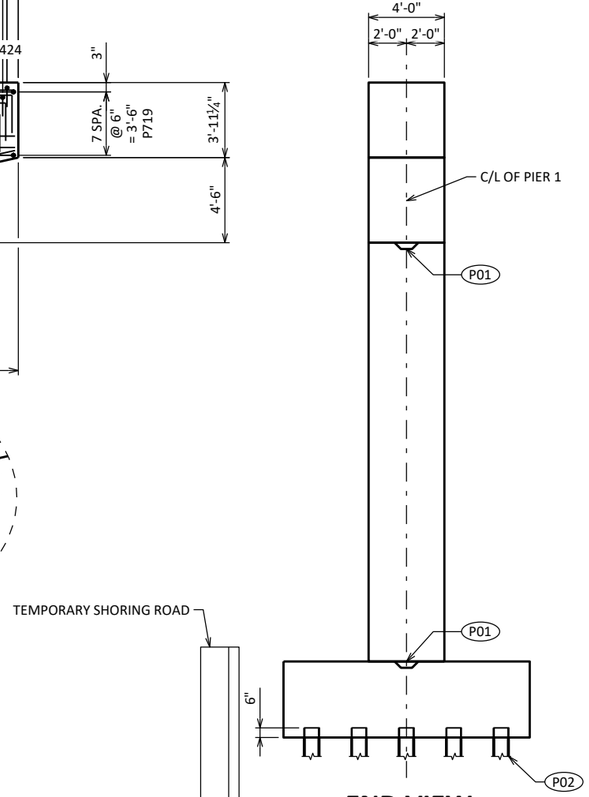
ELEVATION

LOOKING NORTH



CONST. JT. DETAIL

✳ ELEVATIONS TAKEN @ C/L OF PIER



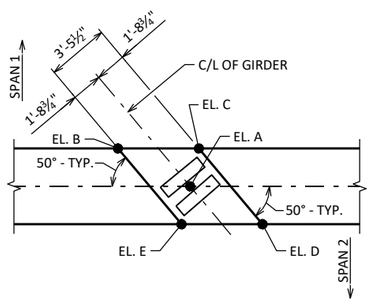
END VIEW

LOOKING WEST

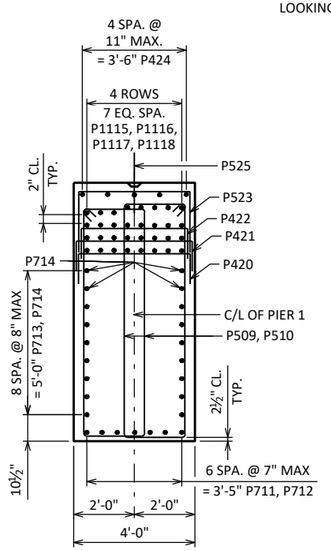
BEAM SEAT ELEVATIONS FOR PIER 1

Girder	Point A	Point B	Point C	Point D	Point E
1	897.04	896.94 ☆	897.01	897.13	897.06 ☆
2	897.12	897.02	897.09	897.21	897.14
3	897.19	897.09	897.16	897.28	897.21
4	897.25	897.15	897.22	897.35	897.27
5	897.32	897.22	897.29	897.42	897.34
6	897.38	897.28	897.35	897.48	897.41
7	897.44	897.35	897.41	897.55	897.47
8	897.48	897.39	897.46 ☆	897.60 ☆	897.51

☆ ELEVATIONS AT CORNER OF PIER



SLOPING BEAM SEAT DETAIL



SECTION A

NOTES:

SEE SHEET 17 FOR SECTION B.

(P01) KEYED CONSTRUCTION JOINT BEVELED KEYWAY 4" DEEP X 16" WIDE.

(P02) SUPPORT PIER ON HP 10 x 42 STEEL PILING, ESTIMATED 35'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(P08) BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

PIER 1

SHEET 16 OF 43

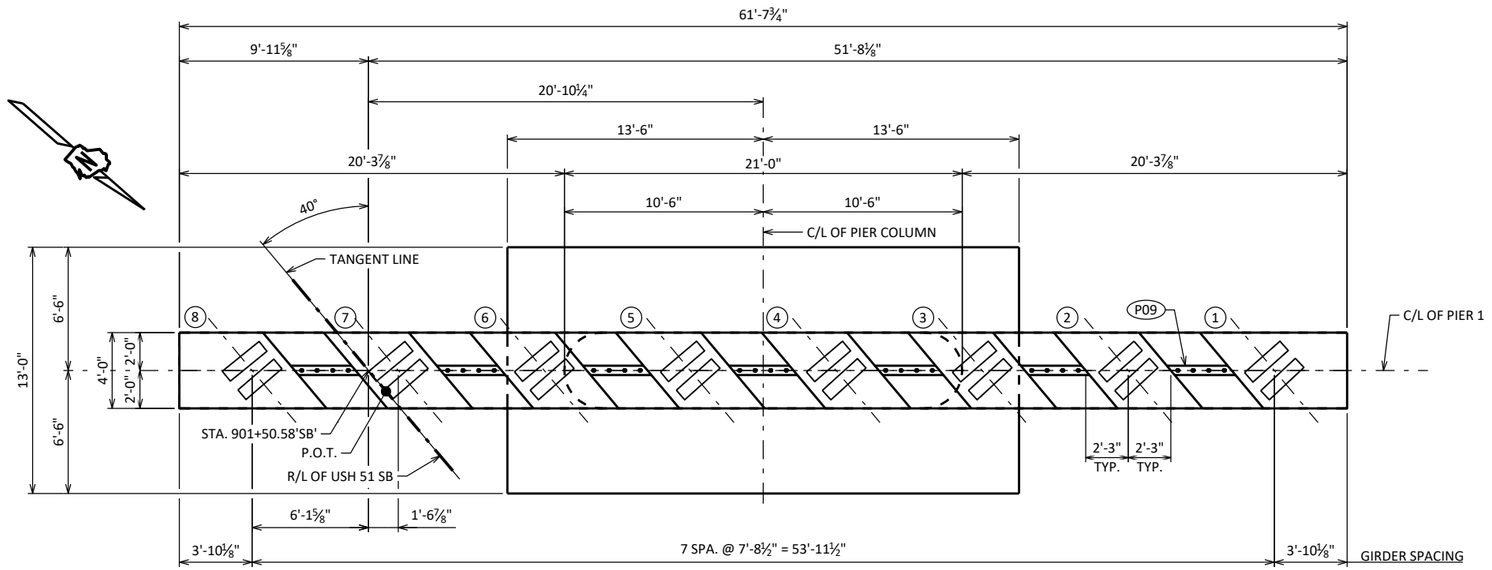
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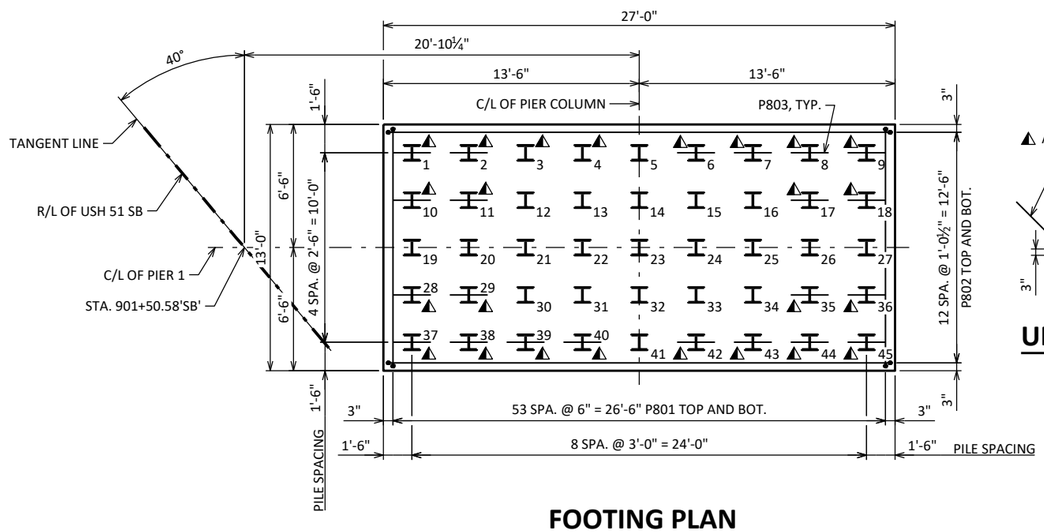
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STATE PROJECT NUMBER

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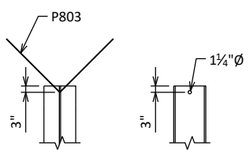


PLAN

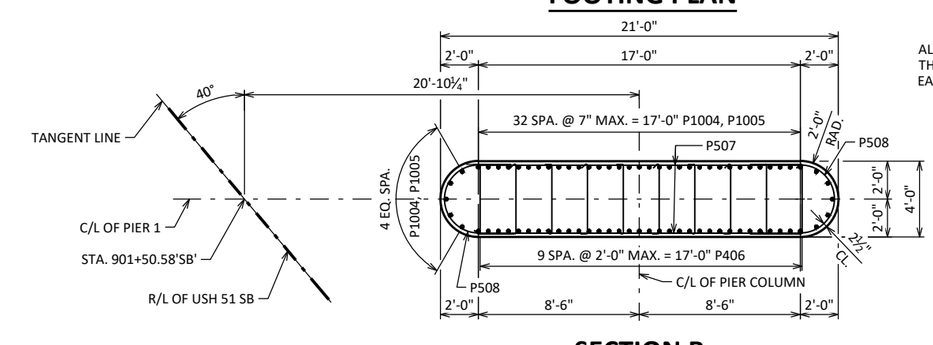


FOOTING PLAN

ATTACH UPLIFT BAR TO PILE



UPLIFT BAR DETAILS



SECTION B

ALTERNATE THE POSITION OF THE 90° AND 180°HOOKS AT EACH VERTICAL LAYER OF TIES.

BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

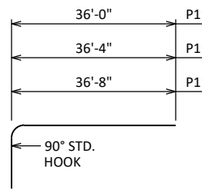
BAR MARK	NO. REQ'D.	LENGTH
P509	4 SERIES OF 14	18'-6" TO 20'-4"
P510	4 SERIES OF 24	11'-8" TO 18'-4"
P713	2 SERIES OF 7	27'-6" TO 60'-0"

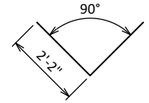
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

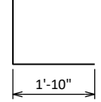
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P801		108	14'-10"	X		FOOTING TOP & BOT.
P802		26	28'-10"	X		FOOTING TOP & BOT.
P803		24	4'-2"	X		UPLIFT BAR @ PILES
P1004	X	76	13'-7"	X		FOOTING DOWEL
P1005	X	76	25'-9"			COLUMN VERT.
P406	X	290	4'-6"	X		COLUMN TIES
P507	X	58	16'-10"			COLUMN HORIZ.
P508	X	58	10'-3"	X		COLUMN HORIZ.
P509	X	56	19'-5"	X	X	CAP STIRRUPS VERT.
P510	X	96	15'-0"	X	X	CAP STIRRUPS VERT.
P711	X	7	20'-7"			CAP BOT.
P712	X	14	25'-4"	X		CAP BOT.
P713	X	14	43'-9"		X	CAP HORIZ.
P714	X	8	33'-0"			CAP HORIZ.
P1115	X	16	37'-3"	X		CAP TOP HORIZ.
P1116	X	16	37'-8"	X		CAP TOP HORIZ.
P1117	X	16	38'-0"	X		CAP TOP HORIZ.
P1118	X	16	38'-4"	X		CAP TOP HORIZ.
P719	X	15	8'-5"	X		CAP ENDS
P420	X	91	5'-5"	X		CAP TOP VERT.
P421	X	91	5'-5"	X		CAP TOP VERT.
P422	X	91	5'-5"	X		CAP TOP VERT.
P523	X	22	7'-4"	X		CAP TOP VERT.
P424	X	5	21'-8"			CAP TOP HORIZ.
P525	X	28	2'-0"			CAP DOWELS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

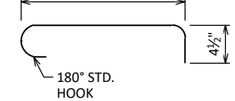




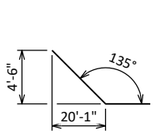
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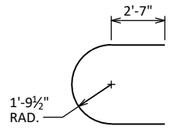
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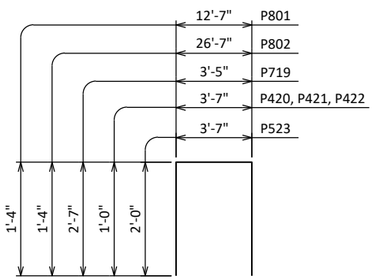
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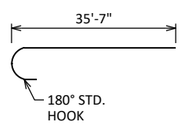


P712

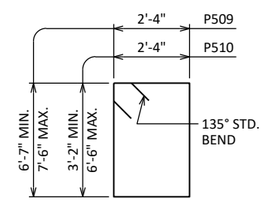


P508





P1115



P509, P510

P09 KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

PIER 1 DETAILS

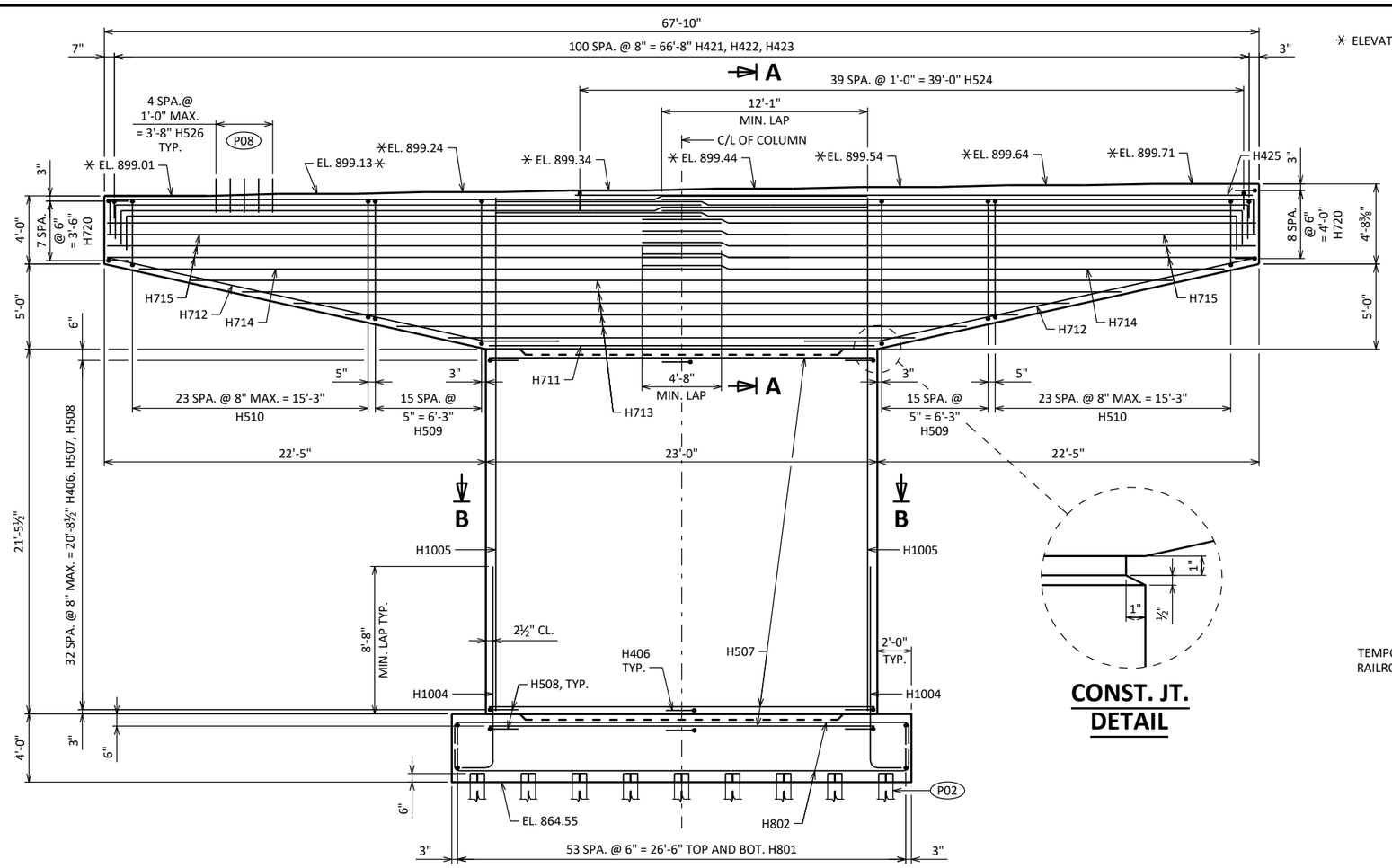
SHEET 17 OF 43

559

8

8

STATE PROJECT NUMBER
5845-16-77

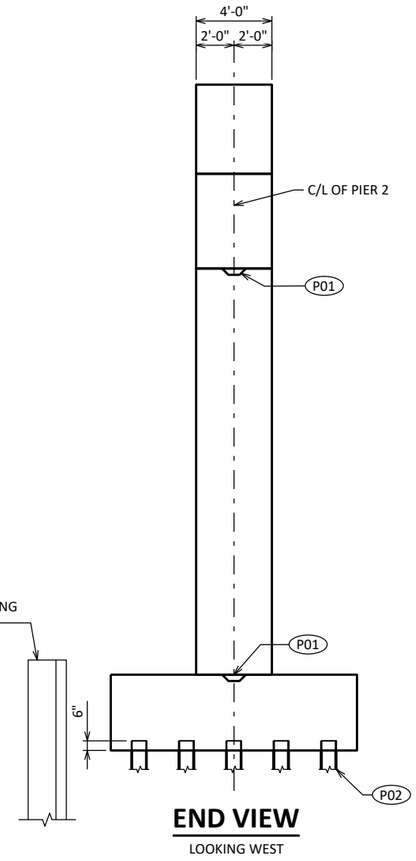


ELEVATION

LOOKING NORTH

CONST. JT. DETAIL

✳ ELEVATIONS TAKEN @ C/L OF PIER



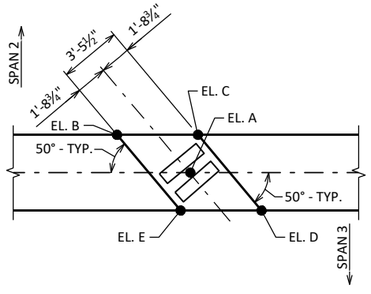
END VIEW

LOOKING WEST

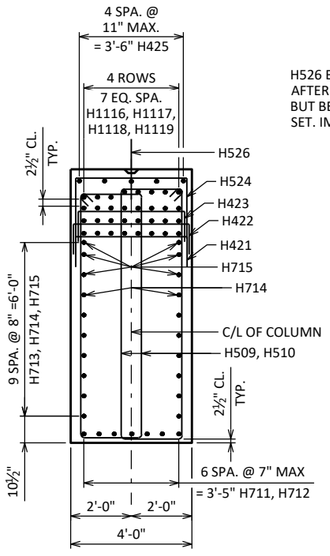
BEAM SEAT ELEVATIONS FOR PIER 2

Girder	Point A	Point B	Point C	Point D	Point E
1	899.01	898.95 ☆	898.99	899.07	899.03 ☆
2	899.13	899.06	899.11	899.18	899.15
3	899.24	899.17	899.22	899.30	899.25
4	899.34	899.27	899.32	899.40	899.35
5	899.44	899.37	899.42	899.50	899.46
6	899.54	899.46	899.52	899.60	899.55
7	899.64	899.56	899.62	899.70	899.65
8	899.71	899.64	899.69 ☆	899.79 ☆	899.73

☆ ELEVATIONS AT CORNER OF PIER



SLOPING BEAM SEAT DETAIL



SECTION A

H526 BARS MAY BE PLACED AFTER PIER CAP IS POURED BUT BEFORE CONCRETE HAS SET. IMBED 1'-0".

NOTES:

SEE SHEET 19 FOR SECTION B.

(P01) KEYED CONSTRUCTION JOINT BEVELED KEYWAY 4" DEEP X 16" WIDE

(P02) SUPPORT PIER ON HP 10 x 42 STEEL PILING, ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.

(P08) BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

PIER 2

SHEET 18 OF 43

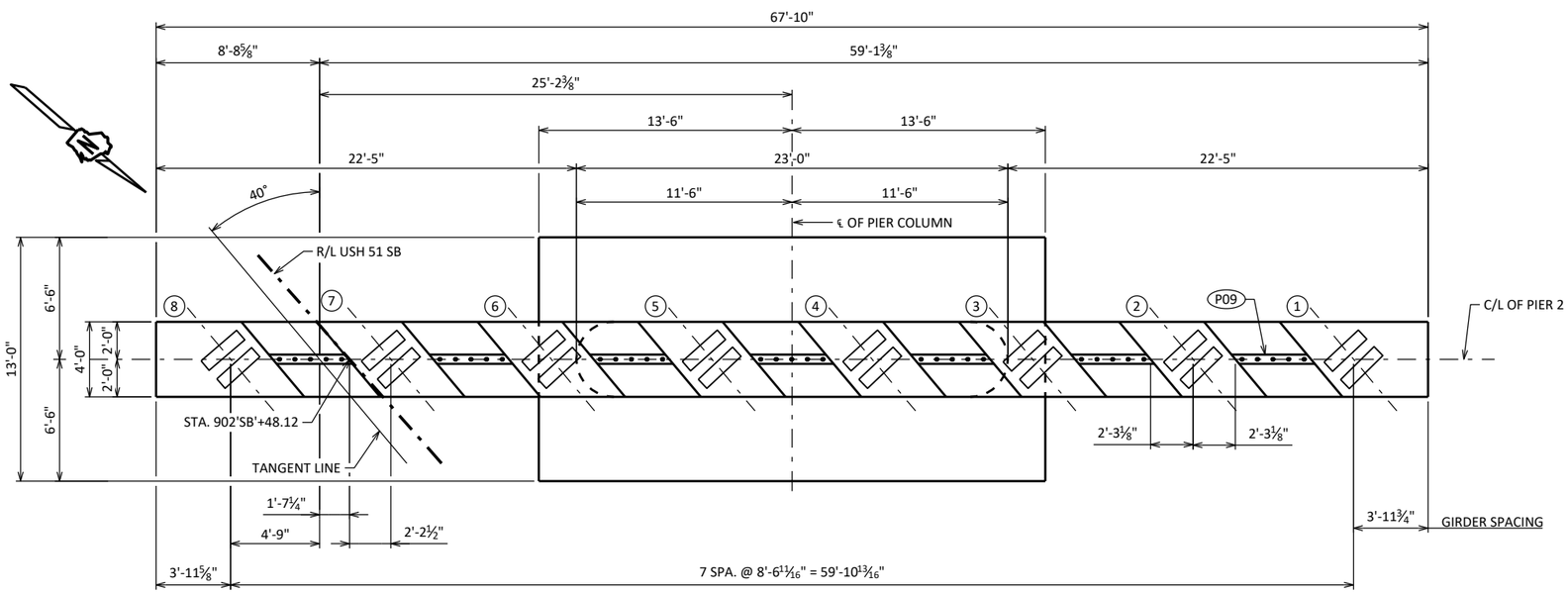
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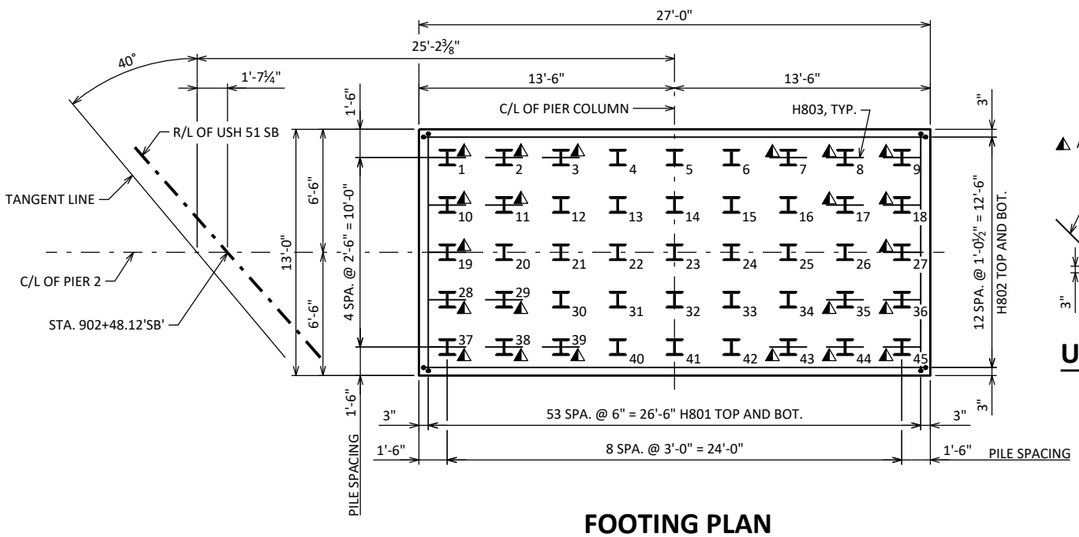
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STATE PROJECT NUMBER

5845-16-77

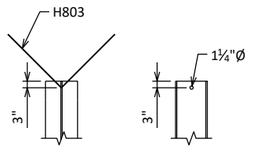


PLAN



FOOTING PLAN

▲ ATTACH UPLIFT BAR TO PILE



UPLIFT BAR DETAILS

SECTION B

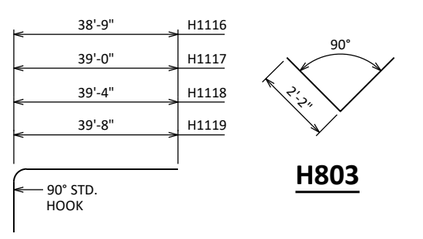
ALTERNATE THE POSITION OF THE 90° AND 180°HOOKS AT EACH VERTICAL LAYER OF TIES.

BILL OF BARS

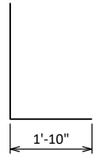
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
H801		108	14'-10"	X		FOOTING TOP & BOT.
H802		26	28'-10"	X		FOOTING TOP & BOT.
H803		22	4'-2"	X		UPLIFT BAR @ PILES
H1004	X	88	13'-7"	X		FOOTING DOWEL
H1005	X	88	30'-2"			COLUMN VERT.
H406	X	374	4'-6"	X		COLUMN TIES
H507	X	68	18'-10"			COLUMN HORIZ.
H508	X	68	10'-3"	X		COLUMN HORIZ.
H509	X	64	20'-11"	X	X	CAP STIRRUPS VERT.
H510	X	96	15'-11"	X	X	CAP STIRRUPS VERT.
H711	X	7	22'-7"			CAP BOT.
H712	X	14	27'-4"	X		CAP BOT.
H713	X	12	44'-3"		X	CAP HORIZ.
H714	X	4	35'-3"			CAP HORIZ.
H715	X	12	36'-1"			CAP HORIZ.
H1116	X	16	40'-5"	X		CAP TOP HORIZ.
H1117	X	16	40'-8"	X		CAP TOP HORIZ.
H1118	X	16	41'-0"	X		CAP TOP HORIZ.
H1119	X	16	41'-4"	X		CAP TOP HORIZ.
H720	X	17	8'-5"	X		CAP ENDS
H421	X	101	5'-5"	X		CAP TOP VERT.
H422	X	101	5'-5"	X		CAP TOP VERT.
H423	X	101	5'-5"	X		CAP TOP VERT.
H524	X	40	7'-10"	X		CAP TOP VERT.
H425	X	5	39'-8"			CAP TOP HORIZ.
H526	X	35	2'-0"			CAP DOWELS

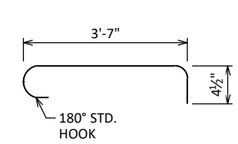
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



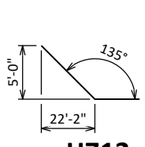
H803



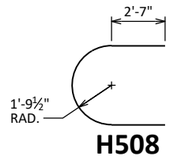
H1004



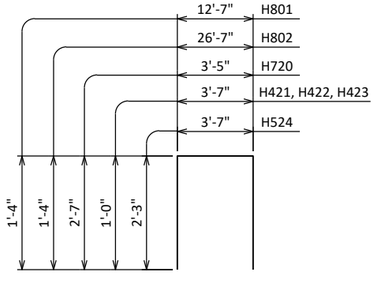
H406

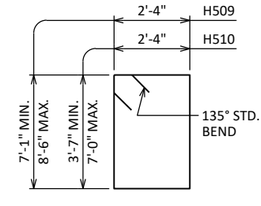


H712



H508





H509, H510

BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
H509	4 SERIES OF 16	19'-6" TO 22'-4"
H510	4 SERIES OF 24	12'-6" TO 19'-4"
H713	2 SERIES OF 6	29'-3" TO 59'-3"

P09 KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6 BETWEEN BEAM SEATS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

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PIER 2 DETAILS

SHEET 19 OF 43

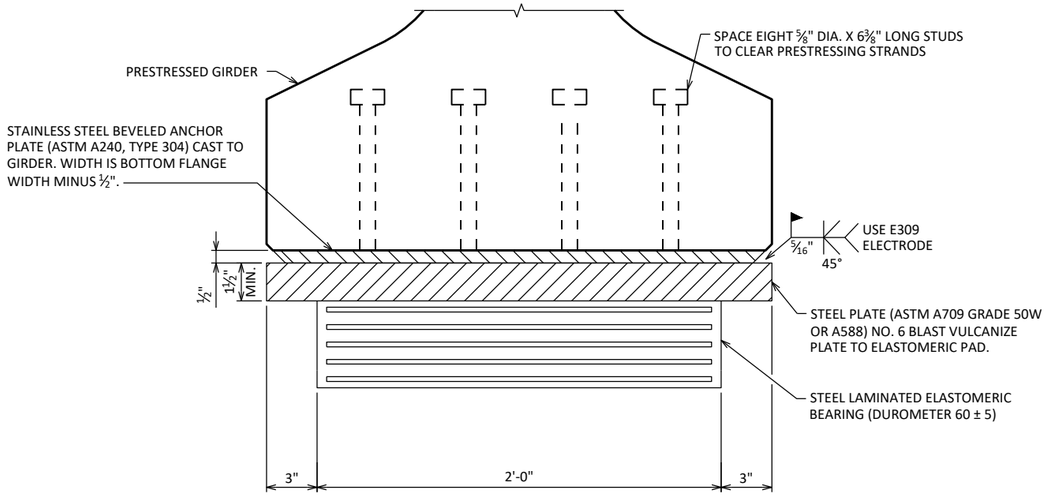
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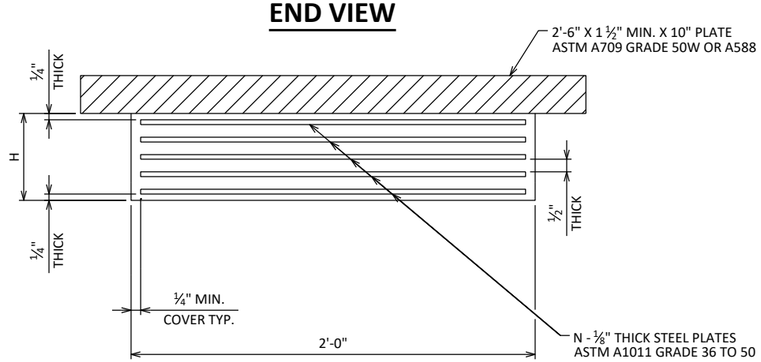
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STATE PROJECT NUMBER

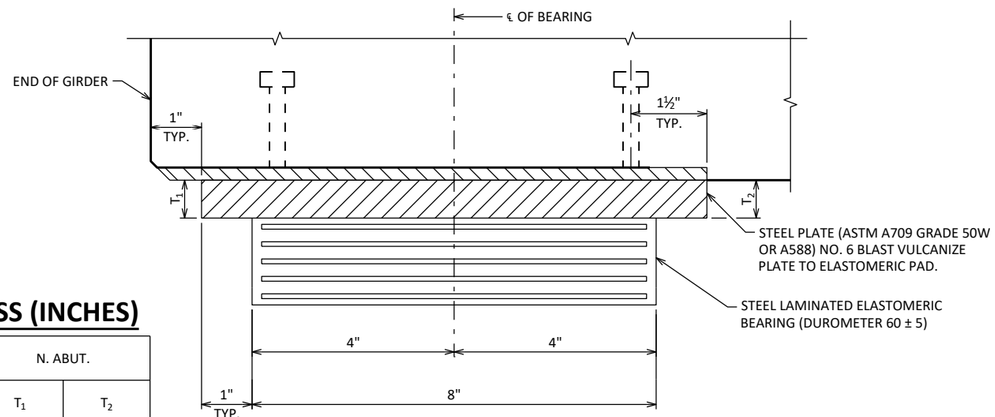
5845-16-77



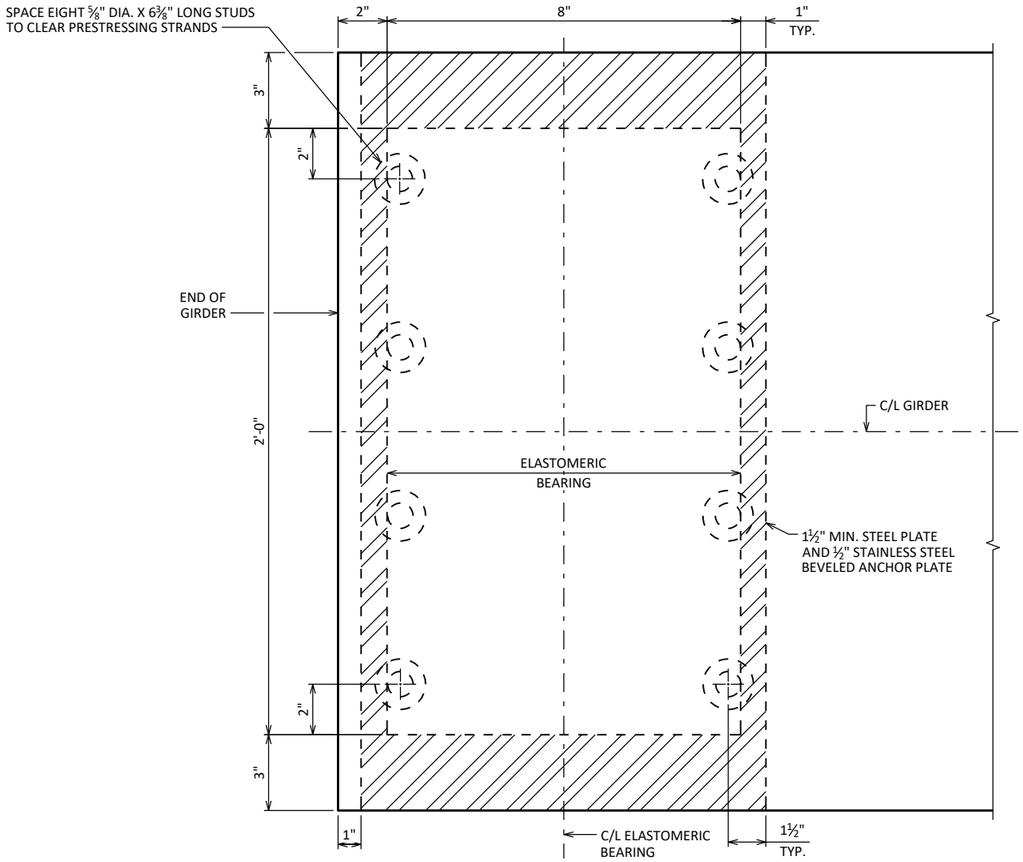
END VIEW



SECTION THRU ELASTOMERIC BEARING



SIDE VIEW



PLAN VIEW

TOTAL PLATE THICKNESS (INCHES)

GIRDER	S. ABUT.		N. ABUT.	
	T_1	T_2	T_1	T_2
GIRDER 1	1.50	1.81	1.63	1.50
GIRDER 2	1.50	1.82	1.63	1.50
GIRDER 3	1.50	1.82	1.63	1.50
GIRDER 4	1.50	1.82	1.64	1.50
GIRDER 5	1.50	1.83	1.65	1.50
GIRDER 6	1.50	1.84	1.65	1.50
GIRDER 7	1.50	1.85	1.66	1.50
GIRDER 8	1.50	1.85	1.65	1.50

ELASTOMERIC LAMINATED BEARING PAD TABLE

LOCATION	N	H
S. ABUT.	5	3⅛"
N. ABUT.	6	3¾"

NOTES

BEARINGS SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85° F.

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

BEARINGS DESIGNED PER METHOD A IN THE CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-899

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PRESTRESSED GIRDER BEARINGS

SHEET 20 OF 43
562

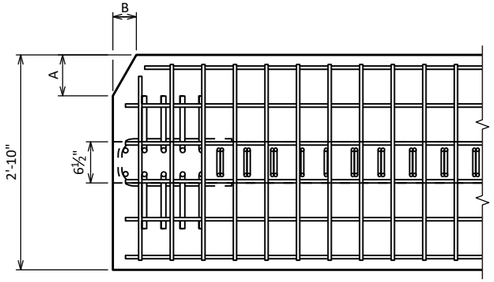
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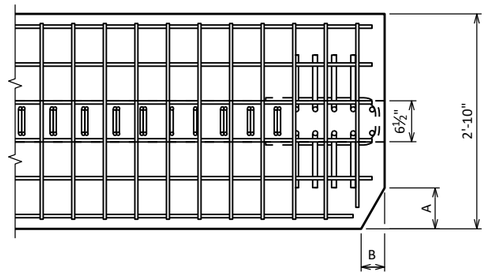
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STATE PROJECT NUMBER

5845-16-77



TOP FLANGE
(AT SOUTH ABUTMENT)



TOP FLANGE
(AT NORTH ABUTMENT)

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.4 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

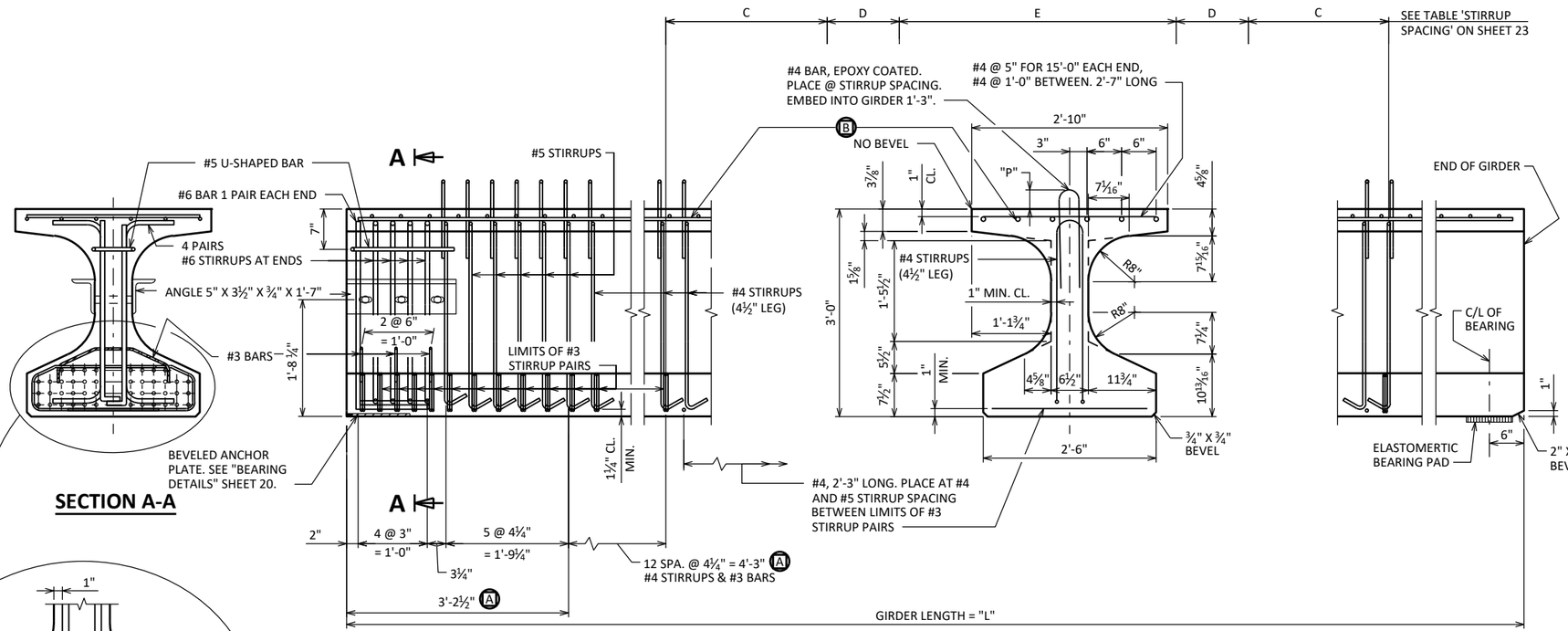
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DESIGN SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

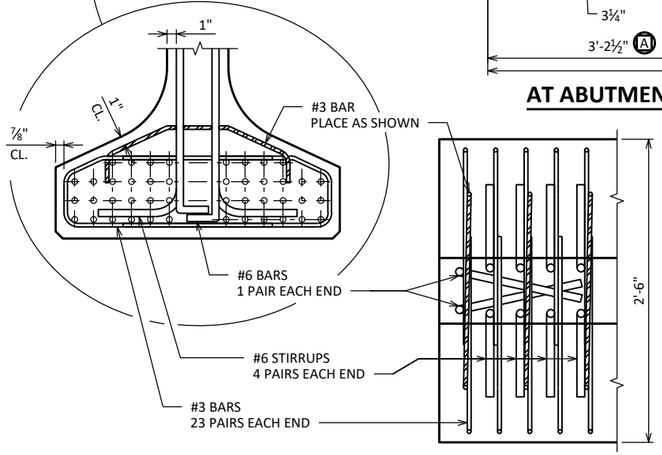
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



SECTION A-A

AT ABUTMENT ENDS

AT PIER ENDS



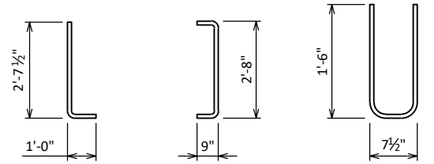
BOTTOM FLANGE

SIDE VIEW & TYPICAL SECTION IN SPAN

(A1) DETAIL TYP. AT EACH END

(B1) 6 #4 BARS, FULL LENGTH, MIN. LAP = 2'-4"

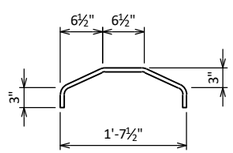
SEE SHEET 23 FOR "P", TIE BAR HEIGHT TABLE



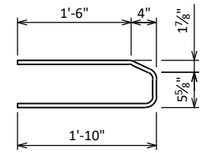
#6 BAR
2 @ EACH END

#6 BAR
8 @ EACH END

#5 BAR
1 @ EACH END



#3 BAR
3 @ EACH END
(EPOXY COATED)



#3 BAR
23 PAIRS EACH END
(EPOXY COATED)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

36W" PRESTRESSED GIRDER DETAILS

SHEET 21 OF 43
563

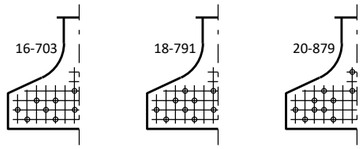
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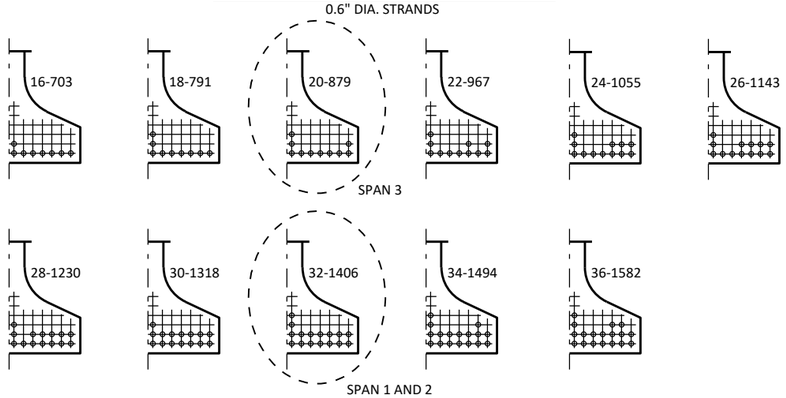
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STATE PROJECT NUMBER

5845-16-77

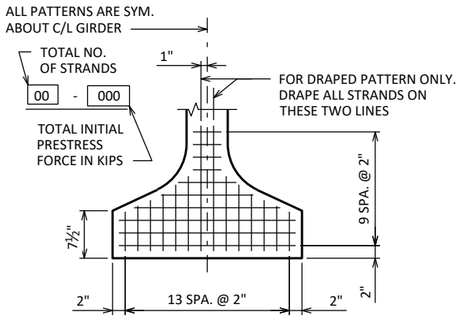


STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

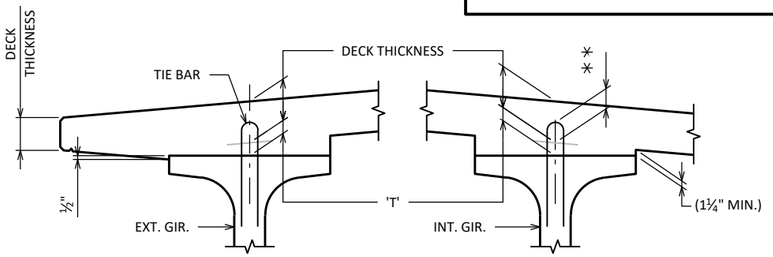


ARRANGEMENT AT C/L SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

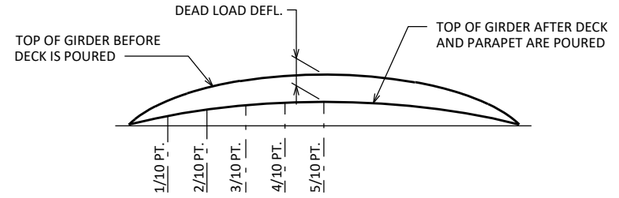
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

⁎⁎ IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

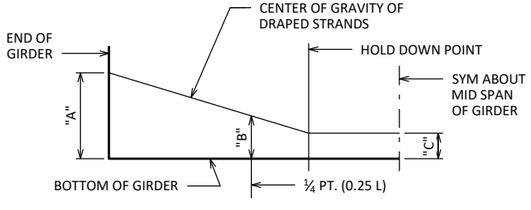
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C/L OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

	TOP OF DECK ELEV. AT FINAL GRADE
-	TOP OF GIRDER ELEVATION
+	DEAD LOAD DEFLECTION
-	DECK THICKNESS
=	HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

⁎ THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) ⁎
1	3.7
2	3.7
3	1.7

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

36W" PRESTRESSED GIRDER DETAILS

SHEET 22 OF 43

564

SCALE = 2.00

STATE PROJECT NUMBER

5845-16-77

⚹ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'_c (P.S.I.)	DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10			TOTAL NO. OF STRANDS	f'_{ci} (P.S.I.) ⚹	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f'_{ci} (P.S.I.) ⚹
1	1	99'-3 3/8"	0.7	1.4	2.0	2.3	2.4	2.3	2.0	1.4	0.7	8,000	0.6	32	6,400	31	11.5	14.5	5		
	2	98'-9 1/8"	0.7	1.4	1.9	2.2	2.3	2.2	1.9	1.4	0.7										
	3	98'-2 7/8"	0.7	1.3	1.9	2.2	2.3	2.2	1.9	1.3	0.7										
	4	97'-8 3/4"	0.7	1.3	1.8	2.1	2.3	2.1	1.8	1.3	0.7										
	5	97'-2 5/8"	0.7	1.3	1.8	2.1	2.2	2.1	1.8	1.3	0.7										
	6	96'-8 5/8"	0.7	1.3	1.8	2.1	2.2	2.1	1.8	1.3	0.7										
	7	96'-2 5/8"	0.7	1.4	1.7	2.0	2.1	2.0	1.7	1.4	0.7										
	8	95'-8 5/8"	0.6	1.2	1.7	2.0	2.1	2.0	1.7	1.2	0.6										
2	1	101'-1 3/8"	0.8	1.5	2.1	2.5	2.6	2.5	2.1	1.5	0.8	8,000	0.6	32	6,400	31	11.5	14.5	5		
	2	100'-6 3/8"	0.8	1.5	2.1	2.6	2.7	2.6	2.1	1.5	0.8										
	3	99'-11 1/2"	0.8	1.5	2.0	2.5	2.7	2.5	2.0	1.5	0.8										
	4	99'-4 3/4"	0.7	1.5	2.0	2.5	2.6	2.5	2.0	1.5	0.7										
	5	98'-9 7/8"	0.7	1.4	2.0	2.4	2.6	2.4	2.0	1.4	0.7										
	6	98'-3 3/8"	0.7	1.4	1.9	2.4	2.5	2.4	1.9	1.4	0.7										
	7	97'-8 1/2"	0.7	1.4	1.9	2.3	2.5	2.3	1.9	1.4	0.7										
	8	97'-1 7/8"	0.7	1.3	1.8	2.1	2.2	2.1	1.8	1.3	0.7										
3	1	79'-4 3/4"	0.5	1.0	1.4	1.6	1.7	1.6	1.4	1.0	0.5	8,000	0.6	20	6,400	32	11	14	4		
	2	78'-10 7/8"	0.5	1.0	1.4	1.7	1.8	1.7	1.4	1.0	0.5										
	3	78'-5 1/8"	0.5	1.0	1.4	1.6	1.7	1.6	1.4	1.0	0.5										
	4	77'-11 3/4"	0.5	1.0	1.4	1.6	1.7	1.6	1.4	1.0	0.5										
	5	77'-5 5/8"	0.5	1.0	1.3	1.6	1.7	1.6	1.3	1.0	0.5										
	6	77'-0"	0.5	0.9	1.3	1.6	1.6	1.6	1.3	0.9	0.5										
	7	76'-6 3/8"	0.5	0.9	1.3	1.5	1.6	1.5	1.3	0.9	0.5										
	8	76'-0 3/4"	0.4	0.8	1.1	1.3	1.3	1.3	1.1	0.8	0.4										

STIRRUP SPACING

SPAN	GIRDER NUMBER	C	D	E
1	1	30 SPA. @ 6" = 15'-0"	8 1/8"	53 SPA. @ 1'-0" = 53'-0"
	2		11"	52 SPA. @ 1'-0" = 52'-0"
	3		8"	52 SPA. @ 1'-0" = 52'-0"
	4		10 7/8"	51 SPA. @ 1'-0" = 51'-0"
	5		7 7/8"	51 SPA. @ 1'-0" = 51'-0"
	6		10 3/4"	50 SPA. @ 1'-0" = 50'-0"
	7		7 3/4"	50 SPA. @ 1'-0" = 50'-0"
	8		10 3/4"	49 SPA. @ 1'-0" = 49'-0"
2	1	30 SPA. @ 6" = 15'-0"	7 1/8"	55 SPA. @ 1'-0" = 55'-0"
	2		9 3/4"	54 SPA. @ 1'-0" = 54'-0"
	3		6 1/4"	54 SPA. @ 1'-0" = 54'-0"
	4		8 7/8"	53 SPA. @ 1'-0" = 53'-0"
	5		11 3/8"	52 SPA. @ 1'-0" = 52'-0"
	6		8"	52 SPA. @ 1'-0" = 52'-0"
	7		10 3/4"	51 SPA. @ 1'-0" = 51'-0"
	8		7 3/8"	51 SPA. @ 1'-0" = 51'-0"
3	1	16 SPA. @ 6" = 8'-0"	8 7/8"	47 SPA. @ 1'-0" = 47'-0"
	2		1'-0"	46 SPA. @ 1'-0" = 46'-0"
	3		9"	46 SPA. @ 1'-0" = 46'-0"
	4		6 1/4"	46 SPA. @ 1'-0" = 46'-0"
	5		9 3/8"	45 SPA. @ 1'-0" = 45'-0"
	6		6 1/2"	45 SPA. @ 1'-0" = 45'-0"
	7		9 5/8"	44 SPA. @ 1'-0" = 44'-0"
	8		6 7/8"	44 SPA. @ 1'-0" = 44'-0"

GIRDER FORM OUT DIMENSIONS

GIRDER	S. ABUT.		N. ABUT.	
	A	B	A	B
1	5 5/8"	5"	6"	5 7/8"
2	5 5/8"	5"	6"	5 3/4"
3	5 5/8"	4 7/8"	5 7/8"	5 5/8"
4	5 1/2"	4 3/4"	5 7/8"	5 5/8"
5	5 1/2"	4 5/8"	5 7/8"	5 1/2"
6	5 1/2"	4 5/8"	5 3/4"	5 3/8"
7	5 3/8"	4 1/2"	5 3/4"	5 1/4"
8	5 3/8"	4 3/8"	5 3/4"	5 1/8"

TIE BAR HEIGHT

SPAN	TIE BAR HEIGHT AT TENTH POINTS (INCHES)										
	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
1	8	7.75	7.75	7.5	7.5	7.25	7.5	7.5	7.75	7.75	8
2	7.5	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.5
3	7.5	7.75	7.75	8	8	8	8	8	7.75	7.75	7.5

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

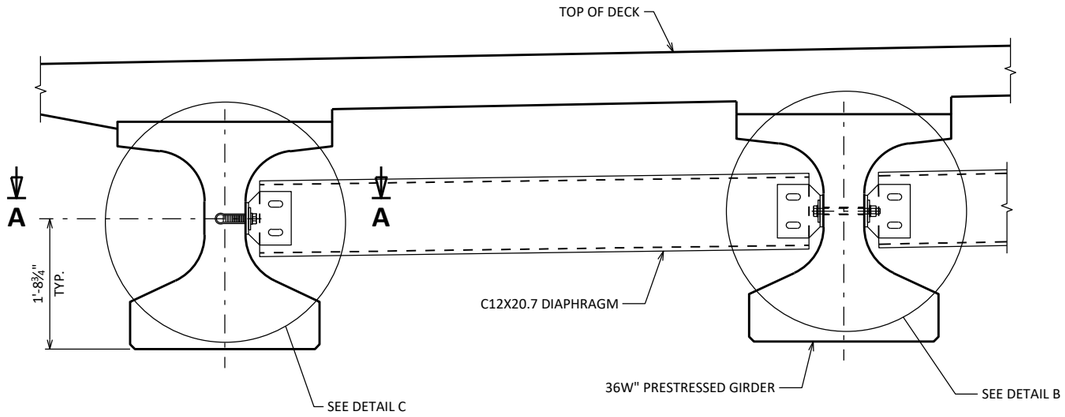
36W" PRESTRESSED GIRDER DETAILS

SHEET 23 OF 43

565

STATE PROJECT NUMBER

5845-16-77



EXTERIOR GIRDER **INTERIOR GIRDER**

NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-13-899, EACH.

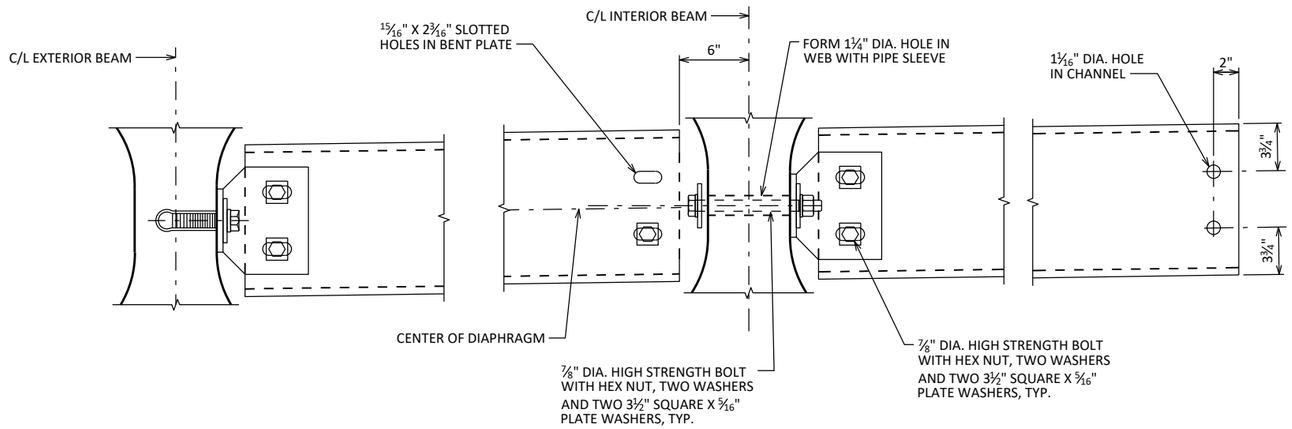
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

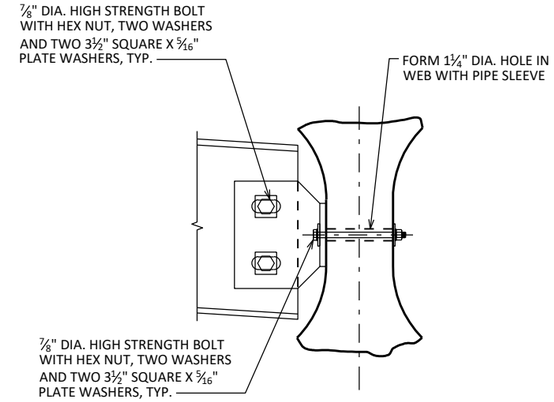
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

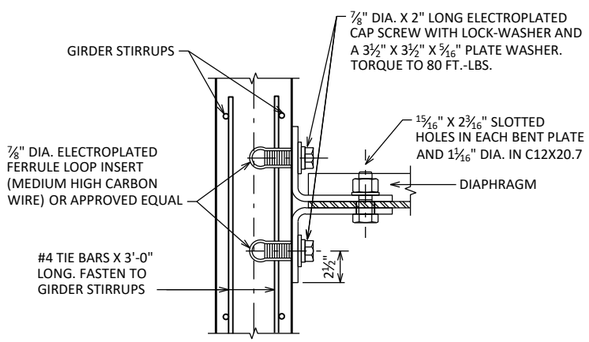
PART TRANSVERSE SECTION AT DIAPHRAGM





SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°

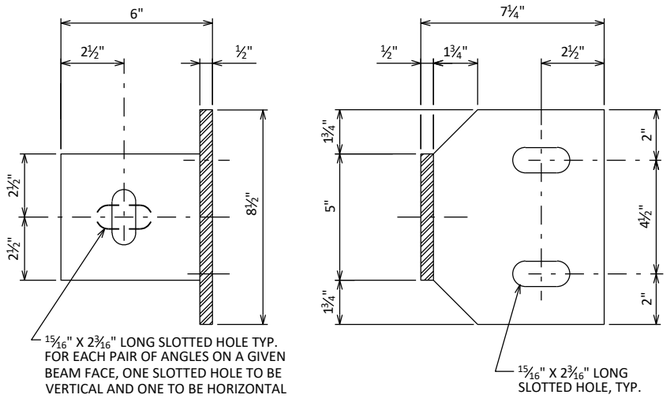
DETAIL C



SECTION A-A

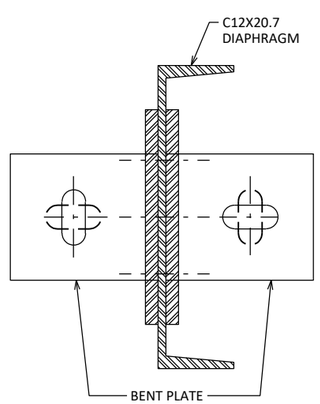
(FOR EXTERIOR ATTACHMENT)

DETAIL B



BEAM FACE

DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

STEEL DIAPHRAGM

SHEET 24 OF 43

566

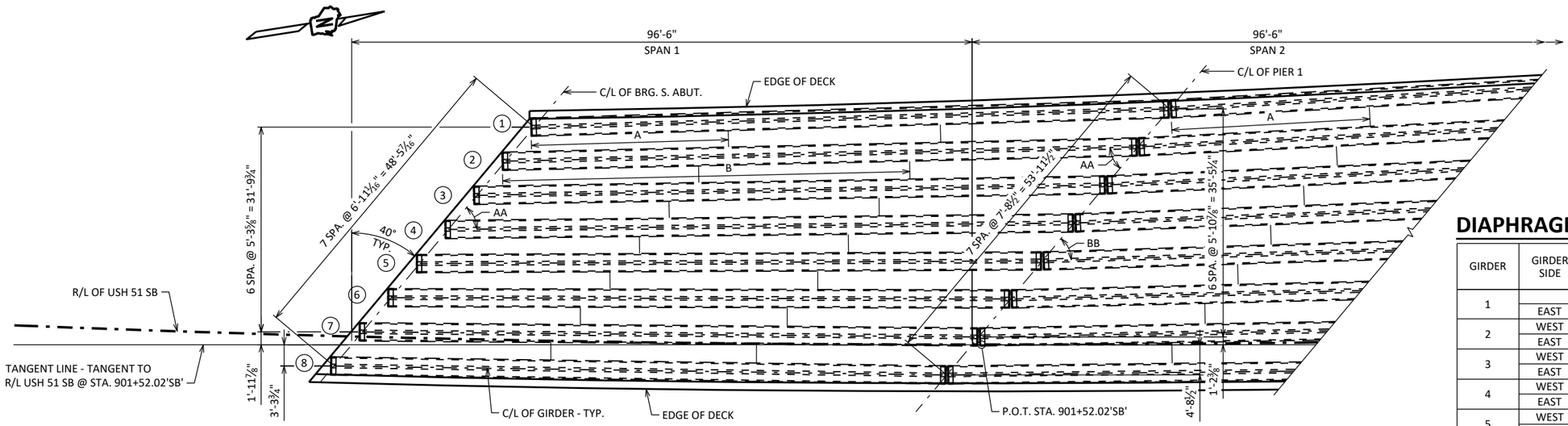
SCALE = 2.00

8

8

STATE PROJECT NUMBER

5845-16-77

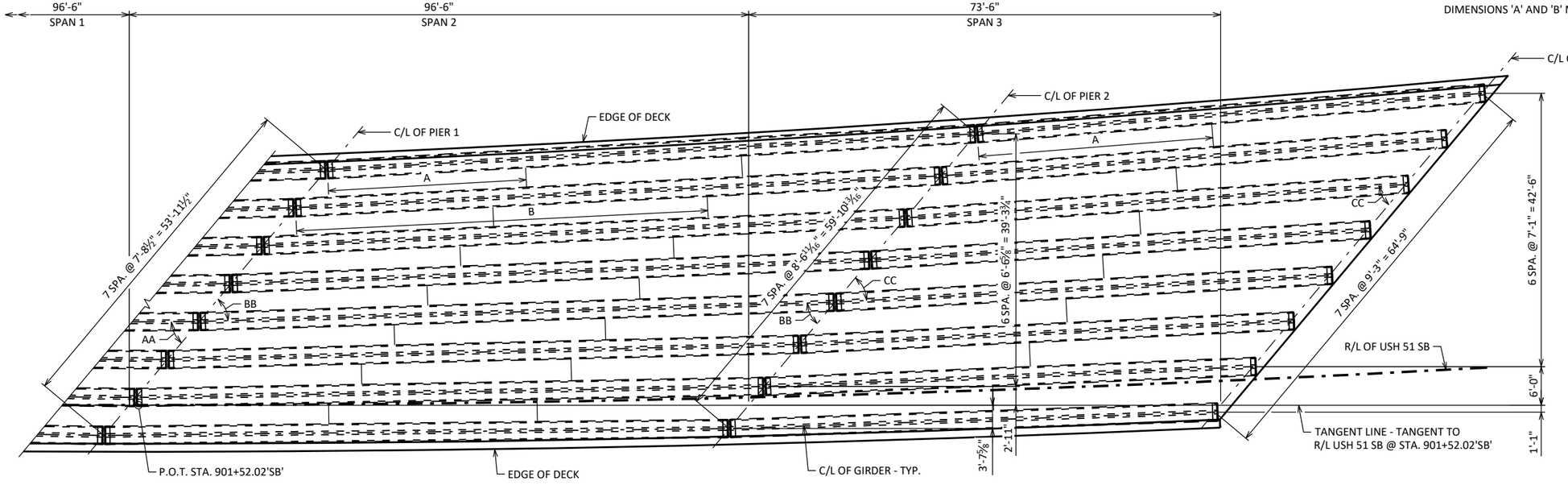


PARTIAL PLAN

DIAPHRAGM LOCATION

GIRDER	GIRDER SIDE	SPAN 1		SPAN 2		SPAN 3
		A	B	A	B	A
1						
	EAST	30'-8"	63'-8¼"	30'-10⅜"	64'-6½"	36'-5⅛"
2	WEST	35'-2⅞"	68'-3"	36'-1½"	69'-9⅜"	42'-6½"
	EAST	30'-6⅜"	63'-4½"	30'-8⅝"	64'-2"	36'-6"
3	WEST	35'-0⅞"	67'-10¾"	35'-11⅝"	69'-4½"	42'-5"
	EAST	30'-4⅝"	63'-0⅝"	30'-6¾"	63'-9¾"	36'-3⅛"
4	WEST	34'-10⅝"	67'-6⅝"	35'-8¾"	68'-11⅝"	42'-1⅞"
	EAST	30'-3"	62'-8⅞"	30'-4¾"	63'-5⅜"	36'-0⅞"
5	WEST	34'-8⅝"	67'-2½"	35'-6⅜"	68'-7"	41'-10⅞"
	EAST	30'-1⅜"	62'-5⅛"	30'-2⅞"	63'-1¼"	35'-10¼"
6	WEST	34'-6⅞"	66'-10½"	35'-4"	68'-2¼"	41'-7⅞"
	EAST	29'-11⅞"	62'-1½"	30'-1⅛"	62'-9"	35'-7⅝"
7	WEST	34'-4½"	66'-6½"	35'-1⅝"	67'-9¾"	41'-4¾"
	EAST	29'-10¼"	61'-10⅛"	29'-11¼"	62'-4⅞"	35'-5⅛"
8	WEST	34'-2⅛"	66'-2½"	34'-11⅜"	67'-5⅝"	41'-1⅛"

DIMENSIONS 'A' AND 'B' MEASURED FROM END OF GIRDER AND ALONG GIRDER C/L.



PARTIAL PLAN

GIRDER ANGLES

GIRDER	AA	BB	CC
1	48°22'06"	46°49'40"	45°26'26"
2	48°42'36"	47°10'46"	45°48'05"
3	49°03'19"	47°32'06"	46°10'00"
4	49°24'15"	47°53'41"	46°32'12"
5	49°45'25"	48°15'31"	46°54'40"
6	50°06'47"	48°37'36"	47°17'25"
7	50°28'24"	48°59'56"	47°40'26"
8	50°50'14"	49°22'31"	48°03'45"

NOTES

FOR SUPERSTRUCTURE DETAILS, BILL OF BARS AND BENDING DIAGRAMS SEE SHEETS 26 THRU 33.

FOR ABUTMENT DIAPHRAGM DETAILS SEE SHEETS 30 THRU 32.

FOR PARAPET DETAILS SEE SHEETS 40 AND 41.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

GIRDER LAYOUT

SHEET 25 OF 43

567

8

8

STATE PROJECT NUMBER

5845-16-77

TOP OF DECK ELEVATIONS - SPAN 1

LOCATION	C/L BRG. S. ABUT.	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	Pier 1
WEST EDGE	898.41	898.69	898.97	899.24	899.51	899.77	900.03	900.28	900.52	900.76	900.99
INSIDE FACE OF W. PARAPET	898.38	898.66	898.94	899.22	899.48	899.74	900.00	900.25	900.49	900.73	900.96
GIRDER 1	898.39	898.67	898.95	899.23	899.49	899.75	900.01	900.26	900.51	900.75	900.98
GIRDER 2	898.43	898.72	899.00	899.28	899.55	899.81	900.07	900.32	900.57	900.81	901.05
GIRDER 3	898.48	898.77	899.05	899.33	899.60	899.87	900.13	900.39	900.64	900.88	901.12
GIRDER 4	898.52	898.81	899.10	899.38	899.65	899.92	900.19	900.45	900.70	900.95	901.19
GIRDER 5	898.56	898.86	899.15	899.43	899.71	899.98	900.25	900.51	900.77	901.02	901.26
GIRDER 6	898.60	898.90	899.19	899.48	899.76	900.03	900.30	900.57	900.83	901.08	901.33
GIRDER 7	898.65	898.94	899.24	899.53	899.81	900.09	900.36	900.63	900.89	901.15	901.40
REF. LINE	898.65	898.95	899.25	899.54	899.82	900.10	900.37	900.64	900.90	901.16	901.41
TANGENT LINE	898.66	898.96	899.25	899.54	899.83	900.10	900.38	900.64	900.91	901.16	901.41
GIRDER 8	898.69	898.99	899.28	899.57	899.86	900.14	900.42	900.69	900.95	901.21	901.47
INSIDE FACE OF E. PARAPET	898.70	899.00	899.30	899.59	899.87	900.16	900.43	900.70	900.97	901.23	901.48
EAST EDGE	898.66	898.97	899.26	899.56	899.84	900.13	900.40	900.67	900.94	901.20	901.45

TOP OF DECK ELEVATIONS - SPAN 2

LOCATION	PIER 1	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	Pier 2
WEST EDGE	900.99	901.21	901.43	901.64	901.85	902.05	902.25	902.43	902.61	902.79	902.96
INSIDE FACE OF W. PARAPET	900.96	901.19	901.41	901.62	901.83	902.03	902.22	902.41	902.59	902.77	902.94
GIRDER 1	900.98	901.20	901.42	901.63	901.84	902.04	902.24	902.43	902.61	902.79	902.96
GIRDER 2	901.05	901.28	901.50	901.72	901.93	902.13	902.33	902.52	902.71	902.89	903.07
GIRDER 3	901.12	901.35	901.58	901.80	902.01	902.22	902.42	902.62	902.81	903.00	903.18
GIRDER 4	901.19	901.43	901.66	901.88	902.10	902.31	902.52	902.72	902.91	903.10	903.28
GIRDER 5	901.26	901.50	901.73	901.96	902.18	902.40	902.61	902.81	903.01	903.20	903.39
GIRDER 6	901.33	901.57	901.81	902.04	902.26	902.48	902.69	902.90	903.10	903.30	903.49
GIRDER 7	901.40	901.64	901.88	902.12	902.34	902.57	902.78	902.99	903.20	903.40	903.60
REF. LINE	901.41	901.66	901.90	902.14	902.37	902.59	902.81	903.02	903.23	903.43	903.62
TANGENT LINE	901.41	901.66	901.90	902.14	902.37	902.59	902.81	903.03	903.24	903.44	903.64
GIRDER 8	901.47	901.71	901.96	902.19	902.42	902.65	902.87	903.08	903.29	903.50	903.70
INSIDE FACE OF E. PARAPET	901.48	901.73	901.97	902.21	902.44	902.67	902.89	903.11	903.31	903.52	903.72
EAST EDGE	901.45	901.70	901.95	902.19	902.42	902.65	902.87	903.08	903.29	903.50	903.69

TOP OF DECK ELEVATIONS - SPAN 3

LOCATION	PIER 2	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	C/L BRG. N. ABUT.
WEST EDGE	902.96	903.08	903.20	903.31	903.43	903.53	903.64	903.74	903.83	903.93	904.01
INSIDE FACE OF W. PARAPET	902.94	903.06	903.18	903.30	903.41	903.52	903.62	903.72	903.82	903.91	904.00
GIRDER 1	902.96	903.08	903.20	903.32	903.43	903.54	903.64	903.74	903.84	903.94	904.03
GIRDER 2	903.07	903.19	903.32	903.44	903.55	903.66	903.77	903.88	903.98	904.08	904.17
GIRDER 3	903.18	903.31	903.43	903.55	903.67	903.79	903.90	904.01	904.11	904.22	904.31
GIRDER 4	903.28	903.42	903.55	903.67	903.79	903.91	904.03	904.14	904.25	904.35	904.46
GIRDER 5	903.39	903.52	903.66	903.79	903.91	904.03	904.15	904.27	904.38	904.49	904.59
GIRDER 6	903.49	903.63	903.77	903.90	904.03	904.15	904.28	904.40	904.51	904.62	904.73
GIRDER 7	903.60	903.74	903.88	904.01	904.14	904.27	904.40	904.52	904.64	904.76	904.87
REF. LINE	903.62	903.77	903.91	904.04	904.18	904.31	904.44	904.56	904.68	904.79	904.91
TANGENT LINE	903.64	903.79	903.93	904.07	904.21	904.35	904.48	904.61	904.74	904.86	904.98
GIRDER 8	903.70	903.84	903.98	904.12	904.26	904.39	904.52	904.64	904.77	904.89	905.00
INSIDE FACE OF E. PARAPET	903.72	903.86	904.01	904.15	904.28	904.41	904.54	904.67	904.79	904.91	905.02
EAST EDGE	903.69	903.84	903.98	904.12	904.26	904.39	904.52	904.65	904.77	904.89	905.01

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

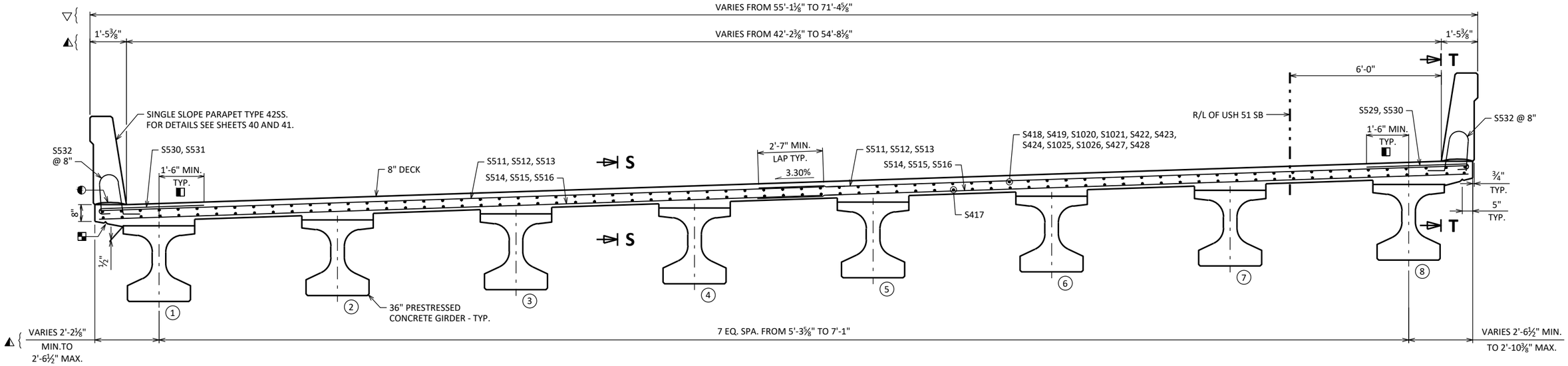
DECK ELEVATIONS

SHEET 26 OF 43

568

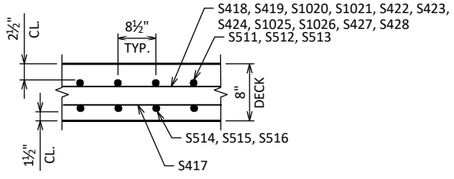
STATE PROJECT NUMBER

5845-16-77

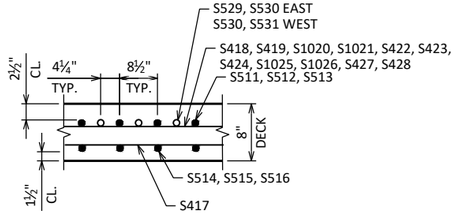


TYPICAL CROSS SECTION THRU DECK

LOOKING NORTH



SECTION S-S



SECTION T-T

- ◭ DIMENSIONS MEASURED NORMAL TO TANGENT LINE.
- ◐ CONST. JOINT - STRIKE OFF AS SHOWN.
- ◧ MEASURED PERPENDICULAR TO C/L OF GIRDER.
- ▽ MEASURED ALONG C/L OF BEARING AT SUBSTRUCTURES.
- ◪ ¾" V-GROOVE TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENT BODY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

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SUPERSTRUCTURE

SHEET 27 OF 43

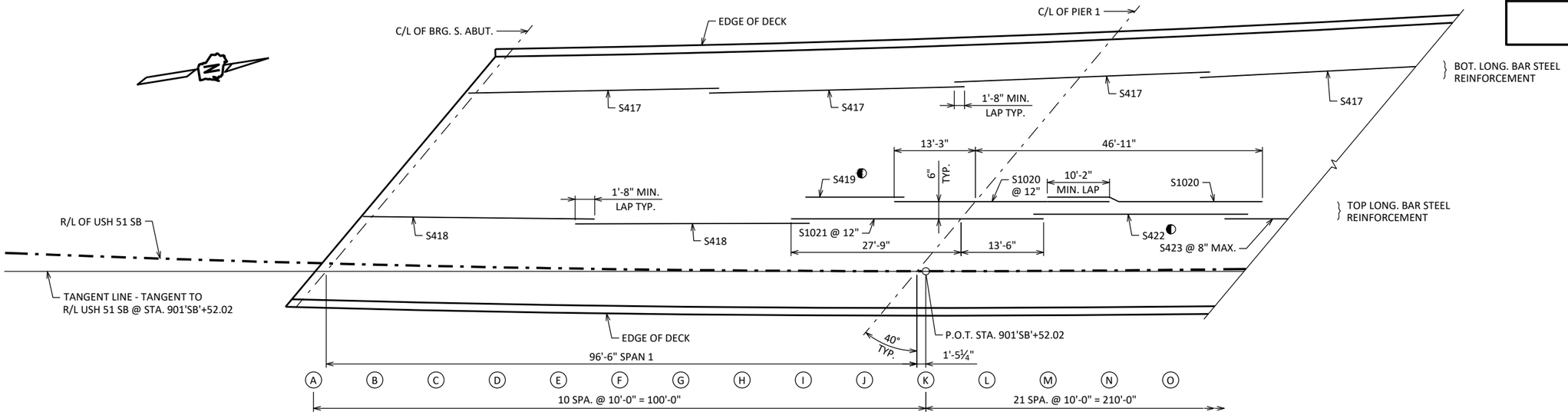
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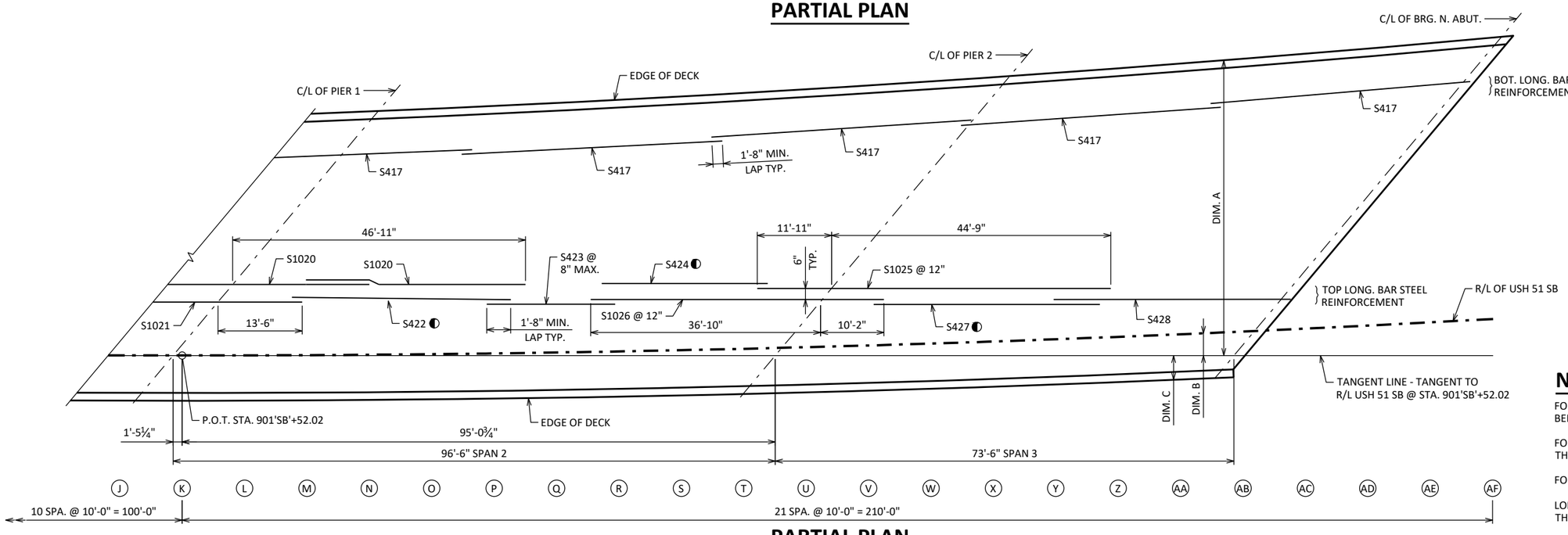
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STATE PROJECT NUMBER

5845-16-77



PARTIAL PLAN



PARTIAL PLAN

EDGE OF DECK OFFSETS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
DIM. A	-----	-----	-----	36'-3¾"	36'-5¾"	36'-7⅞"	36'-10½"	37'-1⅜"	37'-4½"	37'-8"	37'-11⅞"	38'-4"	38'-8½"	39'-1⅜"	39'-6½"	40'-0"
DIM. B	1'-3⅞"	1'-0⅞"	0'-10¼"	0'-7¾"	0'-5¾"	0'-4"	0'-2½"	0'-1½"	0'-0⅝"	0'-0⅛"	0'-0"	0'-0⅛"	0'-0⅝"	0'-1⅜"	0'-2½"	0'-4"
DIM. C	5'-11⅛"	6'-2⅛"	6'-4⅞"	6'-7¼"	6'-9¼"	6'-11"	7'-0½"	7'-1⅝"	7'-2⅜"	7'-2⅞"	7'-3"	7'-2⅞"	7'-2⅜"	7'-1⅝"	7'-0½"	6'-11"

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF
DIM. A	40'-5¾"	40'-11¾"	41'-6¼"	42'-1"	42'-8"	43'-3⅜"	43'-11⅛"	44'-7⅛"	45'-3½"	46'-0¼"	46'-9¼"	47'-6⅝"	48'-4¼"	49'-2¼"	50'-0⅝"	50'-11¼"
DIM. B	0'-5¾"	0'-7¾"	0'-10⅛"	1'-0⅞"	1'-4"	1'-7⅛"	1'-10⅞"	2'-2⅝"	2'-7¼"	2'-11⅞"	3'-4¾"	3'-10"	4'-3⅝"	4'-9½"	5'-3¾"	5'-10¼"
DIM. C	6'-9¼"	6'-7¼"	6'-4⅞"	6'-2⅛"	5'-11⅛"	5'-7¾"	5'-4⅛"	5'-0⅛"	4'-7⅞"	4'-3¾"	3'-10⅜"	-----	-----	-----	-----	-----

BAR SPACING AT SUPPORTS

(MEASURED PERPENDICULAR TO TANGENT LINE)

S. ABUT.	PIER 1	PIER 2	N. ABUT.
7"	7¾"	8⅜"	9"

FOR BARS S417, S418 & S428.
S423 SPA. @ 8" MAX.

NOTES

FOR SUPER STRUCTURE DETAILS, BILL OF BARS AND BENDING DIAGRAMS SEE SHEETS 26 THRU 33.

FOR ABUTMENT DIAPHRAGM DETAILS SEE SHEETS 30 THRU 32.

FOR PARAPET DETAILS SEE SHEET 40 AND 41.

LONGITUDINAL BAR SPACINGS ARE FLARED. SEE TABLE ON THIS SHEET FOR SPACING AT SUPPORTS.

DIM. A, B & C MEASURED PERPENDICULAR TO TANGENT LINE.

◐ LAP TOP LONG. #4 BARS WITH #10 BARS AT 12" SPACING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

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LONGITUDINAL DECK STEEL

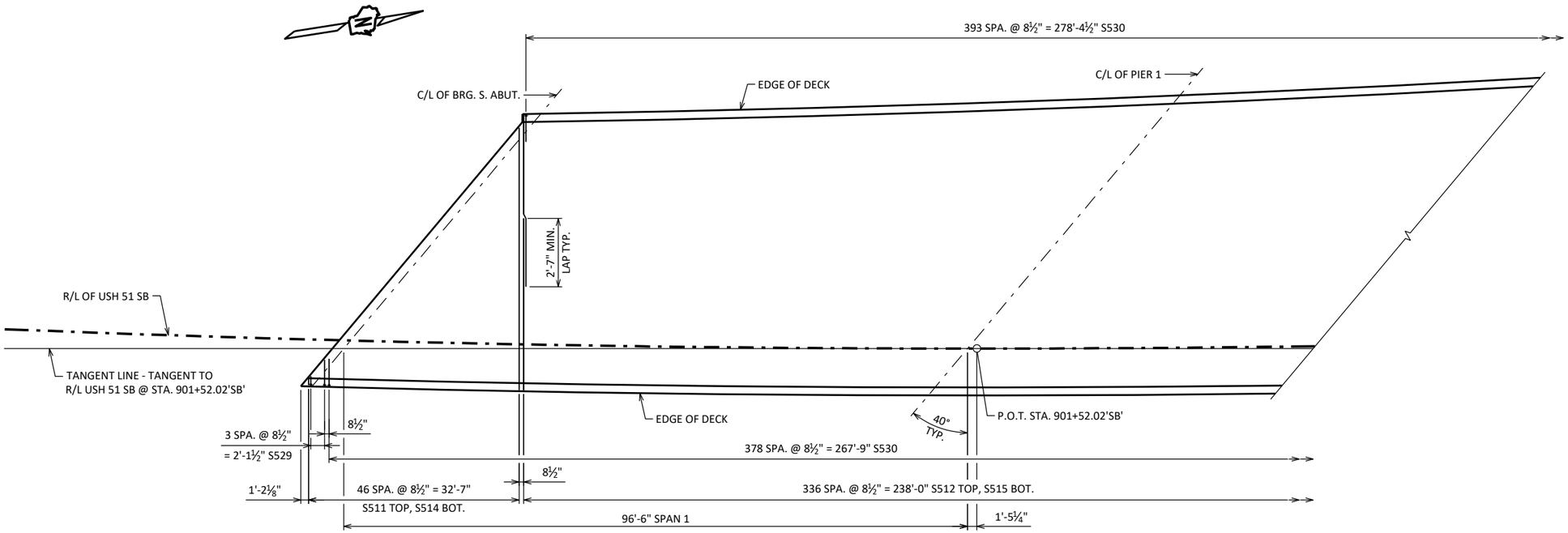
SHEET 28 OF 43
570

8

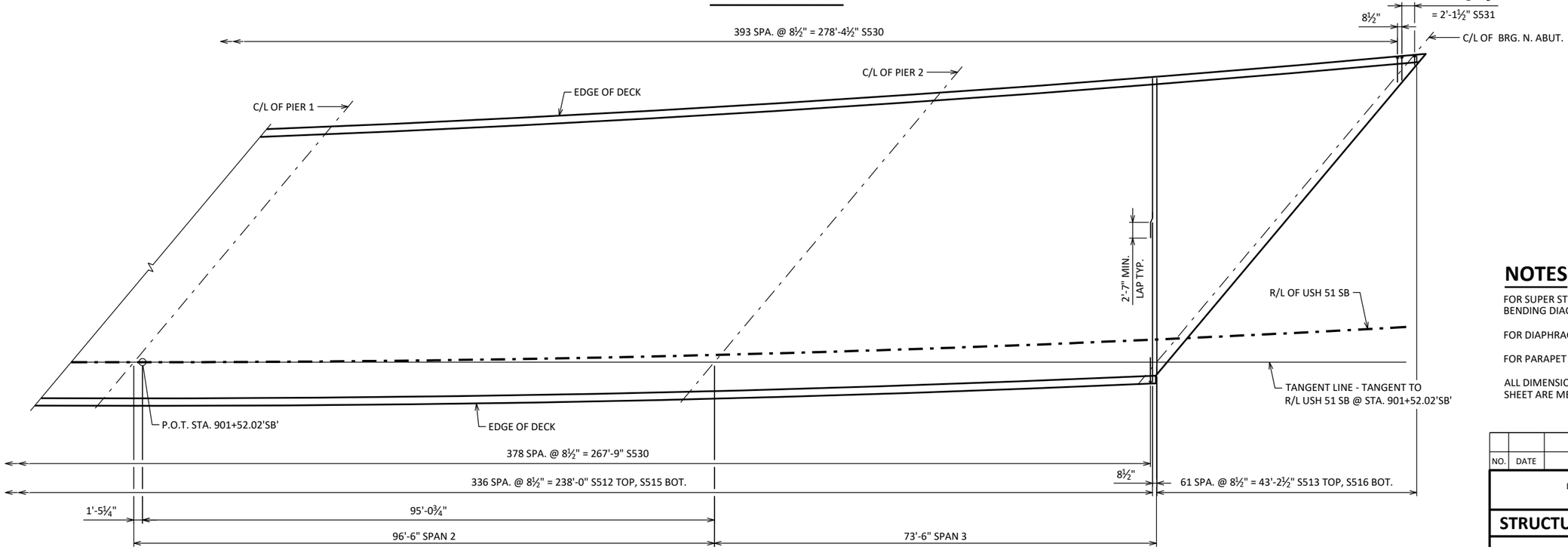
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STATE PROJECT NUMBER

5845-16-77



PARTIAL PLAN



PARTIAL PLAN

NOTES

FOR SUPER STRUCTURE DETAILS, BILL OF BARS AND BENDING DIAGRAMS SEE SHEETS 26 THRU 33.

FOR DIAPHRAGM DETAILS SEE SHEETS 30 THRU 32.

FOR PARAPET DETAILS SEE SHEET 40 AND 41.

ALL DIMENSIONS AND SPACINGS SHOWN ON THIS SHEET ARE MEASURED ALONG THE TANGENT LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

TRANSVERSE DECK STEEL

SHEET 29 OF 43

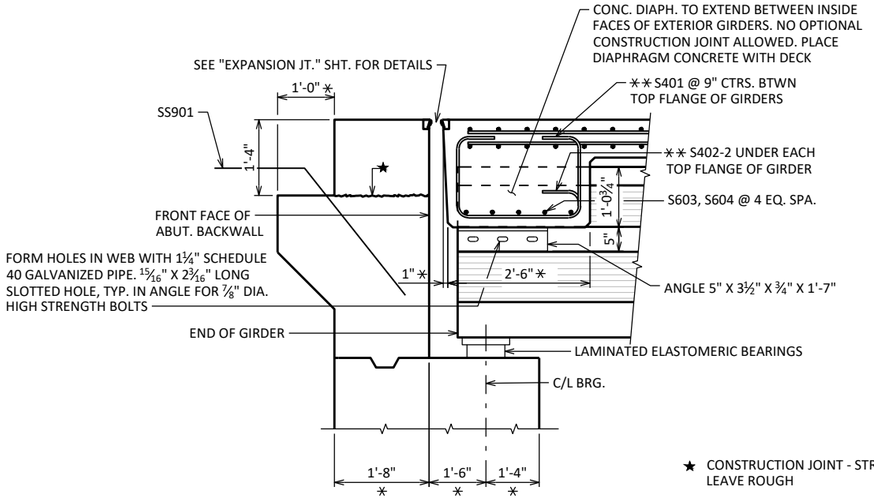
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8

STATE PROJECT NUMBER

5845-16-77



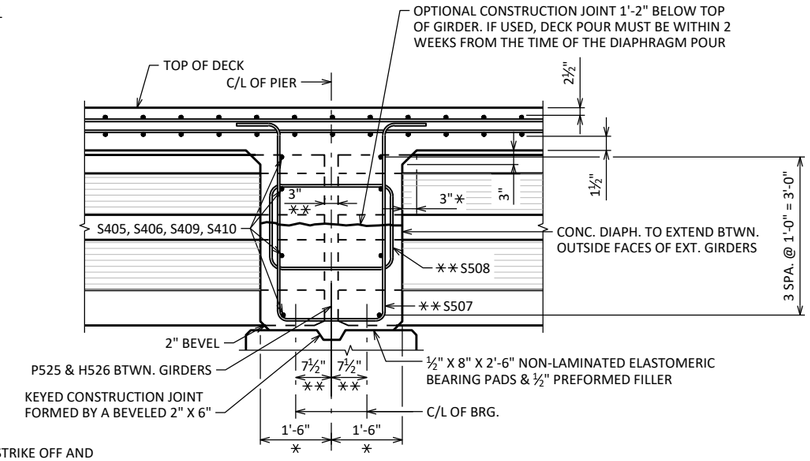
PART LONGIT. SECTION

AT ABUTMENTS

★ CONSTRUCTION JOINT - STRIKE OFF AND LEAVE ROUGH

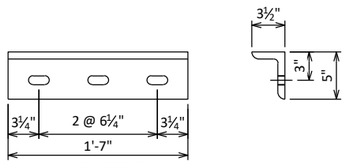
⁎ DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNITS.

⁎⁎ BARS PLACED PARALLEL TO TANGENT LINE. SPACING PERPENDICULAR TO TANGENT LINE.



PART LONGIT. SECTION

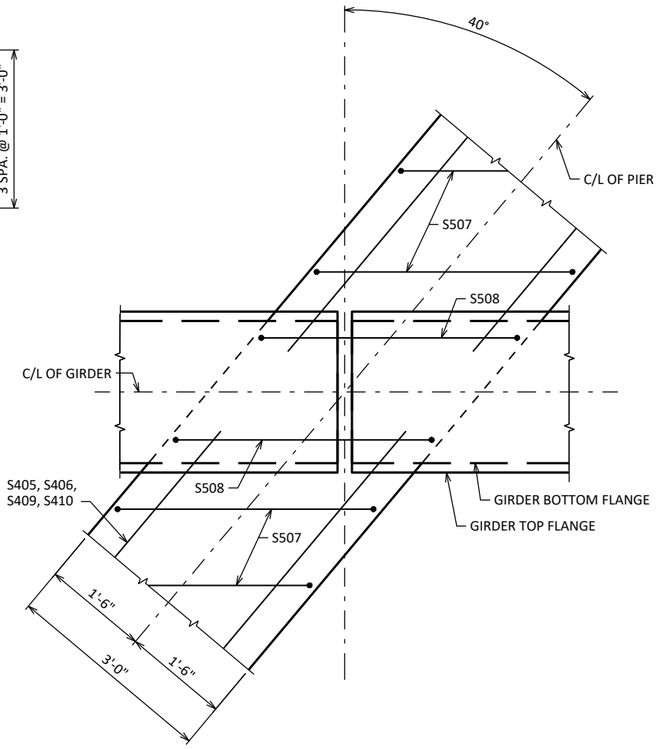
AT PIER



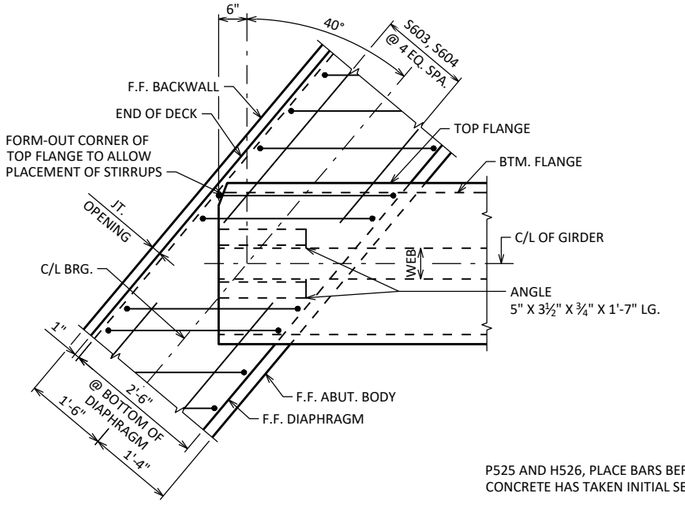
ANGLE

5" X 3½" X ¾" X 1'-7"

PROVIDE 3½" X 3½" X 5/16" PLATE WASHERS AT ALL LOCATIONS EXCEPT AT EXTERIOR FACES OF EXTERIOR GIRDERS WHERE 3½" X 3½" X ½" PLATE WASHERS SHALL BE PROVIDED.

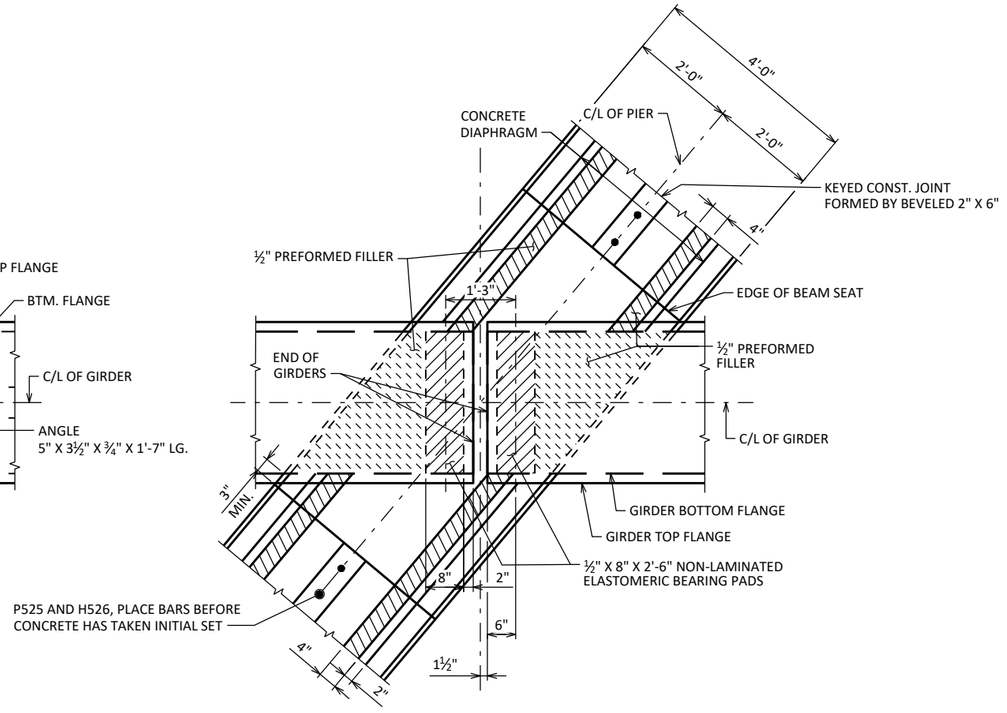


TOP VIEW OF PIER DIAPHRAGM



TOP VIEW OF DIAPHRAGM

AT ABUTMENT



BEARING PAD DETAIL

AT PIER

NOTES

ALL DIAPHRAGM SUPPORT HARDWARE SHALL BE INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

DIAPHRAGM SUPPORT ANGLES SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM SUPPORT HARDWARE INCLUDING BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM SUPPORT ANGLE TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-899

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SUPERSTRUCTURE DETAILS

SHEET 30 OF 43

572

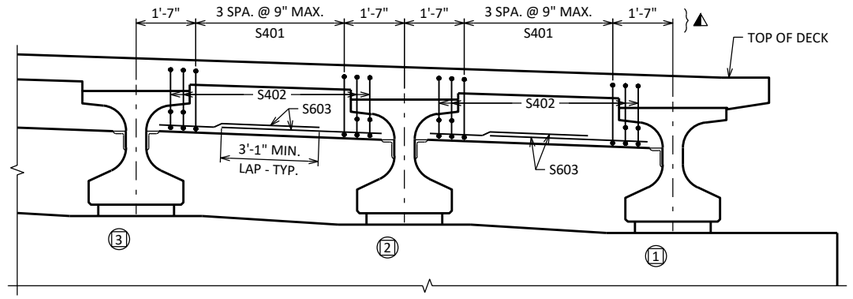
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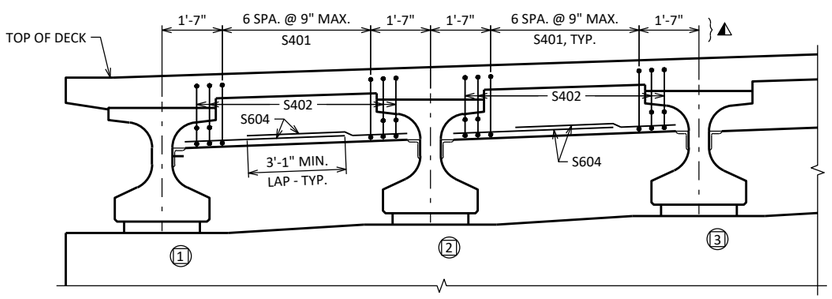
STATE PROJECT NUMBER

5845-16-77



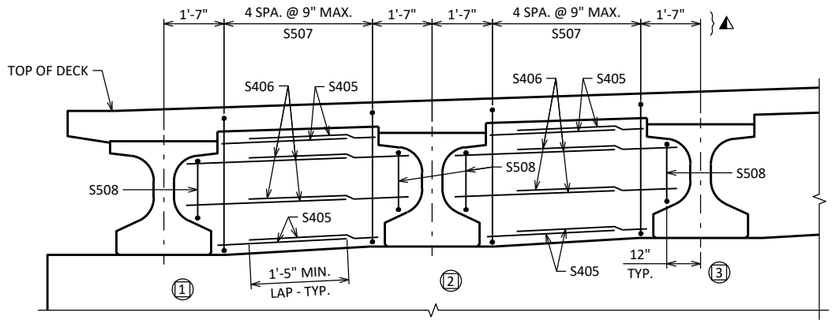
DIAPHRAGM DETAIL AT SOUTH ABUTMENT

LOOKING SOUTH



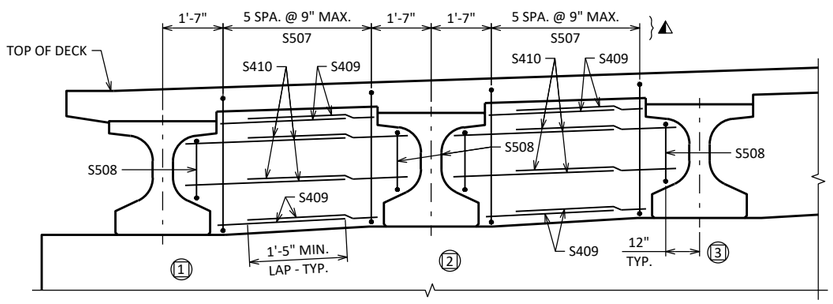
DIAPHRAGM DETAIL AT NORTH ABUTMENT

LOOKING NORTH



DIAPHRAGM DETAIL AT PIER 1

LOOKING NORTH



DIAPHRAGM DETAIL AT PIER 2

LOOKING NORTH

NOTE: 42SS CONCRETE PARAPET NOT SHOWN FOR CLARITY.

⚠ DIMENSIONS MEASURED NORMAL TO TANGENT LINE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

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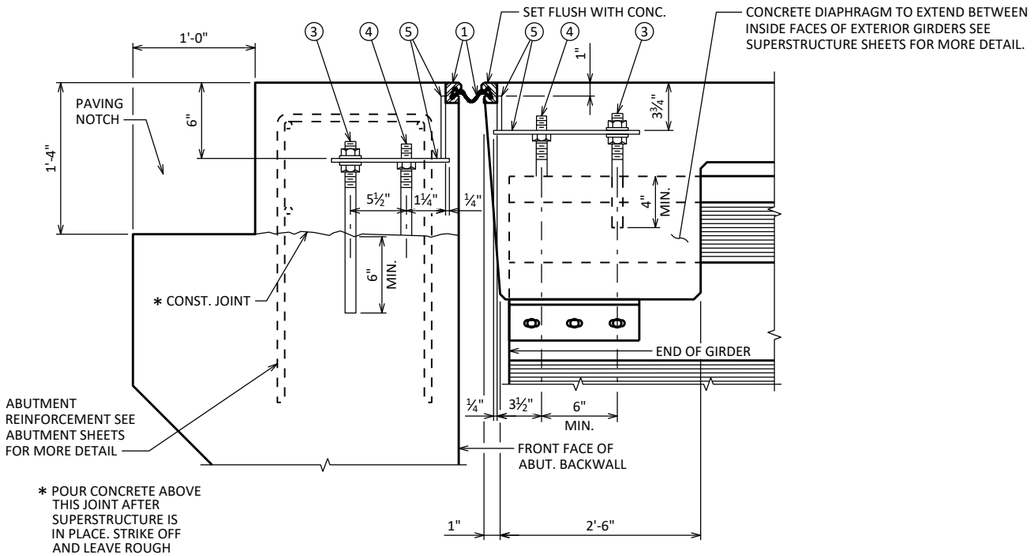
DIAPHRAGM DETAILS

SHEET 31 OF 43

573

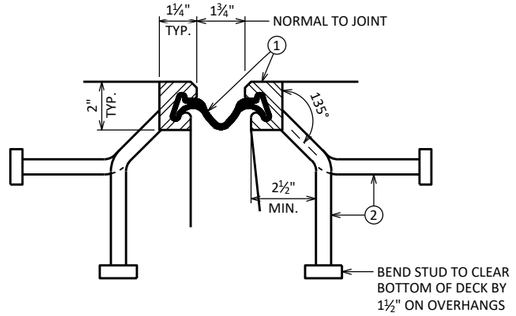
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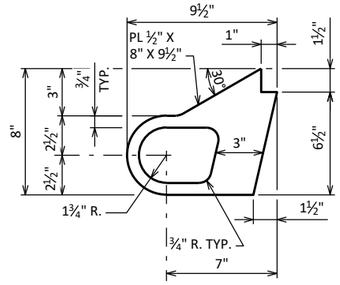
SECTION THRU JOINT AT ABUTMENT

NORMAL TO C/L SUBSTRUCTURE

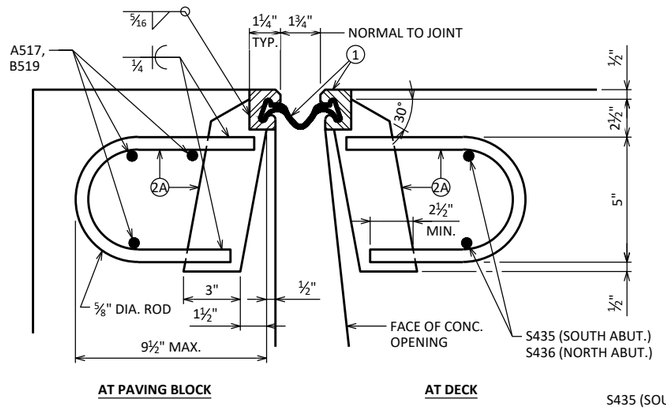


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS

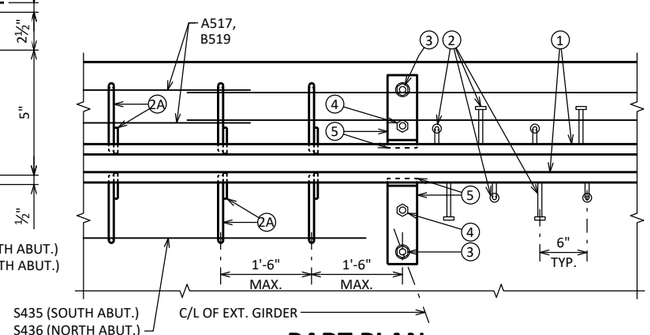


ALTERNATE STRIP SEAL ANCHOR



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS



PART PLAN

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE B-13-899", LF.

STATE PROJECT NUMBER

5845-16-77

LEGEND

(1) NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.

(2) STUDS ⅝" DIA. X 6¾" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

(2A) ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.

(3) ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. GROUT THREADED ROD INTO FIELD DRILLED HOLES ON C/L OF GIRDER. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.

(4) ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.

(5) FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.

(6) GALVANIZED PLATE ⅜" X 10" X 2'-2" LONG WITH HOLES FOR NO.7.

(7) ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.

(8) ¾" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.

(9) ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.

(11) 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-899

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EXPANSION DEVICE

SHEET 32 OF 43
574

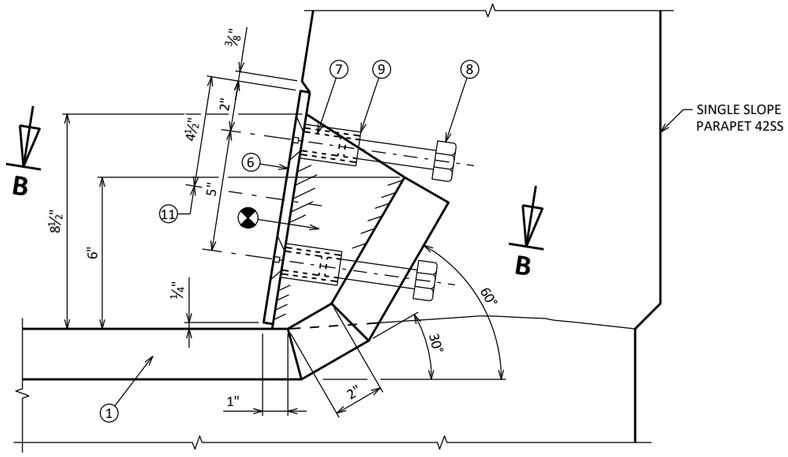
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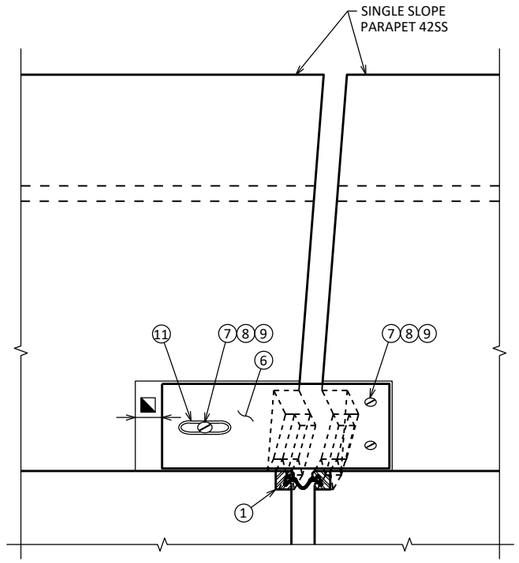
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STATE PROJECT NUMBER

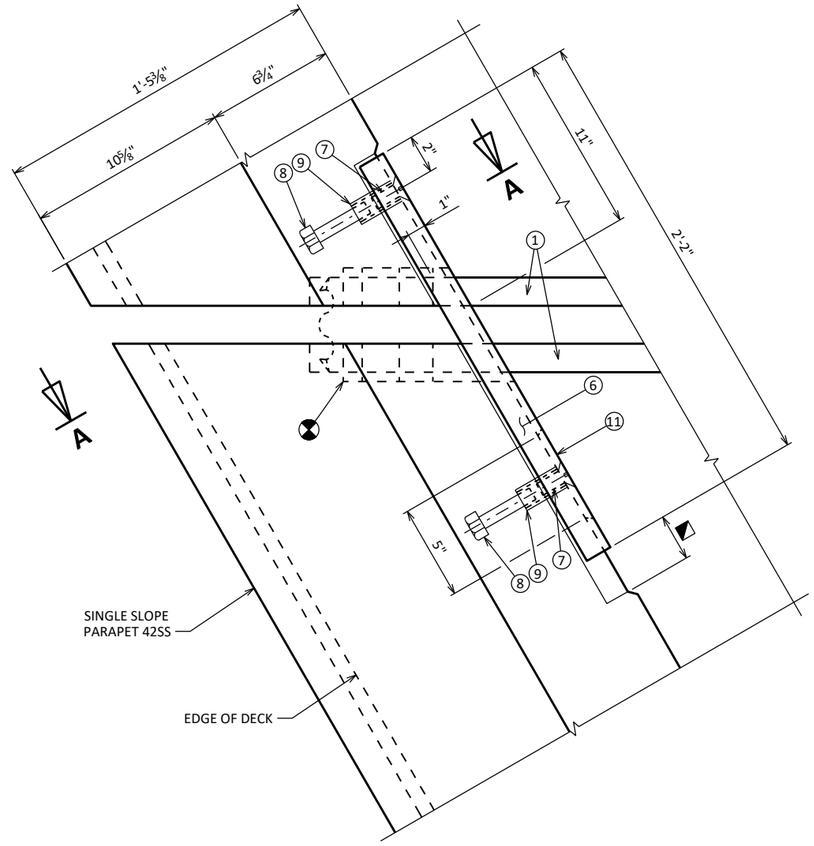
5845-16-77



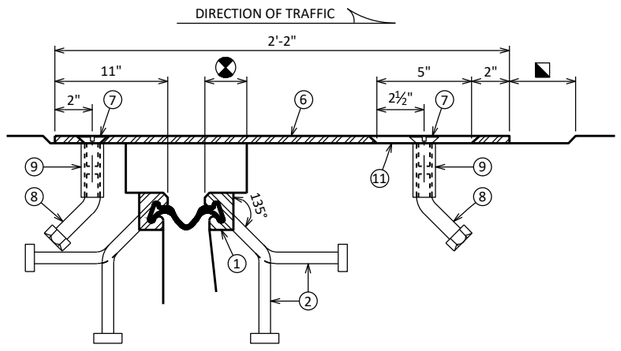
SECTION A-A



VIEW OF PARAPET PLATE FROM ROADWAY



PLAN AT PARAPET



SECTION B-B

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIMENSION ALONG SKEW PLUS ½", 2¼" MIN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-899

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COVER PLATE DETAILS

SHEET 33 OF 43

575

SCALE = 2.00

8

8

STATE PROJECT NUMBER

5845-16-77

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	77	7'-0"	X		DIA. @ ABUT. VERT.
S402	X	56	5'-10"	X		DIA. @ ABUT. VERT.
S603	X	70	4'-6"			DIA. @ S. ABUT. HORIZ.
S604	X	70	5'-8"			DIA. @ N. ABUT. HORIZ.
S405	X	28	2'-9"			DIA. @ PIER 1 HORIZ.
S406	X	28	4'-0"			DIA. @ PIER 1 HORIZ.
S507	X	77	11'-11"	X		DIA. @ PIERS VERT.
S508	X	28	10'-4"	X		DIA. @ PIERS VERT.
S409	X	28	3'-2"			DIA. @ PIER 2 HORIZ.
S410	X	28	4'-6"			DIA. @ PIER 2 HORIZ.
S511	X	47	20'-10"		◭	DECK TRANS. TOP SPAN 1
S512	X	674	26'-7"			DECK TRANS. TOP
S513	X	62	25'-0"		◭	DECK TRANS. TOP SPAN 3
S514	X	47	20'-10"		◭	DECK TRANS. BOT. SPAN 1
S515	X	674	26'-7"			DECK TRANS. BOT.
S516	X	62	25'-0"		◭	DECK TRANS. BOT. SPAN 3
S417	X	518	41'-10"			DECK LONG. BOT.
S418	X	148	40'-8"			DECK LONG. TOP SPAN 1
S419	X	47	16'-2"			DECK LONG. TOP SPAN 1
S1020	X	94	35'-2"			DECK LONG. TOP PIER 1
S1021	X	46	41'-3"			DECK LONG. TOP PIER 1
S422	X	46	35'-1"			DECK LONG. TOP SPAN 2
S423	X	74	21'-0"			DECK LONG. TOP SPAN 2
S424	X	51	26'-7"			DECK LONG. TOP SPAN 2
S1025	X	51	56'-8"			DECK LONG. TOP PIER 2
S1026	X	51	47'-0"			DECK LONG. TOP PIER 2
S427	X	51	36'-3"			DECK LONG. TOP SPAN 3
S428	X	74	38'-0"			DECK LONG TOP SPAN 3
S529	X	4	3'-3"	X	◭	DECK TRANS. TOP @ PARAPET
S530	X	773	4'-10"	X		DECK TRANS. TOP @ PARAPET
S531	X	4	3'-6"	X	◭	DECK TRANS. TOP @ PARAPET
S532	X	844	4'-5"	X		PARAPET VERT.
S533	X	844	6'-8"	X		PARAPET VERT.
S534	X	112	42'-11"			PARAPET HORIZ.
S435	X	14	2'-10"			S. ABUT. JOINT
S436	X	14	4'-11"			N. ABUT. JOINT

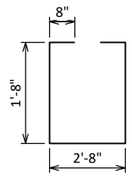
◭ LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

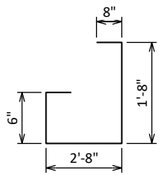
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

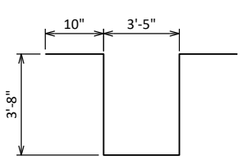
BAR MARK	NO. REQ'D.	LENGTH
S511	1 SERIES OF 47	1'-0" TO 40'-8"
S513	1 SERIES OF 62	1'-3" TO 48'-9"
S514	1 SERIES OF 47	1'-0" TO 40'-8"
S516	1 SERIES OF 62	1'-3" TO 48'-9"
S529	1 SERIES OF 4	2'-0" TO 4'-6"
S531	1 SERIES OF 4	2'-3" TO 4'-9"



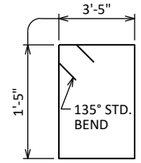
S401



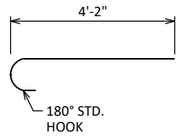
S402

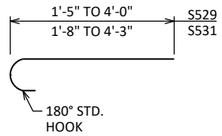


S507

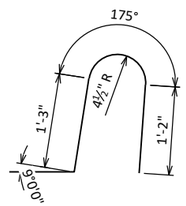


S508

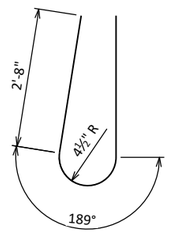




S530



S532



S533

NOTES

FOR SUPERSTRUCTURE PLAN AND DETAILS SEE SHEETS 26 THRU 32.

FOR DIAPHRAGM DETAILS SEE SHEETS 30 THRU 32.

FOR PARAPET DETAILS SEE SHEET 40 AND 41.

FOR APPROACH APRON DETAILS SEE SHEETS 37 THRU 39.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

SUPERSTRUCTURE BILL OF BARS

SHEET 34 OF 43

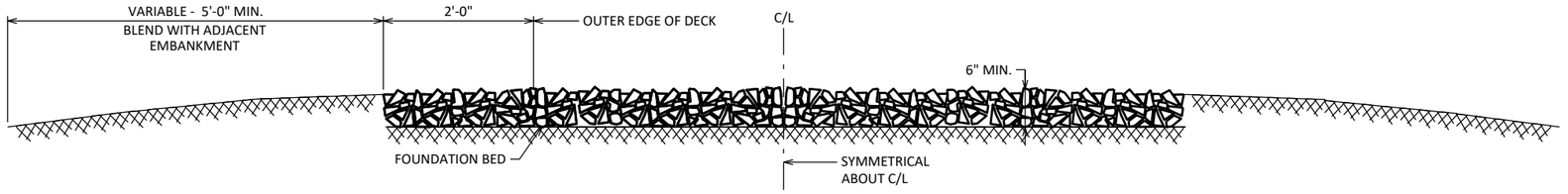
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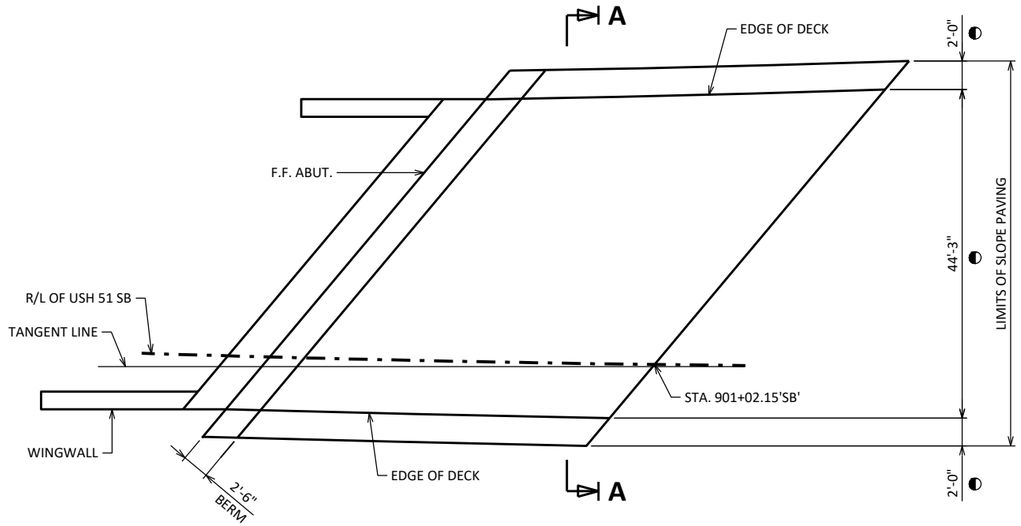
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STATE PROJECT NUMBER

5845-16-77

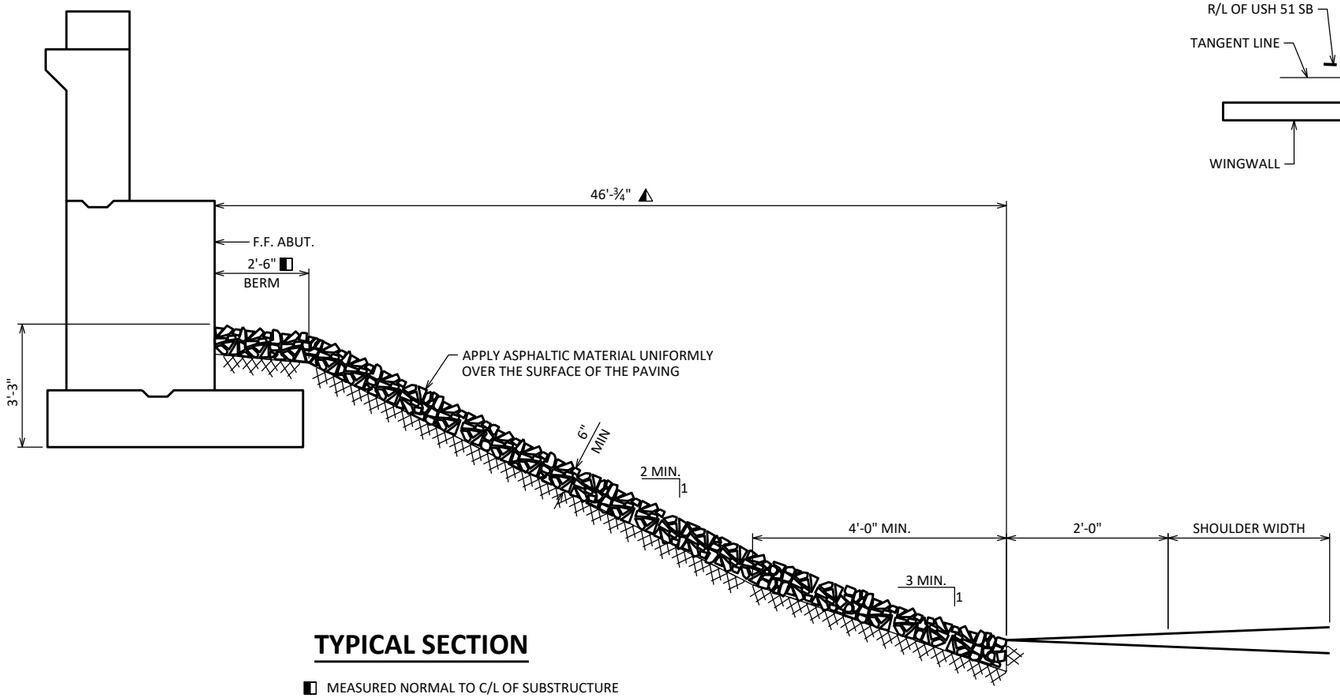


SECTION A-A



PLAN

◐ MEASURED PERPENDICULAR TO T/L



TYPICAL SECTION

◧ MEASURED NORMAL TO C/L OF SUBSTRUCTURE

⚠ MEASURED PARALLEL TO T/L

NOTES

BID ITEM SHALL BE "SLOPE PAVING CRUSHED AGGREGATE".

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

SLOPE PAVING (CRUSHED AGGREGATE) SOUTH ABUTMENT

SHEET 35 OF 43

577

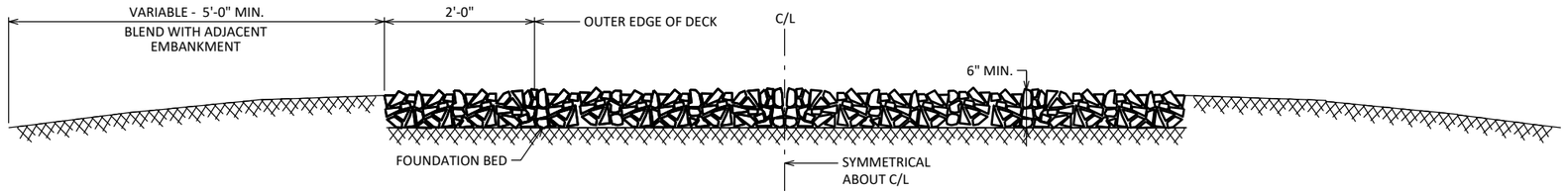
SCALE = 2

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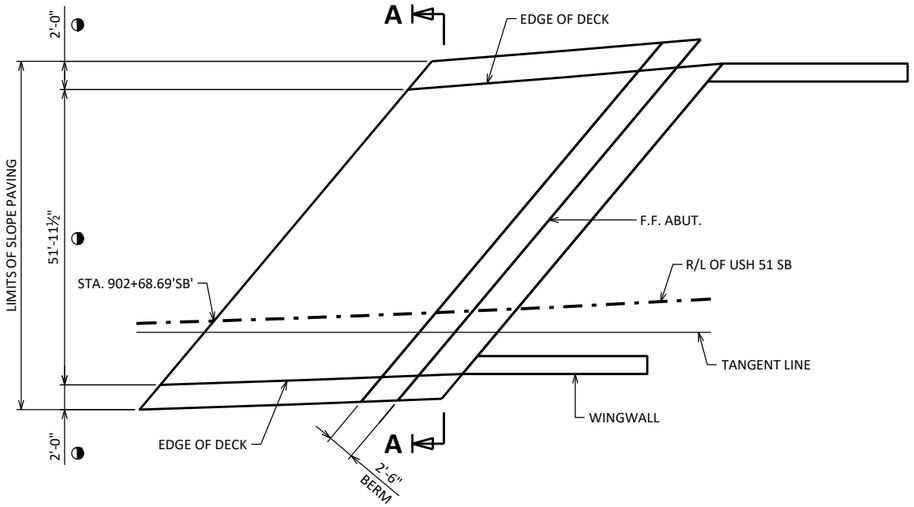
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STATE PROJECT NUMBER

5845-16-77

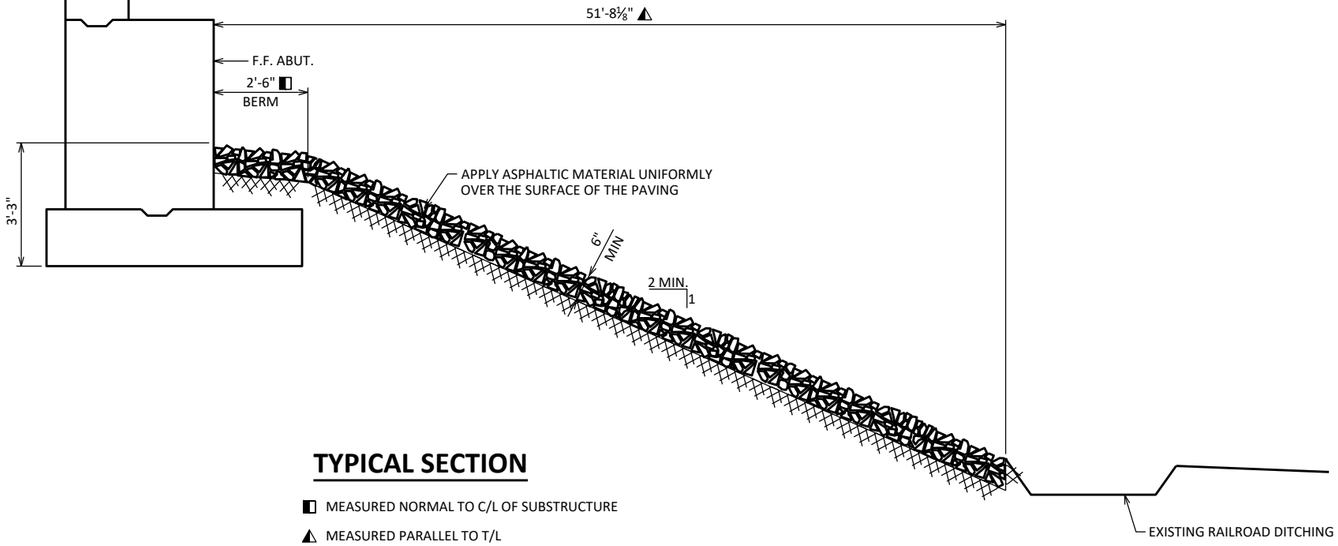


SECTION A-A



PLAN

◐ MEASURED PERPENDICULAR TO T/L



TYPICAL SECTION

◧ MEASURED NORMAL TO C/L OF SUBSTRUCTURE

◭ MEASURED PARALLEL TO T/L

NOTES

BID ITEM SHALL BE "SLOPE PAVING CRUSHED AGGREGATE".

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

SLOPE PAVING (CRUSHED AGGREGATE) NORTH ABUTMENT

SHEET 36 OF 43

578

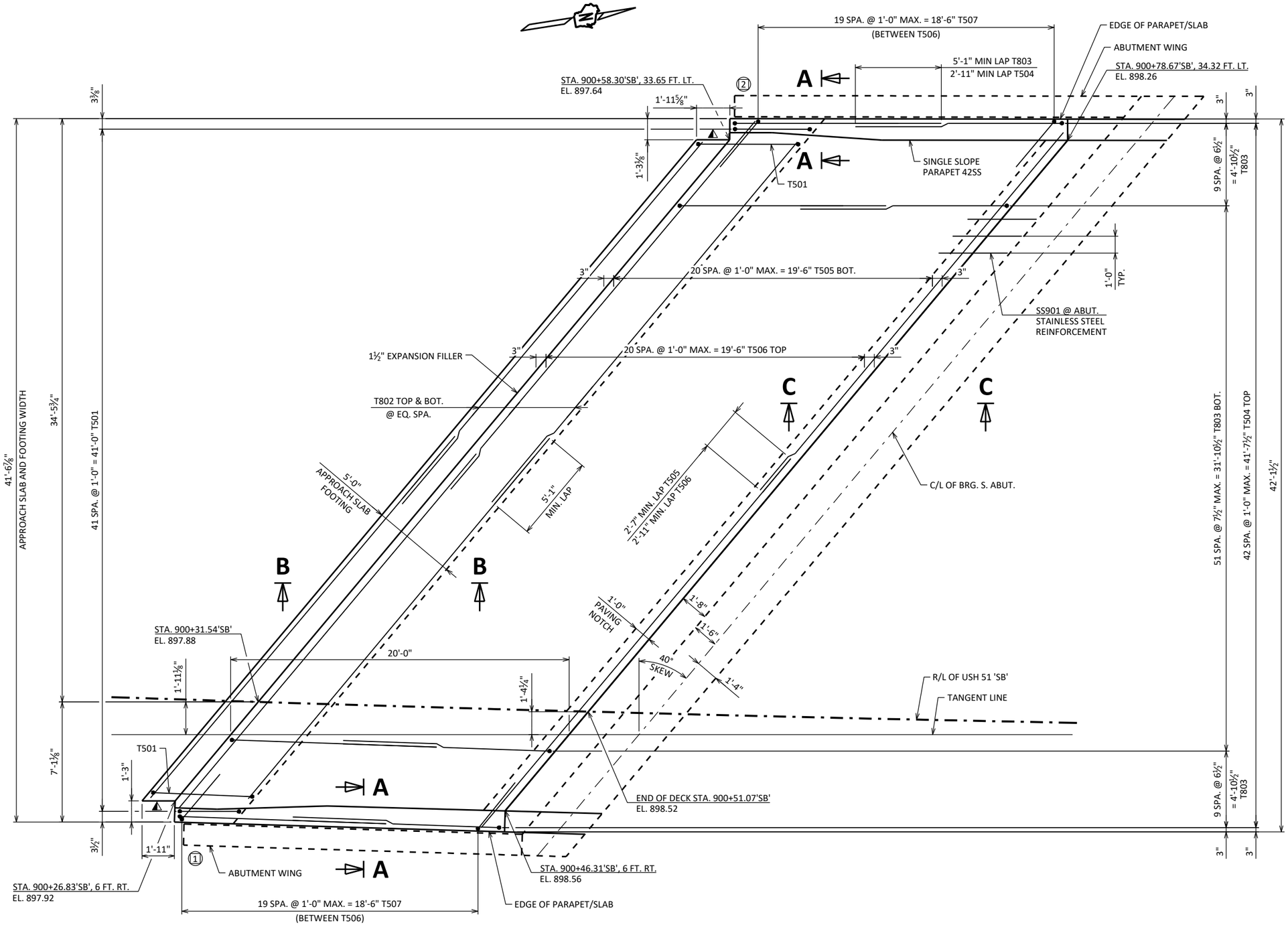
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STATE PROJECT NUMBER

5845-16-77



APPROACH SLAB PLAN

FOR SECTIONS A, B AND C SEE SHEET 39.

DIMENSIONS SHOWN ARE MEASURED PERPENDICULAR TO T/L.

⚠ NOTCH APPROACH SLAB FOOTING TO ALLOW FOR THRIE BEAM POST INSTALLATION. (ADJUST BAR STEEL AS NECESSARY)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

SOUTH STRUCTURAL APPROACH SLAB

SHEET 37 OF 43

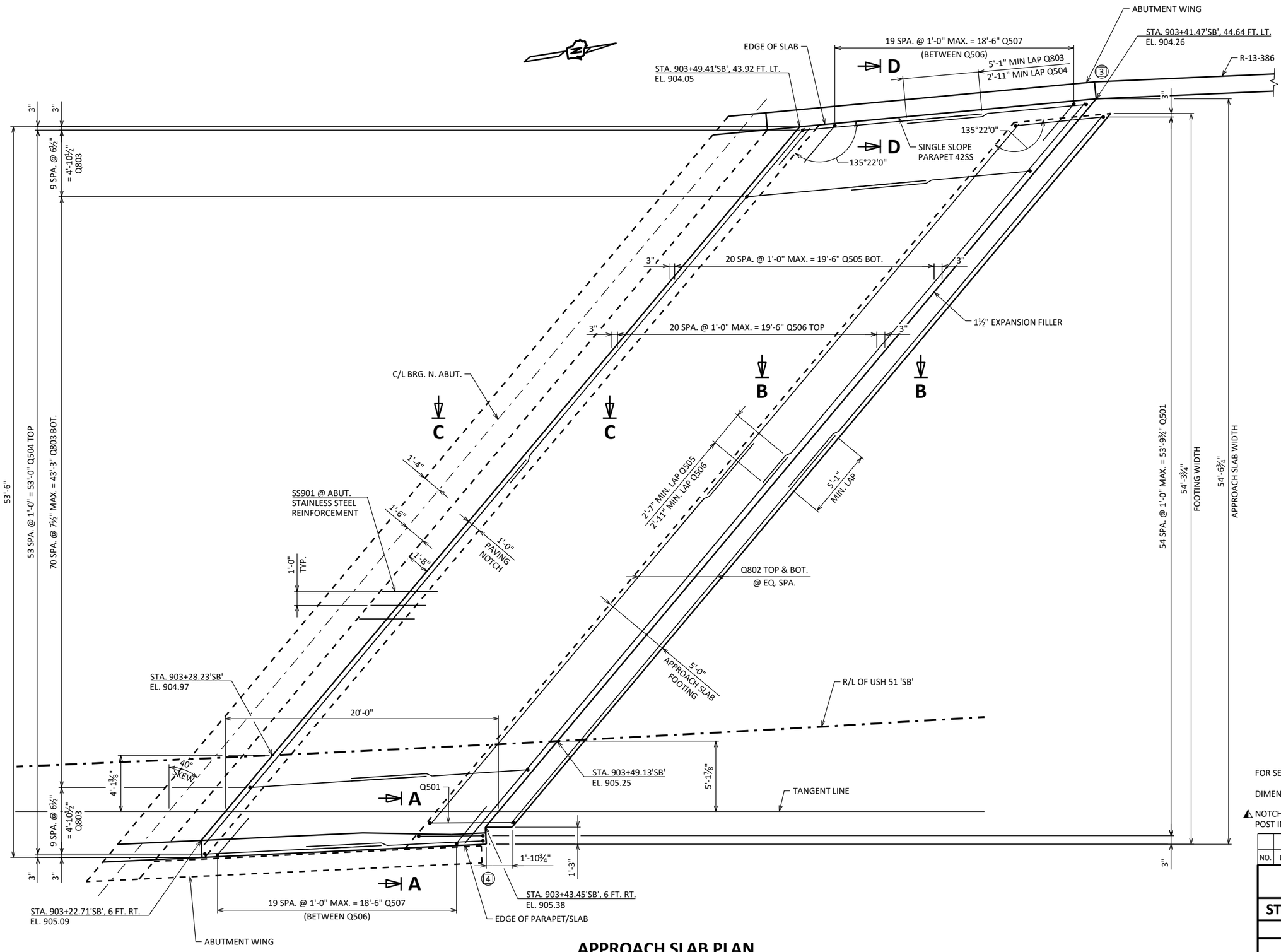
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8

STATE PROJECT NUMBER

5845-16-77



APPROACH SLAB PLAN

FOR SECTIONS A, B, C AND D SEE SHEET 39.

DIMENSIONS SHOWN ARE MEASURED PERPENDICULAR TO T/L.

⚠ NOTCH APPROACH SLAB FOOTING TO ALLOW FOR THRIE BEAM POST INSTALLATION. (ADJUST BAR STEEL AS NECESSARY)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY	ZSS	PLANS CK'D	JLB

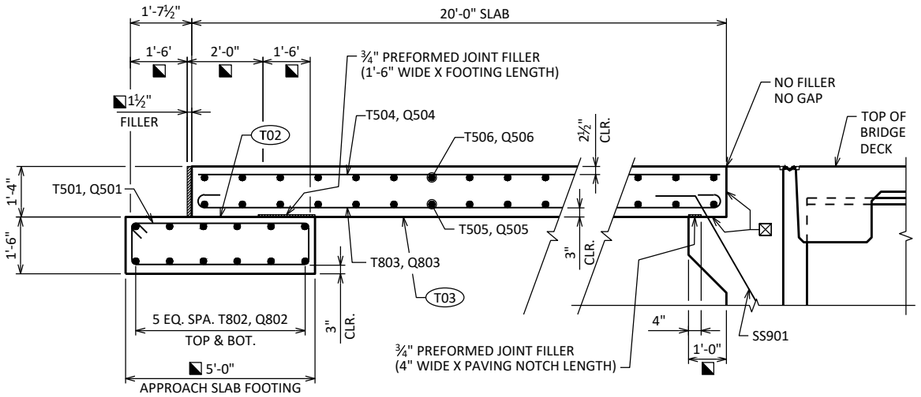
NORTH STRUCTURAL APPROACH SLAB

SHEET 38 OF 43

580

STATE PROJECT NUMBER

5845-16-77



SECTION B

SECTION C

SECTION THRU APPROACH SLAB

- ☒ APPLY PROTECTIVE SURFACE TREATMENT TO PAVING NOTCH SURFACES PRIOR TO POURING STRUCTURAL APPROACH SLAB.
- ◪ MEASURED NORMAL TO ABUTMENT.

BILL OF BARS - SOUTH APPROACH SLAB

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

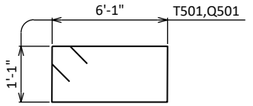
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	42	15'-0"	X		S. APPROACH SLAB FTG. STIRRUP
T802	X	24	29'-6"			S. APPROACH SLAB FTG. TRANS.
T803	X	142	14'-5"	X		S. APPRAOCH SLAB LONG. BOT.
T504	X	86	11'-4"			S. APPROACH SLAB LONG. TOP
T505	X	42	28'-8"			S. APPROACH SLAB TRANS. BOT.
T506	X	42	28'-10"			S. APPROACH SLAB TRANS. TOP
T507	X	40	4'-1"	X		S. APPROACH SLAB TRANS. TOP

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

BILL OF BARS - NORTH APPROACH SLAB

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

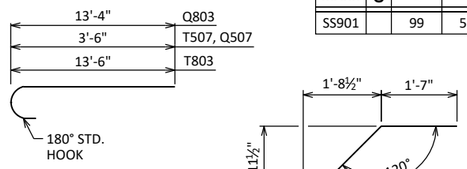
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
Q501	X	52	15'-0"	X		N. APPROACH SLAB FTG. STIRRUP
Q802	X	24	35'-10"			N. APPROACH SLAB FTG. TRANS.
Q803	X	176	14'-3"	X		N. APPRAOCH SLAB LONG. BOT.
Q504	X	108	12'-3"			N. APPROACH SLAB LONG. TOP
Q505	X	42	36'-9"			N. APPROACH SLAB TRANS. BOT.
Q506	X	42	36'-11"			N. APPROACH SLAB TRANS. TOP
Q507	X	40	4'-1"	X		N. APPROACH SLAB TRANS. TOP



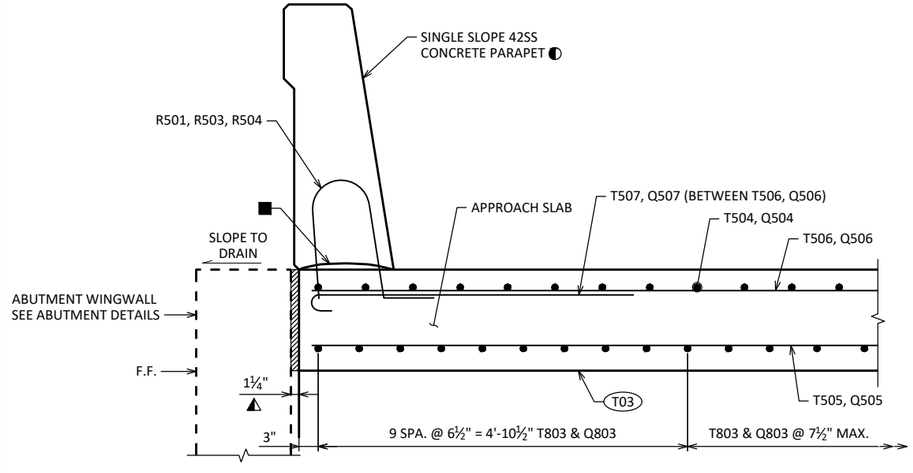
STAINLESS STEEL BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

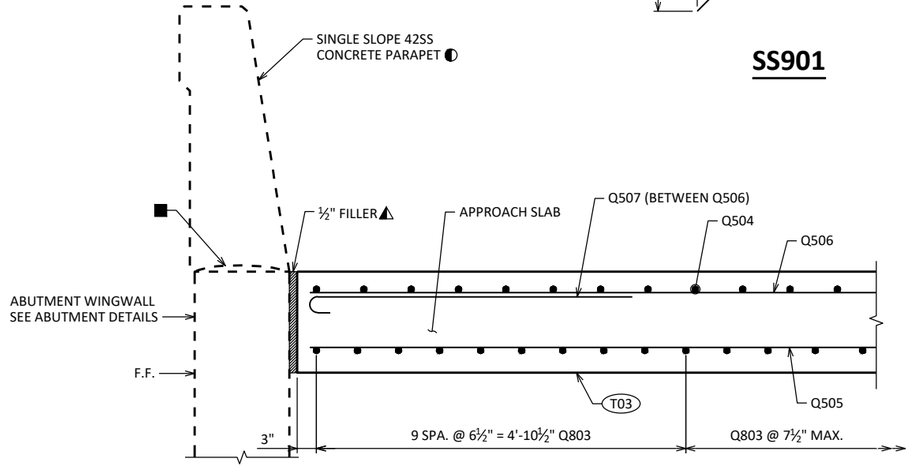
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
SS901		99	5'-0"	X		CONC. BACKWALL TO APPROACH SLAB



SS901



SECTION A



SECTION D

- ◪ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ◐ SEE PARAPET SHEETS FOR DETAILS OF REINFORCEMENT, LOCATION OF NAME PLATE, AND BENCHMARK (IF PROVIDED).
- ■ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- ◭ SLOPE TO DRAIN.

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHYLENE SHEETS OVER THE ENTIRE TOP OF SUBGRADE BENEATH SLAB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

STRUCTURAL APPROACH SLAB DETAILS

SHEET 39 OF 43

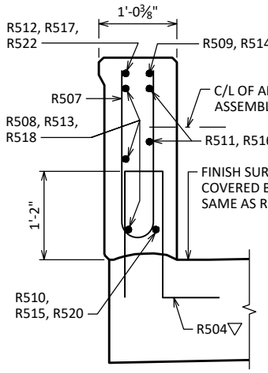
581

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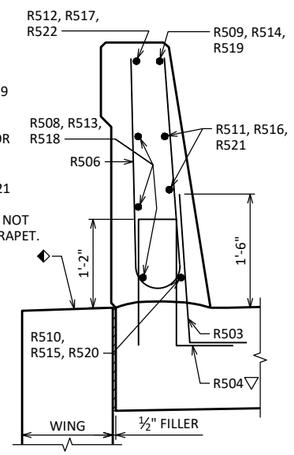
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STATE PROJECT NUMBER

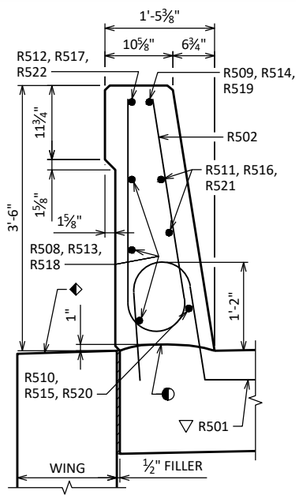
5845-16-77



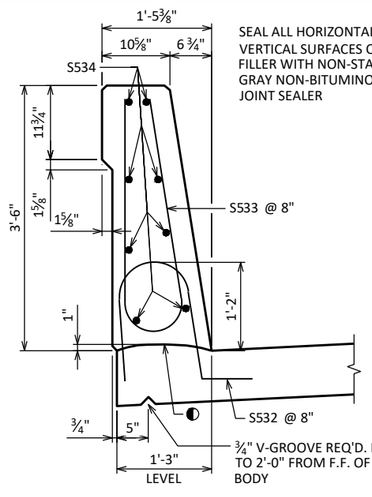
SECTION A-A



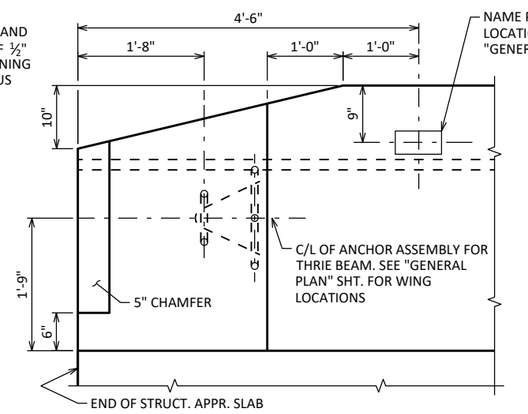
SECTION B-B



SECTION C-C

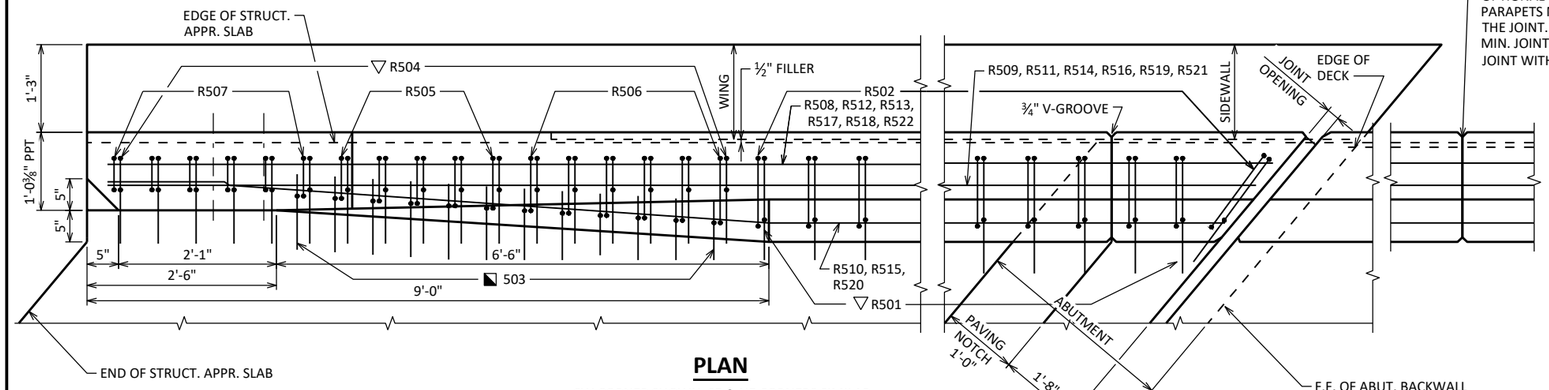


SECTION THRU PARAPET ON DECK



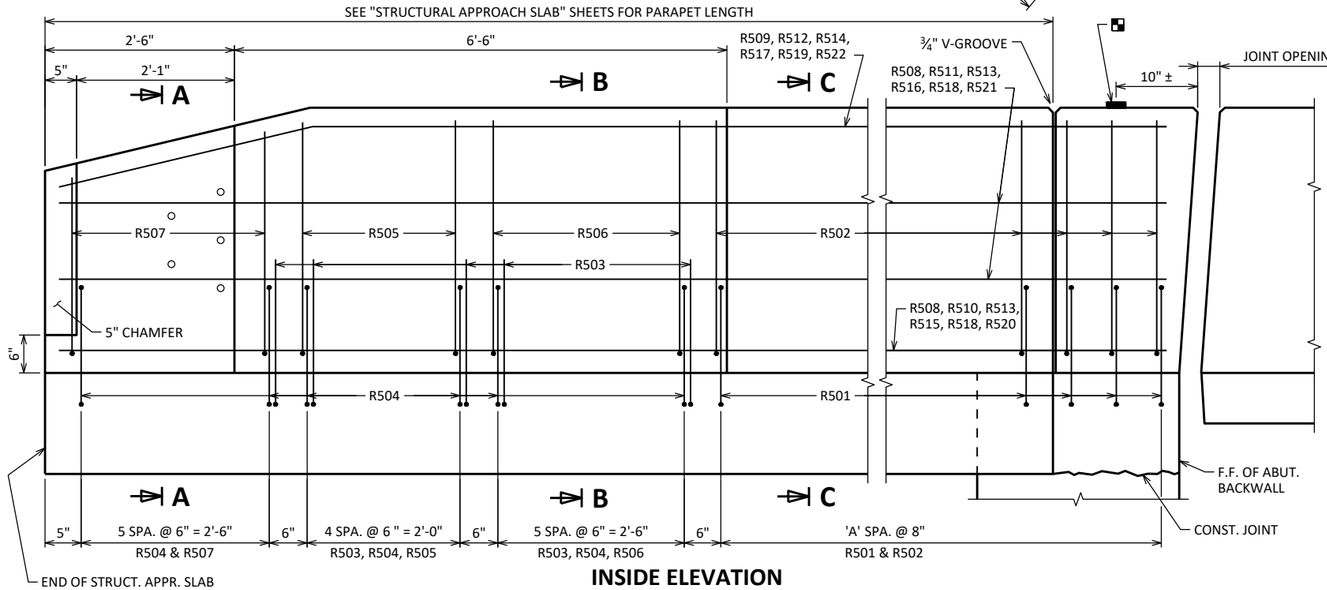
PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET



PLAN

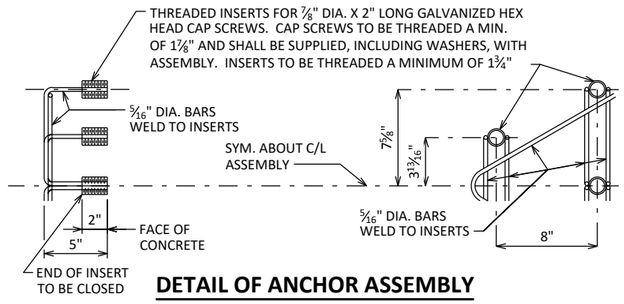
SW CORNER SHOWN, SE & NE CORNERS SIMILAR



INSIDE ELEVATION

SW CORNER SHOWN, SE & NE CORNERS SIMILAR
WING & STRUCTURAL APPROACH SLAB FOOTING NOT SHOWN FOR CLARITY

QUADRANT	'A'
SW	22
SE	19
NE	23



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH ASTM F2329.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH AT SW, SE AND NE WINGWALLS.

- CONST. JOINT - STRIKE OFF AS SHOWN
- SLOPE FOR DRAINAGE
- R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- R501 AND R504 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.
- BENCH MARK CAP

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

SINGLE SLOPE PARAPET 42SS

SHEET 40 OF 43
582

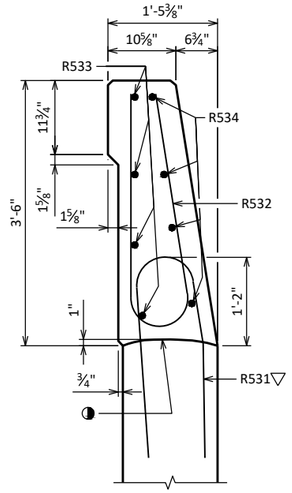
SCALE = 2.00

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STATE PROJECT NUMBER

5845-16-77



SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

SECTION C-C

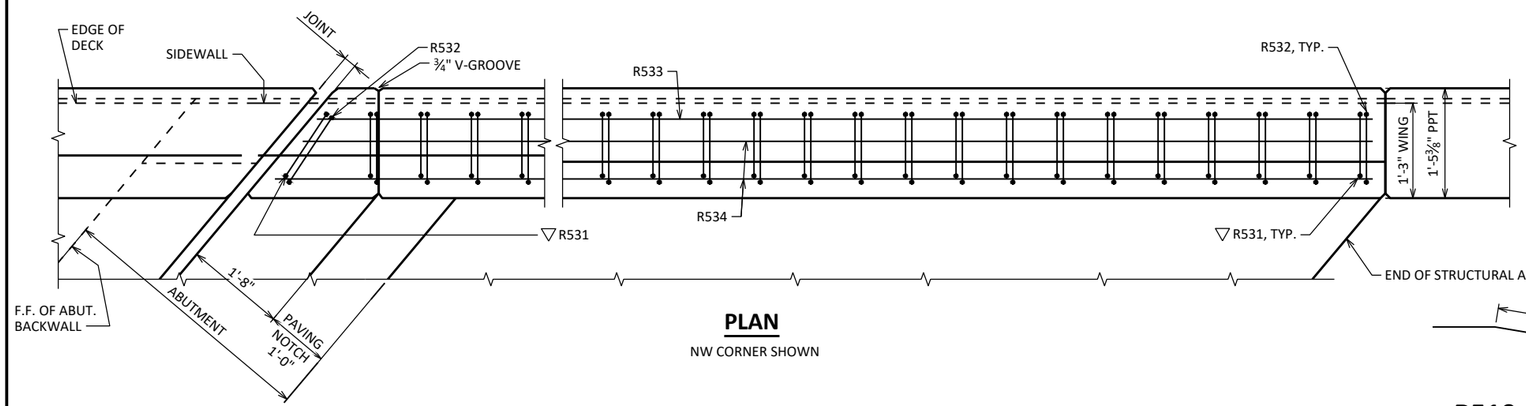
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
R507	3 SERIES OF 6	4'-9" TO 6'-3"

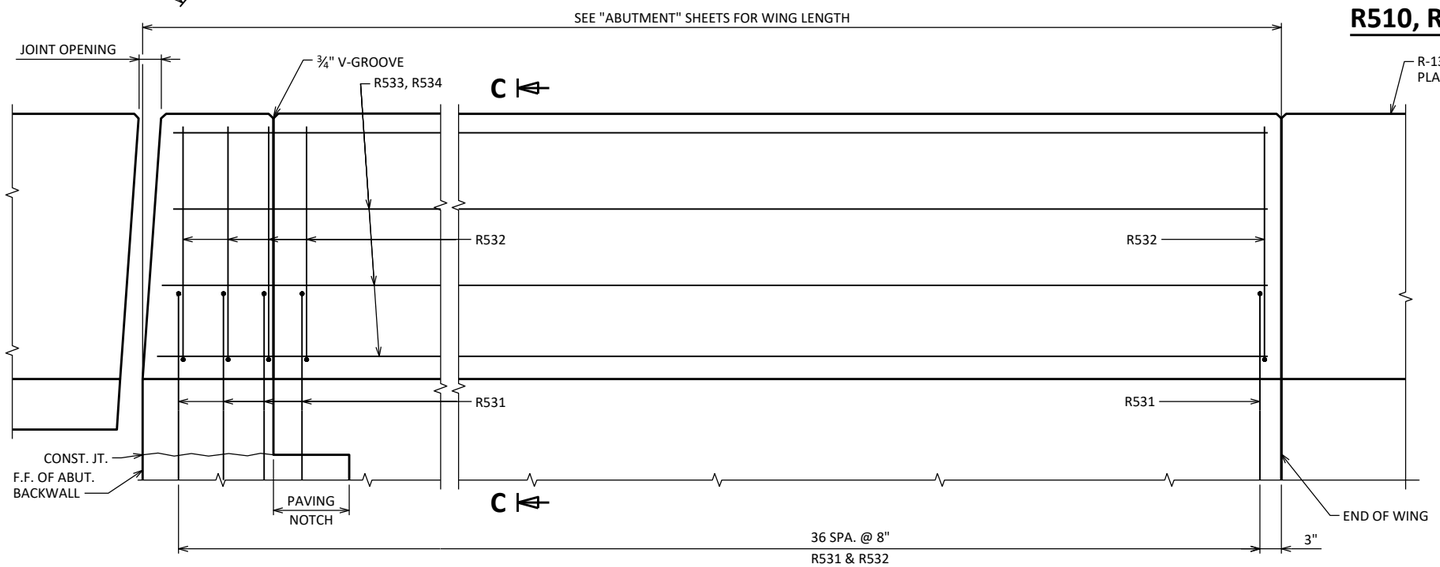
BILL OF BARS

BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	43	24	4'-5"	X		PARAPET VERT. CORNERS SE, SW, NE
R502	X	43	24	6'-8"	X		PARAPET VERT. CORNERS SE, SW, NE
R503	X	22	11	2'-9"	X		PARAPET VERT. CORNERS SE, SW, NE
R504	X	34	17	4'-4"	X		PARAPET VERT. CORNERS SE, SW, NE
R505	X	10	5	6'-5"	X		PARAPET VERT. CORNERS SE, SW, NE
R506	X	12	6	6'-6"	X		PARAPET VERT. CORNERS SE, SW, NE
R507	X	12	6	5'-5"	X	X	PARAPET VERT. CORNERS SE, SW, NE
R508	X	3	0	20'-3"			PARAPET HORIZ. CORNER SE
R509	X	1	0	21'-3"	X		PARAPET HORIZ. CORNER SE
R510	X	1	0	21'-2"	X		PARAPET HORIZ. CORNER SE
R511	X	2	0	21'-3"			PARAPET HORIZ. CORNER SE
R512	X	1	0	20'-3"	X		PARAPET HORIZ. CORNER SE
R513	X	3	0	23'-0"			PARAPET HORIZ. CORNER SW
R514	X	1	0	23'-1"	X		PARAPET HORIZ. CORNER SW
R515	X	1	0	21'-11"	X		PARAPET HORIZ. CORNER SW
R516	X	2	0	22'-0"			PARAPET HORIZ. CORNER SW
R517	X	1	0	22'-0"	X		PARAPET HORIZ. CORNER SW
R518	X	0	3	23'-10"			PARAPET HORIZ. CORNER NE
R519	X	0	1	23'-11"	X		PARAPET HORIZ. CORNER NE
R520	X	0	1	22'-8"	X		PARAPET HORIZ. CORNER NE
R521	X	0	2	22'-9"			PARAPET HORIZ. CORNER NE
R522	X	0	1	22'-9"	X		PARAPET HORIZ. CORNER NE
R531	X	0	37	5'-10"	X		PARAPET HORIZ. CORNER NW
R532	X	0	37	6'-8"	X		PARAPET HORIZ. CORNER NW
R533	X	0	4	22'-6"			PARAPET HORIZ. CORNER NW
R534	X	0	4	23'-9"			PARAPET HORIZ. CORNER NW



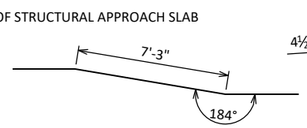
PLAN

NW CORNER SHOWN

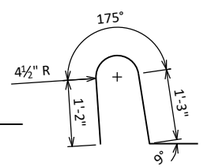


INSIDE ELEVATION

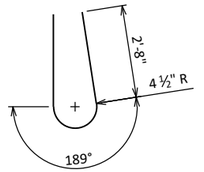
NW CORNER SHOWN



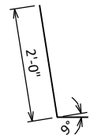
R510, R515, R520



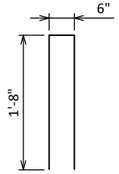
R501



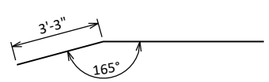
R502



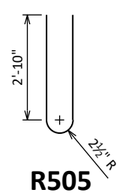
R503



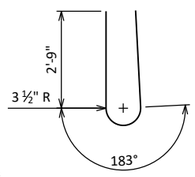
R504



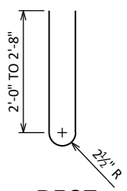
R509, R512, R514, R517, R519, R522



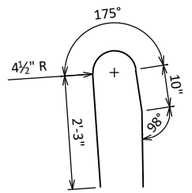
R505



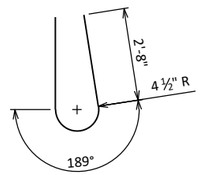
R506



R507



R501



R502

◑ CONST. JOINT - STRIKE OFF AS SHOWN

▽ R531 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-899

DRAWN BY ZSS | PLANS CK'D JLB

SINGLE SLOPE PARAPET 42SS

SHEET 41 OF 43

583

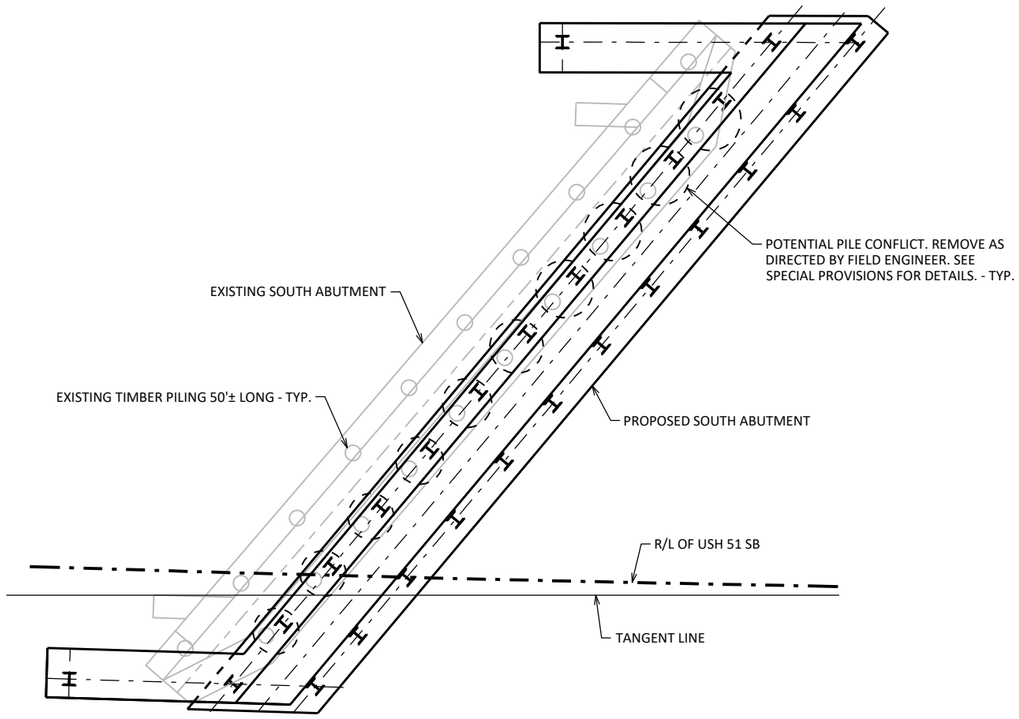
SCALE = 2.00

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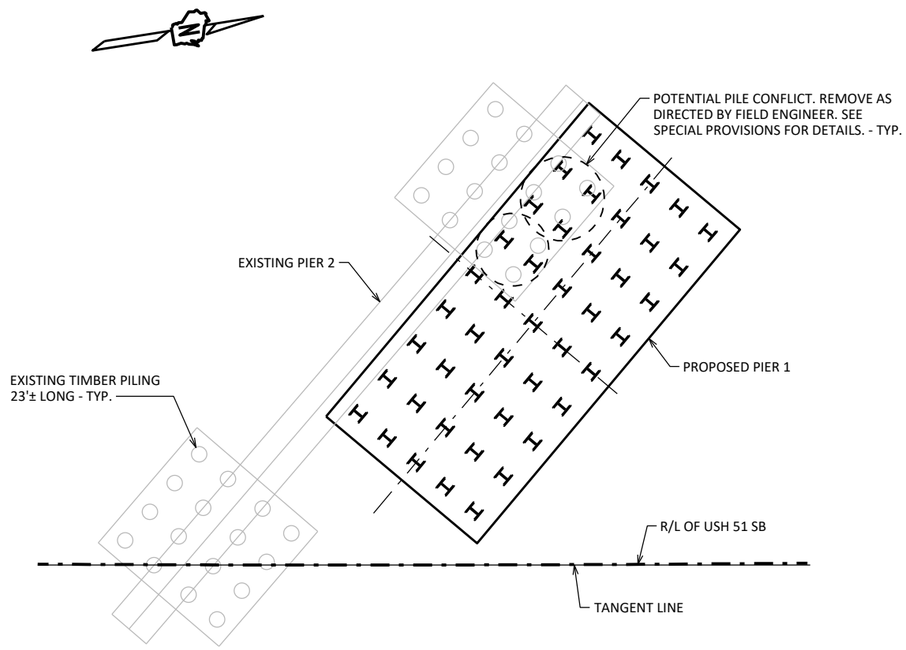
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STATE PROJECT NUMBER

5845-16-77



SOUTH ABUTMENT



PIER 1

EXISTING SUBSTRUCTURE PILE PLAN (PROPOSED PILES SHOWN)

LOCATIONS ARE APPROXIMATE AND ESTIMATED BASED ON ORIGINAL STRUCTURE PLANS AND SURVEY DATA. EXTENTS AND OTHER LOCATIONS SHALL BE CONFIRMED BY FIELD ENGINEER. SEE "SOUTH ABUTMENT" AND "PIER 1 DETAILS" SHEETS FOR PILE PLAN LAYOUTS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY	ZSS	PLANS CK'D	JLB

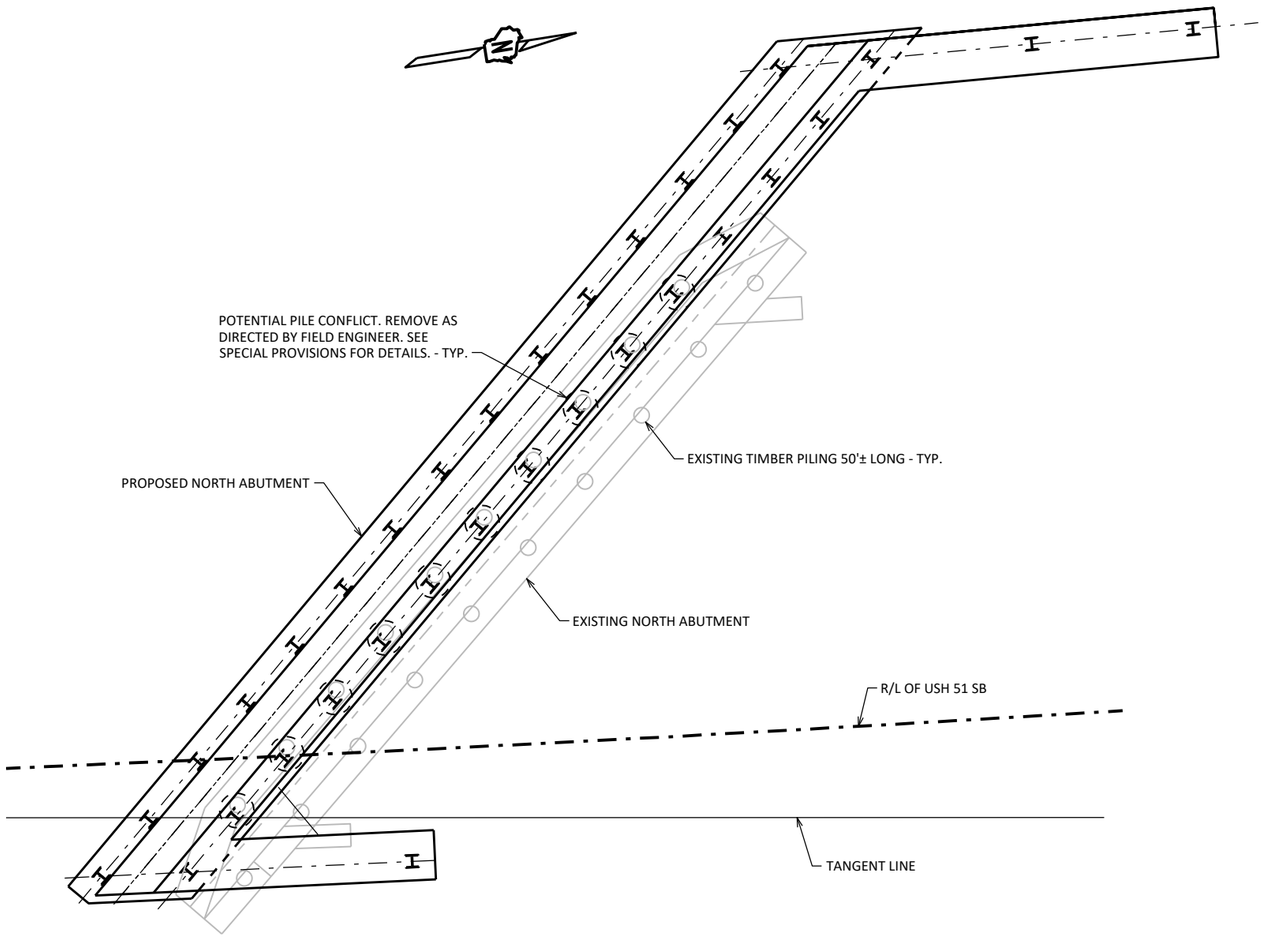
PILE REMOVAL SOUTH ABUT. & PIER 1

SHEET 42 OF 43

584

STATE PROJECT NUMBER

5845-16-77



8

8

NORTH ABUTMENT

EXISTING SUBSTRUCTURE PILE PLAN (PROPOSED PILES SHOWN)

LOCATIONS ARE APPROXIMATE AND ESTIMATED BASED ON ORIGINAL STRUCTURE PLANS AND SURVEY DATA. EXTENTS AND OTHER LOCATIONS SHALL BE CONFIRMED BY FIELD ENGINEER. SEE "NORTH ABUTMENT" SHEET FOR PILE PLAN LAYOUTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-899

DRAWN BY	ZSS	PLANS CK'D	JLB

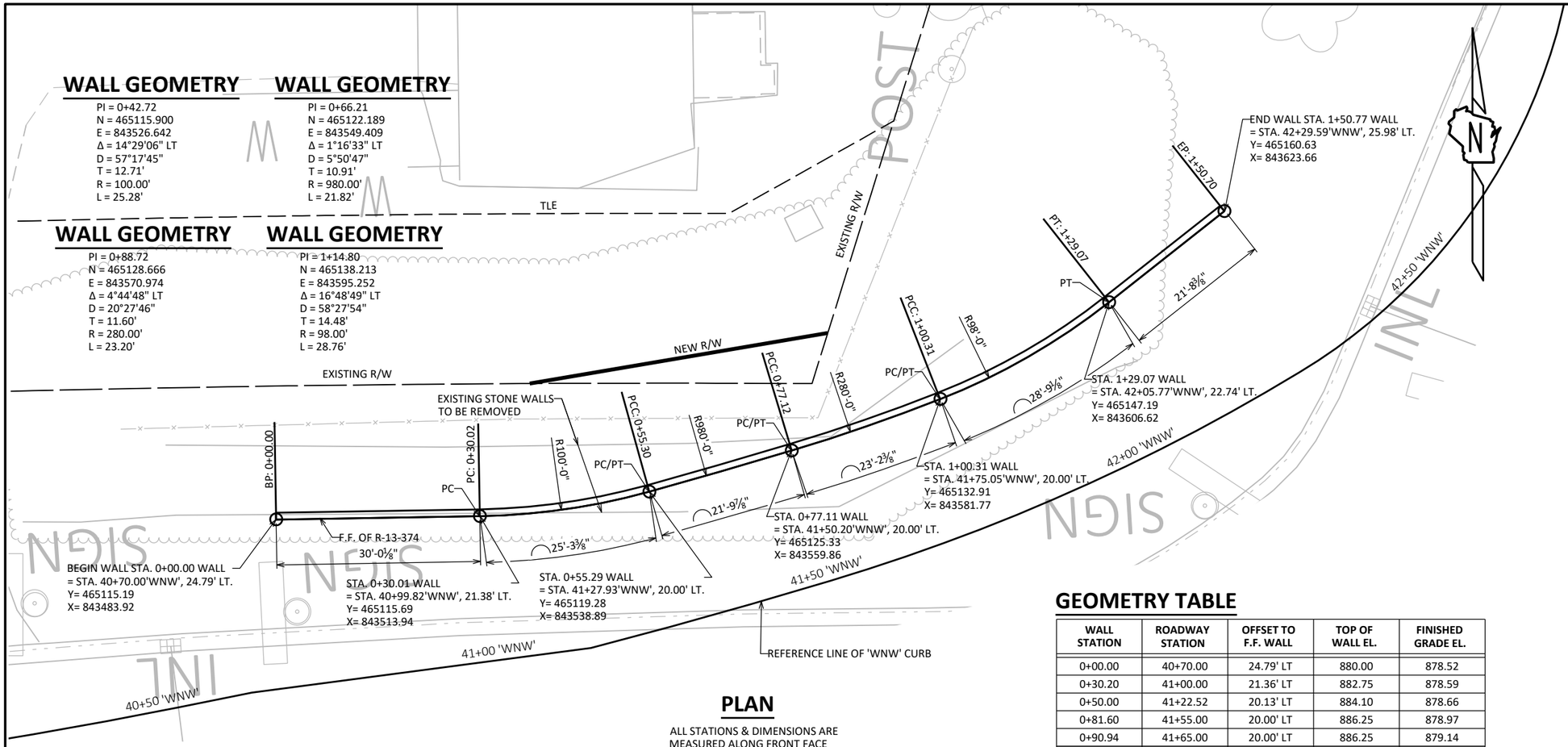
PILE REMOVAL NORTH ABUTMENT

SHEET 43 OF 43

585

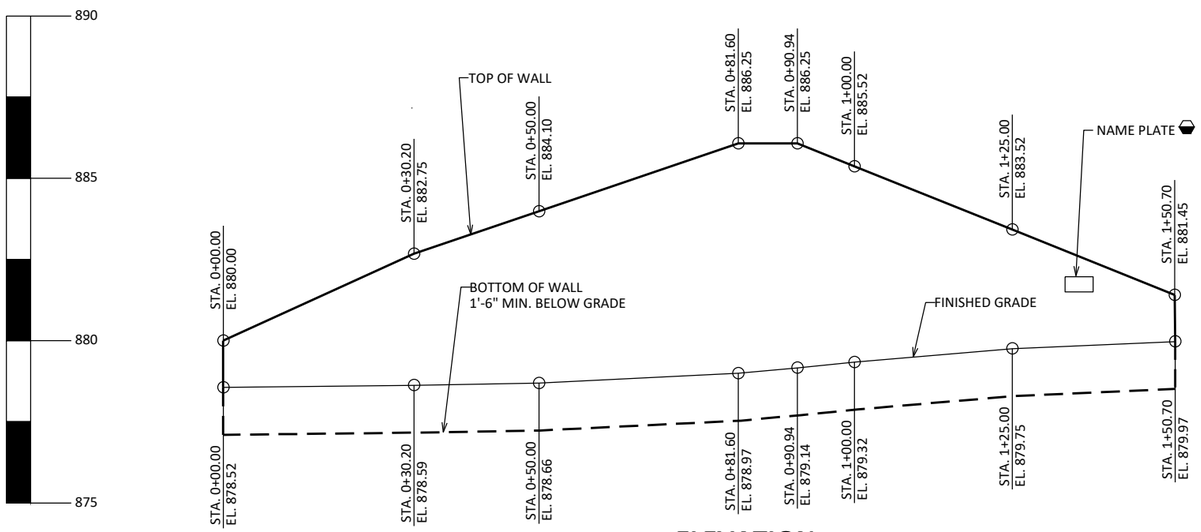
STATE PROJECT NUMBER

5845-16-77



PLAN

ALL STATIONS & DIMENSIONS ARE MEASURED ALONG FRONT FACE



ELEVATION

(LOOKING AT FRONT FACE OF WALL)

LOCATE NAME PLATE ON THE FRONT OF WALL APPROXIMATELY 3' TO 6' HIGH. CENTER NAME PLATE BETWEEN CAST-IN-PLACE CONCRETE COPING JOINTS, CENTERED ON A NON-CAP BLOCK, OR AS DIRECTED BY THE FIELD ENGINEER.

GEOMETRY TABLE

WALL STATION	ROADWAY STATION	OFFSET TO F.F. WALL	TOP OF WALL EL.	FINISHED GRADE EL.
0+00.00	40+70.00	24.79' LT	880.00	878.52
0+30.20	41+00.00	21.36' LT	882.75	878.59
0+50.00	41+22.52	20.13' LT	884.10	878.66
0+81.60	41+55.00	20.00' LT	886.25	878.97
0+90.94	41+65.00	20.00' LT	886.25	879.14
1+00.00	41+74.71	20.00' LT	885.52	879.32
1+25.00	42+01.44	22.02' LT	883.52	879.75
1+50.70	42+30.00	25.97' LT	881.45	879.97

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES & WALL DETAILS
3. RETAINING WALL DETAILS
4. RAILING DETAILS
5. SUBSURFACE EXPLORATION



9/25/2024

STRUCTURE DESIGN CONTACTS:

AARON BONK	608-261-0261
KRISTOFER OLSON	920-498-1200

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE PLAN QUANTITY FOR THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO A CONSTANT DEPTH OF 1'-6" BELOW FINISHED GRADE.

AT THE BACK FACE OF THE RETAINING WALL ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES RETAINING WALLS R-13-374" SHALL BE THE EXISTING GROUND.

CONCRETE COPING SHALL BE STAINED AMS STANDARD COLOR NO. 20122, BROWN. APPLY STAIN TO THE FRONT FACE ONLY. THE MODULAR BLOCKS SHALL BE AMS STANDARD COLOR NO. 33448, DARK YELLOW, AND HAVE A TUMBLED STONE APPEARANCE.

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 100 PSF.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

MATERIAL PROPERTIES:

CONCRETE MASONRY (COPING) _____ f'_c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 _____ f_y = 60,000 P.S.I.

ALLOWABLE WALL SYSTEMS

WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

AYRES
700 PILGRIM WAY, SUITE 180
GREEN BAY, WI 54304
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 09/26/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-13-374

WNW MSE RETAINING WALL

COUNTY	VILLAGE
DANE	MCFARLAND

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
KRO	JMC	ZSS/CLP	KRO

GENERAL PLAN

SHEET 1 OF 5
586

I.D. 5845-16-06 DATE: 04/26/22

8

8

STATE PROJECT NUMBER

5845-16-77

TOTAL ESTIMATED QUANTITIES

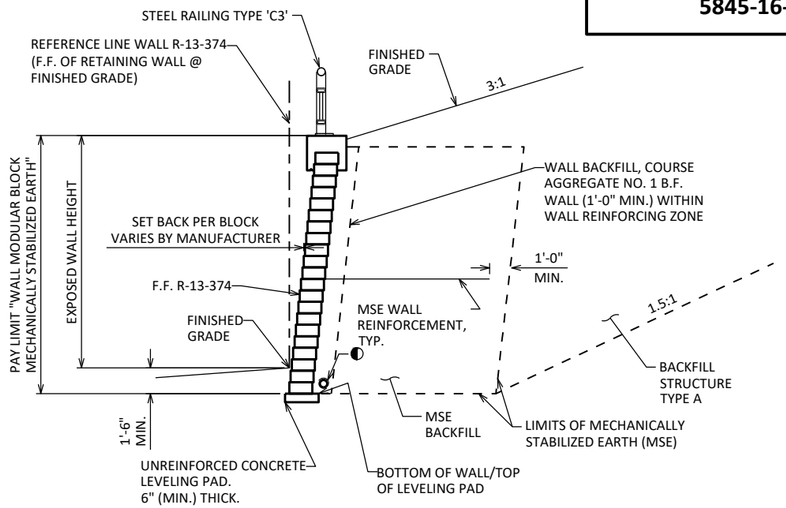
BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
204.9060.S	REMOVING RETAINING WALL 'WNW'	EA	1
206.3001	EXCAVATION FOR STRUCTURES RETAINING WALLS R-13-374	EA	1
513.8016	RAILING STEEL PEDESTRIAN TYPE C3	LF	150.7
517.1010.S	STAINING CONCRETE R-13-374	SF	190
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	175
SPV.0165	WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH R-13-374	SF	927

WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS	
WALL HEIGHT (FEET)	7.5	9.0
EXPOSED WALL HEIGHT (FEET)	6.0	7.5
LENGTH OF REINFORCEMENT (FEET) ▪	8.5	10.0
WALL STATION	0+00 TO 1+50.70	
BORING USED	RW-01	RW-02
CAPACITY TO DEMAND RATIO (CDR)		
SLIDING (CDR>1.0)	1.00	1.00
ECCENTRICITY (CDR>1.0)	3.30	3.30
OVERALL STABILITY (CDR >1.0) ☆	1.27	1.24
BEARING RESISTANCE (CDR>1.0)	2.0	1.67
FACTORED BEARING RESISTANCE (psf)	4,000	4,000

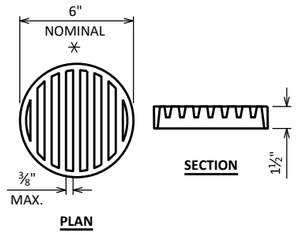
SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
GRANULAR BACKFILL (REINFORCED ZONE)	120	30	0
RETAINED SOIL	120	30	0
BASE AGGREGATE DENSE 3-INCH	130	35	0
BORING RW-01			
MEDIUM DENSE TO DENSE SAND ELEVATION 880.0 TO 910.0 ◓	125	33	0
BORING RW-02			
MEDIUM DENSE SAND ELEVATION 882.0 TO 906.0 ◓	125	31	0
VERY DENSE SAND (WEATHERED BEDROCK) ELEVATION 906.0 TO 912.0 ◓	125	40	0



TYPICAL SECTION THRU MSE RETAINING WALL

◐ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



RODENT SHIELD DETAIL

✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAING WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NOTES:

▪ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

☆ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.

◓ STRATUM LOCATIONS & SOIL DESCRIPTIONS AT EACH BORING LOCATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-374

DRAWN BY CLP | PLANS CK'D KRO

QUANTITIES & WALL DETAILS

SHEET 2 OF 5

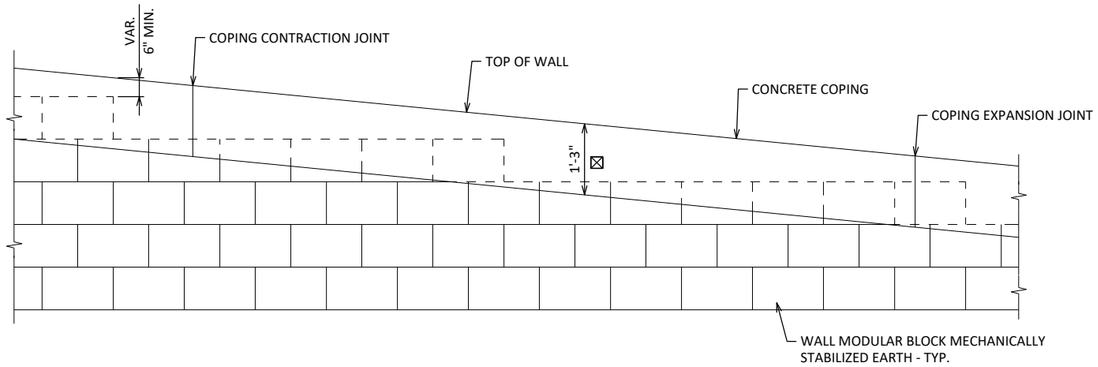
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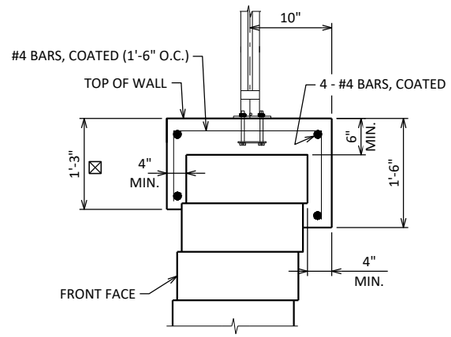
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STATE PROJECT NUMBER

5845-16-77



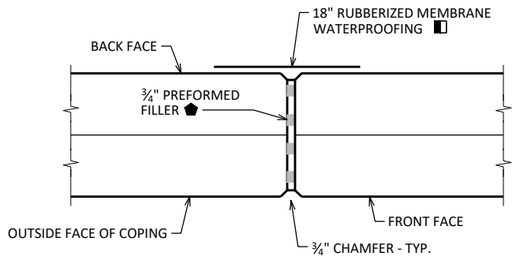
RETAINING WALL FACE & CONCRETE COPING DETAIL



COPING DETAIL

⊠ THIS DIMENSION MAY CHANGE DEPENDING ON HEIGHT OF BLOCKS. THIS DIMENSION TO BE CONSTANT FOR ENTIRE LENGTH OF WALL. MAXIMUM ALLOWABLE HEIGHT OF BLOCKS TO BE 9 INCHES.

MAINTAIN 2" MINIMUM COVER ON ALL REBAR.



COPING EXPANSION JOINT

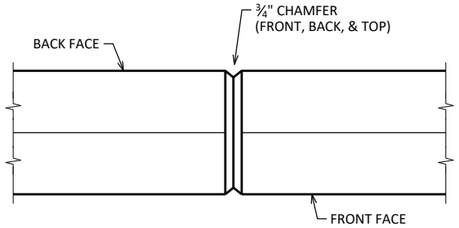
◧ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS.

⬟ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.)

PLACE EXPANSION JOINTS AT EVERY THIRD JOINT AND AT ALL WALL RADIUS PC/PT POINTS AND BEND POINTS.

DO NOT RUN BAR STEEL THRU JOINT.

MAXIMUM SPACING OF JOINT = 50' .



COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT MAXIMUM SPACING OF JOINT = 12'

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-374

DRAWN BY ZSS | PLANS CK'D KRO

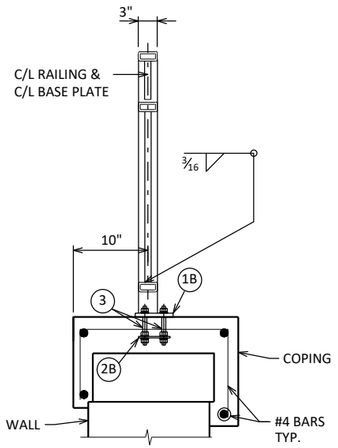
RETAINING WALL DETAILS

SHEET 3 OF 5

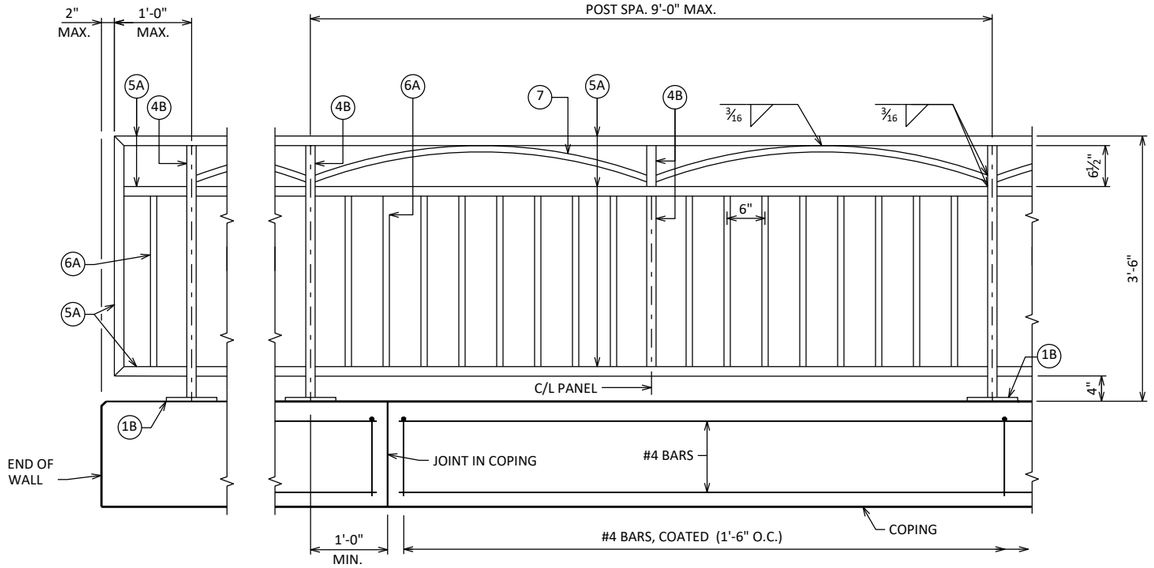
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STATE PROJECT NUMBER

5845-16-77



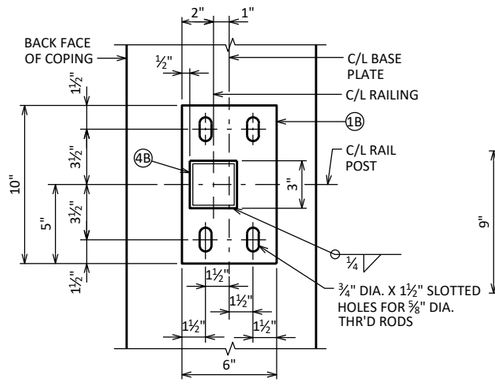
END VIEW



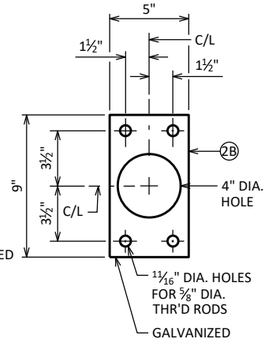
ELEVATION OF RAILING

LEGEND

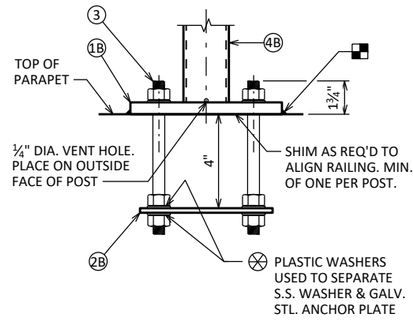
- (1B) PLATE ⅝" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.
- (2B) ¼" X 5" X 9" ANCHOR PLATE WITH $^{11}/_{16}$" DIA. HOLES FOR THR'D RODS NO. 3.
- (3) ⅝" DIA. X 7 ½" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 OF THE STANDARD SPECIFICATIONS.
- (4B) STRUCTURAL TUBING 3" X 3" X $^{3}/_{16}$". PLACE VERTICAL. WELD TO NO. 1 & 5.
- (5A) STRUCTURAL TUBING 3" X 1½" X $^{3}/_{16}$" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- (6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.
- (7) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM $^{3}/_{16}$" PLATES. PROVIDE "SLIDING FIT".
- (10A) RECTANGULAR SLEEVE FABRICATED FROM $^{3}/_{16}$" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)



TYPICAL RAIL POST BASE PLATE



ANCHOR PLATE



ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED
WHEN ADHESIVE ANCHORS ARE USED.

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

◪ CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

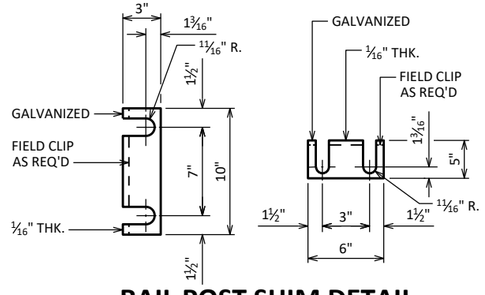
ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3 & 12) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

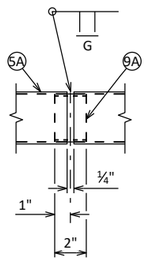
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



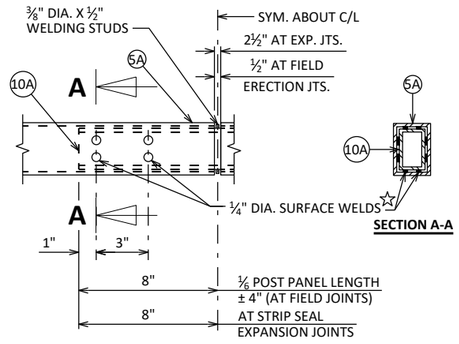
RAIL POST SHIM DETAIL

(2 SETS PER POST)



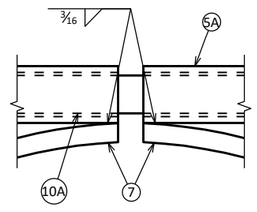
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



CURVED MEMBER JOINT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-374

DRAWN BY ZSS | PLANS CK'D KRO

RAILING DETAILS

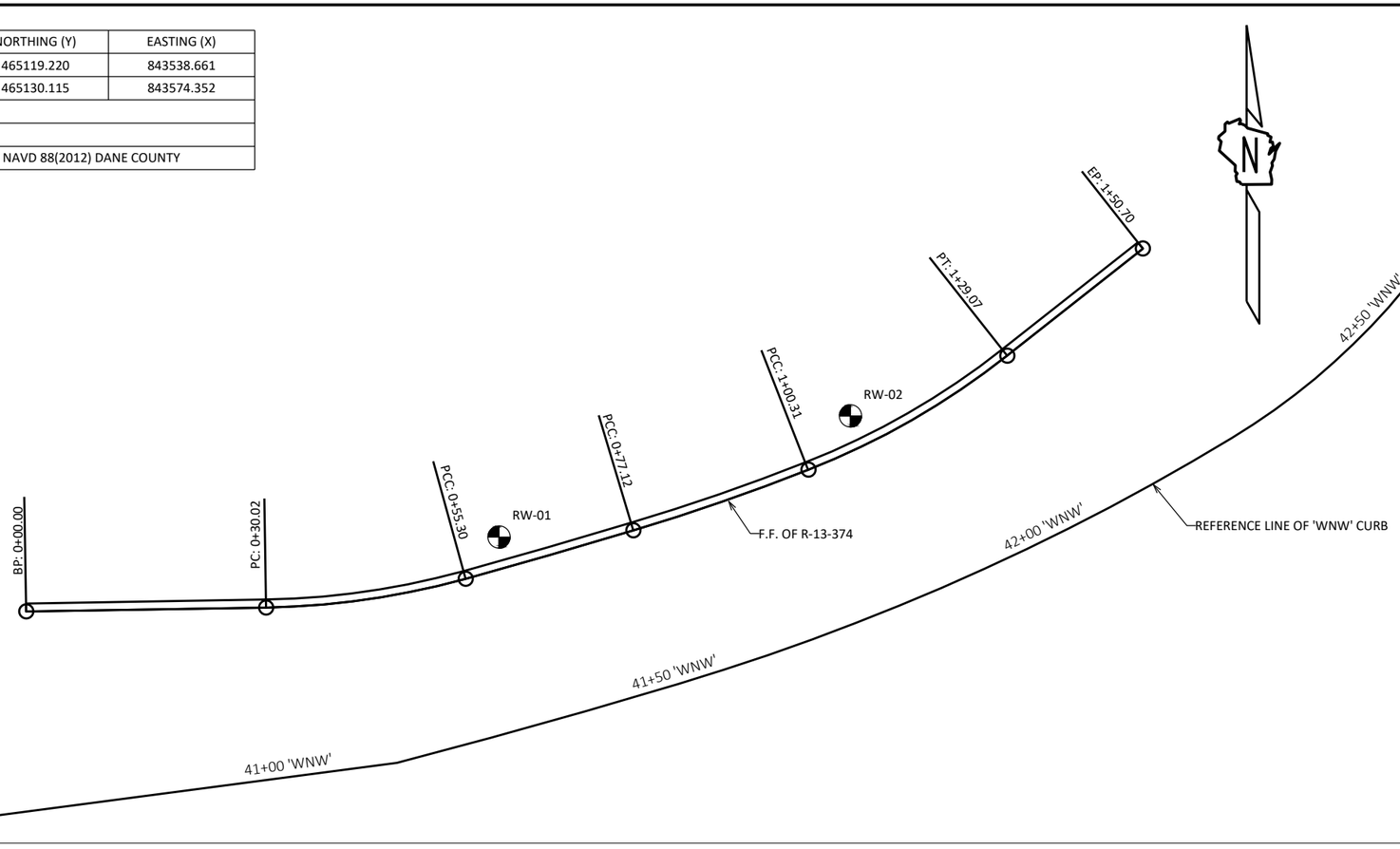
SHEET 4 OF 5

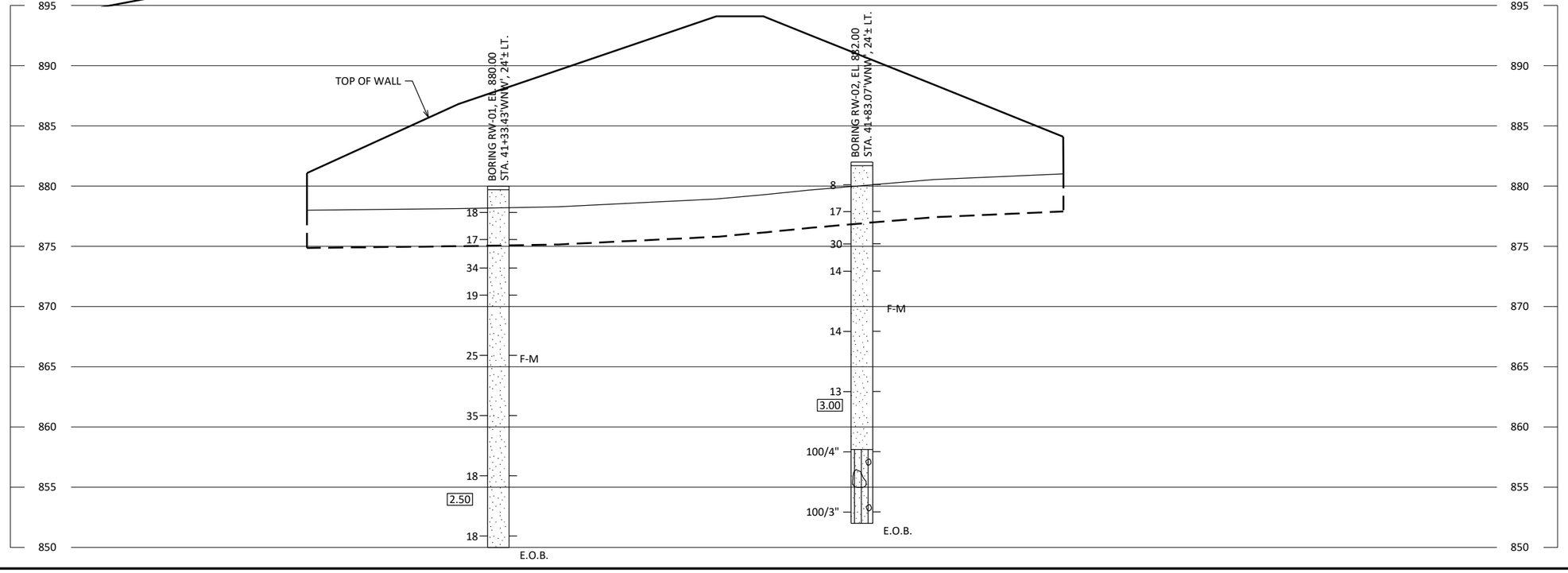
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
RW-01	SEPTEMBER 6, 2022	465119.220	843538.661
RW-02	SEPTEMBER 6, 2022	465130.115	843574.352
BORINGS COMPLETED BY: CGC, INC.			
REPORT COMPLETED BY: CGC, INC.			
ALL COORDINATES REFERENCED TO WCCS NAVD 88(2012) DANE COUNTY			





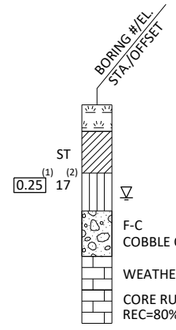
STATE PROJECT NUMBER

5845-16-77

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

AT TIME OF DRILLING

END OF DRILLING

AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-374

DRAWN BY	ZSS	PLANS CK'D	KRO

SUBSURFACE EXPLORATION

SHEET 5 OF 5

590

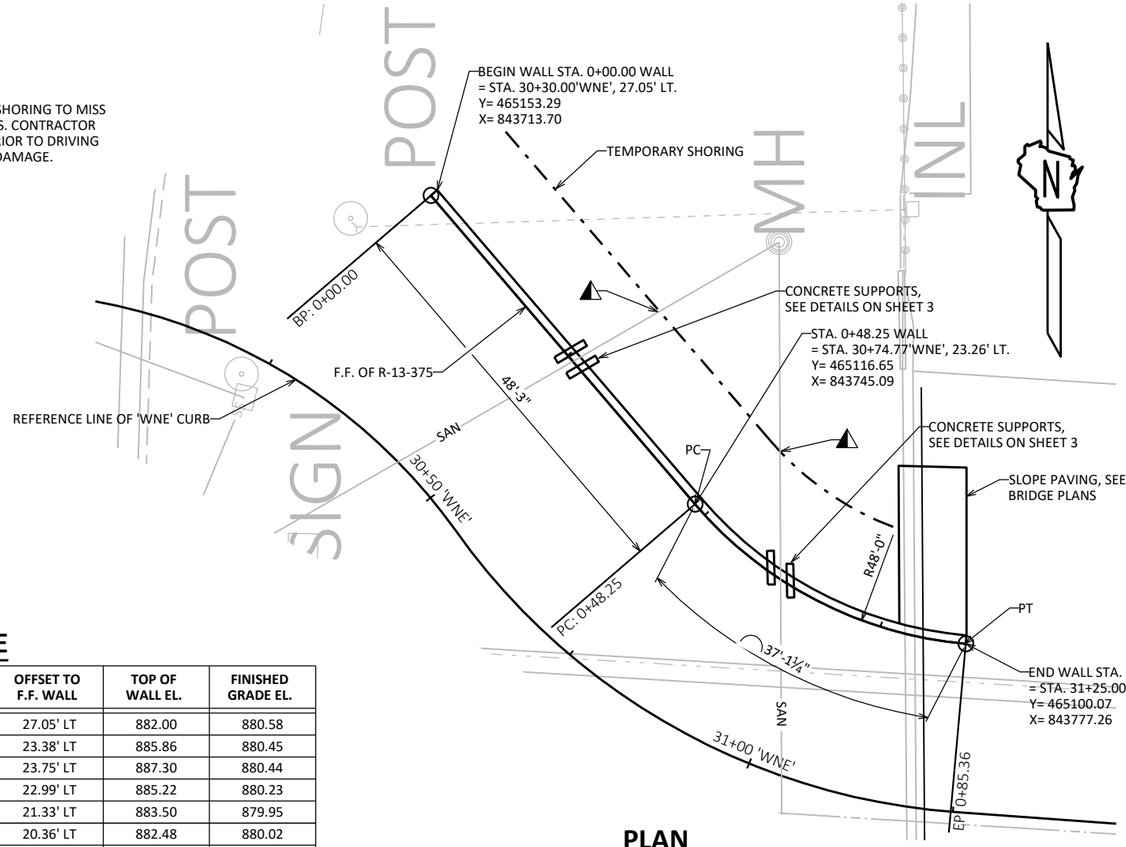
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STATE PROJECT NUMBER

5845-16-77

DESIGN TEMPORARY SHORING TO MISS EXISTING SEWER LINES. CONTRACTOR TO EXPOSE UTILITY PRIOR TO DRIVING SHEETS TO PREVENT DAMAGE.



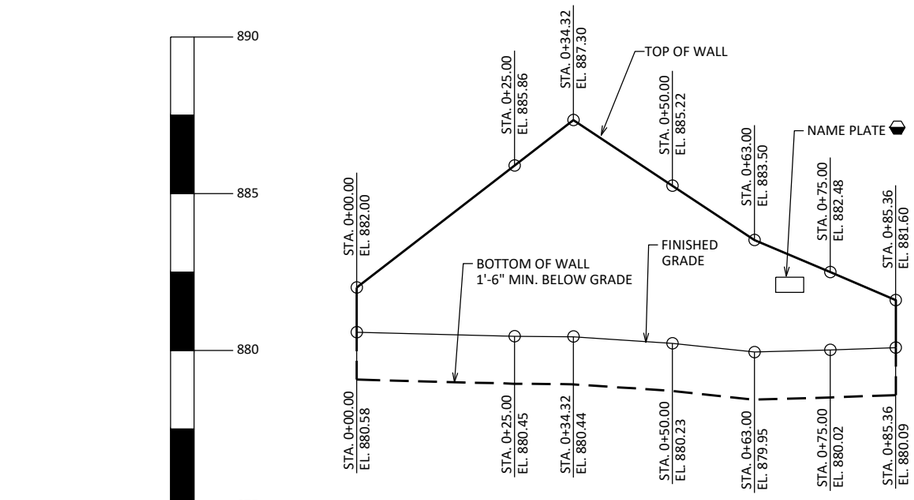
PLAN

WALL GEOMETRY

PI = 0+67.79
N = 465101.815
E = 843757.799
Δ = 44°17'16" LT
D = 119°21'58"
T = 19.53'
R = 48.00'
L = 37.10'

GEOMETRY TABLE

WALL STATION	ROADWAY STATION	OFFSET TO F.F. WALL	TOP OF WALL EL.	FINISHED GRADE EL.
0+00.00	30+30.00	27.05' LT	882.00	880.58
0+25.00	30+48.06	23.38' LT	885.86	880.45
0+34.32	30+55.00	23.75' LT	887.30	880.44
0+50.00	30+77.19	22.99' LT	885.22	880.23
0+63.00	30+95.00	21.33' LT	883.50	879.95
0+75.00	31+11.17	20.36' LT	882.48	880.02
0+85.36	31+25.00	20.01' LT	881.60	880.09



ELEVATION

(LOOKING AT FRONT FACE OF WALL)

LOCATE NAME PLATE ON THE FRONT OF WALL APPROXIMATELY 3' TO 6' HIGH. CENTER NAME PLATE BETWEEN CAST-IN-PLACE CONCRETE COPING JOINTS, CENTERED ON A NON-CAP BLOCK, OR AS DIRECTED BY THE FIELD ENGINEER.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE PLAN QUANTITY FOR THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO A CONSTANT DEPTH OF 1'-6" BELOW FINISHED GRADE.

AT THE BACK FACE OF THE RETAINING WALL ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

CONCRETE COPING SHALL BE STAINED AMS STANDARD COLOR NO. 20122, BROWN. APPLY STAIN TO THE FRONT FACE ONLY. THE MODULAR BLOCKS SHALL BE AMS STANDARD COLOR NO. 33448, DARK YELLOW, AND HAVE A TUMBLED STONE APPEARANCE.

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 100 PSF.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

MATERIAL PROPERTIES:

CONCRETE MASONRY (COPING) _____ f'_c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 _____ f_y = 60,000 P.S.I.

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES & WALL DETAILS
3. RETAINING WALL DETAILS
4. RAILING DETAILS
5. SUBSURFACE EXPLORATION

ALLOWABLE WALL SYSTEMS

WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER

8/5/2024

STRUCTURE DESIGN CONTACTS:

AARON BONK 608-261-0261
KRISTOFER OLSON 920-498-1200

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES
700 PILGRIM WAY, SUITE 180
GREEN BAY, WI 54304
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED _____ SDR 08/06/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-13-375

WNE MSE RETAINING WALL

COUNTY	VILLAGE
DANE	MCFARLAND

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
KRO	JMC	ZSS/CLP	KRO

GENERAL PLAN

SHEET 1 OF 5
591

I.D. 5845-16-06 DATE: 04/26/22

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8

STATE PROJECT NUMBER

5845-16-77

TOTAL ESTIMATED QUANTITIES

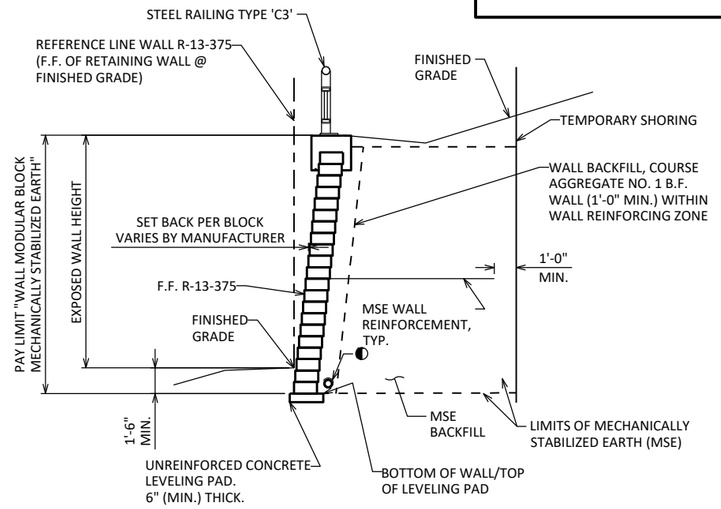
BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
205.0100	EXCAVATION COMMON	CY	60
305.0130	BASE AGGREGATE DENSE 3-INCH	TON	115
511.1200	TEMPORARY SHORING R-13-375	SF	600
513.8016	RAILING STEEL PEDESTRIAN TYPE C3	LF	85.4
517.1010.S	STAINING CONCRETE R-13-375	SF	110
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	110
SPV.0165	WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH R-13-375	SF	476

WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS	
WALL HEIGHT (FEET)	8.7	
EXPOSED WALL HEIGHT (FEET)	7.2	
LENGTH OF REINFORCEMENT (FEET) ■	14.0	
WALL STATION	0+00 TO 0+85.35	
BORING USED	RW-03	
CAPACITY TO DEMAND RATIO (CDR)		
SLIDING (CDR>1.0)	1.00	
ECCENTRICITY (CDR>1.0)	2.75	
OVERALL STABILITY (CDR >1.0) ☆	1.12	
BEARING RESISTANCE (CDR>1.0)	1.60	
FACTORED BEARING RESISTANCE (psf)	4,000	

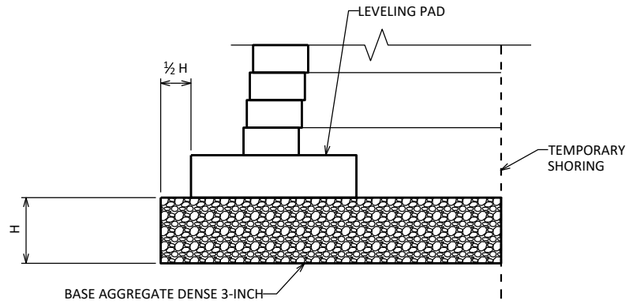
SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
GRANULAR BACKFILL (REINFORCED ZONE)	120	30	0
RETAINED SOIL	120	30	0
BASE AGGREGATE DENSE 3-INCH	130	35	0
BORING RW-03			
EXISTING CLAY FILL ELEVATION 884.0 TO 881.5 ◓	115	0	2,000
MEDIUM DENSE SAND ELEVATION 881.5 TO 857.0 ◓	125	31	0
VERY DENSE SAND (WEATHERED BEDROCK) ELEVATION 857.0 TO 855.2 ◓	125	40	0



TYPICAL SECTION THRU MSE RETAINING WALL

◐ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



EXCAVATION BELOW SUBGRADE DETAIL

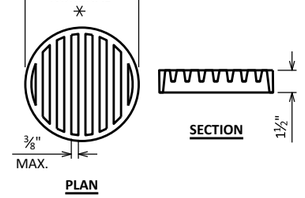
EXCAVATE BELOW BOTTOM OF LEVELING PAD TO REMOVE UNSUITABLE MATERIAL AND BACKFILL WITH BASE AGGREGATE DENSE 3-INCH, AS DIRECTED BY THE ENGINEER. EXCAVATION TO BE PAID AS "EXCAVATION COMMON".
(FOR QUANTITIES PURPOSE IT WAS ASSUMED "H" = 1 FT.)

NOTES:

■ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

☆ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.

◓ STRATUM LOCATIONS & SOIL DESCRIPTIONS AT EACH BORING LOCATION.



RODENT SHIELD DETAIL

✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAING WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-375

DRAWN BY ZSS/CLP | PLANS CK'D KRO

QUANTITIES & WALL DETAILS

SHEET 2 OF 5

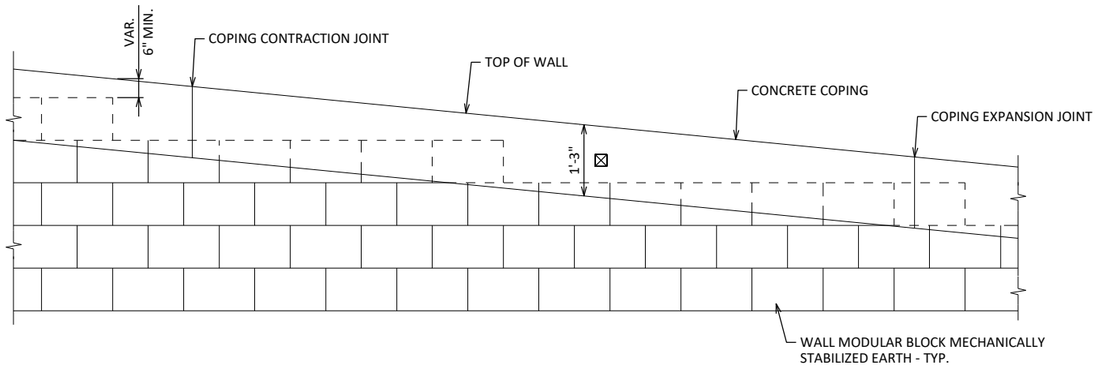
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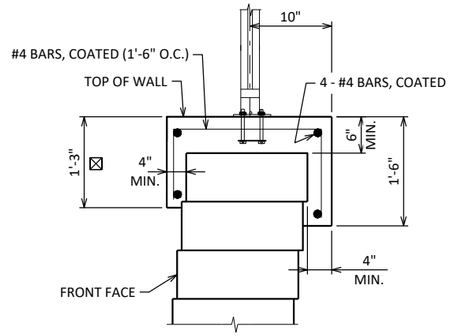
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STATE PROJECT NUMBER

5845-16-77



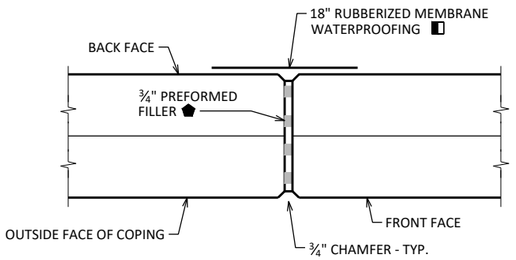
RETAINING WALL FACE & CONCRETE COPING DETAIL



COPING DETAIL

⊠ THIS DIMENSION MAY CHANGE DEPENDING ON HEIGHT OF BLOCKS. THIS DIMENSION TO BE CONSTANT FOR ENTIRE LENGTH OF WALL. MAXIMUM ALLOWABLE HEIGHT OF BLOCKS TO BE 9 INCHES.

MAINTAIN 2" MINIMUM COVER ON ALL REBAR.



COPING EXPANSION JOINT

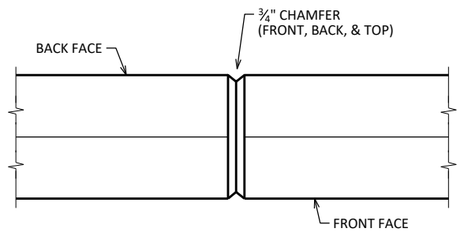
◧ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS.

⬟ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅜" BELOW SURFACE OF CONC.)

PLACE EXPANSION JOINTS AT EVERY THIRD JOINT AND AT ALL WALL RADIUS PC/PT POINTS AND BEND POINTS.

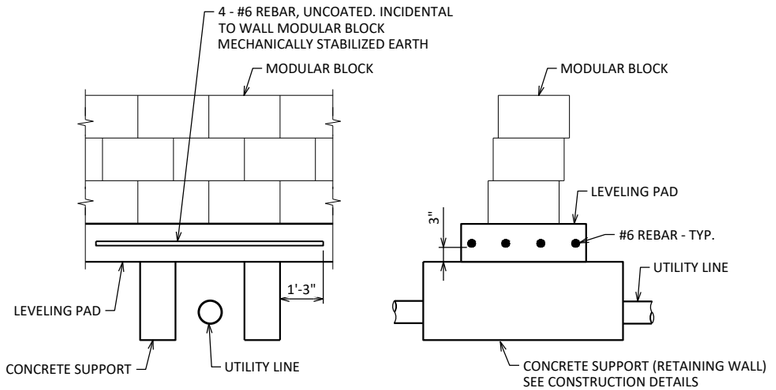
DO NOT RUN BAR STEEL THRU JOINT.

MAXIMUM SPACING OF JOINT = 50' .



COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT MAXIMUM SPACING OF JOINT = 12'



LEVELING PAD REINFORCEMENT AT CONCRETE SUPORTS (RETAINING WALL)

SUPPORTS PAID FOR UNDER ROADWAY ITEMS, SEE ROADWAY CONSTRUCTION DETAILS

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-375

DRAWN BY ZSS | PLANS CK'D KRO

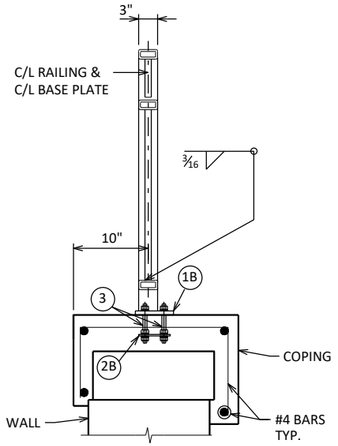
RETAINING WALL DETAILS

SHEET 3 OF 5

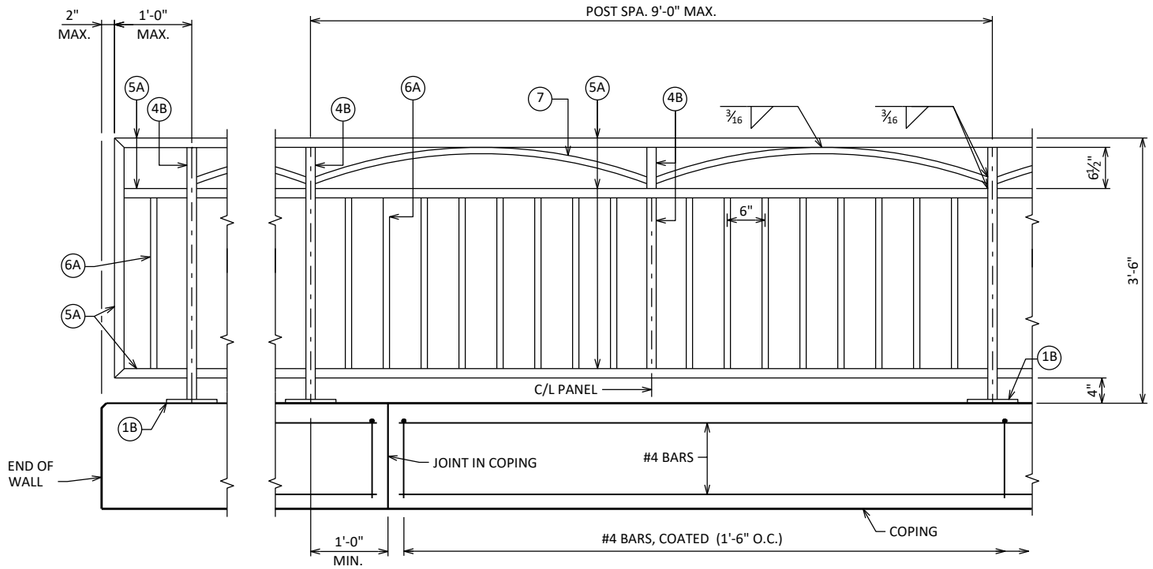
593

STATE PROJECT NUMBER

5845-16-77



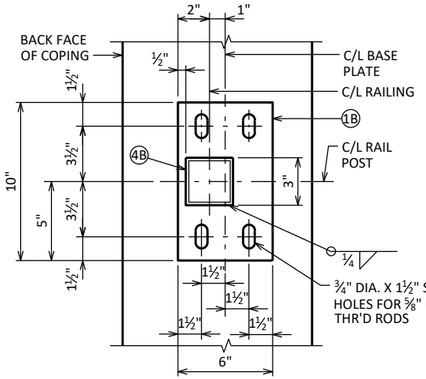
END VIEW



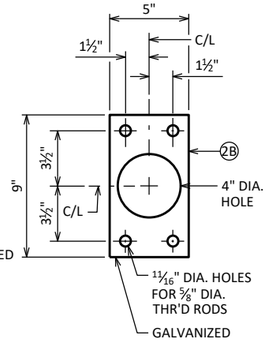
ELEVATION OF RAILING

LEGEND

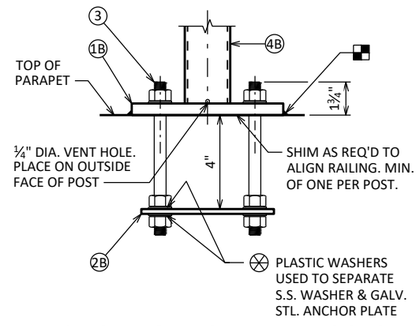
- (1B) PLATE ⅝" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.
- (2B) ¼" X 5" X 9" ANCHOR PLATE WITH $^{11}/_{16}$" DIA. HOLES FOR THR'D RODS NO. 3.
- (3) ⅝" DIA. X 7 ½" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 OF THE STANDARD SPECIFICATIONS.
- (4B) STRUCTURAL TUBING 3" X 3" X $^{3}/_{16}$". PLACE VERTICAL. WELD TO NO. 1 & 5.
- (5A) STRUCTURAL TUBING 3" X 1½" X $^{3}/_{16}$" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- (6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.
- (7) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM $^{3}/_{16}$" PLATES. PROVIDE "SLIDING FIT".
- (10A) RECTANGULAR SLEEVE FABRICATED FROM $^{3}/_{16}$" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)



TYPICAL RAIL POST BASE PLATE



ANCHOR PLATE



ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED
WHEN ADHESIVE ANCHORS ARE USED.

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

◪ CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

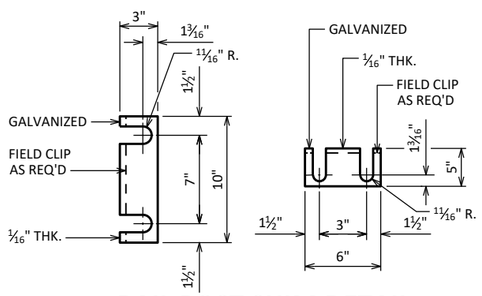
ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3 & 12) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

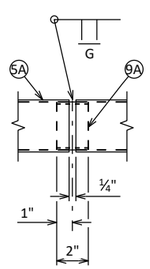
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



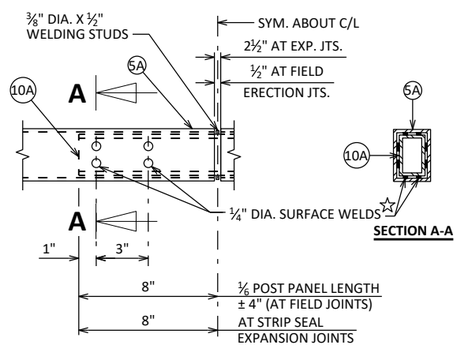
RAIL POST SHIM DETAIL

(2 SETS PER POST)



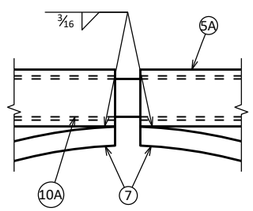
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



CURVED MEMBER JOINT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-375

DRAWN BY ZSS | PLANS CK'D KRO

RAILING DETAILS

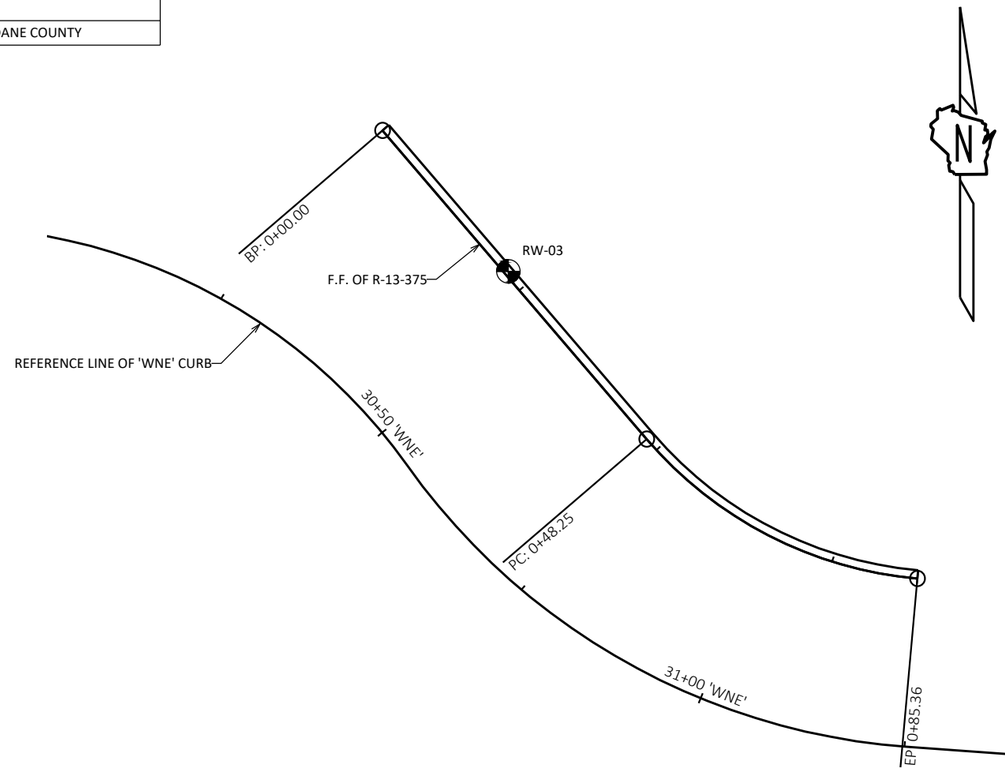
SHEET 4 OF 5

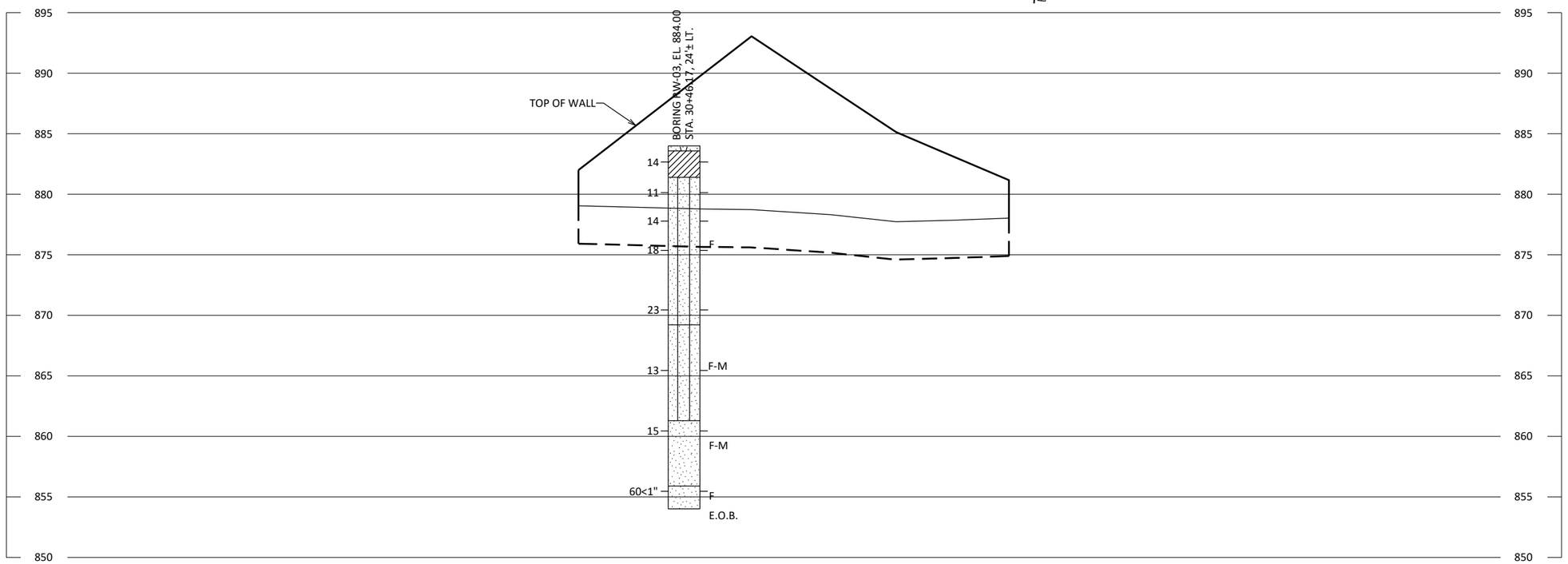
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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
RW-03	SEPTEMBER 6, 2022	465134.97	843729.40
BORINGS COMPLETED BY: CGC, INC.			
REPORT COMPLETED BY: CGC, INC.			
ALL COORDINATES REFERENCED TO WCCS NAVD 88(2012) DANE COUNTY			





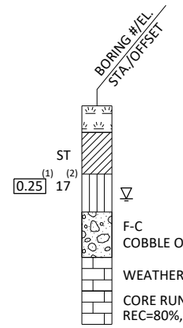
STATE PROJECT NUMBER

5845-16-77

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-375

DRAWN BY	ZSS	PLANS CK'D	KRO

SUBSURFACE EXPLORATION

SHEET 5 OF 5

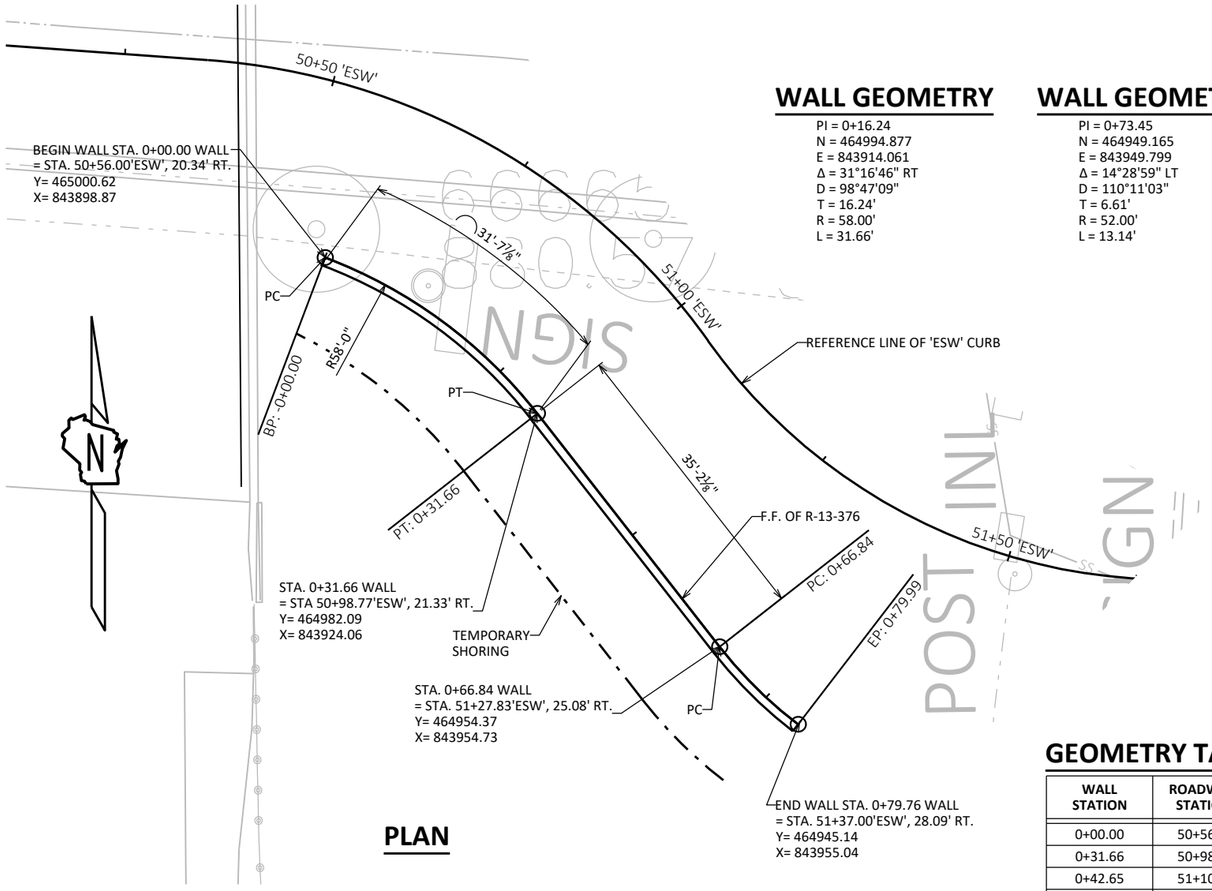
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STATE PROJECT NUMBER

5845-16-77



PLAN

WALL GEOMETRY

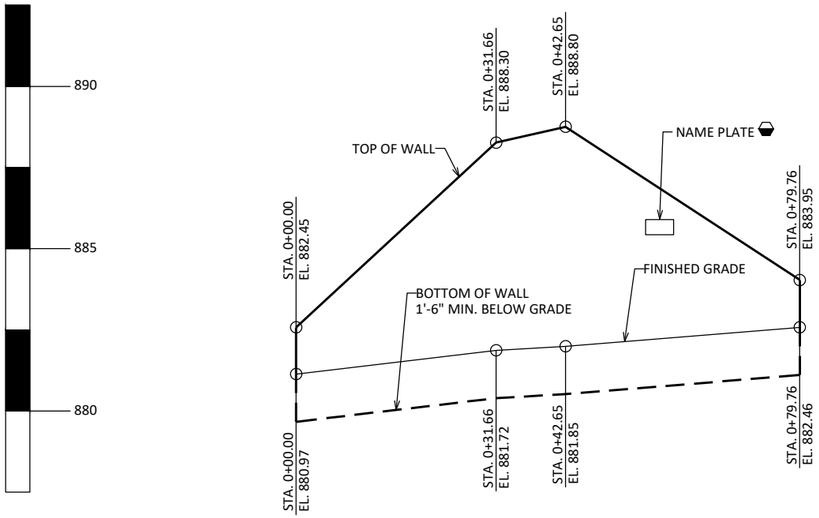
PI = 0+16.24
N = 464994.877
E = 843914.061
Δ = 31°16'46" RT
D = 98°47'09"
T = 16.24'
R = 58.00'
L = 31.66'

WALL GEOMETRY

PI = 0+73.45
N = 464949.165
E = 843949.799
Δ = 14°28'59" LT
D = 110°11'03"
T = 6.61'
R = 52.00'
L = 13.14'

GEOMETRY TABLE

WALL STATION	ROADWAY STATION	OFFSET TO F.F. WALL	TOP OF WALL EL.	FINISHED GRADE EL.
0+00.00	50+56.00	20.34' RT	882.45	880.97
0+31.66	50+98.70	21.33' RT	888.30	881.72
0+42.65	51+10.00	21.25' RT	888.80	881.85
0+79.76	51+37.00	28.09' RT	883.95	882.46



ELEVATION

(LOOKING AT BACK FACE OF WALL)

LOCATE NAME PLATE ON THE FRONT OF WALL APPROXIMATELY 3' TO 6' HIGH. CENTER NAME PLATE BETWEEN CAST-IN-PLACE CONCRETE COPING JOINTS, CENTERED ON A NON-CAP BLOCK, OR AS DIRECTED BY THE FIELD ENGINEER.

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES & WALL DETAILS
3. RETAINING WALL DETAILS
4. RAILING DETAILS
5. SUBSURFACE EXPLORATION

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE PLAN QUANTITY FOR THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO A CONSTANT DEPTH OF 1'-6" BELOW FINISHED GRADE.

AT THE BACK FACE OF THE RETAINING WALL ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

CONCRETE COPING SHALL BE STAINED AMS STANDARD COLOR NO. 20122, BROWN. APPLY STAIN TO THE FRONT FACE ONLY. THE MODULAR BLOCKS SHALL BE AMS STANDARD COLOR NO. 33448, DARK YELLOW, AND HAVE A TUMBLED STONE APPEARANCE.

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 100 PSF.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

MATERIAL PROPERTIES:

CONCRETE MASONRY (COPING) _____ f'_c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 _____ f_y = 60,000 P.S.I.

ALLOWABLE WALL SYSTEMS

WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER

6/27/2024

STRUCTURE DESIGN CONTACTS:

AARON BONK	608-261-0261
KRISTOFER OLSON	920-498-1200

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

AYRES
700 PILGRIM WAY, SUITE 180
GREEN BAY, WI 54304
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED _____ SDR 08/06/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE R-13-376

ESW MSE RETAINING WALL

COUNTY	VILLAGE
DANE	MCFARLAND

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
KRO	JMC	ZSS/CLP	KRO

GENERAL PLAN

SHEET 1 OF 5
596

I.D. 5845-16-06 DATE: 04-26-22

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8

STATE PROJECT NUMBER

5845-16-77

TOTAL ESTIMATED QUANTITIES

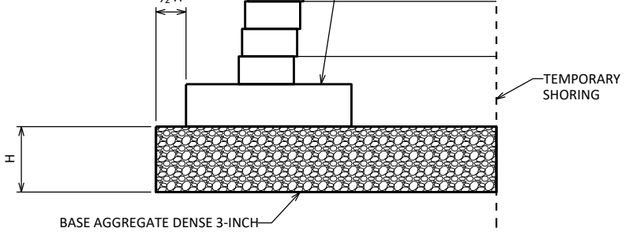
BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
205.0100	EXCAVATION COMMON	CY	60
305.0130	BASE AGGREGATE DENSE 3-INCH	TON	105
511.1200	TEMPORARY SHORING R-13-376	SF	600
513.8016	RAILING STEEL PEDESTRIAN TYPE C3	LF	79.8
517.1010.S	STAINING CONCRETE R-13-376	SF	100
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	100
SPV.0165	WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH R-13-376	SF	480

WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS	
WALL HEIGHT (FEET)	8.8	
EXPOSED WALL HEIGHT (FEET)	7.3	
LENGTH OF REINFORCEMENT (FEET) ■	14.0	
WALL STATION	0+00 TO 0+79.76	
BORING USED	RW-04	
CAPACITY TO DEMAND RATIO (CDR)		
SLIDING (CDR>1.0)	1.00	
ECCENTRICITY (CDR>1.0)	2.75	
OVERALL STABILITY (CDR >1.0) ☆	1.08	
BEARING RESISTANCE (CDR>1.0)	1.57	
FACTORED BEARING RESISTANCE (psf)	4,000	

SOIL PARAMETERS

STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
GRANULAR BACKFILL (REINFORCED ZONE)	120	30	0
RETAINED SOIL	120	30	0
BASE AGGREGATE DENSE 3-INCH	130	35	0
BORING RW-04			
LOOSE TO MEDIUM DENSE SAND ELEVATION 887.0 TO 909.0 ◓	120	0	0
VERY STIFF CLAY ELEVATION 909.0 TO 912.0 ◓	115	0	2,500
VERY DENSE SAND (WEATHERED BEDROCK) ELEVATION 912.0 TO 817.0 ◓	125	40	0



EXCAVATION BELOW SUBGRADE DETAIL

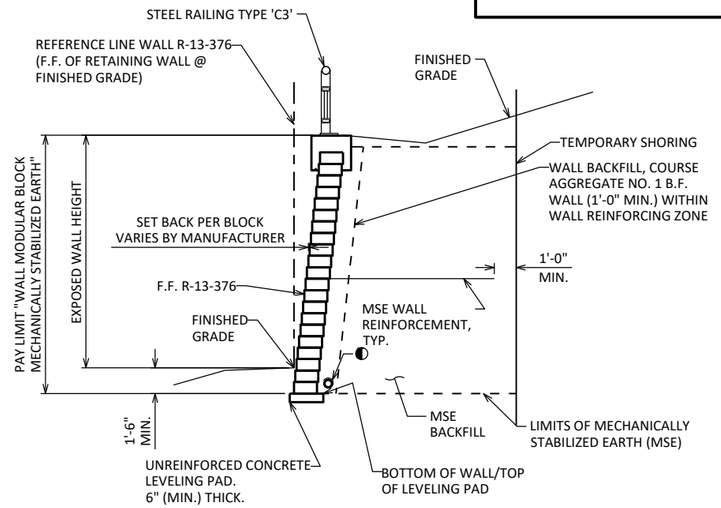
EXCAVATE BELOW BOTTOM OF LEVELING PAD TO REMOVE UNSUITABLE MATERIAL AND BACKFILL WITH BASE AGGREGATE DENSE 3-INCH, AS DIRECTED BY THE ENGINEER. EXCAVATION TO BE PAID AS "EXCAVATION COMMON".
(FOR QUANTITIES PURPOSE IT WAS ASSUMED "H" = 1 FT.)

NOTES:

■ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

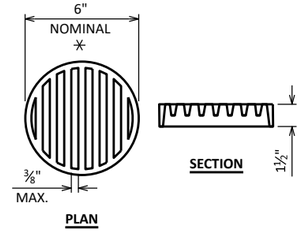
☆ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.

◓ STRATUM LOCATIONS & SOIL DESCRIPTIONS AT EACH BORING LOCATION.



TYPICAL SECTION THRU MSE RETAINING WALL

◐ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



RODENT SHIELD DETAIL

✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAING WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-376

DRAWN BY CLP | PLANS CK'D KRO

QUANTITIES & WALL DETAILS

SHEET 2 OF 5

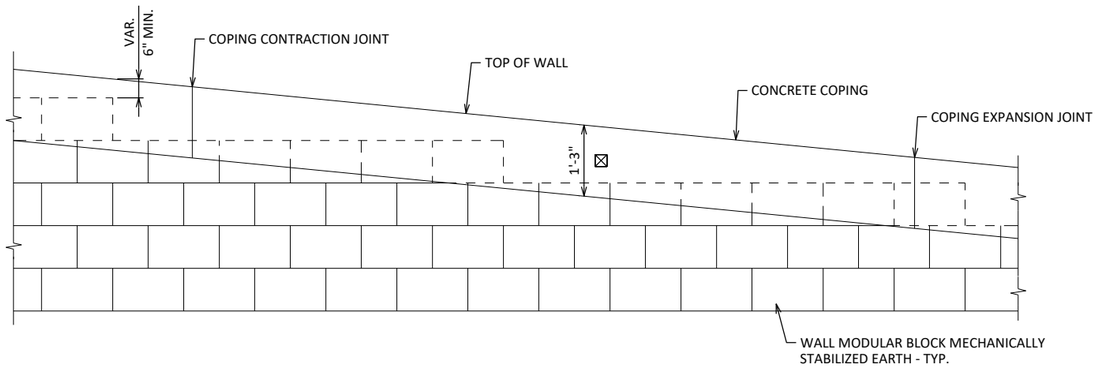
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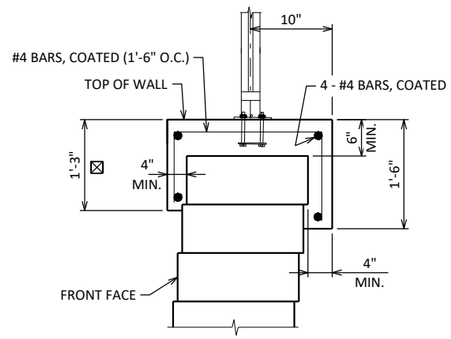
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STATE PROJECT NUMBER

5845-16-77



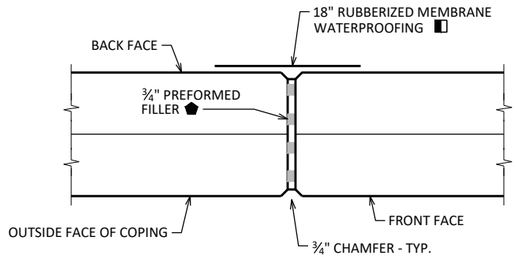
RETAINING WALL FACE & CONCRETE COPING DETAIL



COPING DETAIL

☒ THIS DIMENSION MAY CHANGE DEPENDING ON HEIGHT OF BLOCKS. THIS DIMENSION TO BE CONSTANT FOR ENTIRE LENGTH OF WALL. MAXIMUM ALLOWABLE HEIGHT OF BLOCKS TO BE 9 INCHES.

MAINTAIN 2" MINIMUM COVER ON ALL REBAR.



COPING EXPANSION JOINT

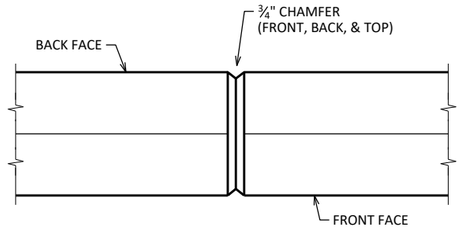
◧ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS.

⬟ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.)

PLACE EXPANSION JOINTS AT EVERY THIRD JOINT AND AT ALL WALL RADIUS PC/PT POINTS AND BEND POINTS.

DO NOT RUN BAR STEEL THRU JOINT.

MAXIMUM SPACING OF JOINT = 50' .



COPING SONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT MAXIMUM SPACING OF JOINT = 12'

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-376

DRAWN BY ZSS | PLANS CK'D KRO

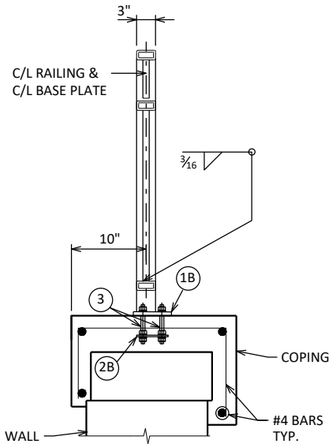
RETAINING WALL DETAILS

SHEET 3 OF 5

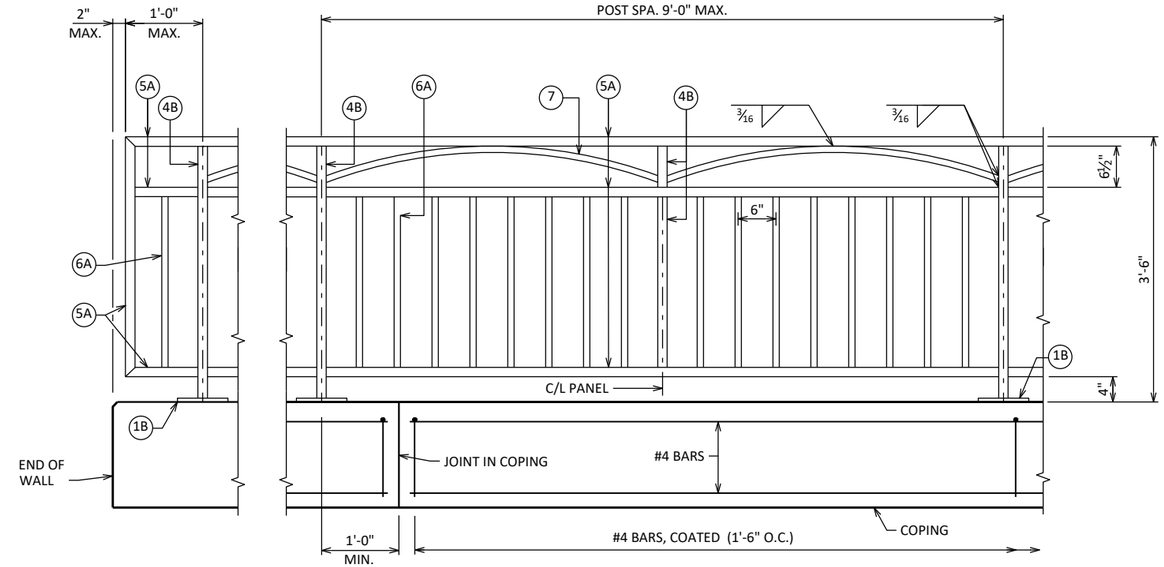
598

STATE PROJECT NUMBER

5845-16-77



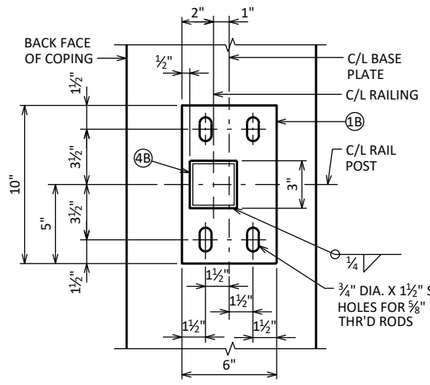
END VIEW



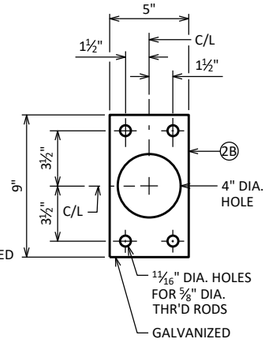
ELEVATION OF RAILING

LEGEND

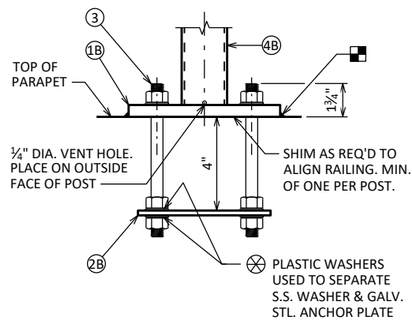
- 1B PLATE ⅝" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.
- 2B ¼" X 5" X 9" ANCHOR PLATE WITH $1\frac{1}{16}$" DIA. HOLES FOR THR'D RODS NO. 3.
- 3 ⅝" DIA. X 7 ½" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 OF THE STANDARD SPECIFICATIONS.
- 4B STRUCTURAL TUBING 3" X 3" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.
- 5A STRUCTURAL TUBING 3" X 1½" X 3/16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- 6A BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.
- 7 BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.
- 9A RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".
- 10A RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)



TYPICAL RAIL POST BASE PLATE



ANCHOR PLATE



ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

▩ CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

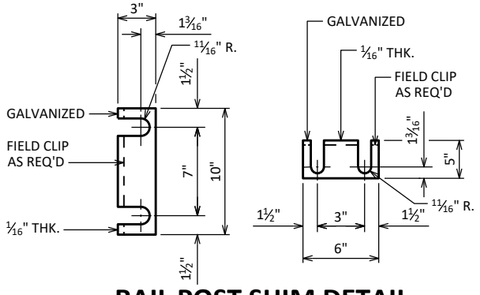
ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3 & 12) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

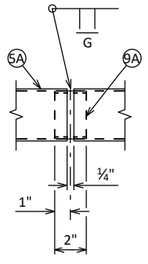
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



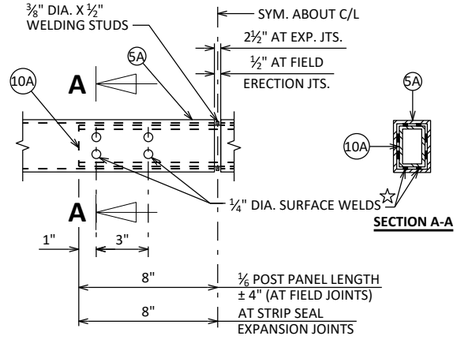
RAIL POST SHIM DETAIL

(2 SETS PER POST)



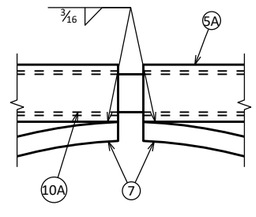
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



CURVED MEMBER JOINT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-376

DRAWN BY ZSS | PLANS CK'D KRO

RAILING DETAILS

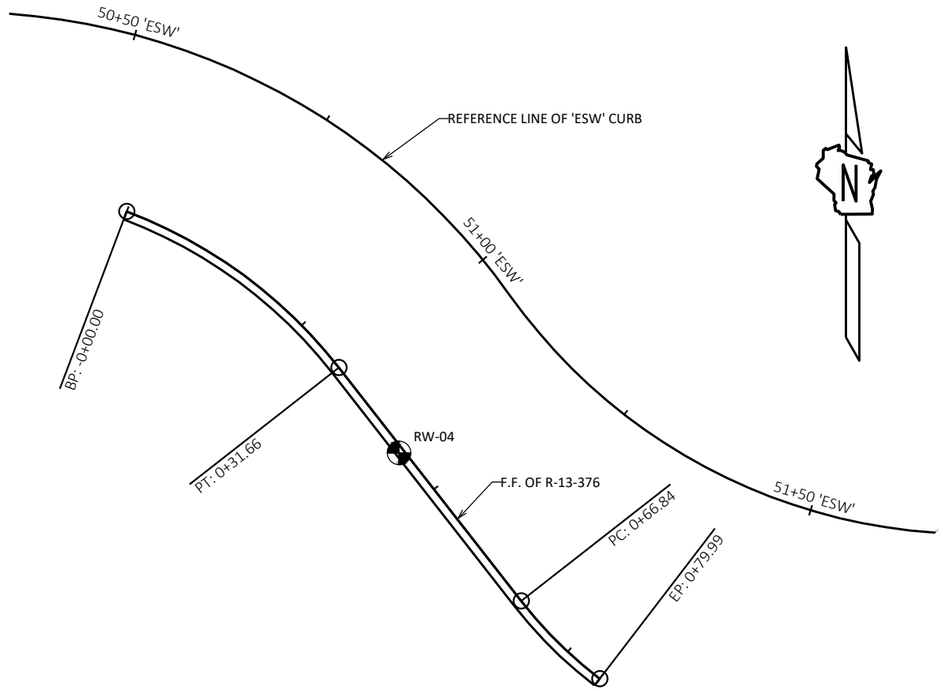
SHEET 4 OF 5

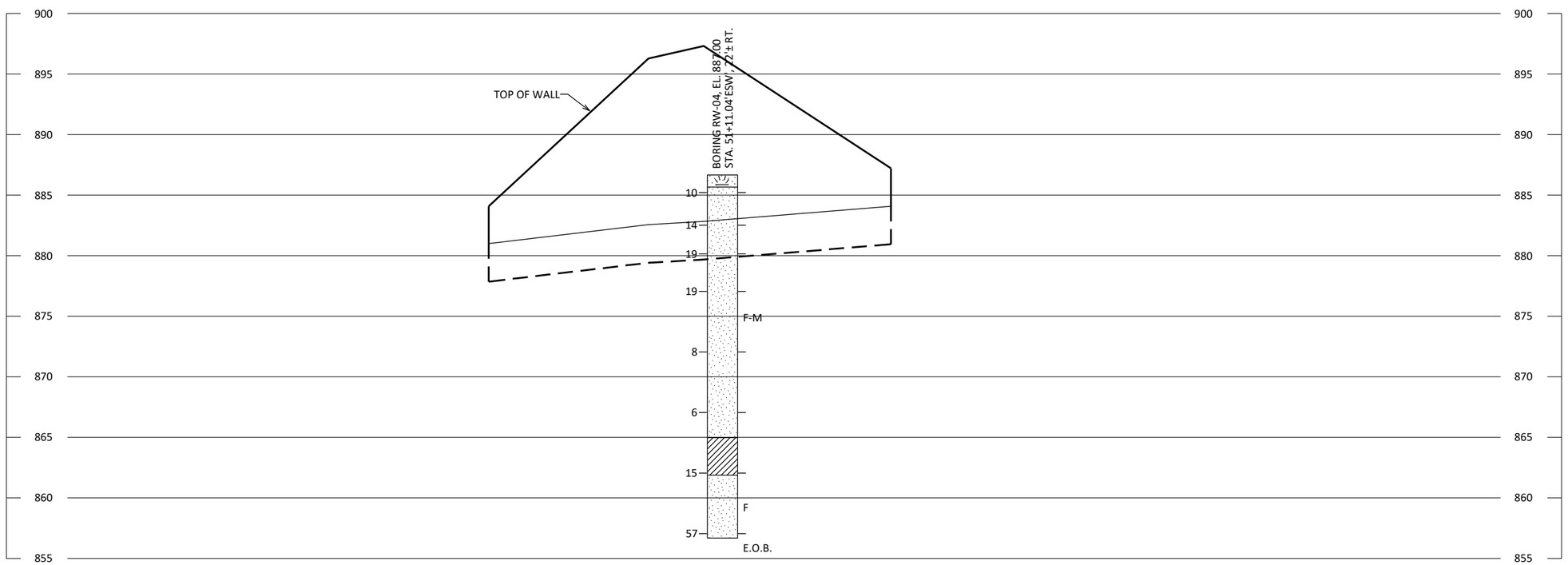
599

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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
RW-04	SEPTEMBER 7, 2022	464975.229	843929.367
BORINGS COMPLETED BY: CGC, INC.			
REPORT COMPLETED BY: CGC, INC.			
ALL COORDINATES REFERENCED TO WCCS NAVD 88(2012) DANE COUNTY			





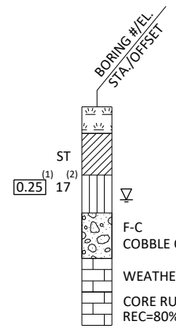
STATE PROJECT NUMBER

5845-16-77

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-376

DRAWN BY ZSS | PLANS CK'D KRO

SUBSURFACE EXPLORATION

SHEET 5 OF 5

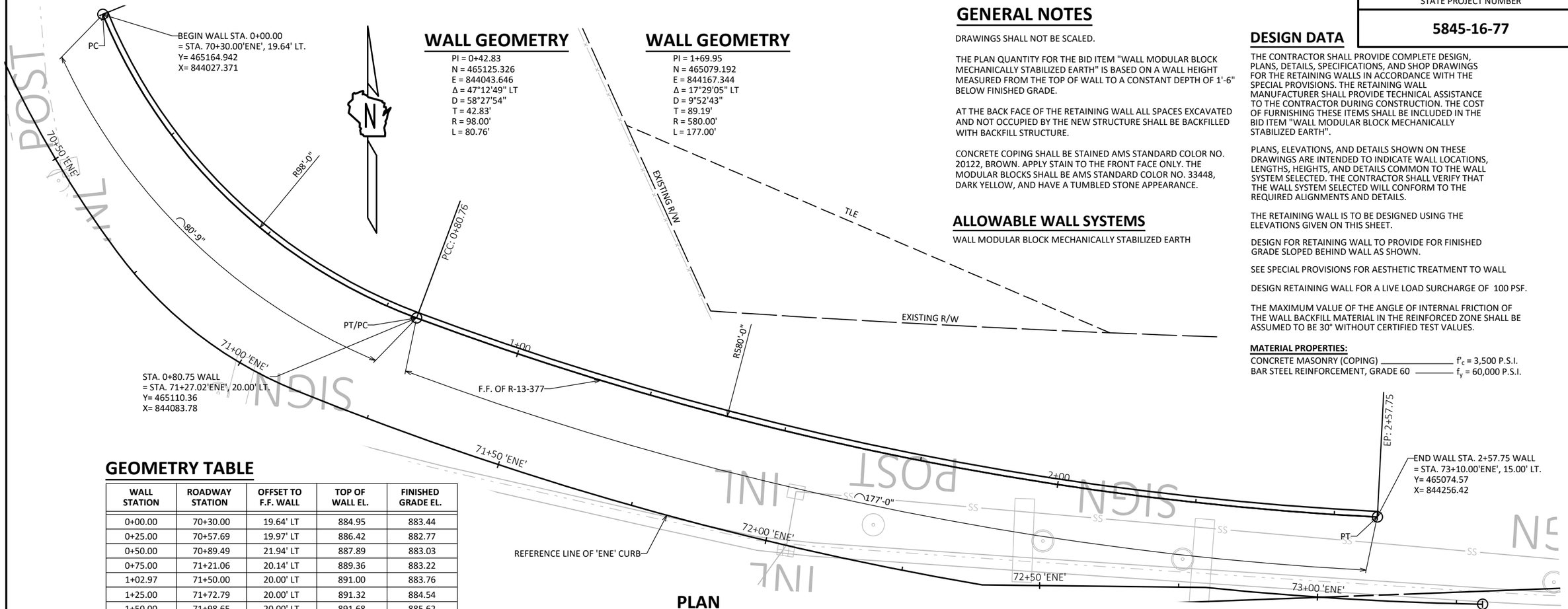
600

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STATE PROJECT NUMBER

5845-16-77



WALL GEOMETRY

PI = 0+42.83
N = 465125.326
E = 844043.646
Δ = 47°12'49" LT
D = 58°27'54"
T = 42.83'
R = 98.00'
L = 80.76'

WALL GEOMETRY

PI = 1+69.95
N = 465079.192
E = 844167.344
Δ = 17°29'05" LT
D = 9°52'43"
T = 89.19'
R = 580.00'
L = 177.00'

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE PLAN QUANTITY FOR THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO A CONSTANT DEPTH OF 1'-6" BELOW FINISHED GRADE.

AT THE BACK FACE OF THE RETAINING WALL ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

CONCRETE COPING SHALL BE STAINED AMS STANDARD COLOR NO. 20122, BROWN. APPLY STAIN TO THE FRONT FACE ONLY. THE MODULAR BLOCKS SHALL BE AMS STANDARD COLOR NO. 33448, DARK YELLOW, AND HAVE A TUMBLED STONE APPEARANCE.

ALLOWABLE WALL SYSTEMS

WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 100 PSF.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

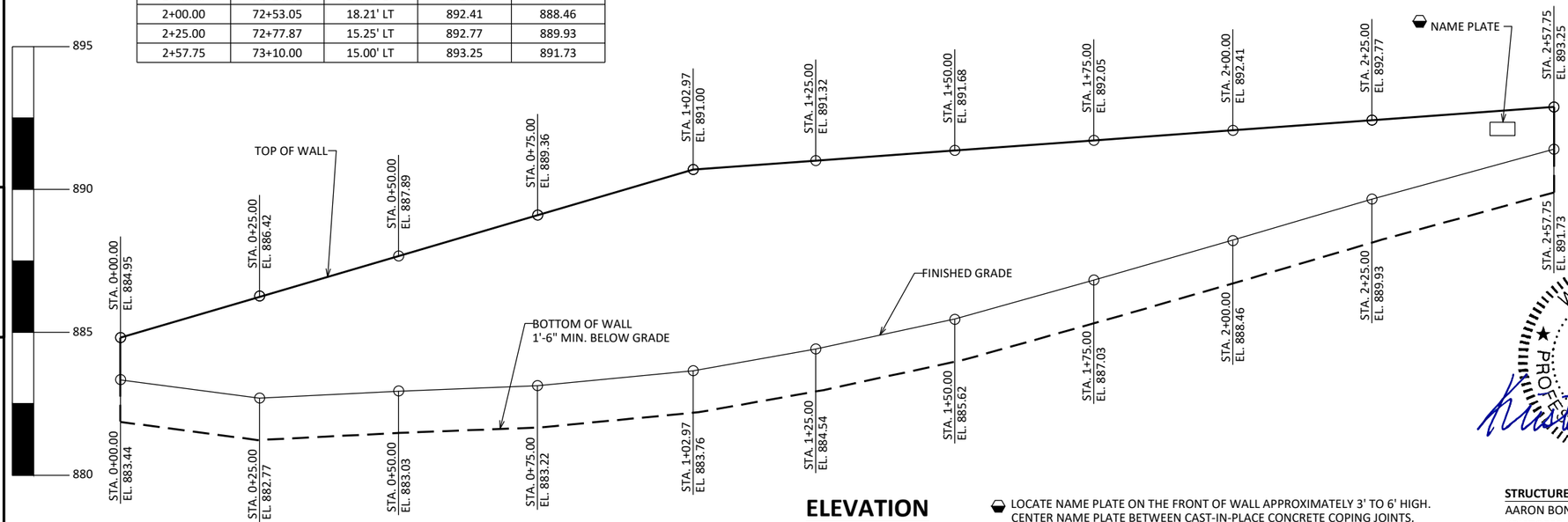
MATERIAL PROPERTIES:

CONCRETE MASONRY (COPING) _____ f'_c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 _____ f_y = 60,000 P.S.I.

GEOMETRY TABLE

WALL STATION	ROADWAY STATION	OFFSET TO F.F. WALL	TOP OF WALL EL.	FINISHED GRADE EL.
0+00.00	70+30.00	19.64' LT	884.95	883.44
0+25.00	70+57.69	19.97' LT	886.42	882.77
0+50.00	70+89.49	21.94' LT	887.89	883.03
0+75.00	71+21.06	20.14' LT	889.36	883.22
1+02.97	71+50.00	20.00' LT	891.00	883.76
1+25.00	71+72.79	20.00' LT	891.32	884.54
1+50.00	71+98.65	20.00' LT	891.68	885.62
1+75.00	72+24.51	20.00' LT	892.05	887.03
2+00.00	72+53.05	18.21' LT	892.41	888.46
2+25.00	72+77.87	15.25' LT	892.77	889.93
2+57.75	73+10.00	15.00' LT	893.25	891.73

PLAN



ELEVATION

(LOOKING AT FRONT FACE OF WALL)

LOCATE NAME PLATE ON THE FRONT OF WALL APPROXIMATELY 3' TO 6' HIGH. CENTER NAME PLATE BETWEEN CAST-IN-PLACE CONCRETE COPING JOINTS, CENTERED ON A NON-CAP BLOCK, OR AS DIRECTED BY THE FIELD ENGINEER.

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES & WALL DETAILS
3. RETAINING WALL DETAILS
4. RAILING DETAILS
5. SUBSURFACE EXPLORATION

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES
700 PILGRIM WAY, SUITE 180
GREEN BAY, WI 54304
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED _____ SDR 08/06/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER
6/27/2024

STRUCTURE DESIGN CONTACTS:

AARON BONK	608-261-0261
KRISTOFER OLSON	920-498-1200

STRUCTURE R-13-377

ENE MSE RETAINING WALL

COUNTY	VILLAGE
DANE	MCFARLAND

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
KRO	JMC	ZSS/CLP	KRO

GENERAL PLAN

SHEET 1 OF 5
601

I.D. 5845-16-06 DATE: 04/26/22

STATE PROJECT NUMBER

5845-16-77

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
513.8016	RAILING STEEL PEDESTRIAN TYPE C3	LF	257.8
517.1010.S	STAINING CONCRETE R-13-377	SF	325
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	280
SPV.0090	CONCRETE SWALE	LF	258
SPV.0165	WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH R-13-377	SF	1,605

WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS	
WALL HEIGHT (FEET)	9.2	7.1
EXPOSED WALL HEIGHT (FEET)	7.7	5.6
LENGTH OF REINFORCEMENT (FEET) ◪	9.5	8.5
WALL STATION	0+00 TO 2+57.75	
BORING USED	RW-05	RW-07
CAPACITY TO DEMAND RATIO (CDR)		
SLIDING (CDR>1.0)	1.00	1.07
ECCENTRICITY (CDR>1.0)	3.30	3.30
OVERALL STABILITY (CDR >1.0) ☆	1.23	1.34
BEARING RESISTANCE (CDR>1.0)	1.74	2.0
FACTORED BEARING RESISTANCE (psf)	4,000	4,000

SOIL PARAMETERS

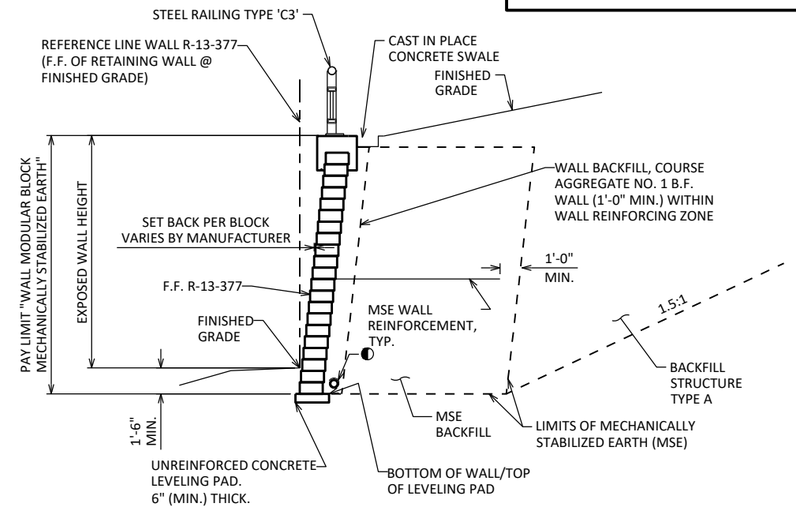
STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
GRANULAR BACKFILL (REINFORCED ZONE)	120	30	0
RETAINED SOIL	120	30	0
BASE AGGREGATE DENSE 3-INCH	130	35	0
BORING RW-05			
MEDIUM DENSE SAND ELEVATION 888.0 TO 916.0 ◓	120	31	0
VERY DENSE SAND (WEATHERED BEDROCK) ELEVATION 916.0 TO 918.0 ◓	125	40	0
BORING RW-07			
EXISTING SAND FILL ELEVATION 890.0 TO 982.5 ◓	120	30	0
MEDIUM DENSE SAND ELEVATION 892.5 TO 912.5 ◓	120	31	0

NOTES:

◪ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

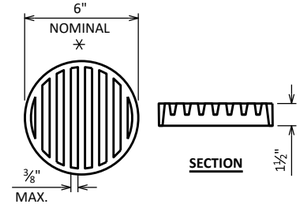
☆ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.

◓ STRATUM LOCATIONS & SOIL DESCRIPTIONS AT EACH BORING LOCATION.



TYPICAL SECTION THRU MSE RETAINING WALL

◐ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



RODENT SHIELD DETAIL

✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAING WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-377

DRAWN BY CLP | PLANS CK'D KRO

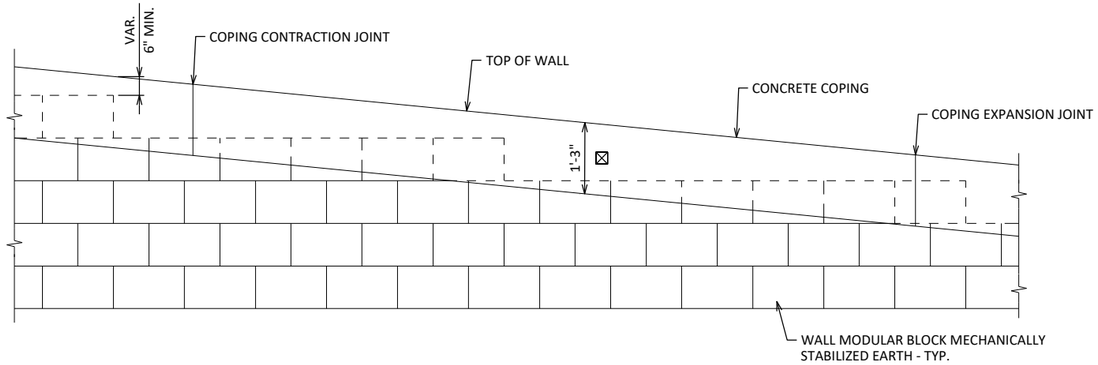
QUANTITIES & WALL DETAILS

SHEET 2 OF 5

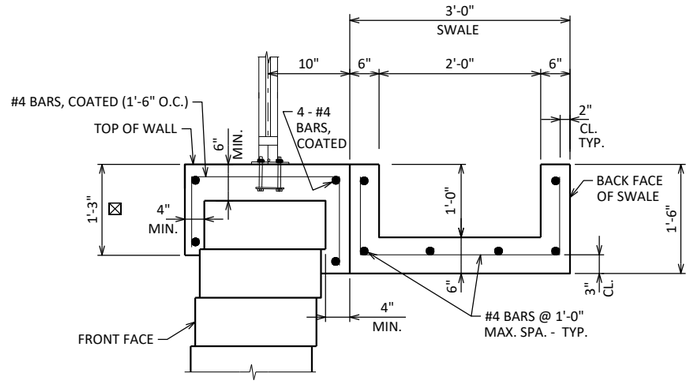
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STATE PROJECT NUMBER

5845-16-77



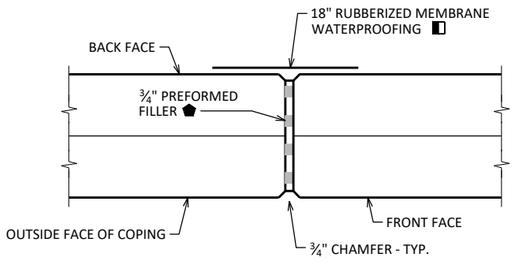
RETAINING WALL FACE & CONCRETE COPING DETAIL



COPING & SWALE DETAIL

☒ THIS DIMENSION MAY CHANGE DEPENDING ON HEIGHT OF BLOCKS. THIS DIMENSION TO BE CONSTANT FOR ENTIRE LENGTH OF WALL. MAXIMUM ALLOWABLE HEIGHT OF BLOCKS TO BE 9 INCHES.

MAINTAIN 2" MINIMUM COVER ON ALL REBAR.



COPING EXPANSION JOINT

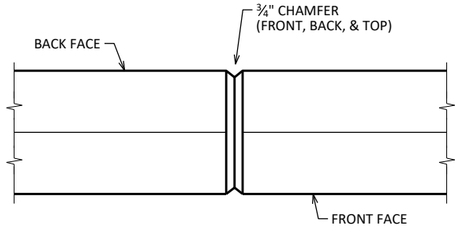
◧ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS.

⬟ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.)

PLACE EXPANSION JOINTS AT EVERY THIRD JOINT AND AT ALL WALL RADIUS PC/PT POINTS AND BEND POINTS.

DO NOT RUN BAR STEEL THRU JOINT.

MAXIMUM SPACING OF JOINT = 50' .



COPING SONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT MAXIMUM SPACING OF JOINT = 12'

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-377

DRAWN BY ZSS | PLANS CK'D KRO

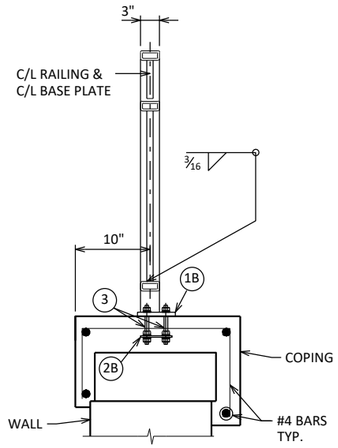
RETAINING WALL DETAILS

SHEET 3 OF 5

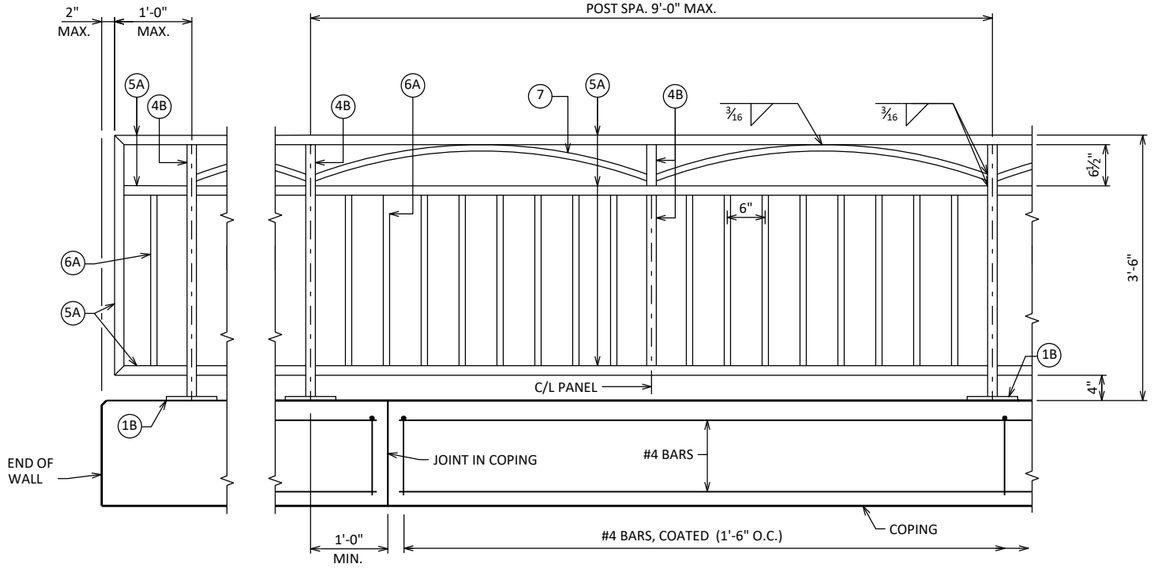
603

STATE PROJECT NUMBER

5845-16-77



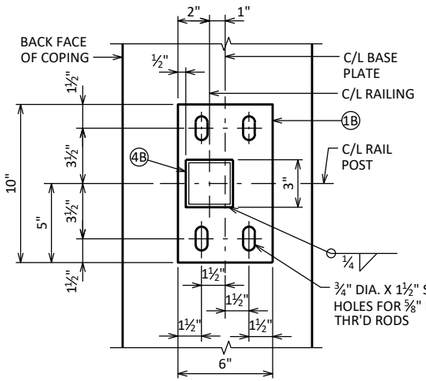
END VIEW



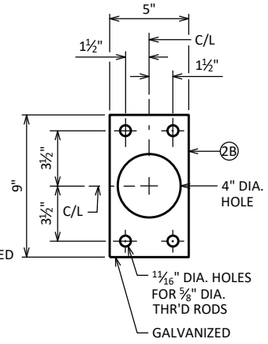
ELEVATION OF RAILING

LEGEND

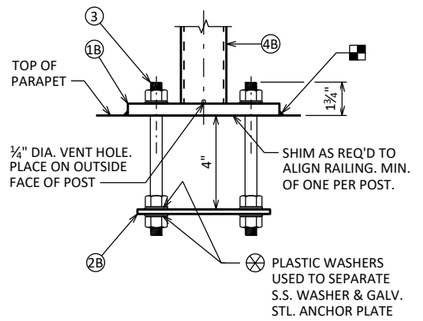
- (1B) PLATE ⅝" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.
- (2B) ¼" X 5" X 9" ANCHOR PLATE WITH $^{11}/_{16}$" DIA. HOLES FOR THR'D RODS NO. 3.
- (3) ⅝" DIA. X 7 ½" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 OF THE STANDARD SPECIFICATIONS.
- (4B) STRUCTURAL TUBING 3" X 3" X $^{3}/_{16}$". PLACE VERTICAL. WELD TO NO. 1 & 5.
- (5A) STRUCTURAL TUBING 3" X 1½" X $^{3}/_{16}$" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- (6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.
- (7) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.
- (9A) RECTANGULAR SLEEVE FABRICATED FROM $^{3}/_{16}$" PLATES. PROVIDE "SLIDING FIT".
- (10A) RECTANGULAR SLEEVE FABRICATED FROM $^{3}/_{16}$" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)



TYPICAL RAIL POST BASE PLATE



ANCHOR PLATE



ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED
WHEN ADHESIVE ANCHORS ARE USED.

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

◪ CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

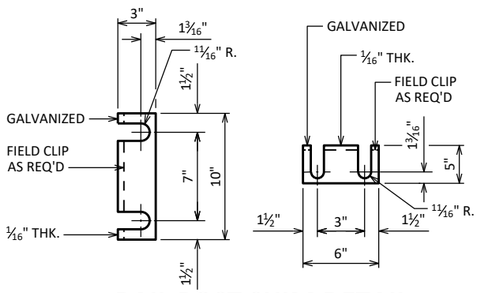
ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3 & 12) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

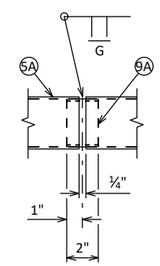
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



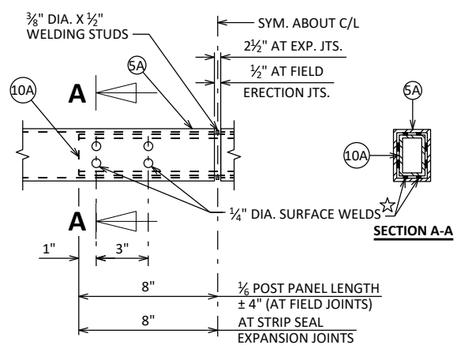
RAIL POST SHIM DETAIL

(2 SETS PER POST)



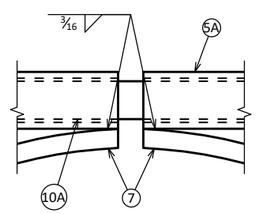
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



CURVED MEMBER JOINT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-377

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RAILING DETAILS

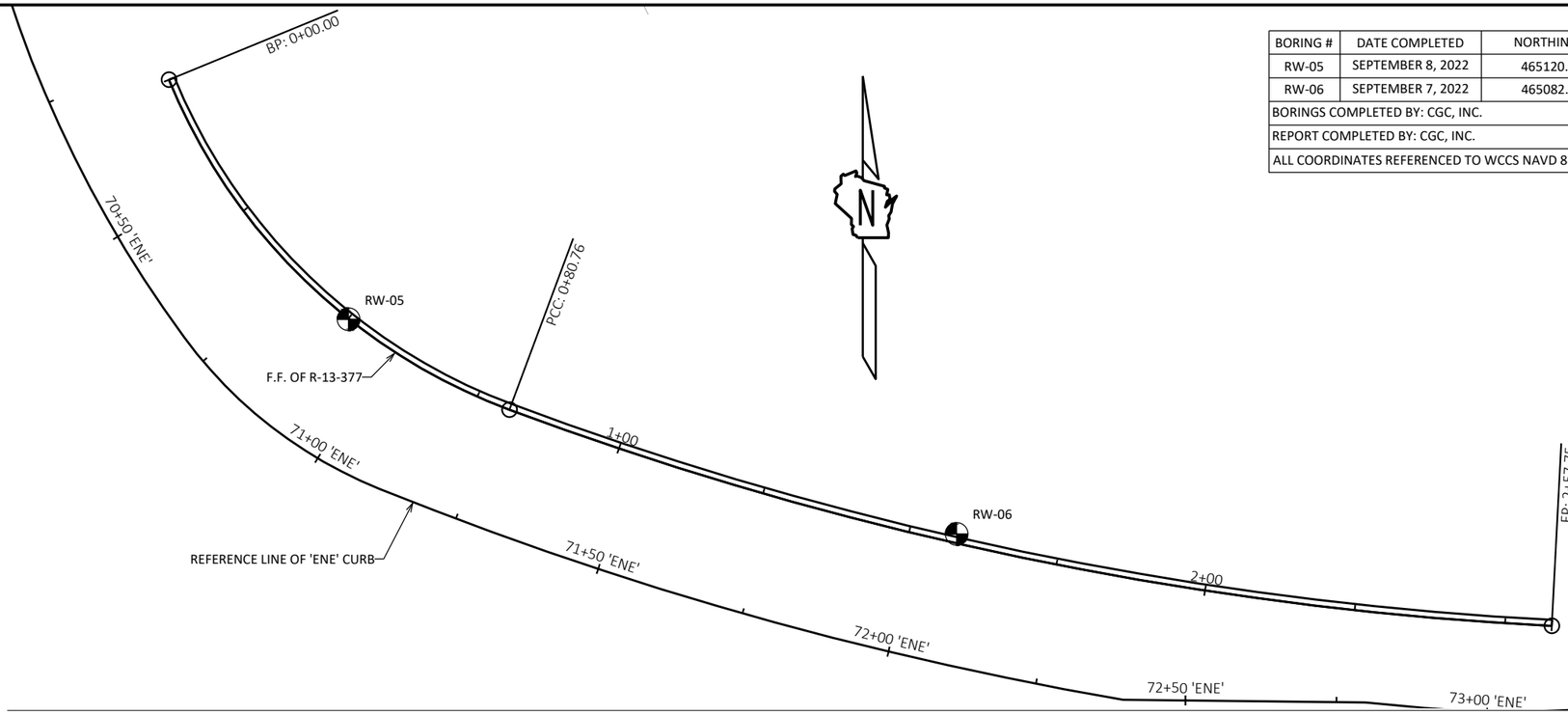
SHEET 4 OF 5

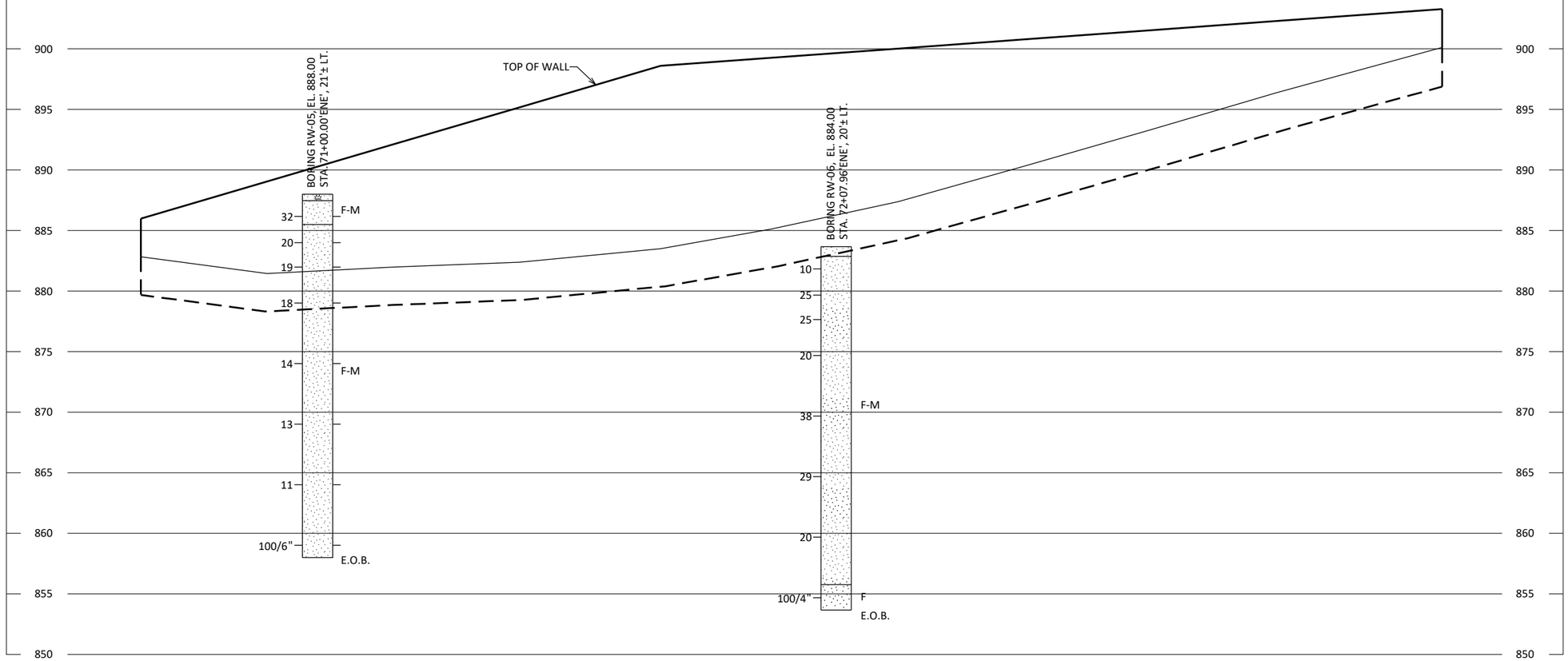
604

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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
RW-05	SEPTEMBER 8, 2022	465120.230	844064.010
RW-06	SEPTEMBER 7, 2022	465082.995	844174.018
BORINGS COMPLETED BY: CGC, INC.			
REPORT COMPLETED BY: CGC, INC.			
ALL COORDINATES REFERENCED TO WCCS NAVD 88(2012) DANE COUNTY			





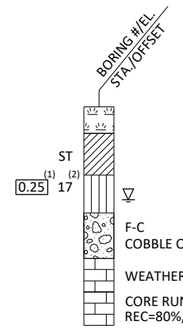
STATE PROJECT NUMBER

5845-16-77

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-377

DRAWN BY ZSS | PLANS CK'D KRO

SUBSURFACE EXPLORATION

SHEET 5 OF 5

605

8

8

STATE PROJECT NUMBER

5845-16-77

WALL GEOMETRY

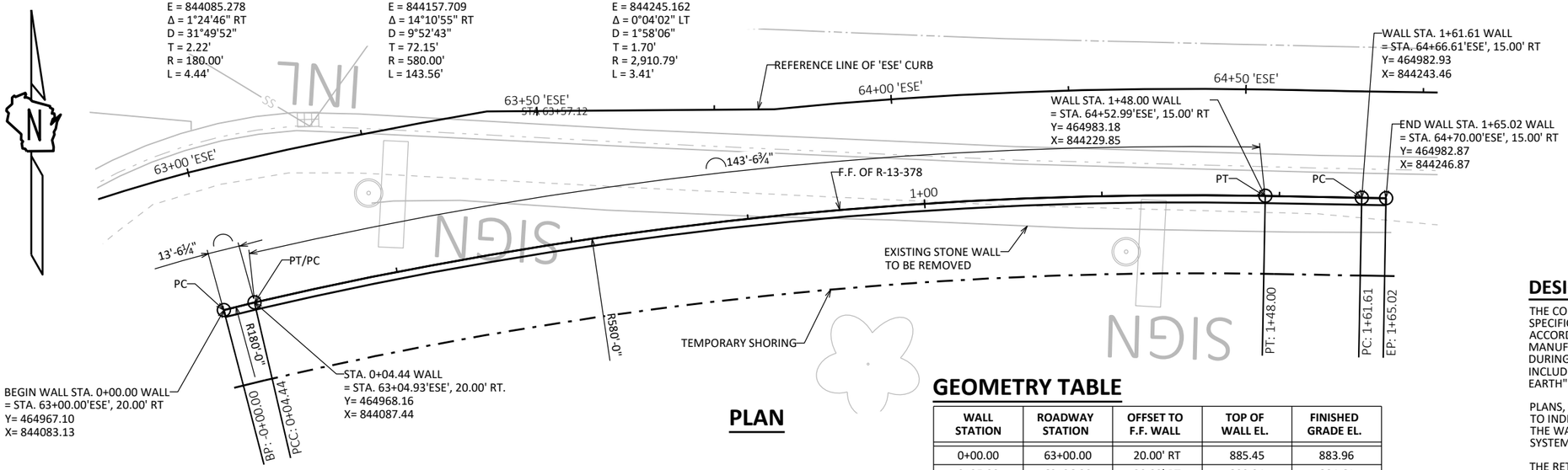
PI = 0+02.22
N = 464967.661
E = 844085.278
Δ = 1°24'46" RT
D = 31°49'52"
T = 2.22'
R = 180.00'
L = 4.44'

WALL GEOMETRY

PI = 0+76.59
N = 464984.530
E = 844157.709
Δ = 14°10'55" RT
D = 9°52'43"
T = 72.15'
R = 580.00'
L = 143.56'

WALL GEOMETRY

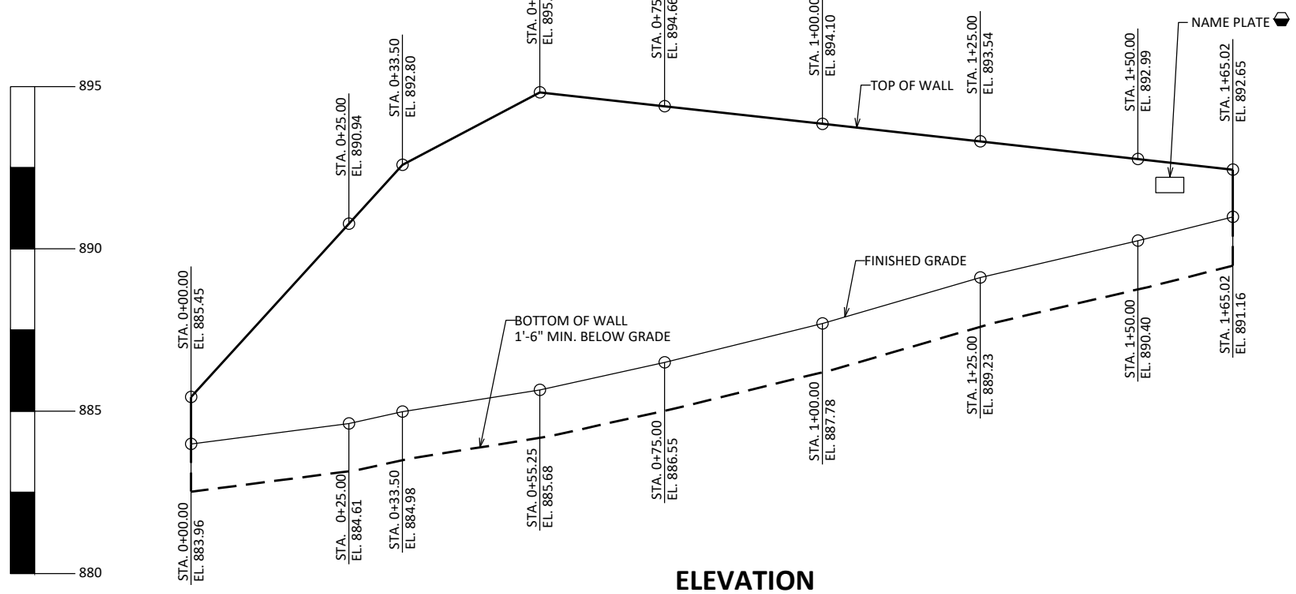
PI = 1+63.32
N = 464982.895
E = 844245.162
Δ = 0°04'02" LT
D = 1°58'06"
T = 1.70'
R = 2,910.79'
L = 3.41'



PLAN

GEOMETRY TABLE

WALL STATION	ROADWAY STATION	OFFSET TO F.F. WALL	TOP OF WALL EL.	FINISHED GRADE EL.
0+00.00	63+00.00	20.00' RT	885.45	883.96
0+25.00	63+26.20	20.00' RT	890.94	884.61
0+33.50	63+35.00	20.00' RT	892.80	884.98
0+55.25	63+60.00	17.72' RT	895.10	885.68
0+75.00	63+79.61	15.43' RT	894.66	886.55
1+00.00	64+03.75	15.00' RT	894.10	887.78
1+25.00	64+29.40	15.00' RT	893.54	889.23
1+50.00	64+54.99	15.00' RT	892.99	890.40
1+65.02	64+70.00	15.00' RT	892.65	891.16



ELEVATION

(LOOKING AT BACK FACE OF WALL)

LOCATE NAME PLATE ON THE FRONT OF WALL APPROXIMATELY 3' TO 6' HIGH. CENTER NAME PLATE BETWEEN CAST-IN-PLACE CONCRETE COPING JOINTS, CENTERED ON A NON-CAP BLOCK, OR AS DIRECTED BY THE FIELD ENGINEER.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

THE PLAN QUANTITY FOR THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF WALL TO A CONSTANT DEPTH OF 1'-6" BELOW FINISHED GRADE.

AT THE BACK FACE OF THE RETAINING WALL ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

CONCRETE COPING SHALL BE STAINED AMS STANDARD COLOR NO. 20122, BROWN. APPLY STAIN TO THE FRONT FACE ONLY. THE MODULAR BLOCKS SHALL BE AMS STANDARD COLOR NO. 33448, DARK YELLOW, AND HAVE A TUMBLED STONE APPEARANCE.

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH".

PLANS, ELEVATIONS, AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPED BEHIND WALL AS SHOWN.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL

DESIGN RETAINING WALL FOR A LIVE LOAD SURCHARGE OF 100 PSF.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

MATERIAL PROPERTIES:

CONCRETE MASONRY (COPING) _____ f'_c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 _____ f_y = 60,000 P.S.I.

ALLOWABLE WALL SYSTEMS

WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES & WALL DETAILS
3. RETAINING WALL DETAILS
4. RAILING DETAILS
5. SUBSURFACE EXPLORATION

WISCONSIN
KRISTOFER R. OLSON
E-35236
APPLETON, WI
PROFESSIONAL ENGINEER
9/25/2024

STRUCTURE DESIGN CONTACTS:

AARON BONK	608-261-0261
KRISTOFER OLSON	920-498-1200

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

AYRES
700 PILGRIM WAY, SUITE 180
GREEN BAY, WI 54304
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED _____ SDR _____ 09/26/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE R-13-378

ESE MSE RETAINING WALL

COUNTY	VILLAGE
DANE	MCFARLAND

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
KRO	JMC	ZSS/CLP	KRO

GENERAL PLAN

SHEET 1 OF 5
606

I.D. 5845-16-06

DATE: 04/26/22

8

8

STATE PROJECT NUMBER
5845-16-77

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
204.9060.S	REMOVING RETAINING WALL 'ESE'	EA	1
511.1200	TEMPORARY SHORING R-13-378	SF	1,500
513.8016	RAILING STEEL PEDESTRIAN TYPE C3	LF	165.2
517.1010.S	STAINING CONCRETE R-13-378	SF	210
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	190
SPV.0090	CONCRETE SWALE	LF	165
SPV.0165	WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH R-13-378	SF	1,197

WALL EXTERNAL & OVERALL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS	
WALL HEIGHT (FEET)	9.4	
EXPOSED WALL HEIGHT (FEET)	7.9	
LENGTH OF REINFORCEMENT (FEET) ◪	16.5	
WALL STATION	0+00 TO 1+65.02	
BORING USED	RW-06	
CAPACITY TO DEMAND RATIO (CDR)		
SLIDING (CDR>1.0)	1.00	
ECCENTRICITY (CDR>1.0)	2.54	
OVERALL STABILITY (CDR >1.0) ☆	1.14	
BEARING RESISTANCE (CDR>1.0)	1.50	
FACTORED BEARING RESISTANCE (psf)	4,000	

SOIL PARAMETERS

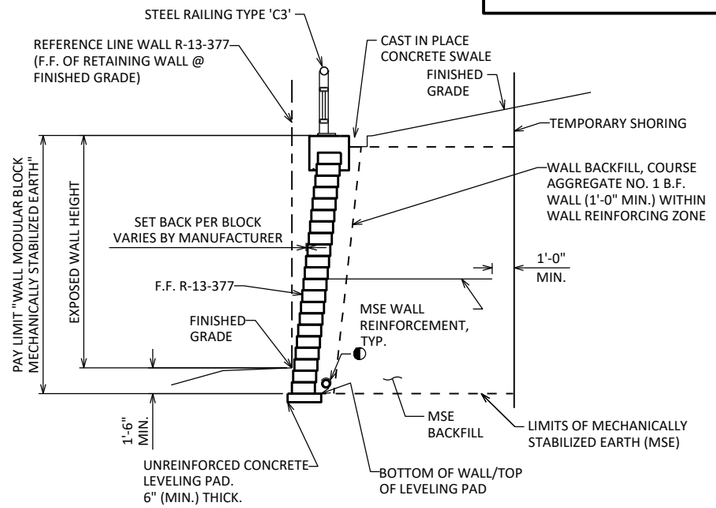
STRATUM LOCATIONS AND SOIL DESCRIPTIONS	TOTAL UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PCF)
GRANULAR BACKFILL (REINFORCED ZONE)	120	30	0
RETAINED SOIL	120	30	0
BASE AGGREGATE DENSE 3-INCH	130	35	0
BORING RW-06			
MEDIUM DENSE TO DENSE SAND ELEVATION 884.0 TO 912.0 ◓	125	34	0
VERY DENSE SAND ELEVATION 912.0 TO 914.0 ◓	125	40	0

NOTES:

◪ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

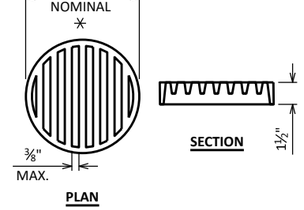
☆ THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED ON OVERALL STABILITY PERFORMED BY THE WALL DESIGNER. COMPOUND STABILITY IS THE CONTRACTORS RESPONSIBILITY.

◓ STRATUM LOCATIONS & SOIL DESCRIPTIONS AT EACH BORING LOCATION.



TYPICAL SECTION THRU MSE RETAINING WALL

◐ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



RODENT SHIELD DETAIL

✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAING WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-378

DRAWN BY CLP | PLANS CK'D KRO

QUANTITIES & WALL DETAILS

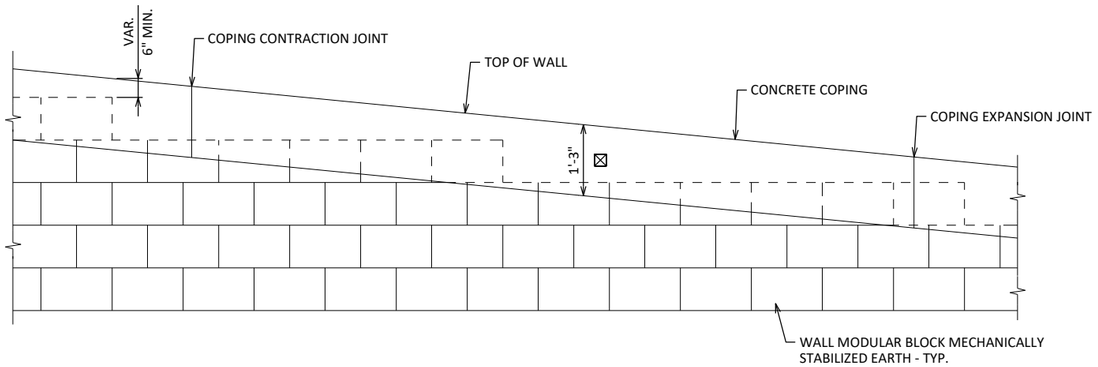
SHEET 2 OF 5
607

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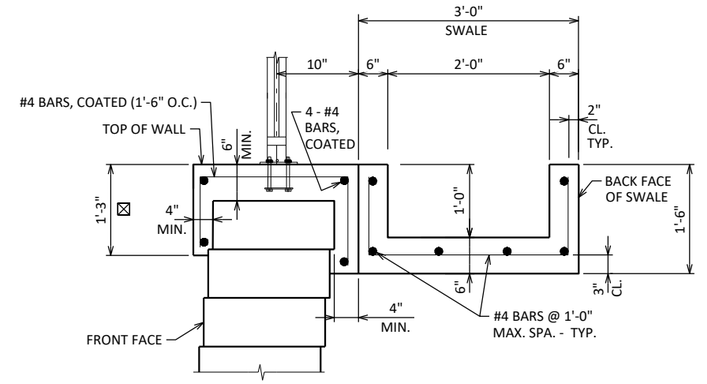
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STATE PROJECT NUMBER

5845-16-77



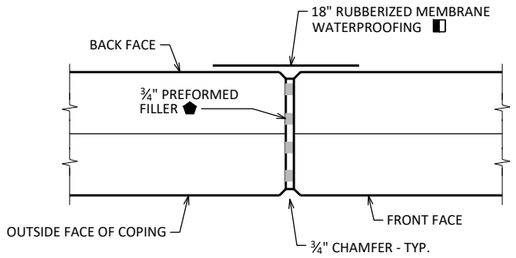
RETAINING WALL FACE & CONCRETE COPING DETAIL



COPING & SWALE DETAIL

☒ THIS DIMENSION MAY CHANGE DEPENDING ON HEIGHT OF BLOCKS. THIS DIMENSION TO BE CONSTANT FOR ENTIRE LENGTH OF WALL. MAXIMUM ALLOWABLE HEIGHT OF BLOCKS TO BE 9 INCHES.

MAINTAIN 2" MINIMUM COVER ON ALL REBAR.



COPING EXPANSION JOINT

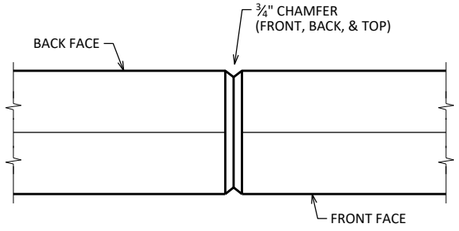
◧ MEMBRANE WATERPROOFING TO EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS.

⬟ SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONC.)

PLACE EXPANSION JOINTS AT EVERY THIRD JOINT AND AT ALL WALL RADIUS PC/PT POINTS AND BEND POINTS.

DO NOT RUN BAR STEEL THRU JOINT.

MAXIMUM SPACING OF JOINT = 50' .



COPING CONTRACTION JOINT

DO NOT RUN BAR STEEL THRU JOINT MAXIMUM SPACING OF JOINT = 12'

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8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-378

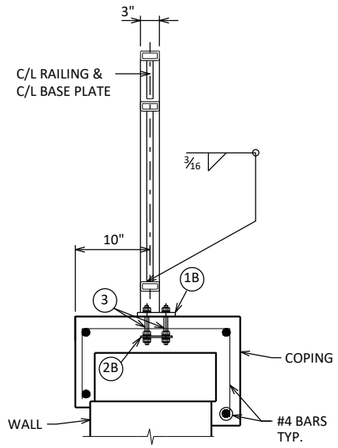
DRAWN BY ZSS | PLANS CK'D KRO

RETAINING WALL DETAILS

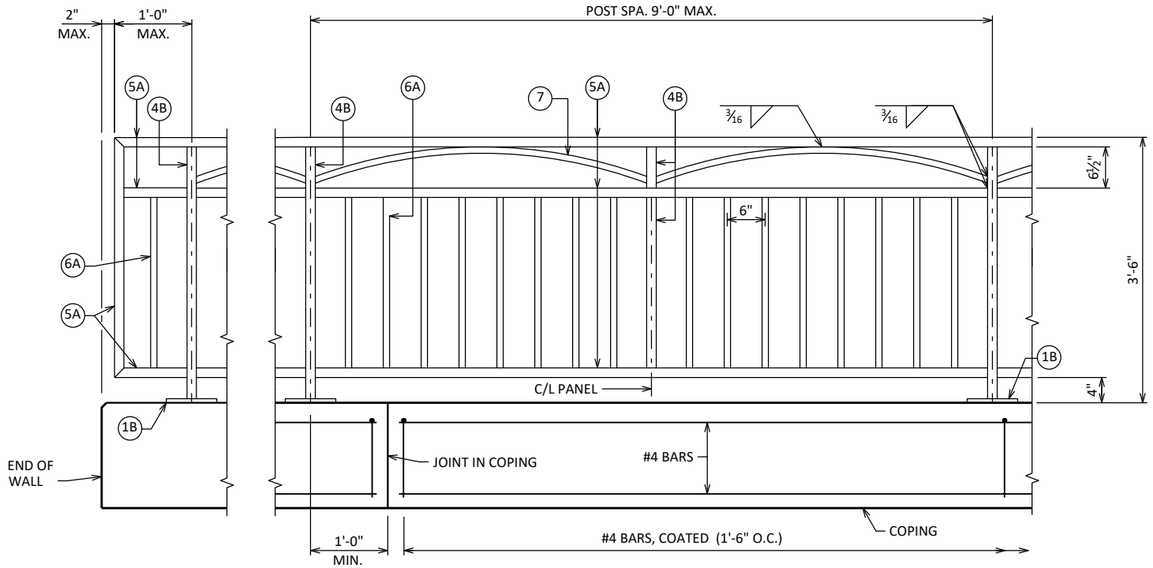
SHEET 3 OF 5
608

STATE PROJECT NUMBER

5845-16-77



END VIEW



ELEVATION OF RAILING

LEGEND

1B PLATE ⅝" X 6" X 10" WITH ¾" X 1½" SLOTTED HOLES.

2B ¼" X 5" X 9" ANCHOR PLATE WITH 11/16" DIA. HOLES FOR THR'D RODS NO. 3.

3 ⅝" DIA. X 7½" LONG, TYPE 316 STAINLESS STEEL THREADED RODS (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ⅝-INCH. EMBED 7" IN CONCRETE FOR RAIL POSTS. EMBED 5" IN CONCRETE FOR END RAILS. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 OF THE STANDARD SPECIFICATIONS.

4B STRUCTURAL TUBING 3" X 3" X 3/16". PLACE VERTICAL. WELD TO NO. 1 & 5.

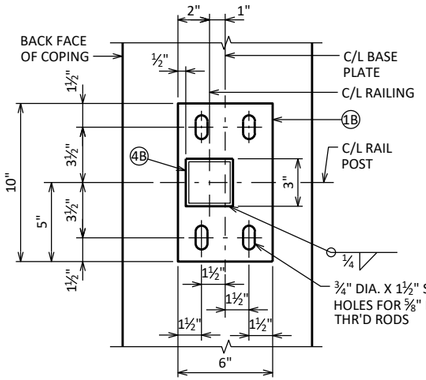
5A STRUCTURAL TUBING 3" X 1½" X 3/16" RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.

6A BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.

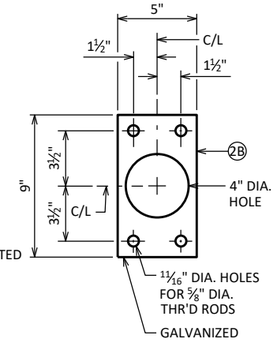
7 BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.

9A RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE "SLIDING FIT".

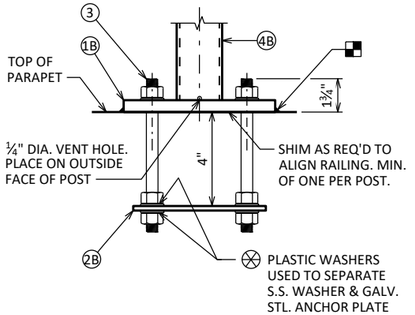
10A RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" @ FIELD ERECTION JTS.) (1'-4" @ STRIP SEAL EXP. JTS.)



TYPICAL RAIL POST BASE PLATE



ANCHOR PLATE



ANCHORAGE FOR RAIL POSTS

NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

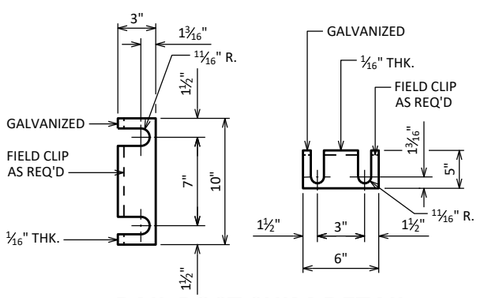
ALL JOINTS AND RECESSES IN CONCRETE PARAPET ARE TO BE VERTICAL.

ALL MATERIAL (EXCEPT NO. 3 & 12) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE CONTRACT DOCUMENTS. THE RAILING SHALL BE PAINTED AMS STD. COLOR NO. 27038, BLACK.

VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

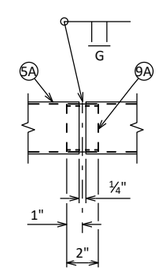
RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



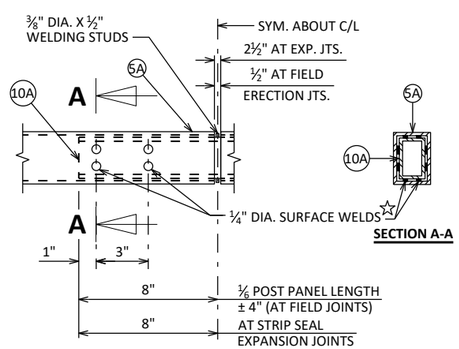
RAIL POST SHIM DETAIL

(2 SETS PER POST)



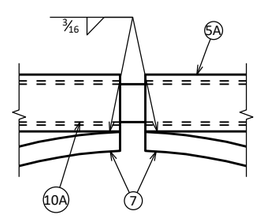
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



FIELD ERECTION JOINT DETAIL

☆ MIN. ⅝" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



CURVED MEMBER JOINT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-378

DRAWN BY ZSS | PLANS CK'D KRO

RAILING DETAILS

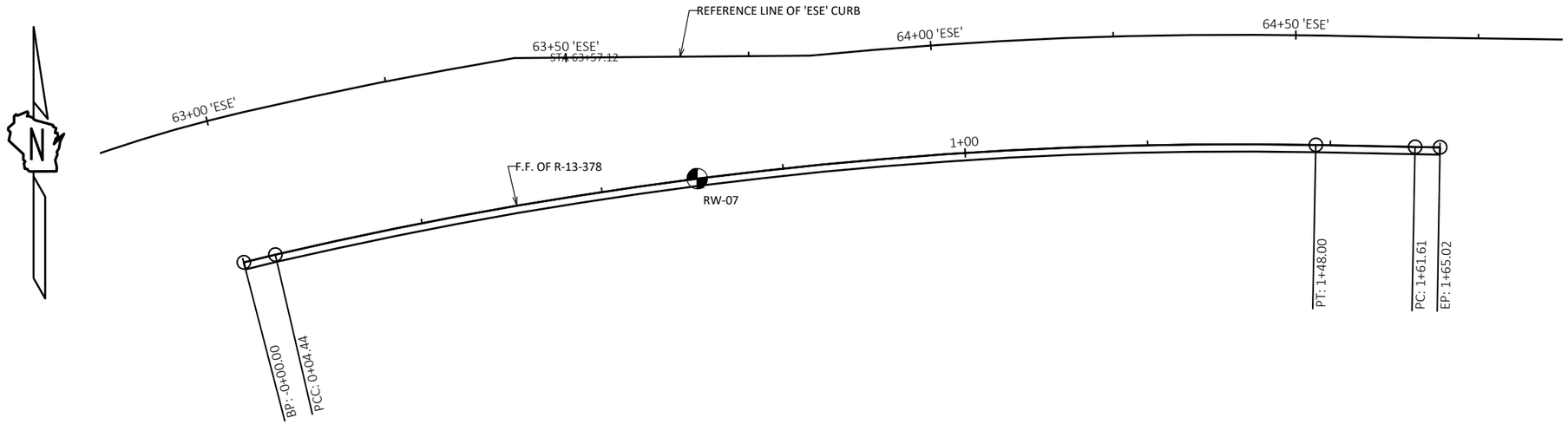
SHEET 4 OF 5

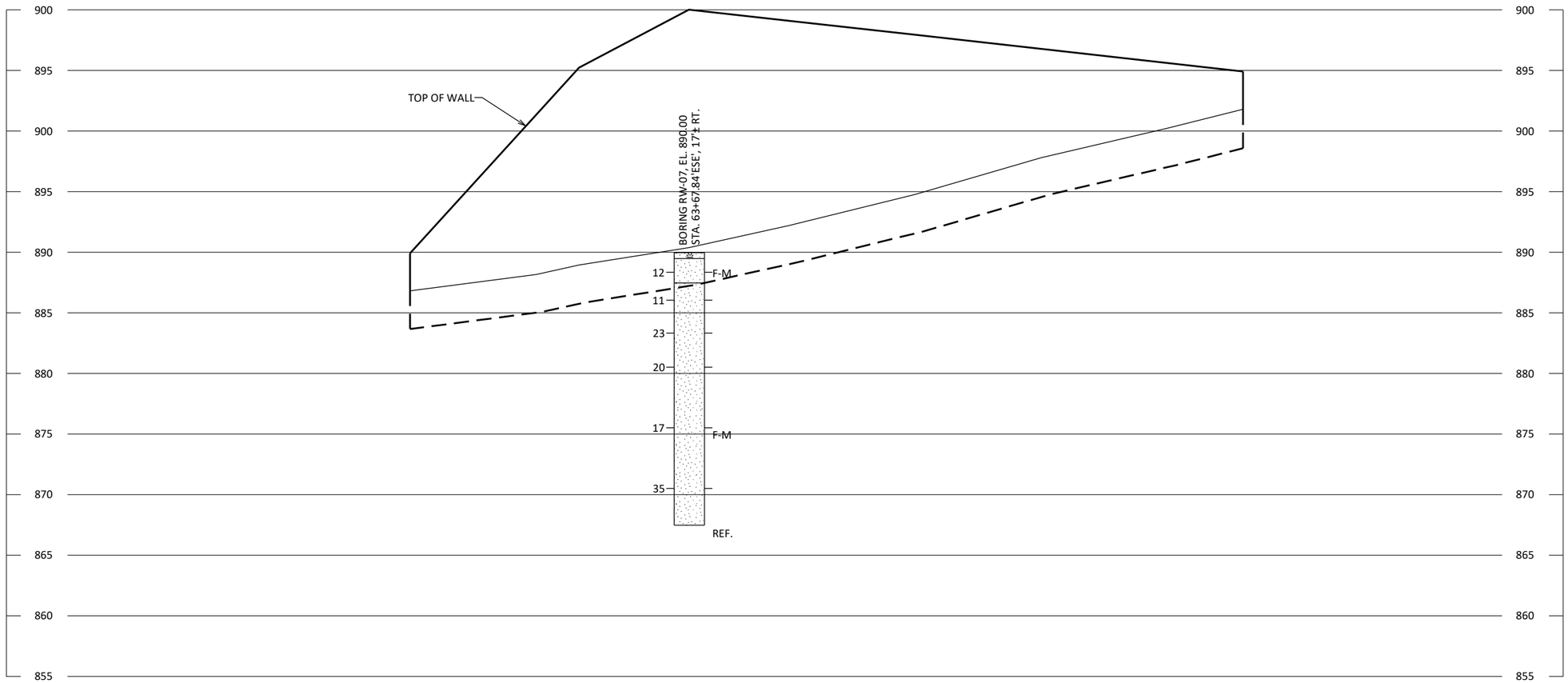
609

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BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
RW-07	SEPTEMBER 7, 2022	464976.927	844091.385
BORINGS COMPLETED BY: CGC, INC.			
REPORT COMPLETED BY: CGC, INC.			
ALL COORDINATES REFERENCED TO WCCS NAVD 88(2012) DANE COUNTY			





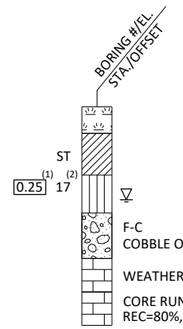
STATE PROJECT NUMBER

5845-16-77

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-13-378

DRAWN BY ZSS | PLANS CK'D KRO

SUBSURFACE EXPLORATION

SHEET 5 OF 5

610

8

8

STATE PROJECT NUMBER

5845-16-77

DESIGN DATA

CONTRACTOR DESIGNED OVERHEAD SIGN STRUCTURES SHALL BE 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.

STANDARD FOUNDATIONS 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: 115 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS. (700 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
EXTREME 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)
	1.0 GVW (GALLOPING - CANTILEVER ONLY)

MATERIAL PROPERTIES

CONCRETE MASONRY.....f'c = 3,500 psi

HIGH STRENGTH STEEL
REINFORCEMENT, GRADE 60.....fy = 60,000 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.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS). DANE COUNTY ZONE. NAD 83 (1997). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007).

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 TRUSS OR MONOTUBE BID ITEMS 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.

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 TYPE
S-13-594	112 SF	7'-0"	TCIV
S-13-595	42 SF	6'-0"	TCI

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. LAYOUT S-13-594
3. LAYOUT S-13-595

LIST OF OSS STANDARD DESIGN DRAWINGS

4. I. MONOTUBE & 2-CHORD TRUSS DETAILS 1
5. II. MONOTUBE & 2-CHORD TRUSS DETAILS 2
6. III. MONOTUBE & 2-CHORD TRUSS ELECTRICAL DETAILS
7. IV. MONOTUBE & 2-CHORD TRUSS FOUNDATIONS

TRAFFIC VOLUME

A.D.T. (2046) = 31,000
R.D.S. = 60 MPH

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	S-13-594	S-13-595
531.2036	DRILLING SHAFT 36-INCH	LF	----	18
531.2042	DRILLING SHAFT 42-INCH	LF	18	----
531.5310	FOUNDATION SINGLE-SHAFT TYPE TCI (S-13-595)	EA	----	1
531.5340	FOUNDATION SINGLE-SHAFT TYPE TCIV (S-13-594)	EA	1	----
532.5310	TRUSS CANTILEVER 2-CHORD TYPE TCI (S-13-595)	EA	----	1
532.5340	TRUSS CANTILEVER 2-CHORD TYPE TCIV (S-13-594)	EA	1	----

STRUCTURE DESIGN CONTACTS:
AARON BONK (608) 261-0261
ARLEN BEAUDETTE (715) 834-3161

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
ARLEN E. BEAUDETTE
E-36829
EAU CLAIRE
PROFESSIONAL ENGINEER

06/03/2024

NO.	DATE	REVISION	BY

BUREAU OF STRUCTURES

ACCEPTED SDR 09/19/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

MONOTUBE AND 2-CHORD TRUSS PLANS

CANTILEVER OVERHEAD SIGN STRUCTURE

COUNTY: DANE
~~TOWN/CITY~~ VILLAGE: MCFARLAND

DESIGN SPEC. AASHTO LRFDLTS-1 W/INTERIMS

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BOS	BOS	CLP	AEB

GENERAL NOTES & DESIGN DATA

SHEET 1 OF 3
611

I.D. XXXX-XX-XXYY

DATE: MMMM YYYY

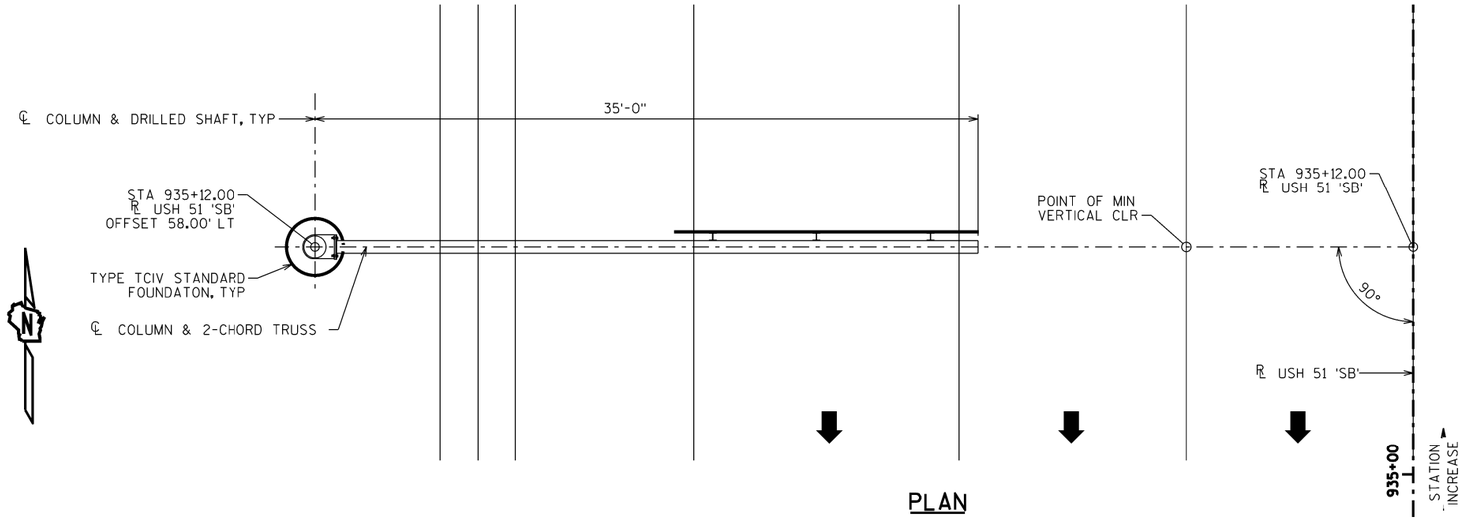
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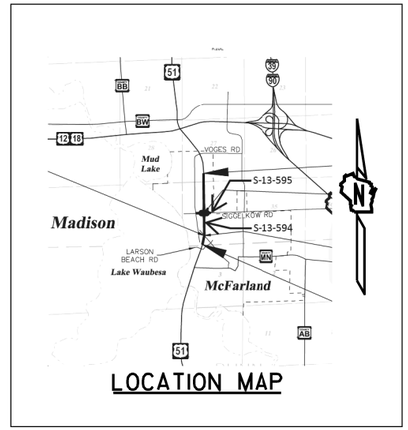
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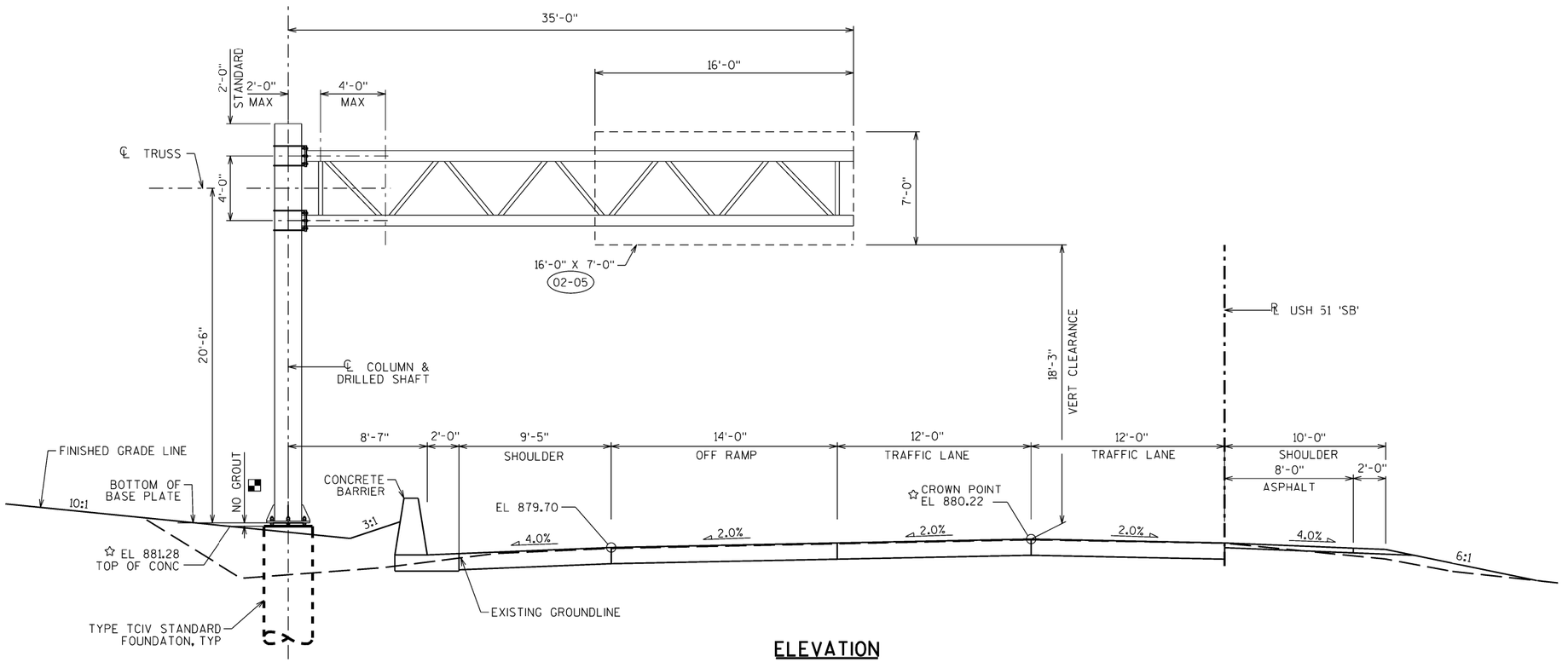
5845-16-77



PLAN



LOCATION MAP



ELEVATION

STA 935+12.00'SB'
(LOOKING UPSTATION AT BACK OF SIGN)

NOTE

POINT OF MIN VERTICAL CLEARANCE
STA 935+12.00, 12.00'LT
EL 880.22

LEGEND

☆ ELEVATIONS GIVEN ALONG ℄ 2-CHORD TRUSS

(XXX) SIGN NUMBERS (PERMANENT SIGNING PLAN)

■ STANDOFF DIMENSION IS ASSUMED TO BE 2½", BUT IS A MAXIMUM OF 2 X ANCHOR ROD DIAMETER. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-13-594

DRAWN BY CLP | PLANS CK'D. AEB

GENERAL LAYOUT
S-13-594

SHEET 2 OF 3

612

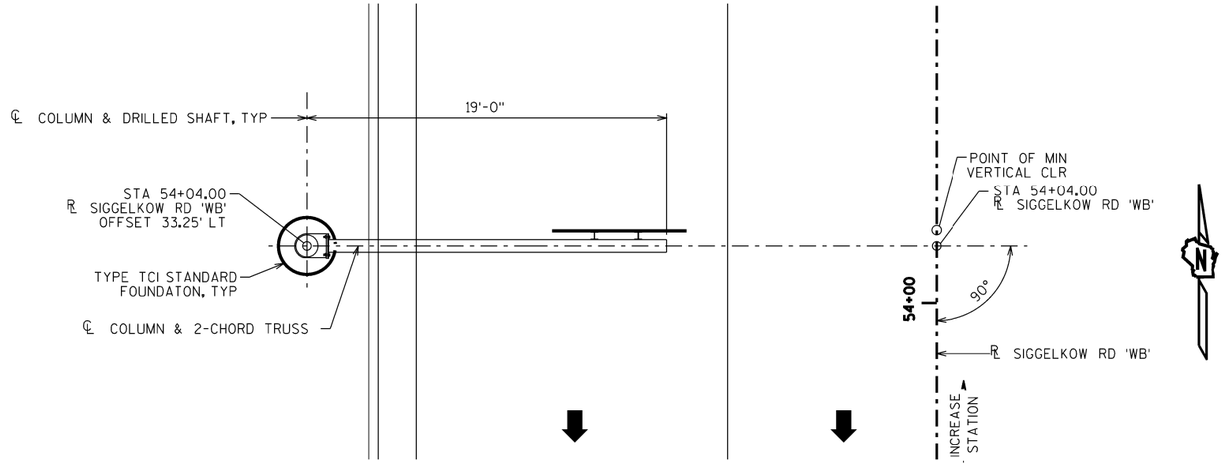
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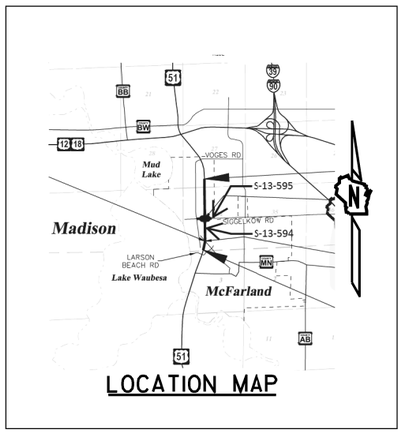
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STATE PROJECT NUMBER

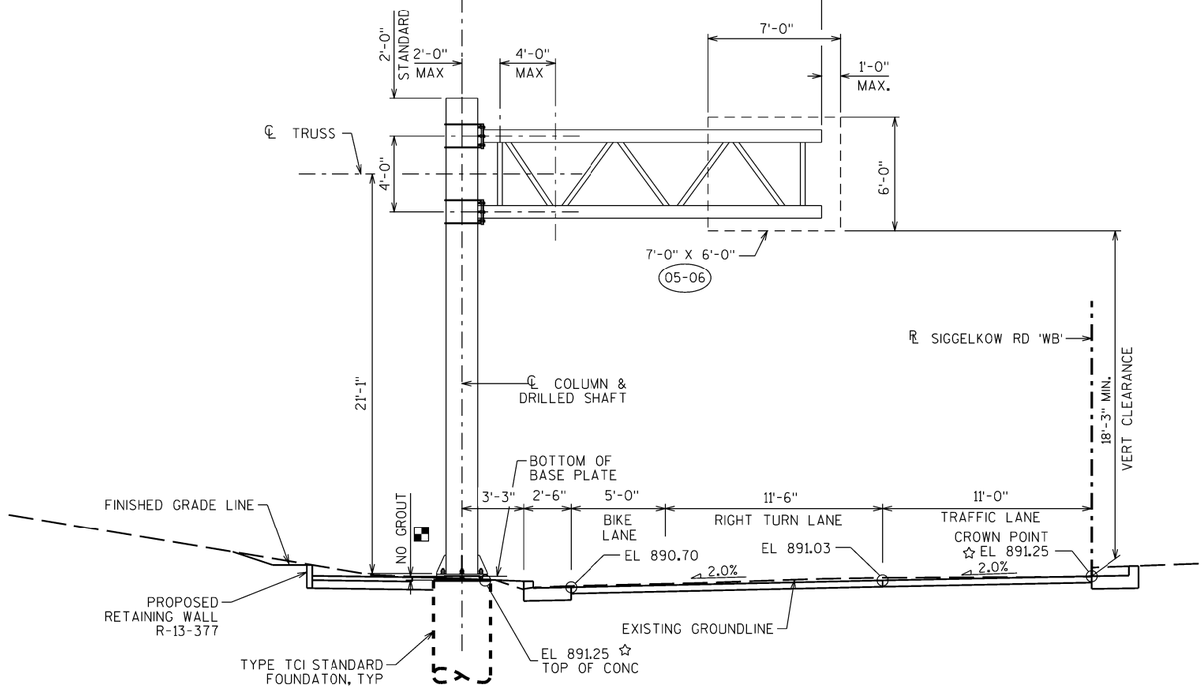
5845-16-77



PLAN



LOCATION MAP



ELEVATION

STA 54+04.00'WB'
(LOOKING UPSTATION AT BACK OF SIGN)

NOTE

POINT OF MIN VERTICAL CLEARANCE
STA 54+04.00, 0.00'LT
EL 891.25

LEGEND

☆ ELEVATIONS GIVEN ALONG ℄ 2-CHORD TRUSS

(XXX) SIGN NUMBERS (PERMANENT SIGNING PLAN)

■ STANDOFF DIMENSION IS ASSUMED TO BE 2½", BUT IS A MAXIMUM OF 2 X ANCHOR ROD DIAMETER. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.

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8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-13-595

DRAWN BY CLP | PLANS CK'D. AEB

GENERAL LAYOUT
S-13-595

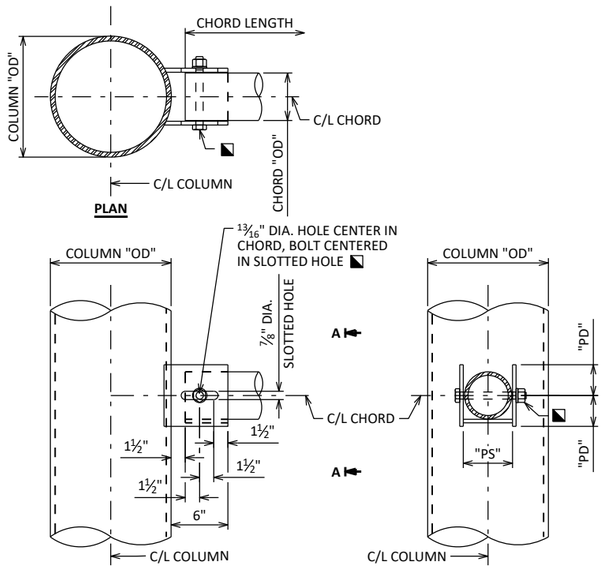
SHEET 3 OF 3

613

SCALE = 4.00

STATE PROJECT NUMBER

STANDARD



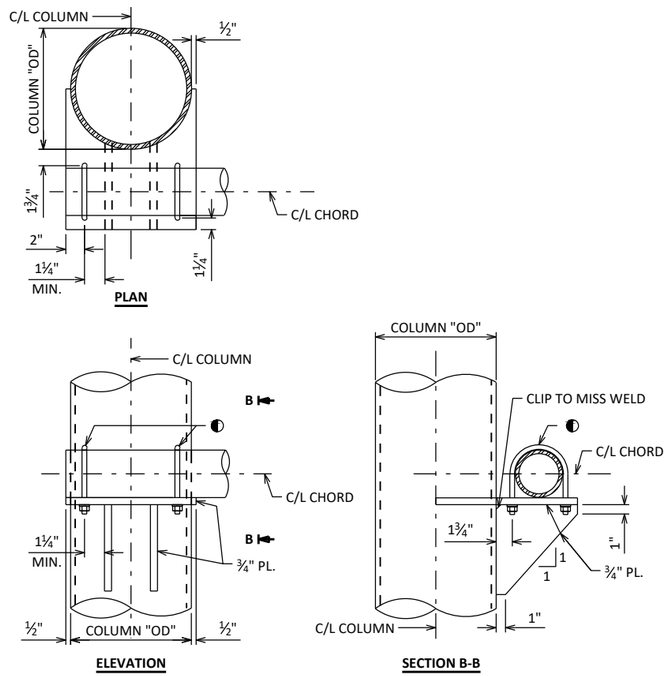
FULL SPAN SADDLE CONNECTION

PREFERRED OPTION

◪ ¾" GALVANIZED A325 OR A449 HEAVY HEX BOLT, NUT AND WASHER SNUG TIGHT ONLY, DO NOT OVER TIGHTEN

"PD" = CHORD "OD"/2 + ¾"

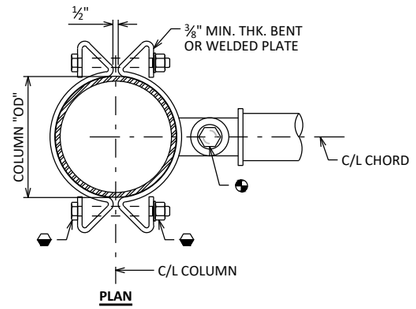
"PS" = CHORD "OD" + 1/16"

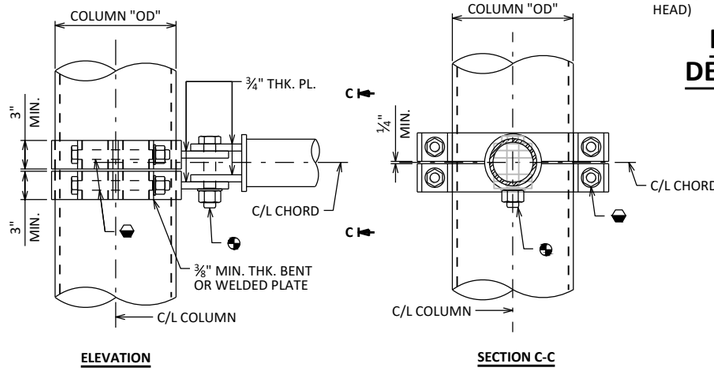


FULL SPAN STIFFENED BEARING CONNECTION

ALTERNATE 1

◐ MIN. (2) ½" MIN. GALVANIZED OR STAINLESS U-BOLT, LOCK NUT AND WASHER



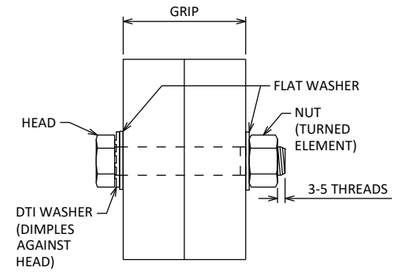


FULL SPAN CLAMP CONNECTION

ALTERNATE 2 - TAPERED COLUMNS ONLY

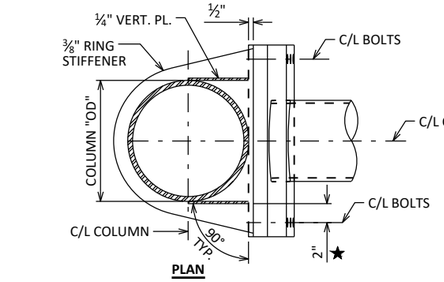
◓ 1¼" GALVANIZED A325 HEAVY HEX BOLT, NUT AND WASHER

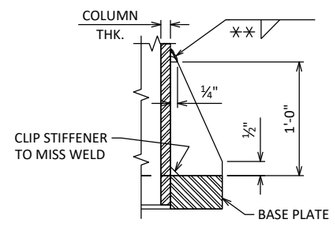
◒ 1" GALVANIZED A325 HEAVY HEX BOLT, NUT AND WASHER

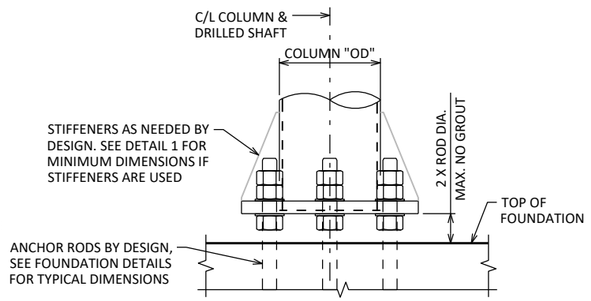


RECOMMENDED BOLT DETAIL WITH DTI WASHER

NUT IS TURNED ELEMENT

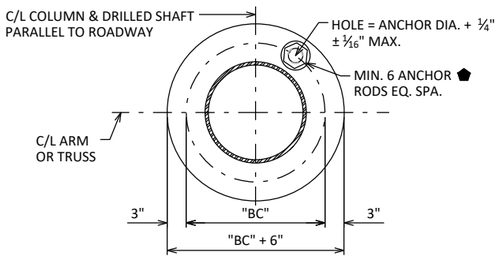






PREFERRED BASE PLATE CONNECTION

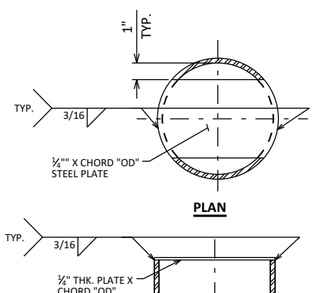
LOOKING AT F.F. OF STRUCTURE.
ALTERNATE BASE PLATE DESIGNS ALLOWED.



BASE PLATE

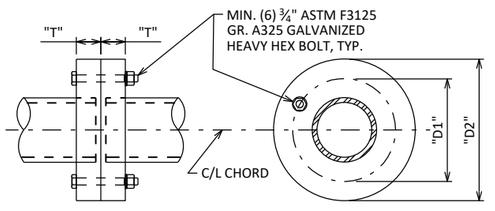
"BC" = COLUMN "OD" + 6"

⬟ ANCHOR SIZE AND ORIENTATION TO BE VERIFIED WITH SHOP DRAWINGS.



CHORD CAP DETAIL

CANTILEVERS ONLY



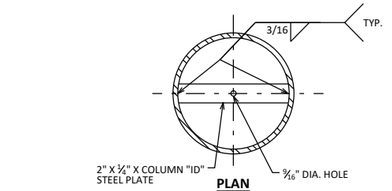
CHORD SPLICE DETAIL

"D1" = COLUMN "OD" + (1.5 x DB)

"D2" = COLUMN "OD" + (3 x DB)

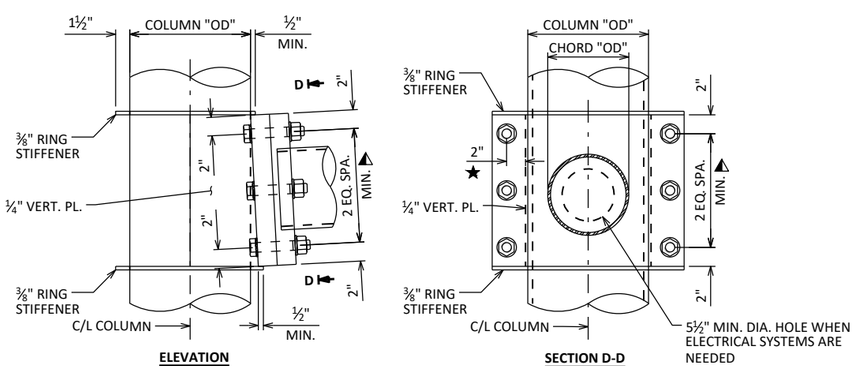
"T" = (BY DESIGN)

DB = BOLT DIAMETER (BY DESIGN)



TOWER CAP DETAIL

✳ PLACE TACK WELD EVERY OTHER FLAT TO SECURE NUT.
ALTERNATE: USE ½" THK. PL. AND DRILL AND TAP HOLE FOR BOLT.



CANTILEVER POST TO CHORD CONNECTION

◭ MIN. (6) 1" GALVANIZED A325 HEAVY HEX BOLT, NUT, DTI WASHER AND WASHER

★ MIN. DIMENSIONS MEASURED FROM EXT. FACE OF VERTICAL PLATE.

NOTES:

MINIMUM VALUES SHOWN. ALL CONNECTIONS ARE TO BE DESIGNED FOR ACTUAL STRUCTURAL LOADS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: JAN. 2023

DRAWN BY: BOS | PLANS CK'D: BOS

MONOTUBE & 2-CHORD TRUSS CONNECTIONS 1

SHEET 614

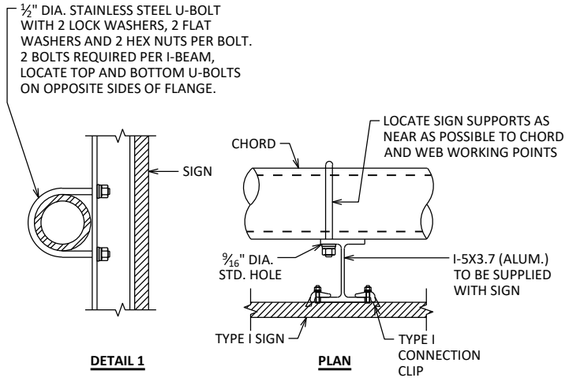
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8

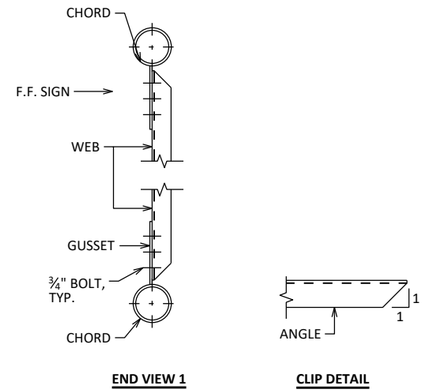
STATE PROJECT NUMBER

STANDARD



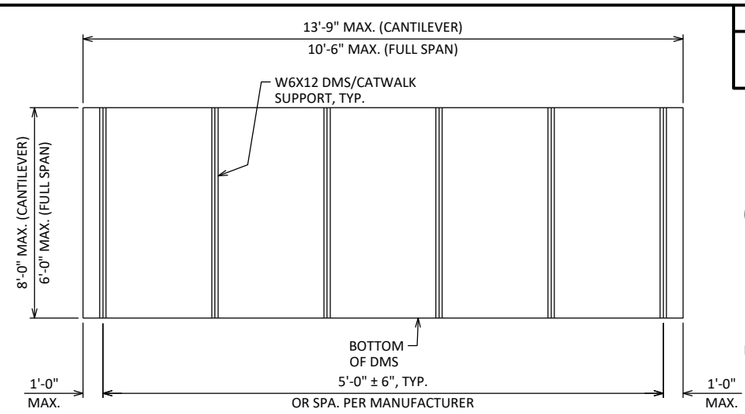
2-CHORD TRUSS SIGN CONNECTION

TYPE I SIGN PANEL SHOWN.
SEE SIGN PLATE MANUAL A4-7A AND A4-7BFOR DETAILS.
ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH SIGN PANEL, HARDWARE TO BE SUPPLIED BY THE CONTRACTOR.



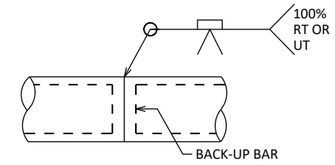
TRUSS CONNECTION DETAILS

MEMBER ORIENTATION FOR BOLTED CONNECTIONS SHOWN, WELDED CONNECTIONS SIMILAR.
ANGLES PREFERRED, OTHER WEB DESIGNS ALLOWED.



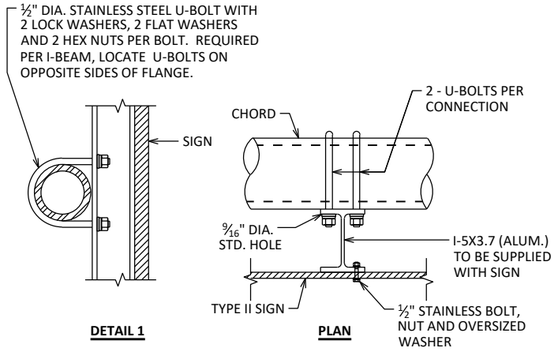
DMS MOUNTING POST DETAIL

POST SPACING MAY BE ADJUSTED AS REQUIRED IF SPACING CONFLICTS WITH GUSSET PLATES OF TRUSS WITHIN TOLERANCES NOTED.



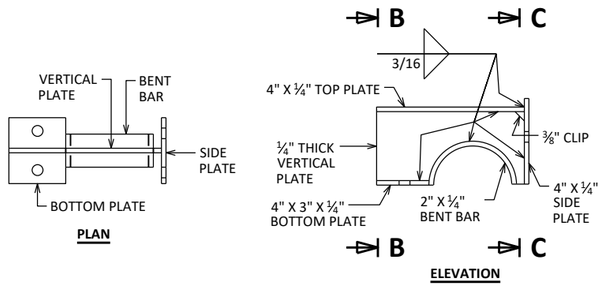
CHORD SPLICE

SEPARATE OPTIONAL SPLICE FROM GUSSET PLATES BY 6" MIN.



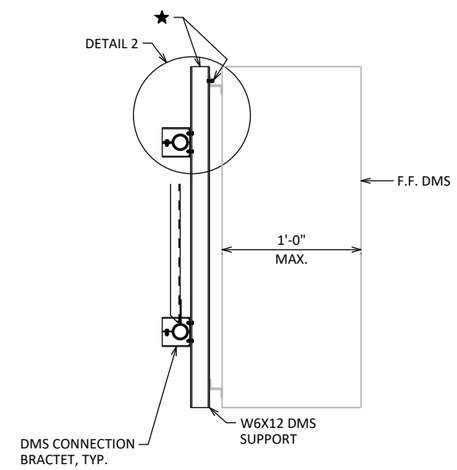
MONOTUBE SIGN CONNECTION

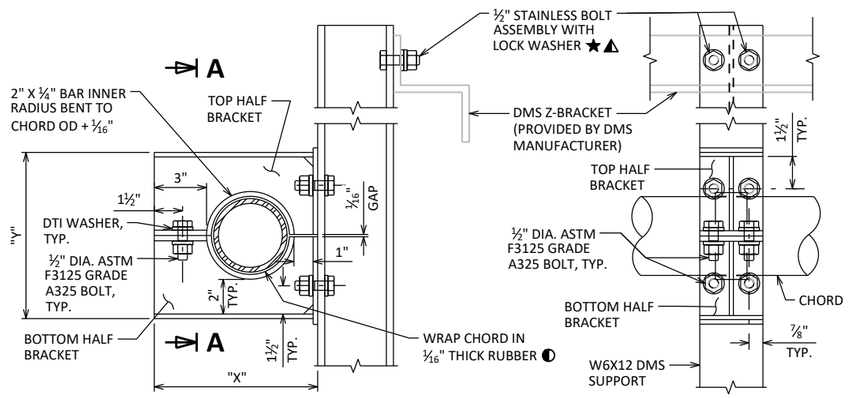
TYPE II SIGN PANEL SHOWN.
SEE SIGN PLATE MANUAL A4-7A AND A4-7B FOR DETAILS.
ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH SIGN PANEL, HARDWARE TO BE SUPPLIED BY THE CONTRACTOR.



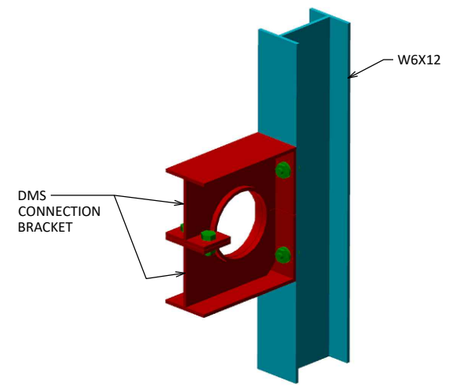
DMS WELDED PLATE CONNECTION DETAILS

TOP HALF OF BRACKET SHOWN, BOTTOM HALF SIMILAR.





CHORD "OD"	"X"	"Y"
"OD"	"OD" + $4\frac{13}{16}$"	"OD" + $5\frac{5}{16}$"



3-D VIEW OF DMS CONNECTION

CHORD NOT SHOW FOR CLARITY

SECTION THRU TRUSS - DMS

FOR DMS/CATWALK CONNECTIONS

★ W6X12 SUPPORTS AND HARDWARE ARE TO BE SUPPLIED BY THE CONTRACTOR. ½" STAINLESS BOLT, NUT, WASHER AND LOCK WASHER REQUIRED, 4 PER W6X12

TYPICAL DMS CONNECTION

◐ NEOPRENE, GRADE 45±5, OTHERWISE MEETING THE REQUIREMENTS OF STD. SPEC. 506.2.6.1

⚠ IF DMS CONNECTION BRACKET IS USED WITH A TYPE II SIGN PANEL, THE BOLT HOLE MUST BE GALVANIZED AND A STAINLESS WASHER USED BETWEEN THE I-BEAM AND SIGN PANEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: OCT. 2023

DRAWN BY BOS | PLANS CK'D BOS

MONOTUBE & 2-CHORD TRUSS CONNECTIONS 2

SHEET II
615

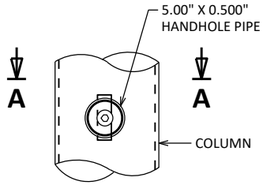
SCALE = 4.0

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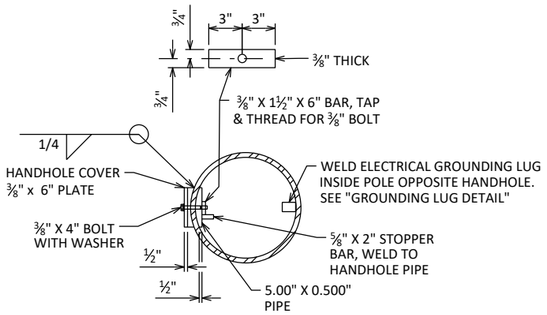
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STATE PROJECT NUMBER

STANDARD



ELEVATION

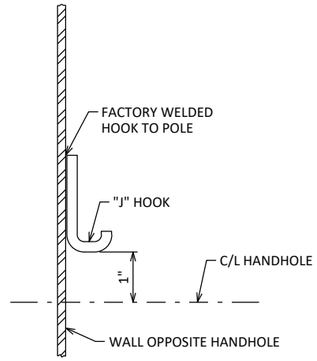


SECTION A-A

HANDHOLE DETAILS

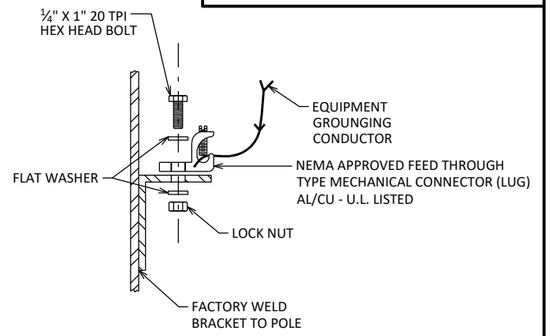
HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN BRIDGE STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC SECTION 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 OTHERWISE NOTED, ALL HANDHOLE ELEMENTS TO BE GALVANIZED PER THE WISDOT STANDARD SPECIFICATIONS.



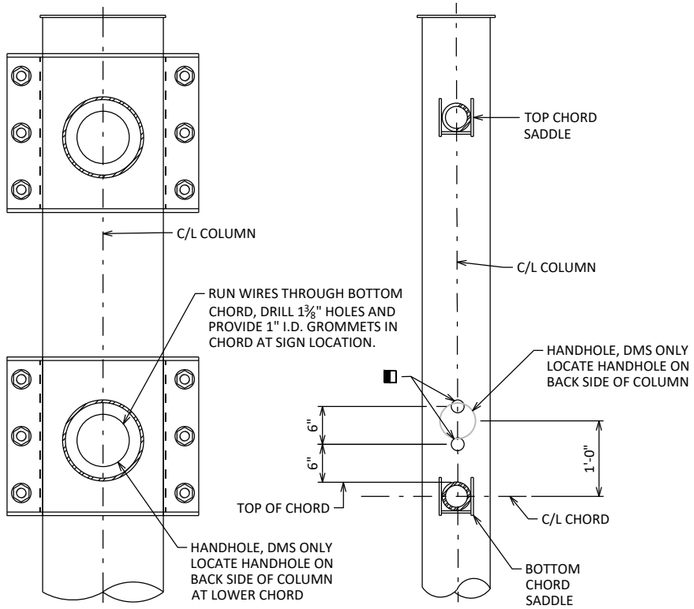
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF THE COLUMN 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



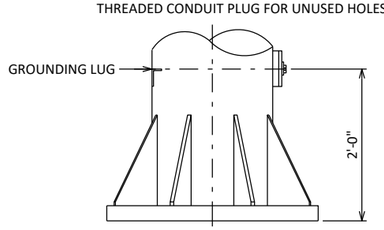
2-CHORD CANTILEVER

2-CHORD FULL SPAN

SADDLE CONNECTION SHOWN, OTHERS SIMILAR

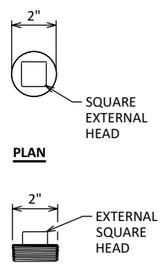
CONDUIT HOLE LOCATIONS

◧ 2" HOLE WITH STANDARD PIPE THREADS, USE THREADED CONDUIT PLUG FOR UNUSED HOLES



GROUNDING LUG LOCATION

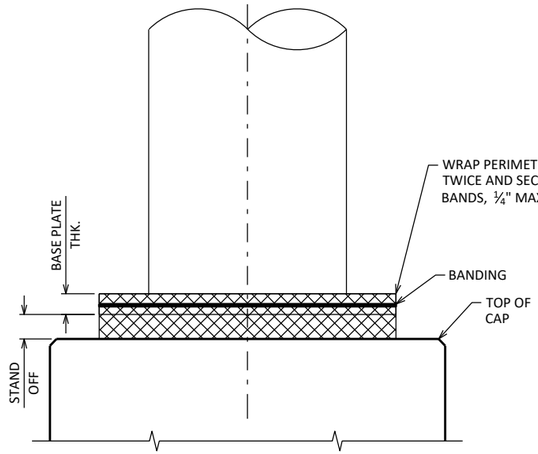
LOOKING AT THE F.F. OF STRUCTURE



PLAN

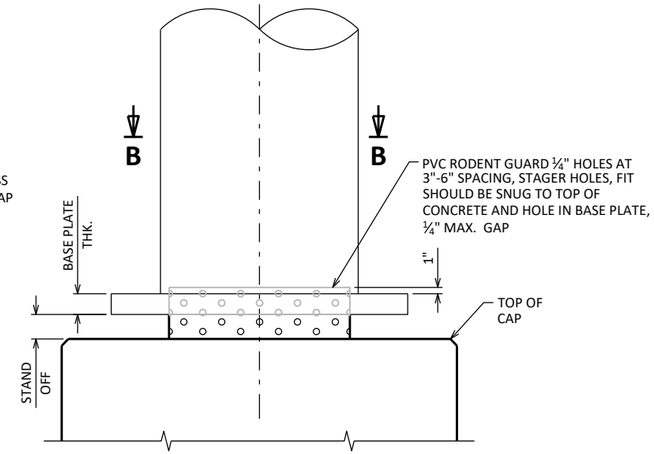
ELEVATION

CONDUIT PLUG DETAILS



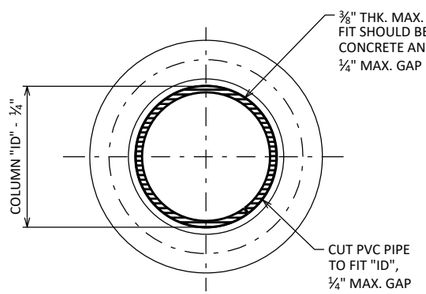
RODENT SCREEN

ONLY REQ'D WHEN ELECTRICAL DEVICES ARE PRESENT
ANCHOR RODS NOT SHOWN



RODENT SCREEN - ALTERNATE

ONLY REQ'D WHEN ELECTRICAL DEVICES ARE PRESENT
ANCHOR RODS NOT SHOWN



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: JAN. 2023

DRAWN BY: BOS | PLANS CK'D: BOS

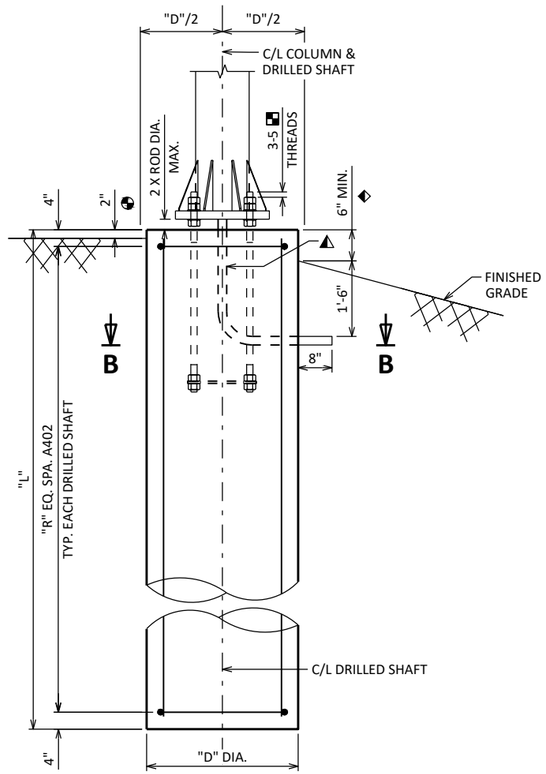
MONOTUBE & 2-CHORD TRUSS ELECTRICAL DETAILS

SHEET III
616

SCALE = 2.0

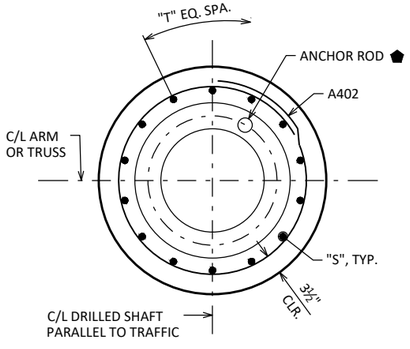
8

8



ELEVATION

- TYPICAL FOR DRILLED SHAFT FOOTINGS INSTALLED ADJACENT TO SIDEWALKS OR BEHIND CURB AND GUTTER ON LOW SPEED ROADS. TOP OF SHAFT SHALL BE FLUSH IF SURROUNDED BY CONCRETE AND 2" ABOVE FINISHED GRADE FOR ALL OTHER SURFACES.
- TYPICAL FOR EACH DRILLED SHAFT FOOTING INSTALLED ADJACENT TO ROADWAY FACILITIES OR ON SIDE SLOPES WITHIN CLEAR ZONE. BARRIER OR BEAMGUARD MAY BE REQUIRED.



SECTION B-B

TYPICAL FOR EACH DRILLED SHAFT FOOTING

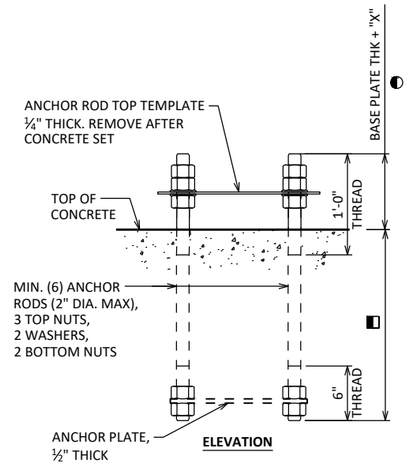
FOUNDATION DIMENSION DATA

STANDARD DESIGN TYPE	FOUNDATION DIMENSIONS					
	"D"	"L"	"R"	"S"	"T"	"BC" MAX.
MFI	2'-0"	12'-0"	12	A801	6	1'-0"
MFII	2'-6"	13'-0"	13	A801	10	1'-5"
MCI/MCII/TFI	2'-6"	17'-0"	17	A801	10	1'-5"
TCI	3'-0"	18'-0"	18	A801	14	1'-10"
TFII	3'-0"	20'-0"	20	A801	14	1'-10"
MCIII/TCII/TFIII	3'-6"	18'-0"	18	A901	14	2'-4"
MCIV/TFIV	3'-6"	23'-0"	23	A901	14	2'-4"
TCIII	4'-0"	23'-0"	23	A1001	14	2'-10"
TCIV	4'-0"	28'-0"	28	A1001	14	2'-10"

ESTIMATED QUANTITIES - FOUNDATION

STANDARD DESIGN TYPE	CONCRETE MASONRY	STEEL REINFORCEMENT HS	FOUNDATION DRILLING (DIA.) (LF)				
	(CY)	(LBS)	24"	30"	36"	42"	48
MFI	2	240	12	---	---	---	---
MFII	3	410	---	13	---	---	---
MCI/MCII/TFI	4	540	---	17	---	---	---
TCI	5	780	---	---	18	---	---
TFII	6	860	---	---	20	---	---
MCIII/TCII/TFIII	7	970	---	---	---	18	---
MCIV/TFIV	9	1,250	---	---	---	23	---
TCIII	11	1,560	---	---	---	---	23
TCIV	13	1,900	---	---	---	---	28

✶✶ QUANTITIES ARE FOR INFORMATION ONLY AND ARE BASED ON A SINGLE DRILLED SHAFT. MULTIPLY BY 2 FOR FULL SPAN STRUCTURES.



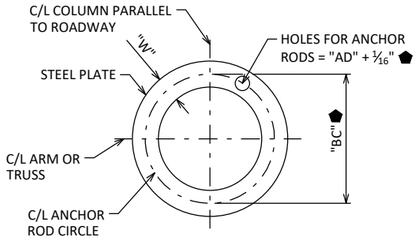
ANCHOR ROD ASSEMBLY DETAILS

◧ ANCHOR RODS PER ASSEMBLY TO BE DESIGNED BY CONTRACTOR AND SHOWN ON SHOP DRAWINGS. SHOW DIAMETER, NUMBER, ORIENTATION AND EMBEDMENT OF ANCHOR RODS.

CENTER ANCHOR ROD ASSEMBLY AND ENSURE ASSEMBLY IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE AS DETAILED. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURED IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHORS.

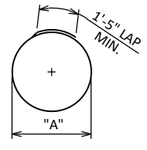
ANCHOR DIAMETER	MAX. STICK OUT ◐
	"X"
1"	5"
1¼"	6"
1½"	7"
1¾"	8"
2"	9"

◐ ADD BASE PLATE THICKNESS TO VALUE SHOWN FOR MAX. STICK OUT DIMENSION. CONTRACTOR TO COORDINATE WITH FABRICATOR FOR PROPER ANCHOR PLACEMENT.



ANCHOR PLATE & TOP TEMPLATE

⬟ ANCHOR SIZE, BOLT CIRCLE, AND POSITION TO BE VERIFIED WITH SHOP DRAWINGS.



A402

LEGEND

◪ ANCHOR ROD STICK OUT IN FINAL CONDITION. EXCESSIVE STICK OUT BEYOND DIMENSION SHOWN TO BE CUT OFF AFTER PLACING STRUCTURE. ANCHORS TO BE ULTRASONIC TESTED TO DETERMINE EMBEDDED LENGTH MEETS REQUIREMENTS PRIOR TO CUTTING. NOTE REMAINING LENGTH ON AS-BUILT.

◭ 2 - 2" DIA. NON-METALLIC 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 DMS. CONDUITS INCIDENTAL TO THE FOUNDATION BID ITEMS.

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS

STANDARD TYPE MFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		6	11'-8"			DRILLED SHAFT - VERTICAL
A402		13	5'-10"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPE MFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		10	12'-8"			DRILLED SHAFT - VERTICAL
A402		14	9'-4"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPES MCI/MCII/TFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		10	16'-8"			DRILLED SHAFT - VERTICAL
A402		18	9'-4"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPE TCI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		14	17'-8"			DRILLED SHAFT - VERTICAL
A402		19	10'-10"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPE TFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	19'-8"			DRILLED SHAFT - VERTICAL
A402		21	10'-10"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPES MCIII/TCII/TFIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	17'-8"			DRILLED SHAFT - VERTICAL
A402		19	12'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPES MCIV/TFIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	22'-8"			DRILLED SHAFT - VERTICAL
A402		24	12'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPE TCIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	22'-8"			DRILLED SHAFT - VERTICAL
A402		24	14'-0"	X		DRILLED SHAFT - HORIZONTAL

STANDARD TYPE TCIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	27'-8"			DRILLED SHAFT - VERTICAL
A402		29	14'-0"	X		DRILLED SHAFT - HORIZONTAL

✶✶ VALUES IN BAR TABLES ARE FOR A SINGLE FOUNDATION ONLY. MULTIPLY BY 2 FOR FULL ✶✶ SPAN STRUCTURES.

STATE PROJECT NUMBER

STANDARD

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: OCT. 2023

DRAWN BY BOS | PLANS CK'D BOS

MONOTUBE & 2-CHORD TRUSS FOUNDATIONS

SHEET IV
617

SCALE = 3.0

8

USH 51 NB

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
									1.00	1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
894+42.668	89442.67	0.00	93.10	0.00	0.13	0	0	0	0	0	0
895+00	89500.00	57.33	167.27	0.00	1.90	276	0	2	276	3	274
896+00	89600.00	100.00	159.51	0.00	1.21	605	0	6	881	10	871
896+55.003	89655.00	55.00	113.98	0.00	24.82	279	0	27	1,160	44	1,116
896+63	89663.00	8.00	113.30	0.00	26.59	34	0	8	1,194	54	1,140
897+00	89700.00	37.00	115.29	0.00	32.04	157	0	40	1,351	104	1,247
897+73.736	89773.74	73.74	129.21	0.00	36.68	334	0	94	1,685	221	1,464
897+98.634	89798.63	24.90	127.40	0.00	32.53	118	0	32	1,803	261	1,542
898+00	89800.00	1.37	127.33	0.00	32.66	6	0	2	1,809	264	1,545
898+25	89825.00	25.00	126.11	0.00	32.10	117	0	30	1,926	301	1,625
899+00	89900.00	75.00	135.44	0.00	27.02	363	0	82	2,289	404	1,885
899+86	89986.00	86.00	131.04	0.00	32.99	424	0	96	2,713	524	2,189
900+00	90000.00	14.00	22.33	0.00	30.01	40	0	16	2,753	544	2,209
903+00	90300.00	0.00	73.67	0.00	0.00	0	0	0	2,753	544	2,209
904+00	90400.00	100.00	118.68	0.00	31.51	356	0	58	3,109	616	2,493
905+00	90500.00	100.00	121.35	0.00	33.17	445	0	120	3,554	766	2,788
906+00	90600.00	100.00	123.83	0.00	43.23	454	0	141	4,008	943	3,066
907+00	90700.00	100.00	123.66	0.00	52.03	458	0	176	4,466	1,163	3,304
908+00	90800.00	100.00	138.78	0.00	3.15	486	0	102	4,952	1,290	3,662
909+00	90900.00	100.00	82.28	0.00	5.27	409	0	16	5,361	1,310	4,051
910+00	91000.00	100.00	82.12	0.00	3.63	304	0	16	5,665	1,330	4,335
911+00	91100.00	100.00	101.42	0.00	4.28	340	0	15	6,005	1,349	4,656
912+00	91200.00	100.00	104.75	0.00	1.34	382	0	10	6,387	1,361	5,026
912+53.835	91253.83	53.83	104.36	0.00	6.00	208	0	7	6,595	1,370	5,225
913+00	91300.00	46.17	110.99	0.00	0.00	184	0	5	6,779	1,376	5,403
914+00	91400.00	100.00	107.41	0.00	7.24	404	0	13	7,183	1,393	5,791
915+00	91500.00	100.00	123.81	0.00	0.56	428	0	14	7,611	1,410	6,201
916+00	91600.00	100.00	130.63	0.00	0.64	471	0	2	8,082	1,413	6,670
917+00	91700.00	100.00	173.31	0.00	8.11	563	0	16	8,645	1,433	7,213
917+42.669	91742.67	42.67	184.25	0.00	8.93	283	0	13	8,928	1,449	7,479
917+66.696	91766.70	24.03	184.80	0.00	5.86	164	0	7	9,092	1,458	7,635
917+77.165	91777.17	10.47	183.59	0.00	4.36	71	0	2	9,163	1,460	7,703
917+91.679	91791.68	14.51	192.05	0.00	2.45	101	0	2	9,264	1,463	7,802
918+00	91800.00	8.32	193.25	0.00	1.49	59	0	1	9,323	1,464	7,859
918+02.148	91802.15	2.15	194.13	0.00	1.04	15	0	0	9,338	1,464	7,874
918+27.13	91827.13	24.98	217.16	0.00	1.78	190	0	1	9,528	1,465	8,063
919+00	91900.00	72.87	184.83	0.00	0.08	542	0	3	10,070	1,469	8,601
919+75	91975.00	75.00	148.65	0.00	0.15	463	0	0	10,533	1,469	9,064

CONTINUED ON NEXT PAGE

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	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

9

9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	EARTHWORK DATA	SHEET 618	E

USH 51 NB

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
922+00	92200.00	0.00	116.54	0.00	195.58	0	0	0	10,533	0	9,064
923+00	92300.00	100.00	111.44	0.00	66.08	422	0	485	10,955	606	8,880
924+00	92400.00	100.00	112.37	0.00	28.09	414	0	174	11,369	824	9,077
925+00	92500.00	100.00	103.07	0.00	11.68	399	0	74	11,768	916	9,383
926+00	92600.00	100.00	105.75	0.00	16.62	387	0	52	12,155	981	9,705
927+00	92700.00	100.00	114.48	0.00	2.16	408	0	35	12,563	1,025	10,069
927+88.609	92788.61	88.61	106.32	0.00	3.26	362	0	9	12,925	1,036	10,420
928+00	92800.00	11.39	106.99	0.00	2.12	45	0	1	12,970	1,038	10,464
929+00	92900.00	100.00	103.22	0.00	0.18	389	0	4	13,359	1,043	10,848
930+00	93000.00	100.00	83.42	0.00	7.45	346	0	14	13,705	1,060	11,176
931+00	93100.00	100.00	84.43	0.00	5.19	311	0	23	14,016	1,089	11,459
932+00	93200.00	100.00	89.42	0.00	2.38	322	0	14	14,338	1,106	11,763
933+00	93300.00	100.00	108.42	0.00	0.00	366	0	4	14,704	1,111	12,124
934+00	93400.00	100.00	101.49	0.00	0.00	389	0	0	15,093	1,111	12,513
935+00	93500.00	100.00	172.44	0.00	0.00	507	0	0	15,600	1,111	13,020
936+00	93600.00	100.00	170.11	0.00	0.02	634	0	0	16,234	1,111	13,654
937+00	93700.00	100.00	203.12	0.00	0.05	691	0	0	16,925	1,111	14,345
938+00	93800.00	100.00	210.08	0.00	3.33	765	0	6	17,690	1,119	15,103
938+88.397	93888.40	88.40	177.08	0.00	13.38	634	0	27	18,324	1,153	15,703
939+00	93900.00	11.60	178.69	0.00	12.59	76	0	6	18,400	1,160	15,771
940+00	94000.00	100.00	170.76	0.00	13.67	647	0	49	19,047	1,221	16,357
941+00	94100.00	100.00	177.27	0.00	16.13	645	0	55	19,692	1,290	16,933
942+00	94200.00	100.00	183.75	0.00	15.39	669	0	58	20,361	1,363	17,530
943+00	94300.00	100.00	191.41	0.00	15.44	695	0	57	21,056	1,434	18,154
944+00	94400.00	100.00	214.41	0.00	7.79	752	0	43	21,808	1,488	18,852
945+00	94500.00	100.00	223.68	0.00	7.95	811	0	29	22,619	1,524	19,627
946+00	94600.00	100.00	215.45	0.00	9.47	813	0	32	23,432	1,564	20,400
946+54.36	94654.36	54.36	206.77	0.00	7.12	425	0	17	23,857	1,585	20,803
947+00	94700.00	45.64	217.64	0.00	4.71	359	0	10	24,216	1,598	21,150
948+00	94800.00	100.00	168.19	0.00	14.87	715	0	36	24,931	1,643	21,820
949+00	94900.00	100.00	140.14	0.00	23.70	571	0	71	25,502	1,731	22,302
950+00	95000.00	100.00	131.06	0.00	44.78	502	0	127	26,004	1,890	22,645
951+00	95100.00	100.00	134.83	0.00	40.78	492	0	158	26,496	2,088	22,940
952+00	95200.00	100.00	148.97	0.00	38.98	526	0	148	27,022	2,273	23,281
953+00	95300.00	100.00	154.19	0.00	37.58	561	0	142	27,583	2,450	23,664
953+40	95340.00	40.00	154.08	0.00	40.84	228	0	58	27,811	2,523	23,820
954+00	95400.00	60.00	150.04	0.00	19.75	338	0	67	28,149	2,606	24,074
955+00	95500.00	100.00	140.93	0.00	2.01	539	0	40	28,688	2,656	24,563
955+20	95520.00	20.00	137.15	0.00	0.33	103	0	1	28,791	2,658	24,665
956+00	95600.00	80.00	29.43	0.00	0.00	247	0	0	29,038	2,658	24,912
957+00	95700.00	100.00	18.39	0.00	0.00	89	0	0	29,127	2,658	25,001
				SUBTOTALS CATEGORY 0010		29,127	0	3,301			

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	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

USH 51 SB

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
									1.00	1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
893+00	89300.00	0.00	1.62	0.00	0.34	0	0	0	0	0	0
894+00	89400.00	100.00	15.31	0.00	2.13	31	0	5	31	6	25
894+50	89450.00	50.00	90.53	0.00	1.16	98	0	3	129	10	119
895+00	89500.00	50.00	87.93	0.00	1.08	165	0	2	294	13	282
896+00	89600.00	100.00	81.85	0.00	2.32	314	0	6	608	20	588
896+50	89650.00	50.00	96.45	0.00	2.42	165	0	4	773	25	748
897+00	89700.00	50.00	89.74	0.00	3.47	172	0	5	945	31	914
898+00	89800.00	100.00	83.26	0.00	1.94	320	0	10	1,265	44	1,221
898+50	89850.00	50.00	80.69	0.00	2.88	152	0	4	1,417	49	1,368
899+00	89900.00	50.00	74.61	0.00	3.05	144	0	5	1,561	55	1,506
900+00	90000.00	100.00	75.09	0.00	3.90	277	0	13	1,838	71	1,767
904+00	90400.00	0.00	46.95	0.00	0.57	0	0	0	1,838	71	1,767
905+00	90500.00	100.00	36.80	0.00	49.15	30	0	92	1,868	186	1,682
905+24.34	90524.34	24.34	37.26	0.00	50.71	33	0	45	1,901	243	1,659
905+49.619	90549.62	25.28	41.09	0.00	51.25	37	0	48	1,938	303	1,636
905+74.91	90574.91	25.29	46.58	0.00	49.43	41	0	47	1,979	361	1,618
906+00	90600.00	25.09	45.97	0.00	51.07	43	0	47	2,022	420	1,602
907+00	90700.00	100.00	44.82	0.00	39.58	168	0	168	2,190	630	1,560
908+00	90800.00	100.00	70.09	0.00	53.69	213	0	173	2,403	846	1,557
909+00	90886.82	86.82	91.01	0.00	35.90	259	0	144	2,662	1,026	1,636
910+00	90986.82	100.00	104.29	0.00	19.18	362	0	102	3,024	1,154	1,870
911+00	91086.82	100.00	65.15	0.00	10.41	314	0	55	3,338	1,223	2,116
912+00	91186.82	100.00	74.62	0.00	4.00	259	0	27	3,597	1,256	2,341
913+00	91286.82	100.00	106.26	0.00	0.04	335	0	7	3,932	1,265	2,667
914+00	91386.82	100.00	105.56	0.00	3.62	392	0	7	4,324	1,274	3,050
915+00	91486.82	100.00	103.40	0.00	18.21	387	0	40	4,711	1,324	3,387
916+00	91586.82	100.00	102.20	0.00	39.51	381	0	107	5,092	1,458	3,635
917+00	91686.82	100.00	105.76	0.00	22.04	385	0	114	5,477	1,600	3,877
918+00	91786.82	100.00	131.45	0.00	13.73	439	0	66	5,916	1,683	4,234
918+08.127	91794.94	8.13	131.31	0.00	14.30	40	0	4	5,956	1,688	4,269
918+33.11	91819.93	24.98	122.76	0.00	21.58	118	0	17	6,074	1,709	4,365
918+58.092	91844.91	24.98	113.22	0.00	32.51	109	0	25	6,183	1,740	4,443
919+00	91886.82	41.91	113.60	0.00	56.42	176	0	69	6,359	1,826	4,533
919+11.243	91898.06	11.24	114.55	0.00	85.00	48	0	29	6,407	1,863	4,545
919+36.225	91923.04	24.98	119.53	0.00	118.92	108	0	94	6,515	1,980	4,535
919+61.208	91948.02	24.98	126.54	0.00	112.41	114	0	107	6,629	2,114	4,515
920+00	91986.82	38.79	97.90	0.00	196.18	161	0	222	6,790	2,391	4,399
922+00	92186.82	0.00	112.03	0.00	2.13	0	0	0	6,790	2,391	4,399
922+22	92208.82	22.00	123.05	0.00	1.73	96	0	2	6,886	2,394	4,492
923+00	92286.82	78.00	180.31	0.00	3.51	438	0	8	7,324	2,404	4,920
923+78.412	92365.23	78.41	168.49	0.00	11.01	506	0	21	7,830	2,430	5,400
924+00	92386.82	21.59	166.76	0.00	13.63	134	0	10	7,964	2,443	5,522
924+03.395	92390.21	3.39	164.63	0.00	14.90	21	0	2	7,985	2,445	5,540

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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	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

USH 51 SB

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
924+28.377	92415.19	24.98	152.59	0.00	14.95	147	0	14	8,132	2,463	5,670
925+00	92486.82	71.62	109.29	0.00	21.39	347	0	48	8,479	2,523	5,957
925+18.993	92505.81	18.99	109.78	0.00	28.30	77	0	17	8,556	2,544	6,012
925+43.976	92530.79	24.98	110.57	0.00	36.27	102	0	30	8,658	2,581	6,077
925+68.958	92555.77	24.98	112.36	0.00	32.19	103	0	32	8,761	2,621	6,140
926+00	92586.82	31.04	109.23	0.00	19.72	127	0	30	8,888	2,659	6,229
927+00	92686.82	100.00	102.10	0.00	2.62	391	0	41	9,279	2,710	6,569
928+37.612	92824.43	137.61	106.64	0.00	3.43	532	0	15	9,811	2,729	7,082
929+00	92886.82	62.39	98.00	0.00	0.85	236	0	5	10,047	2,735	7,312
930+00	92986.82	100.00	106.82	0.00	10.03	379	0	20	10,426	2,760	7,666
931+00	93086.82	100.00	104.67	0.00	7.59	392	0	33	10,818	2,801	8,017
932+00	93186.82	100.00	105.11	0.00	0.00	388	0	14	11,206	2,819	8,387
933+00	93286.82	100.00	89.50	0.00	2.21	360	0	4	11,566	2,824	8,742
934+00	93386.82	100.00	81.61	0.00	5.34	317	0	14	11,883	2,841	9,042
934+75	93461.82	75.00	148.53	0.00	43.22	320	0	67	12,203	2,925	9,278
935+00	93486.82	25.00	145.09	0.00	36.43	136	0	37	12,339	2,971	9,368
936+00	93586.82	100.00	138.28	0.00	20.32	525	0	105	12,864	3,103	9,762
937+00	93686.82	100.00	153.74	0.00	0.50	541	0	39	13,405	3,151	10,254
937+75	93761.82	75.00	141.90	0.00	3.90	411	0	6	13,816	3,159	10,657
938+00	93786.82	25.00	138.95	0.00	4.40	130	0	4	13,946	3,164	10,782
939+00	93886.82	100.00	138.00	0.00	3.18	513	0	14	14,459	3,181	11,278
940+00	93986.82	100.00	128.35	0.00	25.27	493	0	53	14,952	3,248	11,705
940+30	94016.82	30.00	204.03	0.00	6.73	185	0	18	15,137	3,270	11,867
940+71	94057.82	41.00	242.18	0.00	8.06	339	0	11	15,476	3,284	12,192
940+90	94076.82	19.00	249.82	0.00	7.63	173	0	6	15,649	3,291	12,358
941+00	94086.82	10.00	254.87	0.00	7.98	93	0	3	15,742	3,295	12,447
941+15.001	94101.82	15.00	228.83	0.00	8.82	134	0	5	15,876	3,301	12,575
941+39.983	94126.80	24.98	209.79	0.00	8.70	203	0	8	16,079	3,311	12,768
942+00	94186.82	60.02	249.51	0.00	5.69	510	0	16	16,589	3,331	13,258
943+00	94286.82	100.00	427.42	0.00	4.77	1,254	0	19	17,843	3,355	14,488
944+00	94386.82	100.00	403.37	0.00	5.85	1,539	0	20	19,382	3,380	16,002
945+00	94486.82	100.00	212.44	0.00	4.70	1,140	0	20	20,522	3,405	17,117
946+00	94586.82	100.00	128.26	0.00	17.17	631	0	41	21,153	3,456	17,697
947+00	94686.82	100.00	139.76	0.00	48.04	496	0	121	21,649	3,608	18,042
948+00	94786.82	100.00	122.64	0.00	74.94	486	0	228	22,135	3,893	18,243
949+00	94886.82	100.00	118.28	0.00	91.43	446	0	308	22,581	4,278	18,304
950+00	94986.82	100.00	117.57	0.00	92.97	437	0	341	23,018	4,704	18,314
951+00	95086.82	100.00	151.71	0.00	54.81	499	0	274	23,517	5,046	18,471
952+00	95186.82	100.00	205.61	0.00	50.58	662	0	195	24,179	5,290	18,889
953+00	95286.82	100.00	225.43	0.00	58.38	798	0	202	24,977	5,543	19,435
954+00	95386.82	100.00	161.10	0.00	53.74	716	0	208	25,693	5,803	19,891
955+00	95486.82	100.00	43.97	0.00	0.00	380	0	100	26,073	5,928	20,146
956+00	95586.82	100.00	30.89	0.00	0.00	139	0	0	26,212	5,928	20,285
957+00	95686.82	100.00	19.08	0.00	0.00	93	0	0	26,305	5,928	20,378
				SUBTOTALS CATEGORY 0010		26,305	0	4,742			

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	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

RAMP A

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
109+00	10900.00	0.00	75.75	0.00	1.39	0	0	0	0	0	0
109+50	10950.00	50.00	87.54	0.00	0.59	151	0	2	151	3	149
110+00	11000.00	50.00	92.24	0.00	1.05	166	0	2	317	5	312
110+50	11050.00	50.00	92.28	0.00	4.58	171	0	5	488	11	477
111+00	11100.00	50.00	61.73	0.00	3.41	143	0	7	631	20	611
111+50	11150.00	50.00	54.15	0.00	5.03	107	0	8	738	30	708
112+00	11200.00	50.00	57.64	0.00	14.07	104	0	18	842	53	790
112+50	11250.00	50.00	60.60	0.00	17.19	109	0	29	951	89	862
112+58.662	11258.66	8.66	61.11	0.00	29.50	20	0	7	971	98	874
113+00	11300.00	41.34	62.36	0.00	18.61	95	0	37	1,066	144	922
113+50	11350.00	50.00	61.06	0.00	10.64	114	0	27	1,180	178	1,003
114+00	11400.00	50.00	62.75	0.00	10.53	115	0	20	1,295	203	1,093
114+50	11450.00	50.00	66.66	0.00	7.86	120	0	17	1,415	224	1,191
115+00	11500.00	50.00	74.05	0.00	3.65	130	0	11	1,545	238	1,308
115+50	11550.00	50.00	74.22	0.00	4.45	137	0	8	1,682	248	1,435
116+00	11600.00	50.00	71.83	0.00	3.71	135	0	8	1,817	258	1,560
116+50	11650.00	50.00	72.72	0.00	3.63	134	0	7	1,951	266	1,685
117+00	11700.00	50.00	71.03	0.00	8.24	133	0	11	2,084	280	1,804
117+50	11750.00	50.00	69.94	0.00	9.44	131	0	16	2,215	300	1,915
118+00	11800.00	50.00	0.00	0.00	0.00	65	0	9	2,280	311	1,969
118+50	11850.00	50.00	0.00	0.00	0.00	0	0	0	2,280	311	1,969
119+00	11900.00	50.00	0.00	0.00	0.00	0	0	0	2,280	311	1,969
119+50	11950.00	50.00	0.00	0.00	0.00	0	0	0	2,280	311	1,969
				SUBTOTALS CATEGORY 0010		2,280	0	249			

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	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

9

9

RAMP B

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
									1.00	1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
221+50	22150.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0
222+00	22200.00	50.00	0.00	0.00	0.00	0	0	0	0	0	0
222+50	22250.00	50.00	0.00	0.00	0.00	0	0	0	0	0	0
223+00	22300.00	50.00	142.05	0.00	0.00	132	0	0	132	0	132
223+50	22350.00	50.00	110.56	0.00	0.81	234	0	1	366	1	365
224+00	22400.00	50.00	96.34	0.00	3.37	192	0	4	558	6	552
224+50	22450.00	50.00	86.58	0.00	3.41	169	0	6	727	14	713
225+00	22500.00	50.00	74.76	0.00	4.39	149	0	7	876	23	854
225+50	22550.00	50.00	71.70	0.00	4.57	136	0	8	1,012	33	980
226+00	22600.00	50.00	78.67	0.00	1.11	139	0	5	1,151	39	1,112
226+50	22650.00	50.00	88.98	0.00	0.00	155	0	1	1,306	40	1,266
227+00	22700.00	50.00	90.71	0.00	0.00	166	0	0	1,472	40	1,432
227+50	22750.00	50.00	98.36	0.00	0.03	175	0	0	1,647	40	1,607
227+88.51	22788.51	38.51	97.81	0.00	0.41	140	0	0	1,787	40	1,747
228+00	22800.00	11.49	97.46	0.00	0.83	42	0	0	1,829	40	1,789
228+50	22850.00	50.00	86.91	0.00	2.05	171	0	3	2,000	44	1,956
229+00	22900.00	50.00	82.02	0.00	1.12	156	0	3	2,156	48	2,109
229+50	22950.00	50.00	108.74	0.00	2.16	177	0	3	2,333	51	2,282
230+00	23000.00	50.00	164.55	0.00	3.28	253	0	5	2,586	58	2,529
230+50	23050.00	50.00	188.07	0.00	3.33	327	0	6	2,913	65	2,848
231+00	23100.00	50.00	234.15	0.00	0.88	391	0	4	3,304	70	3,234
231+50	23150.00	50.00	278.85	0.00	0.00	475	0	1	3,779	71	3,708
232+00	23200.00	50.00	275.96	0.00	0.00	514	0	0	4,293	71	4,222
232+50	23250.00	50.00	186.90	0.00	0.07	429	0	0	4,722	71	4,651
233+00	23300.00	50.00	174.57	0.00	0.07	335	0	0	5,057	71	4,986
233+50	23350.00	50.00	153.16	0.00	0.00	303	0	0	5,360	71	5,289
234+00	23400.00	50.00	131.37	0.00	0.00	263	0	0	5,623	71	5,552
234+50	23450.00	50.00	73.11	0.00	0.14	189	0	0	5,812	71	5,741
				SUBTOTALS CATEGORY 0010		5,812	0	57			

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	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

9

9

RAMP C

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
									1.00	1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
322+00	32200.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0
322+50	32250.00	50.00	0.00	0.00	0.00	0	0	0	0	0	0
323+00	32300.00	50.00	0.00	0.00	0.00	0	0	0	0	0	0
323+40	32340.00	40.00	0.00	0.00	0.00	0	0	0	0	0	0
323+50	32350.00	10.00	0.00	0.00	0.00	0	0	0	0	0	0
324+00	32400.00	50.00	128.89	0.00	0.01	119	0	0	119	0	119
324+50	32450.00	50.00	109.60	0.00	0.12	221	0	0	340	0	340
325+00	32500.00	50.00	106.38	0.00	0.00	200	0	0	540	0	540
325+50	32550.00	50.00	113.52	0.00	0.02	204	0	0	744	0	744
326+00	32600.00	50.00	100.22	0.00	0.02	198	0	0	942	0	942
326+50	32650.00	50.00	97.60	0.00	0.00	183	0	0	1,125	0	1,125
327+00	32700.00	50.00	104.48	0.00	0.00	187	0	0	1,312	0	1,312
327+50	32750.00	50.00	101.87	0.00	0.00	191	0	0	1,503	0	1,503
327+75	32775.00	25.00	99.20	0.00	0.00	93	0	0	1,596	0	1,596
328+00	32800.00	25.00	97.12	0.00	0.60	91	0	0	1,687	0	1,687
328+37.398	32837.40	37.40	92.55	0.00	1.77	131	0	2	1,818	3	1,816
328+50	32850.00	12.60	90.31	0.00	0.03	43	0	0	1,861	3	1,859
329+00	32900.00	50.00	88.25	0.00	0.00	165	0	0	2,026	3	2,024
329+50	32950.00	50.00	83.36	0.00	0.60	159	0	1	2,185	4	2,181
330+00	33000.00	50.00	78.56	0.00	3.93	150	0	4	2,335	9	2,326
330+50	33050.00	50.00	96.02	0.00	8.11	162	0	11	2,497	23	2,475
330+75	33075.00	25.00	90.54	0.00	11.06	86	0	9	2,583	34	2,549
331+00	33100.00	25.00	84.27	0.00	13.78	81	0	11	2,664	48	2,617
331+50	33150.00	50.00	74.89	0.00	14.85	147	0	27	2,811	81	2,730
332+00	33200.00	50.00	97.59	0.00	17.27	160	0	30	2,971	119	2,852
332+50	33250.00	50.00	91.20	0.00	18.49	175	0	33	3,146	160	2,986
333+00	33300.00	50.00	85.03	0.00	20.31	163	0	36	3,309	205	3,104
333+50	33350.00	50.00	79.12	0.00	11.84	152	0	30	3,461	243	3,219
333+75	33375.00	25.00	76.17	0.00	11.00	72	0	11	3,533	256	3,277
334+00	33400.00	25.00	75.42	0.00	15.68	70	0	12	3,603	271	3,332
			SUBTOTALS CATEGORY 0010			3,603	0	217			

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	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [{CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - {(FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - {(FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [{CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - {(FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - {(FILL - EXPANDED ROCK) * FILL FACTOR)]

RAMP 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
410+50	41036.82	0.00	55.91	0.00	0.00	0	0	0	0	0	0
411+00	41086.82	50.00	70.03	0.00	0.00	117	0	0	117	0	117
411+50	41136.82	50.00	82.66	0.00	0.00	141	0	0	258	0	258
412+00	41186.82	50.00	91.01	0.00	0.11	161	0	0	419	0	419
412+50	41236.82	50.00	72.20	0.00	5.01	151	0	5	570	6	564
413+00	41286.82	50.00	94.70	0.00	5.48	155	0	10	725	19	706
413+50	41336.82	50.00	117.71	0.00	2.62	197	0	8	922	29	893
414+00	41386.82	50.00	127.92	0.00	0.75	227	0	3	1,149	33	1,117
414+50	41436.82	50.00	120.26	0.00	0.90	230	0	2	1,379	35	1,344
415+00	41486.82	50.00	90.57	0.00	2.84	195	0	3	1,574	39	1,535
415+50	41536.82	50.00	74.47	0.00	4.96	153	0	7	1,727	48	1,680
416+00	41586.82	50.00	74.23	0.00	3.87	138	0	8	1,865	58	1,808
416+50	41636.82	50.00	75.41	0.00	4.47	139	0	8	2,004	68	1,937
417+00	41686.82	50.00	76.27	0.00	4.00	140	0	8	2,144	78	2,067
417+50	41736.82	50.00	78.27	0.00	2.31	143	0	6	2,287	85	2,202
418+00	41786.82	50.00	85.86	0.00	0.28	152	0	2	2,439	88	2,352
418+50	41836.82	50.00	88.65	0.00	0.46	162	0	1	2,601	89	2,512
419+00	41886.82	50.00	92.54	0.00	0.61	168	0	1	2,769	90	2,679
419+50	41936.82	50.00	0.00	0.00	0.00	86	0	1	2,855	91	2,764
420+00	41986.82	50.00	0.00	0.00	0.00	0	0	0	2,855	91	2,764
				SUBTOTALS CATEGORY 0010		2,855	0	73			

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	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

9

9

SIGGELKOW RD EB

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
									1.00	1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
42+50	4250.00	0.00	55.99	0.00	6.25	0	0	0	0	0	0
43+00	4300.00	50.00	70.65	0.00	0.17	117	0	6	117	8	110
43+50	4350.00	50.00	85.87	0.00	0.00	145	0	0	262	8	255
44+00	4400.00	50.00	84.35	0.00	0.10	158	0	0	420	8	413
44+50	4450.00	50.00	80.07	0.00	9.53	152	0	9	572	19	553
45+00	4500.00	50.00	80.16	0.00	15.03	148	0	23	720	48	673
45+50	4550.00	50.00	77.66	0.00	8.18	146	0	21	866	74	792
45+70	4570.00	20.00	89.78	0.00	0.00	62	0	3	928	78	851
46+00	4600.00	30.00	81.36	0.00	19.33	95	0	11	1,023	91	932
46+50	4650.00	50.00	83.72	0.00	34.14	153	0	50	1,176	154	1,022
47+00	4700.00	50.00	77.12	0.00	48.63	149	0	77	1,325	250	1,075
52+50	5250.00	0.00	124.94	0.00	0.00	0	0	0	1,325	250	1,075
53+00	5300.00	50.00	124.29	0.00	0.00	231	0	0	1,556	250	1,306
53+50	5350.00	50.00	102.97	0.00	0.00	210	0	0	1,766	250	1,516
54+00	5400.00	50.00	96.82	0.00	0.74	185	0	1	1,951	251	1,700
54+07	5407.00	7.00	95.92	0.00	0.99	25	0	0	1,976	251	1,725
54+50	5450.00	43.00	97.37	0.00	7.01	154	0	6	2,130	259	1,871
55+00	5500.00	50.00	101.74	0.00	6.78	184	0	13	2,314	275	2,039
55+50	5550.00	50.00	114.20	0.00	1.33	200	0	8	2,514	285	2,229
			SUBTOTALS CATEGORY 0010			2,514	0	228			

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	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

9

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PROJECT NO: 5845-16-77 | HWY: USH 51 | COUNTY: DANE | EARTHWORK DATA | SHEET 626 | E

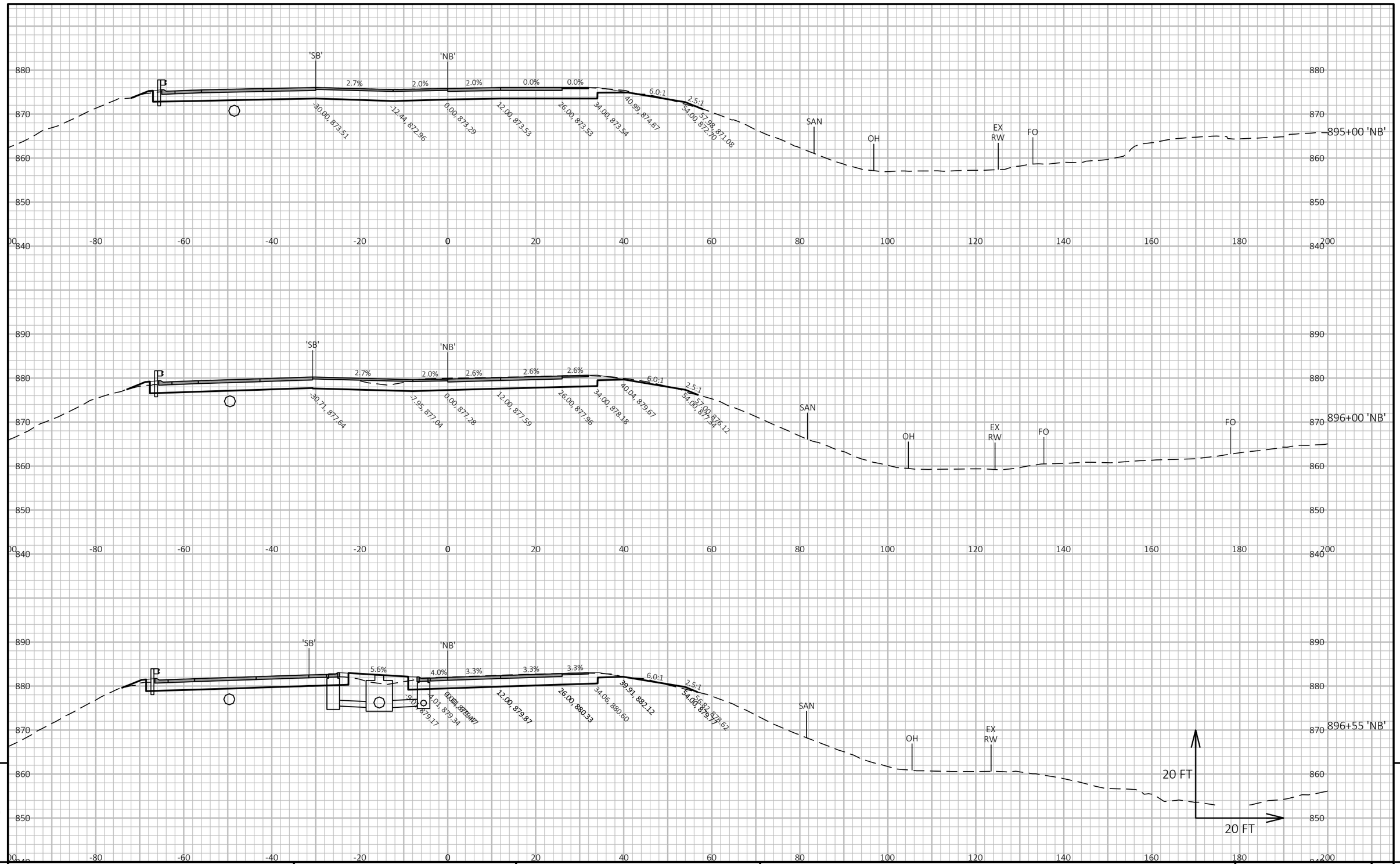
SIGGELKOW RD WB

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
42+50	4250.00	0.00	60.22	0.00	0.12	0	0	0	0	0	0
43+00	4300.00	50.00	71.44	0.00	0.61	122	0	1	122	1	121
43+50	4350.00	50.00	85.50	0.00	0.00	145	0	1	267	3	265
43+65.333	4365.33	15.33	104.58	0.00	0.00	54	0	0	321	3	319
44+00	4400.00	34.67	76.62	0.00	0.00	116	0	0	437	3	435
44+30.303	4430.30	30.30	87.59	0.00	0.00	92	0	0	529	3	527
44+50	4450.00	19.70	67.81	0.00	0.63	57	0	0	586	3	584
45+00	4500.00	50.00	78.18	0.00	0.00	135	0	1	721	4	717
45+09.923	4509.92	9.92	76.10	0.00	0.00	28	0	0	749	4	745
45+50	4550.00	40.08	60.00	0.00	5.75	101	0	4	850	9	841
45+85.195	4585.19	35.19	74.96	0.00	0.00	88	0	4	938	14	924
46+00	4600.00	14.81	120.81	0.00	4.71	54	0	1	992	15	977
46+50	4650.00	50.00	84.60	0.00	0.79	190	0	5	1,182	21	1,161
47+00	4700.00	50.00	142.68	0.00	0.98	210	0	2	1,392	24	1,368
52+50	5253.01	0.00	119.34	0.00	0.00	0	0	0	1,392	24	1,368
53+00	5303.01	50.00	108.18	0.00	0.00	211	0	0	1,603	24	1,579
53+50	5353.01	50.00	168.81	0.00	0.00	256	0	0	1,859	24	1,835
54+00	5403.01	50.00	110.74	0.00	0.00	259	0	0	2,118	24	2,094
54+50	5453.01	50.00	75.60	0.00	1.37	173	0	1	2,291	25	2,266
55+00	5503.01	50.00	76.90	0.00	1.31	141	0	2	2,432	28	2,405
55+50	5553.01	50.00	93.41	0.00	1.94	158	0	3	2,590	31	2,559
			SUBTOTALS CATEGORY 0010			2,590	0	25			

SIGGELKOW RD S1L

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
100+25	10025.00	0.00	136.09	0.00	0.43	0	0	0	0	0	0
100+50	10050.00	25.00	152.93	0.00	0.00	134	0	0	134	0	134
101+00	10100.00	50.00	155.24	0.00	0.00	285	0	0	419	0	419
101+18.783	10118.78	18.78	124.15	0.00	0.00	97	0	0	516	0	516
101+50	10150.00	31.22	98.30	0.00	0.00	114	0	0	114	0	114
			SUBTOTALS CATEGORY 0010			630	0	0			

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	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

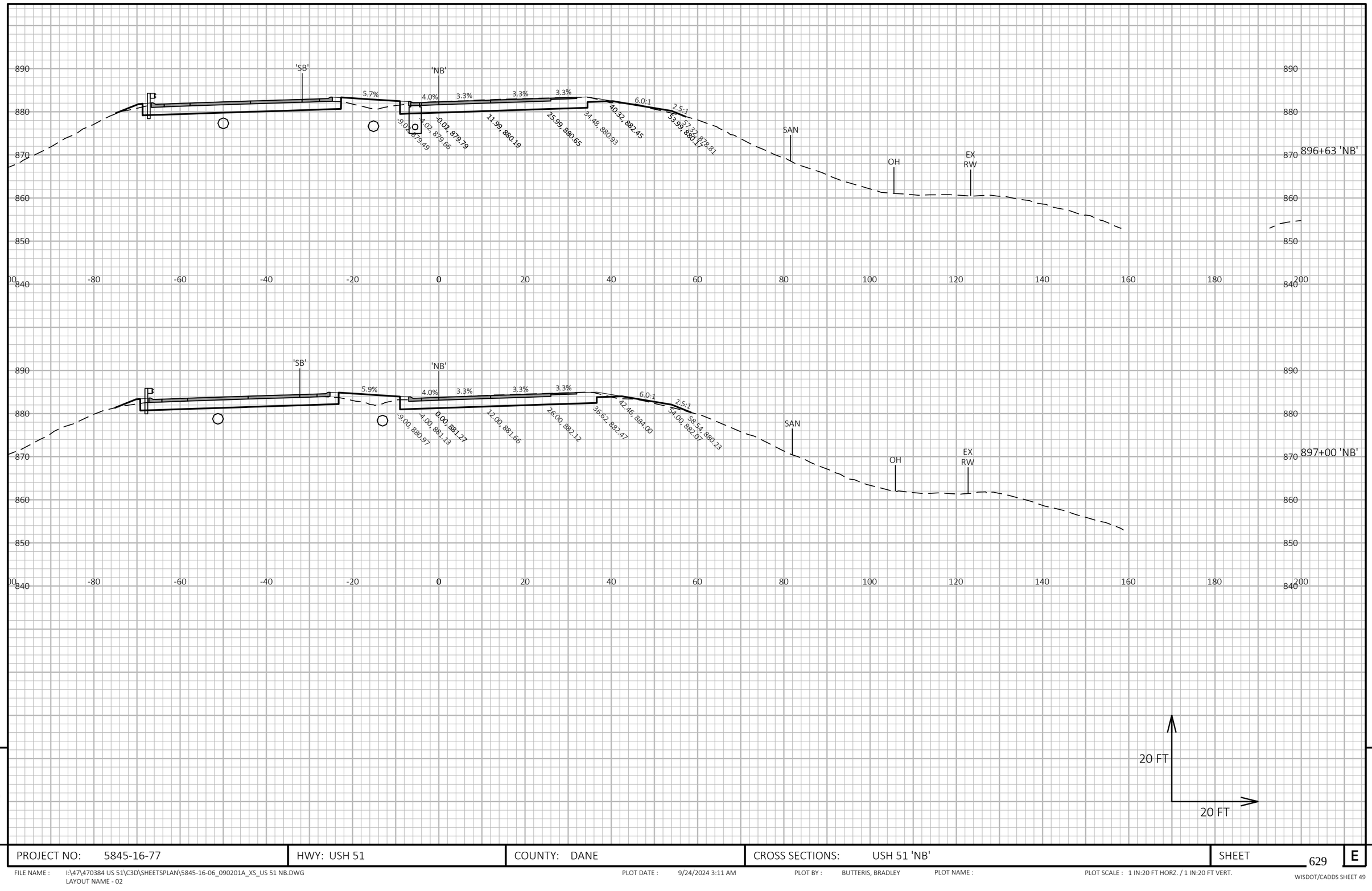


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 628	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2024 3:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



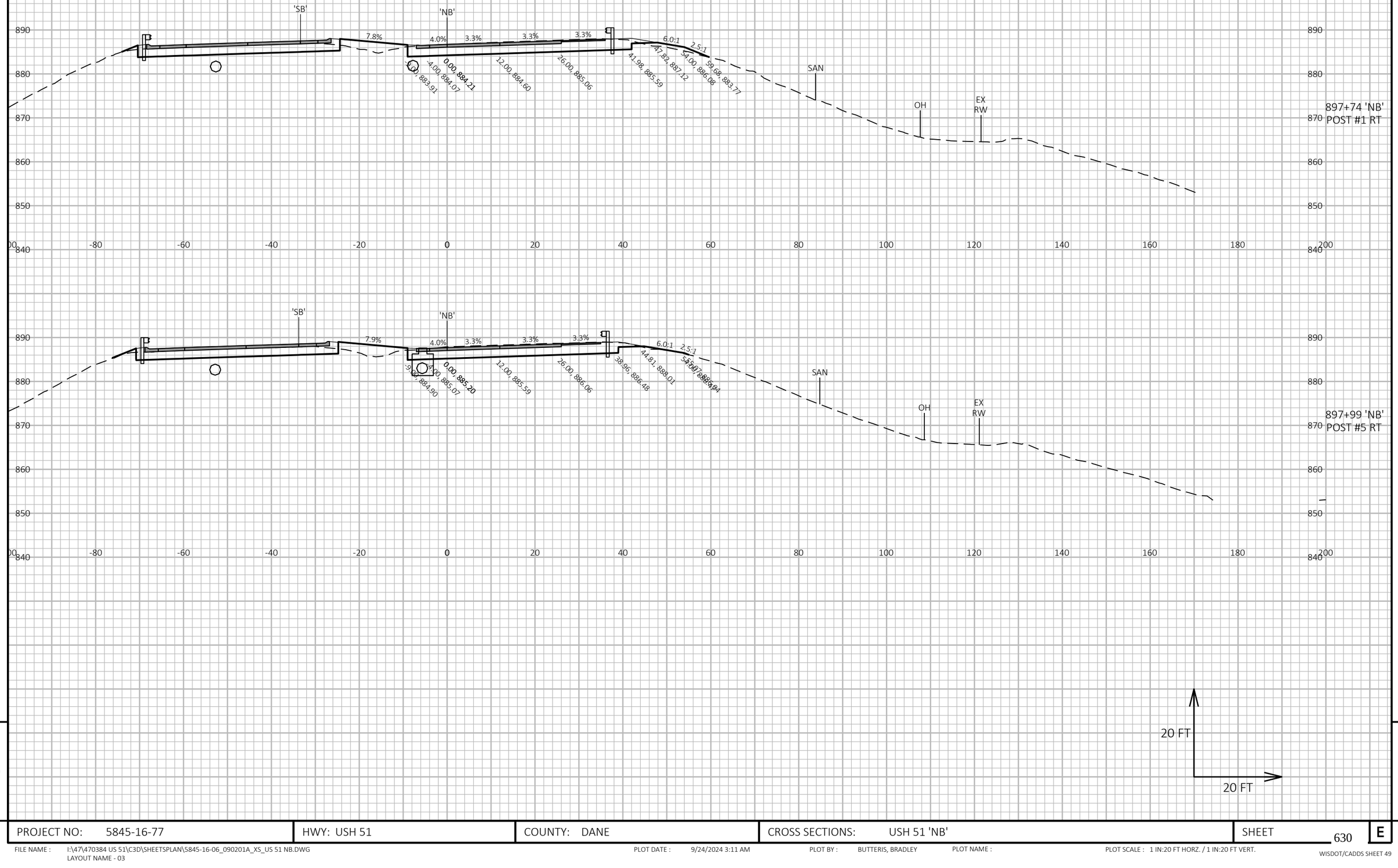
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 629	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2024 3:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



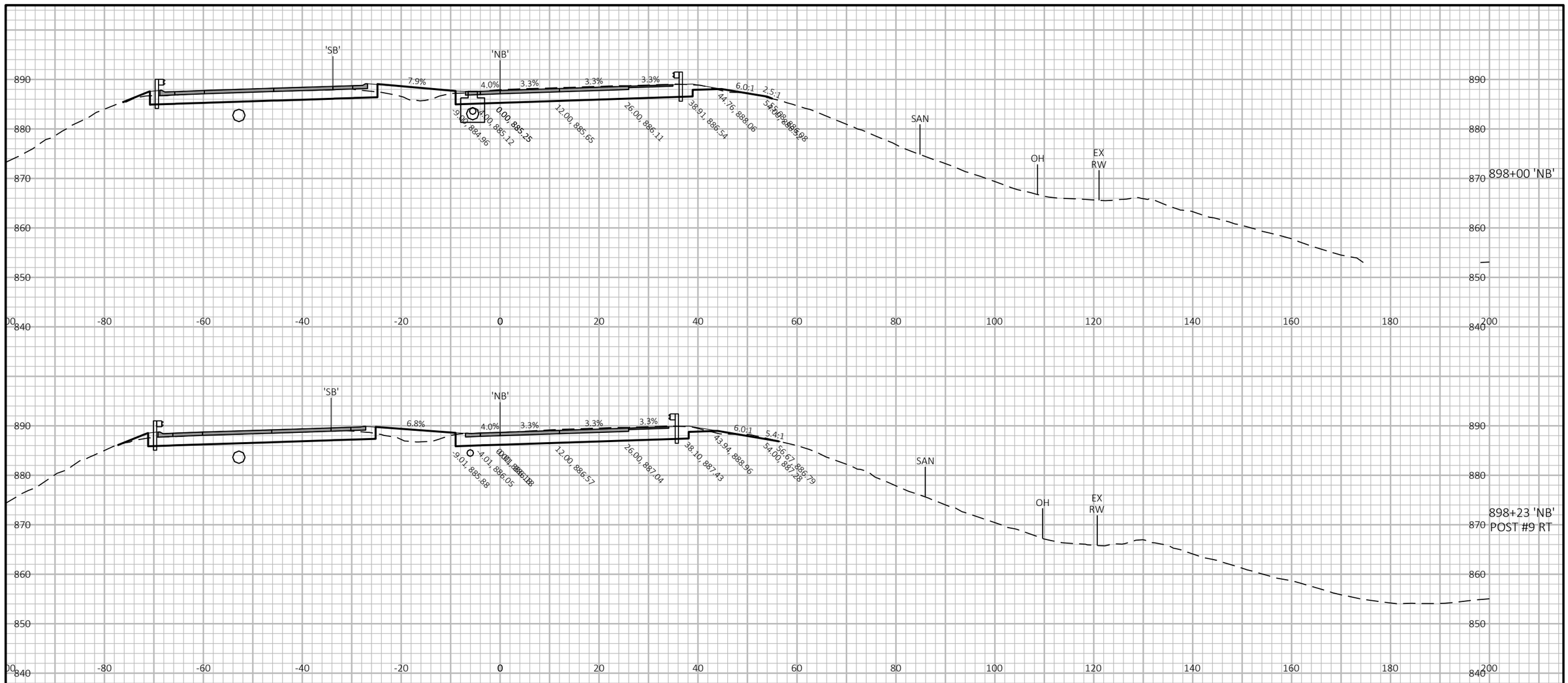
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 630	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2024 3:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

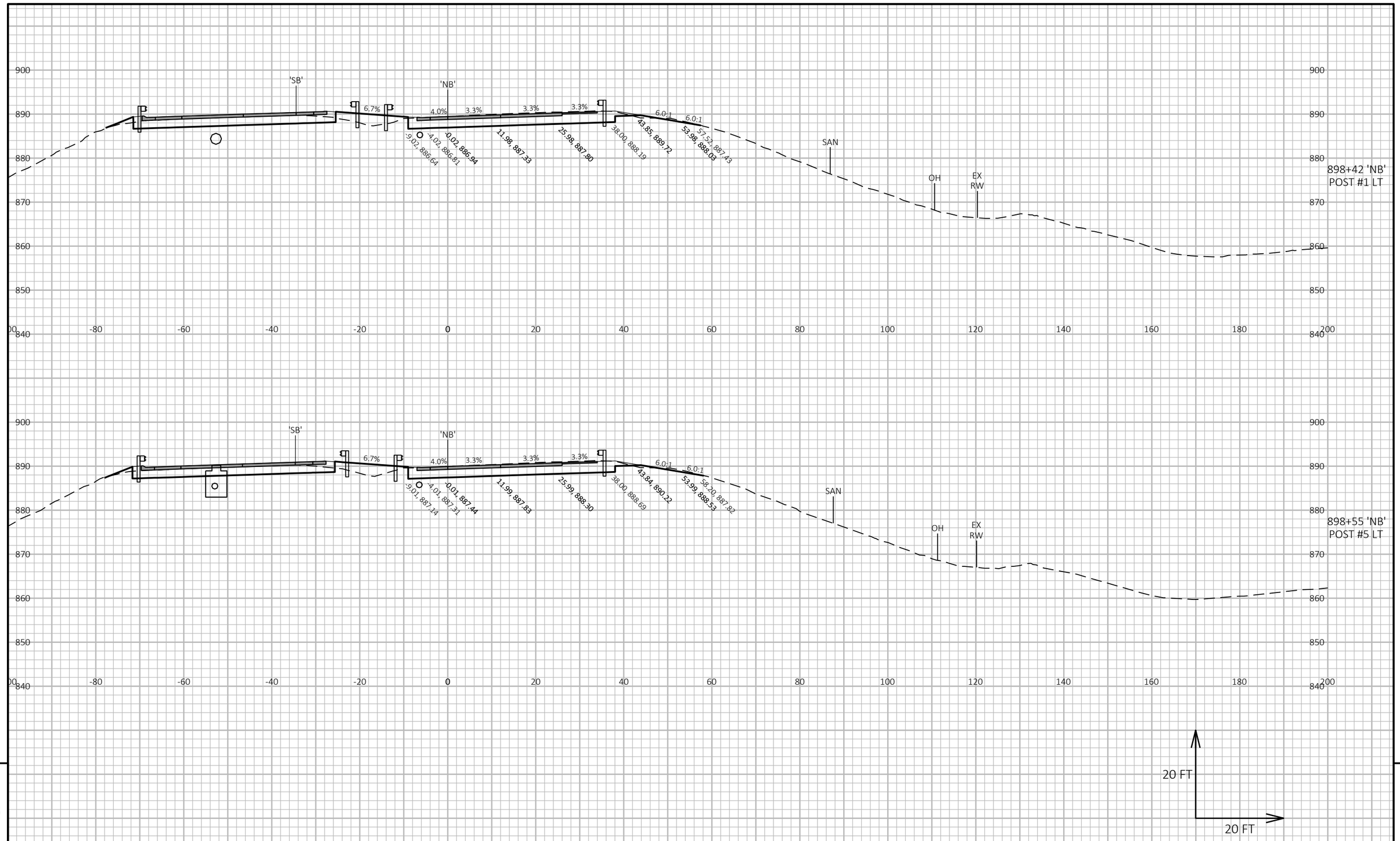
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 631	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2024 3:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

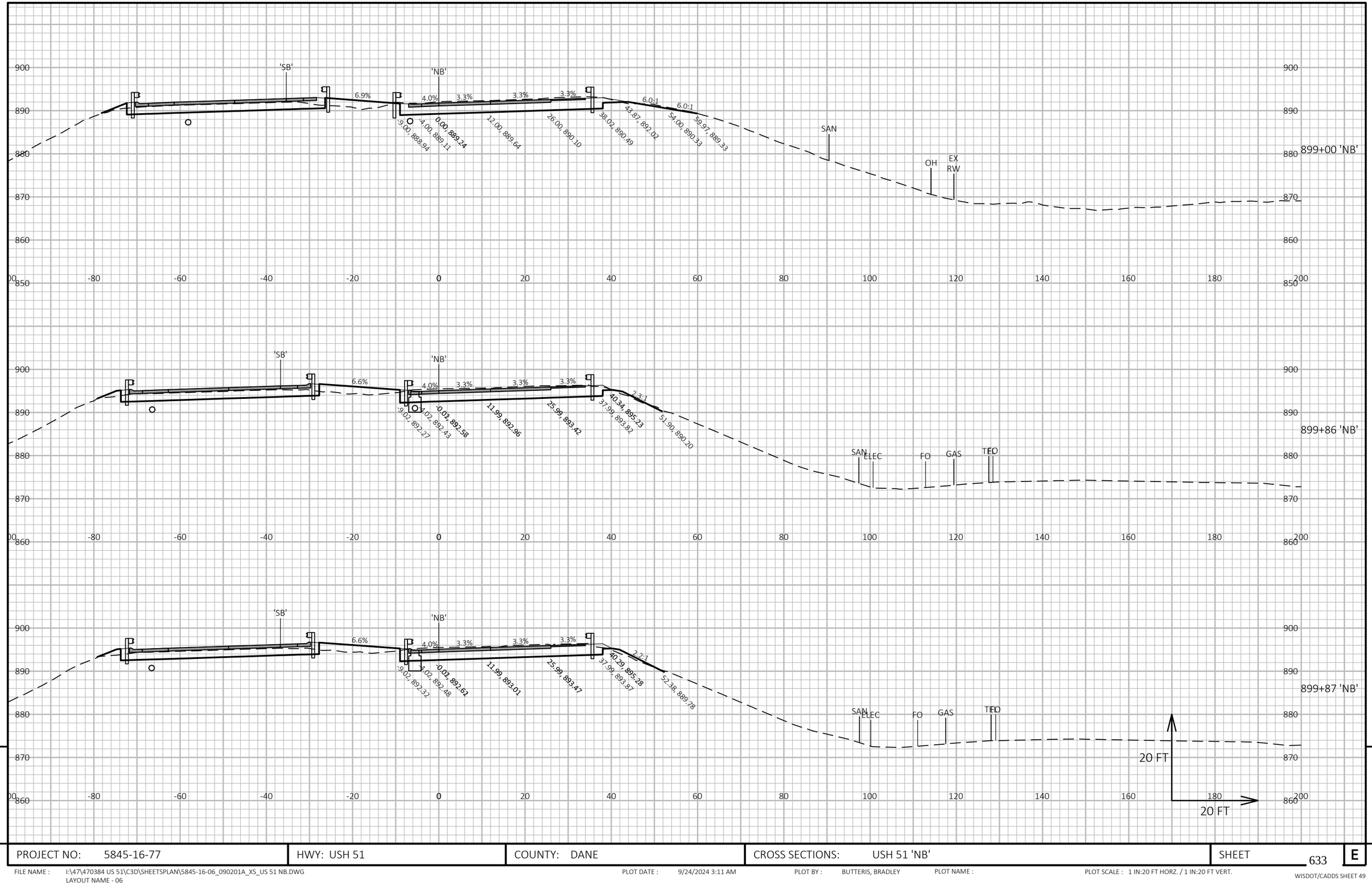
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 632	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2024 3:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

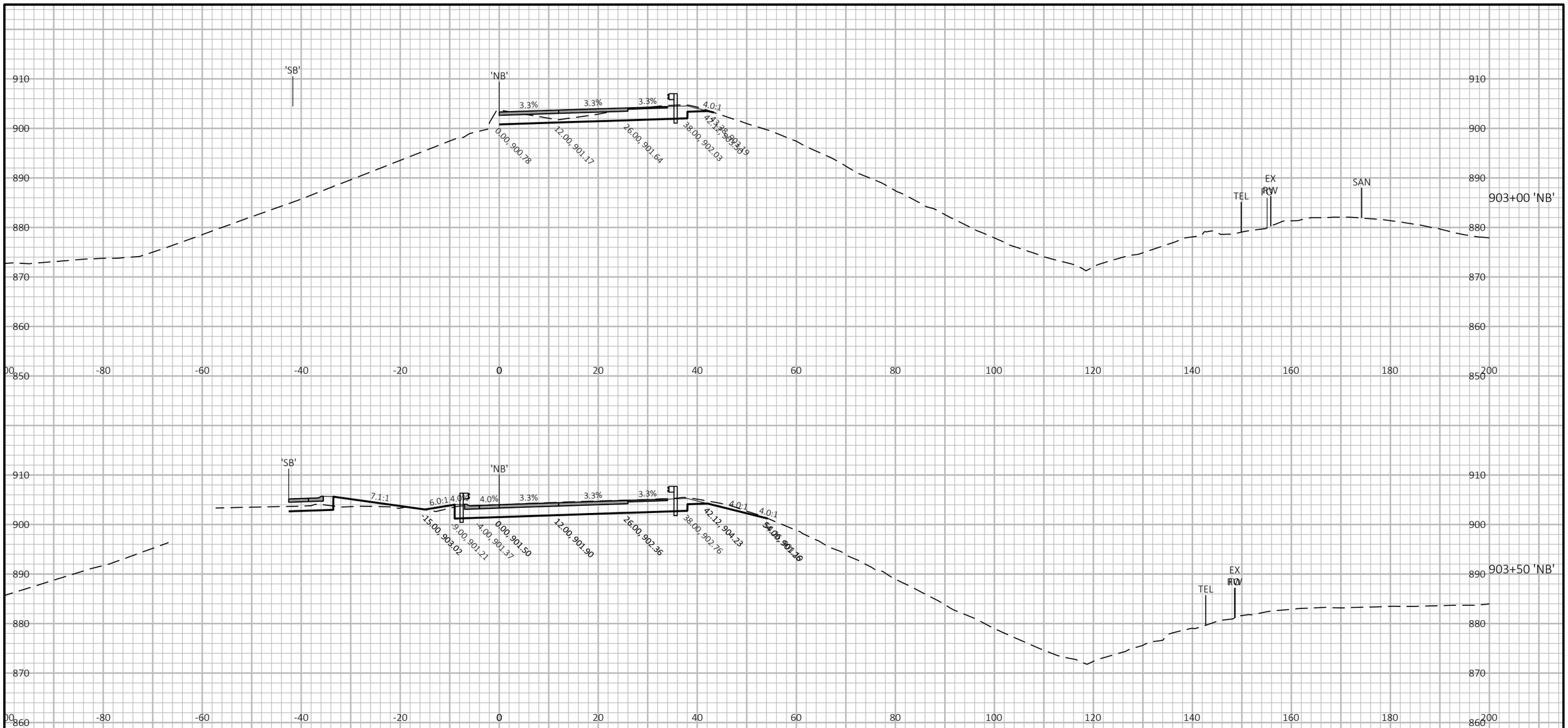
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 633	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2024 3:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

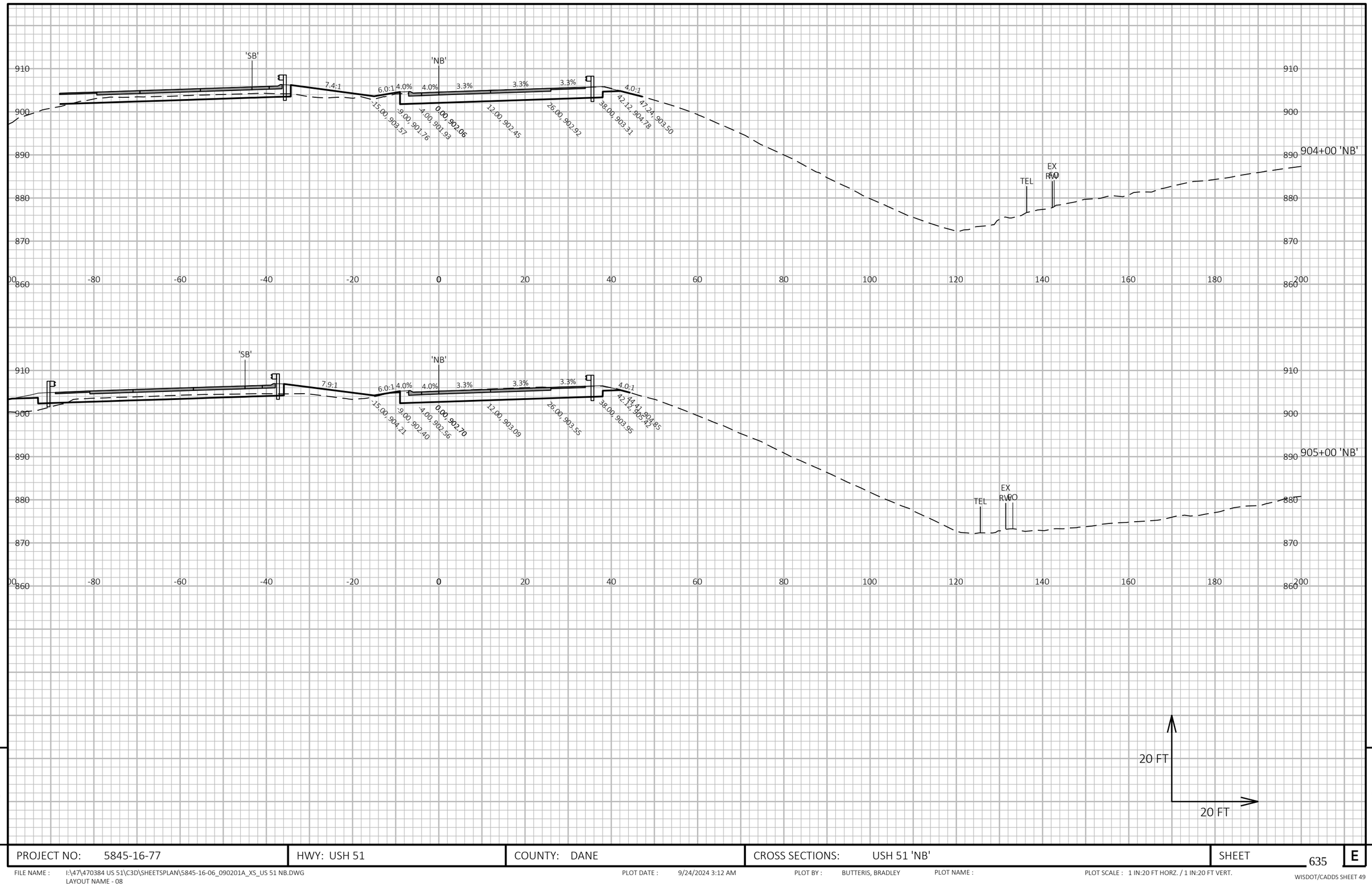


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 634	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 07

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

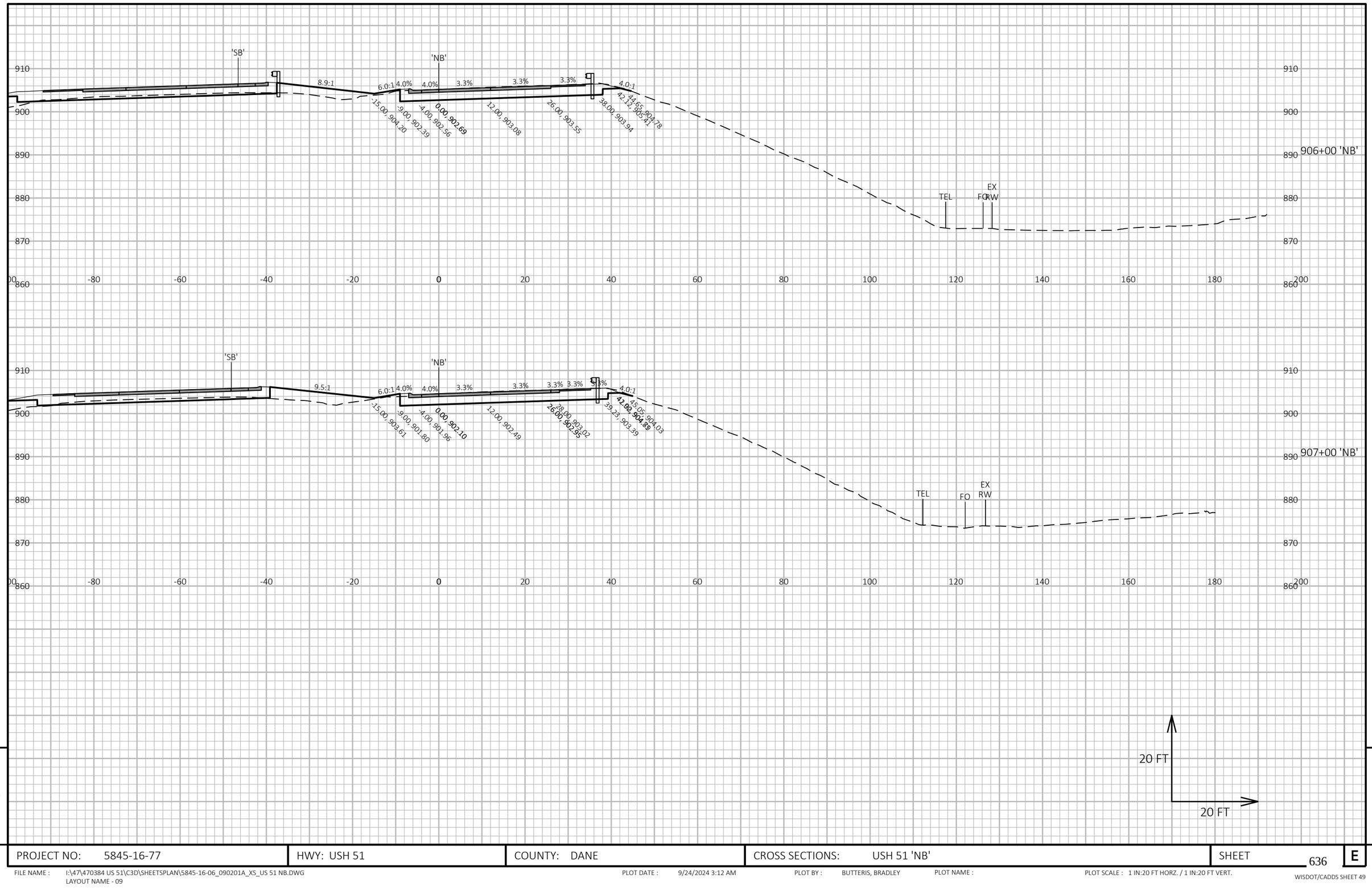
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 635	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



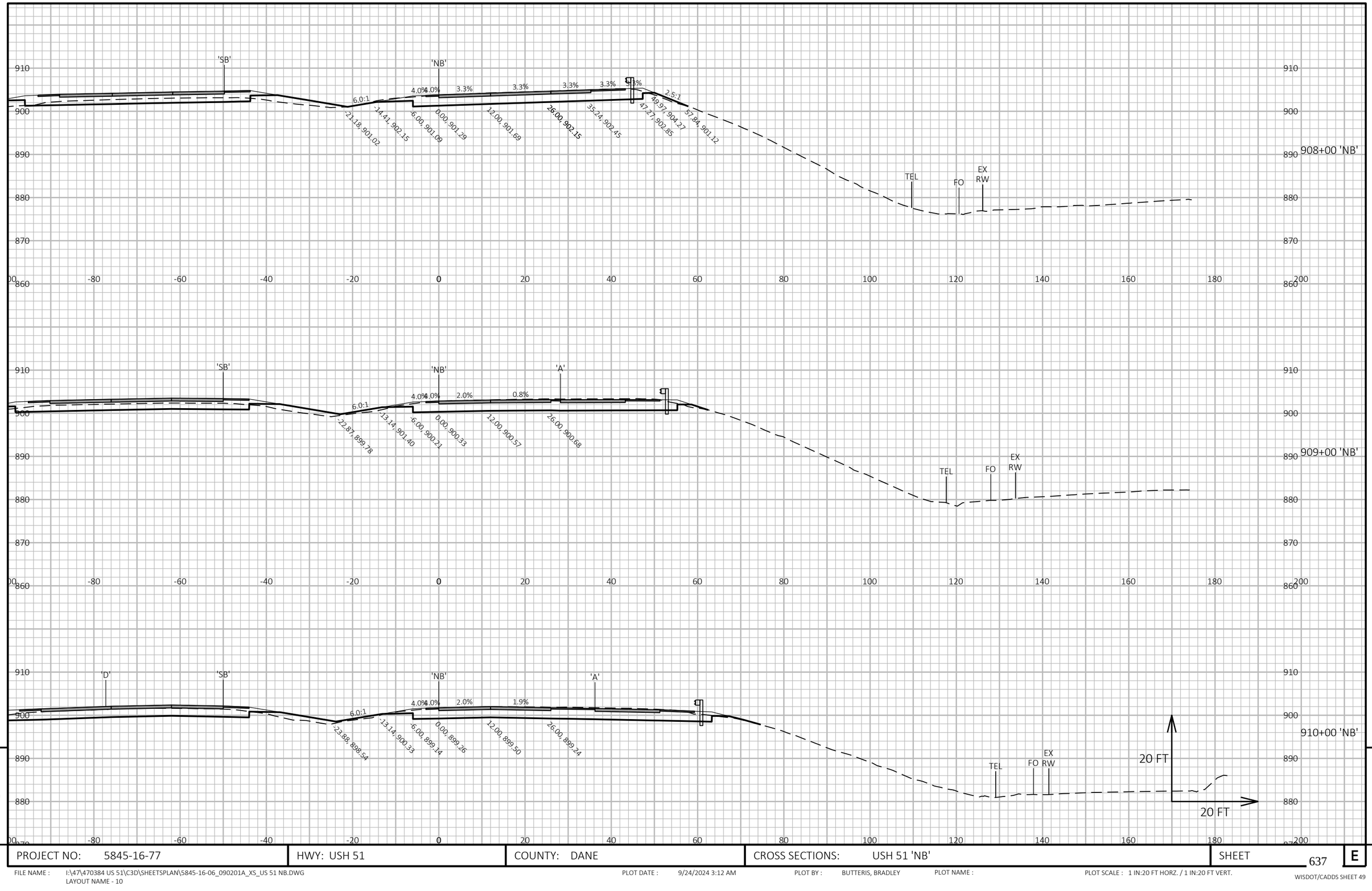
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 636	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 637	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 10

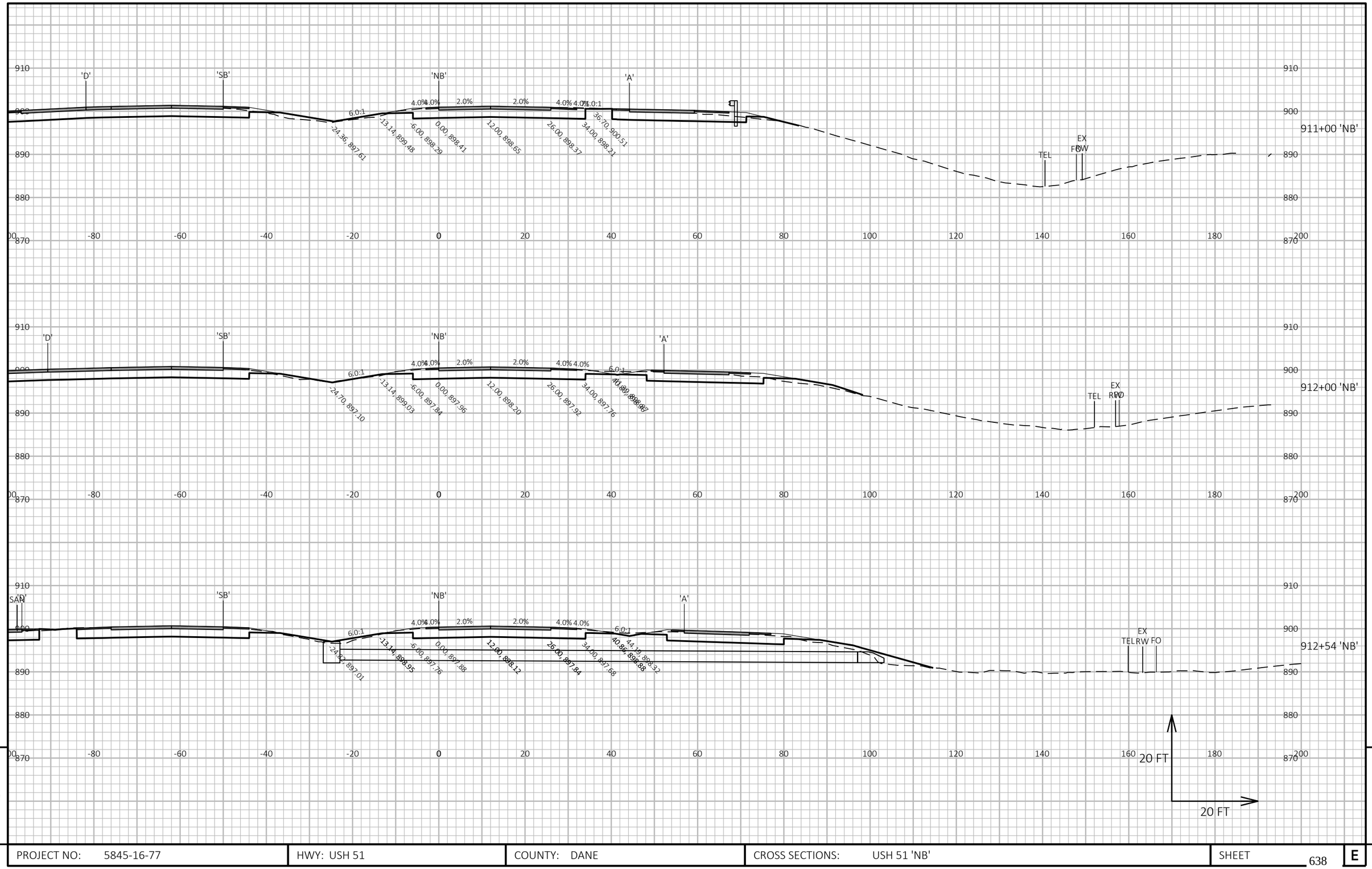
PLOT DATE : 9/24/2024 3:12 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 638	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 11

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

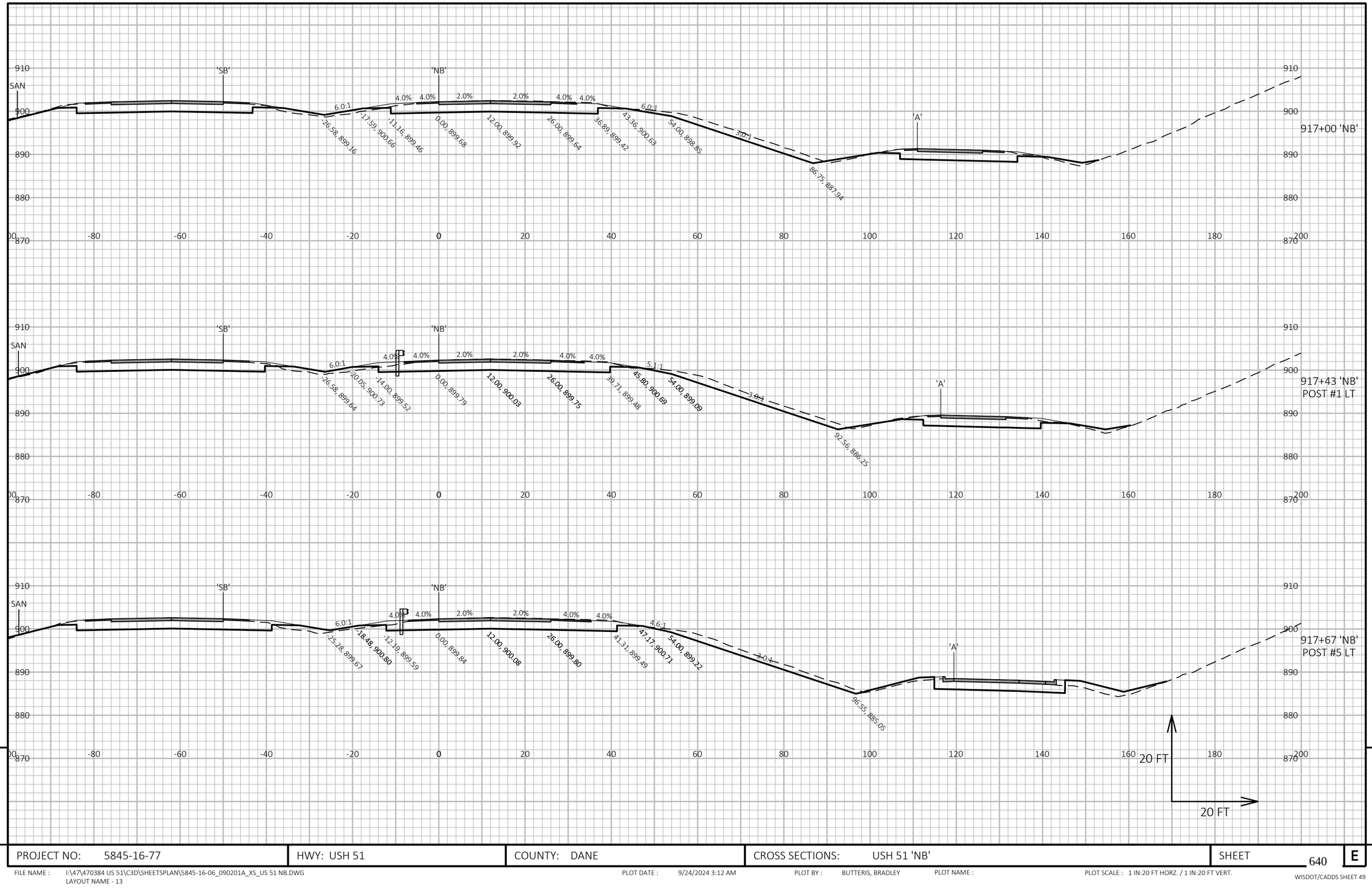
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 639	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 12

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

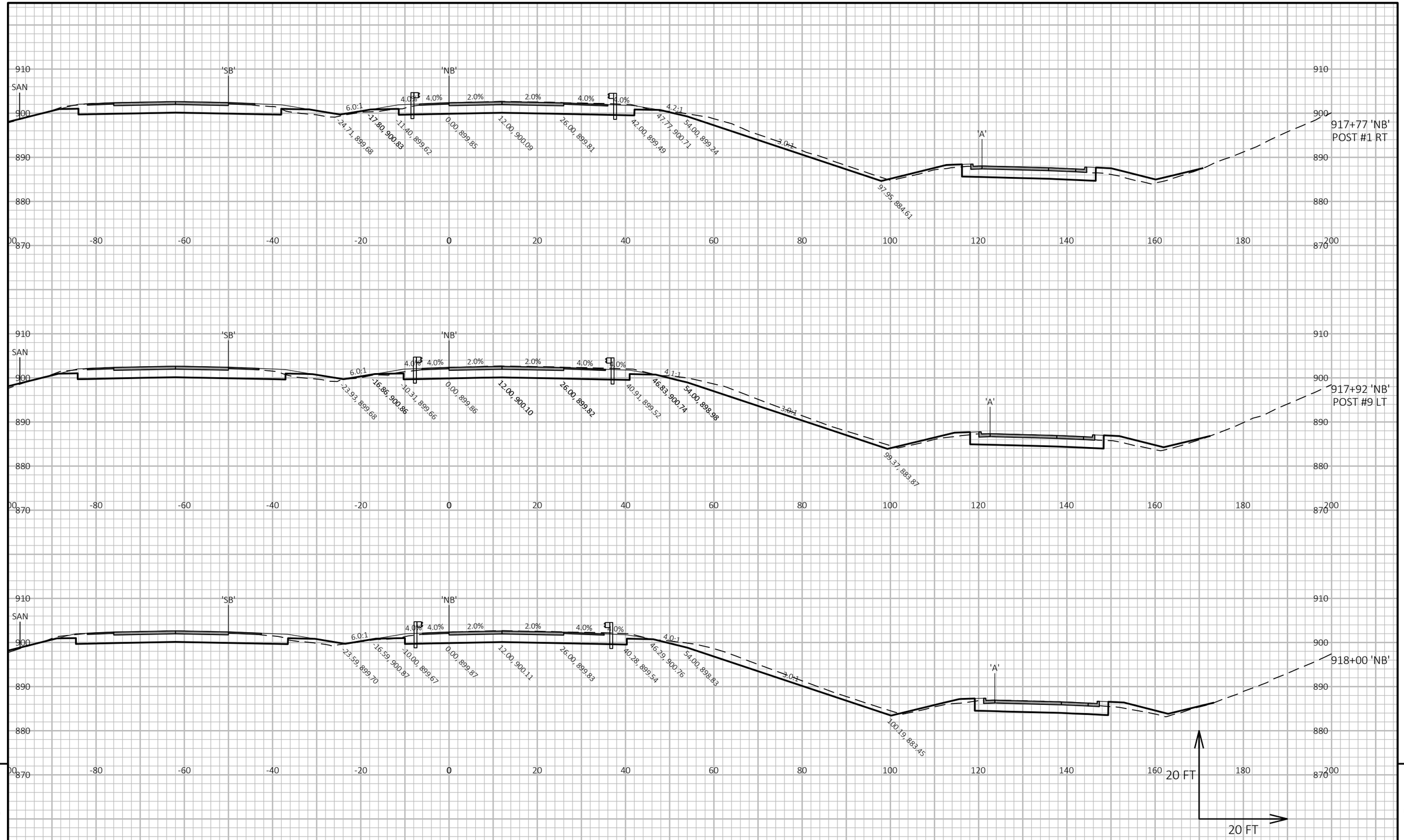


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 640	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 13

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

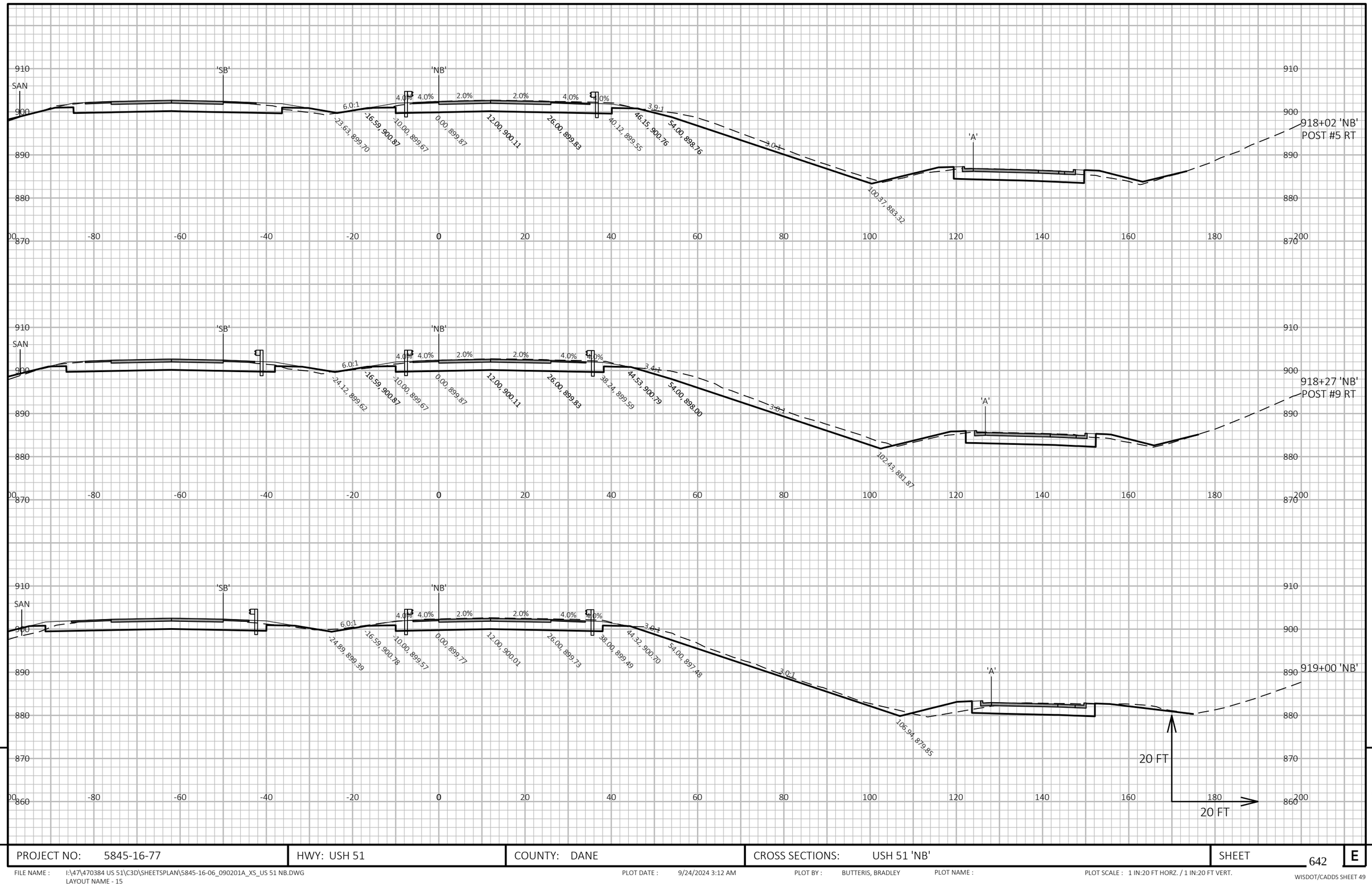
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 641	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 14

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

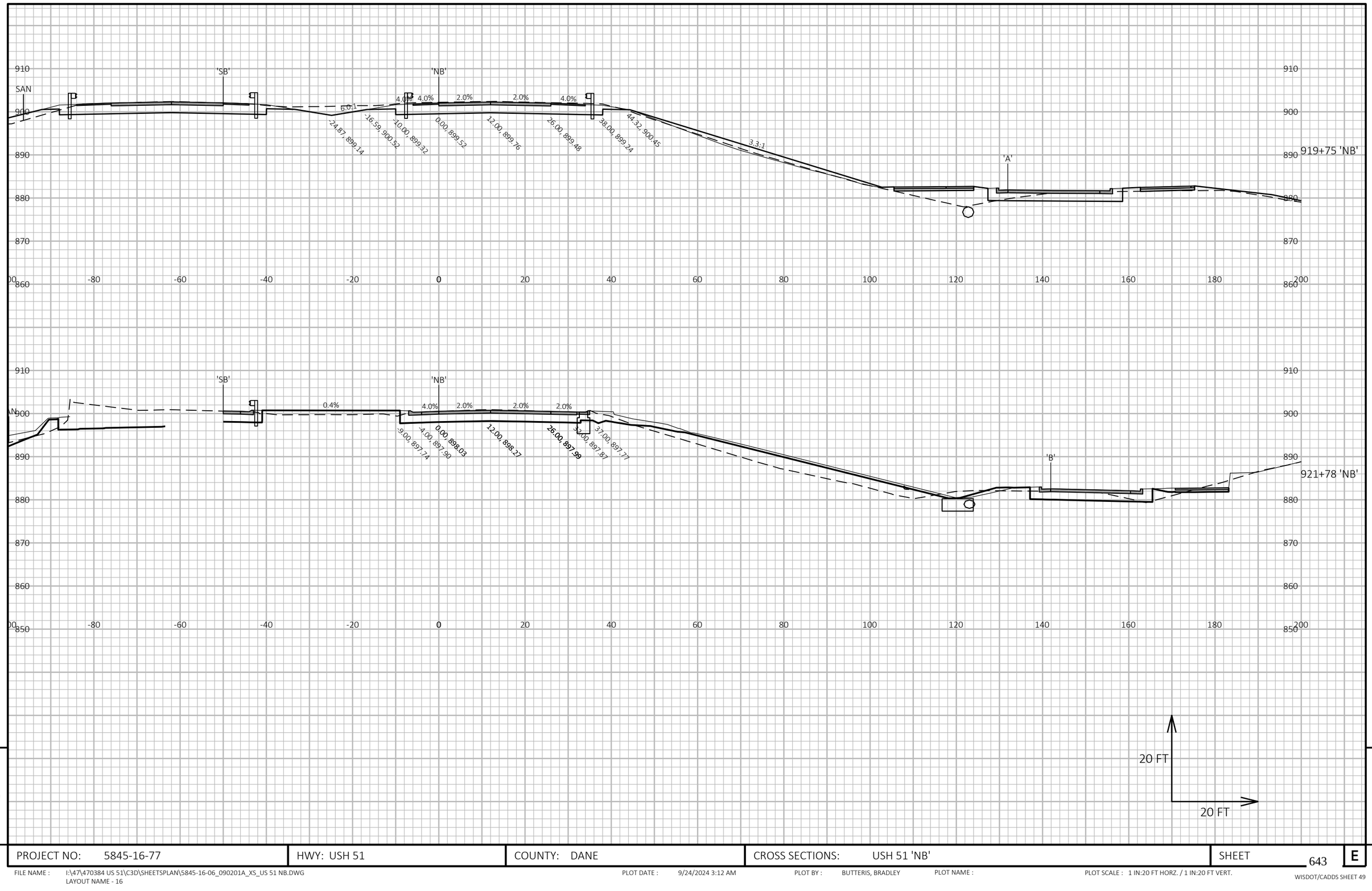


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 642	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 15

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

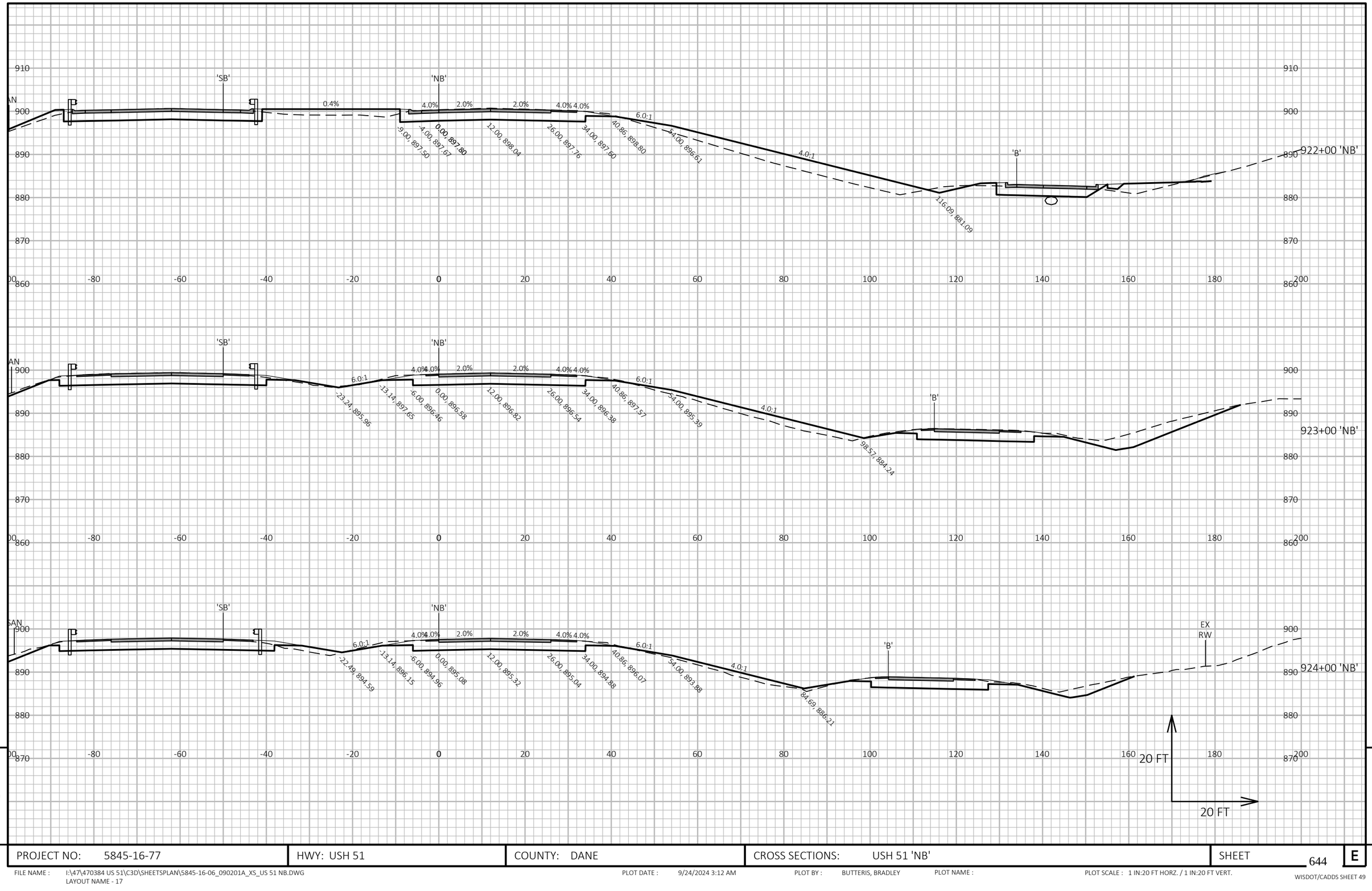
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 643	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 16

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

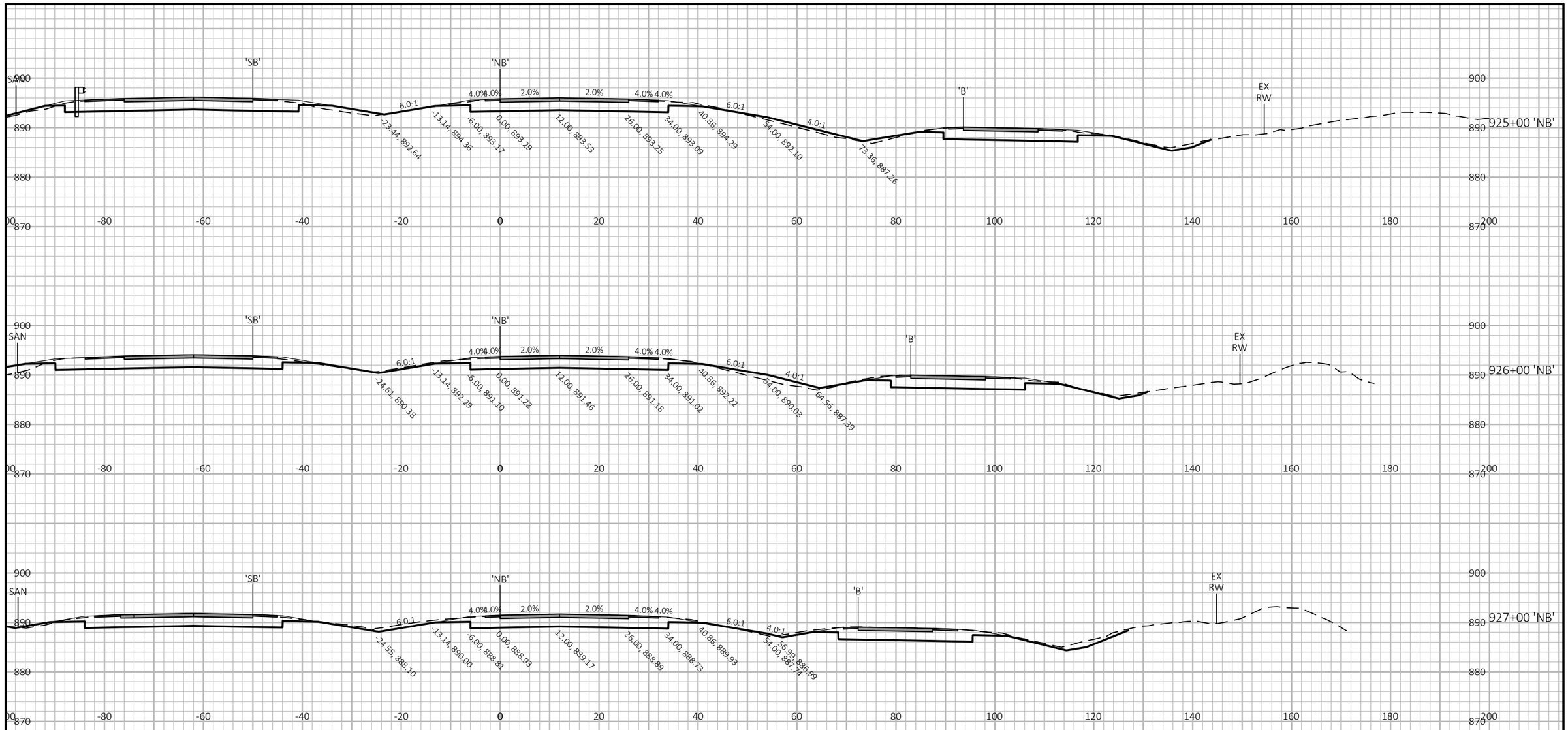
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 644	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 17

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

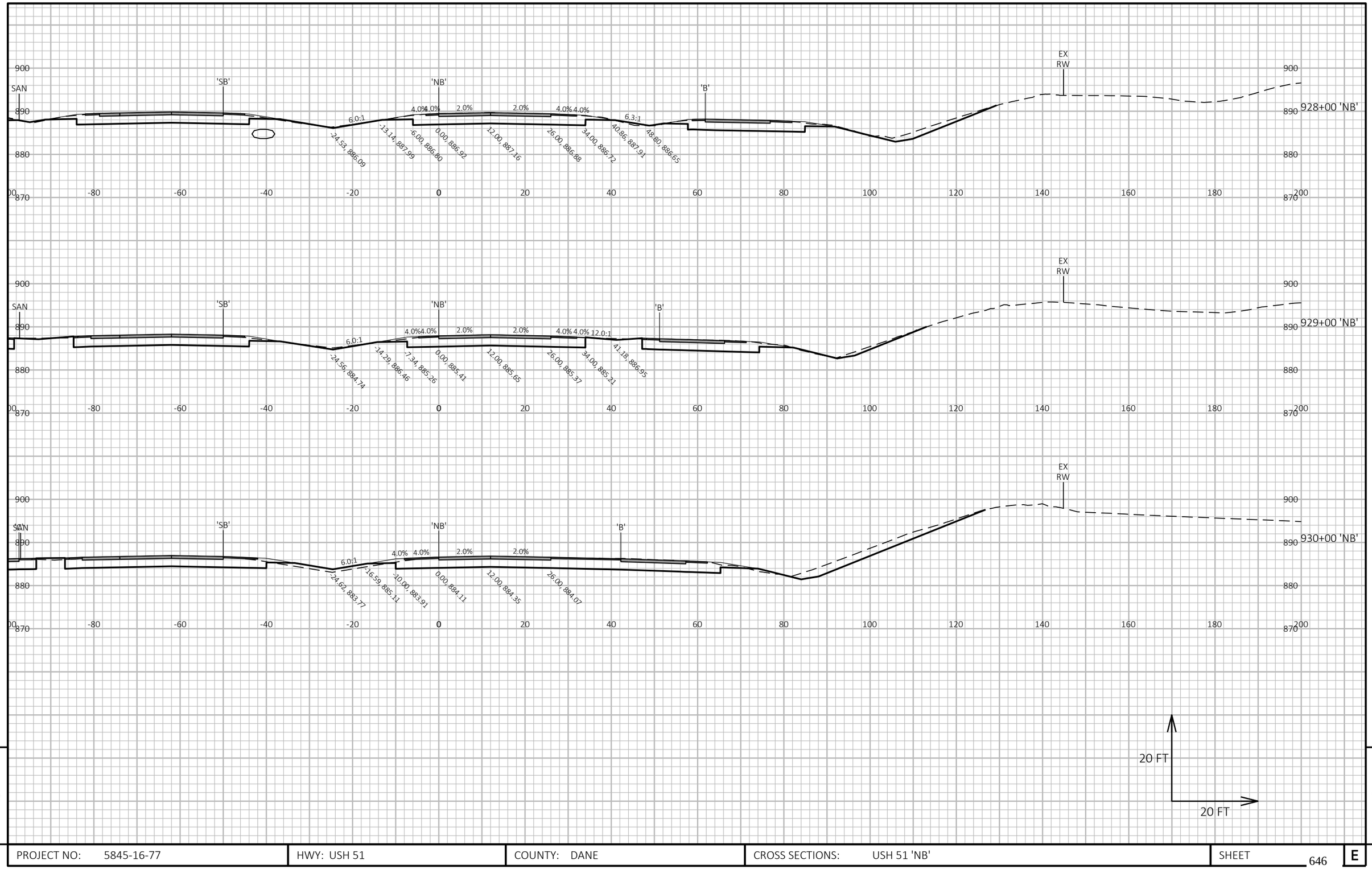
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 645	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 18

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



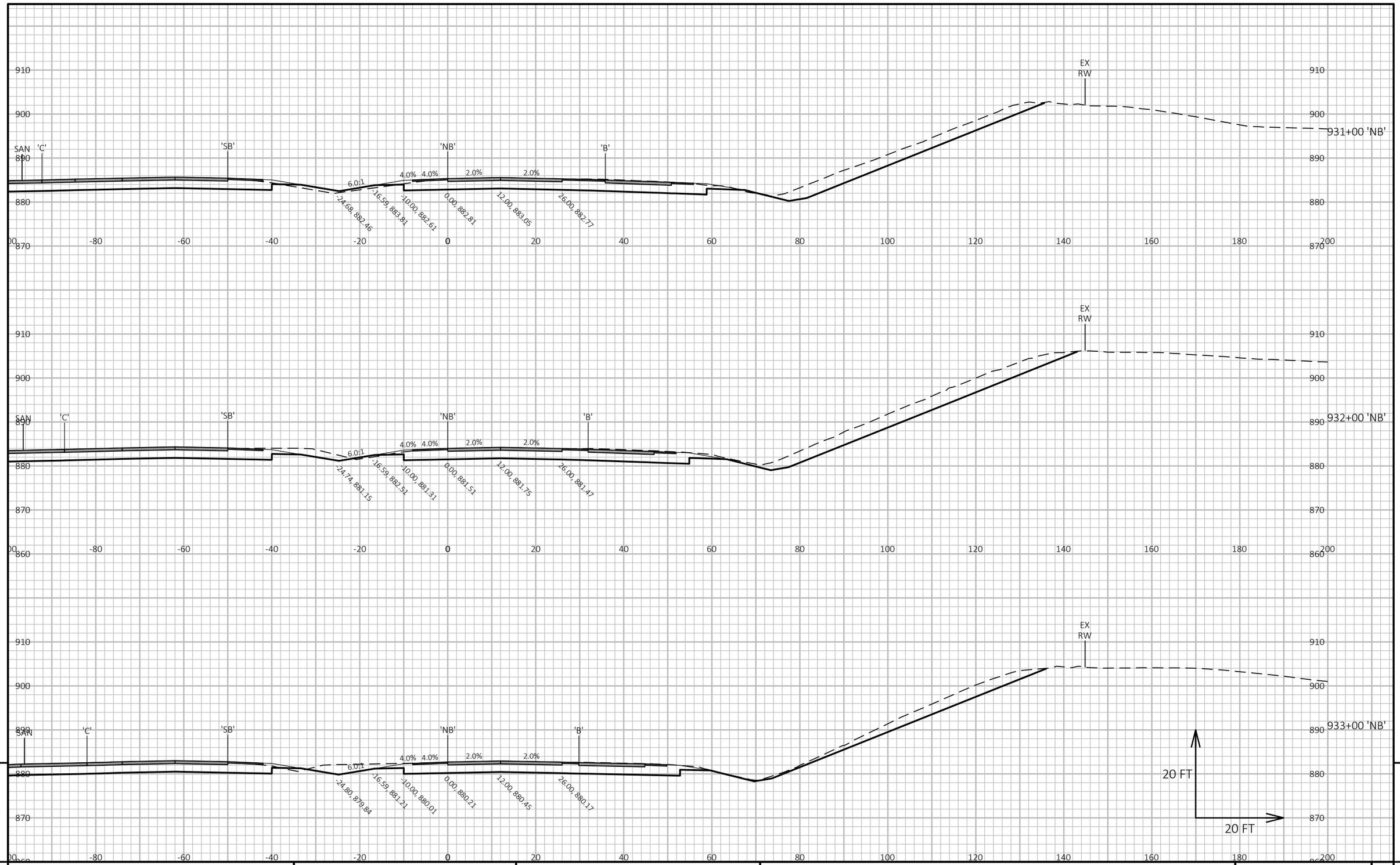
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9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 646	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 19

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

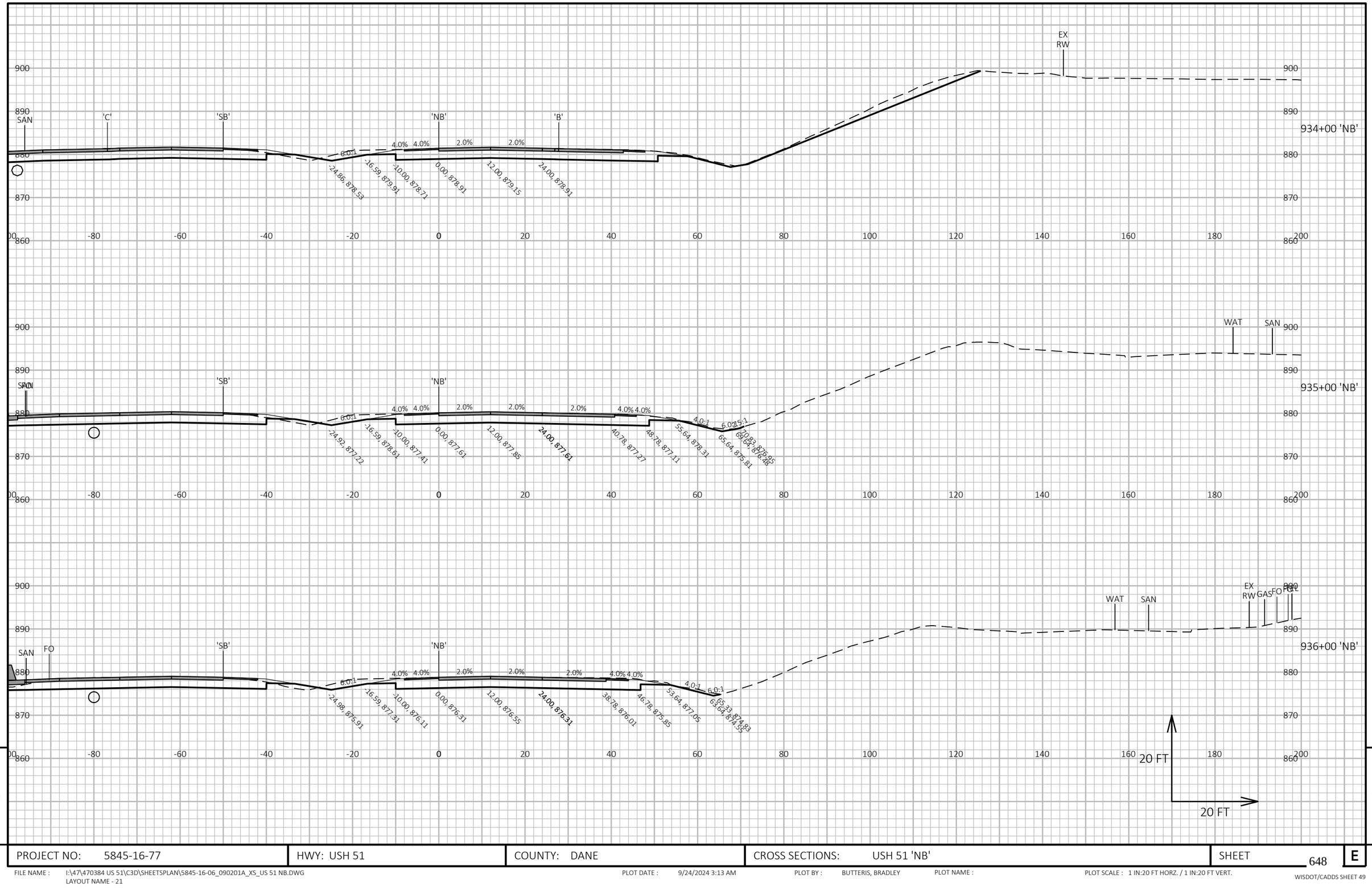
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 647	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 20

PLOT DATE : 9/24/2024 3:12 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

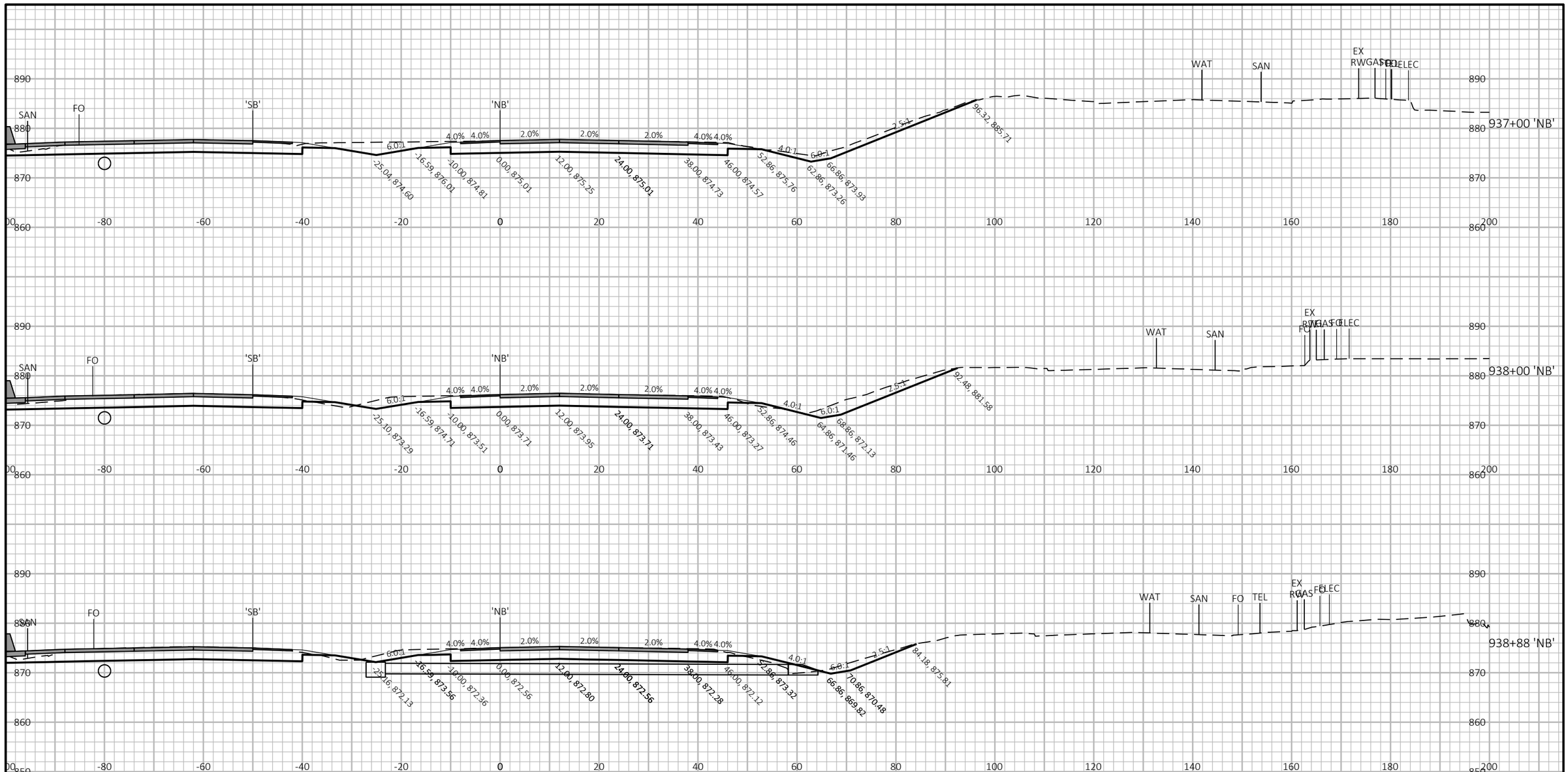


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 648 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 21

PLOT DATE : 9/24/2024 3:13 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



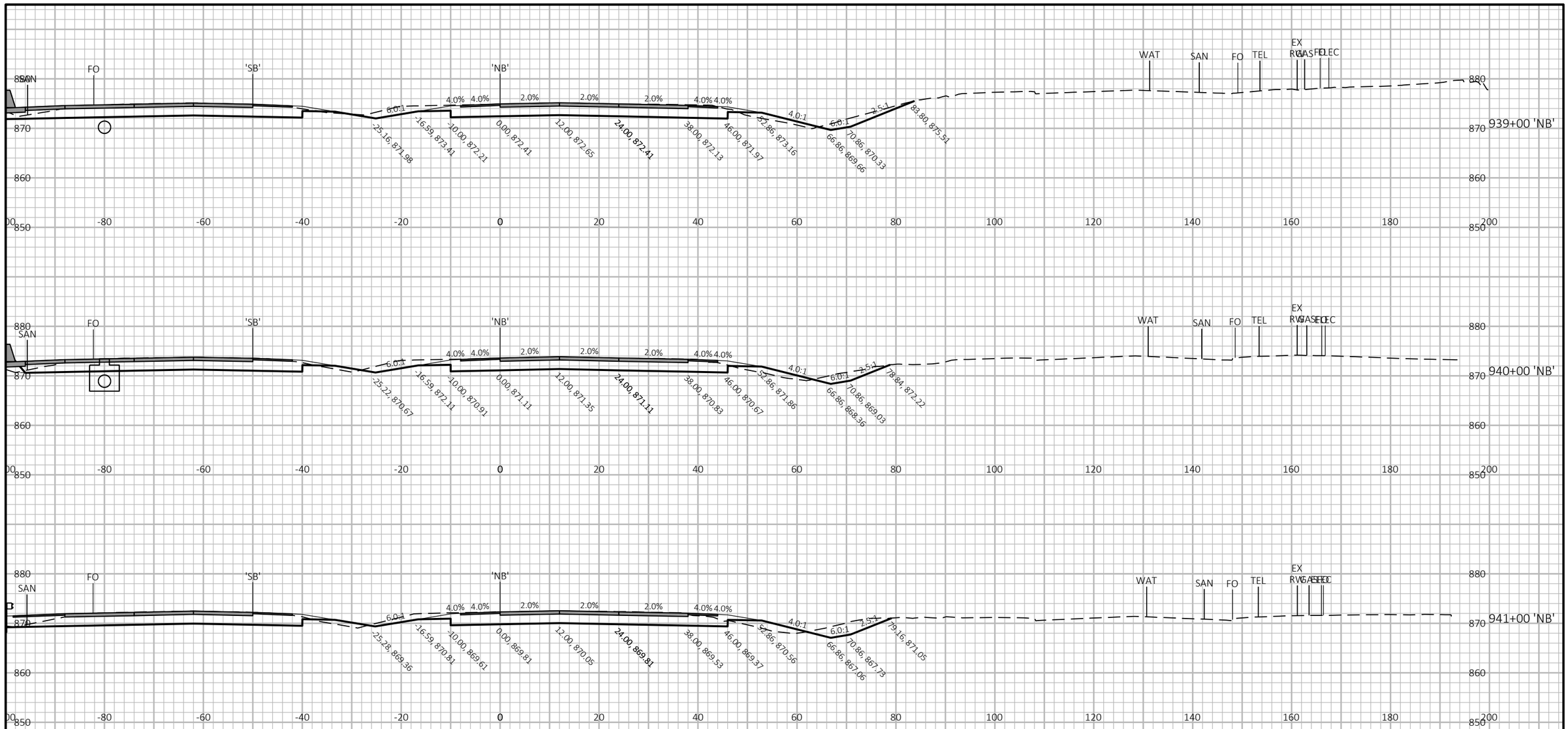
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9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 649	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 22

PLOT DATE : 9/24/2024 3:13 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 650	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 23

PLOT DATE : 9/24/2024 3:13 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

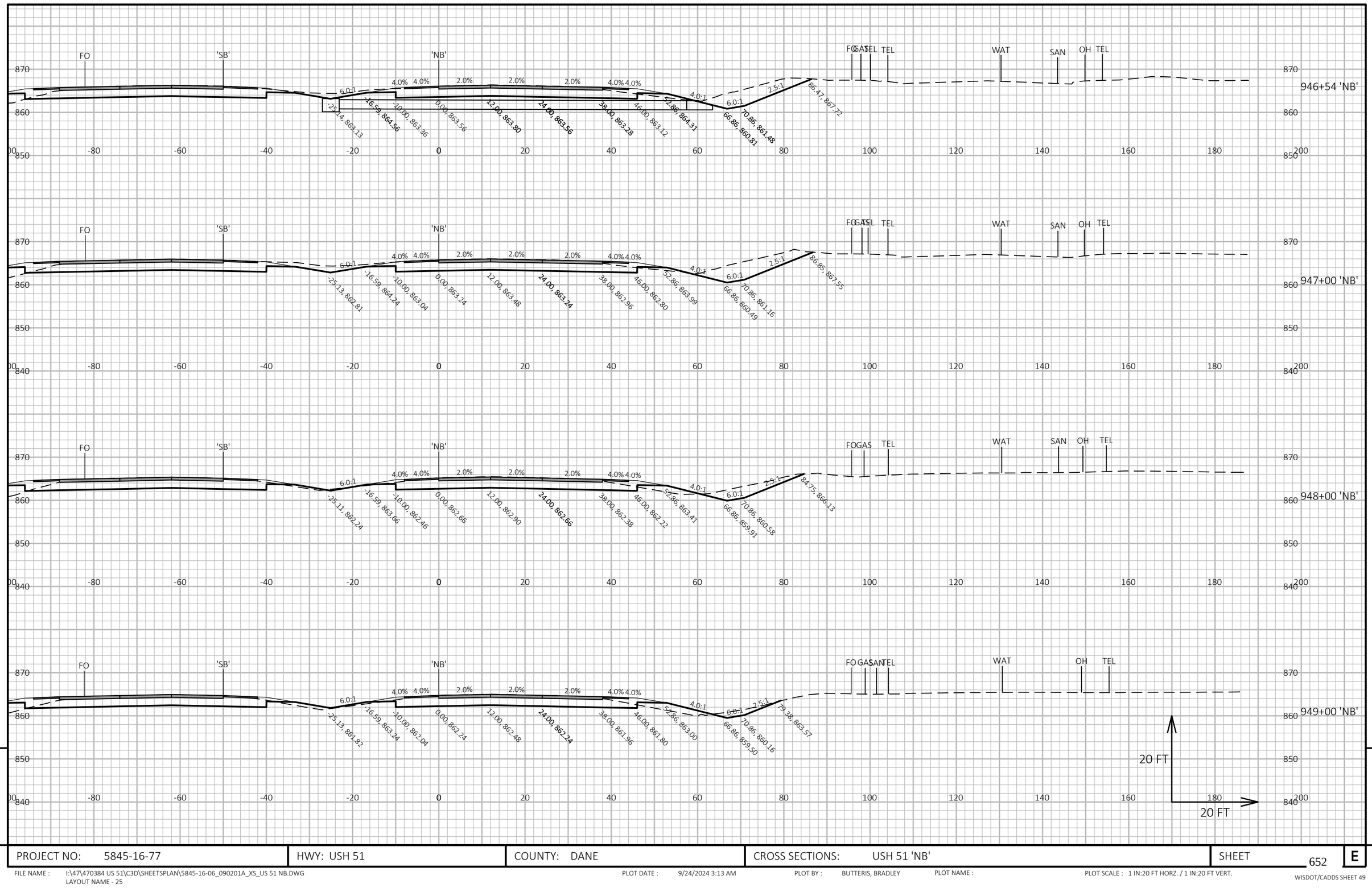
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 651	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 24

PLOT DATE : 9/24/2024 3:13 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 652	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 25

PLOT DATE : 9/24/2024 3:13 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

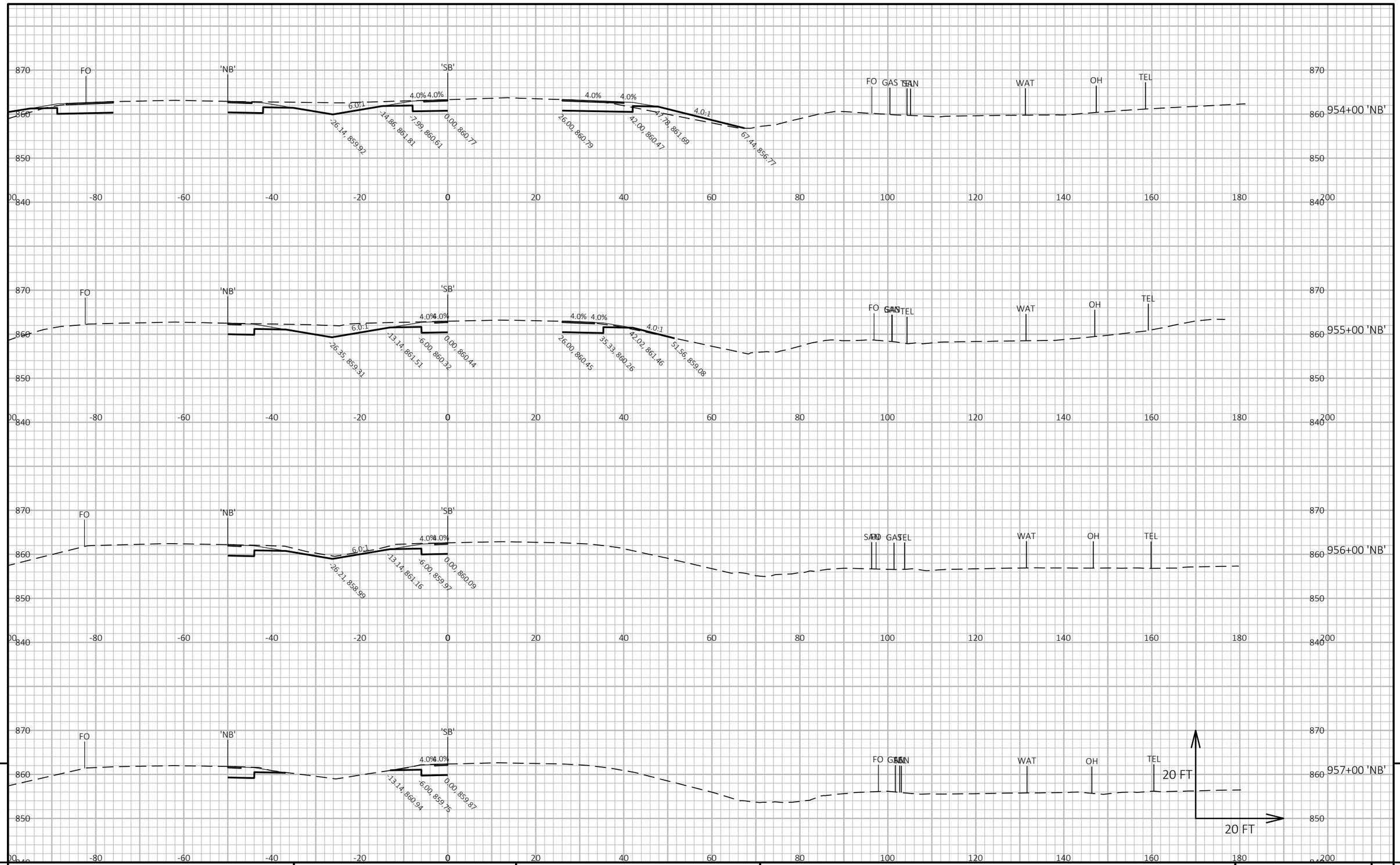


9 9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 653	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 26

PLOT DATE : 9/24/2024 3:13 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



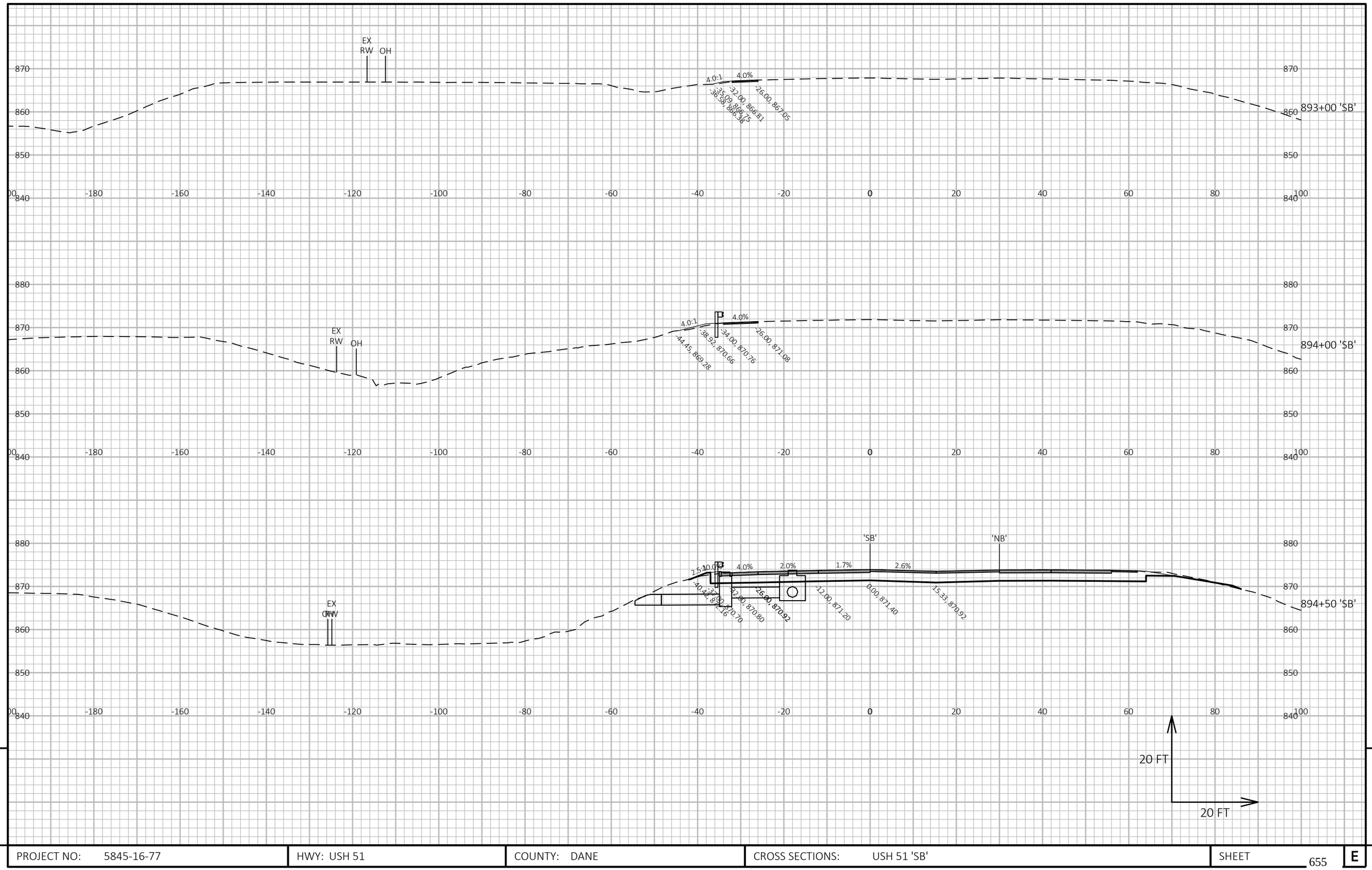
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9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'NB'	SHEET 654	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201A_XS_US 51 NB.DWG
LAYOUT NAME - 27

PLOT DATE : 9/24/2024 3:13 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 655	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 01

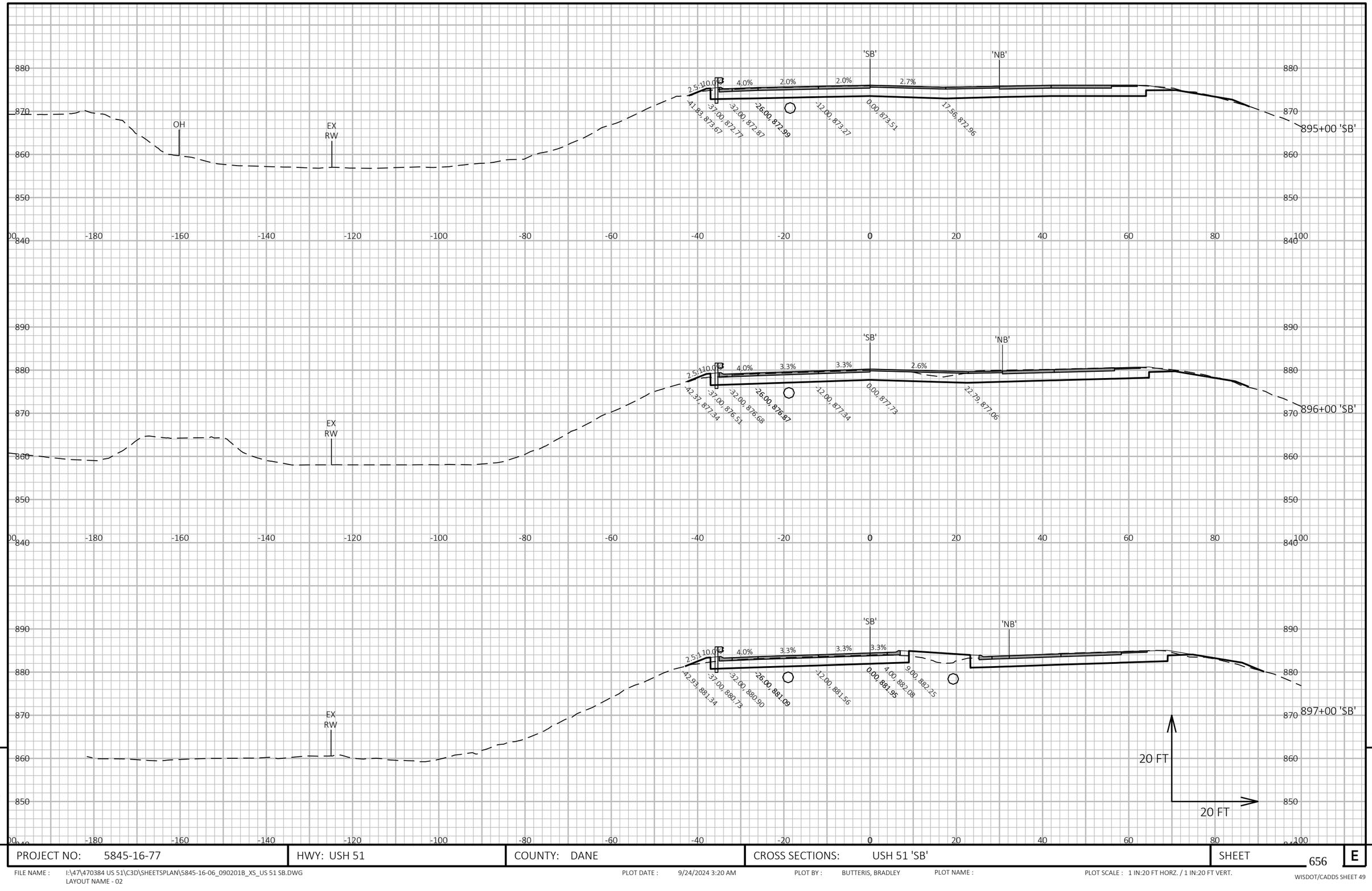
PLOT DATE : 9/24/2024 3:20 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

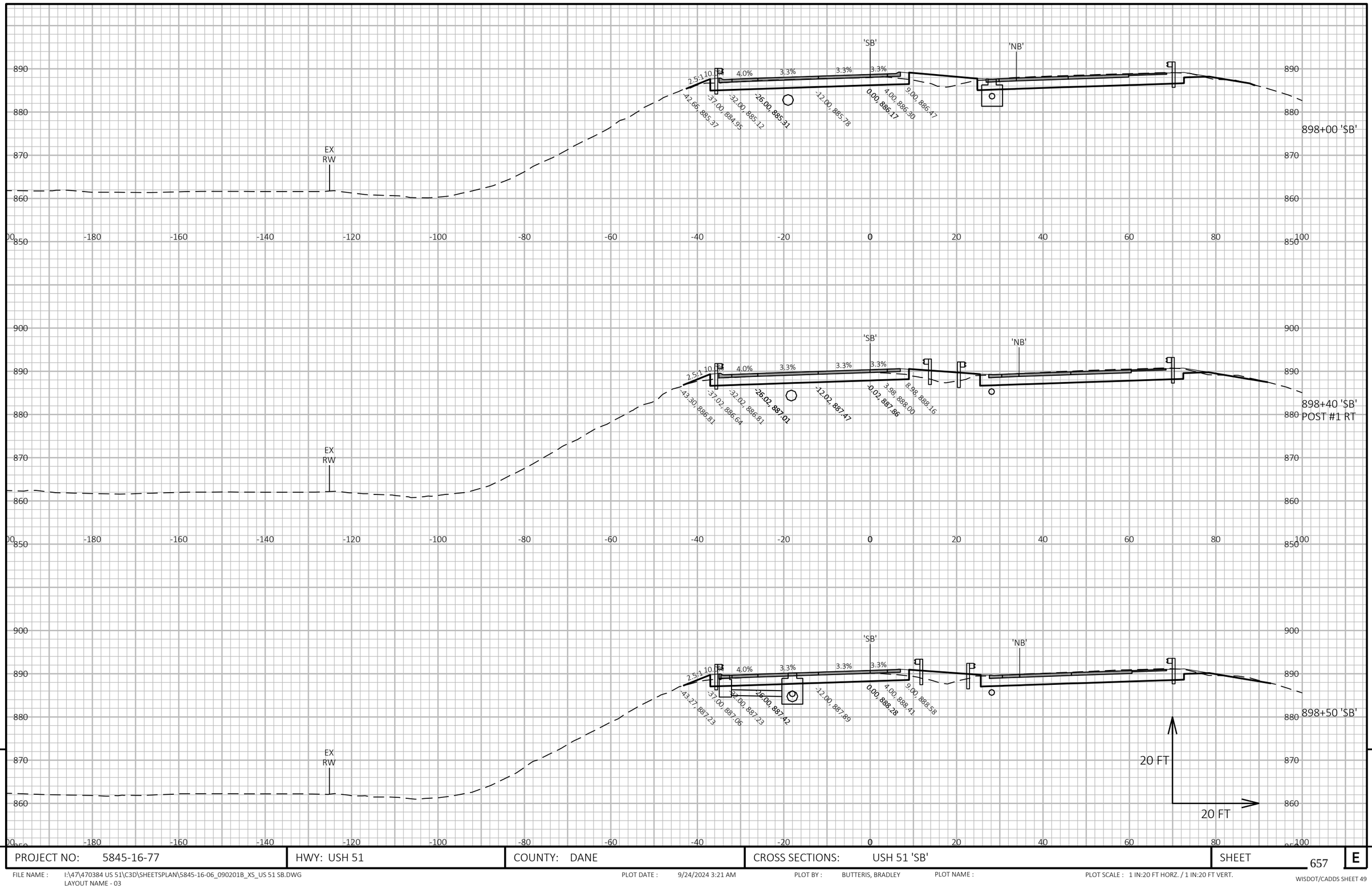


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 656	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2024 3:20 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



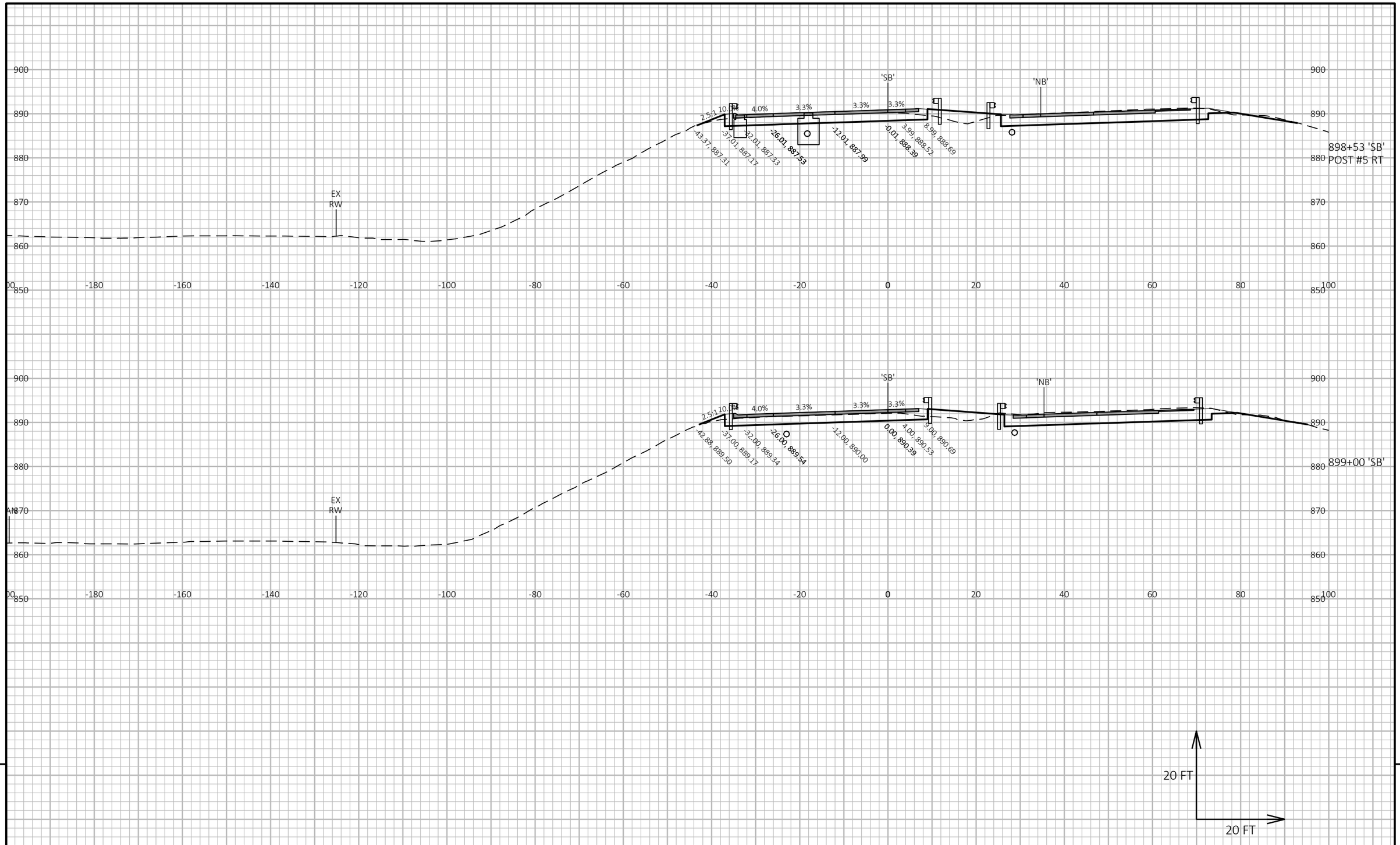
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9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 657	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2024 3:21 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

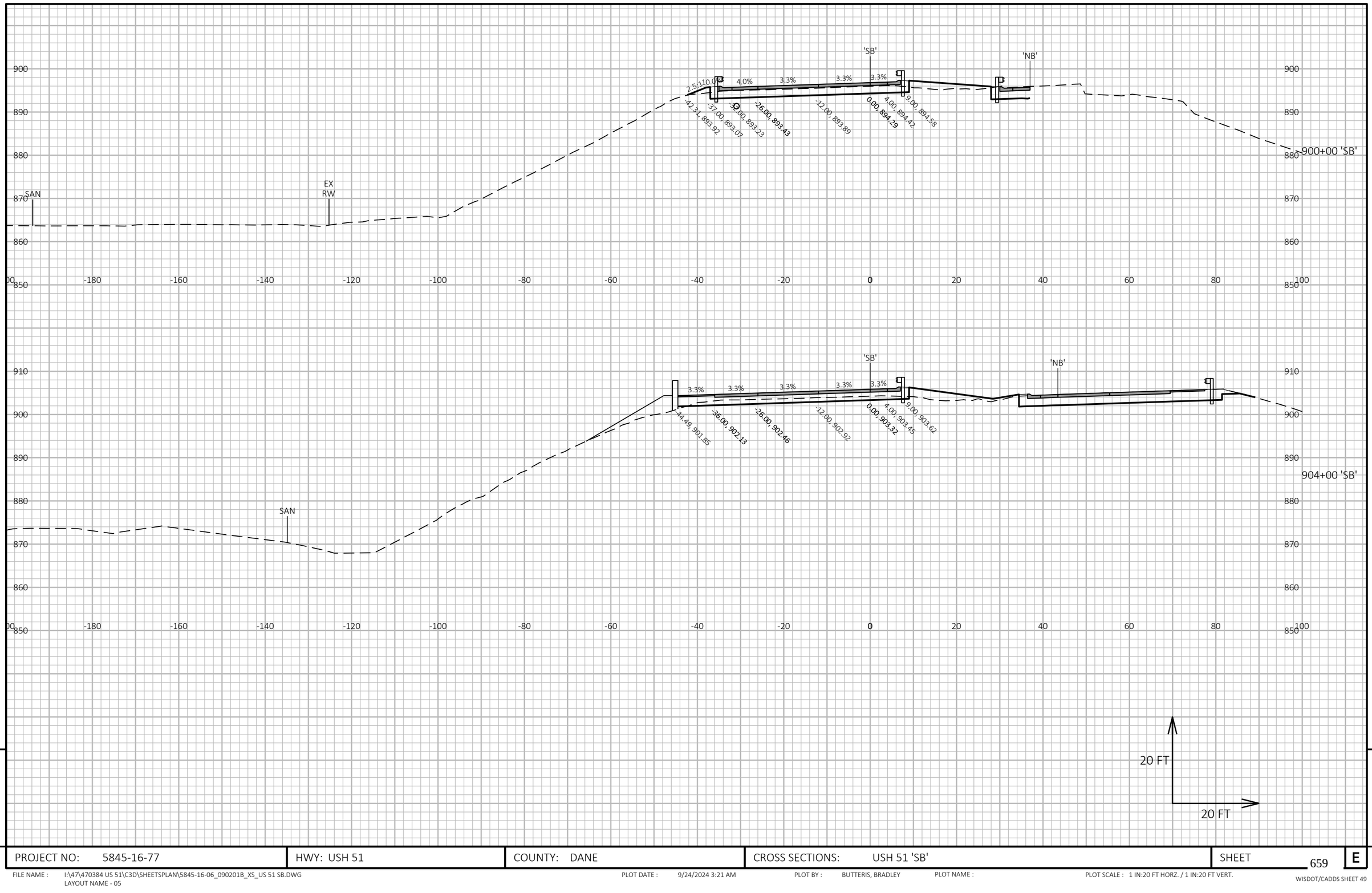
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 658	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2024 3:21 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

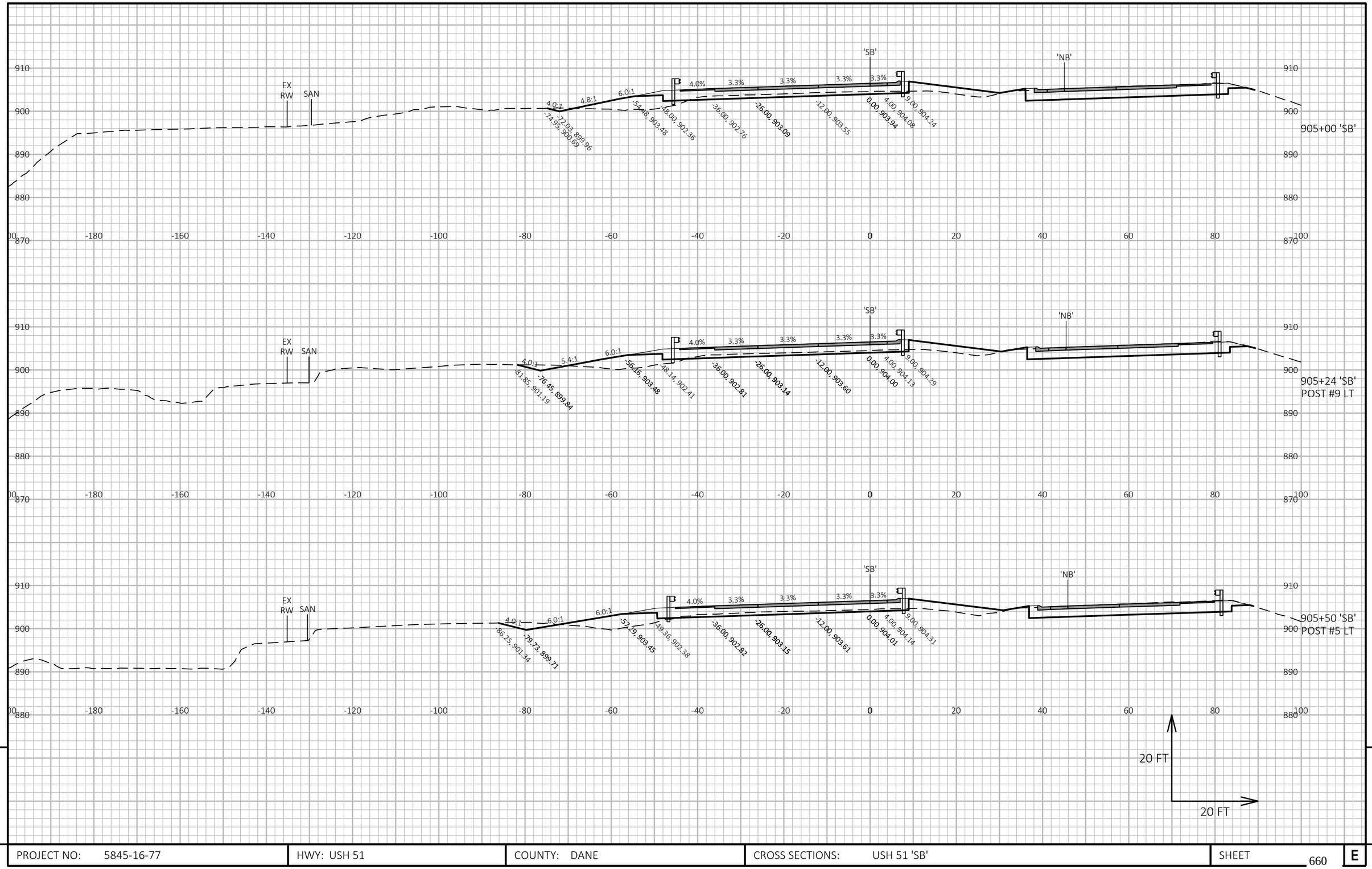
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 659	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2024 3:21 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

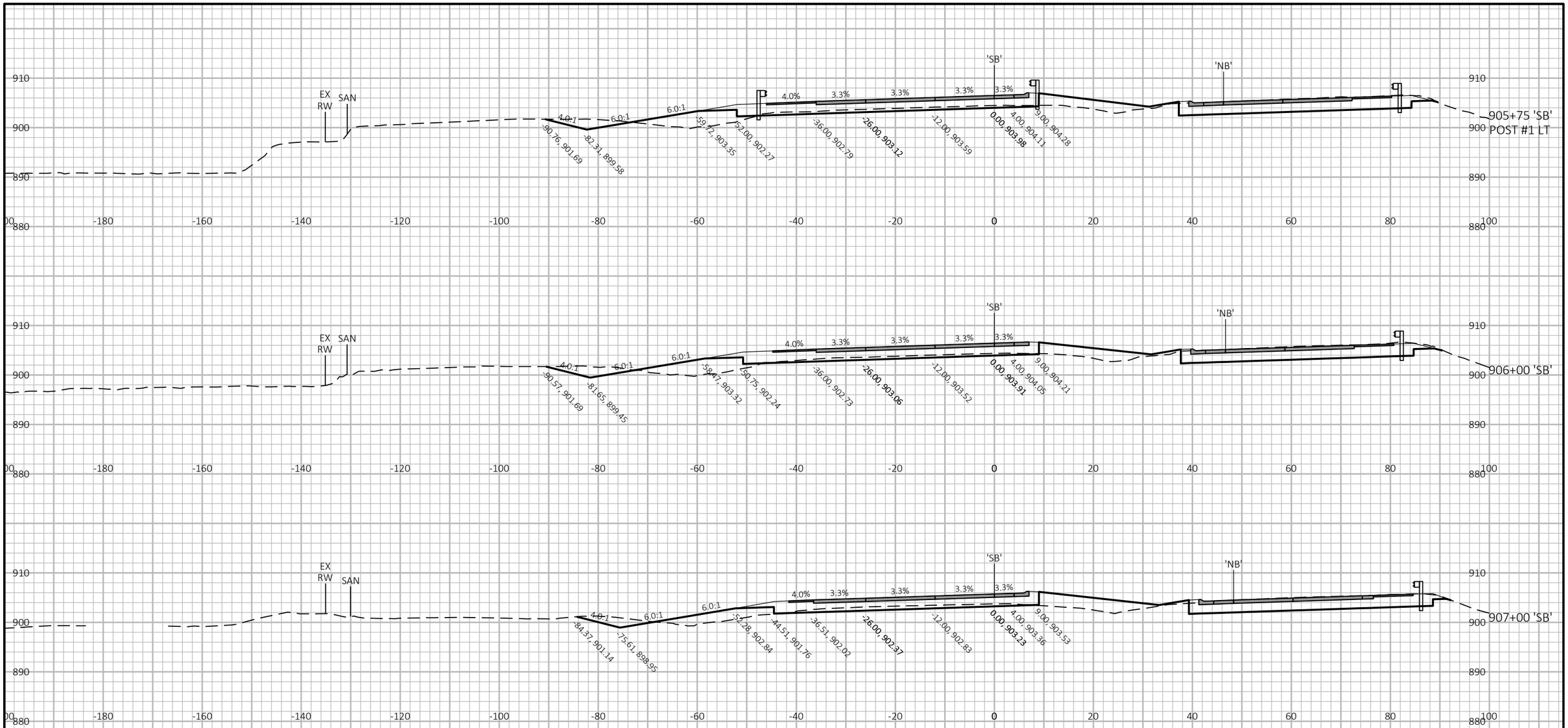
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 660	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2024 3:21 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

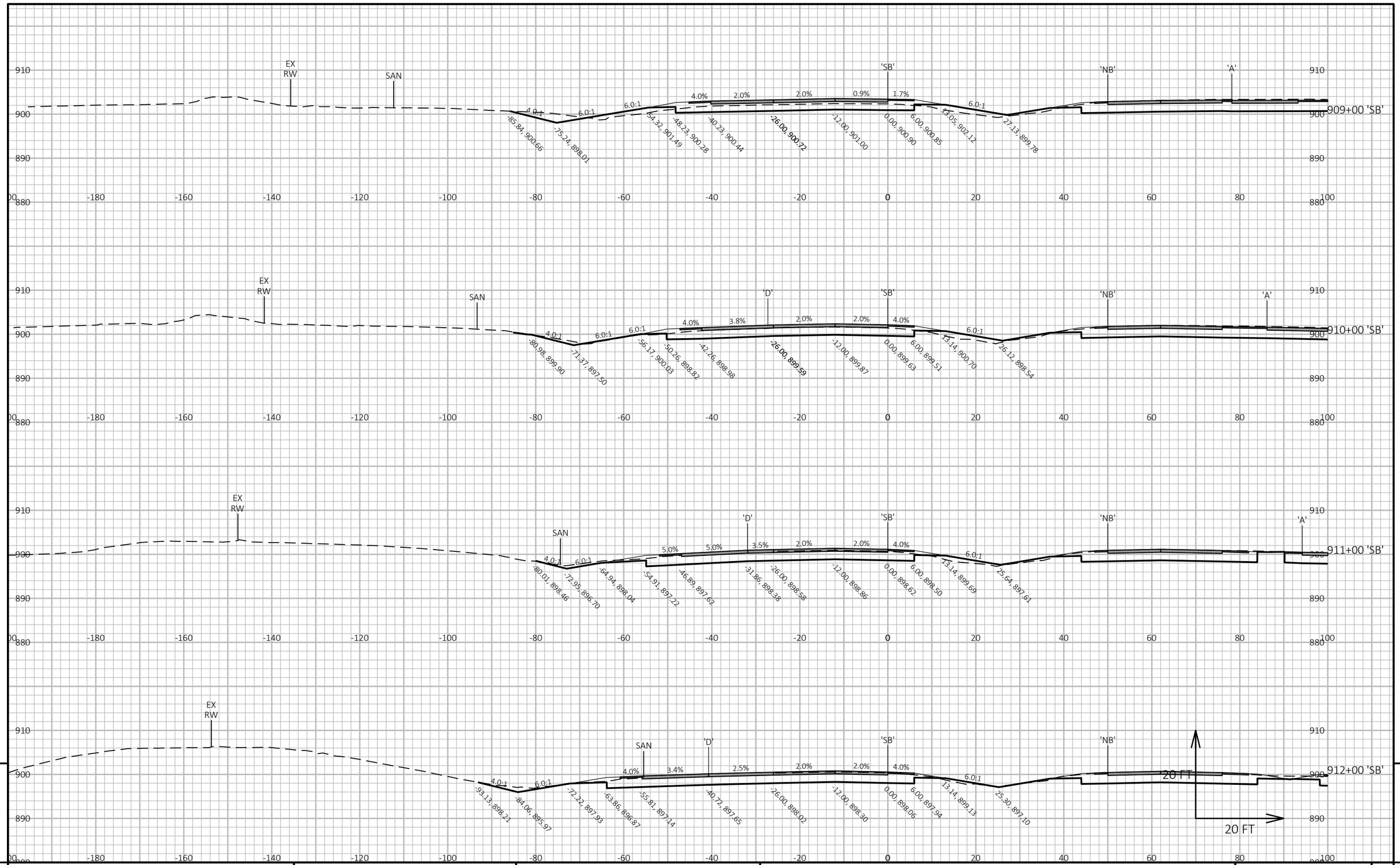
9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 661	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 07

PLOT DATE : 9/24/2024 3:21 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



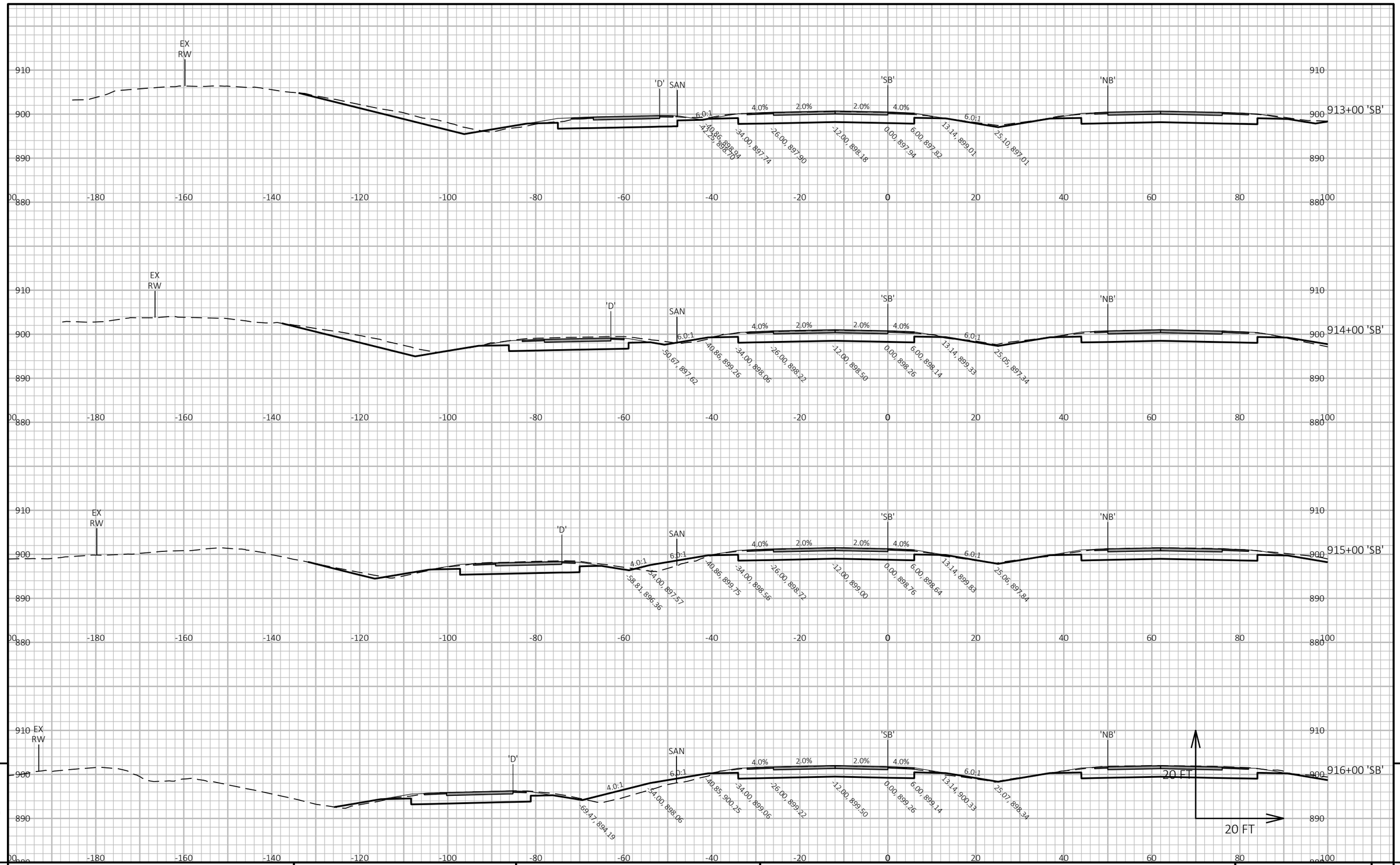
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 662	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2024 3:21 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



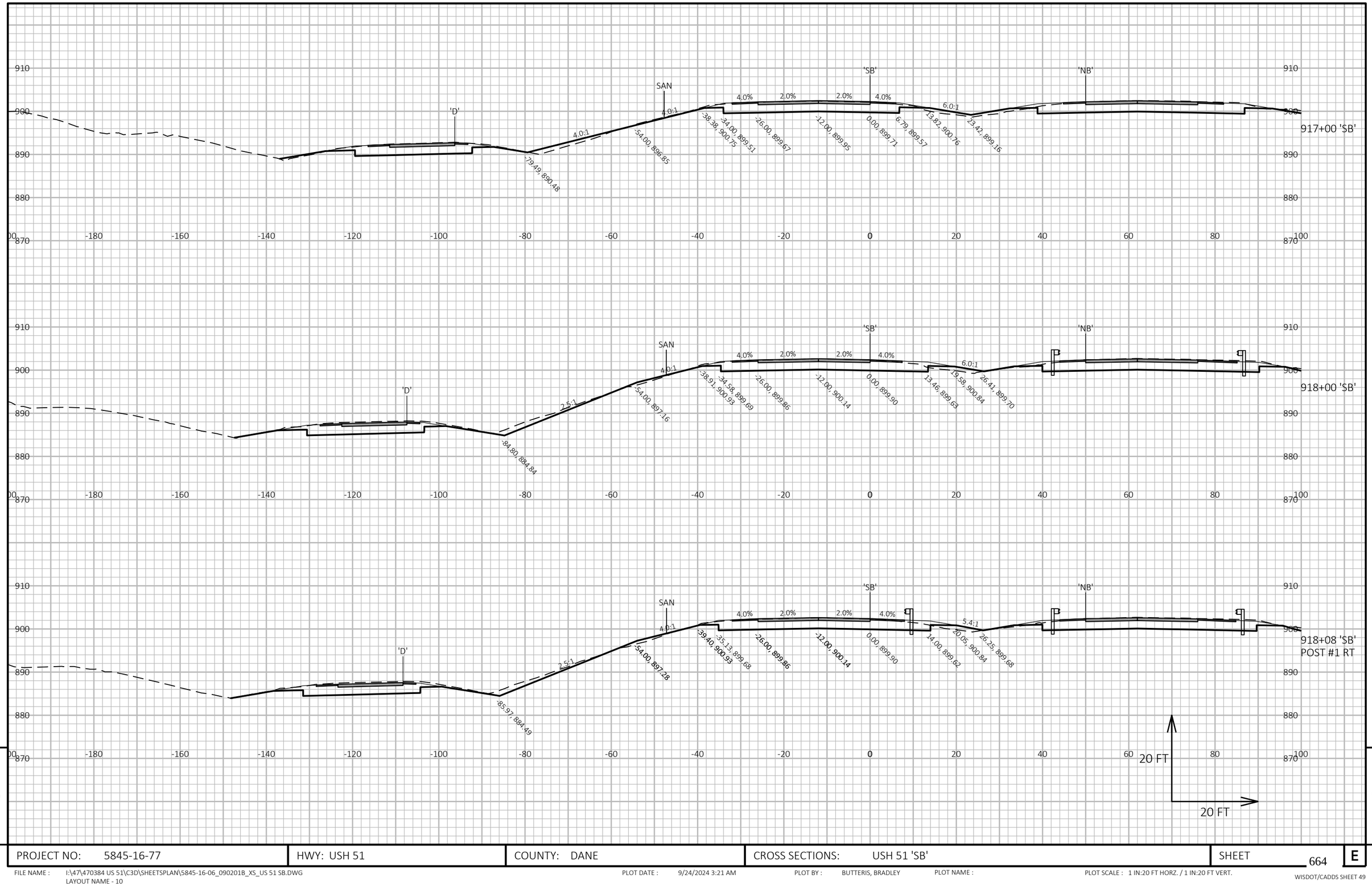
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9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 663	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2024 3:21 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

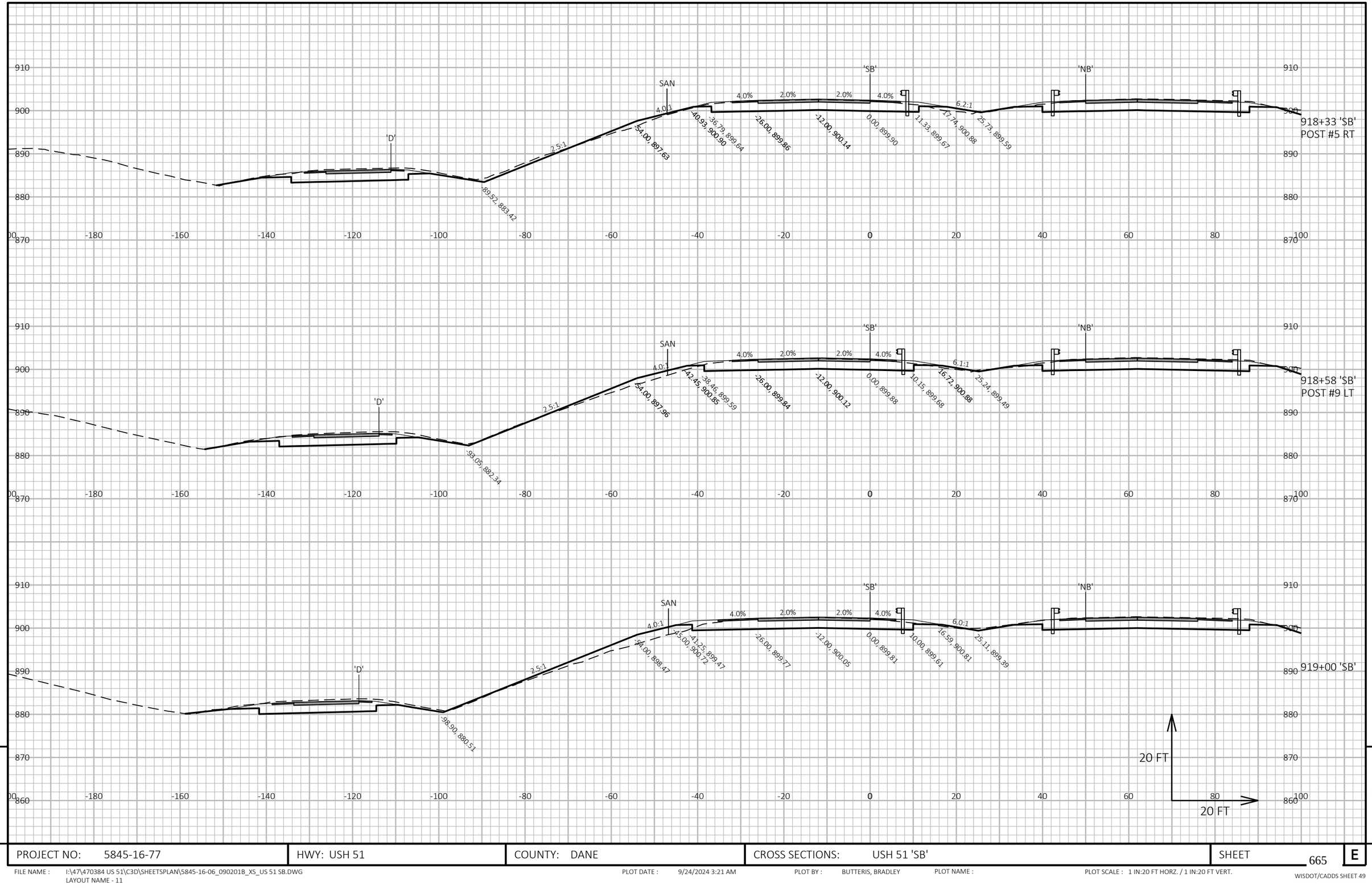
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 664	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 10

PLOT DATE : 9/24/2024 3:21 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

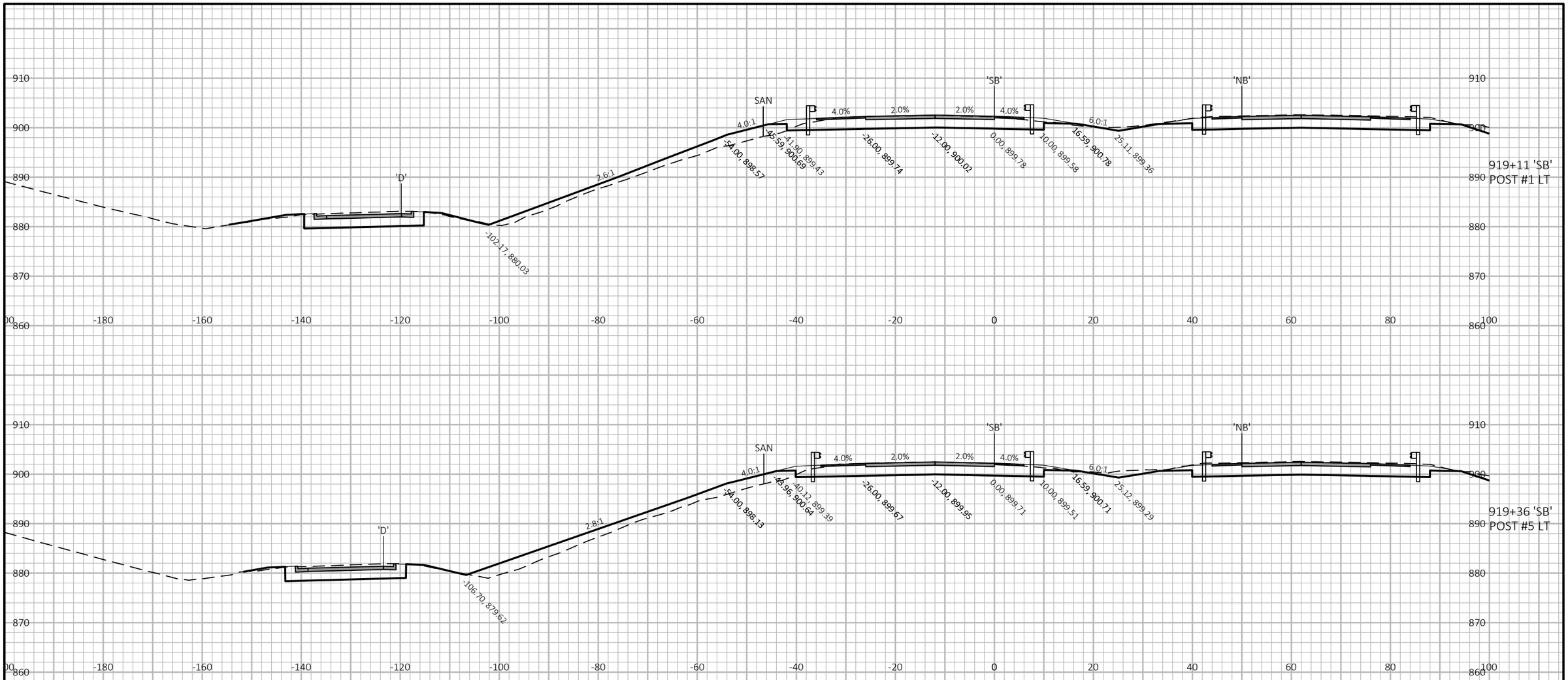


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 665	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 11

PLOT DATE : 9/24/2024 3:21 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

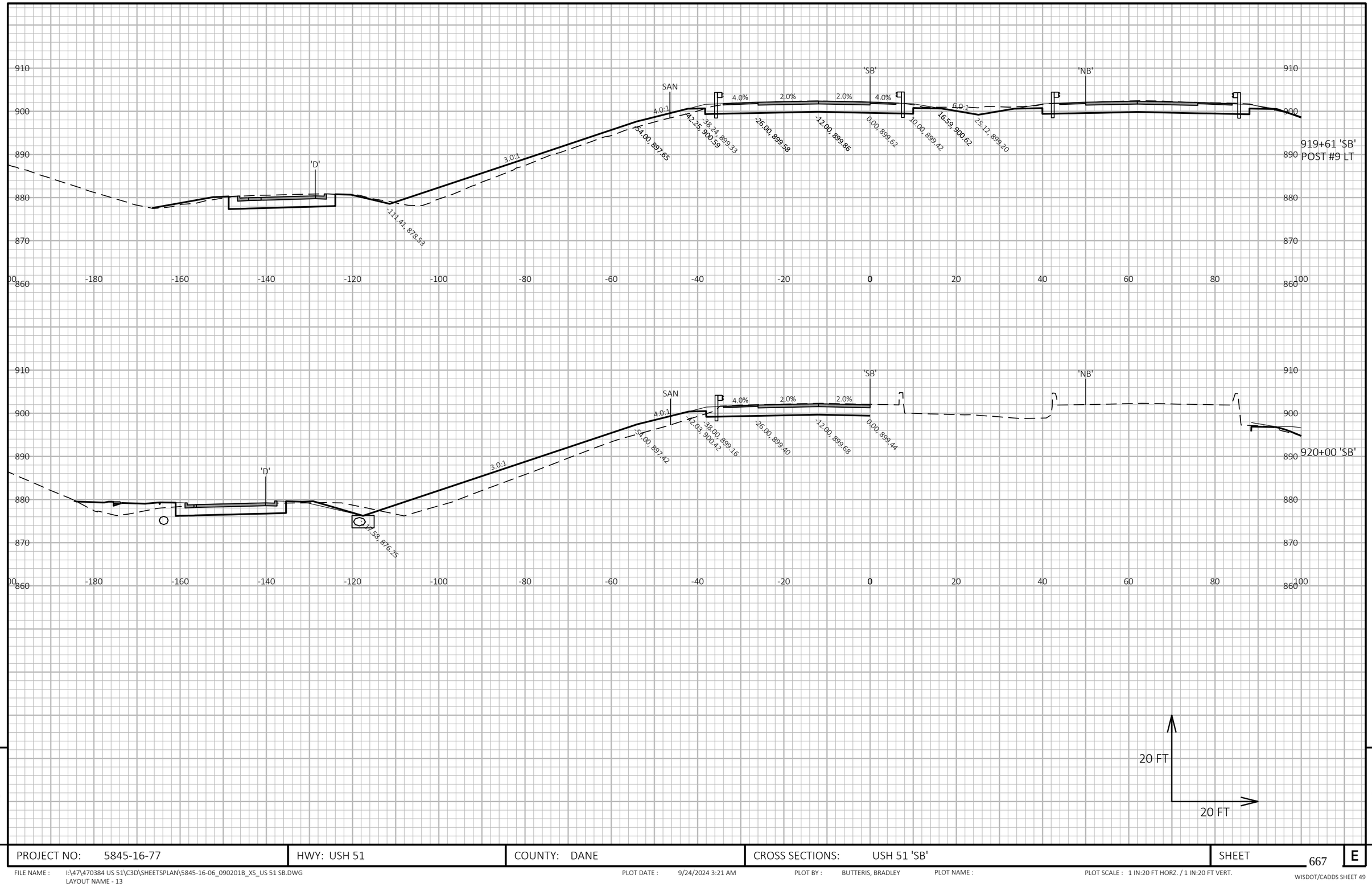
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 666	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 12

PLOT DATE : 9/24/2024 3:21 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

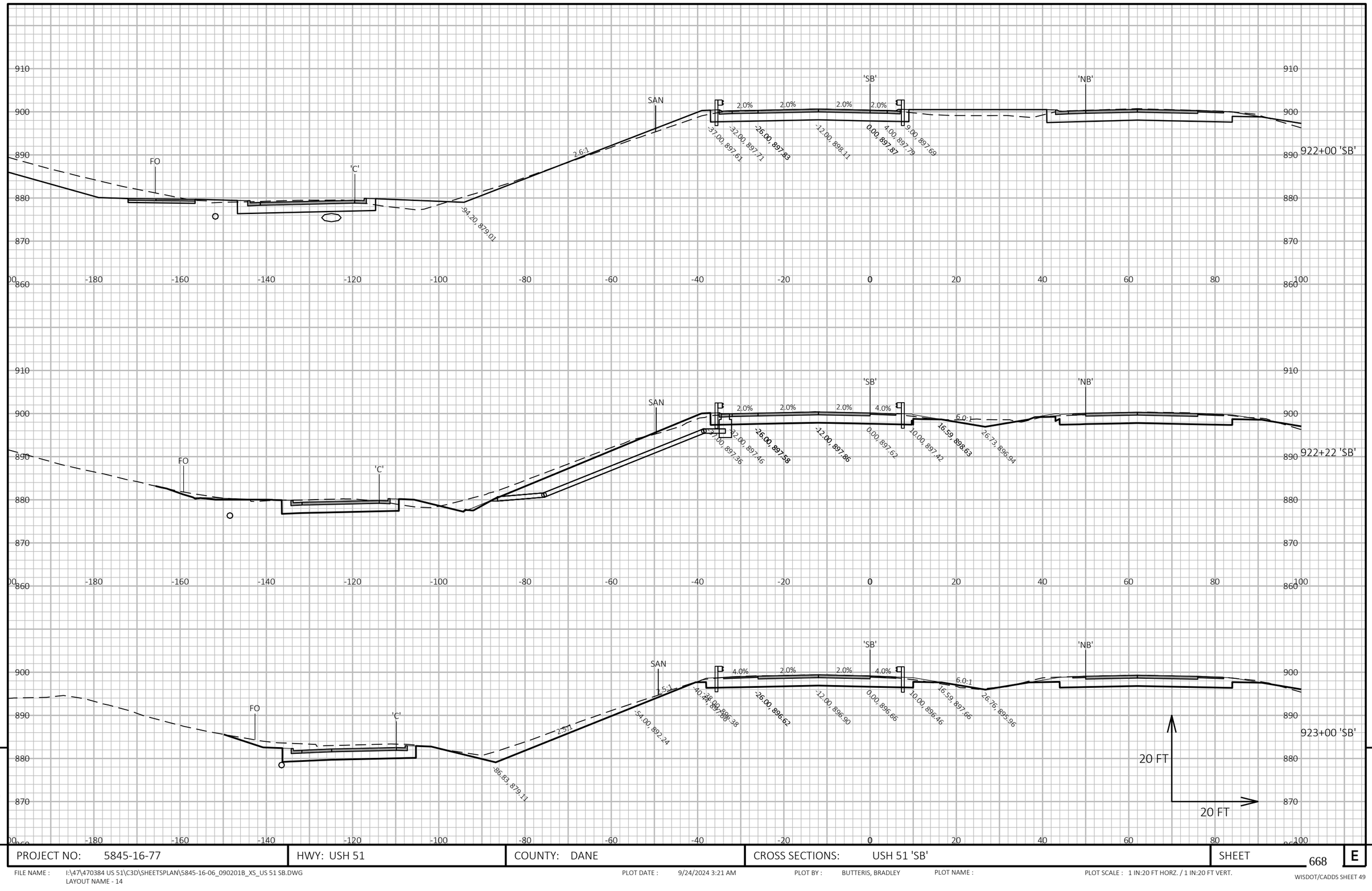
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 667	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 13

PLOT DATE : 9/24/2024 3:21 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

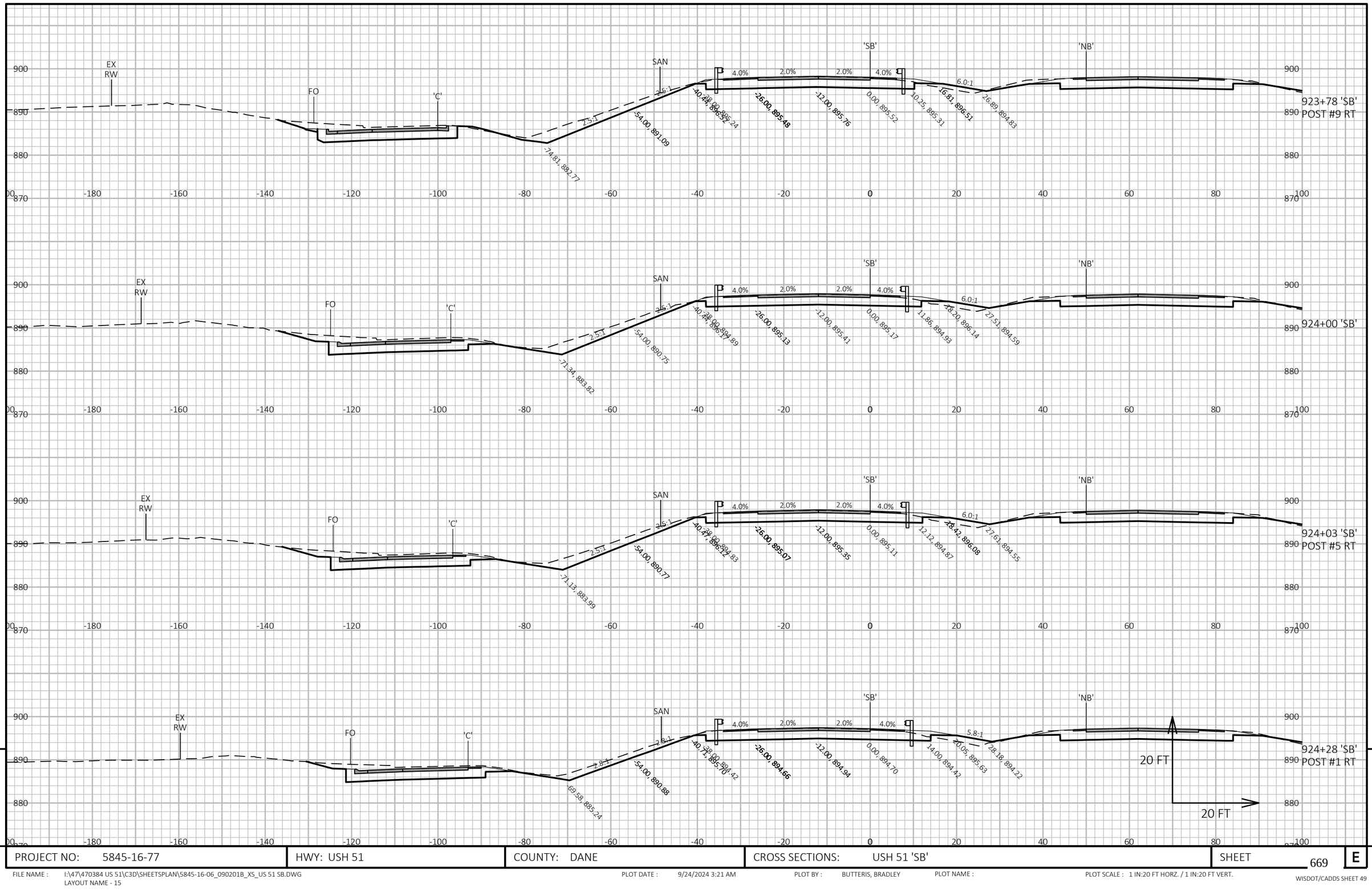
9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 668	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 14

PLOT DATE : 9/24/2024 3:21 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 669	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 15

PLOT DATE : 9/24/2024 3:21 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



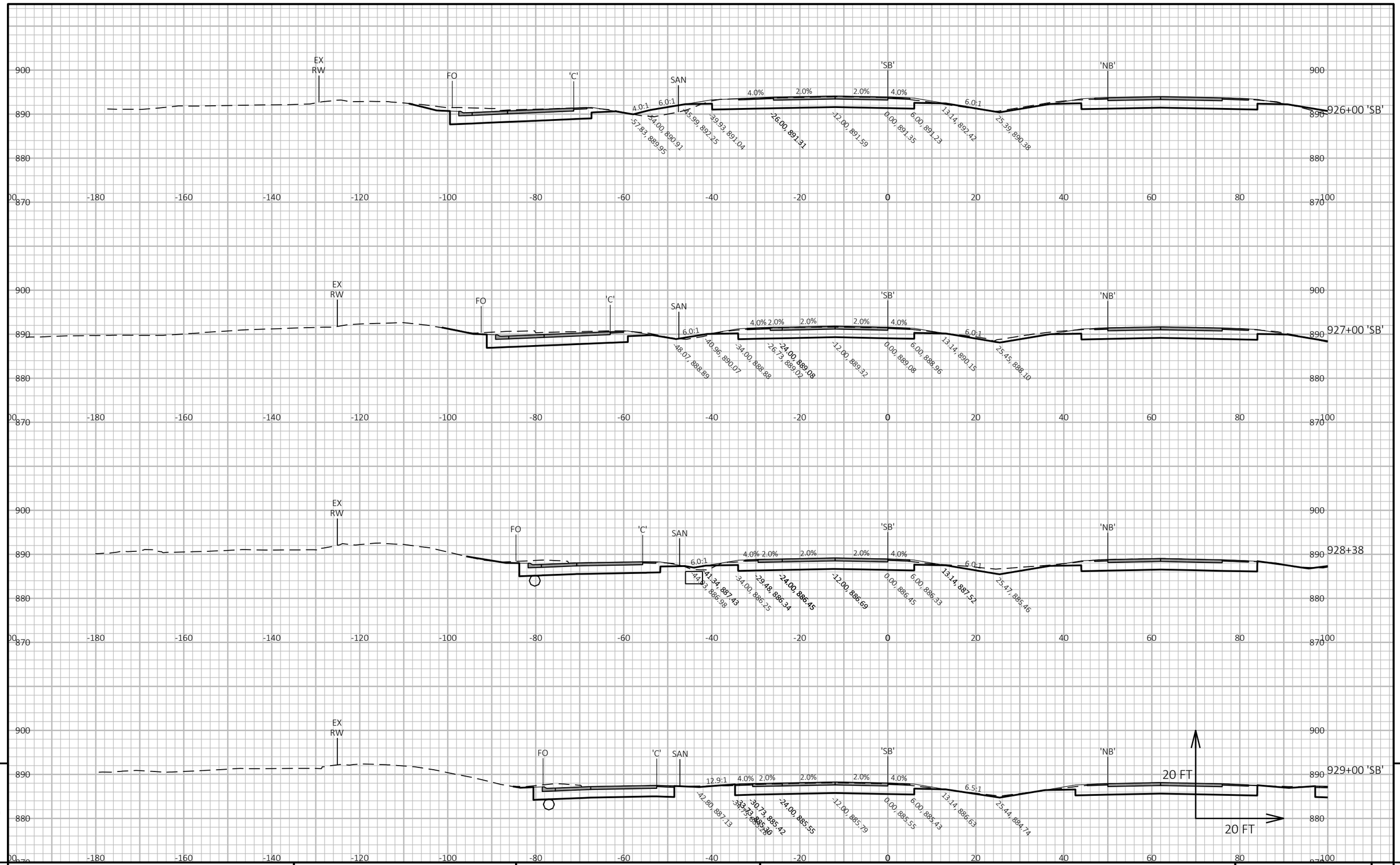
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9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 670	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 16

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 671	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 17

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

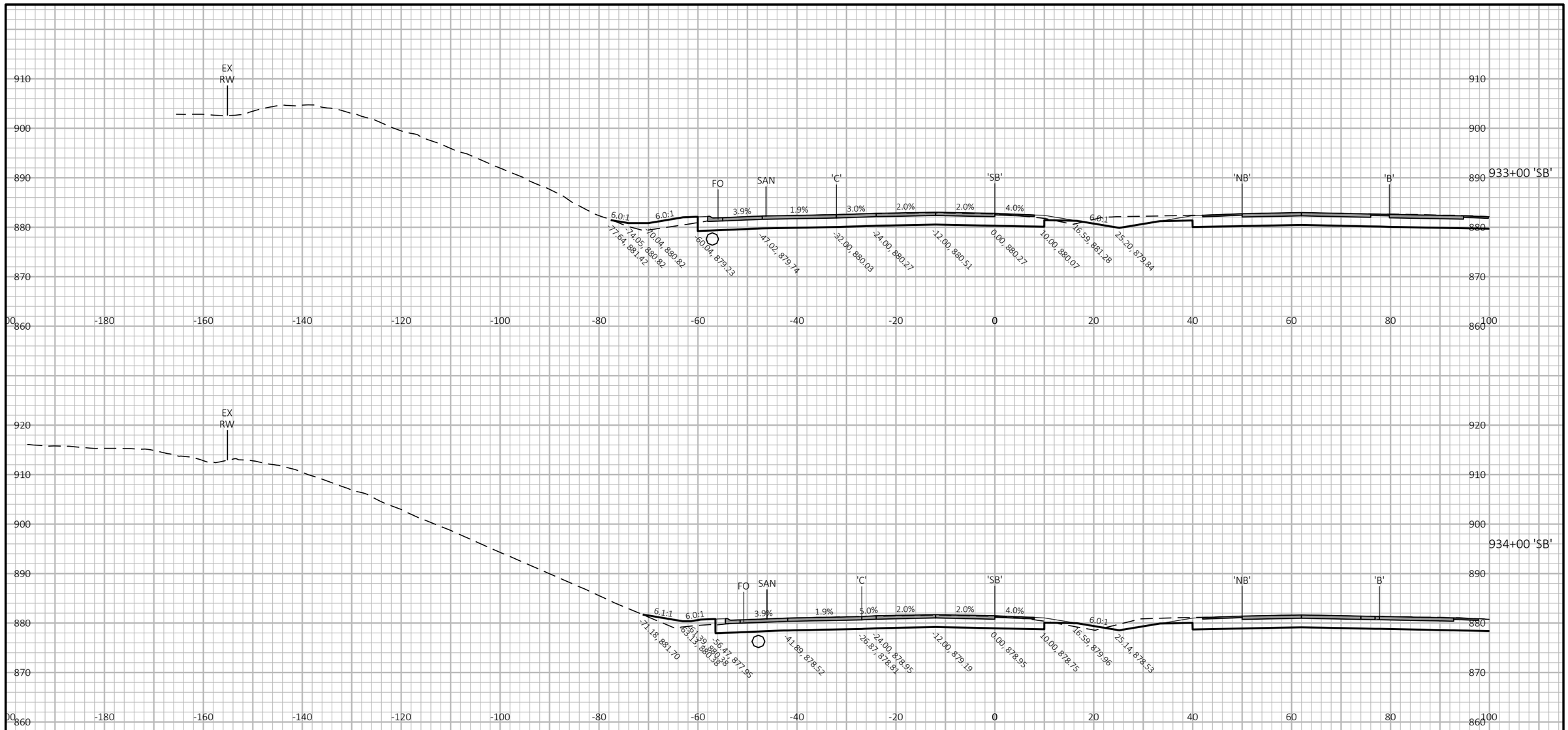


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 672 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 18

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

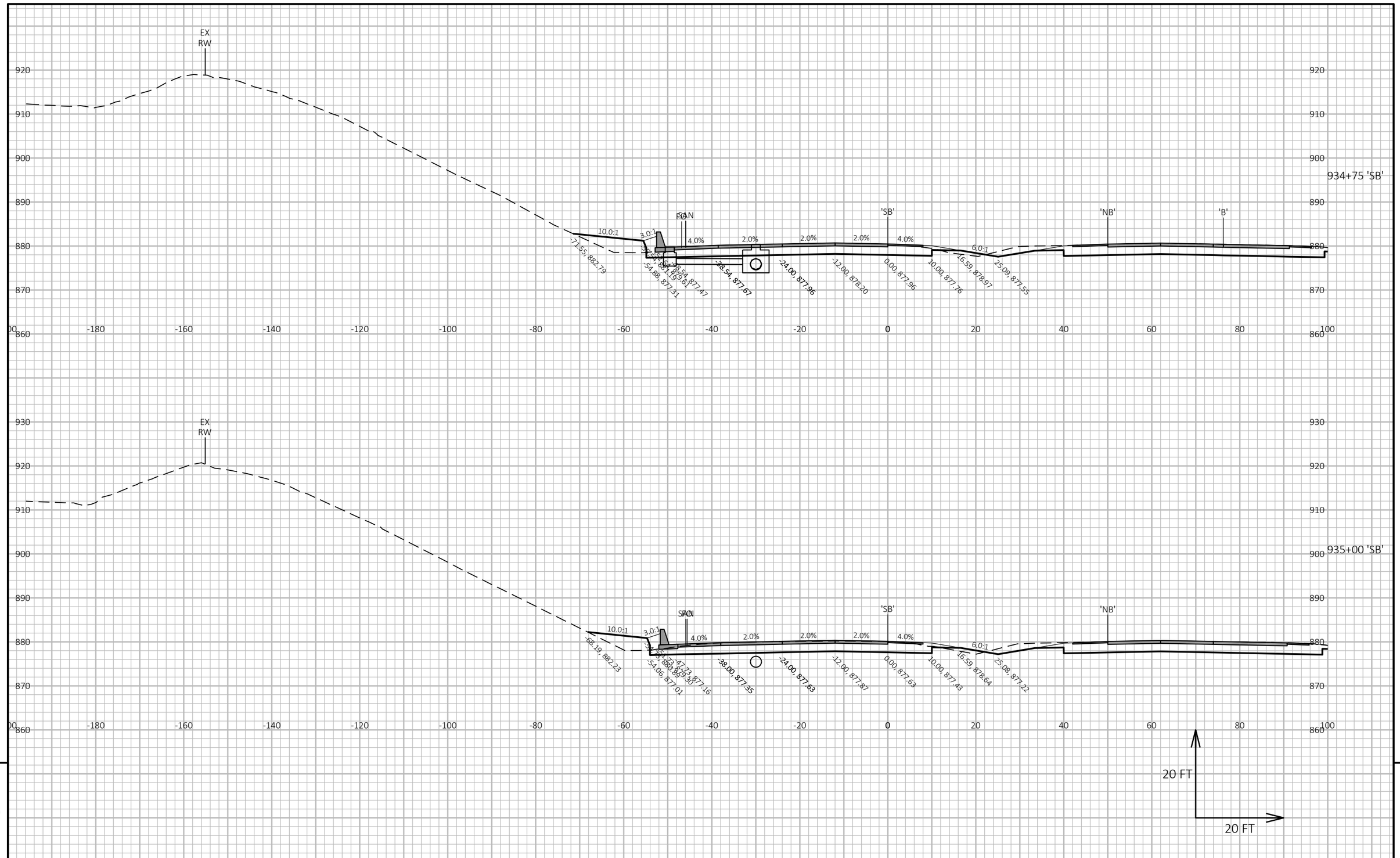
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 673	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 19

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

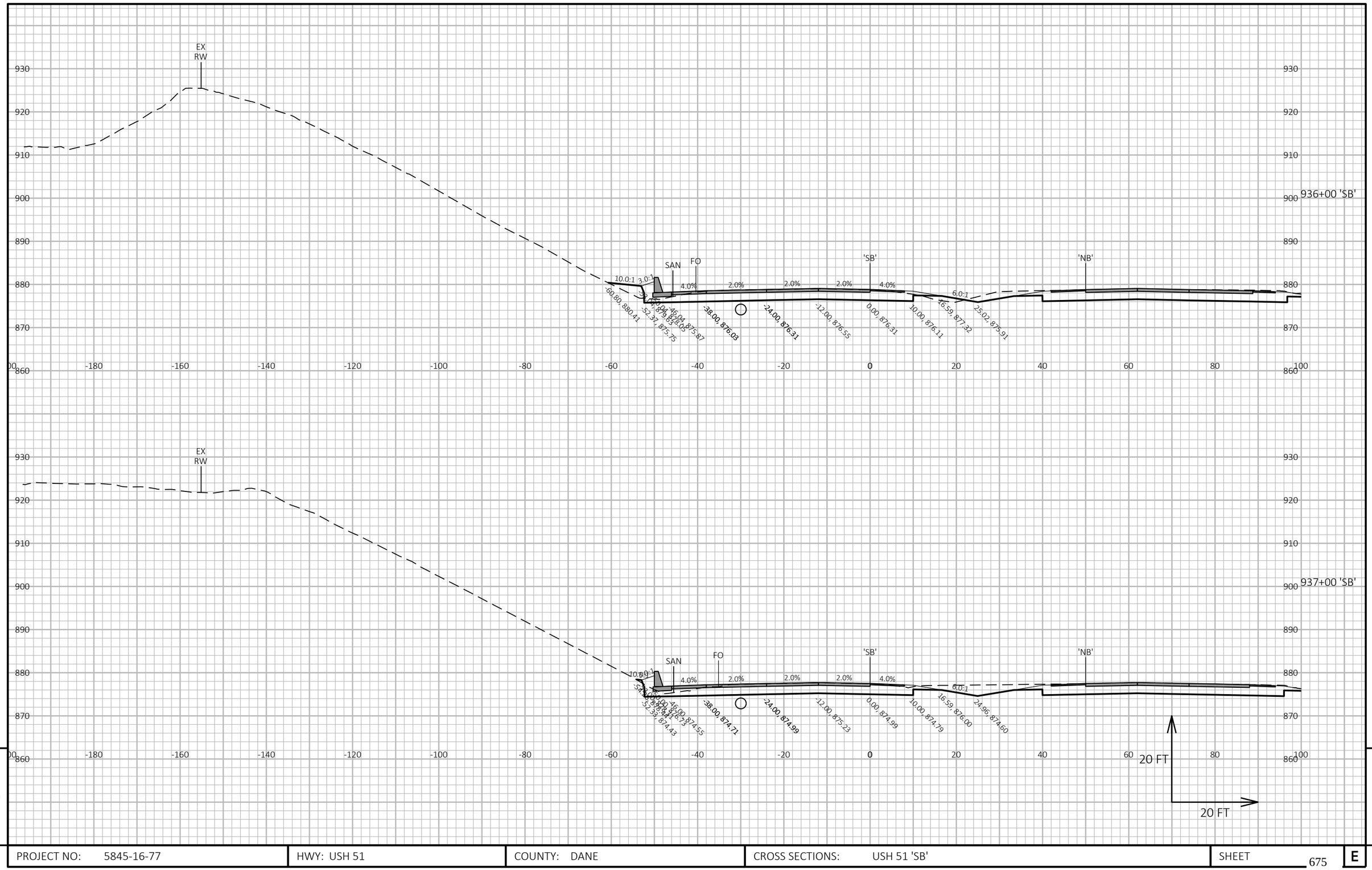
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 674	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 20

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

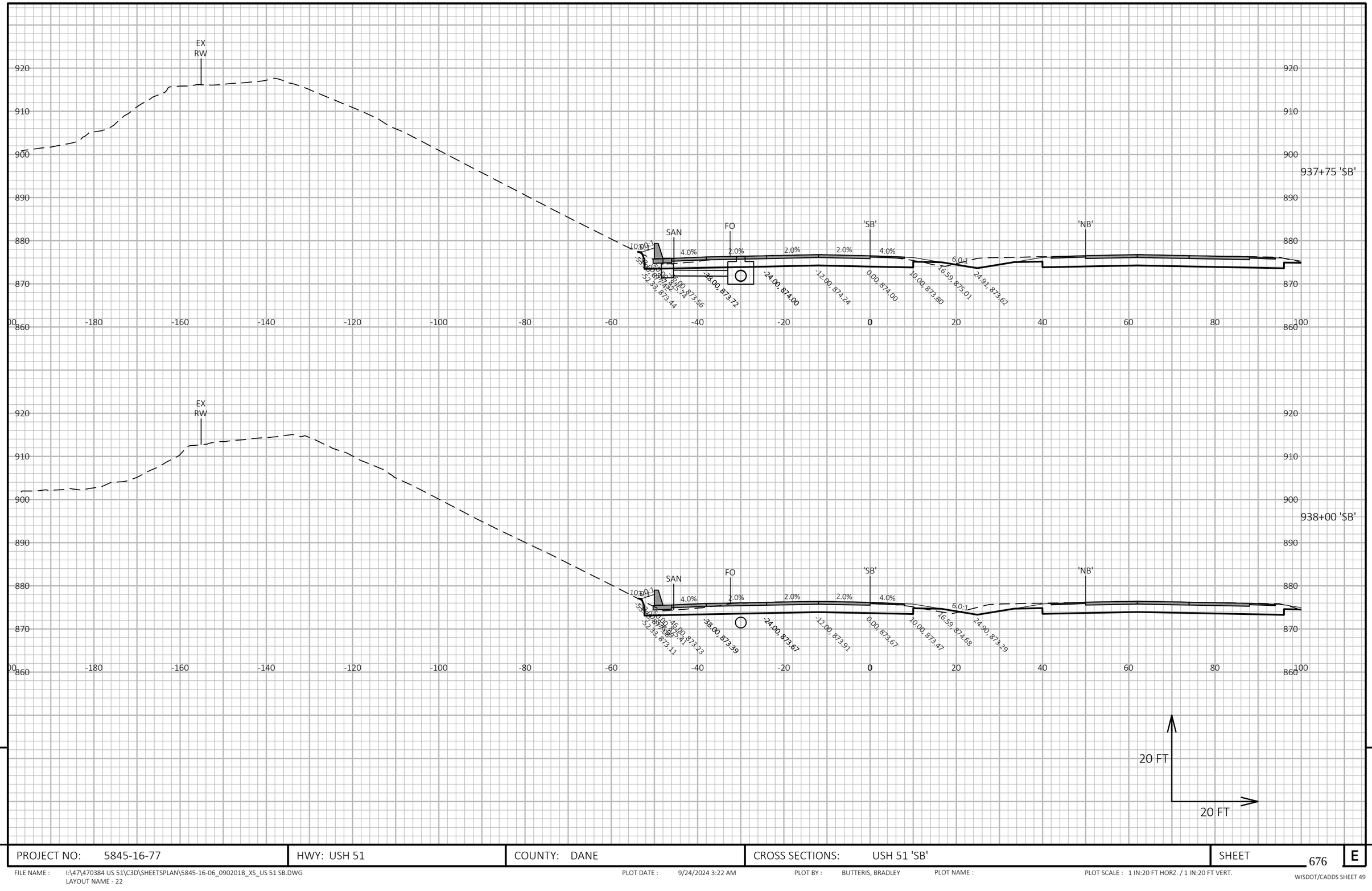


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 675	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 21

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

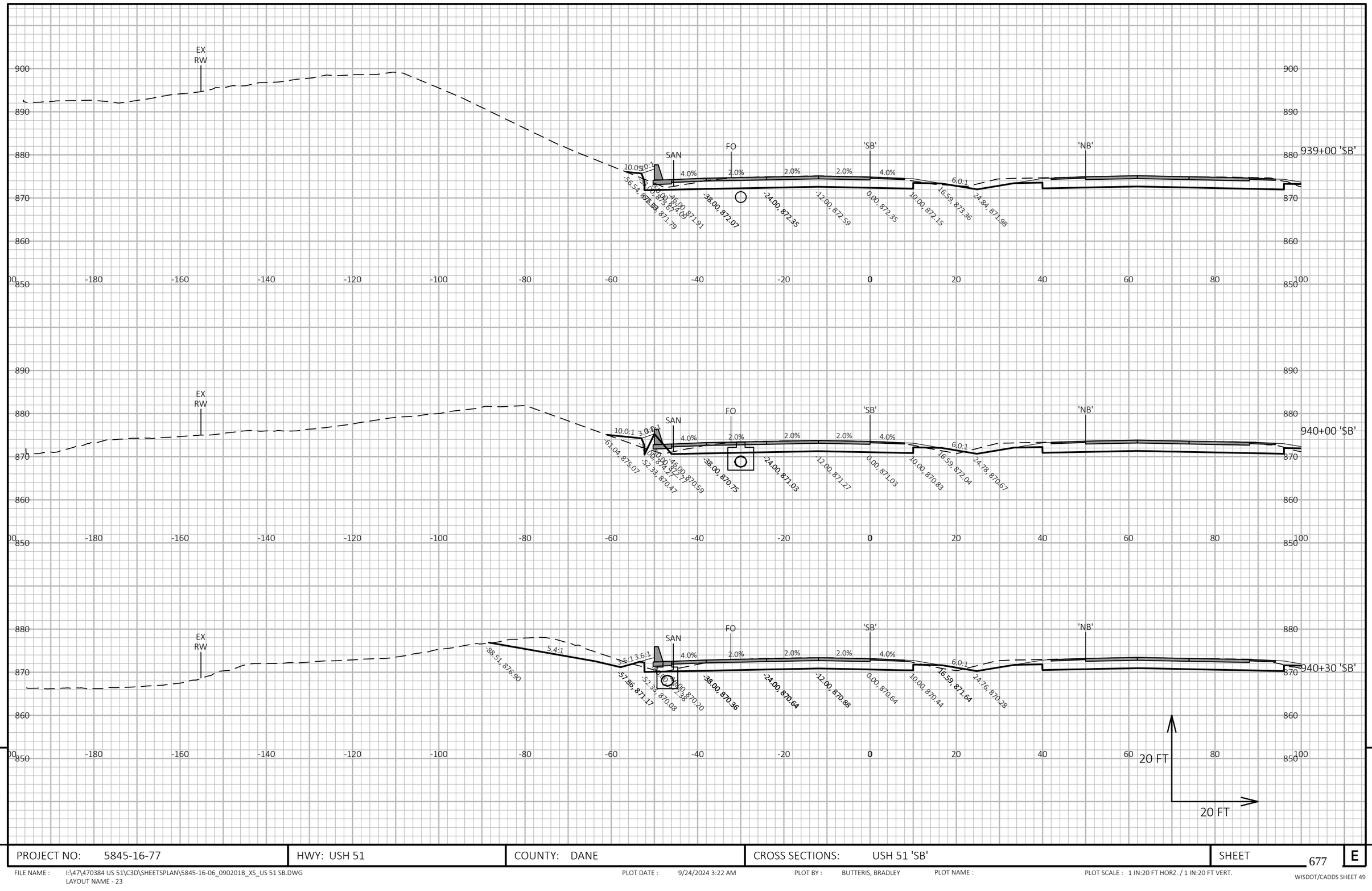


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 676	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 22

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

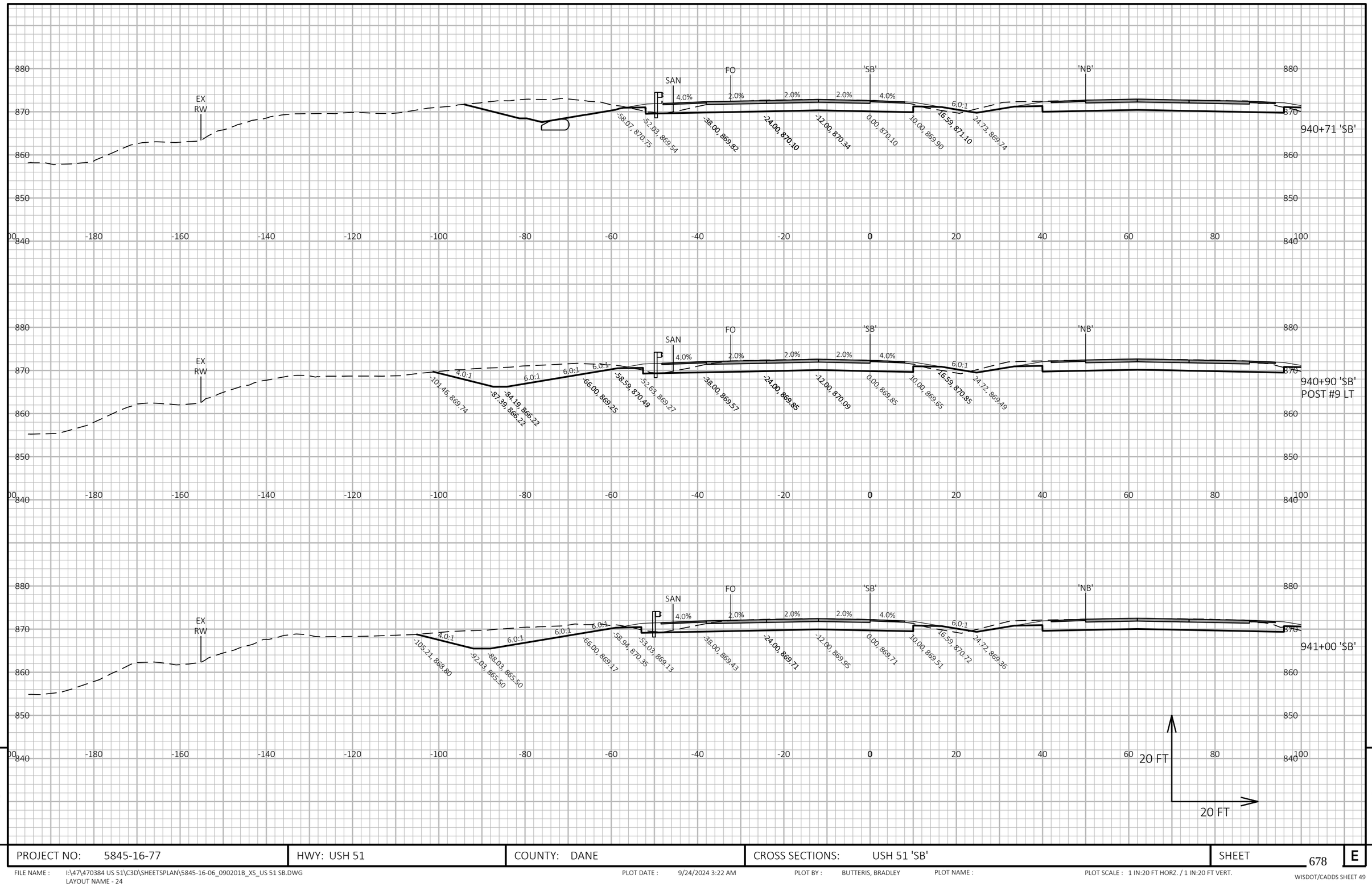


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 677	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 23

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

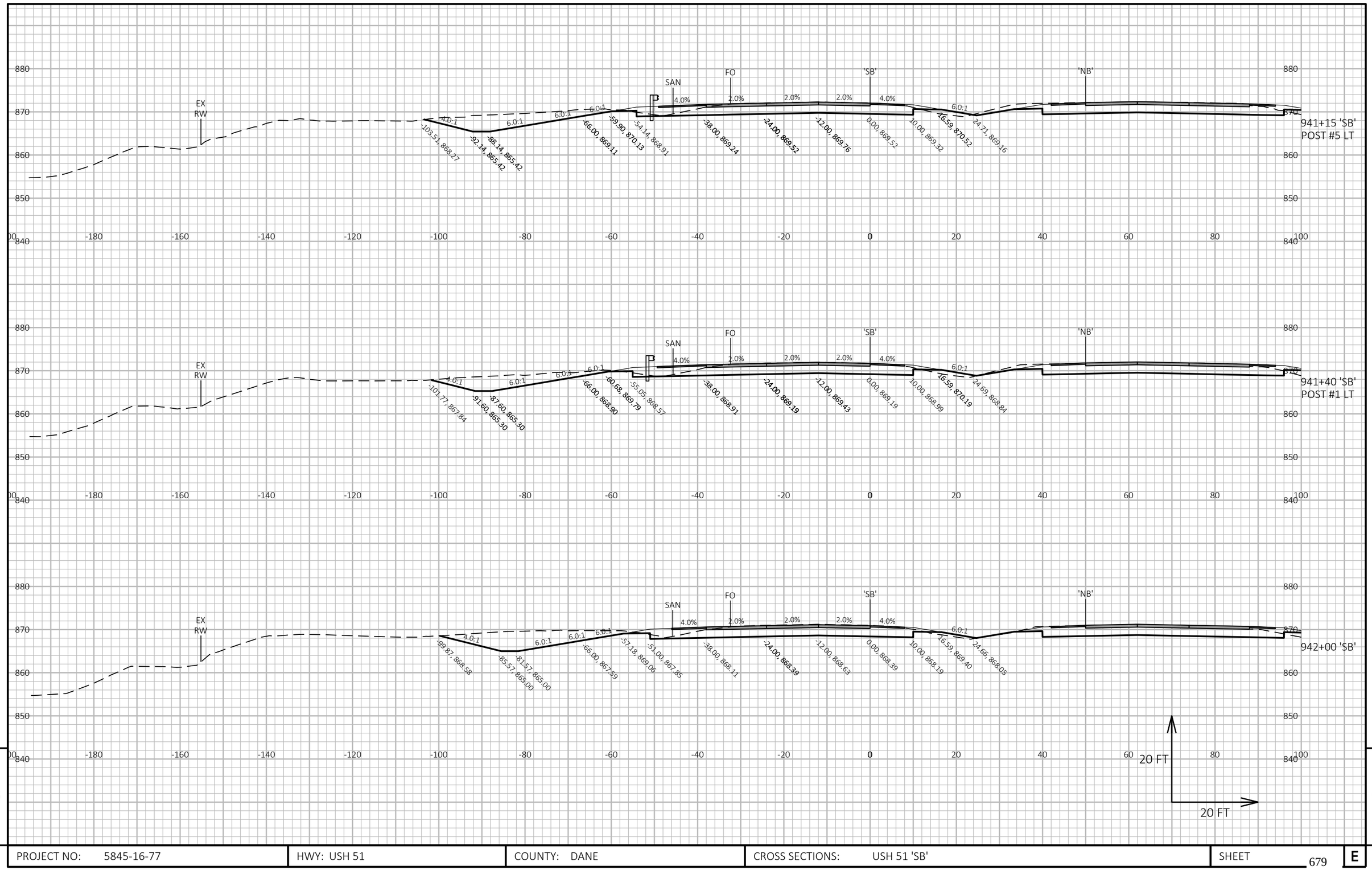
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 678	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 24

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

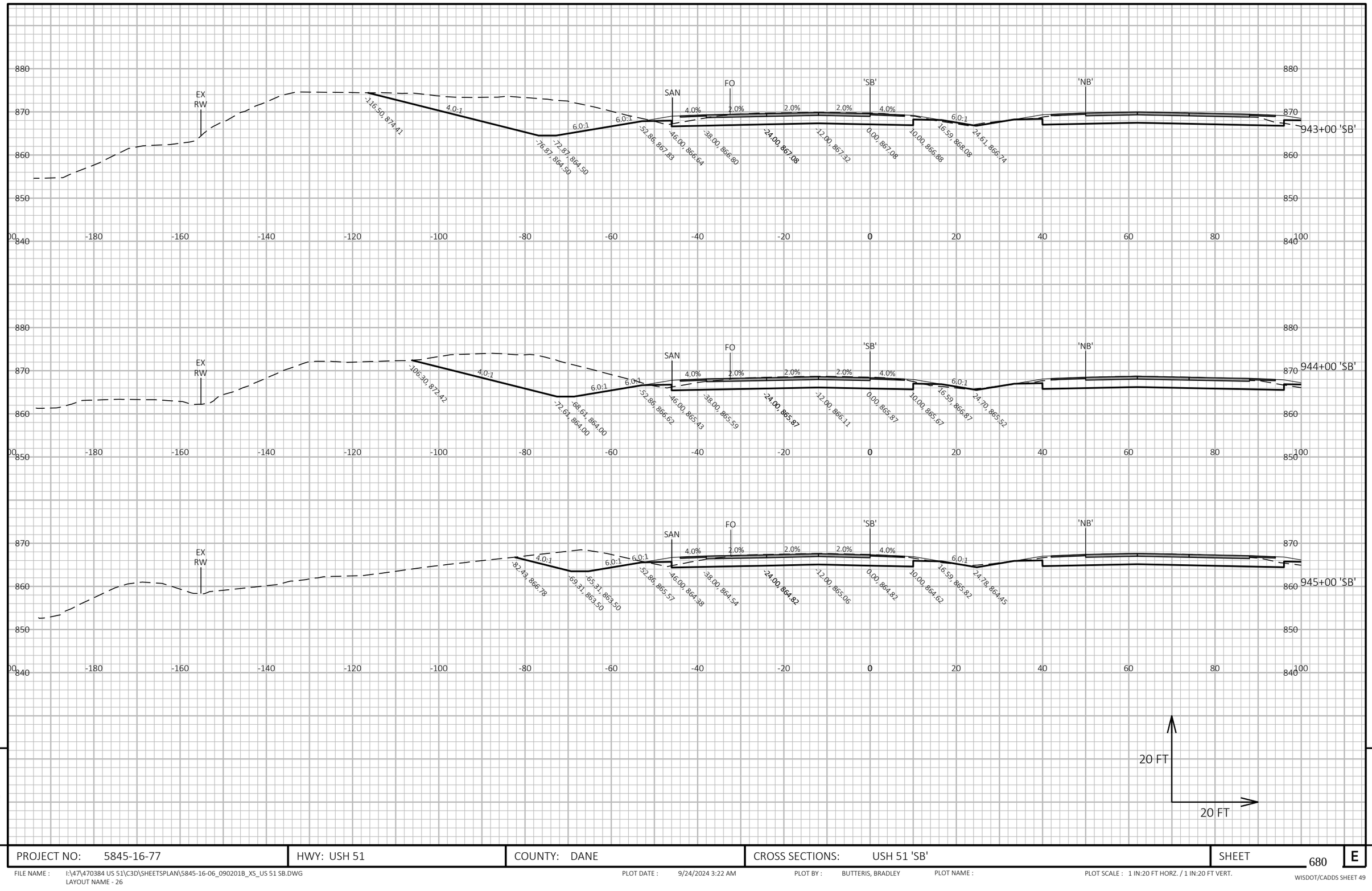


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 679	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 25

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

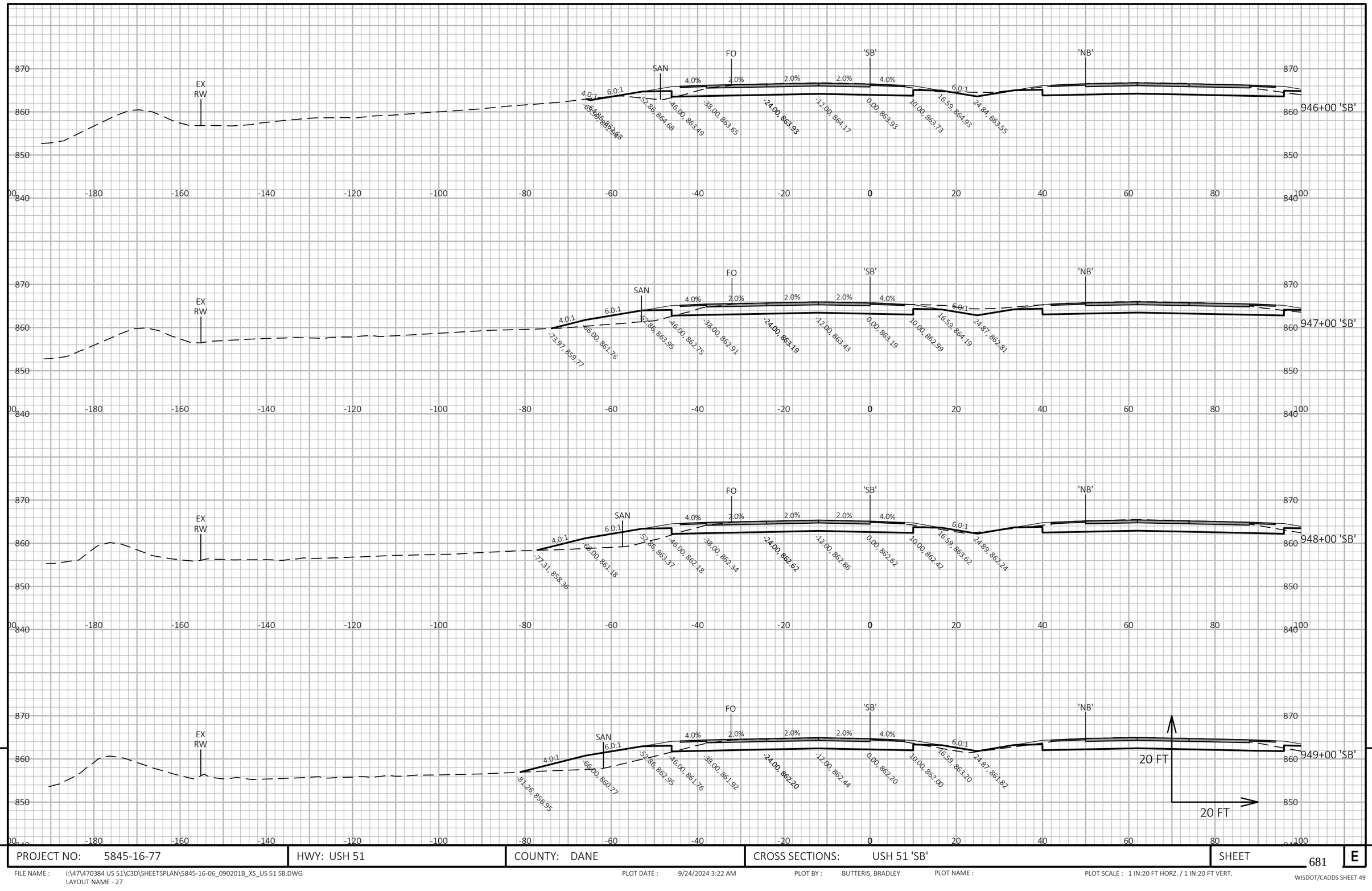


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 680	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 26

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

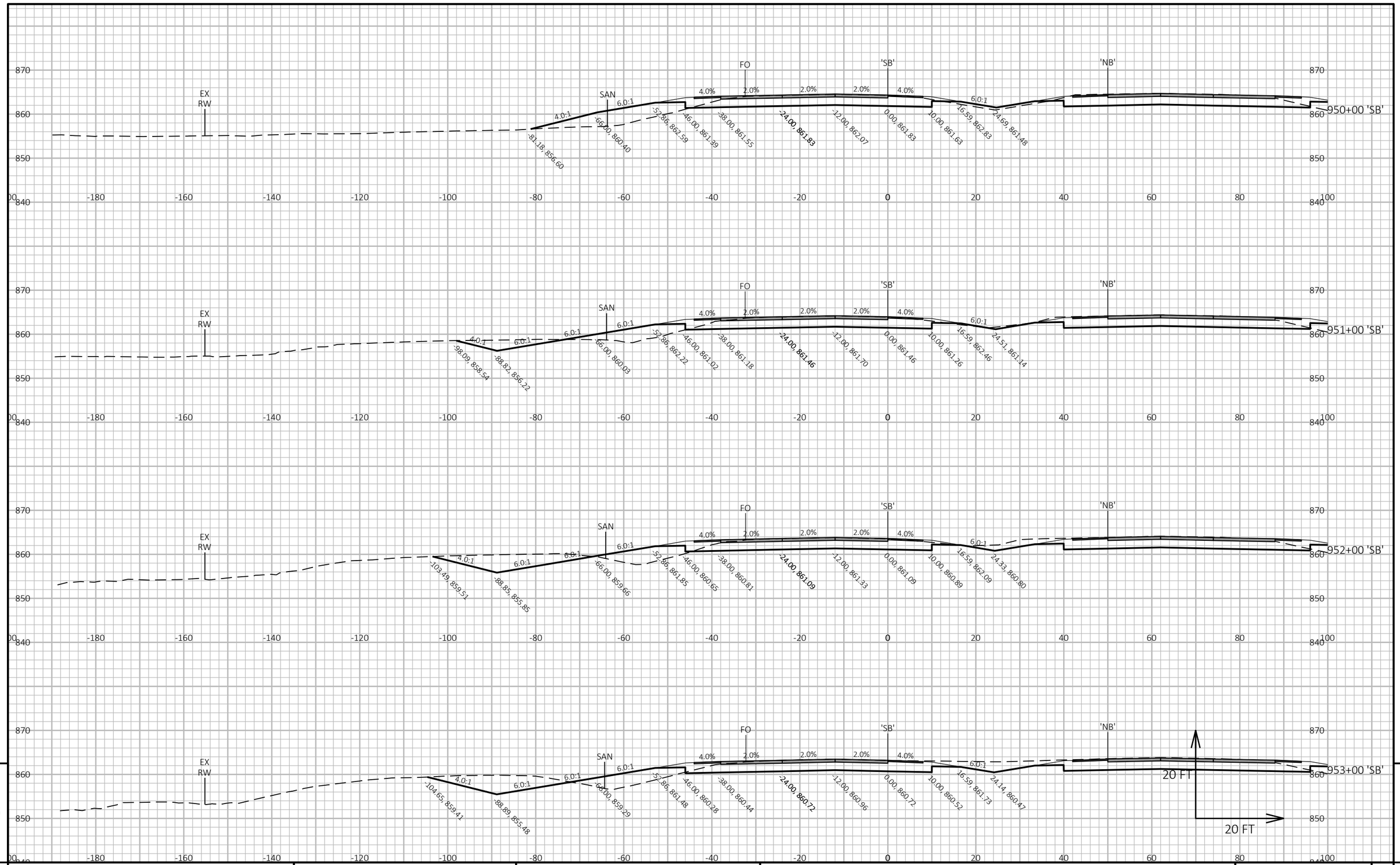


9 9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 681	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 27

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.



9

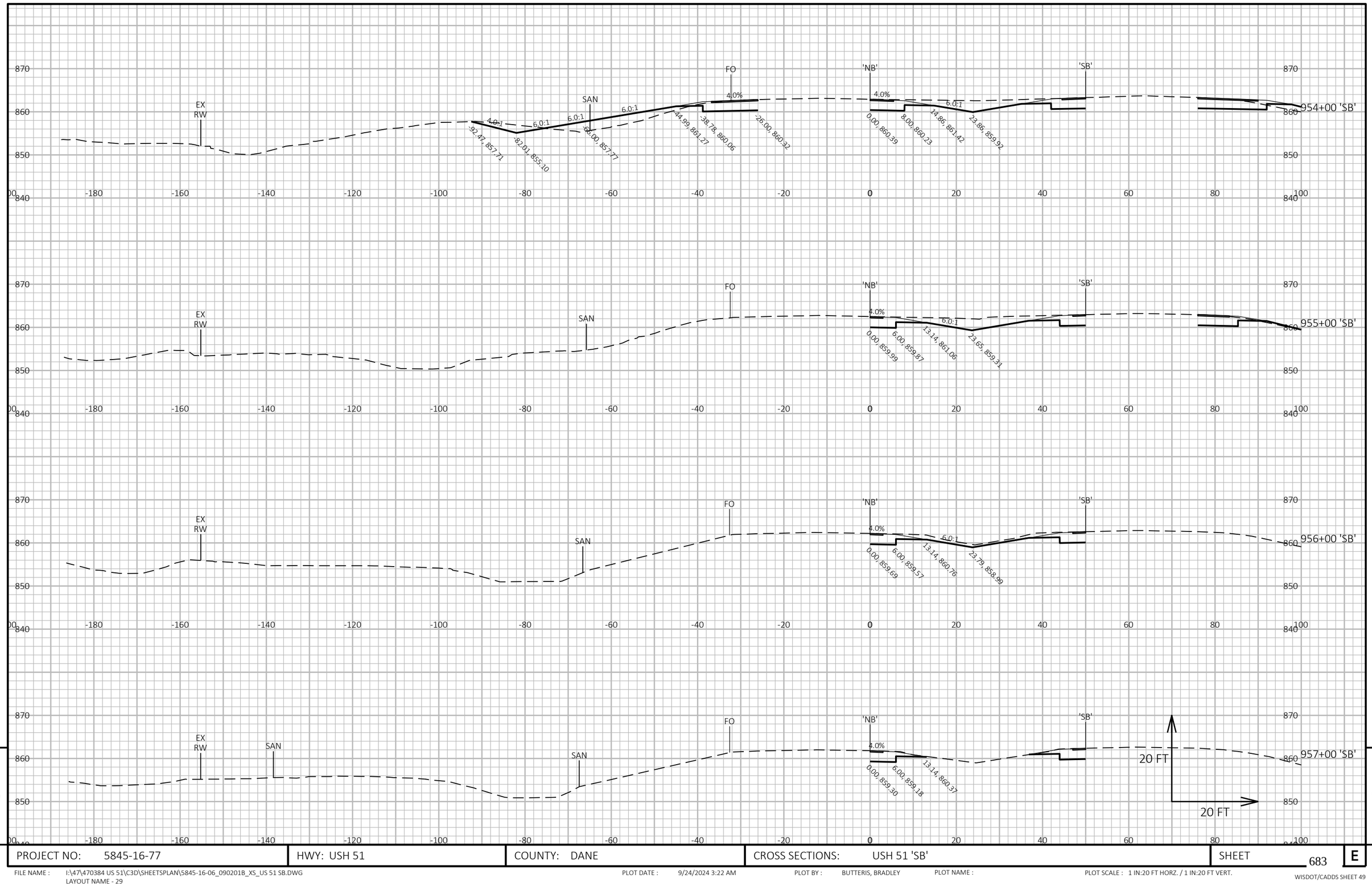
9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 682	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 28

PLOT DATE : 9/24/2024 3:22 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: USH 51 'SB'	SHEET 683	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090201B_XS_US 51 SB.DWG
LAYOUT NAME - 29

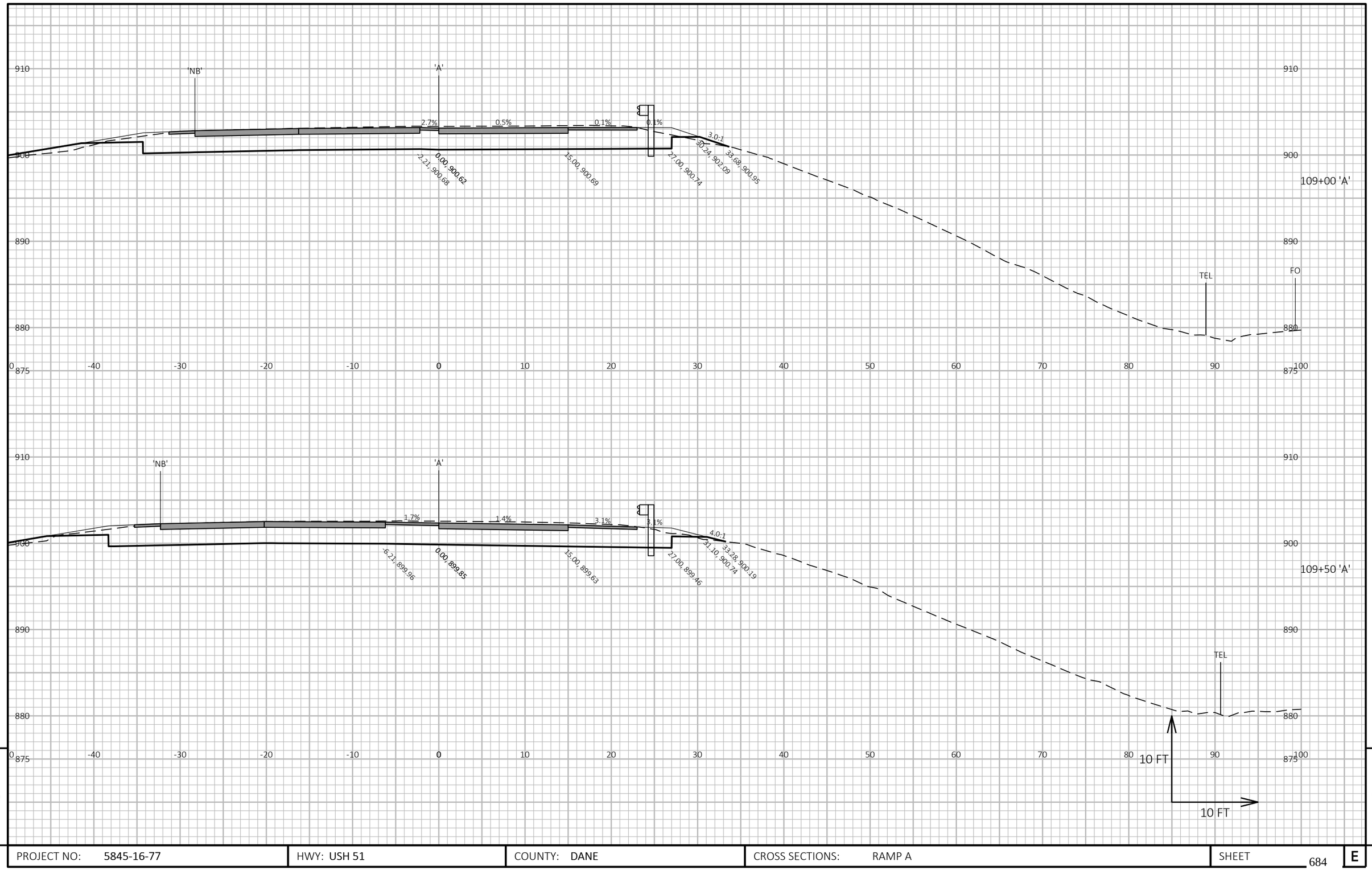
PLOT DATE : 9/24/2024 3:22 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

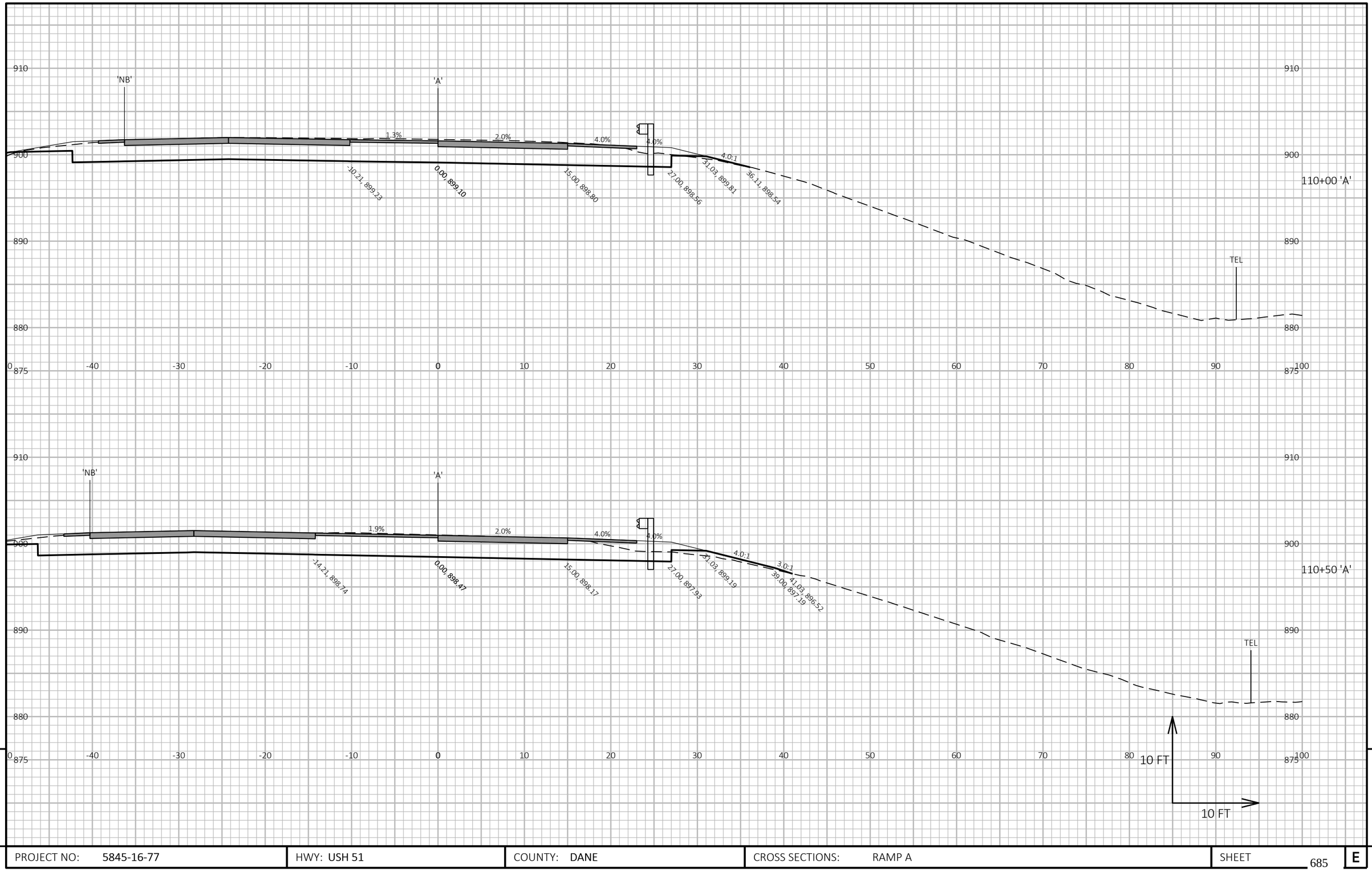


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP A	SHEET 684 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202A_XS_RAMP A.DWG
LAYOUT NAME - 01

PLOT DATE : 4/17/2024 10:03 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



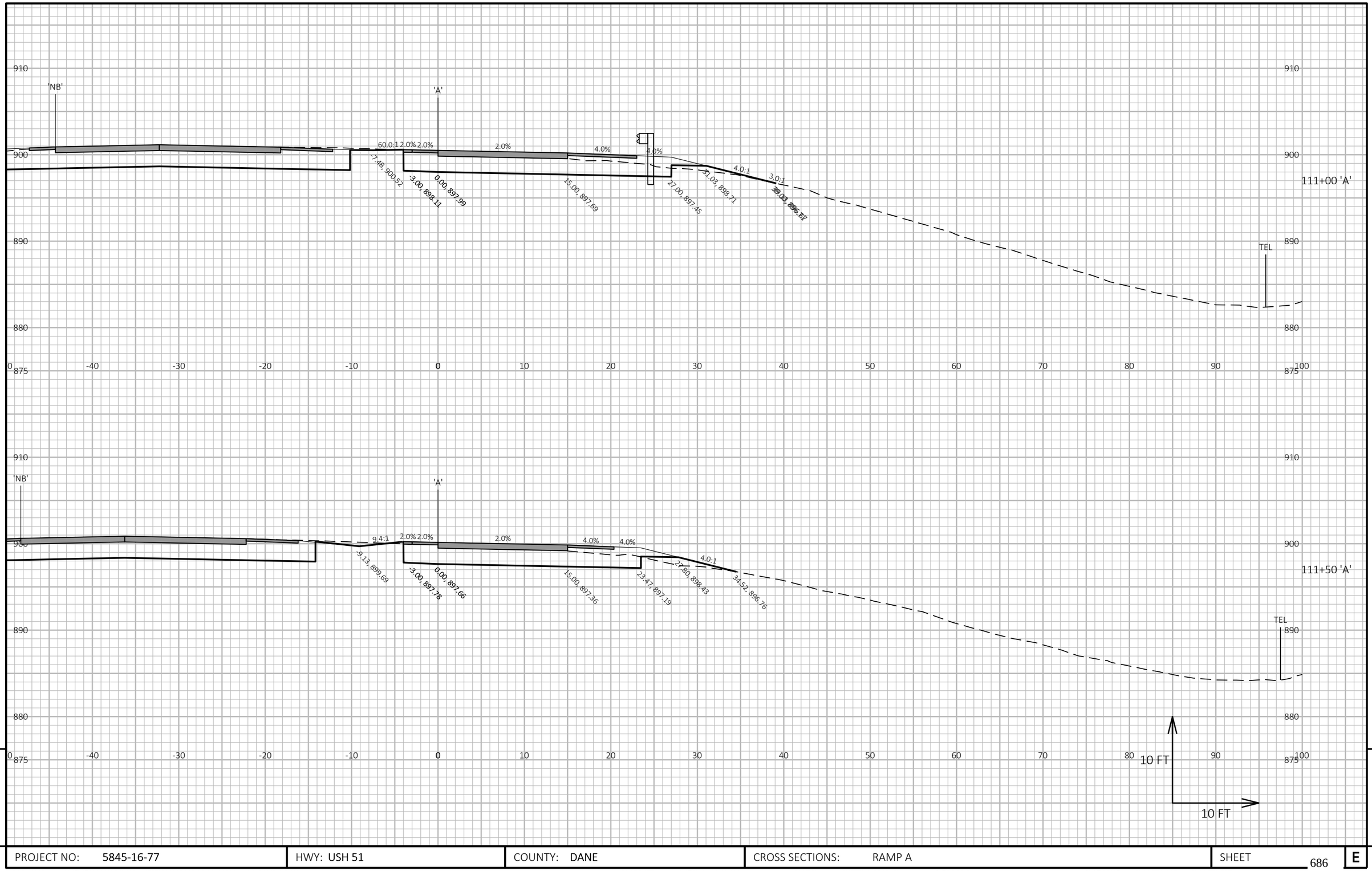
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP A	SHEET 685	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202A_XS_RAMP A.DWG
LAYOUT NAME - 02

PLOT DATE : 4/17/2024 10:03 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP A	SHEET 686	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202A_XS_RAMP A.DWG
LAYOUT NAME - 03

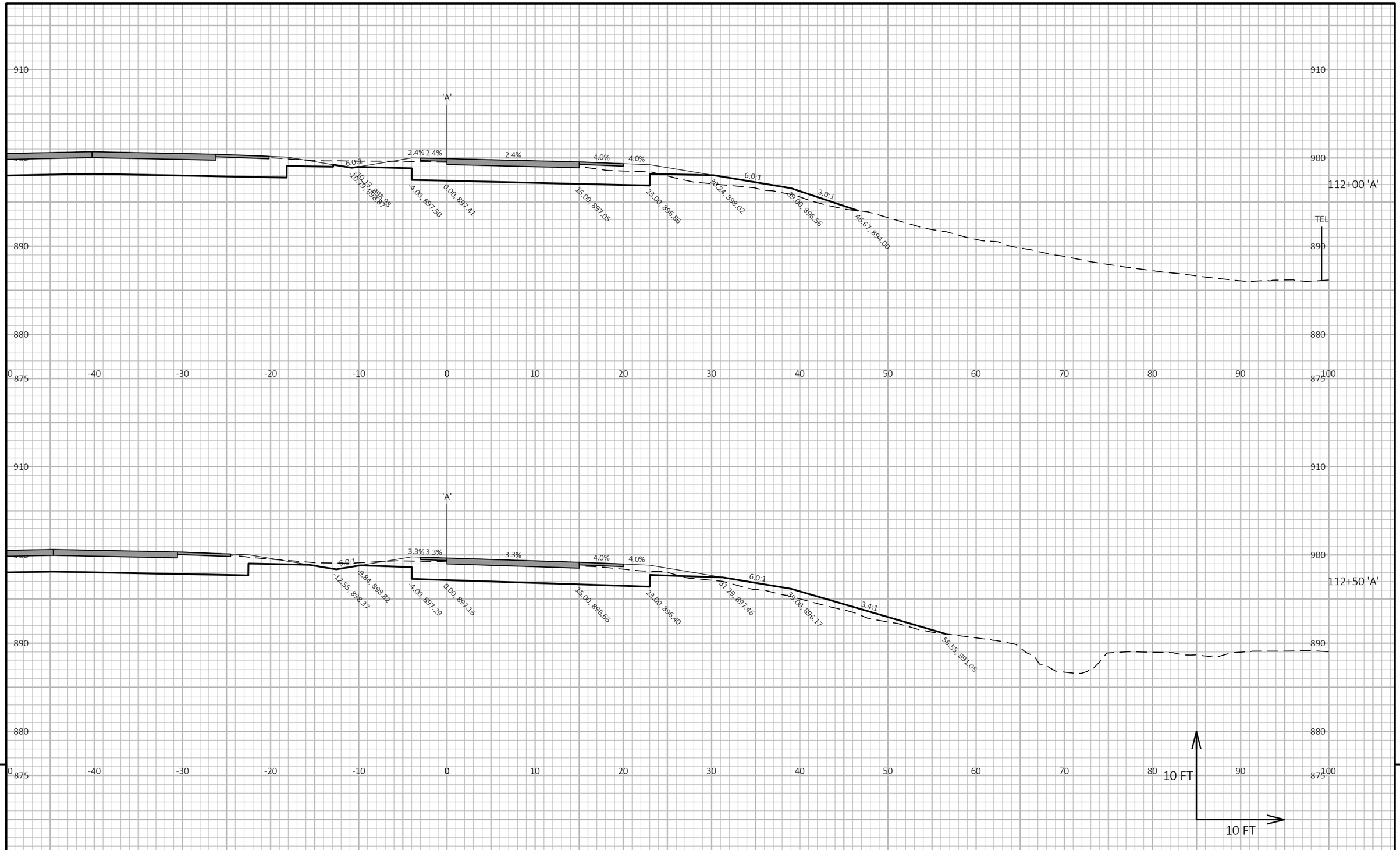
PLOT DATE : 4/17/2024 10:03 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



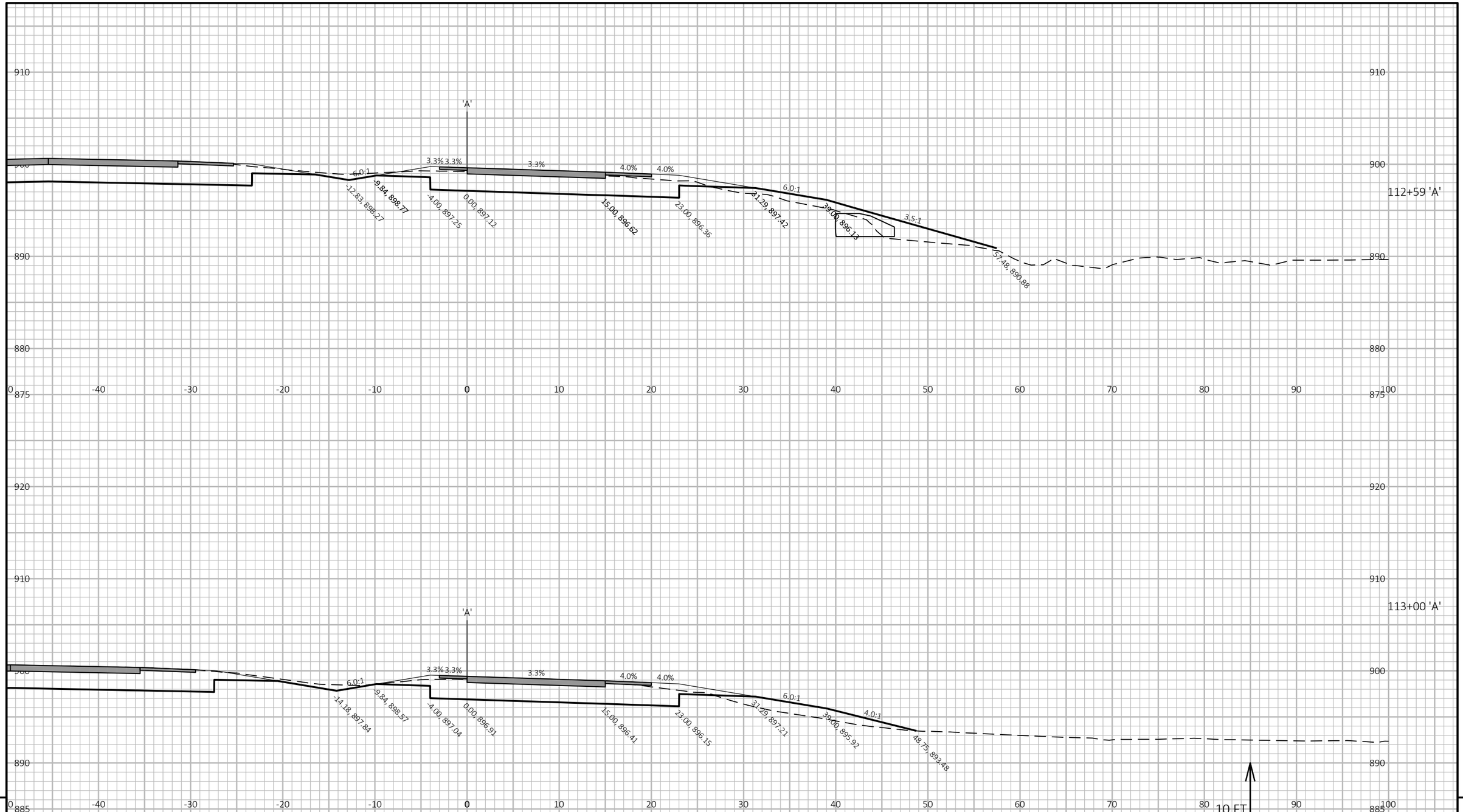
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP A	SHEET 687	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202A_XS_RAMP A.DWG
LAYOUT NAME - 04

PLOT DATE : 4/17/2024 10:03 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

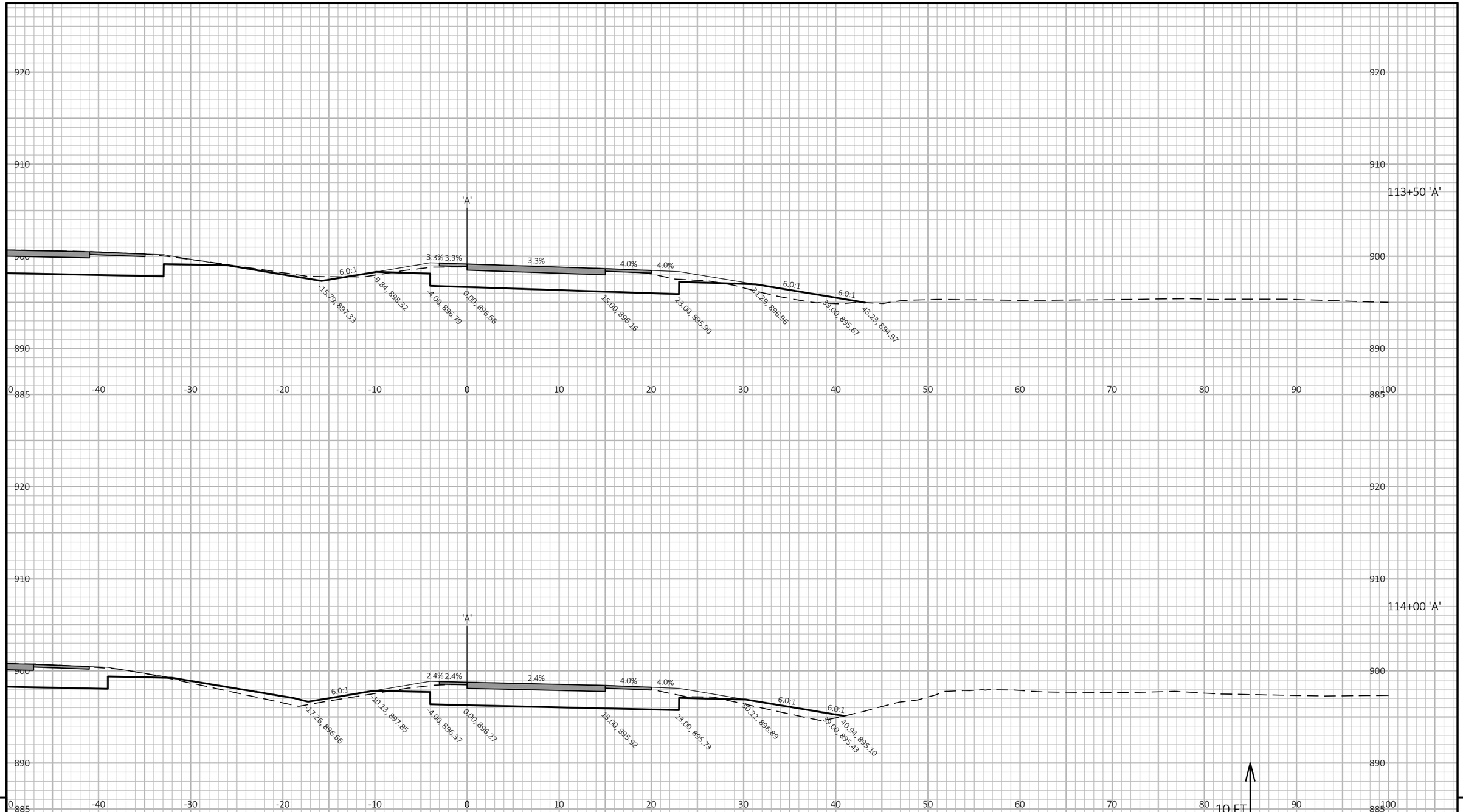


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP A	SHEET 688	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202A_XS_RAMP A.DWG
LAYOUT NAME - 05

PLOT DATE : 4/17/2024 10:03 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



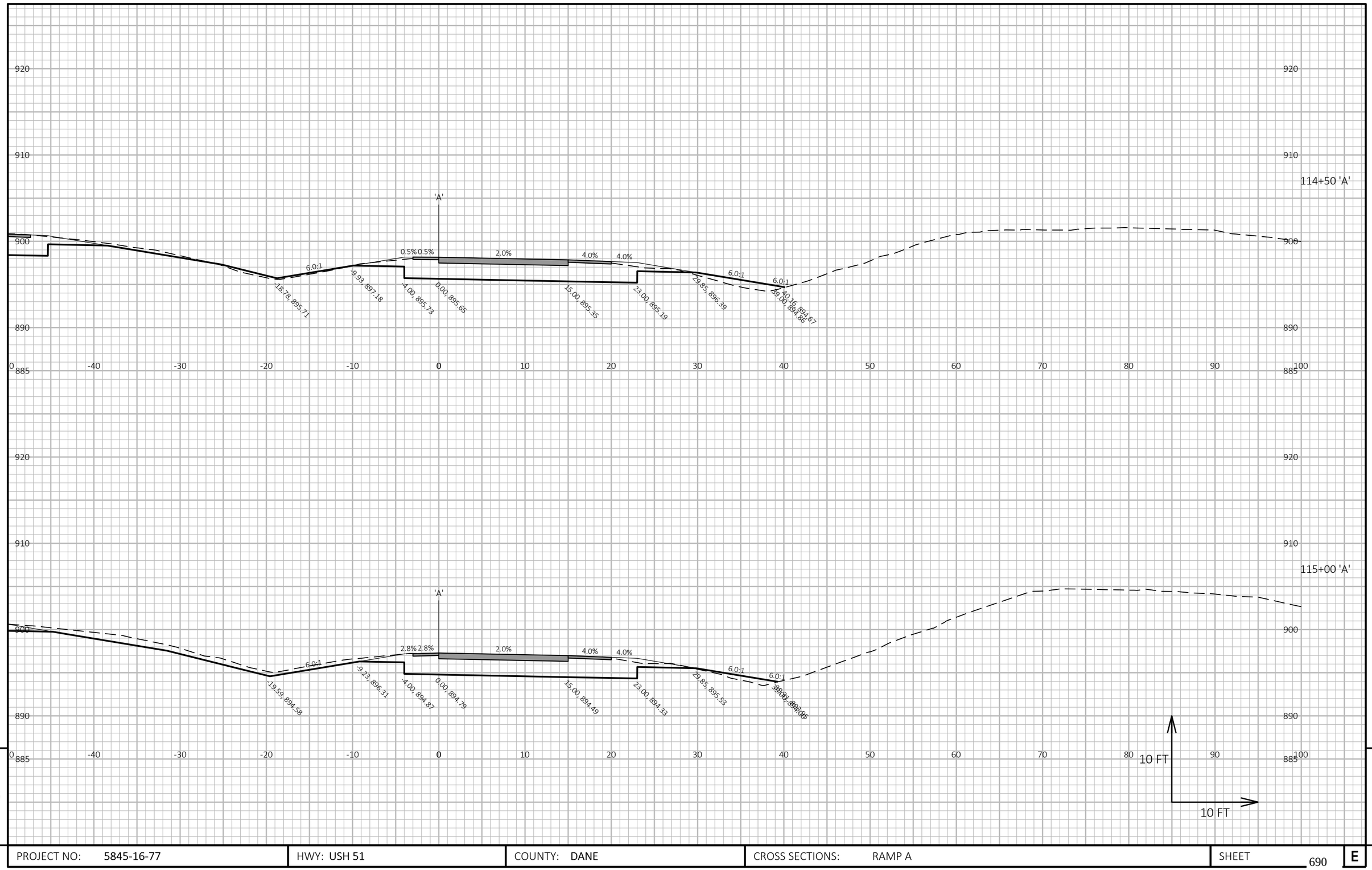
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP A	SHEET 689	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202A_XS_RAMP A.DWG
LAYOUT NAME - 06

PLOT DATE : 4/17/2024 10:03 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

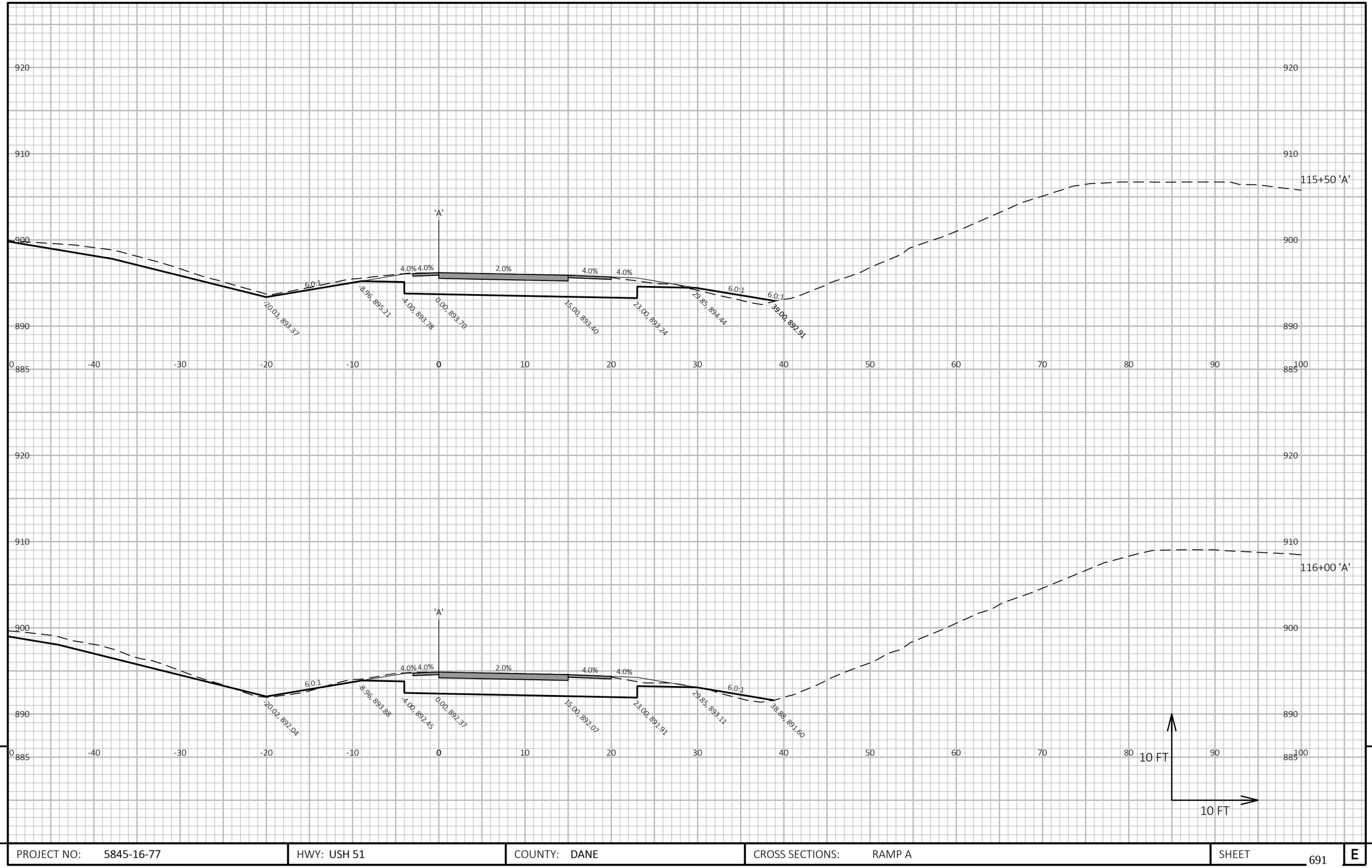


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP A	SHEET 690 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202A_XS_RAMP A.DWG
LAYOUT NAME - 07

PLOT DATE : 4/17/2024 10:04 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

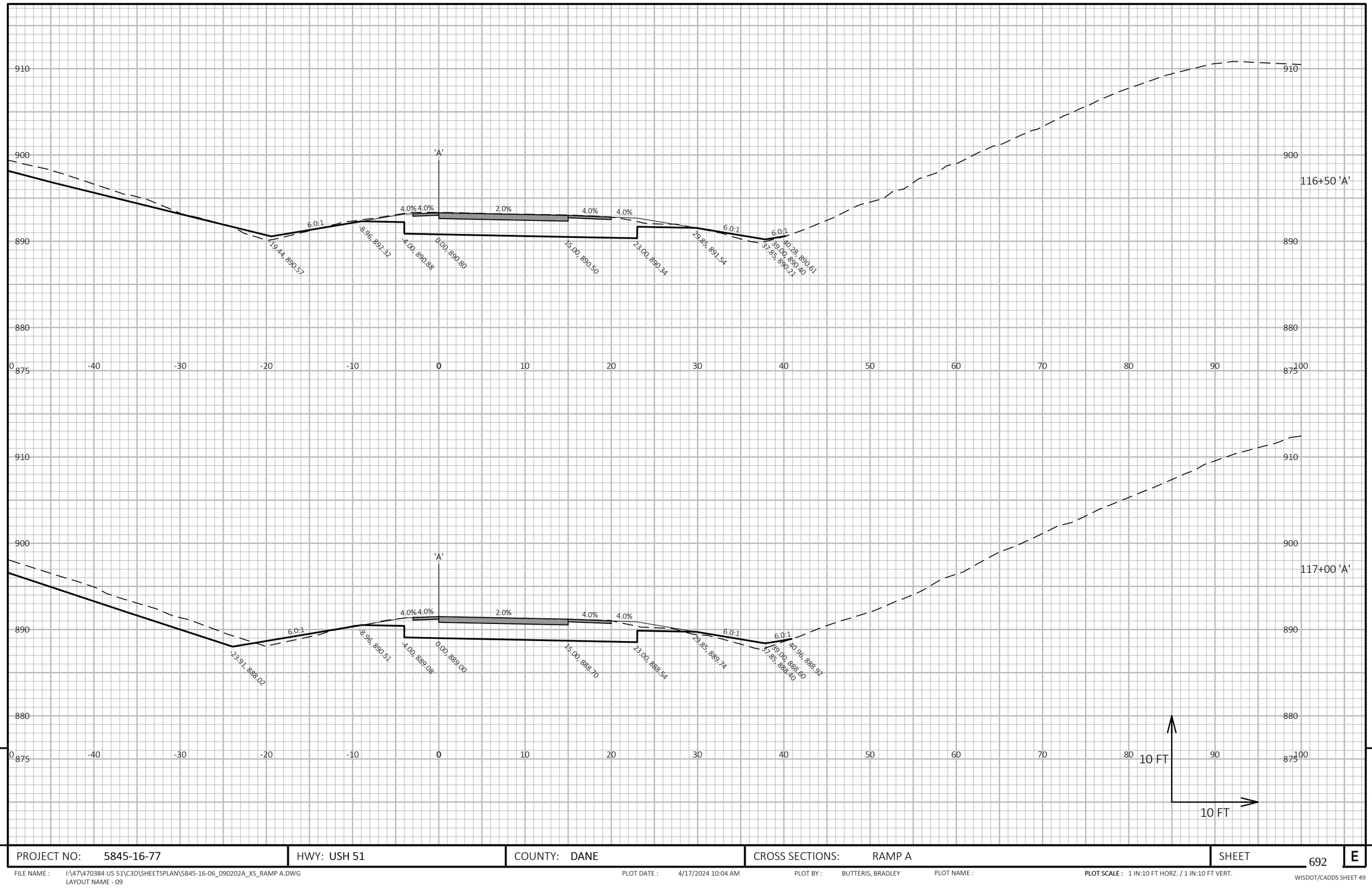
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP A	SHEET 691	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202A_XS_RAMP A.DWG
LAYOUT NAME - 08

PLOT DATE : 4/17/2024 10:04 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

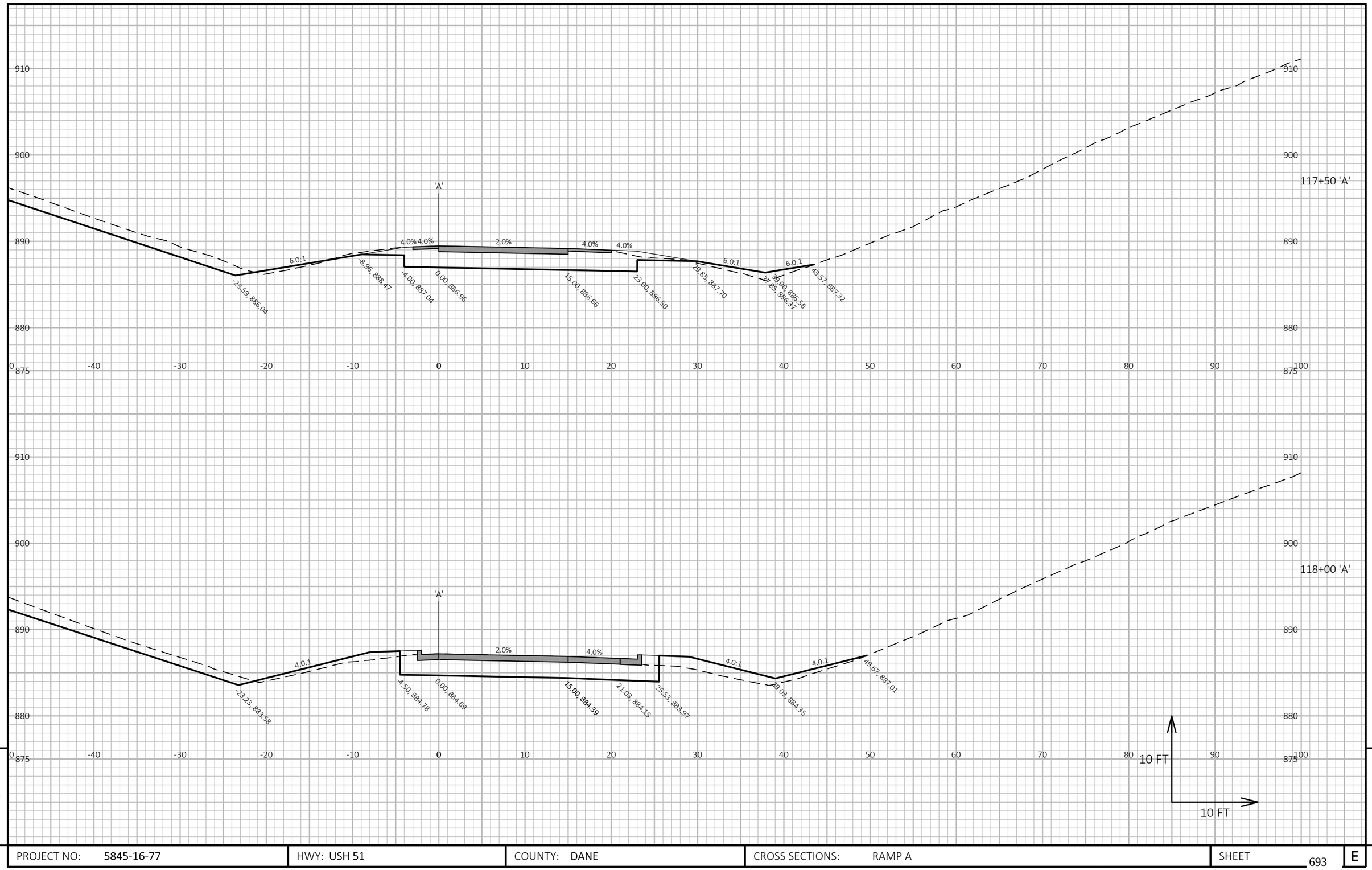
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP A	SHEET 692	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202A_XS_RAMP A.DWG
LAYOUT NAME - 09

PLOT DATE : 4/17/2024 10:04 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

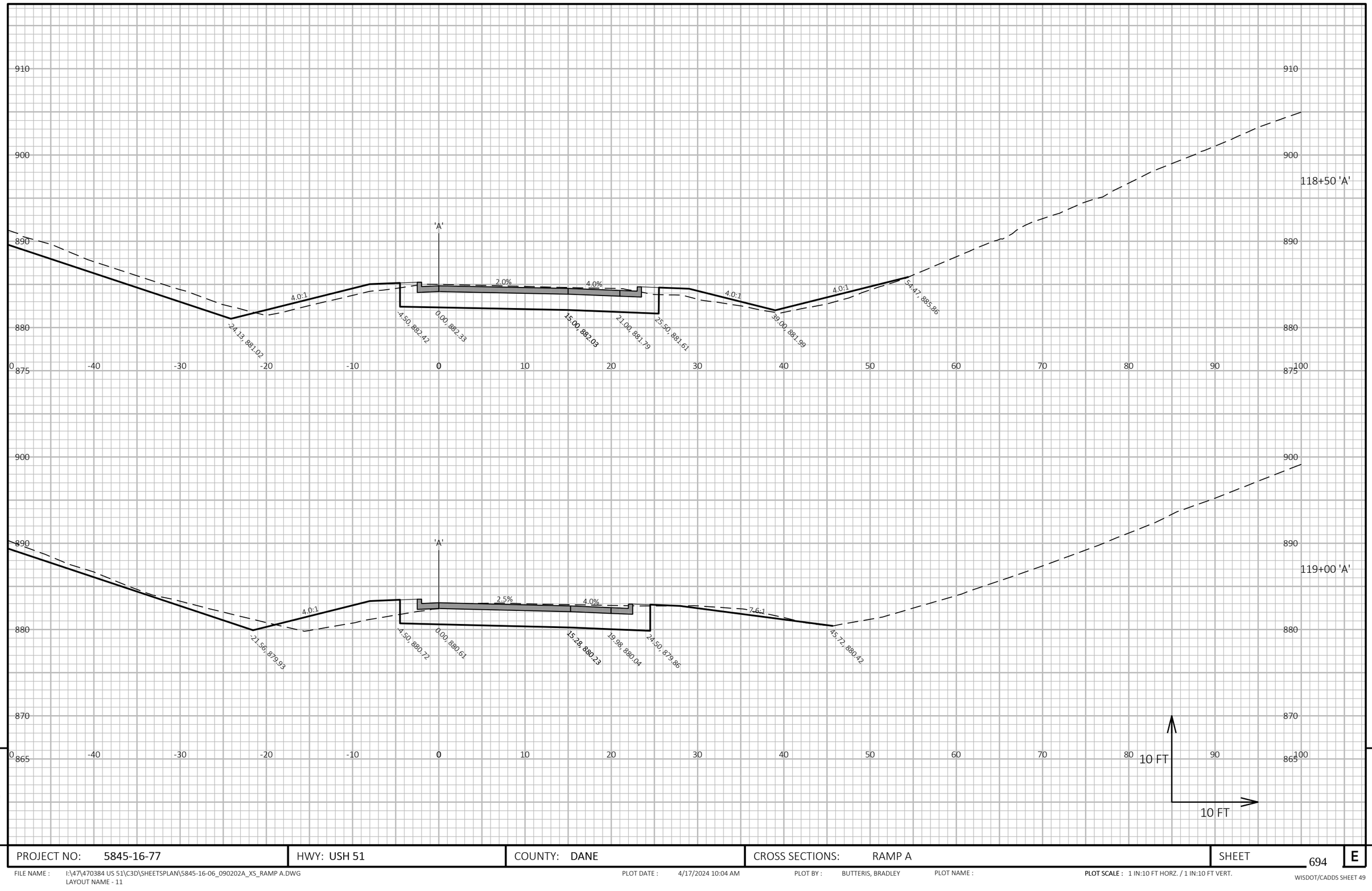


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP A	SHEET 693	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202A_XS_RAMP A.DWG
LAYOUT NAME - 10

PLOT DATE : 4/17/2024 10:04 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP A	SHEET 694	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202A_XS_RAMP A.DWG
LAYOUT NAME - 11

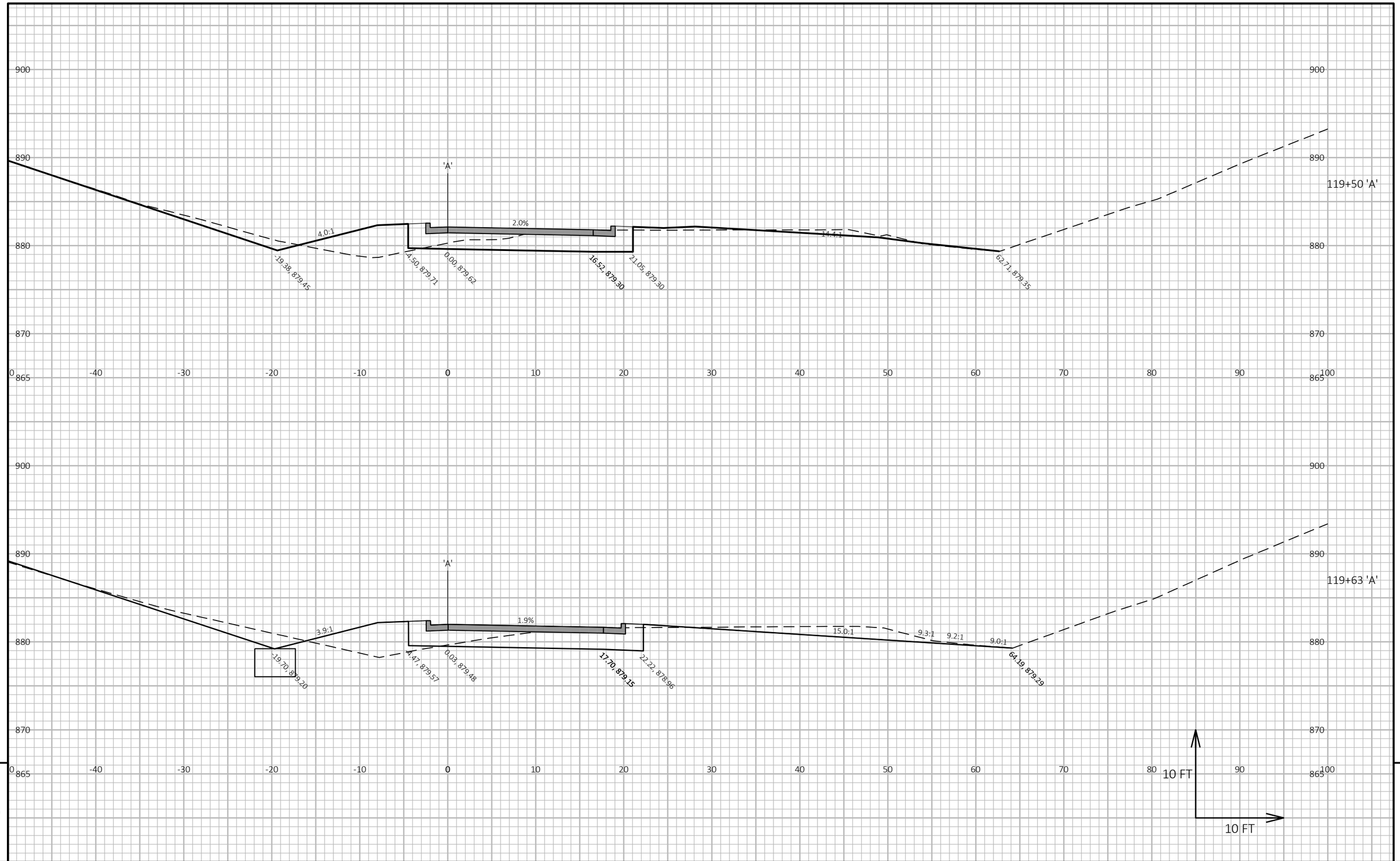
PLOT DATE : 4/17/2024 10:04 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

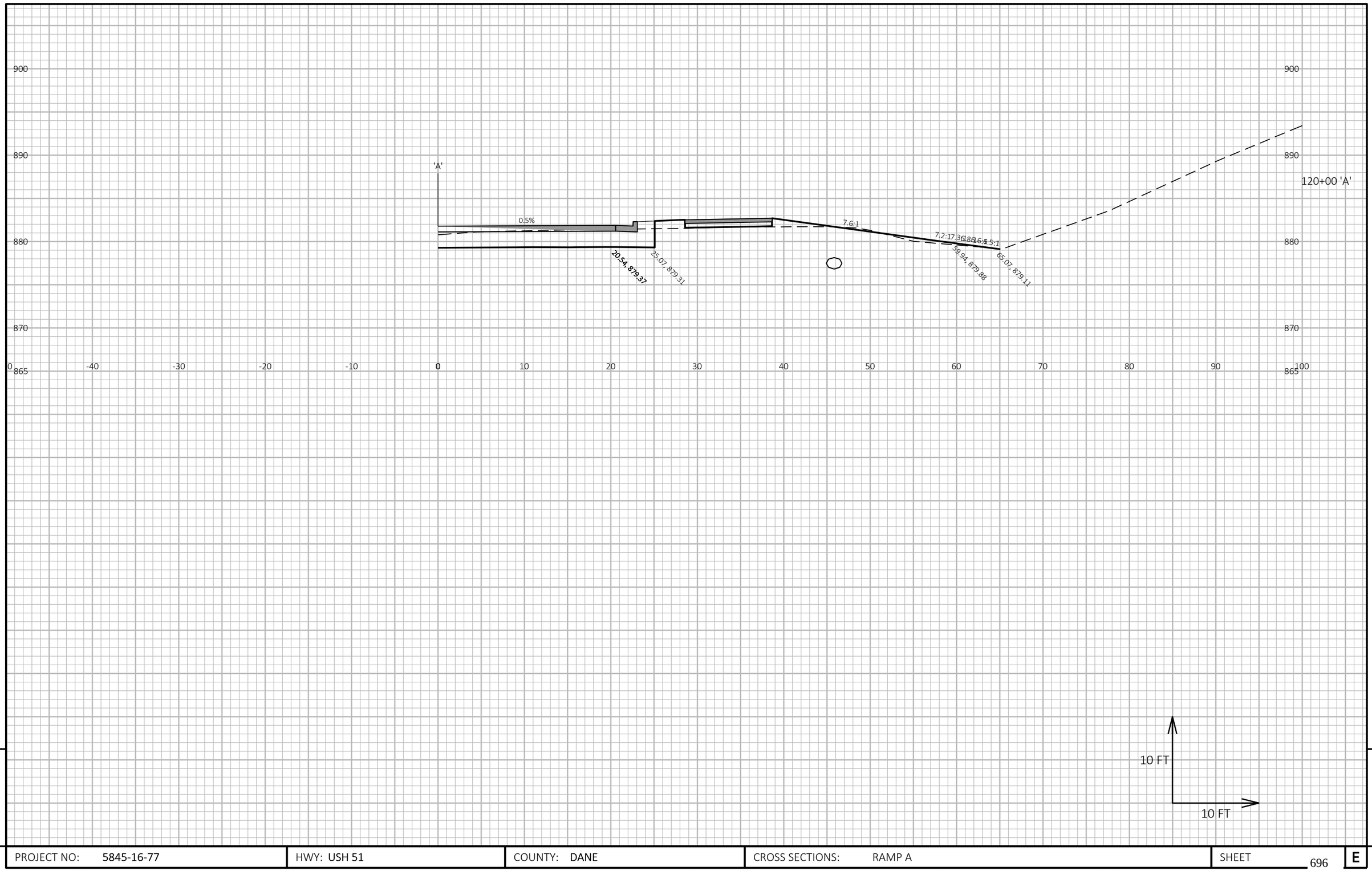


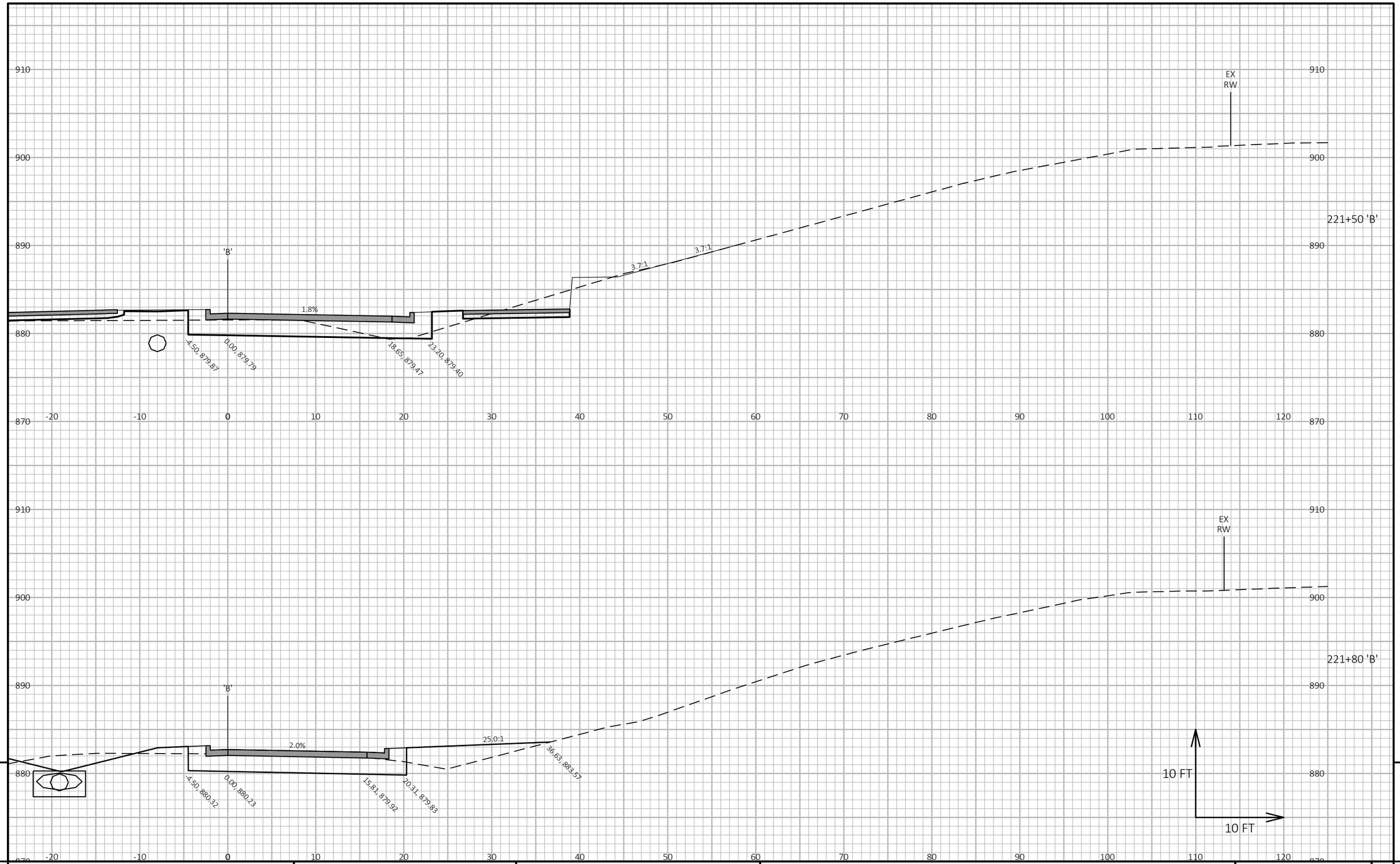
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP A	SHEET 695	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202A_XS_RAMP A.DWG
LAYOUT NAME - 12

PLOT DATE : 4/17/2024 10:04 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49


900
890
880
870
865
0
-40
-30
-20
-10
0
10
20
30
40
50
60
70
80
90
100
'A'
120+00 'A'
0.5%
7.6:1
7.2:1
7.6:1
7.6:1
7.6



9

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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 697	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 01

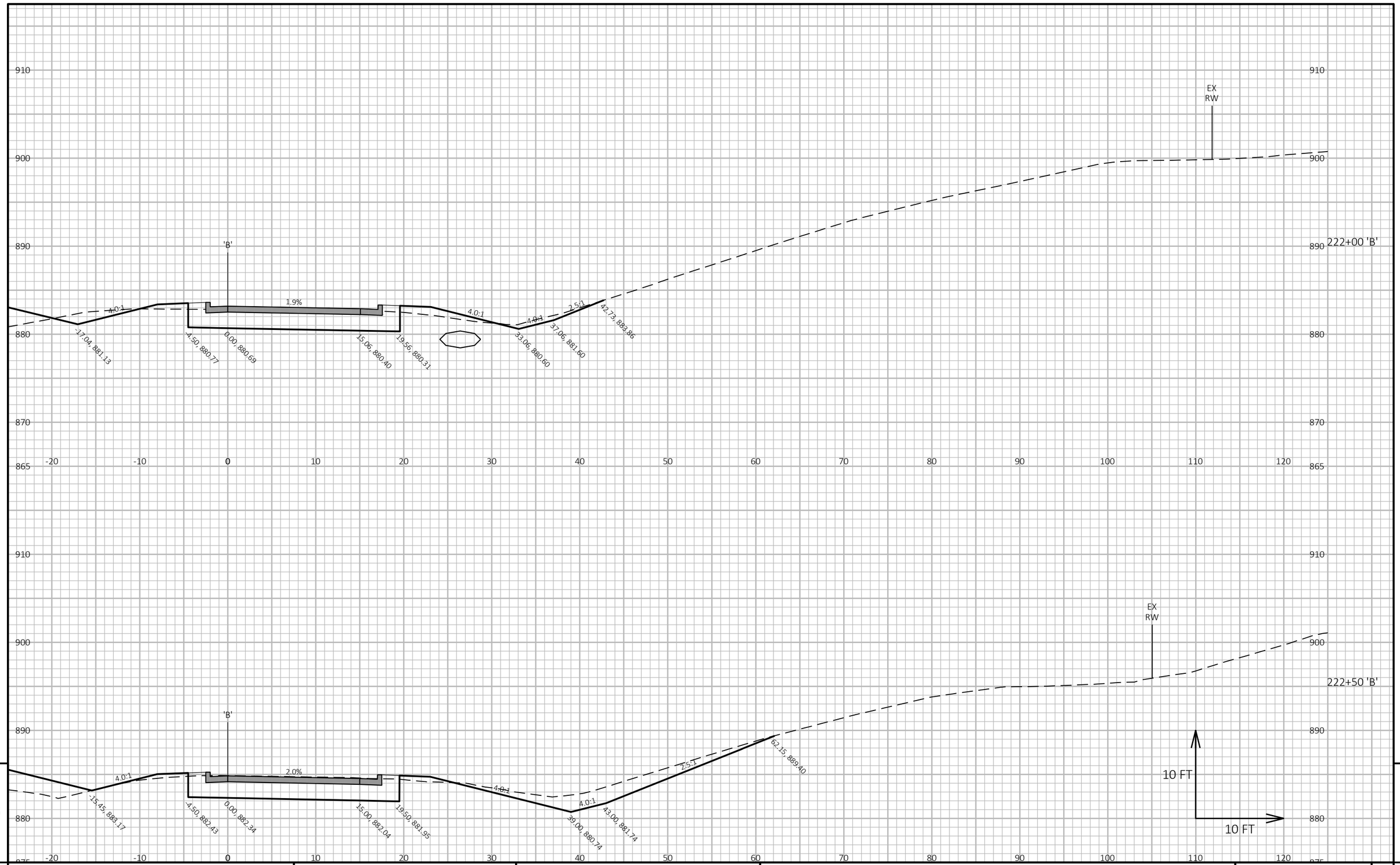
PLOT DATE : 9/24/2024 3:30 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

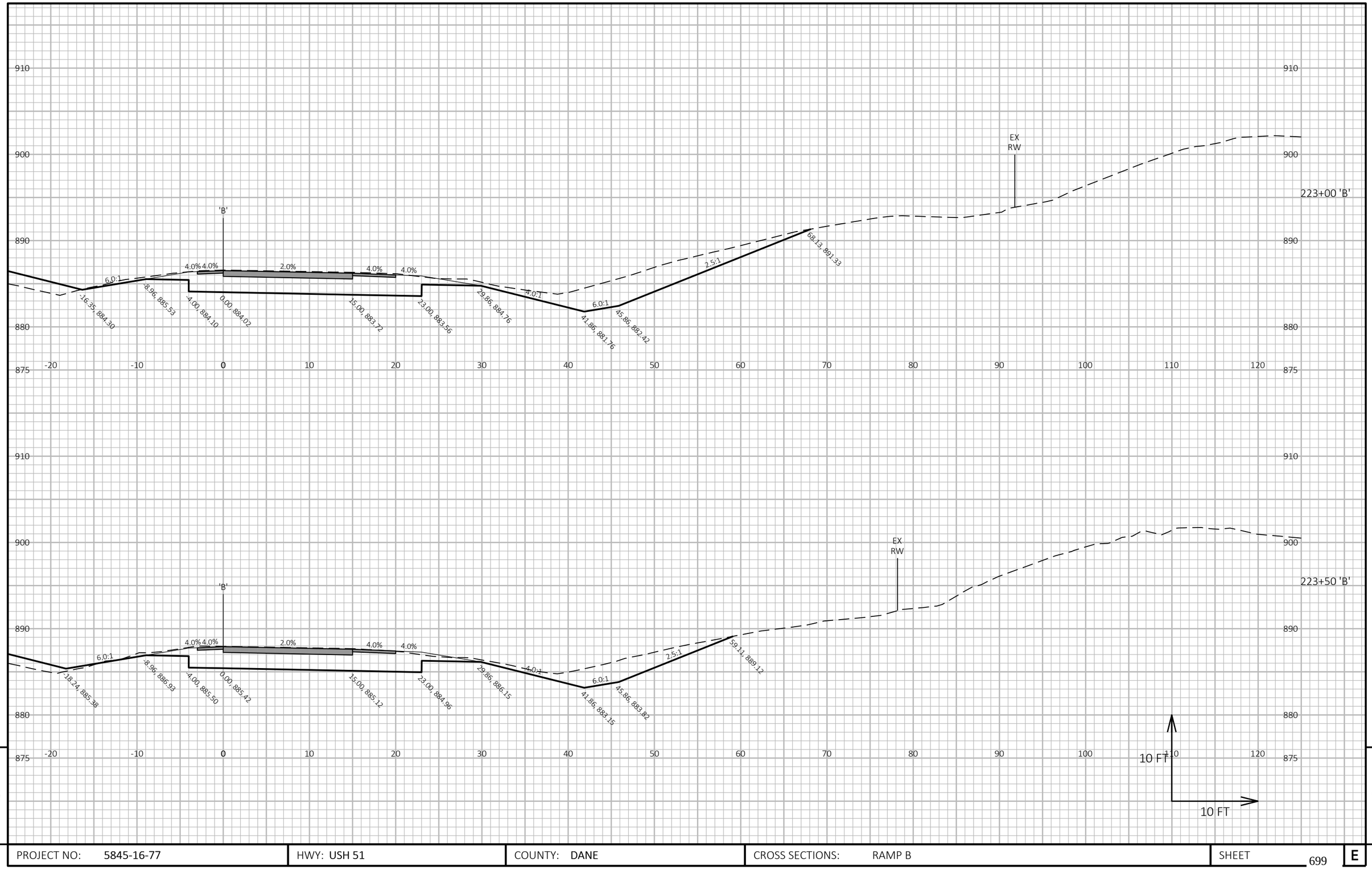


9 9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 698	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2024 3:30 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



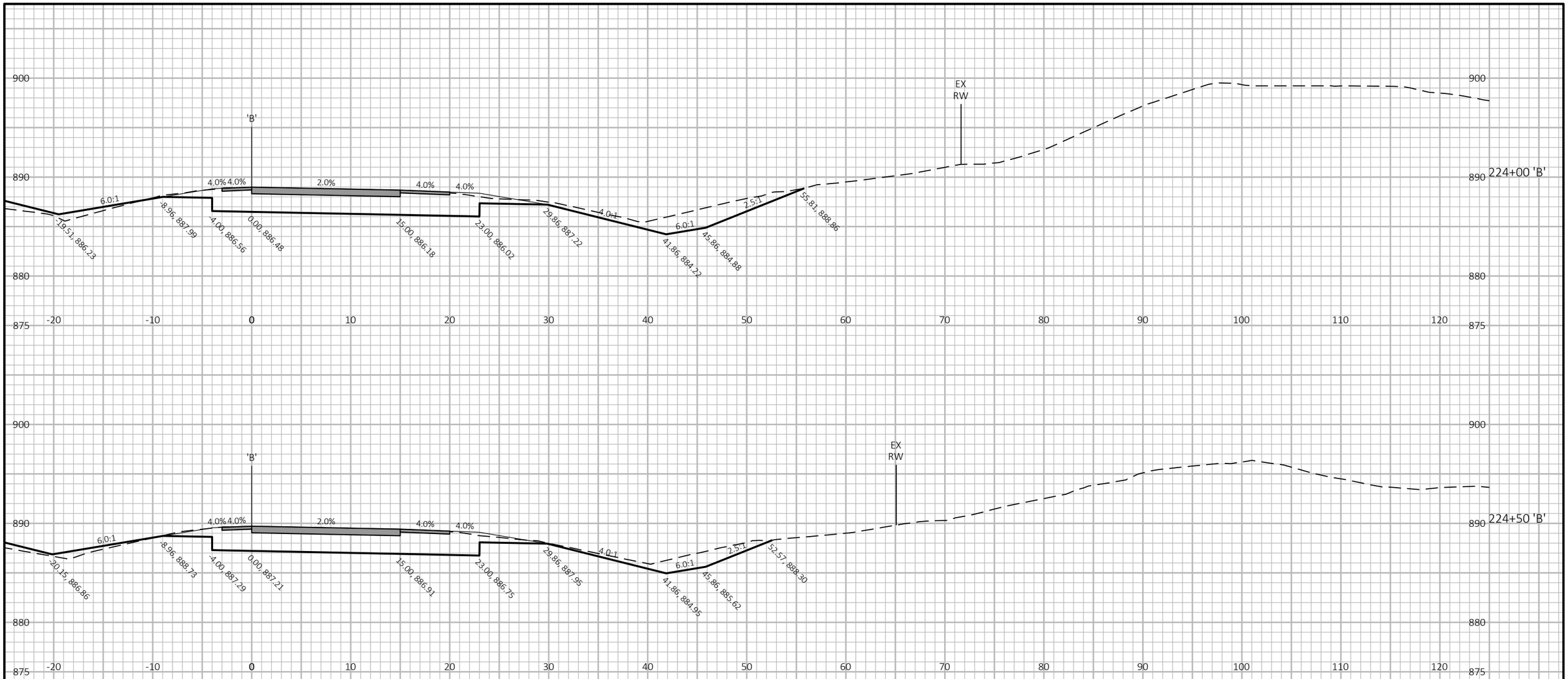
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 699	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2024 3:30 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

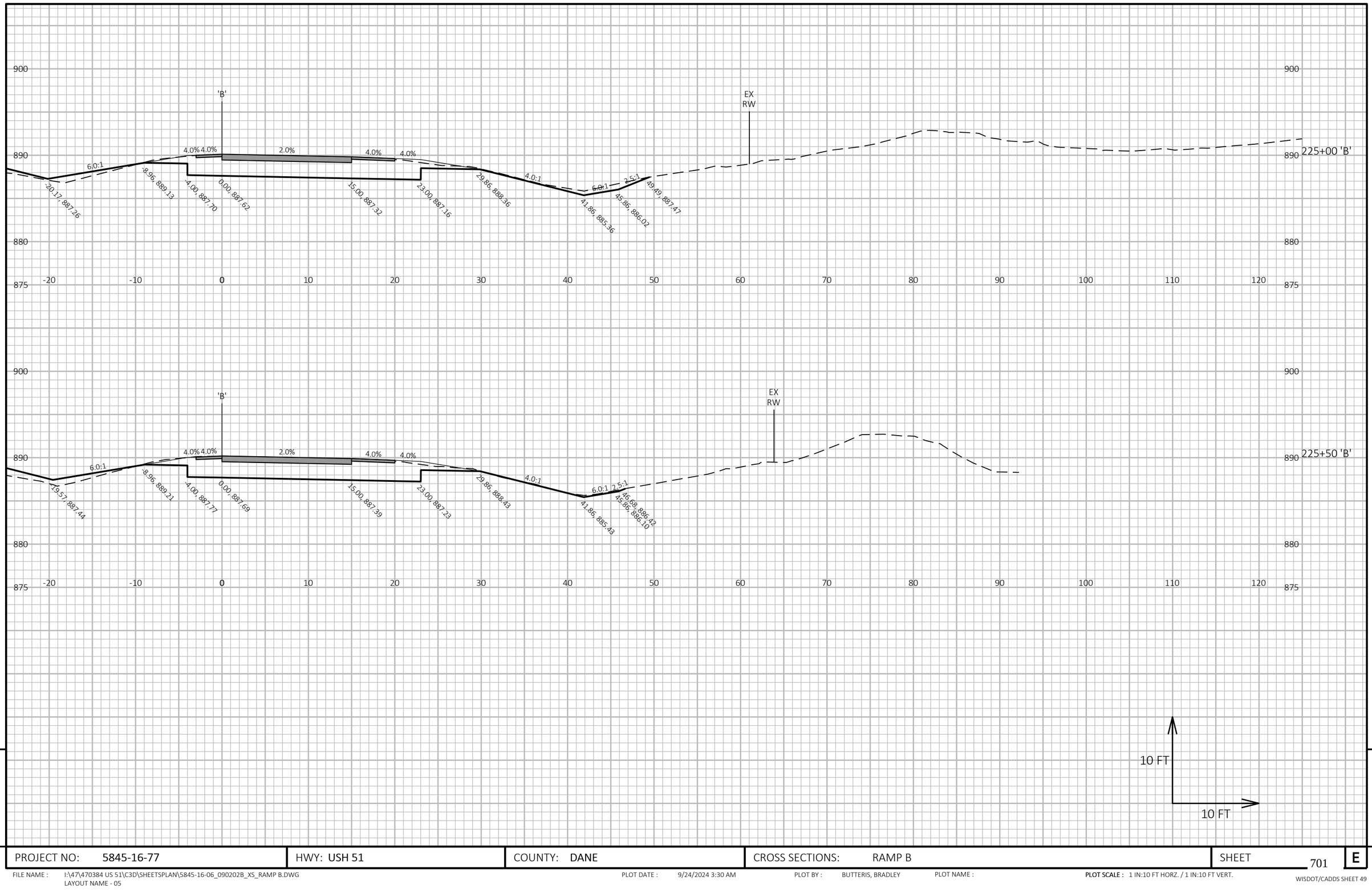


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 700	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2024 3:30 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 701	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2024 3:30 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 702	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 06

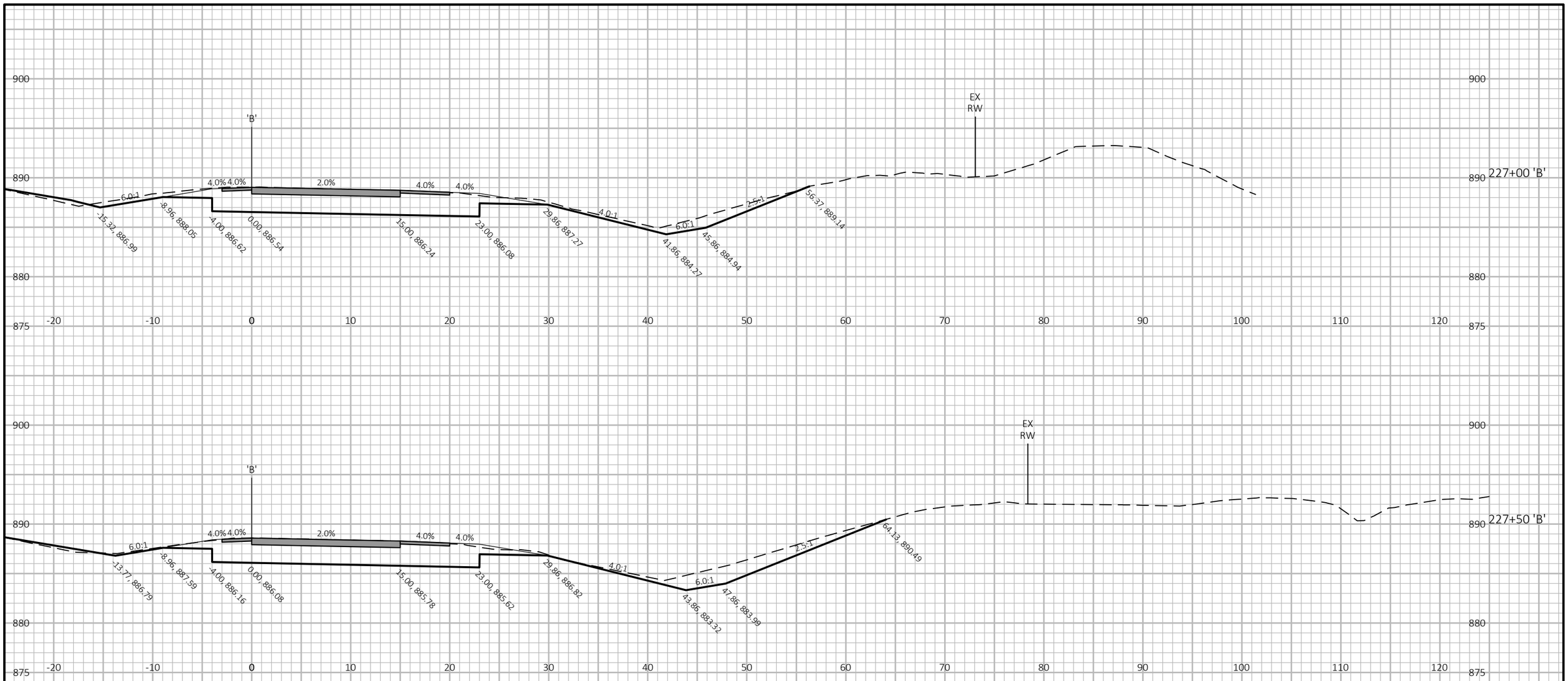
PLOT DATE : 9/24/2024 3:30 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



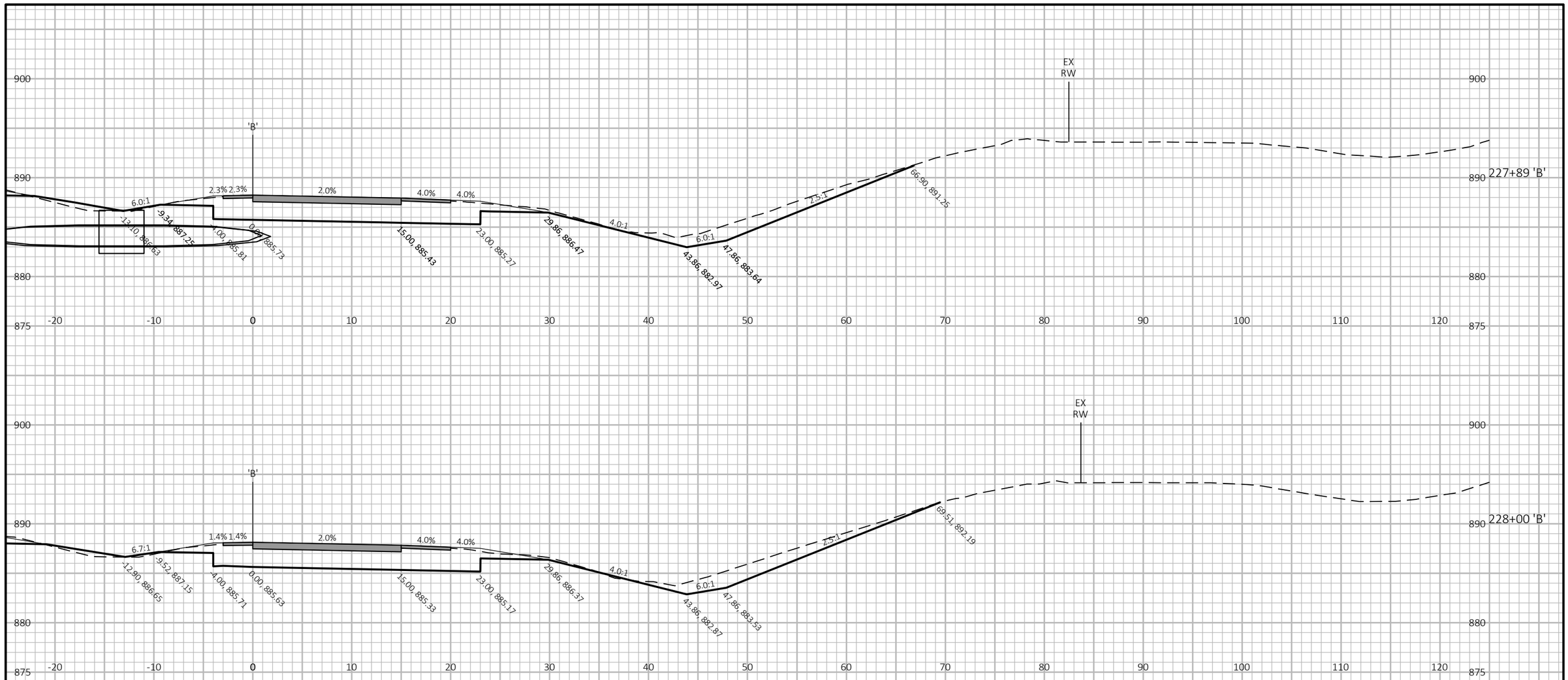
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FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 07

PLOT DATE : 9/24/2024 3:30 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



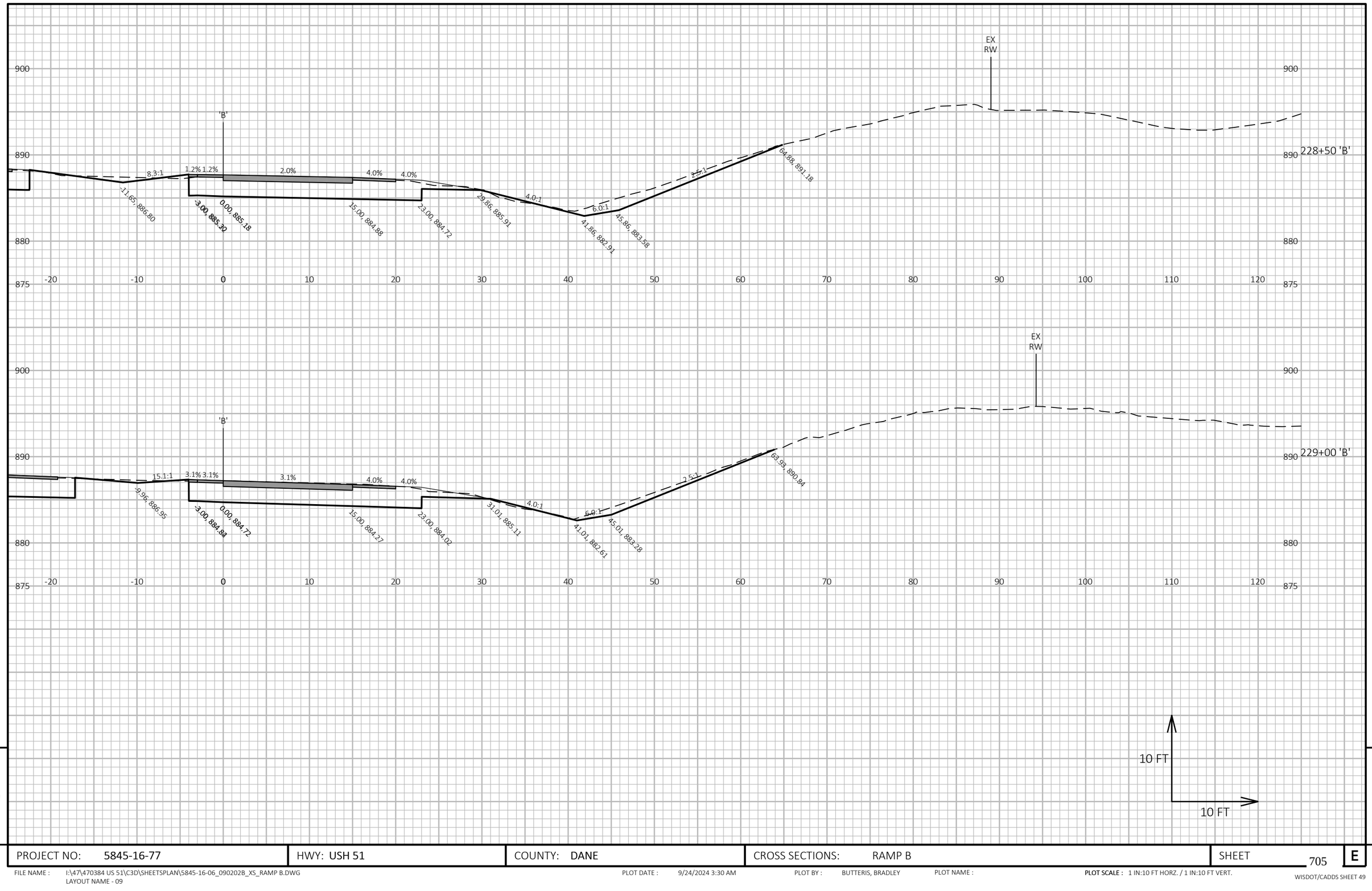
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 704	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2024 3:30 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 705	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 09

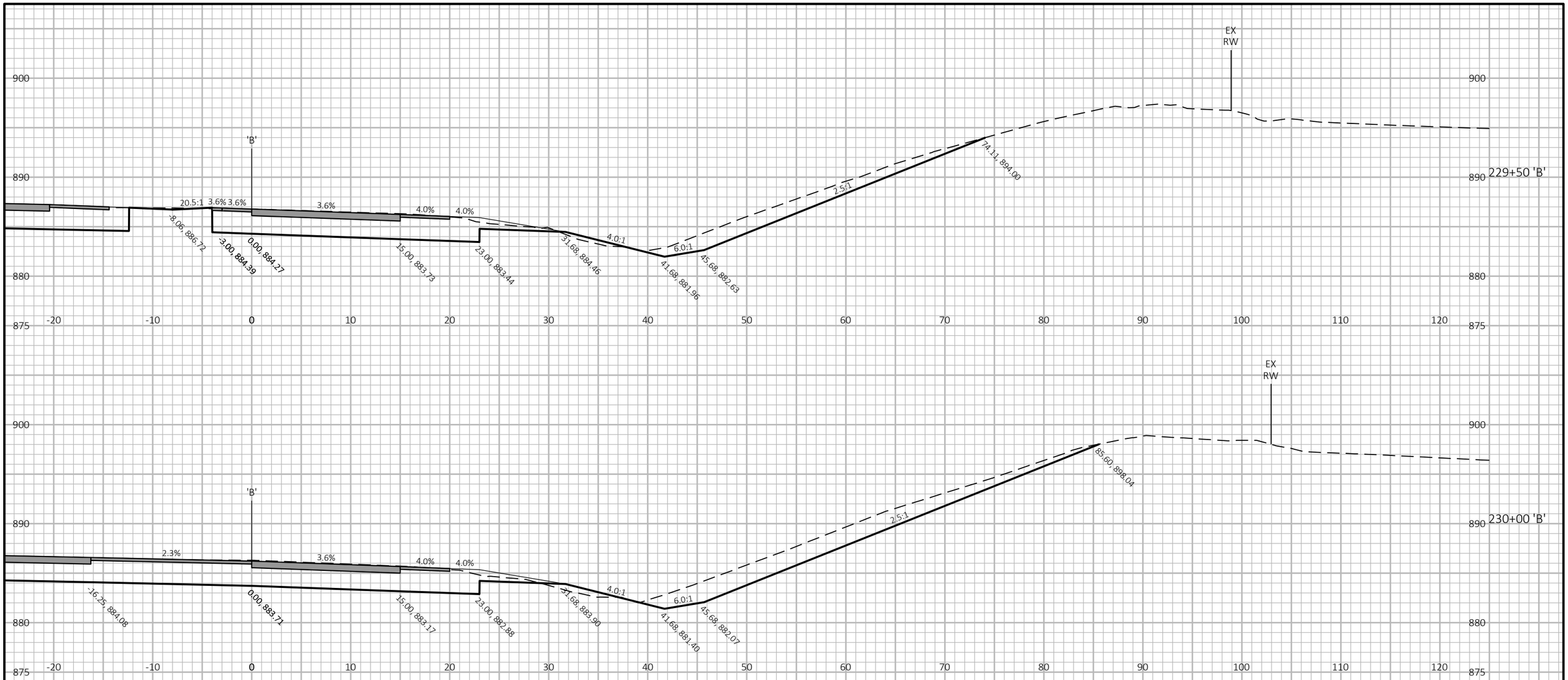
PLOT DATE : 9/24/2024 3:30 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

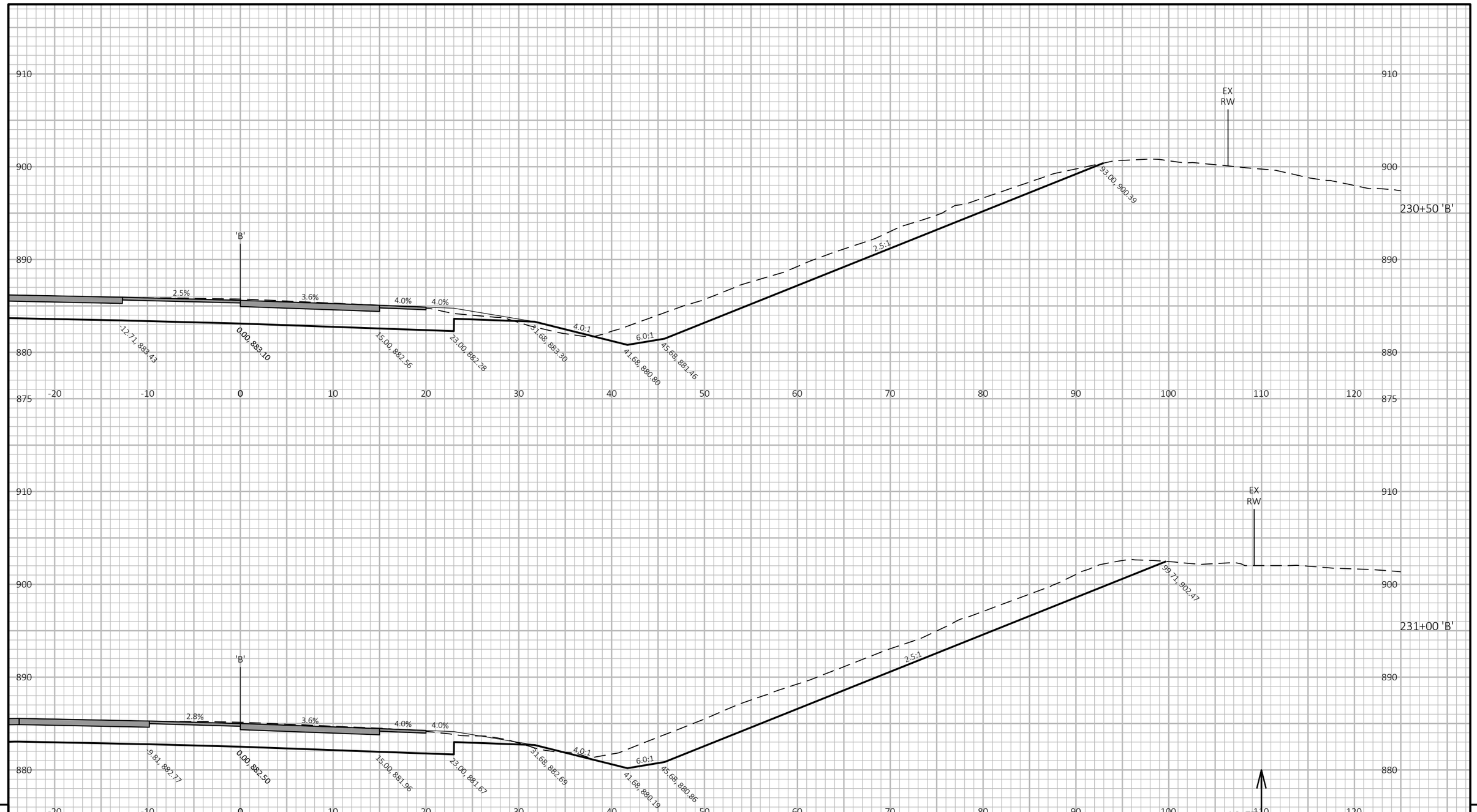


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 706	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 10

PLOT DATE : 9/24/2024 3:30 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 707	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 11

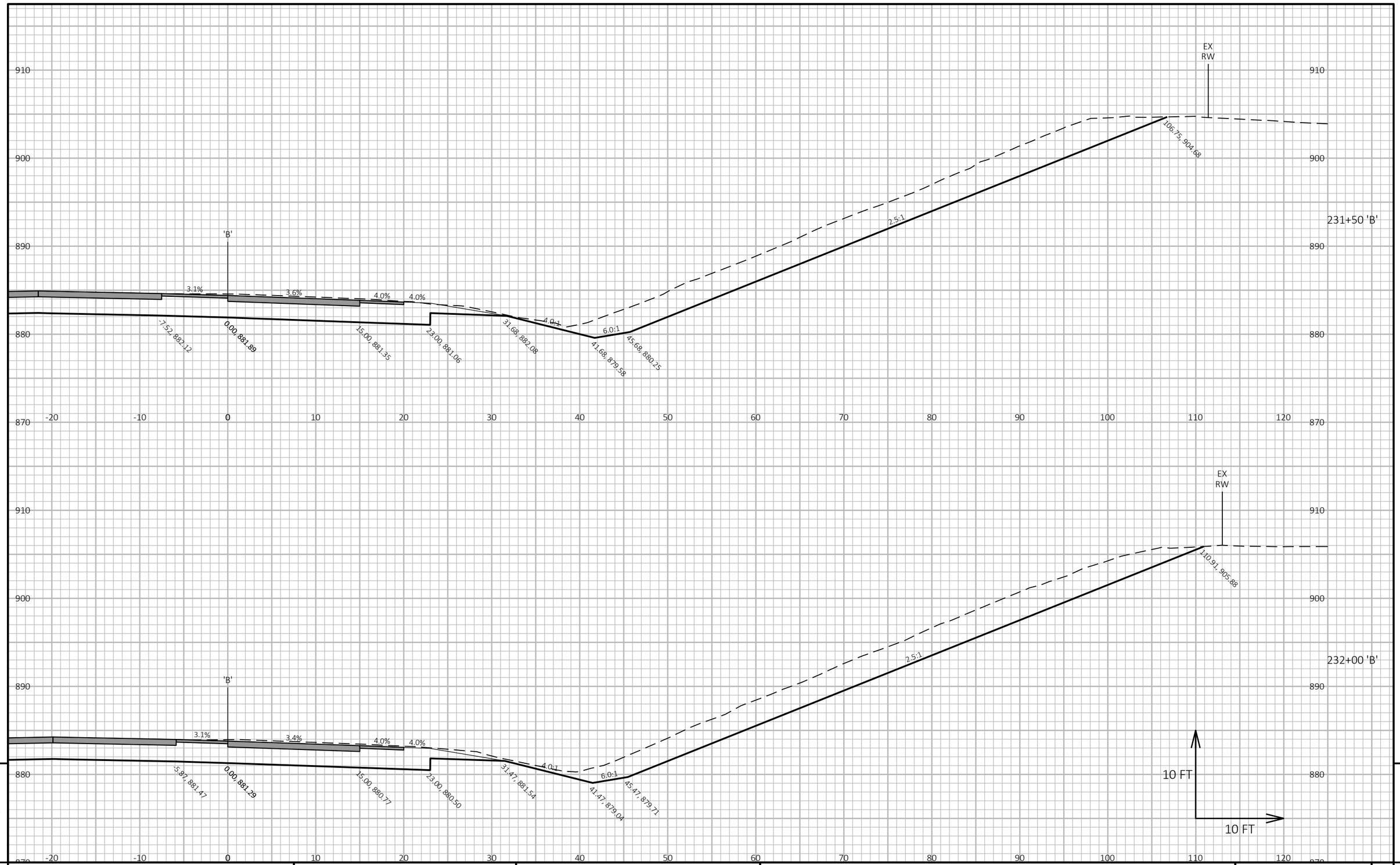
PLOT DATE : 9/24/2024 3:31 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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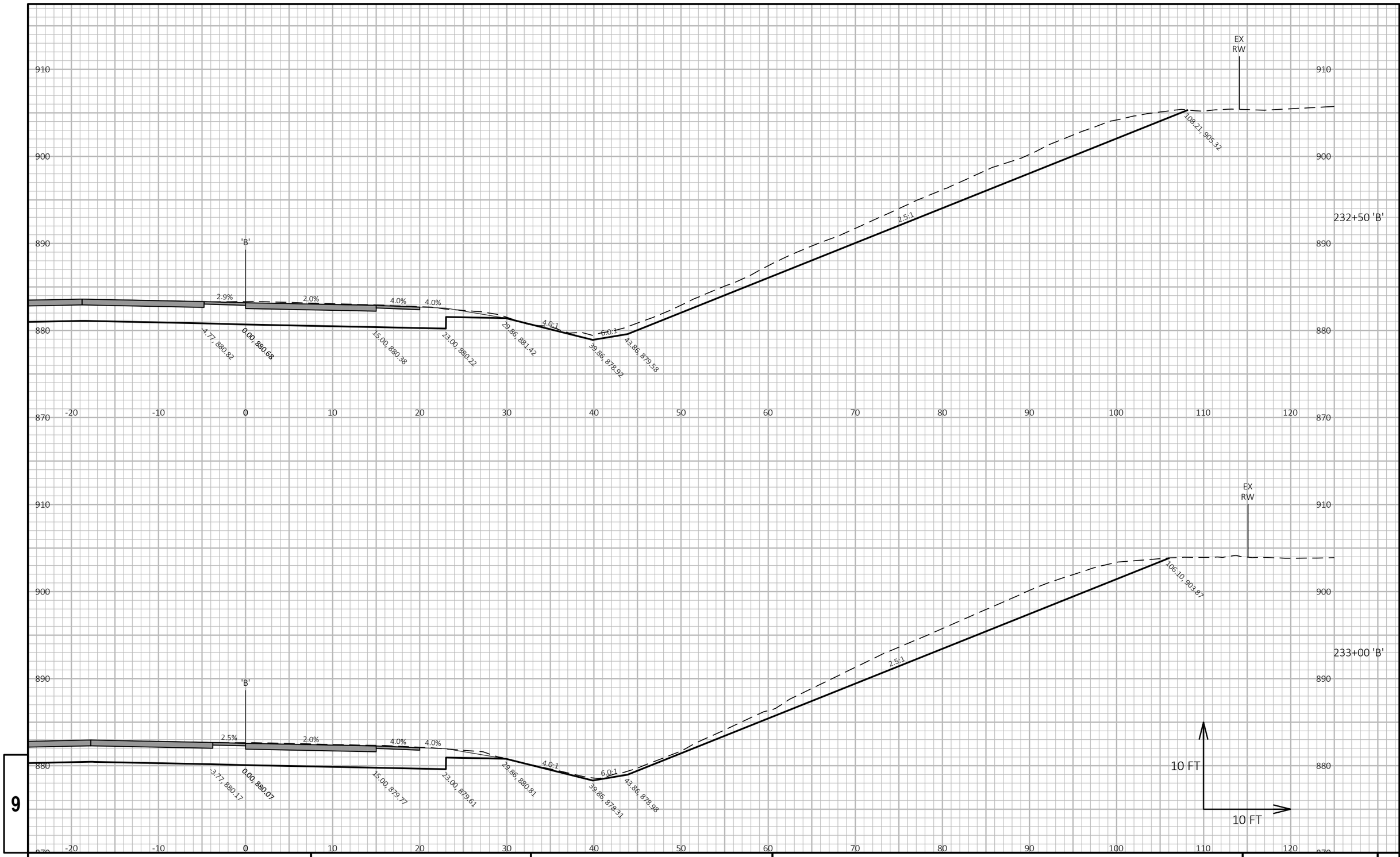
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 708	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 12

PLOT DATE : 9/24/2024 3:31 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

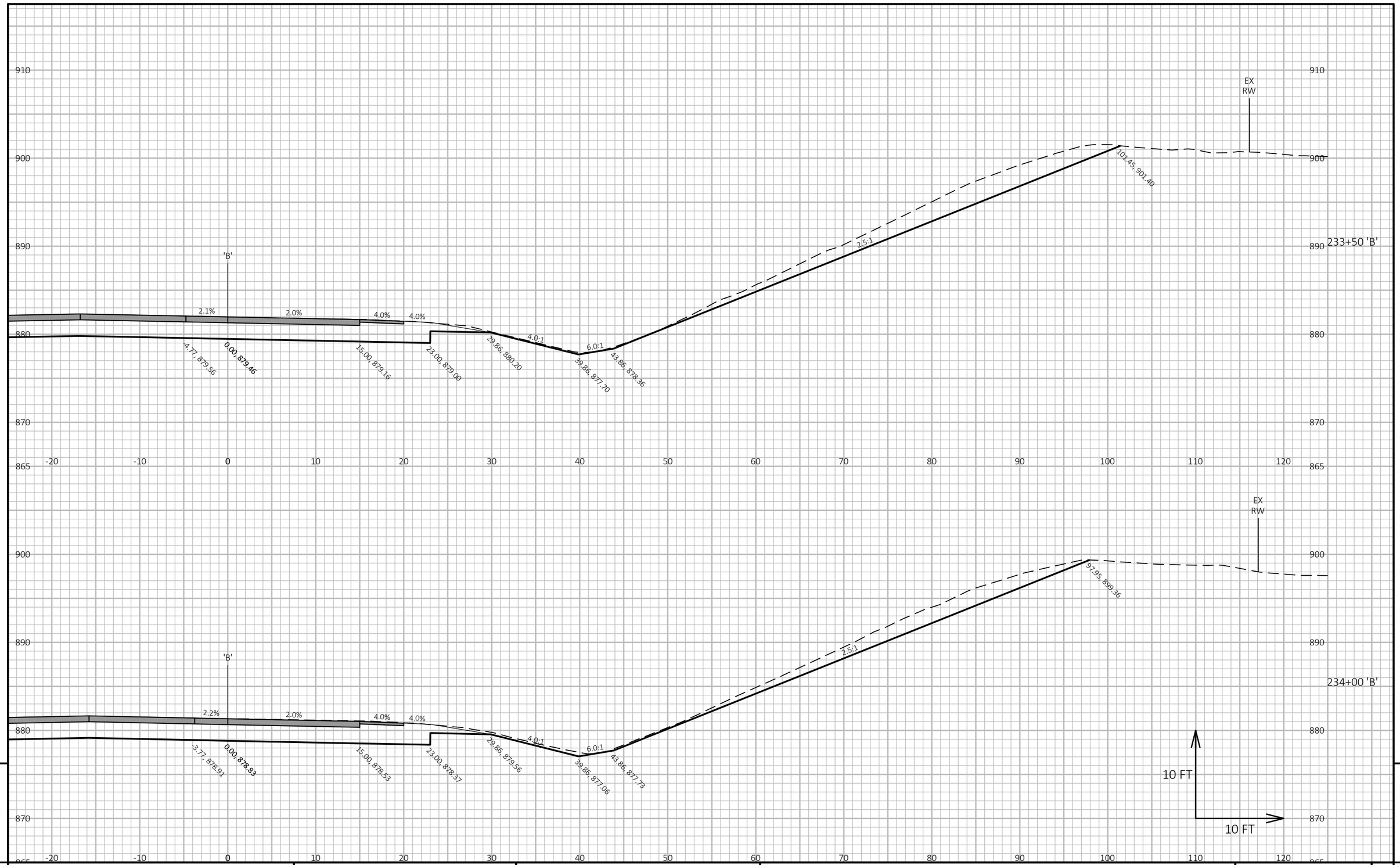


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 709	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 13

PLOT DATE : 9/24/2024 3:31 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 710	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 14

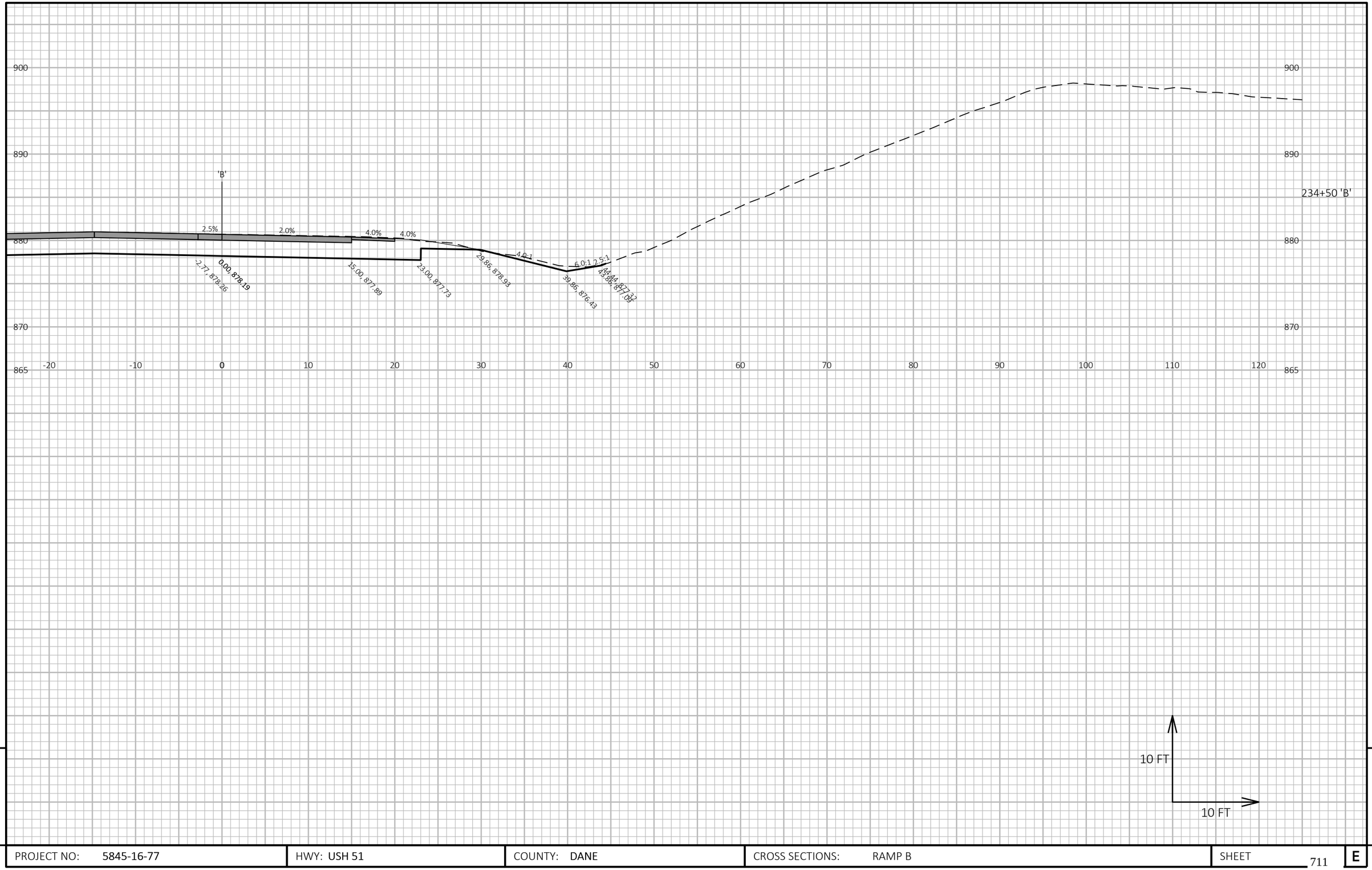
PLOT DATE : 9/24/2024 3:31 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP B	SHEET 711	E

9

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202B_XS_RAMP B.DWG
LAYOUT NAME - 15

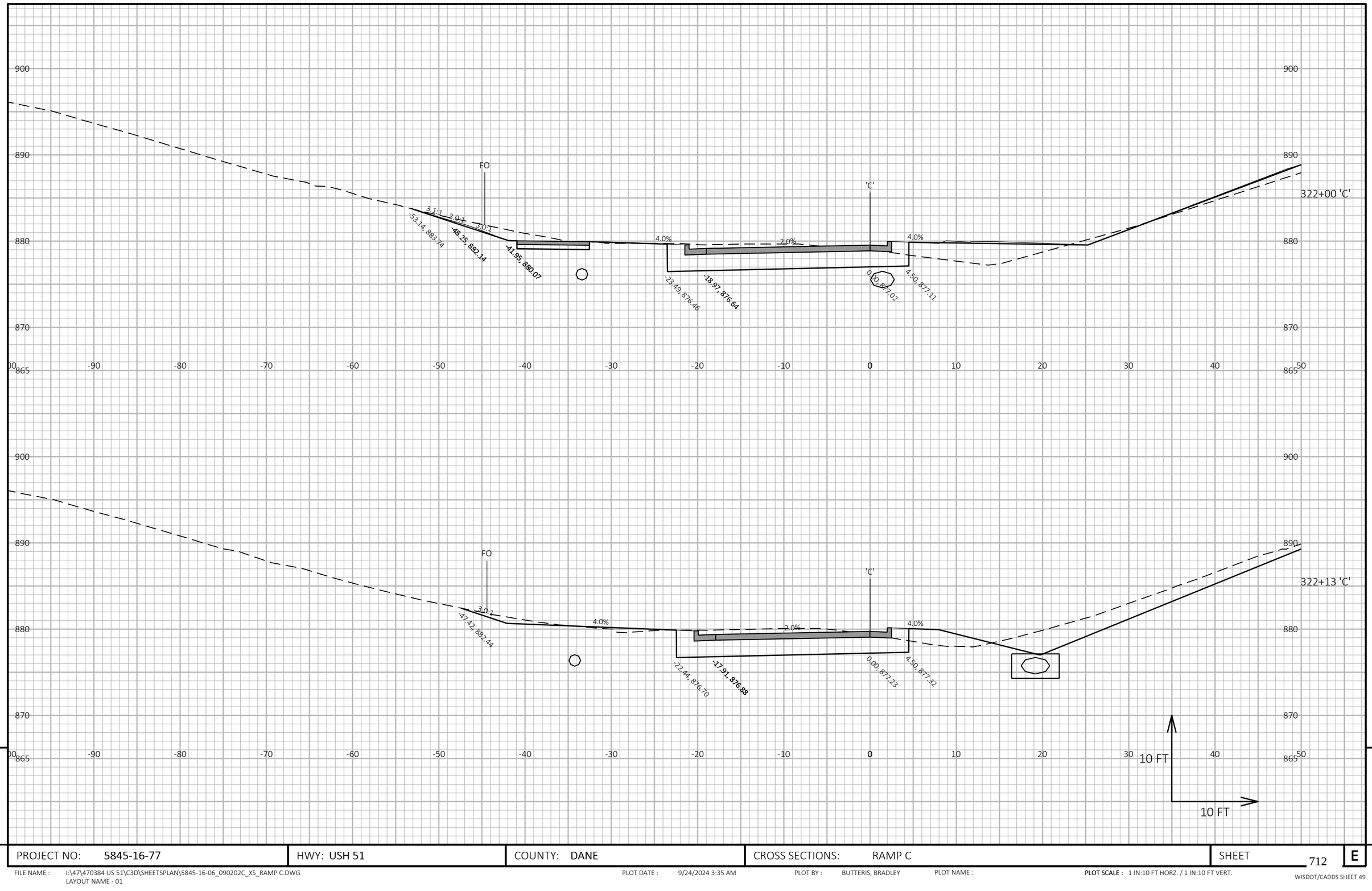
PLOT DATE : 9/24/2024 3:31 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



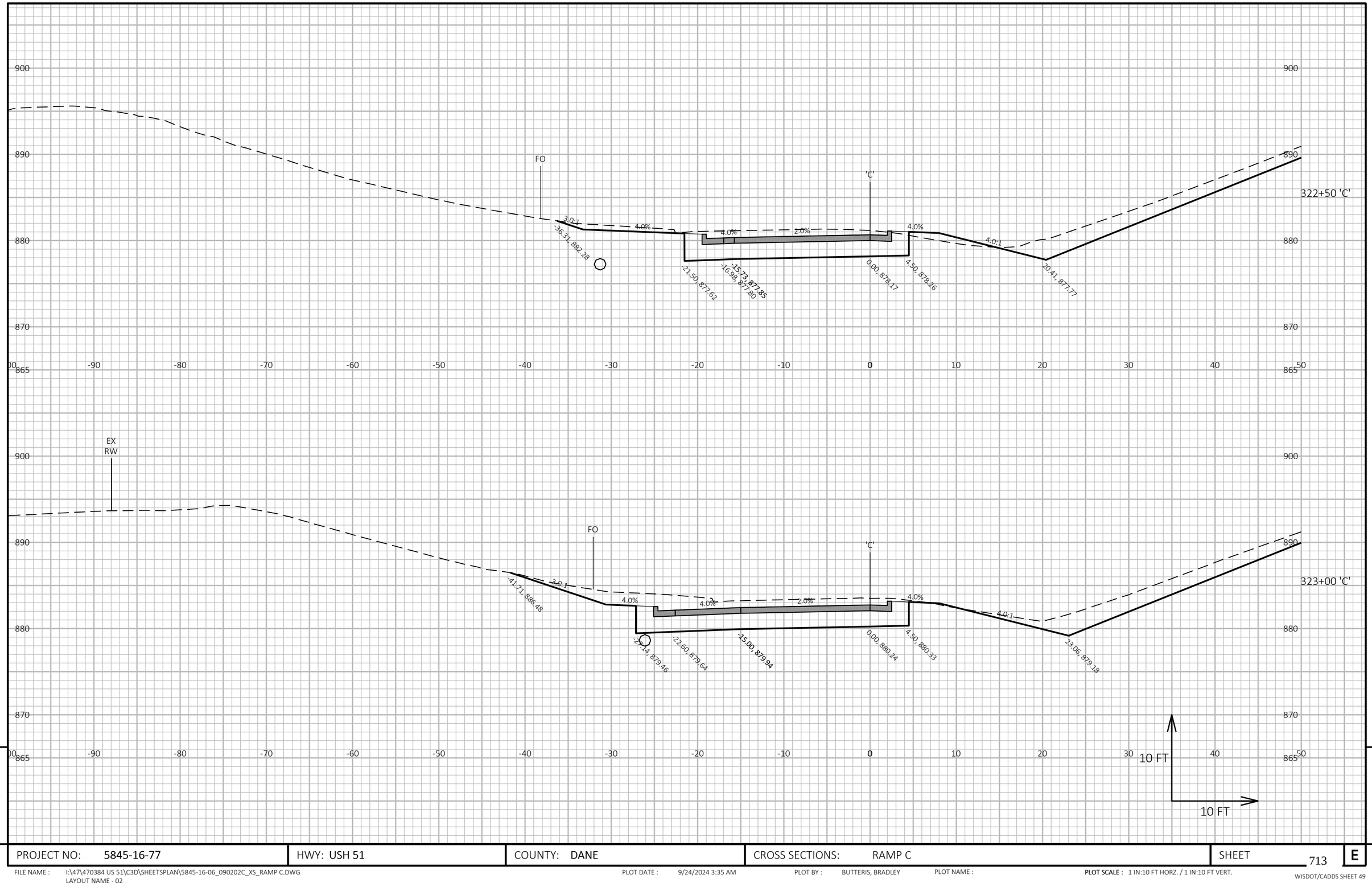
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP C	SHEET 712	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2024 3:35 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP C	SHEET 713	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2024 3:35 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



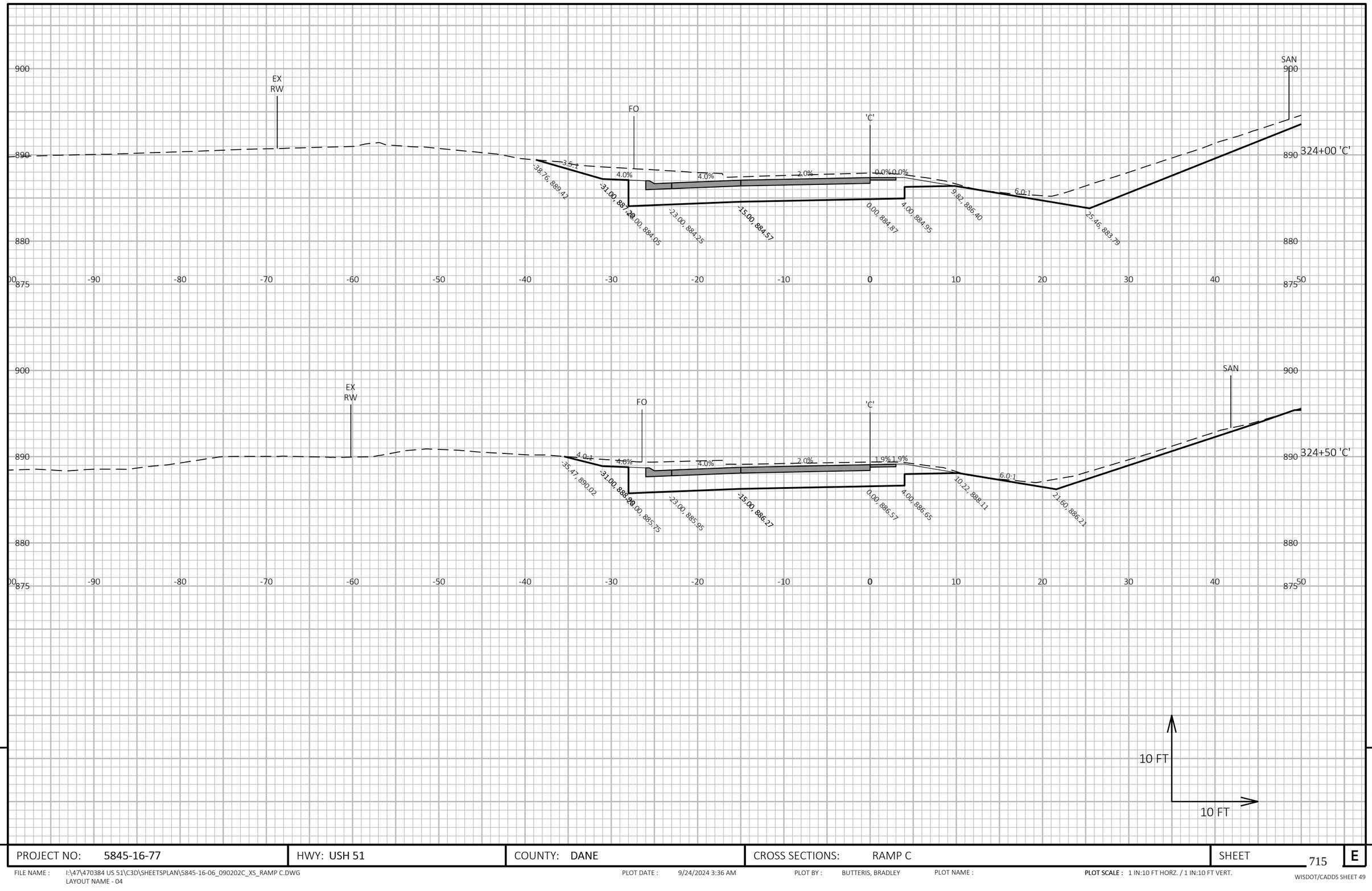
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP C	SHEET 714	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



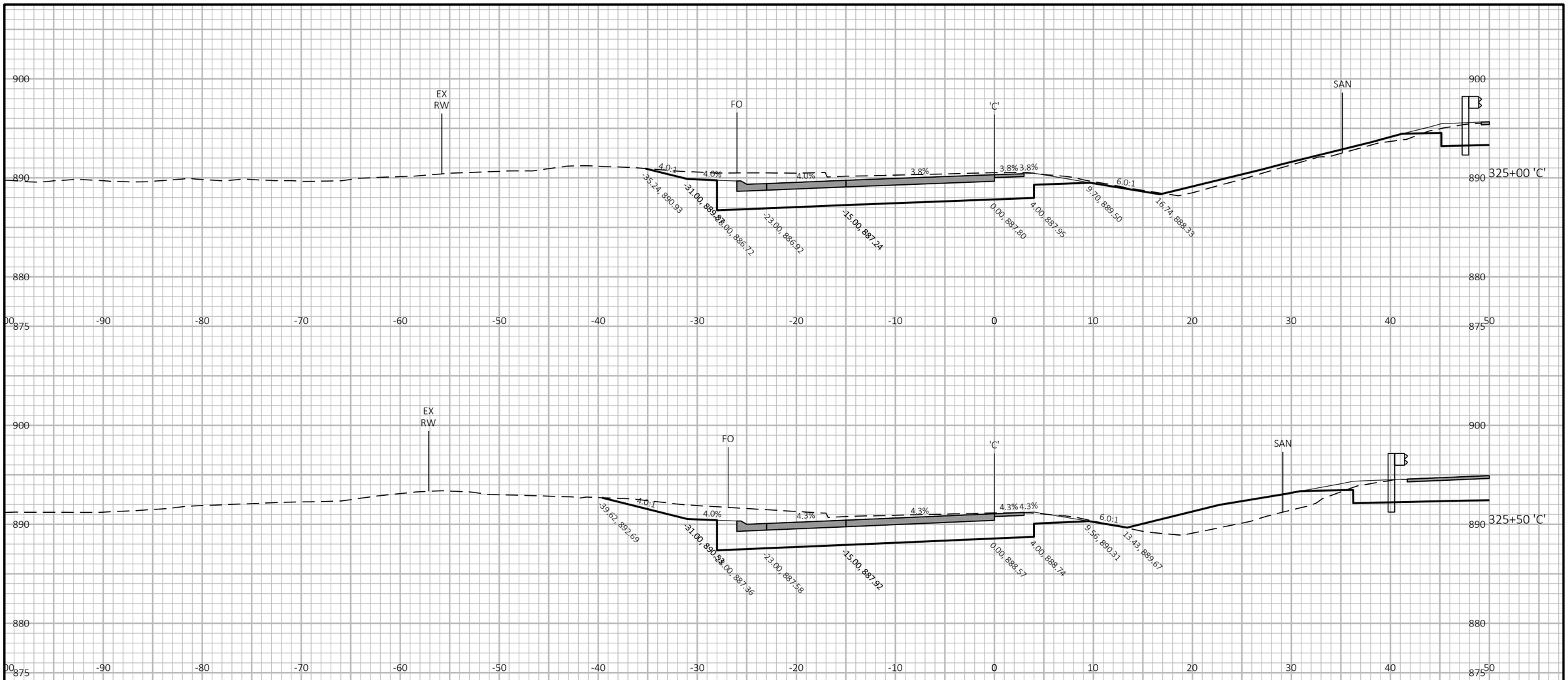
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP C	SHEET 715	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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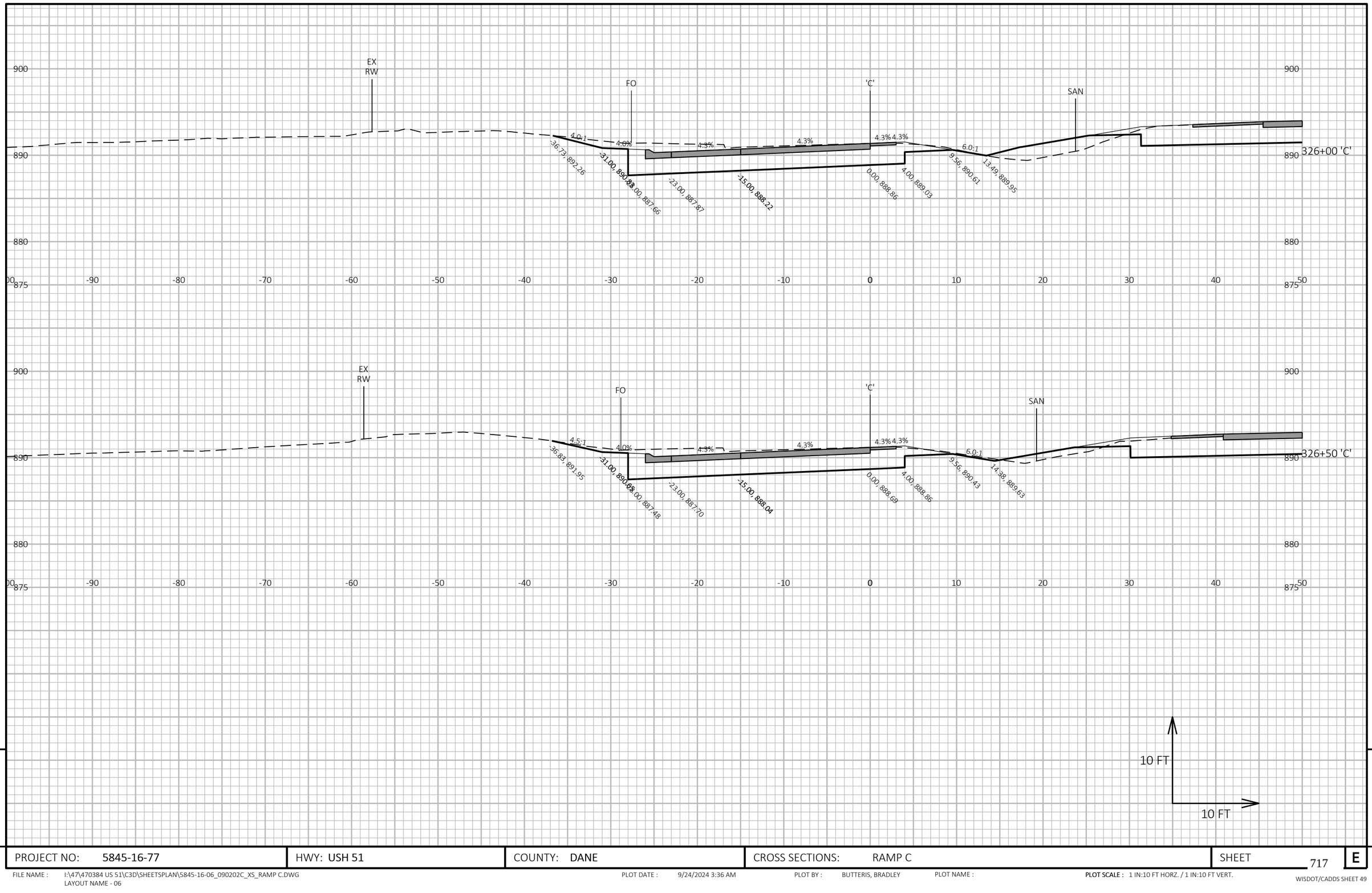
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FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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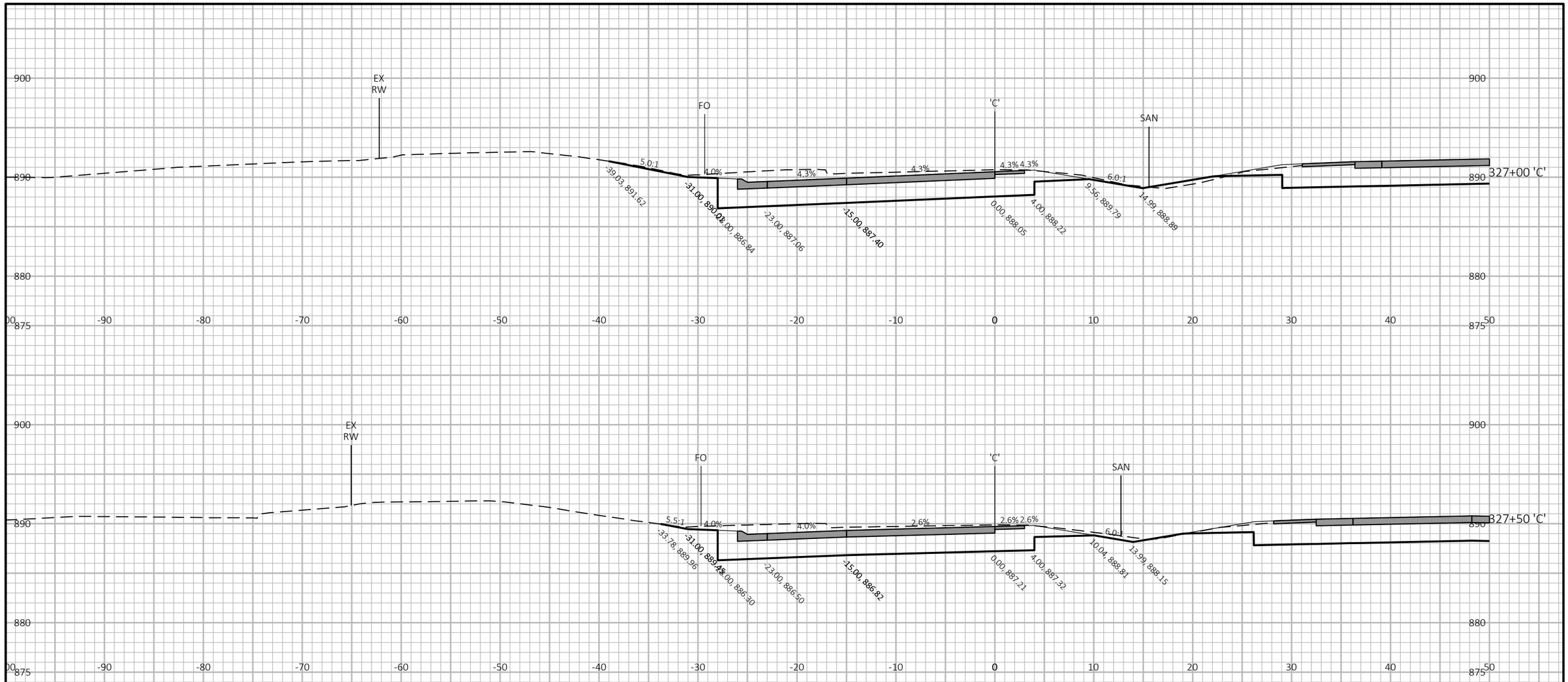
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP C	SHEET 717	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP C	SHEET 718	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 07

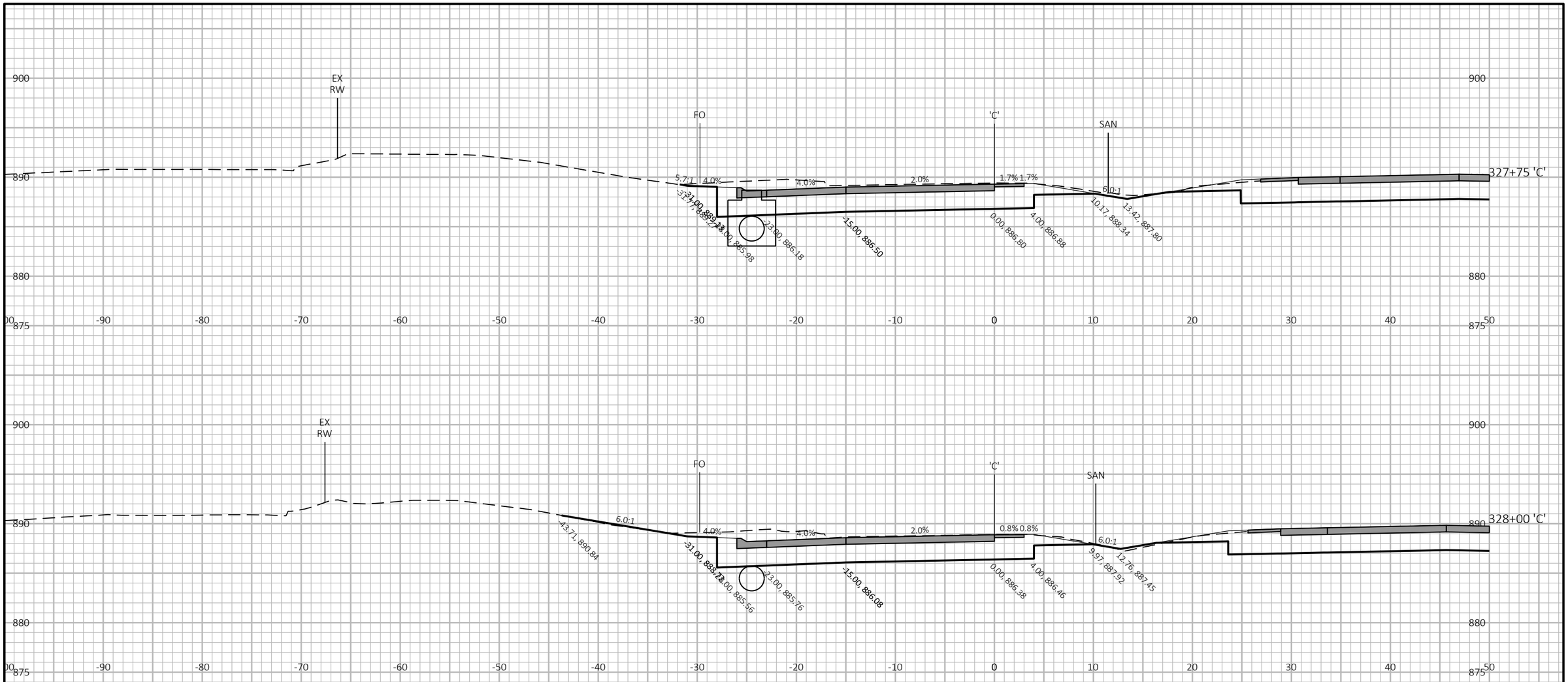
PLOT DATE : 9/24/2024 3:36 AM

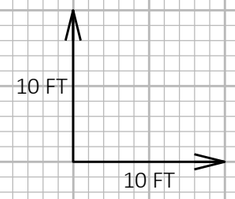
PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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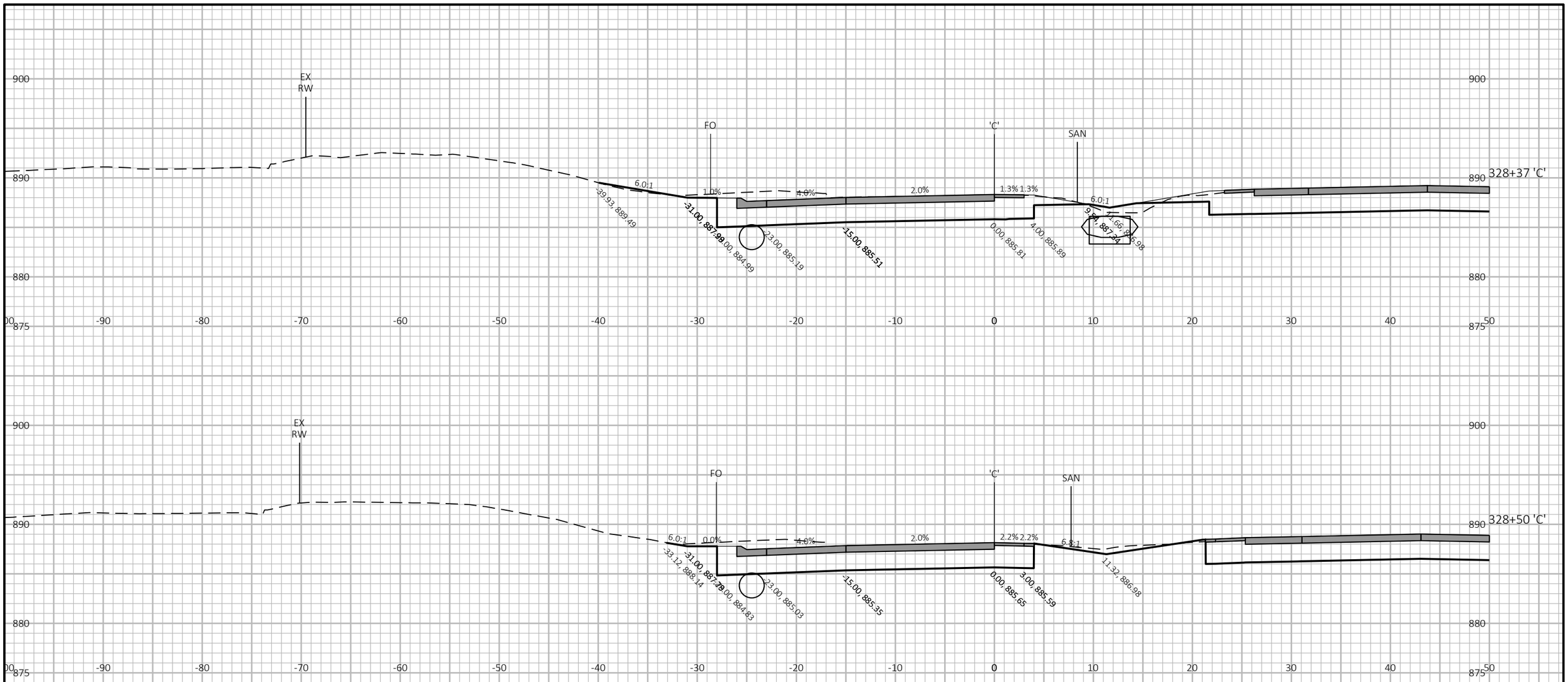
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP C	SHEET 719	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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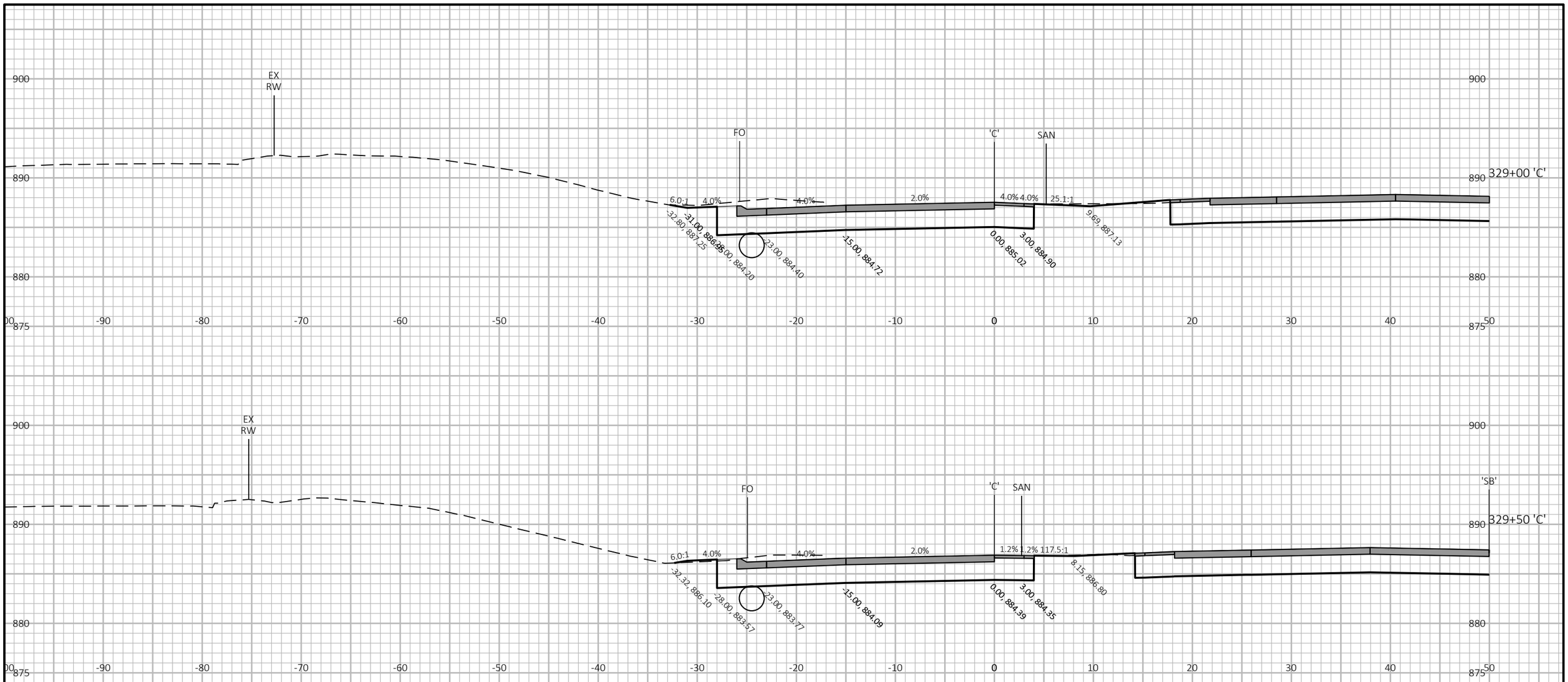
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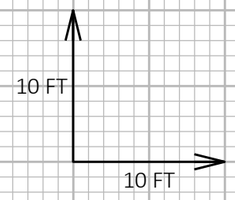
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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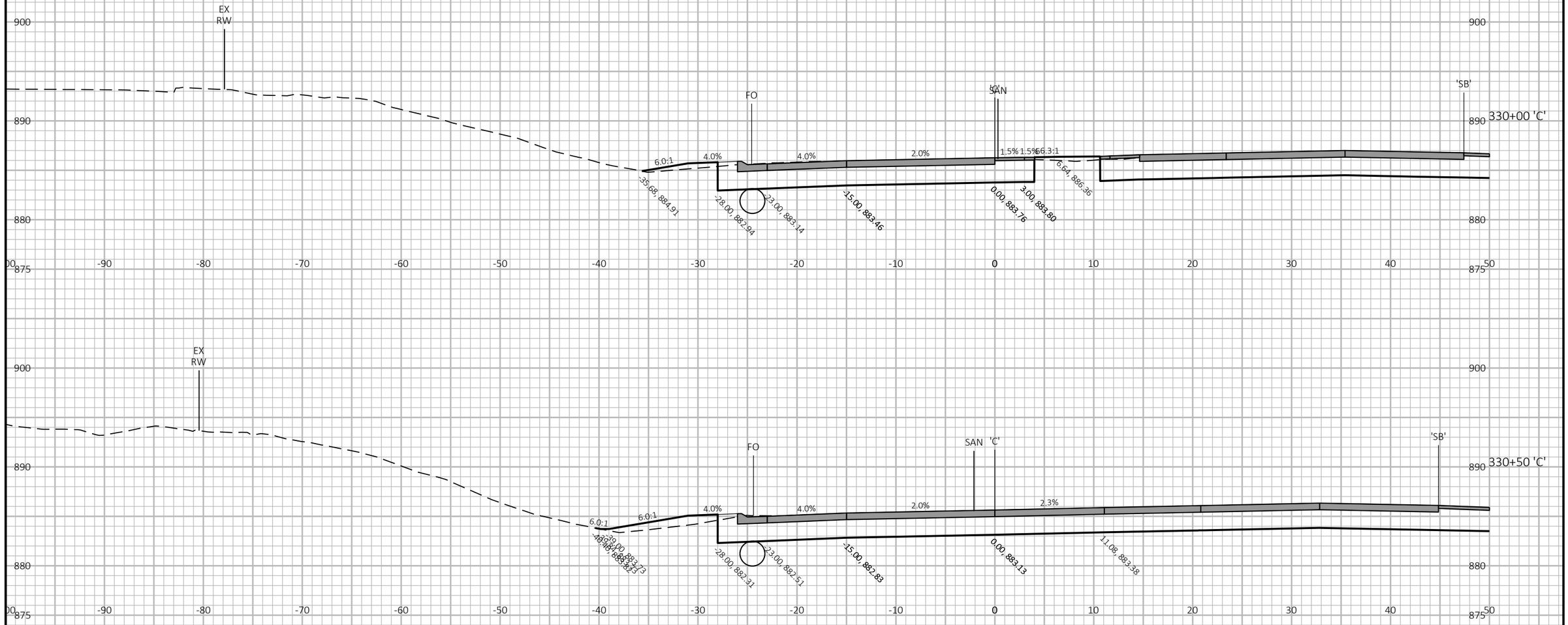
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP C	SHEET 721	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 10

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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10 FT

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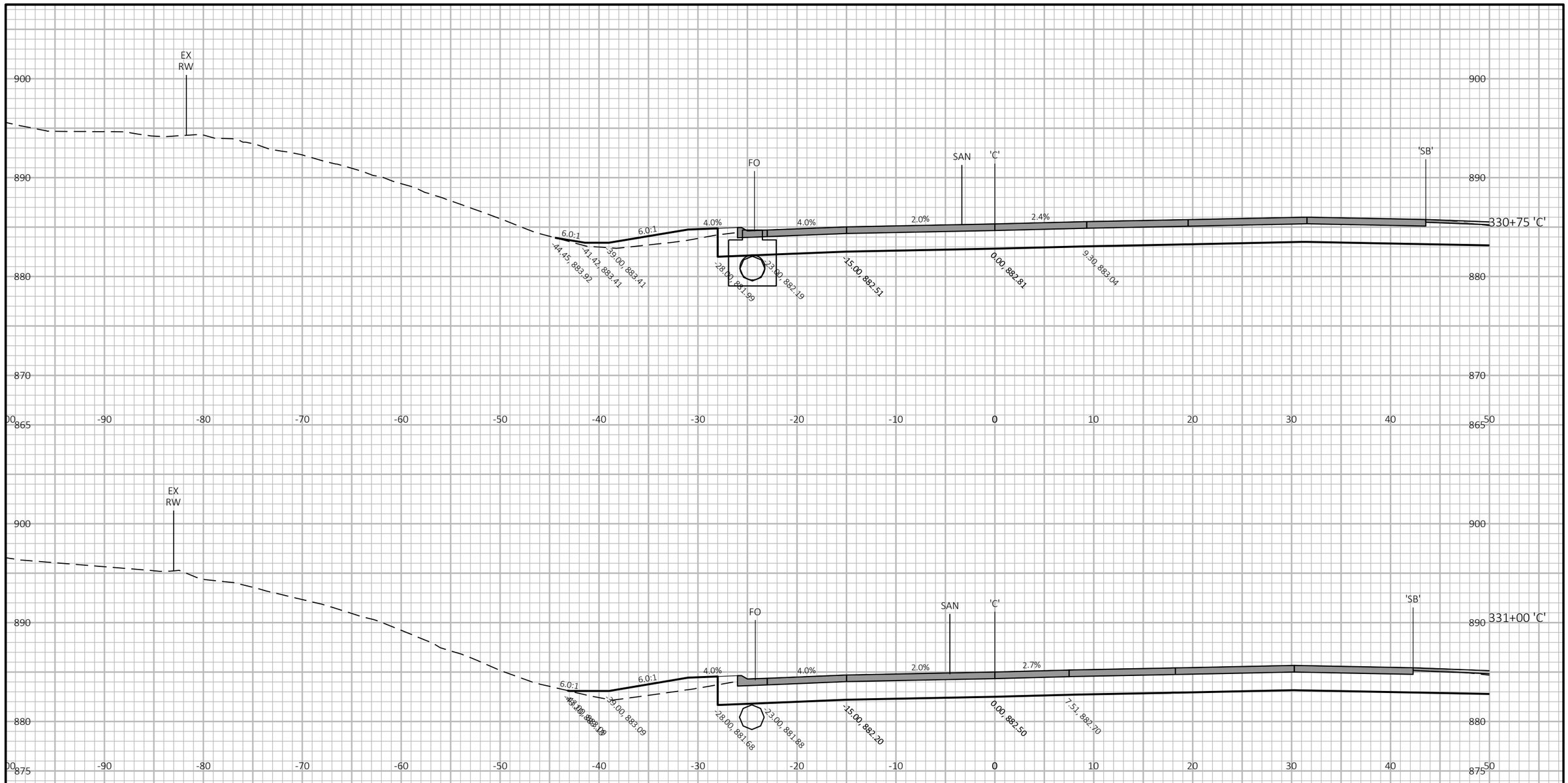
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP C	SHEET 722	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 11

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



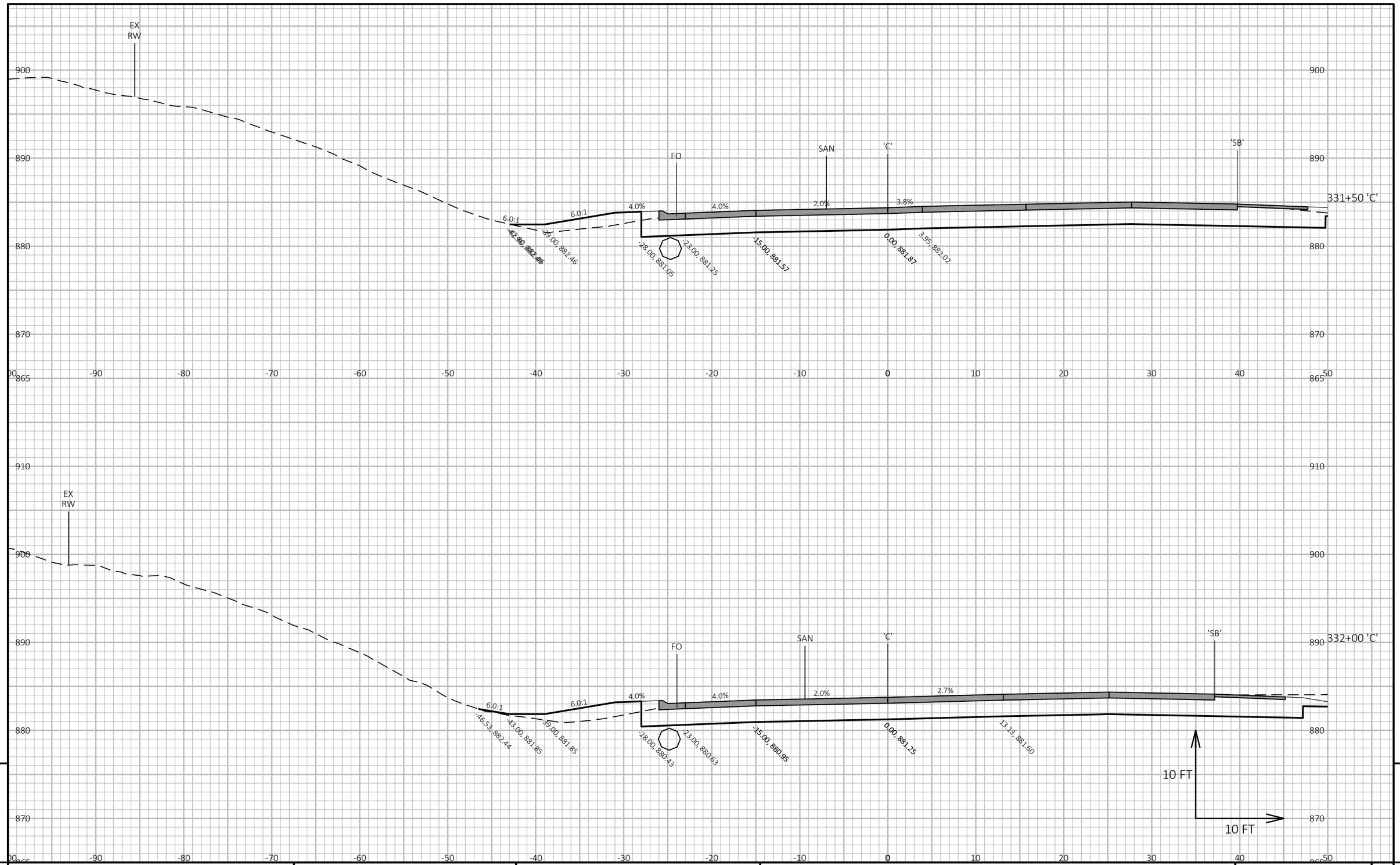
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP C	SHEET 723	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 12

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



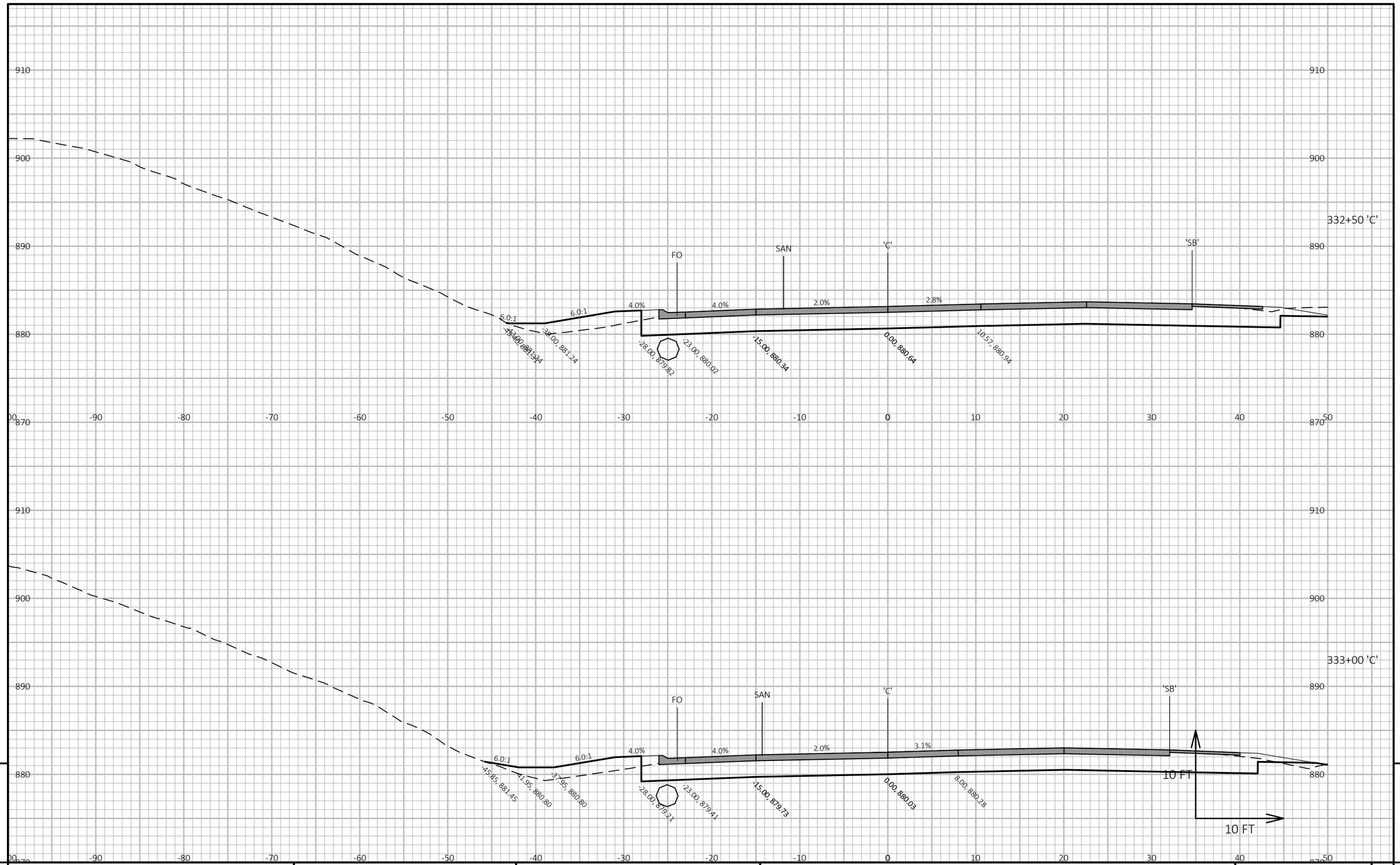
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP C	SHEET 724	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 13

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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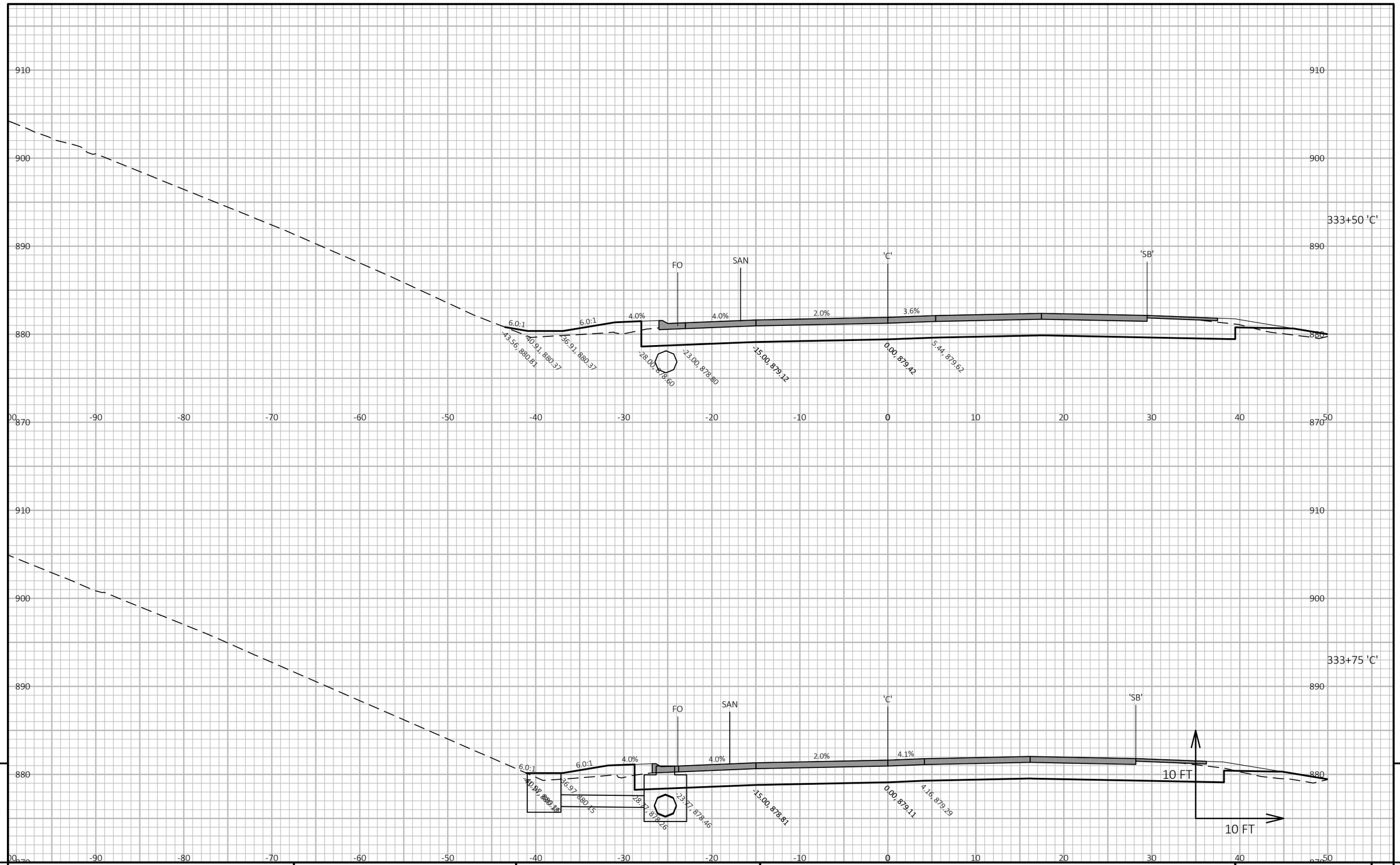
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FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 14

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP C	SHEET 726	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 15

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

910
900
890
880
870
865

-90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50

334+00 'C'

FO
SAN
'C'
'SB'

6.0:1
6.0:1
4.0%
4.0%
2.0%
5.1%

-44.62, 881.88
-30.77, 880.40
-29.28, 880.40
-29.60, 877.93
-24.60, 878.13
-15.00, 878.51
0.00, 878.81
2.88, 878.96

10 FT
10 FT

9
9

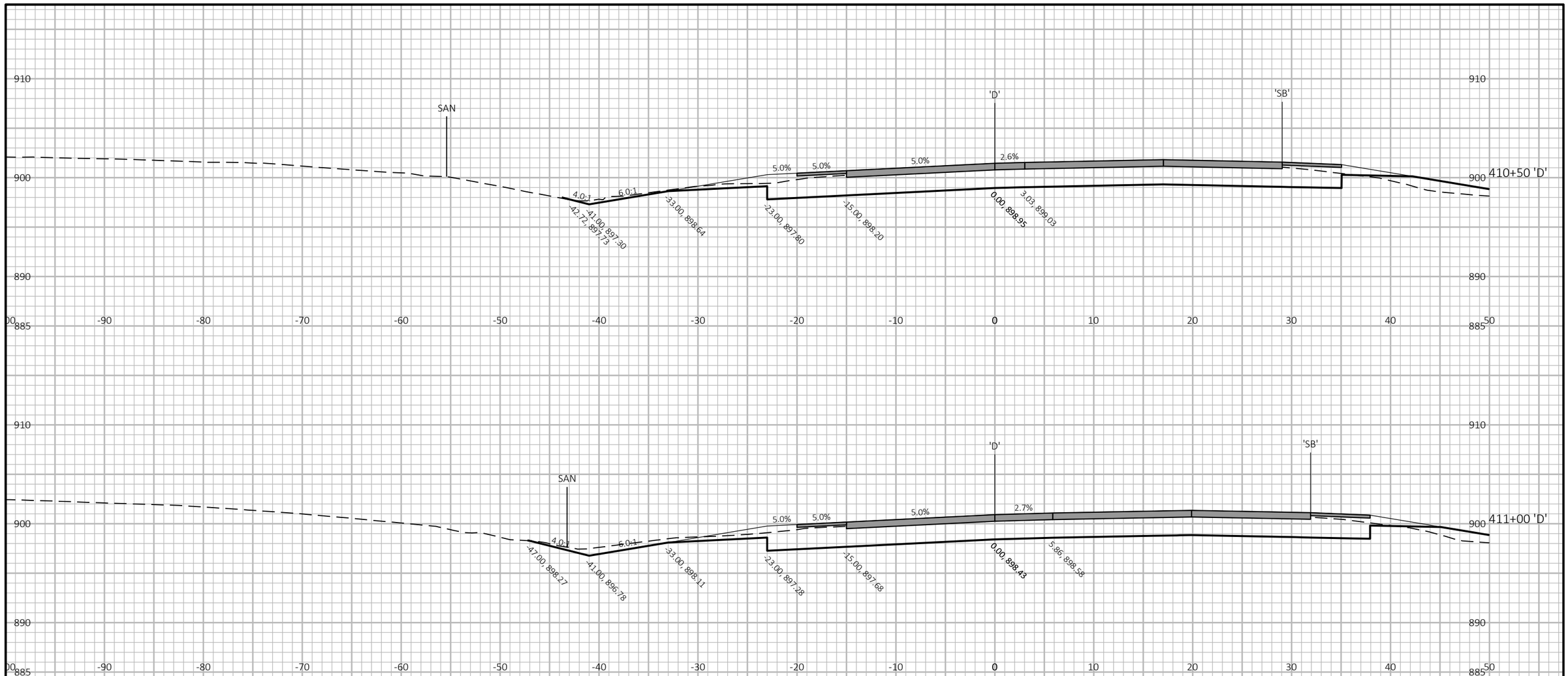
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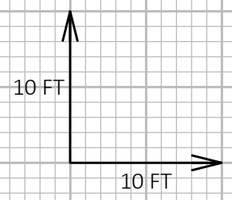
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202C_XS_RAMP C.DWG
LAYOUT NAME - 16

PLOT DATE : 9/24/2024 3:36 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP D	SHEET 728	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202D_XS_RAMP D.DWG
LAYOUT NAME - 01

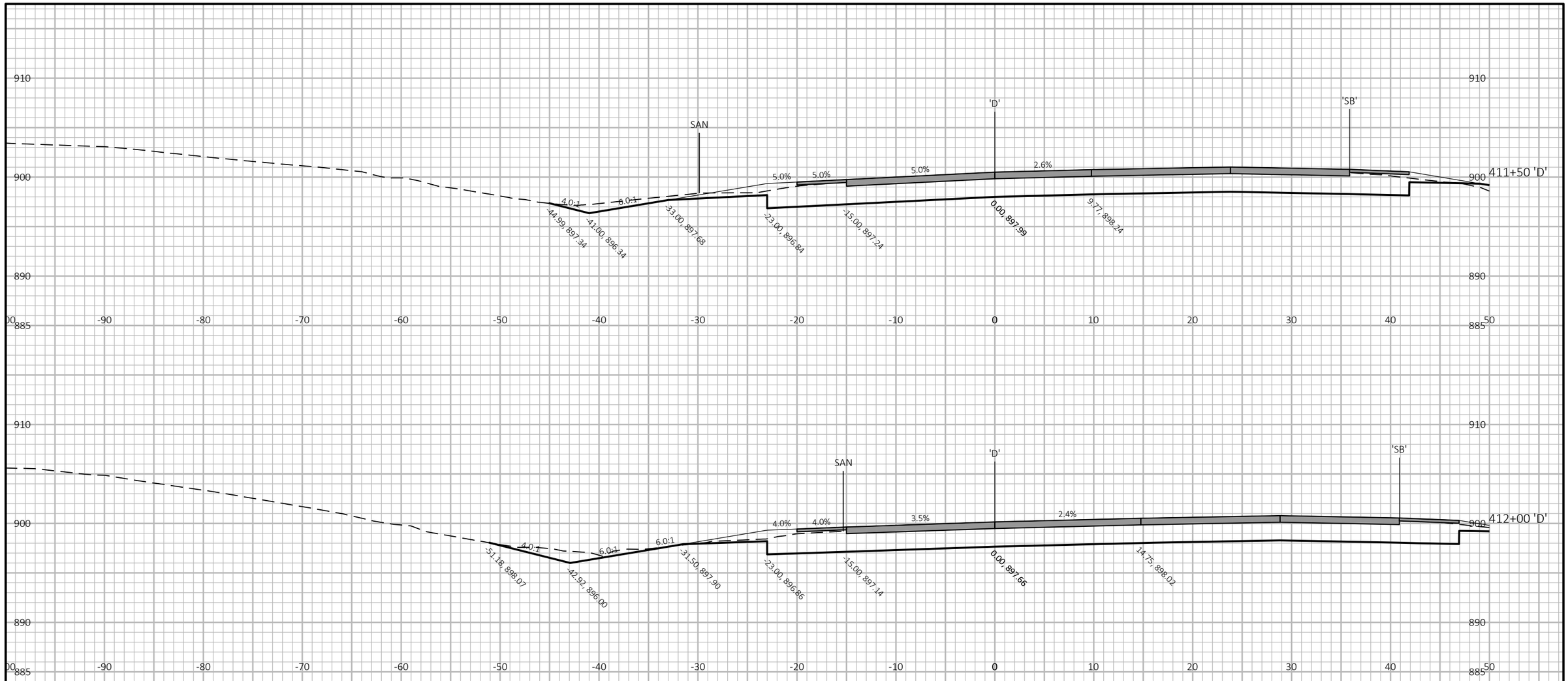
PLOT DATE : 9/24/2024 3:40 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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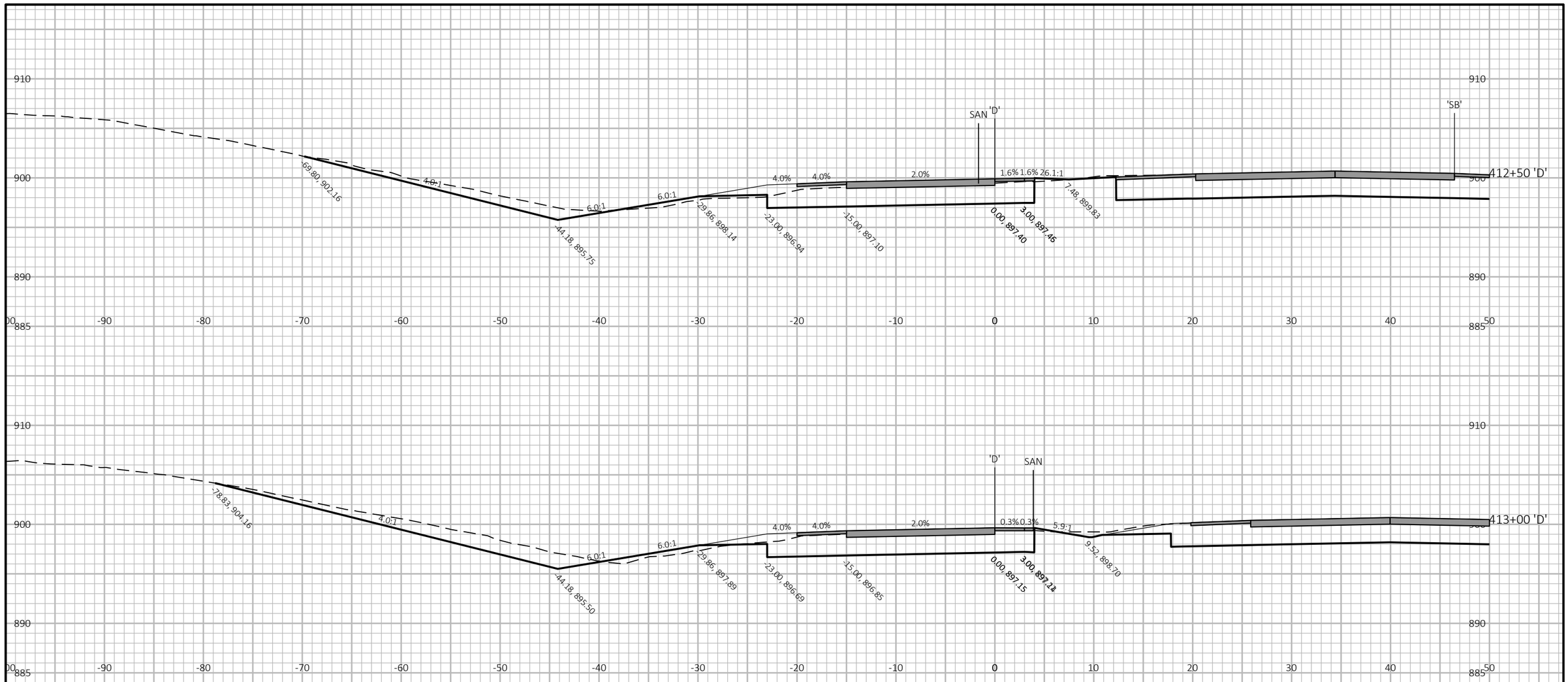
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP D	SHEET 729	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202D_XS_RAMP D.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2024 3:40 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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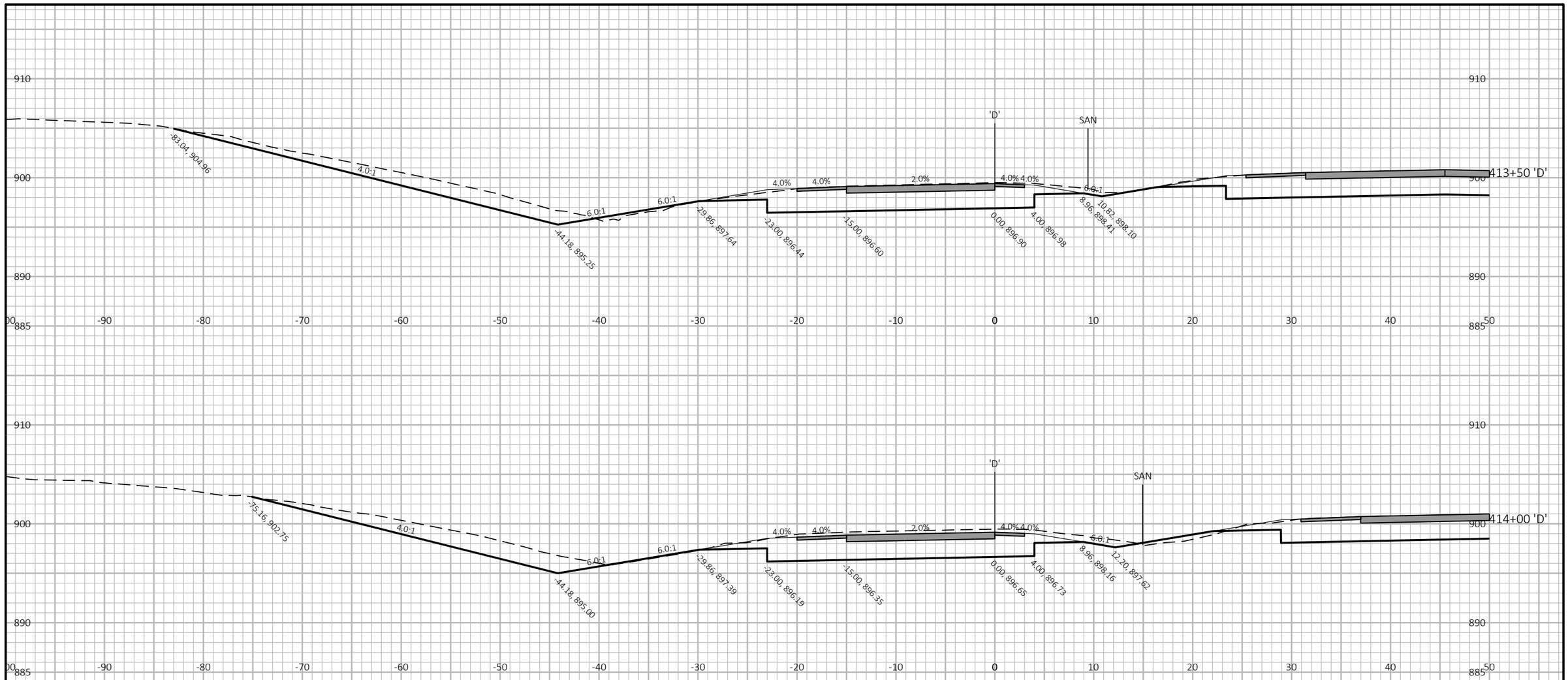
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FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202D_XS_RAMP D.DWG
LAYOUT NAME - 03

PLOT DATE : 9/24/2024 3:40 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP D	SHEET 731	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202D_XS_RAMP D.DWG
LAYOUT NAME - 04

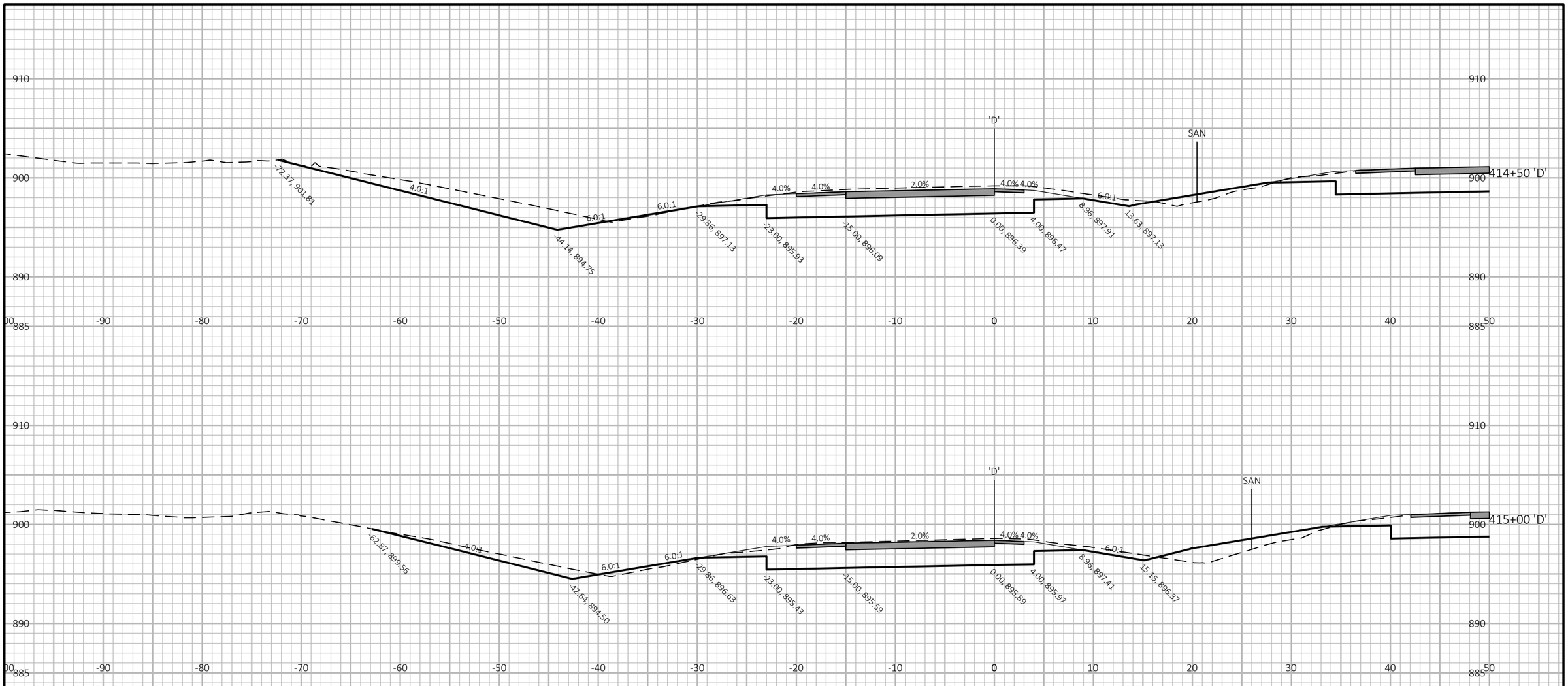
PLOT DATE : 9/24/2024 3:40 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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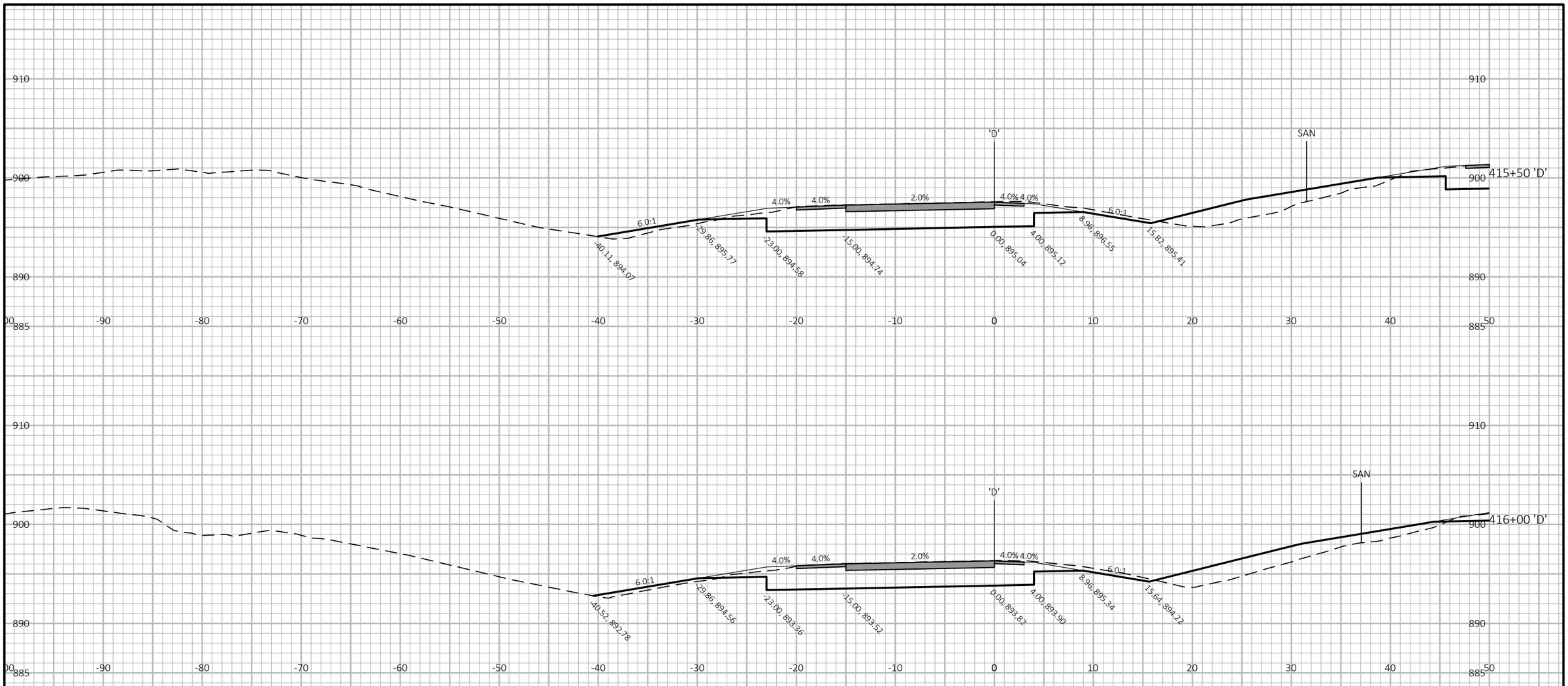
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP D	SHEET 732	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202D_XS_RAMP D.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2024 3:40 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP D	SHEET 733	E

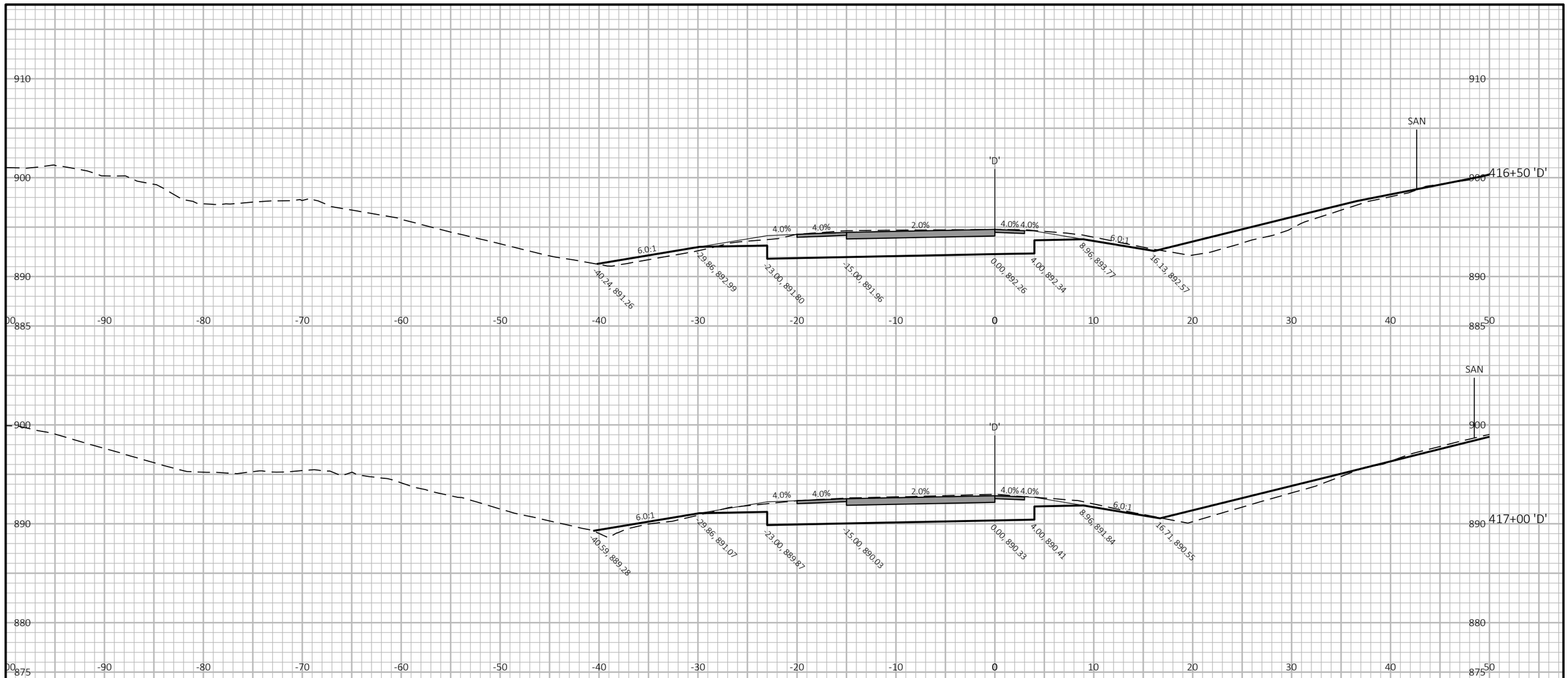
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FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202D_XS_RAMP D.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2024 3:40 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP D	SHEET 734	E

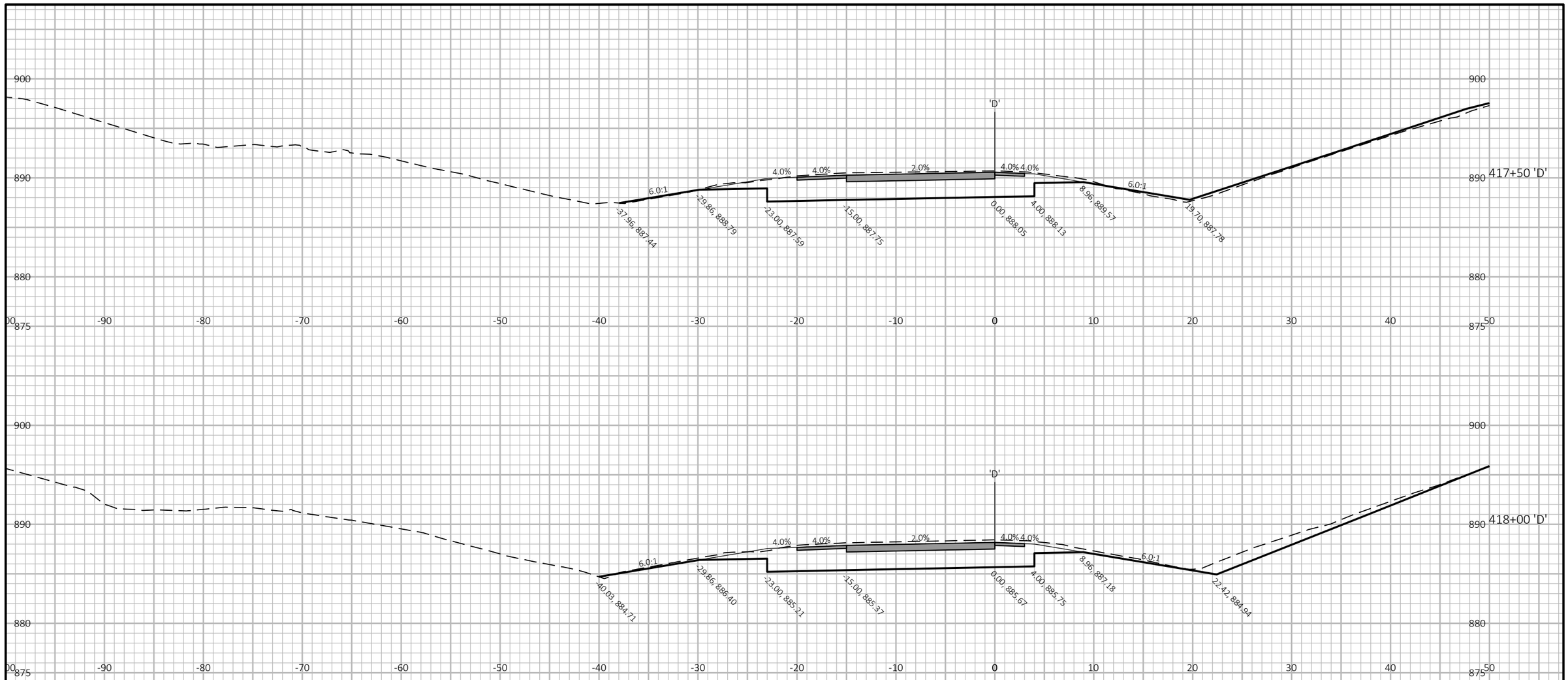
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202D_XS_RAMP D.DWG
LAYOUT NAME - 07

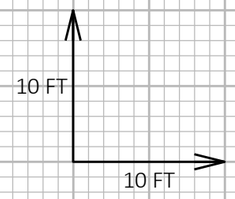
PLOT DATE : 9/24/2024 3:40 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.





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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP D	SHEET 735	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202D_XS_RAMP D.DWG
LAYOUT NAME - 08

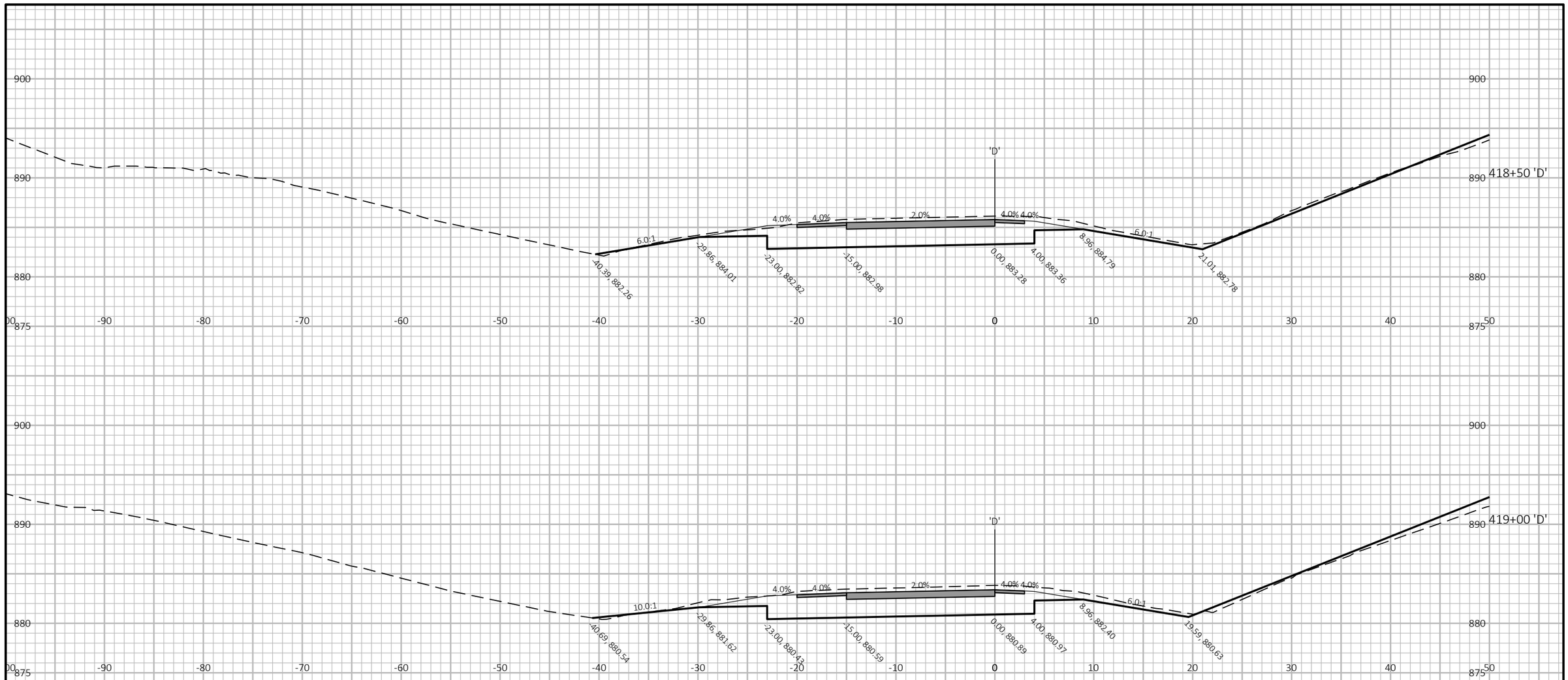
PLOT DATE : 9/24/2024 3:40 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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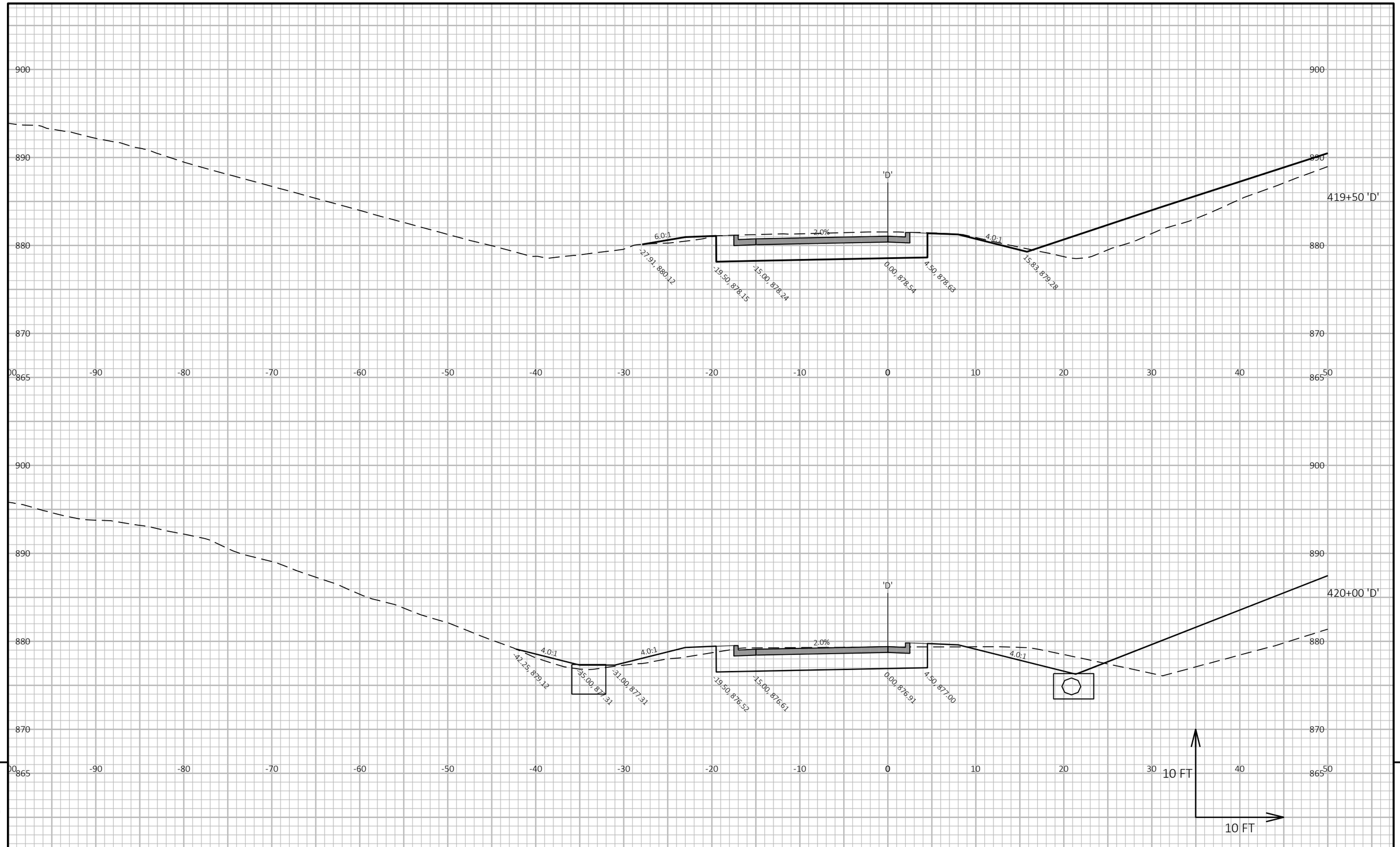
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP D	SHEET 736	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202D_XS_RAMP D.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2024 3:40 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP D	SHEET 737 E

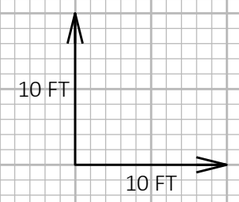
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202D_XS_RAMP D.DWG
LAYOUT NAME - 10

PLOT DATE : 9/24/2024 3:41 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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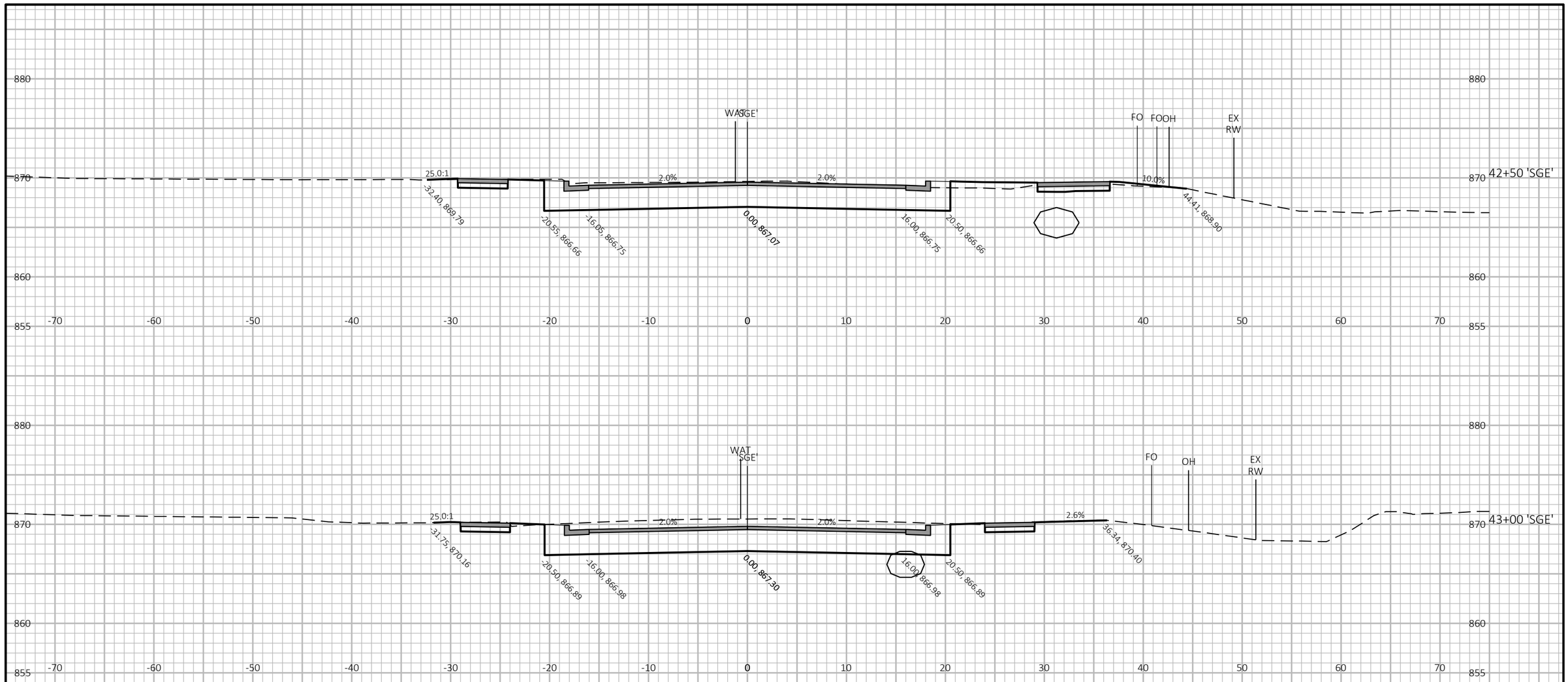
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: RAMP D	SHEET 738	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090202D_XS_RAMP D.DWG
LAYOUT NAME - 11

PLOT DATE : 9/24/2024 3:41 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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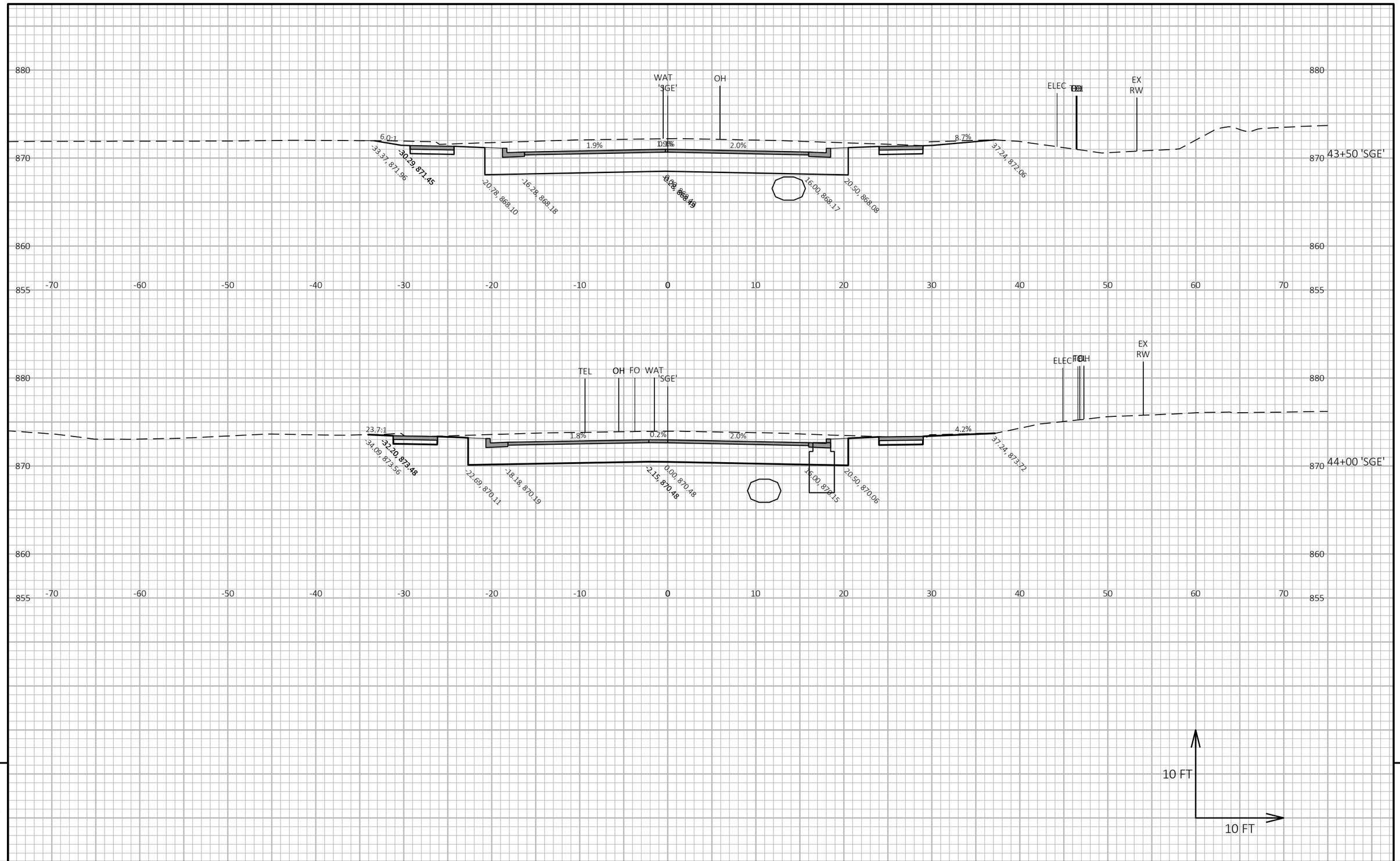
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD EB	SHEET 739	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203A_XS_SIGGELKOW EB.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2024 4:10 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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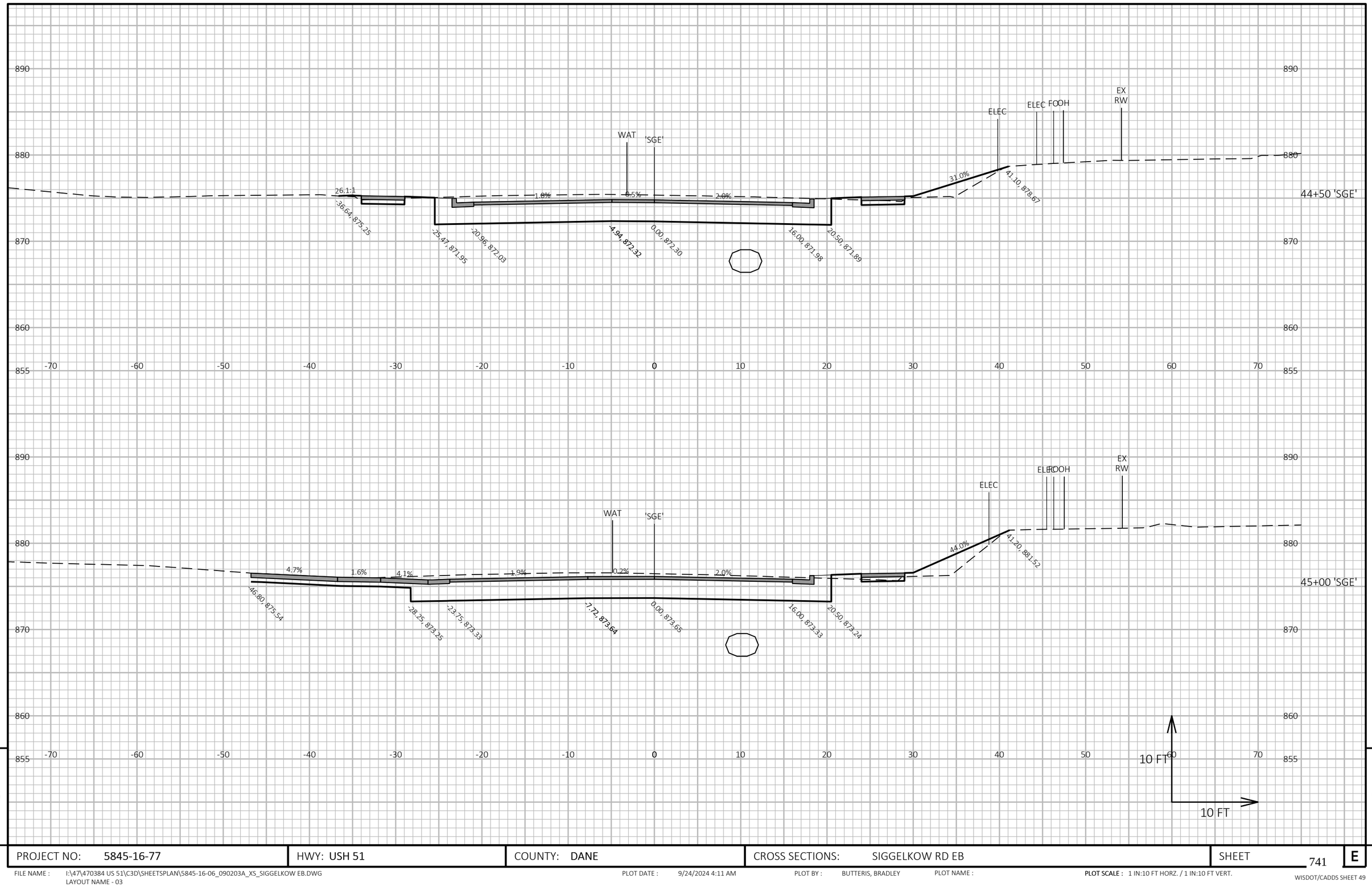
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD EB	SHEET 740	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203A_XS_SIGGELKOW EB.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2024 4:10 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD EB	SHEET 741	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203A_XS_SIGGELKOW EB.DWG
LAYOUT NAME - 03

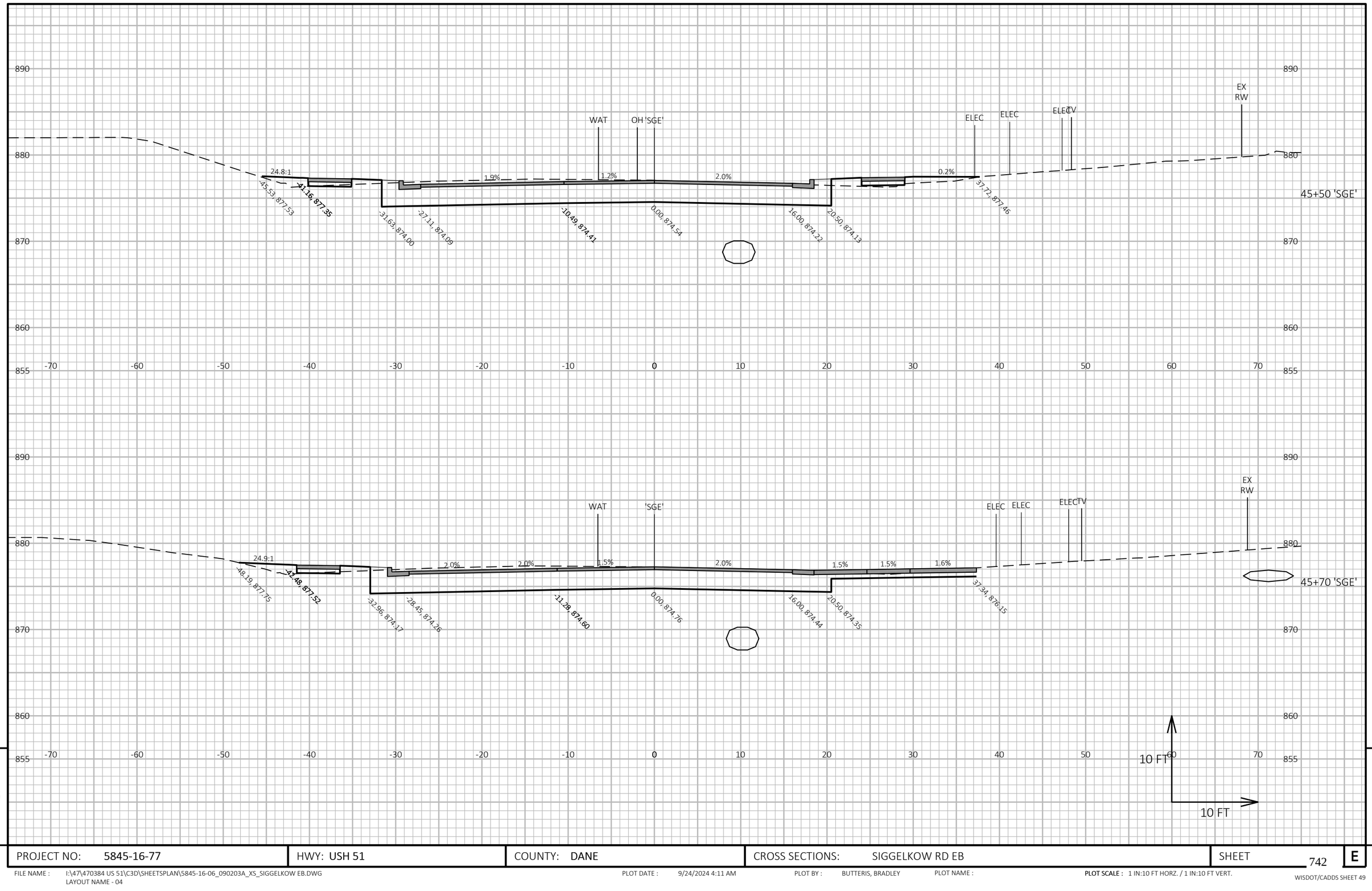
PLOT DATE : 9/24/2024 4:11 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD EB	SHEET 742	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203A_XS_SIGGELKOW EB.DWG
LAYOUT NAME - 04

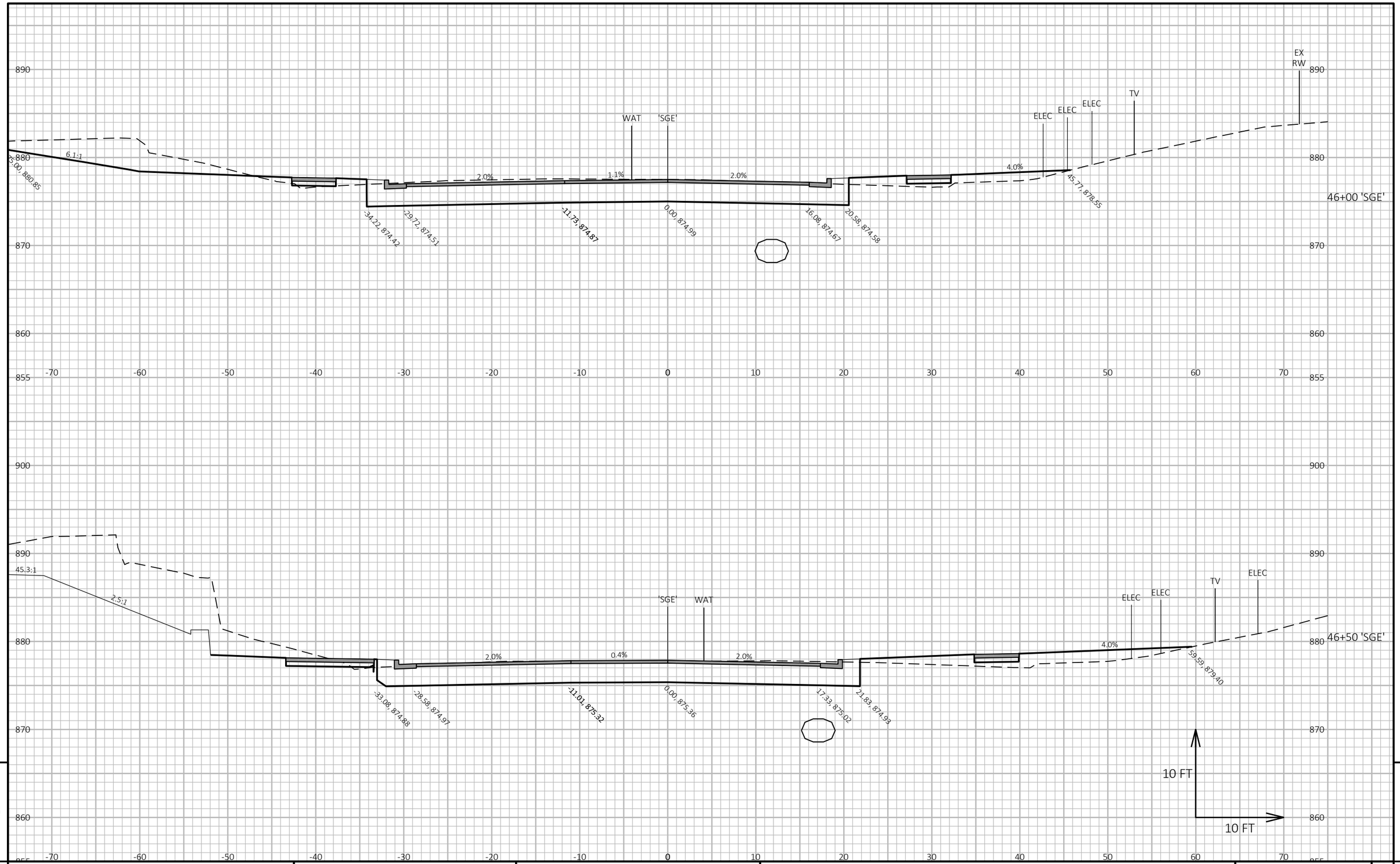
PLOT DATE : 9/24/2024 4:11 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

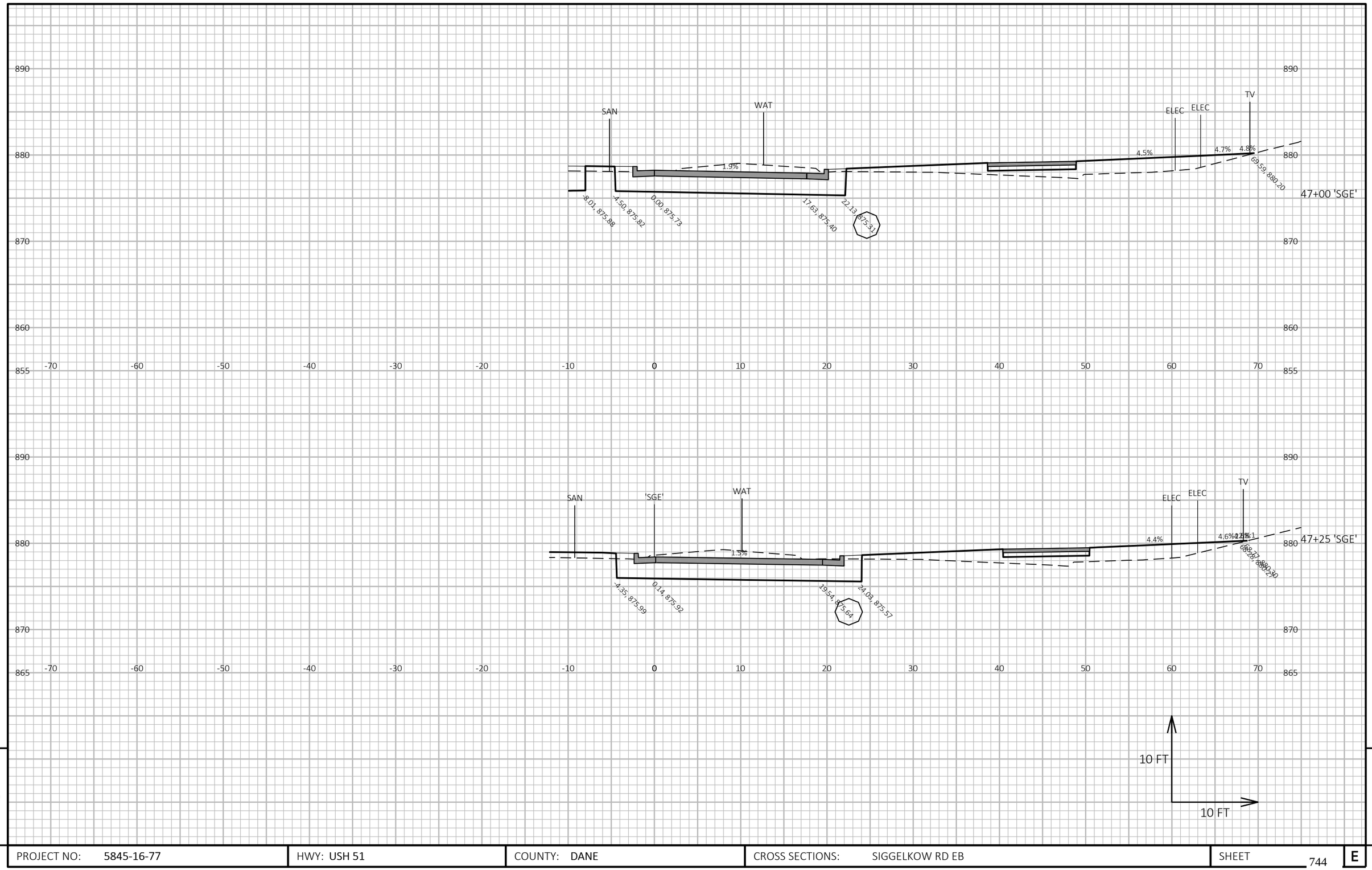


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD EB	SHEET 743 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203A_XS_SIGGELKOW EB.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2024 4:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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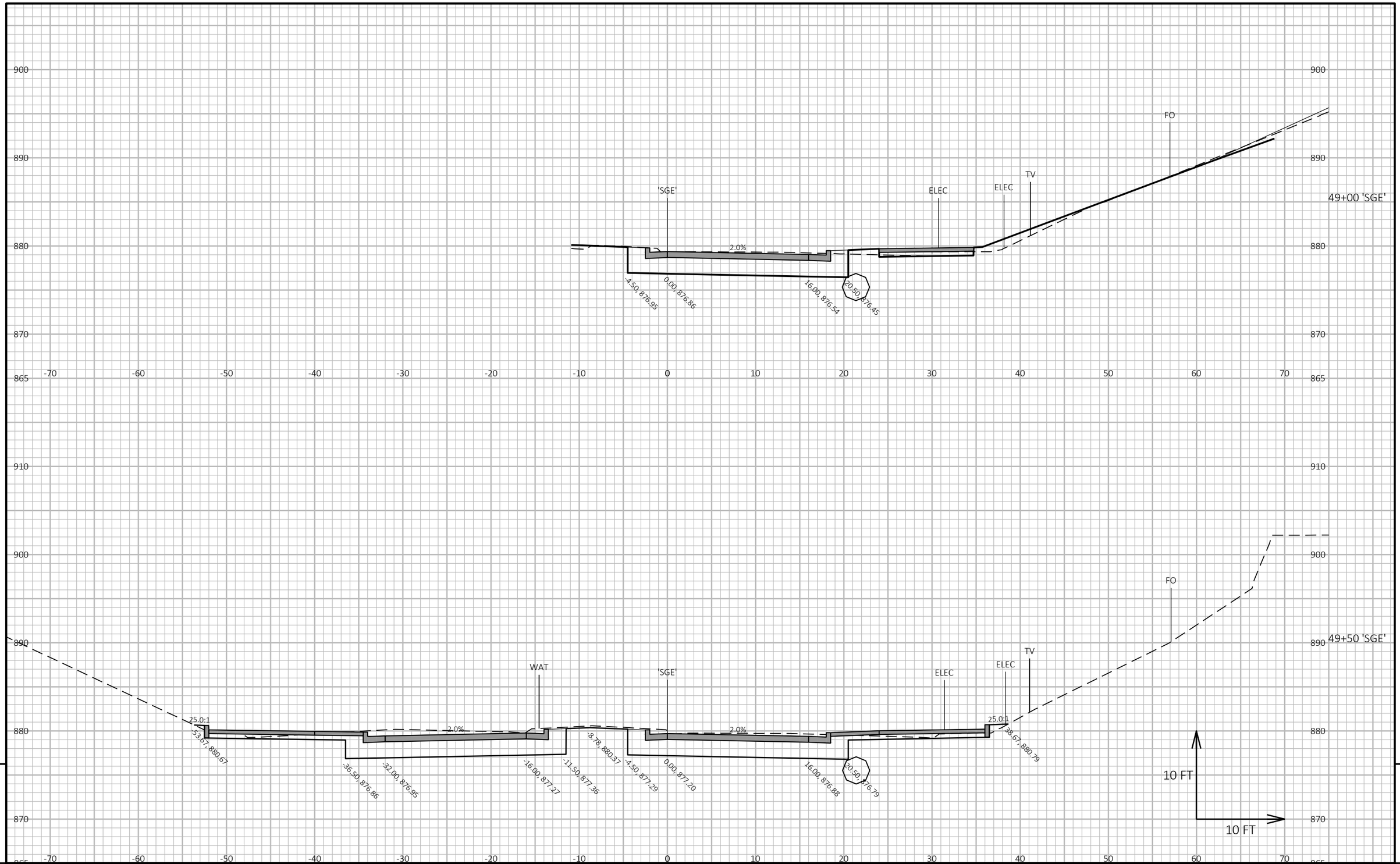
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FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203A_XS_SIGGELKOW EB.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2024 4:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



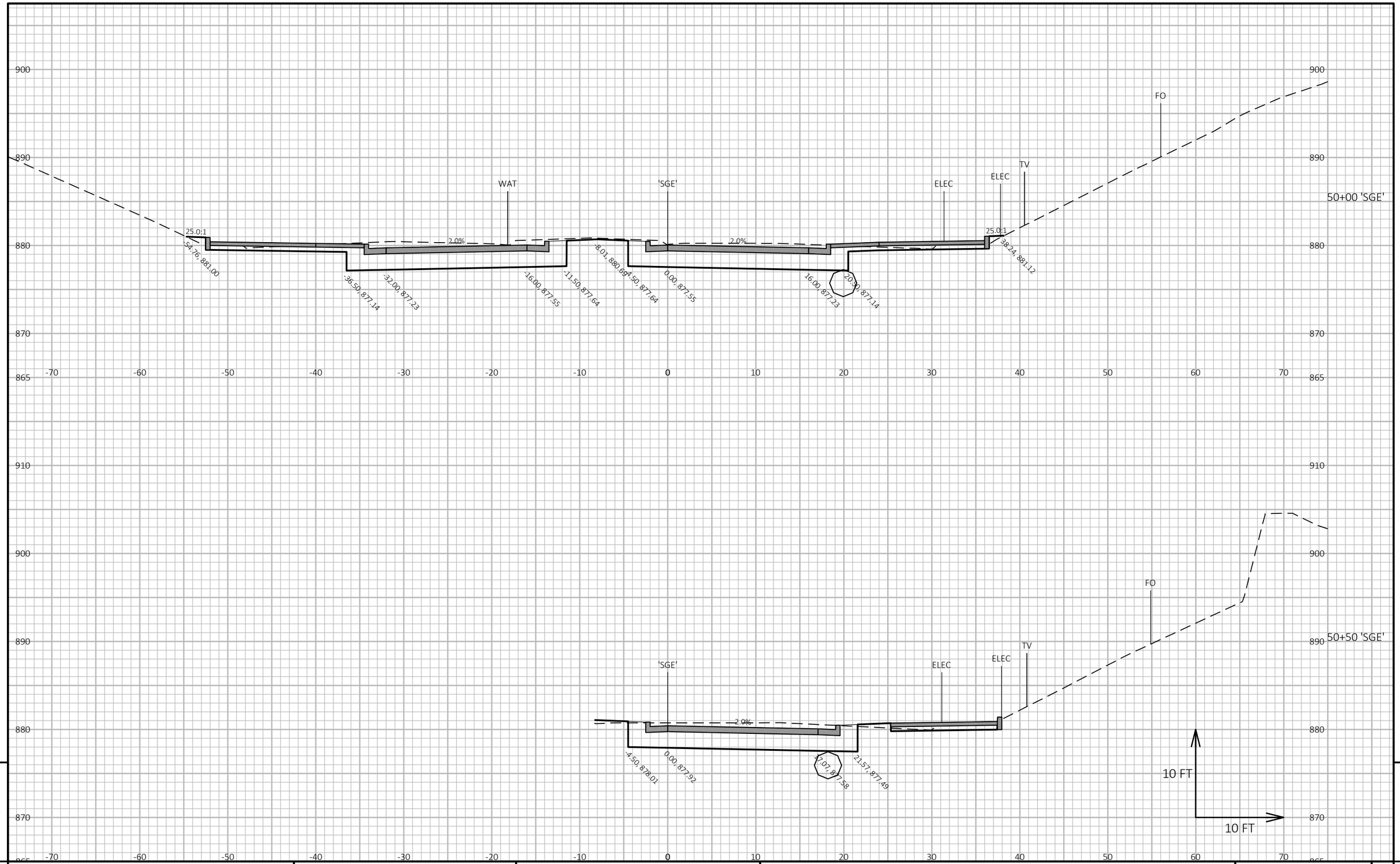
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FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203A_XS_SIGGELKOW EB.DWG
LAYOUT NAME - 07

PLOT DATE : 9/24/2024 4:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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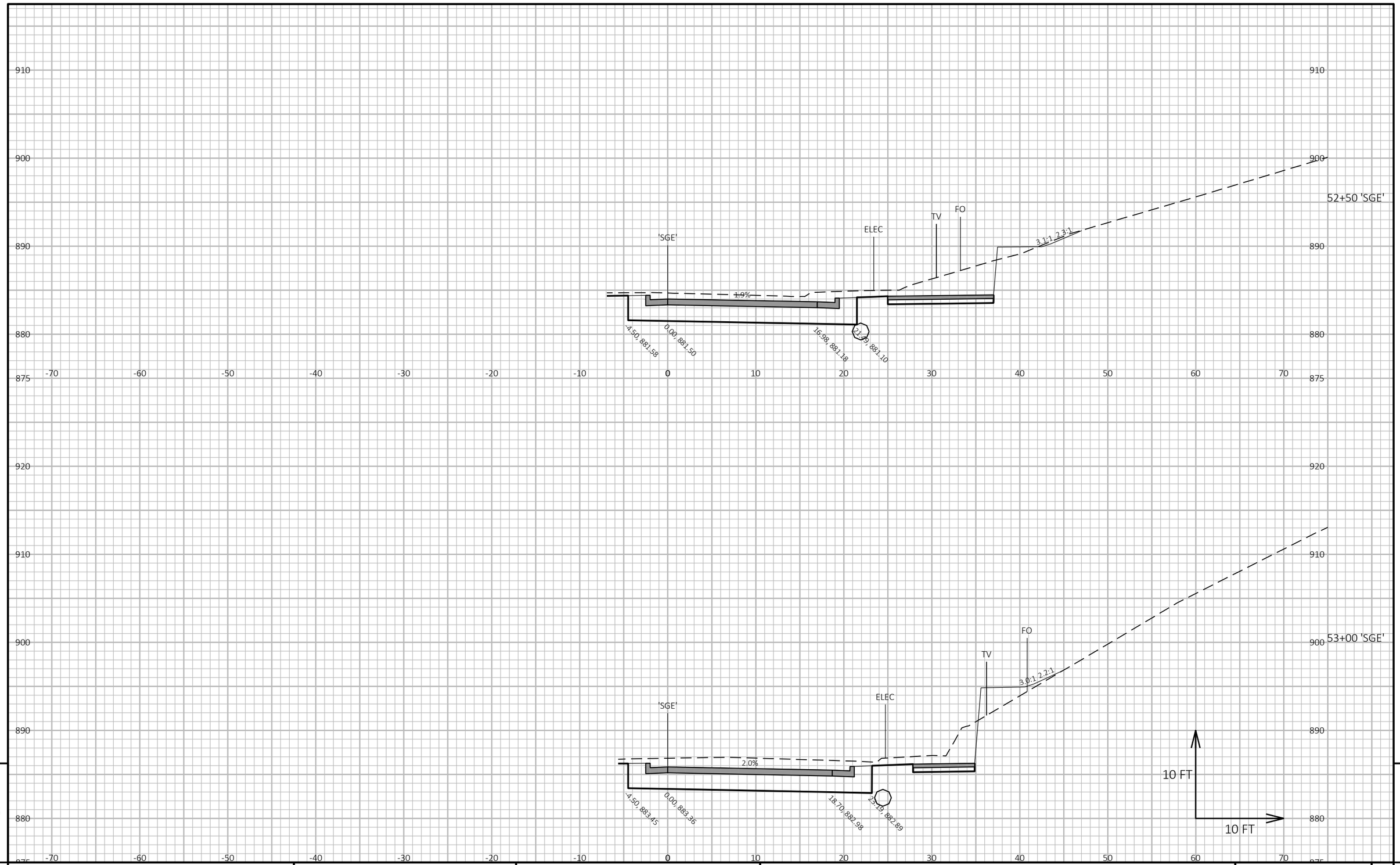
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FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203A_XS_SIGGELKOW EB.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2024 4:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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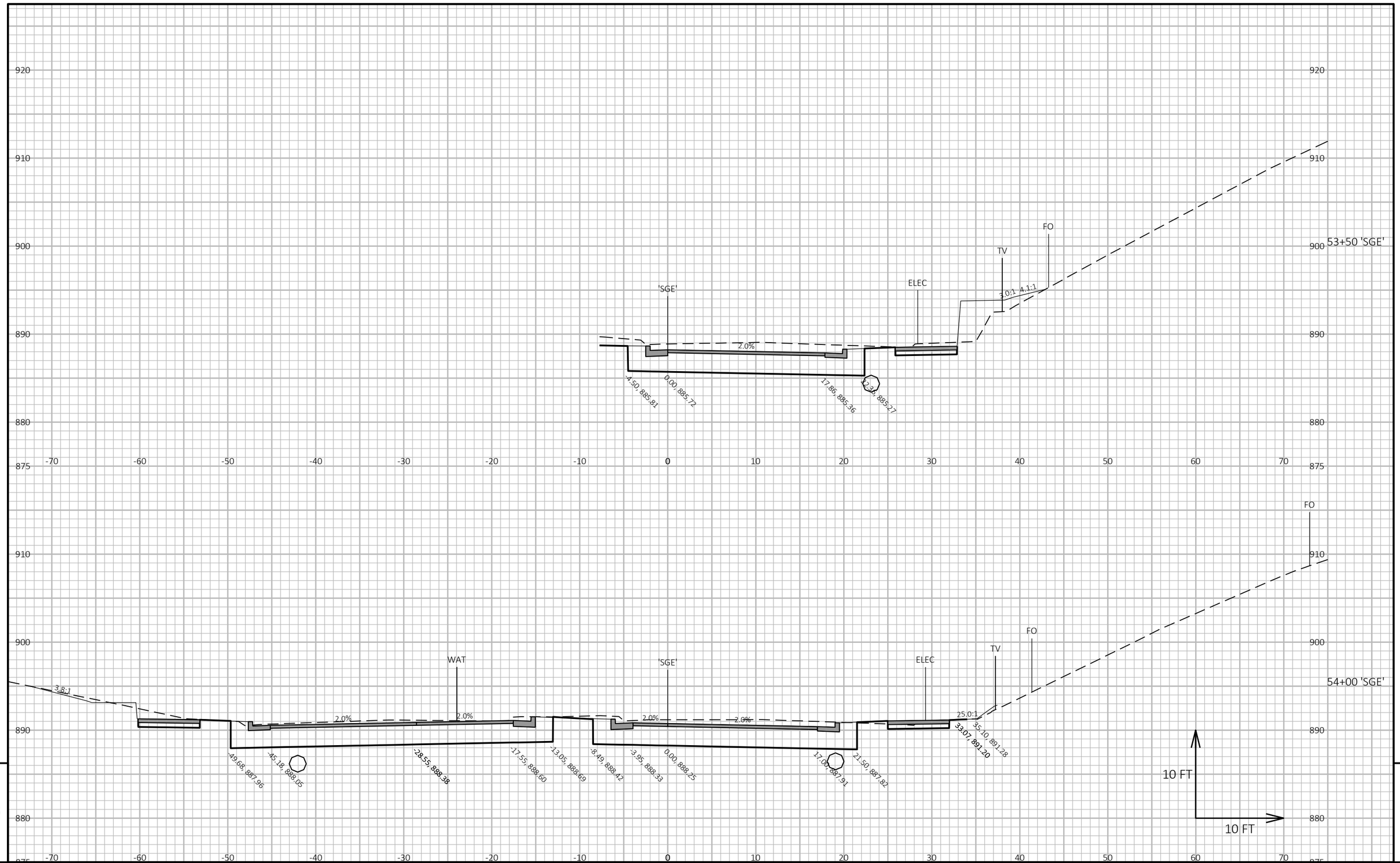
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FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203A_XS_SIGGELKOW EB.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2024 4:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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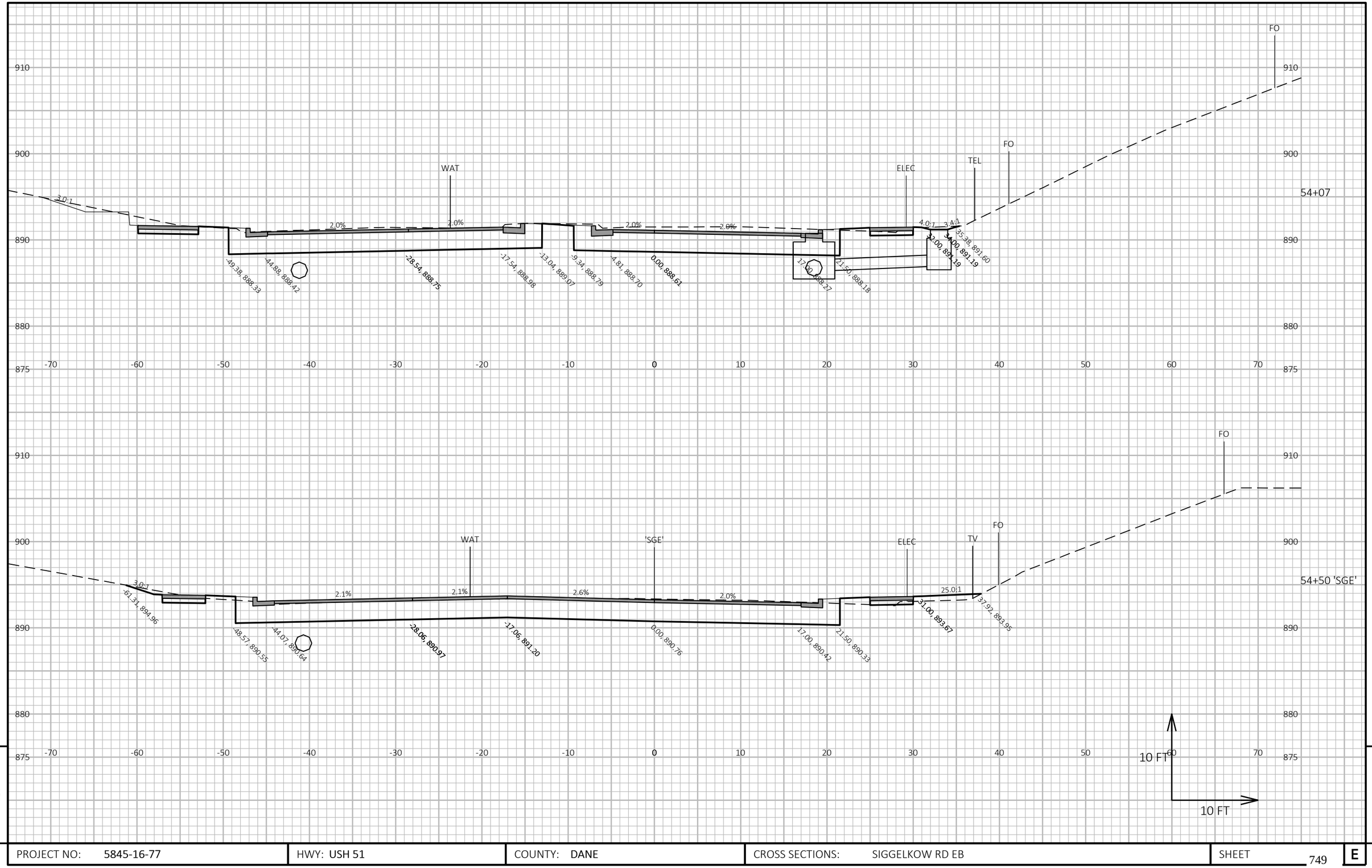
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD EB	SHEET 748	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203A_XS_SIGGELKOW EB.DWG
LAYOUT NAME - 10

PLOT DATE : 9/24/2024 4:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



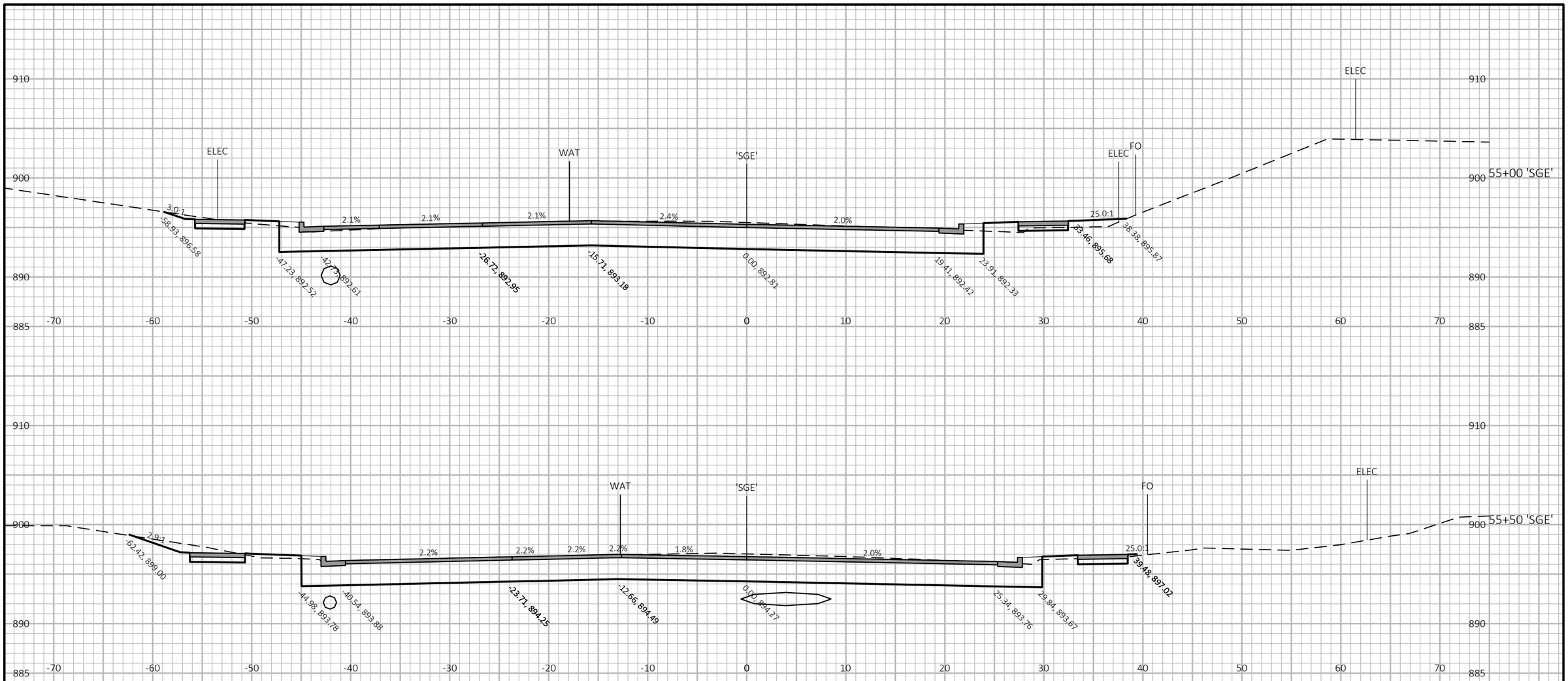
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD EB	SHEET 749	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203A_XS_SIGGELKOW EB.DWG
LAYOUT NAME - 11

PLOT DATE : 9/24/2024 4:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



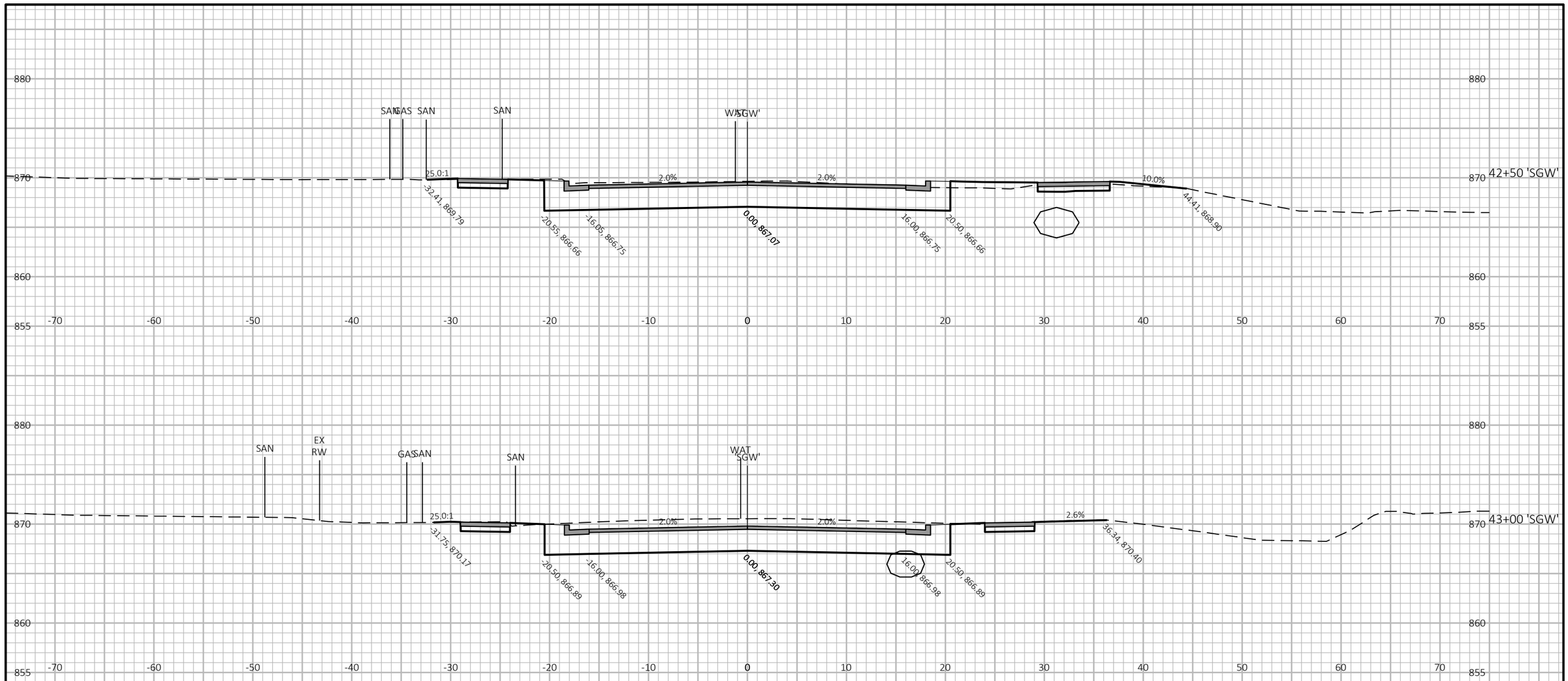
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD EB	SHEET 750	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203A_XS_SIGGELKOW EB.DWG
LAYOUT NAME - 12

PLOT DATE : 9/24/2024 4:11 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

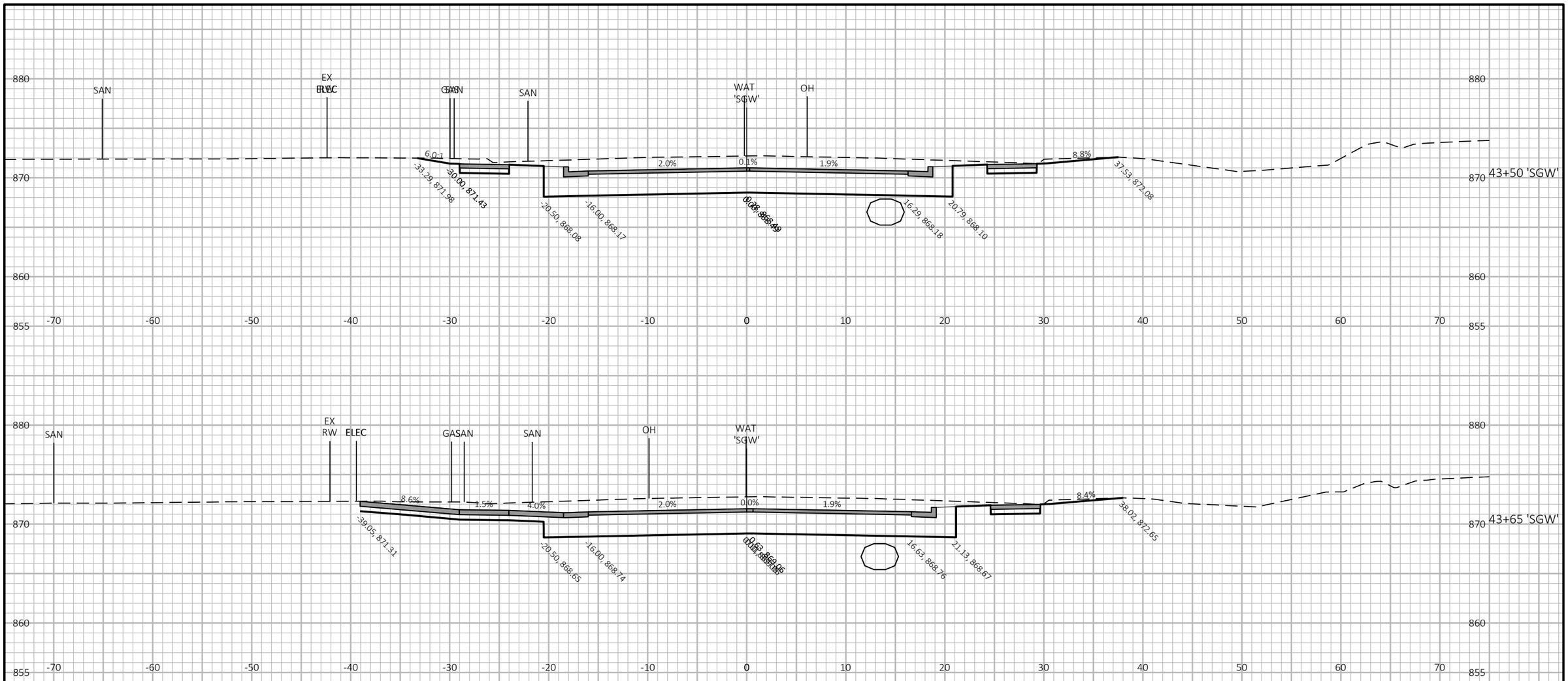
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FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 01

PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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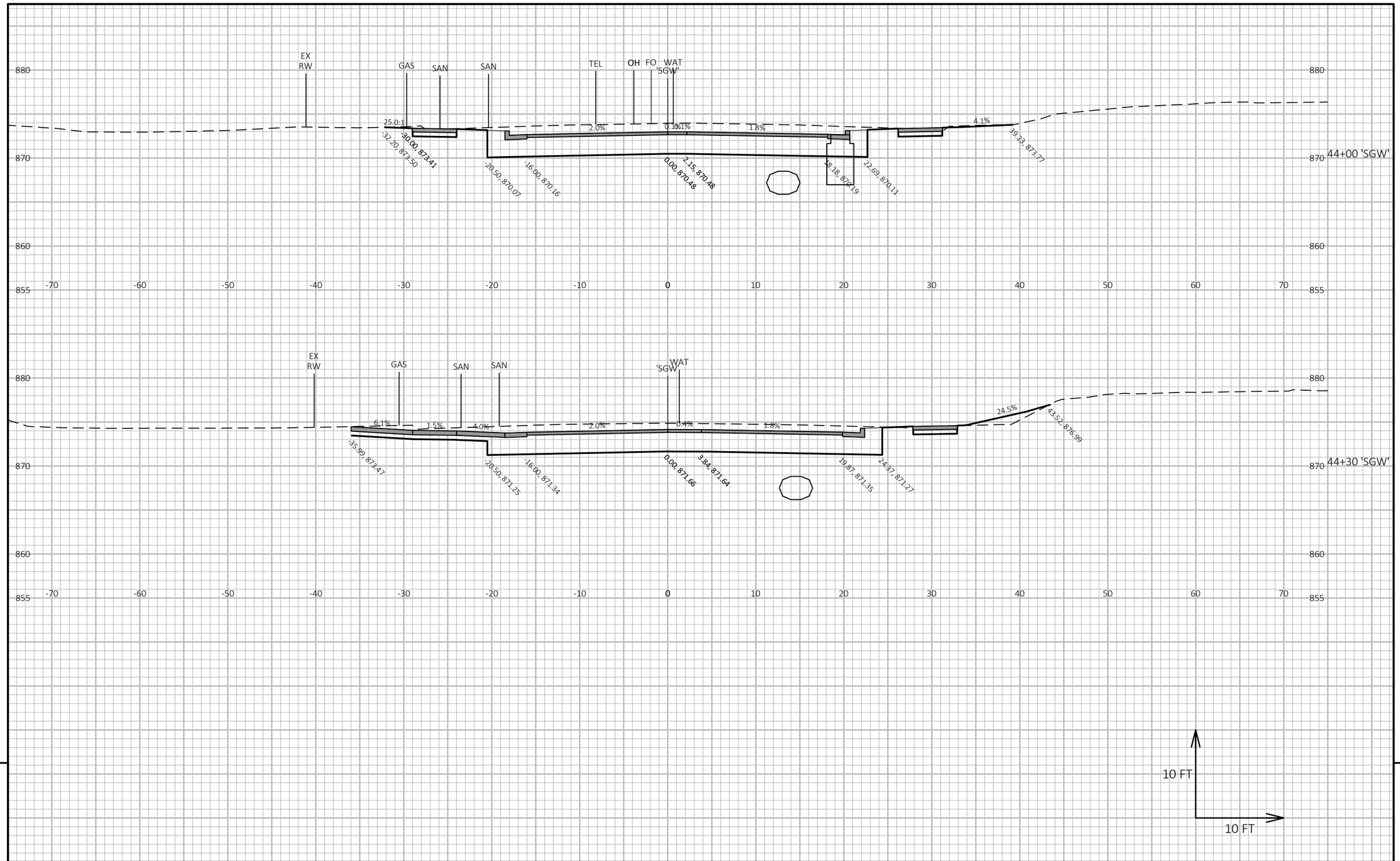
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 752	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 02

PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 753	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 03

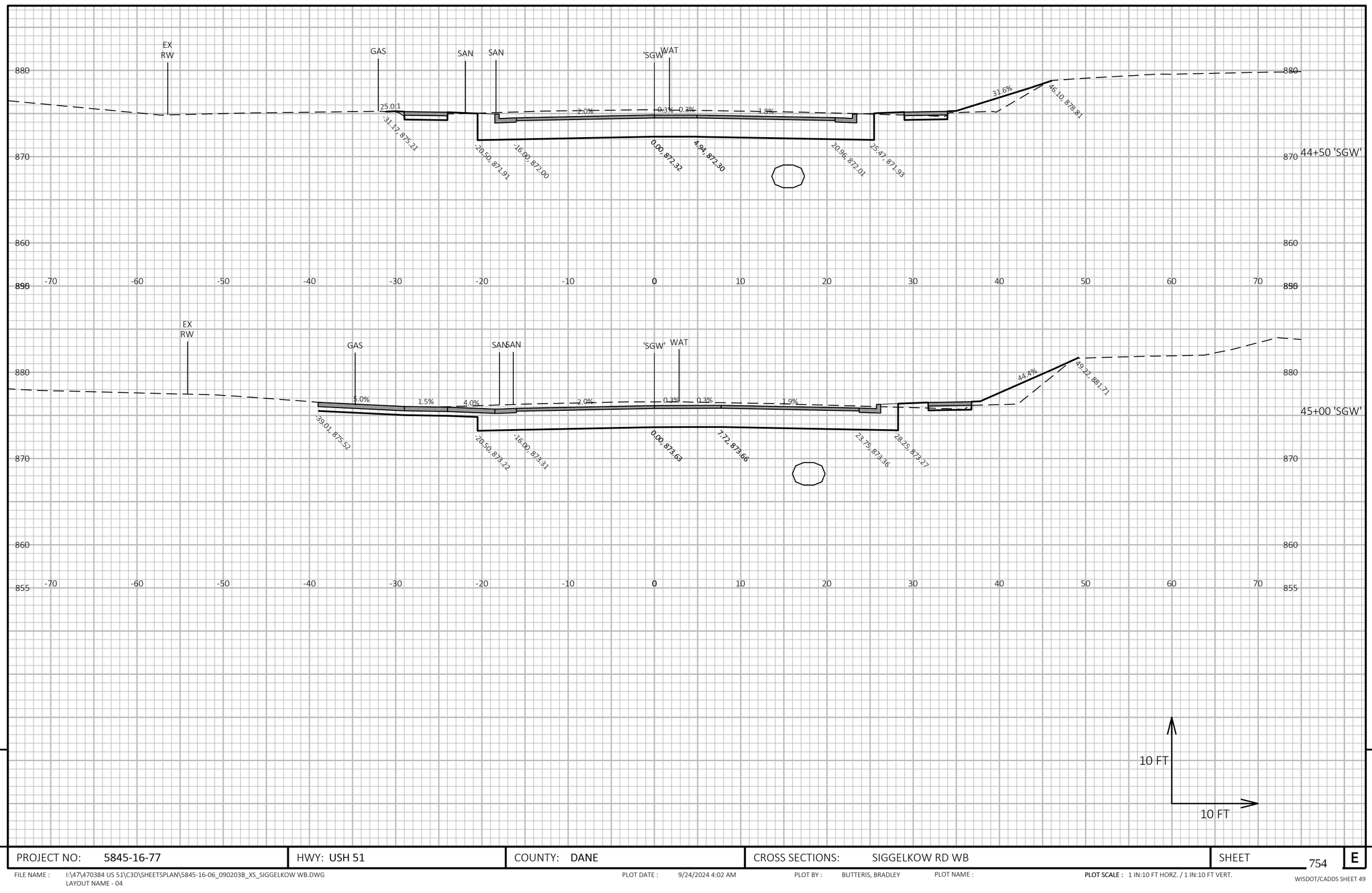
PLOT DATE : 9/24/2024 4:02 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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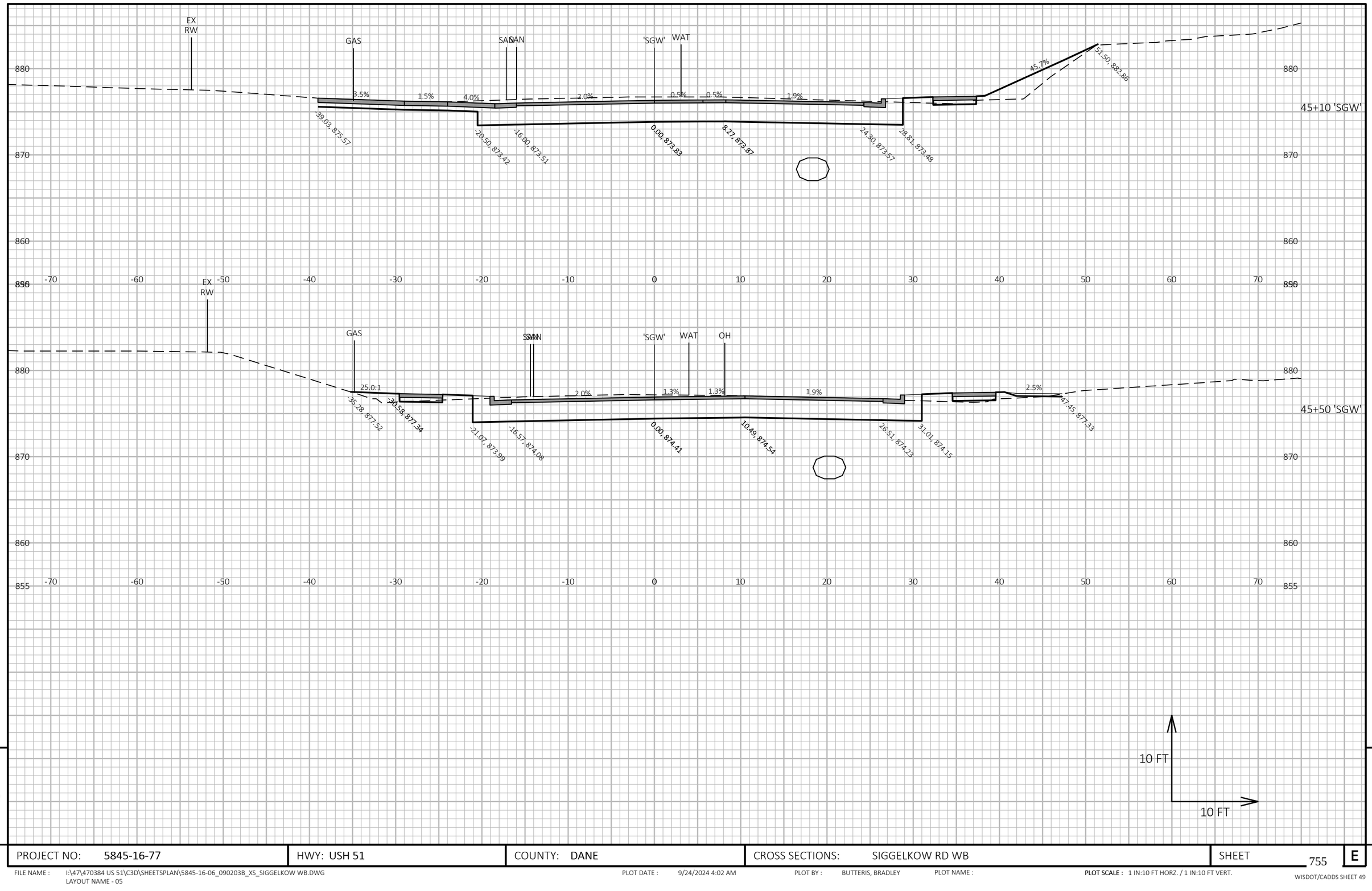
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 754	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 04

PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 755	E

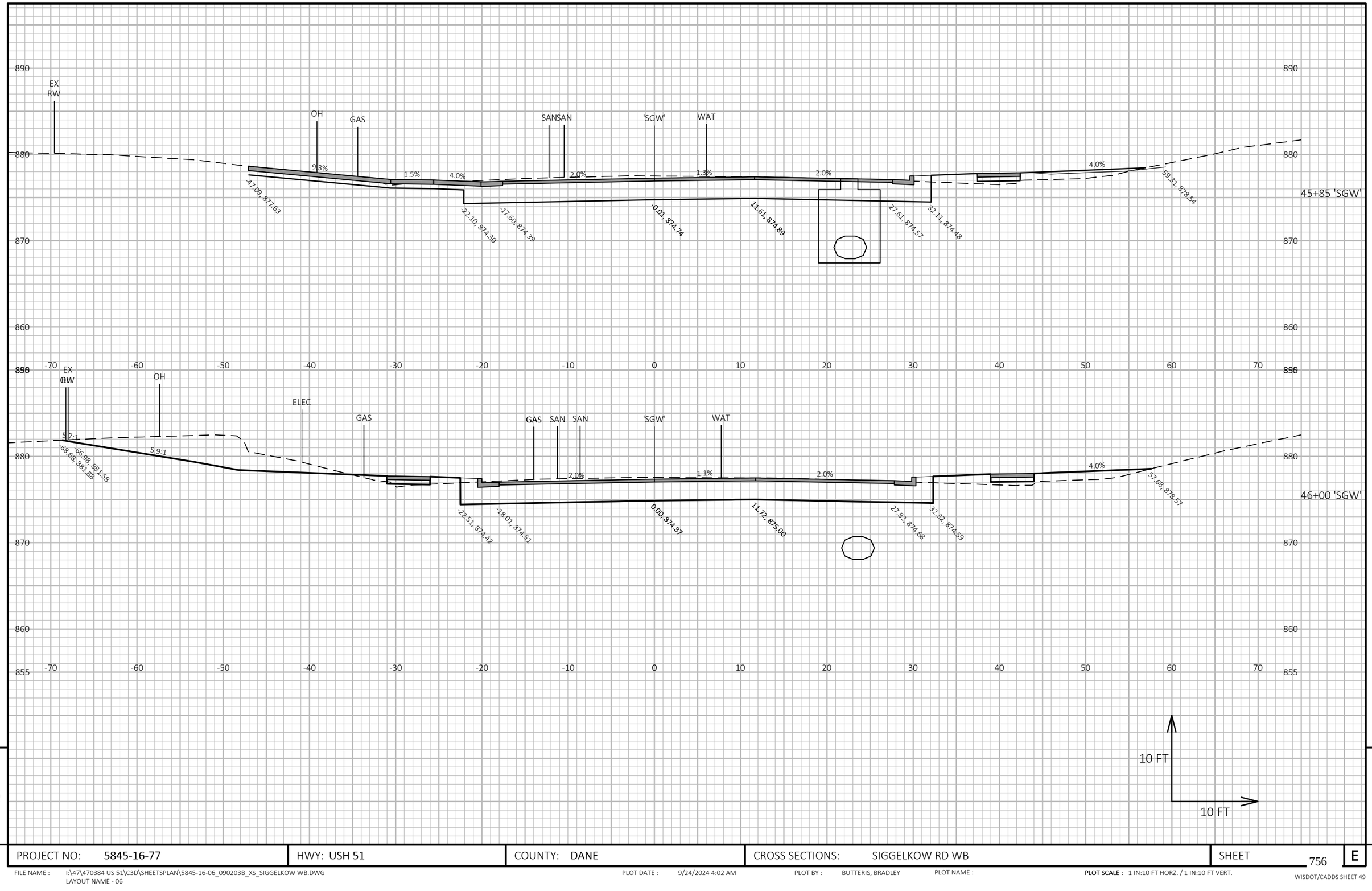
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 05

PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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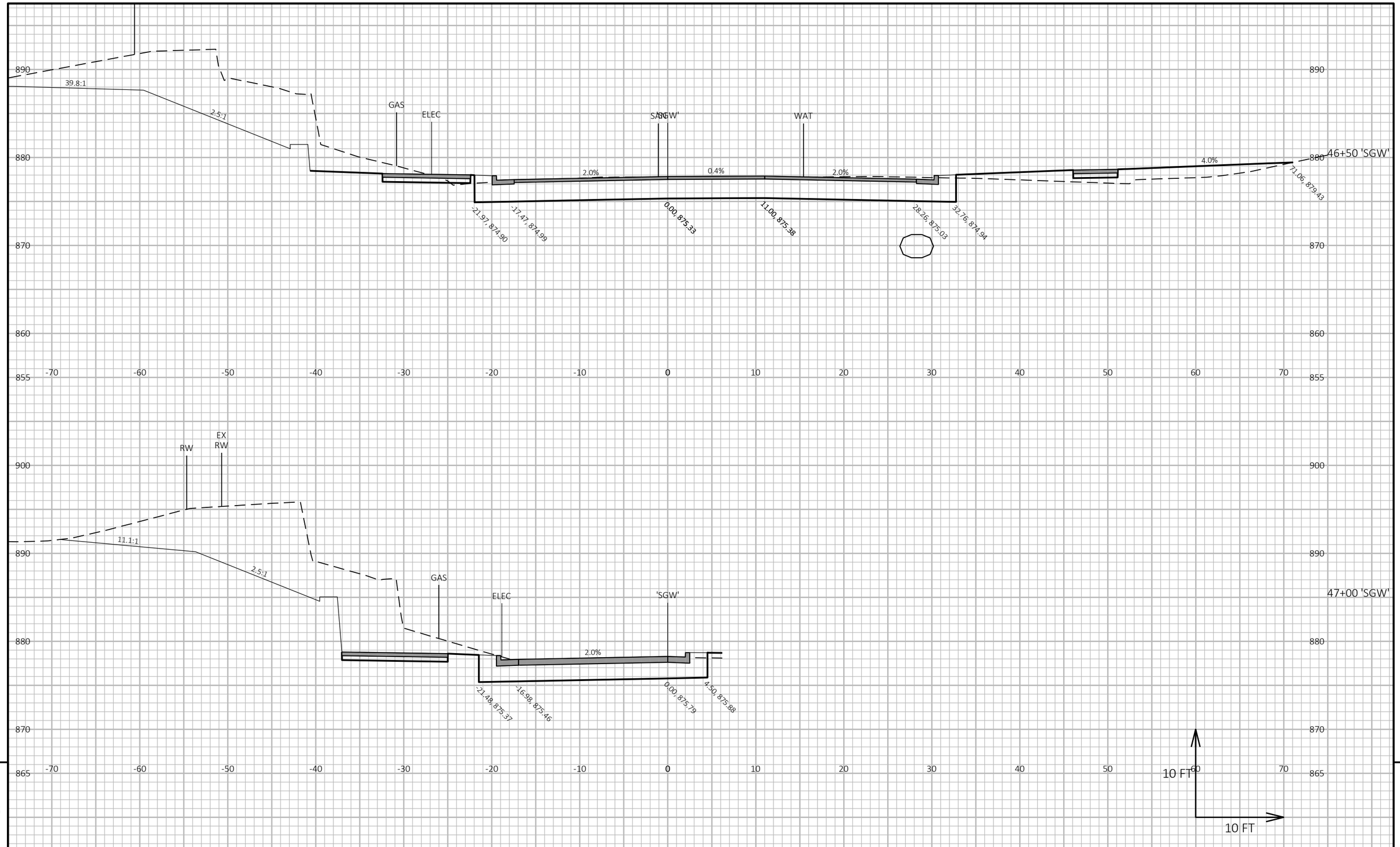
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 756	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 06

PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 757	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 07

PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

910
900
890
880
870
865

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

GAS
ELEC
SAN
'SGW'
WAT
-7.0%
-21.89, 876.54
-17.39, 876.63
0.00, 876.98
4.50, 877.07

49+00 'SGW'

10 FT
10 FT

9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 758	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 08

PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

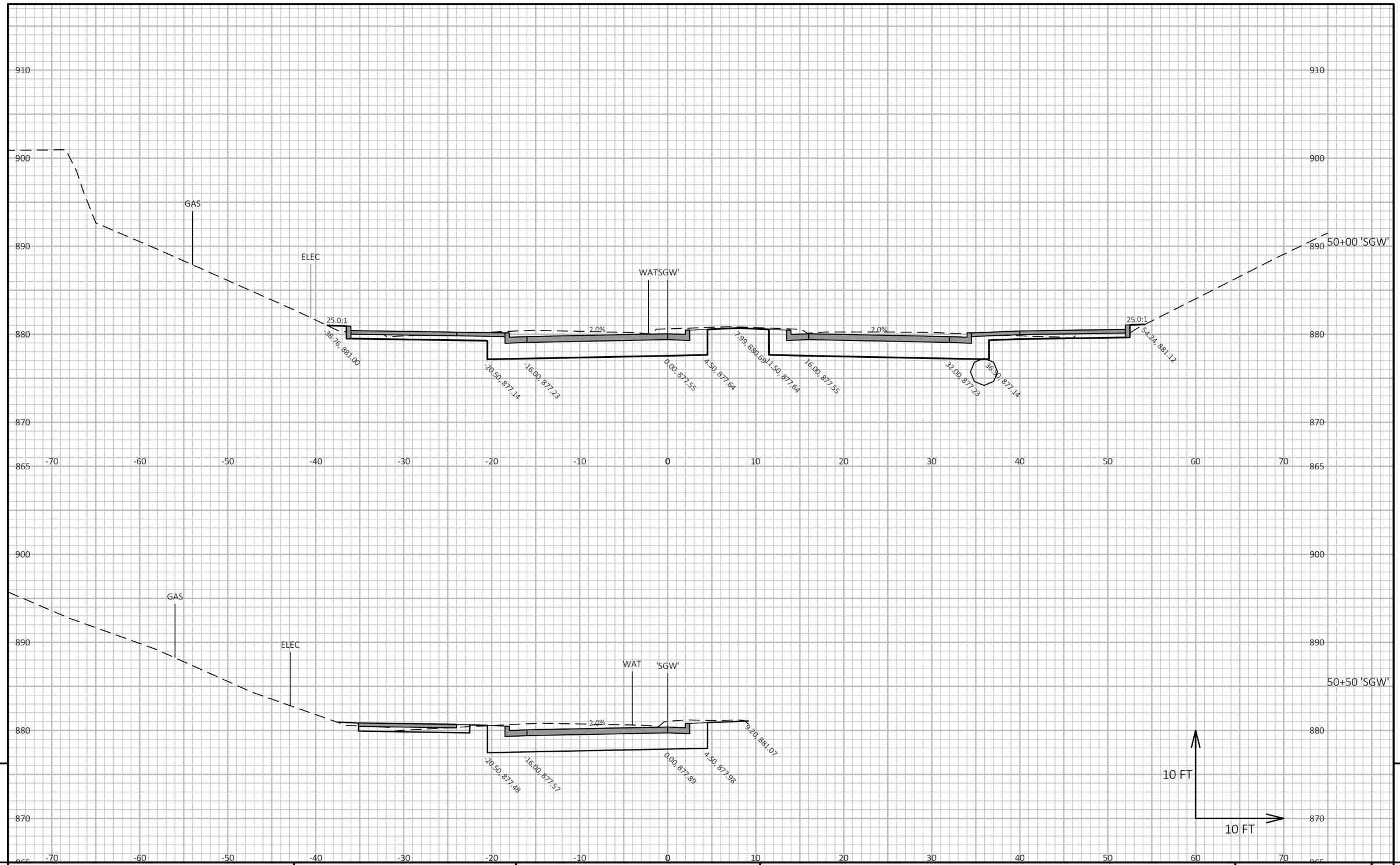
910
900
890
880
870
865
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70
GAS
ELEC
'SGW'
WAT
49+50 'SGW'
25.0:1
2.0%
2.0%
25.0:1
-37.67, 880.67
-20.50, 876.86
-16.00, 876.95
0.00, 877.27
4.50, 877.36
7.22, 880.37
11.50, 877.29
16.00, 877.20
32.00, 875.88
36.50, 876.79
54.67, 880.79
10 FT
10 FT
9
9

PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 759	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 09

PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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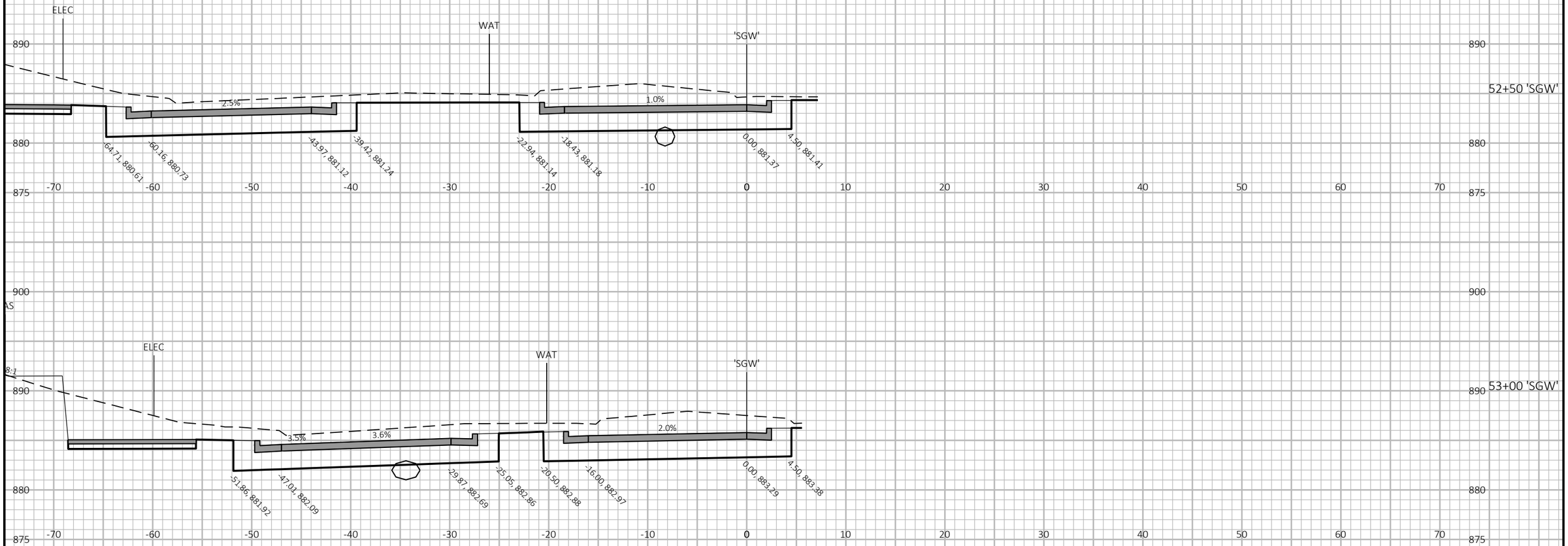
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 760	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 10

PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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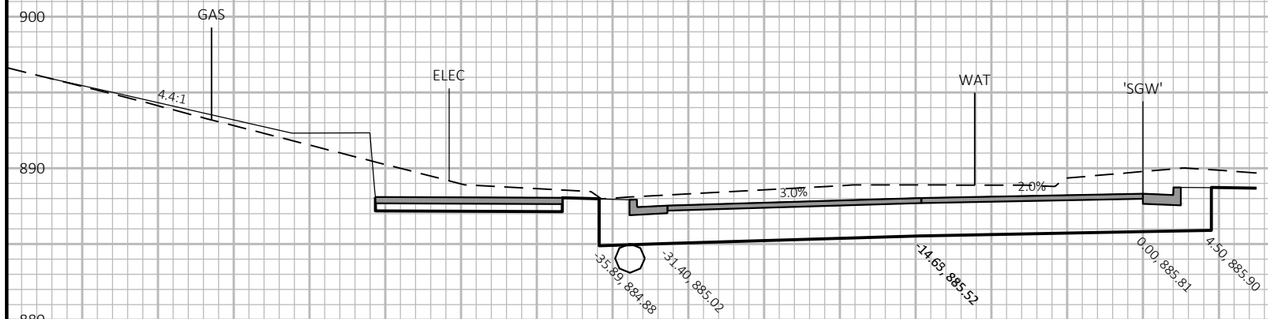
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 761	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 11

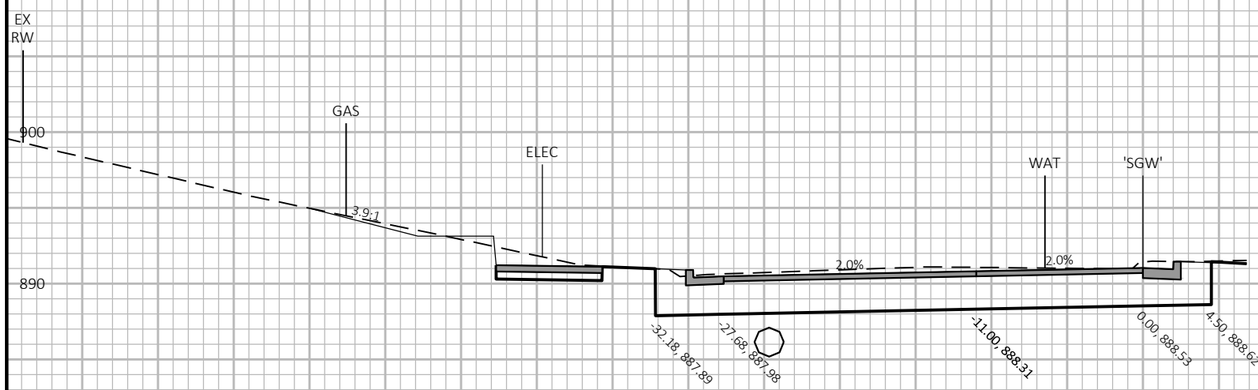
PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

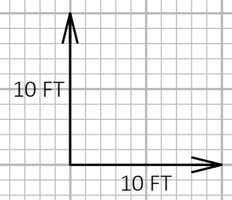
WISDOT/CADDS SHEET 49



53+50 'SGW'



54+00 'SGW'

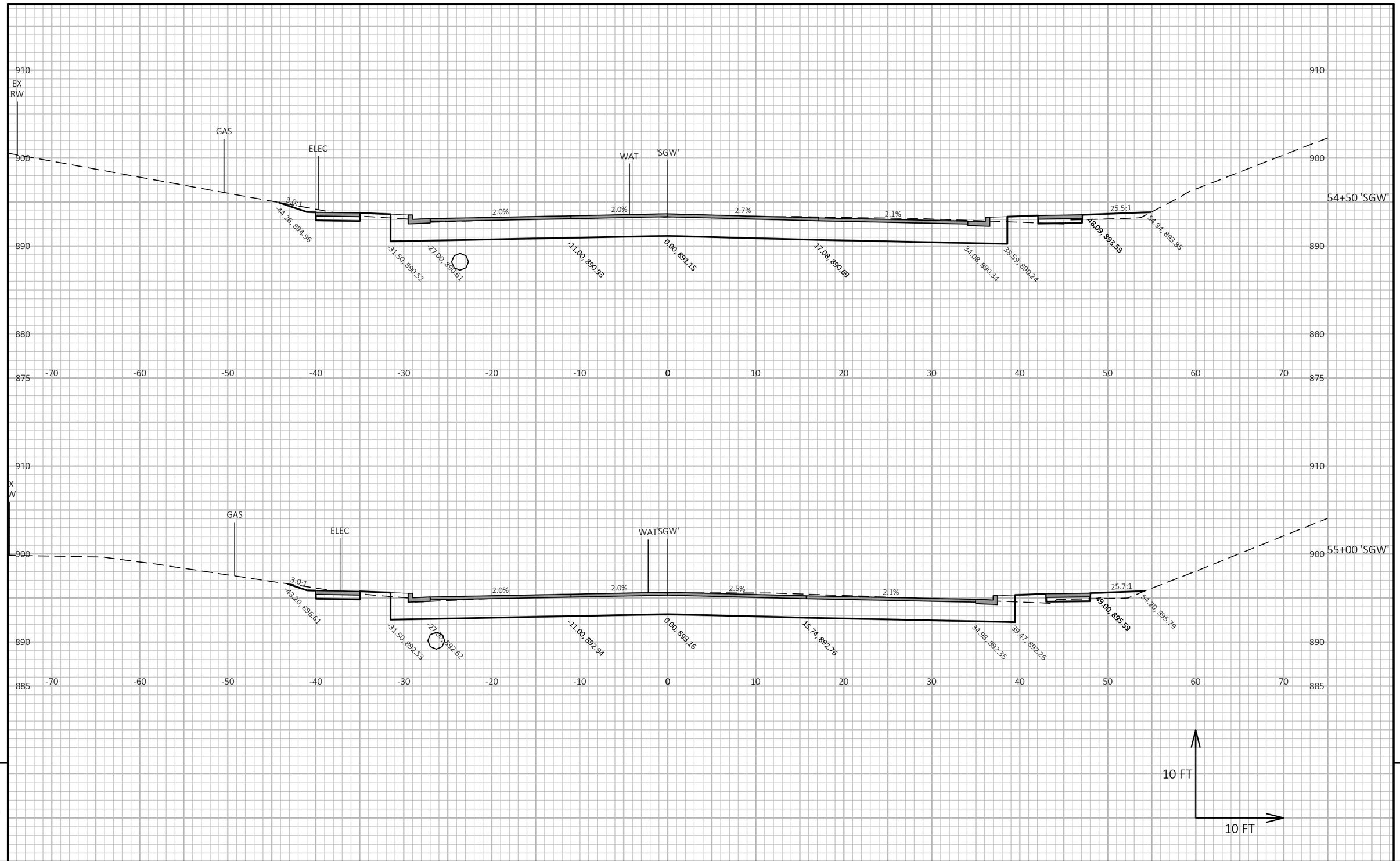


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 762	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 12

PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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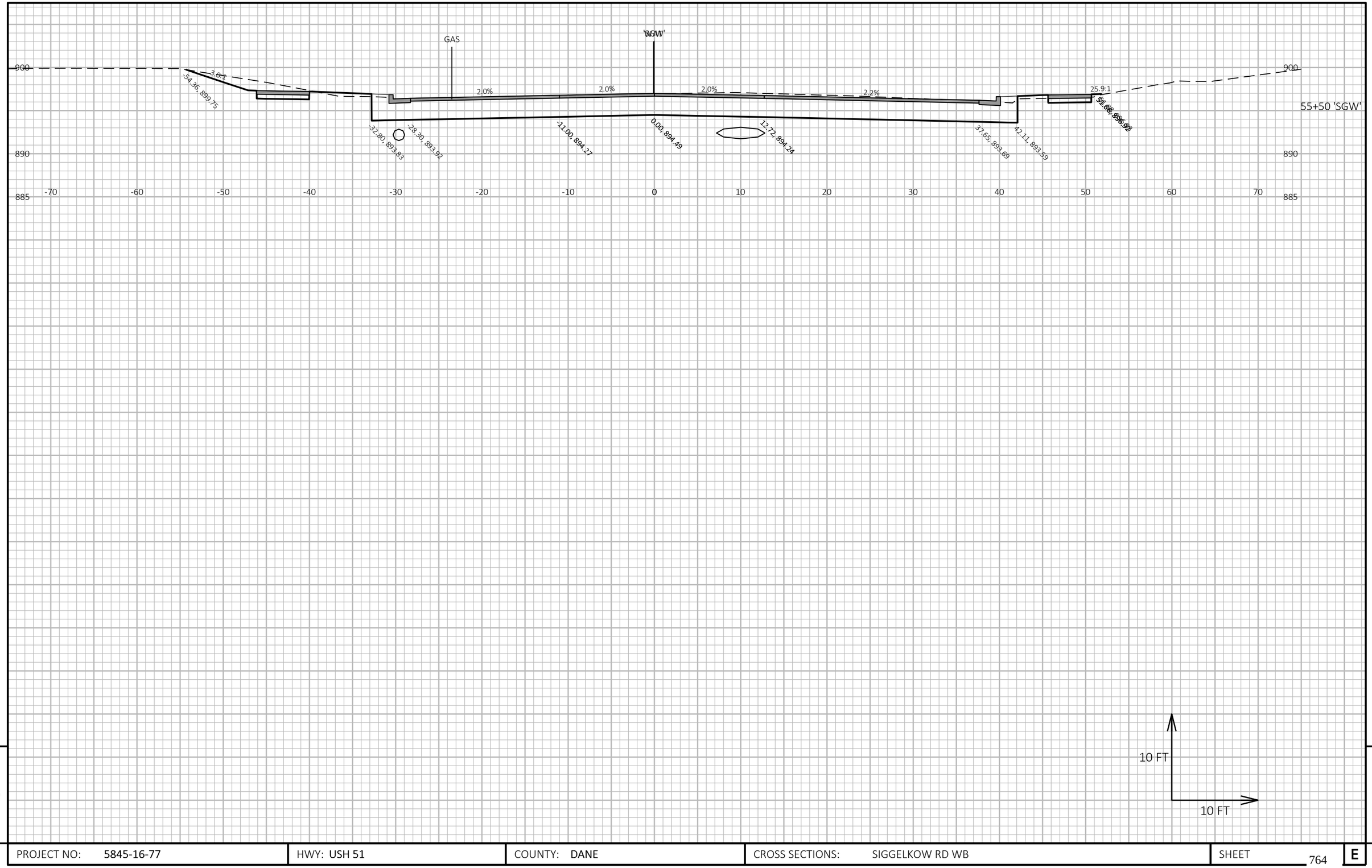
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 763	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 13

PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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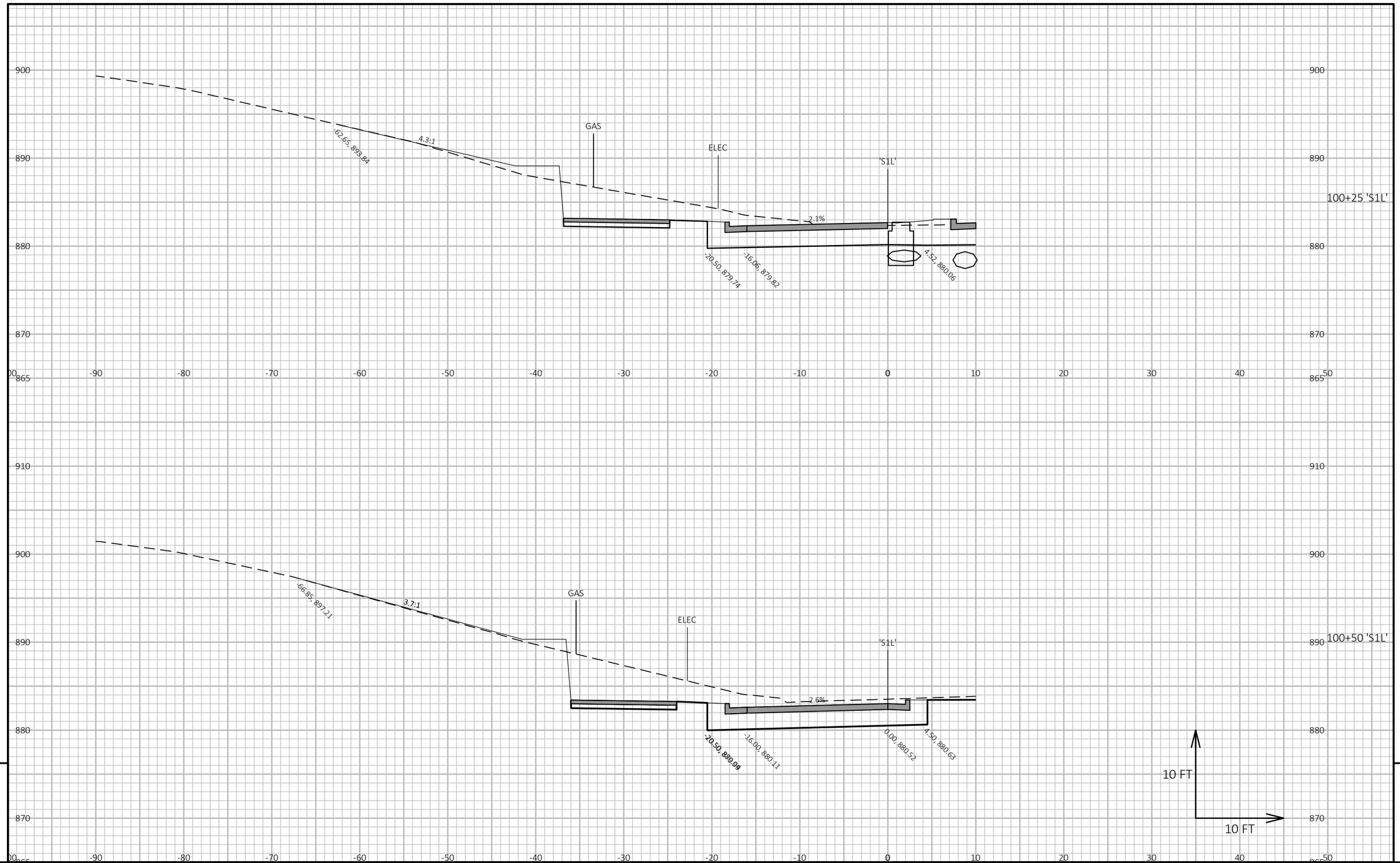
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: SIGGELKOW RD WB	SHEET 764	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203B_XS_SIGGELKOW WB.DWG
LAYOUT NAME - 14

PLOT DATE : 9/24/2024 4:02 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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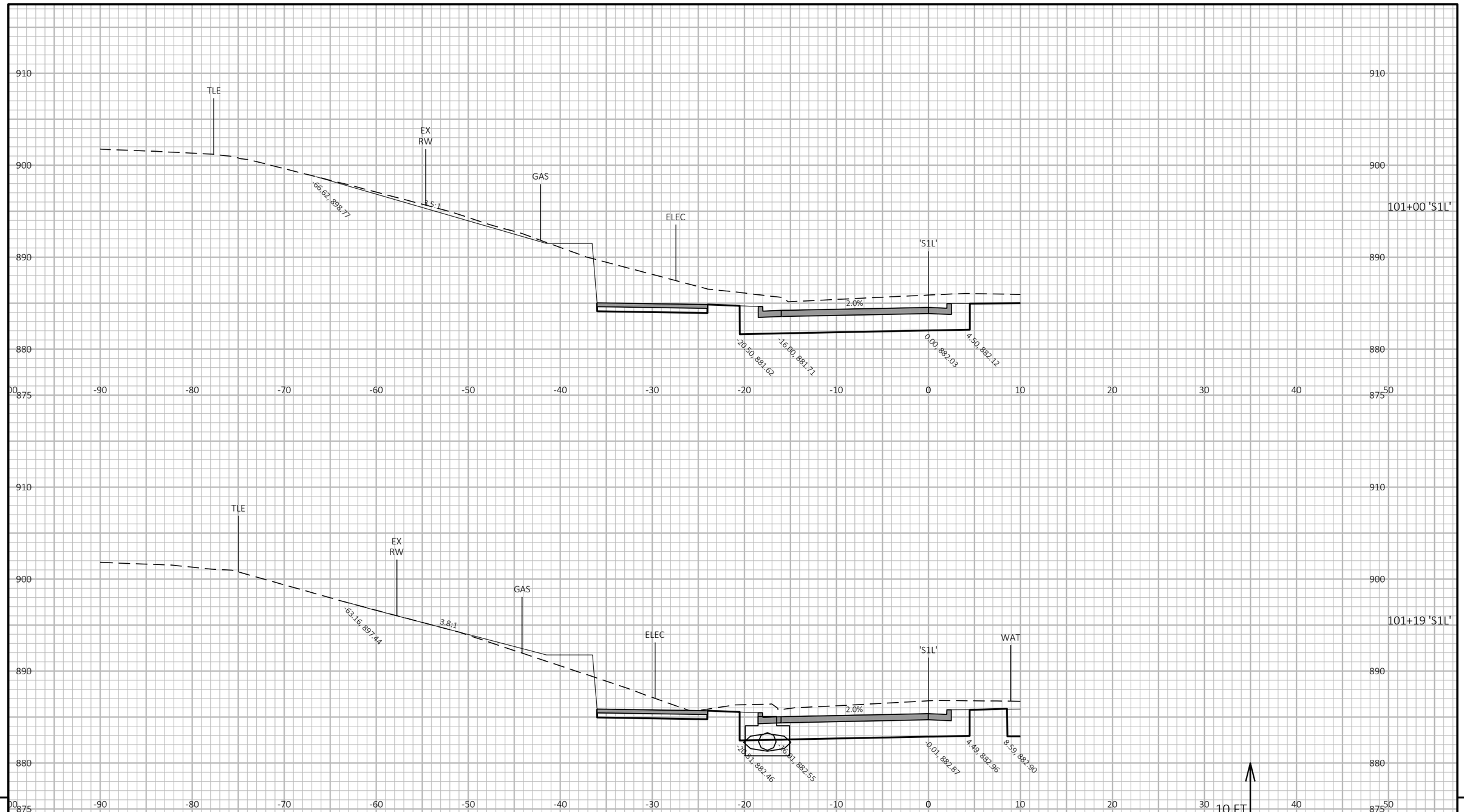
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'S1L' LINE	SHEET 765	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203D_XS_SIGGELKOW S1L.DWG
LAYOUT NAME - 15

PLOT DATE : 9/24/2024 12:31 PM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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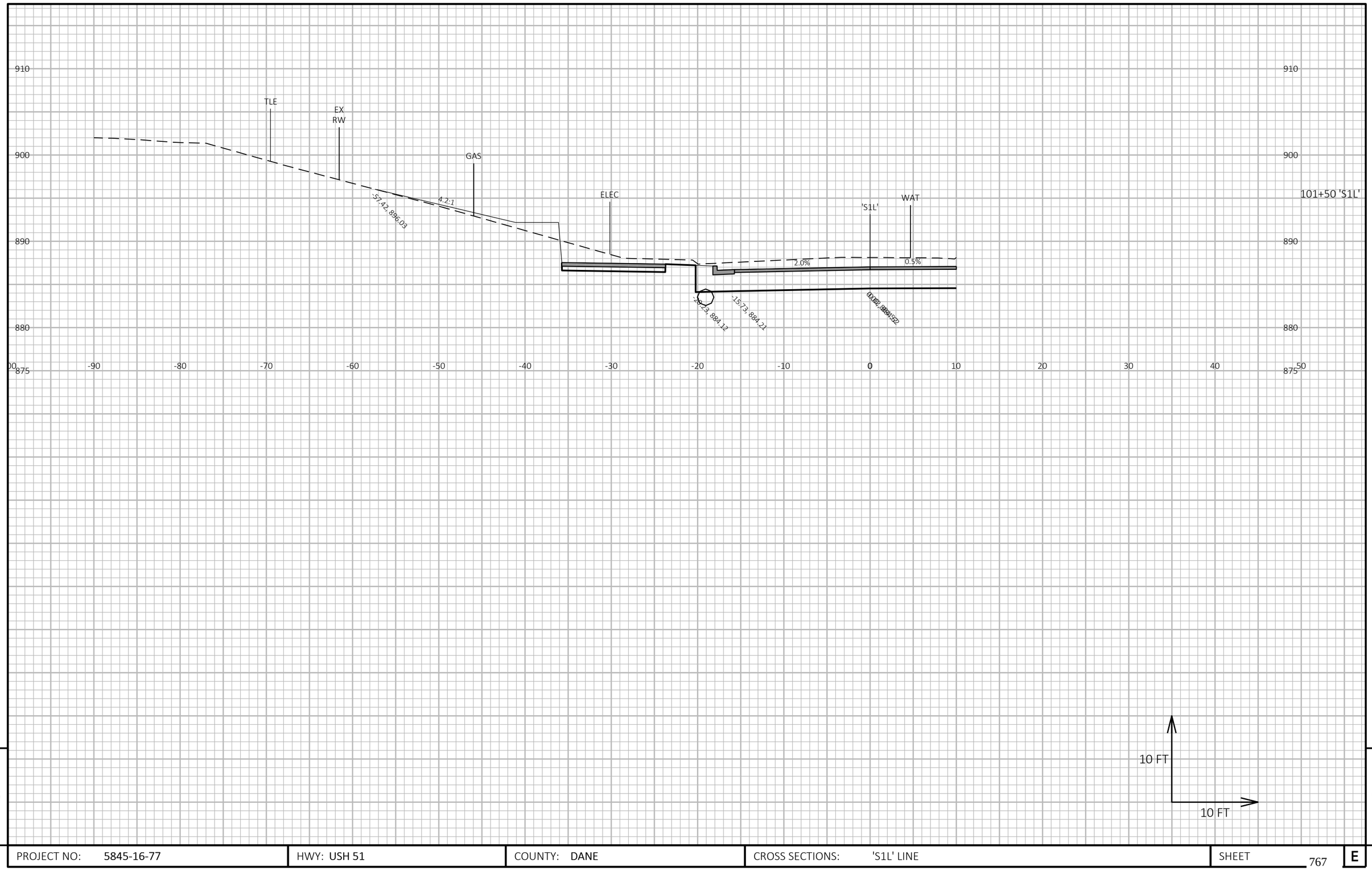
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'S1L' LINE	SHEET 766	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203D_XS_SIGGELKOW S1L.DWG
LAYOUT NAME - 16

PLOT DATE : 9/24/2024 12:31 PM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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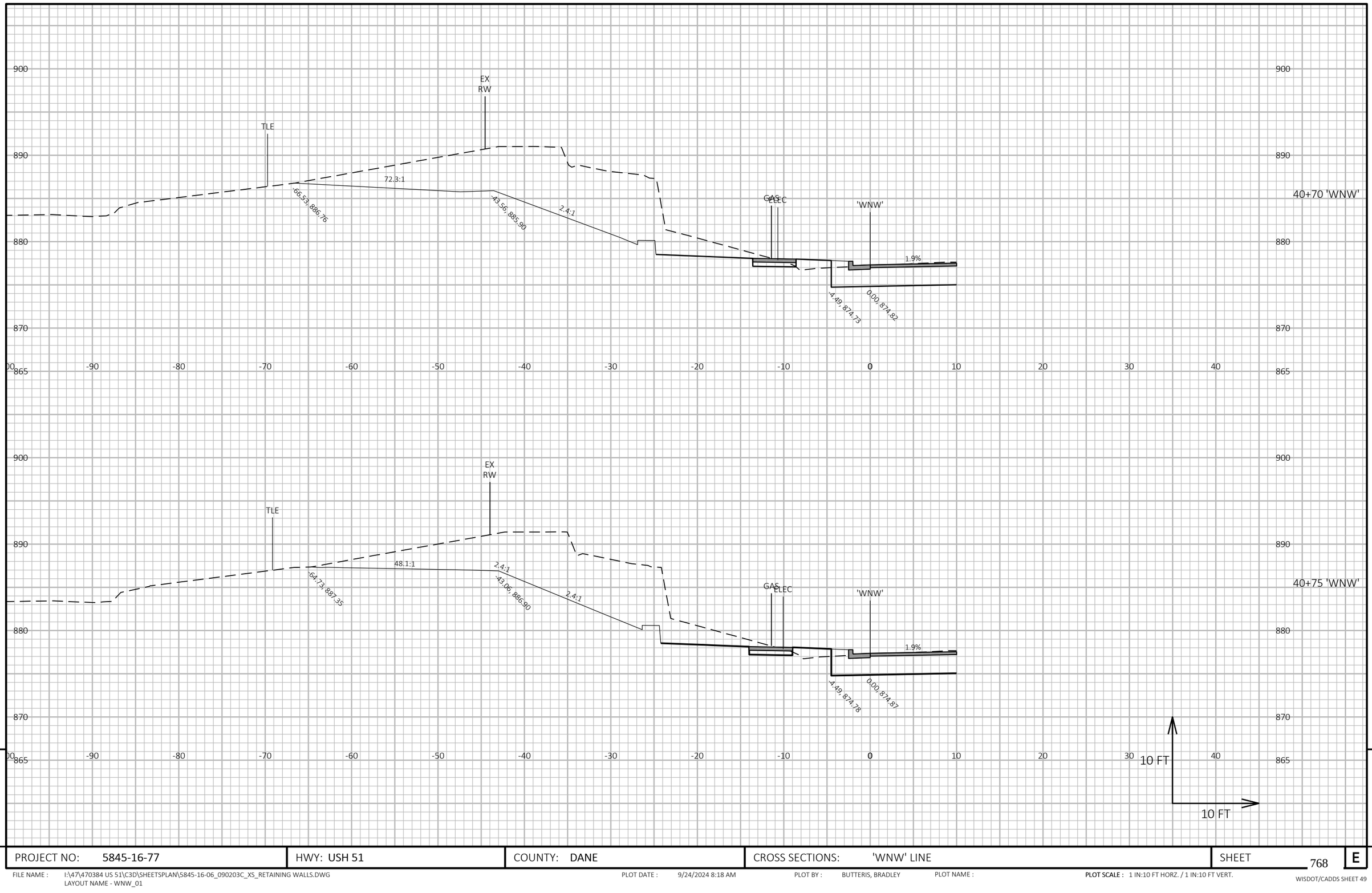
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'S1L' LINE	SHEET 767	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203D_XS_SIGGELKOW S1L.DWG
LAYOUT NAME - 17

PLOT DATE : 9/24/2024 12:31 PM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9 9

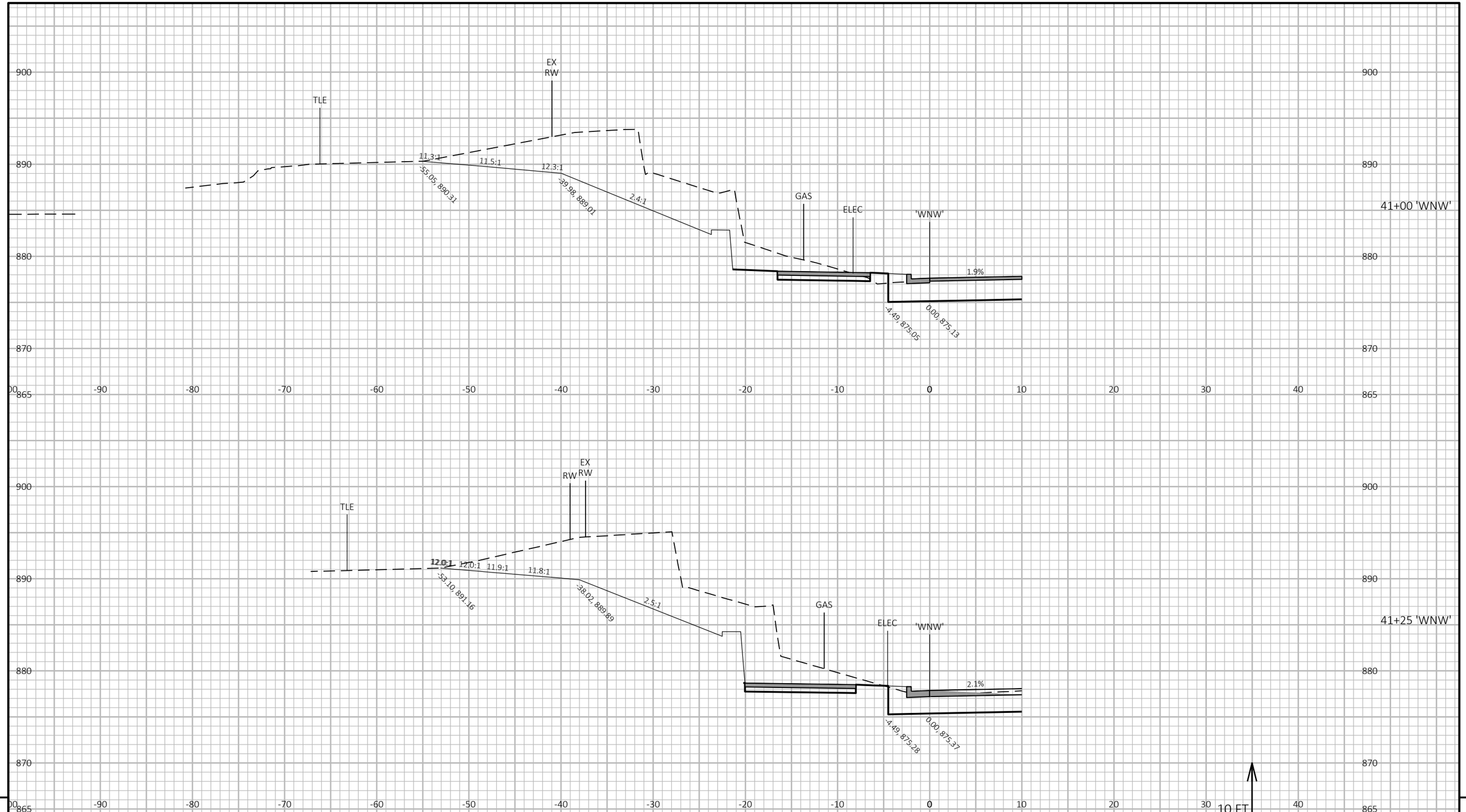
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'WNW' LINE	SHEET 768 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - WNW_01

PLOT DATE : 9/24/2024 8:18 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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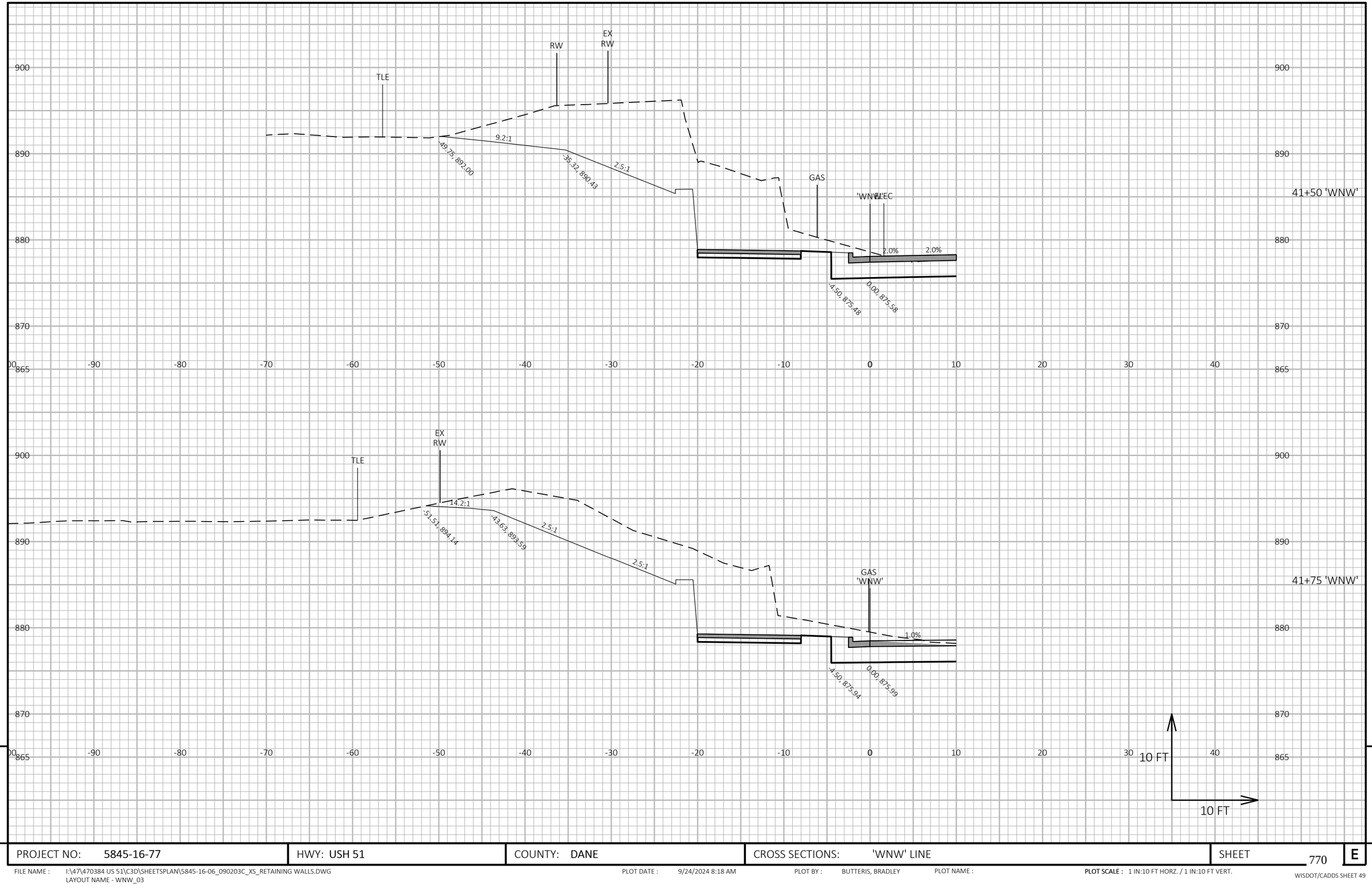
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'WNW' LINE	SHEET 769	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - WNW_02

PLOT DATE : 9/24/2024 8:18 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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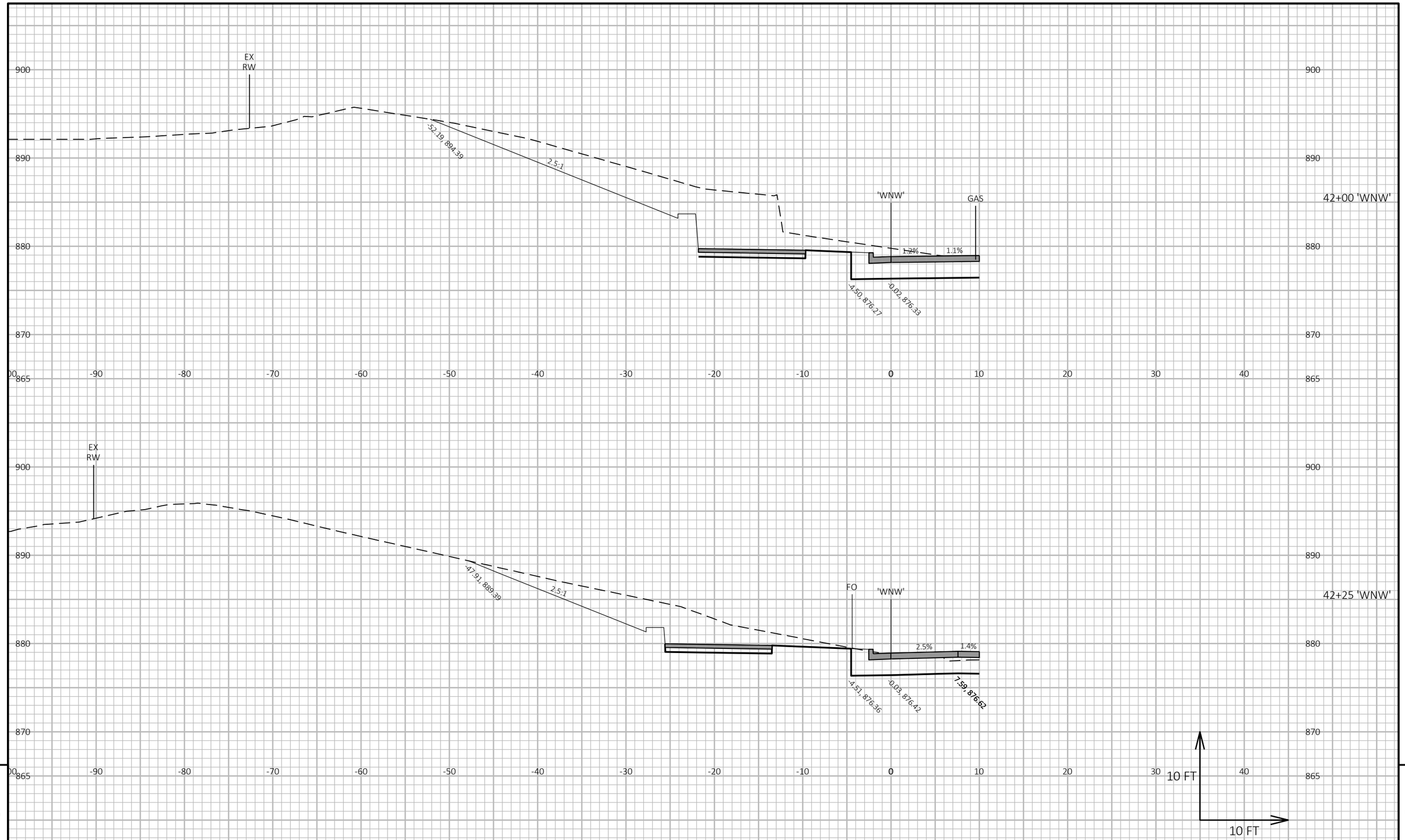
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'WNW' LINE	SHEET 770	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - WNW_03

PLOT DATE : 9/24/2024 8:18 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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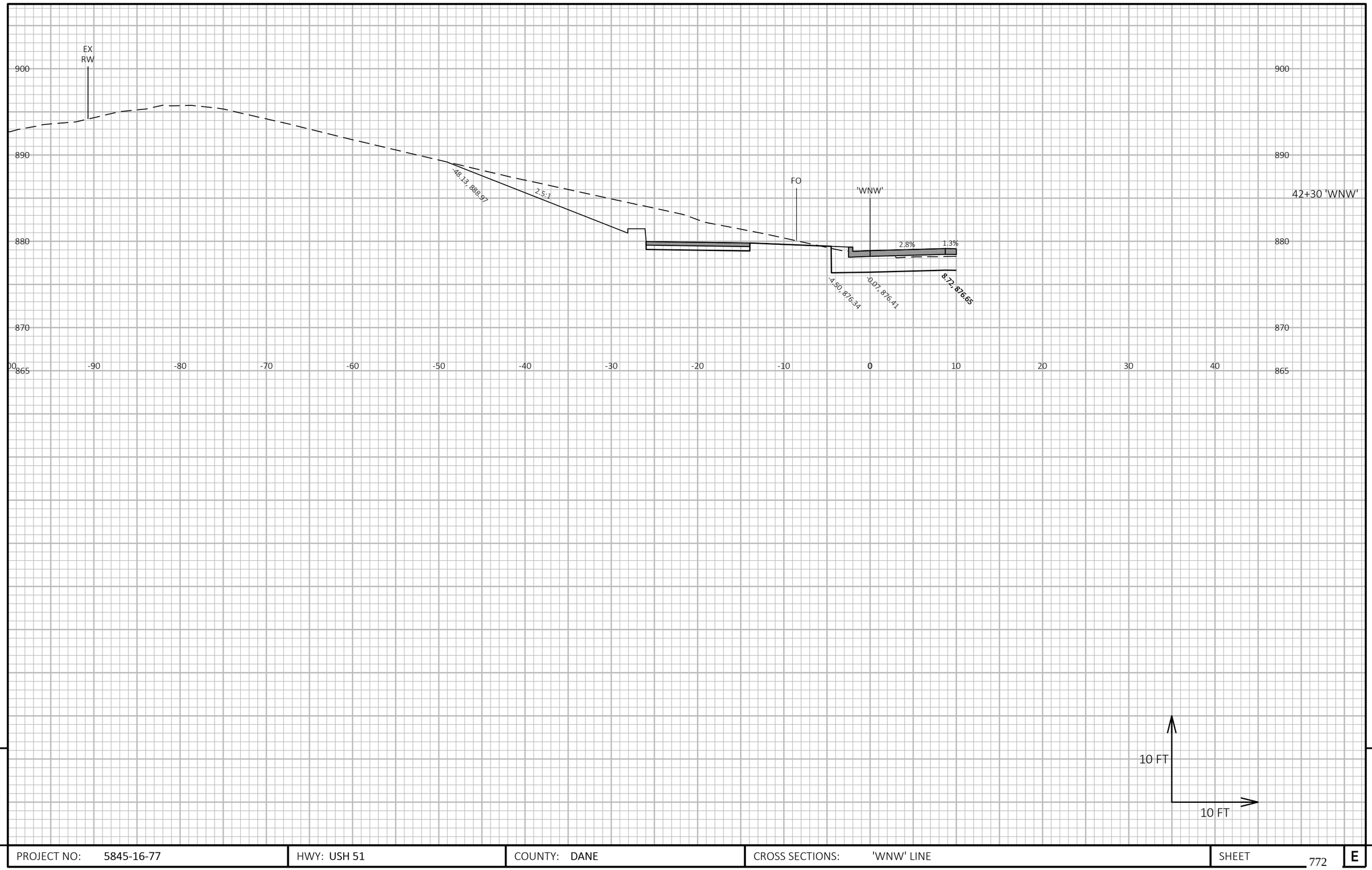
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'WNW' LINE	SHEET 771	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - WNW_04

PLOT DATE : 9/24/2024 8:18 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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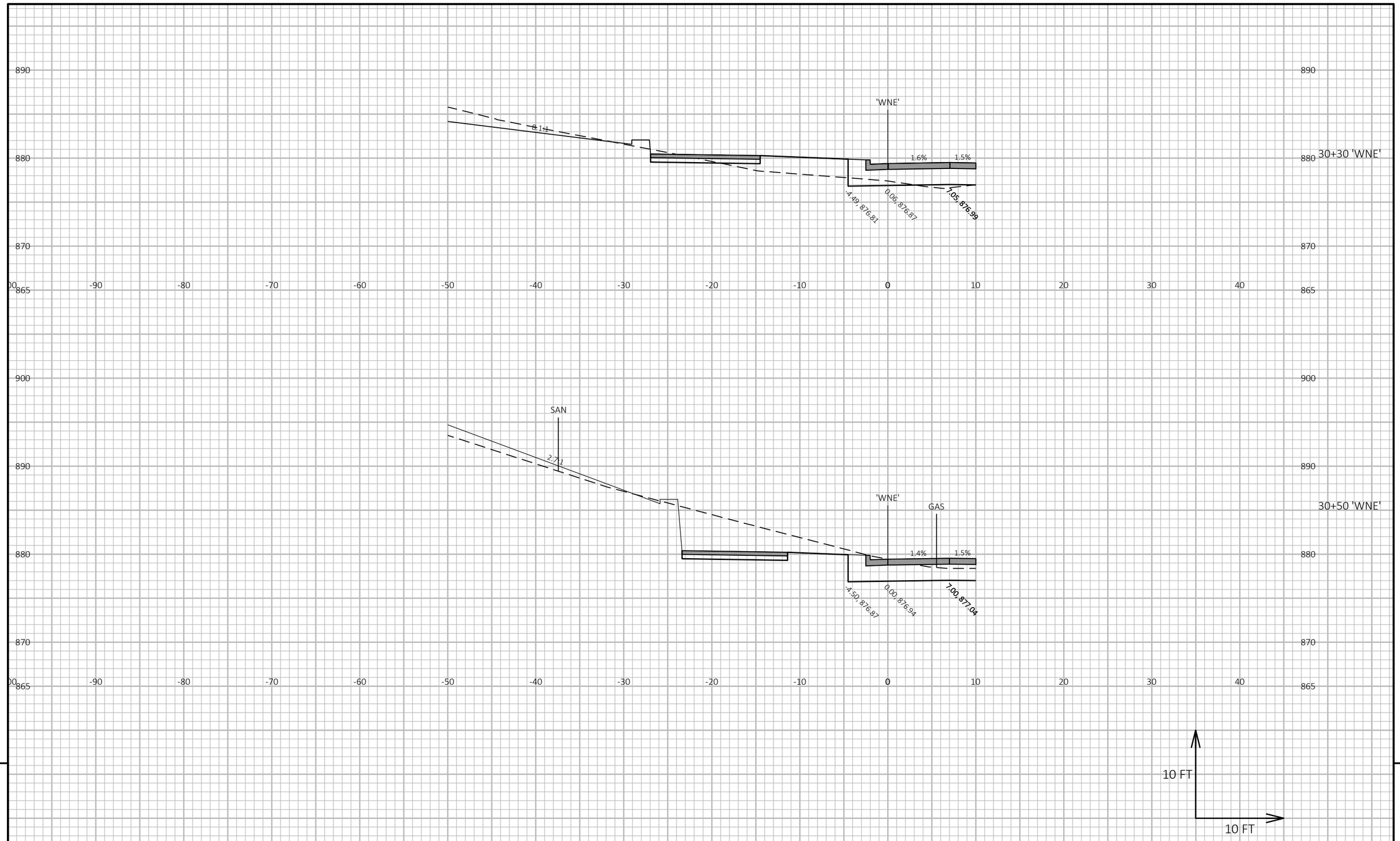
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'WNW' LINE	SHEET 772	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - WNW_05

PLOT DATE : 9/24/2024 8:18 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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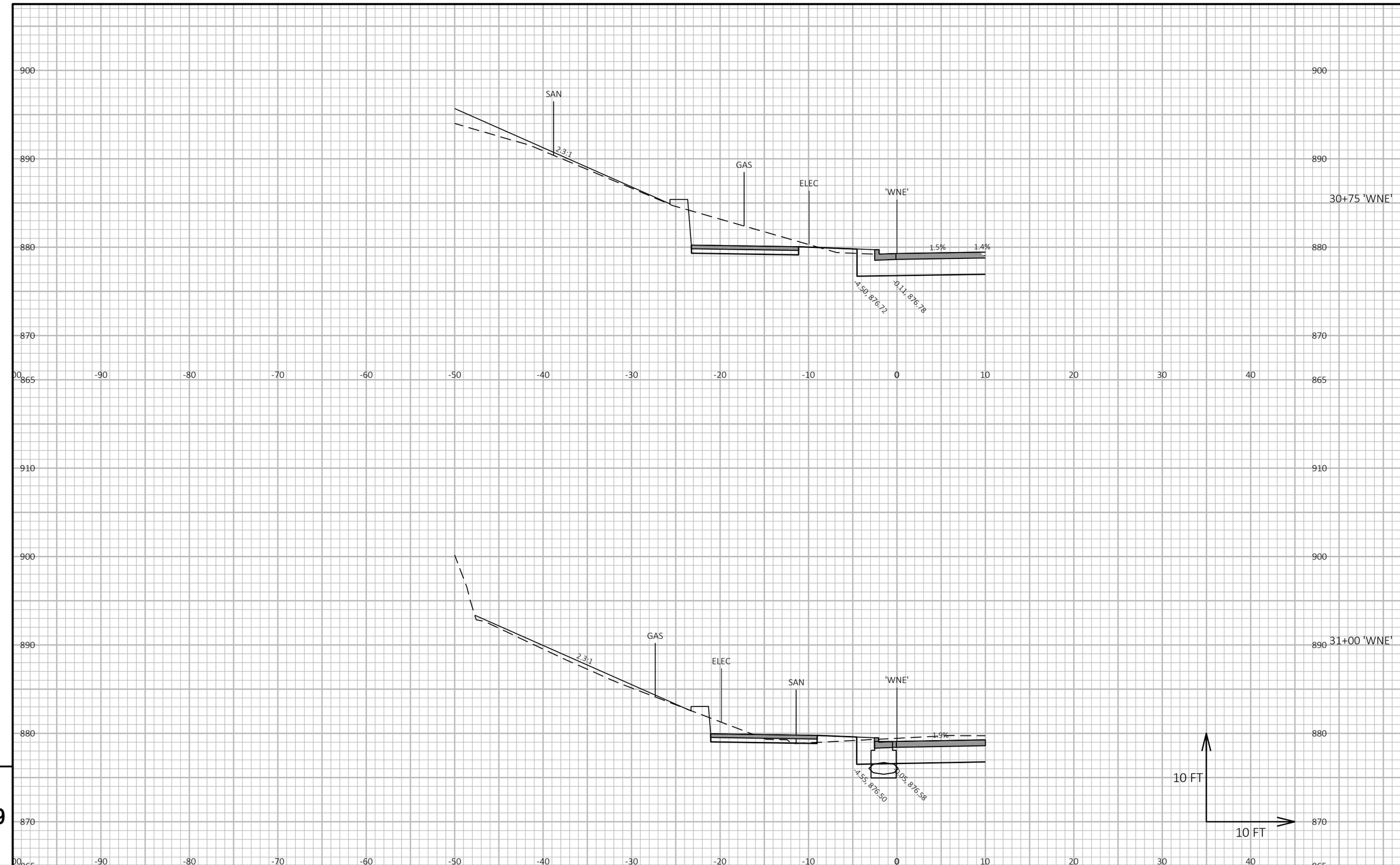
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'WNE' LINE	SHEET 773	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - WNE_1

PLOT DATE : 9/24/2024 8:18 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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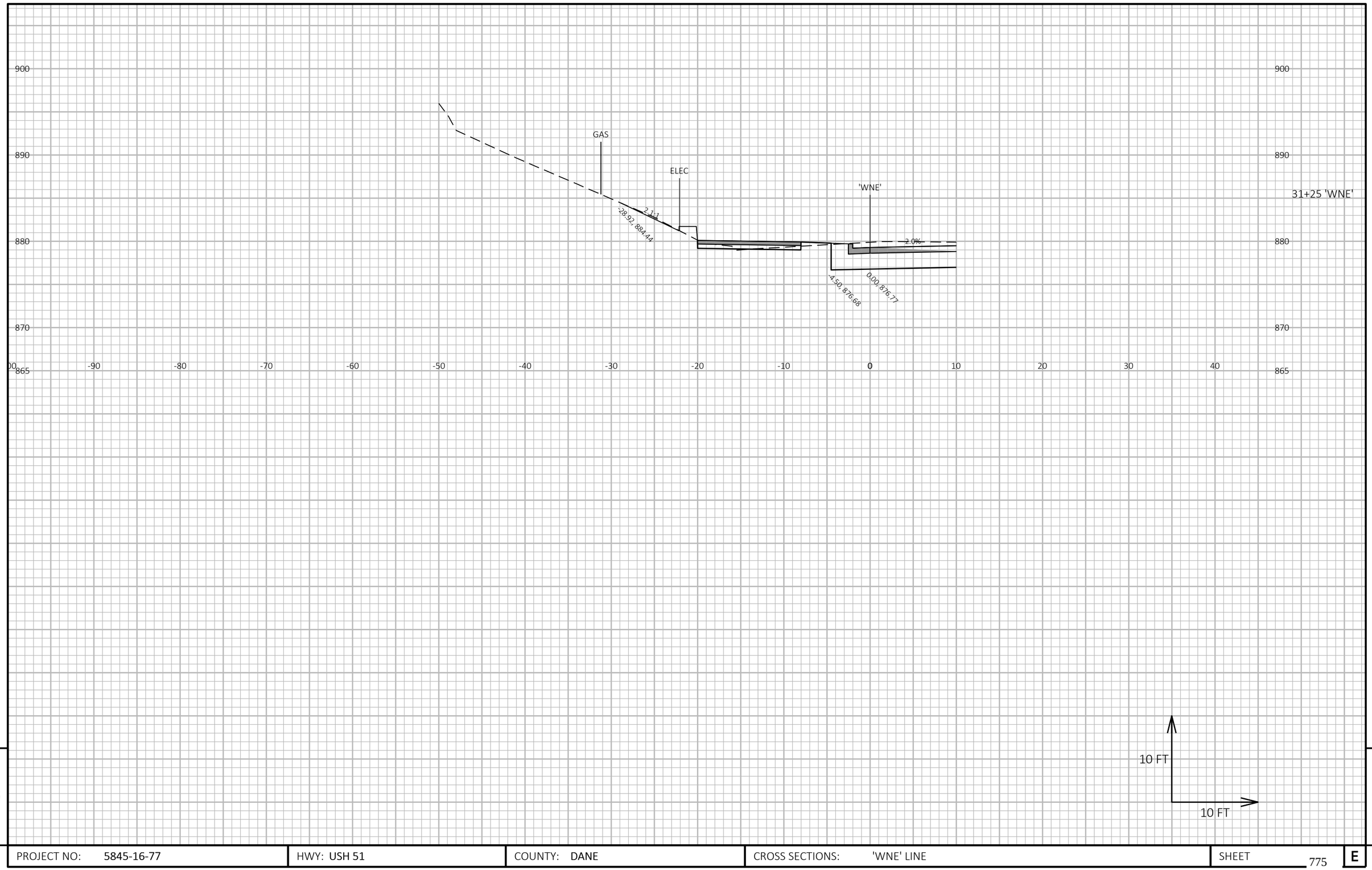
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FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - WNE_2

PLOT DATE : 9/24/2024 8:18 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



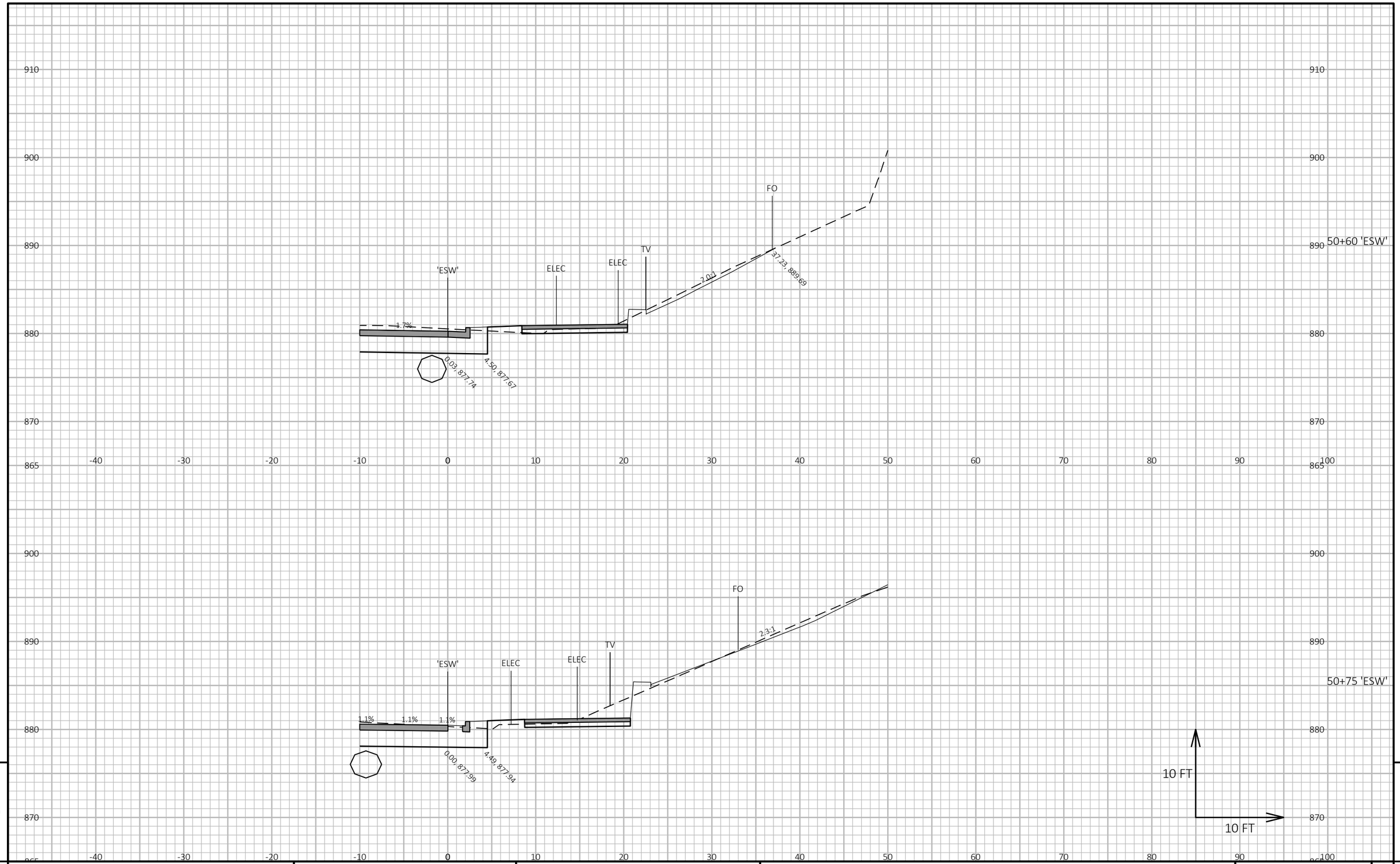
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'WNE' LINE	SHEET 775	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - WNE_3

PLOT DATE : 9/24/2024 8:18 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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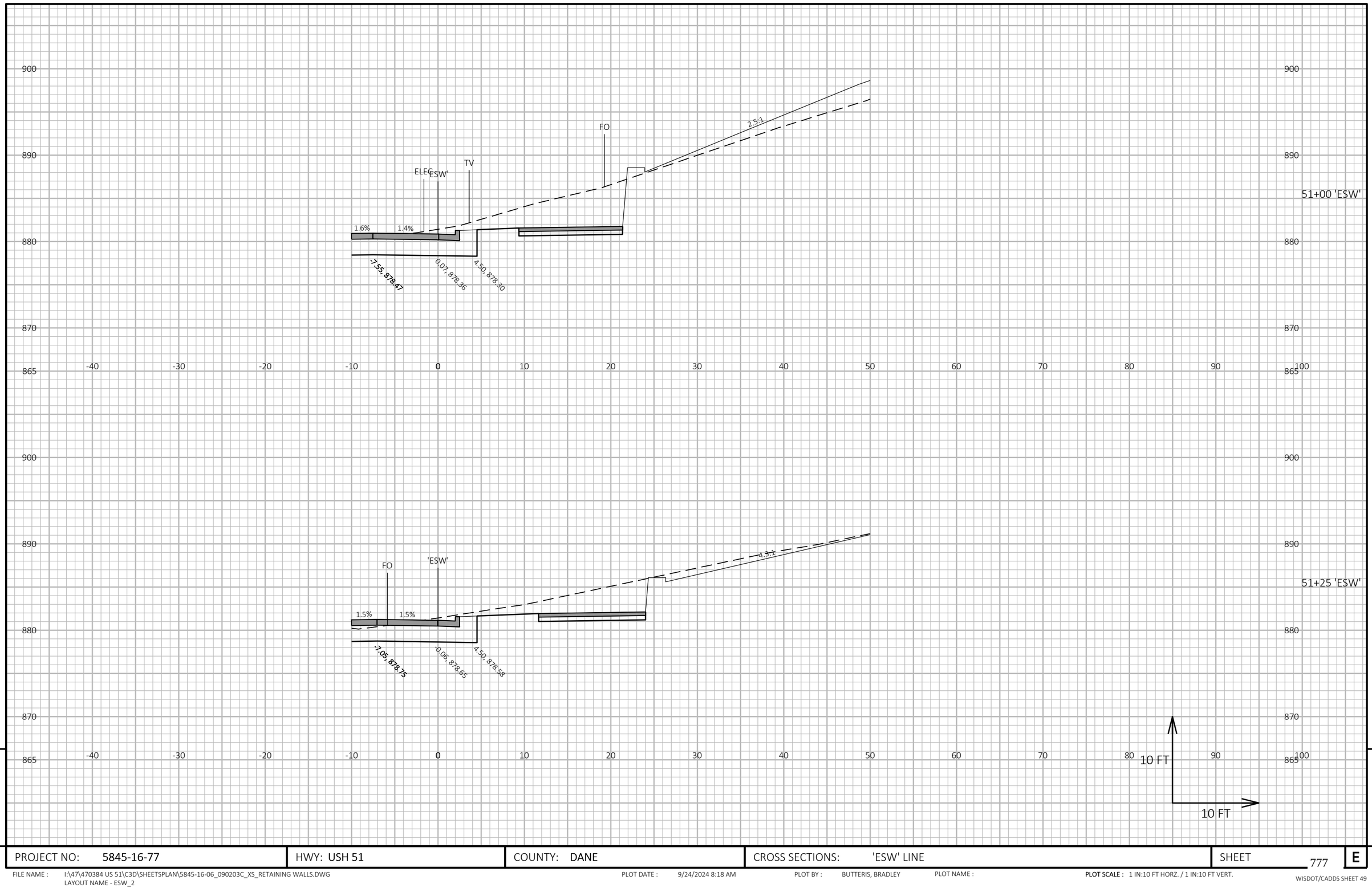
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ESW' LINE	SHEET 776	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ESW_1

PLOT DATE : 9/24/2024 8:18 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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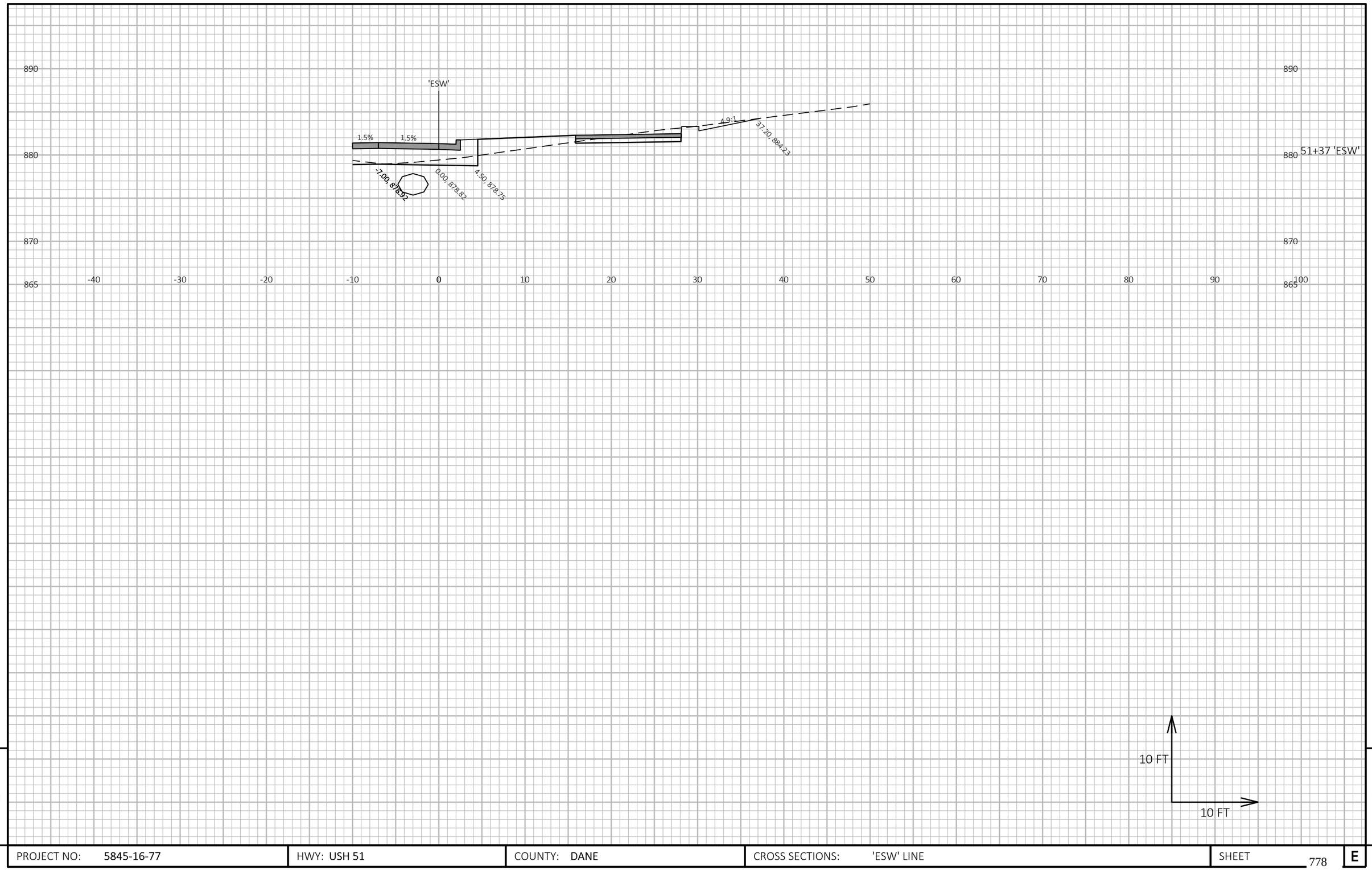
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ESW' LINE	SHEET 777	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ESW_2

PLOT DATE : 9/24/2024 8:18 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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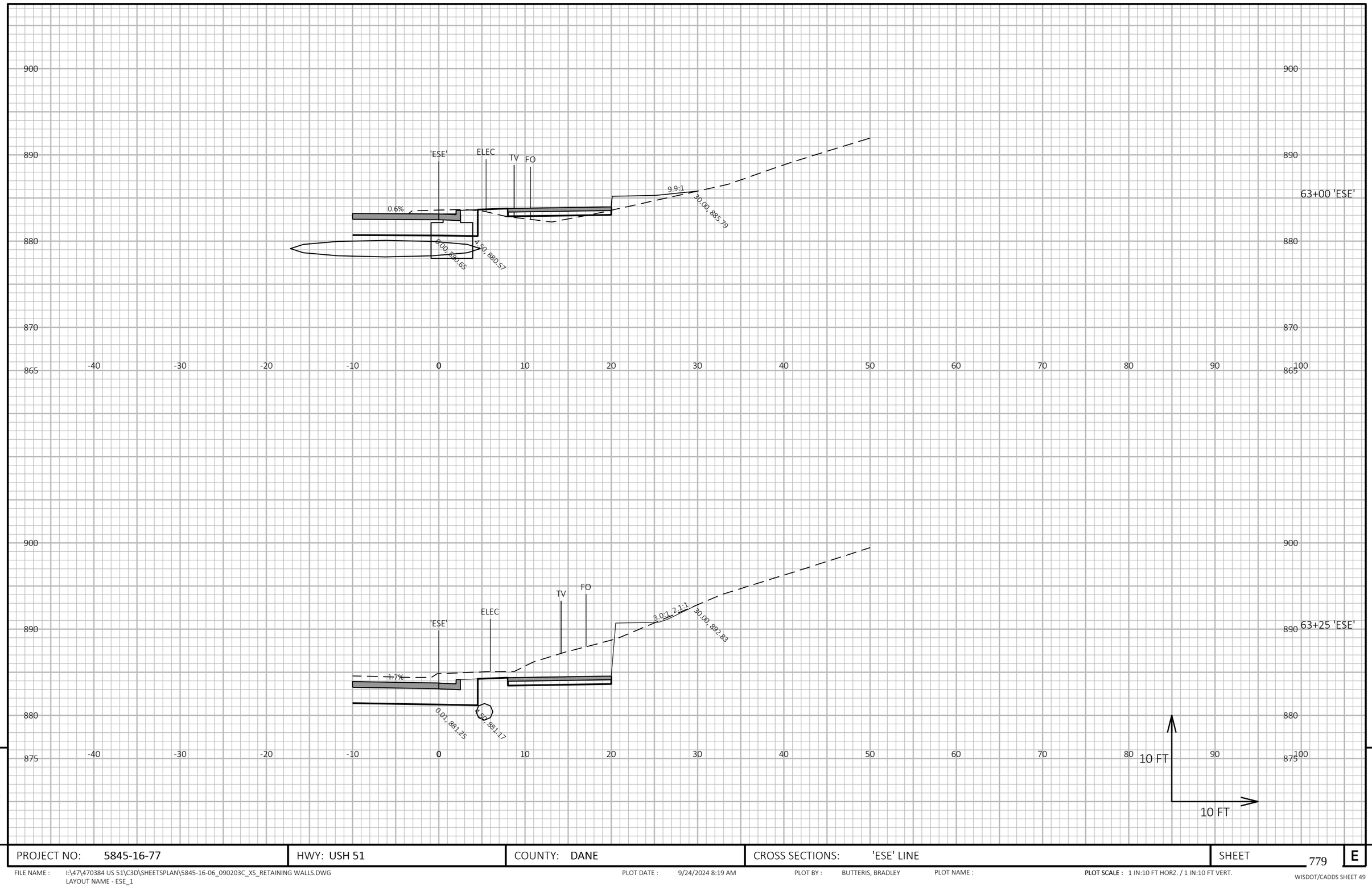
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ESW' LINE	SHEET 778	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ESW_3

PLOT DATE : 9/24/2024 8:18 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ESE' LINE	SHEET 779	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ESE_1

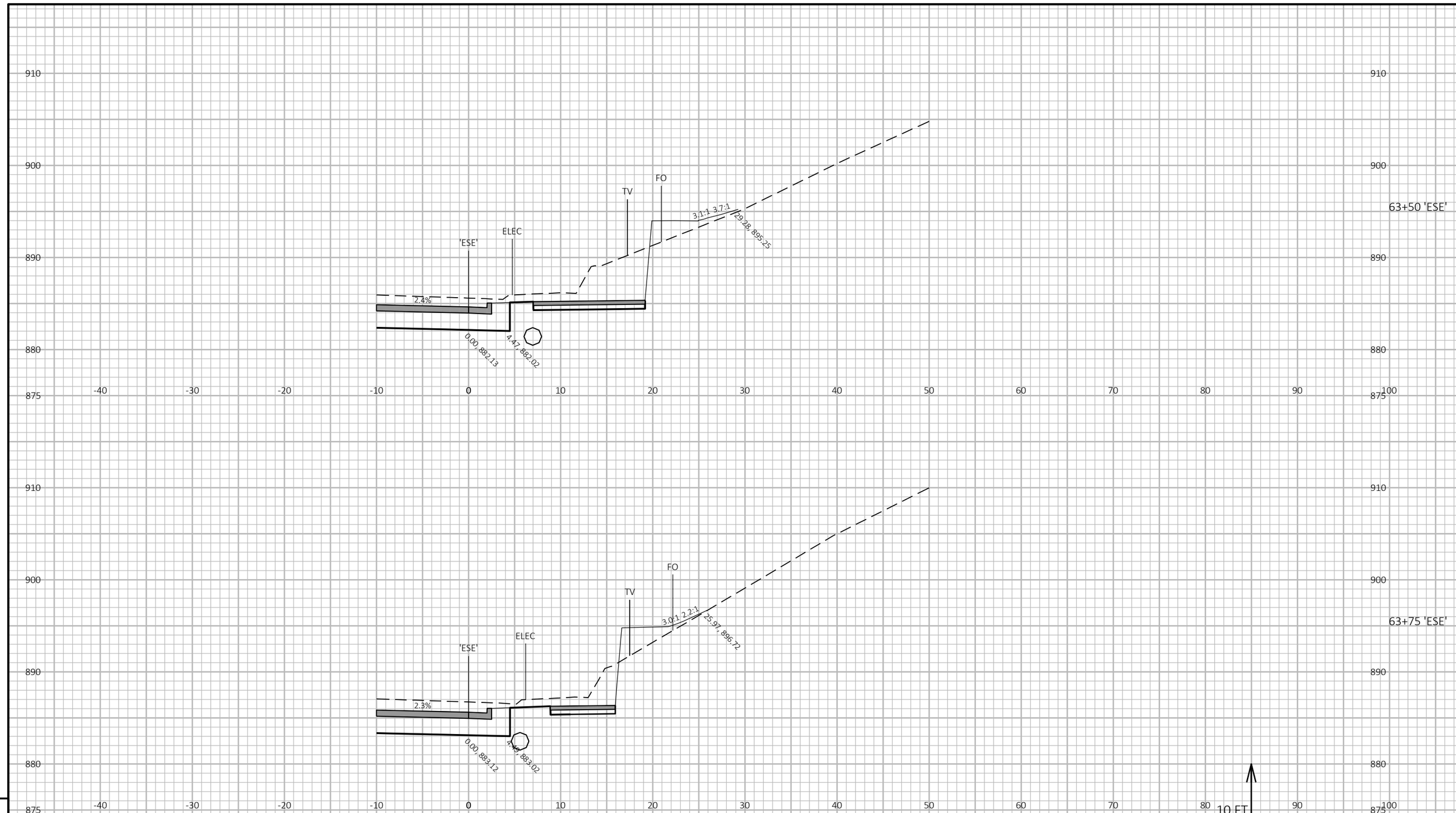
PLOT DATE : 9/24/2024 8:19 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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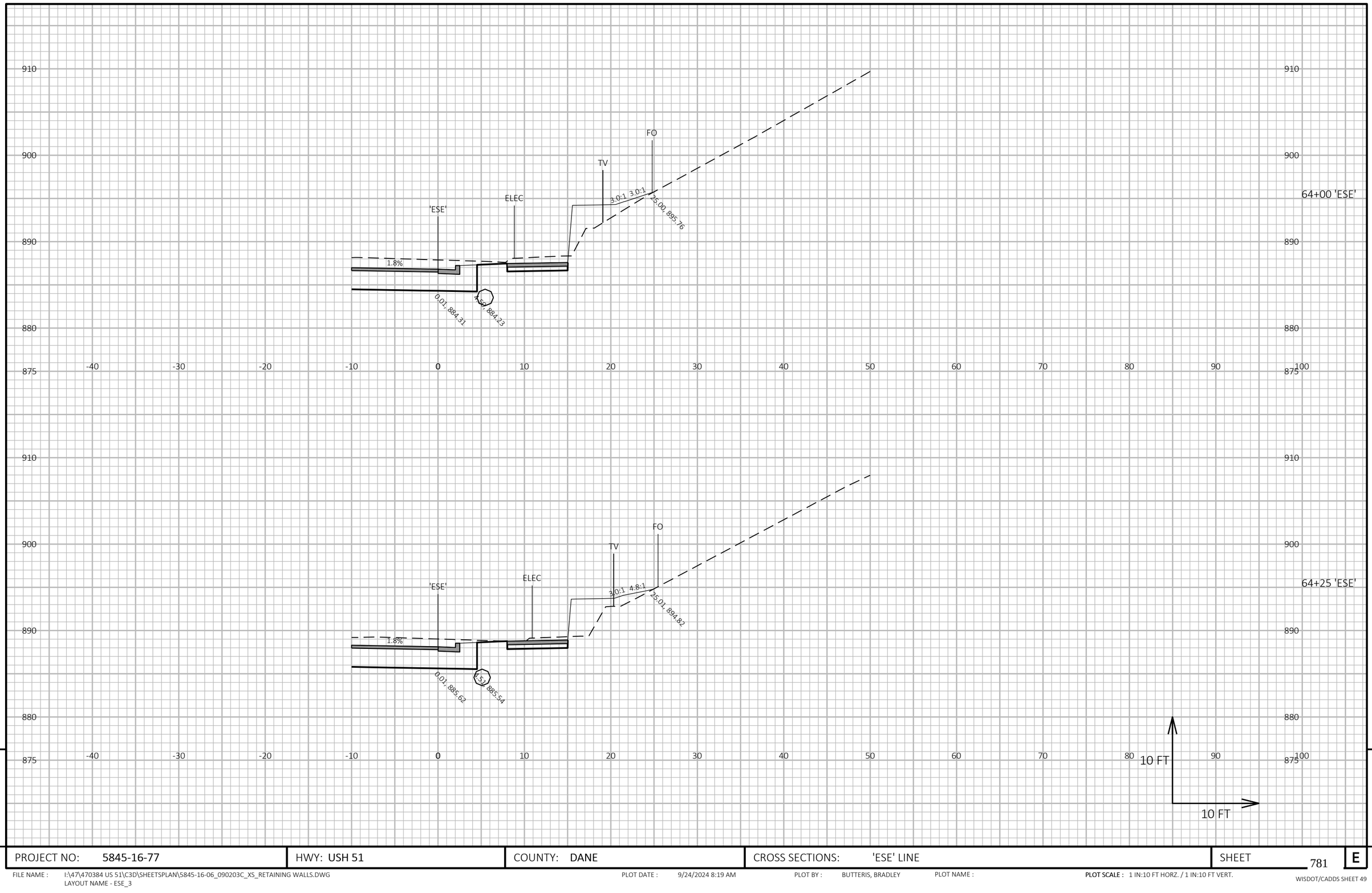
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ESE' LINE	SHEET 780	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ESE_2

PLOT DATE : 9/24/2024 8:19 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

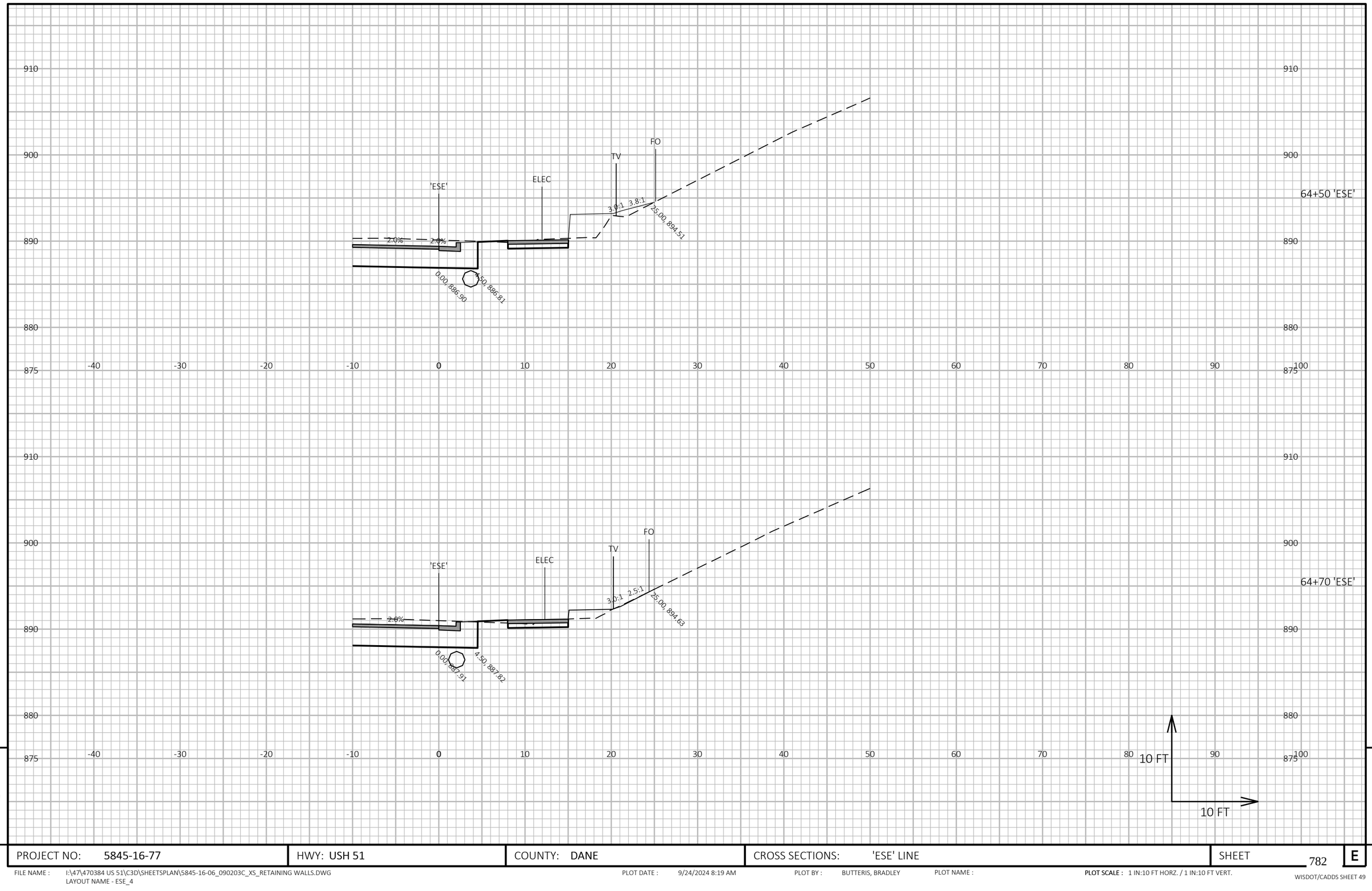


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ESE' LINE	SHEET 781	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ESE_3

PLOT DATE : 9/24/2024 8:19 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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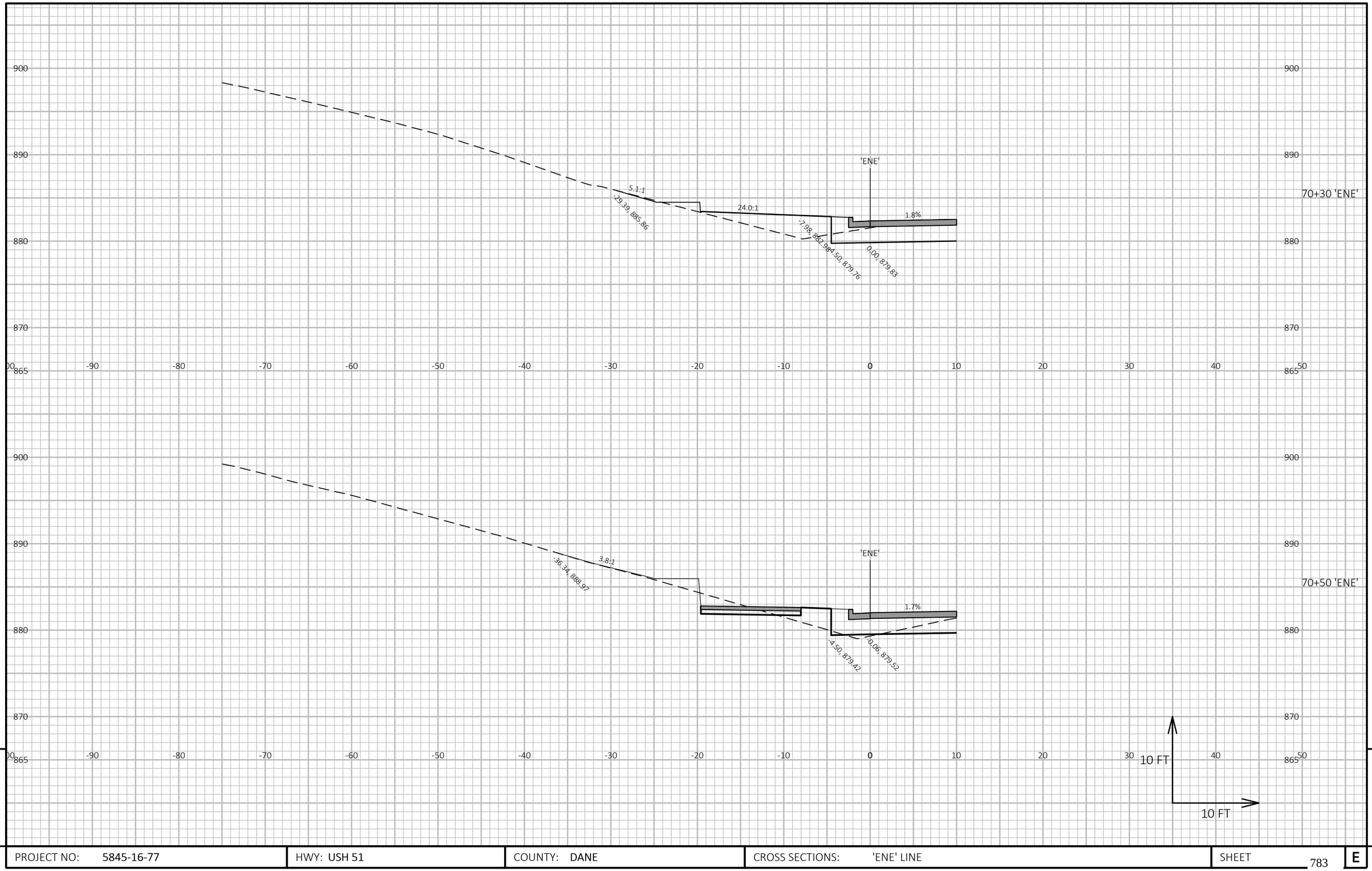
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ESE' LINE	SHEET 782	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ESE_4

PLOT DATE : 9/24/2024 8:19 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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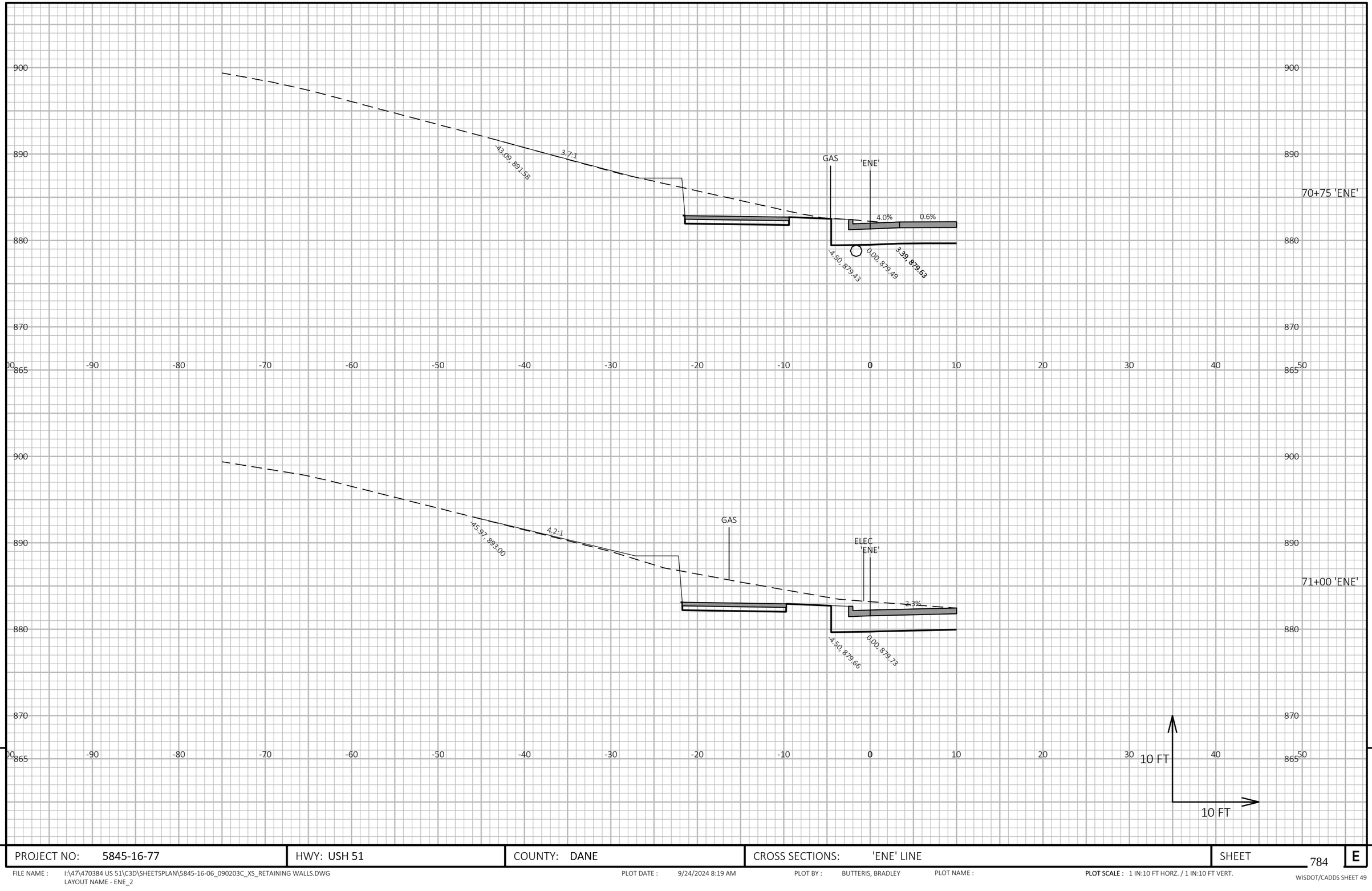
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ENE' LINE	SHEET 783	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ENE_1

PLOT DATE : 9/24/2024 8:19 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ENE' LINE	SHEET 784	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ENE_2

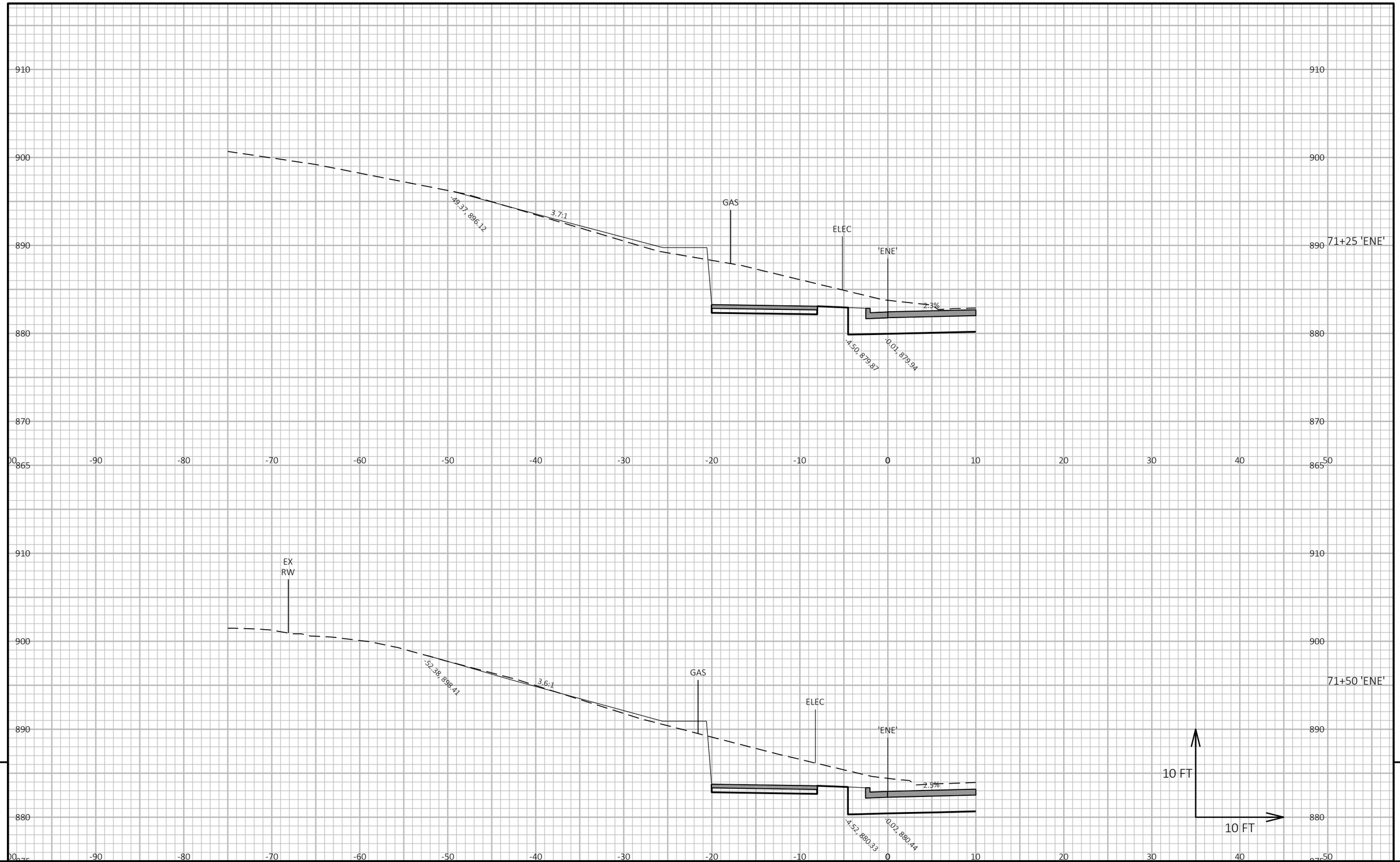
PLOT DATE : 9/24/2024 8:19 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



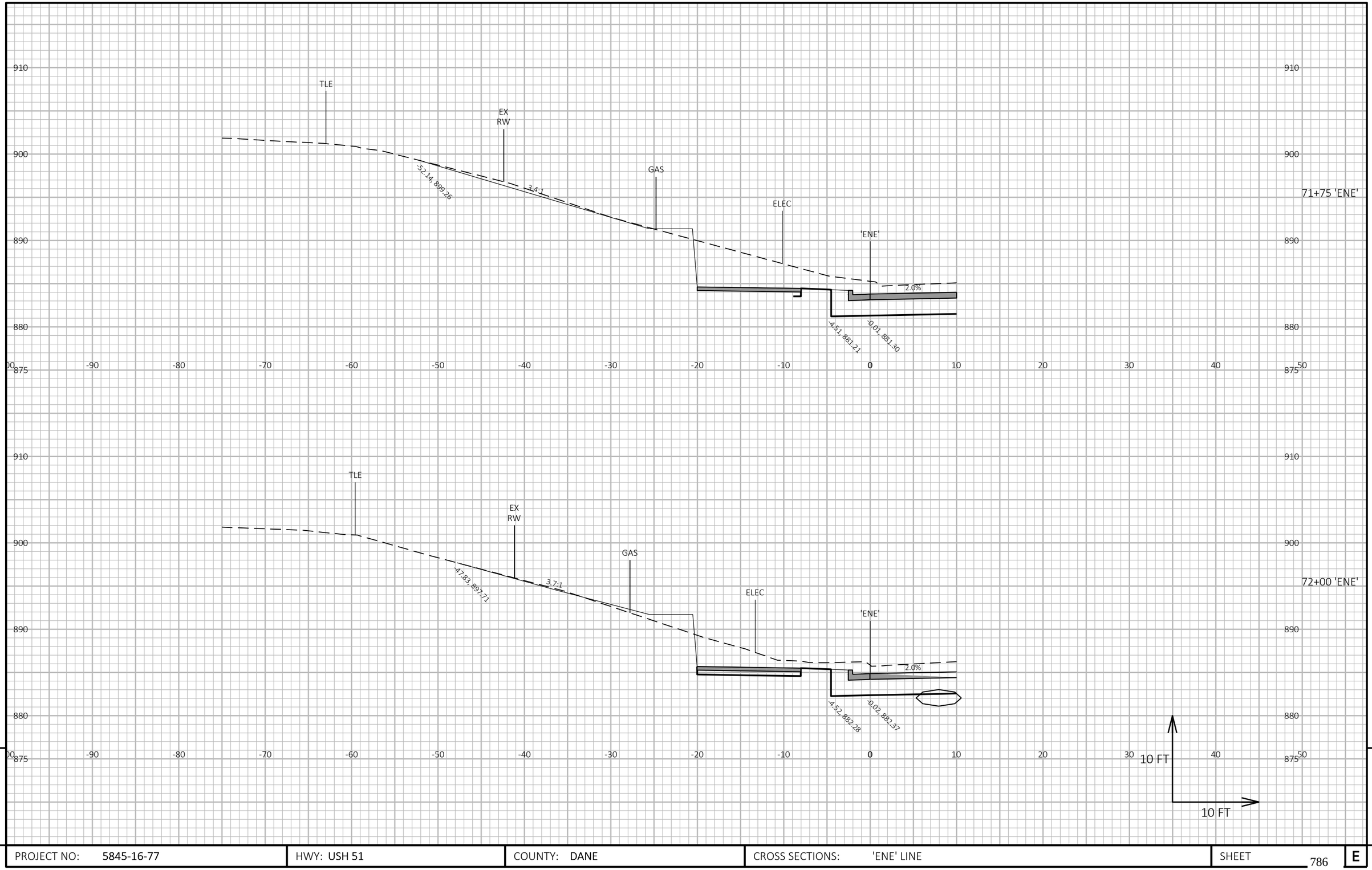
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ENE' LINE	SHEET 785	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ENE_3

PLOT DATE : 9/24/2024 8:19 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ENE' LINE	SHEET 786	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ENE_4

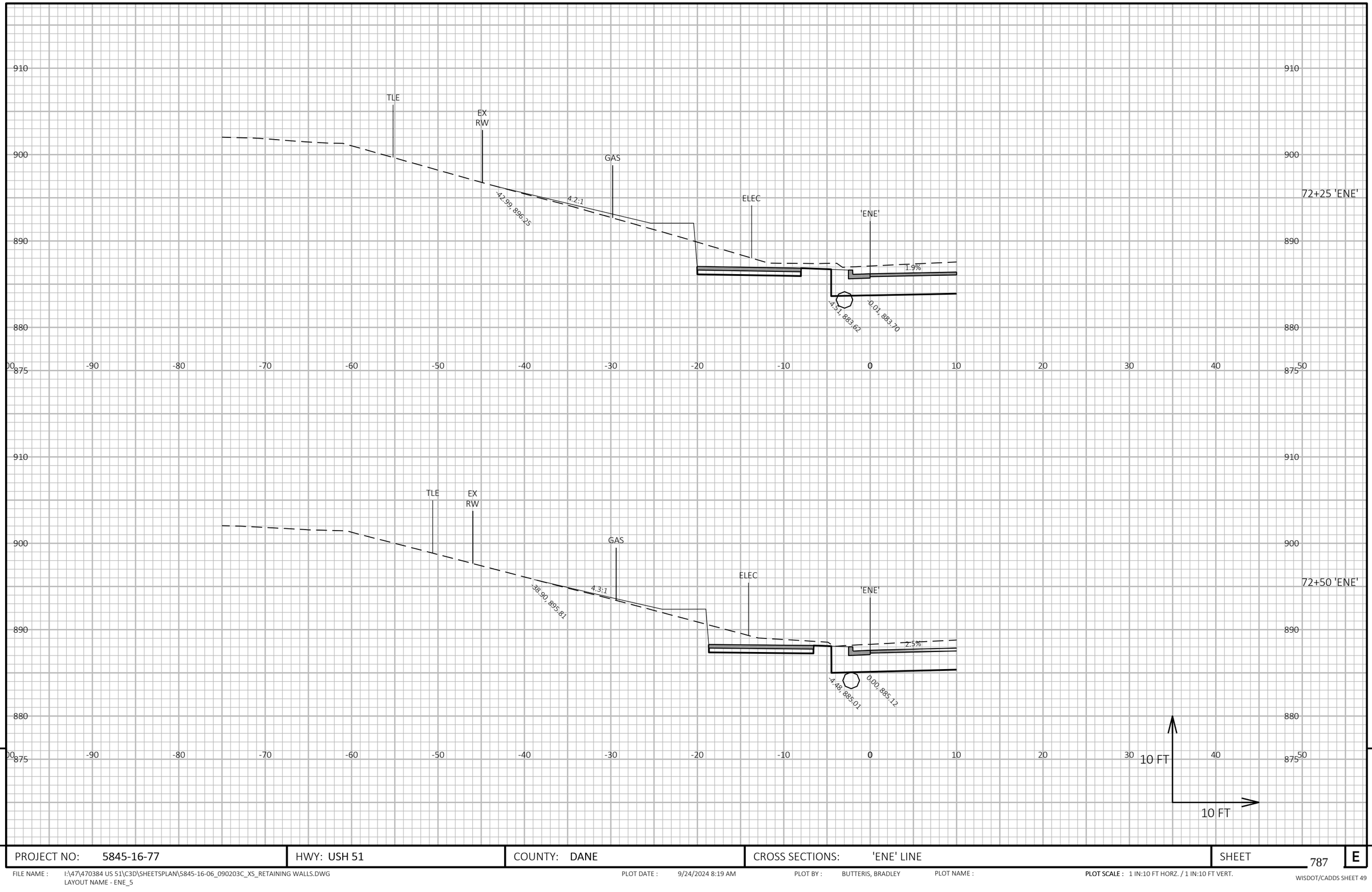
PLOT DATE : 9/24/2024 8:19 AM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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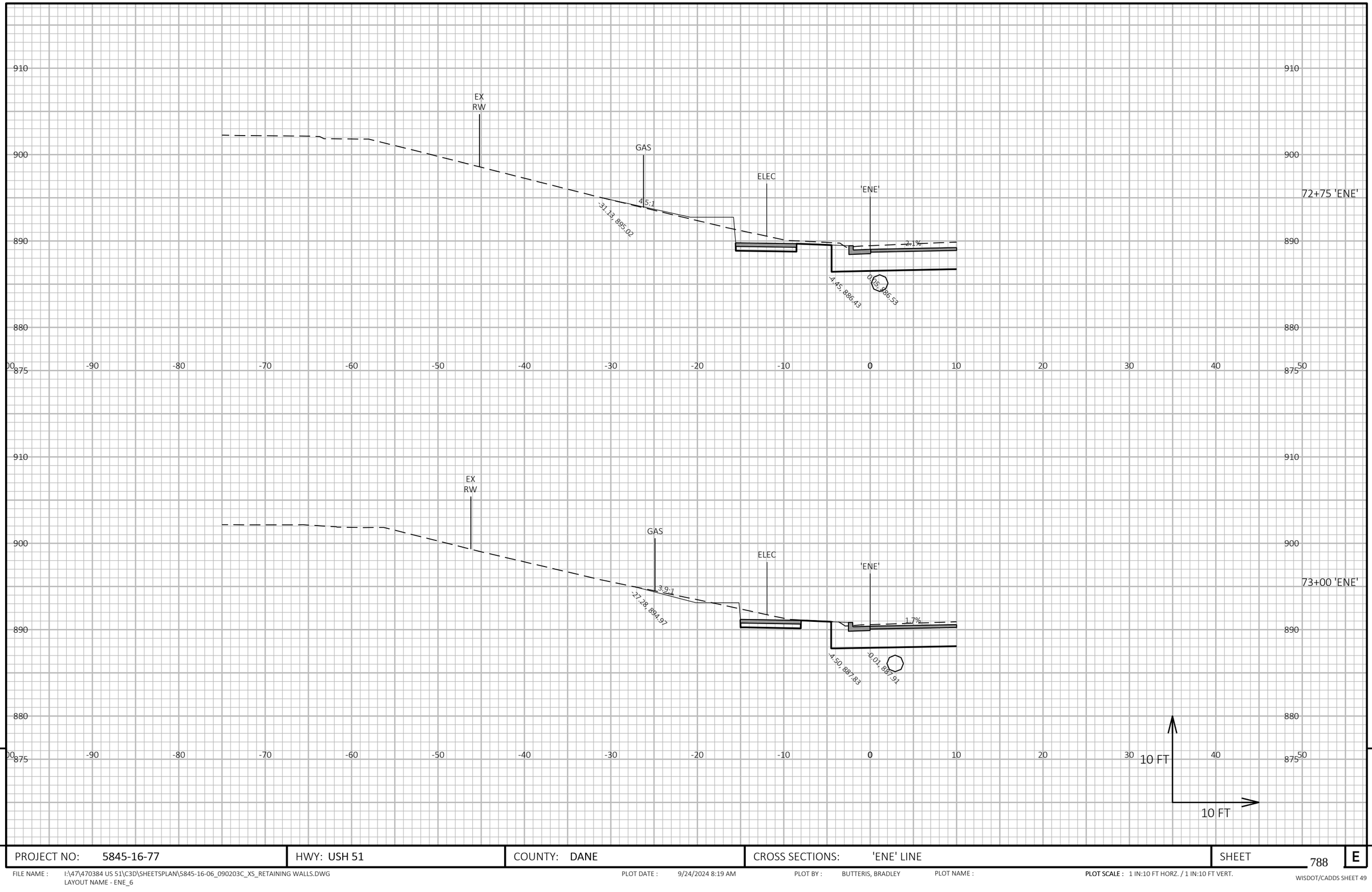
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ENE' LINE	SHEET 787	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ENE_5

PLOT DATE : 9/24/2024 8:19 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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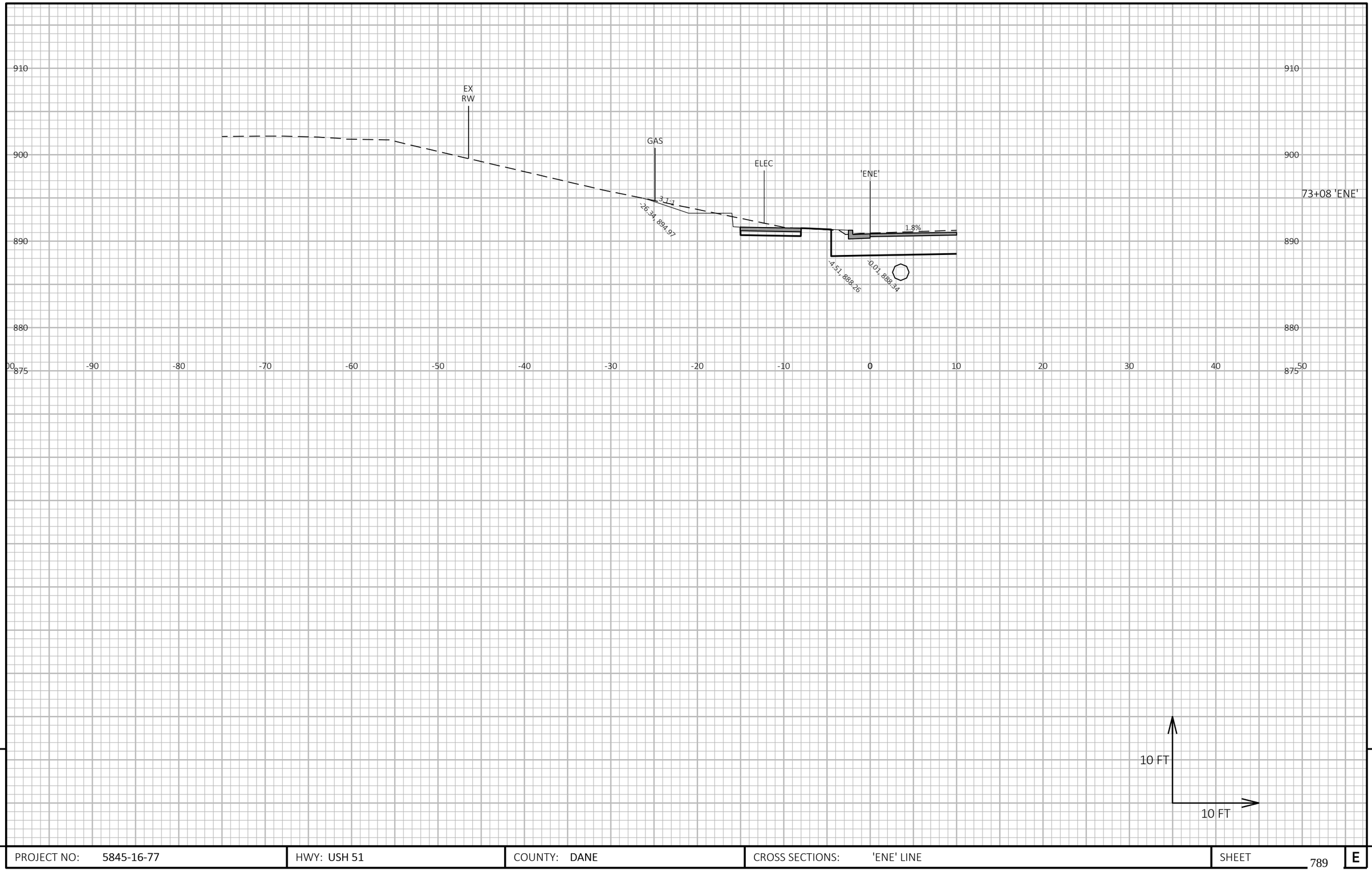
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ENE' LINE	SHEET 788	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ENE_6

PLOT DATE : 9/24/2024 8:19 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



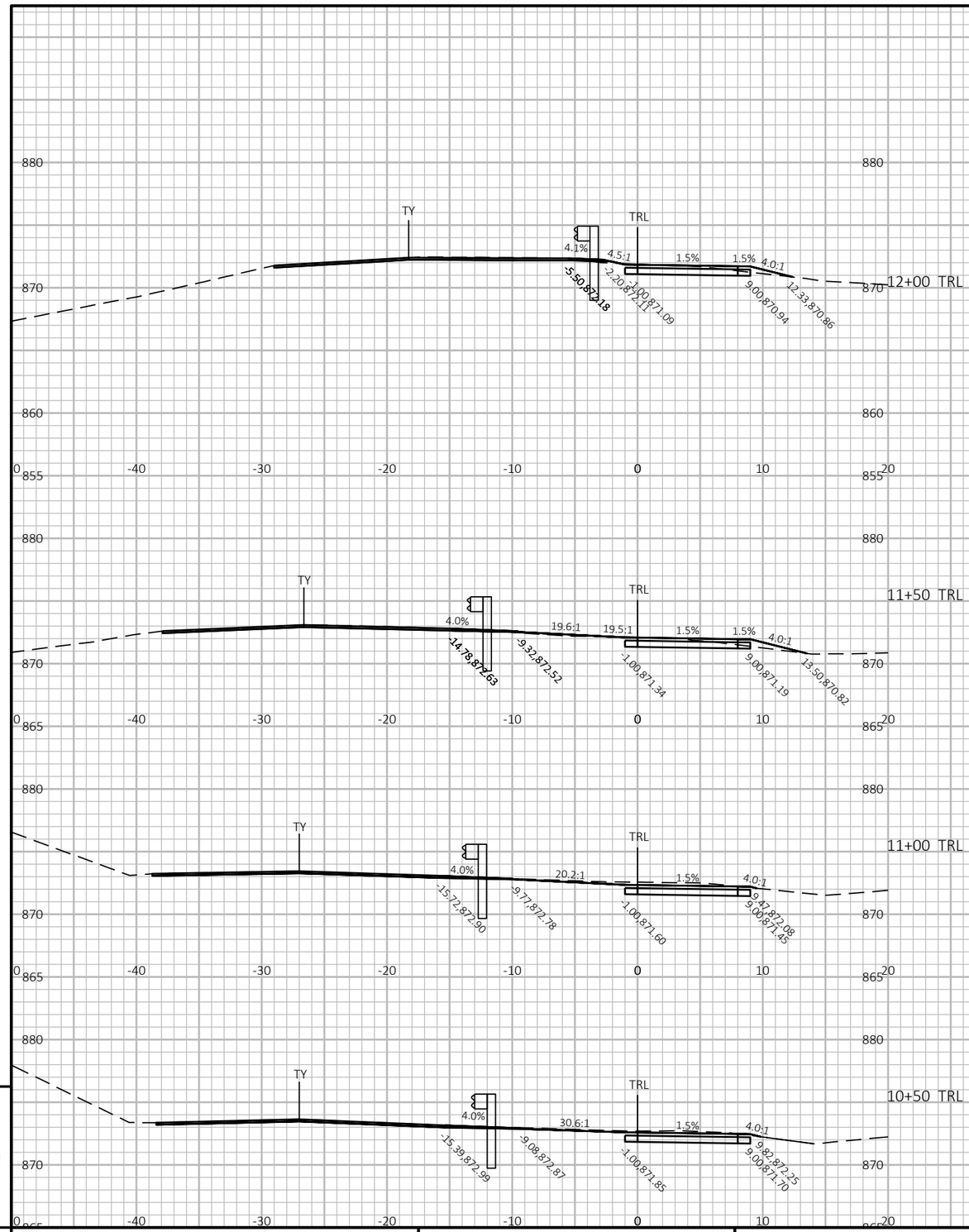
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: 'ENE' LINE	SHEET 789	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090203C_XS_RETAINING WALLS.DWG
LAYOUT NAME - ENE_7

PLOT DATE : 9/24/2024 8:19 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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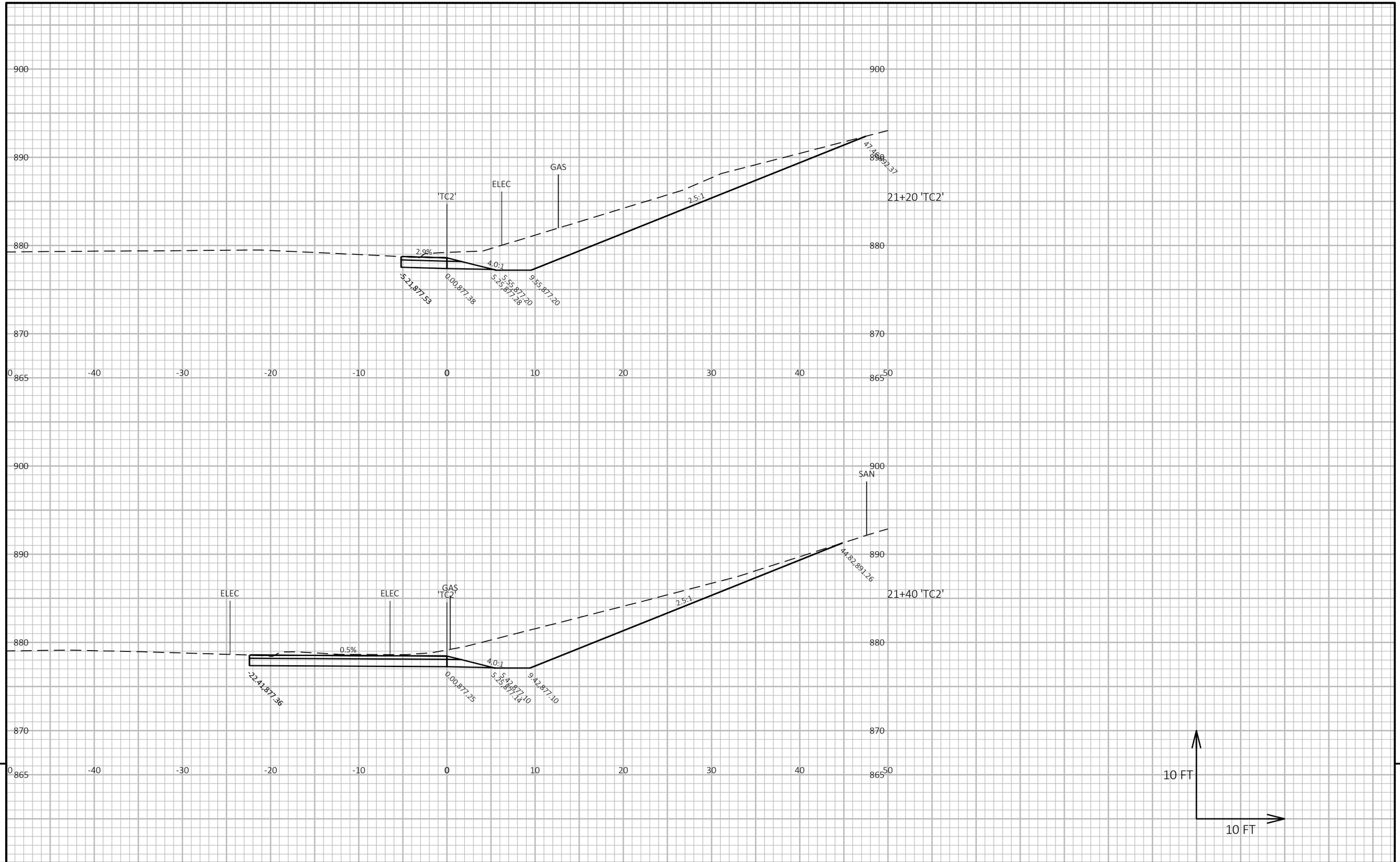
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: LOWER YAHARA RIVER TRAIL	SHEET 790	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090204_XS_TAYLORRD.DWG
LAYOUT NAME - 09

PLOT DATE : 7/21/2023 1:42 PM PLOT BY : SIMON, DAYENU PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2A - RAMP C	SHEET 791	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090205_XS_S2A_RAMP C.DWG
LAYOUT NAME - 01

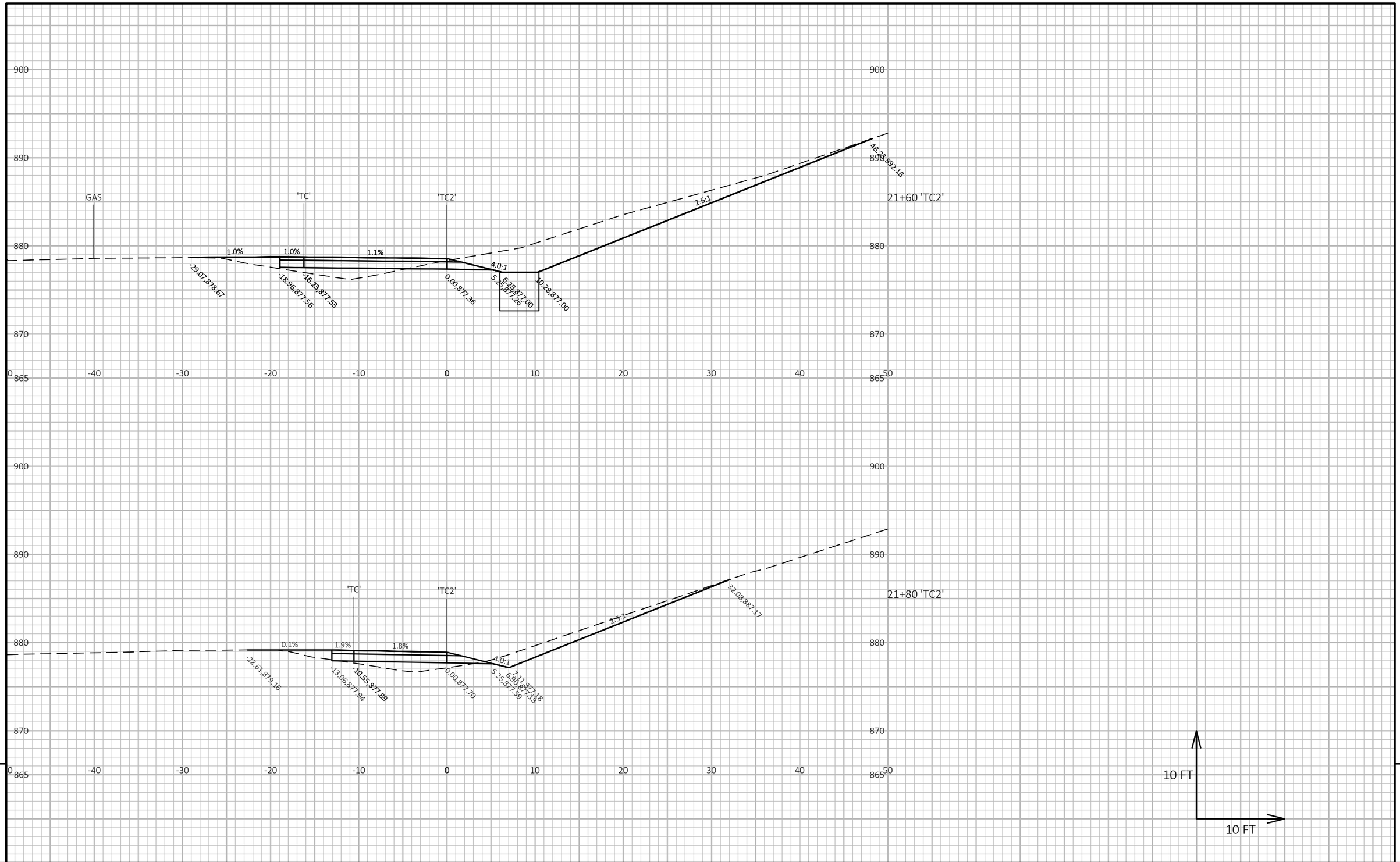
PLOT DATE : 7/19/2024 4:14 PM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

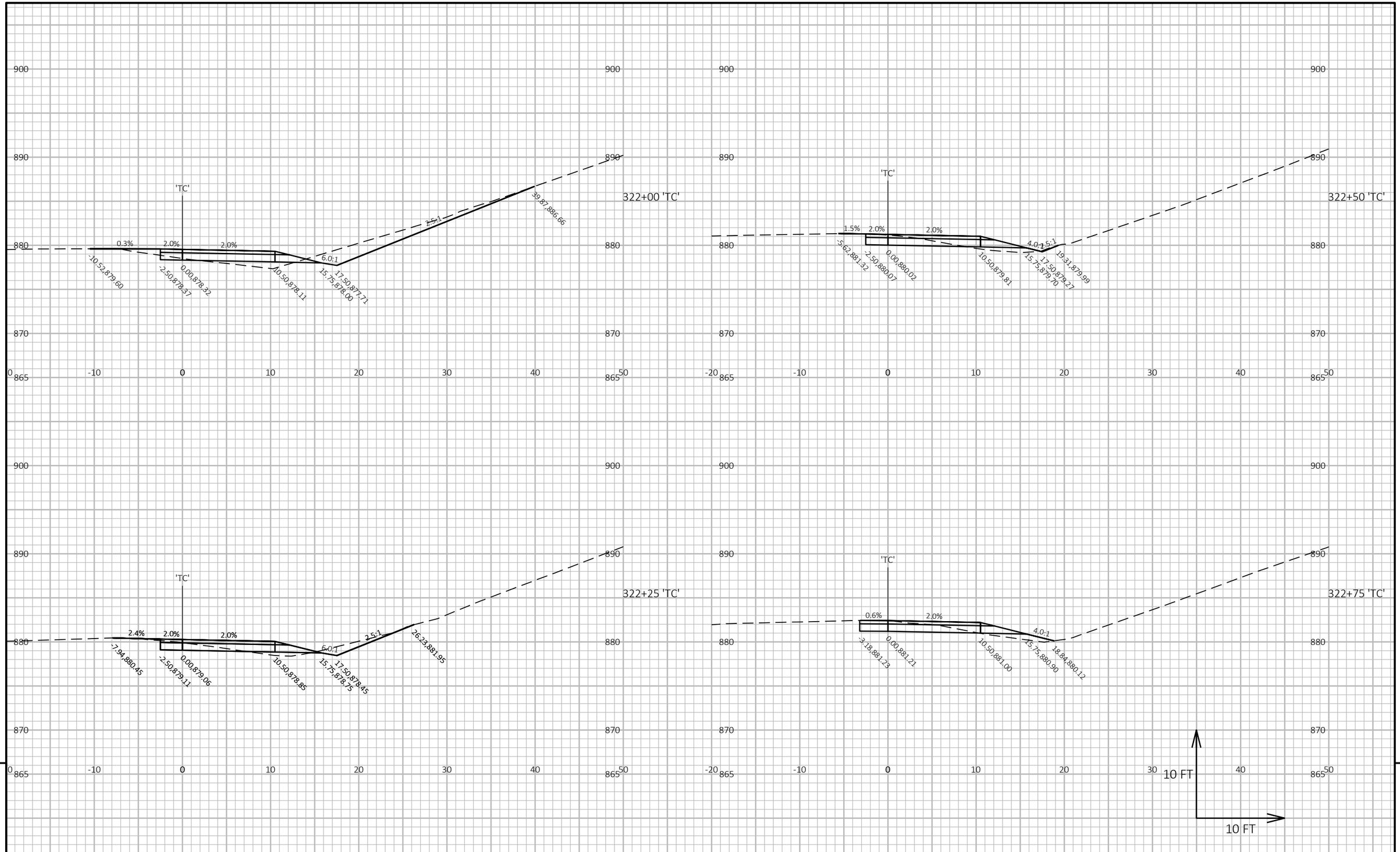


PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2A - RAMP C	SHEET 792 E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090205_XS_S2A_RAMP C.DWG
LAYOUT NAME - 02

PLOT DATE : 7/19/2024 4:15 PM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2A - RAMP C	SHEET 793	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090205_XS_S2A_RAMP C.DWG
LAYOUT NAME - 03

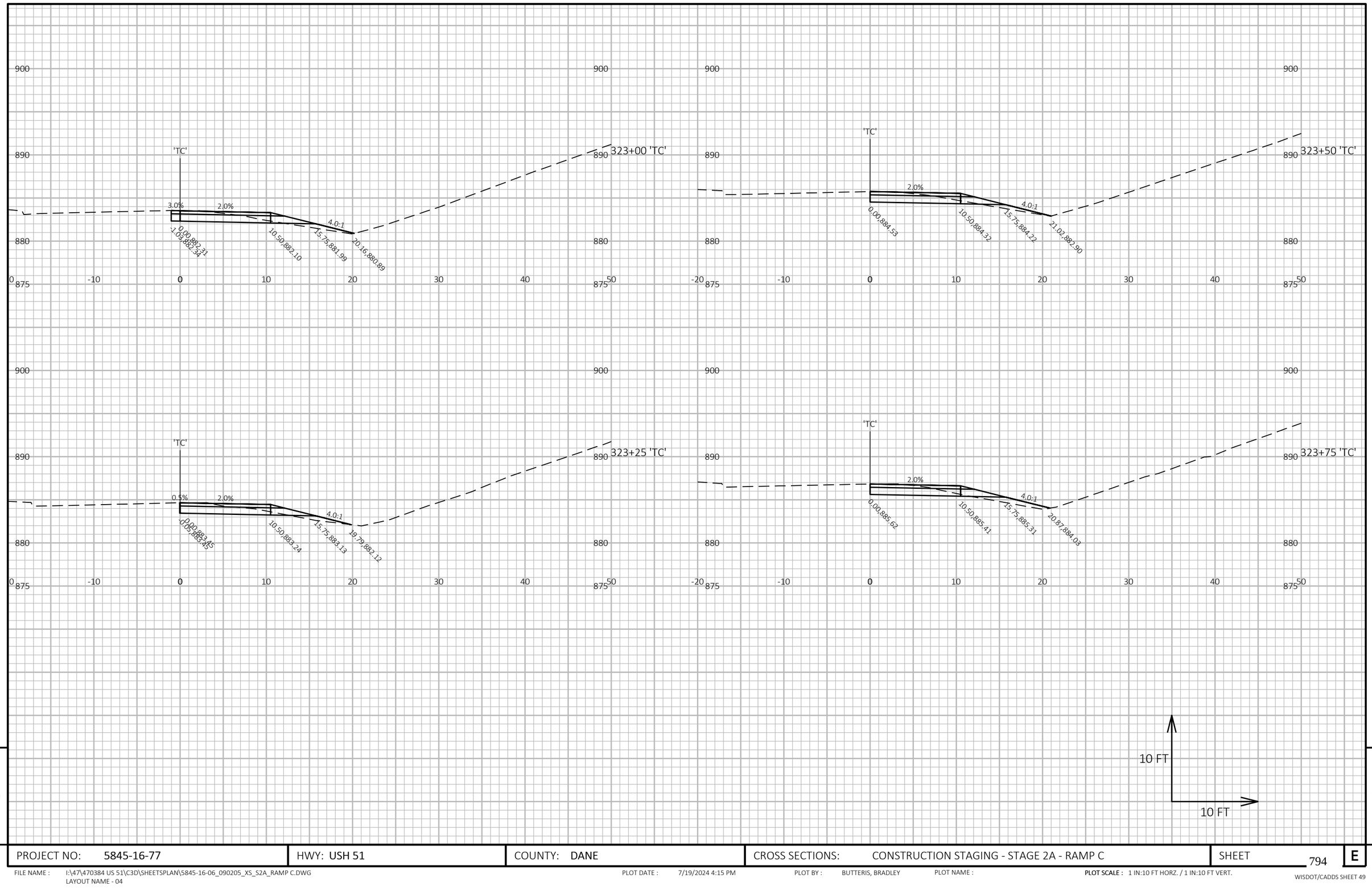
PLOT DATE : 7/19/2024 4:15 PM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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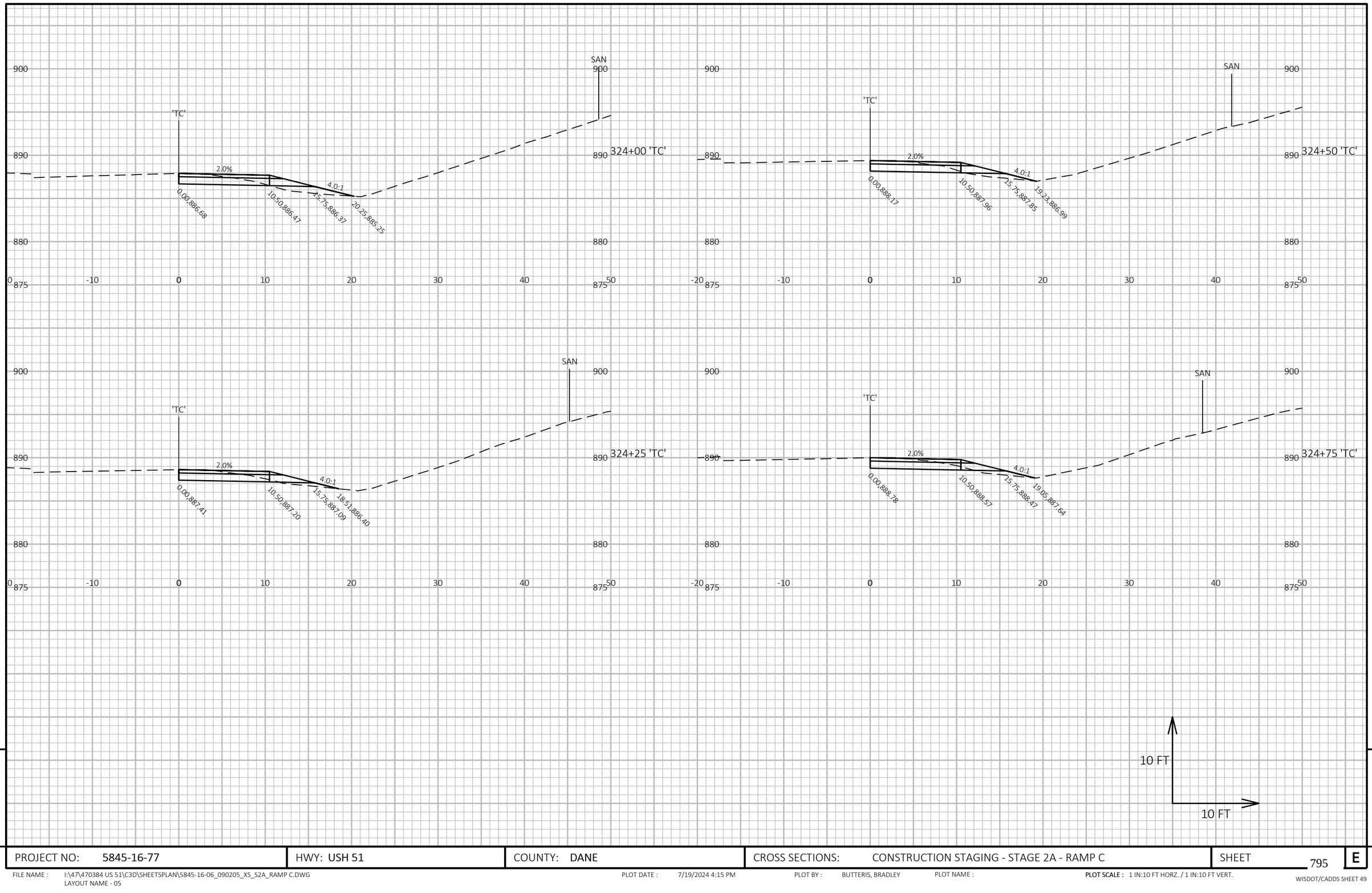
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2A - RAMP C	SHEET 794	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090205_XS_S2A_RAMP C.DWG
LAYOUT NAME - 04

PLOT DATE : 7/19/2024 4:15 PM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2A - RAMP C	SHEET 795	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090205_XS_S2A_RAMP C.DWG
LAYOUT NAME - 05

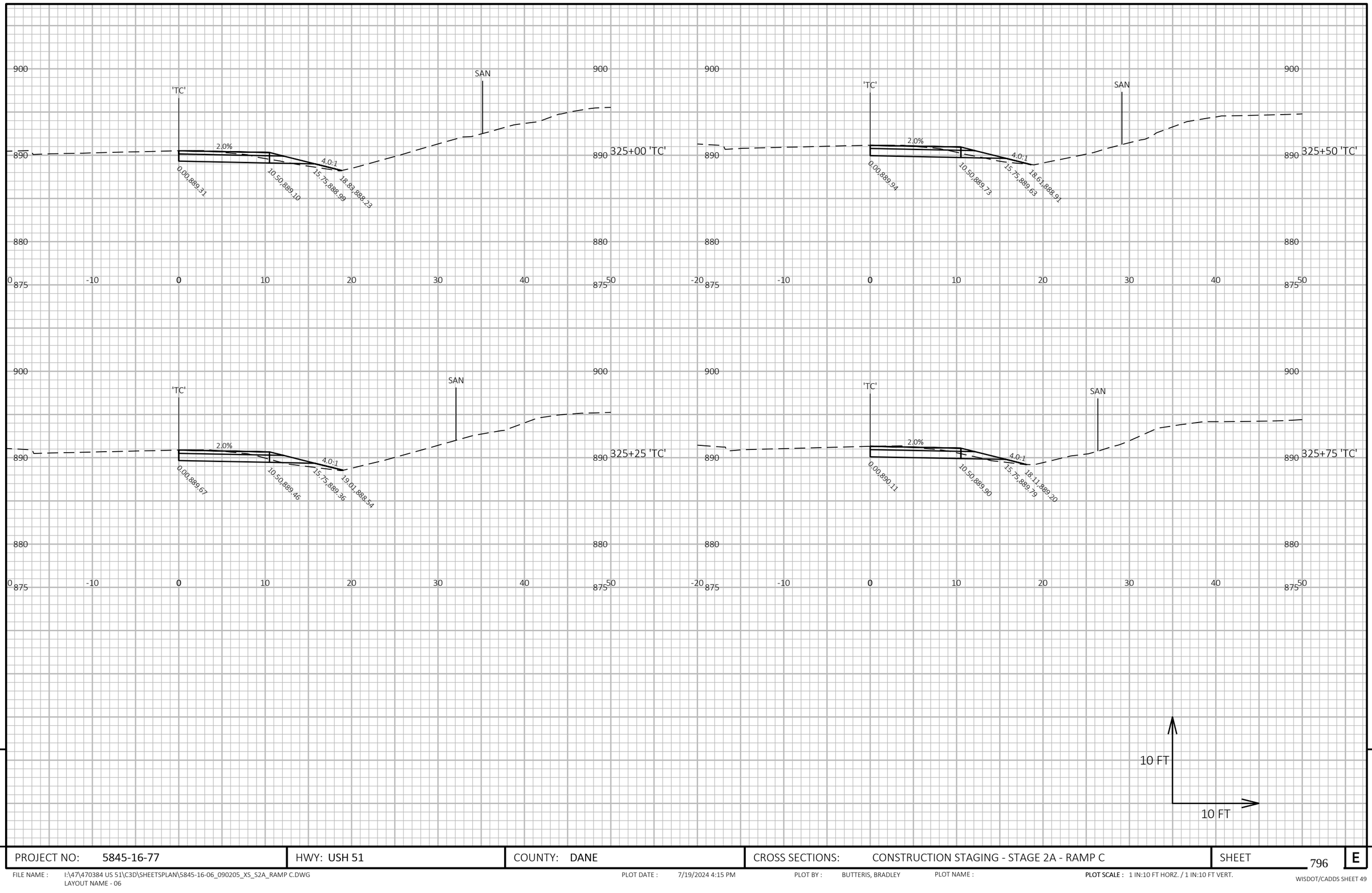
PLOT DATE : 7/19/2024 4:15 PM

PLOT BY : BUTTERIS, BRADLEY

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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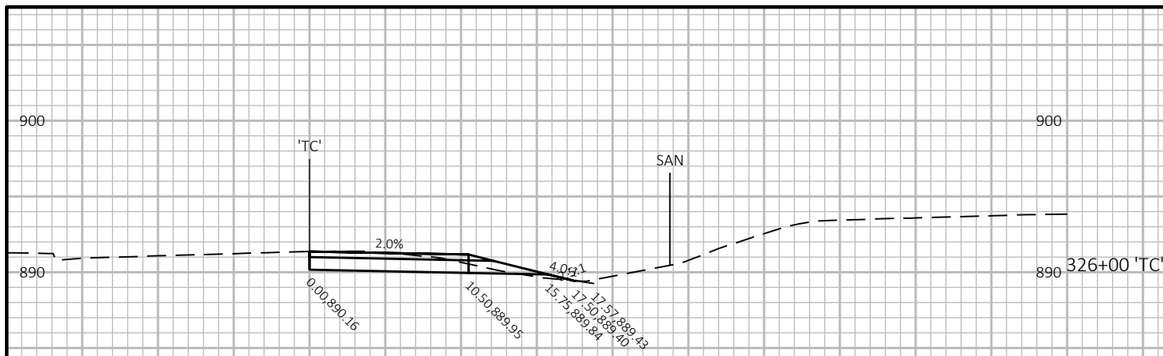
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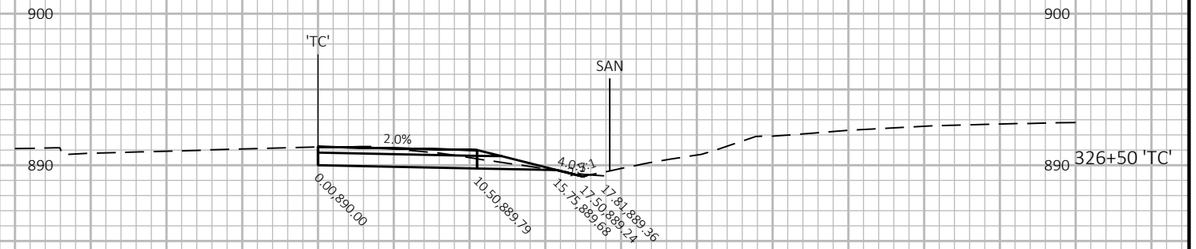
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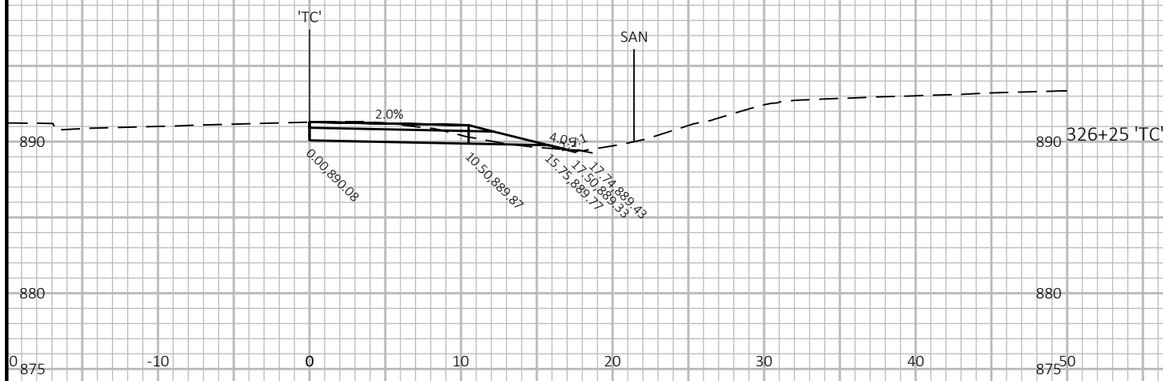
FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090205_XS_S2A_RAMP C.DWG
LAYOUT NAME - 06

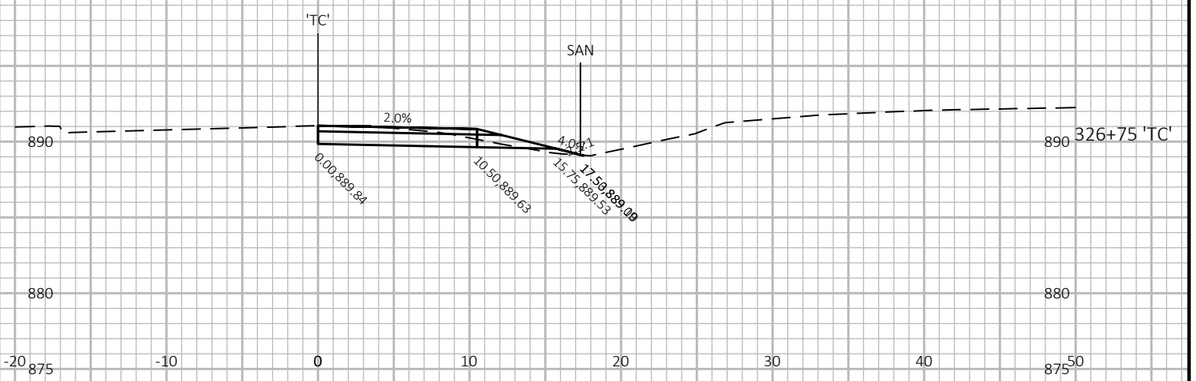
PLOT DATE : 7/19/2024 4:15 PM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

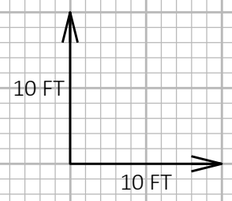
WISDOT/CADDS SHEET 49











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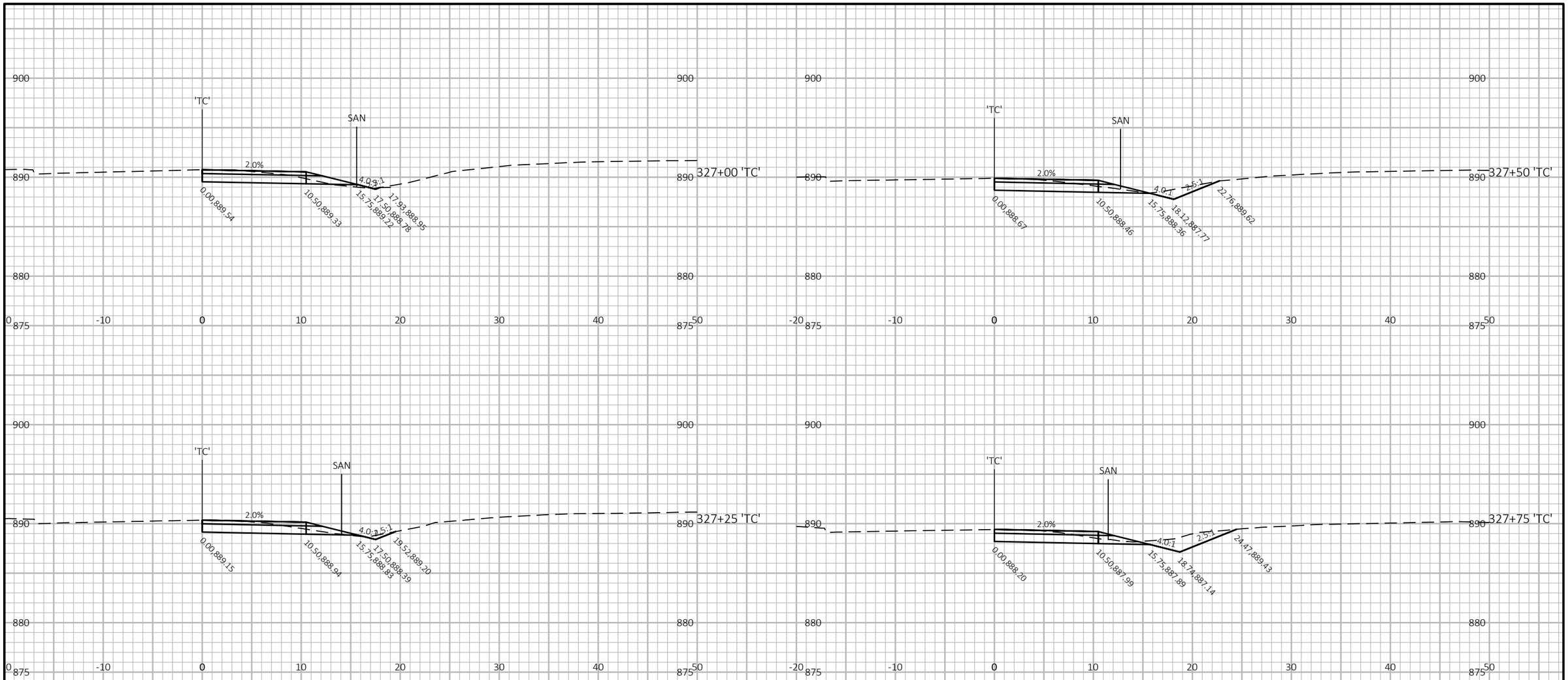
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2A - RAMP C	SHEET 797	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090205_XS_S2A_RAMP C.DWG
LAYOUT NAME - 07

PLOT DATE : 7/19/2024 4:15 PM PLOT BY : BUTTERIS, BRADLEY PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

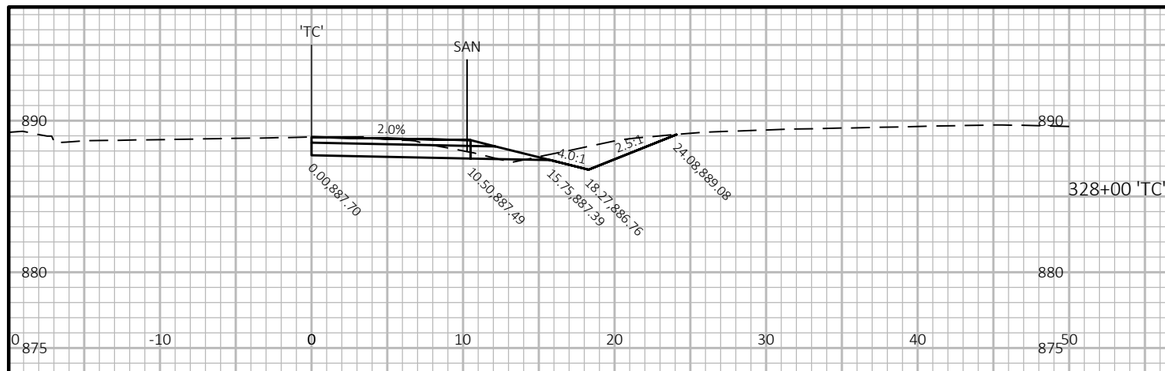
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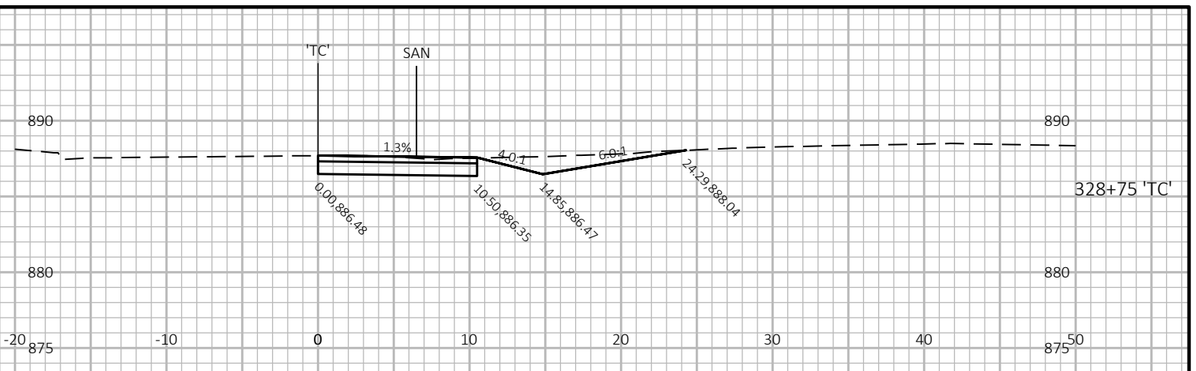
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2A - RAMP C	SHEET 798	E

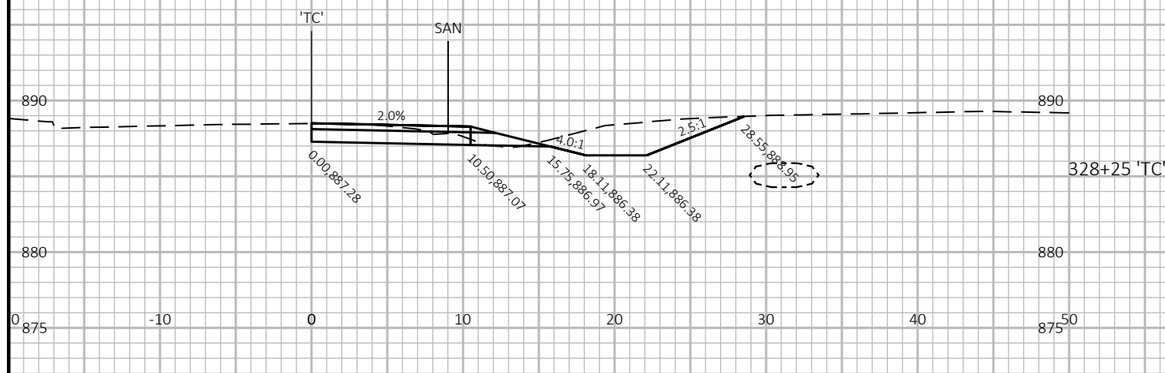
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LAYOUT NAME - 08

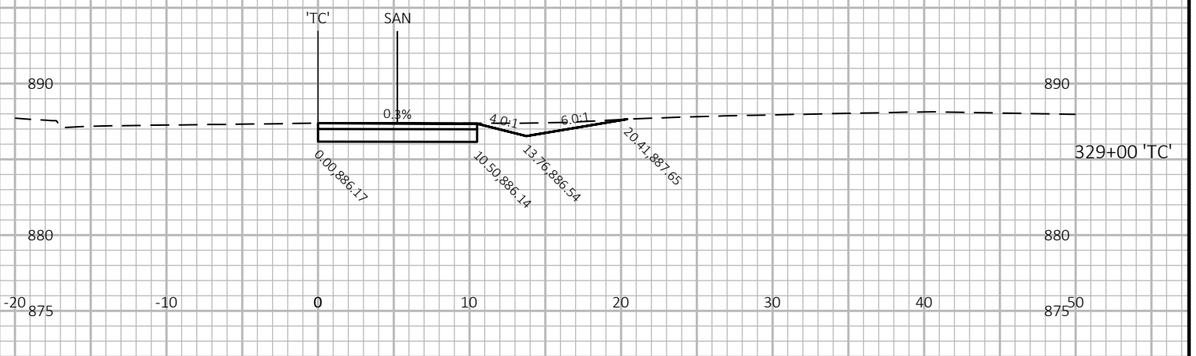
PLOT DATE : 7/19/2024 4:15 PM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

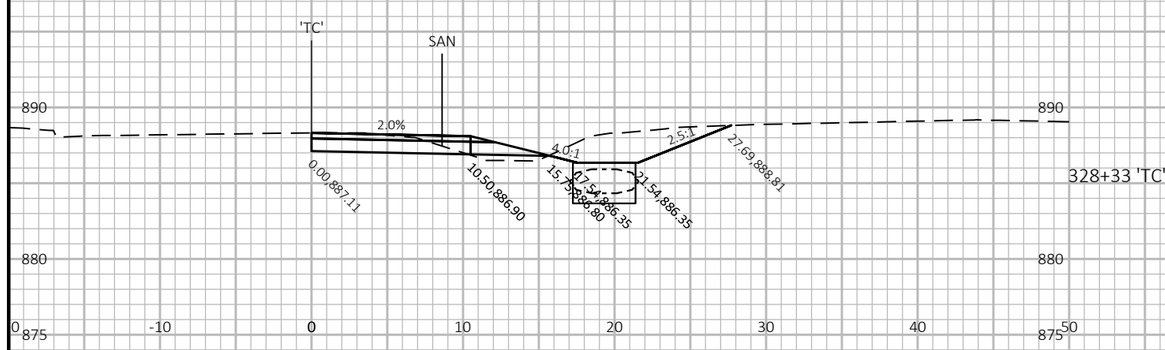
WISDOT/CADDS SHEET 49

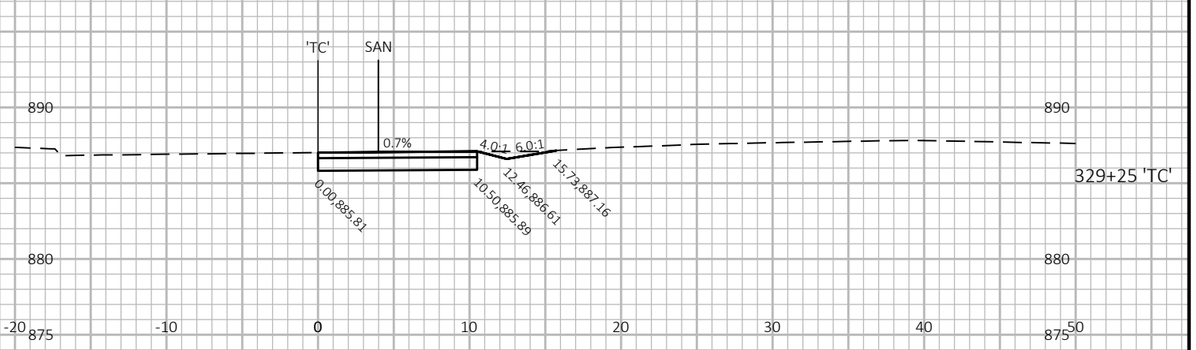


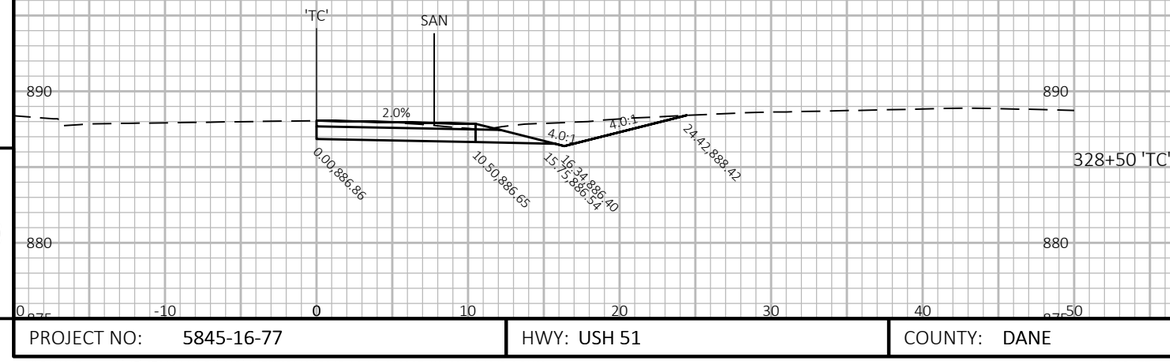


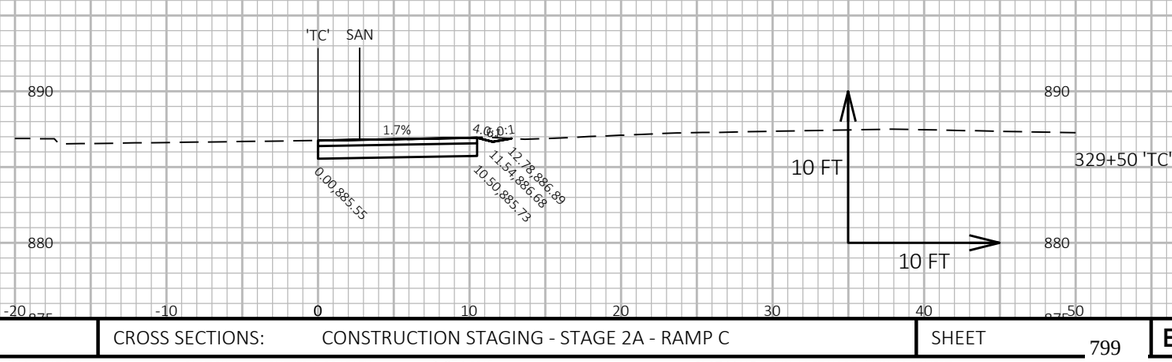












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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2A - RAMP C	SHEET 799	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090205_XS_S2A_RAMP C.DWG
LAYOUT NAME - 09

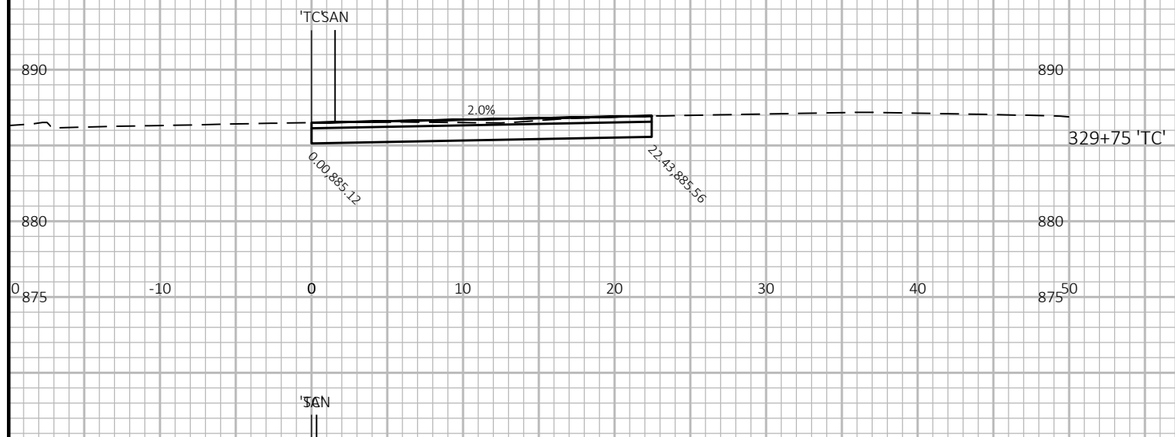
PLOT DATE : 7/19/2024 4:15 PM

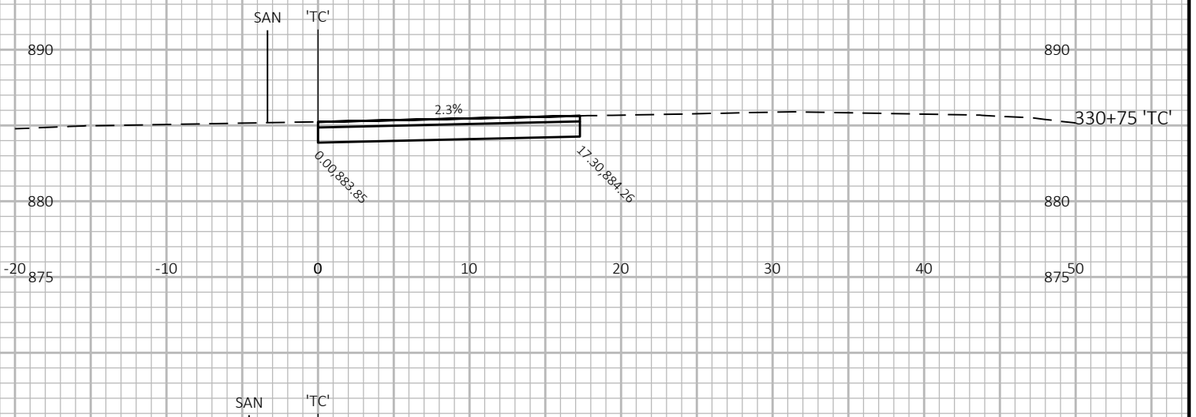
PLOT BY : BUTTERIS, BRADLEY

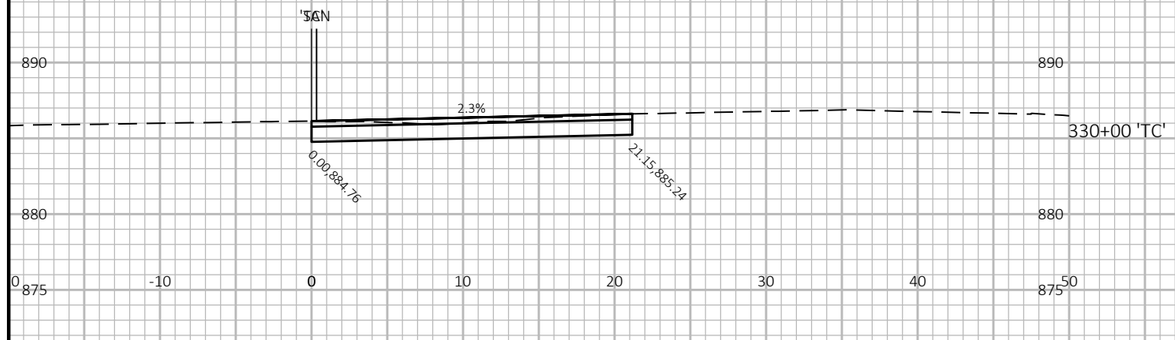
PLOT NAME :

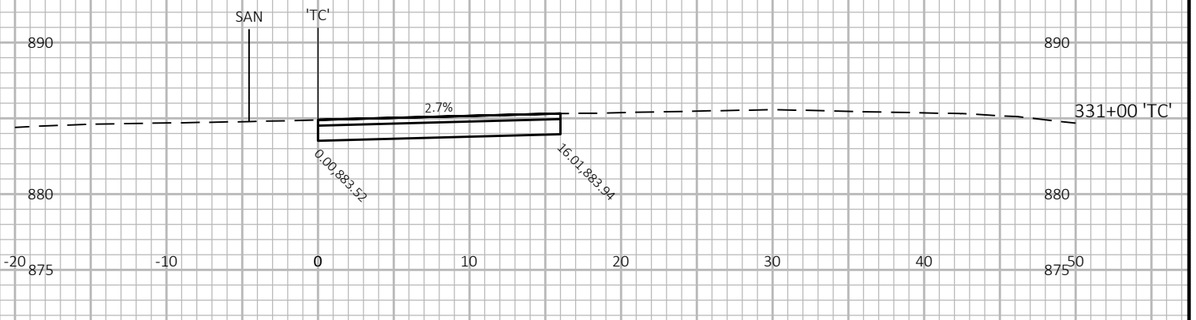
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

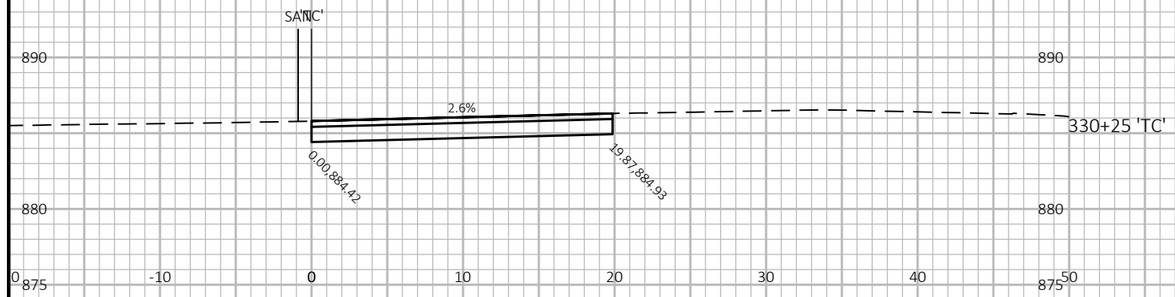
WISDOT/CADDS SHEET 49

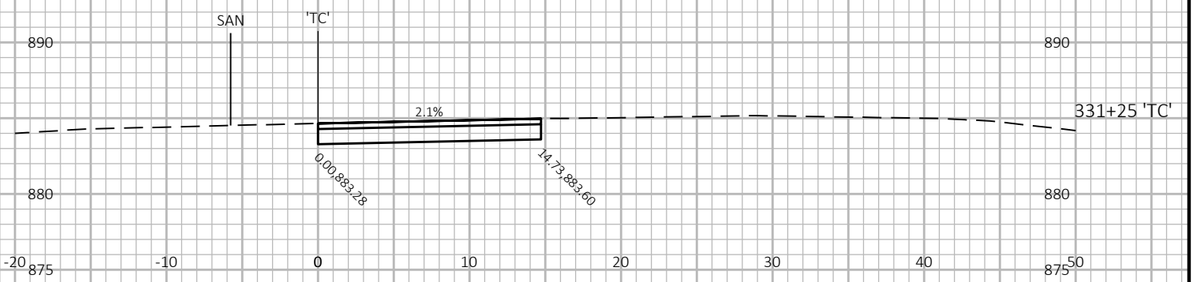


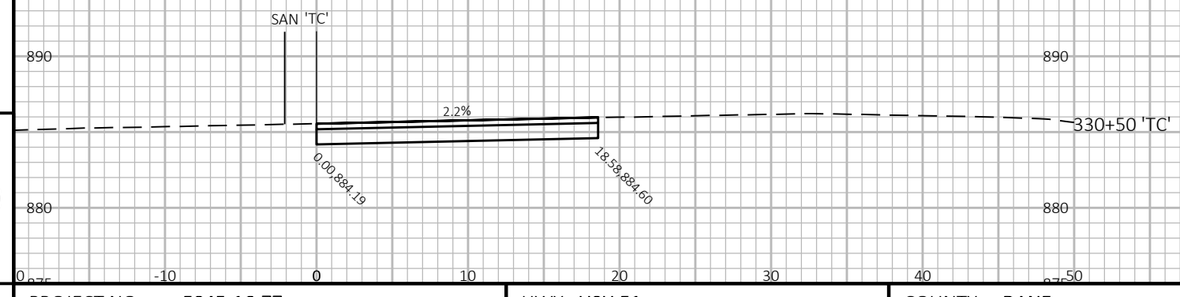


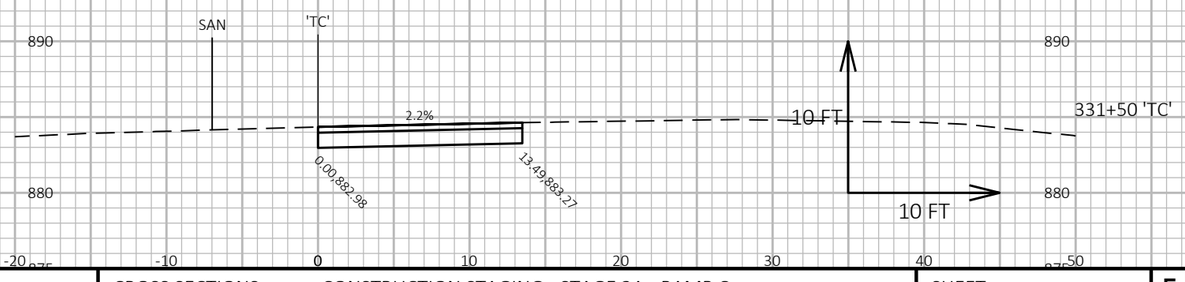












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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2A - RAMP C	SHEET 800	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090205_XS_S2A_RAMP C.DWG
LAYOUT NAME - 10

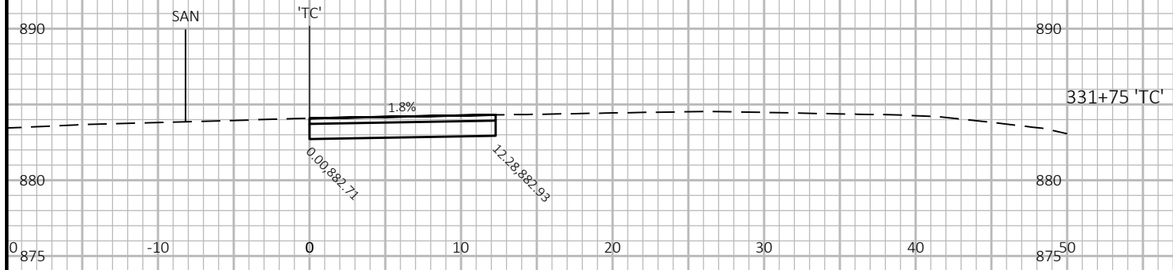
PLOT DATE : 7/19/2024 4:15 PM

PLOT BY : BUTTERIS, BRADLEY

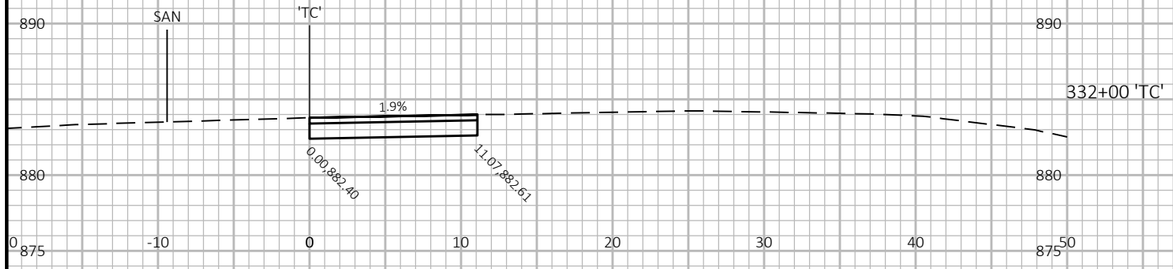
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

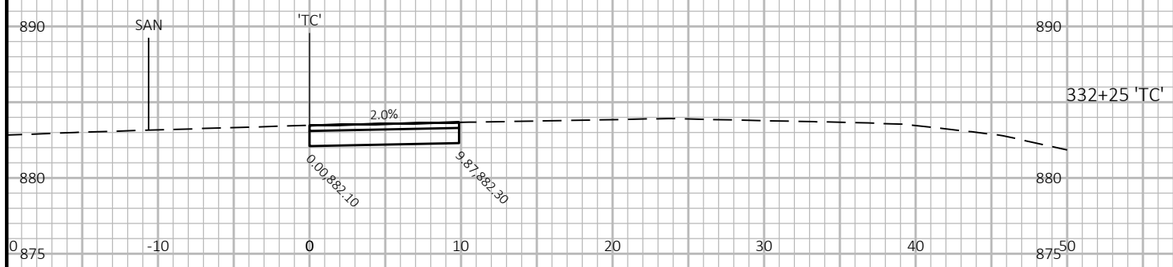
WISDOT/CADDS SHEET 49



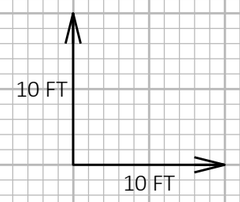
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332+00 'TC'



332+25 'TC'



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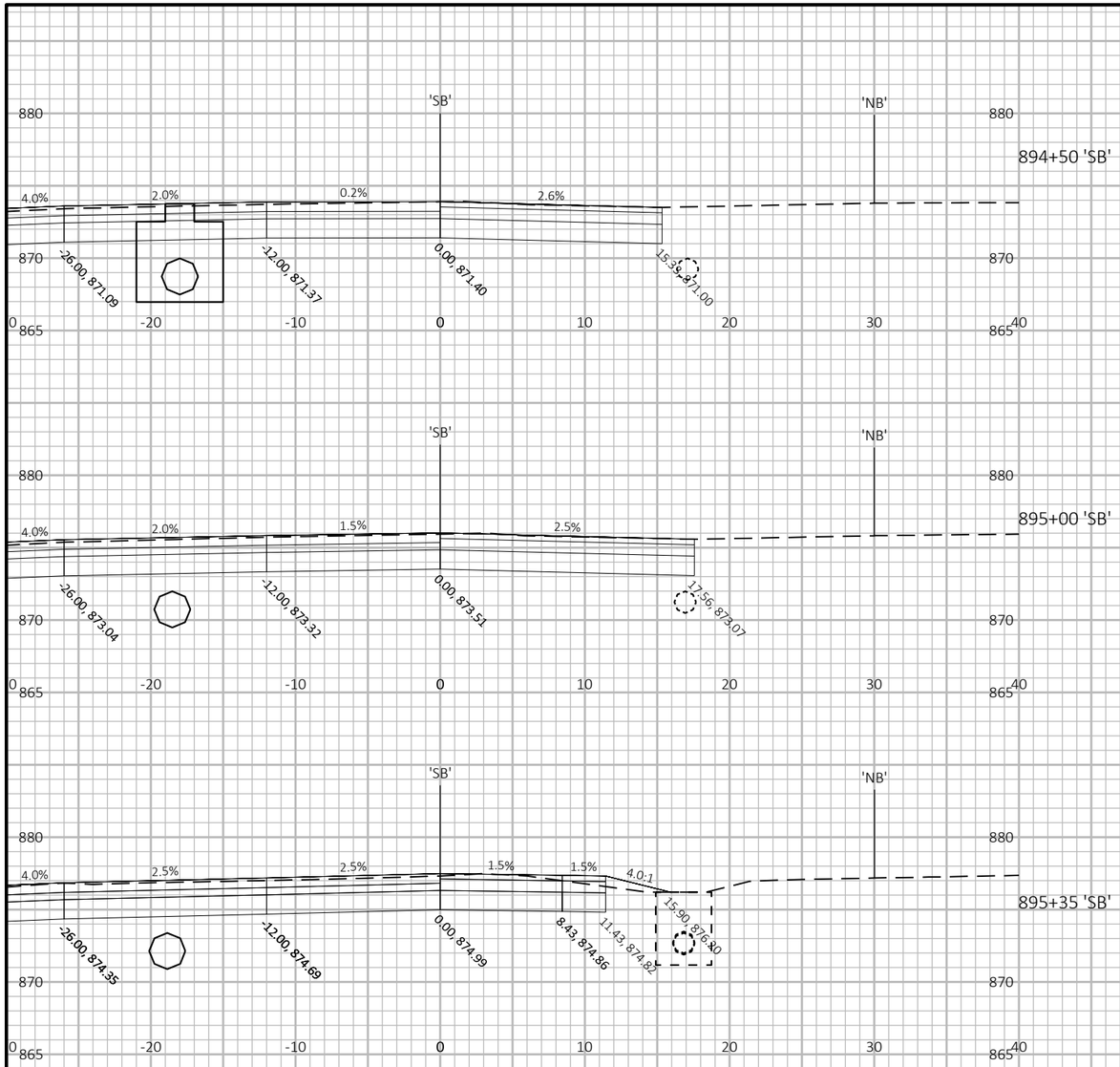
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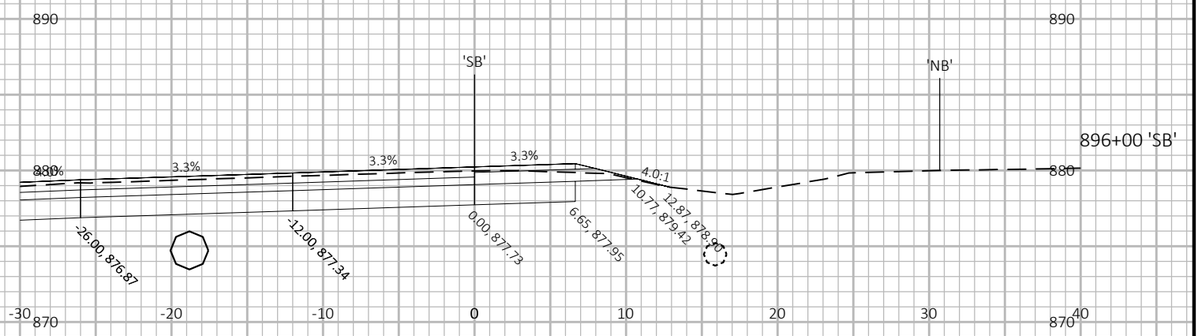
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2A - RAMP C	SHEET 801	E

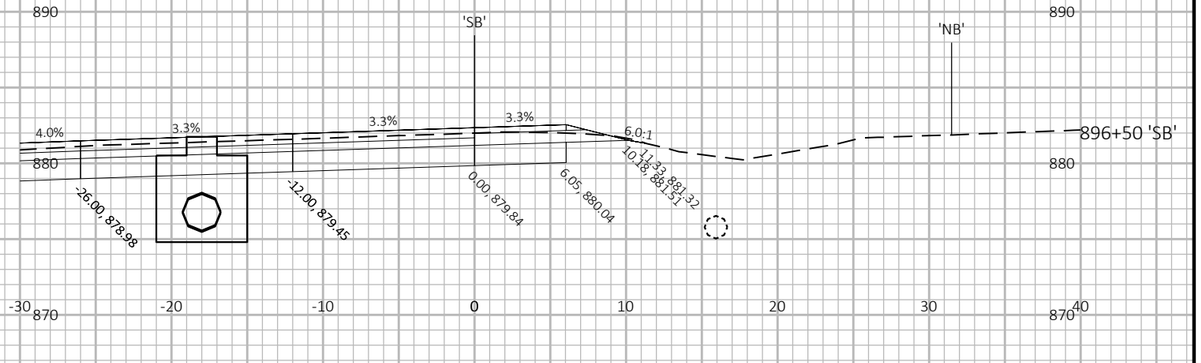
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LAYOUT NAME - 11

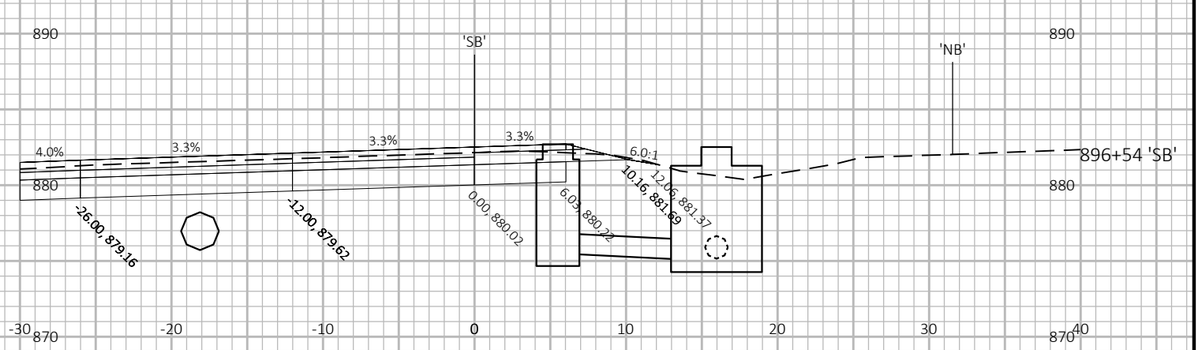
PLOT DATE : 7/19/2024 4:15 PM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

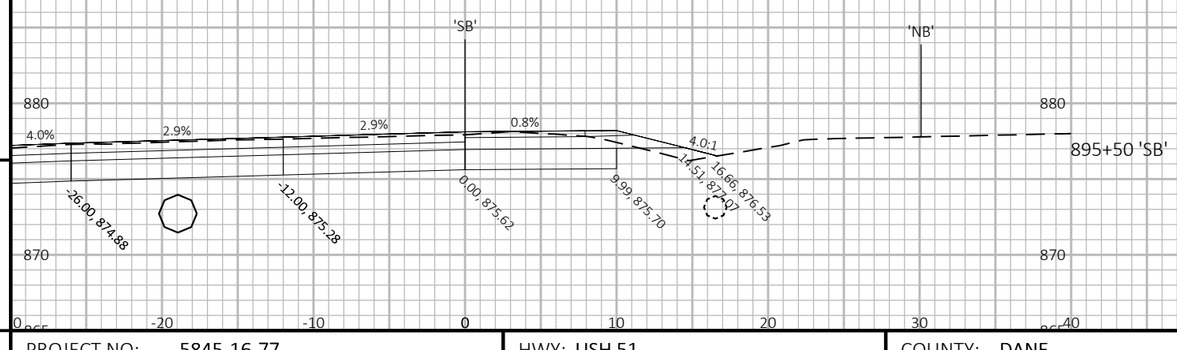
WISDOT/CADDS SHEET 49

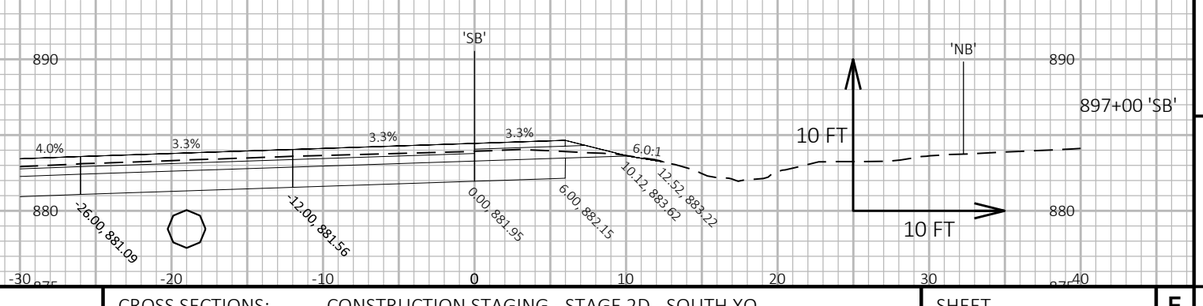












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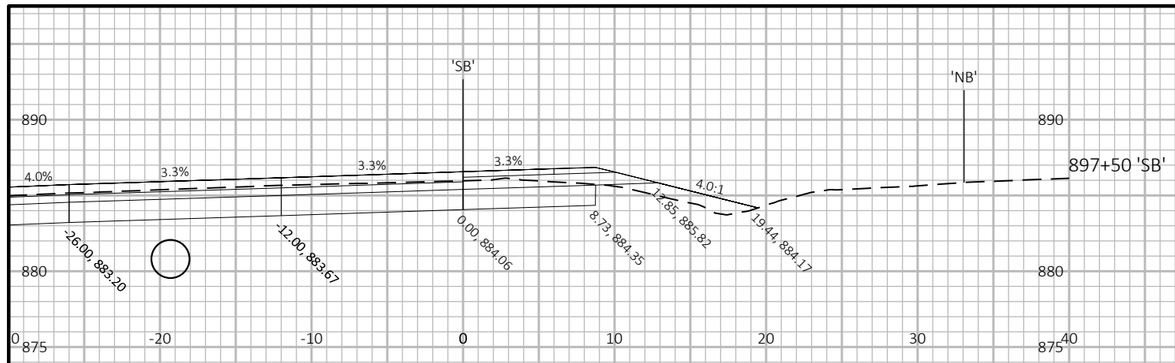
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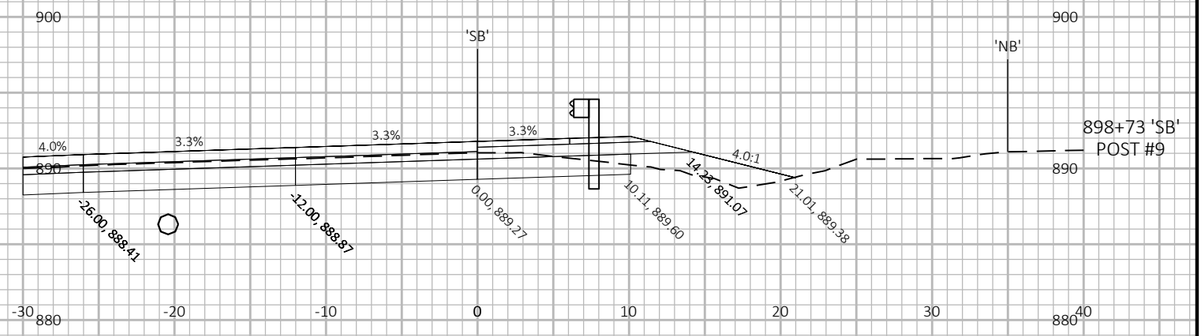
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2D - SOUTH XO	SHEET 802	E

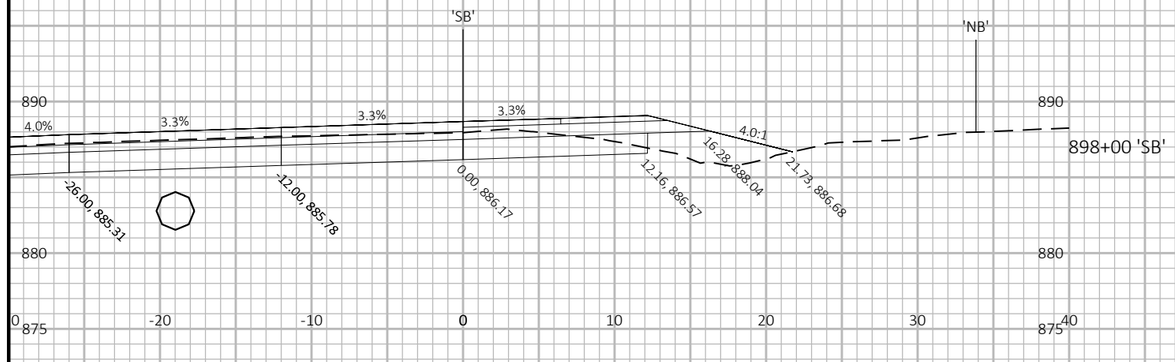
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LAYOUT NAME - SXO_1

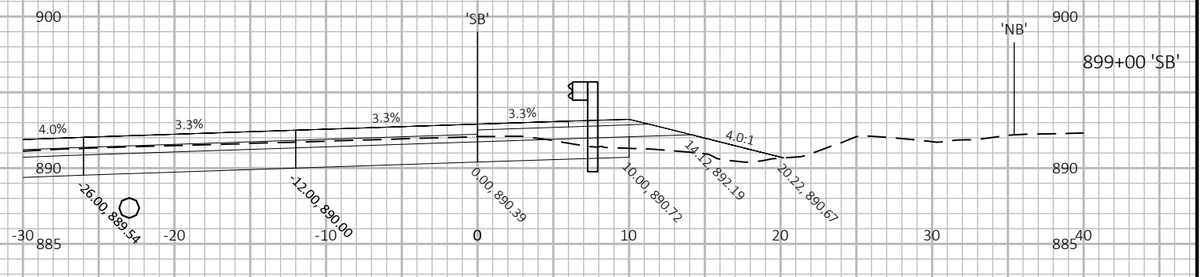
PLOT DATE : 7/20/2024 11:05 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

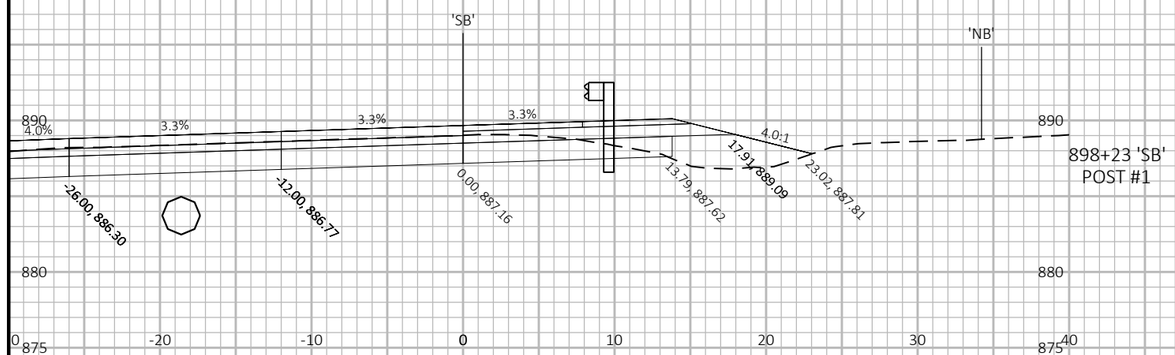
WISDOT/CADDS SHEET 49

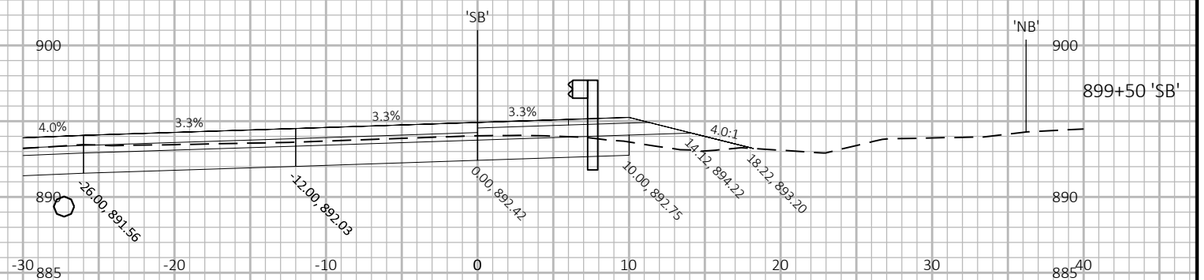


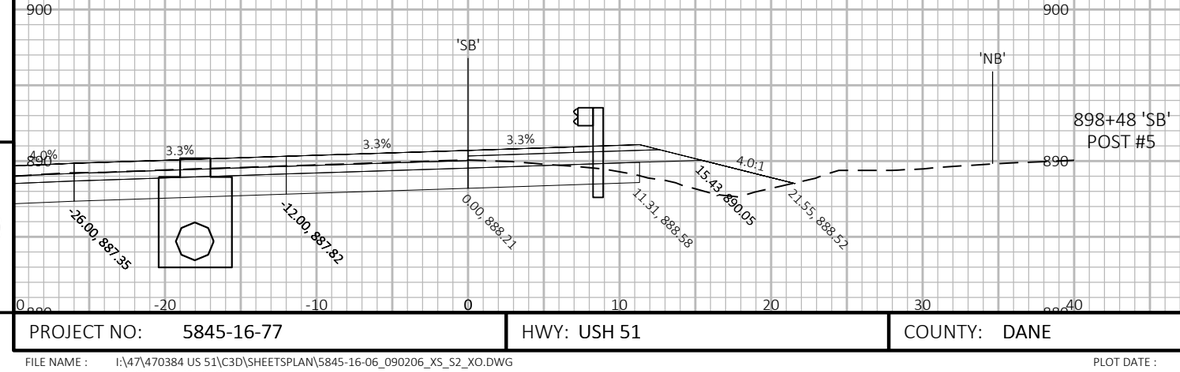


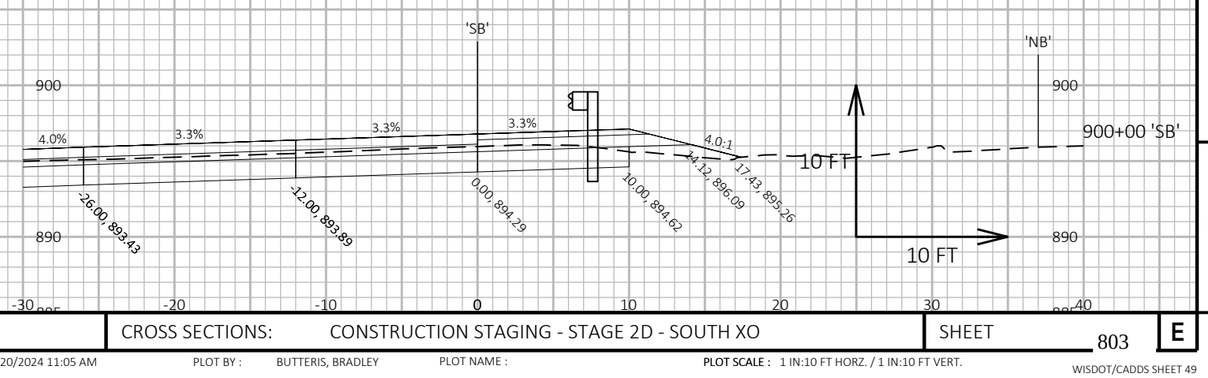










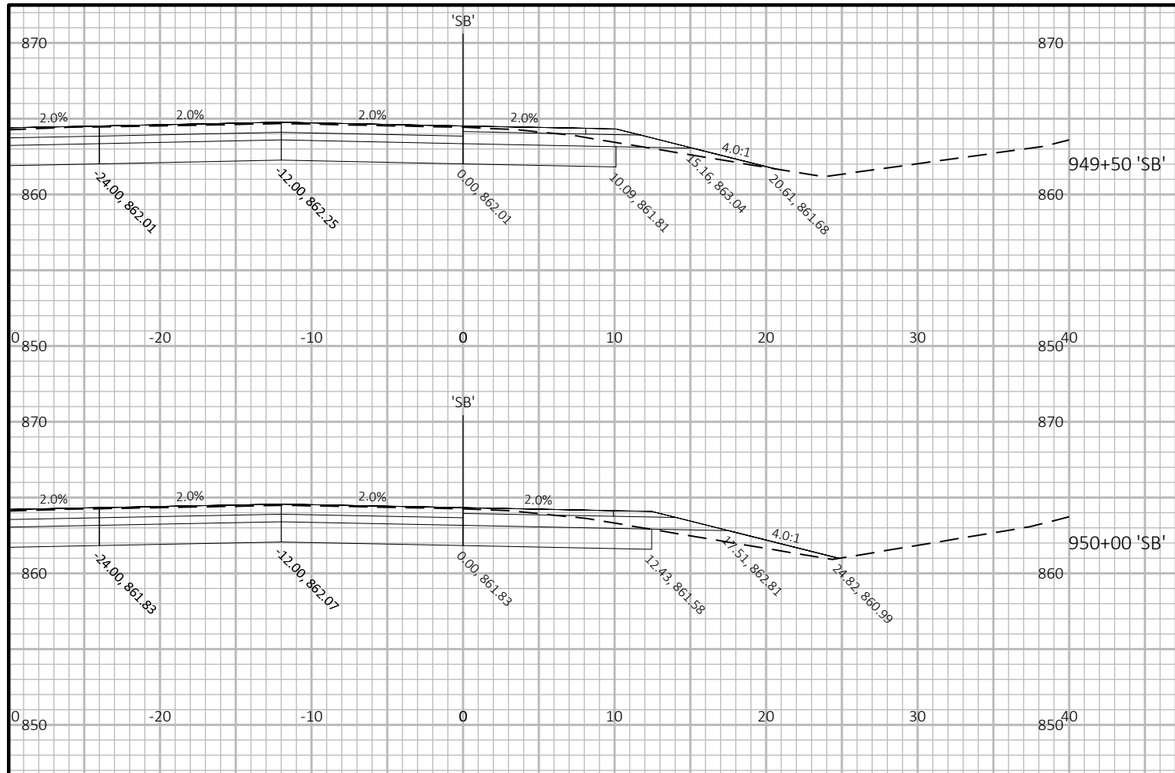


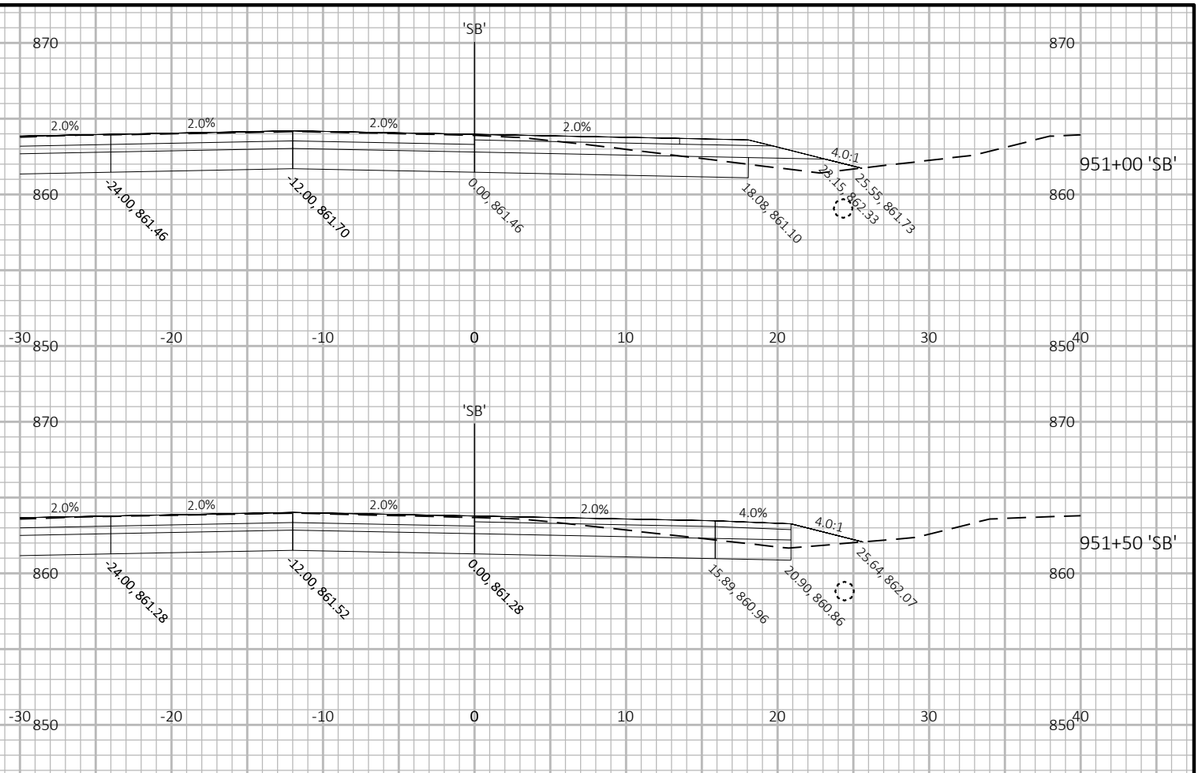
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2D - SOUTH XO	SHEET 803 E

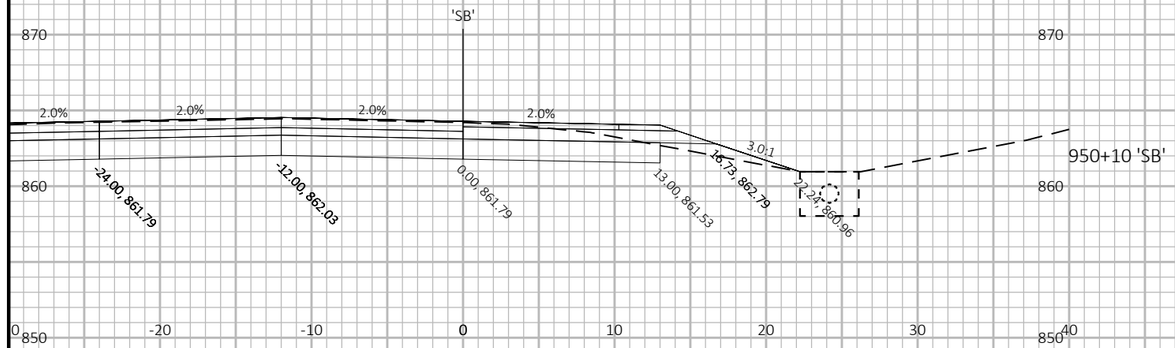
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LAYOUT NAME - SXO_2

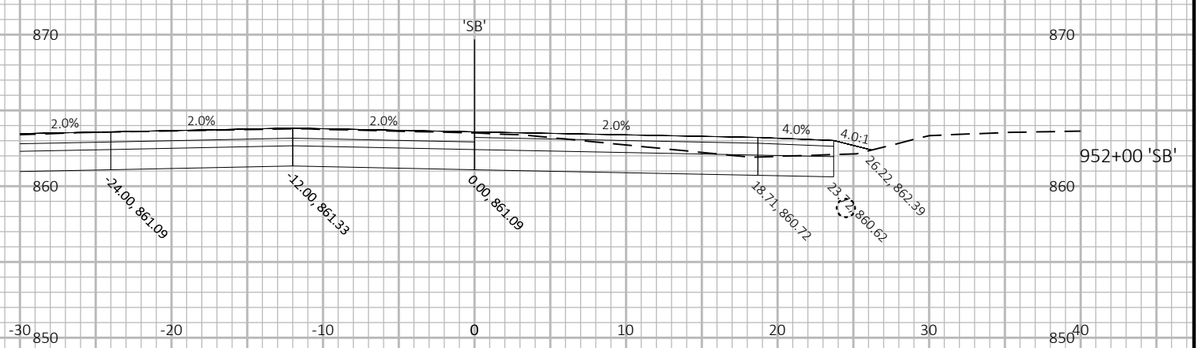
PLOT DATE : 7/20/2024 11:05 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

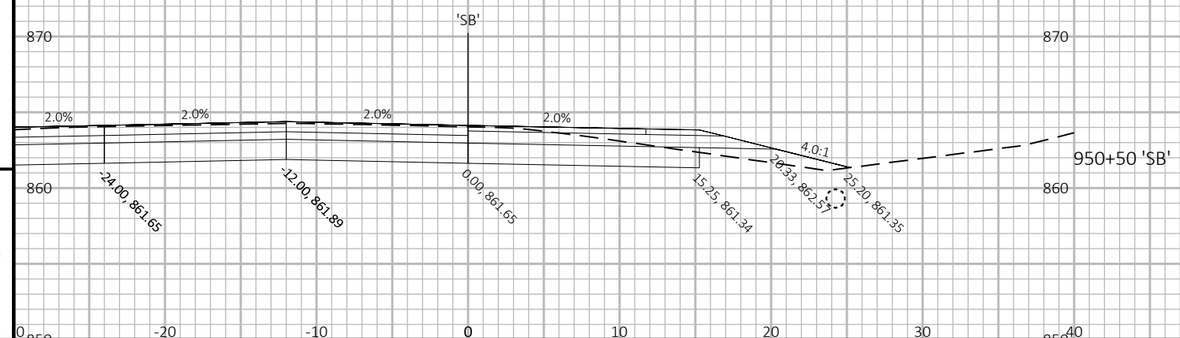
WISDOT/CADDS SHEET 49

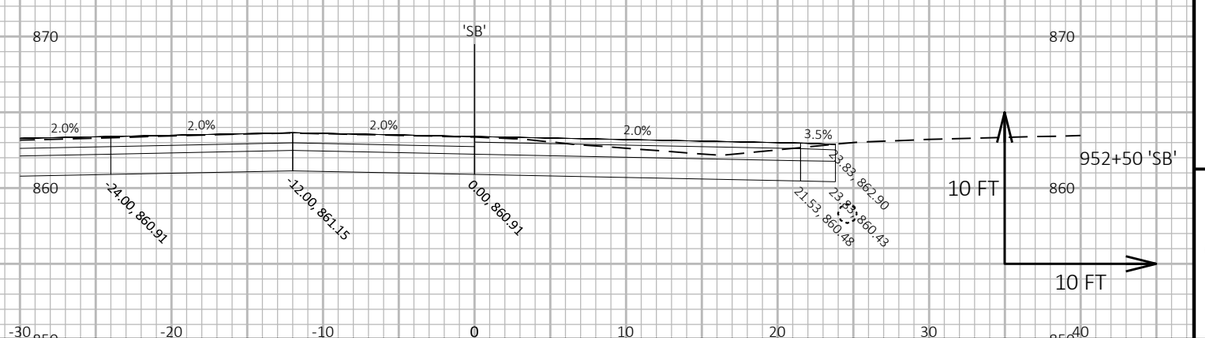












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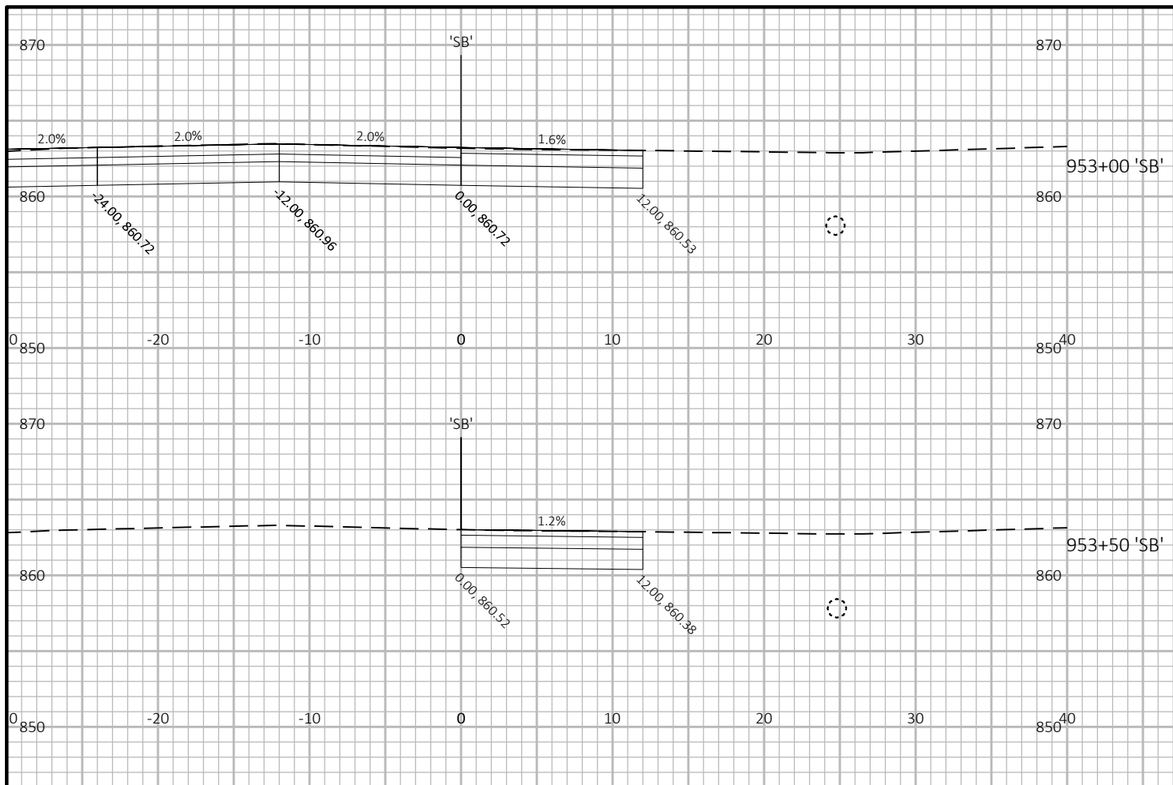
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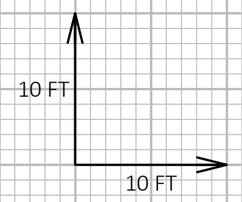
PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2D - NORTH XO	SHEET 804	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090206_XS_S2_XO.DWG
LAYOUT NAME - NXO_1

PLOT DATE : 7/20/2024 11:05 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





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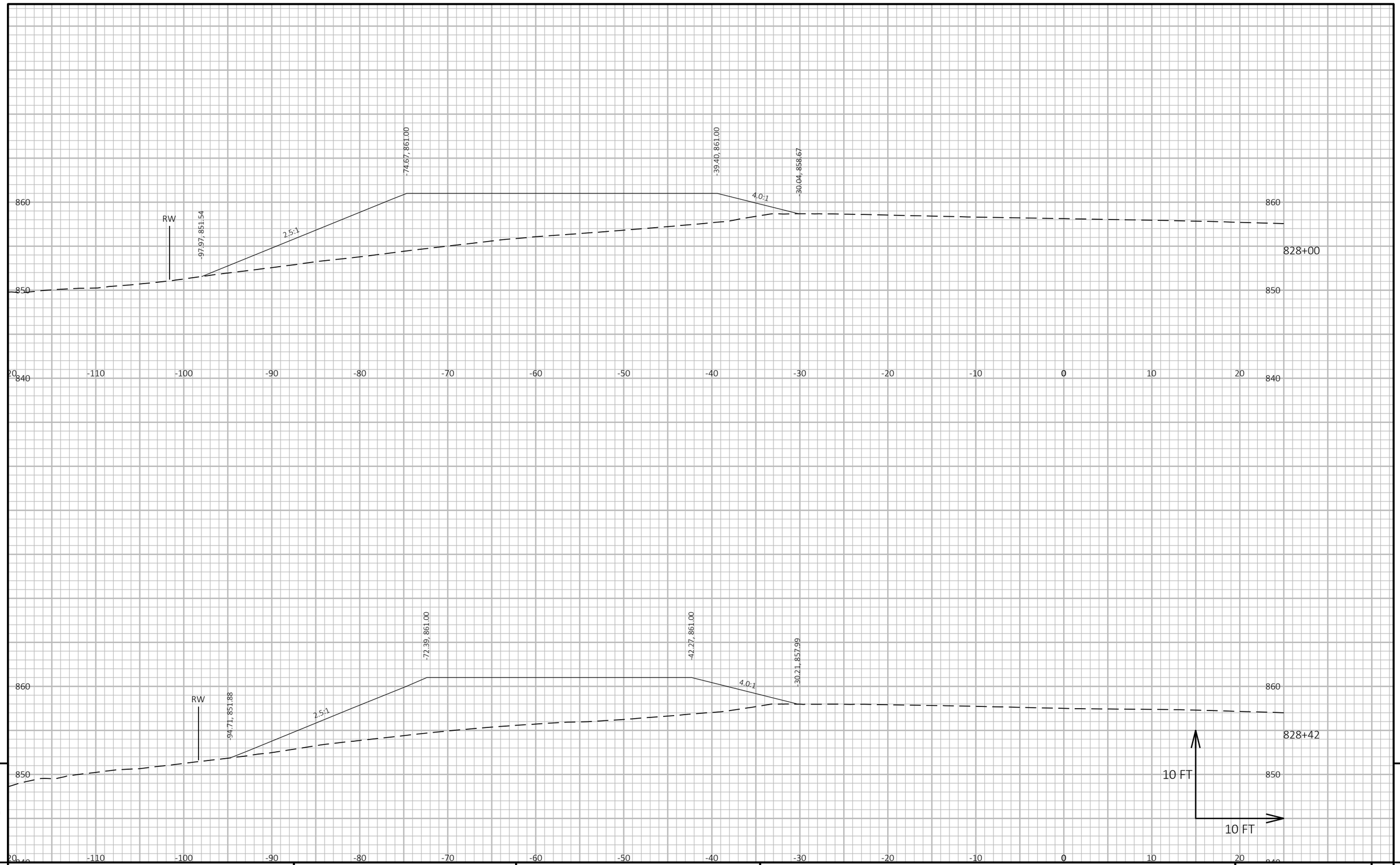
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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CONSTRUCTION STAGING - STAGE 2D - NORTH XO	SHEET 805	E

FILE NAME : I:\47\470384 US 51\C3D\SHEETSPLAN\5845-16-06_090206_XS_S2_XO.DWG
LAYOUT NAME - NXO_2

PLOT DATE : 7/20/2024 11:05 AM PLOT BY : BUTTERIS, BRADLEY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 5845-16-77	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: EXCHANGE STREET INTERSECTION SURCHARGE	SHEET 806	E

FILE NAME : S:\MAD\1000--1099\1089\981\DRAWINGS\CAD\CIVIL 3D\SHEETSOTHER\EARLY FILL DETAIL.DWG
LAYOUT NAME - CROSS SECTION

PLOT DATE : 6/28/2024 2:42 PM

PLOT BY : JACK, ROBERT A.

PLOT NAME :

PLOT SCALE : 1 IN:10 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